Appendix A: Woodcrest Christian School Expansion Conceptual Plant Palette

TREES



Jacaranda mimosifolia
JACARANDA



Parkinsonia x 'Desert Museum'
DESERT MUSEUM PALO VERDE



Quercus suber
CORK OAK



Washingtonia robusta
MEXICAN FAN PALM

FOREGROUND SHRUBS & GROUNDCOVERS



Baccharis pilularis 'Pigeon Point'
PIGEON POINT COYOTE BRUSH



Lantana x 'New Gold'
NEW GOLD LANTANA



Muhlenbergia dubia
PINE MUHLY



Salvia 'Mrs. Beard'
MRS. BEARD SAGE

MID-GROUND SHRUBS



Abutilon palmeri
INDIAN MALLOW



Salvia clevelandii
CLEVELAND SAGE



Salvia leucantha 'Santa Barbara'
Santa Barbara Mexican Bush Sage

BACKGROUND SHRUBS



Leucophyllum frutescens
TEXAS SAGE



Tecoma stans var. stans 'Gold Star'
'GOLD STAR' YELLOW BELLS

PLANT SELECTION

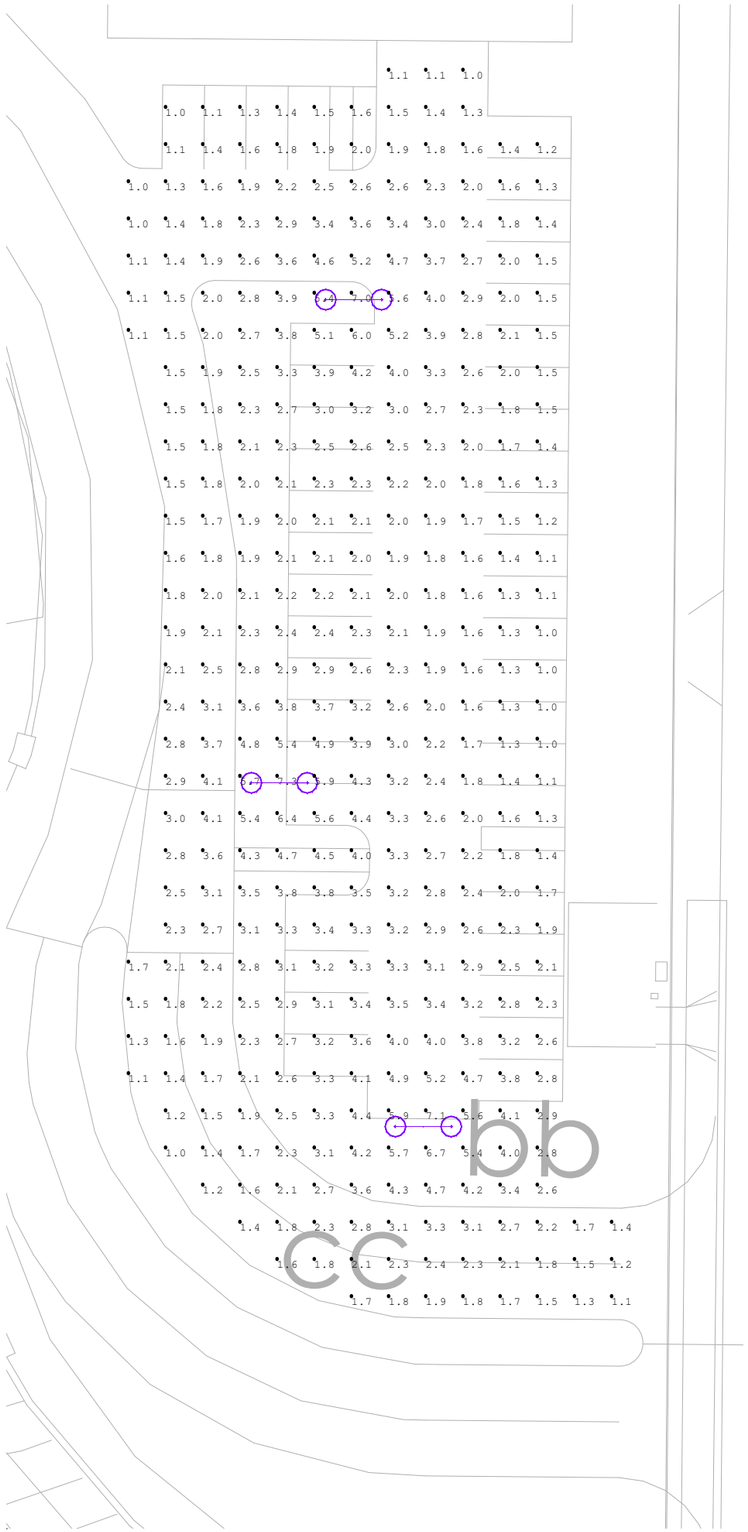
The plant palette for the Woodcrest Christian School Expansion project was developed to provide a natural appearing, drought tolerant, and hardy landscape inspired by the school colors. Low maintenance California-native or climate adapted species were selected due to their proven longevity and performance in Inland Southern California.

WOODCREST CHRISTIAN SCHOOL EXPANSION

CONCEPTUAL PLANT PALETTE

AUGUST 07, 2023

Appendix B: Woodcrest Photometrics



DAUCHY AVENUE

NOVEMBER 2,2023
PROJECT: WOODCREST CHRISTIAN SCHOOL - PARKING LOT
SPECIFIER: CHARLES BROWN ARCHITECT
CALIFORNIA LIGHTING SALES
JIM POIRIER
TAMI JOHNSON

Luminaire Schedule

Symbol	Qty	Label	Arrangement	Description	Tag	Mounting Height	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	3	18	Back-Back	US ARCHITECTURAL: DSB18-PLED-VSQ-W-48LED-875mA-40K	BOTTOM OF POLE FIXTURE AT 18 FEET-0 INCH AFG	18	0.900	16099	133.9	803.4

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
PARKING & DRIVE	Illuminance	Fc	2.57	7.3	1.0	2.57	7.30

DISCLAIMER: This calculation, either normal lighting or emergency lighting, is based on the information provided to CLS by the architect, engineer, lighting designer, contractor, etc.. These findings should be verified by a certified electrical engineer as to their accuracy. Design changes such as ceiling heights, ceiling, wall and floor reflectances of all interior surfaces including partition walls may adversely affect the overall light levels. CLS is not responsible as to the veracity of these calculations, and should only be used as a design reference tool and are only an approximation.

CLS
CALIFORNIA LIGHTING SALES

SOLID STATE AREA LIGHTING

DSB SERIES-PLED

PROJECT NAME:

FIXTURE TYPE:

FEATURES

Luminaire Arm
Heavy walled one-piece aluminum spinning with single reveal for additional rigidity. Arm is heavy cast low copper aluminum (A356 alloy, < .02% copper) and also functions as driver compartment.

PLED™ Optics
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED refractor. LED optics completely seal each individual emitter to meet an IP66 rating. In asymmetric distributions, a micro-reflector inside the refractor re-directs the house side emitter output towards the street side and functions as a house side shielding element. Refractors are injection molded H12 acrylic. Each LED refractor is sealed to the PCB over an emitter and all refractors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED refractors produce standard site/area distributions. Panels are field replaceable and field rotatable in 90° increments.

LED Emitters
High output LED's are utilized with drive currents ranging from 350mA to 875mA. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

LED Driver
Constant current electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50,60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with 20KV surge protector for field installation.)

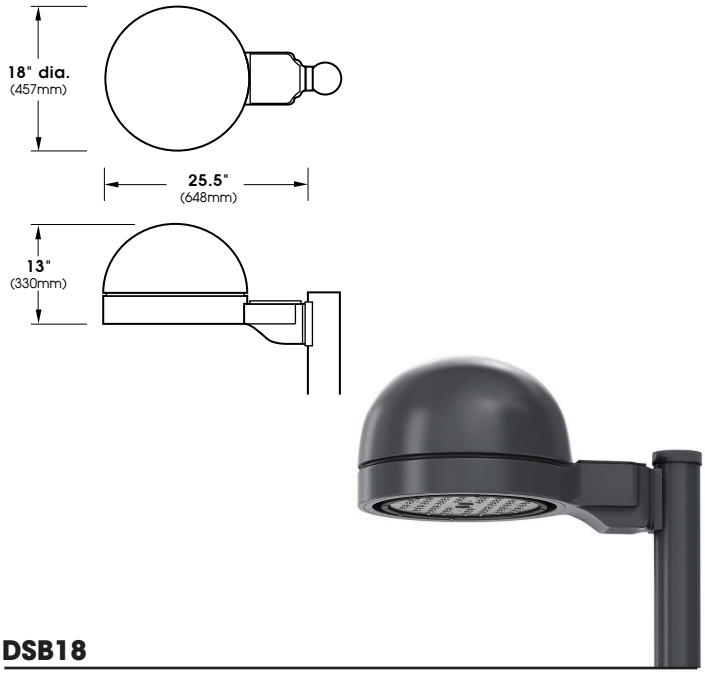
AmberLE Ds
PCA (Phosphor Converted Amber) LED's utilize phosphors to create color output similar to LPS lamps and have a slight output in the blue spectral bandwidth. TRA (True Amber) LED's utilize material that emits light in the amber spectral bandwidth only without the use of phosphors.

Finish
Polyester powder coat incorporates four step iron phosphate process to pretreat metal surface for maximum adhesion. Top coat is baked at 400°F for maximum hardness and exterior durability.



DSB22

(Formerly DSB) Patent pending



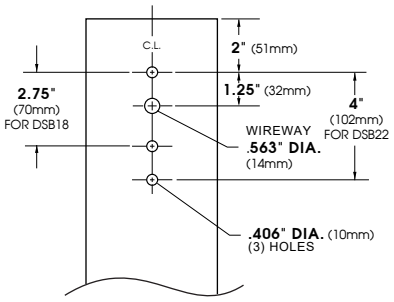
DSB18

(Formerly DSBM) Patent pending

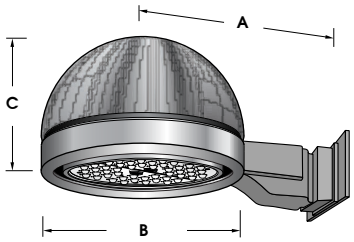
DSB SERIES - PLED

SPECIFICATIONS

B e Dr h gT empba e



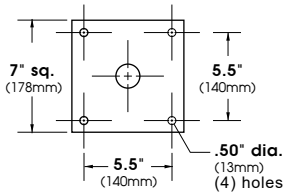
WallM ount



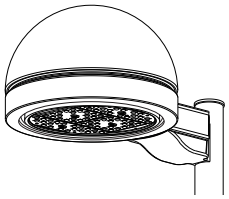
F ture	A	B	C
DSB 2	21" nom. (457mm)	22" (559mm)	15" (381mm)
DSB 8	19" nom. (483mm)	18" (457mm)	13" (330mm)a

Extruded aluminum arm and cast aluminum wall bracket assembly provided with built in gasketed wire access for fixture/supply wire connection.

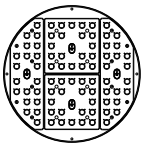
WallP late



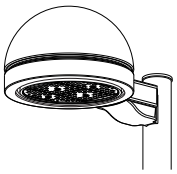
PLED™ od les



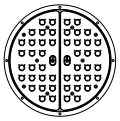
DSB22 E.P.A.= 1.57
Available in:
80 LED Module Max



80 LED Module



DSB18 E.P.A.= 1.03
Available in:
48 LED Module Max



48 LED Module

ORDERING INFORMATION

Spec/Order Example: DSB18/PLED-II/48LED-350mA/NW/347/1/RAL-7005-S

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options
Lumin a e	**Optics**	**LED**	**Voltage**	**Mounting**	**F nish**	**Options**

Luminaire

- ☐ **DSB22-PLED** (Formerly DSB)
- ☐ **DSB18-PLED** (Formerly DSBM)

Optics — PLED™ Distribution Type

- ☐ Type II **PLED-II**
- ☐ Type II Front Row **PLED-II-FR**
- ☐ Type III Med. **PLED-III-M**
- ☐ Type III Wide **PLED-III-W**
- ☐ Type IV **PLED-IV**
- ☐ Type IV **PLED-IV-FT**
- ☐ Type V Narrow **PLED-VSQ-N**
- ☐ Type V Med. **PLED-V-SQ-M**
- ☐ Type V Wide **PLED-V-SQ-W**

LED

# of LEDs

DSB22
- ☐ **80LED**[1]
- ☐ **48LED**
- ☐ **36LED**

DSAB18
- ☐ **48LED**[1]
- ☐ **36LED**
- ☐ **20LED**

Drive Current
- ☐ **1050mA**[2]
- ☐ **875mA**[2]
- ☐ **700mA**[2]
- ☐ **525mA**
- ☐ **350mA**

Color Temp - CCT
- ☐ **NW (4000K)*** *Standard
- ☐ **CW (5000K)**
- ☐ **WW (3000K)**

Other LED Colors Available Consult Factory

Amber[3]
- ☐ Phosphor Converted Amber **PCA**[4]
- ☐ True Amber[5] **TRA**

NOTES:
1 - 875mA maximum
2 - 700mA and 875mA not for use with TRA LED's
3 - Narrow band Ambers have no Definable CCT equivalent
4 - 700mA maximum
5 - Available in 350mA & 525mA drive currents only

Voltage
- ☐ **120**
- ☐ **208**
- ☐ **240**
- ☐ **277**
- ☐ **347**
- ☐ **480**

Mounting
- ☐ **1**
- ☐ **2-90**
- ☐ **2-180**
- ☐ **3-90**
- ☐ **3-120**
- ☐ **4-90**

Wallmount
- ☐ **WM**

Post Top
- ☐ **PT**

See USALTG.COM for additional arm styles

Finish

Standard Textured Finish
- ☐ Black **RAL-9005-T**
- ☐ White **RAL-9003-T**
- ☐ Grey **RAL-7004-T**
- ☐ Dark Bronze **RAL-8019-T**
- ☐ Green **RAL-6005-T**

For smooth finish replace suffix "T" with suffix "S" (Example: RAL-9500-S)

Consult factor for custom colors

Options
- ☐ Stem Mount + Length(in) (48" Max) **SM+L**
- ☐ Chain Mount + Length(in) (48" Max) **CM+L**
- ☐ Internal House Side Shield inc. LED Count (Example: HS-PLED/48) **HS-PLED**
- ☐ Twist Lock Receptable Only **TPR**
- ☐ 7-Pin Twist Lock Receptable Only **TPR7**
- ☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW**
- ☐ Photo Cell + Voltage (Example: PC120V) **PC+V**
- ☐ Single Fuse (120V, 277V) **SF**
- ☐ Double Fuse (208V, 240V) **DF**
- ☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F311**

U.S. Pole Co Inc. | 660 West Avenue O, Palmdale, CA 93551
Phone (661) 233-2000 Fax (661) 233-2001
www.usaltg.com

U.S. ARCHITECTURAL LIGHTING

DSB SERIES - PLED

LED Count	Source Type	Source	Initial Lumens - 4000K CCT	Initial Lumens - 3000K CCT	Initial Lumens - 5000K CCT	L70 greater than (R)	Starting Temp.	System Watts	Volts	Max Input Amps
DSB18										
20	LED	20 PLED® Optical Module -350m A	2842 – 3262	2700 – 3098	2984 – 3424	90,000+	-40°F	22/28	120 277 347	.19/.24 .08/.11 .07/.08
20	LED	20 PLED® Optical Module -525m A	4042 – 4637	3839 – 4405	4243 – 4868	90,000+	-40°F	33/39	120 277 347	.28/.33 .12/.14 .10/.12
20	LED	20 PLED® Optical Module -700m A	5083 – 5832	4829 - 5540	5337 – 6123	90,000+	-40°F	44/50	120 277 347	.37/.42 .16/.18 .13/.15
20	LED	20 PLED® Optical Module -875m A	6108 – 7008	5802 – 6657	6413 – 7358	90,000+	-40°F	56/62	120 277 347	.47/.52 .21/.23 .17/.18
20	LED	20 PLED® Optical Module -1050m A	7086 – 8131	6732 – 7725	7441 – 8537	90,000+	-40°F	67/73	120 277 347	.56/.61 .25/.27 .20/.21
36	LED	36 PLED® Optical Module -350m A	5116 – 5871	4860 – 5577	5371 – 6164	90,000+	-40°F	40/46	120 277 347	.34/.39 .15/.17 .12/.14
36	LED	36 PLED® Optical Module -525m A	7274 – 8346	6910 – 7929	7638 – 8763	90,000+	-40°F	60/66	120 277 347	.50/.55 .22/.24 .18/.20
36	LED	36 PLED® Optical Module -700m A	9149 – 10497	8691 – 9972	9606 – 11022	90,000+	-40°F	79/85	120 277 347	.66/.71 .29/.31 .23/.25
36	LED	36 PLED® Optical Module -875m A	10994 – 12614	10444 – 11983	11544 – 13245	90,000+	-40°F	101/107	120 277 347	.85/.90 .37/.39 .30/.31
36	LED	36 PLED® Optical Module -1050m A	12755 – 14635	12117 – 13903	13392 – 15367	90,000+	-40°F	120/126	120 277 347	1.00/1.05 .44/.46 .35/.37
48	LED	8 PLED® Optical Module -350m A	6821 – 7827	6480 – 7435	7162 – 8218	90,000+	-40°F	53/59	120 277 347	.45/.50 .20/.22 .16/.17
48	LED	8 PLED® Optical Module -525m A	9699 – 11128	9214 – 10572	10183 – 11684	90,000+	-40°F	79/85	120 277 347	.66/.71 .29/.31 .23/.25
48	LED	8 PLED® Optical Module -700m A	12199 – 13398	11589 – 13296	12808 – 14696	90,000+	-40°F	106/112	120 277 347	.89/.94 .39/.41 .31/.33
48	LED	8 PLED® Optical Module -875m A	14659 – 16819	13926 – 15978	15392 – 17660	90,000+	-40°F	134/140	120 277 347	1.12/1.17 .49/.51 .39/.41
DSB22										
36	LED	36 PLED® Optical Module -350m A	5126 – 5882	4870 – 5588	5383 – 6176	90,000+	-40°F	40/46	120 277 347	.34/.39 .15/.17 .12/.14
36	LED	36 PLED® Optical Module -525m A	7382 – 8470	7013 – 8047	7751 – 8894	90,000+	-40°F	59/65	120 277 347	.50/.55 .23/.24 .17/.19
36	LED	36 PLED® Optical Module -700m A	9362 – 10742	8894 – 10205	9830 – 11279	90,000+	-40°F	79/85	120 277 347	.66/.71 .29/.31 .23/.25
36	LED	36 PLED® Optical Module -875m A	10719 – 12298	10183 – 11682	11254 – 12913	90,000+	-40°F	103/109	120 277 347	.86/.91 .38/.40 .30/.32
36	LED	36 PLED® Optical Module -1050m A	12435 – 14268	11813 – 13554	13057 – 14981	90,000+	-40°F	116/122	120 277 347	.97/1.02 .42/.44 .34/.36
48	LED	8 PLED® Optical Module -350m A	6835 – 7843	6493 – 7450	7177 – 8235	90,000+	-40°F	53/59	120 277 347	.45/.50 .20/.23 .16/.17

DSB SERIES - PLED

LED Count	Source Type	Source	Initial Lumens - 4000K CCT	Initial Lumens - 3000K CCT	Initial Lumens - 5000K CCT	L70 greater than (Ⓡ)	Starting Temp.	System Watts	Volts	Max Input Amps
DSB22										
48	LED	**8 PLED®** Optical Module -525m A	9843 – 11294	9351 – 10729	10336 – 11859	90,000+	-40°F	78/84	120 277 347	.65/.70 .29/.31 .23/.25
48	LED	**8 PLED®** Optical Module -700m A	12483 – 14323	11859 – 13607	13107 – 15038	90,000+	-40°F	105/111	120 277 347	.88/.93 .38/.40 .31/.32
48	LED	**8 PLED®** Optical Module -875m A	14292 – 16397	13577 – 15577	15006 – 17217	90,000+	-40°F	137/143	120 277 347	1.15/1.20 .50/.52 .40/.42
48	LED	**8 PLED®** Optical Module -1050m A	16581 – 19024	15752 – 18073	17409 – 19975	90,000+	-40°F	154/160	120 277 347	1.29/1.34 .56/.58 .45/.47
80	LED	**80 PLED®** Optical Module -350m A	11392 – 13071	10823 – 12418	11962 – 13724	90,000+	-40°F	88/94	120 277 347	.74/.79 .32/.34 .26/.27
80	LED	**80 PLED®** Optical Module -525m A	16406 – 18823	15585 – 17882	17226 – 19765	90,000+	-40°F	130/136	120 277 347	1.09/1.14 .47/.50 .38/.40
80	LED	**80 PLED®** Optical Module -700m A	20805 – 23871	19765 – 22678	21845 – 25065	90,000+	-40°F	174/180	120 277 347	1.45/1.50 .63/.65 .50/.52
80	LED	**80 PLED®** Optical Module -875m A	23819 – 27329	22628 – 25962	25010 – 28695	90,000+	-40°F	226/232	120 277 347	1.89/1.94 .82/.84 .66/.69
		Phosphor Converted Amber LED								
DSB18										
20	PCA - LED	**20 PLED®** Optical Module -350m A	1478 – 1696			51,000+	-40°F	25	120 277 347	.21 .10 .08
20	PCA - LED	**20 PLED®** Optical Module -525m A	2102 – 2411			51,000+	-40°F	37	120 277 347	.31 .14 .11
20	PCA - LED	**20 PLED®** Optical Module -700m A	2643 – 3033			51,000+	-40°F	50	120 277 347	.42 .18 .15
36	PCA - LED	**36 PLED®** Optical Module -350m A	2660 – 3053			51,000+	-40°F	45	120 277 347	.38 .17 .13
36	PCA - LED	**36 PLED®** Optical Module -525m A	3783 – 4340			51,000+	-40°F	67	120 277 347	.56 .25 .20
36	PCA - LED	**36 PLED®** Optical Module -700m A	4757 – 5459			51,000+	-40°F	89	120 277 347	.75 .33 .26
48	PCA - LED	**8 PLED®** Optical Module -350m A	3547 – 4070			51,000+	-40°F	59	120 277 347	.50 .22 .17
48	PCA - LED	**8 PLED®** Optical Module -525m A	5043 – 5787			51,000+	-40°F	89	120 277 347	.75 .33 .26
48	PCA - LED	**8 PLED®** Optical Module -700m A	6343 – 7278			51,000+	-40°F	118	120 277 347	.99 .43 .34
DSB22										
36	PCA - LED	**36 PLED®** Optical Module -350m A	2666 – 3059			51,000+	-40°F	45	120 277 347	.38 .17 .13
36	PCA - LED	**36 PLED®** Optical Module -525m A	3839 – 4405			51,000+	-40°F	66	120 277 347	.56 .24 .19

DSB SERIES - PLED

LED Count	Source Type	Source	Initial Lumens - 4000K CCT	Initial Lumens - 3000K CCT	Initial Lumens - 5000K CCT	L70 greater than (Ⓗ)	Starting Temp.	System Watts	Volts	Max Input Amps
Phosphor Converted Amber LED										
DSB22										
36	PCA - LED	**36 PLED®** Optical Module -700m A	4868 – 5586			51,000+	-40°F	88	120 277 347	.74 .32 .26
48	PCA - LED	**48 PLED®** Optical Module -350m A	3554 – 4078			51,000+	-40°F	59	120 277 347	.50 .22 .17
48	PCA - LED	**48 PLED®** Optical Module -525m A	5119 – 5873			51,000+	-40°F	87	120 277 347	.73 .32 .25
48	PCA - LED	**48 PLED®** Optical Module -700m A	6491 – 7448			51,000+	-40°F	117	120 277 347	.98 .43 .34
80	PCA - LED	**80 PLED®** Optical Module -350m A	11392 – 13071			51,000+	-40°F	98	120 277 347	.82 .36 .29
80	PCA - LED	**80 PLED®** Optical Module -525m A	16406 – 18823			51,000+	-40°F	145	120 277 347	1.21 .52 .42
80	PCA - LED	**80 PLED®** Optical Module -700m A	20805 – 23871			51,000+	-40°F	195	120 277 347	1.63 .71 .57
True Amber LED - 590nm										
DSB18										
20	TRA - LED	**20 PLED®** Optical Module -350m A	854 – 979			66,500+	-40°F	18	120 277 347	.15 .07 .06
20	TRA - LED	**20 PLED®** Optical Module -700m A	1022 – 1172			66,500+	-40°F	26	120 277 347	.22 .10 .08
36	TRA - LED	**36 PLED®** Optical Module -350m A	1536 – 1762			66,500+	-40°F	31	120 277 347	.26 .12 .09
36	TRA - LED	**36 PLED®** Optical Module -525m A	1838 – 2109			66,500+	-40°F	47	120 277 347	.40 .17 .14
48	TRA - LED	**48 PLED®** Optical Module -350m A	2048 – 2350			66,500+	-40°F	41	120 277 347	.35 .15 .12
48	TRA - LED	**48 PLED®** Optical Module -525m A	2451 – 2812			66,500+	-40°F	62	120 277 347	.52 .23 .18
DSB22										
36	TRA - LED	**36 PLED®** Optical Module -350m A	1539 – 1766			66,500+	-40°F	31	120 277 347	.26 .12 .09
36	TRA - LED	**36 PLED®** Optical Module -525m A	1866 – 2140			66,500+	-40°F	46	120 277 347	.39 .18 .14
48	TRA - LED	**48 PLED®** Optical Module -350m A	2053 – 2355			66,500+	-40°F	41	120 277 347	.35 .19 .12
48	TRA - LED	**48 PLED®** Optical Module -525m A	2488 – 2854			66,500+	-40°F	61	120 277 347	.51 .22 .18
80	TRA - LED	**80 PLED®** Optical Module -350m A	3421 – 3925			66,500+	-40°F	67	120 277 347	.56 .25 .20

DSB SERIES - PLED

LED Count	Source Type	Source	Initial Lumens - 4000K CCT	Initial Lumens - 3000K CCT	Initial Lumens - 5000K CCT	L70 greater than (Ħ)	Starting Temp.	System Watts	Volts	Max Input Amps
True Amber LED - 590nm										
DSB22										
80	TRA - LED	**80 PLED® Optical Module -525m A**	4146 – 4757			66,500+	-40°F	101	120 277 347	.85 .37 .30

1) Max Input Amps is the highest of starting, operating, or open circuit currents

2) System Watts includes the source watts and all driver components.

3) Lumen values for LED Modules vary according to the distribution type

4) For Wattage and Max Input Amps showing two values, use the higher value for luminaires with lit uplight windows (-L & -M)

5) PCA and TRA LED optics not recommended for use with lit uplight window models (-L & -M)

6) Fuse value should be sufficient to protect all wiring components. For electronic driver and LED component protection, use 20KV surge suppressors.

7) L70(10K) – TM-21 6x rule applied

WARNING: All fixtures must be installed in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury.

SOLID STATE AREA LIGHTING

DSB SERIES - VLED

PROJECT NAME:

FIXTURE TYPE:

FEATURES

Luminaire Arm

Heavy walled one-piece aluminum spinning with single reveal for additional rigidity. Arm is heavy cast low copper aluminum (A356 alloy, < .02% copper) and also functions as driver compartment.

VLED® Optics

Low copper (A356 Alloy; <0.2% Cu) cast aluminum housing. Integrated clear tempered glass lens sealed with a continuous silicone gasket protects emitters (LED's), Reflector-Prism optics, and seals the module from water intrusion and environmental contaminants. Module is sealed to meet an IP67 rating. Each emitter is optically controlled by a Reflector-Prism injection molded from H12 acrylic (3 types per module; one from 0° - 50°; one from 50° - 65°; one from 65° - 72°). Each Reflector-Prism is secured to an optical plate made of matte black anodized aluminum has indexing pins for precise aiming. The optical plate locates every Reflector-Prism over an emitter, are inserted to the optical plate from above and are secured with a UV curing adhesive. The Reflector-Prisms are arrayed to produce IES Type II, III, IV, and V-SQ distributions. The entire Optical Module is field rotatable in 90° increments. Both module and drivers are factory wired using water resistant, insulated cord.

LED Emitters

High output LED's are utilized with drive currents ranging from 350mA to 700mA. 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult Factory for other LED options.

LED Driver

Constant current programmable electronic with a power factor of >.90 and a minimum operating temperature of -40°F/-40°C. Driver(s) is/are UL and cUL recognized. In-line terminal blocks facilitate wiring between the driver and optical arrays. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50,60Hz. (0 - 10V dimmable driver is standard. Driver has a minimum of 3KV internal surge protection. Luminaire supplied with 20KV surge protector for field installation.)

Amber LEDs

PCA (Phosphor Converted Amber) LED's utilize phosphors to create color output similar to LPS lamps and have a slight output in the blue spectral bandwidth. TRA (True Amber) LED's utilize material that emits light in the amber spectral bandwidth only without the use of phosphors.

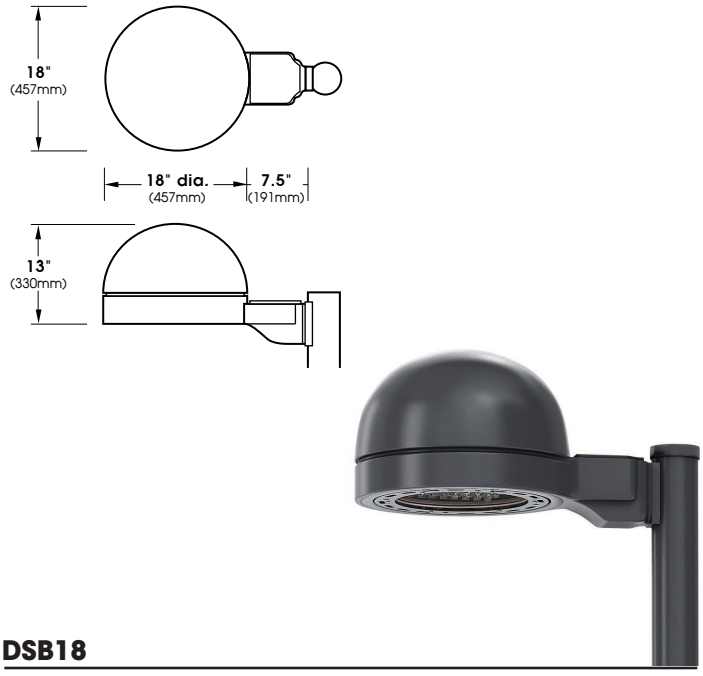
Finish

Polyester powder coat incorporates four step iron phosphate process to pretreat metal surface for maximum adhesion. Top coat is baked at 400°F for maximum hardness and exterior durability.



DSB22

(Formerly DSB) Patent pending



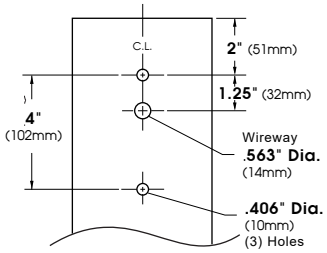
DSB18

(Formerly DSBM) Patent pending

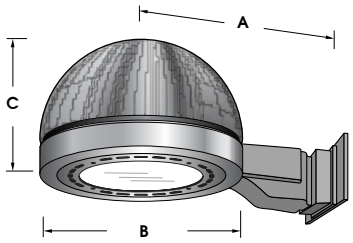
DSB SERIES - VLED

SPECIFICATIONS

Bolt Drilling Template



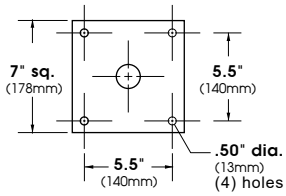
Wall Mount



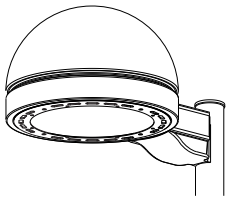
Fixture	A	B	C
DSB22	21" nom. (457mm)	22" (559mm)	15" (381mm)
DSB18	19" nom. (483mm)	18" (457mm)	13" (330mm)a

Extruded aluminum arm and cast aluminum wall bracket assembly provided with built in gasketed wire access for fixture/supply wire connection.

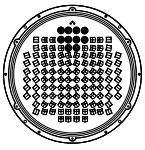
Wall Plate



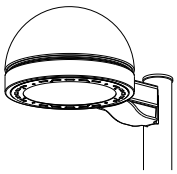
VLED® Modules



DSB22 E.P.A.= 1.57
Available in:
120 LED Module Max



120 LED Module



DSB18 E.P.A.= 1.03
Available in:
80 LED Module Max



80 LED Module

ORDERING INFORMATION

Spec/Order Example: DSB22/VLED-III-W/80LED-525mA/NW/277/1/RAL-7005-S

Luminaire	Optics	LED Mode	Voltage	Mounting	Finish	Options
Luminaire	**Optics**	**LED**	**Voltage**	**Mounting**	**Finish**	**Options**
☐ **DSB22-VLED** (Formerly DSB) ☐ **DSB18-VLED** (Formerly DSBM)	VLED® IES Distribution Type ☐ Type II **VLED-II** ☐ Type III **VLED-III** ☐ Type IV **VLED-IV** ☐ Type V Med. **VLED-V-SQ**	# of LEDs **DSB22** ☐ **120LED**[1] ☐ **100LED**[1] ☐ **80LED** ☐ **64LED** **DSB18** ☐ **80LED**[1] ☐ **64LED** ☐ **48LED** Drive Current ☐ **700mA** ☐ **525mA** ☐ **350mA** Color Temp - CCT ☐ **NW (4000K)*** *Standard ☐ **CW (5000K)** ☐ **WW (3000K)** Other LED Colors Available Consult Factory Amber[2] ☐ Phosphor Converted Amber **PCA** ☐ True Amber[1] **TRA**	☐ **120** ☐ **208** ☐ **240** ☐ **277** ☐ **347** ☐ **480**	☐ **1** ☐ **2-90** ☐ **2-180** ☐ **3-90** ☐ **3-120** ☐ **4-90** Wallmount ☐ **WM** Post Top ☐ **PT** See USALTG.COM for additional arm styles	Standard Textured Finish ☐ Black **RAL-9005-T** ☐ White **RAL-9003-T** ☐ Grey **RAL-7004-T** ☐ Dark Bronze **RAL-8019-T** ☐ Green **RAL-6005-T** For smooth finish replace suffix "T" with suffix "S" (Example: RAL-9500-S) Consult factor for custom colors	☐ Stem Mount + Length(in) (48" Max) **SM+L** ☐ Chain Mount + Length(in) (48" Max) **CM+L** ☐ Internal House Side Shielde inc. LED Count (Example: HS-VLED/48) **HS-VLED** ☐ Twist Lock Receptable Only **TPR** ☐ 7-Pin Twist Lock Receptable Only **TPR7** ☐ High-Low Dimming for Switch by Others/Select Levels 50/100 or 25/100 (Example: HLSW/25) **HLSW** ☐ Photo Cell + Voltage (Example: PC120V) **PC+V** ☐ Single Fuse (120V, 277V) **SF** ☐ Double Fuse (208V, 240V) **DF** ☐ Blue-Tooth Programmable Photo/Motion Sensor (Factory - Motion 50/100; Photo 75fc) **MS-F311**

NOTES:

1 - Available in 350mA & 525mA Drive Currents only

2 - Narrow band Ambers have no definable CCT equivalent

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Phone (661) 233-2000 Fax (661) 233-2001
www.usaltg.com

U.S. ARCHITECTURAL LIGHTING

DSB SERIES - VLED

LED Count	Source Type	Source	Initial Lumens - 4000K CCT	Initial Lumens - 3000K CCT	Initial Lumens - 5000K CCT	L70 greater than (Ⓡ)	Starting Temp.	System Watts	Volts	Max Input Amps
DSB18										
48	White LED	**8** VLED® Optical Module -350m A	6169 - 6558	5860 - 6230	6478 - 6886	90,000+	-40°C	53/59	120 277 347	0.44/0.49 0.19/0.21 0.15/0.17
48	White LED	**8** VLED® Optical Module -525m A	8494 - 9031	8069 - 8579	8919 - 9482	90,000+	-40°C	77/83	120 277 347	0.64/0.69 0.28/0.3 0.22/0.24
48	White LED	**8** VLED® Optical Module -700m A	10635 - 11307	10103 - 10742	11167 - 11872	90,000+	-40°C	103/109	120 277 347	0.86/0.91 0.37/0.39 0.3/0.31
64	White LED	**6** VLED® Optical Module -350m A	8225 - 8338	7813 - 7921	8636 - 8755	90,000+	-40°C	69/75	120 277 347	0.58/0.63 0.25/0.27 0.2/0.22
64	White LED	**6** VLED® Optical Module -525m A	11325 - 11481	10759 - 10907	11891 - 12055	90,000+	-40°C	102/108	120 277 347	0.85/0.9 0.37/0.39 0.29/0.31
80	White LED	80 VLED® Optical Module -350m A	9675 - 9808	9191 - 9317	10159 - 10298	90,000+	-40°C	87/93	120 277 347	0.73/0.78 0.31/0.34 0.25/0.27
80	White LED	80 VLED® Optical Module -525m A	13189 - 13370	12529 - 12701	13848 - 14038	90,000+	-40°C	127/133	120 277 347	1.06/1.11 0.46/0.48 0.37/0.38
DSB22										
48	White LED	**8** VLED® Optical Module -350m A	6169 - 6558	5860 - 6230	6478 - 6886	90,000+	-40°C	53/59	120 277 347	0.44/0.49 0.19/0.21 0.15/0.17
48	White LED	**8** VLED® Optical Module -525m A	8494 - 9031	8069 - 8579	8919 - 9482	90,000+	-40°C	75/81	120 277 347	0.63/0.68 0.27/0.29 0.22/0.23
48	White LED	**8** VLED® Optical Module -700m A	10635 - 11307	10103 - 10742	11167 - 11872	90,000+	-40°C	105/111	120 277 347	0.88/0.93 0.38/0.4 0.3/0.32
64	White LED	**6** VLED® Optical Module -350m A	8225 - 8745	7813 - 8308	8636 - 9183	90,000+	-40°C	71/77	120 277 347	0.59/0.64 0.26/0.28 0.2/0.22
64	White LED	**6** VLED® Optical Module -525m A	11325 - 12042	10759 - 11440	11891 - 12644	90,000+	-40°C	103/109	120 277 347	0.86/0.91 0.37/0.39 0.3/0.31
64	White LED	**6** VLED® Optical Module -700m A	13190 - 13824	12531 - 13133	13849 - 14516	90,000+	-40°C	140/146	120 277 347	1.17/1.22 0.51/0.53 0.4/0.42
80	White LED	80 VLED® Optical Module -350m A	9675 - 10286	9191 - 9772	10159 - 10801	90,000+	-40°C	87/93	120 277 347	0.73/0.78 0.31/0.34 0.25/0.27
80	White LED	80 VLED® Optical Module -525m A	13189 - 14023	12529 - 13322	13848 - 14724	90,000+	-40°C	127/133	120 277 347	1.06/1.11 0.46/0.48 0.37/0.38
80	White LED	80 VLED® Optical Module -700m A	16487 - 17280	15662 - 16416	17311 - 18144	90,000+	-40°C	173/179	120 277 347	1.44/1.49 0.62/0.65 0.5/0.52
100	White LED	100 VLED® Optical Module -350m A	11776 - 12304	11187 - 11689	12365 - 12919	90,000+	-40°C	108/114	120 277 347	0.9/0.95 0.39/0.41 0.31/0.33
100	White LED	100 VLED® Optical Module -525m A	16291 - 17025	15476 - 16174	17106 - 17877	90,000+	-40°C	160/166	120 277 347	1.33/1.38 0.58/0.6 0.46/0.48
120	White LED	120 VLED® Optical Module -350m A	14129 - 14765	13423 - 14027	14836 - 15503	90,000+	-40°C	129/135	120 277 347	1.08/1.13 0.47/0.49 0.37/0.39
120	White LED	120 VLED® Optical Module -525m A	19549 - 20430	18572 - 19408	20527 - 21451	90,000+	-40°C	192/198	120 277 347	1.6/1.65 0.69/0.71 0.55/0.57

DSB SERIES - VLED

LED Count	Source Type	Source	Initial Lumens	L70 greater than (Ⓡ)	Starting Temp.	System Watts	Volts	Max Input Amps
Phosphor Converted Amber LED								
DSB18								
48	PC Amber	48 VLED® Optical Module -350m A	3208 - 3410	51,000+	-40°C	59	120 277 347	0.49 0.21 0.17
48	PC Amber	48 VLED® Optical Module -525m A	4417 - 4696	51,000+	-40°C	86	120 277 347	0.72 0.31 0.25
48	PC Amber	48 VLED® Optical Module -700m A	5530 - 5880	51,000+	-40°C	115	120 277 347	0.96 0.42 0.33
64	PC Amber	64 VLED® Optical Module -350m A	4277 - 4547	51,000+	-40°C	80	120 277 347	0.67 0.29 0.23
64	PC Amber	64 VLED® Optical Module -525m A	5889 - 6262	51,000+	-40°C	114	120 277 347	0.95 0.41 0.33
80	PC Amber	80 VLED® Optical Module -350m A	5031 - 5349	51,000+	-40°C	97	120 277 347	0.81 0.35 0.28
80	PC Amber	80 VLED® Optical Module -525m A	6858 - 7292	51,000+	-40°C	142	120 277 347	1.18 0.51 0.41
DSB22								
48	PC Amber	48 VLED® Optical Module -350m A	3208 - 3410	51,000+	-40°C	60	120 277 347	0.50 0.22 0.17
48	PC Amber	48 VLED® Optical Module -525m A	4417 - 4696	51,000+	-40°C	84	120 277 347	0.70 0.30 0.24
48	PC Amber	48 VLED® Optical Module -700m A	5530 - 5880	51,000+	-40°C	118	120 277 347	0.98 0.43 0.34
64	PC Amber	64 VLED® Optical Module -350m A	4277 - 4547	51,000+	-40°C	80	120 277 347	0.67 0.29 0.23
64	PC Amber	64 VLED® Optical Module -525m A	5889 - 6262	51,000+	-40°C	116	120 277 347	0.97 0.42 0.33
64	PC Amber	64 VLED® Optical Module -700m A	6859 - 7189	51,000+	-40°C	157	120 277 347	1.31 0.57 0.45
80	PC Amber	80 VLED® Optical Module -350m A	5031 - 5349	51,000+	-40°C	98	120 277 347	0.82 0.35 0.28
80	PC Amber	80 VLED® Optical Module -525m A	6858 - 7292	51,000+	-40°C	142	120 277 347	1.18 0.51 0.41
80	PC Amber	80 VLED® Optical Module -700m A	8573 - 8986	51,000+	-40°C	194	120 277 347	1.62 0.70 0.56
100	PC Amber	100 VLED® Optical Module -350m A	6124 - 6398	51,000+	-40°C	121	120 277 347	1.01 0.44 0.35
100	PC Amber	100 VLED® Optical Module -525m A	8471 - 8853	51,000+	-40°C	179	120 277 347	1.49 0.65 0.52
120	PC Amber	120 VLED® Optical Module -350m A	7347 - 7678	51,000+	-40°C	145	120 277 347	1.21 0.52 0.42
120	PC Amber	120 VLED® Optical Module -525m A	10166 - 10624	51,000+	-40°C	215	120 277 347	1.79 0.78 0.62

DSB SERIES - VLED

LED Count	Source Type	Source	Initial Lumens	L70 greater than (Hr)	Starting Temp.	System Watts	Volts	Max Input Amps
True Amber LED - 590nm								
DSB18								
48	True Amber	**8** VLED® Optical Module -350m A	1841 - 1957	66,500+	-40°C	41	120 277 347	0.34 0.15 0.12
48	True Amber	**8** VLED® Optical Module -525m A	2535 - 2695	66,500+	-40°C	60	120 277 347	0.50 0.22 0.17
64	True Amber	**6** VLED® Optical Module -350m A	2454 - 2610	66,500+	-40°C	55	120 277 347	0.46 0.20 0.16
64	True Amber	**6** VLED® Optical Module -525m A	3379 - 3593	66,500+	-40°C	80	120 277 347	0.67 0.29 0.23
80	True Amber	80 VLED® Optical Module -350m A	2887 - 3070	66,500+	-40°C	66	120 277 347	0.55 0.24 0.19
80	True Amber	80 VLED® Optical Module -525m A	3936 - 4185	66,500+	-40°C	98	120 277 347	0.82 0.35 0.28
DSB22								
48	True Amber	**8** VLED® Optical Module -350m A	1841 - 1957	66,500+	-40°C	41	120 277 347	0.34 0.15 0.12
48	True Amber	**8** VLED® Optical Module -525m A	2535 - 2695	66,500+	-40°C	58	120 277 347	0.48 0.21 0.17
64	True Amber	**6** VLED® Optical Module -350m A	2454 - 2610	66,500+	-40°C	55	120 277 347	0.46 0.20 0.16
64	True Amber	**6** VLED® Optical Module -525m A	3379 - 3593	66,500+	-40°C	80	120 277 347	0.67 0.29 0.23
80	True Amber	80 VLED® Optical Module -350m A	2887 - 3070	66,500+	-40°C	67	120 277 347	0.56 0.24 0.19
80	True Amber	80 VLED® Optical Module -525m A	3936 - 4185	66,500+	-40°C	98	120 277 347	0.82 0.35 0.28
100	True Amber	100 VLED® Optical Module -350m A	3514 - 3672	66,500+	-40°C	83	120 277 347	0.69 0.30 0.24
100	True Amber	100 VLED® Optical Module -525m A	4861 - 5080	66,500+	-40°C	123	120 277 347	1.03 0.44 0.35
120	True Amber	120 VLED® Optical Module -350m A	4216 - 4406	66,500+	-40°C	99	120 277 347	0.83 0.36 0.29
120	True Amber	120 VLED® Optical Module -525m A	5834 - 6097	66,500+	-40°C	148	120 277 347	1.23 0.53 0.43

WOODCREST CHRISTIAN SCHOOL

Ball Field

11/06/2023

Job Number: **990347**

Prepared by: SS

Powered by Wisconsin Lighting Lab, Inc.

NOTES

60' Poles
940W KB8s

*Luminaire testing data is based on Illuminating Engineering Society (IES) standards under simulated and laboratory conditions. This design is based on information supplied by others, and individual field measurements may vary from computer-simulated calculations due to variables like (but not limited to) variation in electrical voltage, environmental conditions and other variable field characteristics. Typical field foot candle measurements may vary +/- 10%. For sports lighting, field measurements should be taken in accordance with IESNA RP-6-15. Conformance to facility and local codes is the responsibility of the owner and their representatives. This layout may not meet CA Title 24 and/or other local energy codes. If specific compliance is required, those details must be provided to your factory design representative.

**Satisfactory performance and safe use of LED sports lighting fixtures is dependent upon light poles, brackets, anchorage and other structural components being of adequate design and condition. The total combined Effective Projected Area (EPA) and weight of all fixtures, brackets and attachments mounting to a light pole cannot exceed the EPA and weight rating for a specified pole. For sports lighting retrofit applications, it is the customer's responsibility to have a qualified inspector and/or engineer confirm the structural adequacy of the existing light poles assemblies. We are happy to quote new light poles and brackets if you have concerns about your existing materials.bonded

General Electrical Requirements:

- 3-phase, 4-wire, 480V at service entrance
- Service entrance supplied voltage to be within 5%.
- Type 2 SPD installed near service entrance
- 2-6ga conductors at each pole base
- 3-wire, 277V at pole base (Line – Neutral – Ground)
- 3% permissible voltage drop from service entrance and pole base
- 3-wire, 110-277V at wireless control base station (exact location TBD)
- Typical grounding electrode at pole base, bonded

Specifications subject to change without notice.

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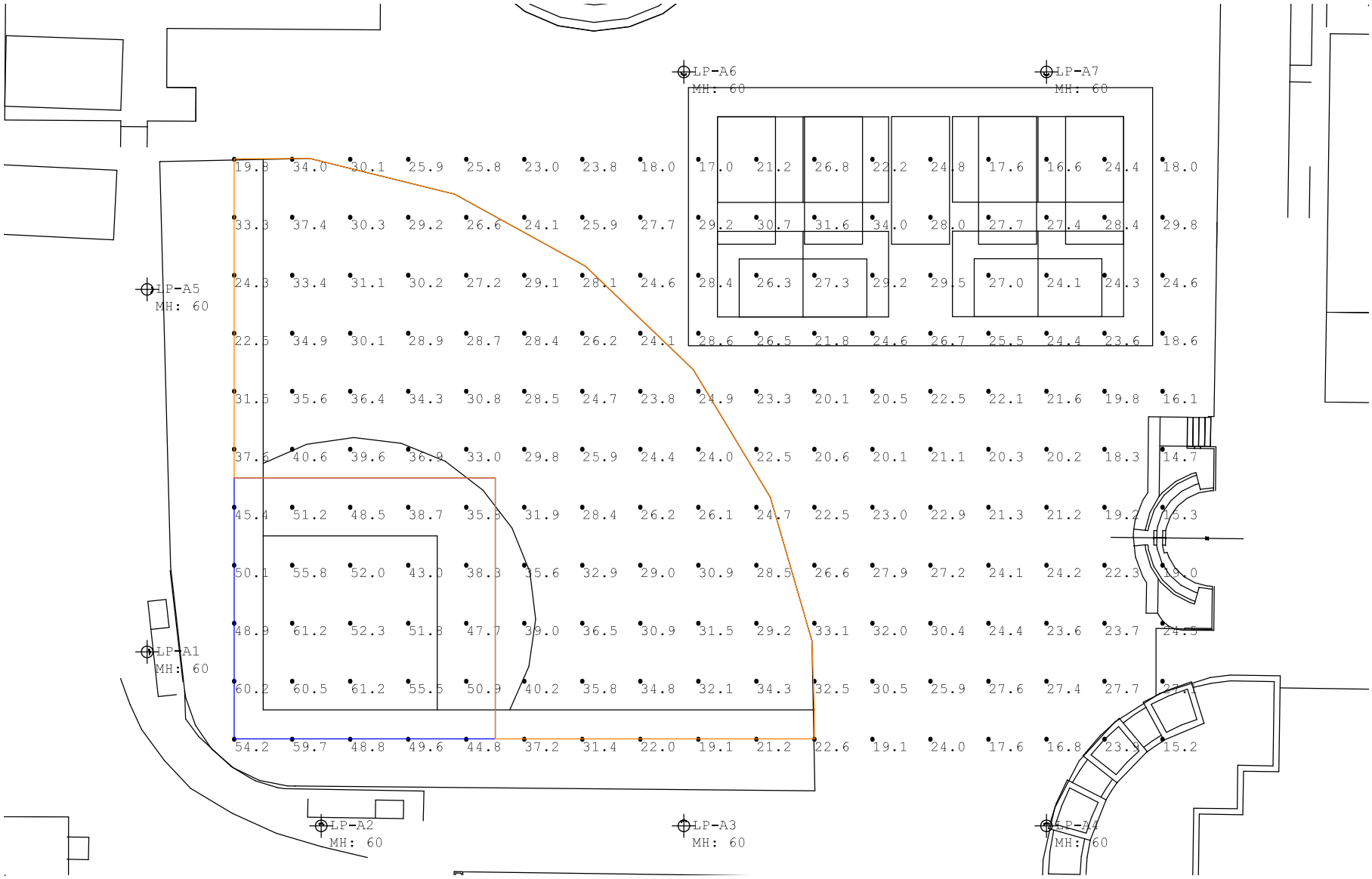
Photometric



Scale: 1 inch= 50 Ft.

Specifications subject to change without notice.

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Pole Schedule

Qty	Label	Description	Total Watts
1	LP-A1	60' POLE, 4 FIXTURES	3536
1	LP-A2	60' POLE, 4 FIXTURES	3536
1	LP-A3	60' POLE, 4 FIXTURES	3536
1	LP-A4	60' POLE, 4 FIXTURES	3536
1	LP-A5	60' POLE, 4 FIXTURES	3536
1	LP-A6	60' POLE, 4 FIXTURES	3536
1	LP-A7	60' POLE, 4 FIXTURES	3536

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Entire Area	Illuminance	Fc	30.01	61.2	14.7	2.03	4.16
Baseball Infield	Illuminance	Fc	50.64	61.2	35.8	1.41	1.71
Baseball Outfield	Illuminance	Fc	30.34	40.6	19.1	1.59	2.13

Specifications subject to change without notice.

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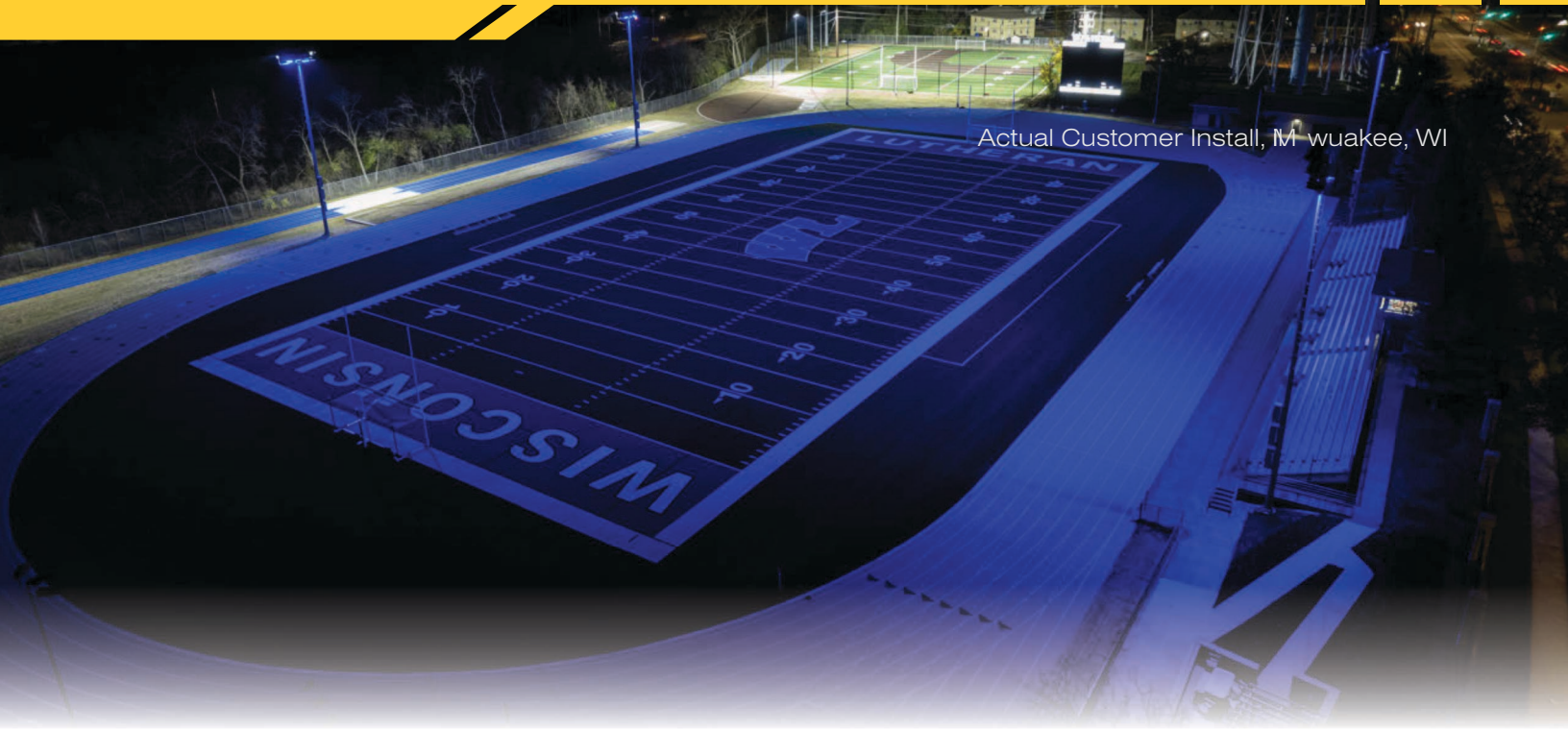

Actual Customer Install, Milwaukee, WI

WILLsport™ GFX

Wireless Lighting Control + Entertainment System


Actual Customer Install, Grand Rapids, MI

WILL | WISCONSIN LIGHTING LAB®

WiLLsport® GFX Wireless Lighting Controls

Catalog #

Project

Comments



WS-GFX

Part #	Description
WS-GFX	WiLLsport® GFX Wireless Lighting System
WS-GFX-WLC	Wireless Lighting Console
WS-GFX-SCORE	Touchscreen + Tabletop/Wall Mount
WS-GFX-WBC	Wireless Button Control



WS-GFX-SCORE



WS-GFX-WBC



WS-GFX-WLC

Highlights

The WiLLsport GFX Wireless Lighting Console is the central point of control for your lighting system. Boasting multiple user interface options and a powerful built-in lighting engine, this secure onsite device provides round-the-clock control of athletic lighting applications. The factory-commissioned lighting platform offers plug-and-play access to bold light shows and automated scheduling capabilities. With wired and wireless configuration options, it's suitable for both retrofit and new installations.

Features

- Designed, engineered, and assembled in Wisconsin, USA from premium domestic and imported components
- Factory-commissioned, plug-and-play
- Multiple touch screen mounting options
- Reliable wireless control with cognitive coexistence
- 500-FT wireless range + range extending options*
- Built-in entertainment programs
- Automated simple-scheduling features
- Sub-field zone control
- IP67 rated outdoor enclosure
- RGB lighting control ready

*Wireless range can vary site to site based on antenna dynamics and local environment.

Specifications - Console

Dimensions	13.2" H x 11.2" W x 7.7" D (336.3 x 285.5 x 195.6 mm)
Input Power	36W
Input Voltage	120V AC
Operating Environment	0 to 45°C; 10 to 90% non-condensing
Radio	2.4 GHz CRMX

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Lighting System Controls

The intuitive user interface provides multiple points of control and automation for the lighting system.

Simple Scheduling Functionality

Automate your field lighting with simple scheduling functionality built-into the GFX lighting control system. Common scheduling examples include:

- Timer with 2-minute dim warning
- Sunrise, sunset, and/or time-triggered lighting events
- Recurring events (daily/weekly)
- Calendar event scheduling

Factory-Commissioned Entertainment Programs

Coordinated entertainment programs to add a show-stopping element to your athletic facility.

- **Lightning** - All fixtures randomly turn ON/OFF to create a camera flash effect on the playing field.
- **Tornado** - All fixtures adjust light levels to create a swirling effect around the playing field.
- **Night Rider** - All fixtures adjust light levels to create a back and forth effect across the playing field.
- **Pulse** - All fixtures simultaneously increase and decrease light levels to create a pulsing effect on the playing field.

Scene Control

Put focus on the action before/during/after the game with scene control.

- Gametime
- Player Intros
- Halftime Show
- National Anthem
- Game Over / Security Lighting

Multi-Field Control

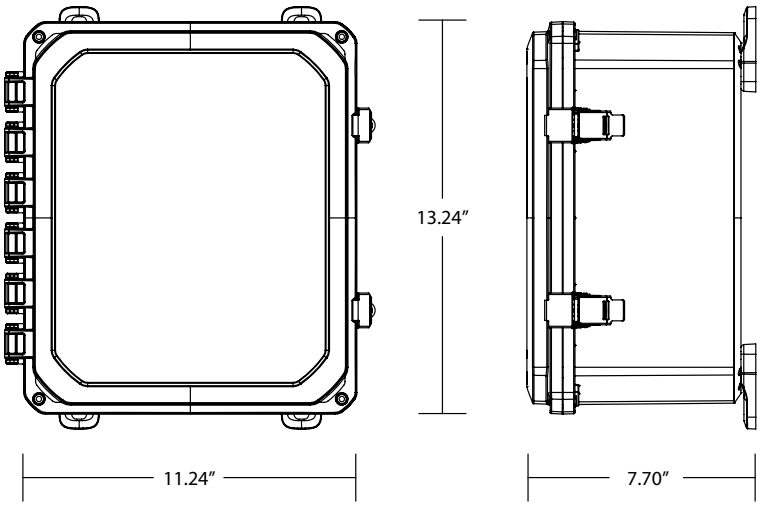
Utilize WiLL's GFX technology to control multiple fields or facility resources with the same system.

- Wagon-wheel ballfield configurations
- Multi-field athletic complexes
- Multi-sport facilities
- Site support lighting (walkways, area lighting, etc)

Specifications - Touchscreen

Dimensions	7.0" H x 9.9" W x 0.9" D (178mm x 252mm x 24mm)
Input Power	18W max
Input Voltage	12V/2A AC/DC Adapter supplied
Operating Environment	0 to 45°C; 10 to 90% non-condensing
Radio	802.11 a/b/g/n/ac
Certifications	FCC, CE, & RoHS

Dimensional Diagrams



RGB Ready

Enhance your lighting application with the addition of dynamic color control to your GFX system.

- Wireless and/or wired RGB lighting control
- Millions of colors
- Great for accent + architectural applications
- Direct factory integration + support

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- **Command Center for Entire Lighting System**
- **Simple + Intuitive Large Touchscreen Control**
- **Configurations:**
  - **Scorekeeper Stand / Wall Mount (Standard)**
  - **Console Mount**



- **Factory-Programmed for Plug-and-Play Installation**
- **Tailored Interface For Your Value**
- **RGB LED Control Ready**

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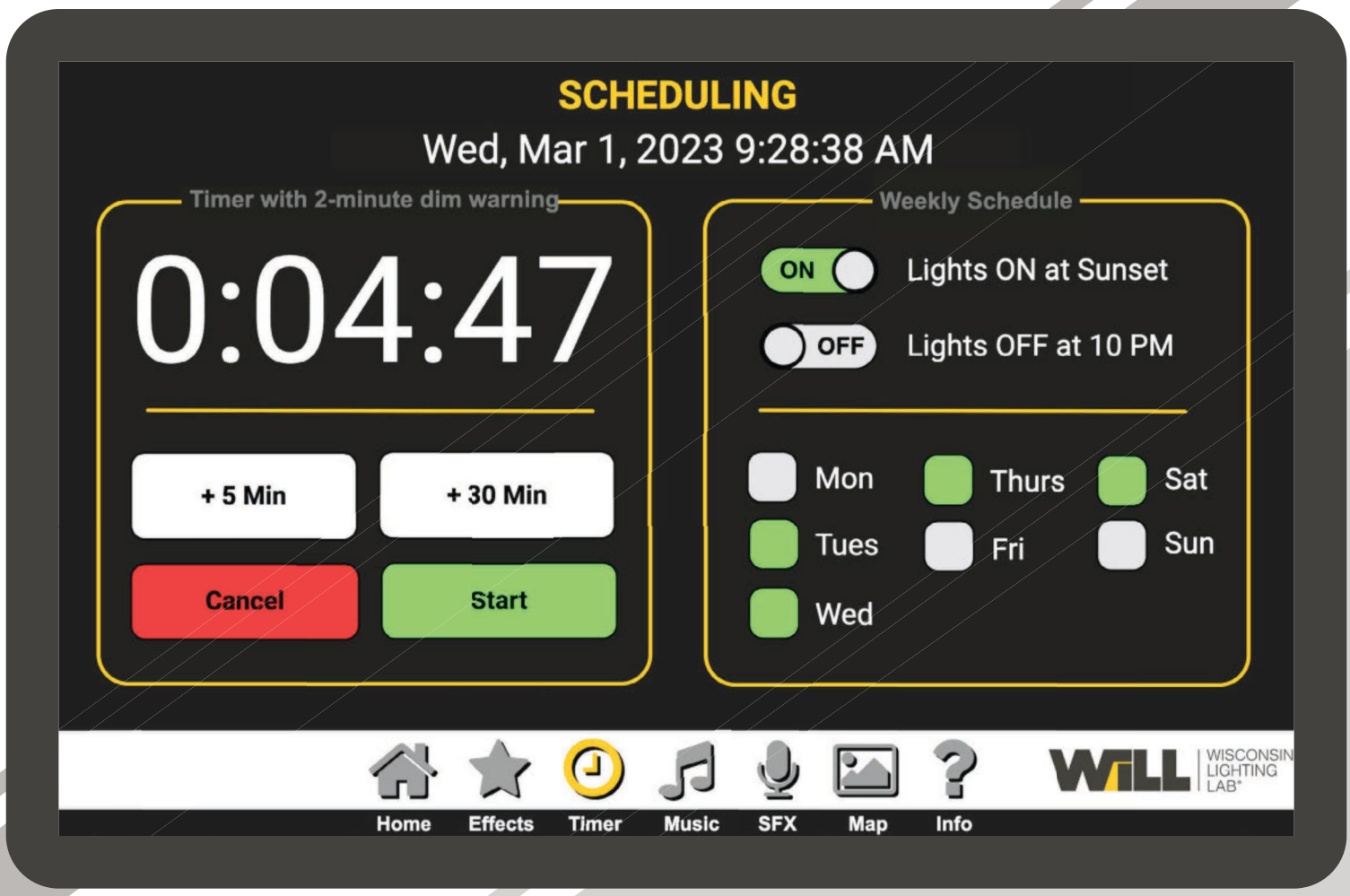
SIMPLE SCHEDULING BUILT-IN

- Sunrise, Sunset, and/or Time-Triggered Lighting Events
- On/Off Times with 2-Minute Dim Warning for Factory Users

FACTORY SUPPORTED SCHEDULING SERVICES*

- Client-Created Scheduling
- Recurring Events (Daily, Weekly, Monthly)
- Contact WiLL's Dedicated Factory Support Team
  - applications@willbrands.com
  - (8) 8 8



Data Collection Required

All pre-set entertainment programs are available as a package add-on. Like all WiLL lighting controls, the entertainment programs are factory commissioned prior to installation as part of your WiLLsport® controls user interface.

LIGHTNING

All fixtures randomly turn ON/OFF to create a camera flash effect on the playing field.

TORNADO

All fixtures adjust light levels to create a swirling effect around the playing field.

NIGHT RIDER

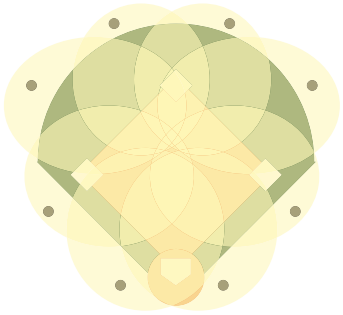
All fixtures adjust light levels to create a back and forth effect across the playing field.

PULSE

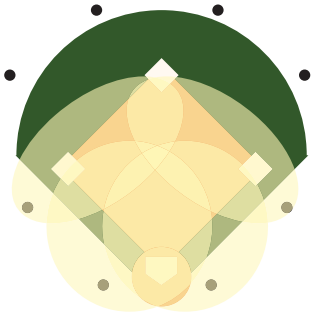
All fixtures increase and decrease light levels to create a pulsing effect on the playing field.

Scenes can be customized and factory-commissioned based on the needs of your individual facility. If there are specific activities you would like to spotlight, our commissioning team can work with you to pre-configure your system at the WiLL factory prior to installation.

BASEBALL



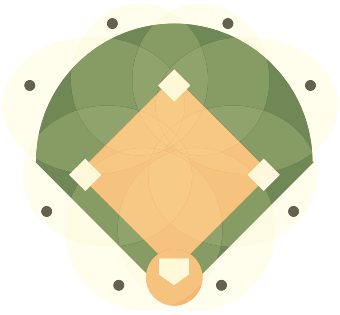
GAME TIME
ENTIRE FIELD
0% ON



PLAYER INTROS
INFIELD/OUTFIELD FOCUS
0% | 0 0% ON

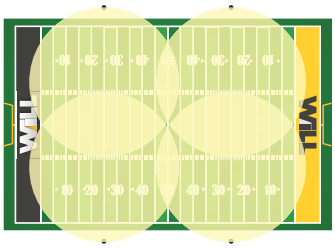


NATIONAL ANTHEM
HOME PLATE FOCUS
0% | 0% ON

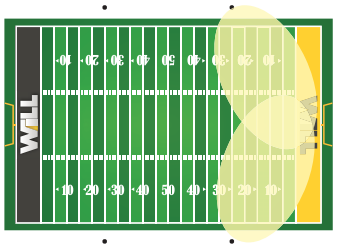


GAME OVER
ENTIRE FIELD
20% DIM

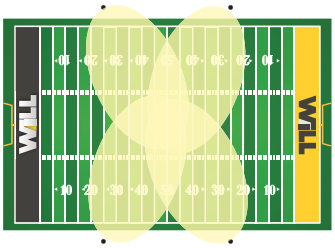
FOOTBALL



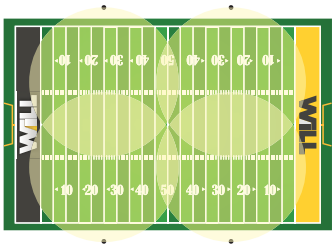
GAMETIME
ENTIRE FIELD
0% ON



PLAYER INTROS
END ZONE 1 2 FOCUS
0% | 10% ON

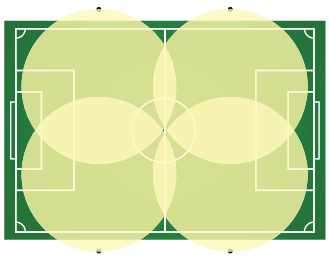


NATIONAL ANTEM + HALFTIME SE W
5 D LINE FOCUS
0% | 0% ON

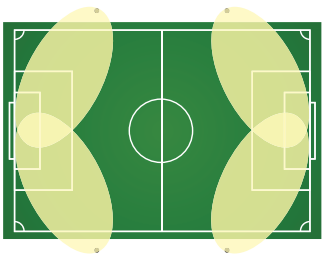


GAME OVER
ENTIRE FIELD
2% DIM

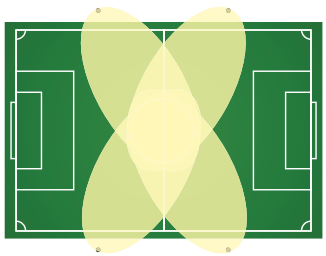
SOCCER



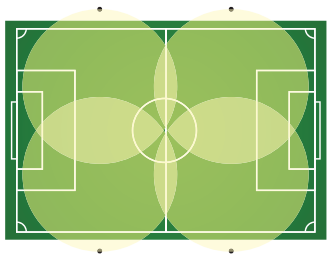
GAMETIME
ENTIRE FIELD
0% ON



G ALIES
NET FOCUS
0% | 10% ON

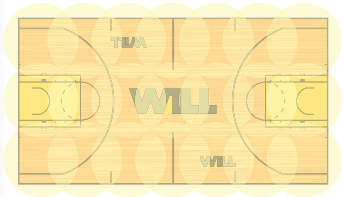


NATIONAL ANTEM + HALFTIME SE W
MIDFIELD FOCUS
0% | 0% ON

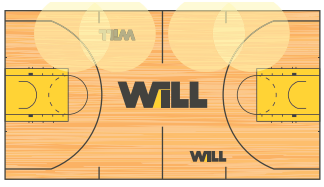


GAME OVER
ENTIRE FIELD
2% DIM

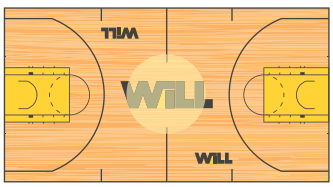
BASKETBALL



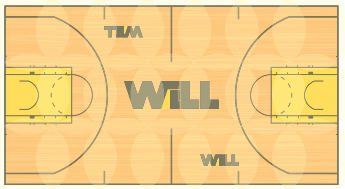
GAMETIME
ENTIRE COURT
0% ON



PLAYER INTROS
PLAYER BN CHES FOCUS
0% | 0 0% ON



NATIONAL ANTEM + HALFTIME SE W
HALF COURT FOCUS
0% | 0% ON



GAME OVER
ENTIRE COURT
2% DIM

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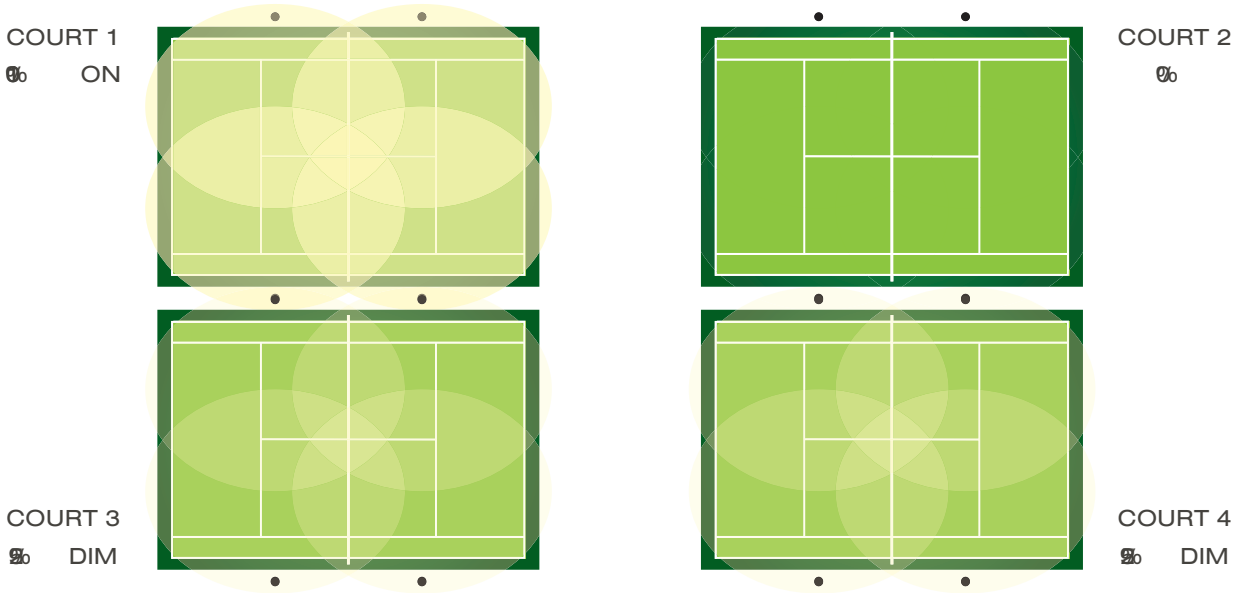
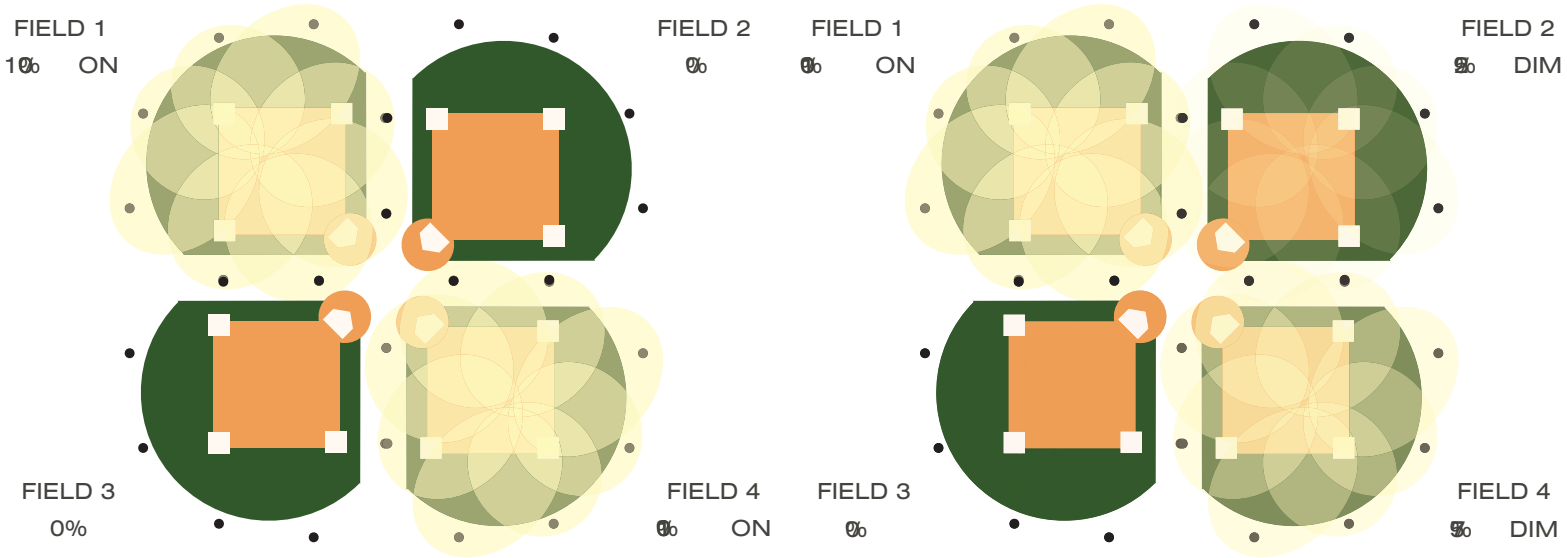
Sports complexes can also take advantage of WiLL wireless controls packages – creating easy and flexible controls over multiple fields all from one secure location.



M nage All Fields in a Complex with ONE Controls System!



500ft+ Wireless Range (*Wireless range can change dependent on on-site variables)

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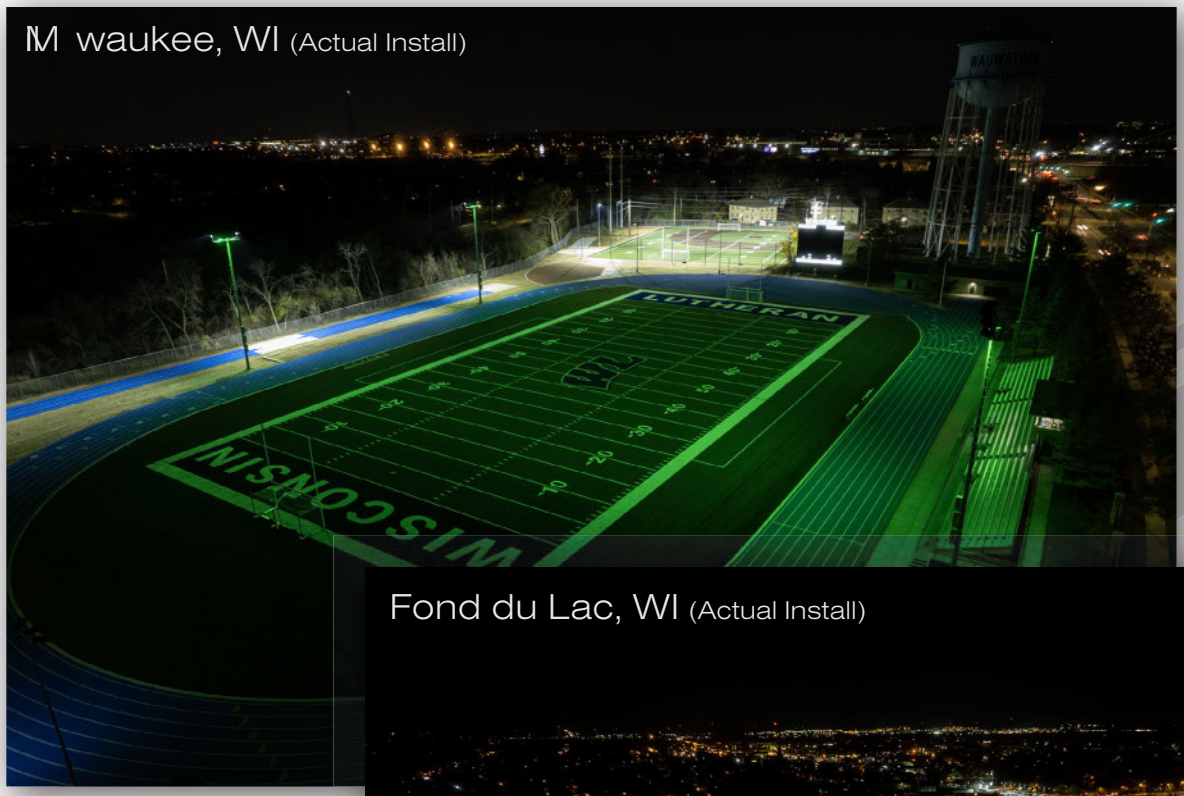
MODERN FACILITY CONTROL

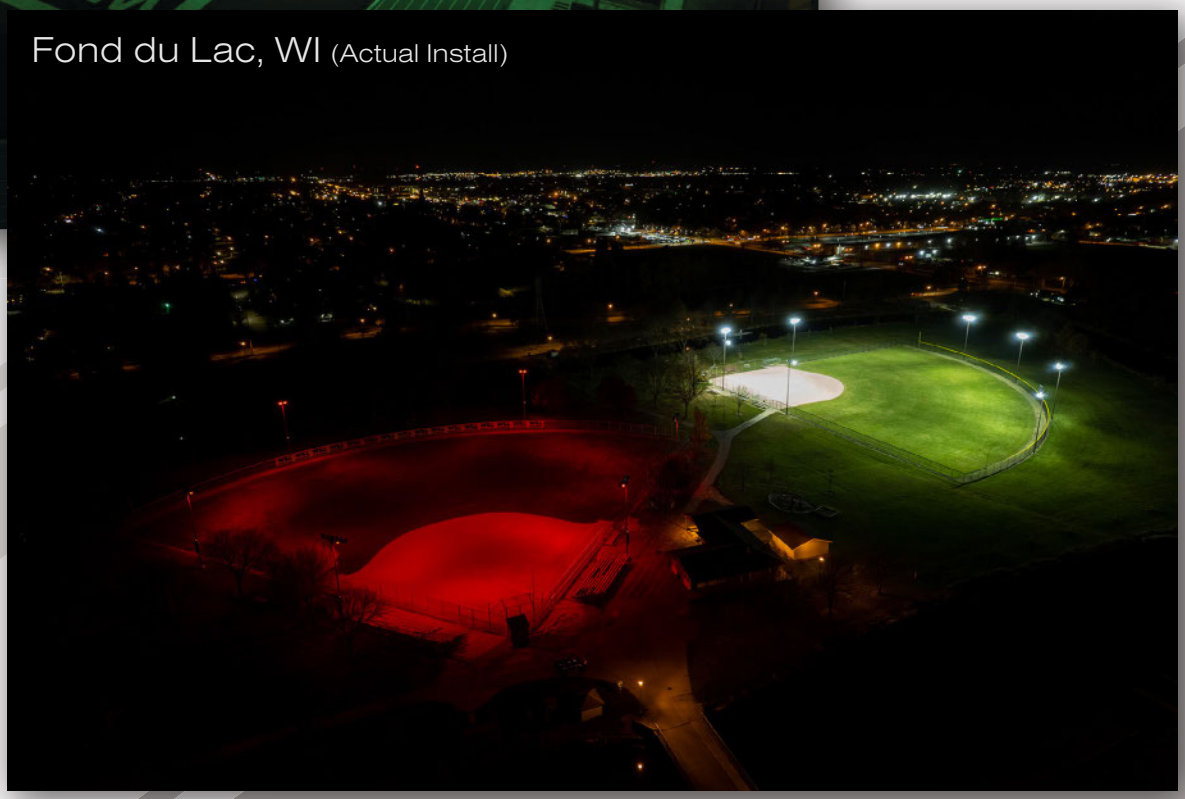
- Eve Ligh Program s
- Seaso Ligh ing Presets

FACTORY COMMISSION NG + SUPPORT

- Milo of Cobr Options
- RGB In egrated LED Fixtures

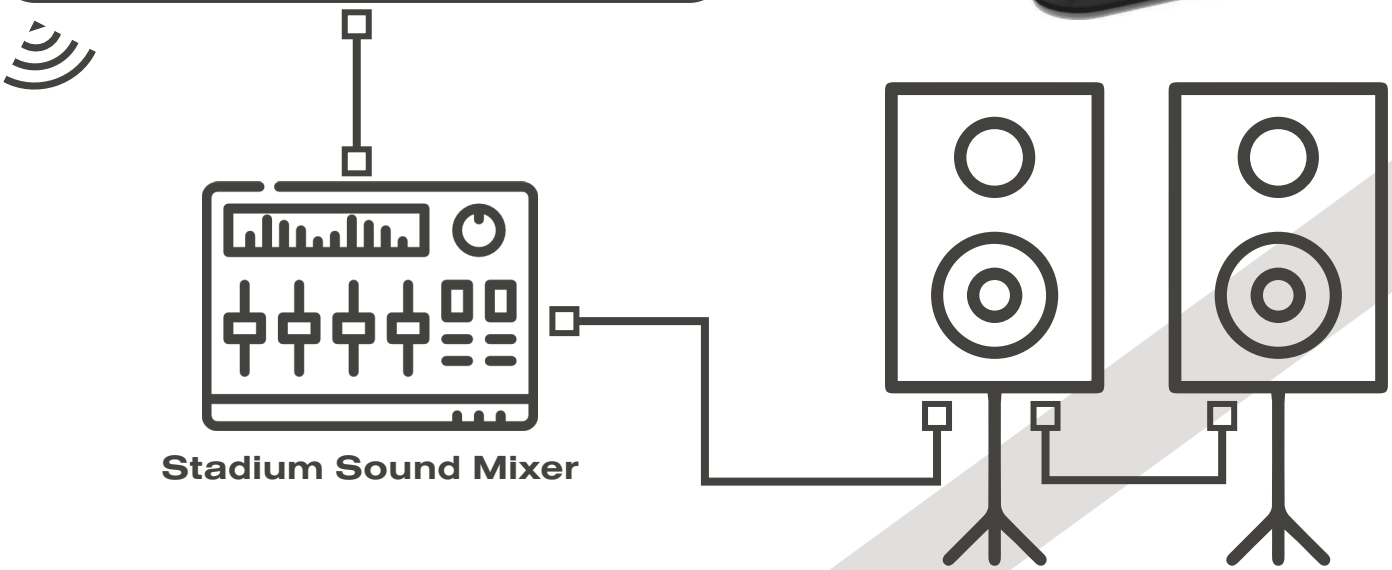


M waukee, WI (Actual Install)


Fond du Lac, WI (Actual Install)









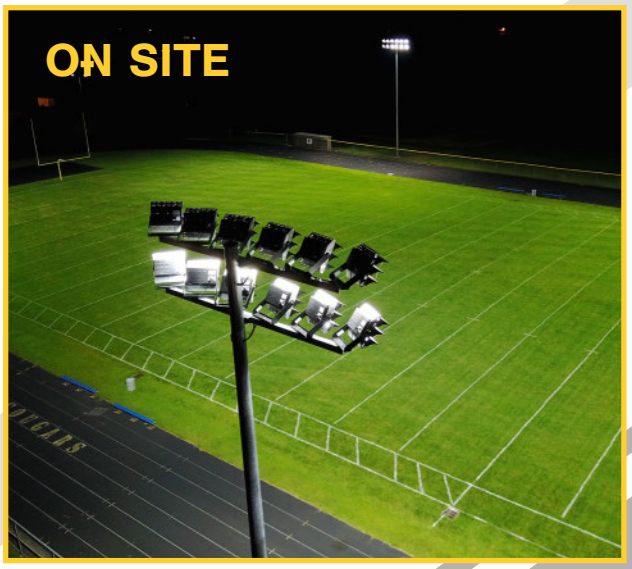
- Ubc k your ente tainma t venue with audio light shows
- Al in one sy tem (Lighting Control, Music + Lighting Enh e tainment)
- Fa tory Commissioned + Supporte
- Retrofi existing sy tem s with minima disruption



- System status + control from anywhere
- Compatible with any connected device with a browser
- Secure login access
- Great feature for coaches, athletic managers + league directors

*Subscription required

REMOTE LIGHTING CONTROL



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- Simple powered control distribution to LED fixtures
- Reliable field flexible data for wireless control communication
- Simplified high-level power connections

- Lockable weatherproof enclosure
- New installation OR retrofit ready
- Compatible with existing DMX 2 systems







- Timed lighting control for public use facilities
- Flexible set time with a 2 minute dim warning
- Single button for intuitive use
- Outdoor + weatherproof enclosure
- Pole or wall mounting options

- Remote tech support directly from the factory engineering team
- Trouble shooting & system status
- Lighting control programming updates
- Assistance with system expansion
- After-hours support



Ordering Your WiLLsport® Lighting Controls System

Ready to enhance your LED lighting system with the addition of wireless controls? Follow these simples steps to kick start your project:

To Place Your Order

Contact your WiLL sales rep, and determine your factory-commissioned controls functions. Our recommended functions include:

Preset Lighting Configurations

On/Off - 0%-100% Dimmer (Main Field)

Preset Entertainment Light Shows

On/Off - 0%-100% Dimmer (Side Field)



Controls functions can be customized to meet the specific needs of your project.

After Placing Your Order

After the order is placed and your light fixtures are in production, our expert team will schedule a controls configuration call to discuss and confirm the finer details of your controls system.

During this call, you will:

- Review your controls program with the expert team at WiLL.
- Discuss the recommended configuration for your site (provided in advance by WiLL)
- Learn more about the easy-to-operate user interface.
- Talk through all special requirements for your project.
- Get answers to any questions you may have!

The approved controls configuration will then be factory-commissioned into the production of your lighting system prior to shipment. Your system will be plug-and-play ready upon arrival.

DESIGNED + SUPPORTED AMERICA

Easy Installation. Expert Support.

WiLL's USA-based production, engineering, and tech support teams have created a simplified, plug-and-play installation process. If any questions or issues do arise, rest assured that the WiLL team has you covered with factory-direct technical support.

WiLLsport® PRODUCT FAMILY

Proudly engineered and manufactured in Wisconsin, USA – our WiLLsport® family of LED sports lighting systems combines 60 years of manufacturing expertise, premium components, top notch midwestern workmanship, and cutting-edge lighting and controls technology. From backyard ballfields to professional sports complexes to infrastructure and transportation applications, WiLLsport® series products are precision-engineered to deliver premium lighting, power management, and entertainment – all while backed by WiLL's unmatched design, engineering, and project support capabilities.

- Output options up to 15,000 lumens
- Proprietary heat sink design with thermally isolated LED modules resulting in calculated L70 LED life over 200,000 hours
- Wireless control options including entertainment, RGB, dimming, zones, and schedules



WiLLsport® KBX + RPCX

INDOOR / OUTDOOR SPORTS LED LIGHTING



MANUFACTURED in WISCONSIN

WiLL WISCONSIN LIGHTING LAB®

WiLLsport® **KBX** LED LIGHTING W/ OPTIONAL **RPCX** REMOTE PWR-CTL SYSTEM

Catalog #

Project

Comments



Highlights

- Designed, engineered, and manufactured in Wisconsin, USA from premium domestic and imported components
- IES files, photometric reports, and lighting simulations available from factory design team
- Output options up to 115,000 lumens
- Easy driver and LED module access for technology upgrades and maintenance
- Remote power-control industrial cabinet options from factory
- Wireless control options including entertainment, RGB, dimming, zones, and schedules
- Pre-aimed adjustable mount according to factory lighting design
- Rugged aluminum chassis construction with integrated GlareKiller system

Applications

- Outdoor sports and entertainment facilities
- Indoor sports arenas and venues
- Retrofit and new installs
- Hometown ball fields
- Professional sports complexes
- General high-output flood and area lighting
- Airports, military, and infrastructure projects

Construction & Finish (Light Fixture)

- Rugged aluminum chassis with excellent heat/impact resistance and hinged electrical access
- Proprietary anodized heat sink design with thermally isolated LED modules resulting in calculated L70 LED life over 200,000 hours
- Standard powder coat facilities are UL1332 (DTVV2) certified for application of organic finish coatings for outdoor enclosures
- Anodized light engine plate and heat sinks meet MIL-A-8625 Type II (Class 1 & 2) standards and are RoHS, REACH, ELV, and WEEE compliant
- High-grade stainless steel hardware for superior strength and corrosion resistance
- Driver components are fully encased in potting material for moisture and vibration resistance

Construction & Finish (Optional Remote PWR-CTL)

- Bottom cabinet(s): Aluminum industrial power-control cabinet with NEMA 3R rating
- Top distribution hub(s): Polycarbonate enclosure with NEMA 1, 2, 4, 4X, and IP66 rating
- Small, medium, large, and custom cabinet configurations available
- Standard powder coat facilities are UL1332 (DTVV2) certified for application of organic finish coatings for outdoor enclosures
- High-grade stainless steel hardware for superior strength and corrosion resistance
- See drawings below for additional component and wiring details

Compliance & Warranty

- ETL Certification for UL STD 1598 & CSA STD C22.2 # 250.0 for dry/damp/wet locations
- Remote power-control: pending
- Meets Buy American Act requirements
- Standard 5-year limited warranty with extended factory warranties available

Light Engine & Electrical

- Premium high-efficiency Chip-on-Board (COB) LEDs wired and bonded directly to circuit board to deliver compact lumen density and added reliability
- Self-sealing optical assembly constructed of optical-grade silicone with 93% typical lighting transmittance
- -40°C to +50°C ambient operating temperature options
- Standard AC input voltage of 120-277V 50/60 Hz; up to 480V available
- Isolated 0-10V dim-to-off with standby power ≤ 1.5W (standard) and PWM/3-timer-modes dimmable (optional)
- Power factor of 0.90 min
- Total harmonic distortion of 20% max
- Drivers include integral input Surge Protection of Differential Mode 6kV, Common Mode 10kV per EN 61000-4-5
- KB4&6: Thermally protected secondary 20kA surge suppression (optional)
- KB8: Thermally protected secondary 10kA surge suppression (optional)
- Always-on auxiliary power: 12VDC, 200mA
- Local specifying engineer recommended for product selection and local compliance
- Licensed electrician required for installation

Power & Control Options

- RGB color mixing and DMX integrations
- Dynamic scene entertainment packages
- Synapse® wireless system for large-scale control of zones, dimming, schedules, and sensors
- Wired and wireless configurations available
- Turnkey factory commissioning with on site support options

Light Poles & Arms

- WiLL offers one of the most comprehensive light pole, bracket, and arm catalogs in the industry
- Aluminum, steel, fiberglass, and concrete materials
- Custom fabrication, finishing, and accessories available
- Dedicated light pole application support team

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EPA Chart

Base Model	0° Tilt	10° Down Tilt	20° Down Tilt	25° Down Tilt	15° Up Tilt	25° Up Tilt
WS-KB4	1.39	1.39	1.39	1.39	1.39	1.46
WS-KB6	1.43	1.39	1.39	1.57	1.7	2.1
WS-KB8	1.85	1.54	1.69	2.06	2.26	2.75

Specifications & Typical Lumen Output

Full White

Base Model	Fixture Weight (Onboard Drivers) (lb)	Fixture Weight (Remote Drivers) (lb)	System Watts (W)	Engine Qty	Drive Current (A)	Lumens	lm/W
WS-KB4-470	38	32	442	4	2.0	57,700	131
WS-KB6-630	49	41	628	6	1.9	85,000	135
WS-KB8-940	63	51	884	8	2.0	115,000	130

Full RGB Tuning

Base Model	Fixture Weight (Onboard Drivers) (lb)	Fixture Weight (Remote Drivers) (lb)	System Watts (W)	Engine Qty	Drive Current (A)	Max RED Estimate (629nm typ.)		Max GREEN Estimate (530nm typ.)		Max BLUE Estimate (475nm typ.)	
						Lumens	lm/W	Lumens	lm/W	Lumens	lm/W
WS-KB4-250	38	32	246	4	0.5	5,768	64	8,060	106	3,392	42
WS-KB6-370	49	41	370	6	0.5	8,652	64	12,090	106	5,088	42
WS-KB8-500	63	51	493	8	0.5	11,536	64	16,120	106	6,784	42

White + RGB Combo Tuning

Base Model	Fixture Weight (Onboard Drivers) (lb)	Fixture Weight (Remote Drivers) (lb)	System Watts (W)	Engine Qty (WHITE)	Engine Qty (RGB)	Max RED Estimate (629nm typ.)		Max GREEN Estimate (530nm typ.)		Max BLUE Estimate (475nm typ.)		Max WHITE Estimate	
						Lumens	lm/W	Lumens	lm/W	Lumens	lm/W	Lumens	lm/W
WS-KB4-360	38	32	358	2	2	2,884	64	4,030	106	1,696	42	28,850	131
WS-KB6-520	49	41	519	3	3	4,326	64	6,045	106	2,544	42	42,500	135
WS-KB8-715	63	51	716	4	4	5,768	64	8,060	106	3,392	42	57,500	130

Note: Typical lumen values are based on lab and simulated photometric tests. Actual performance may differ resulting from optical configuration, color temp and CRI, glare management, owner environment, and application.
Note: Data based on 25°C ambient operating temperature.

Lumen Multiplier & Maintenance (Full WHITE)

Ambient Temperature	Lumen Multiplier	TM-21 Lumen Maintenance (50,000 Hours)	Calculated L90 (hrs)	Calculated L70 (hrs)
0°C / 32°F	1.04	91.71	60,000	206,000
10°C / 50°F	1.02	91.71	60,000	206,000
25° C / 77°F	1.00	91.71	60,000	206,000
30°C / 86°F	0.99	91.71	60,000	206,000
35°C / 95°F	0.99	90.95	55,000	188,000
40° C / 104°F	0.98	90.12	50,000	171,000
45° C / 113°F	0.96	89.26	46,000	157,000
50°C / 122°F	0.96	88.35	42,000	144,000

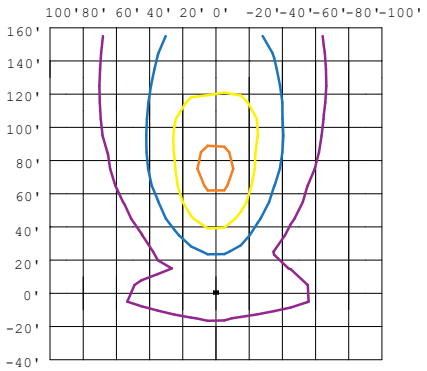
Note: Values calculated according to IESNA TM-21-11 methodology.

Current (A)			
Voltage	442W	628W	884W
Input Current @ 120V (A)	3.68	5.23	7.37
Input Current @ 208V (A)	2.13	3.02	4.25
Input Current @ 240V (A)	1.84	2.62	3.68
Input Current @ 277V (A)	1.60	2.27	3.19
Input Current @ 347V (A)	1.27	1.81	2.55
Input Current @ 480V (A)	0.92	1.31	1.84

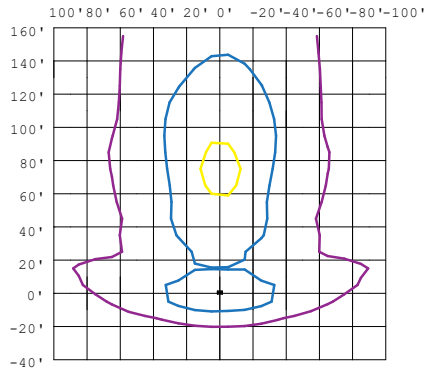
Photometric Diagrams

LEGEND
0.5 fc 2.0 fc 5.0 fc 10 fc 25 fc

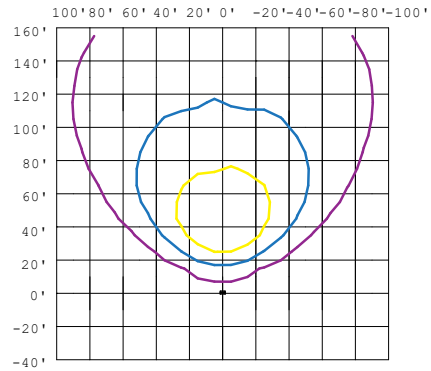
Simulated per IESNA LM-63-1995



630W KB6
(5N) 25° Narrow Sport
50' Height @ 0° Up Tilt



630W KB6
(45) 45° Narrow Sport
50' Height @ 0° Up Tilt



630W KB6
(70) 70° Medium Sport
50' Height @ 0° Up Tilt

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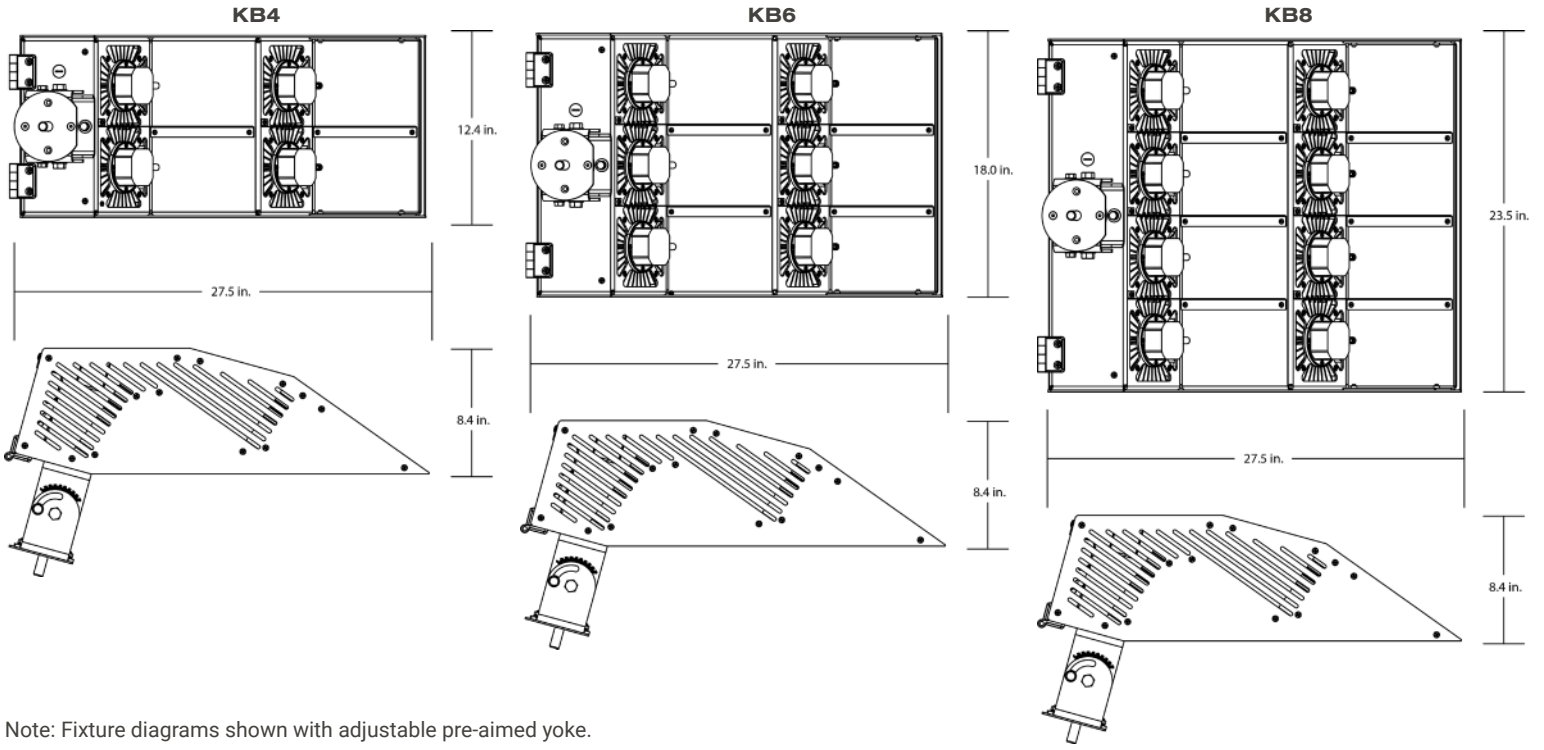
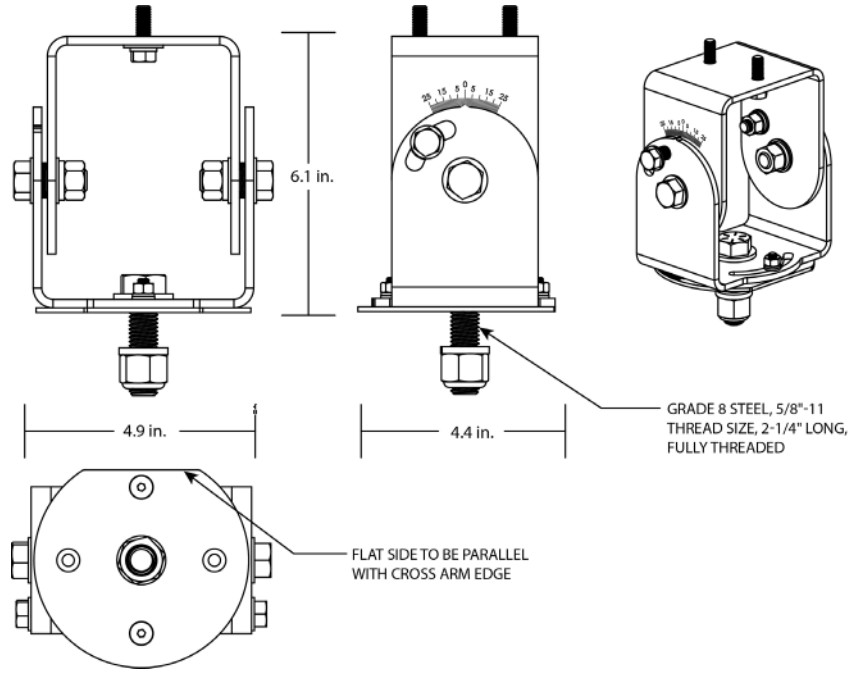
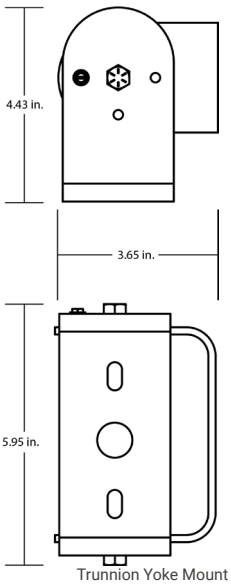
Dimensional Diagrams (Light Fixture)



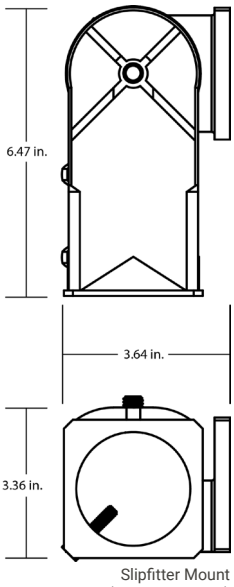
Note: Fixture diagrams shown with adjustable pre-aimed yoke.



Adjustable Pre-Aimed Yoke



Trunnion Yoke Mount
(KB4 & KB6 Only)



Slipfitter Mount
(KB4 & KB6 Only)

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Ordering Information (Light Fix ure)

Ex: WS-KB6-630-57-RP-5N-BC-APYH-WHP15NP-SS

Product Family	Design	Performance (Watts = Typical Lumens)	Color Temp	Voltage	Distribution	Finish Color
WS = WiLLsport®	KB4 = 4 Engine Chassis (Outdoor Wet)	470 = 60,000	57 = 5700K, 70 CRI	RP = Remote Power/Drivers	5N = 25° Narrow Sport	BK = Black Anodized (Standard)
	KB6 = 6 Engine Chassis (Outdoor Wet)	630 = 85,000	578 = 5700K, 80 CRI	MV = 120-277V	5N70 = 25°/70°Combo	SV = Silver Anodized (Custom)
	KB8 = 8 Engine Chassis (Outdoor Wet)	940 = 115,000	50 = 5000K, 70 CRI	HV = 277-480V	45 = 45° Medium Sport	BC = 2-Color Combo Branding Upgrade (Custom)
	KB4A = 4 Engine Chassis (Indoor Dry/Damp)	360 = x2 WHITE + x2 RGB	40 = 4000K, 70 CRI	CV = Custom	70 = 70° Medium Sport	RAL = Custom RAL Match (Custom)
	KB6A = 6 Engine Chassis (Indoor Dry/Damp)	520 = x3 WHITE + x3 RGB	RGB = All RGB		5N45 = 25°/45°Combo	
	KB8A = 8 Engine Chassis (Indoor Dry/Damp)	715 = x4 WHITE + x4 RGB	CT = Custom		5M = 100° Medium Sport	
		250 = x4 RGB			CD = Custom	
		370 = x6 RGB				
		500 = x8 RGB				
		CW = Custom				

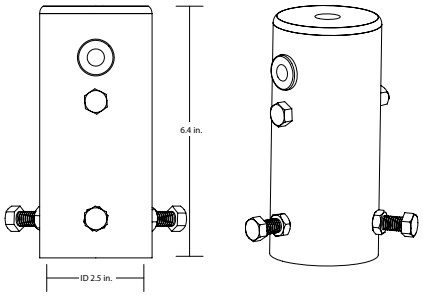
Options & Accessories (Add as Suffix)			
Mounting	**Option**	**Option**	**Accessories**
APY = Adjustable PreAimed Yoke	WHP3NP = 2' Cord w/o Plug, Stripped Pigtail	SRG27720 = 20kA Surge Suppressor (Field Replaceable), 120-277V [Onboard KB4&6 Only]	PTT = 2.38" OD Tenon Adapter
APYH = Adjustable PreAimed Yoke (Hanging Config Below Crossarm)	WHP7NP = 6' Cord w/o Plug, Stripped Pigtail	SRG48020 = 20kA Surge Suppressor (Field Replaceable), 347-480V [Onboard KB4&6 Only]	EXT = Extension Plate For APY (Common For Back-To-Back Crossarm Apps)
SF = 2.38"" OD Slipfitter (KB4 & KB6 Only)	WHP11NP = 10' Cord w/o Plug, Stripped Pigtail	SRG27710 = 10kA Surge Suppressor (Field Replaceable), 120-277V [Onboard KB8 Only]	STUDL = 5/8-11x6", Grade 8, Zinc Yellow-Chromate Plated, Nut, Washer, and Lock Washer
TR = Trunnion Yoke (KB4 & KB6 Only)	WHP15NP = 14' Cord w/o Plug, Stripped Pigtail	SRG48010 = 10kA Surge Suppressor (Field Replaceable), 347-480V [Onboard KB8 Only]	PDH = Pole Top Power Distribution Hub
CM = Custom	NAT = Natatorium Application (Wet Rated, 316 Stainless Hardware, Anti-Galvanic Corrosion Paste, IP67 Silicone LED Module, Anodized Aluminum Chassis)		WGKB-4/6/8 = KB4 Wireguard (Common For Uplights, Wattage Specific)
			SS-4/6/8 = Spill Sponge Louvers, Added Glare Management (Wattage Specific)
			GC-4/6/8 = Glare Cup Beam Control (Wattage Specific)
			CH = Safety Chain (Common for Arenas)
			GFX = Wireless DMX Lighting Control System (Consult Factory)
			GFM = Wireless Mesh Lighting Control System (Consult Factory)

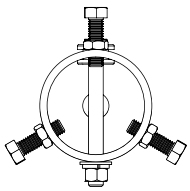
Note: Custom products, configurations, options, and accessories available from factory.



Tenon Adapter









WHITE/RGB Shown



Pole Top Power Distribution Hub

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Ordering Information (Optional Remote PWR-CTL)

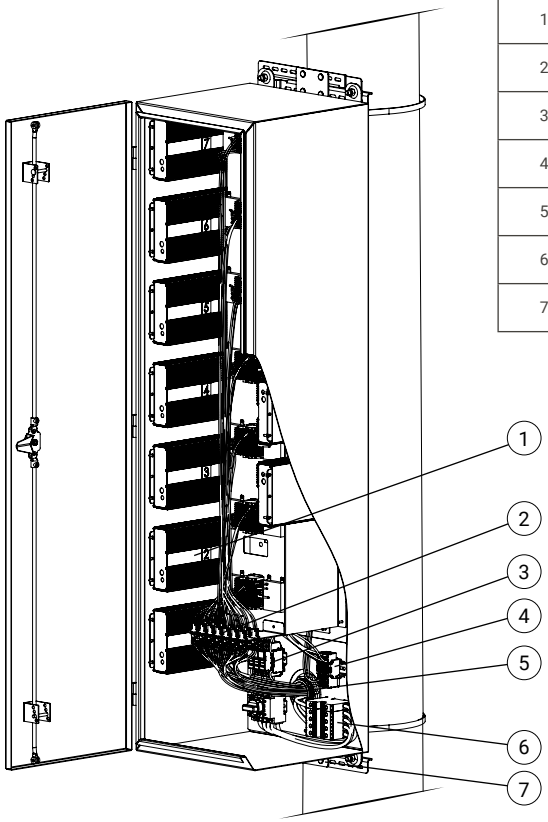
Ex: WS-RPCN-6W-8-MV-LG-PBS-GFX

Product Family	Design	Fixture Model	Fixture Count (Per Pole)		Voltage	Finish Color
WS = WiLLsport®	RPCN = Remote Power-Control System (New Pole Install)	4W = KB4-470	1	2	MV = 120-277V	LG = Light Gray (Standard)
	RPCE = Remote Power-Control System (Existing Pole Install)	6W = KB6-630	3	4	HV = 277-480V	BC = 2-Color Combo Branding Upgrade (Custom)
		8W = KB8-940	5	6	CV = Custom	RAL = Custom RAL Match (Custom)
		CW = Custom	7	8		
			9	10		
			11	12		
			13	14		
			15	16		
			17	18		
			19	20		
			CN = Custom			

Options & Accessories (Add as Suffix)	
Mounting	**Option**
PBS = Pole Banding Straps	GFX = Wireless DMX Lighting Control System (Consult Factory)
CM = Custom	GFM = Wireless Mesh Lighting Control System (Consult Factory)

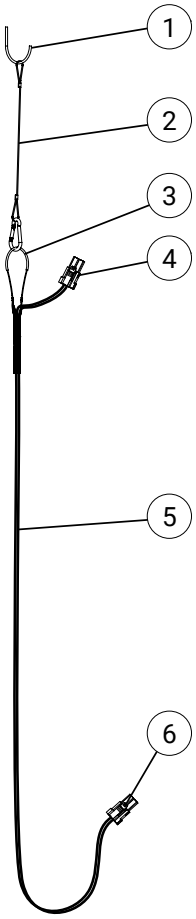
Note: Custom products, configurations, options, and accessories available from factory.

Example Remote Power-Control Cabinet
(Exact Specifications Will Vary)



ITEM NO.	COMPONENT
1	LED DRIVER
2	WIRING HARNESS CONNECTIONS
3	IN-LINE FUSES
4	TYPE 2 SPD (NOT PICTURED)
5	COUPLING (WIRE ENTRANCE)
6	TERMINAL BLOCKS
7	BAND-WRAP BRACKET

Standard Wiring Harness
(Exact Specifications Will Vary)



ITEM NO.	COMPONENT
1	STRAIN-RELIEF HOOK (ON POLE)
2	STRAIN-RELIEF CABLE
3	STRAIN-RELIEF CONNECTOR
4	QUICK-CONNECT PLUG (UPPER)
5	WIRING HARNESS
6	QUICK-CONNECT PLUG (LOWER)

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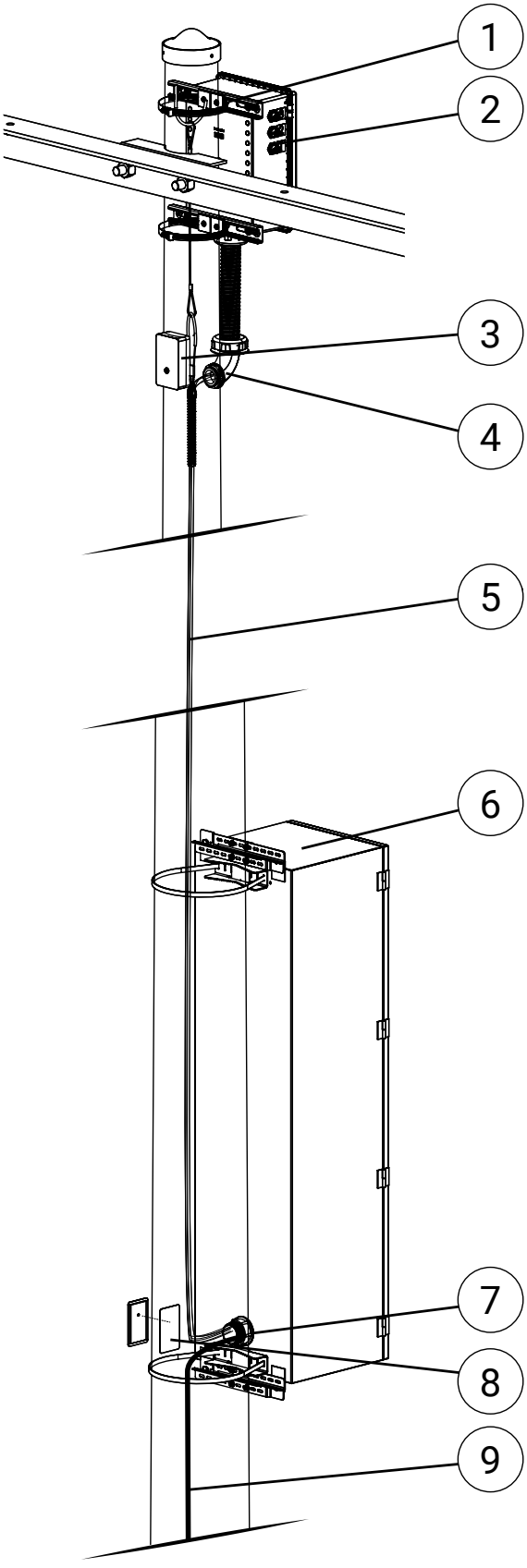
Remote PWR-CTL Detail (Optional)

Example Assembly
(Exact Specifications May Vary)



Upper Power Hub & Lower Power-Control Cabinets

- Top hub: polycarbonate enclosure w/ NEMA 1, 2, 4, 4X, and IP66 rating
- Labeled connections for fixtures on cross arm(s)
- Lower aluminum industrial power-control cabinet with NEMA 3R rating
- Small, medium, large, and custom cabinet configurations available

ITEM NO.	COMPONENT
1	BAND-WRAP BRACKET
2	UPPER CONNECTION PANEL
3	ADDITIONAL HANDHOLE
4	UPPER COUPLING
5	WIRING HARNESS
6	LOWER REMOTE DRIVER PANEL
7	LOWER COUPLING
8	ADDITIONAL HANDHOLE
9	INCOMING CONDUCTORS

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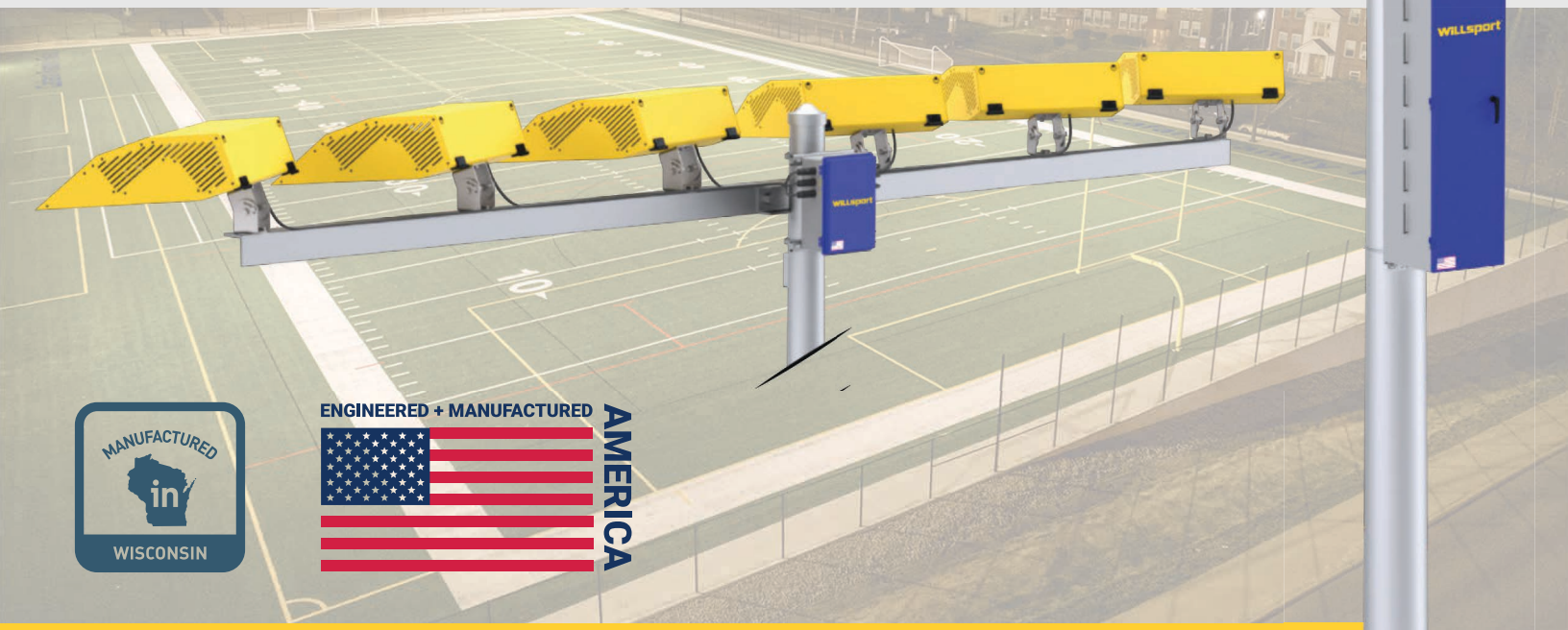
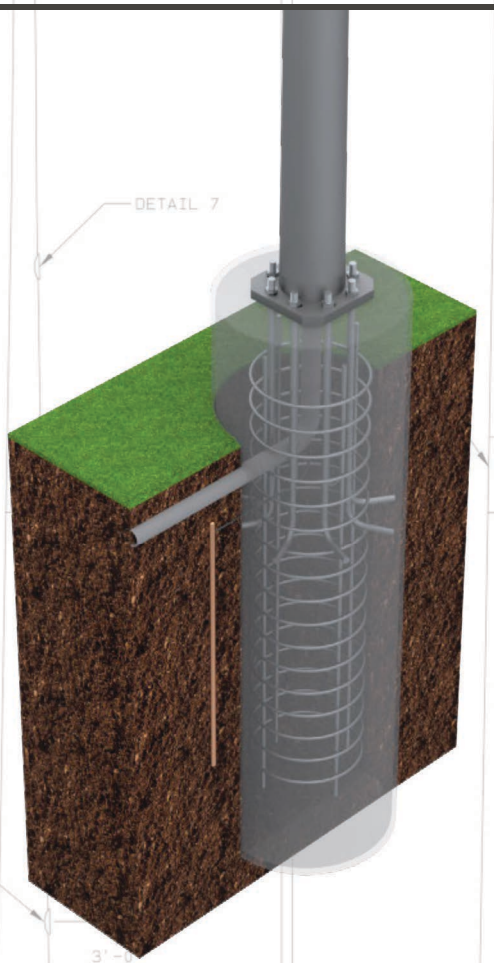
WiLLsport® 2 Color Combo

Showcase your team **colors**, **brand**, or **logo** with WiLL's color combo upgrade



Custom colors for fixture **body**, **PDH cover**, **bottom cabinet cover**

WiLLsport® Design & Engineering Support



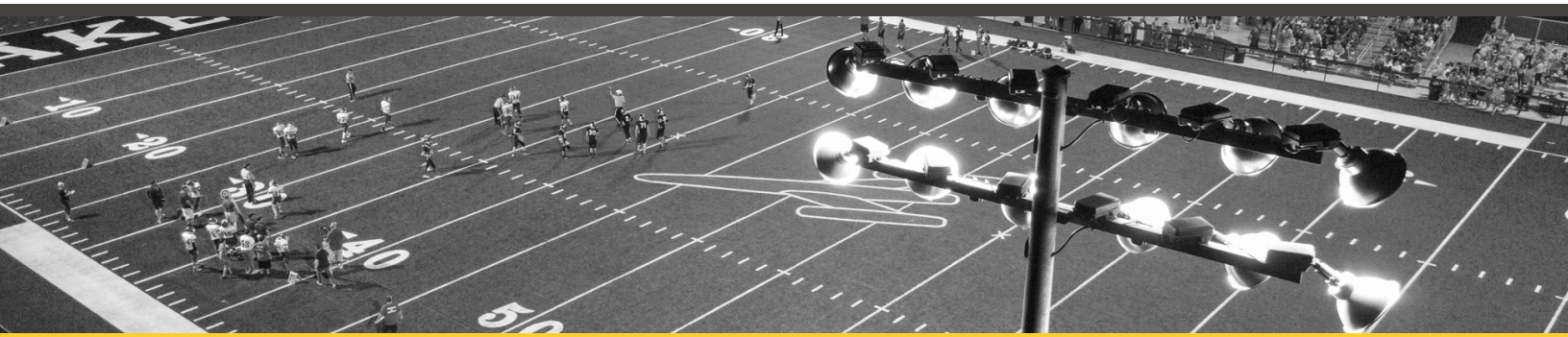
- Professional Engineer (PE) network covering entire United States
- Light pole/bracket assembly wind zone calculations and PE stamp
- Foundation design and calculation packages with PE stamp
- Inspection and non-destructive testing of existing sports structures checking for fatigue and cracks

WiLLsport® RTSA ROUND TAPERED STEEL ANCHOR BASE SPORT LIGHT POLES

Catalog #

Project

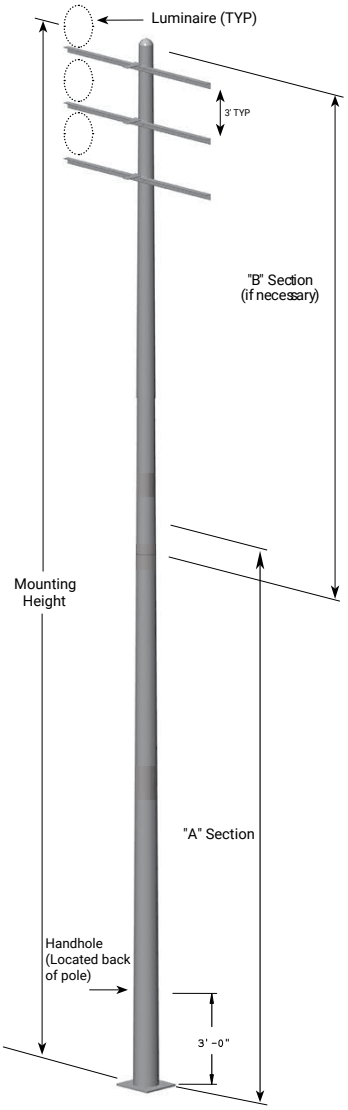
Comments



Proudly engineered and manufactured in the American Midwest – our WiLLsport® family of professional-grade light pole products combines 50+ years of manufacturing expertise and top-notch Midwestern workmanship. Like all WiLL products, WiLLsport® poles come supported by our unmatched design, engineering, and project support capabilities.

Specifications

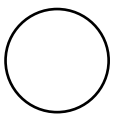
- **Pole Shaft** - The pole shaft conforms to ASTM A595 Grade A or A572 Grade 55 with a constant linear taper of 0.14 in/ft. Pole 50' and below are provided as a one-piece unit. Poles greater than 50' are provided as a two-piece field assembled unit.
- **Pole Top** - Pole is provided with a removable pole cap.
- **Hand Hole** - A reinforced handhole with grounding provision is provided at 3' from the base end of the pole assembly. Each handhole includes a cover and the cover attachment hardware. All pole assemblies are provided with a 4" X 6.5" ovalized handhole. Handhole dimensions are nominal.
- **Anchor Bolts** - Anchor bolts conform to ASTM F1554 Grade 55 and are provided with two hex nuts and two flat washers. Bolts have an "L" bend on one end and are galvanized a minimum of 12" on the threaded end.
- **Hardware** - All structural fasteners are galvanized high strength carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.
- **Finish** - Finishes include galvanized or painted. Please consult factory for special finishing colors and fixture matching options. When storing light poles outside, remove all protective wrapping immediately upon delivery to prevent finish damage.
- **Crossarms** - Angle iron and tubular crossarms available in 2,3,4,5 and 6 fixture mounting points. Crossarms bolt directly to light pole.
- **Design Criteria** - Please reference Design Criteria Specification for appropriate design conditions.



Handhole



Cross Section



Round

Pole Cap



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EPA Loading Guide (Commercial Design Criteria)

Base Model	90mph		100mph		110mph		120mph		130mph		140mph		150mph	
	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)	Max EPA (sq ft)	Max Weight (lb)
VS-RTSA-40-0001-SP-AB-GV	27	675	21.5	538	17.5	438	14.5	363	12	300	10	250	8.5	213
VS-RTSA-40-0002-SP-AB-GV	43	1075	35	875	29	725	24.5	613	20.5	513	17.5	438	15	375
VS-RTSA-50-0001-SP-AB-GV	18.5	463	14.5	363	11	275	9	225	7	175	5.5	138	4.5	113
VS-RTSA-50-0002-SP-AB-GV	24	600	19.5	488	16	400	13.5	338	11.5	288	9.5	238	8.5	213
VS-RTSA-50-0003-SP-AB-GV	33	825	27	675	22.5	563	18.5	463	15.5	388	13	325	11	275
VS-RTSA-50-0004-SP-AB-GV	53	1325	43.5	1088	35.5	888	29.5	738	24.5	613	20.5	513	17	425
VS-RTSA-50-0005-SP-AB-GV	73	1825	60	1500	50	1250	42	1050	35.5	888	30	750	25.5	638
VS-RTSA-55-0001-SP-AB-GV	15.5	388	11.5	288	9	225	7	175	5	125	4	100	3	75
VS-RTSA-55-0002-SP-AB-GV	25.5	638	20.5	513	17	425	14.5	363	12	300	10	250	8.5	213
VS-RTSA-55-0003-SP-AB-GV	44	1100	36	900	30	750	24.5	613	20	500	17	425	14	350
VS-RTSA-55-0004-SP-AB-GV	60	1500	50	1250	42	1050	35.5	888	30	750	25.5	638	21.5	538
VS-RTSA-60-0001-SP-AB-GV	18.5	463	18.5	463	18.5	463	15.5	388	13	325	11	275	9.5	238
VS-RTSA-60-0002-SP-AB-GV	30	750	30	750	27	675	23	575	19.5	488	16.5	413	14	350
VS-RTSA-60-0003-SP-AB-GV	44	1100	44	1100	40.5	1013	34	850	28.5	713	24	600	20	500
VS-RTSA-60-0004-SP-AB-GV	64	1600	64	1600	53	1325	44.5	1113	37.5	938	32	800	27.5	688
VS-RTSA-60-0005-SP-AB-GV	64	1600	64	1600	64	1600	53	1325	44	1100	36.5	913	31	775
VS-RTSA-70-0001-SP-AB-GV	17	425	17	425	15.5	388	12.5	313	11	275	9	225	7.5	188
VS-RTSA-70-0002-SP-AB-GV	22.5	563	21	525	17.5	438	14.5	363	12.5	313	10.5	263	9	225
VS-RTSA-70-0003-SP-AB-GV	33	825	33	825	29	725	24	600	20.5	513	17	425	14.5	363
VS-RTSA-70-0004-SP-AB-GV	49	1225	43.5	1088	36	900	30	750	25	625	21	525	18	450
VS-RTSA-70-0005-SP-AB-GV	58	1450	58	1450	48	1200	40.5	1013	34	850	29	725	24.5	613
VS-RTSA-70-0006-SP-AB-GV	78.5	1963	78.5	1963	67	1675	55.5	1388	47	1175	39.5	988	33.5	838
VS-RTSA-80-0001-SP-AB-GV	25	625	23	575	19.5	488	16	400	13.5	338	11.5	288	9.5	238
VS-RTSA-80-0002-SP-AB-GV	37.5	938	31	775	25.5	638	21.5	538	18	450	15	375	12.5	313
VS-RTSA-80-0003-SP-AB-GV	44.5	1113	40	1000	33	825	27.5	688	23	575	19.5	488	16	400
VS-RTSA-80-0004-SP-AB-GV	61	1525	58.5	1463	48	1200	39.5	988	32.5	813	27	675	22.5	563
VS-RTSA-80-0005-SP-AB-GV	87	2175	80	2000	66.5	1663	55.5	1388	47	1175	40	1000	34	850
VS-RTSA-90-0001-SP-AB-GV	22.5	563	20.5	513	17	425	14	350	12	300	10	250	8.5	213
VS-RTSA-90-0002-SP-AB-GV	34.5	863	28.5	713	23.5	588	20	500	16.5	413	14	350	12	300
VS-RTSA-90-0003-SP-AB-GV	47	1175	47	1175	46.5	1163	38	950	30.5	763	24.5	613	19	475
VS-RTSA-90-0004-SP-AB-GV	69.5	1738	58.5	1463	49	1225	41	1025	34.5	863	29.5	738	25	625
VS-RTSA-90-0005-SP-AB-GV	93	2325	83	2075	68.5	1713	56	1400	47.5	1188	40	1000	34	850
VS-RTSA-100-0001-SP-AB-GV	19.5	488	18.5	463	15	375	12.5	313	10.5	263	9	225	6.5	163
VS-RTSA-100-0002-SP-AB-GV	29.5	738	24.5	613	20	500	17	425	14	350	12	300	10	250
VS-RTSA-100-0003-SP-AB-GV	37	925	34	850	28	750	23.5	588	19.5	488	16	400	13.5	338
VS-RTSA-100-0004-SP-AB-GV	49.5	1238	49.5	1238	43	1075	35.5	888	29	725	23.5	588	18	450
VS-RTSA-100-0005-SP-AB-GV	56	1400	47.5	1188	39.5	988	33.5	838	28	700	24	600	20	500
VS-RTSA-100-0006-SP-AB-GV	76	1900	67.5	1688	55.5	1388	46	1150	38.5	963	32.5	813	27.5	688

Cross Arm Model	EPA
VS-S-ACR-BTP-2-180-GV	1.74
VS-S-ACR-BTP-3-180-GV	2.73
VS-S-ACR-BTP-4-180-GV	3.97
VS-S-ACR-BTP-5-180-GV	5.95
VS-S-ACR-BTP-6-180-GV	7.37

Cross Arm Model	EPA
VS-S-TUB-BTP-2-180-GV	1.28
VS-S-TUB-BTP-3-180-GV	2.45
VS-S-TUB-BTP-4-180-GV	3.21
VS-S-TUB-BTP-5-180-GV	4.17
VS-S-TUB-BTP-6-180-GV	5.13

AASHTO 210 SPECIFICATIONS

The sports lighting structures shown on this drawing have been designed in accordance with the loading and the allowable stress requirements of the 2013 AASHTO standard specifications for structural supports for highway signs, luminaires and traffic signals, sixth edition, LTS-6. The wind loads were calculated from a basic wind velocity of 90 MPH with a recurrence interval of 50 years and a fatigue category of 1. The fatigue loads were calculated on the requirements of section 11 of the code and the following conditions.

1. Structures are designed to resist natural wind gusts based on the code requirements in table 11.7.2-1.
2. Galloping-included cyclic loads are not applicable for sports lighting structures.
3. Truck-induced gust loads are not applicable for sports lighting structures.

VIBRATION DISCLAIMER

Although rare, vibration severe enough to cause damage can occasionally occur n structures of all types. Because they are influenced by many variables, vibrations are generally unpredictable. The user's maintenance program should include observation for excessive vibration and examination for any structural damage or bolt loosening. The factory warranty specifically excludes fatigue failure of similar phenomena resulting from induced vibration, harmonic oscillation or resonance associated with movement of air current around the product.

STRUCTURAL NOTICE

Outer section of slip joint connections fabricated from ASTM A572 material will have a complete joint penetration longitudinal seam weld for a minimum distance of 1.5D + 6".

Outer section of slip joint connections fabricated from ASTM A595 material will have the seam weld reinforced with 0.2391" thick x 1.25" wide bards. When measured from the large end, A 4" bar will begin at 0.19" and an 8" bar will begin at 1.5D + 6.18".

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Designation & Dimensional Information

Base Model	Pole Dimensions			Base Plate			Anchor Bolts	
	Nominal Mounting Height	Style	Structural Weight (lb)	Bolt Circle Diameter (in)	Center Hole Dia (in)	Sq (in) x Thick (in)	Quantity	Dia x Length x Hook (in)
VS-RTSA-40-0001-SP-AB-GV	40'-0"	1-Piece	552	12.5	9	12.38 x 1.25	4	1.25 x 42 x 6
VS-RTSA-40-0002-SP-AB-GV	40'-0"	1-Piece	651	14	10	14.5 x 1.5	4	1.50 x 54 x 6
VS-RTSA-50-0001-SP-AB-GV	50'-0"	1-Piece	721	13.5	10	14 x 1.25	4	1.25 x 42 x 6
VS-RTSA-50-0002-SP-AB-GV	50'-0"	1-Piece	732	14	10	14.5 x 1.5	4	1.50 x 54 x 6
VS-RTSA-50-0003-SP-AB-GV	50'-0"	1-Piece	852	15	11	16.5 x 1.5	4	1.50 x 54 x 6
VS-RTSA-50-0004-SP-AB-GV	50'-0"	1-Piece	1077	17.5	13	18.5 x 1.75	4	1.75 x 84 x 6
VS-RTSA-50-0005-SP-AB-GV	50'-0"	1-Piece	1378	18	13	18.5 x 2	4	2.00 x 84 x 6
VS-RTSA-55-0001-SP-AB-GV	55'-0"	2-Piece	813	14	10.5	14 x 1.25	4	1.25 x 42 x 6
VS-RTSA-55-0002-SP-AB-GV	55'-0"	2-Piece	904	15	11	16.5 x 1.5	4	1.50 x 54 x 6
VS-RTSA-55-0003-SP-AB-GV	55'-0"	2-Piece	1159	17.5	13	18.5 x 1.75	4	1.75 x 84 x 6
VS-RTSA-55-0004-SP-AB-GV	55'-0"	2-Piece	1431	18	13	18.5 x 2	4	2.00 x 84 x 6
VS-RTSA-60-0001-SP-AB-GV	60'-0"	2-Piece	1115	15.5	10.25	18 x 2	8	1.25 x 42 x 6
VS-RTSA-60-0002-SP-AB-GV	60'-0"	2-Piece	1390	17	9	20 x 2	8	1.50 x 54 x 6
VS-RTSA-60-0003-SP-AB-GV	60'-0"	2-Piece	1696	19	9.25	22 x 2	8	1.50 x 54 x 6
VS-RTSA-60-0004-SP-AB-GV	60'-0"	2-Piece	2083	20.5	10.75	24 x 2.5	8	1.75 x 84 x 6
VS-RTSA-60-0005-SP-AB-GV	60'-0"	2-Piece	2324	20.5	10.75	24 x 2.5	8	1.75 x 84 x 6
VS-RTSA-70-0001-SP-AB-GV	70'-0"	2-Piece	1355	17	10.25	20 x 2	8	1.25 x 42 x 6
VS-RTSA-70-0002-SP-AB-GV	70'-0"	2-Piece	1488	17	9	20 x 2	8	1.50 x 54 x 6
VS-RTSA-70-0003-SP-AB-GV	70'-0"	2-Piece	1836	19	9.25	22 x 2	8	1.50 x 54 x 6
VS-RTSA-70-0004-SP-AB-GV	70'-0"	2-Piece	2224	20.5	10.75	24 x 2.5	8	1.75 x 84 x 6
VS-RTSA-70-0005-SP-AB-GV	70'-0"	2-Piece	2510	21.5	10	26 x 2.25	10	1.75 x 84 x 6
VS-RTSA-70-0006-SP-AB-GV	70'-0"	2-Piece	2951	25	9.5	29.5 x 2.25	10	1.75 x 84 x 6
VS-RTSA-80-0001-SP-AB-GV	80'-0"	2-Piece	1945	19	9.25	22 x 2	8	1.50 x 54 x 6
VS-RTSA-80-0002-SP-AB-GV	80'-0"	2-Piece	2385	20.5	10.75	24 x 2.5	8	1.75 x 84 x 6
VS-RTSA-80-0003-SP-AB-GV	80'-0"	2-Piece	2644	21.5	10	26 x 2.25	10	1.75 x 84 x 6
VS-RTSA-80-0004-SP-AB-GV	80'-0"	2-Piece	3232	25	9.5	29.5 x 2.25	10	1.75 x 84 x 6
VS-RTSA-80-0005-SP-AB-GV	80'-0"	2-Piece	3976	25	9.25	29.5 x 2.75	12	1.75 x 84 x 6
VS-RTSA-90-0001-SP-AB-GV	90'-0"	2-Piece	2320	20.5	10.75	24 x 2.25	8	1.75 x 84 x 6
VS-RTSA-90-0002-SP-AB-GV	90'-0"	2-Piece	2793	21.5	10	25 x 2.25	8	1.75 x 84 x 6
VS-RTSA-90-0003-SP-AB-GV	90'-0"	2-Piece	3618	25	9.5	29.5 x 2.25	10	1.75 x 84 x 6
VS-RTSA-90-0004-SP-AB-GV	90'-0"	2-Piece	4237	25	9.25	29.5 x 2.75	12	1.75 x 84 x 6
VS-RTSA-90-0005-SP-AB-GV	90'-0"	2-Piece	5026	28	9.75	33 x 2.75	10	2.00 x 84 x 6
VS-RTSA-100-0001-SP-AB-GV	100'-0"	2-Piece	2642	21.5	9.75	25 x 2	8	1.75 x 84 x 6
VS-RTSA-100-0002-SP-AB-GV	100'-0"	2-Piece	3179	23	9.75	26.5 x 2.25	8	1.75 x 84 x 6
VS-RTSA-100-0003-SP-AB-GV	100'-0"	2-Piece	3630	25	9.5	29.5 x 2.25	10	1.75 x 84 x 6
VS-RTSA-100-0004-SP-AB-GV	100'-0"	2-Piece	4386	28	10	32.25 x 2.25	12	1.75 x 84 x 6
VS-RTSA-100-0005-SP-AB-GV	100'-0"	2-Piece	4521	25	9.25	29.5 x 2.75	12	1.75 x 84 x 6
VS-RTSA-100-0006-SP-AB-GV	100'-0"	2-Piece	5354	28	9.75	33 x 2.75	10	2.00 x 84 x 6

Cross Arm Model	Length	Weight (lb)
VS-S-ACR-BTP-2-180-GV	3'-6"	30
VS-S-ACR-BTP-3-180-GV	5'-6"	47
VS-S-ACR-BTP-4-180-GV	8'-0"	68
VS-S-ACR-BTP-5-180-GV	10'-6"	103
VS-S-ACR-BTP-6-180-GV	13'-0"	127

Cross Arm Model	Length	Weight (lb)
VS-S-TUB-BTP-2-180-GV	4'-0"	44
VS-S-TUB-BTP-3-180-GV	7'-0"	65
VS-S-TUB-BTP-4-180-GV	10'-0"	98
VS-S-TUB-BTP-5-180-GV	13'-0"	116
VS-S-TUB-BTP-6-180-GV	16'-0"	150

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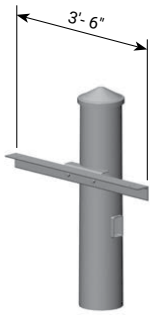
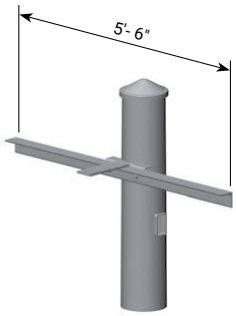
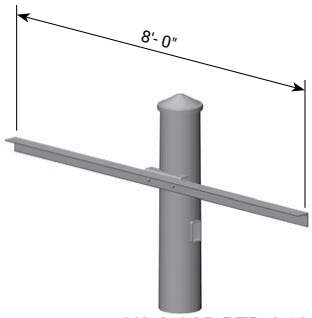
Angle Iron Cross Arms



VS-S-ACR-BTP-2-180
(2 Fixtures)

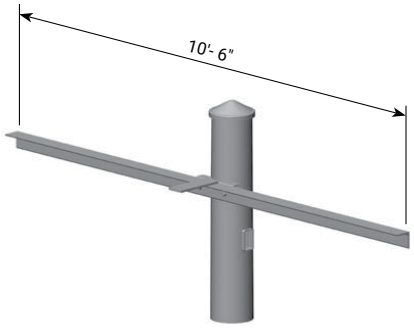


VS-S-ACR-BTP-3-180
(3 Fixtures)

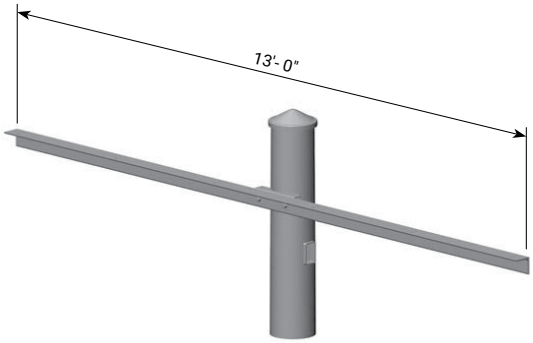


VS-S-ACR-BTP-4-180
(4 Fixtures)

Note: VS-S-ACR-BT-2-180 Fixture Drillings Spaced 36" on Center
All Others: Fixture Drillings Spaced 30" on Center

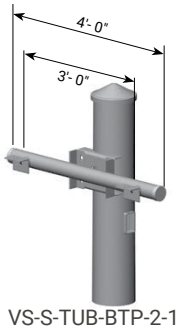


VS-S-ACR-BTP-5-180
(5 Fixtures)

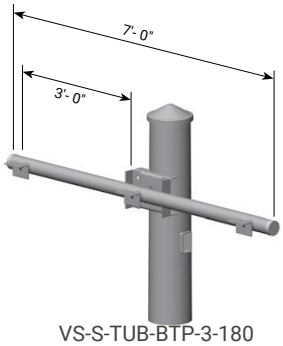


VS-S-ACR-BTP-6-180
(6 Fixtures)

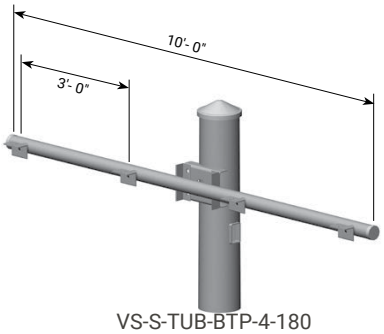
Tubular Cross Arms



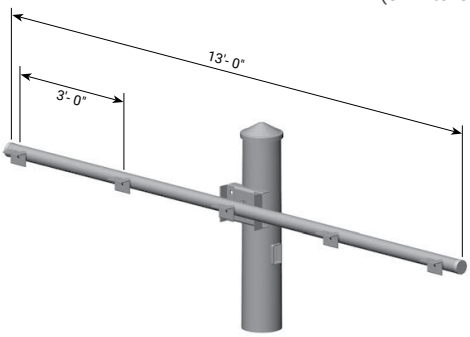
VS-S-TUB-BTP-2-180
(2 Fixtures)



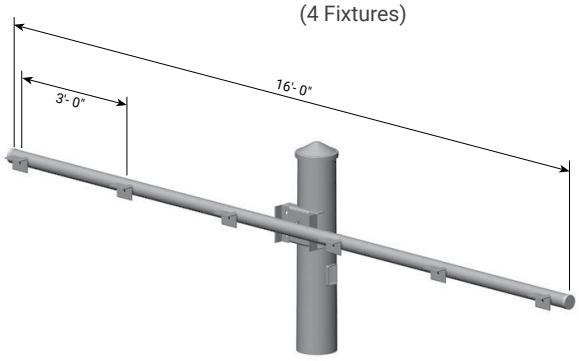
VS-S-TUB-BTP-3-180
(3 Fixtures)



VS-S-TUB-BTP-4-180
(4 Fixtures)



VS-S-TUB-BTP-5-180
(5 Fixtures)



VS-S-TUB-BTP-6-180
(6 Fixtures)

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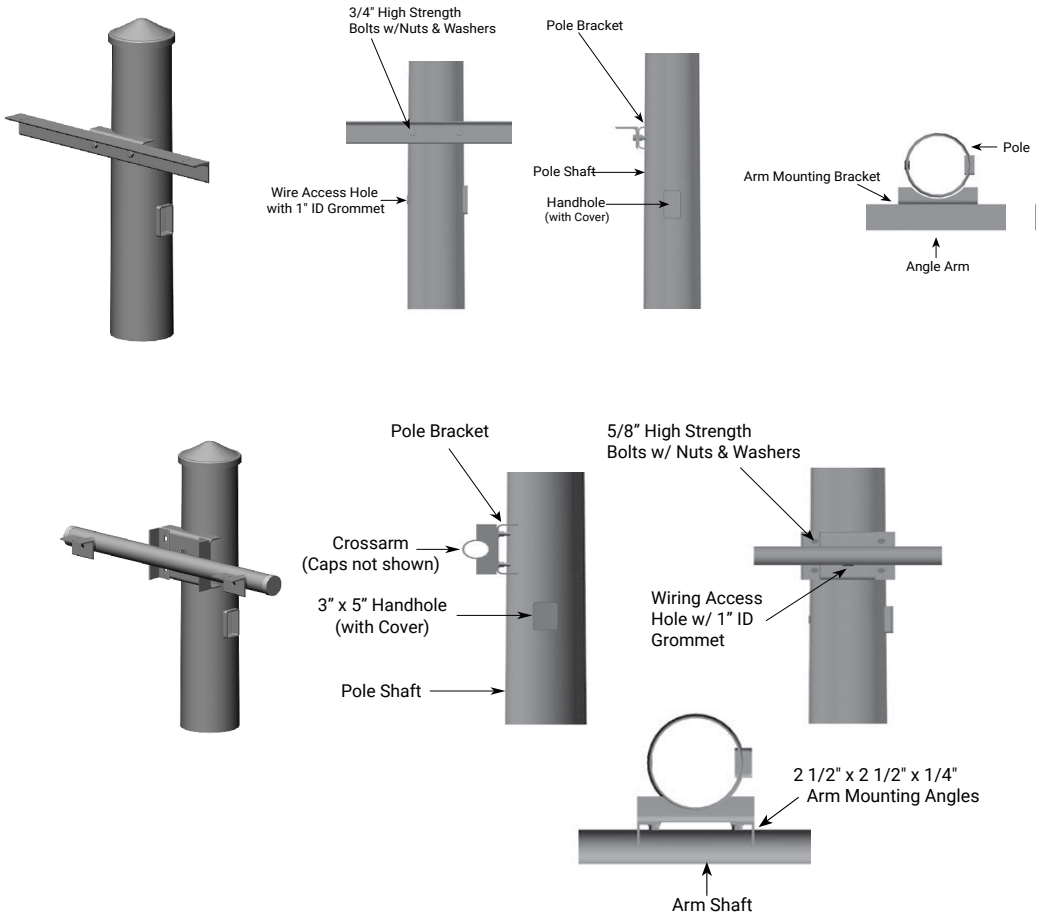
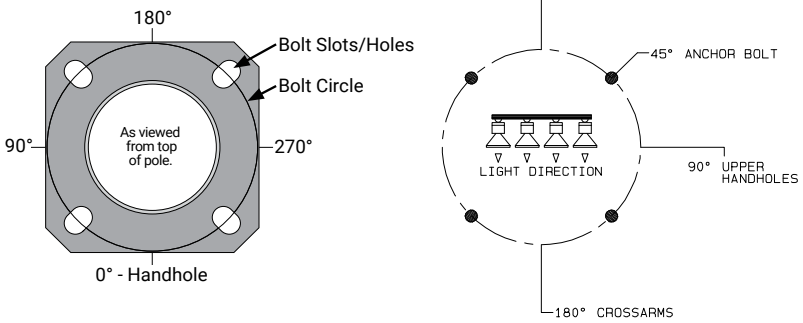
Cross Arm Mounting Detail

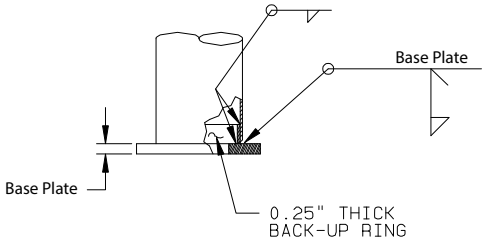


Base Plate Detail

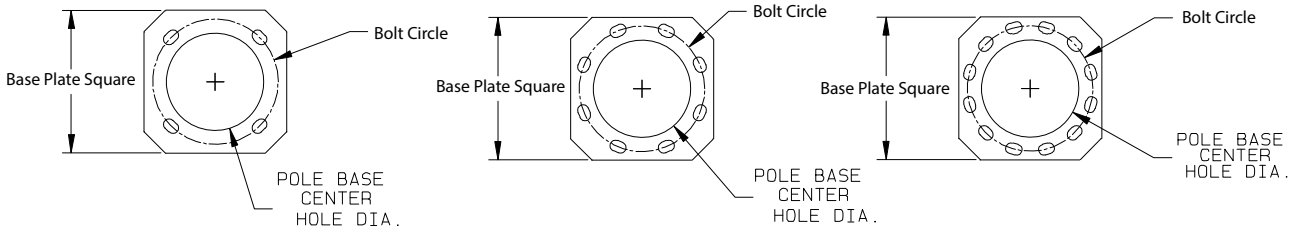
Anchor Base Detail & Orientation



Base Plate Weld Detail



Base Plate Bolt Patterns (See Pole Design Data for appropriate plate detail)



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Light Pole Base Reactions

Base Model	90 MPH (Torsion 0-ft-lbs)			100 MPH (Torsion 0-ft-lbs)			110 MPH (Torsion 0-ft-lbs)			120 MPH (Torsion 0-ft-lbs)			130 MPH (Torsion 0-ft-lbs)			140 MPH (Torsion 0-ft-lbs)			150 MPH (Torsion 0-ft-lbs)		
	Bending Moment (ft-lbs)	Shear Force (lbs)	Axial Force (lbs)	Bending Moment (ft-lbs)	Shear Force (lbs)	Axial Force (lbs)	Bending Moment (ft-lbs)	Shear Force (lbs)	Axial Force (lbs)	Bending Moment (ft-lbs)	Shear Force (lbs)	Axial Force (lbs)	Bending Moment (ft-lbs)	Shear Force (lbs)	Axial Force (lbs)	Bending Moment (ft-lbs)	Shear Force (lbs)	Axial Force (lbs)	Bending Moment (ft-lbs)	Shear Force (lbs)	Axial Force (lbs)
VS-RTSA-40-0001-SP-AB-GV	36,268	1,021	1,680	36,105	1,051	1,477	36,105	1,080	1,330	36,180	1,113	1,220	35,874	1,138	1,127	35,534	1,166	1,053	35,577	1,206	999
VS-RTSA-40-0002-SP-AB-GV	53,835	1,418	2,384	53,708	1,458	2,087	53,641	1,498	1,865	53,972	1,549	1,699	53,466	1,583	1,551	53,573	1,633	1,441	53,630	1,684	1,348
VS-RTSA-50-0001-SP-AB-GV	39,470	941	1,596	39,659	984	1,450	38,681	1,007	1,320	39,387	1,062	1,248	38,789	1,097	1,174	38,577	1,142	1,119	38,818	1,199	1,083
VS-RTSA-50-0002-SP-AB-GV	48,356	1,083	1,807	49,074	1,144	1,643	49,583	1,200	1,515	50,701	1,269	1,425	51,735	1,340	1,354	51,658	1,393	1,281	53,607	1,486	1,247
VS-RTSA-50-0003-SP-AB-GV	62,278	1,332	2,281	62,911	1,398	2,059	63,764	1,469	1,894	63,229	1,517	1,746	63,307	1,578	1,635	63,282	1,641	1,542	63,537	1,713	1,470
VS-RTSA-50-0004-SP-AB-GV	89,794	1,850	3,301	90,498	1,937	2,949	89,854	2,001	2,651	90,030	2,081	2,429	89,783	2,157	2,243	89,866	2,241	2,095	89,257	2,316	1,967
VS-RTSA-50-0005-SP-AB-GV	119,218	2,367	4,325	119,769	2,463	3,843	120,500	2,561	3,472	121,052	2,656	3,176	121,489	2,750	2,935	121,335	2,835	2,731	121,335	2,926	2,568
VS-RTSA-55-0001-SP-AB-GV	40,865	925	1,623	40,205	958	1,476	40,687	1,012	1,384	40,945	1,065	1,312	39,615	1,094	1,237	40,185	1,159	1,201	39,967	1,215	1,164
VS-RTSA-55-0002-SP-AB-GV	58,981	1,200	2,084	59,379	1,264	1,901	60,512	1,341	1,773	62,196	1,428	1,683	62,111	1,489	1,590	62,251	1,557	1,516	63,071	1,641	1,463
VS-RTSA-55-0003-SP-AB-GV	88,979	1,700	3,091	89,490	1,784	2,793	90,597	1,880	2,571	89,703	1,947	2,366	88,590	2,012	2,198	90,031	2,125	2,088	89,513	2,208	1,979
VS-RTSA-55-0004-SP-AB-GV	115,328	2,120	3,942	117,335	2,238	3,572	118,929	2,351	3,275	120,310	2,463	3,035	121,013	2,566	2,831	121,789	2,674	2,665	121,586	2,768	2,520
VS-RTSA-60-0001-SP-AB-GV	53,499	1,091	2,038	63,177	1,285	2,046	73,363	1,500	2,054	74,373	1,587	1,944	75,205	1,676	1,851	76,315	1,773	1,778	78,318	1,891	1,727
VS-RTSA-60-0002-SP-AB-GV	73,944	1,406	2,775	87,987	1,676	2,781	95,063	1,860	2,673	97,574	1,984	2,525	99,338	2,103	2,396	100,697	2,220	2,286	102,234	2,345	2,197
VS-RTSA-60-0003-SP-AB-GV	96,970	1,800	3,667	117,384	2,186	3,673	130,498	2,480	3,547	132,992	2,626	3,305	134,796	2,766	3,101	136,881	2,915	2,936	137,613	3,048	2,792
VS-RTSA-60-0004-SP-AB-GV	131,906	2,361	4,751	161,072	2,893	4,758	163,530	3,047	4,350	166,909	3,219	4,035	169,709	3,385	3,775	173,289	3,568	3,574	177,079	3,760	3,413
VS-RTSA-60-0005-SP-AB-GV	131,765	2,362	4,996	161,064	2,895	5,002	193,631	3,493	5,008	194,323	3,631	4,600	194,153	3,757	4,265	192,980	3,870	3,989	194,726	4,032	3,790
VS-RTSA-70-0001-SP-AB-GV	65,082	1,181	2,287	76,499	1,394	2,298	83,403	1,564	2,250	84,029	1,661	2,140	88,132	1,810	2,087	88,895	1,919	2,014	90,711	2,049	1,963
VS-RTSA-70-0002-SP-AB-GV	77,330	1,331	2,637	87,045	1,529	2,590	89,520	1,646	2,463	91,414	1,763	2,354	94,753	1,904	2,282	96,621	2,031	2,209	99,622	2,180	2,159
VS-RTSA-70-0003-SP-AB-GV	99,639	1,656	3,457	118,909	1,988	3,465	126,823	2,196	3,319	128,481	2,334	3,133	132,711	2,511	3,004	134,248	2,661	2,876	138,292	2,850	2,791
VS-RTSA-70-0004-SP-AB-GV	133,811	2,120	4,411	146,192	2,387	4,211	149,156	2,549	3,931	152,287	2,718	3,708	155,091	2,889	3,522	158,665	3,078	3,377	164,295	3,302	3,274
VS-RTSA-70-0005-SP-AB-GV	151,956	2,404	5,071	185,095	2,942	5,080	188,905	3,131	4,708	194,753	3,352	4,430	198,930	3,558	4,188	204,638	3,790	4,008	208,396	4,004	3,849
VS-RTSA-70-0006-SP-AB-GV	196,386	3,096	6,424	241,839	3,821	6,432	254,404	4,146	6,007	258,326	4,367	5,580	265,177	4,633	5,264	269,218	4,870	4,992	274,204	5,127	4,777
VS-RTSA-80-0001-SP-AB-GV	102,678	1,574	3,322	114,565	1,808	3,257	119,772	1,981	3,130	121,897	2,127	2,999	125,947	2,303	2,908	130,736	2,496	2,839	133,787	2,677	2,771
VS-RTSA-80-0002-SP-AB-GV	135,318	1,958	4,206	139,539	2,127	3,964	142,582	2,290	3,760	147,659	2,484	3,612	151,895	2,677	3,481	155,794	2,876	3,375	159,924	3,085	3,290
VS-RTSA-80-0003-SP-AB-GV	151,947	2,187	4,783	168,049	2,496	4,620	172,251	2,690	4,359	177,210	2,900	4,154	182,378	3,121	3,987	189,113	3,370	3,864	192,633	3,591	3,743
VS-RTSA-80-0004-SP-AB-GV	193,645	2,770	6,063	228,914	3,318	5,978	235,139	3,566	5,587	240,603	3,812	5,271	245,182	4,057	5,010	250,927	4,325	4,813	257,032	4,608	4,656
VS-RTSA-80-0005-SP-AB-GV	260,543	3,511	7,679	296,112	4,075	7,426	304,085	4,354	6,925	310,689	4,624	6,516	319,016	4,920	6,201	327,080	5,223	5,949	333,827	5,520	5,738
VS-RTSA-90-0001-SP-AB-GV	116,213	1,661	3,661	129,269	1,914	3,598	134,570	2,103	3,469	139,007	2,292	3,359	146,036	2,518	3,287	151,394	2,736	3,219	158,309	2,982	3,176
VS-RTSA-90-0002-SP-AB-GV	153,573	2,058	4,648	159,356	2,257	4,425	164,439	2,459	4,239	172,518	2,703	4,109	177,474	2,925	3,979	185,319	3,189	3,894	194,539	3,480	3,833
VS-RTSA-90-0003-SP-AB-GV	189,804	2,514	5,985	230,225	3,071	5,997	272,579	3,674	5,990	276,435	3,921	5,670	277,100	4,144	5,391	278,405	4,381	5,176	275,394	4,582	4,979
VS-RTSA-90-0004-SP-AB-GV	257,876	3,172	7,357	270,994	3,487	6,950	281,172	3,783	6,596	289,976	4,077	6,298	299,386	4,388	6,059	311,189	4,735	5,884	320,642	5,070	5,731
VS-RTSA-90-0005-SP-AB-GV	328,970	4,048	9,121	366,734	4,636	8,756	377,375	4,976	8,217	382,702	5,271	7,751	396,850	5,667	7,438	407,548	6,042	7,170	419,938	6,448	6,962
VS-RTSA-100-0001-SP-AB-GV	127,775	1,742	4,013	145,545	2,046	3,991	151,342	2,258	3,863	159,193	2,500	3,774	167,284	2,756	3,702	173,397	3,004	3,636	177,588	3,243	3,570
VS-RTSA-100-0002-SP-AB-GV	164,264	2,092	4,938	172,913	2,330	4,755	178,944	2,557	4,586	189,016	2,834	4,476	196,351	3,098	4,365	207,776	3,416	4,303	217,201	3,728	4,243
VS-RTSA-100-0003-SP-AB-GV	190,155	2,379	5,706	214,696	2,773	5,602	224,043	3,047	5,428	234,268	3,359	5,210	244,056	3,673	5,063	253,107	3,995	4,943	266,351	4,373	4,869
VS-RTSA-100-0004-SP-AB-GV	234,628	2,920	7,087	286,690	3,589	7,100	311,515	4,049	6,860	324,364	4,420	6,580	334,574	4,782	6,340	343,627	5,148	6,148	344,633	5,452	5,955
VS-RTSA-100-0005-SP-AB-GV	258,272	2,943	7,214	272,786	3,266	6,900	281,749	3,554	6,602	293,813	3,882	6,379	302,619	4,194	6,176	316,124	4,563	6,041	324,702	4,899	5,909
VS-RTSA-100-0006-SP-AB-GV	325,871	3,715	8,906	361,382	4,258	8,597	373,032	4,613	8,149	385,174	4,984	7,794	398,635	5,381	7,519	413,474	5,807	7,311	428,510	6,251	7,144

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Appendix C: Air Quality and Greenhouse Gas Emissions Impact Analysis Memorandum for the proposed Woodcrest Christian School Improvement Project

CARLSBAD
CLOVIS
IRVINE
LOS ANGELES
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: September 30, 2022, *Revised February 28, 2025*

TO: James F. Sullivan, Woodcrest Christian School System

FROM: Ronald Brugger, Senior Air Quality Specialist

SUBJECT: Air Quality and Greenhouse Gas Emissions Impact Analysis Memorandum for the proposed Woodcrest Christian School Improvement Project in Riverside, California

INTRODUCTION

This air quality and greenhouse gas (GHG) emissions impact analysis for the proposed Woodcrest Christian School Improvement Project in the City of Riverside, in Riverside County, California (project) has been prepared using methods and assumptions recommended in the South Coast Air Quality Management District's (SCAQMD) *CEQA Air Quality Handbook* (SCAQMD, 1993). This analysis includes a description of existing regulatory framework, an assessment of project operational air quality emissions, and an assessment of GHG emissions. Measures to reduce or eliminate significant impacts are identified, where appropriate.

PROJECT LOCATION

The project site is located in the City of Riverside (City) in Riverside County. The project site is located at 18401 Van Buren Boulevard (APN 266-020-013, -014, -015, -037, -038, -059) in the City of Riverside, California, bounded by Van Buren Boulevard and commercial buildings to the north, commercial and residential to the east, single-family residential units to the south and west. Figure 1 shows the project location and sensitive receptors. (All figures are included in Attachment A.)

PROJECT DESCRIPTION

The Woodcrest Christian School System in Riverside California is updating its Master Plan to include improvements to Woodcrest Christian School (Middle School and High School combined) to expand capacity by an additional 280 students, resulting in a total student count of 924. The project site is 29.29 acres. The proposed project would include an expansion of the Middle School administration and multipurpose room by an additional 900 square feet (sf) of office space, along with a 11,600 sf two story office and classroom building and a 300-seat outdoor amphitheater. In addition, the High School portion of the site would include the addition of a 1,600 sf food service building, a 5,000 sf locker room/snack bar building, an 8,300 sf chapel and arts building, a 2,800 sf weight and storage room, a 1,400 sf storage room, and an additional 92 parking spaces. The existing single family residential unit located 190 feet east of the project site (on Dauchy Avenue) will be demolished to

provide additional parking for the school. This will bring total parking spaces provided on site to 290 spaces. Figure 2 shows the site plan. Project construction was analyzed as starting in the spring of 2024 and ending in late spring of 2026. Due to delays construction would now occur in phases with the first phase starting as soon as spring 2025 and, depending on enrollment and funding, having all phases completed several years later. As the included analysis assumes dates that are earlier than the expected dates, actual construction equipment emissions are anticipated to be the same or even lower under the latest construction schedule. Additionally, the phased construction would spread out the construction activities compared to the analyzed construction duration of 2 years, further reducing the daily construction emissions presented below when compared to the daily construction emissions thresholds.

The site has an existing photovoltaic system that provides approximately 95 percent of the total electricity used by the school. After the proposed expansion the photovoltaic system would continue to provide approximately 95 percent of the total electricity used.

Sensitive Receptors and Land Uses in the Project Vicinity

Sensitive Receptors include residences, schools, hospitals, and similar uses that are sensitive to air quality. The project site is bounded by Van Buren Boulevard and commercial buildings to the north, Dauchy Ave, commercial buildings, single family residential units, and a high school to the east, single family residential units to the south, and single-family residential units and vacant land to the west. The nearest sensitive receptors in proximity to the project site are single-family residential units that are 637 feet to the west along Little Court, 547 feet to the east along Dauchy Avenue and Ardenwood Lane and 775 feet to the south along Blue Sky Street. Martin Luther King High School is located 1,253 feet east of the project site.

REGIONAL CLIMATE AND AIR QUALITY

The project site is in the City of Riverside, Riverside County, California, which is part of the South Coast Air Basin (Basin) and is under the jurisdiction of SCAQMD. This Basin includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. Both the State of California (State) and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants. As detailed in Table 1, these pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in size (PM_{10}), particulate matter less than 2.5 microns in size ($PM_{2.5}$), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide (H_2S), vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Table 2 summarizes the most common health and environmental effects for each of the air pollutants for which there is a national and/or California AAQS, as well as for toxic air contaminants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (by the United States Environmental Protection Agency [EPA]), these health effects would not occur unless the standards are exceeded by a large margin or for a prolonged period of time. State AAQS are typically more stringent than federal AAQS.

Table 1: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
O_3[8]	1-Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[9]	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter ($PM_{2.5}$)[9]	24-Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
CO	1-Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	—	
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
NO_2[10]	1-Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
SO_2[11]	1-Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour	—		—	0.5 ppm (1,300 µg/m³)	
	24-Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30-Day Average	1.5 µg/m³	Atomic Absorption	—	—	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[13]	Same as Primary Standard	
	Rolling 3-Month Average[11]	—		0.15 µg/m³		
Visibility-Reducing Particles[14]	8-Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Source: CARB *Ambient Air Quality Standards*. May 4, 2016. Website: www.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf (accessed September 2022)

Footnotes are provided on the following page.

[1] California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1- and 24-hour), NO_2, and PM (PM_{10}, $PM_{2.5}$, and visibility-reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California AAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than for O_3 and PM and those based on the annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the EPA for further clarification and current national policies.

[3] Concentration expressed first in the units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] Any equivalent measurement method that can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] The reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

[8] On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm.

[9] On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

[10] To attain the 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[11] On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated as Nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[12] CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[13] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated as Nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.

[14] In 1989, CARB converted both the general statewide 10 mi visibility standard and the Lake Tahoe 30 mi visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

°C = degrees Celsius
µg/m^3 = micrograms per cubic meter
AAQS = ambient air quality standards
CARB = California Air Resources Board
CO = carbon monoxide
EPA = United States Environmental Protection Agency
mg/m^3 = milligrams per cubic meter
mi = mile/miles
NO_2 = nitrogen dioxide
O_3 = ozone
PM = particulate matter
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
ppb = parts per billion
ppm = parts per million
SO_2 = sulfur dioxide

Table 2: Summary of Health and Environmental Effects of the Criteria Air Pollutants

Pollutant	Effects on Health and the Environment
Ozone (O_3)	• Respiratory symptoms • Worsening of lung disease leading to premature death • Damage to lung tissue • Crop, forest and ecosystem damage • Damage to a variety of materials, including rubber, plastics, fabrics, paint and metals
$PM_{2.5}$ (particulate matter less than 2.5 microns in aerodynamic diameter)	• Premature death • Hospitalization for worsening of cardiovascular disease • Hospitalization for respiratory disease • Asthma-related emergency room visits • Increased symptoms, increased inhaler usage
PM_{10} (particulate matter less than 10 microns in aerodynamic diameter)	• Premature death & hospitalization, primarily for worsening of respiratory disease • Reduced visibility and material soiling
Nitrogen Oxides (NO_X)	• Lung irritation • Enhanced allergic responses
Carbon Monoxide (CO)	• Chest pain in patients with heart disease • Headache • Light-headedness • Reduced mental alertness
Sulfur Oxides (SO_X)	• Worsening of asthma: increased symptoms, increased medication usage, and emergency room visits
Lead	• Impaired mental functioning in children • Learning disabilities in children • Brain and kidney damage
Hydrogen Sulfide (H_2S)	• Nuisance odor (rotten egg smell) • At high concentrations: headache & breathing difficulties
Sulfate	• Same as $PM_{2.5}$, particularly worsening of asthma and other lung diseases • Reduces visibility
Vinyl Chloride	• Central nervous system effects, such as dizziness, drowsiness & headaches • Long-term exposure: liver damage & liver cancer
Visibility Reducing Particles	• Reduced airport safety, scenic enjoyment, road safety, and discourages tourism
Toxic Air Contaminants About 200 chemicals have been listed as toxic air contaminants	• Cancer • Reproductive and developmental effects • Neurological effects

Source: Common Air Pollutants (CARB Website: www.arb.ca.gov/resources/common-air-pollutants (accessed September 2022).
CARB = California Air Resources Board

Among the pollutants, O_3 and particulate matter ($PM_{2.5}$ and PM_{10}) are considered pollutants with regional effects, while the others have more localized effects. (CARB 2017).

The California Clean Air Act (CCAA) provides SCAQMD and other air districts with the authority to manage transportation activities at indirect sources. Indirect sources of pollution include any facility, building, structure, or installation, or combination thereof, that attracts or generates mobile-source emissions of any pollutant. In addition, area-source emissions that are generated when minor sources collectively emit a substantial amount of pollution are also managed by the local air districts. Examples of this would be the motor vehicles at an intersection, at a mall, and on highways. SCAQMD also regulates stationary sources of pollution throughout its jurisdictional area. The California Air Resources Board (CARB) regulates direct emissions from motor vehicles.

Climate/Meteorology

Air quality in the planning area is affected not only by various emission sources (e.g., mobile and industry) but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The regional climate within the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Basin is primarily influenced by a wide range of emissions sources—such as dense population centers, heavy vehicular traffic, and industry—and meteorology.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the Riverside Fire Station 3 (Western Regional Climate Center 2022). The monthly average maximum temperature recorded at this station ranged from 66.8°F in January to 94.4°F in August, with an annual average maximum of 79.5°F. The monthly average minimum temperature recorded at this station ranged from 39.1°F in January to 59.6°F in August, with an annual average minimum of 48.6°F. January is typically the coldest month, and July and August are typically the warmest months in this area of the Basin.

Description of Global Climate Change and Its Sources

Earth's natural warming process is known as the "greenhouse effect." This greenhouse effect compares the Earth and the atmosphere surrounding it to a greenhouse with glass panes. The glass allows solar radiation (sunlight) into Earth's atmosphere but prevents radiated heat from escaping, thus warming Earth's atmosphere. GHGs keep the average surface temperature of the Earth to approximately 60°F. However, excessive concentrations of GHGs in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences (IPCC 2022).

Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect (Pew Center 2006). While the increase in temperature is known as "global warming," the resulting change in weather patterns is known as "global climate change." Global climate change (GCC) is evidenced in changes to global temperature rise, warming oceans, shrinking ice sheets, glacial retreat, decreased snow cover, sea level rise, declining Arctic sea ice, extreme weather events, and ocean acidification (IPCC 2022).

Higher temperatures, conducive to air pollution formation, could worsen air quality in California. While climate change may increase the concentration of ground-level ozone, the magnitude of the effect and, therefore, its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would exacerbate air quality. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat related deaths, illnesses, and asthma attacks throughout the state. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus reducing the pollution associated with wildfires. GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced GCC are the following:[1]

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which can cause global warming. Although GHGs produced by human activities include naturally occurring GHGs (e.g., CO_2, CH_4, and N_2O), some gases (e.g., HFCs, PFCs, and SF_6) are completely new to the atmosphere. Water vapor is a GHG, but is generally excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes (e.g., oceanic evaporation). For the purposes of this air quality study, the term "GHGs" will refer collectively to the six gases identified in the bulleted list provided above.

These GHGs vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas in absorbing infrared radiation and the length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. For example, N_2O is 265 times more potent at contributing to global warming than CO_2. GHG emissions are typically measured in terms of metric tons of "CO_2 equivalents" (MT CO_2e). Table 3 identifies the GWP for each type of GHG analyzed in this report. The EPA and CARB use GWP values from the 2007 IPCC Fourth Assessment Report (AR4). The IPCC has published the 2021 IPCC Sixth Assessment Report (AR6) with updated GWP values.

[1] The greenhouse gases listed are consistent with the definition in Assembly Bill 32 (Government Code 38505), as discussed later in this section.

Table 3: Global Warming Potential for Selected Greenhouse Gases

Pollutant	AR4 Values	AR6 Values
Carbon Dioxide (CO_2)	1 (by definition)	1 (by definition)
Methane (CH_4)	25	29.8 ± 11
Nitrous Oxide (N_2O)	298	273 ± 130

Sources: CARB. *2017 Climate Change Scoping Plan,*[1] and IPCC Sixth Assessment Report

[1] The EPA and CARB use global warming potential values from the IPCC Fourth Assessment Report (AR4) (2007).

AR4 = IPCC Assessment Report 4

AR6 = IPCC Assessment Report 6

CARB = California Air Resources Board

EPA = United States Environmental Protection Agency

IPCC = Intergovernmental Panel on Climate Change

Air Pollution Constituents and Attainment Status

CARB coordinates and oversees both State and federal air pollution control programs in the State. CARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the EPA and local air districts. CARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by CARB and the EPA to classify air basins as Attainment, Nonattainment, Nonattainment-Transitional, or Unclassified, based on air quality data for the most recent 3 calendar years compared with the AAQS.

Attainment areas may be the following:

- **Attainment/Unclassified** ("Unclassifiable" in some lists). These basins have never violated the air quality standard of interest or do not have enough monitoring data to establish Attainment or Nonattainment status.

- **Attainment-Maintenance** (national ambient air quality standards [NAAQS] only). These basins violated a NAAQS that is currently in use (were Nonattainment) in or after 1990, but now attain the standard and are officially redesignated as Attainment by the EPA with a Maintenance State Implementation Plan (SIP).

- **Attainment** (usually only for California ambient air quality standards [CAAQS], but sometimes for NAAQS). These basins have adequate monitoring data to show attainment, have never been Nonattainment, or, for NAAQS, have completed the official Maintenance period.

Nonattainment areas are imposed with additional restrictions as required by the EPA. The air quality data are also used to monitor progress in attaining air quality standards. Table 4 lists the attainment status for the criteria pollutants in the Basin.

[1] California Air resources Board. 2017. *2017 Climate Change Scoping Plan*. November. Accessible online at: www.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf (accessed July 2022).

Table 4: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3	Nonattainment (1-hour) Nonattainment (8-hour)	Extreme Nonattainment (1-hour) Extreme Nonattainment (8-hour)
PM_{10}	Nonattainment (24-hour) Nonattainment (Annual)	Attainment-Maintenance (24-hour)
$PM_{2.5}$	Nonattainment (Annual)	Serious Nonattainment (24-hour) Moderate Nonattainment (Annual)
CO	Attainment (1-hour) Attainment (8-hour)	Attainment-Maintenance (1-hour) Attainment-Maintenance (8-hour)
NO_2	Attainment (1-hour) Attainment (Annual)	Attainment/Unclassified (1-hour) Attainment-Maintenance (Annual)
SO_2	Attainment (1-hour) Attainment (24-hour)	Attainment/Unclassified (1-hour) Attainment/Unclassified (Annual)
Lead[1]	Nonattainment (30-day average)	Nonattainment (3-month rolling)
All Others	Attainment/Unclassified	N/A

Source: *National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin* (SCAQMD), Website:www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf (accessed September 2022).

[1] Only the Los Angeles County portion of the Basin is in nonattainment for lead.

CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SO_2 = sulfur dioxide

LOCAL AIR QUALITY

SCAQMD, together with CARB, maintains ambient air quality monitoring stations. The air quality monitoring station that monitors air pollutant data closest to the site is the Rubidoux Monitoring Station at 5888 Mission Blvd, Riverside California, approximately 9 miles northwest of the project site. The air quality trends from this station are used to represent the ambient air quality in the project area. The ambient air quality data in Table 5 show that NO_2 and CO levels are below the applicable State and federal standards. However, PM_{10} and O_3 levels frequently exceed their respective standards and $PM_{2.5}$ levels occasionally exceed the federal 24-hour standard.

Table 5: Air Quality Concentrations in the Project Vicinity

Pollutant	Standard	2019	2020	2021
CO (Measured at the Riverside – Rubidoux Monitoring Station)				
Maximum 1-hour concentration (ppm)		1.5	1.8	2.1
No. of days exceeded	State: 20 ppm	0	0	0
	Federal: 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		1.2	1.5	1.8
No. of days exceeded	State: 9 ppm	0	0	0
	Federal: 9 ppm	0	0	0
O_3 (Measured at the Riverside – Rubidoux Monitoring Station)				
Maximum 1-hour concentration (ppm)		0.123	0.143	0.117
No. of days exceeded	State: 0.09 ppm	24	46	ND
Max 8-hr concentration (ppm)		0.096	0.115	0.097
No. of days exceeded	State: 0.07 ppm	63	86	ND
	Federal: 0.07 ppm	59	82	ND
PM_{10} (Measured at the Riverside – Rubidoux Monitoring Station)				
Maximum 24-hour concentration (µg/m³)		57.6	61.9	76.0
No. of days exceeded	State: 50 µg/m³	110	115	0
	Federal: 150 µg/m³	0	0	0
Annual avg. concentration (µg/m³)		40.9	ND	33.2
Exceeds Standard?	State: 20 µg/m³	Yes	ND	Yes
$PM_{2.5}$ (Measured at the Riverside – Rubidoux Monitoring Station)				
Maximum 24-hour concentration (µg/m³)		57.7	59.9	44.4
No. of days exceeded	Federal: 35 µg/m³	5	12	0
Annual avg. concentration (µg/m³)		11.2	14.1	13.3
Exceeds Standard?	State: 12 µg/m³	No	Yes	No
	Federal: 12 µg/m³	No	Yes	No
NO_2 (Measured at the Riverside – Rubidoux Monitoring Station)				
Maximum 1-hour concentration (ppb):		56.0	62.0	52
No. of days exceeded	State: 180 ppb	0	0	0
	Federal: 100 ppb	0	0	0
Annual avg. concentration (ppb):		14.0	14.0	14.3
Exceeds standard?	State: 30 ppb	No	No	No
	Federal: 53 ppb	No	No	No

Sources: Air Data: EPA Air Quality Data Collected at Outdoor Monitors across the U.S.); and CARB's iADAM
Notes: Data was collected from the closest stations to the project site where each criteria pollutant data was available.
The *Riverside - Rubidoux* Air Quality Monitoring Station located at 5888 Mission Boulevard, Rubidoux, CA.
µg/m³ = micrograms per cubic meter
CARB = California Air Resources Board
CO = carbon monoxide
EPA = United States Environmental Protection Agency
ND = No data available
NO_2 = nitrogen dioxide
O_3 = ozone
$PM_{2.5}$ = particulate matter smaller than 2.5 microns in size
PM_{10} = particulate matter smaller than 10 microns in size
ppb = parts per billion
ppm = parts per million

Regulatory Framework

Air quality and GHG standards and the regulatory framework are discussed below.

Federal Regulations

Pursuant to the federal Clean Air Act (CAA) of 1970, the EPA established the NAAQS. The NAAQS were established for six major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations to protect public health.

The EPA has designated the Southern California Association of Governments (SCAG) as the Metropolitan Planning Organization responsible for ensuring compliance with the requirements of the CAA for the Basin.

The United States has historically had a voluntary approach to reducing GHG emissions; however, on April 2, 2007, the United States Supreme Court ruled that the EPA has the authority to regulate CO_2 emissions under the CAA. The Supreme Court ruled that GHGs fit within the CAA's definition of a pollutant and that the EPA did not have a valid rationale for not regulating GHGs. In December 2009, the EPA issued an endangerment finding for GHGs under the CAA.

On December 7, 2009, the EPA Administrator signed a final action under the CAA, finding that six GHGs (i.e., CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare and that the combined emissions from motor vehicles cause and contribute to GCC.

In 2012, the EPA and the National Highway Traffic Safety Administration (NHTSA) promulgated new rules to set GHG emission and fuel economy standards for new motor vehicles. The rules created requirements for model years 2017–2021 and 2022–2025, which would become more stringent each year, achieving greater GHG reductions over time. On March 31, 2020, the agencies issued the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule (EPA 2021) that increases the stringency of CAFE and CO_2 emissions standards by 1.5% each year through model year 2026. The current administration withdrew portions of the SAFE Rule, concluding that the SAFE Rule overstepped the agency's legal authority and finalized updated CAFE Standards for model years 2024 through 2026. The final rule establishes standards that would require an industry-wide fleet average of approximately 49 mpg for passenger cars and light trucks in model year 2026, by increasing fuel efficiency by 8 percent annually for model years 2024 and 2025, and 10 percent annually for model years 2026. The agency projects the final standards will save consumers nearly $1,400 in total fuel expenses over the lifetimes of vehicles produced in these model years and avoid the consumption of about 234 billion gallons of gas between model years 2030 to 2050. The NHTSA also projects that the standards will cut greenhouse gases from the atmosphere, reduce air pollution, and reduce the country's dependence on oil.

State Agencies

California Air Resources Board

In 1967, the State Legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus (i.e., the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board) to establish CARB. Since its formation, CARB has worked with the public, the business sector, and local governments to find solutions to the State's air pollution problems. California adopted the CCAA in 1988. CARB administers the CAAQs for the 10 air pollutants designated in the CCAA. These 10 State

air pollutants are the 6 criteria pollutants designated by the federal CAA as well as 4 others: visibility-reducing particulates, H_2S, sulfates, and vinyl chloride.

The California Global Warming Solutions Act of 2006, widely known as Assembly Bill (AB) 32, requires CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB was directed to set a statewide GHG emissions limit and set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

In 2016, the Legislature passed and Governor Jerry Brown signed, Senate Bill (SB) 32 and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown's April 2015 Executive Order (EO) B-30-15. SB 32 builds on AB 32 and keeps California on the path toward achieving the State's 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an IPCC analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 ppm CO_2e and reduce the likelihood of catastrophic impacts from climate change. The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions.

In December 2017, CARB adopted "California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target" (CARB 2017) that describes the actions the State will take to achieve the SB 32 climate goal of reducing GHG emissions at least 40 percent below 1990 levels by 2030. The 2017 Scoping Plan includes input from a range of State agencies and is the result of a 2-year development process, including extensive public and stakeholder outreach, designed to ensure that California's climate and air quality efforts continue to improve public health and drive development of a more sustainable economy. It outlines an approach that cuts across economic sectors to combine GHG reductions with reductions of smog-causing pollutants, while also safeguarding public health and economic goals. The 2017 Scoping Plan reflects the direction from the Legislature on the Cap-and-Trade Program, as described in AB 398, the need to extend key existing emissions reductions programs, and acknowledges the parallel actions required under AB 617 to strengthen monitoring and reduce air pollution at the community level.

The actions identified in the 2017 Scoping Plan can reduce overall GHG emissions in California and deliver strong policy signals that will continue to drive investment and certainty in a low-carbon economy. The 2017 Scoping Plan builds upon the successful framework established by the original Scoping Plan and the 2014 Scoping Plan, while also identifying new, technologically feasibility and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities.

Although the 2017 Scoping Plan does not impose any specific mandates or policies that specifically apply to individual development projects such as the proposed project, the Scoping Plan encourages local municipalities to update building codes and establish sustainable development practices for accommodating future growth. Key policies that involve the residential and commercial building sectors that are indirectly applicable to the proposed Project include the implementation of SB 275 (promoting infill development and high density housing in high quality transit areas), implementing

green building practices (i.e., the California Green Building Standards Code), energy efficiency and water conservation policies, and waste diversion efforts.

CARB is developing the 2022 Scoping Plan Update, with the finalizing of the Draft 2022 Scoping Plan expected by year's end. The 2022 Scoping Plan Update assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Senate Bill 97 and CEQA Guidelines

In August 2007, the Legislature adopted SB 97, requiring the Office of Planning and Research (OPR) to prepare and transmit new California Environmental Quality Act (CEQA) guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the California Natural Resources Agency. OPR submitted its proposed guidelines to the Secretary for Natural Resources on April 13, 2009, and the CEQA Guidelines amendments were adopted on December 30, 2009 and became effective on March 18, 2010.

The CEQA Guidelines amendments do not specify a threshold of significance for GHG emissions or prescribe assessment methodologies or specific mitigation measures. Instead, the amendments encourage lead agencies to consider many factors in performing a CEQA analysis but rely on the lead agencies in making their own significance determinations based upon substantial evidence. The CEQA Guidelines amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

The CEQA Guidelines amendments require a lead agency to make a good-faith effort based on the extent possible on scientific and factual data to describe, calculate or estimate the amount of GHG emissions resulting from a project. The CEQA Guidelines amendments give discretion to the lead agency whether to (1) use a model or methodology to quantify GHG emissions resulting from a project and which model or methodology to use and/or (2) rely on a qualitative analysis or performance-based standards. The California Natural Resources Agency is required to periodically update the guidelines to incorporate new information or criteria established by CARB pursuant to AB 32.

California Green Building Standards

The California Green Building Standards Code, which is Part 11 of the California Code of Regulations, is commonly referred to as the CALGreen Code. The first edition of the CALGreen Code was released in 2008 and contained only voluntary standards. The 2019 CALGreen Code was updated in 2019, became effective on January 1, 2020, and applies to non-residential and residential developments. The CALGreen Code contains requirements for construction site selection, stormwater control during construction, construction waste reduction, indoor water use reduction, material selection, natural resource conservation, site irrigation conservation, and more. The CALGreen Code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The CALGreen Code also requires building commissioning, which is a

process for the verification that all building systems, such as heating and cooling equipment and lighting systems, function at their maximum efficiency.

Regional Air Quality Planning Framework

SCAG is a council of governments for Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. SCAG is a regional planning agency and a forum for regional issues relating to transportation, the economy and community development, and the environment. Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality.

On September 3, 2020, the Regional Council of SCAG adopted *Connect SoCal*, also known as the *2020–2045 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability, and High Quality of Life* (a.k.a., 2020–2045 RTP/SCS). The 2020–2045 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. Connect SoCal embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions (CTCs), tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura.

South Coast Air Quality Management District

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin. To that end, the SCAQMD, a regional agency, works directly with SCAG, county transportation commissions and local governments, and cooperates actively with State and federal government agencies. The SCAQMD develops air quality-related rules and regulations, establishes permitting requirements, inspects emissions sources, and provides regulatory enforcement through such measures as educational programs or fines, when necessary.

Regional Air Quality Management Plan

SCAQMD and SCAG are responsible for formulating and implementing the AQMP for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. SCAQMD prepares a new AQMP every 3 years, updating the previous plan and a 20-year horizon.

The 2022 AQMP is currently under development; however, the latest plan is the 2016 AQMP (SCAQMD 2017), which incorporates the latest scientific and technological information and planning assumptions, including updated emission inventory methodologies for various source categories. The 2016 AQMP includes the integrated strategies and measures needed to meet the NAAQS, implementation of new technology measures, and demonstrations of attainment of the 1-hour and 8-hour O_3 NAAQS as well as the latest 24-hour and annual $PM_{2.5}$ standards. Key elements of the 2016 AQMP include the following:

- Calculation and credit for co-benefits from other planning efforts (e.g., climate, energy, and transportation)

- A strategy with fair-share emission reductions at the federal, State, and local levels
- Investment in strategies and technologies meeting multiple air quality objectives
- Identification of new partnerships and significant funding for incentives to accelerate deployment of zero and near-zero technologies
- Enhanced socioeconomic assessment, including an expanded environmental-justice analysis
- Attainment of the 24-hour $PM_{2.5}$ standard in 2019 with no additional measures
- Attainment of the annual $PM_{2.5}$ standard by 2025 with implementation of a portion of the O_3 strategy
- Attainment of the 1-hour O_3 standard by 2022 with no reliance on "black box" future technology (CAA Section 182(e)(5) measures)

SCAQMD adopts rules and regulations to implement portions of the AQMP. Several of these rules may apply to project construction or operation. For example, SCAQMD Rule 403 requires the implementation of the best-available fugitive dust control measure during active construction periods capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads.

Although SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality issues associated with new development projects within the Basin, such as the proposed project. Instead, SCAQMD published the *CEQA Air Quality Handbook* (SCAQMD 1993) to assist lead agencies, as well as consultants, project proponents, and other interested parties in evaluating potential air quality impacts of projects proposed in the Basin. The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses in Environmental Impact Reports and was used extensively in the preparation of this analysis. SCAQMD is currently in the process of replacing the *CEQA Air Quality Handbook* (1993) with the *Air Quality Analysis Guidance Handbook* (SCAQMD 2022a).

To assist the CEQA practitioner in conducting an air quality analysis in the interim while the replacement *Air Quality Analysis Guidance Handbook* is being prepared, supplemental guidance/information is provided on the SCAQMD website and includes (1) on-road vehicle emission factors, (2) background CO concentrations, (3) localized significance thresholds (LSTs), (4) mitigation measures and control efficiencies, (5) mobile-source toxics analysis, (6) off-road mobile-source emission factors, (7) $PM_{2.5}$ significance thresholds and calculation methodology, and (8) updated SCAQMD Air Quality Significance Thresholds. SCAQMD also recommends using approved models to calculate emissions from land use projects, such as the California Emissions Estimator Model (CalEEMod). These recommendations were followed in the preparation of this analysis.

The following SCAQMD rules and regulations would apply to the proposed project:

- SCAQMD Rule 403 (SCAQMD 2005) requires projects to incorporate fugitive dust control measures.

- SCAQMD Rule 1113 (SCAQMD 2016) limits the VOC content of architectural coatings.

Local Regulations

City of Riverside General Plan 2025

The *City of Riverside General Plan 2025* (General Plan) was adopted in November 2007 to preserve the vision and values of Riverside looking ahead to future improvements, increasing industry, and population growth. The Air Quality Element of the implemented policies intended to limit air pollution and reduce the potential sensitive receptor exposure (City of Riverside 2007). The following policies from the Air Quality Element of the General Plan are applicable to the project:

- **Objective AQ-1:** Adopt land use policies that site polluting facilities away from sensitive receptors and vice versa, improve the jobs–housing balance, reduce vehicle miles traveled and the length of work trips, and improve the flow of traffic.
    - **Policy AQ-1.2:** Consider potential environmental justice issues in reviewing impacts (including cumulative impacts for each project proposed).
    - **Policy AQ-1.3:** Separate, buffer, and protect sensitive receptors from significant sources of pollution to the greatest extent possible.
    - **Policy AQ-1.4:** Facilitate communication between residents and businesses on nuisance issues related to air quality.
    - **Policy AQ-1.16**: Design safe and efficient vehicular access to commercial land uses from arterial streets to ensure efficient vehicular ingress and egress.
    - **Policy AQ-2.4:** Monitor and strive to achieve performance goals and/or VMT reduction which are consistent with SCAG's goals.
    - **Policy AQ-3.4:** Require projects to mitigate, to the extent feasible, anticipated emissions that exceed the AQMP Guidelines.
    - **Policy AQ-3.6:** Support "green" building codes that require air conditioning/filtration installation, upgrades or improvements for all buildings, but particularly for those associated with sensitive receptors.
    - **Policy AQ-3.7:** Require use of pollution control measures for stationary and area sources through the use of best available control activities, fuel/material substitution, cleaner fuel alternatives, product reformulation, change in work practices and of control measures identified in the latest AQMP.
    - **Policy AQ-4.5:** Require the suspension of all grading operations when wind speeds (as instantaneous gusts) exceed 25 mph.

THRESHOLDS OF SIGNIFICANCE

Certain air districts (e.g., SCAQMD) have created guidelines and requirements to conduct air quality analyses. SCAQMD's current guidelines, the *CEQA Air Quality Handbook* (SCAQMD 1993) with associated updates, were followed in this assessment of air quality and climate impacts for the proposed project.

Based on the *State CEQA Guidelines*, Appendix G (Public Resources Code Sections 15000–15387), a project would normally be considered to have a significant effect on air quality if the project would violate any CAAQS, contribute substantially to an existing air quality violation, expose sensitive receptors to substantial pollutants concentrations, or conflict with adopted environmental plans and goals of the community in which it is located.

POLLUTANTS WITH REGIONAL EFFECTS

SCAQMD has established daily emissions thresholds for construction and operation of a proposed project in the Basin. The emissions thresholds were established based on the attainment status of the Basin with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (SCAQMD 2017), these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Regional Emissions Thresholds

Table 6 lists the CEQA significance thresholds for construction and operational emissions established for the Basin.

Table 6: Regional Thresholds for Construction and Operational Emissions

Emissions Source	Pollutant Emissions Thresholds (lbs/day)					
	VOCs	NO_X	CO	PM_{10}	$PM_{2.5}$	SO_X
Construction	75	100	550	150	55	150
Operations	55	55	550	150	55	150

Source: South Coast AQMD Air Quality Significance Thresholds (SCAQMD 2022b)

CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOC = volatile organic compound

Projects in the Basin with construction- or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under SCAQMD guidelines. These thresholds, which SCAQMD developed and which apply throughout the Basin, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

Local Microscale Concentration Standards

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. Because ambient CO

levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 ppm
- California State 8-hour CO standard of 9 ppm

LOCALIZED IMPACTS ANALYSIS

SCAQMD published its *Final Localized Significance Threshold Methodology* in June 2003 and updated it in July 2008 (SCAQMD 2008), recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors. LSTs represent the maximum emissions from a project site that are not expected to result in an exceedance of the NAAQS or the CAAQS for CO, NO_2, PM_{10} and $PM_{2.5}$, as shown in Table 7. LSTs are based on the ambient concentrations of that pollutant within the project's Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. The project site is in the Metropolitan Riverside County area (SRA 23).

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. As described above, the nearest sensitive receptors in proximity to the project site are multi-family homes located approximately The nearest sensitive receptors in proximity to the project site are single-family residential units that are 637 feet to the west along Little Court, 547 feet to the east along Dauchy Avenue and Ardenwood Lane and 775 feet to the south along Blue Sky Street. Martin Luther King High School is located 1,253 feet east of the project site.

The SCAQMD provides LST screening tables for 25, 50, 100, 200, and 500-meter source-receptor distances. As identified, the nearby sensitive receptors are located approximately 547 feet (166 m) from the project site boundary. The proposed project site is 29.29 acres, however the construction activities will only occur on small portions of the project site. To approximate the maximum construction area, the largest building to be constructed is the 11,600 square foot, two story building along with a new outdoor 300 seat amphitheater. The areas for construction span approximately 2 acres, therefore, LSTs for the 2 acre/166-meter combination were derived by interpolation.

Table 7 shows the emission thresholds that would apply based on the project size and distance to nearby receptors during project construction and operation, respectively.

Table 7: SCAQMD Localized Significance Thresholds

Emissions Source Category	Pollutant Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction (2.ac, 547 ft distance)	340	4,149	62	19
Operations (2 ac, 547 ft distance)	340	4,149	15	5

Source: *Final Localized Significance Threshold Methodology* (SCAQMD 2008).
ac = acre
CO = carbon monoxide
ft = feet
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size

GLOBAL CLIMATE CHANGE

State CEQA Guidelines Section 15064(b) provides that the "determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data", and further states that an "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

Appendix G of the *State CEQA Guidelines* includes significance thresholds for GHG emissions. A project would normally have a significant effect on the environment if it would do either of the following:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment

- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs

Currently, there is no Statewide GHG emissions threshold that has been used to determine the potential GHG emissions impacts of a project. Threshold methodology and thresholds are still being developed and revised by air districts in California.

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group) in 2008. This Working Group proposed a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency. The applicable tier for this project is Tier 3, which states that if GHG emissions are less than 3,000 MT CO_2e per year, project-level and cumulative GHG emissions would be less than significant. However, this threshold was developed to meet the 2020 GHG emissions goals.

To be consistent with State goals detailed in SB 32, EO B-30-15, and EO S 3-05 to reduce GHG emissions by 40 percent below 1990 levels by 2030, a scaled screening GHG threshold can be developed for an assumed opening year of 2026, which is when the proposed project is anticipated to be operational. Though the SCAQMD has not published a quantified threshold beyond 2020, a threshold of 2,280 MT CO_2e per year would be the appropriate scaled GHG threshold for the build-out year of 2026 based on the GHG reduction goals of SB 32 and EO B-30-15.

IMPACTS AND MITIGATION MEASURES

Emissions would include criteria air pollutants and GHG emissions. The sections below describe the proposed project's consistency with applicable air quality plans, estimated project emissions, and the significance of impacts with respect to SCAQMD thresholds.

Air Quality Impacts

Criteria Pollutant Analysis

The SCAB is designated as non-attainment for O_3 and $PM_{2.5}$ for federal standards and non-attainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards. The SCAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions.

Construction Emissions

Construction activities produce combustion emissions from various sources (utility engines, tenant improvements, and motor vehicles transporting the construction crew). Exhaust emissions from construction activities envisioned on site would vary daily as construction activity levels change.

The construction analysis includes estimating the construction equipment that would be used during each construction activity, the hours of use for that construction equipment, the quantities of earth and debris to be moved, and the on-road vehicle trips (e.g., worker, soil-hauling, and vendor trips). The proposed earthwork for the project assumes the site would be balanced (no import or export needed). CalEEMod defaults are assumed for the construction activities, off-road equipment, and on-road construction fleet mix and trip lengths. Project construction was analyzed as starting in the spring of 2024 and ending in late spring of 2026. Due to delays construction would now occur in phases with the first phase starting as soon as spring 2025 and, depending on enrollment and funding, having all phases completed several years later. As the included analysis assumes dates that are earlier than the expected dates, actual construction equipment emissions are anticipated to be the same or even lower under the latest construction schedule. Additionally, the phased construction would spread out the construction activities compared to the analyzed construction duration of 2 years, further reducing the daily construction emissions presented below when compared to the daily construction emissions thresholds.

Table 8 lists the project construction schedule analyzed.

Table 8: Tentative Project Construction Schedule

Phase Name	Phase Start Date	Phase End Date	Number of Days
Demolition	4/1/2024	5/10/2024	30
Site Preparation	5/11/2024	6/7/2024	20
Grading	6/8/2024	8/9/2024	45
Building Construction	8/10/2024	4/17/2026	440
Architectural Coatings	3/9/2026	4/17/2026	30
Paving	4/18/2026	6/5/2026	35

Source: Estimated by LSA Associates, Inc. from the project information provided (September 2022).

The most recent version of CalEEMod (Version 2020.4.0) was used to develop the construction equipment inventory and calculate the construction emissions. Table 9 lists the estimated construction equipment that would be used during project construction as estimated by CalEEMod default values. The CalEEMod output is included as Attachment B.

Table 9: Diesel Construction Equipment Used by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	1	8	81	0.73
	Rubber Tired Dozers	1	8	158	0.40
	Tractors/Loaders/Backhoes	3	8	7	0.37
Site Preparation	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	158	0.40
	Tractors/Loaders/Backhoes	1	7	97	0.37
Grading	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.4
	Tractors/Loaders/Backhoes	2	7	97	0.37
Building Construction	Cranes	1	6	231	0.29
	Forklifts	1	6	89	0.2
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	1	6	97	0.37
	Welders	3	8	46	0.45
Architectural Coating	Air Compressors	1	6	78	0.48
Paving	Pavers	1	8	130	0.42
	Paving Equipment	1	8	132	0.36
	Rollers	1	8	80	0.38
	Tractors/Loaders/Backhoes	1	8	97	0.37

Source: Compiled by LSA Associates, Inc. using CalEEMod defaults (September 2022).
CalEEMod = California Emissions Estimator Model

The emissions rates shown in Table 10 are from the CalEEMod output tables listed as "Mitigated Construction," even though the only measures that have been applied to the analysis are the required construction emissions control measures, or standard conditions. They are also the combination of the on- and off-site emissions and the greater of summer and winter emissions. No exceedances of any criteria pollutants are expected. Standard measures are documented in the CalEEMod output in Attachment B.

Table 10: Short-Term Regional Construction Emissions

Construction Phase	Total Regional Pollutant Emissions (lbs/day)							
	VOCs	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Demolition	1	14	14	<1	<1	<1	<1	<1
Site Preparation	1	12	7	<1	3	<1	1	<1
Grading	1	14	9	<1	3	<1	2	<1
Building Construction	2	12	14	<1	<1	<1	<1	<1
Architectural Coating	7	1	2	<1	<1	<1	<1	<1
Paving	<1	5	9	<1	<1	<1	<1	<1
Peak Daily	**7**	**14**	**14**	**<1**	**4**		**2**	
SCAQMD Threshold	**75**	**100**	**550**	**150**	**150**		**55**	
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**		**No**	

Source: Compiled by LSA Associates, Inc. (September 2022)
PM_{10} and $PM_{2.5}$ fugitive emissions are from the Mitigated results; the only "mitigation" measures applied in this modeling are required dust control measures per SCAQMD Rule 403. It was assumed that the Architectural Coatings would be applied during the Building Construction phase.
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxides
VOCs = volatile organic compounds

Fugitive Dust

Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind, as well as cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and weather conditions at the time of construction.

The construction calculations prepared for this project assumed that dust control measures (watering a minimum of two times daily consistent with SCAQMD Rule 403) would be employed to reduce emissions of fugitive dust during site grading. Furthermore, all construction would need to comply with SCAQMD Rule 403 regarding the emission of fugitive dust. Table 10 lists total construction emissions (i.e., fugitive dust emissions and construction equipment exhausts) that have incorporated the following Rule 403 measures that would be implemented to significantly reduce PM_{10} emissions from construction:

- Water active sites at least twice daily (locations where grading is to occur shall be thoroughly watered prior to earthmoving).
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 ft (0.6 meter) of freeboard (vertical space between the top of the load and the top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour (mph) or less.

These Rule 403 measures were incorporated in the CalEEMod analysis.

Architectural Coatings

Architectural coatings contain VOCs that are part of the O_3 precursors. Based on the proposed project, it is estimated that application of the architectural coatings for the proposed peak construction day would result in a peak of 9 pound per day (lb/day) of VOCs. Therefore, VOC emissions from architectural-coating application would not exceed the SCAQMD VOC threshold of 75 lbs/day.

Localized Impacts Analysis

Table 11 shows the portion of the construction emissions that would be produced on the project sites compared to the LSTs. Table 11 shows that the localized construction emissions would not result in a locally significant air quality impact.

Table 11: Construction Localized Impacts Analysis

Emissions Sources	Pollutant Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions	14	13	4	2
LST	**340**	**4,149**	**62**	**19**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA Associates, Inc. (September 2022)
Note: SRA 23- Metropolitan Riverside County, 2-ac construction area, 547 feet to the nearest sensitive receptors.
ac = acre
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxides
LST = localized significance threshold
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

Odors from Construction Activities

Heavy-duty equipment in the project area during construction would emit odors, primarily from the equipment exhaust. However, the construction-produced odors would cease to occur after individual construction is completed. No other sources of objectionable odors have been identified for the proposed project, and no mitigation measures are required.

SCAQMD Rule 402 regarding nuisances states,

> *"A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."*

The proposed uses are not anticipated to emit any objectionable odors. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of the proposed project.

Construction Emissions Conclusions

Tables 10 and 11 show that daily regional construction emissions and localized emissions would not exceed the established thresholds of any criteria pollutant emission thresholds established by SCAQMD; thus, during construction, there would be no air quality impacts.

OPERATIONAL EMISSIONS

Long-term air pollutant emission impacts are those associated with mobile sources (e.g., vehicle trips), energy sources (e.g., electricity and natural gas) and area sources (e.g., architectural coatings and the use of landscape maintenance equipment) related to the proposed project.

PM_{10} emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM_{10} occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-powered vehicles. Based on the Traffic Impact Analysis prepared for the project, the proposed project would generate a total of 2,686 vehicle trips on a peak day (weekday), which was accounted for in the CalEEMod analysis.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. Major sources of energy demand include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as computers. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources.

Typically, area source emissions consist of direct sources of air emissions located at the project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the project would include emissions from the use of landscaping equipment and the use of consumer products.

Emission estimates for operation of the project were calculated using CalEEMod and are shown in Table 12, below. The peak daily emissions associated with project operations are identified in Table 12 for VOC, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$.

The results shown in Table 12 indicate the project would not exceed the significance criteria for annual VOC, NO, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions; therefore, operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State AAQS.

Emission calculations sheets are included in Attachment B.

Table 12: Project Operation Emissions

	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Existing Operation Emissions						
Area Source Emissions	2	<1-	<1	<1-	<1-	<1-
Energy Source Emissions	<1	<1	<1	<1-	<1	<1
Mobile Source Emissions	8	11	93	<1	21	6
Total Existing Emissions	**10**	**12**	**93**	**<1**	**21**	**6**
Proposed Operation Emissions						
Area Source Emissions	3	<1-	<1	<1-	<1-	<1-
Energy Source Emissions	<1	<1	<1	<1-	<1	<1
Mobile Source Emissions	10	11	111	<1	31	8
Total Project Emissions	**12**	**12**	**111**	**<1**	**31**	**8**
Net Change in Emissions	**2**	**0**	**18**	**<1**	**10**	**2**
SCAQMD Significance Threshold	**55**	**55**	**550**	**150**	**55**	**150**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA (September 2022).

Localized Impacts Analysis

By design, the localized impacts analysis only includes on-site sources; however, the CalEEMod outputs do not separate on-site and off-site emissions for operations. Table 13 shows that the proposed operational emission rates would not exceed the LSTs for sensitive receptors in the project area. Therefore, the proposed operational activity would not result in a locally significant air quality impact. The proposed project would be less than significant.

Table 13: Long-Term Operational Localized Impacts Analysis

Emissions Sources	Pollutant Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
On-Site Emissions	<1	6	2	<1
LST	**340**	**4,149**	**15**	**5**
Exceeds Threshold?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (September 2022) SRA 23- Metropolitan Riverside, 2-ac operating area, receptors at 547 feet (166 meters)

ac = acre
CO = carbon monoxide
LST = local significance threshold
NO_X = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

Objectionable Odors

The SCAQMD addresses odor criteria within the CEQA Handbook. The district has not established a rule or standard regarding odor emissions, rather, the district has a nuisance rule: "Any project with the potential to frequently expose members of the public to objectionable odors should be deemed to have a significant impact."

The proposed project would not include any activities or operations that would generate objectionable odors. Therefore, the proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Greenhouse Gas Impacts

Generate Greenhouse Gas Emissions

This section discusses the project's impacts related to the release of GHG emissions for the construction and operational phases of the project.

Emissions Background

Estimation of GHG emissions in the future does not account for all changes in technology that may reduce such emissions; therefore, the estimates are based on past performance and represent a scenario that is worse than that which is likely to be encountered (after energy-efficient technologies have been implemented). While information is presented below to assist the public and decision-makers in understanding the project's potential contribution to GCC impacts, the information available is not sufficiently detailed to allow a direct comparison between particular project characteristics and particular climate change impacts or between any particular proposed mitigation measure and any reduction in climate change impacts.

Construction and operation of the proposed project would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during the project's operation.

Overall, the following activities associated with the proposed project could directly or indirectly contribute to the generation of GHG emissions.

Construction Activities. Construction activities associated with maximum buildout would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O. Furthermore, CH_4 is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

The SCAQMD does not provide a separate GHG significance threshold for construction emissions, rather their guidance specifies that construction emissions should be amortized over 30 years (a typical project lifetime), added to the project operational emissions, and that total compared to the GHG significance threshold.

Operational GHG Emissions. Long-term GHG emissions are typically generated from mobile sources (e.g., cars, trucks and buses), area sources (e.g., maintenance activities and landscaping), indirect emissions from sources associated with energy consumption, waste sources (land filling and waste disposal), and water sources (water supply and conveyance, treatment, and distribution). Mobile-source GHG emissions would include project-generated vehicle and truck trips to and from the

project. Area-source emissions would be associated with activities such as landscaping and maintenance on the project site. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing project generated waste. The site has an existing photovoltaic system that provides approximately 95 percent of the total electricity used by the school. After the proposed expansion the photovoltaic system would continue to provide approximately 95 percent of the total electricity used.

As described above, this analysis evaluates existing and proposed operational emissions associated with the project. Construction and Operational GHG emissions were estimated using CalEEMod and the results are presented in Table 14 and 15.

Table 14: Construction Greenhouse Gas Emissions

Construction Phase	Total Emissions per Phase (MT)			Total Emissions per Phase (MT CO_2e)
	CO_2	CH_4	N_2O	
Demolition	34	<1	<1	34
Site Preparation	16	<1	<1	16
Grading	43	<1	<1	43
Building Construction (2024, 2025, 2026)	509	<1	<1	514
Architectural Coating	5	<1	<1	5
Paving	22	<1	<1	23
Total Emissions for the Entire Construction Process				**634**
Total Construction Emissions Amortized over 30 Years				**21**

Source: Compiled by LSA Associates, Inc. (September 2022)

CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
MT CO_2e = metric tons of carbon dioxide equivalent
MT = metric tons
N_2O = nitrous oxide

As shown in Table 15, the project's net change to GHG emissions would be an increase of 914 MT CO_2e per year. This is less than SCAQMD's threshold of 3,000 MT CO_2e/yr and less than the post-2020-adjusted Tier 3 threshold of 2,280 MT CO_2e/yr.

Operational GHG emissions are calculated through varying means of combining emission factors from vehicular traffic data, energy consumption, water conveyance and treatment, and waste generation. The same methodology described above for criteria pollutant emissions applies to operational GHG estimates. The GHG emission estimates presented in Table 15 show the emissions associated with the existing operations, with the level of development envisioned by the proposed project at opening, and the net change as a result of the project.

Table 15: Long Term Operational GHG Emissions

Source	Pollutant Emissions (MT per year)					
	Bio-CO_2	NBio-CO_2	Total CO_2	CH_4	N_2O	CO_2e
Existing Operational Emissions						
Area	<1	<1	<1	<1	<1	<1
Energy	<1	51	51	<1	<1	52
Mobile	<1	2,702	2,702	<1	<1	2,740
Waste	24	<1	24	1	<1	59
Water	<1	42	43	<1	<1	46
Total Existing Emissions	**24**	**2,795**	**2,820**	**1**	**<1**	**2,897**
Proposed Operational Emissions						
Area	<1	<1	<1	<1	<1	<1
Energy	<1	74	74	<1	<1	74
Mobile	<1	3,518	3,518	<1	<1	3,565
Waste	34	<1	34	2	<1	85
Water	1	61	62	<1	<1	66
Total Proposed Project Emissions	**36**	**3,652**	**3,687**	**2**	**<1**	**3,790**
Construction Emissions Amortized over 30 Years						**21**
					Total Net Change to GHG Emissions	**914**
					SCAQMD Threshold (Adjusted for 2026)	**2,280**
					Net Emissions Exceed Threshold?	**No**

Source: Compiled by LSA (September 2022).
Note: CalEEMod only allows including the photovoltaic system as mitigation, even though it is already in place. Thus, the results reported in this table are from the "Mitigated" results from CalEEMod.

Bio-CO_2 = biologically generated CO_2
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide
NBio-CO_2 = non-biologically generated CO_2

CONCLUSION

Based on the analysis presented above, the increase in operational emissions associated with the difference between the existing operations and the proposed project would not exceed SCAQMD established significance thresholds. The proposed project is not expected to produce significant emissions that would affect nearby sensitive receptors. The proposed project would also not result in objectionable odors affecting a substantial number of people. The increase in GHG emissions associated with the difference between the existing operations and the proposed project are estimated to be lower than significance thresholds, and thus would not be cumulatively considerable.

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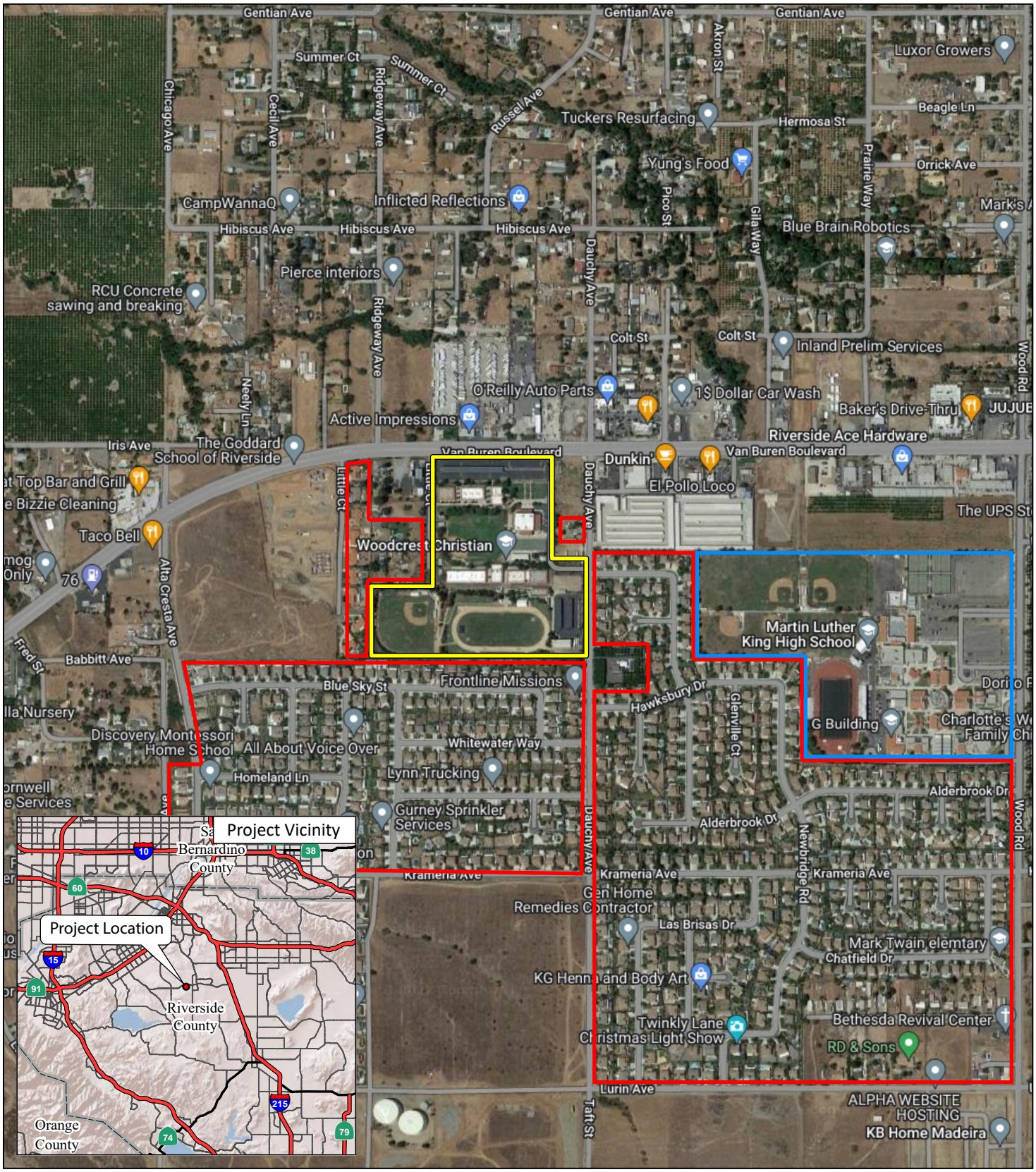
Attachments: A – Figures
B – CalEEMod Output

ATTACHMENT A

FIGURES



LSA

FIGURE 1

LEGEND

- Project Location
- Single Family Residential Units
- Martin Luther King High School

Note: No nearby sensitive receptors north of Van Buren Boulevard

0 400 800
FEET

SOURCE: Google Maps, 2022

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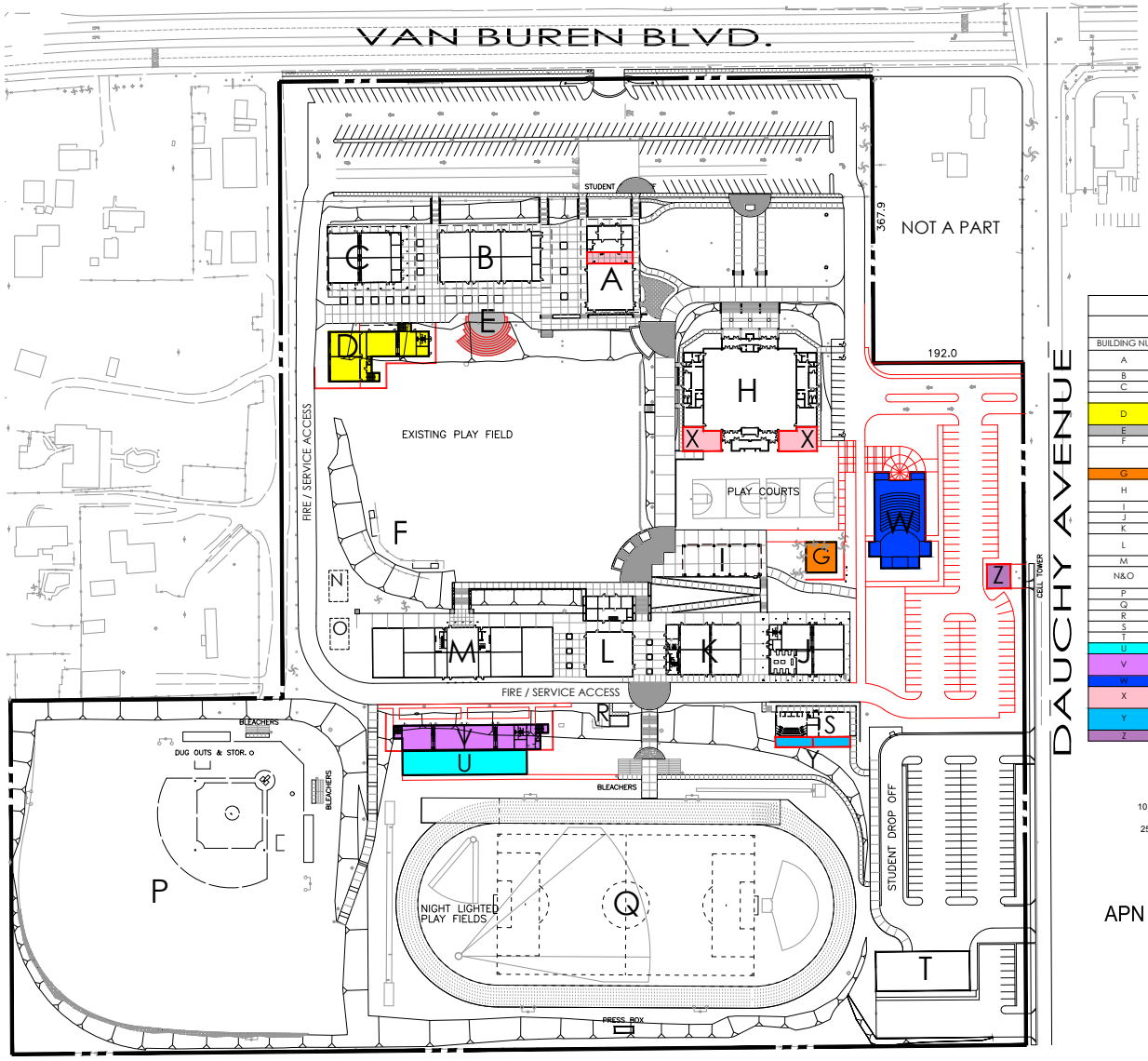
Woodcrest Christian School Improvement Project

Project Location and Sensitive Receptors



LEGEND

MIDDLE SCHOOL

BUILDING NUMBER	BUILDING NAME	SQUARE FOOTAGE	EXISTING / PROPOSED
A	ADMINISTRATION & MULTIPURPOSE ROOM	5,310 S.F. OFFICE - 900 S.F.	EXISTING PROPOSED
B	CLASSROOMS (6)	8,320 S.F.	EXISTING
C	CLASSROOMS (4)	6,016 S.F.	EXISTING
D	2 STORY OFFICE/ CLASSROOMS (6)	11,600	PROPOSED
E	AMPHITHEATER	300 SEATS	PROPOSED
F	BASEBALL FIELD	-	EXISTING

HIGH SCHOOL

G	FOOD SERVICES	1,600 S.F.	PROPOSED
H	GYMNASIUM & LOCKERS	20,208 S.F.	EXISTING
I	LUNCH SHELTERS	5,600 S.F.	EXISTING
J	CLASSROOMS (4)	6,144 S.F.	EXISTING
K	CLASSROOMS (4)	6,142 S.F.	EXISTING
L	ADMINISTRATION & LIBRARY	LOWER 2,933 S.F. FIRST 5,400 S.F.	EXISTING
M	CLASSROOMS (9)	14,848 S.F.	EXISTING
N&O	TEMPORARY CLASSROOMS	960 S.F. EACH TOTAL OF 2	EXISTING
P	BASEBALL FIELD	-	EXISTING
Q	TRACK & FIELD	-	EXISTING
R	ELECTRICAL		EXISTING
S	CHOIR & BAND	3,066 S.F.	EXISTING
T	BUS BARN	6,000 S.F.	EXISTING
U	LOCKERS/SNACK BAR	5,000 S.F.	PROPOSED
V	2 STORY OFFICE/ CLASSROOMS (6)	10,000 S.F.	PROPOSED
W	CHAPEL ARTS BUILDING	300 SEATS - 8,300 S.F.	PROPOSED
X	WEIGHT ROOM STORAGE ROOM	1,400 S.F. 1,400 S.F.	PROPOSED
Y	STORAGE ROOMS	1,400 S.F.	PROPOSED
Z	EXPAND CELL TOWER	1,000 S.F.	PROPOSED

PARKING

2 PARKING SPACES FOR EVERY MIDDLE SCHOOL CLASS ROOM
10 MIDDLE SCHOOL CLASS ROOMS WHICH EQUALS 20 PARKING SPACES
7 PARKING SPACES FOR EVERY HIGH SCHOOL CLASS ROOM
25 HIGH SCHOOL CLASS ROOMS WHICH EQUALS 175 PARKING SPACES
FOR A REQUIREMENT TOTAL OF 195 PARKING SPACES
290 TOTAL PARKING SPACES PROVIDED

29.29 ACRES

APN 266-020-013,-014,-015,-037,-038,-059

OWNER
WOODCREST CHRISTIAN SCHOOL
18401 VAN BUREN BLVD.
PH. 909 780 2010

LSA

FIGURE 2

0 120 240
FEET

SOURCE: Charles Brown Architects

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Woodcrest Christian School Improvement Project

Site Plan

ATTACHMENT B

CALEEMOD OUTPUT

Woodcrest Christian School Improvements - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodcrest Christian School - Existing

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	644.00	Student	1.96	85,433.67	0
Parking Lot	150.00	1000sqft	3.44	150,000.00	0
City Park	23.89	Acre	23.89	1,040,648.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company	Riverside Public Utilities/City of Riverside				
CO2 Intensity (lb/MWhr)	789.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing School

Construction Phase - The analysis will not have construction

Off-road Equipment - There will not be any site preparation

Trips and VMT - No construction analyzed.

Grading - .

Vehicle Trips - Trip generation daily equals to 2.91.

Area Coating - Architectural Coating would comply with Rule 113

Woodcrest Christian School Improvements - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water And Wastewater - .

Construction Off-road Equipment Mitigation - Dust control measures as required from SCAQMD Rule 403

Mobile Commute Mitigation -

Area Mitigation - .

Energy Mitigation - The site generates 95 percent Solar

Fleet Mix - Project Trip Generation did not provide Fleet Mix. Defaults will apply.

On-road Fugitive Dust - construction not analyzed

Solid Waste - .

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	4/29/2022	4/3/2022
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	VendorPercentPave	100.00	0.00
tblOnRoadDust	WorkerPercentPave	100.00	0.00
tblSolidWaste	SolidWasteGenerationRate	2.05	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	0.58	0.83

Woodcrest Christian School Improvements - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.25	0.50
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	2.03	2.91
tblWater	OutdoorWaterUseRate	28,464,489.44	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					

Woodcrest Christian School Improvements - South Coast AQMD Air District, Annual

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2022	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3500	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0203	0.0203	5.0000e-005	0.0000	0.0216
Energy	4.0000e-003	0.0364	0.0306	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	273.0302	273.0302	0.0105	1.9100e-003	273.8615
Mobile	1.0491	1.6347	12.5990	0.0291	2.9440	0.0247	2.9687	0.7857	0.0231	0.8088	0.0000	2,701.7231	2,701.7231	0.1571	0.1144	2,739.7294
Waste						0.0000	0.0000		0.0000	0.0000	23.8575	0.0000	23.8575	1.4099	0.0000	59.1060
Water						0.0000	0.0000		0.0000	0.0000	0.9000	42.2760	43.1760	0.0942	2.4000e-003	46.2453
Total	**1.4031**	**1.6711**	**12.6401**	**0.0293**	**2.9440**	**0.0275**	**2.9715**	**0.7857**	**0.0259**	**0.8116**	**24.7575**	**3,017.0496**	**3,041.8071**	**1.6718**	**0.1187**	**3,118.9639**

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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3500	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0203	0.0203	5.0000e-005	0.0000	0.0216
Energy	4.0000e-003	0.0364	0.0306	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	51.2889	51.2889	1.2500e-003	7.9000e-004	51.5541
Mobile	1.0491	1.6347	12.5990	0.0291	2.9440	0.0247	2.9687	0.7857	0.0231	0.8088	0.0000	2,701.7231	2,701.7231	0.1571	0.1144	2,739.7294
Waste						0.0000	0.0000		0.0000	0.0000	23.8575	0.0000	23.8575	1.4099	0.0000	59.1060
Water						0.0000	0.0000		0.0000	0.0000	0.9000	42.2760	43.1760	0.0942	2.4000e-003	46.2453
Total	**1.4031**	**1.6711**	**12.6401**	**0.0293**	**2.9440**	**0.0275**	**2.9715**	**0.7857**	**0.0259**	**0.8116**	**24.7575**	**2,795.3083**	**2,820.0659**	**1.6626**	**0.1176**	**2,896.6565**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**7.35**	**7.29**	**0.55**	**0.94**	**7.13**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

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1	Site Preparation	Site Preparation	4/4/2022	4/3/2022	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.44

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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Category	tons/yr										MT/yr					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0491	1.6347	12.5990	0.0291	2.9440	0.0247	2.9687	0.7857	0.0231	0.8088	0.0000	2,701.7231	2,701.7231	0.1571	0.1144	2,739.7294
Unmitigated	1.0491	1.6347	12.5990	0.0291	2.9440	0.0247	2.9687	0.7857	0.0231	0.8088	0.0000	2,701.7231	2,701.7231	0.1571	0.1144	2,739.7294

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
High School	1,874.04	534.52	322.00	7,819,751	7,819,751
Parking Lot	0.00	0.00	0.00		
Total	1,874.04	534.52	322.00	7,819,751	7,819,751

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.543376	0.059966	0.184357	0.131187	0.023843	0.006245	0.012012	0.009162	0.000826	0.000515	0.023898	0.000748	0.003864

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High School	0.543376	0.059966	0.184357	0.131187	0.023843	0.006245	0.012012	0.009162	0.000826	0.000515	0.023898	0.000748	0.003864
Parking Lot	0.543376	0.059966	0.184357	0.131187	0.023843	0.006245	0.012012	0.009162	0.000826	0.000515	0.023898	0.000748	0.003864

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	11.6706	11.6706	4.9000e-004	6.0000e-005	11.7004
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	233.4119	233.4119	9.7500e-003	1.1800e-003	234.0078
NaturalGas Mitigated	4.0000e-003	0.0364	0.0306	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.6183	39.6183	7.6000e-004	7.3000e-004	39.8537
NaturalGas Unmitigated	4.0000e-003	0.0364	0.0306	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.6183	39.6183	7.6000e-004	7.3000e-004	39.8537

5.2 Energy by Land Use - NaturalGas

Unmitigated

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	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	742419	4.0000e-003	0.0364	0.0306	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.6183	39.6183	7.6000e-004	7.3000e-004	39.8537
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.0000e-003**	**0.0364**	**0.0306**	**2.2000e-004**		**2.7700e-003**	**2.7700e-003**		**2.7700e-003**	**2.7700e-003**	**0.0000**	**39.6183**	**39.6183**	**7.6000e-004**	**7.3000e-004**	**39.8537**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	742419	4.0000e-003	0.0364	0.0306	2.2000e-004		2.7700e-003	2.7700e-003		2.7700e-003	2.7700e-003	0.0000	39.6183	39.6183	7.6000e-004	7.3000e-004	39.8537
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.0000e-003**	**0.0364**	**0.0306**	**2.2000e-004**		**2.7700e-003**	**2.7700e-003**		**2.7700e-003**	**2.7700e-003**	**0.0000**	**39.6183**	**39.6183**	**7.6000e-004**	**7.3000e-004**	**39.8537**

5.3 Energy by Land Use - Electricity

Unmitigated

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	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
High School	598890	214.5996	8.9600e-003	1.0900e-003	215.1475
Parking Lot	52500	18.8123	7.9000e-004	1.0000e-004	18.8603
Total		**233.4119**	**9.7500e-003**	**1.1900e-003**	**234.0078**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
High School	29944.5	10.7300	4.5000e-004	5.0000e-005	10.7574
Parking Lot	2625	0.9406	4.0000e-005	0.0000	0.9430
Total		**11.6706**	**4.9000e-004**	**5.0000e-005**	**11.7004**

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6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3500	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0203	0.0203	5.0000e-005	0.0000	0.0216
Unmitigated	0.3500	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0203	0.0203	5.0000e-005	0.0000	0.0216

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.7000e-004	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0203	0.0203	5.0000e-005	0.0000	0.0216

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**0.3500**	**1.0000e-004**	**0.0105**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0203**	**0.0203**	**5.0000e-005**	**0.0000**	**0.0216**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0208					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3282					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.7000e-004	1.0000e-004	0.0105	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.0203	0.0203	5.0000e-005	0.0000	0.0216
Total	**0.3500**	**1.0000e-004**	**0.0105**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**0.0203**	**0.0203**	**5.0000e-005**	**0.0000**	**0.0216**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e

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Category	MT/yr			
Mitigated	43.1760	0.0942	2.4000e-003	46.2453
Unmitigated	43.1760	0.0942	2.4000e-003	46.2453

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
High School	2.83679 / 7.29461	43.1760	0.0942	2.4000e-003	46.2453
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**43.1760**	**0.0942**	**2.4000e-003**	**46.2453**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

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Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
High School	2.83679 / 7.29461	43.1760	0.0942	2.4000e-003	46.2453
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**43.1760**	**0.0942**	**2.4000e-003**	**46.2453**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	23.8575	1.4099	0.0000	59.1060
Unmitigated	23.8575	1.4099	0.0000	59.1060

8.2 Waste by Land Use

Unmitigated

Woodcrest Christian School Improvements - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
High School	117.53	23.8575	1.4099	0.0000	59.1060
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**23.8575**	**1.4099**	**0.0000**	**59.1060**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
High School	117.53	23.8575	1.4099	0.0000	59.1060
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**23.8575**	**1.4099**	**0.0000**	**59.1060**

Woodcrest Christian School Improvements - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodcrest Christian School - Existing

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	644.00	Student	1.96	85,433.67	0
Parking Lot	150.00	1000sqft	3.44	150,000.00	0
City Park	23.89	Acre	23.89	1,040,648.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company	Riverside Public Utilities/City of Riverside				
CO2 Intensity (lb/MWhr)	789.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing School

Construction Phase - The analysis will not have construction

Off-road Equipment - There will not be any site preparation

Trips and VMT - No construction analyzed.

Grading - .

Vehicle Trips - Trip generation daily equals to 2.91.

Area Coating - Architectural Coating would comply with Rule 113

Water And Wastewater - .

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation - Dust control measures as required from SCAQMD Rule 403

Mobile Commute Mitigation -

Area Mitigation - .

Energy Mitigation - The site generates 95 percent Solar

Fleet Mix - Project Trip Generation did not provide Fleet Mix. Defaults will apply.

On-road Fugitive Dust - construction not analyzed

Solid Waste - .

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	4/29/2022	4/3/2022
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	VendorPercentPave	100.00	0.00
tblOnRoadDust	WorkerPercentPave	100.00	0.00
tblSolidWaste	SolidWasteGenerationRate	2.05	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	0.58	0.83
tblVehicleTrips	SU_TR	2.19	0.00

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	0.25	0.50
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	2.03	2.91
tblWater	OutdoorWaterUseRate	28,464,489.44	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	1.6126	0.0000	0.0000	1.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.6126**	**0.0000**	**0.0000**	**1.4836**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	1.6126	0.0000	0.0000	1.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.6126**	**0.0000**	**0.0000**	**1.4836**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.9203	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908
Energy	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189
Mobile	7.6792	10.5733	92.2624	0.2127	21.1364	0.1741	21.3105	5.6326	0.1626	5.7953		21,788.8529	21,788.8529	1.2040	0.8480	22,071.6439
Total	**9.6215**	**10.7735**	**92.5136**	**0.2139**	**21.1364**	**0.1896**	**21.3260**	**5.6326**	**0.1781**	**5.8107**		**22,028.3288**	**22,028.3288**	**1.2091**	**0.8523**	**22,312.5536**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	lb/day										lb/day					
Area	1.9203	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908
Energy	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189
Mobile	7.6792	10.5733	92.2624	0.2127	21.1364	0.1741	21.3105	5.6326	0.1626	5.7953		21,788.8529	21,788.8529	1.2040	0.8480	22,071.6439
Total	**9.6215**	**10.7735**	**92.5136**	**0.2139**	**21.1364**	**0.1896**	**21.3260**	**5.6326**	**0.1781**	**5.8107**		**22,028.3288**	**22,028.3288**	**1.2091**	**0.8523**	**22,312.5536**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/4/2022	4/3/2022	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.44

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.6792	10.5733	92.2624	0.2127	21.1364	0.1741	21.3105	5.6326	0.1626	5.7953		21,788.8529	21,788.8529	1.2040	0.8480	22,071.6439
Unmitigated	7.6792	10.5733	92.2624	0.2127	21.1364	0.1741	21.3105	5.6326	0.1626	5.7953		21,788.8529	21,788.8529	1.2040	0.8480	22,071.6439

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
High School	1,874.04	534.52	322.00	7,819,751	7,819,751

Parking Lot	0.00	0.00	0.00		
Total	1,874.04	534.52	322.00	7,819,751	7,819,751

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.543376	0.059966	0.184357	0.131187	0.023843	0.006245	0.012012	0.009162	0.000826	0.000515	0.023898	0.000748	0.003864
High School	0.543376	0.059966	0.184357	0.131187	0.023843	0.006245	0.012012	0.009162	0.000826	0.000515	0.023898	0.000748	0.003864
Parking Lot	0.543376	0.059966	0.184357	0.131187	0.023843	0.006245	0.012012	0.009162	0.000826	0.000515	0.023898	0.000748	0.003864

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

NaturalGas Mitigated	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189
NaturalGas Unmitigated	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	2034.02	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0219**	**0.1994**	**0.1675**	**1.2000e-003**		**0.0152**	**0.0152**		**0.0152**	**0.0152**		**239.2969**	**239.2969**	**4.5900e-003**	**4.3900e-003**	**240.7189**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

High School	2.03402	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0219**	**0.1994**	**0.1675**	**1.2000e-003**		**0.0152**	**0.0152**		**0.0152**	**0.0152**		**239.2969**	**239.2969**	**4.5900e-003**	**4.3900e-003**	**240.7189**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9203	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908
Unmitigated	1.9203	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SubCategory	lb/day										lb/day					
Architectural Coating	0.1142					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7983					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.7800e-003	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908
Total	**1.9203**	**7.6000e-004**	**0.0836**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**0.1790**	**0.1790**	**4.7000e-004**		**0.1908**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1142					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7983					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.7800e-003	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908
Total	**1.9203**	**7.6000e-004**	**0.0836**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**0.1790**	**0.1790**	**4.7000e-004**		**0.1908**

7.0 Water Detail

7.1 Mitigation Measures Water

Woodcrest Christian School Improvements - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodcrest Christian School - Existing

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	644.00	Student	1.96	85,433.67	0
Parking Lot	150.00	1000sqft	3.44	150,000.00	0
City Park	23.89	Acre	23.89	1,040,648.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2022
Utility Company	Riverside Public Utilities/City of Riverside				
CO2 Intensity (lb/MWhr)	789.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing School

Construction Phase - The analysis will not have construction

Off-road Equipment - There will not be any site preparation

Trips and VMT - No construction analyzed.

Grading - .

Vehicle Trips - Trip generation daily equals to 2.91.

Area Coating - Architectural Coating would comply with Rule 113

Water And Wastewater - .

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Construction Off-road Equipment Mitigation - Dust control measures as required from SCAQMD Rule 403

Mobile Commute Mitigation -

Area Mitigation - .

Energy Mitigation - The site generates 95 percent Solar

Fleet Mix - Project Trip Generation did not provide Fleet Mix. Defaults will apply.

On-road Fugitive Dust - construction not analyzed

Solid Waste - .

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstructionPhase	NumDays	20.00	0.00
tblConstructionPhase	PhaseEndDate	4/29/2022	4/3/2022
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	VendorPercentPave	100.00	0.00
tblOnRoadDust	WorkerPercentPave	100.00	0.00
tblSolidWaste	SolidWasteGenerationRate	2.05	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	0.58	0.83
tblVehicleTrips	SU_TR	2.19	0.00

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	SU_TR	0.25	0.50
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	2.03	2.91
tblWater	OutdoorWaterUseRate	28,464,489.44	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	1.6126	0.0000	0.0000	1.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.6126**	**0.0000**	**0.0000**	**1.4836**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	0.0000	0.0000	0.0000	0.0000	0.0000	1.6126	0.0000	0.0000	1.4836	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.6126**	**0.0000**	**0.0000**	**1.4836**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.9203	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908
Energy	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189
Mobile	7.4750	11.3340	87.4343	0.2026	21.1364	0.1742	21.3106	5.6326	0.1627	5.7953		20,760.3120	20,760.3120	1.2240	0.8810	21,053.4504
Total	**9.4172**	**11.5341**	**87.6854**	**0.2038**	**21.1364**	**0.1897**	**21.3260**	**5.6326**	**0.1781**	**5.8108**		**20,999.7879**	**20,999.7879**	**1.2290**	**0.8854**	**21,294.3601**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	lb/day										lb/day					
Area	1.9203	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908
Energy	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189
Mobile	7.4750	11.3340	87.4343	0.2026	21.1364	0.1742	21.3106	5.6326	0.1627	5.7953		20,760.3120	20,760.3120	1.2240	0.8810	21,053.4504
Total	**9.4172**	**11.5341**	**87.6854**	**0.2038**	**21.1364**	**0.1897**	**21.3260**	**5.6326**	**0.1781**	**5.8108**		**20,999.7879**	**20,999.7879**	**1.2290**	**0.8854**	**21,294.3601**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/4/2022	4/3/2022	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 3.44

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.4750	11.3340	87.4343	0.2026	21.1364	0.1742	21.3106	5.6326	0.1627	5.7953		20,760.3120	20,760.3120	1.2240	0.8810	21,053.4504
Unmitigated	7.4750	11.3340	87.4343	0.2026	21.1364	0.1742	21.3106	5.6326	0.1627	5.7953		20,760.3120	20,760.3120	1.2240	0.8810	21,053.4504

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
High School	1,874.04	534.52	322.00	7,819,751	7,819,751

Parking Lot	0.00	0.00	0.00		
Total	1,874.04	534.52	322.00	7,819,751	7,819,751

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.543376	0.059966	0.184357	0.131187	0.023843	0.006245	0.012012	0.009162	0.000826	0.000515	0.023898	0.000748	0.003864
High School	0.543376	0.059966	0.184357	0.131187	0.023843	0.006245	0.012012	0.009162	0.000826	0.000515	0.023898	0.000748	0.003864
Parking Lot	0.543376	0.059966	0.184357	0.131187	0.023843	0.006245	0.012012	0.009162	0.000826	0.000515	0.023898	0.000748	0.003864

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

NaturalGas Mitigated	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189
NaturalGas Unmitigated	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	2034.02	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0219**	**0.1994**	**0.1675**	**1.2000e-003**		**0.0152**	**0.0152**		**0.0152**	**0.0152**		**239.2969**	**239.2969**	**4.5900e-003**	**4.3900e-003**	**240.7189**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

High School	2.03402	0.0219	0.1994	0.1675	1.2000e-003		0.0152	0.0152		0.0152	0.0152		239.2969	239.2969	4.5900e-003	4.3900e-003	240.7189
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0219**	**0.1994**	**0.1675**	**1.2000e-003**		**0.0152**	**0.0152**		**0.0152**	**0.0152**		**239.2969**	**239.2969**	**4.5900e-003**	**4.3900e-003**	**240.7189**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9203	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908
Unmitigated	1.9203	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SubCategory	lb/day										lb/day					
Architectural Coating	0.1142					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7983					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.7800e-003	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908
Total	**1.9203**	**7.6000e-004**	**0.0836**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**0.1790**	**0.1790**	**4.7000e-004**		**0.1908**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1142					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7983					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.7800e-003	7.6000e-004	0.0836	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004		0.1790	0.1790	4.7000e-004		0.1908
Total	**1.9203**	**7.6000e-004**	**0.0836**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**		**0.1790**	**0.1790**	**4.7000e-004**		**0.1908**

7.0 Water Detail

7.1 Mitigation Measures Water

Woodcrest Christian School Improvements - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodcrest Christian School Improvements Construction

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	280.00	Student	0.85	42,600.00	0
Parking Lot	92.00	Space	0.83	36,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2026
Utility Company	Riverside Public Utilities/City of Riverside				
CO2 Intensity (lb/MWhr)	789.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - School additions total 42,600 sf plus a 92 space parking lot.

Construction Phase - Architectural Coatings will be happening during Building Construction

Grading - .

Architectural Coating - Assume All AC comply with Rule 1113000000

Vehicle Trips - Construction-only analysis

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - Construction-only analysis

Energy Use - Construction-only analysis

Water And Wastewater - .Construction-only analysis

Solid Waste - Construction-only analysis

Construction Off-road Equipment Mitigation - Dust Control Measures as required by SCAQMD Rule 403

Area Mitigation - .

Energy Mitigation - The project site generates 95 percent of their electricity with solar

Operational Off-Road Equipment - .

Fleet Mix - The proposed Trip Generation does not provide Fleet Mix/ Specific Vehicles used for this project.

Demolition - Estimated building square footage from Google Aerial view.

Consumer Products - Construction-only analysis

Landscape Equipment - Construction-only analysis

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_Nonresidential_Exterior	21300	0
tblAreaCoating	Area_Nonresidential_Interior	63900	0
tblAreaCoating	Area_Parking	2208	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	4.00	45.00
tblConstructionPhase	NumDays	200.00	440.00
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	10.00	35.00
tblConstructionPhase	PhaseEndDate	4/26/2024	5/10/2024
tblConstructionPhase	PhaseEndDate	4/30/2024	6/7/2024
tblConstructionPhase	PhaseEndDate	5/6/2024	8/9/2024
tblConstructionPhase	PhaseEndDate	2/10/2025	4/17/2026
tblConstructionPhase	PhaseEndDate	3/10/2025	4/17/2026
tblConstructionPhase	PhaseEndDate	2/24/2025	6/5/2026
tblConstructionPhase	PhaseStartDate	4/27/2024	5/11/2024
tblConstructionPhase	PhaseStartDate	5/1/2024	6/8/2024
tblConstructionPhase	PhaseStartDate	5/7/2024	8/10/2024
tblConstructionPhase	PhaseStartDate	2/25/2025	3/9/2026
tblConstructionPhase	PhaseStartDate	2/11/2025	4/18/2026
tblConsumerProducts	ROG_EF	1.98E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	3.03	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	NT24E	1.49	0.00
tblEnergyUse	NT24NG	1.79	0.00
tblEnergyUse	T24E	2.49	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblEnergyUse	T24NG	6.90	0.00
tblLandscapeEquipment	NumberSummerDays	250	0
tblLandUse	LandUseSquareFeet	37,145.07	42,600.00
tblSolidWaste	SolidWasteGenerationRate	51.10	0.00
tblVehicleTrips	ST_TR	0.58	0.00
tblVehicleTrips	SU_TR	0.25	0.00
tblVehicleTrips	WD_TR	2.03	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	1,233,388.80	0.00
tblWater	OutdoorWaterUseRate	3,171,571.20	0.00
tblWater	SepticTankPercent	10.33	100.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1414	1.2325	1.1790	2.4400e-003	0.2512	0.0504	0.3016	0.1148	0.0476	0.1624	0.0000	210.5580	210.5580	0.0423	2.1800e-003	212.2650
2025	0.1864	1.4318	1.7700	3.5600e-003	0.0580	0.0518	0.1098	0.0156	0.0500	0.0656	0.0000	301.9857	301.9857	0.0405	5.0700e-003	304.5093
2026	0.1706	0.5330	0.7099	1.3500e-003	0.0207	0.0204	0.0411	5.5800e-003	0.0195	0.0251	0.0000	115.8205	115.8205	0.0187	1.5200e-003	116.7415
Maximum	**0.1864**	**1.4318**	**1.7700**	**3.5600e-003**	**0.2512**	**0.0518**	**0.3016**	**0.1148**	**0.0500**	**0.1624**	**0.0000**	**301.9857**	**301.9857**	**0.0423**	**5.0700e-003**	**304.5093**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Year	tons/yr										MT/yr					
2024	0.1414	1.2325	1.1790	2.4400e-003	0.1286	0.0504	0.1790	0.0559	0.0476	0.1034	0.0000	210.5578	210.5578	0.0423	2.1800e-003	212.2648
2025	0.1864	1.4318	1.7700	3.5600e-003	0.0580	0.0518	0.1098	0.0156	0.0500	0.0656	0.0000	301.9854	301.9854	0.0405	5.0700e-003	304.5090
2026	0.1706	0.5330	0.7099	1.3500e-003	0.0207	0.0204	0.0411	5.5800e-003	0.0195	0.0251	0.0000	115.8204	115.8204	0.0187	1.5200e-003	116.7414
Maximum	**0.1864**	**1.4318**	**1.7700**	**3.5600e-003**	**0.1286**	**0.0518**	**0.1790**	**0.0559**	**0.0500**	**0.1034**	**0.0000**	**301.9854**	**301.9854**	**0.0423**	**5.0700e-003**	**304.5090**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**37.18**	**0.00**	**27.10**	**43.35**	**0.00**	**23.30**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-1-2024**	**6-30-2024**	0.4748	0.4748
2	**7-1-2024**	**9-30-2024**	0.4606	0.4606
3	**10-1-2024**	**12-31-2024**	0.4327	0.4327
4	**1-1-2025**	**3-31-2025**	0.3988	0.3988
5	**4-1-2025**	**6-30-2025**	0.4021	0.4021
6	**7-1-2025**	**9-30-2025**	0.4065	0.4065
7	**10-1-2025**	**12-31-2025**	0.4076	0.4076
8	**1-1-2026**	**3-31-2026**	0.4648	0.4648
9	**4-1-2026**	**6-30-2026**	0.2295	0.2295
		Highest	0.4748	0.4748

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2024	5/10/2024	5	30	
2	Site Preparation	Site Preparation	5/11/2024	6/7/2024	5	20	
3	Grading	Grading	6/8/2024	8/9/2024	5	45	
4	Building Construction	Building Construction	8/10/2024	4/17/2026	5	440	
5	Paving	Paving	4/18/2026	6/5/2026	5	35	
6	Architectural Coating	Architectural Coating	3/9/2026	4/17/2026	5	30	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Site Preparation Phase): 18.75

Acres of Grading (Grading Phase): 45

Acres of Paving: 0.83

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 63,900; Non-Residential Outdoor: 21,300; Striped Parking Area: 2,208

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	1	6.00	130	0.42

Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	33.00	13.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Fugitive Dust					9.8000e-004	0.0000	9.8000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0216	0.2083	0.2023	3.6000e-004		9.4700e-003	9.4700e-003		8.8400e-003	8.8400e-003	0.0000	31.6373	31.6373	8.0100e-003	0.0000	31.8375
Total	**0.0216**	**0.2083**	**0.2023**	**3.6000e-004**	**9.8000e-004**	**9.4700e-003**	**0.0105**	**1.5000e-004**	**8.8400e-003**	**8.9900e-003**	**0.0000**	**31.6373**	**31.6373**	**8.0100e-003**	**0.0000**	**31.8375**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	5.7000e-004	1.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.2531	0.2531	1.0000e-005	4.0000e-005	0.2655
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	4.2000e-004	5.9500e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6588	1.6588	4.0000e-005	4.0000e-005	1.6717
Total	**5.8000e-004**	**9.9000e-004**	**6.1100e-003**	**2.0000e-005**	**2.2200e-003**	**1.0000e-005**	**2.2300e-003**	**5.9000e-004**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**1.9119**	**1.9119**	**5.0000e-005**	**8.0000e-005**	**1.9372**

Mitigated Construction On-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.4000e-004	0.0000	4.4000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0216	0.2083	0.2023	3.6000e-004		9.4700e-003	9.4700e-003		8.8400e-003	8.8400e-003	0.0000	31.6373	31.6373	8.0100e-003	0.0000	31.8375
Total	**0.0216**	**0.2083**	**0.2023**	**3.6000e-004**	**4.4000e-004**	**9.4700e-003**	**9.9100e-003**	**7.0000e-005**	**8.8400e-003**	**8.9100e-003**	**0.0000**	**31.6373**	**31.6373**	**8.0100e-003**	**0.0000**	**31.8375**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	5.7000e-004	1.6000e-004	0.0000	8.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.2531	0.2531	1.0000e-005	4.0000e-005	0.2655
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	4.2000e-004	5.9500e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.6588	1.6588	4.0000e-005	4.0000e-005	1.6717
Total	**5.8000e-004**	**9.9000e-004**	**6.1100e-003**	**2.0000e-005**	**2.2200e-003**	**1.0000e-005**	**2.2300e-003**	**5.9000e-004**	**1.0000e-005**	**6.1000e-004**	**0.0000**	**1.9119**	**1.9119**	**5.0000e-005**	**8.0000e-005**	**1.9372**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0626	0.0000	0.0626	0.0300	0.0000	0.0300	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0111	0.1184	0.0663	1.7000e-004		4.8200e-003	4.8200e-003		4.4400e-003	4.4400e-003	0.0000	15.1126	15.1126	4.8900e-003	0.0000	15.2348
Total	**0.0111**	**0.1184**	**0.0663**	**1.7000e-004**	**0.0626**	**4.8200e-003**	**0.0675**	**0.0300**	**4.4400e-003**	**0.0345**	**0.0000**	**15.1126**	**15.1126**	**4.8900e-003**	**0.0000**	**15.2348**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.7000e-004	2.4400e-003	1.0000e-005	8.8000e-004	0.0000	8.8000e-004	2.3000e-004	0.0000	2.4000e-004	0.0000	0.6805	0.6805	2.0000e-005	2.0000e-005	0.6858
Total	**2.3000e-004**	**1.7000e-004**	**2.4400e-003**	**1.0000e-005**	**8.8000e-004**	**0.0000**	**8.8000e-004**	**2.3000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**0.6805**	**0.6805**	**2.0000e-005**	**2.0000e-005**	**0.6858**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0282	0.0000	0.0282	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0111	0.1184	0.0663	1.7000e-004		4.8200e-003	4.8200e-003		4.4400e-003	4.4400e-003	0.0000	15.1126	15.1126	4.8900e-003	0.0000	15.2348
Total	**0.0111**	**0.1184**	**0.0663**	**1.7000e-004**	**0.0282**	**4.8200e-003**	**0.0330**	**0.0135**	**4.4400e-003**	**0.0180**	**0.0000**	**15.1126**	**15.1126**	**4.8900e-003**	**0.0000**	**15.2348**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.7000e-004	2.4400e-003	1.0000e-005	8.8000e-004	0.0000	8.8000e-004	2.3000e-004	0.0000	2.4000e-004	0.0000	0.6805	0.6805	2.0000e-005	2.0000e-005	0.6858
Total	**2.3000e-004**	**1.7000e-004**	**2.4400e-003**	**1.0000e-005**	**8.8000e-004**	**0.0000**	**8.8000e-004**	**2.3000e-004**	**0.0000**	**2.4000e-004**	**0.0000**	**0.6805**	**0.6805**	**2.0000e-005**	**2.0000e-005**	**0.6858**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1594	0.0000	0.1594	0.0771	0.0000	0.0771	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0293	0.3109	0.1958	4.6000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	40.7331	40.7331	0.0132	0.0000	41.0625
Total	**0.0293**	**0.3109**	**0.1958**	**4.6000e-004**	**0.1594**	**0.0129**	**0.1722**	**0.0771**	**0.0119**	**0.0889**	**0.0000**	**40.7331**	**40.7331**	**0.0132**	**0.0000**	**41.0625**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	4.8000e-004	6.8700e-003	2.0000e-005	2.4700e-003	1.0000e-005	2.4800e-003	6.6000e-004	1.0000e-005	6.7000e-004	0.0000	1.9140	1.9140	5.0000e-005	5.0000e-005	1.9289
Total	**6.6000e-004**	**4.8000e-004**	**6.8700e-003**	**2.0000e-005**	**2.4700e-003**	**1.0000e-005**	**2.4800e-003**	**6.6000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.9140**	**1.9140**	**5.0000e-005**	**5.0000e-005**	**1.9289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0717	0.0000	0.0717	0.0347	0.0000	0.0347	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0293	0.3109	0.1958	4.6000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	40.7331	40.7331	0.0132	0.0000	41.0624

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**0.0293**	**0.3109**	**0.1958**	**4.6000e-004**	**0.0717**	**0.0129**	**0.0846**	**0.0347**	**0.0119**	**0.0465**	**0.0000**	**40.7331**	**40.7331**	**0.0132**	**0.0000**	**41.0624**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	4.8000e-004	6.8700e-003	2.0000e-005	2.4700e-003	1.0000e-005	2.4800e-003	6.6000e-004	1.0000e-005	6.7000e-004	0.0000	1.9140	1.9140	5.0000e-005	5.0000e-005	1.9289
Total	**6.6000e-004**	**4.8000e-004**	**6.8700e-003**	**2.0000e-005**	**2.4700e-003**	**1.0000e-005**	**2.4800e-003**	**6.6000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.9140**	**1.9140**	**5.0000e-005**	**5.0000e-005**	**1.9289**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Off-Road	0.0724	0.5643	0.6384	1.1200e-003		0.0230	0.0230		0.0222	0.0222	0.0000	92.6217	92.6217	0.0154	0.0000	93.0074
Total	**0.0724**	**0.5643**	**0.6384**	**1.1200e-003**		**0.0230**	**0.0230**		**0.0222**	**0.0222**	**0.0000**	**92.6217**	**92.6217**	**0.0154**	**0.0000**	**93.0074**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-004	0.0254	9.4600e-003	1.2000e-004	4.1800e-003	1.4000e-004	4.3200e-003	1.2100e-003	1.3000e-004	1.3400e-003	0.0000	11.6299	11.6299	4.0000e-004	1.6900e-003	12.1427
Worker	4.9100e-003	3.6000e-003	0.0514	1.5000e-004	0.0185	1.0000e-004	0.0186	4.9000e-003	9.0000e-005	5.0000e-003	0.0000	14.3168	14.3168	3.4000e-004	3.5000e-004	14.4283
Total	**5.6100e-003**	**0.0290**	**0.0609**	**2.7000e-004**	**0.0226**	**2.4000e-004**	**0.0229**	**6.1100e-003**	**2.2000e-004**	**6.3400e-003**	**0.0000**	**25.9467**	**25.9467**	**7.4000e-004**	**2.0400e-003**	**26.5709**

Mitigated Construction On-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0724	0.5643	0.6384	1.1200e-003		0.0230	0.0230		0.0222	0.0222	0.0000	92.6216	92.6216	0.0154	0.0000	93.0073
Total	**0.0724**	**0.5643**	**0.6384**	**1.1200e-003**		**0.0230**	**0.0230**		**0.0222**	**0.0222**	**0.0000**	**92.6216**	**92.6216**	**0.0154**	**0.0000**	**93.0073**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-004	0.0254	9.4600e-003	1.2000e-004	4.1800e-003	1.4000e-004	4.3200e-003	1.2100e-003	1.3000e-004	1.3400e-003	0.0000	11.6299	11.6299	4.0000e-004	1.6900e-003	12.1427
Worker	4.9100e-003	3.6000e-003	0.0514	1.5000e-004	0.0185	1.0000e-004	0.0186	4.9000e-003	9.0000e-005	5.0000e-003	0.0000	14.3168	14.3168	3.4000e-004	3.5000e-004	14.4283
Total	**5.6100e-003**	**0.0290**	**0.0609**	**2.7000e-004**	**0.0226**	**2.4000e-004**	**0.0229**	**6.1100e-003**	**2.2000e-004**	**6.3400e-003**	**0.0000**	**25.9467**	**25.9467**	**7.4000e-004**	**2.0400e-003**	**26.5709**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1729	1.3589	1.6233	2.8800e-003		0.0512	0.0512		0.0494	0.0494	0.0000	237.0300	237.0300	0.0387	0.0000	237.9975
Total	**0.1729**	**1.3589**	**1.6233**	**2.8800e-003**		**0.0512**	**0.0512**		**0.0494**	**0.0494**	**0.0000**	**237.0300**	**237.0300**	**0.0387**	**0.0000**	**237.9975**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7500e-003	0.0646	0.0238	3.0000e-004	0.0107	3.6000e-004	0.0111	3.0900e-003	3.5000e-004	3.4300e-003	0.0000	29.2168	29.2168	1.0200e-003	4.2400e-003	30.5069
Worker	0.0118	8.2900e-003	0.1228	3.8000e-004	0.0473	2.5000e-004	0.0475	0.0126	2.3000e-004	0.0128	0.0000	35.7388	35.7388	7.8000e-004	8.3000e-004	36.0049
Total	**0.0135**	**0.0729**	**0.1467**	**6.8000e-004**	**0.0580**	**6.1000e-004**	**0.0586**	**0.0156**	**5.8000e-004**	**0.0162**	**0.0000**	**64.9557**	**64.9557**	**1.8000e-003**	**5.0700e-003**	**66.5118**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1729	1.3589	1.6233	2.8800e-003		0.0512	0.0512		0.0494	0.0494	0.0000	237.0298	237.0298	0.0387	0.0000	237.9973
Total	**0.1729**	**1.3589**	**1.6233**	**2.8800e-003**		**0.0512**	**0.0512**		**0.0494**	**0.0494**	**0.0000**	**237.0298**	**237.0298**	**0.0387**	**0.0000**	**237.9973**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.7500e-003	0.0646	0.0238	3.0000e-004	0.0107	3.6000e-004	0.0111	3.0900e-003	3.5000e-004	3.4300e-003	0.0000	29.2168	29.2168	1.0200e-003	4.2400e-003	30.5069

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Worker	0.0118	8.2900e-003	0.1228	3.8000e-004	0.0473	2.5000e-004	0.0475	0.0126	2.3000e-004	0.0128	0.0000	35.7388	35.7388	7.8000e-004	8.3000e-004	36.0049
Total	**0.0135**	**0.0729**	**0.1467**	**6.8000e-004**	**0.0580**	**6.1000e-004**	**0.0586**	**0.0156**	**5.8000e-004**	**0.0162**	**0.0000**	**64.9557**	**64.9557**	**1.8000e-003**	**5.0700e-003**	**66.5118**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0510	0.4009	0.4789	8.5000e-004		0.0151	0.0151		0.0146	0.0146	0.0000	69.9284	69.9284	0.0114	0.0000	70.2138
Total	**0.0510**	**0.4009**	**0.4789**	**8.5000e-004**		**0.0151**	**0.0151**		**0.0146**	**0.0146**	**0.0000**	**69.9284**	**69.9284**	**0.0114**	**0.0000**	**70.2138**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

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Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	0.0189	6.9500e-003	9.0000e-005	3.1600e-003	1.1000e-004	3.2600e-003	9.1000e-004	1.0000e-004	1.0100e-003	0.0000	8.4580	8.4580	3.0000e-004	1.2300e-003	8.8319
Worker	3.2800e-003	2.2200e-003	0.0341	1.1000e-004	0.0139	7.0000e-005	0.0140	3.7000e-003	6.0000e-005	3.7700e-003	0.0000	10.3040	10.3040	2.1000e-004	2.3000e-004	10.3778
Total	**3.7900e-003**	**0.0212**	**0.0410**	**2.0000e-004**	**0.0171**	**1.8000e-004**	**0.0173**	**4.6100e-003**	**1.6000e-004**	**4.7800e-003**	**0.0000**	**18.7619**	**18.7619**	**5.1000e-004**	**1.4600e-003**	**19.2097**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0510	0.4009	0.4789	8.5000e-004		0.0151	0.0151		0.0146	0.0146	0.0000	69.9283	69.9283	0.0114	0.0000	70.2138
Total	**0.0510**	**0.4009**	**0.4789**	**8.5000e-004**		**0.0151**	**0.0151**		**0.0146**	**0.0146**	**0.0000**	**69.9283**	**69.9283**	**0.0114**	**0.0000**	**70.2138**

Mitigated Construction Off-Site

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1000e-004	0.0189	6.9500e-003	9.0000e-005	3.1600e-003	1.1000e-004	3.2600e-003	9.1000e-004	1.0000e-004	1.0100e-003	0.0000	8.4580	8.4580	3.0000e-004	1.2300e-003	8.8319
Worker	3.2800e-003	2.2200e-003	0.0341	1.1000e-004	0.0139	7.0000e-005	0.0140	3.7000e-003	6.0000e-005	3.7700e-003	0.0000	10.3040	10.3040	2.1000e-004	2.3000e-004	10.3778
Total	**3.7900e-003**	**0.0212**	**0.0410**	**2.0000e-004**	**0.0171**	**1.8000e-004**	**0.0173**	**4.6100e-003**	**1.6000e-004**	**4.7800e-003**	**0.0000**	**18.7619**	**18.7619**	**5.1000e-004**	**1.4600e-003**	**19.2097**

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0100	0.0932	0.1539	2.4000e-004		4.3100e-003	4.3100e-003		3.9800e-003	3.9800e-003	0.0000	20.6037	20.6037	6.5300e-003	0.0000	20.7670
Paving	1.0900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0111**	**0.0932**	**0.1539**	**2.4000e-004**		**4.3100e-003**	**4.3100e-003**		**3.9800e-003**	**3.9800e-003**	**0.0000**	**20.6037**	**20.6037**	**6.5300e-003**	**0.0000**	**20.7670**

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Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.0000e-004	6.1100e-003	2.0000e-005	2.5000e-003	1.0000e-005	2.5100e-003	6.6000e-004	1.0000e-005	6.7000e-004	0.0000	1.8451	1.8451	4.0000e-005	4.0000e-005	1.8583
Total	**5.9000e-004**	**4.0000e-004**	**6.1100e-003**	**2.0000e-005**	**2.5000e-003**	**1.0000e-005**	**2.5100e-003**	**6.6000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.8451**	**1.8451**	**4.0000e-005**	**4.0000e-005**	**1.8583**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0100	0.0932	0.1539	2.4000e-004		4.3100e-003	4.3100e-003		3.9800e-003	3.9800e-003	0.0000	20.6037	20.6037	6.5300e-003	0.0000	20.7669
Paving	1.0900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Total	**0.0111**	**0.0932**	**0.1539**	**2.4000e-004**		**4.3100e-003**	**4.3100e-003**		**3.9800e-003**	**3.9800e-003**	**0.0000**	**20.6037**	**20.6037**	**6.5300e-003**	**0.0000**	**20.7669**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.0000e-004	6.1100e-003	2.0000e-005	2.5000e-003	1.0000e-005	2.5100e-003	6.6000e-004	1.0000e-005	6.7000e-004	0.0000	1.8451	1.8451	4.0000e-005	4.0000e-005	1.8583
Total	**5.9000e-004**	**4.0000e-004**	**6.1100e-003**	**2.0000e-005**	**2.5000e-003**	**1.0000e-005**	**2.5100e-003**	**6.6000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.8451**	**1.8451**	**4.0000e-005**	**4.0000e-005**	**1.8583**

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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Category	tons/yr										MT/yr					
Archit. Coating	0.1013					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5600e-003	0.0172	0.0271	4.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	3.8299	3.8299	2.1000e-004	0.0000	3.8351
Total	**0.1038**	**0.0172**	**0.0271**	**4.0000e-005**		**7.7000e-004**	**7.7000e-004**		**7.7000e-004**	**7.7000e-004**	**0.0000**	**3.8299**	**3.8299**	**2.1000e-004**	**0.0000**	**3.8351**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	1.8000e-004	2.8200e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.8516	0.8516	2.0000e-005	2.0000e-005	0.8577
Total	**2.7000e-004**	**1.8000e-004**	**2.8200e-003**	**1.0000e-005**	**1.1500e-003**	**1.0000e-005**	**1.1600e-003**	**3.1000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.8516**	**0.8516**	**2.0000e-005**	**2.0000e-005**	**0.8577**

Mitigated Construction On-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1013					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5600e-003	0.0172	0.0271	4.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	3.8299	3.8299	2.1000e-004	0.0000	3.8351
Total	**0.1038**	**0.0172**	**0.0271**	**4.0000e-005**		**7.7000e-004**	**7.7000e-004**		**7.7000e-004**	**7.7000e-004**	**0.0000**	**3.8299**	**3.8299**	**2.1000e-004**	**0.0000**	**3.8351**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	1.8000e-004	2.8200e-003	1.0000e-005	1.1500e-003	1.0000e-005	1.1600e-003	3.1000e-004	1.0000e-005	3.1000e-004	0.0000	0.8516	0.8516	2.0000e-005	2.0000e-005	0.8577
Total	**2.7000e-004**	**1.8000e-004**	**2.8200e-003**	**1.0000e-005**	**1.1500e-003**	**1.0000e-005**	**1.1600e-003**	**3.1000e-004**	**1.0000e-005**	**3.1000e-004**	**0.0000**	**0.8516**	**0.8516**	**2.0000e-005**	**2.0000e-005**	**0.8577**

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
High School	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

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	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594
Parking Lot	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High School	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

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	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
High School	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High School	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
High School	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High School	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
High School	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

High School	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
High School	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodcrest Christian School Improvements Construction

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	280.00	Student	0.85	42,600.00	0
Parking Lot	92.00	Space	0.83	36,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2026
Utility Company	Riverside Public Utilities/City of Riverside				
CO2 Intensity (lb/MWhr)	789.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - School additions total 42,600 sf plus a 92 space parking lot.

Construction Phase - Architectural Coatings will be happening during Building Construction

Grading - .

Architectural Coating - Assume All AC comply with Rule 1113000000

Vehicle Trips - Construction-only analysis

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Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - Construction-only analysis

Energy Use - Construction-only analysis

Water And Wastewater - .Construction-only analysis

Solid Waste - Construction-only analysis

Construction Off-road Equipment Mitigation - Dust Control Measures as required by SCAQMD Rule 403

Area Mitigation - .

Energy Mitigation - The project site generates 95 percent of their electricity with solar

Operational Off-Road Equipment - .

Fleet Mix - The proposed Trip Generation does not provide Fleet Mix/ Specific Vehicles used for this project.

Demolition - Estimated building square footage from Google Aerial view.

Consumer Products - Construction-only analysis

Landscape Equipment - Construction-only analysis

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_Nonresidential_Exterior	21300	0
tblAreaCoating	Area_Nonresidential_Interior	63900	0
tblAreaCoating	Area_Parking	2208	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	4.00	45.00
tblConstructionPhase	NumDays	200.00	440.00
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	10.00	35.00
tblConstructionPhase	PhaseEndDate	4/26/2024	5/10/2024
tblConstructionPhase	PhaseEndDate	4/30/2024	6/7/2024
tblConstructionPhase	PhaseEndDate	5/6/2024	8/9/2024
tblConstructionPhase	PhaseEndDate	2/10/2025	4/17/2026
tblConstructionPhase	PhaseEndDate	3/10/2025	4/17/2026
tblConstructionPhase	PhaseEndDate	2/24/2025	6/5/2026
tblConstructionPhase	PhaseStartDate	4/27/2024	5/11/2024
tblConstructionPhase	PhaseStartDate	5/1/2024	6/8/2024
tblConstructionPhase	PhaseStartDate	5/7/2024	8/10/2024
tblConstructionPhase	PhaseStartDate	2/25/2025	3/9/2026
tblConstructionPhase	PhaseStartDate	2/11/2025	4/18/2026
tblConsumerProducts	ROG_EF	1.98E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	3.03	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	NT24E	1.49	0.00
tblEnergyUse	NT24NG	1.79	0.00
tblEnergyUse	T24E	2.49	0.00

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblEnergyUse	T24NG	6.90	0.00
tblLandscapeEquipment	NumberSummerDays	250	0
tblLandUse	LandUseSquareFeet	37,145.07	42,600.00
tblSolidWaste	SolidWasteGenerationRate	51.10	0.00
tblVehicleTrips	ST_TR	0.58	0.00
tblVehicleTrips	SU_TR	0.25	0.00
tblVehicleTrips	WD_TR	2.03	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	1,233,388.80	0.00
tblWater	OutdoorWaterUseRate	3,171,571.20	0.00
tblWater	SepticTankPercent	10.33	100.00

tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.5325	13.9479	13.9248	0.0275	7.1944	0.6322	7.7672	3.4544	0.5904	3.9814	0.0000	2,576.6425	2,576.6425	0.6476	0.0434	2,598.2920
2025	1.4306	10.9415	13.6301	0.0274	0.4521	0.3971	0.8492	0.1218	0.3829	0.5047	0.0000	2,564.3732	2,564.3732	0.3420	0.0423	2,585.5236
2026	8.3665	12.0894	15.5788	0.0308	0.5303	0.4489	0.9793	0.1425	0.4347	0.5772	0.0000	2,899.4392	2,899.4392	0.4137	0.0426	2,921.0779
Maximum	**8.3665**	**13.9479**	**15.5788**	**0.0308**	**7.1944**	**0.6322**	**7.7672**	**3.4544**	**0.5904**	**3.9814**	**0.0000**	**2,899.4392**	**2,899.4392**	**0.6476**	**0.0434**	**2,921.0779**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Year	lb/day										lb/day					
2024	1.5325	13.9479	13.9248	0.0275	3.2989	0.6322	3.8718	1.5708	0.5904	2.0978	0.0000	2,576.6425	2,576.6425	0.6476	0.0434	2,598.2920
2025	1.4306	10.9415	13.6301	0.0274	0.4521	0.3971	0.8492	0.1218	0.3829	0.5047	0.0000	2,564.3732	2,564.3732	0.3420	0.0423	2,585.5236
2026	8.3665	12.0894	15.5788	0.0308	0.5303	0.4489	0.9793	0.1425	0.4347	0.5772	0.0000	2,899.4392	2,899.4392	0.4137	0.0426	2,921.0779
Maximum	**8.3665**	**13.9479**	**15.5788**	**0.0308**	**3.2989**	**0.6322**	**3.8718**	**1.5708**	**0.5904**	**2.0978**	**0.0000**	**2,899.4392**	**2,899.4392**	**0.6476**	**0.0434**	**2,921.0779**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**47.64**	**0.00**	**40.60**	**50.65**	**0.00**	**37.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**3.4900e-003**	**3.4000e-004**	**0.0379**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**1.3000e-004**		**0.0814**	**0.0814**	**2.1000e-004**	**0.0000**	**0.0867**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4900e-003**	**3.4000e-004**	**0.0379**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**1.3000e-004**		**0.0814**	**0.0814**	**2.1000e-004**	**0.0000**	**0.0867**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2024	5/10/2024	5	30	
2	Site Preparation	Site Preparation	5/11/2024	6/7/2024	5	20	
3	Grading	Grading	6/8/2024	8/9/2024	5	45	
4	Building Construction	Building Construction	8/10/2024	4/17/2026	5	440	
5	Paving	Paving	4/18/2026	6/5/2026	5	35	
6	Architectural Coating	Architectural Coating	3/9/2026	4/17/2026	5	30	

Acres of Grading (Site Preparation Phase): 18.75

Acres of Grading (Grading Phase): 45

Acres of Paving: 0.83

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 63,900; Non-Residential Outdoor: 21,300; Striped Parking Area: 2,208

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	33.00	13.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0656	0.0000	0.0656	9.9400e-003	0.0000	9.9400e-003			0.0000			0.0000
Off-Road	1.4397	13.8867	13.4879	0.0241		0.6311	0.6311		0.5895	0.5895		2,324.9459	2,324.9459	0.5884		2,339.6562
Total	**1.4397**	**13.8867**	**13.4879**	**0.0241**	**0.0656**	**0.6311**	**0.6967**	**9.9400e-003**	**0.5895**	**0.5994**		**2,324.9459**	**2,324.9459**	**0.5884**		**2,339.6562**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.4000e-004	0.0363	0.0103	1.7000e-004	5.2500e-003	2.7000e-004	5.5200e-003	1.4400e-003	2.6000e-004	1.7000e-003		18.5932	18.5932	1.0500e-003	2.9500e-003	19.5000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	0.0388	0.0249	0.4266	1.2400e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		127.4579	127.4579	2.8200e-003	2.7400e-003	128.3437
Total	**0.0394**	**0.0612**	**0.4369**	**1.4100e-003**	**0.1506**	**1.0500e-003**	**0.1516**	**0.0400**	**9.8000e-004**	**0.0410**		**146.0511**	**146.0511**	**3.8700e-003**	**5.6900e-003**	**147.8437**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0295	0.0000	0.0295	4.4700e-003	0.0000	4.4700e-003			0.0000			0.0000
Off-Road	1.4397	13.8867	13.4879	0.0241		0.6311	0.6311		0.5895	0.5895	0.0000	2,324.9459	2,324.9459	0.5884		2,339.6562
Total	**1.4397**	**13.8867**	**13.4879**	**0.0241**	**0.0295**	**0.6311**	**0.6606**	**4.4700e-003**	**0.5895**	**0.5939**	**0.0000**	**2,324.9459**	**2,324.9459**	**0.5884**		**2,339.6562**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	lb/day											lb/day				
Hauling	6.4000e-004	0.0363	0.0103	1.7000e-004	5.2500e-003	2.7000e-004	5.5200e-003	1.4400e-003	2.6000e-004	1.7000e-003		18.5932	18.5932	1.0500e-003	2.9500e-003	19.5000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0388	0.0249	0.4266	1.2400e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		127.4579	127.4579	2.8200e-003	2.7400e-003	128.3437
Total	**0.0394**	**0.0612**	**0.4369**	**1.4100e-003**	**0.1506**	**1.0500e-003**	**0.1516**	**0.0400**	**9.8000e-004**	**0.0410**		**146.0511**	**146.0511**	**3.8700e-003**	**5.6900e-003**	**147.8437**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Fugitive Dust					6.2635	0.0000	6.2635	3.0038	0.0000	3.0038			0.0000			0.0000
Off-Road	1.1067	11.8407	6.6317	0.0172		0.4823	0.4823		0.4437	0.4437		1,665.8826	1,665.8826	0.5388		1,679.3521
Total	**1.1067**	**11.8407**	**6.6317**	**0.0172**	**6.2635**	**0.4823**	**6.7458**	**3.0038**	**0.4437**	**3.4475**		**1,665.8826**	**1,665.8826**	**0.5388**		**1,679.3521**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0239	0.0153	0.2625	7.6000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		78.4356	78.4356	1.7400e-003	1.6800e-003	78.9808
Total	**0.0239**	**0.0153**	**0.2625**	**7.6000e-004**	**0.0894**	**4.8000e-004**	**0.0899**	**0.0237**	**4.4000e-004**	**0.0242**		**78.4356**	**78.4356**	**1.7400e-003**	**1.6800e-003**	**78.9808**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8186	0.0000	2.8186	1.3517	0.0000	1.3517			0.0000			0.0000
Off-Road	1.1067	11.8407	6.6317	0.0172		0.4823	0.4823		0.4437	0.4437	0.0000	1,665.8826	1,665.8826	0.5388		1,679.3521
Total	**1.1067**	**11.8407**	**6.6317**	**0.0172**	**2.8186**	**0.4823**	**3.3008**	**1.3517**	**0.4437**	**1.7954**	**0.0000**	**1,665.8826**	**1,665.8826**	**0.5388**		**1,679.3521**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0239	0.0153	0.2625	7.6000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		78.4356	78.4356	1.7400e-003	1.6800e-003	78.9808
Total	**0.0239**	**0.0153**	**0.2625**	**7.6000e-004**	**0.0894**	**4.8000e-004**	**0.0899**	**0.0237**	**4.4000e-004**	**0.0242**		**78.4356**	**78.4356**	**1.7400e-003**	**1.6800e-003**	**78.9808**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.3015	13.8178	8.6998	0.0206		0.5722	0.5722		0.5265	0.5265		1,995.5803	1,995.5803	0.6454		2,011.7155
Total	**1.3015**	**13.8178**	**8.6998**	**0.0206**	**7.0826**	**0.5722**	**7.6548**	**3.4247**	**0.5265**	**3.9512**		**1,995.5803**	**1,995.5803**	**0.6454**		**2,011.7155**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0298	0.0192	0.3281	9.5000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		98.0445	98.0445	2.1700e-003	2.1000e-003	98.7259
Total	**0.0298**	**0.0192**	**0.3281**	**9.5000e-004**	**0.1118**	**6.0000e-004**	**0.1124**	**0.0296**	**5.6000e-004**	**0.0302**		**98.0445**	**98.0445**	**2.1700e-003**	**2.1000e-003**	**98.7259**

Mitigated Construction On-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1872	0.0000	3.1872	1.5411	0.0000	1.5411			0.0000			0.0000
Off-Road	1.3015	13.8178	8.6998	0.0206		0.5722	0.5722		0.5265	0.5265	0.0000	1,995.5803	1,995.5803	0.6454		2,011.7155
Total	**1.3015**	**13.8178**	**8.6998**	**0.0206**	**3.1872**	**0.5722**	**3.7594**	**1.5411**	**0.5265**	**2.0676**	**0.0000**	**1,995.5803**	**1,995.5803**	**0.6454**		**2,011.7155**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0298	0.0192	0.3281	9.5000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		98.0445	98.0445	2.1700e-003	2.1000e-003	98.7259
Total	**0.0298**	**0.0192**	**0.3281**	**9.5000e-004**	**0.1118**	**6.0000e-004**	**0.1124**	**0.0296**	**5.6000e-004**	**0.0302**		**98.0445**	**98.0445**	**2.1700e-003**	**2.1000e-003**	**98.7259**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**		**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0140	0.4741	0.1827	2.3300e-003	0.0832	2.7500e-003	0.0860	0.0240	2.6300e-003	0.0266		251.1741	251.1741	8.5700e-003	0.0364	262.2402

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	0.0984	0.0632	1.0828	3.1400e-003	0.3689	1.9900e-003	0.3709	0.0978	1.8300e-003	0.0997		323.5470	323.5470	7.1700e-003	6.9400e-003	325.7956
Total	**0.1125**	**0.5373**	**1.2655**	**5.4700e-003**	**0.4521**	**4.7400e-003**	**0.4569**	**0.1218**	**4.4600e-003**	**0.1263**		**574.7210**	**574.7210**	**0.0157**	**0.0434**	**588.0358**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**	**0.0000**	**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0140	0.4741	0.1827	2.3300e-003	0.0832	2.7500e-003	0.0860	0.0240	2.6300e-003	0.0266		251.1741	251.1741	8.5700e-003	0.0364	262.2402
Worker	0.0984	0.0632	1.0828	3.1400e-003	0.3689	1.9900e-003	0.3709	0.0978	1.8300e-003	0.0997		323.5470	323.5470	7.1700e-003	6.9400e-003	325.7956
Total	**0.1125**	**0.5373**	**1.2655**	**5.4700e-003**	**0.4521**	**4.7400e-003**	**0.4569**	**0.1218**	**4.4600e-003**	**0.1263**		**574.7210**	**574.7210**	**0.0157**	**0.0434**	**588.0358**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785		2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**		**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0137	0.4718	0.1800	2.2900e-003	0.0832	2.7600e-003	0.0860	0.0240	2.6400e-003	0.0266		246.5960	246.5960	8.5900e-003	0.0358	257.4772
Worker	0.0922	0.0569	1.0108	3.0300e-003	0.3689	1.9000e-003	0.3708	0.0978	1.7500e-003	0.0996		315.6248	315.6248	6.4700e-003	6.4900e-003	317.7217
Total	**0.1059**	**0.5287**	**1.1908**	**5.3200e-003**	**0.4521**	**4.6600e-003**	**0.4568**	**0.1218**	**4.3900e-003**	**0.1262**		**562.2208**	**562.2208**	**0.0151**	**0.0423**	**575.1989**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785	0.0000	2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**	**0.0000**	**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0137	0.4718	0.1800	2.2900e-003	0.0832	2.7600e-003	0.0860	0.0240	2.6400e-003	0.0266		246.5960	246.5960	8.5900e-003	0.0358	257.4772
Worker	0.0922	0.0569	1.0108	3.0300e-003	0.3689	1.9000e-003	0.3708	0.0978	1.7500e-003	0.0996		315.6248	315.6248	6.4700e-003	6.4900e-003	317.7217
Total	**0.1059**	**0.5287**	**1.1908**	**5.3200e-003**	**0.4521**	**4.6600e-003**	**0.4568**	**0.1218**	**4.3900e-003**	**0.1262**		**562.2208**	**562.2208**	**0.0151**	**0.0423**	**575.1989**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785		2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**		**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0135	0.4685	0.1778	2.2400e-003	0.0832	2.7600e-003	0.0860	0.0240	2.6400e-003	0.0266		241.9713	241.9713	8.6100e-003	0.0352	252.6631
Worker	0.0869	0.0517	0.9508	2.9400e-003	0.3689	1.8000e-003	0.3707	0.0978	1.6600e-003	0.0995		308.4406	308.4406	5.8800e-003	6.1300e-003	310.4129
Total	**0.1003**	**0.5202**	**1.1286**	**5.1800e-003**	**0.4521**	**4.5600e-003**	**0.4567**	**0.1218**	**4.3000e-003**	**0.1261**		**550.4120**	**550.4120**	**0.0145**	**0.0413**	**563.0761**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785	0.0000	2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**	**0.0000**	**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0135	0.4685	0.1778	2.2400e-003	0.0832	2.7600e-003	0.0860	0.0240	2.6400e-003	0.0266		241.9713	241.9713	8.6100e-003	0.0352	252.6631
Worker	0.0869	0.0517	0.9508	2.9400e-003	0.3689	1.8000e-003	0.3707	0.0978	1.6600e-003	0.0995		308.4406	308.4406	5.8800e-003	6.1300e-003	310.4129
Total	**0.1003**	**0.5202**	**1.1286**	**5.1800e-003**	**0.4521**	**4.5600e-003**	**0.4567**	**0.1218**	**4.3000e-003**	**0.1261**		**550.4120**	**550.4120**	**0.0145**	**0.0413**	**563.0761**

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-Road	0.5732	5.3259	8.7951	0.0136		0.2465	0.2465		0.2276	0.2276		1,297.8096	1,297.8096	0.4114		1,308.0951
Paving	0.0621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6353**	**5.3259**	**8.7951**	**0.0136**		**0.2465**	**0.2465**		**0.2276**	**0.2276**		**1,297.8096**	**1,297.8096**	**0.4114**		**1,308.0951**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0342	0.0204	0.3746	1.1600e-003	0.1453	7.1000e-004	0.1460	0.0385	6.5000e-004	0.0392		121.5069	121.5069	2.3200e-003	2.4100e-003	122.2839
Total	**0.0342**	**0.0204**	**0.3746**	**1.1600e-003**	**0.1453**	**7.1000e-004**	**0.1460**	**0.0385**	**6.5000e-004**	**0.0392**		**121.5069**	**121.5069**	**2.3200e-003**	**2.4100e-003**	**122.2839**

Mitigated Construction On-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5732	5.3259	8.7951	0.0136		0.2465	0.2465		0.2276	0.2276	0.0000	1,297.8096	1,297.8096	0.4114		1,308.0951
Paving	0.0621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6353**	**5.3259**	**8.7951**	**0.0136**		**0.2465**	**0.2465**		**0.2276**	**0.2276**	**0.0000**	**1,297.8096**	**1,297.8096**	**0.4114**		**1,308.0951**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0342	0.0204	0.3746	1.1600e-003	0.1453	7.1000e-004	0.1460	0.0385	6.5000e-004	0.0392		121.5069	121.5069	2.3200e-003	2.4100e-003	122.2839
Total	**0.0342**	**0.0204**	**0.3746**	**1.1600e-003**	**0.1453**	**7.1000e-004**	**0.1460**	**0.0385**	**6.5000e-004**	**0.0392**		**121.5069**	**121.5069**	**2.3200e-003**	**2.4100e-003**	**122.2839**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.7523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.9231**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0184	0.0110	0.2017	6.2000e-004	0.0782	3.8000e-004	0.0786	0.0208	3.5000e-004	0.0211		65.4268	65.4268	1.2500e-003	1.3000e-003	65.8452
Total	**0.0184**	**0.0110**	**0.2017**	**6.2000e-004**	**0.0782**	**3.8000e-004**	**0.0786**	**0.0208**	**3.5000e-004**	**0.0211**		**65.4268**	**65.4268**	**1.2500e-003**	**1.3000e-003**	**65.8452**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.7523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.9231**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0184	0.0110	0.2017	6.2000e-004	0.0782	3.8000e-004	0.0786	0.0208	3.5000e-004	0.0211		65.4268	65.4268	1.2500e-003	1.3000e-003	65.8452
Total	**0.0184**	**0.0110**	**0.2017**	**6.2000e-004**	**0.0782**	**3.8000e-004**	**0.0786**	**0.0208**	**3.5000e-004**	**0.0211**		**65.4268**	**65.4268**	**1.2500e-003**	**1.3000e-003**	**65.8452**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
High School	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594
Parking Lot	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High School	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High School	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867
Unmitigated	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867
Total	**3.4900e-003**	**3.4000e-004**	**0.0379**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0814**	**0.0814**	**2.1000e-004**		**0.0867**

Mitigated

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867
Total	**3.4900e-003**	**3.4000e-004**	**0.0379**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0814**	**0.0814**	**2.1000e-004**		**0.0867**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodcrest Christian School Improvements Construction

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	280.00	Student	0.85	42,600.00	0
Parking Lot	92.00	Space	0.83	36,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2026
Utility Company	Riverside Public Utilities/City of Riverside				
CO2 Intensity (lb/MWhr)	789.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - School additions total 42,600 sf plus a 92 space parking lot.

Construction Phase - Architectural Coatings will be happening during Building Construction

Grading - .

Architectural Coating - Assume All AC comply with Rule 1113000000

Vehicle Trips - Construction-only analysis

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating - Construction-only analysis

Energy Use - Construction-only analysis

Water And Wastewater - .Construction-only analysis

Solid Waste - Construction-only analysis

Construction Off-road Equipment Mitigation - Dust Control Measures as required by SCAQMD Rule 403

Area Mitigation - .

Energy Mitigation - The project site generates 95 percent of their electricity with solar

Operational Off-Road Equipment - .

Fleet Mix - The proposed Trip Generation does not provide Fleet Mix/ Specific Vehicles used for this project.

Demolition - Estimated building square footage from Google Aerial view.

Consumer Products - Construction-only analysis

Landscape Equipment - Construction-only analysis

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_Nonresidential_Exterior	21300	0
tblAreaCoating	Area_Nonresidential_Interior	63900	0
tblAreaCoating	Area_Parking	2208	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	30.00

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	4.00	45.00
tblConstructionPhase	NumDays	200.00	440.00
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	10.00	35.00
tblConstructionPhase	PhaseEndDate	4/26/2024	5/10/2024
tblConstructionPhase	PhaseEndDate	4/30/2024	6/7/2024
tblConstructionPhase	PhaseEndDate	5/6/2024	8/9/2024
tblConstructionPhase	PhaseEndDate	2/10/2025	4/17/2026
tblConstructionPhase	PhaseEndDate	3/10/2025	4/17/2026
tblConstructionPhase	PhaseEndDate	2/24/2025	6/5/2026
tblConstructionPhase	PhaseStartDate	4/27/2024	5/11/2024
tblConstructionPhase	PhaseStartDate	5/1/2024	6/8/2024
tblConstructionPhase	PhaseStartDate	5/7/2024	8/10/2024
tblConstructionPhase	PhaseStartDate	2/25/2025	3/9/2026
tblConstructionPhase	PhaseStartDate	2/11/2025	4/18/2026
tblConsumerProducts	ROG_EF	1.98E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	3.03	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	NT24E	1.49	0.00
tblEnergyUse	NT24NG	1.79	0.00
tblEnergyUse	T24E	2.49	0.00

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblEnergyUse	T24NG	6.90	0.00
tblLandscapeEquipment	NumberSummerDays	250	0
tblLandUse	LandUseSquareFeet	37,145.07	42,600.00
tblSolidWaste	SolidWasteGenerationRate	51.10	0.00
tblVehicleTrips	ST_TR	0.58	0.00
tblVehicleTrips	SU_TR	0.25	0.00
tblVehicleTrips	WD_TR	2.03	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	1,233,388.80	0.00
tblWater	OutdoorWaterUseRate	3,171,571.20	0.00
tblWater	SepticTankPercent	10.33	100.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	1.5376	13.9519	13.8846	0.0273	7.1944	0.6322	7.7672	3.4544	0.5904	3.9814	0.0000	2,558.3387	2,558.3387	0.6476	0.0439	2,580.1434
2025	1.4356	10.9702	13.5410	0.0272	0.4521	0.3972	0.8493	0.1218	0.3829	0.5047	0.0000	2,546.5510	2,546.5510	0.3420	0.0428	2,567.8471
2026	8.3727	12.1185	15.4767	0.0306	0.5303	0.4489	0.9793	0.1425	0.4347	0.5772	0.0000	2,878.2585	2,878.2585	0.4138	0.0431	2,900.0586
Maximum	**8.3727**	**13.9519**	**15.4767**	**0.0306**	**7.1944**	**0.6322**	**7.7672**	**3.4544**	**0.5904**	**3.9814**	**0.0000**	**2,878.2585**	**2,878.2585**	**0.6476**	**0.0439**	**2,900.0586**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Year	lb/day										lb/day					
2024	1.5376	13.9519	13.8846	0.0273	3.2989	0.6322	3.8718	1.5708	0.5904	2.0978	0.0000	2,558.3387	2,558.3387	0.6476	0.0439	2,580.1434
2025	1.4356	10.9702	13.5410	0.0272	0.4521	0.3972	0.8493	0.1218	0.3829	0.5047	0.0000	2,546.5510	2,546.5510	0.3420	0.0428	2,567.8471
2026	8.3727	12.1185	15.4767	0.0306	0.5303	0.4489	0.9793	0.1425	0.4347	0.5772	0.0000	2,878.2585	2,878.2585	0.4138	0.0431	2,900.0586
Maximum	**8.3727**	**13.9519**	**15.4767**	**0.0306**	**3.2989**	**0.6322**	**3.8718**	**1.5708**	**0.5904**	**2.0978**	**0.0000**	**2,878.2585**	**2,878.2585**	**0.6476**	**0.0439**	**2,900.0586**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**47.64**	**0.00**	**40.60**	**50.65**	**0.00**	**37.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**3.4900e-003**	**3.4000e-004**	**0.0379**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**1.3000e-004**		**0.0814**	**0.0814**	**2.1000e-004**	**0.0000**	**0.0867**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.4900e-003**	**3.4000e-004**	**0.0379**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**1.3000e-004**		**0.0814**	**0.0814**	**2.1000e-004**	**0.0000**	**0.0867**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2024	5/10/2024	5	30	
2	Site Preparation	Site Preparation	5/11/2024	6/7/2024	5	20	
3	Grading	Grading	6/8/2024	8/9/2024	5	45	
4	Building Construction	Building Construction	8/10/2024	4/17/2026	5	440	
5	Paving	Paving	4/18/2026	6/5/2026	5	35	
6	Architectural Coating	Architectural Coating	3/9/2026	4/17/2026	5	30	

Acres of Grading (Site Preparation Phase): 18.75

Acres of Grading (Grading Phase): 45

Acres of Paving: 0.83

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 63,900; Non-Residential Outdoor: 21,300; Striped Parking Area: 2,208

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	1	6.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	9.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	33.00	13.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0656	0.0000	0.0656	9.9400e-003	0.0000	9.9400e-003			0.0000			0.0000
Off-Road	1.4397	13.8867	13.4879	0.0241		0.6311	0.6311		0.5895	0.5895		2,324.9459	2,324.9459	0.5884		2,339.6562
Total	**1.4397**	**13.8867**	**13.4879**	**0.0241**	**0.0656**	**0.6311**	**0.6967**	**9.9400e-003**	**0.5895**	**0.5994**		**2,324.9459**	**2,324.9459**	**0.5884**		**2,339.6562**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.0000e-004	0.0380	0.0105	1.7000e-004	5.2500e-003	2.7000e-004	5.5200e-003	1.4400e-003	2.6000e-004	1.7000e-003		18.6143	18.6143	1.0500e-003	2.9600e-003	19.5221
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	0.0411	0.0272	0.3862	1.1600e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		120.0655	120.0655	2.8700e-003	2.9000e-003	121.0015
Total	**0.0417**	**0.0653**	**0.3967**	**1.3300e-003**	**0.1506**	**1.0500e-003**	**0.1516**	**0.0400**	**9.8000e-004**	**0.0410**		**138.6798**	**138.6798**	**3.9200e-003**	**5.8600e-003**	**140.5236**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0295	0.0000	0.0295	4.4700e-003	0.0000	4.4700e-003			0.0000			0.0000
Off-Road	1.4397	13.8867	13.4879	0.0241		0.6311	0.6311		0.5895	0.5895	0.0000	2,324.9459	2,324.9459	0.5884		2,339.6562
Total	**1.4397**	**13.8867**	**13.4879**	**0.0241**	**0.0295**	**0.6311**	**0.6606**	**4.4700e-003**	**0.5895**	**0.5939**	**0.0000**	**2,324.9459**	**2,324.9459**	**0.5884**		**2,339.6562**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	lb/day											lb/day					
Hauling	6.0000e-004	0.0380	0.0105	1.7000e-004	5.2500e-003	2.7000e-004	5.5200e-003	1.4400e-003	2.6000e-004	1.7000e-003		18.6143	18.6143	1.0500e-003	2.9600e-003	19.5221
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0411	0.0272	0.3862	1.1600e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		120.0655	120.0655	2.8700e-003	2.9000e-003	121.0015
Total	**0.0417**	**0.0653**	**0.3967**	**1.3300e-003**	**0.1506**	**1.0500e-003**	**0.1516**	**0.0400**	**9.8000e-004**	**0.0410**		**138.6798**	**138.6798**	**3.9200e-003**	**5.8600e-003**	**140.5236**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Fugitive Dust					6.2635	0.0000	6.2635	3.0038	0.0000	3.0038			0.0000			0.0000
Off-Road	1.1067	11.8407	6.6317	0.0172		0.4823	0.4823		0.4437	0.4437		1,665.8826	1,665.8826	0.5388		1,679.3521
Total	**1.1067**	**11.8407**	**6.6317**	**0.0172**	**6.2635**	**0.4823**	**6.7458**	**3.0038**	**0.4437**	**3.4475**		**1,665.8826**	**1,665.8826**	**0.5388**		**1,679.3521**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0253	0.0168	0.2377	7.2000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		73.8865	73.8865	1.7600e-003	1.7800e-003	74.4625
Total	**0.0253**	**0.0168**	**0.2377**	**7.2000e-004**	**0.0894**	**4.8000e-004**	**0.0899**	**0.0237**	**4.4000e-004**	**0.0242**		**73.8865**	**73.8865**	**1.7600e-003**	**1.7800e-003**	**74.4625**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8186	0.0000	2.8186	1.3517	0.0000	1.3517			0.0000			0.0000
Off-Road	1.1067	11.8407	6.6317	0.0172		0.4823	0.4823		0.4437	0.4437	0.0000	1,665.8826	1,665.8826	0.5388		1,679.3521
Total	**1.1067**	**11.8407**	**6.6317**	**0.0172**	**2.8186**	**0.4823**	**3.3008**	**1.3517**	**0.4437**	**1.7954**	**0.0000**	**1,665.8826**	**1,665.8826**	**0.5388**		**1,679.3521**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0253	0.0168	0.2377	7.2000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		73.8865	73.8865	1.7600e-003	1.7800e-003	74.4625
Total	**0.0253**	**0.0168**	**0.2377**	**7.2000e-004**	**0.0894**	**4.8000e-004**	**0.0899**	**0.0237**	**4.4000e-004**	**0.0242**		**73.8865**	**73.8865**	**1.7600e-003**	**1.7800e-003**	**74.4625**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.3015	13.8178	8.6998	0.0206		0.5722	0.5722		0.5265	0.5265		1,995.5803	1,995.5803	0.6454		2,011.7155
Total	**1.3015**	**13.8178**	**8.6998**	**0.0206**	**7.0826**	**0.5722**	**7.6548**	**3.4247**	**0.5265**	**3.9512**		**1,995.5803**	**1,995.5803**	**0.6454**		**2,011.7155**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0316	0.0210	0.2971	9.0000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		92.3581	92.3581	2.2100e-003	2.2300e-003	93.0781
Total	**0.0316**	**0.0210**	**0.2971**	**9.0000e-004**	**0.1118**	**6.0000e-004**	**0.1124**	**0.0296**	**5.6000e-004**	**0.0302**		**92.3581**	**92.3581**	**2.2100e-003**	**2.2300e-003**	**93.0781**

Mitigated Construction On-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1872	0.0000	3.1872	1.5411	0.0000	1.5411			0.0000			0.0000
Off-Road	1.3015	13.8178	8.6998	0.0206		0.5722	0.5722		0.5265	0.5265	0.0000	1,995.5803	1,995.5803	0.6454		2,011.7155
Total	**1.3015**	**13.8178**	**8.6998**	**0.0206**	**3.1872**	**0.5722**	**3.7594**	**1.5411**	**0.5265**	**2.0676**	**0.0000**	**1,995.5803**	**1,995.5803**	**0.6454**		**2,011.7155**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0316	0.0210	0.2971	9.0000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		92.3581	92.3581	2.2100e-003	2.2300e-003	93.0781
Total	**0.0316**	**0.0210**	**0.2971**	**9.0000e-004**	**0.1118**	**6.0000e-004**	**0.1124**	**0.0296**	**5.6000e-004**	**0.0302**		**92.3581**	**92.3581**	**2.2100e-003**	**2.2300e-003**	**93.0781**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**		**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0134	0.4976	0.1886	2.3300e-003	0.0832	2.7700e-003	0.0860	0.0240	2.6500e-003	0.0266		251.6357	251.6357	8.5300e-003	0.0365	262.7295

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Worker	0.1042	0.0691	0.9804	2.9500e-003	0.3689	1.9900e-003	0.3709	0.0978	1.8300e-003	0.0997		304.7816	304.7816	7.2800e-003	7.3600e-003	307.1577
Total	**0.1176**	**0.5667**	**1.1690**	**5.2800e-003**	**0.4521**	**4.7600e-003**	**0.4569**	**0.1218**	**4.4800e-003**	**0.1263**		**556.4173**	**556.4173**	**0.0158**	**0.0439**	**569.8871**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**	**0.0000**	**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0134	0.4976	0.1886	2.3300e-003	0.0832	2.7700e-003	0.0860	0.0240	2.6500e-003	0.0266		251.6357	251.6357	8.5300e-003	0.0365	262.7295
Worker	0.1042	0.0691	0.9804	2.9500e-003	0.3689	1.9900e-003	0.3709	0.0978	1.8300e-003	0.0997		304.7816	304.7816	7.2800e-003	7.3600e-003	307.1577
Total	**0.1176**	**0.5667**	**1.1690**	**5.2800e-003**	**0.4521**	**4.7600e-003**	**0.4569**	**0.1218**	**4.4800e-003**	**0.1263**		**556.4173**	**556.4173**	**0.0158**	**0.0439**	**569.8871**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785		2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**		**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0131	0.4952	0.1858	2.2900e-003	0.0832	2.7800e-003	0.0860	0.0240	2.6600e-003	0.0266		247.0560	247.0560	8.5500e-003	0.0359	257.9642
Worker	0.0979	0.0622	0.9158	2.8500e-003	0.3689	1.9000e-003	0.3708	0.0978	1.7500e-003	0.0996		297.3425	297.3425	6.5800e-003	6.8800e-003	299.5581
Total	**0.1110**	**0.5574**	**1.1016**	**5.1400e-003**	**0.4521**	**4.6800e-003**	**0.4568**	**0.1218**	**4.4100e-003**	**0.1262**		**544.3985**	**544.3985**	**0.0151**	**0.0428**	**557.5223**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785	0.0000	2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**	**0.0000**	**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0131	0.4952	0.1858	2.2900e-003	0.0832	2.7800e-003	0.0860	0.0240	2.6600e-003	0.0266		247.0560	247.0560	8.5500e-003	0.0359	257.9642
Worker	0.0979	0.0622	0.9158	2.8500e-003	0.3689	1.9000e-003	0.3708	0.0978	1.7500e-003	0.0996		297.3425	297.3425	6.5800e-003	6.8800e-003	299.5581
Total	**0.1110**	**0.5574**	**1.1016**	**5.1400e-003**	**0.4521**	**4.6800e-003**	**0.4568**	**0.1218**	**4.4100e-003**	**0.1262**		**544.3985**	**544.3985**	**0.0151**	**0.0428**	**557.5223**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785		2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**		**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

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Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0128	0.4918	0.1836	2.2500e-003	0.0832	2.7700e-003	0.0860	0.0240	2.6500e-003	0.0266		242.4286	242.4286	8.5700e-003	0.0353	253.1468
Worker	0.0925	0.0565	0.8618	2.7700e-003	0.3689	1.8000e-003	0.3707	0.0978	1.6600e-003	0.0995		290.5893	290.5893	5.9800e-003	6.4900e-003	292.6730
Total	**0.1053**	**0.5482**	**1.0454**	**5.0200e-003**	**0.4521**	**4.5700e-003**	**0.4567**	**0.1218**	**4.3100e-003**	**0.1261**		**533.0179**	**533.0179**	**0.0146**	**0.0417**	**545.8198**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3246	10.4128	12.4393	0.0221		0.3925	0.3925		0.3785	0.3785	0.0000	2,002.1524	2,002.1524	0.3269		2,010.3248
Total	**1.3246**	**10.4128**	**12.4393**	**0.0221**		**0.3925**	**0.3925**		**0.3785**	**0.3785**	**0.0000**	**2,002.1524**	**2,002.1524**	**0.3269**		**2,010.3248**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0128	0.4918	0.1836	2.2500e-003	0.0832	2.7700e-003	0.0860	0.0240	2.6500e-003	0.0266		242.4286	242.4286	8.5700e-003	0.0353	253.1468
Worker	0.0925	0.0565	0.8618	2.7700e-003	0.3689	1.8000e-003	0.3707	0.0978	1.6600e-003	0.0995		290.5893	290.5893	5.9800e-003	6.4900e-003	292.6730
Total	**0.1053**	**0.5482**	**1.0454**	**5.0200e-003**	**0.4521**	**4.5700e-003**	**0.4567**	**0.1218**	**4.3100e-003**	**0.1261**		**533.0179**	**533.0179**	**0.0146**	**0.0417**	**545.8198**

3.6 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-Road	0.5732	5.3259	8.7951	0.0136		0.2465	0.2465		0.2276	0.2276		1,297.8096	1,297.8096	0.4114		1,308.0951
Paving	0.0621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6353**	**5.3259**	**8.7951**	**0.0136**		**0.2465**	**0.2465**		**0.2276**	**0.2276**		**1,297.8096**	**1,297.8096**	**0.4114**		**1,308.0951**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0365	0.0222	0.3395	1.0900e-003	0.1453	7.1000e-004	0.1460	0.0385	6.5000e-004	0.0392		114.4746	114.4746	2.3600e-003	2.5600e-003	115.2954
Total	**0.0365**	**0.0222**	**0.3395**	**1.0900e-003**	**0.1453**	**7.1000e-004**	**0.1460**	**0.0385**	**6.5000e-004**	**0.0392**		**114.4746**	**114.4746**	**2.3600e-003**	**2.5600e-003**	**115.2954**

Mitigated Construction On-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5732	5.3259	8.7951	0.0136		0.2465	0.2465		0.2276	0.2276	0.0000	1,297.8096	1,297.8096	0.4114		1,308.0951
Paving	0.0621					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6353**	**5.3259**	**8.7951**	**0.0136**		**0.2465**	**0.2465**		**0.2276**	**0.2276**	**0.0000**	**1,297.8096**	**1,297.8096**	**0.4114**		**1,308.0951**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0365	0.0222	0.3395	1.0900e-003	0.1453	7.1000e-004	0.1460	0.0385	6.5000e-004	0.0392		114.4746	114.4746	2.3600e-003	2.5600e-003	115.2954
Total	**0.0365**	**0.0222**	**0.3395**	**1.0900e-003**	**0.1453**	**7.1000e-004**	**0.1460**	**0.0385**	**6.5000e-004**	**0.0392**		**114.4746**	**114.4746**	**2.3600e-003**	**2.5600e-003**	**115.2954**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.7523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**6.9231**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0196	0.0120	0.1828	5.9000e-004	0.0782	3.8000e-004	0.0786	0.0208	3.5000e-004	0.0211		61.6402	61.6402	1.2700e-003	1.3800e-003	62.0822
Total	**0.0196**	**0.0120**	**0.1828**	**5.9000e-004**	**0.0782**	**3.8000e-004**	**0.0786**	**0.0208**	**3.5000e-004**	**0.0211**		**61.6402**	**61.6402**	**1.2700e-003**	**1.3800e-003**	**62.0822**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	6.7523					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**6.9231**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0196	0.0120	0.1828	5.9000e-004	0.0782	3.8000e-004	0.0786	0.0208	3.5000e-004	0.0211		61.6402	61.6402	1.2700e-003	1.3800e-003	62.0822
Total	**0.0196**	**0.0120**	**0.1828**	**5.9000e-004**	**0.0782**	**3.8000e-004**	**0.0786**	**0.0208**	**3.5000e-004**	**0.0211**		**61.6402**	**61.6402**	**1.2700e-003**	**1.3800e-003**	**62.0822**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
High School	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	75	19	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High School	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594
Parking Lot	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High School	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
High School	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867
Unmitigated	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867
Total	**3.4900e-003**	**3.4000e-004**	**0.0379**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0814**	**0.0814**	**2.1000e-004**		**0.0867**

Mitigated

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.4900e-003	3.4000e-004	0.0379	0.0000		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004		0.0814	0.0814	2.1000e-004		0.0867
Total	**3.4900e-003**	**3.4000e-004**	**0.0379**	**0.0000**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**		**0.0814**	**0.0814**	**2.1000e-004**		**0.0867**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Woodcrest Christian School Improvements Construction - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodcrest Christian School Improvements Proposed

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	924.00	Student	2.81	122,578.74	0
Parking Lot	214.85	1000sqft	4.93	214,853.00	0
City Park	21.55	Acre	21.55	938,718.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2026
Utility Company	Riverside Public Utilities/City of Riverside				
CO2 Intensity (lb/MWhr)	789.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing site with additions and improvements.
Additional 280 Students, Parking la

Construction Phase - Architectural Coatings will be happening during Building Construction

Grading - .

Architectural Coating - Assume All AC comply with Rule 1113

Vehicle Trips - Proposed Trip Generation is 2.91. Assume Divert and Pass-by are accounted for in the Trip Generation

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Emission Factors -

Area Coating - Area Architectural Coatings would comply with Rule 1113

Energy Use -

Construction Off-road Equipment Mitigation - Dust Control Measures as requiredfrom SCAQMD Rule 403

Area Mitigation - .

Energy Mitigation - The project site generates 95 percent of their electricity with solar

Operational Off-Road Equipment - .

Fleet Mix - The proposed Trip Generation does not provide Fleet Mix/ Specific Vehicles used for this project.

Water And Wastewater - .

Solid Waste - .

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	30.00
tblLandUse	LandUseSquareFeet	214,850.00	214,853.00
tblSolidWaste	SolidWasteGenerationRate	1.85	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	75.00	100.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	ST_TR	0.58	0.83
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.25	0.50
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	2.03	2.91
tblWater	OutdoorWaterUseRate	25,676,423.09	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.3012	2.4674	2.9401	8.2100e-003	0.7802	0.0920	0.8722	0.2848	0.0855	0.3703	0.0000	752.1486	752.1486	0.1047	0.0329	764.5779
2025	0.3978	2.8008	4.4772	0.0145	0.9394	0.0787	1.0181	0.2534	0.0740	0.3275	0.0000	1,352.8572	1,352.8572	0.1001	0.0817	1,379.6971
2026	0.4428	0.9911	1.6171	4.7900e-003	0.2976	0.0314	0.3290	0.0802	0.0294	0.1096	0.0000	446.6375	446.6375	0.0411	0.0239	454.7702
Maximum	**0.4428**	**2.8008**	**4.4772**	**0.0145**	**0.9394**	**0.0920**	**1.0181**	**0.2848**	**0.0855**	**0.3703**	**0.0000**	**1,352.8572**	**1,352.8572**	**0.1047**	**0.0817**	**1,379.6971**

Mitigated Construction

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.3012	2.4674	2.9401	8.2100e-003	0.5582	0.0920	0.6501	0.1840	0.0855	0.2695	0.0000	752.1482	752.1482	0.1047	0.0329	764.5775
2025	0.3978	2.8008	4.4772	0.0145	0.9394	0.0787	1.0181	0.2534	0.0740	0.3275	0.0000	1,352.8568	1,352.8568	0.1001	0.0817	1,379.6967
2026	0.4428	0.9911	1.6171	4.7900e-003	0.2976	0.0314	0.3290	0.0802	0.0294	0.1096	0.0000	446.6374	446.6374	0.0411	0.0239	454.7700
Maximum	**0.4428**	**2.8008**	**4.4772**	**0.0145**	**0.9394**	**0.0920**	**1.0181**	**0.2534**	**0.0855**	**0.3275**	**0.0000**	**1,352.8568**	**1,352.8568**	**0.1047**	**0.0817**	**1,379.6967**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**11.01**	**0.00**	**10.00**	**16.30**	**0.00**	**12.48**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-1-2024**	**6-30-2024**	0.9238	0.9238
2	**7-1-2024**	**9-30-2024**	0.9814	0.9814
3	**10-1-2024**	**12-31-2024**	0.8525	0.8525
4	**1-1-2025**	**3-31-2025**	0.7910	0.7910
5	**4-1-2025**	**6-30-2025**	0.7821	0.7821
6	**7-1-2025**	**9-30-2025**	0.7907	0.7907
7	**10-1-2025**	**12-31-2025**	0.8086	0.8086
8	**1-1-2026**	**3-31-2026**	0.9618	0.9618
9	**4-1-2026**	**6-30-2026**	0.4502	0.4502
		Highest	0.9814	0.9814

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4969	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0288	0.0288	7.0000e-005	0.0000	0.0307
Energy	5.7400e-003	0.0522	0.0439	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	391.6932	391.6932	0.0151	2.7400e-003	392.8860
Mobile	1.3280	1.7285	15.2453	0.0369	4.2241	0.0261	4.2502	1.1273	0.0243	1.1516	0.0000	3,517.6161	3,517.6161	0.2004	0.1411	3,564.6617
Waste						0.0000	0.0000		0.0000	0.0000	34.2304	0.0000	34.2304	2.0230	0.0000	84.8043
Water						0.0000	0.0000		0.0000	0.0000	1.2913	60.6569	61.9482	0.1352	3.4400e-003	66.3520
Total	**1.8307**	**1.7808**	**15.3039**	**0.0372**	**4.2241**	**0.0301**	**4.2542**	**1.1273**	**0.0283**	**1.1557**	**35.5217**	**3,969.9950**	**4,005.5167**	**2.3736**	**0.1472**	**4,108.7346**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.4969	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0288	0.0288	7.0000e-005	0.0000	0.0307
Energy	5.7400e-003	0.0522	0.0439	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	73.5861	73.5861	1.7900e-003	1.1300e-003	73.9666

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mobile	1.3280	1.7285	15.2453	0.0369	4.2241	0.0261	4.2502	1.1273	0.0243	1.1516	0.0000	3,517.6161	3,517.6161	0.2004	0.1411	3,564.6617
Waste						0.0000	0.0000		0.0000	0.0000	34.2304	0.0000	34.2304	2.0230	0.0000	84.8043
Water						0.0000	0.0000		0.0000	0.0000	1.2913	60.6569	61.9482	0.1352	3.4400e-003	66.3520
Total	**1.8307**	**1.7808**	**15.3039**	**0.0372**	**4.2241**	**0.0301**	**4.2542**	**1.1273**	**0.0283**	**1.1557**	**35.5217**	**3,651.8879**	**3,687.4096**	**2.3603**	**0.1456**	**3,789.8153**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**8.01**	**7.94**	**0.56**	**1.09**	**7.76**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2024	5/10/2024	5	30	
2	Site Preparation	Site Preparation	5/11/2024	6/7/2024	5	20	
3	Grading	Grading	6/8/2024	8/9/2024	5	45	
4	Building Construction	Building Construction	8/10/2024	4/17/2026	5	440	
5	Architectural Coating	Architectural Coating	3/9/2026	4/17/2026	5	30	
6	Paving	Paving	4/18/2026	6/5/2026	5	35	

Acres of Grading (Site Preparation Phase): 30

Acres of Grading (Grading Phase): 135

Acres of Paving: 4.93

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 183,868; Non-Residential Outdoor: 61,289; Striped Parking Area: 12,891

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading		8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction		9	536.00	209.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating		1	107.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving		6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0337	0.3132	0.2956	5.8000e-004		0.0144	0.0144		0.0134	0.0134	0.0000	50.9941	50.9941	0.0143	0.0000	51.3508
Total	**0.0337**	**0.3132**	**0.2956**	**5.8000e-004**		**0.0144**	**0.0144**		**0.0134**	**0.0134**	**0.0000**	**50.9941**	**50.9941**	**0.0143**	**0.0000**	**51.3508**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	4.8000e-004	6.8700e-003	2.0000e-005	2.4700e-003	1.0000e-005	2.4800e-003	6.6000e-004	1.0000e-005	6.7000e-004	0.0000	1.9140	1.9140	5.0000e-005	5.0000e-005	1.9289
Total	**6.6000e-004**	**4.8000e-004**	**6.8700e-003**	**2.0000e-005**	**2.4700e-003**	**1.0000e-005**	**2.4800e-003**	**6.6000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.9140**	**1.9140**	**5.0000e-005**	**5.0000e-005**	**1.9289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0337	0.3132	0.2956	5.8000e-004		0.0144	0.0144		0.0134	0.0134	0.0000	50.9940	50.9940	0.0143	0.0000	51.3507
Total	**0.0337**	**0.3132**	**0.2956**	**5.8000e-004**		**0.0144**	**0.0144**		**0.0134**	**0.0134**	**0.0000**	**50.9940**	**50.9940**	**0.0143**	**0.0000**	**51.3507**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	4.8000e-004	6.8700e-003	2.0000e-005	2.4700e-003	1.0000e-005	2.4800e-003	6.6000e-004	1.0000e-005	6.7000e-004	0.0000	1.9140	1.9140	5.0000e-005	5.0000e-005	1.9289
Total	**6.6000e-004**	**4.8000e-004**	**6.8700e-003**	**2.0000e-005**	**2.4700e-003**	**1.0000e-005**	**2.4800e-003**	**6.6000e-004**	**1.0000e-005**	**6.7000e-004**	**0.0000**	**1.9140**	**1.9140**	**5.0000e-005**	**5.0000e-005**	**1.9289**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1966	0.0000	0.1966	0.1010	0.0000	0.1010	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0266	0.2718	0.1834	3.8000e-004		0.0123	0.0123		0.0113	0.0113	0.0000	33.4571	33.4571	0.0108	0.0000	33.7276
Total	**0.0266**	**0.2718**	**0.1834**	**3.8000e-004**	**0.1966**	**0.0123**	**0.2089**	**0.1010**	**0.0113**	**0.1123**	**0.0000**	**33.4571**	**33.4571**	**0.0108**	**0.0000**	**33.7276**

Unmitigated Construction Off-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.9000e-004	5.5000e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.5312	1.5312	4.0000e-005	4.0000e-005	1.5431
Total	**5.2000e-004**	**3.9000e-004**	**5.5000e-003**	**2.0000e-005**	**1.9700e-003**	**1.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.5312**	**1.5312**	**4.0000e-005**	**4.0000e-005**	**1.5431**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0885	0.0000	0.0885	0.0455	0.0000	0.0455	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0266	0.2718	0.1834	3.8000e-004		0.0123	0.0123		0.0113	0.0113	0.0000	33.4570	33.4570	0.0108	0.0000	33.7275
Total	**0.0266**	**0.2718**	**0.1834**	**3.8000e-004**	**0.0885**	**0.0123**	**0.1008**	**0.0455**	**0.0113**	**0.0568**	**0.0000**	**33.4570**	**33.4570**	**0.0108**	**0.0000**	**33.7275**

Mitigated Construction Off-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2000e-004	3.9000e-004	5.5000e-003	2.0000e-005	1.9700e-003	1.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.3000e-004	0.0000	1.5312	1.5312	4.0000e-005	4.0000e-005	1.5431
Total	**5.2000e-004**	**3.9000e-004**	**5.5000e-003**	**2.0000e-005**	**1.9700e-003**	**1.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**	**0.0000**	**1.5312**	**1.5312**	**4.0000e-005**	**4.0000e-005**	**1.5431**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2071	0.0000	0.2071	0.0822	0.0000	0.0822	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0724	0.7285	0.6238	1.4000e-003		0.0301	0.0301		0.0276	0.0276	0.0000	122.6689	122.6689	0.0397	0.0000	123.6608
Total	**0.0724**	**0.7285**	**0.6238**	**1.4000e-003**	**0.2071**	**0.0301**	**0.2371**	**0.0822**	**0.0276**	**0.1099**	**0.0000**	**122.6689**	**122.6689**	**0.0397**	**0.0000**	**123.6608**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3100e-003	9.6000e-004	0.0137	4.0000e-005	4.9400e-003	3.0000e-005	4.9600e-003	1.3100e-003	2.0000e-005	1.3400e-003	0.0000	3.8280	3.8280	9.0000e-005	9.0000e-005	3.8578
Total	**1.3100e-003**	**9.6000e-004**	**0.0137**	**4.0000e-005**	**4.9400e-003**	**3.0000e-005**	**4.9600e-003**	**1.3100e-003**	**2.0000e-005**	**1.3400e-003**	**0.0000**	**3.8280**	**3.8280**	**9.0000e-005**	**9.0000e-005**	**3.8578**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0932	0.0000	0.0932	0.0370	0.0000	0.0370	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0724	0.7285	0.6238	1.4000e-003		0.0301	0.0301		0.0276	0.0276	0.0000	122.6688	122.6688	0.0397	0.0000	123.6606
Total	**0.0724**	**0.7285**	**0.6238**	**1.4000e-003**	**0.0932**	**0.0301**	**0.1232**	**0.0370**	**0.0276**	**0.0646**	**0.0000**	**122.6688**	**122.6688**	**0.0397**	**0.0000**	**123.6606**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3100e-003	9.6000e-004	0.0137	4.0000e-005	4.9400e-003	3.0000e-005	4.9600e-003	1.3100e-003	2.0000e-005	1.3400e-003	0.0000	3.8280	3.8280	9.0000e-005	9.0000e-005	3.8578
Total	**1.3100e-003**	**9.6000e-004**	**0.0137**	**4.0000e-005**	**4.9400e-003**	**3.0000e-005**	**4.9600e-003**	**1.3100e-003**	**2.0000e-005**	**1.3400e-003**	**0.0000**	**3.8280**	**3.8280**	**9.0000e-005**	**9.0000e-005**	**3.8578**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0751	0.6856	0.8245	1.3700e-003		0.0313	0.0313		0.0294	0.0294	0.0000	118.2430	118.2430	0.0280	0.0000	118.9421
Total	**0.0751**	**0.6856**	**0.8245**	**1.3700e-003**		**0.0313**	**0.0313**		**0.0294**	**0.0294**	**0.0000**	**118.2430**	**118.2430**	**0.0280**	**0.0000**	**118.9421**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.4079	0.1521	1.9100e-003	0.0672	2.2600e-003	0.0695	0.0194	2.1600e-003	0.0216	0.0000	186.9733	186.9733	6.3600e-003	0.0271	195.2167
Worker	0.0797	0.0586	0.8347	2.4800e-003	0.2999	1.6500e-003	0.3016	0.0797	1.5200e-003	0.0812	0.0000	232.5390	232.5390	5.4700e-003	5.6200e-003	234.3502
Total	**0.0909**	**0.4665**	**0.9867**	**4.3900e-003**	**0.3671**	**3.9100e-003**	**0.3710**	**0.0991**	**3.6800e-003**	**0.1027**	**0.0000**	**419.5122**	**419.5122**	**0.0118**	**0.0328**	**429.5669**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0751	0.6856	0.8245	1.3700e-003		0.0313	0.0313		0.0294	0.0294	0.0000	118.2429	118.2429	0.0280	0.0000	118.9419
Total	**0.0751**	**0.6856**	**0.8245**	**1.3700e-003**		**0.0313**	**0.0313**		**0.0294**	**0.0294**	**0.0000**	**118.2429**	**118.2429**	**0.0280**	**0.0000**	**118.9419**

Mitigated Construction Off-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0112	0.4079	0.1521	1.9100e-003	0.0672	2.2600e-003	0.0695	0.0194	2.1600e-003	0.0216	0.0000	186.9733	186.9733	6.3600e-003	0.0271	195.2167
Worker	0.0797	0.0586	0.8347	2.4800e-003	0.2999	1.6500e-003	0.3016	0.0797	1.5200e-003	0.0812	0.0000	232.5390	232.5390	5.4700e-003	5.6200e-003	234.3502
Total	**0.0909**	**0.4665**	**0.9867**	**4.3900e-003**	**0.3671**	**3.9100e-003**	**0.3710**	**0.0991**	**3.6800e-003**	**0.1027**	**0.0000**	**419.5122**	**419.5122**	**0.0118**	**0.0328**	**429.5669**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

Unmitigated Construction Off-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0281	1.0388	0.3833	4.8000e-003	0.1720	5.8100e-003	0.1778	0.0496	5.5600e-003	0.0552	0.0000	469.7169	469.7169	0.0163	0.0682	490.4569
Worker	0.1912	0.1347	1.9949	6.1400e-003	0.7674	4.0300e-003	0.7715	0.2038	3.7000e-003	0.2075	0.0000	580.4854	580.4854	0.0127	0.0134	584.8067
Total	**0.2194**	**1.1735**	**2.3781**	**0.0109**	**0.9394**	**9.8400e-003**	**0.9493**	**0.2534**	**9.2600e-003**	**0.2627**	**0.0000**	**1,050.2023**	**1,050.2023**	**0.0290**	**0.0817**	**1,075.2636**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

Mitigated Construction Off-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0281	1.0388	0.3833	4.8000e-003	0.1720	5.8100e-003	0.1778	0.0496	5.5600e-003	0.0552	0.0000	469.7169	469.7169	0.0163	0.0682	490.4569
Worker	0.1912	0.1347	1.9949	6.1400e-003	0.7674	4.0300e-003	0.7715	0.2038	3.7000e-003	0.2075	0.0000	580.4854	580.4854	0.0127	0.0134	584.8067
Total	**0.2194**	**1.1735**	**2.3781**	**0.0109**	**0.9394**	**9.8400e-003**	**0.9493**	**0.2534**	**9.2600e-003**	**0.2627**	**0.0000**	**1,050.2023**	**1,050.2023**	**0.0290**	**0.0817**	**1,075.2636**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0526	0.4801	0.6193	1.0400e-003		0.0203	0.0203		0.0191	0.0191	0.0000	89.2890	89.2890	0.0210	0.0000	89.8137
Total	**0.0526**	**0.4801**	**0.6193**	**1.0400e-003**		**0.0203**	**0.0203**		**0.0191**	**0.0191**	**0.0000**	**89.2890**	**89.2890**	**0.0210**	**0.0000**	**89.8137**

Unmitigated Construction Off-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.1300e-003	0.3043	0.1117	1.3900e-003	0.0507	1.7100e-003	0.0525	0.0146	1.6400e-003	0.0163	0.0000	135.9780	135.9780	4.8200e-003	0.0198	141.9900
Worker	0.0532	0.0361	0.5538	1.7600e-003	0.2264	1.1300e-003	0.2275	0.0601	1.0400e-003	0.0612	0.0000	167.3612	167.3612	3.3900e-003	3.7400e-003	168.5602
Total	**0.0613**	**0.3404**	**0.6655**	**3.1500e-003**	**0.2771**	**2.8400e-003**	**0.2800**	**0.0748**	**2.6800e-003**	**0.0775**	**0.0000**	**303.3392**	**303.3392**	**8.2100e-003**	**0.0235**	**310.5502**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0526	0.4801	0.6193	1.0400e-003		0.0203	0.0203		0.0191	0.0191	0.0000	89.2889	89.2889	0.0210	0.0000	89.8136
Total	**0.0526**	**0.4801**	**0.6193**	**1.0400e-003**		**0.0203**	**0.0203**		**0.0191**	**0.0191**	**0.0000**	**89.2889**	**89.2889**	**0.0210**	**0.0000**	**89.8136**

Mitigated Construction Off-Site

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.1300e-003	0.3043	0.1117	1.3900e-003	0.0507	1.7100e-003	0.0525	0.0146	1.6400e-003	0.0163	0.0000	135.9780	135.9780	4.8200e-003	0.0198	141.9900
Worker	0.0532	0.0361	0.5538	1.7600e-003	0.2264	1.1300e-003	0.2275	0.0601	1.0400e-003	0.0612	0.0000	167.3612	167.3612	3.3900e-003	3.7400e-003	168.5602
Total	**0.0613**	**0.3404**	**0.6655**	**3.1500e-003**	**0.2771**	**2.8400e-003**	**0.2800**	**0.0748**	**2.6800e-003**	**0.0775**	**0.0000**	**303.3392**	**303.3392**	**8.2100e-003**	**0.0235**	**310.5502**

3.6 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2990					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5600e-003	0.0172	0.0271	4.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	3.8299	3.8299	2.1000e-004	0.0000	3.8351
Total	**0.3016**	**0.0172**	**0.0271**	**4.0000e-005**		**7.7000e-004**	**7.7000e-004**		**7.7000e-004**	**7.7000e-004**	**0.0000**	**3.8299**	**3.8299**	**2.1000e-004**	**0.0000**	**3.8351**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1400e-003	2.8100e-003	0.0431	1.4000e-004	0.0176	9.0000e-005	0.0177	4.6800e-003	8.0000e-005	4.7600e-003	0.0000	13.0168	13.0168	2.6000e-004	2.9000e-004	13.1101
Total	**4.1400e-003**	**2.8100e-003**	**0.0431**	**1.4000e-004**	**0.0176**	**9.0000e-005**	**0.0177**	**4.6800e-003**	**8.0000e-005**	**4.7600e-003**	**0.0000**	**13.0168**	**13.0168**	**2.6000e-004**	**2.9000e-004**	**13.1101**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2990					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5600e-003	0.0172	0.0271	4.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	3.8299	3.8299	2.1000e-004	0.0000	3.8351
Total	**0.3016**	**0.0172**	**0.0271**	**4.0000e-005**		**7.7000e-004**	**7.7000e-004**		**7.7000e-004**	**7.7000e-004**	**0.0000**	**3.8299**	**3.8299**	**2.1000e-004**	**0.0000**	**3.8351**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.1400e-003	2.8100e-003	0.0431	1.4000e-004	0.0176	9.0000e-005	0.0177	4.6800e-003	8.0000e-005	4.7600e-003	0.0000	13.0168	13.0168	2.6000e-004	2.9000e-004	13.1101
Total	**4.1400e-003**	**2.8100e-003**	**0.0431**	**1.4000e-004**	**0.0176**	**9.0000e-005**	**0.0177**	**4.6800e-003**	**8.0000e-005**	**4.7600e-003**	**0.0000**	**13.0168**	**13.0168**	**2.6000e-004**	**2.9000e-004**	**13.1101**

3.7 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0160	0.1502	0.2551	4.0000e-004		7.3200e-003	7.3200e-003		6.7400e-003	6.7400e-003	0.0000	35.0337	35.0337	0.0113	0.0000	35.3170
Paving	6.4600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0225**	**0.1502**	**0.2551**	**4.0000e-004**		**7.3200e-003**	**7.3200e-003**		**6.7400e-003**	**6.7400e-003**	**0.0000**	**35.0337**	**35.0337**	**0.0113**	**0.0000**	**35.3170**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.8000e-004	4.6000e-004	7.0400e-003	2.0000e-005	2.8800e-003	1.0000e-005	2.8900e-003	7.6000e-004	1.0000e-005	7.8000e-004	0.0000	2.1289	2.1289	4.0000e-005	5.0000e-005	2.1442
Total	**6.8000e-004**	**4.6000e-004**	**7.0400e-003**	**2.0000e-005**	**2.8800e-003**	**1.0000e-005**	**2.8900e-003**	**7.6000e-004**	**1.0000e-005**	**7.8000e-004**	**0.0000**	**2.1289**	**2.1289**	**4.0000e-005**	**5.0000e-005**	**2.1442**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0160	0.1502	0.2551	4.0000e-004		7.3200e-003	7.3200e-003		6.7400e-003	6.7400e-003	0.0000	35.0337	35.0337	0.0113	0.0000	35.3169
Paving	6.4600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0225**	**0.1502**	**0.2551**	**4.0000e-004**		**7.3200e-003**	**7.3200e-003**		**6.7400e-003**	**6.7400e-003**	**0.0000**	**35.0337**	**35.0337**	**0.0113**	**0.0000**	**35.3169**

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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.8000e-004	4.6000e-004	7.0400e-003	2.0000e-005	2.8800e-003	1.0000e-005	2.8900e-003	7.6000e-004	1.0000e-005	7.8000e-004	0.0000	2.1289	2.1289	4.0000e-005	5.0000e-005	2.1442
Total	**6.8000e-004**	**4.6000e-004**	**7.0400e-003**	**2.0000e-005**	**2.8800e-003**	**1.0000e-005**	**2.8900e-003**	**7.6000e-004**	**1.0000e-005**	**7.8000e-004**	**0.0000**	**2.1289**	**2.1289**	**4.0000e-005**	**5.0000e-005**	**2.1442**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

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Category	tons/yr										MT/yr					
Mitigated	1.3280	1.7285	15.2453	0.0369	4.2241	0.0261	4.2502	1.1273	0.0243	1.1516	0.0000	3,517.6161	3,517.6161	0.2004	0.1411	3,564.6617
Unmitigated	1.3280	1.7285	15.2453	0.0369	4.2241	0.0261	4.2502	1.1273	0.0243	1.1516	0.0000	3,517.6161	3,517.6161	0.2004	0.1411	3,564.6617

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
High School	2,688.84	766.92	462.00	11,219,643	11,219,643
Parking Lot	0.00	0.00	0.00		
Total	2,688.84	766.92	462.00	11,219,643	11,219,643

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594
High School	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594
Parking Lot	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594

5.0 Energy Detail

Historical Energy Use: N

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	16.7425	16.7425	7.0000e-004	8.0000e-005	16.7852
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	334.8496	334.8496	0.0140	1.7000e-003	335.7045
NaturalGas Mitigated	5.7400e-003	0.0522	0.0439	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	56.8436	56.8436	1.0900e-003	1.0400e-003	57.1814
NaturalGas Unmitigated	5.7400e-003	0.0522	0.0439	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	56.8436	56.8436	1.0900e-003	1.0400e-003	57.1814

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.06521e+006	5.7400e-003	0.0522	0.0439	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	56.8436	56.8436	1.0900e-003	1.0400e-003	57.1814

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Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.7400e-003**	**0.0522**	**0.0439**	**3.1000e-004**		**3.9700e-003**	**3.9700e-003**		**3.9700e-003**	**3.9700e-003**	**0.0000**	**56.8436**	**56.8436**	**1.0900e-003**	**1.0400e-003**	**57.1814**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High School	1.06521e+006	5.7400e-003	0.0522	0.0439	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	56.8436	56.8436	1.0900e-003	1.0400e-003	57.1814
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.7400e-003**	**0.0522**	**0.0439**	**3.1000e-004**		**3.9700e-003**	**3.9700e-003**		**3.9700e-003**	**3.9700e-003**	**0.0000**	**56.8436**	**56.8436**	**1.0900e-003**	**1.0400e-003**	**57.1814**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

City Park	0	0.0000	0.0000	0.0000	0.0000
High School	859277	307.9038	0.0129	1.5600e-003	308.6899
Parking Lot	75198.5	26.9458	1.1300e-003	1.4000e-004	27.0146
Total		**334.8496**	**0.0140**	**1.7000e-003**	**335.7045**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
High School	42963.8	15.3952	6.4000e-004	8.0000e-005	15.4345
Parking Lot	3759.93	1.3473	6.0000e-005	1.0000e-005	1.3507
Total		**16.7425**	**7.0000e-004**	**9.0000e-005**	**16.7852**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4969	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0288	0.0288	7.0000e-005	0.0000	0.0307
Unmitigated	0.4969	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0288	0.0288	7.0000e-005	0.0000	0.0307

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0299					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4657					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3600e-003	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0288	0.0288	7.0000e-005	0.0000	0.0307
Total	**0.4969**	**1.3000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0288**	**0.0288**	**7.0000e-005**	**0.0000**	**0.0307**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0299					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4657					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3600e-003	1.3000e-004	0.0148	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0288	0.0288	7.0000e-005	0.0000	0.0307
Total	**0.4969**	**1.3000e-004**	**0.0148**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0288**	**0.0288**	**7.0000e-005**	**0.0000**	**0.0307**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	61.9482	0.1352	3.4400e-003	66.3520
Unmitigated	61.9482	0.1352	3.4400e-003	66.3520

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
High School	4.07018 / 10.4662	61.9482	0.1352	3.4400e-003	66.3520
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**61.9482**	**0.1352**	**3.4400e-003**	**66.3520**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 0	0.0000	0.0000	0.0000	0.0000
High School	4.07018 / 10.4662	61.9482	0.1352	3.4400e-003	66.3520
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Total	**61.9482**	**0.1352**	**3.4400e-003**	**66.3520**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	34.2304	2.0230	0.0000	84.8043
Unmitigated	34.2304	2.0230	0.0000	84.8043

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

High School	168.63	34.2304	2.0230	0.0000	84.8043
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**34.2304**	**2.0230**	**0.0000**	**84.8043**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
High School	168.63	34.2304	2.0230	0.0000	84.8043
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**34.2304**	**2.0230**	**0.0000**	**84.8043**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodcrest Christian School Improvements Proposed

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	924.00	Student	2.81	122,578.74	0
Parking Lot	214.85	1000sqft	4.93	214,853.00	0
City Park	21.55	Acre	21.55	938,718.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2026
Utility Company	Riverside Public Utilities/City of Riverside				
CO2 Intensity (lb/MWhr)	789.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing site with additions and improvements.
Additional 280 Students, Parking lo

Construction Phase - Architectural Coatings will be happening during Building Construction

Grading - .

Architectural Coating - Assume All AC comply with Rule 1113

Vehicle Trips - Proposed Trip Generation is 2.91. Assume Divert and Pass-by are accounted for in the Trip Generation

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Coating - Area Architectural Coatings would comply with Rule 1113

Energy Use -

Construction Off-road Equipment Mitigation - Dust Control Measures as requiredfrom SCAQMD Rule 403

Area Mitigation - .

Energy Mitigation - The project site generates 95 percent of their electricity with solar

Operational Off-Road Equipment - .

Fleet Mix - The proposed Trip Generation does not provide Fleet Mix/ Specific Vehicles used for this project.

Water And Wastewater - .

Solid Waste - .

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	30.00
tblLandUse	LandUseSquareFeet	214,850.00	214,853.00
tblSolidWaste	SolidWasteGenerationRate	1.85	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	ST_TR	1.96	0.00

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	0.58	0.83
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.25	0.50
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	2.03	2.91
tblWater	OutdoorWaterUseRate	25,676,423.09	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.2960	32.4153	36.6919	0.1154	19.8582	1.3366	21.0886	10.1558	1.2297	11.2878	0.0000	11,848.9923	11,848.9923	1.9480	0.6982	12,078.5328
2025	3.0858	20.9787	35.3961	0.1129	7.3295	0.6028	7.9323	1.9742	0.5671	2.5414	0.0000	11,647.4909	11,647.4909	0.8442	0.6809	11,871.5091
2026	23.3810	22.1537	39.2783	0.1232	8.5255	0.6585	9.1840	2.2914	0.6225	2.9139	0.0000	12,737.9957	12,737.9957	0.8692	0.6846	12,963.7245
Maximum	**23.3810**	**32.4153**	**39.2783**	**0.1232**	**19.8582**	**1.3366**	**21.0886**	**10.1558**	**1.2297**	**11.2878**	**0.0000**	**12,737.9957**	**12,737.9957**	**1.9480**	**0.6982**	**12,963.7245**

Mitigated Construction

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.2960	32.4153	36.6919	0.1154	9.0469	1.3366	10.2773	4.5995	1.2297	5.7315	0.0000	11,848.9923	11,848.9923	1.9480	0.6982	12,078.5328
2025	3.0858	20.9787	35.3961	0.1129	7.3295	0.6028	7.9323	1.9742	0.5671	2.5414	0.0000	11,647.4909	11,647.4909	0.8442	0.6809	11,871.5091
2026	23.3810	22.1537	39.2783	0.1232	8.5255	0.6585	9.1840	2.2914	0.6225	2.9139	0.0000	12,737.9957	12,737.9957	0.8692	0.6846	12,963.7245
Maximum	**23.3810**	**32.4153**	**39.2783**	**0.1232**	**9.0469**	**1.3366**	**10.2773**	**4.5995**	**1.2297**	**5.7315**	**0.0000**	**12,737.9957**	**12,737.9957**	**1.9480**	**0.6982**	**12,963.7245**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**30.27**	**0.00**	**28.30**	**38.53**	**0.00**	**33.19**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.7263	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705
Energy	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793
Mobile	9.7112	11.1748	110.9584	0.2694	30.3264	0.1843	30.5107	8.0817	0.1715	8.2532		28,356.7116	28,356.7116	1.5351	1.0496	28,707.8675
Total	**12.4689**	**11.4620**	**111.3170**	**0.2712**	**30.3264**	**0.2065**	**30.5328**	**8.0817**	**0.1937**	**8.2754**		**28,700.3046**	**28,700.3046**	**1.5423**	**1.0559**	**29,053.5172**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.7263	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705
Energy	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793
Mobile	9.7112	11.1748	110.9584	0.2694	30.3264	0.1843	30.5107	8.0817	0.1715	8.2532		28,356.7116	28,356.7116	1.5351	1.0496	28,707.8675
Total	**12.4689**	**11.4620**	**111.3170**	**0.2712**	**30.3264**	**0.2065**	**30.5328**	**8.0817**	**0.1937**	**8.2754**		**28,700.3046**	**28,700.3046**	**1.5423**	**1.0559**	**29,053.5172**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2024	5/10/2024	5	30	
2	Site Preparation	Site Preparation	5/11/2024	6/7/2024	5	20	
3	Grading	Grading	6/8/2024	8/9/2024	5	45	
4	Building Construction	Building Construction	8/10/2024	4/17/2026	5	440	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5	Architectural Coating	Architectural Coating	3/9/2026	4/17/2026	5	30	
6	Paving	Paving	4/18/2026	6/5/2026	5	35	

Acres of Grading (Site Preparation Phase): 30

Acres of Grading (Grading Phase): 135

Acres of Paving: 4.93

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 183,868; Non-Residential Outdoor: 61,289; Striped Parking Area: 12,891

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	536.00	209.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	107.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922		3,747.4228	3,747.4228	1.0485		3,773.6345
Total	**2.2437**	**20.8781**	**19.7073**	**0.0388**		**0.9602**	**0.9602**		**0.8922**	**0.8922**		**3,747.4228**	**3,747.4228**	**1.0485**		**3,773.6345**

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Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0447	0.0287	0.4922	1.4300e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		147.0668	147.0668	3.2600e-003	3.1600e-003	148.0889
Total	**0.0447**	**0.0287**	**0.4922**	**1.4300e-003**	**0.1677**	**9.0000e-004**	**0.1686**	**0.0445**	**8.3000e-004**	**0.0453**		**147.0668**	**147.0668**	**3.2600e-003**	**3.1600e-003**	**148.0889**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922	0.0000	3,747.4228	3,747.4228	1.0485		3,773.6345
Total	**2.2437**	**20.8781**	**19.7073**	**0.0388**		**0.9602**	**0.9602**		**0.8922**	**0.8922**	**0.0000**	**3,747.4228**	**3,747.4228**	**1.0485**		**3,773.6345**

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0447	0.0287	0.4922	1.4300e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		147.0668	147.0668	3.2600e-003	3.1600e-003	148.0889
Total	**0.0447**	**0.0287**	**0.4922**	**1.4300e-003**	**0.1677**	**9.0000e-004**	**0.1686**	**0.0445**	**8.3000e-004**	**0.0453**		**147.0668**	**147.0668**	**3.2600e-003**	**3.1600e-003**	**148.0889**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**19.6570**	**1.2294**	**20.8864**	**10.1025**	**1.1310**	**11.2335**		**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

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Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0537	0.0345	0.5906	1.7100e-003	0.2012	1.0900e-003	0.2023	0.0534	1.0000e-003	0.0544		176.4802	176.4802	3.9100e-003	3.7900e-003	177.7067
Total	**0.0537**	**0.0345**	**0.5906**	**1.7100e-003**	**0.2012**	**1.0900e-003**	**0.2023**	**0.0534**	**1.0000e-003**	**0.0544**		**176.4802**	**176.4802**	**3.9100e-003**	**3.7900e-003**	**177.7067**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310	0.0000	3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**8.8457**	**1.2294**	**10.0750**	**4.5461**	**1.1310**	**5.6771**	**0.0000**	**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0537	0.0345	0.5906	1.7100e-003	0.2012	1.0900e-003	0.2023	0.0534	1.0000e-003	0.0544		176.4802	176.4802	3.9100e-003	3.7900e-003	177.7067
Total	**0.0537**	**0.0345**	**0.5906**	**1.7100e-003**	**0.2012**	**1.0900e-003**	**0.2023**	**0.0534**	**1.0000e-003**	**0.0544**		**176.4802**	**176.4802**	**3.9100e-003**	**3.7900e-003**	**177.7067**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

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Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0597	0.0383	0.6562	1.9000e-003	0.2236	1.2100e-003	0.2248	0.0593	1.1100e-003	0.0604		196.0891	196.0891	4.3500e-003	4.2100e-003	197.4519
Total	**0.0597**	**0.0383**	**0.6562**	**1.9000e-003**	**0.2236**	**1.2100e-003**	**0.2248**	**0.0593**	**1.1100e-003**	**0.0604**		**196.0891**	**196.0891**	**4.3500e-003**	**4.2100e-003**	**197.4519**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**4.1416**	**1.3354**	**5.4770**	**1.6442**	**1.2286**	**2.8728**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0597	0.0383	0.6562	1.9000e-003	0.2236	1.2100e-003	0.2248	0.0593	1.1100e-003	0.0604		196.0891	196.0891	4.3500e-003	4.2100e-003	197.4519
Total	**0.0597**	**0.0383**	**0.6562**	**1.9000e-003**	**0.2236**	**1.2100e-003**	**0.2248**	**0.0593**	**1.1100e-003**	**0.0604**		**196.0891**	**196.0891**	**4.3500e-003**	**4.2100e-003**	**197.4519**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2256	7.6212	2.9377	0.0375	1.3383	0.0443	1.3826	0.3853	0.0424	0.4277		4,038.1065	4,038.1065	0.1377	0.5855	4,216.0148
Worker	1.5988	1.0271	17.5873	0.0509	5.9912	0.0323	6.0236	1.5889	0.0298	1.6187		5,255.1868	5,255.1868	0.1165	0.1128	5,291.7103
Total	**1.8244**	**8.6483**	**20.5250**	**0.0884**	**7.3295**	**0.0766**	**7.4061**	**1.9742**	**0.0721**	**2.0463**		**9,293.2934**	**9,293.2934**	**0.2542**	**0.6982**	**9,507.7251**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2256	7.6212	2.9377	0.0375	1.3383	0.0443	1.3826	0.3853	0.0424	0.4277		4,038.1065	4,038.1065	0.1377	0.5855	4,216.0148
Worker	1.5988	1.0271	17.5873	0.0509	5.9912	0.0323	6.0236	1.5889	0.0298	1.6187		5,255.1868	5,255.1868	0.1165	0.1128	5,291.7103
Total	**1.8244**	**8.6483**	**20.5250**	**0.0884**	**7.3295**	**0.0766**	**7.4061**	**1.9742**	**0.0721**	**2.0463**		**9,293.2934**	**9,293.2934**	**0.2542**	**0.6982**	**9,507.7251**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2207	7.5851	2.8935	0.0368	1.3383	0.0444	1.3827	0.3853	0.0425	0.4278		3,964.5054	3,964.5054	0.1381	0.5754	4,139.4411
Worker	1.4977	0.9239	16.4179	0.0492	5.9912	0.0309	6.0221	1.5889	0.0284	1.6173		5,126.5111	5,126.5111	0.1051	0.1055	5,160.5699
Total	**1.7184**	**8.5090**	**19.3115**	**0.0860**	**7.3295**	**0.0753**	**7.4048**	**1.9742**	**0.0709**	**2.0451**		**9,091.0166**	**9,091.0166**	**0.2433**	**0.6809**	**9,300.0111**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2207	7.5851	2.8935	0.0368	1.3383	0.0444	1.3827	0.3853	0.0425	0.4278		3,964.5054	3,964.5054	0.1381	0.5754	4,139.4411
Worker	1.4977	0.9239	16.4179	0.0492	5.9912	0.0309	6.0221	1.5889	0.0284	1.6173		5,126.5111	5,126.5111	0.1051	0.1055	5,160.5699
Total	**1.7184**	**8.5090**	**19.3115**	**0.0860**	**7.3295**	**0.0753**	**7.4048**	**1.9742**	**0.0709**	**2.0451**		**9,091.0166**	**9,091.0166**	**0.2433**	**0.6809**	**9,300.0111**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2163	7.5314	2.8585	0.0360	1.3383	0.0443	1.3826	0.3853	0.0424	0.4277		3,890.1541	3,890.1541	0.1384	0.5652	4,062.0458
Worker	1.4107	0.8395	15.4431	0.0477	5.9912	0.0293	6.0205	1.5889	0.0270	1.6159		5,009.8238	5,009.8238	0.0955	0.0995	5,041.8584
Total	**1.6269**	**8.3709**	**18.3016**	**0.0837**	**7.3295**	**0.0736**	**7.4031**	**1.9742**	**0.0694**	**2.0436**		**8,899.9778**	**8,899.9778**	**0.2339**	**0.6647**	**9,103.9042**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2163	7.5314	2.8585	0.0360	1.3383	0.0443	1.3826	0.3853	0.0424	0.4277		3,890.1541	3,890.1541	0.1384	0.5652	4,062.0458
Worker	1.4107	0.8395	15.4431	0.0477	5.9912	0.0293	6.0205	1.5889	0.0270	1.6159		5,009.8238	5,009.8238	0.0955	0.0995	5,041.8584
Total	**1.6269**	**8.3709**	**18.3016**	**0.0837**	**7.3295**	**0.0736**	**7.4031**	**1.9742**	**0.0694**	**2.0436**		**8,899.9778**	**8,899.9778**	**0.2339**	**0.6647**	**9,103.9042**

3.6 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.9342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**20.1051**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2816	0.1676	3.0829	9.5200e-003	1.1960	5.8500e-003	1.2019	0.3172	5.3800e-003	0.3226		1,000.0954	1,000.0954	0.0191	0.0199	1,006.4904
Total	**0.2816**	**0.1676**	**3.0829**	**9.5200e-003**	**1.1960**	**5.8500e-003**	**1.2019**	**0.3172**	**5.3800e-003**	**0.3226**		**1,000.0954**	**1,000.0954**	**0.0191**	**0.0199**	**1,006.4904**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.9342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**20.1051**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2816	0.1676	3.0829	9.5200e-003	1.1960	5.8500e-003	1.2019	0.3172	5.3800e-003	0.3226		1,000.0954	1,000.0954	0.0191	0.0199	1,006.4904
Total	**0.2816**	**0.1676**	**3.0829**	**9.5200e-003**	**1.1960**	**5.8500e-003**	**1.2019**	**0.3172**	**5.3800e-003**	**0.3226**		**1,000.0954**	**1,000.0954**	**0.0191**	**0.0199**	**1,006.4904**

3.7 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.3691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2842**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0395	0.0235	0.4322	1.3300e-003	0.1677	8.2000e-004	0.1685	0.0445	7.5000e-004	0.0452		140.2003	140.2003	2.6700e-003	2.7800e-003	141.0968
Total	**0.0395**	**0.0235**	**0.4322**	**1.3300e-003**	**0.1677**	**8.2000e-004**	**0.1685**	**0.0445**	**7.5000e-004**	**0.0452**		**140.2003**	**140.2003**	**2.6700e-003**	**2.7800e-003**	**141.0968**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.3691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2842**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0395	0.0235	0.4322	1.3300e-003	0.1677	8.2000e-004	0.1685	0.0445	7.5000e-004	0.0452		140.2003	140.2003	2.6700e-003	2.7800e-003	141.0968
Total	**0.0395**	**0.0235**	**0.4322**	**1.3300e-003**	**0.1677**	**8.2000e-004**	**0.1685**	**0.0445**	**7.5000e-004**	**0.0452**		**140.2003**	**140.2003**	**2.6700e-003**	**2.7800e-003**	**141.0968**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Mitigated	9.7112	11.1748	110.9584	0.2694	30.3264	0.1843	30.5107	8.0817	0.1715	8.2532		28,356.7116	28,356.7116	1.5351	1.0496	28,707.8675
Unmitigated	9.7112	11.1748	110.9584	0.2694	30.3264	0.1843	30.5107	8.0817	0.1715	8.2532		28,356.7116	28,356.7116	1.5351	1.0496	28,707.8675

4.2 Trip Summary Information

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
High School	2,688.84	766.92	462.00	11,219,643	11,219,643
Parking Lot	0.00	0.00	0.00		
Total	2,688.84	766.92	462.00	11,219,643	11,219,643

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594
High School	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594
Parking Lot	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793
NaturalGas Unmitigated	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	2918.38	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0315**	**0.2861**	**0.2403**	**1.7200e-003**		**0.0217**	**0.0217**		**0.0217**	**0.0217**		**343.3390**	**343.3390**	**6.5800e-003**	**6.2900e-003**	**345.3793**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	2.91838	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0315**	**0.2861**	**0.2403**	**1.7200e-003**		**0.0217**	**0.0217**		**0.0217**	**0.0217**		**343.3390**	**343.3390**	**6.5800e-003**	**6.2900e-003**	**345.3793**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7263	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705
Unmitigated	2.7263	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705

6.2 Area by SubCategory

Unmitigated

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1638					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.5515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0109	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705
Total	**2.7262**	**1.0700e-003**	**0.1182**	**1.0000e-005**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**		**0.2540**	**0.2540**	**6.6000e-004**		**0.2705**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1638					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.5515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0109	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705
Total	**2.7262**	**1.0700e-003**	**0.1182**	**1.0000e-005**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**		**0.2540**	**0.2540**	**6.6000e-004**		**0.2705**

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Woodcrest Christian School Improvements Proposed

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
High School	924.00	Student	2.81	122,578.74	0
Parking Lot	214.85	1000sqft	4.93	214,853.00	0
City Park	21.55	Acre	21.55	938,718.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	10			**Operational Year**	2026
Utility Company	Riverside Public Utilities/City of Riverside				
CO2 Intensity (lb/MWhr)	789.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Existing site with additions and improvements.
Additional 280 Students, Parking lo

Construction Phase - Architectural Coatings will be happening during Building Construction

Grading - .

