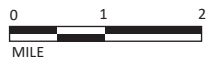


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SOURCE: City of Riverside PACT, December 2021

P:\WCS2101\_Woodcrest Christian School Expansion\Traffic\July 2023\GIS\Reports\fig4-6\_Trails\_03-15-2023.ai (3/15/2023)

PR-2023-001080 (CUP, DR) - Exhibit 9g-ISMND - Appendix F

#### LEGEND

Primary Corridors (Existing/Proposed)

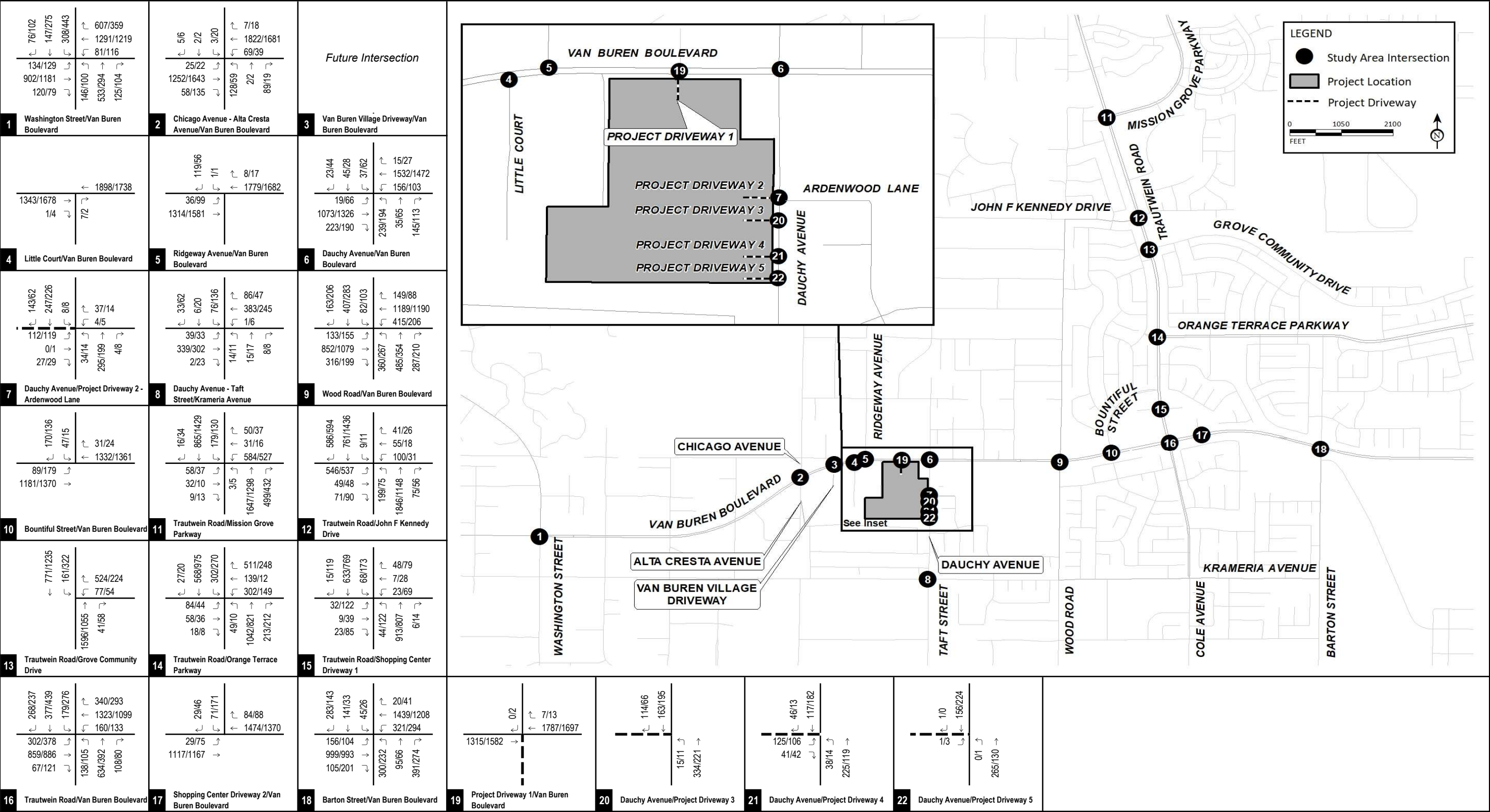
- 7 Mile Trail
- Box Springs
- Bradley
- Buchanan
- Gage Canal
- Indiana Ave
- Irving
- John F Kennedy
- La Sierra
- Main Street
- Mitchell
- Mitchell to Buchanan
- Prenda Arroyo Trail
- Primary EW 1
- Rancho La Sierra
- Santa Ana River Trail
- Sycamore Canyon Park
- Victoria Ave
- Washington
- Wood

- Proposed Multipurpose Trails
- Existing Multipurpose Trails
- Proposed Class I Bikeways
- Existing Class I Bikeways
- City Limits
- Parks

FIGURE 4-6

Woodcrest Christian School Expansion  
Traffic Operational Analysis

City of Riverside Trail Corridors



LSA

XXXX/YYYY  
AM/Afternoon Peak Hour Trips

FIGURE 4-7

Woodcrest Christian School Expansion Project  
Traffic Operational Analysis  
Existing Peak Hour Traffic Volumes

**Table 4-A - City of Riverside General Plan Roadway Segment Classification**

Roadway	#	Segment	Jurisdiction	Existing Conditions Number of Lanes	General Plan Classification <sup>1</sup>
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:**

<sup>1</sup>Classifications for all segments have been obtained from the City of Riverside General Plan Circulation and Community Mobility Element Master Plan of Roadways.

**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



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 <sup>1</sup>		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 <sup>2</sup>	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

<sup>1</sup> This intersection does not exist under existing conditions.

<sup>2</sup> This intersection has no stop control, but conflicting movements exist.

Table 4-D - Existing Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Classification <sup>1</sup>	LOS Standard	Number of Lanes	Without Project			
					Roadway Capacity <sup>2</sup>	Daily Volume	V/C Ratio	LOS
<b>Segments on Van Buren Boulevard</b>								
1 . Between Little Court and Dauchy Avenue	County of Riverside/City of Riverside	Arterial (120')	D	4	36,400	39,230	1.08	<b>F</b> *
<b>Segments on Dauchy Avenue</b>								
2 . Between Van Buren Boulevard and Ardenwood Lane	City of Riverside	Local	D	2	3,400	5,540	1.63	<b>F</b> *
3 . Between Ardenwood Lane and Hawksbury Drive	City of Riverside	Local	D	2	3,400	3,250	0.96	<b>E</b> *

**Notes:**

LOS = Level of Service

\* Exceeds LOS Standard

<sup>1</sup> Classifications for all segments have been obtained from the City of Riverside General Plan Circulation and Community Mobility Element Master Plan of Roadways.<sup>2</sup> 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