Architectural Coating - Assume All AC comply with Rule 1113

Vehicle Trips - Proposed Trip Generation is 2.91. Assume Divert and Pass-by are accounted for in the Trip Generation

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Coating - Area Architectural Coatings would comply with Rule 1113

Energy Use -

Construction Off-road Equipment Mitigation - Dust Control Measures as requiredfrom SCAQMD Rule 403

Area Mitigation - .

Energy Mitigation - The project site generates 95 percent of their electricity with solar

Operational Off-Road Equipment - .

Fleet Mix - The proposed Trip Generation does not provide Fleet Mix/ Specific Vehicles used for this project.

Water And Wastewater - .

Solid Waste - .

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	100	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	35.00	30.00
tblLandUse	LandUseSquareFeet	214,850.00	214,853.00
tblSolidWaste	SolidWasteGenerationRate	1.85	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	DV_TP	19.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	PR_TP	75.00	100.00
tblVehicleTrips	ST_TR	1.96	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	0.58	0.83
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	SU_TR	0.25	0.50
tblVehicleTrips	WD_TR	0.78	0.00
tblVehicleTrips	WD_TR	2.03	2.91
tblWater	OutdoorWaterUseRate	25,676,423.09	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.3799	32.4189	35.1228	0.1125	19.8582	1.3366	21.0886	10.1558	1.2297	11.2878	0.0000	11,551.6185	11,551.6185	1.9481	0.7066	11,783.6738
2025	3.1684	21.4412	33.9467	0.1101	7.3295	0.6030	7.9325	1.9742	0.5673	2.5416	0.0000	11,357.9385	11,357.9385	0.8453	0.6888	11,584.3182
2026	23.4813	22.6215	37.6375	0.1199	8.5255	0.6587	9.1842	2.2914	0.6227	2.9141	0.0000	12,397.5164	12,397.5164	0.8706	0.6932	12,625.8413
Maximum	**23.4813**	**32.4189**	**37.6375**	**0.1199**	**19.8582**	**1.3366**	**21.0886**	**10.1558**	**1.2297**	**11.2878**	**0.0000**	**12,397.5164**	**12,397.5164**	**1.9481**	**0.7066**	**12,625.8413**

Mitigated Construction

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	3.3799	32.4189	35.1228	0.1125	9.0469	1.3366	10.2773	4.5995	1.2297	5.7315	0.0000	11,551.6185	11,551.6185	1.9481	0.7066	11,783.6738
2025	3.1684	21.4412	33.9467	0.1101	7.3295	0.6030	7.9325	1.9742	0.5673	2.5416	0.0000	11,357.9385	11,357.9385	0.8453	0.6888	11,584.3182
2026	23.4813	22.6215	37.6375	0.1199	8.5255	0.6587	9.1842	2.2914	0.6227	2.9141	0.0000	12,397.5164	12,397.5164	0.8706	0.6932	12,625.8413
Maximum	**23.4813**	**32.4189**	**37.6375**	**0.1199**	**9.0469**	**1.3366**	**10.2773**	**4.5995**	**1.2297**	**5.7315**	**0.0000**	**12,397.5164**	**12,397.5164**	**1.9481**	**0.7066**	**12,625.8413**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**30.27**	**0.00**	**28.30**	**38.53**	**0.00**	**33.19**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.7263	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705
Energy	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793
Mobile	9.4569	12.0019	106.0097	0.2569	30.3264	0.1844	30.5107	8.0817	0.1716	8.2532		27,035.1940	27,035.1940	1.5612	1.0878	27,398.3860
Total	**12.2146**	**12.2891**	**106.3682**	**0.2586**	**30.3264**	**0.2065**	**30.5329**	**8.0817**	**0.1937**	**8.2754**		**27,378.7870**	**27,378.7870**	**1.5684**	**1.0941**	**27,744.0358**

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.7263	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705
Energy	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793
Mobile	9.4569	12.0019	106.0097	0.2569	30.3264	0.1844	30.5107	8.0817	0.1716	8.2532		27,035.1940	27,035.1940	1.5612	1.0878	27,398.3860
Total	**12.2146**	**12.2891**	**106.3682**	**0.2586**	**30.3264**	**0.2065**	**30.5329**	**8.0817**	**0.1937**	**8.2754**		**27,378.7870**	**27,378.7870**	**1.5684**	**1.0941**	**27,744.0358**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2024	5/10/2024	5	30	
2	Site Preparation	Site Preparation	5/11/2024	6/7/2024	5	20	
3	Grading	Grading	6/8/2024	8/9/2024	5	45	
4	Building Construction	Building Construction	8/10/2024	4/17/2026	5	440	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5	Architectural Coating	Architectural Coating	3/9/2026	4/17/2026	5	30	
6	Paving	Paving	4/18/2026	6/5/2026	5	35	

Acres of Grading (Site Preparation Phase): 30

Acres of Grading (Grading Phase): 135

Acres of Paving: 4.93

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 183,868; Non-Residential Outdoor: 61,289; Striped Parking Area: 12,891

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	536.00	209.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	107.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922		3,747.4228	3,747.4228	1.0485		3,773.6345
Total	**2.2437**	**20.8781**	**19.7073**	**0.0388**		**0.9602**	**0.9602**		**0.8922**	**0.8922**		**3,747.4228**	**3,747.4228**	**1.0485**		**3,773.6345**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0474	0.0314	0.4456	1.3400e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		138.5371	138.5371	3.3100e-003	3.3500e-003	139.6171
Total	**0.0474**	**0.0314**	**0.4456**	**1.3400e-003**	**0.1677**	**9.0000e-004**	**0.1686**	**0.0445**	**8.3000e-004**	**0.0453**		**138.5371**	**138.5371**	**3.3100e-003**	**3.3500e-003**	**139.6171**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922	0.0000	3,747.4228	3,747.4228	1.0485		3,773.6345
Total	**2.2437**	**20.8781**	**19.7073**	**0.0388**		**0.9602**	**0.9602**		**0.8922**	**0.8922**	**0.0000**	**3,747.4228**	**3,747.4228**	**1.0485**		**3,773.6345**

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0474	0.0314	0.4456	1.3400e-003	0.1677	9.0000e-004	0.1686	0.0445	8.3000e-004	0.0453		138.5371	138.5371	3.3100e-003	3.3500e-003	139.6171
Total	**0.0474**	**0.0314**	**0.4456**	**1.3400e-003**	**0.1677**	**9.0000e-004**	**0.1686**	**0.0445**	**8.3000e-004**	**0.0453**		**138.5371**	**138.5371**	**3.3100e-003**	**3.3500e-003**	**139.6171**

3.3 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**19.6570**	**1.2294**	**20.8864**	**10.1025**	**1.1310**	**11.2335**		**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0569	0.0377	0.5347	1.6100e-003	0.2012	1.0900e-003	0.2023	0.0534	1.0000e-003	0.0544		166.2445	166.2445	3.9700e-003	4.0200e-003	167.5405
Total	**0.0569**	**0.0377**	**0.5347**	**1.6100e-003**	**0.2012**	**1.0900e-003**	**0.2023**	**0.0534**	**1.0000e-003**	**0.0544**		**166.2445**	**166.2445**	**3.9700e-003**	**4.0200e-003**	**167.5405**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310	0.0000	3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**8.8457**	**1.2294**	**10.0750**	**4.5461**	**1.1310**	**5.6771**	**0.0000**	**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0569	0.0377	0.5347	1.6100e-003	0.2012	1.0900e-003	0.2023	0.0534	1.0000e-003	0.0544		166.2445	166.2445	3.9700e-003	4.0200e-003	167.5405
Total	**0.0569**	**0.0377**	**0.5347**	**1.6100e-003**	**0.2012**	**1.0900e-003**	**0.2023**	**0.0534**	**1.0000e-003**	**0.0544**		**166.2445**	**166.2445**	**3.9700e-003**	**4.0200e-003**	**167.5405**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0632	0.0419	0.5942	1.7900e-003	0.2236	1.2100e-003	0.2248	0.0593	1.1100e-003	0.0604		184.7161	184.7161	4.4100e-003	4.4600e-003	186.1562
Total	**0.0632**	**0.0419**	**0.5942**	**1.7900e-003**	**0.2236**	**1.2100e-003**	**0.2248**	**0.0593**	**1.1100e-003**	**0.0604**		**184.7161**	**184.7161**	**4.4100e-003**	**4.4600e-003**	**186.1562**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.1416	0.0000	4.1416	1.6442	0.0000	1.6442			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**4.1416**	**1.3354**	**5.4770**	**1.6442**	**1.2286**	**2.8728**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0632	0.0419	0.5942	1.7900e-003	0.2236	1.2100e-003	0.2248	0.0593	1.1100e-003	0.0604		184.7161	184.7161	4.4100e-003	4.4600e-003	186.1562
Total	**0.0632**	**0.0419**	**0.5942**	**1.7900e-003**	**0.2236**	**1.2100e-003**	**0.2248**	**0.0593**	**1.1100e-003**	**0.0604**		**184.7161**	**184.7161**	**4.4100e-003**	**4.4600e-003**	**186.1562**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2155	7.9993	3.0328	0.0375	1.3383	0.0445	1.3828	0.3853	0.0426	0.4279		4,045.5276	4,045.5276	0.1371	0.5870	4,223.8813
Worker	1.6928	1.1228	15.9232	0.0480	5.9912	0.0323	6.0236	1.5889	0.0298	1.6187		4,950.3920	4,950.3920	0.1182	0.1196	4,988.9848
Total	**1.9083**	**9.1221**	**18.9560**	**0.0855**	**7.3295**	**0.0768**	**7.4063**	**1.9742**	**0.0723**	**2.0465**		**8,995.9196**	**8,995.9196**	**0.2553**	**0.7066**	**9,212.8661**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2155	7.9993	3.0328	0.0375	1.3383	0.0445	1.3828	0.3853	0.0426	0.4279		4,045.5276	4,045.5276	0.1371	0.5870	4,223.8813
Worker	1.6928	1.1228	15.9232	0.0480	5.9912	0.0323	6.0236	1.5889	0.0298	1.6187		4,950.3920	4,950.3920	0.1182	0.1196	4,988.9848
Total	**1.9083**	**9.1221**	**18.9560**	**0.0855**	**7.3295**	**0.0768**	**7.4063**	**1.9742**	**0.0723**	**2.0465**		**8,995.9196**	**8,995.9196**	**0.2553**	**0.7066**	**9,212.8661**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2104	7.9619	2.9874	0.0368	1.3383	0.0446	1.3829	0.3853	0.0427	0.4280		3,971.9010	3,971.9010	0.1375	0.5770	4,147.2708
Worker	1.5907	1.0096	14.8747	0.0464	5.9912	0.0309	6.0221	1.5889	0.0284	1.6173		4,829.5631	4,829.5631	0.1069	0.1118	4,865.5493
Total	**1.8010**	**8.9715**	**17.8620**	**0.0832**	**7.3295**	**0.0755**	**7.4050**	**1.9742**	**0.0711**	**2.0453**		**8,801.4641**	**8,801.4641**	**0.2443**	**0.6888**	**9,012.8201**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2104	7.9619	2.9874	0.0368	1.3383	0.0446	1.3829	0.3853	0.0427	0.4280		3,971.9010	3,971.9010	0.1375	0.5770	4,147.2708
Worker	1.5907	1.0096	14.8747	0.0464	5.9912	0.0309	6.0221	1.5889	0.0284	1.6173		4,829.5631	4,829.5631	0.1069	0.1118	4,865.5493
Total	**1.8010**	**8.9715**	**17.8620**	**0.0832**	**7.3295**	**0.0755**	**7.4050**	**1.9742**	**0.0711**	**2.0453**		**8,801.4641**	**8,801.4641**	**0.2443**	**0.6888**	**9,012.8201**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2058	7.9061	2.9511	0.0361	1.3383	0.0445	1.3828	0.3853	0.0426	0.4279		3,897.5063	3,897.5063	0.1377	0.5667	4,069.8219
Worker	1.5030	0.9172	13.9982	0.0449	5.9912	0.0293	6.0205	1.5889	0.0270	1.6159		4,719.8741	4,719.8741	0.0972	0.1054	4,753.7193
Total	**1.7088**	**8.8233**	**16.9493**	**0.0810**	**7.3295**	**0.0738**	**7.4033**	**1.9742**	**0.0695**	**2.0437**		**8,617.3804**	**8,617.3804**	**0.2349**	**0.6721**	**8,823.5412**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2058	7.9061	2.9511	0.0361	1.3383	0.0445	1.3828	0.3853	0.0426	0.4279		3,897.5063	3,897.5063	0.1377	0.5667	4,069.8219
Worker	1.5030	0.9172	13.9982	0.0449	5.9912	0.0293	6.0205	1.5889	0.0270	1.6159		4,719.8741	4,719.8741	0.0972	0.1054	4,753.7193
Total	**1.7088**	**8.8233**	**16.9493**	**0.0810**	**7.3295**	**0.0738**	**7.4033**	**1.9742**	**0.0695**	**2.0437**		**8,617.3804**	**8,617.3804**	**0.2349**	**0.6721**	**8,823.5412**

3.6 Architectural Coating - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.9342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**20.1051**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3000	0.1831	2.7944	8.9700e-003	1.1960	5.8500e-003	1.2019	0.3172	5.3800e-003	0.3226		942.2137	942.2137	0.0194	0.0210	948.9701
Total	**0.3000**	**0.1831**	**2.7944**	**8.9700e-003**	**1.1960**	**5.8500e-003**	**1.2019**	**0.3172**	**5.3800e-003**	**0.3226**		**942.2137**	**942.2137**	**0.0194**	**0.0210**	**948.9701**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	19.9342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**20.1051**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3000	0.1831	2.7944	8.9700e-003	1.1960	5.8500e-003	1.2019	0.3172	5.3800e-003	0.3226		942.2137	942.2137	0.0194	0.0210	948.9701
Total	**0.3000**	**0.1831**	**2.7944**	**8.9700e-003**	**1.1960**	**5.8500e-003**	**1.2019**	**0.3172**	**5.3800e-003**	**0.3226**		**942.2137**	**942.2137**	**0.0194**	**0.0210**	**948.9701**

3.7 Paving - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.3691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2842**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Unmitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0421	0.0257	0.3917	1.2600e-003	0.1677	8.2000e-004	0.1685	0.0445	7.5000e-004	0.0452		132.0860	132.0860	2.7200e-003	2.9500e-003	133.0332
Total	**0.0421**	**0.0257**	**0.3917**	**1.2600e-003**	**0.1677**	**8.2000e-004**	**0.1685**	**0.0445**	**7.5000e-004**	**0.0452**		**132.0860**	**132.0860**	**2.7200e-003**	**2.9500e-003**	**133.0332**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.3691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2842**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Mitigated Construction Off-Site

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0421	0.0257	0.3917	1.2600e-003	0.1677	8.2000e-004	0.1685	0.0445	7.5000e-004	0.0452		132.0860	132.0860	2.7200e-003	2.9500e-003	133.0332
Total	**0.0421**	**0.0257**	**0.3917**	**1.2600e-003**	**0.1677**	**8.2000e-004**	**0.1685**	**0.0445**	**7.5000e-004**	**0.0452**		**132.0860**	**132.0860**	**2.7200e-003**	**2.9500e-003**	**133.0332**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.4569	12.0019	106.0097	0.2569	30.3264	0.1844	30.5107	8.0817	0.1716	8.2532		27,035.1940	27,035.1940	1.5612	1.0878	27,398.3860
Unmitigated	9.4569	12.0019	106.0097	0.2569	30.3264	0.1844	30.5107	8.0817	0.1716	8.2532		27,035.1940	27,035.1940	1.5612	1.0878	27,398.3860

4.2 Trip Summary Information

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
High School	2,688.84	766.92	462.00	11,219,643	11,219,643
Parking Lot	0.00	0.00	0.00		
Total	2,688.84	766.92	462.00	11,219,643	11,219,643

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	16.60	8.40	6.90	33.00	48.00	19.00	0	0	0
High School	16.60	8.40	6.90	77.80	17.20	5.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594
High School	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594
Parking Lot	0.540893	0.062748	0.186142	0.127785	0.023768	0.006610	0.012333	0.009205	0.000817	0.000491	0.024860	0.000754	0.003594

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Percent of Electricity Use Generated with Renewable Energy

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793
NaturalGas Unmitigated	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	2918.38	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0315**	**0.2861**	**0.2403**	**1.7200e-003**		**0.0217**	**0.0217**		**0.0217**	**0.0217**		**343.3390**	**343.3390**	**6.5800e-003**	**6.2900e-003**	**345.3793**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High School	2.91838	0.0315	0.2861	0.2403	1.7200e-003		0.0217	0.0217		0.0217	0.0217		343.3390	343.3390	6.5800e-003	6.2900e-003	345.3793
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0315**	**0.2861**	**0.2403**	**1.7200e-003**		**0.0217**	**0.0217**		**0.0217**	**0.0217**		**343.3390**	**343.3390**	**6.5800e-003**	**6.2900e-003**	**345.3793**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7263	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705
Unmitigated	2.7263	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705

6.2 Area by SubCategory

Unmitigated

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1638					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.5515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0109	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705
Total	**2.7262**	**1.0700e-003**	**0.1182**	**1.0000e-005**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**		**0.2540**	**0.2540**	**6.6000e-004**		**0.2705**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1638					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.5515					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0109	1.0700e-003	0.1182	1.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004		0.2540	0.2540	6.6000e-004		0.2705
Total	**2.7262**	**1.0700e-003**	**0.1182**	**1.0000e-005**		**4.2000e-004**	**4.2000e-004**		**4.2000e-004**	**4.2000e-004**		**0.2540**	**0.2540**	**6.6000e-004**		**0.2705**

Woodcrest Christian School Improvements Proposed - South Coast AQMD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix D: Preliminary WQMP Infiltration Feasibility Report Woodcrest Christian School

ARAGÓN GEOTECHNICAL, INC.
Consultants in the Earth & Material Sciences

July 28, 2021
Project No. 4725-SFI

Adkan Engineers
6870 Airport Drive
Riverside, California 92504

Attention: Mr. Mitch Adkison, P.E.

Subject: Preliminary WQMP Infiltration Feasibility Report
Woodcrest Christian School
18401 Van Buren Boulevard
Woodcrest, Riverside County, California.

Dear Mr. Adkison:

In accordance with the technical scope detailed in our proposal dated June 7, 2021, Aragón Geotechnical, Inc. (AGI) has completed site testing and analyses of soil infiltration potential. Field test data are required for purposes of developing a site-specific preliminary water quality management plan (WQMP) with the related selection of stormwater best management practices (BMPs). These services were performed concurrently with a comprehensive geotechnical investigation by AGI for a variety of proposed site improvements. Subsurface borings, geological research, and characterization of the local groundwater regime were requirements for each separately reported study. Figure 1 (next page) outlines the school site on a 1:24,000-scale topographic base map. This report is intended to support the design and construction of low-impact development (LID), hydromodification, and pollution prevention features for site stormwater runoff as required by the Santa Ana Region (SAR) *Water Quality Management Plan* effective January 1, 2013.

Our primary tasks for the infiltration feasibility assessment consisted of (1) Review of regional geotechnical and geologic data along with AGI's on-site deep exploration data; (2) Field tests of water absorption rates at shallow soil depths, reflective of limited options we envision for microbasins or vegetated swales but *not* for subsurface infiltration systems

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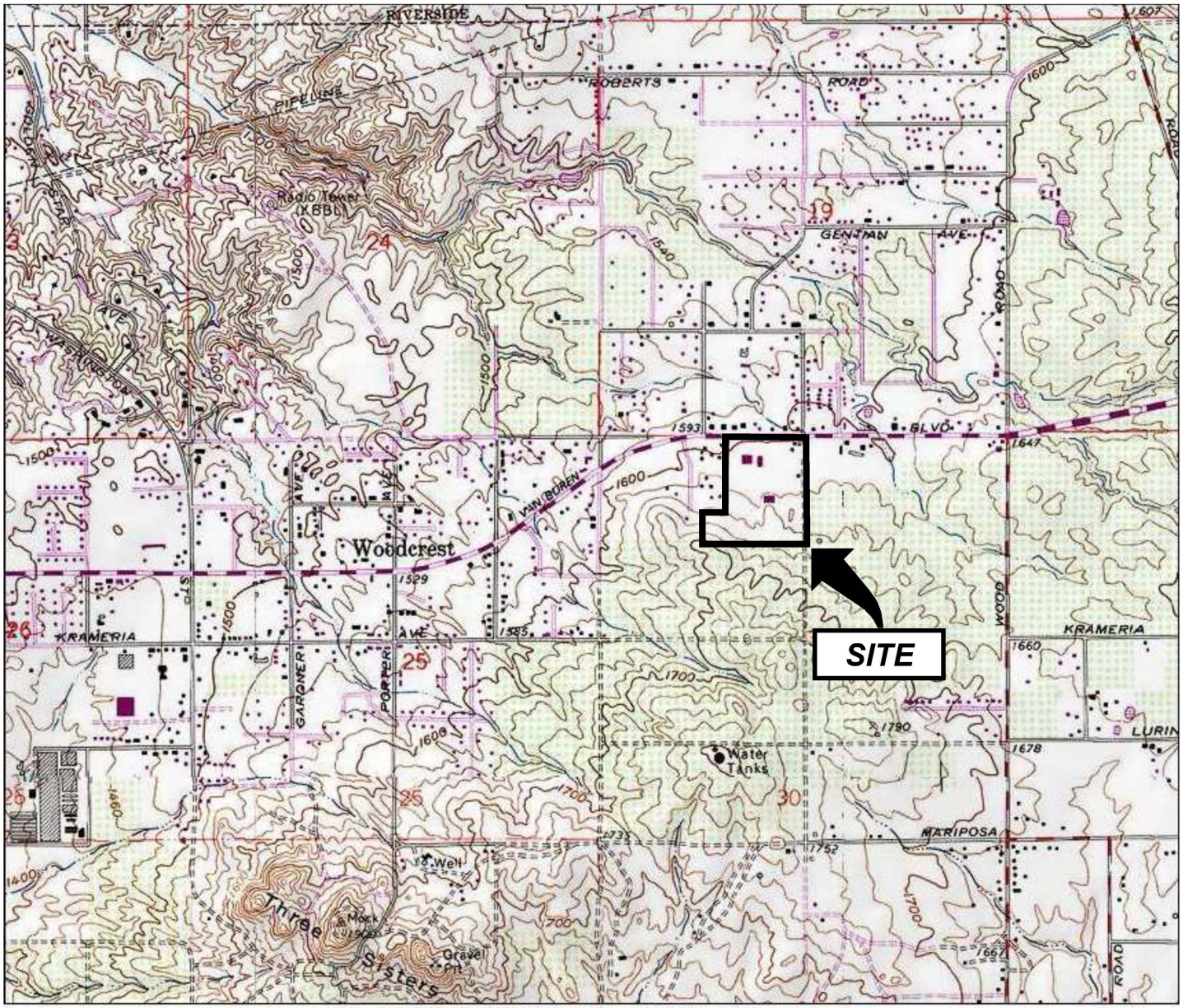
Riverside, CA 92504
Tel: 951.776.0345 ● **Fax:** 951.776.0395
www.aragongeo.com



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Reference: U. S. Geological Survey 7½-Minute Series Topographic Map, Riverside East and Steele Peak Quadrangles (1980).

AGI	**SITE LOCATION MAP**		
	WOODCREST CHRISTIAN SCHOOL, RIVERSIDE, CALIF.		
	PROJECT NO. 4725-SFI	DATE: 7/28/21	**FIGURE 1**

such as chambers; and (3) Preparation of this results report. Investigation findings of very shallow groundwater reduced AGI's testing scope. Few site areas have any capability for even nuisance water disposal, as outlined in other parts of this letter. Calculations or recommendations for the design precipitation event, storm water detention volume, or treatment flow rates were not within the scope of AGI's services.

Background Information & Proposed Construction

Woodcrest Christian School is spread across 6 contiguous land parcels that encompass 29.29 acres in the Alta Cresta area of the City of Riverside. Bordering the school is major-arterial Van Buren Boulevard to the north, and Dauchy Avenue, a smaller collector street, to the east. Residential areas abut the school site on the remaining sides. Local terrain comprises a sloped surface with a north-directed surface gradient that averages around 4 percent. The school site has been substantially modified by historical cut-and-fill grading. Existing facilities include middle school and high school classrooms, administration and maintenance buildings, a large gymnasium building, and athletic fields. The school utilizes an on-site wastewater treatment system (OWTS) composed of conventional septic tanks and a leach-line absorption field. The latter occupies a large grassy area in the approximate geometric center of the school that is partly open space and partly a baseball/softball playing field. Known historical site uses have included cultivation of dry-farmed grain crops and limited poultry ranching, but not citrus orchards or intensive stock raising.

AGI received a master plan exhibit dated April 16, 2021, depicting the proposed new construction. Up to 10 new buildings or building additions and student amenities are proposed. Twelve classrooms would be situated in a pair of 2-story structures. A 300-seat chapel arts building would be situated close to Dauchy Avenue. The gymnasium would receive a pair of structural additions for weight training and equipment storage. Other improvements such as a snack bar, lockers, an outdoor amphitheater, a multi-purpose room, and more would be scattered around the school site. New driveway and parking lot pavements are depicted. Some existing buildings and improvements will need to be demolished. The supplied plan lacked defined locations for either surface or subsurface retention features. For feasibility-study purposes, however, the topographically lowest site area north of the proposed chapel arts building and auto parking lots was evaluated for absorption capacity. These proposed improvements would be the largest sources of uncontrolled runoff from new construction.

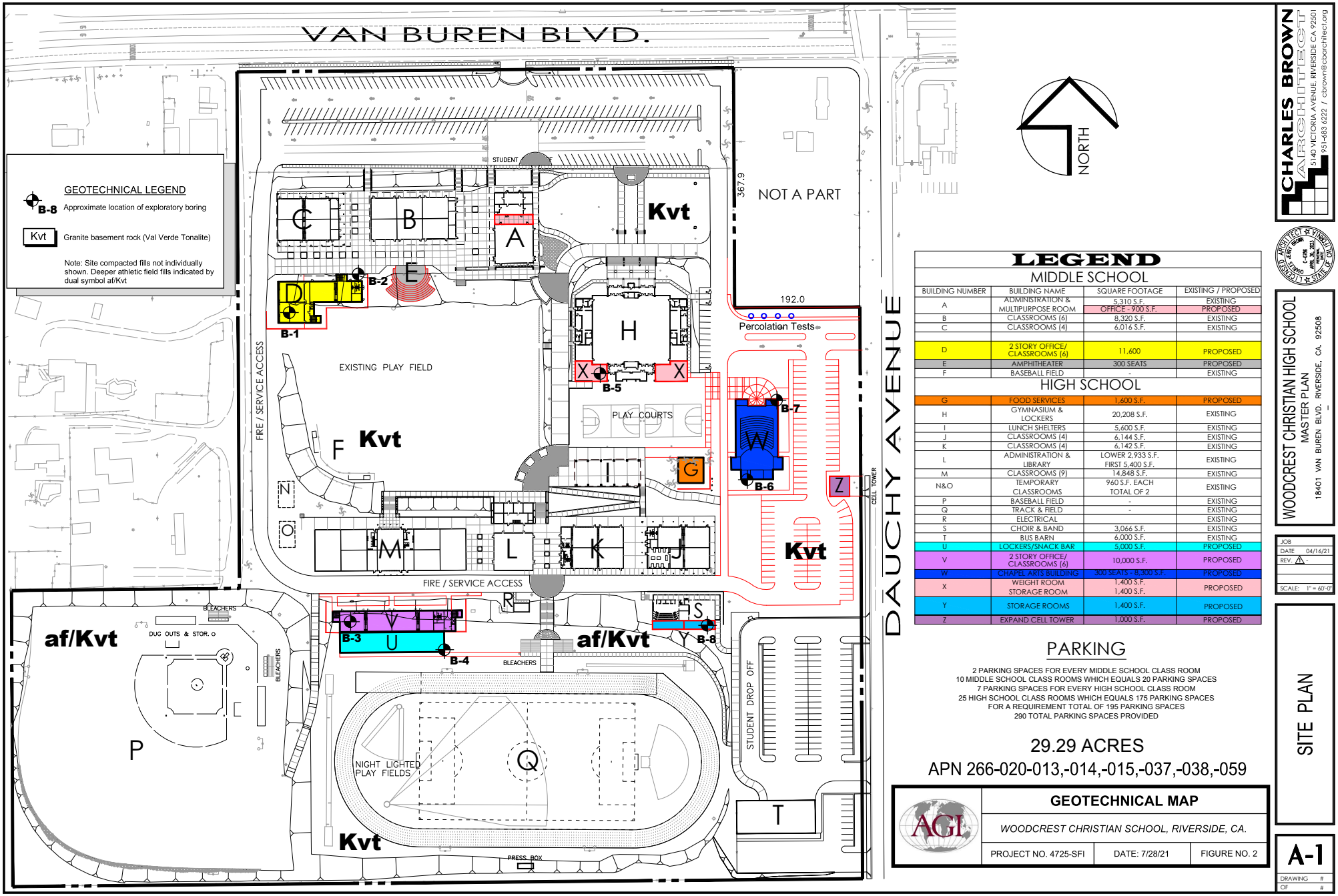
Field Observations and Permeability Testing

AGI's infiltration determinations were based on Riverside County's technical guidelines for percolation testing in small-diameter boreholes. These tests are customarily done for on-site wastewater treatment systems. Most California jurisdictions including the City of Riverside accept percolation test results for stormwater BMP design, with the proviso that percolation test data be adjusted to an equivalent one-dimensional (1-D) infiltration velocity. Methods and requirements for percolation testing are outlined in the *Local Agency Management Plan for Onsite Wastewater Treatment Systems* prepared by the County of Riverside Department of Environmental Health (DEH, October 5, 2016). All field exploration, percolation testing, and derivations of equivalent infiltration velocities were performed or supervised by the following qualified company representatives:

- Justin Long, Engineering Technician.
- Fernando Aragón, P.E.: California Registered Geotechnical Engineer, with over 15 years of professional experience.
- Mark G. Doerschlag: California Professional Geologist and Certified Engineering Geologist, with over 35 years of professional experience.

A geotechnical boring drilled for the proposed chapel improvements served as the required deep exploration in accordance with the requirements of Appendix A, Table 1 of the *Design Handbook for Low Impact Development Best Management Practices* (Riverside County, 2011). The boring was advanced on June 21, 2021. Related geotechnical borings were completed the same day. All deep borings were drilled with a truck-mounted Mobile Drill B-61 hollow-stem auger rig, at the locations shown on the Geotechnical Map, Figure 2 on the next page. Exploratory borings were checked for groundwater inflows or seepage before subsequent backfilling with compacted soil cuttings. All exploratory borings were observed and continuously logged during drilling by a qualified engineering geologist. The drill log for the WQMP-specific exploratory boring (Boring B-7) is reproduced as an attachment to this report.

AGI opened four 7½-inch-diameter percolation test holes on the same day as the exploration drilling with the same truck-mounted rig. The holes were cleaned of all loose slough and lightly scored with manual auger tools on July 7, 2021. The holes were not pre-soaked, in anticipation of relatively slow absorption given the logged soil types. Measured final depths ranged from 37 to 61 inches. About two inches of crushed rock was placed in the bottom of each test hole for erosion/sediment control. AGI waived any trials to



LEGEND

MIDDLE SCHOOL

BUILDING NUMBER	BUILDING NAME	SQUARE FOOTAGE	EXISTING / PROPOSED
A	ADMINISTRATION & MULTIPURPOSE ROOM	5,310 S.F. OFFICE - 900 S.F.	EXISTING PROPOSED
B	CLASSROOMS (6)	8,320 S.F.	EXISTING
C	CLASSROOMS (4)	6,016 S.F.	EXISTING
D	2 STORY OFFICE/ CLASSROOMS (6)	11,600	PROPOSED
E	AMPHITHEATER	300 SEATS	PROPOSED
F	BASEBALL FIELD	-	EXISTING

HIGH SCHOOL

G	FOOD SERVICES	1,600 S.F.	PROPOSED
H	GYMNASIUM & LOCKERS	20,208 S.F.	EXISTING
I	LUNCH SHELTERS	5,600 S.F.	EXISTING
J	CLASSROOMS (4)	6,144 S.F.	EXISTING
K	CLASSROOMS (4)	6,142 S.F.	EXISTING
L	ADMINISTRATION & LIBRARY	LOWER 2,933 S.F. FIRST 5,400 S.F.	EXISTING
M	CLASSROOMS (9)	14,848 S.F.	EXISTING
N&O	TEMPORARY CLASSROOMS	960 S.F. EACH TOTAL OF 2	EXISTING
P	BASEBALL FIELD	-	EXISTING
Q	TRACK & FIELD	-	EXISTING
R	ELECTRICAL		EXISTING
S	CHOIR & BAND	3,066 S.F.	EXISTING
T	BUS BARN	6,000 S.F.	EXISTING
U	LOCKERS/SNACK BAR	5,000 S.F.	PROPOSED
V	2 STORY OFFICE/ CLASSROOMS (6)	10,000 S.F.	PROPOSED
W	CHAPEL ARTS BUILDING	300 SEATS - 8,300 S.F.	PROPOSED
X	WEIGHT ROOM STORAGE ROOM	1,400 S.F. 1,400 S.F.	PROPOSED
Y	STORAGE ROOMS	1,400 S.F.	PROPOSED
Z	EXPAND CELL TOWER	1,000 S.F.	PROPOSED

PARKING

2 PARKING SPACES FOR EVERY MIDDLE SCHOOL CLASS ROOM
10 MIDDLE SCHOOL CLASS ROOMS WHICH EQUALS 20 PARKING SPACES
7 PARKING SPACES FOR EVERY HIGH SCHOOL CLASS ROOM
25 HIGH SCHOOL CLASS ROOMS WHICH EQUALS 175 PARKING SPACES
FOR A REQUIREMENT TOTAL OF 195 PARKING SPACES
290 TOTAL PARKING SPACES PROVIDED

29.29 ACRES

APN 266-020-013,-014,-015,-037,-038,-059

AGI

GEOTECHNICAL MAP

WOODCREST CHRISTIAN SCHOOL, RIVERSIDE, CA.

PROJECT NO. 4725-SFI | DATE: 7/28/21 | FIGURE NO. 2

CHARLES BROWN ARCHITECT
5140 VICTORIA AVENUE, RIVERSIDE CA 92501
951-683 6222 / cbrown@cbarchitect.org

WOODCREST CHRISTIAN HIGH SCHOOL
MASTER PLAN
18401 VAN BUREN BLVD. RIVERSIDE, CA. 92508

JOB
DATE 04/16/21
REV.
SCALE: 1" = 60'-0"

SITE PLAN

A-1
DRAWING #
OF #

determine if "rapid" tests were feasible based on soils classifications. All tests were run as normal 6-hour (cumulative) duration tests. Standard test protocols were followed, based on measured water level drops (*inches*) for a fixed time increment. All test trials began with approximately 24-inch-deep water pools. Water was restored to near the initial starting depth following each timed drop. The field data sheets are included in the Appendix.

FINDINGS

Local Soil Conditions

Regional geologic maps and AGI geotechnical drilling data indicate the entire school site is underlain by very thin colluvial and residual soils over granitic basement rocks (where not already modified by mass grading). AGI advanced the BMP-relevant chapel boring, B-7, in highly weathered bedrock ("decomposed granite") starting only 4½ feet below grade. The boring intercepted an abandoned leach-line trench before encountering the bedrock. Moderately weathered and slow-to-drill materials abruptly started at about 15 feet below grade, and continued with some rate variability until a termination depth of 25.0 feet was achieved.

From a soil science viewpoint, the native surficial materials in the 29-plus acre site are assigned to the Fallbrook soil series FcF2 where weathered bedrock is typically under two feet below natural grade, and the Monserate soil series MmB where colluvium ranges to more than 60 inches deep (Natural Resources Conservation Service, 2021). Monserate soils are guessed to be limited to terrain close to Van Buren Boulevard. Fallbrook rocky sandy loam is categorized as a low-permeability material (hydrologic soil group D). Geotechnical findings correlate quite closely with the NRCS standard profile. Fallbrook soils are residuum derived from intense *in situ* weathering of the parent granitic rock, and in the Woodcrest area tend to be very cohesive with significant clay content. The reported effective hydraulic conductivity K_{sat} for the most limiting layer is presented as "0.0" inches per hour. NRCS soil profile characterizations are generally limited to only 60 inches from grade.

All four aligned test bores P-1 through P-4 were bottomed in highly weathered bedrock ("decomposed granite"). Depths to bedrock increased from east to west. The test intervals were just below zones of slightly clayey colluvium and clayey residual soil plus a surficial layer of man-made fill that we interpreted to also thicken to the west. The ground surfaces were barren and not part of an irrigated lawn or garden.

Groundwater

Soil boring B-7 began producing free groundwater during drilling near the 12 to 13-foot depth, and had a final measured static water depth of 8.8 feet below grade. Groundwater occurrences in other portions of the school site were highly variable. Referring to the Geotechnical Map, soil borings B-1, B-3, B-4, B-5, and B-8 were dry. Some "dry" holes met very shallow rig refusal due to hard rock, or were otherwise halted above likely perched-water depths. Boring B-2, in contrast, penetrated a thin perched-water zone starting only 15 inches below grade.

From a hydrogeological viewpoint, the site is considered to be atop "non-water bearing" granitic basement rock. However, Woodcrest Christian School and the many neighboring residential tract developments share a propensity for the development of anthropic perched-water horizons caused by infiltration of landscape irrigation and OWTS effluent. Perched water can be found near soil-bedrock contacts, or within the "decomposed granite" layer. Manufactured slopes and slope toes become favored sites for rising water conditions such as seeps and minor springs. We understand that the cut slope toe south of the athletic field has had perennial problems with wet ground and phreatophytic vegetation since the completion of homes bordering the property.

Our interpretation is that groundwater depths of under 10 feet from ground surface are ubiquitous and now permanent everywhere in the 29-plus acre school site except where elevated compacted fills provide greater separation. Fluctuations in static water elevations may result from on- or off-site grading, addition or subtraction of anthropic recharge sources, increased precipitation after an extremely dry 2021 season, and other factors. Speculation would be that average depths can rise even higher than noted from our studies. Groundwater depths and the potential for mounding will rule out large-scale infiltration BMPs such as basins or subterranean chambers.

Percolation Test Results

The following table *(next page)* summarizes the obtained field test results. Raw percolation rates for each borehole percolation test were converted to a 1-D infiltration velocity by Porchet's method. The corrected infiltration test velocities I_t would roughly correspond to velocities obtained by double-ring infiltrometers.

Highly variable uptake rates were noted. Test site P-1 had an anomalously fast rate that we suspect was due to unseen soil disturbance from past historical uses. The hole consistently percolated ~24 inches of water in under 30 minutes. Test sites P-2 through P-4 matched a predicted progression to less-favorable conditions as residual clay proportions of wetted intervals increased toward Dauchy Avenue.

Test Location	Saturation Test Interval Depth Below Existing Ground Surface (inches)	Raw Percolation Rate, DEH Test Method (min/in)	Corrected 1-D Infiltration Velocity I_t (in/hr via Porchet method)
P-1	37 - 61	<1.25	Min. 8.4
P-2	30 - 57	7.5	0.7
P-3	18 - 43	15.0	0.4
P-4	14 - 37	40.0	<0.2

Conclusions, Recommendations, and Advice

The SAR *Water Quality Management Plan* explicitly requires any infiltration-based BMP to be clear of water in 72 hours or less after the design storm event. Mathematically, for typical volume-based BMP designs this requires field infiltration velocities I_t of roughly 1.6 inches per hour or faster. After rejecting P-1 results as non-representative, none of the remaining recorded site test data clear this hurdle. We can conclude with certainty that ordinary infiltration basins or buried infiltration chambers are not feasible and are not recommended. These could be considered for hydromodification purposes, though.

Lower-priority treatment control BMPs such as flow-based bioretention basins or filtration trenches should be acceptable alternatives. Water-quality objectives would be met by ensuring filtration occurs through suitable media such as sand and compost before passing into underdrains that direct flows to off-site and non-erosive MS4 facilities.

Our preliminary opinion is that filtration or detention BMPs for the chapel arts building and associated pavements should not require a watertight liner (incidental and ephemeral infiltration will not be a hazard nor contribute to groundwater mounding). Only at this

improvement site, the civil engineer may optionally assume **0.2 in/hr** infiltration capability for flow-based BMPs that fully penetrate fill or clayey residual soils, i.e., bottoms greater than 3 feet or so in the chapel building vicinity. This velocity may also be applicable to permeable pavement installations as long as sufficient reservoir rock is present to store the incidental precipitation, bottoms are level (may require stepped grading with check dams on a sloped site), and bottoms are entirely composed of in-place decomposed granite. The design velocity I_d must include a safety factor that will reduce the field-determined velocity presented above by a factor of at least 3, if Riverside County standards apply to this project.

For the remainder of the Woodcrest Christian School, zero infiltration should be permitted. If location-specific BMPs are required for structures and improvements not associated with the chapel arts building, we recommend that **only** flow-based systems such as filter strips with impermeable bottoms be considered. The main concern is shallow groundwater and potential mounding within the OWTS absorption field.

Investigation Limitations

The findings in this report may require modification as a result of later field observations. Our opinions have been based on the results of limited testing within AGI-conceived water-quality BMP sites combined with extrapolations of soil conditions away from the test array. The nature and extent of variations within or beyond the tested areas may not become evident until construction. If a permeable pavement system meeting design parameters recommended in this report becomes one preferred option, then additional site testing of the accepting weathered-rock layer, preparation recommendations, or as-built tests may be needed to achieve correct designs for this treatment control BMP.

Closure

This report was prepared for the use of Adkan Engineers, principals at Woodcrest Christian School, and authorized owner-designates in cooperation with this office. Our findings and recommendations were prepared in accordance with generally accepted professional principles and local practice in the fields of engineering geology and geotechnical engineering. We make no other warranties either expressed or implied. Questions concerning the test results or design advice are invited, and may be directed to the undersigned at our Riverside office at (951) 776-0345 or through the convenience of email at www.aragongeo.com.

Respectfully submitted,
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MGD/CFA:mma

Attachments: Exploratory Boring Log, Boring B-7
Percolation Field Test Data, Sites P-1 through P-4

REFERENCES

Morton, D.M., and Miller, F.K., 2006, Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California [Ver. 1.0], U.S. Geological Survey Open File Report 2006-1217, scale 1:100,000.

Natural Resources Conservation Service, 2021, Web Soil Survey utility, accessed 7/20/21 from Internet URL http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm

Riverside County Flood Control and Water Conservation District, 2011, *Design Handbook for Low Impact Development Best Management Practices*, Riverside, California, download file at Internet URL http://rcflood.org/downloads/NPDES/Documents/LIDManual/LID_BMP_Design_Handbook.pdf

FIELD LOG OF BORING B - 7

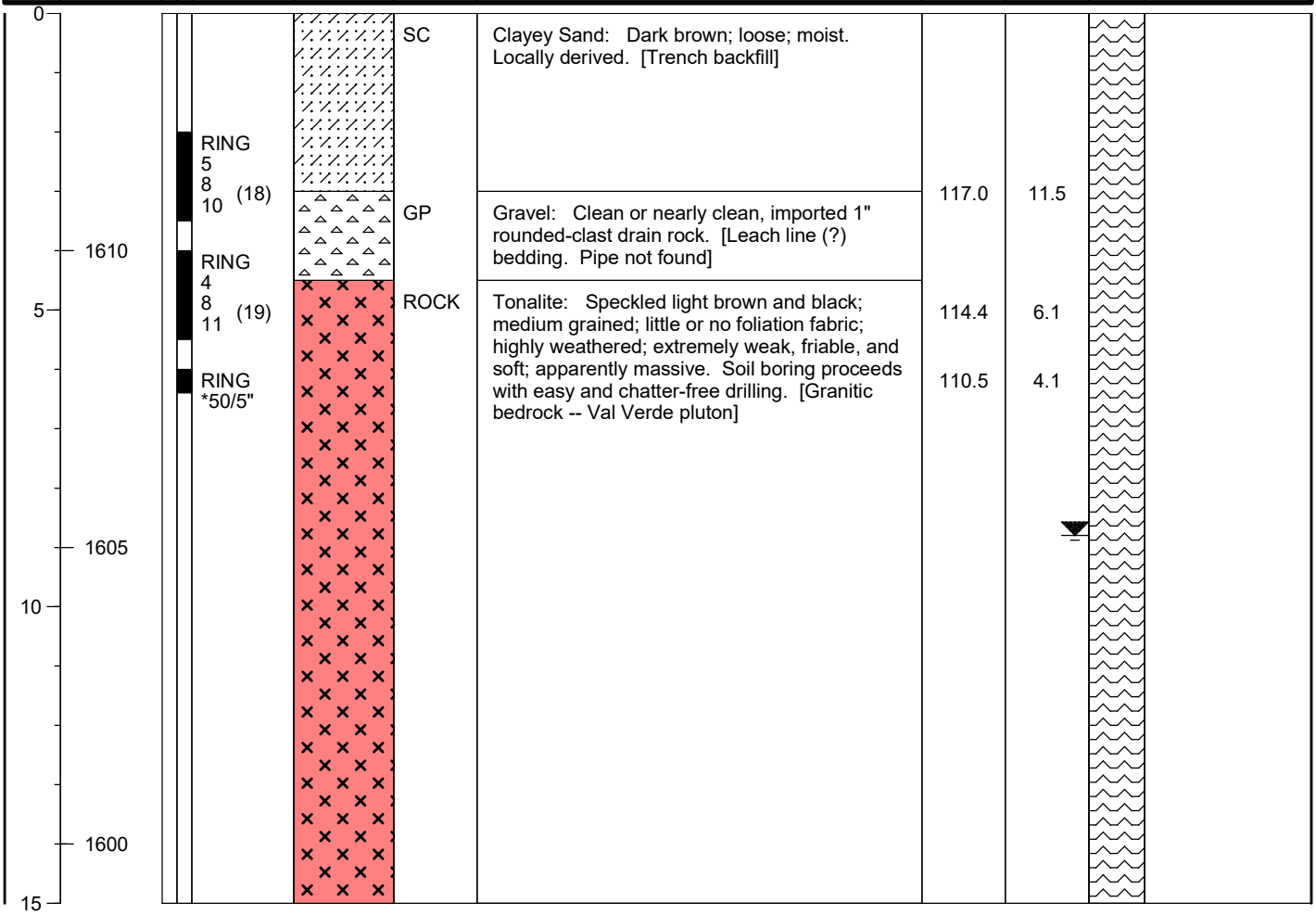
Sheet 1 of 2

Project: ***WOODCREST CHRISTIAN SCHOOL***

Location: ***WOODCREST, RIVERSIDE COUNTY, CA***

Date(s) Drilled:	**6/21/21**	Logged By:	**M. Doerschlag**
Drilled By:	**GP Drilling**	Total Depth:	**25.0 Ft.**
Rig Make/Model:	**Mobile B-61**	Hammer Type:	**Automatic trip**
Drilling Method:	**Hollow-Stem Auger**	Hammer Weight/Drop:	**140 Lb./30 In.**
Hole Diameter:	**7½ In.**	Surface Elevation:	**± 1614 Ft. AMSL per older topo**

Comments: Exploration sited in northeastern corner of proposed chapel building.



Continued on next sheet.

FIELD LOG OF BORING B - 7

Sheet 2 of 2

Project: ***WOODCREST CHRISTIAN SCHOOL***

Location: ***WOODCREST, RIVERSIDE COUNTY, CA***

DEPTH (ft.)	ELEVATION (MSL DATUM)	SAMPLE INTERVALS: BULK	SAMPLE INTERVALS: DRIVE	SAMPLE INTERVALS: TYPE, "N" or (Blows/ft.)	GRAPHIC LOG	USCS	GEOTECHNICAL DESCRIPTION	DRY DENSITY (pcf)	WATER CONTENT (%)	WELL COMPLETION	OTHER TESTS
15						ROCK	Tonalite: Speckled grayish brown and black; medium grained. At 15 feet, abruptly becomes moderately weathered, with very slow but smooth drilling to ~17 feet.. [Granitic bedrock -- Val Verde pluton] Drilling rate increases (softer). Probable fractures zone immediately begins to produce water to the bore.				
	1595										
20							Slow drilling. Brief interval of highly weathered rock. Very slow progress. Moderately weathered.				
	1590										
25											

Bottom of boring at 25.0 feet.
Groundwater measured at 8.8 feet.
Boring backfilled with compacted soil cuttings.

Percolation Data Sheet (Leach Line, ATU, Stormwater BMP)

Project: WOODCREST CHRISTIAN	Project No. 4725-SF1
Test Hole No. P-1	Date Excavated: 6/21/21
Depth of Test Hole: 61" bgs	Soil Classification: BOT = D.G.
Check for Sandy Soil Criteria Tested By: N/A	Date: N/A Presoak: NONE
Field Percolation Test By: J. LONG	Date: 7/7/21

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)
1					
2					

Use: ☒ Normal Soil Criteria ☐ Sandy Soil Criteria (>6" drop in <25 min. both trials)

Time	Time Interval (Min.)	Total Elapsed Time (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)	Percolation Rate (Min./In.)
0925 / 0955	30	30	BGS 39.0	DRY	>22	
0955 / 1025	30	60	40.0	52.0	12.0	
1025 / 1055	30	90	40.0	52.0	12.0	
1055 / 1125	30	120	39.0	DRY	>22	
1125 / 1155	30	150	38.0	DRY	>23	
1155 / 1225	30	180	39 1/2	DRY	>21 1/2	
1225 / 1255	30	210	39.0	DRY	>22	
1255 / 1325	30	240	38.0	DRY	>23	
1325 / 1355	30	270	38.0	DRY	>23	
1355 / 1425	30	300	38.0	DRY	>23	
1425 / 1455	30	330	37.0	DRY	>24	
1455 / 1525	30	360	37.0	DRY	>24	MINIMUM 1.25

END

Aragón Geotechnical, Inc.

Percolation Data Sheet (Leach Line, ATU, Stormwater BMP)

Project: Woodcrest Christian		Project No. 4725-SF1	
Test Hole No. P-2		Date Excavated: 6/21/21	
Depth of Test Hole: 57" bgs		Soil Classification: 80% = D.G.	
Check for Sandy Soil Criteria Tested By: N/A		Date: N/A	Presoak: None
Field Percolation Test By: J. Lowe		Date: 7/7/21	

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)
1					
2					

Use: ☒ Normal Soil Criteria ☐ Sandy Soil Criteria (>6" drop in <25 min. both trials)

Time	Time Interval (Min.)	Total Elapsed Time (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)	Percolation Rate (Min./In.)
0927						
0957	30	30	31 3/4	DRY	> 25 1/4	
0957						
1027	30	60	26.0	DRY	> 31	
1027						
1057	30	90	29 1/2	DRY	> 27 1/2	
1057						
1127	30	120	30.0	48.0	12.0	
1127						
1157	30	150	30.0	47.0	17.0	
1157						
1227	30	180	30 1/2	45 1/2	15.0	
1227						
1257	30	210	30.0	42 1/2	12 1/2	
1257						
1327	30	240	31.0	39 1/2	8 1/2	
1327						
1357	30	270	31.0	36.0	5.0	
1357						
1427	30	300	31.0	35 1/4	4 1/4	
1427						
1457	30	330	30.0	34.0	4.0	
1457						
1527	30	360	30.0	34.0	4.0	7.5

Percolation Data Sheet (Leach Line, ATU, Stormwater BMP)

Project: Woodcrest Christian		Project No. 4725-SF1	
Test Hole No. P-3		Date Excavated: 6/21/21	
Depth of Test Hole: 43" bgs		Soil Classification: S.G. @ Bot	
Check for Sandy Soil Criteria Tested By: N/A		Date: N/A	Presoak: None
Field Percolation Test By: J. Lowe		Date: 7/7/21	

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)
1	/				
2					

Use: ☒ Normal Soil Criteria ☐ Sandy Soil Criteria (>6" drop in <25 min. both trials)

Time	Time Interval (Min.)	Total Elapsed Time (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)	Percolation Rate (Min./In.)
0928 / 0958	30	30	18 1/4	27.0	8 3/4	
0958 / 1028	30	60	17 1/2	24.0	6 1/2	
1028 / 1058	30	90	16 1/2	22.0	5 1/2	
1058 / 1128	30	120	19 1/2	23.0	4.0	
1128 / 1158	30	150	18.0	20.0	2.0	
1158 / 1228	30	180	18.0	20.0	2.0	
1228 / 1258	30	210	18.0	20.0	2.0	
1258 / 1328	30	240	18.0	20.0	2.0	
1328 / 1358	30	270	17 1/2	19 1/2	2.0	
1358 / 1428	30	300	17.0	19.0	2.0	
1428 / 1458	30	330	17.5	19 1/2	2.0	
1458 / 1528	30	360	18.0	20.0	2.0	15.0

EOT

Aragón Geotechnical, Inc.

Percolation Data Sheet (Leach Line, ATU, Stormwater BMP)

Project: WOODCREST CHRISTIAN		Project No. 4725-SF1	
Test Hole No. P-4		Date Excavated: 6/21/21	
Depth of Test Hole: 37" bgs		Soil Classification:	
Check for Sandy Soil Criteria Tested By: N/A		Date: N/A	Presoak: None
Field Percolation Test By: J. Lowe		Date: 7/7/21	

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)
1					
2					

Use: ☒ Normal Soil Criteria ☐ Sandy Soil Criteria (>6" drop in <25 min. both trials)

Time	Time Interval (Min.)	Total Elapsed Time (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)	Percolation Rate (Min./In.)
0930			~~13~~ 13			
1000	30	30	13 1/2	17 1/4	3 3/4	
1000						
1030	30	60	13 1/2	16.0	2 1/2	
1030						
1100	30	90	13.0	15 1/2	2 1/2	
1100						
1130	30	120	13.0	14 3/4	1 3/4	
1130						
1200	30	150	13 1/2	15.0	1 1/2	
1200						
1230	30	180	13 1/2	14 1/2	1.0	
1230						
1300	30	210	13 1/2	14 1/2	1.0	
1300						
1330	30	240	13 1/2	14 1/2	1.0	
1330						
1400	30	270	13 1/2	14 1/2	1.0	
1400						
1430	30	300	14.0	14 3/4	3/4	
1430						
1500	30	330	14.0	14 3/4	3/4	
1500						
1530	30	360	14.0	14 3/4	3/4	40.0

END

Appendix E: Project Specific Water Quality Management Plan

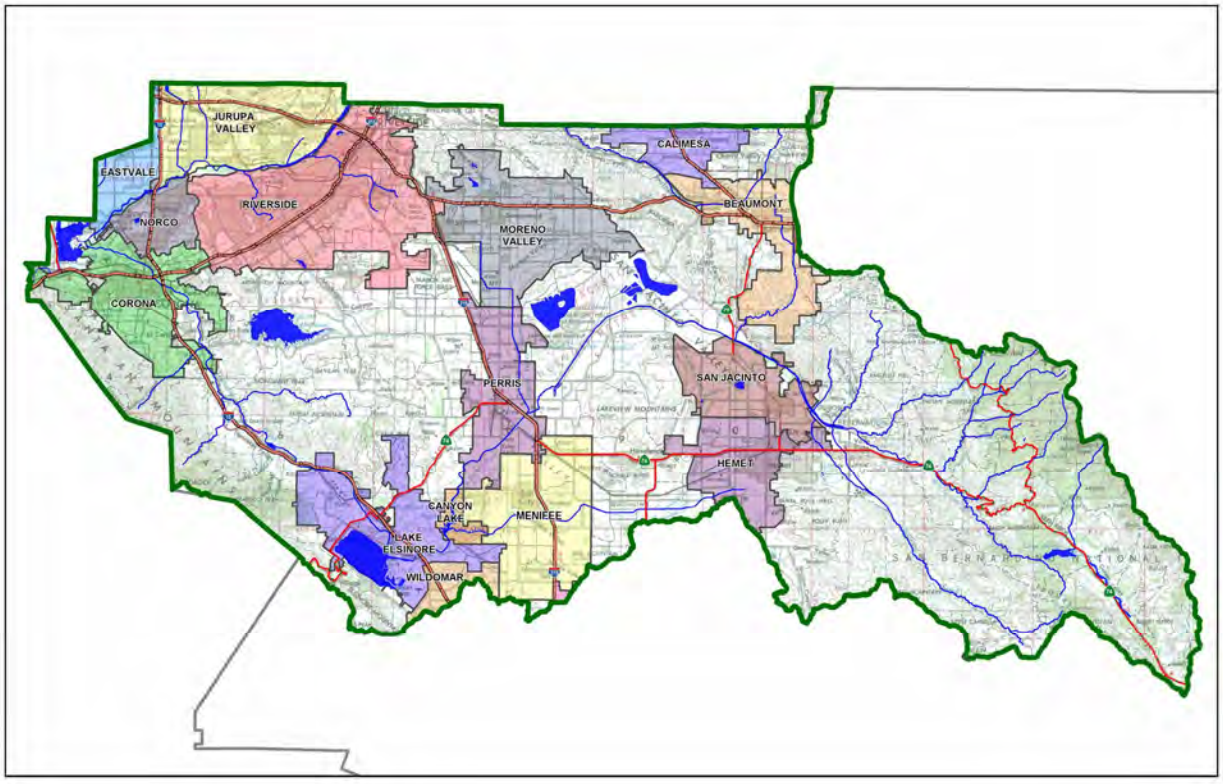
Project Specific Water Quality Management Plan

*A Template for Projects located within the **Santa Ana Watershed** Region of Riverside County*

Project Title: Woodcrest Christian School, 18401 Van Buren Blvd.

Development No: GP-2023-17709

Design Review/Case No: PR-2023-001080



☒ **Preliminary**
☐ **Final**

Original Date Prepared: July 2023

Revision Date(s): November 2023, May 2024

Prepared for Compliance with
Regional Board Order No. **R8-2010-0033**

Prepared for:
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Riverside, CA 92508
Tel: (951) 780-2010

Prepared by:
adkan ENGINEERS
6879 Airport Drive
Riverside, CA 92504
Tel: (951) 688-0241

OWNER'S CERTIFICATION

This Project-Specific Water Quality Management Plan (WQMP) has been prepared for Woodcrest Christian by Adkan Engineers for the Woodcrest Christian School.

This WQMP is intended to comply with the requirements of the City of Riverside, which includes the requirement for the preparation and implementation of a Project-Specific WQMP.

The undersigned, while owning the property/project described in the preceding paragraph, shall be responsible for the implementation and funding of this WQMP and will ensure that this WQMP is amended as appropriate to reflect up-to-date conditions on the site. In addition, the property owner accepts responsibility for interim operation and maintenance of Stormwater BMPs until such time as this responsibility is formally transferred to a subsequent owner. This WQMP will be reviewed with the facility operator, facility supervisors, employees, tenants, maintenance and service contractors, or any other party (or parties) having responsibility for implementing portions of this WQMP. At least one copy of this WQMP will be maintained at the project site or project office in perpetuity. The undersigned is authorized to certify and to approve implementation of this WQMP. The undersigned is aware that implementation of this WQMP is enforceable under the City of Riverside Water Quality Ordinance (Municipal Code Section 14.12.315).

"I, the undersigned, certify under penalty of law that the provisions of this WQMP have been reviewed and accepted and that the WQMP will be transferred to future successors in interest."

Owner's Signature	Date
Owner's Printed Name	Owner's Title/Position

PREPARER'S CERTIFICATION

"The selection, sizing and design of stormwater treatment and other stormwater quality and quantity control measures in this plan meet the requirements of Regional Water Quality Control Board Order No. **R8-2010-0033** and any subsequent amendments thereto."

Preparer's Signature	Date 5-15-2024
Mitch Adkison	Executive Vice President
Preparer's Printed Name	Preparer's Title/Position

Preparer's Licensure:



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Section A: Project and Site Information

PROJECT INFORMATION	
Type of Project:	School
Ward Area:	Ward 4
Community Name:	Orangecrest
Development Name:	Woodcrest Christian School
PROJECT LOCATION	
Latitude & Longitude (DMS): 33°/53'07.7"N, 117°20'26.6"W	
Project Watershed and Sub-Watershed: Santa Ana, Reach 3	
APN(s): 266-020-057	
Map Book and Page No.: Thomas Bros Page 746, Grid C3	
PROJECT CHARACTERISTICS	
Proposed or Potential Land Use(s)	PF – Private School
Proposed or Potential SIC Code(s)	8211
Area of Impervious Project Footprint (SF)	171,221
Total Area of proposed Impervious Surfaces within the Project Limits (SF)/or Replacement	171,221
Does the project consist of offsite road improvements?	☒ Y ☐ N
Does the project propose to construct unpaved roads?	☐ Y ☒ N
Is the project part of a larger common plan of development (phased project)?	☐ Y ☒ N
EXISTING SITE CHARACTERISTICS	
Total area of existing Impervious Surfaces within the project limits (SF)	47,314 SF
Is the project located within any MSHCP Criteria Cell?	☐ Y ☒ N
If so, identify the Cell number:	N/A
Are there any natural hydrologic features on the project site?	☒ Y ☐ N
Is a Geotechnical Report attached?	☐ Y ☒ N
If no Geotech. Report, list the NRCS soils type(s) present on the site (A, B, C and/or D)	See Appendix 3
What is the Water Quality Design Storm Depth for the project?	0.51in

The proposed project will consist of construction of 5 new buildings and building additions to two existing buildings with new parking areas, driveways and landscape areas on the easterly side of the site along Dauchy Avenue. The treatment area located on the east side are of the site is an oversized bio-retention area design to treat the amount of runoff required by all 5 new building areas and building additions. The buildings proposed on the westerly side of the site, along Little Court, and the building additions will use flow guard downspout filters to treat the run off due to limited area.

A.1 Maps and Site Plans

When completing your Project-Specific WQMP, include a map of the local vicinity and existing site. In addition, include all grading, drainage, landscape/plant palette and other pertinent construction plans in Appendix 2. At a **minimum**, your WQMP Site Plan should include the following:

- Drainage Management Areas
- Proposed Structural BMPs
- Drainage Path
- Drainage Infrastructure, Inlets, Overflows
- Source Control BMPs
- Buildings, Roof Lines, Downspouts
- Impervious Surfaces
- Standard Labeling

Use your discretion on whether or not you may need to create multiple sheets or can appropriately accommodate these features on one or two sheets. Keep in mind that the Co-Permittee plan reviewer must be able to easily analyze your project utilizing this template and its associated site plans and maps.

A.2 Identify Receiving Waters

Using Table A.1 below, list in order of upstream to downstream, the receiving waters that the project site is tributary to. Continue to fill each row with the Receiving Water's 303(d) listed impairments (if any), designated beneficial uses, and proximity, if any, to a RARE beneficial use. Include a map of the receiving waters in Appendix 1.

Table A.1 Identification of Receiving Waters

Receiving Waters	EPA Approved 303(d) List Impairments	Designated Beneficial Uses	Proximity to RARE Beneficial Use
Santa Ana River Reach 3	Lead, Copper, Indicator Bacteria	AGR, GWR, REC1, REC2, WARM, WILD, RARE, SPWN	7.5 miles
Prado Basin	pH	REC1, REC2, WARM, WILD, RARE	11 miles

A.3 Additional Permits/Approvals required for the Project:

Table A.2 Other Applicable Permits

Agency	Permit Required	
State Department of Fish and Game, 1602 Streambed Alteration Agreement	☐ Y	☒ N
State Water Resources Control Board, Clean Water Act (CWA) Section 401 Water Quality Cert.	☐ Y	☒ N
US Army Corps of Engineers, CWA Section 404 Permit	☐ Y	☒ N
US Fish and Wildlife, Endangered Species Act Section 7 Biological Opinion	☐ Y	☒ N
Statewide Construction General Permit Coverage	☒ Y	☐ N
Statewide Industrial General Permit Coverage	☐ Y	☒ N
Western Riverside MSHCP Consistency Approval (e.g., JPR, DBESP)	☐ Y	☒ N
Other *(please list in the space below as required)*		☐ N
County of Riverside Conditional Use Permit	☒ Y	☐ N
County of Riverside Design Review	☒ Y	☐ N
County of Riverside Grading Permit	☒ Y	☐ N
County of Riverside Construction Permit	☒ Y	

If yes is answered to any of the questions above, the Co-Permittee may require proof of approval/coverage from those agencies as applicable including documentation of any associated requirements that may affect this Project-Specific WQMP.

Section B: Optimize Site Utilization (LID Principles)

Review of the information collected in Section 'A' will aid in identifying the principal constraints on site design and selection of LID BMPs as well as opportunities to reduce imperviousness and incorporate LID Principles into the site and landscape design. For example, **constraints** might include impermeable soils, high groundwater, groundwater pollution or contaminated soils, steep slopes, geotechnical instability, high-intensity land use, heavy pedestrian or vehicular traffic, utility locations or safety concerns. **Opportunities** might include existing natural areas, low areas, oddly configured or otherwise unbuildable parcels, easements and landscape amenities including open space and buffers (which can double as locations for bioretention BMPs), and differences in elevation (which can provide hydraulic head). Prepare a brief narrative for each of the site optimization strategies described below. This narrative will help you as you proceed with your LID design and explain your design decisions to others.

The 2010 Santa Ana MS4 Permit further requires that LID Retention BMPs (Infiltration Only or Harvest and Use) be used unless it can be shown that those BMPs are infeasible. Therefore, it is important that your narrative identify and justify if there are any constraints that would prevent the use of those categories of LID BMPs. Similarly, you should also note opportunities that exist which will be utilized during project design. Upon completion of identifying Constraints and Opportunities, include these on your WQMP Site plan in Appendix 1.

Site Optimization

The following questions are based upon Section 3.2 of the WQMP Guidance Document. Review of the WQMP Guidance Document will help you determine how best to optimize your site and subsequently identify opportunities and/or constraints, and document compliance.

Did you identify and preserve existing drainage patterns? If so, how? If not, why?
Yes, the drainage pattern for the site that is being developed was naturally draining to the north. This same pattern was conserved such that the site drains to the proposed bioretention basin.

Did you identify and protect existing vegetation? If so, how? If not, why?
No, trees or other vegetation that is required to be protected was identified at this point in time. The area of the project site that is being developed will have all existing vegetation removed.

Did you identify and preserve natural infiltration capacity? If so, how? If not, why?
No, site will use an oversized bio-retention to treat and over-mitigate the east side and the treatment area required by the westerly two building. In addition, the westerly two building will be treated using flow based FloGard +Plus® Downspout Filter or equivalent.

Did you identify and minimize impervious area? If so, how? If not, why?
Impervious area was minimized to the largest extent possible given the parking requirements and amenities being provided for a project of this type.

Did you identify and disperse runoff to adjacent pervious areas? If so, how? If not, why?
Yes, a pervious area was created within the bioretention. Nearly all of the runoff from the developed project site was dispersed to this pervious area.

Section C: Delineate Drainage Management Areas (DMAs)

Utilizing the procedure in Section 3.3 of the WQMP Guidance Document which discusses the methods of delineating and mapping your project site into individual DMAs, complete Table C.1 below to appropriately categorize the types of classification (e.g., Type A, Type B, etc.) per DMA for your project site. Upon completion of this table, this information will then be used to populate and tabulate the corresponding tables for their respective DMA classifications.

Table C.1 DMA Classifications

DMA Name or ID	Surface Type(s)[1]	Area (Sq. Ft.)	DMA Type
D.1.1	*Roofs*	7,232	D
D.1.2	*Concrete / Asphalt*	*6,309*	D
D.1.3	*Landscape*	*6,801*	D
D.2.1	*Roofs*	15,123	D
D.2.2	*Concrete / Asphalt*	*5,999*	D
D.2.3	*Landscape*	*4,309*	D
D.3.1	*Roofs*	*31,027*	D
D.3.2	*Concrete / Asphalt*	66,043	D
D.3.3	*Landscape*	28,378	D

[1]*Reference Table 2-1 in the WQMP Guidance Document to populate this column*

Table C.2 Type 'A', Self-Treating Areas

DMA Name or ID	Area (Sq. Ft.)	Stabilization Type	Irrigation Type (if any)

Table C.3 Type 'B', Self-Retaining Areas

Self-Retaining Area				**Type 'C' DMAs that are draining to the Self-Retaining Area**		
DMA Name/ ID	Post-project surface type	Area (square feet) [A]	Storm Depth (inches) [B]	DMA Name / ID	[C] from Table C.4 = [C]	Required Retention Depth (inches) [D]
N/A				N/A		

$$[D] = [B] + \frac{[B] \cdot [C]}{[A]}$$

Table C.4 Type 'C', Areas that Drain to Self-Retaining Areas

DMA					**Receiving Self-Retaining DMA**		
DMA Name/ ID	Area (square feet)	Post-project surface type	Runoff factor	Product		Area (square feet)	Ratio
	[A]		[B]	[C] = [A] x [B]	DMA name /ID	[D]	[C]/[D]
N/A					N/A		

Table C.5 Type 'D', Areas Draining to BMPs

DMA Name or ID	BMP Name or ID
D.1	Bio-Retention (oversized D.3)
D.2	Bio-Retention (oversized D.3)
D.3	Bio-Retention Basin (Oversized)

Note: More than one drainage management area can drain to a single LID BMP, however, one drainage management area may not drain to more than one BMP.

-

Section D: Implement LID BMPs

D.1 Infiltration Applicability

Is there an approved downstream 'Highest and Best Use' for stormwater runoff (see discussion in Chapter 2.4.4 of the WQMP Guidance Document for further details)? ☐ Y ☒ N

If yes has been checked, Infiltration BMPs shall not be used for the site. If no, continue working through this section to implement your LID BMPs. It is recommended that you contact your Co-Permittee to verify whether or not your project discharges to an approved downstream 'Highest and Best Use' feature.

Geotechnical Report

A Geotechnical Report or Phase I Environmental Site Assessment may be required by the Copermittee to confirm present and past site characteristics that may affect the use of Infiltration BMPs. In addition, the Co-Permittee, at their discretion, may not require a geotechnical report for small projects as described in Chapter 2 of the WQMP Guidance Document. If a geotechnical report has been prepared, include it in Appendix 3. In addition, if a Phase I Environmental Site Assessment has been prepared, include it in Appendix 4.

Is this project classified as a small project consistent with the requirements of Chapter 2 of the WQMP Guidance Document? ☐ Y ☒ N

Infiltration Feasibility

Table D.1 below is meant to provide a simple means of assessing which DMAs on your site support Infiltration BMPs and is discussed in the WQMP Guidance Document in Chapter 2.4.5. Check the appropriate box for each question and then list affected DMAs as applicable. If additional space is needed, add a row below the corresponding answer.

Table D.1 Infiltration Feasibility

Does the project site…	YES	NO
…have any DMAs with a seasonal high groundwater mark shallower than 10 feet?		X
If Yes, list affected DMAs:		
…have any DMAs located within 100 feet of a water supply well?		X
If Yes, list affected DMAs:		
…have any areas identified by the geotechnical report as posing a public safety risk where infiltration of stormwater could have a negative impact?		X
If Yes, list affected DMAs:		
…have measured in-situ infiltration rates of less than 1.6 inches / hour?	X	
If Yes, list affected DMAs:		
…have significant cut and/or fill conditions that would preclude in-situ testing of infiltration rates at the final infiltration surface?		X
If Yes, list affected DMAs:		
…geotechnical report identify other site-specific factors that would preclude effective and safe infiltration?		
Describe here: (Report N/A currently)		

If you answered "Yes" to any of the questions above for any DMA, Infiltration BMPs should not be used for those DMAs and you should proceed to the assessment for Harvest and Use below.

D.2 Harvest and Use Assessment

Please check what applies*:*

☐ Reclaimed water will be used for the non-potable water demands for the project.

☐Downstream water rights may be impacted by Harvest and Use as approved by the Regional Board (verify with the Copermittee).

☐The Design Capture Volume will be addressed using Infiltration Only BMPs. In such a case, Harvest and Use BMPs are still encouraged, but it would not be required if the Design Capture Volume will be infiltrated or evapotranspired.

☒ None of the above apply.

Irrigation Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for Irrigation Use BMPs on your site:

Step 1: Identify the total area of irrigated landscape on the site, and the type of landscaping used.

Total Area of Irrigated Landscape: 35,667 sf

Type of Landscaping (Conservation Design or Active Turf): Conservation Design

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for irrigation use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: 135,749

Step 3: Cross reference the Design Storm depth for the project site (see Exhibit A of the WQMP Guidance Document) with the left column of Table 2-3 in Chapter 2 to determine the minimum area of Effective Irrigated Area per Tributary Impervious Area (EIATIA).

Enter your EIATIA factor: 0.51

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum irrigated area that would be required.

Minimum required irrigated area: 0.51 * 135,749=69,232

Step 5: Determine if harvesting stormwater runoff for irrigation use is feasible for the project by comparing the total area of irrigated landscape (Step 1) to the minimum required irrigated area (Step 4).

Minimum required irrigated area (Step 4)	Available Irrigated Landscape (Step 1)
69,232	35,661

Toilet Use Feasibility

Complete the following steps to determine the feasibility of harvesting stormwater runoff for toilet flushing uses on your site:

Step 1: Identify the projected total number of daily toilet users during the wet season, and account for any periodic shut downs or other lapses in occupancy:

*Projected Number of Daily Toilet Users: 24 tu/ac * 3.94 = 94.56*

Project Type: School

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for toilet use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: 135,749/43,560= 3.1163

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-1 in Chapter 2 to determine the minimum number or toilet users per tributary impervious acre (TUTIA).

Enter your TUTIA factor: 24

Step 4: Multiply the unit value obtained from Step 3 by the total of impervious areas from Step 2 to develop the minimum number of toilet users that would be required.

*Minimum number of toilet users: 24 * 3.1163=74.7912*

Step 5: Determine if harvesting stormwater runoff for toilet flushing use is feasible for the project by comparing the Number of Daily Toilet Users (Step 1) to the minimum required number of toilet users (Step 4).

Minimum required Toilet Users (Step 4)	Projected number of toilet users (Step 1)
74.7912	94.56

Other Non-Potable Use Feasibility

Are there other non-potable uses for stormwater runoff on the site (e.g. industrial use)? See Chapter 2 of the Guidance for further information. If yes, describe below. If no, write N/A.

N/A

Step 1: Identify the projected average daily non-potable demand, in gallons per day, during the wet season and accounting for any periodic shut downs or other lapses in occupancy or operation.

Average Daily Demand: N/A

Step 2: Identify the planned total of all impervious areas on the proposed project from which runoff might be feasibly captured and stored for the identified non-potable use. Depending on the configuration of buildings and other impervious areas on the site, you may consider the site as a whole, or parts of the site, to evaluate reasonable scenarios for capturing and storing runoff and directing the stored runoff to the potential use(s) identified in Step 1 above.

Total Area of Impervious Surfaces: N/A

Step 3: Enter the Design Storm depth for the project site (see Exhibit A) into the left column of Table 2-3 in Chapter 2 to determine the minimum demand for non-potable uses per tributary impervious acre.

Enter the factor from Table 2-3: N/A

Step 4: Multiply the unit value obtained from Step 4 by the total of impervious areas from Step 3 to develop the minimum number of gallons per day of non-potable use that would be required.

Minimum required use: N/A

Step 5: Determine if harvesting stormwater runoff for other non-potable use is feasible for the project by comparing the Number of Daily Toilet Users (Step 1) to the minimum required number of toilet users (Step 4).

Minimum required non-potable use (Step 4)	**Projected average daily use (Step 1)**
N/A	N/A

If Irrigation, Toilet and Other Use feasibility anticipated demands are less than the applicable minimum values, Harvest and Use BMPs are not required and you should proceed to utilize LID Bioretention and Biotreatment, unless a site-specific analysis has been completed that demonstrates technical infeasibility as noted in D.3 below.

D.3 Bioretention and Biotreatment Assessment

Other LID Bioretention and Biotreatment BMPs as described in Chapter 2.4.7 of the WQMP Guidance Document are feasible on nearly all development sites with sufficient advance planning.

Select one of the following:

☒ LID Bioretention/Biotreatment BMPs will be used for some or all DMAs of the project as noted below in Section D.4 (note the requirements of Section 3.4.2 in the WQMP Guidance Document).

☐ A site-specific analysis demonstrating the technical infeasibility of all LID BMPs has been performed and is included in Appendix 5. If you plan to submit an analysis demonstrating the technical infeasibility of LID BMPs, request a pre-submittal meeting with the Copermittee to discuss this option. Proceed to Section E to document your alternative compliance measures.

D.4 Feasibility Assessment Summaries

From the Infiltration, Harvest and Use, Bioretention and Biotreatment Sections above, complete Table D.2 below to summarize which LID BMPs are technically feasible, and which are not, based upon the established hierarchy. D.3 Bio-Retention basin is oversized to account for D.1, D.2 and D.3 treatment areas. In addition, the use of down spout filters for buildings in D.1 and D.2 to minimize contaminates.

Table D.2 LID Prioritization Summary Matrix

DMA Name/ID	LID BMP Hierarchy				No LID (Alternative Compliance)
	1. Infiltration	2. Harvest and use	3. Bioretention	4. Biotreatment	
D.1.1	☐	☐	☐	☐	☒
D.1.2	☐	☐	☐	☐	☒
D.1.3	☐	☐	☐	☐	☒
D.2.1	☐	☐	☐	☐	☒
D.2.2	☐	☐	☐	☐	☒
D.2.3	☐	☐	☐	☐	☒
D.3.1	☐	☐	☒	☐	☐
D.3.2	☐	☐	☒	☐	☐
D.3.3	☐	☐	☒	☐	☐

No LID for D.1 and D.2, Over-mitigating in DMA D.3 with an oversized bio-retention to treat the east side of the project, including the treatment area required by the westerly two building. In addition, the westerly two building will utilize flow based FloGard +Plus® Downspout Filter or equivalent for pre-treatment.

D.5 LID BMP Sizing

Each LID BMP must be designed to ensure that the Design Capture Volume will be addressed by the selected BMPs. First**,** calculate the Design Capture Volume for each LID BMP using the V_{BMP} worksheet in Appendix F of the LID BMP Design Handbook. Second**,** design the LID BMP to meet the required V_{BMP} using a method approved by the Copermittee. Utilize the worksheets found in the LID BMP Design Handbook or consult with your Copermittee to assist you in correctly sizing your LID BMPs. Complete Table D.3 below to document the Design Capture Volume and the Proposed Volume for each LID BMP. Provide the completed design procedure sheets for each LID BMP in Appendix 6. You may add additional rows to the table below as needed.

Table D.3 DCV Calculations for LID BMPs

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Impervious Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*D-3 Bio-Retention*		
	[A]		[B]	[C]	[A] x [C]			
D-1.1	*7,323*	*Roof*	*1.0*	*0.89*	*6,450.9*			
D-1.2	*6,309*	*Concrete/ Asphalt*	*1.0*	*0.89*	*5,627.6*			
D-1.3	*6,801*	*Landscaping*	*0.1*	*0.11*	*751.2*			
D-2.1	*15,123*	*Roof*	*1.0*	*0.89*	*13,489.7*			
D-2.2	*5,999*	*Concrete/ Asphalt*	*1.0*	*0.89*	*5,351.1*			
D-2.3	*4,309*	*Landscaping*	*0.1*	*0.11*	*476*			
D-3.1	*31,027*	*Roof*	*1.0*	*0.89*	*27,676.10*			
D-3.2	*66,043*	*Concrete/ Asphalt*	*1.0*	*0.89*	*58,910.40*			
D-3.3	*28,378*	*Landscaping*	*0.1*	*0.11*	*3,134.60*			
						Design Storm Depth (in)	*Design Capture Volume,* V_{BMP} *(cubic feet)*	*Proposed Volume on Plans (cubic feet)*
	177221				121,867.6	0.51	5,179.4	5,263

[B], [C] is obtained as described in Section 2.3.1 of the WQMP Guidance Document

[E] is obtained from Exhibit A in the WQMP Guidance Document

[G] is obtained from a design procedure sheet, such as in LID BMP Design Handbook and placed in Appendix 6

Section E: Alternative Compliance (LID Waiver Program)

LID BMPs are expected to be feasible on virtually all projects. Where LID BMPs have been demonstrated to be infeasible as documented in Section D, other Treatment Control BMPs must be used (subject to LID waiver approval by the Committee). Check one of the following Boxes:

☒ LID Principles and LID BMPs have been incorporated into the site design to fully address all Drainage Management Areas. No alternative compliance measures are required for this project and thus this Section is not required to be completed.

- *Or* -

☐ The following Drainage Management Areas are unable to be addressed using LID BMPs. A site-specific analysis demonstrating technical infeasibility of LID BMPs has been approved by the Co-Permittee and included in Appendix 5. Additionally, no downstream regional and/or sub-regional LID BMPs exist or are available for use by the project. The following alternative compliance measures on the following pages are being implemented to ensure that any pollutant loads expected to be discharged by not incorporating LID BMPs, are fully mitigated.

E.1 Identify Pollutants of Concern

Utilizing Table A.1 from Section A above which noted your project's receiving waters and their associated EPA approved 303(d) listed impairments, cross reference this information with that of your selected Priority Development Project Category in Table E.1 below. If the identified General Pollutant Categories are the same as those listed for your receiving waters, then these will be your Pollutants of Concern and the appropriate box or boxes will be checked on the last row. The purpose of this is to document compliance and to help you appropriately plan for mitigating your Pollutants of Concern in lieu of implementing LID BMPs.

Table E.1 Potential Pollutants by Land Use Type

Priority Development Project Categories and/or Project Features (check those that apply)	General Pollutant Categories							
	Bacterial Indicators	Metals	Nutrients	Pesticides	Toxic Organic Compounds	Sediments	Trash & Debris	Oil & Grease
☐ Detached Residential Development	P	N	P	P	N	P	P	P
☐ Attached Residential Development	P	N	P	P	N	P	P	P(2)
☐ Commercial/Industrial Development	P(3)	P	P(1)	P(1)	P(5)	P(1)	P	P
☐ Automotive Repair Shops	N	P	N	N	P(4, 5)	N	P	P
☐ Restaurants (>5,000 ft^2)	P	N	N	N	N	N	P	P
☐ Hillside Development (>5,000 ft^2)	P	N	P	P	N	P	P	P
☒ Parking Lots (>5,000 ft^2)	P(6)	P	P(1)	P(1)	P(4)	P(1)	P	P
☐ Retail Gasoline Outlets	N	P	N	N	P	N	P	P
Project Priority Pollutant(s) of Concern	☒	☒	☒	☒	☒	☒	☒	☒

P = Potential

N = Not Potential

(1) A potential Pollutant if non-native landscaping exists or is proposed onsite; otherwise not expected

(2) A potential Pollutant if the project includes uncovered parking areas; otherwise not expected

(3) A potential Pollutant is land use involving animal waste

(4) Specifically petroleum hydrocarbons

(5) Specifically solvents

(6) Bacterial indicators are routinely detected in pavement runoff

E.2 Stormwater Credits

Projects that cannot implement LID BMPs but nevertheless implement smart growth principles are potentially eligible for Stormwater Credits. Utilize Table 3-8 within the WQMP Guidance Document to identify your Project Category and its associated Water Quality Credit. If not applicable, write N/A.

Table E.2 Water Quality Credits

Qualifying Project Categories	Credit Percentage[2]
Total Credit Percentage[1]	

[1]*Cannot Exceed 50%*
[2]*Obtain corresponding data from Table 3-8 in the WQMP Guidance Document*

E.3 Sizing Criteria

After you appropriately considered Stormwater Credits for your project, utilize Table E.3 below to appropriately size them to the DCV, or Design Flow Rate, as applicable. Please reference Chapter 3.5.2 of the WQMP Guidance Document for further information.

Table E.3 Treatment Control BMP Sizing

DMA Type/ID	**DMA Area (square feet)**	**Post-Project Surface Type**	**Effective Impervious Fraction, I_f**	**DMA Runoff Factor**	**DMA Area x Runoff Factor**		***Enter BMP Name / Identifier Here***		
	[A]		[B]	[C]	[A] x [C]				
						Design Storm Depth (in)	*Minimum Design Capture Volume or Design Flow Rate (cubic feet or cfs)*	*Total Storm Water Credit % Reduction*	*Proposed Volume or Flow on Plans (cubic feet or cfs)*
	A_T = Σ[A]				Σ= [D]	[E]	$[F] = \frac{[D]x[E]}{[G]}$	[F] X (1-[H])	[I]

[B], [C] is obtained as described in Section 2.3.1 from the WQMP Guidance Document
[E] is for Flow-Based Treatment Control BMPs [E] = .2, for Volume-Based Control Treatment BMPs, [E] obtained from Exhibit A in the WQMP Guidance Document
[G] is for Flow-Based Treatment Control BMPs [G] = 43,560, for Volume-Based Control Treatment BMPs, [G] = 12
[H] is from the Total Credit Percentage as Calculated from Table E.2 above
[I] as obtained from a design procedure sheet from the BMP manufacturer and should be included in Appendix 6

E.4 Treatment Control BMP Selection

Treatment Control BMPs typically provide proprietary treatment mechanisms to treat potential pollutants in runoff, but do not sustain significant biological processes. Treatment Control BMPs must have a removal efficiency of a medium or high effectiveness as quantified below:

- **High**: equal to or greater than 80% removal efficiency
- **Medium**: between 40% and 80% removal efficiency

Such removal efficiency documentation (e.g., studies, reports, etc.) as further discussed in Chapter 3.5.2 of the WQMP Guidance Document, must be included in Appendix 6. In addition, ensure that proposed Treatment Control BMPs are properly identified on the WQMP Site Plan in Appendix 1.

Table E.4 Treatment Control BMP Selection

Selected Treatment Control BMP Name or ID[1]	Priority Pollutant(s) of Concern to Mitigate[2]	Removal Efficiency Percentage[3]

[1] Treatment Control BMPs must not be constructed within Receiving Waters. In addition, a proposed Treatment Control BMP may be listed more than once if they possess more than one qualifying pollutant removal efficiency.

[2] Cross Reference Table E.1 above to populate this column.

[3] As documented in a Co-Permittee Approved Study and provided in Appendix 6.

Section F: Hydromodification

F.1 Hydrologic Conditions of Concern (HCOC) Analysis

Once you have determined that the LID design is adequate to address water quality requirements, you will need to assess if the proposed LID Design may still create a HCOC. Review Chapters 2 and 3 (including Figure 3-7) of the WQMP Guidance Document to determine if your project must mitigate for Hydromodification impacts. If your project meets one of the following criteria which will be indicated by the check boxes below, you do not need to address Hydromodification at this time. However, if the project does not qualify for Exemptions 1, 2 or 3, then additional measures must be added to the design to comply with HCOC criteria. This is discussed in further detail below in Section F.2.

HCOC EXEMPTION 1: The Priority Development Project disturbs less than one acre. The Copermittee has the discretion to require a Project-Specific WQMP to address HCOCs on projects less than one acre on a case by case basis. The disturbed area calculation should include all disturbances associated with larger common plans of development.

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, HCOC criteria do not apply.

HCOC EXEMPTION 2: The volume and time of concentration[1] of storm water runoff for the post-development condition is not significantly different from the pre-development condition for a 2-year return frequency storm (a difference of 5% or less is considered insignificant) using one of the following methods to calculate:

- Riverside County Hydrology Manual
- Technical Release 55 (TR-55): Urban Hydrology for Small Watersheds (NRCS 1986), or derivatives thereof, such as the Santa Barbara Urban Hydrograph Method
- Other methods acceptable to the Co-Permittee

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, report results in Table F.1 below and provide your substantiated hydrologic analysis in Appendix 7.

Table F.1 Hydrologic Conditions of Concern Summary

	2 year – 24 hour		
	Pre-condition	**Post-condition**	**% Difference**
Time of Concentration			
Volume (Cubic Feet)			

[1] Time of concentration is defined as the time after the beginning of the rainfall when all portions of the drainage basin are contributing to flow at the outlet.

HCOC EXEMPTION 3: All downstream conveyance channels to an adequate sump (for example, Prado Dam, Lake Elsinore, Canyon Lake, Santa Ana River, or other lake, reservoir or naturally erosion resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity; no sensitive stream habitat areas will be adversely affected; or are not identified on the Co-Permittees Hydromodification Sensitivity Maps.

Does the project qualify for this HCOC Exemption? ☐ Y ☒ N

If Yes, HCOC criteria do not apply and note below which adequate sump applies to this HCOC qualifier:

F.2 HCOC Mitigation

If none of the above HCOC Exemption Criteria are applicable, HCOC criteria is considered mitigated if they meet one of the following conditions:

☐ a. Additional LID BMPS are implemented onsite or offsite to mitigate potential erosion or habitat impacts as a result of HCOCs. This can be conducted by an evaluation of site-specific conditions utilizing accepted professional methodologies published by entities such as the California Stormwater Quality Association (CASQA), the Southern California Coastal Water Research Project (SCCRWP), or other Co-Permittee approved methodologies for site-specific HCOC analysis.

☐ b. The project is developed consistent with an approved Watershed Action Plan that addresses HCOC in Receiving Waters.

☒ c. Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than 10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

☐ d. None of the above.

Section G: Source Control BMPs

Source control BMPs include permanent, structural features that may be required in your project plans — such as roofs over and berms around trash and recycling areas — and Operational BMPs, such as regular sweeping and "housekeeping", that must be implemented by the site's occupant or user. The MEP standard typically requires both types of BMPs. In general, Operational BMPs cannot be substituted for a feasible and effective permanent BMP. Using the Pollutant Sources/Source Control Checklist in Appendix 8, review the following procedure to specify Source Control BMPs for your site:

1. ***Identify Pollutant Sources*:** Review Column 1 in the Pollutant Sources/Source Control Checklist. Check off the potential sources of Pollutants that apply to your site.

2. ***Note Locations on Project-Specific WQMP Exhibit*:** Note the corresponding requirements listed in Column 2 of the Pollutant Sources/Source Control Checklist. Show the location of each Pollutant source and each permanent Source Control BMP in your Project-Specific WQMP Exhibit located in Appendix 1.

3. ***Prepare a Table and Narrative*:** Check off the corresponding requirements listed in Column 3 in the Pollutant Sources/Source Control Checklist. In the left column of Table G.1 below, list each potential source of runoff Pollutants on your site (from those that you checked in the Pollutant Sources/Source Control Checklist). In the middle column, list the corresponding permanent, Structural Source Control BMPs (from Columns 2 and 3 of the Pollutant Sources/Source Control Checklist) used to prevent Pollutants from entering runoff. **Add additional narrative** in this column that explains any special features, materials or methods of construction that will be used to implement these permanent, Structural Source Control BMPs.

4. ***Identify Operational Source Control BMPs:*** To complete your table, refer once again to the Pollutant Sources/Source Control Checklist. List in the right column of your table the Operational BMPs that should be implemented as long as the anticipated activities continue at the site. Copermittee stormwater ordinances require that applicable Source Control BMPs be implemented; the same BMPs may also be required as a condition of a use permit or other revocable Discretionary Approval for use of the site.

Table G.1 Permanent and Operational Source Control Measures

Potential Sources of Runoff pollutants	Permanent Structural Source Control BMPs	Operational Source Control BMPs
Onsite Storm Drain Inlets	• Mark all drains with the words, "Only Rain Down the Storm Drain" or similar.	• Maintain and periodically repaint or replace inlet markings. • Provide stormwater pollution prevention information to new site owners, lessees, or operators. • Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."
Need for future indoor & structural pest control	• Note building design features that discourage entry of pests.	• Provide Integrated Pest Management information to owners, lessees, and operators
Landscape/Outdoor Pesticide Use	• Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. • Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers or pesticides that contribute to stormwater pollution. • Consider using pest-resistant plants, especially adjacent to hardscape. • Select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	• Maintain landscaping using minimum or no pesticides. • See applicable operational BMP educational materials. • Provide IPM information to new owners, lessees, and operators.
Refuse Areas	• Signs shall be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.	• Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34 "Waste Handling and Disposal" in Appendix 10.

Vehicle and Equipment Cleaning		• Washwater from vehicle and equipment washing shall not be discharged to the storm drain system.
Fire Sprinkler Test Water	• Provide a means to drain fire sprinkler test water to the sanitary sewer.	• See Fact Sheet SC-41 "Building and Grounds Maintenance" in Appendix 10.
Condensate drain lines	• Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system.	
Rooftop equipment	• Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment.	
Roofing, gutters, and trim	• Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.	
Plazas, Sidewalks, and Parking Lots		• Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.

Section H: Construction Plan Checklist

Populate Table H.1 below to assist the plan checker in an expeditious review of your project. The first two columns will contain information that was prepared in previous steps, while the last column will be populated with the corresponding plan sheets. This table is to be completed with the submittal of your final Project-Specific WQMP.

Table H.1 Construction Plan Cross-reference

BMP No. or ID	BMP Identifier and Description	Corresponding Plan Sheet(s)	BMP Location (Lat/Long)
Bio	Bio-retention	Conceptual Grading Sheet	33°53’09.3”N, 117°20’26.6”W

Section I: Operation, Maintenance and Funding

The Copermittee will periodically verify that Stormwater BMPs on your site are maintained and continue to operate as designed. To make this possible, your Copermittee will require that you include in Appendix 9 of this Project-Specific WQMP:

1. A means to finance and implement facility maintenance in perpetuity, including replacement cost.
2. Acceptance of responsibility for maintenance from the time the BMPs are constructed until responsibility for operation and maintenance is legally transferred. A warranty covering a period following construction may also be required.
3. An outline of general maintenance requirements for the Stormwater BMPs you have selected.
4. Figures delineating and designating pervious and impervious areas, location, and type of Stormwater BMP, and tables of pervious and impervious areas served by each facility. Geo-locating the BMPs using a coordinate system of latitude and longitude is recommended to help facilitate a future statewide database system.
5. A separate list and location of self-retaining areas or areas addressed by LID Principles that do not require specialized O&M or inspections but will require typical landscape maintenance as noted in Chapter 5, pages 85-86, in the WQMP Guidance. Include a brief description of typical landscape maintenance for these areas.

Your local Co-Permittee will also require that you prepare and submit a detailed Stormwater BMP Operation and Maintenance Plan that sets forth a maintenance schedule for each of the Stormwater BMPs built on your site. An agreement assigning responsibility for maintenance and providing for inspections and certification may also be required.

Details of these requirements and instructions for preparing a Stormwater BMP Operation and Maintenance Plan are in Chapter 5 of the WQMP Guidance Document.

Maintenance Mechanism: Property Owner to be responsible for all maintenance onsite.

Will the proposed BMPs be maintained by a Home Owners' Association (HOA) or Property Owners Association (POA)?

☐ Y ☒ N

Operation and Maintenance Plan and Maintenance Mechanism is included in Appendix 9. Educational materials for those personnel that will be maintaining the proposed BMPs within this Project-Specific WQMP are included in Appendix 10.

Appendix 1: Maps and Site Plans

Location Map, WQMP Site Plan and Receiving Waters Map

WQMP – BMP MAP
WOODCREST CHRISTIAN

OWNER/APPLICANT

WOODCREST CHRISTIAN
18401 VAN BUREN BLVD
RIVERSIDE, CA 92508
(951) 780-2010

ENGINEER

adkan ENGINEERS
6879 AIRPORT DRIVE
RIVERSIDE, CA. 92504
951-688-0241

ASSESSOR'S PARCEL NUMBER

266-020-057
TOTAL PARCEL AREA: 0.90 ACRES

LEGEND

- EXISTING STORM DRAIN
- PROPOSED ONSITE STORM DRAIN
- PROPOSED OFFSITE STORM DRAIN
- DMA BOUNDARY
- DRAINAGE FLOW DIRECTION ARROW
- ASPHALT/CONCRETE
- ROOF
- LANDSCAPE
- BIO-RETENTION AREA
- OVER-MITIGATION AREA

SITE DESIGN BMPS

SD-10 SITE DESIGN & LANDSCAPE PLANNING
SD-11 ROOF RUNOFF CONTROLS
SD-12 EFFICIENT IRRIGATION
SD-13 STORM DRAIN SIGNAGE
SD-30 FUELING AREAS
SD-32 TRASH STORAGE AREAS
SD-33 VEHICLE WASHING AREAS

SOURCE CONTROL BMPS

SC-10 STORM DRAIN INLET PROTECTION
SC-11 SPILL PREVENTION, CONTROL AND CLEANUP
SC-20 VEHICLE AND EQUIPMENT FUELING
SC-21 VEHICLE AND EQUIPMENT CLEANING
SC-34 WASTE HANDLING AND DISPOSAL
SC-41 BUILDING AND GROUNDS MAINTENANCE
SC-43 PARKING/STORAGE AREA MAINTENANCE

TREATMENT CONTROL BMPS

TC-32 BIORETENTION

BMP SIZING METHOD FOR BIORETENTION W/ UNDERDRAINS

CAPTURE EFFICIENCY METHOD FOR VOLUME-BASED, CONSTANT DRAWDOWN BMPS
DRAWDOWN TIME = 7.8 HOURS
ADJUSTED DCV (DESIGN VOLUME) = 5,179 CF
PONDING DEPTH = 0.5'
REQUIRED BASIN AREA = 2,878 SF
PROVIDED BASIN AREA = 2,882 SF

*SEE APPENDIX 6 OF WQMP REPORT FOR ADDITIONAL INFORMATION AND CALCULATIONS REGARDING THIS METHOD OF SIZING.

BMP NOTE

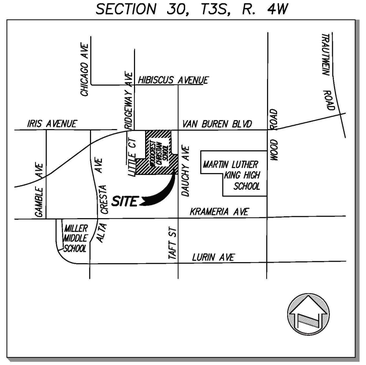
ALL ROCK OR SAND TO BE PLACED IN POST-CONSTRUCTION BMPS SHALL BE CLEAN-WASHED ROCK TO SATISFACTION OF THE GRADING INSPECTOR

BIORETENTION/FILTRATION BMPS

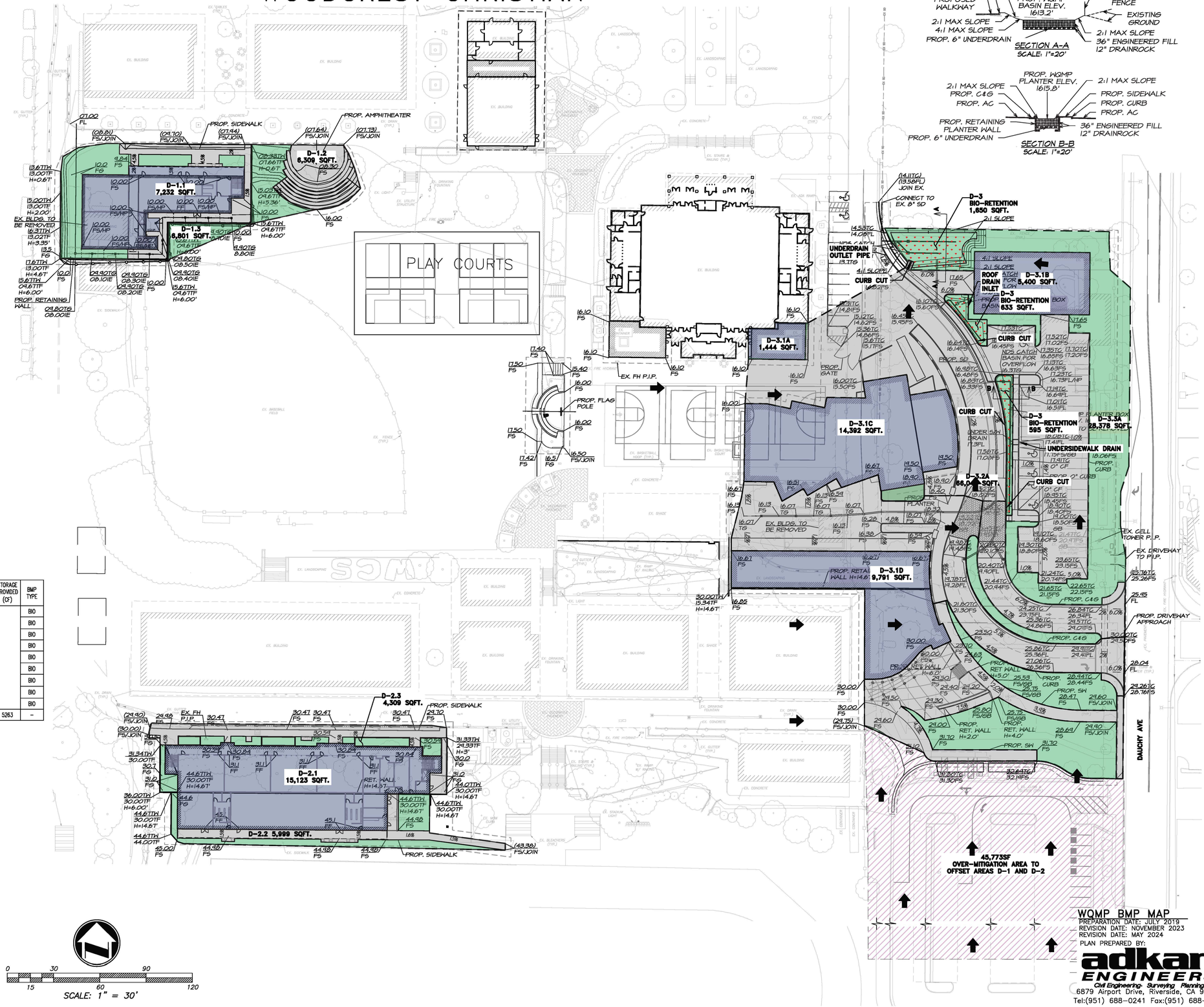
IMMEDIATELY BELOW THE SOIL MEDIA (BMS) INCLUDE A SECTION OF 12" GRAVEL LAYER DEPTH. ALL SUBDRAINS SHALL BE 6" PERFORATED SCH. 40 WITH MINIMUM SLOPE OF 0.5%

DMA	SURFACE TYPE	DMA TYPE	TOTAL AREA	PERVIOUS AREA	IMPERVIOUS AREA	% PERVIOUS	% IMPERVIOUS	EFFECTIVE IMPERVIOUS FRACTION	DMA RUNOFF FACTOR	V BMP (CF)	BIO-RETENTION PROPOSED SURFACE AREA	STORAGE REQUIRED (CF)	STORAGE PROVIDED (CF)	BMP TYPE
DMA 1.1	ROOF	D	7232	0	7232	0	100	1	0.89					BIO
DMA 1.2	CONC/AC	D	6309	0	6309	0	100	1	0.89					BIO
DMA 1.3	LANDSCAPE	D	6801	6801	0	100	0	0.10	0.11					BIO
DMA2.1	ROOF	D	15123	0	15123	0	100	1	0.89					BIO
DMA2.2	CONC/AC	D	5999	0	5999	0	100	1	0.89					BIO
DMA2.3	LANDSCAPE	D	4309	4309	0	100	0	0.10	0.11					BIO
DMA3.1	ROOF	D	31027	0	31027	0	100	1	0.89					BIO
DMA3.2	CONC/AC	D	66043	0	66043	0	100	1	0.89					BIO
DMA3.3	LANDSCAPE	D	28378	28378	0	100	0	0.10	0.11					BIO
TOTAL	–	–	171221	39488	131733	–	–	–	–	5179.40	2882	5179.40	5263	–

SECTION 30, T3S, R. 4W



VICINITY MAP
(N.T.S.)



0 30 90
15 60 120
SCALE: 1" = 30'

WQMP BMP MAP
PREPARATION DATE: JULY 2019
REVISION DATE: NOVEMBER 2023
REVISION DATE: MAY 2024
PLAN PREPARED BY:

adkan ENGINEERS
Civil Engineering Surveying Planning
6879 Airport Drive, Riverside, CA 92504
Tel:(951) 688-0241 Fax:(951) 688-0599

Plot Date: 5/15/2024

R 07 W | R 06 W | R 05 W | R 04 W | R 03 W | R 02 W | R 01 W | R 01 E | R 02 E | R 03 E | R 04 E | R 05 E

T 01 S | T 02 S | T 03 S | T 04 S | T 05 S | T 06 S | T 07 S | T 08 S

PROJECT SITE = 0.51

0.85 MiraLoma
0.61 RiversideNorth
0.68 PigeonPass
0.54 RiversideSouth
0.66 MorenoEast
0.85 Beaumont
0.88 PradoDam
0.51 Woodcrest
0.50 LakeMathews
0.68 PerrisReservoir
0.87 VistaGrandeGS
0.70 SanJacintoNWS
1.18 Idyllwild
0.58 SunCity
0.68 Winchester
0.70 ElsinoreNWS
1.11 ElCarisoStation
0.90 HurkeyCreek
0.77 WildomarLaCresta
0.52 SkinnerLake
0.65 Anza
0.77 SantaRosaPlateau
1.00 TemeculaNWS
0.64 AguangaValley

Santa Ana River Watershed

Santa Margarita Watershed

Rain Gage Locations

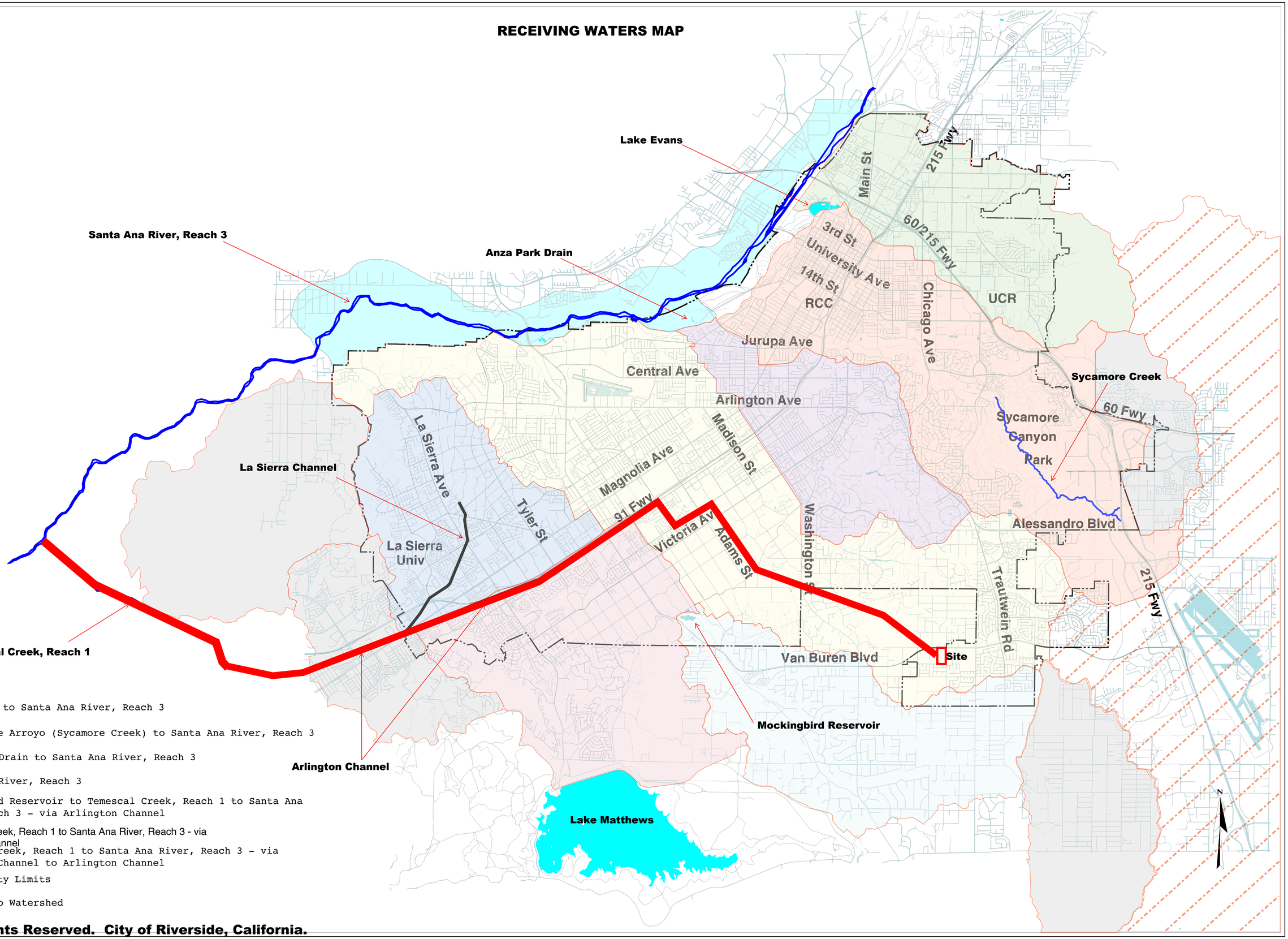
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Isohyetal Map for the 85th Percentile 24 hour Storm Event

July 2011


Interstate Towing
Van Buren Boulevard
Van Buren Boulevard
Little Ct
Little Ct
Dauchy Ave
Woodcrest Christian
SITE
Blue Sky St
Frontline Missions

RECEIVING WATERS MAP



LEGEND

- Lake Evans to Santa Ana River, Reach 3
- Tequesquite Arroyo (Sycamore Creek) to Santa Ana River, Reach 3
- Anza Park Drain to Santa Ana River, Reach 3
- Santa Ana River, Reach 3
- Mockingbird Reservoir to Temescal Creek, Reach 1 to Santa Ana River, Reach 3 - via Arlington Channel
- Temescal Creek, Reach 1 to Santa Ana River, Reach 3 - via Arlington Channel
- Temescal Creek, Reach 1 to Santa Ana River, Reach 3 - via La Sierra Channel to Arlington Channel
- Outside City Limits
- San Jacinto Watershed

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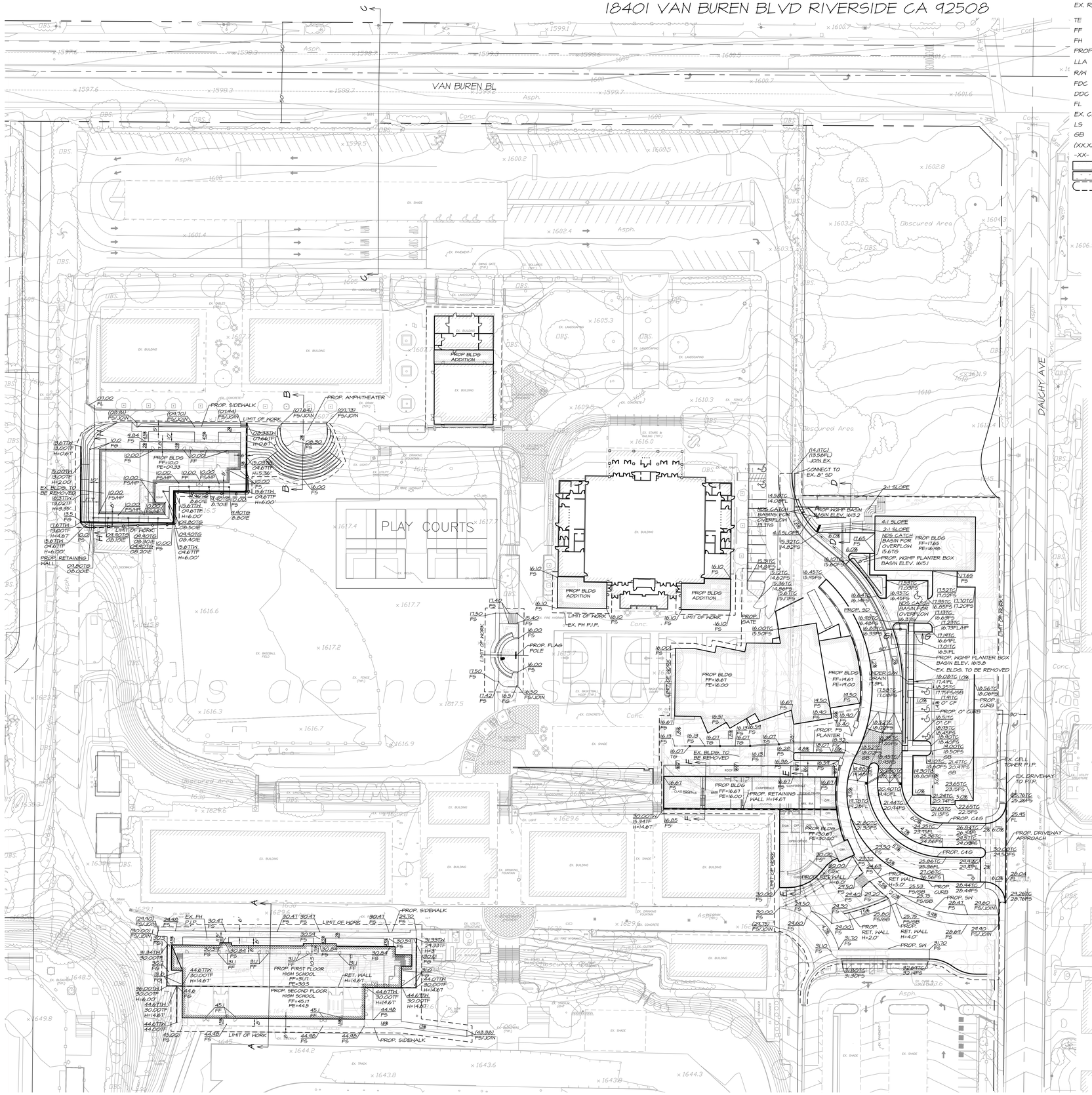
Appendix 2: Construction Plans

Grading and Drainage Plans

CONCEPTUAL GRADING PLAN
WOODCREST CHRISTIAN SCHOOL

18401 VAN BUREN BLVD RIVERSIDE CA 92508


VAN BUREN BL
DAUCHY AVE
PROP BLDG ADDITION
PLAY COURTS
EX. BUILDING
EX. FIELD
EX. BASEBALL FIELD
EX. BASKETBALL COURT (TYP.)
EX. SHADE
EX. LANDSCAPING
EX. CONCRETE
EX. ASPHALT
EX. PAVEMENT
EX. DRIVING GATE (TYP.)
EX. BOLLARDS (TYP.)
EX. DRIVEWAY
EX. CURB & GUTTER (TYP.)
EX. DRAIN (TYP.)
EX. LIGHT
EX. UTILITY STRUCTURE
EX. DRINKING FOUNDATION
EX. BIKE RACKS
EX. SIGN
EX. FENCE (TYP.)
EX. STAIRS & RAILING (TYP.)
EX. RETAINING WALL
EX. SIDEWALK
EX. TRACK
EX. BLEACHERS (TYP.)
EX. WM
EX. SEWER MH
EX. STORM DRAIN MH
EX. TREE
EX. GRADE
EX. CONTOUR
EX. SPOT ELEVATION
Obscured Area
Asphalt
Concrete
PROP BLDG ADDITION
PROP. AMPHITHEATER
PROP. SIDEWALK
PROP. FLAG POLE
PROP. FIRST FLOOR HIGH SCHOOL FF=31.0 FE=30.5
PROP. SECOND FLOOR HIGH SCHOOL FF=45.7 FE=44.5
EX. BLDGS. TO BE REMOVED
PROP. RETAINING WALL
PROP. BLDG FF=10.0 FE=9.35
PROP. BLDG FF=16.67 FE=16.00
PROP. BLDG FF=30.67 FE=30.00
PROP. BLDG FF=11.65 FE=10.65
PROP. BLDG FF=16.67 FE=14.00
PROP. BLDG FF=14.67 FE=14.00
PROP. HGMP PLANTER BOX BASIN ELEV. 1615.1
PROP. HGMP PLANTER BOX BASIN ELEV. 1615.2
PROP. HGMP PLANTER BOX BASIN ELEV. 1615.8
PROP. 6" CURB
PROP. 0" CURB
PROP. FS PLANTER
PROP. CAG
PROP. RET. WALL H=2.0'
PROP. RET. WALL H=5.0'
PROP. RET. WALL H=2.0'
PROP. RET. WALL H=4.0'
PROP. SW
PROP. DRIVEWAY APPROACH
EX. DRIVEWAY TO P.I.P.
EX. CELL TOWER P.I.P.
EX. FH P.I.P.
LIMIT OF WORK
PROP. 15ATE
PROP. 50
PROP. 30
PROP. 50
PROP. 0" GF
PROP. 10" GF
PROP. 6" GF
PROP. 12" GF
PROP. 18" GF
PROP. 24" GF
PROP. 30" GF
PROP. 36" GF
PROP. 42" GF
PROP. 48" GF
PROP. 54" GF
PROP. 60" GF
PROP. 66" GF
PROP. 72" GF
PROP. 78" GF
PROP.

Appendix 3: Soils Information

Geotechnical Study and Other Infiltration Testing Data

ARAGÓN GEOTECHNICAL, INC.
Consultants in the Earth & Material Sciences

July 28, 2021
Project No. 4725-SFI

Adkan Engineers
6870 Airport Drive
Riverside, California 92504

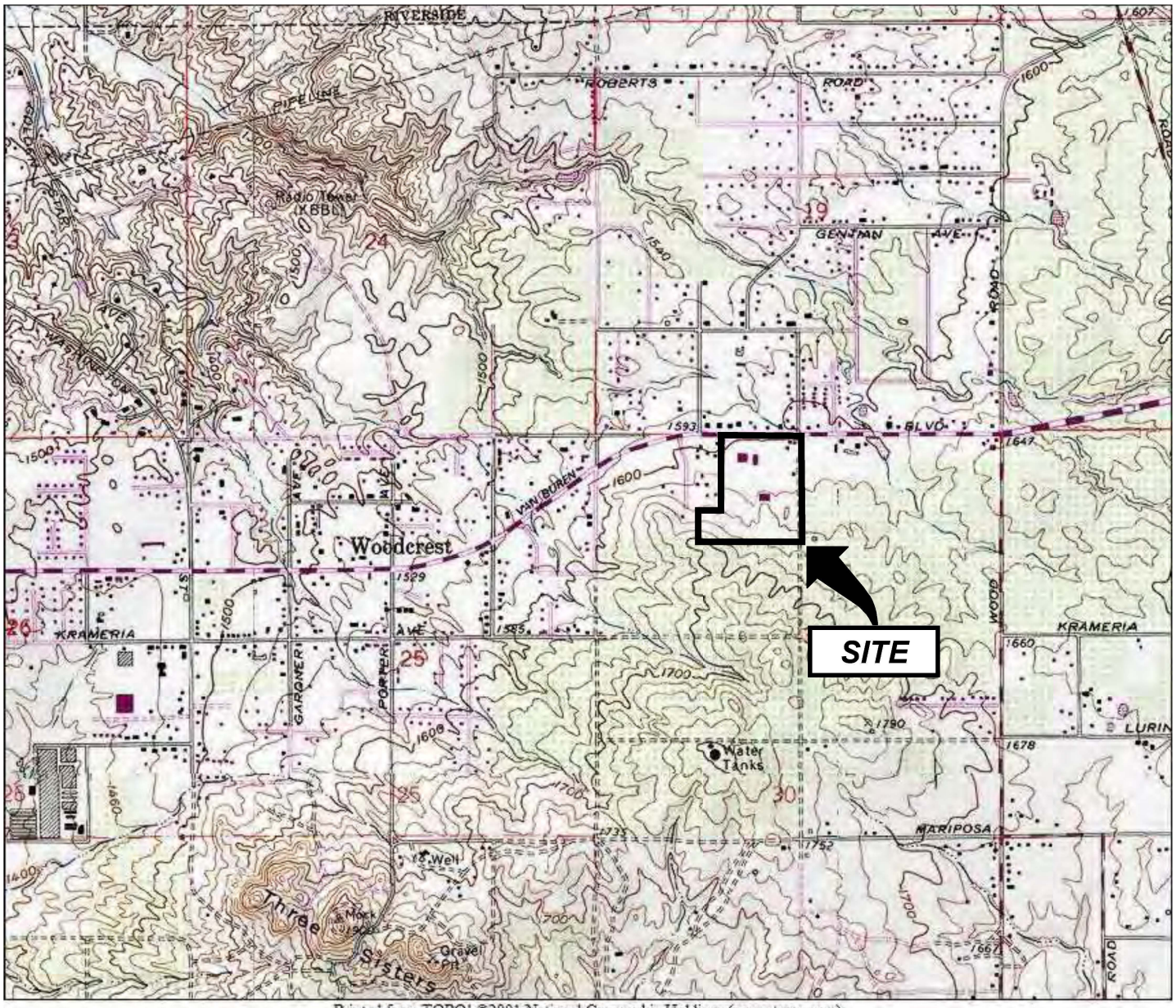
Attention: Mr. Mitch Adkison, P.E.

Subject: Preliminary WQMP Infiltration Feasibility Report
Woodcrest Christian School
18401 Van Buren Boulevard
Woodcrest, Riverside County, California.

Dear Mr. Adkison:

In accordance with the technical scope detailed in our proposal dated June 7, 2021, Aragón Geotechnical, Inc. (AGI) has completed site testing and analyses of soil infiltration potential. Field test data are required for purposes of developing a site-specific preliminary water quality management plan (WQMP) with the related selection of stormwater best management practices (BMPs). These services were performed concurrently with a comprehensive geotechnical investigation by AGI for a variety of proposed site improvements. Subsurface borings, geological research, and characterization of the local groundwater regime were requirements for each separately reported study. Figure 1 (next page) outlines the school site on a 1:24,000-scale topographic base map. This report is intended to support the design and construction of low-impact development (LID), hydromodification, and pollution prevention features for site stormwater runoff as required by the Santa Ana Region (SAR) *Water Quality Management Plan* effective January 1, 2013.

Our primary tasks for the infiltration feasibility assessment consisted of (1) Review of regional geotechnical and geologic data along with AGI's on-site deep exploration data; (2) Field tests of water absorption rates at shallow soil depths, reflective of limited options we envision for microbasins or vegetated swales but *not* for subsurface infiltration systems



Printed from TOPO! ©2001 National Geographic Holdings (www.topo.com)

0 2000 4000 FT.

N

Reference: U. S. Geological Survey 7½-Minute Series Topographic Map, Riverside East and Steele Peak Quadrangles (1980).

AGI	**SITE LOCATION MAP**		
	WOODCREST CHRISTIAN SCHOOL, RIVERSIDE, CALIF.		
	PROJECT NO. 4725-SFI	DATE: 7/28/21	**FIGURE 1**

such as chambers; and (3) Preparation of this results report. Investigation findings of very shallow groundwater reduced AGI's testing scope. Few site areas have any capability for even nuisance water disposal, as outlined in other parts of this letter. Calculations or recommendations for the design precipitation event, storm water detention volume, or treatment flow rates were not within the scope of AGI's services.

Background Information & Proposed Construction

Woodcrest Christian School is spread across 6 contiguous land parcels that encompass 29.29 acres in the Alta Cresta area of the City of Riverside. Bordering the school is major-arterial Van Buren Boulevard to the north, and Dauchy Avenue, a smaller collector street, to the east. Residential areas abut the school site on the remaining sides. Local terrain comprises a sloped surface with a north-directed surface gradient that averages around 4 percent. The school site has been substantially modified by historical cut-and-fill grading. Existing facilities include middle school and high school classrooms, administration and maintenance buildings, a large gymnasium building, and athletic fields. The school utilizes an on-site wastewater treatment system (OWTS) composed of conventional septic tanks and a leach-line absorption field. The latter occupies a large grassy area in the approximate geometric center of the school that is partly open space and partly a baseball/softball playing field. Known historical site uses have included cultivation of dry-farmed grain crops and limited poultry ranching, but not citrus orchards or intensive stock raising.

AGI received a master plan exhibit dated April 16, 2021, depicting the proposed new construction. Up to 10 new buildings or building additions and student amenities are proposed. Twelve classrooms would be situated in a pair of 2-story structures. A 300-seat chapel arts building would be situated close to Dauchy Avenue. The gymnasium would receive a pair of structural additions for weight training and equipment storage. Other improvements such as a snack bar, lockers, an outdoor amphitheater, a multi-purpose room, and more would be scattered around the school site. New driveway and parking lot pavements are depicted. Some existing buildings and improvements will need to be demolished. The supplied plan lacked defined locations for either surface or subsurface retention features. For feasibility-study purposes, however, the topographically lowest site area north of the proposed chapel arts building and auto parking lots was evaluated for absorption capacity. These proposed improvements would be the largest sources of uncontrolled runoff from new construction.

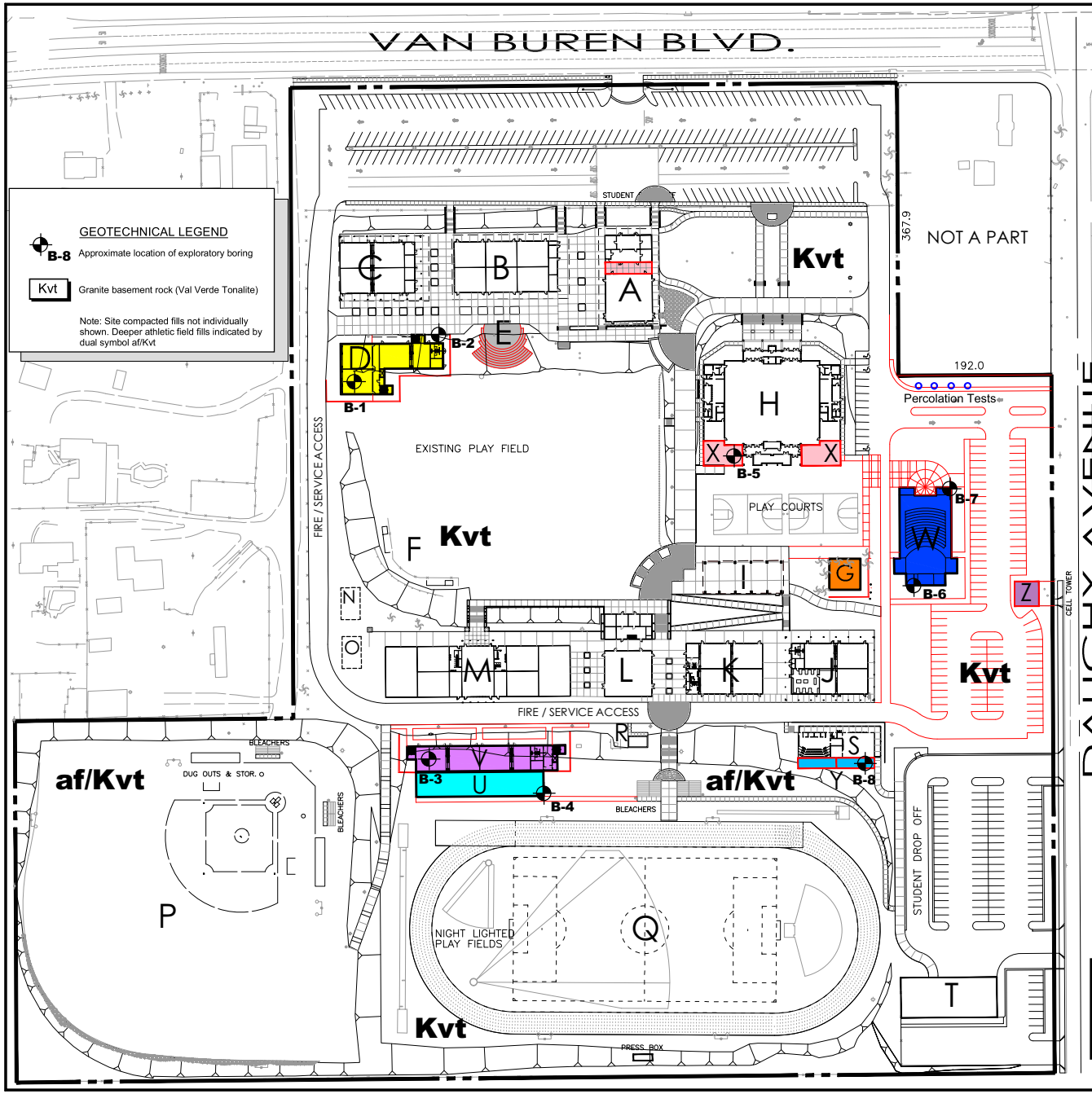
Field Observations and Permeability Testing

AGI's infiltration determinations were based on Riverside County's technical guidelines for percolation testing in small-diameter boreholes. These tests are customarily done for on-site wastewater treatment systems. Most California jurisdictions including the City of Riverside accept percolation test results for stormwater BMP design, with the proviso that percolation test data be adjusted to an equivalent one-dimensional (1-D) infiltration velocity. Methods and requirements for percolation testing are outlined in the *Local Agency Management Plan for Onsite Wastewater Treatment Systems* prepared by the County of Riverside Department of Environmental Health (DEH, October 5, 2016). All field exploration, percolation testing, and derivations of equivalent infiltration velocities were performed or supervised by the following qualified company representatives:

- Justin Long, Engineering Technician.
- Fernando Aragón, P.E.: California Registered Geotechnical Engineer, with over 15 years of professional experience.
- Mark G. Doerschlag: California Professional Geologist and Certified Engineering Geologist, with over 35 years of professional experience.

A geotechnical boring drilled for the proposed chapel improvements served as the required deep exploration in accordance with the requirements of Appendix A, Table 1 of the *Design Handbook for Low Impact Development Best Management Practices* (Riverside County, 2011). The boring was advanced on June 21, 2021. Related geotechnical borings were completed the same day. All deep borings were drilled with a truck-mounted Mobile Drill B-61 hollow-stem auger rig, at the locations shown on the Geotechnical Map, Figure 2 on the next page. Exploratory borings were checked for groundwater inflows or seepage before subsequent backfilling with compacted soil cuttings. All exploratory borings were observed and continuously logged during drilling by a qualified engineering geologist. The drill log for the WQMP-specific exploratory boring (Boring B-7) is reproduced as an attachment to this report.

AGI opened four 7½-inch-diameter percolation test holes on the same day as the exploration drilling with the same truck-mounted rig. The holes were cleaned of all loose slough and lightly scored with manual auger tools on July 7, 2021. The holes were not pre-soaked, in anticipation of relatively slow absorption given the logged soil types. Measured final depths ranged from 37 to 61 inches. About two inches of crushed rock was placed in the bottom of each test hole for erosion/sediment control. AGI waived any trials to



NORTH

LEGEND

MIDDLE SCHOOL

BUILDING NUMBER	BUILDING NAME	SQUARE FOOTAGE	EXISTING / PROPOSED
A	ADMINISTRATION & MULTIPURPOSE ROOM	5,310 S.F. OFFICE - 900 S.F.	EXISTING PROPOSED
B	CLASSROOMS (6)	8,320 S.F.	EXISTING
C	CLASSROOMS (4)	6,016 S.F.	EXISTING
D	2 STORY OFFICE/ CLASSROOMS (6)	11,600	PROPOSED
E	AMPHITHEATER	300 SEATS	PROPOSED
F	BASEBALL FIELD	-	EXISTING

HIGH SCHOOL

G	FOOD SERVICES	1,600 S.F.	PROPOSED
H	GYMNASIUM & LOCKERS	20,208 S.F.	EXISTING
I	LUNCH SHELTERS	5,600 S.F.	EXISTING
J	CLASSROOMS (4)	6,144 S.F.	EXISTING
K	CLASSROOMS (4)	6,142 S.F.	EXISTING
L	ADMINISTRATION & LIBRARY	LOWER 2,933 S.F. FIRST 5,400 S.F.	EXISTING
M	CLASSROOMS (9)	14,848 S.F.	EXISTING
N&O	TEMPORARY CLASSROOMS	960 S.F. EACH TOTAL OF 2	EXISTING
P	BASEBALL FIELD	-	EXISTING
Q	TRACK & FIELD	-	EXISTING
R	ELECTRICAL		EXISTING
S	CHOIR & BAND	3,066 S.F.	EXISTING
T	BUS BARN	6,000 S.F.	EXISTING
U	LOCKERS/SNACK BAR	5,000 S.F.	PROPOSED
V	2 STORY OFFICE/ CLASSROOMS (6)	10,000 S.F.	PROPOSED
W	CHAPEL ARTS BUILDING	300 SEATS - 8,300 S.F.	PROPOSED
X	WEIGHT ROOM STORAGE ROOM	1,400 S.F. 1,400 S.F.	PROPOSED
Y	STORAGE ROOMS	1,400 S.F.	PROPOSED
Z	EXPAND CELL TOWER	1,000 S.F.	PROPOSED

PARKING

2 PARKING SPACES FOR EVERY MIDDLE SCHOOL CLASS ROOM
10 MIDDLE SCHOOL CLASS ROOMS WHICH EQUALS 20 PARKING SPACES
7 PARKING SPACES FOR EVERY HIGH SCHOOL CLASS ROOM
25 HIGH SCHOOL CLASS ROOMS WHICH EQUALS 175 PARKING SPACES
FOR A REQUIREMENT TOTAL OF 195 PARKING SPACES
290 TOTAL PARKING SPACES PROVIDED

29.29 ACRES

APN 266-020-013,-014,-015,-037,-038,-059

	GEOTECHNICAL MAP		
AGL	*WOODCREST CHRISTIAN SCHOOL, RIVERSIDE, CA.*		
	PROJECT NO. 4725-SFI	DATE: 7/28/21	FIGURE NO. 2

CHARLES BROWN ARCHITECT
5140 VICTORIA AVENUE, RIVERSIDE CA 92501
951-683 6222 / cbrown@cbarchitect.org

WOODCREST CHRISTIAN HIGH SCHOOL
MASTER PLAN
18401 VAN BUREN BLVD. RIVERSIDE, CA. 92508

JOB
DATE 04/16/21
REV.
SCALE: 1" = 60'-0"

SITE PLAN

A-1
DRAWING #
OF #

determine if "rapid" tests were feasible based on soils classifications. All tests were run as normal 6-hour (cumulative) duration tests. Standard test protocols were followed, based on measured water level drops (*inches*) for a fixed time increment. All test trials began with approximately 24-inch-deep water pools. Water was restored to near the initial starting depth following each timed drop. The field data sheets are included in the Appendix.

FINDINGS

Local Soil Conditions

Regional geologic maps and AGI geotechnical drilling data indicate the entire school site is underlain by very thin colluvial and residual soils over granitic basement rocks (where not already modified by mass grading). AGI advanced the BMP-relevant chapel boring, B-7, in highly weathered bedrock ("decomposed granite") starting only 4½ feet below grade. The boring intercepted an abandoned leach-line trench before encountering the bedrock. Moderately weathered and slow-to-drill materials abruptly started at about 15 feet below grade, and continued with some rate variability until a termination depth of 25.0 feet was achieved.

From a soil science viewpoint, the native surficial materials in the 29-plus acre site are assigned to the Fallbrook soil series FcF2 where weathered bedrock is typically under two feet below natural grade, and the Monserate soil series MmB where colluvium ranges to more than 60 inches deep (Natural Resources Conservation Service, 2021). Monserate soils are guessed to be limited to terrain close to Van Buren Boulevard. Fallbrook rocky sandy loam is categorized as a low-permeability material (hydrologic soil group D). Geotechnical findings correlate quite closely with the NRCS standard profile. Fallbrook soils are residuum derived from intense *in situ* weathering of the parent granitic rock, and in the Woodcrest area tend to be very cohesive with significant clay content. The reported effective hydraulic conductivity K_{sat} for the most limiting layer is presented as "0.0" inches per hour. NRCS soil profile characterizations are generally limited to only 60 inches from grade.

All four aligned test bores P-1 through P-4 were bottomed in highly weathered bedrock ("decomposed granite"). Depths to bedrock increased from east to west. The test intervals were just below zones of slightly clayey colluvium and clayey residual soil plus a surficial layer of man-made fill that we interpreted to also thicken to the west. The ground surfaces were barren and not part of an irrigated lawn or garden.

Groundwater

Soil boring B-7 began producing free groundwater during drilling near the 12 to 13-foot depth, and had a final measured static water depth of 8.8 feet below grade. Groundwater occurrences in other portions of the school site were highly variable. Referring to the Geotechnical Map, soil borings B-1, B-3, B-4, B-5, and B-8 were dry. Some "dry" holes met very shallow rig refusal due to hard rock, or were otherwise halted above likely perched-water depths. Boring B-2, in contrast, penetrated a thin perched-water zone starting only 15 inches below grade.

From a hydrogeological viewpoint, the site is considered to be atop "non-water bearing" granitic basement rock. However, Woodcrest Christian School and the many neighboring residential tract developments share a propensity for the development of anthropic perched-water horizons caused by infiltration of landscape irrigation and OWTS effluent. Perched water can be found near soil-bedrock contacts, or within the "decomposed granite" layer. Manufactured slopes and slope toes become favored sites for rising water conditions such as seeps and minor springs. We understand that the cut slope toe south of the athletic field has had perennial problems with wet ground and phreatophytic vegetation since the completion of homes bordering the property.

Our interpretation is that groundwater depths of under 10 feet from ground surface are ubiquitous and now permanent everywhere in the 29-plus acre school site except where elevated compacted fills provide greater separation. Fluctuations in static water elevations may result from on- or off-site grading, addition or subtraction of anthropic recharge sources, increased precipitation after an extremely dry 2021 season, and other factors. Speculation would be that average depths can rise even higher than noted from our studies. Groundwater depths and the potential for mounding will rule out large-scale infiltration BMPs such as basins or subterranean chambers.

Percolation Test Results

The following table *(next page)* summarizes the obtained field test results. Raw percolation rates for each borehole percolation test were converted to a 1-D infiltration velocity by Porchet's method. The corrected infiltration test velocities I_t would roughly correspond to velocities obtained by double-ring infiltrometers.

Highly variable uptake rates were noted. Test site P-1 had an anomalously fast rate that we suspect was due to unseen soil disturbance from past historical uses. The hole consistently percolated ~24 inches of water in under 30 minutes. Test sites P-2 through P-4 matched a predicted progression to less-favorable conditions as residual clay proportions of wetted intervals increased toward Dauchy Avenue.

Test Location	Saturation Test Interval Depth Below Existing Ground Surface (inches)	Raw Percolation Rate, DEH Test Method (min/in)	Corrected 1-D Infiltration Velocity I_t (in/hr via Porchet method)
P-1	37 - 61	<1.25	Min. 8.4
P-2	30 - 57	7.5	0.7
P-3	18 - 43	15.0	0.4
P-4	14 - 37	40.0	<0.2

Conclusions, Recommendations, and Advice

The SAR *Water Quality Management Plan* explicitly requires any infiltration-based BMP to be clear of water in 72 hours or less after the design storm event. Mathematically, for typical volume-based BMP designs this requires field infiltration velocities I_t of roughly 1.6 inches per hour or faster. After rejecting P-1 results as non-representative, none of the remaining recorded site test data clear this hurdle. We can conclude with certainty that ordinary infiltration basins or buried infiltration chambers are not feasible and are not recommended. These could be considered for hydromodification purposes, though.

Lower-priority treatment control BMPs such as flow-based bioretention basins or filtration trenches should be acceptable alternatives. Water-quality objectives would be met by ensuring filtration occurs through suitable media such as sand and compost before passing into underdrains that direct flows to off-site and non-erosive MS4 facilities.

Our preliminary opinion is that filtration or detention BMPs for the chapel arts building and associated pavements should not require a watertight liner (incidental and ephemeral infiltration will not be a hazard nor contribute to groundwater mounding). Only at this

improvement site, the civil engineer may optionally assume **0.2 in/hr** infiltration capability for flow-based BMPs that fully penetrate fill or clayey residual soils, i.e., bottoms greater than 3 feet or so in the chapel building vicinity. This velocity may also be applicable to permeable pavement installations as long as sufficient reservoir rock is present to store the incidental precipitation, bottoms are level (may require stepped grading with check dams on a sloped site), and bottoms are entirely composed of in-place decomposed granite. The design velocity I_d must include a safety factor that will reduce the field-determined velocity presented above by a factor of at least 3, if Riverside County standards apply to this project.

For the remainder of the Woodcrest Christian School, zero infiltration should be permitted. If location-specific BMPs are required for structures and improvements not associated with the chapel arts building, we recommend that **only** flow-based systems such as filter strips with impermeable bottoms be considered. The main concern is shallow groundwater and potential mounding within the OWTS absorption field.

Investigation Limitations

The findings in this report may require modification as a result of later field observations. Our opinions have been based on the results of limited testing within AGI-conceived water-quality BMP sites combined with extrapolations of soil conditions away from the test array. The nature and extent of variations within or beyond the tested areas may not become evident until construction. If a permeable pavement system meeting design parameters recommended in this report becomes one preferred option, then additional site testing of the accepting weathered-rock layer, preparation recommendations, or as-built tests may be needed to achieve correct designs for this treatment control BMP.

Closure

This report was prepared for the use of Adkan Engineers, principals at Woodcrest Christian School, and authorized owner-designates in cooperation with this office. Our findings and recommendations were prepared in accordance with generally accepted professional principles and local practice in the fields of engineering geology and geotechnical engineering. We make no other warranties either expressed or implied. Questions concerning the test results or design advice are invited, and may be directed to the undersigned at our Riverside office at (951) 776-0345 or through the convenience of email at www.aragongeo.com.

Respectfully submitted,
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MGD/CFA:mma

Attachments: Exploratory Boring Log, Boring B-7
Percolation Field Test Data, Sites P-1 through P-4

REFERENCES

Morton, D.M., and Miller, F.K., 2006, Geologic map of the San Bernardino and Santa Ana 30' x 60' quadrangles, California [Ver. 1.0], U.S. Geological Survey Open File Report 2006-1217, scale 1:100,000.

Natural Resources Conservation Service, 2021, Web Soil Survey utility, accessed 7/20/21 from Internet URL http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm

Riverside County Flood Control and Water Conservation District, 2011, *Design Handbook for Low Impact Development Best Management Practices*, Riverside, California, download file at Internet URL http://rcflood.org/downloads/NPDES/Documents/LIDManual/LID_BMP_Design_Handbook.pdf

FIELD LOG OF BORING B - 7

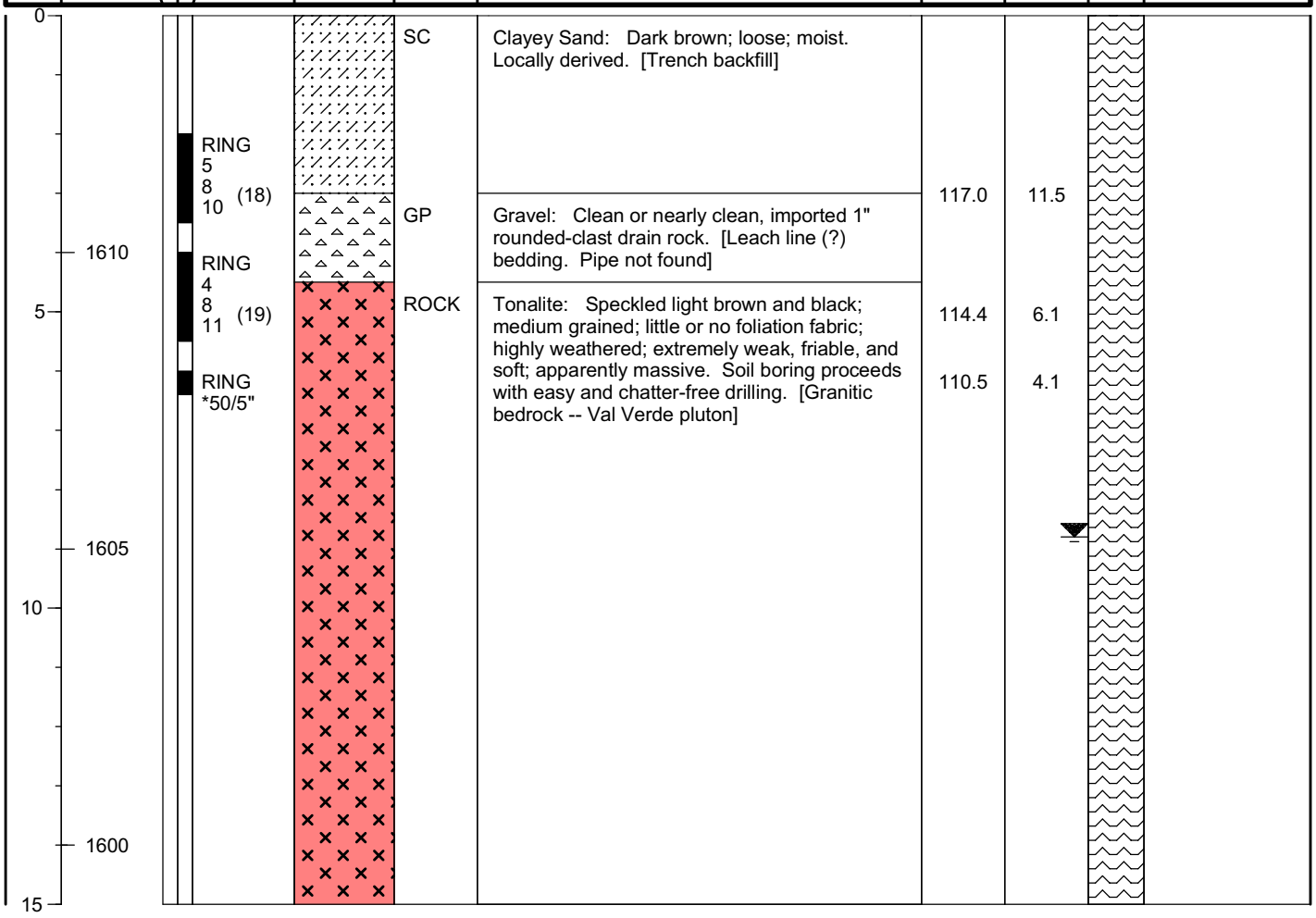
Sheet 1 of 2

Project: ***WOODCREST CHRISTIAN SCHOOL***

Location: ***WOODCREST, RIVERSIDE COUNTY, CA***

Date(s) Drilled:	**6/21/21**	Logged By:	**M. Doerschlag**
Drilled By:	**GP Drilling**	Total Depth:	**25.0 Ft.**
Rig Make/Model:	**Mobile B-61**	Hammer Type:	**Automatic trip**
Drilling Method:	**Hollow-Stem Auger**	Hammer Weight/Drop:	**140 Lb./30 In.**
Hole Diameter:	**7½ In.**	Surface Elevation:	**± 1614 Ft. AMSL per older topo**

Comments: Exploration sited in northeastern corner of proposed chapel building.



Continued on next sheet.

FIELD LOG OF BORING B - 7

Sheet 2 of 2

Project: ***WOODCREST CHRISTIAN SCHOOL***

Location: ***WOODCREST, RIVERSIDE COUNTY, CA***

DEPTH (ft.)	ELEVATION (MSL DATUM)	SAMPLE INTERVALS: BULK	SAMPLE INTERVALS: DRIVE	SAMPLE INTERVALS: TYPE, "N" or (Blows/ft.)	GRAPHIC LOG	USCS	GEOTECHNICAL DESCRIPTION	DRY DENSITY (pcf)	WATER CONTENT (%)	WELL COMPLETION	OTHER TESTS
15						ROCK	Tonalite: Speckled grayish brown and black; medium grained. At 15 feet, abruptly becomes moderately weathered, with very slow but smooth drilling to ~17 feet.. [Granitic bedrock -- Val Verde pluton] Drilling rate increases (softer). Probable fractures zone immediately begins to produce water to the bore.				
	1595										
20							Slow drilling. Brief interval of highly weathered rock. Very slow progress. Moderately weathered.				
	1590										
25											

Bottom of boring at 25.0 feet.
Groundwater measured at 8.8 feet.
Boring backfilled with compacted soil cuttings.

Percolation Data Sheet (Leach Line, ATU, Stormwater BMP)

Project: WOODCREST CHRISTIAN		Project No. 4725-SF1	
Test Hole No. P-1		Date Excavated: 6/21/21	
Depth of Test Hole: 61" bgs		Soil Classification: BOT = D.G.	
Check for Sandy Soil Criteria Tested By: N/A		Date: N/A	Presoak: NONE
Field Percolation Test By: J. LOWE		Date: 7/7/21	

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)
1					
2					

Use: ☒ Normal Soil Criteria ☐ Sandy Soil Criteria (>6" drop in <25 min. both trials)

Time	Time Interval (Min.)	Total Elapsed Time (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)	Percolation Rate (Min./In.)
0925			BES			
0955	30	30	39.0	DRY	>22	
0955						
1025	30	60	40.0	52.0	12.0	
1025						
1055	30	90	40.0	52.0	12.0	
1055						
1125	30	120	39.0	DRY	>22	
1125						
1155	30	150	38.0	DRY	>23	
1155						
1225	30	180	39½	DRY	>21½	
1225						
1255	30	210	39.0	DRY	>22	
1255						
1325	30	240	38.0	DRY	>23	
1325						
1355	30	270	38.0	DRY	>23	
1355						
1425	30	300	38.0	DRY	>23	
1425						
1455	30	330	37.0	DRY	>24	
1455						MINIMUM
1525	30	360	37.0	DRY	>24	1.25

END

Aragón Geotechnical, Inc.

Percolation Data Sheet (Leach Line, ATU, Stormwater BMP)

Project: Woodcrest Christian		Project No. 4725-SF1	
Test Hole No. P-2		Date Excavated: 6/21/21	
Depth of Test Hole: 57" bgs		Soil Classification: Bot = D.G.	
Check for Sandy Soil Criteria Tested By: N/A		Date: N/A	Presoak: None
Field Percolation Test By: J. Lowe		Date: 7/7/21	

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)
1					
2					

Use: ☒ Normal Soil Criteria ☐ Sandy Soil Criteria (>6" drop in <25 min. both trials)

Time	Time Interval (Min.)	Total Elapsed Time (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)	Percolation Rate (Min./In.)
0927						
0957	30	30	31 3/4	DRY	> 25 1/4	
0957						
1027	30	60	26.0	DRY	> 31	
1027						
1057	30	90	29 1/2	DRY	> 27 1/2	
1057						
1127	30	120	30.0	48.0	12.0	
1127						
1157	30	150	30.0	47.0	17.0	
1157						
1227	30	180	30 1/2	45 1/2	15.0	
1227						
1257	30	210	30.0	42 1/2	12 1/2	
1257						
1327	30	240	31.0	39 1/2	8 1/2	
1327						
1357	30	270	31.0	36.0	5.0	
1357						
1427	30	300	31.0	35 1/4	4 1/4	
1427						
1457	30	330	30.0	34.0	4.0	
1457						
1527	30	360	30.0	34.0	4.0	7.5

Percolation Data Sheet (Leach Line, ATU, Stormwater BMP)

Project: Woodcrest Christian		Project No. 4725-SF1	
Test Hole No. P-3		Date Excavated: 6/21/21	
Depth of Test Hole: 43" bgs		Soil Classification: D.G. @ Bot	
Check for Sandy Soil Criteria Tested By: N/A		Date: N/A	Presoak: None
Field Percolation Test By: J. Lowe		Date: 7/7/21	

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)
1	/				
2	/				

Use: ☒ Normal Soil Criteria ☐ Sandy Soil Criteria (>6" drop in <25 min. both trials)

Time	Time Interval (Min.)	Total Elapsed Time (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)	Percolation Rate (Min./In.)
0928 / 0958	30	30	18 1/4	27.0	8 3/4	
0958 / 1028	30	60	17 1/2	24.0	6 1/2	
1028 / 1058	30	90	16 1/2	22.0	5 1/2	
1058 / 1128	30	120	19 1/2	23.0	4.0	
1128 / 1158	30	150	18.0	20.0	2.0	
1158 / 1228	30	180	18.0	20.0	2.0	
1228 / 1258	30	210	18.0	20.0	2.0	
1258 / 1328	30	240	18.0	20.0	2.0	
1328 / 1358	30	270	17 1/2	19 1/2	2.0	
1358 / 1428	30	300	17.0	19.0	2.0	
1428 / 1458	30	330	17.5	19 1/2	2.0	
1458 / 1528	30	360	18.0	20.0	2.0	15.0

EOD

Percolation Data Sheet (Leach Line, ATU, Stormwater BMP)

Project: WOODCREST CHRISTIAN		Project No. 4725-SF1	
Test Hole No. P-4		Date Excavated: 6/21/21	
Depth of Test Hole: 37" bgs		Soil Classification:	
Check for Sandy Soil Criteria Tested By: N/A		Date: N/A	Presoak: None
Field Percolation Test By: J. Lowe		Date: 7/7/21	

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)
1					
2					

Use: ☒ Normal Soil Criteria ☐ Sandy Soil Criteria (>6" drop in <25 min. both trials)

Time	Time Interval (Min.)	Total Elapsed Time (Min.)	Initial Water Level (In.)	Final Water Level (In.)	Δ in Water Level (In.)	Percolation Rate (Min./In.)
0930			863			
1000	30	30	13 1/2	17 1/4	3 3/4	
1000						
1030	30	60	13 1/2	16.0	2 1/2	
1030						
1100	30	90	13.0	15 1/2	2 1/2	
1100						
1130	30	120	13.0	14 3/4	1 3/4	
1130						
1200	30	150	13 1/2	15.0	1 1/2	
1200						
1230	30	180	13 1/2	14 1/2	1.0	
1230						
1300	30	210	13 1/2	14 1/2	1.0	
1300						
1330	30	240	13 1/2	14 1/2	1.0	
1330						
1400	30	270	13 1/2	14 1/2	1.0	
1400						
1430	30	300	14.0	14 3/4	3/4	
1430						
1500	30	330	14.0	14 3/4	3/4	
1500						
1530	30	360	14.0	14 3/4	3/4	40.0

END

Appendix 4: Historical Site Conditions

Phase I Environmental Site Assessment or Other Information on Past Site Use

Appendix 5: LID Infeasibility

LID Technical Infeasibility Analysis

NOT APPLICABLE

Appendix 6: BMP Design Details

BMP Sizing, Design Details and other Supporting Documentation

- BMP DESIGN CALCULATIONS
- SUPPORTING DOCUMENTS

Santa Ana Watershed - BMP Design Volume, V_{BMP}

(Rev. 10-2011)

Legend: Required Entries / Calculated Cells

*(Note this worksheet shall **only** be used in conjunction with BMP designs from the **LID BMP Design Handbook**)*

Company Name	ADKAN ENGINEERS	Date	11/17/2023
Designed by	Jose Contreras	Case No	GP-2023-17709
Company Project Number/Name	Woodcrest Christian		

BMP Identification

BMP NAME / ID: BIO RETENTION BASIN FOR D-1, OVER-MITIGATION FOR D-2 AND D-3

Must match Name/ID used on BMP Design Calculation Sheet

Design Rainfall Depth

85th Percentile, 24-hour Rainfall Depth, from the Isohyetal Map in Handbook Appendix E

D_{85}= 0.51 inches

Drainage Management Area Tabulation

Insert additional rows if needed to accommodate all DMAs draining to the BMP

DMA Type/ID	DMA Area (square feet)	Post-Project Surface Type	Effective Imperivous Fraction, I_f	DMA Runoff Factor	DMA Areas x Runoff Factor	*Design Storm Depth (in)*	*Design Capture Volume, V_{BMP} (cubic feet)*	*Proposed Volume on Plans (cubic feet)*
D-1.1	*7,232*	*Roofs*	*1*	*0.89*	*6450.9*			
D-1.2	*6,309*	*Concrete or Asphalt*	*1*	*0.89*	*5627.6*			
D-1.3	*6,801*	*Ornamental Landscaping*	*0.1*	*0.11*	*751.2*			
D-2.1	*15,123*	*Roofs*	*1*	*0.89*	*13489.7*			
D-2.2	*5,999*	*Concrete or Asphalt*	*1*	*0.89*	*5351.1*			
D-2.3	*4,309*	*Ornamental Landscaping*	*0.1*	*0.11*	*476*			
D-3.1	*31,027*	*Roofs*	*1*	*0.89*	*27676.1*			
D-3.2	*66,043*	*Concrete or Asphalt*	*1*	*0.89*	*58910.4*			
D-3-3	*28378*	*Ornamental Landscaping*	*0.1*	*0.11*	*3134.6*			
	171221	***Total***			**121867.6**	**0.51**	***5179.4***	***5263***

Notes:

Bioretention Facility - Design Procedure	BMP ID: BIO	Legend:	Required Entries / Calculated Cells

Company Name:	Adkan Engineers	Date:	11-17-23'
Designed by:	Jose Contreras	County/City Case No.:	GP-2023 -17709

Design Volume

Enter the area tributary to this feature	A_T=	3.56	acres
Enter V_{BMP} determined from Section 2.1 of this Handbook	V_{BMP}=	5,179	ft^3

Type of Bioretention Facility Design

- ○ Side slopes required (parallel to parking spaces or adjacent to walkways)
- ◉ No side slopes required (perpendicular to parking space or Planter Boxes)

Bioretention Facility Surface Area

Depth of Soil Filter Media Layer	d_S =	3.0	ft
Top Width of Bioretention Facility, excluding curb	w_T =	5.0	ft
Total Effective Depth, d_E			
$d_E = [(0.3) \times d_S + (0.4) \times 1] + 0.5$	d_E =	1.80	ft
Minimum Surface Area, A_m			
$A_M\,(ft^2) = \frac{V_{BMP}\,(ft^3)}{d_E\,(ft)}$	A_M =	2,878	ft^2
Proposed Surface Area	A=	2,882	ft^2
Minimum Required Length of Bioretention Facility, L	L =	575.6	ft

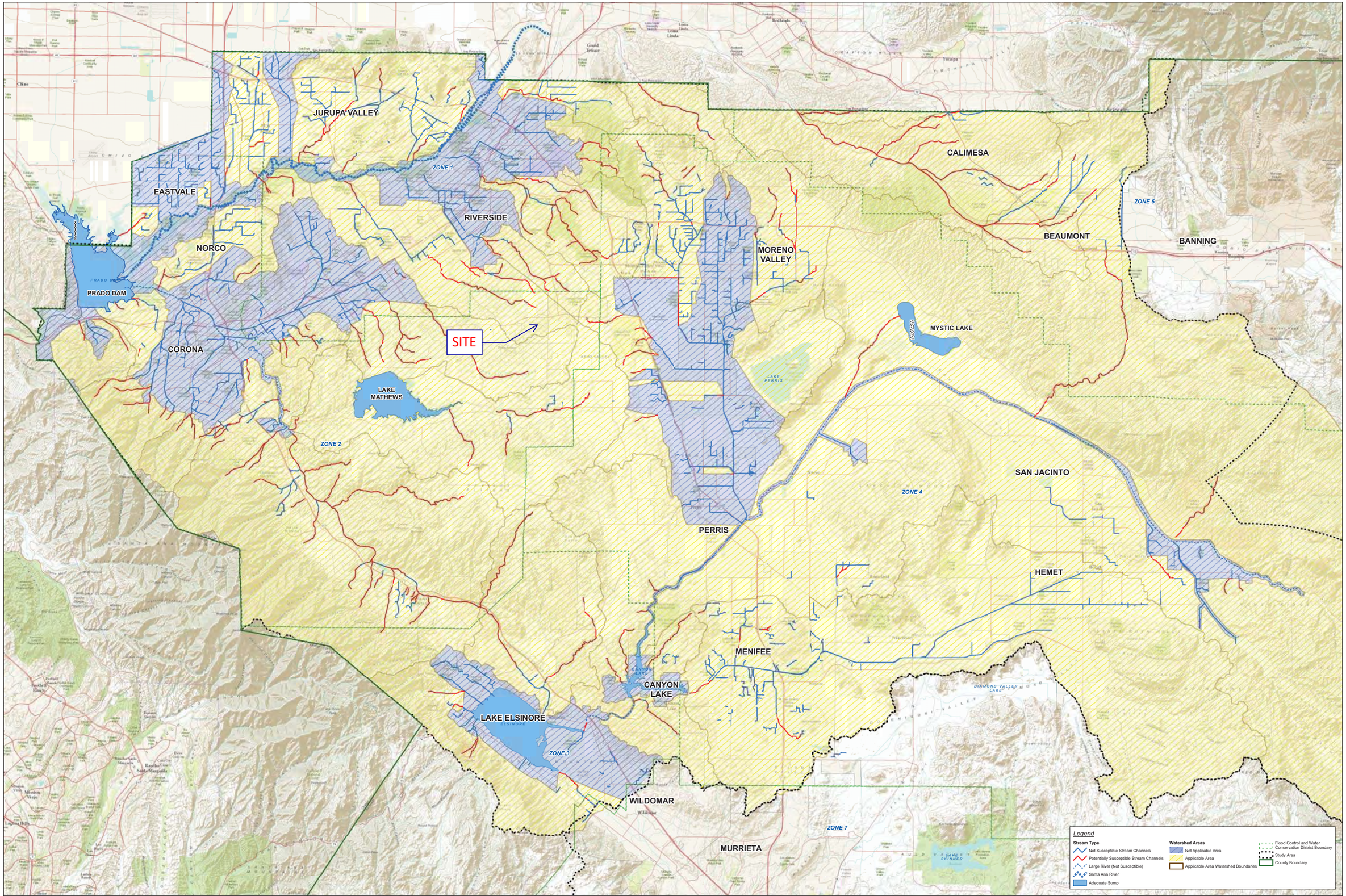
Bioretention Facility Properties

Side Slopes in Bioretention Facility	z =	4	:1
Diameter of Underdrain		6	inches
Longitudinal Slope of Site (3% maximum)		0	%
6" Check Dam Spacing		0	feet
Describe Vegetation:			

Notes:

Appendix 7: Hydromodification

Supporting Detail Relating to Hydrologic Conditions of Concern



RBF CONSULTING GIS

0 1 2 3 4 Miles

HCOC Applicability Map

Hydromodification Susceptibility Documentation Report and Mapping
Riverside County Flood Control and Water Conservation District

Map 2

U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 11/20/23 File: EX2YR242.out

++

Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 5006

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Drainage Area = 3.93(Ac.) = 0.006 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 3.93(Ac.) = 0.006 Sq. Mi.
Length along longest watercourse = 423.00(Ft.)
Length along longest watercourse measured to centroid = 212.00(Ft.)
Length along longest watercourse = 0.080 Mi.
Length along longest watercourse measured to centroid = 0.040 Mi.
Difference in elevation = 20.00(Ft.)
Slope along watercourse = 249.6454 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.014 Hr.
Lag time = 0.85 Min.
25% of lag time = 0.21 Min.
40% of lag time = 0.34 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
3.93	1.60	6.29

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
3.93	4.50	17.69

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.600(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.600(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
3.930	62.50	0.300

Total Area Entered = 3.93(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
62.5	42.5	0.645	0.300	0.471	1.000	0.471
					Sum (F) =	0.471

Area averaged mean soil loss (F) (In/Hr) = 0.471
Minimum soil loss rate ((In/Hr)) = 0.236
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.660

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)

1	0.083	585.049	74.671	2.958
2	0.167	1170.099	25.329	1.003
			Sum = 100.000 Sum=	3.961

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.013	(0.835)	0.008	0.004
2	0.17	0.07	0.013	(0.832)	0.008	0.004
3	0.25	0.07	0.013	(0.829)	0.008	0.004
4	0.33	0.10	0.019	(0.826)	0.013	0.007
5	0.42	0.10	0.019	(0.822)	0.013	0.007
6	0.50	0.10	0.019	(0.819)	0.013	0.007
7	0.58	0.10	0.019	(0.816)	0.013	0.007
8	0.67	0.10	0.019	(0.813)	0.013	0.007
9	0.75	0.10	0.019	(0.810)	0.013	0.007
10	0.83	0.13	0.026	(0.806)	0.017	0.009
11	0.92	0.13	0.026	(0.803)	0.017	0.009
12	1.00	0.13	0.026	(0.800)	0.017	0.009
13	1.08	0.10	0.019	(0.797)	0.013	0.007
14	1.17	0.10	0.019	(0.794)	0.013	0.007
15	1.25	0.10	0.019	(0.791)	0.013	0.007
16	1.33	0.10	0.019	(0.788)	0.013	0.007
17	1.42	0.10	0.019	(0.784)	0.013	0.007
18	1.50	0.10	0.019	(0.781)	0.013	0.007
19	1.58	0.10	0.019	(0.778)	0.013	0.007
20	1.67	0.10	0.019	(0.775)	0.013	0.007
21	1.75	0.10	0.019	(0.772)	0.013	0.007
22	1.83	0.13	0.026	(0.769)	0.017	0.009
23	1.92	0.13	0.026	(0.766)	0.017	0.009
24	2.00	0.13	0.026	(0.763)	0.017	0.009
25	2.08	0.13	0.026	(0.760)	0.017	0.009
26	2.17	0.13	0.026	(0.756)	0.017	0.009
27	2.25	0.13	0.026	(0.753)	0.017	0.009
28	2.33	0.13	0.026	(0.750)	0.017	0.009
29	2.42	0.13	0.026	(0.747)	0.017	0.009
30	2.50	0.13	0.026	(0.744)	0.017	0.009
31	2.58	0.17	0.032	(0.741)	0.021	0.011
32	2.67	0.17	0.032	(0.738)	0.021	0.011
33	2.75	0.17	0.032	(0.735)	0.021	0.011
34	2.83	0.17	0.032	(0.732)	0.021	0.011
35	2.92	0.17	0.032	(0.729)	0.021	0.011
36	3.00	0.17	0.032	(0.726)	0.021	0.011
37	3.08	0.17	0.032	(0.723)	0.021	0.011
38	3.17	0.17	0.032	(0.720)	0.021	0.011
39	3.25	0.17	0.032	(0.717)	0.021	0.011
40	3.33	0.17	0.032	(0.714)	0.021	0.011
41	3.42	0.17	0.032	(0.711)	0.021	0.011
42	3.50	0.17	0.032	(0.708)	0.021	0.011
43	3.58	0.17	0.032	(0.705)	0.021	0.011
44	3.67	0.17	0.032	(0.702)	0.021	0.011
45	3.75	0.17	0.032	(0.699)	0.021	0.011
46	3.83	0.20	0.038	(0.696)	0.025	0.013
47	3.92	0.20	0.038	(0.693)	0.025	0.013
48	4.00	0.20	0.038	(0.690)	0.025	0.013
49	4.08	0.20	0.038	(0.687)	0.025	0.013
50	4.17	0.20	0.038	(0.685)	0.025	0.013
51	4.25	0.20	0.038	(0.682)	0.025	0.013
52	4.33	0.23	0.045	(0.679)	0.030	0.015
53	4.42	0.23	0.045	(0.676)	0.030	0.015
54	4.50	0.23	0.045	(0.673)	0.030	0.015
55	4.58	0.23	0.045	(0.670)	0.030	0.015
56	4.67	0.23	0.045	(0.667)	0.030	0.015
57	4.75	0.23	0.045	(0.664)	0.030	0.015
58	4.83	0.27	0.051	(0.661)	0.034	0.017
59	4.92	0.27	0.051	(0.659)	0.034	0.017
60	5.00	0.27	0.051	(0.656)	0.034	0.017
61	5.08	0.20	0.038	(0.653)	0.025	0.013
62	5.17	0.20	0.038	(0.650)	0.025	0.013
63	5.25	0.20	0.038	(0.647)	0.025	0.013
64	5.33	0.23	0.045	(0.644)	0.030	0.015
65	5.42	0.23	0.045	(0.642)	0.030	0.015
66	5.50	0.23	0.045	(0.639)	0.030	0.015
67	5.58	0.27	0.051	(0.636)	0.034	0.017
68	5.67	0.27	0.051	(0.633)	0.034	0.017
69	5.75	0.27	0.051	(0.630)	0.034	0.017
70	5.83	0.27	0.051	(0.628)	0.034	0.017
71	5.92	0.27	0.051	(0.625)	0.034	0.017
72	6.00	0.27	0.051	(0.622)	0.034	0.017
73	6.08	0.30	0.058	(0.619)	0.038	0.020
74	6.17	0.30	0.058	(0.616)	0.038	0.020

75	6.25	0.30	0.058	(0.614)	0.038	0.020
76	6.33	0.30	0.058	(0.611)	0.038	0.020
77	6.42	0.30	0.058	(0.608)	0.038	0.020
78	6.50	0.30	0.058	(0.606)	0.038	0.020
79	6.58	0.33	0.064	(0.603)	0.042	0.022
80	6.67	0.33	0.064	(0.600)	0.042	0.022
81	6.75	0.33	0.064	(0.597)	0.042	0.022
82	6.83	0.33	0.064	(0.595)	0.042	0.022
83	6.92	0.33	0.064	(0.592)	0.042	0.022
84	7.00	0.33	0.064	(0.589)	0.042	0.022
85	7.08	0.33	0.064	(0.587)	0.042	0.022
86	7.17	0.33	0.064	(0.584)	0.042	0.022
87	7.25	0.33	0.064	(0.581)	0.042	0.022
88	7.33	0.37	0.070	(0.579)	0.046	0.024
89	7.42	0.37	0.070	(0.576)	0.046	0.024
90	7.50	0.37	0.070	(0.573)	0.046	0.024
91	7.58	0.40	0.077	(0.571)	0.051	0.026
92	7.67	0.40	0.077	(0.568)	0.051	0.026
93	7.75	0.40	0.077	(0.565)	0.051	0.026
94	7.83	0.43	0.083	(0.563)	0.055	0.028
95	7.92	0.43	0.083	(0.560)	0.055	0.028
96	8.00	0.43	0.083	(0.558)	0.055	0.028
97	8.08	0.50	0.096	(0.555)	0.063	0.033
98	8.17	0.50	0.096	(0.552)	0.063	0.033
99	8.25	0.50	0.096	(0.550)	0.063	0.033
100	8.33	0.50	0.096	(0.547)	0.063	0.033
101	8.42	0.50	0.096	(0.545)	0.063	0.033
102	8.50	0.50	0.096	(0.542)	0.063	0.033
103	8.58	0.53	0.102	(0.540)	0.068	0.035
104	8.67	0.53	0.102	(0.537)	0.068	0.035
105	8.75	0.53	0.102	(0.535)	0.068	0.035
106	8.83	0.57	0.109	(0.532)	0.072	0.037
107	8.92	0.57	0.109	(0.530)	0.072	0.037
108	9.00	0.57	0.109	(0.527)	0.072	0.037
109	9.08	0.63	0.122	(0.525)	0.080	0.041
110	9.17	0.63	0.122	(0.522)	0.080	0.041
111	9.25	0.63	0.122	(0.520)	0.080	0.041
112	9.33	0.67	0.128	(0.517)	0.084	0.044
113	9.42	0.67	0.128	(0.515)	0.084	0.044
114	9.50	0.67	0.128	(0.512)	0.084	0.044
115	9.58	0.70	0.134	(0.510)	0.089	0.046
116	9.67	0.70	0.134	(0.507)	0.089	0.046
117	9.75	0.70	0.134	(0.505)	0.089	0.046
118	9.83	0.73	0.141	(0.502)	0.093	0.048
119	9.92	0.73	0.141	(0.500)	0.093	0.048
120	10.00	0.73	0.141	(0.498)	0.093	0.048
121	10.08	0.50	0.096	(0.495)	0.063	0.033
122	10.17	0.50	0.096	(0.493)	0.063	0.033
123	10.25	0.50	0.096	(0.490)	0.063	0.033
124	10.33	0.50	0.096	(0.488)	0.063	0.033
125	10.42	0.50	0.096	(0.486)	0.063	0.033
126	10.50	0.50	0.096	(0.483)	0.063	0.033
127	10.58	0.67	0.128	(0.481)	0.084	0.044
128	10.67	0.67	0.128	(0.479)	0.084	0.044
129	10.75	0.67	0.128	(0.476)	0.084	0.044
130	10.83	0.67	0.128	(0.474)	0.084	0.044
131	10.92	0.67	0.128	(0.472)	0.084	0.044
132	11.00	0.67	0.128	(0.469)	0.084	0.044
133	11.08	0.63	0.122	(0.467)	0.080	0.041
134	11.17	0.63	0.122	(0.465)	0.080	0.041
135	11.25	0.63	0.122	(0.462)	0.080	0.041
136	11.33	0.63	0.122	(0.460)	0.080	0.041
137	11.42	0.63	0.122	(0.458)	0.080	0.041
138	11.50	0.63	0.122	(0.456)	0.080	0.041
139	11.58	0.57	0.109	(0.453)	0.072	0.037
140	11.67	0.57	0.109	(0.451)	0.072	0.037
141	11.75	0.57	0.109	(0.449)	0.072	0.037
142	11.83	0.60	0.115	(0.447)	0.076	0.039
143	11.92	0.60	0.115	(0.444)	0.076	0.039
144	12.00	0.60	0.115	(0.442)	0.076	0.039
145	12.08	0.83	0.160	(0.440)	0.106	0.054
146	12.17	0.83	0.160	(0.438)	0.106	0.054
147	12.25	0.83	0.160	(0.435)	0.106	0.054
148	12.33	0.87	0.166	(0.433)	0.110	0.057
149	12.42	0.87	0.166	(0.431)	0.110	0.057
150	12.50	0.87	0.166	(0.429)	0.110	0.057
151	12.58	0.93	0.179	(0.427)	0.118	0.061
152	12.67	0.93	0.179	(0.425)	0.118	0.061
153	12.75	0.93	0.179	(0.422)	0.118	0.061
154	12.83	0.97	0.186	(0.420)	0.122	0.063
155	12.92	0.97	0.186	(0.418)	0.122	0.063
156	13.00	0.97	0.186	(0.416)	0.122	0.063
157	13.08	1.13	0.218	(0.414)	0.144	0.074
158	13.17	1.13	0.218	(0.412)	0.144	0.074
159	13.25	1.13	0.218	(0.410)	0.144	0.074
160	13.33	1.13	0.218	(0.408)	0.144	0.074

161	13.42	1.13	0.218	(0.406)	0.144	0.074
162	13.50	1.13	0.218	(0.404)	0.144	0.074
163	13.58	0.77	0.147	(0.402)	0.097	0.050
164	13.67	0.77	0.147	(0.400)	0.097	0.050
165	13.75	0.77	0.147	(0.397)	0.097	0.050
166	13.83	0.77	0.147	(0.395)	0.097	0.050
167	13.92	0.77	0.147	(0.393)	0.097	0.050
168	14.00	0.77	0.147	(0.391)	0.097	0.050
169	14.08	0.90	0.173	(0.389)	0.114	0.059
170	14.17	0.90	0.173	(0.387)	0.114	0.059
171	14.25	0.90	0.173	(0.385)	0.114	0.059
172	14.33	0.87	0.166	(0.383)	0.110	0.057
173	14.42	0.87	0.166	(0.382)	0.110	0.057
174	14.50	0.87	0.166	(0.380)	0.110	0.057
175	14.58	0.87	0.166	(0.378)	0.110	0.057
176	14.67	0.87	0.166	(0.376)	0.110	0.057
177	14.75	0.87	0.166	(0.374)	0.110	0.057
178	14.83	0.83	0.160	(0.372)	0.106	0.054
179	14.92	0.83	0.160	(0.370)	0.106	0.054
180	15.00	0.83	0.160	(0.368)	0.106	0.054
181	15.08	0.80	0.154	(0.366)	0.101	0.052
182	15.17	0.80	0.154	(0.364)	0.101	0.052
183	15.25	0.80	0.154	(0.362)	0.101	0.052
184	15.33	0.77	0.147	(0.361)	0.097	0.050
185	15.42	0.77	0.147	(0.359)	0.097	0.050
186	15.50	0.77	0.147	(0.357)	0.097	0.050
187	15.58	0.63	0.122	(0.355)	0.080	0.041
188	15.67	0.63	0.122	(0.353)	0.080	0.041
189	15.75	0.63	0.122	(0.351)	0.080	0.041
190	15.83	0.63	0.122	(0.350)	0.080	0.041
191	15.92	0.63	0.122	(0.348)	0.080	0.041
192	16.00	0.63	0.122	(0.346)	0.080	0.041
193	16.08	0.13	0.026	(0.344)	0.017	0.009
194	16.17	0.13	0.026	(0.343)	0.017	0.009
195	16.25	0.13	0.026	(0.341)	0.017	0.009
196	16.33	0.13	0.026	(0.339)	0.017	0.009
197	16.42	0.13	0.026	(0.337)	0.017	0.009
198	16.50	0.13	0.026	(0.336)	0.017	0.009
199	16.58	0.10	0.019	(0.334)	0.013	0.007
200	16.67	0.10	0.019	(0.332)	0.013	0.007
201	16.75	0.10	0.019	(0.330)	0.013	0.007
202	16.83	0.10	0.019	(0.329)	0.013	0.007
203	16.92	0.10	0.019	(0.327)	0.013	0.007
204	17.00	0.10	0.019	(0.325)	0.013	0.007
205	17.08	0.17	0.032	(0.324)	0.021	0.011
206	17.17	0.17	0.032	(0.322)	0.021	0.011
207	17.25	0.17	0.032	(0.321)	0.021	0.011
208	17.33	0.17	0.032	(0.319)	0.021	0.011
209	17.42	0.17	0.032	(0.317)	0.021	0.011
210	17.50	0.17	0.032	(0.316)	0.021	0.011
211	17.58	0.17	0.032	(0.314)	0.021	0.011
212	17.67	0.17	0.032	(0.313)	0.021	0.011
213	17.75	0.17	0.032	(0.311)	0.021	0.011
214	17.83	0.13	0.026	(0.310)	0.017	0.009
215	17.92	0.13	0.026	(0.308)	0.017	0.009
216	18.00	0.13	0.026	(0.306)	0.017	0.009
217	18.08	0.13	0.026	(0.305)	0.017	0.009
218	18.17	0.13	0.026	(0.303)	0.017	0.009
219	18.25	0.13	0.026	(0.302)	0.017	0.009
220	18.33	0.13	0.026	(0.301)	0.017	0.009
221	18.42	0.13	0.026	(0.299)	0.017	0.009
222	18.50	0.13	0.026	(0.298)	0.017	0.009
223	18.58	0.10	0.019	(0.296)	0.013	0.007
224	18.67	0.10	0.019	(0.295)	0.013	0.007
225	18.75	0.10	0.019	(0.293)	0.013	0.007
226	18.83	0.07	0.013	(0.292)	0.008	0.004
227	18.92	0.07	0.013	(0.291)	0.008	0.004
228	19.00	0.07	0.013	(0.289)	0.008	0.004
229	19.08	0.10	0.019	(0.288)	0.013	0.007
230	19.17	0.10	0.019	(0.286)	0.013	0.007
231	19.25	0.10	0.019	(0.285)	0.013	0.007
232	19.33	0.13	0.026	(0.284)	0.017	0.009
233	19.42	0.13	0.026	(0.282)	0.017	0.009
234	19.50	0.13	0.026	(0.281)	0.017	0.009
235	19.58	0.10	0.019	(0.280)	0.013	0.007
236	19.67	0.10	0.019	(0.279)	0.013	0.007
237	19.75	0.10	0.019	(0.277)	0.013	0.007
238	19.83	0.07	0.013	(0.276)	0.008	0.004
239	19.92	0.07	0.013	(0.275)	0.008	0.004
240	20.00	0.07	0.013	(0.274)	0.008	0.004
241	20.08	0.10	0.019	(0.272)	0.013	0.007
242	20.17	0.10	0.019	(0.271)	0.013	0.007
243	20.25	0.10	0.019	(0.270)	0.013	0.007
244	20.33	0.10	0.019	(0.269)	0.013	0.007
245	20.42	0.10	0.019	(0.268)	0.013	0.007
246	20.50	0.10	0.019	(0.267)	0.013	0.007

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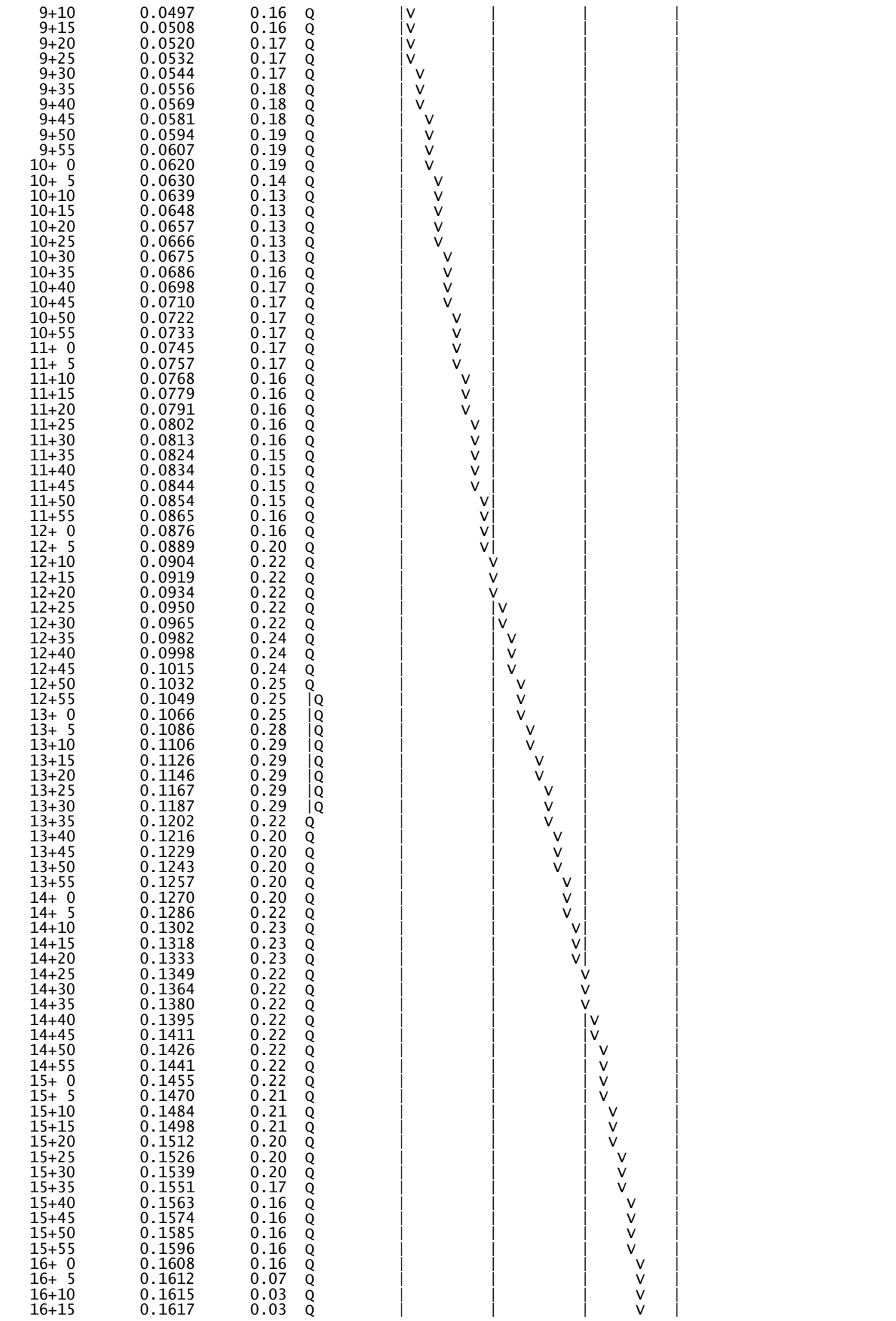
247  20.58     0.10      0.019       (  0.265)       0.013        0.007
248  20.67     0.10      0.019       (  0.264)       0.013        0.007
249  20.75     0.10      0.019       (  0.263)       0.013        0.007
250  20.83     0.07      0.013       (  0.262)       0.008        0.004
251  20.92     0.07      0.013       (  0.261)       0.008        0.004
252  21.00     0.07      0.013       (  0.260)       0.008        0.004
253  21.08     0.10      0.019       (  0.259)       0.013        0.007
254  21.17     0.10      0.019       (  0.258)       0.013        0.007
255  21.25     0.10      0.019       (  0.257)       0.013        0.007
256  21.33     0.07      0.013       (  0.256)       0.008        0.004
257  21.42     0.07      0.013       (  0.255)       0.008        0.004
258  21.50     0.07      0.013       (  0.254)       0.008        0.004
259  21.58     0.10      0.019       (  0.253)       0.013        0.007
260  21.67     0.10      0.019       (  0.252)       0.013        0.007
261  21.75     0.10      0.019       (  0.251)       0.013        0.007
262  21.83     0.07      0.013       (  0.251)       0.008        0.004
263  21.92     0.07      0.013       (  0.250)       0.008        0.004
264  22.00     0.07      0.013       (  0.249)       0.008        0.004
265  22.08     0.10      0.019       (  0.248)       0.013        0.007
266  22.17     0.10      0.019       (  0.247)       0.013        0.007
267  22.25     0.10      0.019       (  0.246)       0.013        0.007
268  22.33     0.07      0.013       (  0.246)       0.008        0.004
269  22.42     0.07      0.013       (  0.245)       0.008        0.004
270  22.50     0.07      0.013       (  0.244)       0.008        0.004
271  22.58     0.07      0.013       (  0.243)       0.008        0.004
272  22.67     0.07      0.013       (  0.243)       0.008        0.004
273  22.75     0.07      0.013       (  0.242)       0.008        0.004
274  22.83     0.07      0.013       (  0.241)       0.008        0.004
275  22.92     0.07      0.013       (  0.241)       0.008        0.004
276  23.00     0.07      0.013       (  0.240)       0.008        0.004
277  23.08     0.07      0.013       (  0.240)       0.008        0.004
278  23.17     0.07      0.013       (  0.239)       0.008        0.004
279  23.25     0.07      0.013       (  0.239)       0.008        0.004
280  23.33     0.07      0.013       (  0.238)       0.008        0.004
281  23.42     0.07      0.013       (  0.238)       0.008        0.004
282  23.50     0.07      0.013       (  0.237)       0.008        0.004
283  23.58     0.07      0.013       (  0.237)       0.008        0.004
284  23.67     0.07      0.013       (  0.237)       0.008        0.004
285  23.75     0.07      0.013       (  0.236)       0.008        0.004
286  23.83     0.07      0.013       (  0.236)       0.008        0.004
287  23.92     0.07      0.013       (  0.236)       0.008        0.004
288  24.00     0.07      0.013       (  0.236)       0.008        0.004
               (Loss Rate Not Used)
    Sum =     100.0                                  Sum =     6.5
      Flood volume = Effective rainfall      0.54(In)
       times area       3.9(Ac.)/[(In)/(Ft.)] =       0.2(Ac.Ft)
      Total soil loss =      1.06(In)
      Total soil loss =     0.346(Ac.Ft)
      Total rainfall =      1.60(In)
      Flood volume =        7760.6 Cubic Feet
      Total soil loss =       15064.7 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      0.293(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
      ---------------------------------------------------------------------
                 Hydrograph in   5   Minute intervals ((CFS))

      ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0001      0.01  Q          |         |         |         |
   0+10       0.0002      0.02  Q          |         |         |         |
   0+15       0.0003      0.02  Q          |         |         |         |
   0+20       0.0005      0.02  Q          |         |         |         |
   0+25       0.0007      0.03  Q          |         |         |         |
   0+30       0.0008      0.03  Q          |         |         |         |
   0+35       0.0010      0.03  Q          |         |         |         |
   0+40       0.0012      0.03  Q          |         |         |         |
   0+45       0.0014      0.03  Q          |         |         |         |
   0+50       0.0016      0.03  Q          |         |         |         |
   0+55       0.0018      0.03  Q          |         |         |         |
   1+ 0       0.0021      0.03  Q          |         |         |         |
   1+ 5       0.0023      0.03  Q          |         |         |         |
   1+10       0.0024      0.03  Q          |         |         |         |
   1+15       0.0026      0.03  Q          |         |         |         |
   1+20       0.0028      0.03  Q          |         |         |         |
   1+25       0.0030      0.03  Q          |         |         |         |
   1+30       0.0032      0.03  Q          |         |         |         |
   1+35       0.0033      0.03  Q          |         |         |         |
   1+40       0.0035      0.03  Q          |         |         |         |
   1+45       0.0037      0.03  Q          |         |         |         |
   1+50       0.0039      0.03  Q          |         |         |         |
   1+55       0.0042      0.03  Q          |         |         |         |
```

```
2+ 0       0.0044      0.03  Q          |          |          |          |
2+ 5       0.0046      0.03  QV         |          |          |          |
2+10       0.0049      0.03  QV         |          |          |          |
2+15       0.0051      0.03  QV         |          |          |          |
2+20       0.0053      0.03  QV         |          |          |          |
2+25       0.0056      0.03  QV         |          |          |          |
2+30       0.0058      0.03  QV         |          |          |          |
2+35       0.0061      0.04  QV         |          |          |          |
2+40       0.0064      0.04  QV         |          |          |          |
2+45       0.0067      0.04  QV         |          |          |          |
2+50       0.0070      0.04  QV         |          |          |          |
2+55       0.0073      0.04  QV         |          |          |          |
3+ 0       0.0076      0.04  QV         |          |          |          |
3+ 5       0.0079      0.04  QV         |          |          |          |
3+10       0.0082      0.04  QV         |          |          |          |
3+15       0.0085      0.04  QV         |          |          |          |
3+20       0.0088      0.04  QV         |          |          |          |
3+25       0.0091      0.04  Q V        |          |          |          |
3+30       0.0094      0.04  Q V        |          |          |          |
3+35       0.0097      0.04  Q V        |          |          |          |
3+40       0.0100      0.04  Q V        |          |          |          |
3+45       0.0103      0.04  Q V        |          |          |          |
3+50       0.0106      0.05  Q V        |          |          |          |
3+55       0.0110      0.05  Q V        |          |          |          |
4+ 0       0.0113      0.05  Q V        |          |          |          |
4+ 5       0.0117      0.05  Q V        |          |          |          |
4+10       0.0120      0.05  Q V        |          |          |          |
4+15       0.0124      0.05  Q V        |          |          |          |
4+20       0.0128      0.06  Q V        |          |          |          |
4+25       0.0132      0.06  Q V        |          |          |          |
4+30       0.0136      0.06  Q  V       |          |          |          |
4+35       0.0140      0.06  Q  V       |          |          |          |
4+40       0.0144      0.06  Q  V       |          |          |          |
4+45       0.0149      0.06  Q  V       |          |          |          |
4+50       0.0153      0.07  Q  V       |          |          |          |
4+55       0.0158      0.07  Q  V       |          |          |          |
5+ 0       0.0163      0.07  Q  V       |          |          |          |
5+ 5       0.0167      0.06  Q  V       |          |          |          |
5+10       0.0170      0.05  Q  V       |          |          |          |
5+15       0.0174      0.05  Q  V       |          |          |          |
5+20       0.0178      0.06  Q  V       |          |          |          |
5+25       0.0182      0.06  Q   V      |          |          |          |
5+30       0.0186      0.06  Q   V      |          |          |          |
5+35       0.0191      0.07  Q   V      |          |          |          |
5+40       0.0195      0.07  Q   V      |          |          |          |
5+45       0.0200      0.07  Q   V      |          |          |          |
5+50       0.0205      0.07  Q   V      |          |          |          |
5+55       0.0210      0.07  Q   V      |          |          |          |
6+ 0       0.0214      0.07  Q   V      |          |          |          |
6+ 5       0.0220      0.08  Q   V      |          |          |          |
6+10       0.0225      0.08  Q    V     |          |          |          |
6+15       0.0230      0.08  Q    V     |          |          |          |
6+20       0.0236      0.08  Q    V     |          |          |          |
6+25       0.0241      0.08  Q    V     |          |          |          |
6+30       0.0246      0.08  Q    V     |          |          |          |
6+35       0.0252      0.08  Q    V     |          |          |          |
6+40       0.0258      0.09  Q    V     |          |          |          |
6+45       0.0264      0.09  Q    V     |          |          |          |
6+50       0.0270      0.09  Q     V    |          |          |          |
6+55       0.0276      0.09  Q     V    |          |          |          |
7+ 0       0.0282      0.09  Q     V    |          |          |          |
7+ 5       0.0288      0.09  Q     V    |          |          |          |
7+10       0.0294      0.09  Q     V    |          |          |          |
7+15       0.0300      0.09  Q     V    |          |          |          |
7+20       0.0306      0.09  Q     V    |          |          |          |
7+25       0.0312      0.09  Q      V   |          |          |          |
7+30       0.0319      0.09  Q      V   |          |          |          |
7+35       0.0326      0.10  Q      V   |          |          |          |
7+40       0.0333      0.10  Q      V   |          |          |          |
7+45       0.0340      0.10  Q      V   |          |          |          |
7+50       0.0348      0.11  Q      V   |          |          |          |
7+55       0.0356      0.11  Q      V   |          |          |          |
8+ 0       0.0363      0.11  Q       V  |          |          |          |
8+ 5       0.0372      0.12  Q       V  |          |          |          |
8+10       0.0381      0.13  Q       V  |          |          |          |
8+15       0.0390      0.13  Q       V  |          |          |          |
8+20       0.0399      0.13  Q       V  |          |          |          |
8+25       0.0408      0.13  Q        V |          |          |          |
8+30       0.0416      0.13  Q        V |          |          |          |
8+35       0.0426      0.14  Q        V |          |          |          |
8+40       0.0435      0.14  Q        V |          |          |          |
8+45       0.0445      0.14  Q        V |          |          |          |
8+50       0.0455      0.14  Q         V          |          |          |
8+55       0.0465      0.15  Q         V          |          |          |
9+ 0       0.0475      0.15  Q         V          |          |          |
9+ 5       0.0486      0.16  Q         V          |          |          |
```



9+10	0.0497	0.16	Q	V
9+15	0.0508	0.16	Q	V
9+20	0.0520	0.17	Q	V
9+25	0.0532	0.17	Q	V
9+30	0.0544	0.17	Q	V
9+35	0.0556	0.18	Q	V
9+40	0.0569	0.18	Q	V
9+45	0.0581	0.18	Q	V
9+50	0.0594	0.19	Q	V
9+55	0.0607	0.19	Q	V
10+ 0	0.0620	0.19	Q	V
10+ 5	0.0630	0.14	Q	V
10+10	0.0639	0.13	Q	V
10+15	0.0648	0.13	Q	V
10+20	0.0657	0.13	Q	V
10+25	0.0666	0.13	Q	V
10+30	0.0675	0.13	Q	V
10+35	0.0686	0.16	Q	V
10+40	0.0698	0.17	Q	V
10+45	0.0710	0.17	Q	V
10+50	0.0722	0.17	Q	V
10+55	0.0733	0.17	Q	V
11+ 0	0.0745	0.17	Q	V
11+ 5	0.0757	0.17	Q	V
11+10	0.0768	0.16	Q	V
11+15	0.0779	0.16	Q	V
11+20	0.0791	0.16	Q	V
11+25	0.0802	0.16	Q	V
11+30	0.0813	0.16	Q	V
11+35	0.0824	0.15	Q	V
11+40	0.0834	0.15	Q	V
11+45	0.0844	0.15	Q	V
11+50	0.0854	0.15	Q	V
11+55	0.0865	0.16	Q	V
12+ 0	0.0876	0.16	Q	V
12+ 5	0.0889	0.20	Q	V
12+10	0.0904	0.22	Q	V
12+15	0.0919	0.22	Q	V
12+20	0.0934	0.22	Q	V
12+25	0.0950	0.22	Q	V
12+30	0.0965	0.22	Q	V
12+35	0.0982	0.24	Q	V
12+40	0.0998	0.24	Q	V
12+45	0.1015	0.24	Q	V
12+50	0.1032	0.25	Q	V
12+55	0.1049	0.25	Q	V
13+ 0	0.1066	0.25	Q	V
13+ 5	0.1086	0.28	Q	V
13+10	0.1106	0.29	Q	V
13+15	0.1126	0.29	Q	V
13+20	0.1146	0.29	Q	V
13+25	0.1167	0.29	Q	V
13+30	0.1187	0.29	Q	V
13+35	0.1202	0.22	Q	V
13+40	0.1216	0.20	Q	V
13+45	0.1229	0.20	Q	V
13+50	0.1243	0.20	Q	V
13+55	0.1257	0.20	Q	V
14+ 0	0.1270	0.20	Q	V
14+ 5	0.1286	0.22	Q	V
14+10	0.1302	0.23	Q	V
14+15	0.1318	0.23	Q	V
14+20	0.1333	0.23	Q	V
14+25	0.1349	0.22	Q	V
14+30	0.1364	0.22	Q	V
14+35	0.1380	0.22	Q	V
14+40	0.1395	0.22	Q	V
14+45	0.1411	0.22	Q	V
14+50	0.1426	0.22	Q	V
14+55	0.1441	0.22	Q	V
15+ 0	0.1455	0.22	Q	V
15+ 5	0.1470	0.21	Q	V
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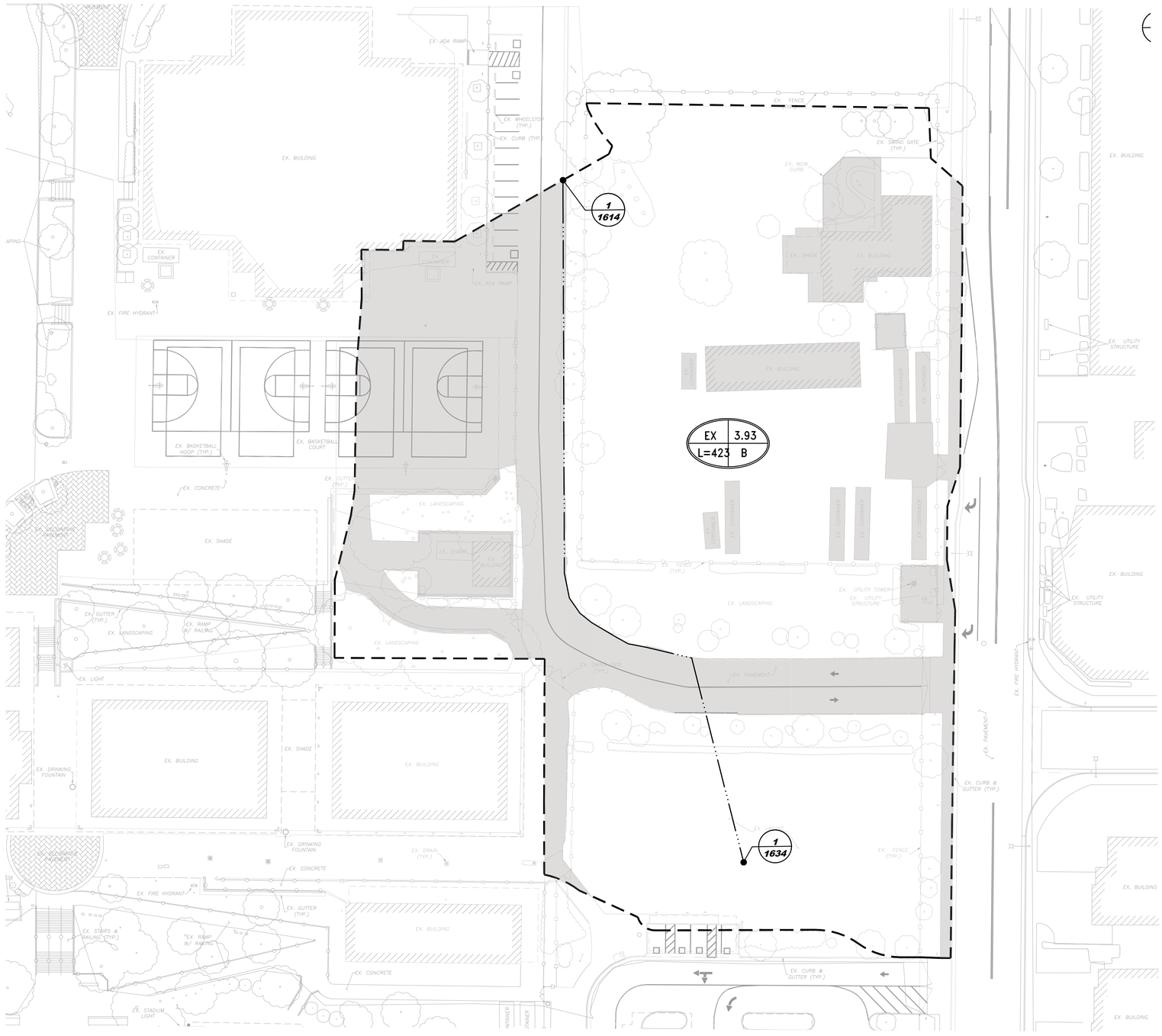
15+15	0.1498	0.21	Q	V
15+20	0.1512	0.20	Q	V
15+25	0.1526	0.20	Q	V
15+30	0.1539	0.20	Q	V
15+35	0.1551	0.17	Q	V
15+40	0.1563	0.16	Q	V
15+45	0.1574	0.16	Q	V
15+50	0.1585	0.16	Q	V
15+55	0.1596	0.16	Q	V
16+ 0	0.1608	0.16	Q	V
16+ 5	0.1612	0.07	Q	V
16+10	0.1615	0.03	Q	V
16+15	0.1617	0.03	Q	V

16+20	0.1619	0.03	Q				V
16+25	0.1622	0.03	Q				V
16+30	0.1624	0.03	Q				V
16+35	0.1626	0.03	Q				V
16+40	0.1628	0.03	Q				V
16+45	0.1630	0.03	Q				V
16+50	0.1631	0.03	Q				V
16+55	0.1633	0.03	Q				V
17+ 0	0.1635	0.03	Q				V
17+ 5	0.1638	0.04	Q				V
17+10	0.1641	0.04	Q				V
17+15	0.1644	0.04	Q				V
17+20	0.1647	0.04	Q				V
17+25	0.1650	0.04	Q				V
17+30	0.1653	0.04	Q				V
17+35	0.1656	0.04	Q				V
17+40	0.1658	0.04	Q				V
17+45	0.1661	0.04	Q				V
17+50	0.1664	0.04	Q				V
17+55	0.1666	0.03	Q				V
18+ 0	0.1669	0.03	Q				V
18+ 5	0.1671	0.03	Q				V
18+10	0.1673	0.03	Q				V
18+15	0.1676	0.03	Q				V
18+20	0.1678	0.03	Q				V
18+25	0.1681	0.03	Q				V
18+30	0.1683	0.03	Q				V
18+35	0.1685	0.03	Q				V
18+40	0.1687	0.03	Q				V
18+45	0.1688	0.03	Q				V
18+50	0.1690	0.02	Q				V
18+55	0.1691	0.02	Q				V
19+ 0	0.1692	0.02	Q				V
19+ 5	0.1694	0.02	Q				V
19+10	0.1696	0.03	Q				V
19+15	0.1697	0.03	Q				V
19+20	0.1700	0.03	Q				V
19+25	0.1702	0.03	Q				V
19+30	0.1704	0.03	Q				V
19+35	0.1706	0.03	Q				V
19+40	0.1708	0.03	Q				V
19+45	0.1710	0.03	Q				V
19+50	0.1711	0.02	Q				V
19+55	0.1712	0.02	Q				V
20+ 0	0.1714	0.02	Q				V
20+ 5	0.1715	0.02	Q				V
20+10	0.1717	0.03	Q				V
20+15	0.1719	0.03	Q				V
20+20	0.1721	0.03	Q				V
20+25	0.1722	0.03	Q				V
20+30	0.1724	0.03	Q				V
20+35	0.1726	0.03	Q				V
20+40	0.1728	0.03	Q				V
20+45	0.1729	0.03	Q				V
20+50	0.1731	0.02	Q				V
20+55	0.1732	0.02	Q				V
21+ 0	0.1733	0.02	Q				V
21+ 5	0.1735	0.02	Q				V
21+10	0.1737	0.03	Q				V
21+15	0.1738	0.03	Q				V
21+20	0.1740	0.02	Q				V
21+25	0.1741	0.02	Q				V
21+30	0.1742	0.02	Q				V
21+35	0.1744	0.02	Q				V
21+40	0.1746	0.03	Q				V
21+45	0.1747	0.03	Q				V
21+50	0.1749	0.02	Q				V
21+55	0.1750	0.02	Q				V
22+ 0	0.1751	0.02	Q				V
22+ 5	0.1753	0.02	Q				V
22+10	0.1754	0.03	Q				V
22+15	0.1756	0.03	Q				V
22+20	0.1758	0.02	Q				V
22+25	0.1759	0.02	Q				V
22+30	0.1760	0.02	Q				V
22+35	0.1761	0.02	Q				V
22+40	0.1762	0.02	Q				V
22+45	0.1763	0.02	Q				V
22+50	0.1765	0.02	Q				V
22+55	0.1766	0.02	Q				V
23+ 0	0.1767	0.02	Q				V
23+ 5	0.1768	0.02	Q				V
23+10	0.1769	0.02	Q				V
23+15	0.1771	0.02	Q				V
23+20	0.1772	0.02	Q				V
23+25	0.1773	0.02	Q				V

```
   23+30       0.1774      0.02  Q          |          |          |        v|
   23+35       0.1775      0.02  Q          |          |          |        v|
   23+40       0.1777      0.02  Q          |          |          |        v|
   23+45       0.1778      0.02  Q          |          |          |        v|
   23+50       0.1779      0.02  Q          |          |          |        v|
   23+55       0.1780      0.02  Q          |          |          |        v|
   24+ 0       0.1781      0.02  Q          |          |          |        v|
   24+ 5       0.1782      0.00  Q          |          |          |        v|
-------------------------------------------------------------------------
```

EXISTING UNIT HYDROGRAPH MAP
WOODCREST CHRISTIAN


EX. ADA RAMP
EX. WHEELSTOP (TYP.)
EX. CURB (TYP.)
EX. BUILDING
EX. FENCE
EX. SWING GATE (TYP.)
EX. MOW CURB
EX. SHADE
EX. BUILDING
EX. UTILITY STRUCTURE
EX. CONTAINER
EX. FIRE HYDRANT
EX. ADA RAMP
EX. BUILDING
EX. BASKETBALL HOOP (TYP.)
EX. BASKETBALL COURT
EX. CONCRETE
EX. GUTTER (TYP.)
EX. LANDSCAPING
EX. SHADE
EX. BUILDING
EX. CONTAINER
EX. CONTAINER
EX. CONTAINER

U n i t H y d r o g r a p h A n a l y s i s

Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2008, Version 8.1
Study date 11/20/23 File: pro2yr242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 5006

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

Drainage Area = 3.93(Ac.) = 0.006 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 3.93(Ac.) = 0.006 Sq. Mi.
Length along longest watercourse = 494.00(Ft.)
Length along longest watercourse measured to centroid = 247.00(Ft.)
Length along longest watercourse = 0.094 Mi.
Length along longest watercourse measured to centroid = 0.047 Mi.
Difference in elevation = 18.37(Ft.)
Slope along watercourse = 196.3433 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.017 Hr.
Lag time = 1.01 Min.
25% of lag time = 0.25 Min.
40% of lag time = 0.40 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
3.93	1.60	6.29

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
3.93	4.50	17.69

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.500(In)

Point rain (area averaged) = 1.600(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.600(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
3.930	62.50	0.800

Total Area Entered = 3.93(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
62.5	42.5	0.645	0.800	0.181	1.000	0.181
					Sum (F) =	0.181

Area averaged mean soil loss (F) (In/Hr) = 0.181
Minimum soil loss rate ((In/Hr)) = 0.090
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.260

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)

1	0.083	497.222	70.784		2.804
2	0.167	994.443	29.216		1.157
			Sum = 100.000	Sum=	3.961

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.013	(0.320)	0.003	0.009
2	0.17	0.07	0.013	(0.319)	0.003	0.009
3	0.25	0.07	0.013	(0.318)	0.003	0.009
4	0.33	0.10	0.019	(0.317)	0.005	0.014
5	0.42	0.10	0.019	(0.315)	0.005	0.014
6	0.50	0.10	0.019	(0.314)	0.005	0.014
7	0.58	0.10	0.019	(0.313)	0.005	0.014
8	0.67	0.10	0.019	(0.312)	0.005	0.014
9	0.75	0.10	0.019	(0.311)	0.005	0.014
10	0.83	0.13	0.026	(0.309)	0.007	0.019
11	0.92	0.13	0.026	(0.308)	0.007	0.019
12	1.00	0.13	0.026	(0.307)	0.007	0.019
13	1.08	0.10	0.019	(0.306)	0.005	0.014
14	1.17	0.10	0.019	(0.304)	0.005	0.014
15	1.25	0.10	0.019	(0.303)	0.005	0.014
16	1.33	0.10	0.019	(0.302)	0.005	0.014
17	1.42	0.10	0.019	(0.301)	0.005	0.014
18	1.50	0.10	0.019	(0.300)	0.005	0.014
19	1.58	0.10	0.019	(0.298)	0.005	0.014
20	1.67	0.10	0.019	(0.297)	0.005	0.014
21	1.75	0.10	0.019	(0.296)	0.005	0.014
22	1.83	0.13	0.026	(0.295)	0.007	0.019
23	1.92	0.13	0.026	(0.294)	0.007	0.019
24	2.00	0.13	0.026	(0.293)	0.007	0.019
25	2.08	0.13	0.026	(0.291)	0.007	0.019
26	2.17	0.13	0.026	(0.290)	0.007	0.019
27	2.25	0.13	0.026	(0.289)	0.007	0.019
28	2.33	0.13	0.026	(0.288)	0.007	0.019
29	2.42	0.13	0.026	(0.287)	0.007	0.019
30	2.50	0.13	0.026	(0.285)	0.007	0.019
31	2.58	0.17	0.032	(0.284)	0.008	0.024
32	2.67	0.17	0.032	(0.283)	0.008	0.024
33	2.75	0.17	0.032	(0.282)	0.008	0.024
34	2.83	0.17	0.032	(0.281)	0.008	0.024
35	2.92	0.17	0.032	(0.280)	0.008	0.024
36	3.00	0.17	0.032	(0.278)	0.008	0.024
37	3.08	0.17	0.032	(0.277)	0.008	0.024
38	3.17	0.17	0.032	(0.276)	0.008	0.024
39	3.25	0.17	0.032	(0.275)	0.008	0.024
40	3.33	0.17	0.032	(0.274)	0.008	0.024
41	3.42	0.17	0.032	(0.273)	0.008	0.024
42	3.50	0.17	0.032	(0.272)	0.008	0.024
43	3.58	0.17	0.032	(0.270)	0.008	0.024
44	3.67	0.17	0.032	(0.269)	0.008	0.024
45	3.75	0.17	0.032	(0.268)	0.008	0.024
46	3.83	0.20	0.038	(0.267)	0.010	0.028
47	3.92	0.20	0.038	(0.266)	0.010	0.028
48	4.00	0.20	0.038	(0.265)	0.010	0.028
49	4.08	0.20	0.038	(0.264)	0.010	0.028
50	4.17	0.20	0.038	(0.263)	0.010	0.028
51	4.25	0.20	0.038	(0.261)	0.010	0.028
52	4.33	0.23	0.045	(0.260)	0.012	0.033
53	4.42	0.23	0.045	(0.259)	0.012	0.033
54	4.50	0.23	0.045	(0.258)	0.012	0.033
55	4.58	0.23	0.045	(0.257)	0.012	0.033
56	4.67	0.23	0.045	(0.256)	0.012	0.033
57	4.75	0.23	0.045	(0.255)	0.012	0.033
58	4.83	0.27	0.051	(0.254)	0.013	0.038
59	4.92	0.27	0.051	(0.253)	0.013	0.038
60	5.00	0.27	0.051	(0.251)	0.013	0.038
61	5.08	0.20	0.038	(0.250)	0.010	0.028
62	5.17	0.20	0.038	(0.249)	0.010	0.028
63	5.25	0.20	0.038	(0.248)	0.010	0.028
64	5.33	0.23	0.045	(0.247)	0.012	0.033
65	5.42	0.23	0.045	(0.246)	0.012	0.033
66	5.50	0.23	0.045	(0.245)	0.012	0.033
67	5.58	0.27	0.051	(0.244)	0.013	0.038
68	5.67	0.27	0.051	(0.243)	0.013	0.038
69	5.75	0.27	0.051	(0.242)	0.013	0.038
70	5.83	0.27	0.051	(0.241)	0.013	0.038
71	5.92	0.27	0.051	(0.240)	0.013	0.038
72	6.00	0.27	0.051	(0.239)	0.013	0.038
73	6.08	0.30	0.058	(0.238)	0.015	0.043
74	6.17	0.30	0.058	(0.236)	0.015	0.043

75	6.25	0.30	0.058	(0.235)	0.015	0.043
76	6.33	0.30	0.058	(0.234)	0.015	0.043
77	6.42	0.30	0.058	(0.233)	0.015	0.043
78	6.50	0.30	0.058	(0.232)	0.015	0.043
79	6.58	0.33	0.064	(0.231)	0.017	0.047
80	6.67	0.33	0.064	(0.230)	0.017	0.047
81	6.75	0.33	0.064	(0.229)	0.017	0.047
82	6.83	0.33	0.064	(0.228)	0.017	0.047
83	6.92	0.33	0.064	(0.227)	0.017	0.047
84	7.00	0.33	0.064	(0.226)	0.017	0.047
85	7.08	0.33	0.064	(0.225)	0.017	0.047
86	7.17	0.33	0.064	(0.224)	0.017	0.047
87	7.25	0.33	0.064	(0.223)	0.017	0.047
88	7.33	0.37	0.070	(0.222)	0.018	0.052
89	7.42	0.37	0.070	(0.221)	0.018	0.052
90	7.50	0.37	0.070	(0.220)	0.018	0.052
91	7.58	0.40	0.077	(0.219)	0.020	0.057
92	7.67	0.40	0.077	(0.218)	0.020	0.057
93	7.75	0.40	0.077	(0.217)	0.020	0.057
94	7.83	0.43	0.083	(0.216)	0.022	0.062
95	7.92	0.43	0.083	(0.215)	0.022	0.062
96	8.00	0.43	0.083	(0.214)	0.022	0.062
97	8.08	0.50	0.096	(0.213)	0.025	0.071
98	8.17	0.50	0.096	(0.212)	0.025	0.071
99	8.25	0.50	0.096	(0.211)	0.025	0.071
100	8.33	0.50	0.096	(0.210)	0.025	0.071
101	8.42	0.50	0.096	(0.209)	0.025	0.071
102	8.50	0.50	0.096	(0.208)	0.025	0.071
103	8.58	0.53	0.102	(0.207)	0.027	0.076
104	8.67	0.53	0.102	(0.206)	0.027	0.076
105	8.75	0.53	0.102	(0.205)	0.027	0.076
106	8.83	0.57	0.109	(0.204)	0.028	0.081
107	8.92	0.57	0.109	(0.203)	0.028	0.081
108	9.00	0.57	0.109	(0.202)	0.028	0.081
109	9.08	0.63	0.122	(0.201)	0.032	0.090
110	9.17	0.63	0.122	(0.200)	0.032	0.090
111	9.25	0.63	0.122	(0.199)	0.032	0.090
112	9.33	0.67	0.128	(0.198)	0.033	0.095
113	9.42	0.67	0.128	(0.197)	0.033	0.095
114	9.50	0.67	0.128	(0.196)	0.033	0.095
115	9.58	0.70	0.134	(0.196)	0.035	0.099
116	9.67	0.70	0.134	(0.195)	0.035	0.099
117	9.75	0.70	0.134	(0.194)	0.035	0.099
118	9.83	0.73	0.141	(0.193)	0.037	0.104
119	9.92	0.73	0.141	(0.192)	0.037	0.104
120	10.00	0.73	0.141	(0.191)	0.037	0.104
121	10.08	0.50	0.096	(0.190)	0.025	0.071
122	10.17	0.50	0.096	(0.189)	0.025	0.071
123	10.25	0.50	0.096	(0.188)	0.025	0.071
124	10.33	0.50	0.096	(0.187)	0.025	0.071
125	10.42	0.50	0.096	(0.186)	0.025	0.071
126	10.50	0.50	0.096	(0.185)	0.025	0.071
127	10.58	0.67	0.128	(0.184)	0.033	0.095
128	10.67	0.67	0.128	(0.184)	0.033	0.095
129	10.75	0.67	0.128	(0.183)	0.033	0.095
130	10.83	0.67	0.128	(0.182)	0.033	0.095
131	10.92	0.67	0.128	(0.181)	0.033	0.095
132	11.00	0.67	0.128	(0.180)	0.033	0.095
133	11.08	0.63	0.122	(0.179)	0.032	0.090
134	11.17	0.63	0.122	(0.178)	0.032	0.090
135	11.25	0.63	0.122	(0.177)	0.032	0.090
136	11.33	0.63	0.122	(0.176)	0.032	0.090
137	11.42	0.63	0.122	(0.176)	0.032	0.090
138	11.50	0.63	0.122	(0.175)	0.032	0.090
139	11.58	0.57	0.109	(0.174)	0.028	0.081
140	11.67	0.57	0.109	(0.173)	0.028	0.081
141	11.75	0.57	0.109	(0.172)	0.028	0.081
142	11.83	0.60	0.115	(0.171)	0.030	0.085
143	11.92	0.60	0.115	(0.170)	0.030	0.085
144	12.00	0.60	0.115	(0.170)	0.030	0.085
145	12.08	0.83	0.160	(0.169)	0.042	0.118
146	12.17	0.83	0.160	(0.168)	0.042	0.118
147	12.25	0.83	0.160	(0.167)	0.042	0.118
148	12.33	0.87	0.166	(0.166)	0.043	0.123
149	12.42	0.87	0.166	(0.165)	0.043	0.123
150	12.50	0.87	0.166	(0.165)	0.043	0.123
151	12.58	0.93	0.179	(0.164)	0.047	0.133
152	12.67	0.93	0.179	(0.163)	0.047	0.133
153	12.75	0.93	0.179	(0.162)	0.047	0.133
154	12.83	0.97	0.186	(0.161)	0.048	0.137
155	12.92	0.97	0.186	(0.160)	0.048	0.137
156	13.00	0.97	0.186	(0.160)	0.048	0.137
157	13.08	1.13	0.218	(0.159)	0.057	0.161
158	13.17	1.13	0.218	(0.158)	0.057	0.161
159	13.25	1.13	0.218	(0.157)	0.057	0.161
160	13.33	1.13	0.218	(0.156)	0.057	0.161

161	13.42	1.13	0.218	(0.156)	0.057	0.161
162	13.50	1.13	0.218	(0.155)	0.057	0.161
163	13.58	0.77	0.147	(0.154)	0.038	0.109
164	13.67	0.77	0.147	(0.153)	0.038	0.109
165	13.75	0.77	0.147	(0.152)	0.038	0.109
166	13.83	0.77	0.147	(0.152)	0.038	0.109
167	13.92	0.77	0.147	(0.151)	0.038	0.109
168	14.00	0.77	0.147	(0.150)	0.038	0.109
169	14.08	0.90	0.173	(0.149)	0.045	0.128
170	14.17	0.90	0.173	(0.149)	0.045	0.128
171	14.25	0.90	0.173	(0.148)	0.045	0.128
172	14.33	0.87	0.166	(0.147)	0.043	0.123
173	14.42	0.87	0.166	(0.146)	0.043	0.123
174	14.50	0.87	0.166	(0.146)	0.043	0.123
175	14.58	0.87	0.166	(0.145)	0.043	0.123
176	14.67	0.87	0.166	(0.144)	0.043	0.123
177	14.75	0.87	0.166	(0.143)	0.043	0.123
178	14.83	0.83	0.160	(0.143)	0.042	0.118
179	14.92	0.83	0.160	(0.142)	0.042	0.118
180	15.00	0.83	0.160	(0.141)	0.042	0.118
181	15.08	0.80	0.154	(0.140)	0.040	0.114
182	15.17	0.80	0.154	(0.140)	0.040	0.114
183	15.25	0.80	0.154	(0.139)	0.040	0.114
184	15.33	0.77	0.147	(0.138)	0.038	0.109
185	15.42	0.77	0.147	(0.138)	0.038	0.109
186	15.50	0.77	0.147	(0.137)	0.038	0.109
187	15.58	0.63	0.122	(0.136)	0.032	0.090
188	15.67	0.63	0.122	(0.135)	0.032	0.090
189	15.75	0.63	0.122	(0.135)	0.032	0.090
190	15.83	0.63	0.122	(0.134)	0.032	0.090
191	15.92	0.63	0.122	(0.133)	0.032	0.090
192	16.00	0.63	0.122	(0.133)	0.032	0.090
193	16.08	0.13	0.026	(0.132)	0.007	0.019
194	16.17	0.13	0.026	(0.131)	0.007	0.019
195	16.25	0.13	0.026	(0.131)	0.007	0.019
196	16.33	0.13	0.026	(0.130)	0.007	0.019
197	16.42	0.13	0.026	(0.129)	0.007	0.019
198	16.50	0.13	0.026	(0.129)	0.007	0.019
199	16.58	0.10	0.019	(0.128)	0.005	0.014
200	16.67	0.10	0.019	(0.127)	0.005	0.014
201	16.75	0.10	0.019	(0.127)	0.005	0.014
202	16.83	0.10	0.019	(0.126)	0.005	0.014
203	16.92	0.10	0.019	(0.125)	0.005	0.014
204	17.00	0.10	0.019	(0.125)	0.005	0.014
205	17.08	0.17	0.032	(0.124)	0.008	0.024
206	17.17	0.17	0.032	(0.124)	0.008	0.024
207	17.25	0.17	0.032	(0.123)	0.008	0.024
208	17.33	0.17	0.032	(0.122)	0.008	0.024
209	17.42	0.17	0.032	(0.122)	0.008	0.024
210	17.50	0.17	0.032	(0.121)	0.008	0.024
211	17.58	0.17	0.032	(0.121)	0.008	0.024
212	17.67	0.17	0.032	(0.120)	0.008	0.024
213	17.75	0.17	0.032	(0.119)	0.008	0.024
214	17.83	0.13	0.026	(0.119)	0.007	0.019
215	17.92	0.13	0.026	(0.118)	0.007	0.019
216	18.00	0.13	0.026	(0.118)	0.007	0.019
217	18.08	0.13	0.026	(0.117)	0.007	0.019
218	18.17	0.13	0.026	(0.116)	0.007	0.019
219	18.25	0.13	0.026	(0.116)	0.007	0.019
220	18.33	0.13	0.026	(0.115)	0.007	0.019
221	18.42	0.13	0.026	(0.115)	0.007	0.019
222	18.50	0.13	0.026	(0.114)	0.007	0.019
223	18.58	0.10	0.019	(0.114)	0.005	0.014
224	18.67	0.10	0.019	(0.113)	0.005	0.014
225	18.75	0.10	0.019	(0.113)	0.005	0.014
226	18.83	0.07	0.013	(0.112)	0.003	0.009
227	18.92	0.07	0.013	(0.111)	0.003	0.009
228	19.00	0.07	0.013	(0.111)	0.003	0.009
229	19.08	0.10	0.019	(0.110)	0.005	0.014
230	19.17	0.10	0.019	(0.110)	0.005	0.014
231	19.25	0.10	0.019	(0.109)	0.005	0.014
232	19.33	0.13	0.026	(0.109)	0.007	0.019
233	19.42	0.13	0.026	(0.108)	0.007	0.019
234	19.50	0.13	0.026	(0.108)	0.007	0.019
235	19.58	0.10	0.019	(0.107)	0.005	0.014
236	19.67	0.10	0.019	(0.107)	0.005	0.014
237	19.75	0.10	0.019	(0.106)	0.005	0.014
238	19.83	0.07	0.013	(0.106)	0.003	0.009
239	19.92	0.07	0.013	(0.105)	0.003	0.009
240	20.00	0.07	0.013	(0.105)	0.003	0.009
241	20.08	0.10	0.019	(0.104)	0.005	0.014
242	20.17	0.10	0.019	(0.104)	0.005	0.014
243	20.25	0.10	0.019	(0.104)	0.005	0.014
244	20.33	0.10	0.019	(0.103)	0.005	0.014
245	20.42	0.10	0.019	(0.103)	0.005	0.014
246	20.50	0.10	0.019	(0.102)	0.005	0.014

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247  20.58     0.10      0.019       (  0.102)       0.005        0.014
248  20.67     0.10      0.019       (  0.101)       0.005        0.014
249  20.75     0.10      0.019       (  0.101)       0.005        0.014
250  20.83     0.07      0.013       (  0.101)       0.003        0.009
251  20.92     0.07      0.013       (  0.100)       0.003        0.009
252  21.00     0.07      0.013       (  0.100)       0.003        0.009
253  21.08     0.10      0.019       (  0.099)       0.005        0.014
254  21.17     0.10      0.019       (  0.099)       0.005        0.014
255  21.25     0.10      0.019       (  0.099)       0.005        0.014
256  21.33     0.07      0.013       (  0.098)       0.003        0.009
257  21.42     0.07      0.013       (  0.098)       0.003        0.009
258  21.50     0.07      0.013       (  0.097)       0.003        0.009
259  21.58     0.10      0.019       (  0.097)       0.005        0.014
260  21.67     0.10      0.019       (  0.097)       0.005        0.014
261  21.75     0.10      0.019       (  0.096)       0.005        0.014
262  21.83     0.07      0.013       (  0.096)       0.003        0.009
263  21.92     0.07      0.013       (  0.096)       0.003        0.009
264  22.00     0.07      0.013       (  0.095)       0.003        0.009
265  22.08     0.10      0.019       (  0.095)       0.005        0.014
266  22.17     0.10      0.019       (  0.095)       0.005        0.014
267  22.25     0.10      0.019       (  0.095)       0.005        0.014
268  22.33     0.07      0.013       (  0.094)       0.003        0.009
269  22.42     0.07      0.013       (  0.094)       0.003        0.009
270  22.50     0.07      0.013       (  0.094)       0.003        0.009
271  22.58     0.07      0.013       (  0.093)       0.003        0.009
272  22.67     0.07      0.013       (  0.093)       0.003        0.009
273  22.75     0.07      0.013       (  0.093)       0.003        0.009
274  22.83     0.07      0.013       (  0.093)       0.003        0.009
275  22.92     0.07      0.013       (  0.092)       0.003        0.009
276  23.00     0.07      0.013       (  0.092)       0.003        0.009
277  23.08     0.07      0.013       (  0.092)       0.003        0.009
278  23.17     0.07      0.013       (  0.092)       0.003        0.009
279  23.25     0.07      0.013       (  0.092)       0.003        0.009
280  23.33     0.07      0.013       (  0.091)       0.003        0.009
281  23.42     0.07      0.013       (  0.091)       0.003        0.009
282  23.50     0.07      0.013       (  0.091)       0.003        0.009
283  23.58     0.07      0.013       (  0.091)       0.003        0.009
284  23.67     0.07      0.013       (  0.091)       0.003        0.009
285  23.75     0.07      0.013       (  0.091)       0.003        0.009
286  23.83     0.07      0.013       (  0.091)       0.003        0.009
287  23.92     0.07      0.013       (  0.090)       0.003        0.009
288  24.00     0.07      0.013       (  0.090)       0.003        0.009
               (Loss Rate Not Used)
    Sum =     100.0                                  Sum =    14.2
      Flood volume = Effective rainfall      1.18(In)
       times area       3.9(Ac.)/[(In)/(Ft.)] =       0.4(Ac.Ft)
      Total soil loss =      0.42(In)
      Total soil loss =     0.136(Ac.Ft)
      Total rainfall =      1.60(In)
      Flood volume =       16890.7 Cubic Feet
      Total soil loss =        5934.6 Cubic Feet
      ---------------------------------------------------------------------
       Peak flow rate of this hydrograph =      0.638(CFS)
      ---------------------------------------------------------------------
      +++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
                          24 - H O U R    S T O R M
                     R u n o f f      H y d r o g r a p h
      ---------------------------------------------------------------------
                 Hydrograph in   5   Minute intervals ((CFS))

      ---------------------------------------------------------------------
 Time(h+m) Volume Ac.Ft   Q(CFS)  0        2.5       5.0       7.5      10.0
 ---------------------------------------------------------------------------
   0+ 5       0.0002      0.03  Q          |         |         |         |
   0+10       0.0004      0.04  Q          |         |         |         |
   0+15       0.0007      0.04  Q          |         |         |         |
   0+20       0.0010      0.05  Q          |         |         |         |
   0+25       0.0014      0.06  Q          |         |         |         |
   0+30       0.0018      0.06  Q          |         |         |         |
   0+35       0.0022      0.06  Q          |         |         |         |
   0+40       0.0026      0.06  Q          |         |         |         |
   0+45       0.0030      0.06  Q          |         |         |         |
   0+50       0.0035      0.07  Q          |         |         |         |
   0+55       0.0040      0.08  Q          |         |         |         |
   1+ 0       0.0045      0.08  Q          |         |         |         |
   1+ 5       0.0049      0.06  Q          |         |         |         |
   1+10       0.0053      0.06  Q          |         |         |         |
   1+15       0.0057      0.06  Q          |         |         |         |
   1+20       0.0061      0.06  Q          |         |         |         |
   1+25       0.0065      0.06  Q          |         |         |         |
   1+30       0.0069      0.06  Q          |         |         |         |
   1+35       0.0073      0.06  Q          |         |         |         |
   1+40       0.0076      0.06  Q          |         |         |         |
   1+45       0.0080      0.06  Q          |         |         |         |
   1+50       0.0085      0.07  Q          |         |         |         |
   1+55       0.0090      0.08  Q          |         |         |         |
```
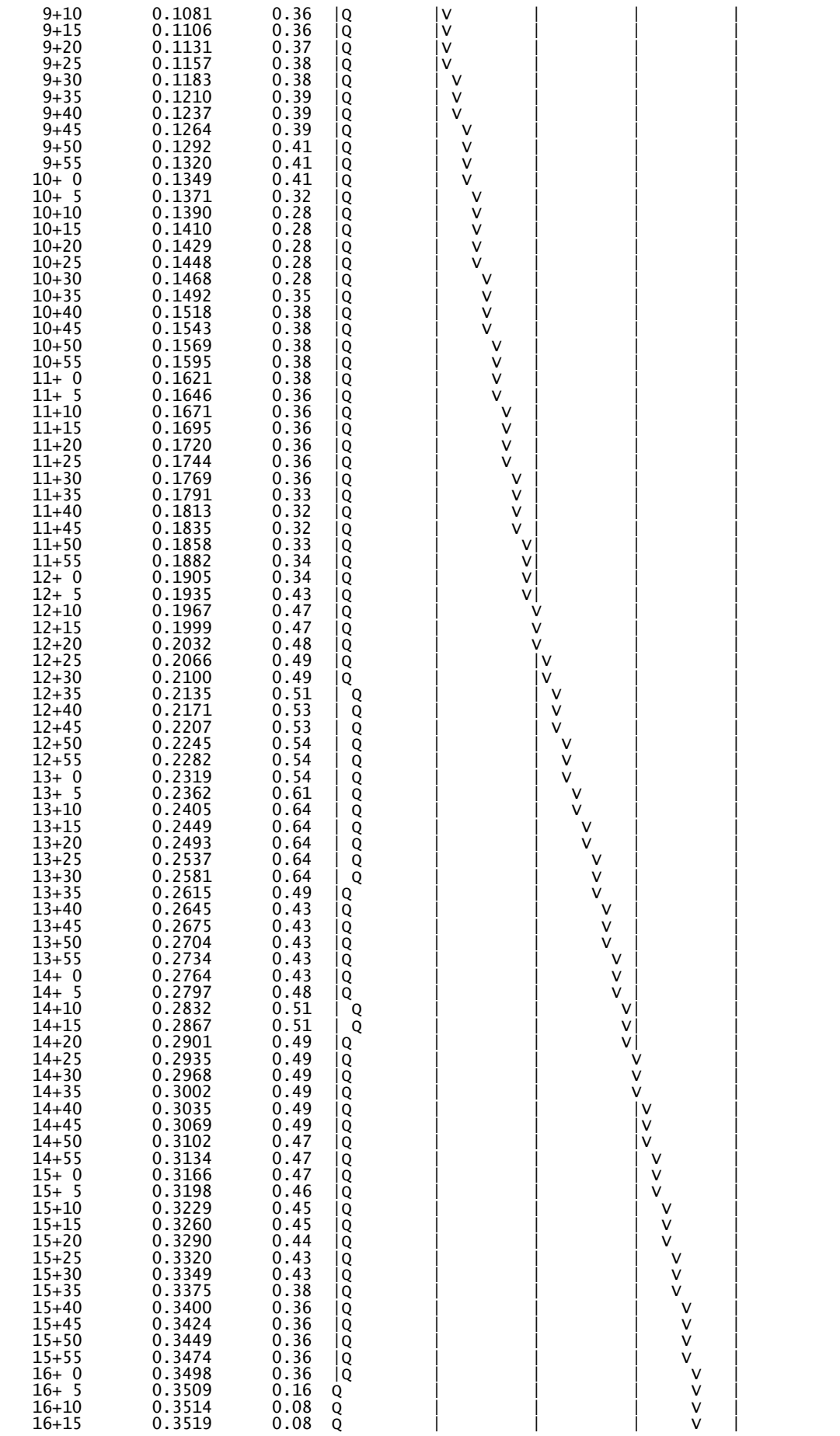

```
2+ 0       0.0095      0.08  Q          |          |          |          |
2+ 5       0.0101      0.08  QV         |          |          |          |
2+10       0.0106      0.08  QV         |          |          |          |
2+15       0.0111      0.08  QV         |          |          |          |
2+20       0.0116      0.08  QV         |          |          |          |
2+25       0.0121      0.08  QV         |          |          |          |
2+30       0.0126      0.08  QV         |          |          |          |
2+35       0.0133      0.09  QV         |          |          |          |
2+40       0.0139      0.09  QV         |          |          |          |
2+45       0.0145      0.09  QV         |          |          |          |
2+50       0.0152      0.09  QV         |          |          |          |
2+55       0.0158      0.09  QV         |          |          |          |
3+ 0       0.0165      0.09  QV         |          |          |          |
3+ 5       0.0171      0.09  QV         |          |          |          |
3+10       0.0178      0.09  QV         |          |          |          |
3+15       0.0184      0.09  QV         |          |          |          |
3+20       0.0191      0.09  QV         |          |          |          |
3+25       0.0197      0.09  Q V        |          |          |          |
3+30       0.0204      0.09  Q V        |          |          |          |
3+35       0.0210      0.09  Q V        |          |          |          |
3+40       0.0217      0.09  Q V        |          |          |          |
3+45       0.0223      0.09  Q V        |          |          |          |
3+50       0.0230      0.11  Q V        |          |          |          |
3+55       0.0238      0.11  Q V        |          |          |          |
4+ 0       0.0246      0.11  Q V        |          |          |          |
4+ 5       0.0254      0.11  Q V        |          |          |          |
4+10       0.0261      0.11  Q V        |          |          |          |
4+15       0.0269      0.11  Q V        |          |          |          |
4+20       0.0278      0.13  Q V        |          |          |          |
4+25       0.0287      0.13  Q V        |          |          |          |
4+30       0.0296      0.13  Q  V       |          |          |          |
4+35       0.0305      0.13  Q  V       |          |          |          |
4+40       0.0314      0.13  Q  V       |          |          |          |
4+45       0.0323      0.13  Q  V       |          |          |          |
4+50       0.0333      0.14  Q  V       |          |          |          |
4+55       0.0343      0.15  Q  V       |          |          |          |
5+ 0       0.0354      0.15  Q  V       |          |          |          |
5+ 5       0.0362      0.12  Q  V       |          |          |          |
5+10       0.0370      0.11  Q  V       |          |          |          |
5+15       0.0378      0.11  Q  V       |          |          |          |
5+20       0.0386      0.13  Q  V       |          |          |          |
5+25       0.0395      0.13  Q   V      |          |          |          |
5+30       0.0405      0.13  Q   V      |          |          |          |
5+35       0.0414      0.14  Q   V      |          |          |          |
5+40       0.0425      0.15  Q   V      |          |          |          |
5+45       0.0435      0.15  Q   V      |          |          |          |
5+50       0.0445      0.15  Q   V      |          |          |          |
5+55       0.0456      0.15  Q   V      |          |          |          |
6+ 0       0.0466      0.15  Q   V      |          |          |          |
6+ 5       0.0477      0.16  Q   V      |          |          |          |
6+10       0.0489      0.17  Q    V     |          |          |          |
6+15       0.0501      0.17  Q    V     |          |          |          |
6+20       0.0512      0.17  Q    V     |          |          |          |
6+25       0.0524      0.17  Q    V     |          |          |          |
6+30       0.0536      0.17  Q    V     |          |          |          |
6+35       0.0548      0.18  Q    V     |          |          |          |
6+40       0.0561      0.19  Q    V     |          |          |          |
6+45       0.0574      0.19  Q    V     |          |          |          |
6+50       0.0587      0.19  Q     V    |          |          |          |
6+55       0.0600      0.19  Q     V    |          |          |          |
7+ 0       0.0613      0.19  Q     V    |          |          |          |
7+ 5       0.0626      0.19  Q     V    |          |          |          |
7+10       0.0639      0.19  Q     V    |          |          |          |
7+15       0.0652      0.19  Q     V    |          |          |          |
7+20       0.0665      0.20  Q     V    |          |          |          |
7+25       0.0680      0.21  Q      V   |          |          |          |
7+30       0.0694      0.21  Q      V   |          |          |          |
7+35       0.0709      0.22  Q      V   |          |          |          |
7+40       0.0724      0.23  Q      V   |          |          |          |
7+45       0.0740      0.23  Q      V   |          |          |          |
7+50       0.0756      0.24  Q      V   |          |          |          |
7+55       0.0773      0.24  Q      V   |          |          |          |
8+ 0       0.0790      0.24  Q       V  |          |          |          |
8+ 5       0.0809      0.27  |Q       V  |          |          |          |
8+10       0.0828      0.28  |Q       V  |          |          |          |
8+15       0.0847      0.28  |Q       V  |          |          |          |
8+20       0.0867      0.28  |Q       V  |          |          |          |
8+25       0.0886      0.28  |Q        V |          |          |          |
8+30       0.0906      0.28  |Q        V |          |          |          |
8+35       0.0926      0.29  |Q        V |          |          |          |
8+40       0.0947      0.30  |Q        V |          |          |          |
8+45       0.0967      0.30  |Q        V |          |          |          |
8+50       0.0989      0.31  |Q         V          |          |          |
8+55       0.1011      0.32  |Q         V          |          |          |
9+ 0       0.1033      0.32  |Q         V          |          |          |
9+ 5       0.1057      0.35  |Q         V          |          |          |
```

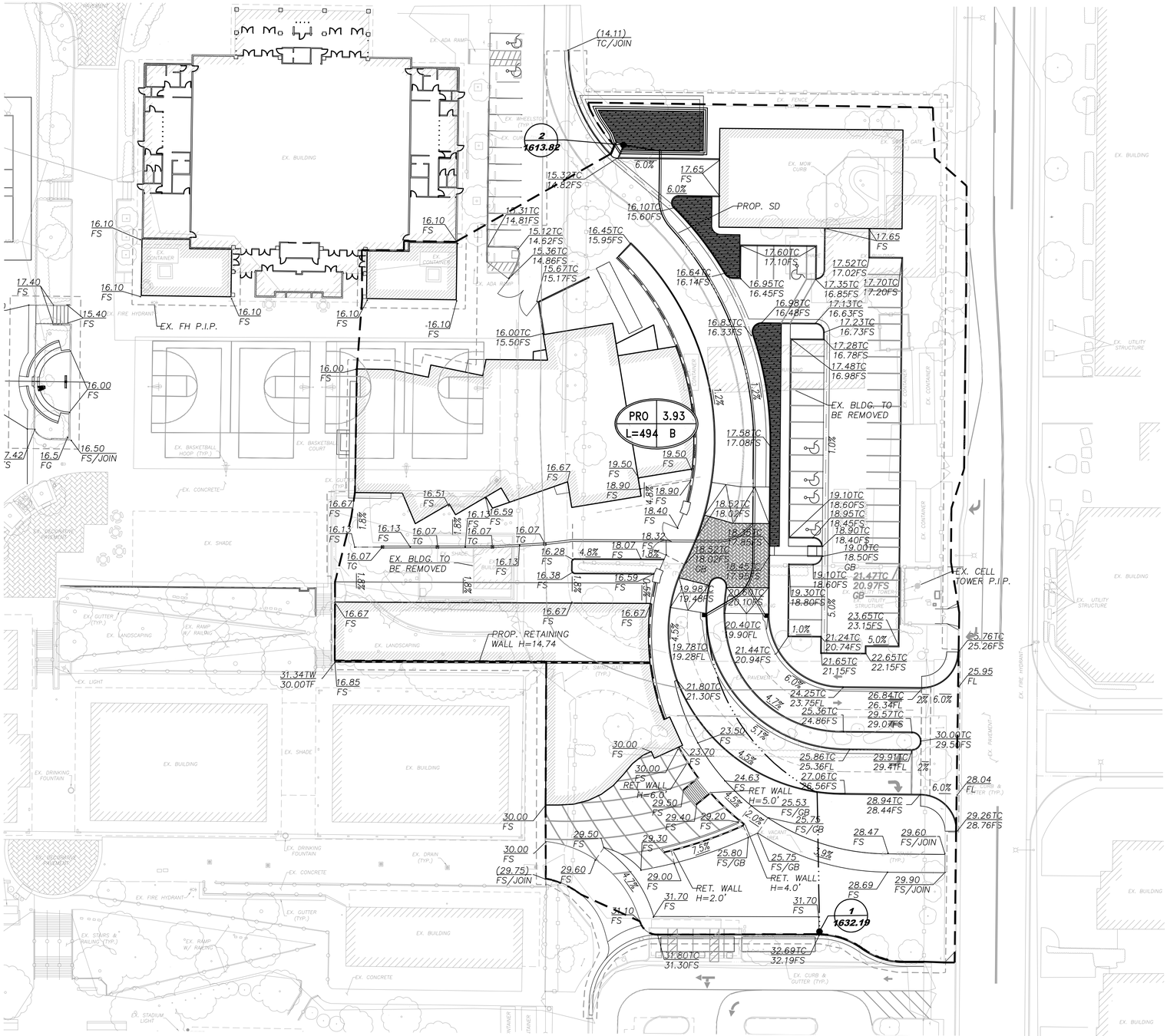


9+10	0.1081	0.36	
9+15	0.1106	0.36	
9+20	0.1131	0.37	
9+25	0.1157	0.38	
9+30	0.1183	0.38	
9+35	0.1210	0.39	
9+40	0.1237	0.39	
9+45	0.1264	0.39	
9+50	0.1292	0.41	
9+55	0.1320	0.41	
10+ 0	0.1349	0.41	
10+ 5	0.1371	0.32	
10+10	0.1390	0.28	
10+15	0.1410	0.28	
10+20	0.1429	0.28	
10+25	0.1448	0.28	
10+30	0.1468	0.28	
10+35	0.1492	0.35	
10+40	0.1518	0.38	
10+45	0.1543	0.38	
10+50	0.1569	0.38	
10+55	0.1595	0.38	
11+ 0	0.1621	0.38	
11+ 5	0.1646	0.36	
11+10	0.1671	0.36	
11+15	0.1695	0.36	
11+20	0.1720	0.36	
11+25	0.1744	0.36	
11+30	0.1769	0.36	
11+35	0.1791	0.33	
11+40	0.1813	0.32	
11+45	0.1835	0.32	
11+50	0.1858	0.33	
11+55	0.1882	0.34	
12+ 0	0.1905	0.34	
12+ 5	0.1935	0.43	
12+10	0.1967	0.47	
12+15	0.1999	0.47	
12+20	0.2032	0.48	
12+25	0.2066	0.49	
12+30	0.2100	0.49	
12+35	0.2135	0.51	
12+40	0.2171	0.53	
12+45	0.2207	0.53	
12+50	0.2245	0.54	
12+55	0.2282	0.54	
13+ 0	0.2319	0.54	
13+ 5	0.2362	0.61	
13+10	0.2405	0.64	
13+15	0.2449	0.64	
13+20	0.2493	0.64	
13+25	0.2537	0.64	
13+30	0.2581	0.64	
13+35	0.2615	0.49	
13+40	0.2645	0.43	
13+45	0.2675	0.43	
13+50	0.2704	0.43	
13+55	0.2734	0.43	
14+ 0	0.2764	0.43	
14+ 5	0.2797	0.48	
14+10	0.2832	0.51	
14+15	0.2867	0.51	
14+20	0.2901	0.49	
14+25	0.2935	0.49	
14+30	0.2968	0.49	
14+35	0.3002	0.49	
14+40	0.3035	0.49	
14+45	0.3069	0.49	
14+50	0.3102	0.47	
14+55	0.3134	0.47	
15+ 0	0.3166	0.47	
15+ 5	0.3198	0.46	
15+10	0.3229	0.45	
15+15	0.3260	0.45	
15+20	0.3290	0.44	
15+25	0.3320	0.43	
15+30	0.3349	0.43	
15+35	0.3375	0.38	
15+40	0.3400	0.36	
15+45	0.3424	0.36	
15+50	0.3449	0.36	
15+55	0.3474	0.36	
16+ 0	0.3498	0.36	
16+ 5	0.3509	0.16	
16+10	0.3514	0.08	
16+15	0.3519	0.08	

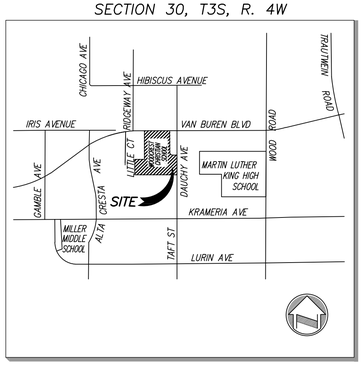
16+20	0.3524	0.08	Q	|	|	|	V |
16+25	0.3530	0.08	Q	|	|	|	V |
16+30	0.3535	0.08	Q	|	|	|	V |
16+35	0.3539	0.06	Q	|	|	|	V |
16+40	0.3543	0.06	Q	|	|	|	V |
16+45	0.3547	0.06	Q	|	|	|	V |
16+50	0.3551	0.06	Q	|	|	|	V |
16+55	0.3555	0.06	Q	|	|	|	V |
17+ 0	0.3558	0.06	Q	|	|	|	V |
17+ 5	0.3564	0.08	Q	|	|	|	V |
17+10	0.3571	0.09	Q	|	|	|	V |
17+15	0.3577	0.09	Q	|	|	|	V |
17+20	0.3584	0.09	Q	|	|	|	V |
17+25	0.3590	0.09	Q	|	|	|	V |
17+30	0.3596	0.09	Q	|	|	|	V |
17+35	0.3603	0.09	Q	|	|	|	V |
17+40	0.3609	0.09	Q	|	|	|	V |
17+45	0.3616	0.09	Q	|	|	|	V |
17+50	0.3621	0.08	Q	|	|	|	V |
17+55	0.3627	0.08	Q	|	|	|	V |
18+ 0	0.3632	0.08	Q	|	|	|	V |
18+ 5	0.3637	0.08	Q	|	|	|	V |
18+10	0.3642	0.08	Q	|	|	|	V |
18+15	0.3647	0.08	Q	|	|	|	V |
18+20	0.3652	0.08	Q	|	|	|	V |
18+25	0.3658	0.08	Q	|	|	|	V |
18+30	0.3663	0.08	Q	|	|	|	V |
18+35	0.3667	0.06	Q	|	|	|	V |
18+40	0.3671	0.06	Q	|	|	|	V |
18+45	0.3675	0.06	Q	|	|	|	V |
18+50	0.3678	0.04	Q	|	|	|	V |
18+55	0.3680	0.04	Q	|	|	|	V |
19+ 0	0.3683	0.04	Q	|	|	|	V |
19+ 5	0.3686	0.05	Q	|	|	|	V |
19+10	0.3690	0.06	Q	|	|	|	V |
19+15	0.3694	0.06	Q	|	|	|	V |
19+20	0.3699	0.07	Q	|	|	|	V |
19+25	0.3704	0.08	Q	|	|	|	V |
19+30	0.3709	0.08	Q	|	|	|	V |
19+35	0.3714	0.06	Q	|	|	|	V |
19+40	0.3717	0.06	Q	|	|	|	V |
19+45	0.3721	0.06	Q	|	|	|	V |
19+50	0.3724	0.04	Q	|	|	|	V |
19+55	0.3727	0.04	Q	|	|	|	V |
20+ 0	0.3729	0.04	Q	|	|	|	V |
20+ 5	0.3733	0.05	Q	|	|	|	V |
20+10	0.3737	0.06	Q	|	|	|	V |
20+15	0.3741	0.06	Q	|	|	|	V |
20+20	0.3745	0.06	Q	|	|	|	V |
20+25	0.3748	0.06	Q	|	|	|	V |
20+30	0.3752	0.06	Q	|	|	|	V |
20+35	0.3756	0.06	Q	|	|	|	V |
20+40	0.3760	0.06	Q	|	|	|	V |
20+45	0.3764	0.06	Q	|	|	|	V |
20+50	0.3767	0.04	Q	|	|	|	V |
20+55	0.3770	0.04	Q	|	|	|	V |
21+ 0	0.3772	0.04	Q	|	|	|	V |
21+ 5	0.3776	0.05	Q	|	|	|	V |
21+10	0.3779	0.06	Q	|	|	|	V |
21+15	0.3783	0.06	Q	|	|	|	V|
21+20	0.3786	0.04	Q	|	|	|	V|
21+25	0.3789	0.04	Q	|	|	|	V|
21+30	0.3792	0.04	Q	|	|	|	V|
21+35	0.3795	0.05	Q	|	|	|	V|
21+40	0.3799	0.06	Q	|	|	|	V|
21+45	0.3803	0.06	Q	|	|	|	V|
21+50	0.3806	0.04	Q	|	|	|	V|
21+55	0.3808	0.04	Q	|	|	|	V|
22+ 0	0.3811	0.04	Q	|	|	|	V|
22+ 5	0.3814	0.05	Q	|	|	|	V|
22+10	0.3818	0.06	Q	|	|	|	V|
22+15	0.3822	0.06	Q	|	|	|	V|
22+20	0.3825	0.04	Q	|	|	|	V|
22+25	0.3828	0.04	Q	|	|	|	V|
22+30	0.3830	0.04	Q	|	|	|	V|
22+35	0.3833	0.04	Q	|	|	|	V|
22+40	0.3835	0.04	Q	|	|	|	V|
22+45	0.3838	0.04	Q	|	|	|	V|
22+50	0.3841	0.04	Q	|	|	|	V|
22+55	0.3843	0.04	Q	|	|	|	V|
23+ 0	0.3846	0.04	Q	|	|	|	V|
23+ 5	0.3848	0.04	Q	|	|	|	V|
23+10	0.3851	0.04	Q	|	|	|	V|
23+15	0.3854	0.04	Q	|	|	|	V|
23+20	0.3856	0.04	Q	|	|	|	V|
23+25	0.3859	0.04	Q	|	|	|	V|

```
   23+30       0.3861      0.04  Q          |          |          |        v|
   23+35       0.3864      0.04  Q          |          |          |        v|
   23+40       0.3866      0.04  Q          |          |          |        v|
   23+45       0.3869      0.04  Q          |          |          |        v|
   23+50       0.3872      0.04  Q          |          |          |        v|
   23+55       0.3874      0.04  Q          |          |          |        v|
   24+ 0       0.3877      0.04  Q          |          |          |        v|
   24+ 5       0.3878      0.01  Q          |          |          |         v
-------------------------------------------------------------------------
```

PROPOSED UNIT HYDROGRAPH MAP
WOODCREST CHRISTIAN



SECTION 30, T3S, R. 4W



VICINITY MAP

N.T.S.

0 30 90
15 60 120
SCALE: 1" = 30'

PROPOSED
UNIT HYDROGRAPH MAP
PREPARATION DATE: NOVEMBER 2023
PLAN PREPARED BY:

adkan ENGINEERS
Civil Engineering · Surveying · Planning
6879 Airport Drive, Riverside, CA 92504
Tel:(951) 688-0241 Fax:(951) 688-0599

SHEET 1 OF 1
Plot Date: 11/20/2023

Basin Size and Flow Calculations

BIORETENTION BASIN

	BASIN PARAMETERS					OUTLET								
Basin Elevation	Depth	Area S.F.	Volume C.F.	Volume AC-FT	Effective Volume AC-FT	Q_1 Orrifice Plate (cfs)	Q_2 Orrifice Plate (cfs)	Q_3 Orrifice Plate (cfs)	Q_4 Orrifice Plate (cfs)	Q_5Orrifice Plate (cfs)	Q_6 Orrifice Plate (cfs)	Q_7Orrifice Plate (cfs)	Q Weir 1 (cfs)	Q Total (cfs)
10.20	0.00	788.40	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11.20	1.00	788.40	788.40	0.018	0.018	0.000	0.181	0.000	0.000	0.000	0.000	0.000	0.000	0.181
12.20	2.00	788.40	1,576.80	0.036	0.036	0.000	0.255	0.000	0.000	0.000	0.000	0.000	0.000	0.255
13.20	3.00	2,628.00	5,124.60	0.118	0.118	0.000	0.313	0.000	0.000	0.000	0.000	0.000	0.000	0.313
13.70	3.50	2,859.00	6,382.95	0.147	0.147	0.000	0.338	0.000	0.000	0.000	0.000	0.000	0.000	0.338
14.20	4.00	3,091.00	7,758.80	0.178	0.178	0.000	0.361	0.000	0.000	0.000	0.000	0.000	18.837	19.198
14.58	4.38	3,555.00	9,512.05	0.218	0.218	0.000	0.378	0.000	0.000	0.000	0.000	0.000	43.983	44.361

SUPPORTING DESIGN PARAMETERS

Orifice Coefficient	0.66		Dia of Orrifice		2.50						
Gravimetric Constant	32.2	ft/s^2	Eff Dia of Orrifice	0.0000	0.2083	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Number of Rows	1		Area of Orrifice	0.0000	0.0341	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Minimum Orrifice Plate Height			Number of Orrifeces	1	1	1	1	1	1	1	1
Minimum Orrifice Plate Width			Elev		10.2						

.		Weir	Sharp Crest Weir Coefficient	3.33
			Length of Weir	16.00
			Elev. at Crest of Weir	13.7

Orifice Equation
$Q=Cd(1/4\pi D2)\sqrt{2gh}$
Weir Equation
(Q/(Weir Length* Weir Coefficent))^(2/3)

Q100 Elevation Weir Calc		
Inlet Weir Calc		
Crest Wier Elev.	13.70	
Q100	12	cfs
Weir Length	16	
Weir Coeff.	3.33	
H Weir	0.37018	
Q100 Elevation	**14.07**	

Q100 Elevation Weir Calc		
Emergency Spillway Weir Calc		
Crest Wier Elev.	14.08	
Q100	12	cfs
Weir Length	11	
Weir Coeff.	3.33	
H Weir	0.47522	
Q100 Elevation	**14.56**	

BIORETENTION

EXISTING			PROPOSED		ROUTING		
AREA	CFS	VOLUME AC.FT.	CFS	VOLUME AC.FT.	CFS	VOLUME AC.FT.	DEPTH FT.
EX	0.293	0.178	0.638	0.388	0.310	0.114	2.95

FLOOD HYDROGRAPH ROUTING PROGRAM
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Study date: 02/15/24

Program License Serial Number 5006

********** HYDROGRAPH INFORMATION **********

From study/file name: pro2yr242.rte
**********HYDROGRAPH DATA**********
Number of intervals = 289
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.638 (CFS)
Total volume = 0.388 (Ac.Ft)
Status of hydrographs being held in storage
Stream 1 Stream 2 Stream 3 Stream 4 Stream 5
Peak (CFS) 0.000 0.000 0.000 0.000 0.000
Vol (Ac.Ft) 0.000 0.000 0.000 0.000 0.000
****

++++++++++
Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****

User entry of depth-outflow-storage data

Total number of inflow hydrograph intervals = 289
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
1.000	0.018	0.181	0.017	0.019
2.000	0.036	0.255	0.035	0.037
3.000	0.118	0.313	0.117	0.119
3.500	0.147	0.338	0.146	0.148
4.000	0.178	19.198	0.112	0.244
4.380	0.218	44.361	0.065	0.371

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.2	0.32	0.48	0.64	Depth (Ft.)
0.083	0.03	0.00	0.000	OI					0.00
0.167	0.04	0.00	0.000	OI					0.02
0.250	0.04	0.01	0.001	OI					0.03
0.333	0.05	0.01	0.001	O I					0.04
0.417	0.06	0.01	0.001	O I					0.06
0.500	0.06	0.01	0.001	O I					0.08
0.583	0.06	0.02	0.002	O I					0.09
0.667	0.06	0.02	0.002	O I					0.11
0.750	0.06	0.02	0.002	|OI					0.12
0.833	0.07	0.02	0.002	|O I					0.14
0.917	0.08	0.03	0.003	|O I					0.15
1.000	0.08	0.03	0.003	|O I					0.17
1.083	0.06	0.03	0.003	|O I					0.19
1.167	0.06	0.04	0.004	|OI					0.19
1.250	0.06	0.04	0.004	|OI					0.20
1.333	0.06	0.04	0.004	|OI					0.21
1.417	0.06	0.04	0.004	|OI					0.22
1.500	0.06	0.04	0.004	| O					0.22
1.583	0.06	0.04	0.004	| O					0.23
1.667	0.06	0.04	0.004	| O					0.23

1.750	0.06	0.04	0.004	O				0.24
1.833	0.07	0.04	0.004	OI				0.25
1.917	0.08	0.05	0.005	OI				0.26
2.000	0.08	0.05	0.005	OI				0.27
2.083	0.08	0.05	0.005	OI				0.28
2.167	0.08	0.05	0.005	OI				0.29
2.250	0.08	0.05	0.005	OI				0.30
2.333	0.08	0.05	0.005	OI				0.30
2.417	0.08	0.06	0.006	OI				0.31
2.500	0.08	0.06	0.006	OI				0.32
2.583	0.09	0.06	0.006	O I				0.33
2.667	0.09	0.06	0.006	OI				0.34
2.750	0.09	0.06	0.006	OI				0.35
2.833	0.09	0.07	0.007	OI				0.36
2.917	0.09	0.07	0.007	OI				0.37
3.000	0.09	0.07	0.007	OI				0.38
3.083	0.09	0.07	0.007	OI				0.39
3.167	0.09	0.07	0.007	OI				0.40
3.250	0.09	0.07	0.007	OI				0.41
3.333	0.09	0.08	0.007	OI				0.41
3.417	0.09	0.08	0.008	OI				0.42
3.500	0.09	0.08	0.008	OI				0.43
3.583	0.09	0.08	0.008	OI				0.43
3.667	0.09	0.08	0.008	OI				0.44
3.750	0.09	0.08	0.008	O				0.45
3.833	0.11	0.08	0.008	OI				0.45
3.917	0.11	0.08	0.008	OI				0.46
4.000	0.11	0.09	0.009	OI				0.47
4.083	0.11	0.09	0.009	OI				0.48
4.167	0.11	0.09	0.009	OI				0.49
4.250	0.11	0.09	0.009	OI				0.50
4.333	0.13	0.09	0.009	O I				0.51
4.417	0.13	0.10	0.009	O I				0.53
4.500	0.13	0.10	0.010	O I				0.54
4.583	0.13	0.10	0.010	OI				0.55
4.667	0.13	0.10	0.010	OI				0.56
4.750	0.13	0.10	0.010	OI				0.57
4.833	0.14	0.11	0.011	O I				0.59
4.917	0.15	0.11	0.011	O I				0.60
5.000	0.15	0.11	0.011	O I				0.62
5.083	0.12	0.11	0.011	OI				0.63
5.167	0.11	0.11	0.011	O				0.63
5.250	0.11	0.11	0.011	O				0.63
5.333	0.13	0.11	0.011	OI				0.63
5.417	0.13	0.11	0.011	OI				0.64
5.500	0.13	0.12	0.012	OI				0.64
5.583	0.14	0.12	0.012	O I				0.65
5.667	0.15	0.12	0.012	O I				0.66
5.750	0.15	0.12	0.012	OI				0.67
5.833	0.15	0.12	0.012	OI				0.68
5.917	0.15	0.13	0.012	OI				0.69
6.000	0.15	0.13	0.013	OI				0.70
6.083	0.16	0.13	0.013	O I				0.71
6.167	0.17	0.13	0.013	O I				0.73
6.250	0.17	0.13	0.013	O I				0.74
6.333	0.17	0.14	0.014	O I				0.75
6.417	0.17	0.14	0.014	O I				0.76
6.500	0.17	0.14	0.014	OI				0.78
6.583	0.18	0.14	0.014	O I				0.79
6.667	0.19	0.15	0.014	O I				0.80
6.750	0.19	0.15	0.015	O I				0.82
6.833	0.19	0.15	0.015	O I				0.83
6.917	0.19	0.15	0.015	O I				0.85
7.000	0.19	0.16	0.015	O I				0.86
7.083	0.19	0.16	0.016	O I				0.87
7.167	0.19	0.16	0.016	OI				0.88
7.250	0.19	0.16	0.016	OI				0.89
7.333	0.20	0.16	0.016	O I				0.91
7.417	0.21	0.17	0.017	O I				0.92
7.500	0.21	0.17	0.017	O I				0.94
7.583	0.22	0.17	0.017	O I				0.95
7.667	0.23	0.18	0.017	O I				0.97
7.750	0.23	0.18	0.018	O I				0.99
7.833	0.24	0.18	0.018	O I				1.01
7.917	0.24	0.18	0.019	O I				1.03
8.000	0.24	0.18	0.019	O I				1.05
8.083	0.27	0.19	0.019	O I				1.08
8.167	0.28	0.19	0.020	O I				1.11
8.250	0.28	0.19	0.021	O I				1.15
8.333	0.28	0.19	0.021	O I				1.18
8.417	0.28	0.20	0.022	O I				1.22
8.500	0.28	0.20	0.022	O I				1.25
8.583	0.29	0.20	0.023	O I				1.28
8.667	0.30	0.20	0.024	O I				1.32
8.750	0.30	0.21	0.024	O I				1.35
8.833	0.31	0.21	0.025	O I				1.39

8.917	0.32	0.21	0.026		o I			1.43
9.000	0.32	0.22	0.026		o I			1.47
9.083	0.35	0.22	0.027		o|I			1.52
9.167	0.36	0.22	0.028		o|I			1.56
9.250	0.36	0.23	0.029		o|I			1.62
9.333	0.37	0.23	0.030		o | I			1.67
9.417	0.38	0.23	0.031		o | I			1.72
9.500	0.38	0.24	0.032		o | I			1.77
9.583	0.39	0.24	0.033		o | I			1.83
9.667	0.39	0.25	0.034		o | I			1.88
9.750	0.39	0.25	0.035		o | I			1.94
9.833	0.41	0.25	0.036		o | I			2.00
9.917	0.41	0.26	0.037		o | I			2.01
10.000	0.41	0.26	0.038		o | I			2.03
10.083	0.32	0.26	0.039		o I			2.03
10.167	0.28	0.26	0.039		o I |			2.04
10.250	0.28	0.26	0.039		o I |			2.04
10.333	0.28	0.26	0.039		o I |			2.04
10.417	0.28	0.26	0.040		o I |			2.04
10.500	0.28	0.26	0.040		o I |			2.05
10.583	0.35	0.26	0.040		o|I			2.05
10.667	0.38	0.26	0.041		o | I			2.06
10.750	0.38	0.26	0.042		o | I			2.07
10.833	0.38	0.26	0.043		o | I			2.08
10.917	0.38	0.26	0.043		o | I			2.09
11.000	0.38	0.26	0.044		o | I			2.10
11.083	0.36	0.26	0.045		o | I			2.11
11.167	0.36	0.26	0.046		o|I			2.12
11.250	0.36	0.26	0.046		o|I			2.12
11.333	0.36	0.26	0.047		o|I			2.13
11.417	0.36	0.26	0.047		o|I			2.14
11.500	0.36	0.26	0.048		o|I			2.15
11.583	0.33	0.26	0.049		o I			2.15
11.667	0.32	0.26	0.049		o I			2.16
11.750	0.32	0.26	0.049		o I			2.16
11.833	0.33	0.26	0.050		o I			2.17
11.917	0.34	0.27	0.050		o I			2.17
12.000	0.34	0.27	0.051		o I			2.18
12.083	0.43	0.27	0.052		o | I			2.19
12.167	0.47	0.27	0.053		o | I			2.21
12.250	0.47	0.27	0.054		o | I			2.22
12.333	0.48	0.27	0.056		o | I			2.24
12.417	0.49	0.27	0.057		o | I			2.26
12.500	0.49	0.27	0.059		o | I			2.28
12.583	0.51	0.27	0.060		o | I			2.30
12.667	0.53	0.27	0.062		o | I			2.32
12.750	0.53	0.27	0.064		o | I			2.34
12.833	0.54	0.28	0.066		o | I			2.36
12.917	0.54	0.28	0.067		o | I			2.38
13.000	0.54	0.28	0.069		o | I			2.40
13.083	0.61	0.28	0.071		o | I			2.43
13.167	0.64	0.28	0.074		o | I			2.46
13.250	0.64	0.28	0.076		o | I			2.49
13.333	0.64	0.29	0.078		o | I			2.52
13.417	0.64	0.29	0.081		o | I			2.55
13.500	0.64	0.29	0.083		o | I			2.58
13.583	0.49	0.29	0.085		o | I			2.60
13.667	0.43	0.29	0.086		o | I			2.61
13.750	0.43	0.29	0.087		o | I			2.63
13.833	0.43	0.29	0.088		o | I			2.64
13.917	0.43	0.29	0.089		o | I			2.65
14.000	0.43	0.29	0.090		o | I			2.66
14.083	0.48	0.29	0.091		o | I			2.68
14.167	0.51	0.30	0.093		o | I			2.69
14.250	0.51	0.30	0.094		o | I			2.71
14.333	0.49	0.30	0.096		o | I			2.73
14.417	0.49	0.30	0.097		o | I			2.74
14.500	0.49	0.30	0.098		o | I			2.76
14.583	0.49	0.30	0.100		o| I			2.77
14.667	0.49	0.30	0.101		o| I			2.79
14.750	0.49	0.30	0.102		o| I			2.81
14.833	0.47	0.30	0.103		o| I|			2.82
14.917	0.47	0.30	0.105		o| I|			2.84
15.000	0.47	0.30	0.106		o| I|			2.85
15.083	0.46	0.31	0.107		o| I |			2.86
15.167	0.45	0.31	0.108		o| I |			2.88
15.250	0.45	0.31	0.109		o| I |			2.89
15.333	0.44	0.31	0.110		o| I |			2.90
15.417	0.43	0.31	0.111		o| I |			2.91
15.500	0.43	0.31	0.111		o| I |			2.92
15.583	0.38	0.31	0.112		o| I			2.93
15.667	0.36	0.31	0.112		o|I			2.93
15.750	0.36	0.31	0.113		o|I			2.94
15.833	0.36	0.31	0.113		o|I			2.94
15.917	0.36	0.31	0.113		o|I			2.94
16.000	0.36	0.31	0.114		o|I			2.95

16.083	0.16	0.31	0.113	| I| o| | |				2.94
16.167	0.08	0.31	0.112	| I | o| | |				2.93
16.250	0.08	0.31	0.110	| I | o| | |				2.91
16.333	0.08	0.31	0.109	| I | o| | |				2.89
16.417	0.08	0.31	0.107	| I | o| | |				2.87
16.500	0.08	0.30	0.106	| I | o| | |				2.85
16.583	0.06	0.30	0.104	| I | o| | |				2.83
16.667	0.06	0.30	0.102	| I | o| | |				2.81
16.750	0.06	0.30	0.101	| I | o| | |				2.79
16.833	0.06	0.30	0.099	| I | o| | |				2.77
16.917	0.06	0.30	0.097	| I | o | | |				2.75
17.000	0.06	0.30	0.096	| I | o | | |				2.73
17.083	0.08	0.30	0.094	| I | o | | |				2.71
17.167	0.09	0.30	0.093	| I | o | | |				2.69
17.250	0.09	0.29	0.091	| I | o | | |				2.67
17.333	0.09	0.29	0.090	| I | o | | |				2.66
17.417	0.09	0.29	0.089	| I | o | | |				2.64
17.500	0.09	0.29	0.087	| I | o | | |				2.62
17.583	0.09	0.29	0.086	| I | o | | |				2.61
17.667	0.09	0.29	0.085	| I | o | | |				2.59
17.750	0.09	0.29	0.083	| I | o | | |				2.58
17.833	0.08	0.29	0.082	| I | o | | |				2.56
17.917	0.08	0.29	0.080	| I | o | | |				2.54
18.000	0.08	0.29	0.079	| I | o | | |				2.52
18.083	0.08	0.28	0.077	| I | o | | |				2.51
18.167	0.08	0.28	0.076	| I | o | | |				2.49
18.250	0.08	0.28	0.075	| I | o | | |				2.47
18.333	0.08	0.28	0.073	| I | o | | |				2.45
18.417	0.08	0.28	0.072	| I | o | | |				2.44
18.500	0.08	0.28	0.070	| I | o | | |				2.42
18.583	0.06	0.28	0.069	| I | o | | |				2.40
18.667	0.06	0.28	0.067	| I | o | | |				2.38
18.750	0.06	0.28	0.066	| I | o | | |				2.36
18.833	0.04	0.28	0.064	| I | o | | |				2.35
18.917	0.04	0.27	0.063	|I | o | | |				2.33
19.000	0.04	0.27	0.061	|I | o | | |				2.31
19.083	0.05	0.27	0.060	| I | o | | |				2.29
19.167	0.06	0.27	0.058	| I | o | | |				2.27
19.250	0.06	0.27	0.057	| I | o | | |				2.25
19.333	0.07	0.27	0.055	| I | o | | |				2.23
19.417	0.08	0.27	0.054	| I | o | | |				2.22
19.500	0.08	0.27	0.052	| I | o | | |				2.20
19.583	0.06	0.27	0.051	| I | o | | |				2.18
19.667	0.06	0.26	0.050	| I | o | | |				2.17
19.750	0.06	0.26	0.048	| I | o | | |				2.15
19.833	0.04	0.26	0.047	| I | o | | |				2.13
19.917	0.04	0.26	0.045	|I | o | | |				2.11
20.000	0.04	0.26	0.044	|I | o | | |				2.09
20.083	0.05	0.26	0.042	| I | o | | |				2.08
20.167	0.06	0.26	0.041	| I | o | | |				2.06
20.250	0.06	0.26	0.039	| I | o | | |				2.04
20.333	0.06	0.26	0.038	| I | o | | |				2.02
20.417	0.06	0.26	0.037	| I | o | | |				2.01
20.500	0.06	0.25	0.035	| I | o | | |				1.96
20.583	0.06	0.25	0.034	| I | o | | |				1.89
20.667	0.06	0.24	0.033	| I | o | | |				1.82
20.750	0.06	0.24	0.031	| I | o | | |				1.75
20.833	0.04	0.23	0.030	| I | o | | |				1.68
20.917	0.04	0.23	0.029	|I | o | | |				1.60
21.000	0.04	0.22	0.028	|I | o | | |				1.53
21.083	0.05	0.22	0.026	| I | o | | |				1.47
21.167	0.06	0.21	0.025	| I | o | | |				1.40
21.250	0.06	0.21	0.024	| I | o | | |				1.35
21.333	0.04	0.20	0.023	| I | o | | |				1.29
21.417	0.04	0.20	0.022	|I |o | | |				1.23
21.500	0.04	0.19	0.021	|I |o | | |				1.17
21.583	0.05	0.19	0.020	| I |o | | |				1.11
21.667	0.06	0.19	0.019	| I |o | | |				1.06
21.750	0.06	0.18	0.018	| I |o | | |				1.01
21.833	0.04	0.17	0.017	| I | o | | |				0.96
21.917	0.04	0.16	0.016	|I | o | | |				0.91
22.000	0.04	0.16	0.016	|I | o| | |				0.86
22.083	0.05	0.15	0.015	| I | o| | |				0.82
22.167	0.06	0.14	0.014	| I | o| | |				0.79
22.250	0.06	0.14	0.014	| I | o | | |				0.76
22.333	0.04	0.13	0.013	| I | o | | |				0.72
22.417	0.04	0.12	0.012	|I | o | | |				0.69
22.500	0.04	0.12	0.012	|I | o | | |				0.66
22.583	0.04	0.11	0.011	|I | o | | |				0.63
22.667	0.04	0.11	0.011	|I | o | | |				0.60
22.750	0.04	0.10	0.010	|I | o | | |				0.57
22.833	0.04	0.10	0.010	|I | o | | |				0.55
22.917	0.04	0.10	0.009	|I | o | | |				0.53
23.000	0.04	0.09	0.009	|I | o | | |				0.50
23.083	0.04	0.09	0.009	|I | o | | |				0.48
23.167	0.04	0.08	0.008	|I | o | | |				0.47

```
23.250    0.04    0.08      0.008  |I  O   |        |        |        |     0.45
23.333    0.04    0.08      0.008  |I O    |        |        |        |     0.43
23.417    0.04    0.08      0.008  |I O    |        |        |        |     0.42
23.500    0.04    0.07      0.007  |I O    |        |        |        |     0.40
23.583    0.04    0.07      0.007  |I O    |        |        |        |     0.39
23.667    0.04    0.07      0.007  |I O    |        |        |        |     0.38
23.750    0.04    0.07      0.007  |I O    |        |        |        |     0.37
23.833    0.04    0.06      0.006  |I O    |        |        |        |     0.36
23.917    0.04    0.06      0.006  |I O    |        |        |        |     0.35
24.000    0.04    0.06      0.006  |I O    |        |        |        |     0.34
24.083    0.01    0.06      0.006  I O     |        |        |        |     0.32
24.167    0.00    0.05      0.005  I O     |        |        |        |     0.30

       Remaining water in basin =    0.01 (Ac.Ft)


       ****************************HYDROGRAPH DATA****************************
                     Number of intervals =   290
                     Time interval =    5.0 (Min.)
                     Maximum/Peak flow rate =        0.310 (CFS)
                     Total volume =       0.382 (Ac.Ft)
              Status of hydrographs being held in storage
                        Stream 1  Stream 2  Stream 3  Stream 4  Stream 5
              Peak (CFS)      0.000     0.000     0.000     0.000     0.000
              Vol (Ac.Ft)      0.000     0.000     0.000     0.000     0.000
       ***********************************************************************

       ----------------------------------------------------------------------
```

Appendix 8: Source Control

Pollutant Sources/Source Control Checklist

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

How to use this worksheet (also see instructions in Section G of the WQMP Template):

1. Review Column 1 and identify which of these potential sources of stormwater pollutants apply to your site. Check each box that applies.
2. Review Column 2 and incorporate all of the corresponding applicable BMPs in your WQMP Exhibit.
3. Review Columns 3 and 4 and incorporate all of the corresponding applicable permanent controls and operational BMPs in your WQMP. Use the format shown in Table G.1on page 23 of this WQMP Template. Describe your specific BMPs in an accompanying narrative, and explain any special conditions or situations that required omitting BMPs or substituting alternative BMPs for those shown here.

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
☒ **A.** On-site storm drain inlets	☒ Locations of inlets.	☒ Mark all inlets with the words "Only Rain Down the Storm Drain" or similar. Catch Basin Markers may be available from the Riverside County Flood Control and Water Conservation District, call 951.955.1200 to verify.	☒ Maintain and periodically repaint or replace inlet markings. ☒ Provide stormwater pollution prevention information to new site owners, lessees, or operators. ☒ See applicable operational BMPs in Fact Sheet SC-44, "Drainage System Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com ☒ Include the following in lease agreements: "Tenant shall not allow anyone to discharge anything to storm drains or to store or deposit materials so as to create a potential discharge to storm drains."
☐ **B.** Interior floor drains and elevator shaft sump pumps		☐ State that interior floor drains and elevator shaft sump pumps will be plumbed to sanitary sewer.	☐ Inspect and maintain drains to prevent blockages and overflow.
☐ **C.** Interior parking garages		☐ State that parking garage floor drains will be plumbed to the sanitary sewer.	☐ Inspect and maintain drains to prevent blockages and overflow.

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☒ **D1.** Need for future indoor & structural pest control		☒ Note building design features that discourage entry of pests.	☒ Provide Integrated Pest Management information to owners, lessees, and operators.
☒ **D2.** Landscape/ Outdoor Pesticide Use	☒ Show locations of native trees or areas of shrubs and ground cover to be undisturbed and retained. ❑ Show self-retaining landscape areas, if any. ☒ Show stormwater treatment and hydrograph modification management BMPs. (See instructions in Chapter 3, Step 5 and guidance in Chapter 5.)	State that final landscape plans will accomplish all of the following. ☒ Preserve existing native trees, shrubs, and ground cover to the maximum extent possible. ☒ Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to stormwater pollution. ❑ Where landscaped areas are used to retain or detain stormwater, specify plants that are tolerant of saturated soil conditions. ☒ Consider using pest-resistant plants, especially adjacent to hardscape. To insure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.	☒ Maintain landscaping using minimum or no pesticides. ☒ See applicable operational BMPs in "What you should know for…..Landscape and Gardening" at http://rcflood.org/stormwater/**Error! Hyperlink reference not valid.** ☒ Provide IPM information to new owners, lessees and operators.

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
❑ **E.** Pools, spas, ponds, decorative fountains, and other water features.	❑ Show location of water feature and a sanitary sewer cleanout in an accessible area within 10 feet. (Exception: Public pools must be plumbed according to County Department of Environmental Health Guidelines.)	If the Co-Permittee requires pools to be plumbed to the sanitary sewer, place a note on the plans and state in the narrative that this connection will be made according to local requirements.	❑ See applicable operational BMPs in "Guidelines for Maintaining Your Swimming Pool, Jacuzzi and Garden Fountain" at http://rcflood.org/stormwater/
❑ **F.** Food service	❑ For restaurants, grocery stores, and other food service operations, show location (indoors or in a covered area outdoors) of a floor sink or other area for cleaning floor mats, containers, and equipment. ❑ On the drawing, show a note that this drain will be connected to a grease interceptor before discharging to the sanitary sewer.	❑ Describe the location and features of the designated cleaning area. ❑ Describe the items to be cleaned in this facility and how it has been sized to insure that the largest items can be accommodated.	❑ See the brochure, "The Food Service Industry Best Management Practices for: Restaurants, Grocery Stores, Delicatessens and Bakeries" at http://rcflood.org/stormwater/ Provide this brochure to new site owners, lessees, and operators.
☒ **G.** Refuse areas	☒ Show where site refuse and recycled materials will be handled and stored for pickup. See local municipal requirements for sizes and other details of refuse areas. ☒ If dumpsters or other receptacles are outdoors, show how the designated area will be covered, graded, and paved to prevent run-on and show locations of berms to prevent runoff from the area. ☒ Any drains from dumpsters, compactors, and tallow bin areas shall be connected to a grease removal device before discharge to sanitary sewer.	☒ State how site refuse will be handled and provide supporting detail to what is shown on plans. ☒ State that signs will be posted on or near dumpsters with the words "Do not dump hazardous materials here" or similar.	☒ State how the following will be implemented: Provide adequate number of receptacles. Inspect receptacles regularly; repair or replace leaky receptacles. Keep receptacles covered. Prohibit/prevent dumping of liquid or hazardous wastes. Post "no hazardous materials" signs. Inspect and pick up litter daily and clean up spills immediately. Keep spill control materials available on-site. See Fact Sheet SC-34, "Waste Handling and Disposal" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	**2** **Permanent Controls—Show on WQMP Drawings**	**3** **Permanent Controls—List in WQMP Table and Narrative**	**4** **Operational BMPs—Include in WQMP Table and Narrative**
☒ **J.** Vehicle and Equipment Cleaning	☒ **Show on drawings as appropriate:** **(1) Commercial/industrial facilities having vehicle/equipment cleaning needs shall either provide a covered, bermed area for washing activities or discourage vehicle/equipment washing by removing hose bibs and installing signs prohibiting such uses.** **(2) Multi-dwelling complexes shall have a paved, bermed, and covered car wash area (unless car washing is prohibited on-site and hoses are provided with an automatic shut-off to discourage such use).** **(3) Washing areas for cars, vehicles, and equipment shall be paved, designed to prevent run-on to or runoff from the area, and plumbed to drain to the sanitary sewer.** **(4) Commercial car wash facilities shall be designed such that no runoff from the facility is discharged to the storm drain system. Wastewater from the facility shall discharge to the sanitary sewer, or a wastewater reclamation system shall be installed.**	❑ **If a car wash area is not provided, describe any measures taken to discourage on-site car washing and explain how these will be enforced.**	**Describe operational measures to implement the following (if applicable):** ☒ **Washwater from vehicle and equipment washing operations shall not be discharged to the storm drain system.** Refer to "Outdoor Cleaning Activities and Professional Mobile Service Providers" for many of the Potential Sources of Runoff Pollutants categories below. Brochure can be found at http://rcflood.org/stormwater/ ❑**Car dealerships and similar may rinse cars with water only.**

IF THESE SOURCES WILL BE ON THE PROJECT SITE …	… THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
☒ **L.** Fuel Dispensing Areas	☒ Fueling areas[6] shall have impermeable floors (i.e., portland cement concrete or equivalent smooth impervious surface) that are: a) graded at the minimum slope necessary to prevent ponding; and b) separated from the rest of the site by a grade break that prevents run-on of stormwater to the maximum extent practicable. ☒ Fueling areas shall be covered by a canopy that extends a minimum of ten feet in each direction from each pump. [Alternative: The fueling area must be covered and the cover's minimum dimensions must be equal to or greater than the area within the grade break or fuel dispensing area[1].] The canopy [or cover] shall not drain onto the fueling area.		☒ The property owner shall dry sweep the fueling area routinely. ☒ See the Fact Sheet SD-30 , "Fueling Areas" in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com

[6] The fueling area shall be defined as the area extending a minimum of 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus a minimum of one foot, whichever is greater.

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 Potential Sources of Runoff Pollutants	2 Permanent Controls—Show on WQMP Drawings	3 Permanent Controls—List in WQMP Table and Narrative	4 Operational BMPs—Include in WQMP Table and Narrative
☒ **N.** Fire Sprinkler Test Water		☒ Provide a means to drain fire sprinkler test water to the sanitary sewer.	☒ See the note in Fact Sheet SC-41, "Building and Grounds Maintenance," in the CASQA Stormwater Quality Handbooks at www.cabmphandbooks.com
O. Miscellaneous Drain or Wash Water or Other Sources ❑ Boiler drain lines ☒ Condensate drain lines ☒ Rooftop equipment ❑ Drainage sumps ☒ Roofing, gutters, and trim. ❑ Other sources		❑ Boiler drain lines shall be directly or indirectly connected to the sanitary sewer system and may not discharge to the storm drain system. ☒ Condensate drain lines may discharge to landscaped areas if the flow is small enough that runoff will not occur. Condensate drain lines may not discharge to the storm drain system. ❑ Rooftop equipment with potential to produce pollutants shall be roofed and/or have secondary containment. ❑ Any drainage sumps on-site shall feature a sediment sump to reduce the quantity of sediment in pumped water. ☒ Avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff. Include controls for other sources as specified by local reviewer.	

STORMWATER POLLUTANT SOURCES/SOURCE CONTROL CHECKLIST

IF THESE SOURCES WILL BE ON THE PROJECT SITE ...	... THEN YOUR WQMP SHOULD INCLUDE THESE SOURCE CONTROL BMPs, AS APPLICABLE		
1 **Potential Sources of Runoff Pollutants**	2 **Permanent Controls—Show on WQMP Drawings**	3 **Permanent Controls—List in WQMP Table and Narrative**	4 **Operational BMPs—Include in WQMP Table and Narrative**
☒ **P.** Plazas, sidewalks, and parking lots.			☒ Sweep plazas, sidewalks, and parking lots regularly to prevent accumulation of litter and debris. Collect debris from pressure washing to prevent entry into the storm drain system. Collect washwater containing any cleaning agent or degreaser and discharge to the sanitary sewer not to a storm drain.

Appendix 9: O&M

Operation and Maintenance Plan and Documentation of Finance, Maintenance and Recording Mechanisms, Covenant and Agreement

Operations & Maintenance Responsibility for Treatment Control BMP's

BMP Required Maintenance	Frequency	Maintenance Requirements	Responsibility
Trash	Weekly	Empty Dumpsters	Property Owner
Bioretention Facility / Planter box	Monthly	Remove litter and debris	Property Owner
	Semi-Annual	Remove and replace dead and diseased vegetation.	
	Annual	Add mulch, replace tree stakes and wires	
	As Needed	Remove sediment, remulch void areas, treat diseased trees and shrubs, mow turf areas, repair erosion at inflow points, repair outflow structures, unclog underdrain, and regulate soil pH regulation.	

BMP's should start and be inspected prior to forecast rain, daily during extended rain events, after rain events, weekly during the rainy season, and at two-week intervals during the non-rainy season.

Funding

Woodcrest Christian
18401 Van Buren Blvd
Riverside, CA 92508
951.780.2010

Basin Site Maintenance Summary Form

Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		
Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		
Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		
Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		
Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		
Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		
Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		
Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		
Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		
Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		
Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		
Date:	**Inspector Name:**	**Basin:**
Maintenance Performed:		

Appendix 10: Educational Materials

BMP Fact Sheets, Maintenance Guidelines and Other End-User BMP Information

INDEX

{Select all applicable BMP's}

SITE DESIGN BMPs

SD-10 Site Design & Landscape Planning
SD-11 Roof Runoff Controls
SD-12 Efficient Irrigation
SD-13 Storm Drain Signage
SD-30 Fueling Areas
SD-32 Trash Storage Areas
SD-33 Vehicle Washing Areas

SOURCE CONTROL BMPs

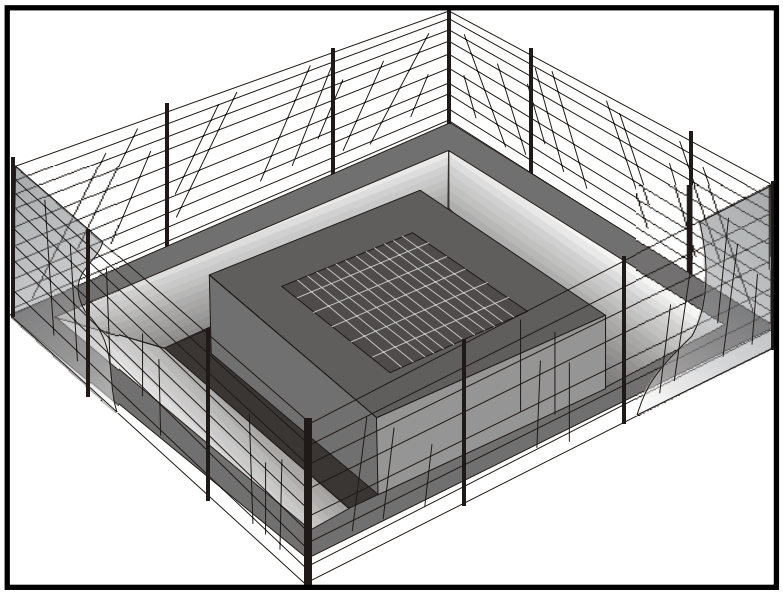
SC-10 Storm Drain Inlet Protection
SC-11 Spill Prevention, Control and Cleanup
SC-20 Vehicle and Equipment Fueling
SC-21 Vehicle and Equipment Cleaning
SC-34 Waste Handling and Disposal
SC-41 Building and Grounds Maintenance
SC-43 Parking/Storage Area Maintenance

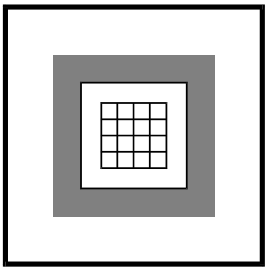
TREATMENT CONTROL BMPs

TC-32 Bioretention

Storm Drain Inlet Protection

SC-10





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ● Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ○ Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

Devices used at storm drain inlets that are subject to runoff from construction activities to detain and/or to filter sediment-laden runoff to allow sediment to settle and/or to filter sediment prior to discharge into storm drainage systems or watercourses.

Appropriate Applications

- Where ponding will not encroach into highway traffic.
- Where sediment laden surface runoff may enter an inlet.
- Where disturbed drainage areas have not yet been permanently stabilized.
- Where the drainage area is 0.4 ha (1 ac) or less.
- Appropriate during wet and snow-melt seasons.

Limitations

- Requires an adequate area for water to pond without encroaching upon traveled way and should not present itself to be an obstacle to oncoming traffic.
- May require other methods of temporary protection to prevent sediment-laden storm water and non-storm water discharges from entering the storm drain system.
- Sediment removal may be difficult in high flow conditions or if runoff is heavily sediment laden. If high flow conditions are expected, use other on-site sediment trapping techniques (e.g. check dams) in conjunction with inlet protection.
- Frequent maintenance is required.
- For drainage areas larger than 0.4 ha (1 ac), runoff shall be routed to a sediment trapping device designed for larger flows. See BMPs SC-2, "Sediment/Desilting Basin," and SC-3 "Sediment Trap."

- Filter fabric fence inlet protection is appropriate in open areas that are subject to sheet flow and for flows not exceeding 0.014 m3/s (0.5 cfs).
- Gravel bag barriers for inlet protection are applicable when sheet flows or concentrated flows exceed 0.014 m3/s (0.5 cfs), and it is necessary to allow for overtopping to prevent flooding.
- Fiber rolls and foam barriers are not appropriate for locations where they cannot be properly anchored to the surface.
- Excavated drop inlet sediment traps are appropriate where relatively heavy flows are expected and overflow capability is needed.

Standards and Specifications

Identify existing and/or planned storm drain inlets that have the potential to receive sediment-laden surface runoff. Determine if storm drain inlet protection is needed, and which method to use.

Methods and Installation

- ***DI Protection Type 1 - Filter Fabric Fence -*** The filter fabric fence (Type 1) protection is illustrated on Page 5. Similar to constructing a silt fence. See BMP SC-1, "Silt Fence." Do not place filter fabric underneath the inlet grate since the collected sediment may fall into the drain inlet when the fabric is removed or replaced.
- ***DI Protection Type 2 - Excavated Drop Inlet Sediment Trap -*** The excavated drop inlet sediment trap (Type 2) is illustrated in Page 6. Similar to constructing a temporary silt fence, See BMP SC-1, "Silt Fence." Size excavated trap to provide a minimum storage capacity calculated at the rate of 130 m3/ha (67 yd3/ac) of drainage area.
- ***DI Protection Type 3 – Gravel bag -*** The gravel bag barrier (Type 3) is illustrated in Page 7. Flow from a severe storm shall not overtop the curb. In areas of high clay and silts, use filter fabric and gravel as additional filter media. Construct gravel bags in accordance with BMP SC-6, "Gravel Bag Berm." Gravel bags shall be used due to their high permeability.
- ***DI Protection Type 4 – Foam Barriers and Fiber Rolls*** – Foam barrier or fiber roll (Type 4) is placed around the inlet and keyed and anchored to the surface. Foam barriers and fiber rolls are intended for use as inlet protection where the area around the inlet is unpaved and the foam barrier or fiber roll can be secured to the surface. RE or Construction Storm Water Coordinator approval is required.

Maintenance and Inspection

General

- Inspect all inlet protection devices before and after every rainfall event, and weekly during the rest of the rainy season. During extended rainfall events, inspect inlet protection devices at least once every 24 hours.

- Inspect the storm drain inlet after severe storms in the rainy season to check for bypassed material.
- Remove all inlet protection devices within thirty days after the site is stabilized, or when the inlet protection is no longer needed.
  - Bring the disturbed area to final grade and smooth and compact it. Appropriately stabilize all bare areas around the inlet.
  - Clean and re-grade area around the inlet and clean the inside of the storm drain inlet as it must be free of sediment and debris at the time of final inspection.

Requirements by Method

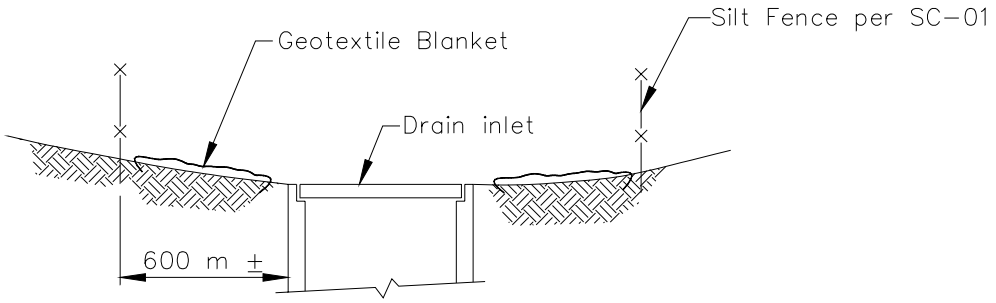
- ***Type 1 - Filter Fabric Fence***
  - This method shall be used for drain inlets requiring protection in areas where finished grade is established and erosion control seeding has been applied or is pending.
  - Make sure the stakes are securely driven in the ground and are structurally sound (i.e., not bent, cracked, or splintered, and are reasonably perpendicular to the ground). Replace damaged stakes.
  - Replace or clean the fabric when the fabric becomes clogged with sediment. Make sure the fabric does not have any holes or tears. Repair or replace fabric as needed or as directed by the RE.
  - At a minimum, remove the sediment behind the fabric fence when accumulation reaches one-third the height of the fence or barrier height. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications Section 7-1.13.
- ***Type 2 – Excavated Drop Inlet Sediment Trap***
  - This method may be used for drain inlets requiring protection in areas that have been cleared and grubbed, and where exposed soil areas are subject to grading.
  - Remove sediment from basin when the volume of the basin has been reduced by one-half.
- ***Type 3 - Gravel Bag Barrier***
  - This method may be used for drain inlets surrounded by AC or paved surfaces.
  - Inspect bags for holes, gashes, and snags.

- Check gravel bags for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications Section 7-1.13.

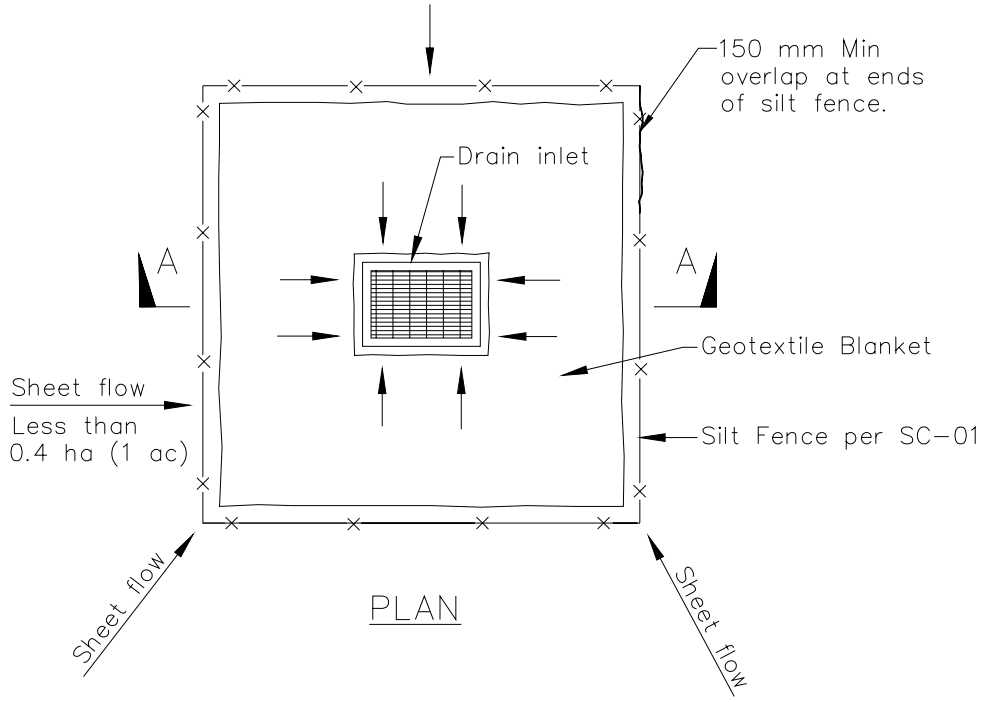
■ ***Type 4 Foam Barriers and Fiber Rolls***

- This method may be used for drain inlets requiring protection in areas that have been cleared and grubbed, and where exposed soil areas subject to grading. RE or Construction Storm Coordinator approval is required.

- Check foam barrier or fiber roll for proper arrangement and displacement. Remove the sediment behind the barrier when it reaches one-third the height of the barrier. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications.



SECTION A–A

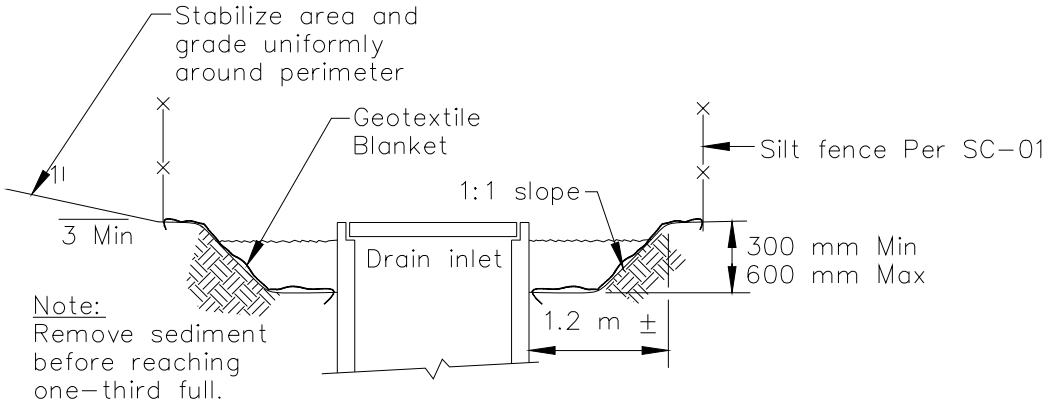


PLAN

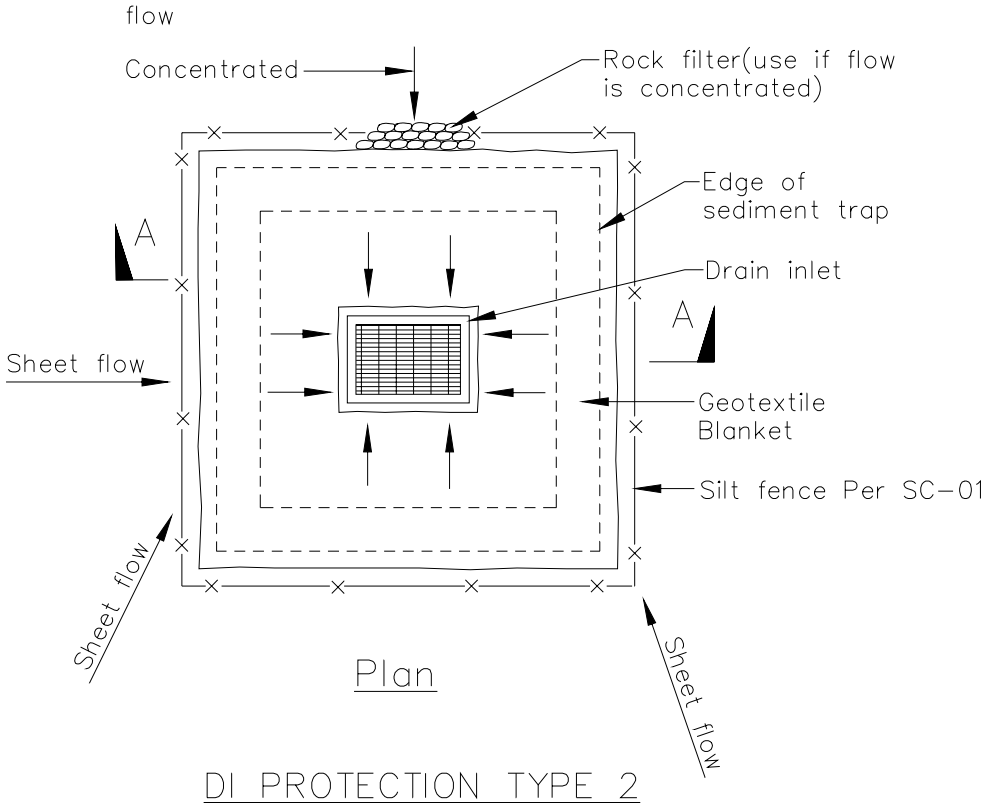
DI PROTECTION TYPE 1
NOT TO SCALE

NOTES:

1. For use in areas where grading has been completed and final soil stabilization and seeding are pending.
2. Not applicable in paved areas.
3. Not applicable with concentrated flows.



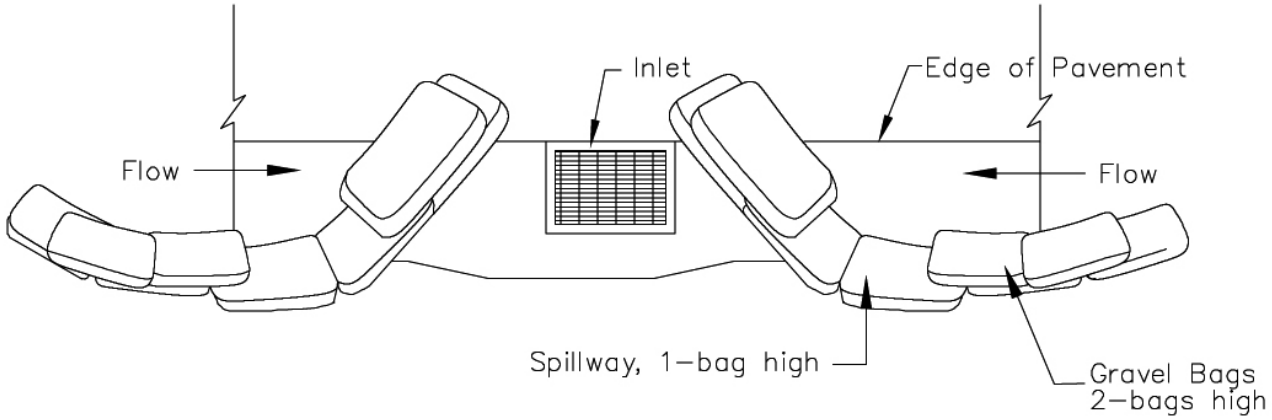
Section A–A



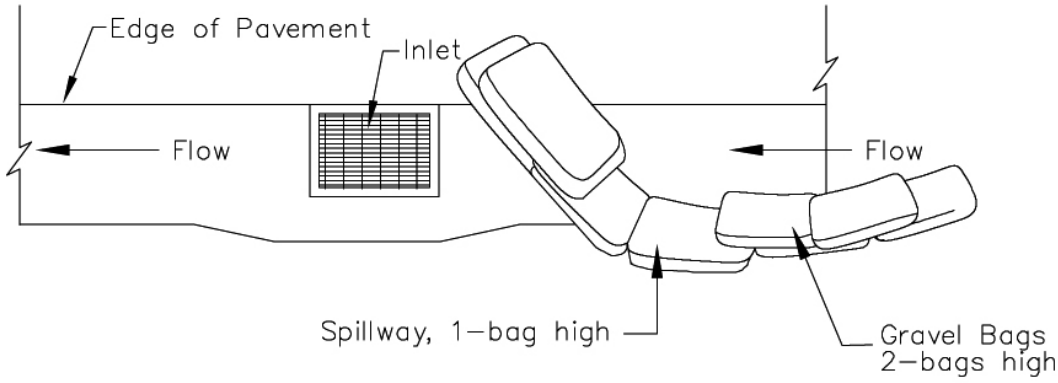
Plan

DI PROTECTION TYPE 2
NOT TO SCALE

Notes
1. For use in cleared and grubbed and in graded areas.
2. Shape basin so that longest inflow area faces longest length of trap.
3. For concentrated flows, shape basin in 2:1 ratio with length oriented towards direction of flow.



TYPICAL PROTECTION FOR INLET WITH OPOSING FLOW DIRECTIONS



TYPICAL PROTECTION FOR INLET WITH SINGLE FLOW DIRECTION

NOTES:

1. Intended for short–term use.
2. Use to inhibit non–storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed
5. Not applicable in areas with high silts and clays without filter fabric.

Spill Prevention, Control & Cleanup SC-11



Photo Credit: Geoff Brosseau

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Description

Many activities that occur at an industrial or commercial site have the potential to cause accidental or illegal spills. Preparation for accidental or illegal spills, with proper training and reporting systems implemented, can minimize the discharge of pollutants to the environment.

Spills and leaks are one of the largest contributors of stormwater pollutants. Spill prevention and control plans are applicable to any site at which hazardous materials are stored or used. An effective plan should have spill prevention and response procedures that identify potential spill areas, specify material handling procedures, describe spill response procedures, and provide spill clean-up equipment. The plan should take steps to identify and characterize potential spills, eliminate and reduce spill potential, respond to spills when they occur in an effort to prevent pollutants from entering the stormwater drainage system, and train personnel to prevent and control future spills.

Targeted Constituents

Sediment	
Nutrients	
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Approach

Pollution Prevention

- Develop procedures to prevent/mitigate spills to storm drain systems. Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures.

- Develop a Spill Prevention Control and Countermeasure (SPCC) Plan. The plan should include:

- Description of the facility, owner and address, activities and chemicals present
- Facility map
- Notification and evacuation procedures
- Cleanup instructions
- Identification of responsible departments
- Identify key spill response personnel

- Recycle, reclaim, or reuse materials whenever possible. This will reduce the amount of process materials that are brought into the facility.

Suggested Protocols (including equipment needs)

Spill Prevention

- Develop procedures to prevent/mitigate spills to storm drain systems. Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures.

- If consistent illegal dumping is observed at the facility:
  - Post "No Dumping" signs with a phone number for reporting illegal dumping and disposal. Signs should also indicate fines and penalties applicable for illegal dumping.
  - Landscaping and beautification efforts may also discourage illegal dumping.
  - Bright lighting and/or entrance barriers may also be needed to discourage illegal dumping.

- Store and contain liquid materials in such a manner that if the tank is ruptured, the contents will not discharge, flow, or be washed into the storm drainage system, surface waters, or groundwater.

- If the liquid is oil, gas, or other material that separates from and floats on water, install a spill control device (such as a tee section) in the catch basins that collects runoff from the storage tank area.

- Routine maintenance:
  - Place drip pans or absorbent materials beneath all mounted taps, and at all potential drip and spill locations during filling and unloading of tanks. Any collected liquids or soiled absorbent materials must be reused/recycled or properly disposed.
  - Store and maintain appropriate spill cleanup materials in a location known to all near the tank storage area; and ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.
  - Sweep and clean the storage area monthly if it is paved, *do not hose down the area to a storm drain*.

  - Check tanks (and any containment sumps) daily for leaks and spills. Replace tanks that are leaking, corroded, or otherwise deteriorating with tanks in good condition. Collect all spilled liquids and properly dispose of them.

- Label all containers according to their contents (e.g., solvent, gasoline).
- Label hazardous substances regarding the potential hazard (corrosive, radioactive, flammable, explosive, poisonous).
- Prominently display required labels on transported hazardous and toxic materials (per US DOT regulations).
- Identify key spill response personnel.

Spill Control and Cleanup Activities

- Follow the Spill Prevention Control and Countermeasure Plan.
- Clean up leaks and spills immediately.
- Place a stockpile of spill cleanup materials where it will be readily accessible (e.g., near storage and maintenance areas).
- On paved surfaces, clean up spills with as little water as possible. Use a rag for small spills, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste. Physical methods for the cleanup of dry chemicals include the use of brooms, shovels, sweepers, or plows.
- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Chemical cleanups of material can be achieved with the use of adsorbents, gels, and foams. Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- For larger spills, a private spill cleanup company or Hazmat team may be necessary.

Reporting

- Report spills that pose an immediate threat to human health or the environment to the Regional Water Quality Control Board.
- Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24 hour).
- Report spills to local agencies, such as the fire department; they can assist in cleanup.
- Establish a system for tracking incidents. The system should be designed to identify the following:

  - Types and quantities (in some cases) of wastes

  - Patterns in time of occurrence (time of day/night, month, or year)

- Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)

- Responsible parties

Training

- Educate employees about spill prevention and cleanup.

- Well-trained employees can reduce human errors that lead to accidental releases or spills:

  - The employee should have the tools and knowledge to immediately begin cleaning up a spill should one occur.

  - Employees should be familiar with the Spill Prevention Control and Countermeasure Plan.

- Employees should be educated about aboveground storage tank requirements. Employees responsible for aboveground storage tanks and liquid transfers should be thoroughly familiar with the Spill Prevention Control and Countermeasure Plan and the plan should be readily available.

- Train employees to recognize and report illegal dumping incidents.

Other Considerations (Limitations and Regulations)

- State regulations exist for facilities with a storage capacity of 10,000 gallons or more of petroleum to prepare a Spill Prevention Control and Countermeasure (SPCC) Plan (Health & Safety Code Chapter 6.67).

- State regulations also exist for storage of hazardous materials (Health & Safety Code Chapter 6.95), including the preparation of area and business plans for emergency response to the releases or threatened releases.

- Consider requiring smaller secondary containment areas (less than 200 sq. ft.) to be connected to the sanitary sewer, prohibiting any hard connections to the storm drain.

Requirements

Costs (including capital and operation & maintenance)

- Will vary depending on the size of the facility and the necessary controls.

- Prevention of leaks and spills is inexpensive. Treatment and/or disposal of contaminated soil or water can be quite expensive.

Maintenance (including administrative and staffing)

- This BMP has no major administrative or staffing requirements. However, extra time is needed to properly handle and dispose of spills, which results in increased labor costs.

Supplemental Information

Further Detail of the BMP

Reporting

Record keeping and internal reporting represent good operating practices because they can increase the efficiency of the facility and the effectiveness of BMPs. A good record keeping system helps the facility minimize incident recurrence, correctly respond with appropriate cleanup activities, and comply with legal requirements. A record keeping and reporting system should be set up for documenting spills, leaks, and other discharges, including discharges of hazardous substances in reportable quantities. Incident records describe the quality and quantity of non-stormwater discharges to the storm sewer. These records should contain the following information:

- Date and time of the incident
- Weather conditions
- Duration of the spill/leak/discharge
- Cause of the spill/leak/discharge
- Response procedures implemented
- Persons notified
- Environmental problems associated with the spill/leak/discharge

Separate record keeping systems should be established to document housekeeping and preventive maintenance inspections, and training activities. All housekeeping and preventive maintenance inspections should be documented. Inspection documentation should contain the following information:

- The date and time the inspection was performed
- Name of the inspector
- Items inspected
- Problems noted
- Corrective action required
- Date corrective action was taken

Other means to document and record inspection results are field notes, timed and dated photographs, videotapes, and drawings and maps.

Aboveground Tank Leak and Spill Control

Accidental releases of materials from aboveground liquid storage tanks present the potential for contaminating stormwater with many different pollutants. Materials spilled, leaked, or lost from

tanks may accumulate in soils or on impervious surfaces and be carried away by stormwater runoff.

The most common causes of unintentional releases are:

- Installation problems
- Failure of piping systems (pipes, pumps, flanges, couplings, hoses, and valves)
- External corrosion and structural failure
- Spills and overfills due to operator error
- Leaks during pumping of liquids or gases from truck or rail car to a storage tank or vice versa

Storage of reactive, ignitable, or flammable liquids should comply with the Uniform Fire Code and the National Electric Code. Practices listed below should be employed to enhance the code requirements:

- Tanks should be placed in a designated area.
- Tanks located in areas where firearms are discharged should be encapsulated in concrete or the equivalent.
- Designated areas should be impervious and paved with Portland cement concrete, free of cracks and gaps, in order to contain leaks and spills.
- Liquid materials should be stored in UL approved double walled tanks or surrounded by a curb or dike to provide the volume to contain 10 percent of the volume of all of the containers or 110 percent of the volume of the largest container, whichever is greater. The area inside the curb should slope to a drain.
- For used oil or dangerous waste, a dead-end sump should be installed in the drain.
- All other liquids should be drained to the sanitary sewer if available. The drain must have a positive control such as a lock, valve, or plug to prevent release of contaminated liquids.
- Accumulated stormwater in petroleum storage areas should be passed through an oil/water separator.

Maintenance is critical to preventing leaks and spills. Conduct routine inspections and:

- Check for external corrosion and structural failure.
- Check for spills and overfills due to operator error.
- Check for failure of piping system (pipes, pumps, flanger, coupling, hoses, and valves).
- Check for leaks or spills during pumping of liquids or gases from truck or rail car to a storage facility or vice versa.

- Visually inspect new tank or container installation for loose fittings, poor welding, and improper or poorly fitted gaskets.
- Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
- Frequently relocate accumulated stormwater during the wet season.
- Periodically conduct integrity testing by a qualified professional.

Vehicle Leak and Spill Control

Major spills on roadways and other public areas are generally handled by highly trained Hazmat teams from local fire departments or environmental health departments. The measures listed below pertain to leaks and smaller spills at vehicle maintenance shops.

In addition to implementing the spill prevention, control, and clean up practices above, use the following measures related to specific activities:

Vehicle and Equipment Maintenance

- Perform all vehicle fluid removal or changing inside or under cover to prevent the run-on of stormwater and the runoff of spills.
- Regularly inspect vehicles and equipment for leaks, and repair immediately.
- Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
- Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
- Immediately drain all fluids from wrecked vehicles.
- Store wrecked vehicles or damaged equipment under cover.
- Place drip pans or absorbent materials under heavy equipment when not in use.
- Use adsorbent materials on small spills rather than hosing down the spill.
- Remove the adsorbent materials promptly and dispose of properly.
- Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
- Oil filters disposed of in trashcans or dumpsters can leak oil and contaminate stormwater. Place the oil filter in a funnel over a waste oil recycling drum to drain excess oil before disposal. Oil filters can also be recycled. Ask your oil supplier or recycler about recycling oil filters.

- Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries, even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

Vehicle and Equipment Fueling

- Design the fueling area to prevent the run-on of stormwater and the runoff of spills:
  - Cover fueling area if possible.
  - Use a perimeter drain or slope pavement inward with drainage to a sump.
  - Pave fueling area with concrete rather than asphalt.
- If dead-end sump is not used to collect spills, install an oil/water separator.
- Install vapor recovery nozzles to help control drips as well as air pollution.
- Discourage "topping-off' of fuel tanks.
- Use secondary containment when transferring fuel from the tank truck to the fuel tank.
- Use adsorbent materials on small spills and general cleaning rather than hosing down the area. Remove the adsorbent materials promptly.
- Carry out all Federal and State requirements regarding underground storage tanks, or install above ground tanks.
- Do not use mobile fueling of mobile industrial equipment around the facility; rather, transport the equipment to designated fueling areas.
- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Train employees in proper fueling and cleanup procedures.

Industrial Spill Prevention Response

For the purposes of developing a spill prevention and response program to meet the stormwater regulations, facility managers should use information provided in this fact sheet and the spill prevention/response portions of the fact sheets in this handbook, for specific activities. The program should:

- Integrate with existing emergency response/hazardous materials programs (e.g., Fire Department)
- Develop procedures to prevent/mitigate spills to storm drain systems
- Identify responsible departments
- Develop and standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures
- Address spills at municipal facilities, as well as public areas

- Provide training concerning spill prevention, response and cleanup to all appropriate personnel

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Stormwater Managers Resource Center http://www.stormwatercenter.net/

Vehicle and quipment Fueling SC-20



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize

Targeted Constituents

Sediment	
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓
Oxygen Demanding	

Description

Spills and leaks that occur during vehicle and equipment fueling can contribute hydrocarbons, oil and grease, as well as heavy metals to stormwater runoff. Implementing the following management practices can help prevent fuel spills and leaks.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

Pollution Prevention

- Use properly maintained offsite fueling stations whenever possible. These businesses are better equipped to handle fuel and spills properly.
- Educate employees about pollution prevention measures and goals
- Focus pollution prevention activities on containment of spills and leaks, most of which may occur during liquid transfers.

Suggested Protocols

General

- "Spot clean" leaks and drips routinely. Leaks are not cleaned up until the absorbent is picked up and disposed of properly.

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- Label drains within the facility boundary, by paint/stencil (or equivalent), to indicate whether they flow to an oil/water separator, directly to the sewer, or to a storm drain. Labels are not necessary for plumbing fixtures directly connected to the sanitary sewer but may be useful to help eliminate confusion about where the drain leads.
- Post signs to remind employees not to top off the fuel tank when filling and signs that ban employees from changing engine oil or other fluids at that location.
- Report leaking vehicles to fleet maintenance.
- Install inlet catch basin equipped with a small sedimentation basin or grit chamber to remove large particles from stormwater in highly impervious areas. Proper maintenance of these devices is necessary.
- Accumulated non-contaminated stormwater (e.g., in a secondary containment) should be released prior to next storm.
- Ensure the following safeguards are in place:
  - Overflow protection devices on tank systems to warn the operator to automatically shutdown transfer pumps when the tank reaches full capacity.
  - Protective guards around tanks and piping to prevent vehicle or forklift damage.
  - Clearly tagging or labeling all valves to reduce human error.
  - Automatic shut off for severed fuel hoses.

Fuel Dispensing Areas

- Maintain clean fuel-dispensing areas using dry cleanup methods such as sweeping for removal of litter and debris, or use of rags and absorbents for leaks and spills. Do not wash down areas with water.
- Fit underground storage tanks with spill containment and overfill prevention systems meeting the requirements of Section 2635(b) of Title 23 of the California Code of Regulations.
- Fit fuel dispensing nozzles with "hold-open latches" (automatic shutoffs) except where prohibited by local fire departments.
- Post signs at the fuel dispenser or fuel island warning vehicle owners/operators against "topping off" of vehicle fuel tanks.
- Design fueling area to prevent stormwater runoff and spills.
- Cover fueling area with an overhanging roof structure or canopy so that precipitation cannot come in contact with the fueling area and if possible use a perimeter drain or slope pavement inward with drainage to a blind sump (must be properly maintained and water properly disposed of); pave area with concrete rather than asphalt.

- Apply a suitable sealant that protects the asphalt from spilled fuels in areas where covering is infeasible and the fuel island is surrounded by pavement.
- Install vapor recovery nozzles to help control drips as well as air pollution.
- Use secondary containment when transferring fuel from the tank truck to the fuel tank.
- Cover storm drains in the vicinity during transfer.

Outdoor Waste Receptacle Area

- Spot clean leaks and drips routinely to prevent runoff of spillage.
- Minimize the possibility of stormwater pollution from outside waste receptacles by using an effective combination of the following:
  - use only watertight waste receptacle(s) and keep the lid(s) closed, or
  - grade and pave the waste receptacle area to prevent runon of stormwater, or
  - install a roof over the waste receptacle area, or
  - install a low containment berm around the waste receptacle area, or
  - use and maintain drip pans under waste receptacles. Containment areas and drip pans must be properly maintained and collected water disposed of properly (e.g., to sanitary sewer). Several drip pans should be stored in a covered location near outdoor waste receptacle area so that they are always available, yet protected from precipitation when not in use.
- Post "no littering" signs.

Air/Water Supply Area

- Minimize the possibility of stormwater pollution from air/water supply areas by implementing an effective combination of the following:
  - spot clean leaks and drips routinely to prevent runoff of spillage, or
  - grade and pave the air/water supply area to prevent runon of stormwater, or
  - install a roof over the air/water supply area, or
  - install a low containment berm around the air/water supply area. Maintain containment areas and dispose of contaminated water properly (e.g., to sanitary sewer).

Inspection

- Aboveground Tank Leak and Spill Control:
  - Check for external corrosion and structural failure.

- Check for spills and overfills due to operator error.
- Check for failure of piping system.
- Check for leaks or spills during pumping of liquids or gases from truck or rail car to a storage facility or vice versa.
- Visually inspect new tank or container installation for loose fittings, poor welding, and improper or poorly fitted gaskets.
- Inspect tank foundations, connections, coatings, and tank walls and piping system. Look for corrosion, leaks, cracks, scratches, and other physical damage that may weaken the tank or container system.
- Periodically, integrity testing should be conducted by a qualified professional.

- Inspect and clean, if necessary, storm drain inlets and catch basins within the facility boundary before October 1 each year.

Training

- Train all employees upon hiring and annually thereafter on proper methods for handling and disposing of waste. Make sure that all employees understand stormwater discharge prohibitions, wastewater discharge requirements, and these best management practices.
- Train employees on proper fueling and cleanup procedures.
- Use a training log or similar method to document training.
- Ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place stockpiles of spill cleanup materials where they are readily accessible.
- Use adsorbent materials on small spills and general cleaning rather than hosing down the area. Remove the adsorbent materials promptly and dispose properly.
- Store portable absorbent booms (long flexible shafts or barriers made of absorbent material) in unbermed fueling areas.
- Report spills promptly.
- Install an oil/water separator and connect to the sanitary sewer (if allowed), if a dead-end sump is not used to collect spills.

Other Considerations

- Carry out all federal and state requirements regarding underground storage tanks, or install above ground tanks.

Requirements

Costs

- The retrofitting of existing fueling areas to minimize stormwater exposure or spill runoff can be expensive. Good design must occur during the initial installation.
- Extruded curb along the "upstream" side of the fueling area to prevent stormwater runon is of modest cost.

Maintenance

- Clean oil/water separators at appropriate intervals.
- Keep ample supplies of spill cleanup materials onsite.
- Inspect fueling areas, storage tanks, catch basin inserts, containment areas, and drip pans on a regular schedule.

Supplemental Information

Design Considerations

Designing New Installations

The elements listed below should be included in the design and construction of new or substantially remodeled facilities.

Fuel Dispensing Areas

- Fuel dispensing areas must be paved with Portland cement concrete (or, equivalent smooth impervious surface), with a 2% to 4% slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents runon of stormwater to the extent practicable. The fuel dispensing area is defined as extending 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus 1 foot, whichever is less. The paving around the fuel dispensing area may exceed the minimum dimensions of the "fuel dispensing area" stated above.
- The fuel dispensing area must be covered, and the cover's minimum dimensions must be equal to or greater than the area within the grade break or the fuel dispensing area, as defined above. The cover must not drain onto the fuel dispensing area.
- If necessary install and maintain an oil control device in the appropriate catch basin(s) to treat runoff from the fueling area.

Outdoor Waste Receptacle Area

- Grade and pave the outdoor waste receptacle area to prevent runon of stormwater to the extent practicable.

Air/Water Supply Area

- Grade and pave the air/water supply area to prevent runon of stormwater to the extent practicable.

Designated Fueling Area

- If your facility has large numbers of mobile equipment working throughout the site and you currently fuel them with a mobile fuel truck, consider establishing a designated fueling area. With the exception of tracked equipment such as bulldozers and perhaps small forklifts, most vehicles should be able to travel to a designated area with little lost time. Place temporary "caps" over nearby catch basins or manhole covers so that if a spill occurs it is prevented from entering the storm drain.

Examples

The Spill Prevention Control and Countermeasure (SPCC) Plan, which is required by law for some facilities, is an effective program to reduce the number of accidental spills and minimize contamination of stormwater runoff.

The City of Palo Alto has an effective program for commercial vehicle service facilities. Many of the program's elements, including specific BMP guidance and lists of equipment suppliers, are also applicable to industrial facilities.

Referen es and Resour es

Best Management Practice Guide for Retail Gasoline Outlets, California Stormwater Quality Task Force. 1997.

King County Stormwater Pollution Control Manual – http//www.dnr.metrokc.gov/wlr/dss/spcm.htm

Orange County Stormwater Program http://www.ocwatersheds.com/StormWater/swp_introduction.asp

San Diego Stormwater Co-permittees Jurisdictional Urban Runoff Management Program (URMP)

Vehicle and Equipment Cleaning SC-21



Photo Credit: Geoff Brosseau

Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Description

Wash water from vehicle and equipment cleaning activities performed outdoors or in areas where wash water flows onto the ground can contribute toxic hydrocarbons and other organic compounds, oils and greases, nutrients, phosphates, heavy metals, and suspended solids to stormwater runoff. Use of the procedures outlined below can prevent or reduce the discharge of pollutants to stormwater during vehicle and equipment cleaning.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives

Pollution Prevention

- If possible, use properly maintained off-site commercial washing and steam cleaning businesses whenever possible. These businesses are better equipped to handle and properly dispose of the wash waters.

- Good housekeeping practices can minimize the risk of contamination from wash water discharges.

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Suggested Protocols

General

- Use biodegradable, phosphate-free detergents for washing vehicles as appropriate.
- Mark the area clearly as a wash area.
- Post signs stating that only washing is allowed in wash area.
- Provide trash container in wash area.
- Map on-site storm drain locations to avoid discharges to the storm drain system.
- Emphasize the connection between the storm drain system and runoff, help reinforce that car washing activities affect local water quality through storm drain stenciling programs.

Vehicle and Equipment Cleaning

- Have all vehicle washing done in areas designed to collect and hold the wash and rinse water or effluent generated. Recycle, collect or treat wash water effluent prior to discharge to the sanitary sewer system.
- If washing/cleaning must occur on-site, consider washing vehicle equipment inside the building or on an impervious surface to control the targeted constituents by directing them to the sanitary sewer.
- If washing must occur on-site and outdoor:
  - Use designated paved wash areas. Designated wash areas must be well marked with signs indicating where and how washing must be done. This area must be covered or bermed to collect the wash water and graded to direct the wash water to a treatment or disposal facility.
  - Do not conduct oil changes and other engine maintenance in the designated washing area. Perform these activities in a place designated for oil change and maintenance activities.
  - Cover the wash area when not in use to prevent contact with rain water.
- Install sumps or drain lines to collect wash water for treatment.
- Use hoses with nozzles that automatically turn off when left unattended.
- Do not permit steam cleaning wash water to enter the storm drain.
- Pressure and steam clean off-site to avoid generating runoff with high pollutant concentrations. If done on-site, no pressure cleaning and steam cleaning should be done in areas designated as wellhead protection areas for public water supply.

Disposal

- Consider filtering and recycling wash water.
- Discharge equipment wash water to the sanitary sewer, a holding tank, or a process treatment system, regardless of the washing method used.
- Collect all wash water from vehicle cleaning operations and (1) discharge to a sanitary sewer, holding tank, or process treatment system or (2) run through an enclosed recycling system.
- Collect and treat wash water at the facility and either recycle or discharge to the sanitary sewer system or collect and dispose of as an industrial waste.
- Discharge wash water to sanitary sewer after contacting local sewer authority to find out if pretreatment is required.

Training

- Train employees on proper cleaning and wash water disposal procedures and conduct "refresher" courses on a regular basis.
- Train staff on proper maintenance measures for the wash area.
- Train employees and contractors on proper spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill should one occur.

Spill Response and Prevention

- Keep the Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Have an emergency plan, equipment, and trained personnel ready at all times to deal immediately with major spills.
- Collect all spilled liquids and properly dispose of them.
- Store and maintain appropriate spill cleanup materials in a location known to all near the designated wash area.

Other Considerations (Limitations and Regulations)

- Some municipalities may require pretreatment and monitoring of wash water discharges to the sanitary sewer.
- Steam cleaning can generate significant pollutant concentrations requiring that careful consideration be given to the environmental impacts and compliance issues related to steam cleaning.
- Most car washing best management practices are inexpensive, and rely more on good housekeeping practices (where vehicles are washed, planning for the collection of wash water) than on expensive technology. However, the construction of a specialized area for vehicle washing can be expensive. Also, for facilities that cannot recycle their wash water, the cost of pre-treating wash water through either structural practices or planning for

collection and hauling of contaminated water to sewage treatment plants can be cost-prohibitive.

Requirements

Costs

- Capital costs vary as follows depending on measures implemented:
  - Low cost ($2000-5,000) for berm construction
  - Medium cost ($10,000-30,000) for plumbing modifications (including re-routing discharge to sanitary sewer and installing simple sump)
  - High cost ($60,000-200,000) for on-site treatment and recycling
- O&M costs increase with increasing capital investment.

Maintenance

- Perform berm repair and patching.
- Sweep washing areas frequently to remove solid debris.
- Inspect and maintain sumps, oil/water separators, and on-site treatment/recycling units.

Supplemental Information

Design Considerations

Designated Cleaning Areas

- Washing operations outside should be conducted in a designated wash area having the following characteristics:
  - Paved with Portland cement concrete
  - Covered and bermed to prevent contact with stormwater and contain wash water
  - Sloped for wash water collections
  - Discharges wash water to the sanitary or recycle treatment process waste sewer, or to a dead-end sump
  - Equipped with an oil/water separator if necessary

Examples

The City of Palo Alto has an effective program for commercial vehicle service facilities. Many of the program's elements, including specific BMP guidance and lists of equipment suppliers, are applicable to industrial vehicle service facilities.

The U.S. Postal Service in West Sacramento has a new vehicle wash system that collects, filters, and recycles wash water.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net

Waste Handling & Disposal SC-34



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Description

Improper storage and handling of solid wastes can allow toxic compounds, oils and greases, heavy metals, nutrients, suspended solids, and other pollutants to enter stormwater runoff. The discharge of pollutants to stormwater from waste handling and disposal can be prevented and reduced by tracking waste generation, storage, and disposal; reducing waste generation and disposal through source reduction, re-use, and recycling; and preventing runon and runoff.

Targeted Constituents

Sediment	☑
Nutrients	☑
Trash	☑
Metals	☑
Bacteria	☑
Oil and Grease	☑
Organics	☑
Oxygen Demanding	☑

Approach

Pollution Prevention

- **Reduction in the amount of waste generated can be accomplished using the following source controls such as:**
  - **Production planning and sequencing**
  - **Process or equipment modification**
  - **Raw material substitution or elimination**
  - **Loss prevention and housekeeping**
  - **Waste segregation and separation**
  - **Close loop recycling**
- **Establish a material tracking system to increase awareness about material usage. This may reduce spills and minimize contamination, thus reducing the amount of waste produced.**
- **Recycle materials whenever possible.**

Suggested Protocols

General

- Cover storage containers with leak proof lids or some other means. If waste is not in containers, cover all waste piles (plastic tarps are acceptable coverage) and prevent stormwater runon and runoff with a berm. The waste containers or piles must be covered except when in use.
- Use drip pans or absorbent materials whenever grease containers are emptied by vacuum trucks or other means. Grease cannot be left on the ground. Collected grease must be properly disposed of as garbage.
- Check storage containers weekly for leaks and to ensure that lids are on tightly. Replace any that are leaking, corroded, or otherwise deteriorating.
- Sweep and clean the storage area regularly. If it is paved, do not hose down the area to a storm drain.
- Dispose of rinse and wash water from cleaning waste containers into a sanitary sewer if allowed by the local sewer authority. Do not discharge wash water to the street or storm drain.
- Transfer waste from damaged containers into safe containers.
- Take special care when loading or unloading wastes to minimize losses. Loading systems can be used to minimize spills and fugitive emission losses such as dust or mist. Vacuum transfer systems can minimize waste loss.

Controlling Litter

- Post "No Littering" signs and enforce anti-litter laws.
- Provide a sufficient number of litter receptacles for the facility.
- Clean out and cover litter receptacles frequently to prevent spillage.

Waste Collection

- Keep waste collection areas clean.
- Inspect solid waste containers for structural damage or leaks regularly. Repair or replace damaged containers as necessary.
- Secure solid waste containers; containers must be closed tightly when not in use.
- Place waste containers under cover if possible.
- Do not fill waste containers with washout water or any other liquid.
- Ensure that only appropriate solid wastes are added to the solid waste container. Certain wastes such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc. may not be

disposed of in solid waste containers (see chemical/ hazardous waste collection section below).

- Do not mix wastes; this can cause chemical reactions, make recycling impossible, and complicate disposal.

Good Housekeeping

- Use all of the product before disposing of the container.
- Keep the waste management area clean at all times by sweeping and cleaning up spills immediately.
- Use dry methods when possible (e.g. sweeping, use of absorbents) when cleaning around restaurant/food handling dumpster areas. If water must be used after sweeping/using absorbents, collect water and discharge through grease interceptor to the sewer.
- Stencil storm drains on the facility's property with prohibitive message regarding waste disposal.

Chemical/Hazardous Wastes

- Select designated hazardous waste collection areas on-site.
- Store hazardous materials and wastes in covered containers protected from vandalism, and in compliance with fire and hazardous waste codes.
- Place hazardous waste containers in secondary containment.
- Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.

Runon/Runoff Prevention

- Prevent stormwater runon from entering the waste management area by enclosing the area or building a berm around the area.
- Prevent the waste materials from directly contacting rain.
- Cover waste piles with temporary covering material such as reinforced tarpaulin, polyethylene, polyurethane, polypropyleneor hypalon.
- Cover the area with a permanent roof if feasible.
- Cover dumpsters to prevent rain from washing waste out of holes or cracks in the bottom of the dumpster.
- Move the activity indoor after ensuring all safety concerns such as fire hazard and ventilation are addressed.

Inspection

- Inspect and replace faulty pumps or hoses regularly to minimize the potential of releases and spills.
- Check waste management areas for leaking containers or spills.
- Repair leaking equipment including valves, lines, seals, or pumps promptly.

Training

- Train staff pollution prevention measures and proper disposal methods.
- Train employees and contractors proper spill containment and cleanup. The employee should have the tools and knowledge to immediately begin cleaning up a spill if one should occur.
- Train employees and subcontractors in proper hazardous waste management.

Spill Response and Prevention

- Refer to SC-11, Spill Prevention, Control & Cleanup.
- Keep your Spill Prevention Control and countermeasure (SPCC) plan up-to-date, and implement accordingly.
- Have spill cleanup materials readily available and in a known location.
- Cleanup spills immediately and use dry methods if possible.
- Properly dispose of spill cleanup material.
- Vehicles transporting waste should have spill prevention equipment that can prevent spills during transport. The spill prevention equipment includes:
  - Vehicles equipped with baffles for liquid waste
  - Trucks with sealed gates and spill guards for solid waste

Other Considerations

- Hazardous waste cannot be re-used or recycled; it must be disposed of by a licensed hazardous waste hauler.

Requirements

Costs

- Capital and operation and maintenance costs will vary substantially depending on the size of the facility and the types of waste handled. Costs should be low if there is an inventory program in place.

Maintenance

- None except for maintaining equipment for material tracking program.

Supplemental Information

Further Detail of the BMP

Land Treatment System

- Minimize the runoff of polluted stormwater from land application of municipal waste on-site by:
  - Choosing a site where slopes are under 6%, the soil is permeable, there is a low water table, it is located away from wetlands or marshes, there is a closed drainage system.
  - Avoiding application of waste to the site when it is raining or when the ground is saturated with water.
  - Growing vegetation on land disposal areas to stabilize soils and reduce the volume of surface water runoff from the site.
  - Maintaining adequate barriers between the land application site and the receiving waters. Planted strips are particularly good.
  - Using erosion control techniques such as mulching and matting, filter fences, straw bales, diversion terracing, and sediment basins.
  - Performing routine maintenance to ensure the erosion control or site stabilization measures are working.

References and Resources

King County Stormwater Pollution Control Manual - http://dnr.metrokc.gov/wlr/dss/spcm.htm

Orange County Stormwater Program
http://www.ocwatersheds.com/StormWater/swp_introduction.asp

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Associations (BASMAA). On-line: http://www.basmaa.org

Building & Grounds Maintenance SC-41



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	✓
Trash	
Metals	✓
Bacteria	✓
Oil and Grease	
Organics	

Description

Stormwater runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, abnormal pH, and oils and greases. Utilizing the protocols in this fact sheet will prevent or reduce the discharge of pollutants to stormwater from building and grounds maintenance activities by washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the stormwater collection system.

Approach

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

Pollution Prevention

- Switch to non-toxic chemicals for maintenance when possible.
- Choose cleaning agents that can be recycled.
- Encourage proper lawn management and landscaping, including use of native vegetation.

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- Encourage use of Integrated Pest Management techniques for pest control.
- Encourage proper onsite recycling of yard trimmings.
- Recycle residual paints, solvents, lumber, and other material as much as possible.

Suggested Protocols

Pressure Washing of Buildings, Rooftops, and Other Large Objects

- In situations where soaps or detergents are used and the surrounding area is paved, pressure washers must use a water collection device that enables collection of wash water and associated solids. A sump pump, wet vacuum or similarly effective device must be used to collect the runoff and loose materials. The collected runoff and solids must be disposed of properly.
- If soaps or detergents are not used, and the surrounding area is paved, wash runoff does not have to be collected but must be screened. Pressure washers must use filter fabric or some other type of screen on the ground and/or in the catch basin to trap the particles in wash water runoff.
- If you are pressure washing on a grassed area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the grass and not drain to pavement.

Landscaping Activities

- Dispose of grass clippings, leaves, sticks, or other collected vegetation as garbage, or by composting. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures on exposed soils.

Building Repair, Remodeling, and Construction

- Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain.
- Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly dispose of collected material daily.
- Use a ground cloth or oversized tub for activities such as paint mixing and tool cleaning.
- Clean paintbrushes and tools covered with water-based paints in sinks connected to sanitary sewers or in portable containers that can be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based paints, finishes, or other materials must be cleaned in a manner that enables collection of used solvents (e.g., paint thinner, turpentine, etc.) for recycling or proper disposal.
- Use a storm drain cover, filter fabric, or similarly effective runoff control mechanism if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. This is particularly necessary on rainy days. The containment device(s) must be in place at the beginning of the work day, and accumulated dirty runoff and solids must be collected and disposed of before removing the containment device(s) at the end of the work day.

- If you need to de-water an excavation site, you may need to filter the water before discharging to a catch basin or off-site. If directed off-site, you should direct the water through hay bales and filter fabric or use other sediment filters or traps.
- Store toxic material under cover during precipitation events and when not in use. A cover would include tarps or other temporary cover material.

Mowing, Trimming, and Planting

- Dispose of leaves, sticks, or other collected vegetation as garbage, by composting or at a permitted landfill. Do not dispose of collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures when soils are exposed.
- Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Consider an alternative approach when bailing out muddy water: do not put it in the storm drain; pour over landscaped areas.
- Use hand weeding where practical.

Fertilizer and Pesticide Management

- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides and training of applicators and pest control advisors.
- Use less toxic pesticides that will do the job when applicable. Avoid use of copper-based pesticides if possible.
- Do not use pesticides if rain is expected.
- Do not mix or prepare pesticides for application near storm drains.
- Use the minimum amount needed for the job.
- Calibrate fertilizer distributors to avoid excessive application.
- Employ techniques to minimize off-target application (e.g., spray drift) of pesticides, including consideration of alternative application techniques.
- Apply pesticides only when wind speeds are low.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Irrigate slowly to prevent runoff and then only as much as is needed.
- Clean pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.
- Dispose of empty pesticide containers according to the instructions on the container label.

- Use up the pesticides. Rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.
- Implement storage requirements for pesticide products with guidance from the local fire department and County Agricultural Commissioner. Provide secondary containment for pesticides.

Inspection

- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering and repair leaks in the irrigation system as soon as they are observed.

Training

- Educate and train employees on pesticide use and in pesticide application techniques to prevent pollution.
- Train employees and contractors in proper techniques for spill containment and cleanup.
- Be sure the frequency of training takes into account the complexity of the operations and the nature of the staff.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials, such as brooms, dustpans, and vacuum sweepers (if desired) near the storage area where it will be readily accessible.
- Have employees trained in spill containment and cleanup present during the loading/unloading of dangerous wastes, liquid chemicals, or other materials.
- Familiarize employees with the Spill Prevention Control and Countermeasure Plan.
- Clean up spills immediately.

Other Considerations

Alternative pest/weed controls may not be available, suitable, or effective in many cases.

Requirements

Costs

- Cost will vary depending on the type and size of facility.
- Overall costs should be low in comparison to other BMPs.

Maintenance

Sweep paved areas regularly to collect loose particles. Wipe up spills with rags and other absorbent material immediately, do not hose down the area to a storm drain.

Supplemental Information

Further Detail of the BMP

Fire Sprinkler Line Flushing

Building fire sprinkler line flushing may be a source of non-stormwater runoff pollution. The water entering the system is usually potable water, though in some areas it may be non-potable reclaimed wastewater. There are subsequent factors that may drastically reduce the quality of the water in such systems. Black iron pipe is usually used since it is cheaper than potable piping, but it is subject to rusting and results in lower quality water. Initially, the black iron pipe has an oil coating to protect it from rusting between manufacture and installation; this will contaminate the water from the first flush but not from subsequent flushes. Nitrates, poly-phosphates and other corrosion inhibitors, as well as fire suppressants and antifreeze may be added to the sprinkler water system. Water generally remains in the sprinkler system a long time (typically a year) and between flushes may accumulate iron, manganese, lead, copper, nickel, and zinc. The water generally becomes anoxic and contains living and dead bacteria and breakdown products from chlorination. This may result in a significant BOD problem and the water often smells. Consequently dispose fire sprinkler line flush water into the sanitary sewer. Do not allow discharge to storm drain or infiltration due to potential high levels of pollutants in fire sprinkler line water.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Mobile Cleaners Pilot Program: Final Report. 1997. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Parking/Storage Area Maintenance SC-43



Objectives

- Cover
- Contain
- Educate
- Reduce/Minimize
- Product Substitution

Targeted Constituents

Sediment	✓
Nutrients	
Trash	✓
Metals	✓
Bacteria	
Oil and Grease	✓
Organics	✓

Description

Parking lots and storage areas can contribute a number of substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals that can enter receiving waters through stormwater runoff or non-stormwater discharges. The protocols in this fact sheet are intended to prevent or reduce the discharge of pollutants from parking/storage areas and include using good housekeeping practices, following appropriate cleaning BMPs, and training employees.

Approach

The goal of this program is to ensure stormwater pollution prevention practices are considered when conducting activities on or around parking areas and storage areas to reduce potential for pollutant discharge to receiving waters. Successful implementation depends on effective training of employees on applicable BMPs and general pollution prevention strategies and objectives.

Pollution Prevention

- Encourage alternative designs and maintenance strategies for impervious parking lots. (See New Development and Redevelopment BMP Handbook)

- Keep accurate maintenance logs to evaluate BMP implementation.

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Suggested Protocols

General

- Keep the parking and storage areas clean and orderly. Remove debris in a timely fashion.
- Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices.
- Utilize sand filters or oleophilic collectors for oily waste in low quantities.
- Arrange rooftop drains to prevent drainage directly onto paved surfaces.
- Design lot to include semi-permeable hardscape.
- Discharge soapy water remaining in mop or wash buckets to the sanitary sewer through a sink, toilet, clean-out, or wash area with drain.

Controlling Litter

- Post "No Littering" signs and enforce anti-litter laws.
- Provide an adequate number of litter receptacles.
- Clean out and cover litter receptacles frequently to prevent spillage.
- Provide trash receptacles in parking lots to discourage litter.
- Routinely sweep, shovel, and dispose of litter in the trash.

Surface Cleaning

- Use dry cleaning methods (e.g., sweeping, vacuuming) to prevent the discharge of pollutants into the stormwater conveyance system if possible.
- Establish frequency of public parking lot sweeping based on usage and field observations of waste accumulation.
- Sweep all parking lots at least once before the onset of the wet season.
- Follow the procedures below if water is used to clean surfaces:
  - Block the storm drain or contain runoff.
  - Collect and pump wash water to the sanitary sewer or discharge to a pervious surface. Do not allow wash water to enter storm drains.
  - Dispose of parking lot sweeping debris and dirt at a landfill.
- Follow the procedures below when cleaning heavy oily deposits:
  - Clean oily spots with absorbent materials.
  - Use a screen or filter fabric over inlet, then wash surfaces.

- Do not allow discharges to the storm drain.
- Vacuum/pump discharges to a tank or discharge to sanitary sewer.
- Appropriately dispose of spilled materials and absorbents.

Surface Repair

- Preheat, transfer or load hot bituminous material away from storm drain inlets.
- Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting stormwater runoff.
- Cover and seal nearby storm drain inlets where applicable (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal.
- Use only as much water as necessary for dust control, to avoid runoff.
- Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose of collected material and absorbents properly.

Inspection

- Have designated personnel conduct inspections of parking facilities and stormwater conveyance systems associated with parking facilities on a regular basis.
- Inspect cleaning equipment/sweepers for leaks on a regular basis.

Training

- Provide regular training to field employees and/or contractors regarding cleaning of paved areas and proper operation of equipment.
- Train employees and contractors in proper techniques for spill containment and cleanup.

Spill Response and Prevention

- Keep your Spill Prevention Control and Countermeasure (SPCC) Plan up-to-date.
- Place a stockpile of spill cleanup materials where it will be readily accessible or at a central location.
- Clean up fluid spills immediately with absorbent rags or material.
- Dispose of spilled material and absorbents properly.

Other Considerations

Limitations related to sweeping activities at large parking facilities may include high equipment costs, the need for sweeper operator training, and the inability of current sweeper technology to remove oil and grease.

SC-43 Parking/Storage Area Maintenance

Requirements

Costs

Cleaning/sweeping costs can be quite large. Construction and maintenance of stormwater structural controls can be quite expensive as well.

Maintenance

- Sweep parking lot regularly to minimize cleaning with water.
- Clean out oil/water/sand separators regularly, especially after heavy storms.
- Clean parking facilities regularly to prevent accumulated wastes and pollutants from being discharged into conveyance systems during rainy conditions.

Supplemental Information

Further Detail of the BMP

Surface Repair

Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting stormwater runoff. Where applicable, cover and seal nearby storm drain inlets (with waterproof material or mesh) and manholes before applying seal coat, slurry seal, etc. Leave covers in place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal. Only use only as much water as is necessary for dust control to avoid runoff.

References and Resources

California's Nonpoint Source Program Plan http://www.swrcb.ca.gov/nps/index.html

Clark County Storm Water Pollution Control Manual
http://www.co.clark.wa.us/pubworks/bmpman.pdf

King County Storm Water Pollution Control Manual http://dnr.metrokc.gov/wlr/dss/spcm.htm

Pollution from Surface Cleaning Folder. 1996. Bay Area Stormwater Management Agencies Association (BASMAA). http://www.basmaa.org/

Oregon Association of Clean Water Agencies. Oregon Municipal Stormwater Toolbox for Maintenance Practices. June 1998.

Santa Clara Valley Urban Runoff Pollution Prevention Program http://www.scvurppp.org

The Storm Water Managers Resource Center http://www.stormwatercenter.net/

Site Design & Landscape Planning SD-10



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- ☑ Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Each project site possesses unique topographic, hydrologic, and vegetative features, some of which are more suitable for development than others. Integrating and incorporating appropriate landscape planning methodologies into the project design is the most effective action that can be done to minimize surface and groundwater contamination from stormwater.

Approach

Landscape planning should couple consideration of land suitability for urban uses with consideration of community goals and projected growth. Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Design requirements for site design and landscapes planning should conform to applicable standards and specifications of agencies with jurisdiction and be consistent with applicable General Plan and Local Area Plan policies.

Designing New Installations

Begin the development of a plan for the landscape unit with attention to the following general principles:

- Formulate the plan on the basis of clearly articulated community goals. Carefully identify conflicts and choices between retaining and protecting desired resources and community growth.
- Map and assess land suitability for urban uses. Include the following landscape features in the assessment: wooded land, open unwooded land, steep slopes, erosion-prone soils, foundation suitability, soil suitability for waste disposal, aquifers, aquifer recharge areas, wetlands, floodplains, surface waters, agricultural lands, and various categories of urban land use. When appropriate, the assessment can highlight outstanding local or regional resources that the community determines should be protected (e.g., a scenic area, recreational area, threatened species habitat, farmland, fish run). Mapping and assessment should recognize not only these resources but also additional areas needed for their sustenance.

Project plan designs should conserve natural areas to the extent possible, maximize natural water storage and infiltration opportunities, and protect slopes and channels.

Conserve Natural Areas during Landscape Planning

If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:

- Cluster development on least-sensitive portions of a site while leaving the remaining land in a natural undisturbed condition.
- Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
- Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.
- Promote natural vegetation by using parking lot islands and other landscaped areas.
- Preserve riparian areas and wetlands.

Maximize Natural Water Storage and Infiltration Opportunities Within the Landscape Unit

- Promote the conservation of forest cover. Building on land that is already deforested affects basin hydrology to a lesser extent than converting forested land. Loss of forest cover reduces interception storage, detention in the organic forest floor layer, and water losses by evapotranspiration, resulting in large peak runoff increases and either their negative effects or the expense of countering them with structural solutions.
- Maintain natural storage reservoirs and drainage corridors, including depressions, areas of permeable soils, swales, and intermittent streams. Develop and implement policies and

regulations to discourage the clearing, filling, and channelization of these features. Utilize them in drainage networks in preference to pipes, culverts, and engineered ditches.

- Evaluating infiltration opportunities by referring to the stormwater management manual for the jurisdiction and pay particular attention to the selection criteria for avoiding groundwater contamination, poor soils, and hydrogeological conditions that cause these facilities to fail. If necessary, locate developments with large amounts of impervious surfaces or a potential to produce relatively contaminated runoff away from groundwater recharge areas.

Protection of Slopes and Channels during Landscape Design

- Convey runoff safely from the tops of slopes.
- Avoid disturbing steep or unstable slopes.
- Avoid disturbing natural channels.
- Stabilize disturbed slopes as quickly as possible.
- Vegetate slopes with native or drought tolerant vegetation.
- Control and treat flows in landscaping and/or other controls prior to reaching existing natural drainage systems.
- Stabilize temporary and permanent channel crossings as quickly as possible, and ensure that increases in run-off velocity and frequency caused by the project do not erode the channel.
- Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion. Energy dissipaters shall be installed in such a way as to minimize impacts to receiving waters.
- Line on-site conveyance channels where appropriate, to reduce erosion caused by increased flow velocity due to increases in tributary impervious area. The first choice for linings should be grass or some other vegetative surface, since these materials not only reduce runoff velocities, but also provide water quality benefits from filtration and infiltration. If velocities in the channel are high enough to erode grass or other vegetative linings, riprap, concrete, soil cement, or geo-grid stabilization are other alternatives.
- Consider other design principles that are comparable and equally effective.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Redevelopment may present significant opportunity to add features which had not previously been implemented. Examples include incorporation of depressions, areas of permeable soils, and swales in newly redeveloped areas. While some site constraints may exist due to the status of already existing infrastructure, opportunities should not be missed to maximize infiltration, slow runoff, reduce impervious areas, disconnect directly connected impervious areas.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Stormwater Management Manual for Western Washington, Washington State Department of Ecology, August 2001.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Roof Runoff Controls SD-11



Rain Garden

Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Description

Various roof runoff controls are available to address stormwater that drains off rooftops. The objective is to reduce the total volume and rate of runoff from individual lots, and retain the pollutants on site that may be picked up from roofing materials and atmospheric deposition. Roof runoff controls consist of directing the roof runoff away from paved areas and mitigating flow to the storm drain system through one of several general approaches: cisterns or rain barrels; dry wells or infiltration trenches; pop-up emitters, and foundation planting. The first three approaches require the roof runoff to be contained in a gutter and downspout system. Foundation planting provides a vegetated strip under the drip line of the roof.

Approach

Design of individual lots for single-family homes as well as lots for higher density residential and commercial structures should consider site design provisions for containing and infiltrating roof runoff or directing roof runoff to vegetative swales or buffer areas. Retained water can be reused for watering gardens, lawns, and trees. Benefits to the environment include reduced demand for potable water used for irrigation, improved stormwater quality, increased groundwater recharge, decreased runoff volume and peak flows, and decreased flooding potential.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment.

Design Considerations

Designing New Installations

Cisterns or Rain Barrels

One method of addressing roof runoff is to direct roof downspouts to cisterns or rain barrels. A cistern is an above ground storage vessel with either a manually operated valve or a permanently open outlet. Roof runoff is temporarily stored and then released for irrigation or infiltration between storms. The number of rain

barrels needed is a function of the rooftop area. Some low impact developers recommend that every house have at least 2 rain barrels, with a minimum storage capacity of 1000 liters. Roof barrels serve several purposes including mitigating the first flush from the roof which has a high volume, amount of contaminants, and thermal load. Several types of rain barrels are commercially available. Consideration must be given to selecting rain barrels that are vector proof and childproof. In addition, some barrels are designed with a bypass valve that filters out grit and other contaminants and routes overflow to a soak-away pit or rain garden.

If the cistern has an operable valve, the valve can be closed to store stormwater for irrigation or infiltration between storms. This system requires continual monitoring by the resident or grounds crews, but provides greater flexibility in water storage and metering. If a cistern is provided with an operable valve and water is stored inside for long periods, the cistern must be covered to prevent mosquitoes from breeding.

A cistern system with a permanently open outlet can also provide for metering stormwater runoff. If the cistern outlet is significantly smaller than the size of the downspout inlet (say ¼ to ½ inch diameter), runoff will build up inside the cistern during storms, and will empty out slowly after peak intensities subside. This is a feasible way to mitigate the peak flow increases caused by rooftop impervious land coverage, especially for the frequent, small storms.

Dry wells and Infiltration Trenches

Roof downspouts can be directed to dry wells or infiltration trenches. A dry well is constructed by excavating a hole in the ground and filling it with an open graded aggregate, and allowing the water to fill the dry well and infiltrate after the storm event. An underground connection from the downspout conveys water into the dry well, allowing it to be stored in the voids. To minimize sedimentation from lateral soil movement, the sides and top of the stone storage matrix can be wrapped in a permeable filter fabric, though the bottom may remain open. A perforated observation pipe can be inserted vertically into the dry well to allow for inspection and maintenance.

In practice, dry wells receiving runoff from single roof downspouts have been successful over long periods because they contain very little sediment. They must be sized according to the amount of rooftop runoff received, but are typically 4 to 5 feet square, and 2 to 3 feet deep, with a minimum of 1-foot soil cover over the top (maximum depth of 10 feet).

To protect the foundation, dry wells must be set away from the building at least 10 feet. They must be installed in solids that accommodate infiltration. In poorly drained soils, dry wells have very limited feasibility.

Infiltration trenches function in a similar manner and would be particularly effective for larger roof areas. An infiltration trench is a long, narrow, rock-filled trench with no outlet that receives stormwater runoff. These are described under Treatment Controls.

Pop-up Drainage Emitter

Roof downspouts can be directed to an underground pipe that daylights some distance from the building foundation, releasing the roof runoff through a pop-up emitter. Similar to a pop-up irrigation head, the emitter only opens when there is flow from the roof. The emitter remains flush to the ground during dry periods, for ease of lawn or landscape maintenance.

Foundation Planting

Landscape planting can be provided around the base to allow increased opportunities for stormwater infiltration and protect the soil from erosion caused by concentrated sheet flow coming off the roof. Foundation plantings can reduce the physical impact of water on the soil and provide a subsurface matrix of roots that encourage infiltration. These plantings must be sturdy enough to tolerate the heavy runoff sheet flows, and periodic soil saturation.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Supplemental Information

Examples

- City of Ottawa's Water Links Surface –Water Quality Protection Program
- City of Toronto Downspout Disconnection Program
- City of Boston, MA, Rain Barrel Demonstration Program

Other Resources

Hager, Marty Catherine, Stormwater, "Low-Impact Development", January/February 2003. www.stormh2o.com

Low Impact Urban Design Tools, Low Impact Development Design Center, Beltsville, MD. www.lid-stormwater.net

Start at the Source, Bay Area Stormwater Management Agencies Association, 1999 Edition

Efficient Irrigation SD-12



Design Objectives

- ☑ Maximize Infiltration
- ☑ Provide Retention
- ☑ Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Irrigation water provided to landscaped areas may result in excess irrigation water being conveyed into stormwater drainage systems.

Approach

Project plan designs for development and redevelopment should include application methods of irrigation water that minimize runoff of excess irrigation water into the stormwater conveyance system.

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Designing New Installations

The following methods to reduce excessive irrigation runoff should be considered, and incorporated and implemented where determined applicable and feasible by the Permittee:

- Employ rain-triggered shutoff devices to prevent irrigation after precipitation.
- Design irrigation systems to each landscape area's specific water requirements.
- Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines.
- Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc.

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- Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system.
- Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). Consider design features such as:
  - Using mulches (such as wood chips or bar) in planter areas without ground cover to minimize sediment in runoff
  - Installing appropriate plant materials for the location, in accordance with amount of sunlight and climate, and use native plant materials where possible and/or as recommended by the landscape architect
  - Leaving a vegetative barrier along the property boundary and interior watercourses, to act as a pollutant filter, where appropriate and feasible
  - Choosing plants that minimize or eliminate the use of fertilizer or pesticides to sustain growth
- Employ other comparable, equally effective methods to reduce irrigation water runoff.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Storm Drain Signage SD-13



Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- ☑ Prohibit Dumping of Improper Materials
- Contain Pollutants
- Collect and Convey

Description

Waste materials dumped into storm drain inlets can have severe impacts on receiving and ground waters. Posting notices regarding discharge prohibitions at storm drain inlets can prevent waste dumping. Storm drain signs and stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets.

Approach

The stencil or affixed sign contains a brief statement that prohibits dumping of improper materials into the urban runoff conveyance system. Storm drain messages have become a popular method of alerting the public about the effects of and the prohibitions against waste disposal.

Suitable Applications

Stencils and signs alert the public to the destination of pollutants discharged to the storm drain. Signs are appropriate in residential, commercial, and industrial areas, as well as any other area where contributions or dumping to storm drains is likely.

Design Considerations

Storm drain message markers or placards are recommended at all storm drain inlets within the boundary of a development project. The marker should be placed in clear sight facing toward anyone approaching the inlet from either side. All storm drain inlet locations should be identified on the development site map.

Designing New Installations

The following methods should be considered for inclusion in the project design and show on project plans:

- Provide stenciling or labeling of all storm drain inlets and catch basins, constructed or modified, within the project area with prohibitive language. Examples include “NO DUMPING

– DRAINS TO OCEAN" and/or other graphical icons to discourage illegal dumping.

- Post signs with prohibitive language and/or graphical icons, which prohibit illegal dumping at public access points along channels and creeks within the project area.

Note - Some local agencies have approved specific signage and/or storm drain message placards for use. Consult local agency stormwater staff to determine specific requirements for placard types and methods of application.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. If the project meets the definition of "redevelopment", then the requirements stated under " designing new installations" above should be included in all project design plans.

Additional Information

Maintenance Considerations

- Legibility of markers and signs should be maintained. If required by the agency with jurisdiction over the project, the owner/operator or homeowner's association should enter into a maintenance agreement with the agency or record a deed restriction upon the property title to maintain the legibility of placards or signs.

Placement

- Signage on top of curbs tends to weather and fade.

- Signage on face of curbs tends to be worn by contact with vehicle tires and sweeper brooms.

Supplemental Information

Examples

- Most MS4 programs have storm drain signage programs. Some MS4 programs will provide stencils, or arrange for volunteers to stencil storm drains as part of their outreach program.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Fueling Areas SD-30



Photo Credit: Geoff Brosseau

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- ☑ Collect and Convey

Description

Fueling areas have the potential to contribute oil and grease, solvents, car battery acid, coolant and gasoline to the stormwater conveyance system. Spills at vehicle and equipment fueling areas can be a significant source of pollution because fuels contain toxic materials and heavy metals that are not easily removed by stormwater treatment devices.

Approach

Project plans must be developed for cleaning near fuel dispensers, emergency spill cleanup, containment, and leak prevention.

Suitable Applications

Appropriate applications include commercial, industrial, and any other areas planned to have fuel dispensing equipment, including retail gasoline outlets, automotive repair shops, and major non-retail dispensing areas.

Design Considerations

Design requirements for fueling areas are governed by Building and Fire Codes and by current local agency ordinances and zoning requirements. Design requirements described in this fact sheet are meant to enhance and be consistent with these code and ordinance requirements.

Designing New Installations

Covering

Fuel dispensing areas should provide an overhanging roof structure or canopy. The cover's minimum dimensions must be equal to or greater than the area within the grade break. The cover must not drain onto the fuel dispensing area and the downspouts must be routed to prevent drainage across the fueling area. The fueling area should drain to the project's treatment control BMP(s) prior to discharging to the stormwater conveyance system. Note - If fueling large equipment or vehicles that would prohibit the use of covers or roofs, the fueling island should be designed to sufficiently accommodate the larger vehicles and equipment and to prevent stormwater run-on and runoff. Grade to direct stormwater to a dead-end sump.

Surfacing

Fuel dispensing areas should be paved with Portland cement concrete (or equivalent smooth impervious surface). The use of asphalt concrete should be prohibited. Use asphalt sealant to protect asphalt paved areas surrounding the fueling area. This provision may be made to sites that have pre-existing asphalt surfaces.

The concrete fuel dispensing area should be extended a minimum of 6.5 ft from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 ft, whichever is less.

Grading/Contouring

Dispensing areas should have an appropriate slope to prevent ponding, and be separated from the rest of the site by a grade break that prevents run-on of urban runoff. (Slope is required to be 2 to 4% in some jurisdictions' stormwater management and mitigation plans.)

Fueling areas should be graded to drain toward a dead-end sump. Runoff from downspouts/roofs should be directed away from fueling areas. Do not locate storm drains in the immediate vicinity of the fueling area.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

- In the case of an emergency, provide storm drain seals, such as isolation valves, drain plugs, or drain covers, to prevent spills or contaminated stormwater from entering the stormwater conveyance system.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Trash Storage Areas SD-32

Description

Trash storage areas are areas where a trash receptacle (s) are located for use as a repository for solid wastes. Stormwater runoff from areas where trash is stored or disposed of can be polluted. In addition, loose trash and debris can be easily transported by water or wind into nearby storm drain inlets, channels, and/or creeks. Waste handling operations that may be sources of stormwater pollution include dumpsters, litter control, and waste piles.

Approach

This fact sheet contains details on the specific measures required to prevent or reduce pollutants in stormwater runoff associated with trash storage and handling. Preventative measures including enclosures, containment structures, and impervious pavements to mitigate spills, should be used to reduce the likelihood of contamination.

Design Objectives

- Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- Collect and Convey

Suitable Applications

Appropriate applications include residential, commercial and industrial areas planned for development or redevelopment. (Detached residential single-family homes are typically excluded from this requirement.)

Design Considerations

Design requirements for waste handling areas are governed by Building and Fire Codes, and by current local agency ordinances and zoning requirements. The design criteria described in this fact sheet are meant to enhance and be consistent with these code and ordinance requirements. Hazardous waste should be handled in accordance with legal requirements established in Title 22, California Code of Regulation.

Wastes from commercial and industrial sites are typically hauled by either public or commercial carriers that may have design or access requirements for waste storage areas. The design criteria in this fact sheet are recommendations and are not intended to be in conflict with requirements established by the waste hauler. The waste hauler should be contacted prior to the design of your site trash collection areas. Conflicts or issues should be discussed with the local agency.

Designing New Installations

Trash storage areas should be designed to consider the following structural or treatment control BMPs:

- Design trash container areas so that drainage from adjoining roofs and pavement is diverted around the area(s) to avoid run-on. This might include berming or grading the waste handling area to prevent run-on of stormwater.
- Make sure trash container areas are screened or walled to prevent off-site transport of trash.

- Use lined bins or dumpsters to reduce leaking of liquid waste.
- Provide roofs, awnings, or attached lids on all trash containers to minimize direct precipitation and prevent rainfall from entering containers.
- Pave trash storage areas with an impervious surface to mitigate spills.
- Do not locate storm drains in immediate vicinity of the trash storage area.
- Post signs on all dumpsters informing users that hazardous materials are not to be disposed of therein.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment. If the definition applies, the steps outlined under "designing new installations" above should be followed.

Additional Information

Maintenance Considerations

The integrity of structural elements that are subject to damage (i.e., screens, covers, and signs) must be maintained by the owner/operator. Maintenance agreements between the local agency and the owner/operator may be required. Some agencies will require maintenance deed restrictions to be recorded of the property title. If required by the local agency, maintenance agreements or deed restrictions must be executed by the owner/operator before improvement plans are approved.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

Model Water Quality Management Plan (WQMP) for County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County, Draft February 2003.

Ventura Countywide Technical Guidance Manual for Stormwater Quality Control Measures, July 2002.

Vehicle Washing Areas SD-33



Photo Credit: Geoff Brosseau

Design Objectives

- ☑ Maximize Infiltration
- Provide Retention
- Slow Runoff
- Minimize Impervious Land Coverage
- Prohibit Dumping of Improper Materials
- ☑ Contain Pollutants
- ☑ Collect and Convey

Description

Vehicle washing, equipment washing, and steam cleaning may contribute high concentrations of metals, oil and grease, solvents, phosphates, and suspended solids to wash waters that drain to stormwater conveyance systems.

Approach

Project plans should include appropriately designed area(s) for washing-steam cleaning of vehicles and equipment. Depending on the size and other parameters of the wastewater facility, wash water may be conveyed to a sewer, an infiltration system, recycling system or other alternative. Pretreatment may be required for conveyance to a sanitary sewer.

Suitable Applications

Appropriate applications include commercial developments, restaurants, retail gasoline outlets, automotive repair shops and others.

Design Considerations

Design requirements for vehicle maintenance are governed by Building and Fire Codes, and by current local agency ordinances, and zoning requirements. Design criteria described in this fact sheet are meant to enhance and be consistent with these code requirements.

Designing New Installations

Areas for washing/steam cleaning should incorporate one of the following features:

- Be self-contained and/or covered with a roof or overhang
- Be equipped with a clarifier or other pretreatment facility
- Have a proper connection to a sanitary sewer

- Include other features which are comparable and equally effective

CAR WASH AREAS - Some jurisdictions' stormwater management plans include vehicle-cleaning area source control design requirements for community car wash racks in complexes with a large number of dwelling units. In these cases, wash water from the areas may be directed to the sanitary sewer, to an engineered infiltration system, or to an equally effective alternative. Pre-treatment may also be required.

Depending on the jurisdiction, developers may be directed to divert surface water runoff away from the exposed area around the wash pad (parking lot, storage areas), and wash pad itself to alternatives other than the sanitary sewer. Roofing may be required for exposed wash pads.

It is generally advisable to cover areas used for regular washing of vehicles, trucks, or equipment, surround them with a perimeter berm, and clearly mark them as a designated washing area. Sumps or drain lines can be installed to collect wash water, which may be treated for reuse or recycling, or for discharge to the sanitary sewer. Jurisdictions may require some form of pretreatment, such as a trap, for these areas.

Redeveloping Existing Installations

Various jurisdictional stormwater management and mitigation plans (SUSMP, WQMP, etc.) define "redevelopment" in terms of amounts of additional impervious area, increases in gross floor area and/or exterior construction, and land disturbing activities with structural or impervious surfaces. The definition of " redevelopment" must be consulted to determine whether or not the requirements for new development apply to areas intended for redevelopment.

Additional Information

Maintenance Considerations

Stormwater and non-stormwater will accumulate in containment areas and sumps with impervious surfaces. Contaminated accumulated water must be disposed of in accordance with applicable laws and cannot be discharged directly to the storm drain or sanitary sewer system without the appropriate permit.

Other Resources

A Manual for the Standard Urban Stormwater Mitigation Plan (SUSMP), Los Angeles County Department of Public Works, May 2002.

Model Standard Urban Storm Water Mitigation Plan (SUSMP) for San Diego County, Port of San Diego, and Cities in San Diego County, February 14, 2002.

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Bioretention TC-32



Design Considerations

- Soil for Infiltration
- Tributary Area
- Slope
- Aesthetics
- Environmental Side-effects

Description

The bioretention best management practice (BMP) functions as a soil and plant-based filtration device that removes pollutants through a variety of physical, biological, and chemical treatment processes. These facilities normally consist of a grass buffer strip, sand bed, ponding area, organic layer or mulch layer, planting soil, and plants. The runoff's velocity is reduced by passing over or through buffer strip and subsequently distributed evenly along a ponding area. Exfiltration of the stored water in the bioretention area planting soil into the underlying soils occurs over a period of days.

Targeted Constituents

☑	Sediment	■
☑	Nutrients	▲
☑	Trash	■
☑	Metals	■
☑	Bacteria	■
☑	Oil and Grease	■
☑	Organics	■

Legend ***(Removal Effectiveness)***

● Low ■ High

▲ Medium

California Experience

None documented. Bioretention has been used as a stormwater BMP since 1992. In addition to Prince George's County, MD and Alexandria, VA, bioretention has been used successfully at urban and suburban areas in Montgomery County, MD; Baltimore County, MD; Chesterfield County, VA; Prince William County, VA; Smith Mountain Lake State Park, VA; and Cary, NC.

Advantages

- Bioretention provides stormwater treatment that enhances the quality of downstream water bodies by temporarily storing runoff in the BMP and releasing it over a period of four days to the receiving water (EPA, 1999).
- The vegetation provides shade and wind breaks, absorbs noise, and improves an area's landscape.

Limitations

- The bioretention BMP is not recommended for areas with slopes greater than 20% or where mature tree removal would

be required since clogging may result, particularly if the BMP receives runoff with high sediment loads (EPA, 1999).

- Bioretention is not a suitable BMP at locations where the water table is within 6 feet of the ground surface and where the surrounding soil stratum is unstable.
- By design, bioretention BMPs have the potential to create very attractive habitats for mosquitoes and other vectors because of highly organic, often heavily vegetated areas mixed with shallow water.
- In cold climates the soil may freeze, preventing runoff from infiltrating into the planting soil.

Design and Sizing Guidelines

- The bioretention area should be sized to capture the design storm runoff.
- In areas where the native soil permeability is less than 0.5 in/hr an underdrain should be provided.
- Recommended minimum dimensions are 15 feet by 40 feet, although the preferred width is 25 feet. Excavated depth should be 4 feet.
- Area should drain completely within 72 hours.
- Approximately 1 tree or shrub per 50 ft^2 of bioretention area should be included.
- Cover area with about 3 inches of mulch.

Construction/Inspection Considerations

Bioretention area should not be established until contributing watershed is stabilized.

Performance

Bioretention removes stormwater pollutants through physical and biological processes, including adsorption, filtration, plant uptake, microbial activity, decomposition, sedimentation and volatilization (EPA, 1999). Adsorption is the process whereby particulate pollutants attach to soil (e.g., clay) or vegetation surfaces. Adequate contact time between the surface and pollutant must be provided for in the design of the system for this removal process to occur. Thus, the infiltration rate of the soils must not exceed those specified in the design criteria or pollutant removal may decrease. Pollutants removed by adsorption include metals, phosphorus, and hydrocarbons. Filtration occurs as runoff passes through the bioretention area media, such as the sand bed, ground cover, and planting soil.

Common particulates removed from stormwater include particulate organic matter, phosphorus, and suspended solids. Biological processes that occur in wetlands result in pollutant uptake by plants and microorganisms in the soil. Plant growth is sustained by the uptake of nutrients from the soils, with woody plants locking up these nutrients through the seasons. Microbial activity within the soil also contributes to the removal of nitrogen and organic matter. Nitrogen is removed by nitrifying and denitrifying bacteria, while aerobic bacteria are responsible for the decomposition of the organic matter. Microbial processes require oxygen and can result in depleted oxygen levels if the bioretention area is not adequately

aerated. Sedimentation occurs in the swale or ponding area as the velocity slows and solids fall out of suspension.

The removal effectiveness of bioretention has been studied during field and laboratory studies conducted by the University of Maryland (Davis et al, 1998). During these experiments, synthetic stormwater runoff was pumped through several laboratory and field bioretention areas to simulate typical storm events in Prince George's County, MD. Removal rates for heavy metals and nutrients are shown in Table 1.

Table 1 Laboratory and Estimated Bioretention Davis et al. (1998); PGDER (1993)

Pollutant	Removal Rate
Total Phosphorus	70-83%
Metals (Cu, Zn, Pb)	93-98%
TKN	68-80%
Total Suspended Solids	90%
Organics	90%
Bacteria	90%

Results for both the laboratory and field experiments were similar for each of the pollutants analyzed. Doubling or halving the influent pollutant levels had little effect on the effluent pollutants concentrations (Davis et al, 1998).

The microbial activity and plant uptake occurring in the bioretention area will likely result in higher removal rates than those determined for infiltration BMPs.

Siting Criteria

Bioretention BMPs are generally used to treat stormwater from impervious surfaces at commercial, residential, and industrial areas (EPA, 1999). Implementation of bioretention for stormwater management is ideal for median strips, parking lot islands, and swales. Moreover, the runoff in these areas can be designed to either divert directly into the bioretention area or convey into the bioretention area by a curb and gutter collection system.

The best location for bioretention areas is upland from inlets that receive sheet flow from graded areas and at areas that will be excavated (EPA, 1999). In order to maximize treatment effectiveness, the site must be graded in such a way that minimizes erosive conditions as sheet flow is conveyed to the treatment area. Locations where a bioretention area can be readily incorporated into the site plan without further environmental damage are preferred. Furthermore, to effectively minimize sediment loading in the treatment area, bioretention only should be used in stabilized drainage areas.

Additional Design Guidelines

The layout of the bioretention area is determined after site constraints such as location of utilities, underlying soils, existing vegetation, and drainage are considered (EPA, 1999). Sites with loamy sand soils are especially appropriate for bioretention because the excavated soil can be backfilled and used as the planting soil, thus eliminating the cost of importing planting soil.

The use of bioretention may not be feasible given an unstable surrounding soil stratum, soils with clay content greater than 25 percent, a site with slopes greater than 20 percent, and/or a site with mature trees that would be removed during construction of the BMP.

Bioretention can be designed to be off-line or on-line of the existing drainage system (EPA, 1999). The drainage area for a bioretention area should be between 0.1 and 0.4 hectares (0.25 and 1.0 acres). Larger drainage areas may require multiple bioretention areas. Furthermore, the maximum drainage area for a bioretention area is determined by the expected rainfall intensity and runoff rate. Stabilized areas may erode when velocities are greater than 5 feet per second (1.5 meter per second). The designer should determine the potential for erosive conditions at the site.

The size of the bioretention area, which is a function of the drainage area and the runoff generated from the area is sized to capture the water quality volume.

The recommended minimum dimensions of the bioretention area are 15 feet (4.6 meters) wide by 40 feet (12.2 meters) long, where the minimum width allows enough space for a dense, randomly-distributed area of trees and shrubs to become established. Thus replicating a natural forest and creating a microclimate, thereby enabling the bioretention area to tolerate the effects of heat stress, acid rain, runoff pollutants, and insect and disease infestations which landscaped areas in urban settings typically are unable to tolerate. The preferred width is 25 feet (7.6 meters), with a length of twice the width. Essentially, any facilities wider than 20 feet (6.1 meters) should be twice as long as they are wide, which promotes the distribution of flow and decreases the chances of concentrated flow.

In order to provide adequate storage and prevent water from standing for excessive periods of time the ponding depth of the bioretention area should not exceed 6 inches (15 centimeters). Water should not be left to stand for more than 72 hours. A restriction on the type of plants that can be used may be necessary due to some plants' water intolerance. Furthermore, if water is left standing for longer than 72 hours mosquitoes and other insects may start to breed.

The appropriate planting soil should be backfilled into the excavated bioretention area. Planting soils should be sandy loam, loamy sand, or loam texture with a clay content ranging from 10 to 25 percent.

Generally the soil should have infiltration rates greater than 0.5 inches (1.25 centimeters) per hour, which is typical of sandy loams, loamy sands, or loams. The pH of the soil should range between 5.5 and 6.5, where pollutants such as organic nitrogen and phosphorus can be adsorbed by the soil and microbial activity can flourish. Additional requirements for the planting soil include a 1.5 to 3 percent organic content and a maximum 500 ppm concentration of soluble salts.

Soil tests should be performed for every 500 cubic yards (382 cubic meters) of planting soil, with the exception of pH and organic content tests, which are required only once per bioretention area (EPA, 1999). Planting soil should be 4 inches (10.1 centimeters) deeper than the bottom of the largest root ball and 4 feet (1.2 meters) altogether. This depth will provide adequate soil for the plants' root systems to become established, prevent plant damage due to severe wind, and provide adequate moisture capacity. Most sites will require excavation in order to obtain the recommended depth.

Planting soil depths of greater than 4 feet (1.2 meters) may require additional construction practices such as shoring measures (EPA, 1999). Planting soil should be placed in 18 inches or greater lifts and lightly compacted until the desired depth is reached. Since high canopy trees may be destroyed during maintenance the bioretention area should be vegetated to resemble a terrestrial forest community ecosystem that is dominated by understory trees. Three species each of both trees and shrubs are recommended to be planted at a rate of 2500 trees and shrubs per hectare (1000 per acre). For instance, a 15 foot (4.6 meter) by 40 foot (12.2 meter) bioretention area (600 square feet or 55.75 square meters) would require 14 trees and shrubs. The shrub-to-tree ratio should be 2:1 to 3:1.

Trees and shrubs should be planted when conditions are favorable. Vegetation should be watered at the end of each day for fourteen days following its planting. Plant species tolerant of pollutant loads and varying wet and dry conditions should be used in the bioretention area.

The designer should assess aesthetics, site layout, and maintenance requirements when selecting plant species. Adjacent non-native invasive species should be identified and the designer should take measures, such as providing a soil breach to eliminate the threat of these species invading the bioretention area. Regional landscaping manuals should be consulted to ensure that the planting of the bioretention area meets the landscaping requirements established by the local authorities. The designers should evaluate the best placement of vegetation within the bioretention area. Plants should be placed at irregular intervals to replicate a natural forest. Trees should be placed on the perimeter of the area to provide shade and shelter from the wind. Trees and shrubs can be sheltered from damaging flows if they are placed away from the path of the incoming runoff. In cold climates, species that are more tolerant to cold winds, such as evergreens, should be placed in windier areas of the site.

Following placement of the trees and shrubs, the ground cover and/or mulch should be established. Ground cover such as grasses or legumes can be planted at the beginning of the growing season. Mulch should be placed immediately after trees and shrubs are planted. Two to 3 inches (5 to 7.6 cm) of commercially-available fine shredded hardwood mulch or shredded hardwood chips should be applied to the bioretention area to protect from erosion.

Maintenance

The primary maintenance requirement for bioretention areas is that of inspection and repair or replacement of the treatment area's components. Generally, this involves nothing more than the routine periodic maintenance that is required of any landscaped area. Plants that are appropriate for the site, climatic, and watering conditions should be selected for use in the bioretention cell. Appropriately selected plants will aide in reducing fertilizer, pesticide, water, and overall maintenance requirements. Bioretention system components should blend over time through plant and root growth, organic decomposition, and the development of a natural

soil horizon. These biologic and physical processes over time will lengthen the facility's life span and reduce the need for extensive maintenance.

Routine maintenance should include a biannual health evaluation of the trees and shrubs and subsequent removal of any dead or diseased vegetation (EPA, 1999). Diseased vegetation should be treated as needed using preventative and low-toxic measures to the extent possible. BMPs have the potential to create very attractive habitats for mosquitoes and other vectors because of highly organic, often heavily vegetated areas mixed with shallow water. Routine inspections for areas of standing water within the BMP and corrective measures to restore proper infiltration rates are necessary to prevent creating mosquito and other vector habitat. In addition, bioretention BMPs are susceptible to invasion by aggressive plant species such as cattails, which increase the chances of water standing and subsequent vector production if not routinely maintained.

In order to maintain the treatment area's appearance it may be necessary to prune and weed. Furthermore, mulch replacement is suggested when erosion is evident or when the site begins to look unattractive. Specifically, the entire area may require mulch replacement every two to three years, although spot mulching may be sufficient when there are random void areas. Mulch replacement should be done prior to the start of the wet season.

New Jersey's Department of Environmental Protection states in their bioretention systems standards that accumulated sediment and debris removal (especially at the inflow point) will normally be the primary maintenance function. Other potential tasks include replacement of dead vegetation, soil pH regulation, erosion repair at inflow points, mulch replenishment, unclogging the underdrain, and repairing overflow structures. There is also the possibility that the cation exchange capacity of the soils in the cell will be significantly reduced over time. Depending on pollutant loads, soils may need to be replaced within 5-10 years of construction (LID, 2000).

Cost

Construction Cost

Construction cost estimates for a bioretention area are slightly greater than those for the required landscaping for a new development (EPA, 1999). A general rule of thumb (Coffman, 1999) is that residential bioretention areas average about $3 to $4 per square foot, depending on soil conditions and the density and types of plants used. Commercial, industrial and institutional site costs can range between $10 to $40 per square foot, based on the need for control structures, curbing, storm drains and underdrains.

Retrofitting a site typically costs more, averaging $6,500 per bioretention area. The higher costs are attributed to the demolition of existing concrete, asphalt, and existing structures and the replacement of fill material with planting soil. The costs of retrofitting a commercial site in Maryland, Kettering Development, with 15 bioretention areas were estimated at $111,600.

In any bioretention area design, the cost of plants varies substantially and can account for a significant portion of the expenditures. While these cost estimates are slightly greater than those of typical landscaping treatment (due to the increased number of plantings, additional soil excavation, backfill material, use of underdrains etc.), those landscaping expenses that would be required regardless of the bioretention installation should be subtracted when determining the net cost.

Perhaps of most importance, however, the cost savings compared to the use of traditional structural stormwater conveyance systems makes bioretention areas quite attractive financially. For example, the use of bioretention can decrease the cost required for constructing stormwater conveyance systems at a site. A medical office building in Maryland was able to reduce the amount of storm drain pipe that was needed from 800 to 230 feet - a cost savings of $24,000 (PGDER, 1993). And a new residential development spent a total of approximately $100,000 using bioretention cells on each lot instead of nearly $400,000 for the traditional stormwater ponds that were originally planned (Rappahanock,). Also, in residential areas, stormwater management controls become a part of each property owner's landscape, reducing the public burden to maintain large centralized facilities.

Maintenance Cost

The operation and maintenance costs for a bioretention facility will be comparable to those of typical landscaping required for a site. Costs beyond the normal landscaping fees will include the cost for testing the soils and may include costs for a sand bed and planting soil.

References and Sources of Additional Information

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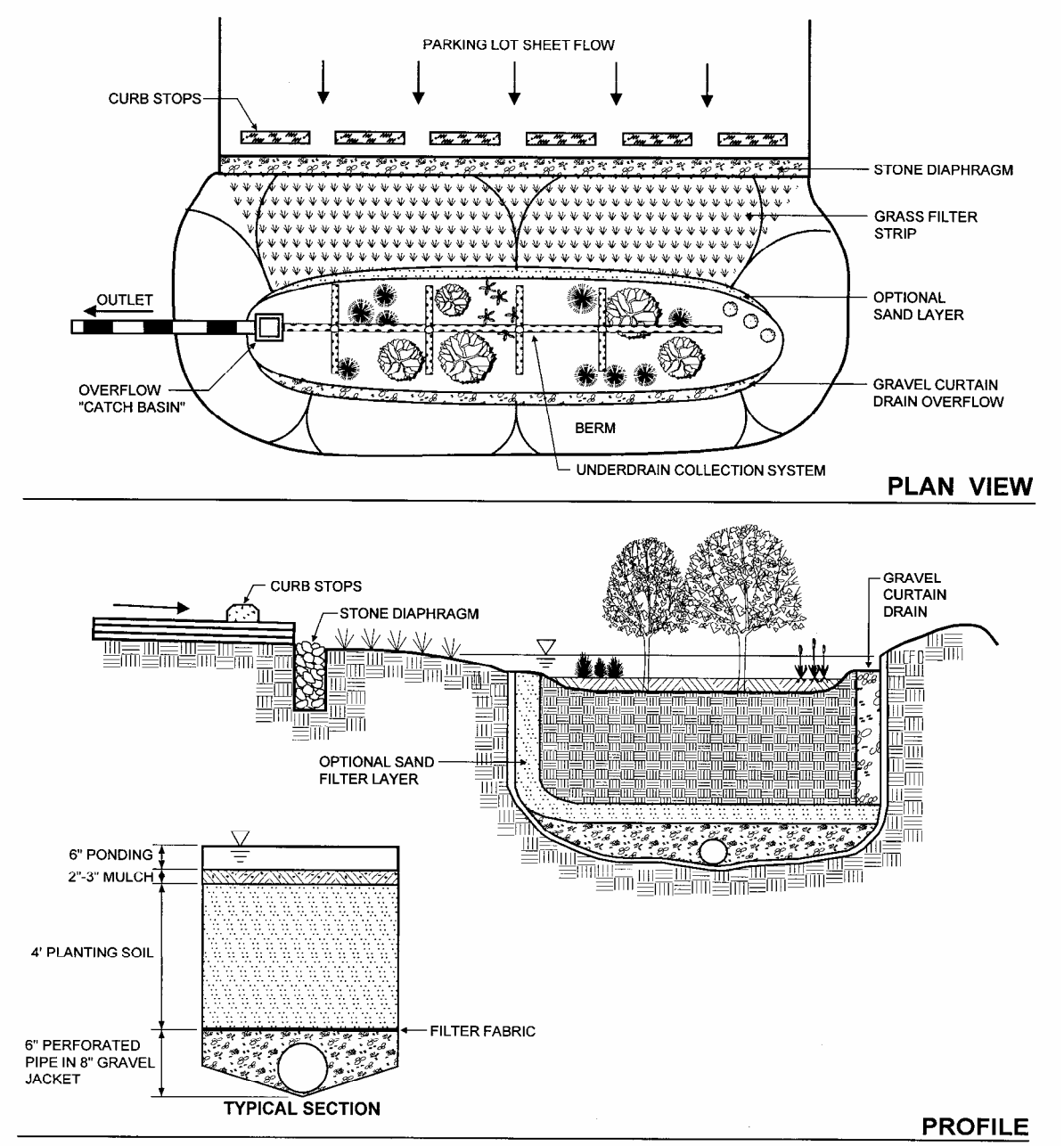


Schematic of a Bioretention Facility (MDE, 2000)

Appendix F: Traffic Operational Analysis Woodcrest Christian School Expansion

CARLSBAD
CLOVIS
IRVINE
PALM SPRINGS
POINT RICHMOND
RIVERSIDE
ROSEVILLE
SAN LUIS OBISPO

MEMORANDUM

DATE: March 31, 2025

TO: Philip Nitollama, PE, TE; City Traffic Engineer; City of Riverside

FROM: Ambarish Mukherjee, PE, AICP; Principal, LSA Associates, Inc.

SUBJECT: Woodcrest Christian School Supplemental Traffic Operations Analysis Memorandum (LSA Project # WCS2101)

LSA Associates, Inc. (LSA) has prepared this Supplemental Traffic Operations Analysis (TOA) Memorandum for the Woodcrest Christian School Expansion Project (Project) to evaluate the potential operational issues associated with the proposed Woodcrest Christian School expansion. The project is located at 18401 Van Buren Boulevard in the City of Riverside (City).

BACKGROUND AND PROJECT DESCRIPTION

LSA has previously prepared a TOA for the proposed project in March 2024 (March 2024 TOA). The March 2024 TOA identified that the intersection of Dauchy Avenue/Project Driveway 2 – Ardenwood Lane is projected to operate at a deficient LOS under Opening Year (2029) and Cumulative (2045) without and with projects conditions during both the a.m. (7:00 a.m. – 9:00 a.m.) and afternoon (2:00 p.m. – 4:00 p.m.) peak hour conditions. The recommended improvement included installation of a traffic signal at this school driveway. The March 2024 TOA also identified that the intersection of Dauchy Avenue/Project Driveway 4 is forecast to operate at a deficient LOS under the a.m. peak hour for Opening Year (2029) and both peak hours for Cumulative (2045). The recommended improvements included the addition of two-way left-turn lane (TWLTL) and the removal of on-street parking on both sides of Dauchy Avenue.

Based on discussion with City staff and the project team, an alternative re-routing of existing school traffic and project traffic associated with the school expansion was proposed to reduce the forecasted deficiencies at study intersections along Dauchy Avenue including Project Driveway 2 and Project Driveway 4. This alternative includes opening the existing driveway on Van Buren Boulevard as a right-out only driveway, restricting left-turn egress at Project Driveway 2 and Project Driveway 4 during the morning drop-off and afternoon pick-up hours, and closure of Project Driveway 3 previously analyzed as an ingress only driveway in the March 2024 TOA. Therefore, for purposes of this analysis, the right-out only Project Driveway 1 and restriction of left-turn egress movements at Project Driveway 2, Project Driveway 4, and closure of Dauchy Avenue/Project Driveway 3 during the peak hours have been considered to be project design features. It should be noted that the intersection of Dauchy Avenue/Project Driveway 2 – Ardenwood Lane and Dauchy Avenue/Project

Driveway 4 would remain a full-access driveway during off-peak hours. As such, this memo has been prepared as a supplement to the March 2024 TOA to examine the traffic operations at surrounding intersections affected by the re-distribution of existing school traffic and project traffic as a result of these updates project design features.

It should be noted that redistribution of project traffic as a result of changes being recommended to the aforementioned driveways will result in changes in traffic volumes (turn movement volumes) at the intersection of Chicago Avenue-Alta Cresta Avenue/Van Buren Boulevard and Dauchy Avenue-Taft Street/Krameria Avenue. Improvements were identified at both of these intersections in the March 2024 TOA. Based on the current analysis, it is not anticipated that any additional improvements will be required at these two intersections to address the operational deficiencies identified in the previous analysis.

INTERSECTION LOS ANALYSIS

Based on discussion with City staff, the following study intersections from the March 2024 TOA were included for analysis:

6. Dauchy Avenue/Van Buren Boulevard
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane
19. Project Driveway 1/Van Buren Boulevard
20. Dauchy Avenue/Project Driveway 3
21. Dauchy Avenue/Project Driveway 4

As a conservative analysis, traffic operations were examined for the Cumulative (2045) conditions. Figure 1 illustrates the Cumulative (2045) plus project intersection lane geometries and traffic control. Traffic volumes for the Cumulative (2045) conditions were obtained from the March 2024 TOA.

Figure 2 illustrates the project trip distribution with the new right-out only driveway at Van Buren Boulevard, closure of Dauchy Avenue/Project Driveway 3 during pick-up and drop-off hours, and left-turn restriction at Dauchy Avenue/Project Driveway 2 – Ardenwood Lane and Dauchy Avenue/Project Driveway 4. Figure 3 illustrates the project trip assignment. Figure 4 illustrates the Cumulative (2045) with project conditions traffic volumes. Volume development worksheets are included in Appendix A.

Table A summarizes the intersection peak hour LOS analysis for Cumulative (2045) plus project conditions. The following intersections are forecast to operate at a deficient LOS:

6. Dauchy Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours)
19. Project Driveway 1/Van Buren Boulevard (both a.m. and afternoon peak hours)

Intersection LOS worksheets are included in Appendix B.

RECOMMENDED CIRCULATION IMPROVEMENTS

The following circulation improvements are recommended to offset the forecasted deficiencies:

6. Dauchy Avenue/Van Buren Boulevard: Add an eastbound through lane while widening the receiving leg to 3 through-lanes through the Transportation Uniform Mitigation Fee (TUMF) Program. Restripe the westbound right-turn lane to a westbound through-right lane while widening the receiving leg to 3 through-lanes. Extend the cycle length to 130 seconds and coordinate the timing with adjacent signals at Van Buren Village Driveway/Van Buren Boulevard. The recommended signal timing sheets are included as Appendix C.

7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane: Implement a 20 feet parking restriction on the northbound approach starting from the intersection due to Assembly Bill 413 (AB-413).

19. Project Driveway 1/Van Buren Boulevard: Provide right-of-way (ROW) for the addition of an eastbound through lane.

Table A summarizes the Cumulative (2045) plus project plus recommended improvements intersection LOS. As summarized in Table A, all study intersections are forecast to operate at a satisfactory LOS with the recommended improvements. Table B summarizes the list of recommended improvements for intersections and funding mechanism for study area intersections. Figure 5 illustrates the Cumulative (2045) plus project plus recommended improvements intersection geometrics and stop control.

PROJECT DESIGN FEATURES

In additional to recommended operational improvements, the project will also construct the following project design features to improve pedestrian safety and vehicular operations:

6. Dauchy Avenue/Van Buren Boulevard: Add continental crosswalks, audible pedestrian push buttons, and pedestrian restriction signs. Extend northbound left storage to 200 feet.

7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane: Install a left turn restriction sign with modified hours of application (R33A CA) [7 AM – 9 AM, 2 PM – 4 PM, School Days] at the eastbound approach for both lanes.

19. Project Driveway 1/Van Buren Boulevard: Provide right turn egress between 7 AM - 9 AM and 2 PM - 4 PM during school days.

20. Dauchy Avenue/Project Driveway 3: Closure of Project Driveway 3 during drop-off and pick-up hours.

21. Dauchy Avenue/Project Driveway 4: Install a left turn restriction sign with modified hours of application (R33A CA) [7 AM – 9 AM, 2 PM – 4 PM, School Days] at the eastbound approach.

Table C summarizes the list of project design features that will be implemented to improve traffic operations. As mentioned previously, Figure 5 illustrates the changes in intersection geometric and stop controls as part of the project design features being implemented by the project. Figure 6 illustrates the recommended conceptual striping plan at Project Driveway 2, Project Driveway 3, and Project Driveway 4. Appendix D illustrates the proposed internal circulation plan for the proposed project. Appendix E illustrates the proposed left turn restriction sign with modified hours of application (R33A CA – Modified).

INTERSECTION QUEUING ANALYSIS – DAUCHY AVENUE/VAN BUREN BOULEVARD

Based on discussion with City staff, an intersection turn-lane queuing analysis was performed at the intersection of Dauchy Avenue/Van Buren Boulevard. Table B summarizes the intersection queue lengths for Cumulative (2045) plus project conditions. The 95th percentile queue was obtained from Synchro. Intersection queuing worksheets are included in Appendix F.

As shown in Table B, the intersection queues are forecast to exceed the available storage for the northbound left-turn, southbound left-turn, eastbound left-turn, and westbound left-turn. Recommended improvements include extending the northbound left-turn storage length from 65 to 200 feet. No further improvements are feasible under current geometric constraints. The forecasted queues for the northbound, southbound, eastbound, and westbound left-turns will continue to exceed the available storage length.

INTERSECTION SIGNAL WARRANT ANALYSIS – DAUCHY AVENUE/ARDENWOOD LANE

Based on discussion with City staff, a peak hour signal warrant analysis was conducted for the intersection of Dauchy Avenue/Project Driveway 2 – Ardenwood Lane to identify if a traffic signal is warranted after implementation of the project (worst case scenario). Figure 7 illustrates the peak hour signal warrant under Cumulative (2045) plus project conditions. As illustrated in Figure 7, the intersection does not meet the peak hour signal warrant. Additionally, the intersection is also forecast to operate at a satisfactory LOS under Cumulative (2045) plus project conditions. Therefore, with implementation of the project and project design features, this intersection will not require any additional circulation improvements.

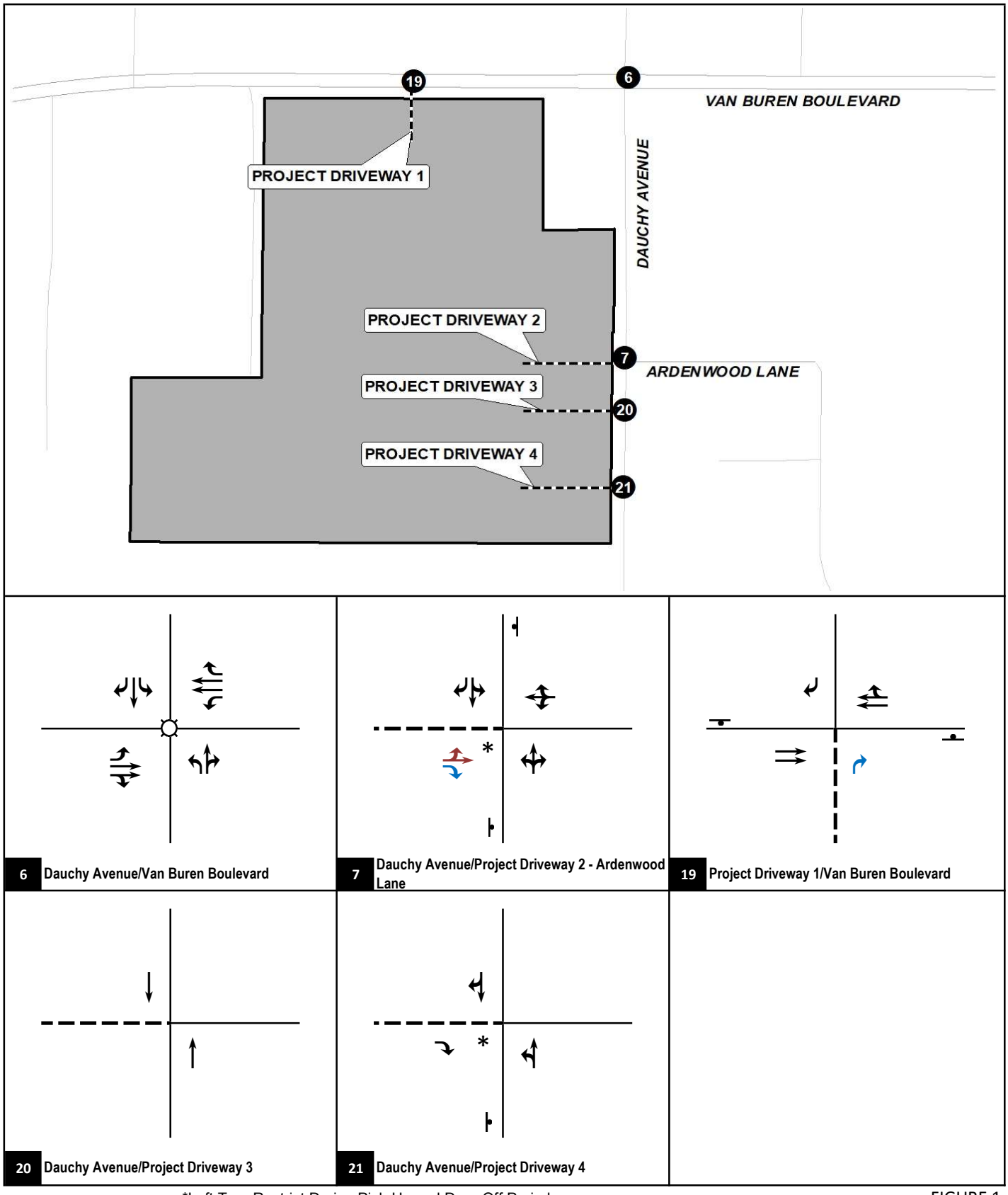
Attachments:

Figure 1 – Cumulative (2045) with Project Study Intersection Geometrics and Traffic Control
Figure 2 – Project Trip Distribution
Figure 3 – Project Trip Assignment
Figure 4 – Cumulative (2045) with Project Peak Hour Traffic Volumes
Figure 5 – Cumulative (2045) with Project with Improvements Study Intersection Geometrics and Traffic Control
Figure 6 – Conceptual Striping and Restrictions

Figure 7 – Cumulative Peak Hour Warrant - Dauchy Avenue/Project Driveway 2-Ardenwood Lane
Table A – Cumulative (2045) Intersection Levels of Service
Table B – Recommended Improvements for Intersections and Funding Mechanism
Table C – Project Design Features
Table D – Cumulative (2045) Intersection Queuing Analysis
Appendix A – Volume Development Worksheets
Appendix B – Intersection LOS Worksheets
Appendix C – Traffic Signal Timing Worksheets
Appendix D – Conceptual Parking Lot Circulation Plan
Appendix E – Conceptual On-Street Parking Restriction Sign
Appendix F – Intersection Queuing Worksheets
Appendix G – Woodcrest Christian School Expansion Traffic Operational Analysis



FIGURES



LSA

Legend

Stop Sign

Signal

*Left Turn Restrict During Pick-Up and Drop-Off Period

Project Design Feature (Restricted Movement)

Project Driveway

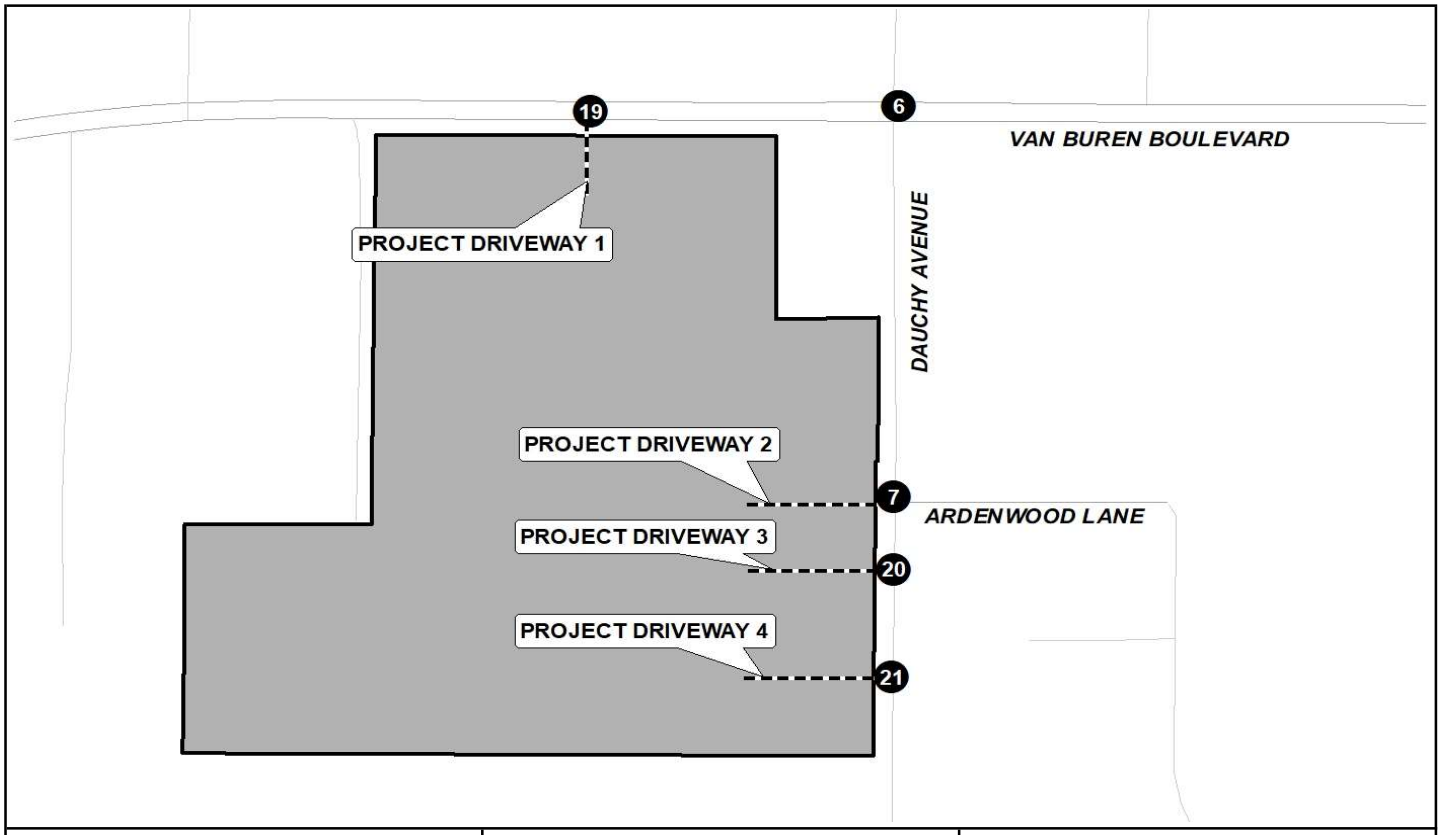
Project Design Feature

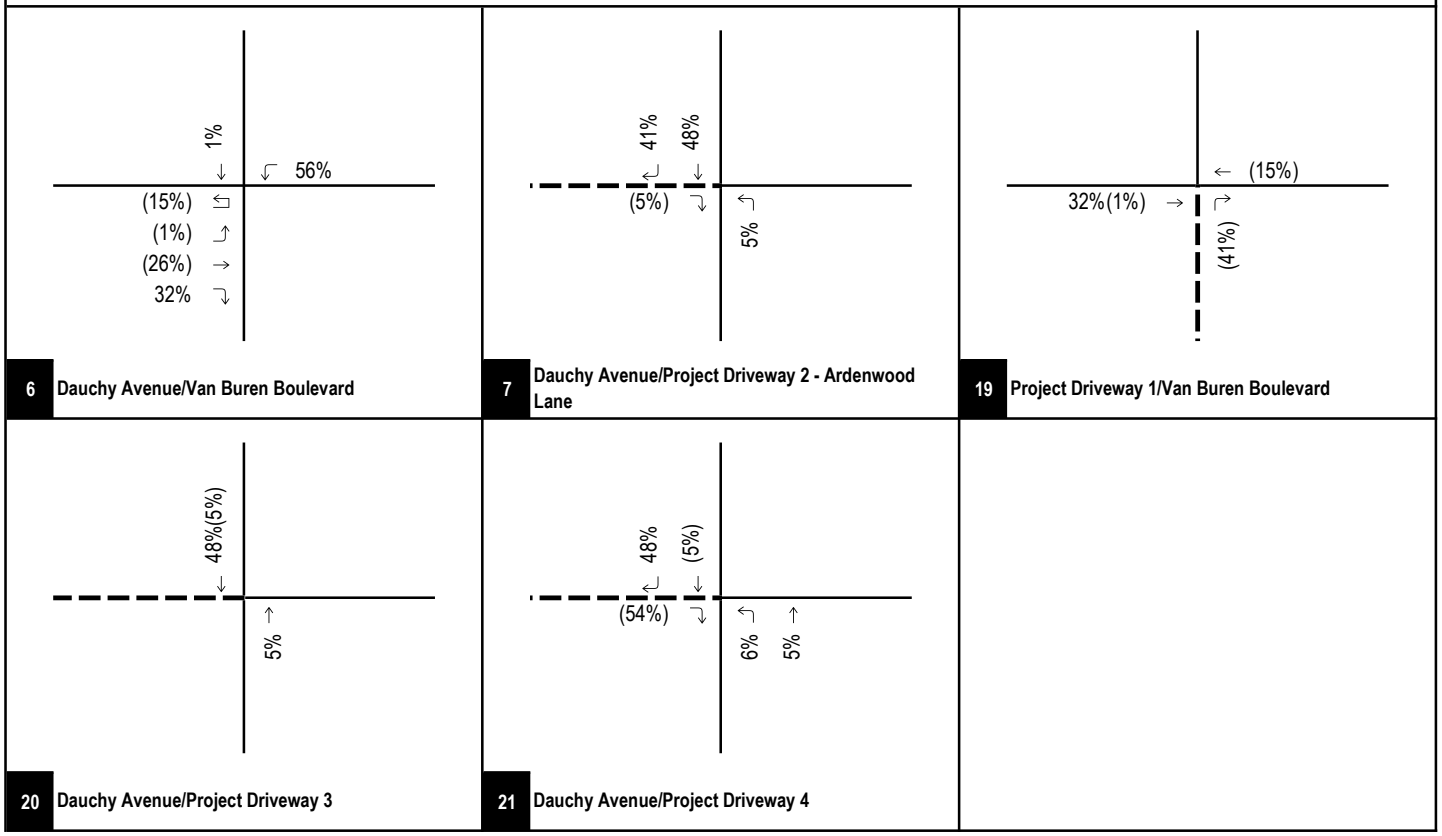
FIGURE 1

Woodcrest Christian School Expansion Project

Supplemental Traffic Operations Analysis Memorandum

Cumulative (2045) with Project Study Intersection Geometrics and Traffic Control





6 Dauchy Avenue/Van Buren Boulevard

7 Dauchy Avenue/Project Driveway 2 - Ardenwood Lane

19 Project Driveway 1/Van Buren Boulevard

20 Dauchy Avenue/Project Driveway 3

21 Dauchy Avenue/Project Driveway 4

FIGURE 2

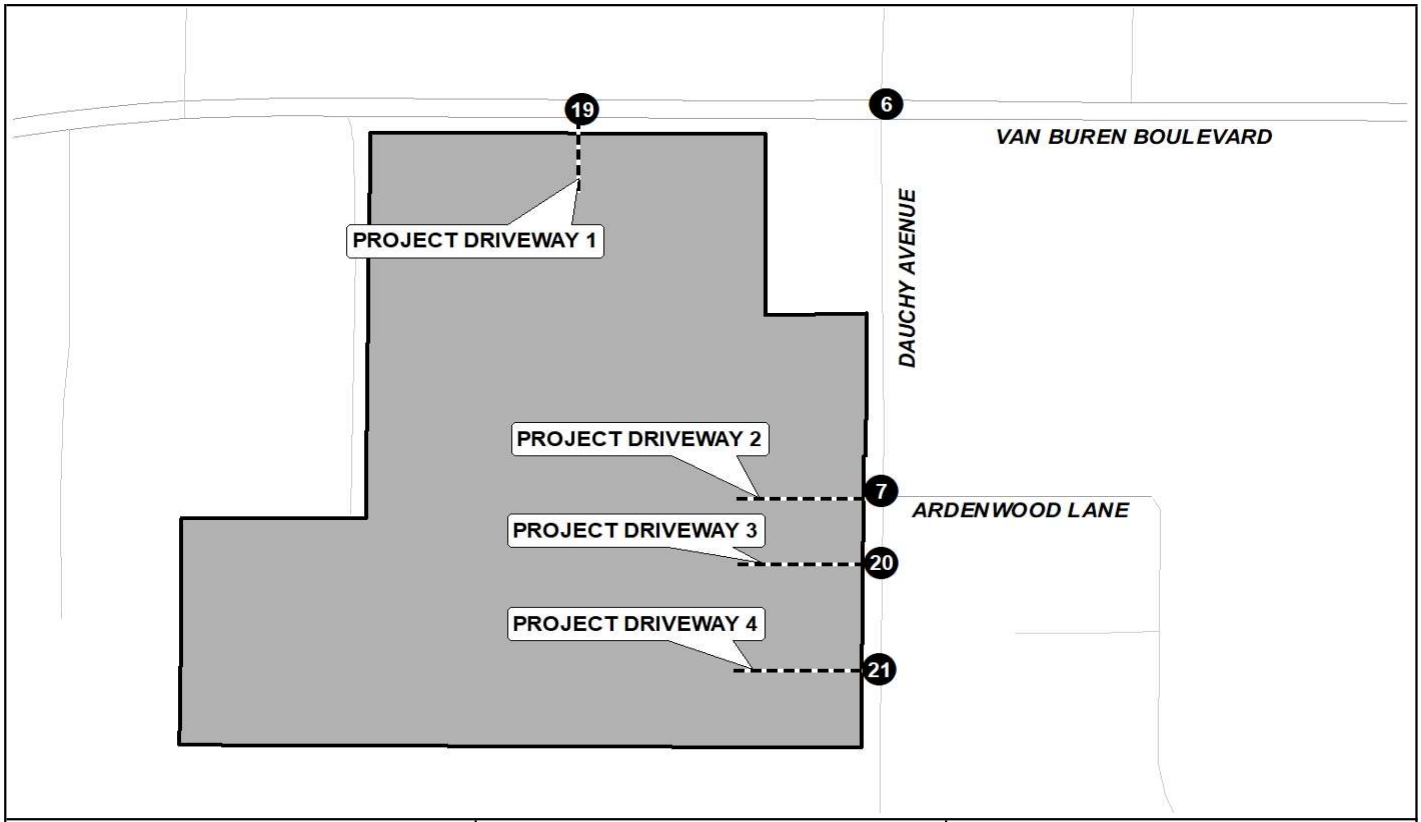
LSA

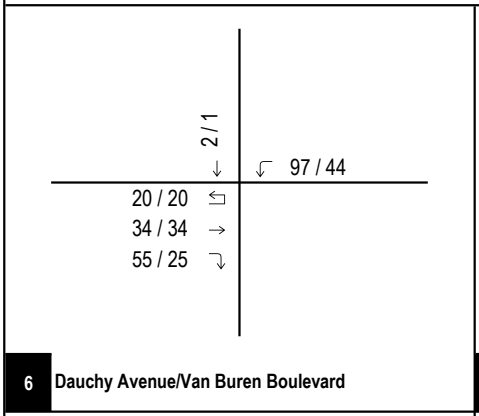
XX% (YY%)
Inbound (Outbound) Distribution

Project Driveway

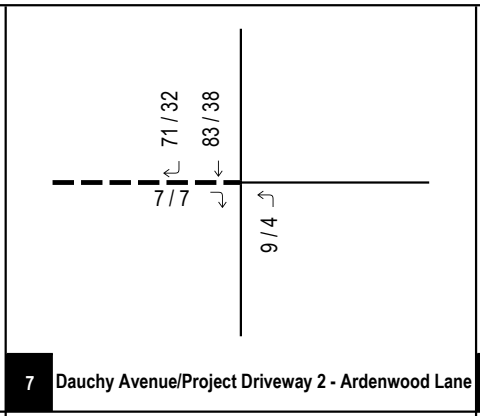
Woodcrest Christian School Expansion Project
Supplemental Traffic Operations Analysis Memorandum

Project Trip Distribution

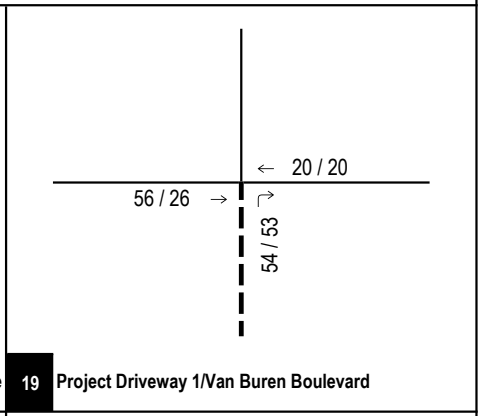




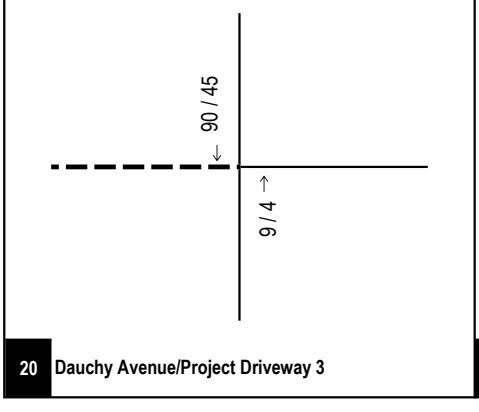
6 Dauchy Avenue/Van Buren Boulevard



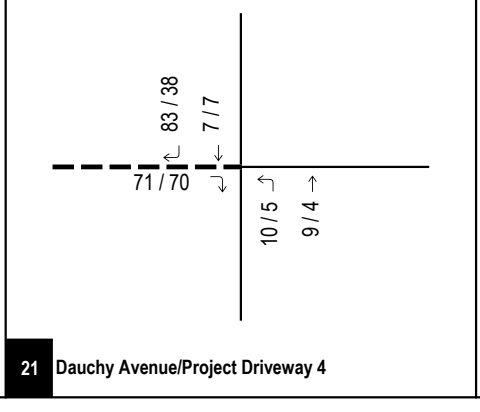
7 Dauchy Avenue/Project Driveway 2 - Ardenwood Lane



19 Project Driveway 1/Van Buren Boulevard



20 Dauchy Avenue/Project Driveway 3



21 Dauchy Avenue/Project Driveway 4

FIGURE 3

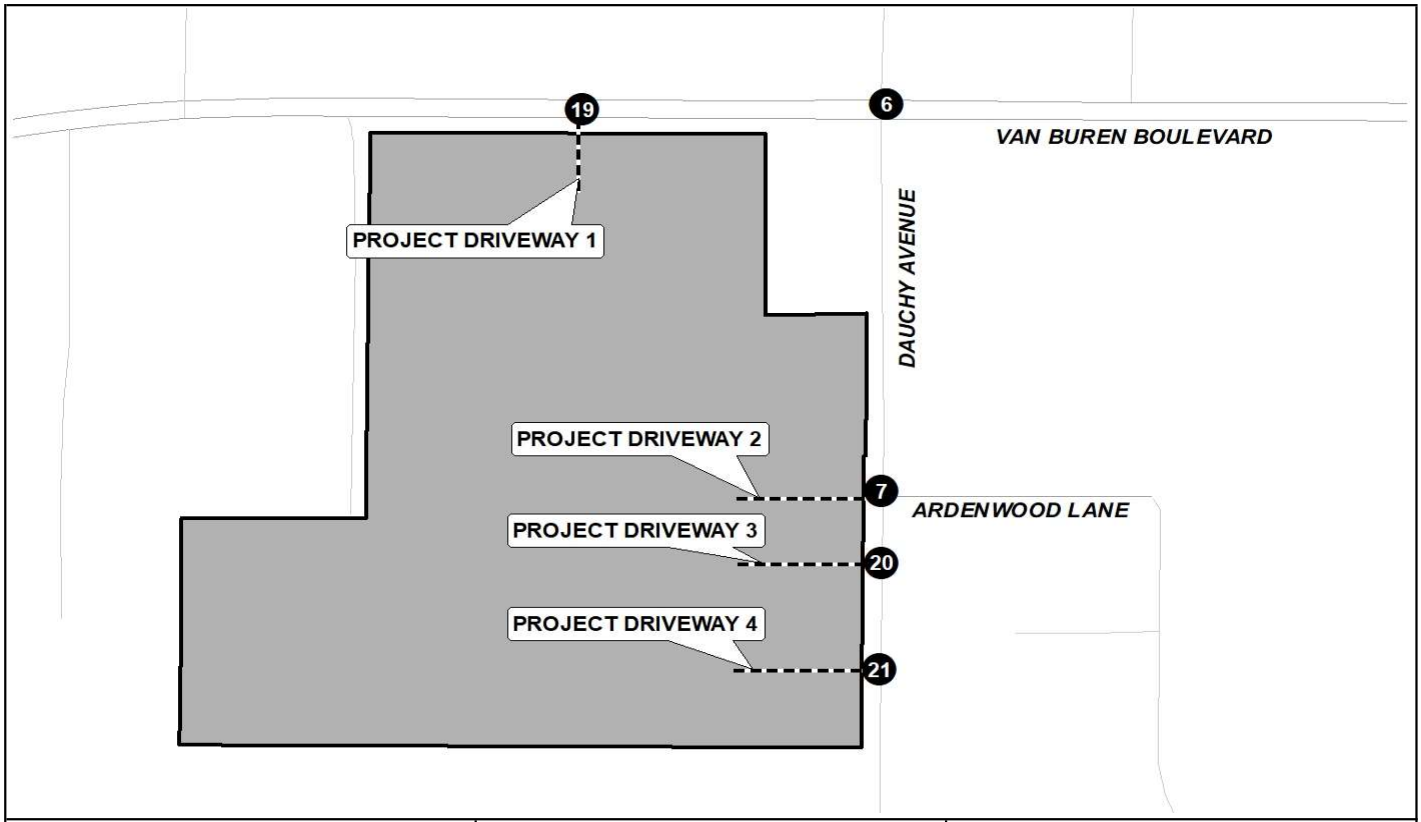
LSA

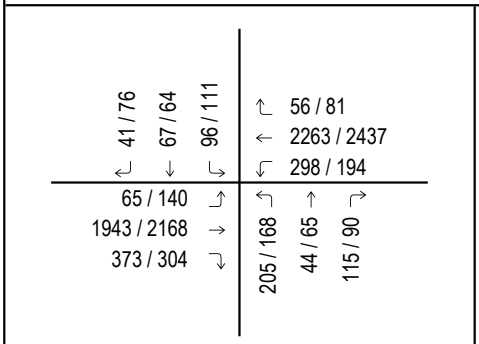
XX / YY
AM / Afternoon Peak Hour Trips

Project Driveway

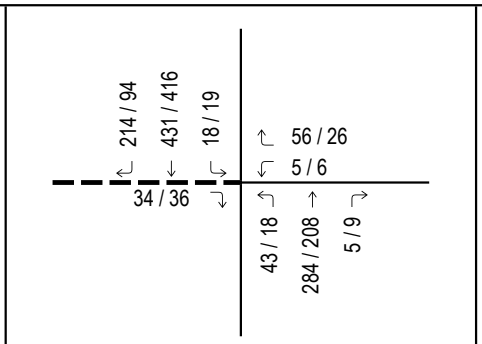
Woodcrest Christian School Expansion Project
Supplemental Traffic Operations Analysis Memorandum

Project Trip Assignment

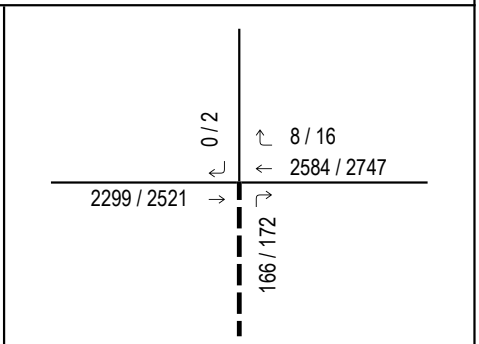




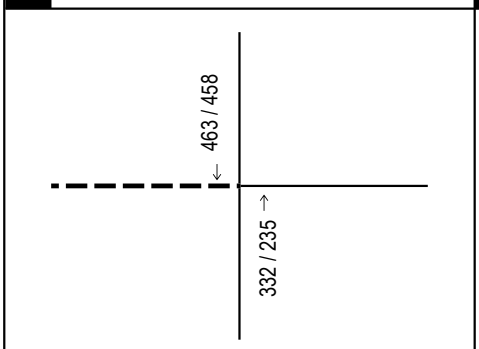
6 Dauchy Avenue/Van Buren Boulevard



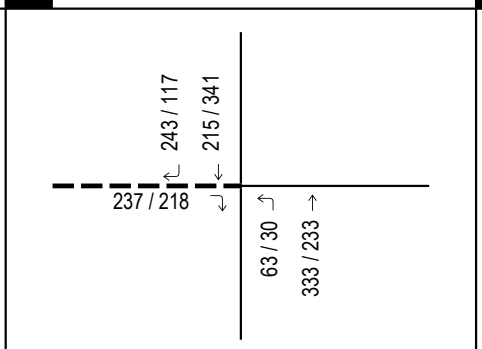
7 Dauchy Avenue/Project Driveway 2 - Ardenwood Lane



19 Project Driveway 1/Van Buren Boulevard



20 Dauchy Avenue/Project Driveway 3



21 Dauchy Avenue/Project Driveway 4

FIGURE 4

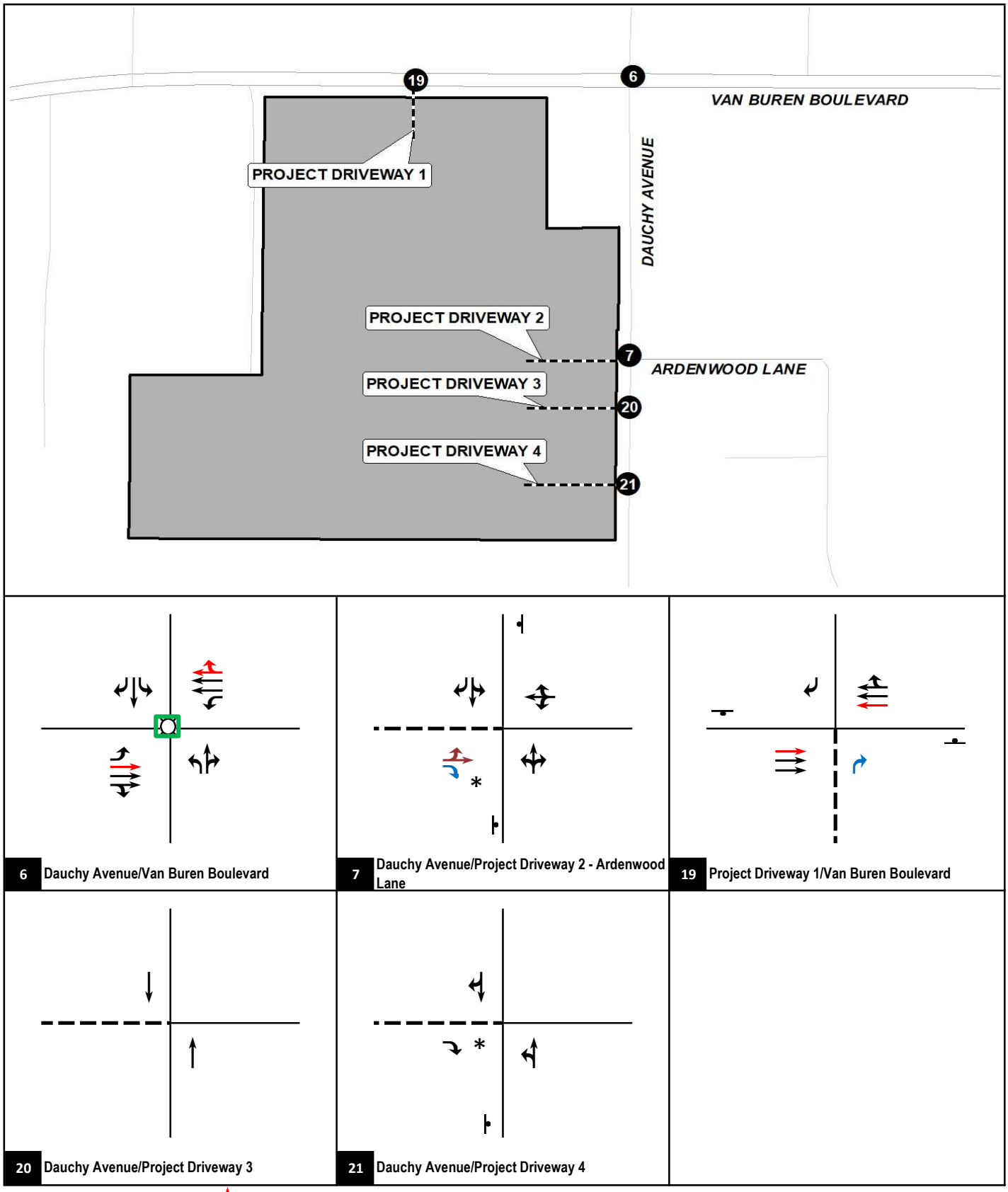
LSA

XXXX / YYYY
AM / Afternoon Peak Hour Trips

Project Driveway

Woodcrest Christian School Expansion Project
Supplemental Traffic Operations Analysis Memorandum

Cumulative (2045) with Project Peak Hour Traffic Volumes



LSA

Legend

Optimize Signal Timing

Stop Sign

Improvements

Project Design Feature (Restricted Movement)

Project Driveway

Project Design Feature

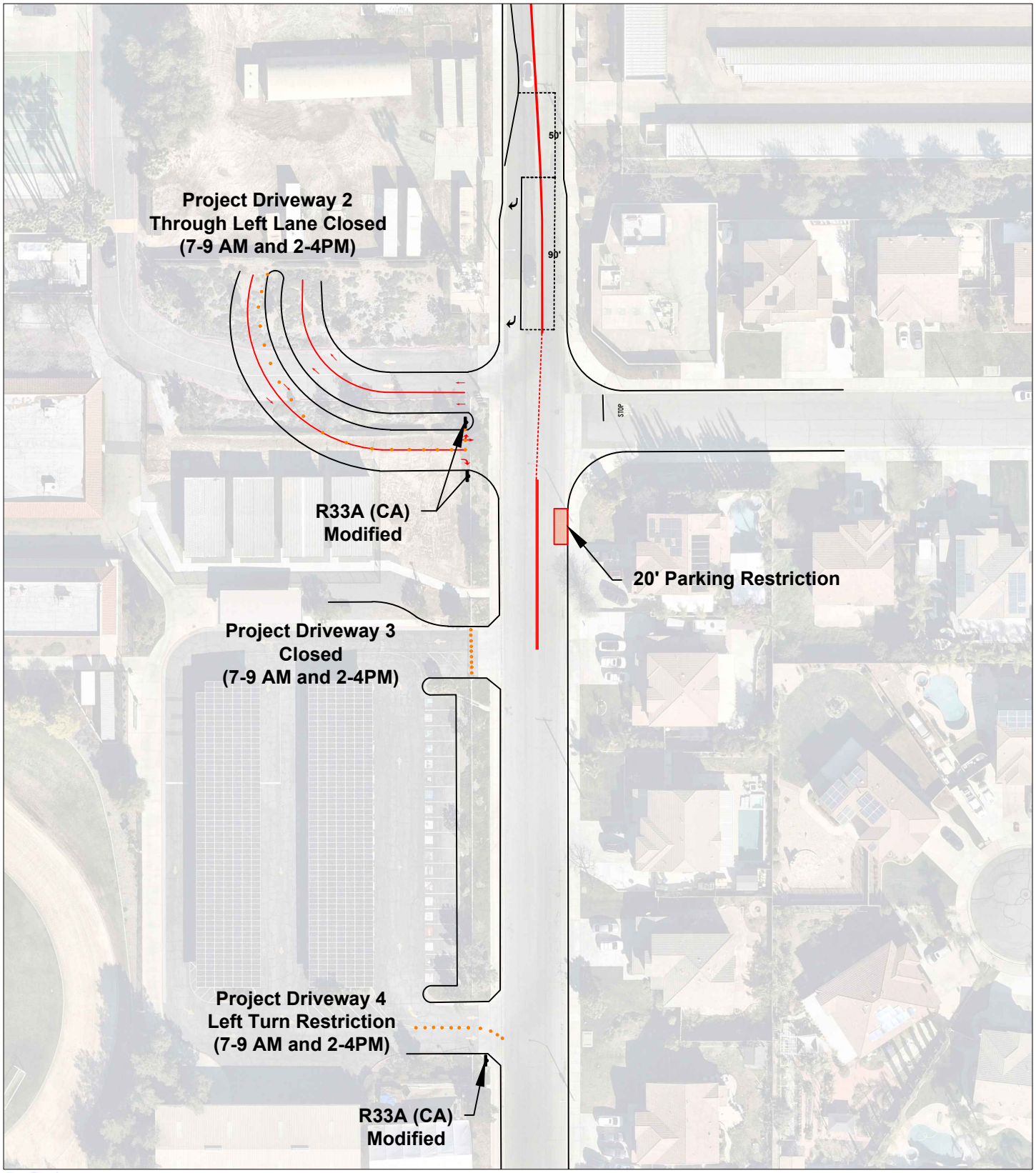
*Left Turn Restrict During Pick-Up and Drop-Off Period

FIGURE 5

Woodcrest Christian School Expansion Project

Supplemental Traffic Operations Analysis Memorandum

Cumulative (2045) with Project with Improvements Study Intersection Geometrics and Traffic Control



LSA

LEGEND

- Parking Restriction (Assembly Bill 413)
- Turning Restriction
- R33A (CA) (Modified)

7-9 AM
2-4 PM
School Days

0 40 80
FEET

FIGURE 6

Woodcrest Christian School
Supplemental Traffic Operations Analysis Memorandum

Conceptual Striping and Restrictions

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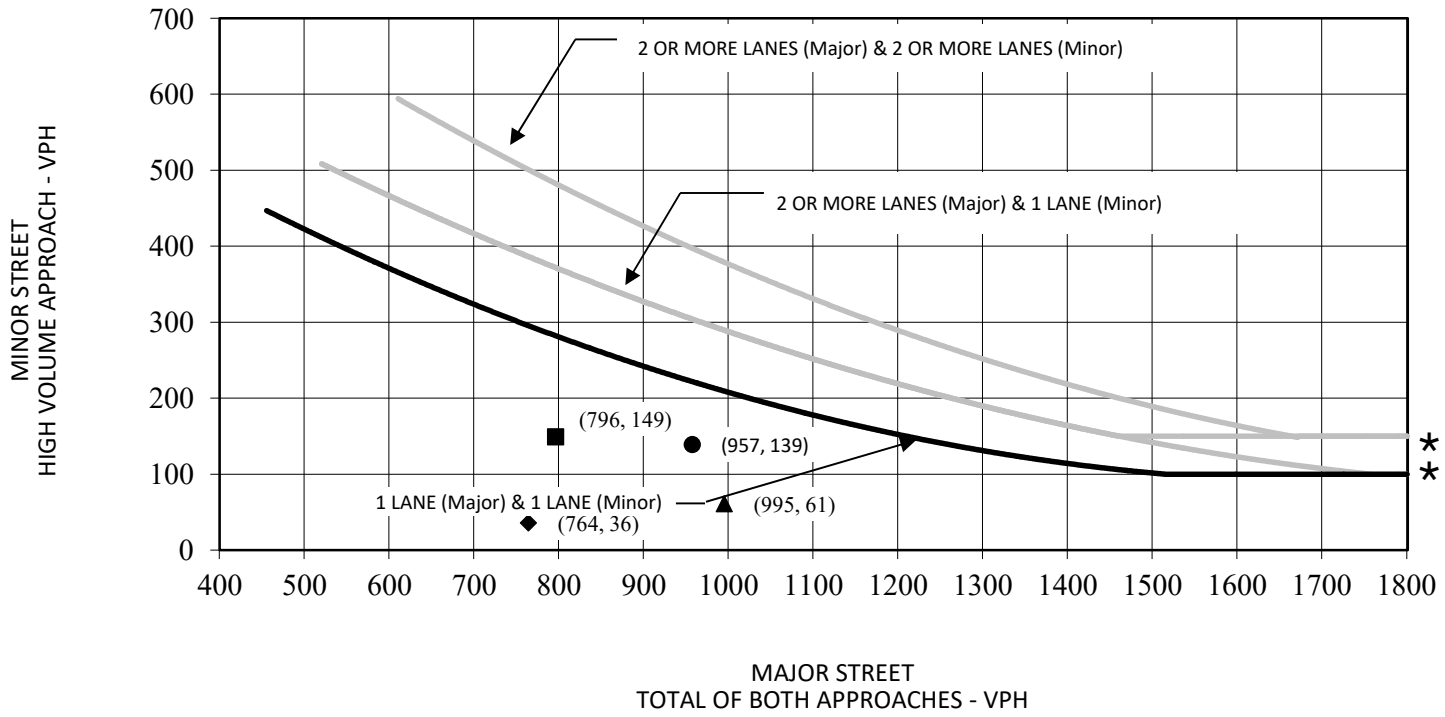
WARRANT 3, PEAK HOUR



* 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 7

● Without Project AM Peak Hour

▲ With Project AM Peak Hour

■ Without Project Afternoon Peak Hour

◆ With Project Afternoon Peak Hour

Woodcrest Christian School Expansion Project

Supplemental Traffic Operations Analysis Memorandum

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

Cumulative Peak Hour Warrant - Dauchy Avenue/Project Driveway 2-Ardenwood Lane

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TABLES

LSA

Table A: Cumulative (2045) Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Cumulative No Project					Cumulative With Project					Cumulative With Project With Improvements				
			Control	A.M. Peak Hour Delay (sec.)	A.M. Peak Hour LOS		Afternoon Peak Hour Delay (sec.) / LOS	Control	A.M. Peak Hour Delay (sec.)	A.M. Peak Hour LOS		Afternoon Peak Hour Delay (sec.) / LOS	Control	A.M. Peak Hour Delay (sec.)	A.M. Peak Hour LOS	Afternoon Peak Hour Delay (sec.)	Afternoon Peak Hour LOS
6 . Dauchy Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	D	Signal	>100	F	*	>100 F *	Signal	>100	F	*	>100 F *	Signal	44.3	D	37.4	D
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane	City of Riverside	C	TWSC	58.1	F	*	75.4 F *	TWSC	12.2	B		12.8 B	TWSC	12.2	B	12.8	B
19 . Project Driveway 1/Van Buren Boulevard	County of Riverside/City of Riverside	D	TWSC	>100	F	*	>100 F *	TWSC	>100	F	*	>100 F *	TWSC	21.4	C	28.8	D
20 . Dauchy Avenue/Project Driveway 3	County of Riverside/City of Riverside	D	TWSC	8.2	A		8.4 A	TWSC	0.0	A		0.0 A	TWSC	0.0	A	0.0	A
21 . Dauchy Avenue/Project Driveway 4	County of Riverside/City of Riverside	D	TWSC	21.2	C		20.2 C	TWSC	14.4	B		16.7 C	TWSC	14.4	B	16.7	C

Notes:

OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

LSA

Table B: Recommended Improvements for Intersections and Funding Mechanism

Intersection	Improvements Covered by TUMF	Improvements In Coordination With City and County
6 . Dauchy Avenue/Van Buren Boulevard	Add EBT. Add EB and WB receiving lane.	Restripe WBR to WBTR. Extend the cycle length to 130 seconds and coordinate the timing with adjacent signals at Van Buren Village Driveway/Van Buren Boulevard.
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane		Restrict a 20' parking restriction on the northbound approach.
19 . Project Driveway 1/Van Buren Boulevard	Add EBT and WBT.	The project to provide right-of-way along the project frontage for EBT.

Notes:

EB = Eastbound; WB = Westbound; L = Left; T = Through; R = Right

TWLTL = Two-Way-Left-Turn-Lane

TUMF refers to the Transportation Uniform Mitigation Fee Program.

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Table C: Project Design Features

Intersection	Project Responsibility
6 . Dauchy Avenue/Van Buren Boulevard	Add continental crosswalks, audible pedestrian push buttons, and pedestrian restriction signs. Extend NBL storage to 200'.
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane	Install a left turn restriction sign (R33A-CA Modified) at the eastbound approach for both lanes.
19 . Project Driveway 1/Van Buren Boulevard	Provide right turn egress between 7 AM - 9 AM and 2 PM - 4 PM during school days.
20 . Dauchy Avenue/Project Driveway 3	Closure of driveway between 7 AM - 9 AM and 2 PM - 4 PM during school days.
21 . Dauchy Avenue/Project Driveway 4	Install a left turn restriction sign (R33A-CA Modified) at the eastbound approach.

Notes:

EB = Eastbound; WB = Westbound; L = Left; T = Through; R = Right

TWLTL = Two-Way-Left-Turn-Lane

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Table D: Cumulative (2045) Intersection Queuing Analysis

Intersection	Movement	Existing Storage Length[1] (ft/ln)	Recommended Storage Length (ft/ln)	Cumulative (2045) With Project[2]		Cumulative (2045) With Project With Imp.[2]	
				AM Peak Hour	Afternoon Peak Hour	AM Peak Hour	Afternoon Peak Hour
6 . Dauchy Avenue/Van Buren Boulevard Signal	**NBL[3]**	65	200	**260**	**180**	**215**	185
	SBL	75	75	**110**	**125**	**105**	**125**
	SBR	55	55	0	25	0	0
	EBL	305	305	300	**455**	240	**330**
	WBL	420	420	**590**	395	**520**	360

Notes:

ft/ln = feet per lane

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; T= Through; R = Right

Bold = Queue exceeds available storage.

1 Storage length for all movements obtained from Google Earth measurements.

2 All queues reported are 95th percentile queues. Queues for signalized intersections have been reported from Synchro.

3 Northbound left turn storage lane proposed to be extended by 135 feet.

APPENDIX A

VOLUME DEVELOPMENT WORKSHEETS

LSA

Table A: Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Cumulative Without Project	Project Trips	Driveway Vol Adjust	Cumulative With Project	Cumulative Without Project	Project Trips	Driveway Vol Adjust	Cumulative With Project
6 Dauchy Avenue/Van Buren Boulevard								
NBL	339	0	(134)	205	285	0	(117)	168
NBT	72	0	(28)	44	110	0	(45)	65
NBR	190	0	(75)	115	153	0	(63)	90
SBL	96	0	0	96	111	0	0	111
SBT	65	2	0	67	63	1	0	64
SBR	41	0	0	41	76	0	0	76
EBL	36	1	28	65	94	1	45	140
EBT	1,874	34	35	1,943	2,101	34	33	2,168
EBR	318	55	0	373	279	25	0	304
WBL	201	97	0	298	150	44	0	194
WBT	2,263	0	0	2,263	2,437	0	0	2,437
WBR	56	0	0	56	81	0	0	81
EBU	0	20	63	83	0	20	62	82
North Leg								
Approach	202	2	0	204	250	1	0	251
Departure	164	1	0	165	285	1	0	286
Total	366	3	0	369	535	2	0	537
South Leg								
Approach	601	0	(237)	364	548	0	(225)	323
Departure	584	154	0	738	492	70	0	562
Total	1,185	154	(237)	1,102	1,040	70	(225)	885
East Leg								
Approach	2,520	97	0	2,617	2,668	44	0	2,712
Departure	2,160	34	(40)	2,154	2,365	34	(30)	2,369
Total	4,680	131	(40)	4,771	5,033	78	(30)	5,081
West Leg								
Approach	2,228	90	126	2,381	2,474	60	140	2,612
Departure	2,643	0	(71)	2,509	2,798	0	(55)	2,681
Total	4,871	90	55	4,890	5,272	60	85	5,293
Total Approaches								
Approach	5,551	189	(111)	5,566	5,940	105	(85)	5,898
Departure	5,551	189	(111)	5,566	5,940	105	(85)	5,898
Total	11,102	378	(222)	11,132	11,880	210	(170)	11,796

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Table A: Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Cumulative Without Project	Project Trips	Driveway Vol Adjust	Cumulative With Project	Cumulative Without Project	Project Trips	Driveway Vol Adjust	Cumulative With Project
7 Dauchy Avenue/Project Driveway 2 - Ardenwood Lane								
NBL	34	9	0	43	14	4	0	18
NBT	409	0	(125)	284	314	0	(106)	208
NBR	5	0	0	5	9	0	0	9
SBL	18	0	0	18	19	0	0	19
SBT	348	83	0	431	378	38	0	416
SBR	143	71	0	214	62	32	0	94
EBL	112	0	(112)	0	119	0	(119)	0
EBT	0	0	0	0	1	0	(1)	0
EBR	27	7	0	34	29	7	0	36
WBL	5	0	0	5	6	0	0	6
WBT	0	0	0	0	0	0	0	0
WBR	56	0	0	56	26	0	0	26
North Leg								
Approach	509	154	0	663	459	70	0	529
Departure	577	0	(237)	340	459	0	(225)	234
Total	1,086	154	(237)	1,003	918	70	(225)	763
South Leg								
Approach	448	9	(125)	332	337	4	(106)	235
Departure	380	90	0	470	413	45	0	458
Total	828	99	(125)	802	750	49	(106)	693
East Leg								
Approach	61	0	0	61	32	0	0	32
Departure	23	0	0	23	29	0	(1)	28
Total	84	0	0	84	61	0	(1)	60
West Leg								
Approach	139	7	(112)	34	149	7	(120)	36
Departure	177	80	0	257	76	36	0	112
Total	316	87	(112)	291	225	43	(120)	148
Total Approaches								
Approach	1,157	170	(237)	1,090	977	81	(226)	832
Departure	1,157	170	(237)	1,090	977	81	(226)	832
Total	2,314	340	(474)	2,180	1,954	162	(452)	1,664

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Table A: Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Cumulative Without Project	Project Trips	Driveway Vol Adjust	Cumulative With Project	Cumulative Without Project	Project Trips	Driveway Vol Adjust	Cumulative With Project
19 Project Driveway 1/Van Buren Boulevard								
NBL	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0
NBR	0	54	112	166	0	53	119	172
SBL	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0
SBR	0	0	0	0	2	0	0	2
EBL	0	0	0	0	0	0	0	0
EBT	2,228	56	15	2,299	2,474	26	21	2,521
EBR	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0
WBT	2,635	20	(71)	2,584	2,782	20	(55)	2,747
WBR	8	0	0	8	16	0	0	16
North Leg								
Approach	0	0	0	0	2	0	0	2
Departure	8	0	0	8	16	0	0	16
Total	8	0	0	8	18	0	0	18
South Leg								
Approach	0	54	112	166	0	53	119	172
Departure	0	0	0	0	0	0	0	0
Total	0	54	112	166	0	53	119	172
East Leg								
Approach	2,643	20	(71)	2,592	2,798	20	(55)	2,763
Departure	2,228	110	127	2,465	2,474	79	140	2,693
Total	4,871	130	56	5,057	5,272	99	85	5,456
West Leg								
Approach	2,228	56	15	2,299	2,474	26	21	2,521
Departure	2,635	20	(71)	2,584	2,784	20	(55)	2,749
Total	4,863	76	(56)	4,883	5,258	46	(34)	5,270
Total Approaches								
Approach	4,871	130	56	5,057	5,274	99	85	5,458
Departure	4,871	130	56	5,057	5,274	99	85	5,458
Total	9,742	260	112	10,114	10,548	198	170	10,916

LSA

Table A: Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Cumulative Without Project	Project Trips	Driveway Vol Adjust	Cumulative With Project	Cumulative Without Project	Project Trips	Driveway Vol Adjust	Cumulative With Project
20 Dauchy Avenue/Project Driveway 3								
NBL	15	0	(15)	0	11	0	(11)	0
NBT	448	9	(125)	332	337	4	(106)	235
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	259	90	114	463	347	45	66	458
SBR	114	0	(114)	0	66	0	(66)	0
EBL	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0
North Leg								
Approach	373	90	0	463	413	45	0	458
Departure	448	9	(125)	332	337	4	(106)	235
Total	821	99	(125)	795	750	49	(106)	693
South Leg								
Approach	463	9	(140)	332	348	4	(117)	235
Departure	259	90	114	463	347	45	66	458
Total	722	99	(26)	795	695	49	(51)	693
East Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
West Leg								
Approach	0	0	0	0	0	0	0	0
Departure	129	0	(129)	0	77	0	(77)	0
Total	129	0	(129)	0	77	0	(77)	0
Total Approaches								
Approach	836	99	(140)	795	761	49	(117)	693
Departure	836	99	(140)	795	761	49	(117)	693
Total	1,672	198	(280)	1,590	1,522	98	(234)	1,386

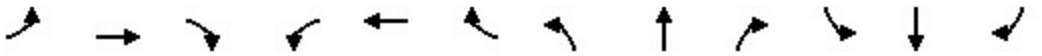
LSA

Table A: Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour				PM Peak Hour			
	Cumulative Without Project	Project Trips	Driveway Vol Adjust	Cumulative With Project	Cumulative Without Project	Project Trips	Driveway Vol Adjust	Cumulative With Project
21 Dauchy Avenue/Project Driveway 4								
NBL	38	10	15	63	14	5	11	30
NBT	339	9	(15)	333	240	4	(11)	233
NBR	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0
SBT	208	7	0	215	334	7	0	341
SBR	46	83	114	243	13	38	66	117
EBL	125	0	(125)	0	106	0	(106)	0
EBT	0	0	0	0	0	0	0	0
EBR	41	71	125	237	42	70	106	218
WBL	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0
North Leg								
Approach	254	90	114	458	347	45	66	458
Departure	464	9	(140)	333	346	4	(117)	233
Total	718	99	(26)	791	693	49	(51)	691
South Leg								
Approach	377	19	0	396	254	9	0	263
Departure	249	78	125	452	376	77	106	559
Total	626	97	125	848	630	86	106	822
East Leg								
Approach	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
West Leg								
Approach	166	71	0	237	148	70	0	218
Departure	84	93	129	306	27	43	77	147
Total	250	164	129	543	175	113	77	365
Total Approaches								
Approach	797	180	114	1,091	749	124	66	939
Departure	797	180	114	1,091	749	124	66	939
Total	1,594	360	228	2,182	1,498	248	132	1,878

APPENDIX B

INTERSECTION LOS WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1874	318	201	2263	56	339	72	190	96	65	41
Future Volume (veh/h)	36	1874	318	201	2263	56	339	72	190	96	65	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	1973	335	212	2382	59	357	76	200	101	68	43
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	73	1698	279	97	2031	906	352	85	223	178	348	295
Arrive On Green	0.01	0.18	0.18	0.05	0.56	0.56	0.05	0.18	0.18	0.05	0.18	0.18
Sat Flow, veh/h	1810	3093	508	1810	3610	1610	1810	463	1218	1810	1900	1610
Grp Volume(v), veh/h	38	1124	1184	212	2382	59	357	0	276	101	68	43
Grp Sat Flow(s),veh/h/ln	1810	1805	1796	1810	1805	1610	1810	0	1681	1810	1900	1610
Q Serve(g_s), s	2.7	71.4	71.4	7.0	73.1	2.2	7.0	0.0	20.9	5.9	3.9	2.9
Cycle Q Clear(g_c), s	2.7	71.4	71.4	7.0	73.1	2.2	7.0	0.0	20.9	5.9	3.9	2.9
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	73	991	986	97	2031	906	352	0	308	178	348	295
V/C Ratio(X)	0.52	1.13	1.20	2.18	1.17	0.07	1.01	0.00	0.90	0.57	0.20	0.15
Avail Cap(c_a), veh/h	97	991	986	97	2031	906	352	0	388	178	438	372
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	53.2	53.2	61.5	28.4	12.9	51.8	0.0	51.9	41.9	45.0	44.5
Incr Delay (d2), s/veh	2.2	73.3	100.1	561.3	83.3	0.1	51.5	0.0	19.4	2.6	0.3	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	54.5	61.5	18.3	51.4	0.8	13.3	0.0	10.5	2.8	1.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.0	126.5	153.3	622.8	111.8	13.0	103.4	0.0	71.3	44.5	45.2	44.8
LnGrp LOS	E	F	F	F	F	B	F		E	D	D	D
Approach Vol, veh/h		2346			2653			633			212	
Approach Delay, s/veh		139.0			150.4			89.4			44.8	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	78.6	11.0	28.4	10.2	80.3	11.0	28.4
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	7.0	65.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	9.0	73.4	9.0	5.9	4.7	75.1	7.9	22.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	135.4
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↰	↱
Traffic Vol, veh/h	112	0	27	5	0	56	34	409	5	18	348	143
Future Vol, veh/h	112	0	27	5	0	56	34	409	5	18	348	143
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	127	0	31	6	0	64	39	465	6	20	395	163

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1013	984	395	1078	1144	468	558	0	0	471	0	0
Stage 1	435	435	-	546	546	-	-	-	-	-	-	-
Stage 2	578	549	-	532	598	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	219	250	659	198	202	599	1023	-	-	1101	-	-
Stage 1	604	584	-	526	521	-	-	-	-	-	-	-
Stage 2	505	520	-	535	494	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	184	231	659	178	186	599	1023	-	-	1101	-	-
Mov Cap-2 Maneuver	184	231	-	178	186	-	-	-	-	-	-	-
Stage 1	573	568	-	499	494	-	-	-	-	-	-	-
Stage 2	428	493	-	496	481	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	58.1	13.3	0.7	0.3
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1023	-	-	214	502	1101	-	-
HCM Lane V/C Ratio	0.038	-	-	0.738	0.138	0.019	-	-
HCM Ctrl Dly (s/v)	8.7	0	-	58.1	13.3	8.3	0	-
HCM Lane LOS	A	A	-	F	B	A	A	-
HCM 95th %tile Q (veh)	0.1	-	-	5	0.5	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	2228	0	0	2635	8	0	0	0	0	0	0
Future Vol, veh/h	0	2228	0	0	2635	8	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2370	0	0	2803	9	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1185	-	-	1406
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*155	0	0	-
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			2
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*155	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	-	-	0
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q (veh)	-	-	-	-	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	15	448	259	114
Future Vol, veh/h	0	0	15	448	259	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	18	527	305	134

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	935	372	439	0	-	0
Stage 1	372	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	297	678	1132	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	290	678	1132	-	-	-
Mov Cap-2 Maneuver	290	-	-	-	-	-
Stage 1	687	-	-	-	-	-
Stage 2	574	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1132	-	-	-	-
HCM Lane V/C Ratio	0.016	-	-	-	-
HCM Ctrl Dly (s/v)	8.2	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q (veh)	0	-	-	-	-

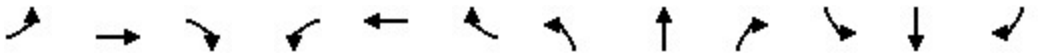
Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	125	41	38	339	208	46
Future Vol, veh/h	125	41	38	339	208	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	147	48	45	399	245	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	761	272	299	0	-	0
Stage 1	272	-	-	-	-	-
Stage 2	489	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	376	772	1274	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	359	772	1274	-	-	-
Mov Cap-2 Maneuver	359	-	-	-	-	-
Stage 1	743	-	-	-	-	-
Stage 2	621	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	21.2	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1274	-	414	-	-
HCM Lane V/C Ratio	0.035	-	0.472	-	-
HCM Ctrl Dly (s/v)	7.9	0	21.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q (veh)	0.1	-	2.5	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	2101	279	150	2437	81	285	110	153	111	63	76
Future Volume (veh/h)	94	2101	279	150	2437	81	285	110	153	111	63	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	99	2212	294	158	2565	85	300	116	161	117	66	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	1763	229	97	1983	878	343	130	180	178	348	287
Arrive On Green	0.05	0.55	0.55	0.05	0.55	0.55	0.05	0.18	0.18	0.05	0.18	0.18
Sat Flow, veh/h	1810	3210	417	1810	3610	1598	1810	708	982	1810	1900	1565
Grp Volume(v), veh/h	99	1221	1285	158	2565	85	300	0	277	117	66	80
Grp Sat Flow(s),veh/h/ln	1810	1805	1821	1810	1805	1598	1810	0	1690	1810	1900	1565
Q Serve(g_s), s	7.0	71.4	71.4	7.0	71.4	3.3	7.0	0.0	20.8	6.9	3.8	5.7
Cycle Q Clear(g_c), s	7.0	71.4	71.4	7.0	71.4	3.3	7.0	0.0	20.8	6.9	3.8	5.7
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	97	991	1000	97	1983	878	343	0	309	178	348	287
V/C Ratio(X)	1.02	1.23	1.28	1.62	1.29	0.10	0.88	0.00	0.90	0.66	0.19	0.28
Avail Cap(c_a), veh/h	97	991	1000	97	1983	878	343	0	390	178	438	361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.5	29.3	29.3	61.5	29.3	13.9	49.8	0.0	51.9	42.3	44.9	45.7
Incr Delay (d2), s/veh	95.6	113.0	135.7	321.6	136.0	0.2	20.8	0.0	19.3	6.8	0.3	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	66.9	73.8	12.2	73.2	4.5	18.1	0.0	11.7	4.6	2.4	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	157.1	142.3	165.0	383.1	165.3	14.2	70.6	0.0	71.2	49.1	45.2	46.2
LnGrp LOS	F	F	F	F	F	B	E		E	D	D	D
Approach Vol, veh/h		2605			2808			577			263	
Approach Delay, s/veh		154.1			173.0			70.9			47.3	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	78.6	11.0	28.4	12.0	78.6	11.0	28.4
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	7.0	65.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	9.0	73.4	9.0	7.7	9.0	73.4	8.9	22.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	0.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	150.4
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	12.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↰	↱
Traffic Vol, veh/h	119	1	29	6	0	26	14	314	9	19	378	62
Future Vol, veh/h	119	1	29	6	0	26	14	314	9	19	378	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	157	1	38	8	0	34	18	413	12	25	497	82

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1019	1008	497	1063	1084	419	579	0	0	425	0	0
Stage 1	547	547	-	455	455	-	-	-	-	-	-	-
Stage 2	472	461	-	608	629	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	217	242	577	203	219	638	1005	-	-	1145	-	-
Stage 1	525	521	-	589	572	-	-	-	-	-	-	-
Stage 2	576	569	-	486	478	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	197	229	577	181	207	638	1005	-	-	1145	-	-
Mov Cap-2 Maneuver	197	229	-	181	207	-	-	-	-	-	-	-
Stage 1	513	504	-	575	559	-	-	-	-	-	-	-
Stage 2	533	556	-	438	462	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	75.4	14.2	0.4	0.3
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1005	-	-	226	433	1145	-	-
HCM Lane V/C Ratio	0.018	-	-	0.867	0.097	0.022	-	-
HCM Ctrl Dly (s/v)	8.6	0	-	75.4	14.2	8.2	0	-
HCM Lane LOS	A	A	-	F	B	A	A	-
HCM 95th %tile Q (veh)	0.1	-	-	6.9	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	2474	0	0	2782	16	0	0	0	0	0	2
Future Vol, veh/h	0	2474	0	0	2782	16	0	0	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2689	0	0	3024	17	0	0	0	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1345	-	-	1521
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*50	0	0	-
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			2
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*50	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	0	
HCM LOS			A	-

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	-	-	-
HCM Lane LOS	A	-	-	-	-	-
HCM 95th %tile Q (veh)	-	-	-	-	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	11	337	347	66
Future Vol, veh/h	0	0	11	337	347	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	13	406	418	80

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	890	458	498	0	-	0
Stage 1	458	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	316	607	1076	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	311	607	1076	-	-	-
Mov Cap-2 Maneuver	311	-	-	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	659	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1076	-	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-	-
HCM Ctrl Dly (s/v)	8.4	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q (veh)	0	-	-	-	-

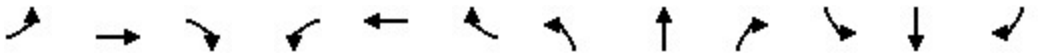
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	106	42	14	240	334	13
Future Vol, veh/h	106	42	14	240	334	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	133	53	18	300	418	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	762	426	434	0	-	0
Stage 1	426	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	376	633	1136	-	-	-
Stage 1	663	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	369	633	1136	-	-	-
Mov Cap-2 Maneuver	369	-	-	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	728	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	20.2	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1136	-	419	-	-
HCM Lane V/C Ratio	0.015	-	0.442	-	-
HCM Ctrl Dly (s/v)	8.2	0	20.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q (veh)	0	-	2.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	1943	373	298	2263	56	205	44	115	96	67	41
Future Volume (veh/h)	148	1943	373	298	2263	56	205	44	115	96	67	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	156	2045	393	314	2382	59	216	46	121	101	71	43
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	111	1735	321	111	2068	922	288	56	148	205	231	196
Arrive On Green	0.06	0.57	0.57	0.06	0.57	0.57	0.06	0.12	0.12	0.06	0.12	0.12
Sat Flow, veh/h	1810	3029	561	1810	3610	1610	1810	463	1218	1810	1900	1610
Grp Volume(v), veh/h	156	1188	1250	314	2382	59	216	0	167	101	71	43
Grp Sat Flow(s),veh/h/ln	1810	1805	1785	1810	1805	1610	1810	0	1681	1810	1900	1610
Q Serve(g_s), s	7.0	65.2	65.2	7.0	65.2	1.8	7.0	0.0	11.0	5.5	3.9	2.7
Cycle Q Clear(g_c), s	7.0	65.2	65.2	7.0	65.2	1.8	7.0	0.0	11.0	5.5	3.9	2.7
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	111	1034	1022	111	2068	922	288	0	204	205	231	196
V/C Ratio(X)	1.40	1.15	1.22	2.82	1.15	0.06	0.75	0.00	0.82	0.49	0.31	0.22
Avail Cap(c_a), veh/h	111	1034	1022	111	2068	922	288	0	443	205	501	424
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	24.3	24.3	53.4	24.3	10.8	45.4	0.0	48.8	40.8	45.6	45.1
Incr Delay (d2), s/veh	226.0	78.5	109.1	844.1	74.5	0.0	9.3	0.0	7.8	0.7	0.7	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	46.1	54.3	29.2	44.9	0.7	3.3	0.0	5.1	2.5	1.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	279.4	102.8	133.5	897.6	98.8	10.8	54.7	0.0	56.6	41.5	46.4	45.7
LnGrp LOS	F	F	F	F	F	B	D		E	D	D	D
Approach Vol, veh/h		2594			2755			383			215	
Approach Delay, s/veh		128.2			187.9			55.5			43.9	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	72.4	11.0	18.4	12.0	72.4	11.0	18.4
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	7.0	65.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	9.0	67.2	9.0	5.9	9.0	67.2	7.5	13.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	148.1
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	34	5	0	56	43	284	5	18	431	214
Future Vol, veh/h	0	0	34	5	0	56	43	284	5	18	431	214
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	88	95	88	95	88	88	88	88	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	36	6	0	64	45	323	6	20	490	225

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	978	949	490	1077	1171	326	715	0	0	329	0	0
Stage 1	530	530	-	416	416	-	-	-	-	-	-	-
Stage 2	448	419	-	661	755	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	232	262	582	198	194	720	895	-	-	1242	-	-
Stage 1	536	530	-	618	595	-	-	-	-	-	-	-
Stage 2	594	593	-	455	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	197	239	582	173	177	720	895	-	-	1242	-	-
Mov Cap-2 Maneuver	197	239	-	173	177	-	-	-	-	-	-	-
Stage 1	503	515	-	580	558	-	-	-	-	-	-	-
Stage 2	508	556	-	415	408	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.6	12.2	1.1	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	895	-	-	-	582	572	1242	-	-
HCM Lane V/C Ratio	0.051	-	-	-	0.061	0.121	0.016	-	-
HCM Ctrl Dly (s/v)	9.2	-	-	0	11.6	12.2	7.9	0	-
HCM Lane LOS	A	-	-	A	B	B	A	A	-
HCM 95th %tile Q (veh)	0.2	-	-	-	0.2	0.4	0.1	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	2299	0	0	2584	8	0	0	166	0	0	0
Future Vol, veh/h	0	2299	0	0	2584	8	0	0	166	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2446	0	0	2749	9	0	0	177	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1223	-	-	1379
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	~ 174	0	0	137
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	~ 174	-	-	137
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	126.3	0
HCM LOS			F	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	174	-	-	-	-	-
HCM Lane V/C Ratio	1.015	-	-	-	-	-
HCM Ctrl Dly (s/v)	126.3	-	-	-	-	0
HCM Lane LOS	F	-	-	-	-	A
HCM 95th %tile Q (veh)	8.3	-	-	-	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	332	463	0
Future Vol, veh/h	0	0	0	332	463	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	0	391	545	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	936	545	545	0	-	0
Stage 1	545	-	-	-	-	-
Stage 2	391	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	297	542	1034	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	297	542	1034	-	-	-
Mov Cap-2 Maneuver	297	-	-	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	688	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1034	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q (veh)	0	-	-	-	-

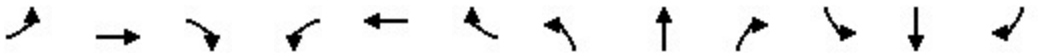
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	237	63	333	215	243
Future Vol, veh/h	0	237	63	333	215	243
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	279	74	392	253	286

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	936	396	539	0	-	0
Stage 1	396	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	297	658	1040	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	270	658	1040	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	622	-	-	-	-	-
Stage 2	588	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.4	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1040	-	658	-	-
HCM Lane V/C Ratio	0.071	-	0.424	-	-
HCM Ctrl Dly (s/v)	8.7	0	14.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q (veh)	0.2	-	2.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	2168	304	194	2437	81	168	65	90	111	64	76
Future Volume (veh/h)	222	2168	304	194	2437	81	168	65	90	111	64	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.97		0.96	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	234	2282	320	204	2565	85	177	68	95	117	67	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	112	1830	250	112	2073	918	282	83	116	205	227	184
Arrive On Green	0.06	0.57	0.57	0.06	0.57	0.57	0.06	0.12	0.12	0.06	0.12	0.12
Sat Flow, veh/h	1810	3187	436	1810	3610	1599	1810	698	975	1810	1900	1541
Grp Volume(v), veh/h	234	1268	1334	204	2565	85	177	0	163	117	67	80
Grp Sat Flow(s),veh/h/ln	1810	1805	1818	1810	1805	1599	1810	0	1673	1810	1900	1541
Q Serve(g_s), s	7.0	65.2	65.2	7.0	65.2	2.7	7.0	0.0	10.8	6.4	3.7	5.5
Cycle Q Clear(g_c), s	7.0	65.2	65.2	7.0	65.2	2.7	7.0	0.0	10.8	6.4	3.7	5.5
Prop In Lane	1.00		0.24	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	112	1036	1044	112	2073	918	282	0	200	205	227	184
V/C Ratio(X)	2.10	1.22	1.28	1.83	1.24	0.09	0.63	0.00	0.82	0.57	0.30	0.43
Avail Cap(c_a), veh/h	112	1036	1044	112	2073	918	282	0	442	205	502	407
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.3	24.2	24.2	53.3	24.2	10.9	43.6	0.0	48.8	41.3	45.6	46.4
Incr Delay (d2), s/veh	523.2	109.2	132.8	405.8	111.3	0.0	3.4	0.0	7.9	2.5	0.7	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.3	54.9	62.2	15.6	55.5	1.0	1.6	0.0	5.0	3.0	1.8	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	576.5	133.4	157.0	459.1	135.5	10.9	46.9	0.0	56.6	43.7	46.4	48.0
LnGrp LOS	F	F	F	F	F	B	D		E	D	D	D
Approach Vol, veh/h		2836			2854			340			264	
Approach Delay, s/veh		181.1			154.9			51.6			45.7	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	72.4	11.0	18.2	12.0	72.4	11.0	18.2
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	7.0	65.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	9.0	67.2	9.0	7.5	9.0	67.2	8.4	12.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	156.5
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	36	6	0	26	18	208	9	19	416	94
Future Vol, veh/h	0	0	36	6	0	26	18	208	9	19	416	94
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	76	95	76	95	76	76	76	76	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	38	8	0	34	19	274	12	25	547	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	932	921	547	984	1014	280	646	0	0	286	0	0
Stage 1	597	597	-	318	318	-	-	-	-	-	-	-
Stage 2	335	324	-	666	696	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	249	273	541	229	240	764	949	-	-	1288	-	-
Stage 1	493	495	-	698	657	-	-	-	-	-	-	-
Stage 2	683	653	-	452	446	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	228	258	541	204	227	764	949	-	-	1288	-	-
Mov Cap-2 Maneuver	228	258	-	204	227	-	-	-	-	-	-	-
Stage 1	481	480	-	681	641	-	-	-	-	-	-	-
Stage 2	637	637	-	407	432	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	12.2	12.8	0.6	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	949	-	-	-	541	504	1288	-	-
HCM Lane V/C Ratio	0.02	-	-	-	0.07	0.084	0.019	-	-
HCM Ctrl Dly (s/v)	8.9	-	-	0	12.2	12.8	7.9	0	-
HCM Lane LOS	A	-	-	A	B	B	A	A	-
HCM 95th %tile Q (veh)	0.1	-	-	-	0.2	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	2521	0	0	2747	16	0	0	172	0	0	2
Future Vol, veh/h	0	2521	0	0	2747	16	0	0	172	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2740	0	0	2986	17	0	0	187	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1370	-	-	1502
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	~ 139	0	0	113
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	~ 139	-	-	113
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	255.8	37.5
HCM LOS			F	E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	139	-	-	-	-	113
HCM Lane V/C Ratio	1.345	-	-	-	-	0.019
HCM Ctrl Dly (s/v)	255.8	-	-	-	-	37.5
HCM Lane LOS	F	-	-	-	-	E
HCM 95th %tile Q (veh)	11.9	-	-	-	-	0.1

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	235	458	0
Future Vol, veh/h	0	0	0	235	458	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	0	283	552	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	835	552	552	0	-	0
Stage 1	552	-	-	-	-	-
Stage 2	283	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	340	537	1028	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	340	537	1028	-	-	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	770	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1028	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q (veh)	0	-	-	-	-

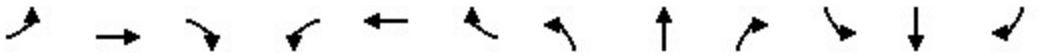
Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	218	30	233	341	117
Future Vol, veh/h	0	218	30	233	341	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	273	38	291	426	146

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	866	499	572	0	-	0
Stage 1	499	-	-	-	-	-
Stage 2	367	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	326	576	1011	-	-	-
Stage 1	614	-	-	-	-	-
Stage 2	705	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	311	576	1011	-	-	-
Mov Cap-2 Maneuver	311	-	-	-	-	-
Stage 1	586	-	-	-	-	-
Stage 2	705	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	16.7	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1011	-	576	-	-
HCM Lane V/C Ratio	0.037	-	0.473	-	-
HCM Ctrl Dly (s/v)	8.7	0	16.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q (veh)	0.1	-	2.5	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	1943	373	298	2263	56	205	44	115	96	67	41
Future Volume (veh/h)	148	1943	373	298	2263	56	205	44	115	96	67	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	156	2045	393	314	2382	59	216	46	121	101	71	43
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	953	3890	724	251	2517	62	428	114	300	341	438	372
Arrive On Green	0.17	0.29	0.29	0.14	0.48	0.48	0.06	0.25	0.25	0.05	0.23	0.23
Sat Flow, veh/h	1810	4376	815	1810	5206	128	1810	463	1218	1810	1900	1610
Grp Volume(v), veh/h	156	1602	836	314	1579	862	216	0	167	101	71	43
Grp Sat Flow(s),veh/h/ln	1810	1729	1733	1810	1729	1877	1810	0	1681	1810	1900	1610
Q Serve(g_s), s	9.5	50.2	52.7	18.0	56.4	57.0	8.0	0.0	10.8	5.6	3.9	2.3
Cycle Q Clear(g_c), s	9.5	50.2	52.7	18.0	56.4	57.0	8.0	0.0	10.8	5.6	3.9	2.3
Prop In Lane	1.00		0.47	1.00		0.07	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	953	3073	1540	251	1672	907	428	0	414	341	438	372
V/C Ratio(X)	0.16	0.52	0.54	1.25	0.94	0.95	0.51	0.00	0.40	0.30	0.16	0.12
Avail Cap(c_a), veh/h	953	3073	1540	251	1681	912	428	0	414	341	438	372
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	22.9	23.7	56.0	31.9	32.1	38.5	0.0	41.0	36.3	40.0	26.6
Incr Delay (d2), s/veh	0.0	0.6	1.4	142.4	12.3	20.0	0.4	0.0	2.9	0.2	0.8	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	23.3	24.8	17.9	24.5	28.8	2.0	0.0	4.9	2.5	1.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.4	23.5	25.1	198.4	44.2	52.0	38.9	0.0	43.9	36.5	40.7	27.2
LnGrp LOS	C	C	C	F	D	D	D		D	D	D	C
Approach Vol, veh/h		2594			2755			383			215	
Approach Delay, s/veh		24.4			64.2			41.1			36.0	
Approach LOS		C			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	124.6	12.0	34.6	77.5	70.0	10.0	36.6
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	7.2	* 7.2	4.0	4.6
Max Green Setting (Gmax), s	18.0	53.2	8.0	30.0	8.0	* 63	6.0	32.0
Max Q Clear Time (g_c+I1), s	20.0	54.7	10.0	5.9	11.5	59.0	7.6	12.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	3.8	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	44.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	34	5	0	56	43	284	5	18	431	214
Future Vol, veh/h	0	0	34	5	0	56	43	284	5	18	431	214
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	88	95	88	95	88	88	88	88	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	36	6	0	64	45	323	6	20	490	225

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	978	949	490	1077	1171	326	715	0	0	329	0	0
Stage 1	530	530	-	416	416	-	-	-	-	-	-	-
Stage 2	448	419	-	661	755	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	232	262	582	198	194	720	895	-	-	1242	-	-
Stage 1	536	530	-	618	595	-	-	-	-	-	-	-
Stage 2	594	593	-	455	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	197	239	582	173	177	720	895	-	-	1242	-	-
Mov Cap-2 Maneuver	197	239	-	173	177	-	-	-	-	-	-	-
Stage 1	503	515	-	580	558	-	-	-	-	-	-	-
Stage 2	508	556	-	415	408	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	11.6	12.2	1.1	0.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	895	-	-	-	582	572	1242	-	-
HCM Lane V/C Ratio	0.051	-	-	-	0.061	0.121	0.016	-	-
HCM Ctrl Dly (s/v)	9.2	-	-	0	11.6	12.2	7.9	0	-
HCM Lane LOS	A	-	-	A	B	B	A	A	-
HCM 95th %tile Q (veh)	0.2	-	-	-	0.2	0.4	0.1	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2299	0	0	2584	8	0	0	166	0	0	0
Future Vol, veh/h	0	2299	0	0	2584	8	0	0	166	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2446	0	0	2749	9	0	0	177	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1223	-	-	1379
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*394	0	0	*313
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*394	-	-	*313
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	21.4	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	394	-	-	-	-	-
HCM Lane V/C Ratio	0.448	-	-	-	-	-
HCM Ctrl Dly (s/v)	21.4	-	-	-	-	0
HCM Lane LOS	C	-	-	-	-	A
HCM 95th %tile Q (veh)	2.3	-	-	-	-	-

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	332	463	0
Future Vol, veh/h	0	0	0	332	463	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	0	391	545	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	936	545	545	0	-	0
Stage 1	545	-	-	-	-	-
Stage 2	391	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	297	542	1034	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	297	542	1034	-	-	-
Mov Cap-2 Maneuver	297	-	-	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	688	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1034	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q (veh)	0	-	-	-	-

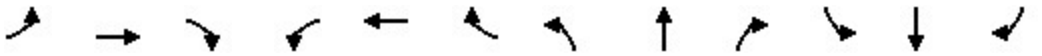
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	237	63	333	215	243
Future Vol, veh/h	0	237	63	333	215	243
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	279	74	392	253	286

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	936	396	539	0	-	0
Stage 1	396	-	-	-	-	-
Stage 2	540	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	297	658	1040	-	-	-
Stage 1	684	-	-	-	-	-
Stage 2	588	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	270	658	1040	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	622	-	-	-	-	-
Stage 2	588	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.4	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1040	-	658	-	-
HCM Lane V/C Ratio	0.071	-	0.424	-	-
HCM Ctrl Dly (s/v)	8.7	0	14.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q (veh)	0.2	-	2.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	2168	304	194	2437	81	168	65	90	111	64	76
Future Volume (veh/h)	222	2168	304	194	2437	81	168	65	90	111	64	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	0.98		0.98	0.98		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	234	2282	320	204	2565	85	177	68	95	117	67	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1161	4819	657	181	2507	82	376	152	213	314	438	363
Arrive On Green	0.21	0.34	0.34	0.10	0.49	0.49	0.04	0.22	0.22	0.05	0.23	0.23
Sat Flow, veh/h	1810	4613	629	1810	5156	170	1810	707	987	1810	1900	1575
Grp Volume(v), veh/h	234	1694	908	204	1714	936	177	0	163	117	67	80
Grp Sat Flow(s),veh/h/ln	1810	1729	1784	1810	1729	1868	1810	0	1694	1810	1900	1575
Q Serve(g_s), s	13.8	0.0	0.0	13.0	63.2	63.2	5.0	0.0	10.9	6.6	3.7	4.3
Cycle Q Clear(g_c), s	13.8	0.0	0.0	13.0	63.2	63.2	5.0	0.0	10.9	6.6	3.7	4.3
Prop In Lane	1.00		0.35	1.00		0.09	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	1161	3612	1864	181	1681	908	376	0	365	314	438	363
V/C Ratio(X)	0.20	0.47	0.49	1.13	1.02	1.03	0.47	0.00	0.45	0.37	0.15	0.22
Avail Cap(c_a), veh/h	1161	3612	1864	181	1681	908	376	0	365	314	438	363
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	0.0	0.0	58.5	33.4	33.4	41.5	0.0	44.3	37.6	39.9	25.5
Incr Delay (d2), s/veh	0.0	0.4	0.9	105.3	27.0	38.1	0.3	0.0	3.9	0.3	0.7	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.2	0.5	11.1	30.5	35.7	2.5	0.0	5.0	3.0	1.8	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.9	0.4	0.9	163.8	60.4	71.5	41.8	0.0	48.2	37.9	40.6	26.9
LnGrp LOS	C	A	A	F	F	F	D		D	D	D	C
Approach Vol, veh/h		2836			2854			340			264	
Approach Delay, s/veh		2.5			71.4			44.9			35.3	
Approach LOS		A			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	145.2	9.0	34.6	92.8	70.4	11.0	32.6
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	7.2	* 7.2	4.0	4.6
Max Green Setting (Gmax), s	13.0	61.2	5.0	30.0	11.0	* 63	7.0	28.0
Max Q Clear Time (g_c+I1), s	15.0	2.0	7.0	6.3	15.8	65.2	8.6	12.9
Green Ext Time (p_c), s	0.0	36.8	0.0	0.6	0.0	0.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay, s/veh	37.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	36	6	0	26	18	208	9	19	416	94
Future Vol, veh/h	0	0	36	6	0	26	18	208	9	19	416	94
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	76	95	76	95	76	76	76	76	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	38	8	0	34	19	274	12	25	547	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	932	921	547	984	1014	280	646	0	0	286	0	0
Stage 1	597	597	-	318	318	-	-	-	-	-	-	-
Stage 2	335	324	-	666	696	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	249	273	541	229	240	764	949	-	-	1288	-	-
Stage 1	493	495	-	698	657	-	-	-	-	-	-	-
Stage 2	683	653	-	452	446	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	228	258	541	204	227	764	949	-	-	1288	-	-
Mov Cap-2 Maneuver	228	258	-	204	227	-	-	-	-	-	-	-
Stage 1	481	480	-	681	641	-	-	-	-	-	-	-
Stage 2	637	637	-	407	432	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	12.2	12.8	0.6	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	949	-	-	-	541	504	1288	-	-
HCM Lane V/C Ratio	0.02	-	-	-	0.07	0.084	0.019	-	-
HCM Ctrl Dly (s/v)	8.9	-	-	0	12.2	12.8	7.9	0	-
HCM Lane LOS	A	-	-	A	B	B	A	A	-
HCM 95th %tile Q (veh)	0.1	-	-	-	0.2	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑				↗			↗
Traffic Vol, veh/h	0	2521	0	0	2747	16	0	0	172	0	0	2
Future Vol, veh/h	0	2521	0	0	2747	16	0	0	172	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2740	0	0	2986	17	0	0	187	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1370	-	-	1502
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*333	0	0	*272
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*333	-	-	*272
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	0	28.8	18.3
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	333	-	-	-	-	272
HCM Lane V/C Ratio	0.561	-	-	-	-	0.008
HCM Ctrl Dly (s/v)	28.8	-	-	-	-	18.3
HCM Lane LOS	D	-	-	-	-	C
HCM 95th %tile Q (veh)	3.3	-	-	-	-	0

Notes	
~: Volume exceeds capacity	$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	235	458	0
Future Vol, veh/h	0	0	0	235	458	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	0	283	552	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	835	552	552	0	-	0
Stage 1	552	-	-	-	-	-
Stage 2	283	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	340	537	1028	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	770	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	340	537	1028	-	-	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	770	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1028	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q (veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	218	30	233	341	117
Future Vol, veh/h	0	218	30	233	341	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	273	38	291	426	146

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	866	499	572	0	-	0
Stage 1	499	-	-	-	-	-
Stage 2	367	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	326	576	1011	-	-	-
Stage 1	614	-	-	-	-	-
Stage 2	705	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	311	576	1011	-	-	-
Mov Cap-2 Maneuver	311	-	-	-	-	-
Stage 1	586	-	-	-	-	-
Stage 2	705	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	16.7	1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1011	-	576	-	-
HCM Lane V/C Ratio	0.037	-	0.473	-	-
HCM Ctrl Dly (s/v)	8.7	0	16.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q (veh)	0.1	-	2.5	-	-

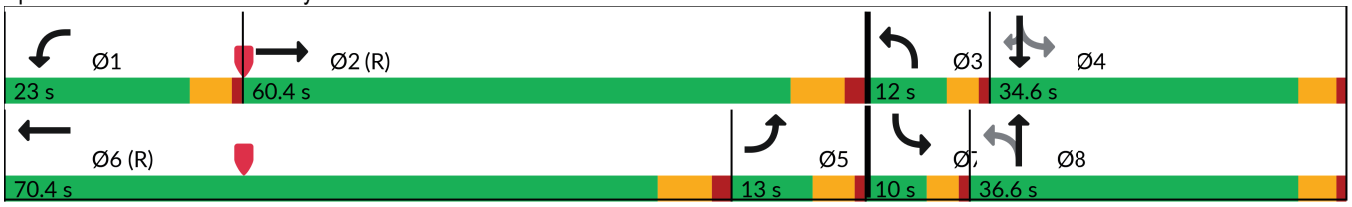
APPENDIX C

TRAFFIC SIGNAL TIMING WORKSHEETS

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	148	1943	298	2263	205	44	96	67	41
Future Volume (vph)	148	1943	298	2263	205	44	96	67	41
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2	1	6	3	8	7	4	
Permitted Phases					8		4		4
Detector Phase	5	2	1	6	3	8	7	4	4
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	25.2	10.0	30.2	9.0	9.6	9.0	34.6	34.6
Total Split (s)	13.0	60.4	23.0	70.4	12.0	36.6	10.0	34.6	34.6
Total Split (%)	10.0%	46.5%	17.7%	54.2%	9.2%	28.2%	7.7%	26.6%	26.6%
Yellow Time (s)	4.0	5.2	4.0	5.2	3.0	3.6	3.0	3.6	3.6
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.2	5.0	7.2	4.0	4.6	4.0	4.6	4.6
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	Max	None	Max	Max
Act Effct Green (s)	8.0	53.2	18.0	63.2	40.6	32.0	36.6	30.0	30.0
Actuated g/C Ratio	0.06	0.41	0.14	0.49	0.31	0.25	0.28	0.23	0.23
v/c Ratio	1.41	1.17	1.26	0.97	0.50	0.34	0.30	0.16	0.09
Control Delay (s/veh)	252.7	109.1	190.6	45.0	39.2	19.4	34.6	41.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	252.7	109.1	190.6	45.0	39.2	19.4	34.6	41.2	0.3
LOS	F	F	F	D	D	B	C	D	A
Approach Delay (s/veh)		117.7		61.6		30.6		29.9	
Approach LOS		F		E		C		C	

Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.41	
Intersection Signal Delay (s/veh): 82.9	Intersection LOS: F
Intersection Capacity Utilization 95.2%	ICU Level of Service F
Analysis Period (min) 15	

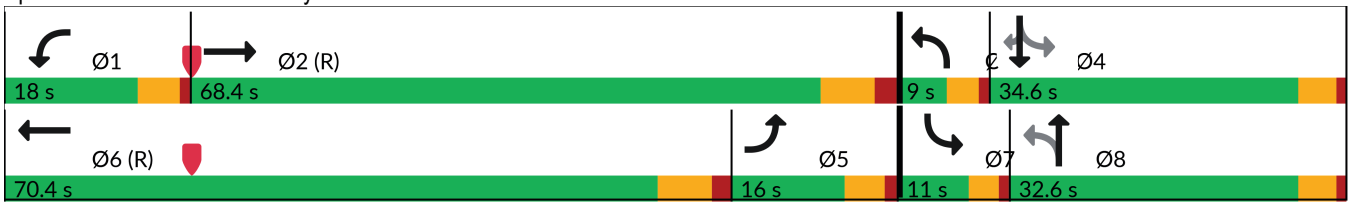
Splits and Phases: 6: Dauchy Ave & Van Buren Blvd



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	222	2168	194	2437	168	65	111	64	76
Future Volume (vph)	222	2168	194	2437	168	65	111	64	76
Turn Type	Prot	NA	Prot	NA	pm+pt	NA	pm+pt	NA	Perm
Protected Phases	5	2	1	6	3	8	7	4	
Permitted Phases					8		4		4
Detector Phase	5	2	1	6	3	8	7	4	4
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	25.2	10.0	30.2	9.0	9.6	11.0	34.6	34.6
Total Split (s)	16.0	68.4	18.0	70.4	9.0	32.6	11.0	34.6	34.6
Total Split (%)	12.3%	52.6%	13.8%	54.2%	6.9%	25.1%	8.5%	26.6%	26.6%
Yellow Time (s)	4.0	5.2	4.0	5.2	3.0	3.6	3.0	3.6	3.6
All-Red Time (s)	1.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	7.2	5.0	7.2	4.0	4.6	4.0	4.6	4.6
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	C-Min	None	Max	None	Max	Max
Act Effct Green (s)	11.0	61.2	13.0	63.2	33.7	28.1	37.5	30.0	30.0
Actuated g/C Ratio	0.08	0.47	0.10	0.49	0.26	0.22	0.29	0.23	0.23
v/c Ratio	1.54	1.08	1.13	1.06	0.49	0.39	0.37	0.15	0.16
Control Delay (s/veh)	296.4	70.4	159.0	68.1	43.3	33.4	37.8	41.1	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	296.4	70.4	159.0	68.1	43.3	33.4	37.8	41.1	0.7
LOS	F	E	F	E	D	C	D	D	A
Approach Delay (s/veh)		89.1		74.6		38.6		27.4	
Approach LOS		F		E		D		C	

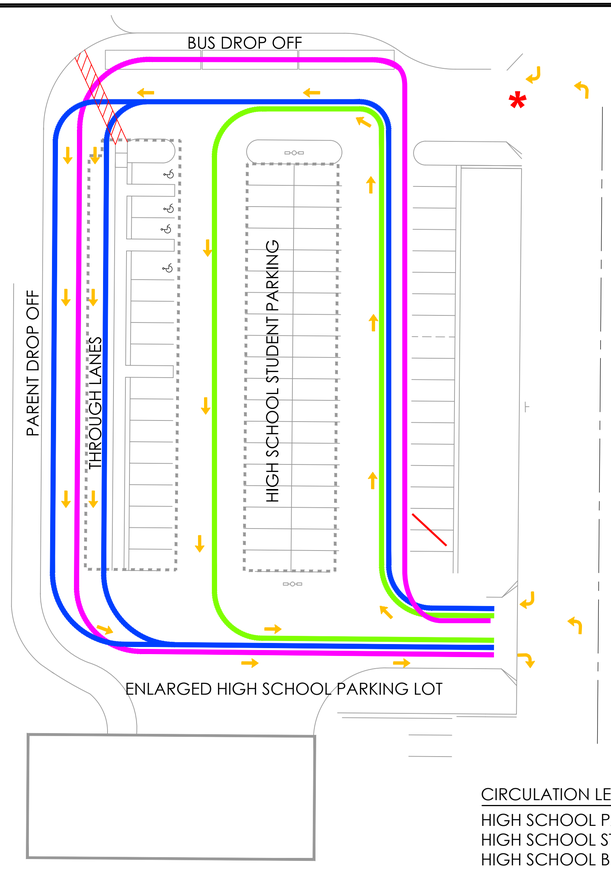
Intersection Summary	
Cycle Length: 130	
Actuated Cycle Length: 130	
Offset: 18 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Green	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.54	
Intersection Signal Delay (s/veh): 77.2	Intersection LOS: E
Intersection Capacity Utilization 112.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 6: Dauchy Ave & Van Buren Blvd



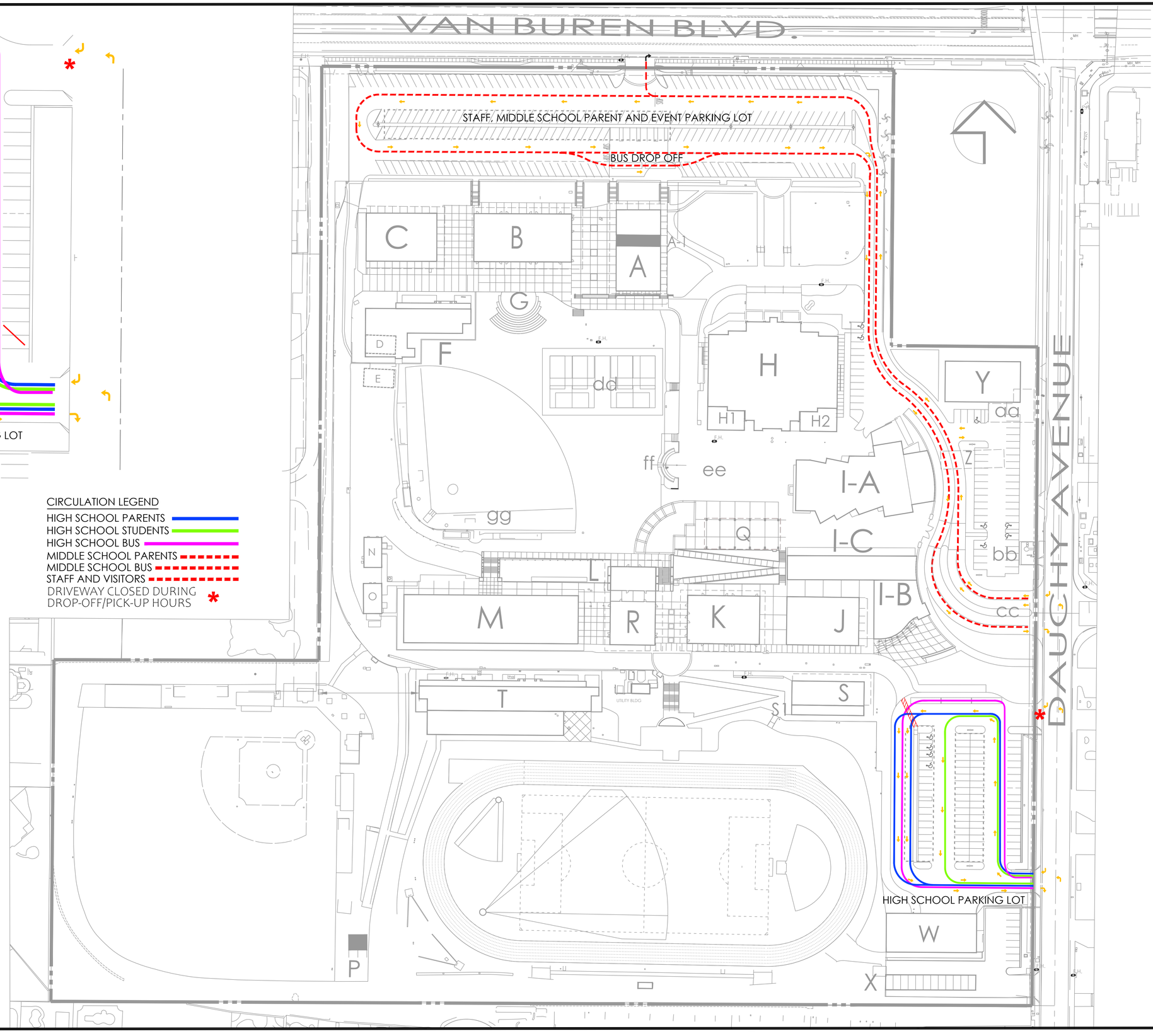
APPENDIX D

CONCEPTUAL PARKING LOT CIRCULATION PLAN



CIRCULATION LEGEND

- HIGH SCHOOL PARENTS
- HIGH SCHOOL STUDENTS
- HIGH SCHOOL BUS
- MIDDLE SCHOOL PARENTS
- MIDDLE SCHOOL BUS
- STAFF AND VISITORS
- DRIVEWAY CLOSED DURING DROP-OFF/PICK-UP HOURS *



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LICENSED ARCHITECT JERRY CHARLES BROWN C-4786 APPROVAL DATE APRIL 30, 2025 STATE OF CALIFORNIA

WOODCREST CHRISTIAN HIGH SCHOOL
MASTER PLAN
18401 VAN BUREN BLVD. RIVERSIDE, CA. 92508

JOB	
DATE	08/15/23
REV. 1	10-09-23
2	02-16-24
SCALE:	1" = 60'-0"

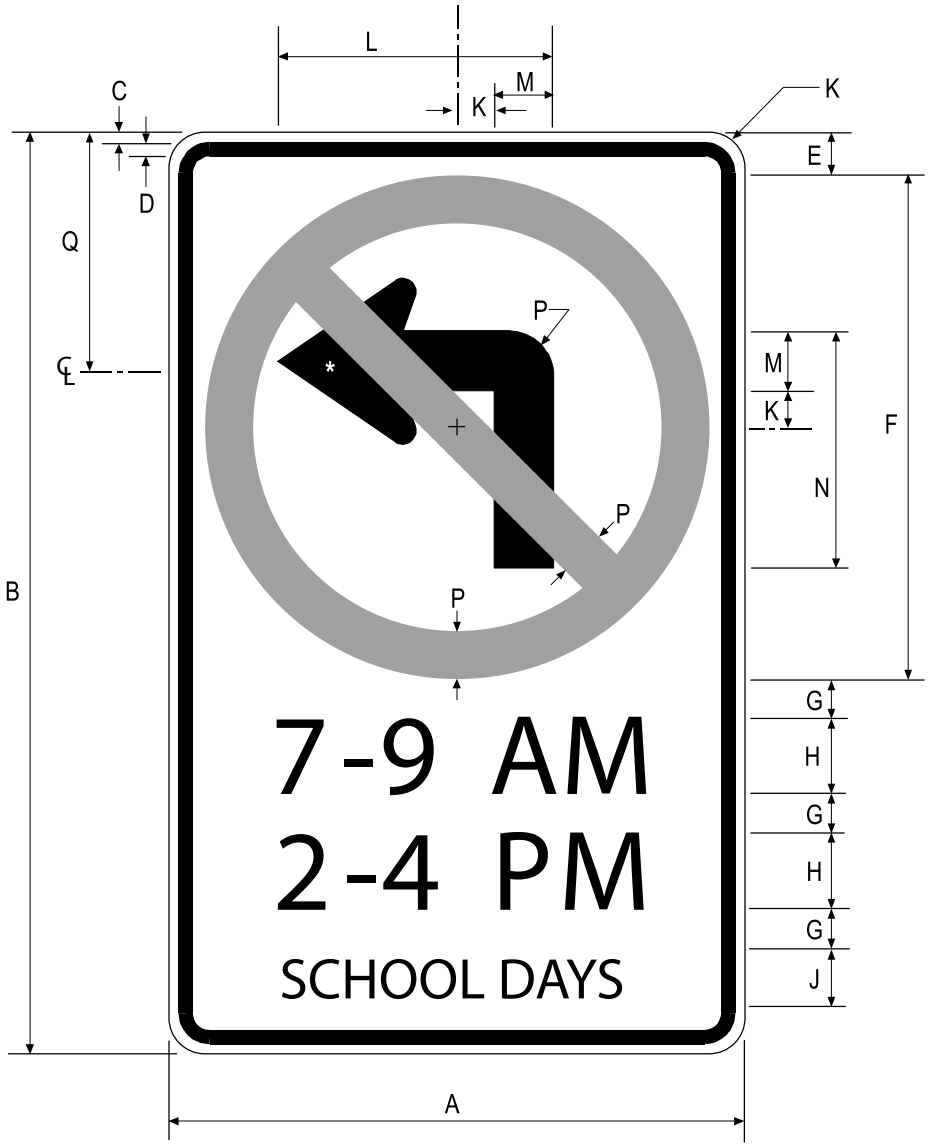
PARKING CIRCULATION

CUP-2.2

DRAWING	#
OF	#

APPENDIX E

CONCEPTUAL ON-STREET PARKING RESTRICTION SIGN



* For arrowhead dimensions, see page 6-2 of the Standard Highway Signs Book.

R33A (CA) - Modified

ENGLISH UNITS

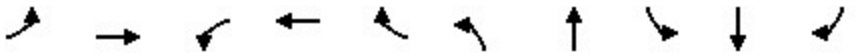
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
30	48	.5	.75	2.25	26.25	2	4D	3D	1.875	14.5	3.125	13.125	2.5	15.375

COLORS: CIRCLE & DIAGONAL - RED (RETROREFLECTIVE)
SYMBOL, BORDER & LEGEND - BLACK
BACKGROUND - WHITE (RETROREFLECTIVE)

9/26/06

APPENDIX F

INTERSECTION QUEUING WORKSHEETS

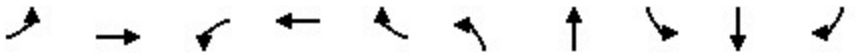


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	156	2438	314	2382	59	216	167	101	71	43
v/c Ratio	1.37	1.17	2.75	1.12	0.06	0.88	0.68	0.55	0.39	0.17
Control Delay (s/veh)	252.6	105.9	836.4	84.1	1.1	77.0	35.5	49.6	52.6	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	252.6	105.9	836.4	84.1	1.1	77.0	35.5	49.6	52.6	1.4
Queue Length 50th (ft)	~146	~1085	~379	~1022	0	141	49	61	48	0
Queue Length 95th (ft)	#296	#1335	#586	#1268	9	#257	120	110	93	0
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	114	2083	114	2131	990	245	529	186	516	519
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.37	1.17	2.75	1.12	0.06	0.88	0.32	0.54	0.14	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	234	2602	204	2565	85	177	163	117	67	80
v/c Ratio	2.09	1.27	1.82	1.23	0.09	0.66	0.68	0.59	0.31	0.29
Control Delay (s/veh)	549.6	149.8	436.1	132.3	2.7	52.2	47.1	50.4	49.3	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	549.6	149.8	436.1	132.3	2.7	52.2	47.1	50.4	49.3	6.1
Queue Length 50th (ft)	~269	~1260	~224	~1210	0	112	79	72	45	0
Queue Length 95th (ft)	#451	#1513	#395	#1460	22	179	150	124	89	23
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	112	2050	112	2087	932	268	498	198	505	496
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	2.09	1.27	1.82	1.23	0.09	0.66	0.33	0.59	0.13	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	156	2438	314	2441	216	167	101	71	43
v/c Ratio	1.41	1.17	1.26	0.97	0.50	0.34	0.30	0.16	0.09
Control Delay (s/veh)	252.7	109.1	190.6	45.0	39.2	19.4	34.6	41.2	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	252.7	109.1	190.6	45.0	39.2	19.4	34.6	41.2	0.3
Queue Length 50th (ft)	~178	~891	~331	715	139	47	60	48	0
Queue Length 95th (ft)	m#238	#974	#517	#849	211	111	105	91	0
Internal Link Dist (ft)		483		2566		678		609	
Turn Bay Length (ft)	305		420		200		75		55
Base Capacity (vph)	111	2086	249	2513	428	489	341	438	504
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.41	1.17	1.26	0.97	0.50	0.34	0.30	0.16	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	234	2602	204	2650	177	163	117	67	80
v/c Ratio	1.54	1.08	1.13	1.06	0.49	0.39	0.37	0.15	0.16
Control Delay (s/veh)	296.4	70.4	159.0	68.1	43.3	33.4	37.8	41.1	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	296.4	70.4	159.0	68.1	43.3	33.4	37.8	41.1	0.7
Queue Length 50th (ft)	~280	~896	~199	~895	115	82	73	45	0
Queue Length 95th (ft)	m#326	#977	#359	#984	181	152	125	87	0
Internal Link Dist (ft)		483		2566		678		609	
Turn Bay Length (ft)	305		420		200		75		55
Base Capacity (vph)	152	2403	180	2508	362	413	317	438	491
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.54	1.08	1.13	1.06	0.49	0.39	0.37	0.15	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX G

WOODCREST CHRISTIAN SCHOOL EXPANSION TRAFFIC OPERATIONAL ANALYSIS

TRAFFIC OPERATIONAL ANALYSIS

WOODCREST CHRISTIAN SCHOOL EXPANSION

CITY OF RIVERSIDE

RIVERSIDE COUNTY, CALIFORNIA

This Traffic Operational Analysis has been prepared under the supervision of
Ambarish Mukherjee, P.E.



LSA

March 2024

TRAFFIC OPERATIONAL ANALYSIS

WOODCREST CHRISTIAN SCHOOL EXPANSION

CITY OF RIVERSIDE

RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

Vital Patel, City Traffic Engineer
City of Riverside
3900 Main Street
Riverside, California 92501

Prepared by:

LSA
1500 Iowa Avenue, Suite 200
Riverside, California 92507
(951) 781-9310

Project No. WCS2101

March 2024

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1.0 EXECUTIVE SUMMARY

The proposed Woodcrest Christian School Expansion Project will include expansion of the existing school's enrollment by 280 students. This expansion will include the addition of administrative offices, classroom buildings, amphitheater, food service facilities, lockers/snack bar, a chapel arts building, weight room, and storage rooms.

The project site is located south of Van Buren Boulevard between Little Court and Dauchy Avenue in the City of Riverside (City). The existing project parcel is considered as Public Facilities/Institutional (PF) in the General Plan Land Use and Public Facilities (PF-SP) Orangecrest Specific Plan Overlay as the Zoning. The adjacent parcel (APN 266020059) located northeast of the current Woodcrest Christian School site will be acquired as part of this project. The adjacent parcel is considered as Mixed Use-Village (MU-V) in the General Plan Land Use and Mixed Use – Village – 2 Story Building – 15 feet Building Setback (MU-V-S-2-X-15-SP) Orangecrest Specific Plan Overlay as the Zoning. This project will only require a Conditional Use Permit (CUP) but not require a General Plan Amendment (GPA) nor Zone Change (ZC). The project is anticipated to be completed by year 2029.

Access to the project site is currently provided via five driveways, one on Van Buren Boulevard and four driveways on Dauchy Avenue. Following is a description of all driveways providing access to the site:

- Driveway on Van Buren Boulevard:
    - Project Driveway 1: This is a gated right-in/right-out (RIRO) driveway. Project traffic would not be typically allowed to use this driveway.
- Driveways on Dauchy Avenue:
    - Project Driveway 2: This is a full-access driveway.
    - Project Driveway 3: This is an entrance only driveway.
    - Project Driveway 4: This is a full-access driveway.
    - Project Driveway 5: This is a restricted access driveway for authorized vehicles. Project traffic would not be allowed to use this driveway.

The project is forecast to generate 814 daily trips, with 303 trips in the a.m. peak hour, and 209 trips occurring during the afternoon peak hour.

The study area for the project was based on the criteria defined in the City of Riverside Public Works Department *Traffic Impact Analysis (TIA) Guidelines for Vehicle Miles Traveled (VMT) and Level of Service (LOS) Assessment* (dated July 2020). Based on the City's TIA Guidelines and discussions with City staff during the scoping agreement process, the study area includes 23 intersections and 3 roadway segments.

Traffic conditions were examined for the weekday daily, a.m., and afternoon peak hour conditions under the following scenarios:

- Existing Conditions;
- Opening Year (2029) without Project Conditions;
- Opening Year (2029) with Project Conditions;
- Cumulative (2045) without Project Conditions; and
- Cumulative (2045) with Project Conditions.

1.1 EXISTING CONDITIONS SUMMARY

Based on the criteria as discussed in the "Level of Service Procedures" section of this report, under existing conditions, the following intersections operates at a deficient LOS:

5. Ridgeway Avenue/Van Buren Boulevard (afternoon peak hour only); and
12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only).

All other intersections operate at a satisfactory LOS under existing conditions. For roadway segments, all three study roadway segments operate at a deficient LOS.

1.2 PROJECT TRAFFIC

The trip generation for the purposed use was developed based on trip generation survey counts collected from the project driveways. Counts were collected over on a Tuesday and Thursday, and the highest a.m. peak hour, afternoon peak hour, and daily counts over the two days were used for developing the trip generation for the existing on-site use. Trip generation rates were developed using empirical trip generation data collected. Using the collected trip generation data, the rate was applied to the future number of students anticipated to be enrolled after the expansion. The expansion of the school is anticipated to generate 303 trips in the a.m. peak hour, 209 trips in the p.m. peak hour, and 814 daily trips.

1.3 PROJECT DESIGN FEATURES

The following project design features have been proposed as part of the school's expansion to minimize the potential effects of project traffic:

- Realignment of Project Driveway 2 to remove existing offset with Ardenwood Lane.
- Addition of a receiving lane at Project Driveway 2 to improve ingress maneuvers.
- Restripe existing lane geometry for the eastbound direction at Project Driveway 2 from a left through right to a through left.
- Addition of a right turn lane for the eastbound direction at Project Driveway 2.
- Relocation of bus parking at rear parking lot to extend vehicle storage for student drop-off and pick-up.

1.4 OPENING YEAR (2029) CONDITIONS SUMMARY

Based on the criteria as discussed in the "Level of Service Procedure" section of this report, under opening year without project conditions, the following intersections are forecast to operate at a deficient LOS:

1. Washington Street/Van Buren Boulevard (afternoon peak hour only);
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
4. Little Court/Van Buren Boulevard (afternoon peak hour only);
5. Ridgeway Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
6. Dauchy Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane (both a.m. and afternoon peak hours);
8. Dauchy Avenue – Taft Street/Krameria Avenue (both a.m. and afternoon peak hours);
11. Trautwein Road/Mission Grove Parkway (both a.m. and afternoon peak hours);
12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only);
14. Trautwein Road/Orange Terrace Parkway (a.m. peak hour only);
16. Trautwein Road/Van Buren Boulevard (afternoon peak hour only);
18. Barton Street/Van Buren Boulevard (both a.m. and afternoon peak hours); and
19. Project Driveway 1/Van Buren Boulevard (afternoon peak hour).

All other intersections are forecast to operate at a satisfactory LOS under opening year without project conditions.

Under opening year with project conditions, the following intersections are forecast to operate at a deficient LOS:

1. Washington Street/Van Buren Boulevard (afternoon peak hour only);
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
4. Little Court/Van Buren Boulevard (afternoon peak hour only);
5. Ridgeway Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
6. Dauchy Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);

7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane (both a.m. and afternoon peak hours);
8. Dauchy Avenue – Taft Street/Krameria Avenue (both a.m. and afternoon peak hours);
11. Trautwein Road/Mission Grove Parkway (both a.m. and afternoon peak hours);
12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only);
14. Trautwein Road/Orange Terrace Parkway (a.m. peak hour only);
16. Trautwein Road/Van Buren Boulevard (afternoon peak hour only);
18. Barton Street/Van Buren Boulevard (both a.m. and afternoon peak hours);
19. Project Driveway 1/Van Buren Boulevard (afternoon peak hour); and
21. Dauchy Avenue/Project Driveway 4 (a.m. peak hour).

All other intersections are forecast to operate at a satisfactory LOS under opening year with project conditions.

1.5 CUMULATIVE (2045) CONDITIONS SUMMARY

Based on the criteria as discussed in the "Level of Service Procedure" section of this report, under cumulative without project conditions, the following intersections are forecast to operate at a deficient LOS:

1. Washington Street/Van Buren Boulevard (both a.m. and afternoon peak hours);
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
4. Little Court/Van Buren Boulevard (afternoon peak hour only);
5. Ridgeway Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
6. Dauchy Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane (both a.m. and afternoon peak hours);
8. Dauchy Avenue – Taft Street/Krameria Avenue (both a.m. and afternoon peak hours);
11. Trautwein Road/Mission Grove Parkway (both a.m. and afternoon peak hours);
12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only);
14. Trautwein Road/Orange Terrace Parkway (a.m. peak hour only);
16. Trautwein Road/Van Buren Boulevard (afternoon peak hour only);
18. Barton Street/Van Buren Boulevard (both a.m. and afternoon peak hours); and

19. Project Driveway 1/Van Buren Boulevard (both a.m. and afternoon peak hours).

All other intersections are forecast to operate at a satisfactory LOS under cumulative without project conditions.

Under cumulative with project conditions, the following intersections are forecast to operate at a deficient LOS:

1. Washington Street/Van Buren Boulevard (both a.m. and afternoon peak hours);
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
4. Little Court/Van Buren Boulevard (both a.m. and afternoon peak hours);
5. Ridgeway Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
6. Dauchy Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane (both a.m. and afternoon peak hours);
8. Dauchy Avenue – Taft Street/Krameria Avenue (both a.m. and afternoon peak hours);
11. Trautwein Road/Mission Grove Parkway (both a.m. and afternoon peak hours);
12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only);
14. Trautwein Road/Orange Terrace Parkway (a.m. peak hour only);
16. Trautwein Road/Van Buren Boulevard (afternoon peak hour only);
18. Barton Street/Van Buren Boulevard (both a.m. and afternoon peak hours);
19. Project Driveway 1/Van Buren Boulevard (both a.m. and afternoon peak hours); and
21. Dauchy Avenue/Project Driveway 4 (both a.m. and afternoon peak hours).

All other intersections are forecast to operate at a satisfactory LOS under cumulative with project conditions.

1.6 TRAFFIC SIGNAL WARRANT ANALYSIS

A peak hour signal warrant analysis was conducted at Dauchy Avenue/Project Driveway 2 – Ardenwood Lane and Dauchy Avenue – Taft Street/Krameria Avenue which are forecast to operate at a deficient LOS under the Opening Year (2029) and Cumulative (2045) conditions. The signal warrant analysis for these intersections were conducted for Opening Year (2029) without Project, Opening Year (2029) with Project, Cumulative (2045) without Project, and Cumulative (2045) with Project conditions. The signal warrant analysis was conducted using the peak hour warrants from the *California Manual on Uniform Traffic Control Devices* (CAMUTCD).

The intersection of Dauchy Avenue/Project Driveway 2 – Ardenwood Lane meets the signal warrant for the a.m. peak hour under the Opening Year (2029) with Project scenario. The intersection of Dauchy Avenue – Taft Street/Krameria Avenue meets the signal warrant for the afternoon peak hour under the Opening Year (2029) with project scenario.

The intersection of Dauchy Avenue/Project Driveway 2 – Ardenwood Lane meets the signal warrant for the a.m. peak hour under the Cumulative (2045) with Project scenario. The intersection of Dauchy Avenue – Taft Street/Krameria Avenue meets the signal warrant for both a.m. and afternoon peak hours under the Cumulative (2045) without and with project scenario.

1.7 SITE ACCESS ANALYSIS

A site access analysis was conducted to analyze potential effects of project driveway designs on accessibility to the project site. Project design features include the realignment of Project Driveway 2 to remove the offset with Ardenwood Lane, the addition of a receiving lane at Project Driveway 2, the addition of a right turn lane for the eastbound direction at Project Driveway 2, and the relocation of bus parking at the rear parking lot, which will improve vehicular access. These changes proposed on the project site is not anticipated to reduce the accessibility of bicyclists, pedestrians, and transit users accessing the site.

1.8 SPEED SURVEY ANALYSIS

A speed survey analysis was conducted to identify changes in vehicle speed due to potential changes in traffic patterns. Speed surveys were conducted along Dauchy Avenue between Hawksbury Drive and Krameria Avenue to determine the average and 85th percentile speed within the project frontage. The posted speed limit on Dauchy Avenue is 25 miles per hour (mph). Speed surveys found that the average speed is 29 mph in the northbound direction and 29 mph in the southbound direction. The 85th percentile speed observed for the northbound direction is 35 mph and 34 mph in the southbound direction. It is estimated that approximately eleven percent of the project trips will be using this roadway segment. Most of these trips will be local trips generated from the nearby residences. As such, it is anticipated that there will be nominal cut-through project trips within the project neighborhood, which is not expected to affect the existing traffic speed pattern for the project neighborhood.

1.9 ACTIVE TRANSPORTATION AND PUBLIC TRANSIT ANALYSIS

An active transportation and public transit analysis was conducted to examine if the project has a conflict with adopted plans, policies, or programs regarding active transportation or public transit facilities, or otherwise decreases the performance or safety of such facilities.

Based on the City's PACT, a Class II bike lane exists along Trautwein Road, along Cole Avenue between Van Buren Boulevard and Krameria Avenue, along Grove Community Drive, along Orange Terrace Parkway, and along Van Buren Boulevard. A Class I & II Bike Lane/Path exists on John F Kennedy Drive between Dauchy Avenue and Trautwein Road. Proposed Class II buffered bike lanes are planned to be constructed on Wood Road and Mission Grove Parkway South in the immediate future. The project is not anticipated to decrease the accessibility of cyclists to the project. As such, the project will not decrease the performance or safety of any existing proposed bicycle facility.

The City's PACT has identified a tier 1 spot improvement has been identified within the study area is the intersection of Wood Road and Van Buren Boulevard. Pedestrian improvements at this intersection as presented in the City's PACT can include but are not limited to the following: curb extensions, right turn on red restrictions, crosswalks and curb camps, high visibility crosswalks, etc. While the intersection of Dauchy Avenue and Van Buren Boulevard has not been identified for spot improvements under the City's PACT, the following improvements has been recommended by City staff to improve pedestrian safety:

- Continental crosswalks;
- Audible pedestrian push buttons; and
- Pedestrian crossing restriction signs for the east leg of the intersection.

These improvements will improve accessibility and safety for pedestrians and students due to additional visibility provided. As such, the proposed project will improve the performance and safety of the existing and/or proposed pedestrian facility.

RTA local bus routes 20, 22, and 27 operate within the study area. At present, there are no additional service changes proposed in RTA's transit network as a result of the project. As such, the project will not decrease the performance or safety of any existing or proposed public transit facility.

As part of the expansion, the school is planning to provide circulation improvements within the project site. Circulation improvements include bus loading zones and bus pullouts in the main parking lot and rear parking lot. These bus loading zones and bus pullout will reduce student exposure to parking lot traffic and minimize conflict within the parking lot.

1.10 QUEUEING ANLAYSIS

A queueing analysis was conducted at intersections/driveways to identify potential queuing deficiencies. The queuing analysis showed that some of the movements are exceeding the existing available turn-pocket storage length under opening year with project scenarios. The project related queues that exceed the available storage lengths are as follows:

6. Dauchy Avenue/Van Buren Boulevard: Northbound left (both a.m. and p.m. peak hour);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane: Northbound left-through-right (p.m. peak hour only).
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane: Westbound left-through-right (a.m. peak hour only).

The queueing analysis showed that some of the movements are exceeding the existing available turn-pocket storage length under cumulative with project scenarios. The project related queues that exceed the available storage lengths are as follows:

6. Dauchy Avenue/Van Buren Boulevard: Northbound left (both a.m. and p.m. peak hour);

7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane: Northbound left-through-right (p.m. peak hour only);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane: Westbound left-through-right (a.m. peak hour only).
20. Dauchy Avenue/Project Driveway 3: Northbound through-left (both a.m. and p.m. peak hour).

Based on the results of the queuing analysis, improvements have been recommended at study intersections where the project related movements are forecast to contribute to queues exceeding existing storage lanes and where storage length extensions are feasible. Recommended improvements include the extension of storage lanes for the northbound left turn movement at Dauchy Avenue/Van Buren Boulevard. However, queues are still forecast to exceed the recommended storage lane extension and further extension is not feasible due to conflicts with upstream intersections and/or private driveways. It should be noted that queues for the northbound left turn movement at Dauchy Avenue/Van Buren Boulevard is forecast to further increase after implementation of improvements due to the prioritization of reducing traffic delay on the eastbound/westbound traffic along Van Buren Boulevard.

Queues for the northbound left-through-right movement at Dauchy Avenue/Project Driveway 2 – Ardenwood Lane is forecast to also increase after improvements due to the recommended improvement of installation of a traffic signal. However, the traffic signal is anticipated to improve intersection delay and reduce queuing along Ardenwood Lane. The addition of a two-way-left-turn-lane (TWLTL) between the intersection of Dauchy Avenue/Project Driveway 3 and Dauchy Avenue/Project Driveway 4 is anticipated to reduce queues caused for northbound left turn movement at Project Driveway 3 and Project Driveway 4 by separating northbound left turn and through movements.

1.11 CIRCULATION IMPROVEMENTS AND FUNDING SOURCES

1.11.1 Opening Year (2029) Conditions

Circulation improvements have been proposed to minimize the circulation deficiencies. Table 1-A summarizes the recommended improvements for study intersections and funding mechanism under Opening Year conditions. With the implementation of improvements recommended in Section 13.1, the following intersections are forecast to continue to operate at a deficient LOS:

11. Trautwein Road/Mission Grove Parkway (both a.m. and afternoon peak hours);
12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only);
14. Trautwein Road/Orange Terrace Parkway (a.m. peak hour only);
16. Trautwein Road/Van Buren Boulevard (afternoon peak hour only); and
18. Barton Street/Van Buren Boulevard (both a.m. and afternoon peak hours).

All other previously deficient intersections are forecast to operate at a satisfactory LOS after improvements. It should be noted that while the intersection of Trautwein Road/Van Buren Boulevard and Barton Street/Van Buren Boulevard are still forecast to operate at a deficient LOS even after implementation of recommended improvements, the delay for Trautwein Road/Van Buren Boulevard and Barton Street/Van Buren Boulevard (afternoon peak hour only) is reduced to a value less or similar than the delay under opening year without project conditions.

Table 1-B summarizes the recommended improvements for study roadway segments and funding mechanism under Opening Year conditions. All three roadway segments are forecast to operate at a deficient LOS under opening year without and with project conditions. Based on the City's TIA Guidelines, the project is forecast to add to the operational deficiencies at two segments on Dauchy Avenue, as it increases the volume-to-capacity (V/C) ratio by more than 5 percent. However, improvements are not possible for the two segments on Dauchy Avenue due to right-of-way constraints. The roadway segment on Van Buren Boulevard is proposed to be widened to six lanes as part of intersection operations improvement. However, even after implementation of the improvement, the segment on Van Buren Boulevard is forecast to operate at a deficient LOS under Opening Year conditions.

1.11.2 Cumulative (2045) Conditions

Previously referenced Table 1-A summarizes the recommended improvements for study intersections and funding mechanism under Cumulative conditions. With implementation of improvements recommended in Section 11.1, the following intersections are forecast to continue to operate at a deficient LOS:

11. Trautwein Road/Mission Grove Parkway (both a.m. and afternoon peak hours);
12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only);
14. Trautwein Road/Orange Terrace Parkway (a.m. peak hour only);
16. Trautwein Road/Van Buren Boulevard (afternoon peak hour only); and
18. Barton Street/Van Buren Boulevard (both a.m. and afternoon peak hours).

All other previously deficient intersections are forecast to operate at a satisfactory LOS after improvements. It should be noted that while the intersection of Trautwein Road/Van Buren Boulevard and Barton Street/Van Buren Boulevard are still forecast to operate at a deficient LOS even after implementation of recommended improvements, the delay for Trautwein Road/Van Buren Boulevard and Barton Street/Van Buren Boulevard (afternoon peak hour only) is reduced to a value less or similar than the delay under cumulative without project conditions.

Previously referenced Table 1-B summarizes the recommended improvements for study roadway segments and funding mechanism under Cumulative conditions. All three roadway segments are forecast to operate at a deficient LOS under Cumulative without and with project conditions. Based on the City's TIA Guidelines, the project is forecast to add to the operational deficiencies at two segments on Dauchy Avenue, as it increases the volume-to-capacity (V/C) ratio by more than 5 percent. However, improvements are not possible for the two segments on Dauchy Avenue due to

right-of-way constraints. The roadway segment on Van Buren Boulevard is proposed to be widened to six lanes as part intersection operations improvement. However, even after the implementation of the improvement the segment on Van Buren Boulevard is forecast to still operate at a deficient LOS under Cumulative conditions.

1.12 DROP-OFF/PICK-UP CIRCULATION

As part of the expansion, the school is planning to provide circulation improvements within the project site. Circulation improvements include bus loading zones and bus pullouts in the main parking lot and rear parking lot. These bus loading zones and bus pullout will minimize conflict within the parking lot and improve internal circulation. With the proposed circulation improvements, no internal queueing issues nor conflicts are anticipated, as the storage for vehicle drop-off and pick-up provides adequate storage room.

1.13 LIST OF CHAPTER 1.0 TABLES

- Table 1-A: Recommended Improvements for Intersections and Funding Mechanism
- Table 1-B: Recommended Improvements for Roadway Segments and Funding Mechanism

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Table 1-A - Recommended Improvements for Intersections and Funding Mechanism

Intersection	Opening Year (2029) with Project Improvements	Cumulative (2045) with Project Improvements	Improvements Covered by TUMF	Improvements In Coordination With City and County	Improvements Covered by Fair Share (County Only)
1 . Washington Street/Van Buren Boulevard	Add EBT. Restripe WBR to WBTR.	No additonal improvements required.	Add EBT.		Restripe WBR to WBTR.
2 . Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard	Add EBT. Add WBT.	No additonal improvements required.	Add EBT. Add WBT.		
4 . Little Court/Van Buren Boulevard	Restripe EBR to EBTR.	No additonal improvements required.	Restripe EBR to EBTR.		
5 . Ridgeway Avenue/Van Buren Boulevard	Restrict SBL movement during peak hours. Add EBT. Add WBT.	No additonal improvements required.	Add EBT. Add WBT.	Restrict SBL movement during peak hours.	
6 . Dauchy Avenue/Van Buren Boulevard	Add EBT. Restripe WBR to WBTR. Extend NBL storage to 200'.	No additonal improvements required.	Add EBT.	Restripe WBR to WBTR. Extend NBL storage to 200'. Add contential corsswalks, audible pedestrian push buttons, and pedestrian restriction signs.	
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane	Add signal.	No additonal improvements required.		Add signal. (Project Responsibility)	
8 . Dauchy Avenue - Taft Street/Krameria Avenue	Add signal.	No additonal improvements required.		Add signal.	
11 . Trautwein Road/Mission Grove Parkway	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.			
12 . Trautwein Road/John F Kennedy Drive	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.			
14 . Trautwein Road/Orange Terrace Parkway	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.			
16 . Trautwein Road/Van Buren Boulevard	Restripe EBR to EBTR. No additional improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.	No additional improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.		Restripe EBR to EBTR.	
18 . Barton Street/Van Buren Boulevard	Add EBT. Add WBL.	No additional improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.	Add EBT.	Add WBL.	
19 . Project Driveway 1/Van Buren Boulevard	Add EBT and WBT.	No additonal improvements required.	Add EBT and WBT.		
20 . Dauchy Avenue/Project Driveway 3	Add TWLTL on Dauchy Ave.			Add TWLTL on Dauchy Ave. (Project Responsibility)	
21 . Dauchy Avenue/Project Driveway 4	Add TWLTL on Dauchy Ave.			Add TWLTL on Dauchy Ave. (Project Responsibility)	

Notes:

EB = Eastbound; WB = Westbound; L = Left; T = Through; R = Right

TWLTL = Two-Way-Left-Turn-Lane

TUMF refers to the Transportation Uniform Mitigation Fee Program.

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Table 1-B - Recommended Improvements for Roadway Segments and Funding Mechanism

Roadway	#	Segment	Opening Year (2029) with Project Improvements	Cumulative (2045) with Project Improvements	Improvements Covered by TUMF	Improvements In Coordination With City and County	Improvements Covered by Fair Share (County Only)
Van Buren Boulevard	1	Between Little Court and Dauchy Avenue	Widen to 6 lanes. No additional improvements feasible due to right-of-way constraints.	No additional improvements feasible due to right-of-way constraints.	Widen to 6 lanes.		
Dauchy Avenue	2	Between Van Buren Boulevard and Ardenwood Lane	No improvements feasible due to right-of-way constraints.	No improvements feasible due to right-of-way constraints.			
	3	Between Ardenwood Lane and Hawksbury Drive	Add TWLTL between Project Driveway 3 and Project Driveway 4 (Project Responsibility). Parking restriction between Project Driveway 2 and Project Driveway 5 (Project Responsibility).No additonal improvements feasible due to right-of-way constraints.	No additional improvements feasible due to right-of-way constraints.		Add TWLTL between Project Driveway 3 and Project Driveway 4 (Project Responsibility). Parking restriction between Project Driveway 2 and Project Driveway 5 (Project Responsibility).	

Notes:

TUMF refers to the Transportation Uniform Mitigation Fee Program.

TWLTL = Two-Way-Left-Turn-Lane

2.0 INTRODUCTION

The Traffic Operational Analysis (TOA) has been prepared for the proposed Woodcrest Christian School Expansion Project (project) to be located south of Van Buren Boulevard between Little Court and Dauchy Avenue in the City of Riverside (City). Figure 2-1 illustrates the regional and project location. (Figures and tables are located at the end of each chapter.)

This report is intended to satisfy the requirements established by the City of Riverside Public Works Department *Traffic Impact Analysis (TIA) Guidelines for Vehicle Miles Traveled (VMT) and Levels of Service Assessments* (dated July 2020), and the requirements for the disclosure of potential impacts and mitigation measures pursuant to the California Environmental Quality Act (CEQA). The scope of work for this TOA, including trip generation, trip distribution, study area, and analysis methodologies, was reviewed by City staff and adjacent jurisdictions via the Scoping Agreement process. Comments provided by city staff has been incorporated as part of preparation of this analysis. A copy of the Scoping Agreement is included in Appendix A.

This study examines traffic operations in the vicinity of the proposed project under the following five scenarios:

- Existing Conditions;
- Opening Year (2029) without Project Conditions;
- Opening Year (2029) with Project Conditions;
- Cumulative (2045) without Project Conditions; and
- Cumulative (2045) with Project Conditions.

Traffic conditions were examined for the weekday daily, a.m., and afternoon peak hour conditions. The a.m. peak hour is defined as the one hour of highest traffic volumes occurring between 7:00 and 9:00 a.m. The afternoon peak hour is the one hour of highest traffic volumes occurring between 2:00 p.m. and 4:00 p.m. Roadway segments were analyzed using daily volume counts and comparisons were made to the daily service volume standards provided in the City's TIA Guidelines.

2.1 PROJECT DESCRIPTION

The proposed Woodcrest Christian School Expansion Project will include expansion of the existing school's enrollment by 280 students. This project will include the expansion of administrative offices by 840 square feet (sf) (Building A), a 11,147 sf office/classrooms building (Building F), a 300 seat amphitheater (Building G), two 1,400 sf H.S. classrooms (Building H1 and H2), a 14,980 sf performing arts building (Building I-A), a 10,223 sf H.S. classrooms/administrative offices (Building I-B), a 5,605 sf grub hub/student center (Building I-C), a 12,426 sf H.S classrooms/offices/storage (Building T), a 7,220 sf sports club/weight room/snack bar (Building T), and multiple storage buildings/storage barn (Building P, S1, X, and Y).

The existing project parcel is considered as Public Facilities/Institutional (PF) in the General Plan Land Use and Public Facilities (PF-SP) Orangecrest Specific Plan Overlay as the Zoning. The adjacent

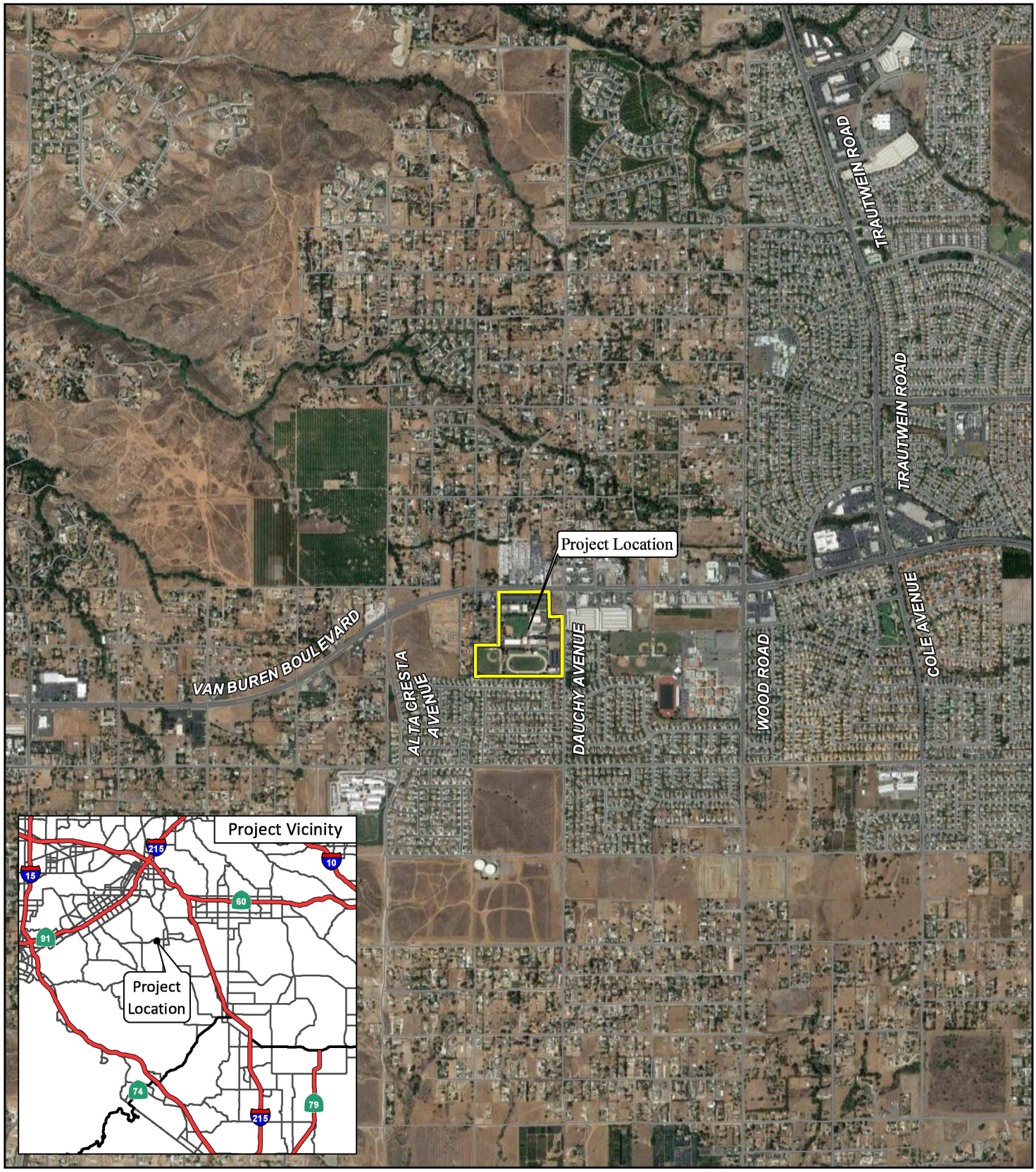
parcel (APN 266020059) located northeast of the current Woodcrest Christian School site will be acquired as part of this project. The adjacent parcel is considered as Mixed Use-Village (MU-V) in the General Plan Land Use and Mixed Use – Village – 2 Story Building – 15 feet Building Setback (MU-V-S-2-X-15-SP) Orangecrest Specific Plan Overlay as the Zoning. This project will only require a Conditional Use Permit (CUP) but not require a General Plan Amendment (GPA) nor Zone Change (ZC). The project is anticipated to be completed by year 2029. Figure 2-2 illustrates the conceptual site plan for the proposed project.

As shown in Figure 2-2, the project can be accessed through three of the five existing driveways, one of which will be reconstructed as a project design feature. Project Driveway 1 will remain gated and Project Driveway 5 is a restricted access driveway for authorized vehicles. Following is a description of all driveways providing access to the site:

- Driveway on Van Buren Boulevard:
    - Project Driveway 1: This is a gated right-in/right-out (RIRO) driveway. Project traffic would not be typically allowed to use this driveway.
- Driveways on Dauchy Avenue:
    - Project Driveway 2: This is a full-access driveway.
    - Project Driveway 3: This is an entrance only driveway.
    - Project Driveway 4: This is a full-access driveway.
    - Project Driveway 5: This is a restricted access driveway for authorized vehicles. Project traffic would not be allowed to use this driveway.

2.2 LIST OF CHAPTER 2.0 FIGURES

- Figure 2-1: Regional and Project Location
- Figure 2-2: Conceptual Site Plan



LSA

LEGEND

Project Site

FIGURE 2-1

N

0 1000 2000

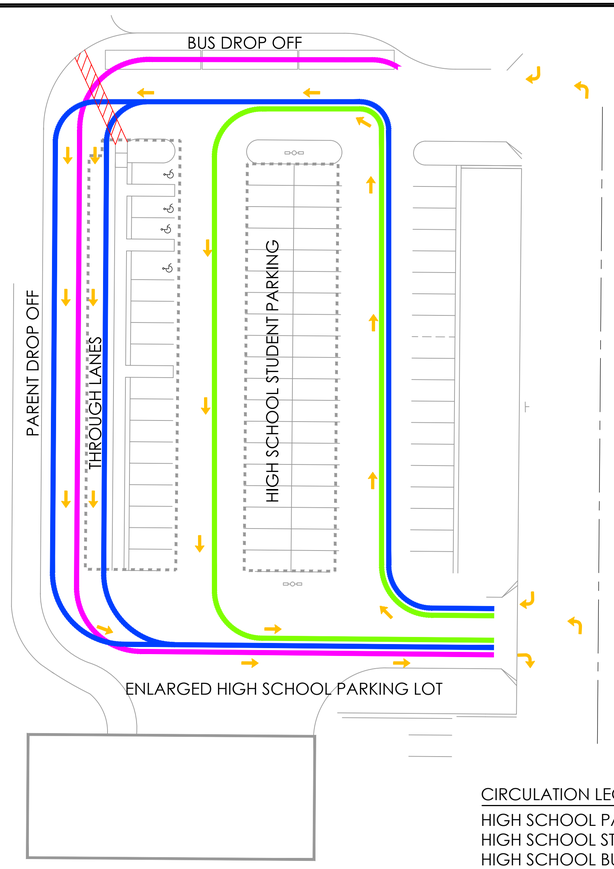
FEET

Woodcrest Christian School Expansion
Traffic Operational Analysis

Regional and Project Location

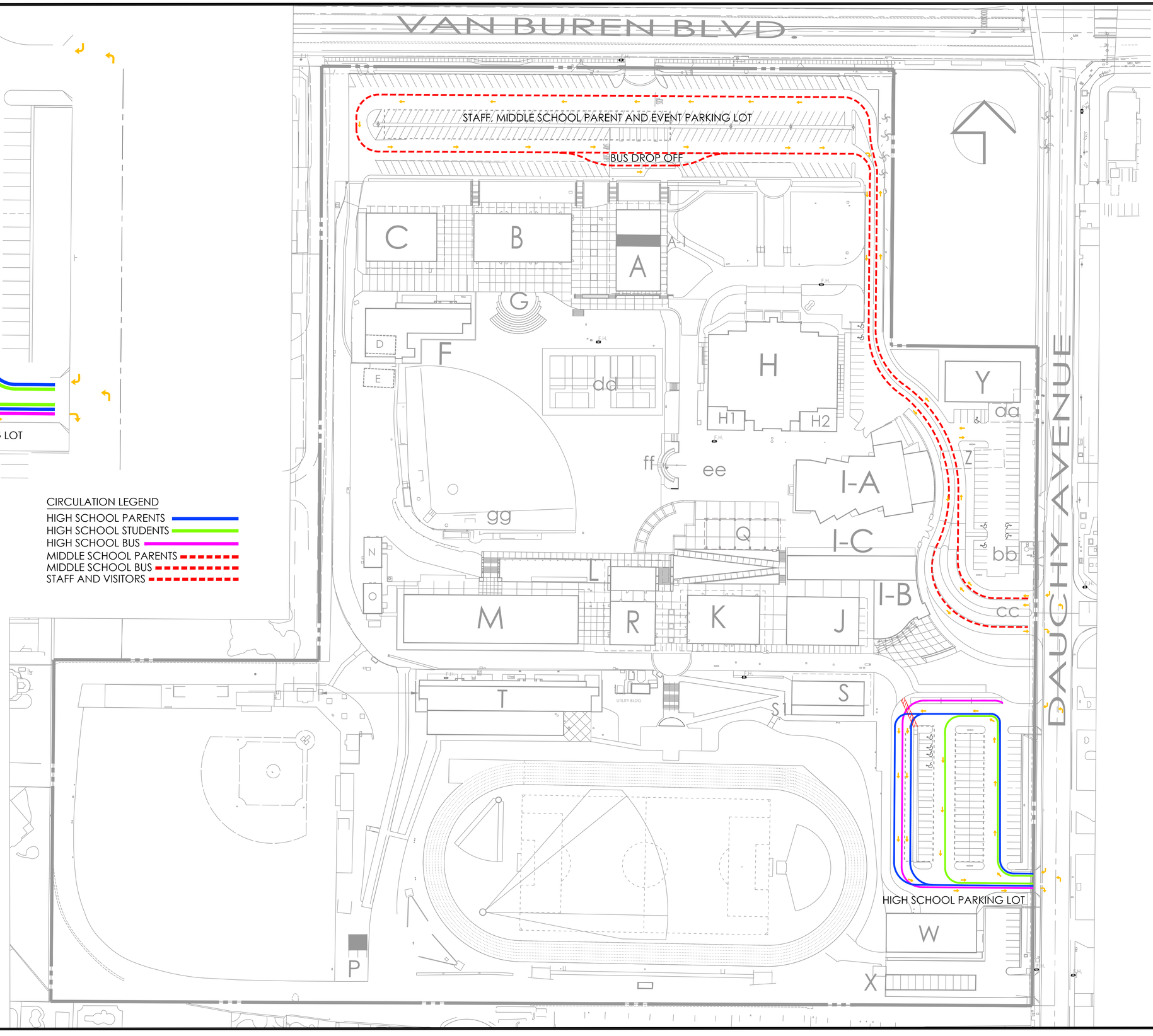
SOURCE: ESRI Streetmap, 2021; Google Earth, 2021.

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\GIS\Reports\fig2-1_Reg_ProjLoc.mxd (8/15/2022)



CIRCULATION LEGEND

- HIGH SCHOOL PARENTS
- HIGH SCHOOL STUDENTS
- HIGH SCHOOL BUS
- MIDDLE SCHOOL PARENTS
- MIDDLE SCHOOL BUS
- STAFF AND VISITORS



CHARLES BROWN ARCHITECT
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LICENSED ARCHITECT JERRY CHARLES BROWN C-4786 APPROVAL DATE APRIL 30, 2025 STATE OF CALIFORNIA

WOODCREST CHRISTIAN HIGH SCHOOL
MASTER PLAN
18401 VAN BUREN BLVD. RIVERSIDE, CA. 92508

JOB	
DATE	08/15/23
REV. 1	10-09-23
2	02-16-24
SCALE:	1" = 60'-0"

PARKING CIRCULATION

CUP-2.2

DRAWING	#
OF	#

3.0 ANALYSIS METHODOLOGY AND CRITERIA

3.1 LEVEL OF SERVICE DEFINITIONS

LOS can be characterized for the whole intersection, by each intersection approach, and by each lane group. Control delay alone is used to characterize LOS for the entire intersection. Control delay quantifies the increase in travel time due to the traffic signal control, and is a surrogate measure of driver discomfort and fuel consumption.

A complete description of the meaning of LOS can be found in the Transportation Research Board Special Report 209, *Highway Capacity Manual* (HCM). The HCM establishes LOS A through F for intersections. A description of LOS for signalized and unsignalized intersections is summarized in Table 3-A. A description of LOS for roadway segments is summarized in Table 3-B.

Table 3-C shows the LOS criteria for unsignalized and signalized intersections. Table 3-D summarizes the LOS criteria used to evaluate roadway segments based on the daily capacity for each functional classification pursuant to the City's TIA Guidelines. The daily traffic volumes represent the total vehicles (both directions) traveling on a roadway segment within 24 hours.

For all study area intersections, the *Highway Capacity Manual 6th Edition* (HCM 6) analysis methodologies were used to determine intersection LOS. Intersection LOS was calculated using the Synchro 11 software, which uses the HCM 6 methodologies.

3.2 LEVEL OF SERVICE PROCEDURES AND CRITERIA

Study intersections and roadway segments analyzed in this report are under the jurisdiction of the City of Riverside and Riverside County. The City uses LOS D as its minimum level of service criterion for intersections of Collector or higher classification streets within the project vicinity. For all other intersections, the City uses LOS C as its minimum level of service criterion. The County uses LOS D as its minimum level of service criterion for intersections within the project vicinity (Woodcrest/Lake Matthews community development area).

For projects in which the proposed uses or intensities are above those contained in the General Plan, operational improvements are required at study intersections within the City when the addition of project trips causes either the intersection peak hour LOS to degrade from acceptable (LOS A through D) to unacceptable levels (LOS E or F) or the peak hour delay to increase from "without project" to "with project" as follows:

- LOS A/B by 10.0 seconds;
- LOS C by 8.0 seconds;
- LOS D by 5.0 seconds;
- LOS E by 2.0 seconds; and
- LOS F by 1.0 second.

Table 3-A: Intersection Level of Service Definitions

LOS	Description
A	Traffic operations with a control delay of 10 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
B	Traffic operations with control delay between 10 seconds per vehicle and 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
C	Traffic operations with control delay between 20 and 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of the insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	Traffic operations with control delay between 35 and 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
E	Traffic operations with control delay between 55 and 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
F	Traffic operations with control delay exceeding 80 seconds per vehicle or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: Highway Capacity Manual (6th Edition)

Table 3-B: Roadway Segment Level of Service Definitions

LOS	Description
A	Describes primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control Delay at the boundary intersection is minimal. The travel speed exceeds 80% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
B	Describes reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted, and control delay at the boundary is not significant. The travel speed is between 67% and 80% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
C	Describes stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersection may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
D	Indicates a less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
E	Characterized by unstable operation and significant delay. Such operations may be due to some combination of adverse progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed, and the volume-to-capacity ratio is no greater than 1.0.
F	Characterized by flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is between 30% or less of the base free-flow speed, and the volume-to-capacity ratio is greater than 1.0.

Source: *Highway Capacity Manual* (6th Edition)

Table 3-C: Level of Service Criteria for Unsignalized and Signalized Intersections

Level of Service	Unsignalized Intersection Average Delay per Vehicle (sec.)	Signalized Intersection Average Delay per Vehicle (sec.)
A	≤ 10	≤ 10
B	> 10 and ≤ 15	> 10 and ≤ 20
C	> 15 and ≤ 25	> 20 and ≤ 35
D	> 25 and ≤ 35	> 35 and ≤ 55
E	> 35 and ≤ 50	> 55 and ≤ 80
F	> 50	> 80

Source: *Highway Capacity Manual* (6th Edition)

Table 3-D: Roadway Segment Capacity and Levels of Service

Type of Roadway	Level of Service		
	C	D	E
Local	2,500–2,799	2,800–3,099	3,100+
Collector (66’ or 80’)	9,900–11,199	11,200–12,499	12,500+
Arterial[1]	14,400–16,199	16,200–17,999	18,000+
Arterial (88’)	16,800–19,399	19,400–21,199	22,000+
Arterial (100’)	26,200–29,599	29,600–32,999	33,000+
Arterial (120’)	38,700–44,099	44,100–49,499	49,500+
Arterial (144’)	50,600–57,799	57,800–64,999	65,000+

Source: City of Riverside Public Works Department *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment*, July 2020.

[1] Two-lane roadways designated as future arterials that conform to arterial design standards for vertical and horizontal alignments are analyzed as arterials.

As stated in the City’s TIA Guidelines, operational improvements at roadway segments are required when either the addition of project-related trips causes the roadway segment LOS to degrade from acceptable (LOS A through D) to unacceptable levels (LOS E or F) or when the roadway segment is operating at an unacceptable LOS in the no project scenario and the addition of project trips causes the volume-to-capacity (V/C) ratio to increase by more than 5 percent.

3.3 LIST OF CHAPTER 3.0 TABLES

- Table 3-A: Intersection Level of Service Definitions
- Table 3-B: Roadway Segment Level of Service Definitions
- Table 3-C: Level of Service Criteria for Unsignalized and Signalized Intersections
- Table 3-D: Roadway Segment Capacity and Levels of Service

4.0 EXISTING CONDITIONS

4.1 STUDY AREA

Based on the City's TIA Guidelines, the TOA is required to analyze all intersections of Collector or higher classification streets where the project would contribute 50 or more peak hour trips, along with intersections identified by City staff. Study intersections and roadway segments considered for the analysis were finalized during the TOA Scoping Agreement process, based on discussion with City staff.

4.1.1 Study Intersections

Per the Scoping Agreement (Appendix A), intersections analyzed in this study and their jurisdictions are as follows:

1. Washington Street/Van Buren Boulevard (County of Riverside);
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard (County of Riverside/City of Riverside);
3. Van Buren Village Driveway/Van Buren Boulevard (County of Riverside/City of Riverside);
4. Little Court/Van Buren Boulevard (County of Riverside/City of Riverside);
5. Ridgeway Avenue/Van Buren Boulevard (County of Riverside/City of Riverside);
6. Dauchy Avenue/Van Buren Boulevard (County of Riverside/City of Riverside);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane (City of Riverside);
8. Dauchy Avenue – Taft Street/Krameria Avenue (City of Riverside);
9. Wood Road/Van Buren Boulevard (City of Riverside);
10. Bountiful Street/Van Buren Boulevard (City of Riverside);
11. Trautwein Road/Mission Grove Parkway (City of Riverside);
12. Trautwein Road/John F Kennedy Drive (City of Riverside);
13. Trautwein Road/Grove Community Drive (City of Riverside);
14. Trautwein Road/Orange Terrace Parkway (City of Riverside);
15. Trautwein Road/Shopping Center Driveway 1 (City of Riverside);
16. Trautwein Road/Van Buren Boulevard (City of Riverside);
17. Shopping Center Driveway 2/Van Buren Boulevard (City of Riverside);
18. Barton Street/Van Buren Boulevard (City of Riverside);
19. Project Driveway 1/Van Buren Boulevard (City of Riverside);
20. Dauchy Avenue/Project Driveway 3 (City of Riverside);

21. Dauchy Avenue/Project Driveway 4 (City of Riverside); and
22. Dauchy Avenue/Project Driveway 5 (City of Riverside).

Figure 4-1 illustrates the locations of all study intersections.

4.1.2 Roadway Segments

Per the Scoping Agreement (Appendix A), roadway segments analyzed in this study are as follows:

1. Van Buren Boulevard, between Little Court and Dauchy Avenue (County of Riverside/City of Riverside);
2. Dauchy Avenue, between Van Buren Blvd and Ardenwood Lane (City of Riverside); and
3. Dauchy Avenue, between Ardenwood Lane and Hawksbury Drive (City of Riverside).

The road segments are within the jurisdiction of County of Riverside/City of Riverside.

4.2 EXISTING ROADWAY NETWORK

This section provides a description of the circulation network within the study area. Figure 4-2 illustrates existing study intersection geometrics and traffic control. All major roadways within the City of Riverside are classified based on the Master Plan of Roadways provided in the Circulation and Community Mobility Element of the City of Riverside *General Plan 2025* (General Plan). Figure 4-3 illustrates the Master Plan of Roadways for the City. All major roadways within the County of Riverside (County) are classified based on the Lake Mathews/Woodcrest Area Plan Circulation of the County of Riverside *Lake Mathews/Woodcrest Area Plan 2016.* Figure 4-4 illustrates the Plan Circulation for the Woodcrest Area. Table 4-A summarizes the classifications and number of mid-block arterial lanes on major roadways in the TOA study area. Following is a brief description of major roadways within the study area:

- **Washington Boulevard:** Washington Boulevard north of Van Buren Boulevard is designated as a 110 ft arterial by the City's General Plan and as an arterial by the County's Lake Mathew/Woodcrest Area Plan. The segment north of Van Buren Boulevard is a three-lane undivided arterial that does not have bike facilities nor on-street parking. Washington Boulevard south of Van Buren Boulevard is designated as an 88 ft arterial by the City's General Plan and as a major by the County's Lake Mathews/Woodcrest Area Plan. The segment south of Van Buren Boulevard is a three-lane divided arterial with a two-way-left-turn-lane (TWLTL) median that does not have bike facilities nor on-street parking.
- **Chicago Avenue:** Chicago Avenue north of Van Buren Boulevard is designated as a 66 ft local roadway by the City's General Plan. This segment is a two-lane undivided local roadway that does not have bike facilities nor on-street parking.
- **Alta Cresta Avenue:** Alta Cresta Avenue south of Van Buren Boulevard is designated as a 66 ft local roadway by the City's General Plan. This segment is a two-lane undivided local roadway that does not have bike facilities but has on-street parking on the southbound side.

- **Little Court:** Little Court south of Van Buren Boulevard has no designation in the City's General Plan. This segment is a two-lane undivided road that does not have bike facilities but has on-street parking for the northbound side.
- **Ridgeway Avenue:** Ridgeway Avenue north of Van Buren Boulevard has no designation in the City's General Plan. This segment is a two-lane undivided road that does not have bike facilities nor on-street parking.
- **Dauchy Avenue:** Dauchy Avenue north of Van Buren Boulevard is designated as a 66 ft local roadway by the City's General Plan. The segment north of Van Buren Boulevard is a two lane-lane undivided local roadway that does not have bike facilities but has on-street parking for both sides. Dauchy Avenue between Van Buren Boulevard and Ardenwood Lane has no designation in the City's General Plan. The segment between Van Buren Boulevard and Ardenwood Lane is a two-lane undivided road with a TWLTL median that does not have bike facilities nor on-street parking. Dauchy Avenue south of Ardenwood Lane has no designation in the City's General Plan. The segment south of Ardenwood Lane is a two-lane undivided road that does not have bike facilities but has on-street parking for both sides.
- **Taft Street:** Taft Street south of Krameria Avenue has no designation in the City's General Plan. This segment is a two-lane undivided road that does not have bike facilities but has on-street parking for the northbound side.
- **Wood Road:** Wood Road is designated as an 88 ft arterial by the City's General Plan and as a secondary by the County's Lake Mathew/Woodcrest Area Plan. The segment north of Van Buren Boulevard is a two-lane divided road with a TWLTL median that does not have bike facilities but has on-street parking on the southbound side. The segment south of Van Buren Boulevard is a five-lane divided road with a TWLTL median that does not have bike facilities nor on-street parking.
- **Bountiful Street:** Bountiful Street north of Van Buren Boulevard has no designation in the City's General Plan. This segment is a two-lane divided road with a TWLTL median that does not have bike facilities nor on-street parking.
- **Trautwein Road:** Trautwein Road between Mission Grove Parkway and Orange Terrace Parkway is designated as a 110 ft scenic boulevard in the City's General Plan. Trautwein Road between Orange Terrace parkway and Van Buren Boulevard is designated as an 88 ft scenic boulevard in the City's General Plan. Both segments are a four-lane divided arterial with a raised median that has bicycle facilities but does not have on-street parking.
- **Cole Avenue:** Cole Avenue south of Van Buren Boulevard is designated as an 88 ft arterial in the City's General Plan. This segment is a two-lane divided arterial that has bicycle facilities but does not have on-street parking.
- **Barton Street:** Barton Street has no designation in the City's General Plan. The segment north of Van Buren Boulevard is a two-lane undivided road that does not have bike facilities but has on-street parking. The segment south of Van Buren Boulevard is a three-lane divided arterial with a TWLTL median that has bicycle facilities but does not have on-street parking.
- **Mission Grove Parkway:** Mission Grove Parkway west of Trautwein Road has no designation in the City's General Plan. The segment west of Trautwein Road is a two-lane undivided road that does not have bike facilities but has on-street parking. Mission Grove Parkway east of Trautwein

Road is designated as a 100 ft arterial in the City's General Plan. The segment east of Trautwein Road is a five-lane divided arterial with a raised median that does not have bicycle facilities but has on-street parking on the eastbound side.

- **John F Kennedy Drive:** John F Kennedy Drive west of Trautwein Road is designated as an 88 ft arterial in the City's General Plan. The segment west of Trautwein Road is a three-lane undivided arterial that does not have bike facilities nor on-street parking. John F Kennedy Drive east of Trautwein Road has no designation in the City's General Plan. The segment east of Trautwein Road is a two-lane undivided road that does not have bike facilities nor on-street parking.
- **Grove Community Drive:** Grove Community Drive is designated as a 66 ft collector in the City's General Plan. This segment is a two-lane divided collector with a TWLTL median that has bike facilities but does not have on-street parking.
- **Orange Terrace Parkway:** Orange Terrace Parkway west of Trautwein Road is not designated in the City's General Plan. The segment west of Trautwein Road is a two-lane road with a raised median that does not have bike facilities nor on-street parking. Orange Terrace Parkway east of Trautwein Road is designated as a 110 ft arterial in the City's General Plan. The segment east of Trautwein Road is a four-lane arterial that has bike facilities but does not have on-street parking.
- **Van Buren Boulevard:** Van Buren Boulevard is designated as a 120 ft arterial by the City's General Plan and as an urban arterial by the County's Lake Mathew/Woodcrest Area Plan. The segment between King Avenue and Wood Road is a four-lane divided arterial with a raised median that has bike facilities but not on-street parking. The segment between Wood Road and Trautwein Road-Cole Avenue is a six-lane divided arterial with a raised median that has bike facilities but does not have on-street parking. The segment between Trautwein Road-Cole Avenue and Barton Street is a five-lane divided arterial with a raised median that has bike facilities on the westbound side but does not have on-street parking on either side.
- **Krameria Avenue:** Krameria Avenue between Golden Lantern Road and Newbridge Road is not designated in the City's General Plan. This segment is a two-lane undivided road that does not have bike facilities but does have on-street parking.

4.3 EXISTING BICYCLE, PEDESTRIAN, AND TRANSIT FACILITIES

4.3.1 Bicycle Facilities

The City of Riverside promotes bicycling for recreation and mobility. Bicycling can be a viable alternative to local work commutes and offers children a healthy way to get to school. To facilitate and encourage bicycle trips, the City has adopted a Active Transportation Plan that includes a network of proposed facilities and a three-tier project prioritization for the recommended improvements. The *Pedestrian Target Safeguarding Plan, Active Transportation Plan, Complete Streets Ordinance, and Trails Master Plan (PACT)* (adopted December 2021) provides an updated inventory of all bicycle infrastructure and non-infrastructure improvements implemented between 2012 and 2020 within the City of Riverside. The Active Transportation Plan also provides an updated list of recommended bicycle improvements, including a new network of proposed bicycle facilities.

According to the City's *PACT: Active Transportation Plan,* the bikeway network within the City is classified into four categories: Class I – Shared Use Paths, Class II – Bicycle Lanes, Class III – Bicycle Routes/Boulevard, and Class IV - Separated Bikeways. Class I shared use paths are paved trails

completely separated from the street. Class II bicycle lanes are striped preferential lanes on the roadway for one-way bicycle travel, in which some of these lanes include a striped buffer on one or both sides to increase separation from the travel lane and/or parked cars. Class III bicycle routes are signed routes where cyclists share a travel lane with motor vehicle traffic, in which some routes include shared lane markings or "sharrows". Class IV separated bikeways are on-street bicycle facilities that are physically separated from motor vehicle traffic by a vertical element or barrier, such as a curb, bollards, or vehicle parking aisle. This allows for one- or two-way travel on one or both sides of the roadway.

As part of the City's Bikeway Network, a Class II bike lane exists along Trautwein Road, Cole Avenue between Van Buren Boulevard and Krameria Avenue, Grove Community Drive, Orange Terrace Parkway, and Van Buren Boulevard. A Class I & II Bike Lane/Path exists on John F Kennedy Drive between Dauchy Avenue and Trautwein Road. A proposed Class II buffered bike lanes will be added on Wood Road. Figure 4-5 illustrates the existing and proposed bikeways within the City of Riverside.

4.3.2 Pedestrian Facilities

The implementation of enhanced pedestrian linkage with a comprehensive trails system links residential areas, schools, parks, and commercial centers so that residents can travel within the community without driving. Safe and attractive sidewalks and walkways improve the walkability of the City. Sidewalks are generally provided on both sides of the streets throughout the City. Additionally, standard paved trails and non-standard unpaved trails are frequently used by bicyclists and pedestrians in the City. Some trails are also available for equestrian riders. The existence of trails and sidewalks provides accessible facilities, provides safety features, and improves walkability in the City of Riverside.

According to the City's PACT, the current trails within the study area are along Wood Road between Krameria Avenue and John F Kennedy Drive, Bountiful Street, John F Kennedy Drive, and Grove Community Drive. Figure 4-6 illustrates the Master Plan of trails within the City.

In addition to trails within the study area, paved sidewalks are available at the following roadway facilities in within the study area:

- Northbound side of Washington Street north of Van Buren Boulevard;
- Both sides of Washington Street south of Van Buren Boulevard;
- Southbound of Alta Cresta Avenue south of Van Buren Boulevard;
- Northbound side of Dauchy Avenue north of Van Buren Boulevard;
- Both sides of Dauchy Avenue between Van Buren Boulevard and Krameria Avenue;
- Northbound side of Taft Street south of Krameria;
- Northbound side of Wood Road north of Van Buren Boulevard;
- Both sides of Wood south of Van Buren Boulevard;
- Both sides of Bountiful Street between Trautwein Road and Van Buren Boulevard;

- Both sides of Barton Street north of Van Buren Boulevard;
- Northbound side of Barton Street south of Van Buren Boulevard;
- Both sides of Mission Grove Parkway South;
- Both sides of John F Kennedy Drive;
- Both sides of Grove Community Drive;
- Both sides of Orange Terrace Parkway;
- Westbound side of Van Buren Boulevard near Washington Street;
- Both sides of Van Buren Boulevard between Washington Street and Woodcrest Plaza;
- Both sides of Van Buren Boulevard between Dauchy Avenue and Winchester Way;
- Eastbound side of Van Buren Boulevard near Blossom Center and Wood Road;
- Both sides of Van Buren between Wood Road and Trautwein Road-Cole Avenue;
- Westbound side of Van Buren Boulevard east of Trautwein Road-Cole Avenue;
- Westbound side of Krameria Avenue west of Dauchy Avenue-Taft Street; and
- Both sides of Krameria Avenue east of Dauchy Avenue-Taft Street.

4.3.3 Transit Facilities

Riverside Transit Agency (RTA) is the consolidated transportation service agency for western Riverside County and is responsible for coordinating transit services throughout the approximately 2,500-square mile service area. RTA provides both local and regional services throughout the region with 33 fixed routes, five CommuterLink Express routes, and Dial-A-Ride services using 334 vehicles. RTA local bus routes 20, 22, and 27 operate within the study area. Route 20 has stops on Mission Grove Parkway. Route 22 has stops on Trautwein Road, Van Buren Boulevard, and Wood Road. Route 27 has stops on Van Buren located at the project site and Orange Terrace Parkway. These routes provide connections to Moreno Valley College, Downtown Riverside, La Sierra Metrolink Station, and Perris.

4.4 EXISTING TRAFFIC VOLUMES

Traffic volumes for existing conditions are typically developed using existing count data collected at study intersections and roadway segments. Due to atypical conditions statewide because of COVID-19, new traffic counts may not reflect realistic traffic conditions at the study intersections and roadway segments. Therefore, LSA consulted with traffic counters to compile a list of historical counts available for both study intersections and roadway segments. Detailed count sheets are included in Appendix B.

The following intersections had recent historical counts that were used for volume development:

1. Washington Street/Van Buren Boulevard;
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard;
6. Dauchy Avenue/Van Buren Boulevard;

9. Wood Road/Van Buren Boulevard;
11. Trautwein Road/Mission Grove Parkway;
12. Trautwein Road/John F Kennedy Drive;
14. Trautwein Road/Orange Terrace Parkway;
16. Trautwein Road/Van Buren Boulevard; and
18. Barton Street/Van Buren Boulevard.

At each study intersection where historical counts were available, a growth rate of 2 percent per annum was applied to the historical counts to develop year 2021 a.m. peak hour traffic volumes. These volumes were compared with the new counts collected at the study intersections. As a conservative approach, the higher of the two for each movement at every intersection was considered as the traffic volumes under existing conditions.

For the afternoon peak hour, historical counts were not available due to the operations of the school requiring an analysis of 2:00 a.m. – 4:00 p.m. As such, COVID adjustments were made based on the volumes at the roadway segment on Van Buren Boulevard between Little Court and Dauchy Avenue. A similar growth rate of 2 percent per annum was applied to the historical counts at the Van Buren Boulevard between Little Court and Dauchy Avenue roadway segment to develop 2021 traffic volumes. As conservative approach, the higher of the two daily traffic volumes was considered as the traffic volumes under existing conditions.

Vehicle classification counts were conducted at the following intersections:

1. Washington Street/Van Buren Boulevard;
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard;
6. Dauchy Avenue/Van Buren Boulevard;
8. Dauchy Avenue – Taft Street/Krameria Avenue;
9. Wood Road/Van Buren Boulevard;
11. Trautwein Road/Mission Grove Parkway;
14. Trautwein Road/Orange Terrace Parkway;
16. Trautwein Road/Van Buren Boulevard; and
18. Barton Street/Van Buren Boulevard.

At these locations, counts were converted to Passenger Car Equivalent (PCE) volumes. The concept of PCEs accounts for the larger impact of trucks on traffic operations. It does so by assigning each type of truck a PCE factor that represents the number of passenger vehicles that could travel through an intersection in the same time that a particular type of truck could. PCE volumes at study intersections were computed using a factor of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with four or more axles. The percentage of trucks at the remaining study intersections without classification counts was determined based on truck percentages derived from adjacent

intersections with classification counts. At these locations, truck PCE volumes were computed using a PCE factor of 2.0 for all trucks, consistent with HCM 6 methodologies.

Figures 4-7 illustrates existing peak hour traffic volumes at study intersections. Table 4-B summarizes the existing daily traffic volumes at study area roadway segments.

Detailed volume development worksheets are included in Appendix C.

4.5 EXISTING LEVELS OF SERVICE

4.5.1 Study Intersections

An intersection LOS analysis was conducted for existing conditions using the methodologies previously discussed. For all signalized intersections located in the City, existing signal timing sheets were obtained and the corresponding pedestrian phases, yellow time, and all-red timings were included in the Synchro files. These signal timing sheets are included in Appendix B. Table 4-C summarizes the results of this analysis and shows that the following intersections are currently operating at a deficient LOS:

5. Ridgeway Avenue/Van Buren Boulevard (afternoon peak hour only); and
12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only).

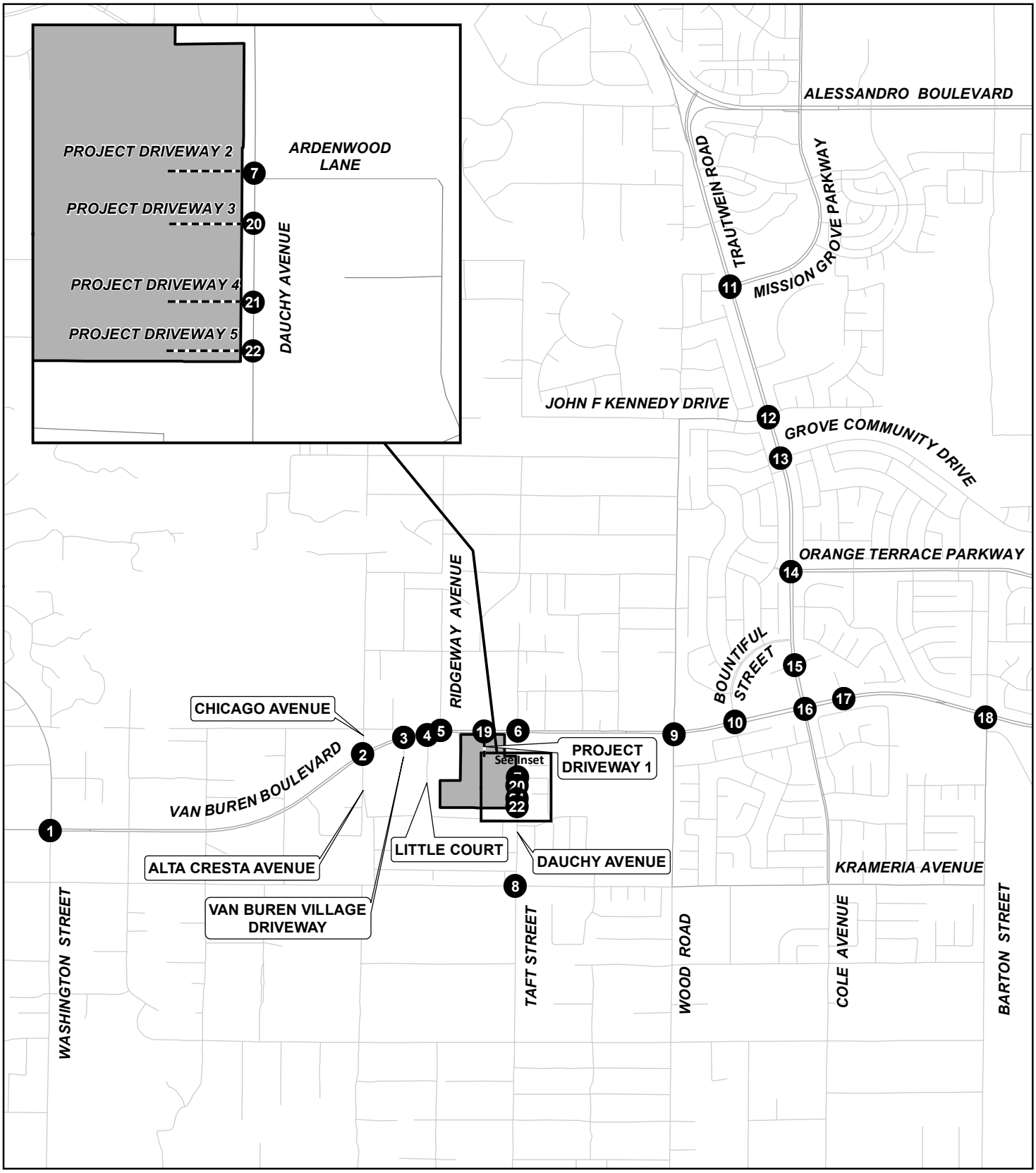
All other intersections currently operate at a satisfactory LOS. Detailed Level of Service Worksheets are included in Appendix D.

4.5.2 Roadway Segments

A roadway segment LOS analysis was conducted for existing conditions using the methodologies previously discussed. Table 4-D summarizes the results of this analysis and shows that all the study roadway segments are currently operating at a deficient LOS.

4.6 LIST OF CHAPTER 4.0 FIGURES AND TABLES

- Figure 4-1: Study Area Intersections
- Figure 4-2: Existing Plus Project Study Intersection Geometrics and Traffic Control
- Figure 4-3: City of Riverside Master Plan of Roadways
- Figure 4-4: Woodcrest Area Plan Circulation
- Figure 4-5: City of Riverside Existing and Proposed Bikeways
- Figure 4-6: City of Riverside Master Plan of Trails
- Figure 4-7: Existing Peak Hour Traffic Volumes
- Table 4-A: City of Riverside General Plan Roadway Segment Classification
- Table 4-B: Existing Roadway Segment Daily Traffic Volumes
- Table 4-C: Existing Intersection Levels of Service
- Table 4-D: Existing Roadway Segment Levels of Service



LSA

LEGEND

Project Location

Study Area Intersections

Project Driveway

N

0 1150 2300

FEET

SOURCE: ESRI Streetmap, 2021.

FIGURE 4-1

Woodcrest Christian School Expansion
Traffic Operational Analysis

Study Area Intesrections

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LEGEND

BUILDING - FUNCTION NUMBER	PREVIOUS CUP NUMBER	BUILDING NAME	NUMBER OF CLASS ROOMS	REQUIRED PARKING	SQUARE FOOTAGE	STATUS	PHASE
A	100	ADMINISTRATION & MULTIPURPOSE ROOM	0	0	5,310 S.F.	EXISTING	
A-1	A-1	OFFICE EXPANSION	0	0	840 S.F.	APPROVED	-
B	200	M.S. CLASSROOMS	6	12	8,320 S.F.	EXISTING	
C	A	M.S. CLASSROOMS	4	8	6,016 S.F.	EXISTING	
*D	K	M.S. CLASSROOMS	0	0	960 S.F.	EXISTING	
*E	K	M.S. CLASSROOMS	0	0	960 S.F.	EXISTING	
F	-	M.S. 2 STORY - OFFICE/ CLASSROOMS	7	14	11,147 S.F. 2 STORY	PROPOSED	4
G	-	AMPHITHEATER	0	0	300 SEATS	PROPOSED	
H	600	GYMNASIUM & LOCKERS	0	0	20,208 S.F.	EXISTING	
H1	-	H.S. CLASS ROOM	1	7	1,400 S.F.	PROPOSED	3
H2	-	H.S. CLASSROOM	1	7	1,400 S.F.	PROPOSED	3
I-A	W	PERFORMING ARTS	0	0	14,980 S.F.	APPROVED	3
I-B	-	H.S. CLASSROOMS + ADMIN.	3	21	10,223 S.F.	PROPOSED	2
I-C	J	GRUB HUB+STUDENT CENTER	0	0	5,605 S.F.	APPROVED	2
J	B	H.S. CLASSROOMS	4	28	6,144 S.F.	EXISTING	
k	300	H.S. CLASSROOMS	4	28	6,142 S.F.	EXISTING	
L	500	LOWER LEVEL STAFF LOUNGE OFFICES & STORAGE	0	0	2,881 S.F.	EXISTING	
M	400	H.S. CLASSROOMS	10	70	14,848 S.F.	EXISTING	
****N	K	H.S. CLASSROOMS	0	0	960 S.F.	EXISTING	
****O	K	H.S. CLASSROOMS	0	0	960 S.F.	EXISTING	
P	-	SPORTS STORAGE/BINS	0	0	480 S.F.	PROPOSED	
Q	F	LUNCH SHELTER	0	0	5,600 S.F.	EXISTING	
R	500	MAIN LEVEL LIBRARY & ADMINISTRATION	0	0	960 S.F. EACH TOTAL OF 4	EXISTING	
S	G	CHOIR & BAND	2	14	3,066 S.F.	EXISTING	
S1	-	STORAGE	0	0	1,400 S.F.	PROPOSED	-
T	-	H.S. 2 STORY CLASSROOMS OFFICES, STORAGE	7	49	12,426 S.F.	PROPOSED	1
	H	SPORTS CLUB W/ STORAGE WEIGHT ROOM - SNACK BAR	0	0	7,220 S.F.	APPROVED	
**U	M	H.S. CLASSROOMS	0	0	3,840 S.F.	EXISTING	
W	C	BUS BARN	0	0	6,000 S.F.	EXISTING	
X	-	STORAGE	0	0	2,400 S.F.	PROPOSED	1
Y	-	STORAGE BARN	0	0	5,400 S.F.	PROPOSED	2
***Z	-	MAINTENANCE SHED	0	0	2,000 S.F.	EXISTING	-
***aa	-	STAFF HOUSING	0	0	1,000 S.F.	EXISTING	-
bb	Z	CELL TOWER EXPANSION	0	0	1,000 S.F.	PROPOSED	-
cc	-	PROJECT ENTRANCE	0	0	-	PROPOSED	2
dd	-	PLAY COURTS	0	0	-	PROPOSED	3
ee		STUDENT ACTIVITIES	0	0	-	PROPOSED	3
ff		OUTDOOR AMPHITHEATER	0	0	-	EXISTING	-
gg		FIELD LIGHTS	0	0	-	PROPOSED	2
TOTAL CLASSROOMS			49	-	17 MIDDLE SCHOOL - 32 HIGH SCHOOL		
TOTAL REQUIRED PARKING				258	2 M.S. BUSSES - 3 H.S. BUSSES		
TOTAL PARKING PROVIDED				365	INCLUDES 43 NEW SPACES IN PHASE 2		

* TO BE REMOVED ON CONSTRUCTION OF BUILDING F

** TO BE REMOVED AFTER CONSTRUCTION OF BUILDING T

*** TO BE REMOVED ON CONSTRUCTION OF PROJECT ENTRANCE

**** TO BE USED AS STAFF OFFICES AFTER CONSTRUCTION OF BUILDING T

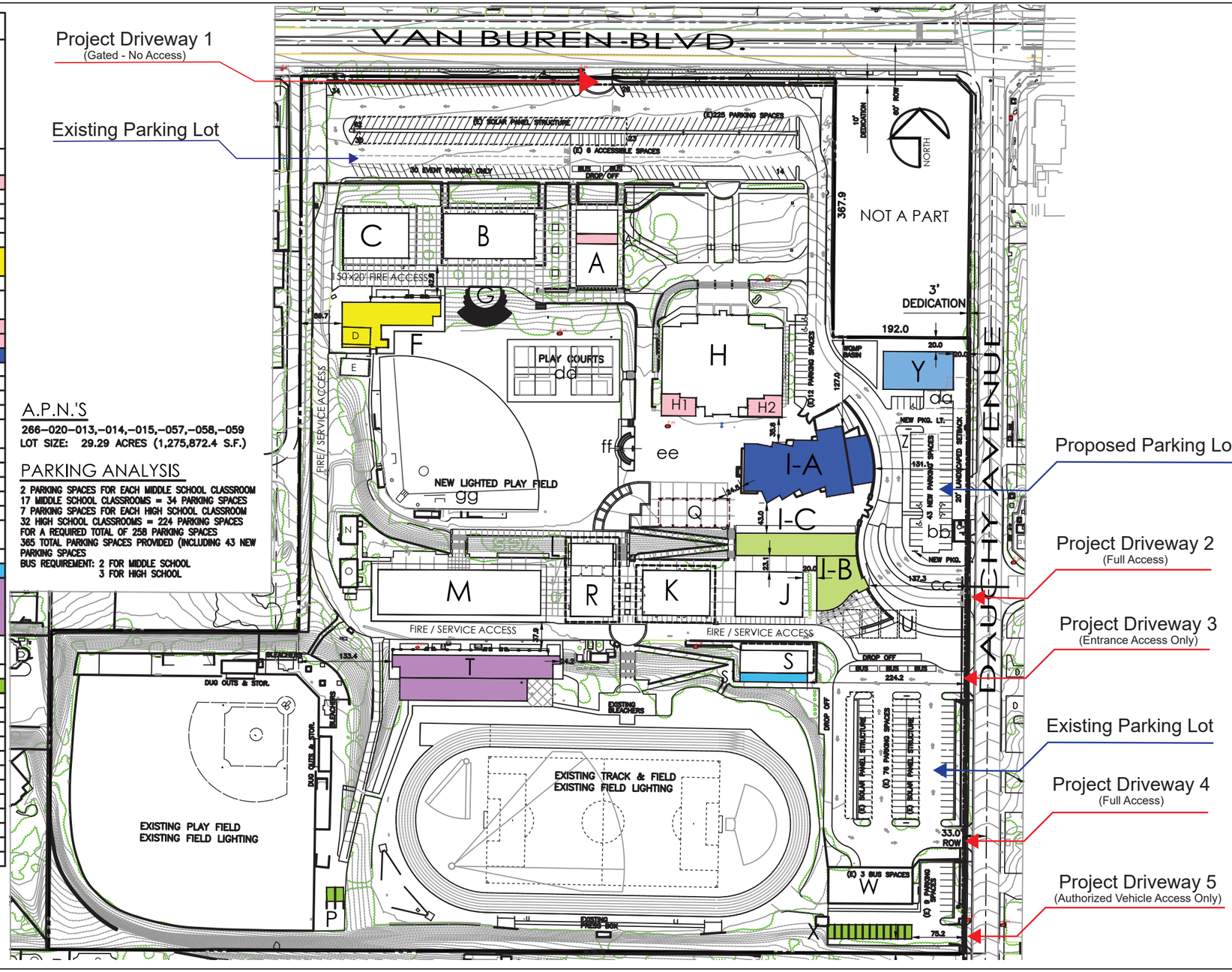
A.P.N.'S

266-020-013,-014,-015,-057,-058,-059

LOT SIZE: 29.29 ACRES (1,275,872.4 S.F.)

PARKING ANALYSIS

2 PARKING SPACES FOR EACH MIDDLE SCHOOL CLASSROOM
17 MIDDLE SCHOOL CLASSROOMS = 34 PARKING SPACES
7 PARKING SPACES FOR EACH HIGH SCHOOL CLASSROOM
32 HIGH SCHOOL CLASSROOMS = 224 PARKING SPACES
FOR A REQUIRED TOTAL OF 258 PARKING SPACES
365 TOTAL PARKING SPACES PROVIDED (INCLUDING 43 NEW PARKING SPACES
BUS REQUIREMENT: 2 FOR MIDDLE SCHOOL
3 FOR HIGH SCHOOL



LSA

N

0 75 150

FEET

SOURCE: Charles Brown Architect, October 2023

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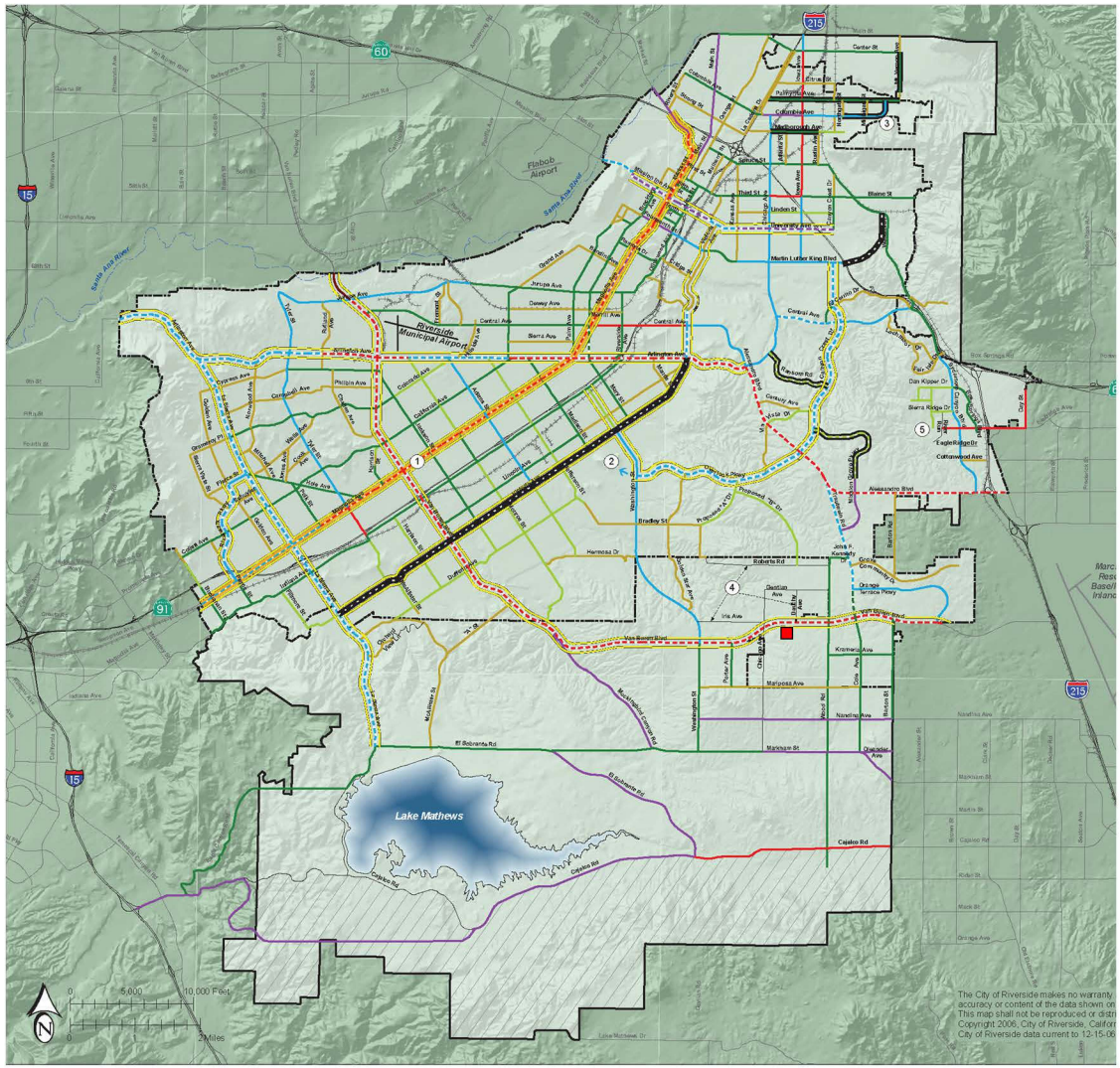
FIGURE 2-2

Woodcrest Christian School Expansion Project
Traffic Operational Analysis

Conceptual Site Plan



LSA

LEGEND

PROJECT SITE

66 FT LOCAL	2 LANES *
66 FT COLLECTOR	2 LANES
80 FT COLLECTOR	2 LANES
88 FT ARTERIAL	4 LANES
100 FT ARTERIAL	4 LANES
110 FT ARTERIAL	4 LANES
120 FT ARTERIAL	6 LANES
144 FT ARTERIAL	8 LANES

SCENIC BOULEVARD
REQUIRES SPECIAL LANDSCAPING, ADDITIONAL RIGHT-OF-WAY MAY BE REQUIRED.

SPECIAL BOULEVARD
TWO-LANE DIVIDED ROADWAY OF VARIABLE GEOMETRIC DESIGN

SPECIAL BOULEVARD
VARIABLE WIDTHS AND DESIGN, CONTACT PUBLIC WORKS FOR DETAIL. SEE OBJECTIVE CCM-3 AND POLICIES CCM-3.1 THROUGH CCM-3.5.

PARKWAYS
FOR INFORMATION ON PARKWAYS SEE LAND USE ELEMENT.

CETAP CORRIDOR AREA
CORRIDOR OPTIONS SUBJECT TO SPECIAL STUDY.

RIVERSIDE CITY BOUNDARY

RIVERSIDE PROPOSED SPHERE OF INFLUENCE

NOTE:

* LOCAL STREETS ARE NOT SHOWN ON THIS PLAN EXCEPT WHERE NEEDED FOR CLARITY.

(1) MAGNOLIA AVENUE SHALL BE A SPECIAL BLVD, WITH 4 LANES EASTERLY OF HARRISON STREET.

(2) OVERLOOK PARKWAY SHALL BE A 2-LANE, 110-FOOT ARTERIAL WITH A WIDE MEDIAN PARKWAY. THE ALIGNMENT OF OVERLOOK PARKWAY WESTERLY OF WASHINGTON IS NOT YET DETERMINED PENDING PREPARATION OF SPECIFIC PLAN LEVEL STUDY.

(3) COLUMBIA AVENUE IS SHOWN BY HUNTER BUSINESS PARK SPECIFIC PLAN AS A 134-FOOT ARTERIAL. ACTUAL STREET WIDTH, DUE TO RAILROAD OVERCROSSING , WILL BE DETERMINED BY PUBLIC WORKS.

(4) THESE STREETS SHALL BE 66-FOOT LOCAL ROADWAYS SERVING AS ALTERNATE ROUTES.

(5) THE STREETS IN SYCAMORE CANYON BUSINESS PARK SPECIFIC PLAN VARY IN SIZE. SEE THE SPECIFIC PLAN FOR DETAILS.

FIGURE 4-3

Woodcrest Christian School Expansion
Traffic Operational Analysis

City of Riverside Master Plan of Roadways

SOURCE: City of Riverside General Plan Circulation Element.

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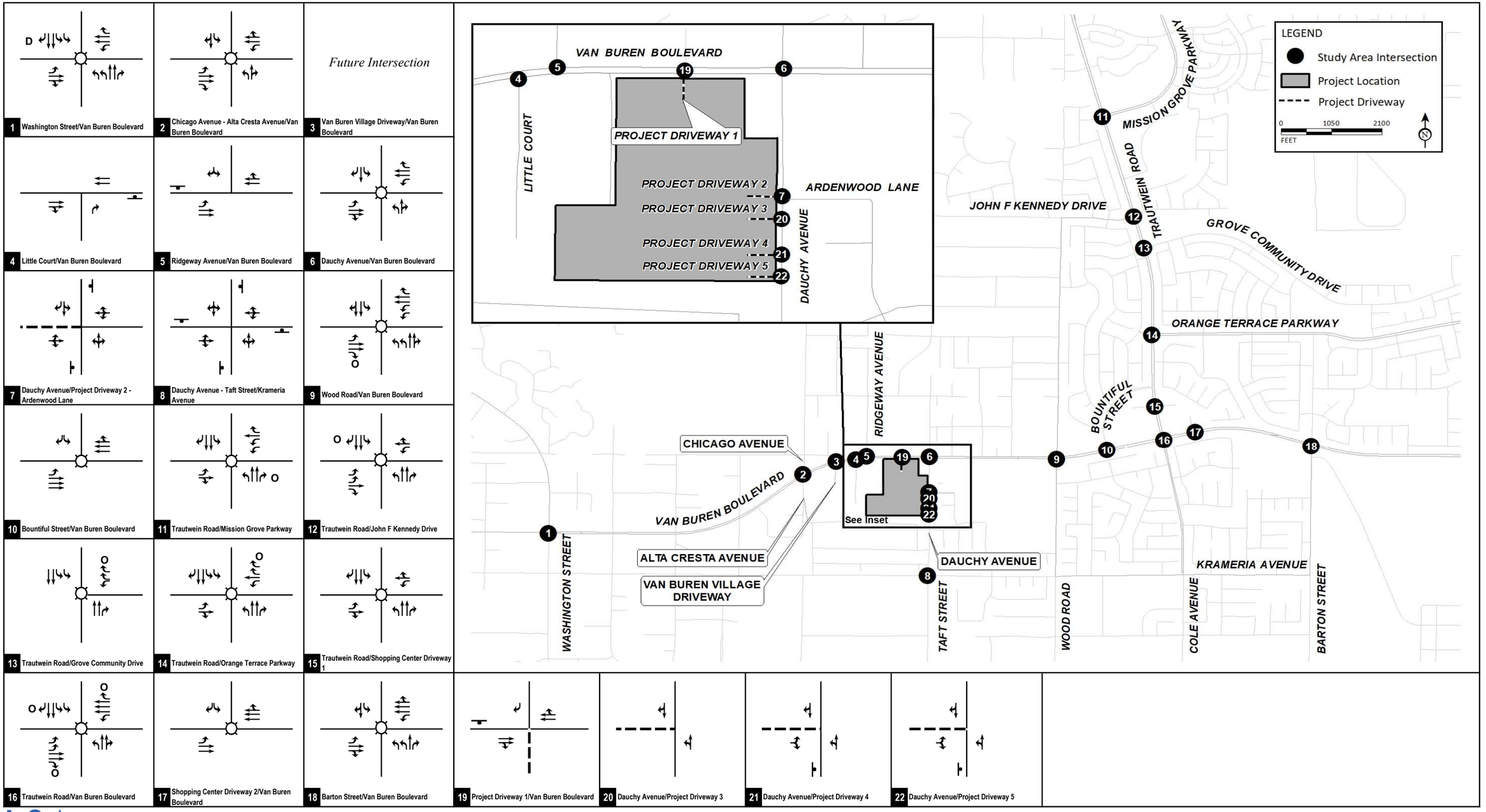
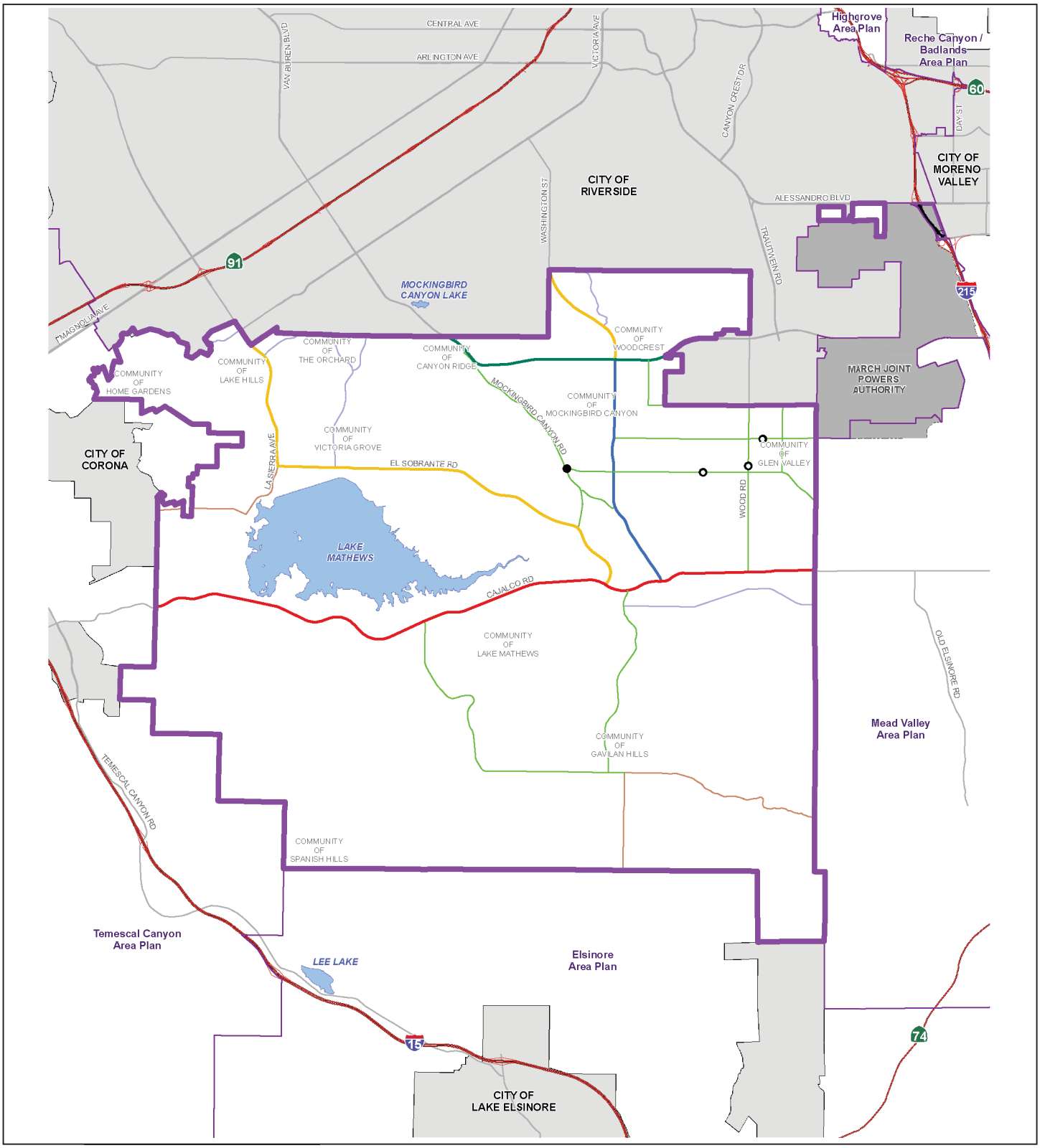


LSA

Legend
- Signal
- Stop Sign
- D De-Facto Right
- O Overlap
- Project Driveway

FIGURE 4-2
Woodcrest Christian School Expansion Project
Traffic Operational Analysis
Existing Study Intersection Geometrics and Traffic Control



LSA

Freeway (Variable ROW)
Expressway (128' to 220' ROW)
Urban Arterial (152' ROW)
Arterial (128' ROW)
Major (118' ROW)
Secondary (100' ROW)
Mountain Arterial 2 Ln (110' ROW)
Collector (74' ROW)
Existing Interchange
Highways
Area Plan Boundary
March Joint Powers Authority
City Boundary
Waterbodies
Existing Bridge
Proposed Bridge

FIGURE 4-4

N

0 1 2
Miles

Woodcrest Christian School Expansion
Traffic Operational Analysis

Lake Mathews/Woodcrest Area Plan Circulation

SOURCE: County of Riverside, December 2015.

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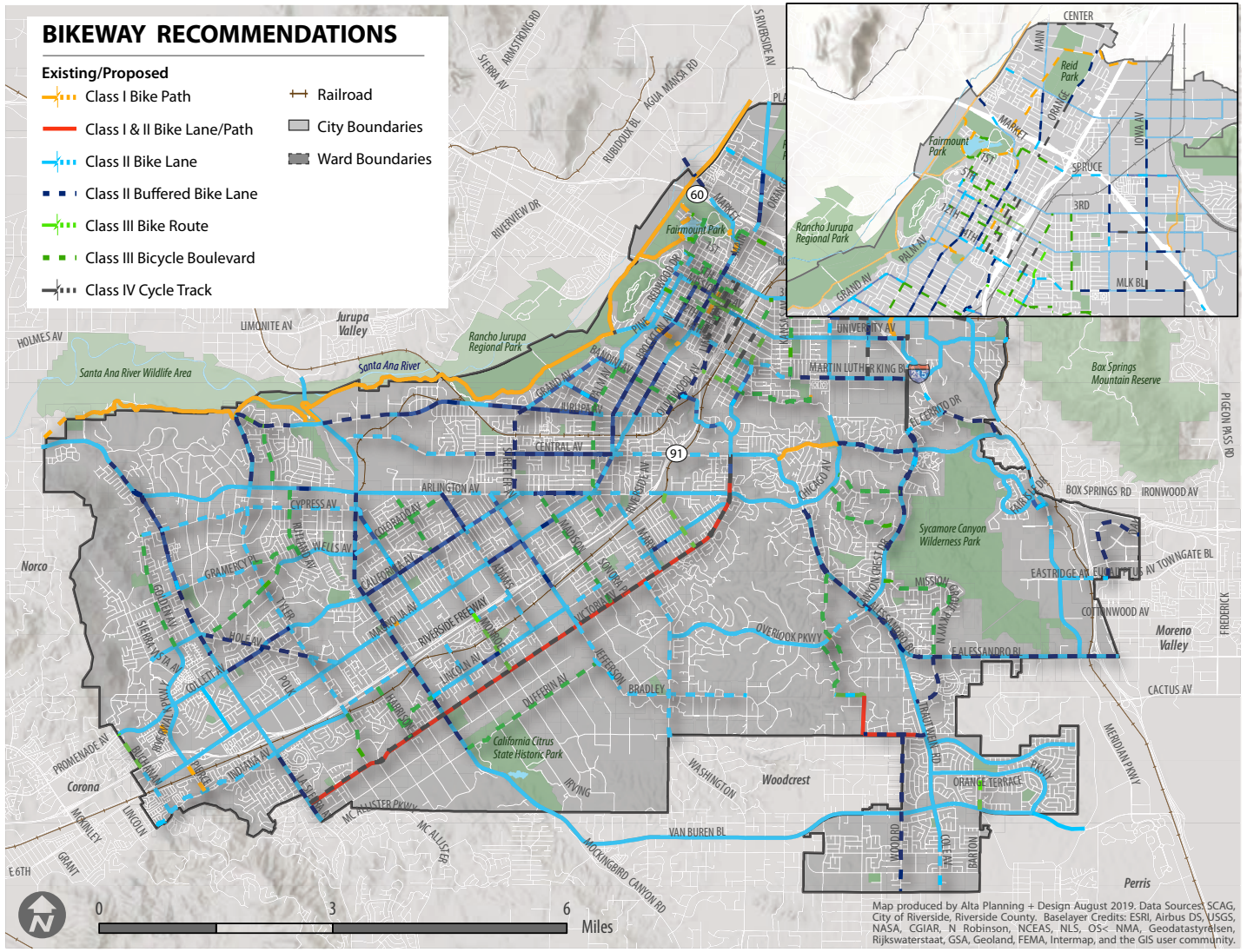

LSA

FIGURE 4-5

Woodcrest Christian School Expansion
Traffic Operational Analysis

City of Riverside Existing/Proposed Bikeways

SOURCE: City of Riverside PACT, December 2021

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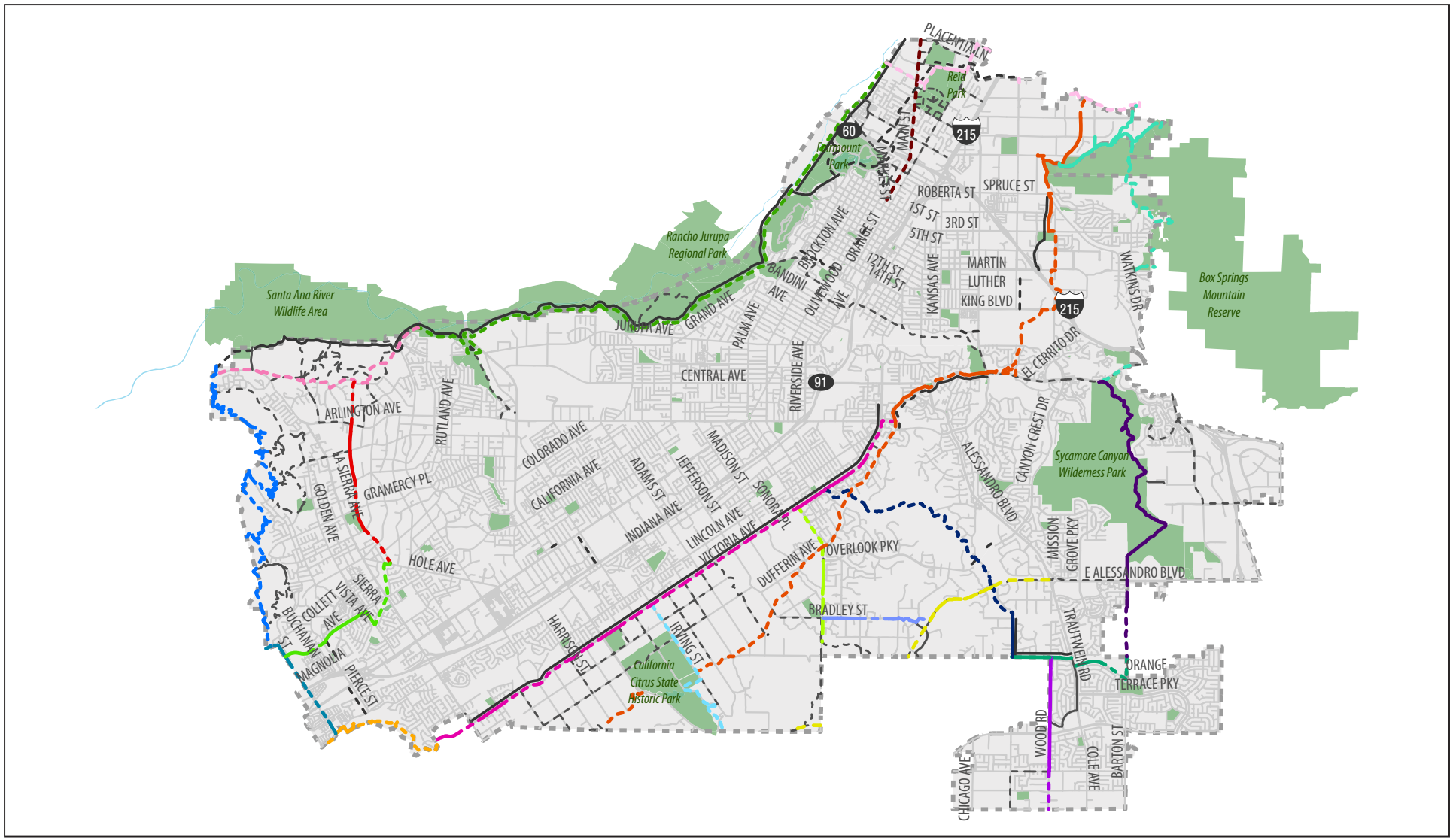

LSA

LEGEND

Primary Corridors (Existing/Proposed)

- 7 Mile Trail
- Box Springs
- Bradley
- Buchanan
- Gage Canal
- Indiana Ave
- Irving
- John F Kennedy
- La Sierra
- Main Street
- Mitchell
- Mitchell to Buchanan
- Prenda Arroyo Trail
- Primary EW 1
- Rancho La Sierra
- Santa Ana River Trail
- Sycamore Canyon Park
- Victoria Ave
- Washington
- Wood

- Proposed Multipurpose Trails
- Existing Multipurpose Trails
- Proposed Class I Bikeways
- Existing Class I Bikeways
- City Limits
- Parks

N

0 1 2
MILE

SOURCE: City of Riverside PACT, December 2021

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FIGURE 4-6

Woodcrest Christian School Expansion
Traffic Operational Analysis

City of Riverside Trail Corridors

LSA

Table 4-A - City of Riverside General Plan Roadway Segment Classification

Roadway	#	Segment	Jurisdiction	Existing Conditions Number of Lanes	General Plan Classification[1]
Van Buren Boulevard	1	Between Little Court and Dauchy Avenue	County of Riverside/City of Riverside	4	Arterial (120')
Dauchy Avenue	2	Between Van Buren Boulevard and Ardenwood Lane	City of Riverside	2	Local
	3	Between Ardenwood Lane and Hawksbury Drive	City of Riverside	2	Local

Notes:

[1]Classifications for all segments have been obtained from the City of Riverside General Plan Circulation and Community Mobility Element Master Plan of Roadways.

LSA

Table 4-B - Existing Roadway Segment Daily Traffic Volumes

Roadway	#	Segment	Historical Counts	Growth Historical Year to Year 2021	Historical Plus Growth	Existing COVID-19 ADT	Adjusted Existing ADT
Van Buren Boulevard	1	Between Little Court and Dauchy Avenue	37,151	1,486	38,637	39,223	39,223
Dauchy Avenue	2	Between Van Buren Boulevard and Ardenwood Lane	N/A	N/A	N/A	5,537	5,537
	3	Between Ardenwood Lane and Hawksbury Drive	N/A	N/A	N/A	3,247	3,247

LSA

Table 4-C - Existing Intersection Levels of Service

Intersection	Jurisdiction	Control	LOS Standard	Without Project			
				A.M. Peak Hour		Afternoon Peak Hour	
				Delay (sec.)	LOS	Delay (sec.)	LOS
1 . Washington Street/Van Buren Boulevard	County of Riverside	Signal	D	41.0	D	40.2	D
2 . Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	Signal	D	23.8	C	15.3	B
3 . Van Buren Village Driveway/Van Buren Boulevard	County of Riverside/City of Riverside	N/A[1]		*Does Not Exist*		*Does Not Exist*	
4 . Little Court/Van Buren Boulevard	County of Riverside/City of Riverside	OWSC	D	16.5	C	20.6	C
5 . Ridgeway Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	OWSC	D	27.3	D	47.8	**E** *
6 . Dauchy Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	Signal	D	32.8	C	26.4	C
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane	City of Riverside	TWSC	C	24.0	C	21.0	C
8 . Dauchy Avenue - Taft Street/Krameria Avenue	City of Riverside	AWSC	C	24.2	C	17.8	C
9 . Wood Road/Van Buren Boulevard	City of Riverside	Signal	D	47.8	D	29.6	C
10 . Bountiful Street/Van Buren Boulevard	City of Riverside	Signal	D	6.8	A	6.8	A
11 . Trautwein Road/Mission Grove Parkway	City of Riverside	Signal	D	51.2	D	47.2	D
12 . Trautwein Road/John F Kennedy Drive	City of Riverside	Signal	D	69.0	**E** *	23.9	C
13 . Trautwein Road/Grove Community Drive	City of Riverside	Signal	D	11.1	B	7.1	A
14 . Trautwein Road/Orange Terrace Parkway	City of Riverside	Signal	D	37.9	D	13.8	B
15 . Trautwein Road/Shopping Center Driveway 1	City of Riverside	Signal	D	10.5	B	16.0	B
16 . Trautwein Road/Van Buren Boulevard	City of Riverside	Signal	D	32.3	C	37.5	D
17 . Shopping Center Driveway 2/Van Buren Boulevard	City of Riverside	Signal	D	10.1	B	10.6	B
18 . Barton Street/Van Buren Boulevard	County of Riverside/City of Riverside	Signal	D	36.4	D	48.9	D
19 . Project Driveway 1/Van Buren Boulevard	County of Riverside/City of Riverside	TWSC	D	0.0	A	14.2	B
20 . Dauchy Avenue/Project Driveway 3[2]	City of Riverside	-	C	7.9	A	7.9	A
21 . Dauchy Avenue/Project Driveway 4	City of Riverside	OWSC	C	14.8	B	13.0	B
22 . Dauchy Avenue/Project Driveway 5	City of Riverside	OWSC	C	11.6	B	11.3	B

Notes:

OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; AWSC = All-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

[1] This intersection does not exist under existing conditions.

[2] This intersection has no stop control, but conflicting movements exist.

LSA

Table 4-D - Existing Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Classification[1]	LOS Standard	Number of Lanes	Without Project			
					Roadway Capacity[2]	Daily Volume	V/C Ratio	LOS
Segments on Van Buren Boulevard								
1 . Between Little Court and Dauchy Avenue	County of Riverside/City of Riverside	Arterial (120')	D	4	36,400	39,230	1.08	**F** *
Segments on Dauchy Avenue								
2 . Between Van Buren Boulevard and Ardenwood Lane	City of Riverside	Local	D	2	3,400	5,540	1.63	**F** *
3 . Between Ardenwood Lane and Hawksbury Drive	City of Riverside	Local	D	2	3,400	3,250	0.96	**E** *

Notes:

LOS = Level of Service

***** Exceeds LOS Standard

[1] Classifications for all segments have been obtained from the City of Riverside General Plan Circulation and Community Mobility Element Master Plan of Roadways.

[2] Roadway capacities have been obtained from the City of Riverside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (dated July 2020).

5.0 PROJECT TRAFFIC

5.1 PROJECT TRIP GENERATION

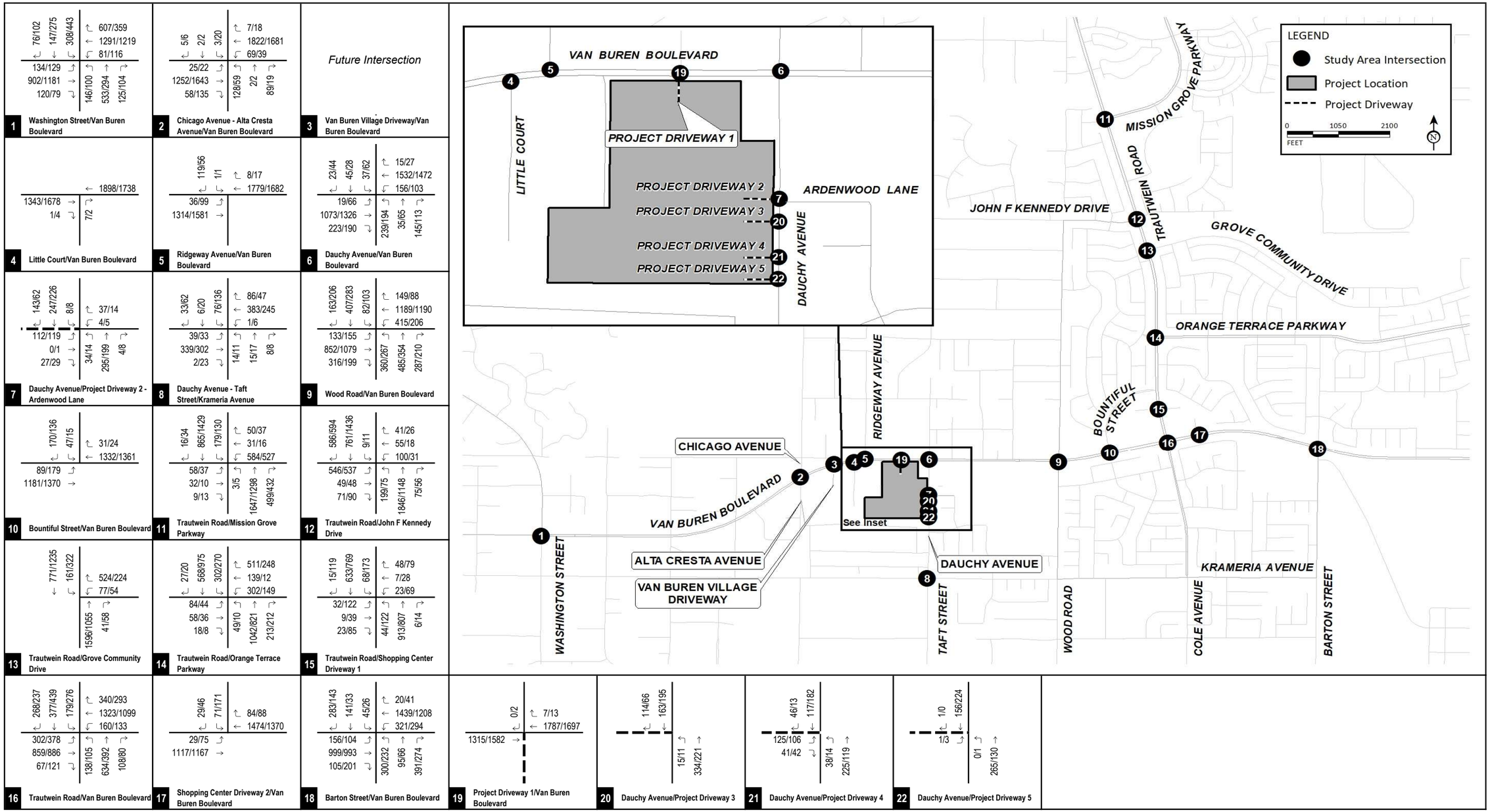
The trip generation for the proposed use was developed based on trip generation survey counts collected from the project site driveways for the existing on-site use. The counts were collected by Counts Unlimited on Thursday October 14, 2021 and Tuesday October 19, 2021. For purposes of this analysis, the highest a.m. peak hour, afternoon peak hour, and daily counts over the two days was used for developing the trip generation for the existing on-site use. Trip generation rates were developed using the empirical trip generation data collected and the number of students currently enrolled. The trip generation rate was then applied to the future number of students anticipated to be enrolled after the expansion. As shown in Table 5-A, the expansion of the school is anticipated to generate 303 trips in the a.m. peak hour, 209 trips in the p.m. peak hour, and 814 daily trips.

5.2 PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

The overall project trip distribution was developed using select zone model runs obtained from the Riverside County Transportation Model (RIVCOM). The select zone model plot for the proposed project has been included as part of the scoping agreement in Appendix A. However, project trip distribution at driveways was adjusted taking into consideration the size of each parking lot and the student drop-off/pick-up zones. Figure 5-1 illustrates the project trip distribution. The project trip assignment is the product of the project trip generation and trip distribution percentages. Figure 5-2 illustrates the project trip assignment.

5.3 LIST OF CHAPTER 5.0 FIGURES AND TABLES

- Figure 5-1: Project Trip Distribution
- Figure 5-2: Project Trip Assignment
- Table 5-A: Project Trip Generation



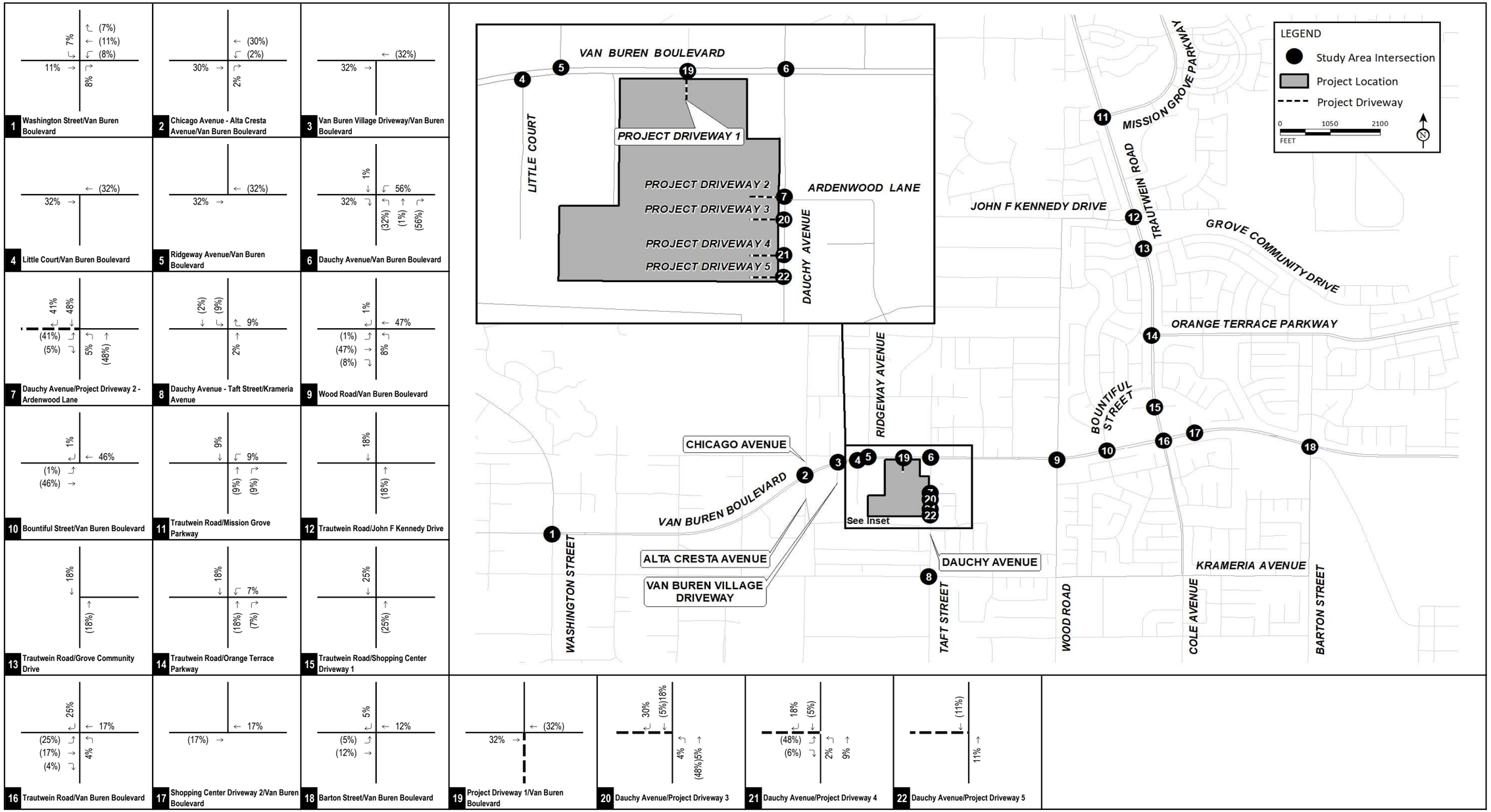
LSA

XXXX/YYYY
AM/Afternoon Peak Hour Trips

Project Driveway

FIGURE 4-7

Woodcrest Christian School Expansion Project
Traffic Operational Analysis
Existing Peak Hour Traffic Volumes



LSA

XX% (YY%)
Inbound (Outbound) Distribution

Project Driveway

FIGURE 5-1

Woodcrest Christian School Expansion Project
Traffic Operational Analysis
Project Trip Distribution

LSA

Table 5-A - Project Trip Generation

Land Use	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	Afternoon Peak Hour In	Afternoon Peak Hour Out	Afternoon Peak Hour Total	Daily
Existing School	644	STU							
Trip Generation			396	302	698	181	300	481	1,872
Proposed Project	280	STU							
Trip Generation			172	131	303	79	130	209	814

Notes:

STU = Students

[1] The trip generation was developed based on existing driveway counts taken by Counts Unlimited on October 14 and 19, 2021.

6.0 OPENING YEAR (2029) ANALYSIS

6.1 CUMULATIVE PROJECT ROADWAY IMPROVEMENTS

As part of the Van Buren Village Project, a traffic signal will be installed at the Van Buren Village Driveway on Van Buren Boulevard within the study area. Therefore, this improvement has been included under Opening Year (2029) and Cumulative (2045) conditions. Figure 6-1 illustrates the Opening Year (2029) and Cumulative (2045) without project study intersection geometrics and traffic control.

6.2 PROJECT DESIGN FEATURES

Project design features has been proposed to minimize the potential effects on traffic operations as a result of the school expansion. The following features were identified as a project design features to address potential effects on operations and queueing issues from vehicles turning into and out of the project:

- Realignment of Project Driveway 2 to remove the existing offset with Ardenwood Lane.
- Addition of a second receiving lane at Project Driveway 2 to improve ingress maneuvers.
- Restripe existing lane geometry for the eastbound direction at Project Driveway 2 from a shared left-through-right to a through-left turn lane.
- Addition of a right turn lane for the eastbound direction at Project Driveway 2.
- Relocation of bus parking at rear parking lot to extend vehicle storage for student drop-off and pick-up.

Figure 6-2 illustrates the Opening Year (2029) and Cumulative (2045) with project study intersection geometrics and traffic control with the implementation of project design features.

6.3 OPENING YEAR (2029) WITHOUT PROJECT TRAFFIC VOLUMES

As discussed during the City's scoping agreement process (Appendix A), traffic volumes for opening year without project conditions were developed by a growth of 2.0 percent per annum to existing traffic volumes and adding trips from approved and pending development projects in the study area. This methodology was applied for both study intersections and roadway segments. Information regarding cumulative projects in vicinity of the proposed project was obtained from City staff and nearby jurisdictions. Figure 6-3 illustrates the cumulative project locations. Trip generation for cumulative projects was either obtained from the respective traffic studies prepared for the projects or developed using rates from the ITE *Trip Generation Manual* (11th Edition). Table 6-A lists the cumulative projects included in this analysis and shows the cumulative projects are expected to generate to generate 5,360 net trips in the a.m. peak hour, 6,291 net trips in the afternoon peak hour, and 63,937 daily trips.

Cumulative project trips were assigned to the roadway network based on their locations in relation to surrounding land uses and regional arterials. Figure 6-4 illustrates the total peak hour cumulative project trip assignment at study area intersections. Figure 6-5 illustrates the peak hour traffic

volumes at study intersections under opening year without project conditions. Table 6-B summarizes opening year without project daily traffic volumes at study area roadway segments.

6.4 OPENING YEAR (2029) WITH PROJECT TRAFFIC VOLUMES

Opening year with project traffic volumes were developed by adding proposed project traffic to the opening year without project traffic volumes. Figure 6-6 illustrates the opening year with project peak hour traffic volumes at study intersections. Table 6-B summarizes the opening year with project daily traffic volumes at study roadway segments.

Detailed volume development worksheets are included in Appendix C.

6.5 OPENING YEAR (2029) WITHOUT PROJECT LEVELS OF SERVICE

6.5.1 Study Intersections

An intersection LOS analysis was conducted for opening year without project conditions using the methodologies previously discussed. Table 6-C summarizes the results of the analysis and shows that the following intersections are forecast to operate at a deficient LOS under opening year without project conditions:

1. Washington Street/Van Buren Boulevard (afternoon peak hour only);
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
4. Little Court/Van Buren Boulevard (afternoon peak hour only);
5. Ridgeway Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
6. Dauchy Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane (both a.m. and afternoon peak hours);
8. Dauchy Avenue – Taft Street/Krameria Avenue (both a.m. and afternoon peak hours);
11. Trautwein Road/Mission Grove Parkway (both a.m. and afternoon peak hours);
12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only);
14. Trautwein Road/Orange Terrace Parkway (a.m. peak hour only);
16. Trautwein Road/Van Buren Boulevard (afternoon peak hour only);
18. Barton Street/Van Buren Boulevard (both a.m. and afternoon peak hours); and
19. Project Driveway 1/Van Buren Boulevard (afternoon peak hour only).

All other intersections are forecast to operate at a satisfactory LOS. Detailed Level of Service Worksheets are included in Appendix D.

6.5.2 Roadway Segments

A roadway segment LOS analysis was conducted for opening year without project conditions using the methodologies previously discussed. Table 6-D summarizes the results of this analysis and shows that all study roadway segments are forecast to operate at a deficient LOS under opening year without project conditions. The following is the list of roadway segments forecast to operate at a deficient LOS:

1. Van Buren Boulevard, between Little Court and Dauchy Avenue;
2. Dauchy Avenue, between Van Buren Blvd and Ardenwood Lane; and
3. Dauchy Avenue, between Ardenwood Lane and Hawksbury Drive.

6.6 OPENING YEAR (2029) WITH PROJECT LEVELS OF SERVICE

6.6.1 Study Intersections

An intersection LOS analysis was conducted for opening year with project conditions using the methodologies previously discussed. Table 6-C summarizes the results of the analysis and shows that the following intersections are forecast to operate at a deficient LOS under opening year with project conditions:

1. Washington Street/Van Buren Boulevard (afternoon peak hour only);
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
4. Little Court/Van Buren Boulevard (afternoon peak hour only);
5. Ridgeway Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
6. Dauchy Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane (both a.m. and afternoon peak hours);
8. Dauchy Avenue – Taft Street/Krameria Avenue (both a.m. and afternoon peak hours);
11. Trautwein Road/Mission Grove Parkway (both a.m. and afternoon peak hours);
12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only);
14. Trautwein Road/Orange Terrace Parkway (a.m. peak hour only);
16. Trautwein Road/Van Buren Boulevard (afternoon peak hour only);
18. Barton Street/Van Buren Boulevard (both a.m. and afternoon peak hours);
19. Project Driveway 1/Van Buren Boulevard (afternoon peak hour only); and
21. Dauchy Avenue/Project Driveway 4 (a.m. peak hour only).

All of the intersections with the exception of Dauchy Avenue/Project Driveway 4 are forecast to operate at a deficient LOS even under opening year without project conditions. Dauchy Avenue/Project Driveway 4 is forecasted to operate at a deficient LOS under with project conditions. Therefore, the project will contribute to the forecasted deficiency at the listed intersections. As such, improvements will be required where feasible.

All other intersections are forecast to operate at a satisfactory LOS under opening year with project conditions. Detailed Level of Service Worksheets are included in Appendix D.

6.6.2 Roadway Segments

A roadway segment LOS analysis was conducted for opening year with project conditions using the methodologies previously discussed. Table 6-D summarizes the results of this analysis and shows that all study roadway segments are forecast to operate at a deficient LOS under opening year with project conditions. The following is the list of roadway segments operating at a deficient LOS:

1. Van Buren Boulevard, between Little Court and Dauchy Avenue;
2. Dauchy Avenue, between Van Buren Blvd and Ardenwood Lane; and
3. Dauchy Avenue, between Ardenwood Lane and Hawksbury Drive.

All these segments are forecast to operate at a deficient LOS even under opening year (2029) without project conditions.

Based on the criteria discussed in the "Levels of Service Procedures" section of this report, the project is forecast to create project related operational deficiencies for two of the three segments. The addition of project-related trips either causes the following roadway segments to degrade from acceptable LOS (A through D) to unacceptable levels (E or F) or increases the V/C ratio by more than 5 percent when the roadway segment is forecast to operate at an unacceptable LOS under the no project scenario:

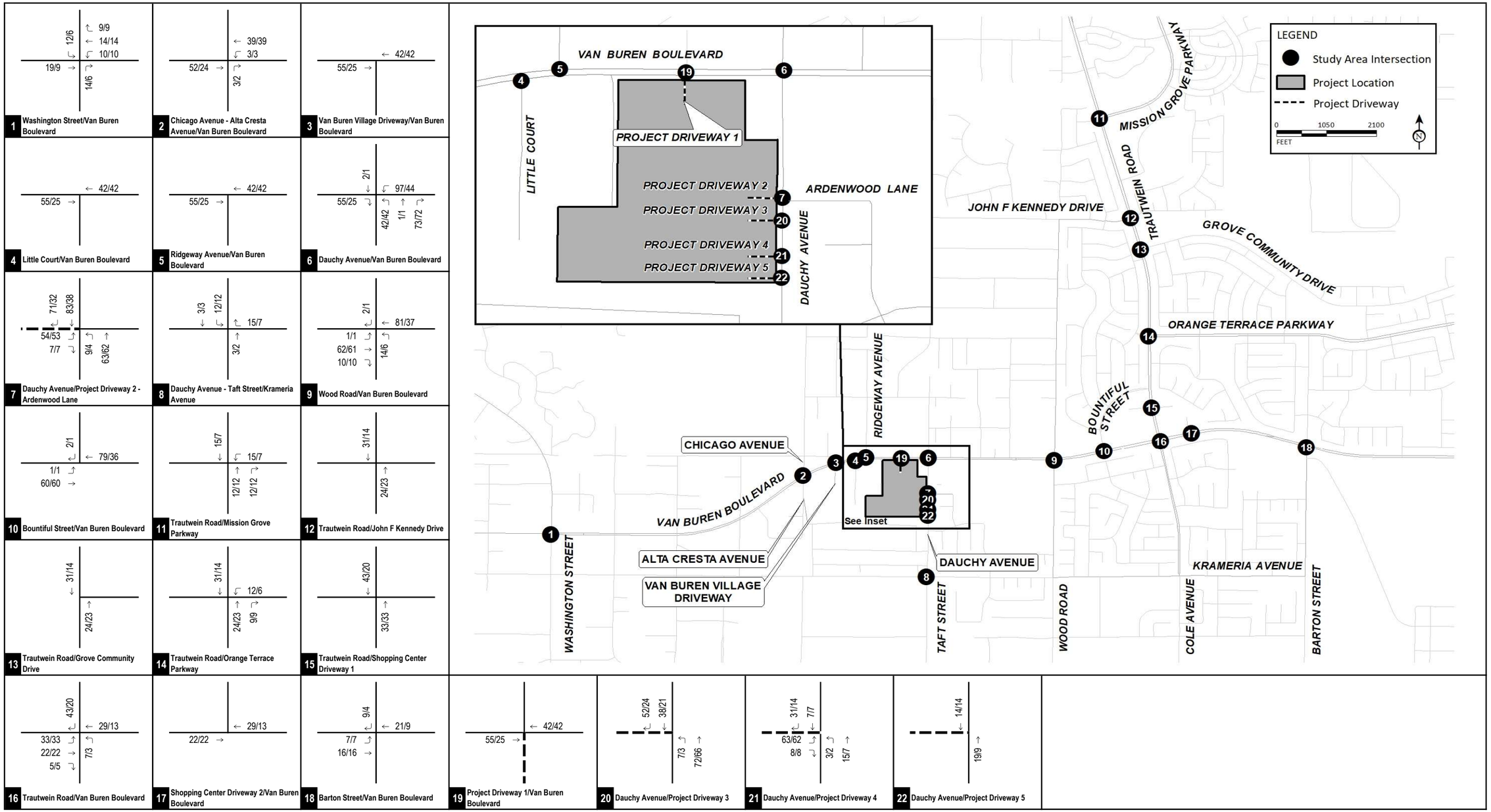
2. Dauchy Avenue, between Van Buren Blvd and Ardenwood Lane; and
3. Dauchy Avenue, between Ardenwood Lane and Hawksbury Drive.

Therefore, improvements will be required to offset the project related operational deficiencies at these segments. However, improvements are not feasible for any of these segments due to right-of-way constraints. As such, these segments will continue to operate at a deficiency.

6.7 LIST OF CHAPTER 6.0 FIGURES AND TABLES

- Figure 6-1: Opening Year (2029) and Cumulative (2045) without Project Study Intersection Geometrics and Traffic Control
- Figure 6-2: Opening Year (2029) and Cumulative (2045) with Project Study Intersection Geometrics and Traffic Control
- Figure 6-3: Cumulative Project Locations
- Figure 6-4: Cumulative Projects Trip Assignment

- Figure 6-5: Opening Year (2029) Peak Hour Traffic Volumes
- Figure 6-6: Opening Year (2029) with Project Peak Hour Traffic Volumes
- Table 6-A: Cumulative Projects Trip Generation
- Table 6-B: Opening Year (2029) Roadway Segment Daily Traffic Volumes
- Table 6-C: Opening Year (2029) Intersection Levels of Service
- Table 6-D: Opening Year (2029) Roadway Segment Levels of Service



LSA

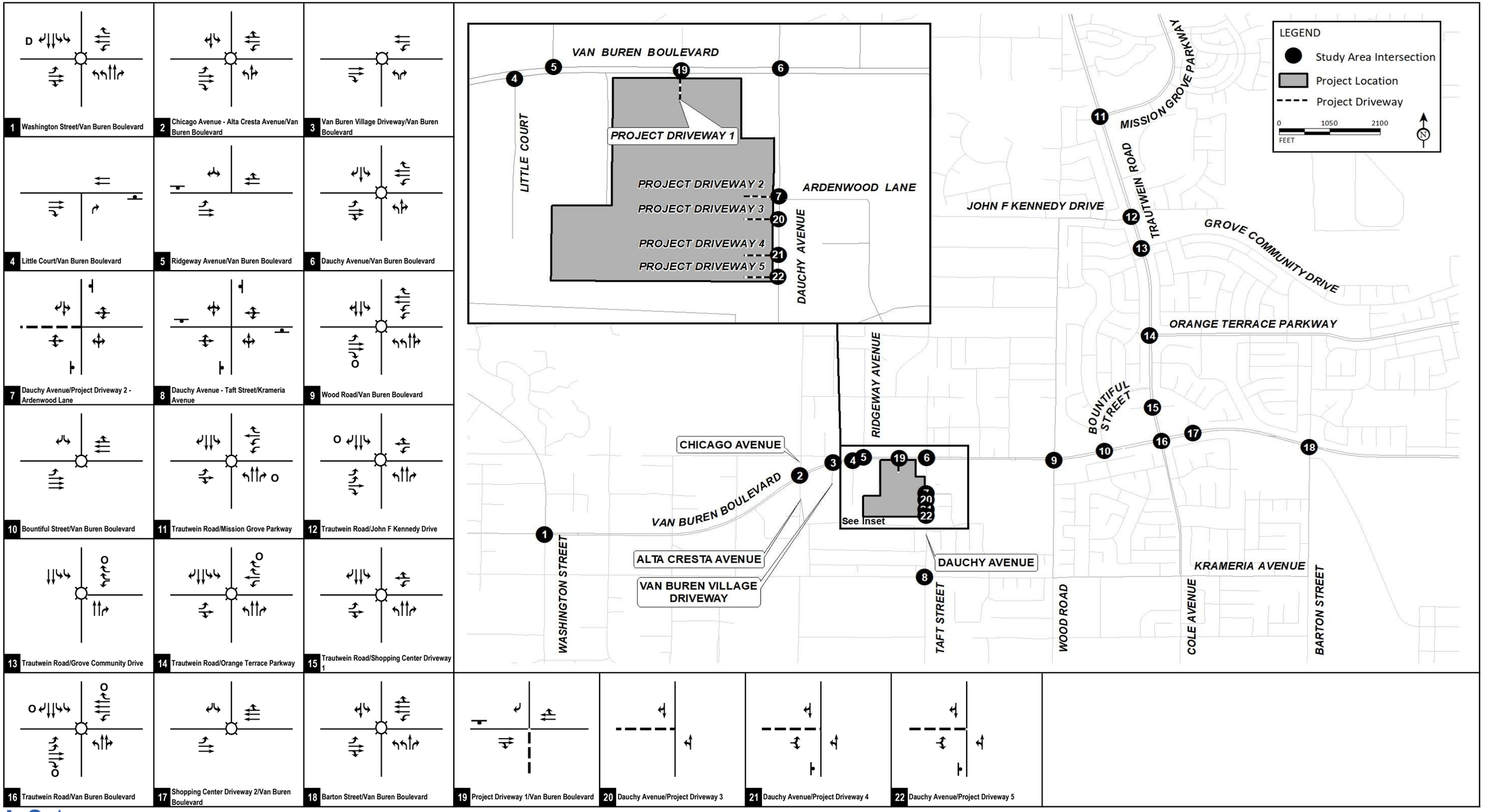
XX/YY
AM/Afternoon Peak Hour Trips

Project Driveway

FIGURE 5-2

Woodcrest Christian School Expansion Project
Traffic Operational Analysis
Project Trip Assignment

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\z60-Assgn.xlsx (3/13/2024)



LSA

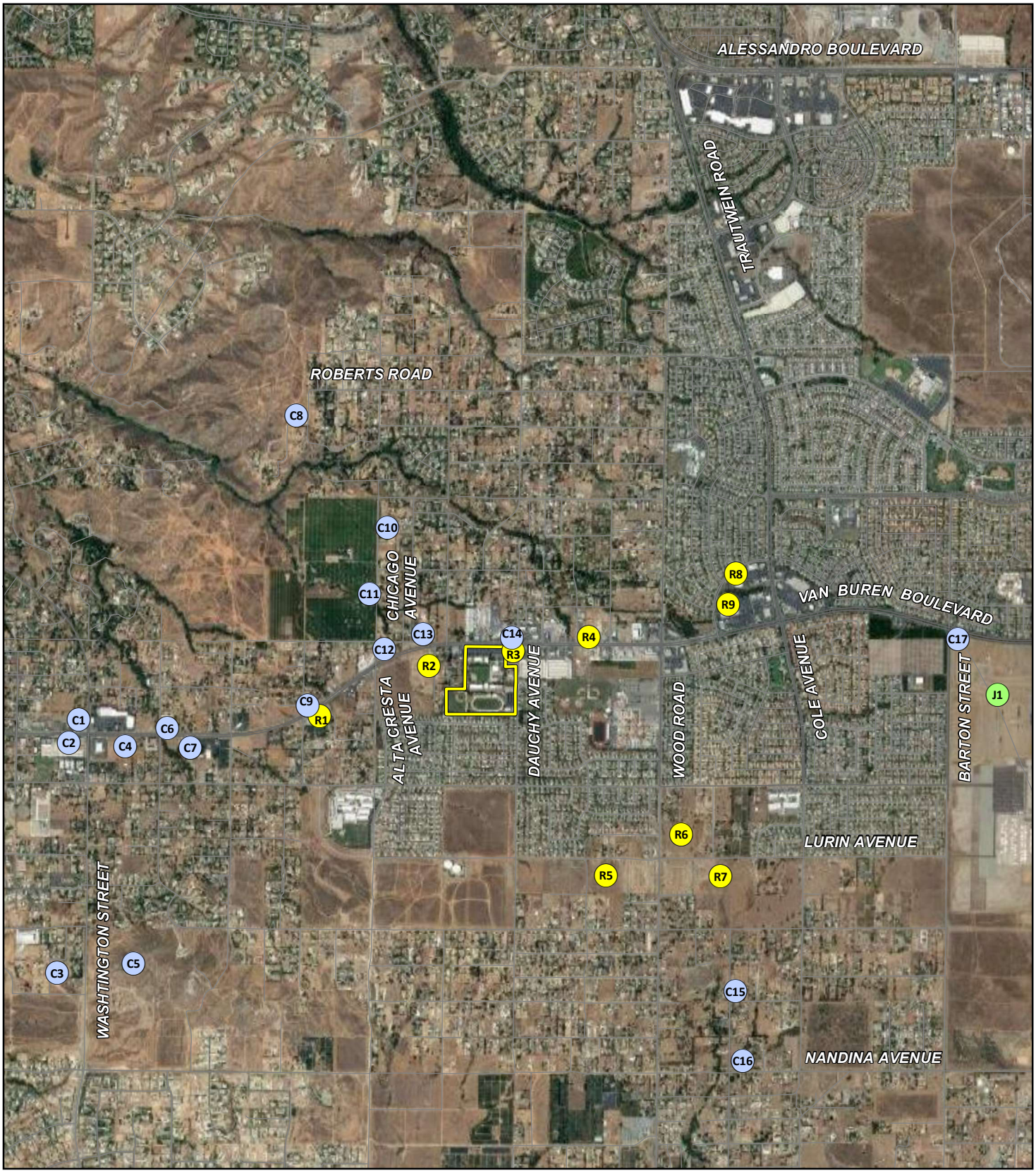
Legend
- Signal
- Stop Sign
- D De-Facto Right
- O Overlap
- Project Driveway

FIGURE 6-1

Woodcrest Christian School Expansion Project

Traffic Operational Analysis

Opening Year (2029) and Cumulative (2045) without Project Study Intersection Geometrics and Traffic Control



LSA

FIGURE 6-3

LEGEND

- Project Location
- City of Riverside Cumulative Project
- County of Riverside Cumulative Project
- March Joint Powers Authority Cumulative Project

0 1250 2500
FEET

Woodcrest Christian School Expansion
Traffic Operational Analysis

Cumulative Project Locations

SOURCE: ESRI Streetmap, 2021; Google Earth, 2021.

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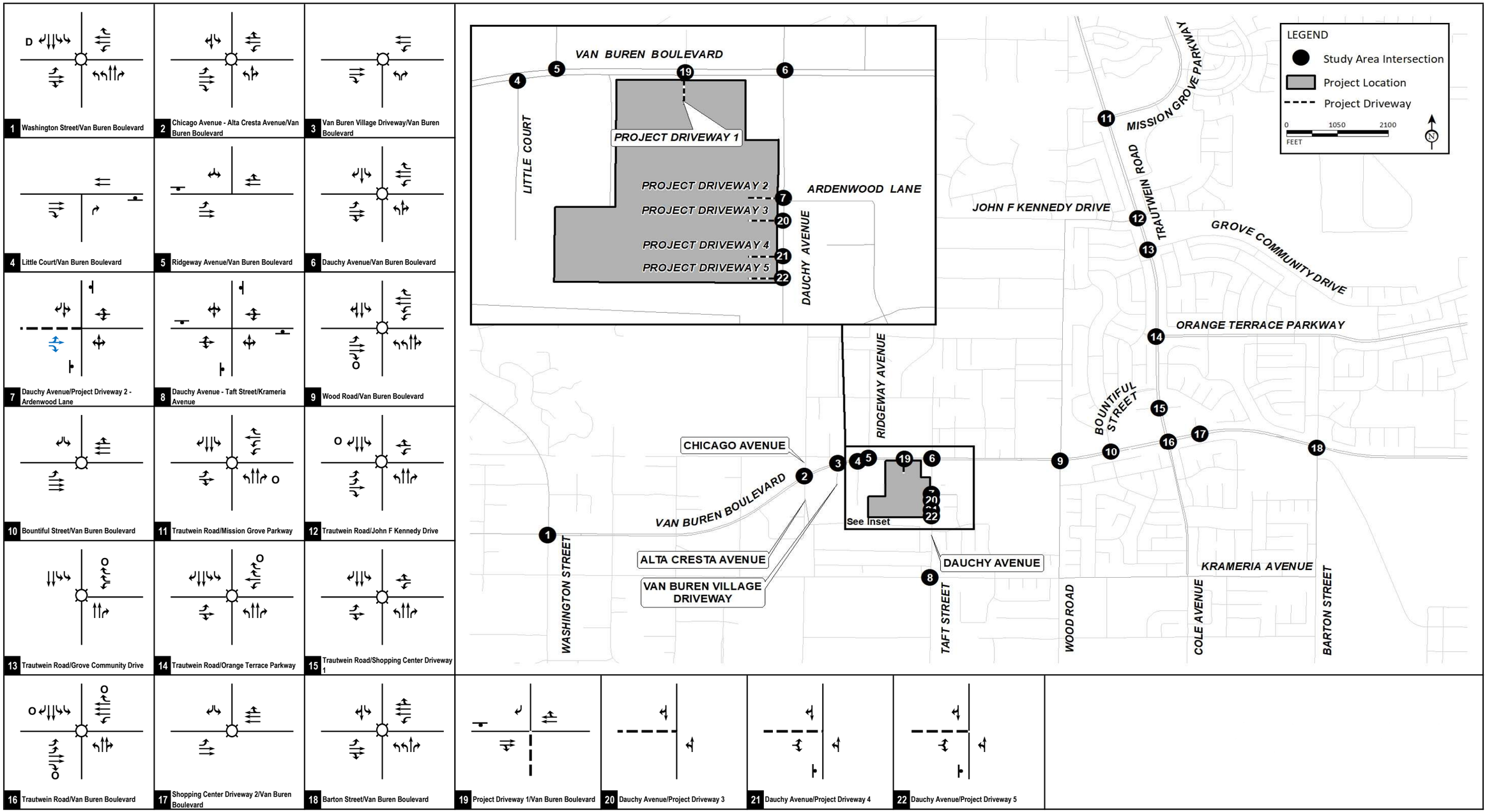


LSA

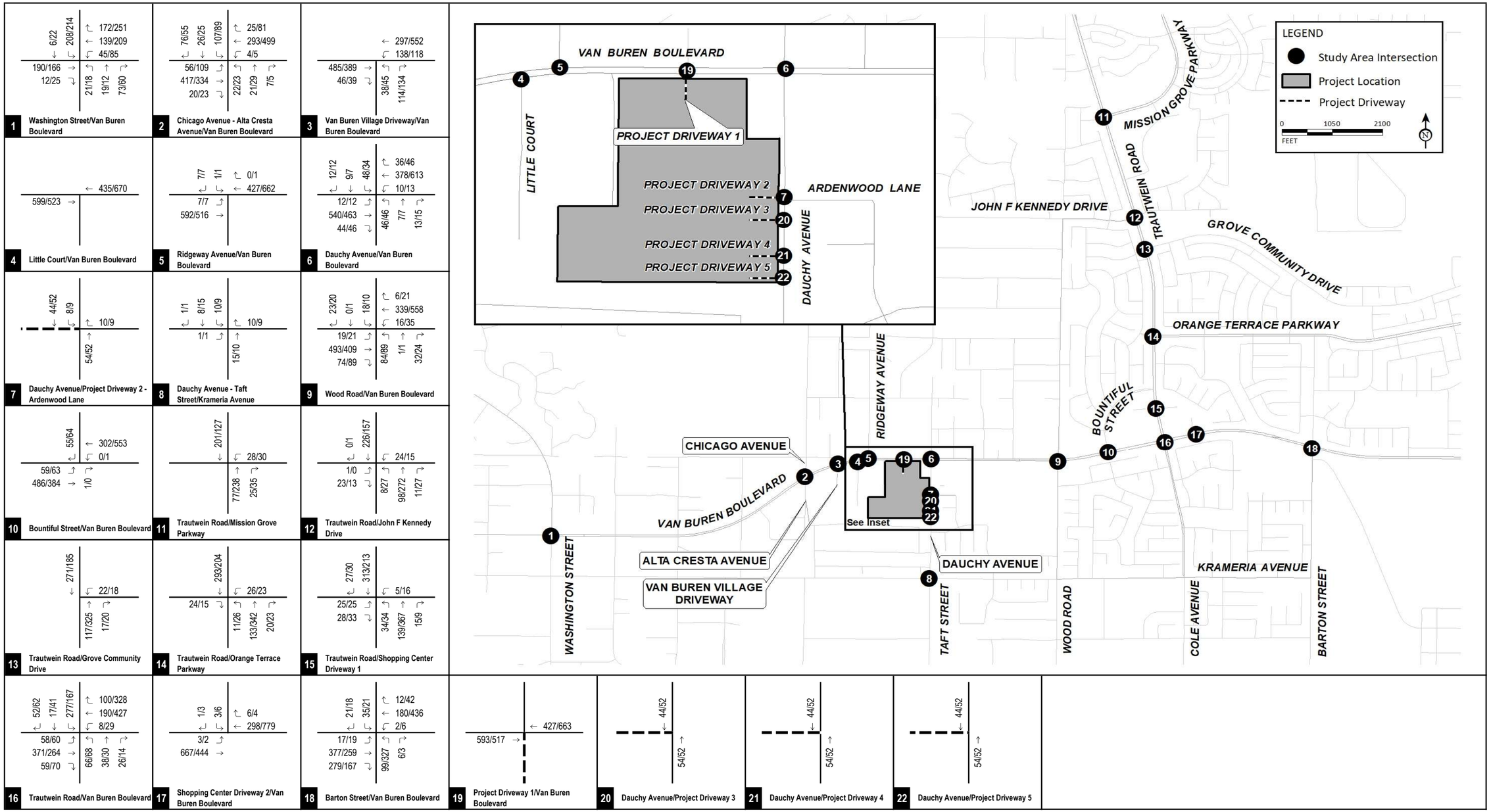
Legend
- Signal
- Stop Sign
- D De-Facto Right
- O Overlap
- Project Design Feature
- Project Driveway

FIGURE 6-2

Woodcrest Christian School Expansion Project

Traffic Operational Analysis

Opening Year (2029) and Cumulative (2045) with Project Study Intersection Geometrics and Traffic Control



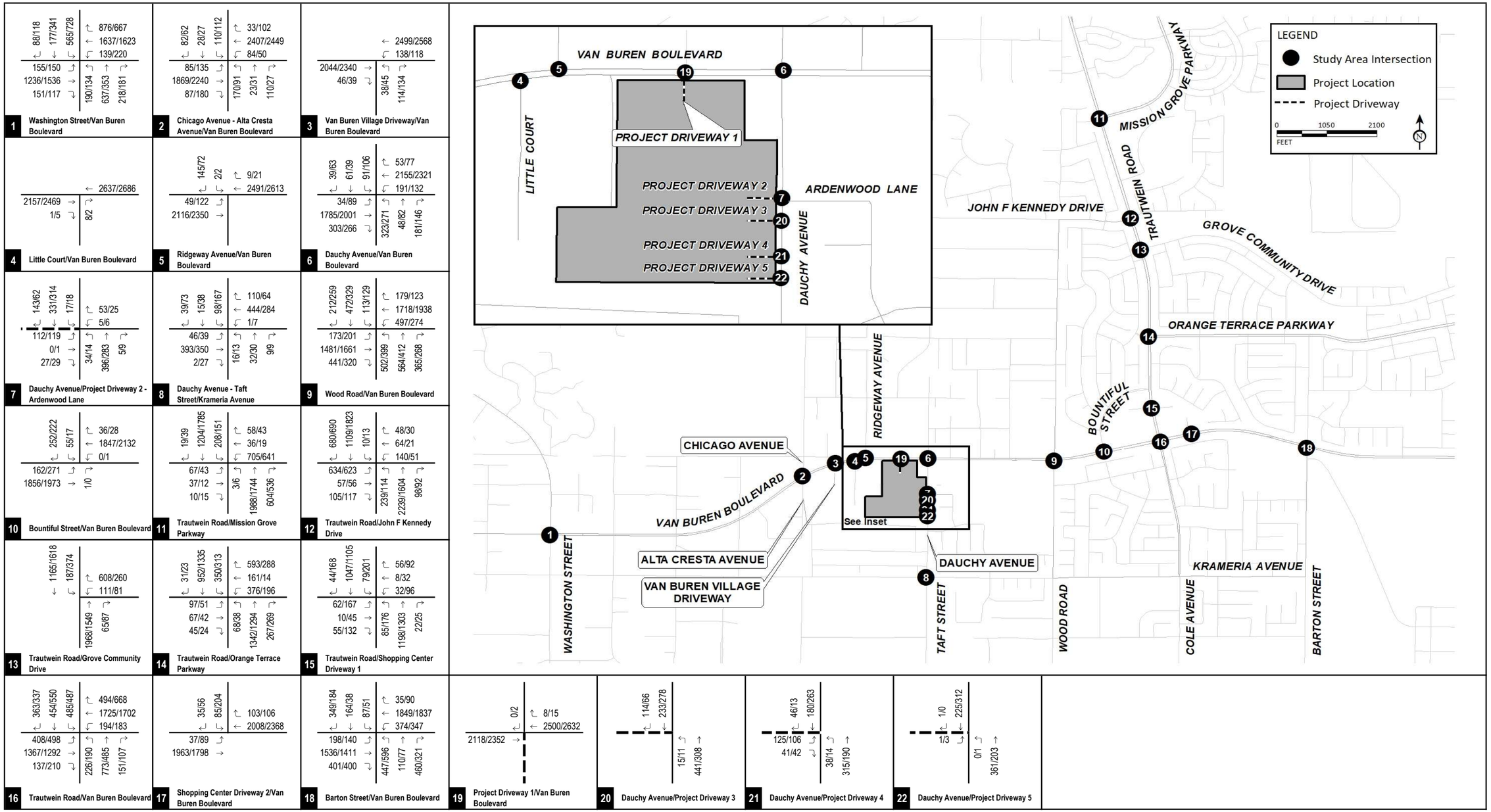
LSA

XXX/YYY
AM/Afternoon Peak Hour Trips

Project Driveway

FIGURE 6-4

Woodcrest Christian School Expansion Project
Traffic Operational Analysis
Cumulative Projects Trip Assignment



LSA

XXXX/YYYY
AM/Afternoon Peak Hour Trips

Project Driveway

FIGURE 6-5

Woodcrest Christian School Expansion Project
Traffic Operational Analysis
Opening Year (2029) Peak Hour Traffic Volumes

LSA

Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	Afternoon Peak Hour[1] In	Afternoon Peak Hour[1] Out	Afternoon Peak Hour[1] Total	Daily
R1 .	**P18-0255 (Comercial Building and Drive Thru)**									
	17815 Van Buren Blvd	4.40	TSF							
	Trips/Unit[2]			22.75	21.86	44.61	17.18	15.85	33.03	467.48
	Trip Generation			100	96	196	76	70	146	2,057
	Pass-By Trips[3,4]			(25)	(24)	(49)	(19)	(18)	(37)	(514)
	Net Trip Generation			75	72	147	57	52	109	1,543
R2 .	**P20-0372 [Van Buren Village] (Daycare, Office, Medical Office Building, Retail, Fast Food Drive Thru, Coffee Shop, Casual Resturant)**									
	18233 Van Buren Blvd									
	Daycare Center	11.00	TSF							
	Trips/Unit[5]			5.83	5.17	11.00	5.23	5.89	11.12	47.62
	Trip Generation[5]			64	57	121	57	65	122	524
	Office	10.00	TSF							
	Trips/Unit[5]			1.00	0.16	1.16	0.18	0.97	1.15	9.74
	Trip Generation			10	2	12	2	10	12	97
	Internal Trip Capture[5]			0	0	0	0	0	0	(6)
	Net Trip Generation			10	2	12	2	10	12	91
	Medical-Dental Office Building	8.00	TSF							
	Trips/Unit[5]			2.17	0.61	2.78	0.97	2.49	3.46	34.80
	Trip Generation			17	5	22	8	20	28	278
	Internal Trip Capture[5]			0	0	0	0	(1)	(1)	(17)
	Net Trip Generation			17	5	22	8	19	27	261
	Retail	10.70	TSF							
	Trips/Unit[5]			0.58	0.36	0.94	1.83	1.98	3.81	37.75
	Trip Generation			6	4	10	20	21	41	404
	Internal Trip Capture[5]			0	0	0	(1)	(1)	(2)	(24)
			Sub-Total	6	4	10	19	20	39	380
	Pass-By Trips[5]			(1)	0	(1)	(6)	(7)	(13)	(38)
	Net Trip Generation			5	4	9	13	13	26	342
	Fast-Food with Drive-Through	2.38	TSF							
	Trips/Unit[5]			20.50	19.69	40.19	16.99	15.68	32.67	470.95
	Trip Generation			49	47	96	41	37	78	1,119
	Internal Trip Capture[5]			0	0	0	(2)	(1)	(3)	(67)
			Sub-Total	49	47	96	39	36	75	1,052
	Pass-By Trips[5]			(24)	(23)	(47)	(20)	(18)	(38)	(515)
	Net Trip Generation			25	24	49	19	18	37	537
	Coffee Shop	2.61	TSF							
	Trips/Unit[5]			45.38	43.61	88.99	21.69	21.69	43.38	820.38
	Trip Generation			118	114	232	57	56	113	2,140
	Internal Trip Capture[5]			0	0	0	(2)	(3)	(5)	(128)
			Sub-Total	118	114	232	55	53	108	2,012
	Pass-By Trips[5]			(59)	(57)	(116)	(14)	(13)	(27)	(503)
	Net Trip Generation			59	57	116	41	40	81	1,509
	Fast Casual Resturant	3.80	TSF							
	Trips/Unit[5]			1.39	0.68	2.07	7.77	6.36	14.13	315.17
	Trip Generation			5	3	8	30	24	54	1,199
	Internal Trip Capture[5]			0	0	0	(1)	(1)	(2)	(72)
			Sub-Total	5	3	8	29	23	52	1,127
	Pass-By Trips[5]			(1)	0	(1)	(12)	(10)	(22)	(113)
	Net Trip Generation			4	3	7	17	13	30	1,014
			Gross Trip Generations	269	232	501	215	233	448	5,761
			Total Internal Capture	0	0	0	(6)	(7)	(13)	(314)
			Total Pass-By Trips	(85)	(80)	(165)	(52)	(48)	(100)	(1,169)
			Net Trip Generation	184	152	336	157	178	335	4,278

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Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	Afternoon Peak Hour[1] In	Afternoon Peak Hour[1] Out	Afternoon Peak Hour[1] Total	Daily
R3 .	**P19-0042 (Denny's Resturant and Office Building)**									
	18451 Van Buren Blvd									
	High-Turnover (Sit-Down) Resturant	4.30	TSF							
	Trips/Unit[6]			5.26	4.31	9.57	5.52	3.53	9.05	107.20
	Trip Generation			23	19	42	24	15	39	461
	Pass-By Trips[7,8]			0	0	0	(6)	(4)	(10)	(115)
	Net Trip Generation			23	19	42	18	11	29	346
	Office	9.90	TSF							
	Trips/Unit[9]			1.37	0.30	1.67	0.73	1.43	2.16	14.39
	Trip Generation			14	3	17	7	14	21	142
			Gross Trip Generation	37	22	59	31	29	60	603
			Total Pass-By Trips	0	0	0	(6)	(4)	(10)	(115)
			Net Trip Generation	37	22	59	25	25	50	488
R4 .	**P17-0688 (Automated Car Wash)**									
	18806 Van Buren Blvd	5.40	TSF							
	Trips/Unit[10]			5.66	3.32	8.98	7.10	7.10	14.20	163.09
	Trip Generation			31	18	49	38	38	76	881
R5 .	**P20-0385 (Tenative Tract Map 37733 - Single Family Residential)**									
	18875 Lurin Ave	40	DU							
	Trips/Unit[11]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			7	21	28	24	14	38	377
R6 .	**PR-2021-001053 (Tentative Tract Map 38094 - Single Family Residential)**									
	Wood Rd/Krameria Ave	72	DU							
	Trips/Unit[11]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			13	37	50	42	25	67	679
R7 .	**P20-0018 (Tenative Tract Map 37731 - Residential)**									
	19331 Lurin Ave	138	DU							
	Trips/Unit[11]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			25	72	97	81	48	129	1,301
R8 .	**R19-0151 (Health and Fitness Center)**									
	8719 Trautwein Rd	21.7	TSF							
	Trips/Unit[12,13]			0.67	0.64	1.31	1.97	1.48	3.45	23.80
	Trip Generation			15	14	29	43	32	75	516
R9 .	**P19-0022 (Panera Bread with Drive Thru)**									
	19260 Van Buren Blvd	4.3	TSF							
	Trips/Unit[2]			22.75	21.86	44.61	17.18	15.85	33.03	467.48
	Trip Generation			98	94	192	74	68	142	2,019
	Pass-By Trips[3,4]			(25)	(24)	(49)	(19)	(17)	(36)	(505)
	Net Trip Generation			73	70	143	55	51	106	1,514

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Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	Afternoon Peak Hour[1] In	Afternoon Peak Hour[1] Out	Afternoon Peak Hour[1] Total	Daily
C1 .	**PAR210018 (Market, Retail Shop, and Two Fast Food Resturant with Drive Thru)**									
	16261 Washington St									
	Shopping Plaza (40-150k)	53.52	TSF							
	Trips/Unit[14]			2.19	1.34	3.53	4.33	4.70	9.03	94.49
	Trip Generation			117	72	189	232	252	484	5,057
	Pass-By Trips[7,15]			0	0	0	(58)	(63)	(121)	(1,264)
	Net Trip Generation			117	72	189	174	189	363	3,793
	Drive Thru Resturant	6.0	TSF							
	Trips/Unit[2]			22.75	21.86	44.61	17.18	15.85	33.03	467.48
	Trip Generation			137	131	268	103	95	198	2,805
	Pass-By Trips[3,4]			(34)	(33)	(67)	(26)	(24)	(50)	(701)
	Net Trip Generation			103	98	201	77	71	148	2,104
		Gross Trip Generation		254	203	457	335	347	682	7,862
		Total Pass-By Trips		(34)	(33)	(67)	(84)	(87)	(171)	(1,965)
		Net Trip Generation		220	170	390	251	260	511	5,897
C2 .	**PAR200001 (Pre-Application Review - Fast Food Drive Thru)**									
	16935 Van Buren Blvd	4.7	TSF							
	Trips/Unit[2]			22.75	21.86	44.61	17.18	15.85	33.03	467.48
	Trip Generation			107	103	210	81	74	155	2,197
	Pass-By Trips[3,4]			(27)	(26)	(53)	(20)	(19)	(39)	(549)
	Net Trip Generation			80	77	157	61	55	116	1,648
C3 .	**PM37101 (Tenative Parcel Map - Residential)**									
	17220 Washington St	4	DU							
	Trips/Unit[11]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			1	2	3	2	1	3	38
C4 .	**CUP180016 (Tractor Supply Store)**									
	South of Van Buren Blvd between Washington St and Gardner Ave	18.8	TSF							
	Trips/Unit[16]			0.23	0.20	0.43	0.66	0.74	1.40	3.79
	Trip Generation			4	4	8	12	14	26	71
C5 .	**PAR200047TR36639E01 (Pre-Application Review - Residential)**									
	17010 Washington St	140	DU							
	Trips/Unit[11]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			25	73	98	83	49	132	1,320
C6 .	**CUP03766 (Car Wash with Office)**									
	16270 Gardner Ave	4.8	TSF							
	Trips/Unit[10]			5.66	3.32	8.98	7.10	7.10	14.20	163.09
	Trip Generation			27	16	43	34	34	68	783
C7 .	**CUP170002 (Storage Yard with Office)**									
	17333 Van Buren Blvd	4.4	TSF							
	Trips/Unit[17]			1.23	0.43	1.66	0.62	1.31	1.93	9.82
	Trip Generation			5	2	7	3	6	9	43
C8 .	**TR36763 (Tract Map - Residential)**									
	Northwest Corner of Roberts Rd and Kross Rd	24	DU							
	Trips/Unit[11]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			4	12	16	14	8	22	226
C9 .	**PPT180002 (Drive Thru Resturant)**									
	Northeast Corner of Gamble Ave and Van Buren Blvd	2.1	TSF							
	Trips/Unit[2]			22.75	21.86	44.61	17.18	15.85	33.03	467.48
	Trip Generation			48	46	94	36	33	69	982
	Pass-By Trips[3,4]			(12)	(12)	(24)	(9)	(8)	(17)	(246)
	Net Trip Generation			36	34	70	27	25	52	736
C10 .	**PM37340 (Tentative Parcel Map - Residential)**									
	15600 Chicago Ave	2	DU							
	Trips/Unit[11]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			0	1	1	1	1	2	19
C11 .	**PAR210156PM37402 (Pre-Application Review - Residential)**									
	15701 Chicago Ave	273	DU							
	Trips/Unit[11]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			49	142	191	161	96	257	2,574

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Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	Afternoon Peak Hour[1] In	Afternoon Peak Hour[1] Out	Afternoon Peak Hour[1] Total	Daily
C12 .	**CUP190021 (Gas Station with Convenience Store and Car Wash)**									
	Northeast Corner of Chicago Ave and Van Buren Blvd	16	VFP							
	Trips/Unit[18]			6.36	6.11	12.47	7.13	6.86	13.99	205.36
	Trip Generation			102	98	200	114	110	224	3,286
	Pass-By Trips[18]			(26)	(25)	(51)	(29)	(28)	(57)	(822)
	Net Trip Generation			76	73	149	85	82	167	2,464
C13 .	**PP26337 (Child Day Care Center with Classrooms and Office)**									
	Northeast Corner of Eastern Terminus of Iris Ave	48	STU							
	Trips/Unit[19]			0.41	0.37	0.78	0.37	0.42	0.79	4.09
	Trip Generation			20	18	38	18	20	38	196
C14 .	**PPT210010 (Drive Thru Resturant)**									
	18494 Van Buren Rd	3.0	TSF							
	Trips/Unit[2]			22.75	21.86	44.61	17.18	15.85	33.03	467.48
	Trip Generation			68	66	134	52	48	100	1,402
	Pass-By Trips[3,4]			(17)	(17)	(34)	(13)	(12)	(25)	(351)
	Net Trip Generation			51	49	100	39	36	75	1,051
C15 .	**TPM38026 (Tenative Parcel Map Division)**									
	17140 Parsons Rd	2	DU							
	Trips/Unit[11]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			0	1	1	1	1	2	19
C16 .	**TTM37594 (Tenative Tract Map - Residential Division)**									
	Northeast Corner of Parsons Rd and Nandina Ave	5	DU							
	Trips/Unit[11]			0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation			1	3	4	3	2	5	47
C17 .	**PP25382 (Commerical Office)**									
	Southeast Corner of Barton St and Van Buren Blvd	10.3	TSF							
	Trips/Unit[20]			1.34	0.18	1.52	0.24	1.20	1.44	10.84
	Trip Generation			14	2	16	2	12	14	112

LSA

Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	Afternoon Peak Hour[1] In	Afternoon Peak Hour[1] Out	Afternoon Peak Hour[1] Total	Daily
J1 .	**March Business Center (Meridian South Campus: March JPA SP-1)**									
	Office[21]	388.0	TSF							
	Passenger Car Trip Generation			331	53	384	65	338	403	3,874
	Truck Trip Generation			7	1	8	1	7	8	80
	Subtotal Trip Generation			338	54	392	66	345	411	3,954
	Commerical Retail[21]	282.7	TSF							
	Passenger Car Trip Generation			303	185	488	481	510	991	10,162
	Truck Trip Generation			6	4	10	10	10	20	208
	Subtotal Trip Generation			309	189	498	491	520	1,011	10,370
	Business Park Office[21]	529.3	TSF							
	Passenger Car Trip Generation			441	73	514	88	457	545	5,234
	Truck Trip Generation			9	1	10	2	9	11	108
	Subtotal Trip Generation			450	74	524	90	466	556	5,342
	Business Park Warehouse[21]	1234.9	TSF							
	Passenger Car Trip Generation			92	28	120	37	100	137	1,262
	Truck Trip Generation			41	12	53	10	28	38	736
	Subtotal Trip Generation			133	40	173	47	128	175	1,998
	Industrial Warehousing[21]	274.4	TSF							
	Passenger Car Trip Generation			31	9	40	13	34	47	302
	Truck Trip Generation			14	4	18	3	10	13	178
	Subtotal Trip Generation			45	13	58	16	44	60	480
	Industrial High-Cube Cold Storage Warehouse[21]	700.0	TSF							
	Passenger Car Trip Generation			41	12	53	18	48	66	1,000
	Truck Trip Generation			18	6	24	5	13	18	584
	Subtotal Trip Generation			59	18	77	23	61	84	1,584
	Industrial High-Cube Transload Short-Term Warehouse (Building D)[21]	800.0	TSF							
	Passenger Car Trip Generation			34	10	44	17	45	63	706
	Truck Trip Generation			15	5	20	5	13	17	414
	Subtotal Trip Generation			49	15	64	22	58	80	1,120
	Dog Park & Paseo[21]	6.2	Ac							
	Trip Generation			0	0	0	13	10	23	94
	LGB6 (Building A)[21]	1000.0	TSF							
	Passenger Car Trip Generation			222	87	309	127	235	362	2,306
	Truck Trip Generation			57	22	79	33	60	93	592
	Subtotal Trip Generation			279	109	388	160	295	455	2,898
	Parcel Delivery Site (Building B + Parking Lot)[21]	1000.0	TSF							
	Passenger Car Trip Generation			341	132	473	221	410	631	2,952
	Truck Trip Generation			151	59	210	61	113	174	1,720
	Subtotal Trip Generation			492	191	683	282	523	805	4,672
	Commercial (Parcel 72)[21]	15.5	TSF							
	Passenger Car Trip Generation			64	55	119	65	70	135	1,502
	Truck Trip Generation			1	1	2	1	1	2	32
	Subtotal Trip Generation			65	56	121	66	71	137	1,534
	Warehousing (Building C)[21]	500.0	TSF							
	Passenger Car Trip Generation			46	14	60	20	54	74	550
	Truck Trip Generation			21	6	27	5	15	20	320
	Subtotal Trip Generation			67	20	87	25	69	94	870
	Gross Passenger Car Trip Generations			1,946	658	2,604	1,165	2,311	3,477	29,944
	Gross Truck Trip Generations			340	121	461	136	279	414	4,972
	Gross Trip Generation			2,286	779	3,065	1,301	2,590	3,891	34,916
	Passenger Car Internal Reduction (10%)			(195)	(66)	(260)	(117)	(231)	(348)	(2,994)
	Truck Internal Reduction (10%)			(34)	(12)	(46)	(14)	(28)	(41)	(497)
	Net Passenger Trip Generation			1,751	592	2,344	1,049	2,080	3,129	26,950
	Net Truck Trip Generation			306	109	415	122	251	373	4,475
	Net Truck Trip Generation (PCE)			612	218	830	245	502	745	8,950
	Total Trip Generation			2,057	701	2,759	1,171	2,331	3,502	31,424
	Total Trip Generation (PCE)			2,363	810	3,173	1,293	2,582	3,875	35,899
	Total Gross Trip Generation			**3,610**	**2,177**	**5,787**	**2,877**	**4,003**	**6,880**	**70,287**
	Total Pass-By Trips			**(251)**	**(241)**	**(492)**	**(251)**	**(241)**	**(492)**	**(6,236)**
	Total Internal Trips			**(229)**	**(78)**	**(307)**	**(136)**	**(266)**	**(402)**	**(3,806)**
	Total Net Trip Generation			**3,130**	**1,858**	**4,989**	**2,490**	**3,496**	**5,986**	**60,245**
	Total Net Trip Generation (PCE)			**3,409**	**1,951**	**5,360**	**2,578**	**3,713**	**6,291**	**63,937**

LSA

Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	Afternoon Peak Hour[1] In	Afternoon Peak Hour[1] Out	Afternoon Peak Hour[1] Total	Daily

Notes:

TSF = Thousand Square Feet; DU = Dwelling Units; VFP = Vehicle Fueling Positions; STU = Student; Ac = Acres

[1] There is no data available for afternoon peak hour trips; therefore, the P.M. peak hour was applied for the afternoon trip generation.

[2] Rates based on the Institue of Transportation Engineers (ITE) Trip Generation Manual (11th Edition) for Land Use 934 - "Fast-Food Resturant with Drive-Through Window", Setting Location - "General Urban/Suburban."

[3] Pass-by rates based on Land Use 934 – "Fast-Food Resturant with Drive-Through" from ITE *Trip Generation Manual,* 11th Edition. As per the City of Riverside Public Works Department Traffic Impact Analysis Preparation Guide, dated December 2017, the pass-by rate shall not be assumed to exceed 25%. Since the pass-by rates provideds in the ITE *Trip Generation Manual* are higher than 25%, a pass-by rate of 25% was used.

[4] There is no data available for daily pass-by trips; therefore, the average of AM and PM pass-by rate was applied for the daily trip generation.

[5] Rates, trip generation, internal trip capture, and pass-by rates based on Linscott Law & Greenspan *Van Buren Village Traffic Circulation Anlaysis Report* .

[6] Rates based on the *ITE Trip Generation Manual* (11th Edition) for Land Use 932 - "High-Turnover (Sit-Down) Restaurant", Setting Location - "General Urban/Suburban."

[7] There is no data available for AM peak hour and daily pass-by trips; therefore, the PM pass-by rate was applied for the daily trip generation.

[8] Pass-by rates based on Land Use 932 – "High-Turnover (Sit-Down) Restaurant" from ITE *Trip Generation Manual,* 11th Edition. As per the City of Riverside Public Works Department Traffic Impact Analysis Preparation Guide, dated December 2017, the pass-by rate shall not be assumed to exceed 25%. Since the pass-by rates provideds in the ITE *Trip Generation Manual* are higher than 25%, a pass-by rate of 25% was used.

[9] Rates based on the ITE *Trip Generation Manua* l (11th Edition) for Land Use 712 - "Small Office Building", Setting Location - "General Urban/Suburban."

[10] Trip generation rates obtained from the ITE *Trip Generation Manual* (11th Edition) for Land Use 948 - "Automated Car Wash", Setting/Location - "General Urban/Suburban." Only P.M. peak hour rates are available for this land use in the ITE manual. The AM peak hour and daily rates were obtained by using the PM peak hour trip generation rate ratio between Land Use 948 and Land Use 949 - "Car Wash and Detail Center" and applying the ratio to the PM peak hour and daily rates for Land Use 949. Also, the PM peak hour splits for Land Use 948 were used for the AM peak hour.

[11] Rates based on the ITE *Trip* Generation Manual (11th Edition) for Land Use 210 - "Single-Family Detached Housing", Setting Location - "General Urban/Suburban."

[12] Rates based on the ITE *Trip* Generation Manual (11th Edition) for Land Use 492 - "Health/Fitness Club", Setting Location - "General Urban/Suburban."

[13] There is no data on daily trip generation rates for Land Use 492 - "Health/Fitness Club" the daily rate was calculated by ten times the average AM and PM peak hour trips.

[14] Rates based on the ITE *Trip* Generation Manual (11th Edition) for Land Use 821 - "Shopping Plaza (40-150k) - Supermarket - Yes", Setting Location - "General Urban/Suburban."

[15] Pass-by rates based on Land Use 821 – "Shopping Plaza (40 - 150k)" from ITE *Trip Generation Manual,* 11th Edition. As per the City of Riverside Public Works Department Traffic Impact Analysis Preparation Guide , dated December 2017, the pass-by rate shall not be assumed to exceed 25%. Since the pass-by rates provideds in the ITE *Trip Generation Manual* are higher than 25%, a pass-by rate of 25% was used.

[16] Trip generation rates obtained from the ITE *Trip Generation Manual* (11th Edition) for Land Use 810 - "Tractor Supply Store", Setting/Location - "General Urban/Suburban." Only P.M. peak hour rates are available for this land use in the ITE manual. The AM peak hour and daily rates were obtained by using the PM peak hour trip generation rate ratio between Land Use 810 and Land Use 816 - "Hardware/Paint Store" and applying the ratio to the PM peak hour and daily rates for Land Use 816. Also, the PM peak hour splits for Land Use 816 were used for the AM peak hour.

[17] Rates based on the ITE *Trip* Generation Manual (11th Edition) for Land Use 180 - "Specialty Trade Contractor", Setting Location - "General Urban/Suburban."

[18] Rates, trip generation, internal trip capture, and pass-by rates based on LSA *Van Buren/Chicago Gasoline Station Project Traffic Impact Analysis* .

[19] Rates based on the ITE *Trip* Generation Manual (11th Edition) for Land Use 565 - "Day Care Center", Setting Location - "General Urban/Suburban."

[20] Rates based on the ITE *Trip* Generation Manual (11th Edition) for Land Use 710 - "General Office Building", Setting Location - "General Urban/Suburban."

[21] Trip generation based on the *Meridian South Campus Traffic Impact Analysis* - March Joint Powers Authority.

LSA

Table 6-B - Opening Year (2029) Roadway Segment Daily Traffic Volumes

Roadway	#	Segment	Existing (2021) ADT	2021 - 2029 Growth	Cumulative Projects Trips	Opening Year (2029) Without Project ADT	Project Trips	Opening Year (2029) With Project ADT
Van Buren Boulevard	1	Between Little Court and Dauchy Avenue	39,223	6,276	12,782	58,281	260	58,541
Dauchy Avenue	2	Between Van Buren Boulevard and Ardenwood Lane	5,537	886	1,202	7,625	724	8,349
	3	Between Ardenwood Lane and Hawksbury Drive	3,247	520	1,202	4,969	430	5,399

LSA

Table 6-C - Opening Year (2029) Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Without Project						With Project						Project Related Operational Deficiency?
				A.M. Peak Hour			Afternoon Peak Hour			A.M. Peak Hour			Afternoon Peak Hour		
			Control	Delay (sec.)	LOS		Delay (sec.)	LOS		Control	Delay (sec.)	LOS		Delay (sec.)	LOS		
1 . Washington Street/Van Buren Boulevard	County of Riverside	D	Signal	41.2	D		67.6	**E**	*	Signal	42.9	D		67.9	**E**	*	**Yes**
2 . Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	D	Signal	76.5	**E**	*	71.6	**E**	*	Signal	82.3	**F**	*	76.4	**E**	*	**Yes**
3 . Van Buren Village Driveway/Van Buren Boulevard	County of Riverside/City of Riverside	D	Signal	7.5	A		9.2	A		Signal	7.8	A		9.9	A		No
4 . Little Court/Van Buren Boulevard	County of Riverside/City of Riverside	D	OWSC	26.1	D		68.4	**F**	*	OWSC	29.6	D		>100	**F**	*	**Yes**
5 . Ridgeway Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	D	OWSC	>100	**F**	*	-	**F**	*	OWSC	>100	**F**	*	-	**F**	*	**Yes**
6 . Dauchy Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	D	Signal	79.8	**E**	*	>100	**F**	*	Signal	>100	**F**	*	>100	**F**	*	**Yes**
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane	City of Riverside	C	TWSC	49.2	**E**	*	44.2	**E**	*	TWSC	>100	**F**	*	97.9	**F**	*	**Yes**
8 . Dauchy Avenue - Taft Street/Krameria Avenue	City of Riverside	C	AWSC	63.7	**F**	*	40.8	**E**	*	AWSC	75.2	**F**	*	45.7	**E**	*	**Yes**
9 . Wood Road/Van Buren Boulevard	City of Riverside	D	Signal	53.4	D		32.3	C		Signal	53.8	D		32.2	C		No
10 . Bountiful Street/Van Buren Boulevard	City of Riverside	D	Signal	7.2	A		7.1	A		Signal	7.1	A		7.2	A		No
11 . Trautwein Road/Mission Grove Parkway	City of Riverside	D	Signal	88.4	**F**	*	69.3	**E**	*	Signal	88.6	**F**	*	70.7	**E**	*	**Yes**
12 . Trautwein Road/John F Kennedy Drive	City of Riverside	D	Signal	85.3	**F**	*	45.7	D		Signal	88.3	**F**	*	45.8	D		**Yes**
13 . Trautwein Road/Grove Community Drive	City of Riverside	D	Signal	36.0	D		9.1	A		Signal	36.0	D		9.1	A		No
14 . Trautwein Road/Orange Terrace Parkway	City of Riverside	D	Signal	66.2	**E**	*	13.8	B		Signal	73.0	**E**	*	19.0	B		**Yes**
15 . Trautwein Road/Shopping Center Driveway 1	City of Riverside	D	Signal	12.5	B		18.2	B		Signal	16.1	B		24.7	C		No
16 . Trautwein Road/Van Buren Boulevard	City of Riverside	D	Signal	45.8	D		61.5	**E**	*	Signal	46.9	D		73.4	**E**	*	**Yes**
17 . Shopping Center Driveway 2/Van Buren Boulevard	City of Riverside	D	Signal	11.7	B		12.7	B		Signal	13.7	B		12.6	B		No
18 . Barton Street/Van Buren Boulevard	County of Riverside/City of Riverside	D	Signal	55.7	**E**	*	>100	**F**	*	Signal	57.3	**E**	*	>100	**F**	*	**Yes**
19 . Project Driveway 1/Van Buren Boulevard	County of Riverside/City of Riverside	D	TWSC	0.0	A		-	**F**	*	TWSC	0.0	A		-	**F**	*	**Yes**
20 . Dauchy Avenue/Project Driveway 3[1]	City of Riverside	C	-	8.1	A		8.2	A		-	8.4	A		8.3	A		No
21 . Dauchy Avenue/Project Driveway 4	City of Riverside	C	OWSC	19.1	C		16.2	C		OWSC	25.6	**D**	*	19.1	C		**Yes**
22 . Dauchy Avenue/Project Driveway 5	City of Riverside	C	OWSC	13.6	B		13.2	B		OWSC	14.0	B		13.5	B		No

Notes:

OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; AWSC = All-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

[1] This intersection has no stop control, but conflicting movements exist.
Based on Synchro results, intersections where the delay is represented with a dash (-) has through volumes that block the turn movements throughout the peak hour. As such, Synchro does not report a delay at these intersections for the blocked turn movements. Therefore, the worst-case movements at these intersections operate at LOS F.

LSA

Table 6-D - Opening Year (2029) Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Classification[1]	LOS Standard	Number of Lanes	Without Project				With Project				V/C Ratio Difference	Project Related Operational Deficiency?[3]
					Roadway Capacity[2]	Daily Volume	V/C Ratio	LOS	Roadway Capacity[2]	Daily Volume	V/C Ratio	LOS		
Segments on Van Buren Boulevard														
1 . Between Little Court and Dauchy Avenue	County of Riverside/City of Riverside	Arterial (120')	D	4	36,400	58,290	1.60	F *	36,400	58,550	1.61	F *	0.01	No
Segments on Dauchy Avenue														
2 . Between Van Buren Boulevard and Ardenwood Lane	City of Riverside	Local	D	2	3,400	7,630	2.24	F *	3,400	8,350	2.46	F *	0.21	**Yes**
3 . Between Ardenwood Lane and Hawksbury Drive	City of Riverside	Local	D	2	3,400	4,970	1.46	F *	3,400	5,400	1.59	F *	0.13	**Yes**

Notes:

LOS = Level of Service

* Exceeds LOS Standard

[1] Classifications for all segments have been obtained from the City of Riverside General Plan Circulation and Community Mobility Element Master Plan of Roadways.

[2] Roadway capacities have been obtained from the City of Riverside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (dated July 2020).

[3] Operational deficiency determined based on the criteria included in the City of Riverside*Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (dated July 2020).

7.0 CUMULATIVE (2045) ANALYSIS

7.1 CUMULATIVE (2045) WITHOUT PROJECT TRAFFIC VOLUMES

Cumulative (2045) traffic without projects volumes were developed using traffic forecasts from RIVCOM. The methodology used to develop Cumulative (2045) without project traffic volumes at all study intersections and roadway segments is consistent with the recommended methodologies outlined in the National Cooperative Highway Research Program (NCHRP) as well as local procedures for post-processing of modeled traffic volumes.

Figure 7-1 illustrates the cumulative peak hour traffic volumes at study intersections. Table 7-A summarizes cumulative daily traffic volumes at study area roadway segments.

7.2 CUMULATIVE (2045) WITH PROJECT TRAFFIC VOLUMES

Cumulative (2045) with project traffic volumes were developed by adding project traffic to the cumulative without project traffic volumes.

Figure 7-2 illustrates the cumulative with project peak hour traffic volumes at study intersections. Table 7-A summarizes cumulative with project daily traffic volumes at study area roadway segments.

Detailed volume development worksheets are included in Appendix C.

7.3 CUMULATIVE (2045) WITHOUT PROJECT LEVELS OF SERVICE

7.3.1 Study Intersections

Previously referenced Figure 6-1 illustrates study intersections geometrics and traffic control under cumulative with project conditions. An intersection LOS analysis was conducted for cumulative without project conditions using the methodologies previously discussed. Table 7-B summarizes the results of the analysis and shows that the following intersections are forecast to operate at a deficient LOS under cumulative without project conditions:

1. Washington Street/Van Buren Boulevard (both a.m. and afternoon peak hours);
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
4. Little Court/Van Buren Boulevard (afternoon peak hour only);
5. Ridgeway Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
6. Dauchy Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane (both a.m. and afternoon peak hours);
8. Dauchy Avenue – Taft Street/Krameria Avenue (both a.m. and afternoon peak hours);
11. Trautwein Road/Mission Grove Parkway (both a.m. and afternoon peak hours);

12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only);
14. Trautwein Road/Orange Terrace Parkway (a.m. peak hour only);
16. Trautwein Road/Van Buren Boulevard (afternoon peak hour only);
18. Barton Street/Van Buren Boulevard (both a.m. and afternoon peak hours); and
19. Project Driveway 1/Van Buren Boulevard (both a.m. and afternoon peak hours).

All other intersections are forecast to operate at a satisfactory LOS.

7.3.2 Roadway Segments

A roadway segment LOS analysis was conducted for cumulative without project conditions using the methodologies previously discussed. Table 7-C summarizes the results of this analysis and shows that all study roadway segments are forecast to operate at a deficient LOS under cumulative without project conditions. The following is the list of roadway segments operating at a deficient LOS:

1. Van Buren Boulevard, between Little Court and Dauchy Avenue;
2. Dauchy Avenue, between Van Buren Blvd and Ardenwood Lane; and
3. Dauchy Avenue, between Ardenwood Lane and Hawksbury Drive.

7.4 CUMULATIVE (2045) WITH PROJECT LEVELS OF SERVICE

7.4.1 Study Intersections

An intersection LOS analysis was conducted for cumulative with project conditions using methodologies previously discussed. Table 7-B summarizes the results of the analysis and shows that the following intersections are forecast to operate at a deficient LOS under cumulative with project conditions:

1. Washington Street/Van Buren Boulevard (both a.m. and afternoon peak hours);
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
4. Little Court/Van Buren Boulevard (both a.m. and afternoon peak hours);
5. Ridgeway Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
6. Dauchy Avenue/Van Buren Boulevard (both a.m. and afternoon peak hours);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane (both a.m. and afternoon peak hours);
8. Dauchy Avenue – Taft Street/Krameria Avenue (both a.m. and afternoon peak hours);
11. Trautwein Road/Mission Grove Parkway (both a.m. and afternoon peak hours);
12. Trautwein Road/John F Kennedy Drive (a.m. peak hour only);
14. Trautwein Road/Orange Terrace Parkway (a.m. peak hour only);

16. Trautwein Road/Van Buren Boulevard (afternoon peak hour only);
18. Barton Street/Van Buren Boulevard (both a.m. and afternoon peak hours);
19. Project Driveway 1/Van Buren Boulevard (both a.m. and afternoon peak hours); and
21. Dauchy Avenue/Project Driveway 4 (both a.m. and afternoon peak hours).

All of the study intersections with the exception of Dauchy Avenue/Project Driveway 4 are forecasted to operate at a deficient LOS even under cumulative without project conditions. Dauchy Avenue/Project Driveway 4 is forecast to operate at a deficient LOS in the with project conditions. Therefore, the project will contribute to the forecasted deficiency at the listed intersections. As such, improvements will be required where feasible.

All other intersections are forecast to operate at a satisfactory LOS under cumulative with project conditions.

Detailed Level of Service Worksheets are included in Appendix D.

7.4.2 Roadway Segments

A roadway segment LOS analysis was conducted for cumulative with project conditions using the methodologies previously discussed. Table 7-C summarizes the results of this analysis and shows that all study roadway segments are forecast to operate at a deficient LOS under cumulative with project conditions. The following is the list of roadway segments operating at a deficient LOS:

1. Van Buren Boulevard, between Little Court and Dauchy Avenue;
2. Dauchy Avenue, between Van Buren Blvd and Ardenwood Lane; and
3. Dauchy Avenue, between Ardenwood Lane and Hawksbury Drive.

All these segments are forecast to operate at a deficient LOS even under cumulative (2045) without project conditions.

Based on the criteria discussed in the “Levels of Service Procedures” section of this report, the project is forecast to create project related operational deficiencies for two of the three segments. The addition of project-related trips either causes the following roadway segments to degrade from acceptable LOS (A through D) to unacceptable levels (E or F) or increases V/C ratio by more than 5 percent when the roadway segment is operating at an unacceptable LOS under the no project scenario:

2. Dauchy Avenue, between Van Buren Blvd and Ardenwood Lane; and
3. Dauchy Avenue, between Ardenwood Lane and Hawksbury Drive.

Therefore, improvements will be required to offset the project related operational deficiencies at these segments. However, improvements are not feasible for any of these segments due to right-of-way constraints. As such, these segments will continue to operate at a deficiency.

7.5 LIST OF CHAPTER 7.0 FIGURES AND TABLES

- Figure 7-1: Cumulative (2045) without Project Peak Hour Traffic Volumes
- Figure 7-2: Cumulative (2045) with Project Peak Hour Traffic Volumes
- Table 7-A: Cumulative (2045) Roadway Segment Daily Traffic Volumes
- Table 7-B: Cumulative (2045) Intersection Levels of Service
- Table 7-C: Cumulative (2045) Roadway Segment Levels of Service

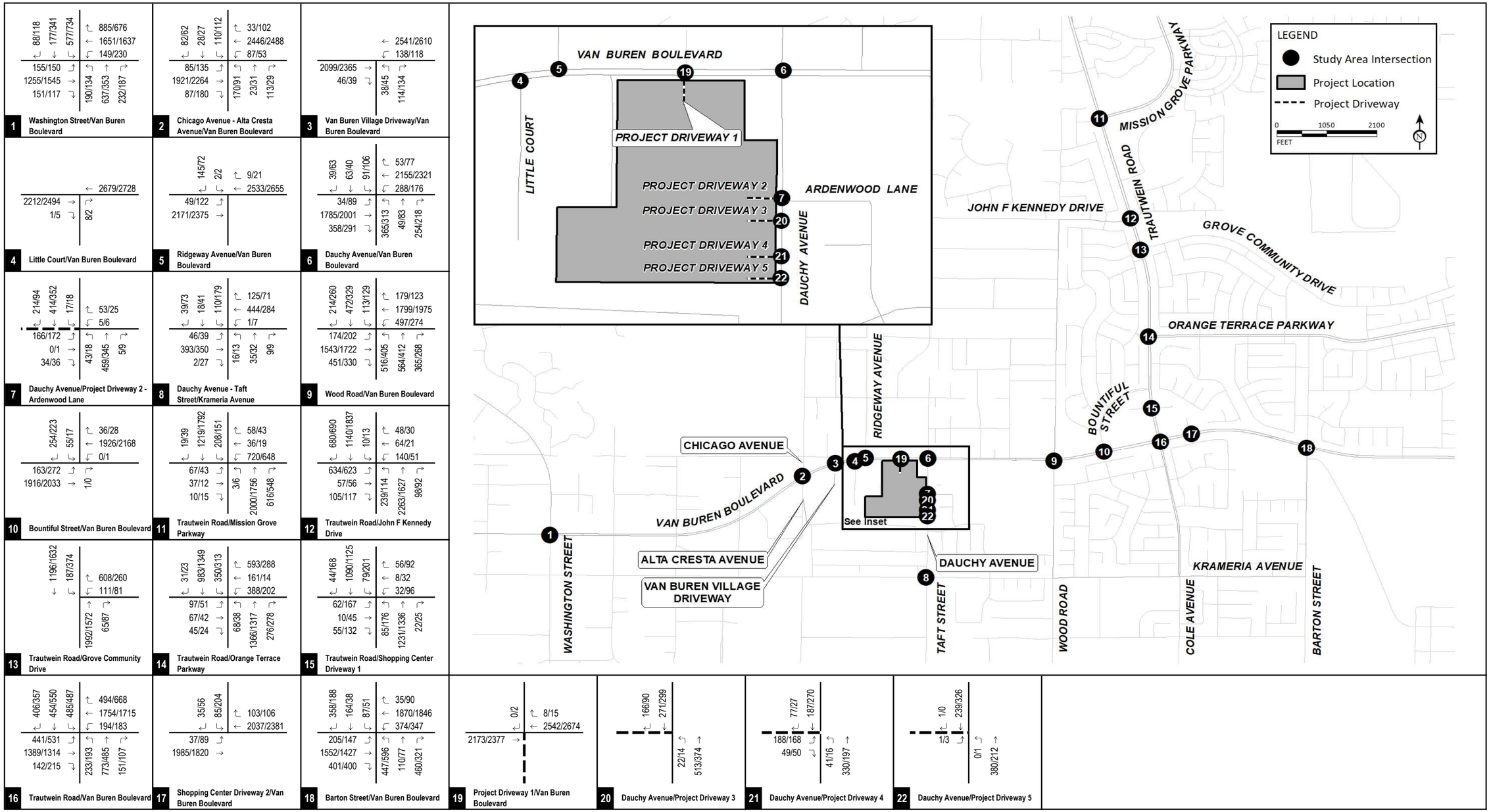
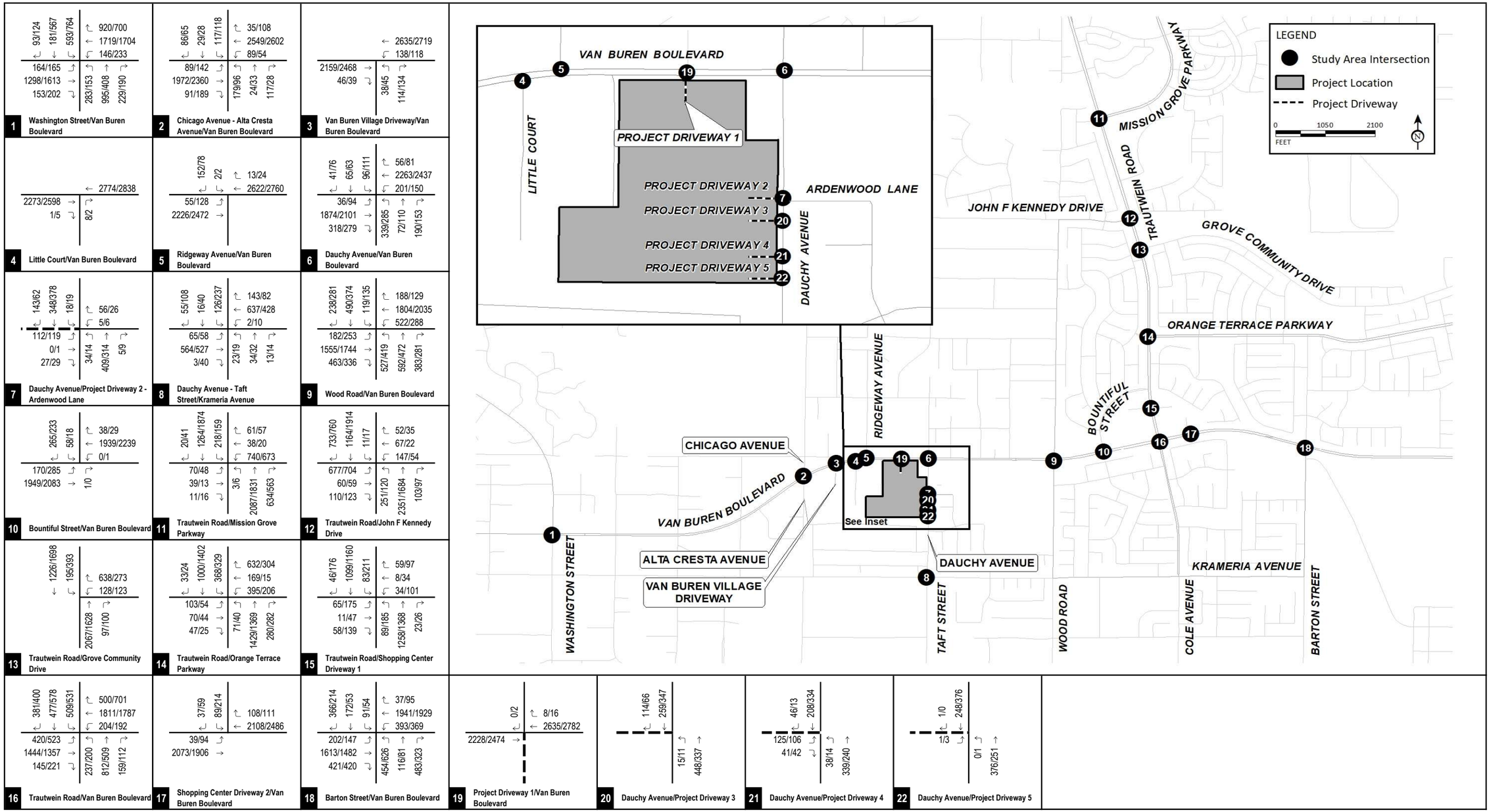


FIGURE 6-6

Woodcrest Christian School Expansion Project
Traffic Operational Analysis
Opening Year (2029) with Project Peak Hour Traffic Volumes



LSA

XXXX/YYYY
AM/Afternoon Peak Hour Trips

Project Driveway

FIGURE 7-1

Woodcrest Christian School Expansion Project
Traffic Operational Analysis
Cumulative (2045) Peak Hour Traffic Volumes

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\z60-Vol_Cumul_NP.xlsx (3/13/2024)

LSA

Table 7-A - Cumulative (2045) Roadway Segment Daily Traffic Volumes

Roadway	#	Segment	Cumulative (2045) Without Project ADT	Project Trips	Cumulative (2045) With Project ADT
Van Buren Boulevard	1	Between Little Court and Dauchy Avenue	61,195	260	61,455
Dauchy Avenue	2	Between Van Buren Boulevard and Ardenwood Lane	7,876	724	8,600
	3	Between Ardenwood Lane and Hawksbury Drive	5,586	430	6,016

LSA

Table 7-B - Cumulative (2045) Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Without Project						With Project						Project Related Operational Deficiency?
				A.M. Peak Hour			Afternoon Peak Hour			A.M. Peak Hour			Afternoon Peak Hour		
			Control	Delay (sec.)	LOS		Delay (sec.)	LOS	Control	Delay (sec.)	LOS		Delay (sec.)	LOS	
1 . Washington Street/Van Buren Boulevard	County of Riverside	D	Signal	68.8	E	*	68.1	E *	Signal	70.6	E	*	70.6	E *	Yes
2 . Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	D	Signal	76.9	E	*	81.4	F *	Signal	82.1	F	*	86.3	F *	Yes
3 . Van Buren Village Driveway/Van Buren Boulevard	County of Riverside/City of Riverside	D	Signal	8.8	A		14.9	B	Signal	10.3	B		17.6	B	No
4 . Little Court/Van Buren Boulevard	County of Riverside/City of Riverside	D	OWSC	34.4	D		>100	F *	OWSC	41.5	E	*	-	F *	Yes
5 . Ridgeway Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	D	OWSC	-	F	*	-	F *	OWSC	-	F	*	-	F *	Yes
6 . Dauchy Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	D	Signal	>100	F	*	>100	F *	Signal	>100	F	*	>100	F *	Yes
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane	City of Riverside	C	TWSC	58.1	F	*	75.4	F *	TWSC	>100	F	*	>100	F *	Yes
8 . Dauchy Avenue - Taft Street/Krameria Avenue	City of Riverside	C	AWSC	>100	F	*	>100	F *	AWSC	>100	F	*	>100	F *	Yes
9 . Wood Road/Van Buren Boulevard	City of Riverside	D	Signal	53.4	D		37.9	D	Signal	53.5	D		38.0	D	No
10 . Bountiful Street/Van Buren Boulevard	City of Riverside	D	Signal	7.5	A		8.4	A	Signal	7.4	A		8.3	A	No
11 . Trautwein Road/Mission Grove Parkway	City of Riverside	D	Signal	>100	F	*	85.9	F *	Signal	>100	F	*	88.0	F *	Yes
12 . Trautwein Road/John F Kennedy Drive	City of Riverside	D	Signal	95.2	F	*	50.2	D	Signal	99.9	F	*	50.4	D	Yes
13 . Trautwein Road/Grove Community Drive	City of Riverside	D	Signal	36.4	D		9.6	A	Signal	36.4	D		9.5	A	No
14 . Trautwein Road/Orange Terrace Parkway	City of Riverside	D	Signal	69.0	E	*	13.8	B	Signal	73.7	E	*	19.5	B	Yes
15 . Trautwein Road/Shopping Center Driveway 1	City of Riverside	D	Signal	15.9	B		18.7	B	Signal	15.9	B		25.5	C	No
16 . Trautwein Road/Van Buren Boulevard	City of Riverside	D	Signal	46.5	D		77.9	E *	Signal	47.7	D		82.5	F *	Yes
17 . Shopping Center Driveway 2/Van Buren Boulevard	City of Riverside	D	Signal	14.2	B		13.4	B	Signal	16.7	B		14.5	B	No
18 . Barton Street/Van Buren Boulevard	County of Riverside/City of Riverside	D	Signal	59.1	E	*	>100	F *	Signal	60.9	E	*	>100	F *	Yes
19 . Project Driveway 1/Van Buren Boulevard	County of Riverside/City of Riverside	D	TWSC	0.0	A		-	F *	TWSC	0.0	A		-	F *	Yes
20 . Dauchy Avenue/Project Driveway 3[1]	City of Riverside	C	-	8.2	A		8.4	A	-	8.5	A		8.5	A	No
21 . Dauchy Avenue/Project Driveway 4	City of Riverside	C	OWSC	21.2	C		20.2	C	OWSC	29.9	D	*	25.8	D *	Yes
22 . Dauchy Avenue/Project Driveway 5	City of Riverside	C	OWSC	14.0	B		14.9	B	OWSC	14.5	B		15.2	C	No

Notes:

OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; AWSC = All-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

[1] This intersection has no stop control, but conflicting movements exist.