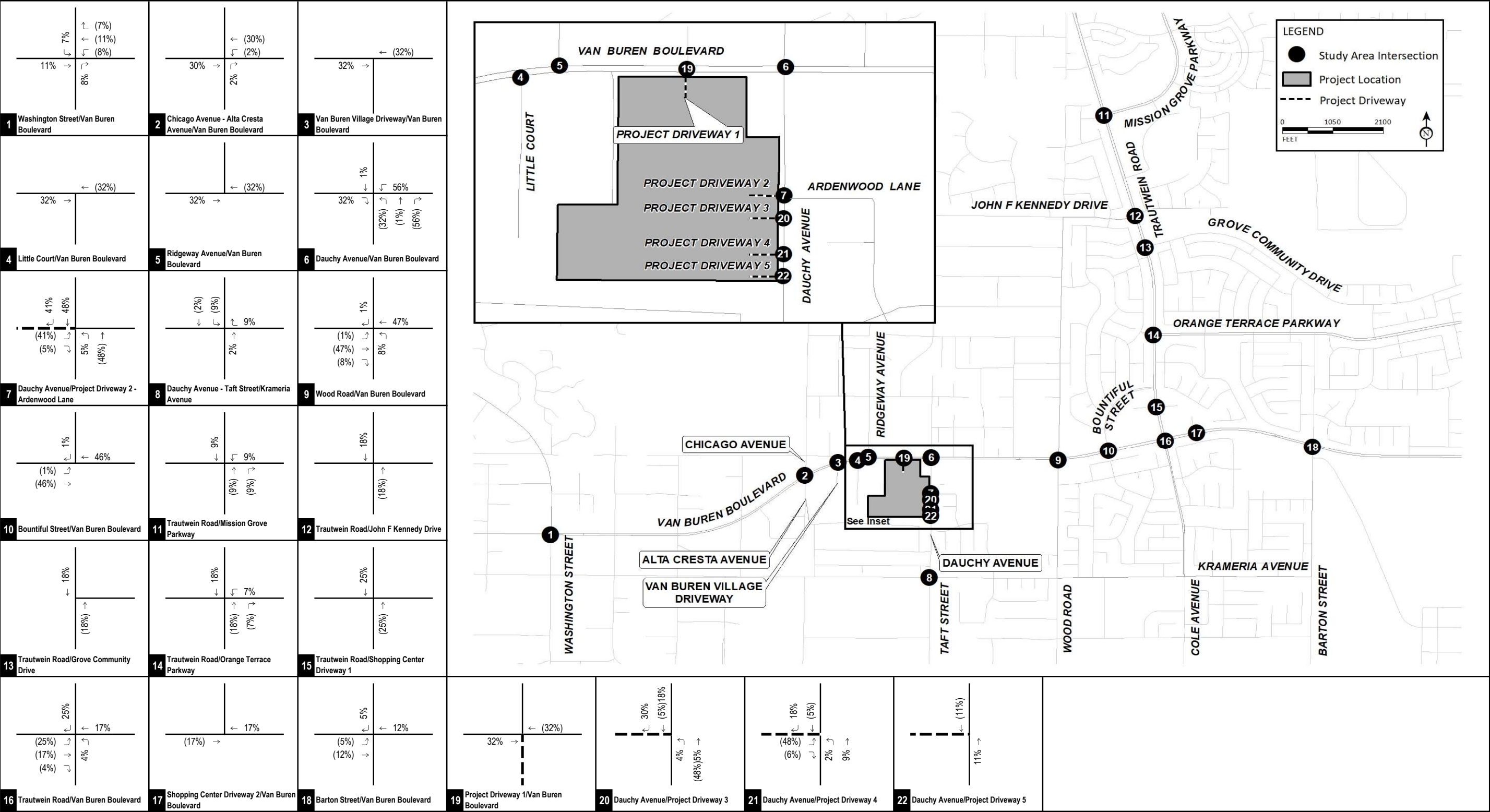
The trip generation for the proposed use was developed based on trip generation survey counts collected from the project site driveways for the existing on-site use. The counts were collected by Counts Unlimited on Thursday October 14, 2021 and Tuesday October 19, 2021. For purposes of this analysis, 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

XX% (YY%)  
Inbound (Outbound) Distribution

--- Project Driveway

FIGURE 5-1

Woodcrest Christian School Expansion Project  
Traffic Operational Analysis  
Project Trip Distribution

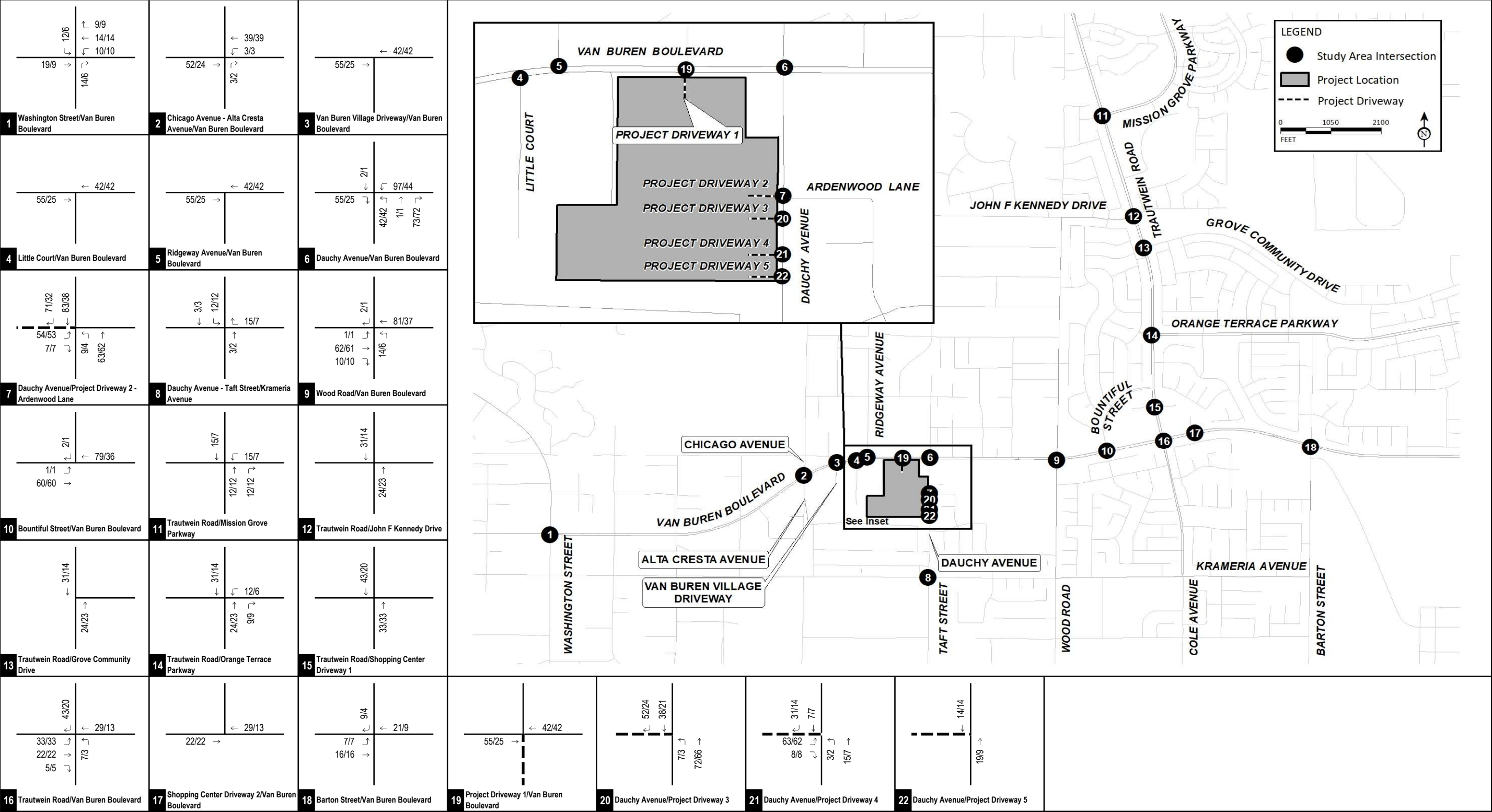


FIGURE 5-2

LSA

XX/YY  
AM/Afternoon Peak Hour Trips

Woodcrest Christian School Expansion Project  
Traffic Operational Analysis  
Project Trip Assignment



Table 5-A - Project Trip Generation

Land Use	Units	A.M. Peak Hour			Afternoon Peak Hour			Daily
		In	Out	Total	In	Out	Total	
<b>Existing School</b> Trip Generation	644 STU	396	302	698	181	300	481	1,872
<b>Proposed Project</b> Trip Generation	280 STU	172	131	303	79	130	209	814

Notes:

STU = Students

<sup>1</sup> 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* (11<sup>th</sup> 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.