Based on Synchro results, intersections where the delay is represented with a dash (-) has through volumes that block the turn movements throughout the peak hour. As such, Synchro does not report a delay at these intersections for the blocked turn movements. Therefore, the worst-case movements at these intersections operate at LOS F.

LSA

Table 7-C - Cumulative (2045) Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	General Plan Classification[1]	LOS Standard	Number of Lanes	Without Project				With Project				V/C Ratio Difference	Project Related Operational Deficiency?[3]
					Roadway Capacity[2]	Daily Volume	V/C Ratio	LOS	Roadway Capacity[2]	Daily Volume	V/C Ratio	LOS		
Segments on Van Buren Boulevard														
1 . Between Little Court and Dauchy Avenue	County of Riverside/City of Riverside	Arterial (120')	D	4	36,400	61,200	1.68	F *	36,400	61,460	1.69	F *	0.01	No
Segments on Dauchy Avenue														
2 . Between Van Buren Boulevard and Ardenwood Lane	City of Riverside	Local	D	2	3,400	7,880	2.32	F *	3,400	8,600	2.53	F *	0.21	**Yes**
3 . Between Ardenwood Lane and Hawksbury Drive	City of Riverside	Local	D	2	3,400	5,590	1.64	F *	3,400	6,020	1.77	F *	0.13	**Yes**

Notes:

LOS = Level of Service

* Exceeds LOS Standard

[1] Classifications for all segments have been obtained from the City of Riverside General Plan Circulation and Community Mobility Element Master Plan of Roadways.

[2] Roadway capacities have been obtained from the City of Riverside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (dated July 2020).

[3] Operational deficiency determined based on the criteria included in the City of Riverside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* (dated July 2020).

8.0 TRAFFIC SIGNAL WARRANT ANALYSIS

A peak hour signal warrant analysis was conducted at the following unsignalized intersections operating at a deficient LOS. The signal warrant analysis for these intersections were conducted for Opening Year (2029) without Project, Opening Year (2029) with Project, Cumulative (2045) without Project, and Cumulative (2045) with Project scenarios. The following intersections had signal warrants conducted for feasibility of installing a traffic signal as an improvement:

7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane; and
8. Dauchy Avenue – Taft Street/Krameria Avenue.

The signal warrant analysis was conducted using the peak hour warrants from the most recent edition of the CAMUTCD. Therefore, this analysis is based on the provisions of the *CAMUTCD*, 2014, Chapter 4C *Traffic Control Signal Needs Studies* for Warrant 3 – Peak Hour. The peak hour signal warrant is intended for use where traffic conditions are such that for a minimum of one hour on an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

8.1 OPENING YEAR (2029) SCENARIO

Figure 8-1 illustrates the peak hour signal warrant for the intersection of Dauchy Avenue/Project Driveway 2 – Ardenwood Lane under the Opening Year (2029) scenario. Figure 8-2 illustrates the peak hour signal warrant for the intersection of Dauchy Avenue – Taft Street/Krameria Avenue under the Opening Year (2029) scenario.

As shown in Figure 8-1, the intersection of Dauchy Avenue/Project Driveway 2 – Ardenwood Lane meets the signal warrant for a.m. peak hour under the Opening Year (2029) with Project scenario.

As shown in Figure 8-2, the intersection of Dauchy Avenue – Taft Street/Krameria Avenue meets the signal warrant for afternoon peak hour under the Opening Year (2029) with project scenario.

8.2 CUMULATIVE (2045) SCENARIO

Figure 8-3 illustrates the peak hour signal warrant for the intersection of Dauchy Avenue/Project Driveway 2 – Ardenwood Lane under the Cumulative (2045) scenario. Figure 8-4 illustrates the peak hour signal warrant for the intersection of Dauchy Avenue – Taft Street/Krameria Avenue under the Cumulative (2045) scenario.

As shown in Figure 8-3, the intersection of Dauchy Avenue/Project Driveway 2 – Ardenwood Lane meets the signal warrant for a.m. peak hour under the Cumulative (2045) with Project scenario.

As shown in Figure 8-4, the intersection of Dauchy Avenue – Taft Street/Krameria Avenue meets the signal warrant for both a.m. and afternoon peak hours under the Cumulative (2045) with and without project scenario.

8.3 LIST OF CHAPTER 8.0 TABLES

- Figure 8-1: Opening Year (2029) Peak Hour Warrant - Dauchy Avenue/Project Driveway 2 – Ardenwood Lane

- Figure 8-2: Opening Year (2029) Peak Hour Warrant - Dauchy Avenue/Krameria Avenue
- Figure 8-3: Cumulative (2045) Peak Hour Warrant - Dauchy Avenue/Project Driveway 2 – Ardenwood Lane
- Figure 8-4: Cumulative (2045) Peak Hour Warrant - Dauchy Avenue/Krameria Avenue

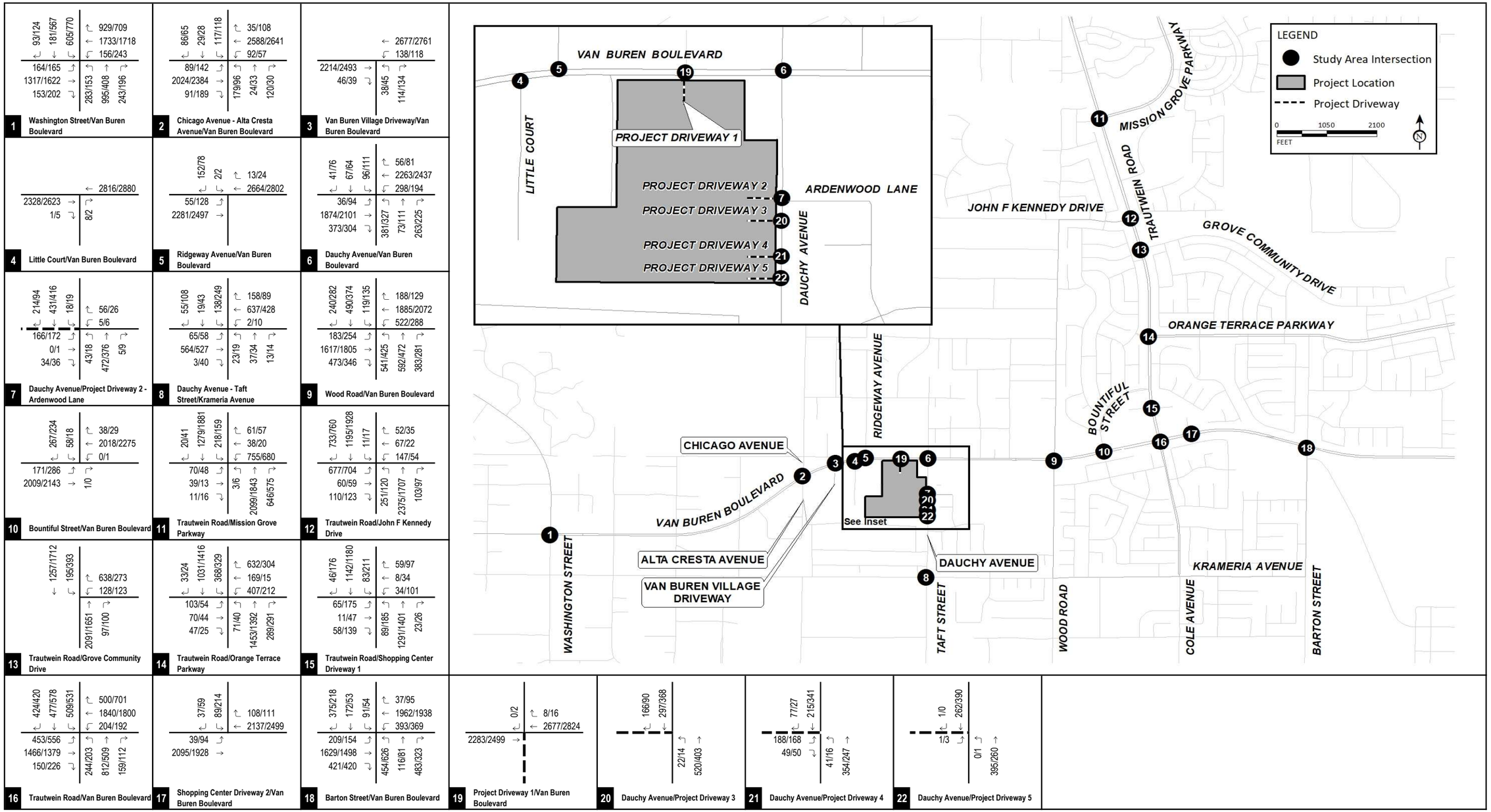


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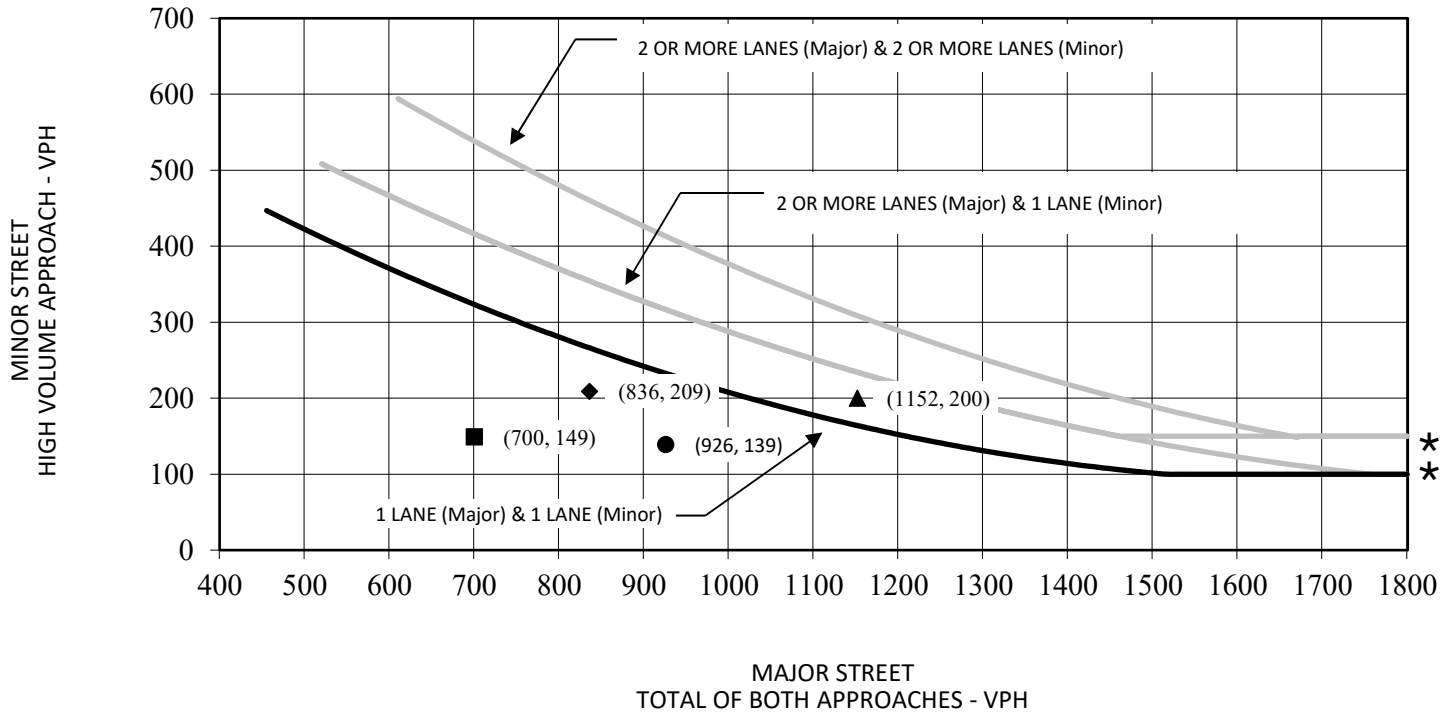
FIGURE 7-2

Woodcrest Christian School Expansion Project
Traffic Operational Analysis
Cumulative (2045) with Project Peak Hour Traffic Volumes

WARRANT 3, PEAK HOUR



* 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-1

● Without Project AM Peak Hour

▲ With Project AM Peak Hour

■ Without Project Afternoon Peak Hour

◆ With Project Afternoon Peak Hour

Woodcrest Christian School Expansion Project

Traffic Operational Analysis

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

Opening Year (2029) Peak Hour Warrant - Dauchy Avenue/Project Driveway 2-Ardenwood Lane

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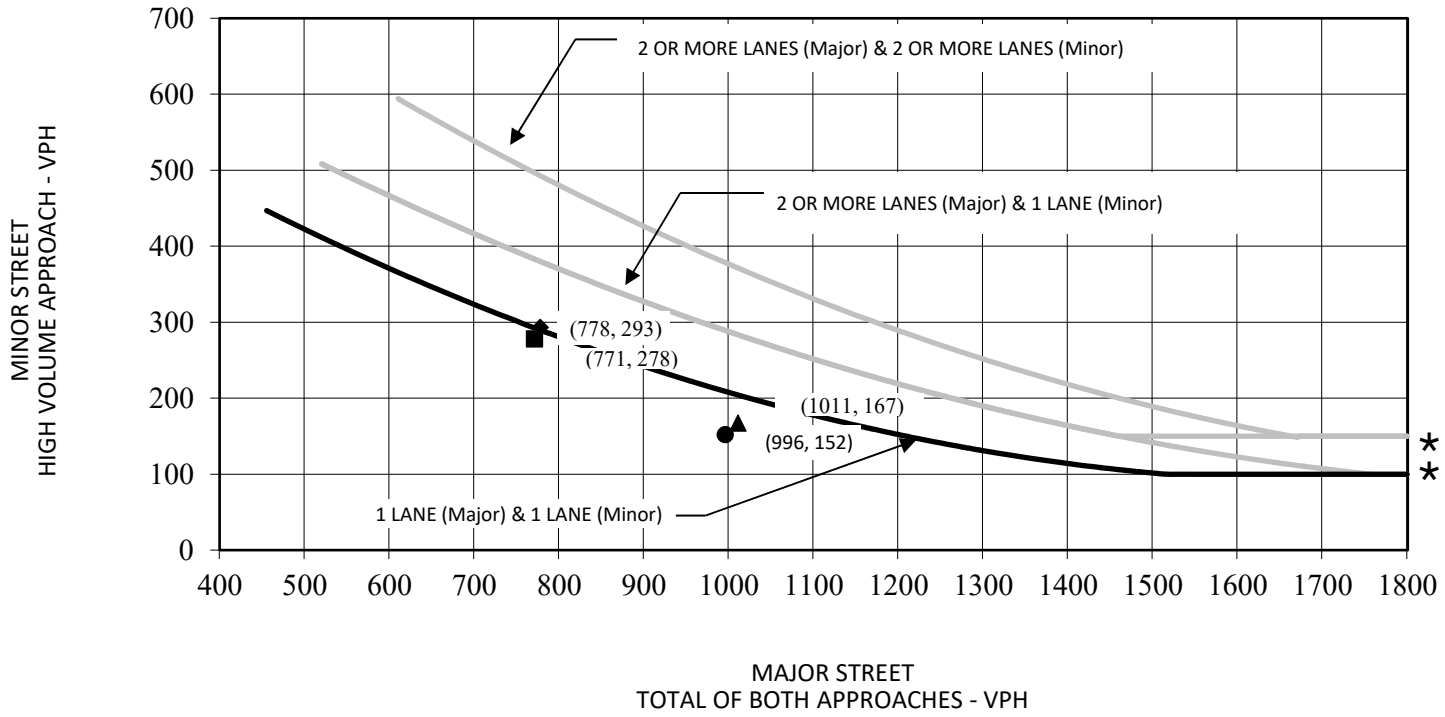
WARRANT 3, PEAK HOUR



* 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-2

● Without Project AM Peak Hour
▲ With Project AM Peak Hour
■ Without Project Afternoon Peak Hour
◆ With Project Afternoon Peak Hour

Woodcrest Christian School Expansion Project
Traffic Operational Analysis

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

Opening Year (2029) Peak Hour Warrant - Dauchy Avenue/Krameria Avenue

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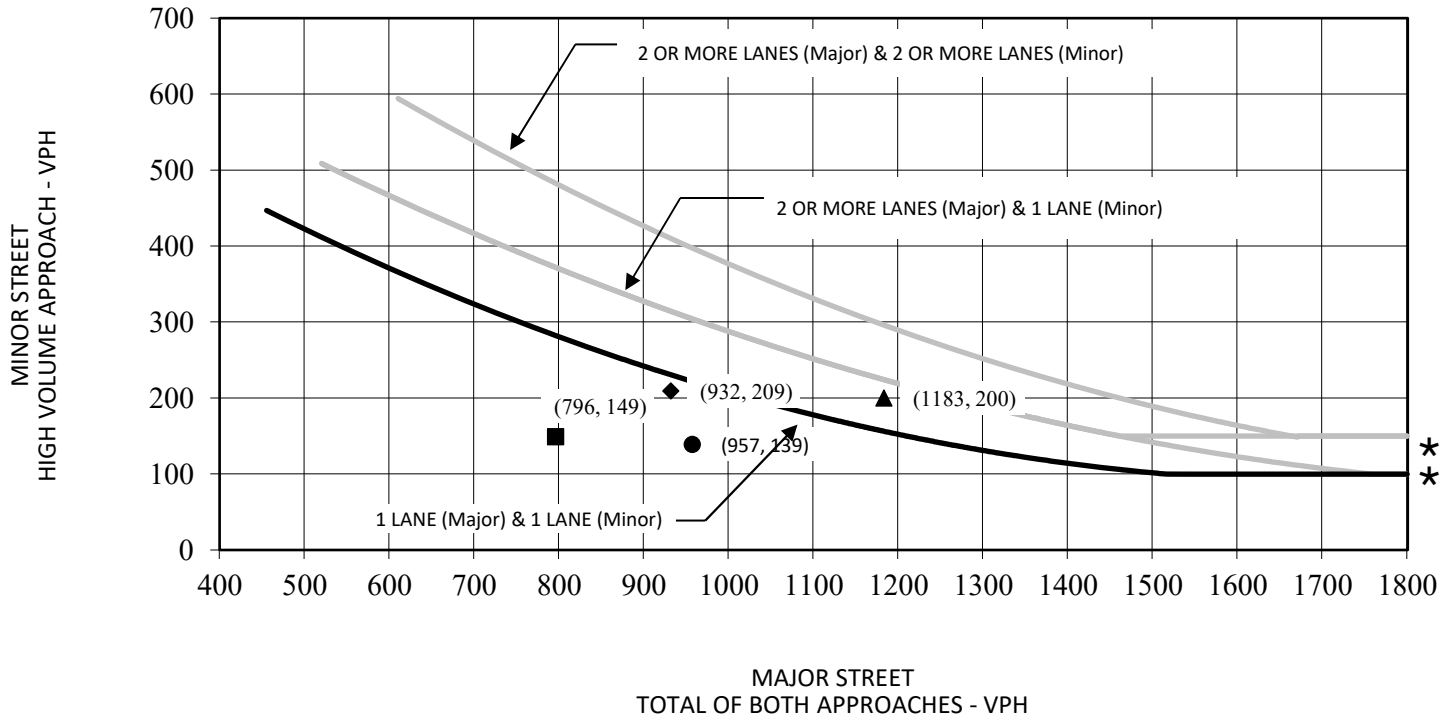
WARRANT 3, PEAK HOUR



* 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 8-3

● Without Project AM Peak Hour
▲ With Project AM Peak Hour
■ Without Project Afternoon Peak Hour
◆ With Project Afternoon Peak Hour

Woodcrest Christian School Expansion Project
Traffic Operational Analysis

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

Cumulative (2045) Peak Hour Warrant - Dauchy Avenue/Project Driveway 2-Ardenwood Lane

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9.0 SITE ACCESS ANALYSIS

9.1 EVALUATION OF PROJECT DRIVEWAYS

The project design features listed in section 6.2 has been proposed to minimize the potential effects on traffic operations as a result of the school expansion. The following improvements has been identified as a project design features to address potential improvements to site access:

- Realignment of Project Driveway 2 to remove the existing offset with Ardenwood Lane.
- Addition of a second receiving lane at Project Driveway 2 to improve ingress maneuvers.
- Restripe existing lane geometry for the eastbound direction at Project Driveway 2 from a shared left-through-right approach to a shared through-left lane.
- Addition of a right-turn lane for the eastbound direction at Project Driveway 2.
- Relocation of bus parking at rear parking lot to extend vehicle storage for student drop-off and pick-up.

The realignment of Project Driveway 2 to remove the existing offset with Ardenwood Lane is anticipated to improve ingress and egress operations by reducing the potential vehicle conflicts, sight distance, and other safety issues related to project traffic.

The addition of a second receiving lane at Project Driveway 2 is anticipated to improve ingress movements into the project and minimize driveway impacts on Dauchy Avenue.

The addition of a right turn lane for the eastbound direction at Project Driveway 2 is anticipated to improve egress movements out of Project Driveway 2. The separation of the left-turn/through movements from the right turning movements is anticipated to reduce queuing on the Project Driveway 2, as right turning egress movements only require traffic gaps in the southbound direction of Dauchy Avenue.

The relocation of bus parking at the rear parking lot will increase the vehicle storage length for student drop-off and pick-up. This extended storage length is anticipated to allow vehicles to enter the project site without causing subsequent vehicles to back out onto Dauchy Avenue (see Section 15.0 for Drop-off/Pick-up Circulation).

9.2 BICYCLE, PEDESTRIAN, AND TRANSIT ACCESSIBILITY

9.2.1 Bicycle Accessibility

As part of the City's Bikeway, Class II bike lanes exist along the westbound and eastbound directions of Van Buren Boulevard in front of the project site. Project Driveway 1 connects the project site to bike lanes in the eastbound direction of Van Buren Boulevard. However, access into the school is restricted due to the gate at Project Driveway 1, and will remain restricted in the future. Bicyclists arriving north and south of the campus can access the school via Dauchy Avenue through Project Driveway 2, Project Driveway 3, and Project Driveway 4.

9.2.2 Pedestrian Accessibility

Although there are no current or proposed trails near the project site, paved sidewalks are provided on both sides of Dauchy Avenue between Van Buren Boulevard and Krameria Avenue, and along most sections of the eastbound direction of Van Buren Boulevard between Dauchy Avenue and Wood Road. Sidewalks are present on both sides of Dauchy Avenue near the project site providing direct and convenient access for students, parents, and faculty arriving on foot. Paved sidewalks and paths are also provided within the project site along drop-off/pick-up zones, enhancing pedestrian safety.

9.2.3 Transit Accessibility

RTA local bus route 27 serves the project site with stops along Van Buren Avenue. This bus route connects the project to neighboring communities of La Sierra and Perris. The bus stop for route 27 in the southbound direction is adjacent to the project site, located along the project frontage on Van Buren Boulevard. The closest bus stop in the westbound direction for route 27 is located north of Van Buren Boulevard between Dauchy Avenue and Winchester Way.

10.0 SPEED SURVEY ANALYSIS

During the scoping agreement process, City staff requested a speed survey analysis near the project frontage on Dauchy Avenue. Speed surveys were conducted along Dauchy Avenue between Hawksbury Drive and Krameria Avenue to determine the average and 85th percentile speed within near the project frontage.

10.1 TRAFFIC AND SPEED ANALYSIS

The posted speed limit on Dauchy Avenue is 25 mph. The operating speeds within the segments were obtained based on speed surveys conducted by Counts Unlimited on November 2021. Detailed speed survey sheets are included in Appendix B.

The average speed observed is 29 mph in the northbound direction and 29 mph in the southbound direction. The 85th percentile speed observed for the northbound direction is 35 mph and 34 mph in the southbound direction. It is estimated that approximately eleven percent of the project trips will be using this roadway segment. As such, the project will add approximately 33 a.m. peak hour trips, 24 afternoon peak hour trips, and 90 daily trips at this segment. Most of these trips will be local trips from the nearby residences, which will be absorbed within the neighborhood. Therefore, the project trips are not expected to significantly alter the existing speed characteristics of this roadway segment.

The speed surveys are summarized in Table 10-A.

10.2 CONCLUSION

Based on the estimated project traffic distribution and assignment, roadway capacity analysis and speed survey, it is estimated that the project traffic will not significantly affect the neighborhood traffic flow and traffic speed pattern. As discussed previously, only 11 percent of project traffic is estimated to use the adjacent neighborhood streets. Most of these trips will be local trips, generated from the nearby residences. As such, it is anticipated that there will be nominal cut-through project trips within the project neighborhood, which is not expected to affect the existing traffic speed pattern for the project neighborhood.

10.3 LIST OF CHAPTER 10.0 FIGURES

- Table 10-A: Speed Analysis

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Table 10-A - Speed Analysis

Roadway	Segment	Direction	Posted Speed Limit (mph)	Average Speed (mph)	85th Percentile Speed (mph)
Dauchy Avenue	between Hawksbury Drive and Krameria Avenue	Northbound	25	30	35
		Southbound	25	29	33

Notes:
Source: Speed surveys conducted by Counts Unlimited

11.0 ACTIVE TRANSPORTATION AND PUBLIC TRANSIT ANALYSIS

According to the City's TIA Guidelines, a significant impact occurs when a project conflicts with adopted plans, policies, or programs regarding active transportation or public transit facilities, or otherwise decreases the performance or safety of such facilities. The following sections examines the effect of the proposed project on the existing and planned active transportation and public transit facilities.

11.1 BICLYCLIST INFRASTRUCTURE

Based on the City's PACT (adopted December 2021) at present, a Class II bike lane exists along Trautwein Road, along Cole Avenue between Van Buren Boulevard and Krameria Avenue, along Grove Community Drive, along Orange Terrace Parkway, and along Van Buren Boulevard. A Class I & II Bike Lane/Path exists on John F Kennedy Drive between Dauchy Avenue and Trautwein Road. Proposed Class II buffered bike lanes are planned to be constructed on Wood Road and Mission Grove Parkway South in the immediate future.

Bicyclists arriving north and south of the campus can access the school via Dauchy Avenue through Project Driveway 2, Project Driveway 3, and Project Driveway 4. The project is not anticipated to decrease the accessibility of cyclists to the project. As such, the project will not decrease the performance or safety of any existing proposed bicycle facility.

11.2 PEDESTRIAN INFRASTRUCTURE

Paved trails and non-standard unpaved trails are frequently used by bicyclists and pedestrians in the City. According to the City's PACT, the current trails within the study area are located along Wood Road between Krameria Avenue and John F Kennedy Drive, along Bountiful Street, along John F Kennedy Drive, and along Grove Community Drive. The City's PACT also proposes to extend the current southern terminus of the Wood Road multipurpose trail to Krameria Avenue between Dauchy Avenue-Taft Street and Taft Street south of Krameria Avenue.

According to the City of Riverside *General Plan Circulation Element*, sidewalks are generally provided on both sides of the streets throughout the City. Sidewalks are present within the study area along the developed project frontages. However, gaps in sidewalks on undeveloped sites on Van Buren Boulevard are still present, but these gaps are anticipated to be filled in as the vacant sites gradually become developed. In addition to sidewalk improvements, the City's PACT has identified pedestrian spot improvements. A tier 1 spot improvement has been identified within the study area is the intersection of Wood Road and Van Buren Boulevard. Pedestrian improvements at this intersection as presented in the City's PACT can include but are not limited to the following: curb extensions, right turn on red restrictions, crosswalks and curb camps, high visibility crosswalks, etc.

The intersection of Dauchy Avenue and Van Buren Boulevard has not been identified for spot improvements under the City's PACT, but improvements have been identified to further improve safety for students and people accessing the school. During the scoping agreement process, the following improvements were recommended at the intersection of Dauchy Avenue and Van Buren Boulevard:

- Continental crosswalks;
- Audible pedestrian push buttons; and
- Pedestrian crossing restriction signs for the east leg of the intersection.

These improvements will improve accessibility and safety for pedestrians and students due to additional visibility provided. As such, the proposed project will improve the performance and safety of the existing and/or proposed pedestrian facility at this location.

11.3 PUBLIC TRANSIT

RTA local bus routes 20, 22, and 27 operate within the study area. Route 20 provides stops on Mission Grove Parkway within the study area, offering connections to Magnolia Town Center and Moreno Valley College. Route 22 provides stops along Mission Grove Parkway, Trautwein Road, Van Buren Boulevard, and Wood Road within the study area while offering connections to Downtown Riverside and Perris Station Transit Center. Route 27 provides a stop directly located on the project frontage on Van Buren Boulevard, and other stops located on Orange Terrace Parkway within the study area while offering connections to Magnolia Tyler Center and Perris Station Transit Center. At present, there are no additional service changes proposed in RTA's transit network as a result of the project. As such, the project will not decrease the performance or safety of any existing or proposed public transit facility.

11.4 SCHOOL BUS

The project currently provides a school bus service for morning pick-up and afternoon drop-off. Under the with project scenario, there will be a bus loading zone in the main parking lot and the rear parking lot.

Access to the main parking lot bus loading zone is provided via Project Driveway 2. Once on campus, the bus follows an internal roadway to the main lot adjacent to Van Buren Boulevard with designated bus drop-off/pick-up zones. The bus drop-off zone will be adjacent to the parking lot sidewalk in a dedicated bus pullout. The bus drop-off zone will allow students to unload and load directly from the sidewalk, minimizing exposure to parking lot traffic. The dedicated bus pullout may improve vehicular circulation by minimizing conflict with vehicles exiting the parking lot.

Access to the rear parking lot bus loading zone is provided via Project Driveway 3. Under existing conditions, the bus drop-off zone is located on the west side of the rear parking lot. There is currently no bus pullout. Under the with project scenario, the bus drop-off zone will be relocated to the north side of the rear parking lot. The bus drop-off zone will be adjacent to the parking lot sidewalk in a dedicated bus pullout. The bus drop-off zone will allow students to unload and load directly from the sidewalk, minimizing exposure to parking lot traffic. The dedicated bus pullout will improve vehicular circulation by minimizing conflict with vehicles exiting the parking lot.

12.0 QUEUING ANALYSIS

An intersection and driveway queuing analysis was requested by City staff during the scoping agreement process to examine the project's effect on queuing at project driveways and adjacent intersections. In case queuing deficiencies are identified, the project would need to identify feasible circulation improvements to alleviate potential queuing issues. As such, the queuing analysis was performed at the following five intersections/driveways:

6. Dauchy Avenue/Van Buren Boulevard;
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane;
8. Dauchy Avenue – Taft Street/Krameria Avenue;
20. Dauchy Avenue/Project Driveway 3; and
21. Dauchy Avenue/Project Driveway 4.

12.1 OPENING YEAR (2029) SCENARIO

Table 12-A lists the available turn-pocket storage lengths and summarizes the 95th percentile back-of-queue lengths at the five study intersections under opening year with project and opening year with project with improvement conditions. Intersection queues at signalized intersections were reported from Synchro while intersection queues at stop-controlled intersections were reported from SimTraffic.

As shown in Table 12-A, queues for some of the movements are exceeding the existing available turn-pocket storage length under opening year with project scenarios. The movements and project related queues that exceed the available storage lengths are as follows:

6. Dauchy Avenue/Van Buren Boulevard: Northbound left (both a.m. and p.m. peak hour);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane: Northbound left-through-right (p.m. peak hour only).
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane: Westbound left-through-right (a.m. peak hour only).

Based on the results of the queuing analysis, improvements have been recommended at study intersections where the project related movements are forecast to contribute to queues exceeding existing storage lanes and where feasible storage length extensions are feasible.

As summarized in Table 12-A, recommended improvements include the extension of storage lanes for the northbound left turn movement at Dauchy Avenue/Van Buren Boulevard. However, queues are still forecast to exceed the recommended storage lane extension and further extension is not feasible due to conflicts with upstream intersections and/or private driveways. It should be noted that queues for the northbound left turn movement at Dauchy Avenue/Van Buren Boulevard is

forecast to further increase after improvements due to the prioritization of reducing traffic delay from the eastbound/westbound traffic along Van Buren Boulevard.

As shown in Table 12-A, queues for the northbound left-through-right movement at Dauchy Avenue/Project Driveway 2 – Ardenwood Lane is forecast to further increase after improvements due to the installation of a traffic signal. However, the traffic signal is anticipated to improve intersection delay and reduce queuing along Ardenwood Lane. A shown in Table 12-A, the addition of a two-way-left-turn-lane (TWLTL) between the intersection of Dauchy Avenue/Project Driveway 3 and Dauchy Avenue/Project Driveway 4 is anticipated to reduce queues caused for northbound left turn movement at Project Driveway 3 and Project Driveway 4 by separating northbound left turn and through movements.

12.2 CUMULATIVE (2045) SCENARIO

As shown in Table 12-B, queues for some of the movements are exceeding the existing available turn-pocket storage length under cumulative with project and cumulative with project with improvement scenarios. The project related queues that exceed the available storage lengths are as follows:

6. Dauchy Avenue/Van Buren Boulevard: Northbound left (both a.m. and p.m. peak hour);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane: Northbound left-through-right (p.m. peak hour only);
7. Dauchy Avenue/Project Driveway 2 – Ardenwood Lane: Westbound left-through-right (a.m. peak hour only).
20. Dauchy Avenue/Project Driveway 3: Northbound through-left (both a.m. and p.m. peak hour).

Based on the results of the queuing analysis, improvements have been recommended at study intersections where the project related movements are forecast to contribute to queues exceeding existing storage lanes and where feasible storage length extensions are feasible.

As summarized in Table 12-B, recommended improvements include the extension of storage lanes for the northbound left turn movement at Dauchy Avenue/Van Buren Boulevard. However, queues are still forecast to exceed the storage needed and further extension is not feasible due to conflicts with upstream intersections and/or private driveways. It should be noted that queues for the northbound left turn movement at Dauchy Avenue/Van Buren Boulevard is forecast to further increase after improvements due to the prioritization of reducing traffic delay from the eastbound/westbound traffic on Van Buren Boulevard.

As shown in Table 12-B, queues for the northbound left-through-right movement at Dauchy Avenue/Project Driveway 2 – Ardenwood Lane is forecast to further increase after improvements due to the installation of a recommended traffic signal. However, the traffic signal is anticipated to improve intersection delay and reduce queuing along Ardenwood Lane. A shown in Table 12-B, the addition of a two-way-left-turn-lane (TWLTL) between the intersection of Dauchy Avenue/Project

Driveway 3 and Dauchy Avenue/Project Driveway 4 is anticipated to reduce queues caused for northbound left turn movement at Project Driveway 3 and Project Driveway 4 by separating northbound left turn and through movements.

12.3 LIST OF CHAPTER 12.0 TABLES AND TABLES

- Table 12-A: Opening Year (2029) Intersection Queueing Analysis
- Table 12-B: Cumulative (2045) Intersection Queueing Analysis

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Table 12-A - Opening Year (2029) Intersection Queuing Analysis

Intersection	Movement	Existing Storage Length[1] (ft/ln)	Recommended Storage Length (ft/ln)	Opening Year (2029) With Project[2]		Opening Year (2029) With Project With Imp.[2]	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
6 . Dauchy Avenue/Van Buren Boulevard	**NBL**	65	200	**445**	**345**	**390**	**415**
Signal	**SBL**	75	75	**105**	**125**	**105**	**120**
	SBR	55	55	0	10	0	0
	EBL	305	305	35	85	55	150
	WBL	420	420	250	155	260	155
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane	**NBLTR**	90	90	85	**105**	**155**	**95**
TWSC/Signal[3]	**SBR**	90	90	0	0	30	20
	WBLTR	460	460	**710**	95	20	15
8 . Dauchy Avenue - Taft Street/Krameria Avenue	**NBLTR**	1240	1240	45	55	40	25
Signal	**SBLTR**	420	420	65	100	90	100
	EBLTR	1130	1130	160	155	170	175
	WBLTR	940	940	195	125	220	140
20 . Dauchy Avenue/Project Driveway 3	**NBTL**[4]	200	-	195	195	-	-
OWSC	**SBTR**	90	90	0	0	0	20
	NBL[5]	-	200	-	-	45	35
	NBT[5]	-	200	-	-	170	60
21 . Dauchy Avenue/Project Driveway 4	**NBTL**[4]	400	-	125	70	-	-
OWSC	**SBTR**	200	200	0	0	15	0
	NBL[5]	-	100	-	-	45	25
	NBT[5]	-	400	-	-	40	0

Notes:

ft/ln = feet per lane

TWSC = Two-Way Stop Control; OWSC = One-Way Stop Control; AWSC = All-Way Stop Control

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; T= Through; R = Right

Bold = Queue exceeds available storage.

1 Storage length for all movements obtained from Google Earth measurements.

2 All queues reported are 95th percentile queues. Queues for signalized intersections have been reported from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

3 This intersection is controlled by a TWSC under the opening year with project secenario and a signal under the opening year with project with improvement scenario.

4 This movement is the existing condition under the opening year with project scenario.

5 This movement is added as result of the installation of a two-way left-turn (TWLTL) lane under the opening year with project with improvement scenario.

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Table 12-B - Cumulative (2045) Intersection Queuing Analysis

Intersection	Movement	Existing Storage Length[1] (ft/ln)	Recommended Storage Length (ft/ln)	Cumulative (2045) With Project[2]		Cumulative (2045) With Project With Imp.[2]	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
6 . Dauchy Avenue/Van Buren Boulevard	**NBL**	65	200	**540**	**360**	**585**	**400**
Signal	**SBL**	75	75	**110**	**125**	**110**	**125**
	SBR	55	55	0	20	0	0
	EBL	305	305	35	95	60	120
	WBL	420	420	305	145	250	140
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane	**NBLTR**	90	90	85	**95**	**180**	**120**
TWSC/Signal[3]	**SBR**	90	90	0	0	30	20
	WBLTR	460	460	**525**	120	20	15
8 . Dauchy Avenue - Taft Street/Krameria Avenue	**NBLTR**	1240	1240	50	55	45	35
Signal	**SBLTR**	420	420	70	130	115	220
	EBLTR	1130	1130	365	295	295	355
	WBLTR	940	940	790	210	450	220
20 . Dauchy Avenue/Project Driveway 3	**NBTL**[4]	200	-	**215**	**235**	-	-
OWSC	**SBTR**	90	90	0	0	0	20
	NBL[5]	-	200	-	-	50	25
	NBT[5]	-	200	-	-	**215**	95
21 . Dauchy Avenue/Project Driveway 4	**NBTL**[4]	400	-	140	85	-	-
OWSC	**SBTR**	200	200	0	0	10	0
	NBL[5]	-	100	-	-	70	30
	NBT[5]	-	400	-	-	130	30

Notes:

ft/ln = feet per lane

TWSC = Two-Way Stop Control; OWSC = One-Way Stop Control; AWSC = All-Way Stop Control

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound

L = Left; T= Through; R = Right

Bold = Queue exceeds available storage.

1 Storage length for all movements obtained from Google Earth measurements.

2 All queues reported are 95th percentile queues. Queues for signalized intersections have been reported from Synchro and queues for stop controlled intersections have been taken from SimTraffic.

3 This intersection is controlled by a TWSC under the cumulative with project secenario and a signal under the cumulative with project with improvement scenario.

4 This movement is the existing condition under the cumulative with project scenario.

5 This movement is added as result of the installation of a two-way left-turn (TWLTL) lane under the cumulative with project with improvement scenario.

13.0 CIRCULATION IMPROVEMENTS AND FUNDING SOURCES

13.1 RECOMMENDED IMPROVEMENTS

Based on the results of the LOS analysis, improvements have been recommended at study intersections where the project is forecast to create a project related operational deficiency under opening year and cumulative conditions where feasible improvements could be identified. Table 13-A summarizes the recommended improvements for study intersections under all scenarios. Figure 13-1 illustrates the opening year/cumulative with project with improvements study intersection geometrics. Figure 13-2 illustrates the conceptual striping for the TWLTL median and subsequent parking restrictions between Project Driveway 2 and Project Driveway 5. Tables 13-B and 13-C summarize the post-improvement intersection levels of service under opening year and cumulative conditions, respectively. As shown in Tables 13-B and 13-C, with the implementation of the proposed improvements and design features, the following intersections are forecast to operate at a satisfactory LOS under opening year and cumulative conditions:

1. Washington Street/Van Buren Boulevard;
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard;
4. Little Court/Van Buren Boulevard;
5. Ridgeway Avenue/Van Buren Boulevard;
6. Dauchy Avenue/Van Buren Boulevard;
7. Dauchy Avenue/Project Driveway – Ardenwood Lane;
8. Dauchy Avenue – Taft Street/Krameria Avenue;
19. Project Driveway 1/Van Buren Boulevard;
21. Dauchy Avenue/Project Driveway 4.

The following intersections are forecast to continue to operate at a deficient LOS due to right-of-way constraints for improvements under opening year and cumulative conditions:

11. Trautwein Road/Mission Grove Parkway;
12. Trautwein Road/John F Kennedy Drive;
14. Trautwein Road/Orange Terrace Parkway;
16. Trautwein Road/Van Buren Boulevard; and
18. Barton Street/Van Buren Boulevard.

It should be noted for the intersection of Trautwein Road/Van Buren Boulevard under opening year conditions, the with project with improvement delay is lower than without project conditions. For the intersection of Barton Street/Van Buren Boulevard, the improvements will improve the delay

under with project conditions to better than the corresponding opening year and cumulative delay under without project conditions for the afternoon peak hour.

Roadway segment widening have been recommended based on the Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) program. While the roadway study segment on Van Buren Boulevard is not a project related deficiency, intersection improvements were recommended based on the corresponding roadway widening included in the TUMF. As such, the recommended roadway segment improvements for Van Buren Boulevard have been included in Table 13-D.

Tables 13-E and 13-F summarize the post-improvement roadway segment levels of service under opening year and cumulative conditions, respectively. All roadway segments are forecast to continue to operate at a deficient LOS. It should be noted that with the implementation of roadway widening, the V/C ratio for the study roadway segment on Van Buren Boulevard under the with project conditions will improve the V/C ratio to better than the corresponding opening year and cumulative V/C ratio under without project conditions.

13.2 FUNDING SOURCES AND MECHANISMS

Where there is a funding mechanism (fee program) for the recommended improvements, payment into the fee program would be considered sufficient project obligation to alleviate project-related operational deficiencies. At study intersections located in the City where the project adds to or creates a forecast deficiency, the project is responsible to coordinate improvements with the City of Riverside.

For study intersections located in the County where the project adds to or creates a forecast deficiency and there is no funding mechanism in place, the project is responsible for its fair-share payment toward the implementation of the improvements.

13.2.1 TUMF Program

The underlying purpose of the TUMF program is “the need to establish a comprehensive funding source to mitigate the cumulative regional transportation impacts of new development on regional arterial highways.” As new development occurs in western Riverside County, the cumulative transportation impacts of this new development are reflected in increased demand for transportation infrastructure leading to decreased levels of service, increased delay and increased congestion on regional transportation facilities, and an overall decline in regional mobility. Therefore, the need to invest in additional transportation infrastructure to meet the increased travel demand and to sustain pre-development traffic conditions to “keep traffic flowing” represents the fundamental premise of the TUMF program. Table 13-A summarizes the improvements included under the TUMF program.

13.2.2 Improvements in Coordination with the City of Riverside

In the absence of a fee program and/or a fair share program, the project shall coordinate with the City to identify improvements the project will need to implement to offset operational deficiencies not covered by the TUMF program or any other programs. For operational deficiencies at intersections directly related to the project, including the installation of a traffic signal at Dauchy

Avenue/Project Driveway 2 – Ardenwood Lane, and the addition of a two-way-left-turn-lane (TWLTL) median between Project Driveway 3 and Project Driveway 4, the project will be responsible for implementation of these improvements. Table 13-A summarizes the improvements that require coordination with the City.

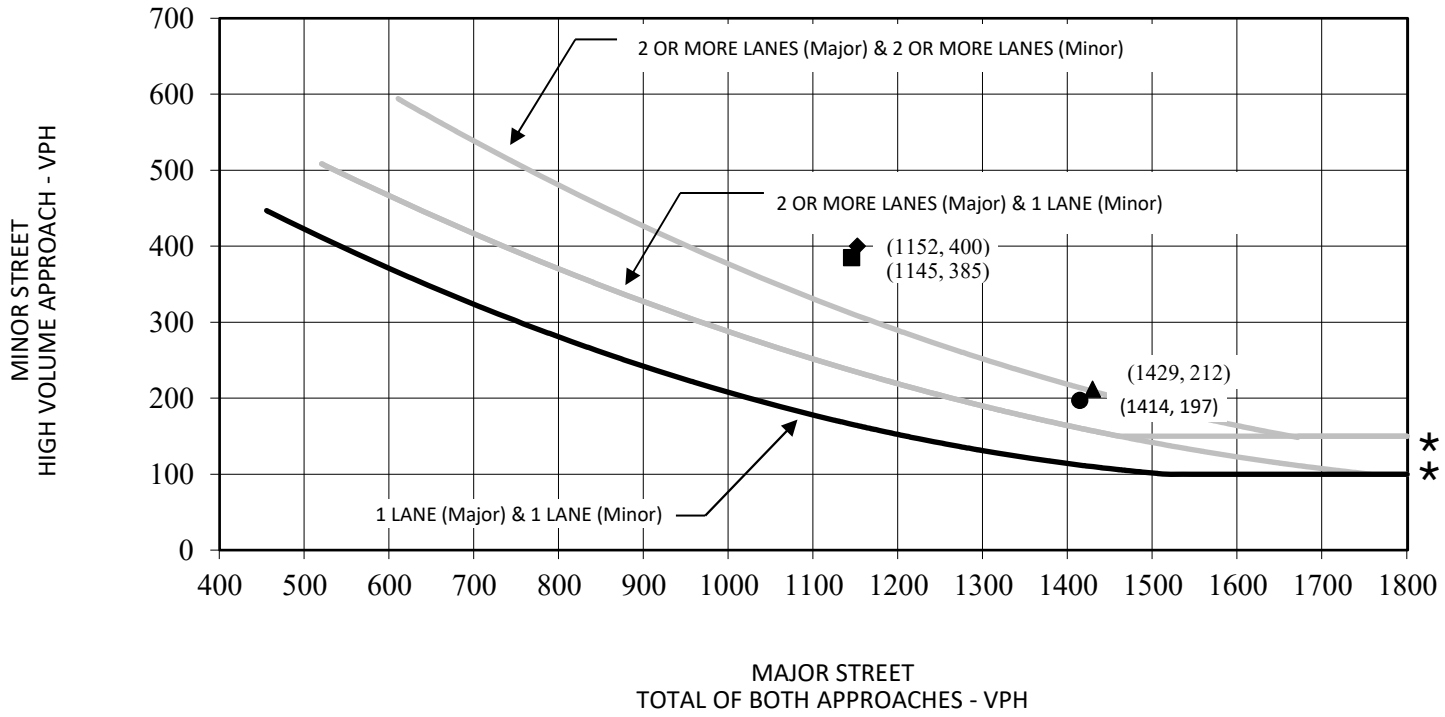
13.2.3 Project Fair Share (County of Riverside)

In the absence of a fee program, the project shall pay its fair share of the cost required to offset operational deficiencies located in the County of Riverside. Table 13-A summarizes the project's fair share at Washington Street/Van Buren Boulevard.

13.3 LIST OF CHAPTER 13.0 TABLES AND TABLES

- Figure 13-1: Opening Year (2029) and Cumulative (2045) with project with Improvements Study Intersection Geometrics and Traffic Control
- Figure 13-2: Conceptual Striping and Parking Restriction
- Table 13-A: Recommended Improvements for Intersections, Funding Mechanism, and Fair Share
- Table 13-B: Opening Year (2029) with Project with Improvements Intersection Levels of Service
- Table 13-C: Cumulative (2045) with Project with Improvements Intersection Levels of Service
- Table 13-D: Recommended Improvements for Roadway Segments, Funding Mechanism, and Fair Share
- Table 13-E: Opening Year (2029) with Project with Improvements Roadway Segment Levels of Service
- Table 13-F: Cumulative (2045) with Project with Improvements Roadway Segment Levels of Service

WARRANT 3, PEAK HOUR



* 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

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FIGURE 8-4

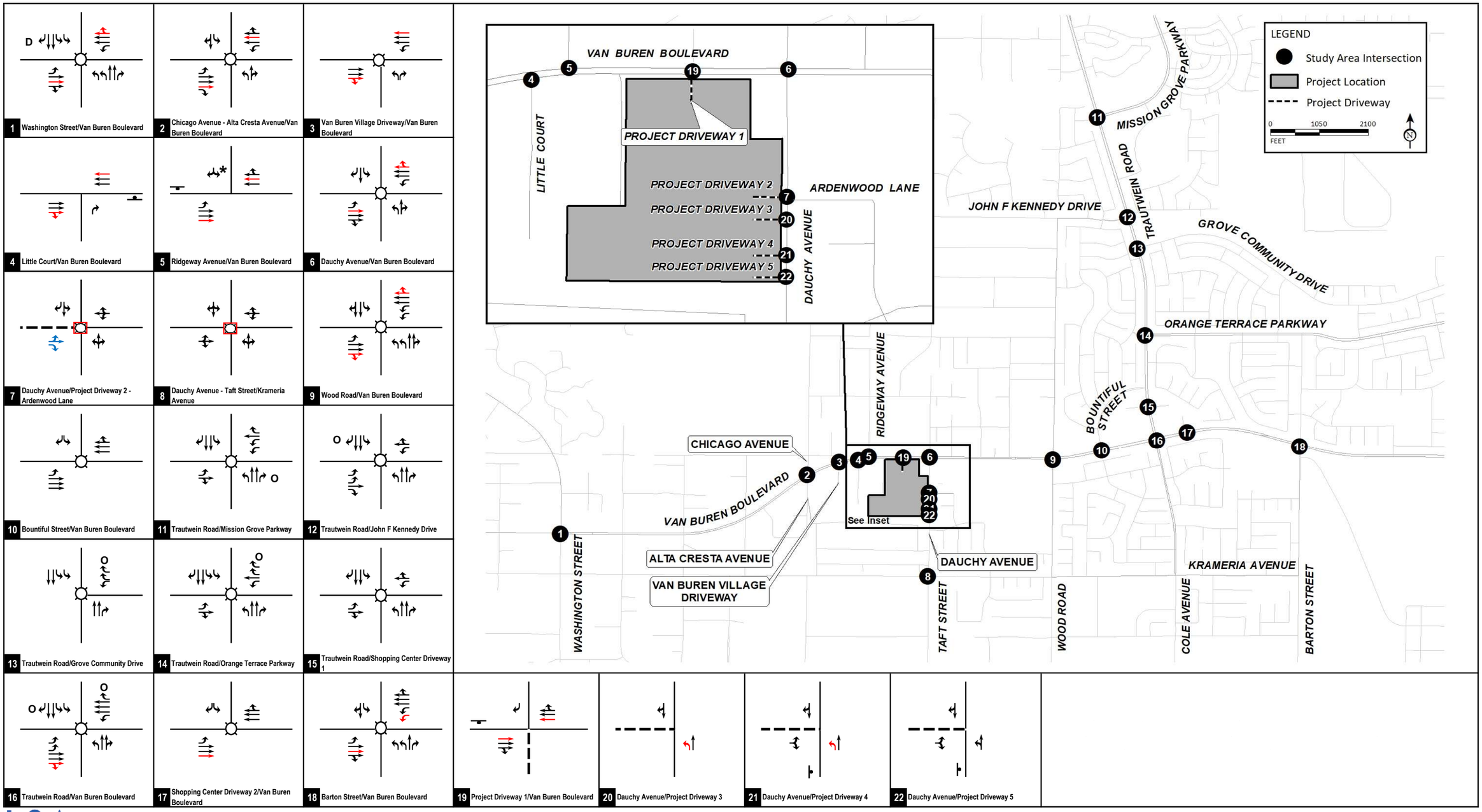
● Without Project AM Peak Hour
▲ With Project AM Peak Hour
■ Without Project Afternoon Peak Hour
◆ With Project Afternoon Peak Hour

Woodcrest Christian School Expansion Project
Traffic Operational Analysis

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

Cumulative (2045) Peak Hour Warrant - Dauchy Avenue/Krameria Avenue

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\Signal Warrant Analysis\SW_INT 8_Cumul.xlsx (11/15/2023)



LSA

Legend
Signal
Stop Sign
D De-Facto Right
O Overlap
Project Design Feature
Improvements
Project Driveway
Add Signal

* Southbound left turns on Ridgeway Avenue will be restricted between 7:00AM - 9:00AM and 2:00PM - 6:00PM.

FIGURE 13-1

Woodcrest Christian School Expansion Project
Traffic Operational Analysis

Opening Year (2029) and Cumulative (2045) with Project with Improvements Study Intersection Geometrics and Traffic Control

LSA

Table 13-A - Recommended Improvements for Intersections, Funding Mechanism, and Fair Share

Intersection	Opening Year (2029) with Project Improvements	Cumulative (2045) with Project Improvements	Improvements Covered by TUMF	Improvements In Coordination With City and County	Improvements Covered by Fair Share (County Only)	Fair Share Percentage
1 . Washington Street/Van Buren Boulevard	Add EBT. Restripe WBR to WBTR.	No additonal improvements required.	Add EBT.		Restripe WBR to WBTR.	3.27%
2 . Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard	Add EBT. Add WBT.	No additonal improvements required.	Add EBT. Add WBT.			N/A
4 . Little Court/Van Buren Boulevard	Restripe EBR to EBTR.	No additonal improvements required.	Restripe EBR to EBTR.			N/A
5 . Ridgeway Avenue/Van Buren Boulevard	Restrict SBL movement during peak hours. Add EBT. Add WBT.	No additonal improvements required.	Add EBT. Add WBT.	Restrict SBL movement during peak hours.		N/A
6 . Dauchy Avenue/Van Buren Boulevard	Add EBT. Restripe WBR to WBTR. Extend NBL storage to 200'.	No additonal improvements required.	Add EBT.	Restripe WBR to WBTR. Extend NBL storage to 200'. Add contential corsswalks, audible pedestrian push buttons, and pedestrian restriction signs.		N/A
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane	Add signal.	No additonal improvements required.		Add signal. (Project Responsibility)		N/A
8 . Dauchy Avenue - Taft Street/Krameria Avenue	Add signal.	No additonal improvements required.		Add signal.		N/A
11 . Trautwein Road/Mission Grove Parkway	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.				N/A
12 . Trautwein Road/John F Kennedy Drive	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.				N/A
14 . Trautwein Road/Orange Terrace Parkway	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.	No improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.				N/A
16 . Trautwein Road/Van Buren Boulevard	Restripe EBR to EBTR. No additional improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.	No additional improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.		Restripe EBR to EBTR.		N/A
18 . Barton Street/Van Buren Boulevard	Add EBT. Add WBL.	No additional improvements feasible due to right-of-way constraints and/or feasible improvements will have a nominal effect on intersection LOS.	Add EBT.	Add WBL.		N/A
19 . Project Driveway 1/Van Buren Boulevard	Add EBT and WBT.	No additonal improvements required.	Add EBT and WBT.			N/A
20 . Dauchy Avenue/Project Driveway 3	Add TWLTL on Dauchy Ave.			Add TWLTL on Dauchy Ave. (Project Responsibility)		N/A
21 . Dauchy Avenue/Project Driveway 4	Add TWLTL on Dauchy Ave.			Add TWLTL on Dauchy Ave. (Project Responsibility)		N/A

Notes:

EB = Eastbound; WB = Westbound; L = Left; T = Through; R = Right

TWLTL = Two-Way-Left-Turn-Lane

TUMF refers to the Transportation Uniform Mitigation Fee Program.

Project Fair Share Percentage is the highest fair share value of the a.m. and afternoon peak hour when both peak hours require improvements, or only in the peak hour that require improvements.

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Table 13-B - Opening Year (2029) with Project Recommended Improvements Intersection Levels of Service

Intersection	Jurisdiction	Without Project Without Improvements					With Project Without Improvements					With Project With Improvements				
			A.M. Peak Hour		Afternoon Peak Hour			A.M. Peak Hour		Afternoon Peak Hour			A.M. Peak Hour		Afternoon Peak Hour	
		Control	Delay (sec.)	LOS	Delay (sec.)	LOS	Control	Delay (sec.)	LOS	Delay (sec.)	LOS	Control	Delay (sec.)	LOS	Delay (sec.)	LOS
1 . Washington Street/Van Buren Boulevard	County of Riverside	Signal	41.2	D	67.6	E *	Signal	42.9	D	67.9	E *	Signal	37.1	D	46.1	D
2 . Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	Signal	76.5	E *	71.6	E *	Signal	82.3	F *	76.4	E *	Signal	33.1	C	17.7	B
4 . Little Court/Van Buren Boulevard	County of Riverside/City of Riverside	OWSC	26.1	D	68.4	F *	OWSC	29.6	D	>100	F *	OWSC	13.9	B	15.9	C
5 . Ridgeway Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	OWSC	-	F *	-	F *	OWSC	>100	F *	-	F *	OWSC	25.3	D	22.1	C
6 . Dauchy Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	Signal	79.8	E *	>100	F *	Signal	>100	F *	>100	F *	Signal	51.8	D	39.1	D
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane	City of Riverside	TWSC	49.2	E *	44.2	E *	TWSC	>100	F *	97.9	F *	Signal	6.8	A	6.7	A
8 . Dauchy Avenue - Taft Street/Krameria Avenue	City of Riverside	AWSC	63.7	F *	40.8	E *	AWSC	75.2	F *	45.7	E *	Signal	16.4	B	15.2	B
11 . Trautwein Road/Mission Grove Parkway	City of Riverside	Signal	88.4	F *	69.3	E *	Signal	88.6	F *	70.7	E *	Signal	88.6	F *	70.7	E *
12 . Trautwein Road/John F Kennedy Drive	City of Riverside	Signal	85.3	F *	45.7	D	Signal	88.3	F *	45.8	D	Signal	93.4	F *	45.8	D
14 . Trautwein Road/Orange Terrace Parkway	City of Riverside	Signal	66.2	E *	13.8	B	Signal	73.0	E *	19.0	B	Signal	73.0	E *	19.0	B
16 . Trautwein Road/Van Buren Boulevard	City of Riverside	Signal	45.8	D	61.5	E *	Signal	46.9	D	73.4	E *	Signal	44.9	D	58.0	E *
18 . Barton Street/Van Buren Boulevard	County of Riverside/City of Riverside	Signal	55.7	E *	>100	F *	Signal	57.3	E *	>100	F *	Signal	55.8	E *	65.5	E *
19 . Project Driveway 1/Van Buren Boulevard	County of Riverside/City of Riverside	TWSC	0.0	A	-	F *	TWSC	0.0	A	-	F *	TWSC	0.0	A	17.4	C
21 . Dauchy Avenue/Project Driveway 4	City of Riverside	OWSC	19.1	C	16.2	C	OWSC	25.6	D *	19.1	C	OWSC	16.9	C	15.2	C

Notes:

OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; AWSC = All-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

[1] From without project without improvements conditions to with project with improvements conditions.

Based on Synchro results, intersections where the delay is represented with a dash (-) has through volumes that block the turn movements throughout the peak hour. As such, Synchro does not report a delay at these intersections for the blocked turn movements. Therefore, the worst-case movements at these intersections operate at LOS F.

LSA

Table 13-C - Cumulative (2045) with Project Recommended Improvements Intersection Levels of Service

Intersection	Jurisdiction	Without Project Without Improvements						With Project Without Improvements						With Project With Improvements					
			A.M. Peak Hour			Afternoon Peak Hour			A.M. Peak Hour			Afternoon Peak Hour			A.M. Peak Hour			Afternoon Peak Hour	
		Control	Delay (sec.)	LOS		Delay (sec.)	LOS	Control	Delay (sec.)	LOS		Delay (sec.)	LOS	Control	Delay (sec.)	LOS		Delay (sec.)	LOS
1 . Washington Street/Van Buren Boulevard	County of Riverside	Signal	68.8	E	*	68.1	E	*	Signal	70.6	E	*	70.6	E	*	Signal	41.9	D		48.6	D	
2 . Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	Signal	76.9	E	*	81.4	F	*	Signal	82.1	F	*	86.3	F	*	Signal	27.2	C		22.4	C	
4 . Little Court/Van Buren Boulevard	County of Riverside/City of Riverside	OWSC	34.4	D		>100	F	*	OWSC	41.5	E	*	-	F	*	OWSC	14.9	B		16.6	C	
5 . Ridgeway Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	OWSC	-	F	*	-	F	*	OWSC	-	F	*	-	F	*	OWSC	31.7	D		24.1	C	
6 . Dauchy Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	Signal	>100	F	*	>100	F	*	Signal	>100	F	*	>100	F	*	Signal	41.0	D		49.2	D	
7 . Dauchy Avenue/Project Driveway 2 - Ardenwood Lane	City of Riverside	TWSC	58.1	F	*	75.4	F	*	TWSC	>100	F	*	>100	F	*	Signal	6.8	A		6.8	A	
8 . Dauchy Avenue - Taft Street/Krameria Avenue	City of Riverside	AWSC	>100	F	*	>100	F	*	AWSC	>100	F	*	>100	F	*	Signal	17.9	B		17.1	B	
11 . Trautwein Road/Mission Grove Parkway	City of Riverside	Signal	>100	F	*	85.9	F	*	Signal	>100	F	*	88.0	F	*	Signal	>100	F	*	88.0	F	*
12 . Trautwein Road/John F Kennedy Drive	City of Riverside	Signal	95.2	F	*	50.2	D		Signal	99.9	F	*	50.4	D		Signal	99.8	F	*	50.4	D	
14 . Trautwein Road/Orange Terrace Parkway	City of Riverside	Signal	69.0	E	*	13.8	B		Signal	73.7	E	*	19.5	B		Signal	73.7	E	*	19.5	B	
16 . Trautwein Road/Van Buren Boulevard	City of Riverside	Signal	46.5	D		77.9	E	*	Signal	47.7	D		82.5	F	*	Signal	46.7	D		81.6	F	*
18 . Barton Street/Van Buren Boulevard	County of Riverside/City of Riverside	Signal	59.1	E	*	>100	F	*	Signal	60.9	E	*	>100	F	*	Signal	59.2	E	*	62.7	E	*
19 . Project Driveway 1/Van Buren Boulevard	County of Riverside/City of Riverside	TWSC	0.0	A		-	F	*	TWSC	0.0	A		-	F	*	TWSC	0.0	A		19.4	C	
21 . Dauchy Avenue/Project Driveway 4	City of Riverside	OWSC	21.2	C		20.2	C		OWSC	29.9	D	*	25.8	D	*	OWSC	18.3	C		17.7	C	

Notes:

OWSC = One-Way Stop Control; TWSC = Two-Way Stop Control; AWSC = All-Way Stop Control; LOS = Level of Service

Delay = Average control delay in seconds (For OWSC/TWSC intersections, reported delay is for worst-case movement).

* Exceeds LOS Standard

[1] From without project without improvements conditions to with project with improvements conditions.

Based on Synchro results, intersections where the delay is represented with a dash (-) has through volumes that block the turn movements throughout the peak hour. As such, Synchro does not report a delay at these intersections for the blocked turn movements. Therefore, the worst-case movements at these intersections operate at LOS F.

LSA

Table 13-D - Recommended Improvements for Roadway Segments, Funding Mechanism, and Fair Share

Roadway	#	Segment	Opening Year (2029) with Project Improvements	Cumulative (2045) with Project Improvements	Improvements Covered by TUMF	Improvements In Coordination With City and County	Improvements Covered by Fair Share (County Only)	Fair Share Percentage
Van Buren Boulevard	1	Between Little Court and Dauchy Avenue	Widen to 6 lanes. No additional improvements feasible due to right-of-way constraints.	No additional improvements feasible due to right-of-way constraints.	Widen to 6 lanes.			-
Dauchy Avenue	2	Between Van Buren Boulevard and Ardenwood Lane	No improvements feasible due to right-of-way constraints.	No improvements feasible due to right-of-way constraints.				N/A
	3	Between Ardenwood Lane and Hawksbury Drive	Add TWLTL between Project Driveway 3 and Project Driveway 4 (Project Responsibility). Parking restriction between Project Driveway 2 and Project Driveway 5 (Project Responsibility).No additonal improvements feasible due to right-of-way constraints.	No additional improvements feasible due to right-of-way constraints.		Add TWLTL between Project Driveway 3 and Project Driveway 4 (Project Responsibility). Parking restriction between Project Driveway 2 and Project Driveway 5 (Project Responsibility).		N/A

Notes:

TUMF refers to the Transportation Uniform Mitigation Fee Program.

TWLTL = Two-Way-Left-Turn-Lane

LSA

Table 13-E - Opening Year (2029) with Project with Improvements Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	LOS Standard	Without Project Without Improvements						With Project Without Improvements						With Project With Improvements						V/C Ratio Difference[3]
			Classification[1]	Number of Lanes	Roadway Capacity[2]	Daily Volume	V/C Ratio	LOS	Classification[1]	Number of Lanes	Roadway Capacity[2]	Daily Volume	V/C Ratio	LOS	Classification[1]	Number of Lanes	Roadway Capacity[2]	Daily Volume	V/C Ratio	LOS	
Segments on Van Buren Boulevard [4]																					
1 . Between Little Court and Dauchy Avenue	County of Riverside/City of Riverside	D	Arterial (120')	4	36,400	58,290	1.60	F *	Arterial (120')	4	36,400	58,550	1.61	F *	Arterial (120')	6	54,900	58,550	1.07	F *	-0.53
Segments on Dauchy Avenue																					
2 . Between Van Buren Boulevard and Ardenwood Lane	City of Riverside	D	Local	2	3,400	7,630	2.24	F *	Local	2	3,400	8,350	2.46	F *	Local	2	3,400	8,350	2.46	F *	0.21
3 . Between Ardenwood Lane and Hawksbury Drive	City of Riverside	D	Local	2	3,400	4,970	1.46	F *	Local	2	3,400	5,400	1.59	F *	Local	2	3,400	5,400	1.59	F *	0.13

Notes:

LOS = Level of Service

***** Exceeds LOS Standard

[1] Classifications for all segments have been obtained from the City of Riverside General Plan Circulation and Community Mobility Element Master Plan of Roadways.

[2] Roadway capacities have been obtained from the City of Riverside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment*(dated July 2020).

[3] From without project without improvements conditions to with project with improvements conditions.

[4] As part of the intersection operations improvements, segments on Van Buren Boulevard will be widened to 6 lanes from Washington Street to Barton Street.

LSA

Table 13-F - Cumulative (2045) with Project with Improvements Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	LOS Standard	Without Project Without Improvements						With Project Without Improvements						With Project With Improvements						V/C Ratio Difference[3]
			Classification[1]	Number of Lanes	Roadway Capacity[2]	Daily Volume	V/C Ratio	LOS	Classification[1]	Number of Lanes	Roadway Capacity[2]	Daily Volume	V/C Ratio	LOS	Classification[1]	Number of Lanes	Roadway Capacity[2]	Daily Volume	V/C Ratio	LOS	
Segments on Van Buren Boulevard																					
1 . Between Little Court and Dauchy Avenue	County of Riverside/City of Riverside	D	Arterial (120')	4	36,400	61,200	1.68	F *	Arterial (120')	4	36,400	61,460	1.69	F *	Arterial (120')	6	54,900	61,460	1.12	F *	-0.56
Segments on Dauchy Avenue																					
2 . Between Van Buren Boulevard and Ardenwood Lane	City of Riverside	D	Local	2	3,400	7,880	2.32	F *	Local	2	3,400	8,600	2.53	F *	Local	2	3,400	8,600	2.53	F *	0.21
3 . Between Ardenwood Lane and Hawksbury Drive	City of Riverside	D	Local	2	3,400	5,590	1.64	F *	Local	2	3,400	6,020	1.77	F *	Local	2	3,400	6,020	1.77	F *	0.13

Notes:

LOS = Level of Service

***** Exceeds LOS Standard

[1] Classifications for all segments have been obtained from the City of Riverside General Plan Circulation and Community Mobility Element Master Plan of Roadways.

[2] Roadway capacities have been obtained from the City of Riverside *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment*(dated July 2020).

[3] From without project without improvements conditions to with project with improvements conditions.

[4] As part of the intersection operations improvements, segments on Van Buren Boulevard will be widened to 6 lanes from Washington Street to Barton Street.

14.0 PROJECT DRIVEWAY SIGNAL IMPLEMENTATION SENSITIVITY ANALYSIS

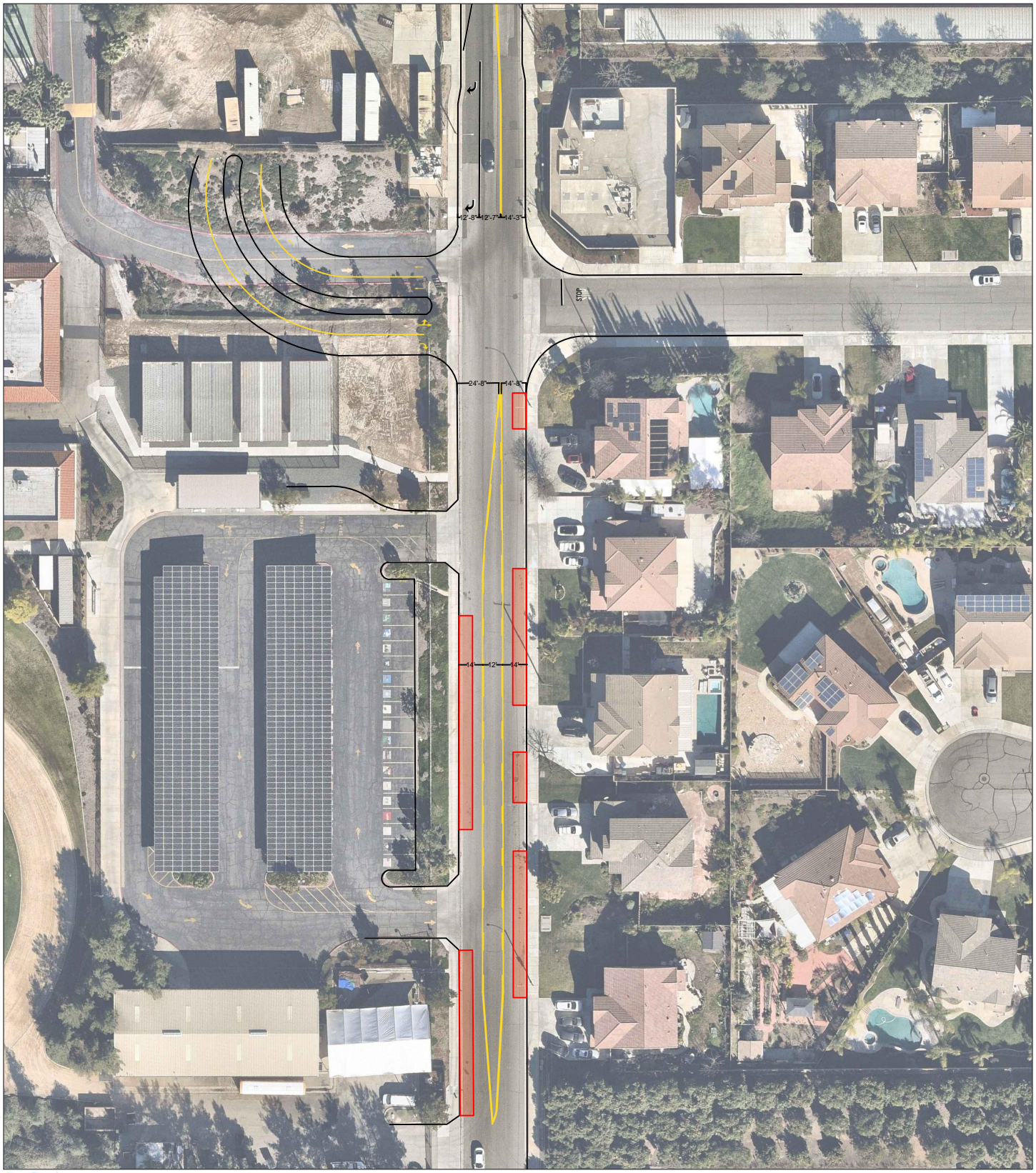
A signal warrant sensitivity analysis was conducted to determine the timeframe when a traffic signal is warranted for the intersection of Dauchy Avenue/Project Driveway 2 – Ardenwood Lane. Based on the traffic signal warrant analysis in Section 8.1, a traffic signal warrant was met under the Opening Year (2029) with Project conditions in the a.m. peak hour. As part of the signal warrant sensitivity analysis, a signal warrant analysis was conducted for the interim years between the time frame from Existing (2021) conditions to Opening Year (2029) conditions to determine when a traffic signal is warranted during the a.m. peak hour.

The signal warrant sensitivity analysis was conducted using traffic volumes from the interim years and project traffic. Background traffic volumes for interim analysis years between the Existing (2021) and Opening Year (2029) was developed using a 2% per annum growth. Additionally, the total cumulative project traffic trips were added to all interim year scenarios as a conservative approach starting with Year 2023. The project trip generation traffic was interpolated using student enrollment projections provided by the project applicant and then added to the corresponding interim year no project traffic volumes.

Figure 13-1, Figure 13-2, Figure 13-3, Figure 13-4, Figure 13-5, illustrates the corresponding Year 2023 to Year 2027 Peak Hour Warrants at Dauchy Avenue/Project Driveway 2 – Ardenwood Lane. As illustrated in Figure 13-1, Figure 13-2, and Figure 13-3, a traffic signal is not warranted for Year 2023, Year 2024, and Year 2025. As illustrated in Figure 13-4 and Figure 13-5, a traffic signal is warranted beginning in Year 2026 and onwards. However, as per the LOS analysis for this intersection, the intersection is forecasted to operate at a deficient LOS without implementation of any new traffic control mechanism. A potential short-term interim improvement could be converting the traffic control at this intersection to an all-way stop control until a signal warrant is met.

14.1 LIST OF CHAPTER 14.0 FIGURES

- Figure 14-1: Year 2023 Peak Hour Warrant – Dauchy Avenue/Project Driveway 2 - Ardenwood Lane
- Figure 14-2: Year 2024 Peak Hour Warrant – Dauchy Avenue/Project Driveway 2 - Ardenwood Lane
- Figure 14-3: Year 2025 Peak Hour Warrant – Dauchy Avenue/Project Driveway 2 - Ardenwood Lane
- Figure 14-4: Year 2026 Peak Hour Warrant – Dauchy Avenue/Project Driveway 2 - Ardenwood Lane
- Figure 14-5: Year 2027 Peak Hour Warrant – Dauchy Avenue/Project Driveway 2 - Ardenwood Lane



LSA

LEGEND

- Parking Restriction

FIGURE 13-2

0 40 80

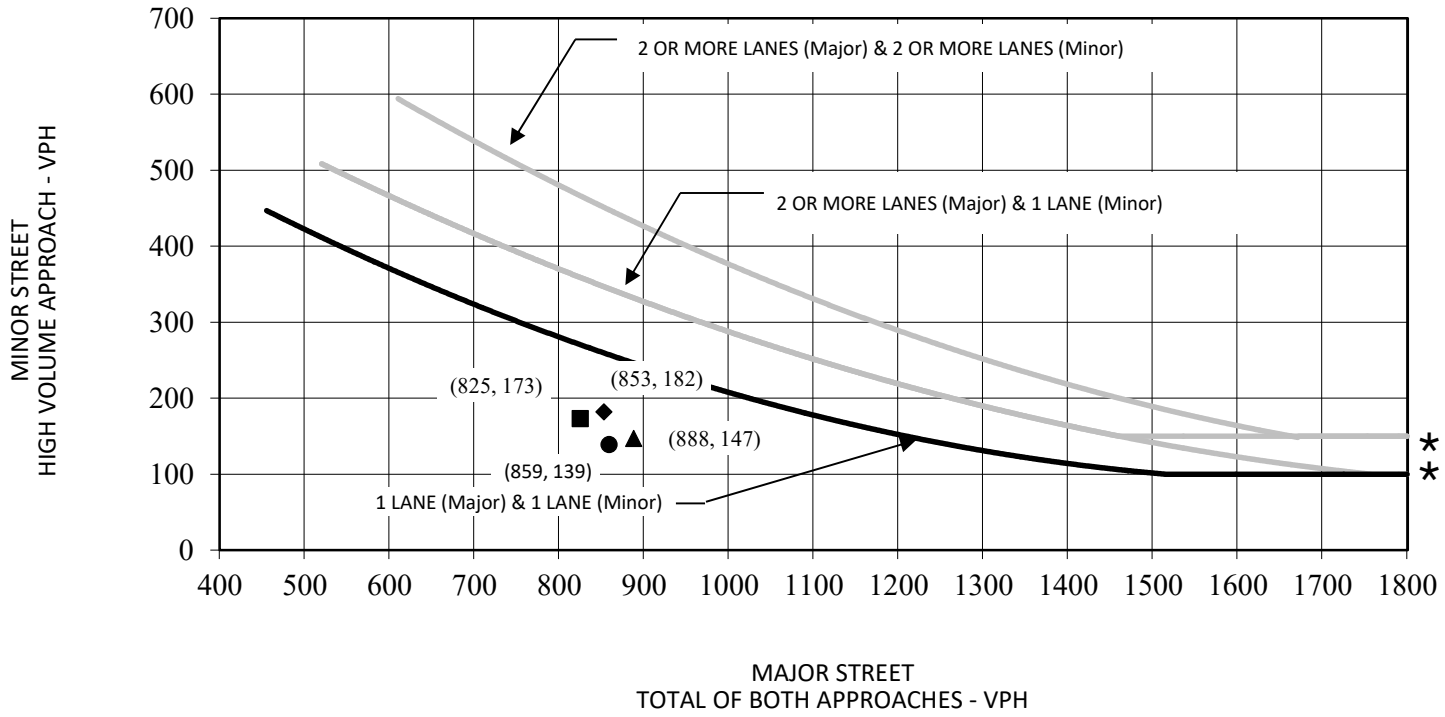
FEET

Woodcrest Christian School
Traffic Operational Analysis

Conceptual Striping and Parking Restriction

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\GIS\AutoCAD\Conceptual_Striping.dwg (3/10/2024)

WARRANT 3, PEAK HOUR



* 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 14-1

● Without Project AM Peak Hour

▲ With Project AM Peak Hour

■ Without Project AM Peak Hour - CA Left Alt

◆ With Project AM Peak Hour - CA Left Alt

Woodcrest Christian School Expansion Project

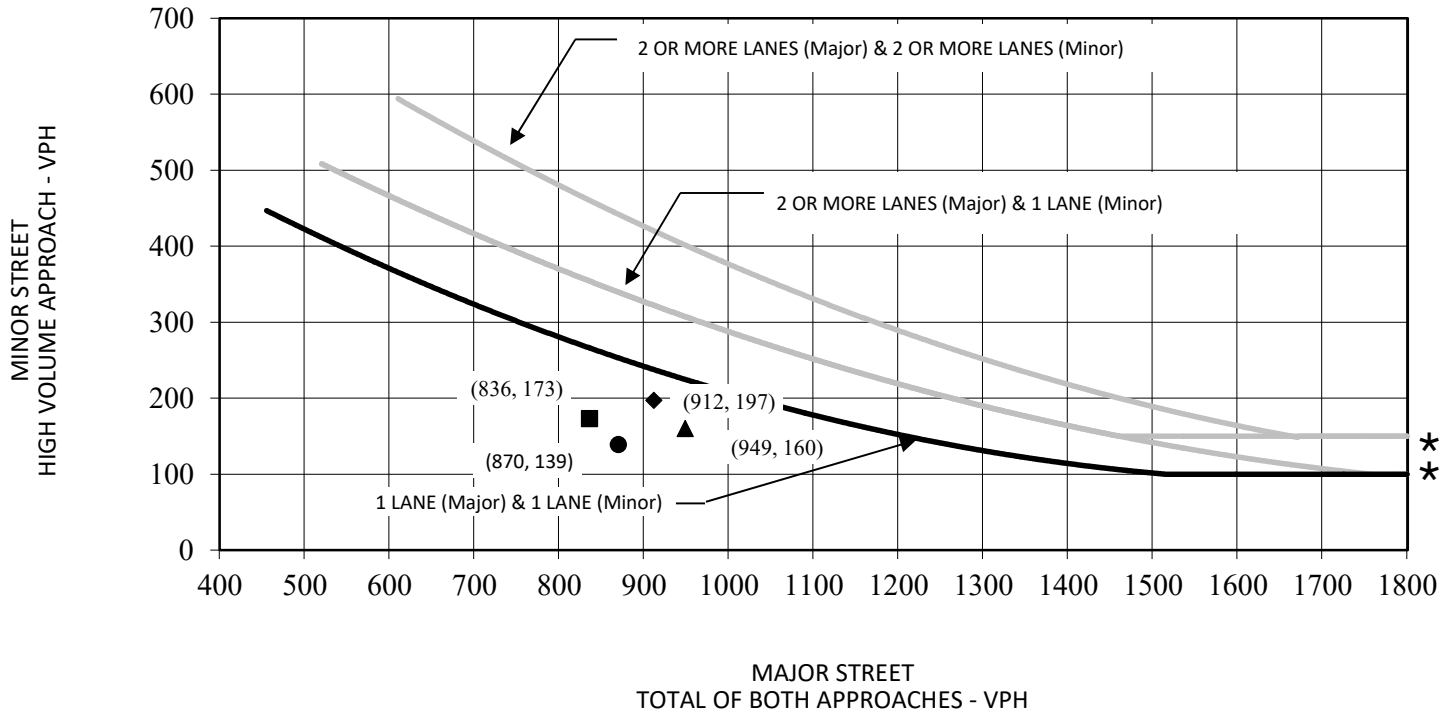
Traffic Operational Analysis

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

Year 2023 Peak Hour Warrant - Dauchy Avenue/Project Driveway 2-Ardenwood Lane

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\Due Diligence - Traffic Signal\SW_INT 7_2023AM.xlsx (2/20/2024)

WARRANT 3, PEAK HOUR



* 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 14-2

● Without Project AM Peak Hour

▲ With Project AM Peak Hour

■ Without Project AM Peak Hour - CA Left Alt

◆ With Project AM Peak Hour - CA Left Alt

Woodcrest Christian School Expansion Project

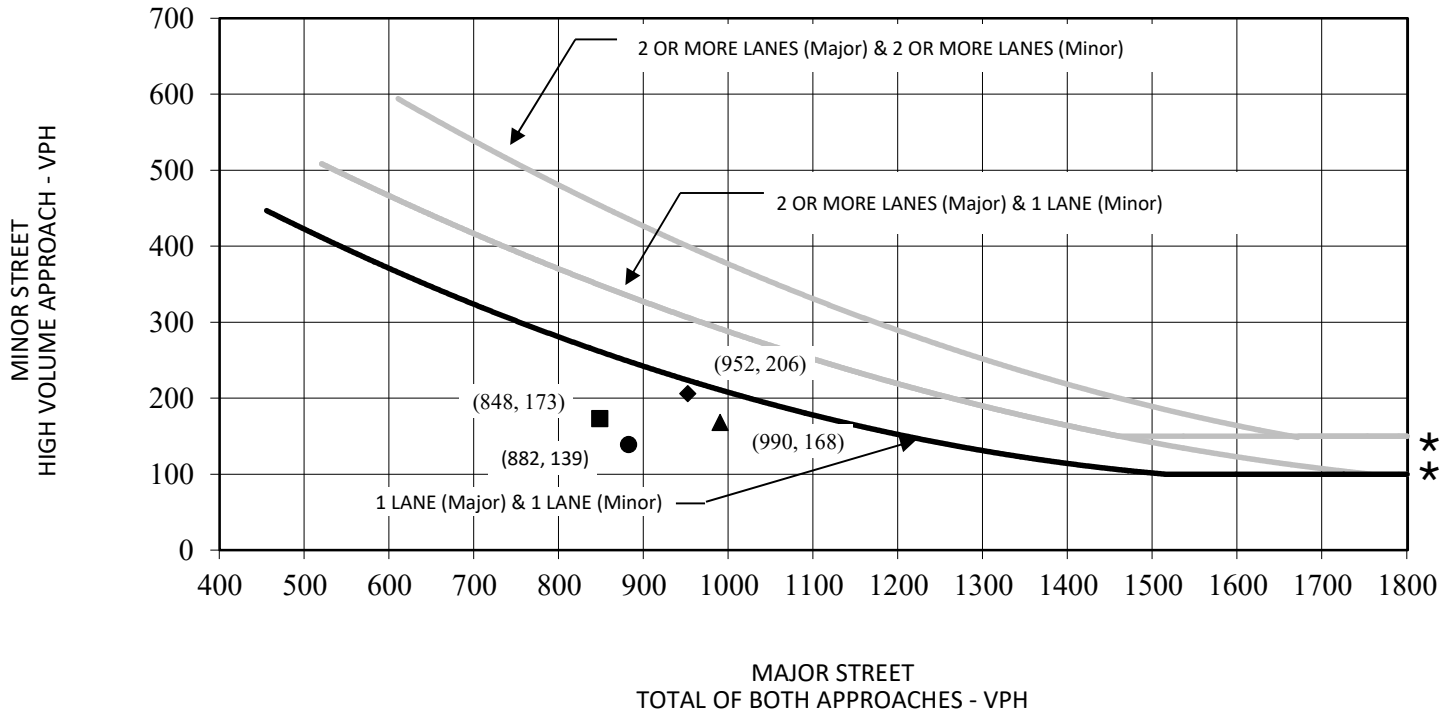
Traffic Operational Analysis

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

Year 2024 Peak Hour Warrant - Dauchy Avenue/Project Driveway 2-Ardenwood Lane

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\Due Diligence - Traffic Signal\SW_INT 7_2024AM.xlsx (2/20/2024)

WARRANT 3, PEAK HOUR



* 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 14-3

● Without Project AM Peak Hour

▲ With Project AM Peak Hour

■ Without Project AM Peak Hour - CA Left Alt

◆ With Project AM Peak Hour - CA Left Alt

Woodcrest Christian School Expansion Project

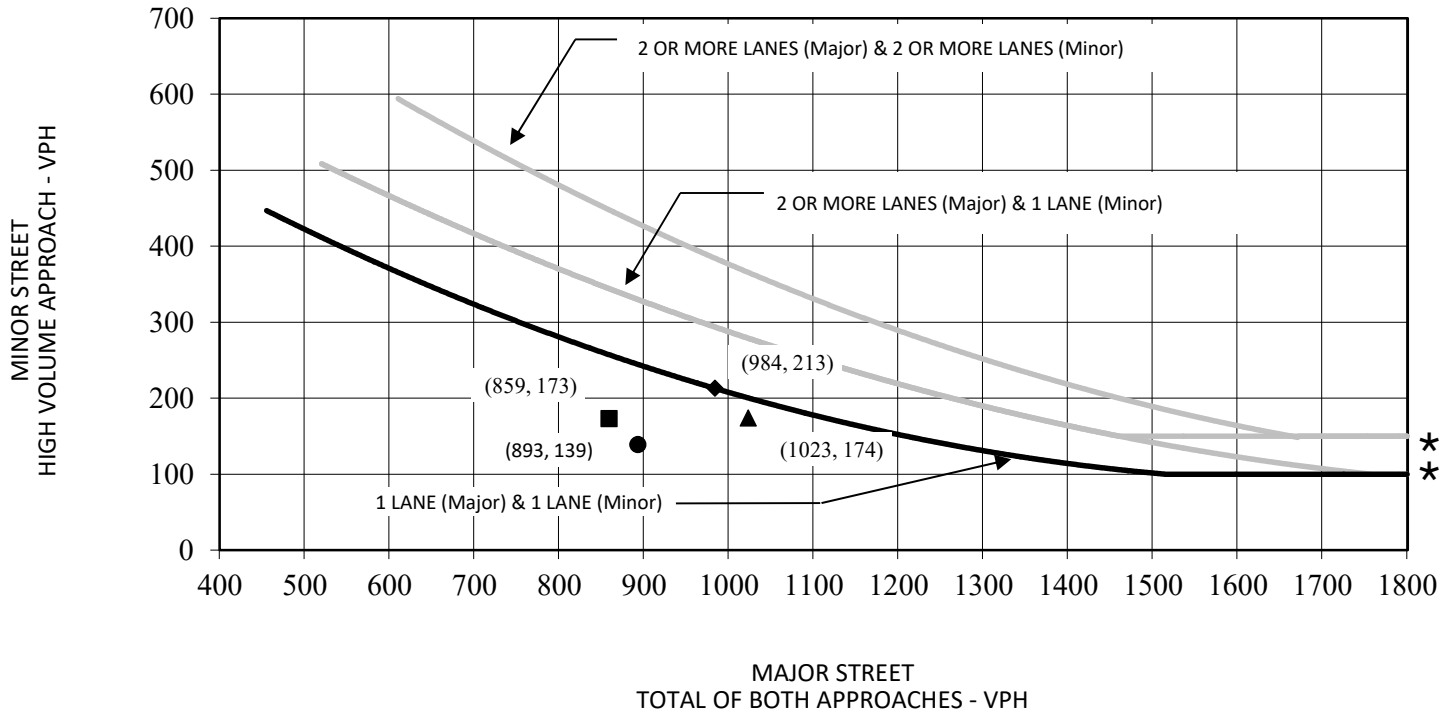
Traffic Operational Analysis

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

Year 2025 Peak Hour Warrant - Dauchy Avenue/Project Driveway 2-Ardenwood Lane

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\Due Diligence - Traffic Signal\SW_INT 7_2025AM.xlsx (2/20/2024)

WARRANT 3, PEAK HOUR



* 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 14-4

● Without Project AM Peak Hour

▲ With Project AM Peak Hour

■ Without Project AM Peak Hour - CA Left Alt

◆ With Project AM Peak Hour - CA Left Alt

Woodcrest Christian School Expansion Project

Traffic Operational Analysis

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

Year 2026 Peak Hour Warrant - Dauchy Avenue/Project Driveway 2-Ardenwood Lane

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\Due Diligence - Traffic Signal\SW_INT 7_2026AM.xlsx (2/20/2024)

15.0 DROP-OFF/PICK-UP CIRCULATION

At the request of City staff, morning and afternoon student drop-off/pick-up procedures were evaluated to determine potential circulation effects associated with on-site queuing. Specifically, the queues formed by student unloading and loading activities were examined to determine if on-site queuing would spill onto Dauchy Avenue and create potential vehicular conflicts.

15.1 ON-SITE CIRCULATION

Drop-off and pick-up access to the main lot is provided via Project Driveway 2. Once on campus, vehicles follow an internal circulation roadway to the main lot adjacent to Van Buren Boulevard with designated drop-off/pick-up zones. The drop-off/pick-up zone at the main lot is approximately 300 feet long. After students had been dropped off or picked up, vehicles continue through an internal circulation roadway and exit the school via eastbound left-turn or right-turn on Dauchy Avenue using Project Driveway 2. Figure 14-1 provides detailed illustration outlining the drop-off/pick-up circulation and loading zones for the main lot.

Drop-off and pick-up access is also provided at the rear lot which can be accessed via Project Driveway 3 and Project Driveway 4. It should be noted that Project Driveway 3 is an ingress only driveway. Once on campus, vehicles follow a designated route to designated drop-off/pick-up zones. The drop-off/pick-up zone at the rear lot is located along the sidewalk adjacent to the track and field, measuring approximately 250 feet under future conditions. After students had been dropped off or picked up, vehicles continue through a designated route and exit the school via eastbound left-turn or right-turn onto Dauchy Avenue at Project Driveway 4. Figure 14-2 provides a detailed illustration outlining the drop-off/pick-up circulation and loading zones for the rear lot.

15.2 ON-SITE QUEING ANLAYSIS (EXISTING CONDITIONS)

Counts Unlimited observed and recorded existing queues associated with student drop-off and pick-up activities during on-site surveys conducted on Tuesday April 26, 2022. The survey was conducted to determine if adequate storage space is available on site to accommodate queues resulting from student pick-up and drop-off activities.

15.2.1 Main Lot

As Figure 14-3 and Figure 14-4 shows, there are approximately 300 feet of available storage on site for drop-off activities, which can accommodate 12 vehicles. The storage area begins at the front of the student unloading zone and extends to the beginning of the loop around the parking lot. There is over 400 feet of storage space available in the parking lot for vehicles waiting to drop-off/pick-up students.

Morning drop-off activities were observed between 7:30 and 8:30 a.m. Between 7:30 and 7:45 a.m., nominal queues were observed on the site due to low arrival rate of drop-off vehicles during this period. Beginning at 7:50 a.m., the arrival rate of drop-off vehicles was observed to increase significantly. A maximum queue length of 350 feet (15 vehicles) was observed at 8:15 a.m. as shown in Figure 14-3. No queuing issues was observed as the onsite vehicles queuing zone is adequate.

During the afternoon student pick-up period, it was observed that vehicle arrival was extended over a longer period (2:15 to 4:40 p.m.) compared to the morning drop-off period. Beginning at 2:30

p.m., the arrival rate of pick-up vehicles was observed to increase significantly. A maximum queue length of 400 feet (19 vehicles) was observed at 2:40 p.m., as shown in Figure 14-4. No queuing issues was observed as the onsite vehicles queuing zone has adequate room.

15.2.2 Rear Lot

As Figure 14-5 and Figure 14-6 shows, there is approximately 225 feet of available storage length on site for drop-off activities, which can accommodate 12 vehicles. The storage area begins at the front of the student unloading zone and extends around the parking lot. There is about 200 feet of storage space available in the parking lot for vehicles waiting to drop-off/pick-up students.

Morning drop-off activities were observed between 7:30 and 8:30 a.m. Between 7:30 and 7:45 a.m., nominal queues were observed on the site due to low arrival rate of drop-off vehicles during this period. Beginning at 7:50 a.m., the arrival rate of drop-off vehicles was observed to increase significantly. A maximum queue length of 250 feet (12 vehicles) was observed at 8:10 a.m., as shown in Figure 14-5. No queuing issues was observed as the onsite vehicles queuing zone is adequate.

During the afternoon student pick-up period, it was observed that vehicle arrival was extended over a longer period (2:15 to 4:15 p.m.) compared to the morning drop-off period. Beginning at 2:20 p.m., the arrival rate of pick-up vehicles was observed to increase significantly. A maximum queue length of 450 feet (20 vehicles) was observed 2:45 p.m., as shown in Figure 14-6. No queuing issues was observed as the onsite vehicles queuing zone is adequate.

15.3 ON-SITE QUEING ANLAYSIS (WITH PROJECT CONDITIONS)

Once the expansion is complete, the school will have capacity to accommodate a maximum net increase of 280 students. Because vehicle queue is a function of the number of students enrolled, the worst-case vehicle queue is expected to increase with expansion of the school during the morning drop-off period. As previously mentioned, the relocation of bus parking at rear parking lot to extend vehicle storage for student drop-off and pick-up, will improve circulation and minimize potential queuing issues as a result of the expansion.

15.3.1 Main Lot

As previously discussed, a worst-case queue length 350 feet was observed during the morning drop-off period. Currently, 644 students are enrolled in the school. Therefore, queues on site form at a rate of 0.54 feet per student (350 feet/644 students). As such, the addition of 280 students would increase the existing queue by an additional 152 feet; and a 502-foot queue could occur when the school is at full capacity (924 student). No queuing issues nor conflicts is anticipated as the storage is adequate, as shown in Figure 14-3.

During the afternoon pick-up period, a worst-case queue length of 400 feet (19 vehicles) was observed during the afternoon pick-up period. Currently, 644 students are enrolled in the school. Therefore, queues on site form at a rate of 0.62 feet per student (400 feet/644 students). As such, the addition of 280 students would increase the existing queue by an additional 174 feet; and a 574-foot queue could occur when the school is at full capacity (924 students). No queuing issues nor conflicts is anticipated as the storage is adequate, as shown in Figure 14-4.

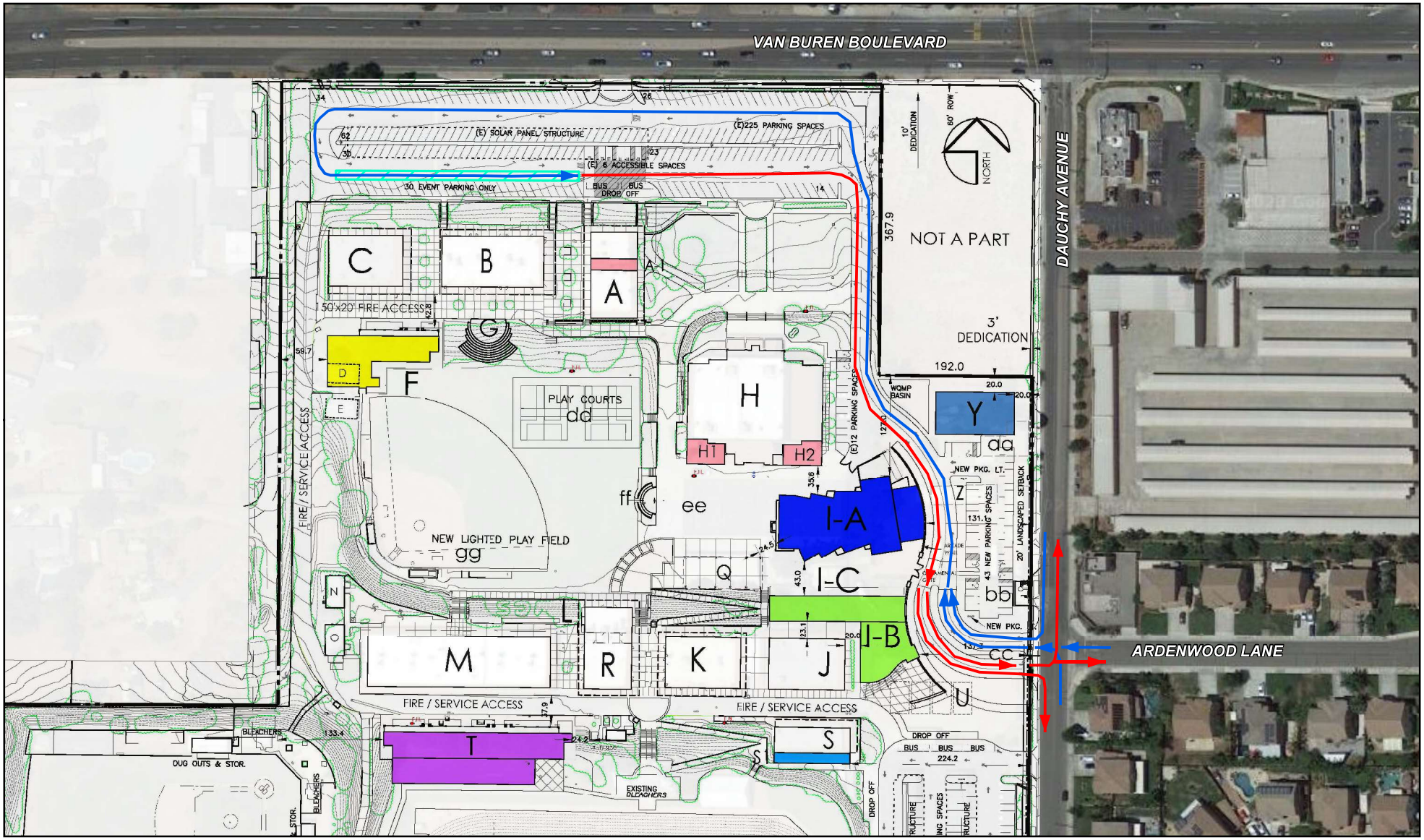
15.3.2 Rear Lot

As previously discussed, a worst-case queue length 250 feet was observed during the morning drop-off period. Currently, 644 students are enrolled in the school. Therefore, queues on site form at a rate of 0.39 feet per student (250 feet/644 students). As such, the addition of 280 students would increase the existing queue by an additional 109 feet; and a 359-foot queue could occur when the school is at full capacity (924 students). No queuing issues nor conflicts is anticipated as the storage is adequate, as shown in Figure 14-7.

During the afternoon pick-up period, a worst-case queue length of 450 feet was observed during the afternoon pick-up period. Currently, 644 students are enrolled in the school. Therefore, queues on site form at a rate of 0.70 feet per student (450 feet/644 students). As such, the addition of 280 students would increase the existing queue by an additional 196 feet; and a 646-foot queue could occur when the school is at full capacity (924 students). No queuing issues nor conflicts is anticipated as the storage is adequate, as shown in Figure 14-8.

15.4 LIST OF CHAPTER 15.0 FIGURES

- Figure 15-1: Main Lot Circulation
- Figure 15-2: Rear Lot Circulation
- Figure 15-3: Main Lot Drop-Off Queue
- Figure 15-4: Main Lot Pick-Up Queue
- Figure 15-5: Existing Rear Lot Drop-Off Queue
- Figure 15-6: Existing Rear Lot Pick-Up Queue
- Figure 15-7: Future Rear Lot Drop-Off Queue
- Figure 15-8: Future Rear Lot Pick-Up Queue



LSA

LEGEND

- In
- Out
- Loading Zone

0 87.5 175
FEET

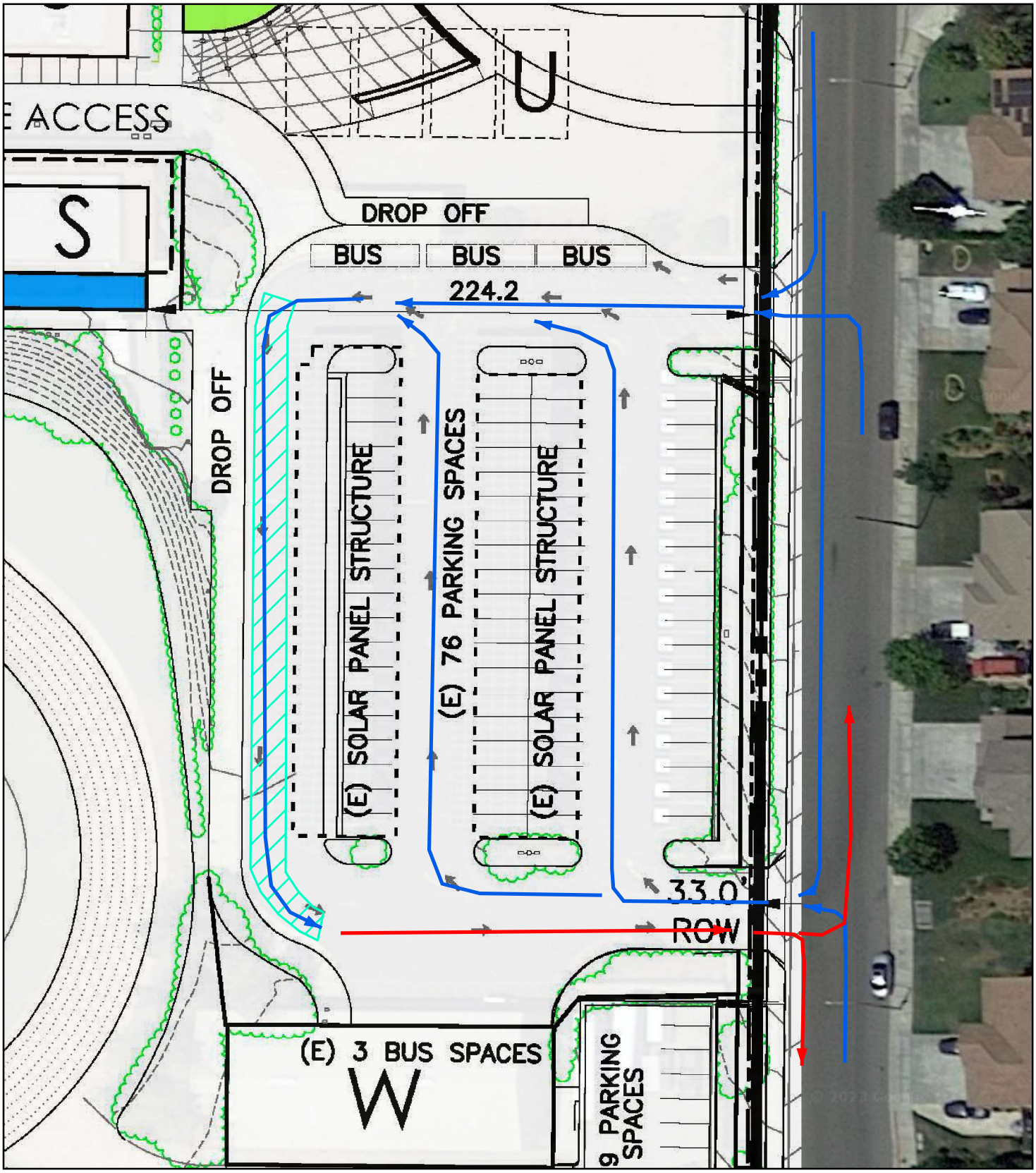
SOURCE: Google Earth, 2021.

FIGURE 15-1

Woodcrest Christian School Expansion
Traffic Operational Analysis

Main Lot Circulation

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\GIS\Reports\fig15-1_Circulation_Main.mxd (11/16/2023)



LSA

LEGEND

In

Out

Loading Zone

N

0 25 50

FEET

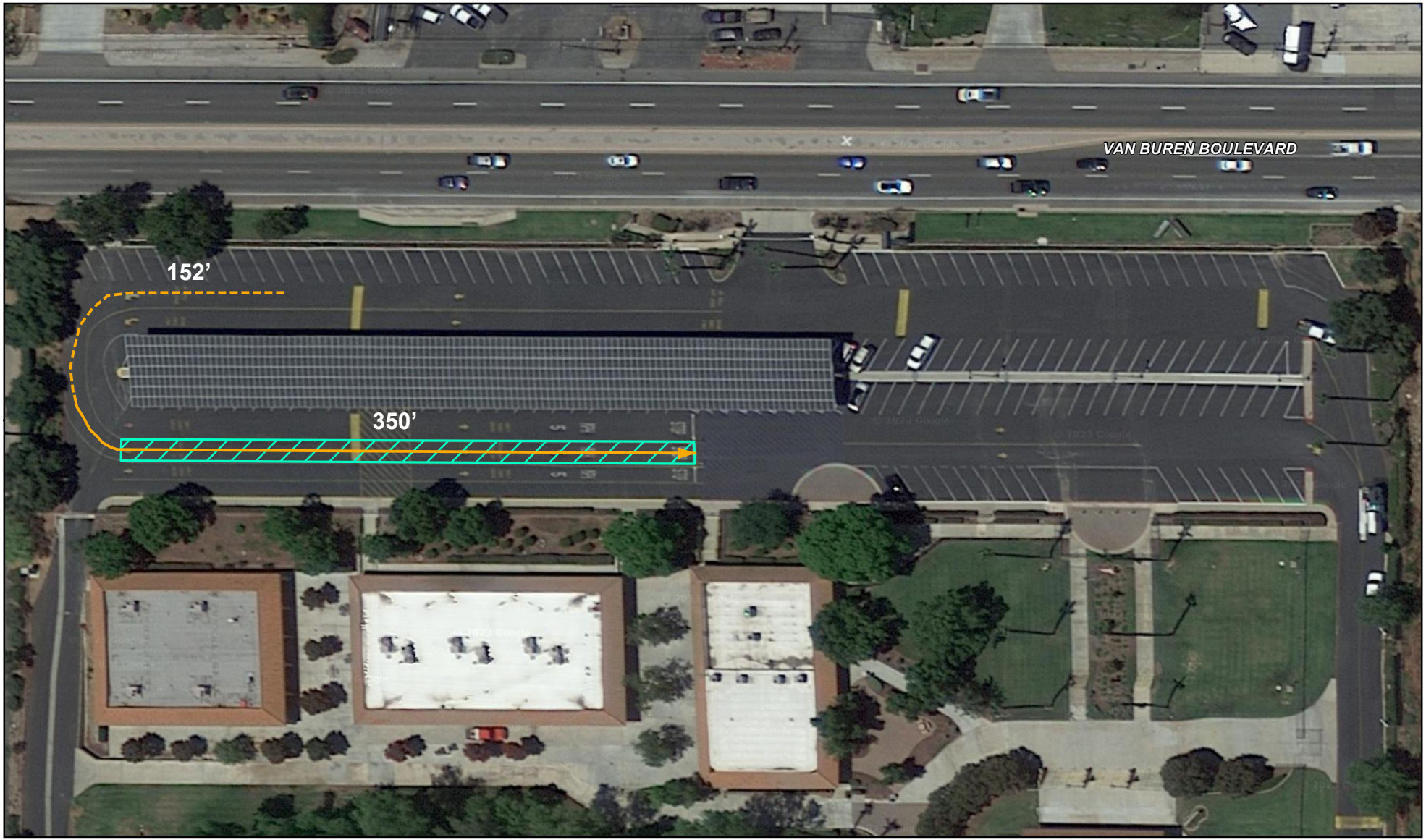
SOURCE: Google Earth, 2021.

FIGURE 15-2

Woodcrest Christian School Expansion
Traffic Operational Analysis

Rear Lot Circulation

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\GIS\Reports\fig15-2_Circulation_Rear.mxd (11/16/2023)



LSA

LEGEND

Drop-off Zone

Existing Observed Queue

Future Additional Queue Due to Expansion

0 37.5 75

FEET

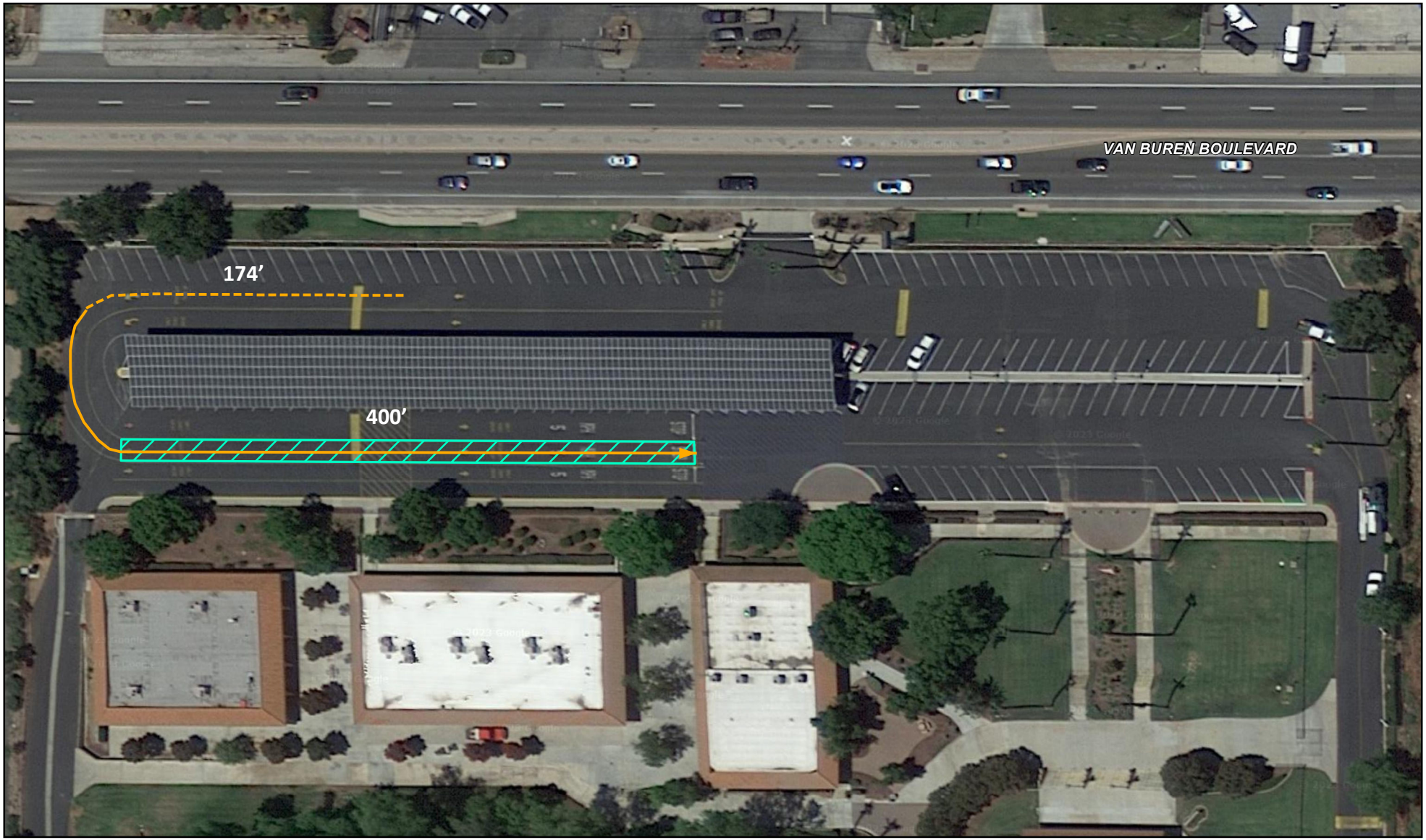
SOURCE: Google Earth, 2021.

FIGURE 15-3

Woodcrest Christian School Expansion
Traffic Operational Analysis

Main Lot Drop-Off Queue

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\GIS\Reports\fig15-3_Dropoff_Main.mxd (11/15/2023)



LSA

LEGEND

Drop-off Zone

Existing Observed Queue

Future Additional Queue Due to Expansion

FIGURE 15-4

0 37.5 75

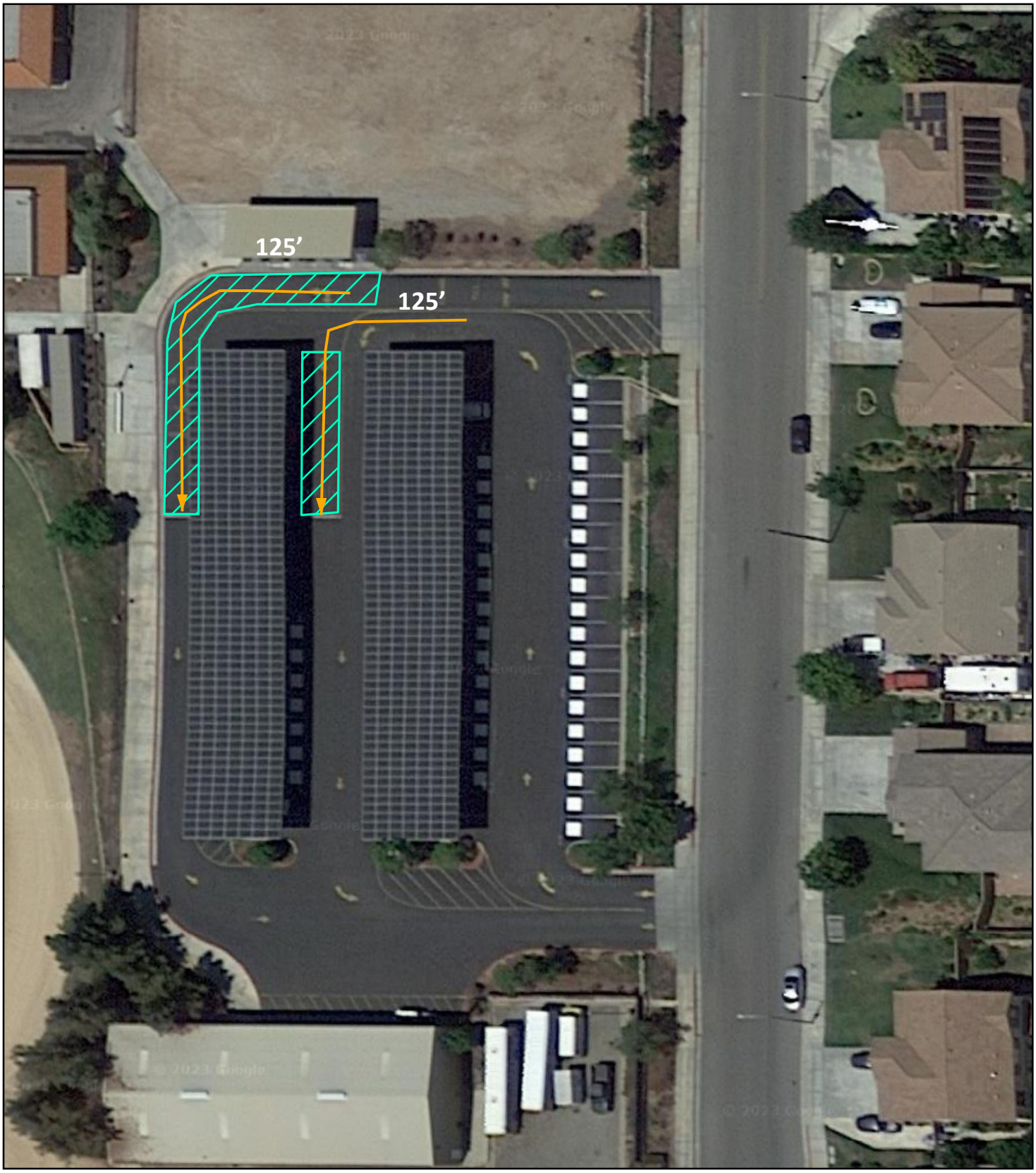
FEET

SOURCE: Google Earth, 2021.

Woodcrest Christian School Expansion
Traffic Operational Analysis

Main Lot Pick-Up Queue

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\GIS\Reports\fig15-4_Pickup_Main.mxd (9/9/2022)



LSA

LEGEND

Existing Observed Queue

Existing Loading Zone

FIGURE 15-5

N

0 25 50

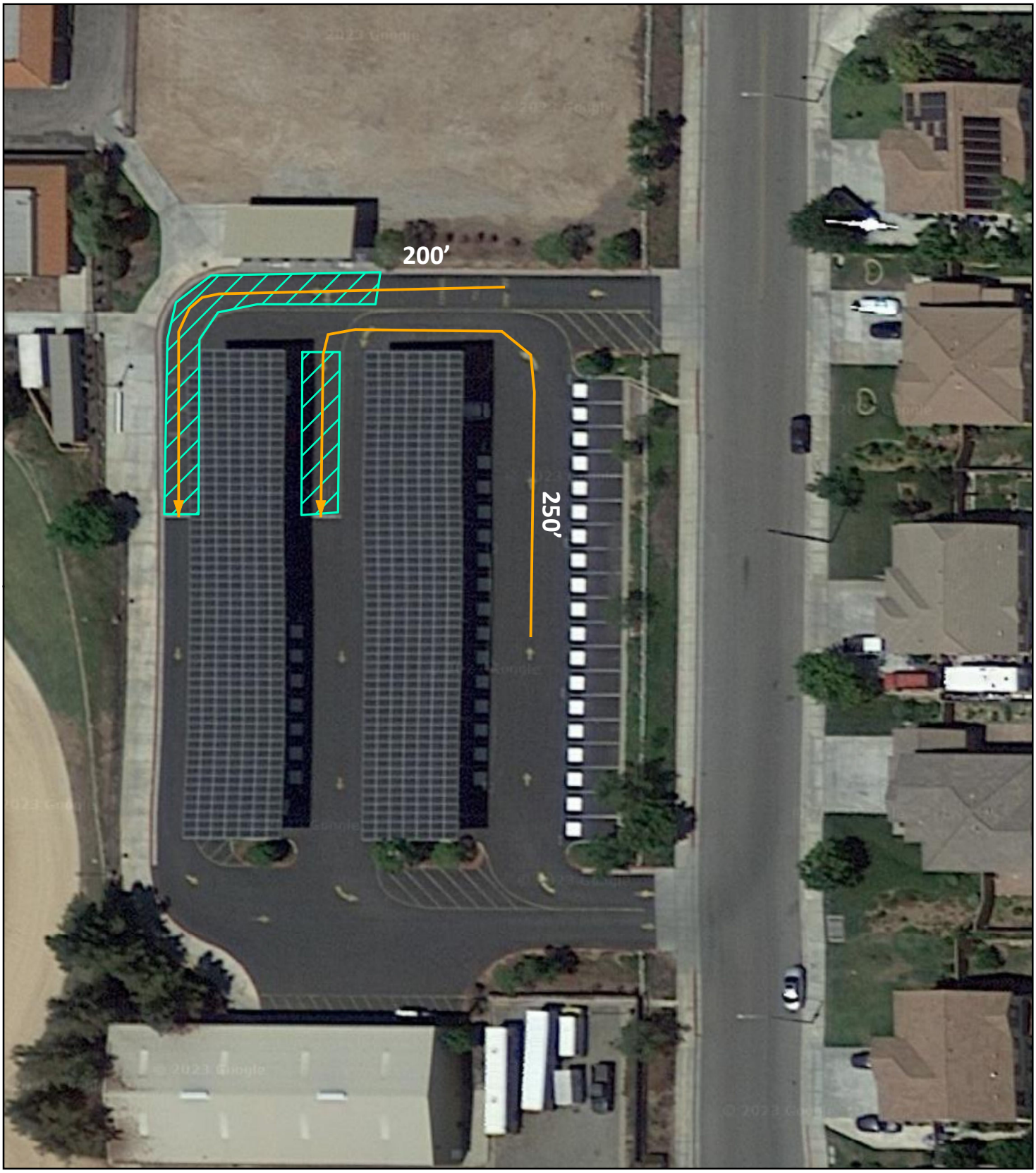
FEET

SOURCE: Google Earth, 2021.

Woodcrest Christian School Expansion
Traffic Operational Analysis

Existing Rear Lot Drop-Off Queue

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\GIS\Reports\fig15-5_Existng_Dropoff_Rear.mxd (11/15/2023)



LSA

LEGEND

Existing Loading Zone

Existing Observed Queue

FIGURE 15-6

N

0 25 50

FEET

SOURCE: Google Earth, 2021.

Woodcrest Christian School Expansion
Traffic Operational Analysis

Existing Rear Lot Pick-Up Queue

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\GIS\Reports\fig15-6_Existing_Pickup_Rear.mxd (11/16/2023)



LSA

LEGEND

Loading Zone

Anticipated Future Queue with Expansion

FIGURE 15-7

N

0 25 50

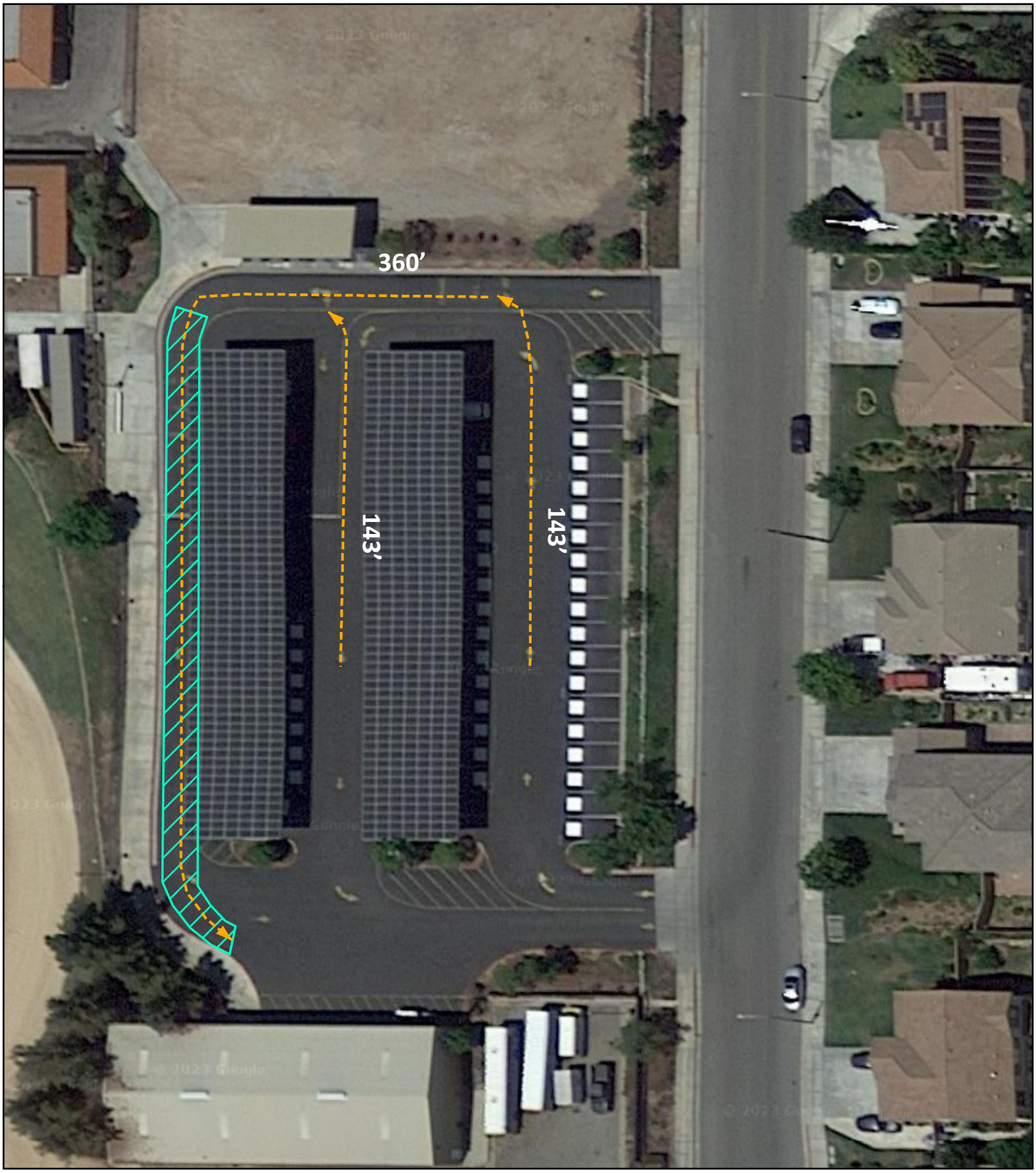
FEET

SOURCE: Google Earth, 2021.

Woodcrest Christian School Expansion
Traffic Operational Analysis

Future Rear Lot Drop-Off Queue

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\GIS\Reports\fig15-7_Future_Dropoff_Rear.mxd (11/15/2023)



LSA

FIGURE 15-8

LEGEND

Loading Zone

Anticipated Future Queue with Expansion

N

0 25 50

FEET

SOURCE: Google Earth, 2021.

Woodcrest Christian School Expansion
Traffic Operational Analysis

Future Rear Lot Pick-Up Queue

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\GIS\Reports\fig15-8_Future_Pickup_Rear.mxd (11/16/2023)

APPENDIX A

SCOPING AGREEMENT

Traffic Analysis Scoping Form

This scoping form shall be submitted to the City of Riverside Traffic Engineering Division

Project Identification:

Case Number:	PR-2021-001080 (CUP, DR)
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Woodcrest Christian School Expansion
Project Address:	18401 Van Buren Boulevard
Project Opening Year:	2029
Project Description:	Expansion of the existing Woodcrest Christian private school (Grades 7-12) capacity by 280 students up to a total capacity of 1000 students.

	Consultant:	Developer:
Name:	LSA Associates, Inc.	Jeff White
Address:	1500 Iowa Avenue, Suite 200	18401 Van Buren Boulevard
	Riverside, CA 92507	Riverside, CA 92508
Telephone:	951-781-9310	
Fax/Email:		mr.jeffwhite@wcss.org

Scoping & Study Fees:

Fees to be made payable to "City of Riverside" and delivered to Land Development. City Hall 3rd Floor, 3900 Main Street, Riverside, CA 92522

✓ 1) Scoping Agreement Fee (For all projects not screened from analysis): **$271.00**

✓ 2) TIA Review (For projects with both LOS & VMT analysis of any scale, or standalone LOS analyses with over 100 vehicle trips per hour): **$2671.02**

3) TIA Review (For standalone VMT analysis, or standalone LOS analyses with under 100 vehicle trips per hour): **$1288.20**

Trip Generation Information:

Trip Generation Data Source: Survey Counts

Current General Plan Land Use:

PF- Public Facilities and
MU-V - Mixed Use-Village

Proposed General Plan Land Use:

N/A

Current Zoning:

PF - SP Public Facilities/Specific Plan (Orangecrest)
MU-V-S-2-X-15-SP Mixed Use-Village

Proposed Zoning:

N/A

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	396	302	698	172	131	303
PM Trips	172	131	303	79	130	209

Trip Internalization: ☐ Yes ☒ No (____% Trip Discount)

Pass-By Allowance: ☐ Yes ☒ No (____% Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses in accordance with City Guidelines?

Is the project screened from LOS assessment? ☐ Yes ☒ No

LOS screening justification (see Page 6 of the guidelines): _____

Is the project screened from VMT assessment? ☐ Yes ☒ No

VMT screening justification (see Pages 23-25 of the guidelines): _____

Level of Service Scoping

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution):

North	South	East	West
28 %	25 %	17 %	30 %

- Attach list of Approved and Pending Projects that need to be considered (provided by the lead agency and adjacent agencies)
- Attach list of study intersections/roadway segments
- Attach legible site plan
- Note other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - ✓ Consistency with Plans supporting Bikes/Peds/Transit
  - ✓ Other Drop-off/Pick-up Circulation, Drop-off/Pick-up Zones. Speed Survey (Dauchy Avenue). Queuing Analysis for Dauchy Ave/Van Buren Blvd, Dauchy Ave/Krameria Ave, Dauchy/Project Driveways. Traffic signal warrant analysis at Dauchy Avenue-Ardenwood Ln/Project Driveway and Dauchy Ave/Krameria Avenue.
- Date of Traffic Counts See Attached Table D
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)

VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model RIVCOM
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

Specific Issues to be addressed in the Study (in addition to the standard analysis described in the Guidelines) (To be filled out by the Public Works Traffic Engineering Division)

1. Traffic signal sensitivity analysis along Dauchy Avenue for the intersection of Dauchy Avenue/ Project Driveway 2-Ardenwood Lane.
2. Design details for each Project Driveways including turn restrictions and recommended improvements will be provided if necessary.
3. Discussion of all modes of transportation to school including walking, biking, bus, etc.
4. Identification of improvements at Van Buren Blvd/Dauchy Ave traffic signal to include continental crosswalks, audible pedestrian push buttons, pedestrian crossing restriction signs where appropriate, etc.

Analysis Scenarios

The LOS analysis for the proposed project will be prepared to meet the requirements of the City. The LOS analysis will address existing traffic conditions, future traffic forecasts, circulation deficiencies (if any), and circulation improvements. Therefore, LSA proposes to analyze a.m. and afternoon peak hour traffic operations at the study intersections for the following five scenarios:

- Existing Conditions;
- Opening Year (2029) without Project Conditions;
- Opening Year (2029) with Project Conditions;
- Cumulative (2045) without Project Conditions; and
- Cumulative (2045) with Project Conditions.

The existing conditions volumes will be developed by comparing historical counts with recent counts collected during the ongoing COVID-19 pandemic and adjusted accordingly. A growth rate will be applied to the historical counts. Per discussion with City staff, a growth rate of 2% per annum will be applied to the historical counts. The higher of the adjusted historical counts and existing counts will be used as the existing conditions volumes.

Existing Conditions Volume Development

Traffic volumes for existing conditions are typically developed using existing count data collected at study intersections and roadway segments. Due atypical conditions statewide because of COVID-19, new traffic counts may not reflect realistic traffic conditions at the study intersections and roadway segments. Therefore, LSA consulted with traffic counters to compile a list of counts available for both study intersections and roadway segments.

The following intersections had recent historical counts that were used for volume development:

1. Washington Street/Van Buren Boulevard;
2. Chicago Avenue – Alta Cresta Avenue/Van Buren Boulevard;
6. Dauchy Avenue/Van Buren Boulevard;
9. Wood Road/Van Buren Boulevard;
11. Trautwein Road/Mission Grove Parkway;
12. Trautwein Road/John F Kennedy Drive;
14. Trautwein Road/Orange Terrace Parkway;
16. Trautwein Road/Van Buren Boulevard; and
18. Barton Street/Van Buren Boulevard.

At each study intersection where historical counts were available, a growth rate of 2 percent per annum was applied to the historical counts to develop year 2021 a.m. peak hour traffic volumes. These volumes were compared with the new counts collected at the study intersections. As a conservative approach, the higher of the two for each movement at every intersection was considered as the traffic volumes under existing conditions.

For the afternoon peak hour historical counts were not available due to the operations of the school requiring an analysis of 2:00 a.m. – 4:00 p.m., COVID adjustments were made based on the volumes at the roadway segment on Van Buren Boulevard between Little Court and Dauchy Avenue.

A similar growth rate of 2 percent per annum was applied to the historical counts at the Van Buren Boulevard between Little Court and Dauchy Avenue roadway segment was applied to develop 2021 traffic volumes. As conservative approach, the higher of the two daily traffic volumes was considered as the traffic volumes under existing conditions.

WRCOG Screening VMT Assessment Tool

As per the City's *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment*, projects can be screened out using the Western Riverside Council of Governments' (WRCOG's) VMT Screening Tool and by applying appropriate thresholds for the different land uses. Results from the VMT Screening Tool are included in Appendix A. As shown in Appendix A, the project does not lie within a Transit Priority Area. Additionally, the Traffic Analysis Zone (TAZ) in which the project is located has a higher VMT per capita and VMT per service population than the jurisdictional average. Though the TAZ has a lower VMT per employee compared to the jurisdictional average, it has a higher VMT per employee compared to the threshold stated in the City's TIA Guidelines, i.e. 15 percent below the current jurisdictional baseline VMT per employee. Therefore, the project cannot be screened out and will require a full VMT analysis.

TABLES

LSA

Table A - Project Trip Generation

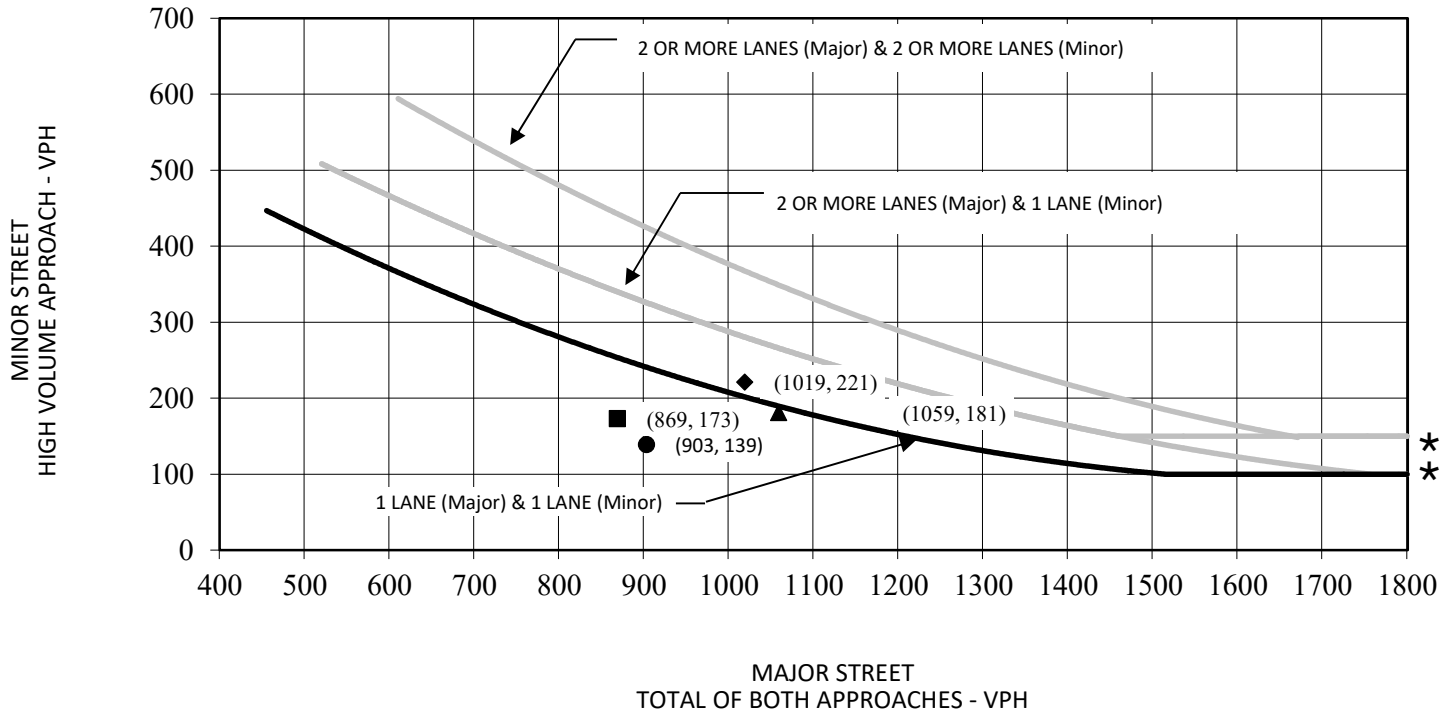
Land Use	Units		A.M. Peak Hour In	A.M. Peak Hour Out	A.M. Peak Hour Total	Afternoon Peak Hour In	Afternoon Peak Hour Out	Afternoon Peak Hour Total	Daily
Existing School	644	STU							
Trip Generation			396	302	698	181	300	481	1,872
Proposed Project	280	STU							
Trip Generation			172	131	303	79	130	209	814

Notes:

STU = Students

[1] The trip generation was developed based on existing driveway counts taken by Counts Unlimited on October 14 and 19, 2021.

WARRANT 3, PEAK HOUR



* 150 VPH applies as the lower threshold volume for a minor street approach with two or more lanes and 100 VPH applies as the lower threshold volume for a minor street approaching with one lane.

LSA

FIGURE 14-5

● Without Project AM Peak Hour

▲ With Project AM Peak Hour

■ Without Project AM Peak Hour - CA Left Alt

◆ With Project AM Peak Hour - CA Left Alt

Woodcrest Christian School Expansion Project

Traffic Operational Analysis

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

Year 2027 Peak Hour Warrant - Dauchy Avenue/Project Driveway 2-Ardenwood Lane

P:\WCS2101_Woodcrest Christian School Expansion\Traffic\July 2023\Due Diligence - Traffic Signal\SW_INT 7_2027AM.xlsx (2/20/2024)

LSA

Table C - Roadway Segments

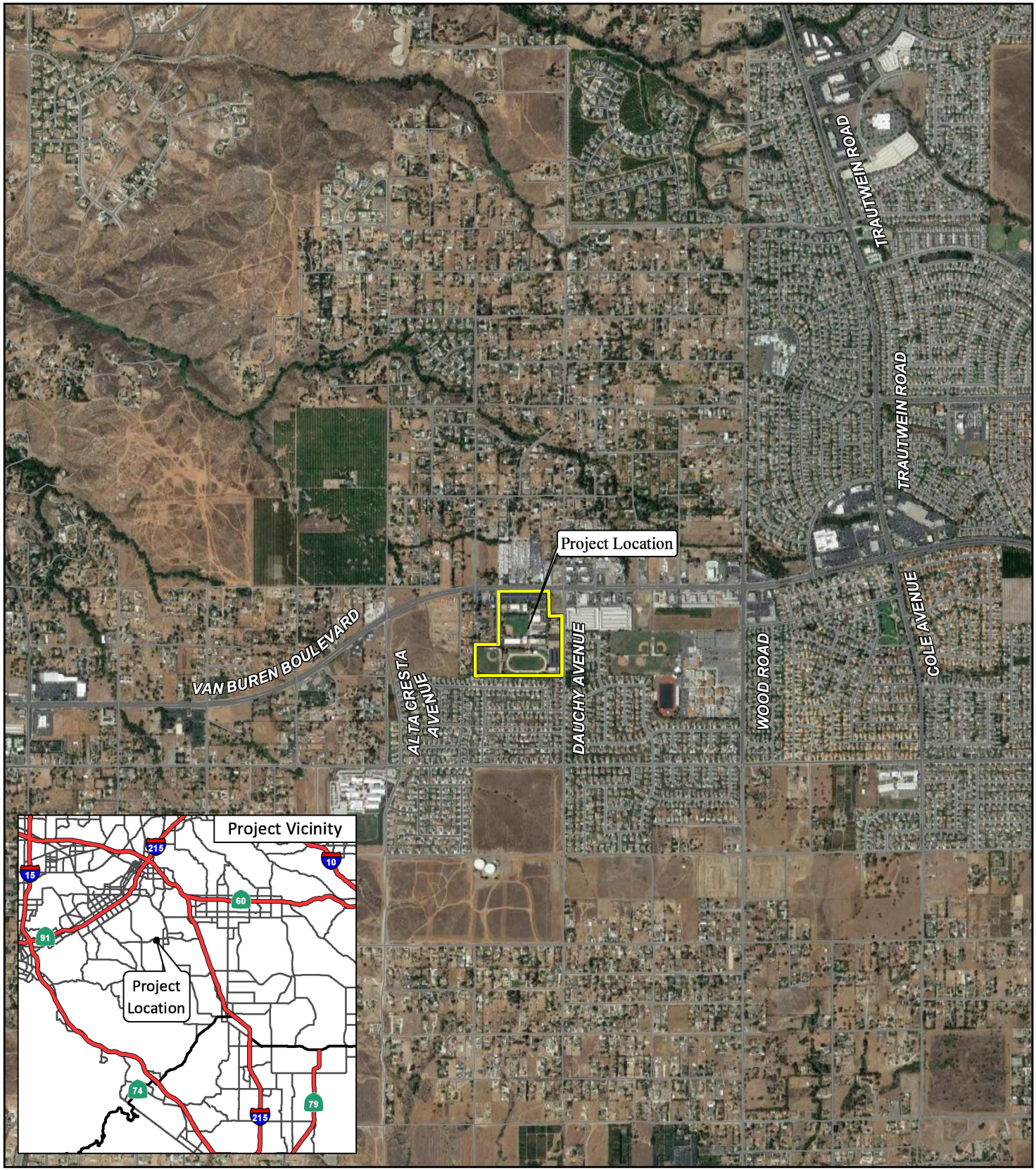
Roadway	#	Segment	Jurisdiction
Van Buren Boulevard	1	Between Little Court and Dauchy Avenue	Riverside
Dauchy Avenue	2	Between Van Buren Boulevard and Ardenwood Lane	Riverside
	3	Between Ardenwood Lane and Hawksbury Drive	Riverside

Table D - Traffic Count Dates

Intersections	Date of Historical Counts	Date of Current Counts
1. Washington St/Van Buren Blvd	2/15/2018	11/18/2021
2. Chicago Ave – Alta Cresta Ave/Van Buren Blvd	2/15/2018	11/18/2021
3. Van Buren Village Driveweay/Van Buren Blvd (Future Intersection)	N/A	N/A
4. Little Ct/Van Buren Blvd	N/A	11/18/2021
5. Ridgeway Ave/Van Buren Blvd	N/A	11/18/2021
6. Dauchy Ave/Van Buren Blvd	2/15/2018	11/18/2021
7. Dauchy Ave/School Driveway 2 – Ardenwood Ln	Not Available	10/14/2021, 10/19/2021
8. Dauchy Ave – Taft St/Krameria Ave	Not Available	11/18/2021
9. Wood Rd/Van Buren Blvd	2/15/2018, 8/20/2019	11/18/2021
10. Bountiful St/Van Buren Blvd	Not Available	11/18/2021
11. Trautwein Rd/Mission Grove Pkwy	8/20/2019	11/18/2021
12. Trautwein Rd/John F Kennedy Dr	8/20/2019	11/18/2021
13. Trautwein Rd/Grove Community Dr	Not Available	11/18/2021
14. Trautwein Rd/Orange Terrace Pkwy	8/20/2019	11/18/2021
15. Trautwein Rd/Shopping Center Driveway	Not Available	11/18/2021
16. Trautwein Rd/Van Buren Blvd	2/15/2018, 8/20/2019	11/18/2021
17. Shopping Center Driveway/Van Buren Blvd	Not Available	11/18/2021
18. Barton St/Van Buren Blvd	8/20/2019	11/18/2021
19. School Driveway 1/Van Buren Blvd	Not Available	10/14/2021, 10/19/2021
20. Dauchy Ave/School Driveway 3	Not Available	10/14/2021, 10/19/2021
21. Dauchy Ave/School Driveway 4	Not Available	10/14/2021, 10/19/2021
22. Dauchy Ave/School Driveway 5	Not Available	10/14/2021, 10/19/2021

Segments	Date of Historical Counts	Date of Current Counts
1 - Van Buren Blvd – between Little Ct and Dauchy Ave	3/27/2019	11/18/2021
2 - Dauchy Ave – between Van Buren Blvd and Ardenwood Ln	Not Available	11/18/2021
3 - Dauchy Ave – between Ardenwood Ln and Hawksbury Dr	Not Available	11/18/2021

FIGURES



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LEGEND

Project Site

FIGURE 1

N

0 1000 2000

FEET

Woodcrest Christian School Expansion
Traffic Operational Analysis

Regional and Project Location

SOURCE: ESRI Streetmap, 2021; Google Earth, 2021.

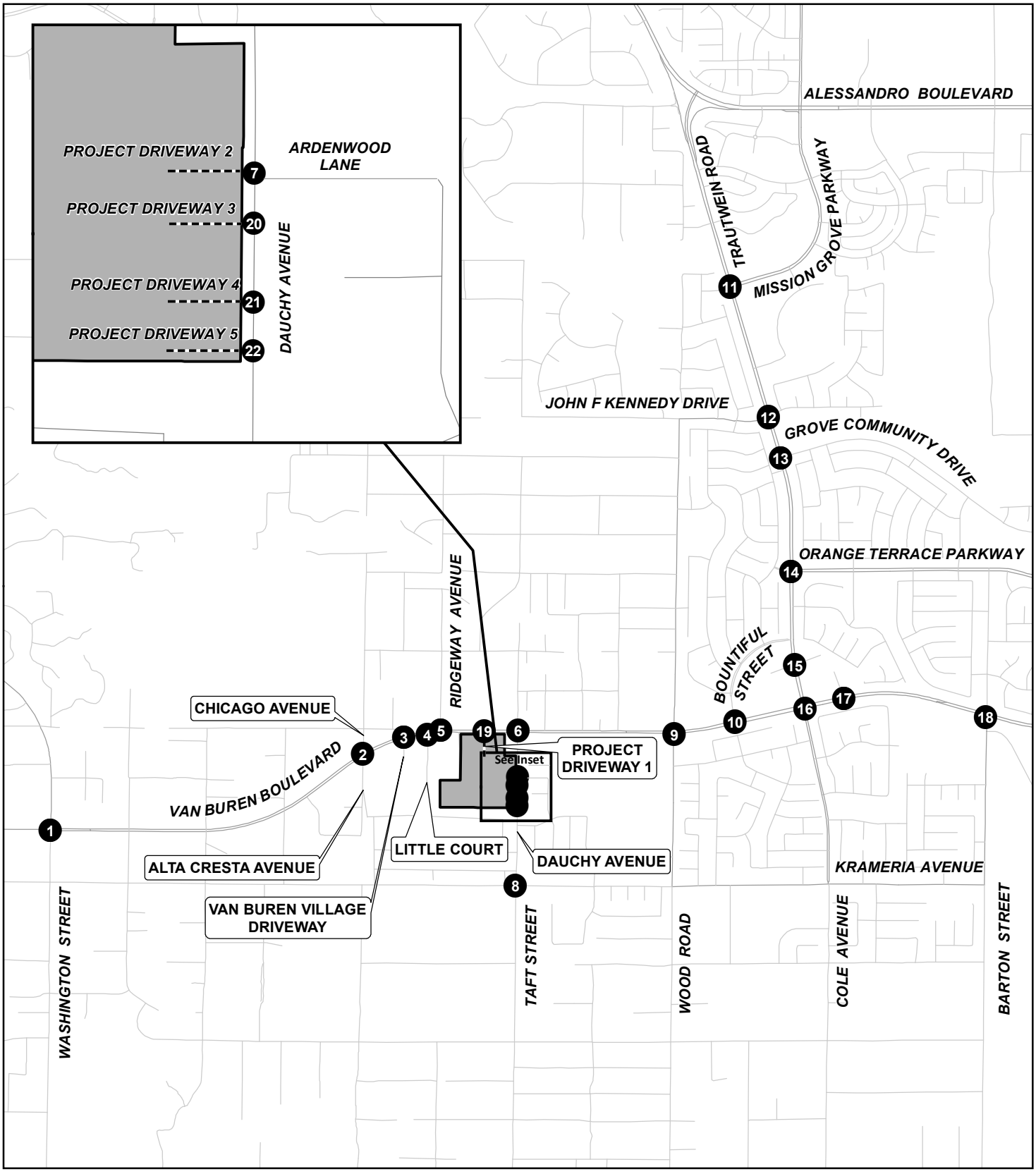
P:\WCS2101_Woodcrest Christian School Expansion\Traffic\GIS\Reports\fig2-1_Reg_ProjLoc.mxd (8/15/2022)

LSA

Table B - Cumulative Projects

Project No.	Project Name	Address	Project Description	Building Total Square Feet/Dwelling Units/Other
R1	P18-0255	17815 Van Buren Blvd	Comercial Building and Drive Thru	4.4 TSF
R2	P20-0372	18233 Van Buren Blvd	Commerical and Drive Thru	3.7 TSF Retail, 2.4 TSF Drive-Thru Resturant
R3	P13-0263	18171 Van Buren Blvd	Van Buren Village	11 TSF Daycare, 10 TSF Office, 8 TSF MOB, 10.7 TSF Retail, 2.4 TSF Fast Food Drive Thru, 2.6 TSF Coffee Shop, 3.8 TSF Fast Casual Resturant
R4	P19-0042	18451 Van Buren Blvd	Denny's Resturant and Office Building	4.3 TSF High Turn Over Resturant, 9.9 TSF Office
R5	P17-0688	18806 Van Buren Blvd	Automated Car Wash	5.4 TSF
R6	P20-0385	18875 Lurin Ave	Tenative Tract Map 37733 - Single Family Residential	40 DU
R7	PR-2021-001053	Wood Rd/Krameria Ave	Tentative Tract Map 38094 - Single Family Residential	72 DU
R8	P20-0018	19331 Lurin Ave	Tract Map - Residential	138 DU
R9	R19-0151	8719 Trautwein Rd	Health and Fitness Center	21.7 TSF
R10	P19-0022	19260 Van Buren Blvd	Panera Bread with Drive Thru	4.3 TSF
C1	PAR210018	16261 Washington St	Market, Retail Shop, and Two Fast Food Resturant with Drive Thru	45.4 TSF Market, 5 TSF Shop, 3.0 TSF Shop, 2.5 TSF Fast Food, 3.5 TSF Fast Food
C2	PAR200001	16935 Van Buren Blvd	Pre-Application Review - Fast Food Drive Thru	2.1 TSF Fast Food, 2.6 TSF Fast Food
C3	PM37101	17220 Washington St	Tenative Parcel Map - Residential	4 DU
C4	CUP180016	South of Van Buren Blvd between Washington St and Gardner Ave	Retail Commercial Building	18.8 TSF
C5	PAR200047 TR36639E01	17010 Washington St	Pre-Application Review - Residential	140 DU
C6	CUP03766	16270 Gardner Ave	Car Wash with Office	4.8 TSF
C7	CUP170002	17333 Van Buren Blvd	Storage Yard with Office	4.4 TSF Storage Garage, 0.6 TSF Office
C8	TR36763	Northwest Corner of Roberts Rd and Kross Rd	Tract Map - Residential	24 DU
C9	PPT180002	Northeast Corner of Gamble Ave and Van Buren Blvd	Drive Thru Resturant	2.1 TSF
C10	PM37340	15600 Chicago Ave	Tentative Parcel Map - Residential	2 DU
C11	PAR210156 PM37402	15701 Chicago Ave	Pre-Application Review - Residential	273 DU
C12	CUP190021	Northeast Corner of Chicago Ave and Van Buren Blvd	Gas Station with Convenience Store and Car Wash	16 FP, 3.8 TSF Convenience Store, and 1.7 TSF Car Wash
C13	PP26337	Northeast Corner of Eastern Terminus of Iris Ave	Child Day Care Center with Classrooms and Office	6.5 TSF/48 Children Daycare
C14	PPT210010	18494 Van Buren Rd	Drive Thru Resturant	3 TSF
C15	TPM38026	17140 Parsons Rd	Tenative Parcel Map Division	2 DU
C16	TTM37594	Northeast Corner of Parsons Rd and Nandina Ave	Tenative Tract Map - Residential Division	5 DU
C17	PP25382	Southeast Corner of Barton St and Van Buren Blvd	Commerical Office	10.3 TSF
J1	March Business Center	Southeast of Barton St and Van Buren Blvd	Meridian South Campus: March JPA SP-1	Office 388 TSF, Commercial 221 TSF, Grocery Store 61 TSF, Business Park 1,764 TSF, High Cube Warehouse 800 TSF, High Cube Cold Storage Warehouse 700 TSF, Warehouse 274 TSF, Amazon 1,000 TSF, Parcel Delivery 1,000 TSF, Warehousing 500 TSF, Commercial 13.9 TSF

Notes:
DU = Dwelling Units; TSF = Thousand Square Feet



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LEGEND

Project Location

Study Area Intersections

Project Driveway

0 1150 2300

FEET

SOURCE: ESRI Streetmap, 2021.

FIGURE 3

Woodcrest Christian School Expansion
Traffic Operational Analysis

Study Area Intesrections

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LEGEND

BUILDING - FUNCTION NUMBER	PREVIOUS CUP NUMBER	BUILDING NAME	NUMBER OF CLASS ROOMS	REQUIRED PARKING	SQUARE FOOTAGE	STATUS	PHASE
A	100	ADMINISTRATION & MULTIPURPOSE ROOM	0	0	5,310 S.F.	EXISTING	
A-1	A-1	OFFICE EXPANSION	0	0	840 S.F.	APPROVED	-
B	200	M.S. CLASSROOMS	6	12	8,320 S.F.	EXISTING	
C	A	M.S. CLASSROOMS	4	8	6,016 S.F.	EXISTING	
*D	K	M.S. CLASSROOMS	0	0	960 S.F.	EXISTING	
*E	K	M.S. CLASSROOMS	0	0	960 S.F.	EXISTING	
F	-	M.S. 2 STORY - OFFICE/ CLASSROOMS	7	14	11,147 S.F. 2 STORY	PROPOSED	4
G	-	AMPHITHEATER	0	0	300 SEATS	PROPOSED	
H	600	GYMNASIUM & LOCKERS	0	0	20,208 S.F.	EXISTING	
H1	-	H.S. CLASS ROOM	1	7	1,400 S.F.	PROPOSED	3
H2	-	H.S. CLASSROOM	1	7	1,400 S.F.	PROPOSED	3
I-A	W	PERFORMING ARTS	0	0	14,980 S.F.	APPROVED	3
I-B	-	H.S. CLASSROOMS + ADMIN.	3	21	10,223 S.F.	PROPOSED	2
I-C	J	GRUB HUB+STUDENT CENTER	0	0	5,605 S.F.	APPROVED	2
J	B	H.S. CLASSROOMS	4	28	6,144 S.F.	EXISTING	
k	300	H.S. CLASSROOMS	4	28	6,142 S.F.	EXISTING	
L	500	LOWER LEVEL STAFF LOUNGE OFFICES & STORAGE	0	0	2,881 S.F.	EXISTING	
M	400	H.S. CLASSROOMS	10	70	14,848 S.F.	EXISTING	
****N	K	H.S. CLASSROOMS	0	0	960 S.F.	EXISTING	
****O	K	H.S. CLASSROOMS	0	0	960 S.F.	EXISTING	
P	-	SPORTS STORAGE/BINS	0	0	480 S.F.	PROPOSED	
Q	F	LUNCH SHELTER	0	0	5,600 S.F.	EXISTING	
R	500	MAIN LEVEL LIBRARY & ADMINISTRATION	0	0	960 S.F. EACH TOTAL OF 4	EXISTING	
S	G	CHOIR & BAND	2	14	3,066 S.F.	EXISTING	
S1	-	STORAGE	0	0	1,400 S.F.	PROPOSED	-
T	-	H.S. 2 STORY CLASSROOMS OFFICES, STORAGE	7	49	12,426 S.F.	PROPOSED	1
	H	SPORTS CLUB W/ STORAGE WEIGHT ROOM - SNACK BAR	0	0	7,220 S.F.	APPROVED	
**U	M	H.S. CLASSROOMS	0	0	3,840 S.F.	EXISTING	
W	C	BUS BARN	0	0	6,000 S.F.	EXISTING	
X	-	STORAGE	0	0	2,400 S.F.	PROPOSED	1
Y	-	STORAGE BARN	0	0	5,400 S.F.	PROPOSED	2
***Z	-	MAINTENANCE SHED	0	0	2,000 S.F.	EXISTING	-
***aa	-	STAFF HOUSING	0	0	1,000 S.F.	EXISTING	-
bb	Z	CELL TOWER EXPANSION	0	0	1,000 S.F.	PROPOSED	-
cc	-	PROJECT ENTRANCE	0	0	-	PROPOSED	2
dd	-	PLAY COURTS	0	0	-	PROPOSED	3
ee		STUDENT ACTIVITIES	0	0	-	PROPOSED	3
ff		OUTDOOR AMPHITHEATER	0	0	-	EXISTING	-
gg		FIELD LIGHTS	0	0	-	PROPOSED	2
TOTAL CLASSROOMS			49	-	17 MIDDLE SCHOOL - 32 HIGH SCHOOL		
TOTAL REQUIRED PARKING				258	2 M.S. BUSSES - 3 H.S. BUSSES		
TOTAL PARKING PROVIDED				365	INCLUDES 43 NEW SPACES IN PHASE 2		

* TO BE REMOVED ON CONSTRUCTION OF BUILDING F

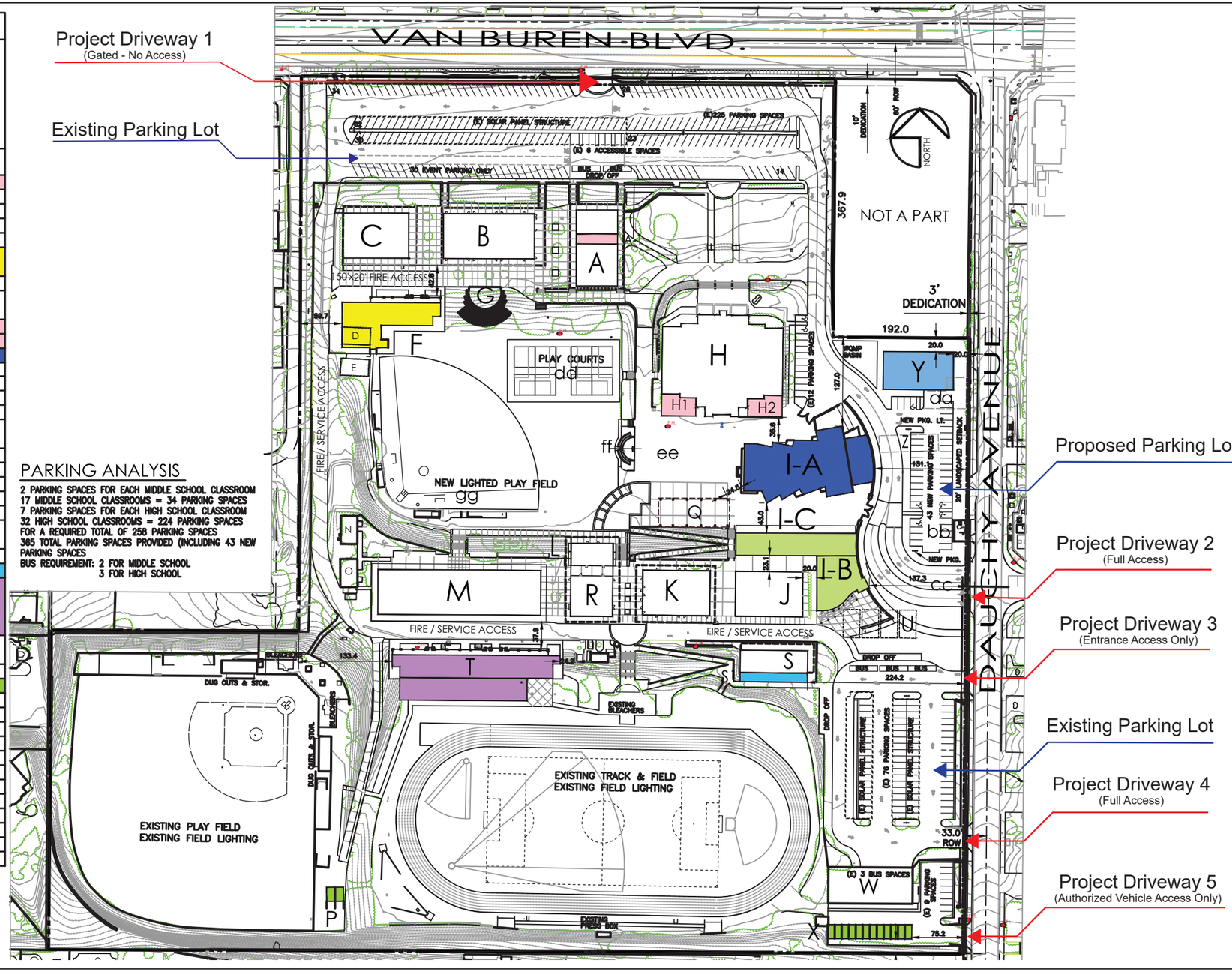
** TO BE REMOVED AFTER CONSTRUCTION OF BUILDING T

*** TO BE REMOVED ON CONSTRUCTION OF PROJECT ENTRANCE

**** TO BE USED AS STAFF OFFICES AFTER CONSTRUCTION OF BUILDING T

PARKING ANALYSIS

2 PARKING SPACES FOR EACH MIDDLE SCHOOL CLASSROOM
17 MIDDLE SCHOOL CLASSROOMS = 34 PARKING SPACES
7 PARKING SPACES FOR EACH HIGH SCHOOL CLASSROOM
32 HIGH SCHOOL CLASSROOMS = 224 PARKING SPACES
FOR A REQUIRED TOTAL OF 258 PARKING SPACES
365 TOTAL PARKING SPACES PROVIDED (INCLUDING 43 NEW PARKING SPACES
BUS REQUIREMENT: 2 FOR MIDDLE SCHOOL
3 FOR HIGH SCHOOL



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N

0 75 150
FEET

SOURCE: Charles Brown Architect, October 2023

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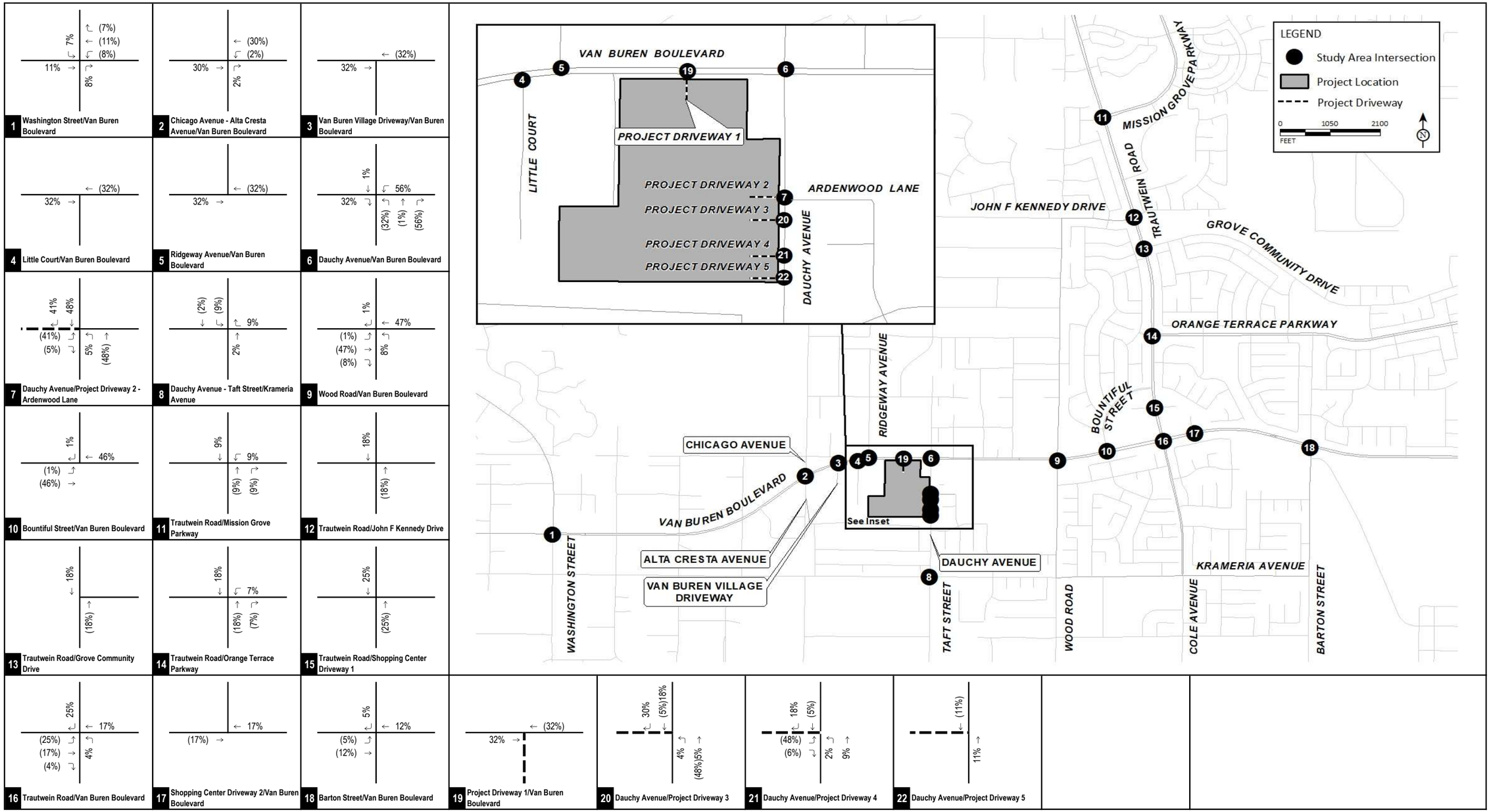
FIGURE 2

Woodcrest Christian School Expansion Project
Traffic Operational Analysis

Conceptual Site Plan



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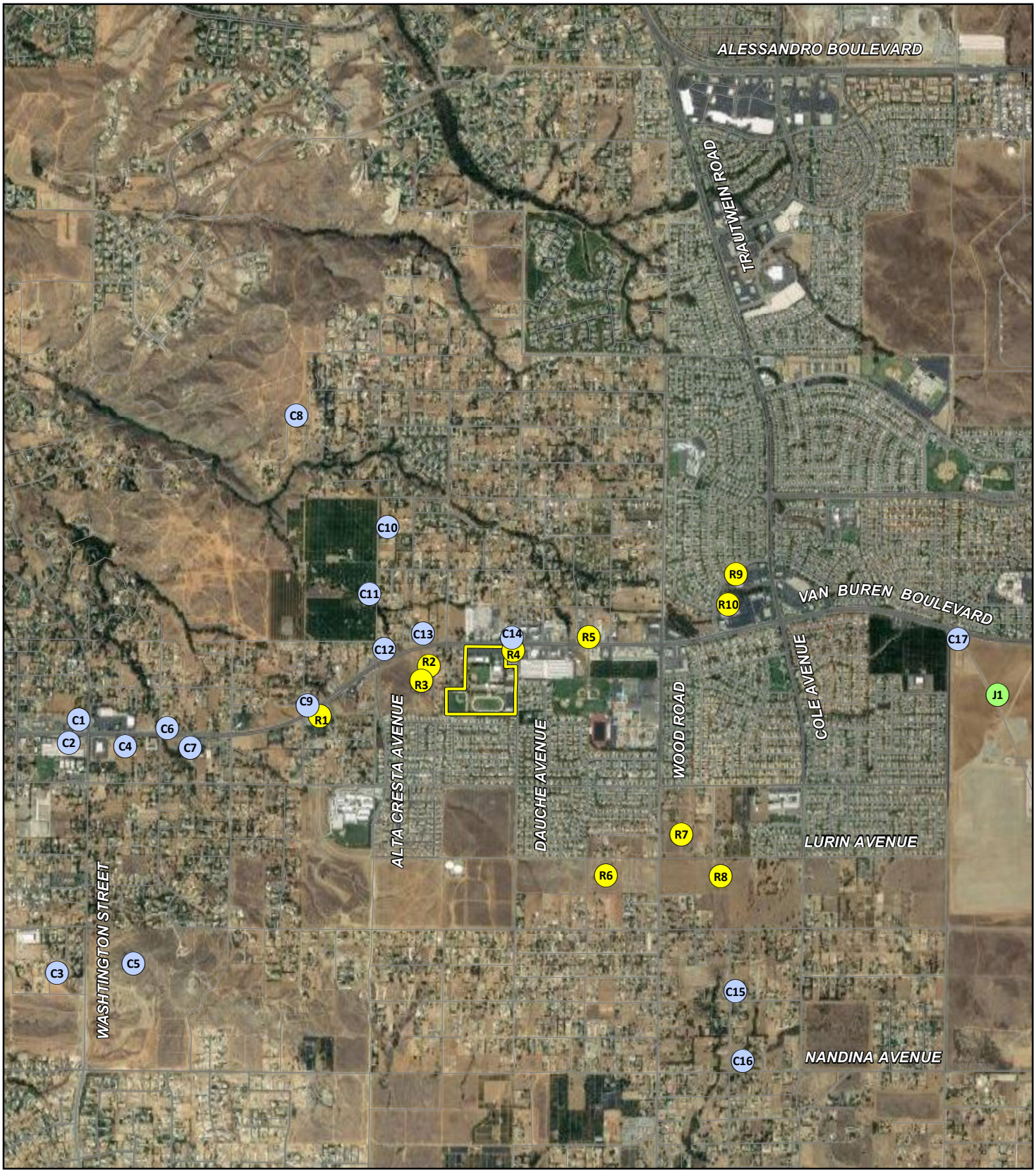
XX% (YY%)
Inbound (Outbound) Distribution

Project Driveway

FIGURE 4

Woodcrest Christian School Expansion Project
Traffic Operational Analysis
Project Trip Distribution



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- City of Riverside Cumulative Project
- County of Riverside Cumulative Project
- March Joint Powers Authority Cumulative Project
- Project Location

0 1000 2000
FEET

FIGURE 6

Woodcrest Christian School Expansion
Traffic Operational Analysis
Cumulative Project Locations

SOURCE: ESRI Streetmap, 2013; Google Earth, 2018.

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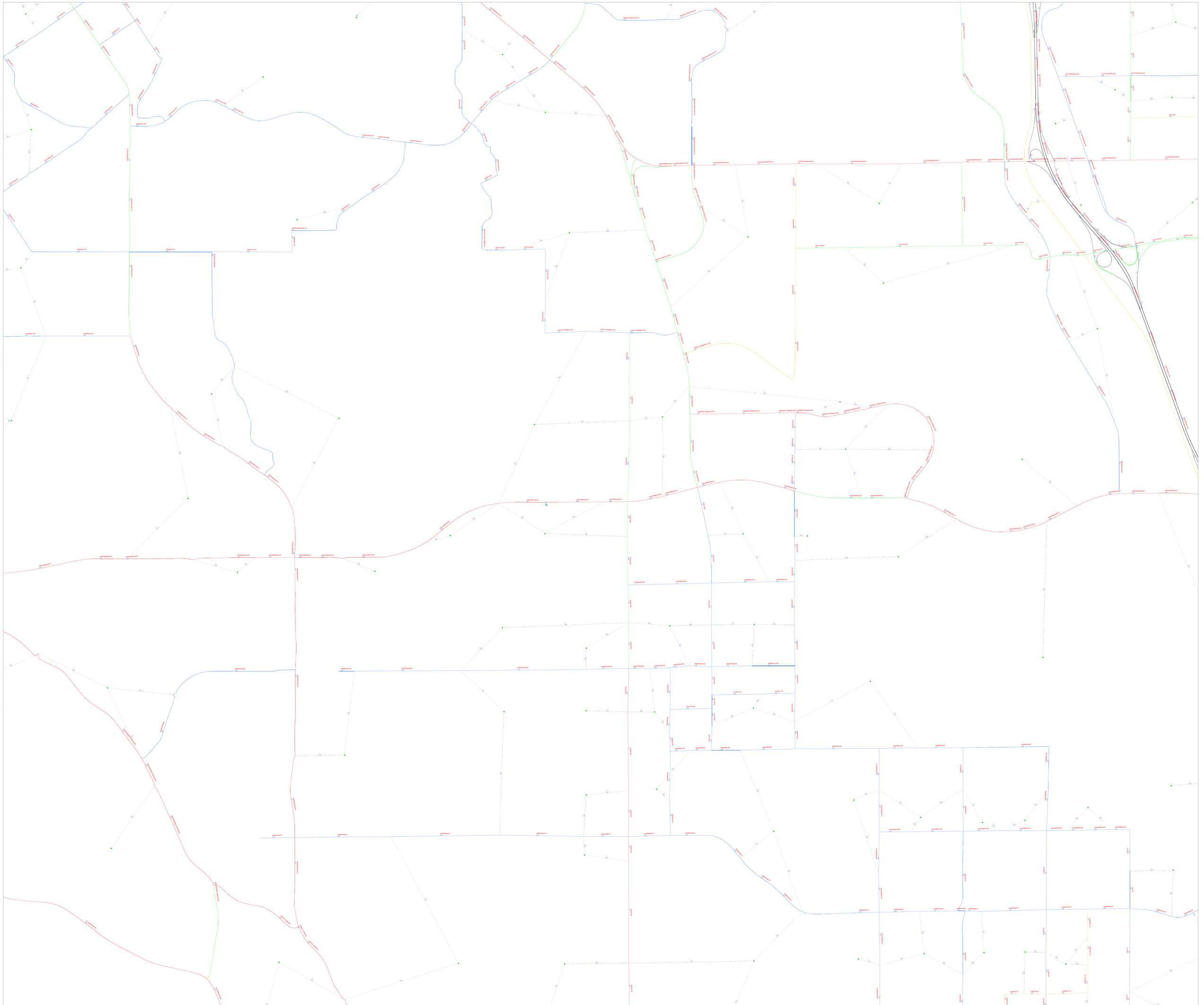
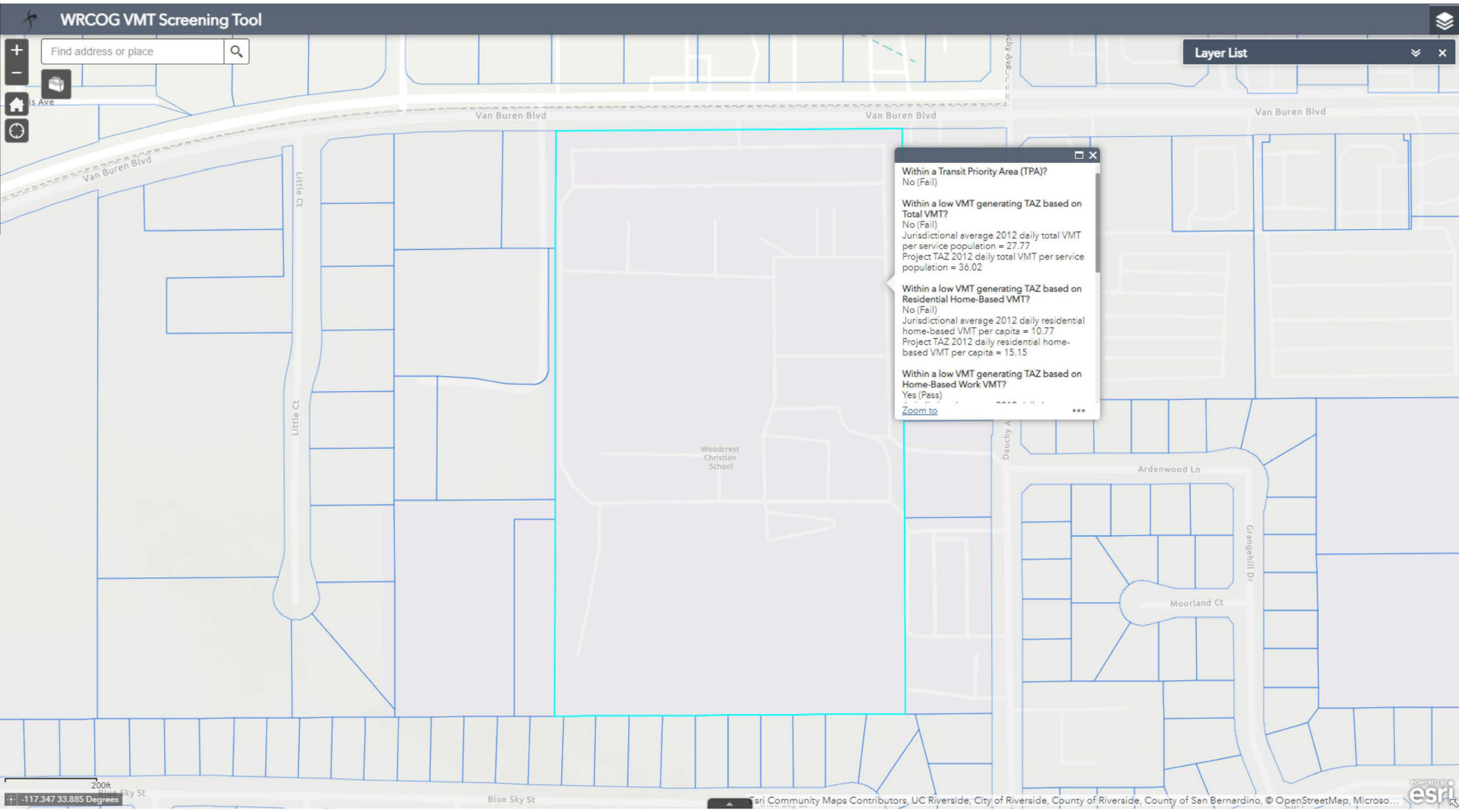
2045 RIVCOM3 - Woodcrest School AM Peak Select Zone Distribution



APPENDIX A:

WRCOG VMT SCREENING TOOL RESULTS


WRCOG VMT Screening Tool
Find address or place
Layer List
Van Buren Blvd
Van Buren Blvd
Van Buren Blvd
Little Ct
Little Ct
Within a Transit Priority Area (TPA)?
No (Fail)
Within a low VMT generating TAZ based on Total VMT?
No (Fail)
Jurisdictional average 2012 daily total VMT per service population = 27.77
Project TAZ 2012 daily total VMT per service population = 36.02
Within a low VMT generating TAZ based on Residential Home-Based VMT?
No (Fail)
Jurisdictional average 2012 daily residential home-based VMT per capita = 10.77
Project TAZ 2012 daily residential home-based VMT per capita = 15.15
Within a low VMT generating TAZ based on Home-Based Work VMT?
Yes (Pass)
Zoom to
Woodcrest Christian School
Ardenwood Ln
Grangehill Dr
Moorland Ct
Blue Sky St
Blue Sky St
200ft
-117.347 33.885 Degrees
Esri Community Maps Contributors, UC Riverside, City of Riverside, County of Riverside, County of San Bernardino, © OpenStreetMap, Microso…
esri

APPENDIX B:

DRIVEWAY SURVEY COUNTS

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Riverside
N/S: Driveway 1
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_DW1_VB AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

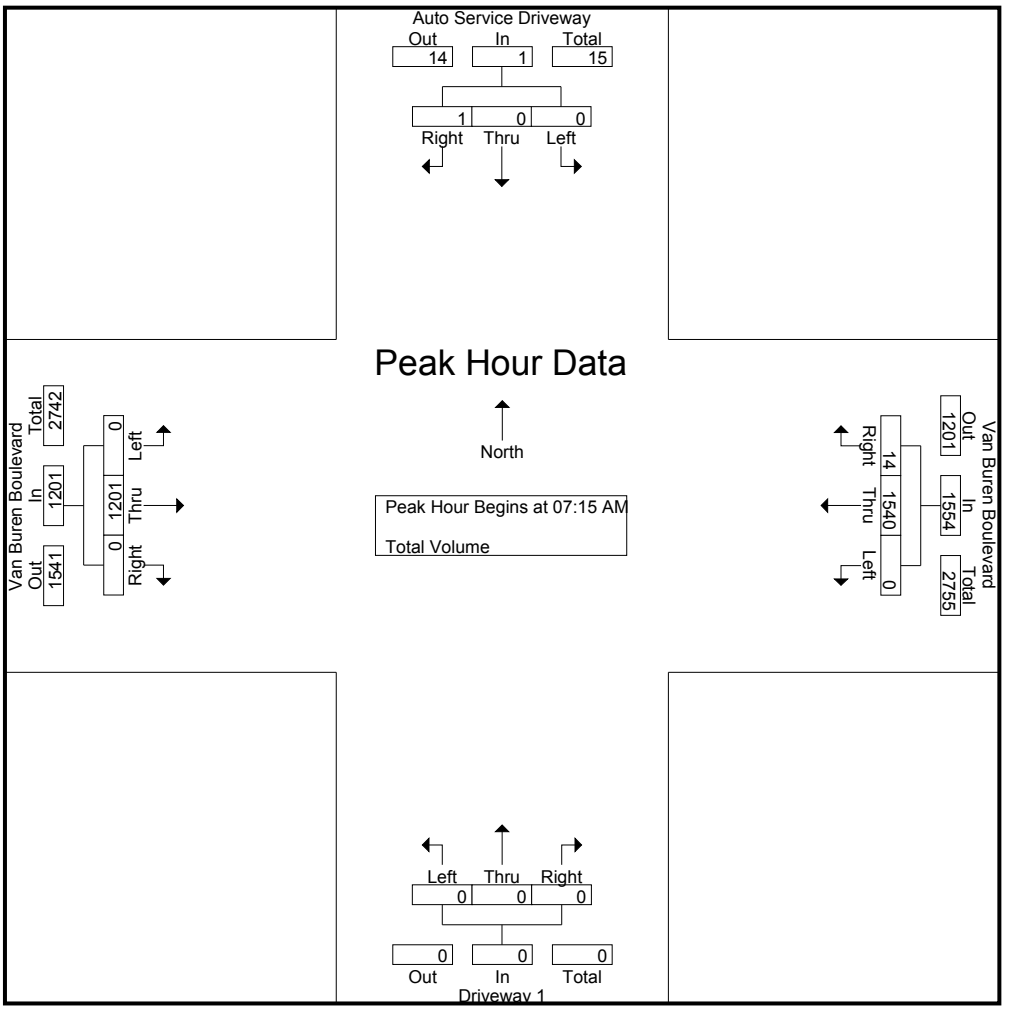
	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	368	4	372	0	0	0	0	0	260	0	260	632
07:15 AM	0	0	0	0	0	403	0	403	0	0	0	0	0	336	0	336	739
07:30 AM	0	0	0	0	0	357	3	360	0	0	0	0	0	305	0	305	665
07:45 AM	0	0	1	1	0	415	6	421	0	0	0	0	0	256	0	256	678
Total	0	0	1	1	0	1543	13	1556	0	0	0	0	0	1157	0	1157	2714
08:00 AM	0	0	0	0	0	365	5	370	0	0	0	0	0	304	0	304	674
08:15 AM	0	0	0	0	0	362	2	364	0	0	0	0	0	244	0	244	608
08:30 AM	0	0	0	0	0	335	2	337	0	0	0	0	0	249	0	249	586
08:45 AM	0	0	1	1	0	270	5	275	0	0	0	0	0	234	0	234	510
Total	0	0	1	1	0	1332	14	1346	0	0	0	0	0	1031	0	1031	2378
Grand Total	0	0	2	2	0	2875	27	2902	0	0	0	0	0	2188	0	2188	5092
Apprch %	0	0	100		0	99.1	0.9		0	0	0		0	100	0		
Total %	0	0	0	0	0	56.5	0.5	57	0	0	0	0	0	43	0	43	

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	403	0	403	0	0	0	0	0	**336**	0	**336**	**739**
07:30 AM	0	0	0	0	0	357	3	360	0	0	0	0	0	305	0	305	665
07:45 AM	0	0	**1**	**1**	0	**415**	**6**	**421**	0	0	0	0	0	256	0	256	678
08:00 AM	0	0	0	0	0	365	5	370	0	0	0	0	0	304	0	304	674
Total Volume	0	0	1	1	0	1540	14	1554	0	0	0	0	0	1201	0	1201	2756
% App. Total	0	0	100		0	99.1	0.9		0	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.928	.583	.923	.000	.000	.000	.000	.000	.894	.000	.894	.932

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Riverside
N/S: Driveway 1
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_DW1_VB AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	0	0	0	0	0	368	4	372	0	0	0	0	0	**336**	0	**336**
+15 mins.	0	0	0	0	0	403	0	403	0	0	0	0	0	305	0	305
+30 mins.	0	0	0	0	0	357	3	360	0	0	0	0	0	256	0	256
+45 mins.	0	0	**1**	**1**	0	**415**	**6**	**421**	0	0	0	0	0	304	0	304
Total Volume	0	0	1	1	0	1543	13	1556	0	0	0	0	0	1201	0	1201
% App. Total	0	0	100		0	99.2	0.8		0	0	0		0	100	0	
PHF	.000	.000	.250	.250	.000	.930	.542	.924	.000	.000	.000	.000	.000	.894	.000	.894

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Riverside
N/S: Driveway 1
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_DW1_VB PM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	2	2	0	265	3	268	0	0	0	0	0	230	0	230	500
02:15 PM	0	0	0	0	0	266	5	271	0	0	0	0	0	257	0	257	528
02:30 PM	0	0	1	1	0	315	1	316	0	0	0	0	0	314	0	314	631
02:45 PM	0	0	1	1	0	393	3	396	0	0	0	0	0	303	0	303	700
Total	0	0	4	4	0	1239	12	1251	0	0	0	0	0	1104	0	1104	2359
03:00 PM	0	0	0	0	0	405	4	409	0	0	0	0	0	332	0	332	741
03:15 PM	0	0	0	0	0	318	5	323	0	0	0	0	0	344	0	344	667
03:30 PM	0	0	0	0	0	375	3	378	0	0	0	0	0	265	0	265	643
03:45 PM	0	0	0	0	0	320	5	325	0	0	0	0	0	383	0	383	708
Total	0	0	0	0	0	1418	17	1435	0	0	0	0	0	1324	0	1324	2759
Grand Total	0	0	4	4	0	2657	29	2686	0	0	0	0	0	2428	0	2428	5118
Apprch %	0	0	100		0	98.9	1.1		0	0	0		0	100	0		
Total %	0	0	0.1	0.1	0	51.9	0.6	52.5	0	0	0	0	0	47.4	0	47.4	

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	**405**	4	**409**	0	0	0	0	0	332	0	332	**741**
03:15 PM	0	0	0	0	0	318	**5**	323	0	0	0	0	0	344	0	344	667
03:30 PM	0	0	0	0	0	375	3	378	0	0	0	0	0	265	0	265	643
03:45 PM	0	0	0	0	0	320	5	325	0	0	0	0	0	**383**	0	**383**	708
Total Volume	0	0	0	0	0	1418	17	1435	0	0	0	0	0	1324	0	1324	2759
% App. Total	0	0	0		0	98.8	1.2		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.875	.850	.877	.000	.000	.000	.000	.000	.864	.000	.864	.931

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City of Riverside
N/S: Driveway 1
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_DW1_VB PM14
Site Code : 00321595
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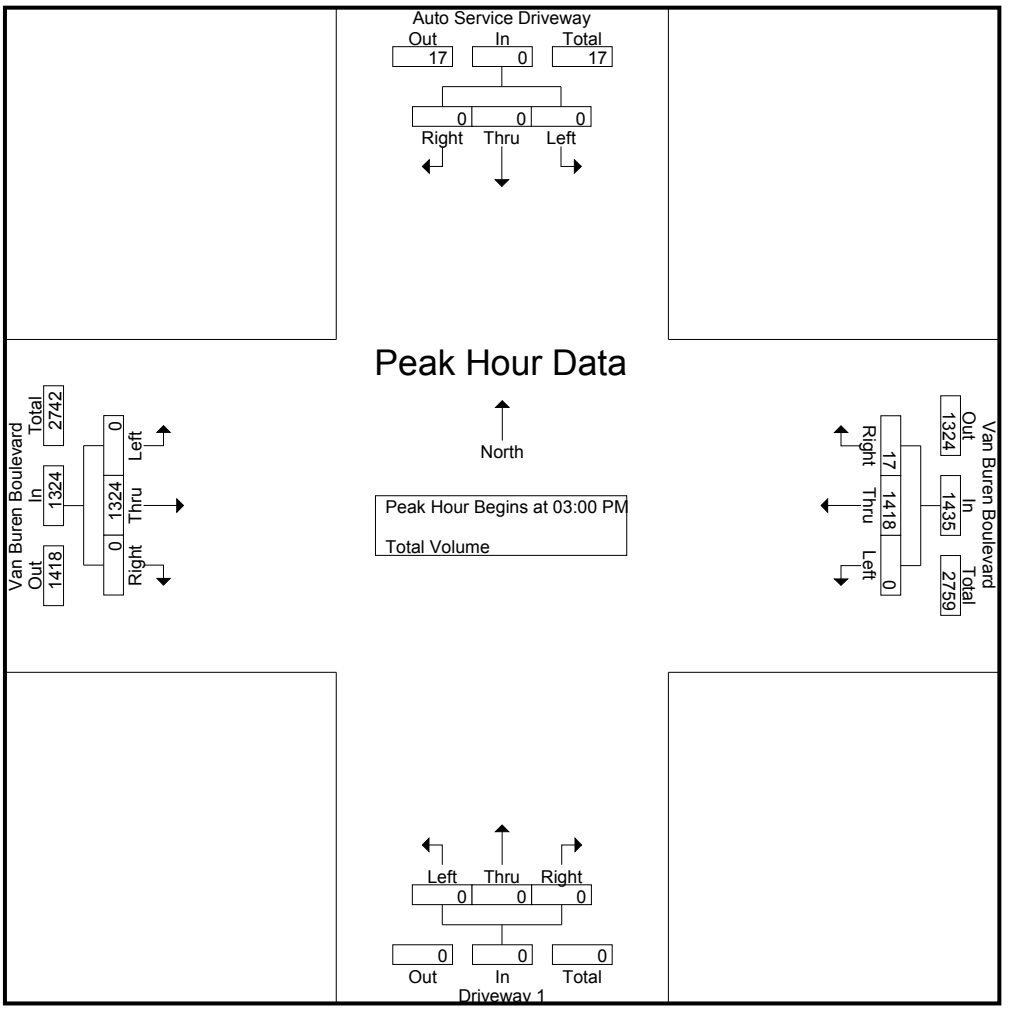

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:00 PM				02:45 PM				02:00 PM				03:00 PM			
+0 mins.	0	0	**2**	**2**	0	393	3	396	0	0	0	0	0	332	0	332
+15 mins.	0	0	0	0	0	**405**	4	**409**	0	0	0	0	0	344	0	344
+30 mins.	0	0	1	1	0	318	**5**	323	0	0	0	0	0	265	0	265
+45 mins.	0	0	1	1	0	375	3	378	0	0	0	0	0	**383**	0	**383**
Total Volume	0	0	4	4	0	1491	15	1506	0	0	0	0	0	1324	0	1324
% App. Total	0	0	100		0	99	1		0	0	0		0	100	0	
PHF	.000	.000	.500	.500	.000	.920	.750	.921	.000	.000	.000	.000	.000	.864	.000	.864

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City of Riverside
N/S: Driveway 1
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_DW1_VB AM19
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Groups Printed- Total Volume

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	378	2	380	0	0	0	0	0	285	0	285	665
07:15 AM	0	0	0	0	0	359	0	359	0	0	0	0	0	332	0	332	691
07:30 AM	0	0	0	0	0	369	1	370	0	0	0	0	0	340	0	340	710
07:45 AM	0	0	0	0	0	355	4	359	0	0	0	0	0	250	0	250	609
Total	0	0	0	0	0	1461	7	1468	0	0	0	0	0	1207	0	1207	2675
08:00 AM	0	0	0	0	0	370	3	373	0	0	0	0	0	285	0	285	658
08:15 AM	0	0	0	0	0	348	3	351	0	0	0	0	0	258	0	258	609
08:30 AM	0	0	1	1	0	280	3	283	0	0	0	0	0	210	0	210	494
08:45 AM	0	0	1	1	0	286	5	291	0	0	0	0	0	211	0	211	503
Total	0	0	2	2	0	1284	14	1298	0	0	0	0	0	964	0	964	2264
Grand Total	0	0	2	2	0	2745	21	2766	0	0	0	0	0	2171	0	2171	4939
Apprch %	0	0	100		0	99.2	0.8		0	0	0		0	100	0		
Total %	0	0	0	0	0	55.6	0.4	56	0	0	0	0	0	44	0	44	

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**378**	2	**380**	0	0	0	0	0	285	0	285	665
07:15 AM	0	0	0	0	0	359	0	359	0	0	0	0	0	332	0	332	691
07:30 AM	0	0	0	0	0	369	1	370	0	0	0	0	0	**340**	0	**340**	**710**
07:45 AM	0	0	0	0	0	355	**4**	359	0	0	0	0	0	250	0	250	609
Total Volume	0	0	0	0	0	1461	7	1468	0	0	0	0	0	1207	0	1207	2675
% App. Total	0	0	0		0	99.5	0.5		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.966	.438	.966	.000	.000	.000	.000	.000	.888	.000	.888	.942

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File Name : 01_RIV_DW1_VB AM19
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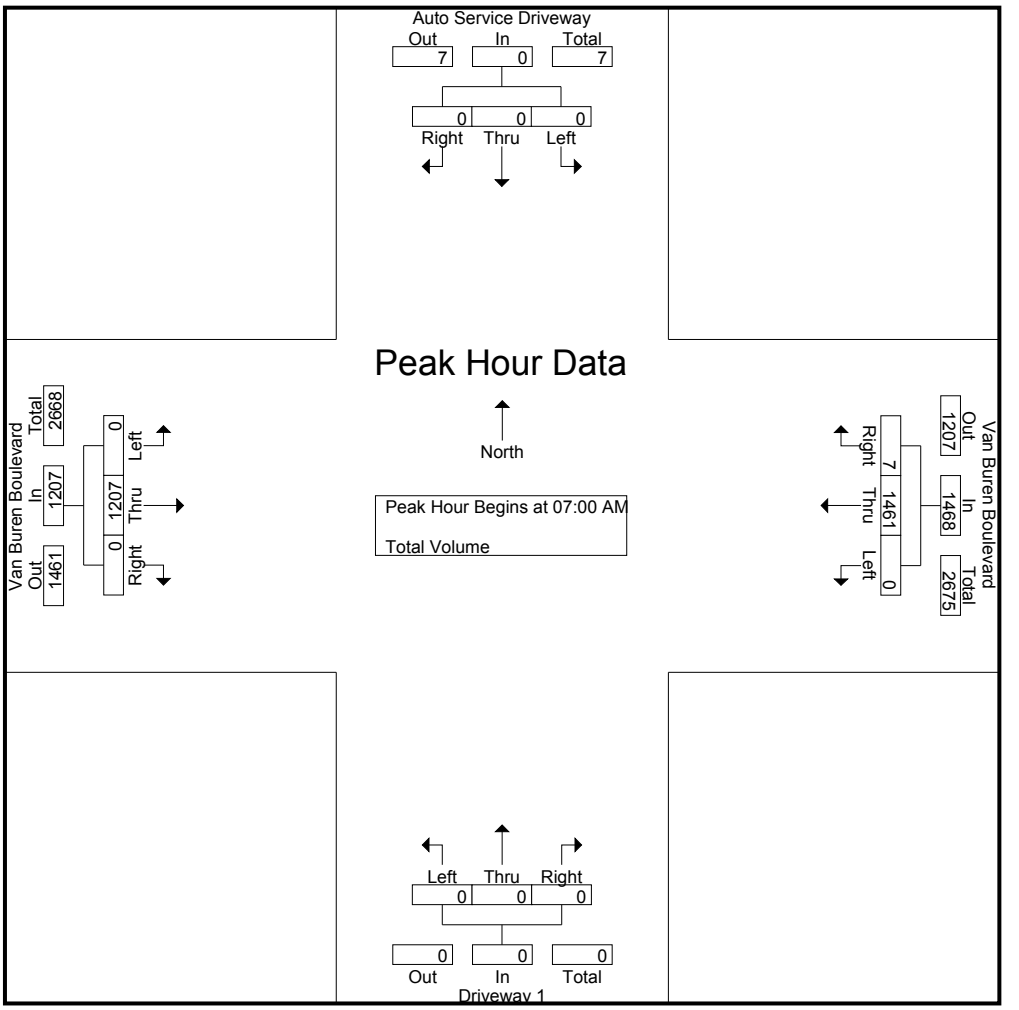

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**378**	2	**380**	0	0	0	0	0	285	0	285
+15 mins.	0	0	0	0	0	359	0	359	0	0	0	0	0	332	0	332
+30 mins.	0	0	**1**	**1**	0	369	1	370	0	0	0	0	0	**340**	0	**340**
+45 mins.	0	0	1	1	0	355	**4**	359	0	0	0	0	0	250	0	250
Total Volume	0	0	2	2	0	1461	7	1468	0	0	0	0	0	1207	0	1207
% App. Total	0	0	100		0	99.5	0.5		0	0	0		0	100	0	
PHF	.000	.000	.500	.500	.000	.966	.438	.966	.000	.000	.000	.000	.000	.888	.000	.888

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File Name : 01_RIV_DW1_VB PM19
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Groups Printed- Total Volume

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	361	4	365	0	0	0	0	0	257	0	257	622
02:15 PM	0	0	1	1	0	386	5	391	0	0	0	0	0	267	0	267	659
02:30 PM	0	0	1	1	0	311	6	317	0	0	0	0	0	305	0	305	623
02:45 PM	0	0	0	0	0	307	3	310	0	0	0	0	0	291	0	291	601
Total	0	0	2	2	0	1365	18	1383	0	0	0	0	0	1120	0	1120	2505
03:00 PM	0	0	0	0	0	364	1	365	0	0	0	0	0	301	0	301	666
03:15 PM	0	0	1	1	0	355	3	358	0	0	0	0	0	336	0	336	695
03:30 PM	0	0	0	0	0	320	2	322	0	0	0	0	0	331	0	331	653
03:45 PM	0	0	1	1	0	376	6	382	0	0	0	0	0	365	0	365	748
Total	0	0	2	2	0	1415	12	1427	0	0	0	0	0	1333	0	1333	2762
Grand Total	0	0	4	4	0	2780	30	2810	0	0	0	0	0	2453	0	2453	5267
Apprch %	0	0	100		0	98.9	1.1		0	0	0		0	100	0		
Total %	0	0	0.1	0.1	0	52.8	0.6	53.4	0	0	0	0	0	46.6	0	46.6	

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	364	1	365	0	0	0	0	0	301	0	301	666
03:15 PM	0	0	**1**	**1**	0	355	3	358	0	0	0	0	0	336	0	336	695
03:30 PM	0	0	0	0	0	320	2	322	0	0	0	0	0	331	0	331	653
03:45 PM	0	0	1	1	0	**376**	**6**	**382**	0	0	0	0	0	**365**	0	**365**	**748**
Total Volume	0	0	2	2	0	1415	12	1427	0	0	0	0	0	1333	0	1333	2762
% App. Total	0	0	100		0	99.2	0.8		0	0	0		0	100	0		
PHF	.000	.000	.500	.500	.000	.941	.500	.934	.000	.000	.000	.000	.000	.913	.000	.913	.923

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File Name : 01_RIV_DW1_VB PM19
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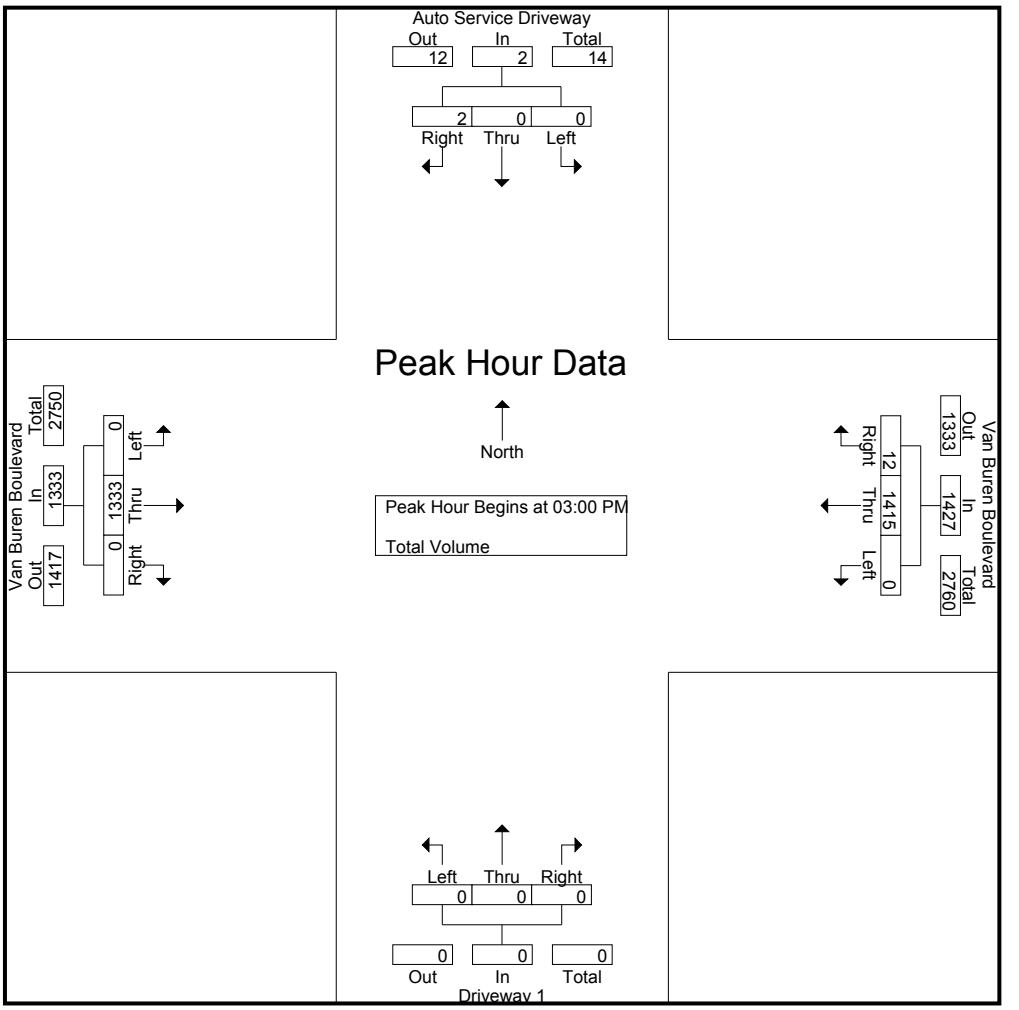

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:00 PM				03:00 PM				02:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	364	1	365	0	0	0	0	0	301	0	301
+15 mins.	0	0	**1**	**1**	0	355	3	358	0	0	0	0	0	336	0	336
+30 mins.	0	0	1	1	0	320	2	322	0	0	0	0	0	331	0	331
+45 mins.	0	0	0	0	0	**376**	**6**	**382**	0	0	0	0	0	**365**	0	**365**
Total Volume	0	0	2	2	0	1415	12	1427	0	0	0	0	0	1333	0	1333
% App. Total	0	0	100		0	99.2	0.8		0	0	0		0	100	0	
PHF	.000	.000	.500	.500	.000	.941	.500	.934	.000	.000	.000	.000	.000	.913	.000	.913

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 2/Ardenwood Lane
Weather: Clear

File Name : 02_RIV_DY_DW2 AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	42	6	49	2	1	9	12	1	59	0	60	2	1	0	3	124
07:15 AM	5	48	13	66	0	0	15	15	3	78	0	81	3	0	1	4	166
07:30 AM	6	61	18	85	1	0	17	18	3	82	0	85	10	0	1	11	199
07:45 AM	1	48	34	83	0	0	9	9	6	72	0	78	23	0	3	26	196
Total	13	199	71	283	3	1	50	54	13	291	0	304	38	1	5	44	685
08:00 AM	0	96	65	161	1	0	4	5	13	59	1	73	35	0	8	43	282
08:15 AM	2	68	32	102	0	0	4	4	12	85	2	99	45	0	12	57	262
08:30 AM	1	11	2	14	0	0	3	3	0	22	0	22	5	0	0	5	44
08:45 AM	1	9	0	10	0	0	2	2	0	15	0	15	1	0	0	1	28
Total	4	184	99	287	1	0	13	14	25	181	3	209	86	0	20	106	616
Grand Total	17	383	170	570	4	1	63	68	38	472	3	513	124	1	25	150	1301
Apprch %	3	67.2	29.8		5.9	1.5	92.6		7.4	92	0.6		82.7	0.7	16.7		
Total %	1.3	29.4	13.1	43.8	0.3	0.1	4.8	5.2	2.9	36.3	0.2	39.4	9.5	0.1	1.9	11.5	

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**6**	61	18	85	**1**	0	**17**	**18**	3	82	0	85	10	0	1	11	199
07:45 AM	1	48	34	83	0	0	9	9	6	72	0	78	23	0	3	26	196
08:00 AM	0	**96**	**65**	**161**	1	0	4	5	**13**	59	1	73	35	0	8	43	**282**
08:15 AM	2	68	32	102	0	0	4	4	12	**85**	**2**	**99**	**45**	0	**12**	**57**	262
Total Volume	9	273	149	431	2	0	34	36	34	298	3	335	113	0	24	137	939
% App. Total	2.1	63.3	34.6		5.6	0	94.4		10.1	89	0.9		82.5	0	17.5		
PHF	.375	.711	.573	.669	.500	.000	.500	.500	.654	.876	.375	.846	.628	.000	.500	.601	.832

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City of Riverside
N/S: Dauchy Avenue
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File Name : 02_RIV_DY_DW2 AM14
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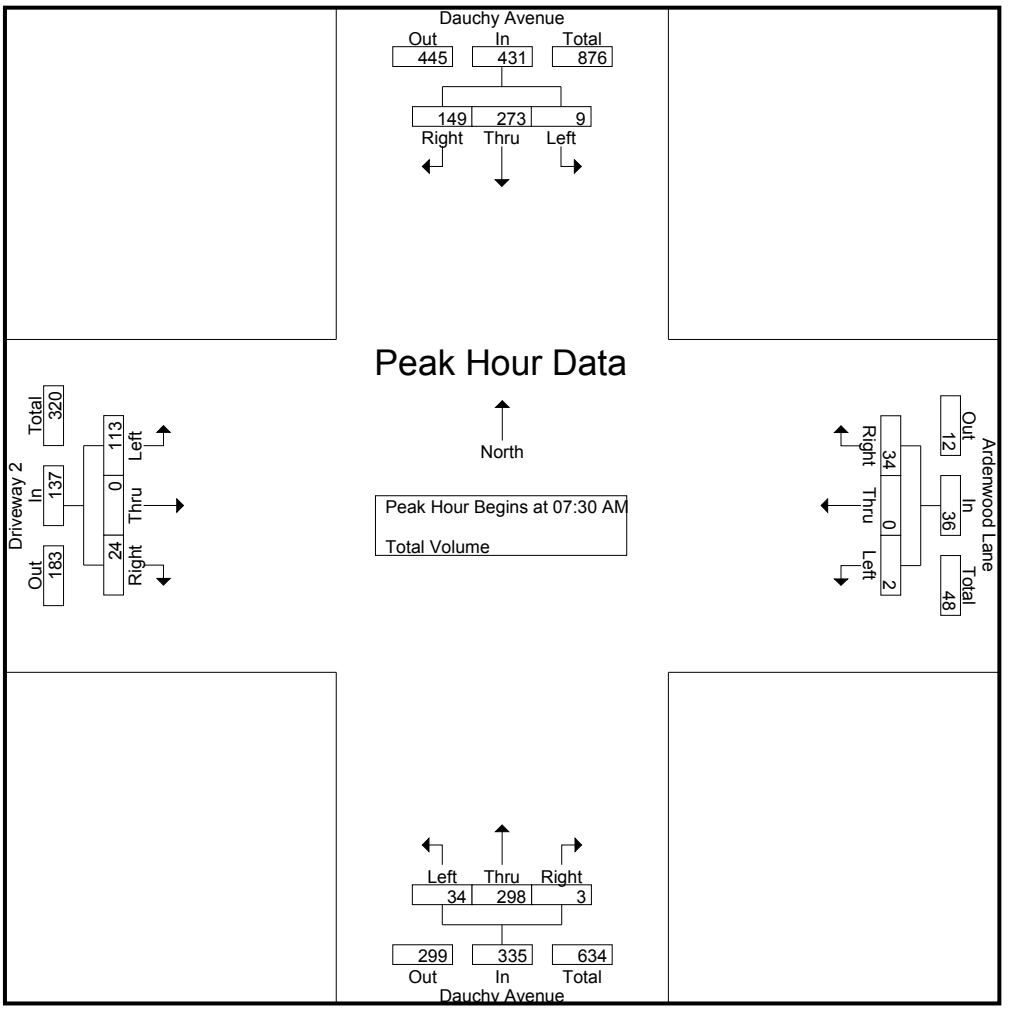

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	**6**	61	18	85	**2**	**1**	9	12	3	82	0	85	10	0	1	11
+15 mins.	1	48	34	83	0	0	15	15	6	72	0	78	23	0	3	26
+30 mins.	0	**96**	**65**	**161**	1	0	**17**	**18**	**13**	59	1	73	35	0	8	43
+45 mins.	2	68	32	102	0	0	9	9	12	**85**	**2**	**99**	**45**	0	**12**	**57**
Total Volume	9	273	149	431	3	1	50	54	34	298	3	335	113	0	24	137
% App. Total	2.1	63.3	34.6		5.6	1.9	92.6		10.1	89	0.9		82.5	0	17.5	
PHF	.375	.711	.573	.669	.375	.250	.735	.750	.654	.876	.375	.846	.628	.000	.500	.601

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 2/Ardenwood Lane
Weather: Clear

File Name : 02_RIV_DY_DW2 PM14
Site Code : 00321595
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Groups Printed- Total Volume

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	1	26	3	30	1	0	0	1	1	26	3	30	5	0	1	6	67
02:15 PM	2	24	5	31	0	0	1	1	7	37	0	44	5	0	1	6	82
02:30 PM	7	46	26	79	2	0	2	4	4	24	4	32	0	0	0	0	115
02:45 PM	6	57	22	85	2	0	20	22	5	80	6	91	30	1	6	37	235
Total	16	153	56	225	5	0	23	28	17	167	13	197	40	1	8	49	499
03:00 PM	3	66	13	82	1	1	5	7	5	63	1	69	43	0	13	56	214
03:15 PM	6	65	12	83	1	0	9	10	1	34	1	36	16	0	6	22	151
03:30 PM	5	63	9	77	0	0	4	4	2	42	0	44	19	0	6	25	150
03:45 PM	2	72	6	80	0	0	1	1	3	41	0	44	6	0	5	11	136
Total	16	266	40	322	2	1	19	22	11	180	2	193	84	0	30	114	651
Grand Total	32	419	96	547	7	1	42	50	28	347	15	390	124	1	38	163	1150
Apprch %	5.9	76.6	17.6		14	2	84		7.2	89	3.8		76.1	0.6	23.3		
Total %	2.8	36.4	8.3	47.6	0.6	0.1	3.7	4.3	2.4	30.2	1.3	33.9	10.8	0.1	3.3	14.2	

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	**6**	57	**22**	**85**	**2**	0	**20**	**22**	**5**	**80**	**6**	**91**	30	**1**	6	37	**235**
03:00 PM	3	**66**	13	82	1	**1**	5	7	5	63	1	69	**43**	0	**13**	**56**	214
03:15 PM	6	65	12	83	1	0	9	10	1	34	1	36	16	0	6	22	151
03:30 PM	5	63	9	77	0	0	4	4	2	42	0	44	19	0	6	25	150
Total Volume	20	251	56	327	4	1	38	43	13	219	8	240	108	1	31	140	750
% App. Total	6.1	76.8	17.1		9.3	2.3	88.4		5.4	91.2	3.3		77.1	0.7	22.1		
PHF	.833	.951	.636	.962	.500	.250	.475	.489	.650	.684	.333	.659	.628	.250	.596	.625	.798

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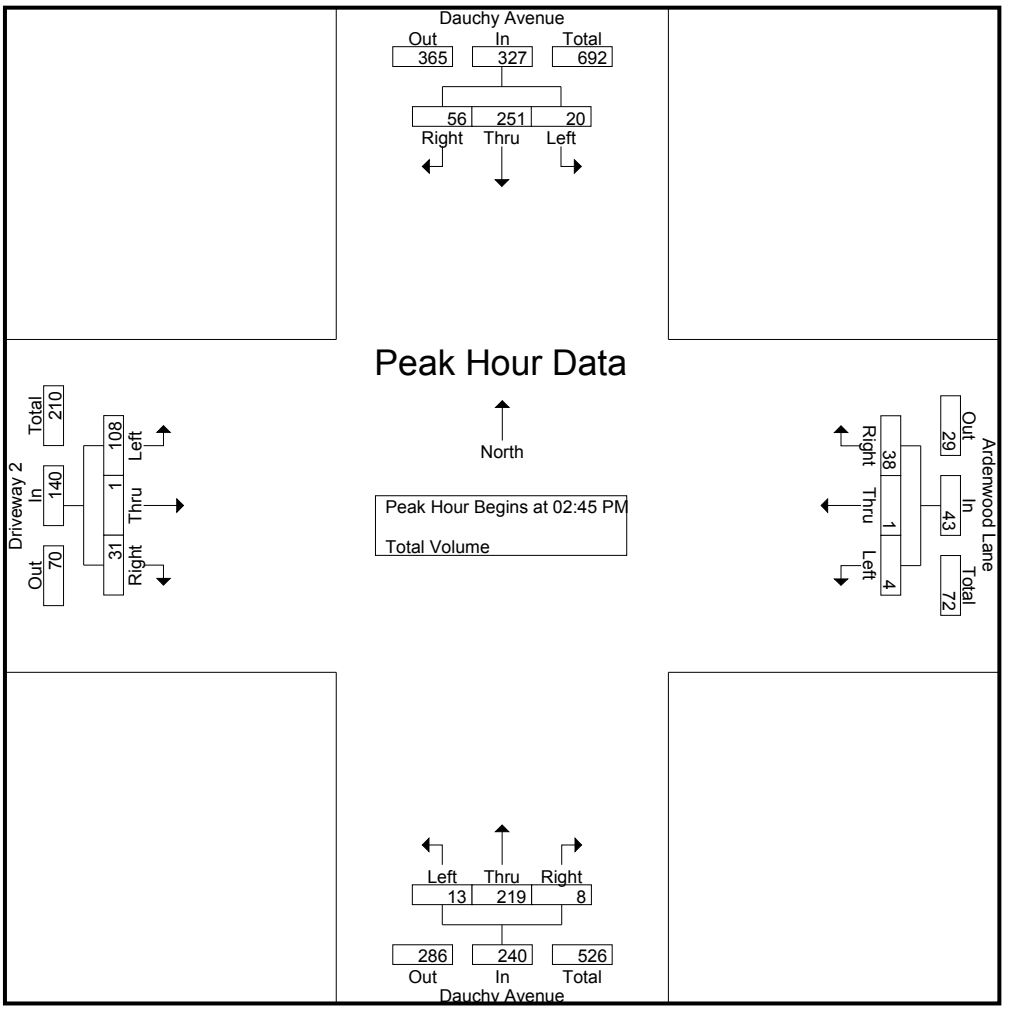

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:30 PM				02:45 PM				02:45 PM			
+0 mins.	**7**	46	**26**	79	**2**	0	2	4	**5**	**80**	**6**	**91**	30	**1**	6	37
+15 mins.	6	57	22	**85**	2	0	**20**	**22**	5	63	1	69	**43**	0	**13**	**56**
+30 mins.	3	**66**	13	82	1	**1**	5	7	1	34	1	36	16	0	6	22
+45 mins.	6	65	12	83	1	0	9	10	2	42	0	44	19	0	6	25
Total Volume	22	234	73	329	6	1	36	43	13	219	8	240	108	1	31	140
% App. Total	6.7	71.1	22.2		14	2.3	83.7		5.4	91.2	3.3		77.1	0.7	22.1	
PHF	.786	.886	.702	.968	.750	.250	.450	.489	.650	.684	.333	.659	.628	.250	.596	.625

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 2/Ardenwood Lane
Weather: Clear

File Name : 02_RIV_DY_DW2 AM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	31	6	39	3	0	8	11	1	62	0	63	4	0	0	4	117
07:15 AM	6	51	9	66	0	0	9	9	1	86	0	87	5	0	3	8	170
07:30 AM	3	67	28	98	1	0	21	22	4	68	1	73	14	0	1	15	208
07:45 AM	1	46	33	80	0	0	8	8	10	72	1	83	21	0	2	23	194
Total	12	195	76	283	4	0	46	50	16	288	2	306	44	0	6	50	689
08:00 AM	1	73	55	129	3	0	6	9	6	62	1	69	28	0	14	42	249
08:15 AM	3	72	27	102	0	0	2	2	14	82	1	97	49	0	10	59	260
08:30 AM	1	9	4	14	0	0	2	2	1	19	0	20	2	0	1	3	39
08:45 AM	1	10	3	14	0	0	1	1	0	15	0	15	2	0	1	3	33
Total	6	164	89	259	3	0	11	14	21	178	2	201	81	0	26	107	581
Grand Total	18	359	165	542	7	0	57	64	37	466	4	507	125	0	32	157	1270
Apprch %	3.3	66.2	30.4		10.9	0	89.1		7.3	91.9	0.8		79.6	0	20.4		
Total %	1.4	28.3	13	42.7	0.6	0	4.5	5	2.9	36.7	0.3	39.9	9.8	0	2.5	12.4	

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**3**	67	28	98	1	0	**21**	**22**	4	68	**1**	73	14	0	1	15	208
07:45 AM	1	46	33	80	0	0	8	8	10	72	1	83	21	0	2	23	194
08:00 AM	1	**73**	**55**	**129**	**3**	0	6	9	6	62	1	69	28	0	**14**	42	249
08:15 AM	3	72	27	102	0	0	2	2	**14**	**82**	1	**97**	**49**	0	10	**59**	**260**
Total Volume	8	258	143	409	4	0	37	41	34	284	4	322	112	0	27	139	911
% App. Total	2	63.1	35		9.8	0	90.2		10.6	88.2	1.2		80.6	0	19.4		
PHF	.667	.884	.650	.793	.333	.000	.440	.466	.607	.866	1.00	.830	.571	.000	.482	.589	.876

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File Name : 02_RIV_DY_DW2 AM19
Site Code : 00321595
Start Date : 10/19/2021
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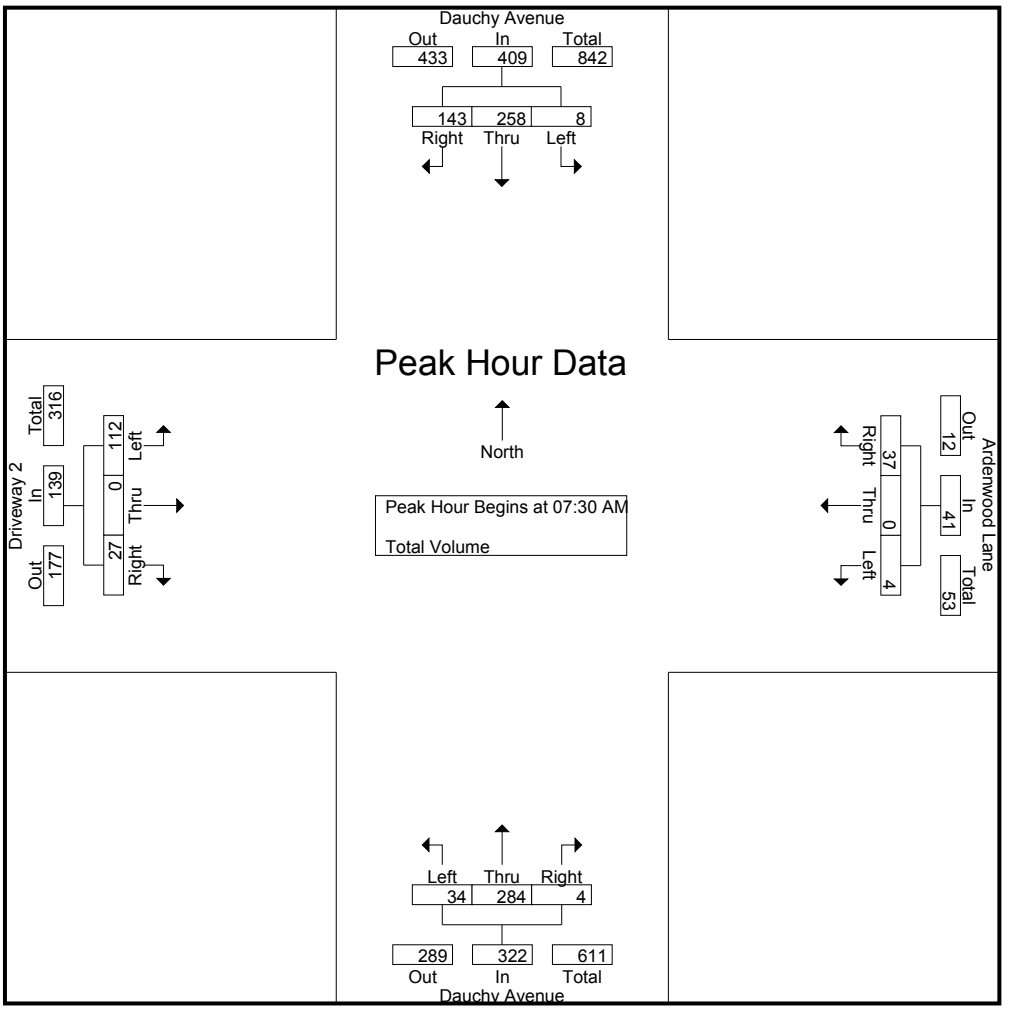

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	**3**	67	28	98	**3**	0	8	11	4	68	**1**	73	14	0	1	15
+15 mins.	1	46	33	80	0	0	9	9	10	72	1	83	21	0	2	23
+30 mins.	1	**73**	**55**	**129**	1	0	**21**	**22**	6	62	1	69	28	0	**14**	42
+45 mins.	3	72	27	102	0	0	8	8	**14**	**82**	1	**97**	**49**	0	10	**59**
Total Volume	8	258	143	409	4	0	46	50	34	284	4	322	112	0	27	139
% App. Total	2	63.1	35		8	0	92		10.6	88.2	1.2		80.6	0	19.4	
PHF	.667	.884	.650	.793	.333	.000	.548	.568	.607	.866	1.000	.830	.571	.000	.482	.589

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File Name : 02_RIV_DY_DW2 PM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	3	25	4	32	2	0	11	13	2	50	0	52	2	0	2	4	101
02:15 PM	2	36	10	48	0	0	2	2	2	19	2	23	2	0	0	2	75
02:30 PM	1	51	29	81	3	0	3	6	6	25	2	33	1	0	1	2	122
02:45 PM	4	53	28	85	1	0	4	5	8	58	3	69	30	0	3	33	192
Total	10	165	71	246	6	0	20	26	18	152	7	177	35	0	6	41	490
03:00 PM	2	47	15	64	4	0	6	10	3	62	3	68	55	1	16	72	214
03:15 PM	0	41	13	54	0	0	3	3	1	39	1	41	20	0	3	23	121
03:30 PM	1	64	6	71	0	0	0	0	2	29	0	31	14	0	7	21	123
03:45 PM	2	44	9	55	0	0	5	5	1	41	0	42	3	0	5	8	110
Total	5	196	43	244	4	0	14	18	7	171	4	182	92	1	31	124	568
Grand Total	15	361	114	490	10	0	34	44	25	323	11	359	127	1	37	165	1058
Apprch %	3.1	73.7	23.3		22.7	0	77.3		7	90	3.1		77	0.6	22.4		
Total %	1.4	34.1	10.8	46.3	0.9	0	3.2	4.2	2.4	30.5	1	33.9	12	0.1	3.5	15.6	

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	**4**	53	**28**	**85**	1	0	4	5	**8**	58	**3**	**69**	30	0	3	33	192
03:00 PM	2	47	15	64	**4**	0	**6**	**10**	3	**62**	3	68	**55**	**1**	**16**	**72**	**214**
03:15 PM	0	41	13	54	0	0	3	3	1	39	1	41	20	0	3	23	121
03:30 PM	1	**64**	6	71	0	0	0	0	2	29	0	31	14	0	7	21	123
Total Volume	7	205	62	274	5	0	13	18	14	188	7	209	119	1	29	149	650
% App. Total	2.6	74.8	22.6		27.8	0	72.2		6.7	90	3.3		79.9	0.7	19.5		
PHF	.438	.801	.554	.806	.313	.000	.542	.450	.438	.758	.583	.757	.541	.250	.453	.517	.759

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File Name : 02_RIV_DY_DW2 PM19
Site Code : 00321595
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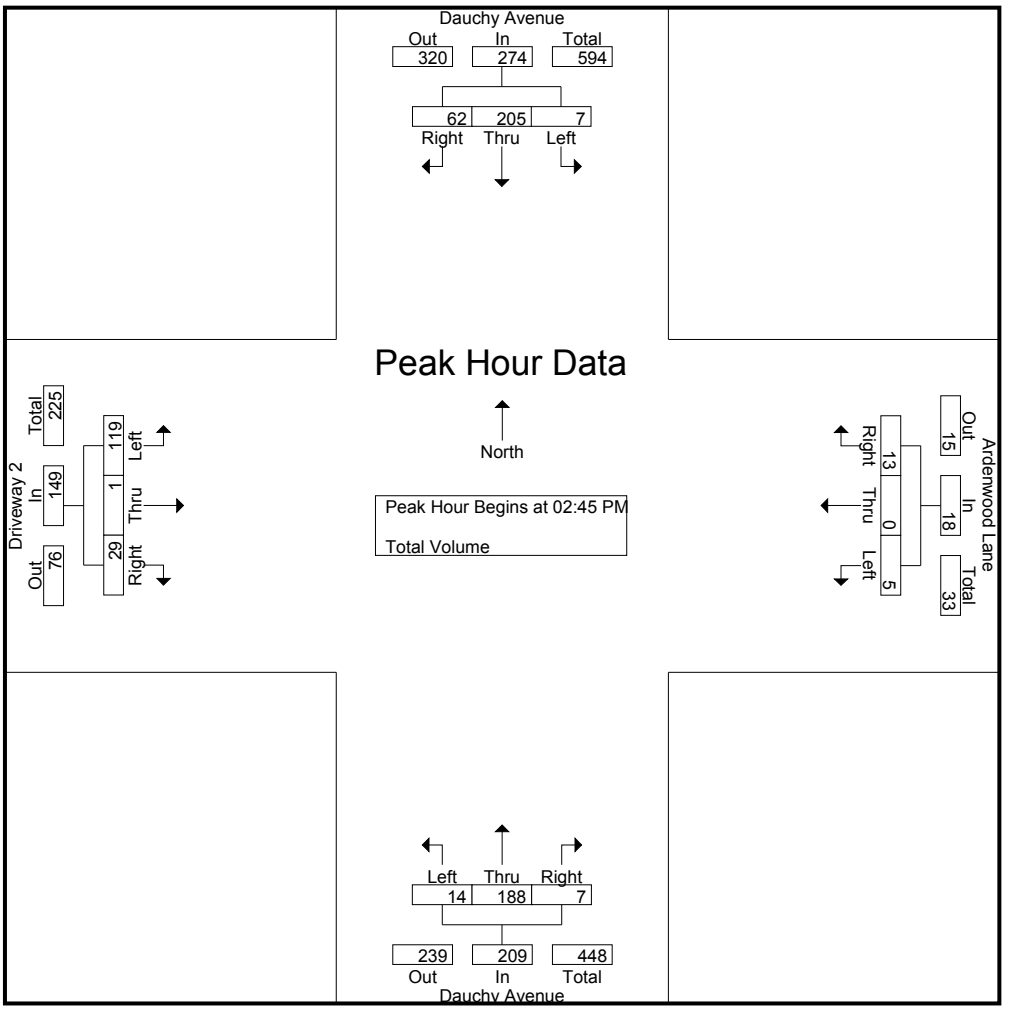

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:00 PM				02:30 PM				02:45 PM			
+0 mins.	1	51	**29**	81	2	0	**11**	**13**	6	25	2	33	30	0	3	33
+15 mins.	**4**	**53**	28	**85**	0	0	2	2	**8**	58	**3**	**69**	**55**	**1**	**16**	**72**
+30 mins.	2	47	15	64	**3**	0	3	6	3	**62**	3	68	20	0	3	23
+45 mins.	0	41	13	54	1	0	4	5	1	39	1	41	14	0	7	21
Total Volume	7	192	85	284	6	0	20	26	18	184	9	211	119	1	29	149
% App. Total	2.5	67.6	29.9		23.1	0	76.9		8.5	87.2	4.3		79.9	0.7	19.5	
PHF	.438	.906	.733	.835	.500	.000	.455	.500	.563	.742	.750	.764	.541	.250	.453	.517

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 3
Weather: Clear

File Name : 03_RIV_DY_DW3 AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	23	21	44	4	60	64	0	0	0	108
07:15 AM	39	11	50	2	83	85	0	0	0	135
07:30 AM	44	13	57	2	81	83	1	0	1	141
07:45 AM	26	26	52	4	77	81	0	0	0	133
Total	132	71	203	12	301	313	1	0	1	517
08:00 AM	50	50	100	5	71	76	0	0	0	176
08:15 AM	49	35	84	1	98	99	0	0	0	183
08:30 AM	7	0	7	0	17	17	0	0	0	24
08:45 AM	11	0	11	0	18	18	0	0	0	29
Total	117	85	202	6	204	210	0	0	0	412
Grand Total	249	156	405	18	505	523	1	0	1	929
Apprch %	61.5	38.5		3.4	96.6		100	0		
Total %	26.8	16.8	43.6	1.9	54.4	56.3	0.1	0	0.1	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	44	13	57	2	81	83	**1**	0	**1**	141
07:45 AM	26	26	52	4	77	81	0	0	0	133
08:00 AM	**50**	**50**	**100**	**5**	71	76	0	0	0	176
08:15 AM	49	35	84	1	**98**	**99**	0	0	0	**183**
Total Volume	169	124	293	12	327	339	1	0	1	633
% App. Total	57.7	42.3		3.5	96.5		100	0		
PHF	.845	.620	.733	.600	.834	.856	.250	.000	.250	.865

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 3
Weather: Clear

File Name : 03_RIV_DY_DW3 AM14
Site Code : 00321595
Start Date : 10/14/2021
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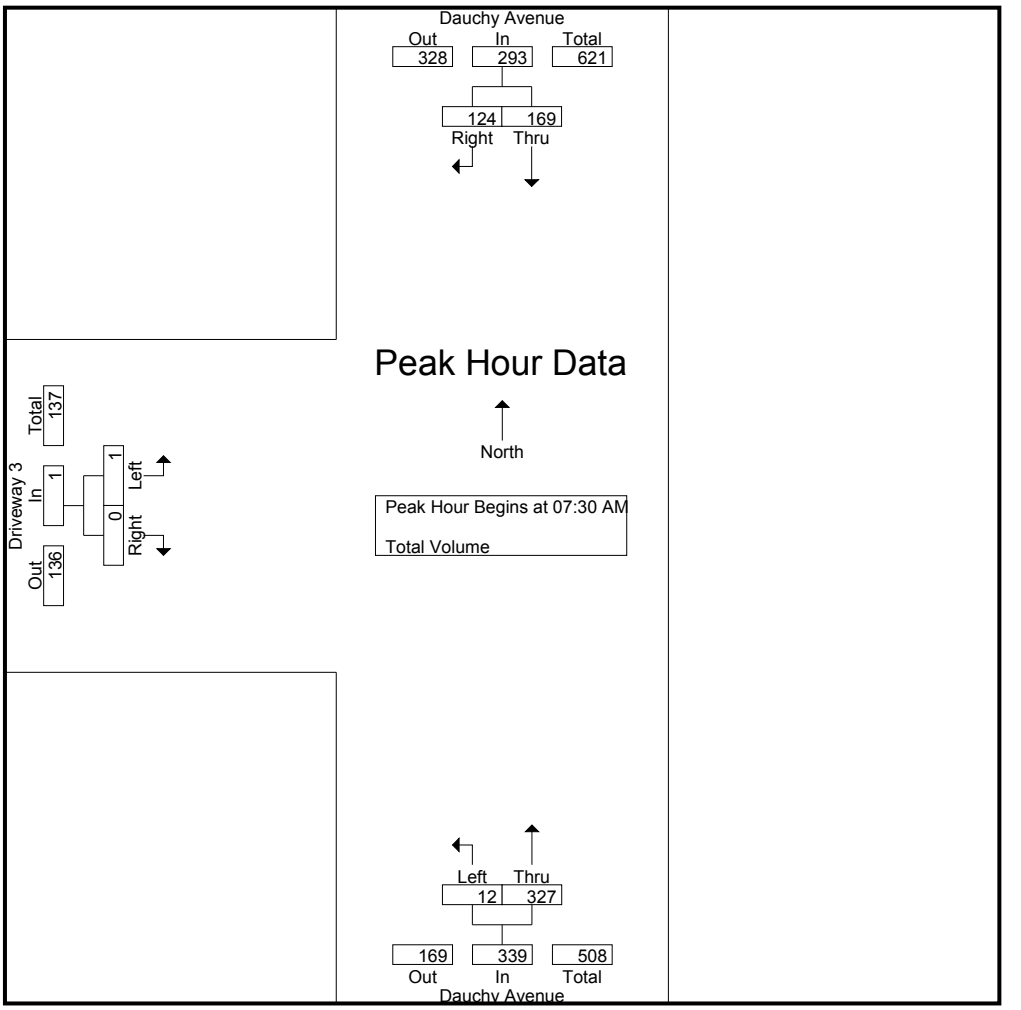

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:00 AM		
+0 mins.	44	13	57	2	81	83	0	0	0
+15 mins.	26	26	52	4	77	81	0	0	0
+30 mins.	**50**	**50**	**100**	**5**	71	76	**1**	0	**1**
+45 mins.	49	35	84	1	**98**	**99**	0	0	0
Total Volume	169	124	293	12	327	339	1	0	1
% App. Total	57.7	42.3		3.5	96.5		100	0	
PHF	.845	.620	.733	.600	.834	.856	.250	.000	.250

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City of Riverside
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Weather: Clear

File Name : 03_RIV_DY_DW3 PM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	23	3	26	1	30	31	0	0	0	57
02:15 PM	23	2	25	2	44	46	0	0	0	71
02:30 PM	43	0	43	0	32	32	0	0	0	75
02:45 PM	57	9	66	2	87	89	0	0	0	155
Total	146	14	160	5	193	198	0	0	0	358
03:00 PM	57	12	69	2	62	64	0	0	0	133
03:15 PM	66	12	78	2	37	39	0	0	0	117
03:30 PM	54	17	71	4	43	47	0	0	0	118
03:45 PM	65	14	79	3	44	47	0	0	0	126
Total	242	55	297	11	186	197	0	0	0	494
Grand Total	388	69	457	16	379	395	0	0	0	852
Apprch %	84.9	15.1		4.1	95.9		0	0		
Total %	45.5	8.1	53.6	1.9	44.5	46.4	0	0	0	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	57	9	66	2	**87**	**89**	0	0	0	**155**
03:00 PM	57	12	69	2	62	64	0	0	0	133
03:15 PM	**66**	12	**78**	2	37	39	0	0	0	117
03:30 PM	54	**17**	71	**4**	43	47	0	0	0	118
Total Volume	234	50	284	10	229	239	0	0	0	523
% App. Total	82.4	17.6		4.2	95.8		0	0		
PHF	.886	.735	.910	.625	.658	.671	.000	.000	.000	.844

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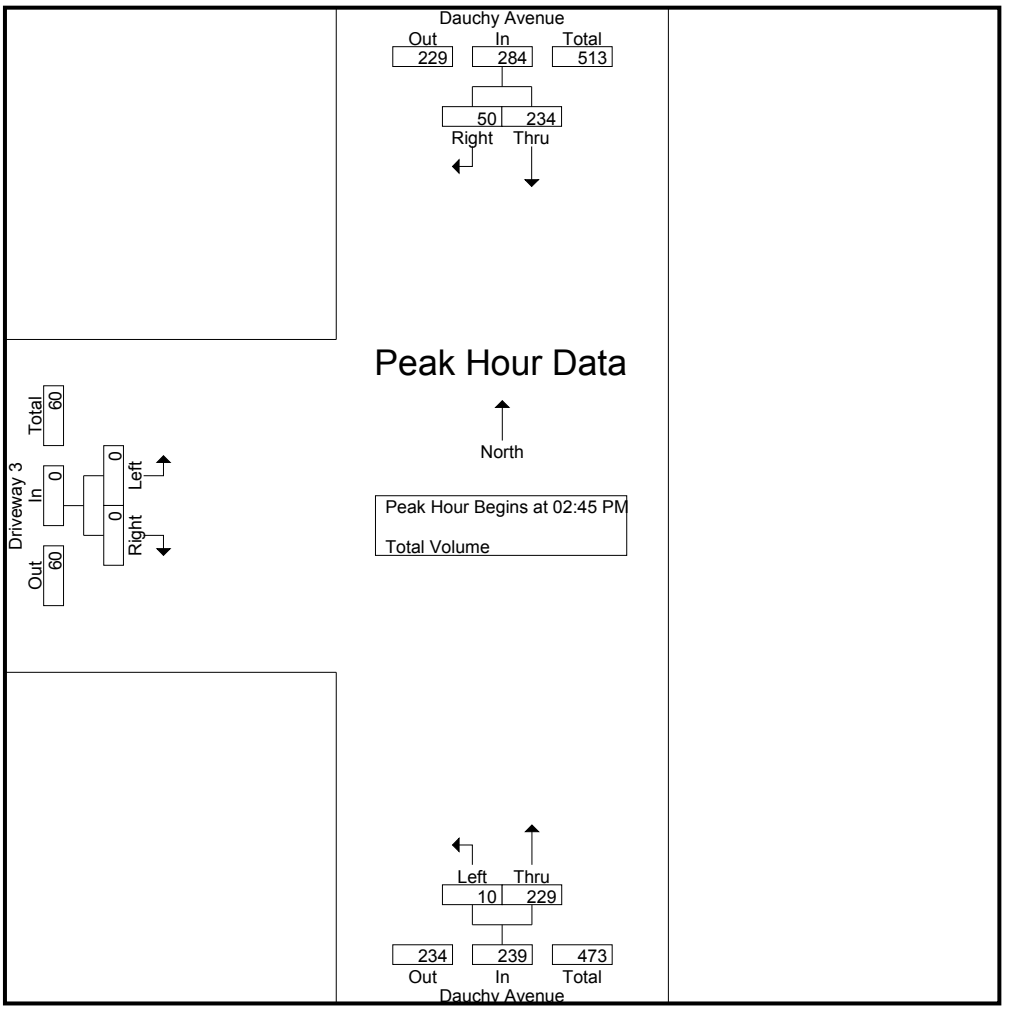

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM			02:45 PM			02:00 PM		
+0 mins.	57	12	69	2	**87**	**89**	0	0	0
+15 mins.	**66**	12	78	2	62	64	0	0	0
+30 mins.	54	**17**	71	2	37	39	0	0	0
+45 mins.	65	14	**79**	**4**	43	47	0	0	0
Total Volume	242	55	297	10	229	239	0	0	0
% App. Total	81.5	18.5		4.2	95.8		0	0	
PHF	.917	.809	.940	.625	.658	.671	.000	.000	.000

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City of Riverside
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File Name : 03_RIV_DY_DW3 AM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	15	17	32	3	61	64	0	0	0	96
07:15 AM	39	17	56	6	90	96	0	0	0	152
07:30 AM	50	17	67	3	73	76	0	0	0	143
07:45 AM	20	19	39	2	79	81	0	0	0	120
Total	124	70	194	14	303	317	0	0	0	511
08:00 AM	49	50	99	7	77	84	0	0	0	183
08:15 AM	51	28	79	3	91	94	0	0	0	173
08:30 AM	8	0	8	0	20	20	0	0	0	28
08:45 AM	11	0	11	0	15	15	0	0	0	26
Total	119	78	197	10	203	213	0	0	0	410
Grand Total	243	148	391	24	506	530	0	0	0	921
Apprch %	62.1	37.9		4.5	95.5		0	0		
Total %	26.4	16.1	42.5	2.6	54.9	57.5	0	0	0	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	50	17	67	3	73	76	0	0	0	143
07:45 AM	20	19	39	2	79	81	0	0	0	120
08:00 AM	49	**50**	**99**	**7**	77	84	0	0	0	**183**
08:15 AM	**51**	28	79	3	**91**	**94**	0	0	0	173
Total Volume	170	114	284	15	320	335	0	0	0	619
% App. Total	59.9	40.1		4.5	95.5		0	0		
PHF	.833	.570	.717	.536	.879	.891	.000	.000	.000	.846

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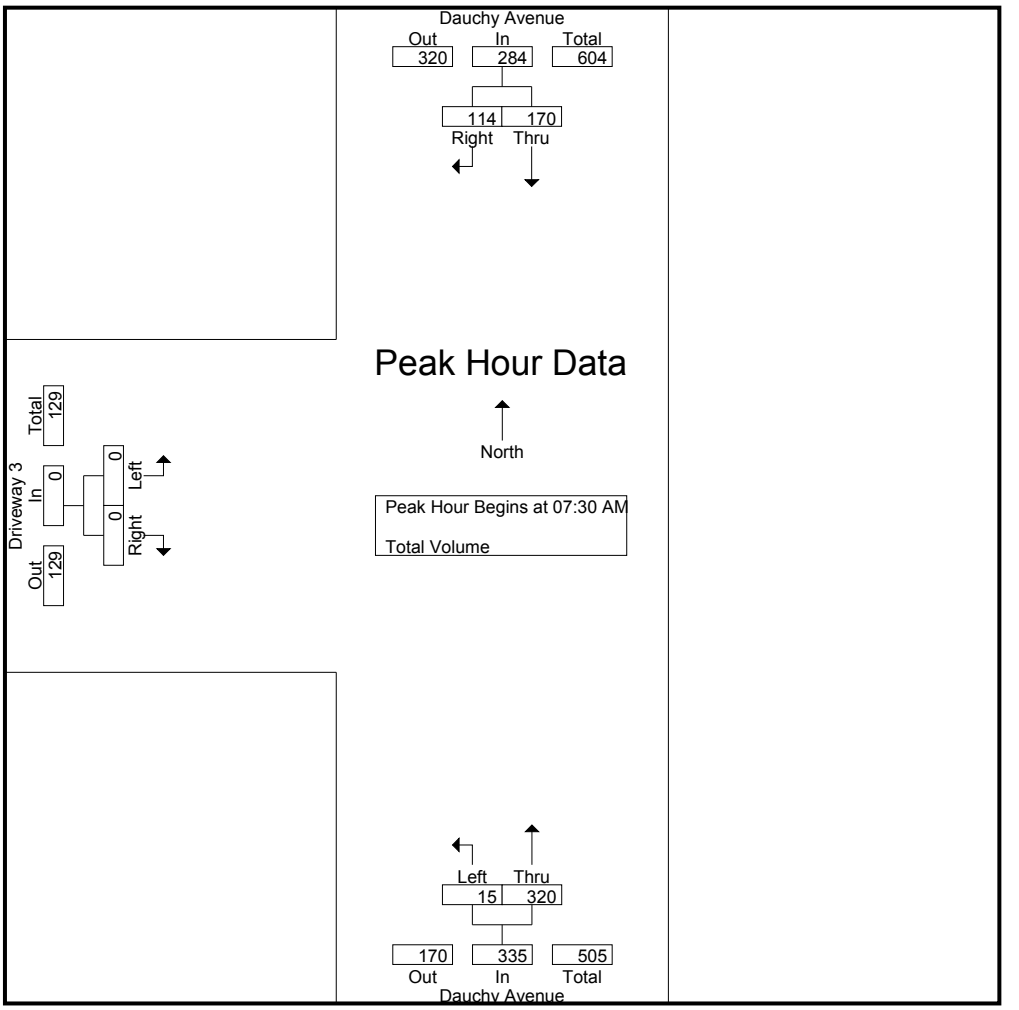

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:15 AM			07:00 AM		
+0 mins.	50	17	67	6	**90**	**96**	0	0	0
+15 mins.	20	19	39	3	73	76	0	0	0
+30 mins.	49	**50**	**99**	2	79	81	0	0	0
+45 mins.	**51**	28	79	**7**	77	84	0	0	0
Total Volume	170	114	284	18	319	337	0	0	0
% App. Total	59.9	40.1		5.3	94.7		0	0	
PHF	.833	.570	.717	.643	.886	.878	.000	.000	.000

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(951)268-6268

City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 3
Weather: Clear

File Name : 03_RIV_DY_DW3 PM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	25	2	27	0	52	52	0	0	0	79
02:15 PM	32	2	34	0	22	22	0	0	0	56
02:30 PM	46	3	49	1	32	33	0	0	0	82
02:45 PM	50	10	60	1	67	68	0	0	0	128
Total	153	17	170	2	173	175	0	0	0	345
03:00 PM	51	20	71	2	66	68	0	0	0	139
03:15 PM	33	11	44	3	41	44	0	0	0	88
03:30 PM	47	25	72	5	31	36	0	0	0	108
03:45 PM	44	7	51	3	42	45	0	0	0	96
Total	175	63	238	13	180	193	0	0	0	431
Grand Total	328	80	408	15	353	368	0	0	0	776
Apprch %	80.4	19.6		4.1	95.9		0	0		
Total %	42.3	10.3	52.6	1.9	45.5	47.4	0	0	0	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	50	10	60	1	**67**	**68**	0	0	0	128
03:00 PM	**51**	20	71	2	66	68	0	0	0	**139**
03:15 PM	33	11	44	3	41	44	0	0	0	88
03:30 PM	47	**25**	**72**	**5**	31	36	0	0	0	108
Total Volume	181	66	247	11	205	216	0	0	0	463
% App. Total	73.3	26.7		5.1	94.9		0	0		
PHF	.887	.660	.858	.550	.765	.794	.000	.000	.000	.833

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City of Riverside
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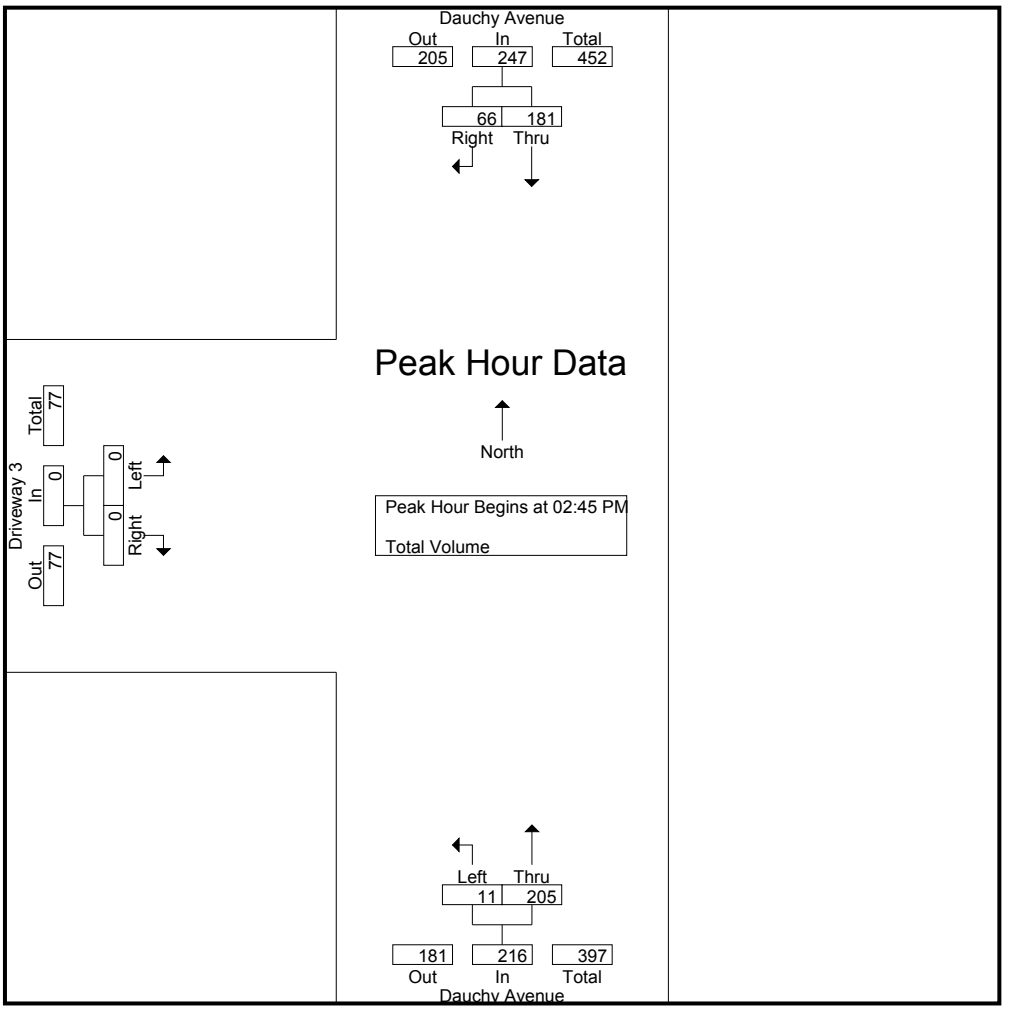
File Name : 03_RIV_DY_DW3 PM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 2



Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM			02:45 PM			02:00 PM		
+0 mins.	50	10	60	1	**67**	**68**	0	0	0
+15 mins.	**51**	20	71	2	66	68	0	0	0
+30 mins.	33	11	44	3	41	44	0	0	0
+45 mins.	47	**25**	**72**	**5**	31	36	0	0	0
Total Volume	181	66	247	11	205	216	0	0	0
% App. Total	73.3	26.7		5.1	94.9		0	0	
PHF	.887	.660	.858	.550	.765	.794	.000	.000	.000

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 4
Weather: Clear

File Name : 04_RIV_DY_DW4 AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	18	5	23	3	49	52	15	2	17	92
07:15 AM	37	0	37	1	69	70	12	2	14	121
07:30 AM	44	2	46	1	77	78	7	2	9	133
07:45 AM	21	4	25	6	57	63	27	4	31	119
Total	120	11	131	11	252	263	61	10	71	465
08:00 AM	28	20	48	14	37	51	43	14	57	156
08:15 AM	29	17	46	13	41	54	49	17	66	166
08:30 AM	8	0	8	0	19	19	1	0	1	28
08:45 AM	11	0	11	0	18	18	0	0	0	29
Total	76	37	113	27	115	142	93	31	124	379
Grand Total	196	48	244	38	367	405	154	41	195	844
Apprch %	80.3	19.7		9.4	90.6		79	21		
Total %	23.2	5.7	28.9	4.5	43.5	48	18.2	4.9	23.1	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**44**	2	46	1	**77**	**78**	7	2	9	133
07:45 AM	21	4	25	6	57	63	27	4	31	119
08:00 AM	28	**20**	**48**	**14**	37	51	43	14	57	156
08:15 AM	29	17	46	13	41	54	**49**	**17**	**66**	**166**
Total Volume	122	43	165	34	212	246	126	37	163	574
% App. Total	73.9	26.1		13.8	86.2		77.3	22.7		
PHF	.693	.538	.859	.607	.688	.788	.643	.544	.617	.864

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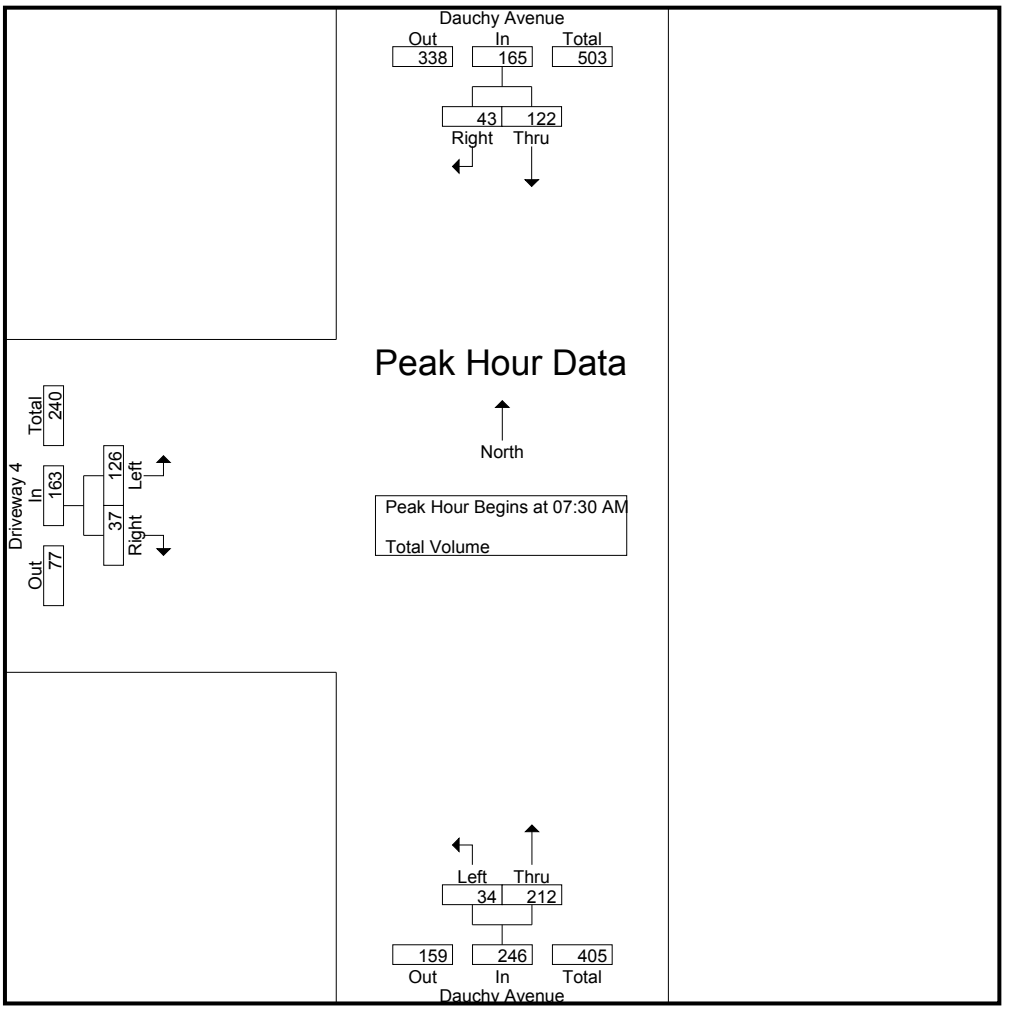
City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 4
Weather: Clear

File Name : 04_RIV_DY_DW4 AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:30 AM		
+0 mins.	**44**	2	46	3	49	52	7	2	9
+15 mins.	21	4	25	1	69	70	27	4	31
+30 mins.	28	**20**	**48**	1	**77**	**78**	43	14	57
+45 mins.	29	17	46	**6**	57	63	**49**	**17**	**66**
Total Volume	122	43	165	11	252	263	126	37	163
% App. Total	73.9	26.1		4.2	95.8		77.3	22.7	
PHF	.693	.538	.859	.458	.818	.843	.643	.544	.617

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 4
Weather: Clear

File Name : 04_RIV_DY_DW4 PM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	23	1	24	0	26	26	0	0	0	50
02:15 PM	20	1	21	1	44	45	2	6	8	74
02:30 PM	29	8	37	2	30	32	1	0	1	70
02:45 PM	52	7	59	6	55	61	29	9	38	158
Total	124	17	141	9	155	164	32	15	47	352
03:00 PM	56	0	56	2	39	41	23	9	32	129
03:15 PM	64	1	65	1	21	22	16	3	19	106
03:30 PM	51	0	51	2	25	27	22	4	26	104
03:45 PM	62	2	64	2	26	28	21	13	34	126
Total	233	3	236	7	111	118	82	29	111	465
Grand Total	357	20	377	16	266	282	114	44	158	817
Apprch %	94.7	5.3		5.7	94.3		72.2	27.8		
Total %	43.7	2.4	46.1	2	32.6	34.5	14	5.4	19.3	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	52	**7**	59	**6**	**55**	**61**	**29**	**9**	**38**	**158**
03:00 PM	56	0	56	2	39	41	23	9	32	129
03:15 PM	**64**	1	**65**	1	21	22	16	3	19	106
03:30 PM	51	0	51	2	25	27	22	4	26	104
Total Volume	223	8	231	11	140	151	90	25	115	497
% App. Total	96.5	3.5		7.3	92.7		78.3	21.7		
PHF	.871	.286	.888	.458	.636	.619	.776	.694	.757	.786

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Site Code : 00321595
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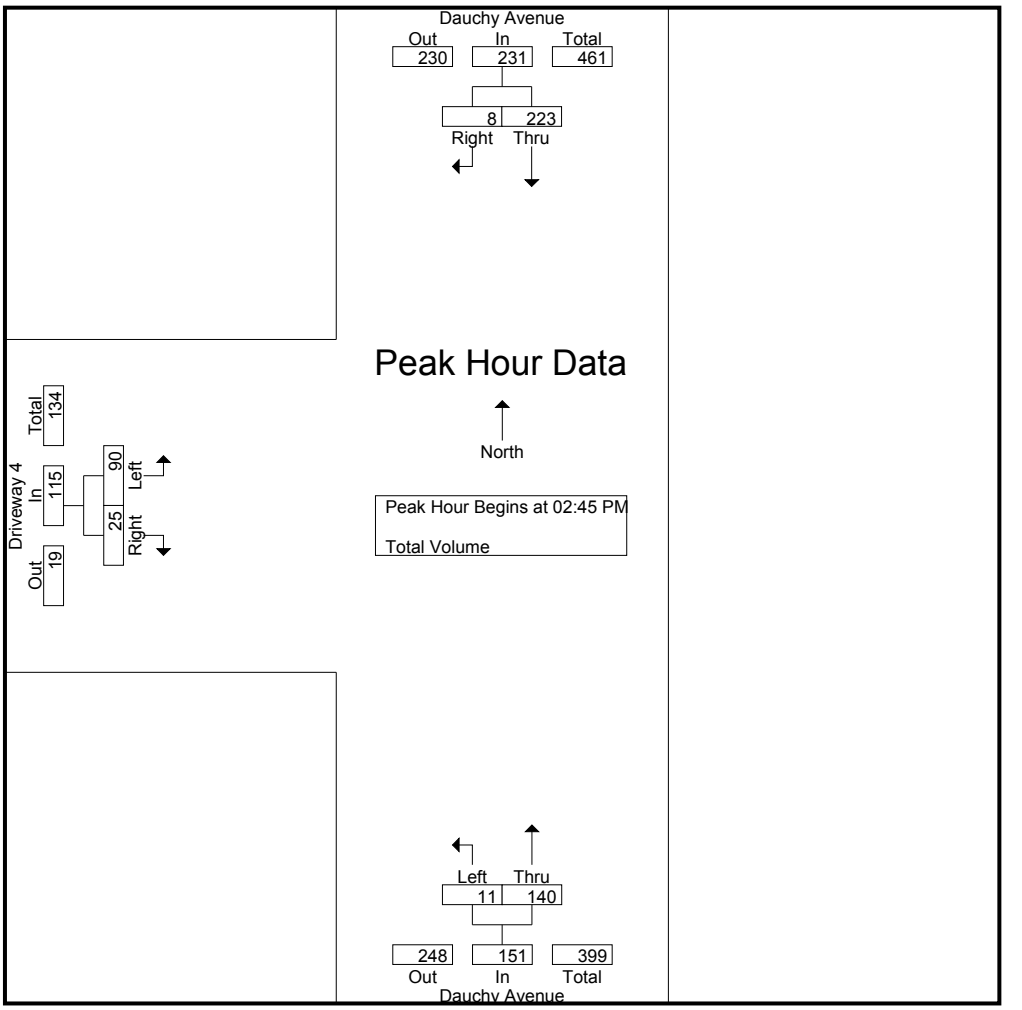

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM			02:15 PM			02:45 PM		
+0 mins.	56	0	56	1	44	45	**29**	**9**	**38**
+15 mins.	**64**	1	**65**	2	30	32	23	9	32
+30 mins.	51	0	51	**6**	**55**	**61**	16	3	19
+45 mins.	62	**2**	64	2	39	41	22	4	26
Total Volume	233	3	236	11	168	179	90	25	115
% App. Total	98.7	1.3		6.1	93.9		78.3	21.7	
PHF	.910	.375	.908	.458	.764	.734	.776	.694	.757

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 4
Weather: Clear

File Name : 04_RIV_DY_DW4 AM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	13	2	15	2	47	49	15	1	16	80
07:15 AM	35	2	37	1	80	81	16	8	24	142
07:30 AM	51	1	52	1	68	69	5	4	9	130
07:45 AM	18	2	20	3	57	60	26	6	32	112
Total	117	7	124	7	252	259	62	19	81	464
08:00 AM	20	26	46	19	42	61	42	16	58	165
08:15 AM	31	17	48	15	39	54	52	15	67	169
08:30 AM	8	0	8	0	18	18	0	0	0	26
08:45 AM	10	0	10	1	14	15	0	0	0	25
Total	69	43	112	35	113	148	94	31	125	385
Grand Total	186	50	236	42	365	407	156	50	206	849
Apprch %	78.8	21.2		10.3	89.7		75.7	24.3		
Total %	21.9	5.9	27.8	4.9	43	47.9	18.4	5.9	24.3	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**51**	1	**52**	1	**68**	**69**	5	4	9	130
07:45 AM	18	2	20	3	57	60	26	6	32	112
08:00 AM	20	**26**	46	**19**	42	61	42	**16**	58	165
08:15 AM	31	17	48	15	39	54	**52**	15	**67**	**169**
Total Volume	120	46	166	38	206	244	125	41	166	576
% App. Total	72.3	27.7		15.6	84.4		75.3	24.7		
PHF	.588	.442	.798	.500	.757	.884	.601	.641	.619	.852

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City of Riverside
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Weather: Clear

File Name : 04_RIV_DY_DW4 AM19
Site Code : 00321595
Start Date : 10/19/2021
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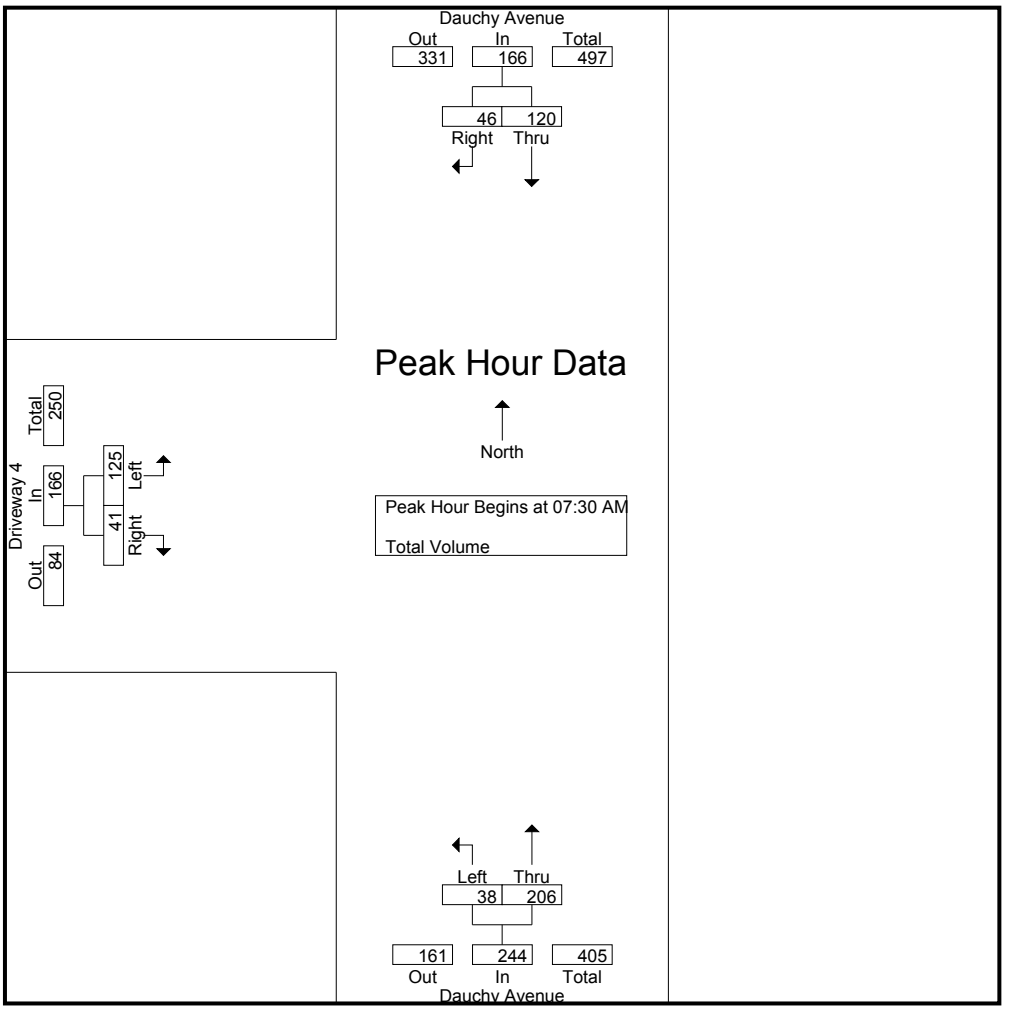

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:15 AM			07:30 AM		
+0 mins.	**51**	1	**52**	1	**80**	**81**	5	4	9
+15 mins.	18	2	20	1	68	69	26	6	32
+30 mins.	20	**26**	46	3	57	60	42	**16**	58
+45 mins.	31	17	48	**19**	42	61	**52**	15	**67**
Total Volume	120	46	166	24	247	271	125	41	166
% App. Total	72.3	27.7		8.9	91.1		75.3	24.7	
PHF	.588	.442	.798	.316	.772	.836	.601	.641	.619

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 4
Weather: Clear

File Name : 04_RIV_DY_DW4 PM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	20	2	22	0	50	50	1	0	1	73
02:15 PM	27	3	30	1	23	24	0	0	0	54
02:30 PM	32	8	40	2	31	33	1	1	2	75
02:45 PM	42	10	52	5	31	36	34	17	51	139
Total	121	23	144	8	135	143	36	18	54	341
03:00 PM	46	2	48	6	27	33	41	17	58	139
03:15 PM	32	1	33	1	26	27	16	3	19	79
03:30 PM	46	0	46	2	20	22	15	5	20	88
03:45 PM	42	1	43	0	26	26	18	10	28	97
Total	166	4	170	9	99	108	90	35	125	403
Grand Total	287	27	314	17	234	251	126	53	179	744
Apprch %	91.4	8.6		6.8	93.2		70.4	29.6		
Total %	38.6	3.6	42.2	2.3	31.5	33.7	16.9	7.1	24.1	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	42	**10**	**52**	5	**31**	**36**	34	**17**	51	**139**
03:00 PM	**46**	2	48	**6**	27	33	**41**	17	**58**	139
03:15 PM	32	1	33	1	26	27	16	3	19	79
03:30 PM	46	0	46	2	20	22	15	5	20	88
Total Volume	166	13	179	14	104	118	106	42	148	445
% App. Total	92.7	7.3		11.9	88.1		71.6	28.4		
PHF	.902	.325	.861	.583	.839	.819	.646	.618	.638	.800

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 4
Weather: Clear

File Name : 04_RIV_DY_DW4 PM19
Site Code : 00321595
Start Date : 10/19/2021
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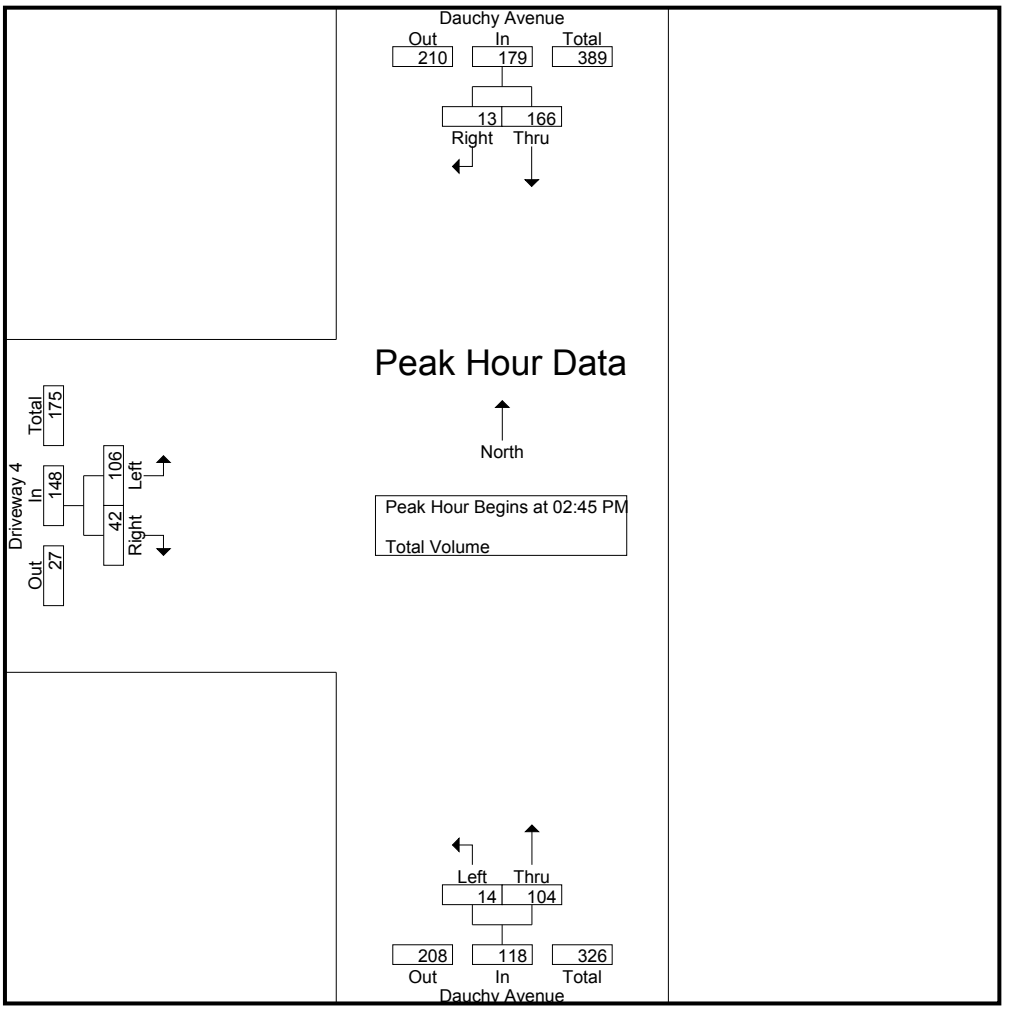

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM			02:00 PM			02:45 PM		
+0 mins.	42	**10**	**52**	0	**50**	**50**	34	**17**	51
+15 mins.	**46**	2	48	1	23	24	**41**	17	**58**
+30 mins.	32	1	33	2	31	33	16	3	19
+45 mins.	46	0	46	**5**	31	36	15	5	20
Total Volume	166	13	179	8	135	143	106	42	148
% App. Total	92.7	7.3		5.6	94.4		71.6	28.4	
PHF	.902	.325	.861	.400	.675	.715	.646	.618	.638

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 5
Weather: Clear

File Name : 05_RIV_DY_DW5 AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	20	0	20	2	53	55	0	0	0	75
07:15 AM	39	0	39	0	66	66	0	0	0	105
07:30 AM	46	0	46	0	75	75	0	0	0	121
07:45 AM	26	0	26	0	64	64	1	0	1	91
Total	131	0	131	2	258	260	1	0	1	392
08:00 AM	41	0	41	0	51	51	0	0	0	92
08:15 AM	46	0	46	0	49	49	0	0	0	95
08:30 AM	7	0	7	0	18	18	0	0	0	25
08:45 AM	10	1	11	0	17	17	0	0	0	28
Total	104	1	105	0	135	135	0	0	0	240
Grand Total	235	1	236	2	393	395	1	0	1	632
Apprch %	99.6	0.4		0.5	99.5		100	0		
Total %	37.2	0.2	37.3	0.3	62.2	62.5	0.2	0	0.2	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	39	0	39	0	66	66	0	0	0	105
07:30 AM	**46**	0	**46**	0	**75**	**75**	0	0	0	**121**
07:45 AM	26	0	26	0	64	64	**1**	0	**1**	91
08:00 AM	41	0	41	0	51	51	0	0	0	92
Total Volume	152	0	152	0	256	256	1	0	1	409
% App. Total	100	0		0	100		100	0		
PHF	.826	.000	.826	.000	.853	.853	.250	.000	.250	.845

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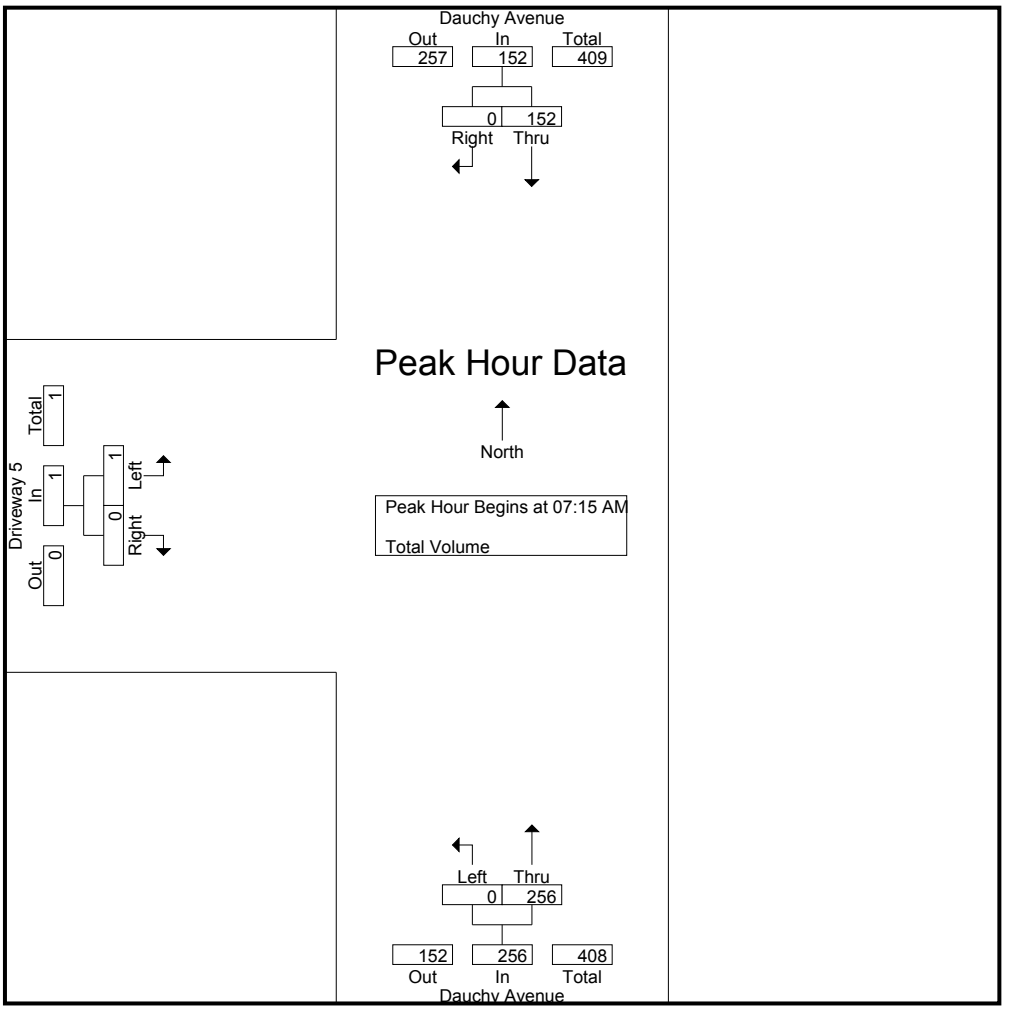
City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 5
Weather: Clear

File Name : 05_RIV_DY_DW5 AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:00 AM		
+0 mins.	**46**	0	**46**	**2**	53	55	0	0	0
+15 mins.	26	0	26	0	66	66	0	0	0
+30 mins.	41	0	41	0	**75**	**75**	0	0	0
+45 mins.	46	0	46	0	64	64	**1**	0	**1**
Total Volume	159	0	159	2	258	260	1	0	1
% App. Total	100	0		0.8	99.2		100	0	
PHF	.864	.000	.864	.250	.860	.867	.250	.000	.250

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 5
Weather: Clear

File Name : 05_RIV_DY_DW5 PM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	22	0	22	0	28	28	0	1	1	51
02:15 PM	25	0	25	0	45	45	0	0	0	70
02:30 PM	25	0	25	1	30	31	0	0	0	56
02:45 PM	59	0	59	0	57	57	0	0	0	116
Total	131	0	131	1	160	161	0	1	1	293
03:00 PM	64	0	64	0	37	37	0	0	0	101
03:15 PM	62	2	64	0	21	21	0	0	0	85
03:30 PM	50	2	52	0	28	28	0	0	0	80
03:45 PM	76	1	77	0	27	27	1	0	1	105
Total	252	5	257	0	113	113	1	0	1	371
Grand Total	383	5	388	1	273	274	1	1	2	664
Apprch %	98.7	1.3		0.4	99.6		50	50		
Total %	57.7	0.8	58.4	0.2	41.1	41.3	0.2	0.2	0.3	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	59	0	59	0	**57**	**57**	0	0	0	**116**
03:00 PM	**64**	0	**64**	0	37	37	0	0	0	101
03:15 PM	62	**2**	64	0	21	21	0	0	0	85
03:30 PM	50	2	52	0	28	28	0	0	0	80
Total Volume	235	4	239	0	143	143	0	0	0	382
% App. Total	98.3	1.7		0	100		0	0		
PHF	.918	.500	.934	.000	.627	.627	.000	.000	.000	.823

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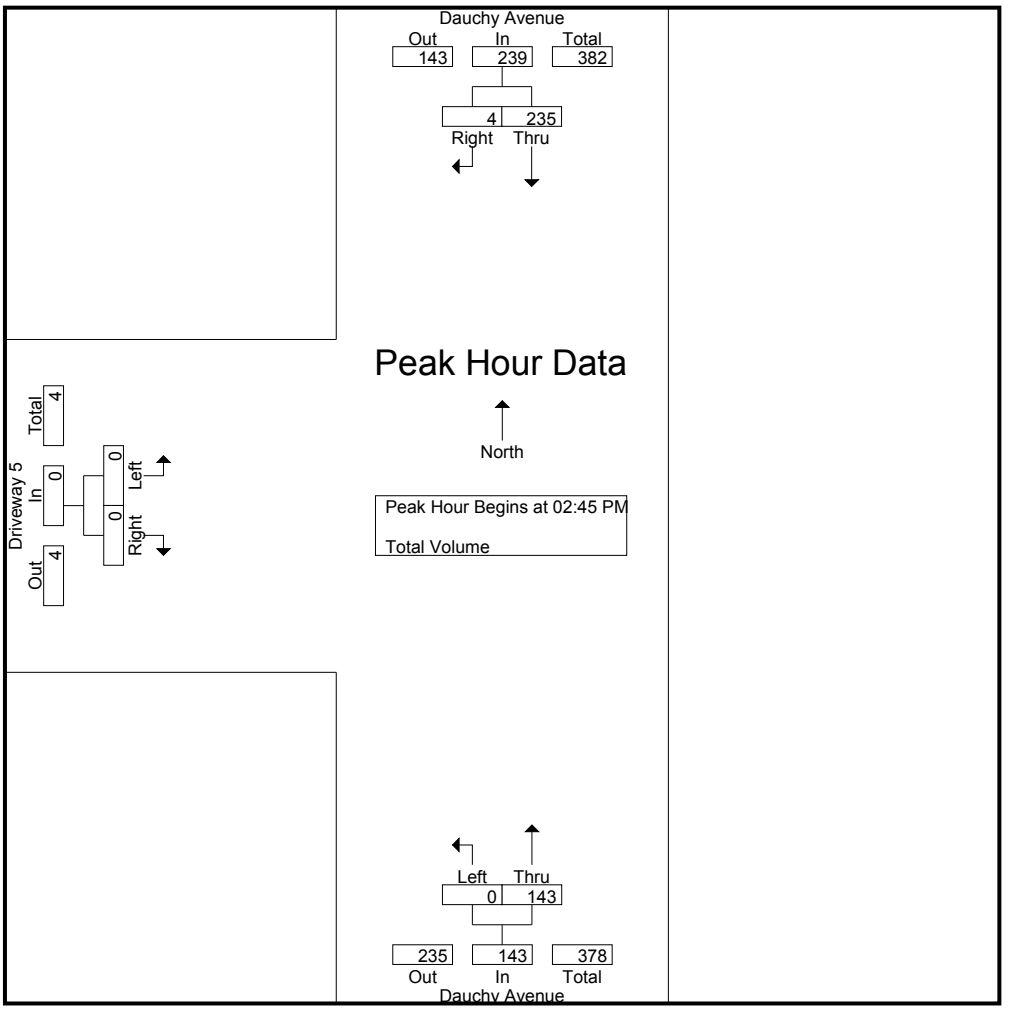
City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 5
Weather: Clear

File Name : 05_RIV_DY_DW5 PM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 2



Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM			02:15 PM			02:00 PM		
+0 mins.	64	0	64	0	45	45	0	**1**	**1**
+15 mins.	62	**2**	64	**1**	30	31	0	0	0
+30 mins.	50	2	52	0	**57**	**57**	0	0	0
+45 mins.	**76**	1	**77**	0	37	37	0	0	0
Total Volume	252	5	257	1	169	170	0	1	1
% App. Total	98.1	1.9		0.6	99.4		0	100	
PHF	.829	.625	.834	.250	.741	.746	.000	.250	.250

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City of Riverside
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E/W: Driveway 5
Weather: Clear

File Name : 05_RIV_DY_DW5 AM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	11	0	11	0	49	49	0	0	0	60
07:15 AM	43	0	43	0	78	78	0	0	0	121
07:30 AM	55	0	55	0	67	67	0	0	0	122
07:45 AM	23	1	24	0	60	60	0	0	0	84
Total	132	1	133	0	254	254	0	0	0	387
08:00 AM	35	0	35	0	60	60	1	0	1	96
08:15 AM	42	1	43	0	51	51	0	0	0	94
08:30 AM	8	0	8	0	18	18	0	0	0	26
08:45 AM	10	0	10	0	16	16	0	0	0	26
Total	95	1	96	0	145	145	1	0	1	242
Grand Total	227	2	229	0	399	399	1	0	1	629
Apprch %	99.1	0.9		0	100		100	0		
Total %	36.1	0.3	36.4	0	63.4	63.4	0.2	0	0.2	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	43	0	43	0	**78**	**78**	0	0	0	121
07:30 AM	**55**	0	**55**	0	67	67	0	0	0	**122**
07:45 AM	23	**1**	24	0	60	60	0	0	0	84
08:00 AM	35	0	35	0	60	60	**1**	0	**1**	96
Total Volume	156	1	157	0	265	265	1	0	1	423
% App. Total	99.4	0.6		0	100		100	0		
PHF	.709	.250	.714	.000	.849	.849	.250	.000	.250	.867

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City of Riverside
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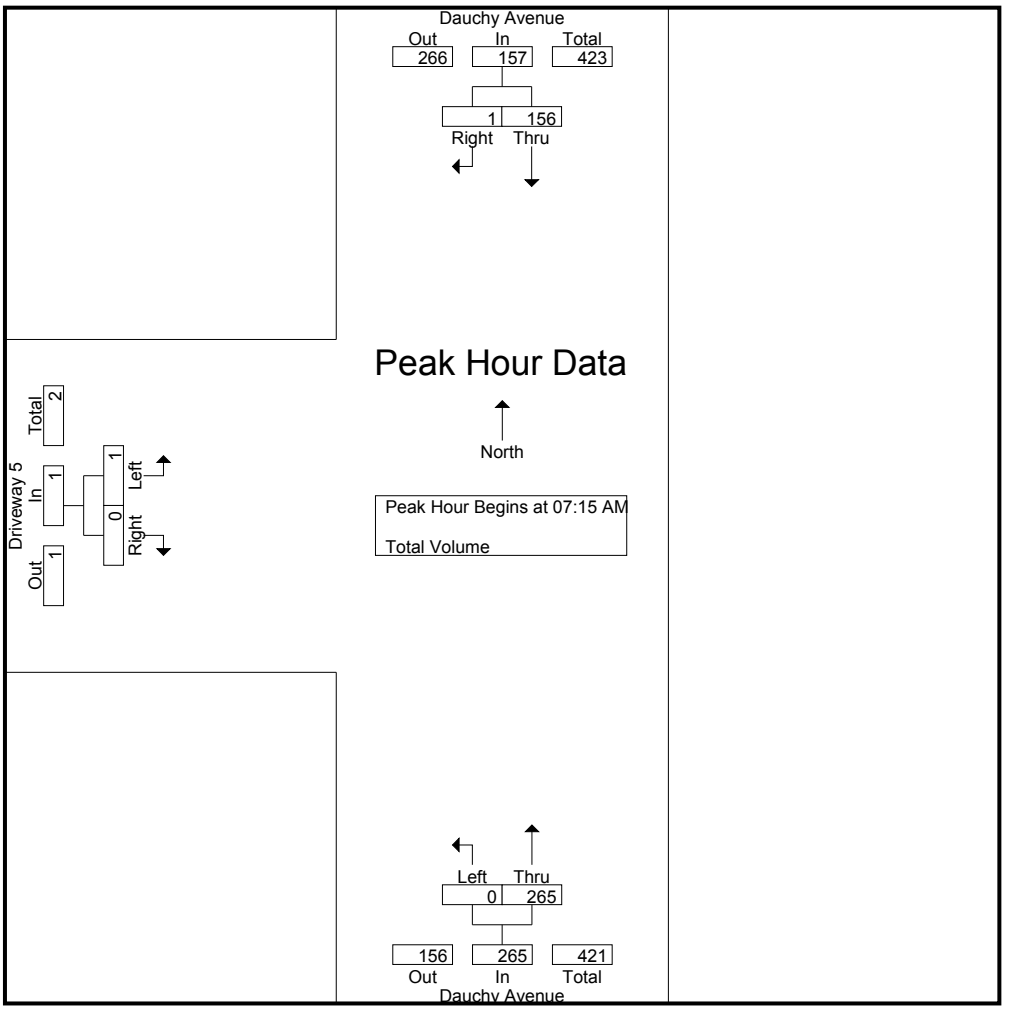

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	43	0	43	0	**78**	**78**	0	0	0
+15 mins.	**55**	0	**55**	0	67	67	0	0	0
+30 mins.	23	**1**	24	0	60	60	0	0	0
+45 mins.	35	0	35	0	60	60	**1**	0	**1**
Total Volume	156	1	157	0	265	265	1	0	1
% App. Total	99.4	0.6		0	100		100	0	
PHF	.709	.250	.714	.000	.849	.849	.250	.000	.250

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Weather: Clear

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Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	17	1	18	0	49	49	0	0	0	67
02:15 PM	27	0	27	0	24	24	0	0	0	51
02:30 PM	29	0	29	1	29	30	2	0	2	61
02:45 PM	56	0	56	1	32	33	1	0	1	90
Total	129	1	130	2	134	136	3	0	3	269
03:00 PM	66	0	66	0	33	33	0	0	0	99
03:15 PM	36	0	36	0	26	26	2	0	2	64
03:30 PM	47	0	47	0	22	22	0	0	0	69
03:45 PM	51	0	51	0	27	27	0	0	0	78
Total	200	0	200	0	108	108	2	0	2	310
Grand Total	329	1	330	2	242	244	5	0	5	579
Apprch %	99.7	0.3		0.8	99.2		100	0		
Total %	56.8	0.2	57	0.3	41.8	42.1	0.9	0	0.9	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	56	0	56	**1**	32	**33**	1	0	1	90
03:00 PM	**66**	0	**66**	0	**33**	33	0	0	0	**99**
03:15 PM	36	0	36	0	26	26	**2**	0	**2**	64
03:30 PM	47	0	47	0	22	22	0	0	0	69
Total Volume	205	0	205	1	113	114	3	0	3	322
% App. Total	100	0		0.9	99.1		100	0		
PHF	.777	.000	.777	.250	.856	.864	.375	.000	.375	.813

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City of Riverside
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Weather: Clear

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Site Code : 00321595
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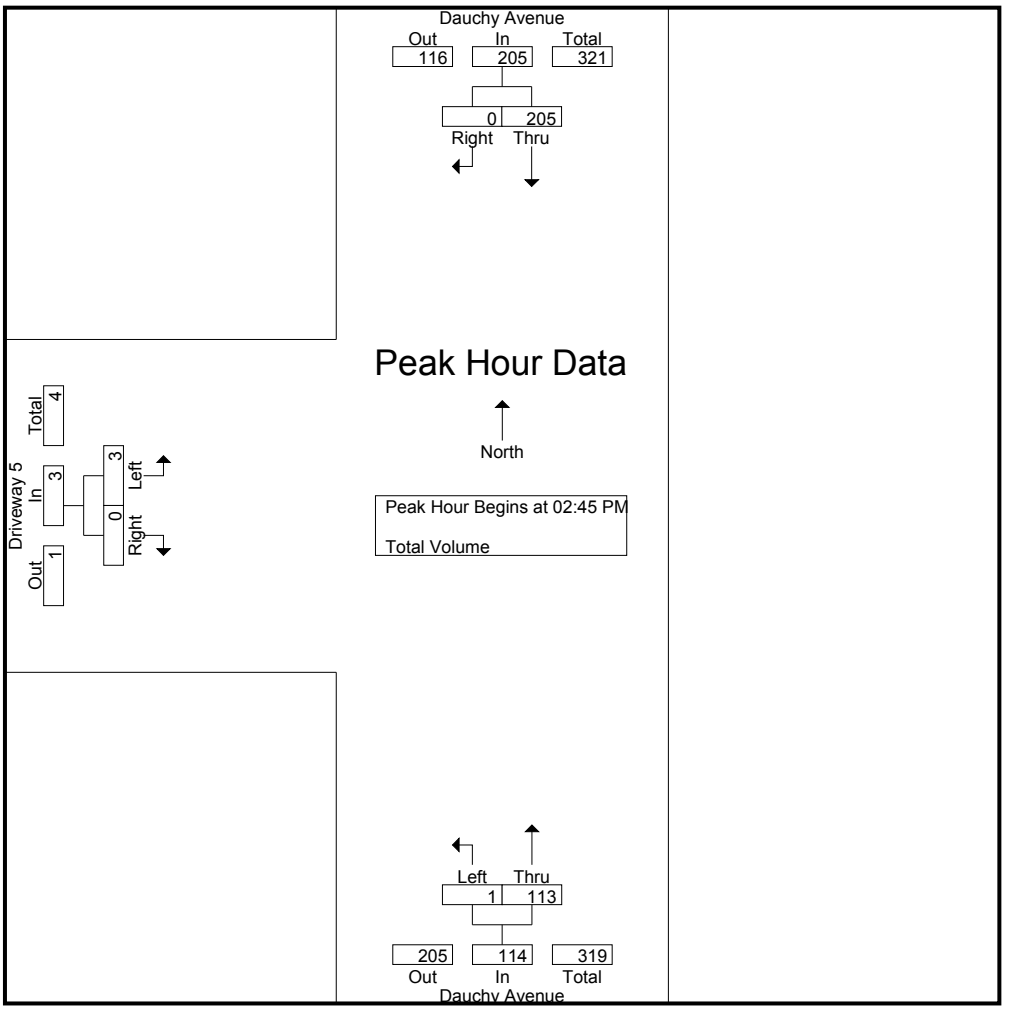

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM			02:00 PM			02:30 PM		
+0 mins.	56	0	56	0	**49**	**49**	**2**	0	**2**
+15 mins.	**66**	0	**66**	0	24	24	1	0	1
+30 mins.	36	0	36	**1**	29	30	0	0	0
+45 mins.	47	0	47	1	32	33	2	0	2
Total Volume	205	0	205	2	134	136	5	0	5
% App. Total	100	0		1.5	98.5		100	0	
PHF	.777	.000	.777	.500	.684	.694	.625	.000	.625

APPENDIX B

TRAFFIC COUNT SHEETS AND SIGNAL TIMING SHEETS

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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_Wash_VB AM
Site Code : 00321719
Start Date : 11/18/2021
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	59	24	16	99	15	262	104	381	31	91	43	165	17	279	13	309	954
07:15 AM	68	31	14	113	6	290	123	419	31	124	46	201	31	251	17	299	1032
07:30 AM	54	32	12	98	15	270	137	422	37	142	19	198	33	211	20	264	982
07:45 AM	63	42	25	130	35	268	102	405	36	89	29	154	25	198	35	258	947
Total	244	129	67	440	71	1090	466	1627	135	446	137	718	106	939	85	1130	3915
08:00 AM	73	38	22	133	24	264	93	381	38	78	29	145	34	219	45	298	957
08:15 AM	71	41	24	136	19	264	135	418	28	63	28	119	29	158	18	205	878
08:30 AM	30	20	16	66	14	289	81	384	30	63	27	120	24	185	13	222	792
08:45 AM	46	32	27	105	17	217	79	313	25	67	18	110	26	154	6	186	714
Total	220	131	89	440	74	1034	388	1496	121	271	102	494	113	716	82	911	3341
Grand Total	464	260	156	880	145	2124	854	3123	256	717	239	1212	219	1655	167	2041	7256
Apprch %	52.7	29.5	17.7		4.6	68	27.3		21.1	59.2	19.7		10.7	81.1	8.2		
Total %	6.4	3.6	2.1	12.1	2	29.3	11.8	43	3.5	9.9	3.3	16.7	3	22.8	2.3	28.1	
Passenger Vehicles	447	251	150	848	143	2076	835	3054	250	709	232	1191	215	1608	163	1986	7079
% Passenger Vehicles	96.3	96.5	96.2	96.4	98.6	97.7	97.8	97.8	97.7	98.9	97.1	98.3	98.2	97.2	97.6	97.3	97.6
Large 2 Axle Vehicles	14	9	6	29	2	23	17	42	4	7	7	18	3	26	2	31	120
% Large 2 Axle Vehicles	3	3.5	3.8	3.3	1.4	1.1	2	1.3	1.6	1	2.9	1.5	1.4	1.6	1.2	1.5	1.7
3 Axle Vehicles	1	0	0	1	0	10	1	11	1	1	0	2	1	6	0	7	21
% 3 Axle Vehicles	0.2	0	0	0.1	0	0.5	0.1	0.4	0.4	0.1	0	0.2	0.5	0.4	0	0.3	0.3
4+ Axle Trucks	2	0	0	2	0	15	1	16	1	0	0	1	0	15	2	17	36
% 4+ Axle Trucks	0.4	0	0	0.2	0	0.7	0.1	0.5	0.4	0	0	0.1	0	0.9	1.2	0.8	0.5

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	68	31	14	113	6	**290**	123	419	31	124	**46**	**201**	31	**251**	17	**299**	**1032**
07:30 AM	54	32	12	98	15	270	**137**	**422**	37	**142**	19	198	33	211	20	264	982
07:45 AM	63	**42**	**25**	130	**35**	268	102	405	36	89	29	154	25	198	35	258	947
08:00 AM	**73**	38	22	**133**	24	264	93	381	**38**	78	29	145	**34**	219	**45**	298	957
Total Volume	258	143	73	474	80	1092	455	1627	142	433	123	698	123	879	117	1119	3918
% App. Total	54.4	30.2	15.4		4.9	67.1	28		20.3	62	17.6		11	78.6	10.5		
PHF	.884	.851	.730	.891	.571	.941	.830	.964	.934	.762	.668	.868	.904	.875	.650	.936	.949

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City of Riverside
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File Name : 01_RIV_Wash_VB AM
Site Code : 00321719
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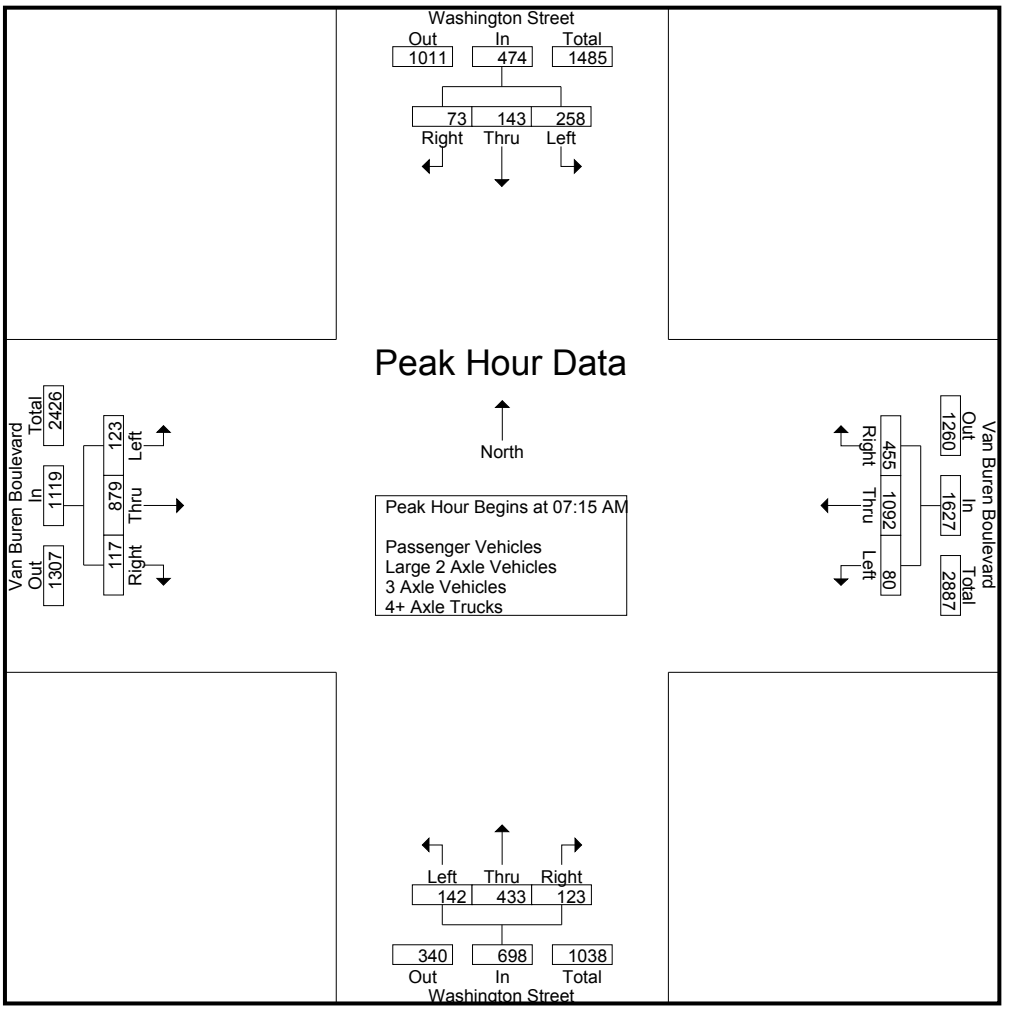

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	54	32	12	98	15	262	104	381	31	91	43	165	17	**279**	13	**309**
+15 mins.	63	**42**	**25**	130	6	**290**	123	419	31	124	**46**	**201**	31	251	17	299
+30 mins.	**73**	38	22	133	15	270	**137**	**422**	**37**	**142**	19	198	**33**	211	20	264
+45 mins.	71	41	24	**136**	**35**	268	102	405	36	89	29	154	25	198	**35**	258
Total Volume	261	153	83	497	71	1090	466	1627	135	446	137	718	106	939	85	1130
% App. Total	52.5	30.8	16.7		4.4	67	28.6		18.8	62.1	19.1		9.4	83.1	7.5	
PHF	.894	.911	.830	.914	.507	.940	.850	.964	.912	.785	.745	.893	.803	.841	.607	.914

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Groups Printed- Passenger Vehicles

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	57	23	15	95	15	257	101	373	29	90	42	161	17	273	13	303	932
07:15 AM	65	30	12	107	6	283	119	408	30	122	45	197	31	245	17	293	1005
07:30 AM	50	31	11	92	15	262	134	411	37	142	18	197	33	207	19	259	959
07:45 AM	61	39	24	124	34	266	100	400	35	88	29	152	24	194	34	252	928
Total	233	123	62	418	70	1068	454	1592	131	442	134	707	105	919	83	1107	3824
08:00 AM	70	36	21	127	24	256	92	372	36	75	27	138	34	213	44	291	928
08:15 AM	69	41	24	134	19	260	132	411	28	62	28	118	26	150	18	194	857
08:30 AM	29	19	16	64	14	283	78	375	30	63	25	118	24	176	12	212	769
08:45 AM	46	32	27	105	16	209	79	304	25	67	18	110	26	150	6	182	701
Total	214	128	88	430	73	1008	381	1462	119	267	98	484	110	689	80	879	3255
Grand Total	447	251	150	848	143	2076	835	3054	250	709	232	1191	215	1608	163	1986	7079
Apprch %	52.7	29.6	17.7		4.7	68	27.3		21	59.5	19.5		10.8	81	8.2		
Total %	6.3	3.5	2.1	12	2	29.3	11.8	43.1	3.5	10	3.3	16.8	3	22.7	2.3	28.1	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	65	30	12	107	6	**283**	119	408	30	122	**45**	**197**	31	**245**	17	**293**	**1005**
07:30 AM	50	31	11	92	15	262	**134**	**411**	**37**	**142**	18	197	33	207	19	259	959
07:45 AM	61	**39**	**24**	124	**34**	266	100	400	35	88	29	152	24	194	34	252	928
08:00 AM	**70**	36	21	**127**	24	256	92	372	36	75	27	138	**34**	213	**44**	291	928
Total Volume	246	136	68	450	79	1067	445	1591	138	427	119	684	122	859	114	1095	3820
% App. Total	54.7	30.2	15.1		5	67.1	28		20.2	62.4	17.4		11.1	78.4	10.4		
PHF	.879	.872	.708	.886	.581	.943	.830	.968	.932	.752	.661	.868	.897	.877	.648	.934	.950

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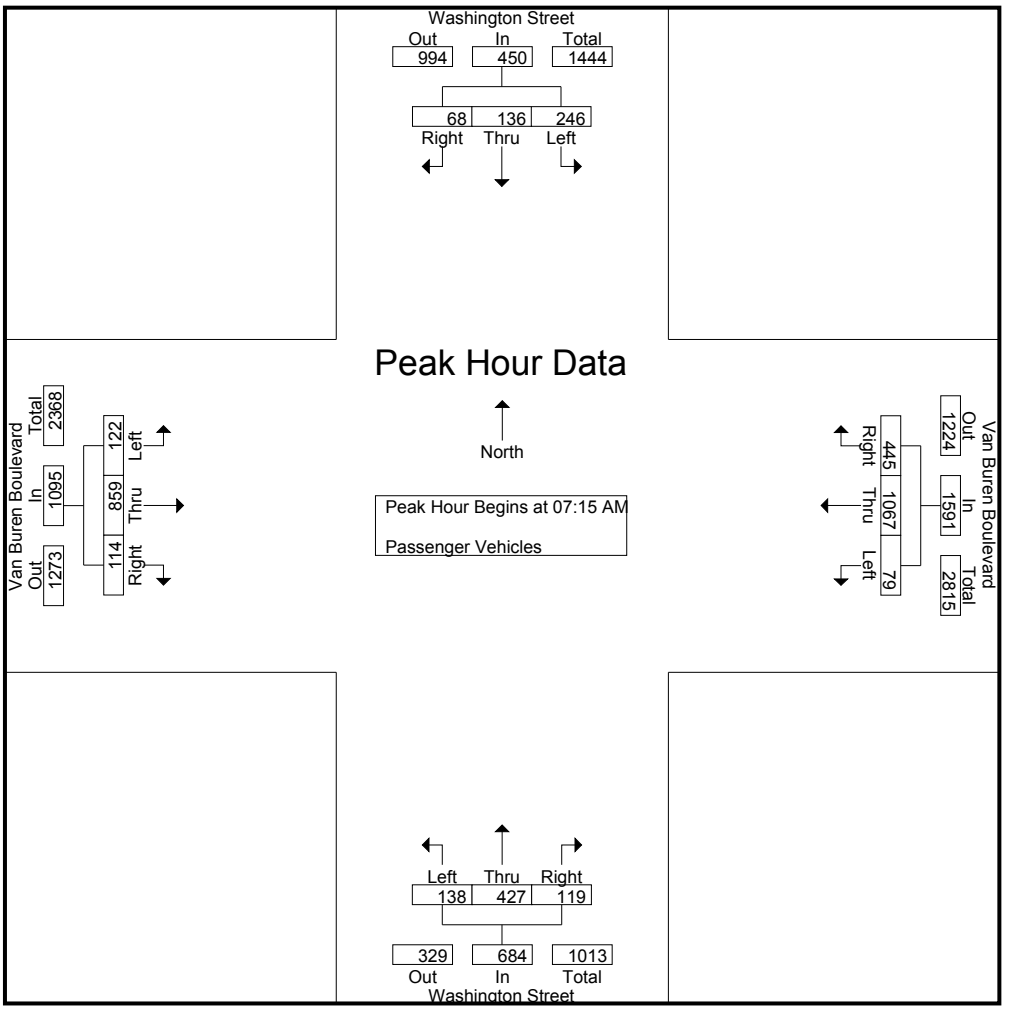

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	65	30	12	107	6	**283**	119	408	30	122	**45**	**197**	31	**245**	17	**293**
+15 mins.	50	31	11	92	15	262	**134**	**411**	**37**	**142**	18	197	33	207	19	259
+30 mins.	61	**39**	**24**	124	**34**	266	100	400	35	88	29	152	24	194	34	252
+45 mins.	**70**	36	21	**127**	24	256	92	372	36	75	27	138	**34**	213	**44**	291
Total Volume	246	136	68	450	79	1067	445	1591	138	427	119	684	122	859	114	1095
% App. Total	54.7	30.2	15.1		5	67.1	28		20.2	62.4	17.4		11.1	78.4	10.4	
PHF	.879	.872	.708	.886	.581	.943	.830	.968	.932	.752	.661	.868	.897	.877	.648	.934

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Weather: Clear

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Groups Printed- Large 2 Axle Vehicles

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	1	3	0	2	3	5	1	1	1	3	0	5	0	5	16
07:15 AM	3	1	2	6	0	4	4	8	1	2	1	4	0	4	0	4	22
07:30 AM	3	1	1	5	0	3	2	5	0	0	1	1	0	1	0	1	12
07:45 AM	2	3	1	6	1	2	2	5	1	1	0	2	0	2	1	3	16
Total	9	6	5	20	1	11	11	23	3	4	3	10	0	12	1	13	66
08:00 AM	3	2	1	6	0	4	1	5	1	2	2	5	0	4	1	5	21
08:15 AM	1	0	0	1	0	1	2	3	0	1	0	1	3	5	0	8	13
08:30 AM	1	1	0	2	0	4	3	7	0	0	2	2	0	3	0	3	14
08:45 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	2	0	2	6
Total	5	3	1	9	1	12	6	19	1	3	4	8	3	14	1	18	54
Grand Total	14	9	6	29	2	23	17	42	4	7	7	18	3	26	2	31	120
Apprch %	48.3	31	20.7		4.8	54.8	40.5		22.2	38.9	38.9		9.7	83.9	6.5		
Total %	11.7	7.5	5	24.2	1.7	19.2	14.2	35	3.3	5.8	5.8	15	2.5	21.7	1.7	25.8	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**3**	1	**2**	**6**	0	**4**	**4**	**8**	**1**	**2**	1	4	0	**4**	0	4	**22**
07:30 AM	3	1	1	5	0	3	2	5	0	0	1	1	0	1	0	1	12
07:45 AM	2	**3**	1	6	**1**	2	2	5	1	1	0	2	0	2	**1**	3	16
08:00 AM	3	2	1	6	0	4	1	5	1	2	**2**	**5**	0	4	1	**5**	21
Total Volume	11	7	5	23	1	13	9	23	3	5	4	12	0	11	2	13	71
% App. Total	47.8	30.4	21.7		4.3	56.5	39.1		25	41.7	33.3		0	84.6	15.4		
PHF	.917	.583	.625	.958	.250	.813	.563	.719	.750	.625	.500	.600	.000	.688	.500	.650	.807

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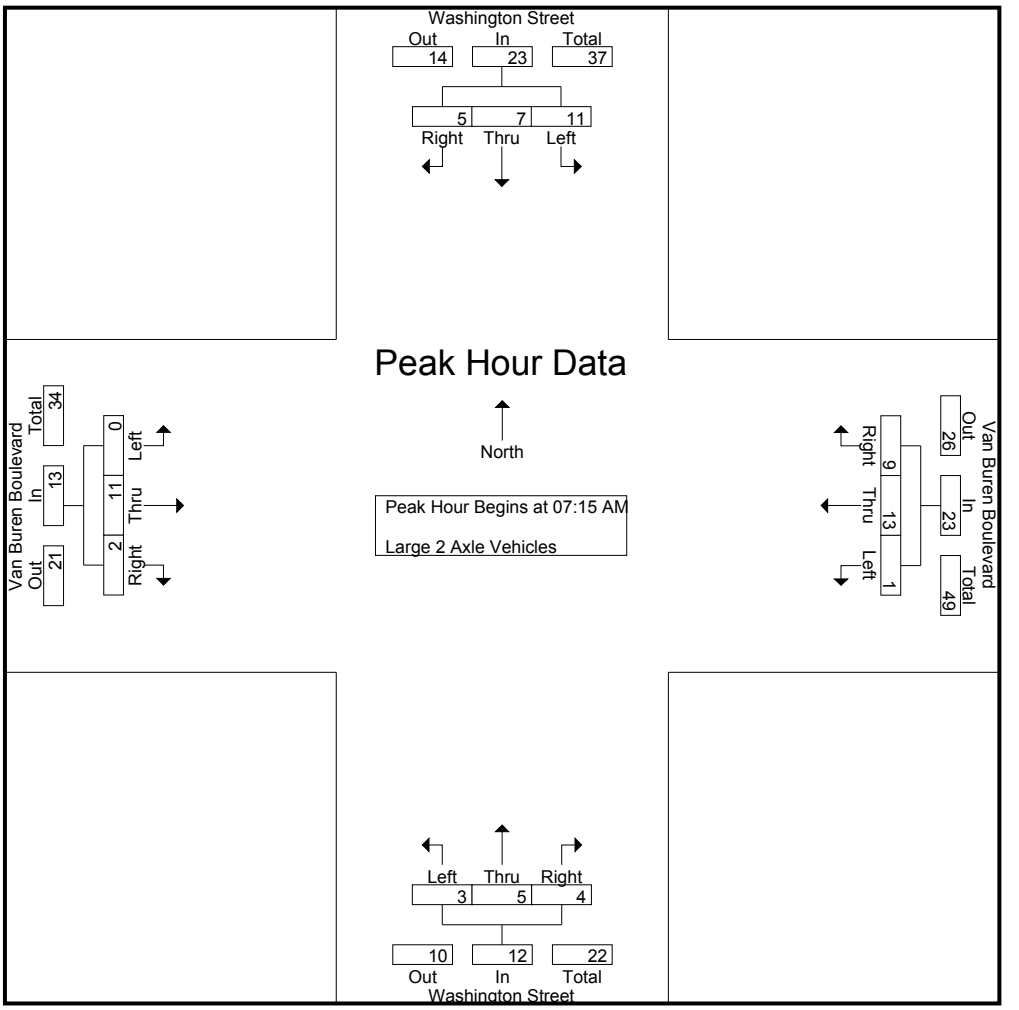

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**3**	1	**2**	**6**	0	**4**	**4**	**8**	**1**	**2**	1	4	0	**4**	0	4
+15 mins.	3	1	1	5	0	3	2	5	0	0	1	1	0	1	0	1
+30 mins.	2	**3**	1	6	**1**	2	2	5	1	1	0	2	0	2	**1**	3
+45 mins.	3	2	1	6	0	4	1	5	1	2	**2**	**5**	0	4	1	**5**
Total Volume	11	7	5	23	1	13	9	23	3	5	4	12	0	11	2	13
% App. Total	47.8	30.4	21.7		4.3	56.5	39.1		25	41.7	33.3		0	84.6	15.4	
PHF	.917	.583	.625	.958	.250	.813	.563	.719	.750	.625	.500	.600	.000	.688	.500	.650

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Groups Printed- 3 Axle Vehicles

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
Total	0	0	0	0	0	4	1	5	0	0	0	0	1	3	0	4	9
08:00 AM	0	0	0	0	0	1	0	1	1	1	0	2	0	0	0	0	3
08:15 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	1	0	0	1	0	6	0	6	1	1	0	2	0	3	0	3	12
Grand Total	1	0	0	1	0	10	1	11	1	1	0	2	1	6	0	7	21
Apprch %	100	0	0		0	90.9	9.1		50	50	0		14.3	85.7	0		
Total %	4.8	0	0	4.8	0	47.6	4.8	52.4	4.8	4.8	0	9.5	4.8	28.6	0	33.3	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	1	2
07:30 AM	0	0	0	0	0	**2**	**1**	**3**	0	0	0	0	0	1	0	1	**4**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1	0	**2**	2
08:00 AM	0	0	0	0	0	1	0	1	**1**	**1**	0	**2**	0	0	0	0	3
Total Volume	0	0	0	0	0	4	1	5	1	1	0	2	1	3	0	4	11
% App. Total	0	0	0		0	80	20		50	50	0		25	75	0		
PHF	.000	.000	.000	.000	.000	.500	.250	.417	.250	.250	.000	.250	.250	.750	.000	.500	.688

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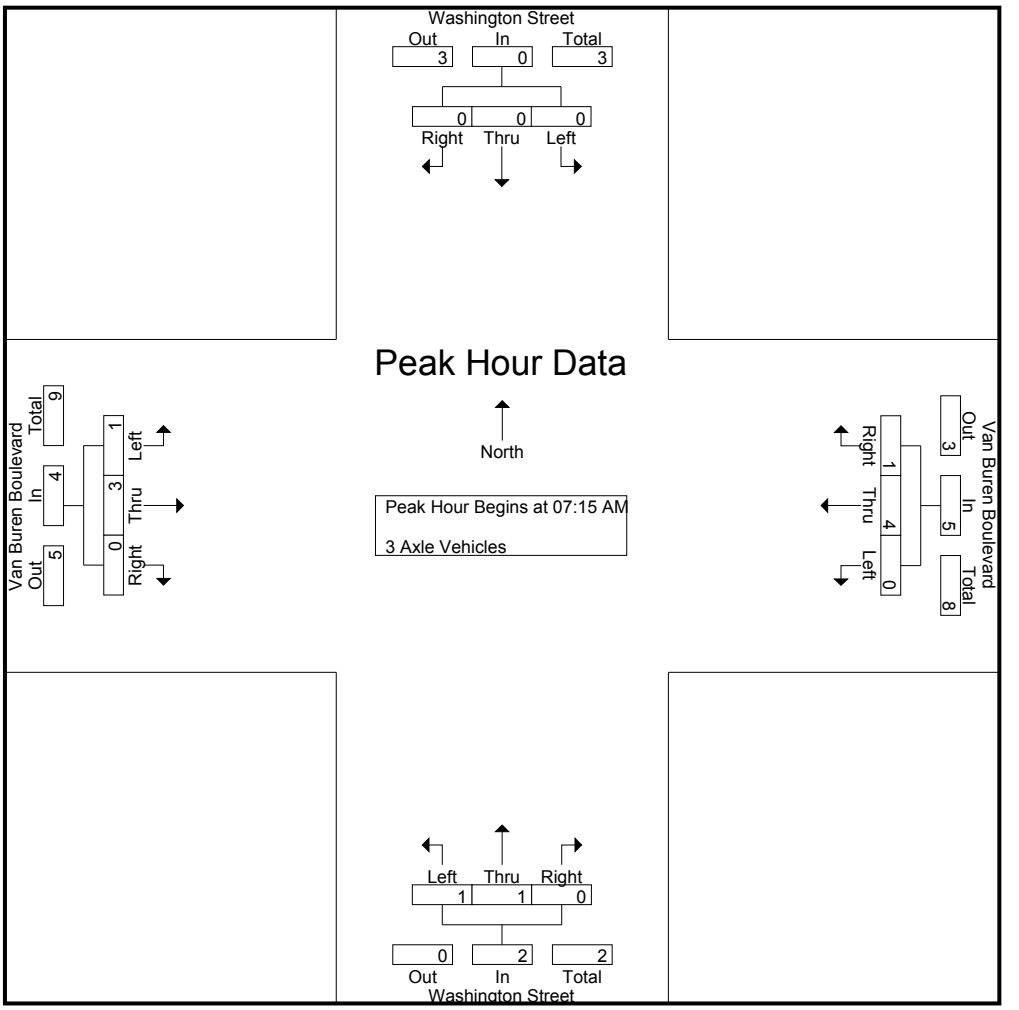

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	1
+15 mins.	0	0	0	0	0	**2**	**1**	**3**	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	1	0	**2**
+45 mins.	0	0	0	0	0	1	0	1	**1**	**1**	0	**2**	0	0	0	0
Total Volume	0	0	0	0	0	4	1	5	1	1	0	2	1	3	0	4
% App. Total	0	0	0		0	80	20		50	50	0		25	75	0	
PHF	.000	.000	.000	.000	.000	.500	.250	.417	.250	.250	.000	.250	.250	.750	.000	.500

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Groups Printed- 4+ Axle Trucks

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	0	1	0	2	0	2	1	0	0	1	0	1	0	1	5
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:30 AM	1	0	0	1	0	3	0	3	0	0	0	0	0	2	1	3	7
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	2	0	0	2	0	7	0	7	1	0	0	1	0	5	1	6	16
08:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
08:15 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2	4
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	5	1	6	7
08:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total	0	0	0	0	0	8	1	9	0	0	0	0	0	10	1	11	20
Grand Total	2	0	0	2	0	15	1	16	1	0	0	1	0	15	2	17	36
Apprch %	100	0	0		0	93.8	6.2		100	0	0		0	88.2	11.8		
Total %	5.6	0	0	5.6	0	41.7	2.8	44.4	2.8	0	0	2.8	0	41.7	5.6	47.2	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:30 AM	**1**	0	0	**1**	0	**3**	0	**3**	0	0	0	0	0	**2**	**1**	**3**	**7**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total Volume	1	0	0	1	0	8	0	8	0	0	0	0	0	6	1	7	16
% App. Total	100	0	0		0	100	0		0	0	0		0	85.7	14.3		
PHF	.250	.000	.000	.250	.000	.667	.000	.667	.000	.000	.000	.000	.000	.750	.250	.583	.571

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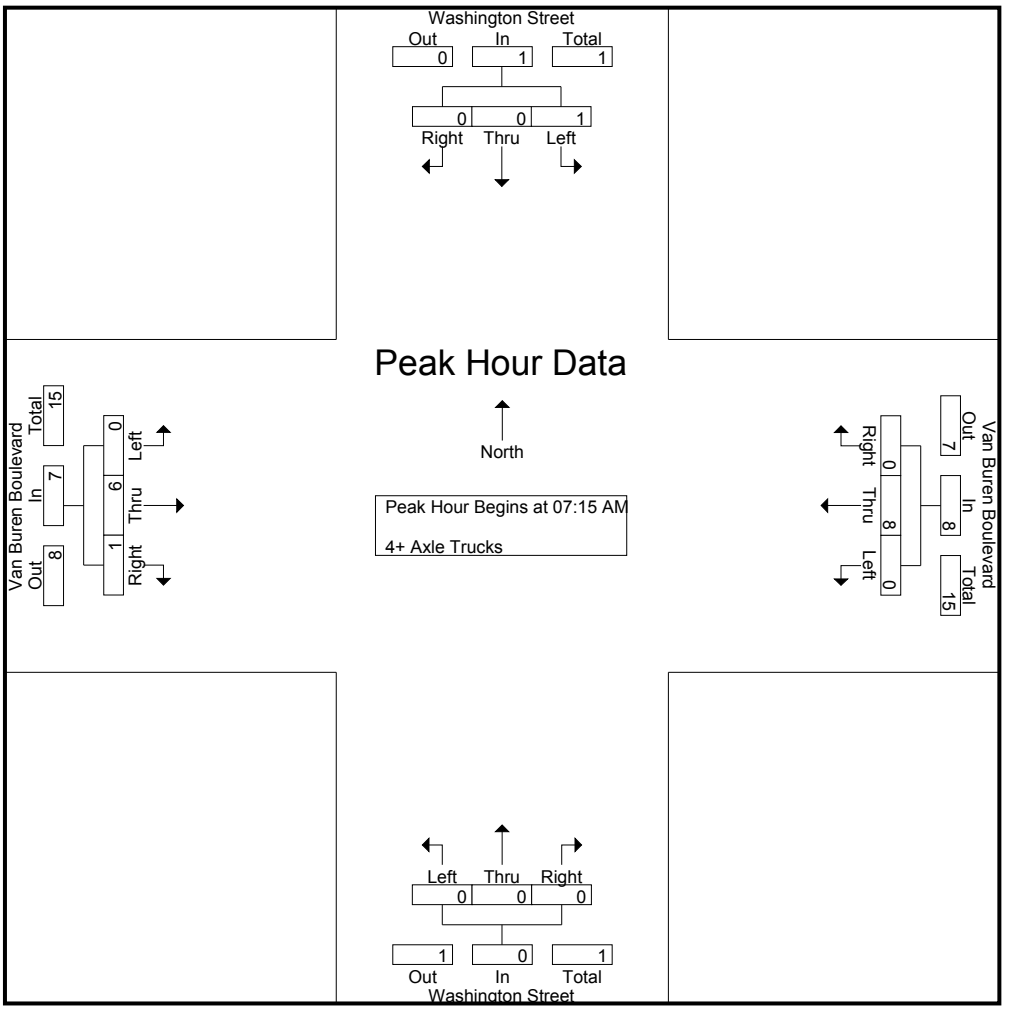

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
+15 mins.	**1**	0	0	**1**	0	**3**	0	**3**	0	0	0	0	0	**2**	**1**	**3**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2
Total Volume	1	0	0	1	0	8	0	8	0	0	0	0	0	6	1	7
% App. Total	100	0	0		0	100	0		0	0	0		0	85.7	14.3	
PHF	.250	.000	.000	.250	.000	.667	.000	.667	.000	.000	.000	.000	.000	.750	.250	.583

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	61	47	15	123	27	212	69	308	33	63	20	116	28	192	21	241	788
02:15 PM	69	49	26	144	40	240	79	359	31	54	26	111	21	209	26	256	870
02:30 PM	74	60	18	152	37	201	63	301	23	43	23	89	25	242	11	278	820
02:45 PM	93	58	20	171	35	236	66	337	40	77	36	153	27	235	37	299	960
Total	297	214	79	590	139	889	277	1305	127	237	105	469	101	878	95	1074	3438
03:00 PM	85	46	18	149	28	309	66	403	26	66	29	121	36	234	18	288	961
03:15 PM	109	70	23	202	19	257	79	355	25	74	21	120	25	236	19	280	957
03:30 PM	89	80	24	193	26	265	91	382	22	73	22	117	30	279	10	319	1011
03:45 PM	126	57	30	213	35	264	88	387	19	56	20	95	28	314	23	365	1060
Total	409	253	95	757	108	1095	324	1527	92	269	92	453	119	1063	70	1252	3989
Grand Total	706	467	174	1347	247	1984	601	2832	219	506	197	922	220	1941	165	2326	7427
Apprch %	52.4	34.7	12.9		8.7	70.1	21.2		23.8	54.9	21.4		9.5	83.4	7.1		
Total %	9.5	6.3	2.3	18.1	3.3	26.7	8.1	38.1	2.9	6.8	2.7	12.4	3	26.1	2.2	31.3	
Passenger Vehicles	696	452	172	1320	244	1927	572	2743	215	487	189	891	216	1879	158	2253	7207
% Passenger Vehicles	98.6	96.8	98.9	98	98.8	97.1	95.2	96.9	98.2	96.2	95.9	96.6	98.2	96.8	95.8	96.9	97
Large 2 Axle Vehicles	8	14	2	24	2	32	24	58	3	17	5	25	3	31	6	40	147
% Large 2 Axle Vehicles	1.1	3	1.1	1.8	0.8	1.6	4	2	1.4	3.4	2.5	2.7	1.4	1.6	3.6	1.7	2
3 Axle Vehicles	1	1	0	2	1	10	2	13	0	2	2	4	0	12	1	13	32
% 3 Axle Vehicles	0.1	0.2	0	0.1	0.4	0.5	0.3	0.5	0	0.4	1	0.4	0	0.6	0.6	0.6	0.4
4+ Axle Trucks	1	0	0	1	0	15	3	18	1	0	1	2	1	19	0	20	41
% 4+ Axle Trucks	0.1	0	0	0.1	0	0.8	0.5	0.6	0.5	0	0.5	0.2	0.5	1	0	0.9	0.6

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	85	46	18	149	28	**309**	66	**403**	**26**	66	**29**	**121**	**36**	234	18	288	961
03:15 PM	109	70	23	202	19	257	79	355	25	**74**	21	120	25	236	19	280	957
03:30 PM	89	**80**	24	193	26	265	**91**	382	22	73	22	117	30	279	10	319	1011
03:45 PM	**126**	57	**30**	**213**	**35**	264	88	387	19	56	20	95	28	**314**	**23**	**365**	**1060**
Total Volume	409	253	95	757	108	1095	324	1527	92	269	92	453	119	1063	70	1252	3989
% App. Total	54	33.4	12.5		7.1	71.7	21.2		20.3	59.4	20.3		9.5	84.9	5.6		
PHF	.812	.791	.792	.888	.771	.886	.890	.947	.885	.909	.793	.936	.826	.846	.761	.858	.941

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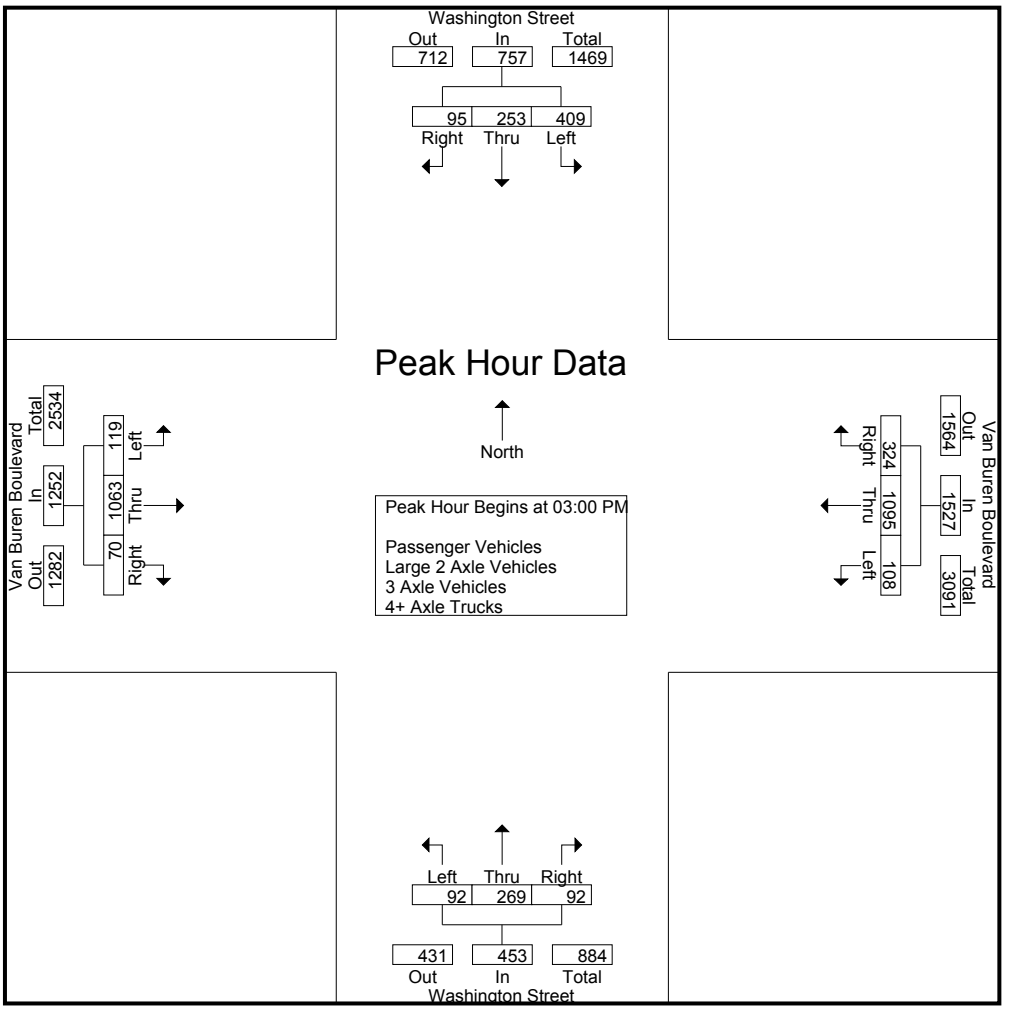

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				02:45 PM				03:00 PM			
+0 mins.	85	46	18	149	28	**309**	66	**403**	**40**	**77**	**36**	**153**	**36**	234	18	288
+15 mins.	109	70	23	202	19	257	79	355	26	66	29	121	25	236	19	280
+30 mins.	89	**80**	24	193	26	265	**91**	382	25	74	21	120	30	279	10	319
+45 mins.	**126**	57	**30**	**213**	**35**	264	88	387	22	73	22	117	28	**314**	**23**	**365**
Total Volume	409	253	95	757	108	1095	324	1527	113	290	108	511	119	1063	70	1252
% App. Total	54	33.4	12.5		7.1	71.7	21.2		22.1	56.8	21.1		9.5	84.9	5.6	
PHF	.812	.791	.792	.888	.771	.886	.890	.947	.706	.942	.750	.835	.826	.846	.761	.858

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Groups Printed- Passenger Vehicles

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	60	43	15	118	27	207	65	299	33	62	20	115	27	186	19	232	764
02:15 PM	68	49	25	142	40	235	74	349	30	51	25	106	19	197	25	241	838
02:30 PM	71	56	17	144	34	191	60	285	22	41	22	85	25	237	11	273	787
02:45 PM	93	56	20	169	35	233	65	333	39	72	36	147	27	227	37	291	940
Total	292	204	77	573	136	866	264	1266	124	226	103	453	98	847	92	1037	3329
03:00 PM	85	44	18	147	28	303	63	394	26	65	28	119	36	228	17	281	941
03:15 PM	108	68	23	199	19	243	73	335	24	73	19	116	25	226	16	267	917
03:30 PM	88	80	24	192	26	256	87	369	22	68	21	111	30	271	10	311	983
03:45 PM	123	56	30	209	35	259	85	379	19	55	18	92	27	307	23	357	1037
Total	404	248	95	747	108	1061	308	1477	91	261	86	438	118	1032	66	1216	3878
Grand Total	696	452	172	1320	244	1927	572	2743	215	487	189	891	216	1879	158	2253	7207
Apprch %	52.7	34.2	13		8.9	70.3	20.9		24.1	54.7	21.2		9.6	83.4	7		
Total %	9.7	6.3	2.4	18.3	3.4	26.7	7.9	38.1	3	6.8	2.6	12.4	3	26.1	2.2	31.3	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	85	44	18	147	28	**303**	63	**394**	**26**	65	**28**	**119**	**36**	228	17	281	941
03:15 PM	108	68	23	199	19	243	73	335	24	**73**	19	116	25	226	16	267	917
03:30 PM	88	**80**	24	192	26	256	**87**	369	22	68	21	111	30	271	10	311	983
03:45 PM	**123**	56	**30**	**209**	**35**	259	85	379	19	55	18	92	27	**307**	**23**	**357**	**1037**
Total Volume	404	248	95	747	108	1061	308	1477	91	261	86	438	118	1032	66	1216	3878
% App. Total	54.1	33.2	12.7		7.3	71.8	20.9		20.8	59.6	19.6		9.7	84.9	5.4		
PHF	.821	.775	.792	.894	.771	.875	.885	.937	.875	.894	.768	.920	.819	.840	.717	.852	.935

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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_Wash_VB MD
Site Code : 00321719
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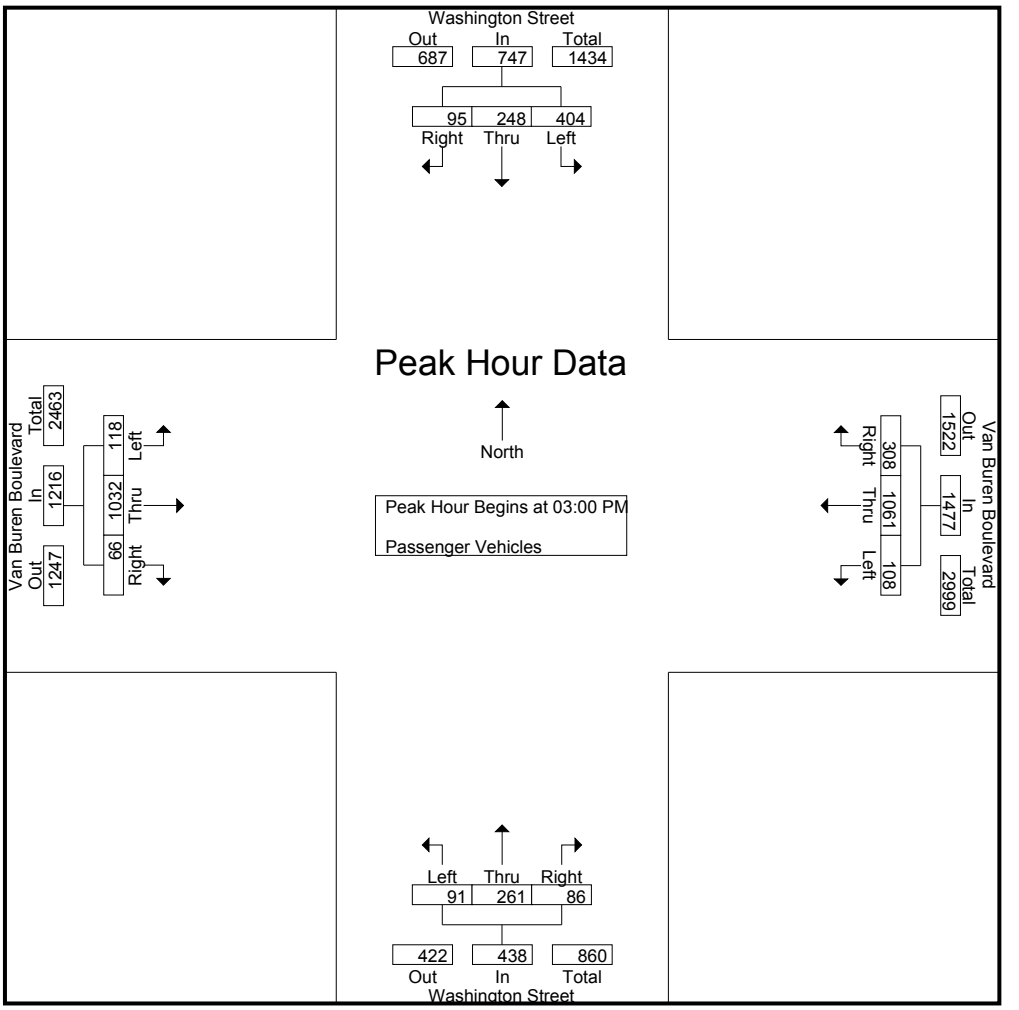

Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	85	44	18	147	28	**303**	63	**394**	**26**	65	**28**	**119**	**36**	228	17	281
+15 mins.	108	68	23	199	19	243	73	335	24	**73**	19	116	25	226	16	267
+30 mins.	88	**80**	24	192	26	256	**87**	369	22	68	21	111	30	271	10	311
+45 mins.	**123**	56	**30**	**209**	**35**	259	85	379	19	55	18	92	27	**307**	**23**	**357**
Total Volume	404	248	95	747	108	1061	308	1477	91	261	86	438	118	1032	66	1216
% App. Total	54.1	33.2	12.7		7.3	71.8	20.9		20.8	59.6	19.6		9.7	84.9	5.4	
PHF	.821	.775	.792	.894	.771	.875	.885	.937	.875	.894	.768	.920	.819	.840	.717	.852

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City of Riverside
N/S: Washington Street
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Weather: Clear

File Name : 01_RIV_Wash_VB MD
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Groups Printed- Large 2 Axle Vehicles

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	4	0	4	0	4	2	6	0	0	0	0	1	5	2	8	18
02:15 PM	1	0	1	2	0	3	4	7	0	2	1	3	1	6	1	8	20
02:30 PM	3	4	1	8	2	8	2	12	1	2	0	3	0	1	0	1	24
02:45 PM	0	1	0	1	0	2	1	3	1	5	0	6	0	2	0	2	12
Total	4	9	2	15	2	17	9	28	2	9	1	12	2	14	3	19	74
03:00 PM	0	2	0	2	0	4	2	6	0	1	0	1	0	2	0	2	11
03:15 PM	1	2	0	3	0	5	6	11	1	1	2	4	0	8	3	11	29
03:30 PM	0	0	0	0	0	3	4	7	0	5	1	6	0	3	0	3	16
03:45 PM	3	1	0	4	0	3	3	6	0	1	1	2	1	4	0	5	17
Total	4	5	0	9	0	15	15	30	1	8	4	13	1	17	3	21	73
Grand Total	8	14	2	24	2	32	24	58	3	17	5	25	3	31	6	40	147
Apprch %	33.3	58.3	8.3		3.4	55.2	41.4		12	68	20		7.5	77.5	15		
Total %	5.4	9.5	1.4	16.3	1.4	21.8	16.3	39.5	2	11.6	3.4	17	2	21.1	4.1	27.2	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	**2**	0	2	0	4	2	6	0	1	0	1	0	2	0	2	11
03:15 PM	1	2	0	3	0	**5**	**6**	**11**	**1**	1	**2**	4	0	**8**	**3**	**11**	**29**
03:30 PM	0	0	0	0	0	3	4	7	0	**5**	1	**6**	0	3	0	3	16
03:45 PM	**3**	1	0	**4**	0	3	3	6	0	1	1	2	**1**	4	0	5	17
Total Volume	4	5	0	9	0	15	15	30	1	8	4	13	1	17	3	21	73
% App. Total	44.4	55.6	0		0	50	50		7.7	61.5	30.8		4.8	81	14.3		
PHF	.333	.625	.000	.563	.000	.750	.625	.682	.250	.400	.500	.542	.250	.531	.250	.477	.629

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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
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File Name : 01_RIV_Wash_VB MD
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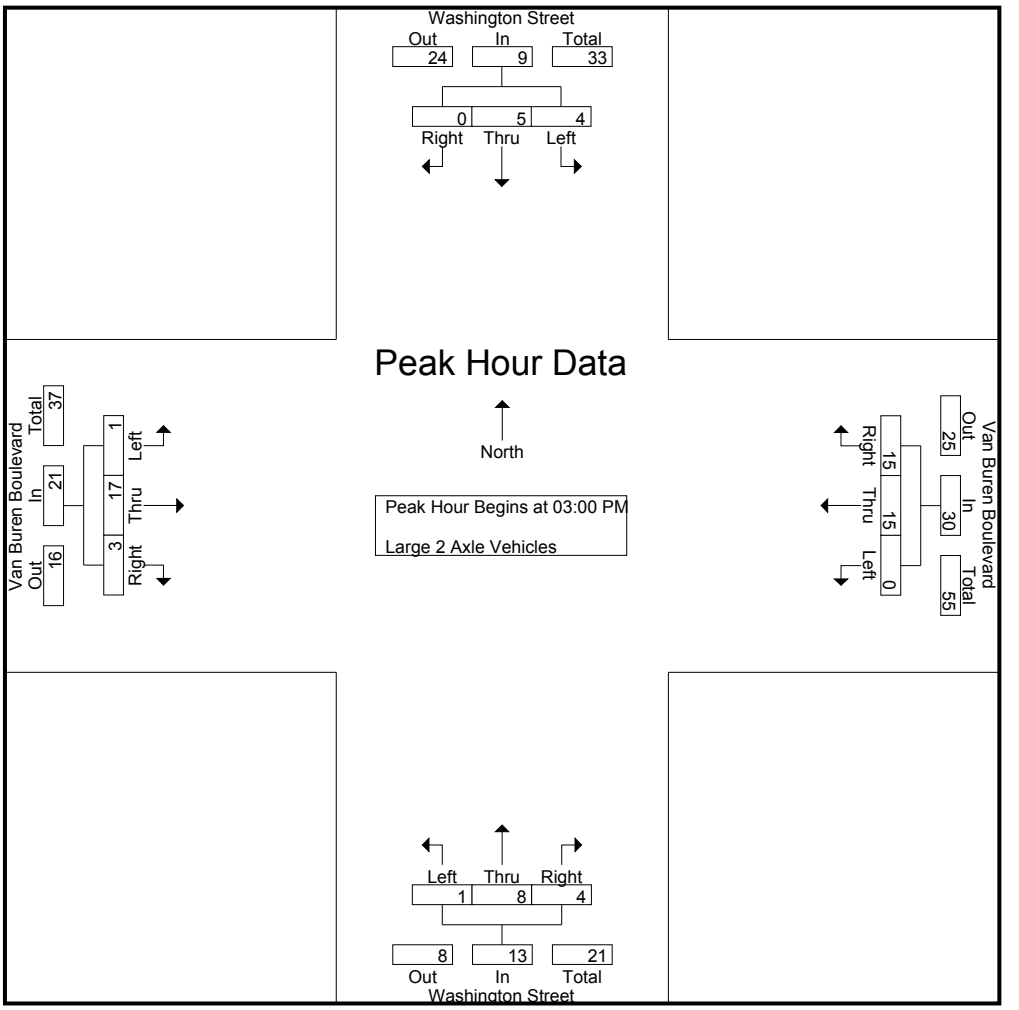

Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	**2**	0	2	0	4	2	6	0	1	0	1	0	2	0	2
+15 mins.	1	2	0	3	0	**5**	**6**	**11**	**1**	1	**2**	4	0	**8**	**3**	**11**
+30 mins.	0	0	0	0	0	3	4	7	0	**5**	1	**6**	0	3	0	3
+45 mins.	**3**	1	0	**4**	0	3	3	6	0	1	1	2	**1**	4	0	5
Total Volume	4	5	0	9	0	15	15	30	1	8	4	13	1	17	3	21
% App. Total	44.4	55.6	0		0	50	50		7.7	61.5	30.8		4.8	81	14.3	
PHF	.333	.625	.000	.563	.000	.750	.625	.682	.250	.400	.500	.542	.250	.531	.250	.477

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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
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File Name : 01_RIV_Wash_VB MD
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Groups Printed- 3 Axle Vehicles

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	1	0	1	3
02:15 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	2	0	2	4
02:30 PM	0	0	0	0	1	1	0	2	0	0	1	1	0	2	0	2	5
02:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	4	0	4	6
Total	0	1	0	1	1	2	2	5	0	2	1	3	0	9	0	9	18
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
03:15 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
03:30 PM	1	0	0	1	0	3	0	3	0	0	0	0	0	0	0	0	4
03:45 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	2	0	2	4
Total	1	0	0	1	0	8	0	8	0	0	1	1	0	3	1	4	14
Grand Total	1	1	0	2	1	10	2	13	0	2	2	4	0	12	1	13	32
Apprch %	50	50	0		7.7	76.9	15.4		0	50	50		0	92.3	7.7		
Total %	3.1	3.1	0	6.2	3.1	31.2	6.2	40.6	0	6.2	6.2	12.5	0	37.5	3.1	40.6	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	**2**	2
03:15 PM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	0	0	0	**4**
03:30 PM	**1**	0	0	**1**	0	3	0	3	0	0	0	0	0	0	0	0	4
03:45 PM	0	0	0	0	0	1	0	1	0	0	**1**	**1**	0	**2**	0	2	4
Total Volume	1	0	0	1	0	8	0	8	0	0	1	1	0	3	1	4	14
% App. Total	100	0	0		0	100	0		0	0	100		0	75	25		
PHF	.250	.000	.000	.250	.000	.500	.000	.500	.000	.000	.250	.250	.000	.375	.250	.500	.875

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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
Weather: Clear

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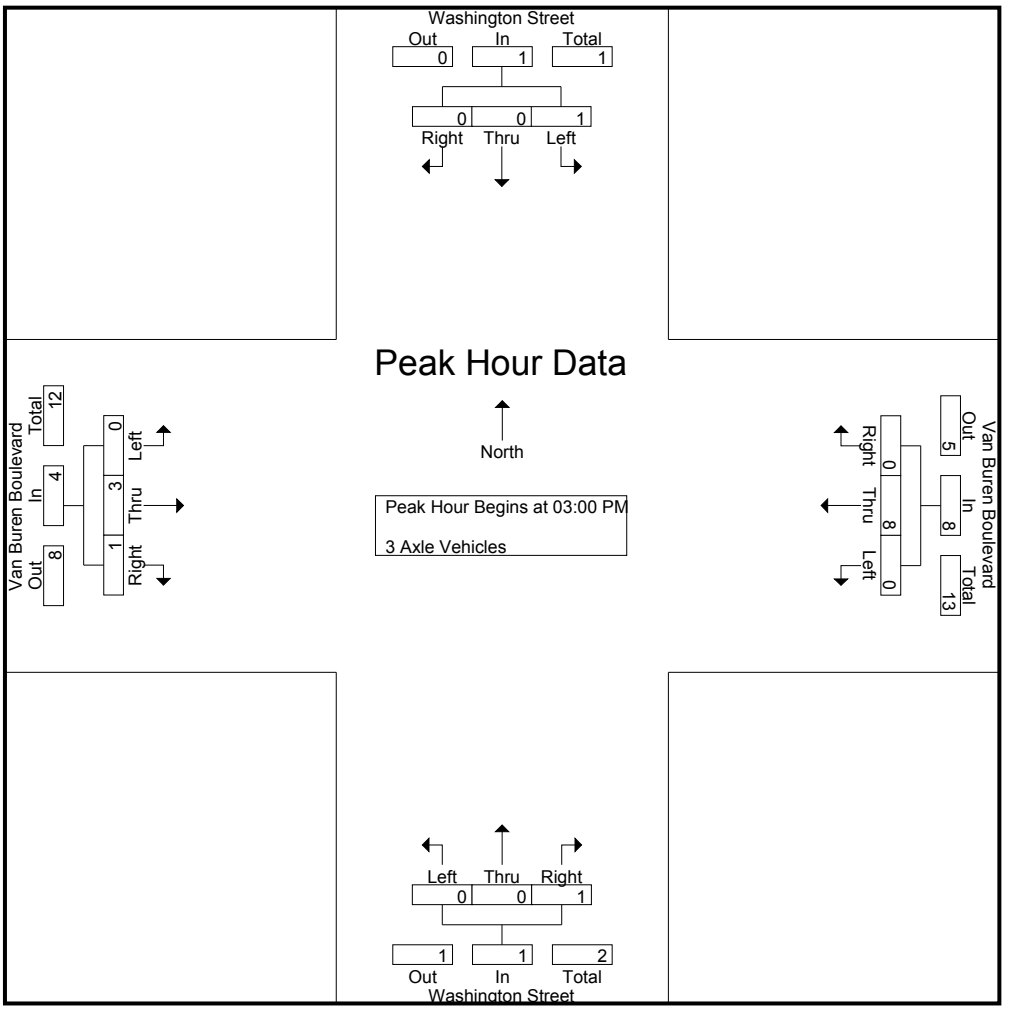

Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	**2**
+15 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	0	0	0
+30 mins.	**1**	0	0	**1**	0	3	0	3	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	**1**	**1**	0	**2**	0	2
Total Volume	1	0	0	1	0	8	0	8	0	0	1	1	0	3	1	4
% App. Total	100	0	0		0	100	0		0	0	100		0	75	25	
PHF	.250	.000	.000	.250	.000	.500	.000	.500	.000	.000	.250	.250	.000	.375	.250	.500

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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_Wash_VB MD
Site Code : 00321719
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Groups Printed- 4+ Axle Trucks

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	1	0	0	1	0	1	1	2	0	0	0	0	0	0	0	0	3
02:15 PM	0	0	0	0	0	2	0	2	1	0	0	1	1	4	0	5	8
02:30 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2	4
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	1	0	0	1	0	4	2	6	1	0	0	1	1	8	0	9	17
03:00 PM	0	0	0	0	0	2	1	3	0	0	1	1	0	3	0	3	7
03:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
03:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	5	0	5	8
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	11	1	12	0	0	1	1	0	11	0	11	24
Grand Total	1	0	0	1	0	15	3	18	1	0	1	2	1	19	0	20	41
Apprch %	100	0	0		0	83.3	16.7		50	0	50		5	95	0		
Total %	2.4	0	0	2.4	0	36.6	7.3	43.9	2.4	0	2.4	4.9	2.4	46.3	0	48.8	

	Washington Street Southbound				Van Buren Boulevard Westbound				Washington Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	2	**1**	3	0	0	**1**	**1**	0	3	0	3	7
03:15 PM	0	0	0	0	0	**5**	0	**5**	0	0	0	0	0	2	0	2	7
03:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	**5**	0	**5**	**8**
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	0	0	0	0	0	11	1	12	0	0	1	1	0	11	0	11	24
% App. Total	0	0	0		0	91.7	8.3		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.000	.550	.250	.600	.000	.000	.250	.250	.000	.550	.000	.550	.750

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City of Riverside
N/S: Washington Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_Wash_VB MD
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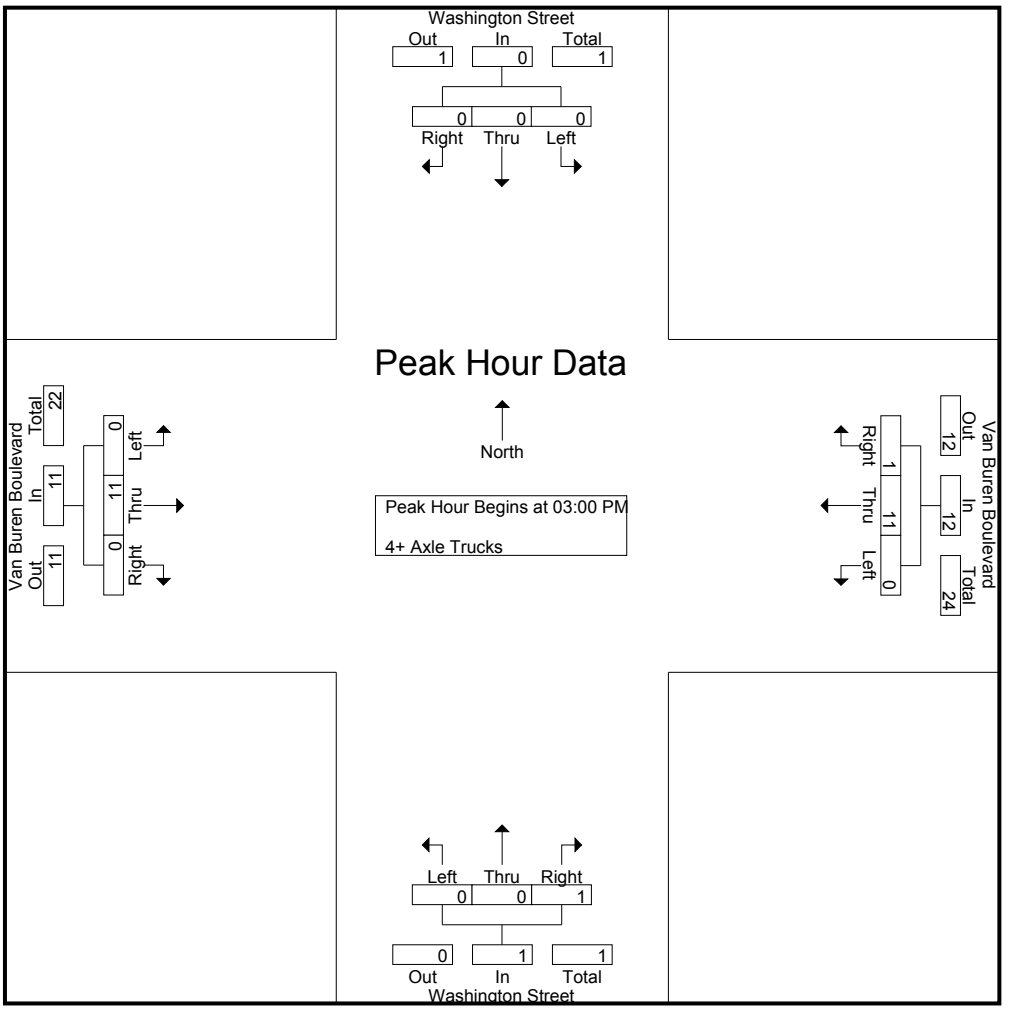

Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	2	**1**	3	0	0	**1**	**1**	0	3	0	3
+15 mins.	0	0	0	0	0	**5**	0	**5**	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	**5**	0	**5**
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	11	1	12	0	0	1	1	0	11	0	11
% App. Total	0	0	0		0	91.7	8.3		0	0	100		0	100	0	
PHF	.000	.000	.000	.000	.000	.550	.250	.600	.000	.000	.250	.250	.000	.550	.000	.550

Location: Riverside
N/S: Washington Street
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Washington Street	East Leg Van Buren Boulevard	South Leg Washington Street	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	1	0	0	0	1
7:45 AM	1	0	0	0	1
8:00 AM	0	1	1	3	5
8:15 AM	1	1	0	1	3
8:30 AM	0	0	0	0	0
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	4	2	1	4	11

	North Leg Washington Street	East Leg Van Buren Boulevard	South Leg Washington Street	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	0	0	0
2:15 PM	0	0	2	0	2
2:30 PM	0	0	0	0	0
2:45 PM	3	1	1	3	8
3:00 PM	0	0	0	0	0
3:15 PM	1	1	0	0	2
3:30 PM	1	1	0	0	2
3:45 PM	0	1	0	0	1
TOTAL VOLUMES:	5	4	3	3	15

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Location: Riverside
N/S: Washington Street
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Washington Street			Westbound Van Buren Boulevard			Northbound Washington Street			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	1	0	2

	Southbound Washington Street			Westbound Van Buren Boulevard			Northbound Washington Street			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Riverside
N/S: Chicago Avenue/Alta Cresta Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 02_RIV_Chicago_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	0	2	34	340	3	377	34	0	21	55	3	309	21	333	767
07:15 AM	1	0	1	2	23	396	0	419	48	1	30	79	1	329	19	349	849
07:30 AM	0	0	2	2	6	390	1	397	12	0	5	17	3	302	8	313	729
07:45 AM	1	0	1	2	6	401	1	408	10	0	4	14	0	282	6	288	712
Total	3	1	4	8	69	1527	5	1601	104	1	60	165	7	1222	54	1283	3057
08:00 AM	4	0	2	6	5	387	5	397	13	0	6	19	6	315	6	327	749
08:15 AM	1	0	1	2	0	416	1	417	9	0	4	13	4	279	16	299	731
08:30 AM	3	0	1	4	7	378	5	390	7	0	3	10	6	240	6	252	656
08:45 AM	0	0	2	2	2	303	3	308	7	0	3	10	0	228	9	237	557
Total	8	0	6	14	14	1484	14	1512	36	0	16	52	16	1062	37	1115	2693
Grand Total	11	1	10	22	83	3011	19	3113	140	1	76	217	23	2284	91	2398	5750
Apprch %	50	4.5	45.5		2.7	96.7	0.6		64.5	0.5	35		1	95.2	3.8		
Total %	0.2	0	0.2	0.4	1.4	52.4	0.3	54.1	2.4	0	1.3	3.8	0.4	39.7	1.6	41.7	
Passenger Vehicles	11	1	9	21	83	2935	17	3035	140	1	74	215	22	2214	91	2327	5598
% Passenger Vehicles	100	100	90	95.5	100	97.5	89.5	97.5	100	100	97.4	99.1	95.7	96.9	100	97	97.4
Large 2 Axle Vehicles	0	0	0	0	0	46	2	48	0	0	2	2	0	44	0	44	94
% Large 2 Axle Vehicles	0	0	0	0	0	1.5	10.5	1.5	0	0	2.6	0.9	0	1.9	0	1.8	1.6
3 Axle Vehicles	0	0	0	0	0	15	0	15	0	0	0	0	0	8	0	8	23
% 3 Axle Vehicles	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	0.4	0	0.3	0.4
4+ Axle Trucks	0	0	1	1	0	15	0	15	0	0	0	0	1	18	0	19	35
% 4+ Axle Trucks	0	0	10	4.5	0	0.5	0	0.5	0	0	0	0	4.3	0.8	0	0.8	0.6

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	**1**	0	**2**	**34**	340	**3**	377	34	0	21	55	**3**	309	**21**	333	767
07:15 AM	1	0	1	2	23	396	0	**419**	**48**	**1**	**30**	**79**	1	**329**	19	**349**	**849**
07:30 AM	0	0	**2**	2	6	390	1	397	12	0	5	17	3	302	8	313	729
07:45 AM	1	0	1	2	6	**401**	1	408	10	0	4	14	0	282	6	288	712
Total Volume	3	1	4	8	69	1527	5	1601	104	1	60	165	7	1222	54	1283	3057
% App. Total	37.5	12.5	50		4.3	95.4	0.3		63	0.6	36.4		0.5	95.2	4.2		
PHF	.750	.250	.500	1.00	.507	.952	.417	.955	.542	.250	.500	.522	.583	.929	.643	.919	.900

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City of Riverside
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E/W: Van Buren Boulevard
Weather: Clear

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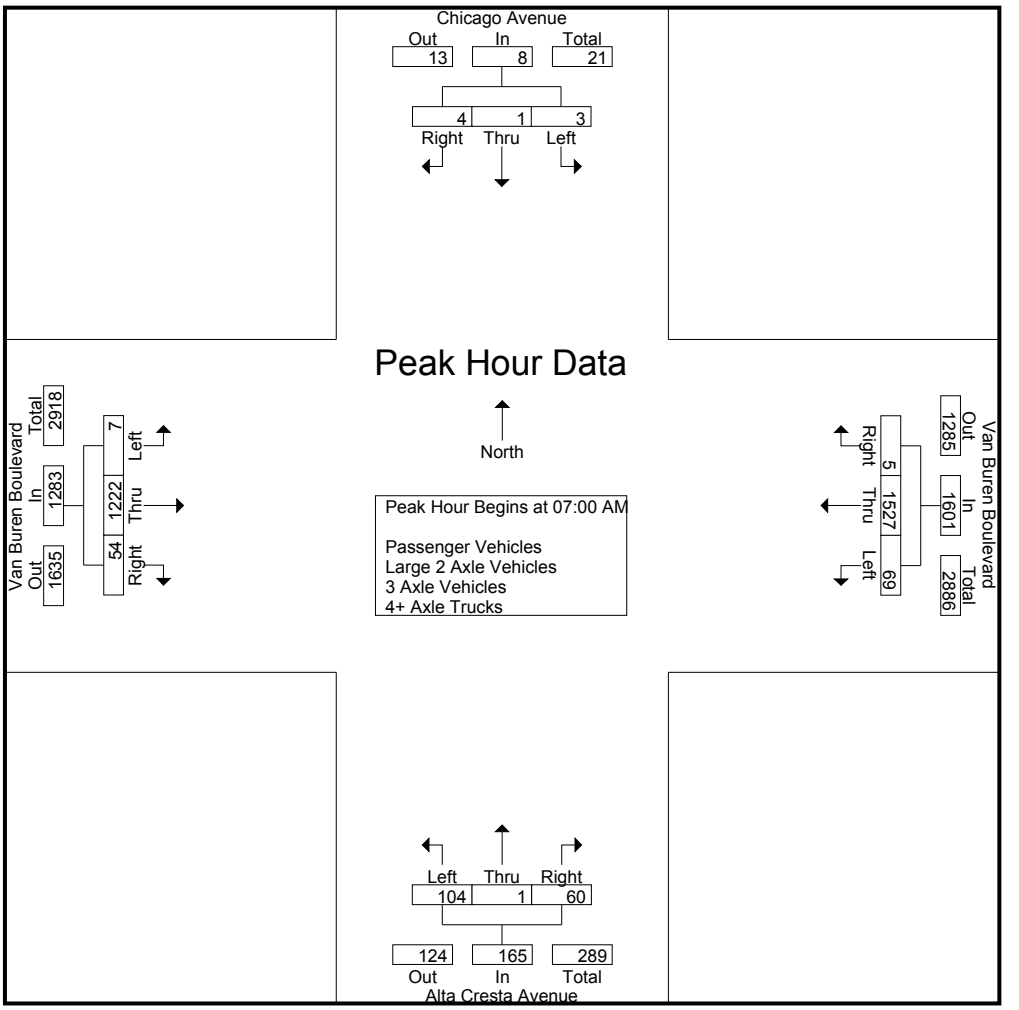

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				07:00 AM				07:00 AM			
+0 mins.	1	0	1	2	**23**	396	0	**419**	34	0	21	55	**3**	309	**21**	333
+15 mins.	**4**	0	**2**	**6**	6	390	1	397	**48**	**1**	**30**	**79**	1	**329**	19	**349**
+30 mins.	1	0	1	2	6	**401**	1	408	12	0	5	17	3	302	8	313
+45 mins.	3	0	1	4	5	387	**5**	397	10	0	4	14	0	282	6	288
Total Volume	9	0	5	14	40	1574	7	1621	104	1	60	165	7	1222	54	1283
% App. Total	64.3	0	35.7		2.5	97.1	0.4		63	0.6	36.4		0.5	95.2	4.2	
PHF	.563	.000	.625	.583	.435	.981	.350	.967	.542	.250	.500	.522	.583	.929	.643	.919

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Groups Printed- Passenger Vehicles

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	0	2	34	330	3	367	34	0	21	55	3	301	21	325	749
07:15 AM	1	0	1	2	23	384	0	407	48	1	29	78	1	318	19	338	825
07:30 AM	0	0	2	2	6	379	1	386	12	0	5	17	3	296	8	307	712
07:45 AM	1	0	1	2	6	396	1	403	10	0	3	13	0	274	6	280	698
Total	3	1	4	8	69	1489	5	1563	104	1	58	163	7	1189	54	1250	2984
08:00 AM	4	0	2	6	5	377	4	386	13	0	6	19	6	303	6	315	726
08:15 AM	1	0	1	2	0	406	1	407	9	0	4	13	3	270	16	289	711
08:30 AM	3	0	1	4	7	370	5	382	7	0	3	10	6	230	6	242	638
08:45 AM	0	0	1	1	2	293	2	297	7	0	3	10	0	222	9	231	539
Total	8	0	5	13	14	1446	12	1472	36	0	16	52	15	1025	37	1077	2614
Grand Total	11	1	9	21	83	2935	17	3035	140	1	74	215	22	2214	91	2327	5598
Apprch %	52.4	4.8	42.9		2.7	96.7	0.6		65.1	0.5	34.4		0.9	95.1	3.9		
Total %	0.2	0	0.2	0.4	1.5	52.4	0.3	54.2	2.5	0	1.3	3.8	0.4	39.5	1.6	41.6	

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	**1**	0	**2**	**34**	330	**3**	367	34	0	21	55	**3**	301	**21**	325	749
07:15 AM	1	0	1	2	23	384	0	**407**	**48**	**1**	**29**	**78**	1	**318**	19	**338**	**825**
07:30 AM	0	0	**2**	2	6	379	1	386	12	0	5	17	3	296	8	307	712
07:45 AM	1	0	1	2	6	**396**	1	403	10	0	3	13	0	274	6	280	698
Total Volume	3	1	4	8	69	1489	5	1563	104	1	58	163	7	1189	54	1250	2984
% App. Total	37.5	12.5	50		4.4	95.3	0.3		63.8	0.6	35.6		0.6	95.1	4.3		
PHF	.750	.250	.500	1.00	.507	.940	.417	.960	.542	.250	.500	.522	.583	.935	.643	.925	.904

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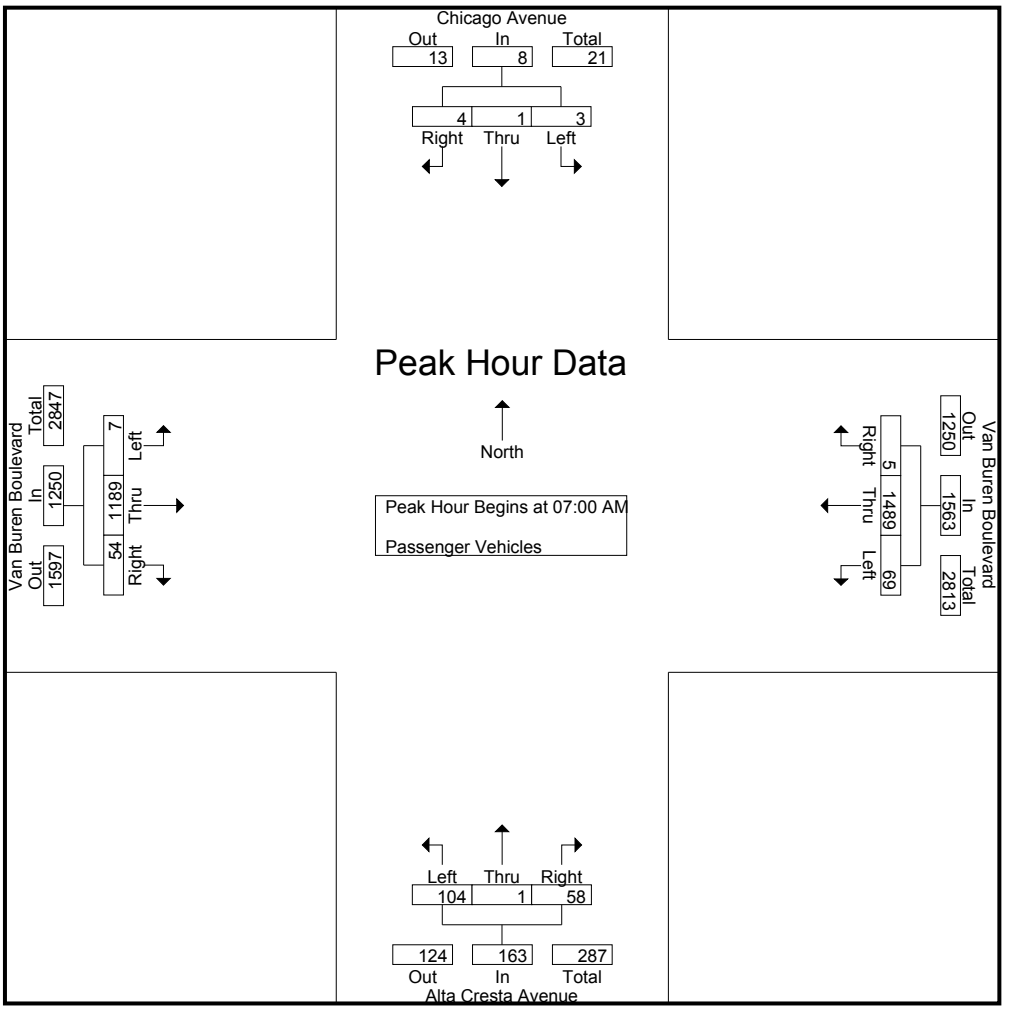

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**1**	**1**	0	**2**	**34**	330	**3**	367	34	0	21	55	**3**	301	**21**	325
+15 mins.	1	0	1	2	23	384	0	**407**	**48**	**1**	**29**	**78**	1	**318**	19	**338**
+30 mins.	0	0	**2**	2	6	379	1	386	12	0	5	17	3	296	8	307
+45 mins.	1	0	1	2	6	**396**	1	403	10	0	3	13	0	274	6	280
Total Volume	3	1	4	8	69	1489	5	1563	104	1	58	163	7	1189	54	1250
% App. Total	37.5	12.5	50		4.4	95.3	0.3		63.8	0.6	35.6		0.6	95.1	4.3	
PHF	.750	.250	.500	1.000	.507	.940	.417	.960	.542	.250	.500	.522	.583	.935	.643	.925

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Groups Printed- Large 2 Axle Vehicles

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	7	0	7	0	0	0	0	0	6	0	6	13
07:15 AM	0	0	0	0	0	9	0	9	0	0	1	1	0	8	0	8	18
07:30 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
07:45 AM	0	0	0	0	0	5	0	5	0	0	1	1	0	4	0	4	10
Total	0	0	0	0	0	25	0	25	0	0	2	2	0	22	0	22	49
08:00 AM	0	0	0	0	0	6	1	7	0	0	0	0	0	9	0	9	16
08:15 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	4	0	4	10
08:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	6	0	6	11
08:45 AM	0	0	0	0	0	4	1	5	0	0	0	0	0	3	0	3	8
Total	0	0	0	0	0	21	2	23	0	0	0	0	0	22	0	22	45
Grand Total	0	0	0	0	0	46	2	48	0	0	2	2	0	44	0	44	94
Apprch %	0	0	0		0	95.8	4.2		0	0	100		0	100	0		
Total %	0	0	0	0	0	48.9	2.1	51.1	0	0	2.1	2.1	0	46.8	0	46.8	

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	7	0	7	0	0	0	0	0	6	0	6	13
07:15 AM	0	0	0	0	0	**9**	0	**9**	0	0	**1**	**1**	0	**8**	0	**8**	**18**
07:30 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
07:45 AM	0	0	0	0	0	5	0	5	0	0	1	1	0	4	0	4	10
Total Volume	0	0	0	0	0	25	0	25	0	0	2	2	0	22	0	22	49
% App. Total	0	0	0		0	100	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.000	.694	.000	.694	.000	.000	.500	.500	.000	.688	.000	.688	.681

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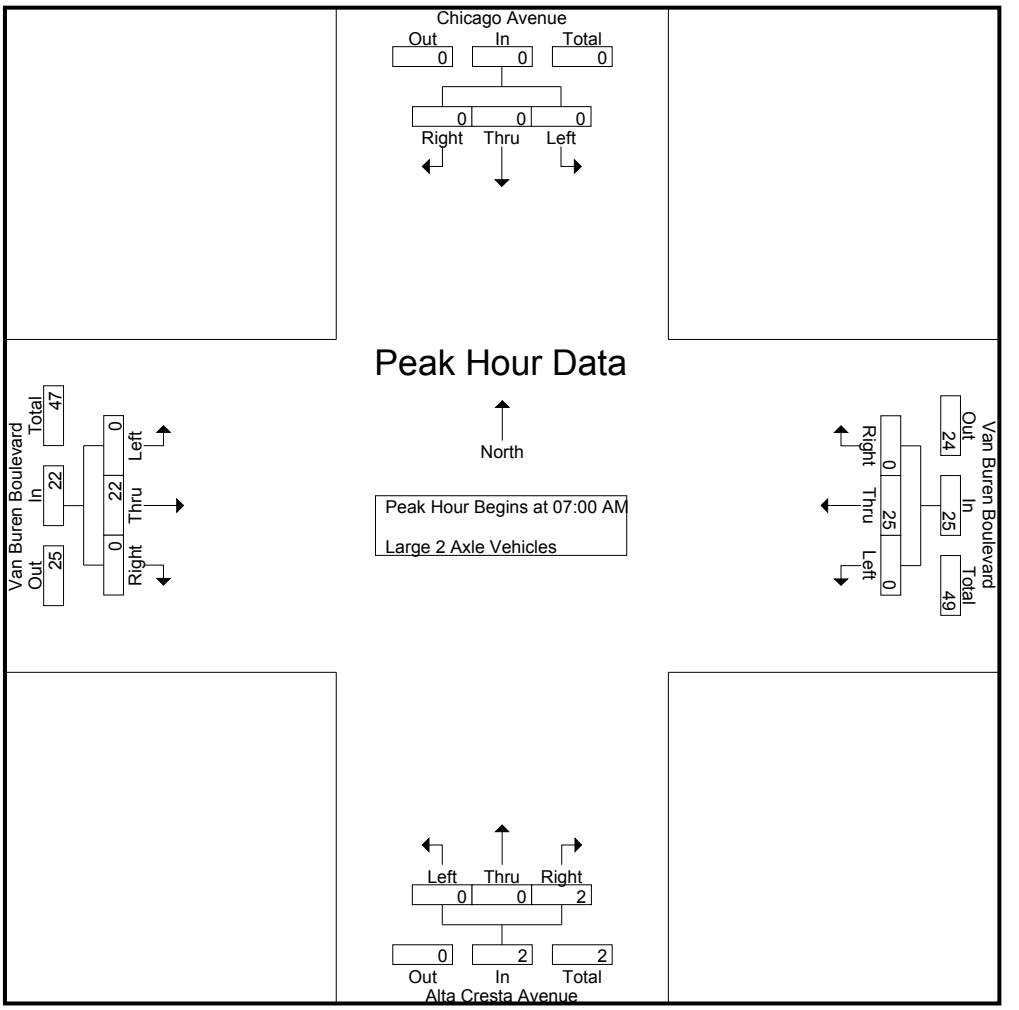

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	7	0	7	0	0	0	0	0	6	0	6
+15 mins.	0	0	0	0	0	**9**	0	**9**	0	0	**1**	**1**	0	**8**	0	**8**
+30 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4
+45 mins.	0	0	0	0	0	5	0	5	0	0	1	1	0	4	0	4
Total Volume	0	0	0	0	0	25	0	25	0	0	2	2	0	22	0	22
% App. Total	0	0	0		0	100	0		0	0	100		0	100	0	
PHF	.000	.000	.000	.000	.000	.694	.000	.694	.000	.000	.500	.500	.000	.688	.000	.688

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Groups Printed- 3 Axle Vehicles

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	9
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	6
Total	0	0	0	0	0	9	0	9	0	0	0	0	0	5	0	5	14
Grand Total	0	0	0	0	0	15	0	15	0	0	0	0	0	8	0	8	23
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	65.2	0	65.2	0	0	0	0	0	34.8	0	34.8	

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**	2
07:30 AM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	1	0	1	**5**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	9
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.750	.000	.750	.450

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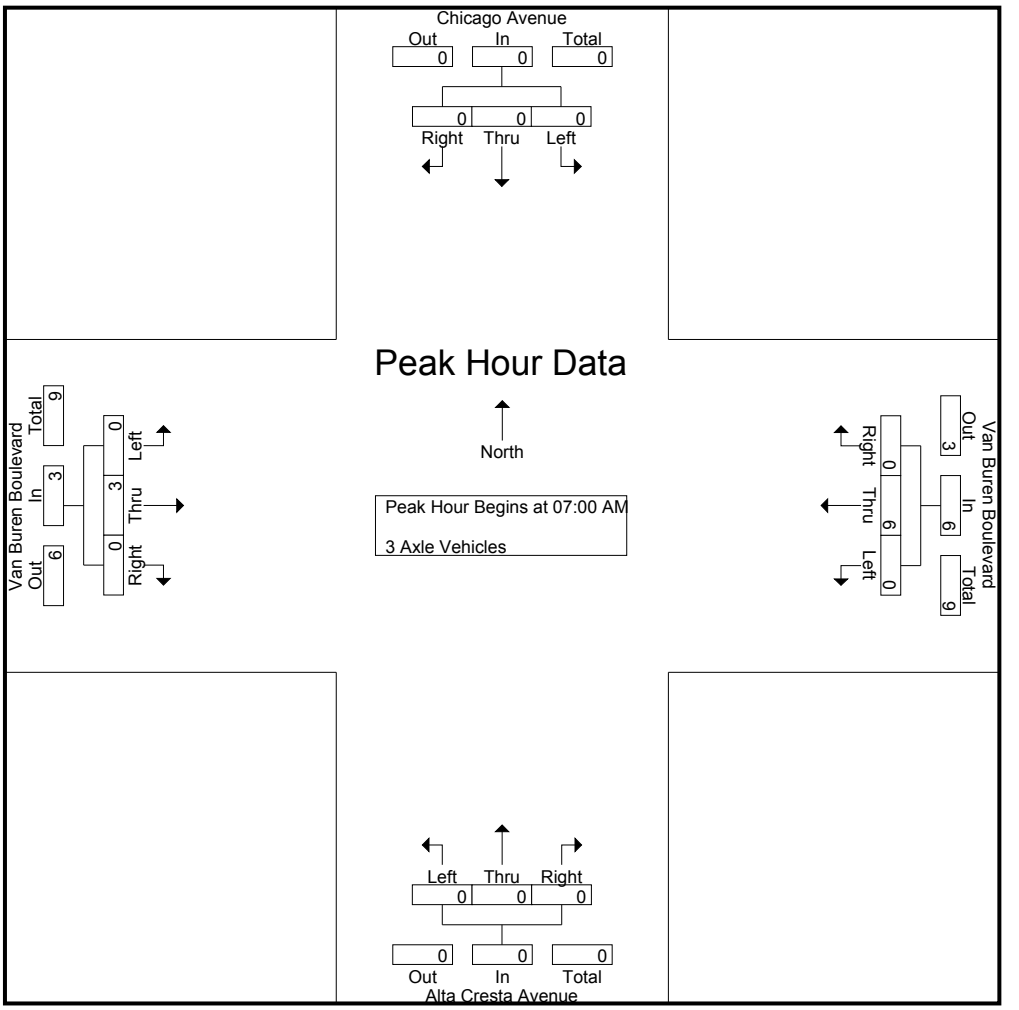

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.000	.000	.000	.750	.000	.750

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Groups Printed- 4+ Axle Trucks

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
Total	0	0	0	0	0	7	0	7	0	0	0	0	0	8	0	8	15
08:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	1	3	0	4	6
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
08:45 AM	0	0	1	1	0	2	0	2	0	0	0	0	0	1	0	1	4
Total	0	0	1	1	0	8	0	8	0	0	0	0	1	10	0	11	20
Grand Total	0	0	1	1	0	15	0	15	0	0	0	0	1	18	0	19	35
Apprch %	0	0	100		0	100	0		0	0	0		5.3	94.7	0		
Total %	0	0	2.9	2.9	0	42.9	0	42.9	0	0	0	0	2.9	51.4	0	54.3	

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	**4**
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:30 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	1	0	1	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**	3
Total Volume	0	0	0	0	0	7	0	7	0	0	0	0	0	8	0	8	15
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.583	.000	.583	.000	.000	.000	.000	.000	.667	.000	.667	.938

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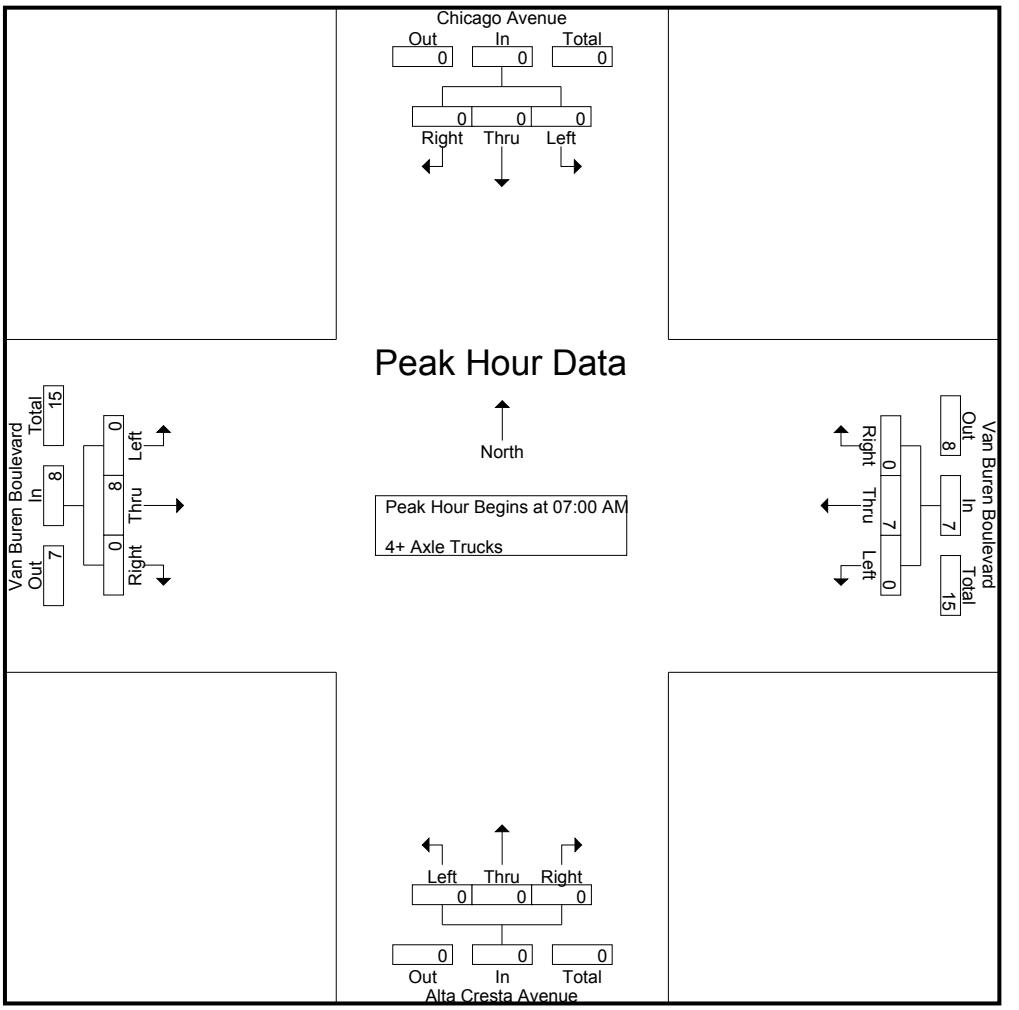

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**
Total Volume	0	0	0	0	0	7	0	7	0	0	0	0	0	8	0	8
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.583	.000	.583	.000	.000	.000	.000	.000	.667	.000	.667

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	10	0	2	12	14	261	2	277	53	2	33	88	2	258	21	281	658
02:15 PM	4	0	3	7	8	329	4	341	13	2	5	20	1	299	15	315	683
02:30 PM	5	1	1	7	4	306	5	315	11	0	6	17	5	336	16	357	696
02:45 PM	2	2	1	5	5	426	5	436	11	3	9	23	6	349	25	380	844
Total	21	3	7	31	31	1322	16	1369	88	7	53	148	14	1242	77	1333	2881
03:00 PM	2	0	1	3	8	398	3	409	14	0	4	18	6	333	28	367	797
03:15 PM	4	0	0	4	7	364	2	373	8	1	3	12	4	366	26	396	785
03:30 PM	6	2	2	10	9	365	8	382	20	0	5	25	6	360	35	401	818
03:45 PM	6	0	3	9	11	388	3	402	12	0	5	17	4	431	36	471	899
Total	18	2	6	26	35	1515	16	1566	54	1	17	72	20	1490	125	1635	3299
Grand Total	39	5	13	57	66	2837	32	2935	142	8	70	220	34	2732	202	2968	6180
Apprch %	68.4	8.8	22.8		2.2	96.7	1.1		64.5	3.6	31.8		1.1	92	6.8		
Total %	0.6	0.1	0.2	0.9	1.1	45.9	0.5	47.5	2.3	0.1	1.1	3.6	0.6	44.2	3.3	48	
Passenger Vehicles	38	5	13	56	65	2748	30	2843	140	7	67	214	33	2654	201	2888	6001
% Passenger Vehicles	97.4	100	100	98.2	98.5	96.9	93.8	96.9	98.6	87.5	95.7	97.3	97.1	97.1	99.5	97.3	97.1
Large 2 Axle Vehicles	1	0	0	1	1	59	2	62	2	1	3	6	1	45	1	47	116
% Large 2 Axle Vehicles	2.6	0	0	1.8	1.5	2.1	6.2	2.1	1.4	12.5	4.3	2.7	2.9	1.6	0.5	1.6	1.9
3 Axle Vehicles	0	0	0	0	0	13	0	13	0	0	0	0	0	13	0	13	26
% 3 Axle Vehicles	0	0	0	0	0	0.5	0	0.4	0	0	0	0	0	0.5	0	0.4	0.4
4+ Axle Trucks	0	0	0	0	0	17	0	17	0	0	0	0	0	20	0	20	37
% 4+ Axle Trucks	0	0	0	0	0	0.6	0	0.6	0	0	0	0	0	0.7	0	0.7	0.6

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	2	0	1	3	8	**398**	3	**409**	14	0	4	18	**6**	333	28	367	797
03:15 PM	4	0	0	4	7	364	2	373	8	**1**	3	12	4	366	26	396	785
03:30 PM	**6**	**2**	2	**10**	9	365	**8**	382	**20**	0	**5**	**25**	6	360	35	401	818
03:45 PM	6	0	**3**	9	**11**	388	3	402	12	0	5	17	4	**431**	**36**	**471**	**899**
Total Volume	18	2	6	26	35	1515	16	1566	54	1	17	72	20	1490	125	1635	3299
% App. Total	69.2	7.7	23.1		2.2	96.7	1		75	1.4	23.6		1.2	91.1	7.6		
PHF	.750	.250	.500	.650	.795	.952	.500	.957	.675	.250	.850	.720	.833	.864	.868	.868	.917

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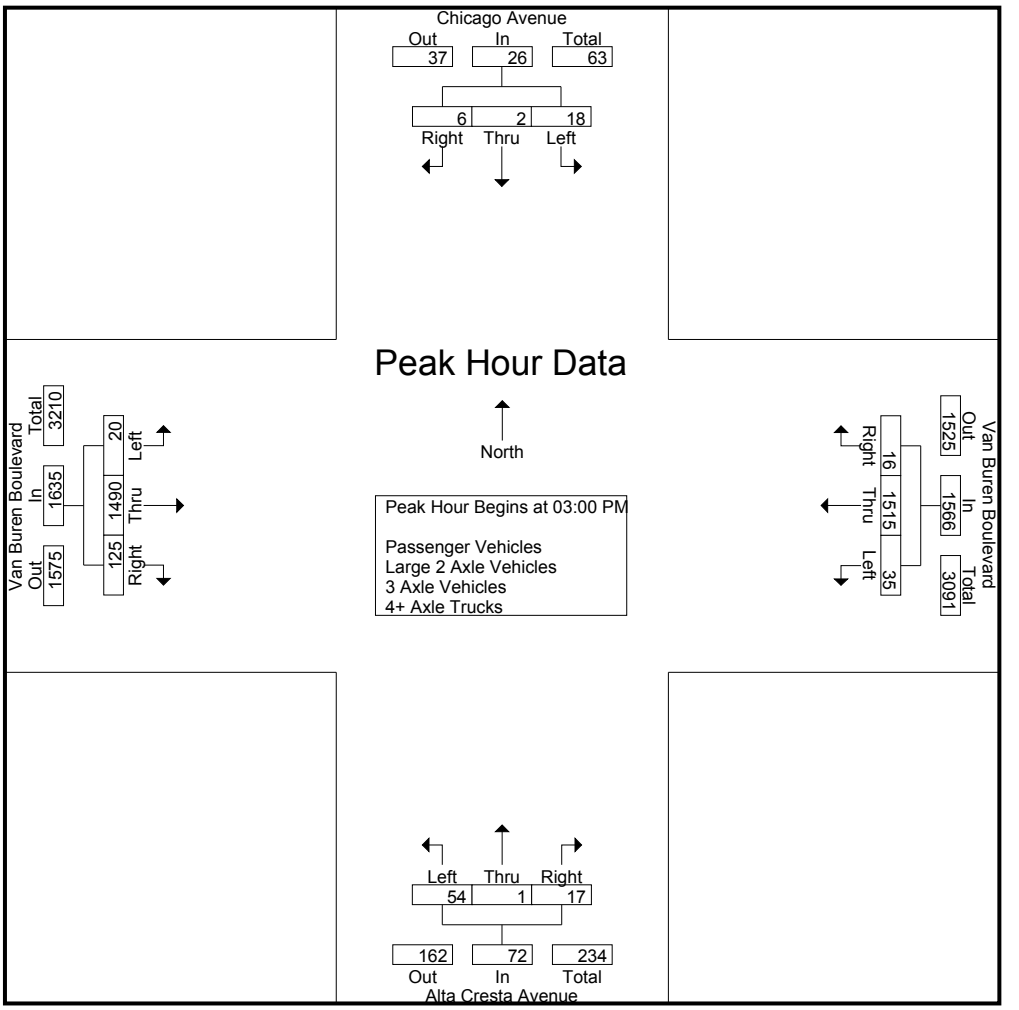

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:00 PM				02:45 PM				02:00 PM				03:00 PM			
+0 mins.	**10**	0	2	**12**	5	**426**	5	**436**	**53**	2	**33**	**88**	**6**	333	28	367
+15 mins.	4	0	**3**	7	8	398	3	409	13	2	5	20	4	366	26	396
+30 mins.	5	1	1	7	7	364	2	373	11	0	6	17	6	360	35	401
+45 mins.	2	**2**	1	5	**9**	365	**8**	382	11	**3**	9	23	4	**431**	**36**	**471**
Total Volume	21	3	7	31	29	1553	18	1600	88	7	53	148	20	1490	125	1635
% App. Total	67.7	9.7	22.6		1.8	97.1	1.1		59.5	4.7	35.8		1.2	91.1	7.6	
PHF	.525	.375	.583	.646	.806	.911	.563	.917	.415	.583	.402	.420	.833	.864	.868	.868

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Groups Printed- Passenger Vehicles

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	10	0	2	12	14	254	2	270	53	2	33	88	1	249	21	271	641
02:15 PM	4	0	3	7	8	321	4	333	13	2	5	20	1	287	15	303	663
02:30 PM	5	1	1	7	4	292	5	301	10	0	6	16	5	326	15	346	670
02:45 PM	2	2	1	5	5	418	5	428	11	3	8	22	6	342	25	373	828
Total	21	3	7	31	31	1285	16	1332	87	7	52	146	13	1204	76	1293	2802
03:00 PM	2	0	1	3	8	383	2	393	14	0	3	17	6	323	28	357	770
03:15 PM	4	0	0	4	7	347	2	356	8	0	3	11	4	351	26	381	752
03:30 PM	5	2	2	9	8	354	7	369	20	0	4	24	6	354	35	395	797
03:45 PM	6	0	3	9	11	379	3	393	11	0	5	16	4	422	36	462	880
Total	17	2	6	25	34	1463	14	1511	53	0	15	68	20	1450	125	1595	3199
Grand Total	38	5	13	56	65	2748	30	2843	140	7	67	214	33	2654	201	2888	6001
Apprch %	67.9	8.9	23.2		2.3	96.7	1.1		65.4	3.3	31.3		1.1	91.9	7		
Total %	0.6	0.1	0.2	0.9	1.1	45.8	0.5	47.4	2.3	0.1	1.1	3.6	0.5	44.2	3.3	48.1	

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	2	0	1	3	8	**383**	2	**393**	14	0	3	17	**6**	323	28	357	770
03:15 PM	4	0	0	4	7	347	2	356	8	0	3	11	4	351	26	381	752
03:30 PM	5	**2**	2	**9**	8	354	**7**	369	**20**	0	4	**24**	6	354	35	395	797
03:45 PM	**6**	0	**3**	9	**11**	379	3	393	11	0	**5**	16	4	**422**	**36**	**462**	**880**
Total Volume	17	2	6	25	34	1463	14	1511	53	0	15	68	20	1450	125	1595	3199
% App. Total	68	8	24		2.3	96.8	0.9		77.9	0	22.1		1.3	90.9	7.8		
PHF	.708	.250	.500	.694	.773	.955	.500	.961	.663	.000	.750	.708	.833	.859	.868	.863	.909

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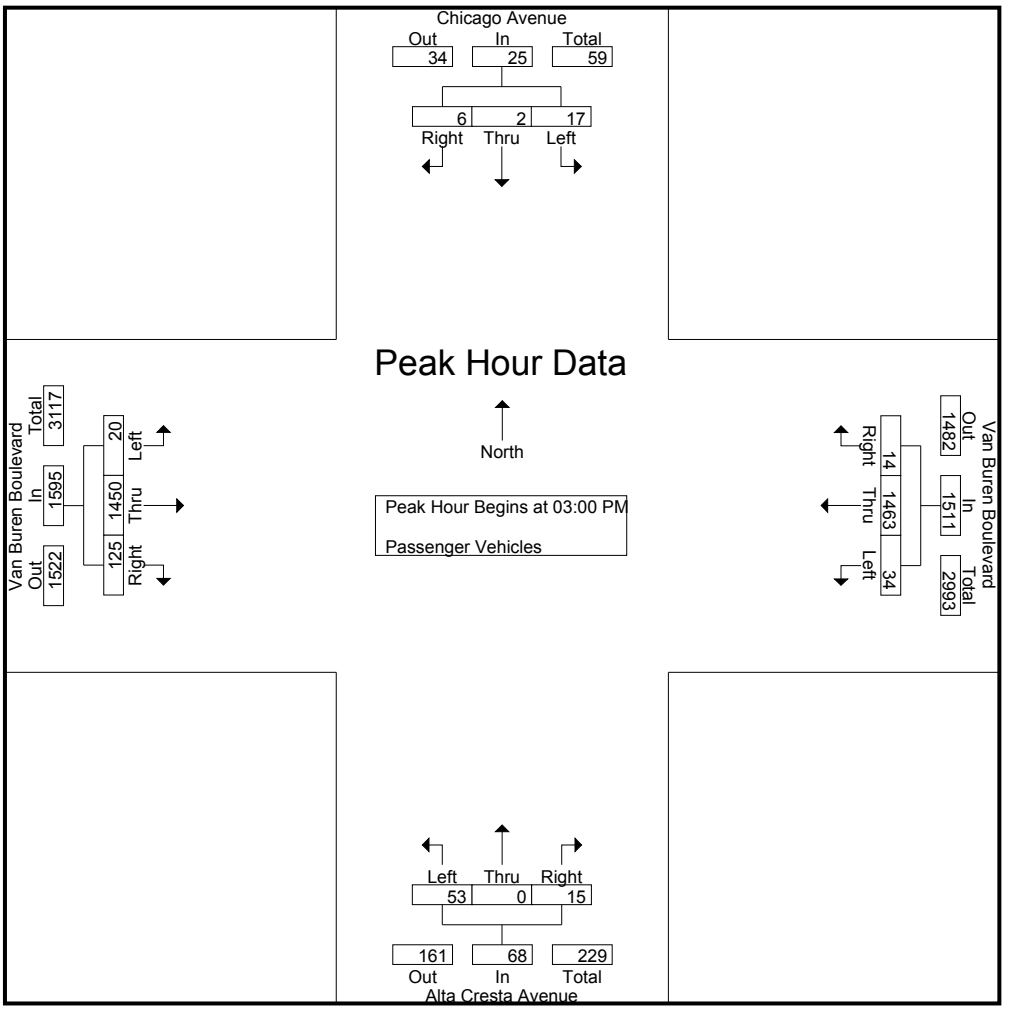

Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	2	0	1	3	8	**383**	2	**393**	14	0	3	17	**6**	323	28	357
+15 mins.	4	0	0	4	7	347	2	356	8	0	3	11	4	351	26	381
+30 mins.	5	**2**	2	**9**	8	354	**7**	369	**20**	0	4	**24**	6	354	35	395
+45 mins.	**6**	0	**3**	9	**11**	379	3	393	11	0	**5**	16	4	**422**	**36**	**462**
Total Volume	17	2	6	25	34	1463	14	1511	53	0	15	68	20	1450	125	1595
% App. Total	68	8	24		2.3	96.8	0.9		77.9	0	22.1		1.3	90.9	7.8	
PHF	.708	.250	.500	.694	.773	.955	.500	.961	.663	.000	.750	.708	.833	.859	.868	.863

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Groups Printed- Large 2 Axle Vehicles

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	1	8	0	9	12
02:15 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	6	0	6	13
02:30 PM	0	0	0	0	0	11	0	11	1	0	0	1	0	4	1	5	17
02:45 PM	0	0	0	0	0	6	0	6	0	0	1	1	0	1	0	1	8
Total	0	0	0	0	0	27	0	27	1	0	1	2	1	19	1	21	50
03:00 PM	0	0	0	0	0	10	1	11	0	0	1	1	0	5	0	5	17
03:15 PM	0	0	0	0	0	8	0	8	0	1	0	1	0	12	0	12	21
03:30 PM	1	0	0	1	1	7	1	9	0	0	1	1	0	3	0	3	14
03:45 PM	0	0	0	0	0	7	0	7	1	0	0	1	0	6	0	6	14
Total	1	0	0	1	1	32	2	35	1	1	2	4	0	26	0	26	66
Grand Total	1	0	0	1	1	59	2	62	2	1	3	6	1	45	1	47	116
Apprch %	100	0	0		1.6	95.2	3.2		33.3	16.7	50		2.1	95.7	2.1		
Total %	0.9	0	0	0.9	0.9	50.9	1.7	53.4	1.7	0.9	2.6	5.2	0.9	38.8	0.9	40.5	

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	**10**	**1**	**11**	0	0	**1**	**1**	0	5	0	5	17
03:15 PM	0	0	0	0	0	8	0	8	0	**1**	0	1	0	**12**	0	**12**	**21**
03:30 PM	**1**	0	0	**1**	**1**	7	1	9	0	0	1	1	0	3	0	3	14
03:45 PM	0	0	0	0	0	7	0	7	**1**	0	0	1	0	6	0	6	14
Total Volume	1	0	0	1	1	32	2	35	1	1	2	4	0	26	0	26	66
% App. Total	100	0	0		2.9	91.4	5.7		25	25	50		0	100	0		
PHF	.250	.000	.000	.250	.250	.800	.500	.795	.250	.250	.500	1.00	.000	.542	.000	.542	.786

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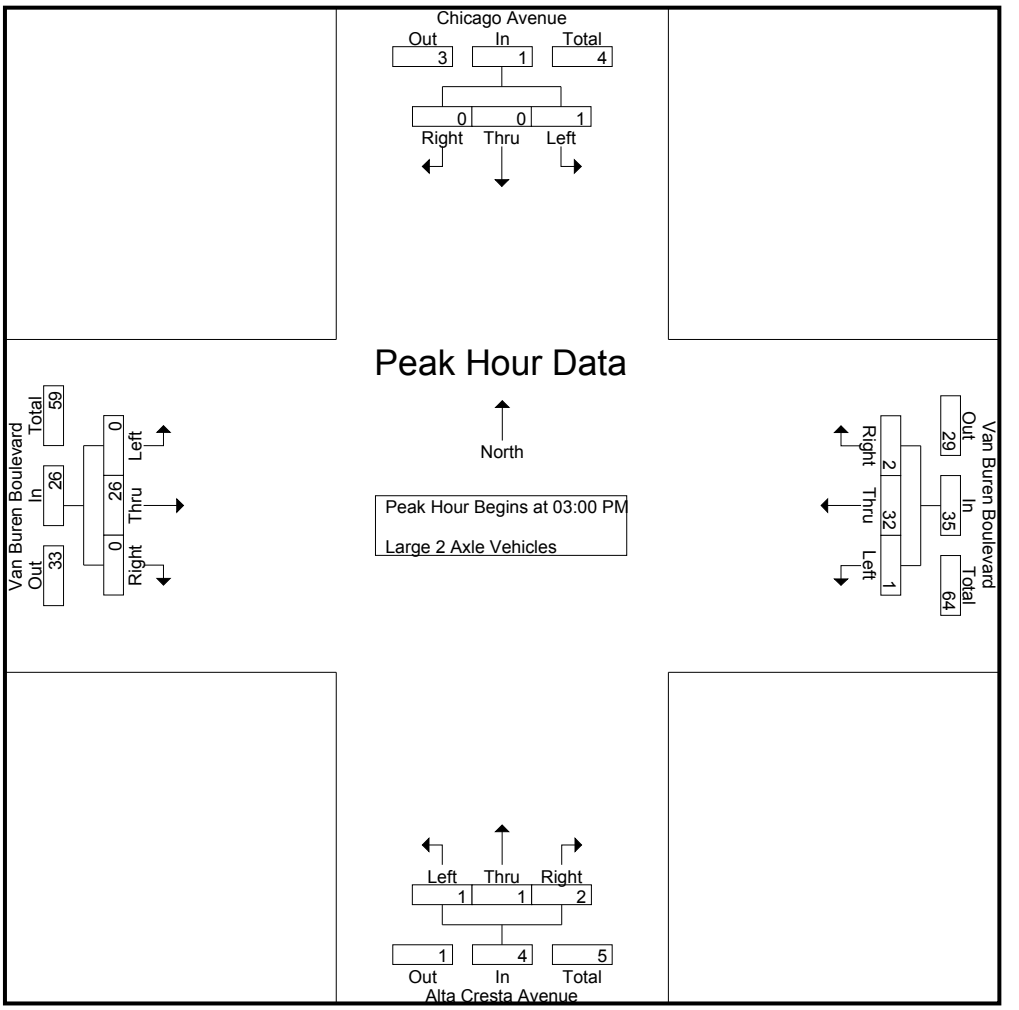

Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	**10**	**1**	**11**	0	0	**1**	**1**	0	5	0	5
+15 mins.	0	0	0	0	0	8	0	8	0	**1**	0	1	0	**12**	0	**12**
+30 mins.	**1**	0	0	**1**	**1**	7	1	9	0	0	1	1	0	3	0	3
+45 mins.	0	0	0	0	0	7	0	7	**1**	0	0	1	0	6	0	6
Total Volume	1	0	0	1	1	32	2	35	1	1	2	4	0	26	0	26
% App. Total	100	0	0		2.9	91.4	5.7		25	25	50		0	100	0	
PHF	.250	.000	.000	.250	.250	.800	.500	.795	.250	.250	.500	1.000	.000	.542	.000	.542

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Groups Printed- 3 Axle Vehicles

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
02:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
02:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
02:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
Total	0	0	0	0	0	4	0	4	0	0	0	0	0	9	0	9	13
03:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
03:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	0	0	0	0	0	9	0	9	0	0	0	0	0	4	0	4	13
Grand Total	0	0	0	0	0	13	0	13	0	0	0	0	0	13	0	13	26
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	0	50	0	50	

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	1	0	1	**4**
03:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	0	**2**	3
Total Volume	0	0	0	0	0	9	0	9	0	0	0	0	0	4	0	4	13
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.500	.000	.500	.813

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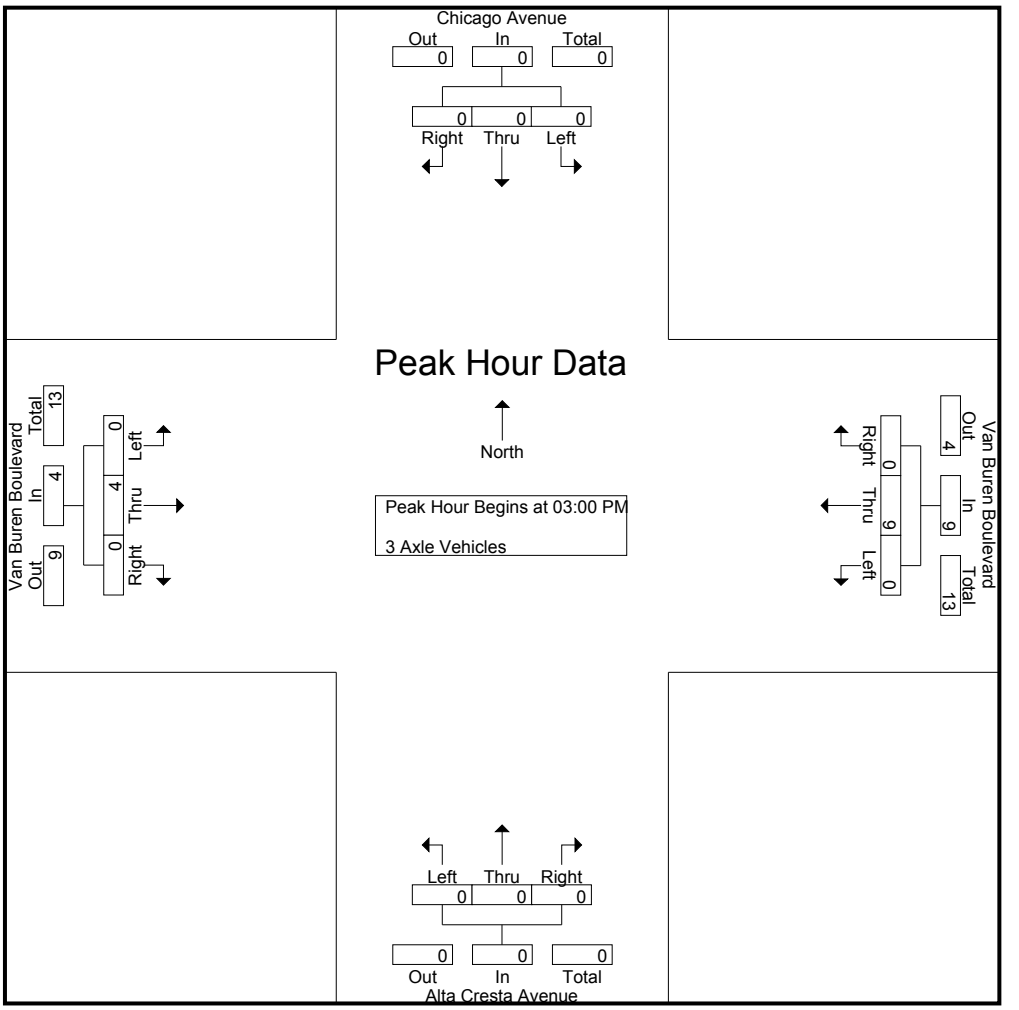
City of Riverside
N/S: Chicago Avenue/Alta Cresta Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 02_RIV_Chicago_VB MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	0	**2**
Total Volume	0	0	0	0	0	9	0	9	0	0	0	0	0	4	0	4
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.500	.000	.500

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City of Riverside
N/S: Chicago Avenue/Alta Cresta Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 02_RIV_Chicago_VB MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
02:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
02:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
Total	0	0	0	0	0	6	0	6	0	0	0	0	0	10	0	10	16
03:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
03:15 PM	0	0	0	0	0	6	0	6	0	0	0	0	0	2	0	2	8
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	11	0	11	0	0	0	0	0	10	0	10	21
Grand Total	0	0	0	0	0	17	0	17	0	0	0	0	0	20	0	20	37
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	45.9	0	45.9	0	0	0	0	0	54.1	0	54.1	

	Chicago Avenue Southbound				Van Buren Boulevard Westbound				Alta Cresta Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	**4**	0	**4**	6
03:15 PM	0	0	0	0	0	**6**	0	**6**	0	0	0	0	0	2	0	2	**8**
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	0	0	0	0	0	11	0	11	0	0	0	0	0	10	0	10	21
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.458	.000	.458	.000	.000	.000	.000	.000	.625	.000	.625	.656

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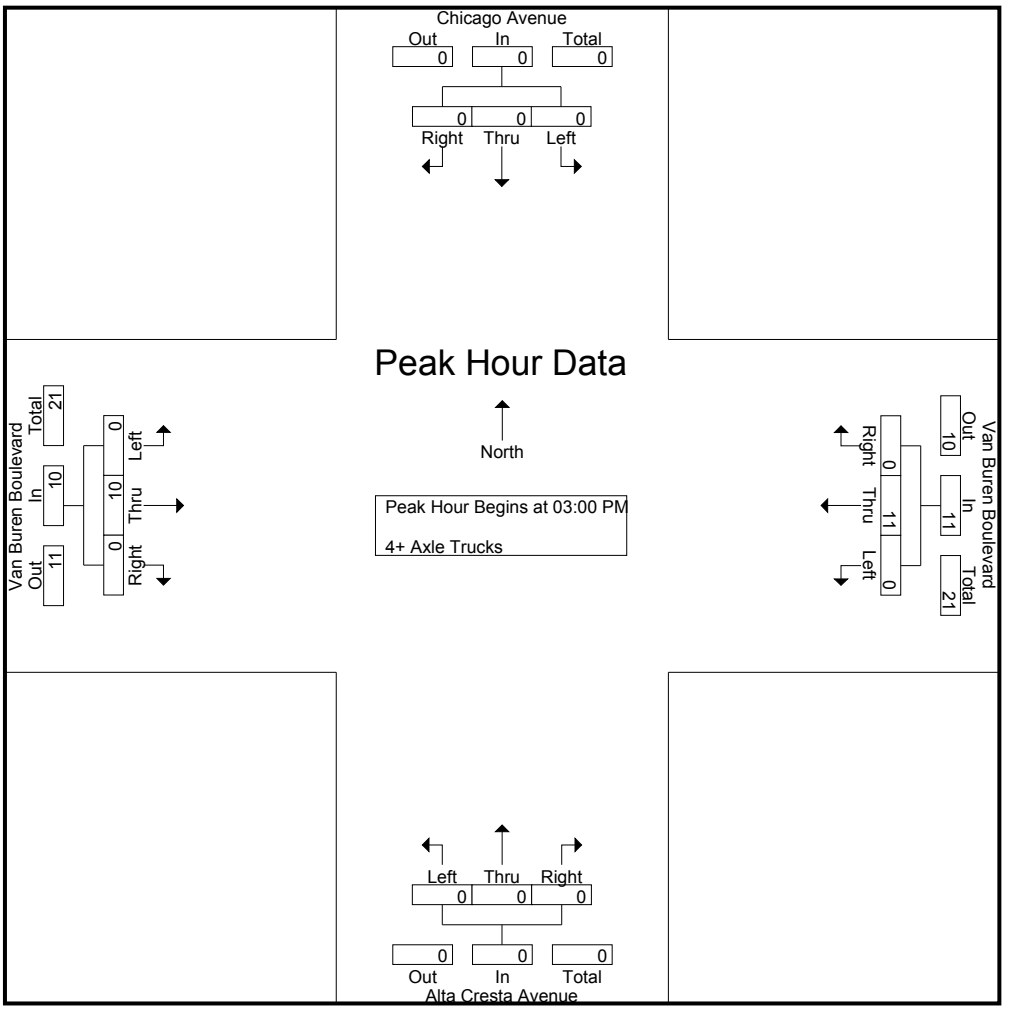
City of Riverside
N/S: Chicago Avenue/Alta Cresta Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 02_RIV_Chicago_VB MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**4**	0	**4**
+15 mins.	0	0	0	0	0	**6**	0	**6**	0	0	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	11	0	11	0	0	0	0	0	10	0	10
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.458	.000	.458	.000	.000	.000	.000	.000	.625	.000	.625

Location: Riverside
N/S: Chicago Ave/Alta Cresta Ave
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Chicago Avenue	East Leg Van Buren Boulevard	South Leg Alta Cresta Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	1	0	2
7:15 AM	1	1	1	0	3
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	1	0	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	2	2	2	0	6

	North Leg Chicago Avenue	East Leg Van Buren Boulevard	South Leg Alta Cresta Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	1	0	2	0	3
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	0	1	0	1
3:15 PM	1	0	0	0	1
3:30 PM	0	1	1	0	2
3:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	1	4	0	7

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Location: Riverside
N/S: Chicago Ave/Alta Cresta Ave
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Chicago Avenue			Westbound Van Buren Boulevard			Northbound Alta Cresta Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	1	2	0	3

	Southbound Chicago Avenue			Westbound Van Buren Boulevard			Northbound Alta Cresta Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	2
TOTAL VOLUMES:	0	0	0	0	3	0	0	1	0	0	1	0	5

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City of Riverside
N/S: Little Court
E/W: Van Buren Boulevard
Weather: Clear

File Name : 04_RIV_Little_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Total Volume

	Van Buren Boulevard Westbound			Little Court Northbound			Van Buren Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	377	377	0	2	2	324	0	324	703
07:15 AM	0	415	415	0	1	1	354	0	354	770
07:30 AM	0	385	385	0	3	3	309	1	310	698
07:45 AM	0	412	412	0	1	1	278	0	278	691
Total	0	1589	1589	0	7	7	1265	1	1266	2862
08:00 AM	0	380	380	0	3	3	315	1	316	699
08:15 AM	0	411	411	0	1	1	274	0	274	686
08:30 AM	0	383	383	0	0	0	235	1	236	619
08:45 AM	0	302	302	0	0	0	225	0	225	527
Total	0	1476	1476	0	4	4	1049	2	1051	2531
Grand Total	0	3065	3065	0	11	11	2314	3	2317	5393
Apprch %	0	100		0	100		99.9	0.1		
Total %	0	56.8	56.8	0	0.2	0.2	42.9	0.1	43	

	Van Buren Boulevard Westbound			Little Court Northbound			Van Buren Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	377	377	0	2	2	324	0	324	703
07:15 AM	0	**415**	**415**	0	1	1	**354**	0	**354**	**770**
07:30 AM	0	385	385	0	**3**	**3**	309	**1**	310	698
07:45 AM	0	412	412	0	1	1	278	0	278	691
Total Volume	0	1589	1589	0	7	7	1265	1	1266	2862
% App. Total	0	100		0	100		99.9	0.1		
PHF	.000	.957	.957	.000	.583	.583	.893	.250	.894	.929

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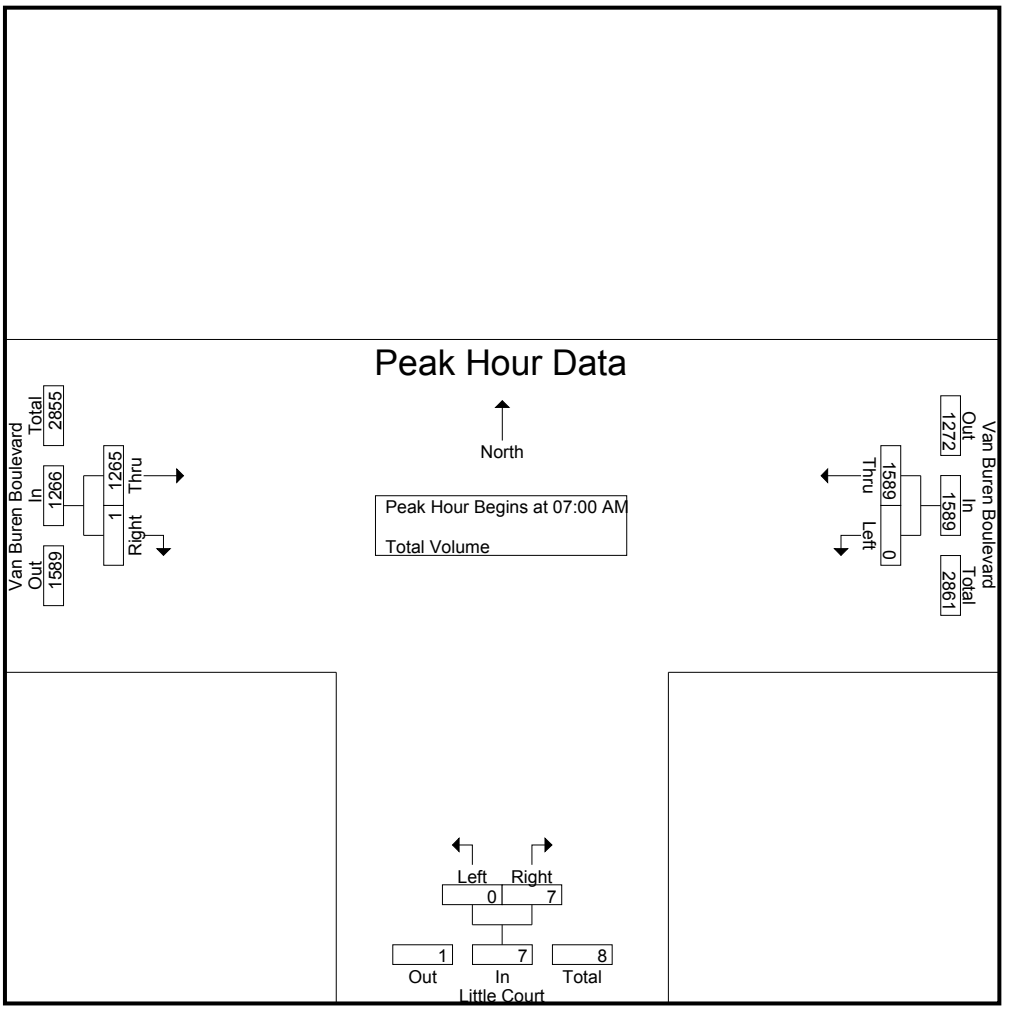
City of Riverside
N/S: Little Court
E/W: Van Buren Boulevard
Weather: Clear

File Name : 04_RIV_Little_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:00 AM		
+0 mins.	0	**415**	**415**	0	1	1	324	0	324
+15 mins.	0	385	385	0	**3**	**3**	**354**	0	**354**
+30 mins.	0	412	412	0	1	1	309	**1**	310
+45 mins.	0	380	380	0	3	3	278	0	278
Total Volume	0	1592	1592	0	8	8	1265	1	1266
% App. Total	0	100		0	100		99.9	0.1	
PHF	.000	.959	.959	.000	.667	.667	.893	.250	.894

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City of Riverside
N/S: Little Court
E/W: Van Buren Boulevard
Weather: Clear

File Name : 04_RIV_Little_VB MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Total Volume

	Van Buren Boulevard Westbound			Little Court Northbound			Van Buren Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
02:00 PM	0	270	270	0	2	2	296	1	297	569
02:15 PM	0	343	343	0	1	1	299	0	299	643
02:30 PM	0	304	304	0	0	0	330	1	331	635
02:45 PM	0	435	435	0	0	0	366	2	368	803
Total	0	1352	1352	0	3	3	1291	4	1295	2650
03:00 PM	0	398	398	0	0	0	330	0	330	728
03:15 PM	0	368	368	0	0	0	369	0	369	737
03:30 PM	0	382	382	0	0	0	355	1	356	738
03:45 PM	0	404	404	0	2	2	445	3	448	854
Total	0	1552	1552	0	2	2	1499	4	1503	3057
Grand Total	0	2904	2904	0	5	5	2790	8	2798	5707
Apprch %	0	100		0	100		99.7	0.3		
Total %	0	50.9	50.9	0	0.1	0.1	48.9	0.1	49	

	Van Buren Boulevard Westbound			Little Court Northbound			Van Buren Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:00 PM										
03:00 PM	0	398	398	0	0	0	330	0	330	728
03:15 PM	0	368	368	0	0	0	369	0	369	737
03:30 PM	0	382	382	0	0	0	355	1	356	738
03:45 PM	0	**404**	**404**	0	**2**	**2**	**445**	**3**	**448**	**854**
Total Volume	0	1552	1552	0	2	2	1499	4	1503	3057
% App. Total	0	100		0	100		99.7	0.3		
PHF	.000	.960	.960	.000	.250	.250	.842	.333	.839	.895

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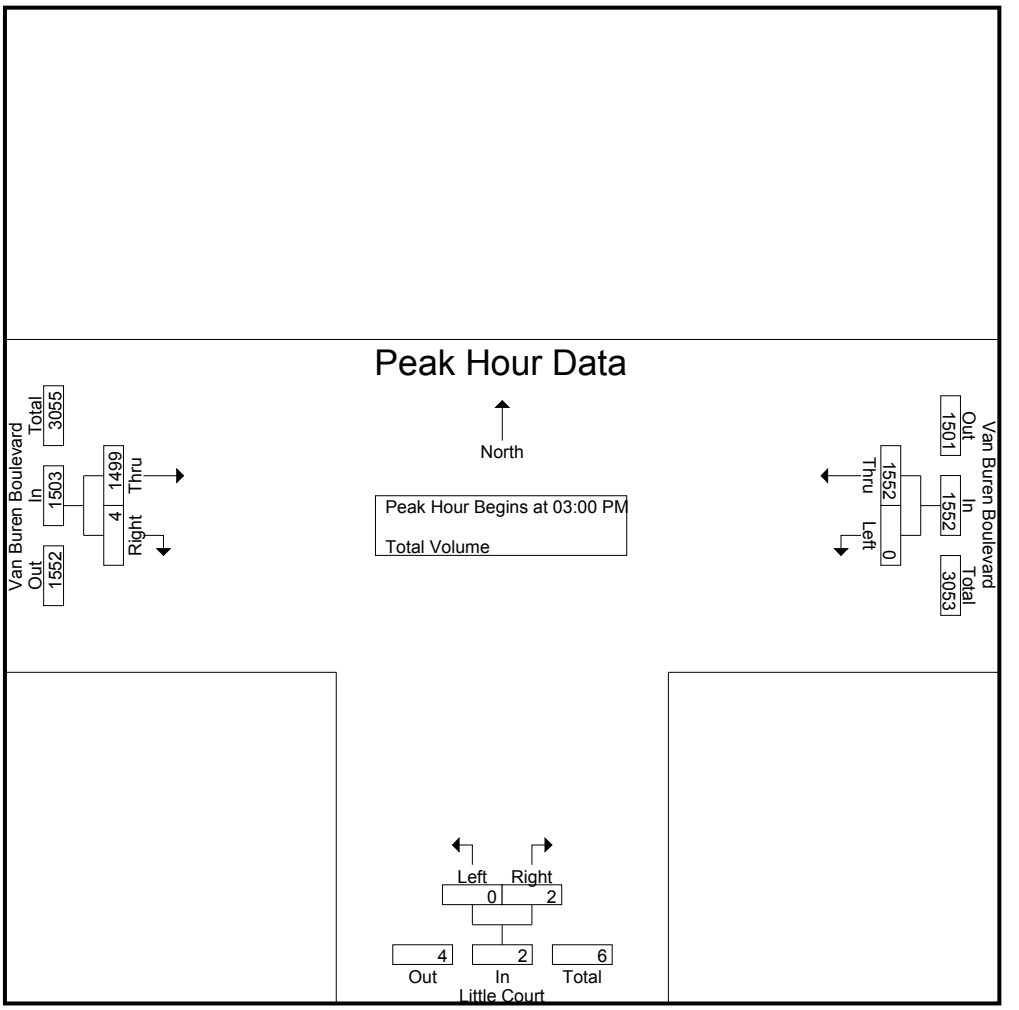
City of Riverside
N/S: Little Court
E/W: Van Buren Boulevard
Weather: Clear

File Name : 04_RIV_Little_VB MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM			02:00 PM			03:00 PM		
+0 mins.	0	**435**	**435**	0	**2**	**2**	330	0	330
+15 mins.	0	398	398	0	1	1	369	0	369
+30 mins.	0	368	368	0	0	0	355	1	356
+45 mins.	0	382	382	0	0	0	**445**	**3**	**448**
Total Volume	0	1583	1583	0	3	3	1499	4	1503
% App. Total	0	100		0	100		99.7	0.3	
PHF	.000	.910	.910	.000	.375	.375	.842	.333	.839

Location: Riverside
N/S: Little Court
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Dead End	East Leg Van Buren Boulevard	South Leg Little Court	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Dead End	East Leg Van Buren Boulevard	South Leg Little Court	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	2	0	2
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	0	0	0	0
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	2	0	2

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951-268-6268

Location: Riverside
N/S: Little Court
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Dead End			Westbound Van Buren Boulevard			Northbound Little Court			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

	Southbound Dead End			Westbound Van Buren Boulevard			Northbound Little Court			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
3:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	1	0	4

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City of Riverside
N/S: Ridgeway Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 05_RIV_Ridge_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Total Volume

	Ridgeway Avenue Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	1	23	24	354	0	354	7	317	324	702
07:15 AM	0	31	31	380	2	382	4	353	357	770
07:30 AM	0	29	29	361	3	364	10	300	310	703
07:45 AM	1	15	16	391	2	393	7	273	280	689
Total	2	98	100	1486	7	1493	28	1243	1271	2864
08:00 AM	0	25	25	357	1	358	13	307	320	703
08:15 AM	1	18	19	393	1	394	7	268	275	688
08:30 AM	0	17	17	365	3	368	7	228	235	620
08:45 AM	0	10	10	293	1	294	2	225	227	531
Total	1	70	71	1408	6	1414	29	1028	1057	2542
Grand Total	3	168	171	2894	13	2907	57	2271	2328	5406
Apprch %	1.8	98.2		99.6	0.4		2.4	97.6		
Total %	0.1	3.1	3.2	53.5	0.2	53.8	1.1	42	43.1	

	Ridgeway Avenue Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	**31**	**31**	380	2	382	4	**353**	**357**	**770**
07:30 AM	0	29	29	361	**3**	364	10	300	310	703
07:45 AM	**1**	15	16	**391**	2	**393**	7	273	280	689
08:00 AM	0	25	25	357	1	358	**13**	307	320	703
Total Volume	1	100	101	1489	8	1497	34	1233	1267	2865
% App. Total	1	99		99.5	0.5		2.7	97.3		
PHF	.250	.806	.815	.952	.667	.952	.654	.873	.887	.930

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City of Riverside
N/S: Ridgeway Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 05_RIV_Ridge_VB AM
Site Code : 00321719
Start Date : 11/18/2021
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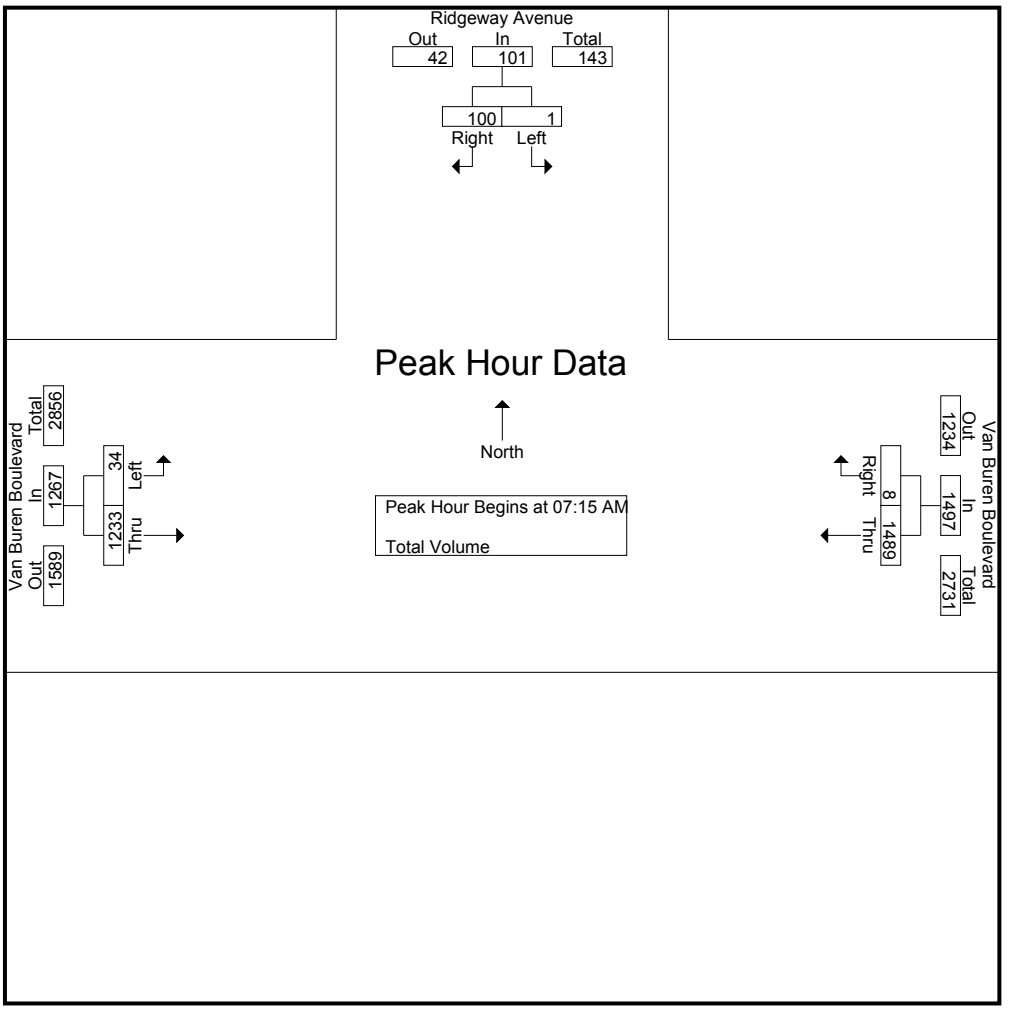

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:45 AM			07:00 AM		
+0 mins.	0	**31**	**31**	391	2	393	7	317	324
+15 mins.	0	29	29	357	1	358	4	**353**	**357**
+30 mins.	**1**	15	16	**393**	1	**394**	**10**	300	310
+45 mins.	0	25	25	365	**3**	368	7	273	280
Total Volume	1	100	101	1506	7	1513	28	1243	1271
% App. Total	1	99		99.5	0.5		2.2	97.8	
PHF	.250	.806	.815	.958	.583	.960	.700	.880	.890

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File Name : 05_RIV_Ridge_VB MD
Site Code : 00321719
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Groups Printed- Total Volume

	Ridgeway Avenue Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
02:00 PM	0	13	13	265	2	267	24	274	298	578
02:15 PM	0	18	18	321	2	323	13	285	298	639
02:30 PM	0	11	11	290	4	294	15	316	331	636
02:45 PM	1	11	12	426	8	434	19	340	359	805
Total	1	53	54	1302	16	1318	71	1215	1286	2658
03:00 PM	1	14	15	379	2	381	16	316	332	728
03:15 PM	0	20	20	350	2	352	23	340	363	735
03:30 PM	0	7	7	379	7	386	25	331	356	749
03:45 PM	0	9	9	387	5	392	24	424	448	849
Total	1	50	51	1495	16	1511	88	1411	1499	3061
Grand Total	2	103	105	2797	32	2829	159	2626	2785	5719
Apprch %	1.9	98.1		98.9	1.1		5.7	94.3		
Total %	0	1.8	1.8	48.9	0.6	49.5	2.8	45.9	48.7	

	Ridgeway Avenue Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:00 PM										
03:00 PM	**1**	14	15	379	2	381	16	316	332	728
03:15 PM	0	**20**	**20**	350	2	352	23	340	363	735
03:30 PM	0	7	7	379	**7**	386	**25**	331	356	749
03:45 PM	0	9	9	**387**	5	**392**	24	**424**	**448**	**849**
Total Volume	1	50	51	1495	16	1511	88	1411	1499	3061
% App. Total	2	98		98.9	1.1		5.9	94.1		
PHF	.250	.625	.638	.966	.571	.964	.880	.832	.836	.901

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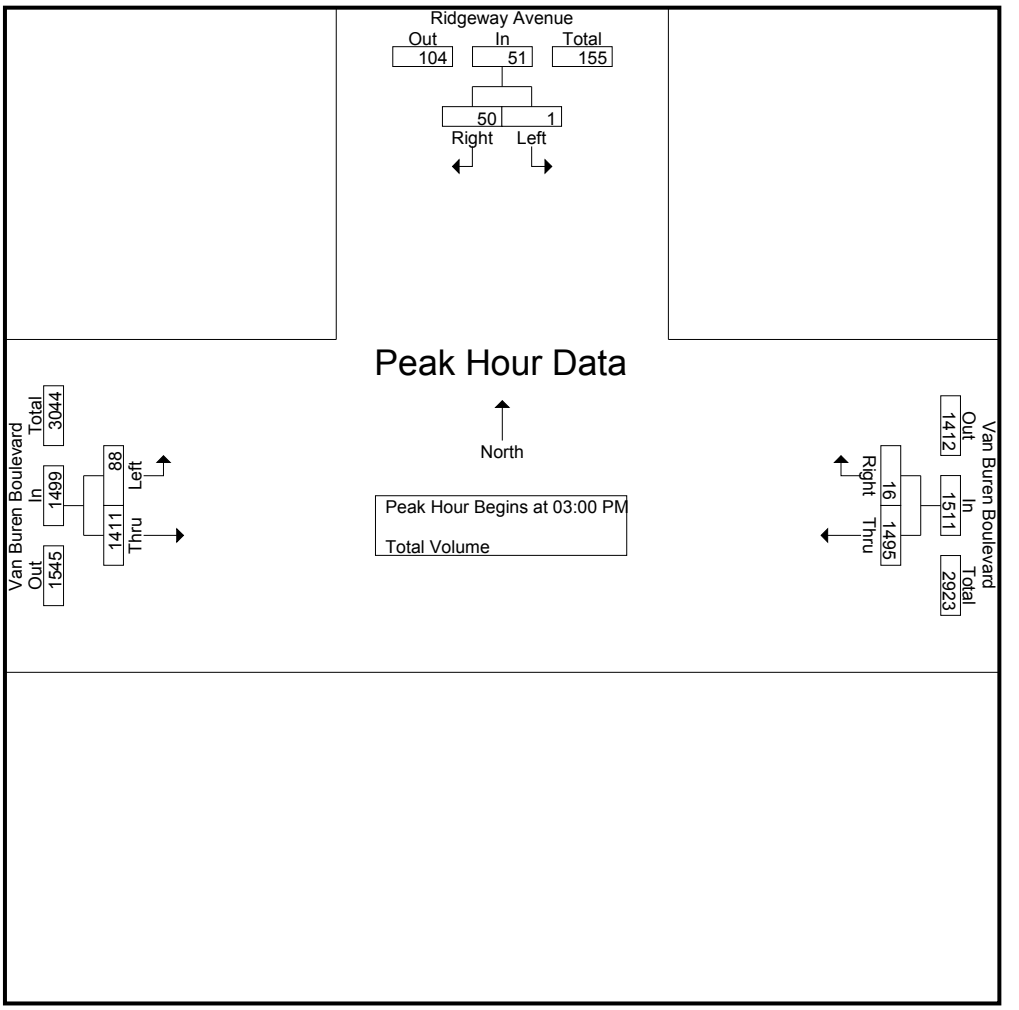

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM			02:45 PM			03:00 PM		
+0 mins.	0	11	11	**426**	**8**	**434**	16	316	332
+15 mins.	**1**	11	12	379	2	381	23	340	363
+30 mins.	1	14	15	350	2	352	**25**	331	356
+45 mins.	0	**20**	**20**	379	7	386	24	**424**	**448**
Total Volume	2	56	58	1534	19	1553	88	1411	1499
% App. Total	3.4	96.6		98.8	1.2		5.9	94.1	
PHF	.500	.700	.725	.900	.594	.895	.880	.832	.836

Location: Riverside
N/S: Ridgeway Avenue
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Ridgeway Avenue	East Leg Van Buren Boulevard	South Leg Dead End	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	2	0	0	0	2
8:00 AM	0	0	0	0	0
8:15 AM	1	0	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	4	0	0	0	4

	North Leg Ridgeway Avenue	East Leg Van Buren Boulevard	South Leg Dead End	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	0	0	0
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	2	0	0	0	2
3:15 PM	0	0	0	0	0
3:30 PM	1	0	0	0	1
3:45 PM	0	0	0	0	0
TOTAL VOLUMES:	3	0	0	0	3

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Location: Riverside
N/S: Ridgeway Avenue
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Ridgeway Avenue			Westbound Van Buren Boulevard			Northbound Dead End			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	1	1	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	1	2	0	3

	Southbound Ridgeway Avenue			Westbound Van Buren Boulevard			Northbound Dead End			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	2	0	0	1	0	0	0	0	0	0	3

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City of Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 06_RIV_Dauchy_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	2	6	14	21	316	2	339	38	3	17	58	4	272	34	310	721
07:15 AM	7	2	2	11	17	323	2	342	60	4	26	90	6	300	35	341	784
07:30 AM	8	8	6	22	20	298	5	323	61	12	20	93	0	264	43	307	745
07:45 AM	6	6	9	21	24	329	5	358	62	11	32	105	5	215	47	267	751
Total	27	18	23	68	82	1266	14	1362	221	30	95	346	15	1051	159	1225	3001
08:00 AM	9	18	4	31	73	324	2	399	50	6	33	89	2	220	67	289	808
08:15 AM	5	12	4	21	36	325	3	364	59	6	59	124	12	223	62	297	806
08:30 AM	3	0	6	9	4	336	2	342	25	3	8	36	8	188	12	208	595
08:45 AM	6	2	6	14	8	286	5	299	9	2	16	27	5	226	7	238	578
Total	23	32	20	75	121	1271	12	1404	143	17	116	276	27	857	148	1032	2787
Grand Total	50	50	43	143	203	2537	26	2766	364	47	211	622	42	1908	307	2257	5788
Apprch %	35	35	30.1		7.3	91.7	0.9		58.5	7.6	33.9		1.9	84.5	13.6		
Total %	0.9	0.9	0.7	2.5	3.5	43.8	0.4	47.8	6.3	0.8	3.6	10.7	0.7	33	5.3	39	
Passenger Vehicles	48	49	43	140	199	2467	26	2692	360	47	209	616	41	1846	303	2190	5638
% Passenger Vehicles	96	98	100	97.9	98	97.2	100	97.3	98.9	100	99.1	99	97.6	96.8	98.7	97	97.4
Large 2 Axle Vehicles	2	1	0	3	3	43	0	46	3	0	2	5	1	37	4	42	96
% Large 2 Axle Vehicles	4	2	0	2.1	1.5	1.7	0	1.7	0.8	0	0.9	0.8	2.4	1.9	1.3	1.9	1.7
3 Axle Vehicles	0	0	0	0	0	13	0	13	0	0	0	0	0	8	0	8	21
% 3 Axle Vehicles	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	0.4	0	0.4	0.4
4+ Axle Trucks	0	0	0	0	1	14	0	15	1	0	0	1	0	17	0	17	33
% 4+ Axle Trucks	0	0	0	0	0.5	0.6	0	0.5	0.3	0	0	0.2	0	0.9	0	0.8	0.6

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	8	8	6	22	20	298	**5**	323	61	**12**	20	93	0	**264**	43	**307**	745
07:45 AM	6	6	**9**	21	24	**329**	5	358	**62**	11	32	105	5	215	47	267	751
08:00 AM	**9**	**18**	4	**31**	**73**	324	2	**399**	50	6	33	89	2	220	**67**	289	**808**
08:15 AM	5	12	4	21	36	325	3	364	59	6	**59**	**124**	**12**	223	62	297	806
Total Volume	28	44	23	95	153	1276	15	1444	232	35	144	411	19	922	219	1160	3110
% App. Total	29.5	46.3	24.2		10.6	88.4	1		56.4	8.5	35		1.6	79.5	18.9		
PHF	.778	.611	.639	.766	.524	.970	.750	.905	.935	.729	.610	.829	.396	.873	.817	.945	.962

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City of Riverside
N/S: Dauchy Avenue
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Weather: Clear

File Name : 06_RIV_Dauchy_VB AM
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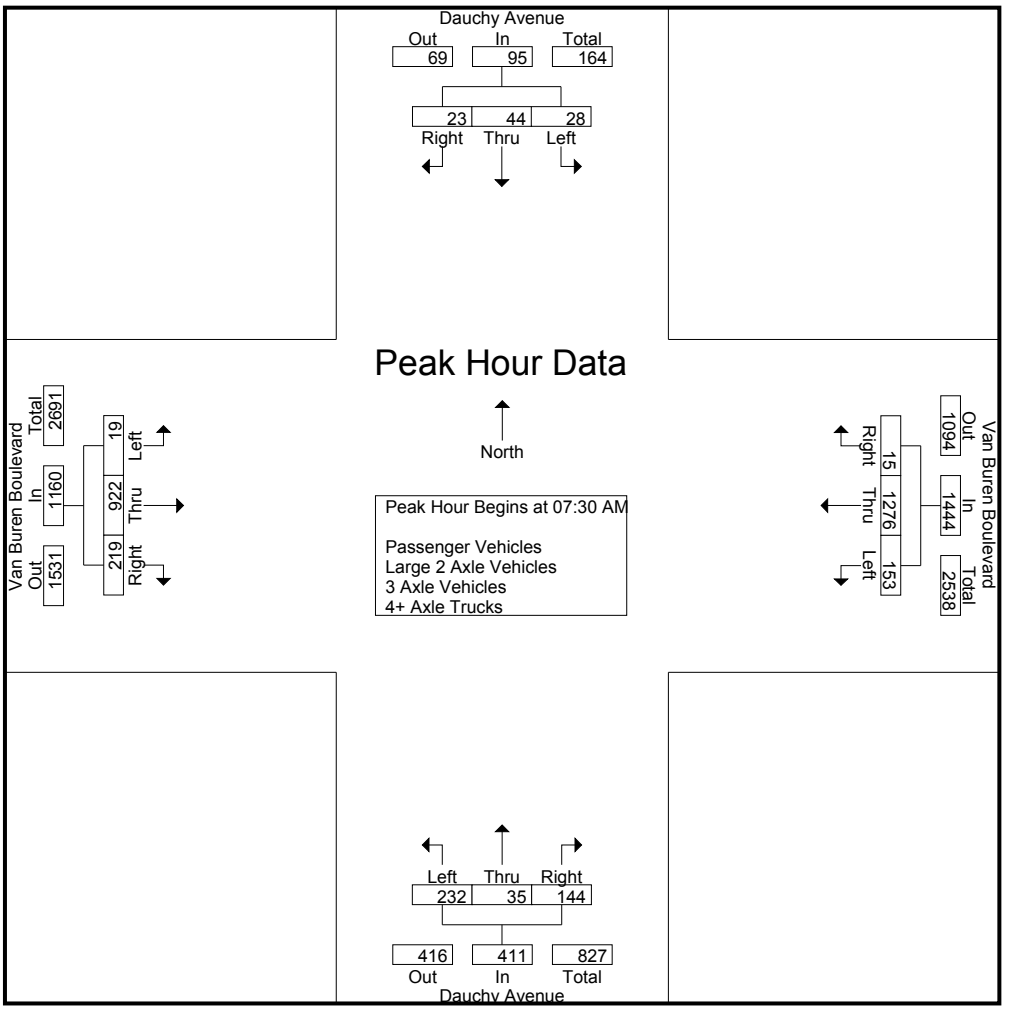

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:30 AM				07:00 AM			
+0 mins.	8	8	6	22	24	329	**5**	358	61	**12**	20	93	4	272	34	310
+15 mins.	6	6	**9**	21	**73**	324	2	**399**	**62**	11	32	105	**6**	**300**	35	**341**
+30 mins.	**9**	**18**	4	**31**	36	325	3	364	50	6	33	89	0	264	43	307
+45 mins.	5	12	4	21	4	**336**	2	342	59	6	**59**	**124**	5	215	**47**	267
Total Volume	28	44	23	95	137	1314	12	1463	232	35	144	411	15	1051	159	1225
% App. Total	29.5	46.3	24.2		9.4	89.8	0.8		56.4	8.5	35		1.2	85.8	13	
PHF	.778	.611	.639	.766	.469	.978	.600	.917	.935	.729	.610	.829	.625	.876	.846	.898

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Groups Printed- Passenger Vehicles

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	6	2	6	14	20	307	2	329	37	3	16	56	4	266	33	303	702
07:15 AM	6	2	2	10	16	314	2	332	58	4	26	88	5	293	34	332	762
07:30 AM	7	7	6	20	19	289	5	313	61	12	20	93	0	259	43	302	728
07:45 AM	6	6	9	21	23	324	5	352	62	11	31	104	5	205	47	257	734
Total	25	17	23	65	78	1234	14	1326	218	30	93	341	14	1023	157	1194	2926
08:00 AM	9	18	4	31	73	313	2	388	50	6	33	89	2	213	65	280	788
08:15 AM	5	12	4	21	36	315	3	354	58	6	59	123	12	211	62	285	783
08:30 AM	3	0	6	9	4	329	2	335	25	3	8	36	8	181	12	201	581
08:45 AM	6	2	6	14	8	276	5	289	9	2	16	27	5	218	7	230	560
Total	23	32	20	75	121	1233	12	1366	142	17	116	275	27	823	146	996	2712
Grand Total	48	49	43	140	199	2467	26	2692	360	47	209	616	41	1846	303	2190	5638
Apprch %	34.3	35	30.7		7.4	91.6	1		58.4	7.6	33.9		1.9	84.3	13.8		
Total %	0.9	0.9	0.8	2.5	3.5	43.8	0.5	47.7	6.4	0.8	3.7	10.9	0.7	32.7	5.4	38.8	

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	7	7	6	20	19	289	**5**	313	61	**12**	20	93	0	**259**	43	**302**	728
07:45 AM	6	6	**9**	21	23	**324**	5	352	**62**	11	31	104	5	205	47	257	734
08:00 AM	**9**	**18**	4	**31**	**73**	313	2	**388**	50	6	33	89	2	213	**65**	280	**788**
08:15 AM	5	12	4	21	36	315	3	354	58	6	**59**	**123**	**12**	211	62	285	783
Total Volume	27	43	23	93	151	1241	15	1407	231	35	143	409	19	888	217	1124	3033
% App. Total	29	46.2	24.7		10.7	88.2	1.1		56.5	8.6	35		1.7	79	19.3		
PHF	.750	.597	.639	.750	.517	.958	.750	.907	.931	.729	.606	.831	.396	.857	.835	.930	.962

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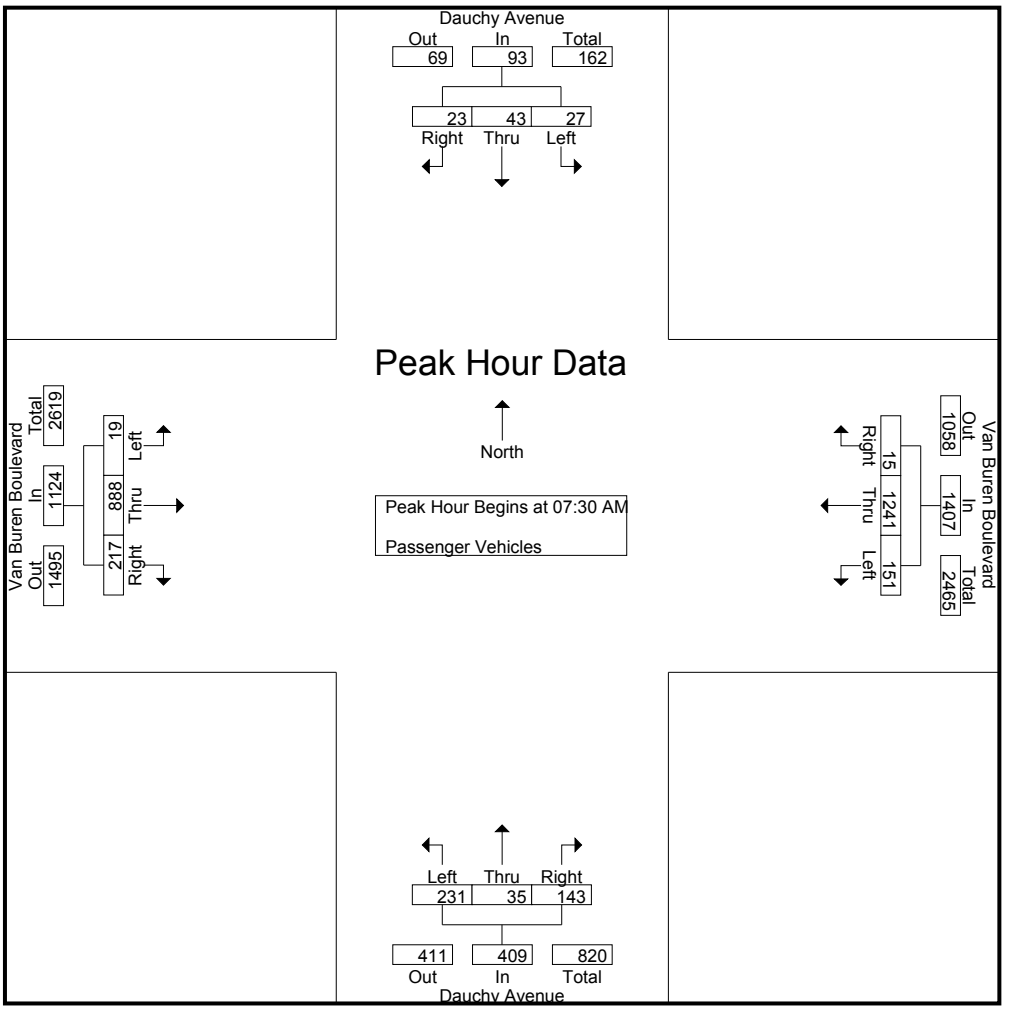

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	7	7	6	20	19	289	**5**	313	61	**12**	20	93	0	**259**	43	**302**
+15 mins.	6	6	**9**	21	23	**324**	5	352	**62**	11	31	104	5	205	47	257
+30 mins.	**9**	**18**	4	**31**	**73**	313	2	**388**	50	6	33	89	2	213	**65**	280
+45 mins.	5	12	4	21	36	315	3	354	58	6	**59**	**123**	**12**	211	62	285
Total Volume	27	43	23	93	151	1241	15	1407	231	35	143	409	19	888	217	1124
% App. Total	29	46.2	24.7		10.7	88.2	1.1		56.5	8.6	35		1.7	79	19.3	
PHF	.750	.597	.639	.750	.517	.958	.750	.907	.931	.729	.606	.831	.396	.857	.835	.930

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City of Riverside
N/S: Dauchy Avenue
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File Name : 06_RIV_Dauchy_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	6	0	7	1	0	1	2	0	4	1	5	14
07:15 AM	1	0	0	1	1	6	0	7	2	0	0	2	1	4	1	6	16
07:30 AM	1	1	0	2	1	2	0	3	0	0	0	0	0	4	0	4	9
07:45 AM	0	0	0	0	0	5	0	5	0	0	1	1	0	5	0	5	11
Total	2	1	0	3	3	19	0	22	3	0	2	5	1	17	2	20	50
08:00 AM	0	0	0	0	0	8	0	8	0	0	0	0	0	5	2	7	15
08:15 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	7	0	7	13
08:30 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
08:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	5	0	5	10
Total	0	0	0	0	0	24	0	24	0	0	0	0	0	20	2	22	46
Grand Total	2	1	0	3	3	43	0	46	3	0	2	5	1	37	4	42	96
Apprch %	66.7	33.3	0		6.5	93.5	0		60	0	40		2.4	88.1	9.5		
Total %	2.1	1	0	3.1	3.1	44.8	0	47.9	3.1	0	2.1	5.2	1	38.5	4.2	43.8	

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**1**	**1**	0	**2**	**1**	2	0	3	0	0	0	0	0	4	0	4	9
07:45 AM	0	0	0	0	0	5	0	5	0	0	**1**	**1**	0	5	0	5	11
08:00 AM	0	0	0	0	0	**8**	0	**8**	0	0	0	0	0	5	**2**	**7**	**15**
08:15 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	**7**	0	7	13
Total Volume	1	1	0	2	1	21	0	22	0	0	1	1	0	21	2	23	48
% App. Total	50	50	0		4.5	95.5	0		0	0	100		0	91.3	8.7		
PHF	.250	.250	.000	.250	.250	.656	.000	.688	.000	.000	.250	.250	.000	.750	.250	.821	.800

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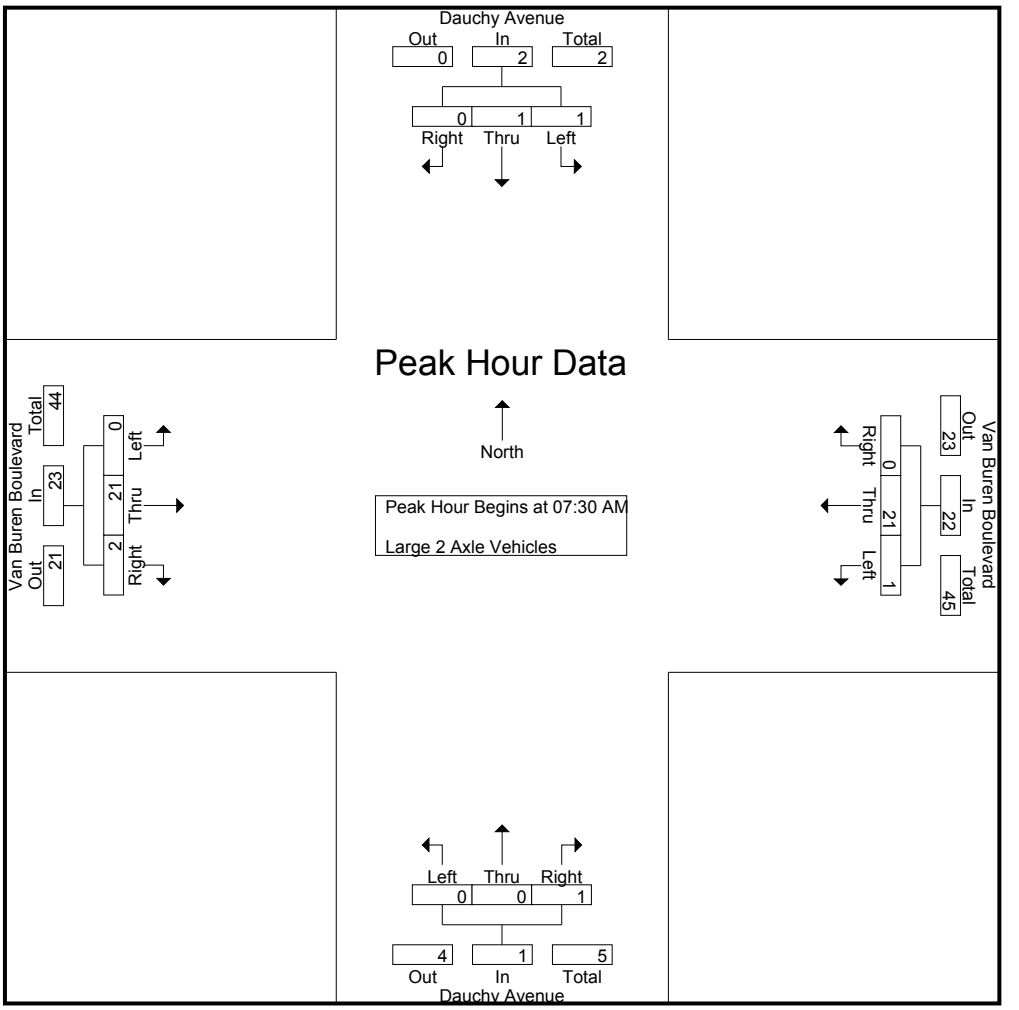

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**1**	**1**	0	**2**	**1**	2	0	3	0	0	0	0	0	4	0	4
+15 mins.	0	0	0	0	0	5	0	5	0	0	**1**	**1**	0	5	0	5
+30 mins.	0	0	0	0	0	**8**	0	**8**	0	0	0	0	0	5	**2**	**7**
+45 mins.	0	0	0	0	0	6	0	6	0	0	0	0	0	**7**	0	7
Total Volume	1	1	0	2	1	21	0	22	0	0	1	1	0	21	2	23
% App. Total	50	50	0		4.5	95.5	0		0	0	100		0	91.3	8.7	
PHF	.250	.250	.000	.250	.250	.656	.000	.688	.000	.000	.250	.250	.000	.750	.250	.821

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Groups Printed- 3 Axle Vehicles

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	9
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	0	0	0	0	0	7	0	7	0	0	0	0	0	5	0	5	12
Grand Total	0	0	0	0	0	13	0	13	0	0	0	0	0	8	0	8	21
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	61.9	0	61.9	0	0	0	0	0	38.1	0	38.1	

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	1	0	1	5
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	**3**	0	**3**	**6**
Total Volume	0	0	0	0	0	7	0	7	0	0	0	0	0	5	0	5	12
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.438	.000	.438	.000	.000	.000	.000	.000	.417	.000	.417	.500

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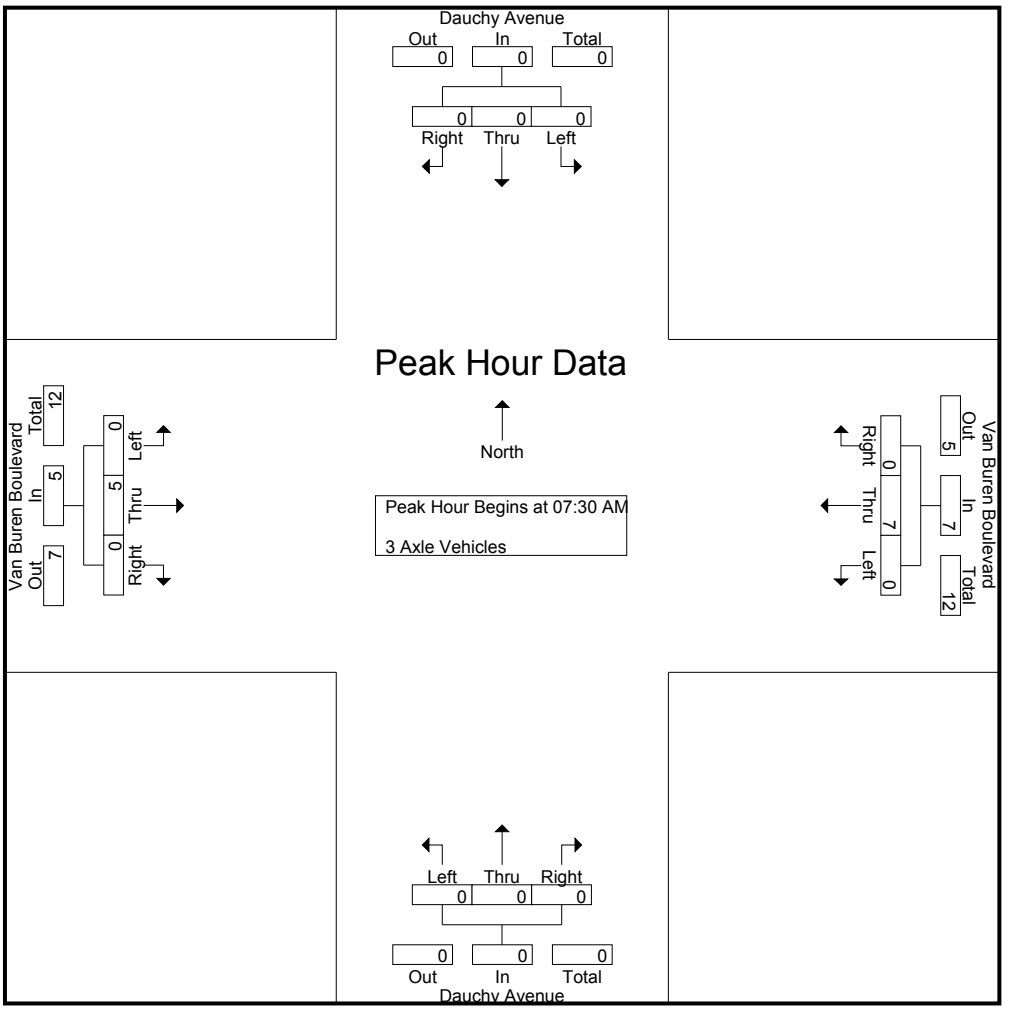

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	**3**	0	**3**
Total Volume	0	0	0	0	0	7	0	7	0	0	0	0	0	5	0	5
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.438	.000	.438	.000	.000	.000	.000	.000	.417	.000	.417

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Groups Printed- 4+ Axle Trucks

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	4	0	4	5
Total	0	0	0	0	1	7	0	8	0	0	0	0	0	8	0	8	16
08:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
08:15 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	2	0	2	4
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	7	0	7	1	0	0	1	0	9	0	9	17
Grand Total	0	0	0	0	1	14	0	15	1	0	0	1	0	17	0	17	33
Apprch %	0	0	0		6.7	93.3	0		100	0	0		0	100	0		
Total %	0	0	0	0	3	42.4	0	45.5	3	0	0	3	0	51.5	0	51.5	

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	0	0	**1**	0	0	1	0	0	0	0	0	**4**	0	**4**	**5**
08:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
08:15 AM	0	0	0	0	0	1	0	1	**1**	0	0	**1**	0	2	0	2	4
Total Volume	0	0	0	0	1	7	0	8	1	0	0	1	0	8	0	8	17
% App. Total	0	0	0		12.5	87.5	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.583	.000	.667	.250	.000	.000	.250	.000	.500	.000	.500	.850

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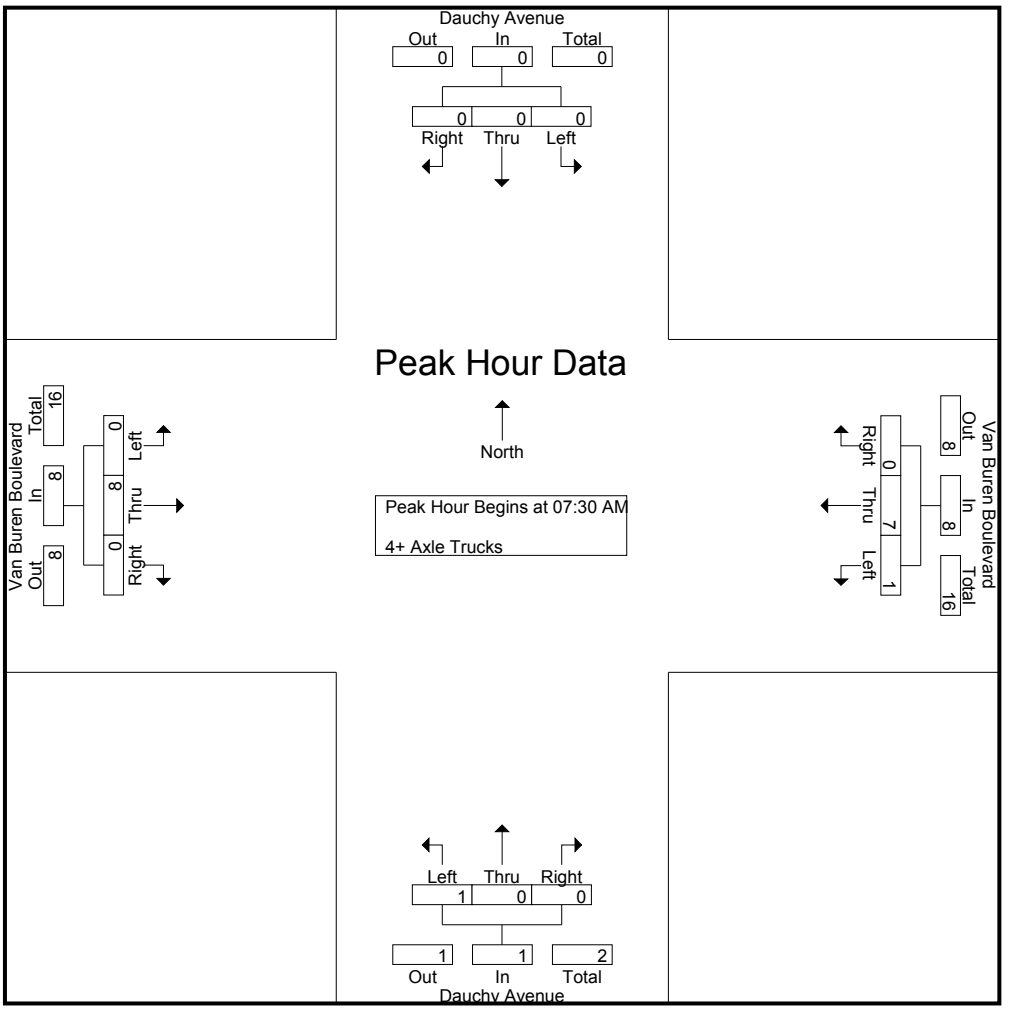

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	**1**	0	0	1	0	0	0	0	0	**4**	0	**4**
+30 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	1	0	1	**1**	0	0	**1**	0	2	0	2
Total Volume	0	0	0	0	1	7	0	8	1	0	0	1	0	8	0	8
% App. Total	0	0	0		12.5	87.5	0		100	0	0		0	100	0	
PHF	.000	.000	.000	.000	.250	.583	.000	.667	.250	.000	.000	.250	.000	.500	.000	.500

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	14	2	8	24	22	245	5	272	21	9	15	45	5	240	21	266	607
02:15 PM	14	3	14	31	25	284	3	312	15	3	13	31	6	255	30	291	665
02:30 PM	13	12	12	37	27	265	4	296	13	5	11	29	15	248	49	312	674
02:45 PM	17	11	12	40	28	371	13	412	58	26	34	118	10	255	44	309	879
Total	58	28	46	132	102	1165	25	1292	107	43	73	223	36	998	144	1178	2825
03:00 PM	20	5	10	35	25	297	8	330	60	21	38	119	18	254	39	311	795
03:15 PM	12	3	9	24	21	328	3	352	22	10	20	52	15	286	52	353	781
03:30 PM	8	7	9	24	21	334	1	356	39	3	11	53	11	309	26	346	779
03:45 PM	16	9	8	33	26	347	4	377	27	6	19	52	13	331	43	387	849
Total	56	24	36	116	93	1306	16	1415	148	40	88	276	57	1180	160	1397	3204
Grand Total	114	52	82	248	195	2471	41	2707	255	83	161	499	93	2178	304	2575	6029
Apprch %	46	21	33.1		7.2	91.3	1.5		51.1	16.6	32.3		3.6	84.6	11.8		
Total %	1.9	0.9	1.4	4.1	3.2	41	0.7	44.9	4.2	1.4	2.7	8.3	1.5	36.1	5	42.7	
Passenger Vehicles	110	52	80	242	190	2396	39	2625	250	83	158	491	87	2111	293	2491	5849
% Passenger Vehicles	96.5	100	97.6	97.6	97.4	97	95.1	97	98	100	98.1	98.4	93.5	96.9	96.4	96.7	97
Large 2 Axle Vehicles	2	0	2	4	5	51	1	57	5	0	3	8	4	37	8	49	118
% Large 2 Axle Vehicles	1.8	0	2.4	1.6	2.6	2.1	2.4	2.1	2	0	1.9	1.6	4.3	1.7	2.6	1.9	2
3 Axle Vehicles	2	0	0	2	0	11	1	12	0	0	0	0	2	13	2	17	31
% 3 Axle Vehicles	1.8	0	0	0.8	0	0.4	2.4	0.4	0	0	0	0	2.2	0.6	0.7	0.7	0.5
4+ Axle Trucks	0	0	0	0	0	13	0	13	0	0	0	0	0	17	1	18	31
% 4+ Axle Trucks	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0	0.8	0.3	0.7	0.5

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	17	**11**	**12**	**40**	**28**	**371**	**13**	**412**	58	**26**	34	118	10	255	44	309	**879**
03:00 PM	**20**	5	10	35	25	297	8	330	**60**	21	**38**	**119**	**18**	254	39	311	795
03:15 PM	12	3	9	24	21	328	3	352	22	10	20	52	15	286	**52**	**353**	781
03:30 PM	8	7	9	24	21	334	1	356	39	3	11	53	11	**309**	26	346	779
Total Volume	57	26	40	123	95	1330	25	1450	179	60	103	342	54	1104	161	1319	3234
% App. Total	46.3	21.1	32.5		6.6	91.7	1.7		52.3	17.5	30.1		4.1	83.7	12.2		
PHF	.713	.591	.833	.769	.848	.896	.481	.880	.746	.577	.678	.718	.750	.893	.774	.934	.920

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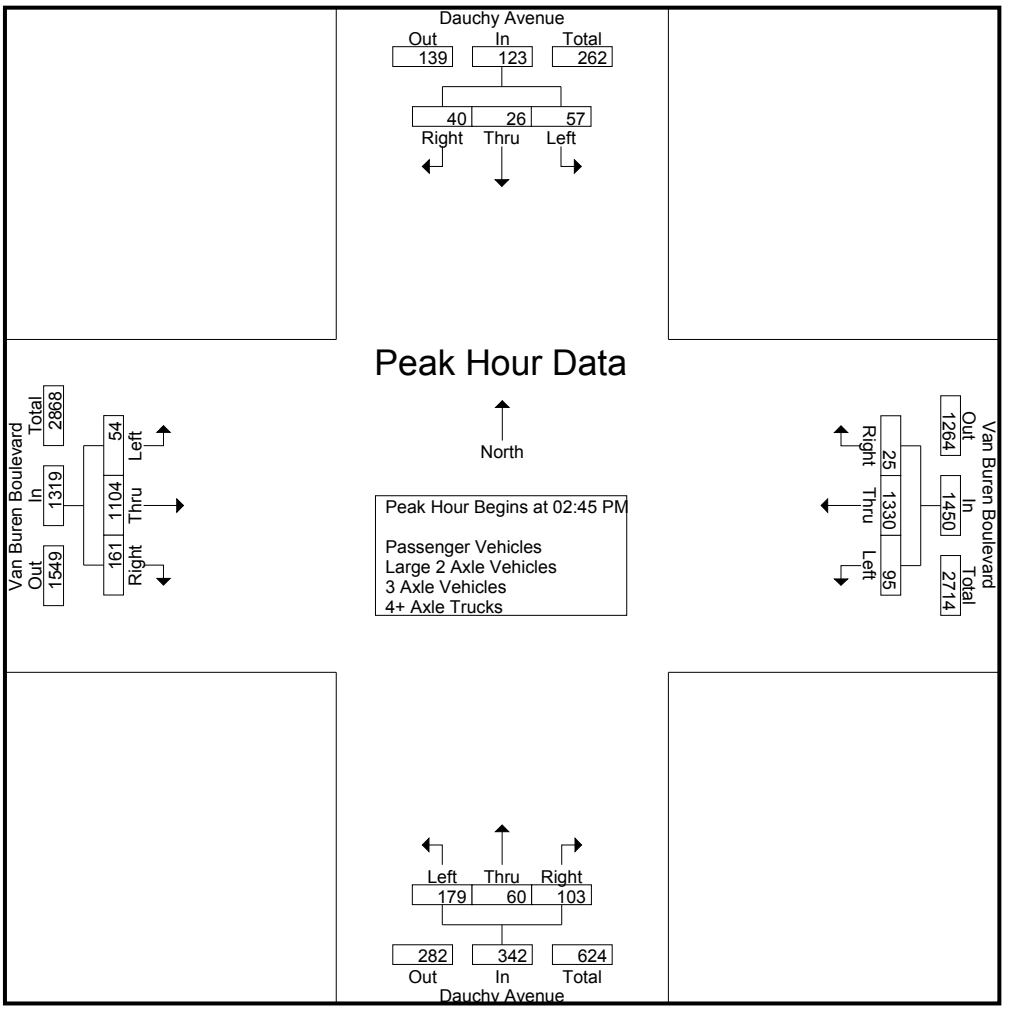

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:15 PM				02:45 PM				02:45 PM				03:00 PM			
+0 mins.	14	3	**14**	31	**28**	**371**	**13**	**412**	58	**26**	34	118	**18**	254	39	311
+15 mins.	13	**12**	12	37	25	297	8	330	**60**	21	**38**	**119**	15	286	**52**	353
+30 mins.	17	11	12	**40**	21	328	3	352	22	10	20	52	11	309	26	346
+45 mins.	**20**	5	10	35	21	334	1	356	39	3	11	53	13	**331**	43	**387**
Total Volume	64	31	48	143	95	1330	25	1450	179	60	103	342	57	1180	160	1397
% App. Total	44.8	21.7	33.6		6.6	91.7	1.7		52.3	17.5	30.1		4.1	84.5	11.5	
PHF	.800	.646	.857	.894	.848	.896	.481	.880	.746	.577	.678	.718	.792	.891	.769	.902

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Groups Printed- Passenger Vehicles

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	13	2	8	23	19	238	5	262	21	9	15	45	5	232	18	255	585
02:15 PM	14	3	13	30	25	275	2	302	15	3	13	31	6	245	29	280	643
02:30 PM	12	12	12	36	27	253	3	283	12	5	11	28	13	238	47	298	645
02:45 PM	16	11	12	39	28	365	13	406	56	26	34	116	10	249	44	303	864
Total	55	28	45	128	99	1131	23	1253	104	43	73	220	34	964	138	1136	2737
03:00 PM	19	5	10	34	25	288	8	321	60	21	36	117	16	246	38	300	772
03:15 PM	12	3	8	23	20	315	3	338	22	10	19	51	13	276	51	340	752
03:30 PM	8	7	9	24	20	322	1	343	39	3	11	53	11	303	25	339	759
03:45 PM	16	9	8	33	26	340	4	370	25	6	19	50	13	322	41	376	829
Total	55	24	35	114	91	1265	16	1372	146	40	85	271	53	1147	155	1355	3112
Grand Total	110	52	80	242	190	2396	39	2625	250	83	158	491	87	2111	293	2491	5849
Apprch %	45.5	21.5	33.1		7.2	91.3	1.5		50.9	16.9	32.2		3.5	84.7	11.8		
Total %	1.9	0.9	1.4	4.1	3.2	41	0.7	44.9	4.3	1.4	2.7	8.4	1.5	36.1	5	42.6	

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	16	**11**	**12**	**39**	**28**	**365**	**13**	**406**	56	**26**	34	116	10	249	44	303	**864**
03:00 PM	**19**	5	10	34	25	288	8	321	**60**	21	**36**	**117**	**16**	246	38	300	772
03:15 PM	12	3	8	23	20	315	3	338	22	10	19	51	13	276	**51**	**340**	752
03:30 PM	8	7	9	24	20	322	1	343	39	3	11	53	11	**303**	25	339	759
Total Volume	55	26	39	120	93	1290	25	1408	177	60	100	337	50	1074	158	1282	3147
% App. Total	45.8	21.7	32.5		6.6	91.6	1.8		52.5	17.8	29.7		3.9	83.8	12.3		
PHF	.724	.591	.813	.769	.830	.884	.481	.867	.738	.577	.694	.720	.781	.886	.775	.943	.911

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City of Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 06_RIV_Dauchy_VB MD
Site Code : 00321719
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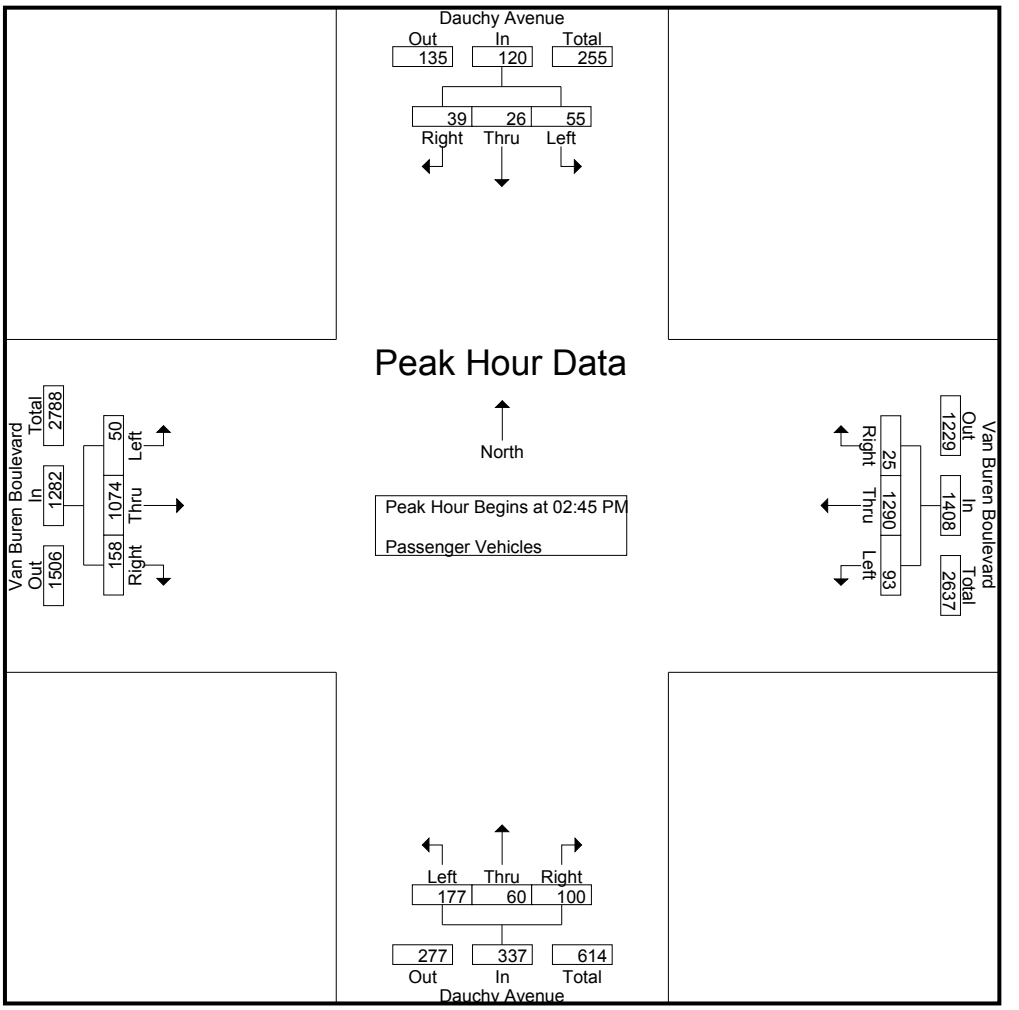

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	16	**11**	**12**	**39**	**28**	**365**	**13**	**406**	56	**26**	34	116	10	249	44	303
+15 mins.	**19**	5	10	34	25	288	8	321	**60**	21	**36**	**117**	**16**	246	38	300
+30 mins.	12	3	8	23	20	315	3	338	22	10	19	51	13	276	**51**	**340**
+45 mins.	8	7	9	24	20	322	1	343	39	3	11	53	11	**303**	25	339
Total Volume	55	26	39	120	93	1290	25	1408	177	60	100	337	50	1074	158	1282
% App. Total	45.8	21.7	32.5		6.6	91.6	1.8		52.5	17.8	29.7		3.9	83.8	12.3	
PHF	.724	.591	.813	.769	.830	.884	.481	.867	.738	.577	.694	.720	.781	.886	.775	.943

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City of Riverside
N/S: Dauchy Avenue
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Weather: Clear

File Name : 06_RIV_Dauchy_VB MD
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Groups Printed- Large 2 Axle Vehicles

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	3	3	0	6	0	0	0	0	0	7	3	10	16
02:15 PM	0	0	1	1	0	8	0	8	0	0	0	0	0	6	1	7	16
02:30 PM	0	0	0	0	0	10	1	11	1	0	0	1	2	4	1	7	19
02:45 PM	1	0	0	1	0	5	0	5	2	0	0	2	0	2	0	2	10
Total	1	0	1	2	3	26	1	30	3	0	0	3	2	19	5	26	61
03:00 PM	1	0	0	1	0	6	0	6	0	0	2	2	1	2	1	4	13
03:15 PM	0	0	1	1	1	6	0	7	0	0	1	1	1	7	1	9	18
03:30 PM	0	0	0	0	1	7	0	8	0	0	0	0	0	5	1	6	14
03:45 PM	0	0	0	0	0	6	0	6	2	0	0	2	0	4	0	4	12
Total	1	0	1	2	2	25	0	27	2	0	3	5	2	18	3	23	57
Grand Total	2	0	2	4	5	51	1	57	5	0	3	8	4	37	8	49	118
Apprch %	50	0	50		8.8	89.5	1.8		62.5	0	37.5		8.2	75.5	16.3		
Total %	1.7	0	1.7	3.4	4.2	43.2	0.8	48.3	4.2	0	2.5	6.8	3.4	31.4	6.8	41.5	

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	**1**	0	0	**1**	0	5	0	5	**2**	0	0	**2**	0	2	0	2	10
03:00 PM	1	0	0	1	0	6	0	6	0	0	**2**	2	**1**	2	**1**	4	13
03:15 PM	0	0	**1**	1	**1**	6	0	7	0	0	1	1	1	**7**	1	**9**	**18**
03:30 PM	0	0	0	0	1	**7**	0	**8**	0	0	0	0	0	5	1	6	14
Total Volume	2	0	1	3	2	24	0	26	2	0	3	5	2	16	3	21	55
% App. Total	66.7	0	33.3		7.7	92.3	0		40	0	60		9.5	76.2	14.3		
PHF	.500	.000	.250	.750	.500	.857	.000	.813	.250	.000	.375	.625	.500	.571	.750	.583	.764

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City of Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 06_RIV_Dauchy_VB MD
Site Code : 00321719
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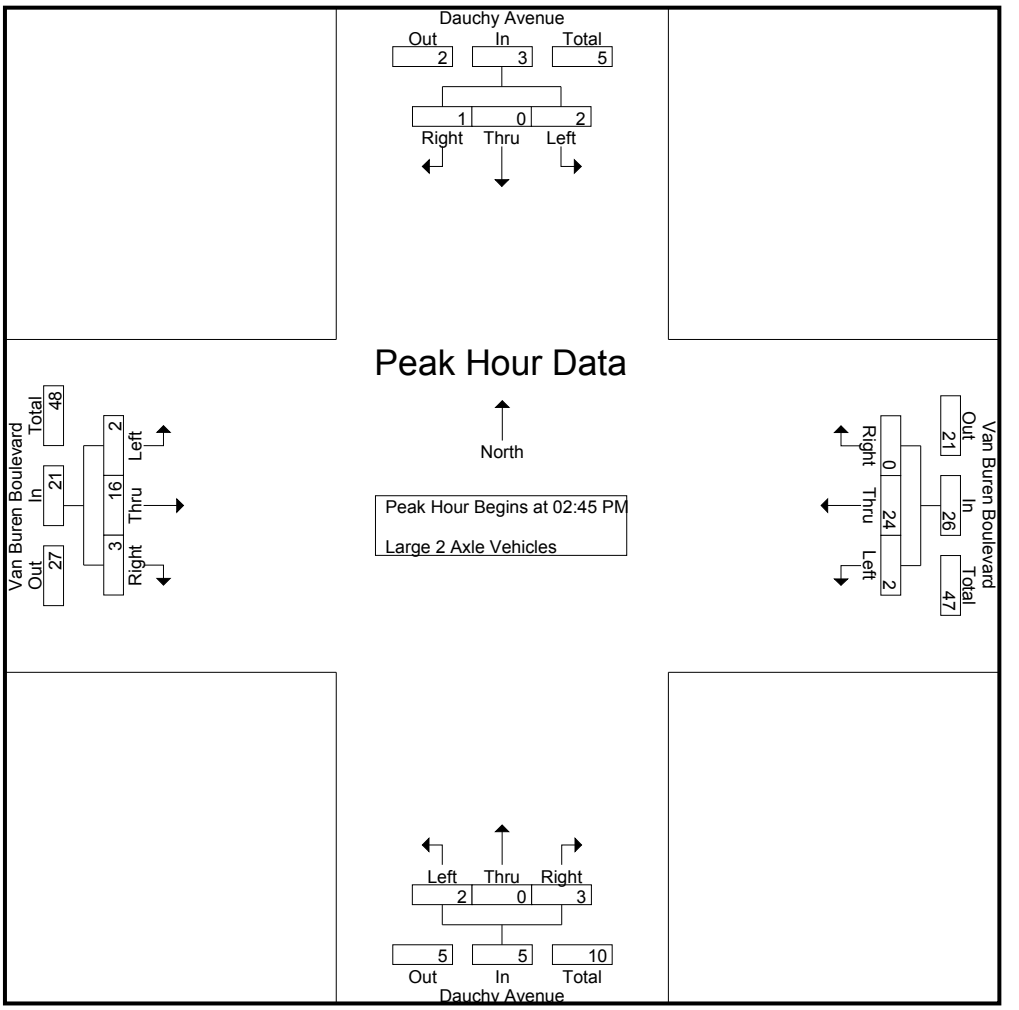

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	**1**	0	0	**1**	0	5	0	5	**2**	0	0	**2**	0	2	0	2
+15 mins.	1	0	0	1	0	6	0	6	0	0	**2**	2	**1**	2	**1**	4
+30 mins.	0	0	**1**	1	**1**	6	0	7	0	0	1	1	1	**7**	1	**9**
+45 mins.	0	0	0	0	1	**7**	0	**8**	0	0	0	0	0	5	1	6
Total Volume	2	0	1	3	2	24	0	26	2	0	3	5	2	16	3	21
% App. Total	66.7	0	33.3		7.7	92.3	0		40	0	60		9.5	76.2	14.3	
PHF	.500	.000	.250	.750	.500	.857	.000	.813	.250	.000	.375	.625	.500	.571	.750	.583

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City of Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 06_RIV_Dauchy_VB MD
Site Code : 00321719
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Groups Printed- 3 Axle Vehicles

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
02:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	2	0	2	4
02:30 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	3	1	4	6
02:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	2	0	0	2	0	3	1	4	0	0	0	0	0	8	1	9	15
03:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	1	3	0	4	7
03:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	0	0	1	3
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	1	3	4
Total	0	0	0	0	0	8	0	8	0	0	0	0	2	5	1	8	16
Grand Total	2	0	0	2	0	11	1	12	0	0	0	0	2	13	2	17	31
Apprch %	100	0	0		0	91.7	8.3		0	0	0		11.8	76.5	11.8		
Total %	6.5	0	0	6.5	0	35.5	3.2	38.7	0	0	0	0	6.5	41.9	6.5	54.8	

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
03:00 PM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	**1**	**3**	0	**4**	**7**
03:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	0	0	1	3
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	8	0	8	0	0	0	0	2	5	0	7	15
% App. Total	0	0	0		0	100	0		0	0	0		28.6	71.4	0		
PHF	.000	.000	.000	.000	.000	.667	.000	.667	.000	.000	.000	.000	.500	.417	.000	.438	.536

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City of Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 06_RIV_Dauchy_VB MD
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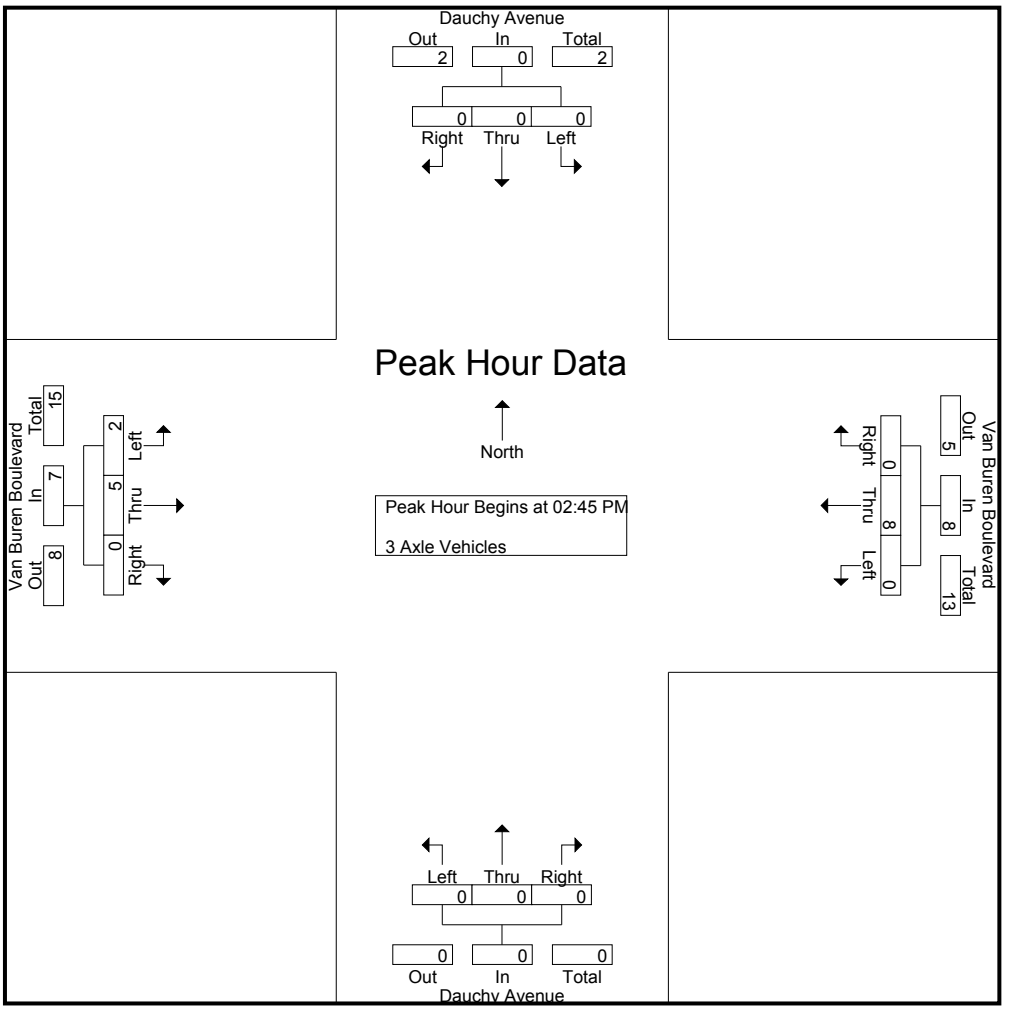

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	**1**	**3**	0	**4**
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	1	0	0	1
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	8	0	8	0	0	0	0	2	5	0	7
% App. Total	0	0	0		0	100	0		0	0	0		28.6	71.4	0	
PHF	.000	.000	.000	.000	.000	.667	.000	.667	.000	.000	.000	.000	.500	.417	.000	.438

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City of Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 06_RIV_Dauchy_VB MD
Site Code : 00321719
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Groups Printed- 4+ Axle Trucks

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
02:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	5	0	5	0	0	0	0	0	7	0	7	12
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
03:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
03:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	4
Total	0	0	0	0	0	8	0	8	0	0	0	0	0	10	1	11	19
Grand Total	0	0	0	0	0	13	0	13	0	0	0	0	0	17	1	18	31
Apprch %	0	0	0		0	100	0		0	0	0		0	94.4	5.6		
Total %	0	0	0	0	0	41.9	0	41.9	0	0	0	0	0	54.8	3.2	58.1	

	Dauchy Avenue Southbound				Van Buren Boulevard Westbound				Dauchy Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**	3
03:15 PM	0	0	0	0	0	**5**	0	**5**	0	0	0	0	0	3	0	3	**8**
03:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total Volume	0	0	0	0	0	8	0	8	0	0	0	0	0	9	0	9	17
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.400	.000	.400	.000	.000	.000	.000	.000	.750	.000	.750	.531

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City of Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 06_RIV_Dauchy_VB MD
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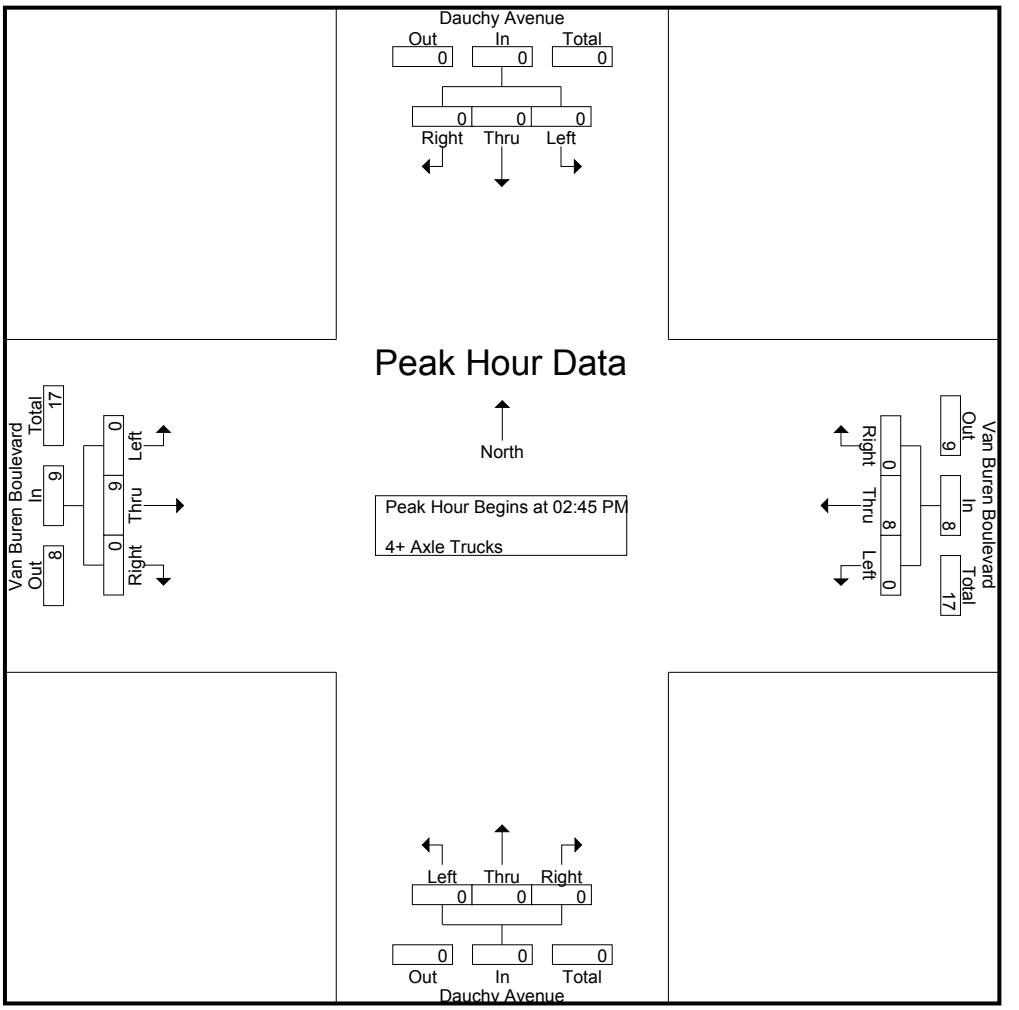

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**
+30 mins.	0	0	0	0	0	**5**	0	**5**	0	0	0	0	0	3	0	3
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	8	0	8	0	0	0	0	0	9	0	9
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.400	.000	.400	.000	.000	.000	.000	.000	.750	.000	.750

Location: Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Dauchy Avenue	East Leg Van Buren Boulevard	South Leg #NAME?	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

	North Leg Dauchy Avenue	East Leg Van Buren Boulevard	South Leg #NAME?	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	0	0	0
2:15 PM	0	0	1	1	2
2:30 PM	0	0	0	0	0
2:45 PM	1	0	0	0	1
3:00 PM	4	0	0	0	4
3:15 PM	3	0	0	9	12
3:30 PM	0	0	2	8	10
3:45 PM	0	0	0	6	6
TOTAL VOLUMES:	8	0	3	24	35

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Location: Riverside
N/S: Dauchy Avenue
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Dauchy Avenue			Westbound Van Buren Boulevard			Northbound #NAME?			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	1	0	1

	Southbound Dauchy Avenue			Westbound Van Buren Boulevard			Northbound #NAME?			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Riverside
N/S: Dauchy Avenue/Taft Street
E/W: Krameria Avenue
Weather: Clear

File Name : 08_RIV_Dauchy_Kram AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	11	0	10	21	0	101	15	116	6	3	0	9	6	97	1	104	250
07:15 AM	19	2	9	30	0	107	23	130	5	7	3	15	11	126	1	138	313
07:30 AM	22	1	5	28	0	96	18	114	2	2	1	5	12	83	0	95	242
07:45 AM	22	3	8	33	1	76	30	107	1	3	4	8	9	31	0	40	188
Total	74	6	32	112	1	380	86	467	14	15	8	37	38	337	2	377	993
08:00 AM	14	2	15	31	3	43	25	71	0	1	2	3	14	19	0	33	138
08:15 AM	17	2	11	30	1	21	13	35	1	4	3	8	10	20	2	32	105
08:30 AM	5	1	0	6	0	30	6	36	2	6	1	9	2	18	1	21	72
08:45 AM	3	1	0	4	1	16	1	18	0	3	1	4	5	13	2	20	46
Total	39	6	26	71	5	110	45	160	3	14	7	24	31	70	5	106	361
Grand Total	113	12	58	183	6	490	131	627	17	29	15	61	69	407	7	483	1354
Apprch %	61.7	6.6	31.7		1	78.1	20.9		27.9	47.5	24.6		14.3	84.3	1.4		
Total %	8.3	0.9	4.3	13.5	0.4	36.2	9.7	46.3	1.3	2.1	1.1	4.5	5.1	30.1	0.5	35.7	
Passenger Vehicles	110	12	56	178	6	484	131	621	17	28	15	60	67	404	7	478	1337
% Passenger Vehicles	97.3	100	96.6	97.3	100	98.8	100	99	100	96.6	100	98.4	97.1	99.3	100	99	98.7
Large 2 Axle Vehicles	3	0	2	5	0	5	0	5	0	1	0	1	1	3	0	4	15
% Large 2 Axle Vehicles	2.7	0	3.4	2.7	0	1	0	0.8	0	3.4	0	1.6	1.4	0.7	0	0.8	1.1
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
% 4+ Axle Trucks	0	0	0	0	0	0.2	0	0.2	0	0	0	0	1.4	0	0	0.2	0.1

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	11	0	**10**	21	0	101	15	116	**6**	3	0	9	6	97	**1**	104	250
07:15 AM	19	2	9	30	0	**107**	23	**130**	5	**7**	3	**15**	11	**126**	1	**138**	**313**
07:30 AM	**22**	1	5	28	0	96	18	114	2	2	1	5	**12**	83	0	95	242
07:45 AM	22	**3**	8	**33**	**1**	76	**30**	107	1	3	**4**	8	9	31	0	40	188
Total Volume	74	6	32	112	1	380	86	467	14	15	8	37	38	337	2	377	993
% App. Total	66.1	5.4	28.6		0.2	81.4	18.4		37.8	40.5	21.6		10.1	89.4	0.5		
PHF	.841	.500	.800	.848	.250	.888	.717	.898	.583	.536	.500	.617	.792	.669	.500	.683	.793

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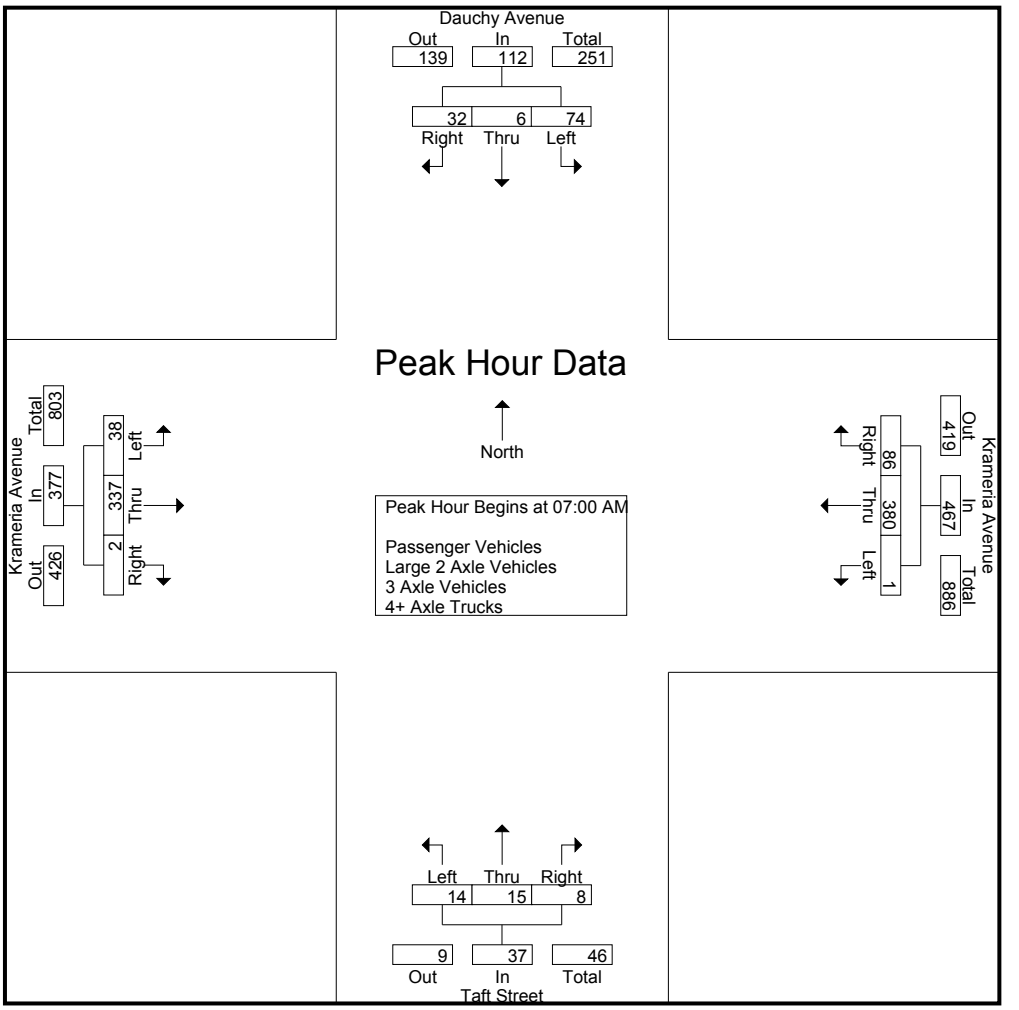
City of Riverside
N/S: Dauchy Avenue/Taft Street
E/W: Krameria Avenue
Weather: Clear

File Name : 08_RIV_Dauchy_Kram AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	19	2	9	30	0	101	15	116	**6**	3	0	9	6	97	**1**	104
+15 mins.	**22**	1	5	28	0	**107**	23	**130**	5	**7**	3	**15**	11	**126**	1	**138**
+30 mins.	22	**3**	8	**33**	0	96	18	114	2	2	1	5	**12**	83	0	95
+45 mins.	14	2	**15**	31	**1**	76	**30**	107	1	3	**4**	8	9	31	0	40
Total Volume	77	8	37	122	1	380	86	467	14	15	8	37	38	337	2	377
% App. Total	63.1	6.6	30.3		0.2	81.4	18.4		37.8	40.5	21.6		10.1	89.4	0.5	
PHF	.875	.667	.617	.924	.250	.888	.717	.898	.583	.536	.500	.617	.792	.669	.500	.683

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City of Riverside
N/S: Dauchy Avenue/Taft Street
E/W: Krameria Avenue
Weather: Clear

File Name : 08_RIV_Dauchy_Kram AM
Site Code : 00321719
Start Date : 11/18/2021

Groups Printed- Passenger Vehicles

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	10	0	10	20	0	98	15	113	6	3	0	9	6	95	1	102	244
07:15 AM	18	2	8	28	0	105	23	128	5	7	3	15	11	126	1	138	309
07:30 AM	21	1	4	26	0	96	18	114	2	2	1	5	11	82	0	93	238
07:45 AM	22	3	8	33	1	76	30	107	1	3	4	8	9	31	0	40	188
Total	71	6	30	107	1	375	86	462	14	15	8	37	37	334	2	373	979
08:00 AM	14	2	15	31	3	42	25	70	0	1	2	3	14	19	0	33	137
08:15 AM	17	2	11	30	1	21	13	35	1	4	3	8	10	20	2	32	105
08:30 AM	5	1	0	6	0	30	6	36	2	6	1	9	2	18	1	21	72
08:45 AM	3	1	0	4	1	16	1	18	0	2	1	3	4	13	2	19	44
Total	39	6	26	71	5	109	45	159	3	13	7	23	30	70	5	105	358
Grand Total	110	12	56	178	6	484	131	621	17	28	15	60	67	404	7	478	1337
Apprch %	61.8	6.7	31.5		1	77.9	21.1		28.3	46.7	25		14	84.5	1.5		
Total %	8.2	0.9	4.2	13.3	0.4	36.2	9.8	46.4	1.3	2.1	1.1	4.5	5	30.2	0.5	35.8	

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	10	0	**10**	20	0	98	15	113	**6**	3	0	9	6	95	**1**	102	244
07:15 AM	18	2	8	28	0	**105**	23	**128**	5	**7**	3	**15**	**11**	**126**	1	**138**	**309**
07:30 AM	21	1	4	26	0	96	18	114	2	2	1	5	11	82	0	93	238
07:45 AM	**22**	**3**	8	**33**	**1**	76	**30**	107	1	3	**4**	8	9	31	0	40	188
Total Volume	71	6	30	107	1	375	86	462	14	15	8	37	37	334	2	373	979
% App. Total	66.4	5.6	28		0.2	81.2	18.6		37.8	40.5	21.6		9.9	89.5	0.5		
PHF	.807	.500	.750	.811	.250	.893	.717	.902	.583	.536	.500	.617	.841	.663	.500	.676	.792

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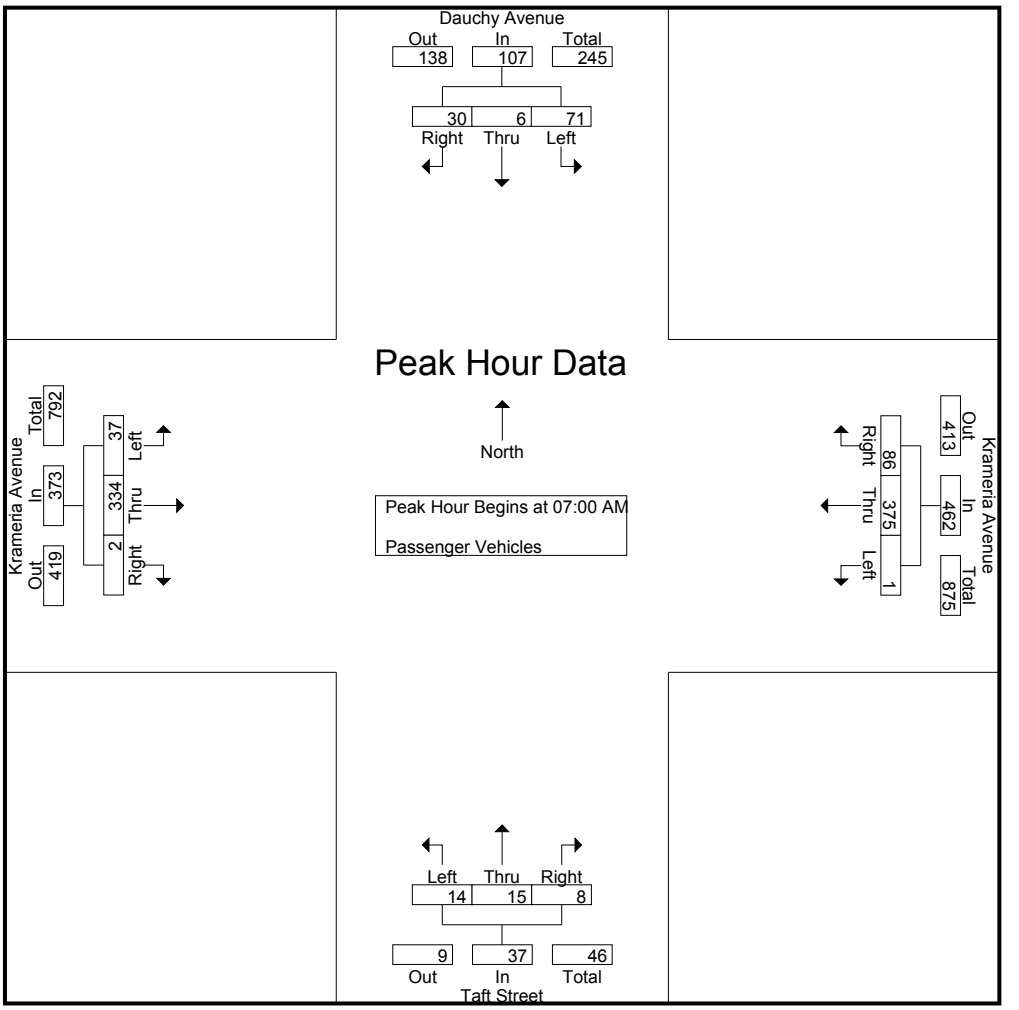
City of Riverside
N/S: Dauchy Avenue/Taft Street
E/W: Krameria Avenue
Weather: Clear

File Name : 08_RIV_Dauchy_Kram AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	10	0	**10**	20	0	98	15	113	**6**	3	0	9	6	95	**1**	102
+15 mins.	18	2	8	28	0	**105**	23	**128**	5	**7**	3	**15**	**11**	**126**	1	**138**
+30 mins.	21	1	4	26	0	96	18	114	2	2	1	5	11	82	0	93
+45 mins.	**22**	**3**	8	**33**	**1**	76	**30**	107	1	3	**4**	8	9	31	0	40
Total Volume	71	6	30	107	1	375	86	462	14	15	8	37	37	334	2	373
% App. Total	66.4	5.6	28		0.2	81.2	18.6		37.8	40.5	21.6		9.9	89.5	0.5	
PHF	.807	.500	.750	.811	.250	.893	.717	.902	.583	.536	.500	.617	.841	.663	.500	.676

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City of Riverside
N/S: Dauchy Avenue/Taft Street
E/W: Krameria Avenue
Weather: Clear

File Name : 08_RIV_Dauchy_Kram AM
Site Code : 00321719
Start Date : 11/18/2021

Groups Printed- Large 2 Axle Vehicles

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	0	1	0	3	0	3	0	0	0	0	0	2	0	2	6
07:15 AM	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0	4
07:30 AM	1	0	1	2	0	0	0	0	0	0	0	0	1	1	0	2	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	0	2	5	0	5	0	5	0	0	0	0	1	3	0	4	14
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	3	0	2	5	0	5	0	5	0	1	0	1	1	3	0	4	15
Apprch %	60	0	40		0	100	0		0	100	0		25	75	0		
Total %	20	0	13.3	33.3	0	33.3	0	33.3	0	6.7	0	6.7	6.7	20	0	26.7	

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**1**	0	0	1	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**	**6**
07:15 AM	1	0	**1**	**2**	0	2	0	2	0	0	0	0	0	0	0	0	4
07:30 AM	1	0	1	2	0	0	0	0	0	0	0	0	**1**	1	0	2	4
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	3	0	2	5	0	5	0	5	0	0	0	0	1	3	0	4	14
% App. Total	60	0	40		0	100	0		0	0	0		25	75	0		
PHF	.750	.000	.500	.625	.000	.417	.000	.417	.000	.000	.000	.000	.250	.375	.000	.500	.583

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City of Riverside
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Weather: Clear

File Name : 08_RIV_Dauchy_Kram AM
Site Code : 00321719
Start Date : 11/18/2021
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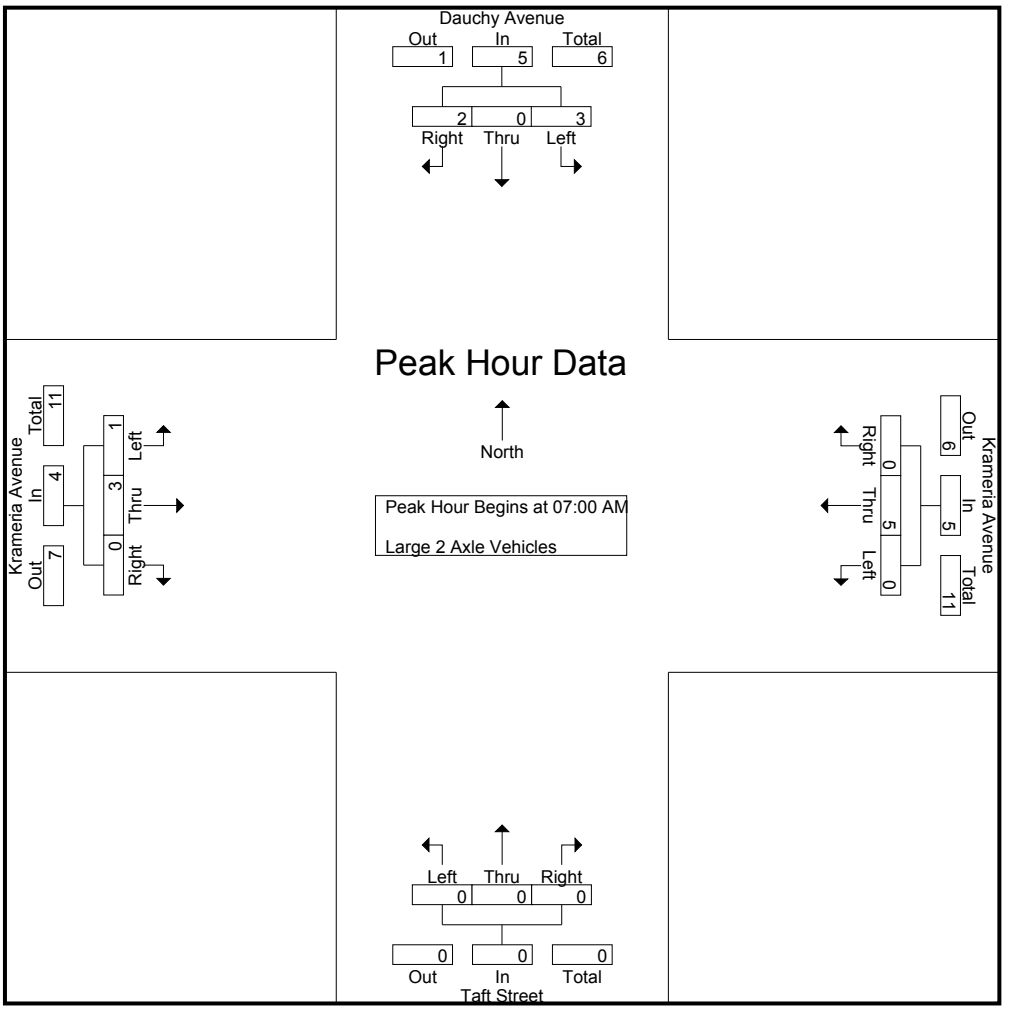

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**1**	0	0	1	0	**3**	0	**3**	0	0	0	0	0	**2**	0	**2**
+15 mins.	1	0	**1**	**2**	0	2	0	2	0	0	0	0	0	0	0	0
+30 mins.	1	0	1	2	0	0	0	0	0	0	0	0	**1**	1	0	2
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	3	0	2	5	0	5	0	5	0	0	0	0	1	3	0	4
% App. Total	60	0	40		0	100	0		0	0	0		25	75	0	
PHF	.750	.000	.500	.625	.000	.417	.000	.417	.000	.000	.000	.000	.250	.375	.000	.500

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City of Riverside
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E/W: Krameria Avenue
Weather: Clear

File Name : 08_RIV_Dauchy_Kram AM
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Groups Printed- 3 Axle Vehicles

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Riverside
N/S: Dauchy Avenue/Taft Street
E/W: Krameria Avenue
Weather: Clear

File Name : 08_RIV_Dauchy_Kram AM
Site Code : 00321719
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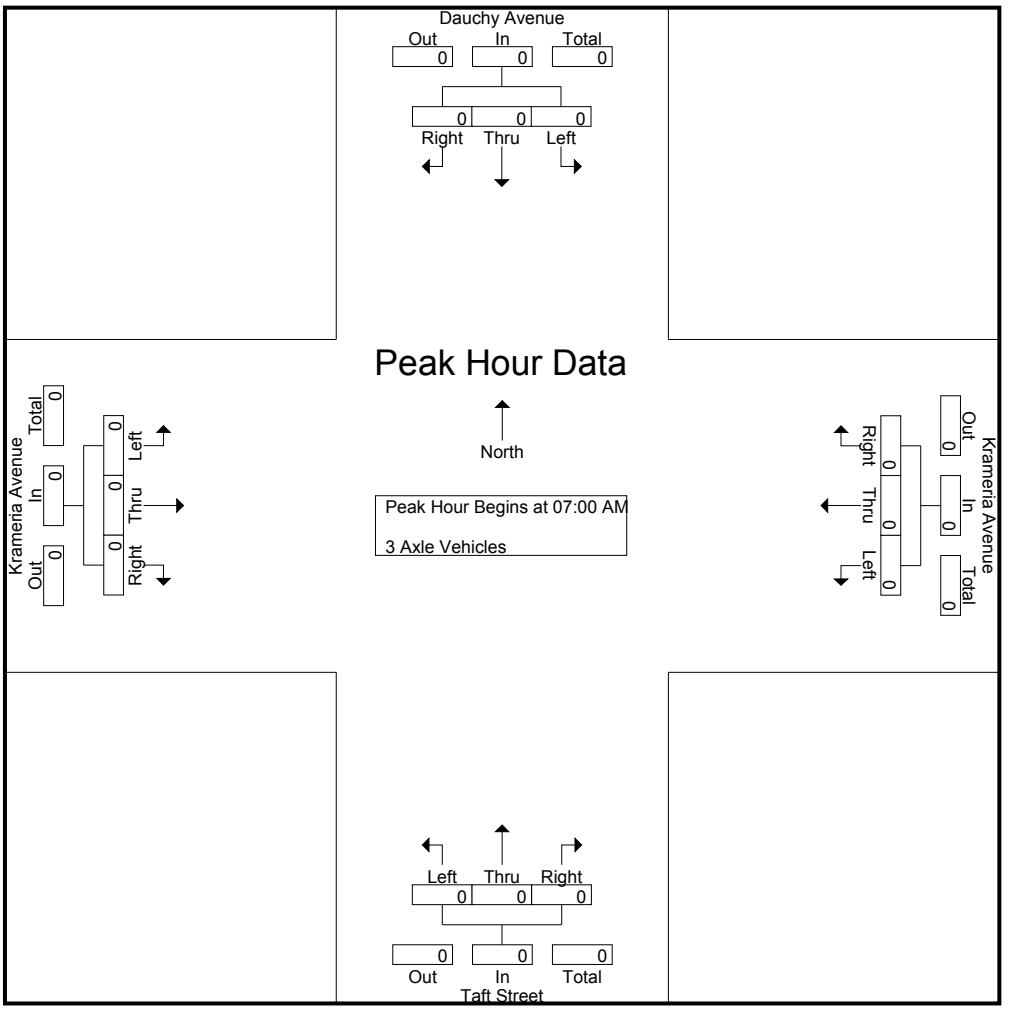
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Riverside
N/S: Dauchy Avenue/Taft Street
E/W: Krameria Avenue
Weather: Clear

File Name : 08_RIV_Dauchy_Kram AM
Site Code : 00321719
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Page No : 1

Groups Printed- 4+ Axle Trucks

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
Apprch %	0	0	0		0	100	0		0	0	0		100	0	0		
Total %	0	0	0	0	0	50	0	50	0	0	0	0	50	0	0	50	

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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E/W: Krameria Avenue
Weather: Clear

File Name : 08_RIV_Dauchy_Kram AM
Site Code : 00321719
Start Date : 11/18/2021
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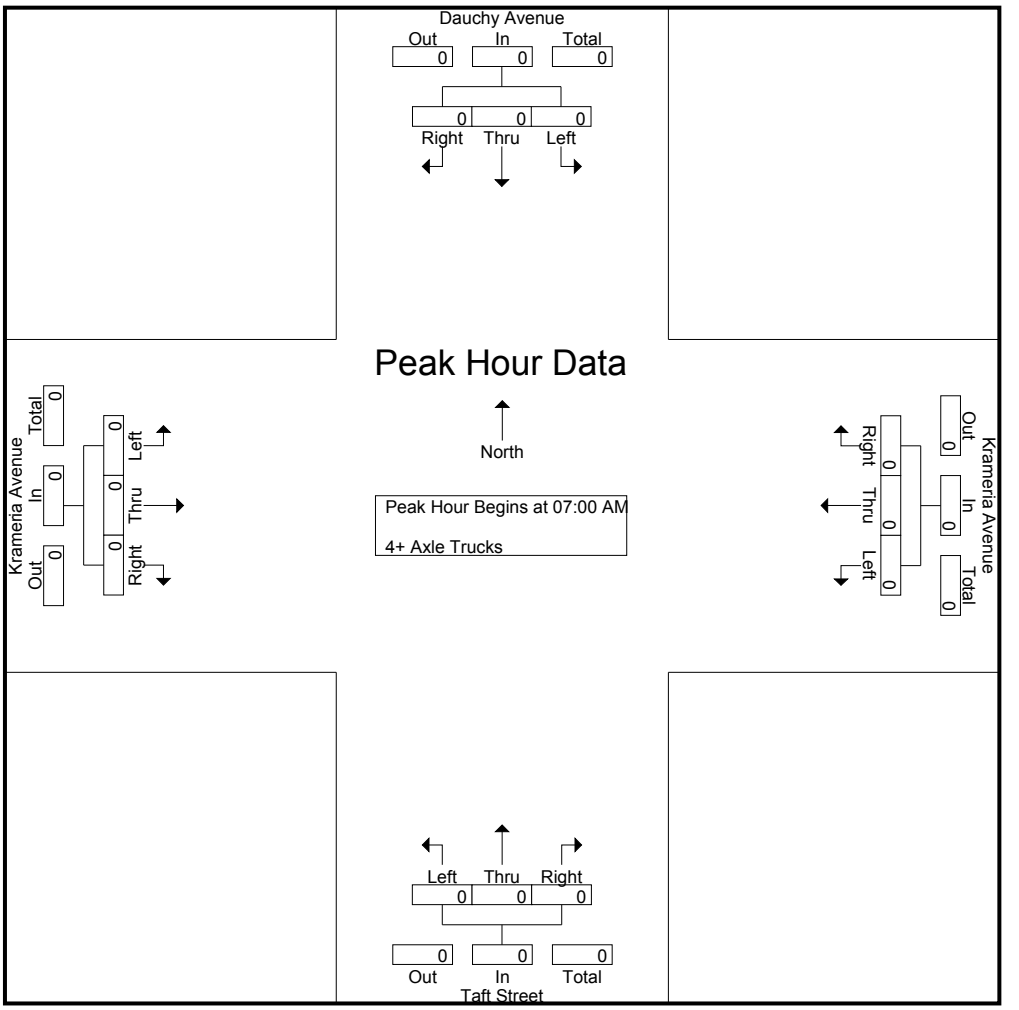

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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File Name : 08_RIV_Dauchy_Kram MD
Site Code : 00321719
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	31	3	7	41	1	62	15	78	3	0	2	5	12	114	2	128	252
02:15 PM	22	3	4	29	5	33	7	45	0	2	2	4	3	69	1	73	151
02:30 PM	22	1	4	27	3	40	20	63	2	0	1	3	2	41	3	46	139
02:45 PM	30	3	17	50	2	104	15	121	4	1	1	6	17	75	1	93	270
Total	105	10	32	147	11	239	57	307	9	3	6	18	34	299	7	340	812
03:00 PM	28	6	18	52	2	58	15	75	2	4	1	7	9	69	9	87	221
03:15 PM	37	3	13	53	1	26	6	33	3	3	4	10	0	66	7	73	169
03:30 PM	29	6	9	44	1	37	7	45	1	8	1	10	5	69	4	78	177
03:45 PM	23	7	3	33	0	33	11	44	1	5	2	8	5	52	4	61	146
Total	117	22	43	182	4	154	39	197	7	20	8	35	19	256	24	299	713
Grand Total	222	32	75	329	15	393	96	504	16	23	14	53	53	555	31	639	1525
Apprch %	67.5	9.7	22.8		3	78	19		30.2	43.4	26.4		8.3	86.9	4.9		
Total %	14.6	2.1	4.9	21.6	1	25.8	6.3	33	1	1.5	0.9	3.5	3.5	36.4	2	41.9	
Passenger Vehicles	219	30	74	323	14	388	95	497	16	22	14	52	53	550	31	634	1506
% Passenger Vehicles	98.6	93.8	98.7	98.2	93.3	98.7	99	98.6	100	95.7	100	98.1	100	99.1	100	99.2	98.8
Large 2 Axle Vehicles	3	2	1	6	0	4	1	5	0	0	0	0	0	4	0	4	15
% Large 2 Axle Vehicles	1.4	6.2	1.3	1.8	0	1	1	1	0	0	0	0	0	0.7	0	0.6	1
3 Axle Vehicles	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
% 3 Axle Vehicles	0	0	0	0	0	0.3	0	0.2	0	4.3	0	1.9	0	0	0	0	0.1
4+ Axle Trucks	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
% 4+ Axle Trucks	0	0	0	0	6.7	0	0	0.2	0	0	0	0	0	0.2	0	0.2	0.1

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	30	3	17	50	**2**	**104**	**15**	**121**	**4**	1	1	6	**17**	**75**	1	**93**	**270**
03:00 PM	28	**6**	**18**	52	2	58	15	75	2	4	1	7	9	69	**9**	87	221
03:15 PM	**37**	3	13	**53**	1	26	6	33	3	3	**4**	**10**	0	66	7	73	169
03:30 PM	29	6	9	44	1	37	7	45	1	**8**	1	10	5	69	4	78	177
Total Volume	124	18	57	199	6	225	43	274	10	16	7	33	31	279	21	331	837
% App. Total	62.3	9	28.6		2.2	82.1	15.7		30.3	48.5	21.2		9.4	84.3	6.3		
PHF	.838	.750	.792	.939	.750	.541	.717	.566	.625	.500	.438	.825	.456	.930	.583	.890	.775

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File Name : 08_RIV_Dauchy_Kram MD
Site Code : 00321719
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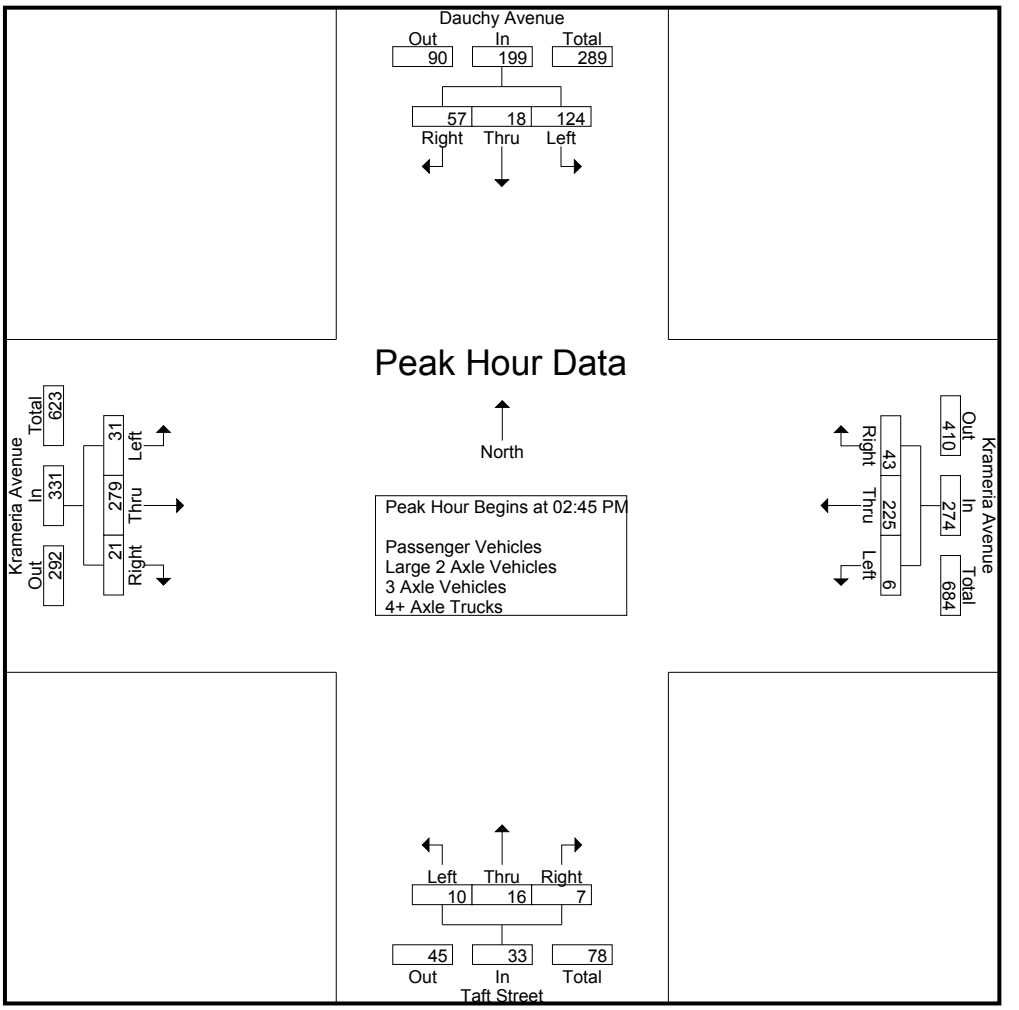

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:00 PM				03:00 PM				02:00 PM			
+0 mins.	30	3	17	50	1	62	15	78	2	4	1	7	12	**114**	2	**128**
+15 mins.	28	**6**	**18**	52	**5**	33	7	45	**3**	3	**4**	**10**	3	69	1	73
+30 mins.	**37**	3	13	**53**	3	40	**20**	63	1	**8**	1	10	2	41	**3**	46
+45 mins.	29	6	9	44	2	**104**	15	**121**	1	5	2	8	**17**	75	1	93
Total Volume	124	18	57	199	11	239	57	307	7	20	8	35	34	299	7	340
% App. Total	62.3	9	28.6		3.6	77.9	18.6		20	57.1	22.9		10	87.9	2.1	
PHF	.838	.750	.792	.939	.550	.575	.713	.634	.583	.625	.500	.875	.500	.656	.583	.664

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File Name : 08_RIV_Dauchy_Kram MD
Site Code : 00321719
Start Date : 11/18/2021

Groups Printed- Passenger Vehicles

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	31	3	7	41	1	62	15	78	3	0	2	5	12	112	2	126	250
02:15 PM	22	3	4	29	4	32	7	43	0	2	2	4	3	69	1	73	149
02:30 PM	22	1	4	27	3	40	20	63	2	0	1	3	2	41	3	46	139
02:45 PM	28	3	17	48	2	103	14	119	4	1	1	6	17	74	1	92	265
Total	103	10	32	145	10	237	56	303	9	3	6	18	34	296	7	337	803
03:00 PM	27	6	18	51	2	57	15	74	2	4	1	7	9	69	9	87	219
03:15 PM	37	2	13	52	1	24	6	31	3	3	4	10	0	65	7	72	165
03:30 PM	29	5	8	42	1	37	7	45	1	8	1	10	5	68	4	77	174
03:45 PM	23	7	3	33	0	33	11	44	1	4	2	7	5	52	4	61	145
Total	116	20	42	178	4	151	39	194	7	19	8	34	19	254	24	297	703
Grand Total	219	30	74	323	14	388	95	497	16	22	14	52	53	550	31	634	1506
Apprch %	67.8	9.3	22.9		2.8	78.1	19.1		30.8	42.3	26.9		8.4	86.8	4.9		
Total %	14.5	2	4.9	21.4	0.9	25.8	6.3	33	1.1	1.5	0.9	3.5	3.5	36.5	2.1	42.1	

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	28	3	17	48	**2**	**103**	14	**119**	**4**	1	1	6	**17**	**74**	1	**92**	**265**
03:00 PM	27	**6**	**18**	51	2	57	**15**	74	2	4	1	7	9	69	**9**	87	219
03:15 PM	**37**	2	13	**52**	1	24	6	31	3	3	**4**	**10**	0	65	7	72	165
03:30 PM	29	5	8	42	1	37	7	45	1	**8**	1	10	5	68	4	77	174
Total Volume	121	16	56	193	6	221	42	269	10	16	7	33	31	276	21	328	823
% App. Total	62.7	8.3	29		2.2	82.2	15.6		30.3	48.5	21.2		9.5	84.1	6.4		
PHF	.818	.667	.778	.928	.750	.536	.700	.565	.625	.500	.438	.825	.456	.932	.583	.891	.776

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File Name : 08_RIV_Dauchy_Kram MD
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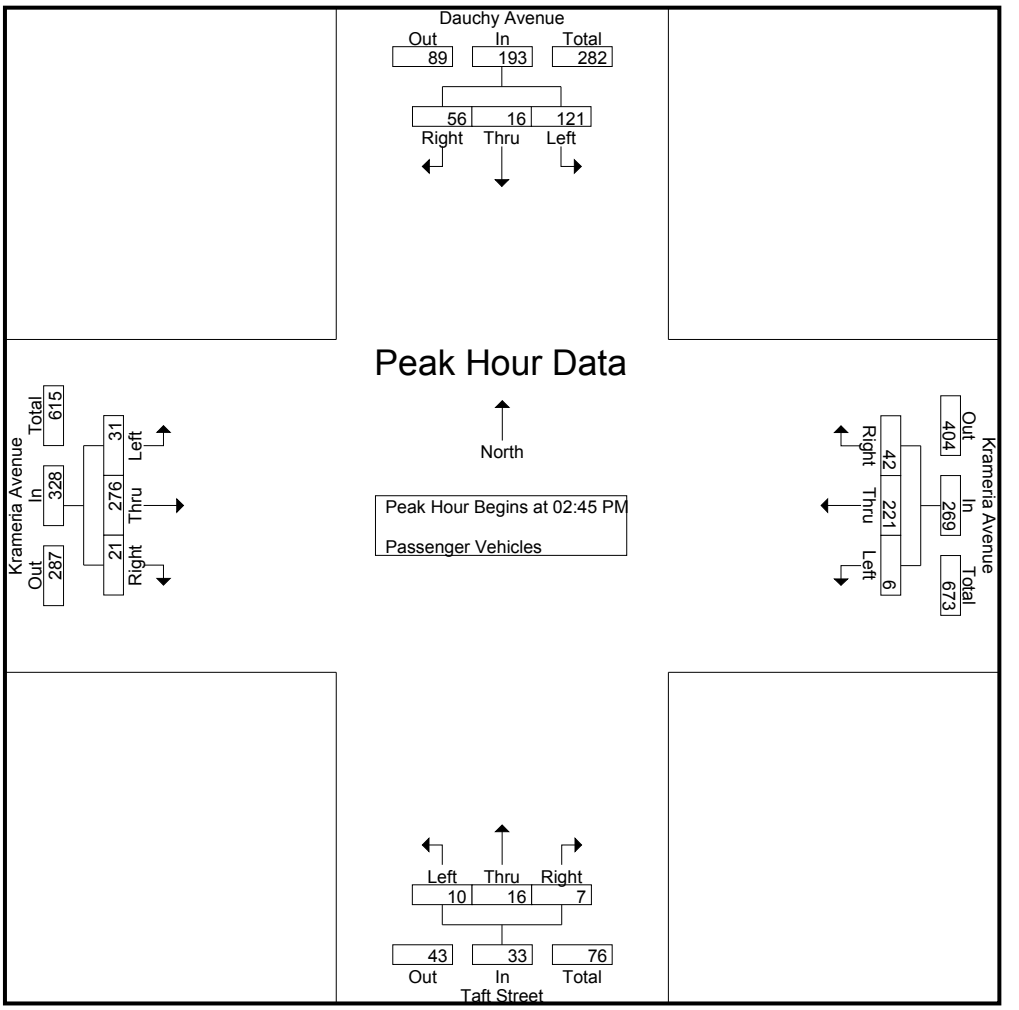

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	28	3	17	48	**2**	**103**	14	**119**	**4**	1	1	6	**17**	**74**	1	**92**
+15 mins.	27	**6**	**18**	51	2	57	**15**	74	2	4	1	7	9	69	**9**	87
+30 mins.	**37**	2	13	**52**	1	24	6	31	3	3	**4**	**10**	0	65	7	72
+45 mins.	29	5	8	42	1	37	7	45	1	**8**	1	10	5	68	4	77
Total Volume	121	16	56	193	6	221	42	269	10	16	7	33	31	276	21	328
% App. Total	62.7	8.3	29		2.2	82.2	15.6		30.3	48.5	21.2		9.5	84.1	6.4	
PHF	.818	.667	.778	.928	.750	.536	.700	.565	.625	.500	.438	.825	.456	.932	.583	.891

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File Name : 08_RIV_Dauchy_Kram MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
02:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	2	0	0	2	0	1	1	2	0	0	0	0	0	1	0	1	5
Total	2	0	0	2	0	2	1	3	0	0	0	0	0	2	0	2	7
03:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
03:30 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1	3
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	2	1	4	0	2	0	2	0	0	0	0	0	2	0	2	8
Grand Total	3	2	1	6	0	4	1	5	0	0	0	0	0	4	0	4	15
Apprch %	50	33.3	16.7		0	80	20		0	0	0		0	100	0		
Total %	20	13.3	6.7	40	0	26.7	6.7	33.3	0	0	0	0	0	26.7	0	26.7	

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	**2**	0	0	**2**	0	1	**1**	**2**	0	0	0	0	0	**1**	0	**1**	**5**
03:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 PM	0	**1**	0	1	0	**2**	0	2	0	0	0	0	0	1	0	1	4
03:30 PM	0	1	**1**	2	0	0	0	0	0	0	0	0	0	1	0	1	3
Total Volume	3	2	1	6	0	3	1	4	0	0	0	0	0	3	0	3	13
% App. Total	50	33.3	16.7		0	75	25		0	0	0		0	100	0		
PHF	.375	.500	.250	.750	.000	.375	.250	.500	.000	.000	.000	.000	.000	.750	.000	.750	.650

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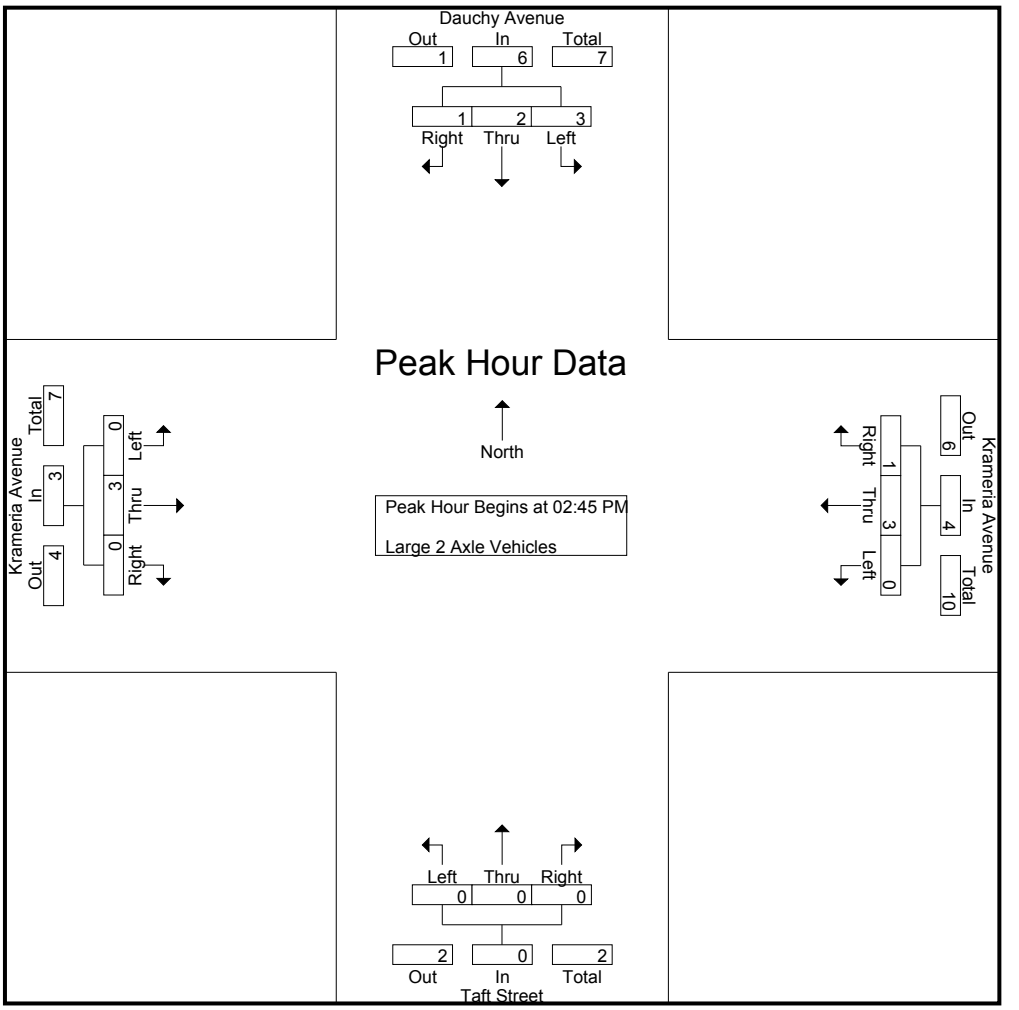

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	**2**	0	0	**2**	0	1	**1**	**2**	0	0	0	0	0	**1**	0	**1**
+15 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	**1**	0	1	0	**2**	0	2	0	0	0	0	0	1	0	1
+45 mins.	0	1	**1**	2	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	3	2	1	6	0	3	1	4	0	0	0	0	0	3	0	3
% App. Total	50	33.3	16.7		0	75	25		0	0	0		0	100	0	
PHF	.375	.500	.250	.750	.000	.375	.250	.500	.000	.000	.000	.000	.000	.750	.000	.750

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File Name : 08_RIV_Dauchy_Kram MD
Site Code : 00321719
Start Date : 11/18/2021

Groups Printed- 3 Axle Vehicles

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Grand Total	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Apprch %	0	0	0		0	100	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	50	0	50	0	50	0	50	0	0	0	0	

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

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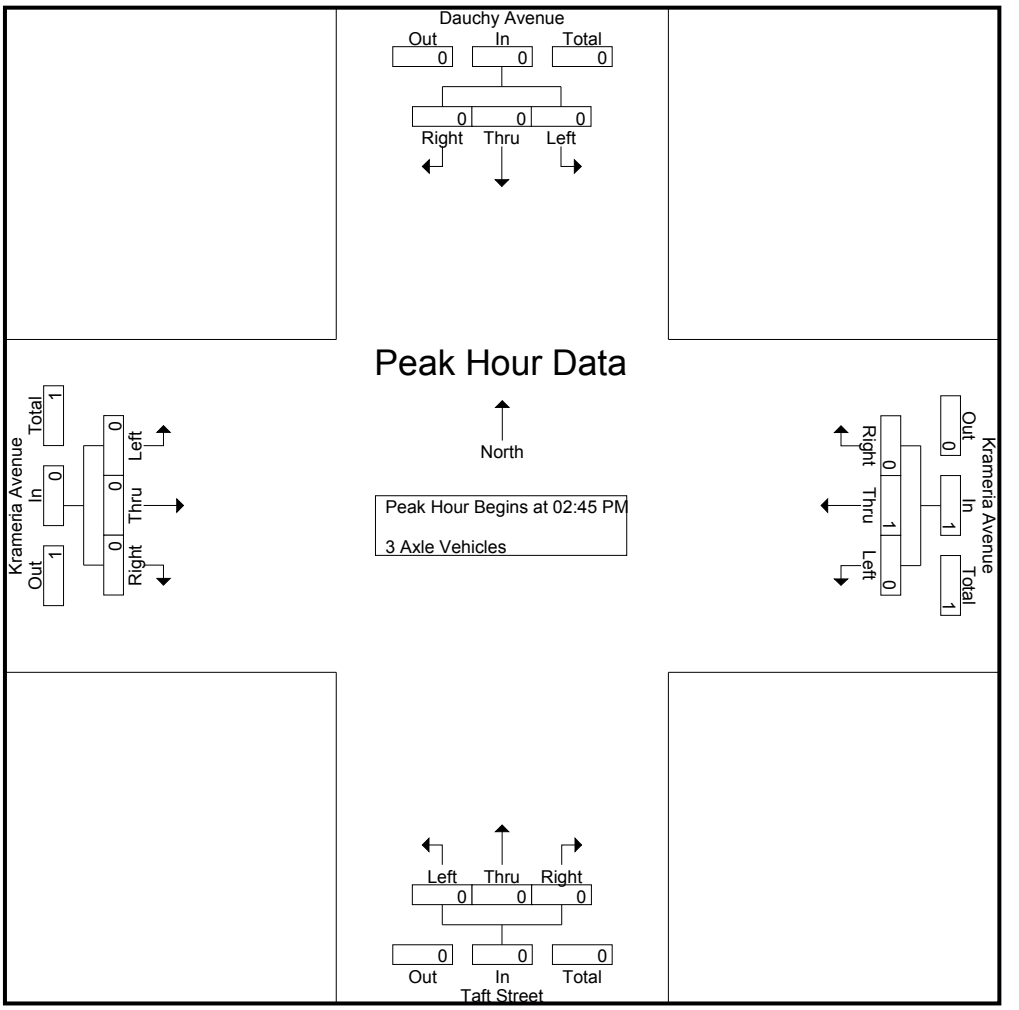

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	100	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000

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City of Riverside
N/S: Dauchy Avenue/Taft Street
E/W: Krameria Avenue
Weather: Clear

File Name : 08_RIV_Dauchy_Kram MD
Site Code : 00321719
Start Date : 11/18/2021

Groups Printed- 4+ Axle Trucks

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
02:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
Apprch %	0	0	0		100	0	0		0	0	0		0	100	0		
Total %	0	0	0	0	50	0	0	50	0	0	0	0	0	50	0	50	

	Dauchy Avenue Southbound				Krameria Avenue Westbound				Taft Street Northbound				Krameria Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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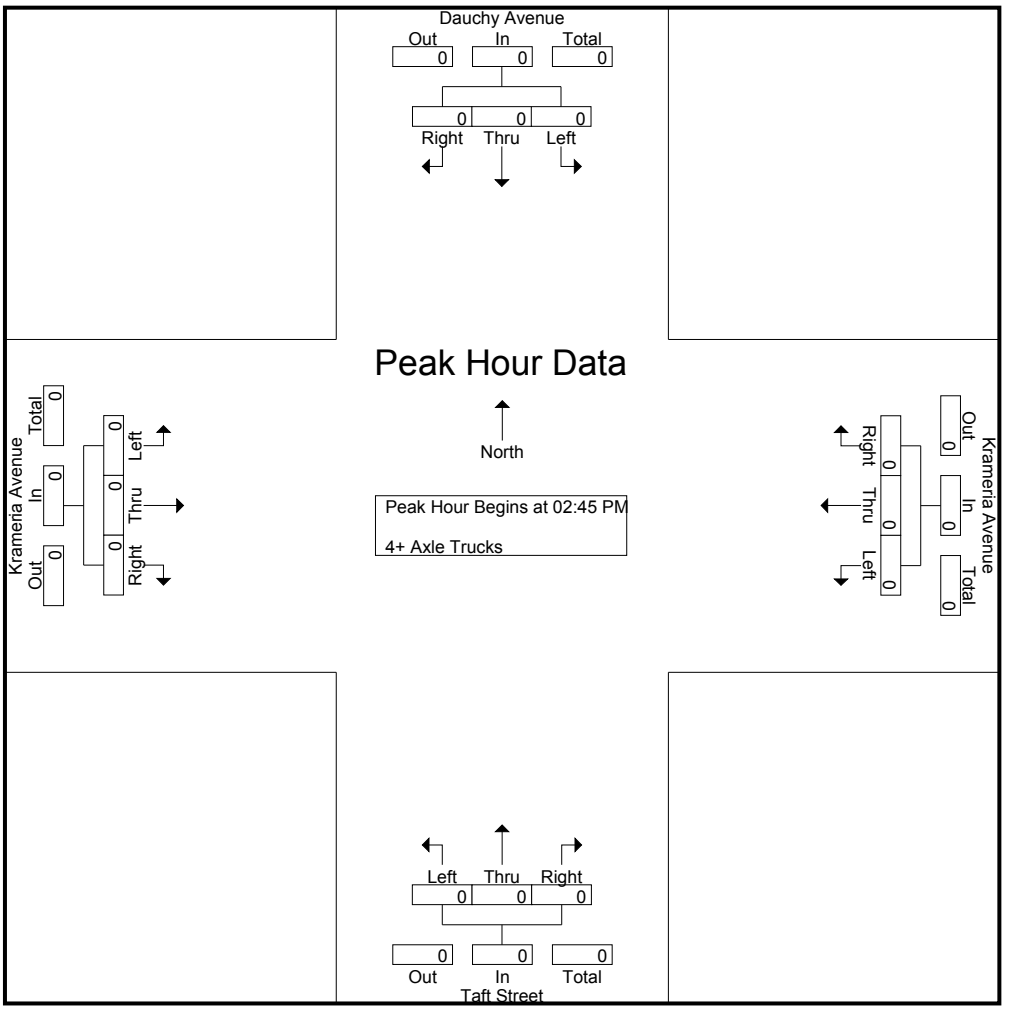
City of Riverside
N/S: Dauchy Avenue/Taft Street
E/W: Krameria Avenue
Weather: Clear

File Name : 08_RIV_Dauchy_Kram MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Riverside
N/S: Dauchy Avenue/Taft Street
E/W: Krameria Avenue

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Dauchy Avenue	East Leg Krameria Avenue	South Leg Taft Street	West Leg Krameria Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	3	2	1	0	6
7:15 AM	3	0	0	0	3
7:30 AM	0	0	0	0	0
7:45 AM	3	1	0	0	4
8:00 AM	2	0	0	0	2
8:15 AM	2	2	1	0	5
8:30 AM	2	0	0	0	2
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	15	5	2	0	22

	North Leg Dauchy Avenue	East Leg Krameria Avenue	South Leg Taft Street	West Leg Krameria Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	22	6	9	0	37
2:15 PM	1	0	0	0	1
2:30 PM	1	0	0	0	1
2:45 PM	9	0	1	0	10
3:00 PM	1	1	1	0	3
3:15 PM	3	0	0	0	3
3:30 PM	0	0	0	0	0
3:45 PM	1	0	0	0	1
TOTAL VOLUMES:	38	7	11	0	56

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Location: Riverside
N/S: Dauchy Avenue/Taft Street
E/W: Krameria Avenue

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Dauchy Avenue			Westbound Krameria Avenue			Northbound Taft Street			Eastbound Krameria Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Dauchy Avenue			Westbound Krameria Avenue			Northbound Taft Street			Eastbound Krameria Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Wood_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	20	90	56	166	79	219	14	312	69	64	27	160	28	173	49	250	888
07:15 AM	21	123	22	166	126	220	28	374	99	120	66	285	35	188	95	318	1143
07:30 AM	18	153	22	193	140	231	23	394	97	134	78	309	28	170	82	280	1176
07:45 AM	22	34	60	116	69	238	21	328	91	103	86	280	39	224	38	301	1025
Total	81	400	160	641	414	908	86	1408	356	421	257	1034	130	755	264	1149	4232
08:00 AM	15	30	53	98	28	326	17	371	40	37	20	97	34	197	28	259	825
08:15 AM	12	33	49	94	21	276	22	319	52	48	20	120	36	204	37	277	810
08:30 AM	18	33	43	94	35	284	14	333	40	28	22	90	28	176	32	236	753
08:45 AM	19	31	39	89	19	226	15	260	40	39	21	100	28	186	29	243	692
Total	64	127	184	375	103	1112	68	1283	172	152	83	407	126	763	126	1015	3080
Grand Total	145	527	344	1016	517	2020	154	2691	528	573	340	1441	256	1518	390	2164	7312
Apprch %	14.3	51.9	33.9		19.2	75.1	5.7		36.6	39.8	23.6		11.8	70.1	18		
Total %	2	7.2	4.7	13.9	7.1	27.6	2.1	36.8	7.2	7.8	4.6	19.7	3.5	20.8	5.3	29.6	
Passenger Vehicles	140	524	336	1000	512	1961	153	2626	519	568	334	1421	246	1474	384	2104	7151
% Passenger Vehicles	96.6	99.4	97.7	98.4	99	97.1	99.4	97.6	98.3	99.1	98.2	98.6	96.1	97.1	98.5	97.2	97.8
Large 2 Axle Vehicles	2	3	6	11	5	37	1	43	5	5	6	16	10	22	3	35	105
% Large 2 Axle Vehicles	1.4	0.6	1.7	1.1	1	1.8	0.6	1.6	0.9	0.9	1.8	1.1	3.9	1.4	0.8	1.6	1.4
3 Axle Vehicles	2	0	2	4	0	8	0	8	3	0	0	3	0	6	1	7	22
% 3 Axle Vehicles	1.4	0	0.6	0.4	0	0.4	0	0.3	0.6	0	0	0.2	0	0.4	0.3	0.3	0.3
4+ Axle Trucks	1	0	0	1	0	14	0	14	1	0	0	1	0	16	2	18	34
% 4+ Axle Trucks	0.7	0	0	0.1	0	0.7	0	0.5	0.2	0	0	0.1	0	1.1	0.5	0.8	0.5

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	20	90	56	166	79	219	14	312	69	64	27	160	28	173	49	250	888
07:15 AM	21	123	22	166	126	220	**28**	374	**99**	120	66	285	35	188	**95**	**318**	1143
07:30 AM	18	**153**	22	**193**	**140**	231	23	**394**	97	**134**	78	**309**	28	170	82	280	**1176**
07:45 AM	**22**	34	**60**	116	69	**238**	21	328	91	103	**86**	280	**39**	**224**	38	301	1025
Total Volume	81	400	160	641	414	908	86	1408	356	421	257	1034	130	755	264	1149	4232
% App. Total	12.6	62.4	25		29.4	64.5	6.1		34.4	40.7	24.9		11.3	65.7	23		
PHF	.920	.654	.667	.830	.739	.954	.768	.893	.899	.785	.747	.837	.833	.843	.695	.903	.900

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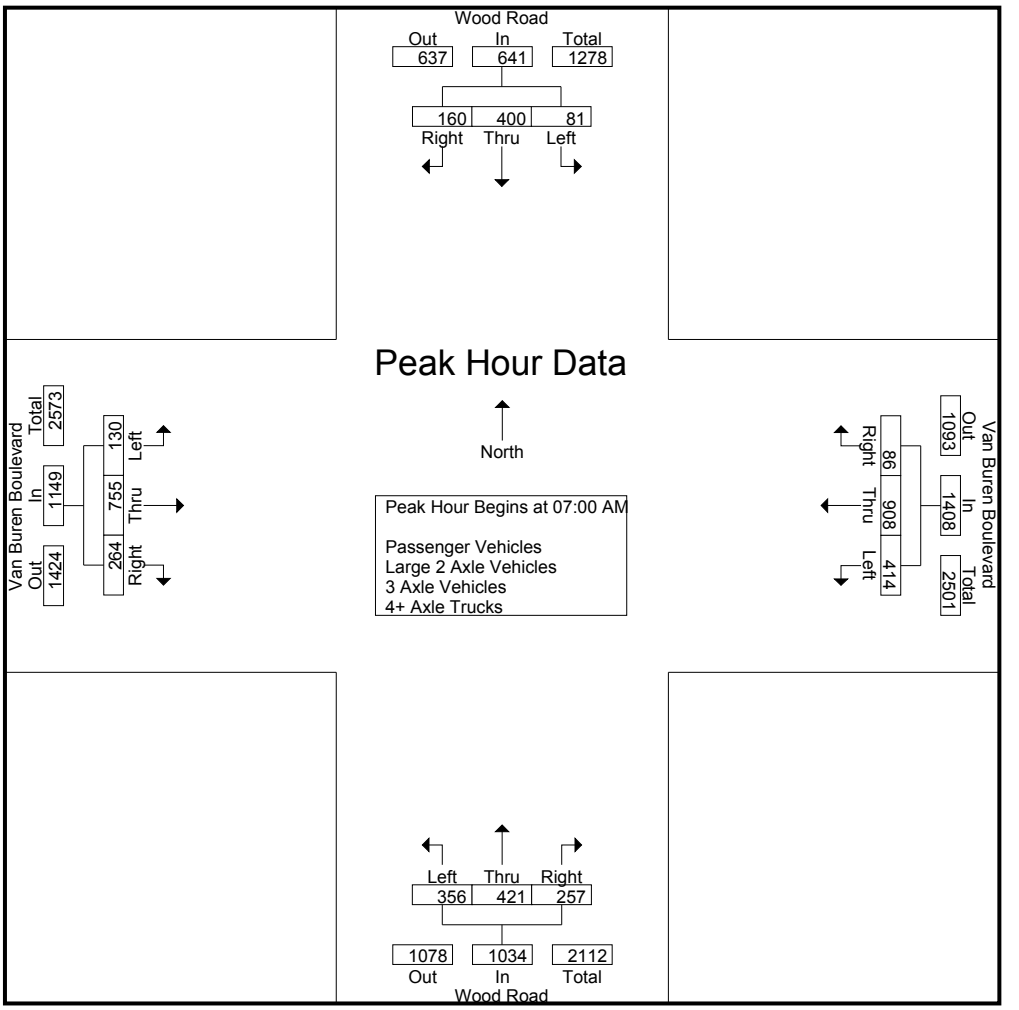
City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Wood_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:00 AM				07:15 AM			
+0 mins.	20	90	56	166	126	220	**28**	374	69	64	27	160	35	188	**95**	**318**
+15 mins.	21	123	22	166	**140**	231	23	**394**	**99**	120	66	285	28	170	82	280
+30 mins.	18	**153**	22	**193**	69	238	21	328	97	**134**	78	**309**	**39**	**224**	38	301
+45 mins.	**22**	34	**60**	116	28	**326**	17	371	91	103	**86**	280	34	197	28	259
Total Volume	81	400	160	641	363	1015	89	1467	356	421	257	1034	136	779	243	1158
% App. Total	12.6	62.4	25		24.7	69.2	6.1		34.4	40.7	24.9		11.7	67.3	21	
PHF	.920	.654	.667	.830	.648	.778	.795	.931	.899	.785	.747	.837	.872	.869	.639	.910

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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
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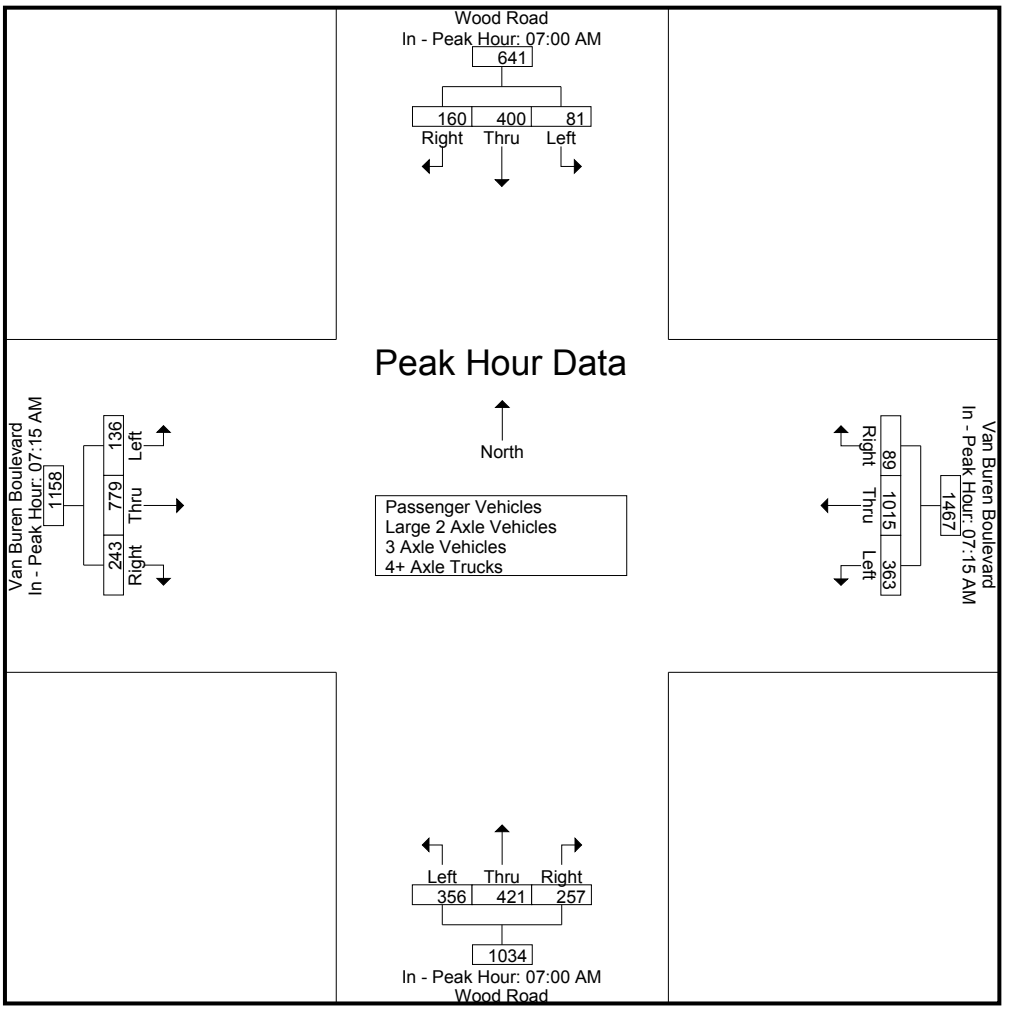
File Name : 09_RIV_Wood_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 3



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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Wood_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Passenger Vehicles

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	20	90	54	164	79	211	14	304	68	63	27	158	27	168	48	243	869
07:15 AM	21	122	21	164	125	215	28	368	95	120	64	279	33	186	95	314	1125
07:30 AM	18	153	21	192	140	224	23	387	96	133	78	307	26	164	82	272	1158
07:45 AM	21	33	60	114	69	230	21	320	91	102	86	279	38	216	38	292	1005
Total	80	398	156	634	413	880	86	1379	350	418	255	1023	124	734	263	1121	4157
08:00 AM	14	30	53	97	27	318	17	362	39	37	20	96	34	191	28	253	808
08:15 AM	12	33	47	92	20	269	21	310	51	46	18	115	34	197	35	266	783
08:30 AM	17	32	42	91	34	275	14	323	40	28	21	89	28	171	29	228	731
08:45 AM	17	31	38	86	18	219	15	252	39	39	20	98	26	181	29	236	672
Total	60	126	180	366	99	1081	67	1247	169	150	79	398	122	740	121	983	2994
Grand Total	140	524	336	1000	512	1961	153	2626	519	568	334	1421	246	1474	384	2104	7151
Apprch %	14	52.4	33.6		19.5	74.7	5.8		36.5	40	23.5		11.7	70.1	18.3		
Total %	2	7.3	4.7	14	7.2	27.4	2.1	36.7	7.3	7.9	4.7	19.9	3.4	20.6	5.4	29.4	

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	20	90	54	164	79	211	14	304	68	63	27	158	27	168	48	243	869
07:15 AM	**21**	122	21	164	125	215	**28**	368	95	120	64	279	33	186	**95**	**314**	1125
07:30 AM	18	**153**	21	**192**	**140**	224	23	**387**	**96**	**133**	78	**307**	26	164	82	272	**1158**
07:45 AM	21	33	**60**	114	69	**230**	21	320	91	102	**86**	279	**38**	**216**	38	292	1005
Total Volume	80	398	156	634	413	880	86	1379	350	418	255	1023	124	734	263	1121	4157
% App. Total	12.6	62.8	24.6		29.9	63.8	6.2		34.2	40.9	24.9		11.1	65.5	23.5		
PHF	.952	.650	.650	.826	.738	.957	.768	.891	.911	.786	.741	.833	.816	.850	.692	.893	.897

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City of Riverside
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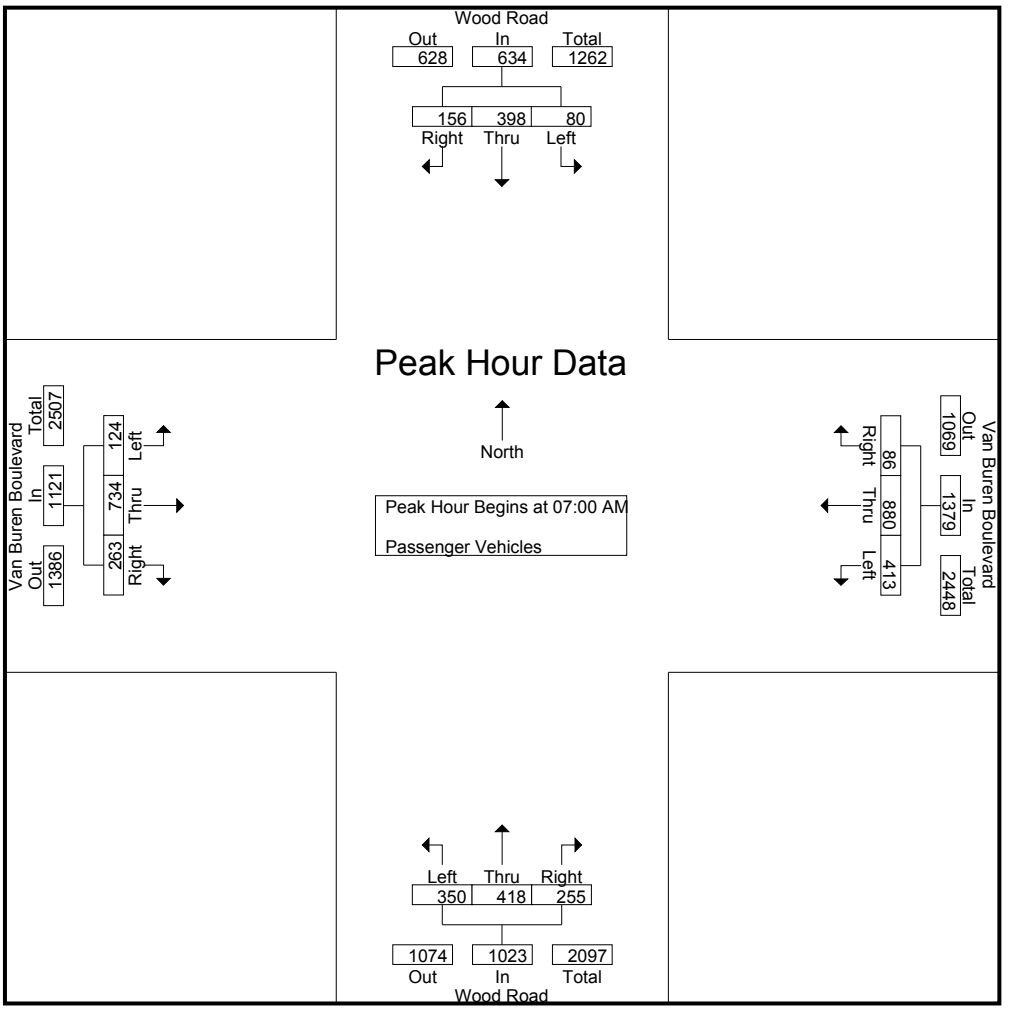
File Name : 09_RIV_Wood_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	20	90	54	164	79	211	14	304	68	63	27	158	27	168	48	243
+15 mins.	**21**	122	21	164	125	215	**28**	368	95	120	64	279	33	186	**95**	**314**
+30 mins.	18	**153**	21	**192**	**140**	224	23	**387**	**96**	**133**	78	**307**	26	164	82	272
+45 mins.	21	33	**60**	114	69	**230**	21	320	91	102	**86**	279	**38**	**216**	38	292
Total Volume	80	398	156	634	413	880	86	1379	350	418	255	1023	124	734	263	1121
% App. Total	12.6	62.8	24.6		29.9	63.8	6.2		34.2	40.9	24.9		11.1	65.5	23.5	
PHF	.952	.650	.650	.826	.738	.957	.768	.891	.911	.786	.741	.833	.816	.850	.692	.893

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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Wood_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	2	2	0	3	0	3	1	1	0	2	1	3	1	5	12
07:15 AM	0	1	1	2	1	4	0	5	3	0	2	5	2	1	0	3	15
07:30 AM	0	0	0	0	0	3	0	3	0	1	0	1	2	4	0	6	10
07:45 AM	1	1	0	2	0	6	0	6	0	1	0	1	1	3	0	4	13
Total	1	2	3	6	1	16	0	17	4	3	2	9	6	11	1	18	50
08:00 AM	0	0	0	0	1	5	0	6	1	0	0	1	0	3	0	3	10
08:15 AM	0	0	2	2	1	4	1	6	0	2	2	4	2	4	1	7	19
08:30 AM	0	1	0	1	1	8	0	9	0	0	1	1	0	2	1	3	14
08:45 AM	1	0	1	2	1	4	0	5	0	0	1	1	2	2	0	4	12
Total	1	1	3	5	4	21	1	26	1	2	4	7	4	11	2	17	55
Grand Total	2	3	6	11	5	37	1	43	5	5	6	16	10	22	3	35	105
Apprch %	18.2	27.3	54.5		11.6	86	2.3		31.2	31.2	37.5		28.6	62.9	8.6		
Total %	1.9	2.9	5.7	10.5	4.8	35.2	1	41	4.8	4.8	5.7	15.2	9.5	21	2.9	33.3	

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	**2**	**2**	0	3	0	3	1	**1**	0	2	1	3	**1**	5	12
07:15 AM	0	**1**	1	2	**1**	4	0	5	**3**	0	**2**	**5**	**2**	1	0	3	**15**
07:30 AM	0	0	0	0	0	3	0	3	0	1	0	1	2	**4**	0	**6**	10
07:45 AM	**1**	1	0	2	0	**6**	0	**6**	0	1	0	1	1	3	0	4	13
Total Volume	1	2	3	6	1	16	0	17	4	3	2	9	6	11	1	18	50
% App. Total	16.7	33.3	50		5.9	94.1	0		44.4	33.3	22.2		33.3	61.1	5.6		
PHF	.250	.500	.375	.750	.250	.667	.000	.708	.333	.750	.250	.450	.750	.688	.250	.750	.833

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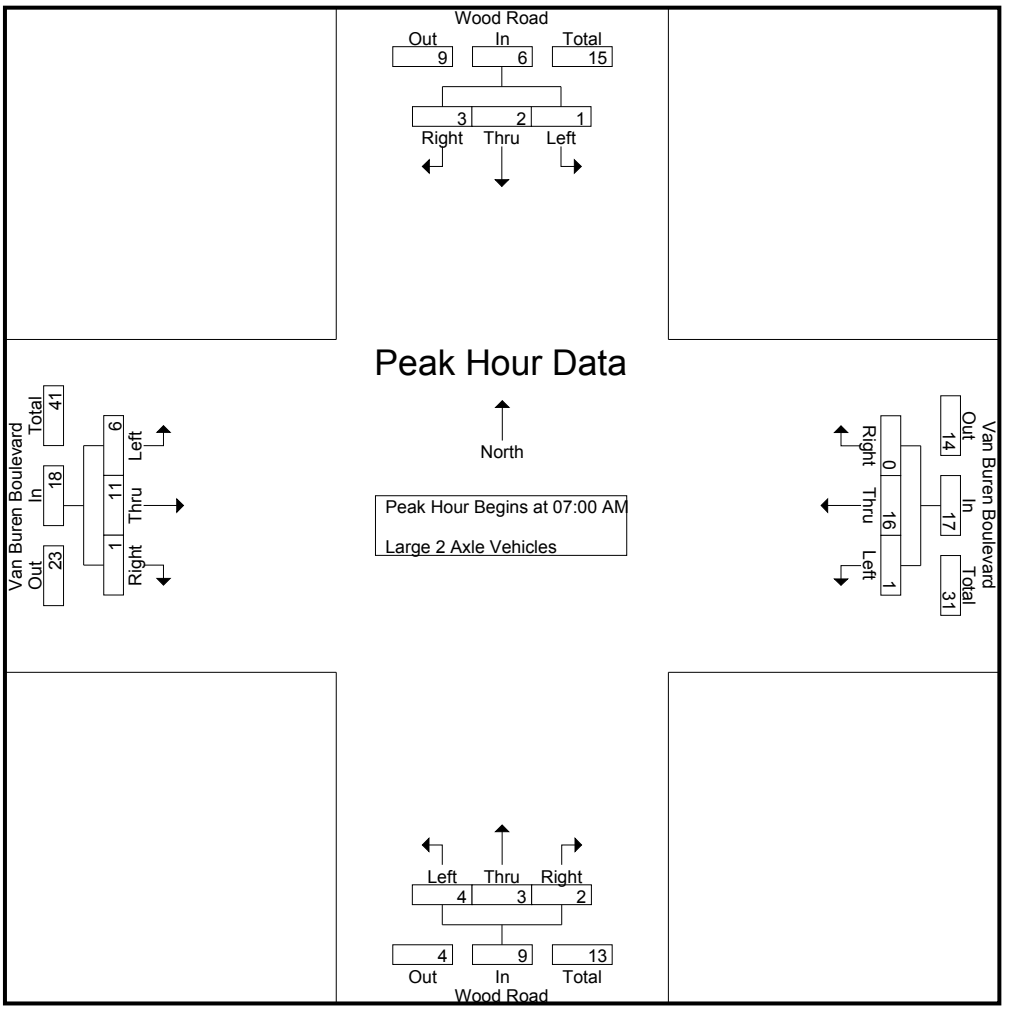

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	**2**	**2**	0	3	0	3	1	**1**	0	2	1	3	**1**	5
+15 mins.	0	**1**	1	2	**1**	4	0	5	**3**	0	**2**	**5**	**2**	1	0	3
+30 mins.	0	0	0	0	0	3	0	3	0	1	0	1	2	**4**	0	**6**
+45 mins.	**1**	1	0	2	0	**6**	0	**6**	0	1	0	1	1	3	0	4
Total Volume	1	2	3	6	1	16	0	17	4	3	2	9	6	11	1	18
% App. Total	16.7	33.3	50		5.9	94.1	0		44.4	33.3	22.2		33.3	61.1	5.6	
PHF	.250	.500	.375	.750	.250	.667	.000	.708	.333	.750	.250	.450	.750	.688	.250	.750

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Groups Printed- 3 Axle Vehicles

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
07:30 AM	0	0	1	1	0	1	0	1	1	0	0	1	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	1	1	0	3	0	3	2	0	0	2	0	3	0	3	9
08:00 AM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	1	2	4
08:30 AM	1	0	1	2	0	1	0	1	0	0	0	0	0	0	0	0	3
08:45 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	2	0	2	4
Total	2	0	1	3	0	5	0	5	1	0	0	1	0	3	1	4	13
Grand Total	2	0	2	4	0	8	0	8	3	0	0	3	0	6	1	7	22
Apprch %	50	0	50		0	100	0		100	0	0		0	85.7	14.3		
Total %	9.1	0	9.1	18.2	0	36.4	0	36.4	13.6	0	0	13.6	0	27.3	4.5	31.8	

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	1	0	1	2
07:30 AM	0	0	**1**	**1**	0	1	0	1	1	0	0	1	0	0	0	0	**3**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	2
Total Volume	0	0	1	1	0	3	0	3	2	0	0	2	0	3	0	3	9
% App. Total	0	0	100		0	100	0		100	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.375	.000	.375	.500	.000	.000	.500	.000	.375	.000	.375	.750

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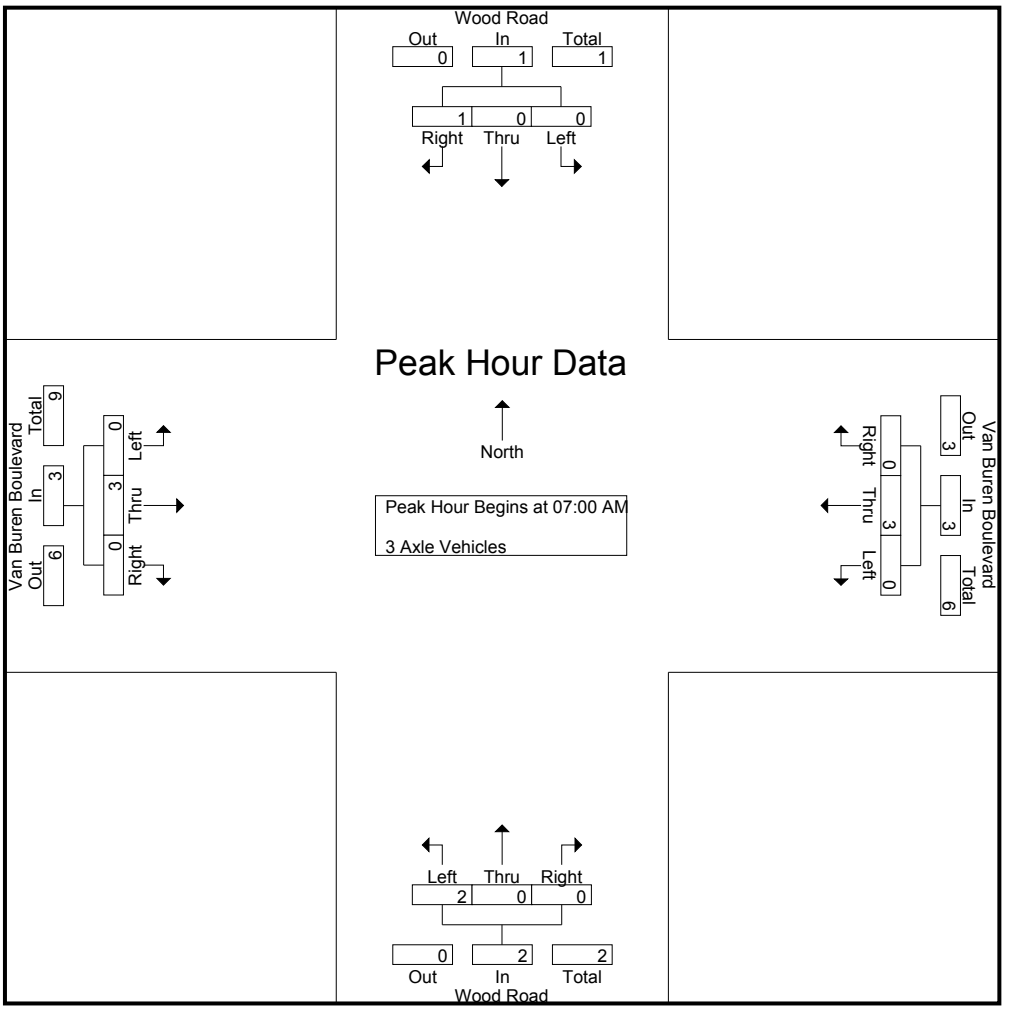

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	1	0	1
+30 mins.	0	0	**1**	**1**	0	1	0	1	1	0	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**
Total Volume	0	0	1	1	0	3	0	3	2	0	0	2	0	3	0	3
% App. Total	0	0	100		0	100	0		100	0	0		0	100	0	
PHF	.000	.000	.250	.250	.000	.375	.000	.375	.500	.000	.000	.500	.000	.375	.000	.375

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Groups Printed- 4+ Axle Trucks

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
Total	0	0	0	0	0	9	0	9	0	0	0	0	0	7	0	7	16
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
08:15 AM	0	0	0	0	0	1	0	1	1	0	0	1	0	2	0	2	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5	5
08:45 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	1	0	1	4
Total	1	0	0	1	0	5	0	5	1	0	0	1	0	9	2	11	18
Grand Total	1	0	0	1	0	14	0	14	1	0	0	1	0	16	2	18	34
Apprch %	100	0	0		0	100	0		100	0	0		0	88.9	11.1		
Total %	2.9	0	0	2.9	0	41.2	0	41.2	2.9	0	0	2.9	0	47.1	5.9	52.9	

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	2	0	2	**5**
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	**3**	5
Total Volume	0	0	0	0	0	9	0	9	0	0	0	0	0	7	0	7	16
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.583	.000	.583	.800

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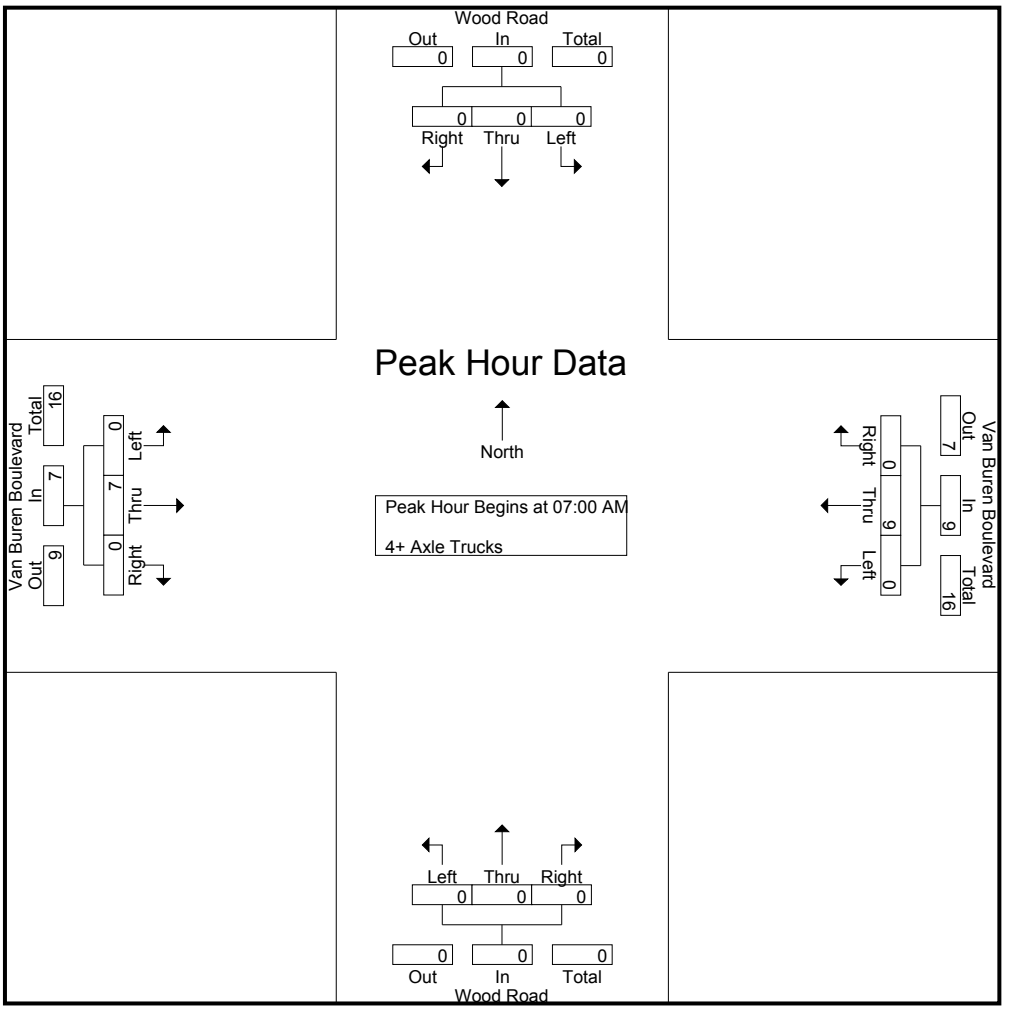

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	**3**
Total Volume	0	0	0	0	0	9	0	9	0	0	0	0	0	7	0	7
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.583	.000	.583

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	21	41	55	117	48	174	28	250	55	59	28	142	30	198	41	269	778
02:15 PM	20	60	46	126	49	253	26	328	44	35	28	107	40	227	45	312	873
02:30 PM	30	61	50	141	68	252	17	337	37	46	22	105	35	231	44	310	893
02:45 PM	33	83	66	182	66	260	21	347	84	101	42	227	28	200	55	283	1039
Total	104	245	217	566	231	939	92	1262	220	241	120	581	133	856	185	1174	3583
03:00 PM	33	68	40	141	52	257	28	337	71	113	70	254	34	221	39	294	1026
03:15 PM	15	43	40	98	40	272	16	328	46	52	42	140	51	239	42	332	898
03:30 PM	15	67	43	125	31	277	16	324	41	62	39	142	29	314	47	390	981
03:45 PM	16	60	68	144	47	257	23	327	68	58	54	180	37	276	38	351	1002
Total	79	238	191	508	170	1063	83	1316	226	285	205	716	151	1050	166	1367	3907
Grand Total	183	483	408	1074	401	2002	175	2578	446	526	325	1297	284	1906	351	2541	7490
Apprch %	17	45	38		15.6	77.7	6.8		34.4	40.6	25.1		11.2	75	13.8		
Total %	2.4	6.4	5.4	14.3	5.4	26.7	2.3	34.4	6	7	4.3	17.3	3.8	25.4	4.7	33.9	
Passenger Vehicles	183	475	400	1058	396	1926	173	2495	436	524	320	1280	278	1845	346	2469	7302
% Passenger Vehicles	100	98.3	98	98.5	98.8	96.2	98.9	96.8	97.8	99.6	98.5	98.7	97.9	96.8	98.6	97.2	97.5
Large 2 Axle Vehicles	0	7	7	14	5	49	2	56	8	2	5	15	4	29	4	37	122
% Large 2 Axle Vehicles	0	1.4	1.7	1.3	1.2	2.4	1.1	2.2	1.8	0.4	1.5	1.2	1.4	1.5	1.1	1.5	1.6
3 Axle Vehicles	0	1	1	2	0	12	0	12	1	0	0	1	2	13	0	15	30
% 3 Axle Vehicles	0	0.2	0.2	0.2	0	0.6	0	0.5	0.2	0	0	0.1	0.7	0.7	0	0.6	0.4
4+ Axle Trucks	0	0	0	0	0	15	0	15	1	0	0	1	0	19	1	20	36
% 4+ Axle Trucks	0	0	0	0	0	0.7	0	0.6	0.2	0	0	0.1	0	1	0.3	0.8	0.5

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	**33**	**83**	**66**	**182**	**66**	260	21	**347**	**84**	101	42	227	28	200	**55**	283	**1039**
03:00 PM	33	68	40	141	52	257	**28**	337	71	**113**	**70**	**254**	34	221	39	294	1026
03:15 PM	15	43	40	98	40	272	16	328	46	52	42	140	**51**	239	42	332	898
03:30 PM	15	67	43	125	31	**277**	16	324	41	62	39	142	29	**314**	47	**390**	981
Total Volume	96	261	189	546	189	1066	81	1336	242	328	193	763	142	974	183	1299	3944
% App. Total	17.6	47.8	34.6		14.1	79.8	6.1		31.7	43	25.3		10.9	75	14.1		
PHF	.727	.786	.716	.750	.716	.962	.723	.963	.720	.726	.689	.751	.696	.775	.832	.833	.949

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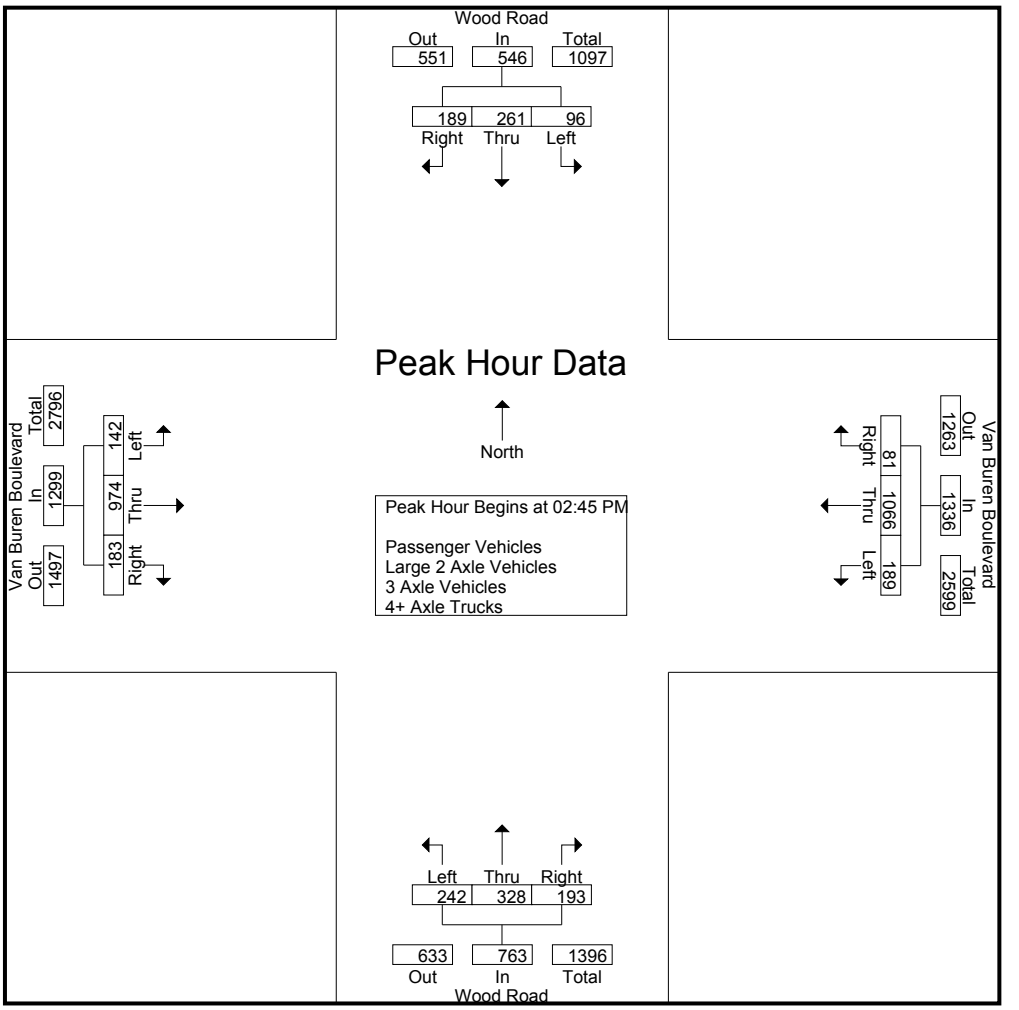

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:15 PM				02:15 PM				02:45 PM				03:00 PM			
+0 mins.	20	60	46	126	49	253	26	328	**84**	101	42	227	34	221	39	294
+15 mins.	30	61	50	141	**68**	252	17	337	71	**113**	**70**	**254**	**51**	239	42	332
+30 mins.	**33**	**83**	**66**	**182**	66	**260**	21	**347**	46	52	42	140	29	**314**	**47**	**390**
+45 mins.	33	68	40	141	52	257	**28**	337	41	62	39	142	37	276	38	351
Total Volume	116	272	202	590	235	1022	92	1349	242	328	193	763	151	1050	166	1367
% App. Total	19.7	46.1	34.2		17.4	75.8	6.8		31.7	43	25.3		11	76.8	12.1	
PHF	.879	.819	.765	.810	.864	.983	.821	.972	.720	.726	.689	.751	.740	.836	.883	.876

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Groups Printed- Passenger Vehicles

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	21	39	55	115	48	166	28	242	55	59	27	141	30	191	39	260	758
02:15 PM	20	57	44	121	48	243	26	317	44	35	28	107	37	220	44	301	846
02:30 PM	30	61	47	138	68	244	16	328	36	45	22	103	35	221	43	299	868
02:45 PM	33	81	65	179	65	256	21	342	82	101	41	224	27	196	55	278	1023
Total	104	238	211	553	229	909	91	1229	217	240	118	575	129	828	181	1138	3495
03:00 PM	33	68	39	140	50	242	27	319	69	112	69	250	33	212	39	284	993
03:15 PM	15	43	39	97	40	258	16	314	45	52	42	139	51	230	41	322	872
03:30 PM	15	66	43	124	31	268	16	315	39	62	38	139	29	308	47	384	962
03:45 PM	16	60	68	144	46	249	23	318	66	58	53	177	36	267	38	341	980
Total	79	237	189	505	167	1017	82	1266	219	284	202	705	149	1017	165	1331	3807
Grand Total	183	475	400	1058	396	1926	173	2495	436	524	320	1280	278	1845	346	2469	7302
Apprch %	17.3	44.9	37.8		15.9	77.2	6.9		34.1	40.9	25		11.3	74.7	14		
Total %	2.5	6.5	5.5	14.5	5.4	26.4	2.4	34.2	6	7.2	4.4	17.5	3.8	25.3	4.7	33.8	

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	**33**	**81**	**65**	**179**	**65**	256	21	**342**	**82**	101	41	224	27	196	**55**	278	**1023**
03:00 PM	33	68	39	140	50	242	**27**	319	69	**112**	**69**	**250**	33	212	39	284	993
03:15 PM	15	43	39	97	40	258	16	314	45	52	42	139	**51**	230	41	322	872
03:30 PM	15	66	43	124	31	**268**	16	315	39	62	38	139	29	**308**	47	**384**	962
Total Volume	96	258	186	540	186	1024	80	1290	235	327	190	752	140	946	182	1268	3850
% App. Total	17.8	47.8	34.4		14.4	79.4	6.2		31.2	43.5	25.3		11	74.6	14.4		
PHF	.727	.796	.715	.754	.715	.955	.741	.943	.716	.730	.688	.752	.686	.768	.827	.826	.941

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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Wood_VB MD
Site Code : 00321719
Start Date : 11/18/2021
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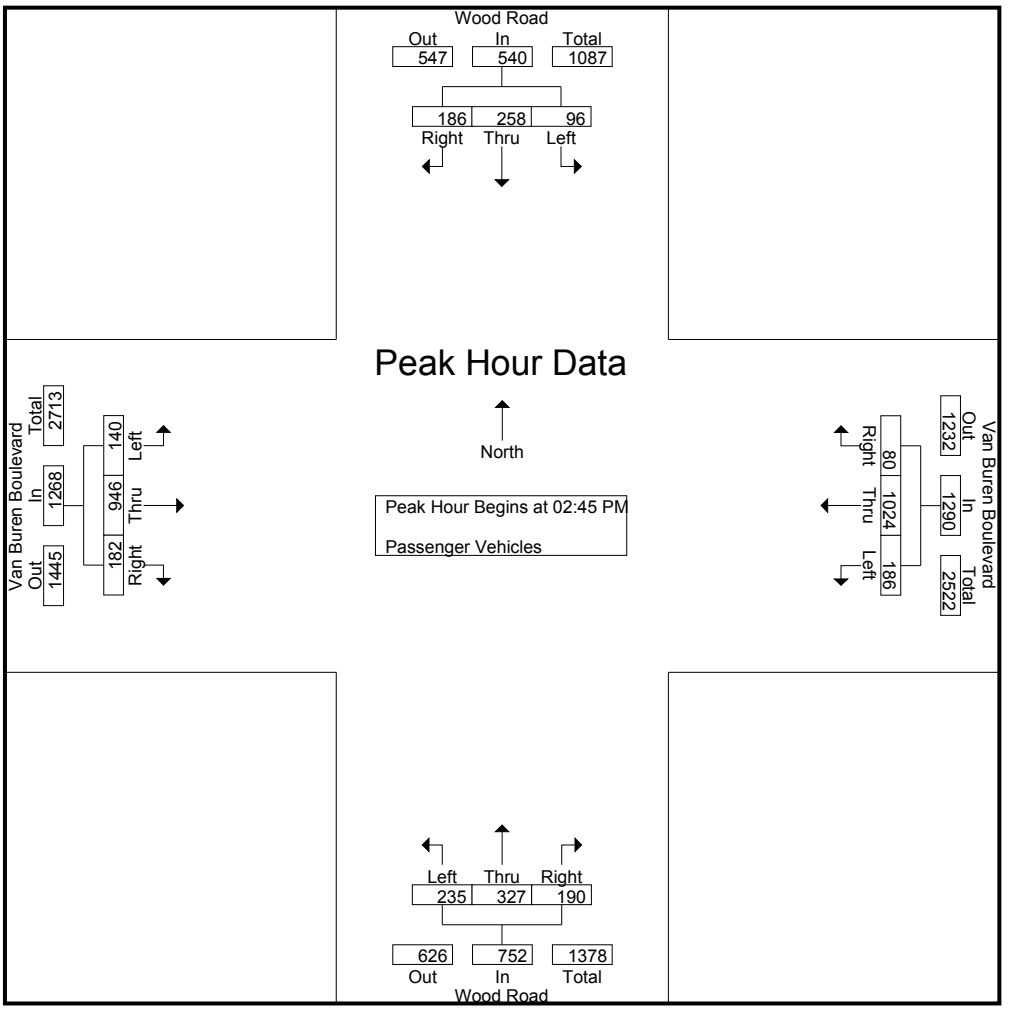

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	**33**	**81**	**65**	**179**	**65**	256	21	**342**	**82**	101	41	224	27	196	**55**	278
+15 mins.	33	68	39	140	50	242	**27**	319	69	**112**	**69**	**250**	33	212	39	284
+30 mins.	15	43	39	97	40	258	16	314	45	52	42	139	**51**	230	41	322
+45 mins.	15	66	43	124	31	**268**	16	315	39	62	38	139	29	**308**	47	**384**
Total Volume	96	258	186	540	186	1024	80	1290	235	327	190	752	140	946	182	1268
% App. Total	17.8	47.8	34.4		14.4	79.4	6.2		31.2	43.5	25.3		11	74.6	14.4	
PHF	.727	.796	.715	.754	.715	.955	.741	.943	.716	.730	.688	.752	.686	.768	.827	.826

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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Wood_VB MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	2	0	2	0	4	0	4	0	0	1	1	0	4	2	6	13
02:15 PM	0	3	1	4	1	9	0	10	0	0	0	0	2	3	1	6	20
02:30 PM	0	0	3	3	0	5	1	6	1	1	0	2	0	2	1	3	14
02:45 PM	0	1	1	2	1	2	0	3	1	0	1	2	0	2	0	2	9
Total	0	6	5	11	2	20	1	23	2	1	2	5	2	11	4	17	56
03:00 PM	0	0	1	1	2	9	1	12	2	1	1	4	1	2	0	3	20
03:15 PM	0	0	1	1	0	8	0	8	0	0	0	0	0	7	0	7	16
03:30 PM	0	1	0	1	0	5	0	5	2	0	1	3	0	4	0	4	13
03:45 PM	0	0	0	0	1	7	0	8	2	0	1	3	1	5	0	6	17
Total	0	1	2	3	3	29	1	33	6	1	3	10	2	18	0	20	66
Grand Total	0	7	7	14	5	49	2	56	8	2	5	15	4	29	4	37	122
Apprch %	0	50	50		8.9	87.5	3.6		53.3	13.3	33.3		10.8	78.4	10.8		
Total %	0	5.7	5.7	11.5	4.1	40.2	1.6	45.9	6.6	1.6	4.1	12.3	3.3	23.8	3.3	30.3	

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	**1**	**1**	**2**	1	2	0	3	1	0	**1**	2	0	2	0	2	9
03:00 PM	0	0	1	1	**2**	**9**	**1**	**12**	**2**	**1**	1	**4**	**1**	2	0	3	**20**
03:15 PM	0	0	1	1	0	8	0	8	0	0	0	0	0	**7**	0	**7**	16
03:30 PM	0	1	0	1	0	5	0	5	2	0	1	3	0	4	0	4	13
Total Volume	0	2	3	5	3	24	1	28	5	1	3	9	1	15	0	16	58
% App. Total	0	40	60		10.7	85.7	3.6		55.6	11.1	33.3		6.2	93.8	0		
PHF	.000	.500	.750	.625	.375	.667	.250	.583	.625	.250	.750	.563	.250	.536	.000	.571	.725

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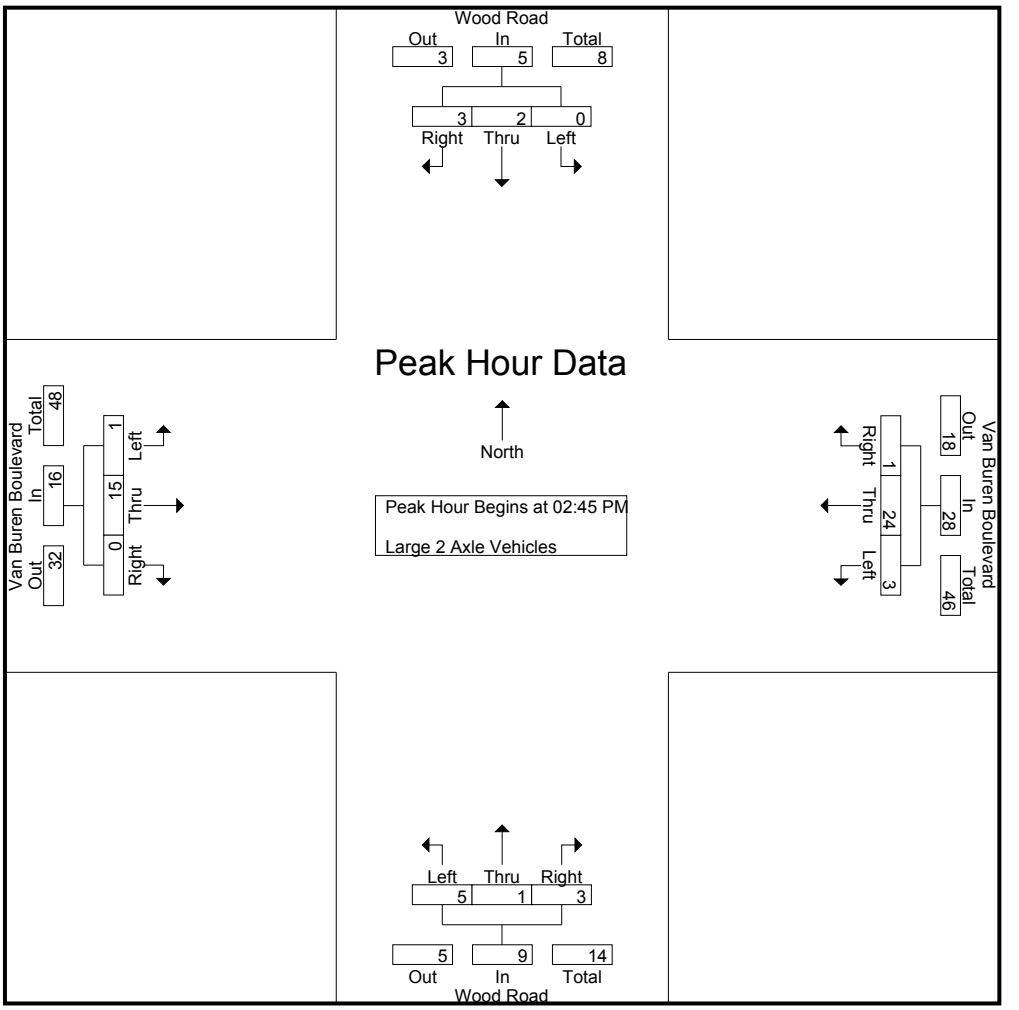
City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Wood_VB MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	0	**1**	**1**	**2**	1	2	0	3	1	0	**1**	2	0	2	0	2
+15 mins.	0	0	1	1	**2**	**9**	**1**	**12**	**2**	**1**	1	**4**	**1**	2	0	3
+30 mins.	0	0	1	1	0	8	0	8	0	0	0	0	0	**7**	0	**7**
+45 mins.	0	1	0	1	0	5	0	5	2	0	1	3	0	4	0	4
Total Volume	0	2	3	5	3	24	1	28	5	1	3	9	1	15	0	16
% App. Total	0	40	60		10.7	85.7	3.6		55.6	11.1	33.3		6.2	93.8	0	
PHF	.000	.500	.750	.625	.375	.667	.250	.583	.625	.250	.750	.563	.250	.536	.000	.571

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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Wood_VB MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
02:15 PM	0	0	1	1	0	1	0	1	0	0	0	0	1	2	0	3	5
02:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
02:45 PM	0	1	0	1	0	2	0	2	0	0	0	0	1	1	0	2	5
Total	0	1	1	2	0	5	0	5	0	0	0	0	2	7	0	9	16
03:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	4	0	4	7
03:15 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0	0	2
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	0	0	0	0	0	7	0	7	1	0	0	1	0	6	0	6	14
Grand Total	0	1	1	2	0	12	0	12	1	0	0	1	2	13	0	15	30
Apprch %	0	50	50		0	100	0		100	0	0		13.3	86.7	0		
Total %	0	3.3	3.3	6.7	0	40	0	40	3.3	0	0	3.3	6.7	43.3	0	50	

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	**1**	0	**1**	0	2	0	2	0	0	0	0	**1**	1	0	2	5
03:00 PM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**4**	0	**4**	**7**
03:15 PM	0	0	0	0	0	1	0	1	**1**	0	0	**1**	0	0	0	0	2
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total Volume	0	1	0	1	0	8	0	8	1	0	0	1	1	5	0	6	16
% App. Total	0	100	0		0	100	0		100	0	0		16.7	83.3	0		
PHF	.000	.250	.000	.250	.000	.667	.000	.667	.250	.000	.000	.250	.250	.313	.000	.375	.571

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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Wood_VB MD
Site Code : 00321719
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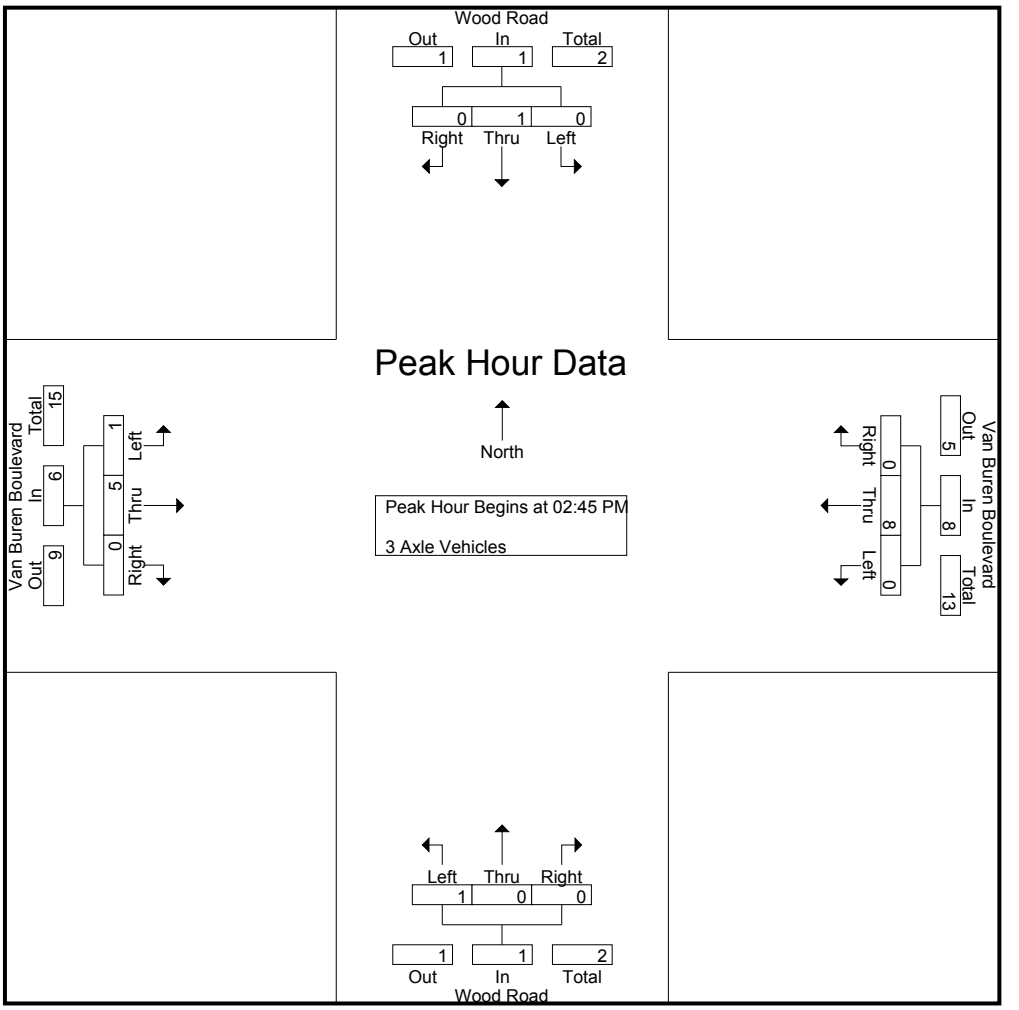

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	0	**1**	0	**1**	0	2	0	2	0	0	0	0	**1**	1	0	2
+15 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	**4**	0	**4**
+30 mins.	0	0	0	0	0	1	0	1	**1**	0	0	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	8	0	8	1	0	0	1	1	5	0	6
% App. Total	0	100	0		0	100	0		100	0	0		16.7	83.3	0	
PHF	.000	.250	.000	.250	.000	.667	.000	.667	.250	.000	.000	.250	.250	.313	.000	.375

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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Wood_VB MD
Site Code : 00321719
Start Date : 11/18/2021
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Groups Printed- 4+ Axle Trucks

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	1	0	1	5
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
02:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	6	0	6	7
02:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
Total	0	0	0	0	0	5	0	5	1	0	0	1	0	10	0	10	16
03:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
03:15 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	1	3	8
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	10	0	10	0	0	0	0	0	9	1	10	20
Grand Total	0	0	0	0	0	15	0	15	1	0	0	1	0	19	1	20	36
Apprch %	0	0	0		0	100	0		100	0	0		0	95	5		
Total %	0	0	0	0	0	41.7	0	41.7	2.8	0	0	2.8	0	52.8	2.8	55.6	

	Wood Road Southbound				Van Buren Boulevard Westbound				Wood Road Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	1	0	1	2
03:00 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	**3**	0	**3**	6
03:15 PM	0	0	0	0	0	**5**	0	**5**	0	0	0	0	0	2	**1**	3	**8**
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Total Volume	0	0	0	0	0	10	0	10	1	0	0	1	0	8	1	9	20
% App. Total	0	0	0		0	100	0		100	0	0		0	88.9	11.1		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.250	.000	.000	.250	.000	.667	.250	.750	.625

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City of Riverside
N/S: Wood Road
E/W: Van Buren Boulevard
Weather: Clear

File Name : 09_RIV_Wood_VB MD
Site Code : 00321719
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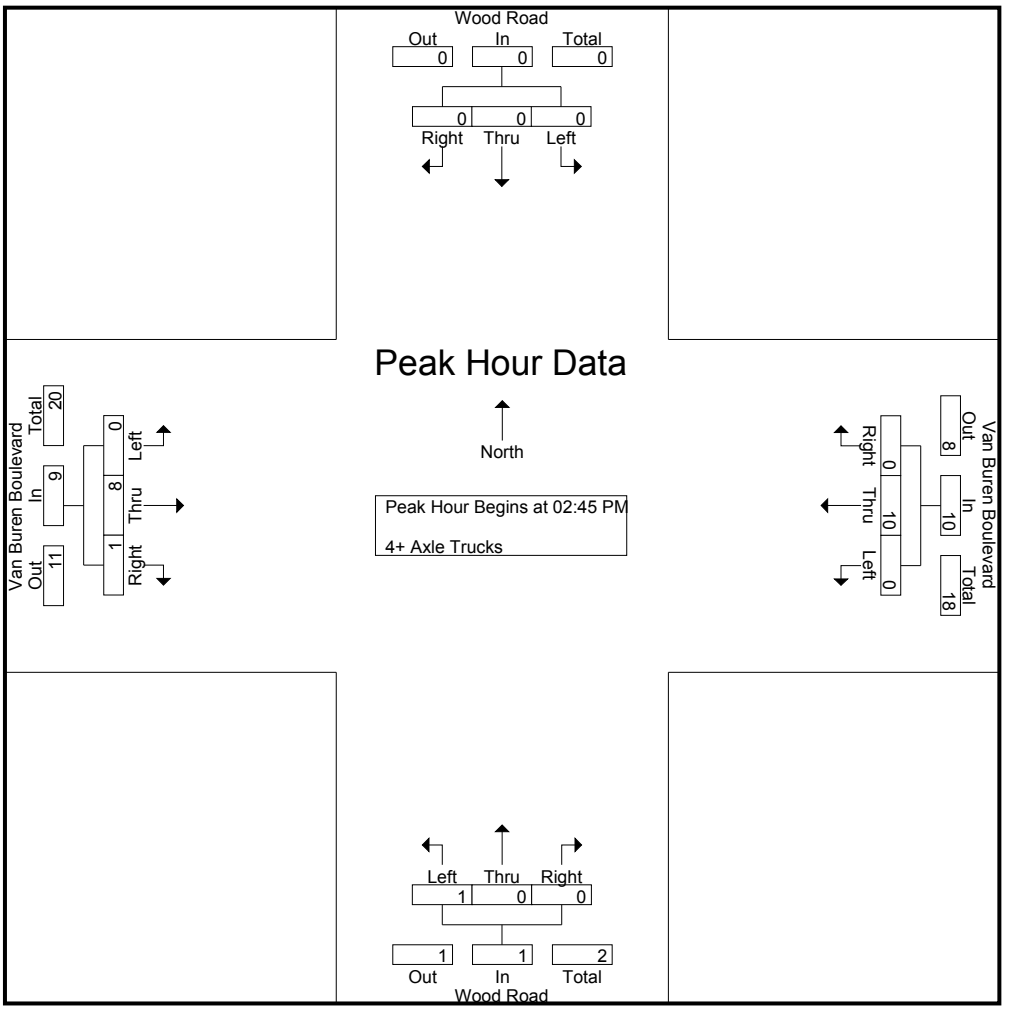

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	1	0	1
+15 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	**3**	0	**3**
+30 mins.	0	0	0	0	0	**5**	0	**5**	0	0	0	0	0	2	**1**	3
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2
Total Volume	0	0	0	0	0	10	0	10	1	0	0	1	0	8	1	9
% App. Total	0	0	0		0	100	0		100	0	0		0	88.9	11.1	
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.250	.000	.000	.250	.000	.667	.250	.750

Location: Riverside
N/S: Wood Road
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Wood Road	East Leg Van Buren Boulevard	South Leg Wood Road	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	3	12	0	3	18
7:15 AM	1	41	7	0	49
7:30 AM	2	32	3	0	37
7:45 AM	0	2	0	0	2
8:00 AM	0	1	0	0	1
8:15 AM	1	3	2	0	6
8:30 AM	0	3	0	0	3
8:45 AM	1	2	0	0	3
TOTAL VOLUMES:	8	96	12	3	119

	North Leg Wood Road	East Leg Van Buren Boulevard	South Leg Wood Road	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	9	0	0	9
2:15 PM	1	7	0	0	8
2:30 PM	0	9	1	0	10
2:45 PM	24	150	33	0	207
3:00 PM	18	45	36	0	99
3:15 PM	19	17	20	0	56
3:30 PM	3	16	12	1	32
3:45 PM	0	4	0	0	4
TOTAL VOLUMES:	65	257	102	1	425

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Location: Riverside
N/S: Wood Road
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Wood Road			Westbound Van Buren Boulevard			Northbound Wood Road			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30 AM	0	0	0	0	5	0	0	0	0	0	0	0	5
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	1	0	0	0	0	1	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	6	1	0	0	0	0	2	0	10

	Southbound Wood Road			Westbound Van Buren Boulevard			Northbound Wood Road			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	2	0	0	3	0	5

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City of Riverside
N/S: Bountiful Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 10_RIV_Bount_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Total Volume

	Bountiful Street Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	9	34	43	345	5	350	16	209	225	618
07:15 AM	8	53	61	365	6	371	18	276	294	726
07:30 AM	9	58	67	327	9	336	25	249	274	677
07:45 AM	15	25	40	295	11	306	30	302	332	678
Total	41	170	211	1332	31	1363	89	1036	1125	2699
08:00 AM	6	32	38	309	7	316	10	224	234	588
08:15 AM	3	18	21	304	1	305	21	212	233	559
08:30 AM	1	27	28	307	2	309	23	188	211	548
08:45 AM	4	19	23	269	0	269	19	213	232	524
Total	14	96	110	1189	10	1199	73	837	910	2219
Grand Total	55	266	321	2521	41	2562	162	1873	2035	4918
Apprch %	17.1	82.9		98.4	1.6		8	92		
Total %	1.1	5.4	6.5	51.3	0.8	52.1	3.3	38.1	41.4	

	Bountiful Street Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	9	34	43	345	5	350	16	209	225	618
07:15 AM	8	53	61	**365**	6	**371**	18	276	294	**726**
07:30 AM	9	**58**	**67**	327	9	336	25	249	274	677
07:45 AM	**15**	25	40	295	**11**	306	**30**	**302**	**332**	678
Total Volume	41	170	211	1332	31	1363	89	1036	1125	2699
% App. Total	19.4	80.6		97.7	2.3		7.9	92.1		
PHF	.683	.733	.787	.912	.705	.918	.742	.858	.847	.929

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City of Riverside
N/S: Bountiful Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 10_RIV_Bount_VB AM
Site Code : 00321719
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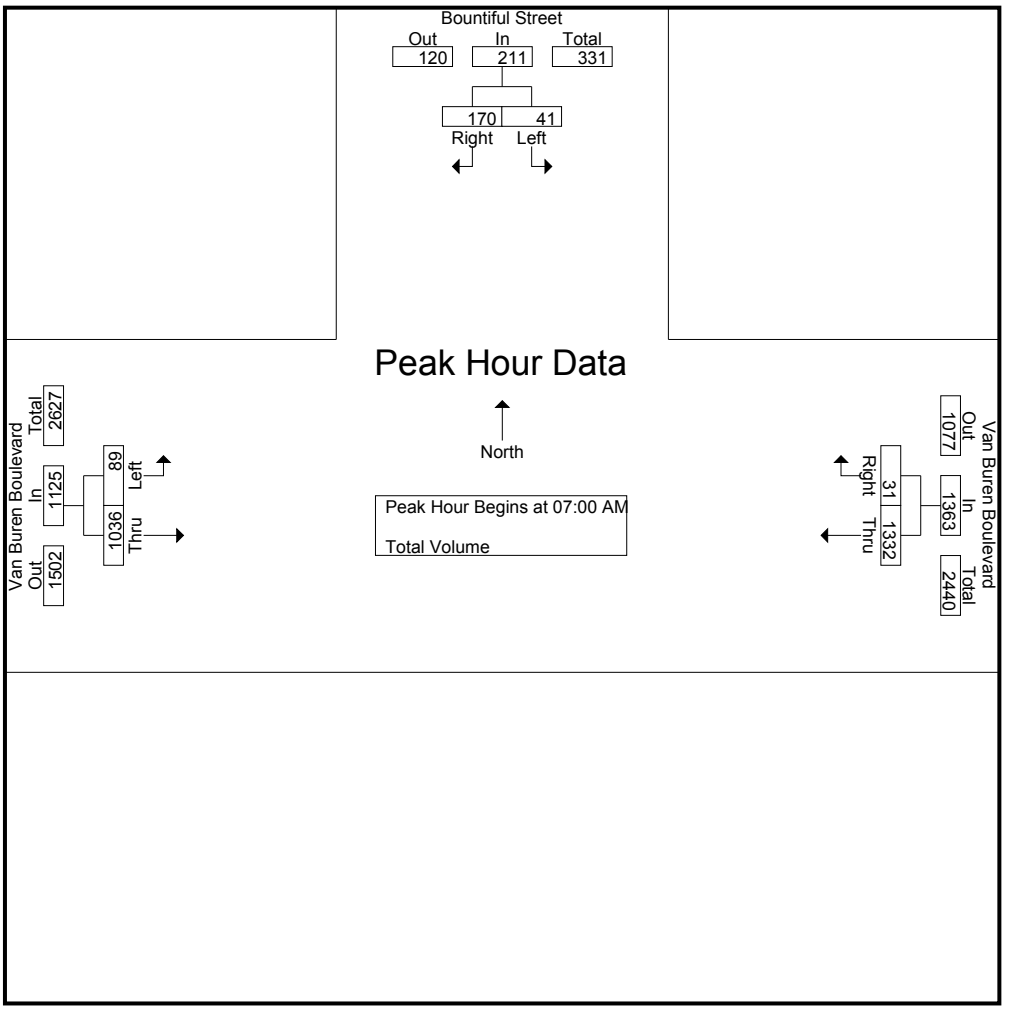

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:15 AM		
+0 mins.	9	34	43	345	5	350	18	276	294
+15 mins.	8	53	61	**365**	6	**371**	25	249	274
+30 mins.	9	**58**	**67**	327	9	336	**30**	**302**	**332**
+45 mins.	**15**	25	40	295	**11**	306	10	224	234
Total Volume	41	170	211	1332	31	1363	83	1051	1134
% App. Total	19.4	80.6		97.7	2.3		7.3	92.7	
PHF	.683	.733	.787	.912	.705	.918	.692	.870	.854

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File Name : 10_RIV_Bount_VB MD
Site Code : 00321719
Start Date : 11/18/2021
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Groups Printed- Total Volume

	Bountiful Street Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
02:00 PM	8	25	33	251	8	259	29	250	279	571
02:15 PM	3	29	32	279	6	285	22	253	275	592
02:30 PM	12	42	54	332	6	338	23	257	280	672
02:45 PM	7	54	61	353	7	360	24	270	294	715
Total	30	150	180	1215	27	1242	98	1030	1128	2550
03:00 PM	4	28	32	307	6	313	55	320	375	720
03:15 PM	2	35	37	294	4	298	30	288	318	653
03:30 PM	3	29	32	314	5	319	33	330	363	714
03:45 PM	5	34	39	350	7	357	48	331	379	775
Total	14	126	140	1265	22	1287	166	1269	1435	2862
Grand Total	44	276	320	2480	49	2529	264	2299	2563	5412
Apprch %	13.8	86.2		98.1	1.9		10.3	89.7		
Total %	0.8	5.1	5.9	45.8	0.9	46.7	4.9	42.5	47.4	

	Bountiful Street Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:00 PM										
03:00 PM	4	28	32	307	6	313	**55**	320	375	720
03:15 PM	2	**35**	37	294	4	298	30	288	318	653
03:30 PM	3	29	32	314	5	319	33	330	363	714
03:45 PM	**5**	34	**39**	**350**	**7**	**357**	48	**331**	**379**	**775**
Total Volume	14	126	140	1265	22	1287	166	1269	1435	2862
% App. Total	10	90		98.3	1.7		11.6	88.4		
PHF	.700	.900	.897	.904	.786	.901	.755	.958	.947	.923

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File Name : 10_RIV_Bount_VB MD
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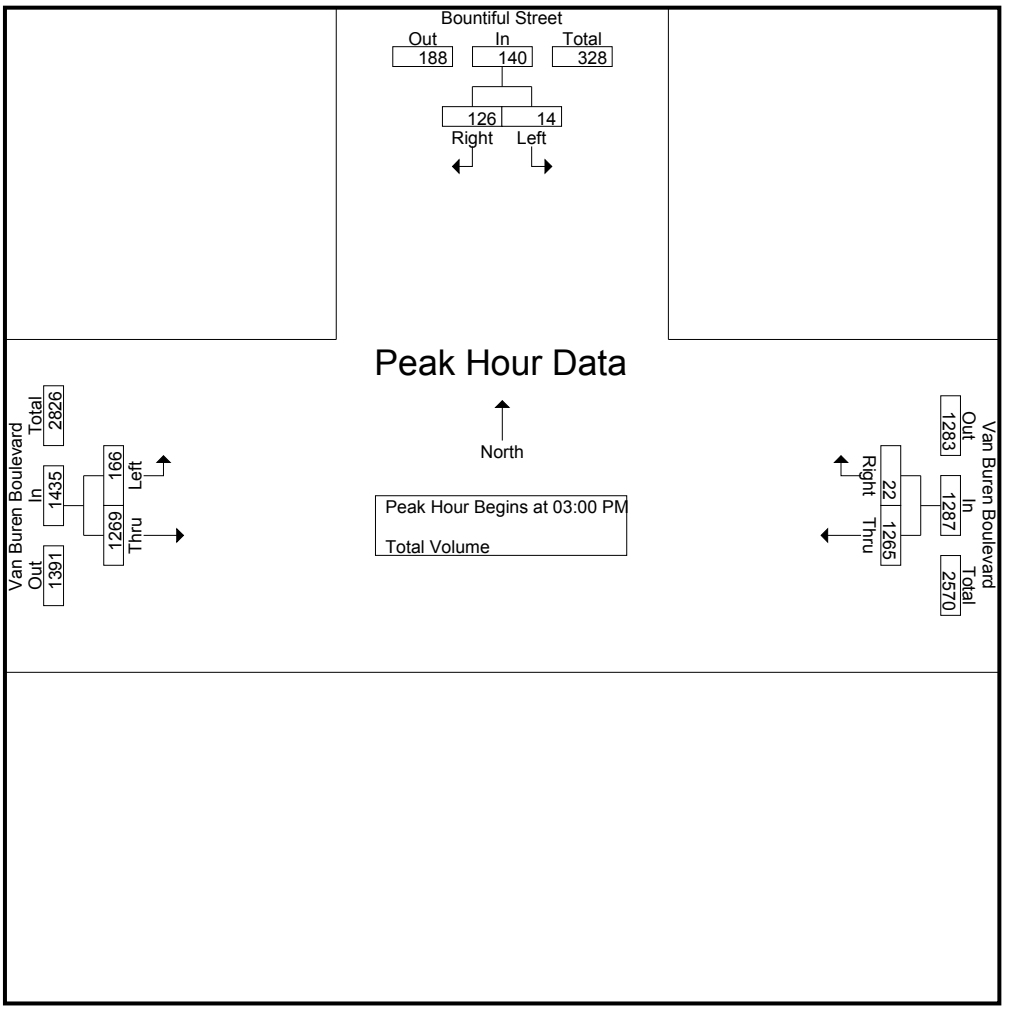

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM			02:30 PM			03:00 PM		
+0 mins.	**12**	42	54	332	6	338	**55**	320	375
+15 mins.	7	**54**	**61**	**353**	**7**	**360**	30	288	318
+30 mins.	4	28	32	307	6	313	33	330	363
+45 mins.	2	35	37	294	4	298	48	**331**	**379**
Total Volume	25	159	184	1286	23	1309	166	1269	1435
% App. Total	13.6	86.4		98.2	1.8		11.6	88.4	
PHF	.521	.736	.754	.911	.821	.909	.755	.958	.947

Location: Riverside
N/S: Bountiful Street
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Bountiful Street	East Leg Van Buren Boulevard	South Leg Dead End	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	1	0	0	4	5
7:15 AM	0	0	0	3	3
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	1	1
8:15 AM	2	0	0	1	3
8:30 AM	2	0	0	0	2
8:45 AM	4	0	0	0	4
TOTAL VOLUMES:	10	0	0	9	19

	North Leg Bountiful Street	East Leg Van Buren Boulevard	South Leg Dead End	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	0	0	0
2:15 PM	1	0	0	1	2
2:30 PM	0	0	0	0	0
2:45 PM	14	0	0	10	24
3:00 PM	10	0	0	4	14
3:15 PM	13	0	0	11	24
3:30 PM	0	0	0	2	2
3:45 PM	0	0	0	1	1
TOTAL VOLUMES:	38	0	0	29	67

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Location: Riverside
N/S: Bountiful Street
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Bountiful Street			Westbound Van Buren Boulevard			Northbound Dead End			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	3	0	0	0	0	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	4	0	3	0	0	0	0	0	0	0	7

	Southbound Bountiful Street			Westbound Van Buren Boulevard			Northbound Dead End			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	1	0	0	0	0	2	2	0	5
3:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
3:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	0	3	2	0	7

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City of Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South
Weather: Clear

File Name : 11_RIV_Traut_Mission AM
Site Code : 00321719
Start Date : 11/18/2021
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	17	203	2	222	138	3	14	155	0	398	51	449	8	3	1	12	838
07:15 AM	24	229	0	253	167	4	15	186	1	416	55	472	9	6	2	17	928
07:30 AM	29	223	7	259	111	2	9	122	0	426	48	474	25	7	3	35	890
07:45 AM	29	202	3	234	123	3	11	137	0	395	90	485	15	16	1	32	888
Total	99	857	12	968	539	12	49	600	1	1635	244	1880	57	32	7	96	3544
08:00 AM	31	183	4	218	96	4	10	110	0	376	97	473	15	8	2	25	826
08:15 AM	40	160	3	203	53	0	11	64	1	344	86	431	10	2	1	13	711
08:30 AM	25	168	0	193	75	1	8	84	0	297	62	359	5	4	2	11	647
08:45 AM	27	175	3	205	70	1	3	74	0	255	78	333	6	1	0	7	619
Total	123	686	10	819	294	6	32	332	1	1272	323	1596	36	15	5	56	2803
Grand Total	222	1543	22	1787	833	18	81	932	2	2907	567	3476	93	47	12	152	6347
Apprch %	12.4	86.3	1.2		89.4	1.9	8.7		0.1	83.6	16.3		61.2	30.9	7.9		
Total %	3.5	24.3	0.3	28.2	13.1	0.3	1.3	14.7	0	45.8	8.9	54.8	1.5	0.7	0.2	2.4	
Passenger Vehicles	218	1518	21	1757	820	18	77	915	2	2858	556	3416	92	47	11	150	6238
% Passenger Vehicles	98.2	98.4	95.5	98.3	98.4	100	95.1	98.2	100	98.3	98.1	98.3	98.9	100	91.7	98.7	98.3
Large 2 Axle Vehicles	4	22	1	27	10	0	4	14	0	42	11	53	1	0	0	1	95
% Large 2 Axle Vehicles	1.8	1.4	4.5	1.5	1.2	0	4.9	1.5	0	1.4	1.9	1.5	1.1	0	0	0.7	1.5
3 Axle Vehicles	0	1	0	1	1	0	0	1	0	7	0	7	0	0	1	1	10
% 3 Axle Vehicles	0	0.1	0	0.1	0.1	0	0	0.1	0	0.2	0	0.2	0	0	8.3	0.7	0.2
4+ Axle Trucks	0	2	0	2	2	0	0	2	0	0	0	0	0	0	0	0	4
% 4+ Axle Trucks	0	0.1	0	0.1	0.2	0	0	0.2	0	0	0	0	0	0	0	0	0.1

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	17	203	2	222	138	3	14	155	0	398	51	449	8	3	1	12	838
07:15 AM	24	**229**	0	253	**167**	**4**	**15**	**186**	**1**	416	55	472	9	6	2	17	**928**
07:30 AM	**29**	223	**7**	**259**	111	2	9	122	0	**426**	48	474	**25**	7	**3**	**35**	890
07:45 AM	29	202	3	234	123	3	11	137	0	395	**90**	**485**	15	**16**	1	32	888
Total Volume	99	857	12	968	539	12	49	600	1	1635	244	1880	57	32	7	96	3544
% App. Total	10.2	88.5	1.2		89.8	2	8.2		0.1	87	13		59.4	33.3	7.3		
PHF	.853	.936	.429	.934	.807	.750	.817	.806	.250	.960	.678	.969	.570	.500	.583	.686	.955

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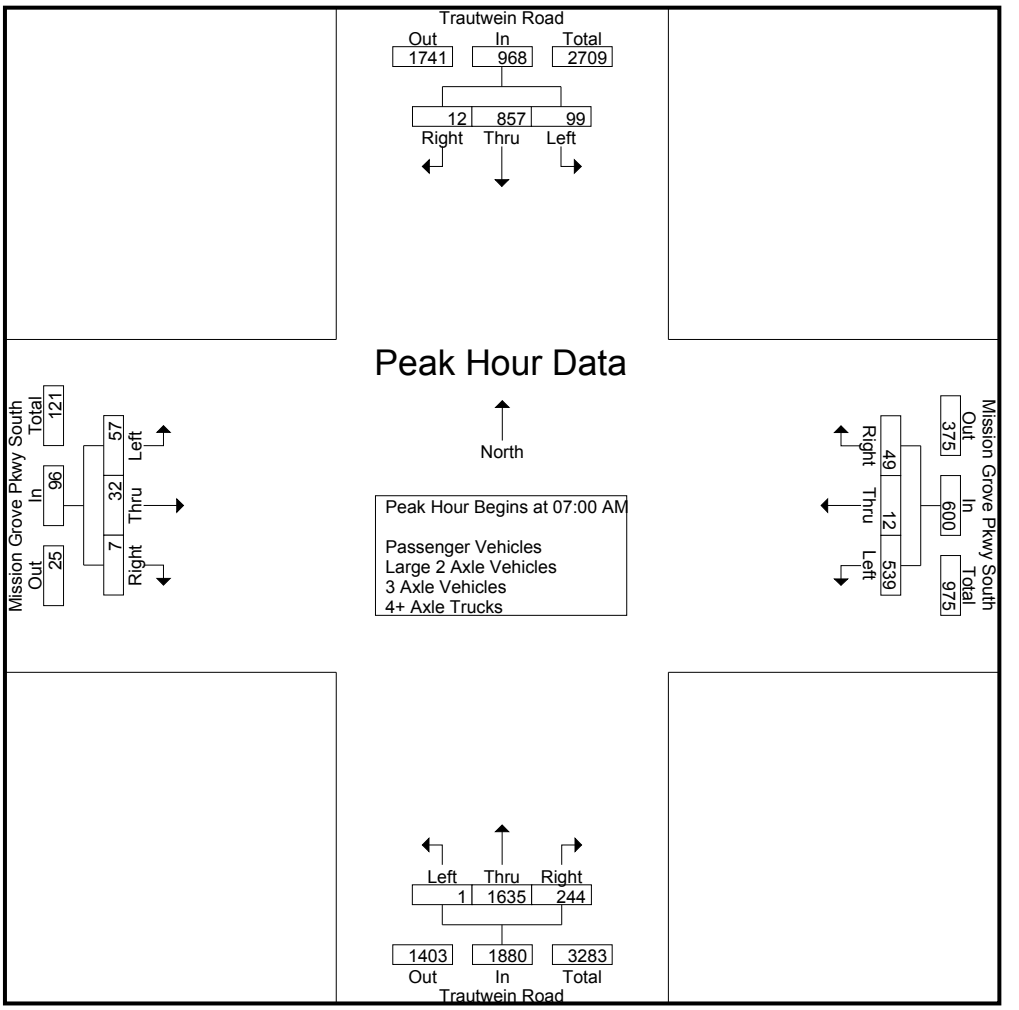
City of Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South
Weather: Clear

File Name : 11_RIV_Traut_Mission AM
Site Code : 00321719
Start Date : 11/18/2021



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	17	203	2	222	138	3	14	155	**1**	416	55	472	9	6	2	17
+15 mins.	24	**229**	0	253	**167**	**4**	**15**	**186**	0	**426**	48	474	**25**	7	**3**	**35**
+30 mins.	**29**	223	**7**	**259**	111	2	9	122	0	395	90	**485**	15	**16**	1	32
+45 mins.	29	202	3	234	123	3	11	137	0	376	**97**	473	15	8	2	25
Total Volume	99	857	12	968	539	12	49	600	1	1613	290	1904	64	37	8	109
% App. Total	10.2	88.5	1.2		89.8	2	8.2		0.1	84.7	15.2		58.7	33.9	7.3	
PHF	.853	.936	.429	.934	.807	.750	.817	.806	.250	.947	.747	.981	.640	.578	.667	.779

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City of Riverside
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File Name : 11_RIV_Traut_Mission AM
Site Code : 00321719
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Groups Printed- Passenger Vehicles

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	15	200	2	217	138	3	14	155	0	393	49	442	8	3	1	12	826
07:15 AM	24	226	0	250	162	4	13	179	1	412	53	466	9	6	2	17	912
07:30 AM	29	223	7	259	111	2	9	122	0	421	47	468	25	7	3	35	884
07:45 AM	28	196	3	227	122	3	11	136	0	389	89	478	14	16	0	30	871
Total	96	845	12	953	533	12	47	592	1	1615	238	1854	56	32	6	94	3493
08:00 AM	30	180	3	213	95	4	10	109	0	367	96	463	15	8	2	25	810
08:15 AM	40	158	3	201	51	0	9	60	1	333	83	417	10	2	1	13	691
08:30 AM	25	162	0	187	74	1	8	83	0	294	62	356	5	4	2	11	637
08:45 AM	27	173	3	203	67	1	3	71	0	249	77	326	6	1	0	7	607
Total	122	673	9	804	287	6	30	323	1	1243	318	1562	36	15	5	56	2745
Grand Total	218	1518	21	1757	820	18	77	915	2	2858	556	3416	92	47	11	150	6238
Apprch %	12.4	86.4	1.2		89.6	2	8.4		0.1	83.7	16.3		61.3	31.3	7.3		
Total %	3.5	24.3	0.3	28.2	13.1	0.3	1.2	14.7	0	45.8	8.9	54.8	1.5	0.8	0.2	2.4	

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	15	200	2	217	138	3	**14**	155	0	393	49	442	8	3	1	12	826
07:15 AM	24	**226**	0	250	**162**	**4**	13	**179**	**1**	412	53	466	9	6	2	17	**912**
07:30 AM	**29**	223	**7**	**259**	111	2	9	122	0	**421**	47	468	**25**	7	**3**	**35**	884
07:45 AM	28	196	3	227	122	3	11	136	0	389	**89**	**478**	14	**16**	0	30	871
Total Volume	96	845	12	953	533	12	47	592	1	1615	238	1854	56	32	6	94	3493
% App. Total	10.1	88.7	1.3		90	2	7.9		0.1	87.1	12.8		59.6	34	6.4		
PHF	.828	.935	.429	.920	.823	.750	.839	.827	.250	.959	.669	.970	.560	.500	.500	.671	.958

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City of Riverside
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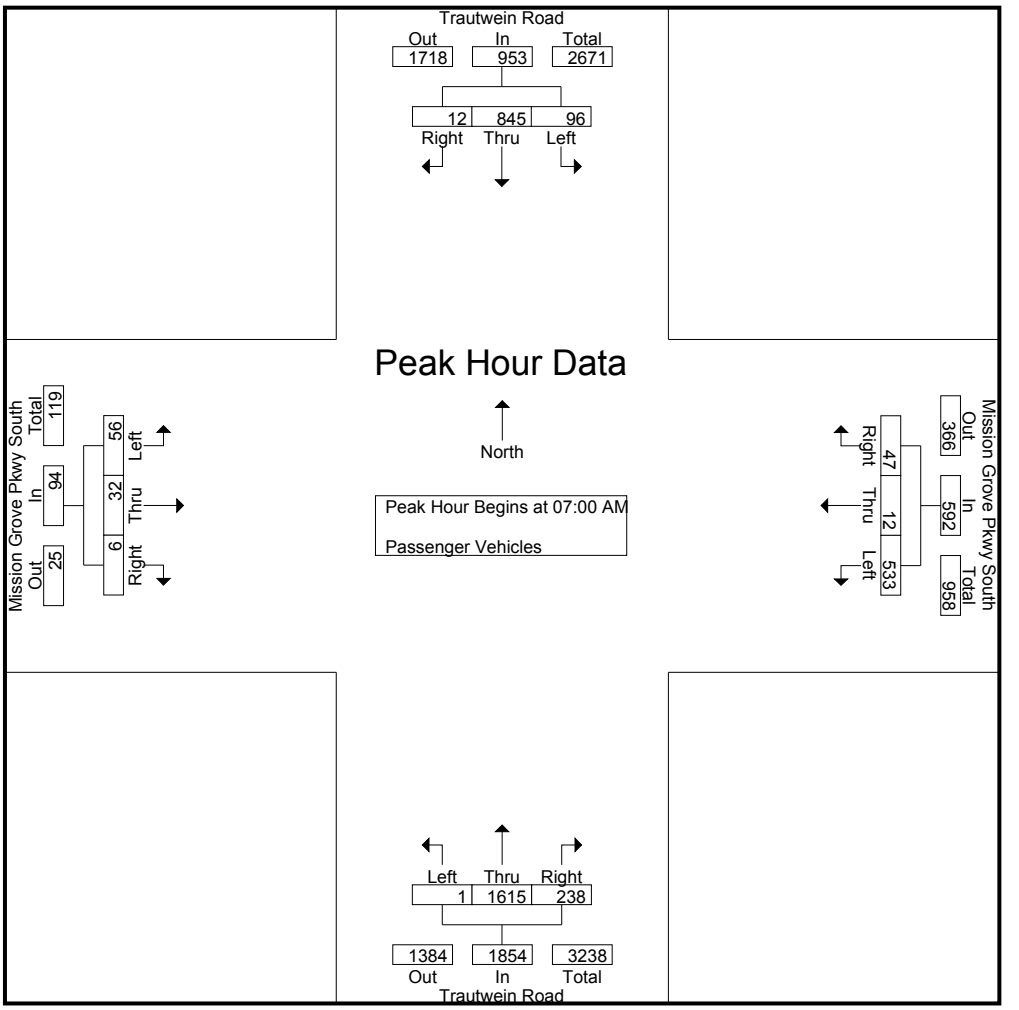

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	15	200	2	217	138	3	**14**	155	0	393	49	442	8	3	1	12
+15 mins.	24	**226**	0	250	**162**	**4**	13	**179**	**1**	412	53	466	9	6	2	17
+30 mins.	**29**	223	**7**	**259**	111	2	9	122	0	**421**	47	468	**25**	7	**3**	**35**
+45 mins.	28	196	3	227	122	3	11	136	0	389	**89**	**478**	14	**16**	0	30
Total Volume	96	845	12	953	533	12	47	592	1	1615	238	1854	56	32	6	94
% App. Total	10.1	88.7	1.3		90	2	7.9		0.1	87.1	12.8		59.6	34	6.4	
PHF	.828	.935	.429	.920	.823	.750	.839	.827	.250	.959	.669	.970	.560	.500	.500	.671

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City of Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South
Weather: Clear

File Name : 11_RIV_Traut_Mission AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	3	0	5	0	0	0	0	0	3	2	5	0	0	0	0	10
07:15 AM	0	3	0	3	5	0	2	7	0	3	2	5	0	0	0	0	15
07:30 AM	0	0	0	0	0	0	0	0	0	5	1	6	0	0	0	0	6
07:45 AM	1	5	0	6	1	0	0	1	0	6	1	7	1	0	0	1	15
Total	3	11	0	14	6	0	2	8	0	17	6	23	1	0	0	1	46
08:00 AM	1	3	1	5	1	0	0	1	0	8	1	9	0	0	0	0	15
08:15 AM	0	2	0	2	1	0	2	3	0	11	3	14	0	0	0	0	19
08:30 AM	0	5	0	5	1	0	0	1	0	1	0	1	0	0	0	0	7
08:45 AM	0	1	0	1	1	0	0	1	0	5	1	6	0	0	0	0	8
Total	1	11	1	13	4	0	2	6	0	25	5	30	0	0	0	0	49
Grand Total	4	22	1	27	10	0	4	14	0	42	11	53	1	0	0	1	95
Apprch %	14.8	81.5	3.7		71.4	0	28.6		0	79.2	20.8		100	0	0		
Total %	4.2	23.2	1.1	28.4	10.5	0	4.2	14.7	0	44.2	11.6	55.8	1.1	0	0	1.1	

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**2**	3	0	5	0	0	0	0	0	3	**2**	5	0	0	0	0	10
07:15 AM	0	3	0	3	**5**	0	**2**	**7**	0	3	2	5	0	0	0	0	**15**
07:30 AM	0	0	0	0	0	0	0	0	0	5	1	6	0	0	0	0	6
07:45 AM	1	**5**	0	**6**	1	0	0	1	0	**6**	1	**7**	**1**	0	0	**1**	15
Total Volume	3	11	0	14	6	0	2	8	0	17	6	23	1	0	0	1	46
% App. Total	21.4	78.6	0		75	0	25		0	73.9	26.1		100	0	0		
PHF	.375	.550	.000	.583	.300	.000	.250	.286	.000	.708	.750	.821	.250	.000	.000	.250	.767

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City of Riverside
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E/W: Mission Grove Pkwy South
Weather: Clear

File Name : 11_RIV_Traut_Mission AM
Site Code : 00321719
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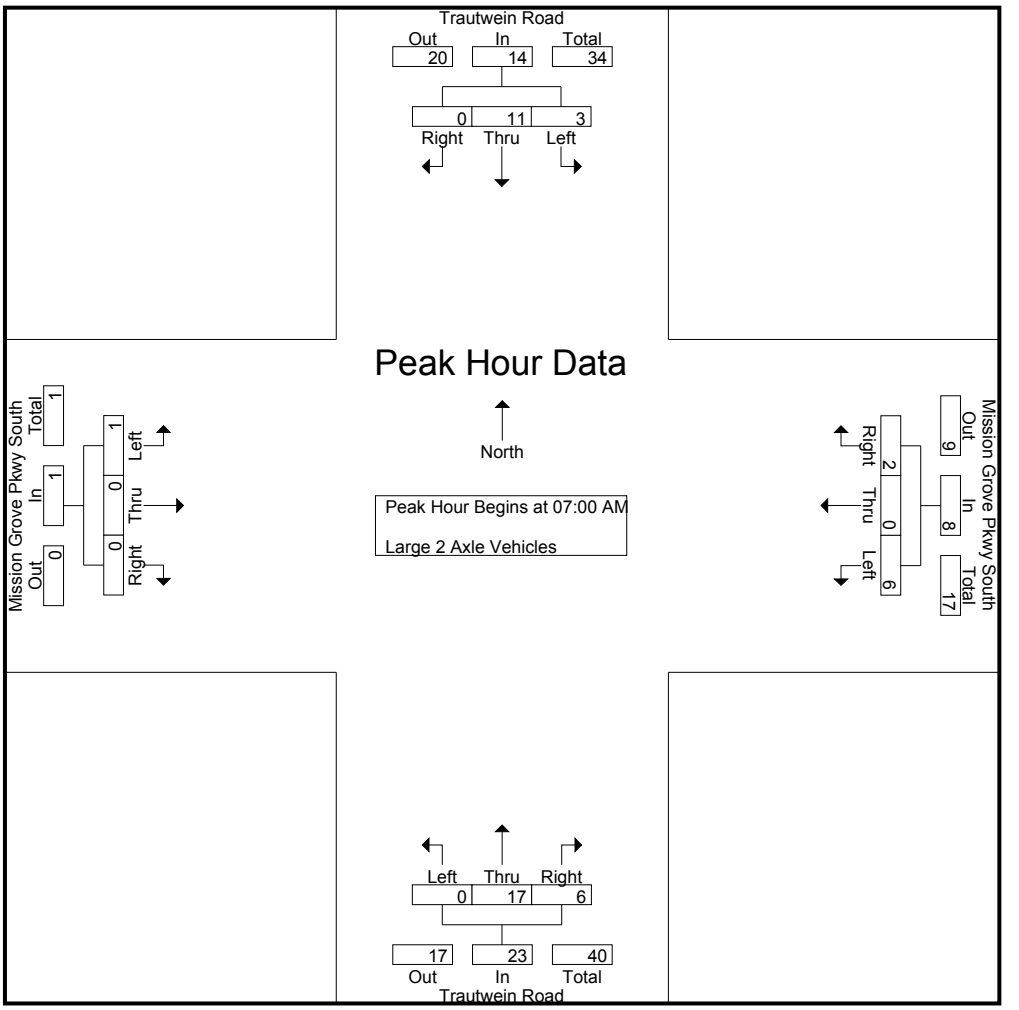

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**2**	3	0	5	0	0	0	0	0	3	**2**	5	0	0	0	0
+15 mins.	0	3	0	3	**5**	0	**2**	**7**	0	3	2	5	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	5	1	6	0	0	0	0
+45 mins.	1	**5**	0	**6**	1	0	0	1	0	**6**	1	**7**	**1**	0	0	**1**
Total Volume	3	11	0	14	6	0	2	8	0	17	6	23	1	0	0	1
% App. Total	21.4	78.6	0		75	0	25		0	73.9	26.1		100	0	0	
PHF	.375	.550	.000	.583	.300	.000	.250	.286	.000	.708	.750	.821	.250	.000	.000	.250

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Groups Printed- 3 Axle Vehicles

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	3	0	3	0	0	1	1	4
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:45 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
Total	0	1	0	1	1	0	0	1	0	4	0	4	0	0	0	0	6
Grand Total	0	1	0	1	1	0	0	1	0	7	0	7	0	0	1	1	10
Apprch %	0	100	0		100	0	0		0	100	0		0	0	100		
Total %	0	10	0	10	10	0	0	10	0	70	0	70	0	0	10	10	

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**2**
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	1
Total Volume	0	0	0	0	0	0	0	0	0	3	0	3	0	0	1	1	4
% App. Total	0	0	0		0	0	0		0	100	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.250	.250	.500

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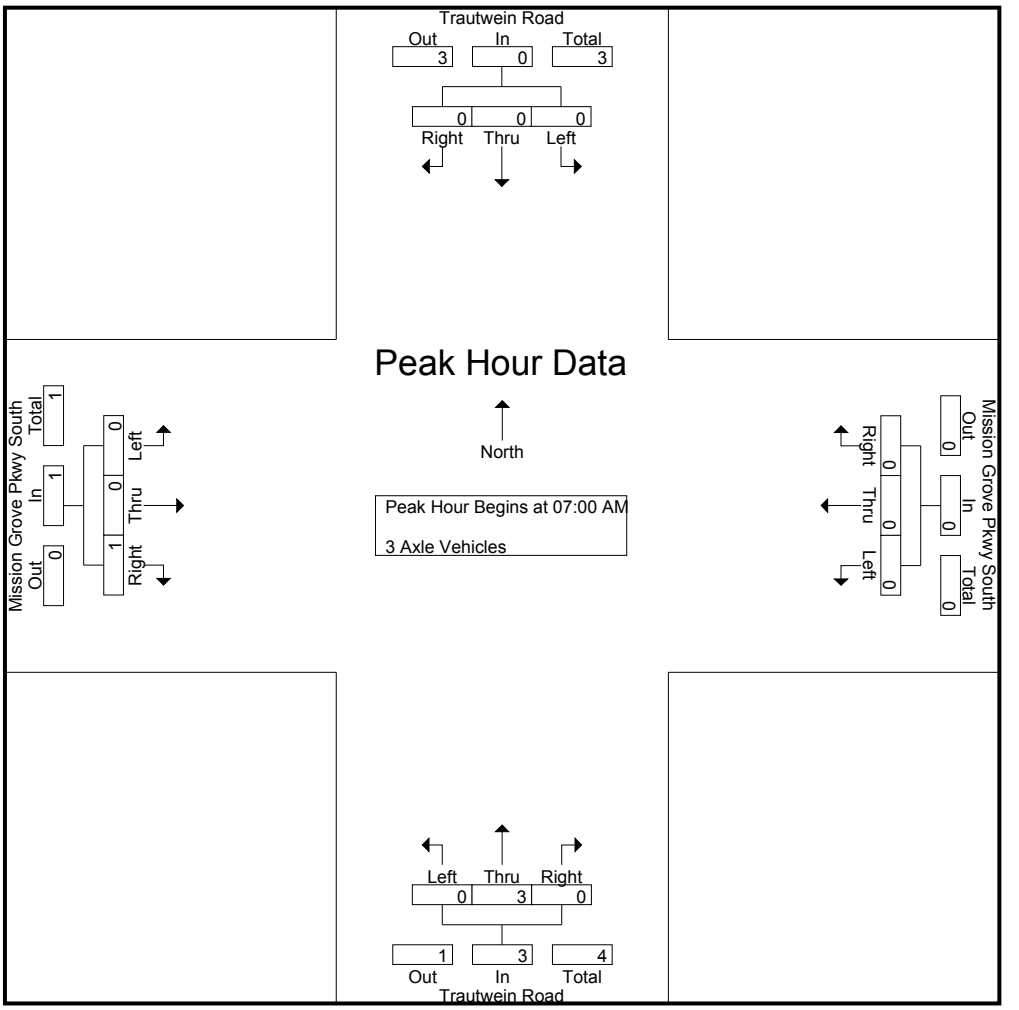

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**
Total Volume	0	0	0	0	0	0	0	0	0	3	0	3	0	0	1	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.375	.000	.000	.250	.250

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File Name : 11_RIV_Traut_Mission AM
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Groups Printed- 4+ Axle Trucks

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
Total	0	1	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3
Grand Total	0	2	0	2	2	0	0	2	0	0	0	0	0	0	0	0	4
Apprch %	0	100	0		100	0	0		0	0	0		0	0	0		
Total %	0	50	0	50	50	0	0	50	0	0	0	0	0	0	0	0	

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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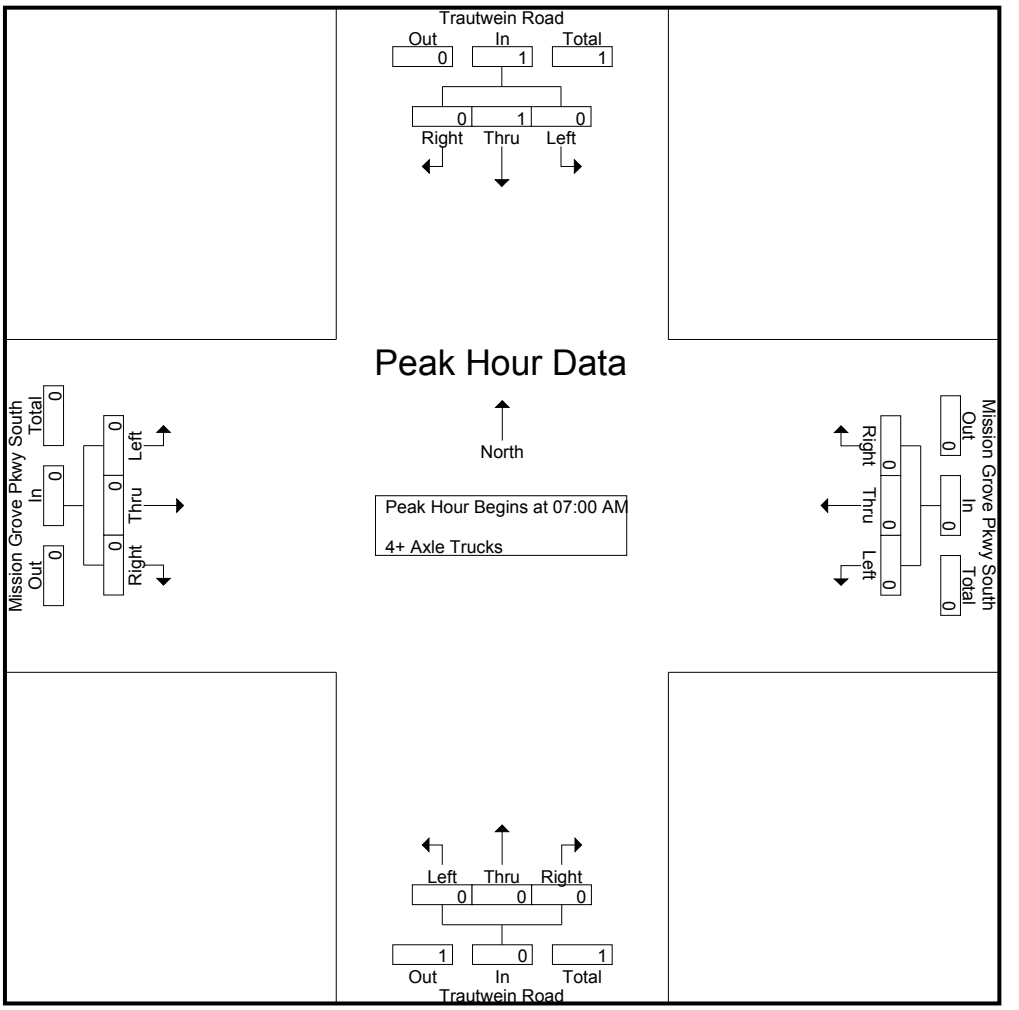

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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File Name : 11_RIV_Traut_Mission MD
Site Code : 00321719
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	15	271	2	288	127	4	9	140	3	263	95	361	7	1	4	12	801
02:15 PM	10	271	3	284	158	10	8	176	1	301	107	409	5	3	1	9	878
02:30 PM	13	282	8	303	159	1	5	165	3	272	107	382	8	3	2	13	863
02:45 PM	13	291	5	309	113	5	7	125	2	346	119	467	6	3	5	14	915
Total	51	1115	18	1184	557	20	29	606	9	1182	428	1619	26	10	12	48	3457
03:00 PM	26	287	4	317	112	6	12	130	2	328	109	439	15	4	2	21	907
03:15 PM	26	282	8	316	117	3	4	124	1	323	102	426	6	0	1	7	873
03:30 PM	34	349	12	395	136	5	7	148	1	278	90	369	4	5	5	14	926
03:45 PM	33	401	7	441	120	1	8	129	1	261	96	358	6	0	4	10	938
Total	119	1319	31	1469	485	15	31	531	5	1190	397	1592	31	9	12	52	3644
Grand Total	170	2434	49	2653	1042	35	60	1137	14	2372	825	3211	57	19	24	100	7101
Apprch %	6.4	91.7	1.8		91.6	3.1	5.3		0.4	73.9	25.7		57	19	24		
Total %	2.4	34.3	0.7	37.4	14.7	0.5	0.8	16	0.2	33.4	11.6	45.2	0.8	0.3	0.3	1.4	
Passenger Vehicles	165	2399	48	2612	1025	35	54	1114	14	2328	809	3151	54	19	24	97	6974
% Passenger Vehicles	97.1	98.6	98	98.5	98.4	100	90	98	100	98.1	98.1	98.1	94.7	100	100	97	98.2
Large 2 Axle Vehicles	5	33	0	38	14	0	6	20	0	36	15	51	0	0	0	0	109
% Large 2 Axle Vehicles	2.9	1.4	0	1.4	1.3	0	10	1.8	0	1.5	1.8	1.6	0	0	0	0	1.5
3 Axle Vehicles	0	1	1	2	3	0	0	3	0	6	1	7	3	0	0	3	15
% 3 Axle Vehicles	0	0	2	0.1	0.3	0	0	0.3	0	0.3	0.1	0.2	5.3	0	0	3	0.2
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	26	287	4	317	112	**6**	**12**	130	**2**	**328**	**109**	**439**	**15**	4	2	**21**	907
03:15 PM	26	282	8	316	117	3	4	124	1	323	102	426	6	0	1	7	873
03:30 PM	**34**	349	**12**	395	**136**	5	7	**148**	1	278	90	369	4	**5**	**5**	14	926
03:45 PM	33	**401**	7	**441**	120	1	8	129	1	261	96	358	6	0	4	10	**938**
Total Volume	119	1319	31	1469	485	15	31	531	5	1190	397	1592	31	9	12	52	3644
% App. Total	8.1	89.8	2.1		91.3	2.8	5.8		0.3	74.7	24.9		59.6	17.3	23.1		
PHF	.875	.822	.646	.833	.892	.625	.646	.897	.625	.907	.911	.907	.517	.450	.600	.619	.971

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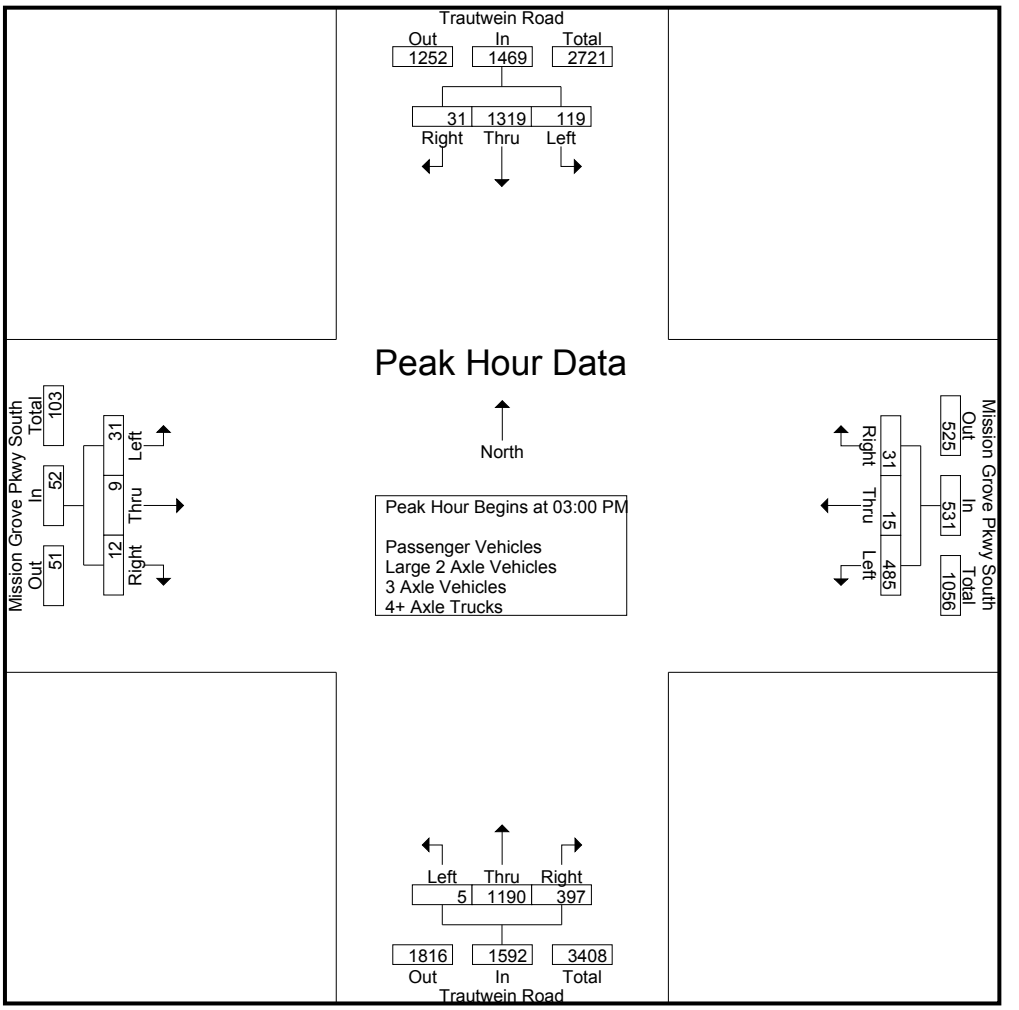

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				02:00 PM				02:30 PM				02:15 PM			
+0 mins.	26	287	4	317	127	4	**9**	140	**3**	272	107	382	5	3	1	9
+15 mins.	26	282	8	316	158	**10**	8	**176**	2	**346**	**119**	**467**	8	3	2	13
+30 mins.	**34**	349	**12**	395	**159**	1	5	165	2	328	109	439	6	3	**5**	14
+45 mins.	33	**401**	7	**441**	113	5	7	125	1	323	102	426	**15**	**4**	2	**21**
Total Volume	119	1319	31	1469	557	20	29	606	8	1269	437	1714	34	13	10	57
% App. Total	8.1	89.8	2.1		91.9	3.3	4.8		0.5	74	25.5		59.6	22.8	17.5	
PHF	.875	.822	.646	.833	.876	.500	.806	.861	.667	.917	.918	.918	.567	.813	.500	.679

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File Name : 11_RIV_Traut_Mission MD
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Groups Printed- Passenger Vehicles

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	14	263	2	279	126	4	8	138	3	261	95	359	7	1	4	12	788
02:15 PM	10	269	3	282	155	10	8	173	1	296	102	399	5	3	1	9	863
02:30 PM	13	279	8	300	156	1	5	162	3	265	106	374	8	3	2	13	849
02:45 PM	13	286	5	304	111	5	7	123	2	339	116	457	6	3	5	14	898
Total	50	1097	18	1165	548	20	28	596	9	1161	419	1589	26	10	12	48	3398
03:00 PM	24	286	4	314	110	6	9	125	2	320	106	428	15	4	2	21	888
03:15 PM	25	280	8	313	114	3	3	120	1	317	101	419	5	0	1	6	858
03:30 PM	34	339	11	384	134	5	7	146	1	273	87	361	4	5	5	14	905
03:45 PM	32	397	7	436	119	1	7	127	1	257	96	354	4	0	4	8	925
Total	115	1302	30	1447	477	15	26	518	5	1167	390	1562	28	9	12	49	3576
Grand Total	165	2399	48	2612	1025	35	54	1114	14	2328	809	3151	54	19	24	97	6974
Apprch %	6.3	91.8	1.8		92	3.1	4.8		0.4	73.9	25.7		55.7	19.6	24.7		
Total %	2.4	34.4	0.7	37.5	14.7	0.5	0.8	16	0.2	33.4	11.6	45.2	0.8	0.3	0.3	1.4	

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	24	286	4	314	110	**6**	**9**	125	**2**	**320**	**106**	**428**	**15**	4	2	**21**	888
03:15 PM	25	280	8	313	114	3	3	120	1	317	101	419	5	0	1	6	858
03:30 PM	**34**	339	**11**	384	**134**	5	7	**146**	1	273	87	361	4	**5**	**5**	14	905
03:45 PM	32	**397**	7	**436**	119	1	7	127	1	257	96	354	4	0	4	8	**925**
Total Volume	115	1302	30	1447	477	15	26	518	5	1167	390	1562	28	9	12	49	3576
% App. Total	7.9	90	2.1		92.1	2.9	5		0.3	74.7	25		57.1	18.4	24.5		
PHF	.846	.820	.682	.830	.890	.625	.722	.887	.625	.912	.920	.912	.467	.450	.600	.583	.966

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City of Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South
Weather: Clear

File Name : 11_RIV_Traut_Mission MD
Site Code : 00321719
Start Date : 11/18/2021
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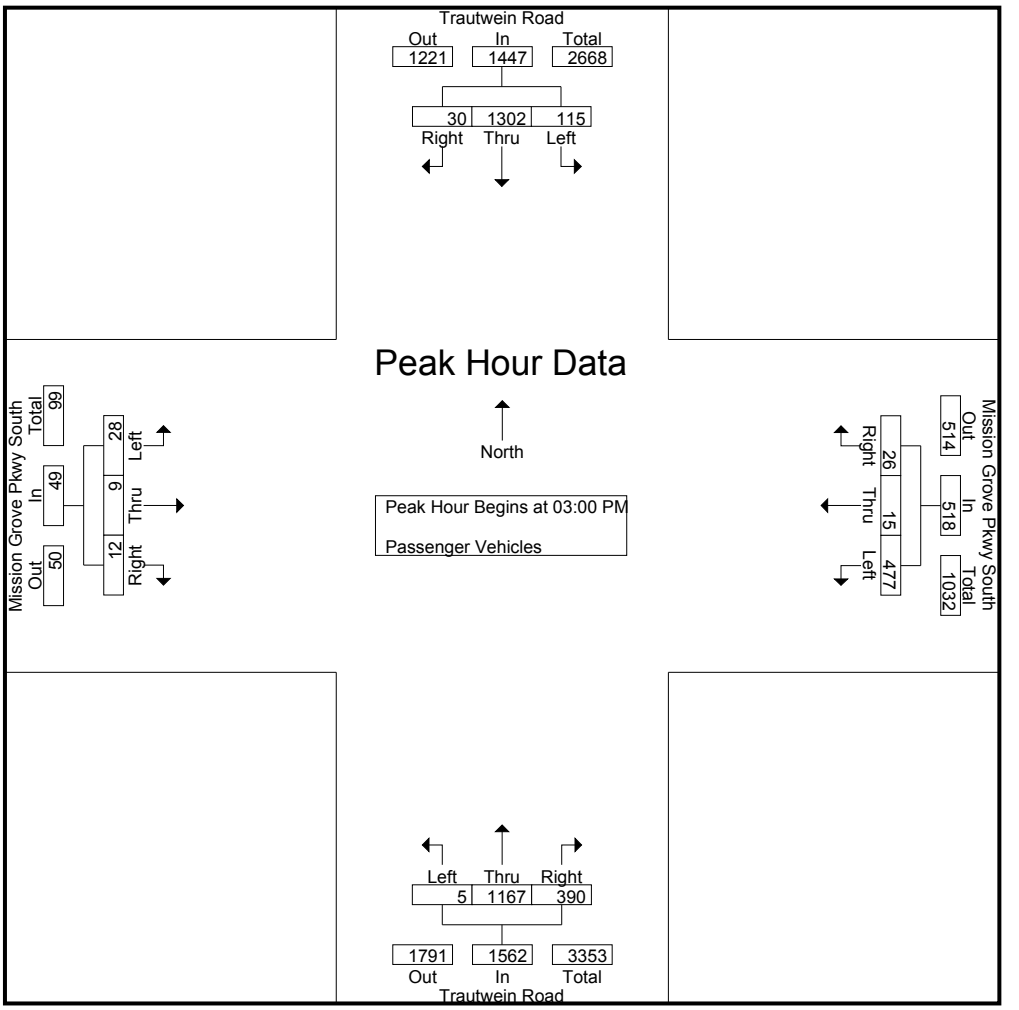

Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	24	286	4	314	110	**6**	**9**	125	**2**	**320**	**106**	**428**	**15**	4	2	**21**
+15 mins.	25	280	8	313	114	3	3	120	1	317	101	419	5	0	1	6
+30 mins.	**34**	339	**11**	384	**134**	5	7	**146**	1	273	87	361	4	**5**	**5**	14
+45 mins.	32	**397**	7	**436**	119	1	7	127	1	257	96	354	4	0	4	8
Total Volume	115	1302	30	1447	477	15	26	518	5	1167	390	1562	28	9	12	49
% App. Total	7.9	90	2.1		92.1	2.9	5		0.3	74.7	25		57.1	18.4	24.5	
PHF	.846	.820	.682	.830	.890	.625	.722	.887	.625	.912	.920	.912	.467	.450	.600	.583

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City of Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South
Weather: Clear

File Name : 11_RIV_Traut_Mission MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	1	8	0	9	0	0	1	1	0	1	0	1	0	0	0	0	11
02:15 PM	0	2	0	2	3	0	0	3	0	5	4	9	0	0	0	0	14
02:30 PM	0	2	0	2	2	0	0	2	0	6	1	7	0	0	0	0	11
02:45 PM	0	4	0	4	2	0	0	2	0	6	3	9	0	0	0	0	15
Total	1	16	0	17	7	0	1	8	0	18	8	26	0	0	0	0	51
03:00 PM	2	1	0	3	2	0	3	5	0	5	3	8	0	0	0	0	16
03:15 PM	1	2	0	3	3	0	1	4	0	6	1	7	0	0	0	0	14
03:30 PM	0	10	0	10	2	0	0	2	0	4	3	7	0	0	0	0	19
03:45 PM	1	4	0	5	0	0	1	1	0	3	0	3	0	0	0	0	9
Total	4	17	0	21	7	0	5	12	0	18	7	25	0	0	0	0	58
Grand Total	5	33	0	38	14	0	6	20	0	36	15	51	0	0	0	0	109
Apprch %	13.2	86.8	0		70	0	30		0	70.6	29.4		0	0	0		
Total %	4.6	30.3	0	34.9	12.8	0	5.5	18.3	0	33	13.8	46.8	0	0	0	0	

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	**2**	1	0	3	2	0	**3**	**5**	0	5	**3**	**8**	0	0	0	0	16
03:15 PM	1	2	0	3	**3**	0	1	4	0	**6**	1	7	0	0	0	0	14
03:30 PM	0	**10**	0	**10**	2	0	0	2	0	4	3	7	0	0	0	0	**19**
03:45 PM	1	4	0	5	0	0	1	1	0	3	0	3	0	0	0	0	9
Total Volume	4	17	0	21	7	0	5	12	0	18	7	25	0	0	0	0	58
% App. Total	19	81	0		58.3	0	41.7		0	72	28		0	0	0		
PHF	.500	.425	.000	.525	.583	.000	.417	.600	.000	.750	.583	.781	.000	.000	.000	.000	.763

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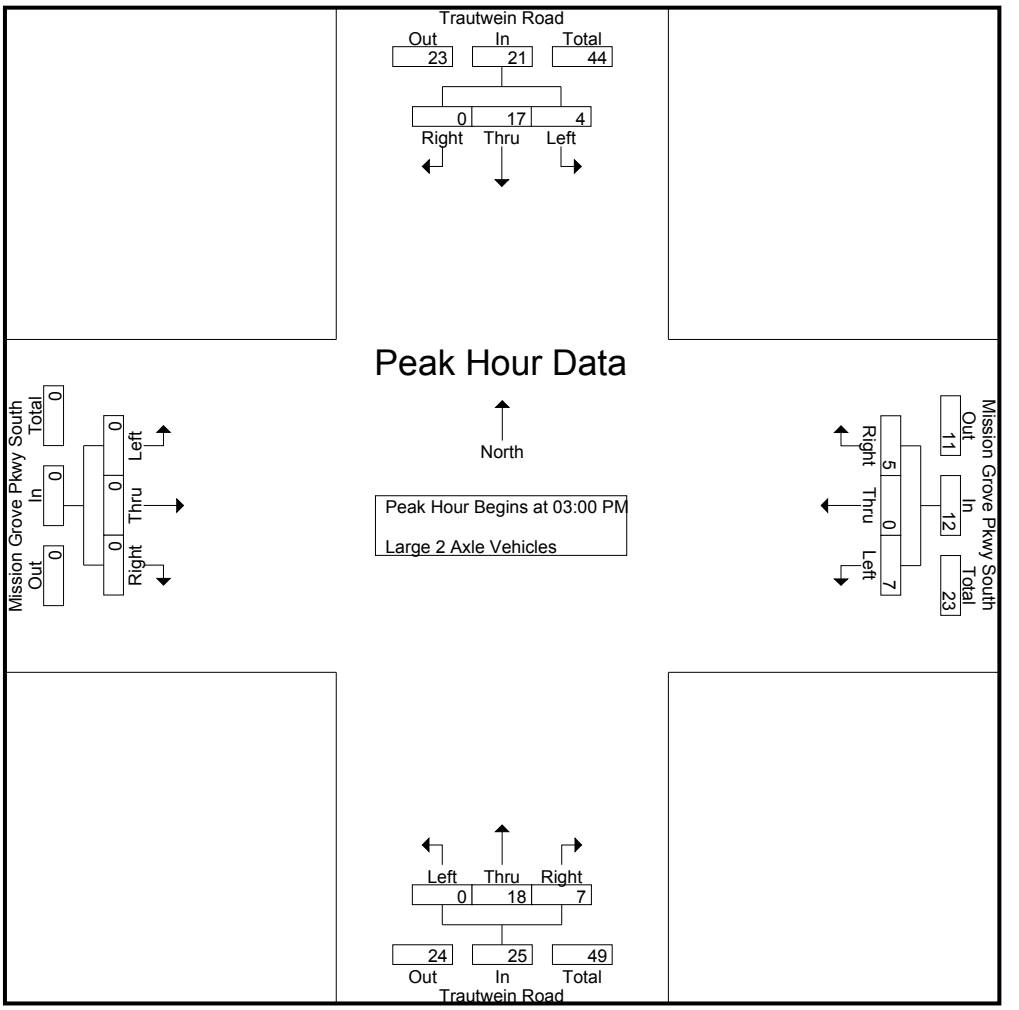
City of Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South
Weather: Clear

File Name : 11_RIV_Traut_Mission MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	**2**	1	0	3	2	0	**3**	**5**	0	5	**3**	**8**	0	0	0	0
+15 mins.	1	2	0	3	**3**	0	1	4	0	**6**	1	7	0	0	0	0
+30 mins.	0	**10**	0	**10**	2	0	0	2	0	4	3	7	0	0	0	0
+45 mins.	1	4	0	5	0	0	1	1	0	3	0	3	0	0	0	0
Total Volume	4	17	0	21	7	0	5	12	0	18	7	25	0	0	0	0
% App. Total	19	81	0		58.3	0	41.7		0	72	28		0	0	0	
PHF	.500	.425	.000	.525	.583	.000	.417	.600	.000	.750	.583	.781	.000	.000	.000	.000

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City of Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South
Weather: Clear

File Name : 11_RIV_Traut_Mission MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- 3 Axle Vehicles

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
02:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
02:30 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
02:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	1	0	1	2	0	0	2	0	3	1	4	0	0	0	0	7
03:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
03:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	1	0	0	1	0	1	0	1	2	0	0	2	4
Total	0	0	1	1	1	0	0	1	0	3	0	3	3	0	0	3	8
Grand Total	0	1	1	2	3	0	0	3	0	6	1	7	3	0	0	3	15
Apprch %	0	50	50		100	0	0		0	85.7	14.3		100	0	0		
Total %	0	6.7	6.7	13.3	20	0	0	20	0	40	6.7	46.7	20	0	0	20	

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0	2
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
03:30 PM	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	**1**	0	0	**1**	0	1	0	1	**2**	0	0	**2**	**4**
Total Volume	0	0	1	1	1	0	0	1	0	3	0	3	3	0	0	3	8
% App. Total	0	0	100		100	0	0		0	100	0		100	0	0		
PHF	.000	.000	.250	.250	.250	.000	.000	.250	.000	.375	.000	.375	.375	.000	.000	.375	.500

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City of Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South
Weather: Clear

File Name : 11_RIV_Traut_Mission MD
Site Code : 00321719
Start Date : 11/18/2021
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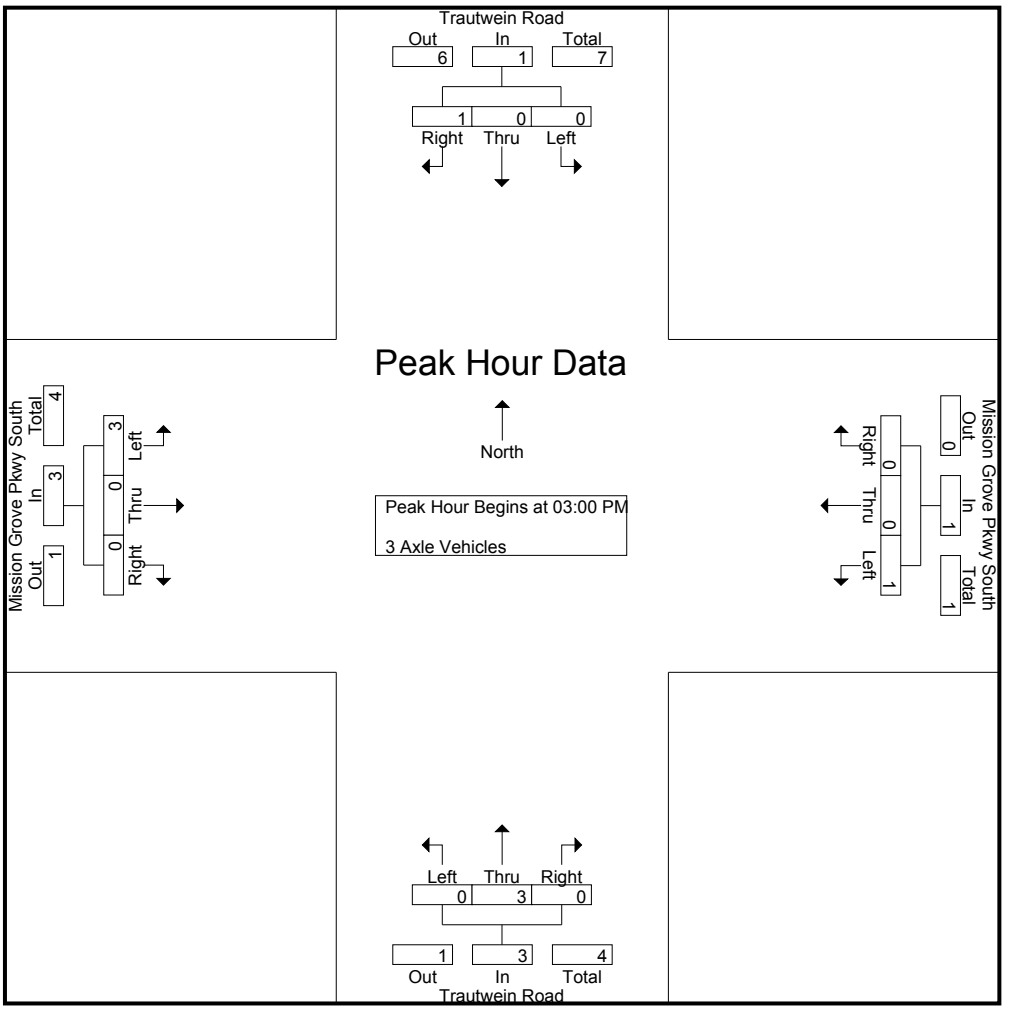

Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
+30 mins.	0	0	**1**	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	**1**	0	0	**1**	0	1	0	1	**2**	0	0	**2**
Total Volume	0	0	1	1	1	0	0	1	0	3	0	3	3	0	0	3
% App. Total	0	0	100		100	0	0		0	100	0		100	0	0	
PHF	.000	.000	.250	.250	.250	.000	.000	.250	.000	.375	.000	.375	.375	.000	.000	.375

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City of Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South
Weather: Clear

File Name : 11_RIV_Traut_Mission MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- 4+ Axle Trucks

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Grand Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	33.3	0	33.3	0	0	0	0	0	66.7	0	66.7	0	0	0	0	

	Trautwein Road Southbound				Mission Grove Pkwy South Westbound				Trautwein Road Northbound				Mission Grove Pkwy South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

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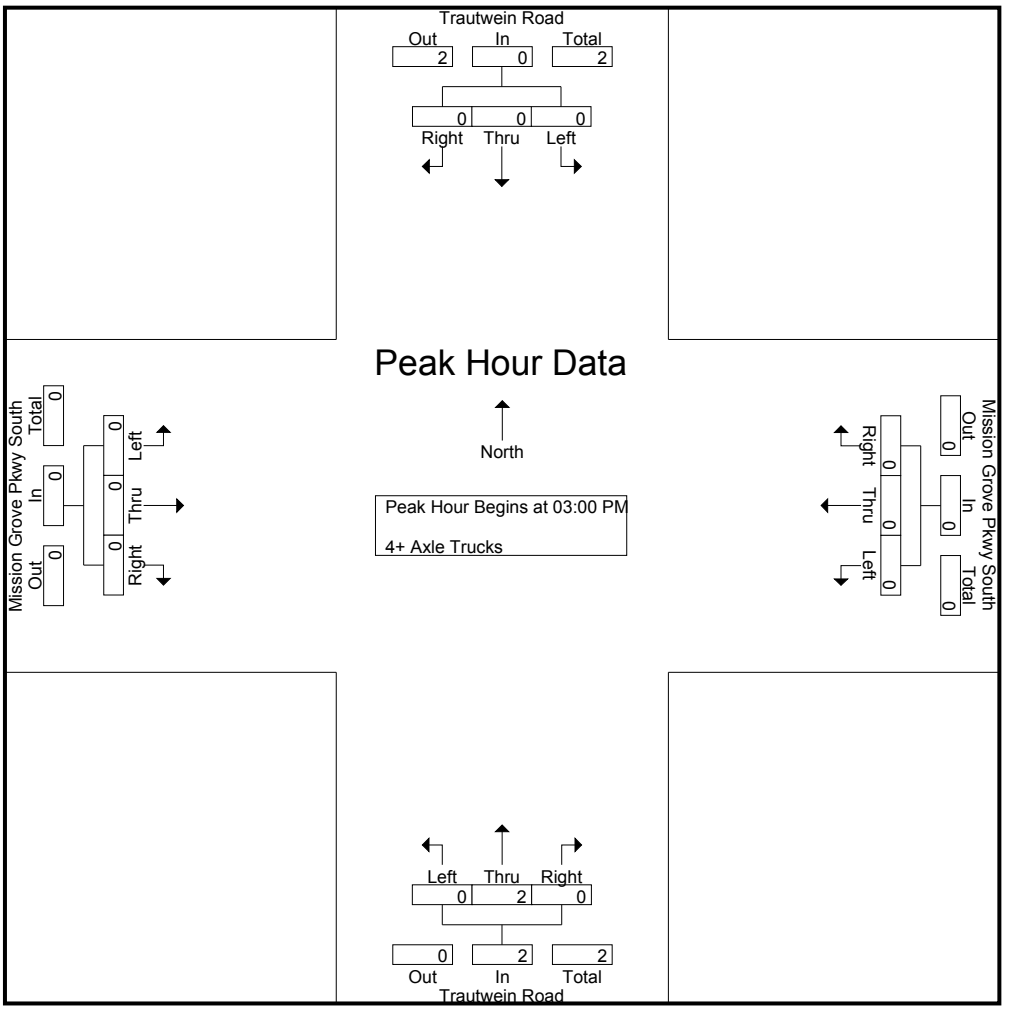
City of Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South
Weather: Clear

File Name : 11_RIV_Traut_Mission MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

Location: Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Trautwein Road	East Leg Mission Grove Pkwy South	South Leg Trautwein Road	West Leg Mission Grove Pkwy South	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	1	2	0	0	3
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1
8:30 AM	0	0	0	0	0
8:45 AM	2	0	0	3	5
TOTAL VOLUMES:	3	3	0	3	9

	North Leg Trautwein Road	East Leg Mission Grove Pkwy South	South Leg Trautwein Road	West Leg Mission Grove Pkwy South	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	0	0	0
2:15 PM	0	0	0	1	1
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	1	1
3:00 PM	0	1	0	0	1
3:15 PM	0	0	1	0	1
3:30 PM	0	0	0	0	0
3:45 PM	10	0	0	10	20
TOTAL VOLUMES:	10	1	1	12	24

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Location: Riverside
N/S: Trautwein Road
E/W: Mission Grove Pkwy South

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Trautwein Road			Westbound Mission Grove Pkwy South			Northbound Trautwein Road			Eastbound Mission Grove Pkwy South			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES:	0	2	0	0	3	0	0	0	0	1	0	0	6

	Southbound Trautwein Road			Westbound Mission Grove Pkwy South			Northbound Trautwein Road			Eastbound Mission Grove Pkwy South			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
3:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	1	2	0	1	0	1	5

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City of Riverside
N/S: Trautwein Road
E/W: John F Kennedy Drive
Weather: Clear

File Name : 12_RIV_Traut_JFK AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Total Volume

	Trautwein Road Southbound				John F Kennedy Drive Westbound				Trautwein Road Northbound				John F Kennedy Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	227	115	345	28	11	7	46	19	392	4	415	90	0	19	109	915
07:15 AM	1	235	147	383	28	25	9	62	46	372	17	435	127	11	20	158	1038
07:30 AM	2	208	142	352	23	11	8	42	40	382	30	452	119	8	10	137	983
07:45 AM	3	146	175	324	3	5	13	21	33	390	13	436	119	23	9	151	932
Total	9	816	579	1404	82	52	37	171	138	1536	64	1738	455	42	58	555	3868
08:00 AM	2	138	139	279	7	5	4	16	14	337	5	356	155	9	10	174	825
08:15 AM	2	165	61	228	4	4	3	11	7	318	2	327	115	5	16	136	702
08:30 AM	1	143	76	220	3	6	4	13	13	265	5	283	76	0	10	86	602
08:45 AM	3	183	68	254	7	2	5	14	10	257	3	270	94	0	14	108	646
Total	8	629	344	981	21	17	16	54	44	1177	15	1236	440	14	50	504	2775
Grand Total	17	1445	923	2385	103	69	53	225	182	2713	79	2974	895	56	108	1059	6643
Apprch %	0.7	60.6	38.7		45.8	30.7	23.6		6.1	91.2	2.7		84.5	5.3	10.2		
Total %	0.3	21.8	13.9	35.9	1.6	1	0.8	3.4	2.7	40.8	1.2	44.8	13.5	0.8	1.6	15.9	

	Trautwein Road Southbound				John F Kennedy Drive Westbound				Trautwein Road Northbound				John F Kennedy Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**3**	227	115	345	**28**	11	7	46	19	**392**	4	415	90	0	19	109	915
07:15 AM	1	**235**	147	**383**	28	**25**	9	**62**	**46**	372	17	435	**127**	11	**20**	**158**	**1038**
07:30 AM	2	208	142	352	23	11	8	42	40	382	**30**	**452**	119	8	10	137	983
07:45 AM	3	146	**175**	324	3	5	**13**	21	33	390	13	436	119	**23**	9	151	932
Total Volume	9	816	579	1404	82	52	37	171	138	1536	64	1738	455	42	58	555	3868
% App. Total	0.6	58.1	41.2		48	30.4	21.6		7.9	88.4	3.7		82	7.6	10.5		
PHF	.750	.868	.827	.916	.732	.520	.712	.690	.750	.980	.533	.961	.896	.457	.725	.878	.932

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City of Riverside
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Weather: Clear

File Name : 12_RIV_Traut_JFK AM
Site Code : 00321719
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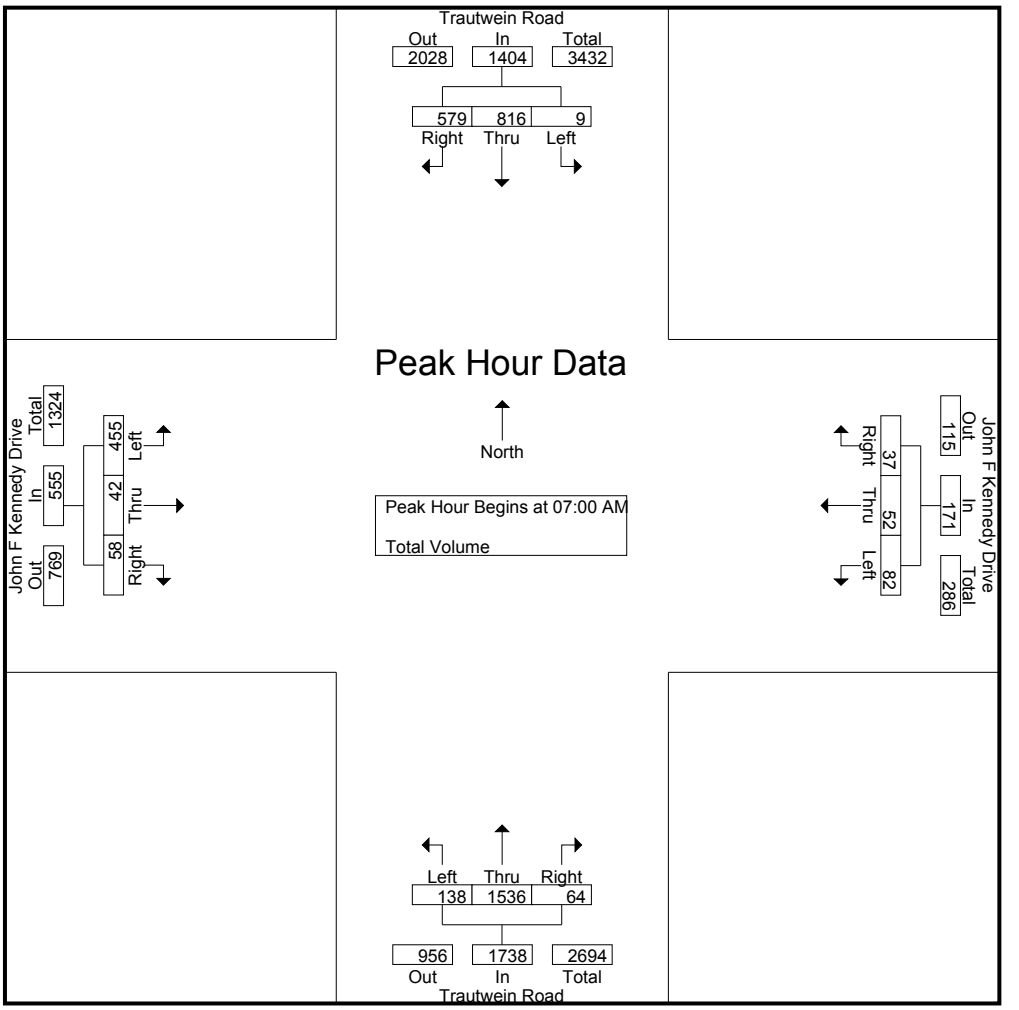

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	**3**	227	115	345	**28**	11	7	46	19	**392**	4	415	127	11	**20**	158
+15 mins.	1	**235**	147	**383**	28	**25**	9	**62**	**46**	372	17	435	119	8	10	137
+30 mins.	2	208	142	352	23	11	8	42	40	382	**30**	**452**	119	**23**	9	151
+45 mins.	3	146	**175**	324	3	5	**13**	21	33	390	13	436	**155**	9	10	**174**
Total Volume	9	816	579	1404	82	52	37	171	138	1536	64	1738	520	51	49	620
% App. Total	0.6	58.1	41.2		48	30.4	21.6		7.9	88.4	3.7		83.9	8.2	7.9	
PHF	.750	.868	.827	.916	.732	.520	.712	.690	.750	.980	.533	.961	.839	.554	.613	.891

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City of Riverside
N/S: Trautwein Road
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Weather: Clear

File Name : 12_RIV_Traut_JFK MD
Site Code : 00321719
Start Date : 11/18/2021
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Groups Printed- Total Volume

	Trautwein Road Southbound				John F Kennedy Drive Westbound				Trautwein Road Northbound				John F Kennedy Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	4	277	119	400	13	6	2	21	33	310	22	365	79	0	15	94	880
02:15 PM	3	306	149	458	5	3	5	13	34	306	32	372	85	5	11	101	944
02:30 PM	0	266	158	424	5	6	9	20	15	262	11	288	137	17	16	170	902
02:45 PM	4	272	142	418	5	4	7	16	20	289	8	317	135	10	26	171	922
Total	11	1121	568	1700	28	19	23	70	102	1167	73	1342	436	32	68	536	3648
03:00 PM	3	281	103	387	9	4	3	16	8	319	7	334	142	13	18	173	910
03:15 PM	7	315	109	431	5	4	5	14	9	281	5	295	131	5	20	156	896
03:30 PM	1	334	133	468	7	2	3	12	8	256	8	272	115	6	25	146	898
03:45 PM	6	409	125	540	3	2	3	8	17	254	6	277	96	5	26	127	952
Total	17	1339	470	1826	24	12	14	50	42	1110	26	1178	484	29	89	602	3656
Grand Total	28	2460	1038	3526	52	31	37	120	144	2277	99	2520	920	61	157	1138	7304
Apprch %	0.8	69.8	29.4		43.3	25.8	30.8		5.7	90.4	3.9		80.8	5.4	13.8		
Total %	0.4	33.7	14.2	48.3	0.7	0.4	0.5	1.6	2	31.2	1.4	34.5	12.6	0.8	2.1	15.6	

	Trautwein Road Southbound				John F Kennedy Drive Westbound				Trautwein Road Northbound				John F Kennedy Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	3	**306**	149	**458**	5	3	5	13	**34**	306	**32**	**372**	85	5	11	101	**944**
02:30 PM	0	266	**158**	424	5	**6**	**9**	**20**	15	262	11	288	137	**17**	16	170	902
02:45 PM	**4**	272	142	418	5	4	7	16	20	289	8	317	135	10	**26**	171	922
03:00 PM	3	281	103	387	**9**	4	3	16	8	**319**	7	334	**142**	13	18	**173**	910
Total Volume	10	1125	552	1687	24	17	24	65	77	1176	58	1311	499	45	71	615	3678
% App. Total	0.6	66.7	32.7		36.9	26.2	36.9		5.9	89.7	4.4		81.1	7.3	11.5		
PHF	.625	.919	.873	.921	.667	.708	.667	.813	.566	.922	.453	.881	.879	.662	.683	.889	.974