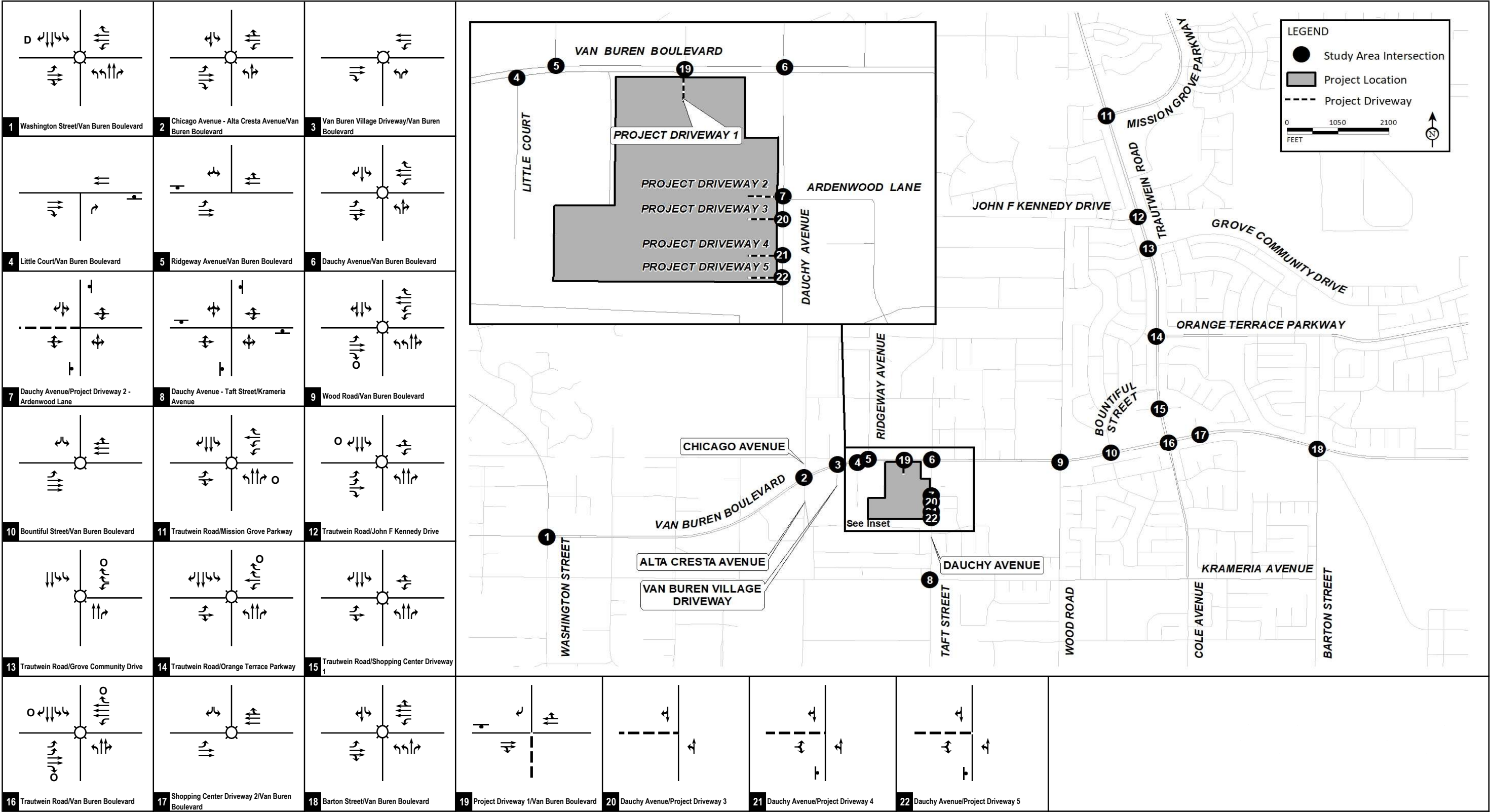
Therefore, improvements will be required to offset the project related operational deficiencies at these segments. However, improvements are not feasible for any of these segments due to right-of-way constraints. As such, these segments will continue to operate at a deficiency.

## 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

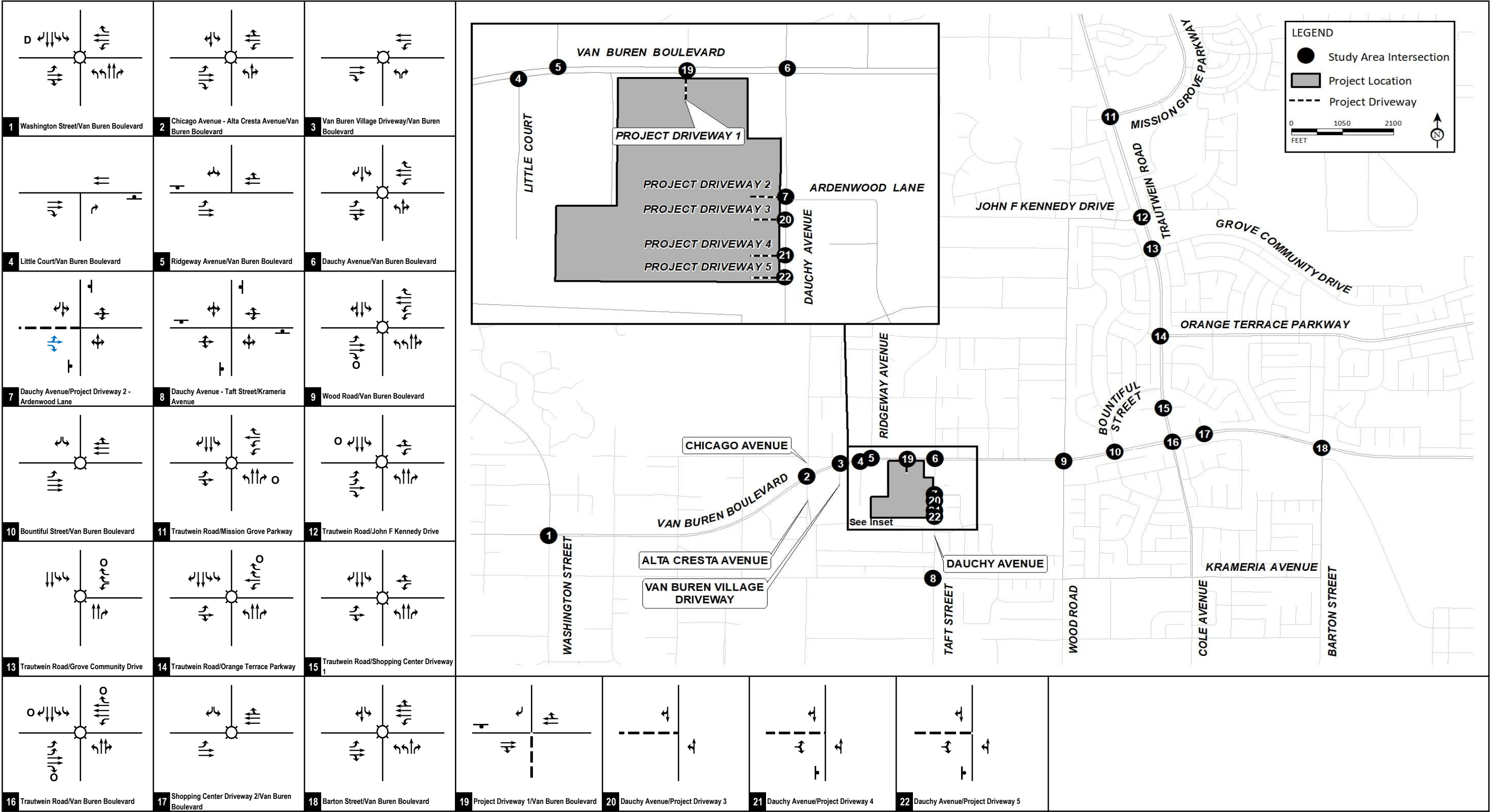


**LSA**

Legend

- D De-Facto Right
- Signal
- ⊥ Stop Sign
- Overlap
- - Project Driveway

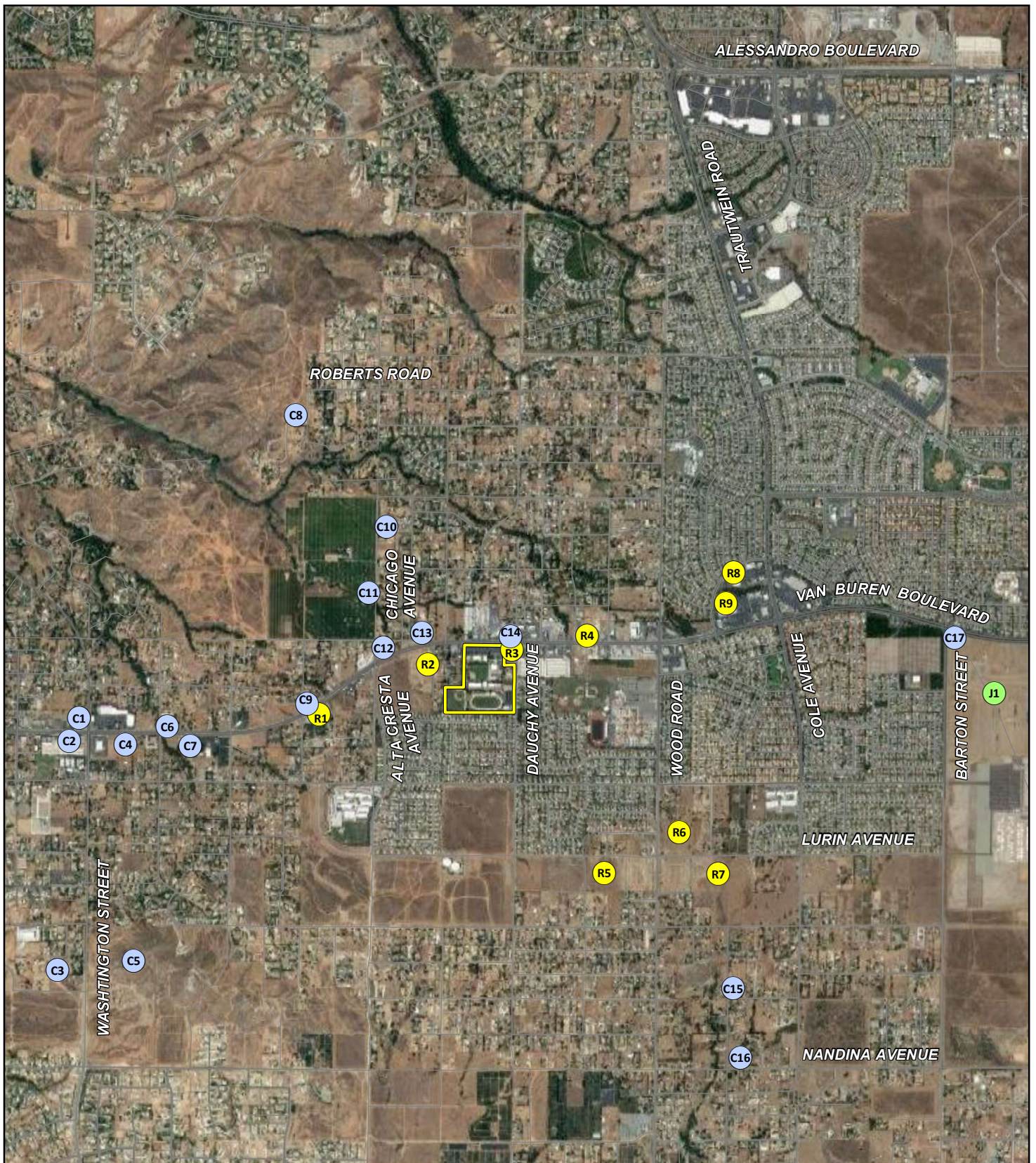
**FIGURE 6-1**  
**Woodcrest Christian School Expansion Project**  
**Traffic Operational Analysis**  
**Opening Year (2029) and Cumulative (2045) without Project Study Intersection Geometrics and Traffic Control**



**LSA**

**FIGURE 6-2**  
 Woodcrest Christian School Expansion Project  
 Traffic Operational Analysis  
 Opening Year (2029) and Cumulative (2045) with Project Study Intersection Geometrics and Traffic Control





LSA

#### LEGEND

- Project Location
- City of Riverside Cumulative Project
- County of Riverside Cumulative Project
- March Joint Powers Authority Cumulative Project

0 1250 2500  
FEET

SOURCE: ESRI Streetmap, 2021; Google Earth, 2021.

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PR-2023-001080 (CUP, DR) - Exhibit 9g-ISMND - Appendix F

FIGURE 6-3

*Woodcrest Christian School Expansion  
Traffic Operational Analysis  
Cumulative Project Locations*