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File Name : 12_RIV_Traut_JFK MD
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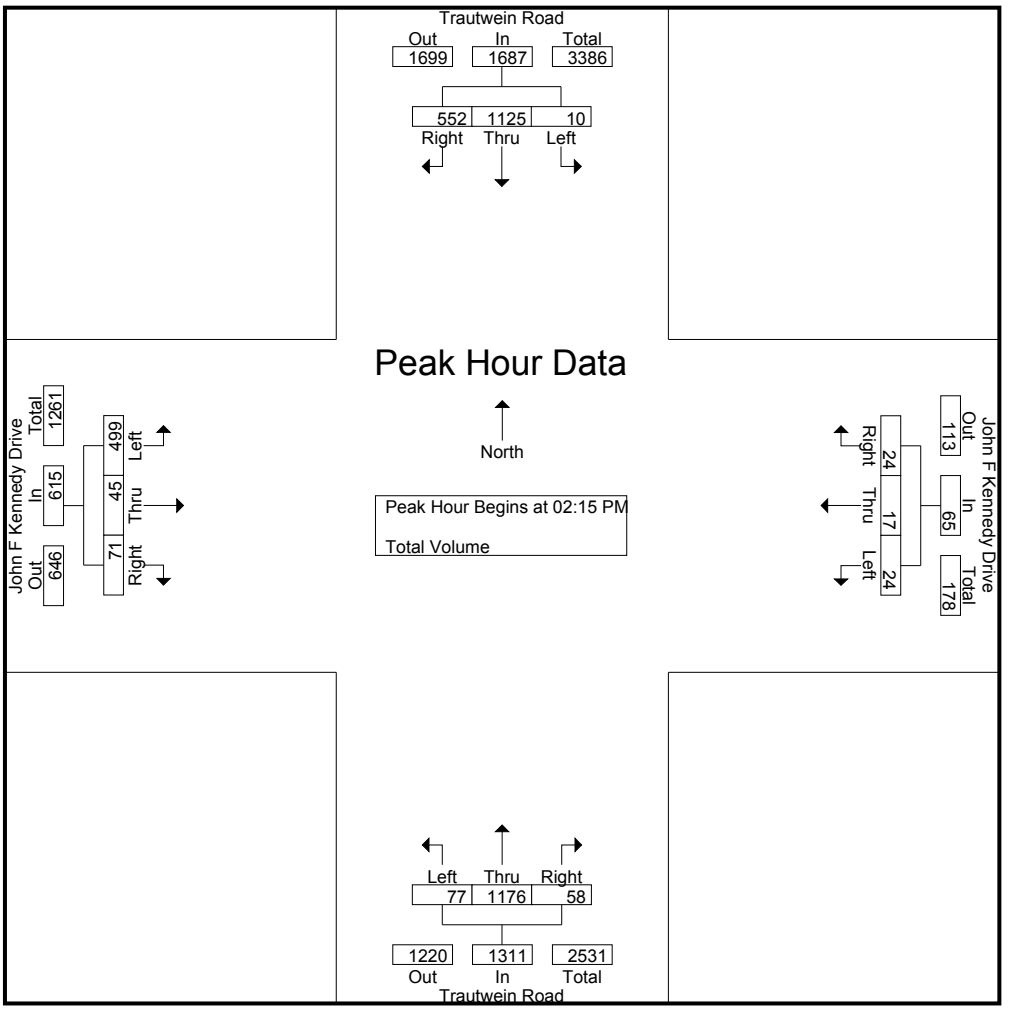

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				02:00 PM				02:00 PM				02:30 PM			
+0 mins.	3	281	103	387	**13**	**6**	2	**21**	33	**310**	22	365	137	**17**	16	170
+15 mins.	**7**	315	109	431	5	3	5	13	**34**	306	**32**	**372**	135	10	**26**	171
+30 mins.	1	334	**133**	468	5	6	**9**	20	15	262	11	288	**142**	13	18	**173**
+45 mins.	6	**409**	125	**540**	5	4	7	16	20	289	8	317	131	5	20	156
Total Volume	17	1339	470	1826	28	19	23	70	102	1167	73	1342	545	45	80	670
% App. Total	0.9	73.3	25.7		40	27.1	32.9		7.6	87	5.4		81.3	6.7	11.9	
PHF	.607	.818	.883	.845	.538	.792	.639	.833	.750	.941	.570	.902	.960	.662	.769	.968

Location: Riverside
N/S: Trautwein Road
E/W: John F Kennedy Drive

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Trautwein Road	East Leg John F Kennedy Drive	South Leg Trautwein Road	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	2	0	3
7:15 AM	0	1	1	1	3
7:30 AM	0	0	0	0	0
7:45 AM	0	0	2	0	2
8:00 AM	0	1	1	0	2
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	2	2
8:45 AM	0	0	0	2	2
TOTAL VOLUMES:	0	3	6	5	14

	North Leg Trautwein Road	East Leg John F Kennedy Drive	South Leg Trautwein Road	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	0	2	2
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	1	1
2:45 PM	1	0	2	1	4
3:00 PM	0	1	0	0	1
3:15 PM	0	1	0	0	1
3:30 PM	0	0	0	0	0
3:45 PM	0	1	0	11	12
TOTAL VOLUMES:	1	3	2	15	21

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Location: Riverside
N/S: Trautwein Road
E/W: John F Kennedy Drive

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Trautwein Road			Westbound John F Kennedy Drive			Northbound Trautwein Road			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	1	0	2
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	1	1	3

	Southbound Trautwein Road			Westbound John F Kennedy Drive			Northbound Trautwein Road			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
2:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
3:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	6	2	0	0	0	9

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City of Riverside
N/S: Trautwein Road
E/W: Grove Community Drive
Weather: Clear

File Name : 13_RIV_Traut_Grove AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Total Volume

	Trautwein Road Southbound			Grove Community Drive Westbound			Trautwein Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	55	197	252	9	109	118	309	3	312	682
07:15 AM	54	217	271	31	158	189	289	5	294	754
07:30 AM	26	227	253	26	170	196	299	12	311	760
07:45 AM	26	130	156	11	87	98	319	11	330	584
Total	161	771	932	77	524	601	1216	31	1247	2780
08:00 AM	37	118	155	8	71	79	285	8	293	527
08:15 AM	46	138	184	7	53	60	271	7	278	522
08:30 AM	40	115	155	6	70	76	218	11	229	460
08:45 AM	68	140	208	8	58	66	212	23	235	509
Total	191	511	702	29	252	281	986	49	1035	2018
Grand Total	352	1282	1634	106	776	882	2202	80	2282	4798
Apprch %	21.5	78.5		12	88		96.5	3.5		
Total %	7.3	26.7	34.1	2.2	16.2	18.4	45.9	1.7	47.6	

	Trautwein Road Southbound			Grove Community Drive Westbound			Trautwein Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	**55**	197	252	9	109	118	309	3	312	682
07:15 AM	54	217	**271**	**31**	158	189	289	5	294	754
07:30 AM	26	**227**	253	26	**170**	**196**	299	**12**	311	**760**
07:45 AM	26	130	156	11	87	98	**319**	11	**330**	584
Total Volume	161	771	932	77	524	601	1216	31	1247	2780
% App. Total	17.3	82.7		12.8	87.2		97.5	2.5		
PHF	.732	.849	.860	.621	.771	.767	.953	.646	.945	.914

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File Name : 13_RIV_Traut_Grove AM
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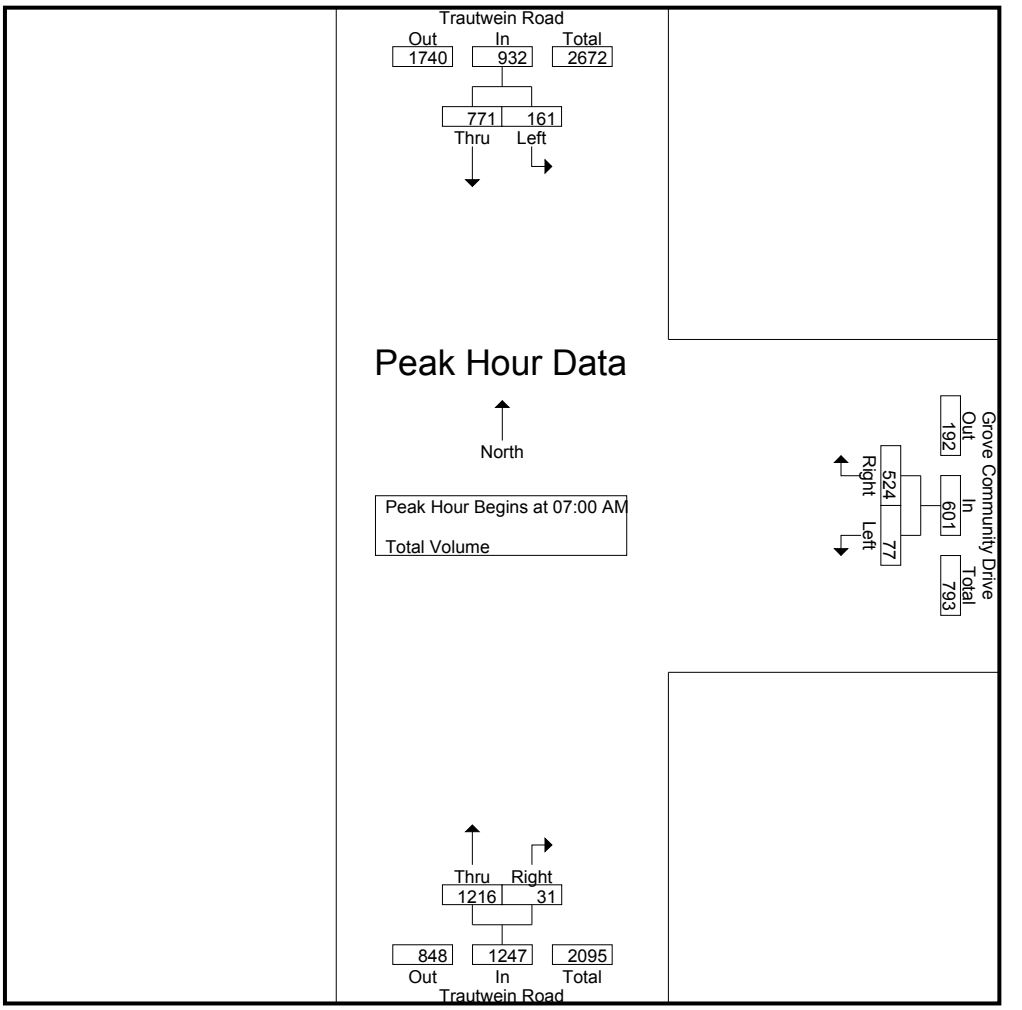

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	**55**	197	252	9	109	118	309	3	312
+15 mins.	54	217	**271**	**31**	158	189	289	5	294
+30 mins.	26	**227**	253	26	**170**	**196**	299	**12**	311
+45 mins.	26	130	156	11	87	98	**319**	11	**330**
Total Volume	161	771	932	77	524	601	1216	31	1247
% App. Total	17.3	82.7		12.8	87.2		97.5	2.5	
PHF	.732	.849	.860	.621	.771	.767	.953	.646	.945

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City of Riverside
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Weather: Clear

File Name : 13_RIV_Traut_Grove MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Total Volume

	Trautwein Road Southbound			Grove Community Drive Westbound			Trautwein Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
02:00 PM	60	235	295	17	117	134	253	12	265	694
02:15 PM	58	275	333	10	100	110	276	5	281	724
02:30 PM	64	233	297	10	63	73	229	8	237	607
02:45 PM	55	239	294	14	68	82	247	6	253	629
Total	237	982	1219	51	348	399	1005	31	1036	2654
03:00 PM	59	237	296	12	50	62	281	12	293	651
03:15 PM	75	264	339	4	52	56	245	6	251	646
03:30 PM	84	298	382	13	47	60	225	16	241	683
03:45 PM	81	349	430	21	59	80	229	20	249	759
Total	299	1148	1447	50	208	258	980	54	1034	2739
Grand Total	536	2130	2666	101	556	657	1985	85	2070	5393
Apprch %	20.1	79.9		15.4	84.6		95.9	4.1		
Total %	9.9	39.5	49.4	1.9	10.3	12.2	36.8	1.6	38.4	

	Trautwein Road Southbound			Grove Community Drive Westbound			Trautwein Road Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:00 PM										
03:00 PM	59	237	296	12	50	62	**281**	12	**293**	651
03:15 PM	75	264	339	4	52	56	245	6	251	646
03:30 PM	**84**	298	382	13	47	60	225	16	241	683
03:45 PM	81	**349**	**430**	**21**	**59**	**80**	229	**20**	249	**759**
Total Volume	299	1148	1447	50	208	258	980	54	1034	2739
% App. Total	20.7	79.3		19.4	80.6		94.8	5.2		
PHF	.890	.822	.841	.595	.881	.806	.872	.675	.882	.902

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File Name : 13_RIV_Traut_Grove MD
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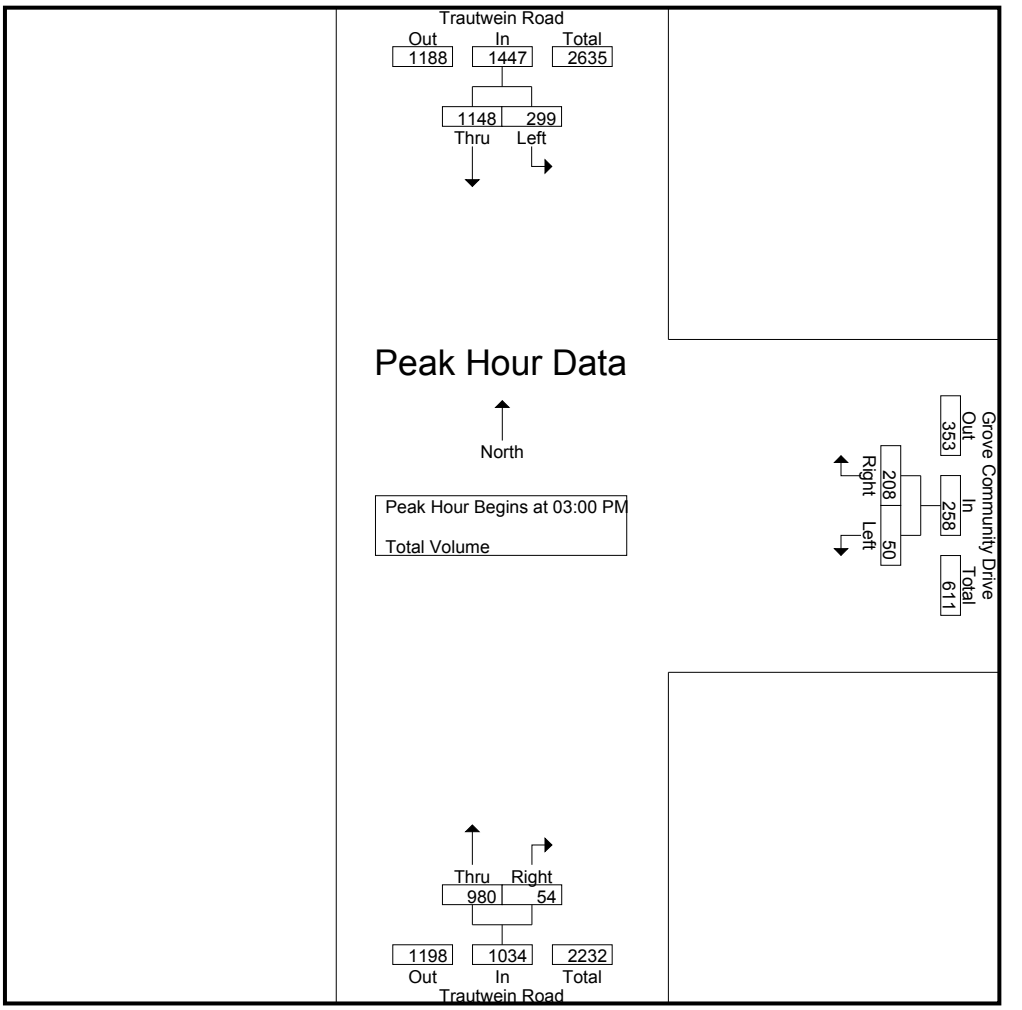

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM			02:00 PM			02:15 PM		
+0 mins.	59	237	296	**17**	**117**	**134**	276	5	281
+15 mins.	75	264	339	10	100	110	229	8	237
+30 mins.	**84**	298	382	10	63	73	247	6	253
+45 mins.	81	**349**	**430**	14	68	82	**281**	**12**	**293**
Total Volume	299	1148	1447	51	348	399	1033	31	1064
% App. Total	20.7	79.3		12.8	87.2		97.1	2.9	
PHF	.890	.822	.841	.750	.744	.744	.919	.646	.908

Location: Riverside
N/S: Trautwein Road
E/W: Grove Community Drive

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Trautwein Road	East Leg Grove Community Drive	South Leg Trautwein Road	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	2	0	3
7:15 AM	0	1	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	1	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	2	3	0	5

	North Leg Trautwein Road	East Leg Grove Community Drive	South Leg Trautwein Road	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	1	1	0	2
2:15 PM	0	0	1	0	1
2:30 PM	0	1	1	0	2
2:45 PM	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	0	1	0	0	1
3:30 PM	0	0	0	0	0
3:45 PM	0	1	0	0	1
TOTAL VOLUMES:	0	4	3	0	7

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Location: Riverside
N/S: Trautwein Road
E/W: Grove Community Drive

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Trautwein Road			Westbound Grove Community Drive			Northbound Trautwein Road			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Trautwein Road			Westbound Grove Community Drive			Northbound Trautwein Road			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	2
3:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	2
3:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	1	0	2	0	4	0	0	0	0	8

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City of Riverside
N/S: Trautwein Road
E/W: Orange Terrace Parkway
Weather: Clear

File Name : 14_RIV_Traut_OTP AM
Site Code : 00321719
Start Date : 11/18/2021
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	86	99	1	186	52	12	98	162	0	198	32	230	11	13	3	27	605
07:15 AM	102	138	4	244	75	35	124	234	4	172	44	220	11	17	3	31	729
07:30 AM	78	188	10	276	65	33	119	217	3	210	65	278	10	18	6	34	805
07:45 AM	18	105	1	124	39	5	71	115	3	206	36	245	13	8	5	26	510
Total	284	530	16	830	231	85	412	728	10	786	177	973	45	56	17	118	2649
08:00 AM	31	104	4	139	26	7	63	96	3	212	31	246	26	8	2	36	517
08:15 AM	42	91	3	136	31	1	62	94	1	193	18	212	17	5	1	23	465
08:30 AM	29	93	1	123	26	0	58	84	0	170	16	186	5	3	2	10	403
08:45 AM	41	99	4	144	24	2	46	72	3	176	26	205	13	7	3	23	444
Total	143	387	12	542	107	10	229	346	7	751	91	849	61	23	8	92	1829
Grand Total	427	917	28	1372	338	95	641	1074	17	1537	268	1822	106	79	25	210	4478
Apprch %	31.1	66.8	2		31.5	8.8	59.7		0.9	84.4	14.7		50.5	37.6	11.9		
Total %	9.5	20.5	0.6	30.6	7.5	2.1	14.3	24	0.4	34.3	6	40.7	2.4	1.8	0.6	4.7	
Passenger Vehicles	419	900	28	1347	334	94	634	1062	16	1498	262	1776	106	76	22	204	4389
% Passenger Vehicles	98.1	98.1	100	98.2	98.8	98.9	98.9	98.9	94.1	97.5	97.8	97.5	100	96.2	88	97.1	98
Large 2 Axle Vehicles	7	13	0	20	4	1	7	12	1	34	6	41	0	2	3	5	78
% Large 2 Axle Vehicles	1.6	1.4	0	1.5	1.2	1.1	1.1	1.1	5.9	2.2	2.2	2.3	0	2.5	12	2.4	1.7
3 Axle Vehicles	1	1	0	2	0	0	0	0	0	5	0	5	0	1	0	1	8
% 3 Axle Vehicles	0.2	0.1	0	0.1	0	0	0	0	0	0.3	0	0.3	0	1.3	0	0.5	0.2
4+ Axle Trucks	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
% 4+ Axle Trucks	0	0.3	0	0.2	0	0	0	0	0	0	0	0	0	0	0	0	0.1

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	86	99	1	186	52	12	98	162	0	198	32	230	11	13	3	27	605
07:15 AM	**102**	138	4	244	**75**	**35**	**124**	**234**	**4**	172	44	220	11	17	3	31	729
07:30 AM	78	**188**	**10**	**276**	65	33	119	217	3	**210**	**65**	**278**	10	**18**	**6**	**34**	**805**
07:45 AM	18	105	1	124	39	5	71	115	3	206	36	245	**13**	8	5	26	510
Total Volume	284	530	16	830	231	85	412	728	10	786	177	973	45	56	17	118	2649
% App. Total	34.2	63.9	1.9		31.7	11.7	56.6		1	80.8	18.2		38.1	47.5	14.4		
PHF	.696	.705	.400	.752	.770	.607	.831	.778	.625	.936	.681	.875	.865	.778	.708	.868	.823

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File Name : 14_RIV_Traut_OTP AM
Site Code : 00321719
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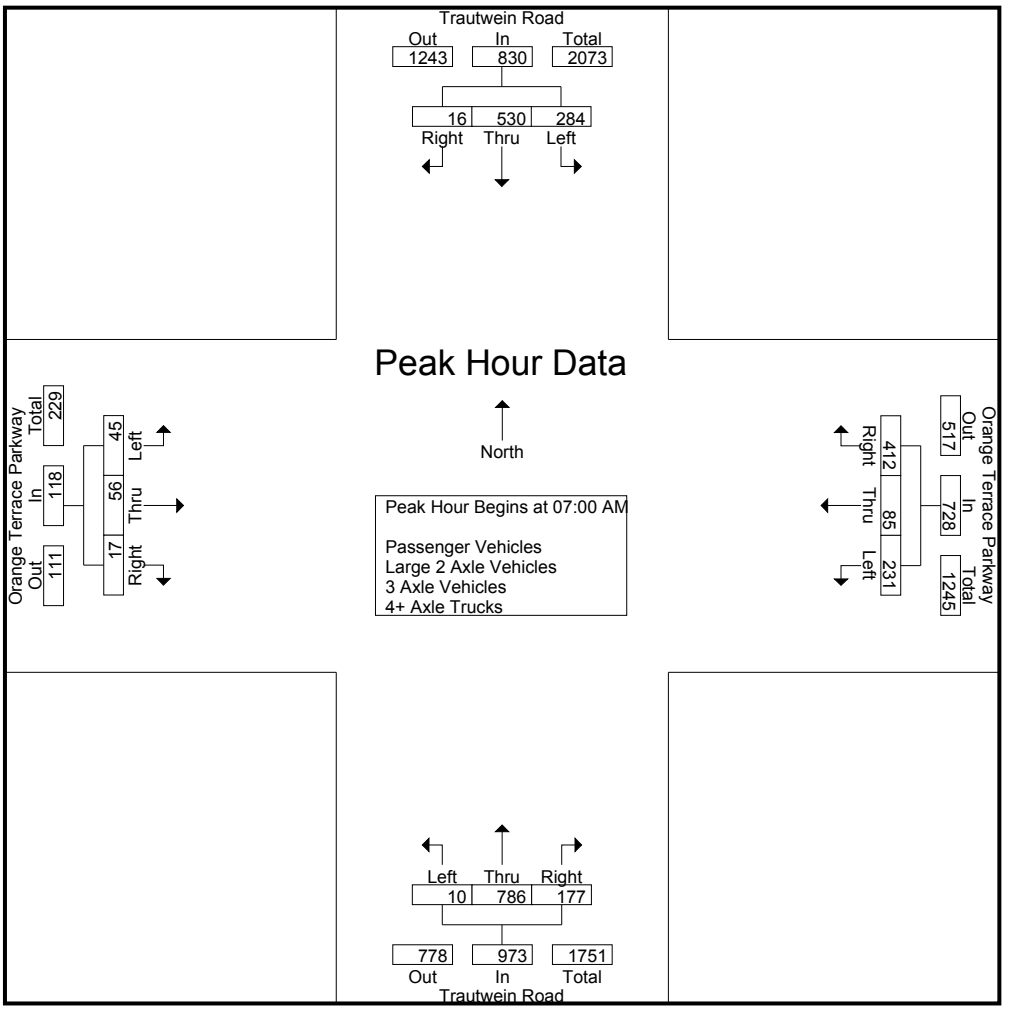

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	86	99	1	186	52	12	98	162	**4**	172	44	220	11	17	3	31
+15 mins.	**102**	138	4	244	**75**	**35**	**124**	**234**	3	210	**65**	**278**	10	**18**	**6**	34
+30 mins.	78	**188**	**10**	**276**	65	33	119	217	3	206	36	245	13	8	5	26
+45 mins.	18	105	1	124	39	5	71	115	3	**212**	31	246	**26**	8	2	**36**
Total Volume	284	530	16	830	231	85	412	728	13	800	176	989	60	51	16	127
% App. Total	34.2	63.9	1.9		31.7	11.7	56.6		1.3	80.9	17.8		47.2	40.2	12.6	
PHF	.696	.705	.400	.752	.770	.607	.831	.778	.813	.943	.677	.889	.577	.708	.667	.882

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File Name : 14_RIV_Traut_OTP AM
Site Code : 00321719
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Groups Printed- Passenger Vehicles

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	83	98	1	182	51	12	98	161	0	192	29	221	11	13	2	26	590
07:15 AM	101	137	4	242	74	35	121	230	4	168	43	215	11	16	2	29	716
07:30 AM	78	188	10	276	64	32	117	213	2	208	64	274	10	18	6	34	797
07:45 AM	17	102	1	120	39	5	70	114	3	203	36	242	13	7	5	25	501
Total	279	525	16	820	228	84	406	718	9	771	172	952	45	54	15	114	2604
08:00 AM	31	99	4	134	26	7	63	96	3	203	30	236	26	8	2	36	502
08:15 AM	42	88	3	133	31	1	61	93	1	187	18	206	17	4	1	22	454
08:30 AM	27	92	1	120	25	0	58	83	0	168	16	184	5	3	2	10	397
08:45 AM	40	96	4	140	24	2	46	72	3	169	26	198	13	7	2	22	432
Total	140	375	12	527	106	10	228	344	7	727	90	824	61	22	7	90	1785
Grand Total	419	900	28	1347	334	94	634	1062	16	1498	262	1776	106	76	22	204	4389
Apprch %	31.1	66.8	2.1		31.5	8.9	59.7		0.9	84.3	14.8		52	37.3	10.8		
Total %	9.5	20.5	0.6	30.7	7.6	2.1	14.4	24.2	0.4	34.1	6	40.5	2.4	1.7	0.5	4.6	

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	83	98	1	182	51	12	98	161	0	192	29	221	11	13	2	26	590
07:15 AM	**101**	137	4	242	**74**	**35**	**121**	**230**	**4**	168	43	215	11	16	2	29	716
07:30 AM	78	**188**	**10**	**276**	64	32	117	213	2	**208**	**64**	**274**	10	**18**	**6**	**34**	**797**
07:45 AM	17	102	1	120	39	5	70	114	3	203	36	242	**13**	7	5	25	501
Total Volume	279	525	16	820	228	84	406	718	9	771	172	952	45	54	15	114	2604
% App. Total	34	64	2		31.8	11.7	56.5		0.9	81	18.1		39.5	47.4	13.2		
PHF	.691	.698	.400	.743	.770	.600	.839	.780	.563	.927	.672	.869	.865	.750	.625	.838	.817

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File Name : 14_RIV_Traut_OTP AM
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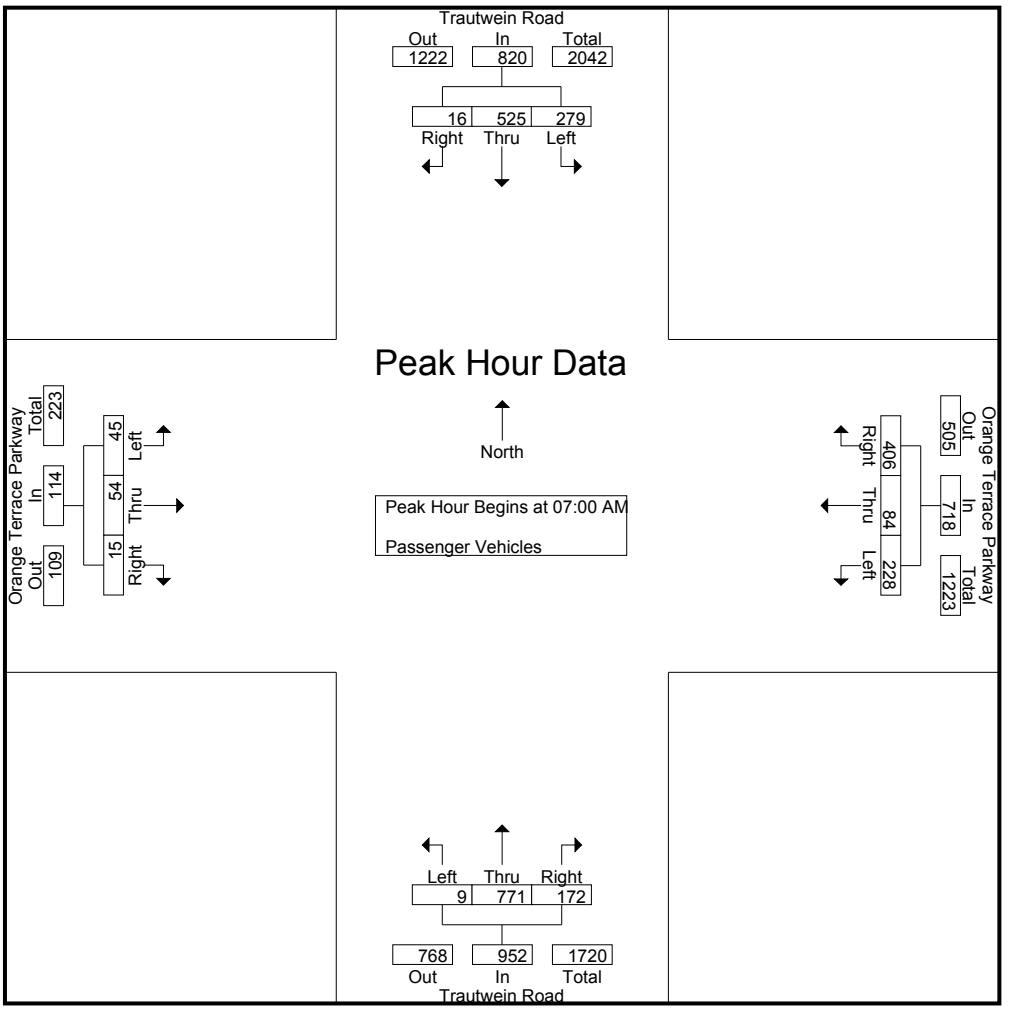

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	83	98	1	182	51	12	98	161	0	192	29	221	11	13	2	26
+15 mins.	**101**	137	4	242	**74**	**35**	**121**	**230**	**4**	168	43	215	11	16	2	29
+30 mins.	78	**188**	**10**	**276**	64	32	117	213	2	**208**	**64**	**274**	10	**18**	**6**	**34**
+45 mins.	17	102	1	120	39	5	70	114	3	203	36	242	**13**	7	5	25
Total Volume	279	525	16	820	228	84	406	718	9	771	172	952	45	54	15	114
% App. Total	34	64	2		31.8	11.7	56.5		0.9	81	18.1		39.5	47.4	13.2	
PHF	.691	.698	.400	.743	.770	.600	.839	.780	.563	.927	.672	.869	.865	.750	.625	.838

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Weather: Clear

File Name : 14_RIV_Traut_OTP AM
Site Code : 00321719
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Groups Printed- Large 2 Axle Vehicles

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	1	0	4	1	0	0	1	0	5	3	8	0	0	1	1	14
07:15 AM	1	1	0	2	1	0	3	4	0	3	1	4	0	0	1	1	11
07:30 AM	0	0	0	0	1	1	2	4	1	2	1	4	0	0	0	0	8
07:45 AM	1	2	0	3	0	0	1	1	0	3	0	3	0	1	0	1	8
Total	5	4	0	9	3	1	6	10	1	13	5	19	0	1	2	3	41
08:00 AM	0	5	0	5	0	0	0	0	0	8	1	9	0	0	0	0	14
08:15 AM	0	2	0	2	0	0	1	1	0	6	0	6	0	1	0	1	10
08:30 AM	2	1	0	3	1	0	0	1	0	1	0	1	0	0	0	0	5
08:45 AM	0	1	0	1	0	0	0	0	0	6	0	6	0	0	1	1	8
Total	2	9	0	11	1	0	1	2	0	21	1	22	0	1	1	2	37
Grand Total	7	13	0	20	4	1	7	12	1	34	6	41	0	2	3	5	78
Apprch %	35	65	0		33.3	8.3	58.3		2.4	82.9	14.6		0	40	60		
Total %	9	16.7	0	25.6	5.1	1.3	9	15.4	1.3	43.6	7.7	52.6	0	2.6	3.8	6.4	

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**3**	1	0	**4**	**1**	0	0	1	0	**5**	**3**	**8**	0	0	**1**	**1**	**14**
07:15 AM	1	1	0	2	1	0	**3**	**4**	0	3	1	4	0	0	1	1	11
07:30 AM	0	0	0	0	1	**1**	2	4	**1**	2	1	4	0	0	0	0	8
07:45 AM	1	**2**	0	3	0	0	1	1	0	3	0	3	0	**1**	0	1	8
Total Volume	5	4	0	9	3	1	6	10	1	13	5	19	0	1	2	3	41
% App. Total	55.6	44.4	0		30	10	60		5.3	68.4	26.3		0	33.3	66.7		
PHF	.417	.500	.000	.563	.750	.250	.500	.625	.250	.650	.417	.594	.000	.250	.500	.750	.732

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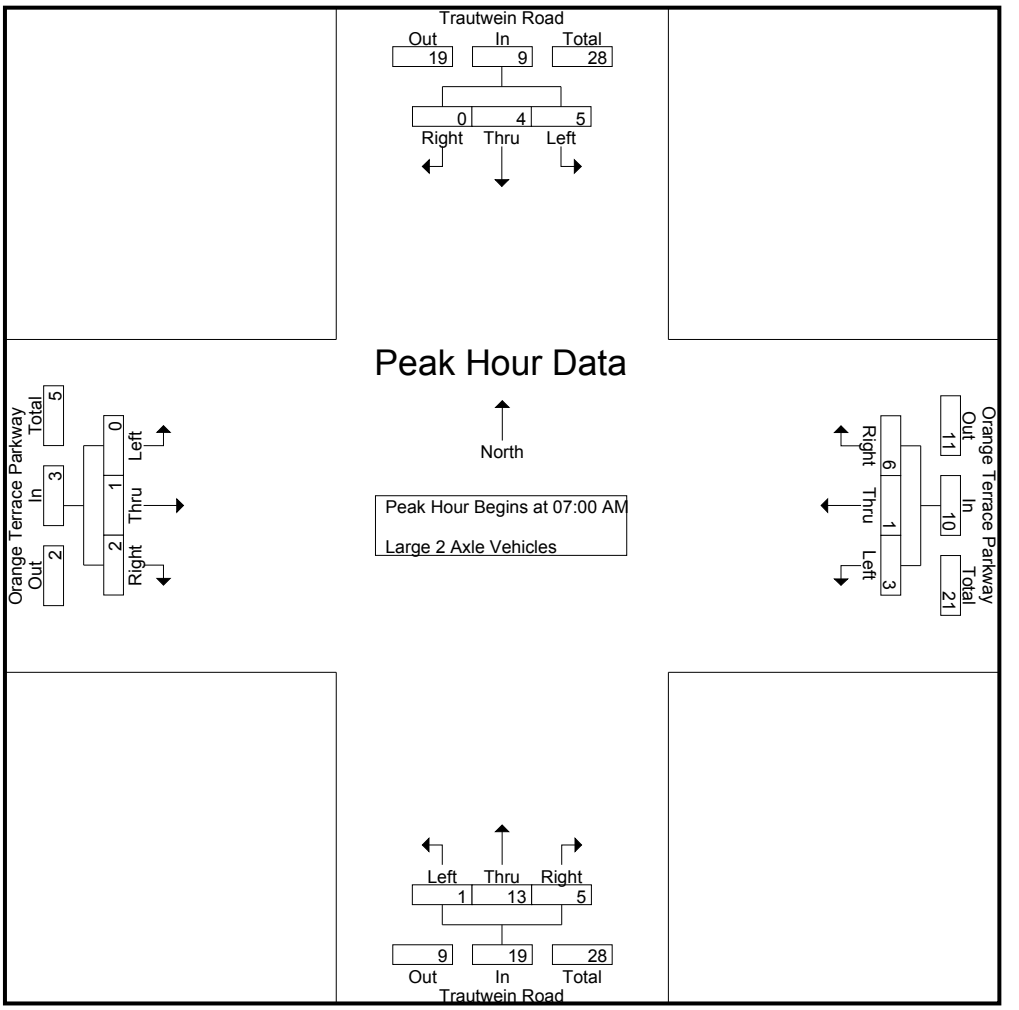

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**3**	1	0	**4**	**1**	0	0	1	0	**5**	**3**	**8**	0	0	**1**	**1**
+15 mins.	1	1	0	2	1	0	**3**	**4**	0	3	1	4	0	0	1	1
+30 mins.	0	0	0	0	1	**1**	2	4	**1**	2	1	4	0	0	0	0
+45 mins.	1	**2**	0	3	0	0	1	1	0	3	0	3	0	**1**	0	1
Total Volume	5	4	0	9	3	1	6	10	1	13	5	19	0	1	2	3
% App. Total	55.6	44.4	0		30	10	60		5.3	68.4	26.3		0	33.3	66.7	
PHF	.417	.500	.000	.563	.750	.250	.500	.625	.250	.650	.417	.594	.000	.250	.500	.750

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City of Riverside
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File Name : 14_RIV_Traut_OTP AM
Site Code : 00321719
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Groups Printed- 3 Axle Vehicles

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total	1	1	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
Grand Total	1	1	0	2	0	0	0	0	0	5	0	5	0	1	0	1	8
Apprch %	50	50	0		0	0	0		0	100	0		0	100	0		
Total %	12.5	12.5	0	25	0	0	0	0	0	62.5	0	62.5	0	12.5	0	12.5	

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	**1**	0	**1**	**2**
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
% App. Total	0	0	0		0	0	0		0	100	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.000	.250	.375

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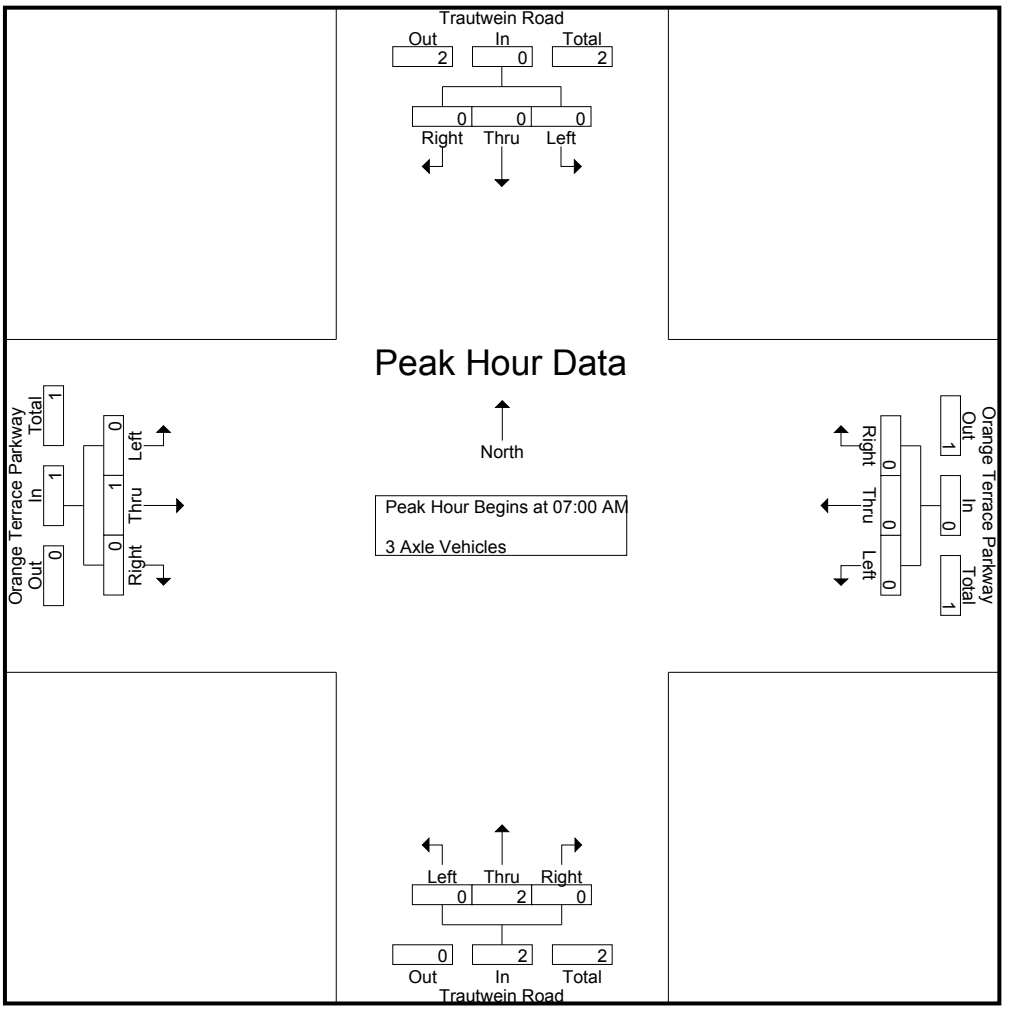

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.000	.250

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City of Riverside
N/S: Trautwein Road
E/W: Orange Terrace Parkway
Weather: Clear

File Name : 14_RIV_Traut_OTP AM
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Groups Printed- 4+ Axle Trucks

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Grand Total	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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File Name : 14_RIV_Traut_OTP AM
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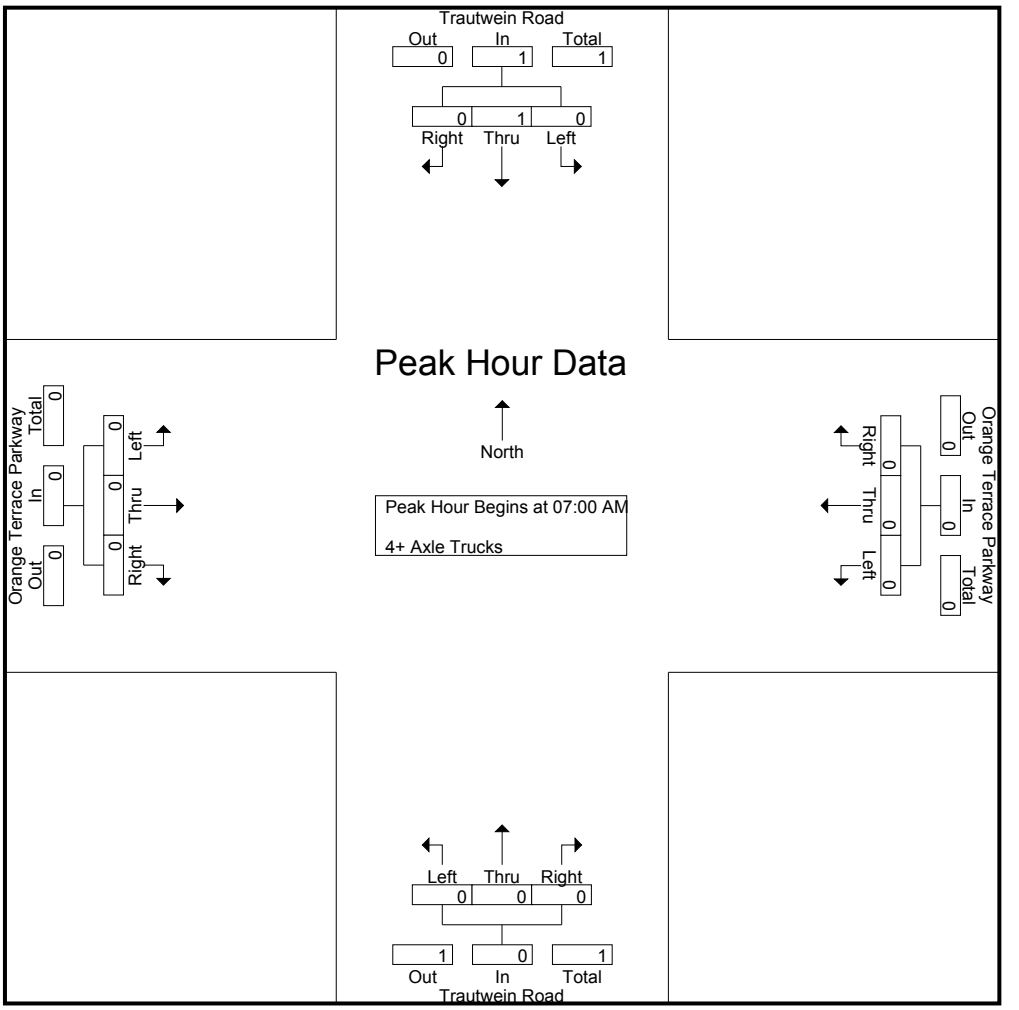

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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File Name : 14_RIV_Traut_OTP MD
Site Code : 00321719
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	86	151	11	248	38	19	101	158	2	167	38	207	5	11	1	17	630
02:15 PM	80	171	12	263	47	13	93	153	5	157	33	195	9	5	1	15	626
02:30 PM	52	174	5	231	47	4	61	112	0	169	31	200	38	21	5	64	607
02:45 PM	53	199	7	259	45	10	57	112	2	174	51	227	8	10	6	24	622
Total	271	695	35	1001	177	46	312	535	9	667	153	829	60	47	13	120	2485
03:00 PM	45	196	4	245	32	3	69	104	3	199	56	258	10	13	2	25	632
03:15 PM	53	206	7	266	33	3	50	86	4	204	49	257	10	6	2	18	627
03:30 PM	77	222	5	304	36	2	59	97	1	155	48	204	10	6	2	18	623
03:45 PM	73	274	3	350	34	3	49	86	1	193	43	237	10	8	1	19	692
Total	248	898	19	1165	135	11	227	373	9	751	196	956	40	33	7	80	2574
Grand Total	519	1593	54	2166	312	57	539	908	18	1418	349	1785	100	80	20	200	5059
Apprch %	24	73.5	2.5		34.4	6.3	59.4		1	79.4	19.6		50	40	10		
Total %	10.3	31.5	1.1	42.8	6.2	1.1	10.7	17.9	0.4	28	6.9	35.3	2	1.6	0.4	4	
Passenger Vehicles	509	1566	52	2127	304	56	530	890	18	1386	342	1746	98	79	20	197	4960
% Passenger Vehicles	98.1	98.3	96.3	98.2	97.4	98.2	98.3	98	100	97.7	98	97.8	98	98.8	100	98.5	98
Large 2 Axle Vehicles	8	26	2	36	8	1	7	16	0	27	7	34	2	1	0	3	89
% Large 2 Axle Vehicles	1.5	1.6	3.7	1.7	2.6	1.8	1.3	1.8	0	1.9	2	1.9	2	1.2	0	1.5	1.8
3 Axle Vehicles	2	0	0	2	0	0	2	2	0	3	0	3	0	0	0	0	7
% 3 Axle Vehicles	0.4	0	0	0.1	0	0	0.4	0.2	0	0.2	0	0.2	0	0	0	0	0.1
4+ Axle Trucks	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
% 4+ Axle Trucks	0	0.1	0	0	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0.1

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	45	196	4	245	32	**3**	**69**	**104**	3	199	**56**	**258**	**10**	**13**	**2**	**25**	632
03:15 PM	53	206	**7**	266	33	3	50	86	**4**	**204**	49	257	10	6	2	18	627
03:30 PM	**77**	222	5	304	**36**	2	59	97	1	155	48	204	10	6	2	18	623
03:45 PM	73	**274**	3	**350**	34	3	49	86	1	193	43	237	10	8	1	19	**692**
Total Volume	248	898	19	1165	135	11	227	373	9	751	196	956	40	33	7	80	2574
% App. Total	21.3	77.1	1.6		36.2	2.9	60.9		0.9	78.6	20.5		50	41.2	8.8		
PHF	.805	.819	.679	.832	.938	.917	.822	.897	.563	.920	.875	.926	1.00	.635	.875	.800	.930

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File Name : 14_RIV_Traut_OTP MD
Site Code : 00321719
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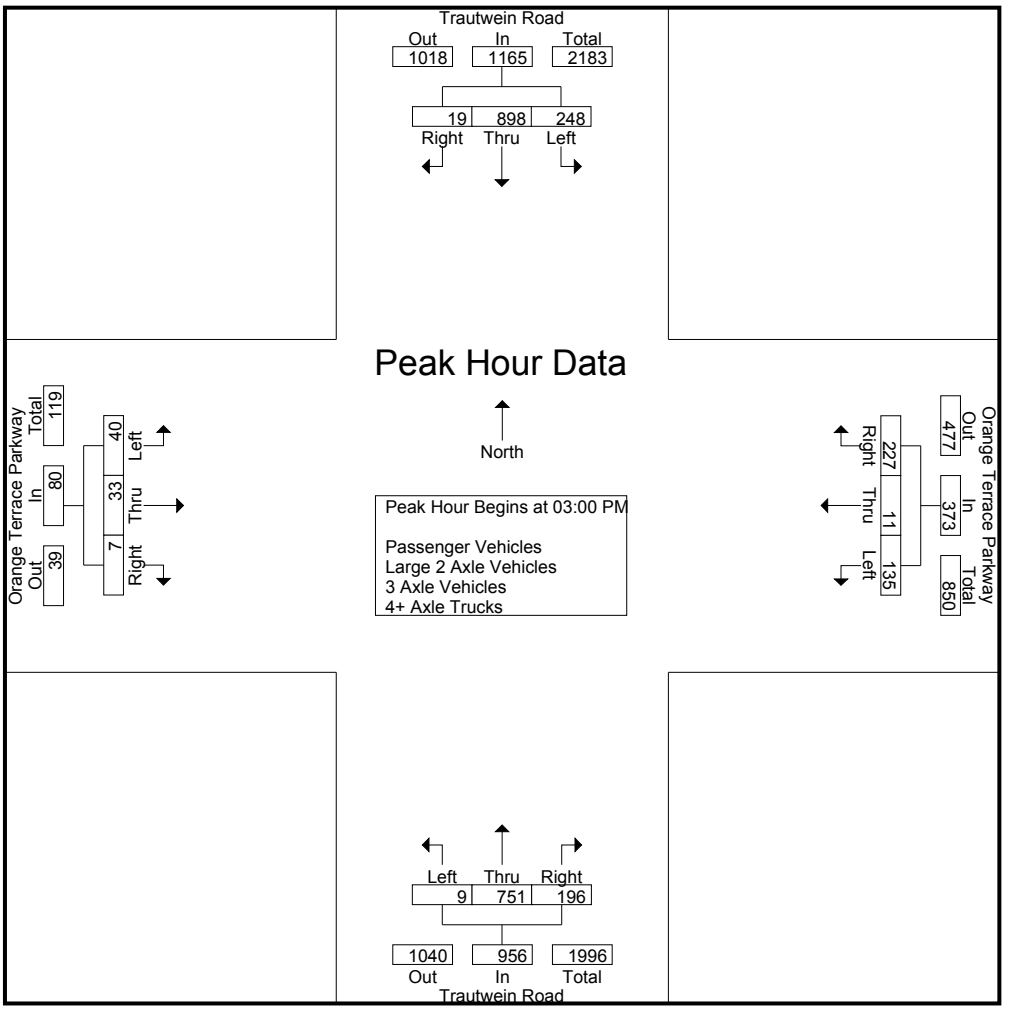

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				02:00 PM				03:00 PM				02:30 PM			
+0 mins.	45	196	4	245	38	**19**	**101**	**158**	3	199	**56**	**258**	**38**	**21**	5	**64**
+15 mins.	53	206	**7**	266	**47**	13	93	153	**4**	**204**	49	257	8	10	**6**	24
+30 mins.	**77**	222	5	304	47	4	61	112	1	155	48	204	10	13	2	25
+45 mins.	73	**274**	3	**350**	45	10	57	112	1	193	43	237	10	6	2	18
Total Volume	248	898	19	1165	177	46	312	535	9	751	196	956	66	50	15	131
% App. Total	21.3	77.1	1.6		33.1	8.6	58.3		0.9	78.6	20.5		50.4	38.2	11.5	
PHF	.805	.819	.679	.832	.941	.605	.772	.847	.563	.920	.875	.926	.434	.595	.625	.512

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Weather: Clear

File Name : 14_RIV_Traut_OTP MD
Site Code : 00321719
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Groups Printed- Passenger Vehicles

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	84	150	10	244	37	19	100	156	2	164	37	203	5	11	1	17	620
02:15 PM	78	166	11	255	46	13	91	150	5	153	32	190	9	5	1	15	610
02:30 PM	51	172	5	228	46	4	61	111	0	165	29	194	37	20	5	62	595
02:45 PM	53	195	7	255	45	9	56	110	2	169	50	221	8	10	6	24	610
Total	266	683	33	982	174	45	308	527	9	651	148	808	59	46	13	118	2435
03:00 PM	45	194	4	243	31	3	66	100	3	193	56	252	9	13	2	24	619
03:15 PM	53	203	7	263	32	3	50	85	4	201	48	253	10	6	2	18	619
03:30 PM	73	215	5	293	35	2	59	96	1	151	48	200	10	6	2	18	607
03:45 PM	72	271	3	346	32	3	47	82	1	190	42	233	10	8	1	19	680
Total	243	883	19	1145	130	11	222	363	9	735	194	938	39	33	7	79	2525
Grand Total	509	1566	52	2127	304	56	530	890	18	1386	342	1746	98	79	20	197	4960
Apprch %	23.9	73.6	2.4		34.2	6.3	59.6		1	79.4	19.6		49.7	40.1	10.2		
Total %	10.3	31.6	1	42.9	6.1	1.1	10.7	17.9	0.4	27.9	6.9	35.2	2	1.6	0.4	4	

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	45	194	4	243	31	**3**	**66**	**100**	3	193	**56**	252	9	**13**	**2**	**24**	619
03:15 PM	53	203	**7**	263	32	3	50	85	**4**	**201**	48	**253**	**10**	6	2	18	619
03:30 PM	**73**	215	5	293	**35**	2	59	96	1	151	48	200	10	6	2	18	607
03:45 PM	72	**271**	3	**346**	32	3	47	82	1	190	42	233	10	8	1	19	**680**
Total Volume	243	883	19	1145	130	11	222	363	9	735	194	938	39	33	7	79	2525
% App. Total	21.2	77.1	1.7		35.8	3	61.2		1	78.4	20.7		49.4	41.8	8.9		
PHF	.832	.815	.679	.827	.929	.917	.841	.908	.563	.914	.866	.927	.975	.635	.875	.823	.928

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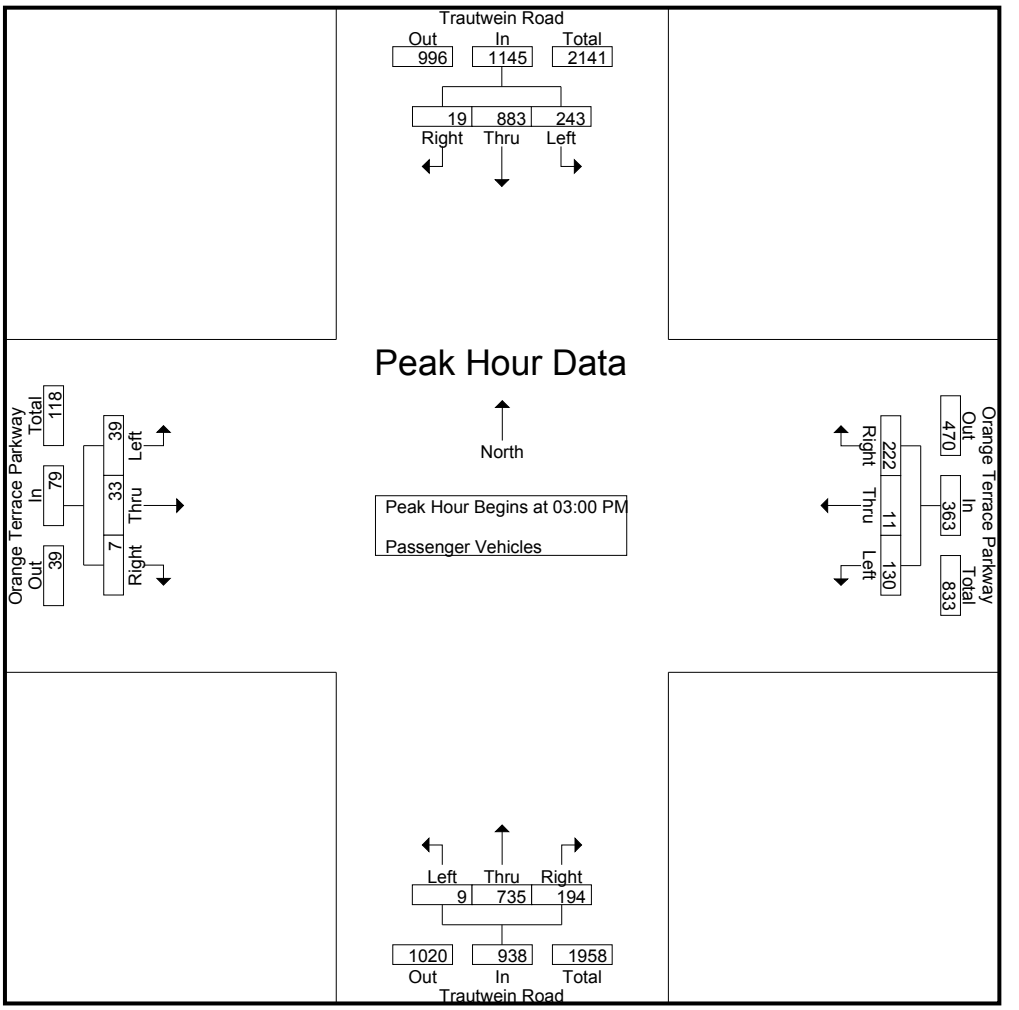

Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	45	194	4	243	31	**3**	**66**	**100**	3	193	**56**	252	9	**13**	**2**	**24**
+15 mins.	53	203	**7**	263	32	3	50	85	**4**	**201**	48	**253**	**10**	6	2	18
+30 mins.	**73**	215	5	293	**35**	2	59	96	1	151	48	200	10	6	2	18
+45 mins.	72	**271**	3	**346**	32	3	47	82	1	190	42	233	10	8	1	19
Total Volume	243	883	19	1145	130	11	222	363	9	735	194	938	39	33	7	79
% App. Total	21.2	77.1	1.7		35.8	3	61.2		1	78.4	20.7		49.4	41.8	8.9	
PHF	.832	.815	.679	.827	.929	.917	.841	.908	.563	.914	.866	.927	.975	.635	.875	.823

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File Name : 14_RIV_Traut_OTP MD
Site Code : 00321719
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Groups Printed- Large 2 Axle Vehicles

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	1	1	1	3	1	0	1	2	0	2	1	3	0	0	0	0	8
02:15 PM	2	5	1	8	1	0	1	2	0	4	1	5	0	0	0	0	15
02:30 PM	1	1	0	2	1	0	0	1	0	3	2	5	1	1	0	2	10
02:45 PM	0	4	0	4	0	1	1	2	0	4	1	5	0	0	0	0	11
Total	4	11	2	17	3	1	3	7	0	13	5	18	1	1	0	2	44
03:00 PM	0	2	0	2	1	0	3	4	0	5	0	5	1	0	0	1	12
03:15 PM	0	3	0	3	1	0	0	1	0	3	1	4	0	0	0	0	8
03:30 PM	4	7	0	11	1	0	0	1	0	3	0	3	0	0	0	0	15
03:45 PM	0	3	0	3	2	0	1	3	0	3	1	4	0	0	0	0	10
Total	4	15	0	19	5	0	4	9	0	14	2	16	1	0	0	1	45
Grand Total	8	26	2	36	8	1	7	16	0	27	7	34	2	1	0	3	89
Apprch %	22.2	72.2	5.6		50	6.2	43.8		0	79.4	20.6		66.7	33.3	0		
Total %	9	29.2	2.2	40.4	9	1.1	7.9	18	0	30.3	7.9	38.2	2.2	1.1	0	3.4	

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	2	0	2	1	0	**3**	**4**	0	**5**	0	**5**	**1**	0	0	**1**	12
03:15 PM	0	3	0	3	1	0	0	1	0	3	**1**	4	0	0	0	0	8
03:30 PM	**4**	**7**	0	**11**	1	0	0	1	0	3	0	3	0	0	0	0	**15**
03:45 PM	0	3	0	3	**2**	0	1	3	0	3	1	4	0	0	0	0	10
Total Volume	4	15	0	19	5	0	4	9	0	14	2	16	1	0	0	1	45
% App. Total	21.1	78.9	0		55.6	0	44.4		0	87.5	12.5		100	0	0		
PHF	.250	.536	.000	.432	.625	.000	.333	.563	.000	.700	.500	.800	.250	.000	.000	.250	.750

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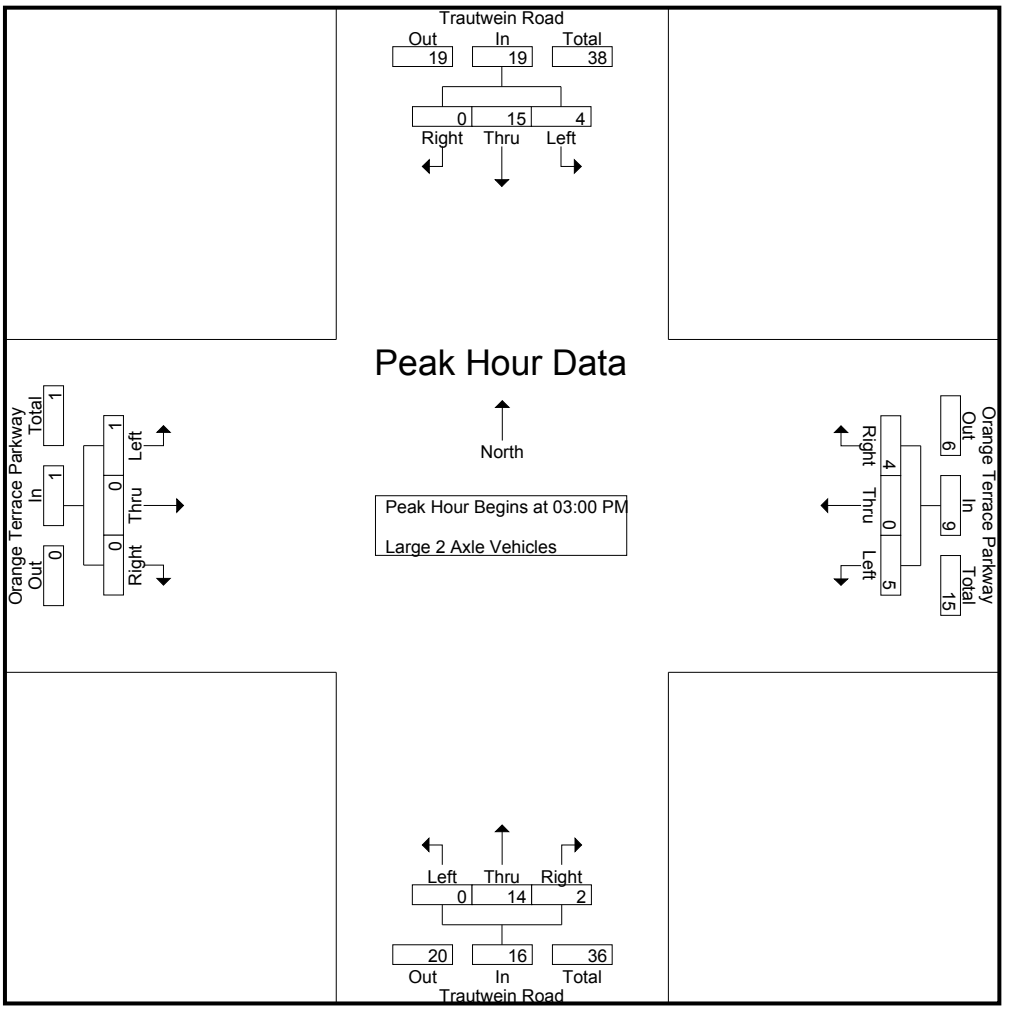

Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	2	0	2	1	0	**3**	**4**	0	**5**	0	**5**	**1**	0	0	**1**
+15 mins.	0	3	0	3	1	0	0	1	0	3	**1**	4	0	0	0	0
+30 mins.	**4**	**7**	0	**11**	1	0	0	1	0	3	0	3	0	0	0	0
+45 mins.	0	3	0	3	**2**	0	1	3	0	3	1	4	0	0	0	0
Total Volume	4	15	0	19	5	0	4	9	0	14	2	16	1	0	0	1
% App. Total	21.1	78.9	0		55.6	0	44.4		0	87.5	12.5		100	0	0	
PHF	.250	.536	.000	.432	.625	.000	.333	.563	.000	.700	.500	.800	.250	.000	.000	.250

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Weather: Clear

File Name : 14_RIV_Traut_OTP MD
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Groups Printed- 3 Axle Vehicles

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
02:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
02:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	1	0	0	1	0	0	1	1	0	3	0	3	0	0	0	0	5
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
Total	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
Grand Total	2	0	0	2	0	0	2	2	0	3	0	3	0	0	0	0	7
Apprch %	100	0	0		0	0	100		0	100	0		0	0	0		
Total %	28.6	0	0	28.6	0	0	28.6	28.6	0	42.9	0	42.9	0	0	0	0	

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	**1**	0	0	**1**	0	0	**1**	**1**	0	0	0	0	0	0	0	0	**2**
Total Volume	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
% App. Total	100	0	0		0	0	100		0	0	0		0	0	0		
PHF	.250	.000	.000	.250	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

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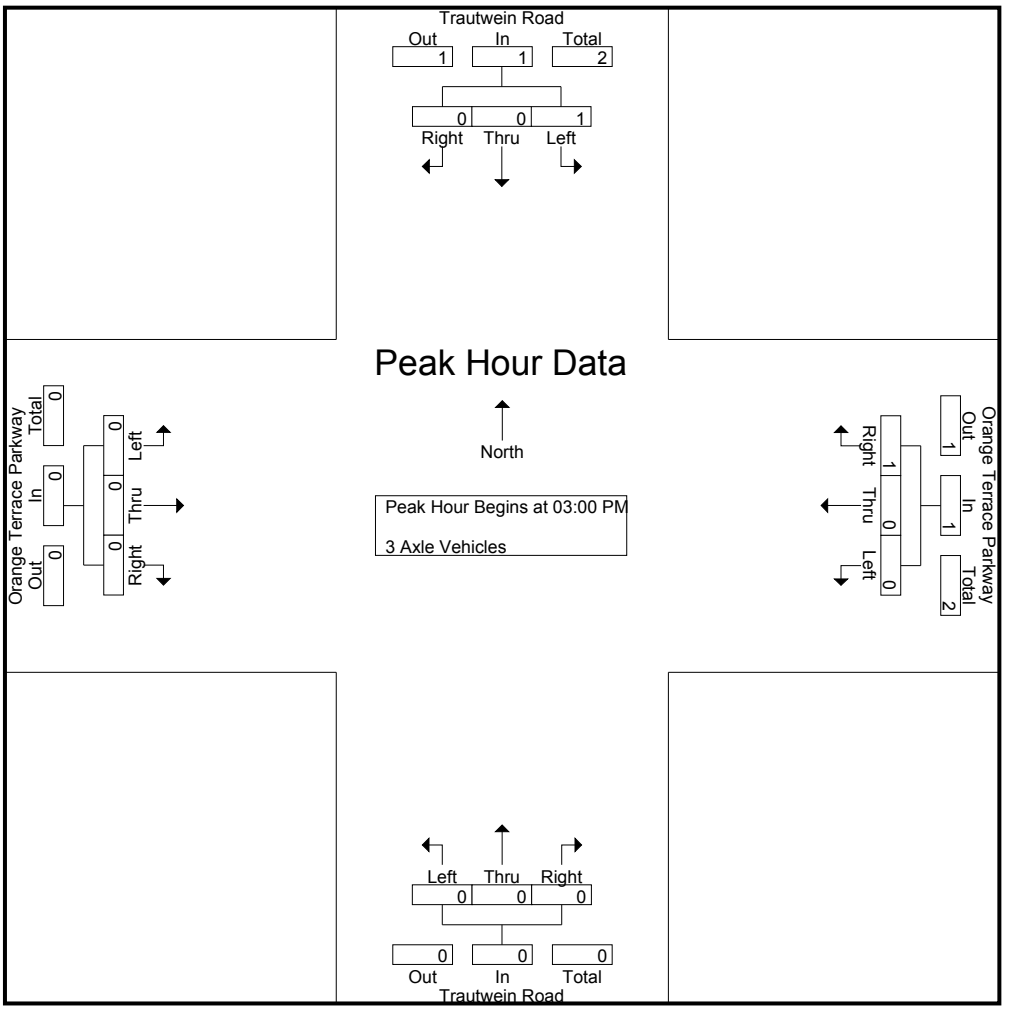
City of Riverside
N/S: Trautwein Road
E/W: Orange Terrace Parkway
Weather: Clear

File Name : 14_RIV_Traut_OTP MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	**1**	0	0	**1**	0	0	**1**	**1**	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0
% App. Total	100	0	0		0	0	100		0	0	0		0	0	0	
PHF	.250	.000	.000	.250	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000

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File Name : 14_RIV_Traut_OTP MD
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Groups Printed- 4+ Axle Trucks

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Grand Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	33.3	0	33.3	0	0	0	0	0	66.7	0	66.7	0	0	0	0	

	Trautwein Road Southbound				Orange Terrace Parkway Westbound				Trautwein Road Northbound				Orange Terrace Parkway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

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City of Riverside
N/S: Trautwein Road
E/W: Orange Terrace Parkway
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File Name : 14_RIV_Traut_OTP MD
Site Code : 00321719
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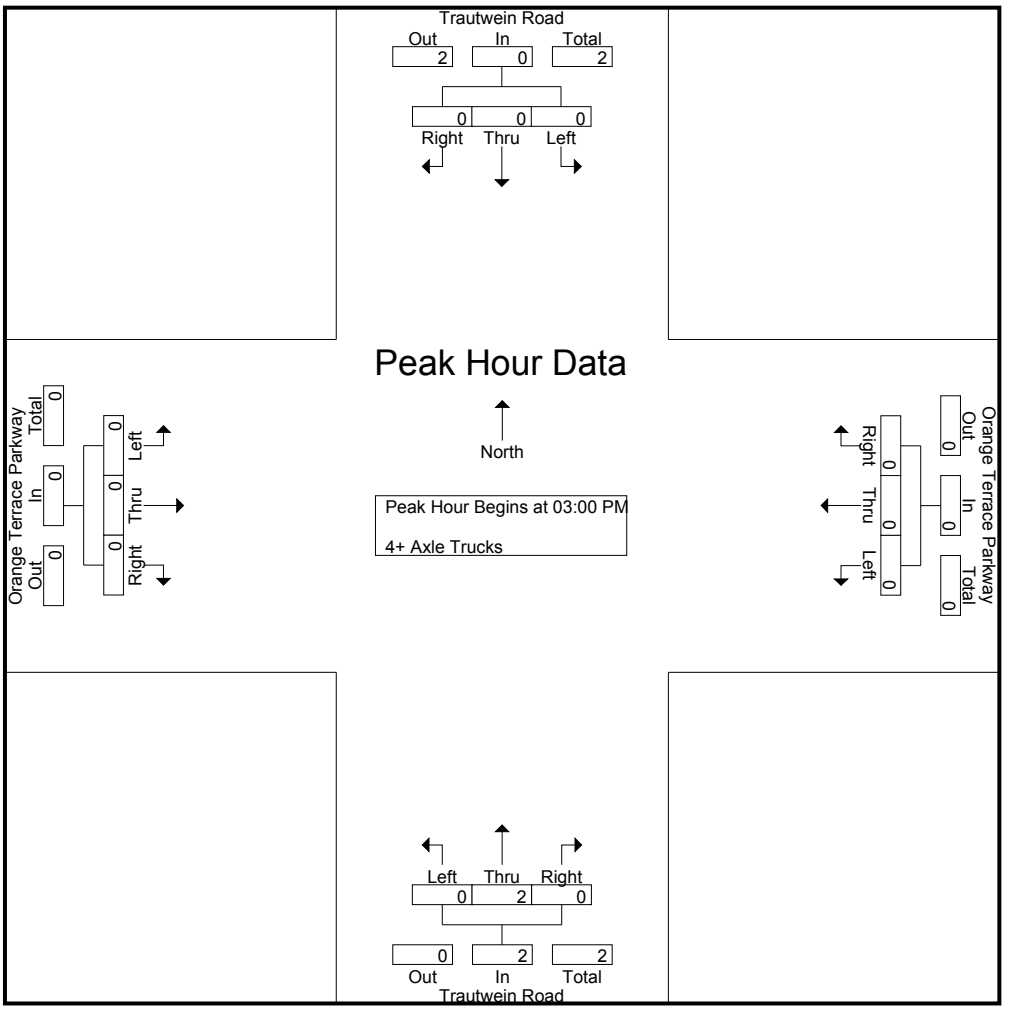

Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

Location: Riverside
N/S: Trautwein Road
E/W: Orange Terrace Parkway

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Trautwein Road	East Leg Orange Terrace Parkway	South Leg Trautwein Road	West Leg Orange Terrace Parkway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	3	2	5
7:15 AM	2	2	0	3	7
7:30 AM	0	0	0	1	1
7:45 AM	0	0	0	1	1
8:00 AM	0	0	0	0	0
8:15 AM	2	0	0	1	3
8:30 AM	0	0	0	5	5
8:45 AM	1	1	3	3	8
TOTAL VOLUMES:	5	3	6	16	30

	North Leg Trautwein Road	East Leg Orange Terrace Parkway	South Leg Trautwein Road	West Leg Orange Terrace Parkway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	1	2	3
2:15 PM	0	0	1	1	2
2:30 PM	0	0	1	2	3
2:45 PM	0	0	0	1	1
3:00 PM	1	0	0	2	3
3:15 PM	0	0	0	0	0
3:30 PM	0	1	0	12	13
3:45 PM	0	0	0	1	1
TOTAL VOLUMES:	1	1	3	21	26

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Location: Riverside
N/S: Trautwein Road
E/W: Orange Terrace Parkway

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Trautwein Road			Westbound Orange Terrace Parkway			Northbound Trautwein Road			Eastbound Orange Terrace Parkway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	3	0	0	0	0	0	0	0	4

	Southbound Trautwein Road			Westbound Orange Terrace Parkway			Northbound Trautwein Road			Eastbound Orange Terrace Parkway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	1	1	0	1	0	0	2	0	5
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
3:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1	1	0	4	0	0	3	0	10

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City of Riverside
N/S: Trautwein Road
E/W: Shopping Center Driveway
Weather: Clear

File Name : 15_RIV_Traut_SCDW AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Total Volume

	Trautwein Road Southbound				Shopping Center Driveway Westbound				Trautwein Road Northbound				Shopping Center Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	7	130	2	139	6	3	11	20	3	196	2	201	9	1	5	15	375
07:15 AM	11	191	2	204	6	1	13	20	9	229	2	240	3	3	3	9	473
07:30 AM	16	218	4	238	4	0	6	10	8	257	1	266	8	1	7	16	530
07:45 AM	27	118	5	150	7	4	8	19	9	210	2	221	13	2	5	20	410
Total	61	657	13	731	23	8	38	69	29	892	7	928	33	7	20	60	1788
08:00 AM	14	106	4	124	6	2	21	29	18	217	1	236	8	3	8	19	408
08:15 AM	10	85	11	106	10	1	10	21	13	195	1	209	13	5	9	27	363
08:30 AM	14	86	14	114	7	9	8	24	22	144	1	167	13	5	6	24	329
08:45 AM	28	77	9	114	16	3	11	30	20	170	3	193	20	6	11	37	374
Total	66	354	38	458	39	15	50	104	73	726	6	805	54	19	34	107	1474
Grand Total	127	1011	51	1189	62	23	88	173	102	1618	13	1733	87	26	54	167	3262
Apprch %	10.7	85	4.3		35.8	13.3	50.9		5.9	93.4	0.8		52.1	15.6	32.3		
Total %	3.9	31	1.6	36.5	1.9	0.7	2.7	5.3	3.1	49.6	0.4	53.1	2.7	0.8	1.7	5.1	

	Trautwein Road Southbound				Shopping Center Driveway Westbound				Trautwein Road Northbound				Shopping Center Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	11	191	2	204	6	1	13	20	9	229	**2**	240	3	**3**	3	9	473
07:30 AM	16	**218**	4	**238**	4	0	6	10	8	**257**	1	**266**	8	1	7	16	**530**
07:45 AM	**27**	118	**5**	150	**7**	**4**	8	19	9	210	2	221	**13**	2	5	**20**	410
08:00 AM	14	106	4	124	6	2	**21**	**29**	**18**	217	1	236	8	3	**8**	19	408
Total Volume	68	633	15	716	23	7	48	78	44	913	6	963	32	9	23	64	1821
% App. Total	9.5	88.4	2.1		29.5	9	61.5		4.6	94.8	0.6		50	14.1	35.9		
PHF	.630	.726	.750	.752	.821	.438	.571	.672	.611	.888	.750	.905	.615	.750	.719	.800	.859

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City of Riverside
N/S: Trautwein Road
E/W: Shopping Center Driveway
Weather: Clear

File Name : 15_RIV_Traut_SCDW AM
Site Code : 00321719
Start Date : 11/18/2021
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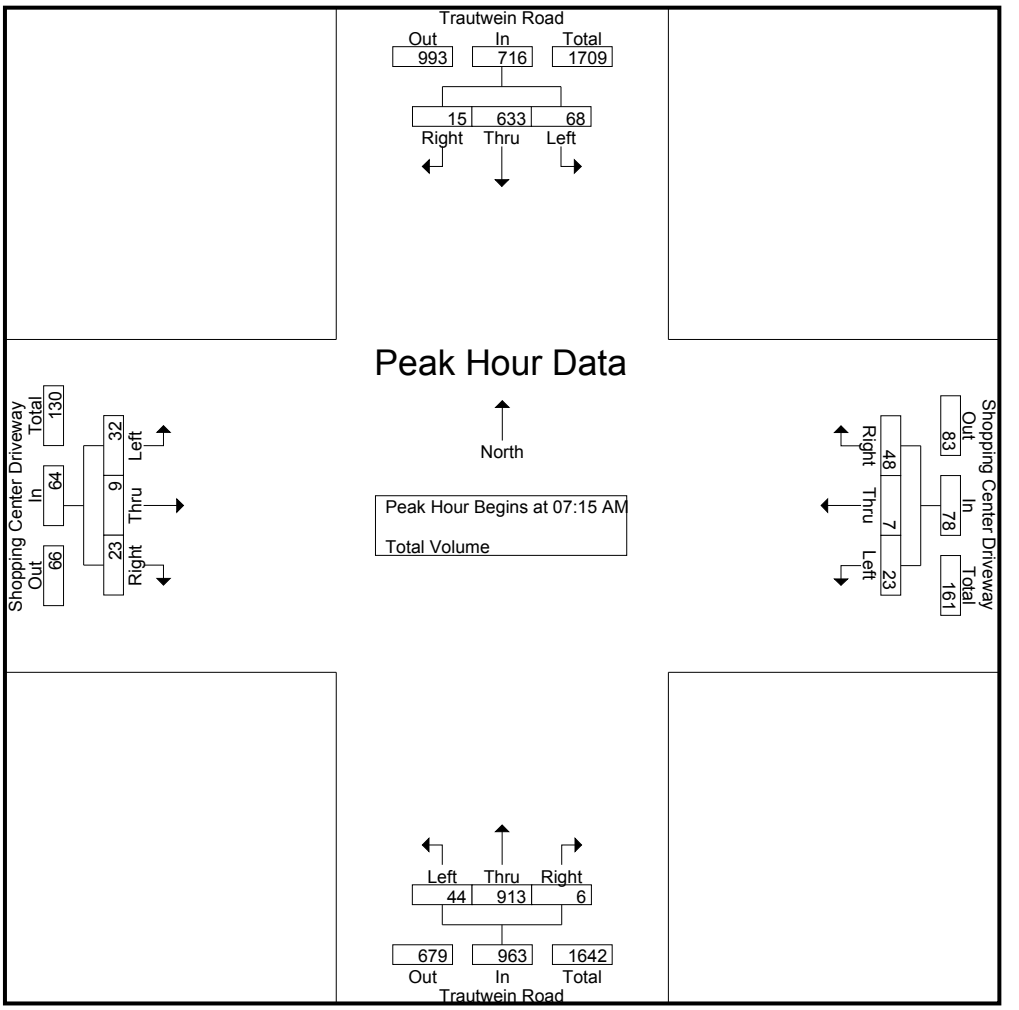

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:15 AM				08:00 AM			
+0 mins.	7	130	2	139	6	2	**21**	29	9	229	**2**	240	8	3	8	19
+15 mins.	11	191	2	204	10	1	10	21	8	**257**	1	**266**	13	5	9	27
+30 mins.	16	**218**	4	**238**	7	**9**	8	24	9	210	2	221	13	5	6	24
+45 mins.	**27**	118	**5**	150	**16**	3	11	**30**	**18**	217	1	236	**20**	**6**	**11**	**37**
Total Volume	61	657	13	731	39	15	50	104	44	913	6	963	54	19	34	107
% App. Total	8.3	89.9	1.8		37.5	14.4	48.1		4.6	94.8	0.6		50.5	17.8	31.8	
PHF	.565	.753	.650	.768	.609	.417	.595	.867	.611	.888	.750	.905	.675	.792	.773	.723

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City of Riverside
N/S: Trautwein Road
E/W: Shopping Center Driveway
Weather: Clear

File Name : 15_RIV_Traut_SCDW MD
Site Code : 00321719
Start Date : 11/18/2021
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Groups Printed- Total Volume

	Trautwein Road Southbound				Shopping Center Driveway Westbound				Trautwein Road Northbound				Shopping Center Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	41	128	21	190	12	10	18	40	25	164	5	194	31	6	13	50	474
02:15 PM	37	151	26	214	20	6	23	49	25	138	0	163	23	3	20	46	472
02:30 PM	27	154	29	210	17	4	28	49	24	159	0	183	24	10	24	58	500
02:45 PM	32	173	34	239	12	1	22	35	21	194	5	220	22	10	16	48	542
Total	137	606	110	853	61	21	91	173	95	655	10	760	100	29	73	202	1988
03:00 PM	32	163	34	229	11	7	12	30	26	200	2	228	35	9	22	66	553
03:15 PM	35	164	25	224	19	6	28	53	36	189	1	226	32	13	18	63	566
03:30 PM	39	196	21	256	19	6	17	42	20	185	3	208	19	5	21	45	551
03:45 PM	55	192	31	278	15	7	16	38	31	176	7	214	27	9	18	54	584
Total	161	715	111	987	64	26	73	163	113	750	13	876	113	36	79	228	2254
Grand Total	298	1321	221	1840	125	47	164	336	208	1405	23	1636	213	65	152	430	4242
Apprch %	16.2	71.8	12		37.2	14	48.8		12.7	85.9	1.4		49.5	15.1	35.3		
Total %	7	31.1	5.2	43.4	2.9	1.1	3.9	7.9	4.9	33.1	0.5	38.6	5	1.5	3.6	10.1	

	Trautwein Road Southbound				Shopping Center Driveway Westbound				Trautwein Road Northbound				Shopping Center Driveway Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	32	163	**34**	229	11	**7**	12	30	26	**200**	2	**228**	**35**	9	**22**	**66**	553
03:15 PM	35	164	25	224	**19**	6	**28**	**53**	**36**	189	1	226	32	**13**	18	63	566
03:30 PM	39	**196**	21	256	19	6	17	42	20	185	3	208	19	5	21	45	551
03:45 PM	**55**	192	31	**278**	15	7	16	38	31	176	**7**	214	27	9	18	54	**584**
Total Volume	161	715	111	987	64	26	73	163	113	750	13	876	113	36	79	228	2254
% App. Total	16.3	72.4	11.2		39.3	16	44.8		12.9	85.6	1.5		49.6	15.8	34.6		
PHF	.732	.912	.816	.888	.842	.929	.652	.769	.785	.938	.464	.961	.807	.692	.898	.864	.965

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City of Riverside
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E/W: Shopping Center Driveway
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File Name : 15_RIV_Traut_SCDW MD
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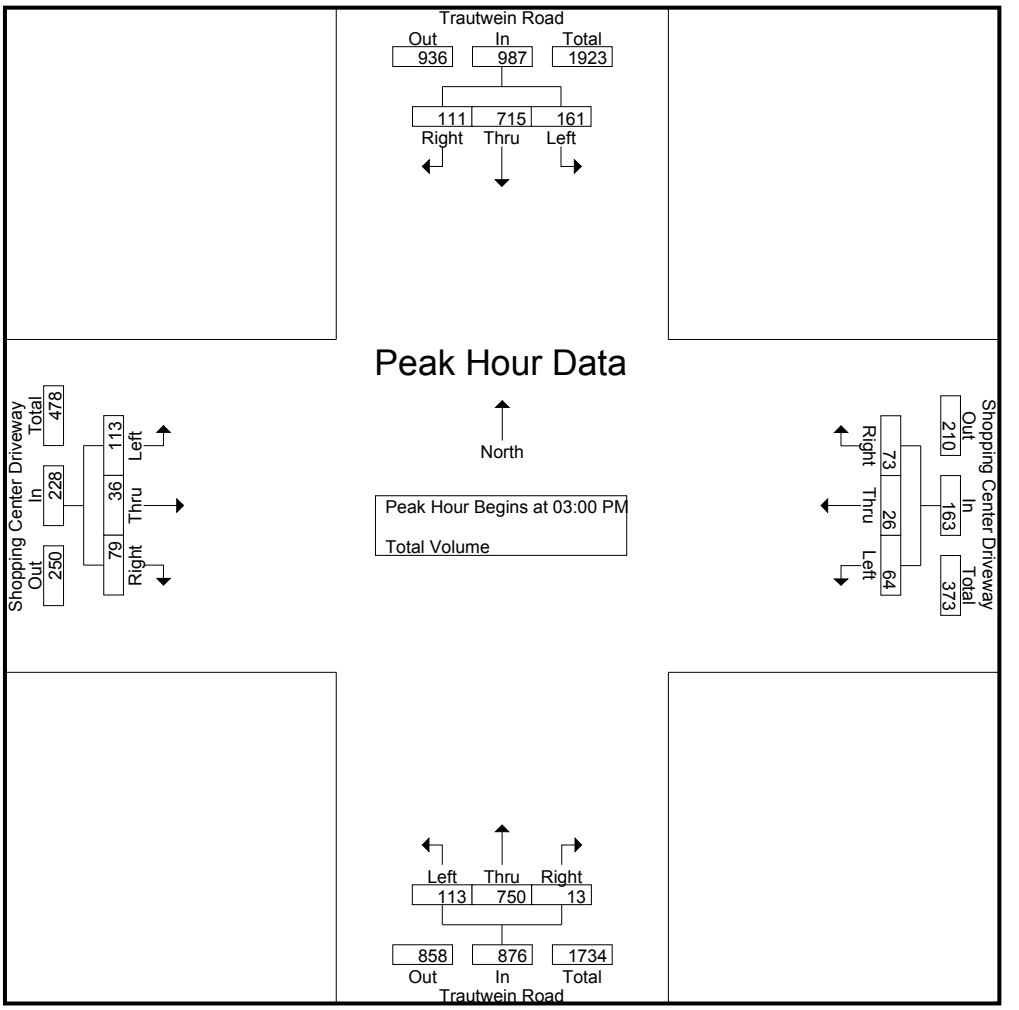

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				02:00 PM				02:45 PM				02:30 PM			
+0 mins.	32	163	**34**	229	12	**10**	18	40	21	194	**5**	220	24	10	**24**	58
+15 mins.	35	164	25	224	**20**	6	23	**49**	26	**200**	2	**228**	22	10	16	48
+30 mins.	39	**196**	21	256	17	4	**28**	49	**36**	189	1	226	**35**	9	22	**66**
+45 mins.	**55**	192	31	**278**	12	1	22	35	20	185	3	208	32	**13**	18	63
Total Volume	161	715	111	987	61	21	91	173	103	768	11	882	113	42	80	235
% App. Total	16.3	72.4	11.2		35.3	12.1	52.6		11.7	87.1	1.2		48.1	17.9	34	
PHF	.732	.912	.816	.888	.763	.525	.813	.883	.715	.960	.550	.967	.807	.808	.833	.890

Location: Riverside
N/S: Trautwein Road
E/W: Shopping Center Driveway

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Trautwein Road	East Leg Shopping Center Driveway	South Leg Trautwein Road	West Leg Shopping Center Driveway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	1	0	2
7:15 AM	1	0	0	1	2
7:30 AM	1	0	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	1	0	0	1
8:15 AM	0	1	1	1	3
8:30 AM	0	0	0	2	2
8:45 AM	2	0	0	1	3
TOTAL VOLUMES:	4	3	2	5	14

	North Leg Trautwein Road	East Leg Shopping Center Driveway	South Leg Trautwein Road	West Leg Shopping Center Driveway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	0	1	1
2:15 PM	0	0	2	2	4
2:30 PM	1	1	1	0	3
2:45 PM	1	1	0	2	4
3:00 PM	1	1	0	1	3
3:15 PM	0	0	0	0	0
3:30 PM	0	0	1	11	12
3:45 PM	1	0	1	0	2
TOTAL VOLUMES:	4	3	5	17	29

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Location: Riverside
N/S: Trautwein Road
E/W: Shopping Center Driveway

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Trautwein Road			Westbound Shopping Center Driveway			Northbound Trautwein Road			Eastbound Shopping Center Driveway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Trautwein Road			Westbound Shopping Center Driveway			Northbound Trautwein Road			Eastbound Shopping Center Driveway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
3:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:15 PM	0	0	0	1	1	0	0	2	0	0	0	0	4
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	1	1	0	0	3	0	0	0	0	6

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City of Riverside
N/S: Trautwein Road/Cole Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 16_RIV_Traut_VB AM
Site Code : 00321719
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	30	48	54	132	19	306	67	392	27	104	17	148	34	190	8	232	904
07:15 AM	56	89	63	208	59	261	82	402	26	124	24	174	59	179	19	257	1041
07:30 AM	54	118	62	234	37	258	70	365	34	143	32	209	54	199	20	273	1081
07:45 AM	32	57	43	132	27	229	72	328	25	112	19	156	73	238	16	327	943
Total	172	312	222	706	142	1054	291	1487	112	483	92	687	220	806	63	1089	3969
08:00 AM	27	61	43	131	18	243	70	331	41	110	13	164	56	165	19	240	866
08:15 AM	29	39	32	100	14	246	69	329	17	76	19	112	63	162	12	237	778
08:30 AM	19	38	45	102	10	251	50	311	29	93	16	138	38	124	13	175	726
08:45 AM	29	36	38	103	13	235	66	314	14	72	8	94	65	157	10	232	743
Total	104	174	158	436	55	975	255	1285	101	351	56	508	222	608	54	884	3113
Grand Total	276	486	380	1142	197	2029	546	2772	213	834	148	1195	442	1414	117	1973	7082
Apprch %	24.2	42.6	33.3		7.1	73.2	19.7		17.8	69.8	12.4		22.4	71.7	5.9		
Total %	3.9	6.9	5.4	16.1	2.8	28.7	7.7	39.1	3	11.8	2.1	16.9	6.2	20	1.7	27.9	
Passenger Vehicles	273	483	370	1126	194	1976	532	2702	211	823	146	1180	424	1378	116	1918	6926
% Passenger Vehicles	98.9	99.4	97.4	98.6	98.5	97.4	97.4	97.5	99.1	98.7	98.6	98.7	95.9	97.5	99.1	97.2	97.8
Large 2 Axle Vehicles	2	3	9	14	0	32	10	42	1	10	2	13	16	13	1	30	99
% Large 2 Axle Vehicles	0.7	0.6	2.4	1.2	0	1.6	1.8	1.5	0.5	1.2	1.4	1.1	3.6	0.9	0.9	1.5	1.4
3 Axle Vehicles	0	0	0	0	2	9	2	13	0	1	0	1	1	8	0	9	23
% 3 Axle Vehicles	0	0	0	0	1	0.4	0.4	0.5	0	0.1	0	0.1	0.2	0.6	0	0.5	0.3
4+ Axle Trucks	1	0	1	2	1	12	2	15	1	0	0	1	1	15	0	16	34
% 4+ Axle Trucks	0.4	0	0.3	0.2	0.5	0.6	0.4	0.5	0.5	0	0	0.1	0.2	1.1	0	0.8	0.5

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	30	48	54	132	19	**306**	67	392	27	104	17	148	34	190	8	232	904
07:15 AM	**56**	89	**63**	208	**59**	261	**82**	**402**	26	124	24	174	59	179	19	257	1041
07:30 AM	54	**118**	62	**234**	37	258	70	365	**34**	**143**	**32**	**209**	54	199	**20**	273	**1081**
07:45 AM	32	57	43	132	27	229	72	328	25	112	19	156	**73**	**238**	16	**327**	943
Total Volume	172	312	222	706	142	1054	291	1487	112	483	92	687	220	806	63	1089	3969
% App. Total	24.4	44.2	31.4		9.5	70.9	19.6		16.3	70.3	13.4		20.2	74	5.8		
PHF	.768	.661	.881	.754	.602	.861	.887	.925	.824	.844	.719	.822	.753	.847	.788	.833	.918

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City of Riverside
N/S: Trautwein Road/Cole Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 16_RIV_Traut_VB AM
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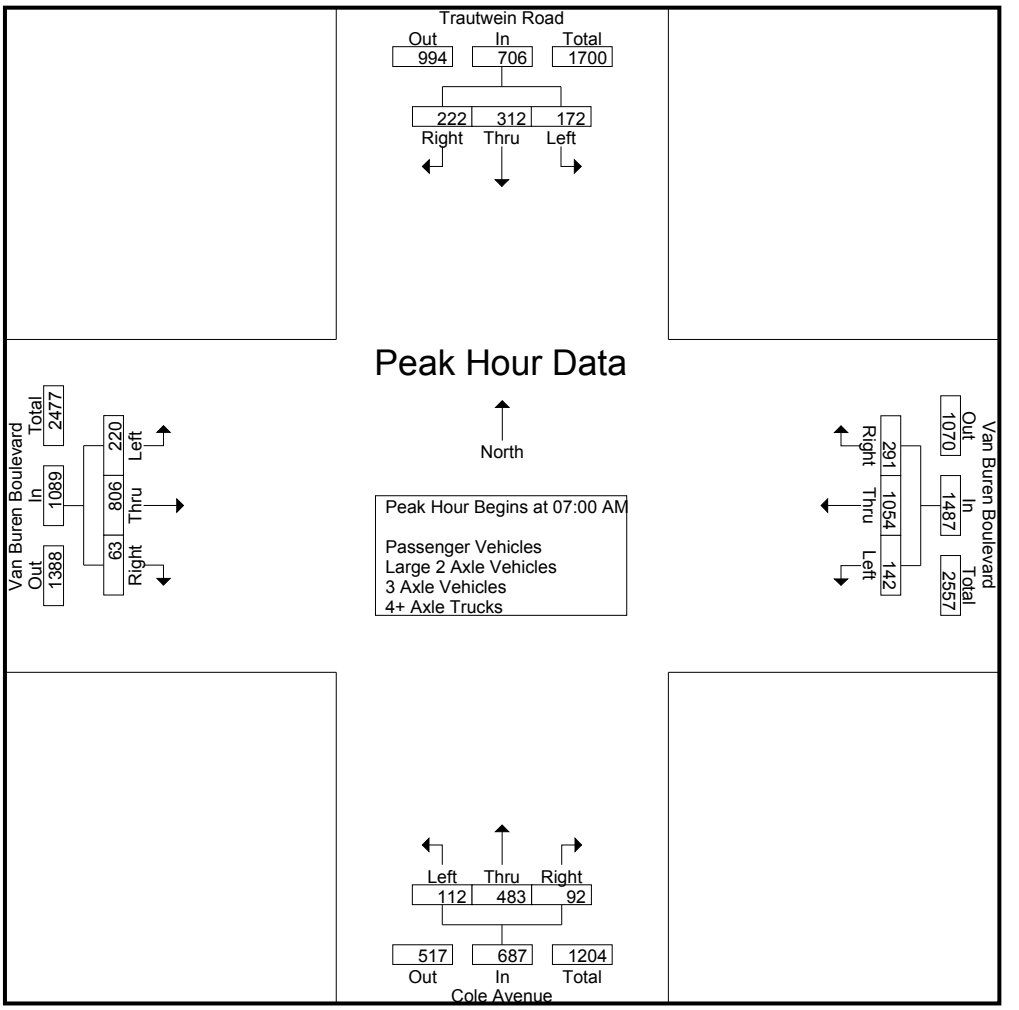

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	30	48	54	132	19	**306**	67	392	26	124	24	174	59	179	19	257
+15 mins.	**56**	89	**63**	208	**59**	261	**82**	**402**	34	**143**	**32**	**209**	54	199	**20**	273
+30 mins.	54	**118**	62	**234**	37	258	70	365	25	112	19	156	**73**	**238**	16	**327**
+45 mins.	32	57	43	132	27	229	72	328	**41**	110	13	164	56	165	19	240
Total Volume	172	312	222	706	142	1054	291	1487	126	489	88	703	242	781	74	1097
% App. Total	24.4	44.2	31.4		9.5	70.9	19.6		17.9	69.6	12.5		22.1	71.2	6.7	
PHF	.768	.661	.881	.754	.602	.861	.887	.925	.768	.855	.688	.841	.829	.820	.925	.839

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City of Riverside
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File Name : 16_RIV_Traut_VB AM
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Groups Printed- Passenger Vehicles

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	30	48	52	130	19	297	65	381	26	101	17	144	31	188	8	227	882
07:15 AM	56	87	63	206	58	258	80	396	26	123	24	173	56	178	19	253	1028
07:30 AM	53	118	62	233	37	251	70	358	34	143	32	209	53	194	20	267	1067
07:45 AM	32	57	42	131	25	224	71	320	24	110	18	152	72	232	15	319	922
Total	171	310	219	700	139	1030	286	1455	110	477	91	678	212	792	62	1066	3899
08:00 AM	26	60	42	128	18	235	69	322	41	106	13	160	52	161	19	232	842
08:15 AM	28	39	32	99	14	237	66	317	17	76	18	111	59	157	12	228	755
08:30 AM	19	38	41	98	10	245	48	303	29	93	16	138	38	117	13	168	707
08:45 AM	29	36	36	101	13	229	63	305	14	71	8	93	63	151	10	224	723
Total	102	173	151	426	55	946	246	1247	101	346	55	502	212	586	54	852	3027
Grand Total	273	483	370	1126	194	1976	532	2702	211	823	146	1180	424	1378	116	1918	6926
Apprch %	24.2	42.9	32.9		7.2	73.1	19.7		17.9	69.7	12.4		22.1	71.8	6		
Total %	3.9	7	5.3	16.3	2.8	28.5	7.7	39	3	11.9	2.1	17	6.1	19.9	1.7	27.7	

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	30	48	52	130	19	**297**	65	381	26	101	17	144	31	188	8	227	882
07:15 AM	**56**	87	**63**	206	**58**	258	**80**	**396**	26	123	24	173	56	178	19	253	1028
07:30 AM	53	**118**	62	**233**	37	251	70	358	**34**	**143**	**32**	**209**	53	194	**20**	267	**1067**
07:45 AM	32	57	42	131	25	224	71	320	24	110	18	152	**72**	**232**	15	**319**	922
Total Volume	171	310	219	700	139	1030	286	1455	110	477	91	678	212	792	62	1066	3899
% App. Total	24.4	44.3	31.3		9.6	70.8	19.7		16.2	70.4	13.4		19.9	74.3	5.8		
PHF	.763	.657	.869	.751	.599	.867	.894	.919	.809	.834	.711	.811	.736	.853	.775	.835	.914

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City of Riverside
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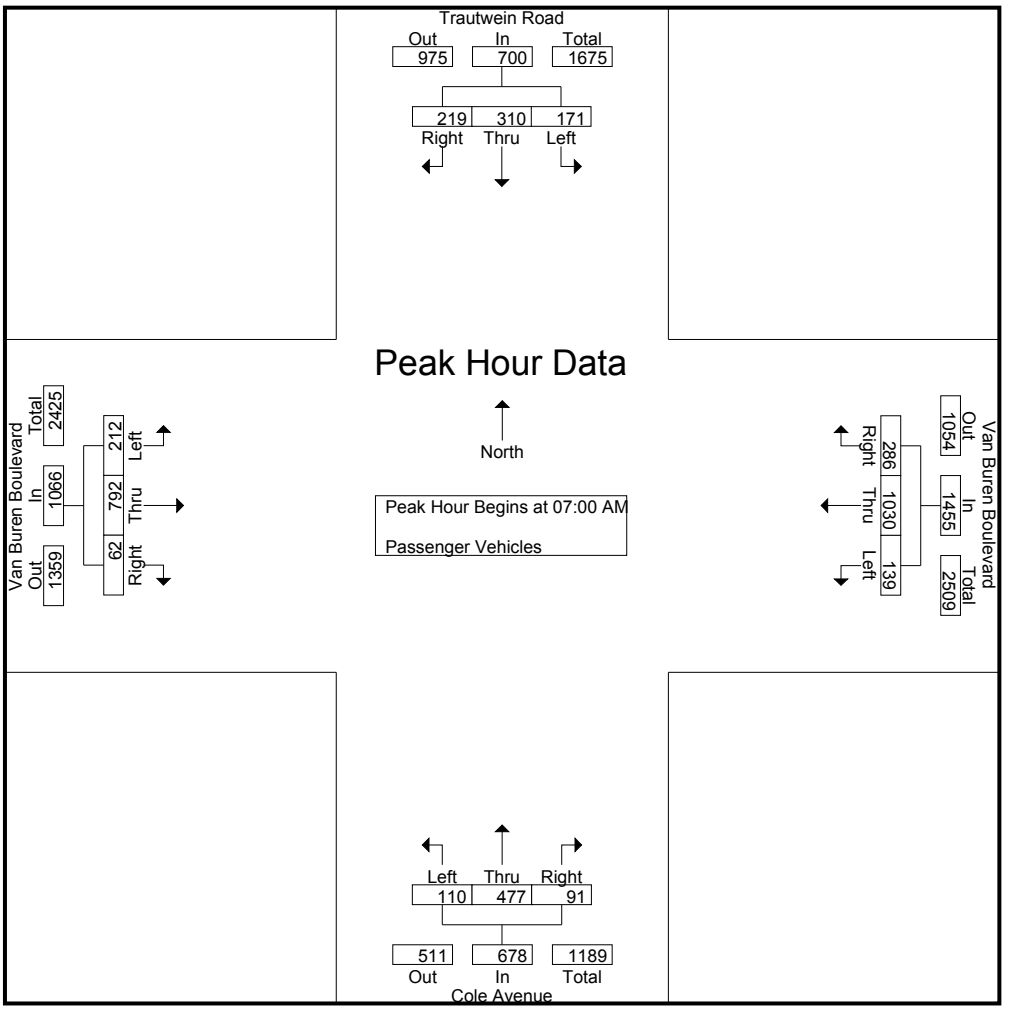

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	30	48	52	130	19	**297**	65	381	26	101	17	144	31	188	8	227
+15 mins.	**56**	87	**63**	206	**58**	258	**80**	**396**	26	123	24	173	56	178	19	253
+30 mins.	53	**118**	62	**233**	37	251	70	358	**34**	**143**	**32**	**209**	53	194	**20**	267
+45 mins.	32	57	42	131	25	224	71	320	24	110	18	152	**72**	**232**	15	**319**
Total Volume	171	310	219	700	139	1030	286	1455	110	477	91	678	212	792	62	1066
% App. Total	24.4	44.3	31.3		9.6	70.8	19.7		16.2	70.4	13.4		19.9	74.3	5.8	
PHF	.763	.657	.869	.751	.599	.867	.894	.919	.809	.834	.711	.811	.736	.853	.775	.835

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City of Riverside
N/S: Trautwein Road/Cole Avenue
E/W: Van Buren Boulevard
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File Name : 16_RIV_Traut_VB AM
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Groups Printed- Large 2 Axle Vehicles

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	2	2	0	4	1	5	0	3	0	3	3	0	0	3	13
07:15 AM	0	2	0	2	0	2	2	4	0	1	0	1	3	1	0	4	11
07:30 AM	1	0	0	1	0	4	0	4	0	0	0	0	1	3	0	4	9
07:45 AM	0	0	0	0	0	4	1	5	1	2	1	4	0	1	1	2	11
Total	1	2	2	5	0	14	4	18	1	6	1	8	7	5	1	13	44
08:00 AM	1	1	1	3	0	5	1	6	0	4	0	4	3	2	0	5	18
08:15 AM	0	0	0	0	0	6	2	8	0	0	1	1	4	2	0	6	15
08:30 AM	0	0	4	4	0	4	0	4	0	0	0	0	0	2	0	2	10
08:45 AM	0	0	2	2	0	3	3	6	0	0	0	0	2	2	0	4	12
Total	1	1	7	9	0	18	6	24	0	4	1	5	9	8	0	17	55
Grand Total	2	3	9	14	0	32	10	42	1	10	2	13	16	13	1	30	99
Apprch %	14.3	21.4	64.3		0	76.2	23.8		7.7	76.9	15.4		53.3	43.3	3.3		
Total %	2	3	9.1	14.1	0	32.3	10.1	42.4	1	10.1	2	13.1	16.2	13.1	1	30.3	

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	**2**	**2**	0	**4**	1	**5**	0	**3**	0	3	**3**	0	0	3	**13**
07:15 AM	0	**2**	0	2	0	2	**2**	4	0	1	0	1	3	1	0	**4**	11
07:30 AM	**1**	0	0	1	0	4	0	4	0	0	0	0	1	**3**	0	4	9
07:45 AM	0	0	0	0	0	4	1	5	**1**	2	**1**	**4**	0	1	**1**	2	11
Total Volume	1	2	2	5	0	14	4	18	1	6	1	8	7	5	1	13	44
% App. Total	20	40	40		0	77.8	22.2		12.5	75	12.5		53.8	38.5	7.7		
PHF	.250	.250	.250	.625	.000	.875	.500	.900	.250	.500	.250	.500	.583	.417	.250	.813	.846

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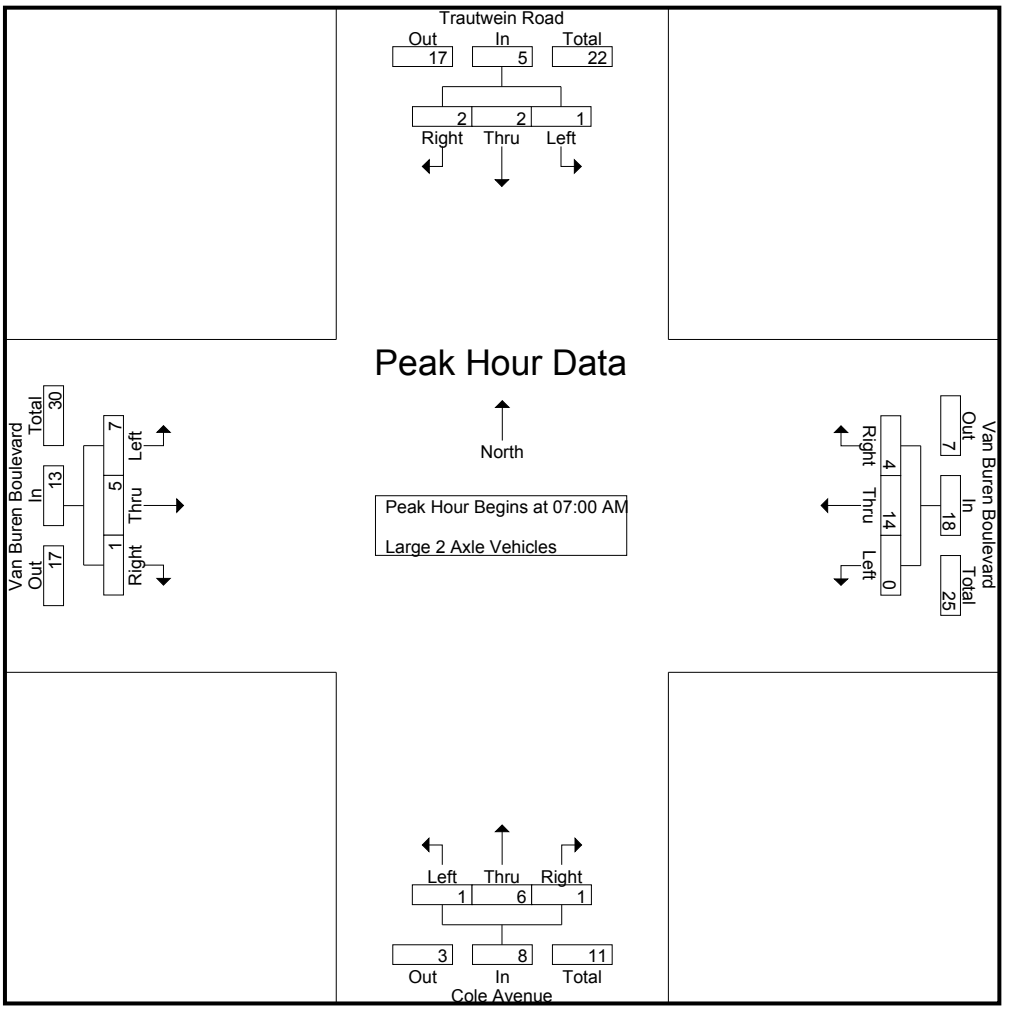

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	**2**	**2**	0	**4**	1	**5**	0	**3**	0	3	**3**	0	0	3
+15 mins.	0	**2**	0	2	0	2	**2**	4	0	1	0	1	3	1	0	**4**
+30 mins.	**1**	0	0	1	0	4	0	4	0	0	0	0	1	**3**	0	4
+45 mins.	0	0	0	0	0	4	1	5	**1**	2	**1**	**4**	0	1	**1**	2
Total Volume	1	2	2	5	0	14	4	18	1	6	1	8	7	5	1	13
% App. Total	20	40	40		0	77.8	22.2		12.5	75	12.5		53.8	38.5	7.7	
PHF	.250	.250	.250	.625	.000	.875	.500	.900	.250	.500	.250	.500	.583	.417	.250	.813

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City of Riverside
N/S: Trautwein Road/Cole Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 16_RIV_Traut_VB AM
Site Code : 00321719
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Groups Printed- 3 Axle Vehicles

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	2	0	0	2	0	0	0	0	0	3	0	3	5
Total	0	0	0	0	2	3	1	6	0	0	0	0	0	3	0	3	9
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:30 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	2	0	2	5
08:45 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	2	0	2	4
Total	0	0	0	0	0	6	1	7	0	1	0	1	1	5	0	6	14
Grand Total	0	0	0	0	2	9	2	13	0	1	0	1	1	8	0	9	23
Apprch %	0	0	0		15.4	69.2	15.4		0	100	0		11.1	88.9	0		
Total %	0	0	0	0	8.7	39.1	8.7	56.5	0	4.3	0	4.3	4.3	34.8	0	39.1	

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**2**	**1**	**3**	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	**2**	0	0	2	0	0	0	0	0	**3**	0	**3**	**5**
Total Volume	0	0	0	0	2	3	1	6	0	0	0	0	0	3	0	3	9
% App. Total	0	0	0		33.3	50	16.7		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.375	.250	.500	.000	.000	.000	.000	.000	.250	.000	.250	.450

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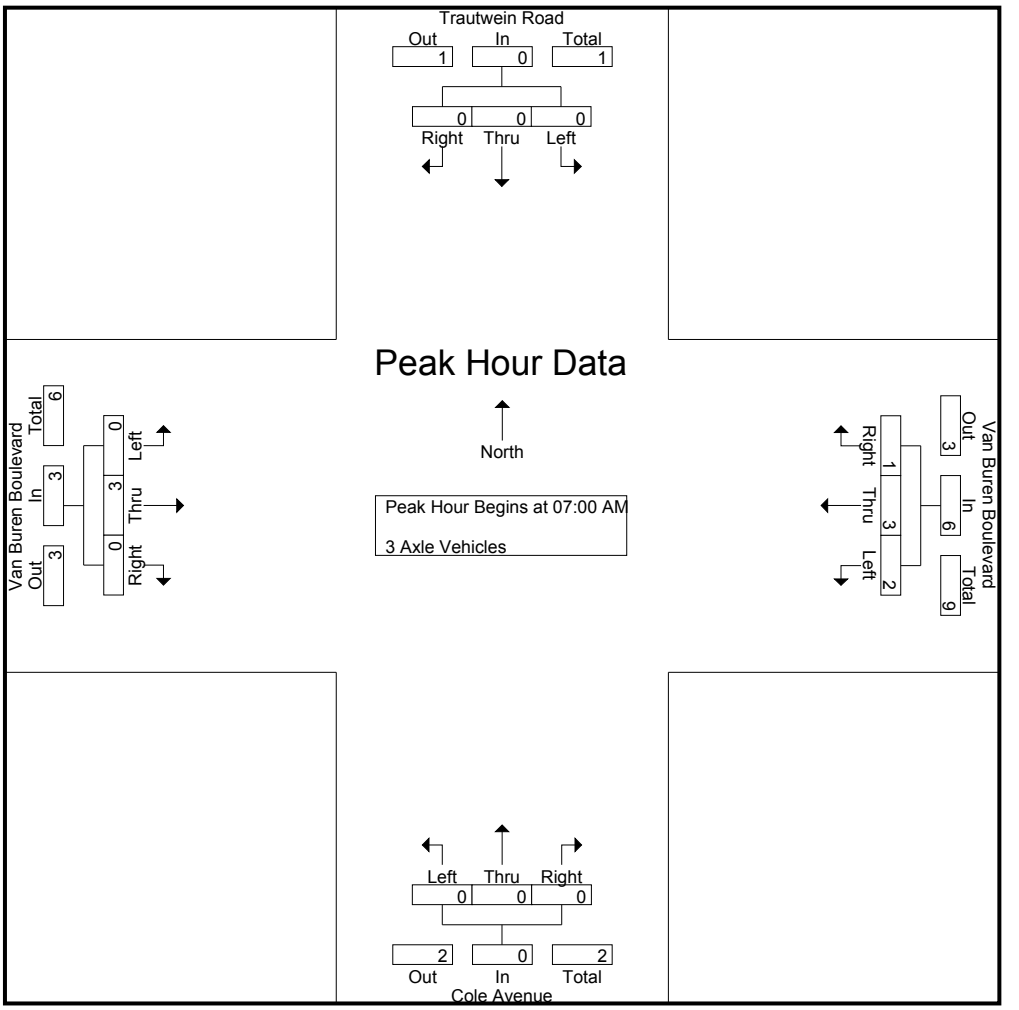

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**2**	**1**	**3**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	**2**	0	0	2	0	0	0	0	0	**3**	0	**3**
Total Volume	0	0	0	0	2	3	1	6	0	0	0	0	0	3	0	3
% App. Total	0	0	0		33.3	50	16.7		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.250	.375	.250	.500	.000	.000	.000	.000	.000	.250	.000	.250

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Groups Printed- 4+ Axle Trucks

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	2	0	2	6
07:15 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	1	2	0	3	5
Total	0	0	1	1	1	7	0	8	1	0	0	1	1	6	0	7	17
08:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
08:15 AM	1	0	0	1	0	1	1	2	0	0	0	0	0	2	0	2	5
08:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	3	0	3	4
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Total	1	0	0	1	0	5	2	7	0	0	0	0	0	9	0	9	17
Grand Total	1	0	1	2	1	12	2	15	1	0	0	1	1	15	0	16	34
Apprch %	50	0	50		6.7	80	13.3		100	0	0		6.2	93.8	0		
Total %	2.9	0	2.9	5.9	2.9	35.3	5.9	44.1	2.9	0	0	2.9	2.9	44.1	0	47.1	

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**3**	0	**3**	**1**	0	0	**1**	0	**2**	0	2	**6**
07:15 AM	0	0	0	0	**1**	1	0	2	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	**1**	**1**	0	1	0	1	0	0	0	0	**1**	2	0	**3**	5
Total Volume	0	0	1	1	1	7	0	8	1	0	0	1	1	6	0	7	17
% App. Total	0	0	100		12.5	87.5	0		100	0	0		14.3	85.7	0		
PHF	.000	.000	.250	.250	.250	.583	.000	.667	.250	.000	.000	.250	.250	.750	.000	.583	.708

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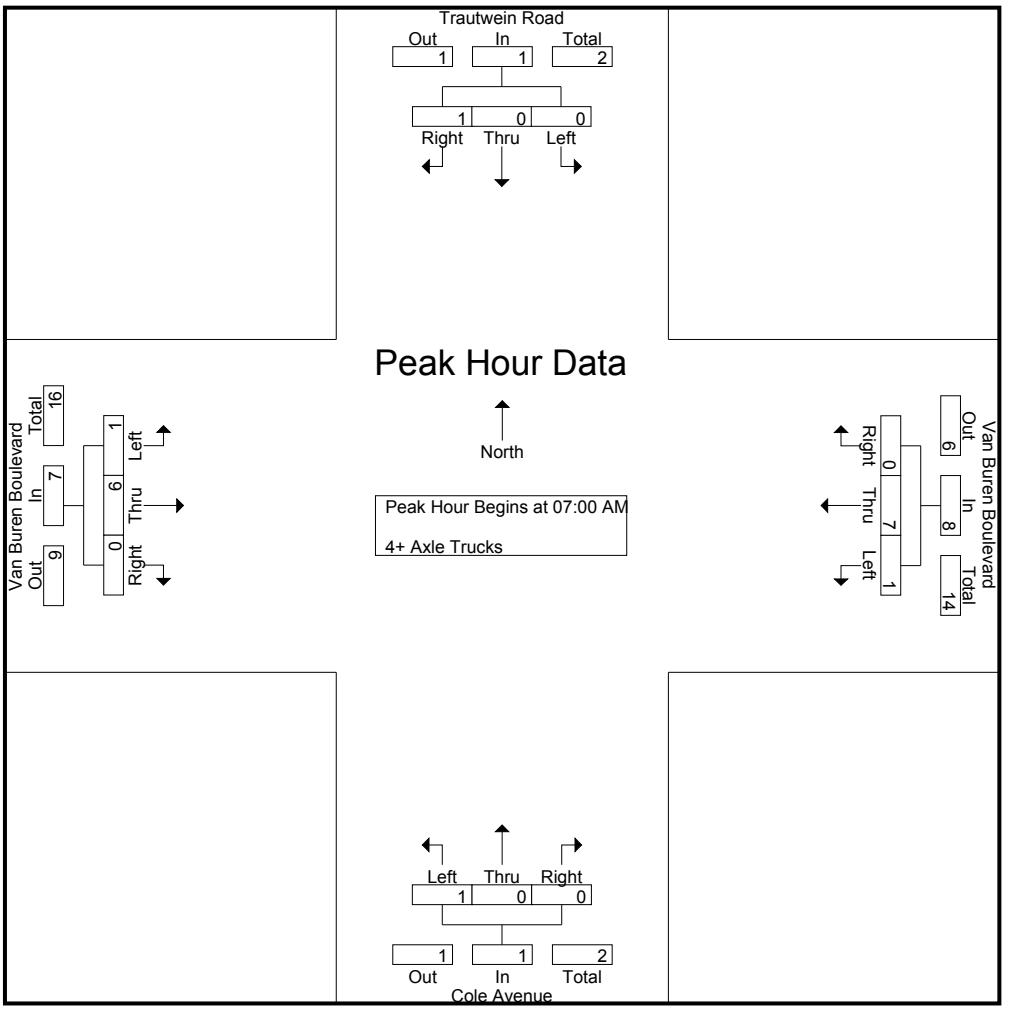

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**3**	0	**3**	**1**	0	0	**1**	0	**2**	0	2
+15 mins.	0	0	0	0	**1**	1	0	2	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2
+45 mins.	0	0	**1**	**1**	0	1	0	1	0	0	0	0	**1**	2	0	**3**
Total Volume	0	0	1	1	1	7	0	8	1	0	0	1	1	6	0	7
% App. Total	0	0	100		12.5	87.5	0		100	0	0		14.3	85.7	0	
PHF	.000	.000	.250	.250	.250	.583	.000	.667	.250	.000	.000	.250	.250	.750	.000	.583

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	55	80	48	183	22	216	80	318	17	55	9	81	71	169	27	267	849
02:15 PM	68	65	60	193	29	195	62	286	23	54	14	91	55	172	22	249	819
02:30 PM	59	104	65	228	29	249	77	355	36	79	17	132	50	181	23	254	969
02:45 PM	49	101	60	210	43	295	60	398	22	98	25	145	82	180	39	301	1054
Total	231	350	233	814	123	955	279	1357	98	286	65	449	258	702	111	1071	3691
03:00 PM	53	101	42	196	29	247	79	355	32	98	21	151	97	204	24	325	1027
03:15 PM	73	106	54	233	28	212	61	301	21	83	13	117	77	171	26	274	925
03:30 PM	69	99	60	228	24	233	64	321	22	82	13	117	93	216	22	331	997
03:45 PM	62	98	56	216	27	287	60	374	14	71	16	101	89	244	23	356	1047
Total	257	404	212	873	108	979	264	1351	89	334	63	486	356	835	95	1286	3996
Grand Total	488	754	445	1687	231	1934	543	2708	187	620	128	935	614	1537	206	2357	7687
Apprch %	28.9	44.7	26.4		8.5	71.4	20.1		20	66.3	13.7		26.1	65.2	8.7		
Total %	6.3	9.8	5.8	21.9	3	25.2	7.1	35.2	2.4	8.1	1.7	12.2	8	20	2.7	30.7	
Passenger Vehicles	481	749	432	1662	229	1890	530	2649	184	611	128	923	606	1493	203	2302	7536
% Passenger Vehicles	98.6	99.3	97.1	98.5	99.1	97.7	97.6	97.8	98.4	98.5	100	98.7	98.7	97.1	98.5	97.7	98
Large 2 Axle Vehicles	7	4	12	23	2	19	10	31	3	9	0	12	8	13	3	24	90
% Large 2 Axle Vehicles	1.4	0.5	2.7	1.4	0.9	1	1.8	1.1	1.6	1.5	0	1.3	1.3	0.8	1.5	1	1.2
3 Axle Vehicles	0	0	1	1	0	12	1	13	0	0	0	0	0	13	0	13	27
% 3 Axle Vehicles	0	0	0.2	0.1	0	0.6	0.2	0.5	0	0	0	0	0	0.8	0	0.6	0.4
4+ Axle Trucks	0	1	0	1	0	13	2	15	0	0	0	0	0	18	0	18	34
% 4+ Axle Trucks	0	0.1	0	0.1	0	0.7	0.4	0.6	0	0	0	0	0	1.2	0	0.8	0.4

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	49	101	**60**	210	**43**	**295**	60	**398**	22	**98**	**25**	145	82	180	**39**	301	**1054**
03:00 PM	53	101	42	196	29	247	**79**	355	**32**	98	21	**151**	**97**	204	24	325	1027
03:15 PM	**73**	**106**	54	**233**	28	212	61	301	21	83	13	117	77	171	26	274	925
03:30 PM	69	99	60	228	24	233	64	321	22	82	13	117	93	**216**	22	**331**	997
Total Volume	244	407	216	867	124	987	264	1375	97	361	72	530	349	771	111	1231	4003
% App. Total	28.1	46.9	24.9		9	71.8	19.2		18.3	68.1	13.6		28.4	62.6	9		
PHF	.836	.960	.900	.930	.721	.836	.835	.864	.758	.921	.720	.877	.899	.892	.712	.930	.949

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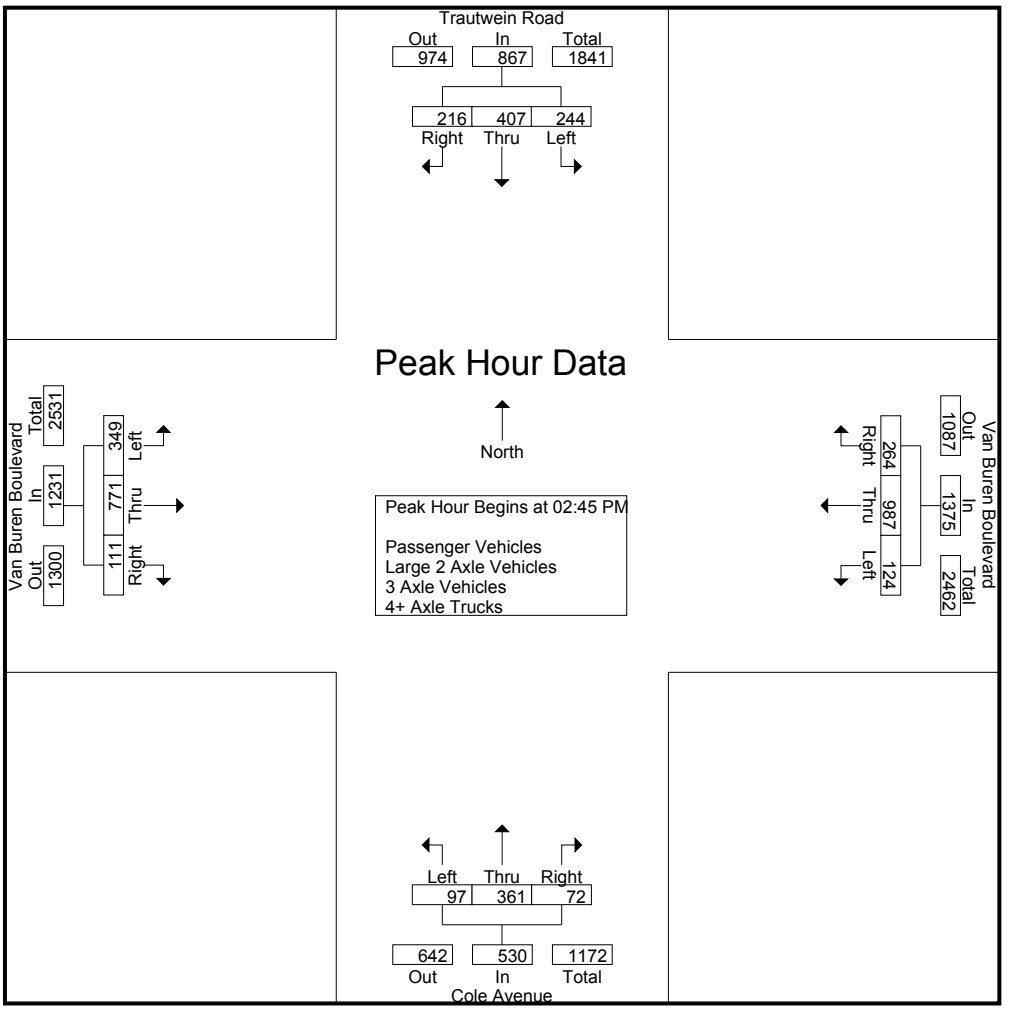

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				02:30 PM				02:30 PM				03:00 PM			
+0 mins.	53	101	42	196	29	249	77	355	**36**	79	17	132	**97**	204	24	325
+15 mins.	**73**	**106**	54	**233**	**43**	**295**	60	**398**	22	**98**	**25**	145	77	171	**26**	274
+30 mins.	69	99	**60**	228	29	247	**79**	355	32	98	21	**151**	93	216	22	331
+45 mins.	62	98	56	216	28	212	61	301	21	83	13	117	89	**244**	23	**356**
Total Volume	257	404	212	873	129	1003	277	1409	111	358	76	545	356	835	95	1286
% App. Total	29.4	46.3	24.3		9.2	71.2	19.7		20.4	65.7	13.9		27.7	64.9	7.4	
PHF	.880	.953	.883	.937	.750	.850	.877	.885	.771	.913	.760	.902	.918	.856	.913	.903

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Groups Printed- Passenger Vehicles

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	55	78	48	181	22	214	79	315	16	55	9	80	69	165	26	260	836
02:15 PM	68	65	57	190	28	189	61	278	23	52	14	89	54	167	22	243	800
02:30 PM	59	103	64	226	29	245	74	348	36	78	17	131	50	172	23	245	950
02:45 PM	49	100	59	208	43	289	56	388	21	96	25	142	82	174	39	295	1033
Total	231	346	228	805	122	937	270	1329	96	281	65	442	255	678	110	1043	3619
03:00 PM	52	100	41	193	29	237	76	342	31	97	21	149	96	195	24	315	999
03:15 PM	72	106	54	232	28	204	61	293	21	82	13	116	75	167	25	267	908
03:30 PM	64	99	55	218	24	228	63	315	22	81	13	116	92	214	21	327	976
03:45 PM	62	98	54	214	26	284	60	370	14	70	16	100	88	239	23	350	1034
Total	250	403	204	857	107	953	260	1320	88	330	63	481	351	815	93	1259	3917
Grand Total	481	749	432	1662	229	1890	530	2649	184	611	128	923	606	1493	203	2302	7536
Apprch %	28.9	45.1	26		8.6	71.3	20		19.9	66.2	13.9		26.3	64.9	8.8		
Total %	6.4	9.9	5.7	22.1	3	25.1	7	35.2	2.4	8.1	1.7	12.2	8	19.8	2.7	30.5	

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	49	100	**59**	208	**43**	**289**	56	**388**	21	96	**25**	142	82	174	**39**	295	**1033**
03:00 PM	52	100	41	193	29	237	**76**	342	**31**	**97**	21	**149**	**96**	195	24	315	999
03:15 PM	**72**	**106**	54	**232**	28	204	61	293	21	82	13	116	75	167	25	267	908
03:30 PM	64	99	55	218	24	228	63	315	22	81	13	116	92	**214**	21	**327**	976
Total Volume	237	405	209	851	124	958	256	1338	95	356	72	523	345	750	109	1204	3916
% App. Total	27.8	47.6	24.6		9.3	71.6	19.1		18.2	68.1	13.8		28.7	62.3	9.1		
PHF	.823	.955	.886	.917	.721	.829	.842	.862	.766	.918	.720	.878	.898	.876	.699	.920	.948

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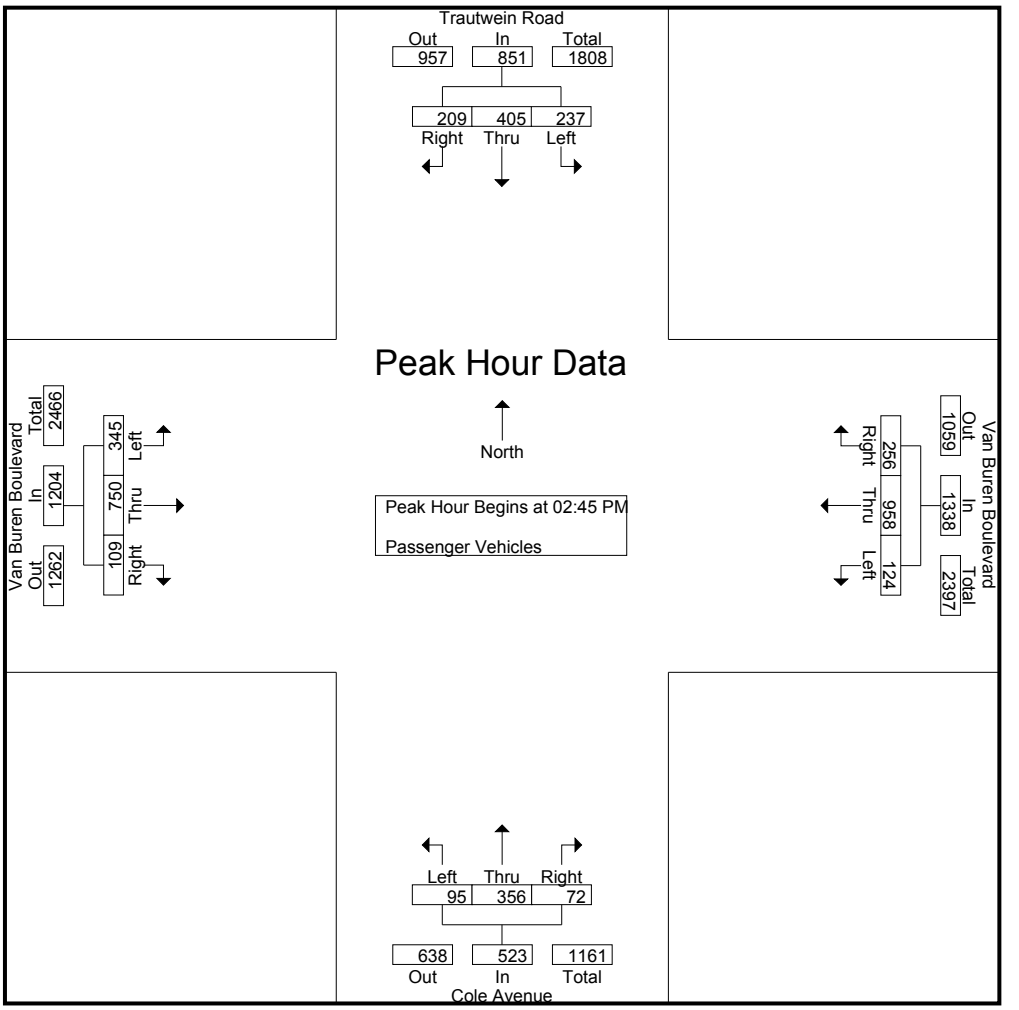

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	49	100	**59**	208	**43**	**289**	56	**388**	21	96	**25**	142	82	174	**39**	295
+15 mins.	52	100	41	193	29	237	**76**	342	**31**	**97**	21	**149**	**96**	195	24	315
+30 mins.	**72**	**106**	54	**232**	28	204	61	293	21	82	13	116	75	167	25	267
+45 mins.	64	99	55	218	24	228	63	315	22	81	13	116	92	**214**	21	**327**
Total Volume	237	405	209	851	124	958	256	1338	95	356	72	523	345	750	109	1204
% App. Total	27.8	47.6	24.6		9.3	71.6	19.1		18.2	68.1	13.8		28.7	62.3	9.1	
PHF	.823	.955	.886	.917	.721	.829	.842	.862	.766	.918	.720	.878	.898	.876	.699	.920

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Groups Printed- Large 2 Axle Vehicles

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	2	0	2	0	0	1	1	1	0	0	1	2	2	1	5	9
02:15 PM	0	0	3	3	1	3	1	5	0	2	0	2	1	2	0	3	13
02:30 PM	0	0	0	0	0	3	3	6	0	1	0	1	0	0	0	0	7
02:45 PM	0	1	1	2	0	4	3	7	1	2	0	3	0	3	0	3	15
Total	0	3	4	7	1	10	8	19	2	5	0	7	3	7	1	11	44
03:00 PM	1	1	1	3	0	3	2	5	1	1	0	2	1	2	0	3	13
03:15 PM	1	0	0	1	0	3	0	3	0	1	0	1	2	2	1	5	10
03:30 PM	5	0	5	10	0	1	0	1	0	1	0	1	1	1	1	3	15
03:45 PM	0	0	2	2	1	2	0	3	0	1	0	1	1	1	0	2	8
Total	7	1	8	16	1	9	2	12	1	4	0	5	5	6	2	13	46
Grand Total	7	4	12	23	2	19	10	31	3	9	0	12	8	13	3	24	90
Apprch %	30.4	17.4	52.2		6.5	61.3	32.3		25	75	0		33.3	54.2	12.5		
Total %	7.8	4.4	13.3	25.6	2.2	21.1	11.1	34.4	3.3	10	0	13.3	8.9	14.4	3.3	26.7	

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	**1**	1	2	0	**4**	**3**	**7**	**1**	**2**	0	**3**	0	**3**	0	3	**15**
03:00 PM	1	1	1	3	0	3	2	5	1	1	0	2	1	2	0	3	13
03:15 PM	1	0	0	1	0	3	0	3	0	1	0	1	**2**	2	**1**	**5**	10
03:30 PM	**5**	0	**5**	**10**	0	1	0	1	0	1	0	1	1	1	1	3	15
Total Volume	7	2	7	16	0	11	5	16	2	5	0	7	4	8	2	14	53
% App. Total	43.8	12.5	43.8		0	68.8	31.2		28.6	71.4	0		28.6	57.1	14.3		
PHF	.350	.500	.350	.400	.000	.688	.417	.571	.500	.625	.000	.583	.500	.667	.500	.700	.883

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City of Riverside
N/S: Trautwein Road/Cole Avenue
E/W: Van Buren Boulevard
Weather: Clear

File Name : 16_RIV_Traut_VB MD
Site Code : 00321719
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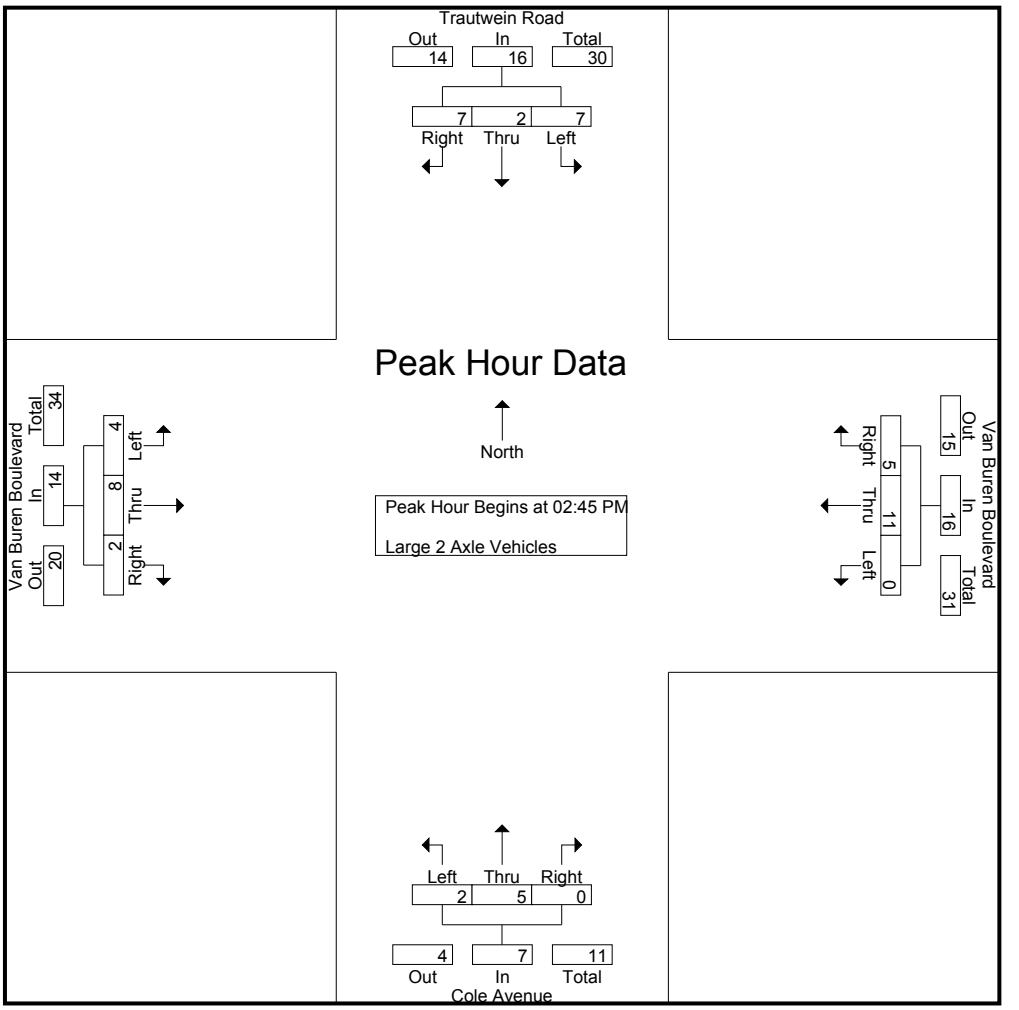

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	0	**1**	1	2	0	**4**	**3**	**7**	**1**	**2**	0	**3**	0	**3**	0	3
+15 mins.	1	1	1	3	0	3	2	5	1	1	0	2	1	2	0	3
+30 mins.	1	0	0	1	0	3	0	3	0	1	0	1	**2**	2	**1**	**5**
+45 mins.	**5**	0	**5**	**10**	0	1	0	1	0	1	0	1	1	1	1	3
Total Volume	7	2	7	16	0	11	5	16	2	5	0	7	4	8	2	14
% App. Total	43.8	12.5	43.8		0	68.8	31.2		28.6	71.4	0		28.6	57.1	14.3	
PHF	.350	.500	.350	.400	.000	.688	.417	.571	.500	.625	.000	.583	.500	.667	.500	.700

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City of Riverside
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E/W: Van Buren Boulevard
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File Name : 16_RIV_Traut_VB MD
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Groups Printed- 3 Axle Vehicles

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
02:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
02:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	3	0	3	5
02:45 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
Total	0	0	1	1	0	4	1	5	0	0	0	0	0	7	0	7	13
03:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	4	0	4	8
03:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	0	0	0	0	0	8	0	8	0	0	0	0	0	6	0	6	14
Grand Total	0	0	1	1	0	12	1	13	0	0	0	0	0	13	0	13	27
Apprch %	0	0	100		0	92.3	7.7		0	0	0		0	100	0		
Total %	0	0	3.7	3.7	0	44.4	3.7	48.1	0	0	0	0	0	48.1	0	48.1	

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	0	0	0	0	1	**1**	2	0	0	0	0	0	1	0	1	3
03:00 PM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	**4**	0	**4**	**8**
03:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Total Volume	0	0	0	0	0	8	1	9	0	0	0	0	0	5	0	5	14
% App. Total	0	0	0		0	88.9	11.1		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.250	.563	.000	.000	.000	.000	.000	.313	.000	.313	.438

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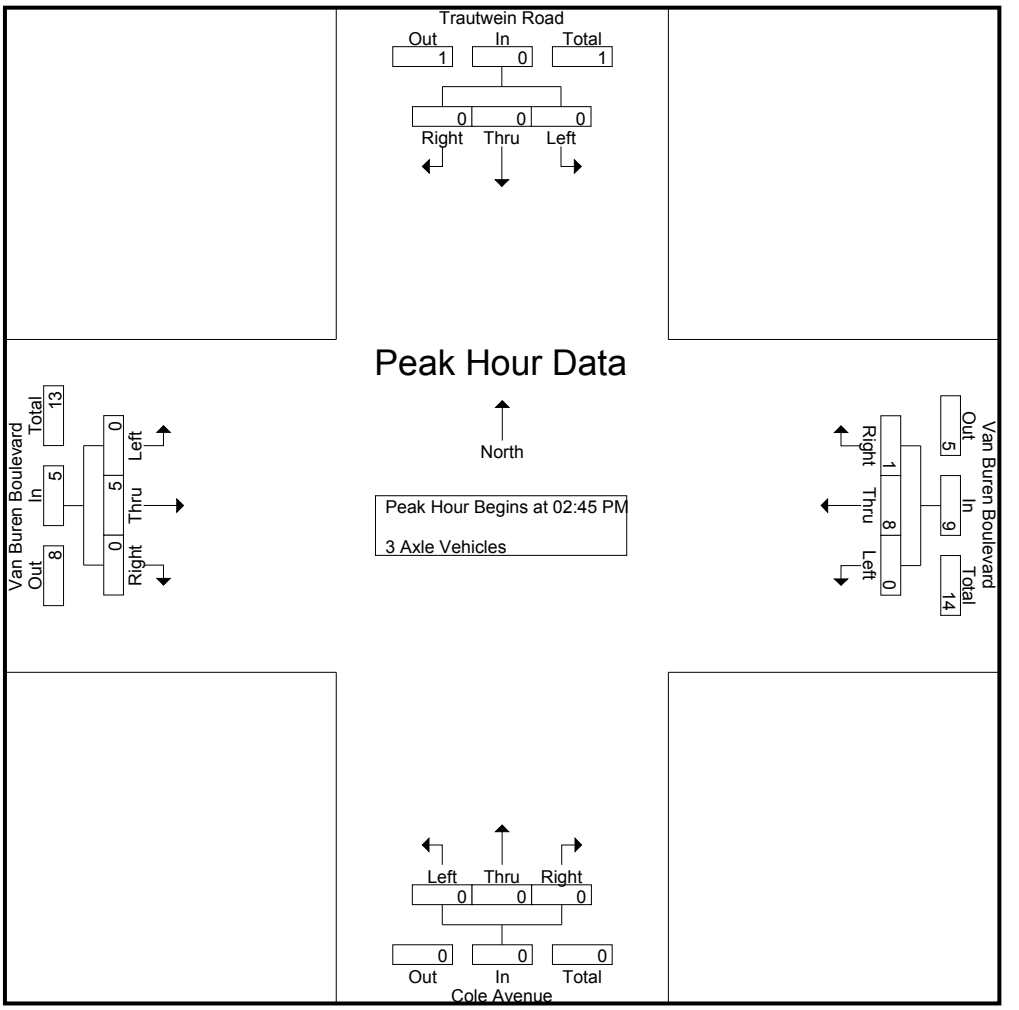

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	0	0	0	0	0	1	**1**	2	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	**4**	0	**4**
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	8	1	9	0	0	0	0	0	5	0	5
% App. Total	0	0	0		0	88.9	11.1		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.500	.250	.563	.000	.000	.000	.000	.000	.313	.000	.313

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City of Riverside
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E/W: Van Buren Boulevard
Weather: Clear

File Name : 16_RIV_Traut_VB MD
Site Code : 00321719
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Groups Printed- 4+ Axle Trucks

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
02:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
02:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	6	0	6	7
02:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Total	0	1	0	1	0	4	0	4	0	0	0	0	0	10	0	10	15
03:00 PM	0	0	0	0	0	3	1	4	0	0	0	0	0	3	0	3	7
03:15 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	6
03:30 PM	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1	4
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	9	2	11	0	0	0	0	0	8	0	8	19
Grand Total	0	1	0	1	0	13	2	15	0	0	0	0	0	18	0	18	34
Apprch %	0	100	0		0	86.7	13.3		0	0	0		0	100	0		
Total %	0	2.9	0	2.9	0	38.2	5.9	44.1	0	0	0	0	0	52.9	0	52.9	

	Trautwein Road Southbound				Van Buren Boulevard Westbound				Cole Avenue Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
03:00 PM	0	0	0	0	0	3	**1**	**4**	0	0	0	0	0	**3**	0	**3**	**7**
03:15 PM	0	0	0	0	0	**4**	0	4	0	0	0	0	0	2	0	2	6
03:30 PM	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1	4
Total Volume	0	0	0	0	0	10	2	12	0	0	0	0	0	8	0	8	20
% App. Total	0	0	0		0	83.3	16.7		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.625	.500	.750	.000	.000	.000	.000	.000	.667	.000	.667	.714

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City of Riverside
N/S: Trautwein Road/Cole Avenue
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Weather: Clear

File Name : 16_RIV_Traut_VB MD
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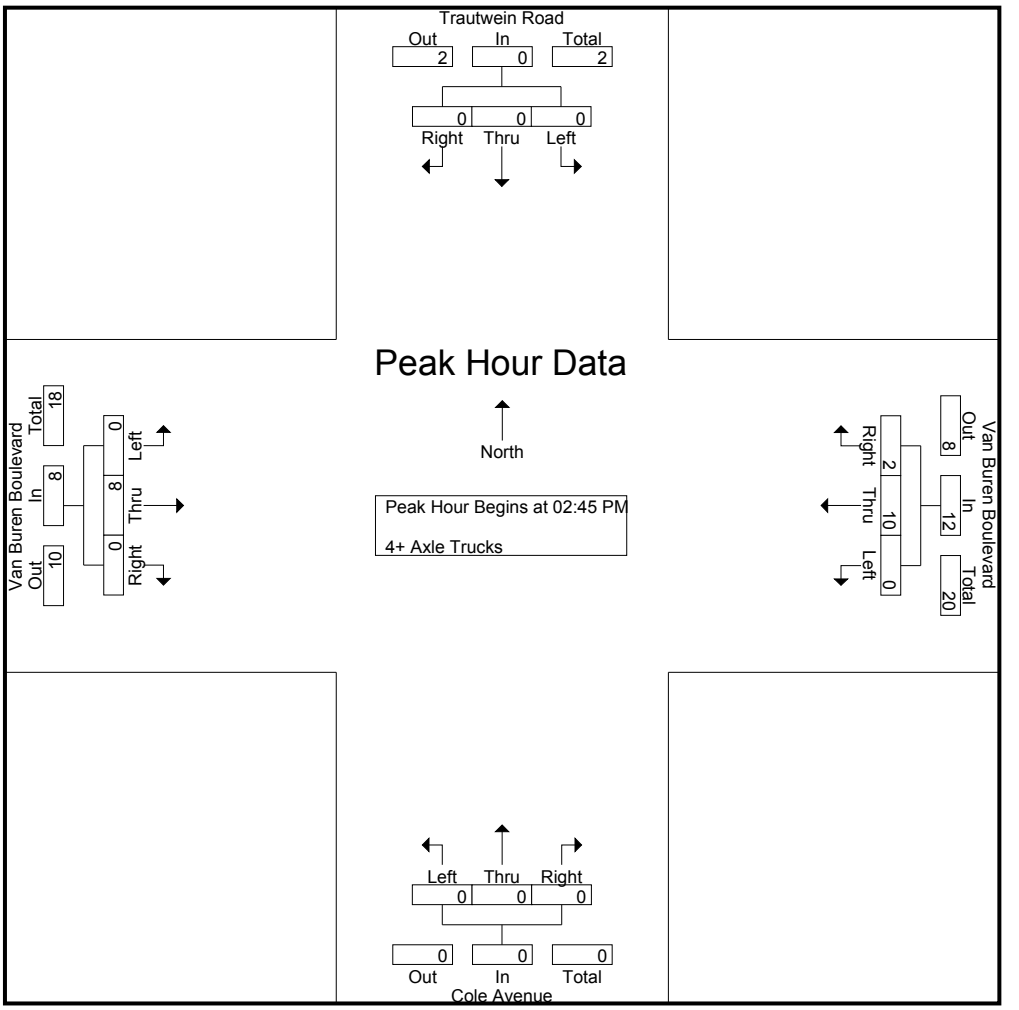

Peak Hour Analysis From 02:45 PM to 03:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM				02:45 PM				02:45 PM				02:45 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	3	**1**	**4**	0	0	0	0	0	**3**	0	**3**
+30 mins.	0	0	0	0	0	**4**	0	4	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	10	2	12	0	0	0	0	0	8	0	8
% App. Total	0	0	0		0	83.3	16.7		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.000	.625	.500	.750	.000	.000	.000	.000	.000	.667	.000	.667

Location: Riverside
N/S: Trautwein Road/Cole Avenue
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Trautwein Road	East Leg Van Buren Boulevard	South Leg Cole Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	1	0	0	2	3
7:30 AM	0	0	0	1	1
7:45 AM	0	1	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	1	0	0	1	2
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	2	1	0	4	7

	North Leg Trautwein Road	East Leg Van Buren Boulevard	South Leg Cole Avenue	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	0	0	0
2:15 PM	2	0	0	0	2
2:30 PM	1	0	0	0	1
2:45 PM	0	0	0	0	0
3:00 PM	5	5	4	4	18
3:15 PM	0	1	1	0	2
3:30 PM	0	0	1	12	13
3:45 PM	0	2	1	0	3
TOTAL VOLUMES:	8	8	7	16	39

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Location: Riverside
N/S: Trautwein Road/Cole Avenue
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Trautwein Road			Westbound Van Buren Boulevard			Northbound Cole Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	2	0	0	2	0	0	0	0	0	1	0	5

	Southbound Trautwein Road			Westbound Van Buren Boulevard			Northbound Cole Avenue			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	3	0	0	1	0	4
3:30 PM	0	0	0	0	0	0	0	3	0	0	0	0	3
3:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	0	6	0	1	1	1	9

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City of Riverside
N/S: Shopping Center Driveway
E/W: Van Buren Boulevard
Weather: Clear

File Name : 17_RIV_Shop_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Total Volume

	Shopping Center Driveway Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	10	8	18	388	13	401	2	232	234	653
07:15 AM	12	9	21	423	18	441	8	251	259	721
07:30 AM	22	5	27	334	29	363	7	277	284	674
07:45 AM	27	7	34	329	24	353	10	277	287	674
Total	71	29	100	1474	84	1558	27	1037	1064	2722
08:00 AM	27	3	30	322	14	336	9	194	203	569
08:15 AM	16	9	25	326	22	348	13	196	209	582
08:30 AM	22	2	24	323	31	354	12	150	162	540
08:45 AM	28	9	37	292	16	308	11	179	190	535
Total	93	23	116	1263	83	1346	45	719	764	2226
Grand Total	164	52	216	2737	167	2904	72	1756	1828	4948
Apprch %	75.9	24.1		94.2	5.8		3.9	96.1		
Total %	3.3	1.1	4.4	55.3	3.4	58.7	1.5	35.5	36.9	

	Shopping Center Driveway Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	10	8	18	388	13	401	2	232	234	653
07:15 AM	12	**9**	21	**423**	18	**441**	8	251	259	**721**
07:30 AM	22	5	27	334	**29**	363	7	**277**	284	674
07:45 AM	**27**	7	**34**	329	24	353	**10**	277	**287**	674
Total Volume	71	29	100	1474	84	1558	27	1037	1064	2722
% App. Total	71	29		94.6	5.4		2.5	97.5		
PHF	.657	.806	.735	.871	.724	.883	.675	.936	.927	.944

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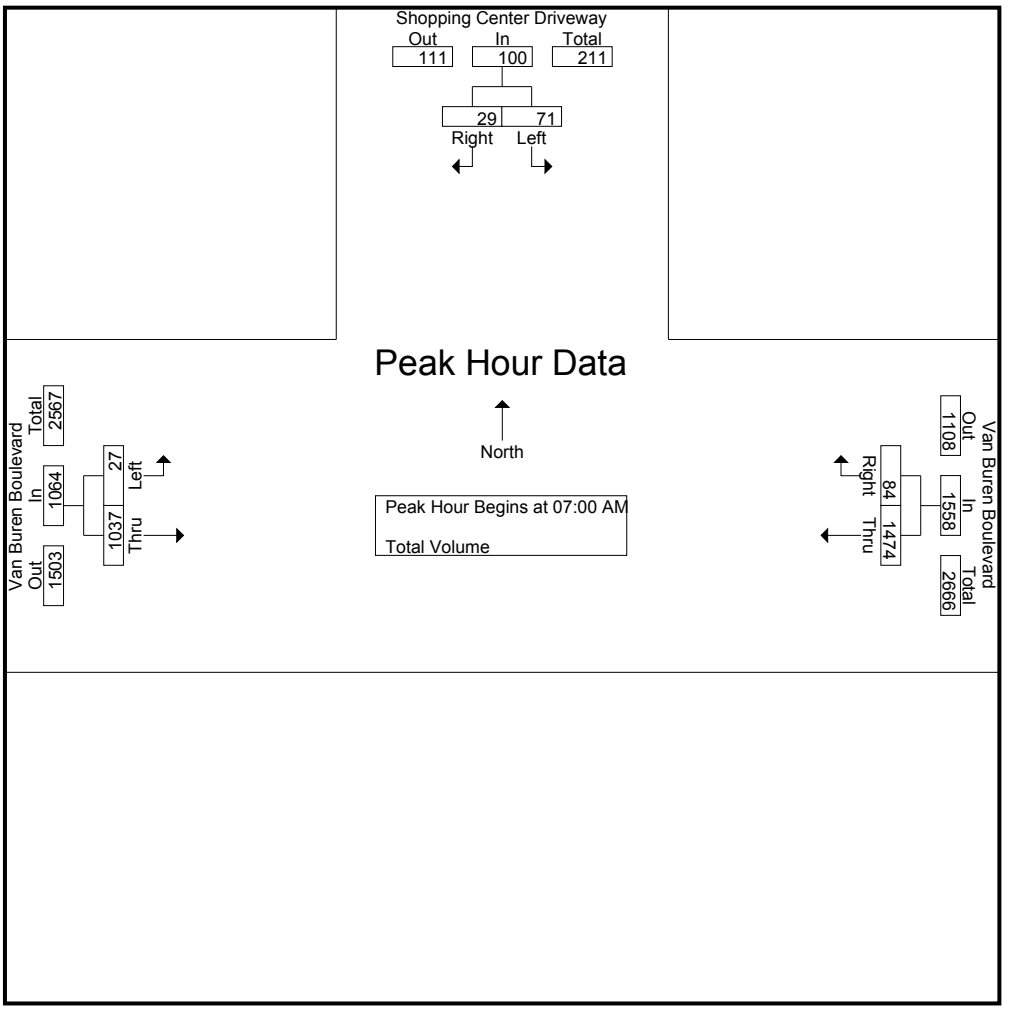

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:00 AM		
+0 mins.	22	5	27	388	13	401	2	232	234
+15 mins.	**27**	7	**34**	**423**	18	**441**	8	251	259
+30 mins.	27	3	30	334	**29**	363	7	**277**	284
+45 mins.	16	**9**	25	329	24	353	**10**	277	**287**
Total Volume	92	24	116	1474	84	1558	27	1037	1064
% App. Total	79.3	20.7		94.6	5.4		2.5	97.5	
PHF	.852	.667	.853	.871	.724	.883	.675	.936	.927

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City of Riverside
N/S: Shopping Center Driveway
E/W: Van Buren Boulevard
Weather: Clear

File Name : 17_RIV_Shop_VB MD
Site Code : 00321719
Start Date : 11/18/2021
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Groups Printed- Total Volume

	Shopping Center Driveway Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
02:00 PM	30	10	40	307	27	334	10	223	233	607
02:15 PM	25	7	32	268	25	293	12	242	254	579
02:30 PM	36	16	52	357	20	377	11	237	248	677
02:45 PM	30	16	46	367	23	390	10	236	246	682
Total	121	49	170	1299	95	1394	43	938	981	2545
03:00 PM	38	9	47	339	23	362	15	279	294	703
03:15 PM	46	13	59	284	18	302	14	240	254	615
03:30 PM	37	11	48	311	17	328	22	279	301	677
03:45 PM	38	10	48	339	24	363	19	286	305	716
Total	159	43	202	1273	82	1355	70	1084	1154	2711
Grand Total	280	92	372	2572	177	2749	113	2022	2135	5256
Apprch %	75.3	24.7		93.6	6.4		5.3	94.7		
Total %	5.3	1.8	7.1	48.9	3.4	52.3	2.1	38.5	40.6	

	Shopping Center Driveway Southbound			Van Buren Boulevard Westbound			Van Buren Boulevard Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 03:00 PM										
03:00 PM	38	9	47	**339**	23	362	15	279	294	703
03:15 PM	**46**	**13**	**59**	284	18	302	14	240	254	615
03:30 PM	37	11	48	311	17	328	**22**	279	301	677
03:45 PM	38	10	48	339	**24**	**363**	19	**286**	**305**	**716**
Total Volume	159	43	202	1273	82	1355	70	1084	1154	2711
% App. Total	78.7	21.3		93.9	6.1		6.1	93.9		
PHF	.864	.827	.856	.939	.854	.933	.795	.948	.946	.947

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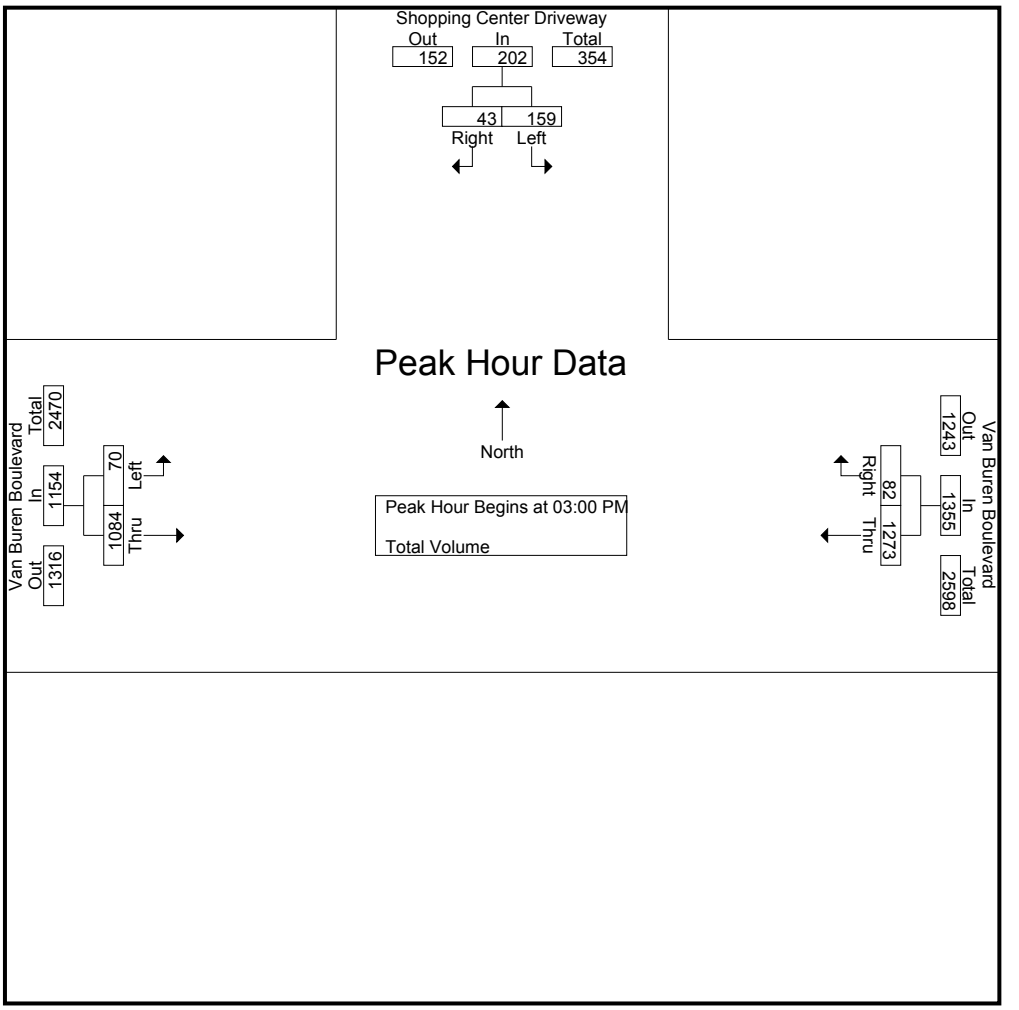
City of Riverside
N/S: Shopping Center Driveway
E/W: Van Buren Boulevard
Weather: Clear

File Name : 17_RIV_Shop_VB MD
Site Code : 00321719
Start Date : 11/18/2021
Page No : 2



Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM			02:30 PM			03:00 PM		
+0 mins.	36	**16**	52	357	20	377	15	279	294
+15 mins.	30	16	46	**367**	**23**	**390**	14	240	254
+30 mins.	38	9	47	339	23	362	**22**	279	301
+45 mins.	**46**	13	**59**	284	18	302	19	**286**	**305**
Total Volume	150	54	204	1347	84	1431	70	1084	1154
% App. Total	73.5	26.5		94.1	5.9		6.1	93.9	
PHF	.815	.844	.864	.918	.913	.917	.795	.948	.946

Location: Riverside
N/S: Shopping Center Driveway
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Shopping Center Driveway	East Leg Van Buren Boulevard	South Leg Dead End	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	1	0	0	0	1
7:15 AM	1	0	0	0	1
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	2	0	0	0	2

	North Leg Shopping Center Driveway	East Leg Van Buren Boulevard	South Leg Dead End	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	0	0	0
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	1	0	0	1	2
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	1	2

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Location: Riverside
N/S: Shopping Center Driveway
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Shopping Center Driveway			Westbound Van Buren Boulevard			Northbound Dead End			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	3	0	0	0	0	0	0	0	3

	Southbound Shopping Center Driveway			Westbound Van Buren Boulevard			Northbound Dead End			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

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City of Riverside
N/S: Barton Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 18_RIV_Barton_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	16	17	63	96	30	276	4	310	71	15	66	152	25	206	16	247	805
07:15 AM	8	34	86	128	66	275	4	345	74	23	77	174	45	213	23	281	928
07:30 AM	8	23	62	93	60	226	2	288	72	9	100	181	20	246	35	301	863
07:45 AM	4	11	19	34	56	261	3	320	81	20	92	193	13	248	30	291	838
Total	36	85	230	351	212	1038	13	1263	298	67	335	700	103	913	104	1120	3434
08:00 AM	9	8	23	40	49	263	2	314	69	4	71	144	9	209	25	243	741
08:15 AM	6	7	17	30	46	259	5	310	80	7	57	144	7	178	29	214	698
08:30 AM	4	4	24	32	37	247	3	287	66	5	50	121	9	133	26	168	608
08:45 AM	6	6	18	30	18	235	6	259	62	7	40	109	12	150	42	204	602
Total	25	25	82	132	150	1004	16	1170	277	23	218	518	37	670	122	829	2649
Grand Total	61	110	312	483	362	2042	29	2433	575	90	553	1218	140	1583	226	1949	6083
Apprch %	12.6	22.8	64.6		14.9	83.9	1.2		47.2	7.4	45.4		7.2	81.2	11.6		
Total %	1	1.8	5.1	7.9	6	33.6	0.5	40	9.5	1.5	9.1	20	2.3	26	3.7	32	
Passenger Vehicles	61	108	310	479	351	1985	28	2364	568	88	551	1207	139	1538	220	1897	5947
% Passenger Vehicles	100	98.2	99.4	99.2	97	97.2	96.6	97.2	98.8	97.8	99.6	99.1	99.3	97.2	97.3	97.3	97.8
Large 2 Axle Vehicles	0	2	1	3	5	30	0	35	7	2	2	11	1	23	3	27	76
% Large 2 Axle Vehicles	0	1.8	0.3	0.6	1.4	1.5	0	1.4	1.2	2.2	0.4	0.9	0.7	1.5	1.3	1.4	1.2
3 Axle Vehicles	0	0	1	1	3	12	1	16	0	0	0	0	0	9	0	9	26
% 3 Axle Vehicles	0	0	0.3	0.2	0.8	0.6	3.4	0.7	0	0	0	0	0	0.6	0	0.5	0.4
4+ Axle Trucks	0	0	0	0	3	15	0	18	0	0	0	0	0	13	3	16	34
% 4+ Axle Trucks	0	0	0	0	0.8	0.7	0	0.7	0	0	0	0	0	0.8	1.3	0.8	0.6

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**16**	17	63	96	30	**276**	**4**	310	71	15	66	152	25	206	16	247	805
07:15 AM	8	**34**	**86**	**128**	**66**	275	4	**345**	74	**23**	77	174	**45**	213	23	281	**928**
07:30 AM	8	23	62	93	60	226	2	288	72	9	**100**	181	20	246	**35**	**301**	863
07:45 AM	4	11	19	34	56	261	3	320	**81**	20	92	**193**	13	**248**	30	291	838
Total Volume	36	85	230	351	212	1038	13	1263	298	67	335	700	103	913	104	1120	3434
% App. Total	10.3	24.2	65.5		16.8	82.2	1		42.6	9.6	47.9		9.2	81.5	9.3		
PHF	.563	.625	.669	.686	.803	.940	.813	.915	.920	.728	.838	.907	.572	.920	.743	.930	.925

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City of Riverside
N/S: Barton Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 18_RIV_Barton_VB AM
Site Code : 00321719
Start Date : 11/18/2021
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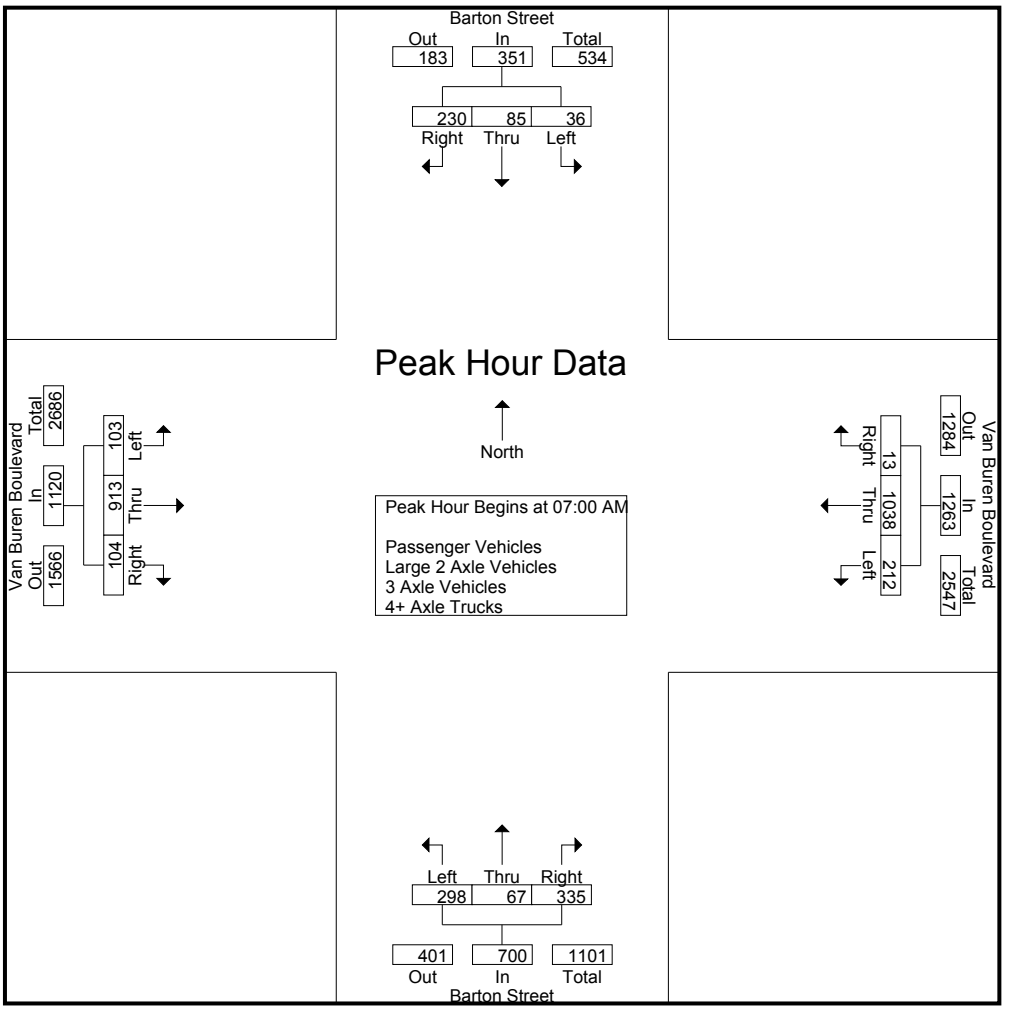

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:00 AM				07:00 AM			
+0 mins.	**16**	17	63	96	**66**	**275**	**4**	**345**	71	15	66	152	25	206	16	247
+15 mins.	8	**34**	**86**	**128**	60	226	2	288	74	**23**	77	174	**45**	213	23	281
+30 mins.	8	23	62	93	56	261	3	320	72	9	**100**	181	20	246	**35**	**301**
+45 mins.	4	11	19	34	49	263	2	314	**81**	20	92	**193**	13	**248**	30	291
Total Volume	36	85	230	351	231	1025	11	1267	298	67	335	700	103	913	104	1120
% App. Total	10.3	24.2	65.5		18.2	80.9	0.9		42.6	9.6	47.9		9.2	81.5	9.3	
PHF	.563	.625	.669	.686	.875	.932	.688	.918	.920	.728	.838	.907	.572	.920	.743	.930

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City of Riverside
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Weather: Clear

File Name : 18_RIV_Barton_VB AM
Site Code : 00321719
Start Date : 11/18/2021
Page No : 1

Groups Printed- Passenger Vehicles

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	16	17	63	96	30	269	4	303	70	15	66	151	25	202	16	243	793
07:15 AM	8	32	85	125	65	268	4	337	71	22	77	170	45	211	23	279	911
07:30 AM	8	23	62	93	58	218	2	278	72	9	99	180	20	240	33	293	844
07:45 AM	4	11	19	34	53	252	3	308	81	20	92	193	13	239	30	282	817
Total	36	83	229	348	206	1007	13	1226	294	66	334	694	103	892	102	1097	3365
08:00 AM	9	8	23	40	49	258	2	309	69	4	70	143	8	202	25	235	727
08:15 AM	6	7	17	30	45	251	5	301	79	7	57	143	7	173	27	207	681
08:30 AM	4	4	24	32	34	241	2	277	65	5	50	120	9	128	26	163	592
08:45 AM	6	6	17	29	17	228	6	251	61	6	40	107	12	143	40	195	582
Total	25	25	81	131	145	978	15	1138	274	22	217	513	36	646	118	800	2582
Grand Total	61	108	310	479	351	1985	28	2364	568	88	551	1207	139	1538	220	1897	5947
Apprch %	12.7	22.5	64.7		14.8	84	1.2		47.1	7.3	45.7		7.3	81.1	11.6		
Total %	1	1.8	5.2	8.1	5.9	33.4	0.5	39.8	9.6	1.5	9.3	20.3	2.3	25.9	3.7	31.9	

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	**16**	17	63	96	30	**269**	**4**	303	70	15	66	151	25	202	16	243	793
07:15 AM	8	**32**	**85**	**125**	**65**	268	4	**337**	71	**22**	77	170	**45**	211	23	279	**911**
07:30 AM	8	23	62	93	58	218	2	278	72	9	**99**	180	20	**240**	**33**	**293**	844
07:45 AM	4	11	19	34	53	252	3	308	**81**	20	92	**193**	13	239	30	282	817
Total Volume	36	83	229	348	206	1007	13	1226	294	66	334	694	103	892	102	1097	3365
% App. Total	10.3	23.9	65.8		16.8	82.1	1.1		42.4	9.5	48.1		9.4	81.3	9.3		
PHF	.563	.648	.674	.696	.792	.936	.813	.909	.907	.750	.843	.899	.572	.929	.773	.936	.923

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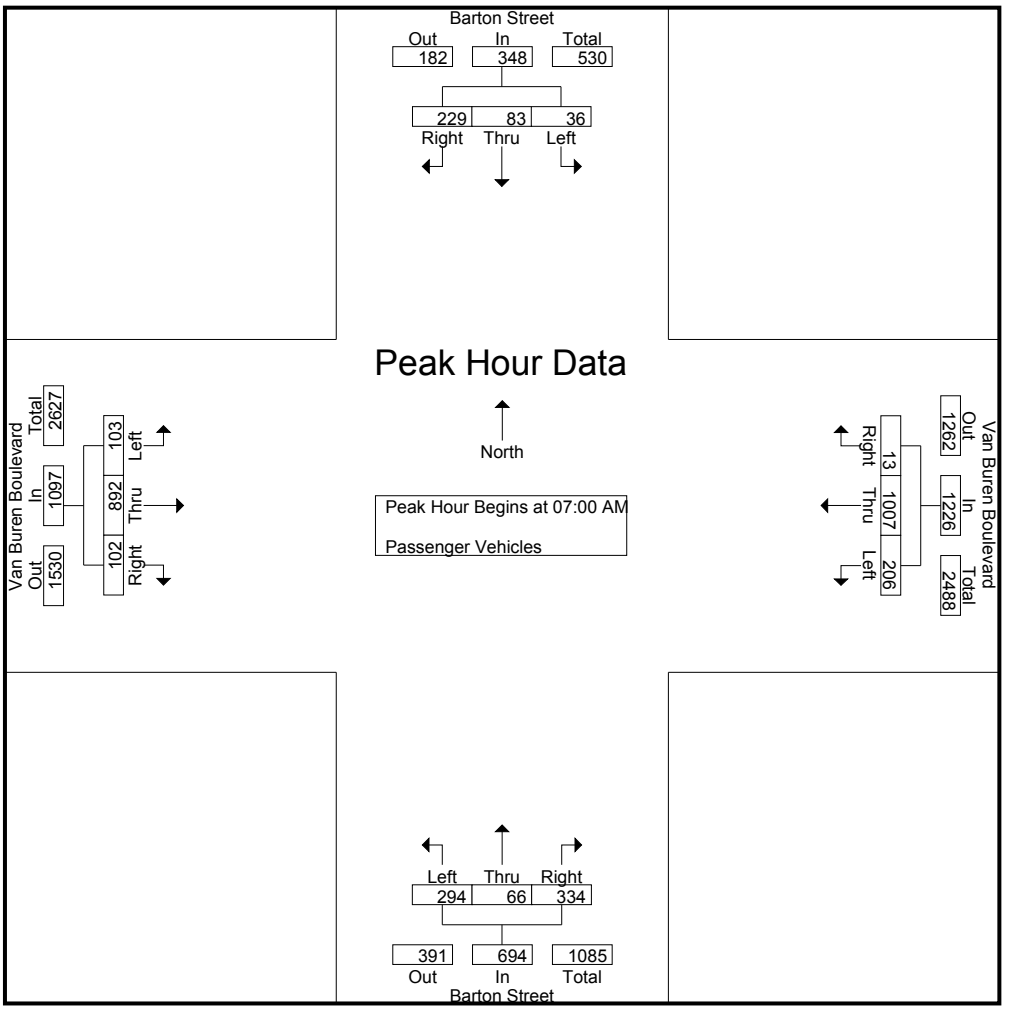

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	**16**	17	63	96	30	**269**	**4**	303	70	15	66	151	25	202	16	243
+15 mins.	8	**32**	**85**	**125**	**65**	268	4	**337**	71	**22**	77	170	**45**	211	23	279
+30 mins.	8	23	62	93	58	218	2	278	72	9	**99**	180	20	**240**	**33**	**293**
+45 mins.	4	11	19	34	53	252	3	308	**81**	20	92	**193**	13	239	30	282
Total Volume	36	83	229	348	206	1007	13	1226	294	66	334	694	103	892	102	1097
% App. Total	10.3	23.9	65.8		16.8	82.1	1.1		42.4	9.5	48.1		9.4	81.3	9.3	
PHF	.563	.648	.674	.696	.792	.936	.813	.909	.907	.750	.843	.899	.572	.929	.773	.936

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City of Riverside
N/S: Barton Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 18_RIV_Barton_VB AM
Site Code : 00321719
Start Date : 11/18/2021
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Groups Printed- Large 2 Axle Vehicles

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	2	0	2	6
07:15 AM	0	2	1	3	0	3	0	3	3	1	0	4	0	2	0	2	12
07:30 AM	0	0	0	0	1	6	0	7	0	0	1	1	0	4	2	6	14
07:45 AM	0	0	0	0	1	4	0	5	0	0	0	0	0	4	0	4	9
Total	0	2	1	3	2	16	0	18	4	1	1	6	0	12	2	14	41
08:00 AM	0	0	0	0	0	4	0	4	0	0	1	1	1	4	0	5	10
08:15 AM	0	0	0	0	0	4	0	4	1	0	0	1	0	2	1	3	8
08:30 AM	0	0	0	0	2	2	0	4	1	0	0	1	0	3	0	3	8
08:45 AM	0	0	0	0	1	4	0	5	1	1	0	2	0	2	0	2	9
Total	0	0	0	0	3	14	0	17	3	1	1	5	1	11	1	13	35
Grand Total	0	2	1	3	5	30	0	35	7	2	2	11	1	23	3	27	76
Apprch %	0	66.7	33.3		14.3	85.7	0		63.6	18.2	18.2		3.7	85.2	11.1		
Total %	0	2.6	1.3	3.9	6.6	39.5	0	46.1	9.2	2.6	2.6	14.5	1.3	30.3	3.9	35.5	

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	3	0	3	1	0	0	1	0	2	0	2	6
07:15 AM	0	**2**	**1**	**3**	0	3	0	3	**3**	**1**	0	**4**	0	2	0	2	12
07:30 AM	0	0	0	0	**1**	**6**	0	**7**	0	0	**1**	1	0	**4**	**2**	**6**	**14**
07:45 AM	0	0	0	0	1	4	0	5	0	0	0	0	0	4	0	4	9
Total Volume	0	2	1	3	2	16	0	18	4	1	1	6	0	12	2	14	41
% App. Total	0	66.7	33.3		11.1	88.9	0		66.7	16.7	16.7		0	85.7	14.3		
PHF	.000	.250	.250	.250	.500	.667	.000	.643	.333	.250	.250	.375	.000	.750	.250	.583	.732

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City of Riverside
N/S: Barton Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 18_RIV_Barton_VB AM
Site Code : 00321719
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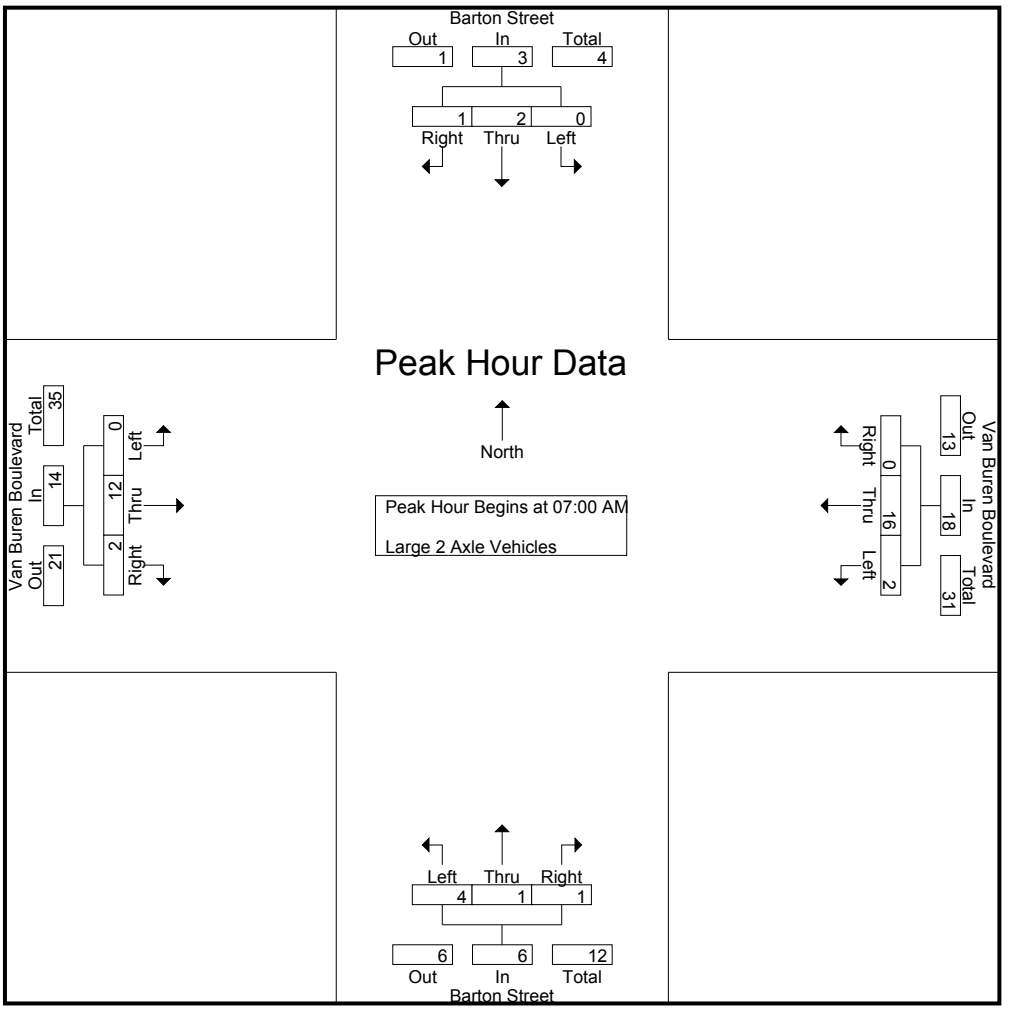

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	3	0	3	1	0	0	1	0	2	0	2
+15 mins.	0	**2**	**1**	**3**	0	3	0	3	**3**	**1**	0	**4**	0	2	0	2
+30 mins.	0	0	0	0	**1**	**6**	0	**7**	0	0	**1**	1	0	**4**	**2**	**6**
+45 mins.	0	0	0	0	1	4	0	5	0	0	0	0	0	4	0	4
Total Volume	0	2	1	3	2	16	0	18	4	1	1	6	0	12	2	14
% App. Total	0	66.7	33.3		11.1	88.9	0		66.7	16.7	16.7		0	85.7	14.3	
PHF	.000	.250	.250	.250	.500	.667	.000	.643	.333	.250	.250	.375	.000	.750	.250	.583

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City of Riverside
N/S: Barton Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 18_RIV_Barton_VB AM
Site Code : 00321719
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Groups Printed- 3 Axle Vehicles

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
Total	0	0	0	0	1	5	0	6	0	0	0	0	0	3	0	3	9
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	2	0	3	0	0	0	0	0	2	0	2	5
08:30 AM	0	0	0	0	1	3	1	5	0	0	0	0	0	2	0	2	7
08:45 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	2	0	2	4
Total	0	0	1	1	2	7	1	10	0	0	0	0	0	6	0	6	17
Grand Total	0	0	1	1	3	12	1	16	0	0	0	0	0	9	0	9	26
Apprch %	0	0	100		18.8	75	6.2		0	0	0		0	100	0		
Total %	0	0	3.8	3.8	11.5	46.2	3.8	61.5	0	0	0	0	0	34.6	0	34.6	

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	**3**	**5**
Total Volume	0	0	0	0	1	5	0	6	0	0	0	0	0	3	0	3	9
% App. Total	0	0	0		16.7	83.3	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.625	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250	.450

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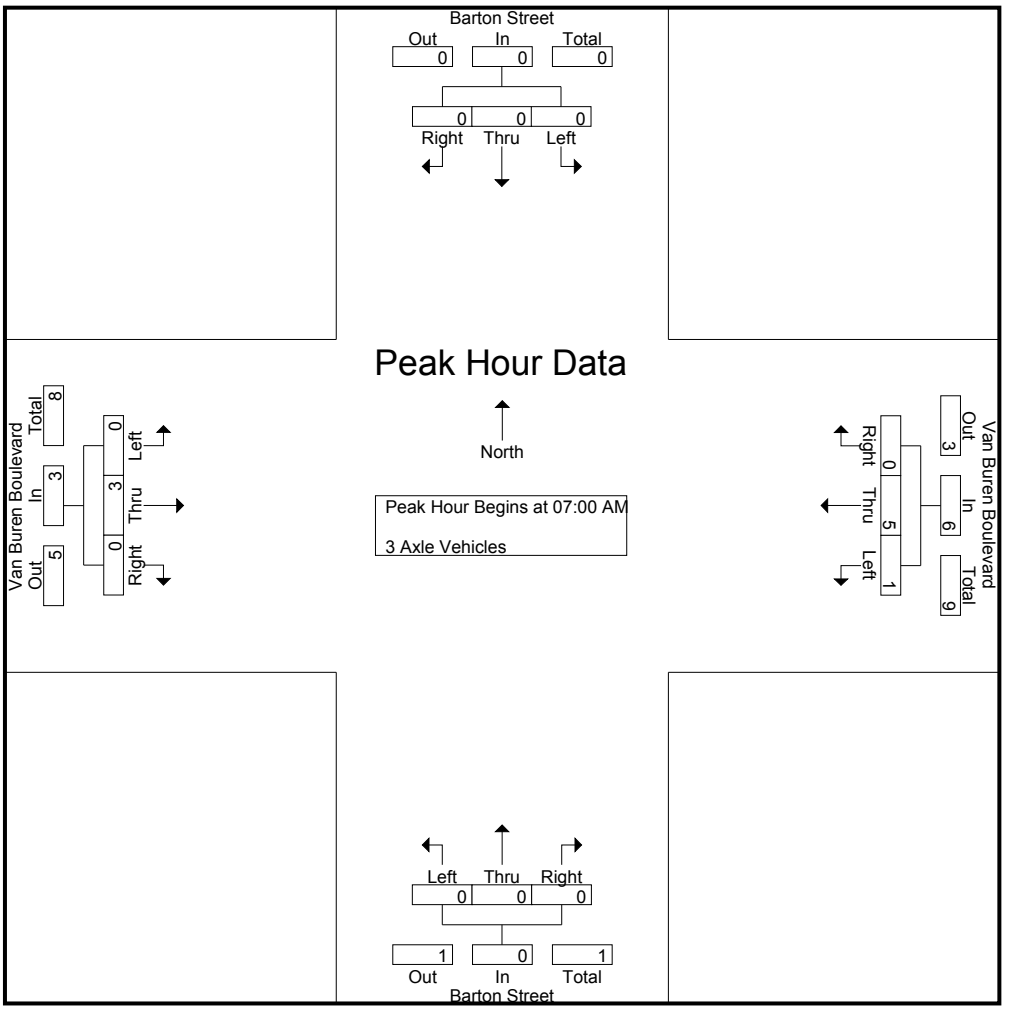

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	**3**
Total Volume	0	0	0	0	1	5	0	6	0	0	0	0	0	3	0	3
% App. Total	0	0	0		16.7	83.3	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.250	.625	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250

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Groups Printed- 4+ Axle Trucks

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:15 AM	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	4
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	2	3	0	5	0	0	0	0	0	2	0	2	7
Total	0	0	0	0	3	10	0	13	0	0	0	0	0	6	0	6	19
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	1	2	4
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	2	5	7
Total	0	0	0	0	0	5	0	5	0	0	0	0	0	7	3	10	15
Grand Total	0	0	0	0	3	15	0	18	0	0	0	0	0	13	3	16	34
Apprch %	0	0	0		16.7	83.3	0		0	0	0		0	81.2	18.8		
Total %	0	0	0	0	8.8	44.1	0	52.9	0	0	0	0	0	38.2	8.8	47.1	

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	**2**	0	**2**	4
07:15 AM	0	0	0	0	1	**3**	0	4	0	0	0	0	0	0	0	0	4
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	**2**	3	0	**5**	0	0	0	0	0	2	0	2	**7**
Total Volume	0	0	0	0	3	10	0	13	0	0	0	0	0	6	0	6	19
% App. Total	0	0	0		23.1	76.9	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.375	.833	.000	.650	.000	.000	.000	.000	.000	.750	.000	.750	.679

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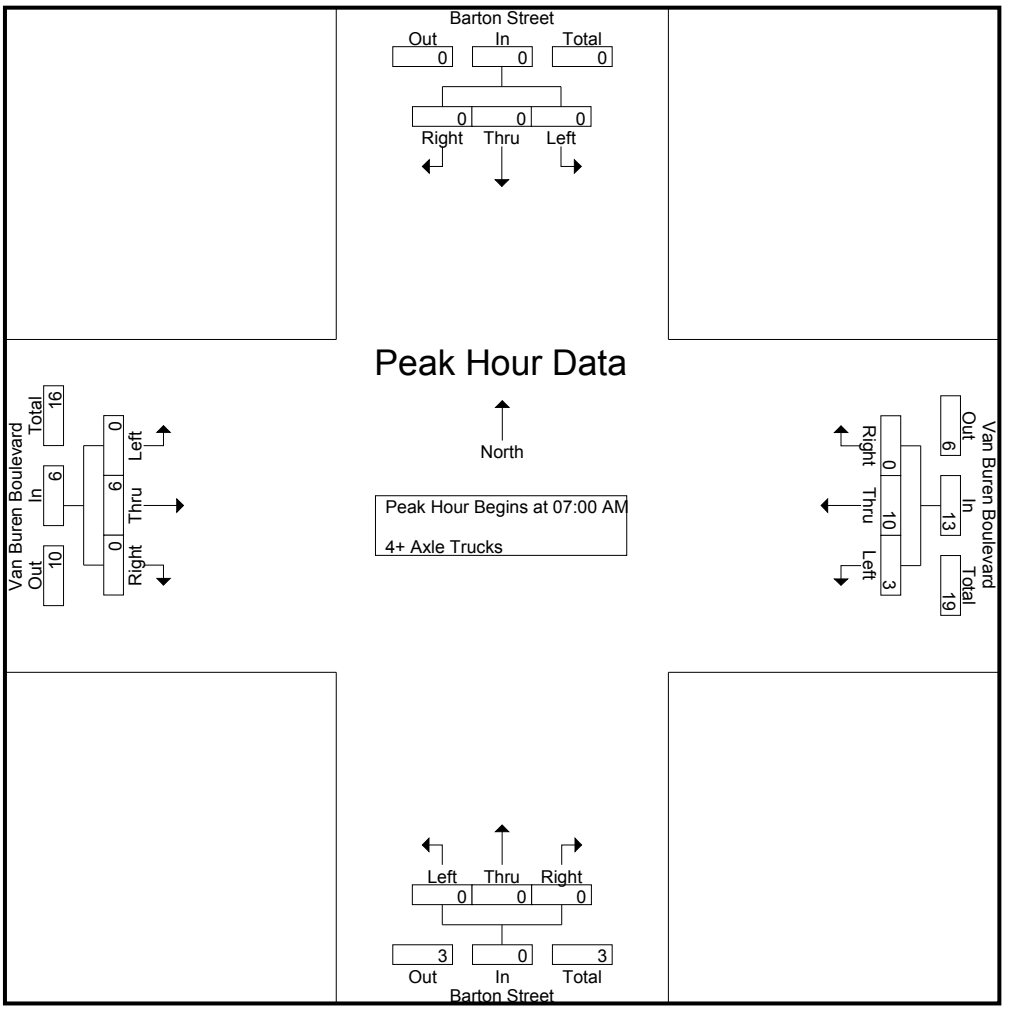

Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**2**	0	**2**
+15 mins.	0	0	0	0	1	**3**	0	4	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	**2**	3	0	**5**	0	0	0	0	0	2	0	2
Total Volume	0	0	0	0	3	10	0	13	0	0	0	0	0	6	0	6
% App. Total	0	0	0		23.1	76.9	0		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.375	.833	.000	.650	.000	.000	.000	.000	.000	.750	.000	.750

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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	10	16	52	78	58	229	12	299	49	16	47	112	46	177	39	262	751
02:15 PM	9	7	43	59	57	215	5	277	47	11	30	88	22	212	42	276	700
02:30 PM	10	11	54	75	68	296	9	373	51	6	48	105	18	220	56	294	847
02:45 PM	5	4	37	46	66	308	7	381	44	19	75	138	20	212	34	266	831
Total	34	38	186	258	249	1048	33	1330	191	52	200	443	106	821	171	1098	3129
03:00 PM	6	7	28	41	57	263	9	329	61	22	71	154	39	208	35	282	806
03:15 PM	3	9	13	25	73	231	12	316	53	12	60	125	20	245	60	325	791
03:30 PM	7	8	21	36	72	247	9	328	68	18	70	156	18	217	44	279	799
03:45 PM	10	9	15	34	77	304	9	390	53	11	63	127	18	249	59	326	877
Total	26	33	77	136	279	1045	39	1363	235	63	264	562	95	919	198	1212	3273
Grand Total	60	71	263	394	528	2093	72	2693	426	115	464	1005	201	1740	369	2310	6402
Apprch %	15.2	18	66.8		19.6	77.7	2.7		42.4	11.4	46.2		8.7	75.3	16		
Total %	0.9	1.1	4.1	6.2	8.2	32.7	1.1	42.1	6.7	1.8	7.2	15.7	3.1	27.2	5.8	36.1	
Passenger Vehicles	59	69	261	389	519	2046	71	2636	416	110	457	983	201	1691	363	2255	6263
% Passenger Vehicles	98.3	97.2	99.2	98.7	98.3	97.8	98.6	97.9	97.7	95.7	98.5	97.8	100	97.2	98.4	97.6	97.8
Large 2 Axle Vehicles	1	2	2	5	3	25	1	29	8	4	7	19	0	22	4	26	79
% Large 2 Axle Vehicles	1.7	2.8	0.8	1.3	0.6	1.2	1.4	1.1	1.9	3.5	1.5	1.9	0	1.3	1.1	1.1	1.2
3 Axle Vehicles	0	0	0	0	1	10	0	11	0	1	0	1	0	9	2	11	23
% 3 Axle Vehicles	0	0	0	0	0.2	0.5	0	0.4	0	0.9	0	0.1	0	0.5	0.5	0.5	0.4
4+ Axle Trucks	0	0	0	0	5	12	0	17	2	0	0	2	0	18	0	18	37
% 4+ Axle Trucks	0	0	0	0	0.9	0.6	0	0.6	0.5	0	0	0.2	0	1	0	0.8	0.6

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	**10**	**11**	**54**	**75**	68	296	9	373	51	6	48	105	18	220	56	294	**847**
02:45 PM	5	4	37	46	66	**308**	7	**381**	44	19	**75**	138	20	212	34	266	831
03:00 PM	6	7	28	41	57	263	9	329	**61**	**22**	71	**154**	**39**	208	35	282	806
03:15 PM	3	9	13	25	**73**	231	**12**	316	53	12	60	125	20	**245**	**60**	**325**	791
Total Volume	24	31	132	187	264	1098	37	1399	209	59	254	522	97	885	185	1167	3275
% App. Total	12.8	16.6	70.6		18.9	78.5	2.6		40	11.3	48.7		8.3	75.8	15.9		
PHF	.600	.705	.611	.623	.904	.891	.771	.918	.857	.670	.847	.847	.622	.903	.771	.898	.967

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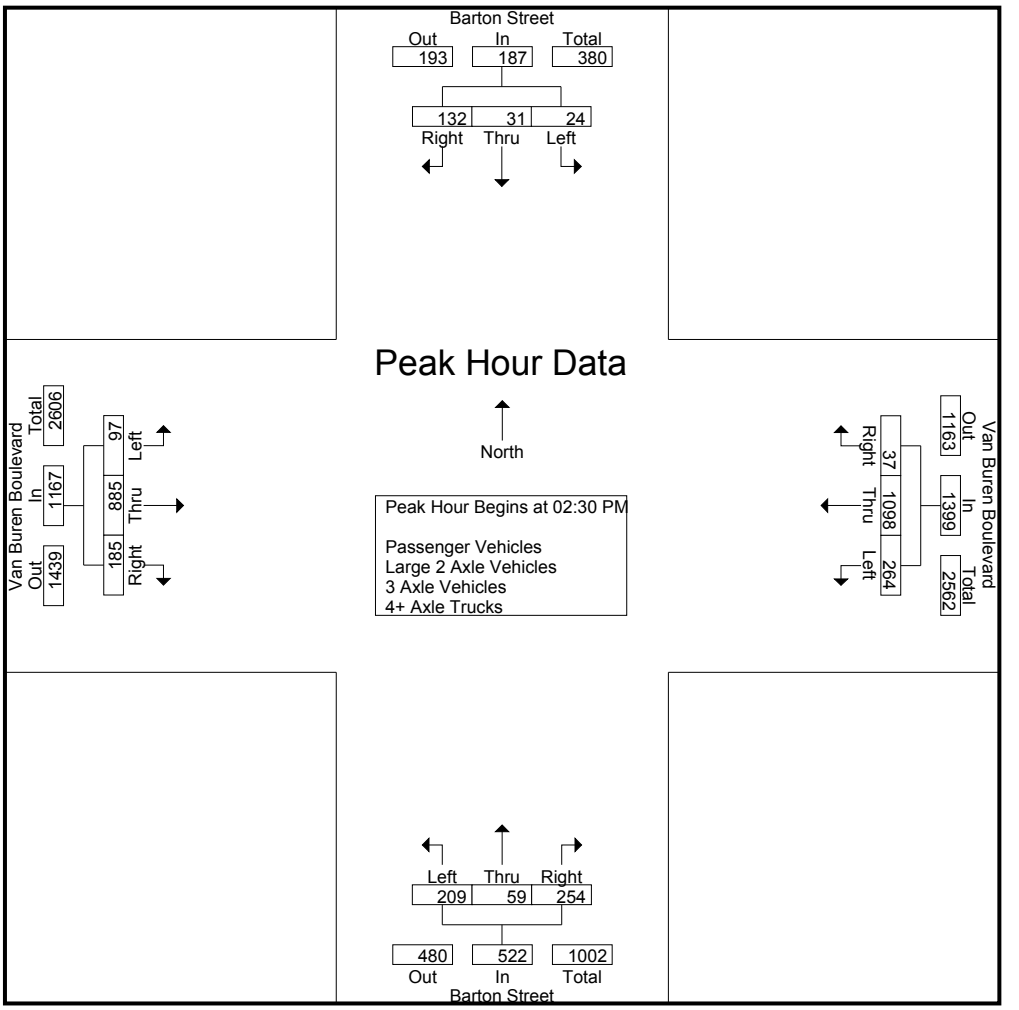

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:00 PM				02:30 PM				02:45 PM				03:00 PM			
+0 mins.	**10**	**16**	52	**78**	68	296	9	373	44	19	**75**	138	**39**	208	35	282
+15 mins.	9	7	43	59	66	**308**	7	**381**	61	**22**	71	154	20	245	**60**	325
+30 mins.	10	11	**54**	75	57	263	9	329	53	12	60	125	18	217	44	279
+45 mins.	5	4	37	46	**73**	231	**12**	316	**68**	18	70	**156**	18	**249**	59	**326**
Total Volume	34	38	186	258	264	1098	37	1399	226	71	276	573	95	919	198	1212
% App. Total	13.2	14.7	72.1		18.9	78.5	2.6		39.4	12.4	48.2		7.8	75.8	16.3	
PHF	.850	.594	.861	.827	.904	.891	.771	.918	.831	.807	.920	.918	.609	.923	.825	.929

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Groups Printed- Passenger Vehicles

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	10	15	52	77	57	226	12	295	49	15	46	110	46	175	39	260	742
02:15 PM	8	6	43	57	57	208	5	270	46	10	29	85	22	206	42	270	682
02:30 PM	10	11	53	74	68	294	8	370	47	6	47	100	18	213	55	286	830
02:45 PM	5	4	37	46	65	299	7	371	41	18	75	134	20	206	34	260	811
Total	33	36	185	254	247	1027	32	1306	183	49	197	429	106	800	170	1076	3065
03:00 PM	6	7	28	41	54	255	9	318	60	21	71	152	39	197	34	270	781
03:15 PM	3	9	13	25	72	223	12	307	53	12	59	124	20	240	59	319	775
03:30 PM	7	8	21	36	70	241	9	320	68	17	69	154	18	212	44	274	784
03:45 PM	10	9	14	33	76	300	9	385	52	11	61	124	18	242	56	316	858
Total	26	33	76	135	272	1019	39	1330	233	61	260	554	95	891	193	1179	3198
Grand Total	59	69	261	389	519	2046	71	2636	416	110	457	983	201	1691	363	2255	6263
Apprch %	15.2	17.7	67.1		19.7	77.6	2.7		42.3	11.2	46.5		8.9	75	16.1		
Total %	0.9	1.1	4.2	6.2	8.3	32.7	1.1	42.1	6.6	1.8	7.3	15.7	3.2	27	5.8	36	

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	**10**	**11**	**53**	**74**	68	294	8	370	47	6	47	100	18	213	55	286	**830**
02:45 PM	5	4	37	46	65	**299**	7	**371**	41	18	**75**	134	20	206	34	260	811
03:00 PM	6	7	28	41	54	255	9	318	**60**	**21**	71	**152**	**39**	197	34	270	781
03:15 PM	3	9	13	25	**72**	223	**12**	307	53	12	59	124	20	**240**	**59**	**319**	775
Total Volume	24	31	131	186	259	1071	36	1366	201	57	252	510	97	856	182	1135	3197
% App. Total	12.9	16.7	70.4		19	78.4	2.6		39.4	11.2	49.4		8.5	75.4	16		
PHF	.600	.705	.618	.628	.899	.895	.750	.920	.838	.679	.840	.839	.622	.892	.771	.889	.963

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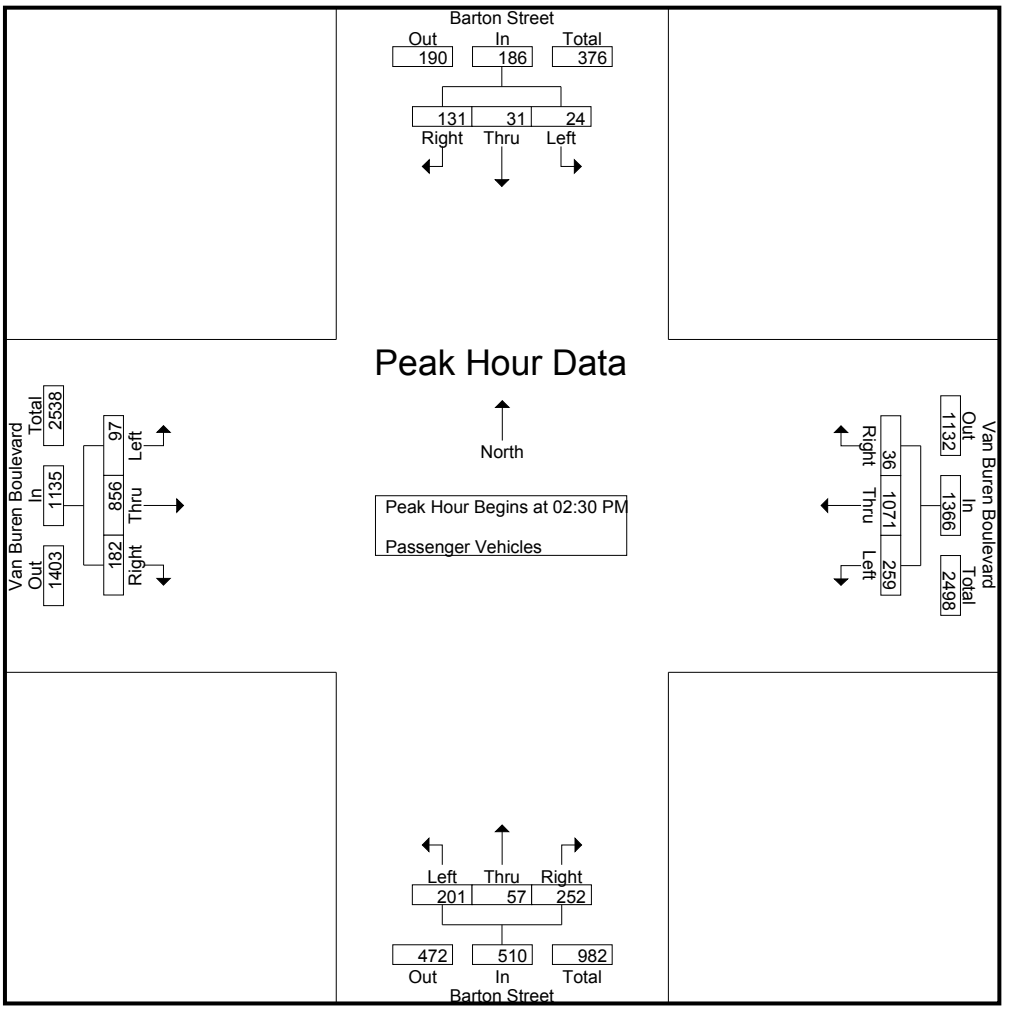

Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:30 PM				02:30 PM				02:30 PM			
+0 mins.	**10**	**11**	**53**	**74**	68	294	8	370	47	6	47	100	18	213	55	286
+15 mins.	5	4	37	46	65	**299**	7	**371**	41	18	**75**	134	20	206	34	260
+30 mins.	6	7	28	41	54	255	9	318	**60**	**21**	71	**152**	**39**	197	34	270
+45 mins.	3	9	13	25	**72**	223	**12**	307	53	12	59	124	20	**240**	**59**	**319**
Total Volume	24	31	131	186	259	1071	36	1366	201	57	252	510	97	856	182	1135
% App. Total	12.9	16.7	70.4		19	78.4	2.6		39.4	11.2	49.4		8.5	75.4	16	
PHF	.600	.705	.618	.628	.899	.895	.750	.920	.838	.679	.840	.839	.622	.892	.771	.889

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Groups Printed- Large 2 Axle Vehicles

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	1	0	1	0	1	0	1	0	1	1	2	0	1	0	1	5
02:15 PM	1	1	0	2	0	4	0	4	1	1	1	3	0	4	0	4	13
02:30 PM	0	0	1	1	0	2	1	3	4	0	1	5	0	1	0	1	10
02:45 PM	0	0	0	0	0	6	0	6	2	0	0	2	0	2	0	2	10
Total	1	2	1	4	0	13	1	14	7	2	3	12	0	8	0	8	38
03:00 PM	0	0	0	0	1	4	0	5	0	1	0	1	0	4	1	5	11
03:15 PM	0	0	0	0	0	4	0	4	0	0	1	1	0	2	1	3	8
03:30 PM	0	0	0	0	2	1	0	3	0	1	1	2	0	4	0	4	9
03:45 PM	0	0	1	1	0	3	0	3	1	0	2	3	0	4	2	6	13
Total	0	0	1	1	3	12	0	15	1	2	4	7	0	14	4	18	41
Grand Total	1	2	2	5	3	25	1	29	8	4	7	19	0	22	4	26	79
Apprch %	20	40	40		10.3	86.2	3.4		42.1	21.1	36.8		0	84.6	15.4		
Total %	1.3	2.5	2.5	6.3	3.8	31.6	1.3	36.7	10.1	5.1	8.9	24.1	0	27.8	5.1	32.9	

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	0	0	**1**	**1**	0	2	**1**	3	**4**	0	**1**	**5**	0	1	0	1	10
02:45 PM	0	0	0	0	0	**6**	0	**6**	2	0	0	2	0	2	0	2	10
03:00 PM	0	0	0	0	**1**	4	0	5	0	**1**	0	1	0	**4**	**1**	**5**	**11**
03:15 PM	0	0	0	0	0	4	0	4	0	0	1	1	0	2	1	3	8
Total Volume	0	0	1	1	1	16	1	18	6	1	2	9	0	9	2	11	39
% App. Total	0	0	100		5.6	88.9	5.6		66.7	11.1	22.2		0	81.8	18.2		
PHF	.000	.000	.250	.250	.250	.667	.250	.750	.375	.250	.500	.450	.000	.563	.500	.550	.886

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City of Riverside
N/S: Barton Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 18_RIV_Barton_VB MD
Site Code : 00321719
Start Date : 11/18/2021
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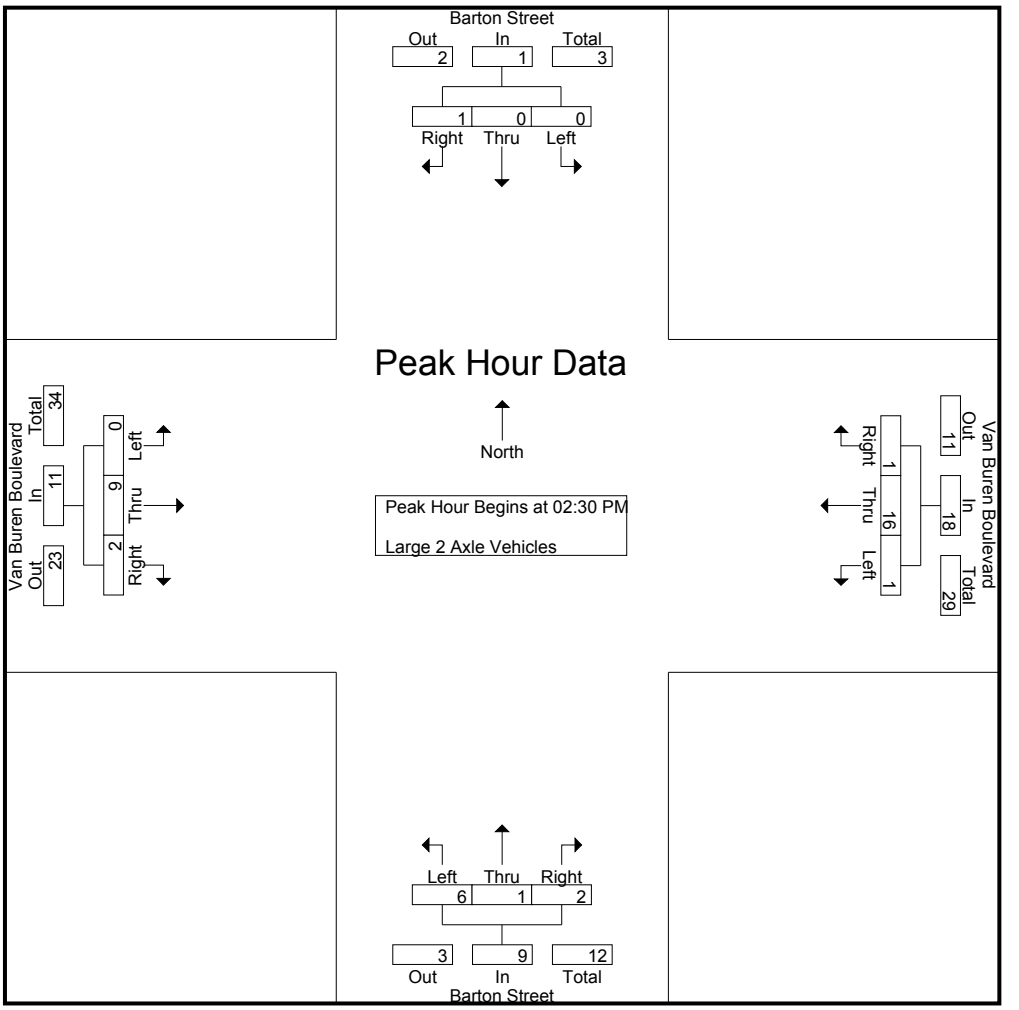

Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:30 PM				02:30 PM				02:30 PM			
+0 mins.	0	0	**1**	**1**	0	2	**1**	3	**4**	0	**1**	**5**	0	1	0	1
+15 mins.	0	0	0	0	0	**6**	0	**6**	2	0	0	2	0	2	0	2
+30 mins.	0	0	0	0	**1**	4	0	5	0	**1**	0	1	0	**4**	**1**	**5**
+45 mins.	0	0	0	0	0	4	0	4	0	0	1	1	0	2	1	3
Total Volume	0	0	1	1	1	16	1	18	6	1	2	9	0	9	2	11
% App. Total	0	0	100		5.6	88.9	5.6		66.7	11.1	22.2		0	81.8	18.2	
PHF	.000	.000	.250	.250	.250	.667	.250	.750	.375	.250	.500	.450	.000	.563	.500	.550

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City of Riverside
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File Name : 18_RIV_Barton_VB MD
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Groups Printed- 3 Axle Vehicles

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
02:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
02:45 PM	0	0	0	0	0	2	0	2	0	1	0	1	0	2	0	2	5
Total	0	0	0	0	1	4	0	5	0	1	0	1	0	4	1	5	11
03:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
03:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	3
Total	0	0	0	0	0	6	0	6	0	0	0	0	0	5	1	6	12
Grand Total	0	0	0	0	1	10	0	11	0	1	0	1	0	9	2	11	23
Apprch %	0	0	0		9.1	90.9	0		0	100	0		0	81.8	18.2		
Total %	0	0	0	0	4.3	43.5	0	47.8	0	4.3	0	4.3	0	39.1	8.7	47.8	

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	2	2
02:45 PM	0	0	0	0	0	**2**	0	**2**	0	**1**	0	**1**	0	2	0	2	**5**
03:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	**3**	5
03:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total Volume	0	0	0	0	0	5	0	5	0	1	0	1	0	7	1	8	14
% App. Total	0	0	0		0	100	0		0	100	0		0	87.5	12.5		
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.250	.000	.250	.000	.583	.250	.667	.700

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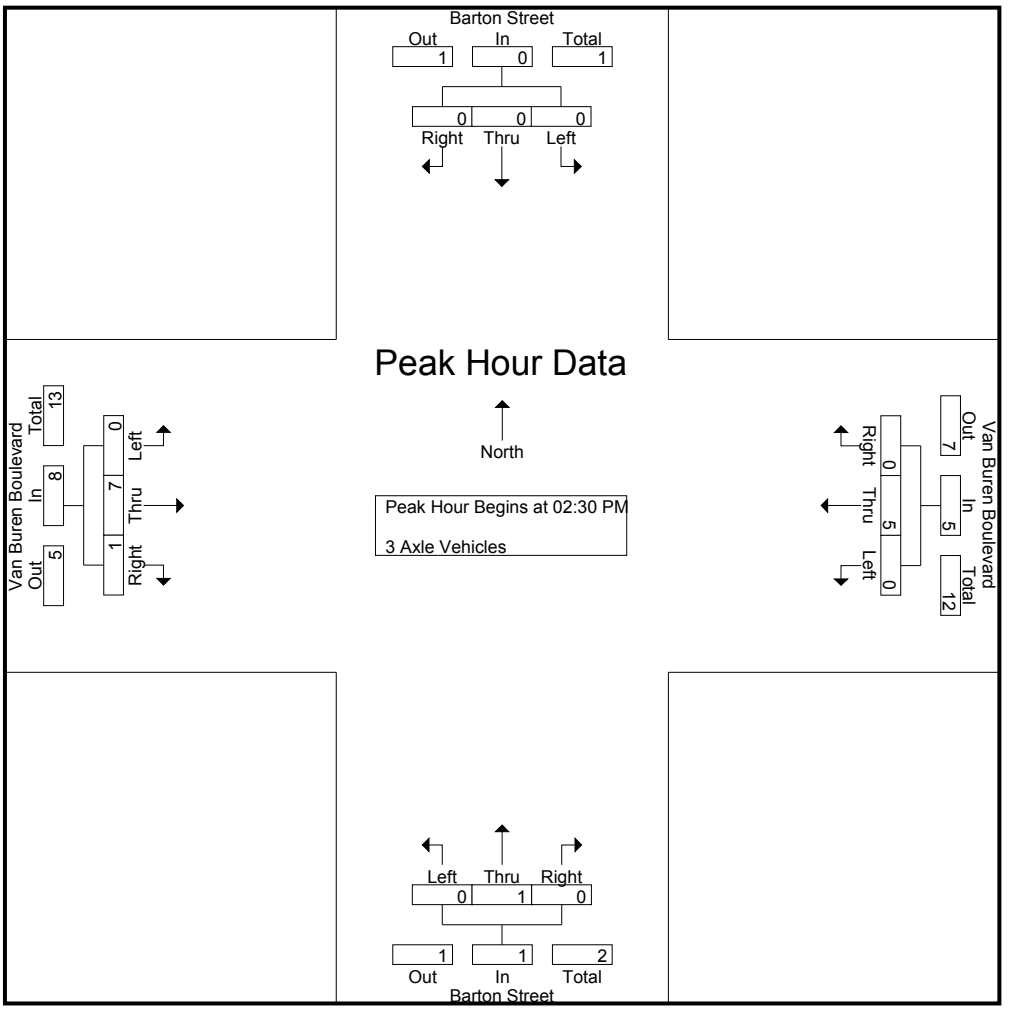

Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:30 PM				02:30 PM				02:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**	2
+15 mins.	0	0	0	0	0	**2**	0	**2**	0	**1**	0	**1**	0	2	0	2
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**3**	0	**3**
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	5	0	5	0	1	0	1	0	7	1	8
% App. Total	0	0	0		0	100	0		0	100	0		0	87.5	12.5	
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.250	.000	.250	.000	.583	.250	.667

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E/W: Van Buren Boulevard
Weather: Clear

File Name : 18_RIV_Barton_VB MD
Site Code : 00321719
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Groups Printed- 4+ Axle Trucks

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
02:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
02:45 PM	0	0	0	0	1	1	0	2	1	0	0	1	0	2	0	2	5
Total	0	0	0	0	1	4	0	5	1	0	0	1	0	9	0	9	15
03:00 PM	0	0	0	0	2	2	0	4	1	0	0	1	0	4	0	4	9
03:15 PM	0	0	0	0	1	3	0	4	0	0	0	0	0	2	0	2	6
03:30 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
03:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	2	3
Total	0	0	0	0	4	8	0	12	1	0	0	1	0	9	0	9	22
Grand Total	0	0	0	0	5	12	0	17	2	0	0	2	0	18	0	18	37
Apprch %	0	0	0		29.4	70.6	0		100	0	0		0	100	0		
Total %	0	0	0	0	13.5	32.4	0	45.9	5.4	0	0	5.4	0	48.6	0	48.6	

	Barton Street Southbound				Van Buren Boulevard Westbound				Barton Street Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**	0	**5**	5
02:45 PM	0	0	0	0	1	1	0	2	**1**	0	0	**1**	0	2	0	2	5
03:00 PM	0	0	0	0	**2**	2	0	**4**	1	0	0	1	0	4	0	4	**9**
03:15 PM	0	0	0	0	1	**3**	0	4	0	0	0	0	0	2	0	2	6
Total Volume	0	0	0	0	4	6	0	10	2	0	0	2	0	13	0	13	25
% App. Total	0	0	0		40	60	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.500	.500	.000	.625	.500	.000	.000	.500	.000	.650	.000	.650	.694

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City of Riverside
N/S: Barton Street
E/W: Van Buren Boulevard
Weather: Clear

File Name : 18_RIV_Barton_VB MD
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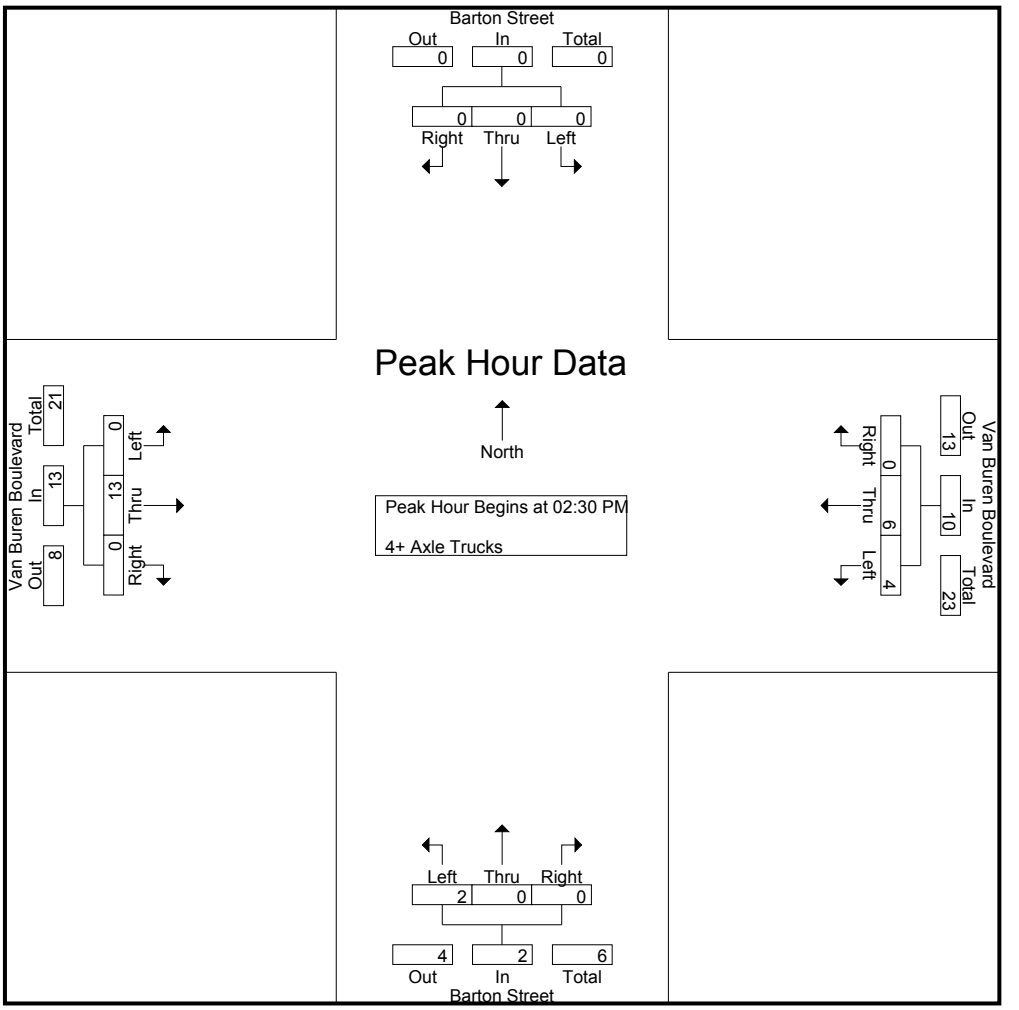

Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:30 PM				02:30 PM				02:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**5**	0	**5**
+15 mins.	0	0	0	0	1	1	0	2	**1**	0	0	**1**	0	2	0	2
+30 mins.	0	0	0	0	**2**	2	0	**4**	1	0	0	1	0	4	0	4
+45 mins.	0	0	0	0	1	**3**	0	4	0	0	0	0	0	2	0	2
Total Volume	0	0	0	0	4	6	0	10	2	0	0	2	0	13	0	13
% App. Total	0	0	0		40	60	0		100	0	0		0	100	0	
PHF	.000	.000	.000	.000	.500	.500	.000	.625	.500	.000	.000	.500	.000	.650	.000	.650

Location: Riverside
N/S: Barton Street
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

PEDESTRIANS

	North Leg Barton Street	East Leg Van Buren Boulevard	South Leg Barton Street	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Barton Street	East Leg Van Buren Boulevard	South Leg Barton Street	West Leg Van Buren Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	1	0	0	0	1
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	0	0	0	0
3:15 PM	1	1	0	0	2
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
TOTAL VOLUMES:	2	1	0	0	3

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Location: Riverside
N/S: Barton Street
E/W: Van Buren Boulevard

Date: 11/18/2021
Day: Thursday

BICYCLES

	Southbound Barton Street			Westbound Van Buren Boulevard			Northbound Barton Street			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	1	0	0	0	2

	Southbound Barton Street			Westbound Van Buren Boulevard			Northbound Barton Street			Eastbound Van Buren Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 2/Ardenwood Lane
Weather: Clear

File Name : 02_RIV_DY_DW2 AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	42	6	49	2	1	9	12	1	59	0	60	2	1	0	3	124
07:15 AM	5	48	13	66	0	0	15	15	3	78	0	81	3	0	1	4	166
07:30 AM	6	61	18	85	1	0	17	18	3	82	0	85	10	0	1	11	199
07:45 AM	1	48	34	83	0	0	9	9	6	72	0	78	23	0	3	26	196
Total	13	199	71	283	3	1	50	54	13	291	0	304	38	1	5	44	685
08:00 AM	0	96	65	161	1	0	4	5	13	59	1	73	35	0	8	43	282
08:15 AM	2	68	32	102	0	0	4	4	12	85	2	99	45	0	12	57	262
08:30 AM	1	11	2	14	0	0	3	3	0	22	0	22	5	0	0	5	44
08:45 AM	1	9	0	10	0	0	2	2	0	15	0	15	1	0	0	1	28
Total	4	184	99	287	1	0	13	14	25	181	3	209	86	0	20	106	616
Grand Total	17	383	170	570	4	1	63	68	38	472	3	513	124	1	25	150	1301
Apprch %	3	67.2	29.8		5.9	1.5	92.6		7.4	92	0.6		82.7	0.7	16.7		
Total %	1.3	29.4	13.1	43.8	0.3	0.1	4.8	5.2	2.9	36.3	0.2	39.4	9.5	0.1	1.9	11.5	

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**6**	61	18	85	**1**	0	**17**	**18**	3	82	0	85	10	0	1	11	199
07:45 AM	1	48	34	83	0	0	9	9	6	72	0	78	23	0	3	26	196
08:00 AM	0	**96**	**65**	**161**	1	0	4	5	**13**	59	1	73	35	0	8	43	**282**
08:15 AM	2	68	32	102	0	0	4	4	12	**85**	**2**	**99**	**45**	0	**12**	**57**	262
Total Volume	9	273	149	431	2	0	34	36	34	298	3	335	113	0	24	137	939
% App. Total	2.1	63.3	34.6		5.6	0	94.4		10.1	89	0.9		82.5	0	17.5		
PHF	.375	.711	.573	.669	.500	.000	.500	.500	.654	.876	.375	.846	.628	.000	.500	.601	.832

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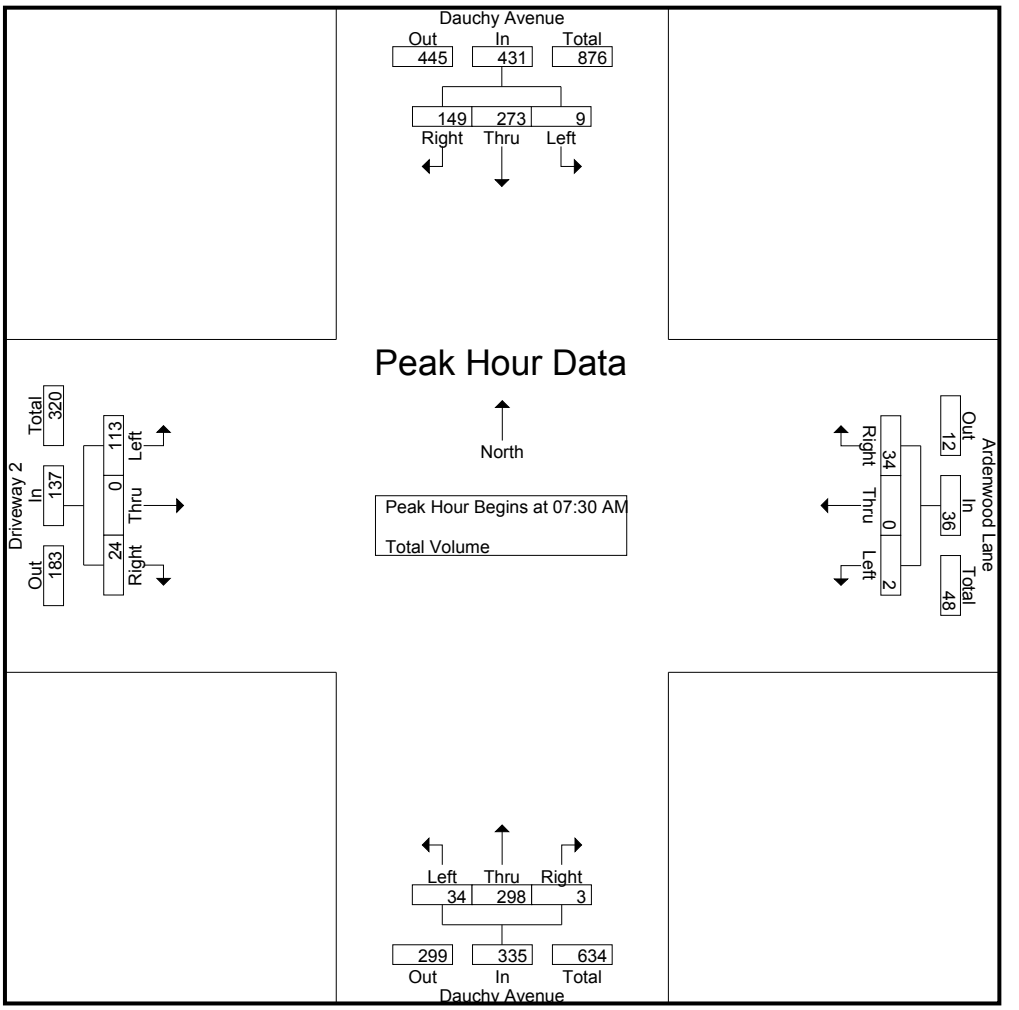
City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 2/Ardenwood Lane
Weather: Clear

File Name : 02_RIV_DY_DW2 AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	**6**	61	18	85	**2**	**1**	9	12	3	82	0	85	10	0	1	11
+15 mins.	1	48	34	83	0	0	15	15	6	72	0	78	23	0	3	26
+30 mins.	0	**96**	**65**	**161**	1	0	**17**	**18**	**13**	59	1	73	35	0	8	43
+45 mins.	2	68	32	102	0	0	9	9	12	**85**	**2**	**99**	**45**	0	**12**	**57**
Total Volume	9	273	149	431	3	1	50	54	34	298	3	335	113	0	24	137
% App. Total	2.1	63.3	34.6		5.6	1.9	92.6		10.1	89	0.9		82.5	0	17.5	
PHF	.375	.711	.573	.669	.375	.250	.735	.750	.654	.876	.375	.846	.628	.000	.500	.601

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 2/Ardenwood Lane
Weather: Clear

File Name : 02_RIV_DY_DW2 PM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	1	26	3	30	1	0	0	1	1	26	3	30	5	0	1	6	67
02:15 PM	2	24	5	31	0	0	1	1	7	37	0	44	5	0	1	6	82
02:30 PM	7	46	26	79	2	0	2	4	4	24	4	32	0	0	0	0	115
02:45 PM	6	57	22	85	2	0	20	22	5	80	6	91	30	1	6	37	235
Total	16	153	56	225	5	0	23	28	17	167	13	197	40	1	8	49	499
03:00 PM	3	66	13	82	1	1	5	7	5	63	1	69	43	0	13	56	214
03:15 PM	6	65	12	83	1	0	9	10	1	34	1	36	16	0	6	22	151
03:30 PM	5	63	9	77	0	0	4	4	2	42	0	44	19	0	6	25	150
03:45 PM	2	72	6	80	0	0	1	1	3	41	0	44	6	0	5	11	136
Total	16	266	40	322	2	1	19	22	11	180	2	193	84	0	30	114	651
Grand Total	32	419	96	547	7	1	42	50	28	347	15	390	124	1	38	163	1150
Apprch %	5.9	76.6	17.6		14	2	84		7.2	89	3.8		76.1	0.6	23.3		
Total %	2.8	36.4	8.3	47.6	0.6	0.1	3.7	4.3	2.4	30.2	1.3	33.9	10.8	0.1	3.3	14.2	

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	**6**	57	**22**	**85**	**2**	0	**20**	**22**	**5**	**80**	**6**	**91**	30	**1**	6	37	**235**
03:00 PM	3	**66**	13	82	1	**1**	5	7	5	63	1	69	**43**	0	**13**	**56**	214
03:15 PM	6	65	12	83	1	0	9	10	1	34	1	36	16	0	6	22	151
03:30 PM	5	63	9	77	0	0	4	4	2	42	0	44	19	0	6	25	150
Total Volume	20	251	56	327	4	1	38	43	13	219	8	240	108	1	31	140	750
% App. Total	6.1	76.8	17.1		9.3	2.3	88.4		5.4	91.2	3.3		77.1	0.7	22.1		
PHF	.833	.951	.636	.962	.500	.250	.475	.489	.650	.684	.333	.659	.628	.250	.596	.625	.798

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City of Riverside
N/S: Dauchy Avenue
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Weather: Clear

File Name : 02_RIV_DY_DW2 PM14
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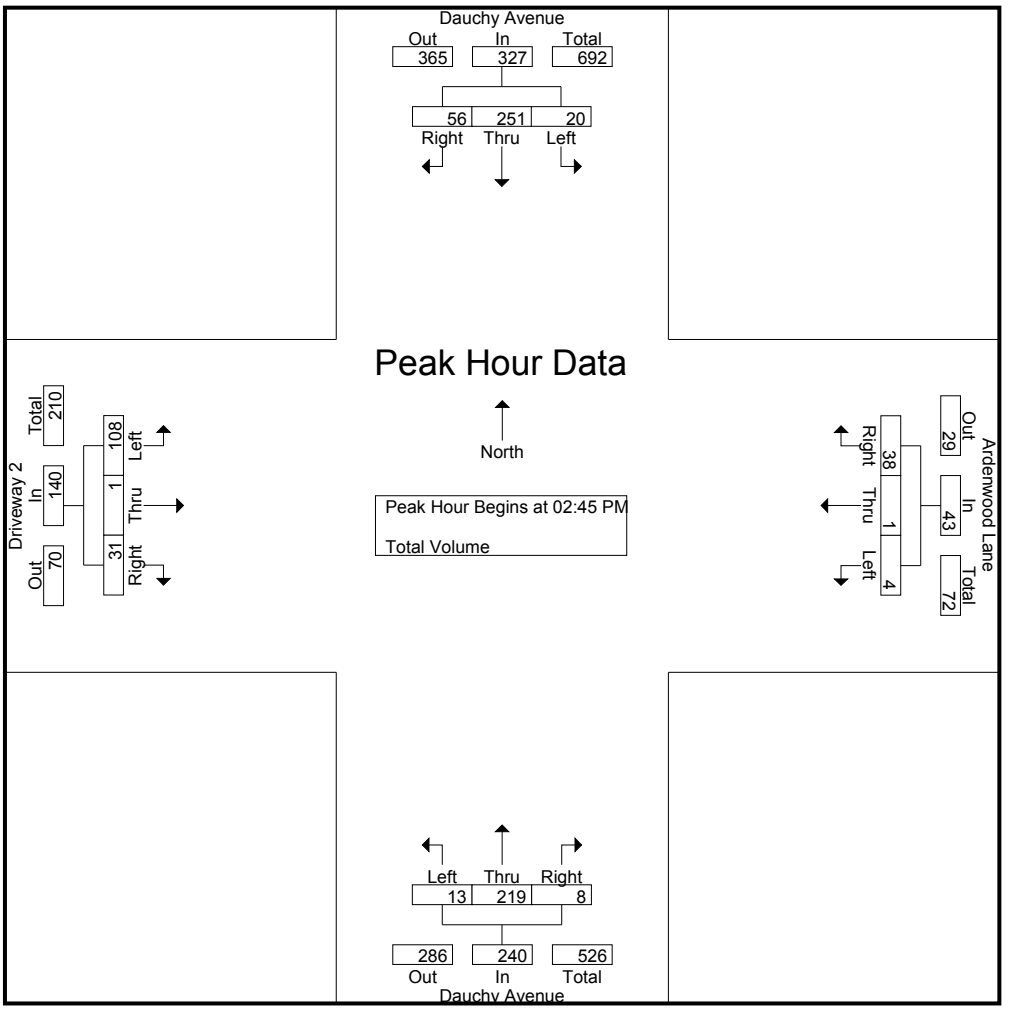

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:30 PM				02:45 PM				02:45 PM			
+0 mins.	**7**	46	**26**	79	**2**	0	2	4	**5**	**80**	**6**	**91**	30	**1**	6	37
+15 mins.	6	57	22	**85**	2	0	**20**	**22**	5	63	1	69	**43**	0	**13**	**56**
+30 mins.	3	**66**	13	82	1	**1**	5	7	1	34	1	36	16	0	6	22
+45 mins.	6	65	12	83	1	0	9	10	2	42	0	44	19	0	6	25
Total Volume	22	234	73	329	6	1	36	43	13	219	8	240	108	1	31	140
% App. Total	6.7	71.1	22.2		14	2.3	83.7		5.4	91.2	3.3		77.1	0.7	22.1	
PHF	.786	.886	.702	.968	.750	.250	.450	.489	.650	.684	.333	.659	.628	.250	.596	.625

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File Name : 02_RIV_DY_DW2 AM19
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Groups Printed- Total Volume

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	31	6	39	3	0	8	11	1	62	0	63	4	0	0	4	117
07:15 AM	6	51	9	66	0	0	9	9	1	86	0	87	5	0	3	8	170
07:30 AM	3	67	28	98	1	0	21	22	4	68	1	73	14	0	1	15	208
07:45 AM	1	46	33	80	0	0	8	8	10	72	1	83	21	0	2	23	194
Total	12	195	76	283	4	0	46	50	16	288	2	306	44	0	6	50	689
08:00 AM	1	73	55	129	3	0	6	9	6	62	1	69	28	0	14	42	249
08:15 AM	3	72	27	102	0	0	2	2	14	82	1	97	49	0	10	59	260
08:30 AM	1	9	4	14	0	0	2	2	1	19	0	20	2	0	1	3	39
08:45 AM	1	10	3	14	0	0	1	1	0	15	0	15	2	0	1	3	33
Total	6	164	89	259	3	0	11	14	21	178	2	201	81	0	26	107	581
Grand Total	18	359	165	542	7	0	57	64	37	466	4	507	125	0	32	157	1270
Apprch %	3.3	66.2	30.4		10.9	0	89.1		7.3	91.9	0.8		79.6	0	20.4		
Total %	1.4	28.3	13	42.7	0.6	0	4.5	5	2.9	36.7	0.3	39.9	9.8	0	2.5	12.4	

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**3**	67	28	98	1	0	**21**	**22**	4	68	**1**	73	14	0	1	15	208
07:45 AM	1	46	33	80	0	0	8	8	10	72	1	83	21	0	2	23	194
08:00 AM	1	**73**	**55**	**129**	**3**	0	6	9	6	62	1	69	28	0	**14**	42	249
08:15 AM	3	72	27	102	0	0	2	2	**14**	**82**	1	**97**	**49**	0	10	**59**	**260**
Total Volume	8	258	143	409	4	0	37	41	34	284	4	322	112	0	27	139	911
% App. Total	2	63.1	35		9.8	0	90.2		10.6	88.2	1.2		80.6	0	19.4		
PHF	.667	.884	.650	.793	.333	.000	.440	.466	.607	.866	1.00	.830	.571	.000	.482	.589	.876

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File Name : 02_RIV_DY_DW2 AM19
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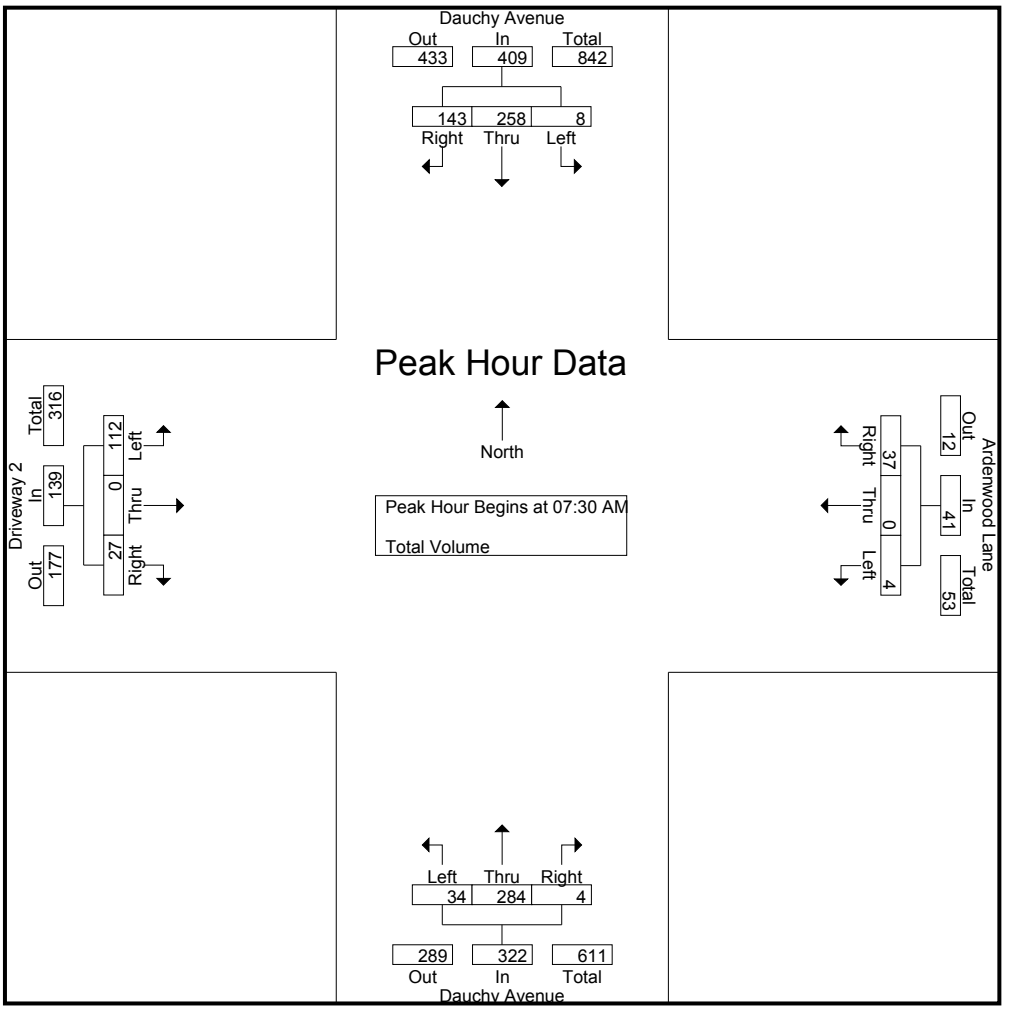

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	**3**	67	28	98	**3**	0	8	11	4	68	**1**	73	14	0	1	15
+15 mins.	1	46	33	80	0	0	9	9	10	72	1	83	21	0	2	23
+30 mins.	1	**73**	**55**	**129**	1	0	**21**	**22**	6	62	1	69	28	0	**14**	42
+45 mins.	3	72	27	102	0	0	8	8	**14**	**82**	1	**97**	**49**	0	10	**59**
Total Volume	8	258	143	409	4	0	46	50	34	284	4	322	112	0	27	139
% App. Total	2	63.1	35		8	0	92		10.6	88.2	1.2		80.6	0	19.4	
PHF	.667	.884	.650	.793	.333	.000	.548	.568	.607	.866	1.000	.830	.571	.000	.482	.589

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File Name : 02_RIV_DY_DW2 PM19
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Groups Printed- Total Volume

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	3	25	4	32	2	0	11	13	2	50	0	52	2	0	2	4	101
02:15 PM	2	36	10	48	0	0	2	2	2	19	2	23	2	0	0	2	75
02:30 PM	1	51	29	81	3	0	3	6	6	25	2	33	1	0	1	2	122
02:45 PM	4	53	28	85	1	0	4	5	8	58	3	69	30	0	3	33	192
Total	10	165	71	246	6	0	20	26	18	152	7	177	35	0	6	41	490
03:00 PM	2	47	15	64	4	0	6	10	3	62	3	68	55	1	16	72	214
03:15 PM	0	41	13	54	0	0	3	3	1	39	1	41	20	0	3	23	121
03:30 PM	1	64	6	71	0	0	0	0	2	29	0	31	14	0	7	21	123
03:45 PM	2	44	9	55	0	0	5	5	1	41	0	42	3	0	5	8	110
Total	5	196	43	244	4	0	14	18	7	171	4	182	92	1	31	124	568
Grand Total	15	361	114	490	10	0	34	44	25	323	11	359	127	1	37	165	1058
Apprch %	3.1	73.7	23.3		22.7	0	77.3		7	90	3.1		77	0.6	22.4		
Total %	1.4	34.1	10.8	46.3	0.9	0	3.2	4.2	2.4	30.5	1	33.9	12	0.1	3.5	15.6	

	Dauchy Avenue Southbound				Ardenwood Lane Westbound				Dauchy Avenue Northbound				Driveway 2 Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	**4**	53	**28**	**85**	1	0	4	5	**8**	58	**3**	**69**	30	0	3	33	192
03:00 PM	2	47	15	64	**4**	0	**6**	**10**	3	**62**	3	68	**55**	**1**	**16**	**72**	**214**
03:15 PM	0	41	13	54	0	0	3	3	1	39	1	41	20	0	3	23	121
03:30 PM	1	**64**	6	71	0	0	0	0	2	29	0	31	14	0	7	21	123
Total Volume	7	205	62	274	5	0	13	18	14	188	7	209	119	1	29	149	650
% App. Total	2.6	74.8	22.6		27.8	0	72.2		6.7	90	3.3		79.9	0.7	19.5		
PHF	.438	.801	.554	.806	.313	.000	.542	.450	.438	.758	.583	.757	.541	.250	.453	.517	.759

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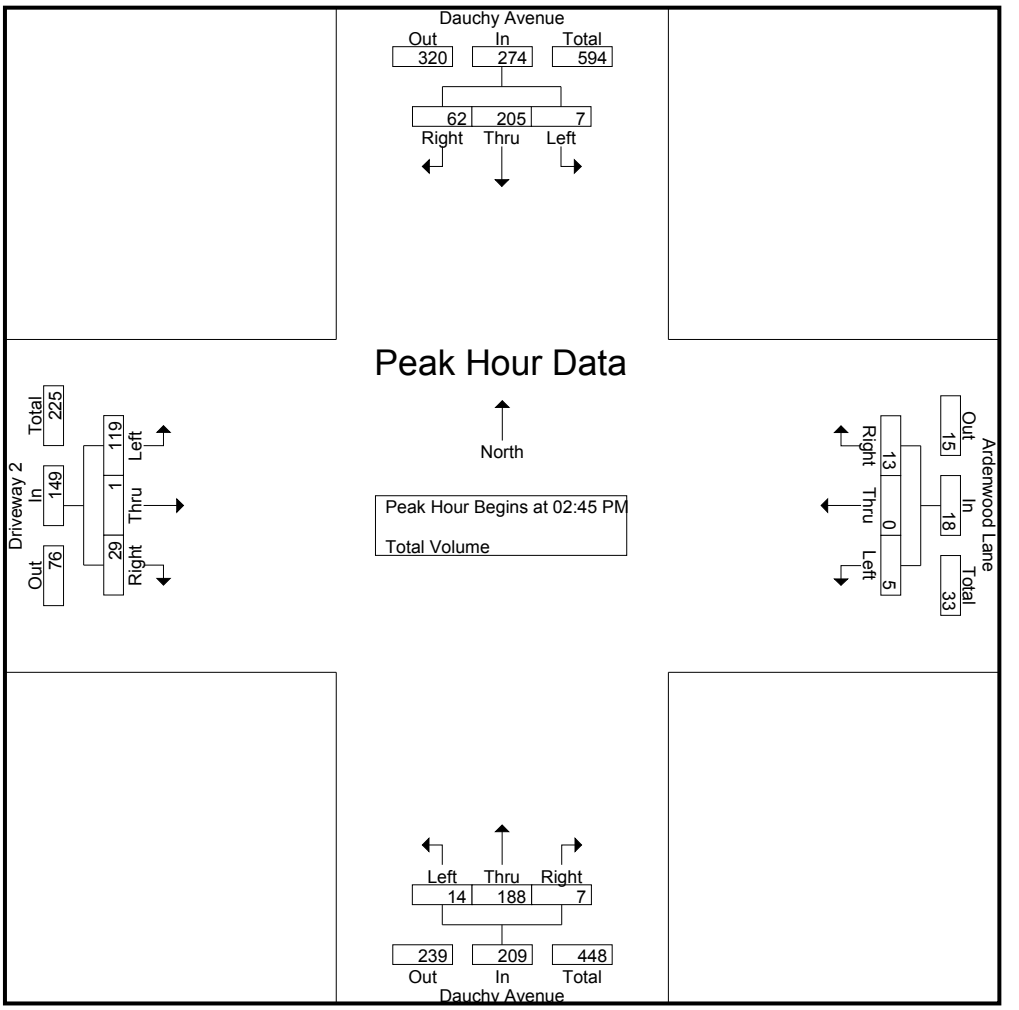

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:30 PM				02:00 PM				02:30 PM				02:45 PM			
+0 mins.	1	51	**29**	81	2	0	**11**	**13**	6	25	2	33	30	0	3	33
+15 mins.	**4**	**53**	28	**85**	0	0	2	2	**8**	58	**3**	**69**	**55**	**1**	**16**	**72**
+30 mins.	2	47	15	64	**3**	0	3	6	3	**62**	3	68	20	0	3	23
+45 mins.	0	41	13	54	1	0	4	5	1	39	1	41	14	0	7	21
Total Volume	7	192	85	284	6	0	20	26	18	184	9	211	119	1	29	149
% App. Total	2.5	67.6	29.9		23.1	0	76.9		8.5	87.2	4.3		79.9	0.7	19.5	
PHF	.438	.906	.733	.835	.500	.000	.455	.500	.563	.742	.750	.764	.541	.250	.453	.517

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City of Riverside
N/S: Driveway 1
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_DW1_VB AM14
Site Code : 00321595
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Groups Printed- Total Volume

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	368	4	372	0	0	0	0	0	260	0	260	632
07:15 AM	0	0	0	0	0	403	0	403	0	0	0	0	0	336	0	336	739
07:30 AM	0	0	0	0	0	357	3	360	0	0	0	0	0	305	0	305	665
07:45 AM	0	0	1	1	0	415	6	421	0	0	0	0	0	256	0	256	678
Total	0	0	1	1	0	1543	13	1556	0	0	0	0	0	1157	0	1157	2714
08:00 AM	0	0	0	0	0	365	5	370	0	0	0	0	0	304	0	304	674
08:15 AM	0	0	0	0	0	362	2	364	0	0	0	0	0	244	0	244	608
08:30 AM	0	0	0	0	0	335	2	337	0	0	0	0	0	249	0	249	586
08:45 AM	0	0	1	1	0	270	5	275	0	0	0	0	0	234	0	234	510
Total	0	0	1	1	0	1332	14	1346	0	0	0	0	0	1031	0	1031	2378
Grand Total	0	0	2	2	0	2875	27	2902	0	0	0	0	0	2188	0	2188	5092
Apprch %	0	0	100		0	99.1	0.9		0	0	0		0	100	0		
Total %	0	0	0	0	0	56.5	0.5	57	0	0	0	0	0	43	0	43	

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	403	0	403	0	0	0	0	0	**336**	0	**336**	**739**
07:30 AM	0	0	0	0	0	357	3	360	0	0	0	0	0	305	0	305	665
07:45 AM	0	0	**1**	**1**	0	**415**	**6**	**421**	0	0	0	0	0	256	0	256	678
08:00 AM	0	0	0	0	0	365	5	370	0	0	0	0	0	304	0	304	674
Total Volume	0	0	1	1	0	1540	14	1554	0	0	0	0	0	1201	0	1201	2756
% App. Total	0	0	100		0	99.1	0.9		0	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.928	.583	.923	.000	.000	.000	.000	.000	.894	.000	.894	.932

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City of Riverside
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File Name : 01_RIV_DW1_VB AM14
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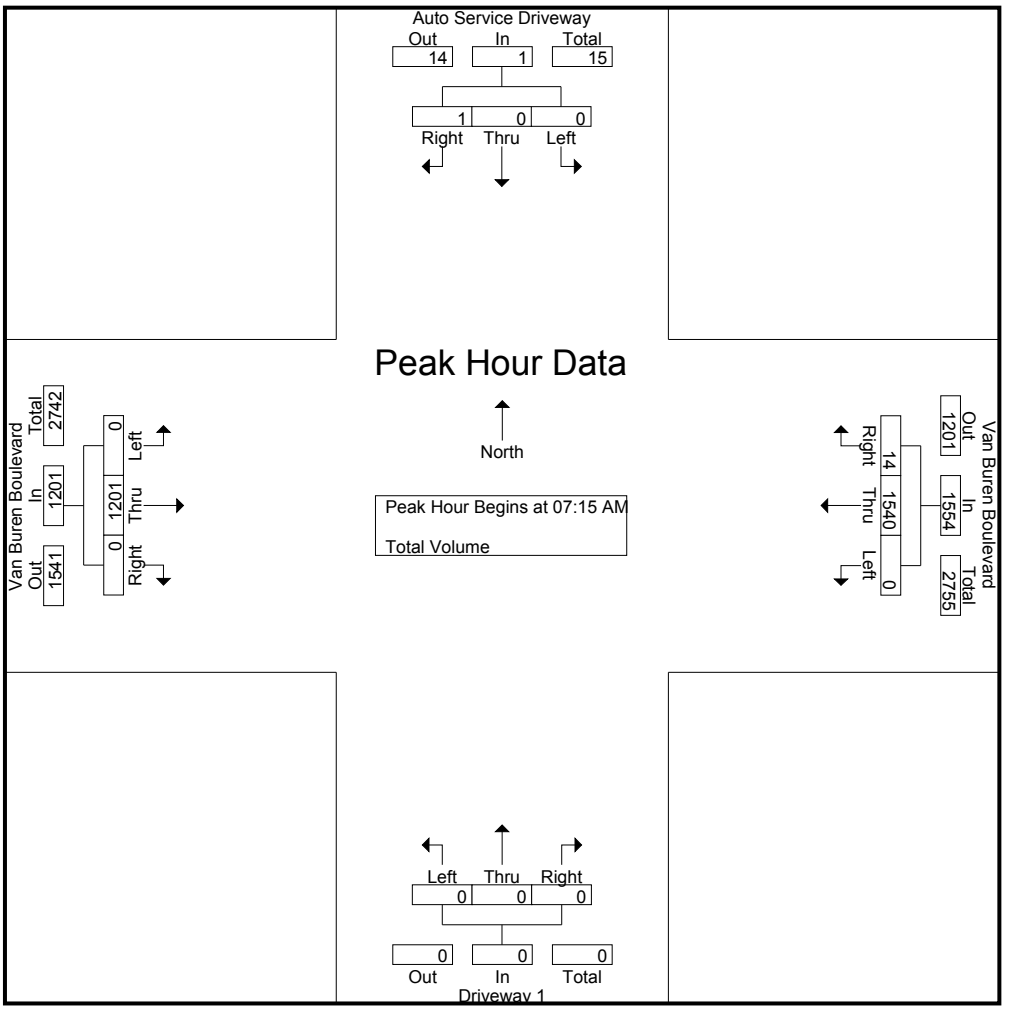

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	0	0	0	0	0	368	4	372	0	0	0	0	0	**336**	0	**336**
+15 mins.	0	0	0	0	0	403	0	403	0	0	0	0	0	305	0	305
+30 mins.	0	0	0	0	0	357	3	360	0	0	0	0	0	256	0	256
+45 mins.	0	0	**1**	**1**	0	**415**	**6**	**421**	0	0	0	0	0	304	0	304
Total Volume	0	0	1	1	0	1543	13	1556	0	0	0	0	0	1201	0	1201
% App. Total	0	0	100		0	99.2	0.8		0	0	0		0	100	0	
PHF	.000	.000	.250	.250	.000	.930	.542	.924	.000	.000	.000	.000	.000	.894	.000	.894

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City of Riverside
N/S: Driveway 1
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File Name : 01_RIV_DW1_VB PM14
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Groups Printed- Total Volume

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	2	2	0	265	3	268	0	0	0	0	0	230	0	230	500
02:15 PM	0	0	0	0	0	266	5	271	0	0	0	0	0	257	0	257	528
02:30 PM	0	0	1	1	0	315	1	316	0	0	0	0	0	314	0	314	631
02:45 PM	0	0	1	1	0	393	3	396	0	0	0	0	0	303	0	303	700
Total	0	0	4	4	0	1239	12	1251	0	0	0	0	0	1104	0	1104	2359
03:00 PM	0	0	0	0	0	405	4	409	0	0	0	0	0	332	0	332	741
03:15 PM	0	0	0	0	0	318	5	323	0	0	0	0	0	344	0	344	667
03:30 PM	0	0	0	0	0	375	3	378	0	0	0	0	0	265	0	265	643
03:45 PM	0	0	0	0	0	320	5	325	0	0	0	0	0	383	0	383	708
Total	0	0	0	0	0	1418	17	1435	0	0	0	0	0	1324	0	1324	2759
Grand Total	0	0	4	4	0	2657	29	2686	0	0	0	0	0	2428	0	2428	5118
Apprch %	0	0	100		0	98.9	1.1		0	0	0		0	100	0		
Total %	0	0	0.1	0.1	0	51.9	0.6	52.5	0	0	0	0	0	47.4	0	47.4	

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	**405**	4	**409**	0	0	0	0	0	332	0	332	**741**
03:15 PM	0	0	0	0	0	318	**5**	323	0	0	0	0	0	344	0	344	667
03:30 PM	0	0	0	0	0	375	3	378	0	0	0	0	0	265	0	265	643
03:45 PM	0	0	0	0	0	320	5	325	0	0	0	0	0	**383**	0	**383**	708
Total Volume	0	0	0	0	0	1418	17	1435	0	0	0	0	0	1324	0	1324	2759
% App. Total	0	0	0		0	98.8	1.2		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.875	.850	.877	.000	.000	.000	.000	.000	.864	.000	.864	.931

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City of Riverside
N/S: Driveway 1
E/W: Van Buren Boulevard
Weather: Clear

File Name : 01_RIV_DW1_VB PM14
Site Code : 00321595
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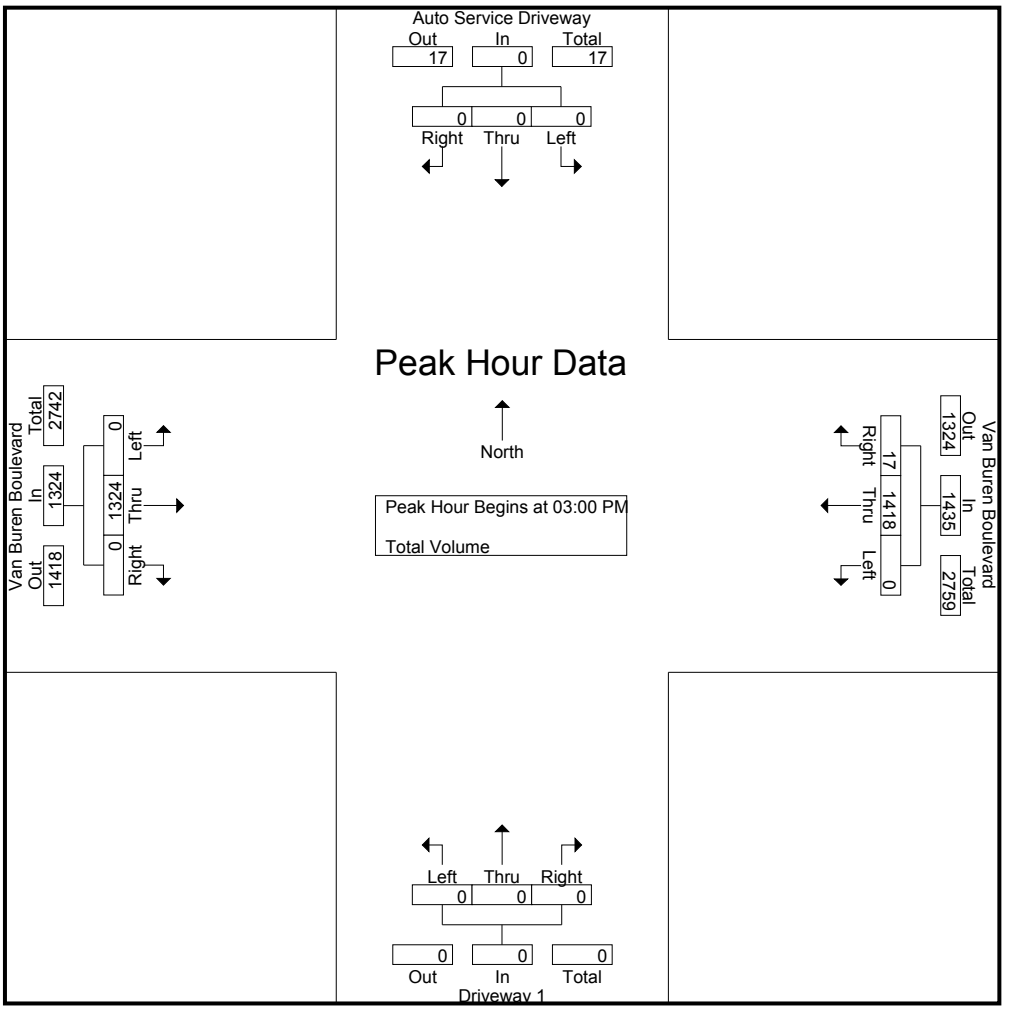

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:00 PM				02:45 PM				02:00 PM				03:00 PM			
+0 mins.	0	0	**2**	**2**	0	393	3	396	0	0	0	0	0	332	0	332
+15 mins.	0	0	0	0	0	**405**	4	**409**	0	0	0	0	0	344	0	344
+30 mins.	0	0	1	1	0	318	**5**	323	0	0	0	0	0	265	0	265
+45 mins.	0	0	1	1	0	375	3	378	0	0	0	0	0	**383**	0	**383**
Total Volume	0	0	4	4	0	1491	15	1506	0	0	0	0	0	1324	0	1324
% App. Total	0	0	100		0	99	1		0	0	0		0	100	0	
PHF	.000	.000	.500	.500	.000	.920	.750	.921	.000	.000	.000	.000	.000	.864	.000	.864

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File Name : 01_RIV_DW1_VB AM19
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Start Date : 10/19/2021
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Groups Printed- Total Volume

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	378	2	380	0	0	0	0	0	285	0	285	665
07:15 AM	0	0	0	0	0	359	0	359	0	0	0	0	0	332	0	332	691
07:30 AM	0	0	0	0	0	369	1	370	0	0	0	0	0	340	0	340	710
07:45 AM	0	0	0	0	0	355	4	359	0	0	0	0	0	250	0	250	609
Total	0	0	0	0	0	1461	7	1468	0	0	0	0	0	1207	0	1207	2675
08:00 AM	0	0	0	0	0	370	3	373	0	0	0	0	0	285	0	285	658
08:15 AM	0	0	0	0	0	348	3	351	0	0	0	0	0	258	0	258	609
08:30 AM	0	0	1	1	0	280	3	283	0	0	0	0	0	210	0	210	494
08:45 AM	0	0	1	1	0	286	5	291	0	0	0	0	0	211	0	211	503
Total	0	0	2	2	0	1284	14	1298	0	0	0	0	0	964	0	964	2264
Grand Total	0	0	2	2	0	2745	21	2766	0	0	0	0	0	2171	0	2171	4939
Apprch %	0	0	100		0	99.2	0.8		0	0	0		0	100	0		
Total %	0	0	0	0	0	55.6	0.4	56	0	0	0	0	0	44	0	44	

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	**378**	2	**380**	0	0	0	0	0	285	0	285	665
07:15 AM	0	0	0	0	0	359	0	359	0	0	0	0	0	332	0	332	691
07:30 AM	0	0	0	0	0	369	1	370	0	0	0	0	0	**340**	0	**340**	**710**
07:45 AM	0	0	0	0	0	355	**4**	359	0	0	0	0	0	250	0	250	609
Total Volume	0	0	0	0	0	1461	7	1468	0	0	0	0	0	1207	0	1207	2675
% App. Total	0	0	0		0	99.5	0.5		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.966	.438	.966	.000	.000	.000	.000	.000	.888	.000	.888	.942

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File Name : 01_RIV_DW1_VB AM19
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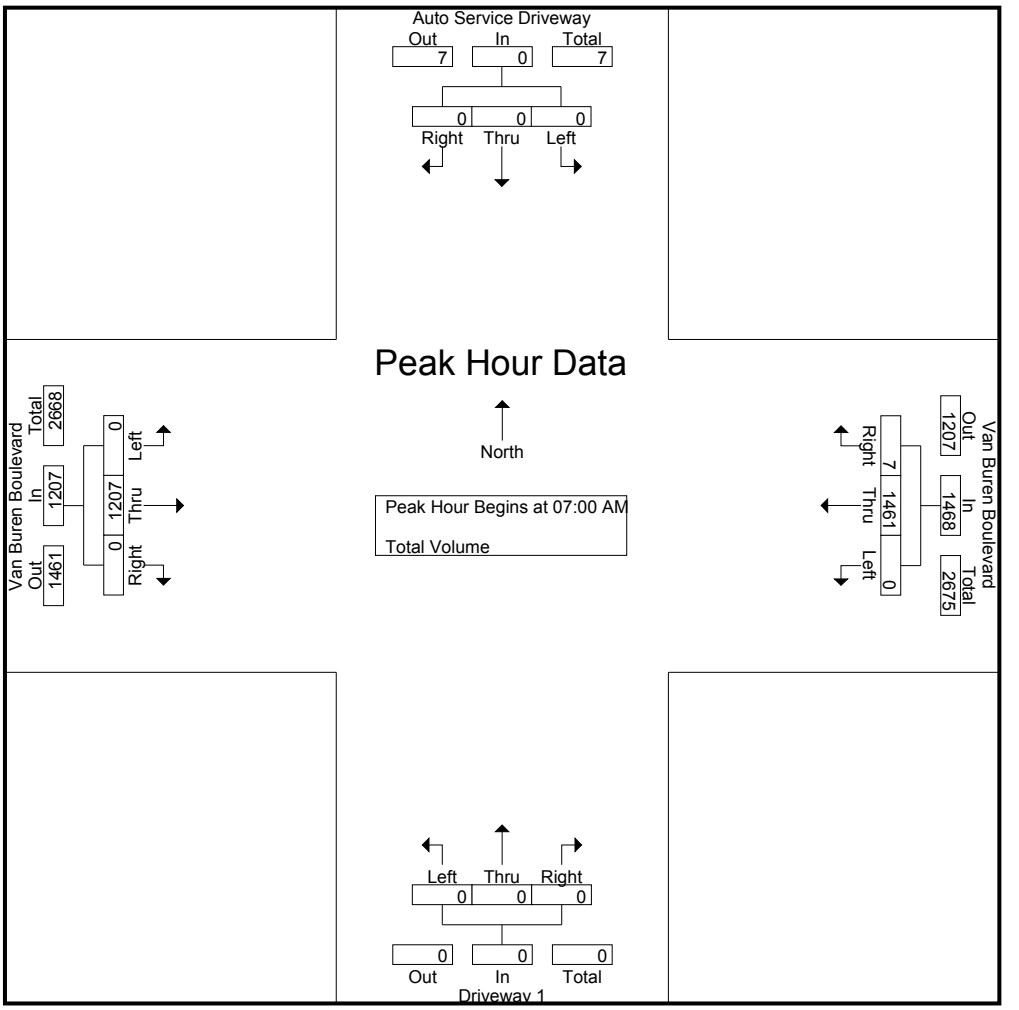

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	**378**	2	**380**	0	0	0	0	0	285	0	285
+15 mins.	0	0	0	0	0	359	0	359	0	0	0	0	0	332	0	332
+30 mins.	0	0	**1**	**1**	0	369	1	370	0	0	0	0	0	**340**	0	**340**
+45 mins.	0	0	1	1	0	355	**4**	359	0	0	0	0	0	250	0	250
Total Volume	0	0	2	2	0	1461	7	1468	0	0	0	0	0	1207	0	1207
% App. Total	0	0	100		0	99.5	0.5		0	0	0		0	100	0	
PHF	.000	.000	.500	.500	.000	.966	.438	.966	.000	.000	.000	.000	.000	.888	.000	.888

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File Name : 01_RIV_DW1_VB PM19
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Groups Printed- Total Volume

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	361	4	365	0	0	0	0	0	257	0	257	622
02:15 PM	0	0	1	1	0	386	5	391	0	0	0	0	0	267	0	267	659
02:30 PM	0	0	1	1	0	311	6	317	0	0	0	0	0	305	0	305	623
02:45 PM	0	0	0	0	0	307	3	310	0	0	0	0	0	291	0	291	601
Total	0	0	2	2	0	1365	18	1383	0	0	0	0	0	1120	0	1120	2505
03:00 PM	0	0	0	0	0	364	1	365	0	0	0	0	0	301	0	301	666
03:15 PM	0	0	1	1	0	355	3	358	0	0	0	0	0	336	0	336	695
03:30 PM	0	0	0	0	0	320	2	322	0	0	0	0	0	331	0	331	653
03:45 PM	0	0	1	1	0	376	6	382	0	0	0	0	0	365	0	365	748
Total	0	0	2	2	0	1415	12	1427	0	0	0	0	0	1333	0	1333	2762
Grand Total	0	0	4	4	0	2780	30	2810	0	0	0	0	0	2453	0	2453	5267
Apprch %	0	0	100		0	98.9	1.1		0	0	0		0	100	0		
Total %	0	0	0.1	0.1	0	52.8	0.6	53.4	0	0	0	0	0	46.6	0	46.6	

	Auto Service Driveway Southbound				Van Buren Boulevard Westbound				Driveway 1 Northbound				Van Buren Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	0	0	0	0	364	1	365	0	0	0	0	0	301	0	301	666
03:15 PM	0	0	**1**	**1**	0	355	3	358	0	0	0	0	0	336	0	336	695
03:30 PM	0	0	0	0	0	320	2	322	0	0	0	0	0	331	0	331	653
03:45 PM	0	0	1	1	0	**376**	**6**	**382**	0	0	0	0	0	**365**	0	**365**	**748**
Total Volume	0	0	2	2	0	1415	12	1427	0	0	0	0	0	1333	0	1333	2762
% App. Total	0	0	100		0	99.2	0.8		0	0	0		0	100	0		
PHF	.000	.000	.500	.500	.000	.941	.500	.934	.000	.000	.000	.000	.000	.913	.000	.913	.923

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File Name : 01_RIV_DW1_VB PM19
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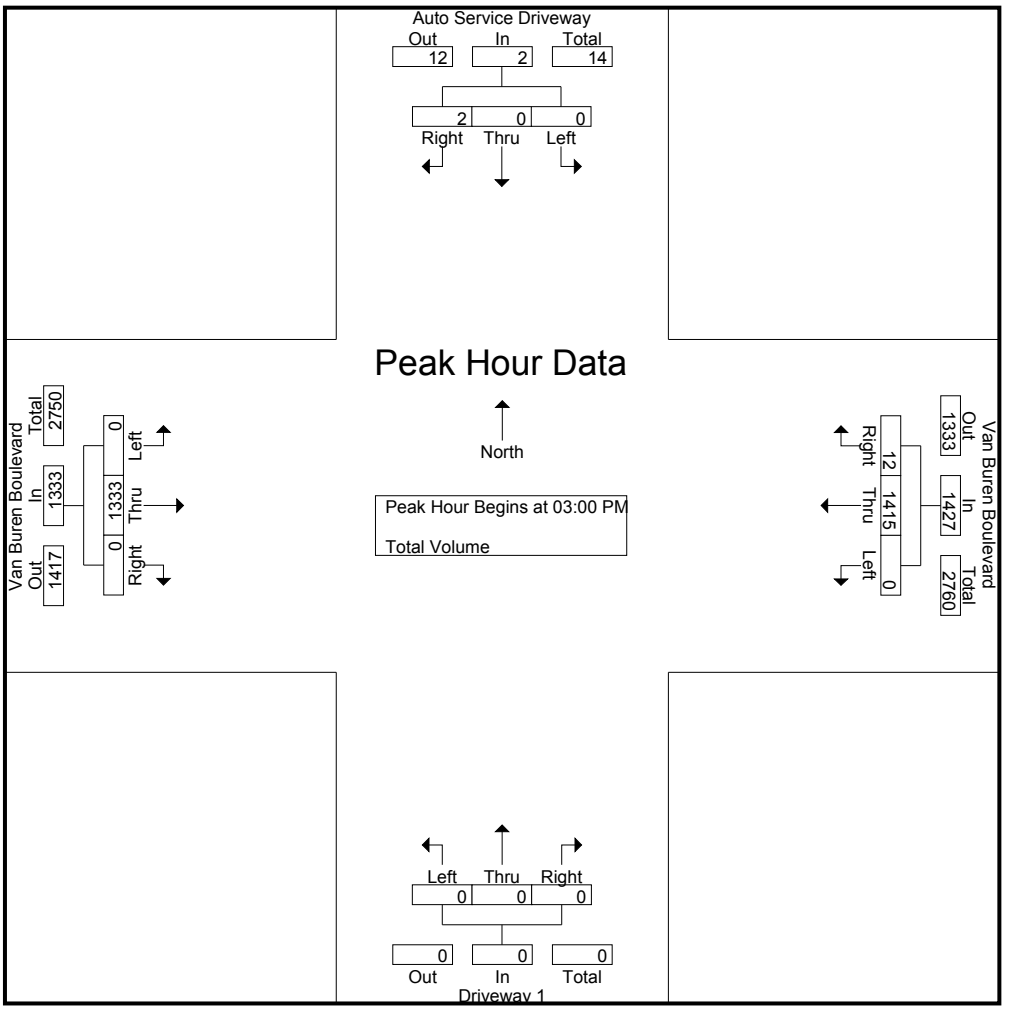

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:00 PM				03:00 PM				02:00 PM				03:00 PM			
+0 mins.	0	0	0	0	0	364	1	365	0	0	0	0	0	301	0	301
+15 mins.	0	0	**1**	**1**	0	355	3	358	0	0	0	0	0	336	0	336
+30 mins.	0	0	1	1	0	320	2	322	0	0	0	0	0	331	0	331
+45 mins.	0	0	0	0	0	**376**	**6**	**382**	0	0	0	0	0	**365**	0	**365**
Total Volume	0	0	2	2	0	1415	12	1427	0	0	0	0	0	1333	0	1333
% App. Total	0	0	100		0	99.2	0.8		0	0	0		0	100	0	
PHF	.000	.000	.500	.500	.000	.941	.500	.934	.000	.000	.000	.000	.000	.913	.000	.913

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 3
Weather: Clear

File Name : 03_RIV_DY_DW3 AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	23	21	44	4	60	64	0	0	0	108
07:15 AM	39	11	50	2	83	85	0	0	0	135
07:30 AM	44	13	57	2	81	83	1	0	1	141
07:45 AM	26	26	52	4	77	81	0	0	0	133
Total	132	71	203	12	301	313	1	0	1	517
08:00 AM	50	50	100	5	71	76	0	0	0	176
08:15 AM	49	35	84	1	98	99	0	0	0	183
08:30 AM	7	0	7	0	17	17	0	0	0	24
08:45 AM	11	0	11	0	18	18	0	0	0	29
Total	117	85	202	6	204	210	0	0	0	412
Grand Total	249	156	405	18	505	523	1	0	1	929
Apprch %	61.5	38.5		3.4	96.6		100	0		
Total %	26.8	16.8	43.6	1.9	54.4	56.3	0.1	0	0.1	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	44	13	57	2	81	83	**1**	0	**1**	141
07:45 AM	26	26	52	4	77	81	0	0	0	133
08:00 AM	**50**	**50**	**100**	**5**	71	76	0	0	0	176
08:15 AM	49	35	84	1	**98**	**99**	0	0	0	**183**
Total Volume	169	124	293	12	327	339	1	0	1	633
% App. Total	57.7	42.3		3.5	96.5		100	0		
PHF	.845	.620	.733	.600	.834	.856	.250	.000	.250	.865

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 3
Weather: Clear

File Name : 03_RIV_DY_DW3 AM14
Site Code : 00321595
Start Date : 10/14/2021
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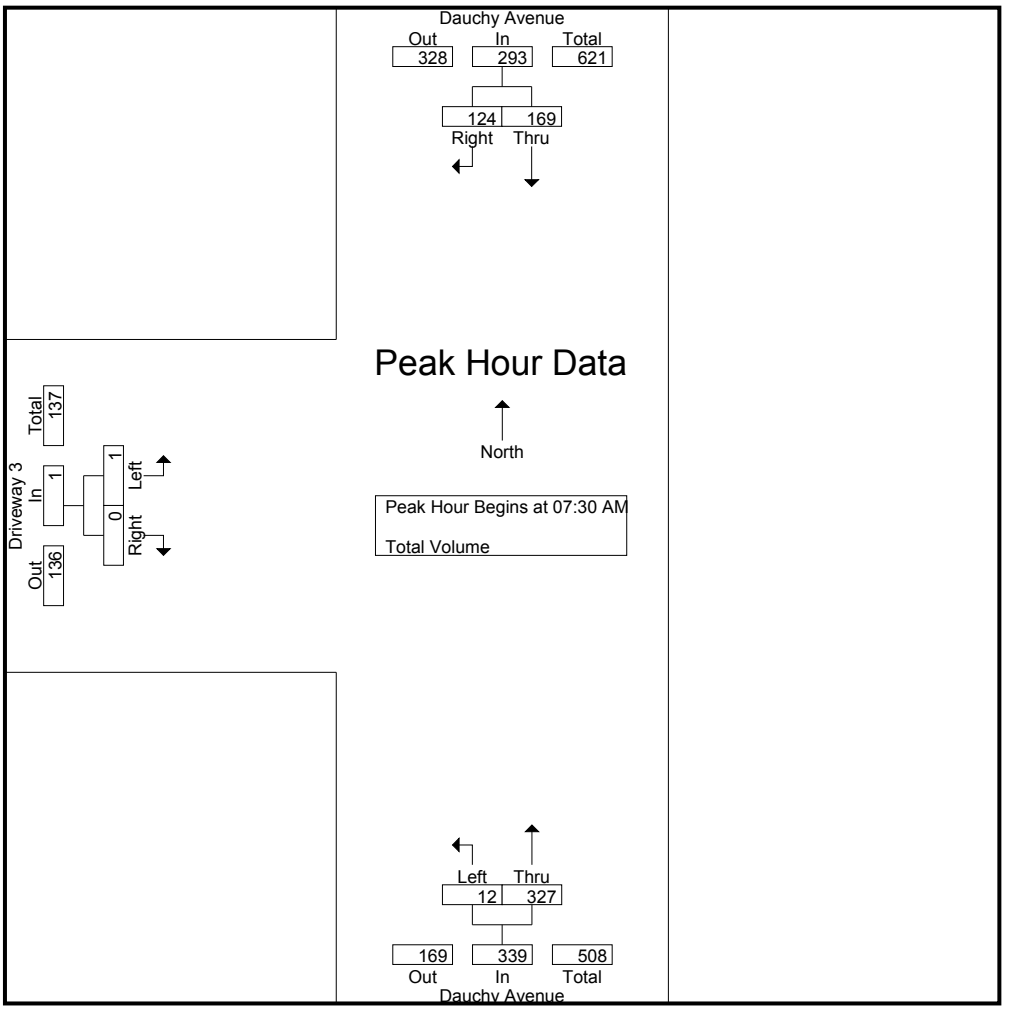

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:00 AM		
+0 mins.	44	13	57	2	81	83	0	0	0
+15 mins.	26	26	52	4	77	81	0	0	0
+30 mins.	**50**	**50**	**100**	**5**	71	76	**1**	0	**1**
+45 mins.	49	35	84	1	**98**	**99**	0	0	0
Total Volume	169	124	293	12	327	339	1	0	1
% App. Total	57.7	42.3		3.5	96.5		100	0	
PHF	.845	.620	.733	.600	.834	.856	.250	.000	.250

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 3
Weather: Clear

File Name : 03_RIV_DY_DW3 PM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	23	3	26	1	30	31	0	0	0	57
02:15 PM	23	2	25	2	44	46	0	0	0	71
02:30 PM	43	0	43	0	32	32	0	0	0	75
02:45 PM	57	9	66	2	87	89	0	0	0	155
Total	146	14	160	5	193	198	0	0	0	358
03:00 PM	57	12	69	2	62	64	0	0	0	133
03:15 PM	66	12	78	2	37	39	0	0	0	117
03:30 PM	54	17	71	4	43	47	0	0	0	118
03:45 PM	65	14	79	3	44	47	0	0	0	126
Total	242	55	297	11	186	197	0	0	0	494
Grand Total	388	69	457	16	379	395	0	0	0	852
Apprch %	84.9	15.1		4.1	95.9		0	0		
Total %	45.5	8.1	53.6	1.9	44.5	46.4	0	0	0	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	57	9	66	2	**87**	**89**	0	0	0	**155**
03:00 PM	57	12	69	2	62	64	0	0	0	133
03:15 PM	**66**	12	**78**	2	37	39	0	0	0	117
03:30 PM	54	**17**	71	**4**	43	47	0	0	0	118
Total Volume	234	50	284	10	229	239	0	0	0	523
% App. Total	82.4	17.6		4.2	95.8		0	0		
PHF	.886	.735	.910	.625	.658	.671	.000	.000	.000	.844

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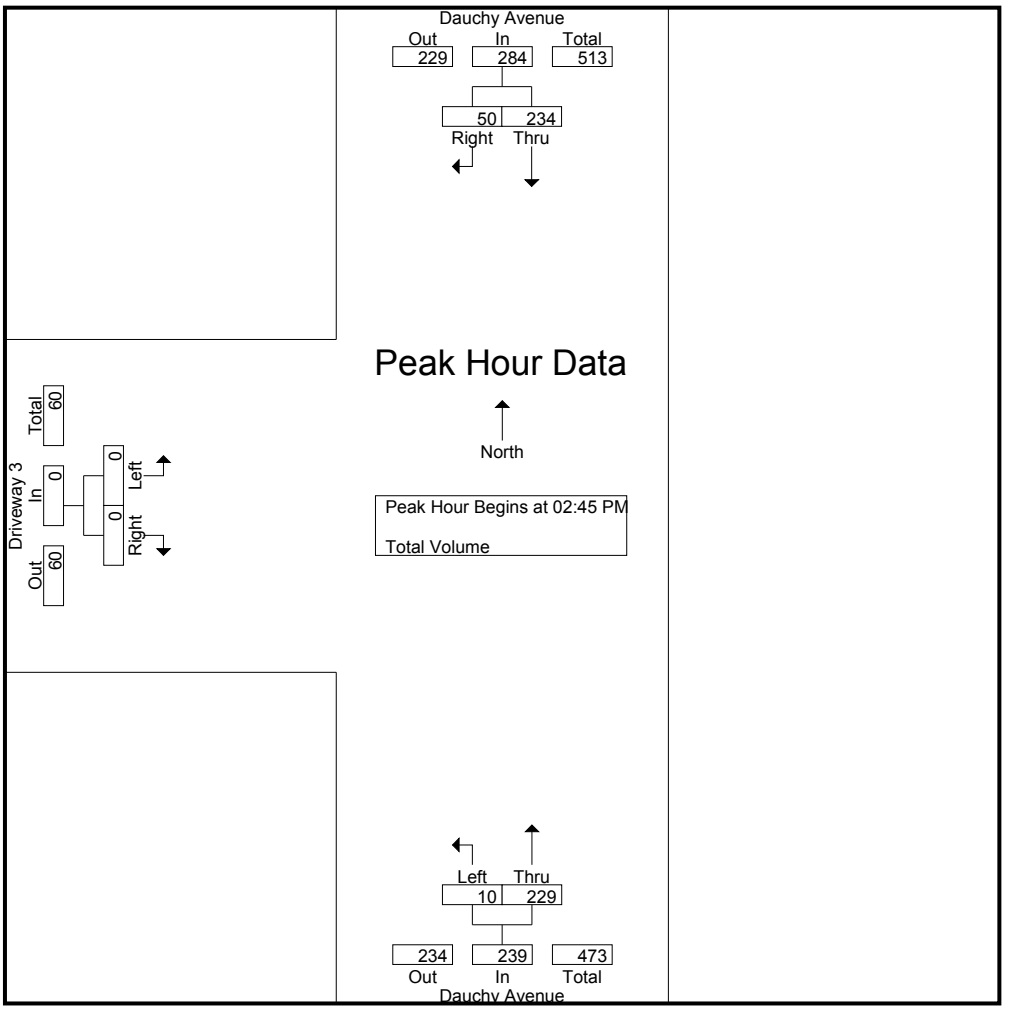

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM			02:45 PM			02:00 PM		
+0 mins.	57	12	69	2	**87**	**89**	0	0	0
+15 mins.	**66**	12	78	2	62	64	0	0	0
+30 mins.	54	**17**	71	2	37	39	0	0	0
+45 mins.	65	14	**79**	**4**	43	47	0	0	0
Total Volume	242	55	297	10	229	239	0	0	0
% App. Total	81.5	18.5		4.2	95.8		0	0	
PHF	.917	.809	.940	.625	.658	.671	.000	.000	.000

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City of Riverside
N/S: Dauchy Avenue
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File Name : 03_RIV_DY_DW3 AM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	15	17	32	3	61	64	0	0	0	96
07:15 AM	39	17	56	6	90	96	0	0	0	152
07:30 AM	50	17	67	3	73	76	0	0	0	143
07:45 AM	20	19	39	2	79	81	0	0	0	120
Total	124	70	194	14	303	317	0	0	0	511
08:00 AM	49	50	99	7	77	84	0	0	0	183
08:15 AM	51	28	79	3	91	94	0	0	0	173
08:30 AM	8	0	8	0	20	20	0	0	0	28
08:45 AM	11	0	11	0	15	15	0	0	0	26
Total	119	78	197	10	203	213	0	0	0	410
Grand Total	243	148	391	24	506	530	0	0	0	921
Apprch %	62.1	37.9		4.5	95.5		0	0		
Total %	26.4	16.1	42.5	2.6	54.9	57.5	0	0	0	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	50	17	67	3	73	76	0	0	0	143
07:45 AM	20	19	39	2	79	81	0	0	0	120
08:00 AM	49	**50**	**99**	**7**	77	84	0	0	0	**183**
08:15 AM	**51**	28	79	3	**91**	**94**	0	0	0	173
Total Volume	170	114	284	15	320	335	0	0	0	619
% App. Total	59.9	40.1		4.5	95.5		0	0		
PHF	.833	.570	.717	.536	.879	.891	.000	.000	.000	.846

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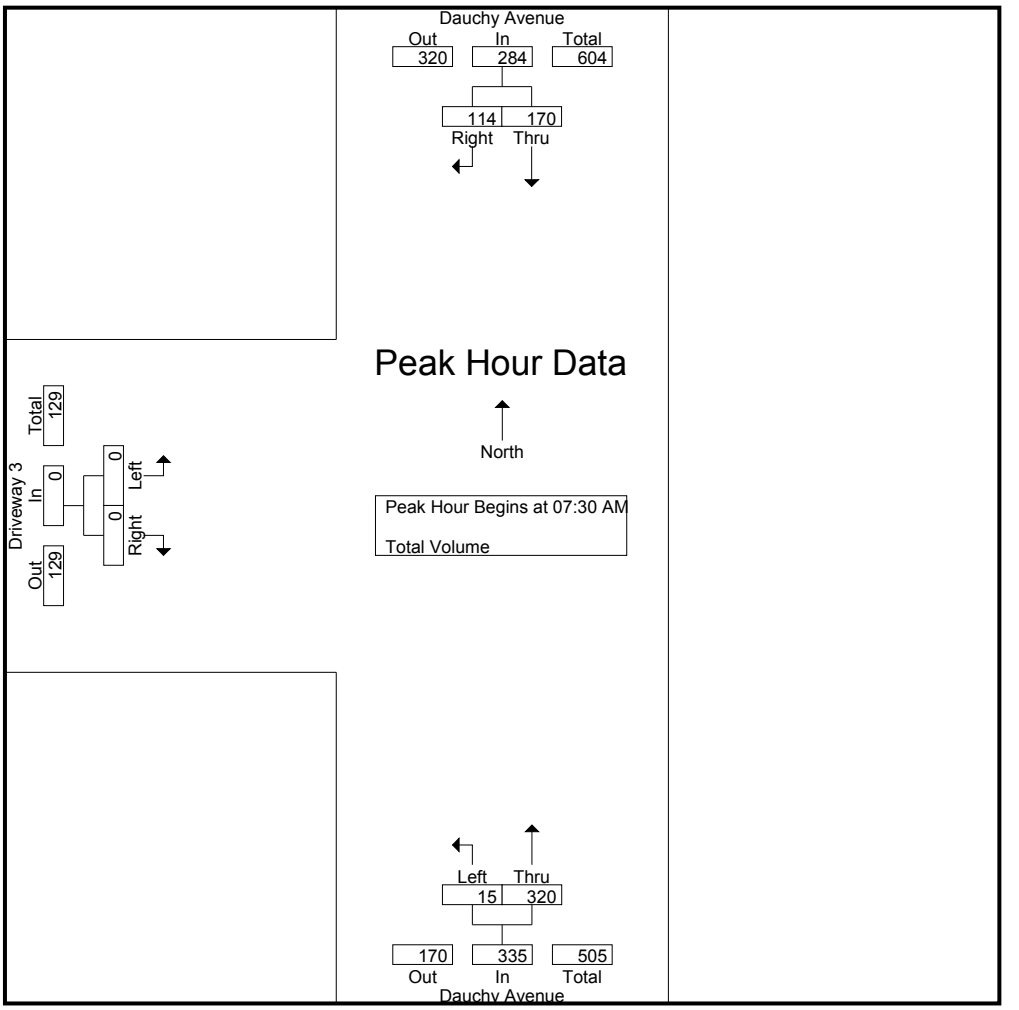

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:15 AM			07:00 AM		
+0 mins.	50	17	67	6	**90**	**96**	0	0	0
+15 mins.	20	19	39	3	73	76	0	0	0
+30 mins.	49	**50**	**99**	2	79	81	0	0	0
+45 mins.	**51**	28	79	**7**	77	84	0	0	0
Total Volume	170	114	284	18	319	337	0	0	0
% App. Total	59.9	40.1		5.3	94.7		0	0	
PHF	.833	.570	.717	.643	.886	.878	.000	.000	.000

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 3
Weather: Clear

File Name : 03_RIV_DY_DW3 PM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	25	2	27	0	52	52	0	0	0	79
02:15 PM	32	2	34	0	22	22	0	0	0	56
02:30 PM	46	3	49	1	32	33	0	0	0	82
02:45 PM	50	10	60	1	67	68	0	0	0	128
Total	153	17	170	2	173	175	0	0	0	345
03:00 PM	51	20	71	2	66	68	0	0	0	139
03:15 PM	33	11	44	3	41	44	0	0	0	88
03:30 PM	47	25	72	5	31	36	0	0	0	108
03:45 PM	44	7	51	3	42	45	0	0	0	96
Total	175	63	238	13	180	193	0	0	0	431
Grand Total	328	80	408	15	353	368	0	0	0	776
Apprch %	80.4	19.6		4.1	95.9		0	0		
Total %	42.3	10.3	52.6	1.9	45.5	47.4	0	0	0	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 3 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	50	10	60	1	**67**	**68**	0	0	0	128
03:00 PM	**51**	20	71	2	66	68	0	0	0	**139**
03:15 PM	33	11	44	3	41	44	0	0	0	88
03:30 PM	47	**25**	**72**	**5**	31	36	0	0	0	108
Total Volume	181	66	247	11	205	216	0	0	0	463
% App. Total	73.3	26.7		5.1	94.9		0	0		
PHF	.887	.660	.858	.550	.765	.794	.000	.000	.000	.833

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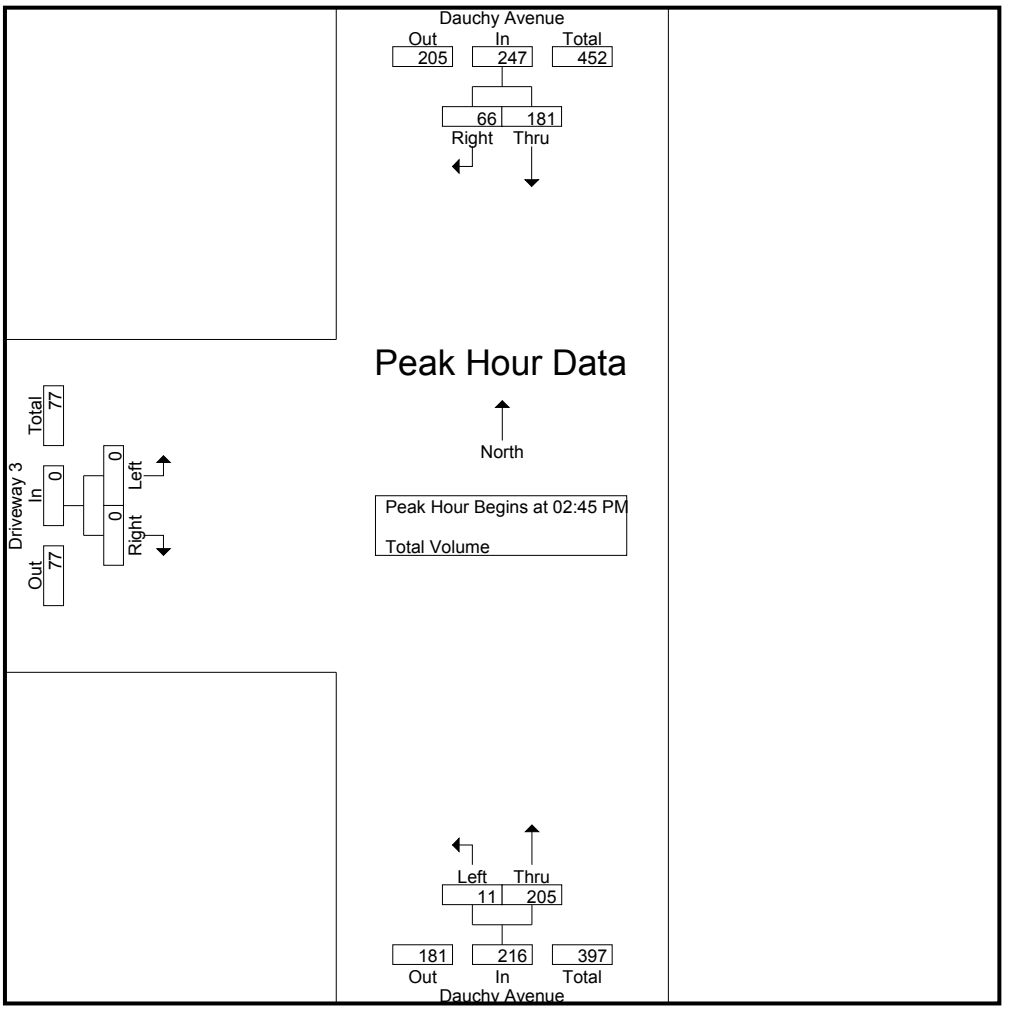
Weather: Clear

File Name : 03_RIV_DY_DW3 PM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 2



Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM			02:45 PM			02:00 PM		
+0 mins.	50	10	60	1	**67**	**68**	0	0	0
+15 mins.	**51**	20	71	2	66	68	0	0	0
+30 mins.	33	11	44	3	41	44	0	0	0
+45 mins.	47	**25**	**72**	**5**	31	36	0	0	0
Total Volume	181	66	247	11	205	216	0	0	0
% App. Total	73.3	26.7		5.1	94.9		0	0	
PHF	.887	.660	.858	.550	.765	.794	.000	.000	.000

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City of Riverside
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E/W: Driveway 4
Weather: Clear

File Name : 04_RIV_DY_DW4 AM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	18	5	23	3	49	52	15	2	17	92
07:15 AM	37	0	37	1	69	70	12	2	14	121
07:30 AM	44	2	46	1	77	78	7	2	9	133
07:45 AM	21	4	25	6	57	63	27	4	31	119
Total	120	11	131	11	252	263	61	10	71	465
08:00 AM	28	20	48	14	37	51	43	14	57	156
08:15 AM	29	17	46	13	41	54	49	17	66	166
08:30 AM	8	0	8	0	19	19	1	0	1	28
08:45 AM	11	0	11	0	18	18	0	0	0	29
Total	76	37	113	27	115	142	93	31	124	379
Grand Total	196	48	244	38	367	405	154	41	195	844
Apprch %	80.3	19.7		9.4	90.6		79	21		
Total %	23.2	5.7	28.9	4.5	43.5	48	18.2	4.9	23.1	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**44**	2	46	1	**77**	**78**	7	2	9	133
07:45 AM	21	4	25	6	57	63	27	4	31	119
08:00 AM	28	**20**	**48**	**14**	37	51	43	14	57	156
08:15 AM	29	17	46	13	41	54	**49**	**17**	**66**	**166**
Total Volume	122	43	165	34	212	246	126	37	163	574
% App. Total	73.9	26.1		13.8	86.2		77.3	22.7		
PHF	.693	.538	.859	.607	.688	.788	.643	.544	.617	.864

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File Name : 04_RIV_DY_DW4 AM14
Site Code : 00321595
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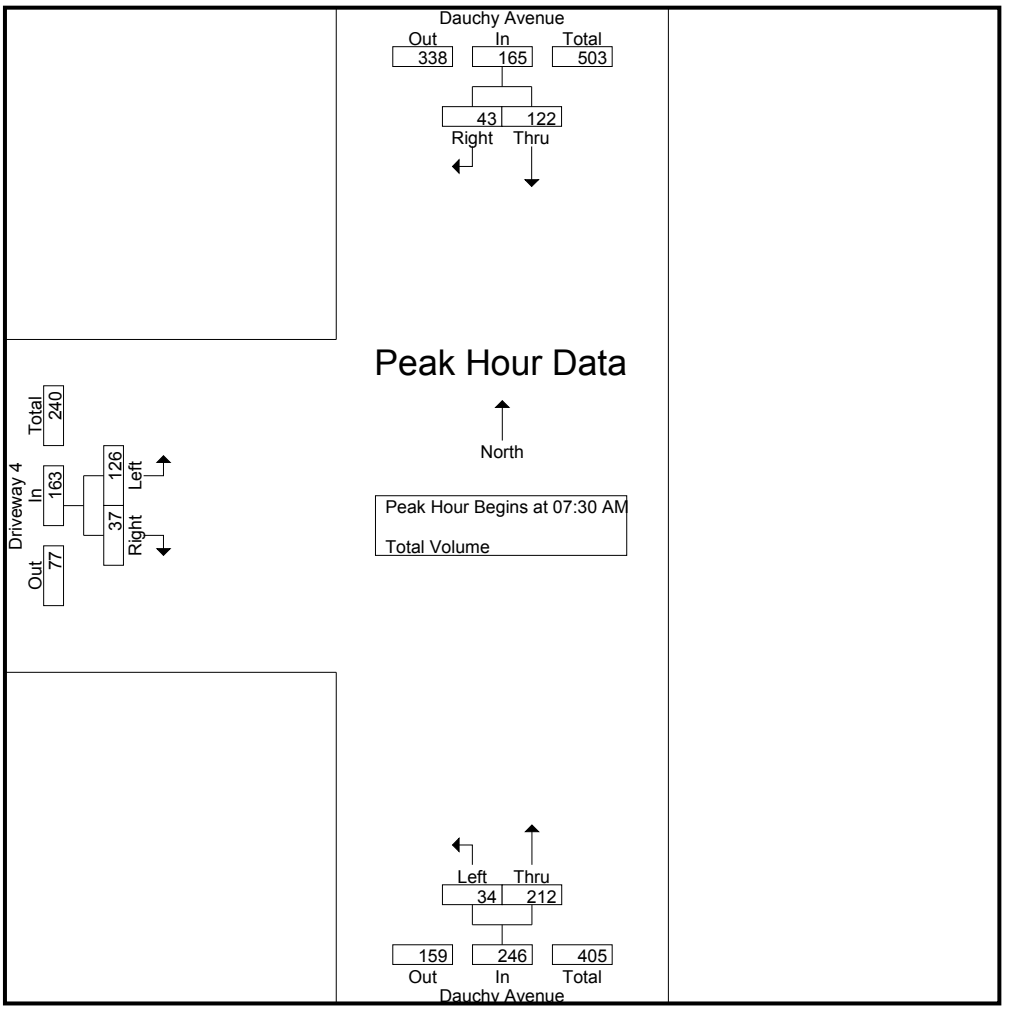

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:30 AM		
+0 mins.	**44**	2	46	3	49	52	7	2	9
+15 mins.	21	4	25	1	69	70	27	4	31
+30 mins.	28	**20**	**48**	1	**77**	**78**	43	14	57
+45 mins.	29	17	46	**6**	57	63	**49**	**17**	**66**
Total Volume	122	43	165	11	252	263	126	37	163
% App. Total	73.9	26.1		4.2	95.8		77.3	22.7	
PHF	.693	.538	.859	.458	.818	.843	.643	.544	.617

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E/W: Driveway 4
Weather: Clear

File Name : 04_RIV_DY_DW4 PM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	23	1	24	0	26	26	0	0	0	50
02:15 PM	20	1	21	1	44	45	2	6	8	74
02:30 PM	29	8	37	2	30	32	1	0	1	70
02:45 PM	52	7	59	6	55	61	29	9	38	158
Total	124	17	141	9	155	164	32	15	47	352
03:00 PM	56	0	56	2	39	41	23	9	32	129
03:15 PM	64	1	65	1	21	22	16	3	19	106
03:30 PM	51	0	51	2	25	27	22	4	26	104
03:45 PM	62	2	64	2	26	28	21	13	34	126
Total	233	3	236	7	111	118	82	29	111	465
Grand Total	357	20	377	16	266	282	114	44	158	817
Apprch %	94.7	5.3		5.7	94.3		72.2	27.8		
Total %	43.7	2.4	46.1	2	32.6	34.5	14	5.4	19.3	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	52	**7**	59	**6**	**55**	**61**	**29**	**9**	**38**	**158**
03:00 PM	56	0	56	2	39	41	23	9	32	129
03:15 PM	**64**	1	**65**	1	21	22	16	3	19	106
03:30 PM	51	0	51	2	25	27	22	4	26	104
Total Volume	223	8	231	11	140	151	90	25	115	497
% App. Total	96.5	3.5		7.3	92.7		78.3	21.7		
PHF	.871	.286	.888	.458	.636	.619	.776	.694	.757	.786

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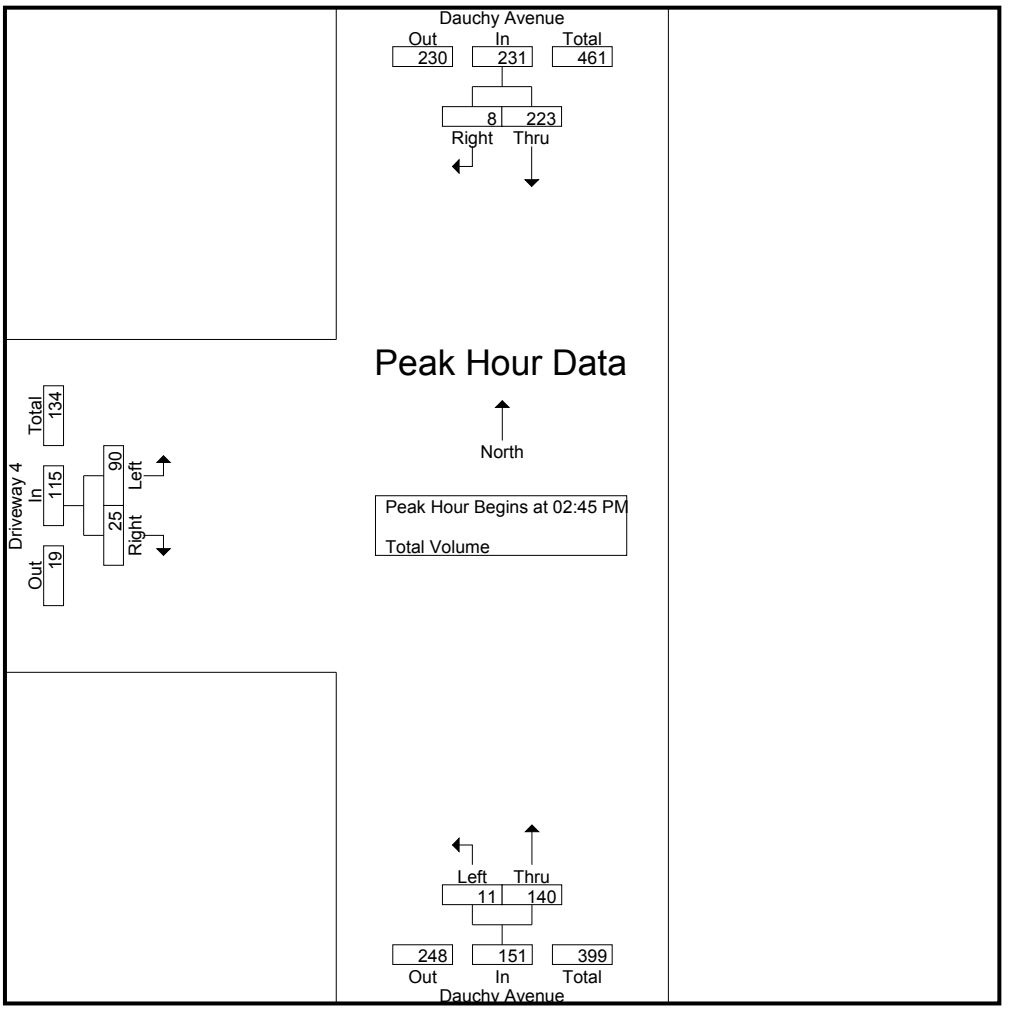

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM			02:15 PM			02:45 PM		
+0 mins.	56	0	56	1	44	45	**29**	**9**	**38**
+15 mins.	**64**	1	**65**	2	30	32	23	9	32
+30 mins.	51	0	51	**6**	**55**	**61**	16	3	19
+45 mins.	62	**2**	64	2	39	41	22	4	26
Total Volume	233	3	236	11	168	179	90	25	115
% App. Total	98.7	1.3		6.1	93.9		78.3	21.7	
PHF	.910	.375	.908	.458	.764	.734	.776	.694	.757

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 4
Weather: Clear

File Name : 04_RIV_DY_DW4 AM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	13	2	15	2	47	49	15	1	16	80
07:15 AM	35	2	37	1	80	81	16	8	24	142
07:30 AM	51	1	52	1	68	69	5	4	9	130
07:45 AM	18	2	20	3	57	60	26	6	32	112
Total	117	7	124	7	252	259	62	19	81	464
08:00 AM	20	26	46	19	42	61	42	16	58	165
08:15 AM	31	17	48	15	39	54	52	15	67	169
08:30 AM	8	0	8	0	18	18	0	0	0	26
08:45 AM	10	0	10	1	14	15	0	0	0	25
Total	69	43	112	35	113	148	94	31	125	385
Grand Total	186	50	236	42	365	407	156	50	206	849
Apprch %	78.8	21.2		10.3	89.7		75.7	24.3		
Total %	21.9	5.9	27.8	4.9	43	47.9	18.4	5.9	24.3	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	**51**	1	**52**	1	**68**	**69**	5	4	9	130
07:45 AM	18	2	20	3	57	60	26	6	32	112
08:00 AM	20	**26**	46	**19**	42	61	42	**16**	58	165
08:15 AM	31	17	48	15	39	54	**52**	15	**67**	**169**
Total Volume	120	46	166	38	206	244	125	41	166	576
% App. Total	72.3	27.7		15.6	84.4		75.3	24.7		
PHF	.588	.442	.798	.500	.757	.884	.601	.641	.619	.852

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 4
Weather: Clear

File Name : 04_RIV_DY_DW4 AM19
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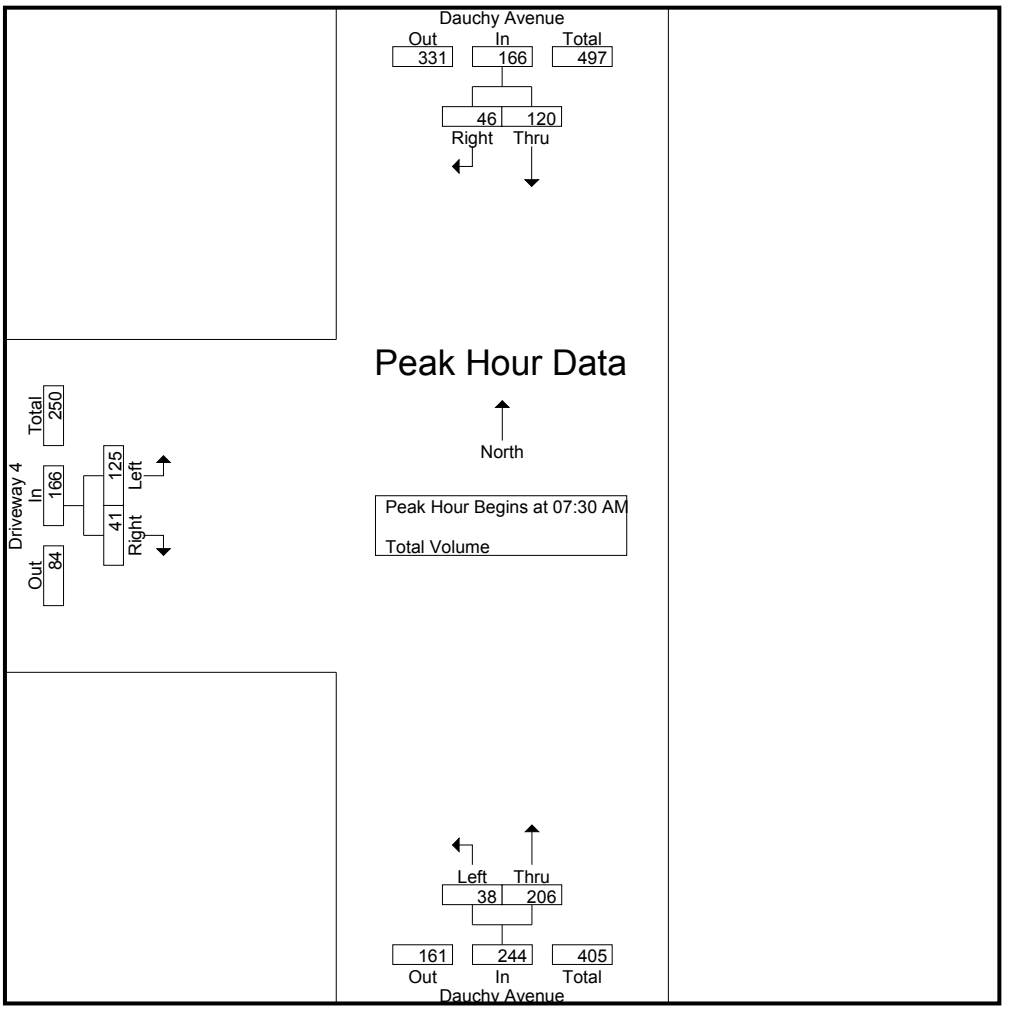

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:15 AM			07:30 AM		
+0 mins.	**51**	1	**52**	1	**80**	**81**	5	4	9
+15 mins.	18	2	20	1	68	69	26	6	32
+30 mins.	20	**26**	46	3	57	60	42	**16**	58
+45 mins.	31	17	48	**19**	42	61	**52**	15	**67**
Total Volume	120	46	166	24	247	271	125	41	166
% App. Total	72.3	27.7		8.9	91.1		75.3	24.7	
PHF	.588	.442	.798	.316	.772	.836	.601	.641	.619

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 4
Weather: Clear

File Name : 04_RIV_DY_DW4 PM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	20	2	22	0	50	50	1	0	1	73
02:15 PM	27	3	30	1	23	24	0	0	0	54
02:30 PM	32	8	40	2	31	33	1	1	2	75
02:45 PM	42	10	52	5	31	36	34	17	51	139
Total	121	23	144	8	135	143	36	18	54	341
03:00 PM	46	2	48	6	27	33	41	17	58	139
03:15 PM	32	1	33	1	26	27	16	3	19	79
03:30 PM	46	0	46	2	20	22	15	5	20	88
03:45 PM	42	1	43	0	26	26	18	10	28	97
Total	166	4	170	9	99	108	90	35	125	403
Grand Total	287	27	314	17	234	251	126	53	179	744
Apprch %	91.4	8.6		6.8	93.2		70.4	29.6		
Total %	38.6	3.6	42.2	2.3	31.5	33.7	16.9	7.1	24.1	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 4 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	42	**10**	**52**	5	**31**	**36**	34	**17**	51	**139**
03:00 PM	**46**	2	48	**6**	27	33	**41**	17	**58**	139
03:15 PM	32	1	33	1	26	27	16	3	19	79
03:30 PM	46	0	46	2	20	22	15	5	20	88
Total Volume	166	13	179	14	104	118	106	42	148	445
% App. Total	92.7	7.3		11.9	88.1		71.6	28.4		
PHF	.902	.325	.861	.583	.839	.819	.646	.618	.638	.800

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E/W: Driveway 4
Weather: Clear

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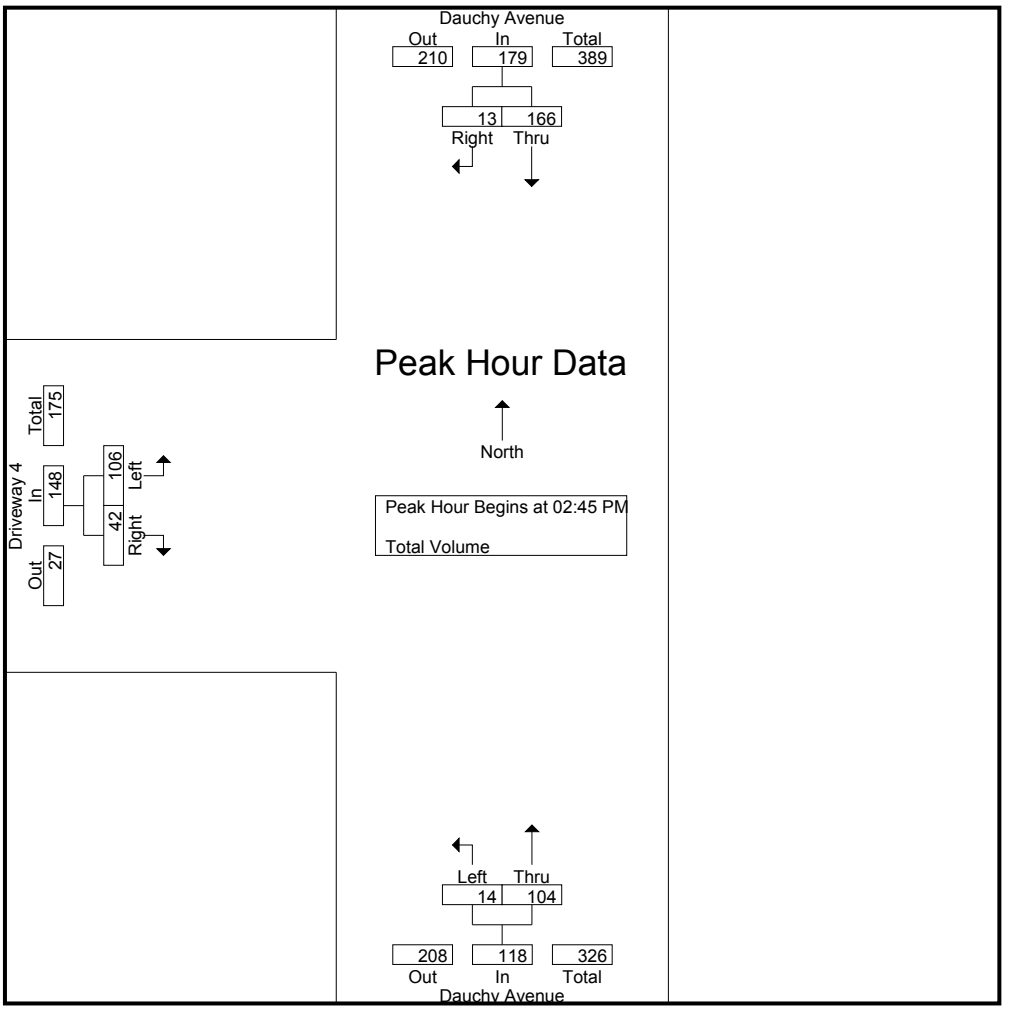

Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM			02:00 PM			02:45 PM		
+0 mins.	42	**10**	**52**	0	**50**	**50**	34	**17**	51
+15 mins.	**46**	2	48	1	23	24	**41**	17	**58**
+30 mins.	32	1	33	2	31	33	16	3	19
+45 mins.	46	0	46	**5**	31	36	15	5	20
Total Volume	166	13	179	8	135	143	106	42	148
% App. Total	92.7	7.3		5.6	94.4		71.6	28.4	
PHF	.902	.325	.861	.400	.675	.715	.646	.618	.638

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E/W: Driveway 5
Weather: Clear

File Name : 05_RIV_DY_DW5 AM14
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Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	20	0	20	2	53	55	0	0	0	75
07:15 AM	39	0	39	0	66	66	0	0	0	105
07:30 AM	46	0	46	0	75	75	0	0	0	121
07:45 AM	26	0	26	0	64	64	1	0	1	91
Total	131	0	131	2	258	260	1	0	1	392
08:00 AM	41	0	41	0	51	51	0	0	0	92
08:15 AM	46	0	46	0	49	49	0	0	0	95
08:30 AM	7	0	7	0	18	18	0	0	0	25
08:45 AM	10	1	11	0	17	17	0	0	0	28
Total	104	1	105	0	135	135	0	0	0	240
Grand Total	235	1	236	2	393	395	1	0	1	632
Apprch %	99.6	0.4		0.5	99.5		100	0		
Total %	37.2	0.2	37.3	0.3	62.2	62.5	0.2	0	0.2	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	39	0	39	0	66	66	0	0	0	105
07:30 AM	**46**	0	**46**	0	**75**	**75**	0	0	0	**121**
07:45 AM	26	0	26	0	64	64	**1**	0	**1**	91
08:00 AM	41	0	41	0	51	51	0	0	0	92
Total Volume	152	0	152	0	256	256	1	0	1	409
% App. Total	100	0		0	100		100	0		
PHF	.826	.000	.826	.000	.853	.853	.250	.000	.250	.845

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Weather: Clear

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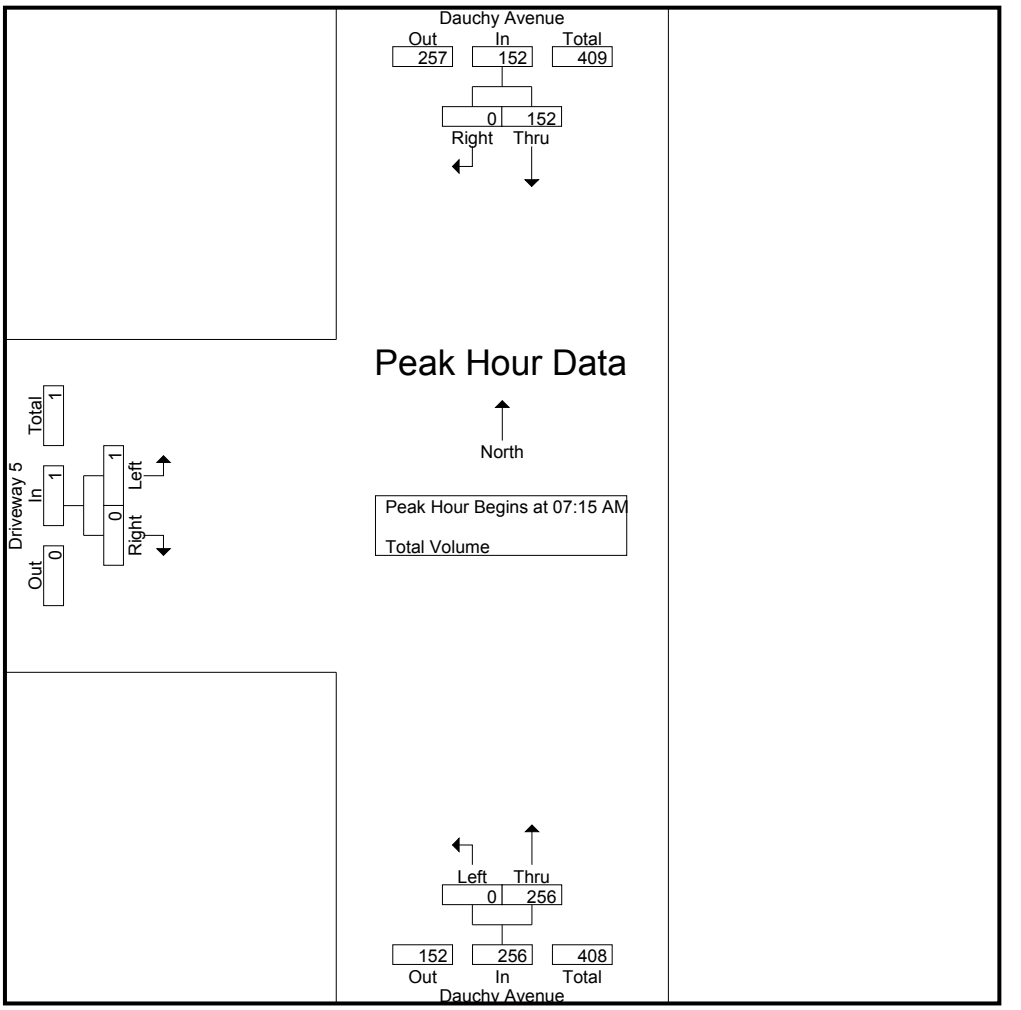

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:00 AM			07:00 AM		
+0 mins.	**46**	0	**46**	**2**	53	55	0	0	0
+15 mins.	26	0	26	0	66	66	0	0	0
+30 mins.	41	0	41	0	**75**	**75**	0	0	0
+45 mins.	46	0	46	0	64	64	**1**	0	**1**
Total Volume	159	0	159	2	258	260	1	0	1
% App. Total	100	0		0.8	99.2		100	0	
PHF	.864	.000	.864	.250	.860	.867	.250	.000	.250

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 5
Weather: Clear

File Name : 05_RIV_DY_DW5 PM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	22	0	22	0	28	28	0	1	1	51
02:15 PM	25	0	25	0	45	45	0	0	0	70
02:30 PM	25	0	25	1	30	31	0	0	0	56
02:45 PM	59	0	59	0	57	57	0	0	0	116
Total	131	0	131	1	160	161	0	1	1	293
03:00 PM	64	0	64	0	37	37	0	0	0	101
03:15 PM	62	2	64	0	21	21	0	0	0	85
03:30 PM	50	2	52	0	28	28	0	0	0	80
03:45 PM	76	1	77	0	27	27	1	0	1	105
Total	252	5	257	0	113	113	1	0	1	371
Grand Total	383	5	388	1	273	274	1	1	2	664
Apprch %	98.7	1.3		0.4	99.6		50	50		
Total %	57.7	0.8	58.4	0.2	41.1	41.3	0.2	0.2	0.3	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	59	0	59	0	**57**	**57**	0	0	0	**116**
03:00 PM	**64**	0	**64**	0	37	37	0	0	0	101
03:15 PM	62	**2**	64	0	21	21	0	0	0	85
03:30 PM	50	2	52	0	28	28	0	0	0	80
Total Volume	235	4	239	0	143	143	0	0	0	382
% App. Total	98.3	1.7		0	100		0	0		
PHF	.918	.500	.934	.000	.627	.627	.000	.000	.000	.823

Counts Unlimited, Inc.
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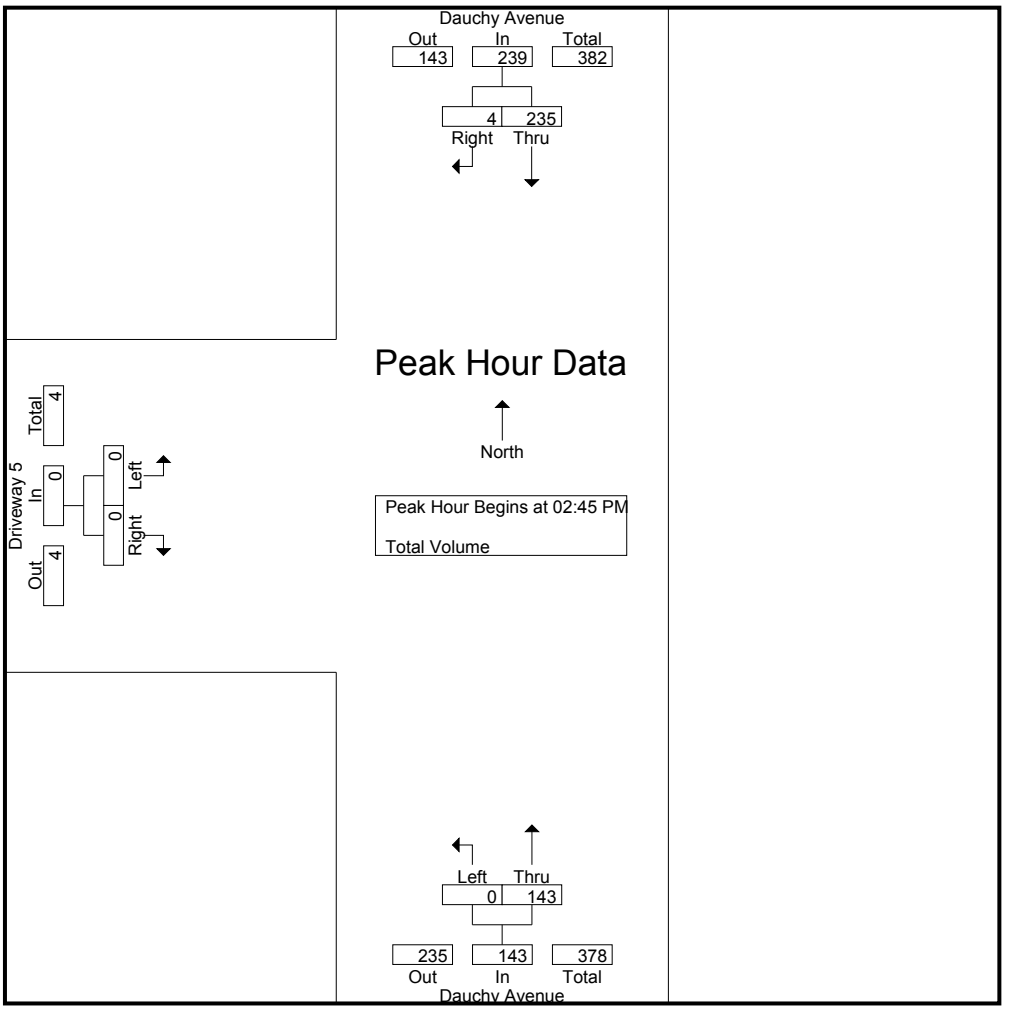
City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 5
Weather: Clear

File Name : 05_RIV_DY_DW5 PM14
Site Code : 00321595
Start Date : 10/14/2021
Page No : 2



Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM			02:15 PM			02:00 PM		
+0 mins.	64	0	64	0	45	45	0	**1**	**1**
+15 mins.	62	**2**	64	**1**	30	31	0	0	0
+30 mins.	50	2	52	0	**57**	**57**	0	0	0
+45 mins.	**76**	1	**77**	0	37	37	0	0	0
Total Volume	252	5	257	1	169	170	0	1	1
% App. Total	98.1	1.9		0.6	99.4		0	100	
PHF	.829	.625	.834	.250	.741	.746	.000	.250	.250

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 5
Weather: Clear

File Name : 05_RIV_DY_DW5 AM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	11	0	11	0	49	49	0	0	0	60
07:15 AM	43	0	43	0	78	78	0	0	0	121
07:30 AM	55	0	55	0	67	67	0	0	0	122
07:45 AM	23	1	24	0	60	60	0	0	0	84
Total	132	1	133	0	254	254	0	0	0	387
08:00 AM	35	0	35	0	60	60	1	0	1	96
08:15 AM	42	1	43	0	51	51	0	0	0	94
08:30 AM	8	0	8	0	18	18	0	0	0	26
08:45 AM	10	0	10	0	16	16	0	0	0	26
Total	95	1	96	0	145	145	1	0	1	242
Grand Total	227	2	229	0	399	399	1	0	1	629
Apprch %	99.1	0.9		0	100		100	0		
Total %	36.1	0.3	36.4	0	63.4	63.4	0.2	0	0.2	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	43	0	43	0	**78**	**78**	0	0	0	121
07:30 AM	**55**	0	**55**	0	67	67	0	0	0	**122**
07:45 AM	23	**1**	24	0	60	60	0	0	0	84
08:00 AM	35	0	35	0	60	60	**1**	0	**1**	96
Total Volume	156	1	157	0	265	265	1	0	1	423
% App. Total	99.4	0.6		0	100		100	0		
PHF	.709	.250	.714	.000	.849	.849	.250	.000	.250	.867

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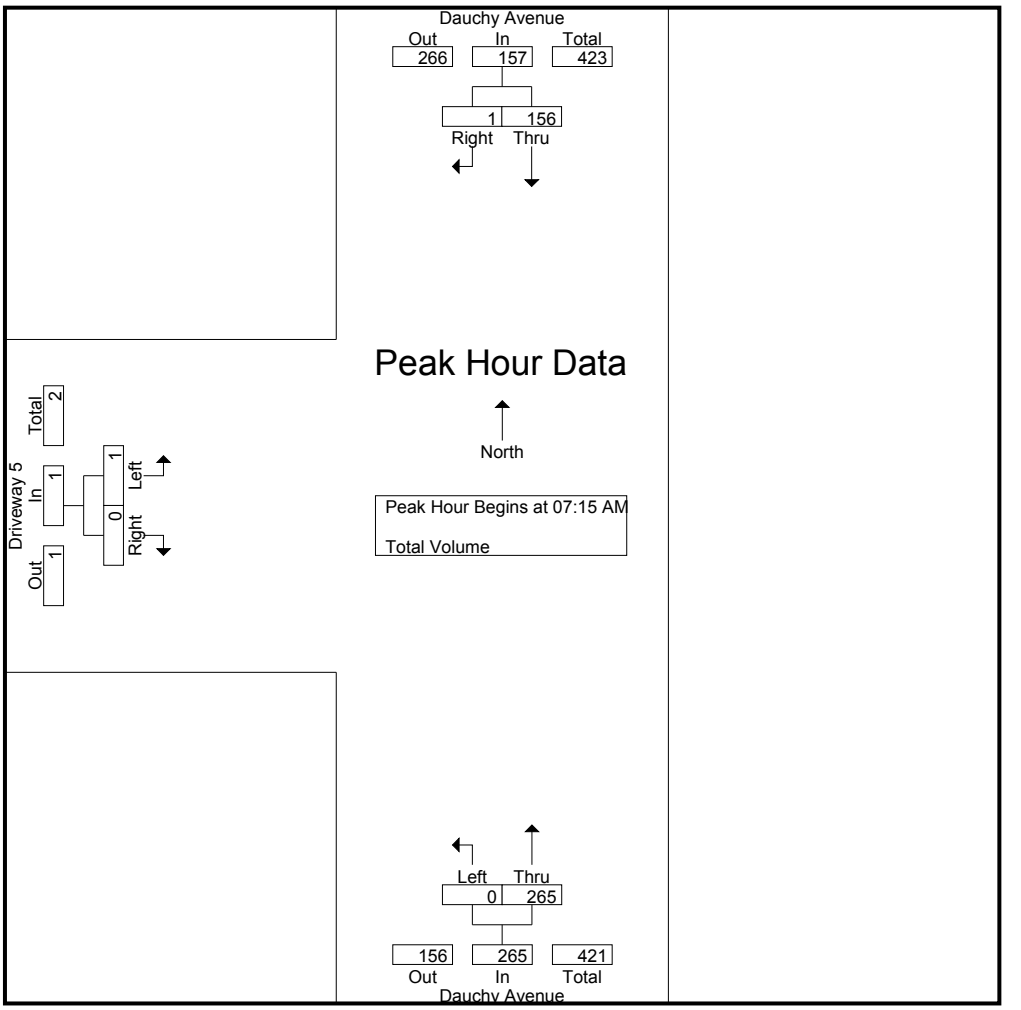
File Name : 05_RIV_DY_DW5 AM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	43	0	43	0	**78**	**78**	0	0	0
+15 mins.	**55**	0	**55**	0	67	67	0	0	0
+30 mins.	23	**1**	24	0	60	60	0	0	0
+45 mins.	35	0	35	0	60	60	**1**	0	**1**
Total Volume	156	1	157	0	265	265	1	0	1
% App. Total	99.4	0.6		0	100		100	0	
PHF	.709	.250	.714	.000	.849	.849	.250	.000	.250

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City of Riverside
N/S: Dauchy Avenue
E/W: Driveway 5
Weather: Clear

File Name : 05_RIV_DY_DW5 PM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 1

Groups Printed- Total Volume

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
02:00 PM	17	1	18	0	49	49	0	0	0	67
02:15 PM	27	0	27	0	24	24	0	0	0	51
02:30 PM	29	0	29	1	29	30	2	0	2	61
02:45 PM	56	0	56	1	32	33	1	0	1	90
Total	129	1	130	2	134	136	3	0	3	269
03:00 PM	66	0	66	0	33	33	0	0	0	99
03:15 PM	36	0	36	0	26	26	2	0	2	64
03:30 PM	47	0	47	0	22	22	0	0	0	69
03:45 PM	51	0	51	0	27	27	0	0	0	78
Total	200	0	200	0	108	108	2	0	2	310
Grand Total	329	1	330	2	242	244	5	0	5	579
Apprch %	99.7	0.3		0.8	99.2		100	0		
Total %	56.8	0.2	57	0.3	41.8	42.1	0.9	0	0.9	

	Dauchy Avenue Southbound			Dauchy Avenue Northbound			Driveway 5 Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:45 PM										
02:45 PM	56	0	56	**1**	32	**33**	1	0	1	90
03:00 PM	**66**	0	**66**	0	**33**	33	0	0	0	**99**
03:15 PM	36	0	36	0	26	26	**2**	0	**2**	64
03:30 PM	47	0	47	0	22	22	0	0	0	69
Total Volume	205	0	205	1	113	114	3	0	3	322
% App. Total	100	0		0.9	99.1		100	0		
PHF	.777	.000	.777	.250	.856	.864	.375	.000	.375	.813

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City of Riverside
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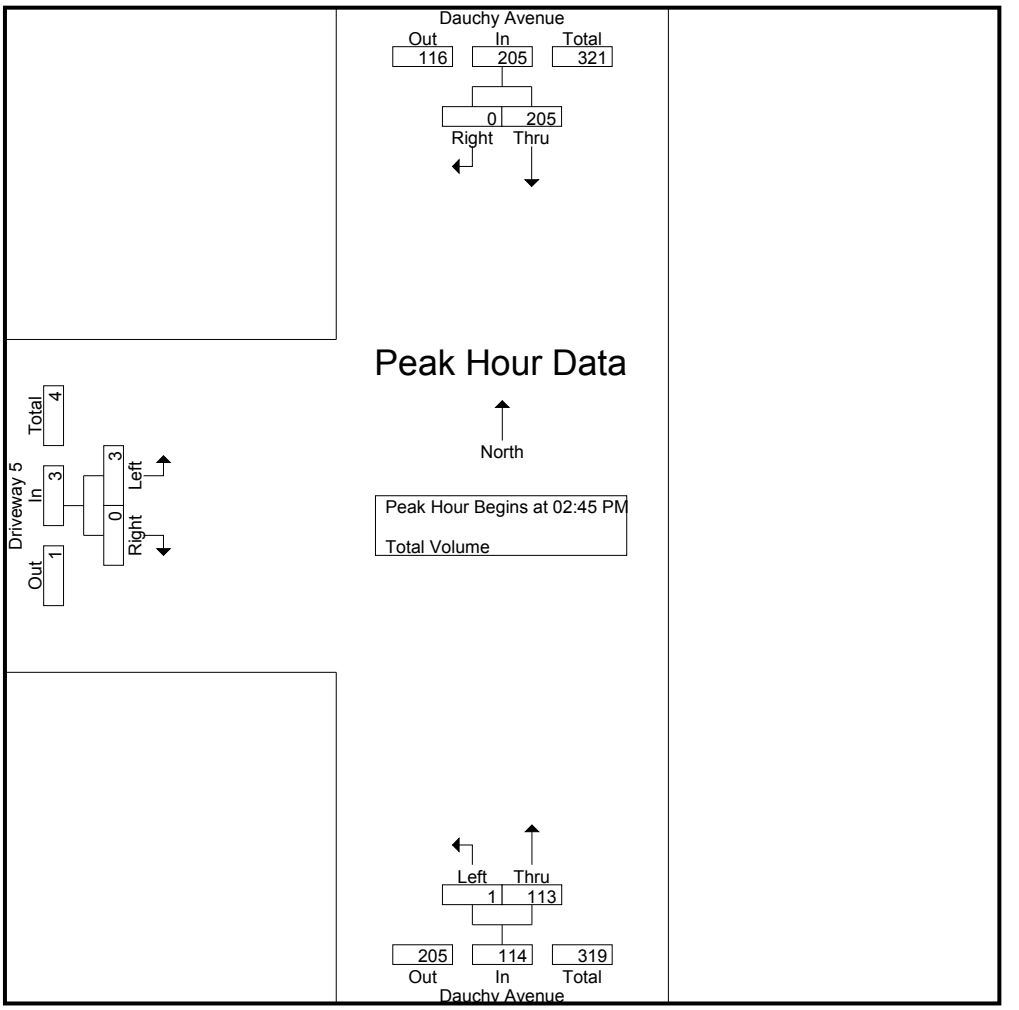
File Name : 05_RIV_DY_DW5 PM19
Site Code : 00321595
Start Date : 10/19/2021
Page No : 2



Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:45 PM			02:00 PM			02:30 PM		
+0 mins.	56	0	56	0	**49**	**49**	**2**	0	**2**
+15 mins.	**66**	0	**66**	0	24	24	1	0	1
+30 mins.	36	0	36	**1**	29	30	0	0	0
+45 mins.	47	0	47	1	32	33	2	0	2
Total Volume	205	0	205	2	134	136	5	0	5
% App. Total	100	0		1.5	98.5		100	0	
PHF	.777	.000	.777	.500	.684	.694	.625	.000	.625

Counts Unlimited, Inc.

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City of Riverside
Van Buren Boulevard
B/ Little Court - Dauchy Avenue
24 Hour Directional Volume Count

RIV002
Site Code: 003-21719B

Start Time	18-Nov-21 Thu	Eastbound Morning	Eastbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Westbound Morning	Westbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		52	247			42	252				
12:15		43	228			37	256				
12:30		34	228			32	228				
12:45		59	279	188	982	21	258	132	994	320	1976
01:00		36	256			23	257				
01:15		38	260			21	267				
01:30		42	282			14	253				
01:45		39	274	155	1072	22	290	80	1067	235	2139
02:00		20	271			32	279				
02:15		25	292			20	314				
02:30		25	313			25	291				
02:45		29	310	99	1186	30	**442**	107	1326	206	2512
03:00		29	312			33	**368**				
03:15		23	353			44	**359**				
03:30		34	349			53	**385**				
03:45		36	391	122	1405	57	386	187	1498	309	2903
04:00		41	**432**			71	396				
04:15		71	**377**			130	369				
04:30		87	**417**			167	380				
04:45		82	**400**	281	1626	157	328	525	1473	806	3099
05:00		86	397			159	383				
05:15		114	400			180	417				
05:30		137	374			213	346				
05:45		147	406	484	1577	208	296	760	1442	1244	3019
06:00		129	370			264	343				
06:15		184	330			288	279				
06:30		214	294			321	281				
06:45		225	265	752	1259	392	281	1265	1184	2017	2443
07:00		**311**	274			361	261				
07:15		**346**	277			**390**	219				
07:30		**309**	213			**367**	167				
07:45		**269**	218	1235	982	**402**	183	1520	830	2755	1812
08:00		292	199			**381**	162				
08:15		297	197			388	107				
08:30		208	193			367	121				
08:45		240	179	1037	768	303	95	1439	485	2476	1253
09:00		189	181			266	120				
09:15		196	183			265	122				
09:30		198	145			282	99				
09:45		172	105	755	614	256	66	1069	407	1824	1021
10:00		207	118			235	59				
10:15		200	133			273	65				
10:30		214	102			239	59				
10:45		273	88	894	441	258	60	1005	243	1899	684
11:00		238	77			207	34				
11:15		222	60			259	43				
11:30		227	62			228	35				
11:45		236	49	923	248	263	31	957	143	1880	391
Total		6925	12160	6925	12160	9046	11092	9046	11092	15971	23252
Combined Total		19085		19085		20138		20138		39223	
AM Peak	-	07:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	1235	-	-	-	1540	-	-	-	-	-
P.H.F.		0.892				0.958					
PM Peak	-	-	04:00	-	-	-	02:45	-	-	-	-
Vol.	-	-	1626	-	-	-	1554	-	-	-	-
P.H.F.			0.941				0.879				
Percentage		36.3%	63.7%			44.9%	55.1%				
ADT/AADT		ADT 39,223		AADT 39,223							

Counts Unlimited, Inc.

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City of Riverside
Dauchy Avenue
B/ Van Buren Boulevard - Ardenwood Lane
24 Hour Directional Volume Count

RIV003
Site Code: 003-21719B

Start Time	18-Nov-21 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		8	27			7	29				
12:15		4	28			6	27				
12:30		2	36			3	24				
12:45		2	30	16	121	4	47	20	127	36	248
01:00		2	40			2	31				
01:15		0	29			0	38				
01:30		0	33			4	38				
01:45		2	43	4	145	3	39	9	146	13	291
02:00		1	45			2	45				
02:15		1	31			1	58				
02:30		0	29			0	**88**				
02:45		2	**118**	4	223	1	**83**	4	274	8	497
03:00		1	**119**			0	**69**				
03:15		0	**52**			1	**76**				
03:30		2	**53**			0	54				
03:45		0	52	3	276	0	78	1	277	4	553
04:00		8	43			3	56				
04:15		7	40			0	51				
04:30		6	34			1	59				
04:45		7	56	28	173	8	73	12	239	40	412
05:00		9	52			3	54				
05:15		10	37			4	60				
05:30		7	28			4	45				
05:45		15	33	41	150	5	69	16	228	57	378
06:00		21	58			10	86				
06:15		19	36			12	57				
06:30		32	40			13	58				
06:45		35	42	107	176	29	52	64	253	171	429
07:00		58	21			57	38				
07:15		90	35			54	36				
07:30		**93**	42			**71**	27				
07:45		**105**	64	346	162	**77**	31	259	132	605	294
08:00		**89**	20			**158**	29				
08:15		**124**	15			**110**	24				
08:30		36	12			16	17				
08:45		27	23	276	70	17	12	301	82	577	152
09:00		25	25			10	22				
09:15		24	14			12	13				
09:30		33	8			21	12				
09:45		27	12	109	59	20	12	63	59	172	118
10:00		17	4			20	9				
10:15		22	7			19	12				
10:30		21	0			25	9				
10:45		35	7	95	18	29	10	93	40	188	58
11:00		27	0			29	6				
11:15		26	5			20	5				
11:30		29	1			21	9				
11:45		23	2	105	8	33	0	103	20	208	28
Total		1134	1581	1134	1581	945	1877	945	1877	2079	3458
Combined Total		2715		2715		2822		2822		5537	
AM Peak	-	07:30	-	-	-	07:30	-	-	-	-	-
Vol.	-	411	-	-	-	416	-	-	-	-	-
P.H.F.		0.829				0.658					
PM Peak	-	-	02:45	-	-	-	02:30	-	-	-	-
Vol.	-	-	342	-	-	-	316	-	-	-	-
P.H.F.			0.718				0.898				
Percentage		41.8%	58.2%			33.5%	66.5%				
ADT/AADT		ADT 5,537		AADT 5,537							

Counts Unlimited, Inc.