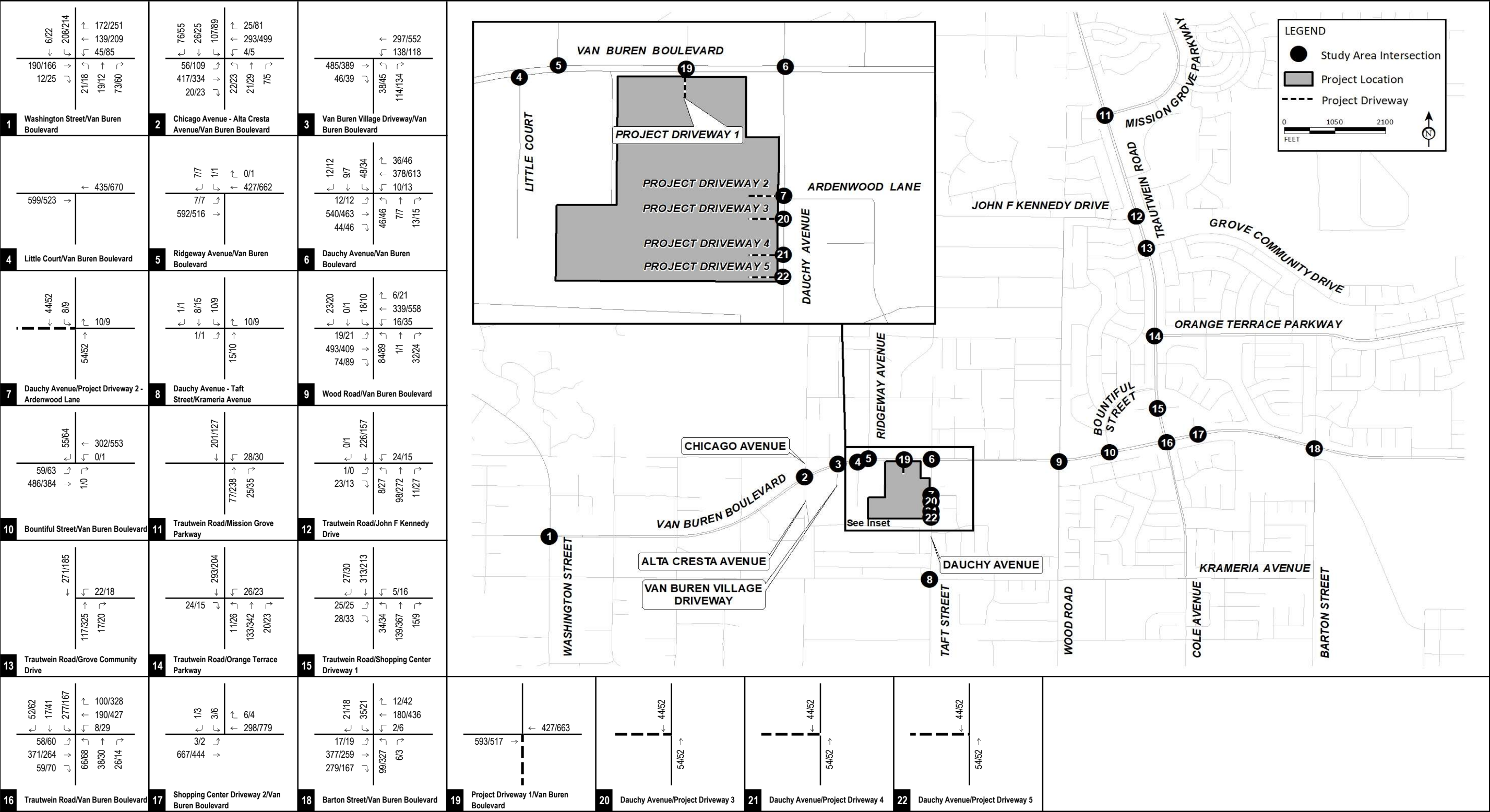


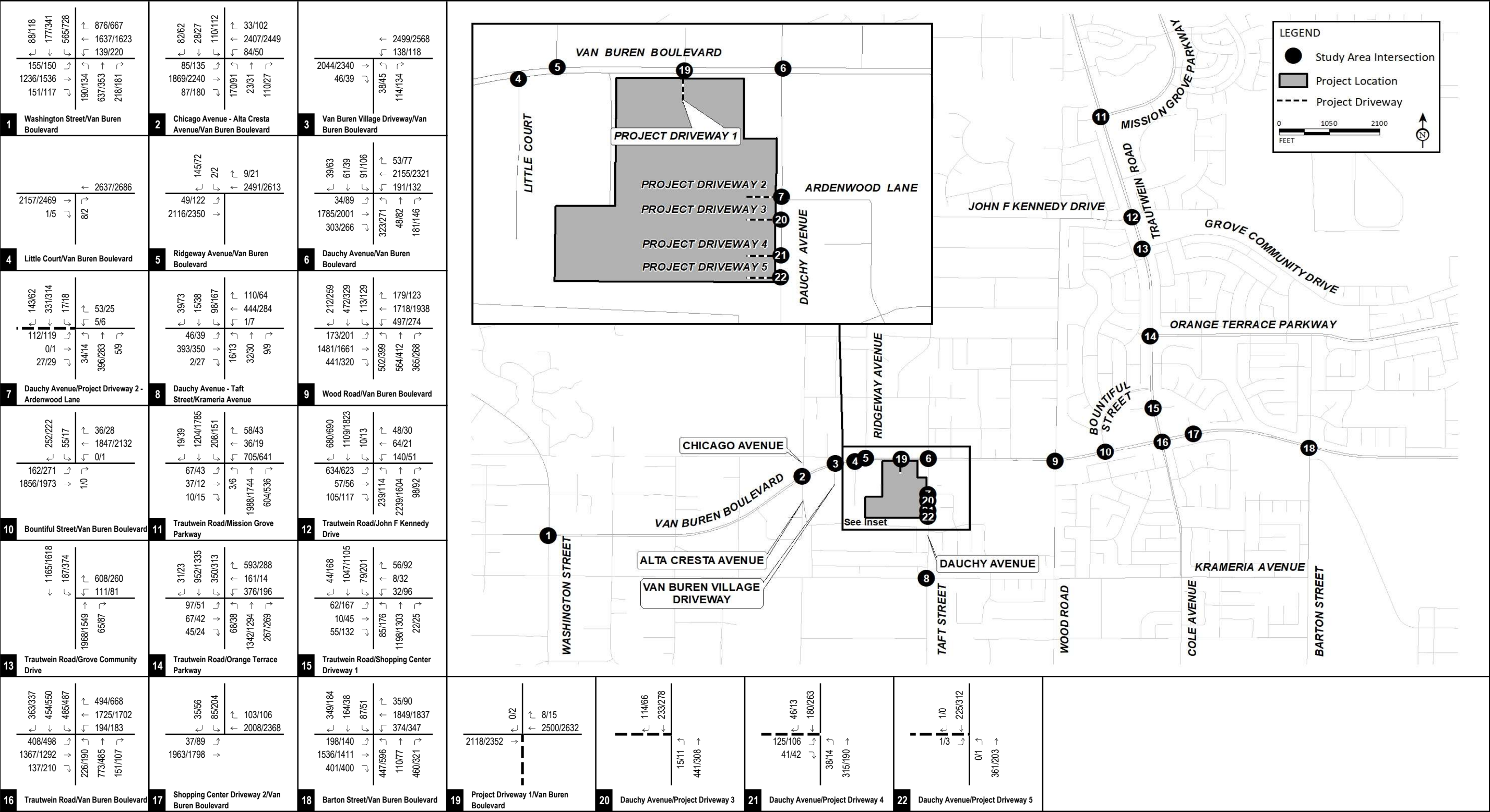
FIGURE 6-4

LSA

XXX/YYY  
AM/Afternoon Peak Hour Trips

Woodcrest Christian School Expansion Project  
Traffic Operational Analysis  
Cumulative Projects Trip Assignment

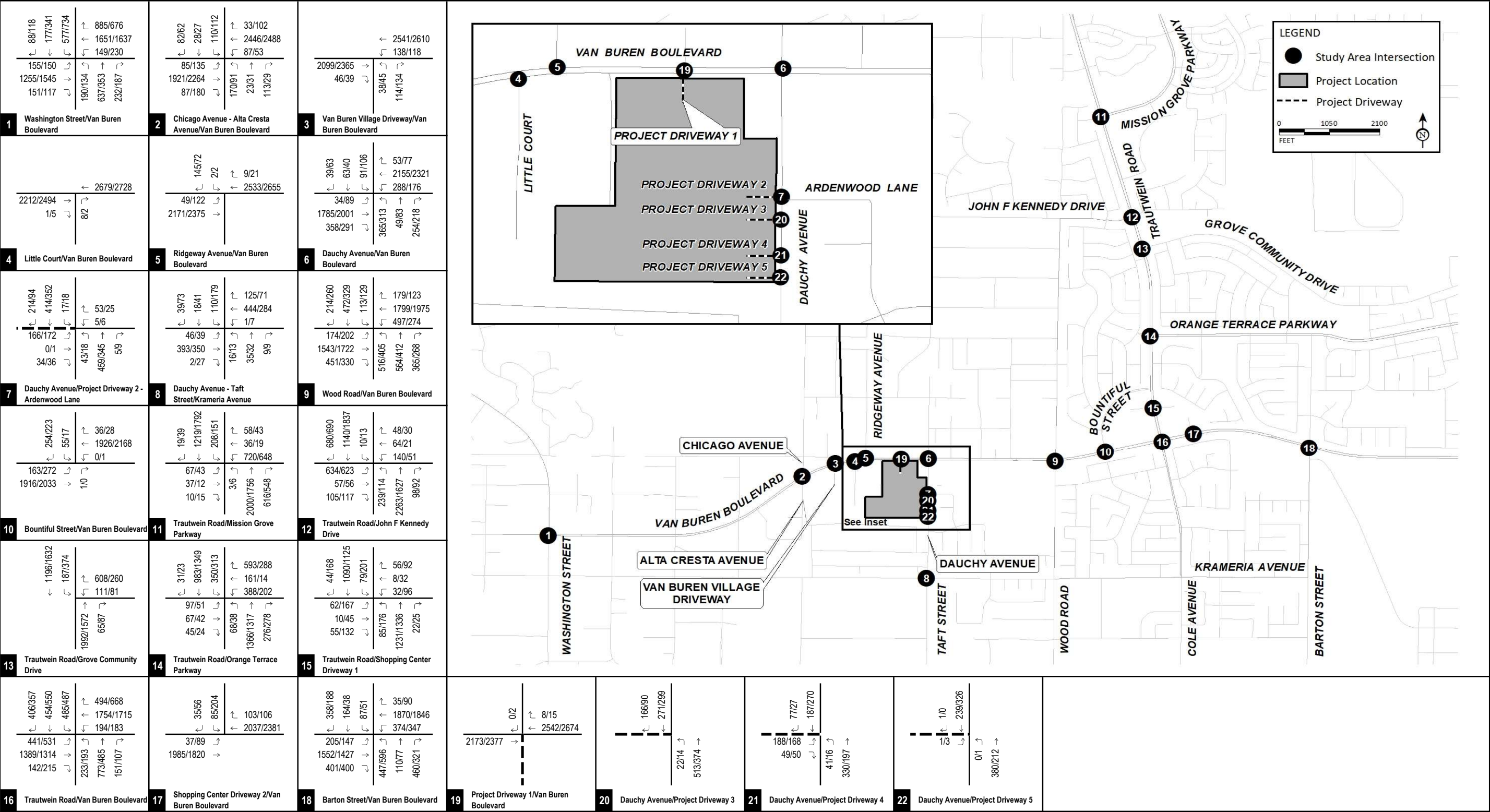




LSA

XXXX/YYYY  
AM/Afternoon Peak Hour Trips

FIGURE 6-5  
Woodcrest Christian School Expansion Project  
Traffic Operational Analysis  
Opening Year (2029) Peak Hour Traffic Volumes



LSA

XXXX/YYYY  
AM/Afternoon Peak Hour Trips

FIGURE 6-6  
Woodcrest Christian School Expansion Project  
Traffic Operational Analysis  
Opening Year (2029) with Project Peak Hour Traffic Volumes

Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour			Afternoon Peak Hour <sup>1</sup>			Daily	
			In	Out	Total	In	Out	Total		
R1 .	P18-0255 (Comercial Building and Drive Thru)									
	17815 Van Buren Blvd	4.40	TSF							
	Trips/Unit <sup>2</sup>			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 <sup>3,4</sup>			(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 <sup>5</sup>			5.83	5.17	11.00	5.23	5.89	11.12	47.62
	Trip Generation <sup>5</sup>			64	57	121	57	65	122	524
	Office	10.00	TSF							
	Trips/Unit <sup>5</sup>			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 <sup>5</sup>			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 <sup>5</sup>			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 <sup>5</sup>			0	0	0	0	(1)	(1)	(17)
	Net Trip Generation			17	5	22	8	19	27	261
	Retail	10.70	TSF							
	Trips/Unit <sup>5</sup>			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 <sup>5</sup>			0	0	0	(1)	(1)	(2)	(24)
			Sub-Total	6	4	10	19	20	39	380
	Pass-By Trips <sup>5</sup>			(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 <sup>5</sup>			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 <sup>5</sup>			0	0	0	(2)	(1)	(3)	(67)
			Sub-Total	49	47	96	39	36	75	1,052
	Pass-By Trips <sup>5</sup>			(24)	(23)	(47)	(20)	(18)	(38)	(515)
	Net Trip Generation			25	24	49	19	18	37	537
	Coffee Shop	2.61	TSF							
	Trips/Unit <sup>5</sup>			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 <sup>5</sup>			0	0	0	(2)	(3)	(5)	(128)
			Sub-Total	118	114	232	55	53	108	2,012
	Pass-By Trips <sup>5</sup>			(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 <sup>5</sup>			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 <sup>5</sup>			0	0	0	(1)	(1)	(2)	(72)
			Sub-Total	5	3	8	29	23	52	1,127
	Pass-By Trips <sup>5</sup>			(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

Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour			Afternoon Peak Hour <sup>1</sup>			Daily
			In	Out	Total	In	Out	Total	
<b>R3 . P19-0042 (Denny's Resturant and Office Building)</b>									
18451 Van Buren Blvd									
High-Turnover (Sit-Down) Resturant	4.30	TSF							
Trips/Unit <sup>6</sup>			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 <sup>7,8</sup>			0	0	0	(6)	(4)	(10)	(115)
Net Trip Generation			23	19	42	18	11	29	346
Office	9.90	TSF							
Trips/Unit <sup>9</sup>			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
<b>R4 . P17-0688 (Automated Car Wash)</b>									
18806 Van Buren Blvd	5.40	TSF							
Trips/Unit <sup>10</sup>			5.66	3.32	8.98	7.10	7.10	14.20	163.09
Trip Generation			31	18	49	38	38	76	881
<b>R5 . P20-0385 (Tenative Tract Map 37733 - Single Family Residential)</b>									
18875 Lurin Ave	40	DU							
Trips/Unit <sup>11</sup>			0.18	0.52	0.70	0.59	0.35	0.94	9.43
Trip Generation			7	21	28	24	14	38	377
<b>R6 . PR-2021-001053 (Tentative Tract Map 38094 - Single Family Residential)</b>									
Wood Rd/Krameria Ave	72	DU							
Trips/Unit <sup>11</sup>			0.18	0.52	0.70	0.59	0.35	0.94	9.43
Trip Generation			13	37	50	42	25	67	679
<b>R7 . P20-0018 (Tenative Tract Map 37731 - Residential)</b>									
19331 Lurin Ave	138	DU							
Trips/Unit <sup>11</sup>			0.18	0.52	0.70	0.59	0.35	0.94	9.43
Trip Generation			25	72	97	81	48	129	1,301
<b>R8 . R19-0151 (Health and Fitness Center)</b>									
8719 Trautwein Rd	21.7	TSF							
Trips/Unit <sup>12,13</sup>			0.67	0.64	1.31	1.97	1.48	3.45	23.80
Trip Generation			15	14	29	43	32	75	516
<b>R9 . P19-0022 (Panera Bread with Drive Thru)</b>									
19260 Van Buren Blvd	4.3	TSF							
Trips/Unit <sup>2</sup>			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 <sup>3,4</sup>			(25)	(24)	(49)	(19)	(17)	(36)	(505)
Net Trip Generation			73	70	143	55	51	106	1,514

Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour			Afternoon Peak Hour <sup>1</sup>			Daily
			In	Out	Total	In	Out	Total	
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 <sup>14</sup>		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 <sup>7,15</sup>		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 <sup>2</sup>		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 <sup>3,4</sup>		(34)	(33)	(67)	(26)	(24)	(50)	(701)
	Net Trip Generation		103	98	201	77	71	148	2,104



Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour			Afternoon Peak Hour <sup>1</sup>			Daily
			In	Out	Total	In	Out	Total	
<b>C12 . CUP190021 (Gas Station with Convenience Store and Car Wash)</b>									
	Northeast Corner of Chicago Ave and Van Buren Blvd	16	VFP						
	Trips/Unit <sup>18</sup>		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 <sup>18</sup>		(26)	(25)	(51)	(29)	(28)	(57)	(822)
	Net Trip Generation		76	73	149	85	82	167	2,464
<b>C13 . PP26337 (Child Day Care Center with Classrooms and Office)</b>									
	Northeast Corner of Eastern Terminus of Iris Ave	48	STU						
	Trips/Unit <sup>19</sup>		0.41	0.37	0.78	0.37	0.42	0.79	4.09
	Trip Generation		20	18	38	18	20	38	196
<b>C14 . PPT210010 (Drive Thru Restaurant)</b>									
	18494 Van Buren Rd	3.0	TSF						
	Trips/Unit <sup>2</sup>		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 <sup>3,4</sup>		(17)	(17)	(34)	(13)	(12)	(25)	(351)
	Net Trip Generation		51	49	100	39	36	75	1,051
<b>C15 . TPM38026 (Tenative Parcel Map Division)</b>									
	17140 Parsons Rd	2	DU						
	Trips/Unit <sup>11</sup>		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		0	1	1	1	1	2	19
<b>C16 . TTM37594 (Tenative Tract Map - Residential Division)</b>									
	Northeast Corner of Parsons Rd and Nandina Ave	5	DU						
	Trips/Unit <sup>11</sup>		0.18	0.52	0.70	0.59	0.35	0.94	9.43
	Trip Generation		1	3	4	3	2	5	47
<b>C17 . PP25382 (Commerical Office)</b>									
	Southeast Corner of Barton St and Van Buren Blvd	10.3	TSF						
	Trips/Unit <sup>20</sup>		1.34	0.18	1.52	0.24	1.20	1.44	10.84
	Trip Generation		14	2	16	2	12	14	112

Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour			Afternoon Peak Hour <sup>1</sup>			Daily	
			In	Out	Total	In	Out	Total		
J1 . March Business Center (Meridian South Campus: March JPA SP-1)										
	Office <sup>21</sup>	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
	Commercial Retail <sup>21</sup>	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 <sup>21</sup>	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 <sup>21</sup>	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 <sup>21</sup>	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 <sup>21</sup>	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) <sup>21</sup>	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 <sup>21</sup>	6.2	Ac							
	Trip Generation			0	0	0	13	10	23	94
	LGB6 (Building A) <sup>21</sup>	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) <sup>21</sup>	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) <sup>21</sup>	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) <sup>21</sup>	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

Table 6-A - Cumulative Projects Trip Generation

Project No.	Land Use/Builder/Applicant/Project Name	Units	A.M. Peak Hour			Afternoon Peak Hour <sup>1</sup>			Daily
			In	Out	Total	In	Out	Total	

## Notes:

- TSF = Thousand Square Feet; DU = Dwelling Units; VFP = Vehicle Fueling Positions; STU = Student; Ac = Acres
- <sup>1</sup> There is no data available for afternoon peak hour trips; therefore, the P.M. peak hour was applied for the afternoon trip generation.
- <sup>2</sup> Rates based on the Institute of Transportation Engineers (ITE) Trip Generation Manual (11<sup>th</sup> Edition) for Land Use 934 - "Fast-Food Restaurant with Drive-Through Window", Setting Location - "General Urban/Suburban."
- <sup>3</sup> Pass-by rates based on Land Use 934 - "Fast-Food Restaurant with Drive-Through" from ITE *Trip Generation Manual*, 11<sup>th</sup> 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 provided in the ITE *Trip Generation Manual* are higher than 25%, a pass-by rate of 25% was used.
- <sup>4</sup> 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.
- <sup>5</sup> Rates, trip generation, internal trip capture, and pass-by rates based on Linscott Law & Greenspan *Van Buren Village Traffic Circulation Analysis Report*.
- <sup>6</sup> Rates based on the ITE *Trip Generation Manual* (11<sup>th</sup> Edition) for Land Use 932 - "High-Turnover (Sit-Down) Restaurant", Setting Location - "General Urban/Suburban."
- <sup>7</sup> 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.
- <sup>8</sup> Pass-by rates based on Land Use 932 - "High-Turnover (Sit-Down) Restaurant" from ITE *Trip Generation Manual*, 11<sup>th</sup> 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 provided in the ITE *Trip Generation Manual* are higher than 25%, a pass-by rate of 25% was used.
- <sup>9</sup> Rates based on the ITE *Trip Generation Manual* (11<sup>th</sup> Edition) for Land Use 712 - "Small Office Building", Setting Location - "General Urban/Suburban."
- <sup>10</sup> Trip generation rates obtained from the ITE *Trip Generation Manual* (11<sup>th</sup> 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.
- <sup>11</sup> Rates based on the ITE *Trip Generation Manual* (11<sup>th</sup> Edition) for Land Use 210 - "Single-Family Detached Housing", Setting Location - "General Urban/Suburban."
- <sup>12</sup> Rates based on the ITE *Trip Generation Manual* (11<sup>th</sup> Edition) for Land Use 492 - "Health/Fitness Club", Setting Location - "General Urban/Suburban."
- <sup>13</sup> 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.
- <sup>14</sup> Rates based on the ITE *Trip Generation Manual* (11<sup>th</sup> Edition) for Land Use 821 - "Shopping Plaza (40-150k) - Supermarket - Yes", Setting Location - "General Urban/Suburban."
- <sup>15</sup> Pass-by rates based on Land Use 821 - "Shopping Plaza (40 - 150k)" from ITE *Trip Generation Manual*, 11<sup>th</sup> 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 provided in the ITE *Trip Generation Manual* are higher than 25%, a pass-by rate of 25% was used.
- <sup>16</sup> Trip generation rates obtained from the ITE *Trip Generation Manual* (11<sup>th</sup> 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.
- <sup>17</sup> Rates based on the ITE *Trip Generation Manual* (11<sup>th</sup> Edition) for Land Use 180 - "Specialty Trade Contractor", Setting Location - "General Urban/Suburban."
- <sup>18</sup> Rates, trip generation, internal trip capture, and pass-by rates based on LSA *Van Buren/Chicago Gasoline Station Project Traffic Impact Analysis*.
- <sup>19</sup> Rates based on the ITE *Trip Generation Manual* (11<sup>th</sup> Edition) for Land Use 565 - "Day Care Center", Setting Location - "General Urban/Suburban."
- <sup>20</sup> Rates based on the ITE *Trip Generation Manual* (11<sup>th</sup> Edition) for Land Use 710 - "General Office Building", Setting Location - "General Urban/Suburban."
- <sup>21</sup> Trip generation based on the *Meridian South Campus Traffic Impact Analysis* - March Joint Powers Authority.

**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

Table 6-C - Opening Year (2029) Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Control	Without Project						With Project						Project Related Operational Deficiency?	
				A.M. Peak Hour			Afternoon Peak Hour			A.M. Peak Hour			Afternoon Peak Hour				
				Delay (sec.)	LOS		Delay (sec.)	LOS		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 <sup>1</sup>	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

<sup>1</sup> 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.

Table 6-D - Opening Year (2029) Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	Classification <sup>1</sup>	LOS Standard	Number of Lanes	Without Project				With Project				V/C Ratio Difference	Project Related Operational Deficiency? <sup>3</sup>
					Roadway Capacity <sup>2</sup>	Daily Volume	V/C Ratio	LOS	Roadway Capacity <sup>2</sup>	Daily Volume	V/C Ratio	LOS		
<b>Segments on Van Buren Boulevard</b>														
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
<b>Segments on Dauchy Avenue</b>														
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

<sup>1</sup> Classifications for all segments have been obtained from the City of Riverside General Plan Circulation and Community Mobility Element Master Plan of Roadways.<sup>2</sup> 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).<sup>3</sup> 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.