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City of Riverside
Dauchy Avenue
B/ Ardenwood Lane - Hawksbury Drive
24 Hour Directional Volume Count

RIV004
Site Code: 003-21719B

Start Time	18-Nov-21 Thu	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	18			5	21				
12:15		2	14			4	25				
12:30		0	22			2	26				
12:45		0	20	3	74	4	33	15	105	18	179
01:00		1	24			2	37				
01:15		0	12			0	42				
01:30		0	19			3	24				
01:45		1	17	2	72	2	28	7	131	9	203
02:00		1	37			3	32				
02:15		0	19			2	32				
02:30		0	**30**			0	27				
02:45		3	**51**	4	137	0	**55**	5	146	9	283
03:00		0	**36**			0	**54**				
03:15		0	**32**			0	**62**				
03:30		0	26			1	**57**				
03:45		3	25	3	119	0	52	1	225	4	344
04:00		3	30			1	38				
04:15		3	29			0	32				
04:30		9	29			1	35				
04:45		1	40	16	128	0	30	2	135	18	263
05:00		8	28			1	34				
05:15		8	29			2	41				
05:30		5	21			2	42				
05:45		9	26	30	104	3	24	8	141	38	245
06:00		11	19			7	31				
06:15		10	17			7	29				
06:30		20	14			8	32				
06:45		22	15	63	65	12	29	34	121	97	186
07:00		**49**	12			19	20				
07:15		**78**	10			**33**	34				
07:30		**75**	4			**39**	17				
07:45		**47**	11	249	37	**28**	19	119	90	368	127
08:00		37	18			**23**	23				
08:15		34	3			26	16				
08:30		22	11			10	14				
08:45		11	3	104	35	10	15	69	68	173	103
09:00		16	7			8	16				
09:15		13	4			11	5				
09:30		21	4			13	11				
09:45		24	6	74	21	22	4	54	36	128	57
10:00		14	4			17	8				
10:15		16	6			11	7				
10:30		16	1			19	9				
10:45		20	4	66	15	17	3	64	27	130	42
11:00		25	1			15	15				
11:15		20	3			25	5				
11:30		14	2			40	9				
11:45		20	2	79	8	21	6	101	35	180	43
Total		693	815	693	815	479	1260	479	1260	1172	2075
Combined Total		1508		1508		1739		1739		3247	
AM Peak	-	07:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	249	-	-	-	123	-	-	-	-	-
P.H.F.		0.798				0.788					
PM Peak	-	-	02:30	-	-	-	02:45	-	-	-	-
Vol.	-	-	149	-	-	-	228	-	-	-	-
P.H.F.			0.730				0.919				
Percentage		46.0%	54.0%			27.5%	72.5%				
ADT/AADT		ADT 3,247		AADT 3,247							

Queue Count

LOCATION: Woodcrest Cristian - Main Lot
CITY: Riverside

DAY: Tuesday
DATE: 4/26/2022

TIME	Maximum Vehicle Queue	Maximum Queue Length
7:30	0	0'
7:35	2	50'
7:40	3	75'
7:45	2	50'
7:50	7	225'
7:55	2	50'
8:00	8	250'
8:05	8	250'
8:10	6	200'
8:15	15	350'
8:20	8	250'
8:25	0	0'
8:30	0	0'

TIME	Maximum Vehicle Queue	Maximum Queue Length
14:15	5	100'
14:20	5	100'
14:25	7	200'
14:30	14	350'
14:35	17	375'
14:40	19	400'
14:45	19	400'
14:50	15	350'
14:55	5	100'
15:00	5	100'
15:05	5	100'
15:10	3	75'
15:15	2	50'
15:20	2	50'
15:25	0	0'
15:30	3	75'
15:35	3	100'
15:40	0	0'
15:45	0	0'
15:50	1	25'
15:55	3	75'
16:00	1	25'
16:05	2	50'
16:10	2	50'
16:15	0	0'

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951-268-6268

Queue Count

LOCATION: Woodcrest Cristian - Rear Lot
CITY: Riverside

DAY: Tuesday
DATE: 4/26/2022

TIME	Maximum Vehicle Queue	Maximum Queue Length
7:30	2	50'
7:35	1	25'
7:40	1	25'
7:45	0	0'
7:50	4	100'
7:55	4	100'
8:00	5	150'
8:05	10	225'
8:10	12	250'
8:15	12	250'
8:20	10	225'
8:25	2	50'
8:30	0	0'

TIME	Maximum Vehicle Queue	Maximum Queue Length
14:15	3	75'
14:20	8	200'
14:25	8	200'
14:30	11	250'
14:35	11	250'
14:40	15	325'
14:45	20	450'
14:50	19	400'
14:55	16	350'
15:00	5	150'
15:05	6	150'
15:10	4	100'
15:15	5	100'
15:20	2	50'
15:25	4	100'
15:30	4	100'
15:35	5	125'
15:40	6	150'
15:45	4	100'
15:50	7	150'
15:55	8	200'
16:00	6	150'
16:05	4	100'
16:10	8	200'
16:15	4	100'

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City of Riverside
Dauchy Avenue
B/ Hawksbury Drive - Krameria Avenue
24 Hour Directional Speed Survey

RIVDAHAKR
Site Code: 003-21719A

Northbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/30/21	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3
01:00	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	1	1	1	0	0	0	0	0	0	0	3
03:00	0	0	0	2	1	1	0	0	0	0	0	0	0	0	4
04:00	0	1	0	2	1	4	2	0	0	0	0	0	0	0	10
05:00	0	1	2	1	1	3	0	0	0	0	0	0	0	0	8
06:00	2	3	4	10	2	4	0	0	0	0	0	0	0	0	25
07:00	8	5	32	51	44	16	2	0	0	0	0	0	0	0	158
08:00	6	2	11	39	31	10	0	0	0	0	0	0	0	0	99
09:00	0	1	3	11	19	6	2	1	0	0	0	0	0	0	43
10:00	2	1	1	15	13	6	1	0	0	0	0	0	0	0	39
11:00	2	2	6	24	38	21	7	1	0	0	0	0	0	0	101
12 PM	2	1	5	24	53	33	10	2	0	0	0	0	0	0	130
13:00	4	1	5	24	33	14	3	0	0	0	0	0	0	0	84
14:00	4	5	13	35	45	18	2	0	0	0	0	0	0	0	122
15:00	6	0	15	32	35	9	0	0	0	0	0	0	0	0	97
16:00	6	10	14	26	22	2	2	0	0	0	0	0	0	0	82
17:00	7	2	11	8	18	3	1	0	0	0	0	0	0	0	50
18:00	3	1	5	9	15	5	0	0	0	0	0	0	0	0	38
19:00	2	3	2	7	7	0	0	0	0	0	0	0	0	0	21
20:00	0	1	2	5	7	1	1	0	1	0	0	0	0	0	18
21:00	1	1	2	3	4	0	0	0	0	0	0	0	0	0	11
22:00	1	0	1	5	2	1	0	0	0	0	0	0	0	0	10
23:00	0	0	0	1	2	0	0	0	0	0	0	0	0	0	3
Total	56	41	135	335	397	158	34	4	1	0	0	0	0	0	1161

Daily

15th Percentile :	22 MPH
50th Percentile :	30 MPH
85th Percentile :	35 MPH
95th Percentile :	39 MPH

Statistics

Mean Speed(Average) :	30 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	732
Percent in Pace :	63.0%
Number of Vehicles > 55 MPH :	0
Percent of Vehicles > 55 MPH :	0.0%

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City of Riverside
Dauchy Avenue
B/ Hawksbury Drive - Krameria Avenue
24 Hour Directional Speed Survey

RIVDAHAKR
Site Code: 003-21719A

Southbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/30/21	0	0	2	3	2	2	0	0	0	0	0	0	0	0	9
01:00	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
02:00	0	1	0	1	2	0	0	0	0	0	0	0	0	0	4
03:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
04:00	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
05:00	1	0	0	1	1	2	0	0	0	0	0	0	0	0	5
06:00	1	1	4	5	9	4	0	0	0	0	0	0	0	0	24
07:00	20	6	20	36	34	10	0	0	0	0	0	0	0	0	126
08:00	3	2	8	25	33	8	0	0	0	0	0	0	0	0	79
09:00	1	0	0	12	14	9	1	1	0	0	0	0	0	0	38
10:00	2	1	4	20	19	3	1	0	0	0	0	0	0	0	50
11:00	5	2	8	20	34	11	5	1	0	0	0	0	0	0	86
12 PM	5	3	10	32	51	23	5	4	0	0	0	0	0	0	133
13:00	7	7	15	27	49	18	1	0	0	0	0	0	0	0	124
14:00	11	1	13	66	80	29	4	3	0	0	0	0	0	0	207
15:00	7	1	43	38	62	14	2	0	0	0	0	0	0	0	167
16:00	9	4	15	84	49	11	1	0	0	0	0	0	0	0	173
17:00	14	5	22	75	42	6	1	0	0	0	0	0	0	0	165
18:00	6	4	16	47	28	8	3	0	0	0	0	0	0	0	112
19:00	1	6	13	19	9	5	0	0	0	0	0	0	0	0	53
20:00	0	2	10	11	8	1	1	0	0	0	0	0	0	0	33
21:00	0	3	2	11	2	1	0	0	0	0	0	1	0	0	20
22:00	0	0	2	6	11	1	0	0	0	0	0	0	0	0	20
23:00	0	2	0	4	3	1	0	1	0	0	0	0	0	0	11
Total	93	51	208	546	543	168	25	10	0	0	0	1	0	0	1645

Daily

15th Percentile :	22 MPH
50th Percentile :	29 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH

Statistics

Mean Speed(Average) :	29 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	1089
Percent in Pace :	66.2%
Number of Vehicles > 55 MPH :	1
Percent of Vehicles > 55 MPH :	0.1%

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City of Riverside
Dauchy Avenue
B/ Hawksbury Drive - Krameria Avenue
24 Hour Directional Speed Survey
Northbound, Southbound

RIVDAHAKR
Site Code: 003-21719A

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/30/21	0	0	3	4	3	2	0	0	0	0	0	0	0	0	12
01:00	0	0	0	2	3	0	0	0	0	0	0	0	0	0	5
02:00	0	1	0	1	3	1	1	0	0	0	0	0	0	0	7
03:00	0	0	0	2	1	2	0	0	0	0	0	0	0	0	5
04:00	0	1	1	3	1	4	2	0	0	0	0	0	0	0	12
05:00	1	1	2	2	2	5	0	0	0	0	0	0	0	0	13
06:00	3	4	8	15	11	8	0	0	0	0	0	0	0	0	49
07:00	28	11	52	87	78	26	2	0	0	0	0	0	0	0	284
08:00	9	4	19	64	64	18	0	0	0	0	0	0	0	0	178
09:00	1	1	3	23	33	15	3	2	0	0	0	0	0	0	81
10:00	4	2	5	35	32	9	2	0	0	0	0	0	0	0	89
11:00	7	4	14	44	72	32	12	2	0	0	0	0	0	0	187
12 PM	7	4	15	56	104	56	15	6	0	0	0	0	0	0	263
13:00	11	8	20	51	82	32	4	0	0	0	0	0	0	0	208
14:00	15	6	26	101	125	47	6	3	0	0	0	0	0	0	329
15:00	13	1	58	70	97	23	2	0	0	0	0	0	0	0	264
16:00	15	14	29	110	71	13	3	0	0	0	0	0	0	0	255
17:00	21	7	33	83	60	9	2	0	0	0	0	0	0	0	215
18:00	9	5	21	56	43	13	3	0	0	0	0	0	0	0	150
19:00	3	9	15	26	16	5	0	0	0	0	0	0	0	0	74
20:00	0	3	12	16	15	2	2	0	1	0	0	0	0	0	51
21:00	1	4	4	14	6	1	0	0	0	0	0	1	0	0	31
22:00	1	0	3	11	13	2	0	0	0	0	0	0	0	0	30
23:00	0	2	0	5	5	1	0	1	0	0	0	0	0	0	14
Total	149	92	343	881	940	326	59	14	1	0	0	1	0	0	2806

Daily

15th Percentile :	22 MPH
50th Percentile :	29 MPH
85th Percentile :	34 MPH
95th Percentile :	38 MPH

Statistics

Mean Speed(Average) :	29 MPH
10 MPH Pace Speed :	26-35 MPH
Number in Pace :	1821
Percent in Pace :	64.9%
Number of Vehicles > 55 MPH :	1
Percent of Vehicles > 55 MPH :	0.0%

INTERSECTION: Van Buren Boulevard & Dauchy Avenue

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Commications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: Dauchy Ave
E/W Street Name: Van Buren Blvd

Last *QuicNet* Database Change:

Notes:

Field Change Record					
Change	By	Date	Change	By	Date

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Exclusive Ped Phase

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Walk Output	0
Don't Walk Output	0

	Phase							
	1	2	3	4	5	6	7	8
Basic Phase Timing								
Min Green	5	5	5	5	5	5	5	5
Extension	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Max	30	50	20	30	20	40	20	40
Max 2	50	70	30	70	30	60	30	50
Cond Serve Check	0	0	0	0	0	0	0	0
Clear								
Yellow Change	4.0	5.2	3.0	3.6	3.5	5.2	3.0	3.6
Red Clear	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
Pedestrian Timing								
Walk	0	7	0	7	0	7	0	0
Ped Clear - FDW	0	11	0	23	0	16	0	0
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	11	0	23	0	16	0	0
Volume Density								
Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.0	2.0	2.0	3.0	2.0	2.0	2.0	3.0
Max Gap	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Reduce Every	0.0	5.0	0.0	0.0	0.0	5.0	0.0	0.0

Phase Timing - Bank 1

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

INTERSECTION: Van Buren Boulevard & Wood Road

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Commications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: Wood Rd
E/W Street Name: Van Buren Blvd

Last *QuicNet* Database Change:

Notes:

Field Change Record					
Change	By	Date	Change	By	Date

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Exclusive Ped Phase

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Walk Output	0
Don't Walk Output	0

	Phase							
	1	2	3	4	5	6	7	8
Basic Phase Timing								
Min Green	5	5	5	5	5	5	5	5
Extension	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Max	30	50	40	30	20	50	20	40
Max 2	30	70	30	70	30	70	30	70
Cond Serve Check	0	0	0	0	0	0	0	0
Clear								
Yellow Change	4.0	5.2	3.0	4.8	4.5	5.2	4.5	4.8
Red Clear	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
Pedestrian Timing								
Walk	0	7	0	0	0	7	0	7
Ped Clear - FDW	0	20	0	0	0	21	0	31
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	20	0	0	0	21	0	31
Volume Density								
Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Max Gap	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Reduce Every	0.0	5.0	0.0	3.0	0.0	5.0	0.0	4.0

Phase Timing - Bank 1

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

INTERSECTION: Van Buren Boulevard & Bountiful Street

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Commications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: Bountiful St
E/W Street Name: Van Buren Blvd

Last *QuicNet* Database Change:

Notes:

Field Change Record					
Change	By	Date	Change	By	Date

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Walk Output	0
Don't Walk Output	0

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Exclusive Ped Phase

	Phase							
	1	2	3	4	5	6	7	8
Basic Phase Timing								
Min Green	0	5	0	5	5	5	0	0
Extension	0.0	3.0	0.0	3.0	2.0	3.0	0.0	0.0
Max	0	50	0	25	20	50	0	0
Max 2	0	70	0	70	30	70	0	0
Cond Serve Check	0	0	0	0	0	0	0	0
Clear								
Yellow Change	0.0	5.2	0.0	3.6	3.0	5.2	0.0	0.0
Red Clear	0.0	2.0	0.0	1.0	1.0	2.0	0.0	0.0
Pedestrian Timing								
Walk	0	0	0	7	0	7	0	0
Ped Clear - FDW	0	0	0	27	0	14	0	0
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	0	0	27	0	14	0	0
Volume Density								
Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	0.0	2.0	0.0	2.0	2.0	2.0	0.0	0.0
Max Gap	0.0	3.0	0.0	3.0	2.0	3.0	0.0	0.0
Reduce Every	0.0	5.0	0.0	0.0	0.0	5.0	0.0	0.0

Phase Timing - Bank 1

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

INTERSECTION: Trautwein Road & Mission Grove Parkway South

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Commications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: Trautwein Rd
E/W Street Name: Mission Grove Pkwy S

Last *QuicNet* Database Change:

Notes:

Field Change Record

Change	By	Date	Change	By	Date

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Exclusive Ped Phase

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Walk Output	0
Don't Walk Output	0

Basic Phase Timing / Clear / Pedestrian Timing / Volume Density

	Phase 1	2	3	4	5	6	7	8
Min Green	5	5	5	5	5	5	5	5
Extension	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Max	25	40	20	30	25	40	20	25
Max 2	30	70	30	70	30	70	30	70
Cond Serve Check	0	0	0	0	0	0	0	0
Yellow Change	3.5	5.2	3.0	4.8	3.5	5.2	4.5	3.6
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Walk	0	7	0	7	0	7	0	7
Ped Clear - FDW	0	12	0	25	0	23	0	28
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	12	0	25	0	23	0	28
Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Max Gap	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Reduce Every	0.0	4.0	0.0	3.0	0.0	4.0	0.0	0.0

Phase Timing - Bank 1

	Phase 1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

INTERSECTION: Trautwein Road & John F Kennedy Drive

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Commications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: Trautwein Rd
E/W Street Name: John F Kennedy Dr

Last *QuicNet* Database Change:

Notes:

Field Change Record

Change	By	Date	Change	By	Date

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Exclusive Ped Phase

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Walk Output	0
Don't Walk Output	0

Basic Phase Timing / Clear / Pedestrian Timing / Volume Density

	Phase 1	2	3	4	5	6	7	8
Min Green	5	5	5	5	5	5	5	5
Extension	2.0	3.0	2.5	3.0	2.0	3.0	2.0	3.0
Max	25	50	30	30	20	50	20	30
Max 2	30	70	30	70	30	70	30	70
Cond Serve Check	0	0	0	0	0	0	0	0
Yellow Change	3.0	5.2	4.0	3.6	3.0	5.2	3.0	4.4
Red Clear	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
Walk	0	7	0	7	0	7	0	7
Ped Clear - FDW	0	18	0	27	0	13	0	26
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	18	0	27	0	13	0	26
Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.0	2.0	2.5	3.0	2.0	2.0	2.0	2.0
Max Gap	2.0	3.0	2.5	3.0	2.0	3.0	2.0	3.0
Reduce Every	0.0	5.0	0.0	0.0	0.0	5.0	0.0	3.0

Phase Timing - Bank 1

	Phase 1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

INTERSECTION: Trautwein Road & Grove Community Drive

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Commications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: Trautwein Rd
E/W Street Name: Grove Community Dr

Last *QuicNet* Database Change:

Notes:

Field Change Record					
Change	By	Date	Change	By	Date

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Walk Output	0
Don't Walk Output	0

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Exclusive Ped Phase

	Phase							
	1	2	3	4	5	6	7	8
Basic Phase Timing								
Min Green	5	5	0	0	0	5	0	5
Extension	3.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0
Max	25	50	0	0	0	50	0	30
Max 2	30	70	0	0	0	70	0	70
Cond Serve Check	0	0	0	0	0	0	0	0
Clear								
Yellow Change	4.5	5.2	0.0	3.0	0.0	5.2	0.0	4.1
Red Clear	1.0	1.0	0.0	1.0	0.0	1.0	0.0	1.0
Pedestrian Timing								
Walk	0	7	0	7	0	0	0	0
Ped Clear - FDW	0	17	0	23	0	0	0	0
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	17	0	23	0	0	0	0
Volume Density								
Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.0	2.0	0.0	0.0	0.0	2.0	0.0	2.0
Max Gap	3.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0
Reduce Every	0.0	4.0	0.0	0.0	0.0	4.0	0.0	3.0

Phase Timing - Bank 1

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

INTERSECTION: Trautwein Road & Orange Terrace Parkway

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Commications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: Trautwein Rd
E/W Street Name: Orange Terrace Pkwy

Last *QuicNet* Database Change:

Notes:

Field Change Record					
Change	By	Date	Change	By	Date

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Walk Output	0
Don't Walk Output	0

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Exclusive Ped Phase

	Phase							
	1	2	3	4	5	6	7	8
Basic Phase Timing								
Min Green	5	5	5	5	5	5	5	5
Extension	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Max	30	50	20	30	30	30	30	25
Max 2	30	70	30	70	30	50	30	70
Cond Serve Check	0	0	0	0	0	0	0	0
Clear								
Yellow Change	3.0	5.2	3.0	4.8	4.0	5.2	3.0	3.6
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Pedestrian Timing								
Walk	0	7	0	7	0	7	0	7
Ped Clear - FDW	0	14	0	26	0	25	0	30
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	14	0	26	0	25	0	30
Volume Density								
Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Max Gap	2.0	3.0	2.0	3.0	2.5	3.0	2.0	3.0
Reduce Every	0.0	5.0	0.0	3.0	3.0	5.0	0.0	0.0

Phase Timing - Bank 1

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

INTERSECTION: Trautwein Road & Shopping Center

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Commications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: Trautwein Rd
E/W Street Name: Shopping Center

Last *QuicNet* Database Change:

Notes:

Field Change Record					
Change	By	Date	Change	By	Date

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Exclusive Ped Phase

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Walk Output	0
Don't Walk Output	0

	Phase							
	1	2	3	4	5	6	7	8
Basic Phase Timing								
Min Green	5	5	0	5	5	5	0	5
Extension	2.0	3.0	0.0	3.0	2.0	3.0	0.0	3.0
Max	20	40	0	30	20	40	0	30
Max 2	30	70	0	70	30	70	0	70
Cond Serve Check	0	0	0	0	0	0	0	0
Clear								
Yellow Change	3.5	5.2	0.0	3.6	3.5	5.2	0.0	3.6
Red Clear	1.0	2.0	0.0	1.0	1.0	2.0	0.0	1.0
Pedestrian Timing								
Walk	0	7	0	7	0	7	0	7
Ped Clear - FDW	0	15	0	26	0	18	0	27
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	15	0	26	0	18	0	27
Volume Density								
Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0
Max Gap	2.0	3.0	0.0	3.0	2.0	3.0	0.0	3.0
Reduce Every	0.0	4.0	0.0	0.0	0.0	4.0	0.0	0.0

Phase Timing - Bank 1

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

INTERSECTION: Trautwein Road & Van Buren Boulevard

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Commications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: Trautwein Rd
E/W Street Name: Van Buren Blvd

Last *QuicNet* Database Change:

Notes:

Field Change Record					
Change	By	Date	Change	By	Date

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Walk Output	0
Don't Walk Output	0

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Exclusive Ped Phase

	Phase							
	1	2	3	4	5	6	7	8
Basic Phase Timing								
Min Green	5	5	5	5	5	5	5	5
Extension	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Max	20	50	20	25	25	50	20	25
Max 2	30	70	30	70	30	70	30	70
Cond Serve Check	0	0	0	0	0	0	0	0
Clear								
Yellow Change	3.0	5.2	4.0	5.2	4.0	5.2	4.0	4.4
Red Clear	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Pedestrian Timing								
Walk	0	7	0	7	0	7	0	7
Ped Clear - FDW	0	17	0	29	0	23	0	33
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	17	0	29	0	23	0	33
Volume Density								
Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	3.0	2.0	3.0	2.0	3.0	2.0	3.0	2.0
Max Gap	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Reduce Every	0.0	5.0	0.0	2.5	0.0	5.0	0.0	2.5

Phase Timing - Bank 1

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

INTERSECTION: Van Buren Boulevard & Shopping Center

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Commications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: Shopping Center
E/W Street Name: Van Buren Blvd

Last *QuicNet* Database Change:

Notes:

Field Change Record					
Change	By	Date	Change	By	Date

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Walk Output	0
Don't Walk Output	0

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Exclusive Ped Phase

	Phase							
	1	2	3	4	5	6	7	8
Basic Phase Timing								
Min Green	0	5	0	5	5	5	0	0
Extension	0.0	3.0	0.0	3.0	2.0	3.0	0.0	0.0
Max	0	40	0	30	20	40	0	0
Max 2	0	70	0	60	30	60	0	0
Cond Serve Check	0	0	0	0	0	0	0	0
Clear								
Yellow Change	0.0	5.2	0.0	3.0	3.5	5.2	0.0	0.0
Red Clear	0.0	2.0	0.0	1.0	1.0	2.0	0.0	0.0
Pedestrian Timing								
Walk	0	0	0	7	0	7	0	0
Ped Clear - FDW	0	0	0	28	0	15	0	0
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	0	0	28	0	15	0	0
Volume Density								
Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	0.0	2.0	0.0	2.0	2.0	2.0	0.0	0.0
Max Gap	0.0	3.0	0.0	3.0	2.0	3.0	0.0	0.0
Reduce Every	0.0	4.0	0.0	0.0	0.0	4.0	0.0	0.0

Phase Timing - Bank 1

	Phase							
	1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

INTERSECTION: Van Buren Boulevard & Barton Street

QuicNet System Parameters

Group Assignment:
Field Master Assignment:
System Reference Number:
Commications Channel:
Drop Address:
Area Number:
Area Address:

N/S Street Name: Barton St
E/W Street Name: Van Buren Blvd

Last *QuicNet* Database Change:

Notes:

Field Change Record

Change	By	Date	Change	By	Date

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Walk Output	0
Don't Walk Output	0

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Exclusive Ped Phase

Basic Phase Timing

	Phase 1	2	3	4	5	6	7	8
Min Green	5	5	5	5	5	5	5	5
Extension	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Max	30	50	20	30	30	50	20	30
Max 2	40	70	30	70	40	70	30	70
Cond Serve Check	0	0	0	0	0	0	0	0

Clear

Yellow Change	3.5	5.2	4.0	3.6	4.0	5.2	3.0	4.8
Red Clear	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0

Pedestrian Timing

Walk	0	7	0	0	0	7	0	7
Ped Clear - FDW	0	18	0	0	0	15	0	36
Adv / Delay Walk	0	0	0	0	0	0	0	0
PE Min Ped FDW	0	18	0	0	0	15	0	36

Volume Density

Type 3 Disconnect	0	0	0	0	0	0	0	0
Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Added Initial	0	0	0	0	0	0	0	0
Min Gap	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Max Gap	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Reduce Every	0.0	5.0	0.0	3.0	0.0	5.0	0.0	3.0

Phase Timing - Bank 1

	Phase 1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Alternate Timing - Bank 1

Red Lock		Red Rest	
Yellow Lock		Dual Entry	
Simultaneous Gap		Sequential Timing	
Rest In Walk		Inhibit Ped Reservice	
Advance Walk		Semi-Actuated	
Flashing Walk		Guaranteed Passage	
Max Extension		Conditional Service	

Phase Functions - Page 1

Minimum Recall	2 6	Soft Recall	
Ped Recall		External Recall	
Maximum Recall		Manual Control Calls	
Green Flash		Fast Green Flash	
Overlap Green Flash		Fast Overlap G. Flash	

Phase Functions - Page 2

APPENDIX C

VOLUME DEVELOPMENT WORKSHEETS

LSA

Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
1 Washington Street/Van Buren Boulevard													
Historical Count Year: 2018													
NBL	138	8	146	145	146	146	0	0	0	93	7	100	100
NBT	503	30	533	437	533	533	0	0	0	273	21	294	294
NBR	91	5	96	125	125	125	0	0	0	97	7	104	104
SBL	291	17	308	266	308	308	0	0	0	412	31	443	443
SBT	131	8	139	147	147	147	0	0	0	256	19	275	275
SBR	61	4	65	76	76	76	0	0	0	95	7	102	102
EBL	126	8	134	124	134	134	0	0	0	120	9	129	129
EBT	851	51	902	900	902	902	0	0	0	1,097	84	1,181	1,181
EBR	70	4	74	120	120	120	0	0	0	73	6	79	79
WBL	47	3	50	81	81	81	0	0	0	108	8	116	116
WBT	1,218	73	1,291	1,119	1,291	1,291	0	0	0	1,133	86	1,219	1,219
WBR	573	34	607	461	607	607	0	0	0	334	25	359	359
North Leg													
Approach	483	29	512	489	531	531	0	0	0	763	57	820	820
Departure	1,202	72	1,274	1,022	1,274	1,274	0	0	0	727	55	782	782
Total	1,685	101	1,786	1,511	1,805	1,805	0	0	0	1,490	112	1,602	1,602
South Leg													
Approach	732	43	775	707	804	804	0	0	0	463	35	498	498
Departure	248	15	263	348	348	348	0	0	0	437	33	470	470
Total	980	58	1,038	1,055	1,152	1,152	0	0	0	900	68	968	968
East Leg													
Approach	1,838	110	1,948	1,661	1,979	1,979	0	0	0	1,575	119	1,694	1,694
Departure	1,233	73	1,306	1,291	1,335	1,335	0	0	0	1,606	122	1,728	1,728
Total	3,071	183	3,254	2,952	3,314	3,314	0	0	0	3,181	241	3,422	3,422
West Leg													
Approach	1,047	63	1,110	1,144	1,156	1,156	0	0	0	1,290	99	1,389	1,389
Departure	1,417	85	1,502	1,340	1,513	1,513	0	0	0	1,321	100	1,421	1,421
Total	2,464	148	2,612	2,484	2,669	2,669	0	0	0	2,611	199	2,810	2,810
Total Approaches													
Approach	4,100	245	4,345	4,001	4,470	4,470	0	0	0	4,091	310	4,401	4,401
Departure	4,100	245	4,345	4,001	4,470	4,470	0	0	0	4,091	310	4,401	4,401
Total	8,200	490	8,690	8,002	8,940	8,940	0	0	0	8,182	620	8,802	8,802

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
2 Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard													
Historical Count Year: 2018													
NBL	121	7	128	104	128	128	0	0	0	55	4	59	59
NBT	2	0	2	1	2	2	0	0	0	2	0	2	2
NBR	84	5	89	61	89	89	0	0	0	18	1	19	19
SBL	1	0	1	3	3	3	0	0	0	19	1	20	20
SBT	2	0	2	1	2	2	0	0	0	2	0	2	2
SBR	5	0	5	4	5	5	0	0	0	6	0	6	6
EBL	24	1	25	7	25	25	0	0	0	20	2	22	22
EBT	1,162	70	1,232	1,252	1,252	1,252	0	0	0	1,527	116	1,643	1,643
EBR	55	3	58	54	58	58	0	0	0	125	10	135	135
WBL	57	3	60	69	69	69	0	0	0	36	3	39	39
WBT	1,719	103	1,822	1,560	1,822	1,822	0	0	0	1,562	119	1,681	1,681
WBR	7	0	7	5	7	7	0	0	0	17	1	18	18
North Leg													
Approach	8	0	8	8	10	10	0	0	0	27	1	28	28
Departure	33	1	34	13	34	34	0	0	0	39	3	42	42
Total	41	1	42	21	44	44	0	0	0	66	4	70	70
South Leg													
Approach	207	12	219	166	219	219	0	0	0	75	5	80	80
Departure	114	6	120	124	129	129	0	0	0	163	13	176	176
Total	321	18	339	290	348	348	0	0	0	238	18	256	256
East Leg													
Approach	1,783	106	1,889	1,634	1,898	1,898	0	0	0	1,615	123	1,738	1,738
Departure	1,247	75	1,322	1,316	1,344	1,344	0	0	0	1,564	118	1,682	1,682
Total	3,030	181	3,211	2,950	3,242	3,242	0	0	0	3,179	241	3,420	3,420
West Leg													
Approach	1,241	74	1,315	1,313	1,335	1,335	0	0	0	1,672	128	1,800	1,800
Departure	1,845	110	1,955	1,668	1,955	1,955	0	0	0	1,623	123	1,746	1,746
Total	3,086	184	3,270	2,981	3,290	3,290	0	0	0	3,295	251	3,546	3,546
Total Approaches													
Approach	3,239	192	3,431	3,121	3,462	3,462	0	0	0	3,389	257	3,646	3,646
Departure	3,239	192	3,431	3,121	3,462	3,462	0	0	0	3,389	257	3,646	3,646
Total	6,478	384	6,862	6,242	6,924	6,924	0	0	0	6,778	514	7,292	7,292

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
3	**Van Buren Village Driveway/Van Buren Boulevard**												
	Intersection does not exist under Existing Conditions.												

Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
4 Little Court/Van Buren Boulevard													
Historical Count Year: N/A													
NBL	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	7	7	7	0	0	0	2	0	2	2
SBL	0	0	0	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	1,265	1,265	1,343	0	0	0	1,499	114	1,613	1,678
EBR	0	0	0	1	1	1	0	0	0	4	0	4	4
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	1,589	1,589	1,898	0	0	0	1,552	118	1,670	1,738
WBR	0	0	0	0	0	0	0	0	0	0	0	0	0
North Leg													
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
South Leg													
Approach	0	0	0	7	7	7	0	0	0	2	0	2	2
Departure	0	0	0	1	1	1	0	0	0	4	0	4	4
Total	0	0	0	8	8	8	0	0	0	6	0	6	6
East Leg													
Approach	0	0	0	1,589	1,589	1,898	0	0	0	1,552	118	1,670	1,738
Departure	0	0	0	1,272	1,272	1,350	0	0	0	1,501	114	1,615	1,680
Total	0	0	0	2,861	2,861	3,248	0	0	0	3,053	232	3,285	3,418
West Leg													
Approach	0	0	0	1,266	1,266	1,344	0	0	0	1,503	114	1,617	1,682
Departure	0	0	0	1,589	1,589	1,898	0	0	0	1,552	118	1,670	1,738
Total	0	0	0	2,855	2,855	3,242	0	0	0	3,055	232	3,287	3,420
Total Approaches													
Approach	0	0	0	2,862	2,862	3,249	0	0	0	3,057	232	3,289	3,422
Departure	0	0	0	2,862	2,862	3,249	0	0	0	3,057	232	3,289	3,422
Total	0	0	0	5,724	5,724	6,498	0	0	0	6,114	464	6,578	6,844

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
5 Ridgeway Avenue/Van Buren Boulevard													
Historical Count Year: N/A													
NBL	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	1	1	1	0	0	0	1	0	1	1
SBT	0	0	0	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	100	100	119	0	0	0	50	4	54	56
EBL	0	0	0	34	34	36	0	0	0	88	7	95	99
EBT	0	0	0	1,233	1,233	1,314	0	0	0	1,411	107	1,518	1,581
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	1,489	1,489	1,779	0	0	0	1,495	114	1,609	1,682
WBR	0	0	0	8	8	8	0	0	0	16	1	17	17
North Leg													
Approach	0	0	0	101	101	120	0	0	0	51	4	55	57
Departure	0	0	0	42	42	44	0	0	0	104	8	112	116
Total	0	0	0	143	143	164	0	0	0	155	12	167	173
South Leg													
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
East Leg													
Approach	0	0	0	1,497	1,497	1,787	0	0	0	1,511	115	1,626	1,699
Departure	0	0	0	1,234	1,234	1,315	0	0	0	1,412	107	1,519	1,582
Total	0	0	0	2,731	2,731	3,102	0	0	0	2,923	222	3,145	3,281
West Leg													
Approach	0	0	0	1,267	1,267	1,350	0	0	0	1,499	114	1,613	1,680
Departure	0	0	0	1,589	1,589	1,898	0	0	0	1,545	118	1,663	1,738
Total	0	0	0	2,856	2,856	3,248	0	0	0	3,044	232	3,276	3,418
Total Approaches													
Approach	0	0	0	2,865	2,865	3,257	0	0	0	3,061	233	3,294	3,436
Departure	0	0	0	2,865	2,865	3,257	0	0	0	3,061	233	3,294	3,436
Total	0	0	0	5,730	5,730	6,514	0	0	0	6,122	466	6,588	6,872

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
6 Dauchy Avenue/Van Buren Boulevard													
Historical Count Year: 2018													
NBL	228	14	242	234	242	239	0	0	0	180	14	194	194
NBT	28	2	30	35	35	35	0	0	0	60	5	65	65
NBR	119	7	126	145	145	145	0	0	0	105	8	113	113
SBL	35	2	37	29	37	37	0	0	0	58	4	62	62
SBT	25	2	27	45	45	45	0	0	0	26	2	28	28
SBR	17	1	18	23	23	23	0	0	0	41	3	44	44
EBL	18	1	19	19	19	19	0	0	0	57	4	61	66
EBT	999	60	1,059	954	1,059	1,073	0	0	0	1,135	86	1,221	1,326
EBR	164	10	174	220	220	223	0	0	0	163	12	175	190
WBL	110	7	117	156	156	156	0	0	0	96	7	103	103
WBT	1,464	88	1,552	1,308	1,552	1,532	0	0	0	1,366	104	1,470	1,472
WBR	11	1	12	15	15	15	0	0	0	25	2	27	27
North Leg													
Approach	77	5	82	97	105	105	0	0	0	125	9	134	134
Departure	57	4	61	69	69	69	0	0	0	142	11	153	158
Total	134	9	143	166	174	174	0	0	0	267	20	287	292
South Leg													
Approach	375	23	398	414	422	419	0	0	0	345	27	372	372
Departure	299	19	318	421	421	424	0	0	0	285	21	306	321
Total	674	42	716	835	843	843	0	0	0	630	48	678	693
East Leg													
Approach	1,585	96	1,681	1,479	1,723	1,703	0	0	0	1,487	113	1,600	1,602
Departure	1,153	69	1,222	1,128	1,241	1,255	0	0	0	1,298	98	1,396	1,501
Total	2,738	165	2,903	2,607	2,964	2,958	0	0	0	2,785	211	2,996	3,103
West Leg													
Approach	1,181	71	1,252	1,193	1,298	1,315	0	0	0	1,355	102	1,457	1,582
Departure	1,709	103	1,812	1,565	1,817	1,794	0	0	0	1,587	121	1,708	1,710
Total	2,890	174	3,064	2,758	3,115	3,109	0	0	0	2,942	223	3,165	3,292
Total Approaches													
Approach	3,218	195	3,413	3,183	3,548	3,542	0	0	0	3,312	251	3,563	3,690
Departure	3,218	195	3,413	3,183	3,548	3,542	0	0	0	3,312	251	3,563	3,690
Total	6,436	390	6,826	6,366	7,096	7,084	0	0	0	6,624	502	7,126	7,380

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
7 Dauchy Avenue/Project Driveway 2 - Ardenwood Lane													
Historical Count Year: N/A													
NBL	0	0	0	34	34	34	0	0	0	14	0	14	14
NBT	0	0	0	284	284	295	0	0	0	188	14	202	199
NBR	0	0	0	4	4	4	0	0	0	7	1	8	8
SBL	0	0	0	8	8	8	0	0	0	7	1	8	8
SBT	0	0	0	258	258	247	0	0	0	205	16	221	226
SBR	0	0	0	143	143	143	0	0	0	62	0	62	62
EBL	0	0	0	112	112	112	0	0	0	119	0	119	119
EBT	0	0	0	0	0	0	0	0	0	1	0	1	1
EBR	0	0	0	27	27	27	0	0	0	29	0	29	29
WBL	0	0	0	4	4	4	0	0	0	5	0	5	5
WBT	0	0	0	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	37	37	37	0	0	0	13	1	14	14
North Leg													
Approach	0	0	0	409	409	398	0	0	0	274	17	291	296
Departure	0	0	0	433	433	444	0	0	0	320	15	335	332
Total	0	0	0	842	842	842	0	0	0	594	32	626	628
South Leg													
Approach	0	0	0	322	322	333	0	0	0	209	15	224	221
Departure	0	0	0	289	289	278	0	0	0	239	16	255	260
Total	0	0	0	611	611	611	0	0	0	448	31	479	481
East Leg													
Approach	0	0	0	41	41	41	0	0	0	18	1	19	19
Departure	0	0	0	12	12	12	0	0	0	15	2	17	17
Total	0	0	0	53	53	53	0	0	0	33	3	36	36
West Leg													
Approach	0	0	0	139	139	139	0	0	0	149	0	149	149
Departure	0	0	0	177	177	177	0	0	0	76	0	76	76
Total	0	0	0	316	316	316	0	0	0	225	0	225	225
Total Approaches													
Approach	0	0	0	911	911	911	0	0	0	650	33	683	685
Departure	0	0	0	911	911	911	0	0	0	650	33	683	685
Total	0	0	0	1,822	1,822	1,822	0	0	0	1,300	66	1,366	1,370

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
8 Dauchy Avenue - Taft Street/Krameria Avenue													
Historical Count Year: N/A													
NBL	0	0	0	14	14	14	0	0	0	10	1	11	11
NBT	0	0	0	15	15	15	0	0	0	16	1	17	17
NBR	0	0	0	8	8	8	0	0	0	7	1	8	8
SBL	0	0	0	76	76	76	0	0	0	126	10	136	136
SBT	0	0	0	6	6	6	0	0	0	19	1	20	20
SBR	0	0	0	33	33	33	0	0	0	58	4	62	62
EBL	0	0	0	39	39	39	0	0	0	31	2	33	33
EBT	0	0	0	339	339	339	0	0	0	281	21	302	302
EBR	0	0	0	2	2	2	0	0	0	21	2	23	23
WBL	0	0	0	1	1	1	0	0	0	6	0	6	6
WBT	0	0	0	383	383	383	0	0	0	228	17	245	245
WBR	0	0	0	86	86	86	0	0	0	44	3	47	47
North Leg													
Approach	0	0	0	115	115	115	0	0	0	203	15	218	218
Departure	0	0	0	140	140	140	0	0	0	91	6	97	97
Total	0	0	0	255	255	255	0	0	0	294	21	315	315
South Leg													
Approach	0	0	0	37	37	37	0	0	0	33	3	36	36
Departure	0	0	0	9	9	9	0	0	0	46	3	49	49
Total	0	0	0	46	46	46	0	0	0	79	6	85	85
East Leg													
Approach	0	0	0	470	470	470	0	0	0	278	20	298	298
Departure	0	0	0	423	423	423	0	0	0	414	32	446	446
Total	0	0	0	893	893	893	0	0	0	692	52	744	744
West Leg													
Approach	0	0	0	380	380	380	0	0	0	333	25	358	358
Departure	0	0	0	430	430	430	0	0	0	296	22	318	318
Total	0	0	0	810	810	810	0	0	0	629	47	676	676
Total Approaches													
Approach	0	0	0	1,002	1,002	1,002	0	0	0	847	63	910	910
Departure	0	0	0	1,002	1,002	1,002	0	0	0	847	63	910	910
Total	0	0	0	2,004	2,004	2,004	0	0	0	1,694	126	1,820	1,820

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
9 Wood Road/Van Buren Boulevard													
Historical Count Year: 2019													
NBL	332	13	345	360	360	360	0	0	0	248	19	267	267
NBT	466	19	485	423	485	485	0	0	0	329	25	354	354
NBR	276	11	287	258	287	287	0	0	0	195	15	210	210
SBL	79	3	82	82	82	82	0	0	0	96	7	103	103
SBT	391	16	407	401	407	407	0	0	0	263	20	283	283
SBR	127	5	132	163	163	163	0	0	0	191	15	206	206
EBL	120	5	125	133	133	133	0	0	0	144	11	155	155
EBT	819	33	852	778	852	852	0	0	0	1,003	76	1,079	1,079
EBR	304	12	316	265	316	316	0	0	0	185	14	199	199
WBL	371	15	386	415	415	415	0	0	0	191	15	206	206
WBT	1,143	46	1,189	937	1,189	1,189	0	0	0	1,106	84	1,190	1,190
WBR	143	6	149	86	149	149	0	0	0	82	6	88	88
North Leg													
Approach	597	24	621	646	652	652	0	0	0	550	42	592	592
Departure	729	30	759	642	767	767	0	0	0	555	42	597	597
Total	1,326	54	1,380	1,288	1,419	1,419	0	0	0	1,105	84	1,189	1,189
South Leg													
Approach	1,074	43	1,117	1,041	1,132	1,132	0	0	0	772	59	831	831
Departure	1,066	43	1,109	1,081	1,138	1,138	0	0	0	639	49	688	688
Total	2,140	86	2,226	2,122	2,270	2,270	0	0	0	1,411	108	1,519	1,519
East Leg													
Approach	1,657	67	1,724	1,438	1,753	1,753	0	0	0	1,379	105	1,484	1,484
Departure	1,174	47	1,221	1,118	1,221	1,221	0	0	0	1,294	98	1,392	1,392
Total	2,831	114	2,945	2,556	2,974	2,974	0	0	0	2,673	203	2,876	2,876
West Leg													
Approach	1,243	50	1,293	1,176	1,301	1,301	0	0	0	1,332	101	1,433	1,433
Departure	1,602	64	1,666	1,460	1,712	1,712	0	0	0	1,545	118	1,663	1,663
Total	2,845	114	2,959	2,636	3,013	3,013	0	0	0	2,877	219	3,096	3,096
Total Approaches													
Approach	4,571	184	4,755	4,301	4,838	4,838	0	0	0	4,033	307	4,340	4,340
Departure	4,571	184	4,755	4,301	4,838	4,838	0	0	0	4,033	307	4,340	4,340
Total	9,142	368	9,510	8,602	9,676	9,676	0	0	0	8,066	614	8,680	8,680

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
10 Bountiful Street/Van Buren Boulevard													
Historical Count Year: N/A													
NBL	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	41	41	47	0	0	0	14	1	15	15
SBT	0	0	0	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	170	170	170	0	0	0	126	10	136	136
EBL	0	0	0	89	89	89	0	0	0	166	13	179	179
EBT	0	0	0	1,036	1,036	1,181	0	0	0	1,269	97	1,366	1,370
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	1,332	1,332	1,332	0	0	0	1,265	96	1,361	1,361
WBR	0	0	0	31	31	31	0	0	0	22	2	24	24
North Leg													
Approach	0	0	0	211	211	217	0	0	0	140	11	151	151
Departure	0	0	0	120	120	120	0	0	0	188	15	203	203
Total	0	0	0	331	331	337	0	0	0	328	26	354	354
South Leg													
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
East Leg													
Approach	0	0	0	1,363	1,363	1,363	0	0	0	1,287	98	1,385	1,385
Departure	0	0	0	1,077	1,077	1,228	0	0	0	1,283	98	1,381	1,385
Total	0	0	0	2,440	2,440	2,591	0	0	0	2,570	196	2,766	2,770
West Leg													
Approach	0	0	0	1,125	1,125	1,270	0	0	0	1,435	110	1,545	1,549
Departure	0	0	0	1,502	1,502	1,502	0	0	0	1,391	106	1,497	1,497
Total	0	0	0	2,627	2,627	2,772	0	0	0	2,826	216	3,042	3,046
Total Approaches													
Approach	0	0	0	2,699	2,699	2,850	0	0	0	2,862	219	3,081	3,085
Departure	0	0	0	2,699	2,699	2,850	0	0	0	2,862	219	3,081	3,085
Total	0	0	0	5,398	5,398	5,700	0	0	0	5,724	438	6,162	6,170

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11 Trautwein Road/Mission Grove Parkway													
Historical Count Year: 2019													
NBL	3	0	3	1	3	3	0	0	0	5	0	5	5
NBT	1,580	63	1,643	1,647	1,647	1,647	0	0	0	1,206	92	1,298	1,298
NBR	480	19	499	247	499	499	0	0	0	401	31	432	432
SBL	172	7	179	101	179	179	0	0	0	121	9	130	130
SBT	770	31	801	865	865	865	0	0	0	1,328	101	1,429	1,429
SBR	15	1	16	12	16	16	0	0	0	32	2	34	34
EBL	55	2	57	58	58	58	0	0	0	34	3	37	37
EBT	29	1	30	32	32	32	0	0	0	9	1	10	10
EBR	9	0	9	8	9	9	0	0	0	12	1	13	13
WBL	562	22	584	542	584	584	0	0	0	490	37	527	527
WBT	30	1	31	12	31	31	0	0	0	15	1	16	16
WBR	43	2	45	50	50	50	0	0	0	34	3	37	37
North Leg													
Approach	957	39	996	978	1,060	1,060	0	0	0	1,481	112	1,593	1,593
Departure	1,678	67	1,745	1,755	1,755	1,755	0	0	0	1,274	98	1,372	1,372
Total	2,635	106	2,741	2,733	2,815	2,815	0	0	0	2,755	210	2,965	2,965
South Leg													
Approach	2,063	82	2,145	1,895	2,149	2,149	0	0	0	1,612	123	1,735	1,735
Departure	1,341	53	1,394	1,415	1,458	1,458	0	0	0	1,830	139	1,969	1,969
Total	3,404	135	3,539	3,310	3,607	3,607	0	0	0	3,442	262	3,704	3,704
East Leg													
Approach	635	25	660	604	665	665	0	0	0	539	41	580	580
Departure	681	27	708	380	710	710	0	0	0	531	41	572	572
Total	1,316	52	1,368	984	1,375	1,375	0	0	0	1,070	82	1,152	1,152
West Leg													
Approach	93	3	96	98	99	99	0	0	0	55	5	60	60
Departure	48	2	50	25	50	50	0	0	0	52	3	55	55
Total	141	5	146	123	149	149	0	0	0	107	8	115	115
Total Approaches													
Approach	3,748	149	3,897	3,575	3,973	3,973	0	0	0	3,687	281	3,968	3,968
Departure	3,748	149	3,897	3,575	3,973	3,973	0	0	0	3,687	281	3,968	3,968
Total	7,496	298	7,794	7,150	7,946	7,946	0	0	0	7,374	562	7,936	7,936

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	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
12 Trautwein Road/John F Kennedy Drive													
Historical Count Year: 2019													
NBL	181	7	188	138	188	199	0	0	0	77	6	83	75
NBT	1,680	67	1,747	1,536	1,747	1,846	0	0	0	1,176	90	1,266	1,148
NBR	68	3	71	64	71	75	0	0	0	58	4	62	56
SBL	9	0	9	9	9	9	0	0	0	10	1	11	11
SBT	789	32	821	816	821	761	0	0	0	1,125	86	1,211	1,436
SBR	563	23	586	579	586	586	0	0	0	552	42	594	594
EBL	525	21	546	455	546	546	0	0	0	499	38	537	537
EBT	47	2	49	42	49	49	0	0	0	45	3	48	48
EBR	74	3	77	58	77	71	0	0	0	71	5	76	90
WBL	104	4	108	82	108	100	0	0	0	24	2	26	31
WBT	53	2	55	52	55	55	0	0	0	17	1	18	18
WBR	39	2	41	37	41	41	0	0	0	24	2	26	26
North Leg													
Approach	1,361	55	1,416	1,404	1,416	1,356	0	0	0	1,687	129	1,816	2,041
Departure	2,244	90	2,334	2,028	2,334	2,433	0	0	0	1,699	130	1,829	1,711
Total	3,605	145	3,750	3,432	3,750	3,789	0	0	0	3,386	259	3,645	3,752
South Leg													
Approach	1,929	77	2,006	1,738	2,006	2,120	0	0	0	1,311	100	1,411	1,279
Departure	967	39	1,006	956	1,006	932	0	0	0	1,220	93	1,313	1,557
Total	2,896	116	3,012	2,694	3,012	3,052	0	0	0	2,531	193	2,724	2,836
East Leg													
Approach	196	8	204	171	204	196	0	0	0	65	5	70	75
Departure	124	5	129	115	129	133	0	0	0	113	8	121	115
Total	320	13	333	286	333	329	0	0	0	178	13	191	190
West Leg													
Approach	646	26	672	555	672	666	0	0	0	615	46	661	675
Departure	797	32	829	769	829	840	0	0	0	646	49	695	687
Total	1,443	58	1,501	1,324	1,501	1,506	0	0	0	1,261	95	1,356	1,362
Total Approaches													
Approach	4,132	166	4,298	3,868	4,298	4,338	0	0	0	3,678	280	3,958	4,070
Departure	4,132	166	4,298	3,868	4,298	4,338	0	0	0	3,678	280	3,958	4,070
Total	8,264	332	8,596	7,736	8,596	8,676	0	0	0	7,356	560	7,916	8,140

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13 Trautwein Road/Grove Community Drive													
Historical Count Year: N/A													
NBL	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	1,216	1,216	1,596	0	0	0	980	75	1,055	1,055
NBR	0	0	0	31	31	41	0	0	0	54	4	58	58
SBL	0	0	0	161	161	161	0	0	0	299	23	322	322
SBT	0	0	0	771	771	771	0	0	0	1,148	87	1,235	1,235
SBR	0	0	0	0	0	0	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	77	77	77	0	0	0	50	4	54	54
WBT	0	0	0	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	524	524	524	0	0	0	208	16	224	224
North Leg													
Approach	0	0	0	932	932	932	0	0	0	1,447	110	1,557	1,557
Departure	0	0	0	1,740	1,740	2,120	0	0	0	1,188	91	1,279	1,279
Total	0	0	0	2,672	2,672	3,052	0	0	0	2,635	201	2,836	2,836
South Leg													
Approach	0	0	0	1,247	1,247	1,637	0	0	0	1,034	79	1,113	1,113
Departure	0	0	0	848	848	848	0	0	0	1,198	91	1,289	1,289
Total	0	0	0	2,095	2,095	2,485	0	0	0	2,232	170	2,402	2,402
East Leg													
Approach	0	0	0	601	601	601	0	0	0	258	20	278	278
Departure	0	0	0	192	192	202	0	0	0	353	27	380	380
Total	0	0	0	793	793	803	0	0	0	611	47	658	658
West Leg													
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approaches													
Approach	0	0	0	2,780	2,780	3,170	0	0	0	2,739	209	2,948	2,948
Departure	0	0	0	2,780	2,780	3,170	0	0	0	2,739	209	2,948	2,948
Total	0	0	0	5,560	5,560	6,340	0	0	0	5,478	418	5,896	5,896

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14 Trautwein Road/Orange Terrace Parkway													
Historical Count Year: 2019													
NBL	47	2	49	11	49	49	0	0	0	9	1	10	10
NBT	1,002	40	1,042	795	1,042	1,042	0	0	0	762	58	820	821
NBR	205	8	213	180	213	213	0	0	0	197	15	212	212
SBL	290	12	302	287	302	302	0	0	0	251	19	270	270
SBT	546	22	568	534	568	568	0	0	0	906	69	975	975
SBR	26	1	27	16	27	27	0	0	0	19	1	20	20
EBL	81	3	84	45	84	84	0	0	0	41	3	44	44
EBT	56	2	58	58	58	58	0	0	0	33	3	36	36
EBR	12	0	12	18	18	18	0	0	0	7	1	8	8
WBL	290	12	302	233	302	302	0	0	0	138	11	149	149
WBT	134	5	139	86	139	139	0	0	0	11	1	12	12
WBR	491	20	511	415	511	511	0	0	0	230	18	248	248
North Leg													
Approach	862	35	897	837	897	897	0	0	0	1,176	89	1,265	1,265
Departure	1,574	63	1,637	1,255	1,637	1,637	0	0	0	1,033	79	1,112	1,113
Total	2,436	98	2,534	2,092	2,534	2,534	0	0	0	2,209	168	2,377	2,378
South Leg													
Approach	1,254	50	1,304	986	1,304	1,304	0	0	0	968	74	1,042	1,043
Departure	848	34	882	785	888	888	0	0	0	1,051	81	1,132	1,132
Total	2,102	84	2,186	1,771	2,192	2,192	0	0	0	2,019	155	2,174	2,175
East Leg													
Approach	915	37	952	734	952	952	0	0	0	379	30	409	409
Departure	551	22	573	525	573	573	0	0	0	481	37	518	518
Total	1,466	59	1,525	1,259	1,525	1,525	0	0	0	860	67	927	927
West Leg													
Approach	149	5	154	121	160	160	0	0	0	81	7	88	88
Departure	207	8	215	113	215	215	0	0	0	39	3	42	42
Total	356	13	369	234	375	375	0	0	0	120	10	130	130
Total Approaches													
Approach	3,180	127	3,307	2,678	3,313	3,313	0	0	0	2,604	200	2,804	2,805
Departure	3,180	127	3,307	2,678	3,313	3,313	0	0	0	2,604	200	2,804	2,805
Total	6,360	254	6,614	5,356	6,626	6,626	0	0	0	5,208	400	5,608	5,610

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15 Trautwein Road/Shopping Center Driveway 1													
Historical Count Year: N/A													
NBL	0	0	0	44	44	44	0	0	0	113	9	122	122
NBT	0	0	0	913	913	913	0	0	0	750	57	807	807
NBR	0	0	0	6	6	6	0	0	0	13	1	14	14
SBL	0	0	0	68	68	68	0	0	0	161	12	173	173
SBT	0	0	0	633	633	633	0	0	0	715	54	769	769
SBR	0	0	0	15	15	15	0	0	0	111	8	119	119
EBL	0	0	0	32	32	32	0	0	0	113	9	122	122
EBT	0	0	0	9	9	9	0	0	0	36	3	39	39
EBR	0	0	0	23	23	23	0	0	0	79	6	85	85
WBL	0	0	0	23	23	23	0	0	0	64	5	69	69
WBT	0	0	0	7	7	7	0	0	0	26	2	28	28
WBR	0	0	0	48	48	48	0	0	0	73	6	79	79
North Leg													
Approach	0	0	0	716	716	716	0	0	0	987	74	1,061	1,061
Departure	0	0	0	993	993	993	0	0	0	936	72	1,008	1,008
Total	0	0	0	1,709	1,709	1,709	0	0	0	1,923	146	2,069	2,069
South Leg													
Approach	0	0	0	963	963	963	0	0	0	876	67	943	943
Departure	0	0	0	679	679	679	0	0	0	858	65	923	923
Total	0	0	0	1,642	1,642	1,642	0	0	0	1,734	132	1,866	1,866
East Leg													
Approach	0	0	0	78	78	78	0	0	0	163	13	176	176
Departure	0	0	0	83	83	83	0	0	0	210	16	226	226
Total	0	0	0	161	161	161	0	0	0	373	29	402	402
West Leg													
Approach	0	0	0	64	64	64	0	0	0	228	18	246	246
Departure	0	0	0	66	66	66	0	0	0	250	19	269	269
Total	0	0	0	130	130	130	0	0	0	478	37	515	515
Total Approaches													
Approach	0	0	0	1,821	1,821	1,821	0	0	0	2,254	172	2,426	2,426
Departure	0	0	0	1,821	1,821	1,821	0	0	0	2,254	172	2,426	2,426
Total	0	0	0	3,642	3,642	3,642	0	0	0	4,508	344	4,852	4,852

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16 Trautwein Road/Van Buren Boulevard													
Historical Count Year: 2018													
NBL	130	8	138	115	138	138	0	0	0	98	7	105	105
NBT	598	36	634	486	634	634	0	0	0	364	28	392	392
NBR	102	6	108	93	108	108	0	0	0	72	5	77	80
SBL	169	10	179	173	179	179	0	0	0	248	19	267	276
SBT	356	21	377	313	377	377	0	0	0	408	31	439	439
SBR	253	15	268	225	268	268	0	0	0	220	17	237	237
EBL	285	17	302	226	302	302	0	0	0	351	27	378	378
EBT	810	49	859	824	859	859	0	0	0	796	61	857	886
EBR	63	4	67	64	67	67	0	0	0	112	9	121	121
WBL	151	9	160	146	160	160	0	0	0	124	9	133	133
WBT	1,248	75	1,323	1,078	1,323	1,323	0	0	0	1,021	78	1,099	1,099
WBR	321	19	340	294	340	340	0	0	0	272	21	293	293
North Leg													
Approach	778	46	824	711	824	824	0	0	0	876	67	943	952
Departure	1,204	72	1,276	1,006	1,276	1,276	0	0	0	987	76	1,063	1,063
Total	1,982	118	2,100	1,717	2,100	2,100	0	0	0	1,863	143	2,006	2,015
South Leg													
Approach	830	50	880	694	880	880	0	0	0	534	40	574	577
Departure	570	34	604	523	604	604	0	0	0	644	49	693	693
Total	1,400	84	1,484	1,217	1,484	1,484	0	0	0	1,178	89	1,267	1,270
East Leg													
Approach	1,720	103	1,823	1,518	1,823	1,823	0	0	0	1,417	108	1,525	1,525
Departure	1,081	65	1,146	1,090	1,146	1,146	0	0	0	1,116	85	1,201	1,242
Total	2,801	168	2,969	2,608	2,969	2,969	0	0	0	2,533	193	2,726	2,767
West Leg													
Approach	1,158	70	1,228	1,114	1,228	1,228	0	0	0	1,259	97	1,356	1,385
Departure	1,631	98	1,729	1,418	1,729	1,729	0	0	0	1,339	102	1,441	1,441
Total	2,789	168	2,957	2,532	2,957	2,957	0	0	0	2,598	199	2,797	2,826
Total Approaches													
Approach	4,486	269	4,755	4,037	4,755	4,755	0	0	0	4,086	312	4,398	4,439
Departure	4,486	269	4,755	4,037	4,755	4,755	0	0	0	4,086	312	4,398	4,439
Total	8,972	538	9,510	8,074	9,510	9,510	0	0	0	8,172	624	8,796	8,878

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
17 Shopping Center Driveway 2/Van Buren Boulevard													
Historical Count Year: N/A													
NBL	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	71	71	71	0	0	0	159	12	171	171
SBT	0	0	0	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	29	29	29	0	0	0	43	3	46	46
EBL	0	0	0	27	27	29	0	0	0	70	5	75	75
EBT	0	0	0	1,037	1,037	1,117	0	0	0	1,084	83	1,167	1,167
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	1,474	1,474	1,474	0	0	0	1,273	97	1,370	1,370
WBR	0	0	0	84	84	84	0	0	0	82	6	88	88
North Leg													
Approach	0	0	0	100	100	100	0	0	0	202	15	217	217
Departure	0	0	0	111	111	113	0	0	0	152	11	163	163
Total	0	0	0	211	211	213	0	0	0	354	26	380	380
South Leg													
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
East Leg													
Approach	0	0	0	1,558	1,558	1,558	0	0	0	1,355	103	1,458	1,458
Departure	0	0	0	1,108	1,108	1,188	0	0	0	1,243	95	1,338	1,338
Total	0	0	0	2,666	2,666	2,746	0	0	0	2,598	198	2,796	2,796
West Leg													
Approach	0	0	0	1,064	1,064	1,146	0	0	0	1,154	88	1,242	1,242
Departure	0	0	0	1,503	1,503	1,503	0	0	0	1,316	100	1,416	1,416
Total	0	0	0	2,567	2,567	2,649	0	0	0	2,470	188	2,658	2,658
Total Approaches													
Approach	0	0	0	2,722	2,722	2,804	0	0	0	2,711	206	2,917	2,917
Departure	0	0	0	2,722	2,722	2,804	0	0	0	2,711	206	2,917	2,917
Total	0	0	0	5,444	5,444	5,608	0	0	0	5,422	412	5,834	5,834

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
18 Barton Street/Van Buren Boulevard													
Historical Count Year: 2019													
NBL	140	6	146	300	300	300	0	0	0	216	16	232	232
NBT	90	5	95	68	95	95	0	0	0	61	5	66	66
NBR	369	22	391	336	391	391	0	0	0	255	19	274	274
SBL	42	3	45	36	45	45	0	0	0	24	2	26	26
SBT	133	8	141	86	141	141	0	0	0	31	2	33	33
SBR	267	16	283	231	283	283	0	0	0	133	10	143	143
EBL	147	9	156	103	156	156	0	0	0	97	7	104	104
EBT	942	57	999	934	999	999	0	0	0	923	70	993	993
EBR	74	4	78	105	105	105	0	0	0	187	14	201	201
WBL	303	18	321	220	321	321	0	0	0	273	21	294	294
WBT	1,358	81	1,439	1,071	1,439	1,439	0	0	0	1,123	85	1,208	1,208
WBR	19	1	20	13	20	20	0	0	0	38	3	41	41
North Leg													
Approach	442	27	469	353	469	469	0	0	0	188	14	202	202
Departure	256	15	271	184	271	271	0	0	0	196	15	211	211
Total	698	42	740	537	740	740	0	0	0	384	29	413	413
South Leg													
Approach	599	33	632	704	786	786	0	0	0	532	40	572	572
Departure	510	30	540	411	567	567	0	0	0	491	37	528	528
Total	1,109	63	1,172	1,115	1,353	1,353	0	0	0	1,023	77	1,100	1,100
East Leg													
Approach	1,680	100	1,780	1,304	1,780	1,780	0	0	0	1,434	109	1,543	1,543
Departure	1,353	82	1,435	1,306	1,435	1,435	0	0	0	1,202	91	1,293	1,293
Total	3,033	182	3,215	2,610	3,215	3,215	0	0	0	2,636	200	2,836	2,836
West Leg													
Approach	1,163	70	1,233	1,142	1,260	1,260	0	0	0	1,207	91	1,298	1,298
Departure	1,765	103	1,868	1,602	2,022	2,022	0	0	0	1,472	111	1,583	1,583
Total	2,928	173	3,101	2,744	3,282	3,282	0	0	0	2,679	202	2,881	2,881
Total Approaches													
Approach	3,884	230	4,114	3,503	4,295	4,295	0	0	0	3,361	254	3,615	3,615
Departure	3,884	230	4,114	3,503	4,295	4,295	0	0	0	3,361	254	3,615	3,615
Total	7,768	460	8,228	7,006	8,590	8,590	0	0	0	6,722	508	7,230	7,230

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
19 Project Driveway 1/Van Buren Boulevard													
Historical Count Year: N/A													
NBL	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0	0	0	2	0	2	2
EBL	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	1,207	1,207	1,315	0	0	0	1,333	101	1,434	1,582
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	1,461	1,461	1,787	0	0	0	1,415	108	1,523	1,697
WBR	0	0	0	7	7	7	0	0	0	12	1	13	13
North Leg													
Approach	0	0	0	0	0	0	0	0	0	2	0	2	2
Departure	0	0	0	7	7	7	0	0	0	12	1	13	13
Total	0	0	0	7	7	7	0	0	0	14	1	15	15
South Leg													
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
East Leg													
Approach	0	0	0	1,468	1,468	1,794	0	0	0	1,427	109	1,536	1,710
Departure	0	0	0	1,207	1,207	1,315	0	0	0	1,333	101	1,434	1,582
Total	0	0	0	2,675	2,675	3,109	0	0	0	2,760	210	2,970	3,292
West Leg													
Approach	0	0	0	1,207	1,207	1,315	0	0	0	1,333	101	1,434	1,582
Departure	0	0	0	1,461	1,461	1,787	0	0	0	1,417	108	1,525	1,699
Total	0	0	0	2,668	2,668	3,102	0	0	0	2,750	209	2,959	3,281
Total Approaches													
Approach	0	0	0	2,675	2,675	3,109	0	0	0	2,762	210	2,972	3,294
Departure	0	0	0	2,675	2,675	3,109	0	0	0	2,762	210	2,972	3,294
Total	0	0	0	5,350	5,350	6,218	0	0	0	5,524	420	5,944	6,588

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
20 Dauchy Avenue/Project Driveway 3													
Historical Count Year: N/A													
NBL	0	0	0	15	15	15	0	0	0	11	0	11	11
NBT	0	0	0	320	320	334	0	0	0	205	16	221	221
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	170	170	163	0	0	0	181	14	195	195
SBR	0	0	0	114	114	114	0	0	0	66	0	66	66
EBL	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0	0	0	0
North Leg													
Approach	0	0	0	284	284	277	0	0	0	247	14	261	261
Departure	0	0	0	320	320	334	0	0	0	205	16	221	221
Total	0	0	0	604	604	611	0	0	0	452	30	482	482
South Leg													
Approach	0	0	0	335	335	349	0	0	0	216	16	232	232
Departure	0	0	0	170	170	163	0	0	0	181	14	195	195
Total	0	0	0	505	505	512	0	0	0	397	30	427	427
East Leg													
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
West Leg													
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	129	129	129	0	0	0	77	0	77	77
Total	0	0	0	129	129	129	0	0	0	77	0	77	77
Total Approaches													
Approach	0	0	0	619	619	626	0	0	0	463	30	493	493
Departure	0	0	0	619	619	626	0	0	0	463	30	493	493
Total	0	0	0	1,238	1,238	1,252	0	0	0	926	60	986	986

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
21 Dauchy Avenue/Project Driveway 4													
Historical Count Year: N/A													
NBL	0	0	0	38	38	38	0	0	0	14	0	14	14
NBT	0	0	0	206	206	225	0	0	0	104	8	112	119
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	120	120	117	0	0	0	166	13	179	182
SBR	0	0	0	46	46	46	0	0	0	13	0	13	13
EBL	0	0	0	125	125	125	0	0	0	106	0	106	106
EBT	0	0	0	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	41	41	41	0	0	0	42	0	42	42
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0	0	0	0
North Leg													
Approach	0	0	0	166	166	163	0	0	0	179	13	192	195
Departure	0	0	0	331	331	350	0	0	0	210	8	218	225
Total	0	0	0	497	497	513	0	0	0	389	21	410	420
South Leg													
Approach	0	0	0	244	244	263	0	0	0	118	8	126	133
Departure	0	0	0	161	161	158	0	0	0	208	13	221	224
Total	0	0	0	405	405	421	0	0	0	326	21	347	357
East Leg													
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
West Leg													
Approach	0	0	0	166	166	166	0	0	0	148	0	148	148
Departure	0	0	0	84	84	84	0	0	0	27	0	27	27
Total	0	0	0	250	250	250	0	0	0	175	0	175	175
Total Approaches													
Approach	0	0	0	576	576	592	0	0	0	445	21	466	476
Departure	0	0	0	576	576	592	0	0	0	445	21	466	476
Total	0	0	0	1,152	1,152	1,184	0	0	0	890	42	932	952

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Table C-1 - Existing Peak Hour PCE Volume Summary

	AM Peak Hour						Afternoon Peak Hour						
	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Existing Volumes	Balanced 2021 Volumes	Historical Counts	Growth Historical Yr to 2021	Historical + Growth (2021)	Existing COVID-19 Volumes	Adjusted Growth for COVID-19	Adjusted Existing Volumes	Balanced 2021 Volumes
22 Dauchy Avenue/Project Driveway 5													
Historical Count Year: N/A													
NBL	0	0	0	0	0	0	0	0	0	1	0	1	1
NBT	0	0	0	265	265	265	0	0	0	113	9	122	130
NBR	0	0	0	0	0	0	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0	0	0	0	0	0	0
SBT	0	0	0	156	156	156	0	0	0	205	16	221	224
SBR	0	0	0	1	1	1	0	0	0	0	0	0	0
EBL	0	0	0	1	1	1	0	0	0	3	0	3	3
EBT	0	0	0	0	0	0	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0	0	0	0	0	0	0
North Leg													
Approach	0	0	0	157	157	157	0	0	0	205	16	221	224
Departure	0	0	0	266	266	266	0	0	0	116	9	125	133
Total	0	0	0	423	423	423	0	0	0	321	25	346	357
South Leg													
Approach	0	0	0	265	265	265	0	0	0	114	9	123	131
Departure	0	0	0	156	156	156	0	0	0	205	16	221	224
Total	0	0	0	421	421	421	0	0	0	319	25	344	355
East Leg													
Approach	0	0	0	0	0	0	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0
West Leg													
Approach	0	0	0	1	1	1	0	0	0	3	0	3	3
Departure	0	0	0	1	1	1	0	0	0	1	0	1	1
Total	0	0	0	2	2	2	0	0	0	4	0	4	4
Total Approaches													
Approach	0	0	0	423	423	423	0	0	0	322	25	347	358
Departure	0	0	0	423	423	423	0	0	0	322	25	347	358
Total	0	0	0	846	846	846	0	0	0	644	50	694	716

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
1 Washington Street/Van Buren Boulevard							
NBL	146	23	169	21	190	0	190
NBT	533	85	618	19	637	0	637
NBR	125	20	145	73	218	14	232
SBL	308	49	357	208	565	12	577
SBT	147	24	171	6	177	0	177
SBR	76	12	88	0	88	0	88
EBL	134	21	155	0	155	0	155
EBT	902	144	1,046	190	1,236	19	1,255
EBR	120	19	139	12	151	0	151
WBL	81	13	94	45	139	10	149
WBT	1,291	207	1,498	139	1,637	14	1,651
WBR	607	97	704	172	876	9	885
North Leg							
Approach	531	85	616	214	830	12	842
Departure	1,274	203	1,477	191	1,668	9	1,677
Total	1,805	288	2,093	405	2,498	21	2,519
South Leg							
Approach	804	128	932	113	1,045	14	1,059
Departure	348	56	404	63	467	10	477
Total	1,152	184	1,336	176	1,512	24	1,536
East Leg							
Approach	1,979	317	2,296	356	2,652	33	2,685
Departure	1,335	213	1,548	471	2,019	45	2,064
Total	3,314	530	3,844	827	4,671	78	4,749
West Leg							
Approach	1,156	184	1,340	202	1,542	19	1,561
Departure	1,513	242	1,755	160	1,915	14	1,929
Total	2,669	426	3,095	362	3,457	33	3,490
Total Approaches							
Approach	4,470	714	5,184	885	6,069	78	6,147
Departure	4,470	714	5,184	885	6,069	78	6,147
Total	8,940	1,428	10,368	1,770	12,138	156	12,294

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
2 Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard							
NBL	128	20	148	22	170	0	170
NBT	2	0	2	21	23	0	23
NBR	89	14	103	7	110	3	113
SBL	3	0	3	107	110	0	110
SBT	2	0	2	26	28	0	28
SBR	5	1	6	76	82	0	82
EBL	25	4	29	56	85	0	85
EBT	1,252	200	1,452	417	1,869	52	1,921
EBR	58	9	67	20	87	0	87
WBL	69	11	80	4	84	3	87
WBT	1,822	292	2,114	293	2,407	39	2,446
WBR	7	1	8	25	33	0	33
North Leg							
Approach	10	1	11	209	220	0	220
Departure	34	5	39	102	141	0	141
Total	44	6	50	311	361	0	361
South Leg							
Approach	219	34	253	50	303	3	306
Departure	129	20	149	50	199	3	202
Total	348	54	402	100	502	6	508
East Leg							
Approach	1,898	304	2,202	322	2,524	42	2,566
Departure	1,344	214	1,558	531	2,089	55	2,144
Total	3,242	518	3,760	853	4,613	97	4,710
West Leg							
Approach	1,335	213	1,548	493	2,041	52	2,093
Departure	1,955	313	2,268	391	2,659	39	2,698
Total	3,290	526	3,816	884	4,700	91	4,791
Total Approaches							
Approach	3,462	552	4,014	1,074	5,088	97	5,185
Departure	3,462	552	4,014	1,074	5,088	97	5,185
Total	6,924	1,104	8,028	2,148	10,176	194	10,370

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
3 Van Buren Village Driveway/Van Buren Boulevard							
NBL	0	0	0	38	38	0	38
NBT	0	0	0	0	0	0	0
NBR	0	0	0	114	114	0	114
SBL	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0
EBT	1,344	215	1,559	485	2,044	55	2,099
EBR	0	0	0	46	46	0	46
WBL	0	0	0	138	138	0	138
WBT	1,898	304	2,202	297	2,499	42	2,541
WBR	0	0	0	0	0	0	0
North Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
South Leg							
Approach	0	0	0	152	152	0	152
Departure	0	0	0	184	184	0	184
Total	0	0	0	336	336	0	336
East Leg							
Approach	1,898	304	2,202	435	2,637	42	2,679
Departure	1,344	215	1,559	599	2,158	55	2,213
Total	3,242	519	3,761	1,034	4,795	97	4,892
West Leg							
Approach	1,344	215	1,559	531	2,090	55	2,145
Departure	1,898	304	2,202	335	2,537	42	2,579
Total	3,242	519	3,761	866	4,627	97	4,724
Total Approaches							
Approach	3,242	519	3,761	1,118	4,879	97	4,976
Departure	3,242	519	3,761	1,118	4,879	97	4,976
Total	6,484	1,038	7,522	2,236	9,758	194	9,952

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
4 Little Court/Van Buren Boulevard							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	7	1	8	0	8	0	8
SBL	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0
EBT	1,343	215	1,558	599	2,157	55	2,212
EBR	1	0	1	0	1	0	1
WBL	0	0	0	0	0	0	0
WBT	1,898	304	2,202	435	2,637	42	2,679
WBR	0	0	0	0	0	0	0
North Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
South Leg							
Approach	7	1	8	0	8	0	8
Departure	1	0	1	0	1	0	1
Total	8	1	9	0	9	0	9
East Leg							
Approach	1,898	304	2,202	435	2,637	42	2,679
Departure	1,350	216	1,566	599	2,165	55	2,220
Total	3,248	520	3,768	1,034	4,802	97	4,899
West Leg							
Approach	1,344	215	1,559	599	2,158	55	2,213
Departure	1,898	304	2,202	435	2,637	42	2,679
Total	3,242	519	3,761	1,034	4,795	97	4,892
Total Approaches							
Approach	3,249	520	3,769	1,034	4,803	97	4,900
Departure	3,249	520	3,769	1,034	4,803	97	4,900
Total	6,498	1,040	7,538	2,068	9,606	194	9,800

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
5 Ridgeway Avenue/Van Buren Boulevard							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0
SBL	1	0	1	1	2	0	2
SBT	0	0	0	0	0	0	0
SBR	119	19	138	7	145	0	145
EBL	36	6	42	7	49	0	49
EBT	1,314	210	1,524	592	2,116	55	2,171
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	1,779	285	2,064	427	2,491	42	2,533
WBR	8	1	9	0	9	0	9
North Leg							
Approach	120	19	139	8	147	0	147
Departure	44	7	51	7	58	0	58
Total	164	26	190	15	205	0	205
South Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
East Leg							
Approach	1,787	286	2,073	427	2,500	42	2,542
Departure	1,315	210	1,525	593	2,118	55	2,173
Total	3,102	496	3,598	1,020	4,618	97	4,715
West Leg							
Approach	1,350	216	1,566	599	2,165	55	2,220
Departure	1,898	304	2,202	434	2,636	42	2,678
Total	3,248	520	3,768	1,033	4,801	97	4,898
Total Approaches							
Approach	3,257	521	3,778	1,034	4,812	97	4,909
Departure	3,257	521	3,778	1,034	4,812	97	4,909
Total	6,514	1,042	7,556	2,068	9,624	194	9,818

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
6 Dauchy Avenue/Van Buren Boulevard							
NBL	239	38	277	46	323	42	365
NBT	35	6	41	7	48	1	49
NBR	145	23	168	13	181	73	254
SBL	37	6	43	48	91	0	91
SBT	45	7	52	9	61	2	63
SBR	23	4	27	12	39	0	39
EBL	19	3	22	12	34	0	34
EBT	1,073	172	1,245	540	1,785	0	1,785
EBR	223	36	259	44	303	55	358
WBL	156	25	181	10	191	97	288
WBT	1,532	245	1,777	378	2,155	0	2,155
WBR	15	2	17	36	53	0	53
North Leg							
Approach	105	17	122	69	191	2	193
Departure	69	11	80	55	135	1	136
Total	174	28	202	124	326	3	329
South Leg							
Approach	419	67	486	66	552	116	668
Departure	424	68	492	63	555	154	709
Total	843	135	978	129	1,107	270	1,377
East Leg							
Approach	1,703	272	1,975	424	2,399	97	2,496
Departure	1,255	201	1,456	601	2,057	73	2,130
Total	2,958	473	3,431	1,025	4,456	170	4,626
West Leg							
Approach	1,315	211	1,526	596	2,122	55	2,177
Departure	1,794	287	2,081	436	2,517	42	2,559
Total	3,109	498	3,607	1,032	4,639	97	4,736
Total Approaches							
Approach	3,542	567	4,109	1,155	5,264	270	5,534
Departure	3,542	567	4,109	1,155	5,264	270	5,534
Total	7,084	1,134	8,218	2,310	10,528	540	11,068

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
7 Dauchy Avenue/Project Driveway 2 - Ardenwood Lane							
NBL	34	0	34	0	34	9	43
NBT	295	47	342	54	396	63	459
NBR	4	1	5	0	5	0	5
SBL	8	1	9	8	17	0	17
SBT	247	40	287	44	331	83	414
SBR	143	0	143	0	143	71	214
EBL	112	0	112	0	112	54	166
EBT	0	0	0	0	0	0	0
EBR	27	0	27	0	27	7	34
WBL	4	1	5	0	5	0	5
WBT	0	0	0	0	0	0	0
WBR	37	6	43	10	53	0	53
North Leg							
Approach	398	41	439	52	491	154	645
Departure	444	53	497	64	561	117	678
Total	842	94	936	116	1,052	271	1,323
South Leg							
Approach	333	48	381	54	435	72	507
Departure	278	41	319	44	363	90	453
Total	611	89	700	98	798	162	960
East Leg							
Approach	41	7	48	10	58	0	58
Departure	12	2	14	8	22	0	22
Total	53	9	62	18	80	0	80
West Leg							
Approach	139	0	139	0	139	61	200
Departure	177	0	177	0	177	80	257
Total	316	0	316	0	316	141	457
Total Approaches							
Approach	911	96	1,007	116	1,123	287	1,410
Departure	911	96	1,007	116	1,123	287	1,410
Total	1,822	192	2,014	232	2,246	574	2,820

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
8 Dauchy Avenue - Taft Street/Krameria Avenue							
NBL	14	2	16	0	16	0	16
NBT	15	2	17	15	32	3	35
NBR	8	1	9	0	9	0	9
SBL	76	12	88	10	98	12	110
SBT	6	1	7	8	15	3	18
SBR	33	5	38	1	39	0	39
EBL	39	6	45	1	46	0	46
EBT	339	54	393	0	393	0	393
EBR	2	0	2	0	2	0	2
WBL	1	0	1	0	1	0	1
WBT	383	61	444	0	444	0	444
WBR	86	14	100	10	110	15	125
North Leg							
Approach	115	18	133	19	152	15	167
Departure	140	22	162	26	188	18	206
Total	255	40	295	45	340	33	373
South Leg							
Approach	37	5	42	15	57	3	60
Departure	9	1	10	8	18	3	21
Total	46	6	52	23	75	6	81
East Leg							
Approach	470	75	545	10	555	15	570
Departure	423	67	490	10	500	12	512
Total	893	142	1,035	20	1,055	27	1,082
West Leg							
Approach	380	60	440	1	441	0	441
Departure	430	68	498	1	499	0	499
Total	810	128	938	2	940	0	940
Total Approaches							
Approach	1,002	158	1,160	45	1,205	33	1,238
Departure	1,002	158	1,160	45	1,205	33	1,238
Total	2,004	316	2,320	90	2,410	66	2,476

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
9 Wood Road/Van Buren Boulevard							
NBL	360	58	418	84	502	14	516
NBT	485	78	563	1	564	0	564
NBR	287	46	333	32	365	0	365
SBL	82	13	95	18	113	0	113
SBT	407	65	472	0	472	0	472
SBR	163	26	189	23	212	2	214
EBL	133	21	154	19	173	1	174
EBT	852	136	988	493	1,481	62	1,543
EBR	316	51	367	74	441	10	451
WBL	415	66	481	16	497	0	497
WBT	1,189	190	1,379	339	1,718	81	1,799
WBR	149	24	173	6	179	0	179
North Leg							
Approach	652	104	756	41	797	2	799
Departure	767	123	890	26	916	1	917
Total	1,419	227	1,646	67	1,713	3	1,716
South Leg							
Approach	1,132	182	1,314	117	1,431	14	1,445
Departure	1,138	182	1,320	90	1,410	10	1,420
Total	2,270	364	2,634	207	2,841	24	2,865
East Leg							
Approach	1,753	280	2,033	361	2,394	81	2,475
Departure	1,221	195	1,416	543	1,959	62	2,021
Total	2,974	475	3,449	904	4,353	143	4,496
West Leg							
Approach	1,301	208	1,509	586	2,095	73	2,168
Departure	1,712	274	1,986	446	2,432	97	2,529
Total	3,013	482	3,495	1,032	4,527	170	4,697
Total Approaches							
Approach	4,838	774	5,612	1,105	6,717	170	6,887
Departure	4,838	774	5,612	1,105	6,717	170	6,887
Total	9,676	1,548	11,224	2,210	13,434	340	13,774

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
10 Bountiful Street/Van Buren Boulevard							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	0	0	0	1	1	0	1
SBL	47	8	55	0	55	0	55
SBT	0	0	0	0	0	0	0
SBR	170	27	197	55	252	2	254
EBL	89	14	103	59	162	1	163
EBT	1,181	189	1,370	486	1,856	60	1,916
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	1,332	213	1,545	302	1,847	79	1,926
WBR	31	5	36	0	36	0	36
North Leg							
Approach	217	35	252	55	307	2	309
Departure	120	19	139	59	198	1	199
Total	337	54	391	114	505	3	508
South Leg							
Approach	0	0	0	1	1	0	1
Departure	0	0	0	0	0	0	0
Total	0	0	0	1	1	0	1
East Leg							
Approach	1,363	218	1,581	302	1,883	79	1,962
Departure	1,228	197	1,425	487	1,912	60	1,972
Total	2,591	415	3,006	789	3,795	139	3,934
West Leg							
Approach	1,270	203	1,473	545	2,018	61	2,079
Departure	1,502	240	1,742	357	2,099	81	2,180
Total	2,772	443	3,215	902	4,117	142	4,259
Total Approaches							
Approach	2,850	456	3,306	903	4,209	142	4,351
Departure	2,850	456	3,306	903	4,209	142	4,351
Total	5,700	912	6,612	1,806	8,418	284	8,702

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
11 Trautwein Road/Mission Grove Parkway							
NBL	3	0	3	0	3	0	3
NBT	1,647	264	1,911	77	1,988	12	2,000
NBR	499	80	579	25	604	12	616
SBL	179	29	208	0	208	0	208
SBT	865	138	1,003	201	1,204	15	1,219
SBR	16	3	19	0	19	0	19
EBL	58	9	67	0	67	0	67
EBT	32	5	37	0	37	0	37
EBR	9	1	10	0	10	0	10
WBL	584	93	677	28	705	15	720
WBT	31	5	36	0	36	0	36
WBR	50	8	58	0	58	0	58
North Leg							
Approach	1,060	170	1,230	201	1,431	15	1,446
Departure	1,755	281	2,036	77	2,113	12	2,125
Total	2,815	451	3,266	278	3,544	27	3,571
South Leg							
Approach	2,149	344	2,493	102	2,595	24	2,619
Departure	1,458	232	1,690	229	1,919	30	1,949
Total	3,607	576	4,183	331	4,514	54	4,568
East Leg							
Approach	665	106	771	28	799	15	814
Departure	710	114	824	25	849	12	861
Total	1,375	220	1,595	53	1,648	27	1,675
West Leg							
Approach	99	15	114	0	114	0	114
Departure	50	8	58	0	58	0	58
Total	149	23	172	0	172	0	172
Total Approaches							
Approach	3,973	635	4,608	331	4,939	54	4,993
Departure	3,973	635	4,608	331	4,939	54	4,993
Total	7,946	1,270	9,216	662	9,878	108	9,986

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
12 Trautwein Road/John F Kennedy Drive							
NBL	199	32	231	8	239	0	239
NBT	1,846	295	2,141	98	2,239	24	2,263
NBR	75	12	87	11	98	0	98
SBL	9	1	10	0	10	0	10
SBT	761	122	883	226	1,109	31	1,140
SBR	586	94	680	0	680	0	680
EBL	546	87	633	1	634	0	634
EBT	49	8	57	0	57	0	57
EBR	71	11	82	23	105	0	105
WBL	100	16	116	24	140	0	140
WBT	55	9	64	0	64	0	64
WBR	41	7	48	0	48	0	48
North Leg							
Approach	1,356	217	1,573	226	1,799	31	1,830
Departure	2,433	389	2,822	99	2,921	24	2,945
Total	3,789	606	4,395	325	4,720	55	4,775
South Leg							
Approach	2,120	339	2,459	117	2,576	24	2,600
Departure	932	149	1,081	273	1,354	31	1,385
Total	3,052	488	3,540	390	3,930	55	3,985
East Leg							
Approach	196	32	228	24	252	0	252
Departure	133	21	154	11	165	0	165
Total	329	53	382	35	417	0	417
West Leg							
Approach	666	106	772	24	796	0	796
Departure	840	135	975	8	983	0	983
Total	1,506	241	1,747	32	1,779	0	1,779
Total Approaches							
Approach	4,338	694	5,032	391	5,423	55	5,478
Departure	4,338	694	5,032	391	5,423	55	5,478
Total	8,676	1,388	10,064	782	10,846	110	10,956

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
13 Trautwein Road/Grove Community Drive							
NBL	0	0	0	0	0	0	0
NBT	1,596	255	1,851	117	1,968	24	1,992
NBR	41	7	48	17	65	0	65
SBL	161	26	187	0	187	0	187
SBT	771	123	894	271	1,165	31	1,196
SBR	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0
WBL	77	12	89	22	111	0	111
WBT	0	0	0	0	0	0	0
WBR	524	84	608	0	608	0	608
North Leg							
Approach	932	149	1,081	271	1,352	31	1,383
Departure	2,120	339	2,459	117	2,576	24	2,600
Total	3,052	488	3,540	388	3,928	55	3,983
South Leg							
Approach	1,637	262	1,899	134	2,033	24	2,057
Departure	848	135	983	293	1,276	31	1,307
Total	2,485	397	2,882	427	3,309	55	3,364
East Leg							
Approach	601	96	697	22	719	0	719
Departure	202	33	235	17	252	0	252
Total	803	129	932	39	971	0	971
West Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
Total Approaches							
Approach	3,170	507	3,677	427	4,104	55	4,159
Departure	3,170	507	3,677	427	4,104	55	4,159
Total	6,340	1,014	7,354	854	8,208	110	8,318

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
14 Trautwein Road/Orange Terrace Parkway							
NBL	49	8	57	11	68	0	68
NBT	1,042	167	1,209	133	1,342	24	1,366
NBR	213	34	247	20	267	9	276
SBL	302	48	350	0	350	0	350
SBT	568	91	659	293	952	31	983
SBR	27	4	31	0	31	0	31
EBL	84	13	97	0	97	0	97
EBT	58	9	67	0	67	0	67
EBR	18	3	21	24	45	0	45
WBL	302	48	350	26	376	12	388
WBT	139	22	161	0	161	0	161
WBR	511	82	593	0	593	0	593
North Leg							
Approach	897	143	1,040	293	1,333	31	1,364
Departure	1,637	262	1,899	133	2,032	24	2,056
Total	2,534	405	2,939	426	3,365	55	3,420
South Leg							
Approach	1,304	209	1,513	164	1,677	33	1,710
Departure	888	142	1,030	343	1,373	43	1,416
Total	2,192	351	2,543	507	3,050	76	3,126
East Leg							
Approach	952	152	1,104	26	1,130	12	1,142
Departure	573	91	664	20	684	9	693
Total	1,525	243	1,768	46	1,814	21	1,835
West Leg							
Approach	160	25	185	24	209	0	209
Departure	215	34	249	11	260	0	260
Total	375	59	434	35	469	0	469
Total Approaches							
Approach	3,313	529	3,842	507	4,349	76	4,425
Departure	3,313	529	3,842	507	4,349	76	4,425
Total	6,626	1,058	7,684	1,014	8,698	152	8,850

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
15 Trautwein Road/Shopping Center Driveway 1							
NBL	44	7	51	34	85	0	85
NBT	913	146	1,059	139	1,198	33	1,231
NBR	6	1	7	15	22	0	22
SBL	68	11	79	0	79	0	79
SBT	633	101	734	313	1,047	43	1,090
SBR	15	2	17	27	44	0	44
EBL	32	5	37	25	62	0	62
EBT	9	1	10	0	10	0	10
EBR	23	4	27	28	55	0	55
WBL	23	4	27	5	32	0	32
WBT	7	1	8	0	8	0	8
WBR	48	8	56	0	56	0	56
North Leg							
Approach	716	114	830	340	1,170	43	1,213
Departure	993	159	1,152	164	1,316	33	1,349
Total	1,709	273	1,982	504	2,486	76	2,562
South Leg							
Approach	963	154	1,117	188	1,305	33	1,338
Departure	679	109	788	346	1,134	43	1,177
Total	1,642	263	1,905	534	2,439	76	2,515
East Leg							
Approach	78	13	91	5	96	0	96
Departure	83	13	96	15	111	0	111
Total	161	26	187	20	207	0	207
West Leg							
Approach	64	10	74	53	127	0	127
Departure	66	10	76	61	137	0	137
Total	130	20	150	114	264	0	264
Total Approaches							
Approach	1,821	291	2,112	586	2,698	76	2,774
Departure	1,821	291	2,112	586	2,698	76	2,774
Total	3,642	582	4,224	1,172	5,396	152	5,548

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
16 Trautwein Road/Van Buren Boulevard							
NBL	138	22	160	66	226	7	233
NBT	634	101	735	38	773	0	773
NBR	108	17	125	26	151	0	151
SBL	179	29	208	277	485	0	485
SBT	377	60	437	17	454	0	454
SBR	268	43	311	52	363	43	406
EBL	302	48	350	58	408	33	441
EBT	859	137	996	371	1,367	22	1,389
EBR	67	11	78	59	137	5	142
WBL	160	26	186	8	194	0	194
WBT	1,323	212	1,535	190	1,725	29	1,754
WBR	340	54	394	100	494	0	494
North Leg							
Approach	824	132	956	346	1,302	43	1,345
Departure	1,276	203	1,479	196	1,675	33	1,708
Total	2,100	335	2,435	542	2,977	76	3,053
South Leg							
Approach	880	140	1,020	130	1,150	7	1,157
Departure	604	97	701	84	785	5	790
Total	1,484	237	1,721	214	1,935	12	1,947
East Leg							
Approach	1,823	292	2,115	298	2,413	29	2,442
Departure	1,146	183	1,329	674	2,003	22	2,025
Total	2,969	475	3,444	972	4,416	51	4,467
West Leg							
Approach	1,228	196	1,424	488	1,912	60	1,972
Departure	1,729	277	2,006	308	2,314	79	2,393
Total	2,957	473	3,430	796	4,226	139	4,365
Total Approaches							
Approach	4,755	760	5,515	1,262	6,777	139	6,916
Departure	4,755	760	5,515	1,262	6,777	139	6,916
Total	9,510	1,520	11,030	2,524	13,554	278	13,832

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
17 Shopping Center Driveway 2/Van Buren Boulevard							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0
SBL	71	11	82	3	85	0	85
SBT	0	0	0	0	0	0	0
SBR	29	5	34	1	35	0	35
EBL	29	5	34	3	37	0	37
EBT	1,117	179	1,296	667	1,963	22	1,985
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	1,474	236	1,710	298	2,008	29	2,037
WBR	84	13	97	6	103	0	103
North Leg							
Approach	100	16	116	4	120	0	120
Departure	113	18	131	9	140	0	140
Total	213	34	247	13	260	0	260
South Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
East Leg							
Approach	1,558	249	1,807	304	2,111	29	2,140
Departure	1,188	190	1,378	670	2,048	22	2,070
Total	2,746	439	3,185	974	4,159	51	4,210
West Leg							
Approach	1,146	184	1,330	670	2,000	22	2,022
Departure	1,503	241	1,744	299	2,043	29	2,072
Total	2,649	425	3,074	969	4,043	51	4,094
Total Approaches							
Approach	2,804	449	3,253	978	4,231	51	4,282
Departure	2,804	449	3,253	978	4,231	51	4,282
Total	5,608	898	6,506	1,956	8,462	102	8,564

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
18 Barton Street/Van Buren Boulevard							
NBL	300	48	348	99	447	0	447
NBT	95	15	110	0	110	0	110
NBR	391	63	454	6	460	0	460
SBL	45	7	52	35	87	0	87
SBT	141	23	164	0	164	0	164
SBR	283	45	328	21	349	9	358
EBL	156	25	181	17	198	7	205
EBT	999	160	1,159	377	1,536	16	1,552
EBR	105	17	122	279	401	0	401
WBL	321	51	372	2	374	0	374
WBT	1,439	230	1,669	180	1,849	21	1,870
WBR	20	3	23	12	35	0	35
North Leg							
Approach	469	75	544	56	600	9	609
Departure	271	43	314	29	343	7	350
Total	740	118	858	85	943	16	959
South Leg							
Approach	786	126	912	105	1,017	0	1,017
Departure	567	91	658	281	939	0	939
Total	1,353	217	1,570	386	1,956	0	1,956
East Leg							
Approach	1,780	284	2,064	194	2,258	21	2,279
Departure	1,435	230	1,665	418	2,083	16	2,099
Total	3,215	514	3,729	612	4,341	37	4,378
West Leg							
Approach	1,260	202	1,462	673	2,135	23	2,158
Departure	2,022	323	2,345	300	2,645	30	2,675
Total	3,282	525	3,807	973	4,780	53	4,833
Total Approaches							
Approach	4,295	687	4,982	1,028	6,010	53	6,063
Departure	4,295	687	4,982	1,028	6,010	53	6,063
Total	8,590	1,374	9,964	2,056	12,020	106	12,126

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
19 Project Driveway 1/Van Buren Boulevard							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0
EBT	1,315	210	1,525	593	2,118	55	2,173
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	1,787	286	2,073	427	2,500	42	2,542
WBR	7	1	8	0	8	0	8
North Leg							
Approach	0	0	0	0	0	0	0
Departure	7	1	8	0	8	0	8
Total	7	1	8	0	8	0	8
South Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
East Leg							
Approach	1,794	287	2,081	427	2,508	42	2,550
Departure	1,315	210	1,525	593	2,118	55	2,173
Total	3,109	497	3,606	1,020	4,626	97	4,723
West Leg							
Approach	1,315	210	1,525	593	2,118	55	2,173
Departure	1,787	286	2,073	427	2,500	42	2,542
Total	3,102	496	3,598	1,020	4,618	97	4,715
Total Approaches							
Approach	3,109	497	3,606	1,020	4,626	97	4,723
Departure	3,109	497	3,606	1,020	4,626	97	4,723
Total	6,218	994	7,212	2,040	9,252	194	9,446

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
20 Dauchy Avenue/Project Driveway 3							
NBL	15	0	15	0	15	7	22
NBT	334	53	387	54	441	72	513
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	163	26	189	44	233	38	271
SBR	114	0	114	0	114	52	166
EBL	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0
North Leg							
Approach	277	26	303	44	347	90	437
Departure	334	53	387	54	441	72	513
Total	611	79	690	98	788	162	950
South Leg							
Approach	349	53	402	54	456	79	535
Departure	163	26	189	44	233	38	271
Total	512	79	591	98	689	117	806
East Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
West Leg							
Approach	0	0	0	0	0	0	0
Departure	129	0	129	0	129	59	188
Total	129	0	129	0	129	59	188
Total Approaches							
Approach	626	79	705	98	803	169	972
Departure	626	79	705	98	803	169	972
Total	1,252	158	1,410	196	1,606	338	1,944

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
21 Dauchy Avenue/Project Driveway 4							
NBL	38	0	38	0	38	3	41
NBT	225	36	261	54	315	15	330
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	117	19	136	44	180	7	187
SBR	46	0	46	0	46	31	77
EBL	125	0	125	0	125	63	188
EBT	0	0	0	0	0	0	0
EBR	41	0	41	0	41	8	49
WBL	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0
North Leg							
Approach	163	19	182	44	226	38	264
Departure	350	36	386	54	440	78	518
Total	513	55	568	98	666	116	782
South Leg							
Approach	263	36	299	54	353	18	371
Departure	158	19	177	44	221	15	236
Total	421	55	476	98	574	33	607
East Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
West Leg							
Approach	166	0	166	0	166	71	237
Departure	84	0	84	0	84	34	118
Total	250	0	250	0	250	105	355
Total Approaches							
Approach	592	55	647	98	745	127	872
Departure	592	55	647	98	745	127	872
Total	1,184	110	1,294	196	1,490	254	1,744

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	AM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
22 Dauchy Avenue/Project Driveway 5							
NBL	0	0	0	0	0	0	0
NBT	265	42	307	54	361	19	380
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	156	25	181	44	225	14	239
SBR	1	0	1	0	1	0	1
EBL	1	0	1	0	1	0	1
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0
North Leg							
Approach	157	25	182	44	226	14	240
Departure	266	42	308	54	362	19	381
Total	423	67	490	98	588	33	621
South Leg							
Approach	265	42	307	54	361	19	380
Departure	156	25	181	44	225	14	239
Total	421	67	488	98	586	33	619
East Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
West Leg							
Approach	1	0	1	0	1	0	1
Departure	1	0	1	0	1	0	1
Total	2	0	2	0	2	0	2
Total Approaches							
Approach	423	67	490	98	588	33	621
Departure	423	67	490	98	588	33	621
Total	846	134	980	196	1,176	66	1,242

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
1 Washington Street/Van Buren Boulevard							
NBL	100	16	116	18	134	0	134
NBT	294	47	341	12	353	0	353
NBR	104	17	121	60	181	6	187
SBL	443	71	514	214	728	6	734
SBT	275	44	319	22	341	0	341
SBR	102	16	118	0	118	0	118
EBL	129	21	150	0	150	0	150
EBT	1,181	189	1,370	166	1,536	9	1,545
EBR	79	13	92	25	117	0	117
WBL	116	19	135	85	220	10	230
WBT	1,219	195	1,414	209	1,623	14	1,637
WBR	359	57	416	251	667	9	676
North Leg							
Approach	820	131	951	236	1,187	6	1,193
Departure	782	125	907	263	1,170	9	1,179
Total	1,602	256	1,858	499	2,357	15	2,372
South Leg							
Approach	498	80	578	90	668	6	674
Departure	470	76	546	132	678	10	688
Total	968	156	1,124	222	1,346	16	1,362
East Leg							
Approach	1,694	271	1,965	545	2,510	33	2,543
Departure	1,728	277	2,005	440	2,445	21	2,466
Total	3,422	548	3,970	985	4,955	54	5,009
West Leg							
Approach	1,389	223	1,612	191	1,803	9	1,812
Departure	1,421	227	1,648	227	1,875	14	1,889
Total	2,810	450	3,260	418	3,678	23	3,701
Total Approaches							
Approach	4,401	705	5,106	1,062	6,168	54	6,222
Departure	4,401	705	5,106	1,062	6,168	54	6,222
Total	8,802	1,410	10,212	2,124	12,336	108	12,444

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
2 Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard							
NBL	59	9	68	23	91	0	91
NBT	2	0	2	29	31	0	31
NBR	19	3	22	5	27	2	29
SBL	20	3	23	89	112	0	112
SBT	2	0	2	25	27	0	27
SBR	6	1	7	55	62	0	62
EBL	22	4	26	109	135	0	135
EBT	1,643	263	1,906	334	2,240	24	2,264
EBR	135	22	157	23	180	0	180
WBL	39	6	45	5	50	3	53
WBT	1,681	269	1,950	499	2,449	39	2,488
WBR	18	3	21	81	102	0	102
North Leg							
Approach	28	4	32	169	201	0	201
Departure	42	7	49	219	268	0	268
Total	70	11	81	388	469	0	469
South Leg							
Approach	80	12	92	57	149	2	151
Departure	176	28	204	53	257	3	260
Total	256	40	296	110	406	5	411
East Leg							
Approach	1,738	278	2,016	585	2,601	42	2,643
Departure	1,682	269	1,951	428	2,379	26	2,405
Total	3,420	547	3,967	1,013	4,980	68	5,048
West Leg							
Approach	1,800	289	2,089	466	2,555	24	2,579
Departure	1,746	279	2,025	577	2,602	39	2,641
Total	3,546	568	4,114	1,043	5,157	63	5,220
Total Approaches							
Approach	3,646	583	4,229	1,277	5,506	68	5,574
Departure	3,646	583	4,229	1,277	5,506	68	5,574
Total	7,292	1,166	8,458	2,554	11,012	136	11,148

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
3 Van Buren Village Driveway/Van Buren Boulevard							
NBL	0	0	0	45	45	0	45
NBT	0	0	0	0	0	0	0
NBR	0	0	0	134	134	0	134
SBL	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0
EBT	1,682	269	1,951	389	2,340	25	2,365
EBR	0	0	0	39	39	0	39
WBL	0	0	0	118	118	0	118
WBT	1,738	278	2,016	552	2,568	42	2,610
WBR	0	0	0	0	0	0	0
North Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
South Leg							
Approach	0	0	0	179	179	0	179
Departure	0	0	0	157	157	0	157
Total	0	0	0	336	336	0	336
East Leg							
Approach	1,738	278	2,016	670	2,686	42	2,728
Departure	1,682	269	1,951	523	2,474	25	2,499
Total	3,420	547	3,967	1,193	5,160	67	5,227
West Leg							
Approach	1,682	269	1,951	428	2,379	25	2,404
Departure	1,738	278	2,016	597	2,613	42	2,655
Total	3,420	547	3,967	1,025	4,992	67	5,059
Total Approaches							
Approach	3,420	547	3,967	1,277	5,244	67	5,311
Departure	3,420	547	3,967	1,277	5,244	67	5,311
Total	6,840	1,094	7,934	2,554	10,488	134	10,622

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
4 Little Court/Van Buren Boulevard							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	2	0	2	0	2	0	2
SBL	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0
SBR	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0
EBT	1,678	268	1,946	523	2,469	25	2,494
EBR	4	1	5	0	5	0	5
WBL	0	0	0	0	0	0	0
WBT	1,738	278	2,016	670	2,686	42	2,728
WBR	0	0	0	0	0	0	0
North Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
South Leg							
Approach	2	0	2	0	2	0	2
Departure	4	1	5	0	5	0	5
Total	6	1	7	0	7	0	7
East Leg							
Approach	1,738	278	2,016	670	2,686	42	2,728
Departure	1,680	268	1,948	523	2,471	25	2,496
Total	3,418	546	3,964	1,193	5,157	67	5,224
West Leg							
Approach	1,682	269	1,951	523	2,474	25	2,499
Departure	1,738	278	2,016	670	2,686	42	2,728
Total	3,420	547	3,967	1,193	5,160	67	5,227
Total Approaches							
Approach	3,422	547	3,969	1,193	5,162	67	5,229
Departure	3,422	547	3,969	1,193	5,162	67	5,229
Total	6,844	1,094	7,938	2,386	10,324	134	10,458

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
5 Ridgeway Avenue/Van Buren Boulevard							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0
SBL	1	0	1	1	2	0	2
SBT	0	0	0	0	0	0	0
SBR	56	9	65	7	72	0	72
EBL	99	16	115	7	122	0	122
EBT	1,581	253	1,834	516	2,350	25	2,375
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	1,682	269	1,951	662	2,613	42	2,655
WBR	17	3	20	1	21	0	21
North Leg							
Approach	57	9	66	8	74	0	74
Departure	116	19	135	8	143	0	143
Total	173	28	201	16	217	0	217
South Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
East Leg							
Approach	1,699	272	1,971	663	2,634	42	2,676
Departure	1,582	253	1,835	517	2,352	25	2,377
Total	3,281	525	3,806	1,180	4,986	67	5,053
West Leg							
Approach	1,680	269	1,949	523	2,472	25	2,497
Departure	1,738	278	2,016	669	2,685	42	2,727
Total	3,418	547	3,965	1,192	5,157	67	5,224
Total Approaches							
Approach	3,436	550	3,986	1,194	5,180	67	5,247
Departure	3,436	550	3,986	1,194	5,180	67	5,247
Total	6,872	1,100	7,972	2,388	10,360	134	10,494

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
6 Dauchy Avenue/Van Buren Boulevard							
NBL	194	31	225	46	271	42	313
NBT	65	10	75	7	82	1	83
NBR	113	18	131	15	146	72	218
SBL	62	10	72	34	106	0	106
SBT	28	4	32	7	39	1	40
SBR	44	7	51	12	63	0	63
EBL	66	11	77	12	89	0	89
EBT	1,326	212	1,538	463	2,001	0	2,001
EBR	190	30	220	46	266	25	291
WBL	103	16	119	13	132	44	176
WBT	1,472	236	1,708	613	2,321	0	2,321
WBR	27	4	31	46	77	0	77
North Leg							
Approach	134	21	155	53	208	1	209
Departure	158	25	183	65	248	1	249
Total	292	46	338	118	456	2	458
South Leg							
Approach	372	59	431	68	499	115	614
Departure	321	50	371	66	437	70	507
Total	693	109	802	134	936	185	1,121
East Leg							
Approach	1,602	256	1,858	672	2,530	44	2,574
Departure	1,501	240	1,741	512	2,253	72	2,325
Total	3,103	496	3,599	1,184	4,783	116	4,899
West Leg							
Approach	1,582	253	1,835	521	2,356	25	2,381
Departure	1,710	274	1,984	671	2,655	42	2,697
Total	3,292	527	3,819	1,192	5,011	67	5,078
Total Approaches							
Approach	3,690	589	4,279	1,314	5,593	185	5,778
Departure	3,690	589	4,279	1,314	5,593	185	5,778
Total	7,380	1,178	8,558	2,628	11,186	370	11,556

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
7 Dauchy Avenue/Project Driveway 2 - Ardenwood Lane							
NBL	14	0	14	0	14	4	18
NBT	199	32	231	52	283	62	345
NBR	8	1	9	0	9	0	9
SBL	8	1	9	9	18	0	18
SBT	226	36	262	52	314	38	352
SBR	62	0	62	0	62	32	94
EBL	119	0	119	0	119	53	172
EBT	1	0	1	0	1	0	1
EBR	29	0	29	0	29	7	36
WBL	5	1	6	0	6	0	6
WBT	0	0	0	0	0	0	0
WBR	14	2	16	9	25	0	25
North Leg							
Approach	296	37	333	61	394	70	464
Departure	332	34	366	61	427	115	542
Total	628	71	699	122	821	185	1,006
South Leg							
Approach	221	33	254	52	306	66	372
Departure	260	37	297	52	349	45	394
Total	481	70	551	104	655	111	766
East Leg							
Approach	19	3	22	9	31	0	31
Departure	17	2	19	9	28	0	28
Total	36	5	41	18	59	0	59
West Leg							
Approach	149	0	149	0	149	60	209
Departure	76	0	76	0	76	36	112
Total	225	0	225	0	225	96	321
Total Approaches							
Approach	685	73	758	122	880	196	1,076
Departure	685	73	758	122	880	196	1,076
Total	1,370	146	1,516	244	1,760	392	2,152

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
8 Dauchy Avenue - Taft Street/Krameria Avenue							
NBL	11	2	13	0	13	0	13
NBT	17	3	20	10	30	2	32
NBR	8	1	9	0	9	0	9
SBL	136	22	158	9	167	12	179
SBT	20	3	23	15	38	3	41
SBR	62	10	72	1	73	0	73
EBL	33	5	38	1	39	0	39
EBT	302	48	350	0	350	0	350
EBR	23	4	27	0	27	0	27
WBL	6	1	7	0	7	0	7
WBT	245	39	284	0	284	0	284
WBR	47	8	55	9	64	7	71
North Leg							
Approach	218	35	253	25	278	15	293
Departure	97	16	113	20	133	9	142
Total	315	51	366	45	411	24	435
South Leg							
Approach	36	6	42	10	52	2	54
Departure	49	8	57	15	72	3	75
Total	85	14	99	25	124	5	129
East Leg							
Approach	298	48	346	9	355	7	362
Departure	446	71	517	9	526	12	538
Total	744	119	863	18	881	19	900
West Leg							
Approach	358	57	415	1	416	0	416
Departure	318	51	369	1	370	0	370
Total	676	108	784	2	786	0	786
Total Approaches							
Approach	910	146	1,056	45	1,101	24	1,125
Departure	910	146	1,056	45	1,101	24	1,125
Total	1,820	292	2,112	90	2,202	48	2,250

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
9 Wood Road/Van Buren Boulevard							
NBL	267	43	310	89	399	6	405
NBT	354	57	411	1	412	0	412
NBR	210	34	244	24	268	0	268
SBL	103	16	119	10	129	0	129
SBT	283	45	328	1	329	0	329
SBR	206	33	239	20	259	1	260
EBL	155	25	180	21	201	1	202
EBT	1,079	173	1,252	409	1,661	61	1,722
EBR	199	32	231	89	320	10	330
WBL	206	33	239	35	274	0	274
WBT	1,190	190	1,380	558	1,938	37	1,975
WBR	88	14	102	21	123	0	123
North Leg							
Approach	592	94	686	31	717	1	718
Departure	597	96	693	43	736	1	737
Total	1,189	190	1,379	74	1,453	2	1,455
South Leg							
Approach	831	134	965	114	1,079	6	1,085
Departure	688	110	798	125	923	10	933
Total	1,519	244	1,763	239	2,002	16	2,018
East Leg							
Approach	1,484	237	1,721	614	2,335	37	2,372
Departure	1,392	223	1,615	443	2,058	61	2,119
Total	2,876	460	3,336	1,057	4,393	98	4,491
West Leg							
Approach	1,433	230	1,663	519	2,182	72	2,254
Departure	1,663	266	1,929	667	2,596	44	2,640
Total	3,096	496	3,592	1,186	4,778	116	4,894
Total Approaches							
Approach	4,340	695	5,035	1,278	6,313	116	6,429
Departure	4,340	695	5,035	1,278	6,313	116	6,429
Total	8,680	1,390	10,070	2,556	12,626	232	12,858

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
10 Bountiful Street/Van Buren Boulevard							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0
SBL	15	2	17	0	17	0	17
SBT	0	0	0	0	0	0	0
SBR	136	22	158	64	222	1	223
EBL	179	29	208	63	271	1	272
EBT	1,370	219	1,589	384	1,973	60	2,033
EBR	0	0	0	0	0	0	0
WBL	0	0	0	1	1	0	1
WBT	1,361	218	1,579	553	2,132	36	2,168
WBR	24	4	28	0	28	0	28
North Leg							
Approach	151	24	175	64	239	1	240
Departure	203	33	236	63	299	1	300
Total	354	57	411	127	538	2	540
South Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	1	1	0	1
Total	0	0	0	1	1	0	1
East Leg							
Approach	1,385	222	1,607	554	2,161	36	2,197
Departure	1,385	221	1,606	384	1,990	60	2,050
Total	2,770	443	3,213	938	4,151	96	4,247
West Leg							
Approach	1,549	248	1,797	447	2,244	61	2,305
Departure	1,497	240	1,737	617	2,354	37	2,391
Total	3,046	488	3,534	1,064	4,598	98	4,696
Total Approaches							
Approach	3,085	494	3,579	1,065	4,644	98	4,742
Departure	3,085	494	3,579	1,065	4,644	98	4,742
Total	6,170	988	7,158	2,130	9,288	196	9,484

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
11 Trautwein Road/Mission Grove Parkway							
NBL	5	1	6	0	6	0	6
NBT	1,298	208	1,506	238	1,744	12	1,756
NBR	432	69	501	35	536	12	548
SBL	130	21	151	0	151	0	151
SBT	1,429	229	1,658	127	1,785	7	1,792
SBR	34	5	39	0	39	0	39
EBL	37	6	43	0	43	0	43
EBT	10	2	12	0	12	0	12
EBR	13	2	15	0	15	0	15
WBL	527	84	611	30	641	7	648
WBT	16	3	19	0	19	0	19
WBR	37	6	43	0	43	0	43
North Leg							
Approach	1,593	255	1,848	127	1,975	7	1,982
Departure	1,372	220	1,592	238	1,830	12	1,842
Total	2,965	475	3,440	365	3,805	19	3,824
South Leg							
Approach	1,735	278	2,013	273	2,286	24	2,310
Departure	1,969	315	2,284	157	2,441	14	2,455
Total	3,704	593	4,297	430	4,727	38	4,765
East Leg							
Approach	580	93	673	30	703	7	710
Departure	572	92	664	35	699	12	711
Total	1,152	185	1,337	65	1,402	19	1,421
West Leg							
Approach	60	10	70	0	70	0	70
Departure	55	9	64	0	64	0	64
Total	115	19	134	0	134	0	134
Total Approaches							
Approach	3,968	636	4,604	430	5,034	38	5,072
Departure	3,968	636	4,604	430	5,034	38	5,072
Total	7,936	1,272	9,208	860	10,068	76	10,144

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
12 Trautwein Road/John F Kennedy Drive							
NBL	75	12	87	27	114	0	114
NBT	1,148	184	1,332	272	1,604	23	1,627
NBR	56	9	65	27	92	0	92
SBL	11	2	13	0	13	0	13
SBT	1,436	230	1,666	157	1,823	14	1,837
SBR	594	95	689	1	690	0	690
EBL	537	86	623	0	623	0	623
EBT	48	8	56	0	56	0	56
EBR	90	14	104	13	117	0	117
WBL	31	5	36	15	51	0	51
WBT	18	3	21	0	21	0	21
WBR	26	4	30	0	30	0	30
North Leg							
Approach	2,041	327	2,368	158	2,526	14	2,540
Departure	1,711	274	1,985	272	2,257	23	2,280
Total	3,752	601	4,353	430	4,783	37	4,820
South Leg							
Approach	1,279	205	1,484	326	1,810	23	1,833
Departure	1,557	249	1,806	185	1,991	14	2,005
Total	2,836	454	3,290	511	3,801	37	3,838
East Leg							
Approach	75	12	87	15	102	0	102
Departure	115	19	134	27	161	0	161
Total	190	31	221	42	263	0	263
West Leg							
Approach	675	108	783	13	796	0	796
Departure	687	110	797	28	825	0	825
Total	1,362	218	1,580	41	1,621	0	1,621
Total Approaches							
Approach	4,070	652	4,722	512	5,234	37	5,271
Departure	4,070	652	4,722	512	5,234	37	5,271
Total	8,140	1,304	9,444	1,024	10,468	74	10,542

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
13 Trautwein Road/Grove Community Drive							
NBL	0	0	0	0	0	0	0
NBT	1,055	169	1,224	325	1,549	23	1,572
NBR	58	9	67	20	87	0	87
SBL	322	52	374	0	374	0	374
SBT	1,235	198	1,433	185	1,618	14	1,632
SBR	0	0	0	0	0	0	0
EBL	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0
WBL	54	9	63	18	81	0	81
WBT	0	0	0	0	0	0	0
WBR	224	36	260	0	260	0	260
North Leg							
Approach	1,557	250	1,807	185	1,992	14	2,006
Departure	1,279	205	1,484	325	1,809	23	1,832
Total	2,836	455	3,291	510	3,801	37	3,838
South Leg							
Approach	1,113	178	1,291	345	1,636	23	1,659
Departure	1,289	207	1,496	203	1,699	14	1,713
Total	2,402	385	2,787	548	3,335	37	3,372
East Leg							
Approach	278	45	323	18	341	0	341
Departure	380	61	441	20	461	0	461
Total	658	106	764	38	802	0	802
West Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
Total Approaches							
Approach	2,948	473	3,421	548	3,969	37	4,006
Departure	2,948	473	3,421	548	3,969	37	4,006
Total	5,896	946	6,842	1,096	7,938	74	8,012

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
14 Trautwein Road/Orange Terrace Parkway							
NBL	10	2	12	26	38	0	38
NBT	821	131	952	342	1,294	23	1,317
NBR	212	34	246	23	269	9	278
SBL	270	43	313	0	313	0	313
SBT	975	156	1,131	204	1,335	14	1,349
SBR	20	3	23	0	23	0	23
EBL	44	7	51	0	51	0	51
EBT	36	6	42	0	42	0	42
EBR	8	1	9	15	24	0	24
WBL	149	24	173	23	196	6	202
WBT	12	2	14	0	14	0	14
WBR	248	40	288	0	288	0	288
North Leg							
Approach	1,265	202	1,467	204	1,671	14	1,685
Departure	1,113	178	1,291	342	1,633	23	1,656
Total	2,378	380	2,758	546	3,304	37	3,341
South Leg							
Approach	1,043	167	1,210	391	1,601	32	1,633
Departure	1,132	181	1,313	242	1,555	20	1,575
Total	2,175	348	2,523	633	3,156	52	3,208
East Leg							
Approach	409	66	475	23	498	6	504
Departure	518	83	601	23	624	9	633
Total	927	149	1,076	46	1,122	15	1,137
West Leg							
Approach	88	14	102	15	117	0	117
Departure	42	7	49	26	75	0	75
Total	130	21	151	41	192	0	192
Total Approaches							
Approach	2,805	449	3,254	633	3,887	52	3,939
Departure	2,805	449	3,254	633	3,887	52	3,939
Total	5,610	898	6,508	1,266	7,774	104	7,878

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
15 Trautwein Road/Shopping Center Driveway 1							
NBL	122	20	142	34	176	0	176
NBT	807	129	936	367	1,303	33	1,336
NBR	14	2	16	9	25	0	25
SBL	173	28	201	0	201	0	201
SBT	769	123	892	213	1,105	20	1,125
SBR	119	19	138	30	168	0	168
EBL	122	20	142	25	167	0	167
EBT	39	6	45	0	45	0	45
EBR	85	14	99	33	132	0	132
WBL	69	11	80	16	96	0	96
WBT	28	4	32	0	32	0	32
WBR	79	13	92	0	92	0	92
North Leg							
Approach	1,061	170	1,231	243	1,474	20	1,494
Departure	1,008	162	1,170	392	1,562	33	1,595
Total	2,069	332	2,401	635	3,036	53	3,089
South Leg							
Approach	943	151	1,094	410	1,504	33	1,537
Departure	923	148	1,071	262	1,333	20	1,353
Total	1,866	299	2,165	672	2,837	53	2,890
East Leg							
Approach	176	28	204	16	220	0	220
Departure	226	36	262	9	271	0	271
Total	402	64	466	25	491	0	491
West Leg							
Approach	246	40	286	58	344	0	344
Departure	269	43	312	64	376	0	376
Total	515	83	598	122	720	0	720
Total Approaches							
Approach	2,426	389	2,815	727	3,542	53	3,595
Departure	2,426	389	2,815	727	3,542	53	3,595
Total	4,852	778	5,630	1,454	7,084	106	7,190

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
16 Trautwein Road/Van Buren Boulevard							
NBL	105	17	122	68	190	3	193
NBT	392	63	455	30	485	0	485
NBR	80	13	93	14	107	0	107
SBL	276	44	320	167	487	0	487
SBT	439	70	509	41	550	0	550
SBR	237	38	275	62	337	20	357
EBL	378	60	438	60	498	33	531
EBT	886	142	1,028	264	1,292	22	1,314
EBR	121	19	140	70	210	5	215
WBL	133	21	154	29	183	0	183
WBT	1,099	176	1,275	427	1,702	13	1,715
WBR	293	47	340	328	668	0	668
North Leg							
Approach	952	152	1,104	270	1,374	20	1,394
Departure	1,063	170	1,233	418	1,651	33	1,684
Total	2,015	322	2,337	688	3,025	53	3,078
South Leg							
Approach	577	93	670	112	782	3	785
Departure	693	110	803	140	943	5	948
Total	1,270	203	1,473	252	1,725	8	1,733
East Leg							
Approach	1,525	244	1,769	784	2,553	13	2,566
Departure	1,242	199	1,441	445	1,886	22	1,908
Total	2,767	443	3,210	1,229	4,439	35	4,474
West Leg							
Approach	1,385	221	1,606	394	2,000	60	2,060
Departure	1,441	231	1,672	557	2,229	36	2,265
Total	2,826	452	3,278	951	4,229	96	4,325
Total Approaches							
Approach	4,439	710	5,149	1,560	6,709	96	6,805
Departure	4,439	710	5,149	1,560	6,709	96	6,805
Total	8,878	1,420	10,298	3,120	13,418	192	13,610

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
17 Shopping Center Driveway 2/Van Buren Boulevard							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0
SBL	171	27	198	6	204	0	204
SBT	0	0	0	0	0	0	0
SBR	46	7	53	3	56	0	56
EBL	75	12	87	2	89	0	89
EBT	1,167	187	1,354	444	1,798	22	1,820
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	1,370	219	1,589	779	2,368	13	2,381
WBR	88	14	102	4	106	0	106
North Leg							
Approach	217	34	251	9	260	0	260
Departure	163	26	189	6	195	0	195
Total	380	60	440	15	455	0	455
South Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
East Leg							
Approach	1,458	233	1,691	783	2,474	13	2,487
Departure	1,338	214	1,552	450	2,002	22	2,024
Total	2,796	447	3,243	1,233	4,476	35	4,511
West Leg							
Approach	1,242	199	1,441	446	1,887	22	1,909
Departure	1,416	226	1,642	782	2,424	13	2,437
Total	2,658	425	3,083	1,228	4,311	35	4,346
Total Approaches							
Approach	2,917	466	3,383	1,238	4,621	35	4,656
Departure	2,917	466	3,383	1,238	4,621	35	4,656
Total	5,834	932	6,766	2,476	9,242	70	9,312

LSA

Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
18 Barton Street/Van Buren Boulevard							
NBL	232	37	269	327	596	0	596
NBT	66	11	77	0	77	0	77
NBR	274	44	318	3	321	0	321
SBL	26	4	30	21	51	0	51
SBT	33	5	38	0	38	0	38
SBR	143	23	166	18	184	4	188
EBL	104	17	121	19	140	7	147
EBT	993	159	1,152	259	1,411	16	1,427
EBR	201	32	233	167	400	0	400
WBL	294	47	341	6	347	0	347
WBT	1,208	193	1,401	436	1,837	9	1,846
WBR	41	7	48	42	90	0	90
North Leg							
Approach	202	32	234	39	273	4	277
Departure	211	35	246	61	307	7	314
Total	413	67	480	100	580	11	591
South Leg							
Approach	572	92	664	330	994	0	994
Departure	528	84	612	173	785	0	785
Total	1,100	176	1,276	503	1,779	0	1,779
East Leg							
Approach	1,543	247	1,790	484	2,274	9	2,283
Departure	1,293	207	1,500	283	1,783	16	1,799
Total	2,836	454	3,290	767	4,057	25	4,082
West Leg							
Approach	1,298	208	1,506	445	1,951	23	1,974
Departure	1,583	253	1,836	781	2,617	13	2,630
Total	2,881	461	3,342	1,226	4,568	36	4,604
Total Approaches							
Approach	3,615	579	4,194	1,298	5,492	36	5,528
Departure	3,615	579	4,194	1,298	5,492	36	5,528
Total	7,230	1,158	8,388	2,596	10,984	72	11,056

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
19 Project Driveway 1/Van Buren Boulevard							
NBL	0	0	0	0	0	0	0
NBT	0	0	0	0	0	0	0
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	0	0	0	0	0	0	0
SBR	2	0	2	0	2	0	2
EBL	0	0	0	0	0	0	0
EBT	1,582	253	1,835	517	2,352	25	2,377
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	1,697	272	1,969	663	2,632	42	2,674
WBR	13	2	15	0	15	0	15
North Leg							
Approach	2	0	2	0	2	0	2
Departure	13	2	15	0	15	0	15
Total	15	2	17	0	17	0	17
South Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
East Leg							
Approach	1,710	274	1,984	663	2,647	42	2,689
Departure	1,582	253	1,835	517	2,352	25	2,377
Total	3,292	527	3,819	1,180	4,999	67	5,066
West Leg							
Approach	1,582	253	1,835	517	2,352	25	2,377
Departure	1,699	272	1,971	663	2,634	42	2,676
Total	3,281	525	3,806	1,180	4,986	67	5,053
Total Approaches							
Approach	3,294	527	3,821	1,180	5,001	67	5,068
Departure	3,294	527	3,821	1,180	5,001	67	5,068
Total	6,588	1,054	7,642	2,360	10,002	134	10,136

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
20 Dauchy Avenue/Project Driveway 3							
NBL	11	0	11	0	11	3	14
NBT	221	35	256	52	308	66	374
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	195	31	226	52	278	21	299
SBR	66	0	66	0	66	24	90
EBL	0	0	0	0	0	0	0
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0
North Leg							
Approach	261	31	292	52	344	45	389
Departure	221	35	256	52	308	66	374
Total	482	66	548	104	652	111	763
South Leg							
Approach	232	35	267	52	319	69	388
Departure	195	31	226	52	278	21	299
Total	427	66	493	104	597	90	687
East Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
West Leg							
Approach	0	0	0	0	0	0	0
Departure	77	0	77	0	77	27	104
Total	77	0	77	0	77	27	104
Total Approaches							
Approach	493	66	559	104	663	114	777
Departure	493	66	559	104	663	114	777
Total	986	132	1,118	208	1,326	228	1,554

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
21 Dauchy Avenue/Project Driveway 4							
NBL	14	0	14	0	14	2	16
NBT	119	19	138	52	190	7	197
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	182	29	211	52	263	7	270
SBR	13	0	13	0	13	14	27
EBL	106	0	106	0	106	62	168
EBT	0	0	0	0	0	0	0
EBR	42	0	42	0	42	8	50
WBL	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0
North Leg							
Approach	195	29	224	52	276	21	297
Departure	225	19	244	52	296	69	365
Total	420	48	468	104	572	90	662
South Leg							
Approach	133	19	152	52	204	9	213
Departure	224	29	253	52	305	15	320
Total	357	48	405	104	509	24	533
East Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
West Leg							
Approach	148	0	148	0	148	70	218
Departure	27	0	27	0	27	16	43
Total	175	0	175	0	175	86	261
Total Approaches							
Approach	476	48	524	104	628	100	728
Departure	476	48	524	104	628	100	728
Total	952	96	1,048	208	1,256	200	1,456

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Table C-2 - Opening Year (2029) Peak Hour PCE Volume Summary

	PM Peak Hour						
	Existing (2021) PCE	2021-2029 Growth	Project Completion 2029	Cumulative Project Trips	OY Without Project	Project Trips	OY With Project
22 Dauchy Avenue/Project Driveway 5							
NBL	1	0	1	0	1	0	1
NBT	130	21	151	52	203	9	212
NBR	0	0	0	0	0	0	0
SBL	0	0	0	0	0	0	0
SBT	224	36	260	52	312	14	326
SBR	0	0	0	0	0	0	0
EBL	3	0	3	0	3	0	3
EBT	0	0	0	0	0	0	0
EBR	0	0	0	0	0	0	0
WBL	0	0	0	0	0	0	0
WBT	0	0	0	0	0	0	0
WBR	0	0	0	0	0	0	0
North Leg							
Approach	224	36	260	52	312	14	326
Departure	133	21	154	52	206	9	215
Total	357	57	414	104	518	23	541
South Leg							
Approach	131	21	152	52	204	9	213
Departure	224	36	260	52	312	14	326
Total	355	57	412	104	516	23	539
East Leg							
Approach	0	0	0	0	0	0	0
Departure	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0
West Leg							
Approach	3	0	3	0	3	0	3
Departure	1	0	1	0	1	0	1
Total	4	0	4	0	4	0	4
Total Approaches							
Approach	358	57	415	104	519	23	542
Departure	358	57	415	104	519	23	542
Total	716	114	830	208	1,038	46	1,084

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
1 Washington Street/Van Buren Boulevard						
NBL	283	0	283	153	0	153
NBT	995	0	995	408	0	408
NBR	229	14	243	190	6	196
SBL	593	12	605	764	6	770
SBT	181	0	181	567	0	567
SBR	93	0	93	124	0	124
EBL	164	0	164	165	0	165
EBT	1,298	19	1,317	1,613	9	1,622
EBR	153	0	153	202	0	202
WBL	146	10	156	233	10	243
WBT	1,719	14	1,733	1,704	14	1,718
WBR	920	9	929	700	9	709
North Leg						
Approach	867	12	879	1,455	6	1,461
Departure	2,079	9	2,088	1,273	9	1,282
Total	2,946	21	2,967	2,728	15	2,743
South Leg						
Approach	1,507	14	1,521	751	6	757
Departure	480	10	490	1,002	10	1,012
Total	1,987	24	2,011	1,753	16	1,769
East Leg						
Approach	2,785	33	2,818	2,637	33	2,670
Departure	2,120	45	2,165	2,567	21	2,588
Total	4,905	78	4,983	5,204	54	5,258
West Leg						
Approach	1,615	19	1,634	1,980	9	1,989
Departure	2,095	14	2,109	1,981	14	1,995
Total	3,710	33	3,743	3,961	23	3,984
Total Approaches						
Approach	6,774	78	6,852	6,823	54	6,877
Departure	6,774	78	6,852	6,823	54	6,877
Total	13,548	156	13,704	13,646	108	13,754

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
2 Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard						
NBL	179	0	179	96	0	96
NBT	24	0	24	33	0	33
NBR	117	3	120	28	2	30
SBL	117	0	117	118	0	118
SBT	29	0	29	28	0	28
SBR	86	0	86	65	0	65
EBL	89	0	89	142	0	142
EBT	1,972	52	2,024	2,360	24	2,384
EBR	91	0	91	189	0	189
WBL	89	3	92	54	3	57
WBT	2,549	39	2,588	2,602	39	2,641
WBR	35	0	35	108	0	108
North Leg						
Approach	232	0	232	211	0	211
Departure	148	0	148	283	0	283
Total	380	0	380	494	0	494
South Leg						
Approach	320	3	323	157	2	159
Departure	209	3	212	271	3	274
Total	529	6	535	428	5	433
East Leg						
Approach	2,673	42	2,715	2,764	42	2,806
Departure	2,206	55	2,261	2,506	26	2,532
Total	4,879	97	4,976	5,270	68	5,338
West Leg						
Approach	2,152	52	2,204	2,691	24	2,715
Departure	2,814	39	2,853	2,763	39	2,802
Total	4,966	91	5,057	5,454	63	5,517
Total Approaches						
Approach	5,377	97	5,474	5,823	68	5,891
Departure	5,377	97	5,474	5,823	68	5,891
Total	10,754	194	10,948	11,646	136	11,782

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
3 Van Buren Village Driveway/Van Buren Boulevard						
NBL	38	0	38	45	0	45
NBT	0	0	0	0	0	0
NBR	114	0	114	134	0	134
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	2,159	55	2,214	2,468	25	2,493
EBR	46	0	46	39	0	39
WBL	138	0	138	118	0	118
WBT	2,635	42	2,677	2,719	42	2,761
WBR	0	0	0	0	0	0
North Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
South Leg						
Approach	152	0	152	179	0	179
Departure	184	0	184	157	0	157
Total	336	0	336	336	0	336
East Leg						
Approach	2,773	42	2,815	2,837	42	2,879
Departure	2,273	55	2,328	2,602	25	2,627
Total	5,046	97	5,143	5,439	67	5,506
West Leg						
Approach	2,205	55	2,260	2,507	25	2,532
Departure	2,673	42	2,715	2,764	42	2,806
Total	4,878	97	4,975	5,271	67	5,338
Total Approaches						
Approach	5,130	97	5,227	5,523	67	5,590
Departure	5,130	97	5,227	5,523	67	5,590
Total	10,260	194	10,454	11,046	134	11,180

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
4 Little Court/Van Buren Boulevard						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	8	0	8	2	0	2
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	2,273	55	2,328	2,598	25	2,623
EBR	1	0	1	5	0	5
WBL	0	0	0	0	0	0
WBT	2,774	42	2,816	2,838	42	2,880
WBR	0	0	0	0	0	0
North Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
South Leg						
Approach	8	0	8	2	0	2
Departure	1	0	1	5	0	5
Total	9	0	9	7	0	7
East Leg						
Approach	2,774	42	2,816	2,838	42	2,880
Departure	2,281	55	2,336	2,600	25	2,625
Total	5,055	97	5,152	5,438	67	5,505
West Leg						
Approach	2,274	55	2,329	2,603	25	2,628
Departure	2,774	42	2,816	2,838	42	2,880
Total	5,048	97	5,145	5,441	67	5,508
Total Approaches						
Approach	5,056	97	5,153	5,443	67	5,510
Departure	5,056	97	5,153	5,443	67	5,510
Total	10,112	194	10,306	10,886	134	11,020

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
5 Ridgeway Avenue/Van Buren Boulevard						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	2	0	2	2	0	2
SBT	0	0	0	0	0	0
SBR	152	0	152	78	0	78
EBL	55	0	55	128	0	128
EBT	2,226	55	2,281	2,472	25	2,497
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	2,622	42	2,664	2,760	42	2,802
WBR	13	0	13	24	0	24
North Leg						
Approach	154	0	154	80	0	80
Departure	68	0	68	152	0	152
Total	222	0	222	232	0	232
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	2,635	42	2,677	2,784	42	2,826
Departure	2,228	55	2,283	2,474	25	2,499
Total	4,863	97	4,960	5,258	67	5,325
West Leg						
Approach	2,281	55	2,336	2,600	25	2,625
Departure	2,774	42	2,816	2,838	42	2,880
Total	5,055	97	5,152	5,438	67	5,505
Total Approaches						
Approach	5,070	97	5,167	5,464	67	5,531
Departure	5,070	97	5,167	5,464	67	5,531
Total	10,140	194	10,334	10,928	134	11,062

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
6 Dauchy Avenue/Van Buren Boulevard						
NBL	339	42	381	285	42	327
NBT	72	1	73	110	1	111
NBR	190	73	263	153	72	225
SBL	96	0	96	111	0	111
SBT	65	2	67	63	1	64
SBR	41	0	41	76	0	76
EBL	36	0	36	94	0	94
EBT	1,874	0	1,874	2,101	0	2,101
EBR	318	55	373	279	25	304
WBL	201	97	298	150	44	194
WBT	2,263	0	2,263	2,437	0	2,437
WBR	56	0	56	81	0	81
North Leg						
Approach	202	2	204	250	1	251
Departure	164	1	165	285	1	286
Total	366	3	369	535	2	537
South Leg						
Approach	601	116	717	548	115	663
Departure	584	154	738	492	70	562
Total	1,185	270	1,455	1,040	185	1,225
East Leg						
Approach	2,520	97	2,617	2,668	44	2,712
Departure	2,160	73	2,233	2,365	72	2,437
Total	4,680	170	4,850	5,033	116	5,149
West Leg						
Approach	2,228	55	2,283	2,474	25	2,499
Departure	2,643	42	2,685	2,798	42	2,840
Total	4,871	97	4,968	5,272	67	5,339
Total Approaches						
Approach	5,551	270	5,821	5,940	185	6,125
Departure	5,551	270	5,821	5,940	185	6,125
Total	11,102	540	11,642	11,880	370	12,250

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
7 Dauchy Avenue/Project Driveway 2 - Ardenwood Lane						
NBL	34	9	43	14	4	18
NBT	409	63	472	314	62	376
NBR	5	0	5	9	0	9
SBL	18	0	18	19	0	19
SBT	348	83	431	378	38	416
SBR	143	71	214	62	32	94
EBL	112	54	166	119	53	172
EBT	0	0	0	1	0	1
EBR	27	7	34	29	7	36
WBL	5	0	5	6	0	6
WBT	0	0	0	0	0	0
WBR	56	0	56	26	0	26
North Leg						
Approach	509	154	663	459	70	529
Departure	577	117	694	459	115	574
Total	1,086	271	1,357	918	185	1,103
South Leg						
Approach	448	72	520	337	66	403
Departure	380	90	470	413	45	458
Total	828	162	990	750	111	861
East Leg						
Approach	61	0	61	32	0	32
Departure	23	0	23	29	0	29
Total	84	0	84	61	0	61
West Leg						
Approach	139	61	200	149	60	209
Departure	177	80	257	76	36	112
Total	316	141	457	225	96	321
Total Approaches						
Approach	1,157	287	1,444	977	196	1,173
Departure	1,157	287	1,444	977	196	1,173
Total	2,314	574	2,888	1,954	392	2,346

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
8 Dauchy Avenue - Taft Street/Krameria Avenue						
NBL	23	0	23	19	0	19
NBT	34	3	37	32	2	34
NBR	13	0	13	14	0	14
SBL	126	12	138	237	12	249
SBT	16	3	19	40	3	43
SBR	55	0	55	108	0	108
EBL	65	0	65	58	0	58
EBT	564	0	564	527	0	527
EBR	3	0	3	40	0	40
WBL	2	0	2	10	0	10
WBT	637	0	637	428	0	428
WBR	143	15	158	82	7	89
North Leg						
Approach	197	15	212	385	15	400
Departure	242	18	260	172	9	181
Total	439	33	472	557	24	581
South Leg						
Approach	70	3	73	65	2	67
Departure	21	3	24	90	3	93
Total	91	6	97	155	5	160
East Leg						
Approach	782	15	797	520	7	527
Departure	703	12	715	778	12	790
Total	1,485	27	1,512	1,298	19	1,317
West Leg						
Approach	632	0	632	625	0	625
Departure	715	0	715	555	0	555
Total	1,347	0	1,347	1,180	0	1,180
Total Approaches						
Approach	1,681	33	1,714	1,595	24	1,619
Departure	1,681	33	1,714	1,595	24	1,619
Total	3,362	66	3,428	3,190	48	3,238

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
9 Wood Road/Van Buren Boulevard						
NBL	527	14	541	419	6	425
NBT	592	0	592	472	0	472
NBR	383	0	383	281	0	281
SBL	119	0	119	135	0	135
SBT	490	0	490	374	0	374
SBR	238	2	240	281	1	282
EBL	182	1	183	253	1	254
EBT	1,555	62	1,617	1,744	61	1,805
EBR	463	10	473	336	10	346
WBL	522	0	522	288	0	288
WBT	1,804	81	1,885	2,035	37	2,072
WBR	188	0	188	129	0	129
North Leg						
Approach	847	2	849	790	1	791
Departure	962	1	963	854	1	855
Total	1,809	3	1,812	1,644	2	1,646
South Leg						
Approach	1,502	14	1,516	1,172	6	1,178
Departure	1,475	10	1,485	998	10	1,008
Total	2,977	24	3,001	2,170	16	2,186
East Leg						
Approach	2,514	81	2,595	2,452	37	2,489
Departure	2,057	62	2,119	2,160	61	2,221
Total	4,571	143	4,714	4,612	98	4,710
West Leg						
Approach	2,200	73	2,273	2,333	72	2,405
Departure	2,569	97	2,666	2,735	44	2,779
Total	4,769	170	4,939	5,068	116	5,184
Total Approaches						
Approach	7,063	170	7,233	6,747	116	6,863
Departure	7,063	170	7,233	6,747	116	6,863
Total	14,126	340	14,466	13,494	232	13,726

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
10 Bountiful Street/Van Buren Boulevard						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	1	0	1	0	0	0
SBL	58	0	58	18	0	18
SBT	0	0	0	0	0	0
SBR	265	2	267	233	1	234
EBL	170	1	171	285	1	286
EBT	1,949	60	2,009	2,083	60	2,143
EBR	0	0	0	0	0	0
WBL	0	0	0	1	0	1
WBT	1,939	79	2,018	2,239	36	2,275
WBR	38	0	38	29	0	29
North Leg						
Approach	323	2	325	251	1	252
Departure	208	1	209	314	1	315
Total	531	3	534	565	2	567
South Leg						
Approach	1	0	1	0	0	0
Departure	0	0	0	1	0	1
Total	1	0	1	1	0	1
East Leg						
Approach	1,977	79	2,056	2,269	36	2,305
Departure	2,008	60	2,068	2,101	60	2,161
Total	3,985	139	4,124	4,370	96	4,466
West Leg						
Approach	2,119	61	2,180	2,368	61	2,429
Departure	2,204	81	2,285	2,472	37	2,509
Total	4,323	142	4,465	4,840	98	4,938
Total Approaches						
Approach	4,420	142	4,562	4,888	98	4,986
Departure	4,420	142	4,562	4,888	98	4,986
Total	8,840	284	9,124	9,776	196	9,972

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
11 Trautwein Road/Mission Grove Parkway						
NBL	3	0	3	6	0	6
NBT	2,087	12	2,099	1,831	12	1,843
NBR	634	12	646	563	12	575
SBL	218	0	218	159	0	159
SBT	1,264	15	1,279	1,874	7	1,881
SBR	20	0	20	41	0	41
EBL	70	0	70	48	0	48
EBT	39	0	39	13	0	13
EBR	11	0	11	16	0	16
WBL	740	15	755	673	7	680
WBT	38	0	38	20	0	20
WBR	61	0	61	57	0	57
North Leg						
Approach	1,502	15	1,517	2,074	7	2,081
Departure	2,218	12	2,230	1,936	12	1,948
Total	3,720	27	3,747	4,010	19	4,029
South Leg						
Approach	2,724	24	2,748	2,400	24	2,424
Departure	2,015	30	2,045	2,563	14	2,577
Total	4,739	54	4,793	4,963	38	5,001
East Leg						
Approach	839	15	854	750	7	757
Departure	891	12	903	735	12	747
Total	1,730	27	1,757	1,485	19	1,504
West Leg						
Approach	120	0	120	77	0	77
Departure	61	0	61	67	0	67
Total	181	0	181	144	0	144
Total Approaches						
Approach	5,185	54	5,239	5,301	38	5,339
Departure	5,185	54	5,239	5,301	38	5,339
Total	10,370	108	10,478	10,602	76	10,678

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
12 Trautwein Road/John F Kennedy Drive						
NBL	251	0	251	120	0	120
NBT	2,351	24	2,375	1,684	23	1,707
NBR	103	0	103	97	0	97
SBL	11	0	11	17	0	17
SBT	1,164	31	1,195	1,914	14	1,928
SBR	733	0	733	760	0	760
EBL	677	0	677	704	0	704
EBT	60	0	60	59	0	59
EBR	110	0	110	123	0	123
WBL	147	0	147	54	0	54
WBT	67	0	67	22	0	22
WBR	52	0	52	35	0	35
North Leg						
Approach	1,908	31	1,939	2,691	14	2,705
Departure	3,080	24	3,104	2,423	23	2,446
Total	4,988	55	5,043	5,114	37	5,151
South Leg						
Approach	2,705	24	2,729	1,901	23	1,924
Departure	1,421	31	1,452	2,091	14	2,105
Total	4,126	55	4,181	3,992	37	4,029
East Leg						
Approach	266	0	266	111	0	111
Departure	174	0	174	173	0	173
Total	440	0	440	284	0	284
West Leg						
Approach	847	0	847	886	0	886
Departure	1,051	0	1,051	902	0	902
Total	1,898	0	1,898	1,788	0	1,788
Total Approaches						
Approach	5,726	55	5,781	5,589	37	5,626
Departure	5,726	55	5,781	5,589	37	5,626
Total	11,452	110	11,562	11,178	74	11,252

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
13 Trautwein Road/Grove Community Drive						
NBL	0	0	0	0	0	0
NBT	2,067	24	2,091	1,628	23	1,651
NBR	97	0	97	100	0	100
SBL	195	0	195	393	0	393
SBT	1,226	31	1,257	1,698	14	1,712
SBR	0	0	0	0	0	0
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	128	0	128	123	0	123
WBT	0	0	0	0	0	0
WBR	638	0	638	273	0	273
North Leg						
Approach	1,421	31	1,452	2,091	14	2,105
Departure	2,705	24	2,729	1,901	23	1,924
Total	4,126	55	4,181	3,992	37	4,029
South Leg						
Approach	2,164	24	2,188	1,728	23	1,751
Departure	1,354	31	1,385	1,821	14	1,835
Total	3,518	55	3,573	3,549	37	3,586
East Leg						
Approach	766	0	766	396	0	396
Departure	292	0	292	493	0	493
Total	1,058	0	1,058	889	0	889
West Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
Total Approaches						
Approach	4,351	55	4,406	4,215	37	4,252
Departure	4,351	55	4,406	4,215	37	4,252
Total	8,702	110	8,812	8,430	74	8,504

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
14 Trautwein Road/Orange Terrace Parkway						
NBL	71	0	71	40	0	40
NBT	1,429	24	1,453	1,369	23	1,392
NBR	280	9	289	282	9	291
SBL	368	0	368	329	0	329
SBT	1,000	31	1,031	1,402	14	1,416
SBR	33	0	33	24	0	24
EBL	103	0	103	54	0	54
EBT	70	0	70	44	0	44
EBR	47	0	47	25	0	25
WBL	395	12	407	206	6	212
WBT	169	0	169	15	0	15
WBR	632	0	632	304	0	304
North Leg						
Approach	1,401	31	1,432	1,755	14	1,769
Departure	2,164	24	2,188	1,727	23	1,750
Total	3,565	55	3,620	3,482	37	3,519
South Leg						
Approach	1,780	33	1,813	1,691	32	1,723
Departure	1,442	43	1,485	1,633	20	1,653
Total	3,222	76	3,298	3,324	52	3,376
East Leg						
Approach	1,196	12	1,208	525	6	531
Departure	718	9	727	655	9	664
Total	1,914	21	1,935	1,180	15	1,195
West Leg						
Approach	220	0	220	123	0	123
Departure	273	0	273	79	0	79
Total	493	0	493	202	0	202
Total Approaches						
Approach	4,597	76	4,673	4,094	52	4,146
Departure	4,597	76	4,673	4,094	52	4,146
Total	9,194	152	9,346	8,188	104	8,292

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
15 Trautwein Road/Shopping Center Driveway 1						
NBL	89	0	89	185	0	185
NBT	1,258	33	1,291	1,368	33	1,401
NBR	23	0	23	26	0	26
SBL	83	0	83	211	0	211
SBT	1,099	43	1,142	1,160	20	1,180
SBR	46	0	46	176	0	176
EBL	65	0	65	175	0	175
EBT	11	0	11	47	0	47
EBR	58	0	58	139	0	139
WBL	34	0	34	101	0	101
WBT	8	0	8	34	0	34
WBR	59	0	59	97	0	97
North Leg						
Approach	1,228	43	1,271	1,547	20	1,567
Departure	1,382	33	1,415	1,640	33	1,673
Total	2,610	76	2,686	3,187	53	3,240
South Leg						
Approach	1,370	33	1,403	1,579	33	1,612
Departure	1,191	43	1,234	1,400	20	1,420
Total	2,561	76	2,637	2,979	53	3,032
East Leg						
Approach	101	0	101	232	0	232
Departure	117	0	117	284	0	284
Total	218	0	218	516	0	516
West Leg						
Approach	134	0	134	361	0	361
Departure	143	0	143	395	0	395
Total	277	0	277	756	0	756
Total Approaches						
Approach	2,833	76	2,909	3,719	53	3,772
Departure	2,833	76	2,909	3,719	53	3,772
Total	5,666	152	5,818	7,438	106	7,544

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
16 Trautwein Road/Van Buren Boulevard						
NBL	237	7	244	200	3	203
NBT	812	0	812	509	0	509
NBR	159	0	159	112	0	112
SBL	509	0	509	531	0	531
SBT	477	0	477	578	0	578
SBR	381	43	424	400	20	420
EBL	420	33	453	523	33	556
EBT	1,444	22	1,466	1,357	22	1,379
EBR	145	5	150	221	5	226
WBL	204	0	204	192	0	192
WBT	1,811	29	1,840	1,787	13	1,800
WBR	500	0	500	701	0	701
North Leg						
Approach	1,367	43	1,410	1,509	20	1,529
Departure	1,732	33	1,765	1,733	33	1,766
Total	3,099	76	3,175	3,242	53	3,295
South Leg						
Approach	1,208	7	1,215	821	3	824
Departure	826	5	831	991	5	996
Total	2,034	12	2,046	1,812	8	1,820
East Leg						
Approach	2,515	29	2,544	2,680	13	2,693
Departure	2,112	22	2,134	2,000	22	2,022
Total	4,627	51	4,678	4,680	35	4,715
West Leg						
Approach	2,009	60	2,069	2,101	60	2,161
Departure	2,429	79	2,508	2,387	36	2,423
Total	4,438	139	4,577	4,488	96	4,584
Total Approaches						
Approach	7,099	139	7,238	7,111	96	7,207
Departure	7,099	139	7,238	7,111	96	7,207
Total	14,198	278	14,476	14,222	192	14,414

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
17 Shopping Center Driveway 2/Van Buren Boulevard						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	89	0	89	214	0	214
SBT	0	0	0	0	0	0
SBR	37	0	37	59	0	59
EBL	39	0	39	94	0	94
EBT	2,073	22	2,095	1,906	22	1,928
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	2,108	29	2,137	2,486	13	2,499
WBR	108	0	108	111	0	111
North Leg						
Approach	126	0	126	273	0	273
Departure	147	0	147	205	0	205
Total	273	0	273	478	0	478
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	2,216	29	2,245	2,597	13	2,610
Departure	2,162	22	2,184	2,120	22	2,142
Total	4,378	51	4,429	4,717	35	4,752
West Leg						
Approach	2,112	22	2,134	2,000	22	2,022
Departure	2,145	29	2,174	2,545	13	2,558
Total	4,257	51	4,308	4,545	35	4,580
Total Approaches						
Approach	4,454	51	4,505	4,870	35	4,905
Departure	4,454	51	4,505	4,870	35	4,905
Total	8,908	102	9,010	9,740	70	9,810

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
18 Barton Street/Van Buren Boulevard						
NBL	454	0	454	626	0	626
NBT	116	0	116	81	0	81
NBR	483	0	483	323	0	323
SBL	91	0	91	54	0	54
SBT	172	0	172	53	0	53
SBR	366	9	375	214	4	218
EBL	202	7	209	147	7	154
EBT	1,613	16	1,629	1,482	16	1,498
EBR	421	0	421	420	0	420
WBL	393	0	393	369	0	369
WBT	1,941	21	1,962	1,929	9	1,938
WBR	37	0	37	95	0	95
North Leg						
Approach	629	9	638	321	4	325
Departure	355	7	362	323	7	330
Total	984	16	1,000	644	11	655
South Leg						
Approach	1,053	0	1,053	1,030	0	1,030
Departure	986	0	986	842	0	842
Total	2,039	0	2,039	1,872	0	1,872
East Leg						
Approach	2,371	21	2,392	2,393	9	2,402
Departure	2,187	16	2,203	1,859	16	1,875
Total	4,558	37	4,595	4,252	25	4,277
West Leg						
Approach	2,236	23	2,259	2,049	23	2,072
Departure	2,761	30	2,791	2,769	13	2,782
Total	4,997	53	5,050	4,818	36	4,854
Total Approaches						
Approach	6,289	53	6,342	5,793	36	5,829
Departure	6,289	53	6,342	5,793	36	5,829
Total	12,578	106	12,684	11,586	72	11,658

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Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
19 Project Driveway 1/Van Buren Boulevard						
NBL	0	0	0	0	0	0
NBT	0	0	0	0	0	0
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	0	0	0	0	0	0
SBR	0	0	0	2	0	2
EBL	0	0	0	0	0	0
EBT	2,228	55	2,283	2,474	25	2,499
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	2,635	42	2,677	2,782	42	2,824
WBR	8	0	8	16	0	16
North Leg						
Approach	0	0	0	2	0	2
Departure	8	0	8	16	0	16
Total	8	0	8	18	0	18
South Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
East Leg						
Approach	2,643	42	2,685	2,798	42	2,840
Departure	2,228	55	2,283	2,474	25	2,499
Total	4,871	97	4,968	5,272	67	5,339
West Leg						
Approach	2,228	55	2,283	2,474	25	2,499
Departure	2,635	42	2,677	2,784	42	2,826
Total	4,863	97	4,960	5,258	67	5,325
Total Approaches						
Approach	4,871	97	4,968	5,274	67	5,341
Departure	4,871	97	4,968	5,274	67	5,341
Total	9,742	194	9,936	10,548	134	10,682

LSA

Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
20 Dauchy Avenue/Project Driveway 3						
NBL	15	7	22	11	3	14
NBT	448	72	520	337	66	403
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	259	38	297	347	21	368
SBR	114	52	166	66	24	90
EBL	0	0	0	0	0	0
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	373	90	463	413	45	458
Departure	448	72	520	337	66	403
Total	821	162	983	750	111	861
South Leg						
Approach	463	79	542	348	69	417
Departure	259	38	297	347	21	368
Total	722	117	839	695	90	785
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	0	0	0	0	0	0
Departure	129	59	188	77	27	104
Total	129	59	188	77	27	104
Total Approaches						
Approach	836	169	1,005	761	114	875
Departure	836	169	1,005	761	114	875
Total	1,672	338	2,010	1,522	228	1,750

LSA

Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
21 Dauchy Avenue/Project Driveway 4						
NBL	38	3	41	14	2	16
NBT	339	15	354	240	7	247
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	208	7	215	334	7	341
SBR	46	31	77	13	14	27
EBL	125	63	188	106	62	168
EBT	0	0	0	0	0	0
EBR	41	8	49	42	8	50
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	254	38	292	347	21	368
Departure	464	78	542	346	69	415
Total	718	116	834	693	90	783
South Leg						
Approach	377	18	395	254	9	263
Departure	249	15	264	376	15	391
Total	626	33	659	630	24	654
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	166	71	237	148	70	218
Departure	84	34	118	27	16	43
Total	250	105	355	175	86	261
Total Approaches						
Approach	797	127	924	749	100	849
Departure	797	127	924	749	100	849
Total	1,594	254	1,848	1,498	200	1,698

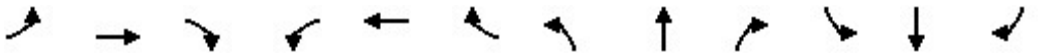
LSA

Table C-3-Cumulative (2045) Peak Hour Volume Summary

	AM Peak Hour			PM Peak Hour		
	Cumulative Without Project	Project Trips	Cumulative With Project	Cumulative Without Project	Project Trips	Cumulative With Project
22 Dauchy Avenue/Project Driveway 5						
NBL	0	0	0	1	0	1
NBT	376	19	395	251	9	260
NBR	0	0	0	0	0	0
SBL	0	0	0	0	0	0
SBT	248	14	262	376	14	390
SBR	1	0	1	0	0	0
EBL	1	0	1	3	0	3
EBT	0	0	0	0	0	0
EBR	0	0	0	0	0	0
WBL	0	0	0	0	0	0
WBT	0	0	0	0	0	0
WBR	0	0	0	0	0	0
North Leg						
Approach	249	14	263	376	14	390
Departure	377	19	396	254	9	263
Total	626	33	659	630	23	653
South Leg						
Approach	376	19	395	252	9	261
Departure	248	14	262	376	14	390
Total	624	33	657	628	23	651
East Leg						
Approach	0	0	0	0	0	0
Departure	0	0	0	0	0	0
Total	0	0	0	0	0	0
West Leg						
Approach	1	0	1	3	0	3
Departure	1	0	1	1	0	1
Total	2	0	2	4	0	4
Total Approaches						
Approach	626	33	659	631	23	654
Departure	626	33	659	631	23	654
Total	1,252	66	1,318	1,262	46	1,308

APPENDIX D

INTERSECTION LEVEL OF SERVICE WORKSHEETS



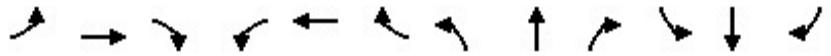
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	902	120	81	1291	607	146	533	125	308	147	76
Future Volume (veh/h)	134	902	120	81	1291	607	146	533	125	308	147	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	141	949	126	85	1359	639	154	561	132	324	155	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	166	1596	212	107	1684	750	715	629	279	377	262	115
Arrive On Green	0.09	0.50	0.50	0.06	0.47	0.47	0.20	0.17	0.17	0.11	0.07	0.07
Sat Flow, veh/h	1810	3197	424	1810	3610	1608	3510	3610	1602	3510	3610	1590
Grp Volume(v), veh/h	141	536	539	85	1359	639	154	561	132	324	155	80
Grp Sat Flow(s),veh/h/ln	1810	1805	1817	1810	1805	1608	1755	1805	1602	1755	1805	1590
Q Serve(g_s), s	10.0	27.5	27.5	6.0	41.9	29.1	4.8	19.8	8.1	11.8	5.4	5.2
Cycle Q Clear(g_c), s	10.0	27.5	27.5	6.0	41.9	29.1	4.8	19.8	8.1	11.8	5.4	5.2
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	901	907	107	1684	750	715	629	279	377	262	115
V/C Ratio(X)	0.85	0.59	0.59	0.79	0.81	0.85	0.22	0.89	0.47	0.86	0.59	0.69
Avail Cap(c_a), veh/h	192	901	907	174	1684	750	715	664	294	405	783	345
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	23.2	23.2	60.4	29.7	12.5	43.1	52.5	34.0	57.1	58.4	39.1
Incr Delay (d2), s/veh	25.5	2.9	2.9	12.2	4.3	11.7	0.1	13.9	1.2	16.1	2.1	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	11.6	11.7	3.1	17.9	12.2	2.1	10.1	3.2	6.0	2.5	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.6	26.1	26.0	72.6	33.9	24.2	43.3	66.4	35.2	73.1	60.6	46.4
LnGrp LOS	F	C	C	E	C	C	D	E	D	E	E	D
Approach Vol, veh/h		1216			2083			847			559	
Approach Delay, s/veh		32.7			32.5			57.4			65.8	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	71.1	31.5	15.2	16.5	66.9	18.9	27.7
Change Period (Y+Rc), s	4.5	6.2	5.0	* 5.8	4.5	6.2	5.0	5.1
Max Green Setting (Gmax), s	12.5	57.8	10.5	* 28	13.8	56.5	15.0	23.9
Max Q Clear Time (g_c+I1), s	8.0	29.5	6.8	7.4	12.0	43.9	13.8	21.8
Green Ext Time (p_c), s	0.1	7.0	0.1	1.0	0.1	8.6	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1252	58	69	1822	7	128	2	89	3	2	5
Future Volume (veh/h)	25	1252	58	69	1822	7	128	2	89	3	2	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	1391	64	77	2024	8	142	2	99	3	2	6
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	62	2313	1030	98	2436	10	170	5	232	10	24	73
Arrive On Green	0.03	0.64	0.64	0.05	0.66	0.66	0.09	0.15	0.15	0.01	0.06	0.06
Sat Flow, veh/h	1810	3610	1608	1810	3688	15	1810	32	1577	1810	415	1246
Grp Volume(v), veh/h	28	1391	64	77	990	1042	142	0	101	3	0	8
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1810	1805	1897	1810	0	1609	1810	0	1661
Q Serve(g_s), s	2.0	29.3	1.9	5.5	53.6	53.7	10.0	0.0	7.4	0.2	0.0	0.6
Cycle Q Clear(g_c), s	2.0	29.3	1.9	5.5	53.6	53.7	10.0	0.0	7.4	0.2	0.0	0.6
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.98	1.00		0.75
Lane Grp Cap(c), veh/h	62	2313	1030	98	1193	1254	170	0	237	10	0	98
V/C Ratio(X)	0.45	0.60	0.06	0.79	0.83	0.83	0.84	0.00	0.43	0.30	0.00	0.08
Avail Cap(c_a), veh/h	97	2313	1030	166	1193	1254	306	0	262	255	0	230
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.6	13.6	8.7	60.7	16.6	16.6	57.9	0.0	50.4	64.4	0.0	57.8
Incr Delay (d2), s/veh	5.1	1.2	0.1	12.8	6.8	6.5	10.3	0.0	1.2	15.9	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	10.8	0.7	2.8	20.8	21.9	5.0	0.0	3.1	0.1	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.6	14.8	8.9	73.5	23.3	23.1	68.2	0.0	51.7	80.2	0.0	58.2
LnGrp LOS	E	B	A	E	C	C	E	A	D	F	A	E
Approach Vol, veh/h		1483			2109			243			11	
Approach Delay, s/veh		15.5			25.1			61.3			64.2	
Approach LOS		B			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	89.5	16.2	12.8	9.0	92.1	4.7	24.2
Change Period (Y+Rc), s	4.5	6.2	4.0	* 5.1	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.0	58.8	22.0	* 18	7.0	63.7	18.3	21.2
Max Q Clear Time (g_c+I1), s	7.5	31.3	12.0	2.6	4.0	55.7	2.2	9.4
Green Ext Time (p_c), s	0.0	11.2	0.2	0.0	0.0	6.6	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1343	1	0	1898	0	7
Future Vol, veh/h	1343	1	0	1898	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1444	1	0	2041	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	723
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	320
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	320
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	320	-	-	-
HCM Lane V/C Ratio	0.024	-	-	-
HCM Control Delay (s)	16.5	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.1

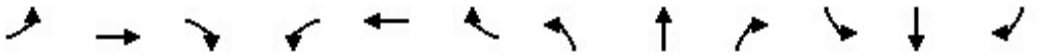
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	1314	1779	8	1	119
Future Vol, veh/h	36	1314	1779	8	1	119
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	39	1413	1913	9	1	128

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1925	0	-	0	2706	964
Stage 1	-	-	-	-	1921	-
Stage 2	-	-	-	-	785	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	*519	-	-	-	*15	*346
Stage 1	-	-	-	-	*326	-
Stage 2	-	-	-	-	*415	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	*517	-	-	-	*14	*345
Mov Cap-2 Maneuver	-	-	-	-	*14	-
Stage 1	-	-	-	-	*300	-
Stage 2	-	-	-	-	*414	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	27.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 517	-	-	-	288
HCM Lane V/C Ratio	0.075	-	-	-	0.448
HCM Control Delay (s)	12.5	-	-	-	27.3
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	2.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	1073	223	156	1532	15	239	35	145	37	45	23
Future Volume (veh/h)	19	1073	223	156	1532	15	239	35	145	37	45	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	20	1118	232	162	1596	16	249	36	151	39	47	24
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	50	1668	344	189	2307	1029	311	42	178	156	104	88
Arrive On Green	0.03	0.56	0.56	0.07	0.43	0.43	0.12	0.13	0.13	0.04	0.05	0.05
Sat Flow, veh/h	1810	2968	612	1810	3610	1610	1810	319	1340	1810	1900	1610
Grp Volume(v), veh/h	20	677	673	162	1596	16	249	0	187	39	47	24
Grp Sat Flow(s),veh/h/ln	1810	1805	1775	1810	1805	1610	1810	0	1659	1810	1900	1610
Q Serve(g_s), s	1.4	34.2	34.7	11.5	46.7	0.7	15.4	0.0	14.3	2.6	3.1	1.9
Cycle Q Clear(g_c), s	1.4	34.2	34.7	11.5	46.7	0.7	15.4	0.0	14.3	2.6	3.1	1.9
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.81	1.00		1.00
Lane Grp Cap(c), veh/h	50	1015	998	189	2307	1029	311	0	220	156	104	88
V/C Ratio(X)	0.40	0.67	0.67	0.86	0.69	0.02	0.80	0.00	0.85	0.25	0.45	0.27
Avail Cap(c_a), veh/h	97	1015	998	320	2307	1029	311	0	383	297	438	372
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.29	0.29	0.29	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.1	19.9	20.1	59.5	26.8	13.6	50.2	0.0	55.1	54.4	59.5	59.0
Incr Delay (d2), s/veh	1.9	3.5	3.6	1.5	0.5	0.0	12.8	0.0	8.9	0.3	3.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	14.0	14.1	5.4	20.7	0.3	8.8	0.0	6.6	1.2	1.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.0	23.4	23.7	60.9	27.3	13.6	63.0	0.0	64.0	54.7	62.6	60.6
LnGrp LOS	E	C	C	E	C	B	E	A	E	D	E	E
Approach Vol, veh/h		1370			1774			436			110	
Approach Delay, s/veh		24.2			30.2			63.4			59.4	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	80.3	19.4	11.7	8.6	90.3	9.3	21.8
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	23.0	40.8	15.4	30.0	7.0	56.8	15.4	30.0
Max Q Clear Time (g_c+I1), s	13.5	36.7	17.4	5.1	3.4	48.7	4.6	16.3
Green Ext Time (p_c), s	0.1	2.7	0.0	0.3	0.0	5.8	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	32.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↰	↱
Traffic Vol, veh/h	112	0	27	4	0	37	34	295	4	8	247	143
Future Vol, veh/h	112	0	27	4	0	37	34	295	4	8	247	143
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	127	0	31	5	0	42	39	335	5	9	281	163

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	736	717	281	812	878	338	444	0	0	340	0	0
Stage 1	299	299	-	416	416	-	-	-	-	-	-	-
Stage 2	437	418	-	396	462	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	337	358	763	300	289	709	1127	-	-	1230	-	-
Stage 1	714	670	-	618	595	-	-	-	-	-	-	-
Stage 2	602	594	-	633	568	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	304	339	763	276	274	709	1127	-	-	1230	-	-
Mov Cap-2 Maneuver	304	339	-	276	274	-	-	-	-	-	-	-
Stage 1	683	663	-	591	569	-	-	-	-	-	-	-
Stage 2	542	568	-	601	562	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	24	11.3	0.8	0.2
HCM LOS	C	B		

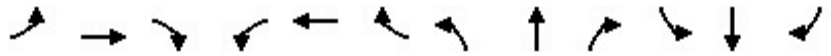
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1127	-	-	344	615	1230	-	-
HCM Lane V/C Ratio	0.034	-	-	0.459	0.076	0.007	-	-
HCM Control Delay (s)	8.3	0	-	24	11.3	7.9	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.3	0.2	0	-	-

Intersection	
Intersection Delay, s/veh	24.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	339	2	1	383	86	14	15	8	76	6	33
Future Vol, veh/h	39	339	2	1	383	86	14	15	8	76	6	33
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	49	429	3	1	485	109	18	19	10	96	8	42
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	21.3	30.5	10.8	12.2
HCM LOS	C	D	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	10%	0%	66%
Vol Thru, %	41%	89%	81%	5%
Vol Right, %	22%	1%	18%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	37	380	470	115
LT Vol	14	39	1	76
Through Vol	15	339	383	6
RT Vol	8	2	86	33
Lane Flow Rate	47	481	595	146
Geometry Grp	1	1	1	1
Degree of Util (X)	0.092	0.722	0.851	0.268
Departure Headway (Hd)	7.068	5.407	5.152	6.626
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	510	664	702	539
Service Time	5.068	3.469	3.209	4.712
HCM Lane V/C Ratio	0.092	0.724	0.848	0.271
HCM Control Delay	10.8	21.3	30.5	12.2
HCM Lane LOS	B	C	D	B
HCM 95th-tile Q	0.3	6.1	9.7	1.1



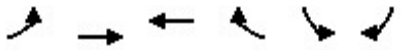
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	133	852	316	415	1189	149	360	485	287	82	407	163
Future Volume (veh/h)	133	852	316	415	1189	149	360	485	287	82	407	163
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.91	1.00		0.87
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	148	947	351	461	1321	166	400	539	319	91	452	181
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	163	1164	734	1795	2732	1197	493	612	361	97	495	195
Arrive On Green	0.12	0.43	0.43	0.17	0.25	0.25	0.14	0.29	0.29	0.05	0.20	0.20
Sat Flow, veh/h	1810	3610	1575	3510	3610	1582	3510	2099	1239	1810	2417	952
Grp Volume(v), veh/h	148	947	351	461	1321	166	400	463	395	91	336	297
Grp Sat Flow(s),veh/h/ln	1810	1805	1575	1755	1805	1582	1755	1805	1533	1810	1805	1565
Q Serve(g_s), s	10.5	29.9	0.0	14.8	40.6	20.4	14.4	31.8	31.9	6.5	23.6	24.3
Cycle Q Clear(g_c), s	10.5	29.9	0.0	14.8	40.6	20.4	14.4	31.8	31.9	6.5	23.6	24.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.61
Lane Grp Cap(c), veh/h	163	1164	734	1795	2732	1197	493	526	447	97	370	321
V/C Ratio(X)	0.91	0.81	0.48	0.26	0.48	0.14	0.81	0.88	0.88	0.93	0.91	0.93
Avail Cap(c_a), veh/h	163	1164	734	1795	2732	1197	493	528	448	97	378	327
HCM Platoon Ratio	1.33	1.33	1.33	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.7	33.7	19.4	32.6	27.1	58.8	54.2	43.9	43.9	61.3	50.5	50.7
Incr Delay (d2), s/veh	33.7	4.3	1.5	0.0	0.6	0.2	9.2	15.7	18.3	69.1	24.7	31.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	12.0	6.1	6.9	19.7	8.9	6.9	16.1	14.1	4.8	13.0	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.4	38.0	20.9	32.6	27.7	59.0	63.4	59.6	62.2	130.3	75.2	82.1
LnGrp LOS	F	D	C	C	C	E	E	E	E	F	E	F
Approach Vol, veh/h		1446			1948			1258			724	
Approach Delay, s/veh		39.2			31.5			61.6			85.0	
Approach LOS		D			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	49.1	23.8	32.4	17.2	107.0	12.5	43.7
Change Period (Y+Rc), s	7.2	* 7.2	5.5	5.8	5.5	7.2	5.5	* 5.8
Max Green Setting (Gmax), s	20.6	* 42	16.3	27.2	11.7	50.8	7.0	* 38
Max Q Clear Time (g_c+I1), s	16.8	31.9	16.4	26.3	12.5	42.6	8.5	33.9
Green Ext Time (p_c), s	0.4	5.0	0.0	0.4	0.0	5.2	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D

Notes

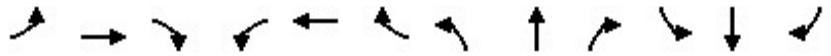
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	89	1181	1332	31	47	170
Future Volume (veh/h)	89	1181	1332	31	47	170
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	96	1270	1432	33	51	183
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	118	4035	3535	81	239	213
Arrive On Green	0.13	1.00	1.00	1.00	0.13	0.13
Sat Flow, veh/h	1810	5358	5384	120	1810	1610
Grp Volume(v), veh/h	96	1270	950	515	51	183
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1875	1810	1610
Q Serve(g_s), s	6.7	0.0	0.0	0.0	3.3	14.5
Cycle Q Clear(g_c), s	6.7	0.0	0.0	0.0	3.3	14.5
Prop In Lane	1.00			0.06	1.00	1.00
Lane Grp Cap(c), veh/h	118	4035	2345	1271	239	213
V/C Ratio(X)	0.81	0.31	0.41	0.41	0.21	0.86
Avail Cap(c_a), veh/h	230	4035	2345	1271	536	477
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.72	0.72	1.00	1.00
Uniform Delay (d), s/veh	55.7	0.0	0.0	0.0	50.4	55.2
Incr Delay (d2), s/veh	2.7	0.1	0.4	0.7	0.4	9.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.1	0.2	1.5	12.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.4	0.1	0.4	0.7	50.8	65.0
LnGrp LOS	E	A	A	A	D	E
Approach Vol, veh/h		1366	1465		234	
Approach Delay, s/veh		4.2	0.5		61.9	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		108.3		21.7	13.0	95.3
Change Period (Y+Rc), s		7.2		4.5	4.5	7.2
Max Green Setting (Gmax), s		79.8		38.5	16.5	58.8
Max Q Clear Time (g_c+I1), s		2.0		16.5	8.7	2.0
Green Ext Time (p_c), s		11.0		0.7	0.1	12.4

Intersection Summary		
HCM 6th Ctrl Delay		6.8
HCM 6th LOS		A



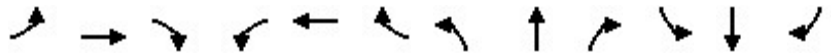
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	32	9	584	31	50	3	1647	499	179	865	16
Future Volume (veh/h)	58	32	9	584	31	50	3	1647	499	179	865	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	60	33	9	608	32	52	3	1716	520	186	901	17
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	91	94	26	512	329	274	10	1762	1020	213	2166	945
Arrive On Green	0.05	0.07	0.07	0.15	0.17	0.17	0.00	0.33	0.33	0.12	0.60	0.60
Sat Flow, veh/h	1810	1436	392	3510	1900	1582	1810	3610	1608	1810	3610	1574
Grp Volume(v), veh/h	60	0	42	608	32	52	3	1716	520	186	901	17
Grp Sat Flow(s),veh/h/ln	1810	0	1827	1755	1900	1582	1810	1805	1608	1810	1805	1574
Q Serve(g_s), s	3.9	0.0	2.6	17.5	1.7	3.4	0.2	56.3	23.8	12.1	16.0	0.5
Cycle Q Clear(g_c), s	3.9	0.0	2.6	17.5	1.7	3.4	0.2	56.3	23.8	12.1	16.0	0.5
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	91	0	119	512	329	274	10	1762	1020	213	2166	945
V/C Ratio(X)	0.66	0.00	0.35	1.19	0.10	0.19	0.30	0.97	0.51	0.87	0.42	0.02
Avail Cap(c_a), veh/h	166	0	490	512	656	546	219	1762	1020	219	2166	945
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	0.0	53.7	51.2	41.7	42.4	59.5	39.6	16.3	52.1	12.8	9.7
Incr Delay (d2), s/veh	3.0	0.0	1.8	102.7	0.1	0.3	0.6	2.8	0.2	28.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.3	14.8	0.8	1.3	0.1	25.8	9.1	7.0	5.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.9	0.0	55.4	154.0	41.9	42.8	60.1	42.4	16.5	80.4	13.4	9.7
LnGrp LOS	E	A	E	F	D	D	E	D	B	F	B	A
Approach Vol, veh/h		102			692			2239			1104	
Approach Delay, s/veh		57.5			140.4			36.4			24.6	
Approach LOS		E			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	64.8	23.0	13.6	5.2	78.2	10.1	26.6
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	4.0	* 5.8
Max Green Setting (Gmax), s	14.5	33.8	17.5	32.2	14.5	33.8	11.0	* 41
Max Q Clear Time (g_c+I1), s	14.1	58.3	19.5	4.6	2.2	18.0	5.9	5.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	5.1	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	546	49	71	100	55	41	199	1846	75	9	761	586
Future Volume (veh/h)	546	49	71	100	55	41	199	1846	75	9	761	586
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	587	53	76	108	59	44	214	1985	81	10	818	630
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	395	190	158	216	108	81	369	2120	944	30	1348	781
Arrive On Green	0.11	0.10	0.10	0.12	0.11	0.11	0.14	0.39	0.39	0.01	0.25	0.25
Sat Flow, veh/h	3510	1900	1586	1810	1004	749	1810	3610	1607	1810	3610	1606
Grp Volume(v), veh/h	587	53	76	108	0	103	214	1985	81	10	818	630
Grp Sat Flow(s),veh/h/ln	1755	1900	1586	1810	0	1753	1810	1805	1607	1810	1805	1606
Q Serve(g_s), s	13.5	3.1	5.4	6.7	0.0	6.7	13.3	63.4	1.7	0.7	24.0	22.1
Cycle Q Clear(g_c), s	13.5	3.1	5.4	6.7	0.0	6.7	13.3	63.4	1.7	0.7	24.0	22.1
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	395	190	158	216	0	189	369	2120	944	30	1348	781
V/C Ratio(X)	1.49	0.28	0.48	0.50	0.00	0.54	0.58	0.94	0.09	0.33	0.61	0.81
Avail Cap(c_a), veh/h	395	583	486	216	0	482	369	2120	944	106	1348	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.57	0.57	0.57	0.63	0.63	0.63
Uniform Delay (d), s/veh	53.2	50.0	51.1	49.5	0.0	50.7	47.0	34.2	3.4	58.7	37.2	16.7
Incr Delay (d2), s/veh	232.0	0.8	2.2	1.8	0.0	2.4	1.3	5.9	0.1	4.1	1.3	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	1.5	2.3	3.2	0.0	3.1	6.2	29.6	1.4	0.3	11.1	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	285.2	50.8	53.3	51.2	0.0	53.2	48.3	40.1	3.5	62.7	38.5	22.4
LnGrp LOS	F	D	D	D	A	D	D	D	A	E	D	C
Approach Vol, veh/h		716			211			2280			1458	
Approach Delay, s/veh		243.3			52.2			39.6			31.7	
Approach LOS		F			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	77.7	19.8	16.6	31.7	52.0	18.0	18.3
Change Period (Y+Rc), s	4.0	7.2	5.4	* 4.6	7.2	* 7.2	4.5	5.4
Max Green Setting (Gmax), s	7.0	45.4	11.0	* 37	7.6	* 45	13.5	33.0
Max Q Clear Time (g_c+I1), s	2.7	65.4	8.7	7.4	15.3	26.0	15.5	8.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	7.4	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	69.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



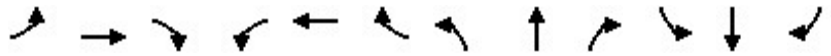
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	77	524	1596	41	161	771
Future Volume (veh/h)	77	524	1596	41	161	771
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	85	576	1754	45	177	847
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	131	725	2160	962	644	3009
Arrive On Green	0.07	0.07	1.00	1.00	0.37	1.00
Sat Flow, veh/h	1810	2834	3705	1607	3510	3705
Grp Volume(v), veh/h	85	576	1754	45	177	847
Grp Sat Flow(s),veh/h/ln	1810	1417	1805	1607	1755	1805
Q Serve(g_s), s	5.5	0.8	0.0	0.0	4.3	0.0
Cycle Q Clear(g_c), s	5.5	0.8	0.0	0.0	4.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	131	725	2160	962	644	3009
V/C Ratio(X)	0.65	0.79	0.81	0.05	0.27	0.28
Avail Cap(c_a), veh/h	179	801	2160	962	644	3009
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.93	0.93
Uniform Delay (d), s/veh	54.2	41.7	0.0	0.0	32.4	0.0
Incr Delay (d2), s/veh	5.3	5.1	0.3	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	8.4	0.1	0.0	1.7	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	59.5	46.8	0.3	0.0	32.6	0.2
LnGrp LOS	E	D	A	A	C	A
Approach Vol, veh/h	661		1799			1024
Approach Delay, s/veh	48.4		0.3			5.8
Approach LOS	D		A			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	28.2	78.0				106.2	13.8
Change Period (Y+Rc), s	6.2	* 6.2				6.2	5.1
Max Green Setting (Gmax), s	19.5	* 72				96.8	11.9
Max Q Clear Time (g_c+I1), s	16.3	2.0				2.0	7.5
Green Ext Time (p_c), s	0.4	21.9				6.2	1.2

Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	58	18	302	139	511	49	1042	213	302	568	27
Future Volume (veh/h)	84	58	18	302	139	511	49	1042	213	302	568	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	102	71	22	368	170	623	60	1271	260	368	693	33
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	127	124	39	315	387	902	91	1588	705	426	1875	830
Arrive On Green	0.07	0.09	0.09	0.17	0.20	0.20	0.05	0.44	0.44	0.24	1.00	1.00
Sat Flow, veh/h	1810	1388	430	1810	1900	2741	1810	3610	1602	3510	3610	1599
Grp Volume(v), veh/h	102	0	93	368	170	623	60	1271	260	368	693	33
Grp Sat Flow(s),veh/h/ln	1810	0	1817	1810	1900	1371	1810	1805	1602	1755	1805	1599
Q Serve(g_s), s	6.7	0.0	5.9	20.9	9.4	17.3	3.9	36.5	7.0	12.0	0.0	0.0
Cycle Q Clear(g_c), s	6.7	0.0	5.9	20.9	9.4	17.3	3.9	36.5	7.0	12.0	0.0	0.0
Prop In Lane	1.00		0.24	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	0	163	315	387	902	91	1588	705	426	1875	830
V/C Ratio(X)	0.80	0.00	0.57	1.17	0.44	0.69	0.66	0.80	0.37	0.86	0.37	0.04
Avail Cap(c_a), veh/h	196	0	503	315	624	1244	226	1588	705	761	1875	830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	0.96	0.96	0.96
Uniform Delay (d), s/veh	55.0	0.0	52.4	49.6	41.8	19.6	56.0	29.1	6.5	44.5	0.0	0.0
Incr Delay (d2), s/veh	6.4	0.0	3.1	104.6	0.8	1.0	2.8	4.0	1.4	2.0	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	2.9	18.6	4.5	5.6	1.8	15.5	4.7	4.6	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.3	0.0	55.5	154.2	42.6	20.5	58.7	33.1	7.9	46.4	0.5	0.1
LnGrp LOS	E	A	E	F	D	C	E	C	A	D	A	A
Approach Vol, veh/h		195			1161			1591			1094	
Approach Delay, s/veh		58.6			66.1			29.9			16.0	
Approach LOS		E			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.6	59.0	24.9	16.6	10.1	68.5	12.4	29.0
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	4.0	4.6
Max Green Setting (Gmax), s	26.6	21.8	18.0	33.2	15.0	33.8	13.0	39.4
Max Q Clear Time (g_c+I1), s	14.0	38.5	22.9	7.9	5.9	2.0	8.7	19.3
Green Ext Time (p_c), s	0.5	0.0	0.0	0.5	0.0	4.6	0.0	3.7

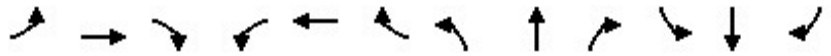
Intersection Summary	
HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	9	23	23	7	48	44	913	6	68	633	15
Future Volume (veh/h)	32	9	23	23	7	48	44	913	6	68	633	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	0.99		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	37	10	27	27	8	56	51	1062	7	79	736	17
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	131	42	113	156	19	133	82	2622	1168	100	2658	1185
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	0.06	0.74	0.74
Sat Flow, veh/h	1353	452	1219	1385	204	1428	1810	3610	1609	1810	3610	1609
Grp Volume(v), veh/h	37	0	37	27	0	64	51	1062	7	79	736	17
Grp Sat Flow(s),veh/h/ln	1353	0	1671	1385	0	1632	1810	1805	1609	1810	1805	1609
Q Serve(g_s), s	3.5	0.0	2.7	2.4	0.0	4.8	3.5	0.0	0.0	5.6	8.8	0.4
Cycle Q Clear(g_c), s	8.3	0.0	2.7	5.1	0.0	4.8	3.5	0.0	0.0	5.6	8.8	0.4
Prop In Lane	1.00		0.73	1.00		0.88	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	131	0	155	156	0	152	82	2622	1168	100	2658	1185
V/C Ratio(X)	0.28	0.00	0.24	0.17	0.00	0.42	0.62	0.41	0.01	0.79	0.28	0.01
Avail Cap(c_a), veh/h	363	0	442	393	0	432	118	2622	1168	216	2658	1185
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.23	0.23	0.23	0.81	0.81	0.81
Uniform Delay (d), s/veh	59.6	0.0	54.7	57.0	0.0	55.7	58.0	0.0	0.0	60.6	5.7	4.6
Incr Delay (d2), s/veh	1.2	0.0	0.8	0.5	0.0	1.9	0.7	0.1	0.0	4.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.2	0.9	0.0	2.1	1.5	0.0	0.0	2.6	2.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	0.0	55.5	57.6	0.0	57.5	58.7	0.1	0.0	64.8	5.9	4.6
LnGrp LOS	E	A	E	E	A	E	E	A	A	E	A	A
Approach Vol, veh/h		74			91			1120			832	
Approach Delay, s/veh		58.1			57.5			2.8			11.5	
Approach LOS		E			E			A			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.7	101.6		16.7	10.4	102.9		16.7
Change Period (Y+Rc), s	4.5	7.2		4.6	4.5	7.2		4.6
Max Green Setting (Gmax), s	15.5	63.8		34.4	8.5	70.8		34.4
Max Q Clear Time (g_c+I1), s	7.3	2.0		10.3	5.5	10.8		7.1
Green Ext Time (p_c), s	0.0	8.5		0.3	0.0	5.2		0.4

Intersection Summary	
HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B



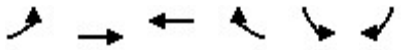
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	302	859	67	160	1323	340	138	634	108	179	377	268
Future Volume (veh/h)	302	859	67	160	1323	340	138	634	108	179	377	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	328	934	73	174	1438	370	150	689	117	195	410	291
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	476	1300	735	245	1867	695	176	804	136	252	849	591
Arrive On Green	0.27	0.72	0.72	0.27	0.72	0.72	0.10	0.26	0.26	0.02	0.08	0.08
Sat Flow, veh/h	3510	3610	1609	1810	5187	1609	1810	3085	523	3510	3610	1583
Grp Volume(v), veh/h	328	934	73	174	1438	370	150	403	403	195	410	291
Grp Sat Flow(s),veh/h/ln	1755	1805	1609	1810	1729	1609	1810	1805	1804	1755	1805	1583
Q Serve(g_s), s	10.9	19.5	0.8	11.3	22.6	7.5	10.6	27.6	27.7	7.2	14.1	4.2
Cycle Q Clear(g_c), s	10.9	19.5	0.8	11.3	22.6	7.5	10.6	27.6	27.7	7.2	14.1	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		1.00
Lane Grp Cap(c), veh/h	476	1300	735	245	1867	695	176	470	470	252	849	591
V/C Ratio(X)	0.69	0.72	0.10	0.71	0.77	0.53	0.85	0.86	0.86	0.77	0.48	0.49
Avail Cap(c_a), veh/h	476	1300	735	245	1867	695	223	555	555	394	1050	679
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.97	0.97	0.97	0.92	0.92	0.92	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	44.9	14.4	3.2	45.1	14.8	4.2	57.8	45.8	45.8	62.4	52.4	18.4
Incr Delay (d2), s/veh	3.4	3.3	0.3	7.3	2.9	2.7	18.7	11.1	11.3	1.9	0.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	5.1	0.4	4.9	5.1	2.4	5.7	13.6	13.6	3.3	6.9	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	17.7	3.5	52.3	17.7	6.8	76.5	56.9	57.0	64.3	52.8	19.1
LnGrp LOS	D	B	A	D	B	A	E	E	E	E	D	B
Approach Vol, veh/h		1335			1982			956			896	
Approach Delay, s/veh		24.5			18.7			60.0			44.3	
Approach LOS		C			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.6	53.0	17.6	36.8	22.6	53.0	14.3	40.1
Change Period (Y+Rc), s	5.0	* 6.2	5.0	6.2	5.0	6.2	5.0	* 6.2
Max Green Setting (Gmax), s	7.5	* 47	16.0	37.8	7.0	46.8	14.6	* 40
Max Q Clear Time (g_c+I1), s	13.3	21.5	12.6	16.1	12.9	24.6	9.2	29.7
Green Ext Time (p_c), s	0.0	6.5	0.1	3.3	0.0	11.5	0.1	3.5

Intersection Summary	
HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Notes

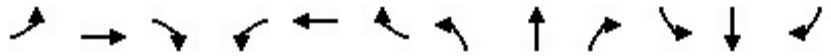
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	1117	1474	84	71	29
Future Volume (veh/h)	29	1117	1474	84	71	29
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1188	1568	89	76	31
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	66	3091	3938	223	104	93
Arrive On Green	0.07	1.00	0.53	0.53	0.06	0.06
Sat Flow, veh/h	1810	3705	5186	285	1810	1610
Grp Volume(v), veh/h	31	1188	1081	576	76	31
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1841	1810	1610
Q Serve(g_s), s	2.1	0.0	24.4	24.4	5.4	2.4
Cycle Q Clear(g_c), s	2.1	0.0	24.4	24.4	5.4	2.4
Prop In Lane	1.00			0.15	1.00	1.00
Lane Grp Cap(c), veh/h	66	3091	2716	1446	104	93
V/C Ratio(X)	0.47	0.38	0.40	0.40	0.73	0.33
Avail Cap(c_a), veh/h	104	3091	2716	1446	487	434
HCM Platoon Ratio	2.00	2.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.38	0.38	1.00	1.00
Uniform Delay (d), s/veh	59.1	0.0	12.4	12.4	60.3	58.9
Incr Delay (d2), s/veh	1.5	0.3	0.2	0.3	9.3	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.1	10.1	10.8	2.8	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	60.6	0.3	12.5	12.7	69.5	60.9
LnGrp LOS	E	A	B	B	E	E
Approach Vol, veh/h		1219	1657		107	
Approach Delay, s/veh		1.8	12.6		67.1	
Approach LOS		A	B		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		118.5		11.5	9.2	109.3
Change Period (Y+Rc), s		7.2		4.0	4.5	7.2
Max Green Setting (Gmax), s		83.8		35.0	7.5	71.8
Max Q Clear Time (g_c+I1), s		2.0		7.4	4.1	26.4
Green Ext Time (p_c), s		10.3		0.3	0.0	14.8

Intersection Summary	
HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	156	999	105	321	1439	20	300	95	391	45	141	283
Future Volume (veh/h)	156	999	105	321	1439	20	300	95	391	45	141	283
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	168	1074	113	345	1547	22	323	102	420	48	152	304
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	196	1263	133	1665	6386	91	372	661	560	80	157	315
Arrive On Green	0.04	0.13	0.13	0.92	1.00	1.00	0.11	0.35	0.35	0.04	0.28	0.28
Sat Flow, veh/h	1810	3296	346	1810	5270	75	3510	1900	1610	1810	565	1131
Grp Volume(v), veh/h	168	588	599	345	1015	554	323	102	420	48	0	456
Grp Sat Flow(s),veh/h/ln	1810	1805	1838	1810	1729	1887	1755	1900	1610	1810	0	1696
Q Serve(g_s), s	12.0	41.4	41.5	2.4	0.0	0.0	11.8	4.8	23.6	3.4	0.0	34.5
Cycle Q Clear(g_c), s	12.0	41.4	41.5	2.4	0.0	0.0	11.8	4.8	23.6	3.4	0.0	34.5
Prop In Lane	1.00		0.19	1.00		0.04	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	196	691	704	1665	4190	2286	372	661	560	80	0	472
V/C Ratio(X)	0.86	0.85	0.85	0.21	0.24	0.24	0.87	0.15	0.75	0.60	0.00	0.97
Avail Cap(c_a), veh/h	278	691	704	1665	4190	2286	378	661	560	97	0	472
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.7	53.1	53.2	0.5	0.0	0.0	57.2	29.2	23.2	61.0	0.0	46.3
Incr Delay (d2), s/veh	11.8	11.7	11.6	0.0	0.1	0.3	17.8	0.1	5.6	2.6	0.0	32.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	22.2	22.6	0.0	0.1	0.2	6.0	2.2	9.4	1.6	0.0	18.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.4	64.8	64.8	0.5	0.1	0.3	75.0	29.3	28.8	63.6	0.0	78.8
LnGrp LOS	E	E	E	A	A	A	E	C	C	E	A	E
Approach Vol, veh/h		1355			1914			845			504	
Approach Delay, s/veh		65.9			0.2			46.5			77.4	
Approach LOS		E			A			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.8	57.0	18.8	42.0	19.1	166.7	9.8	51.0
Change Period (Y+Rc), s	7.2	* 7.2	5.0	* 5.8	5.0	7.2	4.0	5.8
Max Green Setting (Gmax), s	8.5	* 50	14.0	* 36	20.0	38.0	7.0	43.0
Max Q Clear Time (g_c+I1), s	14.4	43.5	13.8	36.5	14.0	2.0	5.4	25.6
Green Ext Time (p_c), s	0.2	3.5	0.0	0.0	0.1	12.6	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	1315	0	0	1787	7	0	0	0	0	0	0
Future Vol, veh/h	0	1315	0	0	1787	7	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1399	0	0	1901	7	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	700	-	-	954
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	386	0	0	*346
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	386	-	-	*346
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	0
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	15	334	163	114
Future Vol, veh/h	0	0	15	334	163	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	18	393	192	134

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	688	259	326	0	-	0
Stage 1	259	-	-	-	-	-
Stage 2	429	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	415	785	1245	-	-	-
Stage 1	789	-	-	-	-	-
Stage 2	661	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	408	785	1245	-	-	-
Mov Cap-2 Maneuver	408	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	661	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1245	-	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-	-
HCM Control Delay (s)	7.9	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	125	41	38	225	117	46
Future Vol, veh/h	125	41	38	225	117	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	147	48	45	265	138	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	520	165	192	0	-	0
Stage 1	165	-	-	-	-	-
Stage 2	355	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	520	885	1394	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	714	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	500	885	1394	-	-	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	714	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.8	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1394	-	560	-	-
HCM Lane V/C Ratio	0.032	-	0.349	-	-
HCM Control Delay (s)	7.7	0	14.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.6	-	-

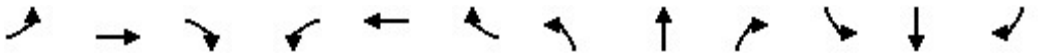
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	265	156	1
Future Vol, veh/h	1	0	0	265	156	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	0	305	179	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	485	180	180	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	545	868	1408	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	752	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	545	868	1408	-	-	-
Mov Cap-2 Maneuver	545	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	752	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1408	-	545	-	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	0	-	11.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



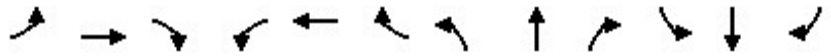
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	1181	79	116	1219	359	100	294	104	443	275	102
Future Volume (veh/h)	129	1181	79	116	1219	359	100	294	104	443	275	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	137	1256	84	123	1297	382	106	313	111	471	293	109
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	163	1708	114	148	1766	787	505	400	177	526	402	178
Arrive On Green	0.09	0.50	0.50	0.08	0.49	0.49	0.14	0.11	0.11	0.15	0.11	0.11
Sat Flow, veh/h	1810	3434	229	1810	3610	1608	3510	3610	1597	3510	3610	1597
Grp Volume(v), veh/h	137	659	681	123	1297	382	106	313	111	471	293	109
Grp Sat Flow(s),veh/h/ln	1810	1805	1858	1810	1805	1608	1755	1805	1597	1755	1805	1597
Q Serve(g_s), s	9.7	37.6	37.8	8.7	37.2	11.1	3.5	11.0	7.1	17.1	10.2	6.9
Cycle Q Clear(g_c), s	9.7	37.6	37.8	8.7	37.2	11.1	3.5	11.0	7.1	17.1	10.2	6.9
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	898	925	148	1766	787	505	400	177	526	402	178
V/C Ratio(X)	0.84	0.73	0.74	0.83	0.73	0.49	0.21	0.78	0.63	0.90	0.73	0.61
Avail Cap(c_a), veh/h	202	898	925	174	1766	787	505	500	221	567	850	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.3	25.9	25.9	58.8	26.5	6.4	49.1	56.3	37.6	54.3	55.9	36.1
Incr Delay (d2), s/veh	22.3	5.3	5.2	24.6	2.8	2.1	0.2	6.3	3.7	16.0	2.5	3.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	16.2	16.8	4.9	15.5	3.9	1.5	5.3	3.0	8.6	4.7	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.6	31.2	31.1	83.4	29.2	8.6	49.3	62.5	41.3	70.2	58.4	39.5
LnGrp LOS	F	C	C	F	C	A	D	E	D	E	E	D
Approach Vol, veh/h		1477			1802			530			873	
Approach Delay, s/veh		35.7			28.5			55.4			62.4	
Approach LOS		D			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.1	70.9	23.7	20.3	16.2	69.8	24.5	19.5
Change Period (Y+Rc), s	4.5	6.2	5.0	* 5.8	4.5	6.2	5.0	5.1
Max Green Setting (Gmax), s	12.5	57.7	8.2	* 31	14.5	55.7	21.0	18.0
Max Q Clear Time (g_c+I1), s	10.7	39.8	5.5	12.2	11.7	39.2	19.1	13.0
Green Ext Time (p_c), s	0.0	7.9	0.1	1.9	0.1	9.0	0.4	1.0

Intersection Summary	
HCM 6th Ctrl Delay	40.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1643	135	39	1681	18	59	2	19	20	2	6
Future Volume (veh/h)	22	1643	135	39	1681	18	59	2	19	20	2	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	24	1786	147	42	1827	20	64	2	21	22	2	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	56	2555	1138	76	2627	29	88	10	102	53	18	64
Arrive On Green	0.03	0.71	0.71	0.04	0.72	0.72	0.05	0.07	0.07	0.03	0.05	0.05
Sat Flow, veh/h	1810	3610	1608	1810	3657	40	1810	141	1484	1810	369	1290
Grp Volume(v), veh/h	24	1786	147	42	900	947	64	0	23	22	0	9
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1810	1805	1892	1810	0	1625	1810	0	1659
Q Serve(g_s), s	1.7	37.2	3.8	3.0	36.4	36.7	4.5	0.0	1.7	1.6	0.0	0.7
Cycle Q Clear(g_c), s	1.7	37.2	3.8	3.0	36.4	36.7	4.5	0.0	1.7	1.6	0.0	0.7
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.91	1.00		0.78
Lane Grp Cap(c), veh/h	56	2555	1138	76	1297	1359	88	0	111	53	0	82
V/C Ratio(X)	0.42	0.70	0.13	0.55	0.69	0.70	0.73	0.00	0.21	0.41	0.00	0.11
Avail Cap(c_a), veh/h	97	2555	1138	104	1297	1359	111	0	226	104	0	231
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.8	11.0	6.1	61.1	10.3	10.3	61.0	0.0	57.2	62.0	0.0	59.0
Incr Delay (d2), s/veh	5.0	1.6	0.2	6.1	3.1	3.0	16.2	0.0	0.9	5.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	12.6	1.3	1.5	12.6	13.3	2.5	0.0	0.7	0.8	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.8	12.6	6.3	67.2	13.4	13.3	77.2	0.0	58.1	67.0	0.0	59.6
LnGrp LOS	E	B	A	E	B	B	E	A	E	E	A	E
Approach Vol, veh/h		1957			1889			87			31	
Approach Delay, s/veh		12.8			14.5			72.2			64.8	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	98.2	10.3	11.5	8.6	99.6	7.8	14.0
Change Period (Y+Rc), s	4.5	6.2	4.0	* 5.1	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.5	77.1	8.0	* 18	7.0	77.6	7.5	18.1
Max Q Clear Time (g_c+I1), s	5.0	39.2	6.5	2.7	3.7	38.7	3.6	3.7
Green Ext Time (p_c), s	0.0	19.1	0.0	0.0	0.0	18.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1678	4	0	1738	0	2
Future Vol, veh/h	1678	4	0	1738	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1864	4	0	1931	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	934
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	233
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	233
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	20.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	233	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-
HCM Control Delay (s)	20.6	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	1.1

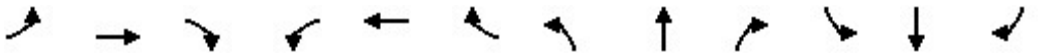
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	99	1581	1682	17	1	56
Future Vol, veh/h	99	1581	1682	17	1	56
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	110	1757	1869	19	1	62

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1891	0	-	0	2981	947
Stage 1	-	-	-	-	1882	-
Stage 2	-	-	-	-	1099	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	*590	-	-	-	*4	*393
Stage 1	-	-	-	-	*371	-
Stage 2	-	-	-	-	*285	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	*589	-	-	-	*4	*392
Mov Cap-2 Maneuver	-	-	-	-	*4	-
Stage 1	-	-	-	-	*301	-
Stage 2	-	-	-	-	*284	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	47.8
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 589	-	-	-	145
HCM Lane V/C Ratio	0.187	-	-	-	0.437
HCM Control Delay (s)	12.5	-	-	-	47.8
HCM Lane LOS	B	-	-	-	E
HCM 95th %tile Q(veh)	0.7	-	-	-	2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	1326	190	103	1472	27	194	65	113	62	28	44
Future Volume (veh/h)	66	1326	190	103	1472	27	194	65	113	62	28	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.97		0.96	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	72	1441	207	112	1600	29	211	71	123	67	30	48
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	92	1841	261	125	2164	959	312	86	149	177	259	211
Arrive On Green	0.05	0.58	0.58	0.09	0.80	0.80	0.05	0.14	0.14	0.05	0.14	0.14
Sat Flow, veh/h	1810	3170	450	1810	3610	1599	1810	609	1055	1810	1900	1550
Grp Volume(v), veh/h	72	813	835	112	1600	29	211	0	194	67	30	48
Grp Sat Flow(s),veh/h/ln	1810	1805	1815	1810	1805	1599	1810	0	1663	1810	1900	1550
Q Serve(g_s), s	5.1	44.6	46.5	8.0	28.5	0.5	7.0	0.0	14.7	4.1	1.8	3.6
Cycle Q Clear(g_c), s	5.1	44.6	46.5	8.0	28.5	0.5	7.0	0.0	14.7	4.1	1.8	3.6
Prop In Lane	1.00		0.25	1.00		1.00	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	92	1048	1054	125	2164	959	312	0	234	177	259	211
V/C Ratio(X)	0.79	0.78	0.79	0.89	0.74	0.03	0.68	0.00	0.83	0.38	0.12	0.23
Avail Cap(c_a), veh/h	97	1048	1054	125	2164	959	312	0	384	186	438	358
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.44	0.44	0.44	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	20.8	21.2	58.5	8.2	5.3	49.8	0.0	54.3	45.6	49.3	50.1
Incr Delay (d2), s/veh	28.8	5.6	6.1	27.3	1.0	0.0	4.8	0.0	7.5	0.5	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	18.4	19.4	4.4	5.9	0.2	3.5	0.0	6.7	1.9	0.9	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.8	26.4	27.3	85.8	9.2	5.4	54.6	0.0	61.8	46.1	49.5	50.6
LnGrp LOS	F	C	C	F	A	A	D	A	E	D	D	D
Approach Vol, veh/h		1720			1741			405			145	
Approach Delay, s/veh		29.5			14.1			58.0			48.3	
Approach LOS		C			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	82.7	11.0	22.3	11.6	85.1	10.4	22.9
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	9.0	63.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	10.0	48.5	9.0	5.6	7.1	30.5	6.1	16.7
Green Ext Time (p_c), s	0.0	9.1	0.0	0.3	0.0	14.9	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	5.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↰	↱
Traffic Vol, veh/h	119	1	29	5	0	14	14	199	8	8	226	62
Future Vol, veh/h	119	1	29	5	0	14	14	199	8	8	226	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	157	1	38	7	0	18	18	262	11	11	297	82

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	632	628	297	684	705	268	379	0	0	273	0	0
Stage 1	319	319	-	304	304	-	-	-	-	-	-	-
Stage 2	313	309	-	380	401	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	396	402	747	365	363	776	1191	-	-	1302	-	-
Stage 1	697	657	-	710	667	-	-	-	-	-	-	-
Stage 2	702	663	-	646	604	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	378	390	747	338	352	776	1191	-	-	1302	-	-
Mov Cap-2 Maneuver	378	390	-	338	352	-	-	-	-	-	-	-
Stage 1	684	650	-	697	655	-	-	-	-	-	-	-
Stage 2	673	651	-	605	597	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21	11.5	0.5	0.2
HCM LOS	C	B		

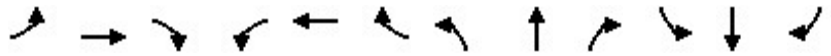
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1191	-	-	418	579	1302	-	-
HCM Lane V/C Ratio	0.015	-	-	0.469	0.043	0.008	-	-
HCM Control Delay (s)	8.1	0	-	21	11.5	7.8	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	2.4	0.1	0	-	-

Intersection	
Intersection Delay, s/veh	17.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	302	23	6	245	47	11	17	8	136	20	62
Future Vol, veh/h	33	302	23	6	245	47	11	17	8	136	20	62
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	42	387	29	8	314	60	14	22	10	174	26	79
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	21.1	16.7	10.6	14.9
HCM LOS	C	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	9%	2%	62%
Vol Thru, %	47%	84%	82%	9%
Vol Right, %	22%	6%	16%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	358	298	218
LT Vol	11	33	6	136
Through Vol	17	302	245	20
RT Vol	8	23	47	62
Lane Flow Rate	46	459	382	279
Geometry Grp	1	1	1	1
Degree of Util (X)	0.089	0.708	0.594	0.48
Departure Headway (Hd)	6.953	5.551	5.601	6.184
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	518	647	638	579
Service Time	4.953	3.632	3.688	4.275
HCM Lane V/C Ratio	0.089	0.709	0.599	0.482
HCM Control Delay	10.6	21.1	16.7	14.9
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	0.3	5.8	3.9	2.6



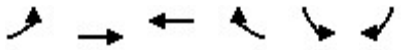
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	1079	199	206	1190	88	267	354	210	103	283	206
Future Volume (veh/h)	155	1079	199	206	1190	88	267	354	210	103	283	206
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.76	1.00		0.74
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	163	1136	209	217	1253	93	281	373	221	108	298	217
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	177	3082	1464	265	3003	1290	336	576	326	111	470	309
Arrive On Green	0.03	0.28	0.28	0.15	1.00	1.00	0.10	0.29	0.29	0.06	0.26	0.26
Sat Flow, veh/h	1810	3610	1534	3510	3610	1552	3510	1970	1114	1810	1805	1187
Grp Volume(v), veh/h	163	1136	209	217	1253	93	281	340	254	108	298	217
Grp Sat Flow(s),veh/h/ln	1810	1805	1534	1755	1805	1552	1755	1805	1279	1810	1805	1187
Q Serve(g_s), s	11.7	32.8	4.6	7.8	0.0	0.0	10.2	21.4	22.8	7.7	19.0	21.5
Cycle Q Clear(g_c), s	11.7	32.8	4.6	7.8	0.0	0.0	10.2	21.4	22.8	7.7	19.0	21.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.87	1.00		1.00
Lane Grp Cap(c), veh/h	177	3082	1464	265	3003	1290	336	528	374	111	470	309
V/C Ratio(X)	0.92	0.37	0.14	0.82	0.42	0.07	0.84	0.64	0.68	0.97	0.63	0.70
Avail Cap(c_a), veh/h	177	3082	1464	292	3003	1290	451	528	374	111	470	309
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.4	18.6	1.4	54.3	0.0	0.0	57.8	40.1	40.6	60.9	42.6	43.5
Incr Delay (d2), s/veh	29.3	0.2	0.1	12.5	0.4	0.1	7.6	2.7	4.9	75.1	2.8	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	15.7	0.0	3.6	0.2	0.0	4.8	9.7	7.5	5.8	8.7	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.7	18.8	1.5	66.8	0.4	0.1	65.3	42.8	45.5	136.0	45.4	50.5
LnGrp LOS	F	B	A	E	A	A	E	D	D	F	D	D
Approach Vol, veh/h		1508			1563			875			623	
Approach Delay, s/veh		24.3			9.6			50.8			62.9	
Approach LOS		C			A			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	120.0	18.0	39.6	18.2	117.1	13.8	43.8
Change Period (Y+Rc), s	5.5	7.2	5.5	5.8	5.5	7.2	5.8	* 5.8
Max Green Setting (Gmax), s	10.8	50.7	16.7	27.8	12.7	48.8	8.0	* 38
Max Q Clear Time (g_c+I1), s	9.8	34.8	12.2	23.5	13.7	2.0	9.7	24.8
Green Ext Time (p_c), s	0.0	7.3	0.2	1.3	0.0	11.3	0.0	3.1

Intersection Summary	
HCM 6th Ctrl Delay	29.6
HCM 6th LOS	C

Notes

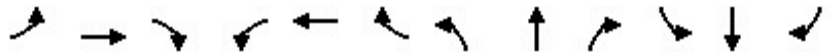
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	179	1370	1361	24	15	136
Future Volume (veh/h)	179	1370	1361	24	15	136
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	195	1489	1479	26	16	148
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	219	4155	3387	60	197	175
Arrive On Green	0.24	1.00	1.00	1.00	0.11	0.11
Sat Flow, veh/h	1810	5358	5416	92	1810	1610
Grp Volume(v), veh/h	195	1489	975	530	16	148
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1879	1810	1610
Q Serve(g_s), s	13.5	0.0	0.0	0.0	1.0	11.7
Cycle Q Clear(g_c), s	13.5	0.0	0.0	0.0	1.0	11.7
Prop In Lane	1.00			0.05	1.00	1.00
Lane Grp Cap(c), veh/h	219	4155	2233	1213	197	175
V/C Ratio(X)	0.89	0.36	0.44	0.44	0.08	0.84
Avail Cap(c_a), veh/h	355	4155	2233	1213	494	440
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.84	0.84	1.00	1.00
Uniform Delay (d), s/veh	48.5	0.0	0.0	0.0	52.1	56.8
Incr Delay (d2), s/veh	6.5	0.2	0.5	1.0	0.2	10.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.1	0.2	0.3	0.5	10.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	55.0	0.2	0.5	1.0	52.2	67.3
LnGrp LOS	D	A	A	A	D	E
Approach Vol, veh/h		1684	1505		164	
Approach Delay, s/veh		6.5	0.7		65.8	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		111.3		18.7	20.2	91.1
Change Period (Y+Rc), s		7.2		4.5	4.5	7.2
Max Green Setting (Gmax), s		82.8		35.5	25.5	52.8
Max Q Clear Time (g_c+I1), s		2.0		13.7	15.5	2.0
Green Ext Time (p_c), s		14.4		0.5	0.2	12.8

Intersection Summary		
HCM 6th Ctrl Delay		6.8
HCM 6th LOS		A



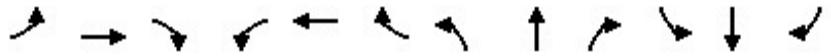
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	10	13	527	16	37	5	1298	432	130	1429	34
Future Volume (veh/h)	37	10	13	527	16	37	5	1298	432	130	1429	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	10	13	543	16	38	5	1338	445	134	1473	35
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	73	83	108	516	438	367	16	1793	1021	135	2030	898
Arrive On Green	0.04	0.11	0.11	0.15	0.23	0.23	0.00	0.16	0.16	0.07	0.56	0.56
Sat Flow, veh/h	1810	738	959	3510	1900	1589	1810	3610	1580	1810	3610	1596
Grp Volume(v), veh/h	38	0	23	543	16	38	5	1338	445	134	1473	35
Grp Sat Flow(s),veh/h/ln	1810	0	1696	1755	1900	1589	1810	1805	1580	1810	1805	1596
Q Serve(g_s), s	2.7	0.0	1.6	19.1	0.8	2.4	0.4	45.9	23.9	9.6	39.2	1.3
Cycle Q Clear(g_c), s	2.7	0.0	1.6	19.1	0.8	2.4	0.4	45.9	23.9	9.6	39.2	1.3
Prop In Lane	1.00		0.57	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	73	0	191	516	438	367	16	1793	1021	135	2030	898
V/C Ratio(X)	0.52	0.00	0.12	1.05	0.04	0.10	0.31	0.75	0.44	0.99	0.73	0.04
Avail Cap(c_a), veh/h	97	0	418	516	684	572	97	1793	1021	135	2030	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.68	0.68	0.68	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	0.0	51.9	55.4	38.8	39.4	64.4	46.5	20.8	60.1	21.0	12.7
Incr Delay (d2), s/veh	2.2	0.0	0.3	54.2	0.0	0.1	2.7	2.0	0.9	74.9	2.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.7	12.1	0.4	1.0	0.2	22.6	10.2	7.1	15.6	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	0.0	52.2	109.7	38.8	39.5	67.1	48.5	21.7	135.1	23.3	12.8
LnGrp LOS	E	A	D	F	D	D	E	D	C	F	C	B
Approach Vol, veh/h		61			597			1788			1642	
Approach Delay, s/veh		59.1			103.3			41.9			32.2	
Approach LOS		E			F			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	70.8	24.6	20.4	5.7	79.3	9.2	35.8
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	4.0	* 5.8
Max Green Setting (Gmax), s	9.7	47.2	19.1	32.0	7.0	49.9	7.0	* 47
Max Q Clear Time (g_c+I1), s	11.6	47.9	21.1	3.6	2.4	41.2	4.7	4.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	5.8	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	47.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	537	48	90	31	18	26	75	1148	56	11	1436	594
Future Volume (veh/h)	537	48	90	31	18	26	75	1148	56	11	1436	594
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	554	49	93	32	19	27	77	1184	58	11	1480	612
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	529	353	298	67	48	68	97	2170	966	32	2041	1152
Arrive On Green	0.15	0.19	0.19	0.04	0.07	0.07	0.11	1.00	1.00	0.02	0.75	0.75
Sat Flow, veh/h	3510	1900	1605	1810	706	1003	1810	3610	1607	1810	3610	1607
Grp Volume(v), veh/h	554	49	93	32	0	46	77	1184	58	11	1480	612
Grp Sat Flow(s),veh/h/ln	1755	1900	1605	1810	0	1709	1810	1805	1607	1810	1805	1607
Q Serve(g_s), s	19.6	2.8	6.5	2.3	0.0	3.4	5.4	0.0	0.0	0.8	29.1	16.2
Cycle Q Clear(g_c), s	19.6	2.8	6.5	2.3	0.0	3.4	5.4	0.0	0.0	0.8	29.1	16.2
Prop In Lane	1.00		1.00	1.00		0.59	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	529	353	298	67	0	116	97	2170	966	32	2041	1152
V/C Ratio(X)	1.05	0.14	0.31	0.48	0.00	0.40	0.80	0.55	0.06	0.34	0.72	0.53
Avail Cap(c_a), veh/h	529	685	579	97	0	434	97	2170	966	97	2041	1152
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.86	0.86	0.86	0.62	0.62	0.62
Uniform Delay (d), s/veh	55.2	44.2	45.7	61.4	0.0	58.0	57.4	0.0	0.0	62.7	10.6	4.3
Incr Delay (d2), s/veh	51.9	0.2	0.6	5.2	0.0	2.2	31.4	0.9	0.1	3.9	1.4	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	1.3	2.7	1.1	0.0	1.5	3.1	0.3	0.0	0.4	6.9	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.1	44.4	46.3	66.6	0.0	60.2	88.8	0.9	0.1	66.6	12.0	5.4
LnGrp LOS	F	D	D	E	A	E	F	A	A	E	B	A
Approach Vol, veh/h		696			78			1319			2103	
Approach Delay, s/veh		94.6			62.8			6.0			10.4	
Approach LOS		F			E			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	85.4	8.8	29.5	10.9	80.7	24.1	14.2
Change Period (Y+Rc), s	4.0	7.2	4.0	* 5.4	4.0	7.2	4.5	5.4
Max Green Setting (Gmax), s	7.3	49.3	7.0	* 47	7.0	49.3	19.6	33.0
Max Q Clear Time (g_c+I1), s	2.8	2.0	4.3	8.5	7.4	31.1	21.6	5.4
Green Ext Time (p_c), s	0.0	10.2	0.0	0.5	0.0	11.8	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	54	224	1055	58	322	1235
Future Volume (veh/h)	54	224	1055	58	322	1235
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	60	249	1172	64	358	1372
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	97	887	1994	888	910	3102
Arrive On Green	0.05	0.05	1.00	1.00	0.52	1.00
Sat Flow, veh/h	1810	2834	3705	1607	3510	3705
Grp Volume(v), veh/h	60	249	1172	64	358	1372
Grp Sat Flow(s),veh/h/ln	1810	1417	1805	1607	1755	1805
Q Serve(g_s), s	4.2	0.0	0.0	0.0	8.0	0.0
Cycle Q Clear(g_c), s	4.2	0.0	0.0	0.0	8.0	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	97	887	1994	888	910	3102
V/C Ratio(X)	0.62	0.28	0.59	0.07	0.39	0.44
Avail Cap(c_a), veh/h	193	1038	1994	888	910	3102
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.92	0.92	0.65	0.65
Uniform Delay (d), s/veh	60.2	33.6	0.0	0.0	25.1	0.0
Incr Delay (d2), s/veh	6.2	0.2	1.2	0.1	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.0	0.3	0.0	2.9	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.4	33.8	1.2	0.1	25.3	0.3
LnGrp LOS	E	C	A	A	C	A
Approach Vol, veh/h	309		1236			1730
Approach Delay, s/veh	40.1		1.1			5.5
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	39.9	78.0			117.9	12.1
Change Period (Y+Rc), s	6.2	* 6.2			6.2	5.1
Max Green Setting (Gmax), s	27.5	* 72			104.8	13.9
Max Q Clear Time (g_c+I1), s	10.3	2.0			2.0	6.2
Green Ext Time (p_c), s	1.1	10.3			13.3	0.7

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



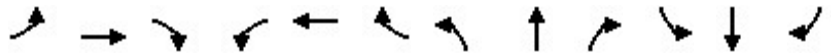
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	36	8	149	12	248	10	821	212	270	975	20
Future Volume (veh/h)	44	36	8	149	12	248	10	821	212	270	975	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	47	39	9	160	13	267	11	883	228	290	1048	22
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	80	91	21	185	227	1041	32	1494	659	884	2401	1059
Arrive On Green	0.04	0.06	0.06	0.10	0.12	0.12	0.04	0.83	0.83	0.50	1.00	1.00
Sat Flow, veh/h	1810	1492	344	1810	1900	2739	1810	3610	1593	3510	3610	1592
Grp Volume(v), veh/h	47	0	48	160	13	267	11	883	228	290	1048	22
Grp Sat Flow(s),veh/h/ln	1810	0	1836	1810	1900	1370	1810	1805	1593	1755	1805	1592
Q Serve(g_s), s	3.3	0.0	3.3	11.3	0.8	1.0	0.8	10.7	3.1	6.4	0.0	0.0
Cycle Q Clear(g_c), s	3.3	0.0	3.3	11.3	0.8	1.0	0.8	10.7	3.1	6.4	0.0	0.0
Prop In Lane	1.00		0.19	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	80	0	112	185	227	1041	32	1494	659	884	2401	1059
V/C Ratio(X)	0.59	0.00	0.43	0.86	0.06	0.26	0.34	0.59	0.35	0.33	0.44	0.02
Avail Cap(c_a), veh/h	125	0	466	209	588	1561	97	1494	659	884	2401	1059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90	0.90	0.90	0.90
Uniform Delay (d), s/veh	61.0	0.0	58.8	57.4	50.7	15.7	62.0	7.5	3.3	25.7	0.0	0.0
Incr Delay (d2), s/veh	2.6	0.0	2.6	24.9	0.1	0.1	2.1	1.6	1.3	0.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	1.6	6.5	0.4	2.0	0.4	2.7	1.5	2.4	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	0.0	61.4	82.4	50.8	15.8	64.1	9.0	4.6	25.8	0.5	0.0
LnGrp LOS	E	A	E	F	D	B	E	A	A	C	A	A
Approach Vol, veh/h		95			440			1122			1360	
Approach Delay, s/veh		62.5			41.0			8.7			5.9	
Approach LOS		E			D			A			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	38.9	60.0	17.3	13.7	6.3	92.7	9.7	21.3
Change Period (Y+Rc), s	6.2	* 6.2	4.0	5.8	4.0	6.2	4.0	* 5.8
Max Green Setting (Gmax), s	7.3	* 54	15.0	33.0	7.0	55.0	9.0	* 40
Max Q Clear Time (g_c+I1), s	8.4	12.7	13.3	5.3	2.8	2.0	5.3	3.0
Green Ext Time (p_c), s	0.0	7.4	0.0	0.2	0.0	8.4	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

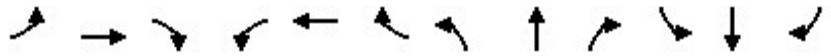
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	39	85	69	28	79	122	807	14	173	769	119
Future Volume (veh/h)	122	39	85	69	28	79	122	807	14	173	769	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	126	40	88	71	29	81	126	832	14	178	793	123
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	215	95	210	201	79	221	150	2101	908	202	2205	974
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.17	1.00	1.00	0.22	1.00	1.00
Sat Flow, veh/h	1300	527	1160	1280	437	1220	1810	3610	1560	1810	3610	1594
Grp Volume(v), veh/h	126	0	128	71	0	110	126	832	14	178	793	123
Grp Sat Flow(s),veh/h/ln	1300	0	1687	1280	0	1656	1810	1805	1560	1810	1805	1594
Q Serve(g_s), s	12.2	0.0	8.7	6.8	0.0	7.6	8.8	0.0	0.0	12.4	0.0	0.0
Cycle Q Clear(g_c), s	19.8	0.0	8.7	15.5	0.0	7.6	8.8	0.0	0.0	12.4	0.0	0.0
Prop In Lane	1.00		0.69	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	0	305	201	0	300	150	2101	908	202	2205	974
V/C Ratio(X)	0.59	0.00	0.42	0.35	0.00	0.37	0.84	0.40	0.02	0.88	0.36	0.13
Avail Cap(c_a), veh/h	354	0	485	337	0	477	285	2101	908	355	2205	974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.68	0.68	0.68	0.88	0.88	0.88
Uniform Delay (d), s/veh	55.4	0.0	47.2	54.0	0.0	46.7	53.4	0.0	0.0	49.7	0.0	0.0
Incr Delay (d2), s/veh	2.5	0.0	0.9	1.1	0.0	0.7	3.3	0.4	0.0	4.5	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	3.8	2.3	0.0	3.2	3.7	0.1	0.0	5.1	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	0.0	48.1	55.1	0.0	47.4	56.8	0.4	0.0	54.1	0.4	0.2
LnGrp LOS	E	A	D	E	A	D	E	A	A	D	A	A
Approach Vol, veh/h		254			181			972			1094	
Approach Delay, s/veh		53.0			50.4			7.7			9.1	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	19.0	82.9		28.1	15.3	86.6		28.1
Change Period (Y+Rc), s	4.5	7.2		4.6	4.5	7.2		4.6
Max Green Setting (Gmax), s	25.5	50.8		37.4	20.5	55.8		37.4
Max Q Clear Time (g_c+I1), s	14.4	2.0		21.8	10.8	2.0		17.5
Green Ext Time (p_c), s	0.2	6.0		1.0	0.1	6.1		0.8

Intersection Summary	
HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B



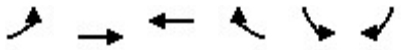
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	378	886	121	133	1099	293	105	392	80	276	439	237
Future Volume (veh/h)	378	886	121	133	1099	293	105	392	80	276	439	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	398	933	127	140	1157	308	111	413	84	291	462	249
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	727	1501	787	166	1492	616	135	675	136	338	898	726
Arrive On Green	0.41	0.83	0.83	0.03	0.09	0.09	0.07	0.23	0.23	0.16	0.42	0.42
Sat Flow, veh/h	3510	3610	1603	1810	5187	1600	1810	2971	598	3510	3610	1579
Grp Volume(v), veh/h	398	933	127	140	1157	308	111	249	248	291	462	249
Grp Sat Flow(s),veh/h/ln	1755	1805	1603	1810	1729	1600	1810	1805	1764	1755	1805	1579
Q Serve(g_s), s	11.2	11.7	1.8	10.0	28.3	9.3	7.9	16.1	16.4	10.5	12.4	2.5
Cycle Q Clear(g_c), s	11.2	11.7	1.8	10.0	28.3	9.3	7.9	16.1	16.4	10.5	12.4	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	727	1501	787	166	1492	616	135	410	401	338	898	726
V/C Ratio(X)	0.55	0.62	0.16	0.84	0.78	0.50	0.82	0.61	0.62	0.86	0.51	0.34
Avail Cap(c_a), veh/h	727	1501	787	191	1492	616	209	555	543	351	1033	785
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.95	0.95	0.95	0.90	0.90	0.90	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	33.5	7.4	5.0	62.1	54.7	15.0	59.3	45.0	45.2	53.7	32.2	7.2
Incr Delay (d2), s/veh	0.5	1.8	0.4	20.5	3.6	2.6	7.6	1.5	1.6	16.7	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	2.9	0.7	5.7	13.6	3.9	3.8	7.3	7.3	5.0	4.7	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	9.2	5.4	82.5	58.3	17.6	66.9	46.5	46.7	70.4	32.6	7.5
LnGrp LOS	C	A	A	F	E	B	E	D	D	E	C	A
Approach Vol, veh/h		1458			1605			608			1002	
Approach Delay, s/veh		15.6			52.6			50.3			37.3	
Approach LOS		B			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.5	60.3	14.7	38.5	33.1	43.6	17.5	35.8
Change Period (Y+Rc), s	4.5	6.2	5.0	6.2	6.2	* 6.2	5.0	* 6.2
Max Green Setting (Gmax), s	13.5	42.2	15.0	37.2	18.0	* 37	13.0	* 40
Max Q Clear Time (g_c+I1), s	12.0	13.7	9.9	14.4	13.2	30.3	12.5	18.4
Green Ext Time (p_c), s	0.0	6.9	0.1	3.5	0.4	4.4	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	37.5
HCM 6th LOS	D

Notes

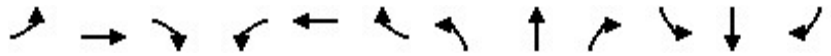
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	1167	1370	88	171	46
Future Volume (veh/h)	75	1167	1370	88	171	46
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	79	1228	1442	93	180	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	99	2874	3519	227	213	189
Arrive On Green	0.11	1.00	0.71	0.71	0.12	0.12
Sat Flow, veh/h	1810	3705	5150	321	1810	1610
Grp Volume(v), veh/h	79	1228	1001	534	180	48
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1842	1810	1610
Q Serve(g_s), s	5.5	0.0	15.5	15.5	12.7	3.5
Cycle Q Clear(g_c), s	5.5	0.0	15.5	15.5	12.7	3.5
Prop In Lane	1.00			0.17	1.00	1.00
Lane Grp Cap(c), veh/h	99	2874	2444	1302	213	189
V/C Ratio(X)	0.80	0.43	0.41	0.41	0.85	0.25
Avail Cap(c_a), veh/h	160	2874	2444	1302	487	434
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.87	0.87	1.00	1.00
Uniform Delay (d), s/veh	57.2	0.0	7.9	7.9	56.2	52.2
Incr Delay (d2), s/veh	3.9	0.3	0.4	0.8	8.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.1	4.9	5.4	6.4	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	61.1	0.3	8.3	8.7	65.0	52.9
LnGrp LOS	E	A	A	A	E	D
Approach Vol, veh/h		1307	1535		228	
Approach Delay, s/veh		4.0	8.4		62.5	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		110.7		19.3	11.6	99.1
Change Period (Y+Rc), s		7.2		4.0	4.5	7.2
Max Green Setting (Gmax), s		83.8		35.0	11.5	67.8
Max Q Clear Time (g_c+I1), s		2.0		14.7	7.5	17.5
Green Ext Time (p_c), s		10.9		0.6	0.0	13.3

Intersection Summary		
HCM 6th Ctrl Delay		10.6
HCM 6th LOS		B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	993	201	294	1208	41	232	66	274	26	33	143
Future Volume (veh/h)	104	993	201	294	1208	41	232	66	274	26	33	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	107	1024	207	303	1245	42	239	68	282	27	34	147
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	131	1380	278	239	2662	90	295	381	323	62	44	192
Arrive On Green	0.07	0.46	0.46	0.13	0.52	0.52	0.08	0.20	0.20	0.03	0.14	0.14
Sat Flow, veh/h	1810	2992	603	1810	5153	174	3510	1900	1608	1810	311	1344
Grp Volume(v), veh/h	107	617	614	303	835	452	239	68	282	27	0	181
Grp Sat Flow(s),veh/h/ln	1810	1805	1791	1810	1729	1869	1755	1900	1608	1810	0	1655
Q Serve(g_s), s	7.3	34.9	35.2	16.5	19.2	19.3	8.4	3.7	21.3	1.8	0.0	13.2
Cycle Q Clear(g_c), s	7.3	34.9	35.2	16.5	19.2	19.3	8.4	3.7	21.3	1.8	0.0	13.2
Prop In Lane	1.00		0.34	1.00		0.09	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	131	833	826	239	1787	965	295	381	323	62	0	236
V/C Ratio(X)	0.81	0.74	0.74	1.27	0.47	0.47	0.81	0.18	0.87	0.44	0.00	0.77
Avail Cap(c_a), veh/h	159	833	826	239	1787	965	393	654	553	101	0	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.1	27.6	27.6	54.2	19.3	19.3	56.3	41.4	48.4	59.2	0.0	51.6
Incr Delay (d2), s/veh	17.4	5.2	5.3	149.6	0.9	1.6	6.7	0.2	7.9	1.8	0.0	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	15.2	15.2	17.2	7.4	8.2	3.9	1.7	9.0	0.9	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.5	32.8	32.9	203.8	20.1	20.9	63.0	41.6	56.3	61.0	0.0	56.8
LnGrp LOS	E	C	C	F	C	C	E	D	E	E	A	E
Approach Vol, veh/h		1338			1590			589			208	
Approach Delay, s/veh		36.2			55.4			57.3			57.3	
Approach LOS		D			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.0	64.9	15.5	23.6	14.1	71.8	8.3	30.9
Change Period (Y+Rc), s	4.5	7.2	5.0	* 5.8	5.0	7.2	4.0	5.8
Max Green Setting (Gmax), s	16.5	37.0	14.0	* 36	11.0	42.0	7.0	43.0
Max Q Clear Time (g_c+I1), s	18.5	37.2	10.4	15.2	9.3	21.3	3.8	23.3
Green Ext Time (p_c), s	0.0	0.0	0.1	1.1	0.0	7.9	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	48.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	1582	0	0	1697	13	0	0	0	0	0	2
Future Vol, veh/h	0	1582	0	0	1697	13	0	0	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	1720	0	0	1845	14	0	0	0	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	860	-	-	930
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	303	0	0	*393
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	303	-	-	*393
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	14.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	393
HCM Lane V/C Ratio	-	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	-	14.2
HCM Lane LOS	A	-	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	-	-	0

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	11	221	195	66
Future Vol, veh/h	0	0	11	221	195	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	13	266	235	80

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	567	275	315	0	-	0
Stage 1	275	-	-	-	-	-
Stage 2	292	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	488	769	1257	-	-	-
Stage 1	776	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	482	769	1257	-	-	-
Mov Cap-2 Maneuver	482	-	-	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	762	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1257	-	-	-	-
HCM Lane V/C Ratio	0.011	-	-	-	-
HCM Control Delay (s)	7.9	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	106	42	14	119	182	13
Future Vol, veh/h	106	42	14	119	182	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	133	53	18	149	228	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	421	236	244	0	-	0
Stage 1	236	-	-	-	-	-
Stage 2	185	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	593	808	1334	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	584	808	1334	-	-	-
Mov Cap-2 Maneuver	584	-	-	-	-	-
Stage 1	796	-	-	-	-	-
Stage 2	852	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1334	-	634	-	-
HCM Lane V/C Ratio	0.013	-	0.292	-	-
HCM Control Delay (s)	7.7	0	13	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	1.2	-	-

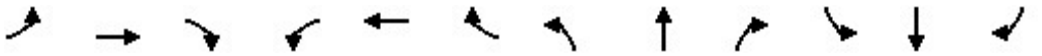
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	130	224	0
Future Vol, veh/h	3	0	1	130	224	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	0	1	160	277	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	439	277	277	0	-	0
Stage 1	277	-	-	-	-	-
Stage 2	162	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	579	767	1298	-	-	-
Stage 1	774	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	578	767	1298	-	-	-
Mov Cap-2 Maneuver	578	-	-	-	-	-
Stage 1	773	-	-	-	-	-
Stage 2	872	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1298	-	578	-	-
HCM Lane V/C Ratio	0.001	-	0.006	-	-
HCM Control Delay (s)	7.8	0	11.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



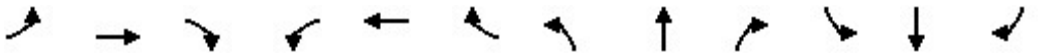
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	1236	151	139	1637	876	190	637	218	565	177	88
Future Volume (veh/h)	155	1236	151	139	1637	876	190	637	218	565	177	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	163	1301	159	146	1723	922	200	671	229	595	186	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	174	1388	169	1047	3338	1488	261	664	295	567	992	441
Arrive On Green	0.10	0.43	0.43	0.58	0.92	0.92	0.07	0.18	0.18	0.16	0.27	0.27
Sat Flow, veh/h	1810	3235	393	1810	3610	1609	3510	3610	1602	3510	3610	1605
Grp Volume(v), veh/h	163	723	737	146	1723	922	200	671	229	595	186	93
Grp Sat Flow(s),veh/h/ln	1810	1805	1823	1810	1805	1609	1755	1805	1602	1755	1805	1605
Q Serve(g_s), s	11.6	49.5	50.4	4.8	8.9	13.1	7.3	23.9	14.7	21.0	5.1	5.8
Cycle Q Clear(g_c), s	11.6	49.5	50.4	4.8	8.9	13.1	7.3	23.9	14.7	21.0	5.1	5.8
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	174	775	782	1047	3338	1488	261	664	295	567	992	441
V/C Ratio(X)	0.94	0.93	0.94	0.14	0.52	0.62	0.77	1.01	0.78	1.05	0.19	0.21
Avail Cap(c_a), veh/h	174	775	782	1047	3338	1488	500	664	295	567	992	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.4	35.3	35.6	12.6	0.7	0.9	59.0	53.1	34.8	54.5	36.0	36.3
Incr Delay (d2), s/veh	50.1	19.6	20.9	0.1	0.6	1.9	4.7	37.7	12.4	51.3	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	24.5	25.4	1.8	0.3	0.8	3.4	14.2	6.7	13.1	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.4	54.9	56.4	12.6	1.3	2.8	63.7	90.7	47.1	105.8	36.1	36.5
LnGrp LOS	F	D	E	B	A	A	E	F	D	F	D	D
Approach Vol, veh/h		1623			2791			1100			874	
Approach Delay, s/veh		61.0			2.4			76.7			83.6	
Approach LOS		E			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	82.3	62.0	14.2	41.5	17.0	127.3	26.0	29.7
Change Period (Y+Rc), s	6.2	* 6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	8.5	* 56	18.5	26.2	12.5	51.8	21.0	* 24
Max Q Clear Time (g_c+I1), s	6.8	52.4	9.3	7.8	13.6	15.1	23.0	25.9
Green Ext Time (p_c), s	0.1	2.5	0.4	1.2	0.0	24.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	1869	87	84	2407	33	170	23	110	110	28	82
Future Volume (veh/h)	85	1869	87	84	2407	33	170	23	110	110	28	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	2077	97	93	2674	37	189	26	122	122	31	91
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	104	2240	998	104	2262	31	145	31	146	111	39	116
Arrive On Green	0.06	0.62	0.62	0.08	0.83	0.83	0.08	0.11	0.11	0.06	0.09	0.09
Sat Flow, veh/h	1810	3610	1608	1810	3646	50	1810	289	1357	1810	424	1243
Grp Volume(v), veh/h	94	2077	97	93	1321	1390	189	0	148	122	0	122
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1810	1805	1891	1810	0	1647	1810	0	1667
Q Serve(g_s), s	6.7	66.8	1.8	6.6	80.7	80.7	10.4	0.0	11.5	8.0	0.0	9.3
Cycle Q Clear(g_c), s	6.7	66.8	1.8	6.6	80.7	80.7	10.4	0.0	11.5	8.0	0.0	9.3
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.82	1.00		0.75
Lane Grp Cap(c), veh/h	104	2240	998	104	1120	1173	145	0	178	111	0	155
V/C Ratio(X)	0.90	0.93	0.10	0.89	1.18	1.18	1.30	0.00	0.83	1.10	0.00	0.79
Avail Cap(c_a), veh/h	104	2240	998	104	1120	1173	145	0	228	111	0	237
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.44	0.44	0.44	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.9	22.0	3.4	59.6	11.4	11.4	59.8	0.0	56.8	61.0	0.0	57.7
Incr Delay (d2), s/veh	57.6	8.2	0.2	31.3	85.0	87.3	176.4	0.0	18.3	113.3	0.0	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	26.8	1.1	3.8	34.7	37.1	11.9	0.0	5.6	7.2	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.5	30.2	3.6	90.9	96.4	98.6	236.2	0.0	75.1	174.3	0.0	67.0
LnGrp LOS	F	C	A	F	F	F	F	A	E	F	A	E
Approach Vol, veh/h		2268			2804			337			244	
Approach Delay, s/veh		32.7			97.3			165.4			120.7	
Approach LOS		C			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	86.9	14.4	16.7	12.0	86.9	12.0	19.1
Change Period (Y+Rc), s	4.5	6.2	4.0	4.6	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.5	76.7	8.0	18.5	7.5	76.7	8.0	18.0
Max Q Clear Time (g_c+I1), s	8.6	68.8	12.4	11.3	8.7	82.7	10.0	13.5
Green Ext Time (p_c), s	0.0	6.8	0.0	0.3	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	76.5
HCM 6th LOS	E



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2044	46	138	2499	38	114
Future Volume (veh/h)	2044	46	138	2499	38	114
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2152	48	145	2631	40	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2555	1139	168	3001	163	145
Arrive On Green	0.94	0.94	0.19	1.00	0.09	0.09
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	2152	48	145	2631	40	120
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	22.0	0.2	10.1	0.0	2.7	9.5
Cycle Q Clear(g_c), s	22.0	0.2	10.1	0.0	2.7	9.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2555	1139	168	3001	163	145
V/C Ratio(X)	0.84	0.04	0.86	0.88	0.24	0.83
Avail Cap(c_a), veh/h	2555	1139	181	3001	262	233
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.20	0.20	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	1.8	1.1	52.1	0.0	55.0	58.1
Incr Delay (d2), s/veh	0.7	0.0	31.0	4.0	0.8	12.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.1	5.5	1.7	1.3	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.5	1.1	83.1	4.0	55.8	70.3
LnGrp LOS	A	A	F	A	E	E
Approach Vol, veh/h	2200			2776	160	
Approach Delay, s/veh	2.5			8.1	66.7	
Approach LOS	A			A	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	16.1	98.2				114.3	15.7
Change Period (Y+Rc), s	4.0	6.2				* 6.2	4.0
Max Green Setting (Gmax), s	13.0	84.0				* 1E2	18.8
Max Q Clear Time (g_c+I1), s	12.1	24.0				2.0	11.5
Green Ext Time (p_c), s	0.0	30.8				62.6	0.3

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2157	1	0	2637	0	8
Future Vol, veh/h	2157	1	0	2637	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2319	1	0	2835	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1160
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	*179
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*179
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	26.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	179	-	-	-
HCM Lane V/C Ratio	0.048	-	-	-
HCM Control Delay (s)	26.1	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.5

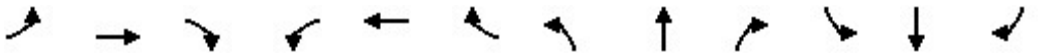
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	49	2116	2491	9	2	145
Future Vol, veh/h	49	2116	2491	9	2	145
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	53	2275	2678	10	2	156

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2691	0	-	0	3930	1347
Stage 1	-	-	-	-	2686	-
Stage 2	-	-	-	-	1244	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	*53	-	-	-	-	*~ 36
Stage 1	-	-	-	-	*34	-
Stage 2	-	-	-	-	*191	-
Platoon blocked, %	1	-	-	-	2	1
Mov Cap-1 Maneuver	*53	-	-	-	-	*~ 35
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	*0	-
Stage 2	-	-	-	-	*190	-

Approach	EB	WB	SB
HCM Control Delay, s	5.6	0	
HCM LOS			-

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 53	-	-	-	-
HCM Lane V/C Ratio	0.994	-	-	-	-
HCM Control Delay (s)	245.9	-	-	-	-
HCM Lane LOS	F	-	-	-	-
HCM 95th %tile Q(veh)	4.4	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	1785	303	191	2155	53	323	48	181	91	61	39
Future Volume (veh/h)	34	1785	303	191	2155	53	323	48	181	91	61	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	1859	316	199	2245	55	336	50	189	95	64	41
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	1711	282	125	2108	940	329	57	215	180	311	263
Arrive On Green	0.01	0.18	0.18	0.14	1.00	1.00	0.05	0.16	0.16	0.05	0.16	0.16
Sat Flow, veh/h	1810	3092	509	1810	3610	1610	1810	348	1315	1810	1900	1610
Grp Volume(v), veh/h	35	1060	1115	199	2245	55	336	0	239	95	64	41
Grp Sat Flow(s),veh/h/ln	1810	1805	1796	1810	1805	1610	1810	0	1663	1810	1900	1610
Q Serve(g_s), s	2.5	71.9	71.9	9.0	0.0	0.0	7.0	0.0	18.2	5.6	3.8	2.8
Cycle Q Clear(g_c), s	2.5	71.9	71.9	9.0	0.0	0.0	7.0	0.0	18.2	5.6	3.8	2.8
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.79	1.00		1.00
Lane Grp Cap(c), veh/h	70	999	994	125	2108	940	329	0	272	180	311	263
V/C Ratio(X)	0.50	1.06	1.12	1.59	1.06	0.06	1.02	0.00	0.88	0.53	0.21	0.16
Avail Cap(c_a), veh/h	97	999	994	125	2108	940	329	0	384	180	438	372
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	53.1	53.1	56.0	0.0	0.0	53.0	0.0	53.1	43.4	47.1	46.7
Incr Delay (d2), s/veh	2.1	46.0	68.4	268.3	30.4	0.0	55.4	0.0	15.3	1.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	47.3	53.3	13.0	8.9	0.0	12.5	0.0	8.8	2.6	1.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	99.2	121.5	324.3	30.4	0.0	108.4	0.0	68.4	44.9	47.4	46.9
LnGrp LOS	E	F	F	F	F	A	F	A	E	D	D	D
Approach Vol, veh/h		2210			2499			575			200	
Approach Delay, s/veh		109.9			53.1			91.8			46.1	
Approach LOS		F			D			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	79.1	11.0	25.9	10.0	83.1	11.0	25.9
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	9.0	63.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	11.0	73.9	9.0	5.8	4.5	2.0	7.6	20.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	35.5	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	79.8
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↰	↱
Traffic Vol, veh/h	112	0	27	5	0	53	34	396	5	17	331	143
Future Vol, veh/h	112	0	27	5	0	53	34	396	5	17	331	143
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	127	0	31	6	0	60	39	450	6	19	376	163

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	975	948	376	1042	1108	453	539	0	0	456	0	0
Stage 1	414	414	-	531	531	-	-	-	-	-	-	-
Stage 2	561	534	-	511	577	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	233	263	675	210	212	611	1040	-	-	1115	-	-
Stage 1	620	597	-	536	529	-	-	-	-	-	-	-
Stage 2	516	528	-	549	505	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	198	244	675	189	196	611	1040	-	-	1115	-	-
Mov Cap-2 Maneuver	198	244	-	189	196	-	-	-	-	-	-	-
Stage 1	589	582	-	509	503	-	-	-	-	-	-	-
Stage 2	442	502	-	511	492	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	49.2	13.1	0.7	0.3
HCM LOS	E	B		

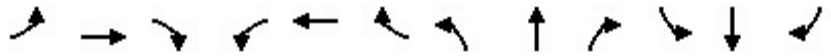
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1040	-	-	230	512	1115	-	-
HCM Lane V/C Ratio	0.037	-	-	0.687	0.129	0.017	-	-
HCM Control Delay (s)	8.6	0	-	49.2	13.1	8.3	0	-
HCM Lane LOS	A	A	-	E	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.4	0.4	0.1	-	-

Intersection	
Intersection Delay, s/veh	63.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	393	2	1	444	110	16	32	9	98	15	39
Future Vol, veh/h	46	393	2	1	444	110	16	32	9	98	15	39
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	58	497	3	1	562	139	20	41	11	124	19	49
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	45	97.1	12.7	15.3
HCM LOS	E	F	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	10%	0%	64%
Vol Thru, %	56%	89%	80%	10%
Vol Right, %	16%	0%	20%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	441	555	152
LT Vol	16	46	1	98
Through Vol	32	393	444	15
RT Vol	9	2	110	39
Lane Flow Rate	72	558	703	192
Geometry Grp	1	1	1	1
Degree of Util (X)	0.155	0.92	1.122	0.385
Departure Headway (Hd)	8.194	6.199	5.752	7.584
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	440	592	625	477
Service Time	6.194	4.199	3.832	5.584
HCM Lane V/C Ratio	0.164	0.943	1.125	0.403
HCM Control Delay	12.7	45	97.1	15.3
HCM Lane LOS	B	E	F	C
HCM 95th-tile Q	0.5	11.5	21.5	1.8



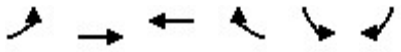
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	1481	441	497	1718	179	502	564	365	113	472	212
Future Volume (veh/h)	173	1481	441	497	1718	179	502	564	365	113	472	212
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.91	1.00		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	192	1646	490	552	1909	199	558	627	406	126	524	236
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	220	2760	1440	581	2918	1279	500	592	383	109	495	221
Arrive On Green	0.04	0.25	0.25	0.22	1.00	1.00	0.14	0.29	0.29	0.06	0.21	0.21
Sat Flow, veh/h	1810	3610	1584	3510	3610	1582	3510	2016	1304	1810	2314	1035
Grp Volume(v), veh/h	192	1646	490	552	1909	199	558	561	472	126	408	352
Grp Sat Flow(s),veh/h/ln	1810	1805	1584	1755	1805	1582	1755	1805	1515	1810	1805	1544
Q Serve(g_s), s	13.7	52.2	13.2	20.2	0.0	0.0	18.5	38.2	38.2	7.8	27.8	27.8
Cycle Q Clear(g_c), s	13.7	52.2	13.2	20.2	0.0	0.0	18.5	38.2	38.2	7.8	27.8	27.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.67
Lane Grp Cap(c), veh/h	220	2760	1440	581	2918	1279	500	530	445	109	386	330
V/C Ratio(X)	0.87	0.60	0.34	0.95	0.65	0.16	1.12	1.06	1.06	1.16	1.06	1.07
Avail Cap(c_a), veh/h	299	2760	1440	581	2918	1279	500	530	445	109	386	330
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.71	0.71	0.71	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	30.9	3.7	50.2	0.0	0.0	55.7	45.9	45.9	61.1	51.1	51.1
Incr Delay (d2), s/veh	1.7	0.1	0.1	20.2	0.8	0.2	76.4	55.4	59.2	135.9	61.6	68.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	25.1	2.5	9.7	0.3	0.1	13.3	24.8	21.3	7.6	18.9	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	31.0	3.8	70.4	0.8	0.2	132.1	101.3	105.1	197.0	112.7	119.3
LnGrp LOS	E	C	A	E	A	A	F	F	F	F	F	F
Approach Vol, veh/h		2328			2660			1591			886	
Approach Delay, s/veh		27.9			15.2			113.3			127.3	
Approach LOS		C			B			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	108.4	24.0	33.6	21.3	114.1	13.6	44.0
Change Period (Y+Rc), s	5.5	7.2	5.5	5.8	5.5	7.2	5.8	* 5.8
Max Green Setting (Gmax), s	21.5	40.0	18.5	26.0	21.5	40.0	7.8	* 38
Max Q Clear Time (g_c+I1), s	22.2	54.2	20.5	29.8	15.7	2.0	9.8	40.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	21.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

Notes

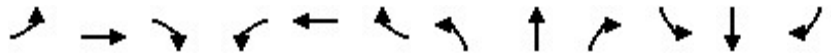
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	162	1856	1847	36	55	252
Future Volume (veh/h)	162	1856	1847	36	55	252
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	174	1996	1986	39	59	271
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	174	3746	3095	61	340	302
Arrive On Green	0.19	1.00	1.00	1.00	0.19	0.19
Sat Flow, veh/h	1810	5358	5405	103	1810	1610
Grp Volume(v), veh/h	174	1996	1311	714	59	271
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1879	1810	1610
Q Serve(g_s), s	12.5	0.0	0.0	0.0	3.6	21.4
Cycle Q Clear(g_c), s	12.5	0.0	0.0	0.0	3.6	21.4
Prop In Lane	1.00			0.05	1.00	1.00
Lane Grp Cap(c), veh/h	174	3746	2045	1111	340	302
V/C Ratio(X)	1.00	0.53	0.64	0.64	0.17	0.90
Avail Cap(c_a), veh/h	174	3746	2045	1111	619	551
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.21	0.21	1.00	1.00
Uniform Delay (d), s/veh	52.5	0.0	0.0	0.0	44.3	51.6
Incr Delay (d2), s/veh	20.5	0.0	0.3	0.6	0.2	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	0.1	0.2	1.6	18.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	73.0	0.0	0.3	0.6	44.6	60.8
LnGrp LOS	F	A	A	A	D	E
Approach Vol, veh/h		2170	2025		330	
Approach Delay, s/veh		5.9	0.4		57.9	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		101.1		28.9	17.0	84.1
Change Period (Y+Rc), s		7.2		4.5	4.5	7.2
Max Green Setting (Gmax), s		73.8		44.5	12.5	56.8
Max Q Clear Time (g_c+I1), s		2.0		23.4	14.5	2.0
Green Ext Time (p_c), s		25.5		1.1	0.0	22.2

Intersection Summary		
HCM 6th Ctrl Delay		7.2
HCM 6th LOS		A



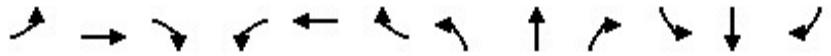
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	37	10	705	36	58	3	1988	604	208	1204	19
Future Volume (veh/h)	67	37	10	705	36	58	3	1988	604	208	1204	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	70	39	10	734	38	60	3	2071	629	217	1254	20
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	289	89	23	532	117	97	10	1941	1109	146	2213	965
Arrive On Green	0.16	0.06	0.06	0.15	0.06	0.06	0.00	0.18	0.18	0.08	0.61	0.61
Sat Flow, veh/h	1810	1457	374	3510	1900	1566	1810	3610	1608	1810	3610	1574
Grp Volume(v), veh/h	70	0	49	734	38	60	3	2071	629	217	1254	20
Grp Sat Flow(s),veh/h/ln	1810	0	1831	1755	1900	1566	1810	1805	1608	1810	1805	1574
Q Serve(g_s), s	4.4	0.0	3.4	19.7	2.5	4.1	0.2	69.9	16.0	10.5	26.8	0.2
Cycle Q Clear(g_c), s	4.4	0.0	3.4	19.7	2.5	4.1	0.2	69.9	16.0	10.5	26.8	0.2
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	0	111	532	117	97	10	1941	1109	146	2213	965
V/C Ratio(X)	0.24	0.00	0.44	1.38	0.32	0.62	0.30	1.07	0.57	1.48	0.57	0.02
Avail Cap(c_a), veh/h	289	0	451	532	693	571	104	1941	1109	146	2213	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	0.0	58.9	55.2	58.4	41.9	64.6	53.5	8.6	59.7	14.9	1.2
Incr Delay (d2), s/veh	0.2	0.0	2.7	182.4	1.6	6.4	0.6	31.4	0.2	250.9	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	1.7	22.0	1.2	2.0	0.1	42.1	6.4	14.9	10.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.9	0.0	61.6	237.6	60.0	48.3	65.2	84.9	8.8	310.7	16.0	1.3
LnGrp LOS	D	A	E	F	E	D	E	F	A	F	B	A
Approach Vol, veh/h		119			832			2703			1491	
Approach Delay, s/veh		53.5			215.8			67.1			58.7	
Approach LOS		D			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	76.1	25.2	13.7	5.2	85.9	26.3	12.6
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	5.5	* 4.6
Max Green Setting (Gmax), s	10.5	45.8	19.7	32.0	7.5	48.8	7.0	* 47
Max Q Clear Time (g_c+I1), s	12.5	71.9	21.7	5.4	2.2	28.8	6.4	6.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	8.4	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	88.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	634	57	105	140	64	48	239	2239	98	10	1109	680
Future Volume (veh/h)	634	57	105	140	64	48	239	2239	98	10	1109	680
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	682	61	113	151	69	52	257	2408	105	11	1192	731
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	223	186	259	114	86	306	2018	898	32	1383	852
Arrive On Green	0.15	0.12	0.12	0.14	0.11	0.11	0.17	0.56	0.56	0.04	0.77	0.77
Sat Flow, veh/h	3510	1900	1590	1810	999	753	1810	3610	1607	1810	3610	1606
Grp Volume(v), veh/h	682	61	113	151	0	121	257	2408	105	11	1192	731
Grp Sat Flow(s),veh/h/ln	1755	1900	1590	1810	0	1753	1810	1805	1607	1810	1805	1606
Q Serve(g_s), s	19.1	3.8	8.8	10.1	0.0	8.5	17.9	72.7	1.8	0.8	29.6	39.0
Cycle Q Clear(g_c), s	19.1	3.8	8.8	10.1	0.0	8.5	17.9	72.7	1.8	0.8	29.6	39.0
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	223	186	259	0	200	306	2018	898	32	1383	852
V/C Ratio(X)	1.32	0.27	0.61	0.58	0.00	0.60	0.84	1.19	0.12	0.34	0.86	0.86
Avail Cap(c_a), veh/h	516	678	567	259	0	445	306	2018	898	97	1383	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.23	0.23	0.23	0.65	0.65	0.65
Uniform Delay (d), s/veh	55.4	52.3	54.5	52.1	0.0	54.8	52.3	28.7	2.8	62.0	12.8	3.2
Incr Delay (d2), s/veh	158.2	0.7	3.2	3.3	0.0	2.9	5.0	88.3	0.1	4.1	4.9	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	1.8	3.7	4.9	0.0	4.0	8.3	52.5	1.4	0.4	5.7	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	213.6	53.0	57.7	55.4	0.0	57.7	57.4	117.0	2.9	66.1	17.7	10.7
LnGrp LOS	F	D	E	E	A	E	E	F	A	E	B	B
Approach Vol, veh/h		856			272			2770			1934	
Approach Delay, s/veh		181.6			56.4			107.1			15.3	
Approach LOS		F			E			F			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	79.9	24.0	19.8	29.1	57.0	23.6	20.3
Change Period (Y+Rc), s	4.0	7.2	5.4	* 4.6	7.2	* 7.2	4.5	5.4
Max Green Setting (Gmax), s	7.3	49.8	7.0	* 46	7.0	* 50	19.1	33.0
Max Q Clear Time (g_c+I1), s	2.8	74.7	12.1	10.8	19.9	41.0	21.1	10.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	6.2	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	85.3
HCM 6th LOS	F

Notes

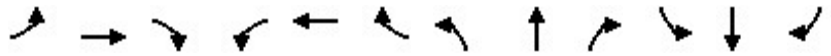
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	111	608	1968	65	187	1165
Future Volume (veh/h)	111	608	1968	65	187	1165
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	122	668	2163	71	205	1280
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	221	560	2430	1082	264	2855
Arrive On Green	0.12	0.12	0.67	0.67	0.15	1.00
Sat Flow, veh/h	1810	2834	3705	1608	3510	3705
Grp Volume(v), veh/h	122	668	2163	71	205	1280
Grp Sat Flow(s),veh/h/ln	1810	1417	1805	1608	1755	1805
Q Serve(g_s), s	8.2	15.9	63.5	2.0	7.3	0.0
Cycle Q Clear(g_c), s	8.2	15.9	63.5	2.0	7.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	221	560	2430	1082	264	2855
V/C Ratio(X)	0.55	1.19	0.89	0.07	0.78	0.45
Avail Cap(c_a), veh/h	221	560	2430	1082	608	2855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.78	0.78
Uniform Delay (d), s/veh	53.7	52.2	17.3	7.3	54.2	0.0
Incr Delay (d2), s/veh	2.9	103.4	0.5	0.0	3.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	17.1	21.8	0.6	3.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.6	155.6	17.9	7.3	58.0	0.4
LnGrp LOS	E	F	B	A	E	A
Approach Vol, veh/h	790		2234			1485
Approach Delay, s/veh	140.3		17.5			8.3
Approach LOS	F		B			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	15.3	93.7				109.0	21.0
Change Period (Y+Rc), s	5.5	6.2				6.2	5.1
Max Green Setting (Gmax), s	22.5	74.8				102.8	15.9
Max Q Clear Time (g_c+I1), s	9.3	65.5				2.0	17.9
Green Ext Time (p_c), s	0.5	8.0				11.7	0.0

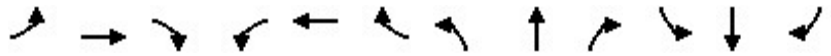
Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	67	45	376	161	593	68	1342	267	350	952	31
Future Volume (veh/h)	97	67	45	376	161	593	68	1342	267	350	952	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	118	82	55	459	196	723	83	1637	326	427	1161	38
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	143	119	80	326	423	938	105	1554	690	405	1789	792
Arrive On Green	0.08	0.11	0.11	0.18	0.22	0.22	0.04	0.29	0.29	0.23	0.99	0.99
Sat Flow, veh/h	1810	1057	709	1810	1900	2744	1810	3610	1602	3510	3610	1599
Grp Volume(v), veh/h	118	0	137	459	196	723	83	1637	326	427	1161	38
Grp Sat Flow(s),veh/h/ln	1810	0	1766	1810	1900	1372	1810	1805	1602	1755	1805	1599
Q Serve(g_s), s	8.4	0.0	9.7	23.4	11.6	22.2	5.9	56.0	11.9	15.0	1.1	0.0
Cycle Q Clear(g_c), s	8.4	0.0	9.7	23.4	11.6	22.2	5.9	56.0	11.9	15.0	1.1	0.0
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	0	199	326	423	938	105	1554	690	405	1789	792
V/C Ratio(X)	0.82	0.00	0.69	1.41	0.46	0.77	0.79	1.05	0.47	1.05	0.65	0.05
Avail Cap(c_a), veh/h	237	0	492	326	547	1117	223	1554	690	405	1789	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81	0.89	0.89	0.89
Uniform Delay (d), s/veh	59.0	0.0	55.5	53.3	43.8	21.2	61.7	46.2	10.2	50.0	0.3	0.1
Incr Delay (d2), s/veh	4.5	0.0	4.2	201.4	0.8	2.8	4.0	36.2	1.9	57.2	1.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	4.6	28.8	5.6	7.4	2.8	33.1	4.9	8.7	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.5	0.0	59.7	254.7	44.6	24.0	65.7	82.5	12.0	107.2	1.9	0.2
LnGrp LOS	E	A	E	F	D	C	E	F	B	F	A	A
Approach Vol, veh/h		255			1378			2046			1626	
Approach Delay, s/veh		61.5			103.8			70.6			29.5	
Approach LOS		E			F			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	62.2	27.4	20.4	11.6	70.6	14.3	33.6
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	4.0	4.6
Max Green Setting (Gmax), s	15.0	40.8	17.0	36.2	16.0	40.8	17.0	37.4
Max Q Clear Time (g_c+I1), s	17.0	58.0	25.4	11.7	7.9	3.1	10.4	24.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	9.4	0.1	3.8

Intersection Summary	
HCM 6th Ctrl Delay	66.2
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	10	55	32	8	56	85	1198	22	79	1047	44
Future Volume (veh/h)	62	10	55	32	8	56	85	1198	22	79	1047	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	72	12	64	37	9	65	99	1393	26	92	1217	51
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	165	32	171	164	25	177	104	2481	1106	116	2503	1116
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.12	1.00	1.00	0.06	0.69	0.69
Sat Flow, veh/h	1342	259	1384	1339	199	1435	1810	3610	1609	1810	3610	1609
Grp Volume(v), veh/h	72	0	76	37	0	74	99	1393	26	92	1217	51
Grp Sat Flow(s),veh/h/ln	1342	0	1643	1339	0	1633	1810	1805	1609	1810	1805	1609
Q Serve(g_s), s	6.8	0.0	5.5	3.4	0.0	5.4	7.1	0.0	0.0	6.5	20.3	1.3
Cycle Q Clear(g_c), s	12.2	0.0	5.5	8.9	0.0	5.4	7.1	0.0	0.0	6.5	20.3	1.3
Prop In Lane	1.00		0.84	1.00		0.88	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	0	203	164	0	202	104	2481	1106	116	2503	1116
V/C Ratio(X)	0.44	0.00	0.37	0.23	0.00	0.37	0.95	0.56	0.02	0.80	0.49	0.05
Avail Cap(c_a), veh/h	351	0	430	349	0	427	104	2481	1106	480	2503	1116
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.34	0.34	0.34
Uniform Delay (d), s/veh	57.9	0.0	52.4	56.5	0.0	52.3	57.3	0.0	0.0	60.0	9.2	6.3
Incr Delay (d2), s/veh	1.8	0.0	1.1	0.7	0.0	1.1	15.5	0.1	0.0	1.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	2.4	1.2	0.0	2.3	3.4	0.0	0.0	3.0	6.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	0.0	53.5	57.2	0.0	53.4	72.8	0.1	0.0	61.6	9.4	6.3
LnGrp LOS	E	A	D	E	A	D	E	A	A	E	A	A
Approach Vol, veh/h		148			111			1518			1360	
Approach Delay, s/veh		56.5			54.7			4.8			12.9	
Approach LOS		E			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.8	96.5		20.7	12.0	97.3		20.7
Change Period (Y+Rc), s	4.5	7.2		4.6	4.5	7.2		4.6
Max Green Setting (Gmax), s	24.5	45.2		34.0	7.5	72.2		34.0
Max Q Clear Time (g_c+I1), s	8.5	2.0		14.2	9.1	22.3		10.9
Green Ext Time (p_c), s	0.1	12.8		0.6	0.0	10.6		0.5

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B



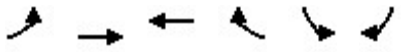
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	408	1367	137	194	1725	494	226	773	151	485	454	363
Future Volume (veh/h)	408	1367	137	194	1725	494	226	773	151	485	454	363
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	443	1486	149	211	1875	537	246	840	164	527	493	395
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1378	2296	1234	234	1867	760	237	902	176	394	1026	1082
Arrive On Green	0.52	0.85	0.85	0.26	0.72	0.72	0.13	0.30	0.30	0.19	0.47	0.47
Sat Flow, veh/h	3510	3610	1609	1810	5187	1609	1810	3010	588	3510	3610	1585
Grp Volume(v), veh/h	443	1486	149	211	1875	537	246	504	500	527	493	395
Grp Sat Flow(s),veh/h/ln	1755	1805	1609	1810	1729	1609	1810	1805	1792	1755	1805	1585
Q Serve(g_s), s	9.4	18.2	1.4	14.6	46.8	0.0	17.0	35.3	35.3	14.6	12.1	6.9
Cycle Q Clear(g_c), s	9.4	18.2	1.4	14.6	46.8	0.0	17.0	35.3	35.3	14.6	12.1	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	1378	2296	1234	234	1867	760	237	541	537	394	1026	1082
V/C Ratio(X)	0.32	0.65	0.12	0.90	1.00	0.71	1.04	0.93	0.93	1.34	0.48	0.37
Avail Cap(c_a), veh/h	1378	2296	1234	383	1867	760	237	555	551	394	1026	1082
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.88	0.88	0.88	0.69	0.69	0.69	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	21.1	5.1	1.6	47.4	18.2	9.3	56.5	44.2	44.2	52.8	27.6	11.5
Incr Delay (d2), s/veh	0.0	1.3	0.2	7.2	18.3	3.8	69.2	22.4	22.6	165.8	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	4.0	0.4	6.0	9.4	5.1	12.2	18.7	18.6	14.8	4.5	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.2	6.3	1.7	54.6	36.5	13.1	125.7	66.7	66.8	218.6	27.9	11.6
LnGrp LOS	C	A	A	D	F	B	F	E	E	F	C	B
Approach Vol, veh/h		2078			2623			1250			1415	
Approach Delay, s/veh		9.1			33.2			78.3			94.4	
Approach LOS		A			C			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.3	90.2	22.0	43.1	58.6	53.0	20.8	44.3
Change Period (Y+Rc), s	4.5	6.2	5.0	6.2	6.2	* 6.2	6.2	* 5.4
Max Green Setting (Gmax), s	27.5	26.8	17.0	36.8	7.0	* 47	14.6	* 40
Max Q Clear Time (g_c+I1), s	16.6	20.2	19.0	14.1	11.4	48.8	16.6	37.3
Green Ext Time (p_c), s	0.2	4.8	0.0	4.3	0.0	0.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	45.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



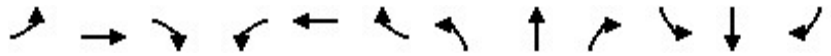
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	1963	2008	103	85	35
Future Volume (veh/h)	37	1963	2008	103	85	35
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	2088	2136	110	90	37
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	671	3060	2127	109	120	107
Arrive On Green	0.74	1.00	0.84	0.84	0.07	0.07
Sat Flow, veh/h	1810	3705	5217	258	1810	1610
Grp Volume(v), veh/h	39	2088	1460	786	90	37
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1846	1810	1610
Q Serve(g_s), s	0.8	0.0	54.8	54.8	6.4	2.9
Cycle Q Clear(g_c), s	0.8	0.0	54.8	54.8	6.4	2.9
Prop In Lane	1.00			0.14	1.00	1.00
Lane Grp Cap(c), veh/h	671	3060	1458	778	120	107
V/C Ratio(X)	0.06	0.68	1.00	1.01	0.75	0.35
Avail Cap(c_a), veh/h	671	3060	1458	778	487	434
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	10.7	0.0	10.2	10.2	59.6	58.0
Incr Delay (d2), s/veh	0.0	0.1	7.4	12.2	9.1	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	5.3	6.7	3.2	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.7	0.1	17.6	22.4	68.7	59.9
LnGrp LOS	B	A	F	F	E	E
Approach Vol, veh/h		2127	2246		127	
Approach Delay, s/veh		0.3	19.3		66.1	
Approach LOS		A	B		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	117.4		12.6	55.4	62.0
Change Period (Y+Rc), s	7.2		4.0	7.2	* 7.2
Max Green Setting (Gmax), s	83.8		35.0	24.5	* 55
Max Q Clear Time (g_c+I1), s	2.0		8.4	2.8	56.8
Green Ext Time (p_c), s	33.2		0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	1536	401	374	1849	35	447	110	460	87	164	349
Future Volume (veh/h)	198	1536	401	374	1849	35	447	110	460	87	164	349
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	213	1652	431	402	1988	38	481	118	495	94	176	375
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1659	3129	781	425	2048	39	459	646	547	97	138	294
Arrive On Green	0.30	0.36	0.36	0.24	0.39	0.39	0.13	0.34	0.34	0.05	0.26	0.26
Sat Flow, veh/h	1810	2862	715	1810	5240	100	3510	1900	1610	1810	541	1152
Grp Volume(v), veh/h	213	1015	1068	402	1311	715	481	118	495	94	0	551
Grp Sat Flow(s),veh/h/ln	1810	1805	1771	1810	1729	1882	1755	1900	1610	1810	0	1693
Q Serve(g_s), s	11.1	0.0	0.0	28.4	48.4	48.5	17.0	5.7	38.1	6.7	0.0	33.2
Cycle Q Clear(g_c), s	11.1	0.0	0.0	28.4	48.4	48.5	17.0	5.7	38.1	6.7	0.0	33.2
Prop In Lane	1.00		0.40	1.00		0.05	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	1659	1974	1937	425	1351	735	459	646	547	97	0	432
V/C Ratio(X)	0.13	0.51	0.55	0.95	0.97	0.97	1.05	0.18	0.90	0.96	0.00	1.27
Avail Cap(c_a), veh/h	1659	1974	1937	452	1351	735	459	646	547	97	0	432
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.6	0.0	0.0	48.9	38.9	38.9	56.5	30.2	40.9	61.4	0.0	48.4
Incr Delay (d2), s/veh	0.0	0.6	0.7	27.4	18.4	27.0	55.1	0.1	18.5	79.0	0.0	140.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.4	15.6	22.7	26.5	10.8	2.6	17.3	5.3	0.0	30.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	0.6	0.7	76.3	57.2	65.9	111.6	30.3	59.3	140.4	0.0	189.0
LnGrp LOS	A	A	A	E	E	E	F	C	E	F	A	F
Approach Vol, veh/h		2296			2428			1094			645	
Approach Delay, s/veh		1.3			62.9			79.2			181.9	
Approach LOS		A			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.1	152.7	22.0	39.0	129.8	58.0	11.0	50.0
Change Period (Y+Rc), s	4.5	7.2	5.0	* 5.8	7.2	* 7.2	4.0	5.8
Max Green Setting (Gmax), s	32.5	26.0	17.0	* 33	7.2	* 51	7.0	43.0
Max Q Clear Time (g_c+I1), s	30.4	2.0	19.0	35.2	13.1	50.5	8.7	40.1
Green Ext Time (p_c), s	0.2	17.0	0.0	0.0	0.0	0.3	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	55.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↳			↑↑↳				↱			↱
Traffic Vol, veh/h	0	2118	0	0	2500	8	0	0	0	0	0	0
Future Vol, veh/h	0	2118	0	0	2500	8	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2253	0	0	2660	9	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1127	-	-	1335
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*202	0	0	*36
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*202	-	-	*36
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	0
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	15	441	233	114
Future Vol, veh/h	0	0	15	441	233	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	18	519	274	134

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	896	341	408	0	-	0
Stage 1	341	-	-	-	-	-
Stage 2	555	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	313	706	1162	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	306	706	1162	-	-	-
Mov Cap-2 Maneuver	306	-	-	-	-	-
Stage 1	709	-	-	-	-	-
Stage 2	579	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1162	-	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Control Delay (s)	8.1	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	125	41	38	315	180	46
Future Vol, veh/h	125	41	38	315	180	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	147	48	45	371	212	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	700	239	266	0	-	0
Stage 1	239	-	-	-	-	-
Stage 2	461	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	409	805	1310	-	-	-
Stage 1	805	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	391	805	1310	-	-	-
Mov Cap-2 Maneuver	391	-	-	-	-	-
Stage 1	770	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.1	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1310	-	448	-	-
HCM Lane V/C Ratio	0.034	-	0.436	-	-
HCM Control Delay (s)	7.8	0	19.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2.2	-	-

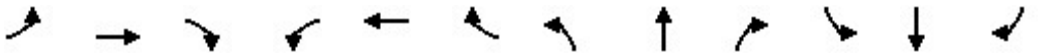
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	361	225	1
Future Vol, veh/h	1	0	0	361	225	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	0	415	259	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	675	260	260	0	-	0
Stage 1	260	-	-	-	-	-
Stage 2	415	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	422	784	1316	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	422	784	1316	-	-	-
Mov Cap-2 Maneuver	422	-	-	-	-	-
Stage 1	788	-	-	-	-	-
Stage 2	671	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1316	-	422	-	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	0	-	13.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



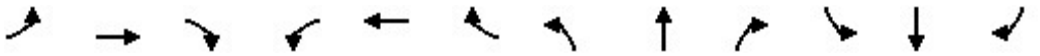
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1536	117	220	1623	667	134	353	181	728	341	118
Future Volume (veh/h)	150	1536	117	220	1623	667	134	353	181	728	341	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	160	1634	124	234	1727	710	143	376	193	774	363	126
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	160	1715	129	202	1903	848	196	490	217	621	941	418
Arrive On Green	0.09	0.50	0.50	0.11	0.53	0.53	0.06	0.14	0.14	0.18	0.26	0.26
Sat Flow, veh/h	1810	3403	256	1810	3610	1608	3510	3610	1600	3510	3610	1605
Grp Volume(v), veh/h	160	860	898	234	1727	710	143	376	193	774	363	126
Grp Sat Flow(s),veh/h/ln	1810	1805	1854	1810	1805	1608	1755	1805	1600	1755	1805	1605
Q Serve(g_s), s	11.5	58.7	60.5	14.5	56.4	48.6	5.2	13.1	15.4	23.0	10.7	8.2
Cycle Q Clear(g_c), s	11.5	58.7	60.5	14.5	56.4	48.6	5.2	13.1	15.4	23.0	10.7	8.2
Prop In Lane	1.00		0.14	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	910	934	202	1903	848	196	490	217	621	941	418
V/C Ratio(X)	1.00	0.95	0.96	1.16	0.91	0.84	0.73	0.77	0.89	1.25	0.39	0.30
Avail Cap(c_a), veh/h	160	910	934	202	1903	848	267	500	221	621	941	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.2	30.5	31.0	57.8	27.9	26.0	60.4	54.2	55.2	53.5	39.5	38.6
Incr Delay (d2), s/veh	71.0	19.2	21.3	112.9	7.8	9.7	6.3	6.9	32.1	123.9	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	28.1	30.2	12.8	24.1	20.0	2.5	6.4	8.1	20.5	4.7	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	130.2	49.8	52.3	170.7	35.7	35.7	66.7	61.1	87.3	177.4	39.8	39.0
LnGrp LOS	F	D	D	F	D	D	E	E	F	F	D	D
Approach Vol, veh/h		1918			2671			712			1263	
Approach Delay, s/veh		57.7			47.5			69.3			124.0	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	72.1	11.8	39.7	16.0	75.1	28.0	23.5
Change Period (Y+Rc), s	4.5	6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	14.5	53.7	9.9	30.9	11.5	56.7	23.0	* 18
Max Q Clear Time (g_c+I1), s	16.5	62.5	7.2	12.7	13.5	58.4	25.0	17.4
Green Ext Time (p_c), s	0.0	0.0	0.1	2.3	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	67.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	2240	180	50	2449	102	91	31	27	112	27	62
Future Volume (veh/h)	135	2240	180	50	2449	102	91	31	27	112	27	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	147	2435	196	54	2662	111	99	34	29	122	29	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	104	2398	1068	84	2303	95	111	72	61	111	39	89
Arrive On Green	0.06	0.66	0.66	0.06	0.87	0.87	0.06	0.08	0.08	0.06	0.08	0.08
Sat Flow, veh/h	1810	3610	1608	1810	3529	146	1810	945	806	1810	508	1175
Grp Volume(v), veh/h	147	2435	196	54	1351	1422	99	0	63	122	0	96
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1810	1805	1870	1810	0	1751	1810	0	1683
Q Serve(g_s), s	7.5	86.3	6.1	3.8	84.9	84.9	7.1	0.0	4.5	8.0	0.0	7.3
Cycle Q Clear(g_c), s	7.5	86.3	6.1	3.8	84.9	84.9	7.1	0.0	4.5	8.0	0.0	7.3
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.46	1.00		0.70
Lane Grp Cap(c), veh/h	104	2398	1068	84	1178	1220	111	0	133	111	0	128
V/C Ratio(X)	1.41	1.02	0.18	0.65	1.15	1.17	0.89	0.00	0.47	1.10	0.00	0.75
Avail Cap(c_a), veh/h	104	2398	1068	104	1178	1220	111	0	242	111	0	240
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.39	0.39	0.39	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.3	21.8	8.3	60.0	8.6	8.6	60.6	0.0	57.6	61.0	0.0	58.9
Incr Delay (d2), s/veh	231.0	22.3	0.4	3.6	70.4	78.2	52.3	0.0	2.6	113.3	0.0	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	37.2	2.1	1.8	28.2	31.9	4.8	0.0	2.1	7.2	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	292.2	44.2	8.7	63.6	79.0	86.8	112.8	0.0	60.2	174.3	0.0	67.5
LnGrp LOS	F	F	A	E	F	F	F	A	E	F	A	E
Approach Vol, veh/h		2778			2827			162			218	
Approach Delay, s/veh		54.8			82.6			92.4			127.3	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	92.5	12.0	14.9	12.0	91.1	12.0	14.9
Change Period (Y+Rc), s	4.5	6.2	4.0	* 5.1	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.5	76.7	8.0	* 19	7.5	76.7	8.0	18.0
Max Q Clear Time (g_c+I1), s	5.8	88.3	9.1	9.3	9.5	86.9	10.0	6.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	71.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2340	39	118	2568	45	134
Future Volume (veh/h)	2340	39	118	2568	45	134
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2463	41	124	2703	47	141
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2559	1142	142	2954	187	166
Arrive On Green	0.94	0.94	0.16	1.00	0.10	0.10
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	2463	41	124	2703	47	141
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	54.7	0.2	8.7	0.0	3.1	11.2
Cycle Q Clear(g_c), s	54.7	0.2	8.7	0.0	3.1	11.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2559	1142	142	2954	187	166
V/C Ratio(X)	0.96	0.04	0.87	0.92	0.25	0.85
Avail Cap(c_a), veh/h	2559	1142	142	2954	262	233
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.6	1.1	54.2	0.0	53.7	57.3
Incr Delay (d2), s/veh	1.5	0.0	40.8	5.7	0.7	18.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.1	5.2	2.3	1.5	5.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.1	1.1	95.0	5.7	54.4	75.4
LnGrp LOS	A	A	F	A	D	E
Approach Vol, veh/h	2504			2827	188	
Approach Delay, s/veh	4.1			9.6	70.2	
Approach LOS	A			A	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	14.2	98.4				112.6	17.4
Change Period (Y+Rc), s	4.0	6.2				* 6.2	4.0
Max Green Setting (Gmax), s	10.2	86.8				* 1E2	18.8
Max Q Clear Time (g_c+I1), s	10.7	56.7				2.0	13.2
Green Ext Time (p_c), s	0.0	24.0				66.3	0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2469	5	0	2686	0	2
Future Vol, veh/h	2469	5	0	2686	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2743	6	0	2984	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1372
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	*59
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*59
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	68.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	59	-	-	-
HCM Lane V/C Ratio	0.038	-	-	-
HCM Control Delay (s)	68.4	-	-	-
HCM Lane LOS	F	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

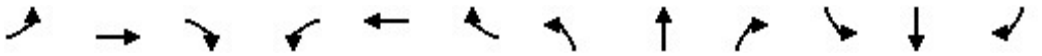
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	122	2350	2613	21	2	72
Future Vol, veh/h	122	2350	2613	21	2	72
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	136	2611	2903	23	2	80

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2929	0	-	0	4496	1466
Stage 1	-	-	-	-	2918	-
Stage 2	-	-	-	-	1578	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*101	-
Platoon blocked, %	2	-	-	-	2	2
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*101	-

Approach	EB	WB	SB
HCM Control Delay, s		0	
HCM LOS			-

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	-	-	-
HCM Lane LOS	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	2001	266	132	2321	77	271	82	146	106	39	63
Future Volume (veh/h)	89	2001	266	132	2321	77	271	82	146	106	39	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	97	2175	289	143	2523	84	295	89	159	115	42	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	1810	235	97	2036	902	343	101	180	179	320	263
Arrive On Green	0.02	0.19	0.19	0.07	0.75	0.75	0.05	0.17	0.17	0.05	0.17	0.17
Sat Flow, veh/h	1810	3210	417	1810	3610	1599	1810	599	1069	1810	1900	1561
Grp Volume(v), veh/h	97	1200	1264	143	2523	84	295	0	248	115	42	68
Grp Sat Flow(s),veh/h/ln	1810	1805	1822	1810	1805	1599	1810	0	1668	1810	1900	1561
Q Serve(g_s), s	7.0	73.3	73.3	7.0	73.3	1.8	7.0	0.0	18.9	6.9	2.4	4.9
Cycle Q Clear(g_c), s	7.0	73.3	73.3	7.0	73.3	1.8	7.0	0.0	18.9	6.9	2.4	4.9
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.64	1.00		1.00
Lane Grp Cap(c), veh/h	97	1018	1027	97	2036	902	343	0	281	179	320	263
V/C Ratio(X)	1.00	1.18	1.23	1.47	1.24	0.09	0.86	0.00	0.88	0.64	0.13	0.26
Avail Cap(c_a), veh/h	97	1018	1027	97	2036	902	343	0	385	179	438	360
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	52.9	52.9	60.3	16.2	7.3	50.3	0.0	52.8	43.5	46.0	47.0
Incr Delay (d2), s/veh	89.6	91.0	112.2	215.5	108.1	0.0	18.5	0.0	16.3	5.9	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	60.9	67.5	8.9	46.8	0.7	8.0	0.0	9.3	3.4	1.2	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	153.4	143.9	165.1	275.9	124.3	7.3	68.9	0.0	69.1	49.5	46.2	47.5
LnGrp LOS	F	F	F	F	F	A	E	A	E	D	D	D
Approach Vol, veh/h		2561			2750			543			225	
Approach Delay, s/veh		154.7			128.7			69.0			48.3	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	80.5	11.0	26.5	12.0	80.5	11.0	26.5
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	7.0	65.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	9.0	75.3	9.0	6.9	9.0	75.3	8.9	20.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	131.3
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↰	↱
Traffic Vol, veh/h	119	1	29	6	0	25	14	283	9	18	314	62
Future Vol, veh/h	119	1	29	6	0	25	14	283	9	18	314	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	157	1	38	8	0	33	18	372	12	24	413	82

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	892	881	413	936	957	378	495	0	0	384	0	0
Stage 1	461	461	-	414	414	-	-	-	-	-	-	-
Stage 2	431	420	-	522	543	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	265	288	643	247	260	673	1079	-	-	1186	-	-
Stage 1	584	569	-	620	597	-	-	-	-	-	-	-
Stage 2	607	593	-	542	523	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	243	274	643	223	248	673	1079	-	-	1186	-	-
Mov Cap-2 Maneuver	243	274	-	223	248	-	-	-	-	-	-	-
Stage 1	572	553	-	607	584	-	-	-	-	-	-	-
Stage 2	565	581	-	494	508	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	44.2	13.1	0.4	0.4
HCM LOS	E	B		

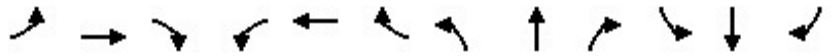
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1079	-	-	277	484	1186	-	-
HCM Lane V/C Ratio	0.017	-	-	0.708	0.084	0.02	-	-
HCM Control Delay (s)	8.4	0	-	44.2	13.1	8.1	0	-
HCM Lane LOS	A	A	-	E	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.9	0.3	0.1	-	-

Intersection	
Intersection Delay, s/veh	40.8
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	350	27	7	284	64	13	30	9	167	38	73
Future Vol, veh/h	39	350	27	7	284	64	13	30	9	167	38	73
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	50	449	35	9	364	82	17	38	12	214	49	94
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	58.4	35.6	13.1	26.2
HCM LOS	F	E	B	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	9%	2%	60%
Vol Thru, %	58%	84%	80%	14%
Vol Right, %	17%	6%	18%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	416	355	278
LT Vol	13	39	7	167
Through Vol	30	350	284	38
RT Vol	9	27	64	73
Lane Flow Rate	67	533	455	356
Geometry Grp	1	1	1	1
Degree of Util (X)	0.157	0.976	0.84	0.713
Departure Headway (Hd)	8.457	6.588	6.646	7.205
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	422	555	542	503
Service Time	6.555	4.616	4.709	5.233
HCM Lane V/C Ratio	0.159	0.96	0.839	0.708
HCM Control Delay	13.1	58.4	35.6	26.2
HCM Lane LOS	B	F	E	D
HCM 95th-tile Q	0.6	13.3	8.7	5.7



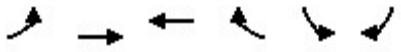
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	1661	320	274	1938	123	399	412	268	129	329	259
Future Volume (veh/h)	201	1661	320	274	1938	123	399	412	268	129	329	259
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.76	1.00		0.71
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	212	1748	337	288	2040	129	420	434	282	136	346	273
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	238	3009	1470	338	2881	1236	419	545	346	111	428	271
Arrive On Green	0.13	0.83	0.83	0.10	0.80	0.80	0.12	0.29	0.29	0.06	0.24	0.24
Sat Flow, veh/h	1810	3610	1533	3510	3610	1549	3510	1864	1183	1810	1805	1145
Grp Volume(v), veh/h	212	1748	337	288	2040	129	420	420	296	136	346	273
Grp Sat Flow(s),veh/h/ln	1810	1805	1533	1755	1805	1549	1755	1805	1241	1810	1805	1145
Q Serve(g_s), s	15.0	20.3	1.7	10.5	34.1	6.0	15.5	27.9	28.8	8.0	23.5	30.8
Cycle Q Clear(g_c), s	15.0	20.3	1.7	10.5	34.1	6.0	15.5	27.9	28.8	8.0	23.5	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.95	1.00		1.00
Lane Grp Cap(c), veh/h	238	3009	1470	338	2881	1236	419	528	363	111	428	271
V/C Ratio(X)	0.89	0.58	0.23	0.85	0.71	0.10	1.00	0.80	0.82	1.22	0.81	1.01
Avail Cap(c_a), veh/h	313	3009	1470	338	2881	1236	419	528	363	111	428	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.58	0.58	0.58	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	3.5	0.2	57.8	6.1	18.5	57.3	42.4	42.7	61.0	46.8	49.6
Incr Delay (d2), s/veh	2.1	0.1	0.0	11.2	0.9	0.1	44.8	8.3	13.5	156.4	11.1	56.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	3.8	0.0	5.0	8.6	0.7	9.4	13.4	10.0	8.5	11.7	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.7	3.6	0.2	69.1	7.0	18.6	102.1	50.7	56.2	217.4	57.9	105.8
LnGrp LOS	E	A	A	E	A	B	F	D	E	F	E	F
Approach Vol, veh/h		2297			2457			1136			755	
Approach Delay, s/veh		8.1			14.9			71.2			103.9	
Approach LOS		A			B			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	117.4	21.0	36.6	22.6	112.8	13.8	43.8
Change Period (Y+Rc), s	5.5	7.2	5.5	5.8	5.5	7.2	5.8	* 5.8
Max Green Setting (Gmax), s	12.5	49.0	15.5	29.0	22.5	39.0	8.0	* 38
Max Q Clear Time (g_c+I1), s	12.5	22.3	17.5	32.8	17.0	36.1	10.0	30.8
Green Ext Time (p_c), s	0.0	16.4	0.0	0.0	0.1	2.6	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Notes

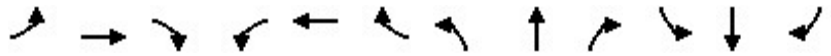
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	271	1973	2132	28	17	222
Future Volume (veh/h)	271	1973	2132	28	17	222
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	295	2145	2317	30	18	241
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	317	3853	2811	36	303	269
Arrive On Green	0.35	1.00	1.00	1.00	0.17	0.17
Sat Flow, veh/h	1810	5358	5445	68	1810	1610
Grp Volume(v), veh/h	295	2145	1518	829	18	241
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1884	1810	1610
Q Serve(g_s), s	20.4	0.0	0.0	0.0	1.1	19.1
Cycle Q Clear(g_c), s	20.4	0.0	0.0	0.0	1.1	19.1
Prop In Lane	1.00			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	317	3853	1843	1004	303	269
V/C Ratio(X)	0.93	0.56	0.82	0.83	0.06	0.89
Avail Cap(c_a), veh/h	550	3853	1843	1004	480	427
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.46	0.46	1.00	1.00
Uniform Delay (d), s/veh	41.5	0.0	0.0	0.0	45.5	53.0
Incr Delay (d2), s/veh	1.0	0.1	2.0	3.7	0.1	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	0.5	1.0	0.5	17.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.4	0.1	2.0	3.7	45.6	66.9
LnGrp LOS	D	A	A	A	D	E
Approach Vol, veh/h		2440	2347		259	
Approach Delay, s/veh		5.2	2.6		65.4	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		103.8		26.2	27.3	76.5
Change Period (Y+Rc), s		7.2		4.5	4.5	7.2
Max Green Setting (Gmax), s		83.8		34.5	39.5	39.8
Max Q Clear Time (g_c+I1), s		2.0		21.1	22.4	2.0
Green Ext Time (p_c), s		30.8		0.7	0.3	23.6

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A



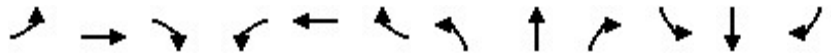
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	12	15	641	19	43	6	1744	536	151	1785	39
Future Volume (veh/h)	43	12	15	641	19	43	6	1744	536	151	1785	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	44	12	15	661	20	44	6	1798	553	156	1840	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	78	85	107	532	443	370	19	1809	1036	118	2007	887
Arrive On Green	0.04	0.11	0.11	0.15	0.23	0.23	0.00	0.17	0.17	0.07	0.56	0.56
Sat Flow, veh/h	1810	755	944	3510	1900	1589	1810	3610	1580	1810	3610	1596
Grp Volume(v), veh/h	44	0	27	661	20	44	6	1798	553	156	1840	40
Grp Sat Flow(s),veh/h/ln	1810	0	1700	1755	1900	1589	1810	1805	1580	1810	1805	1596
Q Serve(g_s), s	3.1	0.0	1.9	19.7	1.1	2.8	0.4	64.7	29.9	8.5	60.0	1.5
Cycle Q Clear(g_c), s	3.1	0.0	1.9	19.7	1.1	2.8	0.4	64.7	29.9	8.5	60.0	1.5
Prop In Lane	1.00		0.56	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	0	192	532	443	370	19	1809	1036	118	2007	887
V/C Ratio(X)	0.57	0.00	0.14	1.24	0.05	0.12	0.32	0.99	0.53	1.32	0.92	0.05
Avail Cap(c_a), veh/h	170	0	418	532	617	516	104	1809	1036	118	2007	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.39	0.39	0.39	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	0.0	52.0	55.2	38.6	39.3	64.3	54.1	21.8	60.8	26.1	13.1
Incr Delay (d2), s/veh	2.4	0.0	0.3	124.4	0.0	0.1	1.4	11.9	0.8	190.7	8.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.8	17.7	0.5	1.1	0.2	34.1	12.6	10.1	25.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.4	0.0	52.3	179.5	38.7	39.5	65.7	66.0	22.6	251.4	34.3	13.2
LnGrp LOS	E	A	D	F	D	D	E	E	C	F	C	B
Approach Vol, veh/h		71			725			2357			2036	
Approach Delay, s/veh		59.2			167.1			55.8			50.5	
Approach LOS		E			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	71.3	25.2	20.5	5.9	78.5	9.6	36.1
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	4.0	* 5.8
Max Green Setting (Gmax), s	8.5	47.8	19.7	32.0	7.5	48.8	12.2	* 42
Max Q Clear Time (g_c+I1), s	10.5	66.7	21.7	3.9	2.4	62.0	5.1	4.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	69.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	623	56	117	51	21	30	114	1604	92	13	1823	690
Future Volume (veh/h)	623	56	117	51	21	30	114	1604	92	13	1823	690
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	642	58	121	53	22	31	118	1654	95	13	1879	711
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	329	277	83	48	68	97	2175	969	37	2054	1151
Arrive On Green	0.15	0.17	0.17	0.05	0.07	0.07	0.04	0.40	0.40	0.03	0.76	0.76
Sat Flow, veh/h	3510	1900	1605	1810	710	1000	1810	3610	1607	1810	3610	1607
Grp Volume(v), veh/h	642	58	121	53	0	53	118	1654	95	13	1879	711
Grp Sat Flow(s),veh/h/ln	1755	1900	1605	1810	0	1710	1810	1805	1607	1810	1805	1607
Q Serve(g_s), s	19.1	3.4	8.8	3.7	0.0	3.9	7.0	51.2	4.8	0.9	53.5	22.4
Cycle Q Clear(g_c), s	19.1	3.4	8.8	3.7	0.0	3.9	7.0	51.2	4.8	0.9	53.5	22.4
Prop In Lane	1.00		1.00	1.00		0.58	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	329	277	83	0	116	97	2175	969	37	2054	1151
V/C Ratio(X)	1.24	0.18	0.44	0.64	0.00	0.46	1.21	0.76	0.10	0.36	0.91	0.62
Avail Cap(c_a), veh/h	516	634	536	139	0	434	97	2175	969	97	2054	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.64	0.64	0.64	0.35	0.35	0.35
Uniform Delay (d), s/veh	55.4	45.9	48.1	61.0	0.0	58.3	62.7	30.7	16.8	62.4	13.3	4.8
Incr Delay (d2), s/veh	125.7	0.3	1.1	7.9	0.0	2.8	140.8	1.7	0.1	2.0	3.1	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	1.6	3.6	1.9	0.0	1.8	7.0	23.2	1.9	0.4	12.4	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	181.1	46.1	49.2	68.8	0.0	61.0	203.4	32.3	17.0	64.5	16.4	5.6
LnGrp LOS	F	D	D	E	A	E	F	C	B	E	B	A
Approach Vol, veh/h		821			106			1867			2603	
Approach Delay, s/veh		152.1			64.9			42.4			13.7	
Approach LOS		F			E			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	85.5	10.0	27.9	11.0	81.2	23.6	14.2
Change Period (Y+Rc), s	4.0	7.2	4.0	* 5.4	4.0	7.2	4.5	5.4
Max Green Setting (Gmax), s	7.0	49.8	10.0	* 43	7.0	49.8	19.1	33.0
Max Q Clear Time (g_c+I1), s	2.9	53.2	5.7	10.8	9.0	55.5	21.1	5.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	45.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	81	260	1549	87	374	1618
Future Volume (veh/h)	81	260	1549	87	374	1618
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	90	289	1721	97	416	1798
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	189	681	2276	1014	476	2918
Arrive On Green	0.10	0.10	1.00	1.00	0.27	1.00
Sat Flow, veh/h	1810	2834	3705	1608	3510	3705
Grp Volume(v), veh/h	90	289	1721	97	416	1798
Grp Sat Flow(s),veh/h/ln	1810	1417	1805	1608	1755	1805
Q Serve(g_s), s	6.1	11.2	0.0	0.0	14.7	0.0
Cycle Q Clear(g_c), s	6.1	11.2	0.0	0.0	14.7	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	189	681	2276	1014	476	2918
V/C Ratio(X)	0.48	0.42	0.76	0.10	0.87	0.62
Avail Cap(c_a), veh/h	221	731	2276	1014	662	2918
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.67	0.67	0.16	0.16
Uniform Delay (d), s/veh	54.8	41.8	0.0	0.0	46.3	0.0
Incr Delay (d2), s/veh	1.8	0.4	1.6	0.1	1.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	4.0	0.5	0.0	5.5	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.7	42.2	1.6	0.1	48.0	0.2
LnGrp LOS	E	D	A	A	D	A
Approach Vol, veh/h	379		1818			2214
Approach Delay, s/veh	45.6		1.5			9.2
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	23.1	88.2			111.3	18.7
Change Period (Y+Rc), s	5.5	6.2			6.2	5.1
Max Green Setting (Gmax), s	24.5	72.8			102.8	15.9
Max Q Clear Time (g_c+I1), s	16.7	2.0			2.0	13.2
Green Ext Time (p_c), s	0.9	21.6			24.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A



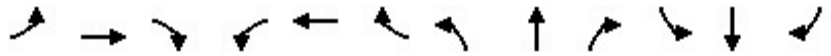
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	42	24	196	14	288	38	1294	269	313	1335	23
Future Volume (veh/h)	51	42	24	196	14	288	38	1294	269	313	1335	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	45	26	211	15	310	41	1391	289	337	1435	25
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	152	72	42	239	203	601	75	1927	852	382	2197	968
Arrive On Green	0.08	0.06	0.06	0.13	0.11	0.11	0.08	1.00	1.00	0.22	1.00	1.00
Sat Flow, veh/h	1810	1128	652	1810	1900	2735	1810	3610	1597	3510	3610	1590
Grp Volume(v), veh/h	55	0	71	211	15	310	41	1391	289	337	1435	25
Grp Sat Flow(s),veh/h/ln	1810	0	1779	1810	1900	1367	1810	1805	1597	1755	1805	1590
Q Serve(g_s), s	3.7	0.0	5.1	14.9	0.9	9.7	2.8	0.0	0.0	12.1	0.0	0.0
Cycle Q Clear(g_c), s	3.7	0.0	5.1	14.9	0.9	9.7	2.8	0.0	0.0	12.1	0.0	0.0
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	152	0	114	239	203	601	75	1927	852	382	2197	968
V/C Ratio(X)	0.36	0.00	0.62	0.88	0.07	0.52	0.54	0.72	0.34	0.88	0.65	0.03
Avail Cap(c_a), veh/h	362	0	452	434	576	1137	97	1927	852	405	2197	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.64	0.64	0.64	0.77	0.77	0.77
Uniform Delay (d), s/veh	56.2	0.0	59.3	55.5	52.2	26.0	58.4	0.0	0.0	50.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	5.5	4.3	0.2	0.7	1.5	1.5	0.7	14.6	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	2.5	7.1	0.5	3.2	1.3	0.4	0.2	5.4	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.8	0.0	64.8	59.7	52.4	26.7	59.9	1.5	0.7	64.7	1.2	0.0
LnGrp LOS	E	A	E	E	D	C	E	A	A	E	A	A
Approach Vol, veh/h		126			536			1721			1797	
Approach Delay, s/veh		61.3			40.4			2.8			13.1	
Approach LOS		E			D			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	75.6	21.1	14.1	9.4	85.3	16.7	18.5
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	5.8	* 4.6
Max Green Setting (Gmax), s	15.0	29.8	31.2	33.0	7.0	38.8	26.0	* 39
Max Q Clear Time (g_c+I1), s	11.7	2.0	16.9	7.1	4.8	2.0	5.7	11.7
Green Ext Time (p_c), s	0.1	12.4	0.2	0.3	0.0	12.8	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	45	132	96	32	92	176	1303	25	201	1105	168
Future Volume (veh/h)	167	45	132	96	32	92	176	1303	25	201	1105	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	172	46	136	99	33	95	181	1343	26	207	1139	173
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	255	93	276	209	94	272	205	1894	817	233	1950	860
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.23	1.00	1.00	0.17	0.72	0.72
Sat Flow, veh/h	1280	422	1249	1219	427	1229	1810	3610	1558	1810	3610	1592
Grp Volume(v), veh/h	172	0	182	99	0	128	181	1343	26	207	1139	173
Grp Sat Flow(s),veh/h/ln	1280	0	1671	1219	0	1656	1810	1805	1558	1810	1805	1592
Q Serve(g_s), s	17.0	0.0	12.4	10.0	0.0	8.5	12.6	0.0	0.0	14.5	19.9	4.6
Cycle Q Clear(g_c), s	25.5	0.0	12.4	22.4	0.0	8.5	12.6	0.0	0.0	14.5	19.9	4.6
Prop In Lane	1.00		0.75	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	0	370	209	0	366	205	1894	817	233	1950	860
V/C Ratio(X)	0.67	0.00	0.49	0.47	0.00	0.35	0.88	0.71	0.03	0.89	0.58	0.20
Avail Cap(c_a), veh/h	307	0	437	258	0	433	327	1894	817	383	1950	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.68	0.68	0.68
Uniform Delay (d), s/veh	53.5	0.0	44.2	54.0	0.0	42.7	49.5	0.0	0.0	53.0	11.2	9.1
Incr Delay (d2), s/veh	4.4	0.0	1.0	1.7	0.0	0.6	1.1	0.2	0.0	5.9	0.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	5.3	3.2	0.0	3.6	4.9	0.1	0.0	6.5	5.8	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	0.0	45.2	55.7	0.0	43.3	50.5	0.2	0.0	58.8	12.1	9.4
LnGrp LOS	E	A	D	E	A	D	D	A	A	E	B	A
Approach Vol, veh/h		354			227			1550			1519	
Approach Delay, s/veh		51.4			48.7			6.1			18.2	
Approach LOS		D			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	31.2	75.4		33.4	19.2	77.4		33.4
Change Period (Y+Rc), s	4.5	7.2		4.6	4.5	7.2		4.6
Max Green Setting (Gmax), s	27.5	52.2		34.0	23.5	56.2		34.0
Max Q Clear Time (g_c+I1), s	16.5	2.0		27.5	14.6	21.9		24.4
Green Ext Time (p_c), s	0.2	12.4		0.9	0.1	9.7		0.7

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B



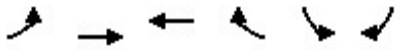
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	498	1292	210	183	1702	668	190	485	107	487	550	337
Future Volume (veh/h)	498	1292	210	183	1702	668	190	485	107	487	550	337
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	524	1360	221	193	1792	703	200	511	113	513	579	355
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	417	1401	836	146	1748	733	240	726	160	421	819	549
Arrive On Green	0.24	0.78	0.78	0.16	0.67	0.67	0.13	0.25	0.25	0.20	0.38	0.38
Sat Flow, veh/h	3510	3610	1603	1810	5187	1602	1810	2919	642	3510	3610	1576
Grp Volume(v), veh/h	524	1360	221	193	1792	703	200	315	309	513	579	355
Grp Sat Flow(s),veh/h/ln	1755	1805	1603	1810	1729	1602	1810	1805	1756	1755	1805	1576
Q Serve(g_s), s	15.5	44.5	1.0	10.5	43.8	43.8	14.0	20.6	20.9	15.6	17.7	3.9
Cycle Q Clear(g_c), s	15.5	44.5	1.0	10.5	43.8	43.8	14.0	20.6	20.9	15.6	17.7	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	417	1401	836	146	1748	733	240	449	437	421	819	549
V/C Ratio(X)	1.26	0.97	0.26	1.32	1.03	0.96	0.83	0.70	0.71	1.22	0.71	0.65
Avail Cap(c_a), veh/h	417	1401	836	146	1748	733	240	555	540	421	1077	662
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.87	0.87	0.87	0.45	0.45	0.45	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	49.5	13.9	2.2	54.5	21.2	9.5	55.0	44.4	44.5	52.0	36.7	27.2
Incr Delay (d2), s/veh	131.2	16.5	0.7	164.3	21.4	14.5	20.2	2.9	3.2	114.4	1.2	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.2	8.5	0.7	10.9	11.0	6.1	7.6	9.4	9.3	12.7	6.6	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	180.8	30.3	2.9	218.8	42.6	24.0	75.2	47.4	47.7	166.4	37.9	28.5
LnGrp LOS	F	C	A	F	F	C	E	D	D	F	D	C
Approach Vol, veh/h		2105			2688			824			1447	
Approach Delay, s/veh		64.9			50.4			54.3			81.1	
Approach LOS		E			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	56.7	22.7	35.7	21.7	50.0	20.6	37.7
Change Period (Y+Rc), s	4.5	6.2	5.4	* 6.2	6.2	* 6.2	5.0	5.4
Max Green Setting (Gmax), s	10.5	42.8	16.0	* 39	9.0	* 44	15.6	40.0
Max Q Clear Time (g_c+I1), s	12.5	46.5	16.0	19.7	17.5	45.8	17.6	22.9
Green Ext Time (p_c), s	0.0	0.0	0.0	4.6	0.0	0.0	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	61.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



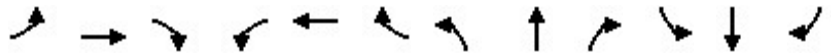
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	89	1798	2368	106	204	56
Future Volume (veh/h)	89	1798	2368	106	204	56
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	1893	2493	112	215	59
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	417	2803	2498	111	249	221
Arrive On Green	0.46	1.00	0.98	0.98	0.14	0.14
Sat Flow, veh/h	1810	3705	5261	227	1810	1610
Grp Volume(v), veh/h	94	1893	1686	919	215	59
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1859	1810	1610
Q Serve(g_s), s	4.1	0.0	47.4	63.8	15.1	4.3
Cycle Q Clear(g_c), s	4.1	0.0	47.4	63.8	15.1	4.3
Prop In Lane	1.00			0.12	1.00	1.00
Lane Grp Cap(c), veh/h	417	2803	1697	912	249	221
V/C Ratio(X)	0.23	0.68	0.99	1.01	0.86	0.27
Avail Cap(c_a), veh/h	417	2803	1697	912	487	434
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.39	0.39	1.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	1.0	1.2	54.9	50.2
Incr Delay (d2), s/veh	0.0	0.1	12.2	20.3	8.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	3.3	5.6	7.6	4.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.1	0.1	13.3	21.5	63.6	50.8
LnGrp LOS	C	A	B	F	E	D
Approach Vol, veh/h		1987	2605		274	
Approach Delay, s/veh		1.4	16.2		60.8	
Approach LOS		A	B		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	108.1		21.9	37.1	71.0
Change Period (Y+Rc), s	7.2		4.0	7.2	* 7.2
Max Green Setting (Gmax), s	83.8		35.0	15.5	* 64
Max Q Clear Time (g_c+I1), s	2.0		17.1	6.1	65.8
Green Ext Time (p_c), s	26.3		0.8	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	1411	400	347	1837	90	596	77	321	51	38	184
Future Volume (veh/h)	140	1411	400	347	1837	90	596	77	321	51	38	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	144	1455	412	358	1894	93	614	79	331	53	39	190
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	236	1100	299	233	1979	97	535	435	368	137	45	217
Arrive On Green	0.26	0.78	0.78	0.13	0.39	0.39	0.15	0.23	0.23	0.08	0.16	0.16
Sat Flow, veh/h	1810	2804	763	1810	5065	248	3510	1900	1608	1810	281	1369
Grp Volume(v), veh/h	144	915	952	358	1292	695	614	79	331	53	0	229
Grp Sat Flow(s),veh/h/ln	1810	1805	1762	1810	1729	1855	1755	1900	1608	1810	0	1650
Q Serve(g_s), s	9.1	51.0	51.0	16.8	47.2	47.5	19.8	4.3	26.0	3.6	0.0	17.6
Cycle Q Clear(g_c), s	9.1	51.0	51.0	16.8	47.2	47.5	19.8	4.3	26.0	3.6	0.0	17.6
Prop In Lane	1.00		0.43	1.00		0.13	1.00		1.00	1.00		0.83
Lane Grp Cap(c), veh/h	236	708	691	233	1351	725	535	435	368	137	0	262
V/C Ratio(X)	0.61	1.29	1.38	1.53	0.96	0.96	1.15	0.18	0.90	0.39	0.00	0.87
Avail Cap(c_a), veh/h	236	708	691	233	1351	725	535	628	532	137	0	386
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.1	14.0	14.0	56.6	38.5	38.6	55.1	40.3	48.6	57.2	0.0	53.4
Incr Delay (d2), s/veh	2.2	138.6	175.7	260.9	16.0	24.8	86.8	0.2	13.6	0.7	0.0	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	32.5	38.9	24.3	21.8	25.2	15.0	2.0	11.5	1.7	0.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.3	152.6	189.7	317.6	54.5	63.4	141.9	40.5	62.2	57.9	0.0	67.3
LnGrp LOS	D	F	F	F	D	E	F	D	E	E	A	E
Approach Vol, veh/h		2011			2345			1024			282	
Approach Delay, s/veh		162.6			97.3			108.3			65.5	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.8	58.2	24.8	25.2	22.0	58.0	14.5	35.6
Change Period (Y+Rc), s	5.0	* 7.2	5.0	4.6	5.0	7.2	4.6	* 5.8
Max Green Setting (Gmax), s	7.5	* 51	19.8	30.4	7.2	50.8	7.0	* 43
Max Q Clear Time (g_c+I1), s	18.8	53.0	21.8	19.6	11.1	49.5	5.6	28.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	1.2	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	120.9
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	2352	0	0	2632	15	0	0	0	0	0	2
Future Vol, veh/h	0	2352	0	0	2632	15	0	0	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2557	0	0	2861	16	0	0	0	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1279	-	-	1439
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*107	0	0	-
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			2
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*107	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	
HCM LOS			A	-

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	-
HCM Lane LOS	A	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	11	308	278	66
Future Vol, veh/h	0	0	11	308	278	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	13	371	335	80

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	772	375	415	0	-	0
Stage 1	375	-	-	-	-	-
Stage 2	397	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	371	676	1155	-	-	-
Stage 1	699	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	366	676	1155	-	-	-
Mov Cap-2 Maneuver	366	-	-	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	683	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1155	-	-	-	-
HCM Lane V/C Ratio	0.011	-	-	-	-
HCM Control Delay (s)	8.2	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	106	42	14	190	263	13
Future Vol, veh/h	106	42	14	190	263	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	133	53	18	238	329	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	611	337	345	0	-	0
Stage 1	337	-	-	-	-	-
Stage 2	274	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	460	710	1225	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	452	710	1225	-	-	-
Mov Cap-2 Maneuver	452	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	777	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.2	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1225	-	504	-	-
HCM Lane V/C Ratio	0.014	-	0.367	-	-
HCM Control Delay (s)	8	0	16.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	1.7	-	-

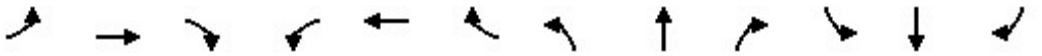
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	203	312	0
Future Vol, veh/h	3	0	1	203	312	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	0	1	251	385	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	638	385	385	0	-	0
Stage 1	385	-	-	-	-	-
Stage 2	253	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	444	667	1185	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	444	667	1185	-	-	-
Mov Cap-2 Maneuver	444	-	-	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1185	-	444	-	-
HCM Lane V/C Ratio	0.001	-	0.008	-	-
HCM Control Delay (s)	8	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



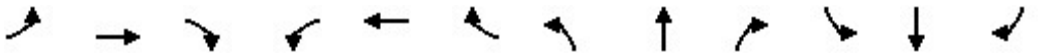
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	1255	151	149	1651	885	190	637	232	577	177	88
Future Volume (veh/h)	155	1255	151	149	1651	885	190	637	232	577	177	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	163	1321	159	157	1738	932	200	671	244	607	186	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	160	1391	166	1091	3454	1540	261	664	295	567	992	441
Arrive On Green	0.09	0.43	0.43	0.60	0.96	0.96	0.07	0.18	0.18	0.16	0.27	0.27
Sat Flow, veh/h	1810	3241	388	1810	3610	1609	3510	3610	1602	3510	3610	1605
Grp Volume(v), veh/h	163	732	748	157	1738	932	200	671	244	607	186	93
Grp Sat Flow(s),veh/h/ln	1810	1805	1824	1810	1805	1609	1755	1805	1602	1755	1805	1605
Q Serve(g_s), s	11.5	50.6	51.6	4.9	5.2	7.7	7.3	23.9	15.8	21.0	5.1	5.8
Cycle Q Clear(g_c), s	11.5	50.6	51.6	4.9	5.2	7.7	7.3	23.9	15.8	21.0	5.1	5.8
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	775	783	1091	3454	1540	261	664	295	567	992	441
V/C Ratio(X)	1.02	0.94	0.96	0.14	0.50	0.61	0.77	1.01	0.83	1.07	0.19	0.21
Avail Cap(c_a), veh/h	160	775	783	1091	3454	1540	500	664	295	567	992	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.2	35.6	35.9	11.2	0.2	0.3	59.0	53.1	35.1	54.5	36.0	36.3
Incr Delay (d2), s/veh	76.0	21.4	23.0	0.1	0.5	1.8	4.7	37.7	17.6	58.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	25.3	26.3	1.8	0.3	0.8	3.4	14.2	7.6	13.6	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	135.3	57.0	58.9	11.3	0.8	2.1	63.7	90.7	52.7	112.5	36.1	36.5
LnGrp LOS	F	E	E	B	A	A	E	F	D	F	D	D
Approach Vol, veh/h		1643			2827			1115			886	
Approach Delay, s/veh		65.6			1.8			77.6			88.5	
Approach LOS		E			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	85.5	62.0	14.2	41.5	16.0	131.5	26.0	29.7
Change Period (Y+Rc), s	6.2	* 6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	8.5	* 56	18.5	26.2	11.5	52.8	21.0	* 24
Max Q Clear Time (g_c+I1), s	6.9	53.6	9.3	7.8	13.5	9.7	23.0	25.9
Green Ext Time (p_c), s	0.1	1.7	0.4	1.2	0.0	27.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	1921	87	87	2446	33	170	23	113	110	28	82
Future Volume (veh/h)	85	1921	87	87	2446	33	170	23	113	110	28	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	2134	97	97	2718	37	189	26	126	122	31	91
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	104	2232	994	104	2255	31	149	31	150	111	39	116
Arrive On Green	0.06	0.62	0.62	0.08	0.82	0.82	0.08	0.11	0.11	0.06	0.09	0.09
Sat Flow, veh/h	1810	3610	1608	1810	3646	50	1810	281	1364	1810	424	1243
Grp Volume(v), veh/h	94	2134	97	97	1342	1413	189	0	152	122	0	122
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1810	1805	1891	1810	0	1646	1810	0	1667
Q Serve(g_s), s	6.7	71.7	1.8	6.9	80.4	80.4	10.7	0.0	11.8	8.0	0.0	9.3
Cycle Q Clear(g_c), s	6.7	71.7	1.8	6.9	80.4	80.4	10.7	0.0	11.8	8.0	0.0	9.3
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.83	1.00		0.75
Lane Grp Cap(c), veh/h	104	2232	994	104	1116	1169	149	0	181	111	0	155
V/C Ratio(X)	0.90	0.96	0.10	0.93	1.20	1.21	1.27	0.00	0.84	1.10	0.00	0.79
Avail Cap(c_a), veh/h	104	2232	994	104	1116	1169	149	0	228	111	0	237
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.42	0.42	0.42	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.9	23.2	3.4	59.7	11.5	11.5	59.6	0.0	56.7	61.0	0.0	57.7
Incr Delay (d2), s/veh	57.6	11.2	0.2	38.3	95.0	97.4	161.8	0.0	19.5	113.3	0.0	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	29.6	1.1	4.1	38.2	40.8	11.6	0.0	5.8	7.2	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.5	34.4	3.6	98.1	106.6	108.9	221.4	0.0	76.2	174.3	0.0	67.0
LnGrp LOS	F	C	A	F	F	F	F	A	E	F	A	E
Approach Vol, veh/h		2325			2852			341			244	
Approach Delay, s/veh		36.5			107.4			156.7			120.7	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	86.6	14.7	16.7	12.0	86.6	12.0	19.4
Change Period (Y+Rc), s	4.5	6.2	4.0	4.6	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.5	76.7	8.0	18.5	7.5	76.7	8.0	18.0
Max Q Clear Time (g_c+I1), s	8.9	73.7	12.7	11.3	8.7	82.4	10.0	13.8
Green Ext Time (p_c), s	0.0	2.7	0.0	0.3	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	82.3
HCM 6th LOS	F



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2099	46	138	2541	38	114
Future Volume (veh/h)	2099	46	138	2541	38	114
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2209	48	145	2675	40	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2557	1141	167	3001	163	145
Arrive On Green	0.94	0.94	0.18	1.00	0.09	0.09
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	2209	48	145	2675	40	120
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	24.8	0.2	10.1	0.0	2.7	9.5
Cycle Q Clear(g_c), s	24.8	0.2	10.1	0.0	2.7	9.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2557	1141	167	3001	163	145
V/C Ratio(X)	0.86	0.04	0.87	0.89	0.25	0.83
Avail Cap(c_a), veh/h	2557	1141	167	3001	251	223
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.14	0.14	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	1.8	1.1	52.2	0.0	55.0	58.1
Incr Delay (d2), s/veh	0.6	0.0	35.3	4.5	0.8	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.1	5.7	1.9	1.3	4.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.4	1.1	87.5	4.5	55.8	72.0
LnGrp LOS	A	A	F	A	E	E
Approach Vol, veh/h	2257			2820	160	
Approach Delay, s/veh	2.4			8.8	68.0	
Approach LOS	A			A	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	16.0	98.3				114.3	15.7
Change Period (Y+Rc), s	4.0	6.2				* 6.2	4.0
Max Green Setting (Gmax), s	12.0	85.8				* 1E2	18.0
Max Q Clear Time (g_c+I1), s	12.1	26.8				2.0	11.5
Green Ext Time (p_c), s	0.0	32.2				65.2	0.2

Intersection Summary	
HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2212	1	0	2679	0	8
Future Vol, veh/h	2212	1	0	2679	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2378	1	0	2881	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1189
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	*155
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*155
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	29.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	155	-	-	-
HCM Lane V/C Ratio	0.055	-	-	-
HCM Control Delay (s)	29.6	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	2.4

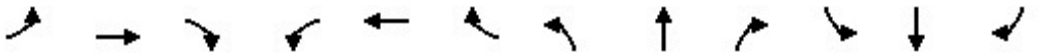
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	49	2171	2533	9	2	145
Future Vol, veh/h	49	2171	2533	9	2	145
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	53	2334	2724	10	2	156

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2737	0	-	0	4005	1370
Stage 1	-	-	-	-	2732	-
Stage 2	-	-	-	-	1273	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	*53	-	-	-	-	*~ 36
Stage 1	-	-	-	-	*34	-
Stage 2	-	-	-	-	*168	-
Platoon blocked, %	1	-	-	-	2	1
Mov Cap-1 Maneuver	*53	-	-	-	-	*~ 35
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	*0	-
Stage 2	-	-	-	-	*168	-

Approach	EB	WB	SB
HCM Control Delay, s	5.4	0	
HCM LOS			-

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 53	-	-	-	-
HCM Lane V/C Ratio	0.994	-	-	-	-
HCM Control Delay (s)	245.9	-	-	-	-
HCM Lane LOS	F	-	-	-	-
HCM 95th %tile Q(veh)	4.4	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	1785	358	288	2155	53	365	49	254	91	63	39
Future Volume (veh/h)	34	1785	358	288	2155	53	365	49	254	91	63	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	1859	373	300	2245	55	380	51	265	95	66	41
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	1529	295	125	1947	869	388	55	288	175	395	335
Arrive On Green	0.01	0.17	0.17	0.14	1.00	1.00	0.05	0.21	0.21	0.05	0.21	0.21
Sat Flow, veh/h	1810	3006	580	1810	3610	1610	1810	266	1384	1810	1900	1610
Grp Volume(v), veh/h	35	1087	1145	300	2245	55	380	0	316	95	66	41
Grp Sat Flow(s),veh/h/ln	1810	1805	1781	1810	1805	1610	1810	0	1651	1810	1900	1610
Q Serve(g_s), s	2.5	66.1	66.1	9.0	0.0	0.0	7.0	0.0	24.4	5.3	3.7	2.7
Cycle Q Clear(g_c), s	2.5	66.1	66.1	9.0	0.0	0.0	7.0	0.0	24.4	5.3	3.7	2.7
Prop In Lane	1.00		0.33	1.00		1.00	1.00		0.84	1.00		1.00
Lane Grp Cap(c), veh/h	70	918	906	125	1947	869	388	0	344	175	395	335
V/C Ratio(X)	0.50	1.18	1.26	2.39	1.15	0.06	0.98	0.00	0.92	0.54	0.17	0.12
Avail Cap(c_a), veh/h	97	918	906	125	1947	869	388	0	381	175	438	372
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	54.1	54.1	56.0	0.0	0.0	50.0	0.0	50.4	39.9	42.2	41.8
Incr Delay (d2), s/veh	2.1	93.9	127.3	629.8	69.4	0.0	40.3	0.0	25.7	1.9	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	55.8	63.4	25.6	18.8	0.0	13.5	0.0	12.6	2.5	1.8	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	148.0	181.3	685.8	69.4	0.0	90.2	0.0	76.1	41.8	42.4	42.0
LnGrp LOS	E	F	F	F	F	A	F	A	E	D	D	D
Approach Vol, veh/h		2267			2600			696			202	
Approach Delay, s/veh		163.6			139.1			83.8			42.0	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	73.3	11.0	31.7	10.0	77.3	11.0	31.7
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	9.0	63.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	11.0	68.1	9.0	5.7	4.5	2.0	7.3	26.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	35.5	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	138.6
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	23.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	166	0	34	5	0	53	43	459	5	17	414	214
Future Vol, veh/h	166	0	34	5	0	53	43	459	5	17	414	214
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	88	95	88	95	88	88	88	88	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	175	0	36	6	0	60	45	522	6	19	470	225

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1153	1126	470	1254	1348	525	695	0	0	528	0	0
Stage 1	508	508	-	615	615	-	-	-	-	-	-	-
Stage 2	645	618	-	639	733	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	176	207	598	150	152	556	910	-	-	1049	-	-
Stage 1	551	542	-	482	485	-	-	-	-	-	-	-
Stage 2	464	484	-	468	429	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 145	187	598	130	137	556	910	-	-	1049	-	-
Mov Cap-2 Maneuver	~ 145	187	-	130	137	-	-	-	-	-	-	-
Stage 1	512	525	-	448	451	-	-	-	-	-	-	-
Stage 2	385	450	-	426	416	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	168.6	14.8	0.7	0.2
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	910	-	-	145	598	434	1049	-	-
HCM Lane V/C Ratio	0.05	-	-	1.205	0.06	0.152	0.018	-	-
HCM Control Delay (s)	9.2	-	-	200.8	11.4	14.8	8.5	0	-
HCM Lane LOS	A	-	-	F	B	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	10.2	0.2	0.5	0.1	-	-

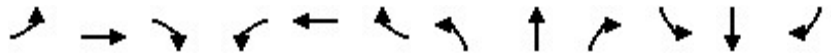
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	75.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	393	2	1	444	125	16	35	9	110	18	39
Future Vol, veh/h	46	393	2	1	444	125	16	35	9	110	18	39
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	58	497	3	1	562	158	20	44	11	139	23	49
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	49.7	118.8	13.1	16.4
HCM LOS	E	F	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	10%	0%	66%
Vol Thru, %	58%	89%	78%	11%
Vol Right, %	15%	0%	22%	23%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	441	570	167
LT Vol	16	46	1	110
Through Vol	35	393	444	18
RT Vol	9	2	125	39
Lane Flow Rate	76	558	722	211
Geometry Grp	1	1	1	1
Degree of Util (X)	0.166	0.94	1.18	0.427
Departure Headway (Hd)	8.455	6.4	5.889	7.749
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	427	569	613	467
Service Time	6.455	4.4	3.969	5.749
HCM Lane V/C Ratio	0.178	0.981	1.178	0.452
HCM Control Delay	13.1	49.7	118.8	16.4
HCM Lane LOS	B	E	F	C
HCM 95th-tile Q	0.6	12.1	24.5	2.1



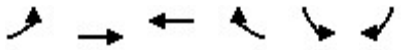
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	1543	451	497	1799	179	516	564	365	113	472	214
Future Volume (veh/h)	174	1543	451	497	1799	179	516	564	365	113	472	214
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.91	1.00		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	193	1714	501	552	1999	199	573	627	406	126	524	238
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	221	2760	1440	581	2916	1278	500	592	383	109	493	222
Arrive On Green	0.04	0.25	0.25	0.22	1.00	1.00	0.14	0.29	0.29	0.06	0.21	0.21
Sat Flow, veh/h	1810	3610	1584	3510	3610	1582	3510	2016	1304	1810	2307	1040
Grp Volume(v), veh/h	193	1714	501	552	1999	199	573	561	472	126	409	353
Grp Sat Flow(s),veh/h/ln	1810	1805	1584	1755	1805	1582	1755	1805	1515	1810	1805	1542
Q Serve(g_s), s	13.8	54.7	13.6	20.2	0.0	0.0	18.5	38.2	38.2	7.8	27.8	27.8
Cycle Q Clear(g_c), s	13.8	54.7	13.6	20.2	0.0	0.0	18.5	38.2	38.2	7.8	27.8	27.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.67
Lane Grp Cap(c), veh/h	221	2760	1440	581	2916	1278	500	530	445	109	386	330
V/C Ratio(X)	0.87	0.62	0.35	0.95	0.69	0.16	1.15	1.06	1.06	1.16	1.06	1.07
Avail Cap(c_a), veh/h	299	2760	1440	581	2916	1278	500	530	445	109	386	330
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.68	0.68	0.68	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	31.9	3.8	50.2	0.0	0.0	55.7	45.9	45.9	61.1	51.1	51.1
Incr Delay (d2), s/veh	1.7	0.1	0.1	19.6	0.9	0.2	87.4	55.4	59.2	135.9	62.6	69.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	26.3	5.4	9.7	0.4	0.1	14.1	24.8	21.3	7.6	19.0	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.1	32.0	3.9	69.8	0.9	0.2	143.2	101.3	105.1	197.0	113.7	120.4
LnGrp LOS	E	C	A	E	A	A	F	F	F	F	F	F
Approach Vol, veh/h		2408			2750			1606			888	
Approach Delay, s/veh		28.6			14.7			117.4			128.2	
Approach LOS		C			B			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	108.4	24.0	33.6	21.4	114.0	13.6	44.0
Change Period (Y+Rc), s	5.5	7.2	5.5	5.8	5.5	7.2	5.8	* 5.8
Max Green Setting (Gmax), s	21.5	40.0	18.5	26.0	21.5	40.0	7.8	* 38
Max Q Clear Time (g_c+I1), s	22.2	56.7	20.5	29.8	15.8	2.0	9.8	40.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	23.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.8
HCM 6th LOS	D

Notes

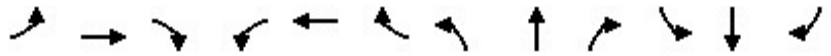
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	163	1916	1926	36	55	254
Future Volume (veh/h)	163	1916	1926	36	55	254
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	175	2060	2071	39	59	273
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	174	3739	3092	58	342	304
Arrive On Green	0.19	1.00	1.00	1.00	0.19	0.19
Sat Flow, veh/h	1810	5358	5410	99	1810	1610
Grp Volume(v), veh/h	175	2060	1366	744	59	273
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1880	1810	1610
Q Serve(g_s), s	12.5	0.0	0.0	0.0	3.6	21.5
Cycle Q Clear(g_c), s	12.5	0.0	0.0	0.0	3.6	21.5
Prop In Lane	1.00			0.05	1.00	1.00
Lane Grp Cap(c), veh/h	174	3739	2041	1109	342	304
V/C Ratio(X)	1.01	0.55	0.67	0.67	0.17	0.90
Avail Cap(c_a), veh/h	174	3739	2041	1109	619	551
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.15	0.15	1.00	1.00
Uniform Delay (d), s/veh	52.5	0.0	0.0	0.0	44.2	51.5
Incr Delay (d2), s/veh	21.9	0.1	0.3	0.5	0.2	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	0.1	0.2	1.6	18.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	74.4	0.1	0.3	0.5	44.4	60.7
LnGrp LOS	F	A	A	A	D	E
Approach Vol, veh/h		2235	2110		332	
Approach Delay, s/veh		5.9	0.3		57.8	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		100.9		29.1	17.0	83.9
Change Period (Y+Rc), s		7.2		4.5	4.5	7.2
Max Green Setting (Gmax), s		73.8		44.5	12.5	56.8
Max Q Clear Time (g_c+I1), s		2.0		23.5	14.5	2.0
Green Ext Time (p_c), s		27.2		1.1	0.0	23.9

Intersection Summary						
HCM 6th Ctrl Delay			7.1			
HCM 6th LOS			A			



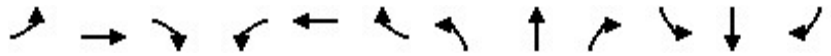
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	37	10	720	36	58	3	2000	616	208	1219	19
Future Volume (veh/h)	67	37	10	720	36	58	3	2000	616	208	1219	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	70	39	10	750	38	60	3	2083	642	217	1270	20
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	273	89	23	500	117	97	10	1974	1109	146	2246	980
Arrive On Green	0.15	0.06	0.06	0.14	0.06	0.06	0.00	0.37	0.37	0.08	0.62	0.62
Sat Flow, veh/h	1810	1457	374	3510	1900	1566	1810	3610	1608	1810	3610	1574
Grp Volume(v), veh/h	70	0	49	750	38	60	3	2083	642	217	1270	20
Grp Sat Flow(s),veh/h/ln	1810	0	1831	1755	1900	1566	1810	1805	1608	1810	1805	1574
Q Serve(g_s), s	4.4	0.0	3.4	18.5	2.5	4.1	0.2	71.1	11.4	10.5	26.7	0.2
Cycle Q Clear(g_c), s	4.4	0.0	3.4	18.5	2.5	4.1	0.2	71.1	11.4	10.5	26.7	0.2
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	0	111	500	117	97	10	1974	1109	146	2246	980
V/C Ratio(X)	0.26	0.00	0.44	1.50	0.32	0.62	0.30	1.06	0.58	1.48	0.57	0.02
Avail Cap(c_a), veh/h	273	0	467	500	693	571	104	1974	1109	146	2246	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	0.0	58.9	55.7	58.4	41.9	64.5	41.2	4.4	59.7	14.3	1.2
Incr Delay (d2), s/veh	0.2	0.0	2.7	235.9	1.6	6.4	0.6	26.2	0.2	250.9	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.7	24.3	1.2	2.0	0.1	39.0	4.2	14.9	10.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.0	0.0	61.6	291.7	60.0	48.3	65.1	67.4	4.6	310.7	15.4	1.3
LnGrp LOS	D	A	E	F	E	D	E	F	A	F	B	A
Approach Vol, veh/h		119			848			2728			1507	
Approach Delay, s/veh		54.2			264.1			52.6			57.7	
Approach LOS		D			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	77.3	24.0	13.7	5.2	87.1	25.1	12.6
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	5.5	* 4.6
Max Green Setting (Gmax), s	10.5	45.8	18.5	33.2	7.5	48.8	7.0	* 47
Max Q Clear Time (g_c+I1), s	12.5	73.1	20.5	5.4	2.2	28.7	6.4	6.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	8.5	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	88.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	634	57	105	140	64	48	239	2263	98	10	1140	680
Future Volume (veh/h)	634	57	105	140	64	48	239	2263	98	10	1140	680
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	682	61	113	151	69	52	257	2433	105	11	1226	731
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	223	186	259	114	86	306	2018	898	32	1383	852
Arrive On Green	0.15	0.12	0.12	0.14	0.11	0.11	0.22	0.74	0.74	0.02	0.38	0.38
Sat Flow, veh/h	3510	1900	1590	1810	999	753	1810	3610	1607	1810	3610	1606
Grp Volume(v), veh/h	682	61	113	151	0	121	257	2433	105	11	1226	731
Grp Sat Flow(s),veh/h/ln	1755	1900	1590	1810	0	1753	1810	1805	1607	1810	1805	1606
Q Serve(g_s), s	19.1	3.8	8.8	10.1	0.0	8.5	17.7	72.7	1.1	0.8	41.2	22.1
Cycle Q Clear(g_c), s	19.1	3.8	8.8	10.1	0.0	8.5	17.7	72.7	1.1	0.8	41.2	22.1
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	223	186	259	0	200	306	2018	898	32	1383	852
V/C Ratio(X)	1.32	0.27	0.61	0.58	0.00	0.60	0.84	1.21	0.12	0.34	0.89	0.86
Avail Cap(c_a), veh/h	516	678	567	259	0	445	306	2018	898	97	1383	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.22	0.22	0.22	0.63	0.63	0.63
Uniform Delay (d), s/veh	55.4	52.3	54.5	52.1	0.0	54.8	48.7	16.7	1.6	63.1	37.5	10.6
Incr Delay (d2), s/veh	158.2	0.7	3.2	3.3	0.0	2.9	4.8	93.8	0.1	4.0	5.8	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	1.8	3.7	4.9	0.0	4.0	7.7	43.0	0.8	0.4	18.3	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	213.6	53.0	57.7	55.4	0.0	57.7	53.6	110.5	1.7	67.1	43.2	17.9
LnGrp LOS	F	D	E	E	A	E	D	F	A	E	D	B
Approach Vol, veh/h		856			272			2795			1968	
Approach Delay, s/veh		181.6			56.4			101.2			33.9	
Approach LOS		F			E			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	79.9	24.0	19.8	29.1	57.0	23.6	20.3
Change Period (Y+Rc), s	4.0	7.2	5.4	* 4.6	7.2	* 7.2	4.5	5.4
Max Green Setting (Gmax), s	7.3	49.8	7.0	* 46	7.0	* 50	19.1	33.0
Max Q Clear Time (g_c+I1), s	12.8	74.7	12.1	10.8	19.7	43.2	21.1	10.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	4.9	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	88.3
HCM 6th LOS	F

Notes

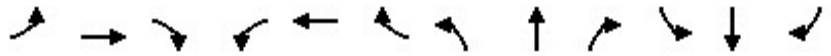
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	111	608	1992	65	187	1196
Future Volume (veh/h)	111	608	1992	65	187	1196
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	122	668	2189	71	205	1314
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	221	559	2432	1083	263	2855
Arrive On Green	0.12	0.12	0.67	0.67	0.15	1.00
Sat Flow, veh/h	1810	2834	3705	1608	3510	3705
Grp Volume(v), veh/h	122	668	2189	71	205	1314
Grp Sat Flow(s),veh/h/ln	1810	1417	1805	1608	1755	1805
Q Serve(g_s), s	8.2	15.9	65.4	2.0	7.3	0.0
Cycle Q Clear(g_c), s	8.2	15.9	65.4	2.0	7.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	221	559	2432	1083	263	2855
V/C Ratio(X)	0.55	1.20	0.90	0.07	0.78	0.46
Avail Cap(c_a), veh/h	221	559	2432	1083	527	2855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.76	0.76
Uniform Delay (d), s/veh	53.7	52.2	17.6	7.2	54.2	0.0
Incr Delay (d2), s/veh	2.9	104.5	0.6	0.0	3.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	17.1	22.5	0.6	3.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.6	156.7	18.2	7.3	58.1	0.4
LnGrp LOS	E	F	B	A	E	A
Approach Vol, veh/h	790		2260			1519
Approach Delay, s/veh	141.2		17.8			8.2
Approach LOS	F		B			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	15.2	93.8				109.0	21.0
Change Period (Y+Rc), s	5.5	6.2				6.2	5.1
Max Green Setting (Gmax), s	9.5	77.8				102.8	15.9
Max Q Clear Time (g_c+I1), s	9.3	67.4				2.0	17.9
Green Ext Time (p_c), s	0.4	9.0				12.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.0
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	67	45	388	161	593	68	1366	276	350	983	31
Future Volume (veh/h)	97	67	45	388	161	593	68	1366	276	350	983	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	118	82	55	473	196	723	83	1666	337	427	1199	38
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	143	119	80	326	423	938	106	1554	690	405	1788	792
Arrive On Green	0.08	0.11	0.11	0.18	0.22	0.22	0.02	0.14	0.14	0.23	0.99	0.99
Sat Flow, veh/h	1810	1057	709	1810	1900	2744	1810	3610	1602	3510	3610	1599
Grp Volume(v), veh/h	118	0	137	473	196	723	83	1666	337	427	1199	38
Grp Sat Flow(s),veh/h/ln	1810	0	1766	1810	1900	1372	1810	1805	1602	1755	1805	1599
Q Serve(g_s), s	8.4	0.0	9.7	23.4	11.6	22.2	5.9	56.0	13.8	15.0	1.2	0.0
Cycle Q Clear(g_c), s	8.4	0.0	9.7	23.4	11.6	22.2	5.9	56.0	13.8	15.0	1.2	0.0
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	0	199	326	423	938	106	1554	690	405	1788	792
V/C Ratio(X)	0.82	0.00	0.69	1.45	0.46	0.77	0.79	1.07	0.49	1.05	0.67	0.05
Avail Cap(c_a), veh/h	237	0	492	326	547	1117	223	1554	690	405	1788	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80	0.88	0.88	0.88
Uniform Delay (d), s/veh	59.0	0.0	55.5	53.3	43.8	21.2	62.9	55.8	12.7	50.0	0.3	0.1
Incr Delay (d2), s/veh	4.5	0.0	4.2	219.8	0.8	2.8	3.9	42.8	2.0	57.0	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	4.6	30.5	5.6	7.4	2.9	36.2	6.2	8.7	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.5	0.0	59.7	273.1	44.6	24.0	66.8	98.6	14.7	107.0	2.1	0.2
LnGrp LOS	E	A	E	F	D	C	E	F	B	F	A	A
Approach Vol, veh/h		255			1392			2086			1664	
Approach Delay, s/veh		61.5			111.6			83.7			29.0	
Approach LOS		E			F			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	62.2	27.4	20.4	11.6	70.6	14.3	33.6
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	4.0	4.6
Max Green Setting (Gmax), s	15.0	40.8	17.0	36.2	16.0	40.8	17.0	37.4
Max Q Clear Time (g_c+I1), s	17.0	58.0	25.4	11.7	7.9	3.2	10.4	24.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	9.9	0.1	3.8

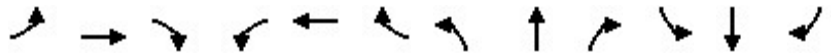
Intersection Summary	
HCM 6th Ctrl Delay	73.0
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	10	55	32	8	56	85	1231	22	79	1090	44
Future Volume (veh/h)	62	10	55	32	8	56	85	1231	22	79	1090	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	72	12	64	37	9	65	99	1431	26	92	1267	51
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	165	32	171	164	25	177	121	2480	1105	116	2470	1101
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.13	1.00	1.00	0.04	0.46	0.46
Sat Flow, veh/h	1342	259	1384	1339	199	1435	1810	3610	1609	1810	3610	1609
Grp Volume(v), veh/h	72	0	76	37	0	74	99	1431	26	92	1267	51
Grp Sat Flow(s),veh/h/ln	1342	0	1643	1339	0	1633	1810	1805	1609	1810	1805	1609
Q Serve(g_s), s	6.8	0.0	5.5	3.4	0.0	5.4	6.9	0.0	0.0	6.5	32.3	2.3
Cycle Q Clear(g_c), s	12.2	0.0	5.5	8.9	0.0	5.4	6.9	0.0	0.0	6.5	32.3	2.3
Prop In Lane	1.00		0.84	1.00		0.88	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	0	203	164	0	202	121	2480	1105	116	2470	1101
V/C Ratio(X)	0.44	0.00	0.37	0.23	0.00	0.37	0.82	0.58	0.02	0.79	0.51	0.05
Avail Cap(c_a), veh/h	351	0	430	349	0	427	174	2480	1105	480	2470	1101
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.29	0.29	0.29
Uniform Delay (d), s/veh	57.9	0.0	52.4	56.5	0.0	52.3	55.5	0.0	0.0	61.4	19.9	11.7
Incr Delay (d2), s/veh	1.8	0.0	1.1	0.7	0.0	1.1	1.2	0.1	0.0	1.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	2.4	1.2	0.0	2.3	2.9	0.0	0.0	3.0	14.2	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.7	0.0	53.5	57.2	0.0	53.4	56.8	0.1	0.0	62.7	20.1	11.8
LnGrp LOS	E	A	D	E	A	D	E	A	A	E	C	B
Approach Vol, veh/h		148			111			1556			1410	
Approach Delay, s/veh		56.5			54.7			3.7			22.6	
Approach LOS		E			D			A			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.8	96.5		20.7	13.2	96.2		20.7
Change Period (Y+Rc), s	4.5	7.2		4.6	4.5	7.2		4.6
Max Green Setting (Gmax), s	24.5	45.2		34.0	12.5	67.2		34.0
Max Q Clear Time (g_c+I1), s	8.5	2.0		14.2	8.9	34.3		10.9
Green Ext Time (p_c), s	0.1	13.4		0.6	0.0	10.4		0.5

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B



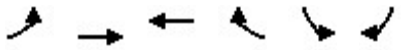
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	441	1389	142	194	1754	494	233	773	151	485	454	406
Future Volume (veh/h)	441	1389	142	194	1754	494	233	773	151	485	454	406
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	479	1510	154	211	1907	537	253	840	164	527	493	441
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1378	2296	1234	234	1867	760	237	902	176	394	1026	1082
Arrive On Green	0.52	0.85	0.85	0.26	0.72	0.72	0.13	0.30	0.30	0.19	0.47	0.47
Sat Flow, veh/h	3510	3610	1609	1810	5187	1609	1810	3010	588	3510	3610	1585
Grp Volume(v), veh/h	479	1510	154	211	1907	537	253	504	500	527	493	441
Grp Sat Flow(s),veh/h/ln	1755	1805	1609	1810	1729	1609	1810	1805	1792	1755	1805	1585
Q Serve(g_s), s	10.4	18.9	1.4	14.6	46.8	0.0	17.0	35.3	35.3	14.6	12.1	8.4
Cycle Q Clear(g_c), s	10.4	18.9	1.4	14.6	46.8	0.0	17.0	35.3	35.3	14.6	12.1	8.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	1378	2296	1234	234	1867	760	237	541	537	394	1026	1082
V/C Ratio(X)	0.35	0.66	0.12	0.90	1.02	0.71	1.07	0.93	0.93	1.34	0.48	0.41
Avail Cap(c_a), veh/h	1378	2296	1234	383	1867	760	237	555	551	394	1026	1082
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.87	0.87	0.87	0.68	0.68	0.68	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	21.4	5.1	1.6	47.4	18.2	9.3	56.5	44.2	44.2	52.8	27.6	11.8
Incr Delay (d2), s/veh	0.0	1.3	0.2	7.1	22.8	3.8	78.0	22.4	22.6	165.8	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.0	0.4	6.0	10.2	5.1	12.8	18.7	18.6	14.8	4.5	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	6.4	1.7	54.5	41.0	13.0	134.5	66.7	66.8	218.6	27.9	12.0
LnGrp LOS	C	A	A	D	F	B	F	E	E	F	C	B
Approach Vol, veh/h		2143			2655			1257			1461	
Approach Delay, s/veh		9.4			36.4			80.4			91.9	
Approach LOS		A			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.3	90.2	22.0	43.1	58.6	53.0	20.8	44.3
Change Period (Y+Rc), s	4.5	6.2	5.0	6.2	6.2	* 6.2	6.2	* 5.4
Max Green Setting (Gmax), s	27.5	26.8	17.0	36.8	7.0	* 47	14.6	* 40
Max Q Clear Time (g_c+I1), s	16.6	20.9	19.0	14.1	12.4	48.8	16.6	37.3
Green Ext Time (p_c), s	0.2	4.4	0.0	4.6	0.0	0.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	46.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



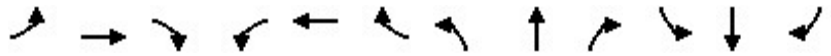
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	37	1985	2037	103	85	35
Future Volume (veh/h)	37	1985	2037	103	85	35
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	2112	2167	110	90	37
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	671	3060	2129	107	120	107
Arrive On Green	0.74	1.00	0.84	0.84	0.07	0.07
Sat Flow, veh/h	1810	3705	5221	255	1810	1610
Grp Volume(v), veh/h	39	2112	1480	797	90	37
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1847	1810	1610
Q Serve(g_s), s	0.8	0.0	54.8	54.8	6.4	2.9
Cycle Q Clear(g_c), s	0.8	0.0	54.8	54.8	6.4	2.9
Prop In Lane	1.00			0.14	1.00	1.00
Lane Grp Cap(c), veh/h	671	3060	1458	779	120	107
V/C Ratio(X)	0.06	0.69	1.02	1.02	0.75	0.35
Avail Cap(c_a), veh/h	671	3060	1458	779	487	434
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	10.7	0.0	10.2	10.2	59.6	58.0
Incr Delay (d2), s/veh	0.0	0.1	11.3	16.6	9.1	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	6.1	7.7	3.2	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.7	0.1	21.5	26.8	68.7	59.9
LnGrp LOS	B	A	F	F	E	E
Approach Vol, veh/h		2151	2277		127	
Approach Delay, s/veh		0.3	23.4		66.1	
Approach LOS		A	C		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	117.4		12.6	55.4	62.0
Change Period (Y+Rc), s	7.2		4.0	7.2	* 7.2
Max Green Setting (Gmax), s	83.8		35.0	24.5	* 55
Max Q Clear Time (g_c+I1), s	2.0		8.4	2.8	56.8
Green Ext Time (p_c), s	34.1		0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	1552	401	374	1870	35	447	110	460	87	164	358
Future Volume (veh/h)	205	1552	401	374	1870	35	447	110	460	87	164	358
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	220	1669	431	402	2011	38	481	118	495	94	176	385
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1659	3136	776	425	2048	39	459	646	547	97	135	296
Arrive On Green	0.30	0.36	0.36	0.24	0.39	0.39	0.13	0.34	0.34	0.05	0.26	0.26
Sat Flow, veh/h	1810	2868	709	1810	5241	99	3510	1900	1610	1810	531	1161
Grp Volume(v), veh/h	220	1023	1077	402	1326	723	481	118	495	94	0	561
Grp Sat Flow(s),veh/h/ln	1810	1805	1772	1810	1729	1882	1755	1900	1610	1810	0	1691
Q Serve(g_s), s	11.5	0.0	0.0	28.4	49.3	49.4	17.0	5.7	38.1	6.7	0.0	33.2
Cycle Q Clear(g_c), s	11.5	0.0	0.0	28.4	49.3	49.4	17.0	5.7	38.1	6.7	0.0	33.2
Prop In Lane	1.00		0.40	1.00		0.05	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	1659	1974	1938	425	1351	736	459	646	547	97	0	432
V/C Ratio(X)	0.13	0.52	0.56	0.95	0.98	0.98	1.05	0.18	0.90	0.96	0.00	1.30
Avail Cap(c_a), veh/h	1659	1974	1938	452	1351	736	459	646	547	97	0	432
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.8	0.0	0.0	48.9	39.1	39.2	56.5	30.2	40.9	61.4	0.0	48.4
Incr Delay (d2), s/veh	0.0	0.6	0.7	27.4	20.4	29.3	55.1	0.1	18.5	79.0	0.0	150.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.4	15.6	23.4	27.3	10.8	2.6	17.3	5.3	0.0	32.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	0.6	0.7	76.3	59.6	68.4	111.6	30.3	59.3	140.4	0.0	199.1
LnGrp LOS	A	A	A	E	E	E	F	C	E	F	A	F
Approach Vol, veh/h		2320			2451			1094			655	
Approach Delay, s/veh		1.4			64.9			79.2			190.7	
Approach LOS		A			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.1	152.7	22.0	39.0	129.8	58.0	11.0	50.0
Change Period (Y+Rc), s	4.5	7.2	5.0	* 5.8	7.2	* 7.2	4.0	5.8
Max Green Setting (Gmax), s	32.5	26.0	17.0	* 33	7.2	* 51	7.0	43.0
Max Q Clear Time (g_c+I1), s	30.4	2.0	19.0	35.2	13.5	51.4	8.7	40.1
Green Ext Time (p_c), s	0.2	17.2	0.0	0.0	0.0	0.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	57.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	2173	0	0	2542	8	0	0	0	0	0	0
Future Vol, veh/h	0	2173	0	0	2542	8	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2312	0	0	2704	9	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1156	-	-	1357
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*179	0	0	*36
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*179	-	-	*36
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	0
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	22	513	271	166
Future Vol, veh/h	0	0	22	513	271	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	85	85	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	23	604	319	175

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1057	407	494	0	-	0
Stage 1	407	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	251	648	1080	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	523	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	243	648	1080	-	-	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	654	-	-	-	-	-
Stage 2	523	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1080	-	-	-	-
HCM Lane V/C Ratio	0.021	-	-	-	-
HCM Control Delay (s)	8.4	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	188	49	41	330	187	77
Future Vol, veh/h	188	49	41	330	187	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	85	85	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	198	52	43	388	220	81

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	735	261	301	0	-	0
Stage 1	261	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	390	783	1272	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	630	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	373	783	1272	-	-	-
Mov Cap-2 Maneuver	373	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	630	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.6	0.8	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1272	-	418	-	-
HCM Lane V/C Ratio	0.034	-	0.597	-	-
HCM Control Delay (s)	7.9	0	25.6	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	3.8	-	-

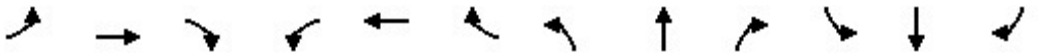
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	380	239	1
Future Vol, veh/h	1	0	0	380	239	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	87	87	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	0	437	275	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	713	276	276	0	-	0
Stage 1	276	-	-	-	-	-
Stage 2	437	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	401	768	1299	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	401	768	1299	-	-	-
Mov Cap-2 Maneuver	401	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	655	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1299	-	401	-	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	0	-	14	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



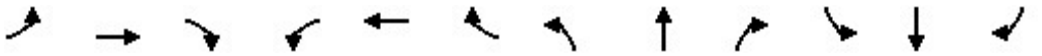
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1545	117	230	1637	676	134	353	187	734	341	118
Future Volume (veh/h)	150	1545	117	230	1637	676	134	353	187	734	341	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	160	1644	124	245	1741	719	143	376	199	781	363	126
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	146	2104	157	132	2204	982	196	499	221	621	949	422
Arrive On Green	0.08	0.62	0.62	0.07	0.61	0.61	0.06	0.14	0.14	0.18	0.26	0.26
Sat Flow, veh/h	1810	3404	255	1810	3610	1609	3510	3610	1600	3510	3610	1605
Grp Volume(v), veh/h	160	865	903	245	1741	719	143	376	199	781	363	126
Grp Sat Flow(s),veh/h/ln	1810	1805	1854	1810	1805	1609	1755	1805	1600	1755	1805	1605
Q Serve(g_s), s	10.5	45.7	47.1	9.5	47.2	40.9	5.2	13.0	15.9	23.0	10.7	8.2
Cycle Q Clear(g_c), s	10.5	45.7	47.1	9.5	47.2	40.9	5.2	13.0	15.9	23.0	10.7	8.2
Prop In Lane	1.00		0.14	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	1116	1146	132	2204	982	196	499	221	621	949	422
V/C Ratio(X)	1.09	0.78	0.79	1.85	0.79	0.73	0.73	0.75	0.90	1.26	0.38	0.30
Avail Cap(c_a), veh/h	146	1116	1146	132	2204	982	267	500	221	621	949	422
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	18.2	18.5	60.2	19.1	17.8	60.4	53.9	55.1	53.5	39.3	38.3
Incr Delay (d2), s/veh	102.1	5.3	5.5	411.3	3.0	4.8	6.3	6.4	34.9	128.6	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	18.3	19.4	19.3	18.2	15.5	2.5	6.3	8.5	21.0	4.7	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.8	23.5	24.0	471.6	22.0	22.7	66.7	60.3	90.1	182.1	39.5	38.7
LnGrp LOS	F	C	C	F	C	C	E	E	F	F	D	D
Approach Vol, veh/h		1928			2705			718			1270	
Approach Delay, s/veh		35.2			62.9			69.8			127.1	
Approach LOS		D			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	87.2	11.8	40.0	15.0	86.2	28.0	23.8
Change Period (Y+Rc), s	4.5	6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	9.5	58.7	9.9	30.9	10.5	57.7	23.0	* 18
Max Q Clear Time (g_c+I1), s	11.5	49.1	7.2	12.7	12.5	49.2	25.0	17.9
Green Ext Time (p_c), s	0.0	7.0	0.1	2.3	0.0	7.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	67.9
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	2264	180	53	2488	102	91	31	29	112	27	62
Future Volume (veh/h)	135	2264	180	53	2488	102	91	31	29	112	27	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	147	2461	196	58	2704	111	99	34	32	122	29	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	104	2394	1066	85	2305	94	111	68	64	111	39	89
Arrive On Green	0.06	0.66	0.66	0.06	0.87	0.87	0.06	0.08	0.08	0.06	0.08	0.08
Sat Flow, veh/h	1810	3610	1608	1810	3531	144	1810	898	845	1810	508	1175
Grp Volume(v), veh/h	147	2461	196	58	1371	1444	99	0	66	122	0	96
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1810	1805	1870	1810	0	1744	1810	0	1683
Q Serve(g_s), s	7.5	86.2	6.1	4.1	84.9	84.9	7.1	0.0	4.7	8.0	0.0	7.3
Cycle Q Clear(g_c), s	7.5	86.2	6.1	4.1	84.9	84.9	7.1	0.0	4.7	8.0	0.0	7.3
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.48	1.00		0.70
Lane Grp Cap(c), veh/h	104	2394	1066	85	1178	1221	111	0	132	111	0	128
V/C Ratio(X)	1.41	1.03	0.18	0.68	1.16	1.18	0.89	0.00	0.50	1.10	0.00	0.75
Avail Cap(c_a), veh/h	104	2394	1066	104	1178	1221	111	0	241	111	0	240
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.36	0.36	0.36	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.3	21.9	8.4	60.0	8.6	8.6	60.6	0.0	57.7	61.0	0.0	58.9
Incr Delay (d2), s/veh	231.0	26.0	0.4	4.7	77.5	85.5	52.3	0.0	2.9	113.3	0.0	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	38.4	2.1	1.9	30.6	34.4	4.8	0.0	2.2	7.2	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	292.2	47.9	8.8	64.7	86.1	94.1	112.8	0.0	60.6	174.3	0.0	67.5
LnGrp LOS	F	F	A	E	F	F	F	A	E	F	A	E
Approach Vol, veh/h		2804			2873			165			218	
Approach Delay, s/veh		57.9			89.7			91.9			127.3	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	92.4	12.0	14.9	12.0	91.1	12.0	14.9
Change Period (Y+Rc), s	4.5	6.2	4.0	* 5.1	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.5	76.7	8.0	* 19	7.5	76.7	8.0	18.0
Max Q Clear Time (g_c+I1), s	6.1	88.2	9.1	9.3	9.5	86.9	10.0	6.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	76.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2365	39	118	2610	45	134
Future Volume (veh/h)	2365	39	118	2610	45	134
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2489	41	124	2747	47	141
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2559	1142	142	2954	187	166
Arrive On Green	0.94	0.94	0.16	1.00	0.10	0.10
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	2489	41	124	2747	47	141
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	61.6	0.2	8.7	0.0	3.1	11.2
Cycle Q Clear(g_c), s	61.6	0.2	8.7	0.0	3.1	11.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2559	1142	142	2954	187	166
V/C Ratio(X)	0.97	0.04	0.87	0.93	0.25	0.85
Avail Cap(c_a), veh/h	2559	1142	142	2954	262	233
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.8	1.1	54.2	0.0	53.7	57.3
Incr Delay (d2), s/veh	1.9	0.0	40.8	6.7	0.7	18.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.1	5.2	2.7	1.5	5.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.8	1.1	95.0	6.7	54.4	75.4
LnGrp LOS	A	A	F	A	D	E
Approach Vol, veh/h	2530			2871	188	
Approach Delay, s/veh	4.7			10.5	70.2	
Approach LOS	A			B	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	14.2	98.4				112.6	17.4
Change Period (Y+Rc), s	4.0	6.2				* 6.2	4.0
Max Green Setting (Gmax), s	10.2	86.8				* 1E2	18.8
Max Q Clear Time (g_c+I1), s	10.7	63.6				2.0	13.2
Green Ext Time (p_c), s	0.0	19.5				68.5	0.3

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2494	5	0	2728	0	2
Future Vol, veh/h	2494	5	0	2728	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2771	6	0	3031	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1386
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	*36
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*36
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	111.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	36	-	-	-
HCM Lane V/C Ratio	0.062	-	-	-
HCM Control Delay (s)	111.5	-	-	-
HCM Lane LOS	F	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

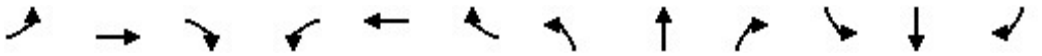
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	122	2375	2655	21	2	72
Future Vol, veh/h	122	2375	2655	21	2	72
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	136	2639	2950	23	2	80

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2976	0	-	0	4557	1490
Stage 1	-	-	-	-	2965	-
Stage 2	-	-	-	-	1592	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*101	-
Platoon blocked, %	2	-	-	-	2	2
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*101	-

Approach	EB	WB	SB
HCM Control Delay, s		0	
HCM LOS			-

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	-	-	-
HCM Lane LOS	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	2001	291	176	2321	77	313	83	218	106	40	63
Future Volume (veh/h)	89	2001	291	176	2321	77	313	83	218	106	40	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	97	2175	316	191	2523	84	340	90	237	115	43	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	1644	233	97	1871	828	403	97	256	174	406	336
Arrive On Green	0.02	0.17	0.17	0.07	0.69	0.69	0.05	0.21	0.21	0.05	0.21	0.21
Sat Flow, veh/h	1810	3171	449	1810	3610	1598	1810	454	1196	1810	1900	1572
Grp Volume(v), veh/h	97	1214	1277	191	2523	84	340	0	327	115	43	68
Grp Sat Flow(s),veh/h/ln	1810	1805	1815	1810	1805	1598	1810	0	1650	1810	1900	1572
Q Serve(g_s), s	7.0	67.4	67.4	7.0	67.4	2.3	7.0	0.0	25.3	6.5	2.4	4.6
Cycle Q Clear(g_c), s	7.0	67.4	67.4	7.0	67.4	2.3	7.0	0.0	25.3	6.5	2.4	4.6
Prop In Lane	1.00		0.25	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	97	936	941	97	1871	828	403	0	353	174	406	336
V/C Ratio(X)	1.00	1.30	1.36	1.96	1.35	0.10	0.84	0.00	0.93	0.66	0.11	0.20
Avail Cap(c_a), veh/h	97	936	941	97	1871	828	403	0	381	174	438	363
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	53.9	53.9	60.3	20.2	10.1	46.7	0.0	50.1	40.0	41.1	42.0
Incr Delay (d2), s/veh	89.6	141.6	167.9	435.5	157.1	0.0	14.3	0.0	27.3	7.3	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	69.2	76.5	14.9	59.5	0.8	9.0	0.0	13.2	3.3	1.1	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	153.4	195.5	221.8	495.8	177.2	10.1	61.0	0.0	77.4	47.3	41.2	42.3
LnGrp LOS	F	F	F	F	F	B	E	A	E	D	D	D
Approach Vol, veh/h		2588			2798			667			226	
Approach Delay, s/veh		206.9			194.0			69.1			44.6	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	74.6	11.0	32.4	12.0	74.6	11.0	32.4
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	7.0	65.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	9.0	69.4	9.0	6.6	9.0	69.4	8.5	27.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	180.7
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	14.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	172	1	36	6	0	25	18	345	9	18	352	94
Future Vol, veh/h	172	1	36	6	0	25	18	345	9	18	352	94
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	76	95	76	95	76	76	76	76	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	181	1	38	8	0	33	19	454	12	24	463	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1026	1015	463	1078	1108	460	562	0	0	466	0	0
Stage 1	511	511	-	498	498	-	-	-	-	-	-	-
Stage 2	515	504	-	580	610	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	215	240	603	198	212	605	1019	-	-	1106	-	-
Stage 1	549	540	-	558	548	-	-	-	-	-	-	-
Stage 2	546	544	-	504	488	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	195	227	603	177	200	605	1019	-	-	1106	-	-
Mov Cap-2 Maneuver	195	227	-	177	200	-	-	-	-	-	-	-
Stage 1	535	523	-	544	534	-	-	-	-	-	-	-
Stage 2	503	530	-	456	472	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	83	14.7	0.3	0.3
HCM LOS	F	B		

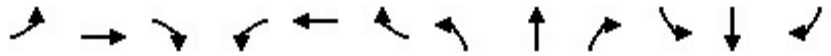
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1019	-	-	195	603	412	1106	-	-
HCM Lane V/C Ratio	0.019	-	-	0.934	0.063	0.099	0.021	-	-
HCM Control Delay (s)	8.6	-	-	97.9	11.4	14.7	8.3	0	-
HCM Lane LOS	A	-	-	F	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	7.5	0.2	0.3	0.1	-	-

Intersection	
Intersection Delay, s/veh	45.7
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	350	27	7	284	71	13	32	9	179	41	73
Future Vol, veh/h	39	350	27	7	284	71	13	32	9	179	41	73
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	50	449	35	9	364	91	17	41	12	229	53	94
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	65.2	41	13.4	29.8
HCM LOS	F	E	B	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	24%	9%	2%	61%
Vol Thru, %	59%	84%	78%	14%
Vol Right, %	17%	6%	20%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	416	362	293
LT Vol	13	39	7	179
Through Vol	32	350	284	41
RT Vol	9	27	71	73
Lane Flow Rate	69	533	464	376
Geometry Grp	1	1	1	1
Degree of Util (X)	0.168	1	0.879	0.762
Departure Headway (Hd)	8.716	6.751	6.816	7.306
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	417	539	538	503
Service Time	6.659	4.81	4.77	5.234
HCM Lane V/C Ratio	0.165	0.989	0.862	0.748
HCM Control Delay	13.4	65.2	41	29.8
HCM Lane LOS	B	F	E	D
HCM 95th-tile Q	0.6	14.1	9.8	6.6



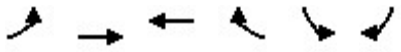
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1722	330	274	1975	123	405	412	268	129	329	260
Future Volume (veh/h)	202	1722	330	274	1975	123	405	412	268	129	329	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.76	1.00		0.71
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	213	1813	347	288	2079	129	426	434	282	136	346	274
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	239	3009	1470	338	2879	1236	419	545	346	111	428	271
Arrive On Green	0.13	0.83	0.83	0.10	0.80	0.80	0.12	0.29	0.29	0.06	0.24	0.24
Sat Flow, veh/h	1810	3610	1533	3510	3610	1549	3510	1864	1183	1810	1805	1145
Grp Volume(v), veh/h	213	1813	347	288	2079	129	426	420	296	136	346	274
Grp Sat Flow(s),veh/h/ln	1810	1805	1533	1755	1805	1549	1755	1805	1241	1810	1805	1145
Q Serve(g_s), s	15.1	21.8	1.8	10.5	35.7	6.0	15.5	27.9	28.8	8.0	23.5	30.8
Cycle Q Clear(g_c), s	15.1	21.8	1.8	10.5	35.7	6.0	15.5	27.9	28.8	8.0	23.5	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.95	1.00		1.00
Lane Grp Cap(c), veh/h	239	3009	1470	338	2879	1236	419	528	363	111	428	271
V/C Ratio(X)	0.89	0.60	0.24	0.85	0.72	0.10	1.02	0.80	0.82	1.22	0.81	1.01
Avail Cap(c_a), veh/h	313	3009	1470	338	2879	1236	419	528	363	111	428	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.52	0.52	0.52	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.5	3.6	0.2	57.8	6.3	18.5	57.3	42.4	42.7	61.0	46.8	49.6
Incr Delay (d2), s/veh	2.2	0.1	0.0	10.2	0.8	0.1	48.6	8.3	13.5	156.4	11.1	57.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	4.1	0.0	5.0	9.0	0.7	9.6	13.4	10.0	8.5	11.7	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.7	3.7	0.2	68.0	7.1	18.6	105.8	50.7	56.2	217.4	57.9	106.8
LnGrp LOS	E	A	A	E	A	B	F	D	E	F	E	F
Approach Vol, veh/h		2373			2496			1142			756	
Approach Delay, s/veh		8.0			14.7			72.7			104.3	
Approach LOS		A			B			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	117.4	21.0	36.6	22.7	112.7	13.8	43.8
Change Period (Y+Rc), s	5.5	7.2	5.5	5.8	5.5	7.2	5.8	* 5.8
Max Green Setting (Gmax), s	12.5	49.0	15.5	29.0	22.5	39.0	8.0	* 38
Max Q Clear Time (g_c+I1), s	12.5	23.8	17.5	32.8	17.1	37.7	10.0	30.8
Green Ext Time (p_c), s	0.0	16.4	0.0	0.0	0.1	1.2	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Notes

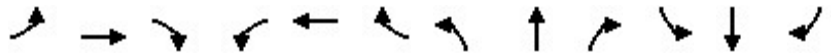
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	272	2033	2168	28	17	223
Future Volume (veh/h)	272	2033	2168	28	17	223
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	296	2210	2357	30	18	242
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	299	3849	2860	36	304	270
Arrive On Green	0.33	1.00	1.00	1.00	0.17	0.17
Sat Flow, veh/h	1810	5358	5447	67	1810	1610
Grp Volume(v), veh/h	296	2210	1543	844	18	242
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1885	1810	1610
Q Serve(g_s), s	21.2	0.0	0.0	0.0	1.1	19.1
Cycle Q Clear(g_c), s	21.2	0.0	0.0	0.0	1.1	19.1
Prop In Lane	1.00			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	299	3849	1875	1022	304	270
V/C Ratio(X)	0.99	0.57	0.82	0.83	0.06	0.90
Avail Cap(c_a), veh/h	299	3849	1875	1022	480	427
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.25	0.25	1.00	1.00
Uniform Delay (d), s/veh	43.4	0.0	0.0	0.0	45.5	53.0
Incr Delay (d2), s/veh	13.1	0.1	1.1	2.0	0.1	14.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	0.0	0.3	0.6	0.5	17.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.5	0.1	1.1	2.0	45.5	67.0
LnGrp LOS	E	A	A	A	D	E
Approach Vol, veh/h		2506	2387		260	
Approach Delay, s/veh		6.7	1.4		65.5	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		103.7		26.3	26.0	77.7
Change Period (Y+Rc), s		7.2		4.5	4.5	7.2
Max Green Setting (Gmax), s		83.8		34.5	21.5	57.8
Max Q Clear Time (g_c+I1), s		2.0		21.1	23.2	2.0
Green Ext Time (p_c), s		32.9		0.7	0.0	30.2

Intersection Summary		
HCM 6th Ctrl Delay		7.2
HCM 6th LOS		A



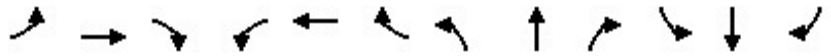
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	12	15	648	19	43	6	1756	548	151	1792	39
Future Volume (veh/h)	43	12	15	648	19	43	6	1756	548	151	1792	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	44	12	15	668	20	44	6	1810	565	156	1847	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	78	85	107	532	443	370	19	1809	1036	118	2007	887
Arrive On Green	0.04	0.11	0.11	0.15	0.23	0.23	0.00	0.17	0.17	0.07	0.56	0.56
Sat Flow, veh/h	1810	755	944	3510	1900	1589	1810	3610	1580	1810	3610	1596
Grp Volume(v), veh/h	44	0	27	668	20	44	6	1810	565	156	1847	40
Grp Sat Flow(s),veh/h/ln	1810	0	1700	1755	1900	1589	1810	1805	1580	1810	1805	1596
Q Serve(g_s), s	3.1	0.0	1.9	19.7	1.1	2.8	0.4	65.1	30.6	8.5	60.5	1.5
Cycle Q Clear(g_c), s	3.1	0.0	1.9	19.7	1.1	2.8	0.4	65.1	30.6	8.5	60.5	1.5
Prop In Lane	1.00		0.56	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	0	192	532	443	370	19	1809	1036	118	2007	887
V/C Ratio(X)	0.57	0.00	0.14	1.26	0.05	0.12	0.32	1.00	0.55	1.32	0.92	0.05
Avail Cap(c_a), veh/h	170	0	418	532	617	516	104	1809	1036	118	2007	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.38	0.38	0.38	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	0.0	52.0	55.2	38.6	39.3	64.3	54.3	22.0	60.8	26.2	13.1
Incr Delay (d2), s/veh	2.4	0.0	0.3	129.8	0.0	0.1	1.3	13.2	0.8	190.7	8.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.8	18.1	0.5	1.1	0.2	34.6	12.9	10.1	25.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.4	0.0	52.3	184.9	38.7	39.5	65.6	67.5	22.8	251.4	34.6	13.2
LnGrp LOS	E	A	D	F	D	D	E	F	C	F	C	B
Approach Vol, veh/h		71			732			2381			2043	
Approach Delay, s/veh		59.2			172.2			56.9			50.8	
Approach LOS		E			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	71.3	25.2	20.5	5.9	78.5	9.6	36.1
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	4.0	* 5.8
Max Green Setting (Gmax), s	8.5	47.8	19.7	32.0	7.5	48.8	12.2	* 42
Max Q Clear Time (g_c+I1), s	10.5	67.1	21.7	3.9	2.4	62.5	5.1	4.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	70.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	623	56	117	51	21	30	114	1627	92	13	1837	690
Future Volume (veh/h)	623	56	117	51	21	30	114	1627	92	13	1837	690
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	642	58	121	53	22	31	118	1677	95	13	1894	711
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	329	277	83	48	68	97	2175	969	37	2054	1151
Arrive On Green	0.15	0.17	0.17	0.05	0.07	0.07	0.04	0.40	0.40	0.03	0.76	0.76
Sat Flow, veh/h	3510	1900	1605	1810	710	1000	1810	3610	1607	1810	3610	1607
Grp Volume(v), veh/h	642	58	121	53	0	53	118	1677	95	13	1894	711
Grp Sat Flow(s),veh/h/ln	1755	1900	1605	1810	0	1710	1810	1805	1607	1810	1805	1607
Q Serve(g_s), s	19.1	3.4	8.8	3.7	0.0	3.9	7.0	52.3	4.8	0.9	54.9	22.4
Cycle Q Clear(g_c), s	19.1	3.4	8.8	3.7	0.0	3.9	7.0	52.3	4.8	0.9	54.9	22.4
Prop In Lane	1.00		1.00	1.00		0.58	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	329	277	83	0	116	97	2175	969	37	2054	1151
V/C Ratio(X)	1.24	0.18	0.44	0.64	0.00	0.46	1.21	0.77	0.10	0.36	0.92	0.62
Avail Cap(c_a), veh/h	516	626	528	148	0	434	97	2175	969	97	2054	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.63	0.63	0.63	0.34	0.34	0.34
Uniform Delay (d), s/veh	55.4	45.9	48.1	61.0	0.0	58.3	62.7	31.0	16.8	62.4	13.5	4.8
Incr Delay (d2), s/veh	125.7	0.3	1.1	7.9	0.0	2.8	140.2	1.7	0.1	2.0	3.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	1.6	3.6	1.9	0.0	1.8	7.0	23.7	1.9	0.4	12.7	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	181.1	46.1	49.2	68.8	0.0	61.0	202.9	32.7	17.0	64.4	16.7	5.6
LnGrp LOS	F	D	D	E	A	E	F	C	B	E	B	A
Approach Vol, veh/h		821			106			1890			2618	
Approach Delay, s/veh		152.1			64.9			42.5			14.0	
Approach LOS		F			E			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	85.5	10.0	27.9	11.0	81.2	23.6	14.2
Change Period (Y+Rc), s	4.0	7.2	4.0	* 5.4	4.0	7.2	4.5	5.4
Max Green Setting (Gmax), s	7.6	49.8	10.6	* 43	7.0	49.8	19.1	33.0
Max Q Clear Time (g_c+I1), s	2.9	54.3	5.7	10.8	9.0	56.9	21.1	5.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	45.8
HCM 6th LOS	D

Notes

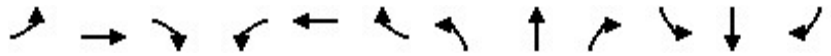
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	81	260	1572	87	374	1632
Future Volume (veh/h)	81	260	1572	87	374	1632
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	90	289	1747	97	416	1813
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	189	681	2276	1014	476	2918
Arrive On Green	0.10	0.10	1.00	1.00	0.27	1.00
Sat Flow, veh/h	1810	2834	3705	1608	3510	3705
Grp Volume(v), veh/h	90	289	1747	97	416	1813
Grp Sat Flow(s),veh/h/ln	1810	1417	1805	1608	1755	1805
Q Serve(g_s), s	6.1	11.2	0.0	0.0	14.7	0.0
Cycle Q Clear(g_c), s	6.1	11.2	0.0	0.0	14.7	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	189	681	2276	1014	476	2918
V/C Ratio(X)	0.48	0.42	0.77	0.10	0.87	0.62
Avail Cap(c_a), veh/h	221	731	2276	1014	662	2918
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.65	0.65	0.14	0.14
Uniform Delay (d), s/veh	54.8	41.8	0.0	0.0	46.3	0.0
Incr Delay (d2), s/veh	1.8	0.4	1.7	0.1	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	4.0	0.5	0.0	5.4	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.7	42.2	1.7	0.1	47.8	0.1
LnGrp LOS	E	D	A	A	D	A
Approach Vol, veh/h	379		1844			2229
Approach Delay, s/veh	45.6		1.6			9.0
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	23.1	88.2			111.3	18.7
Change Period (Y+Rc), s	5.5	6.2			6.2	5.1
Max Green Setting (Gmax), s	24.5	72.8			102.8	15.9
Max Q Clear Time (g_c+I1), s	16.7	2.0			2.0	13.2
Green Ext Time (p_c), s	0.9	22.3			24.5	0.4

Intersection Summary	
HCM 6th Ctrl Delay	9.1
HCM 6th LOS	A



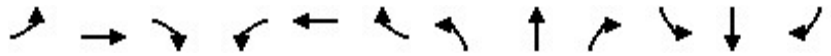
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	42	24	202	14	288	38	1317	278	313	1349	23
Future Volume (veh/h)	51	42	24	202	14	288	38	1317	278	313	1349	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	45	26	217	15	310	41	1416	299	337	1451	25
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	159	72	42	245	203	600	75	1915	847	382	2186	963
Arrive On Green	0.09	0.06	0.06	0.14	0.11	0.11	0.06	0.71	0.71	0.22	1.00	1.00
Sat Flow, veh/h	1810	1128	652	1810	1900	2735	1810	3610	1597	3510	3610	1590
Grp Volume(v), veh/h	55	0	71	217	15	310	41	1416	299	337	1451	25
Grp Sat Flow(s),veh/h/ln	1810	0	1779	1810	1900	1367	1810	1805	1597	1755	1805	1590
Q Serve(g_s), s	3.7	0.0	5.1	15.3	0.9	9.6	2.9	31.4	9.5	12.1	0.0	0.0
Cycle Q Clear(g_c), s	3.7	0.0	5.1	15.3	0.9	9.6	2.9	31.4	9.5	12.1	0.0	0.0
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	159	0	114	245	203	600	75	1915	847	382	2186	963
V/C Ratio(X)	0.35	0.00	0.62	0.89	0.07	0.52	0.54	0.74	0.35	0.88	0.66	0.03
Avail Cap(c_a), veh/h	362	0	452	434	576	1137	97	1915	847	405	2186	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.62	0.62	0.62	0.76	0.76	0.76
Uniform Delay (d), s/veh	55.8	0.0	59.3	55.2	52.3	25.8	60.2	13.6	10.4	50.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	5.5	4.3	0.2	0.7	1.4	1.6	0.7	14.5	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	2.5	7.3	0.5	3.2	1.3	8.7	3.2	5.4	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	0.0	64.8	59.5	52.4	26.5	61.6	15.2	11.1	64.5	1.2	0.0
LnGrp LOS	E	A	E	E	D	C	E	B	B	E	A	A
Approach Vol, veh/h		126			542			1756			1813	
Approach Delay, s/veh		61.1			40.4			15.6			13.0	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	75.2	21.6	14.1	9.4	84.9	17.2	18.5
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	5.8	* 4.6
Max Green Setting (Gmax), s	4.2	29.8	31.2	33.0	7.0	38.8	26.0	* 39
Max Q Clear Time (g_c+I1), s	11.4	33.4	17.3	7.1	4.9	2.0	5.7	11.6
Green Ext Time (p_c), s	0.1	0.0	0.3	0.3	0.0	13.1	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	19.0
HCM 6th LOS	B

Notes

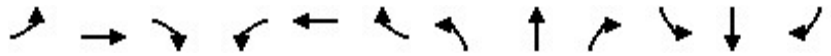
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	45	132	96	32	92	176	1336	25	201	1125	168
Future Volume (veh/h)	167	45	132	96	32	92	176	1336	25	201	1125	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	172	46	136	99	33	95	181	1377	26	207	1160	173
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	255	93	276	209	94	272	205	1890	815	235	1950	860
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.23	1.00	1.00	0.09	0.36	0.36
Sat Flow, veh/h	1280	422	1249	1219	427	1229	1810	3610	1558	1810	3610	1592
Grp Volume(v), veh/h	172	0	182	99	0	128	181	1377	26	207	1160	173
Grp Sat Flow(s),veh/h/ln	1280	0	1671	1219	0	1656	1810	1805	1558	1810	1805	1592
Q Serve(g_s), s	17.0	0.0	12.4	10.0	0.0	8.5	12.6	0.0	0.0	14.7	34.0	9.7
Cycle Q Clear(g_c), s	25.5	0.0	12.4	22.4	0.0	8.5	12.6	0.0	0.0	14.7	34.0	9.7
Prop In Lane	1.00		0.75	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	0	370	209	0	366	205	1890	815	235	1950	860
V/C Ratio(X)	0.67	0.00	0.49	0.47	0.00	0.35	0.88	0.73	0.03	0.88	0.60	0.20
Avail Cap(c_a), veh/h	307	0	437	258	0	433	383	1890	815	383	1950	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.66	0.66	0.66
Uniform Delay (d), s/veh	53.5	0.0	44.2	54.0	0.0	42.7	49.4	0.0	0.0	58.3	29.9	22.2
Incr Delay (d2), s/veh	4.4	0.0	1.0	1.7	0.0	0.6	0.5	0.2	0.0	5.3	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	5.3	3.2	0.0	3.6	4.9	0.1	0.0	7.2	15.4	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.9	0.0	45.2	55.7	0.0	43.3	49.9	0.2	0.0	63.6	30.8	22.5
LnGrp LOS	E	A	D	E	A	D	D	A	A	E	C	C
Approach Vol, veh/h		354			227			1584			1540	
Approach Delay, s/veh		51.4			48.7			5.9			34.3	
Approach LOS		D			D			A			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	31.4	75.2		33.4	19.2	77.4		33.4
Change Period (Y+Rc), s	4.5	7.2		4.6	4.5	7.2		4.6
Max Green Setting (Gmax), s	27.5	52.2		34.0	27.5	52.2		34.0
Max Q Clear Time (g_c+I1), s	16.7	2.0		27.5	14.6	36.0		24.4
Green Ext Time (p_c), s	0.2	12.9		0.9	0.2	7.4		0.7

Intersection Summary		
HCM 6th Ctrl Delay		24.7
HCM 6th LOS		C



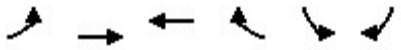
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	531	1314	215	183	1715	668	193	485	107	487	550	357
Future Volume (veh/h)	531	1314	215	183	1715	668	193	485	107	487	550	357
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	559	1383	226	193	1805	703	203	511	113	513	579	376
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	538	1525	833	146	1748	676	175	729	160	297	825	607
Arrive On Green	0.31	0.84	0.84	0.16	0.67	0.67	0.10	0.25	0.25	0.14	0.38	0.38
Sat Flow, veh/h	3510	3610	1603	1810	5187	1602	1810	2919	642	3510	3610	1576
Grp Volume(v), veh/h	559	1383	226	193	1805	703	203	315	309	513	579	376
Grp Sat Flow(s),veh/h/ln	1755	1805	1603	1810	1729	1602	1810	1805	1756	1755	1805	1576
Q Serve(g_s), s	19.9	33.0	0.8	10.5	43.8	43.8	12.6	20.6	20.8	11.0	17.6	0.0
Cycle Q Clear(g_c), s	19.9	33.0	0.8	10.5	43.8	43.8	12.6	20.6	20.8	11.0	17.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	538	1525	833	146	1748	676	175	451	439	297	825	607
V/C Ratio(X)	1.04	0.91	0.27	1.32	1.03	1.04	1.16	0.70	0.70	1.73	0.70	0.62
Avail Cap(c_a), veh/h	538	1525	833	146	1748	676	175	619	603	297	1300	814
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.85	0.85	0.85	0.44	0.44	0.44	1.00	1.00	1.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	45.1	8.4	1.6	54.5	21.2	8.5	58.7	44.3	44.4	55.8	36.4	24.5
Incr Delay (d2), s/veh	46.3	8.2	0.7	163.9	23.7	34.1	118.1	2.1	2.3	338.0	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	5.3	0.6	10.9	11.4	9.4	11.4	9.3	9.2	18.4	6.5	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.4	16.6	2.3	218.4	44.9	42.7	176.8	46.4	46.7	393.8	37.3	25.3
LnGrp LOS	F	B	A	F	F	F	F	D	D	F	D	C
Approach Vol, veh/h		2168			2701			827			1468	
Approach Delay, s/veh		34.4			56.7			78.5			158.8	
Approach LOS		C			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	61.1	18.0	35.9	26.1	50.0	16.0	37.9
Change Period (Y+Rc), s	4.5	6.2	5.4	* 6.2	6.2	* 6.2	5.0	5.4
Max Green Setting (Gmax), s	10.5	42.8	8.0	* 47	9.0	* 44	11.0	44.6
Max Q Clear Time (g_c+I1), s	12.5	35.0	14.6	19.6	21.9	45.8	13.0	22.8
Green Ext Time (p_c), s	0.0	5.3	0.0	5.1	0.0	0.0	0.0	3.6

Intersection Summary	
HCM 6th Ctrl Delay	73.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



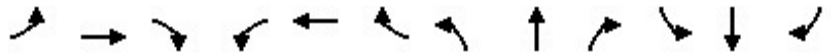
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	89	1820	2381	106	204	56
Future Volume (veh/h)	89	1820	2381	106	204	56
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	1916	2506	112	215	59
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	417	2803	2499	111	249	221
Arrive On Green	0.46	1.00	0.98	0.98	0.14	0.14
Sat Flow, veh/h	1810	3705	5263	225	1810	1610
Grp Volume(v), veh/h	94	1916	1694	924	215	59
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1859	1810	1610
Q Serve(g_s), s	4.1	0.0	58.9	63.8	15.1	4.3
Cycle Q Clear(g_c), s	4.1	0.0	58.9	63.8	15.1	4.3
Prop In Lane	1.00			0.12	1.00	1.00
Lane Grp Cap(c), veh/h	417	2803	1697	912	249	221
V/C Ratio(X)	0.23	0.68	1.00	1.01	0.86	0.27
Avail Cap(c_a), veh/h	417	2803	1697	912	487	434
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.33	0.33	1.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	1.2	1.2	54.9	50.2
Incr Delay (d2), s/veh	0.0	0.1	12.2	20.2	8.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	3.3	5.6	7.6	4.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.1	0.1	13.4	21.4	63.6	50.8
LnGrp LOS	C	A	B	F	E	D
Approach Vol, veh/h		2010	2618		274	
Approach Delay, s/veh		1.4	16.2		60.8	
Approach LOS		A	B		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	108.1		21.9	37.1	71.0
Change Period (Y+Rc), s	7.2		4.0	7.2	* 7.2
Max Green Setting (Gmax), s	83.8		35.0	15.5	* 64
Max Q Clear Time (g_c+I1), s	2.0		17.1	6.1	65.8
Green Ext Time (p_c), s	27.1		0.8	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	1427	400	347	1846	90	596	77	321	51	38	188
Future Volume (veh/h)	147	1427	400	347	1846	90	596	77	321	51	38	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	152	1471	412	358	1903	93	614	79	331	53	39	194
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	232	1103	296	229	1980	97	535	435	368	136	45	221
Arrive On Green	0.04	0.13	0.13	0.13	0.39	0.39	0.15	0.23	0.23	0.08	0.16	0.16
Sat Flow, veh/h	1810	2812	756	1810	5066	247	3510	1900	1608	1810	276	1374
Grp Volume(v), veh/h	152	922	961	358	1298	698	614	79	331	53	0	233
Grp Sat Flow(s),veh/h/ln	1810	1805	1763	1810	1729	1855	1755	1900	1608	1810	0	1650
Q Serve(g_s), s	10.8	51.0	51.0	16.4	47.6	47.8	19.8	4.3	26.0	3.6	0.0	17.9
Cycle Q Clear(g_c), s	10.8	51.0	51.0	16.4	47.6	47.8	19.8	4.3	26.0	3.6	0.0	17.9
Prop In Lane	1.00		0.43	1.00		0.13	1.00		1.00	1.00		0.83
Lane Grp Cap(c), veh/h	232	708	692	229	1351	725	535	435	368	136	0	266
V/C Ratio(X)	0.66	1.30	1.39	1.56	0.96	0.96	1.15	0.18	0.90	0.39	0.00	0.88
Avail Cap(c_a), veh/h	232	708	692	229	1351	725	535	628	532	136	0	386
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.4	56.6	56.6	56.8	38.6	38.7	55.1	40.3	48.6	57.3	0.0	53.3
Incr Delay (d2), s/veh	3.4	142.6	181.1	274.1	16.7	25.6	86.8	0.2	13.6	0.7	0.0	14.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	52.6	58.8	24.7	22.1	25.6	15.0	2.0	11.5	1.7	0.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.8	199.1	237.7	330.9	55.3	64.3	141.9	40.5	62.2	57.9	0.0	67.7
LnGrp LOS	E	F	F	F	E	E	F	D	E	E	A	E
Approach Vol, veh/h		2035			2354			1024			286	
Approach Delay, s/veh		207.2			99.9			108.3			65.9	
Approach LOS		F			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.4	58.2	24.8	25.6	21.6	58.0	14.8	35.6
Change Period (Y+Rc), s	5.0	* 7.2	5.0	4.6	5.0	7.2	5.0	* 5.8
Max Green Setting (Gmax), s	7.5	* 51	19.8	30.4	7.2	50.8	7.0	* 43
Max Q Clear Time (g_c+I1), s	18.8	53.0	21.8	19.9	12.8	49.8	5.6	28.0
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	0.9	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	138.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	2377	0	0	2674	15	0	0	0	0	0	2
Future Vol, veh/h	0	2377	0	0	2674	15	0	0	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2584	0	0	2907	16	0	0	0	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1292	-	-	1462
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*107	0	0	-
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			2
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*107	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	
HCM LOS			A	-

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	-
HCM Lane LOS	A	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	14	374	299	90
Future Vol, veh/h	0	0	14	374	299	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	83	83	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	15	451	360	95

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	889	408	455	0	-	0
Stage 1	408	-	-	-	-	-
Stage 2	481	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	316	648	1116	-	-	-
Stage 1	676	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	310	648	1116	-	-	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	664	-	-	-	-	-
Stage 2	626	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1116	-	-	-	-
HCM Lane V/C Ratio	0.013	-	-	-	-
HCM Control Delay (s)	8.3	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	168	50	16	197	270	27
Future Vol, veh/h	168	50	16	197	270	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	80	80	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	177	53	17	246	338	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	632	352	366	0	-	0
Stage 1	352	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	448	696	1204	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	441	696	1204	-	-	-
Mov Cap-2 Maneuver	441	-	-	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	772	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.1	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1204	-	481	-	-
HCM Lane V/C Ratio	0.014	-	0.477	-	-
HCM Control Delay (s)	8	0	19.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	2.5	-	-

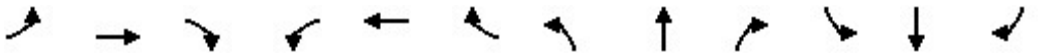
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	212	326	0
Future Vol, veh/h	3	0	1	212	326	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	81	81	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	0	1	262	402	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	666	402	402	0	-	0
Stage 1	402	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	428	653	1168	-	-	-
Stage 1	680	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	428	653	1168	-	-	-
Mov Cap-2 Maneuver	428	-	-	-	-	-
Stage 1	679	-	-	-	-	-
Stage 2	785	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1168	-	428	-	-
HCM Lane V/C Ratio	0.001	-	0.007	-	-
HCM Control Delay (s)	8.1	0	13.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



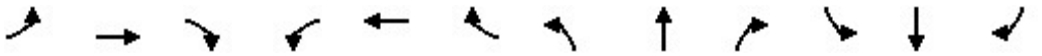
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1298	153	146	1719	920	283	995	229	593	181	93
Future Volume (veh/h)	164	1298	153	146	1719	920	283	995	229	593	181	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	173	1366	161	154	1809	968	298	1047	241	624	191	98
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	201	1370	160	1170	3503	1561	365	830	369	459	941	418
Arrive On Green	0.11	0.42	0.42	0.65	0.97	0.97	0.10	0.23	0.23	0.13	0.26	0.26
Sat Flow, veh/h	1810	3250	380	1810	3610	1609	3510	3610	1604	3510	3610	1605
Grp Volume(v), veh/h	173	754	773	154	1809	968	298	1047	241	624	191	98
Grp Sat Flow(s),veh/h/ln	1810	1805	1825	1810	1805	1609	1755	1805	1604	1755	1805	1605
Q Serve(g_s), s	12.2	54.0	54.8	4.3	3.9	5.8	10.8	29.9	14.7	17.0	5.4	6.3
Cycle Q Clear(g_c), s	12.2	54.0	54.8	4.3	3.9	5.8	10.8	29.9	14.7	17.0	5.4	6.3
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	761	769	1170	3503	1561	365	830	369	459	941	418
V/C Ratio(X)	0.86	0.99	1.00	0.13	0.52	0.62	0.82	1.26	0.65	1.36	0.20	0.23
Avail Cap(c_a), veh/h	313	761	769	1170	3503	1561	608	830	369	459	941	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.8	37.4	37.6	8.9	0.1	0.1	57.0	50.0	31.2	56.5	37.5	37.8
Incr Delay (d2), s/veh	13.5	30.6	33.5	0.1	0.5	1.9	4.5	127.1	4.1	175.4	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	28.6	29.9	1.5	0.3	0.8	5.0	28.0	6.1	18.5	2.3	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.3	68.0	71.1	8.9	0.7	2.0	61.5	177.2	35.3	231.9	37.6	38.1
LnGrp LOS	E	E	F	A	A	A	E	F	D	F	D	D
Approach Vol, veh/h		1700			2931			1586			913	
Approach Delay, s/veh		69.6			1.5			133.9			170.4	
Approach LOS		E			A			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	92.2	61.0	18.0	39.7	18.9	134.2	22.0	35.7
Change Period (Y+Rc), s	6.2	* 6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	7.5	* 55	22.5	24.2	22.5	39.8	17.0	* 30
Max Q Clear Time (g_c+I1), s	6.3	56.8	12.8	8.3	14.2	7.8	19.0	31.9
Green Ext Time (p_c), s	0.0	0.0	0.7	1.2	0.3	23.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	68.8
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	1972	91	89	2549	35	179	24	117	117	29	86
Future Volume (veh/h)	89	1972	91	89	2549	35	179	24	117	117	29	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	2076	96	94	2683	37	188	25	123	123	31	91
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	104	2240	997	104	2262	31	145	30	148	111	39	116
Arrive On Green	0.06	0.62	0.62	0.08	0.83	0.83	0.08	0.11	0.11	0.06	0.09	0.09
Sat Flow, veh/h	1810	3610	1608	1810	3646	50	1810	278	1367	1810	424	1243
Grp Volume(v), veh/h	94	2076	96	94	1325	1395	188	0	148	123	0	122
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1810	1805	1891	1810	0	1645	1810	0	1667
Q Serve(g_s), s	6.7	66.8	1.8	6.7	80.7	80.7	10.5	0.0	11.5	8.0	0.0	9.3
Cycle Q Clear(g_c), s	6.7	66.8	1.8	6.7	80.7	80.7	10.5	0.0	11.5	8.0	0.0	9.3
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.83	1.00		0.75
Lane Grp Cap(c), veh/h	104	2240	997	104	1120	1173	145	0	178	111	0	155
V/C Ratio(X)	0.90	0.93	0.10	0.90	1.18	1.19	1.29	0.00	0.83	1.10	0.00	0.79
Avail Cap(c_a), veh/h	104	2240	997	104	1120	1173	145	0	228	111	0	237
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.36	0.36	0.36	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.9	22.0	3.4	59.6	11.4	11.4	59.8	0.0	56.8	61.0	0.0	57.7
Incr Delay (d2), s/veh	57.6	8.2	0.2	28.8	86.0	88.3	173.1	0.0	18.3	116.2	0.0	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	26.8	1.1	3.8	35.0	37.4	11.8	0.0	5.6	7.3	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.5	30.2	3.6	88.5	97.4	99.7	232.9	0.0	75.2	177.2	0.0	67.0
LnGrp LOS	F	C	A	F	F	F	F	A	E	F	A	E
Approach Vol, veh/h		2266			2814			336			245	
Approach Delay, s/veh		32.7			98.2			163.4			122.3	
Approach LOS		C			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	86.9	14.5	16.7	12.0	86.9	12.0	19.1
Change Period (Y+Rc), s	4.5	6.2	4.0	4.6	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.5	76.7	8.0	18.5	7.5	76.7	8.0	18.0
Max Q Clear Time (g_c+I1), s	8.7	68.8	12.5	11.3	8.7	82.7	10.0	13.5
Green Ext Time (p_c), s	0.0	6.8	0.0	0.3	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	76.9
HCM 6th LOS	E



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2159	46	138	2635	38	114
Future Volume (veh/h)	2159	46	138	2635	38	114
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2273	48	145	2774	40	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2555	1140	168	3001	163	145
Arrive On Green	0.94	0.94	0.19	1.00	0.09	0.09
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	2273	48	145	2774	40	120
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	29.5	0.2	10.1	0.0	2.7	9.5
Cycle Q Clear(g_c), s	29.5	0.2	10.1	0.0	2.7	9.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2555	1140	168	3001	163	145
V/C Ratio(X)	0.89	0.04	0.86	0.92	0.24	0.83
Avail Cap(c_a), veh/h	2555	1140	170	3001	259	230
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.20	0.20	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	2.0	1.1	52.2	0.0	55.0	58.1
Incr Delay (d2), s/veh	1.1	0.0	34.0	6.2	0.8	12.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.1	5.6	2.6	1.3	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.1	1.1	86.1	6.2	55.8	70.7
LnGrp LOS	A	A	F	A	E	E
Approach Vol, veh/h	2321			2919	160	
Approach Delay, s/veh	3.0			10.2	67.0	
Approach LOS	A			B	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	16.0	98.2				114.3	15.7
Change Period (Y+Rc), s	4.0	6.2				* 6.2	4.0
Max Green Setting (Gmax), s	12.2	85.0				* 1E2	18.6
Max Q Clear Time (g_c+I1), s	12.1	31.5				2.0	11.5
Green Ext Time (p_c), s	0.0	32.2				69.9	0.2

Intersection Summary	
HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2273	1	0	2774	0	8
Future Vol, veh/h	2273	1	0	2774	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2393	1	0	2920	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1197
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	*131
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*131
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	34.4
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	131	-	-	-
HCM Lane V/C Ratio	0.064	-	-	-
HCM Control Delay (s)	34.4	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

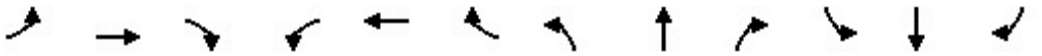
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	2226	2622	13	2	152
Future Vol, veh/h	55	2226	2622	13	2	152
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	58	2343	2760	14	2	160

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2777	0	-	0	4058	1390
Stage 1	-	-	-	-	2770	-
Stage 2	-	-	-	-	1288	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*146	-
Platoon blocked, %	2	-	-	-	2	2
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*146	-

Approach	EB	WB	SB
HCM Control Delay, s		0	
HCM LOS			-

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	-	-	-
HCM Lane LOS	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1874	318	201	2263	56	339	72	190	96	65	41
Future Volume (veh/h)	36	1874	318	201	2263	56	339	72	190	96	65	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	1973	335	212	2382	59	357	76	200	101	68	43
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	73	1698	279	97	2031	906	352	85	223	178	348	295
Arrive On Green	0.01	0.18	0.18	0.11	1.00	1.00	0.05	0.18	0.18	0.05	0.18	0.18
Sat Flow, veh/h	1810	3093	508	1810	3610	1610	1810	463	1218	1810	1900	1610
Grp Volume(v), veh/h	38	1124	1184	212	2382	59	357	0	276	101	68	43
Grp Sat Flow(s),veh/h/ln	1810	1805	1796	1810	1805	1610	1810	0	1681	1810	1900	1610
Q Serve(g_s), s	2.7	71.4	71.4	7.0	73.1	0.0	7.0	0.0	20.9	5.9	3.9	2.9
Cycle Q Clear(g_c), s	2.7	71.4	71.4	7.0	73.1	0.0	7.0	0.0	20.9	5.9	3.9	2.9
Prop In Lane	1.00		0.28	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	73	991	986	97	2031	906	352	0	308	178	348	295
V/C Ratio(X)	0.52	1.13	1.20	2.18	1.17	0.07	1.01	0.00	0.90	0.57	0.20	0.15
Avail Cap(c_a), veh/h	97	991	986	97	2031	906	352	0	388	178	438	372
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	53.2	53.2	58.0	0.0	0.0	51.8	0.0	51.9	41.9	45.0	44.5
Incr Delay (d2), s/veh	2.2	73.3	100.1	532.2	78.3	0.0	51.5	0.0	19.4	2.6	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	54.5	61.5	17.3	22.1	0.0	13.3	0.0	10.5	2.8	1.9	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	126.5	153.3	590.2	78.3	0.0	103.4	0.0	71.3	44.5	45.2	44.8
LnGrp LOS	E	F	F	F	F	A	F	A	E	D	D	D
Approach Vol, veh/h		2346			2653			633			212	
Approach Delay, s/veh		139.0			117.4			89.4			44.8	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	78.6	11.0	28.4	10.2	80.3	11.0	28.4
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	7.0	65.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	9.0	73.4	9.0	5.9	4.7	75.1	7.9	22.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	120.4
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	8.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↰	↱
Traffic Vol, veh/h	112	0	27	5	0	56	34	409	5	18	348	143
Future Vol, veh/h	112	0	27	5	0	56	34	409	5	18	348	143
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	127	0	31	6	0	64	39	465	6	20	395	163

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1013	984	395	1078	1144	468	558	0	0	471	0	0
Stage 1	435	435	-	546	546	-	-	-	-	-	-	-
Stage 2	578	549	-	532	598	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	219	250	659	198	202	599	1023	-	-	1101	-	-
Stage 1	604	584	-	526	521	-	-	-	-	-	-	-
Stage 2	505	520	-	535	494	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	184	231	659	178	186	599	1023	-	-	1101	-	-
Mov Cap-2 Maneuver	184	231	-	178	186	-	-	-	-	-	-	-
Stage 1	573	568	-	499	494	-	-	-	-	-	-	-
Stage 2	428	493	-	496	481	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	58.1	13.3	0.7	0.3
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1023	-	-	214	502	1101	-	-
HCM Lane V/C Ratio	0.038	-	-	0.738	0.138	0.019	-	-
HCM Control Delay (s)	8.7	0	-	58.1	13.3	8.3	0	-
HCM Lane LOS	A	A	-	F	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	5	0.5	0.1	-	-

Intersection	
Intersection Delay, s/veh	129.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	564	3	2	637	143	23	34	13	126	16	55
Future Vol, veh/h	65	564	3	2	637	143	23	34	13	126	16	55
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	68	594	3	2	671	151	24	36	14	133	17	58
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	100.6	191.1	13.9	17.2
HCM LOS	F	F	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	10%	0%	64%
Vol Thru, %	49%	89%	81%	8%
Vol Right, %	19%	0%	18%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	632	782	197
LT Vol	23	65	2	126
Through Vol	34	564	637	16
RT Vol	13	3	143	55
Lane Flow Rate	74	665	823	207
Geometry Grp	1	1	1	1
Degree of Util (X)	0.164	1.121	1.358	0.425
Departure Headway (Hd)	9.093	6.595	6.191	8.22
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	397	559	593	442
Service Time	7.093	4.595	4.191	6.22
HCM Lane V/C Ratio	0.186	1.19	1.388	0.468
HCM Control Delay	13.9	100.6	191.1	17.2
HCM Lane LOS	B	F	F	C
HCM 95th-tile Q	0.6	19.8	34.6	2.1



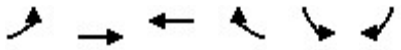
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	1555	463	522	1804	188	527	592	383	119	490	238
Future Volume (veh/h)	182	1555	463	522	1804	188	527	592	383	119	490	238
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.91	1.00		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	192	1637	487	549	1899	198	555	623	403	125	516	251
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	220	2760	1440	581	2918	1279	500	589	381	111	480	232
Arrive On Green	0.04	0.25	0.25	0.22	1.00	1.00	0.14	0.29	0.29	0.06	0.21	0.21
Sat Flow, veh/h	1810	3610	1584	3510	3610	1582	3510	2016	1303	1810	2247	1085
Grp Volume(v), veh/h	192	1637	487	549	1899	198	555	558	468	125	414	353
Grp Sat Flow(s),veh/h/ln	1810	1805	1584	1755	1805	1582	1755	1805	1515	1810	1805	1527
Q Serve(g_s), s	13.7	51.8	13.1	20.0	0.0	0.0	18.5	38.0	38.0	8.0	27.8	27.8
Cycle Q Clear(g_c), s	13.7	51.8	13.1	20.0	0.0	0.0	18.5	38.0	38.0	8.0	27.8	27.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.71
Lane Grp Cap(c), veh/h	220	2760	1440	581	2918	1279	500	528	443	111	386	326
V/C Ratio(X)	0.87	0.59	0.34	0.95	0.65	0.15	1.11	1.06	1.06	1.12	1.07	1.08
Avail Cap(c_a), veh/h	299	2760	1440	581	2918	1279	500	528	443	111	386	326
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.68	0.68	0.68	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.4	30.8	3.7	50.1	0.0	0.0	55.7	46.0	46.0	61.0	51.1	51.1
Incr Delay (d2), s/veh	1.7	0.1	0.1	18.7	0.8	0.2	74.2	55.1	58.9	122.0	66.4	73.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	24.9	1.8	9.5	0.3	0.1	13.2	24.6	21.1	7.4	19.4	17.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.0	30.9	3.8	68.8	0.8	0.2	130.0	101.1	104.9	183.0	117.5	124.5
LnGrp LOS	E	C	A	E	A	A	F	F	F	F	F	F
Approach Vol, veh/h		2316			2646			1581			892	
Approach Delay, s/veh		27.9			14.9			112.3			129.4	
Approach LOS		C			B			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.0	108.4	24.0	33.6	21.3	114.1	13.8	43.8
Change Period (Y+Rc), s	5.5	7.2	5.5	5.8	5.5	7.2	5.8	* 5.8
Max Green Setting (Gmax), s	21.5	40.0	18.5	26.0	21.5	40.0	8.0	* 38
Max Q Clear Time (g_c+I1), s	22.0	53.8	20.5	29.8	15.7	2.0	10.0	40.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	21.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

Notes

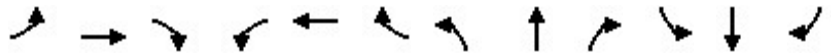
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	170	1949	1939	38	58	265
Future Volume (veh/h)	170	1949	1939	38	58	265
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	179	2052	2041	40	61	279
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	174	3720	3069	60	349	311
Arrive On Green	0.19	1.00	1.00	1.00	0.19	0.19
Sat Flow, veh/h	1810	5358	5405	102	1810	1610
Grp Volume(v), veh/h	179	2052	1347	734	61	279
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1879	1810	1610
Q Serve(g_s), s	12.5	0.0	0.0	0.0	3.7	22.0
Cycle Q Clear(g_c), s	12.5	0.0	0.0	0.0	3.7	22.0
Prop In Lane	1.00			0.05	1.00	1.00
Lane Grp Cap(c), veh/h	174	3720	2028	1102	349	311
V/C Ratio(X)	1.03	0.55	0.66	0.67	0.17	0.90
Avail Cap(c_a), veh/h	174	3720	2028	1102	619	551
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.17	0.17	1.00	1.00
Uniform Delay (d), s/veh	52.5	0.0	0.0	0.0	43.8	51.2
Incr Delay (d2), s/veh	28.2	0.1	0.3	0.6	0.2	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	0.1	0.2	1.7	19.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	80.7	0.1	0.3	0.6	44.1	60.8
LnGrp LOS	F	A	A	A	D	E
Approach Vol, veh/h		2231	2081		340	
Approach Delay, s/veh		6.5	0.4		57.8	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		100.4		29.6	17.0	83.4
Change Period (Y+Rc), s		7.2		4.5	4.5	7.2
Max Green Setting (Gmax), s		73.8		44.5	12.5	56.8
Max Q Clear Time (g_c+I1), s		2.0		24.0	14.5	2.0
Green Ext Time (p_c), s		27.0		1.1	0.0	23.3

Intersection Summary		
HCM 6th Ctrl Delay		7.5
HCM 6th LOS		A



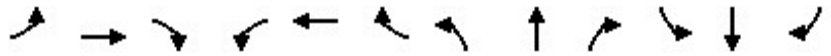
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	39	11	740	38	61	3	2087	634	218	1264	20
Future Volume (veh/h)	70	39	11	740	38	61	3	2087	634	218	1264	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	74	41	12	779	40	64	3	2197	667	229	1331	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	289	86	25	532	117	97	10	1941	1109	146	2213	965
Arrive On Green	0.16	0.06	0.06	0.15	0.06	0.06	0.00	0.36	0.36	0.08	0.61	0.61
Sat Flow, veh/h	1810	1410	413	3510	1900	1566	1810	3610	1608	1810	3610	1574
Grp Volume(v), veh/h	74	0	53	779	40	64	3	2197	667	229	1331	21
Grp Sat Flow(s),veh/h/ln	1810	0	1823	1755	1900	1566	1810	1805	1608	1810	1805	1574
Q Serve(g_s), s	4.7	0.0	3.7	19.7	2.6	4.4	0.2	69.9	11.9	10.5	29.4	0.2
Cycle Q Clear(g_c), s	4.7	0.0	3.7	19.7	2.6	4.4	0.2	69.9	11.9	10.5	29.4	0.2
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	0	111	532	117	97	10	1941	1109	146	2213	965
V/C Ratio(X)	0.26	0.00	0.48	1.46	0.34	0.66	0.30	1.13	0.60	1.57	0.60	0.02
Avail Cap(c_a), veh/h	289	0	449	532	693	571	244	1941	1109	146	2213	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	0.0	59.1	55.2	58.5	42.0	64.5	41.6	4.5	59.7	15.4	1.2
Incr Delay (d2), s/veh	0.2	0.0	3.2	219.1	1.7	7.6	0.6	60.1	0.2	285.5	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.8	24.7	1.3	2.2	0.1	47.4	4.4	16.3	11.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	0.0	62.2	274.3	60.2	49.6	65.1	101.6	4.7	345.2	16.6	1.3
LnGrp LOS	D	A	E	F	E	D	E	F	A	F	B	A
Approach Vol, veh/h		127			883			2867			1581	
Approach Delay, s/veh		53.9			248.3			79.1			64.0	
Approach LOS		D			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	76.1	25.2	13.7	5.2	85.9	26.3	12.6
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	5.5	* 4.6
Max Green Setting (Gmax), s	10.5	45.8	19.7	32.0	17.5	38.8	7.0	* 47
Max Q Clear Time (g_c+I1), s	12.5	71.9	21.7	5.7	2.2	31.4	6.7	6.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	4.7	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	101.5
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	677	60	110	147	67	52	251	2351	103	11	1164	733
Future Volume (veh/h)	677	60	110	147	67	52	251	2351	103	11	1164	733
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	713	63	116	155	71	55	264	2475	108	12	1225	772
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	226	189	261	115	89	301	2004	892	34	1383	852
Arrive On Green	0.15	0.12	0.12	0.14	0.12	0.12	0.22	0.74	0.74	0.03	0.51	0.51
Sat Flow, veh/h	3510	1900	1590	1810	987	764	1810	3610	1607	1810	3610	1606
Grp Volume(v), veh/h	713	63	116	155	0	126	264	2475	108	12	1225	772
Grp Sat Flow(s),veh/h/ln	1755	1900	1590	1810	0	1751	1810	1805	1607	1810	1805	1606
Q Serve(g_s), s	19.1	3.9	9.0	10.4	0.0	8.9	18.3	72.2	1.2	0.8	39.4	21.8
Cycle Q Clear(g_c), s	19.1	3.9	9.0	10.4	0.0	8.9	18.3	72.2	1.2	0.8	39.4	21.8
Prop In Lane	1.00		1.00	1.00		0.44	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	226	189	261	0	204	301	2004	892	34	1383	852
V/C Ratio(X)	1.38	0.28	0.61	0.59	0.00	0.62	0.88	1.24	0.12	0.35	0.89	0.91
Avail Cap(c_a), veh/h	516	678	567	261	0	444	301	2004	892	97	1383	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.21	0.21	0.21	0.58	0.58	0.58
Uniform Delay (d), s/veh	55.4	52.2	54.4	52.1	0.0	54.6	49.3	17.0	1.7	62.6	29.3	6.8
Incr Delay (d2), s/veh	183.9	0.7	3.2	3.6	0.0	3.0	6.5	106.8	0.1	3.5	5.3	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.5	1.9	3.8	5.0	0.0	4.1	8.1	46.7	0.9	0.4	15.2	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	239.3	52.9	57.6	55.7	0.0	57.6	55.8	123.8	1.7	66.1	34.6	16.4
LnGrp LOS	F	D	E	E	A	E	E	F	A	E	C	B
Approach Vol, veh/h		892			281			2847			2009	
Approach Delay, s/veh		202.5			56.6			112.9			27.8	
Approach LOS		F			E			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	79.4	24.1	20.1	28.8	57.0	23.6	20.6
Change Period (Y+Rc), s	4.0	7.2	5.4	* 4.6	7.2	* 7.2	4.5	5.4
Max Green Setting (Gmax), s	7.0	49.8	7.0	* 46	7.0	* 50	19.1	33.0
Max Q Clear Time (g_c+I1), s	2.8	74.2	12.4	11.0	20.3	41.4	21.1	10.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	6.1	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	95.2
HCM 6th LOS	F

Notes

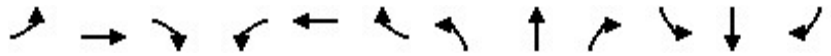
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	128	638	2067	97	195	1226
Future Volume (veh/h)	128	638	2067	97	195	1226
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	135	672	2176	102	205	1291
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	221	560	2430	1082	264	2855
Arrive On Green	0.12	0.12	0.67	0.67	0.15	1.00
Sat Flow, veh/h	1810	2834	3705	1608	3510	3705
Grp Volume(v), veh/h	135	672	2176	102	205	1291
Grp Sat Flow(s),veh/h/ln	1810	1417	1805	1608	1755	1805
Q Serve(g_s), s	9.2	15.9	64.5	2.9	7.3	0.0
Cycle Q Clear(g_c), s	9.2	15.9	64.5	2.9	7.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	221	560	2430	1082	264	2855
V/C Ratio(X)	0.61	1.20	0.90	0.09	0.78	0.45
Avail Cap(c_a), veh/h	221	560	2430	1082	608	2855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.75	0.75
Uniform Delay (d), s/veh	54.1	52.2	17.5	7.4	54.2	0.0
Incr Delay (d2), s/veh	4.8	106.3	0.6	0.0	3.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	17.3	22.2	0.9	3.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.9	158.4	18.0	7.4	57.8	0.4
LnGrp LOS	E	F	B	A	E	A
Approach Vol, veh/h	807		2278			1496
Approach Delay, s/veh	141.8		17.6			8.3
Approach LOS	F		B			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	15.3	93.7				109.0	21.0
Change Period (Y+Rc), s	5.5	6.2				6.2	5.1
Max Green Setting (Gmax), s	22.5	74.8				102.8	15.9
Max Q Clear Time (g_c+I1), s	9.3	66.5				2.0	17.9
Green Ext Time (p_c), s	0.5	7.3				11.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	70	47	395	169	632	71	1429	280	368	1000	33
Future Volume (veh/h)	103	70	47	395	169	632	71	1429	280	368	1000	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	108	74	49	416	178	665	75	1504	295	387	1053	35
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	133	112	74	324	418	800	96	1752	778	243	1839	815
Arrive On Green	0.07	0.11	0.11	0.18	0.22	0.22	0.04	0.33	0.33	0.14	1.00	1.00
Sat Flow, veh/h	1810	1063	704	1810	1900	2744	1810	3610	1603	3510	3610	1599
Grp Volume(v), veh/h	108	0	123	416	178	665	75	1504	295	387	1053	35
Grp Sat Flow(s),veh/h/ln	1810	0	1766	1810	1900	1372	1810	1805	1603	1755	1805	1599
Q Serve(g_s), s	7.6	0.0	8.7	23.2	10.5	22.2	5.3	50.7	9.2	9.0	0.0	0.0
Cycle Q Clear(g_c), s	7.6	0.0	8.7	23.2	10.5	22.2	5.3	50.7	9.2	9.0	0.0	0.0
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	0	186	324	418	800	96	1752	778	243	1839	815
V/C Ratio(X)	0.81	0.00	0.66	1.29	0.43	0.83	0.78	0.86	0.38	1.59	0.57	0.04
Avail Cap(c_a), veh/h	237	0	492	324	547	986	139	1752	778	243	1839	815
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.84	0.84	0.84	0.88	0.88	0.88
Uniform Delay (d), s/veh	59.4	0.0	56.0	53.4	43.6	25.3	62.0	39.7	7.2	56.0	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.0	4.0	150.0	0.7	5.1	8.1	4.9	1.2	283.1	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	4.1	24.0	5.0	7.7	2.6	24.0	3.5	13.1	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.9	0.0	60.0	203.3	44.3	30.4	70.0	44.5	8.4	339.1	1.1	0.1
LnGrp LOS	E	A	E	F	D	C	E	D	A	F	A	A
Approach Vol, veh/h		231			1259			1874			1475	
Approach Delay, s/veh		61.8			89.5			39.9			89.8	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	69.3	27.2	19.5	10.9	72.4	13.5	33.2
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	4.0	4.6
Max Green Setting (Gmax), s	9.0	46.8	17.0	36.2	10.0	46.8	17.0	37.4
Max Q Clear Time (g_c+I1), s	11.0	52.7	25.2	10.7	7.3	2.0	9.6	24.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	8.4	0.1	3.4

Intersection Summary	
HCM 6th Ctrl Delay	69.0
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	11	58	34	8	59	89	1258	23	83	1099	46
Future Volume (veh/h)	65	11	58	34	8	59	89	1258	23	83	1099	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	68	12	61	36	8	62	94	1324	24	87	1157	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	32	163	160	22	171	104	2509	1118	110	2521	1124
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.12	1.00	1.00	0.04	0.47	0.47
Sat Flow, veh/h	1347	270	1374	1343	186	1445	1810	3610	1609	1810	3610	1609
Grp Volume(v), veh/h	68	0	73	36	0	70	94	1324	24	87	1157	48
Grp Sat Flow(s),veh/h/ln	1347	0	1644	1343	0	1631	1810	1805	1609	1810	1805	1609
Q Serve(g_s), s	6.4	0.0	5.3	3.3	0.0	5.1	6.7	0.0	0.0	6.2	28.2	2.1
Cycle Q Clear(g_c), s	11.5	0.0	5.3	8.6	0.0	5.1	6.7	0.0	0.0	6.2	28.2	2.1
Prop In Lane	1.00		0.84	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	0	195	160	0	193	104	2509	1118	110	2521	1124
V/C Ratio(X)	0.42	0.00	0.37	0.23	0.00	0.36	0.90	0.53	0.02	0.79	0.46	0.04
Avail Cap(c_a), veh/h	354	0	430	352	0	427	104	2509	1118	592	2521	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.57	0.57	0.57
Uniform Delay (d), s/veh	58.1	0.0	52.9	56.8	0.0	52.8	57.1	0.0	0.0	61.5	17.9	11.0
Incr Delay (d2), s/veh	1.7	0.0	1.2	0.7	0.0	1.1	9.5	0.1	0.0	2.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	2.3	1.2	0.0	2.2	3.1	0.0	0.0	2.9	12.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	0.0	54.0	57.5	0.0	53.9	66.6	0.1	0.0	64.2	18.3	11.0
LnGrp LOS	E	A	D	E	A	D	E	A	A	E	B	B
Approach Vol, veh/h		141			106			1442			1292	
Approach Delay, s/veh		56.8			55.1			4.4			21.1	
Approach LOS		E			E			A			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.4	97.6		20.0	12.0	98.0		20.0
Change Period (Y+Rc), s	4.5	7.2		4.6	4.5	7.2		4.6
Max Green Setting (Gmax), s	42.5	37.2		34.0	7.5	72.2		34.0
Max Q Clear Time (g_c+I1), s	8.2	2.0		13.5	8.7	30.2		10.6
Green Ext Time (p_c), s	0.1	11.2		0.6	0.0	9.6		0.5

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B



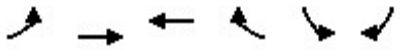
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	1444	145	204	1811	500	237	812	159	509	477	381
Future Volume (veh/h)	420	1444	145	204	1811	500	237	812	159	509	477	381
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	442	1520	153	215	1906	526	249	855	167	536	502	401
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1681	2600	1370	238	1867	760	237	909	178	394	1035	1225
Arrive On Green	0.64	0.96	0.96	0.26	0.72	0.72	0.13	0.30	0.30	0.19	0.48	0.48
Sat Flow, veh/h	3510	3610	1609	1810	5187	1609	1810	3009	588	3510	3610	1585
Grp Volume(v), veh/h	442	1520	153	215	1906	526	249	513	509	536	502	401
Grp Sat Flow(s),veh/h/ln	1755	1805	1609	1810	1729	1609	1810	1805	1792	1755	1805	1585
Q Serve(g_s), s	7.1	5.2	0.3	14.9	46.8	0.0	17.0	36.0	36.0	14.6	12.3	7.0
Cycle Q Clear(g_c), s	7.1	5.2	0.3	14.9	46.8	0.0	17.0	36.0	36.0	14.6	12.3	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	1681	2600	1370	238	1867	760	237	545	541	394	1035	1225
V/C Ratio(X)	0.26	0.58	0.11	0.90	1.02	0.69	1.05	0.94	0.94	1.36	0.48	0.33
Avail Cap(c_a), veh/h	1681	2600	1370	383	1867	760	237	555	551	394	1035	1225
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.87	0.87	0.87	0.66	0.66	0.66	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	13.6	0.9	0.2	47.1	18.2	9.2	56.5	44.2	44.2	52.8	27.4	11.4
Incr Delay (d2), s/veh	0.0	0.8	0.1	7.6	22.4	3.4	72.9	24.1	24.2	175.8	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.1	0.1	6.1	10.1	4.9	12.4	19.3	19.2	15.3	4.5	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.6	1.7	0.4	54.7	40.6	12.7	129.4	68.3	68.5	228.6	27.7	11.6
LnGrp LOS	B	A	A	D	F	B	F	E	E	F	C	B
Approach Vol, veh/h		2115			2647			1271			1439	
Approach Delay, s/veh		4.1			36.2			80.3			98.0	
Approach LOS		A			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	101.5	22.0	43.5	70.1	53.0	20.8	44.7
Change Period (Y+Rc), s	4.5	6.2	5.0	6.2	6.2	* 6.2	6.2	* 5.4
Max Green Setting (Gmax), s	27.5	26.8	17.0	36.8	7.0	* 47	14.6	* 40
Max Q Clear Time (g_c+I1), s	16.9	7.2	19.0	14.3	9.1	48.8	16.6	38.0
Green Ext Time (p_c), s	0.2	10.9	0.0	4.4	0.0	0.0	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	46.5
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



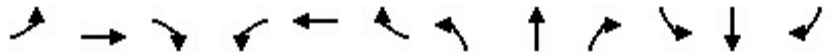
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	39	2073	2108	108	89	37
Future Volume (veh/h)	39	2073	2108	108	89	37
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	2182	2219	114	94	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	652	3051	2166	111	124	111
Arrive On Green	0.72	1.00	0.86	0.86	0.07	0.07
Sat Flow, veh/h	1810	3705	5218	257	1810	1610
Grp Volume(v), veh/h	41	2182	1516	817	94	39
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1846	1810	1610
Q Serve(g_s), s	0.9	0.0	55.8	55.8	6.6	3.0
Cycle Q Clear(g_c), s	0.9	0.0	55.8	55.8	6.6	3.0
Prop In Lane	1.00			0.14	1.00	1.00
Lane Grp Cap(c), veh/h	652	3051	1484	793	124	111
V/C Ratio(X)	0.06	0.72	1.02	1.03	0.76	0.35
Avail Cap(c_a), veh/h	652	3051	1484	793	487	434
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	11.7	0.0	9.2	9.2	59.5	57.8
Incr Delay (d2), s/veh	0.0	0.1	13.3	19.1	9.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	6.2	7.9	3.4	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.7	0.1	22.5	28.3	68.5	59.7
LnGrp LOS	B	A	F	F	E	E
Approach Vol, veh/h		2223	2333		133	
Approach Delay, s/veh		0.3	24.5		65.9	
Approach LOS		A	C		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	117.1		12.9	54.1	63.0
Change Period (Y+Rc), s	7.2		4.0	7.2	* 7.2
Max Green Setting (Gmax), s	83.8		35.0	23.5	* 56
Max Q Clear Time (g_c+I1), s	2.0		8.6	2.9	57.8
Green Ext Time (p_c), s	36.8		0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	1613	421	393	1941	37	454	116	483	91	172	366
Future Volume (veh/h)	202	1613	421	393	1941	37	454	116	483	91	172	366
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	213	1698	443	414	2043	39	478	122	508	96	181	385
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1659	3111	777	437	2048	39	459	646	547	97	138	294
Arrive On Green	0.30	0.36	0.36	0.24	0.39	0.39	0.13	0.34	0.34	0.05	0.26	0.26
Sat Flow, veh/h	1810	2862	715	1810	5240	100	3510	1900	1610	1810	541	1151
Grp Volume(v), veh/h	213	1043	1098	414	1347	735	478	122	508	96	0	566
Grp Sat Flow(s),veh/h/ln	1810	1805	1771	1810	1729	1882	1755	1900	1610	1810	0	1693
Q Serve(g_s), s	11.1	0.0	0.0	29.3	50.6	50.7	17.0	5.9	39.5	6.9	0.0	33.2
Cycle Q Clear(g_c), s	11.1	0.0	0.0	29.3	50.6	50.7	17.0	5.9	39.5	6.9	0.0	33.2
Prop In Lane	1.00		0.40	1.00		0.05	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	1659	1962	1926	437	1351	735	459	646	547	97	0	432
V/C Ratio(X)	0.13	0.53	0.57	0.95	1.00	1.00	1.04	0.19	0.93	0.99	0.00	1.31
Avail Cap(c_a), veh/h	1659	1962	1926	452	1351	735	459	646	547	97	0	432
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.6	0.0	0.0	48.5	39.5	39.6	56.5	30.3	41.4	61.4	0.0	48.4
Incr Delay (d2), s/veh	0.0	0.6	0.8	28.6	23.8	32.9	53.1	0.1	22.3	86.0	0.0	155.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.4	16.2	24.6	28.6	10.7	2.7	18.4	5.5	0.0	32.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	0.6	0.8	77.1	63.3	72.5	109.6	30.4	63.6	147.5	0.0	203.4
LnGrp LOS	A	A	A	E	E	E	F	C	E	F	A	F
Approach Vol, veh/h		2354			2496			1108			662	
Approach Delay, s/veh		1.3			68.3			79.8			195.3	
Approach LOS		A			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.9	151.9	22.0	39.0	129.8	58.0	11.0	50.0
Change Period (Y+Rc), s	4.5	7.2	5.0	* 5.8	7.2	* 7.2	4.0	5.8
Max Green Setting (Gmax), s	32.5	26.0	17.0	* 33	7.2	* 51	7.0	43.0
Max Q Clear Time (g_c+I1), s	31.3	2.0	19.0	35.2	13.1	52.7	8.9	41.5
Green Ext Time (p_c), s	0.1	17.6	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	59.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↳			↑↑↳				↱			↱
Traffic Vol, veh/h	0	2228	0	0	2635	8	0	0	0	0	0	0
Future Vol, veh/h	0	2228	0	0	2635	8	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2370	0	0	2803	9	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1185	-	-	1406
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*155	0	0	-
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			2
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*155	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	0
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	15	448	259	114
Future Vol, veh/h	0	0	15	448	259	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	18	527	305	134

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	935	372	439	0	-	0
Stage 1	372	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	297	678	1132	-	-	-
Stage 1	702	-	-	-	-	-
Stage 2	574	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	290	678	1132	-	-	-
Mov Cap-2 Maneuver	290	-	-	-	-	-
Stage 1	687	-	-	-	-	-
Stage 2	574	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1132	-	-	-	-
HCM Lane V/C Ratio	0.016	-	-	-	-
HCM Control Delay (s)	8.2	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	125	41	38	339	208	46
Future Vol, veh/h	125	41	38	339	208	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	147	48	45	399	245	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	761	272	299	0	-	0
Stage 1	272	-	-	-	-	-
Stage 2	489	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	376	772	1274	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	359	772	1274	-	-	-
Mov Cap-2 Maneuver	359	-	-	-	-	-
Stage 1	743	-	-	-	-	-
Stage 2	621	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.2	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1274	-	414	-	-
HCM Lane V/C Ratio	0.035	-	0.472	-	-
HCM Control Delay (s)	7.9	0	21.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2.5	-	-

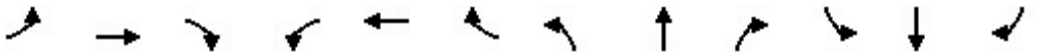
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	376	248	1
Future Vol, veh/h	1	0	0	376	248	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	0	432	285	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	718	286	286	0	-	0
Stage 1	286	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	399	758	1288	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	399	758	1288	-	-	-
Mov Cap-2 Maneuver	399	-	-	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	659	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1288	-	399	-	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	0	-	14	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



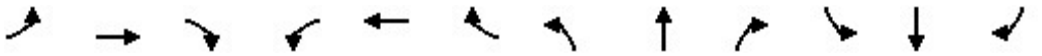
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1613	202	233	1704	700	153	408	190	764	567	124
Future Volume (veh/h)	165	1613	202	233	1704	700	153	408	190	764	567	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	174	1698	213	245	1794	737	161	429	200	804	597	131
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	146	2013	248	146	2247	1001	213	500	221	618	931	414
Arrive On Green	0.08	0.62	0.62	0.08	0.62	0.62	0.06	0.14	0.14	0.18	0.26	0.26
Sat Flow, veh/h	1810	3235	398	1810	3610	1609	3510	3610	1600	3510	3610	1605
Grp Volume(v), veh/h	174	932	979	245	1794	737	161	429	200	804	597	131
Grp Sat Flow(s),veh/h/ln	1810	1805	1828	1810	1805	1609	1755	1805	1600	1755	1805	1605
Q Serve(g_s), s	10.5	52.5	56.6	10.5	48.5	41.5	5.9	15.1	16.0	22.9	19.1	8.6
Cycle Q Clear(g_c), s	10.5	52.5	56.6	10.5	48.5	41.5	5.9	15.1	16.0	22.9	19.1	8.6
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	1123	1138	146	2247	1001	213	500	221	618	931	414
V/C Ratio(X)	1.19	0.83	0.86	1.68	0.80	0.74	0.76	0.86	0.90	1.30	0.64	0.32
Avail Cap(c_a), veh/h	146	1123	1138	146	2247	1001	230	500	221	618	931	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	19.2	20.0	59.7	18.4	17.1	60.1	54.8	55.1	53.5	42.9	39.0
Incr Delay (d2), s/veh	134.7	7.2	8.6	332.3	3.1	4.8	12.6	13.9	35.4	146.7	1.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	35.9	38.0	18.8	33.3	38.0	3.3	8.7	15.6	23.8	11.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	194.5	26.3	28.5	392.0	21.5	21.9	72.7	68.7	90.5	200.2	44.4	39.4
LnGrp LOS	F	C	C	F	C	C	E	E	F	F	D	D
Approach Vol, veh/h		2085			2776			790			1532	
Approach Delay, s/veh		41.4			54.3			75.0			125.8	
Approach LOS		D			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	87.8	12.4	39.3	15.0	87.8	27.9	23.8
Change Period (Y+Rc), s	4.5	6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	10.5	57.8	8.5	32.2	10.5	57.8	22.9	* 18
Max Q Clear Time (g_c+I1), s	12.5	58.6	7.9	21.1	12.5	50.5	24.9	18.0
Green Ext Time (p_c), s	0.0	0.0	0.0	3.1	0.0	6.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	68.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	2360	189	54	2602	108	96	33	28	118	28	65
Future Volume (veh/h)	142	2360	189	54	2602	108	96	33	28	118	28	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	149	2484	199	57	2739	114	101	35	29	124	29	68
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	104	2393	1066	85	2301	95	111	73	61	111	38	90
Arrive On Green	0.06	0.66	0.66	0.06	0.87	0.87	0.06	0.08	0.08	0.06	0.08	0.08
Sat Flow, veh/h	1810	3610	1608	1810	3529	146	1810	959	794	1810	503	1179
Grp Volume(v), veh/h	149	2484	199	57	1390	1463	101	0	64	124	0	97
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1810	1805	1870	1810	0	1753	1810	0	1682
Q Serve(g_s), s	7.5	86.2	6.2	4.0	84.8	84.8	7.2	0.0	4.5	8.0	0.0	7.3
Cycle Q Clear(g_c), s	7.5	86.2	6.2	4.0	84.8	84.8	7.2	0.0	4.5	8.0	0.0	7.3
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.45	1.00		0.70
Lane Grp Cap(c), veh/h	104	2393	1066	85	1177	1219	111	0	134	111	0	128
V/C Ratio(X)	1.43	1.04	0.19	0.67	1.18	1.20	0.91	0.00	0.48	1.11	0.00	0.76
Avail Cap(c_a), veh/h	104	2393	1066	104	1177	1219	111	0	243	111	0	239
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.29	0.29	0.29	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.3	21.9	8.4	60.0	8.6	8.6	60.6	0.0	57.6	61.0	0.0	58.8
Incr Delay (d2), s/veh	238.7	29.2	0.4	3.5	84.2	92.5	57.0	0.0	2.6	119.1	0.0	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.7	52.9	9.7	2.1	70.0	75.3	5.4	0.0	2.4	7.7	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	299.9	51.1	8.8	63.5	92.8	101.1	117.6	0.0	60.2	180.1	0.0	67.5
LnGrp LOS	F	F	A	E	F	F	F	A	E	F	A	E
Approach Vol, veh/h		2832			2910			165			221	
Approach Delay, s/veh		61.2			96.4			95.4			130.7	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	92.4	12.0	15.0	12.0	91.0	12.0	15.0
Change Period (Y+Rc), s	4.5	6.2	4.0	* 5.1	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.5	76.7	8.0	* 19	7.5	76.7	8.0	18.0
Max Q Clear Time (g_c+I1), s	6.0	88.2	9.2	9.3	9.5	86.8	10.0	6.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	81.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2468	39	118	2719	45	134
Future Volume (veh/h)	2468	39	118	2719	45	134
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2598	41	124	2862	47	141
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2573	1148	135	2954	187	166
Arrive On Green	0.95	0.95	0.15	1.00	0.10	0.10
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	2598	41	124	2862	47	141
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	92.7	0.2	8.8	0.0	3.1	11.2
Cycle Q Clear(g_c), s	92.7	0.2	8.8	0.0	3.1	11.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2573	1148	135	2954	187	166
V/C Ratio(X)	1.01	0.04	0.92	0.97	0.25	0.85
Avail Cap(c_a), veh/h	2573	1148	135	2954	259	230
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.4	1.0	54.9	0.0	53.7	57.3
Incr Delay (d2), s/veh	7.9	0.0	53.3	10.7	0.7	18.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	49.2	1.6	6.5	56.0	1.7	10.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.3	1.0	108.3	10.7	54.4	75.9
LnGrp LOS	F	A	F	B	D	E
Approach Vol, veh/h	2639			2986	188	
Approach Delay, s/veh	11.1			14.8	70.5	
Approach LOS	B			B	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.7	98.9				112.6	17.4
Change Period (Y+Rc), s	4.0	6.2				* 6.2	4.0
Max Green Setting (Gmax), s	9.7	87.5				* 1E2	18.6
Max Q Clear Time (g_c+I1), s	10.8	94.7				2.0	13.2
Green Ext Time (p_c), s	0.0	0.0				74.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	14.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2598	5	0	2838	0	2
Future Vol, veh/h	2598	5	0	2838	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2735	5	0	2987	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1368
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	*12
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*12
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	$ 360.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	12	-	-	-
HCM Lane V/C Ratio	0.175	-	-	-
HCM Control Delay (s)	$ 360.5	-	-	-
HCM Lane LOS	F	-	-	-
HCM 95th %tile Q(veh)	0.5	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

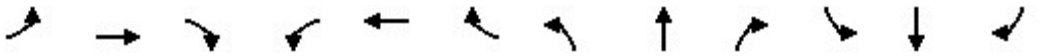
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	128	2472	2760	24	2	78
Future Vol, veh/h	128	2472	2760	24	2	78
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	135	2602	2905	25	2	82

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2933	0	-	0	4492	1468
Stage 1	-	-	-	-	2921	-
Stage 2	-	-	-	-	1571	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*56	-
Platoon blocked, %	2	-	-	-	2	2
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*56	-

Approach	EB	WB	SB
HCM Control Delay, s		0	
HCM LOS			-

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	-	-	-
HCM Lane LOS	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	2101	279	150	2437	81	285	110	153	111	63	76
Future Volume (veh/h)	94	2101	279	150	2437	81	285	110	153	111	63	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.97	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	99	2212	294	158	2565	85	300	116	161	117	66	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	1763	229	97	1983	878	343	130	180	178	348	287
Arrive On Green	0.02	0.18	0.18	0.07	0.73	0.73	0.05	0.18	0.18	0.05	0.18	0.18
Sat Flow, veh/h	1810	3210	417	1810	3610	1598	1810	708	982	1810	1900	1565
Grp Volume(v), veh/h	99	1221	1285	158	2565	85	300	0	277	117	66	80
Grp Sat Flow(s),veh/h/ln	1810	1805	1821	1810	1805	1598	1810	0	1690	1810	1900	1565
Q Serve(g_s), s	7.0	71.4	71.4	7.0	71.4	2.0	7.0	0.0	20.8	6.9	3.8	5.7
Cycle Q Clear(g_c), s	7.0	71.4	71.4	7.0	71.4	2.0	7.0	0.0	20.8	6.9	3.8	5.7
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	97	991	1000	97	1983	878	343	0	309	178	348	287
V/C Ratio(X)	1.02	1.23	1.28	1.62	1.29	0.10	0.88	0.00	0.90	0.66	0.19	0.28
Avail Cap(c_a), veh/h	97	991	1000	97	1983	878	343	0	390	178	438	361
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	53.2	53.2	60.3	17.5	8.2	49.8	0.0	51.9	42.3	44.9	45.7
Incr Delay (d2), s/veh	95.6	113.0	135.7	284.0	132.5	0.0	20.8	0.0	19.3	6.8	0.3	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	66.9	73.8	11.2	72.2	3.9	18.1	0.0	11.7	4.6	2.4	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	159.4	166.3	188.9	344.3	150.0	8.2	70.6	0.0	71.2	49.1	45.2	46.2
LnGrp LOS	F	F	F	F	F	A	E	A	E	D	D	D
Approach Vol, veh/h		2605			2808			577			263	
Approach Delay, s/veh		177.2			156.6			70.9			47.3	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	78.6	11.0	28.4	12.0	78.6	11.0	28.4
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	7.0	65.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	9.0	73.4	9.0	7.7	9.0	73.4	8.9	22.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	0.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	152.7
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	12.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↰	↱
Traffic Vol, veh/h	119	1	29	6	0	26	14	314	9	19	378	62
Future Vol, veh/h	119	1	29	6	0	26	14	314	9	19	378	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	76	76	76	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	157	1	38	8	0	34	18	413	12	25	497	82

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1019	1008	497	1063	1084	419	579	0	0	425	0	0
Stage 1	547	547	-	455	455	-	-	-	-	-	-	-
Stage 2	472	461	-	608	629	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	217	242	577	203	219	638	1005	-	-	1145	-	-
Stage 1	525	521	-	589	572	-	-	-	-	-	-	-
Stage 2	576	569	-	486	478	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	197	229	577	181	207	638	1005	-	-	1145	-	-
Mov Cap-2 Maneuver	197	229	-	181	207	-	-	-	-	-	-	-
Stage 1	513	504	-	575	559	-	-	-	-	-	-	-
Stage 2	533	556	-	438	462	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	75.4	14.2	0.4	0.3
HCM LOS	F	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1005	-	-	226	433	1145	-	-
HCM Lane V/C Ratio	0.018	-	-	0.867	0.097	0.022	-	-
HCM Control Delay (s)	8.6	0	-	75.4	14.2	8.2	0	-
HCM Lane LOS	A	A	-	F	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	6.9	0.3	0.1	-	-

Intersection	
Intersection Delay, s/veh	101.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	527	40	10	428	82	19	32	14	237	40	108
Future Vol, veh/h	58	527	40	10	428	82	19	32	14	237	40	108
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	61	555	42	11	451	86	20	34	15	249	42	114
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	162.6	84.2	15.1	39.1
HCM LOS	F	F	C	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	29%	9%	2%	62%
Vol Thru, %	49%	84%	82%	10%
Vol Right, %	22%	6%	16%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	625	520	385
LT Vol	19	58	10	237
Through Vol	32	527	428	40
RT Vol	14	40	82	108
Lane Flow Rate	68	658	547	405
Geometry Grp	1	1	1	1
Degree of Util (X)	0.172	1.278	1.057	0.826
Departure Headway (Hd)	10.066	7.222	7.459	8.038
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	359	507	493	454
Service Time	8.066	5.222	5.459	6.038
HCM Lane V/C Ratio	0.189	1.298	1.11	0.892
HCM Control Delay	15.1	162.6	84.2	39.1
HCM Lane LOS	C	F	F	E
HCM 95th-tile Q	0.6	26.4	15.7	7.9



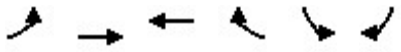
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	253	1744	336	288	2035	129	419	472	281	135	374	281
Future Volume (veh/h)	253	1744	336	288	2035	129	419	472	281	135	374	281
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.76	1.00		0.71
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	266	1836	354	303	2142	136	441	497	296	142	394	296
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	291	3010	1470	338	2777	1190	419	565	333	111	428	271
Arrive On Green	0.16	0.83	0.83	0.10	0.77	0.77	0.12	0.29	0.29	0.06	0.24	0.24
Sat Flow, veh/h	1810	3610	1533	3510	3610	1547	3510	1932	1138	1810	1805	1145
Grp Volume(v), veh/h	266	1836	354	303	2142	136	441	464	329	142	394	296
Grp Sat Flow(s),veh/h/ln	1810	1805	1533	1755	1805	1547	1755	1805	1266	1810	1805	1145
Q Serve(g_s), s	18.8	22.4	1.8	11.1	43.8	6.8	15.5	31.8	32.3	8.0	27.7	30.8
Cycle Q Clear(g_c), s	18.8	22.4	1.8	11.1	43.8	6.8	15.5	31.8	32.3	8.0	27.7	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.90	1.00		1.00
Lane Grp Cap(c), veh/h	291	3010	1470	338	2777	1190	419	528	370	111	428	271
V/C Ratio(X)	0.92	0.61	0.24	0.90	0.77	0.11	1.05	0.88	0.89	1.28	0.92	1.09
Avail Cap(c_a), veh/h	313	3010	1470	338	2777	1190	419	528	370	111	428	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.49	0.49	0.49	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	3.7	0.2	58.1	8.5	20.8	57.3	43.8	44.0	61.0	48.4	49.6
Incr Delay (d2), s/veh	4.0	0.1	0.0	14.2	1.1	0.1	58.8	15.6	22.3	176.4	25.2	81.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	33.2	13.4	6.1	39.1	7.6	11.0	19.0	14.2	9.5	17.2	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	3.7	0.2	72.3	9.6	20.9	116.1	59.5	66.3	237.4	73.7	130.7
LnGrp LOS	E	A	A	E	A	C	F	E	E	F	E	F
Approach Vol, veh/h		2456			2581			1234			832	
Approach Delay, s/veh		9.1			17.5			81.5			121.9	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	117.4	21.0	36.6	26.4	109.0	13.8	43.8
Change Period (Y+Rc), s	5.5	7.2	5.5	5.8	5.5	7.2	5.8	* 5.8
Max Green Setting (Gmax), s	12.5	49.0	15.5	29.0	22.5	39.0	8.0	* 38
Max Q Clear Time (g_c+I1), s	13.1	24.4	17.5	32.8	20.8	45.8	10.0	34.3
Green Ext Time (p_c), s	0.0	16.4	0.0	0.0	0.1	0.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

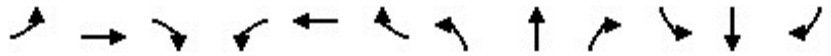
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	285	2083	2239	29	18	233
Future Volume (veh/h)	285	2083	2239	29	18	233
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	300	2193	2357	31	19	245
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	285	3835	2884	38	309	275
Arrive On Green	0.32	1.00	1.00	1.00	0.17	0.17
Sat Flow, veh/h	1810	5358	5444	69	1810	1610
Grp Volume(v), veh/h	300	2193	1544	844	19	245
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1884	1810	1610
Q Serve(g_s), s	20.5	0.0	0.0	0.0	1.1	19.3
Cycle Q Clear(g_c), s	20.5	0.0	0.0	0.0	1.1	19.3
Prop In Lane	1.00			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	285	3835	1891	1030	309	275
V/C Ratio(X)	1.05	0.57	0.82	0.82	0.06	0.89
Avail Cap(c_a), veh/h	285	3835	1891	1030	619	551
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.31	0.31	1.00	1.00
Uniform Delay (d), s/veh	44.5	0.0	0.0	0.0	45.2	52.7
Incr Delay (d2), s/veh	31.6	0.1	1.3	2.4	0.1	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	26.4	28.2	31.1	0.7	16.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	76.1	0.1	1.3	2.4	45.3	62.4
LnGrp LOS	F	A	A	A	D	E
Approach Vol, veh/h		2493	2388		264	
Approach Delay, s/veh		9.2	1.7		61.2	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		103.3		26.7	25.0	78.3
Change Period (Y+Rc), s		7.2		4.5	4.5	7.2
Max Green Setting (Gmax), s		73.8		44.5	20.5	48.8
Max Q Clear Time (g_c+I1), s		2.0		21.3	22.5	2.0
Green Ext Time (p_c), s		31.0		0.8	0.0	27.5

Intersection Summary		
HCM 6th Ctrl Delay		8.4
HCM 6th LOS		A



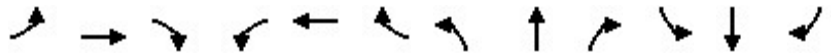
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	13	16	673	20	57	6	1831	563	159	1874	41
Future Volume (veh/h)	48	13	16	673	20	57	6	1831	563	159	1874	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	14	17	708	21	60	6	1927	593	167	1973	43
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	87	105	532	438	367	19	1808	1035	118	2006	887
Arrive On Green	0.05	0.11	0.11	0.15	0.23	0.23	0.00	0.17	0.17	0.07	0.56	0.56
Sat Flow, veh/h	1810	769	933	3510	1900	1589	1810	3610	1580	1810	3610	1596
Grp Volume(v), veh/h	51	0	31	708	21	60	6	1927	593	167	1973	43
Grp Sat Flow(s),veh/h/ln	1810	0	1702	1755	1900	1589	1810	1805	1580	1810	1805	1596
Q Serve(g_s), s	3.6	0.0	2.1	19.7	1.1	3.9	0.4	65.1	32.4	8.5	69.6	1.6
Cycle Q Clear(g_c), s	3.6	0.0	2.1	19.7	1.1	3.9	0.4	65.1	32.4	8.5	69.6	1.6
Prop In Lane	1.00		0.55	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	0	192	532	438	367	19	1808	1035	118	2006	887
V/C Ratio(X)	0.62	0.00	0.16	1.33	0.05	0.16	0.32	1.07	0.57	1.41	0.98	0.05
Avail Cap(c_a), veh/h	170	0	419	532	617	516	104	1808	1035	118	2006	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.17	0.17	0.17	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	0.0	52.1	55.2	38.9	40.0	64.3	54.3	22.5	60.8	28.3	13.2
Incr Delay (d2), s/veh	2.9	0.0	0.4	161.5	0.0	0.2	0.6	32.1	0.4	227.6	16.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.1	21.5	0.8	3.9	0.2	40.7	33.9	11.8	40.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.8	0.0	52.5	216.6	38.9	40.2	64.9	86.4	22.9	288.4	44.8	13.3
LnGrp LOS	E	A	D	F	D	D	E	F	C	F	D	B
Approach Vol, veh/h		82			789			2526			2183	
Approach Delay, s/veh		59.5			198.5			71.4			62.8	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	71.3	25.2	20.5	5.9	78.4	9.9	35.8
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	4.0	* 5.8
Max Green Setting (Gmax), s	8.5	47.8	19.7	32.0	7.5	48.8	12.2	* 42
Max Q Clear Time (g_c+I1), s	10.5	67.1	21.7	4.1	2.4	71.6	5.6	5.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	85.9
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	704	59	123	54	22	35	120	1684	97	17	1914	760
Future Volume (veh/h)	704	59	123	54	22	35	120	1684	97	17	1914	760
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	741	62	129	57	23	37	126	1773	102	18	2015	800
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	193	162	204	44	71	97	2155	960	47	2054	1151
Arrive On Green	0.15	0.10	0.10	0.11	0.07	0.07	0.05	0.60	0.60	0.05	1.00	1.00
Sat Flow, veh/h	3510	1900	1601	1810	652	1048	1810	3610	1607	1810	3610	1607
Grp Volume(v), veh/h	741	62	129	57	0	60	126	1773	102	18	2015	800
Grp Sat Flow(s),veh/h/ln	1755	1900	1601	1810	0	1700	1810	1805	1607	1810	1805	1607
Q Serve(g_s), s	19.1	3.9	8.9	3.8	0.0	4.4	7.0	50.6	1.7	1.3	0.0	0.0
Cycle Q Clear(g_c), s	19.1	3.9	8.9	3.8	0.0	4.4	7.0	50.6	1.7	1.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	193	162	204	0	116	97	2155	960	47	2054	1151
V/C Ratio(X)	1.44	0.32	0.79	0.28	0.00	0.52	1.29	0.82	0.11	0.39	0.98	0.70
Avail Cap(c_a), veh/h	516	634	534	204	0	432	97	2155	960	97	2054	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.63	0.63	0.63	0.21	0.21	0.21
Uniform Delay (d), s/veh	55.4	54.3	42.9	52.8	0.0	58.5	61.5	20.7	2.6	60.7	0.0	0.0
Incr Delay (d2), s/veh	207.4	1.0	8.5	0.7	0.0	3.6	171.4	2.4	0.1	1.1	5.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.2	2.3	8.7	2.1	0.0	2.3	8.2	32.7	4.4	0.7	37.9	29.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	262.8	55.2	51.4	53.6	0.0	62.1	232.9	23.1	2.7	61.8	5.7	0.7
LnGrp LOS	F	E	D	D	A	E	F	C	A	E	A	A
Approach Vol, veh/h		932			117			2001			2833	
Approach Delay, s/veh		219.8			57.9			35.3			4.7	
Approach LOS		F			E			D			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	84.8	20.1	17.8	11.0	81.2	23.6	14.2
Change Period (Y+Rc), s	4.0	7.2	5.4	* 4.6	4.0	7.2	4.5	5.4
Max Green Setting (Gmax), s	7.3	49.8	10.0	* 43	7.0	49.8	19.1	33.0
Max Q Clear Time (g_c+I1), s	3.3	52.6	5.8	10.9	9.0	2.0	21.1	6.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	32.5	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	50.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	123	273	1628	100	393	1698
Future Volume (veh/h)	123	273	1628	100	393	1698
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	129	287	1714	105	414	1787
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	189	679	2279	1015	474	2919
Arrive On Green	0.10	0.10	1.00	1.00	0.27	1.00
Sat Flow, veh/h	1810	2834	3705	1608	3510	3705
Grp Volume(v), veh/h	129	287	1714	105	414	1787
Grp Sat Flow(s),veh/h/ln	1810	1417	1805	1608	1755	1805
Q Serve(g_s), s	8.9	11.1	0.0	0.0	14.6	0.0
Cycle Q Clear(g_c), s	8.9	11.1	0.0	0.0	14.6	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	189	679	2279	1015	474	2919
V/C Ratio(X)	0.68	0.42	0.75	0.10	0.87	0.61
Avail Cap(c_a), veh/h	221	729	2279	1015	662	2919
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.63	0.63	0.09	0.09
Uniform Delay (d), s/veh	56.1	41.8	0.0	0.0	46.4	0.0
Incr Delay (d2), s/veh	6.7	0.4	1.5	0.1	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	9.2	31.4	3.8	7.5	32.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	62.9	42.2	1.5	0.1	47.3	0.1
LnGrp LOS	E	D	A	A	D	A
Approach Vol, veh/h	416		1819			2201
Approach Delay, s/veh	48.6		1.4			9.0
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	23.1	88.3			111.3	18.7
Change Period (Y+Rc), s	5.5	6.2			6.2	5.1
Max Green Setting (Gmax), s	24.5	72.8			102.8	15.9
Max Q Clear Time (g_c+I1), s	16.6	2.0			2.0	13.1
Green Ext Time (p_c), s	0.9	21.5			23.6	0.4

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	44	25	206	15	304	40	1369	282	329	1402	24
Future Volume (veh/h)	54	44	25	206	15	304	40	1369	282	329	1402	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	57	46	26	217	16	320	42	1441	297	346	1476	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	155	73	42	245	207	614	76	1904	842	390	2182	961
Arrive On Green	0.09	0.06	0.06	0.14	0.11	0.11	0.08	1.00	1.00	0.22	1.00	1.00
Sat Flow, veh/h	1810	1138	643	1810	1900	2736	1810	3610	1596	3510	3610	1590
Grp Volume(v), veh/h	57	0	72	217	16	320	42	1441	297	346	1476	25
Grp Sat Flow(s),veh/h/ln	1810	0	1781	1810	1900	1368	1810	1805	1596	1755	1805	1590
Q Serve(g_s), s	3.9	0.0	5.1	15.3	1.0	9.9	2.9	0.0	0.0	12.4	0.0	0.0
Cycle Q Clear(g_c), s	3.9	0.0	5.1	15.3	1.0	9.9	2.9	0.0	0.0	12.4	0.0	0.0
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	155	0	115	245	207	614	76	1904	842	390	2182	961
V/C Ratio(X)	0.37	0.00	0.63	0.89	0.08	0.52	0.55	0.76	0.35	0.89	0.68	0.03
Avail Cap(c_a), veh/h	362	0	452	434	576	1144	97	1904	842	405	2182	961
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.53	0.53	0.53	0.75	0.75	0.75
Uniform Delay (d), s/veh	56.1	0.0	59.3	55.2	52.0	25.6	58.4	0.0	0.0	49.7	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	5.5	4.3	0.2	0.7	1.2	1.5	0.6	15.2	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	2.8	8.1	0.6	9.2	1.5	26.4	10.9	7.1	27.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.6	0.0	64.8	59.5	52.2	26.3	59.6	1.5	0.6	64.9	1.3	0.0
LnGrp LOS	E	A	E	E	D	C	E	A	A	E	A	A
Approach Vol, veh/h		129			553			1780			1847	
Approach Delay, s/veh		61.2			40.1			2.8			13.2	
Approach LOS		E			D			A			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	74.8	21.6	14.2	9.5	84.8	17.0	18.8
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	5.8	* 4.6
Max Green Setting (Gmax), s	4.5	29.8	31.2	33.0	7.0	38.8	26.0	* 39
Max Q Clear Time (g_c+I1), s	11.4	2.0	17.3	7.1	4.9	2.0	5.9	11.9
Green Ext Time (p_c), s	0.0	13.0	0.3	0.3	0.0	13.4	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	47	139	101	34	97	185	1368	26	211	1160	176
Future Volume (veh/h)	175	47	139	101	34	97	185	1368	26	211	1160	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	184	49	146	106	36	102	195	1440	27	222	1221	185
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	264	98	293	216	101	287	219	1817	784	248	1875	827
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.24	1.00	1.00	0.18	0.69	0.69
Sat Flow, veh/h	1269	420	1251	1205	432	1225	1810	3610	1557	1810	3610	1592
Grp Volume(v), veh/h	184	0	195	106	0	138	195	1440	27	222	1221	185
Grp Sat Flow(s),veh/h/ln	1269	0	1671	1205	0	1657	1810	1805	1557	1810	1805	1592
Q Serve(g_s), s	18.4	0.0	13.2	10.9	0.0	9.0	13.5	0.0	0.0	15.6	24.7	5.5
Cycle Q Clear(g_c), s	27.5	0.0	13.2	24.0	0.0	9.0	13.5	0.0	0.0	15.6	24.7	5.5
Prop In Lane	1.00		0.75	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	0	391	216	0	388	219	1817	784	248	1875	827
V/C Ratio(X)	0.70	0.00	0.50	0.49	0.00	0.36	0.89	0.79	0.03	0.90	0.65	0.22
Avail Cap(c_a), veh/h	299	0	437	249	0	433	452	1817	784	452	1875	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.65	0.65	0.65
Uniform Delay (d), s/veh	53.1	0.0	43.2	53.6	0.0	41.6	48.4	0.0	0.0	52.2	13.5	10.5
Incr Delay (d2), s/veh	5.9	0.0	1.0	1.7	0.0	0.6	0.5	0.3	0.0	3.0	1.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	7.1	3.9	0.0	5.0	7.1	26.0	1.0	8.2	22.3	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.0	0.0	44.1	55.3	0.0	42.1	48.9	0.3	0.0	55.3	14.6	10.9
LnGrp LOS	E	A	D	E	A	D	D	A	A	E	B	B
Approach Vol, veh/h		379			244			1662			1628	
Approach Delay, s/veh		51.4			47.9			6.0			19.8	
Approach LOS		D			D			A			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	32.3	72.6		35.0	20.2	74.7		35.0
Change Period (Y+Rc), s	4.5	7.2		4.6	4.5	7.2		4.6
Max Green Setting (Gmax), s	32.5	47.2		34.0	32.5	47.2		34.0
Max Q Clear Time (g_c+I1), s	17.6	2.0		29.5	15.5	26.7		26.0
Green Ext Time (p_c), s	0.2	13.7		0.8	0.2	8.8		0.7

Intersection Summary	
HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B



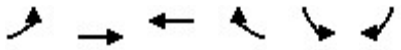
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	523	1357	221	192	1787	701	200	509	112	531	578	400
Future Volume (veh/h)	523	1357	221	192	1787	701	200	509	112	531	578	400
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	551	1428	233	202	1881	738	211	536	118	559	608	421
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	427	1411	827	146	1748	720	226	741	162	394	838	562
Arrive On Green	0.24	0.78	0.78	0.16	0.67	0.67	0.12	0.25	0.25	0.19	0.39	0.39
Sat Flow, veh/h	3510	3610	1603	1810	5187	1602	1810	2922	640	3510	3610	1577
Grp Volume(v), veh/h	551	1428	233	202	1881	738	211	330	324	559	608	421
Grp Sat Flow(s),veh/h/ln	1755	1805	1603	1810	1729	1602	1810	1805	1757	1755	1805	1577
Q Serve(g_s), s	15.8	50.8	1.1	10.5	43.8	43.8	15.0	21.7	21.9	14.6	18.7	9.2
Cycle Q Clear(g_c), s	15.8	50.8	1.1	10.5	43.8	43.8	15.0	21.7	21.9	14.6	18.7	9.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	427	1411	827	146	1748	720	226	458	446	394	838	562
V/C Ratio(X)	1.29	1.01	0.28	1.38	1.08	1.02	0.93	0.72	0.73	1.42	0.73	0.75
Avail Cap(c_a), veh/h	427	1411	827	146	1748	720	226	555	541	394	1050	654
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.86	0.86	0.86	0.38	0.38	0.38	1.00	1.00	1.00	0.73	0.73	0.73
Uniform Delay (d), s/veh	49.2	14.2	2.3	54.5	21.2	10.8	56.4	44.3	44.4	52.8	36.3	27.6
Incr Delay (d2), s/veh	145.3	25.2	0.7	187.5	39.2	27.1	41.6	3.6	3.9	198.7	1.4	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.3	30.4	8.9	12.9	27.3	35.2	10.2	12.4	12.2	18.0	11.1	17.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	194.4	39.4	3.0	242.0	60.4	38.0	98.0	47.9	48.2	251.6	37.7	30.6
LnGrp LOS	F	F	A	F	F	F	F	D	D	F	D	C
Approach Vol, veh/h		2212			2821			865			1588	
Approach Delay, s/veh		74.2			67.5			60.2			111.1	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	57.0	21.6	36.4	22.0	50.0	19.6	38.4
Change Period (Y+Rc), s	4.5	6.2	5.4	* 6.2	6.2	* 6.2	5.0	5.4
Max Green Setting (Gmax), s	10.5	43.8	16.0	* 38	10.0	* 44	14.6	40.0
Max Q Clear Time (g_c+I1), s	12.5	52.8	17.0	20.7	17.8	45.8	16.6	23.9
Green Ext Time (p_c), s	0.0	0.0	0.0	4.8	0.0	0.0	0.0	3.4

Intersection Summary	
HCM 6th Ctrl Delay	77.9
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



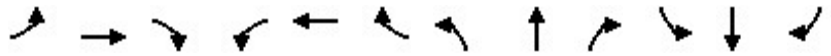
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	94	1906	2486	111	214	59
Future Volume (veh/h)	94	1906	2486	111	214	59
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	99	2006	2617	117	225	62
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	392	2782	2538	112	259	230
Arrive On Green	0.43	1.00	1.00	1.00	0.14	0.14
Sat Flow, veh/h	1810	3705	5263	225	1810	1610
Grp Volume(v), veh/h	99	2006	1768	966	225	62
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1859	1810	1610
Q Serve(g_s), s	4.5	0.0	64.8	64.8	15.8	4.5
Cycle Q Clear(g_c), s	4.5	0.0	64.8	64.8	15.8	4.5
Prop In Lane	1.00			0.12	1.00	1.00
Lane Grp Cap(c), veh/h	392	2782	1724	927	259	230
V/C Ratio(X)	0.25	0.72	1.03	1.04	0.87	0.27
Avail Cap(c_a), veh/h	392	2782	1724	927	487	434
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	0.2	0.2	54.5	49.6
Incr Delay (d2), s/veh	0.0	0.2	14.5	22.8	8.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	36.2	34.5	39.3	8.7	4.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.1	0.2	14.7	23.0	63.2	50.3
LnGrp LOS	C	A	F	F	E	D
Approach Vol, veh/h		2105	2734		287	
Approach Delay, s/veh		1.6	17.6		60.4	
Approach LOS		A	B		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		107.4		22.6	35.4	72.0
Change Period (Y+Rc), s		7.2		4.0	7.2	* 7.2
Max Green Setting (Gmax), s		83.8		35.0	14.5	* 65
Max Q Clear Time (g_c+I1), s		2.0		17.8	6.5	66.8
Green Ext Time (p_c), s		30.2		0.8	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	1482	420	369	1929	95	626	81	323	54	53	214
Future Volume (veh/h)	147	1482	420	369	1929	95	626	81	323	54	53	214
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	155	1560	442	388	2031	100	659	85	340	57	56	225
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	1033	279	1158	4917	241	711	635	537	85	56	227
Arrive On Green	0.02	0.12	0.12	0.64	0.97	0.97	0.20	0.33	0.33	0.05	0.17	0.17
Sat Flow, veh/h	1810	2809	759	1810	5065	249	3510	1900	1609	1810	330	1328
Grp Volume(v), veh/h	155	975	1027	388	1385	746	659	85	340	57	0	281
Grp Sat Flow(s),veh/h/ln	1810	1805	1762	1810	1729	1855	1755	1900	1609	1810	0	1658
Q Serve(g_s), s	7.0	47.8	47.8	12.8	2.5	2.6	24.0	4.1	17.4	4.0	0.0	22.0
Cycle Q Clear(g_c), s	7.0	47.8	47.8	12.8	2.5	2.6	24.0	4.1	17.4	4.0	0.0	22.0
Prop In Lane	1.00		0.43	1.00		0.13	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	97	664	648	1158	3357	1801	711	635	537	85	0	283
V/C Ratio(X)	1.59	1.47	1.58	0.33	0.41	0.41	0.93	0.13	0.63	0.67	0.00	0.99
Avail Cap(c_a), veh/h	97	664	648	1158	3357	1801	756	635	537	97	0	283
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	63.8	57.1	57.1	10.7	0.1	0.1	50.9	30.2	20.7	61.0	0.0	53.8
Incr Delay (d2), s/veh	292.5	216.2	267.4	0.1	0.4	0.7	16.3	0.1	2.4	9.6	0.0	51.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.4	63.8	71.5	14.0	25.2	27.3	13.5	3.1	18.8	2.3	0.0	14.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	356.4	273.3	324.5	10.8	0.5	0.8	67.2	30.3	23.1	70.5	0.0	105.1
LnGrp LOS	F	F	F	B	A	A	E	C	C	E	A	F
Approach Vol, veh/h		2157			2519			1084			338	
Approach Delay, s/veh		303.6			2.2			50.5			99.2	
Approach LOS		F			A			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	92.6	55.0	31.3	28.0	12.0	135.6	10.1	49.2
Change Period (Y+Rc), s	7.2	* 7.2	5.0	* 5.8	5.0	7.2	4.0	5.8
Max Green Setting (Gmax), s	10.7	* 48	28.0	* 22	7.0	51.0	7.0	43.0
Max Q Clear Time (g_c+I1), s	14.8	49.8	26.0	24.0	9.0	4.6	6.0	19.4
Green Ext Time (p_c), s	0.0	0.0	0.4	0.0	0.0	22.8	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	122.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	2474	0	0	2782	16	0	0	0	0	0	2
Future Vol, veh/h	0	2474	0	0	2782	16	0	0	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2689	0	0	3024	17	0	0	0	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1345	-	-	1521
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*59	0	0	-
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			2
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*59	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	
HCM LOS			A	-

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	-
HCM Lane LOS	A	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	11	337	347	66
Future Vol, veh/h	0	0	11	337	347	66
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	13	406	418	80

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	890	458	498	0	-	0
Stage 1	458	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	316	607	1076	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	311	607	1076	-	-	-
Mov Cap-2 Maneuver	311	-	-	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	659	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1076	-	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-	-
HCM Control Delay (s)	8.4	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	106	42	14	240	334	13
Future Vol, veh/h	106	42	14	240	334	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	133	53	18	300	418	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	762	426	434	0	-	0
Stage 1	426	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	376	633	1136	-	-	-
Stage 1	663	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	369	633	1136	-	-	-
Mov Cap-2 Maneuver	369	-	-	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	728	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	20.2	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1136	-	419	-	-
HCM Lane V/C Ratio	0.015	-	0.442	-	-
HCM Control Delay (s)	8.2	0	20.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	2.2	-	-

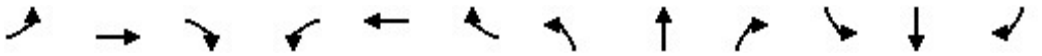
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	251	376	0
Future Vol, veh/h	3	0	1	251	376	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	0	1	310	464	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	776	464	464	0	-	0
Stage 1	464	-	-	-	-	-
Stage 2	312	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	369	602	1108	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	369	602	1108	-	-	-
Mov Cap-2 Maneuver	369	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	747	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1108	-	369	-	-
HCM Lane V/C Ratio	0.001	-	0.01	-	-
HCM Control Delay (s)	8.3	0	14.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



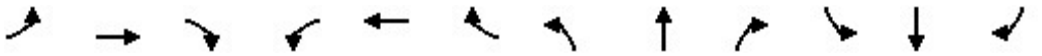
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1317	153	156	1733	929	283	995	243	605	181	93
Future Volume (veh/h)	164	1317	153	156	1733	929	283	995	243	605	181	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	173	1386	161	164	1824	978	298	1047	256	637	191	98
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	201	1372	158	1183	3527	1572	365	830	369	459	941	418
Arrive On Green	0.11	0.42	0.42	0.65	0.98	0.98	0.10	0.23	0.23	0.13	0.26	0.26
Sat Flow, veh/h	1810	3256	375	1810	3610	1609	3510	3610	1604	3510	3610	1605
Grp Volume(v), veh/h	173	764	783	164	1824	978	298	1047	256	637	191	98
Grp Sat Flow(s),veh/h/ln	1810	1805	1826	1810	1805	1609	1755	1805	1604	1755	1805	1605
Q Serve(g_s), s	12.2	54.8	54.8	4.5	3.0	4.6	10.8	29.9	15.8	17.0	5.4	6.3
Cycle Q Clear(g_c), s	12.2	54.8	54.8	4.5	3.0	4.6	10.8	29.9	15.8	17.0	5.4	6.3
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	761	770	1183	3527	1572	365	830	369	459	941	418
V/C Ratio(X)	0.86	1.00	1.02	0.14	0.52	0.62	0.82	1.26	0.69	1.39	0.20	0.23
Avail Cap(c_a), veh/h	313	761	770	1183	3527	1572	608	830	369	459	941	418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.8	37.6	37.6	8.6	0.1	0.1	57.0	50.0	31.5	56.5	37.5	37.8
Incr Delay (d2), s/veh	13.5	33.5	36.9	0.1	0.5	1.9	4.5	127.1	5.5	187.5	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	29.6	30.6	1.6	0.3	0.8	5.0	28.0	6.6	19.3	2.3	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.3	71.1	74.5	8.6	0.6	1.9	61.5	177.2	37.1	244.0	37.6	38.1
LnGrp LOS	E	F	F	A	A	A	E	F	D	F	D	D
Approach Vol, veh/h		1720			2966			1601			926	
Approach Delay, s/veh		72.6			1.5			133.2			179.6	
Approach LOS		E			A			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	93.1	61.0	18.0	39.7	18.9	135.1	22.0	35.7
Change Period (Y+Rc), s	6.2	* 6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	7.5	* 55	22.5	24.2	22.5	39.8	17.0	* 30
Max Q Clear Time (g_c+I1), s	6.5	56.8	12.8	8.3	14.2	6.6	19.0	31.9
Green Ext Time (p_c), s	0.0	0.0	0.7	1.2	0.3	24.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	70.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	2024	91	92	2588	35	179	24	120	117	29	86
Future Volume (veh/h)	89	2024	91	92	2588	35	179	24	120	117	29	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	2131	96	97	2724	37	188	25	126	123	31	91
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	104	2234	995	104	2257	31	149	30	150	111	39	116
Arrive On Green	0.06	0.62	0.62	0.08	0.82	0.82	0.08	0.11	0.11	0.06	0.09	0.09
Sat Flow, veh/h	1810	3610	1608	1810	3647	49	1810	272	1372	1810	424	1243
Grp Volume(v), veh/h	94	2131	96	97	1345	1416	188	0	151	123	0	122
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1810	1805	1891	1810	0	1644	1810	0	1667
Q Serve(g_s), s	6.7	71.4	1.8	6.9	80.4	80.4	10.7	0.0	11.7	8.0	0.0	9.3
Cycle Q Clear(g_c), s	6.7	71.4	1.8	6.9	80.4	80.4	10.7	0.0	11.7	8.0	0.0	9.3
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.83	1.00		0.75
Lane Grp Cap(c), veh/h	104	2234	995	104	1117	1170	149	0	180	111	0	155
V/C Ratio(X)	0.90	0.95	0.10	0.93	1.20	1.21	1.27	0.00	0.84	1.10	0.00	0.79
Avail Cap(c_a), veh/h	104	2234	995	104	1117	1170	149	0	228	111	0	237
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.33	0.33	0.33	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.9	23.1	3.4	59.7	11.5	11.5	59.7	0.0	56.7	61.0	0.0	57.7
Incr Delay (d2), s/veh	57.6	10.9	0.2	32.7	95.0	97.3	162.2	0.0	19.2	116.2	0.0	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	29.3	1.1	4.0	38.1	40.7	11.6	0.0	5.8	7.3	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.5	34.0	3.6	92.5	106.5	108.8	221.9	0.0	76.0	177.2	0.0	67.0
LnGrp LOS	F	C	A	F	F	F	F	A	E	F	A	E
Approach Vol, veh/h		2321			2858			339			245	
Approach Delay, s/veh		36.1			107.2			156.9			122.3	
Approach LOS		D			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	86.6	14.7	16.7	12.0	86.6	12.0	19.4
Change Period (Y+Rc), s	4.5	6.2	4.0	4.6	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.5	76.7	8.0	18.5	7.5	76.7	8.0	18.0
Max Q Clear Time (g_c+I1), s	8.9	73.4	12.7	11.3	8.7	82.4	10.0	13.7
Green Ext Time (p_c), s	0.0	3.0	0.0	0.3	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	82.1
HCM 6th LOS	F



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2214	46	138	2677	38	114
Future Volume (veh/h)	2214	46	138	2677	38	114
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2331	48	145	2818	40	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2613	1165	139	3001	163	145
Arrive On Green	0.96	0.96	0.15	1.00	0.09	0.09
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	2331	48	145	2818	40	120
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	22.3	0.2	10.0	0.0	2.7	9.5
Cycle Q Clear(g_c), s	22.3	0.2	10.0	0.0	2.7	9.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2613	1165	139	3001	163	145
V/C Ratio(X)	0.89	0.04	1.04	0.94	0.25	0.83
Avail Cap(c_a), veh/h	2613	1165	139	3001	251	223
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.14	0.14	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	1.1	0.7	55.0	0.0	55.0	58.1
Incr Delay (d2), s/veh	0.8	0.0	87.8	7.3	0.8	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.1	7.4	3.0	1.3	4.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.9	0.7	142.8	7.3	55.8	72.0
LnGrp LOS	A	A	F	A	E	E
Approach Vol, veh/h	2379			2963	160	
Approach Delay, s/veh	1.9			13.9	68.0	
Approach LOS	A			B	E	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.0	100.3			114.3	15.7
Change Period (Y+Rc), s	4.0	6.2			* 6.2	4.0
Max Green Setting (Gmax), s	10.0	87.8			* 1E2	18.0
Max Q Clear Time (g_c+I1), s	12.0	24.3			2.0	11.5
Green Ext Time (p_c), s	0.0	37.1			72.3	0.2

Intersection Summary	
HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2328	1	0	2816	0	8
Future Vol, veh/h	2328	1	0	2816	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2451	1	0	2964	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1226
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	*107
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*107
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	41.5
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	107	-	-	-
HCM Lane V/C Ratio	0.079	-	-	-
HCM Control Delay (s)	41.5	-	-	-
HCM Lane LOS	E	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

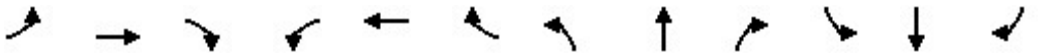
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	2281	2664	13	2	152
Future Vol, veh/h	55	2281	2664	13	2	152
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	58	2401	2804	14	2	160

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2821	0	-	0	4131	1412
Stage 1	-	-	-	-	2814	-
Stage 2	-	-	-	-	1317	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*124	-
Platoon blocked, %	2	-	-	-	2	2
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*123	-

Approach	EB	WB	SB
HCM Control Delay, s		0	
HCM LOS			-

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	-	-	-
HCM Lane LOS	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1874	373	298	2263	56	381	73	263	96	67	41
Future Volume (veh/h)	36	1874	373	298	2263	56	381	73	263	96	67	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	1973	393	314	2382	59	401	77	277	101	71	43
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	73	1524	292	97	1877	837	407	82	294	171	429	364
Arrive On Green	0.01	0.17	0.17	0.11	1.00	1.00	0.05	0.23	0.23	0.05	0.23	0.23
Sat Flow, veh/h	1810	3010	577	1810	3610	1610	1810	362	1303	1810	1900	1610
Grp Volume(v), veh/h	38	1153	1213	314	2382	59	401	0	354	101	71	43
Grp Sat Flow(s),veh/h/ln	1810	1805	1782	1810	1805	1610	1810	0	1665	1810	1900	1610
Q Serve(g_s), s	2.7	65.8	65.8	7.0	67.6	0.0	7.0	0.0	27.2	5.5	3.9	2.8
Cycle Q Clear(g_c), s	2.7	65.8	65.8	7.0	67.6	0.0	7.0	0.0	27.2	5.5	3.9	2.8
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	73	914	902	97	1877	837	407	0	376	171	429	364
V/C Ratio(X)	0.52	1.26	1.34	3.22	1.27	0.07	0.98	0.00	0.94	0.59	0.17	0.12
Avail Cap(c_a), veh/h	97	914	902	97	1877	837	407	0	384	171	438	372
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	54.1	54.1	58.0	0.0	0.0	48.9	0.0	49.5	38.8	40.5	40.0
Incr Delay (d2), s/veh	2.2	126.3	162.6	1002.6	121.4	0.0	40.3	0.0	30.9	3.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	63.7	72.0	30.1	31.6	0.0	14.5	0.0	14.6	2.7	1.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	180.5	216.7	1060.6	121.4	0.0	89.3	0.0	80.3	42.6	40.6	40.2
LnGrp LOS	E	F	F	F	F	A	F	A	F	D	D	D
Approach Vol, veh/h		2404			2755			755			215	
Approach Delay, s/veh		196.9			225.8			85.1			41.5	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	73.0	11.0	34.0	10.2	74.8	11.0	34.0
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	7.0	65.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	9.0	67.8	9.0	5.9	4.7	69.6	7.5	29.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	190.7
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	27.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	166	0	34	5	0	56	43	472	5	18	431	214
Future Vol, veh/h	166	0	34	5	0	56	43	472	5	18	431	214
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	88	95	88	95	88	88	88	88	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	175	0	36	6	0	64	45	536	6	20	490	225

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1191	1162	490	1290	1384	539	715	0	0	542	0	0
Stage 1	530	530	-	629	629	-	-	-	-	-	-	-
Stage 2	661	632	-	661	755	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 166	197	582	142	145	546	895	-	-	1037	-	-
Stage 1	536	530	-	474	478	-	-	-	-	-	-	-
Stage 2	455	477	-	455	420	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 135	177	582	123	130	546	895	-	-	1037	-	-
Mov Cap-2 Maneuver	~ 135	177	-	123	130	-	-	-	-	-	-	-
Stage 1	497	513	-	440	444	-	-	-	-	-	-	-
Stage 2	373	443	-	413	406	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	200.3	15.1	0.7	0.2
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	895	-	-	135	582	426	1037	-	-
HCM Lane V/C Ratio	0.051	-	-	1.294	0.061	0.163	0.02	-	-
HCM Control Delay (s)	9.2	-	-	239	11.6	15.1	8.5	0	-
HCM Lane LOS	A	-	-	F	B	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	11	0.2	0.6	0.1	-	-

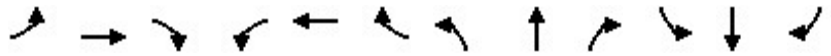
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	140.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	564	3	2	637	158	23	37	13	138	19	55
Future Vol, veh/h	65	564	3	2	637	158	23	37	13	138	19	55
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	68	594	3	2	671	166	24	39	14	145	20	58
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	107.7	211.3	14.3	18.3
HCM LOS	F	F	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	32%	10%	0%	65%
Vol Thru, %	51%	89%	80%	9%
Vol Right, %	18%	0%	20%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	632	797	212
LT Vol	23	65	2	138
Through Vol	37	564	637	19
RT Vol	13	3	158	55
Lane Flow Rate	77	665	839	223
Geometry Grp	1	1	1	1
Degree of Util (X)	0.173	1.139	1.405	0.459
Departure Headway (Hd)	9.33	6.767	6.312	8.356
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	387	539	579	435
Service Time	7.33	4.767	4.312	6.356
HCM Lane V/C Ratio	0.199	1.234	1.449	0.513
HCM Control Delay	14.3	107.7	211.3	18.3
HCM Lane LOS	B	F	F	C
HCM 95th-tile Q	0.6	20.4	37	2.4



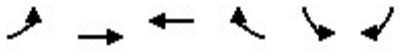
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	1617	473	522	1885	188	541	592	383	119	490	240
Future Volume (veh/h)	183	1617	473	522	1885	188	541	592	383	119	490	240
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		0.91	1.00		0.88
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	193	1702	498	549	1984	198	569	623	403	125	516	253
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	220	2844	1477	500	2919	1280	500	589	381	111	479	233
Arrive On Green	0.08	0.53	0.53	0.19	1.00	1.00	0.14	0.29	0.29	0.06	0.21	0.21
Sat Flow, veh/h	1810	3610	1584	3510	3610	1582	3510	2016	1303	1810	2239	1090
Grp Volume(v), veh/h	193	1702	498	549	1984	198	569	558	468	125	415	354
Grp Sat Flow(s),veh/h/ln	1810	1805	1584	1755	1805	1582	1755	1805	1515	1810	1805	1525
Q Serve(g_s), s	13.7	42.3	8.1	18.5	0.0	0.0	18.5	38.0	38.0	8.0	27.8	27.8
Cycle Q Clear(g_c), s	13.7	42.3	8.1	18.5	0.0	0.0	18.5	38.0	38.0	8.0	27.8	27.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		0.72
Lane Grp Cap(c), veh/h	220	2844	1477	500	2919	1280	500	528	443	111	386	326
V/C Ratio(X)	0.88	0.60	0.34	1.10	0.68	0.15	1.14	1.06	1.06	1.12	1.08	1.09
Avail Cap(c_a), veh/h	258	2844	1477	500	2919	1280	500	528	443	111	386	326
HCM Platoon Ratio	0.67	0.67	0.67	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.8	16.5	1.3	52.7	0.0	0.0	55.7	46.0	46.0	61.0	51.1	51.1
Incr Delay (d2), s/veh	2.8	0.1	0.1	62.7	0.8	0.2	84.4	55.1	58.9	122.0	67.5	74.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	18.2	0.0	11.8	0.3	0.1	13.9	24.6	21.1	7.4	19.5	17.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.5	16.6	1.4	115.4	0.8	0.2	140.2	101.1	104.9	183.0	118.6	125.6
LnGrp LOS	E	B	A	F	A	A	F	F	F	F	F	F
Approach Vol, veh/h		2393			2731			1595			894	
Approach Delay, s/veh		17.1			23.8			116.1			130.4	
Approach LOS		B			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	111.4	24.0	33.6	21.3	114.1	13.8	43.8
Change Period (Y+Rc), s	5.5	7.2	5.5	5.8	5.5	7.2	5.8	* 5.8
Max Green Setting (Gmax), s	18.5	43.0	18.5	26.0	18.5	43.0	8.0	* 38
Max Q Clear Time (g_c+I1), s	20.5	44.3	20.5	29.8	15.7	2.0	10.0	40.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	23.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	53.5
HCM 6th LOS	D

Notes

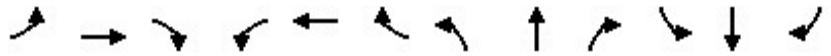
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	171	2009	2018	38	58	267
Future Volume (veh/h)	171	2009	2018	38	58	267
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	180	2115	2124	40	61	281
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	174	3713	3066	58	351	313
Arrive On Green	0.19	1.00	1.00	1.00	0.19	0.19
Sat Flow, veh/h	1810	5358	5410	99	1810	1610
Grp Volume(v), veh/h	180	2115	1401	763	61	281
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1880	1810	1610
Q Serve(g_s), s	12.5	0.0	0.0	0.0	3.7	22.1
Cycle Q Clear(g_c), s	12.5	0.0	0.0	0.0	3.7	22.1
Prop In Lane	1.00			0.05	1.00	1.00
Lane Grp Cap(c), veh/h	174	3713	2023	1100	351	313
V/C Ratio(X)	1.03	0.57	0.69	0.69	0.17	0.90
Avail Cap(c_a), veh/h	174	3713	2023	1100	619	551
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.12	0.12	1.00	1.00
Uniform Delay (d), s/veh	52.5	0.0	0.0	0.0	43.7	51.1
Incr Delay (d2), s/veh	30.0	0.1	0.2	0.4	0.2	9.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	0.1	0.1	1.7	19.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	82.5	0.1	0.2	0.4	43.9	60.9
LnGrp LOS	F	A	A	A	D	E
Approach Vol, veh/h		2295	2164		342	
Approach Delay, s/veh		6.5	0.3		57.9	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		100.3		29.7	17.0	83.3
Change Period (Y+Rc), s		7.2		4.5	4.5	7.2
Max Green Setting (Gmax), s		73.8		44.5	12.5	56.8
Max Q Clear Time (g_c+I1), s		2.0		24.1	14.5	2.0
Green Ext Time (p_c), s		28.8		1.1	0.0	25.1

Intersection Summary		
HCM 6th Ctrl Delay		7.4
HCM 6th LOS		A



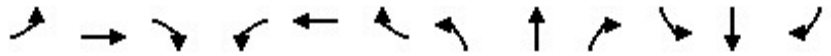
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	39	11	755	38	61	3	2099	646	218	1279	20
Future Volume (veh/h)	70	39	11	755	38	61	3	2099	646	218	1279	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	74	41	12	795	40	64	3	2209	680	229	1346	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	289	86	25	532	117	97	10	1941	1109	146	2213	965
Arrive On Green	0.16	0.06	0.06	0.15	0.06	0.06	0.00	0.36	0.36	0.08	0.61	0.61
Sat Flow, veh/h	1810	1410	413	3510	1900	1566	1810	3610	1608	1810	3610	1574
Grp Volume(v), veh/h	74	0	53	795	40	64	3	2209	680	229	1346	21
Grp Sat Flow(s),veh/h/ln	1810	0	1823	1755	1900	1566	1810	1805	1608	1810	1805	1574
Q Serve(g_s), s	4.7	0.0	3.7	19.7	2.6	4.4	0.2	69.9	12.2	10.5	29.9	0.2
Cycle Q Clear(g_c), s	4.7	0.0	3.7	19.7	2.6	4.4	0.2	69.9	12.2	10.5	29.9	0.2
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	0	111	532	117	97	10	1941	1109	146	2213	965
V/C Ratio(X)	0.26	0.00	0.48	1.49	0.34	0.66	0.30	1.14	0.61	1.57	0.61	0.02
Avail Cap(c_a), veh/h	289	0	449	532	693	571	230	1941	1109	146	2213	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	0.0	59.1	55.2	58.5	42.0	64.5	41.6	4.6	59.7	15.5	1.2
Incr Delay (d2), s/veh	0.2	0.0	3.2	232.3	1.7	7.6	0.6	62.8	0.2	285.5	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.8	25.6	1.3	2.2	0.1	48.2	4.5	16.3	11.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	0.0	62.2	287.4	60.2	49.6	65.1	104.4	4.8	345.2	16.8	1.3
LnGrp LOS	D	A	E	F	E	D	E	F	A	F	B	A
Approach Vol, veh/h		127			899			2892			1596	
Approach Delay, s/veh		53.9			260.4			80.9			63.7	
Approach LOS		D			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	76.1	25.2	13.7	5.2	85.9	26.3	12.6
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	5.5	* 4.6
Max Green Setting (Gmax), s	10.5	45.8	19.7	32.0	16.5	39.8	7.0	* 47
Max Q Clear Time (g_c+I1), s	12.5	71.9	21.7	5.7	2.2	31.9	6.7	6.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	4.9	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	104.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	677	60	110	147	67	52	251	2375	103	11	1195	733
Future Volume (veh/h)	677	60	110	147	67	52	251	2375	103	11	1195	733
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	713	63	116	155	71	55	264	2500	108	12	1258	772
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	226	189	261	115	89	301	2004	892	34	1383	852
Arrive On Green	0.15	0.12	0.12	0.14	0.12	0.12	0.22	0.74	0.74	0.02	0.38	0.38
Sat Flow, veh/h	3510	1900	1590	1810	987	764	1810	3610	1607	1810	3610	1606
Grp Volume(v), veh/h	713	63	116	155	0	126	264	2500	108	12	1258	772
Grp Sat Flow(s),veh/h/ln	1755	1900	1590	1810	0	1751	1810	1805	1607	1810	1805	1606
Q Serve(g_s), s	19.1	3.9	9.0	10.4	0.0	8.9	18.3	72.2	1.2	0.9	42.9	26.5
Cycle Q Clear(g_c), s	19.1	3.9	9.0	10.4	0.0	8.9	18.3	72.2	1.2	0.9	42.9	26.5
Prop In Lane	1.00		1.00	1.00		0.44	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	226	189	261	0	204	301	2004	892	34	1383	852
V/C Ratio(X)	1.38	0.28	0.61	0.59	0.00	0.62	0.88	1.25	0.12	0.35	0.91	0.91
Avail Cap(c_a), veh/h	516	678	567	261	0	444	301	2004	892	97	1383	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.21	0.21	0.21	0.56	0.56	0.56
Uniform Delay (d), s/veh	55.4	52.2	54.4	52.1	0.0	54.6	49.3	17.0	1.7	63.0	38.0	11.7
Incr Delay (d2), s/veh	183.9	0.7	3.2	3.6	0.0	3.0	6.5	112.4	0.1	3.4	6.3	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.5	1.9	3.8	5.0	0.0	4.1	8.1	48.2	0.9	0.4	19.1	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	239.3	52.9	57.6	55.7	0.0	57.6	55.8	129.4	1.7	66.4	44.3	21.1
LnGrp LOS	F	D	E	E	A	E	E	F	A	E	D	C
Approach Vol, veh/h		892			281			2872			2042	
Approach Delay, s/veh		202.5			56.6			117.8			35.7	
Approach LOS		F			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	79.4	24.1	20.1	28.8	57.0	23.6	20.6
Change Period (Y+Rc), s	4.0	7.2	5.4	* 4.6	7.2	* 7.2	4.5	5.4
Max Green Setting (Gmax), s	7.0	49.8	7.0	* 46	7.0	* 50	19.1	33.0
Max Q Clear Time (g_c+I1), s	2.9	74.2	12.4	11.0	20.3	44.9	21.1	10.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	3.9	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	99.9
HCM 6th LOS	F

Notes

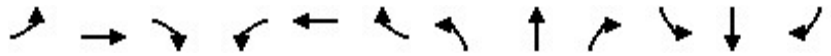
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	128	638	2091	97	195	1257
Future Volume (veh/h)	128	638	2091	97	195	1257
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	135	672	2201	102	205	1323
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	221	559	2432	1083	263	2855
Arrive On Green	0.12	0.12	0.67	0.67	0.15	1.00
Sat Flow, veh/h	1810	2834	3705	1608	3510	3705
Grp Volume(v), veh/h	135	672	2201	102	205	1323
Grp Sat Flow(s),veh/h/ln	1810	1417	1805	1608	1755	1805
Q Serve(g_s), s	9.2	15.9	66.3	2.9	7.3	0.0
Cycle Q Clear(g_c), s	9.2	15.9	66.3	2.9	7.3	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	221	559	2432	1083	263	2855
V/C Ratio(X)	0.61	1.20	0.91	0.09	0.78	0.46
Avail Cap(c_a), veh/h	221	559	2432	1083	527	2855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	0.74	0.74
Uniform Delay (d), s/veh	54.1	52.2	17.7	7.4	54.2	0.0
Incr Delay (d2), s/veh	4.8	107.4	0.6	0.0	3.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	17.3	22.8	0.9	3.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.9	159.6	18.4	7.4	58.0	0.4
LnGrp LOS	E	F	B	A	E	A
Approach Vol, veh/h	807		2303			1528
Approach Delay, s/veh	142.7		17.9			8.1
Approach LOS	F		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	15.2	93.8			109.0	21.0
Change Period (Y+Rc), s	5.5	6.2			6.2	5.1
Max Green Setting (Gmax), s	9.5	77.8			102.8	15.9
Max Q Clear Time (g_c+I1), s	9.3	68.3			2.0	17.9
Green Ext Time (p_c), s	0.4	8.3			12.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	36.4
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	70	47	407	169	632	71	1453	289	368	1031	33
Future Volume (veh/h)	103	70	47	407	169	632	71	1453	289	368	1031	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	108	74	49	428	178	665	75	1529	304	387	1085	35
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	133	112	74	324	418	800	96	1752	778	243	1839	814
Arrive On Green	0.07	0.11	0.11	0.18	0.22	0.22	0.02	0.16	0.16	0.14	1.00	1.00
Sat Flow, veh/h	1810	1063	704	1810	1900	2744	1810	3610	1603	3510	3610	1599
Grp Volume(v), veh/h	108	0	123	428	178	665	75	1529	304	387	1085	35
Grp Sat Flow(s),veh/h/ln	1810	0	1766	1810	1900	1372	1810	1805	1603	1755	1805	1599
Q Serve(g_s), s	7.6	0.0	8.7	23.2	10.5	22.2	5.4	53.8	11.0	9.0	0.0	0.0
Cycle Q Clear(g_c), s	7.6	0.0	8.7	23.2	10.5	22.2	5.4	53.8	11.0	9.0	0.0	0.0
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	0	186	324	418	800	96	1752	778	243	1839	814
V/C Ratio(X)	0.81	0.00	0.66	1.32	0.43	0.83	0.78	0.87	0.39	1.59	0.59	0.04
Avail Cap(c_a), veh/h	237	0	492	324	547	986	139	1752	778	243	1839	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.83	0.83	0.83	0.87	0.87	0.87
Uniform Delay (d), s/veh	59.4	0.0	56.0	53.4	43.6	25.3	63.1	50.7	9.3	56.0	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.0	4.0	165.2	0.7	5.1	7.8	5.3	1.2	282.9	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	4.1	25.4	5.0	7.7	2.7	27.2	4.9	13.1	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.9	0.0	60.0	218.6	44.3	30.4	71.0	56.0	10.6	338.9	1.2	0.1
LnGrp LOS	E	A	E	F	D	C	E	E	B	F	A	A
Approach Vol, veh/h		231			1271			1908			1507	
Approach Delay, s/veh		61.8			95.7			49.4			87.9	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	69.3	27.2	19.5	10.9	72.4	13.5	33.2
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	4.0	4.6
Max Green Setting (Gmax), s	9.0	46.8	17.0	36.2	10.0	46.8	17.0	37.4
Max Q Clear Time (g_c+I1), s	11.0	55.8	25.2	10.7	7.4	2.0	9.6	24.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	8.7	0.1	3.4

Intersection Summary	
HCM 6th Ctrl Delay	73.7
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	11	58	34	8	59	89	1291	23	83	1142	46
Future Volume (veh/h)	65	11	58	34	8	59	89	1291	23	83	1142	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	68	12	61	36	8	62	94	1359	24	87	1202	48
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	32	163	160	22	171	104	2510	1119	110	2521	1124
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.12	1.00	1.00	0.04	0.47	0.47
Sat Flow, veh/h	1347	270	1374	1343	186	1445	1810	3610	1609	1810	3610	1609
Grp Volume(v), veh/h	68	0	73	36	0	70	94	1359	24	87	1202	48
Grp Sat Flow(s),veh/h/ln	1347	0	1644	1343	0	1631	1810	1805	1609	1810	1805	1609
Q Serve(g_s), s	6.4	0.0	5.3	3.3	0.0	5.1	6.7	0.0	0.0	6.2	29.6	2.1
Cycle Q Clear(g_c), s	11.5	0.0	5.3	8.6	0.0	5.1	6.7	0.0	0.0	6.2	29.6	2.1
Prop In Lane	1.00		0.84	1.00		0.89	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	0	195	160	0	193	104	2510	1119	110	2521	1124
V/C Ratio(X)	0.42	0.00	0.37	0.23	0.00	0.36	0.90	0.54	0.02	0.79	0.48	0.04
Avail Cap(c_a), veh/h	354	0	430	352	0	427	104	2510	1119	452	2521	1124
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.54	0.54	0.54
Uniform Delay (d), s/veh	58.1	0.0	52.9	56.8	0.0	52.8	57.1	0.0	0.0	61.5	18.3	11.0
Incr Delay (d2), s/veh	1.7	0.0	1.2	0.7	0.0	1.1	9.5	0.1	0.0	2.6	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	2.3	1.2	0.0	2.2	3.1	0.0	0.0	2.9	13.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.8	0.0	54.0	57.5	0.0	53.9	66.6	0.1	0.0	64.1	18.7	11.0
LnGrp LOS	E	A	D	E	A	D	E	A	A	E	B	B
Approach Vol, veh/h		141			106			1477			1337	
Approach Delay, s/veh		56.8			55.1			4.3			21.3	
Approach LOS		E			E			A			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	12.4	97.6		20.0	12.0	98.0		20.0
Change Period (Y+Rc), s	4.5	7.2		4.6	4.5	7.2		4.6
Max Green Setting (Gmax), s	32.5	47.2		34.0	7.5	72.2		34.0
Max Q Clear Time (g_c+I1), s	8.2	2.0		13.5	8.7	31.6		10.6
Green Ext Time (p_c), s	0.1	12.4		0.6	0.0	10.1		0.5

Intersection Summary	
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B



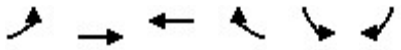
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	453	1466	150	204	1840	500	244	812	159	509	477	424
Future Volume (veh/h)	453	1466	150	204	1840	500	244	812	159	509	477	424
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	477	1543	158	215	1937	526	257	855	167	536	502	446
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1681	2600	1370	238	1867	760	237	909	178	394	1035	1225
Arrive On Green	0.64	0.96	0.96	0.26	0.72	0.72	0.13	0.30	0.30	0.19	0.48	0.48
Sat Flow, veh/h	3510	3610	1609	1810	5187	1609	1810	3009	588	3510	3610	1585
Grp Volume(v), veh/h	477	1543	158	215	1937	526	257	513	509	536	502	446
Grp Sat Flow(s),veh/h/ln	1755	1805	1609	1810	1729	1609	1810	1805	1792	1755	1805	1585
Q Serve(g_s), s	7.8	5.4	0.3	14.9	46.8	0.0	17.0	36.0	36.0	14.6	12.3	8.5
Cycle Q Clear(g_c), s	7.8	5.4	0.3	14.9	46.8	0.0	17.0	36.0	36.0	14.6	12.3	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	1681	2600	1370	238	1867	760	237	545	541	394	1035	1225
V/C Ratio(X)	0.28	0.59	0.12	0.90	1.04	0.69	1.09	0.94	0.94	1.36	0.48	0.36
Avail Cap(c_a), veh/h	1681	2600	1370	383	1867	760	237	555	551	394	1035	1225
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.86	0.86	0.86	0.65	0.65	0.65	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	13.7	0.9	0.2	47.1	18.2	9.2	56.5	44.2	44.2	52.8	27.4	11.8
Incr Delay (d2), s/veh	0.0	0.9	0.1	7.5	27.4	3.4	83.3	24.1	24.2	175.6	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	1.1	0.1	6.1	11.0	4.9	13.1	19.3	19.2	15.3	4.5	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	1.7	0.4	54.6	45.6	12.6	139.8	68.3	68.5	228.4	27.7	11.9
LnGrp LOS	B	A	A	D	F	B	F	E	E	F	C	B
Approach Vol, veh/h		2178			2678			1279			1484	
Approach Delay, s/veh		4.3			39.9			82.7			95.5	
Approach LOS		A			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	101.5	22.0	43.5	70.1	53.0	20.8	44.7
Change Period (Y+Rc), s	4.5	6.2	5.0	6.2	6.2	* 6.2	6.2	* 5.4
Max Green Setting (Gmax), s	27.5	26.8	17.0	36.8	7.0	* 47	14.6	* 40
Max Q Clear Time (g_c+I1), s	16.9	7.4	19.0	14.3	9.8	48.8	16.6	38.0
Green Ext Time (p_c), s	0.2	11.0	0.0	4.6	0.0	0.0	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	47.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



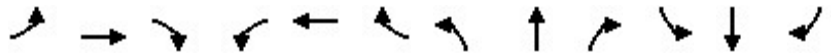
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	39	2095	2137	108	89	37
Future Volume (veh/h)	39	2095	2137	108	89	37
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	41	2205	2249	114	94	39
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	652	3051	2168	109	124	111
Arrive On Green	0.72	1.00	0.86	0.86	0.07	0.07
Sat Flow, veh/h	1810	3705	5222	254	1810	1610
Grp Volume(v), veh/h	41	2205	1534	829	94	39
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1847	1810	1610
Q Serve(g_s), s	0.9	0.0	55.8	55.8	6.6	3.0
Cycle Q Clear(g_c), s	0.9	0.0	55.8	55.8	6.6	3.0
Prop In Lane	1.00			0.14	1.00	1.00
Lane Grp Cap(c), veh/h	652	3051	1484	793	124	111
V/C Ratio(X)	0.06	0.72	1.03	1.04	0.76	0.35
Avail Cap(c_a), veh/h	652	3051	1484	793	487	434
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	11.7	0.0	9.2	9.2	59.5	57.8
Incr Delay (d2), s/veh	0.0	0.1	18.0	24.2	9.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	7.2	9.0	3.4	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.7	0.1	27.2	33.4	68.5	59.7
LnGrp LOS	B	A	F	F	E	E
Approach Vol, veh/h		2246	2363		133	
Approach Delay, s/veh		0.3	29.4		65.9	
Approach LOS		A	C		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	117.1		12.9	54.1	63.0
Change Period (Y+Rc), s	7.2		4.0	7.2	* 7.2
Max Green Setting (Gmax), s	83.8		35.0	23.5	* 56
Max Q Clear Time (g_c+I1), s	2.0		8.6	2.9	57.8
Green Ext Time (p_c), s	37.7		0.4	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	209	1629	421	393	1962	37	454	116	483	91	172	375
Future Volume (veh/h)	209	1629	421	393	1962	37	454	116	483	91	172	375
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	220	1715	443	414	2065	39	478	122	508	96	181	395
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1659	3118	771	437	2048	39	459	646	547	97	136	296
Arrive On Green	0.30	0.36	0.36	0.24	0.39	0.39	0.13	0.34	0.34	0.05	0.26	0.26
Sat Flow, veh/h	1810	2868	709	1810	5241	99	3510	1900	1610	1810	531	1160
Grp Volume(v), veh/h	220	1051	1107	414	1362	742	478	122	508	96	0	576
Grp Sat Flow(s),veh/h/ln	1810	1805	1772	1810	1729	1882	1755	1900	1610	1810	0	1691
Q Serve(g_s), s	11.5	0.0	0.0	29.3	50.8	50.8	17.0	5.9	39.5	6.9	0.0	33.2
Cycle Q Clear(g_c), s	11.5	0.0	0.0	29.3	50.8	50.8	17.0	5.9	39.5	6.9	0.0	33.2
Prop In Lane	1.00		0.40	1.00		0.05	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	1659	1962	1927	437	1351	736	459	646	547	97	0	432
V/C Ratio(X)	0.13	0.54	0.57	0.95	1.01	1.01	1.04	0.19	0.93	0.99	0.00	1.33
Avail Cap(c_a), veh/h	1659	1962	1927	452	1351	736	459	646	547	97	0	432
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.8	0.0	0.0	48.5	39.6	39.6	56.5	30.3	41.4	61.4	0.0	48.4
Incr Delay (d2), s/veh	0.0	0.6	0.8	28.6	26.3	35.5	53.1	0.1	22.3	86.0	0.0	165.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.4	16.2	25.1	29.2	10.7	2.7	18.4	5.5	0.0	33.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.8	0.6	0.8	77.1	65.9	75.1	109.6	30.4	63.6	147.5	0.0	213.7
LnGrp LOS	A	A	A	E	F	F	F	C	E	F	A	F
Approach Vol, veh/h		2378			2518			1108			672	
Approach Delay, s/veh		1.3			70.5			79.8			204.2	
Approach LOS		A			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.9	151.9	22.0	39.0	129.8	58.0	11.0	50.0
Change Period (Y+Rc), s	4.5	7.2	5.0	* 5.8	7.2	* 7.2	4.0	5.8
Max Green Setting (Gmax), s	32.5	26.0	17.0	* 33	7.2	* 51	7.0	43.0
Max Q Clear Time (g_c+I1), s	31.3	2.0	19.0	35.2	13.5	52.8	8.9	41.5
Green Ext Time (p_c), s	0.1	17.8	0.0	0.0	0.0	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	60.9
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↳			↑↑↳				↱			↱
Traffic Vol, veh/h	0	2283	0	0	2677	8	0	0	0	0	0	0
Future Vol, veh/h	0	2283	0	0	2677	8	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2429	0	0	2848	9	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1215	-	-	1429
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*131	0	0	-
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			2
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*131	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	0
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	22	520	297	166
Future Vol, veh/h	0	0	22	520	297	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	85	85	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	23	612	349	175

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1095	437	524	0	-	0
Stage 1	437	-	-	-	-	-
Stage 2	658	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	239	624	1053	-	-	-
Stage 1	655	-	-	-	-	-
Stage 2	519	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	231	624	1053	-	-	-
Mov Cap-2 Maneuver	231	-	-	-	-	-
Stage 1	633	-	-	-	-	-
Stage 2	519	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1053	-	-	-	-
HCM Lane V/C Ratio	0.022	-	-	-	-
HCM Control Delay (s)	8.5	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	188	49	41	354	215	77
Future Vol, veh/h	188	49	41	354	215	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	85	85	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	198	52	43	416	253	81

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	796	294	334	0	-	0
Stage 1	294	-	-	-	-	-
Stage 2	502	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	359	750	1237	-	-	-
Stage 1	761	-	-	-	-	-
Stage 2	612	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	343	750	1237	-	-	-
Mov Cap-2 Maneuver	343	-	-	-	-	-
Stage 1	727	-	-	-	-	-
Stage 2	612	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.9	0.8	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1237	-	386	-	-
HCM Lane V/C Ratio	0.035	-	0.646	-	-
HCM Control Delay (s)	8	0	29.9	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	4.4	-	-

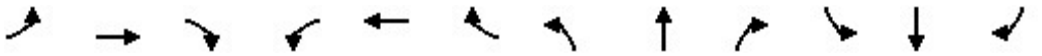
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	395	262	1
Future Vol, veh/h	1	0	0	395	262	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	87	87	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	0	454	301	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	756	302	302	0	-	0
Stage 1	302	-	-	-	-	-
Stage 2	454	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	379	742	1270	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	644	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	379	742	1270	-	-	-
Mov Cap-2 Maneuver	379	-	-	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	644	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1270	-	379	-	-
HCM Lane V/C Ratio	-	-	0.003	-	-
HCM Control Delay (s)	0	-	14.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



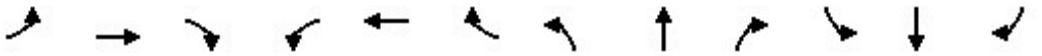
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1622	202	243	1718	709	153	408	196	770	567	124
Future Volume (veh/h)	165	1622	202	243	1718	709	153	408	196	770	567	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	174	1707	213	256	1808	746	161	429	206	811	597	131
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	146	2015	246	146	2247	1001	213	500	221	618	931	414
Arrive On Green	0.08	0.62	0.62	0.08	0.62	0.62	0.06	0.14	0.14	0.18	0.26	0.26
Sat Flow, veh/h	1810	3237	396	1810	3610	1609	3510	3610	1600	3510	3610	1605
Grp Volume(v), veh/h	174	936	984	256	1808	746	161	429	206	811	597	131
Grp Sat Flow(s),veh/h/ln	1810	1805	1828	1810	1805	1609	1755	1805	1600	1755	1805	1605
Q Serve(g_s), s	10.5	52.9	57.2	10.5	49.3	42.5	5.9	15.1	16.6	22.9	19.1	8.6
Cycle Q Clear(g_c), s	10.5	52.9	57.2	10.5	49.3	42.5	5.9	15.1	16.6	22.9	19.1	8.6
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	1123	1138	146	2247	1001	213	500	221	618	931	414
V/C Ratio(X)	1.19	0.83	0.86	1.75	0.80	0.75	0.76	0.86	0.93	1.31	0.64	0.32
Avail Cap(c_a), veh/h	146	1123	1138	146	2247	1001	230	500	221	618	931	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	19.3	20.1	59.7	18.6	17.3	60.1	54.8	55.4	53.5	42.9	39.0
Incr Delay (d2), s/veh	134.7	7.3	8.8	364.8	3.2	5.0	12.6	13.9	41.5	151.5	1.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.1	21.5	23.8	19.5	18.9	16.0	3.0	7.8	9.2	22.8	8.5	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	194.5	26.6	28.9	424.6	21.8	22.3	72.7	68.7	96.9	205.1	44.4	39.4
LnGrp LOS	F	C	C	F	C	C	E	E	F	F	D	D
Approach Vol, veh/h		2094			2810			796			1539	
Approach Delay, s/veh		41.6			58.6			76.8			128.6	
Approach LOS		D			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	87.8	12.4	39.3	15.0	87.8	27.9	23.8
Change Period (Y+Rc), s	4.5	6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	10.5	57.8	8.5	32.2	10.5	57.8	22.9	* 18
Max Q Clear Time (g_c+I1), s	12.5	59.2	7.9	21.1	12.5	51.3	24.9	18.6
Green Ext Time (p_c), s	0.0	0.0	0.0	3.1	0.0	5.8	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	70.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	2384	189	57	2641	108	96	33	30	118	28	65
Future Volume (veh/h)	142	2384	189	57	2641	108	96	33	30	118	28	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	149	2509	199	60	2780	114	101	35	32	124	29	68
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	104	2390	1064	86	2303	94	111	70	64	111	38	90
Arrive On Green	0.06	0.66	0.66	0.06	0.87	0.87	0.06	0.08	0.08	0.06	0.08	0.08
Sat Flow, veh/h	1810	3610	1608	1810	3531	144	1810	912	834	1810	503	1179
Grp Volume(v), veh/h	149	2509	199	60	1410	1484	101	0	67	124	0	97
Grp Sat Flow(s),veh/h/ln	1810	1805	1608	1810	1805	1870	1810	0	1746	1810	0	1682
Q Serve(g_s), s	7.5	86.1	6.2	4.2	84.8	84.8	7.2	0.0	4.8	8.0	0.0	7.3
Cycle Q Clear(g_c), s	7.5	86.1	6.2	4.2	84.8	84.8	7.2	0.0	4.8	8.0	0.0	7.3
Prop In Lane	1.00		1.00	1.00		0.08	1.00		0.48	1.00		0.70
Lane Grp Cap(c), veh/h	104	2390	1064	86	1177	1219	111	0	133	111	0	128
V/C Ratio(X)	1.43	1.05	0.19	0.70	1.20	1.22	0.91	0.00	0.50	1.11	0.00	0.76
Avail Cap(c_a), veh/h	104	2390	1064	104	1177	1219	111	0	242	111	0	239
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.26	0.26	0.26	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.3	22.0	8.5	60.0	8.6	8.6	60.6	0.0	57.7	61.0	0.0	58.8
Incr Delay (d2), s/veh	238.7	33.1	0.4	4.0	91.4	99.7	57.0	0.0	2.9	119.1	0.0	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.3	40.8	2.2	2.0	35.1	39.2	5.1	0.0	2.2	7.4	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	299.9	55.1	8.9	64.0	100.0	108.4	117.6	0.0	60.6	180.1	0.0	67.5
LnGrp LOS	F	F	A	E	F	F	F	A	E	F	A	E
Approach Vol, veh/h		2857			2954			168			221	
Approach Delay, s/veh		64.6			103.5			94.9			130.7	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	92.3	12.0	15.0	12.0	91.0	12.0	15.0
Change Period (Y+Rc), s	4.5	6.2	4.0	* 5.1	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.5	76.7	8.0	* 19	7.5	76.7	8.0	18.0
Max Q Clear Time (g_c+I1), s	6.2	88.1	9.2	9.3	9.5	86.8	10.0	6.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	86.3
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	2493	39	118	2761	45	134
Future Volume (veh/h)	2493	39	118	2761	45	134
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	2624	41	124	2906	47	141
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	2573	1148	135	2954	187	166
Arrive On Green	0.95	0.95	0.15	1.00	0.10	0.10
Sat Flow, veh/h	3705	1610	1810	3705	1810	1610
Grp Volume(v), veh/h	2624	41	124	2906	47	141
Grp Sat Flow(s),veh/h/ln	1805	1610	1810	1805	1810	1610
Q Serve(g_s), s	92.7	0.2	8.8	0.0	3.1	11.2
Cycle Q Clear(g_c), s	92.7	0.2	8.8	0.0	3.1	11.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2573	1148	135	2954	187	166
V/C Ratio(X)	1.02	0.04	0.92	0.98	0.25	0.85
Avail Cap(c_a), veh/h	2573	1148	135	2954	259	230
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	3.4	1.0	54.9	0.0	53.7	57.3
Incr Delay (d2), s/veh	11.4	0.0	53.3	13.2	0.7	18.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.1	5.6	5.4	1.5	5.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.7	1.0	108.3	13.2	54.4	75.9
LnGrp LOS	F	A	F	B	D	E
Approach Vol, veh/h	2665			3030	188	
Approach Delay, s/veh	14.5			17.1	70.5	
Approach LOS	B			B	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	13.7	98.9				112.6	17.4
Change Period (Y+Rc), s	4.0	6.2				* 6.2	4.0
Max Green Setting (Gmax), s	9.7	87.5				* 1E2	18.6
Max Q Clear Time (g_c+I1), s	10.8	94.7				2.0	13.2
Green Ext Time (p_c), s	0.0	0.0				76.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↱		↑↑		↱
Traffic Vol, veh/h	2623	5	0	2880	0	2
Future Vol, veh/h	2623	5	0	2880	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2761	5	0	3032	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1381
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	*313
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*313
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	313	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-
HCM Control Delay (s)	16.6	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0

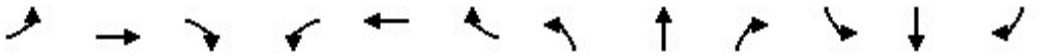
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	128	2497	2802	24	2	78
Future Vol, veh/h	128	2497	2802	24	2	78
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	135	2628	2949	25	2	82

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2977	0	-	0	4549	1490
Stage 1	-	-	-	-	2965	-
Stage 2	-	-	-	-	1584	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*34	-
Platoon blocked, %	2	-	-	-	2	2
Mov Cap-1 Maneuver	-	-	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	*33	-

Approach	EB	WB	SB
HCM Control Delay, s		0	
HCM LOS			-

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	-	-	-
HCM Lane LOS	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	2101	304	194	2437	81	327	111	225	111	64	76
Future Volume (veh/h)	94	2101	304	194	2437	81	327	111	225	111	64	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	99	2212	320	204	2565	85	344	117	237	117	67	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	1608	227	97	1829	809	397	124	252	170	429	355
Arrive On Green	0.02	0.17	0.17	0.07	0.67	0.67	0.05	0.23	0.23	0.05	0.23	0.23
Sat Flow, veh/h	1810	3173	447	1810	3610	1597	1810	551	1117	1810	1900	1574
Grp Volume(v), veh/h	99	1234	1298	204	2565	85	344	0	354	117	67	80
Grp Sat Flow(s),veh/h/ln	1810	1805	1815	1810	1805	1597	1810	0	1668	1810	1900	1574
Q Serve(g_s), s	7.0	65.9	65.9	7.0	65.9	2.4	7.0	0.0	27.1	6.5	3.7	5.4
Cycle Q Clear(g_c), s	7.0	65.9	65.9	7.0	65.9	2.4	7.0	0.0	27.1	6.5	3.7	5.4
Prop In Lane	1.00		0.25	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	97	915	920	97	1829	809	397	0	376	170	429	355
V/C Ratio(X)	1.02	1.35	1.41	2.09	1.40	0.11	0.87	0.00	0.94	0.69	0.16	0.23
Avail Cap(c_a), veh/h	97	915	920	97	1829	809	397	0	385	170	438	363
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	54.1	54.1	60.3	21.2	10.9	46.6	0.0	49.5	39.2	40.4	41.1
Incr Delay (d2), s/veh	95.6	164.2	191.7	495.3	181.3	0.0	17.2	0.0	30.7	9.2	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	73.4	80.9	16.5	65.0	0.9	9.6	0.0	14.6	3.3	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	159.4	218.3	245.9	555.7	202.5	10.9	63.8	0.0	80.2	48.4	40.6	41.4
LnGrp LOS	F	F	F	F	F	B	E	A	F	D	D	D
Approach Vol, veh/h		2631			2854			698			264	
Approach Delay, s/veh		229.7			222.0			72.1			44.3	
Approach LOS		F			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	73.1	11.0	33.9	12.0	73.1	11.0	33.9
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	7.0	65.2	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	9.0	67.9	9.0	7.4	9.0	67.9	8.5	29.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	201.7
HCM 6th LOS	F

Intersection	
Int Delay, s/veh	23.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	172	1	36	6	0	26	18	376	9	19	416	94
Future Vol, veh/h	172	1	36	6	0	26	18	376	9	19	416	94
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	90
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	76	95	76	95	76	76	76	76	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	181	1	38	8	0	34	19	495	12	25	547	99

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1153	1142	547	1205	1235	501	646	0	0	507	0	0
Stage 1	597	597	-	539	539	-	-	-	-	-	-	-
Stage 2	556	545	-	666	696	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	~ 176	202	541	162	178	574	949	-	-	1068	-	-
Stage 1	493	495	-	530	525	-	-	-	-	-	-	-
Stage 2	519	522	-	452	446	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 157	189	541	143	167	574	949	-	-	1068	-	-
Mov Cap-2 Maneuver	~ 157	189	-	143	167	-	-	-	-	-	-	-
Stage 1	479	477	-	515	510	-	-	-	-	-	-	-
Stage 2	474	507	-	404	429	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	150.4	16.1	0.3	0.3
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	949	-	-	157	541	367	1068	-	-
HCM Lane V/C Ratio	0.02	-	-	1.16	0.07	0.115	0.023	-	-
HCM Control Delay (s)	8.9	-	-	179.1	12.2	16.1	8.5	0	-
HCM Lane LOS	A	-	-	F	B	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	10	0.2	0.4	0.1	-	-

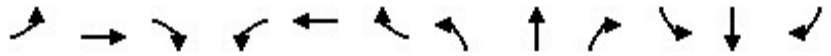
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Intersection Delay, s/veh	109.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	527	40	10	428	89	19	34	14	249	43	108
Future Vol, veh/h	58	527	40	10	428	89	19	34	14	249	43	108
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	61	555	42	11	451	94	20	36	15	262	45	114
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	173.3	94.2	15.5	44.6
HCM LOS	F	F	C	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	28%	9%	2%	62%
Vol Thru, %	51%	84%	81%	11%
Vol Right, %	21%	6%	17%	27%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	67	625	527	400
LT Vol	19	58	10	249
Through Vol	34	527	428	43
RT Vol	14	40	89	108
Lane Flow Rate	71	658	555	421
Geometry Grp	1	1	1	1
Degree of Util (X)	0.178	1.303	1.087	0.864
Departure Headway (Hd)	10.325	7.376	7.605	8.143
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	350	500	483	446
Service Time	8.325	5.376	5.605	6.143
HCM Lane V/C Ratio	0.203	1.316	1.149	0.944
HCM Control Delay	15.5	173.3	94.2	44.6
HCM Lane LOS	C	F	F	E
HCM 95th-tile Q	0.6	27.2	16.7	8.8



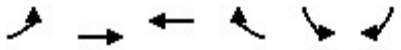
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	254	1805	346	288	2072	129	425	472	281	135	374	282
Future Volume (veh/h)	254	1805	346	288	2072	129	425	472	281	135	374	282
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.96	1.00		0.76	1.00		0.71
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	267	1900	364	303	2181	136	447	497	296	142	394	297
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	292	3010	1470	338	2775	1189	419	565	333	111	428	271
Arrive On Green	0.16	0.83	0.83	0.10	0.77	0.77	0.12	0.29	0.29	0.06	0.24	0.24
Sat Flow, veh/h	1810	3610	1533	3510	3610	1547	3510	1932	1138	1810	1805	1145
Grp Volume(v), veh/h	267	1900	364	303	2181	136	447	464	329	142	394	297
Grp Sat Flow(s),veh/h/ln	1810	1805	1533	1755	1805	1547	1755	1805	1266	1810	1805	1145
Q Serve(g_s), s	18.9	24.0	1.9	11.1	45.9	6.8	15.5	31.8	32.3	8.0	27.7	30.8
Cycle Q Clear(g_c), s	18.9	24.0	1.9	11.1	45.9	6.8	15.5	31.8	32.3	8.0	27.7	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.90	1.00		1.00
Lane Grp Cap(c), veh/h	292	3010	1470	338	2775	1189	419	528	370	111	428	271
V/C Ratio(X)	0.92	0.63	0.25	0.90	0.79	0.11	1.07	0.88	0.89	1.28	0.92	1.09
Avail Cap(c_a), veh/h	313	3010	1470	338	2775	1189	419	528	370	111	428	271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.47	0.47	0.47	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	3.8	0.2	58.1	8.8	20.8	57.3	43.8	44.0	61.0	48.4	49.6
Incr Delay (d2), s/veh	4.0	0.1	0.0	13.7	1.1	0.1	63.3	15.6	22.3	176.4	25.2	82.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	4.5	0.0	5.4	13.0	0.9	10.4	16.2	12.2	9.1	15.2	14.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	3.9	0.2	71.9	9.9	20.9	120.5	59.5	66.3	237.4	73.7	131.9
LnGrp LOS	E	A	A	E	A	C	F	E	E	F	E	F
Approach Vol, veh/h		2531			2620			1240			833	
Approach Delay, s/veh		9.0			17.6			83.3			122.3	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	117.4	21.0	36.6	26.4	108.9	13.8	43.8
Change Period (Y+Rc), s	5.5	7.2	5.5	5.8	5.5	7.2	5.8	* 5.8
Max Green Setting (Gmax), s	12.5	49.0	15.5	29.0	22.5	39.0	8.0	* 38
Max Q Clear Time (g_c+I1), s	13.1	26.0	17.5	32.8	20.9	47.9	10.0	34.3
Green Ext Time (p_c), s	0.0	16.2	0.0	0.0	0.1	0.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	38.0
HCM 6th LOS	D

Notes

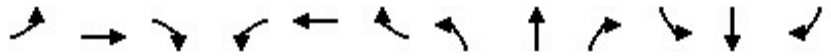
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	286	2143	2275	29	18	234
Future Volume (veh/h)	286	2143	2275	29	18	234
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.96	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	301	2256	2395	31	19	246
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	285	3831	2881	37	310	276
Arrive On Green	0.32	1.00	1.00	1.00	0.17	0.17
Sat Flow, veh/h	1810	5358	5445	68	1810	1610
Grp Volume(v), veh/h	301	2256	1568	858	19	246
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1884	1810	1610
Q Serve(g_s), s	20.5	0.0	0.0	0.0	1.1	19.4
Cycle Q Clear(g_c), s	20.5	0.0	0.0	0.0	1.1	19.4
Prop In Lane	1.00			0.04	1.00	1.00
Lane Grp Cap(c), veh/h	285	3831	1889	1029	310	276
V/C Ratio(X)	1.05	0.59	0.83	0.83	0.06	0.89
Avail Cap(c_a), veh/h	285	3831	1889	1029	619	551
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.28	0.28	1.00	1.00
Uniform Delay (d), s/veh	44.5	0.0	0.0	0.0	45.1	52.7
Incr Delay (d2), s/veh	32.9	0.1	1.3	2.4	0.1	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	0.0	0.3	0.7	0.5	17.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	77.4	0.1	1.3	2.4	45.2	62.4
LnGrp LOS	F	A	A	A	D	E
Approach Vol, veh/h		2557	2426		265	
Approach Delay, s/veh		9.2	1.7		61.1	
Approach LOS		A	A		E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		103.2		26.8	25.0	78.2
Change Period (Y+Rc), s		7.2		4.5	4.5	7.2
Max Green Setting (Gmax), s		73.8		44.5	20.5	48.8
Max Q Clear Time (g_c+I1), s		2.0		21.4	22.5	2.0
Green Ext Time (p_c), s		32.9		0.9	0.0	28.2

Intersection Summary	
HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A



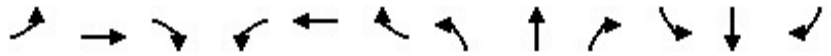
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	13	16	680	20	57	6	1843	575	159	1881	41
Future Volume (veh/h)	48	13	16	680	20	57	6	1843	575	159	1881	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	14	17	716	21	60	6	1940	605	167	1980	43
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	87	105	532	438	367	19	1808	1035	118	2006	887
Arrive On Green	0.05	0.11	0.11	0.15	0.23	0.23	0.00	0.17	0.17	0.07	0.56	0.56
Sat Flow, veh/h	1810	769	933	3510	1900	1589	1810	3610	1580	1810	3610	1596
Grp Volume(v), veh/h	51	0	31	716	21	60	6	1940	605	167	1980	43
Grp Sat Flow(s),veh/h/ln	1810	0	1702	1755	1900	1589	1810	1805	1580	1810	1805	1596
Q Serve(g_s), s	3.6	0.0	2.1	19.7	1.1	3.9	0.4	65.1	33.1	8.5	70.2	1.6
Cycle Q Clear(g_c), s	3.6	0.0	2.1	19.7	1.1	3.9	0.4	65.1	33.1	8.5	70.2	1.6
Prop In Lane	1.00		0.55	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	0	192	532	438	367	19	1808	1035	118	2006	887
V/C Ratio(X)	0.62	0.00	0.16	1.35	0.05	0.16	0.32	1.07	0.58	1.41	0.99	0.05
Avail Cap(c_a), veh/h	170	0	419	532	617	516	104	1808	1035	118	2006	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.16	0.16	0.16	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	0.0	52.1	55.2	38.9	40.0	64.3	54.3	22.8	60.8	28.4	13.2
Incr Delay (d2), s/veh	2.9	0.0	0.4	167.9	0.0	0.2	0.6	35.0	0.4	227.6	17.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	0.9	20.9	0.5	1.5	0.2	40.1	13.8	11.3	31.7	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.8	0.0	52.5	223.0	38.9	40.2	64.9	89.3	23.2	288.4	45.6	13.3
LnGrp LOS	E	A	D	F	D	D	E	F	C	F	D	B
Approach Vol, veh/h		82			797			2551			2190	
Approach Delay, s/veh		59.5			204.4			73.5			63.5	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	71.3	25.2	20.5	5.9	78.4	9.9	35.8
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	4.0	* 5.8
Max Green Setting (Gmax), s	8.5	47.8	19.7	32.0	7.5	48.8	12.2	* 42
Max Q Clear Time (g_c+I1), s	10.5	67.1	21.7	4.1	2.4	72.2	5.6	5.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	88.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	704	59	123	54	22	35	120	1707	97	17	1928	760
Future Volume (veh/h)	704	59	123	54	22	35	120	1707	97	17	1928	760
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	741	62	129	57	23	37	126	1797	102	18	2029	800
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	193	162	204	44	71	97	2155	960	47	2054	1151
Arrive On Green	0.15	0.10	0.10	0.11	0.07	0.07	0.05	0.60	0.60	0.05	1.00	1.00
Sat Flow, veh/h	3510	1900	1601	1810	652	1048	1810	3610	1607	1810	3610	1607
Grp Volume(v), veh/h	741	62	129	57	0	60	126	1797	102	18	2029	800
Grp Sat Flow(s),veh/h/ln	1755	1900	1601	1810	0	1700	1810	1805	1607	1810	1805	1607
Q Serve(g_s), s	19.1	3.9	8.9	3.8	0.0	4.4	7.0	51.9	1.7	1.3	0.0	0.0
Cycle Q Clear(g_c), s	19.1	3.9	8.9	3.8	0.0	4.4	7.0	51.9	1.7	1.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	193	162	204	0	116	97	2155	960	47	2054	1151
V/C Ratio(X)	1.44	0.32	0.80	0.28	0.00	0.52	1.29	0.83	0.11	0.39	0.99	0.70
Avail Cap(c_a), veh/h	516	626	527	204	0	432	97	2155	960	97	2054	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.61	0.61	0.61	0.20	0.20	0.20
Uniform Delay (d), s/veh	55.4	54.3	42.9	52.8	0.0	58.5	61.5	21.0	2.6	60.7	0.0	0.0
Incr Delay (d2), s/veh	207.4	1.0	8.5	0.7	0.0	3.6	170.4	2.5	0.1	1.0	6.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.2	1.9	4.0	1.8	0.0	2.0	7.7	20.0	1.3	0.6	1.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	262.8	55.2	51.4	53.6	0.0	62.1	231.9	23.5	2.7	61.7	6.5	0.7
LnGrp LOS	F	E	D	D	A	E	F	C	A	E	A	A
Approach Vol, veh/h		932			117			2025			2847	
Approach Delay, s/veh		219.8			57.9			35.4			5.2	
Approach LOS		F			E			D			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	84.8	20.1	17.8	11.0	81.2	23.6	14.2
Change Period (Y+Rc), s	4.0	7.2	5.4	* 4.6	4.0	7.2	4.5	5.4
Max Green Setting (Gmax), s	7.3	49.8	10.6	* 43	7.0	49.8	19.1	33.0
Max Q Clear Time (g_c+I1), s	3.3	53.9	5.8	10.9	9.0	2.0	21.1	6.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	32.8	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D

Notes

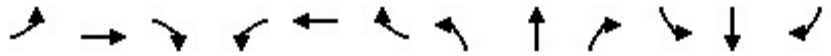
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	123	273	1651	100	393	1712
Future Volume (veh/h)	123	273	1651	100	393	1712
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	129	287	1738	105	414	1802
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	189	679	2279	1015	474	2919
Arrive On Green	0.10	0.10	1.00	1.00	0.27	1.00
Sat Flow, veh/h	1810	2834	3705	1608	3510	3705
Grp Volume(v), veh/h	129	287	1738	105	414	1802
Grp Sat Flow(s),veh/h/ln	1810	1417	1805	1608	1755	1805
Q Serve(g_s), s	8.9	11.1	0.0	0.0	14.6	0.0
Cycle Q Clear(g_c), s	8.9	11.1	0.0	0.0	14.6	0.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	189	679	2279	1015	474	2919
V/C Ratio(X)	0.68	0.42	0.76	0.10	0.87	0.62
Avail Cap(c_a), veh/h	221	729	2279	1015	662	2919
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.60	0.60	0.09	0.09
Uniform Delay (d), s/veh	56.1	41.8	0.0	0.0	46.4	0.0
Incr Delay (d2), s/veh	6.7	0.4	1.5	0.1	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	3.9	0.5	0.0	5.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	62.9	42.2	1.5	0.1	47.3	0.1
LnGrp LOS	E	D	A	A	D	A
Approach Vol, veh/h	416		1843			2216
Approach Delay, s/veh	48.6		1.4			8.9
Approach LOS	D		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	23.1	88.3			111.3	18.7
Change Period (Y+Rc), s	5.5	6.2			6.2	5.1
Max Green Setting (Gmax), s	24.5	72.8			102.8	15.9
Max Q Clear Time (g_c+I1), s	16.6	2.0			2.0	13.1
Green Ext Time (p_c), s	0.9	22.1			24.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A



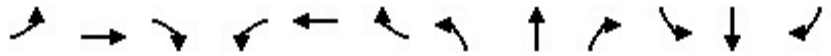
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	44	25	212	15	304	40	1392	291	329	1416	24
Future Volume (veh/h)	54	44	25	212	15	304	40	1392	291	329	1416	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	57	46	26	223	16	320	42	1465	306	346	1491	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	73	42	250	207	613	76	1893	837	390	2170	956
Arrive On Green	0.09	0.06	0.06	0.14	0.11	0.11	0.06	0.70	0.70	0.22	1.00	1.00
Sat Flow, veh/h	1810	1138	643	1810	1900	2736	1810	3610	1596	3510	3610	1590
Grp Volume(v), veh/h	57	0	72	223	16	320	42	1465	306	346	1491	25
Grp Sat Flow(s),veh/h/ln	1810	0	1781	1810	1900	1368	1810	1805	1596	1755	1805	1590
Q Serve(g_s), s	3.8	0.0	5.1	15.7	1.0	9.8	2.9	34.7	10.1	12.4	0.0	0.0
Cycle Q Clear(g_c), s	3.8	0.0	5.1	15.7	1.0	9.8	2.9	34.7	10.1	12.4	0.0	0.0
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	0	115	250	207	613	76	1893	837	390	2170	956
V/C Ratio(X)	0.35	0.00	0.63	0.89	0.08	0.52	0.55	0.77	0.37	0.89	0.69	0.03
Avail Cap(c_a), veh/h	362	0	452	434	576	1144	97	1893	837	405	2170	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.51	0.51	0.51	0.75	0.75	0.75
Uniform Delay (d), s/veh	55.6	0.0	59.3	55.0	52.1	25.4	60.2	14.6	10.9	49.7	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	5.5	5.5	0.2	0.7	1.2	1.6	0.6	15.2	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	2.5	7.6	0.5	3.3	1.3	9.8	3.3	5.5	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	0.0	64.8	60.5	52.2	26.1	61.4	16.3	11.5	64.9	1.4	0.0
LnGrp LOS	E	A	E	E	D	C	E	B	B	E	A	A
Approach Vol, veh/h		129			559			1813			1862	
Approach Delay, s/veh		60.9			40.6			16.5			13.2	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	74.4	22.0	14.2	9.5	84.3	17.4	18.7
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	5.8	* 4.6
Max Green Setting (Gmax), s	4.5	29.8	31.2	33.0	7.0	38.8	26.0	* 39
Max Q Clear Time (g_c+I1), s	11.4	36.7	17.7	7.1	4.9	2.0	5.8	11.8
Green Ext Time (p_c), s	0.0	0.0	0.3	0.3	0.0	13.6	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

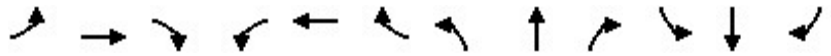
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	175	47	139	101	34	97	185	1401	26	211	1180	176
Future Volume (veh/h)	175	47	139	101	34	97	185	1401	26	211	1180	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.97	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	184	49	146	106	36	102	195	1475	27	222	1242	185
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	264	98	293	216	101	287	219	1812	781	250	1875	827
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.24	1.00	1.00	0.09	0.35	0.35
Sat Flow, veh/h	1269	420	1251	1205	432	1225	1810	3610	1557	1810	3610	1592
Grp Volume(v), veh/h	184	0	195	106	0	138	195	1475	27	222	1242	185
Grp Sat Flow(s),veh/h/ln	1269	0	1671	1205	0	1657	1810	1805	1557	1810	1805	1592
Q Serve(g_s), s	18.4	0.0	13.2	10.9	0.0	9.0	13.5	0.0	0.0	15.8	37.9	10.7
Cycle Q Clear(g_c), s	27.5	0.0	13.2	24.0	0.0	9.0	13.5	0.0	0.0	15.8	37.9	10.7
Prop In Lane	1.00		0.75	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	0	391	216	0	388	219	1812	781	250	1875	827
V/C Ratio(X)	0.70	0.00	0.50	0.49	0.00	0.36	0.89	0.81	0.03	0.89	0.66	0.22
Avail Cap(c_a), veh/h	299	0	437	249	0	433	452	1812	781	452	1875	827
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.63	0.63	0.63
Uniform Delay (d), s/veh	53.1	0.0	43.2	53.6	0.0	41.6	48.4	0.0	0.0	58.0	32.7	23.9
Incr Delay (d2), s/veh	5.9	0.0	1.0	1.7	0.0	0.6	0.5	0.4	0.0	2.7	1.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	5.6	3.4	0.0	3.8	5.2	0.1	0.0	7.5	17.3	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.0	0.0	44.1	55.3	0.0	42.1	48.9	0.4	0.0	60.7	33.9	24.2
LnGrp LOS	E	A	D	E	A	D	D	A	A	E	C	C
Approach Vol, veh/h		379			244			1697			1649	
Approach Delay, s/veh		51.4			47.9			6.0			36.4	
Approach LOS		D			D			A			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	32.5	72.5		35.0	20.2	74.7		35.0
Change Period (Y+Rc), s	4.5	7.2		4.6	4.5	7.2		4.6
Max Green Setting (Gmax), s	32.5	47.2		34.0	32.5	47.2		34.0
Max Q Clear Time (g_c+I1), s	17.8	2.0		29.5	15.5	39.9		26.0
Green Ext Time (p_c), s	0.2	14.2		0.8	0.2	4.6		0.7

Intersection Summary		
HCM 6th Ctrl Delay		25.5
HCM 6th LOS		C



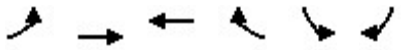
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	556	1379	226	192	1800	701	203	509	112	531	578	420
Future Volume (veh/h)	556	1379	226	192	1800	701	203	509	112	531	578	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	585	1452	238	202	1895	738	214	536	118	559	608	442
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	427	1411	827	146	1748	720	225	741	162	394	839	562
Arrive On Green	0.24	0.78	0.78	0.16	0.67	0.67	0.12	0.25	0.25	0.19	0.39	0.39
Sat Flow, veh/h	3510	3610	1603	1810	5187	1602	1810	2922	640	3510	3610	1577
Grp Volume(v), veh/h	585	1452	238	202	1895	738	214	330	324	559	608	442
Grp Sat Flow(s),veh/h/ln	1755	1805	1603	1810	1729	1602	1810	1805	1757	1755	1805	1577
Q Serve(g_s), s	15.8	50.8	1.1	10.5	43.8	43.8	15.3	21.7	21.9	14.6	18.6	11.6
Cycle Q Clear(g_c), s	15.8	50.8	1.1	10.5	43.8	43.8	15.3	21.7	21.9	14.6	18.6	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	427	1411	827	146	1748	720	225	458	446	394	839	562
V/C Ratio(X)	1.37	1.03	0.29	1.38	1.08	1.02	0.95	0.72	0.73	1.42	0.72	0.79
Avail Cap(c_a), veh/h	427	1411	827	146	1748	720	225	555	541	394	1050	654
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.85	0.85	0.85	0.37	0.37	0.37	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	49.2	14.2	2.3	54.5	21.2	10.8	56.5	44.3	44.4	52.8	36.2	28.0
Incr Delay (d2), s/veh	178.9	29.9	0.7	187.1	42.3	26.8	45.8	3.6	3.9	198.6	1.4	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.3	11.2	0.8	11.8	14.4	9.0	9.7	10.0	9.9	16.6	6.9	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	228.1	44.1	3.0	241.6	63.5	37.7	102.3	47.9	48.2	251.4	37.6	32.0
LnGrp LOS	F	F	A	F	F	F	F	D	D	F	D	C
Approach Vol, veh/h		2275			2835			868			1609	
Approach Delay, s/veh		87.1			69.5			61.4			110.3	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	57.0	21.6	36.4	22.0	50.0	19.6	38.4
Change Period (Y+Rc), s	4.5	6.2	5.4	* 6.2	6.2	* 6.2	5.0	5.4
Max Green Setting (Gmax), s	10.5	43.8	16.0	* 38	10.0	* 44	14.6	40.0
Max Q Clear Time (g_c+I1), s	12.5	52.8	17.3	20.6	17.8	45.8	16.6	23.9
Green Ext Time (p_c), s	0.0	0.0	0.0	4.9	0.0	0.0	0.0	3.4

Intersection Summary	
HCM 6th Ctrl Delay	82.5
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



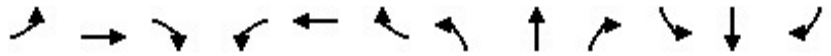
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	94	1928	2499	111	214	59
Future Volume (veh/h)	94	1928	2499	111	214	59
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	99	2029	2631	117	225	62
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	392	2782	2539	112	259	230
Arrive On Green	0.43	1.00	1.00	1.00	0.14	0.14
Sat Flow, veh/h	1810	3705	5264	224	1810	1610
Grp Volume(v), veh/h	99	2029	1777	971	225	62
Grp Sat Flow(s),veh/h/ln	1810	1805	1729	1859	1810	1610
Q Serve(g_s), s	4.5	0.0	64.8	64.8	15.8	4.5
Cycle Q Clear(g_c), s	4.5	0.0	64.8	64.8	15.8	4.5
Prop In Lane	1.00			0.12	1.00	1.00
Lane Grp Cap(c), veh/h	392	2782	1724	927	259	230
V/C Ratio(X)	0.25	0.73	1.03	1.05	0.87	0.27
Avail Cap(c_a), veh/h	392	2782	1724	927	487	434
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	30.1	0.0	0.2	0.2	54.5	49.6
Incr Delay (d2), s/veh	0.0	0.2	16.5	25.0	8.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.1	4.0	6.5	7.9	4.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.1	0.2	16.7	25.2	63.2	50.3
LnGrp LOS	C	A	F	F	E	D
Approach Vol, veh/h		2128	2748		287	
Approach Delay, s/veh		1.6	19.7		60.4	
Approach LOS		A	B		E	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	107.4		22.6	35.4	72.0
Change Period (Y+Rc), s	7.2		4.0	7.2	* 7.2
Max Green Setting (Gmax), s	83.8		35.0	14.5	* 65
Max Q Clear Time (g_c+I1), s	2.0		17.8	6.5	66.8
Green Ext Time (p_c), s	31.0		0.8	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1498	420	369	1938	95	626	81	323	54	53	218
Future Volume (veh/h)	154	1498	420	369	1938	95	626	81	323	54	53	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	162	1577	442	388	2040	100	659	85	340	57	56	229
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	97	1014	271	1172	4918	240	711	635	537	85	56	227
Arrive On Green	0.02	0.12	0.12	0.65	0.97	0.97	0.20	0.33	0.33	0.05	0.17	0.17
Sat Flow, veh/h	1810	2816	753	1810	5066	247	3510	1900	1609	1810	326	1332
Grp Volume(v), veh/h	162	984	1035	388	1390	750	659	85	340	57	0	285
Grp Sat Flow(s),veh/h/ln	1810	1805	1763	1810	1729	1855	1755	1900	1609	1810	0	1658
Q Serve(g_s), s	7.0	46.8	46.8	12.5	2.5	2.6	24.0	4.1	17.2	4.0	0.0	22.2
Cycle Q Clear(g_c), s	7.0	46.8	46.8	12.5	2.5	2.6	24.0	4.1	17.2	4.0	0.0	22.2
Prop In Lane	1.00		0.43	1.00		0.13	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	97	650	635	1172	3357	1801	711	635	537	85	0	283
V/C Ratio(X)	1.66	1.51	1.63	0.33	0.41	0.42	0.93	0.13	0.63	0.67	0.00	1.01
Avail Cap(c_a), veh/h	97	650	635	1172	3357	1801	756	635	537	97	0	283
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	63.8	57.3	57.3	10.3	0.1	0.1	50.9	30.2	20.0	61.0	0.0	53.9
Incr Delay (d2), s/veh	323.0	235.8	288.2	0.1	0.4	0.7	16.3	0.1	2.4	9.6	0.0	55.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	65.1	72.8	4.4	0.2	0.4	11.8	1.8	6.5	2.1	0.0	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	386.8	293.1	345.5	10.3	0.5	0.8	67.2	30.3	22.5	70.5	0.0	109.1
LnGrp LOS	F	F	F	B	A	A	E	C	C	E	A	F
Approach Vol, veh/h		2181			2528			1084			342	
Approach Delay, s/veh		324.9			2.1			50.3			102.7	
Approach LOS		F			A			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	93.6	54.0	31.3	28.0	12.0	135.6	10.1	49.2
Change Period (Y+Rc), s	7.2	* 7.2	5.0	* 5.8	5.0	7.2	4.0	5.8
Max Green Setting (Gmax), s	11.5	* 47	28.0	* 22	7.0	51.0	7.0	43.0
Max Q Clear Time (g_c+I1), s	14.5	48.8	26.0	24.2	9.0	4.6	6.0	19.2
Green Ext Time (p_c), s	0.0	0.0	0.4	0.0	0.0	23.0	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	131.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	2499	0	0	2824	16	0	0	0	0	0	2
Future Vol, veh/h	0	2499	0	0	2824	16	0	0	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2716	0	0	3070	17	0	0	0	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1358	-	-	1544
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*36	0	0	-
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			2
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*36	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	
HCM LOS			A	-

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	-
HCM Lane LOS	A	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	14	403	368	90
Future Vol, veh/h	0	0	14	403	368	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	83	83	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	0	15	486	443	95

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1007	491	538	0	-	0
Stage 1	491	-	-	-	-	-
Stage 2	516	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	269	582	1040	-	-	-
Stage 1	619	-	-	-	-	-
Stage 2	603	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	264	582	1040	-	-	-
Mov Cap-2 Maneuver	264	-	-	-	-	-
Stage 1	607	-	-	-	-	-
Stage 2	603	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1040	-	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-	-
HCM Control Delay (s)	8.5	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	168	50	16	247	341	27
Future Vol, veh/h	168	50	16	247	341	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	80	80	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	177	53	17	309	426	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	783	440	454	0	-	0
Stage 1	440	-	-	-	-	-
Stage 2	343	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	365	621	1117	-	-	-
Stage 1	653	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	358	621	1117	-	-	-
Mov Cap-2 Maneuver	358	-	-	-	-	-
Stage 1	641	-	-	-	-	-
Stage 2	723	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.8	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1117	-	397	-	-
HCM Lane V/C Ratio	0.015	-	0.578	-	-
HCM Control Delay (s)	8.3	0	25.8	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0	-	3.5	-	-

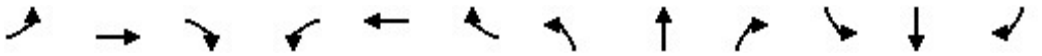
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	260	390	0
Future Vol, veh/h	3	0	1	260	390	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	81	81	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	0	1	321	481	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	804	481	481	0	-	0
Stage 1	481	-	-	-	-	-
Stage 2	323	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	355	589	1092	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	355	589	1092	-	-	-
Mov Cap-2 Maneuver	355	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	738	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1092	-	355	-	-
HCM Lane V/C Ratio	0.001	-	0.009	-	-
HCM Control Delay (s)	8.3	0	15.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-



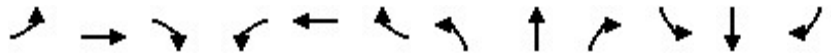
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	155	1255	151	149	1651	885	190	637	232	577	177	88
Future Volume (veh/h)	155	1255	151	149	1651	885	190	637	232	577	177	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	163	1321	159	157	1738	932	200	671	244	607	186	93
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	160	2010	242	1091	3309	1540	261	664	295	567	992	441
Arrive On Green	0.09	0.43	0.43	0.60	0.96	0.96	0.07	0.18	0.18	0.16	0.27	0.27
Sat Flow, veh/h	1810	4683	564	1810	3458	1609	3510	3610	1602	3510	3610	1605
Grp Volume(v), veh/h	163	975	505	157	1738	932	200	671	244	607	186	93
Grp Sat Flow(s),veh/h/ln	1810	1729	1789	1810	1729	1609	1755	1805	1602	1755	1805	1605
Q Serve(g_s), s	11.5	29.2	29.2	4.9	5.7	7.7	7.3	23.9	15.8	21.0	5.1	5.8
Cycle Q Clear(g_c), s	11.5	29.2	29.2	4.9	5.7	7.7	7.3	23.9	15.8	21.0	5.1	5.8
Prop In Lane	1.00		0.32	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	1484	768	1091	3309	1540	261	664	295	567	992	441
V/C Ratio(X)	1.02	0.66	0.66	0.14	0.53	0.61	0.77	1.01	0.83	1.07	0.19	0.21
Avail Cap(c_a), veh/h	160	1484	768	1091	3309	1540	500	664	295	567	992	441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.2	29.5	29.5	11.2	0.2	0.3	59.0	53.1	35.1	54.5	36.0	36.3
Incr Delay (d2), s/veh	76.0	2.3	4.4	0.1	0.6	1.8	4.7	37.7	17.6	58.0	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.5	11.9	12.7	1.8	0.3	0.8	3.4	14.2	7.6	13.6	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	135.3	31.8	33.9	11.3	0.8	2.1	63.7	90.7	52.7	112.5	36.1	36.5
LnGrp LOS	F	C	C	B	A	A	E	F	D	F	D	D
Approach Vol, veh/h		1643			2827			1115			886	
Approach Delay, s/veh		42.7			1.8			77.6			88.5	
Approach LOS		D			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	85.5	62.0	14.2	41.5	16.0	131.5	26.0	29.7
Change Period (Y+Rc), s	6.2	* 6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	8.5	* 56	18.5	26.2	11.5	52.8	21.0	* 24
Max Q Clear Time (g_c+I1), s	6.9	31.2	9.3	7.8	13.5	9.7	23.0	25.9
Green Ext Time (p_c), s	0.1	10.3	0.4	1.2	0.0	31.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	1921	87	89	2446	33	170	23	113	110	28	82
Future Volume (veh/h)	85	1921	87	89	2446	33	170	23	113	110	28	82
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	2134	97	99	2718	37	189	26	126	122	31	91
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	113	2990	927	122	3068	42	207	31	151	168	39	115
Arrive On Green	0.06	0.58	0.58	0.07	0.58	0.58	0.11	0.11	0.11	0.09	0.09	0.09
Sat Flow, veh/h	1810	5187	1607	1810	5273	72	1810	281	1364	1810	424	1243
Grp Volume(v), veh/h	94	2134	97	99	1779	976	189	0	152	122	0	122
Grp Sat Flow(s),veh/h/ln	1810	1729	1607	1810	1729	1887	1810	0	1646	1810	0	1667
Q Serve(g_s), s	6.7	38.5	1.9	7.0	57.6	58.3	13.4	0.0	11.8	8.5	0.0	9.3
Cycle Q Clear(g_c), s	6.7	38.5	1.9	7.0	57.6	58.3	13.4	0.0	11.8	8.5	0.0	9.3
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.83	1.00		0.75
Lane Grp Cap(c), veh/h	113	2990	927	122	2012	1098	207	0	182	168	0	155
V/C Ratio(X)	0.83	0.71	0.10	0.81	0.88	0.89	0.91	0.00	0.83	0.73	0.00	0.79
Avail Cap(c_a), veh/h	113	2990	927	146	2012	1098	207	0	253	173	0	231
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.78	0.78	0.78	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.3	19.8	3.7	59.8	23.4	23.6	56.9	0.0	56.6	57.4	0.0	57.7
Incr Delay (d2), s/veh	38.9	1.5	0.2	19.6	4.9	8.7	38.9	0.0	15.3	13.8	0.0	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	14.3	1.3	3.8	22.1	25.5	8.3	0.0	5.6	4.6	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.2	21.3	3.9	79.4	28.3	32.3	95.8	0.0	72.0	71.2	0.0	67.9
LnGrp LOS	F	C	A	E	C	C	F	A	E	E	A	E
Approach Vol, veh/h		2325			2854			341			244	
Approach Delay, s/veh		23.7			31.4			85.2			69.5	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	81.1	18.9	16.7	12.6	81.8	16.1	19.5
Change Period (Y+Rc), s	4.5	6.2	4.0	4.6	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	10.5	67.3	14.9	18.0	8.1	69.7	12.4	20.0
Max Q Clear Time (g_c+I1), s	9.0	40.5	15.4	11.3	8.7	60.3	10.5	13.8
Green Ext Time (p_c), s	0.0	18.1	0.0	0.3	0.0	8.6	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2214	1	0	2681	0	8
Future Vol, veh/h	2214	1	0	2681	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2381	1	0	2883	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1191
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	*414
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*414
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	414	-	-	-
HCM Lane V/C Ratio	0.021	-	-	-
HCM Control Delay (s)	13.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

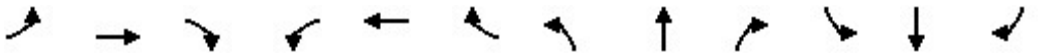
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	49	2173	2533	9	0	147
Future Vol, veh/h	49	2173	2533	9	0	147
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	53	2337	2724	10	0	158

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2737	0	-	0	-	1370
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.3	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.1	-	-	-	-	3.9
Pot Cap-1 Maneuver	*419	-	-	-	0	*333
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	*418	-	-	-	-	*332
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.3	0	25.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 418	-	-	-	332
HCM Lane V/C Ratio	0.126	-	-	-	0.476
HCM Control Delay (s)	14.9	-	-	-	25.3
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0.4	-	-	-	2.5

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	1785	358	288	2155	53	365	49	254	91	63	39
Future Volume (veh/h)	34	1785	358	288	2155	53	365	49	254	91	63	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	35	1859	373	300	2245	55	380	51	265	95	66	41
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	70	1926	379	214	2818	69	435	55	288	150	102	87
Arrive On Green	0.01	0.15	0.15	0.24	1.00	1.00	0.21	0.21	0.21	0.05	0.05	0.05
Sat Flow, veh/h	1810	4332	851	1810	5208	127	1810	266	1384	1810	1900	1610
Grp Volume(v), veh/h	35	1476	756	300	1489	811	380	0	316	95	66	41
Grp Sat Flow(s),veh/h/ln	1810	1729	1725	1810	1729	1877	1810	0	1651	1810	1900	1610
Q Serve(g_s), s	2.5	55.1	56.8	15.4	0.0	0.0	21.9	0.0	24.4	2.6	4.4	2.8
Cycle Q Clear(g_c), s	2.5	55.1	56.8	15.4	0.0	0.0	21.9	0.0	24.4	2.6	4.4	2.8
Prop In Lane	1.00		0.49	1.00		0.07	1.00		0.84	1.00		1.00
Lane Grp Cap(c), veh/h	70	1537	767	214	1871	1016	435	0	344	150	102	87
V/C Ratio(X)	0.50	0.96	0.99	1.40	0.80	0.80	0.87	0.00	0.92	0.63	0.65	0.47
Avail Cap(c_a), veh/h	97	1537	767	214	1871	1016	435	0	381	153	438	372
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.81	0.00	0.81	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	54.3	55.0	49.6	0.0	0.0	47.9	0.0	50.4	58.9	60.3	46.4
Incr Delay (d2), s/veh	2.1	15.2	29.1	183.5	0.3	0.6	14.3	0.0	22.1	6.1	6.6	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	28.6	32.3	16.7	0.1	0.2	13.6	0.0	12.2	3.3	2.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	69.5	84.2	233.1	0.3	0.6	62.2	0.0	72.5	65.0	66.9	50.3
LnGrp LOS	E	E	F	F	A	A	E	A	E	E	E	D
Approach Vol, veh/h		2267			2600			696			202	
Approach Delay, s/veh		74.4			27.3			66.9			62.6	
Approach LOS		E			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.6	65.0	30.8	11.6	10.0	77.6	10.8	31.7
Change Period (Y+Rc), s	7.2	* 7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	14.4	* 58	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	17.4	58.8	23.9	6.4	4.5	2.0	4.6	26.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	29.8	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	51.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	0	34	5	0	53	43	459	5	17	414	214
Future Volume (veh/h)	166	0	34	5	0	53	43	459	5	17	414	214
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	175	0	36	6	0	60	45	522	6	19	470	225
Peak Hour Factor	0.95	0.95	0.95	0.88	0.95	0.88	0.95	0.88	0.88	0.88	0.88	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	597	0	369	162	19	336	176	738	8	152	799	698
Arrive On Green	0.23	0.00	0.23	0.23	0.00	0.23	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1427	0	1610	64	83	1466	70	1704	19	26	1844	1610
Grp Volume(v), veh/h	175	0	36	66	0	0	573	0	0	489	0	225
Grp Sat Flow(s),veh/h/ln	1427	0	1610	1613	0	0	1792	0	0	1870	0	1610
Q Serve(g_s), s	1.8	0.0	0.5	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s	2.7	0.0	0.5	0.9	0.0	0.0	6.7	0.0	0.0	5.2	0.0	2.5
Prop In Lane	1.00		1.00	0.09		0.91	0.08		0.01	0.04		1.00
Lane Grp Cap(c), veh/h	597	0	369	517	0	0	922	0	0	951	0	698
V/C Ratio(X)	0.29	0.00	0.10	0.13	0.00	0.00	0.62	0.00	0.00	0.51	0.00	0.32
Avail Cap(c_a), veh/h	1206	0	1088	1226	0	0	1334	0	0	1392	0	1088
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.9	0.0	8.1	8.3	0.0	0.0	6.1	0.0	0.0	5.8	0.0	5.0
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.1	0.0	0.0	0.7	0.0	0.0	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.1	0.2	0.0	0.0	1.4	0.0	0.0	1.1	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	0.0	8.2	8.4	0.0	0.0	6.8	0.0	0.0	6.2	0.0	5.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		211			66			573			714	
Approach Delay, s/veh		9.0			8.4			6.8			5.9	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	16.0	10.6	16.0	10.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	18.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	8.7	4.7	7.2	2.9
Green Ext Time (p_c), s	2.8	0.9	3.1	0.2

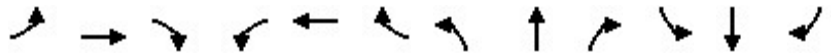
Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	393	2	1	444	125	16	35	9	110	18	39
Future Volume (veh/h)	46	393	2	1	444	125	16	35	9	110	18	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	58	497	3	1	562	158	20	44	11	139	23	49
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	113	709	4	60	642	180	214	445	100	469	85	137
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	105	1571	9	0	1423	399	346	1116	251	926	214	345
Grp Volume(v), veh/h	558	0	0	721	0	0	75	0	0	211	0	0
Grp Sat Flow(s),veh/h/ln	1685	0	0	1823	0	0	1714	0	0	1484	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0
Cycle Q Clear(g_c), s	15.2	0.0	0.0	21.5	0.0	0.0	1.5	0.0	0.0	5.6	0.0	0.0
Prop In Lane	0.10		0.01	0.00		0.22	0.27		0.15	0.66		0.23
Lane Grp Cap(c), veh/h	827	0	0	883	0	0	759	0	0	691	0	0
V/C Ratio(X)	0.67	0.00	0.00	0.82	0.00	0.00	0.10	0.00	0.00	0.31	0.00	0.00
Avail Cap(c_a), veh/h	974	0	0	1047	0	0	759	0	0	691	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.9	0.0	0.0	14.9	0.0	0.0	11.3	0.0	0.0	12.5	0.0	0.0
Incr Delay (d2), s/veh	1.5	0.0	0.0	4.4	0.0	0.0	0.3	0.0	0.0	1.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	0.0	8.8	0.0	0.0	0.6	0.0	0.0	2.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.4	0.0	0.0	19.3	0.0	0.0	11.6	0.0	0.0	13.6	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	B	A	A	B	A	A
Approach Vol, veh/h		558			721			75			211	
Approach Delay, s/veh		14.4			19.3			11.6			13.6	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	28.4	31.6	28.4	31.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.5	32.5	18.5	32.5
Max Q Clear Time (g_c+I1), s	3.5	17.2	7.6	23.5
Green Ext Time (p_c), s	0.3	3.7	0.9	3.6

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	37	10	720	36	58	3	2000	616	208	1219	19
Future Volume (veh/h)	67	37	10	720	36	58	3	2000	616	208	1219	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	70	39	10	750	38	60	3	2083	642	217	1270	20
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	273	89	23	500	117	97	10	1974	1109	146	2246	980
Arrive On Green	0.15	0.06	0.06	0.14	0.06	0.06	0.00	0.37	0.37	0.08	0.62	0.62
Sat Flow, veh/h	1810	1457	374	3510	1900	1566	1810	3610	1608	1810	3610	1574
Grp Volume(v), veh/h	70	0	49	750	38	60	3	2083	642	217	1270	20
Grp Sat Flow(s),veh/h/ln	1810	0	1831	1755	1900	1566	1810	1805	1608	1810	1805	1574
Q Serve(g_s), s	4.4	0.0	3.4	18.5	2.5	4.1	0.2	71.1	11.4	10.5	26.7	0.2
Cycle Q Clear(g_c), s	4.4	0.0	3.4	18.5	2.5	4.1	0.2	71.1	11.4	10.5	26.7	0.2
Prop In Lane	1.00		0.20	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	0	111	500	117	97	10	1974	1109	146	2246	980
V/C Ratio(X)	0.26	0.00	0.44	1.50	0.32	0.62	0.30	1.06	0.58	1.48	0.57	0.02
Avail Cap(c_a), veh/h	273	0	467	500	693	571	104	1974	1109	146	2246	980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.8	0.0	58.9	55.7	58.4	41.9	64.5	41.2	4.4	59.7	14.3	1.2
Incr Delay (d2), s/veh	0.2	0.0	2.7	235.9	1.6	6.4	0.6	26.2	0.2	250.9	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.7	24.3	1.2	2.0	0.1	39.0	4.2	14.9	10.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.0	0.0	61.6	291.7	60.0	48.3	65.1	67.4	4.6	310.7	15.4	1.3
LnGrp LOS	D	A	E	F	E	D	E	F	A	F	B	A
Approach Vol, veh/h		119			848			2728			1507	
Approach Delay, s/veh		54.2			264.1			52.6			57.7	
Approach LOS		D			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	77.3	24.0	13.7	5.2	87.1	25.1	12.6
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	5.5	* 4.6
Max Green Setting (Gmax), s	10.5	45.8	18.5	33.2	7.5	48.8	7.0	* 47
Max Q Clear Time (g_c+I1), s	12.5	73.1	20.5	5.4	2.2	28.7	6.4	6.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	8.5	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	88.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



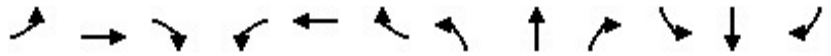
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	634	57	105	140	64	48	239	2263	98	10	1140	680
Future Volume (veh/h)	634	57	105	140	64	48	239	2263	98	10	1140	680
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	682	61	113	151	69	52	257	2433	105	11	1226	731
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	223	186	259	114	86	306	2018	898	32	1383	852
Arrive On Green	0.15	0.12	0.12	0.14	0.11	0.11	0.17	0.56	0.56	0.02	0.38	0.38
Sat Flow, veh/h	3510	1900	1590	1810	999	753	1810	3610	1607	1810	3610	1606
Grp Volume(v), veh/h	682	61	113	151	0	121	257	2433	105	11	1226	731
Grp Sat Flow(s),veh/h/ln	1755	1900	1590	1810	0	1753	1810	1805	1607	1810	1805	1606
Q Serve(g_s), s	19.1	3.8	8.8	10.1	0.0	8.5	17.9	72.7	1.8	0.8	41.2	22.1
Cycle Q Clear(g_c), s	19.1	3.8	8.8	10.1	0.0	8.5	17.9	72.7	1.8	0.8	41.2	22.1
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	223	186	259	0	200	306	2018	898	32	1383	852
V/C Ratio(X)	1.32	0.27	0.61	0.58	0.00	0.60	0.84	1.21	0.12	0.34	0.89	0.86
Avail Cap(c_a), veh/h	516	678	567	259	0	445	306	2018	898	97	1383	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.20	0.20	0.20	0.63	0.63	0.63
Uniform Delay (d), s/veh	55.4	52.3	54.5	52.1	0.0	54.8	52.3	28.7	2.8	63.1	37.5	10.6
Incr Delay (d2), s/veh	158.2	0.7	3.2	3.3	0.0	2.9	4.4	93.7	0.1	4.0	5.8	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.6	1.8	3.7	4.9	0.0	4.0	8.2	54.0	1.4	0.4	18.3	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	213.6	53.0	57.7	55.4	0.0	57.7	56.8	122.4	2.9	67.1	43.2	17.9
LnGrp LOS	F	D	E	E	A	E	E	F	A	E	D	B
Approach Vol, veh/h		856			272			2795			1968	
Approach Delay, s/veh		181.6			56.4			111.8			33.9	
Approach LOS		F			E			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	79.9	24.0	19.8	29.1	57.0	23.6	20.3
Change Period (Y+Rc), s	4.0	7.2	5.4	* 4.6	7.2	* 7.2	4.5	5.4
Max Green Setting (Gmax), s	7.3	49.8	7.0	* 46	7.0	* 50	19.1	33.0
Max Q Clear Time (g_c+I1), s	12.8	74.7	12.1	10.8	19.9	43.2	21.1	10.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	4.9	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	93.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	67	45	388	161	593	68	1366	276	350	983	31
Future Volume (veh/h)	97	67	45	388	161	593	68	1366	276	350	983	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	118	82	55	473	196	723	83	1666	337	427	1199	38
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	143	119	80	326	423	938	106	1554	690	405	1788	792
Arrive On Green	0.08	0.11	0.11	0.18	0.22	0.22	0.02	0.14	0.14	0.23	0.99	0.99
Sat Flow, veh/h	1810	1057	709	1810	1900	2744	1810	3610	1602	3510	3610	1599
Grp Volume(v), veh/h	118	0	137	473	196	723	83	1666	337	427	1199	38
Grp Sat Flow(s),veh/h/ln	1810	0	1766	1810	1900	1372	1810	1805	1602	1755	1805	1599
Q Serve(g_s), s	8.4	0.0	9.7	23.4	11.6	22.2	5.9	56.0	13.8	15.0	1.2	0.0
Cycle Q Clear(g_c), s	8.4	0.0	9.7	23.4	11.6	22.2	5.9	56.0	13.8	15.0	1.2	0.0
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	143	0	199	326	423	938	106	1554	690	405	1788	792
V/C Ratio(X)	0.82	0.00	0.69	1.45	0.46	0.77	0.79	1.07	0.49	1.05	0.67	0.05
Avail Cap(c_a), veh/h	237	0	492	326	547	1117	223	1554	690	405	1788	792
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80	0.88	0.88	0.88
Uniform Delay (d), s/veh	59.0	0.0	55.5	53.3	43.8	21.2	62.9	55.8	12.7	50.0	0.3	0.1
Incr Delay (d2), s/veh	4.5	0.0	4.2	219.8	0.8	2.8	3.9	42.8	2.0	57.0	1.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	4.6	30.5	5.6	7.4	2.9	36.2	6.2	8.7	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.5	0.0	59.7	273.1	44.6	24.0	66.8	98.6	14.7	107.0	2.1	0.2
LnGrp LOS	E	A	E	F	D	C	E	F	B	F	A	A
Approach Vol, veh/h		255			1392			2086			1664	
Approach Delay, s/veh		61.5			111.6			83.7			29.0	
Approach LOS		E			F			F			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.0	62.2	27.4	20.4	11.6	70.6	14.3	33.6
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	4.0	4.6
Max Green Setting (Gmax), s	15.0	40.8	17.0	36.2	16.0	40.8	17.0	37.4
Max Q Clear Time (g_c+I1), s	17.0	58.0	25.4	11.7	7.9	3.2	10.4	24.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	9.9	0.1	3.8

Intersection Summary	
HCM 6th Ctrl Delay	73.0
HCM 6th LOS	E



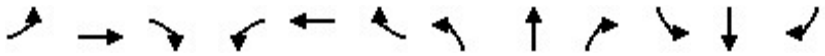
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	441	1389	142	194	1754	494	233	773	151	485	454	406
Future Volume (veh/h)	441	1389	142	194	1754	494	233	773	151	485	454	406
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	479	1510	154	211	1907	537	253	840	164	527	493	441
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1378	3042	310	234	1867	760	237	902	176	394	1026	1082
Arrive On Green	0.78	1.00	1.00	0.26	0.72	0.72	0.13	0.30	0.30	0.19	0.47	0.47
Sat Flow, veh/h	3510	4783	487	1810	5187	1609	1810	3010	588	3510	3610	1585
Grp Volume(v), veh/h	479	1092	572	211	1907	537	253	504	500	527	493	441
Grp Sat Flow(s),veh/h/ln	1755	1729	1812	1810	1729	1609	1810	1805	1792	1755	1805	1585
Q Serve(g_s), s	5.2	0.0	0.0	14.6	46.8	0.0	17.0	35.3	35.3	14.6	12.1	8.4
Cycle Q Clear(g_c), s	5.2	0.0	0.0	14.6	46.8	0.0	17.0	35.3	35.3	14.6	12.1	8.4
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	1378	2199	1152	234	1867	760	237	541	537	394	1026	1082
V/C Ratio(X)	0.35	0.50	0.50	0.90	1.02	0.71	1.07	0.93	0.93	1.34	0.48	0.41
Avail Cap(c_a), veh/h	1378	2199	1152	383	1867	760	237	555	551	394	1026	1082
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.87	0.87	0.87	0.68	0.68	0.68	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	9.1	0.0	0.0	47.4	18.2	9.3	56.5	44.2	44.2	52.8	27.6	11.8
Incr Delay (d2), s/veh	0.0	0.7	1.3	7.1	22.8	3.8	78.0	22.4	22.6	165.8	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.2	0.4	6.0	10.2	5.1	12.8	18.7	18.6	14.8	4.5	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	0.7	1.3	54.5	41.0	13.0	134.5	66.7	66.8	218.6	27.9	12.0
LnGrp LOS	A	A	A	D	F	B	F	E	E	F	C	B
Approach Vol, veh/h		2143			2655			1257			1461	
Approach Delay, s/veh		2.7			36.4			80.4			91.9	
Approach LOS		A			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.3	90.2	22.0	43.1	58.6	53.0	20.8	44.3
Change Period (Y+Rc), s	4.5	6.2	5.0	6.2	6.2	* 6.2	6.2	* 5.4
Max Green Setting (Gmax), s	27.5	26.8	17.0	36.8	7.0	* 47	14.6	* 40
Max Q Clear Time (g_c+I1), s	16.6	2.0	19.0	14.1	7.2	48.8	16.6	37.3
Green Ext Time (p_c), s	0.2	11.9	0.0	4.6	0.0	0.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	44.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	205	1552	401	374	1870	35	447	110	460	87	164	358
Future Volume (veh/h)	205	1552	401	374	1870	35	447	110	460	87	164	358
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	220	1669	431	402	2011	38	481	118	495	94	176	385
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1640	4885	1241	465	2048	39	459	646	547	97	135	296
Arrive On Green	0.91	1.00	1.00	0.13	0.39	0.39	0.13	0.34	0.34	0.05	0.26	0.26
Sat Flow, veh/h	1810	4122	1047	3510	5241	99	3510	1900	1610	1810	531	1161
Grp Volume(v), veh/h	220	1396	704	402	1326	723	481	118	495	94	0	561
Grp Sat Flow(s),veh/h/ln	1810	1729	1711	1755	1729	1882	1755	1900	1610	1810	0	1691
Q Serve(g_s), s	1.7	0.0	0.0	14.6	49.3	49.4	17.0	5.7	38.1	6.7	0.0	33.2
Cycle Q Clear(g_c), s	1.7	0.0	0.0	14.6	49.3	49.4	17.0	5.7	38.1	6.7	0.0	33.2
Prop In Lane	1.00		0.61	1.00		0.05	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	1640	4098	2028	465	1351	736	459	646	547	97	0	432
V/C Ratio(X)	0.13	0.34	0.35	0.86	0.98	0.98	1.05	0.18	0.90	0.96	0.00	1.30
Avail Cap(c_a), veh/h	1640	4098	2028	878	1351	736	459	646	547	97	0	432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.7	0.0	0.0	55.2	39.1	39.2	56.5	30.2	40.9	61.4	0.0	48.4
Incr Delay (d2), s/veh	0.0	0.2	0.4	1.9	20.4	29.3	55.1	0.1	18.5	79.0	0.0	150.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.2	6.4	23.4	27.3	10.8	2.6	17.3	5.3	0.0	32.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.7	0.2	0.4	57.2	59.6	68.4	111.6	30.3	59.3	140.4	0.0	199.1
LnGrp LOS	A	A	A	E	E	E	F	C	E	F	A	F
Approach Vol, veh/h		2320			2451			1094			655	
Approach Delay, s/veh		0.3			61.8			79.2			190.7	
Approach LOS		A			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.7	164.5	22.0	39.0	128.2	58.0	11.0	50.0
Change Period (Y+Rc), s	4.5	7.2	5.0	* 5.8	7.2	* 7.2	4.0	5.8
Max Green Setting (Gmax), s	32.5	26.0	17.0	* 33	7.2	* 51	7.0	43.0
Max Q Clear Time (g_c+I1), s	16.6	2.0	19.0	35.2	3.7	51.4	8.7	40.1
Green Ext Time (p_c), s	0.6	15.7	0.0	0.0	0.1	0.0	0.0	0.8

Intersection Summary	
HCM 6th Ctrl Delay	55.8
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↱			↑↑↱				↱			↱
Traffic Vol, veh/h	0	2173	0	0	2542	8	0	0	0	0	0	0
Future Vol, veh/h	0	2173	0	0	2542	8	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2312	0	0	2704	9	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1156	-	-	1357
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*414	0	0	*333
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*414	-	-	*333
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	0
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

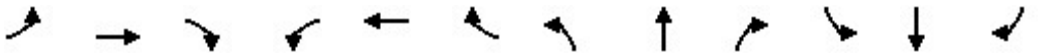
Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	188	49	41	330	187	77
Future Vol, veh/h	188	49	41	330	187	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	85	85	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	198	52	43	388	220	81

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	735	261	301	0	-	0
Stage 1	261	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	415	783	1272	-	-	-
Stage 1	787	-	-	-	-	-
Stage 2	680	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	400	783	1272	-	-	-
Mov Cap-2 Maneuver	509	-	-	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	680	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.9	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1272	-	549	-	-
HCM Lane V/C Ratio	0.034	-	0.454	-	-
HCM Control Delay (s)	7.9	-	16.9	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2.4	-	-



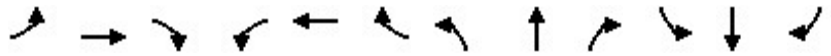
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	1545	117	230	1637	676	134	353	187	734	341	118
Future Volume (veh/h)	150	1545	117	230	1637	676	134	353	187	734	341	118
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	160	1644	124	245	1741	719	143	376	199	781	363	126
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	146	2477	187	260	2081	808	199	499	221	775	1105	491
Arrive On Green	0.08	0.50	0.50	0.14	0.57	0.57	0.06	0.14	0.14	0.22	0.31	0.31
Sat Flow, veh/h	1810	4920	371	1810	3674	1426	3510	3610	1600	3510	3610	1605
Grp Volume(v), veh/h	160	1155	613	245	1632	828	143	376	199	781	363	126
Grp Sat Flow(s),veh/h/ln	1810	1729	1833	1810	1729	1642	1755	1805	1600	1755	1805	1605
Q Serve(g_s), s	10.5	32.4	32.4	17.4	50.4	57.3	5.2	13.0	15.9	28.7	10.1	7.7
Cycle Q Clear(g_c), s	10.5	32.4	32.4	17.4	50.4	57.3	5.2	13.0	15.9	28.7	10.1	7.7
Prop In Lane	1.00		0.20	1.00		0.87	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	1741	923	260	1959	930	199	499	221	775	1105	491
V/C Ratio(X)	1.09	0.66	0.66	0.94	0.83	0.89	0.72	0.75	0.90	1.01	0.33	0.26
Avail Cap(c_a), veh/h	146	1741	923	260	1959	930	367	500	221	775	1105	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	24.1	24.1	55.1	23.1	24.6	60.3	53.9	55.1	50.7	34.8	34.0
Incr Delay (d2), s/veh	102.1	2.0	3.8	40.0	4.3	12.5	4.8	6.4	34.9	34.2	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	12.8	14.0	10.6	19.5	23.1	2.4	6.3	8.5	15.9	4.4	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.8	26.1	27.8	95.1	27.5	37.1	65.1	60.3	90.1	84.9	35.0	34.2
LnGrp LOS	F	C	C	F	C	D	E	E	F	F	C	C
Approach Vol, veh/h		1928			2705			718			1270	
Approach Delay, s/veh		37.9			36.6			69.5			65.6	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.2	72.3	11.9	45.6	15.0	80.5	33.7	23.8
Change Period (Y+Rc), s	4.5	6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	18.7	43.8	13.6	32.9	10.5	52.0	28.7	* 18
Max Q Clear Time (g_c+I1), s	19.4	34.4	7.2	12.1	12.5	59.3	30.7	17.9
Green Ext Time (p_c), s	0.0	6.6	0.2	2.4	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	2264	180	55	2488	102	91	31	29	112	27	62
Future Volume (veh/h)	135	2264	180	55	2488	102	91	31	29	112	27	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	147	2461	196	60	2704	111	99	34	32	122	29	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	161	3417	1059	86	3152	128	118	61	57	134	39	89
Arrive On Green	0.09	0.66	0.66	0.10	1.00	1.00	0.07	0.07	0.07	0.07	0.08	0.08
Sat Flow, veh/h	1810	5187	1608	1810	5108	207	1810	898	845	1810	508	1175
Grp Volume(v), veh/h	147	2461	196	60	1819	996	99	0	66	122	0	96
Grp Sat Flow(s),veh/h/ln	1810	1729	1608	1810	1729	1857	1810	0	1743	1810	0	1683
Q Serve(g_s), s	10.5	40.1	6.2	4.2	0.0	0.0	7.0	0.0	4.8	8.7	0.0	7.3
Cycle Q Clear(g_c), s	10.5	40.1	6.2	4.2	0.0	0.0	7.0	0.0	4.8	8.7	0.0	7.3
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.48	1.00		0.70
Lane Grp Cap(c), veh/h	161	3417	1059	86	2134	1146	118	0	118	134	0	128
V/C Ratio(X)	0.91	0.72	0.19	0.70	0.85	0.87	0.84	0.00	0.56	0.91	0.00	0.75
Avail Cap(c_a), veh/h	161	3417	1059	99	2134	1146	118	0	241	134	0	254
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.76	0.76	0.76	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.7	14.4	8.6	57.9	0.0	0.0	60.1	0.0	58.7	59.8	0.0	58.9
Incr Delay (d2), s/veh	45.7	1.3	0.4	12.7	3.5	7.1	38.2	0.0	4.1	52.3	0.0	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	13.8	2.2	2.1	1.0	2.3	4.5	0.0	2.2	6.0	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.3	15.7	9.0	70.6	3.5	7.1	98.2	0.0	62.9	112.1	0.0	67.4
LnGrp LOS	F	B	A	E	A	A	F	A	E	F	A	E
Approach Vol, veh/h		2804			2875			165			218	
Approach Delay, s/veh		19.9			6.2			84.1			92.4	
Approach LOS		B			A			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	91.8	12.5	15.0	16.1	86.4	13.6	13.9
Change Period (Y+Rc), s	4.5	6.2	4.0	* 5.1	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.1	75.5	8.5	* 20	11.6	71.0	9.6	18.0
Max Q Clear Time (g_c+I1), s	6.2	42.1	9.0	9.3	12.5	2.0	10.7	6.8
Green Ext Time (p_c), s	0.0	25.2	0.0	0.3	0.0	45.7	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2496	5	0	2730	0	2
Future Vol, veh/h	2496	5	0	2730	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2773	6	0	3033	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1390
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	*333
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*333
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	333	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-
HCM Control Delay (s)	15.9	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.8

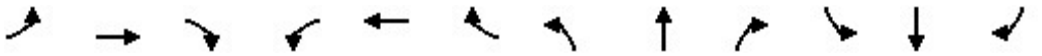
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	122	2377	2655	21	0	74
Future Vol, veh/h	122	2377	2655	21	0	74
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	136	2641	2950	23	0	82

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2976	0	-	0	-	1490
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.3	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.1	-	-	-	-	3.9
Pot Cap-1 Maneuver	*368	-	-	-	0	*293
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	*367	-	-	-	-	*292
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	22.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 367	-	-	-	292
HCM Lane V/C Ratio	0.369	-	-	-	0.282
HCM Control Delay (s)	20.4	-	-	-	22.1
HCM Lane LOS	C	-	-	-	C
HCM 95th %tile Q(veh)	1.7	-	-	-	1.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	2001	291	176	2321	77	313	83	218	106	40	63
Future Volume (veh/h)	89	2001	291	176	2321	77	313	83	218	106	40	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	97	2175	316	191	2523	84	340	90	237	115	43	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	109	2231	316	153	2546	84	408	98	257	175	394	326
Arrive On Green	0.06	0.49	0.49	0.17	0.99	0.99	0.06	0.22	0.22	0.05	0.21	0.21
Sat Flow, veh/h	1810	4585	650	1810	5155	170	1810	454	1196	1810	1900	1571
Grp Volume(v), veh/h	97	1627	864	191	1686	921	340	0	327	115	43	68
Grp Sat Flow(s),veh/h/ln	1810	1729	1777	1810	1729	1868	1810	0	1650	1810	1900	1571
Q Serve(g_s), s	6.9	59.3	63.2	11.0	31.7	55.4	8.0	0.0	25.2	6.5	2.4	3.8
Cycle Q Clear(g_c), s	6.9	59.3	63.2	11.0	31.7	55.4	8.0	0.0	25.2	6.5	2.4	3.8
Prop In Lane	1.00		0.37	1.00		0.09	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	109	1682	864	153	1708	922	408	0	355	175	394	326
V/C Ratio(X)	0.89	0.97	1.00	1.25	0.99	1.00	0.83	0.00	0.92	0.66	0.11	0.21
Avail Cap(c_a), veh/h	109	1682	864	153	1708	922	408	0	394	175	438	362
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.88	0.00	0.88	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.6	32.4	33.4	54.0	0.6	0.7	46.2	0.0	49.9	40.4	41.8	28.0
Incr Delay (d2), s/veh	51.4	15.4	30.5	116.4	4.3	8.5	11.7	0.0	23.2	6.9	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	26.3	32.1	9.4	1.3	2.5	8.2	0.0	12.8	3.3	1.2	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	112.1	47.8	63.9	170.4	4.9	9.2	57.9	0.0	73.2	47.3	41.9	28.3
LnGrp LOS	F	D	E	F	A	A	E	A	E	D	D	C
Approach Vol, veh/h		2588			2798			667			226	
Approach Delay, s/veh		55.6			17.6			65.4			40.6	
Approach LOS		E			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	70.4	12.0	31.6	15.0	71.4	11.0	32.6
Change Period (Y+Rc), s	5.0	7.2	4.0	4.6	7.2	* 7.2	4.0	4.6
Max Green Setting (Gmax), s	11.0	60.2	8.0	30.0	7.0	* 64	7.0	31.0
Max Q Clear Time (g_c+I1), s	13.0	65.2	10.0	5.8	8.9	57.4	8.5	27.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	6.2	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	39.1
HCM 6th LOS	D

Notes

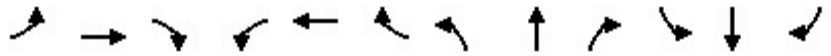
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	1	36	6	0	25	18	345	9	18	352	94
Future Volume (veh/h)	172	1	36	6	0	25	18	345	9	18	352	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	181	1	38	8	0	33	19	454	12	24	463	99
Peak Hour Factor	0.95	0.95	0.95	0.76	0.95	0.76	0.95	0.76	0.76	0.76	0.76	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	626	3	380	208	40	307	163	714	18	168	729	643
Arrive On Green	0.24	0.24	0.24	0.24	0.00	0.24	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1422	11	1610	144	171	1299	30	1786	46	37	1825	1610
Grp Volume(v), veh/h	182	0	38	41	0	0	485	0	0	487	0	99
Grp Sat Flow(s),veh/h/ln	1434	0	1610	1613	0	0	1862	0	0	1862	0	1610
Q Serve(g_s), s	2.2	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s	2.7	0.0	0.5	0.5	0.0	0.0	5.1	0.0	0.0	5.1	0.0	1.0
Prop In Lane	0.99		1.00	0.20		0.80	0.04		0.02	0.05		1.00
Lane Grp Cap(c), veh/h	629	0	380	555	0	0	895	0	0	897	0	643
V/C Ratio(X)	0.29	0.00	0.10	0.07	0.00	0.00	0.54	0.00	0.00	0.54	0.00	0.15
Avail Cap(c_a), veh/h	1318	0	1173	1324	0	0	1494	0	0	1492	0	1173
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.2	0.0	7.4	7.4	0.0	0.0	6.0	0.0	0.0	6.0	0.0	4.7
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.1	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.1	0.1	0.0	0.0	1.1	0.0	0.0	1.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.4	0.0	7.5	7.4	0.0	0.0	6.5	0.0	0.0	6.5	0.0	4.9
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		220			41			485			586	
Approach Delay, s/veh		8.3			7.4			6.5			6.2	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	14.4	10.3	14.4	10.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	18.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	7.1	4.7	7.1	2.5
Green Ext Time (p_c), s	2.5	0.9	2.8	0.1

Intersection Summary	
HCM 6th Ctrl Delay	6.7
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	350	27	7	284	71	13	32	9	179	41	73
Future Volume (veh/h)	39	350	27	7	284	71	13	32	9	179	41	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.98	0.99		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	50	449	35	9	364	91	17	41	12	229	53	94
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	114	549	41	77	501	123	234	533	140	523	129	179
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	102	1593	119	11	1457	358	305	1120	295	855	271	376
Grp Volume(v), veh/h	534	0	0	464	0	0	70	0	0	376	0	0
Grp Sat Flow(s),veh/h/ln	1814	0	0	1827	0	0	1720	0	0	1502	0	0
Q Serve(g_s), s	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	0.0	0.0
Cycle Q Clear(g_c), s	13.4	0.0	0.0	11.2	0.0	0.0	1.0	0.0	0.0	8.5	0.0	0.0
Prop In Lane	0.09		0.07	0.02		0.20	0.24		0.17	0.61		0.25
Lane Grp Cap(c), veh/h	703	0	0	702	0	0	908	0	0	831	0	0
V/C Ratio(X)	0.76	0.00	0.00	0.66	0.00	0.00	0.08	0.00	0.00	0.45	0.00	0.00
Avail Cap(c_a), veh/h	816	0	0	820	0	0	908	0	0	831	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	14.4	0.0	0.0	7.1	0.0	0.0	9.0	0.0	0.0
Incr Delay (d2), s/veh	3.6	0.0	0.0	1.6	0.0	0.0	0.2	0.0	0.0	1.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	0.0	4.3	0.0	0.0	0.4	0.0	0.0	2.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.6	0.0	0.0	16.0	0.0	0.0	7.3	0.0	0.0	10.8	0.0	0.0
LnGrp LOS	B	A	A	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h		534			464			70			376	
Approach Delay, s/veh		18.6			16.0			7.3			10.8	
Approach LOS		B			B			A			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	28.3	21.7	28.3	21.7
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	20.5	20.5	20.5
Max Q Clear Time (g_c+I1), s	3.0	15.4	10.5	13.2
Green Ext Time (p_c), s	0.3	1.7	1.8	1.8

Intersection Summary	
HCM 6th Ctrl Delay	15.2
HCM 6th LOS	B



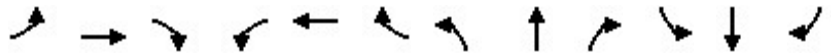
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	12	15	648	19	43	6	1756	548	151	1792	39
Future Volume (veh/h)	43	12	15	648	19	43	6	1756	548	151	1792	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	44	12	15	668	20	44	6	1810	565	156	1847	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	78	85	107	532	443	370	19	1809	1036	118	2007	887
Arrive On Green	0.04	0.11	0.11	0.15	0.23	0.23	0.00	0.17	0.17	0.07	0.56	0.56
Sat Flow, veh/h	1810	755	944	3510	1900	1589	1810	3610	1580	1810	3610	1596
Grp Volume(v), veh/h	44	0	27	668	20	44	6	1810	565	156	1847	40
Grp Sat Flow(s),veh/h/ln	1810	0	1700	1755	1900	1589	1810	1805	1580	1810	1805	1596
Q Serve(g_s), s	3.1	0.0	1.9	19.7	1.1	2.8	0.4	65.1	30.6	8.5	60.5	1.5
Cycle Q Clear(g_c), s	3.1	0.0	1.9	19.7	1.1	2.8	0.4	65.1	30.6	8.5	60.5	1.5
Prop In Lane	1.00		0.56	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	78	0	192	532	443	370	19	1809	1036	118	2007	887
V/C Ratio(X)	0.57	0.00	0.14	1.26	0.05	0.12	0.32	1.00	0.55	1.32	0.92	0.05
Avail Cap(c_a), veh/h	170	0	418	532	617	516	104	1809	1036	118	2007	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.38	0.38	0.38	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	0.0	52.0	55.2	38.6	39.3	64.3	54.3	22.0	60.8	26.2	13.1
Incr Delay (d2), s/veh	2.4	0.0	0.3	129.8	0.0	0.1	1.3	13.2	0.8	190.7	8.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.8	18.1	0.5	1.1	0.2	34.6	12.9	10.1	25.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.4	0.0	52.3	184.9	38.7	39.5	65.6	67.5	22.8	251.4	34.6	13.2
LnGrp LOS	E	A	D	F	D	D	E	F	C	F	C	B
Approach Vol, veh/h		71			732			2381			2043	
Approach Delay, s/veh		59.2			172.2			56.9			50.8	
Approach LOS		E			F			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	71.3	25.2	20.5	5.9	78.5	9.6	36.1
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	4.0	* 5.8
Max Green Setting (Gmax), s	8.5	47.8	19.7	32.0	7.5	48.8	12.2	* 42
Max Q Clear Time (g_c+I1), s	10.5	67.1	21.7	3.9	2.4	62.5	5.1	4.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	70.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	623	56	117	51	21	30	114	1627	92	13	1837	690
Future Volume (veh/h)	623	56	117	51	21	30	114	1627	92	13	1837	690
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	642	58	121	53	22	31	118	1677	95	13	1894	711
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	329	277	83	48	68	97	2175	969	37	2054	1151
Arrive On Green	0.15	0.17	0.17	0.05	0.07	0.07	0.04	0.40	0.40	0.03	0.76	0.76
Sat Flow, veh/h	3510	1900	1605	1810	710	1000	1810	3610	1607	1810	3610	1607
Grp Volume(v), veh/h	642	58	121	53	0	53	118	1677	95	13	1894	711
Grp Sat Flow(s),veh/h/ln	1755	1900	1605	1810	0	1710	1810	1805	1607	1810	1805	1607
Q Serve(g_s), s	19.1	3.4	8.8	3.7	0.0	3.9	7.0	52.3	4.8	0.9	54.9	22.4
Cycle Q Clear(g_c), s	19.1	3.4	8.8	3.7	0.0	3.9	7.0	52.3	4.8	0.9	54.9	22.4
Prop In Lane	1.00		1.00	1.00		0.58	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	329	277	83	0	116	97	2175	969	37	2054	1151
V/C Ratio(X)	1.24	0.18	0.44	0.64	0.00	0.46	1.21	0.77	0.10	0.36	0.92	0.62
Avail Cap(c_a), veh/h	516	626	528	148	0	434	97	2175	969	97	2054	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.63	0.63	0.63	0.34	0.34	0.34
Uniform Delay (d), s/veh	55.4	45.9	48.1	61.0	0.0	58.3	62.7	31.0	16.8	62.4	13.5	4.8
Incr Delay (d2), s/veh	125.7	0.3	1.1	7.9	0.0	2.8	140.2	1.7	0.1	2.0	3.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	1.6	3.6	1.9	0.0	1.8	7.0	23.7	1.9	0.4	12.7	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	181.1	46.1	49.2	68.8	0.0	61.0	202.9	32.7	17.0	64.4	16.7	5.6
LnGrp LOS	F	D	D	E	A	E	F	C	B	E	B	A
Approach Vol, veh/h		821			106			1890			2618	
Approach Delay, s/veh		152.1			64.9			42.5			14.0	
Approach LOS		F			E			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	85.5	10.0	27.9	11.0	81.2	23.6	14.2
Change Period (Y+Rc), s	4.0	7.2	4.0	* 5.4	4.0	7.2	4.5	5.4
Max Green Setting (Gmax), s	7.6	49.8	10.6	* 43	7.0	49.8	19.1	33.0
Max Q Clear Time (g_c+I1), s	2.9	54.3	5.7	10.8	9.0	56.9	21.1	5.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	45.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	42	24	202	14	288	38	1317	278	313	1349	23
Future Volume (veh/h)	51	42	24	202	14	288	38	1317	278	313	1349	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	45	26	217	15	310	41	1416	299	337	1451	25
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	159	72	42	245	203	600	75	1915	847	382	2186	963
Arrive On Green	0.09	0.06	0.06	0.14	0.11	0.11	0.06	0.71	0.71	0.22	1.00	1.00
Sat Flow, veh/h	1810	1128	652	1810	1900	2735	1810	3610	1597	3510	3610	1590
Grp Volume(v), veh/h	55	0	71	217	15	310	41	1416	299	337	1451	25
Grp Sat Flow(s),veh/h/ln	1810	0	1779	1810	1900	1367	1810	1805	1597	1755	1805	1590
Q Serve(g_s), s	3.7	0.0	5.1	15.3	0.9	9.6	2.9	31.4	9.5	12.1	0.0	0.0
Cycle Q Clear(g_c), s	3.7	0.0	5.1	15.3	0.9	9.6	2.9	31.4	9.5	12.1	0.0	0.0
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	159	0	114	245	203	600	75	1915	847	382	2186	963
V/C Ratio(X)	0.35	0.00	0.62	0.89	0.07	0.52	0.54	0.74	0.35	0.88	0.66	0.03
Avail Cap(c_a), veh/h	362	0	452	434	576	1137	97	1915	847	405	2186	963
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.62	0.62	0.62	0.76	0.76	0.76
Uniform Delay (d), s/veh	55.8	0.0	59.3	55.2	52.3	25.8	60.2	13.6	10.4	50.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	5.5	4.3	0.2	0.7	1.4	1.6	0.7	14.5	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.0	2.5	7.3	0.5	3.2	1.3	8.7	3.2	5.4	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.2	0.0	64.8	59.5	52.4	26.5	61.6	15.2	11.1	64.5	1.2	0.0
LnGrp LOS	E	A	E	E	D	C	E	B	B	E	A	A
Approach Vol, veh/h		126			542			1756			1813	
Approach Delay, s/veh		61.1			40.4			15.6			13.0	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	75.2	21.6	14.1	9.4	84.9	17.2	18.5
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	5.8	* 4.6
Max Green Setting (Gmax), s	15.0	29.8	31.2	33.0	7.0	38.8	26.0	* 39
Max Q Clear Time (g_c+I1), s	14.1	33.4	17.3	7.1	4.9	2.0	5.7	11.6
Green Ext Time (p_c), s	0.1	0.0	0.3	0.3	0.0	13.1	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	19.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



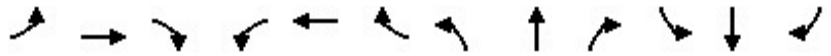
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	531	1314	215	183	1715	668	193	485	107	487	550	357
Future Volume (veh/h)	531	1314	215	183	1715	668	193	485	107	487	550	357
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	559	1383	226	193	1805	703	203	511	113	513	579	376
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	450	1581	258	204	1748	733	238	726	160	421	822	565
Arrive On Green	0.26	0.70	0.70	0.23	0.67	0.67	0.13	0.25	0.25	0.20	0.38	0.38
Sat Flow, veh/h	3510	4489	733	1810	5187	1602	1810	2919	642	3510	3610	1576
Grp Volume(v), veh/h	559	1065	544	193	1805	703	203	315	309	513	579	376
Grp Sat Flow(s),veh/h/ln	1755	1729	1764	1810	1729	1602	1810	1805	1756	1755	1805	1576
Q Serve(g_s), s	16.7	30.8	30.9	13.7	43.8	43.8	14.3	20.6	20.9	15.6	17.6	3.7
Cycle Q Clear(g_c), s	16.7	30.8	30.9	13.7	43.8	43.8	14.3	20.6	20.9	15.6	17.6	3.7
Prop In Lane	1.00		0.42	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	450	1218	621	204	1748	733	238	449	437	421	822	565
V/C Ratio(X)	1.24	0.87	0.88	0.95	1.03	0.96	0.85	0.70	0.71	1.22	0.70	0.67
Avail Cap(c_a), veh/h	450	1218	621	204	1748	733	238	555	540	421	1161	713
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.85	0.85	0.85	0.44	0.44	0.44	1.00	1.00	1.00	0.78	0.78	0.78
Uniform Delay (d), s/veh	48.3	17.0	17.0	50.0	21.2	9.5	55.2	44.4	44.5	52.0	36.6	26.7
Incr Delay (d2), s/veh	124.6	7.7	13.8	28.4	23.7	14.3	23.3	2.9	3.2	114.0	0.9	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	6.8	8.0	6.9	11.4	6.1	7.9	9.4	9.3	12.7	6.5	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	173.0	24.7	30.8	78.3	44.9	23.8	78.5	47.4	47.7	166.0	37.4	27.9
LnGrp LOS	F	C	C	E	F	C	E	D	D	F	D	C
Approach Vol, veh/h		2168			2701			827			1468	
Approach Delay, s/veh		64.5			41.8			55.1			79.9	
Approach LOS		E			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.7	52.0	22.5	35.8	21.7	50.0	20.6	37.7
Change Period (Y+Rc), s	5.0	* 6.2	5.4	* 6.2	5.0	6.2	5.0	5.4
Max Green Setting (Gmax), s	7.5	* 46	13.0	* 42	9.0	43.8	15.6	40.0
Max Q Clear Time (g_c+I1), s	15.7	32.9	16.3	19.6	18.7	45.8	17.6	22.9
Green Ext Time (p_c), s	0.0	7.8	0.0	4.8	0.0	0.0	0.0	3.3

Intersection Summary	
HCM 6th Ctrl Delay	58.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	1427	400	347	1846	90	596	77	321	51	38	188
Future Volume (veh/h)	147	1427	400	347	1846	90	596	77	321	51	38	188
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	152	1471	412	358	1903	93	614	79	331	53	39	194
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	186	1583	440	356	1980	97	594	553	468	83	44	220
Arrive On Green	0.07	0.26	0.26	0.10	0.39	0.39	0.17	0.29	0.29	0.05	0.16	0.16
Sat Flow, veh/h	1810	4034	1121	3510	5066	247	3510	1900	1609	1810	276	1374
Grp Volume(v), veh/h	152	1259	624	358	1298	698	614	79	331	53	0	233
Grp Sat Flow(s),veh/h/ln	1810	1729	1697	1755	1729	1855	1755	1900	1609	1810	0	1650
Q Serve(g_s), s	10.8	46.2	46.7	13.2	47.6	47.8	22.0	4.0	17.7	3.7	0.0	18.0
Cycle Q Clear(g_c), s	10.8	46.2	46.7	13.2	47.6	47.8	22.0	4.0	17.7	3.7	0.0	18.0
Prop In Lane	1.00		0.66	1.00		0.13	1.00		1.00	1.00		0.83
Lane Grp Cap(c), veh/h	186	1357	666	356	1351	725	594	553	468	83	0	264
V/C Ratio(X)	0.82	0.93	0.94	1.01	0.96	0.96	1.03	0.14	0.71	0.64	0.00	0.88
Avail Cap(c_a), veh/h	186	1357	666	356	1351	725	594	628	532	97	0	358
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.3	46.1	46.3	58.4	38.6	38.7	54.0	34.1	22.5	61.0	0.0	53.4
Incr Delay (d2), s/veh	19.6	10.9	20.0	49.4	16.7	25.6	45.8	0.1	3.7	5.9	0.0	17.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	22.1	23.6	8.1	22.1	25.6	13.2	1.8	6.9	1.9	0.0	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.9	57.0	66.3	107.8	55.3	64.3	99.8	34.2	26.2	66.9	0.0	70.7
LnGrp LOS	E	E	E	F	E	E	F	C	C	E	A	E
Approach Vol, veh/h		2035			2354			1024			286	
Approach Delay, s/veh		61.5			65.9			71.0			70.0	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	58.2	27.0	26.6	18.4	58.0	10.0	43.7
Change Period (Y+Rc), s	5.0	* 7.2	5.0	* 5.8	5.0	7.2	4.0	5.8
Max Green Setting (Gmax), s	7.5	* 51	22.0	* 28	7.2	50.8	7.0	43.0
Max Q Clear Time (g_c+I1), s	15.2	48.7	24.0	20.0	12.8	49.8	5.7	19.7
Green Ext Time (p_c), s	0.0	1.9	0.0	0.9	0.0	0.9	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	65.5
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2377	0	0	2674	15	0	0	0	0	0	2
Future Vol, veh/h	0	2377	0	0	2674	15	0	0	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2584	0	0	2907	16	0	0	0	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1292	-	-	1462
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*373	0	0	*293
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*373	-	-	*293
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	17.4
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	293
HCM Lane V/C Ratio	-	-	-	-	-	0.007
HCM Control Delay (s)	0	-	-	-	-	17.4
HCM Lane LOS	A	-	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	-	-	0

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	168	50	16	197	270	27
Future Vol, veh/h	168	50	16	197	270	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	80	80	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	177	53	17	246	338	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	632	352	366	0	-	0
Stage 1	352	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	465	696	1204	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	458	696	1204	-	-	-
Mov Cap-2 Maneuver	551	-	-	-	-	-
Stage 1	706	-	-	-	-	-
Stage 2	814	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1204	-	579	-	-
HCM Lane V/C Ratio	0.014	-	0.396	-	-
HCM Control Delay (s)	8	-	15.2	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	1.9	-	-

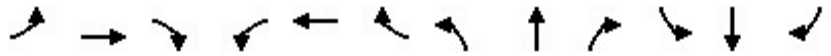
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1317	153	156	1733	929	283	995	243	605	181	93
Future Volume (veh/h)	164	1317	153	156	1733	929	283	995	243	605	181	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	173	1386	161	164	1824	978	298	1047	256	637	191	98
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	201	1585	184	1183	3086	1436	372	997	443	594	1239	551
Arrive On Green	0.11	0.34	0.34	0.65	0.89	0.89	0.11	0.28	0.28	0.17	0.34	0.34
Sat Flow, veh/h	1810	4704	546	1810	3458	1609	3510	3610	1605	3510	3610	1606
Grp Volume(v), veh/h	173	1019	528	164	1824	978	298	1047	256	637	191	98
Grp Sat Flow(s),veh/h/ln	1810	1729	1792	1810	1729	1609	1755	1805	1605	1755	1805	1606
Q Serve(g_s), s	12.2	36.0	36.0	4.5	15.6	21.7	10.8	35.9	14.6	22.0	4.8	5.5
Cycle Q Clear(g_c), s	12.2	36.0	36.0	4.5	15.6	21.7	10.8	35.9	14.6	22.0	4.8	5.5
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	1165	604	1183	3086	1436	372	997	443	594	1239	551
V/C Ratio(X)	0.86	0.87	0.87	0.14	0.59	0.68	0.80	1.05	0.58	1.07	0.15	0.18
Avail Cap(c_a), veh/h	313	1165	604	1183	3086	1436	959	997	443	594	1239	551
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.8	40.5	40.5	8.6	1.6	1.9	56.8	47.1	27.1	54.0	29.6	29.9
Incr Delay (d2), s/veh	13.5	9.2	16.2	0.1	0.8	2.6	4.0	42.6	1.9	57.8	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	16.1	17.8	1.6	0.6	1.3	5.0	21.8	5.8	14.2	2.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.3	49.8	56.7	8.6	2.4	4.5	60.8	89.7	29.0	111.8	29.7	30.0
LnGrp LOS	E	D	E	A	A	A	E	F	C	F	C	C
Approach Vol, veh/h		1720			2966			1601			926	
Approach Delay, s/veh		54.0			3.5			74.6			86.2	
Approach LOS		D			A			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	93.1	50.0	18.3	50.4	18.9	124.1	27.0	41.7
Change Period (Y+Rc), s	6.2	* 6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	7.5	* 44	35.5	22.2	22.5	28.8	22.0	* 36
Max Q Clear Time (g_c+I1), s	6.5	38.0	12.8	7.5	14.2	23.7	24.0	37.9
Green Ext Time (p_c), s	0.0	4.0	1.0	1.1	0.3	4.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	89	2024	91	94	2588	35	179	24	120	117	29	86
Future Volume (veh/h)	89	2024	91	94	2588	35	179	24	120	117	29	86
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	94	2131	96	99	2724	37	188	25	126	123	31	91
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	113	2995	928	122	3072	42	206	30	151	168	39	115
Arrive On Green	0.06	0.58	0.58	0.09	0.77	0.77	0.11	0.11	0.11	0.09	0.09	0.09
Sat Flow, veh/h	1810	5187	1607	1810	5274	71	1810	272	1372	1810	424	1243
Grp Volume(v), veh/h	94	2131	96	99	1783	978	188	0	151	123	0	122
Grp Sat Flow(s),veh/h/ln	1810	1729	1607	1810	1729	1887	1810	0	1644	1810	0	1667
Q Serve(g_s), s	6.7	38.3	1.9	7.0	48.0	48.9	13.4	0.0	11.7	8.6	0.0	9.3
Cycle Q Clear(g_c), s	6.7	38.3	1.9	7.0	48.0	48.9	13.4	0.0	11.7	8.6	0.0	9.3
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.83	1.00		0.75
Lane Grp Cap(c), veh/h	113	2995	928	122	2014	1099	206	0	181	168	0	155
V/C Ratio(X)	0.83	0.71	0.10	0.81	0.89	0.89	0.91	0.00	0.83	0.73	0.00	0.79
Avail Cap(c_a), veh/h	113	2995	928	146	2014	1099	206	0	252	173	0	231
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.74	0.74	0.74	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.3	19.7	3.7	58.4	11.5	11.6	57.0	0.0	56.7	57.4	0.0	57.7
Incr Delay (d2), s/veh	38.9	1.5	0.2	19.1	4.7	8.4	39.4	0.0	15.3	14.5	0.0	10.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	14.3	1.3	3.7	10.1	12.3	8.3	0.0	5.6	4.7	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.2	21.2	3.9	77.4	16.2	20.0	96.3	0.0	72.0	72.0	0.0	67.9
LnGrp LOS	F	C	A	E	B	B	F	A	E	E	A	E
Approach Vol, veh/h		2321			2860			339			245	
Approach Delay, s/veh		23.6			19.6			85.5			70.0	
Approach LOS		C			B			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	81.3	18.8	16.7	12.6	81.9	16.0	19.4
Change Period (Y+Rc), s	4.5	6.2	4.0	4.6	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	10.5	67.4	14.8	18.0	8.1	69.8	12.4	19.9
Max Q Clear Time (g_c+I1), s	9.0	40.3	15.4	11.3	8.7	50.9	10.6	13.7
Green Ext Time (p_c), s	0.0	18.2	0.0	0.3	0.0	16.3	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2330	1	0	2818	0	8
Future Vol, veh/h	2330	1	0	2818	0	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2453	1	0	2966	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1227
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	*373
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*373
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	373	-	-	-
HCM Lane V/C Ratio	0.023	-	-	-
HCM Control Delay (s)	14.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.1

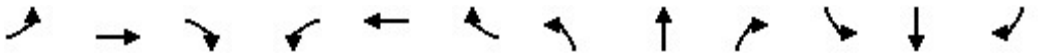
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	2283	2664	13	0	154
Future Vol, veh/h	55	2283	2664	13	0	154
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	58	2403	2804	14	0	162

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2821	0	-	0	-	1412
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.3	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.1	-	-	-	-	3.9
Pot Cap-1 Maneuver	*368	-	-	-	0	*293
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	*367	-	-	-	-	*292
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	31.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 367	-	-	-	292
HCM Lane V/C Ratio	0.158	-	-	-	0.555
HCM Control Delay (s)	16.6	-	-	-	31.7
HCM Lane LOS	C	-	-	-	D
HCM 95th %tile Q(veh)	0.6	-	-	-	3.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1874	373	298	2263	56	381	73	263	96	67	41
Future Volume (veh/h)	36	1874	373	298	2263	56	381	73	263	96	67	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	1973	393	314	2382	59	401	77	277	101	71	43
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	73	1865	361	571	3757	93	407	82	294	171	429	364
Arrive On Green	0.05	0.57	0.57	0.63	1.00	1.00	0.05	0.23	0.23	0.05	0.23	0.23
Sat Flow, veh/h	1810	4344	841	1810	5206	128	1810	362	1303	1810	1900	1610
Grp Volume(v), veh/h	38	1559	807	314	1579	862	401	0	354	101	71	43
Grp Sat Flow(s),veh/h/ln	1810	1729	1727	1810	1729	1877	1810	0	1665	1810	1900	1610
Q Serve(g_s), s	2.7	55.8	55.8	12.7	0.0	0.0	7.0	0.0	27.2	5.5	3.9	2.8
Cycle Q Clear(g_c), s	2.7	55.8	55.8	12.7	0.0	0.0	7.0	0.0	27.2	5.5	3.9	2.8
Prop In Lane	1.00		0.49	1.00		0.07	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	73	1484	741	571	2495	1354	407	0	376	171	429	364
V/C Ratio(X)	0.52	1.05	1.09	0.55	0.63	0.64	0.98	0.00	0.94	0.59	0.17	0.12
Avail Cap(c_a), veh/h	97	1484	741	571	2495	1354	407	0	384	171	438	372
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.80	0.00	0.80	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.3	27.9	27.9	18.8	0.0	0.0	48.9	0.0	49.5	38.8	40.5	40.0
Incr Delay (d2), s/veh	2.2	37.8	59.7	0.1	0.1	0.2	35.7	0.0	26.7	3.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	25.9	30.4	3.9	0.0	0.1	13.9	0.0	14.2	2.7	1.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.5	65.7	87.6	18.8	0.1	0.2	84.7	0.0	76.1	42.6	40.6	40.2
LnGrp LOS	E	F	F	B	A	A	F	A	E	D	D	D
Approach Vol, veh/h		2404			2755			755			215	
Approach Delay, s/veh		73.0			2.3			80.7			41.5	
Approach LOS		E			A			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	48.2	63.0	11.0	34.0	10.2	101.0	11.0	34.0
Change Period (Y+Rc), s	7.2	* 7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	16.4	* 56	7.0	30.0	7.0	65.2	7.0	30.0
Max Q Clear Time (g_c+I1), s	14.7	57.8	9.0	5.9	4.7	2.0	7.5	29.2
Green Ext Time (p_c), s	0.1	0.0	0.0	0.5	0.0	33.5	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

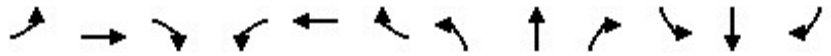
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	166	0	34	5	0	56	43	472	5	18	431	214
Future Volume (veh/h)	166	0	34	5	0	56	43	472	5	18	431	214
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	175	0	36	6	0	64	45	536	6	20	490	225
Peak Hour Factor	0.95	0.95	0.95	0.88	0.95	0.88	0.95	0.88	0.88	0.88	0.88	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	594	0	368	159	18	337	175	757	8	151	805	703
Arrive On Green	0.23	0.00	0.23	0.23	0.00	0.23	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	1427	0	1610	60	78	1475	70	1733	19	27	1843	1610
Grp Volume(v), veh/h	175	0	36	70	0	0	587	0	0	510	0	225
Grp Sat Flow(s),veh/h/ln	1427	0	1610	1613	0	0	1822	0	0	1869	0	1610
Q Serve(g_s), s	1.8	0.0	0.5	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	2.5
Cycle Q Clear(g_c), s	2.7	0.0	0.5	0.9	0.0	0.0	6.9	0.0	0.0	5.6	0.0	2.5
Prop In Lane	1.00		1.00	0.09		0.91	0.08		0.01	0.04		1.00
Lane Grp Cap(c), veh/h	594	0	368	514	0	0	940	0	0	956	0	703
V/C Ratio(X)	0.29	0.00	0.10	0.14	0.00	0.00	0.62	0.00	0.00	0.53	0.00	0.32
Avail Cap(c_a), veh/h	1193	0	1078	1215	0	0	1348	0	0	1378	0	1078
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	0.0	8.2	8.4	0.0	0.0	6.2	0.0	0.0	5.8	0.0	5.0
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.1	0.0	0.0	0.7	0.0	0.0	0.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.1	0.2	0.0	0.0	1.5	0.0	0.0	1.2	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.2	0.0	8.3	8.5	0.0	0.0	6.9	0.0	0.0	6.3	0.0	5.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		211			70			587			735	
Approach Delay, s/veh		9.1			8.5			6.9			6.0	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	16.2	10.6	16.2	10.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	18.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	8.9	4.7	7.6	2.9
Green Ext Time (p_c), s	2.8	0.9	3.2	0.3

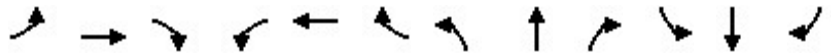
Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	564	3	2	637	158	23	37	13	138	19	55
Future Volume (veh/h)	65	564	3	2	637	158	23	37	13	138	19	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	68	594	3	2	671	166	24	39	14	145	20	58
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	117	752	4	60	736	182	222	341	108	415	68	135
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	101	1499	7	1	1467	362	411	979	309	908	194	387
Grp Volume(v), veh/h	665	0	0	839	0	0	77	0	0	223	0	0
Grp Sat Flow(s),veh/h/ln	1607	0	0	1830	0	0	1699	0	0	1490	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0
Cycle Q Clear(g_c), s	20.0	0.0	0.0	25.3	0.0	0.0	1.7	0.0	0.0	6.5	0.0	0.0
Prop In Lane	0.10		0.00	0.00		0.20	0.31		0.18	0.65		0.26
Lane Grp Cap(c), veh/h	872	0	0	978	0	0	671	0	0	618	0	0
V/C Ratio(X)	0.76	0.00	0.00	0.86	0.00	0.00	0.11	0.00	0.00	0.36	0.00	0.00
Avail Cap(c_a), veh/h	936	0	0	1051	0	0	671	0	0	618	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.9	0.0	0.0	13.8	0.0	0.0	13.3	0.0	0.0	14.8	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.0	0.0	6.9	0.0	0.0	0.3	0.0	0.0	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	0.0	10.6	0.0	0.0	0.7	0.0	0.0	2.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.4	0.0	0.0	20.6	0.0	0.0	13.6	0.0	0.0	16.4	0.0	0.0
LnGrp LOS	B	A	A	C	A	A	B	A	A	B	A	A
Approach Vol, veh/h		665			839			77			223	
Approach Delay, s/veh		15.4			20.6			13.6			16.4	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	25.4	34.6	25.4	34.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.5	32.5	18.5	32.5
Max Q Clear Time (g_c+I1), s	3.7	22.0	8.5	27.3
Green Ext Time (p_c), s	0.3	3.8	0.9	2.8

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B



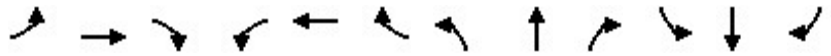
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	39	11	755	38	61	3	2099	646	218	1279	20
Future Volume (veh/h)	70	39	11	755	38	61	3	2099	646	218	1279	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	74	41	12	795	40	64	3	2209	680	229	1346	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	289	86	25	532	117	97	10	1941	1109	146	2213	965
Arrive On Green	0.16	0.06	0.06	0.15	0.06	0.06	0.00	0.36	0.36	0.08	0.61	0.61
Sat Flow, veh/h	1810	1410	413	3510	1900	1566	1810	3610	1608	1810	3610	1574
Grp Volume(v), veh/h	74	0	53	795	40	64	3	2209	680	229	1346	21
Grp Sat Flow(s),veh/h/ln	1810	0	1823	1755	1900	1566	1810	1805	1608	1810	1805	1574
Q Serve(g_s), s	4.7	0.0	3.7	19.7	2.6	4.4	0.2	69.9	12.2	10.5	29.9	0.2
Cycle Q Clear(g_c), s	4.7	0.0	3.7	19.7	2.6	4.4	0.2	69.9	12.2	10.5	29.9	0.2
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	0	111	532	117	97	10	1941	1109	146	2213	965
V/C Ratio(X)	0.26	0.00	0.48	1.49	0.34	0.66	0.30	1.14	0.61	1.57	0.61	0.02
Avail Cap(c_a), veh/h	289	0	449	532	693	571	230	1941	1109	146	2213	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	0.0	59.1	55.2	58.5	42.0	64.5	41.6	4.6	59.7	15.5	1.2
Incr Delay (d2), s/veh	0.2	0.0	3.2	232.3	1.7	7.6	0.6	62.8	0.2	285.5	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.8	25.6	1.3	2.2	0.1	48.2	4.5	16.3	11.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	0.0	62.2	287.4	60.2	49.6	65.1	104.4	4.8	345.2	16.8	1.3
LnGrp LOS	D	A	E	F	E	D	E	F	A	F	B	A
Approach Vol, veh/h		127			899			2892			1596	
Approach Delay, s/veh		53.9			260.4			80.9			63.7	
Approach LOS		D			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	76.1	25.2	13.7	5.2	85.9	26.3	12.6
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	5.5	* 4.6
Max Green Setting (Gmax), s	10.5	45.8	19.7	32.0	16.5	39.8	7.0	* 47
Max Q Clear Time (g_c+I1), s	12.5	71.9	21.7	5.7	2.2	31.9	6.7	6.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	4.9	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	104.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	677	60	110	147	67	52	251	2375	103	11	1195	733
Future Volume (veh/h)	677	60	110	147	67	52	251	2375	103	11	1195	733
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	713	63	116	155	71	55	264	2500	108	12	1258	772
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	226	189	261	115	89	301	2004	892	34	1383	852
Arrive On Green	0.15	0.12	0.12	0.14	0.12	0.12	0.22	0.74	0.74	0.02	0.38	0.38
Sat Flow, veh/h	3510	1900	1590	1810	987	764	1810	3610	1607	1810	3610	1606
Grp Volume(v), veh/h	713	63	116	155	0	126	264	2500	108	12	1258	772
Grp Sat Flow(s),veh/h/ln	1755	1900	1590	1810	0	1751	1810	1805	1607	1810	1805	1606
Q Serve(g_s), s	19.1	3.9	9.0	10.4	0.0	8.9	18.3	72.2	1.2	0.9	42.9	26.5
Cycle Q Clear(g_c), s	19.1	3.9	9.0	10.4	0.0	8.9	18.3	72.2	1.2	0.9	42.9	26.5
Prop In Lane	1.00		1.00	1.00		0.44	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	226	189	261	0	204	301	2004	892	34	1383	852
V/C Ratio(X)	1.38	0.28	0.61	0.59	0.00	0.62	0.88	1.25	0.12	0.35	0.91	0.91
Avail Cap(c_a), veh/h	516	678	567	261	0	444	301	2004	892	97	1383	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.19	0.19	0.19	0.56	0.56	0.56
Uniform Delay (d), s/veh	55.4	52.2	54.4	52.1	0.0	54.6	49.3	17.0	1.7	63.0	38.0	11.7
Incr Delay (d2), s/veh	183.9	0.7	3.2	3.6	0.0	3.0	5.9	112.3	0.1	3.4	6.3	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.5	1.9	3.8	5.0	0.0	4.1	8.1	48.2	0.9	0.4	19.1	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	239.3	52.9	57.6	55.7	0.0	57.6	55.3	129.3	1.7	66.4	44.3	21.1
LnGrp LOS	F	D	E	E	A	E	E	F	A	E	D	C
Approach Vol, veh/h		892			281			2872			2042	
Approach Delay, s/veh		202.5			56.6			117.7			35.7	
Approach LOS		F			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	79.4	24.1	20.1	28.8	57.0	23.6	20.6
Change Period (Y+Rc), s	4.0	7.2	5.4	* 4.6	7.2	* 7.2	4.5	5.4
Max Green Setting (Gmax), s	7.0	49.8	7.0	* 46	7.0	* 50	19.1	33.0
Max Q Clear Time (g_c+I1), s	2.9	74.2	12.4	11.0	20.3	44.9	21.1	10.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	3.9	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	99.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	70	47	407	169	632	71	1453	289	368	1031	33
Future Volume (veh/h)	103	70	47	407	169	632	71	1453	289	368	1031	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	108	74	49	428	178	665	75	1529	304	387	1085	35
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	133	112	74	324	418	800	96	1752	778	243	1839	814
Arrive On Green	0.07	0.11	0.11	0.18	0.22	0.22	0.02	0.16	0.16	0.14	1.00	1.00
Sat Flow, veh/h	1810	1063	704	1810	1900	2744	1810	3610	1603	3510	3610	1599
Grp Volume(v), veh/h	108	0	123	428	178	665	75	1529	304	387	1085	35
Grp Sat Flow(s),veh/h/ln	1810	0	1766	1810	1900	1372	1810	1805	1603	1755	1805	1599
Q Serve(g_s), s	7.6	0.0	8.7	23.2	10.5	22.2	5.4	53.8	11.0	9.0	0.0	0.0
Cycle Q Clear(g_c), s	7.6	0.0	8.7	23.2	10.5	22.2	5.4	53.8	11.0	9.0	0.0	0.0
Prop In Lane	1.00		0.40	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	133	0	186	324	418	800	96	1752	778	243	1839	814
V/C Ratio(X)	0.81	0.00	0.66	1.32	0.43	0.83	0.78	0.87	0.39	1.59	0.59	0.04
Avail Cap(c_a), veh/h	237	0	492	324	547	986	139	1752	778	243	1839	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.83	0.83	0.83	0.87	0.87	0.87
Uniform Delay (d), s/veh	59.4	0.0	56.0	53.4	43.6	25.3	63.1	50.7	9.3	56.0	0.0	0.0
Incr Delay (d2), s/veh	4.6	0.0	4.0	165.2	0.7	5.1	7.8	5.3	1.2	282.9	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	4.1	25.4	5.0	7.7	2.7	27.2	4.9	13.1	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.9	0.0	60.0	218.6	44.3	30.4	71.0	56.0	10.6	338.9	1.2	0.1
LnGrp LOS	E	A	E	F	D	C	E	E	B	F	A	A
Approach Vol, veh/h		231			1271			1908			1507	
Approach Delay, s/veh		61.8			95.7			49.4			87.9	
Approach LOS		E			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	69.3	27.2	19.5	10.9	72.4	13.5	33.2
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	4.0	4.6
Max Green Setting (Gmax), s	9.0	46.8	17.0	36.2	10.0	46.8	17.0	37.4
Max Q Clear Time (g_c+I1), s	11.0	55.8	25.2	10.7	7.4	2.0	9.6	24.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	8.7	0.1	3.4

Intersection Summary	
HCM 6th Ctrl Delay	73.7
HCM 6th LOS	E



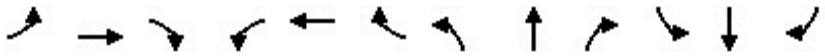
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	453	1466	150	204	1840	500	244	812	159	509	477	424
Future Volume (veh/h)	453	1466	150	204	1840	500	244	812	159	509	477	424
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	477	1543	158	215	1937	526	257	855	167	536	502	446
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1681	3443	352	238	1867	760	237	909	178	394	1035	1225
Arrive On Green	0.96	1.00	1.00	0.26	0.72	0.72	0.13	0.30	0.30	0.19	0.48	0.48
Sat Flow, veh/h	3510	4781	489	1810	5187	1609	1810	3009	588	3510	3610	1585
Grp Volume(v), veh/h	477	1116	585	215	1937	526	257	513	509	536	502	446
Grp Sat Flow(s),veh/h/ln	1755	1729	1812	1810	1729	1609	1810	1805	1792	1755	1805	1585
Q Serve(g_s), s	1.0	0.0	0.0	14.9	46.8	0.0	17.0	36.0	36.0	14.6	12.3	8.5
Cycle Q Clear(g_c), s	1.0	0.0	0.0	14.9	46.8	0.0	17.0	36.0	36.0	14.6	12.3	8.5
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.33	1.00		1.00
Lane Grp Cap(c), veh/h	1681	2490	1305	238	1867	760	237	545	541	394	1035	1225
V/C Ratio(X)	0.28	0.45	0.45	0.90	1.04	0.69	1.09	0.94	0.94	1.36	0.48	0.36
Avail Cap(c_a), veh/h	1681	2490	1305	383	1867	760	237	555	551	394	1035	1225
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.86	0.86	0.86	0.65	0.65	0.65	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	1.5	0.0	0.0	47.1	18.2	9.2	56.5	44.2	44.2	52.8	27.4	11.8
Incr Delay (d2), s/veh	0.0	0.5	1.0	7.5	27.4	3.4	83.3	24.1	24.2	175.6	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.3	6.1	11.0	4.9	13.1	19.3	19.2	15.3	4.5	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	1.5	0.5	1.0	54.6	45.6	12.6	139.8	68.3	68.5	228.4	27.7	11.9
LnGrp LOS	A	A	A	D	F	B	F	E	E	F	C	B
Approach Vol, veh/h		2178			2678			1279			1484	
Approach Delay, s/veh		0.8			39.9			82.7			95.5	
Approach LOS		A			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.6	101.5	22.0	43.5	70.1	53.0	20.8	44.7
Change Period (Y+Rc), s	4.5	6.2	5.0	6.2	6.2	* 6.2	6.2	* 5.4
Max Green Setting (Gmax), s	17.1	26.8	17.0	36.8	7.0	* 47	14.6	* 40
Max Q Clear Time (g_c+I1), s	16.9	2.0	19.0	14.3	3.0	48.8	16.6	38.0
Green Ext Time (p_c), s	0.2	12.3	0.0	4.6	0.4	0.0	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	46.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	209	1629	421	393	1962	37	454	116	483	91	172	375
Future Volume (veh/h)	209	1629	421	393	1962	37	454	116	483	91	172	375
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	220	1715	443	414	2065	39	478	122	508	96	181	395
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	1640	4874	1235	477	2048	39	459	646	547	97	136	296
Arrive On Green	0.91	1.00	1.00	0.14	0.39	0.39	0.13	0.34	0.34	0.05	0.26	0.26
Sat Flow, veh/h	1810	4125	1045	3510	5241	99	3510	1900	1610	1810	531	1160
Grp Volume(v), veh/h	220	1432	726	414	1362	742	478	122	508	96	0	576
Grp Sat Flow(s),veh/h/ln	1810	1729	1712	1755	1729	1882	1755	1900	1610	1810	0	1691
Q Serve(g_s), s	1.7	0.0	0.0	15.0	50.8	50.8	17.0	5.9	39.5	6.9	0.0	33.2
Cycle Q Clear(g_c), s	1.7	0.0	0.0	15.0	50.8	50.8	17.0	5.9	39.5	6.9	0.0	33.2
Prop In Lane	1.00		0.61	1.00		0.05	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	1640	4086	2023	477	1351	736	459	646	547	97	0	432
V/C Ratio(X)	0.13	0.35	0.36	0.87	1.01	1.01	1.04	0.19	0.93	0.99	0.00	1.33
Avail Cap(c_a), veh/h	1640	4086	2023	878	1351	736	459	646	547	97	0	432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.7	0.0	0.0	55.0	39.6	39.6	56.5	30.3	41.4	61.4	0.0	48.4
Incr Delay (d2), s/veh	0.0	0.2	0.4	1.9	26.3	35.5	53.1	0.1	22.3	86.0	0.0	165.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.2	6.6	25.1	29.2	10.7	2.7	18.4	5.5	0.0	33.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.7	0.2	0.4	56.9	65.9	75.1	109.6	30.4	63.6	147.5	0.0	213.7
LnGrp LOS	A	A	A	E	F	F	F	C	E	F	A	F
Approach Vol, veh/h		2378			2518			1108			672	
Approach Delay, s/veh		0.3			67.2			79.8			204.2	
Approach LOS		A			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.2	164.0	22.0	39.0	128.2	58.0	11.0	50.0
Change Period (Y+Rc), s	4.5	7.2	5.0	* 5.8	7.2	* 7.2	4.0	5.8
Max Green Setting (Gmax), s	32.5	26.0	17.0	* 33	7.2	* 51	7.0	43.0
Max Q Clear Time (g_c+I1), s	17.0	2.0	19.0	35.2	3.7	52.8	8.9	41.5
Green Ext Time (p_c), s	0.7	16.1	0.0	0.0	0.1	0.0	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	59.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2283	0	0	2677	8	0	0	0	0	0	0
Future Vol, veh/h	0	2283	0	0	2677	8	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2429	0	0	2848	9	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1215	-	-	1429
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*394	0	0	*293
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*394	-	-	*293
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	-	0
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

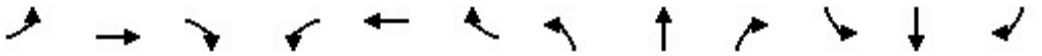
Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	188	49	41	354	215	77
Future Vol, veh/h	188	49	41	354	215	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	85	85	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	198	52	43	416	253	81

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	796	294	334	0	-	0
Stage 1	294	-	-	-	-	-
Stage 2	502	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	371	750	1237	-	-	-
Stage 1	761	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	358	750	1237	-	-	-
Mov Cap-2 Maneuver	478	-	-	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	654	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.3	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1237	-	517	-	-
HCM Lane V/C Ratio	0.035	-	0.483	-	-
HCM Control Delay (s)	8	-	18.3	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2.6	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	1622	202	243	1718	709	153	408	196	770	567	124
Future Volume (veh/h)	165	1622	202	243	1718	709	153	408	196	770	567	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	174	1707	213	256	1808	746	161	429	206	811	597	131
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	188	2271	282	281	1983	760	220	500	221	834	1145	509
Arrive On Green	0.10	0.49	0.49	0.16	0.54	0.54	0.06	0.14	0.14	0.24	0.32	0.32
Sat Flow, veh/h	1810	4672	581	1810	3688	1414	3510	3610	1600	3510	3610	1606
Grp Volume(v), veh/h	174	1262	658	256	1687	867	161	429	206	811	597	131
Grp Sat Flow(s),veh/h/ln	1810	1729	1795	1810	1729	1644	1755	1805	1600	1755	1805	1606
Q Serve(g_s), s	12.4	38.4	38.7	18.1	57.2	67.2	5.9	15.1	16.6	29.8	17.6	7.9
Cycle Q Clear(g_c), s	12.4	38.4	38.7	18.1	57.2	67.2	5.9	15.1	16.6	29.8	17.6	7.9
Prop In Lane	1.00		0.32	1.00		0.86	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	188	1681	873	281	1859	884	220	500	221	834	1145	509
V/C Ratio(X)	0.93	0.75	0.75	0.91	0.91	0.98	0.73	0.86	0.93	0.97	0.52	0.26
Avail Cap(c_a), veh/h	188	1681	873	299	1859	884	473	500	221	834	1145	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.8	27.0	27.1	54.0	27.1	29.4	59.9	54.8	55.4	49.1	36.3	33.0
Incr Delay (d2), s/veh	45.0	3.1	6.0	29.2	7.9	26.1	4.6	13.9	41.5	24.4	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	23.5	25.2	11.5	32.5	37.7	3.0	8.7	16.4	17.5	10.8	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	102.8	30.2	33.1	83.2	35.1	55.5	64.5	68.7	96.9	73.5	36.7	33.2
LnGrp LOS	F	C	C	F	D	E	E	E	F	E	D	C
Approach Vol, veh/h		2094			2810			796			1539	
Approach Delay, s/veh		37.1			45.8			75.1			55.8	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.7	70.1	12.7	47.0	18.0	76.8	35.9	23.8
Change Period (Y+Rc), s	4.5	6.2	4.5	5.8	4.5	6.2	5.0	* 5.8
Max Green Setting (Gmax), s	21.5	38.8	17.5	31.2	13.5	46.8	30.9	* 18
Max Q Clear Time (g_c+I1), s	20.1	40.7	7.9	19.6	14.4	69.2	31.8	18.6
Green Ext Time (p_c), s	0.1	0.0	0.3	3.2	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	48.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	2384	189	59	2641	108	96	33	30	118	28	65
Future Volume (veh/h)	142	2384	189	59	2641	108	96	33	30	118	28	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	149	2509	199	62	2780	114	101	35	32	124	29	68
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	163	3407	1056	87	3142	127	120	61	56	136	39	90
Arrive On Green	0.09	0.66	0.66	0.06	0.82	0.82	0.07	0.07	0.07	0.08	0.08	0.08
Sat Flow, veh/h	1810	5187	1608	1810	5109	206	1810	912	834	1810	503	1179
Grp Volume(v), veh/h	149	2509	199	62	1868	1026	101	0	67	124	0	97
Grp Sat Flow(s),veh/h/ln	1810	1729	1608	1810	1729	1857	1810	0	1746	1810	0	1682
Q Serve(g_s), s	10.6	41.8	6.3	4.4	45.4	49.3	7.2	0.0	4.8	8.8	0.0	7.3
Cycle Q Clear(g_c), s	10.6	41.8	6.3	4.4	45.4	49.3	7.2	0.0	4.8	8.8	0.0	7.3
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.48	1.00		0.70
Lane Grp Cap(c), veh/h	163	3407	1056	87	2127	1142	120	0	118	136	0	129
V/C Ratio(X)	0.91	0.74	0.19	0.71	0.88	0.90	0.84	0.00	0.57	0.91	0.00	0.75
Avail Cap(c_a), veh/h	163	3407	1056	99	2127	1142	120	0	242	136	0	255
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.72	0.72	0.72	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.7	14.8	8.7	60.0	8.7	9.0	60.0	0.0	58.8	59.7	0.0	58.8
Incr Delay (d2), s/veh	46.5	1.5	0.4	13.8	4.1	8.4	39.3	0.0	4.3	50.6	0.0	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.5	30.6	9.8	2.6	34.9	39.7	5.0	0.0	2.6	6.4	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.2	16.3	9.1	73.8	12.8	17.5	99.3	0.0	63.1	110.2	0.0	67.4
LnGrp LOS	F	B	A	E	B	B	F	A	E	F	A	E
Approach Vol, veh/h		2857			2956			168			221	
Approach Delay, s/veh		20.4			15.7			84.9			91.4	
Approach LOS		C			B			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	91.6	12.6	15.1	16.2	86.1	13.8	13.9
Change Period (Y+Rc), s	4.5	6.2	4.0	* 5.1	4.5	6.2	4.0	5.1
Max Green Setting (Gmax), s	7.1	75.3	8.6	* 20	11.7	70.7	9.8	18.0
Max Q Clear Time (g_c+I1), s	6.4	43.8	9.2	9.3	12.6	51.3	10.8	6.8
Green Ext Time (p_c), s	0.0	24.5	0.0	0.3	0.0	17.2	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2625	5	0	2882	0	2
Future Vol, veh/h	2625	5	0	2882	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2763	5	0	3034	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1384
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	*313
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*313
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	313	-	-	-
HCM Lane V/C Ratio	0.007	-	-	-
HCM Control Delay (s)	16.6	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

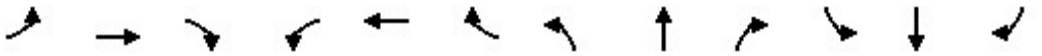
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	128	2499	2802	24	0	80
Future Vol, veh/h	128	2499	2802	24	0	80
Conflicting Peds, #/hr	3	0	0	3	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	135	2631	2949	25	0	84

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	2977	0	-	0	-	1490
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	5.3	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	3.1	-	-	-	-	3.9
Pot Cap-1 Maneuver	*343	-	-	-	0	*272
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	1	-	-	-		1
Mov Cap-1 Maneuver	*342	-	-	-	-	*272
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	24.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 342	-	-	-	272
HCM Lane V/C Ratio	0.394	-	-	-	0.31
HCM Control Delay (s)	22.2	-	-	-	24.1
HCM Lane LOS	C	-	-	-	C
HCM 95th %tile Q(veh)	1.8	-	-	-	1.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	2101	304	194	2437	81	327	111	225	111	64	76
Future Volume (veh/h)	94	2101	304	194	2437	81	327	111	225	111	64	76
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.98		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	99	2212	320	204	2565	85	344	117	237	117	67	80
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	123	2111	297	482	3484	115	397	124	252	170	429	355
Arrive On Green	0.02	0.15	0.15	0.53	1.00	1.00	0.05	0.23	0.23	0.05	0.23	0.23
Sat Flow, veh/h	1810	4589	646	1810	5157	170	1810	551	1117	1810	1900	1574
Grp Volume(v), veh/h	99	1652	880	204	1714	936	344	0	354	117	67	80
Grp Sat Flow(s),veh/h/ln	1810	1729	1777	1810	1729	1868	1810	0	1668	1810	1900	1574
Q Serve(g_s), s	7.1	59.8	59.8	8.8	0.0	0.0	7.0	0.0	27.1	6.5	3.7	5.4
Cycle Q Clear(g_c), s	7.1	59.8	59.8	8.8	0.0	0.0	7.0	0.0	27.1	6.5	3.7	5.4
Prop In Lane	1.00		0.36	1.00		0.09	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	123	1591	817	482	2336	1262	397	0	376	170	429	355
V/C Ratio(X)	0.81	1.04	1.08	0.42	0.73	0.74	0.87	0.00	0.94	0.69	0.16	0.23
Avail Cap(c_a), veh/h	131	1591	817	482	2336	1262	397	0	385	170	438	363
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	0.86	0.00	0.86	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.7	55.1	55.1	24.3	0.0	0.0	46.6	0.0	49.5	39.2	40.4	41.1
Incr Delay (d2), s/veh	25.9	33.3	54.1	0.0	0.2	0.4	15.2	0.0	27.8	9.2	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	36.1	41.8	7.4	31.0	33.9	20.2	0.0	15.7	4.7	2.4	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.6	88.4	109.2	24.3	0.2	0.4	61.8	0.0	77.3	48.4	40.6	41.4
LnGrp LOS	F	F	F	C	A	A	E	A	E	D	D	D
Approach Vol, veh/h		2631			2854			698			264	
Approach Delay, s/veh		95.4			2.0			69.6			44.3	
Approach LOS		F			A			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	41.9	67.0	11.0	33.9	13.8	95.0	11.0	33.9
Change Period (Y+Rc), s	7.2	* 7.2	4.0	4.6	5.0	7.2	4.0	4.6
Max Green Setting (Gmax), s	12.4	* 60	7.0	30.0	9.4	62.8	7.0	30.0
Max Q Clear Time (g_c+I1), s	10.8	61.8	9.0	7.4	9.1	2.0	8.5	29.1
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	38.1	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	49.2
HCM 6th LOS	D

Notes

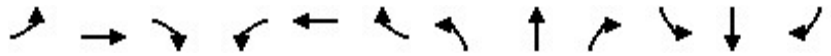
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	1	36	6	0	26	18	376	9	19	416	94
Future Volume (veh/h)	172	1	36	6	0	26	18	376	9	19	416	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	181	1	38	8	0	34	19	495	12	25	547	99
Peak Hour Factor	0.95	0.95	0.95	0.76	0.95	0.76	0.95	0.76	0.76	0.76	0.76	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	593	3	364	193	38	295	152	779	18	156	796	699
Arrive On Green	0.23	0.23	0.23	0.23	0.00	0.23	0.43	0.43	0.43	0.43	0.43	0.43
Sat Flow, veh/h	1424	11	1610	140	168	1306	26	1794	42	32	1833	1610
Grp Volume(v), veh/h	182	0	38	42	0	0	526	0	0	572	0	99
Grp Sat Flow(s),veh/h/ln	1435	0	1610	1614	0	0	1862	0	0	1865	0	1610
Q Serve(g_s), s	2.4	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
Cycle Q Clear(g_c), s	2.9	0.0	0.5	0.5	0.0	0.0	5.8	0.0	0.0	6.5	0.0	1.0
Prop In Lane	0.99		1.00	0.19		0.81	0.04		0.02	0.04		1.00
Lane Grp Cap(c), veh/h	595	0	364	526	0	0	949	0	0	952	0	699
V/C Ratio(X)	0.31	0.00	0.10	0.08	0.00	0.00	0.55	0.00	0.00	0.60	0.00	0.14
Avail Cap(c_a), veh/h	1230	0	1095	1236	0	0	1395	0	0	1397	0	1095
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	0.0	8.1	8.1	0.0	0.0	5.9	0.0	0.0	6.1	0.0	4.5
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.1	0.0	0.0	0.5	0.0	0.0	0.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.3	0.3	0.0	0.0	4.0	0.0	0.0	4.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	0.0	8.2	8.2	0.0	0.0	6.4	0.0	0.0	6.7	0.0	4.6
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		220			42			526			671	
Approach Delay, s/veh		9.1			8.2			6.4			6.4	
Approach LOS		A			A			A			A	

Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	16.0		10.5		16.0		10.5					
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5					
Max Green Setting (Gmax), s	18.0		18.0		18.0		18.0					
Max Q Clear Time (g_c+I1), s	7.8		4.9		8.5		2.5					
Green Ext Time (p_c), s	2.6		0.9		3.0		0.1					

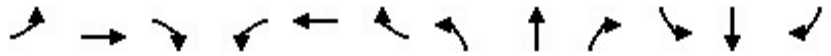
Intersection Summary												
HCM 6th Ctrl Delay			6.8									
HCM 6th LOS			A									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	527	40	10	428	89	19	34	14	249	43	108
Future Volume (veh/h)	58	527	40	10	428	89	19	34	14	249	43	108
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	61	555	42	11	451	94	20	36	15	262	45	114
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	114	645	47	72	625	128	239	410	151	481	88	172
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	104	1565	114	12	1516	311	365	965	356	883	207	405
Grp Volume(v), veh/h	658	0	0	556	0	0	71	0	0	421	0	0
Grp Sat Flow(s),veh/h/ln	1783	0	0	1839	0	0	1686	0	0	1494	0	0
Q Serve(g_s), s	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.9	0.0	0.0
Cycle Q Clear(g_c), s	18.6	0.0	0.0	14.0	0.0	0.0	1.3	0.0	0.0	12.2	0.0	0.0
Prop In Lane	0.09		0.06	0.02		0.17	0.28		0.21	0.62		0.27
Lane Grp Cap(c), veh/h	806	0	0	825	0	0	799	0	0	740	0	0
V/C Ratio(X)	0.82	0.00	0.00	0.67	0.00	0.00	0.09	0.00	0.00	0.57	0.00	0.00
Avail Cap(c_a), veh/h	894	0	0	917	0	0	799	0	0	740	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.8	0.0	0.0	13.6	0.0	0.0	9.5	0.0	0.0	12.5	0.0	0.0
Incr Delay (d2), s/veh	5.5	0.0	0.0	1.7	0.0	0.0	0.2	0.0	0.0	3.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	8.9	0.0	0.0	1.1	0.0	0.0	7.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.2	0.0	0.0	15.3	0.0	0.0	9.7	0.0	0.0	15.7	0.0	0.0
LnGrp LOS	C	A	A	B	A	A	A	A	A	B	A	A
Approach Vol, veh/h		658			556			71			421	
Approach Delay, s/veh		20.2			15.3			9.7			15.7	
Approach LOS		C			B			A			B	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	27.8	27.2	27.8	27.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	20.5	25.5	20.5	25.5
Max Q Clear Time (g_c+I1), s	3.3	20.6	14.2	16.0
Green Ext Time (p_c), s	0.3	2.1	1.5	2.7

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B



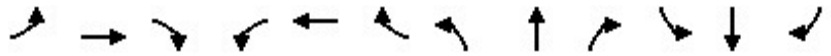
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	13	16	680	20	57	6	1843	575	159	1881	41
Future Volume (veh/h)	48	13	16	680	20	57	6	1843	575	159	1881	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	14	17	716	21	60	6	1940	605	167	1980	43
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	82	87	105	532	438	367	19	1808	1035	118	2006	887
Arrive On Green	0.05	0.11	0.11	0.15	0.23	0.23	0.00	0.17	0.17	0.07	0.56	0.56
Sat Flow, veh/h	1810	769	933	3510	1900	1589	1810	3610	1580	1810	3610	1596
Grp Volume(v), veh/h	51	0	31	716	21	60	6	1940	605	167	1980	43
Grp Sat Flow(s),veh/h/ln	1810	0	1702	1755	1900	1589	1810	1805	1580	1810	1805	1596
Q Serve(g_s), s	3.6	0.0	2.1	19.7	1.1	3.9	0.4	65.1	33.1	8.5	70.2	1.6
Cycle Q Clear(g_c), s	3.6	0.0	2.1	19.7	1.1	3.9	0.4	65.1	33.1	8.5	70.2	1.6
Prop In Lane	1.00		0.55	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	82	0	192	532	438	367	19	1808	1035	118	2006	887
V/C Ratio(X)	0.62	0.00	0.16	1.35	0.05	0.16	0.32	1.07	0.58	1.41	0.99	0.05
Avail Cap(c_a), veh/h	170	0	419	532	617	516	104	1808	1035	118	2006	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.16	0.16	0.16	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.0	0.0	52.1	55.2	38.9	40.0	64.3	54.3	22.8	60.8	28.4	13.2
Incr Delay (d2), s/veh	2.9	0.0	0.4	167.9	0.0	0.2	0.6	35.0	0.4	227.6	17.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	1.1	22.0	0.8	3.9	0.2	41.4	34.6	11.8	40.5	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.8	0.0	52.5	223.0	38.9	40.2	64.9	89.3	23.2	288.4	45.6	13.3
LnGrp LOS	E	A	D	F	D	D	E	F	C	F	D	B
Approach Vol, veh/h		82			797			2551			2190	
Approach Delay, s/veh		59.5			204.4			73.5			63.5	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	71.3	25.2	20.5	5.9	78.4	9.9	35.8
Change Period (Y+Rc), s	4.5	6.2	5.5	5.8	4.5	6.2	4.0	* 5.8
Max Green Setting (Gmax), s	8.5	47.8	19.7	32.0	7.5	48.8	12.2	* 42
Max Q Clear Time (g_c+I1), s	10.5	67.1	21.7	4.1	2.4	72.2	5.6	5.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	88.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	704	59	123	54	22	35	120	1707	97	17	1928	760
Future Volume (veh/h)	704	59	123	54	22	35	120	1707	97	17	1928	760
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	741	62	129	57	23	37	126	1797	102	18	2029	800
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	516	193	162	204	44	71	97	2155	960	47	2054	1151
Arrive On Green	0.15	0.10	0.10	0.11	0.07	0.07	0.05	0.60	0.60	0.05	1.00	1.00
Sat Flow, veh/h	3510	1900	1601	1810	652	1048	1810	3610	1607	1810	3610	1607
Grp Volume(v), veh/h	741	62	129	57	0	60	126	1797	102	18	2029	800
Grp Sat Flow(s),veh/h/ln	1755	1900	1601	1810	0	1700	1810	1805	1607	1810	1805	1607
Q Serve(g_s), s	19.1	3.9	8.9	3.8	0.0	4.4	7.0	51.9	1.7	1.3	0.0	0.0
Cycle Q Clear(g_c), s	19.1	3.9	8.9	3.8	0.0	4.4	7.0	51.9	1.7	1.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	516	193	162	204	0	116	97	2155	960	47	2054	1151
V/C Ratio(X)	1.44	0.32	0.80	0.28	0.00	0.52	1.29	0.83	0.11	0.39	0.99	0.70
Avail Cap(c_a), veh/h	516	626	527	204	0	432	97	2155	960	97	2054	1151
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.61	0.61	0.61	0.20	0.20	0.20
Uniform Delay (d), s/veh	55.4	54.3	42.9	52.8	0.0	58.5	61.5	21.0	2.6	60.7	0.0	0.0
Incr Delay (d2), s/veh	207.4	1.0	8.5	0.7	0.0	3.6	170.4	2.5	0.1	1.0	6.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.2	2.3	8.7	2.1	0.0	2.3	8.1	33.2	4.4	0.7	38.4	29.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	262.8	55.2	51.4	53.6	0.0	62.1	231.9	23.5	2.7	61.7	6.5	0.7
LnGrp LOS	F	E	D	D	A	E	F	C	A	E	A	A
Approach Vol, veh/h		932			117			2025			2847	
Approach Delay, s/veh		219.8			57.9			35.4			5.2	
Approach LOS		F			E			D			A	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	84.8	20.1	17.8	11.0	81.2	23.6	14.2
Change Period (Y+Rc), s	4.0	7.2	5.4	* 4.6	4.0	7.2	4.5	5.4
Max Green Setting (Gmax), s	7.3	49.8	10.6	* 43	7.0	49.8	19.1	33.0
Max Q Clear Time (g_c+I1), s	3.3	53.9	5.8	10.9	9.0	2.0	21.1	6.4
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	32.8	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	50.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	44	25	212	15	304	40	1392	291	329	1416	24
Future Volume (veh/h)	54	44	25	212	15	304	40	1392	291	329	1416	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	57	46	26	223	16	320	42	1465	306	346	1491	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	162	73	42	250	207	613	76	1893	837	390	2170	956
Arrive On Green	0.09	0.06	0.06	0.14	0.11	0.11	0.06	0.70	0.70	0.22	1.00	1.00
Sat Flow, veh/h	1810	1138	643	1810	1900	2736	1810	3610	1596	3510	3610	1590
Grp Volume(v), veh/h	57	0	72	223	16	320	42	1465	306	346	1491	25
Grp Sat Flow(s),veh/h/ln	1810	0	1781	1810	1900	1368	1810	1805	1596	1755	1805	1590
Q Serve(g_s), s	3.8	0.0	5.1	15.7	1.0	9.8	2.9	34.7	10.1	12.4	0.0	0.0
Cycle Q Clear(g_c), s	3.8	0.0	5.1	15.7	1.0	9.8	2.9	34.7	10.1	12.4	0.0	0.0
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	0	115	250	207	613	76	1893	837	390	2170	956
V/C Ratio(X)	0.35	0.00	0.63	0.89	0.08	0.52	0.55	0.77	0.37	0.89	0.69	0.03
Avail Cap(c_a), veh/h	362	0	452	434	576	1144	97	1893	837	405	2170	956
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.51	0.51	0.51	0.75	0.75	0.75
Uniform Delay (d), s/veh	55.6	0.0	59.3	55.0	52.1	25.4	60.2	14.6	10.9	49.7	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	5.5	5.5	0.2	0.7	1.2	1.6	0.6	15.2	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	2.8	8.4	0.6	9.1	1.5	26.8	14.5	7.1	27.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	0.0	64.8	60.5	52.2	26.1	61.4	16.3	11.5	64.9	1.4	0.0
LnGrp LOS	E	A	E	E	D	C	E	B	B	E	A	A
Approach Vol, veh/h		129			559			1813			1862	
Approach Delay, s/veh		60.9			40.6			16.5			13.2	
Approach LOS		E			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	74.4	22.0	14.2	9.5	84.3	17.4	18.7
Change Period (Y+Rc), s	5.0	6.2	4.0	5.8	4.0	6.2	5.8	* 4.6
Max Green Setting (Gmax), s	4.5	29.8	31.2	33.0	7.0	38.8	26.0	* 39
Max Q Clear Time (g_c+I1), s	11.4	36.7	17.7	7.1	4.9	2.0	5.8	11.8
Green Ext Time (p_c), s	0.0	0.0	0.3	0.3	0.0	13.6	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



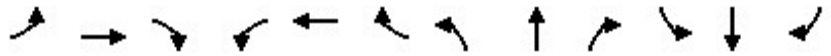
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	556	1379	226	192	1800	701	203	509	112	531	578	420
Future Volume (veh/h)	556	1379	226	192	1800	701	203	509	112	531	578	420
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.96	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	585	1452	238	202	1895	738	214	536	118	559	608	442
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	432	1615	264	195	1788	733	225	741	162	394	839	565
Arrive On Green	0.25	0.72	0.72	0.07	0.23	0.23	0.12	0.25	0.25	0.19	0.39	0.39
Sat Flow, veh/h	3510	4487	734	1810	5187	1602	1810	2922	640	3510	3610	1577
Grp Volume(v), veh/h	585	1119	571	202	1895	738	214	330	324	559	608	442
Grp Sat Flow(s),veh/h/ln	1755	1729	1763	1810	1729	1602	1810	1805	1757	1755	1805	1577
Q Serve(g_s), s	16.0	33.3	33.5	14.0	44.8	36.1	15.3	21.7	21.9	14.6	18.6	11.2
Cycle Q Clear(g_c), s	16.0	33.3	33.5	14.0	44.8	36.1	15.3	21.7	21.9	14.6	18.6	11.2
Prop In Lane	1.00		0.42	1.00		1.00	1.00		0.36	1.00		1.00
Lane Grp Cap(c), veh/h	432	1245	635	195	1788	733	225	458	446	394	839	565
V/C Ratio(X)	1.35	0.90	0.90	1.04	1.06	1.01	0.95	0.72	0.73	1.42	0.72	0.78
Avail Cap(c_a), veh/h	432	1245	635	195	1788	733	225	555	541	394	1050	657
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	0.85	0.85	0.85	0.42	0.42	0.42	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	49.0	16.3	16.3	60.3	50.0	21.1	56.5	44.3	44.4	52.8	36.2	27.8
Incr Delay (d2), s/veh	171.5	9.1	16.0	51.3	33.1	23.3	45.8	3.6	3.9	198.6	1.4	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.1	21.7	23.4	9.8	27.0	42.3	10.6	12.4	12.2	18.0	11.1	19.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	220.4	25.4	32.4	111.6	83.1	44.3	102.3	47.9	48.2	251.4	37.6	31.7
LnGrp LOS	F	C	C	F	F	F	F	D	D	F	D	C
Approach Vol, veh/h		2275			2835			868			1609	
Approach Delay, s/veh		77.3			75.1			61.4			110.3	
Approach LOS		E			E			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	53.0	21.6	36.4	21.0	51.0	19.6	38.4
Change Period (Y+Rc), s	5.0	* 6.2	5.4	* 6.2	5.0	6.2	5.0	5.4
Max Green Setting (Gmax), s	7.5	* 47	16.0	* 38	9.0	44.8	14.6	40.0
Max Q Clear Time (g_c+I1), s	16.0	35.5	17.3	20.6	18.0	46.8	16.6	23.9
Green Ext Time (p_c), s	0.0	7.4	0.0	4.9	0.0	0.0	0.0	3.4

Intersection Summary	
HCM 6th Ctrl Delay	81.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1498	420	369	1938	95	626	81	323	54	53	218
Future Volume (veh/h)	154	1498	420	369	1938	95	626	81	323	54	53	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	162	1577	442	388	2040	100	659	85	340	57	56	229
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	130	1357	375	1839	4081	199	713	661	560	87	60	247
Arrive On Green	0.07	0.34	0.34	0.52	0.81	0.81	0.20	0.35	0.35	0.05	0.19	0.19
Sat Flow, veh/h	1810	4039	1117	3510	5066	247	3510	1900	1609	1810	326	1332
Grp Volume(v), veh/h	162	1347	672	388	1390	750	659	85	340	57	0	285
Grp Sat Flow(s),veh/h/ln	1810	1729	1698	1755	1729	1855	1755	1900	1609	1810	0	1658
Q Serve(g_s), s	9.0	42.0	42.0	7.4	16.3	16.5	23.0	3.8	15.9	3.9	0.0	21.1
Cycle Q Clear(g_c), s	9.0	42.0	42.0	7.4	16.3	16.5	23.0	3.8	15.9	3.9	0.0	21.1
Prop In Lane	1.00		0.66	1.00		0.13	1.00		1.00	1.00		0.80
Lane Grp Cap(c), veh/h	130	1162	570	1839	2786	1495	713	661	560	87	0	307
V/C Ratio(X)	1.24	1.16	1.18	0.21	0.50	0.50	0.92	0.13	0.61	0.65	0.00	0.93
Avail Cap(c_a), veh/h	130	1162	570	1839	2786	1495	758	661	560	101	0	308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	41.5	41.5	15.9	4.0	4.0	48.9	27.8	17.8	58.5	0.0	50.1
Incr Delay (d2), s/veh	151.4	80.0	94.5	0.0	0.6	1.2	15.9	0.1	1.9	7.2	0.0	33.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	33.1	34.8	6.7	24.4	26.5	13.0	3.0	17.7	2.2	0.0	12.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	209.4	121.5	136.0	15.9	4.6	5.2	64.8	27.9	19.7	65.7	0.0	83.2
LnGrp LOS	F	F	F	B	A	A	E	C	B	E	A	F
Approach Vol, veh/h		2181			2528			1084			342	
Approach Delay, s/veh		132.5			6.5			47.8			80.3	
Approach LOS		F			A			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	49.2	30.4	29.0	14.0	108.2	10.0	49.3
Change Period (Y+Rc), s	7.2	* 7.2	5.0	* 5.8	5.0	7.2	4.0	5.8
Max Green Setting (Gmax), s	11.5	* 42	27.0	* 23	9.0	44.0	7.0	43.0
Max Q Clear Time (g_c+I1), s	9.4	44.0	25.0	23.1	11.0	18.5	5.9	17.9
Green Ext Time (p_c), s	0.2	0.0	0.4	0.0	0.0	16.4	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	62.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	2499	0	0	2824	16	0	0	0	0	0	2
Future Vol, veh/h	0	2499	0	0	2824	16	0	0	0	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	2716	0	0	3070	17	0	0	0	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1358	-	-	1544
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*333	0	0	*252
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*333	-	-	*252
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	19.4
HCM LOS			A	C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	-	-	252
HCM Lane V/C Ratio	-	-	-	-	-	0.009
HCM Control Delay (s)	0	-	-	-	-	19.4
HCM Lane LOS	A	-	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	-	-	0

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	168	50	16	247	341	27
Future Vol, veh/h	168	50	16	247	341	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	50	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	80	80	95
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	177	53	17	309	426	28

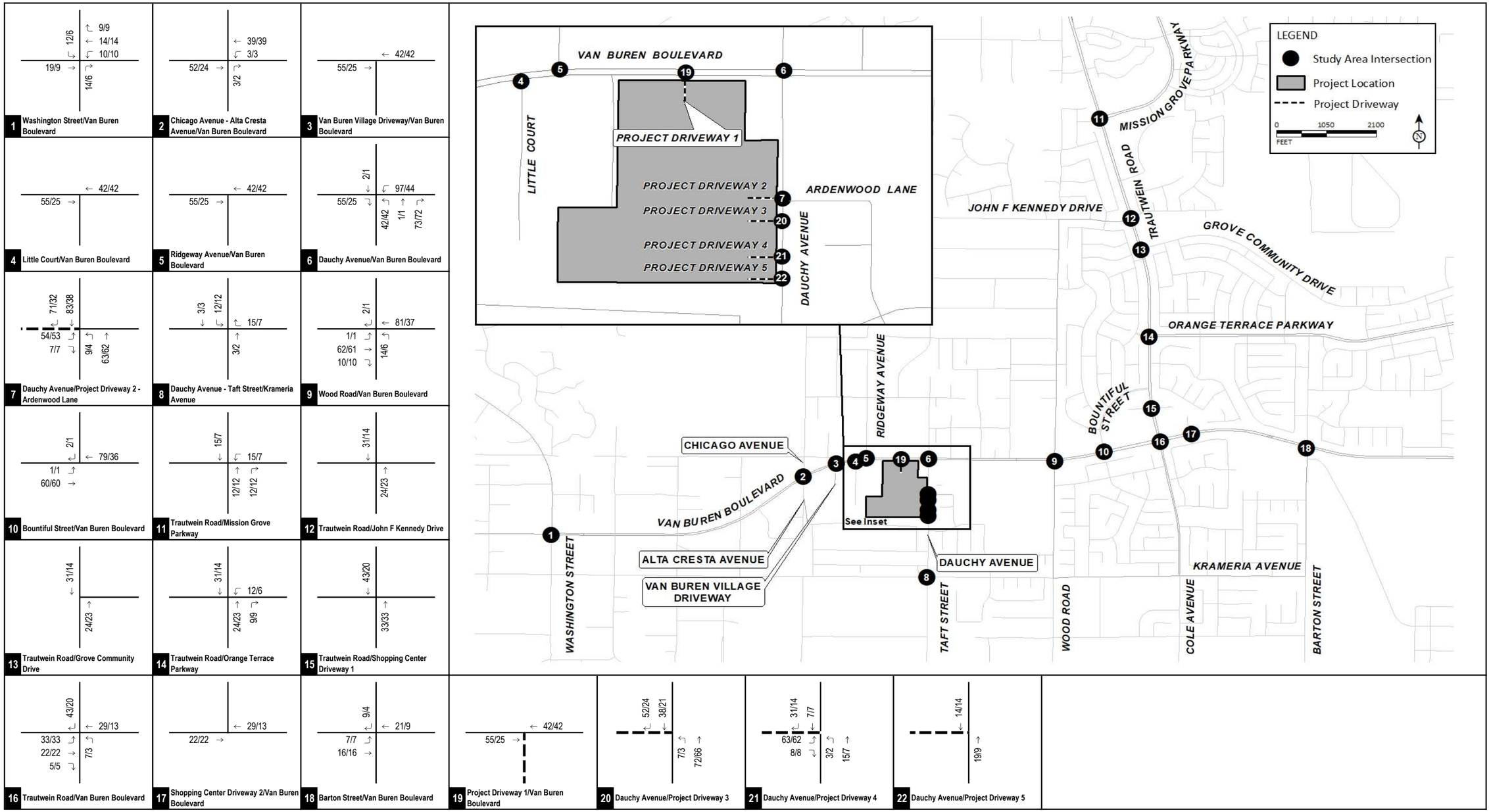
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	783	440	454	0	-	0
Stage 1	440	-	-	-	-	-
Stage 2	343	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	370	621	1117	-	-	-
Stage 1	653	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	365	621	1117	-	-	-
Mov Cap-2 Maneuver	484	-	-	-	-	-
Stage 1	643	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	0.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1117	-	510	-	-
HCM Lane V/C Ratio	0.015	-	0.45	-	-
HCM Control Delay (s)	8.3	-	17.7	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	2.3	-	-

APPENDIX E

ENROLLMENT PROJECTS AND INTERIM TRIP GENERATION



XX/YY
AM/Afternoon Peak Hour Trips

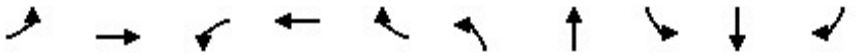
Project Driveway

FIGURE 5

Woodcrest Christian School Expansion Project
Traffic Operational Analysis
Project Trip Assignment

APPENDIX F

QUEUING ANALYSIS WORKSHEETS



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	20	1350	163	1596	16	249	187	39	47	24
v/c Ratio	0.20	0.70	0.73	0.66	0.01	0.86	0.55	0.22	0.36	0.09
Control Delay	48.4	33.6	72.8	15.6	0.0	74.6	19.2	43.0	65.1	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	33.6	72.8	15.6	0.0	74.6	19.2	43.0	65.1	0.7
Queue Length 50th (ft)	0	454	124	217	0	191	27	26	39	0
Queue Length 95th (ft)	m32	423	m121	m770	m0	#289	100	56	78	0
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	100	1930	319	2425	1114	291	501	288	438	490
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.70	0.51	0.66	0.01	0.86	0.37	0.14	0.11	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 7: Dauchy Avenue & Project Driveway 2/Ardenwood Lane

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LT
Maximum Queue (ft)	108	49	68	43
Average Queue (ft)	41	19	16	2
95th Queue (ft)	78	44	52	16
Link Distance (ft)	732	538	63	666
Upstream Blk Time (%)			0	
Queuing Penalty (veh)			1	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Taft Street/Dauchy Avenue & Krameria Avenue

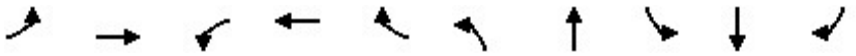
Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	158	225	31	56
Average Queue (ft)	71	97	23	44
95th Queue (ft)	112	177	45	67
Link Distance (ft)	1157	955	779	1295
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB
Directions Served	LT
Maximum Queue (ft)	119
Average Queue (ft)	13
95th Queue (ft)	57
Link Distance (ft)	173
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	104	56
Average Queue (ft)	57	10
95th Queue (ft)	94	41
Link Distance (ft)	452	84
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	72	1648	112	1600	29	211	194	67	30	48
v/c Ratio	0.51	0.81	0.60	0.73	0.03	0.89	0.74	0.42	0.13	0.17
Control Delay	81.7	13.5	77.1	15.0	0.5	84.7	53.5	48.7	49.6	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.7	13.5	77.1	15.0	0.5	84.7	53.5	48.7	49.6	1.3
Queue Length 50th (ft)	61	361	84	576	0	160	109	47	23	0
Queue Length 95th (ft)	m84	#612	m103	792	m0	226	183	83	50	0
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	142	2046	188	2178	968	237	444	160	438	445
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.81	0.60	0.73	0.03	0.89	0.44	0.42	0.07	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Queuing and Blocking Report

Intersection: 7: Dauchy Avenue & Project Driveway 2/Ardenwood Lane

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LT
Maximum Queue (ft)	76	50	25	19
Average Queue (ft)	34	19	5	1
95th Queue (ft)	61	44	21	7
Link Distance (ft)	732	538	63	666
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Queuing and Blocking Report

Intersection: 8: Taft Street/Dauchy Avenue & Krameria Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	101	102	54	124
Average Queue (ft)	62	60	21	55
95th Queue (ft)	92	95	49	89
Link Distance (ft)	1157	955	779	1295
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

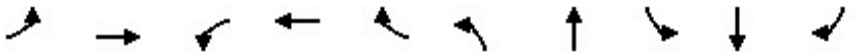
Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB
Directions Served	LT
Maximum Queue (ft)	31
Average Queue (ft)	4
95th Queue (ft)	22
Link Distance (ft)	173
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Queuing and Blocking Report

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	77	31
Average Queue (ft)	47	1
95th Queue (ft)	71	11
Link Distance (ft)	452	84
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	35	2175	199	2245	55	336	239	95	64	41
v/c Ratio	0.32	1.26	0.58	0.95	0.05	1.35	0.78	0.60	0.31	0.15
Control Delay	56.7	161.1	55.4	18.8	1.0	223.5	40.3	59.6	54.8	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	161.1	55.4	18.8	1.0	223.5	40.3	59.6	54.8	1.1
Queue Length 50th (ft)	27	~1152	116	1038	1	~376	80	69	51	0
Queue Length 95th (ft)	m32	#1292	m97	m727	m0	#478	153	110	90	0
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	108	1722	342	2357	1085	248	490	158	438	458
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	1.26	0.58	0.95	0.05	1.35	0.49	0.60	0.15	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 7: Dauchy Avenue & Project Driveway 2/Ardenwood Lane

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LT
Maximum Queue (ft)	747	553	74	124
Average Queue (ft)	621	353	67	9
95th Queue (ft)	987	677	82	51
Link Distance (ft)	732	538	63	666
Upstream Blk Time (%)	71	40	60	
Queuing Penalty (veh)	0	0	269	
Storage Bay Dist (ft)				
Storage Blk Time (%)				0
Queuing Penalty (veh)				1

Intersection: 8: Taft Street/Dauchy Avenue & Krameria Avenue

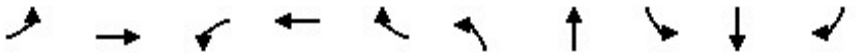
Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	195	276	53	96
Average Queue (ft)	84	124	27	44
95th Queue (ft)	143	232	49	82
Link Distance (ft)	1157	955	779	1295
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB
Directions Served	LT
Maximum Queue (ft)	188
Average Queue (ft)	170
95th Queue (ft)	241
Link Distance (ft)	173
Upstream Blk Time (%)	53
Queuing Penalty (veh)	236
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB	SB
Directions Served	LR	LT	TR
Maximum Queue (ft)	467	104	30
Average Queue (ft)	362	82	1
95th Queue (ft)	614	136	10
Link Distance (ft)	452	84	173
Upstream Blk Time (%)	67	42	
Queuing Penalty (veh)	0	155	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	97	2464	143	2523	84	295	248	115	42	68
v/c Ratio	0.58	1.38	0.60	1.29	0.10	0.99	0.79	0.69	0.15	0.21
Control Delay	59.6	211.4	58.8	158.7	4.0	97.1	55.9	62.0	46.3	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	211.4	58.8	158.7	4.0	97.1	55.9	62.0	46.3	3.1
Queue Length 50th (ft)	72	~1328	92	~1484	15	~233	147	79	31	0
Queue Length 95th (ft)	m79	m#1340	m79	m808	m9	#322	217	123	62	9
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	168	1780	240	1953	878	299	445	167	438	445
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	1.38	0.60	1.29	0.10	0.99	0.56	0.69	0.10	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 7: Dauchy Avenue & Project Driveway 2/Ardenwood Lane

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LT
Maximum Queue (ft)	747	117	87	222
Average Queue (ft)	469	35	53	11
95th Queue (ft)	898	85	93	81
Link Distance (ft)	732	538	63	666
Upstream Blk Time (%)	34		25	
Queuing Penalty (veh)	0		82	
Storage Bay Dist (ft)				
Storage Blk Time (%)				2
Queuing Penalty (veh)				2

Intersection: 8: Taft Street/Dauchy Avenue & Krameria Avenue

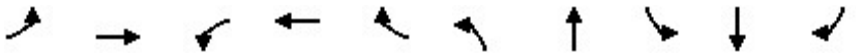
Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	207	260	56	101
Average Queue (ft)	82	96	28	57
95th Queue (ft)	147	197	46	93
Link Distance (ft)	1157	955	779	1295
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB	SB
Directions Served	LT	TR
Maximum Queue (ft)	185	162
Average Queue (ft)	70	6
95th Queue (ft)	176	55
Link Distance (ft)	173	63
Upstream Blk Time (%)	4	0
Queuing Penalty (veh)	13	1
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	200	92
Average Queue (ft)	56	11
95th Queue (ft)	120	52
Link Distance (ft)	452	84
Upstream Blk Time (%)		2
Queuing Penalty (veh)		3
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	35	2232	300	2245	55	380	316	95	66	41
v/c Ratio	0.35	1.30	1.16	1.02	0.05	1.24	0.85	0.61	0.23	0.12
Control Delay	59.3	176.5	127.5	32.3	1.7	173.1	48.5	54.6	47.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.3	176.5	127.5	32.3	1.7	173.1	48.5	54.6	47.2	0.7
Queue Length 50th (ft)	27	~1253	~293	~1135	2	~376	141	64	49	0
Queue Length 95th (ft)	m33	#1343	m#248	m703	m0	#442	210	101	85	0
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	100	1718	258	2205	1021	306	487	157	438	458
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	1.30	1.16	1.02	0.05	1.24	0.65	0.61	0.15	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 7: Dauchy Avenue & Project Driveway 2/Ardenwood Lane

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	LTR	LT
Maximum Queue (ft)	629	644	553	80	38
Average Queue (ft)	600	594	444	76	4
95th Queue (ft)	667	802	706	81	21
Link Distance (ft)	629	629	538	71	667
Upstream Blk Time (%)	90	88	62	67	
Queuing Penalty (veh)	0	0	0	343	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: Taft Street/Dauchy Avenue & Krameria Avenue

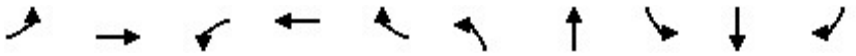
Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	260	259	53	74
Average Queue (ft)	92	114	30	37
95th Queue (ft)	160	193	45	63
Link Distance (ft)	1157	955	779	1295
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB
Directions Served	LT
Maximum Queue (ft)	190
Average Queue (ft)	181
95th Queue (ft)	193
Link Distance (ft)	173
Upstream Blk Time (%)	65
Queuing Penalty (veh)	336
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	467	104
Average Queue (ft)	445	94
95th Queue (ft)	522	125
Link Distance (ft)	452	84
Upstream Blk Time (%)	93	61
Queuing Penalty (veh)	0	233
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	97	2491	191	2523	84	340	327	115	43	68
v/c Ratio	0.66	1.40	1.01	1.33	0.10	1.02	0.86	0.73	0.13	0.19
Control Delay	65.7	218.6	81.0	176.3	3.9	100.3	55.9	64.8	43.0	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.7	218.6	81.0	176.3	3.9	100.3	55.9	64.8	43.0	2.7
Queue Length 50th (ft)	72	~1384	~170	~1535	17	~248	178	75	31	0
Queue Length 95th (ft)	m81	m#1344	m#152	m792	m8	#341	246	#121	62	9
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	147	1778	190	1896	854	333	463	157	438	445
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	1.40	1.01	1.33	0.10	1.02	0.71	0.73	0.10	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 7: Dauchy Avenue & Project Driveway 2/Ardenwood Lane

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	LTR	LT
Maximum Queue (ft)	644	644	109	79	20
Average Queue (ft)	426	344	41	48	3
95th Queue (ft)	851	855	92	102	15
Link Distance (ft)	629	629	538	71	667
Upstream Blk Time (%)	53	50		20	
Queuing Penalty (veh)	0	0		78	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: Taft Street/Dauchy Avenue & Krameria Avenue

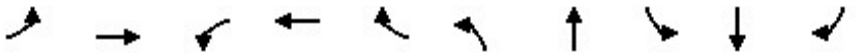
Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	199	141	54	120
Average Queue (ft)	88	73	28	60
95th Queue (ft)	154	121	52	97
Link Distance (ft)	1157	955	779	1295
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB
Directions Served	LT
Maximum Queue (ft)	184
Average Queue (ft)	78
95th Queue (ft)	195
Link Distance (ft)	173
Upstream Blk Time (%)	8
Queuing Penalty (veh)	31
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	352	100
Average Queue (ft)	97	18
95th Queue (ft)	226	69
Link Distance (ft)	452	84
Upstream Blk Time (%)		5
Queuing Penalty (veh)		12
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	38	2308	212	2382	59	357	276	101	68	43
v/c Ratio	0.37	1.30	0.90	1.11	0.06	1.18	0.81	0.64	0.24	0.13
Control Delay	61.7	174.4	74.2	71.1	0.5	153.5	52.0	58.1	48.1	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	174.4	74.2	71.1	0.5	153.5	52.0	58.1	48.1	0.8
Queue Length 50th (ft)	30	~1342	160	~1257	0	~358	149	69	51	0
Queue Length 95th (ft)	m35	#1478	m#166	m801	m1	#467	225	108	89	0
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	104	1775	236	2140	994	302	463	157	438	458
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	1.30	0.90	1.11	0.06	1.18	0.60	0.64	0.16	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 7: Dauchy Avenue & Project Driveway 2/Ardenwood Lane

Movement	EB	WB	NB	SB	SB
Directions Served	LTR	LTR	LTR	LT	R
Maximum Queue (ft)	747	553	74	19	18
Average Queue (ft)	515	263	61	2	1
95th Queue (ft)	986	541	99	11	9
Link Distance (ft)	732	538	63	666	
Upstream Blk Time (%)	56	1	46		
Queuing Penalty (veh)	0	0	207		
Storage Bay Dist (ft)					90
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: Taft Street/Dauchy Avenue & Krameria Avenue

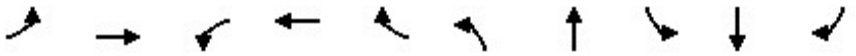
Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	263	970	55	77
Average Queue (ft)	134	814	35	50
95th Queue (ft)	209	1193	55	71
Link Distance (ft)	1157	955	779	1295
Upstream Blk Time (%)		50		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB
Directions Served	LT
Maximum Queue (ft)	184
Average Queue (ft)	141
95th Queue (ft)	255
Link Distance (ft)	173
Upstream Blk Time (%)	32
Queuing Penalty (veh)	145
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	432	101
Average Queue (ft)	167	64
95th Queue (ft)	358	128
Link Distance (ft)	452	84
Upstream Blk Time (%)	0	21
Queuing Penalty (veh)	0	77
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	99	2506	158	2565	85	300	277	117	66	80
v/c Ratio	0.63	1.41	0.79	1.35	0.10	0.90	0.81	0.72	0.20	0.22
Control Delay	58.8	221.6	63.2	185.2	4.1	75.4	60.0	61.9	45.3	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.8	221.6	63.2	185.2	4.1	75.4	60.0	61.9	45.3	4.2
Queue Length 50th (ft)	76	~1492	111	~1560	17	222	186	78	48	0
Queue Length 95th (ft)	m#94	m#1490	m#93	m746	m7	295	268	#126	85	20
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	157	1780	201	1898	855	333	438	163	438	445
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	1.41	0.79	1.35	0.10	0.90	0.63	0.72	0.15	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 7: Dauchy Avenue & Project Driveway 2/Ardenwood Lane

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LT
Maximum Queue (ft)	321	52	72	19
Average Queue (ft)	68	21	11	4
95th Queue (ft)	196	50	47	16
Link Distance (ft)	732	538	63	666
Upstream Blk Time (%)			3	
Queuing Penalty (veh)			11	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Taft Street/Dauchy Avenue & Krameria Avenue

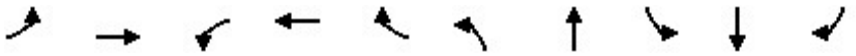
Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	204	257	55	210
Average Queue (ft)	130	136	27	87
95th Queue (ft)	191	224	51	153
Link Distance (ft)	1157	955	779	1295
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB	SB
Directions Served	LT	TR
Maximum Queue (ft)	160	47
Average Queue (ft)	18	2
95th Queue (ft)	74	16
Link Distance (ft)	173	63
Upstream Blk Time (%)	0	0
Queuing Penalty (veh)	0	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	88	53
Average Queue (ft)	50	6
95th Queue (ft)	78	29
Link Distance (ft)	452	84
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	38	2366	314	2382	59	401	354	101	71	43
v/c Ratio	0.38	1.34	1.65	1.16	0.06	1.20	0.87	0.65	0.22	0.12
Control Delay	59.7	191.5	334.0	96.2	2.1	157.5	53.9	56.0	45.2	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.7	191.5	334.0	96.2	2.1	157.5	53.9	56.0	45.2	0.7
Queue Length 50th (ft)	31	~1397	~389	~1315	3	~386	183	65	51	0
Queue Length 95th (ft)	m35	#1532	m#301	m765	m0	#538	271	107	91	0
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	101	1772	190	2054	957	333	484	156	438	458
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	1.34	1.65	1.16	0.06	1.20	0.73	0.65	0.16	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 7: Dauchy Avenue & Project Driveway 2/Ardenwood Lane

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	LTR	LT
Maximum Queue (ft)	644	644	545	101	39
Average Queue (ft)	585	276	294	76	3
95th Queue (ft)	744	787	524	85	16
Link Distance (ft)	629	629	538	71	667
Upstream Blk Time (%)	80	41	7	47	
Queuing Penalty (veh)	0	0	0	241	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: Taft Street/Dauchy Avenue & Krameria Avenue

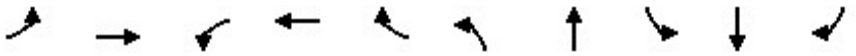
Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	431	788	56	75
Average Queue (ft)	203	471	30	48
95th Queue (ft)	362	788	48	69
Link Distance (ft)	1157	955	779	1295
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB
Directions Served	LT
Maximum Queue (ft)	187
Average Queue (ft)	170
95th Queue (ft)	213
Link Distance (ft)	173
Upstream Blk Time (%)	34
Queuing Penalty (veh)	181
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	467	124
Average Queue (ft)	305	70
95th Queue (ft)	593	136
Link Distance (ft)	452	84
Upstream Blk Time (%)	45	24
Queuing Penalty (veh)	0	95
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	99	2532	204	2565	85	344	354	117	67	80
v/c Ratio	0.74	1.42	1.34	1.39	0.10	0.93	0.89	0.75	0.18	0.20
Control Delay	65.7	228.3	204.4	201.5	4.0	77.1	62.9	63.6	42.6	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.7	228.3	204.4	201.5	4.0	77.1	62.9	63.6	42.6	4.0
Queue Length 50th (ft)	81	~1553	~242	~1562	17	243	225	73	46	0
Queue Length 95th (ft)	m#92	m#1492	m#143	m732	m6	#356	324	#125	87	20
Internal Link Dist (ft)		483		2566			678		609	
Turn Bay Length (ft)	305		420		375	65		75		55
Base Capacity (vph)	133	1778	152	1848	835	369	450	157	438	445
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	1.42	1.34	1.39	0.10	0.93	0.79	0.75	0.15	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Intersection: 7: Dauchy Avenue & Project Driveway 2/Ardenwood Lane

Movement	EB	EB	WB	NB	SB
Directions Served	LT	R	LTR	LTR	LT
Maximum Queue (ft)	644	644	137	98	43
Average Queue (ft)	439	261	45	64	4
95th Queue (ft)	783	761	116	95	20
Link Distance (ft)	629	629	538	71	667
Upstream Blk Time (%)	38	24		25	
Queuing Penalty (veh)	0	0		104	
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 8: Taft Street/Dauchy Avenue & Krameria Avenue

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	367	258	73	134
Average Queue (ft)	185	133	36	81
95th Queue (ft)	295	209	55	128
Link Distance (ft)	1157	955	779	1295
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB	SB
Directions Served	LT	TR
Maximum Queue (ft)	186	29
Average Queue (ft)	102	1
95th Queue (ft)	233	10
Link Distance (ft)	173	71
Upstream Blk Time (%)	11	
Queuing Penalty (veh)	51	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	467	96
Average Queue (ft)	122	27
95th Queue (ft)	317	83
Link Distance (ft)	452	84
Upstream Blk Time (%)	1	1
Queuing Penalty (veh)	0	5
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	35	2232	300	2300	380	316	95	66	41
v/c Ratio	0.35	0.90	1.51	0.77	0.84	0.83	0.37	0.45	0.15
Control Delay	83.9	34.3	268.3	17.4	61.9	40.0	44.4	66.4	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.9	34.3	268.3	17.4	61.9	40.0	44.4	66.4	1.1
Queue Length 50th (ft)	31	710	~358	723	290	109	60	54	0
Queue Length 95th (ft)	m52	#751	m#259	m530	390	201	101	100	0
Internal Link Dist (ft)		483		2566		678		609	
Turn Bay Length (ft)	305		420		200		75		55
Base Capacity (vph)	100	2488	199	3005	454	527	258	438	504
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.90	1.51	0.77	0.84	0.60	0.37	0.15	0.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	175	36	66	573	489	225
v/c Ratio	0.46	0.07	0.13	0.55	0.46	0.22
Control Delay	15.2	4.6	4.6	10.7	9.1	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	4.6	4.6	10.7	9.1	2.1
Queue Length 50th (ft)	29	0	1	68	59	0
Queue Length 95th (ft)	66	12	17	152	149	26
Internal Link Dist (ft)	642		487	69	678	
Turn Bay Length (ft)						90
Base Capacity (vph)	690	839	845	1037	1072	1030
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.04	0.08	0.55	0.46	0.22

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	558	721	75	211
v/c Ratio	0.69	0.81	0.12	0.39
Control Delay	16.7	20.3	13.4	16.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.7	20.3	13.4	16.3
Queue Length 50th (ft)	136	183	16	49
Queue Length 95th (ft)	169	220	36	86
Internal Link Dist (ft)	1105	903	727	1265
Turn Bay Length (ft)				
Base Capacity (vph)	915	1007	638	540
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.61	0.72	0.12	0.39

Intersection Summary

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB	NB
Directions Served	L	T
Maximum Queue (ft)	74	186
Average Queue (ft)	12	72
95th Queue (ft)	43	169
Link Distance (ft)		173
Upstream Blk Time (%)		2
Queuing Penalty (veh)		12
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	14
Queuing Penalty (veh)	0	3

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	137	45	93	31
Average Queue (ft)	75	15	6	1
95th Queue (ft)	123	41	39	11
Link Distance (ft)	446		84	173
Upstream Blk Time (%)			1	
Queuing Penalty (veh)			3	
Storage Bay Dist (ft)		50		
Storage Blk Time (%)		0	2	
Queuing Penalty (veh)		0	1	



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	97	2491	191	2607	340	327	115	43	68
v/c Ratio	1.00	1.05	0.74	0.92	0.99	0.85	0.73	0.14	0.17
Control Delay	155.9	81.1	62.5	14.3	92.9	56.2	64.7	43.6	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	155.9	81.1	62.5	14.3	92.9	56.2	64.7	43.6	0.9
Queue Length 50th (ft)	77	~741	130	733	~273	194	75	31	0
Queue Length 95th (ft)	m#146	#784	m#155	m606	#411	290	118	62	0
Internal Link Dist (ft)		483		2566		678		609	
Turn Bay Length (ft)	305		420		200		75		55
Base Capacity (vph)	97	2362	257	2847	343	476	157	438	491
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	1.05	0.74	0.92	0.99	0.69	0.73	0.10	0.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	EBR	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	182	38	41	485	487	99
v/c Ratio	0.46	0.07	0.08	0.47	0.48	0.11
Control Delay	14.6	4.5	5.0	9.3	9.7	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.6	4.5	5.0	9.3	9.7	2.5
Queue Length 50th (ft)	26	0	1	53	60	0
Queue Length 95th (ft)	69	12	14	95	122	18
Internal Link Dist (ft)	642		487	69	678	
Turn Bay Length (ft)						90
Base Capacity (vph)	705	878	847	1105	1098	1004
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.04	0.05	0.44	0.44	0.10

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	534	464	70	376
v/c Ratio	0.82	0.67	0.09	0.57
Control Delay	25.6	17.3	8.3	13.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	25.6	17.3	8.3	13.8
Queue Length 50th (ft)	123	94	10	68
Queue Length 95th (ft)	174	136	24	100
Internal Link Dist (ft)	1105	903	727	1265
Turn Bay Length (ft)				
Base Capacity (vph)	724	761	756	660
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.74	0.61	0.09	0.57

Intersection Summary

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB	NB	SB
Directions Served	L	T	TR
Maximum Queue (ft)	73	97	55
Average Queue (ft)	7	16	2
95th Queue (ft)	34	57	19
Link Distance (ft)		173	68
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)	50		
Storage Blk Time (%)	0	1	
Queuing Penalty (veh)	0	0	

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	151	31
Average Queue (ft)	67	5
95th Queue (ft)	115	24
Link Distance (ft)	446	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		50
Storage Blk Time (%)		0
Queuing Penalty (veh)		0



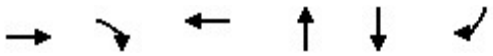
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	38	2366	314	2441	401	354	101	71	43
v/c Ratio	0.38	0.96	1.38	0.83	1.21	0.88	0.65	0.22	0.10
Control Delay	68.4	30.0	210.7	12.6	160.3	54.4	56.1	45.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.4	30.0	210.7	12.6	160.3	54.4	56.1	45.4	0.5
Queue Length 50th (ft)	35	358	~360	640	~411	190	66	51	0
Queue Length 95th (ft)	m56	#881	m#249	m513	#584	295	107	91	0
Internal Link Dist (ft)		483		2566		678		609	
Turn Bay Length (ft)	305		420		200		75		55
Base Capacity (vph)	101	2452	227	2950	331	487	156	438	504
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.96	1.38	0.83	1.21	0.73	0.65	0.16	0.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	175	36	70	587	510	225
v/c Ratio	0.46	0.08	0.14	0.57	0.48	0.22
Control Delay	15.5	4.6	4.6	11.5	9.3	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	4.6	4.6	11.5	9.3	2.1
Queue Length 50th (ft)	29	0	1	73	63	0
Queue Length 95th (ft)	66	12	18	#178	158	26
Internal Link Dist (ft)	642		487	69	678	
Turn Bay Length (ft)						90
Base Capacity (vph)	675	825	835	1038	1073	1032
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.04	0.08	0.57	0.48	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	665	839	77	223
v/c Ratio	0.79	0.88	0.14	0.46
Control Delay	19.8	25.0	13.6	18.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.8	25.0	13.6	18.0
Queue Length 50th (ft)	166	220	16	55
Queue Length 95th (ft)	#292	#450	43	113
Internal Link Dist (ft)	1105	903	727	1265
Turn Bay Length (ft)				
Base Capacity (vph)	894	1008	562	489
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.74	0.83	0.14	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB	NB
Directions Served	L	T
Maximum Queue (ft)	74	190
Average Queue (ft)	11	176
95th Queue (ft)	50	215
Link Distance (ft)		173
Upstream Blk Time (%)		46
Queuing Penalty (veh)		249
Storage Bay Dist (ft)	50	
Storage Blk Time (%)	0	72
Queuing Penalty (veh)	0	16

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	461	74	102	21
Average Queue (ft)	417	20	76	1
95th Queue (ft)	575	70	130	7
Link Distance (ft)	446		84	173
Upstream Blk Time (%)	78	0	35	
Queuing Penalty (veh)	0	0	137	
Storage Bay Dist (ft)		50		
Storage Blk Time (%)		0	43	
Queuing Penalty (veh)		1	17	



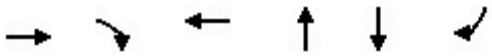
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	99	2532	204	2650	344	354	117	67	80
v/c Ratio	0.74	1.01	1.19	1.00	0.93	0.89	0.75	0.18	0.18
Control Delay	80.6	38.8	126.1	20.6	77.4	63.3	63.6	42.6	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.6	38.8	126.1	20.6	77.4	63.3	63.6	42.6	0.9
Queue Length 50th (ft)	75	~863	~206	~895	249	233	73	46	0
Queue Length 95th (ft)	m#120	#942	m139	m89	#399	#369	#125	87	0
Internal Link Dist (ft)		483		2566		678		609	
Turn Bay Length (ft)	305		420		200		75		55
Base Capacity (vph)	138	2501	172	2642	369	450	157	438	491
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	1.01	1.19	1.00	0.93	0.79	0.75	0.15	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	EBR	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	182	38	42	526	572	99
v/c Ratio	0.48	0.08	0.09	0.50	0.54	0.10
Control Delay	15.5	4.5	5.1	9.6	11.5	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.5	4.5	5.1	9.6	11.5	2.5
Queue Length 50th (ft)	31	0	1	64	76	0
Queue Length 95th (ft)	69	12	14	120	149	18
Internal Link Dist (ft)	642		487	69	678	
Turn Bay Length (ft)						90
Base Capacity (vph)	668	836	808	1061	1058	969
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.05	0.05	0.50	0.54	0.10

Intersection Summary

Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	658	556	71	421
v/c Ratio	0.88	0.69	0.11	0.71
Control Delay	29.0	17.0	10.0	22.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	29.0	17.0	10.0	22.1
Queue Length 50th (ft)	171	124	12	102
Queue Length 95th (ft)	#353	216	33	#219
Internal Link Dist (ft)	1105	903	727	1265
Turn Bay Length (ft)				
Base Capacity (vph)	805	856	655	591
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.82	0.65	0.11	0.71

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Intersection: 20: Dauchy Avenue & Project Driveway 3

Movement	NB	NB	SB
Directions Served	L	T	TR
Maximum Queue (ft)	31	180	43
Average Queue (ft)	5	32	3
95th Queue (ft)	25	95	19
Link Distance (ft)		173	68
Upstream Blk Time (%)		1	
Queuing Penalty (veh)		2	
Storage Bay Dist (ft)	50		
Storage Blk Time (%)	0	3	
Queuing Penalty (veh)	0	0	

Intersection: 21: Dauchy Avenue & Project Driveway 4

Movement	EB	NB	NB
Directions Served	LR	L	T
Maximum Queue (ft)	180	31	75
Average Queue (ft)	74	6	3
95th Queue (ft)	131	27	26
Link Distance (ft)	446		84
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)		50	
Storage Blk Time (%)		0	0
Queuing Penalty (veh)		0	0

Appendix G: Vehicle Miles Traveled Analysis Woodcrest Christian School Expansion

VEHICLE MILES TRAVELED ANALYSIS

WOODCREST CHRISTIAN SCHOOL EXPANSION

CITY OF RIVERSIDE

RIVERSIDE COUNTY, CALIFORNIA

This Vehicle Miles Traveled Analysis has been prepared under the supervision of Ambarish Mukherjee, P.E.



LSA

March 2024

VEHICLE MILES TRAVELED ANALYSIS

WOODCREST CHRISTIAN SCHOOL EXPANSION

CITY OF RIVERSIDE

RIVERSIDE COUNTY, CALIFORNIA

Prepared for:

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Project No. WCS2101

March 2024

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1.0 EXECUTIVE SUMMARY

The proposed Woodcrest Christian School Expansion Project will include expansion of the existing school's enrollment by 280 students. This expansion will include the addition of administrative offices, classroom buildings, amphitheater, food service facilities, lockers/snack bar, a chapel arts building, weight room, and storage rooms.

The project site is located south of Van Buren Boulevard between Little Court and Dauchy Avenue in the City of Riverside (City). The existing project parcel is considered as Public Facilities/Institutional (PF) in the General Plan Land Use and Public Facilities (PF-SP) Orangecrest Specific Plan Overlay as the Zoning. The adjacent parcel (APN 266020059) located northeast of the current Woodcrest Christian School site will be acquired as part of this project. The adjacent parcel is considered as Mixed Use-Village (MU-V) in the General Plan Land Use and Mixed Use – Village – 2 Story Building – 15 feet Building Setback (MU-V-S-2-X-15-SP) Orangecrest Specific Plan Overlay as the Zoning. This project will only require a Conditional Use Permit (CUP) but not require a General Plan Amendment (GPA) nor Zone Change (ZC). The project is anticipated to be completed by year 2029.

Access to the project site is currently provided via five driveways, one on Van Buren Boulevard and four driveways on Dauchy Avenue. Following is a description of all driveways providing access to the site:

- Driveway on Van Buren Boulevard:
    - Project Driveway 1: This is a gated right-in/right-out (RIRO) driveway. Project traffic would not be typically allowed to use this driveway.
- Driveways on Dauchy Avenue:
    - Project Driveway 2: This is a full-access driveway.
    - Project Driveway 3: This is an entrance only driveway.
    - Project Driveway 4: This is a full-access driveway.
    - Project Driveway 5: This is a restricted access driveway for authorized vehicles. Project traffic would not be allowed to use this driveway.

The project is forecast to generate 814 daily trips, with 303 trips in the a.m. peak hour, and 209 trips occurring during the afternoon peak hour.

The City adopted its *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* in July 2020. The project doesn't meet screening criteria for VMT evaluation identified in the City's guidelines. The City's guidelines recommend that for projects that are not screened out of VMT analysis, a detailed VMT analysis be prepared using Riverside County Transportation Model (RIVCOM) for evaluation of project VMT impacts. The City's guidelines provide guidance regarding VMT analysis based on land use types. The proposed project is a school expansion which falls under "other land use projects" category. Therefore, pursuant to the City's VMT analysis guidelines for "other land use projects", a significant VMT impact would occur if the net total VMT of the

jurisdiction (City) with the project is higher than the net total VMT of the jurisdiction (City) without the project. The net total VMT includes trips that originate and end in the City (Internal-Internal trips), and trips that originate or end at the City from other jurisdictions (External-Internal and Internal-External trips).

The project is located on the eastern boundary of the City and given the location and unique operational characteristics of the project, it was determined that use of City boundary may not be suitable for estimation of net change in VMT for project evaluation. A catchment area for the project was determined based on existing student enrollment information which was used to estimate net change in VMT using RIVCOM. Based on the VMT analysis, the project will not have a significant transportation impact under CEQA.

2.0 VEHICLE MILES TRAVELED ANALYSIS

2.1 BACKGROUND

On December 28, 2018, the California Office of Administrative Law cleared the revised California Environmental Quality Act (CEQA) guidelines for use. Among the changes to the guidelines was removal of vehicle delay and level of service from consideration under CEQA. With the adopted guidelines, transportation impacts are to be evaluated based on a project's effect on Vehicle Miles Traveled (VMT).

The City adopted its Senate Bill 743 (SB 743) guidelines / VMT analysis guidelines (guidelines) in July 2020. Therefore, for purposes of this analysis, the City's Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (dated July 2020) have been used.

2.2 METHODOLOGY

2.2.1 Project VMT Screening Analysis

The City's guidelines include multiple screening criteria for small land use projects to be screened out of a detailed VMT analysis. The screening thresholds and their applicability to the project site are as follows:

- Transit Priority Area Screening: The project is not located in a Transit Priority Area, therefore this screening criteria does not apply and a VMT analysis would be required.

- Low VMT Area Screening: The project land use is considered "other land use projects" and therefore low VMT area screening is not applicable for the project.

- Project Type Screening: This applies to local serving projects, projects with 100% affordable housing and projects generating fewer than 110 daily vehicle trips. Local-serving K-12 schools are included for screening under this category. However, given the project is a private school with a bigger catchment area than a local-serving K-12 school, it was determined that the project does not meet this screening criterion and a detailed VMT analysis would be required.

- Mixed-Use Projects: The project is a single use and therefore does not meet this criterion and a VMT analysis would be required.

- Redevelopment Projects: The project is not a redevelopment project and therefore, this criterion would not apply to the project and a VMT analysis would be required.

As noted above, the project doesn't meet any of the screening criteria identified in the guidelines and so a detailed VMT analysis was conducted to evaluate the project VMT impact.

The City's guidelines provide guidance regarding VMT analysis based on land use types. The proposed project is an expansion of existing private school which falls under "other land use project" category. Therefore, pursuant to the City's VMT analysis guidelines, a significant VMT impact would occur according to the following criterion:

- The project would result in a significant VMT impact if the baseline or cumulative link-level boundary VMT (City) increases under the plus project condition compared to the no project condition.

The regional travel demand model - Riverside County Transportation Model (RIVCOM) has been used to estimate the project VMT impact. Both base line (2018) and cumulative (2045) scenarios were analyzed to estimate project VMT as recommended in the guidelines.

2.2.2 Project Traffic Analysis Zone Update

To calculate the project VMT, the first step was to update the traffic analysis zones (TAZs) in the model that include the project area. Typically, the project should be isolated in the travel model to estimate project VMT. RIVCOM doesn't include ability to split or add new TAZs, however, the model includes few empty zones. One empty zone was borrowed to model the project.

The proposed project involves expansion of an existing school, therefore only the proposed expansion was included in the newly borrowed zone. The project land use was added to the borrowed TAZ. Both baseline and cumulative scenario model runs were conducted with inclusion of project land use updates. No project specific roadway network modifications were made for the model runs.

2.3 VMT ANALYSIS

Outputs from the above-mentioned model runs (with project related land use changes) were used to develop project related VMT for both baseline and cumulative scenarios. LSA also conducted no project model runs for baseline and cumulative scenarios and outputs from the no project model runs were used to estimate VMT for "without project" conditions.

2.3.1 Observed Data

To determine the net change in link-level VMT, the City's guidelines recommend using the city boundary as the region. However, use of City boundary to estimate net change in VMT due to the project will not capture the project's effect on VMT given its location (eastern boundary of the City) and its unique nature (private school with its unique catchment area). Therefore, to appropriately capture the VMT effects of the project a different boundary was deemed necessary. Existing school has address information for its current enrollment which was used (anonymously) to determine appropriate sphere of influence/catchment area for the proposed expansion. Anonymous address information was available for all currently enrolled students. The student addresses were geocoded and average driving distances from the student addresses to the school were determined using Google. Peak periods of the day were used to estimate the average driving distances. Average trip distance for all the available addresses was estimated to be approximately 8.9 miles. Therefore, as a conservative approach, a 10-mile buffer was determined to be an appropriate boundary to identify VMT differences between "without" and "with" project model runs. The 10-mile buffer would capture majority of students (approximately 80 percent) currently enrolled and therefore it is anticipated that the catchment area for future enrollment with the school expansion would remain similar. Figure 2-A shows the 5 and 10-mile buffer boundaries overlaid on the geocoded addresses of current enrollment.

2.3.2 Project VMT

As previously explained, a 10-mile buffer was selected as a suitable boundary to evaluate change in link-level total VMT for the project. Link-level roadway VMT from RIVCOM model runs for both "without" and "with" project scenarios within the boundary were compared to determine the project's VMT impact. As shown in Table 2-A, there is no net increase in roadway VMT for both base and cumulative scenarios in the "with project" condition. Therefore, the project does not have a significant impact for VMT.

2.4 LIST OF CHAPTER 2.0 FIGURES AND TABLES

- Figure 2-A: Current Enrollment Address Locations
- Table 2-A: Roadway VMT - With and Without Project

Figure 2-A: Current Enrollment Address Locations

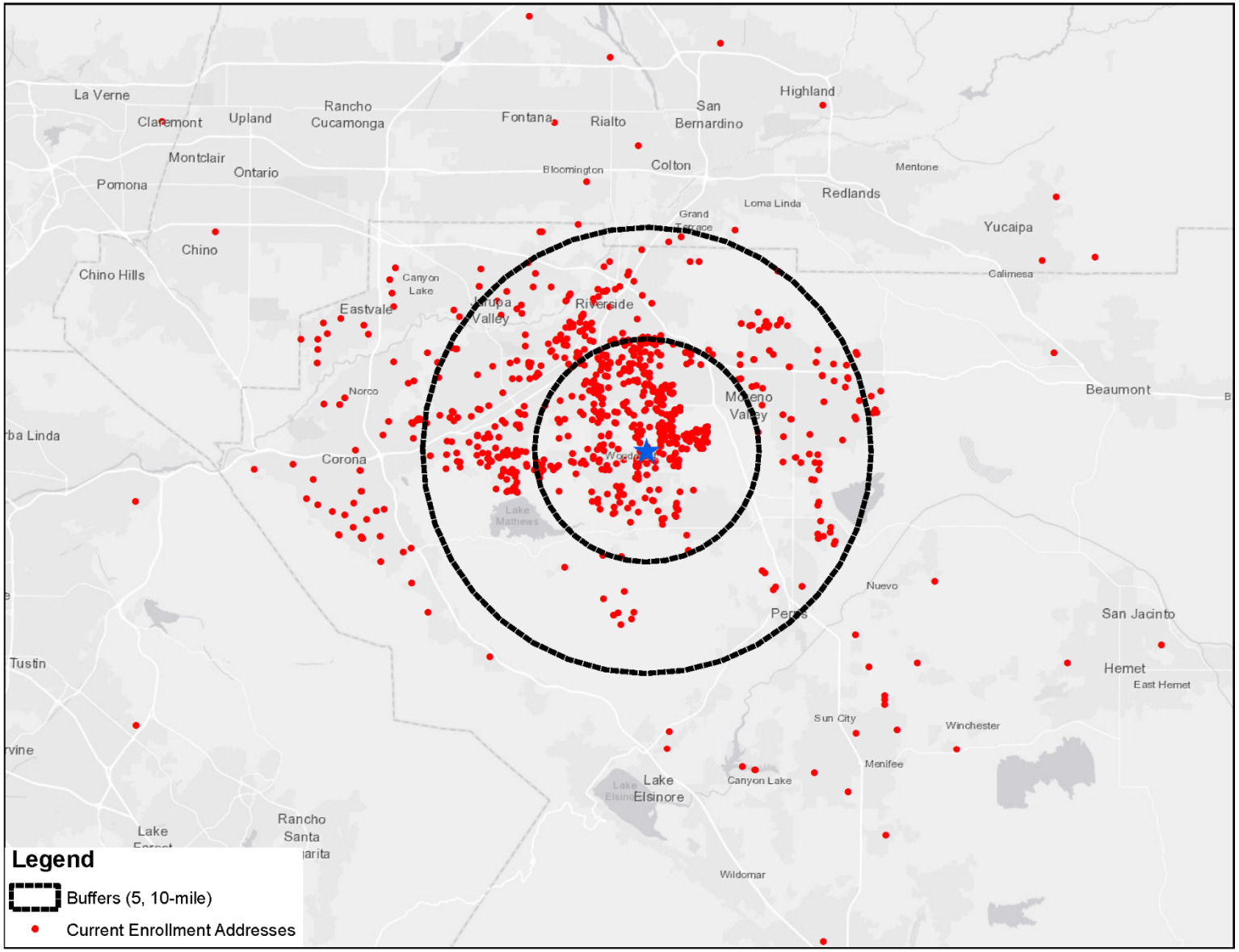

Table 2-A: Roadway VMT - With and Without Project

10 mile project buffer	With Project	Without Project	Difference
2018	15,107,009	15,107,174	(165)
2045	20,007,531	20,009,049	(1,518)

Source: RIVCOM
Roadway VMT within 10 mile buffer for "without project" has been obtained from LSA's no project model runs.

WOODCREST CHRISTIAN
SCHOOL SYSTEM

Middle School - High School Enrollment Projection 11/8/22



Grade	Campus	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31
9th - 12th	Van Buren Campus	382	393	451	484	506	538	570	602	634	668
7th - 8th	Van Buren Campus	265	287	292	295	300	300	305	310	315	320
TOTALS		**647**	**680**	**743**	**779**	**806**	**838**	**875**	**912**	**949**	**988**