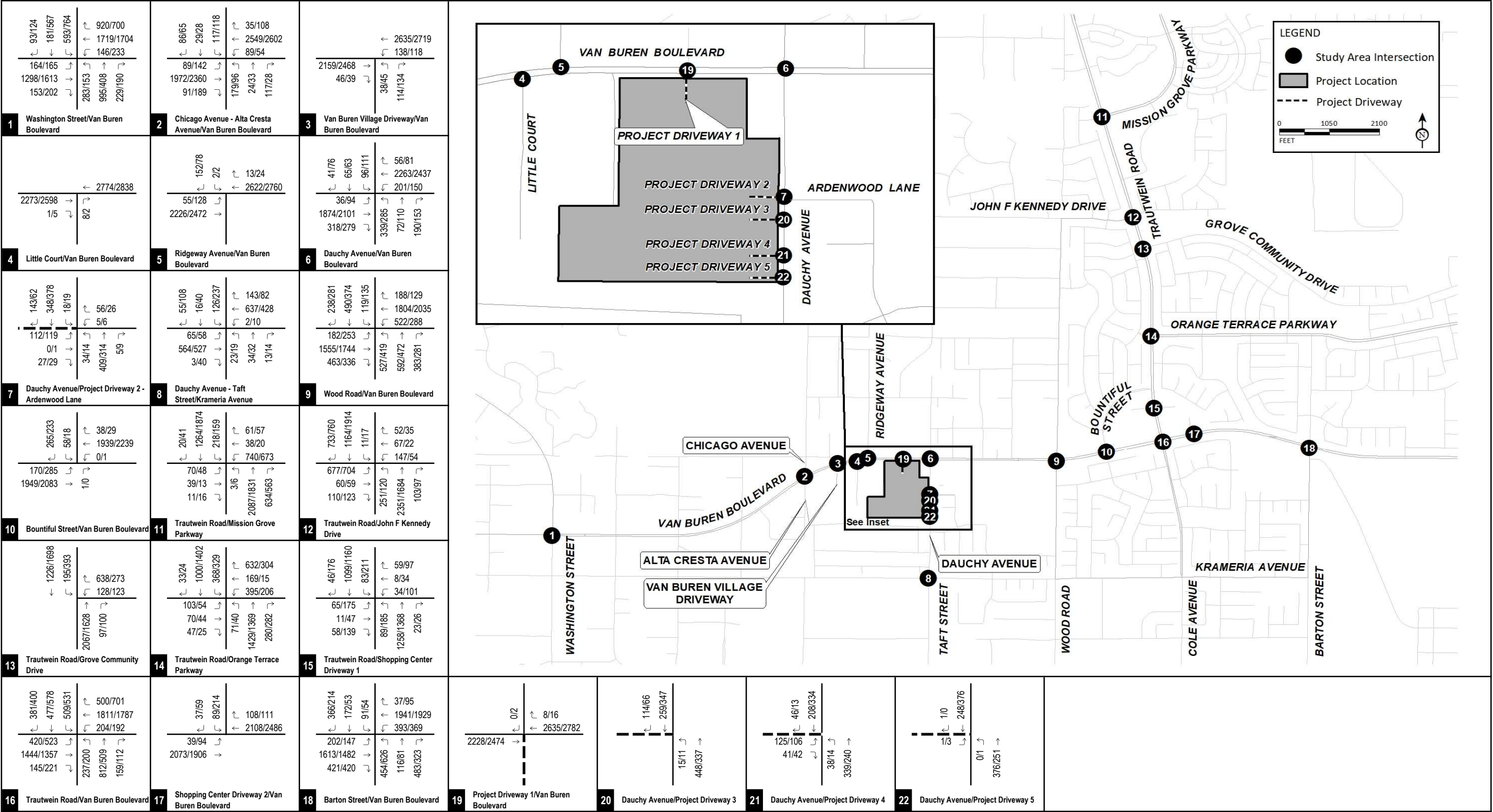
Based on the criteria discussed in the “Levels of Service Procedures” section of this report, the project is forecast to create project related operational deficiencies for two of the three segments. The addition of project-related trips either causes the following roadway segments to degrade from acceptable 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

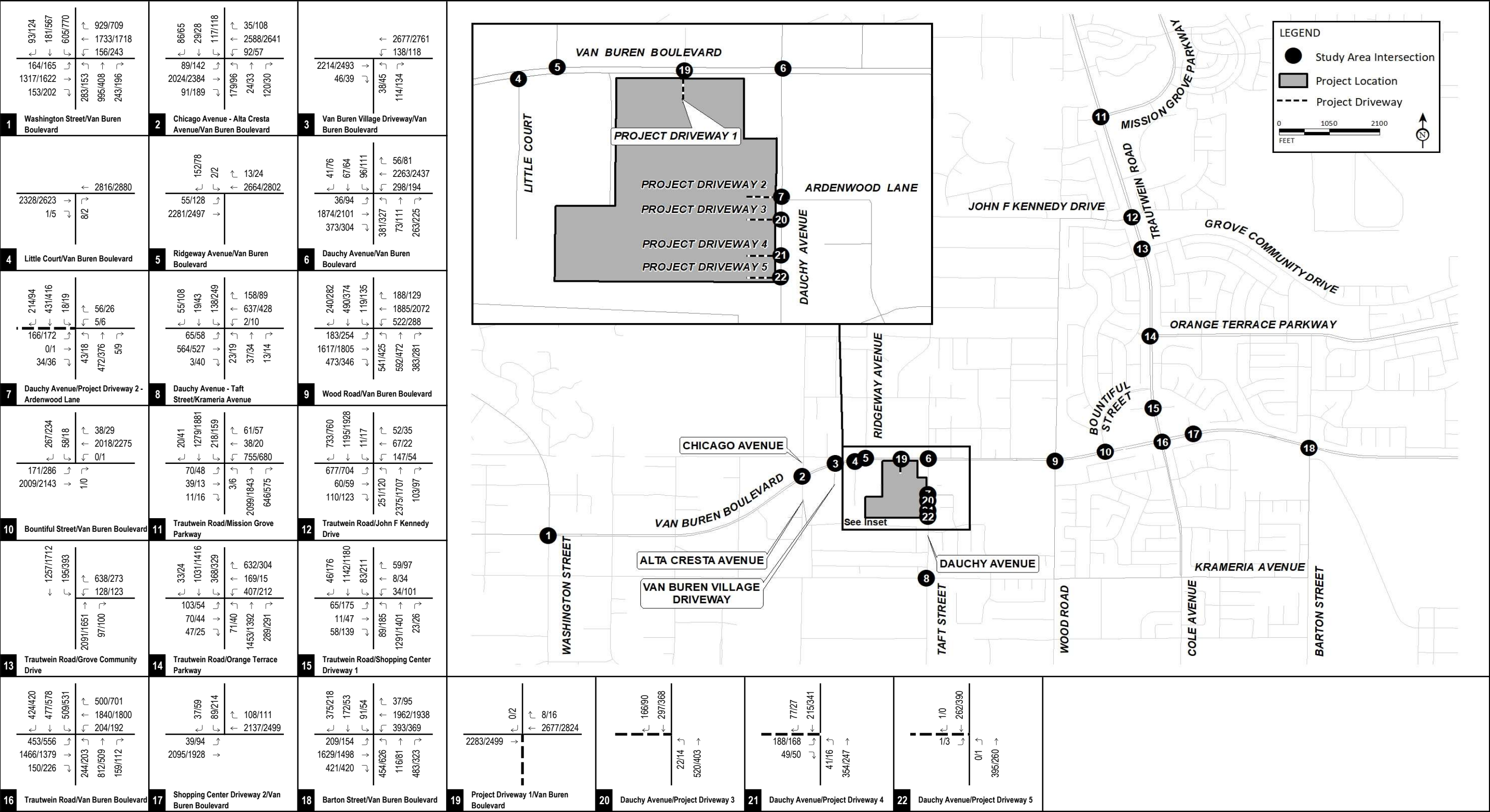
- Figure 7-1: Cumulative (2045) without Project Peak Hour Traffic Volumes
- Figure 7-2: Cumulative (2045) with Project Peak Hour Traffic Volumes
- Table 7-A: Cumulative (2045) Roadway Segment Daily Traffic Volumes
- Table 7-B: Cumulative (2045) Intersection Levels of Service
- Table 7-C: Cumulative (2045) Roadway Segment Levels of Service



LSA

XXXX/YYYY  
AM/Afternoon Peak Hour Trips

FIGURE 7-1  
Woodcrest Christian School Expansion Project  
Traffic Operational Analysis  
Cumulative (2045) Peak Hour Traffic Volumes



LSA

XXXX/YYYY  
AM/Afternoon Peak Hour Trips

FIGURE 7-2  
Woodcrest Christian School Expansion Project  
Traffic Operational Analysis  
Cumulative (2045) with Project Peak Hour Traffic Volumes



**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



Table 7-B - Cumulative (2045) Intersection Levels of Service

Intersection	Jurisdiction	LOS Standard	Control	Without Project				Control	With Project				Project Related Operational Deficiency?
				A.M. Peak Hour		Afternoon Peak Hour			A.M. Peak Hour		Afternoon Peak Hour		
				Delay (sec.)	LOS	Delay (sec.)	LOS		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 <sup>1</sup>	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

<sup>1</sup> 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.

Table 7-C - Cumulative (2045) Roadway Segment Levels of Service

Roadway Segment	Jurisdiction	General Plan Classification <sup>1</sup>	LOS Standard	Number of Lanes	Without Project				With Project				V/C Ratio Difference	Project Related Operational Deficiency? <sup>3</sup>
					Roadway Capacity <sup>2</sup>	Daily Volume	V/C Ratio	LOS	Roadway Capacity <sup>2</sup>	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

<sup>1</sup> Classifications for all segments have been obtained from the City of Riverside General Plan Circulation and Community Mobility Element Master Plan of Roadways.<sup>2</sup> 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).<sup>3</sup> 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.

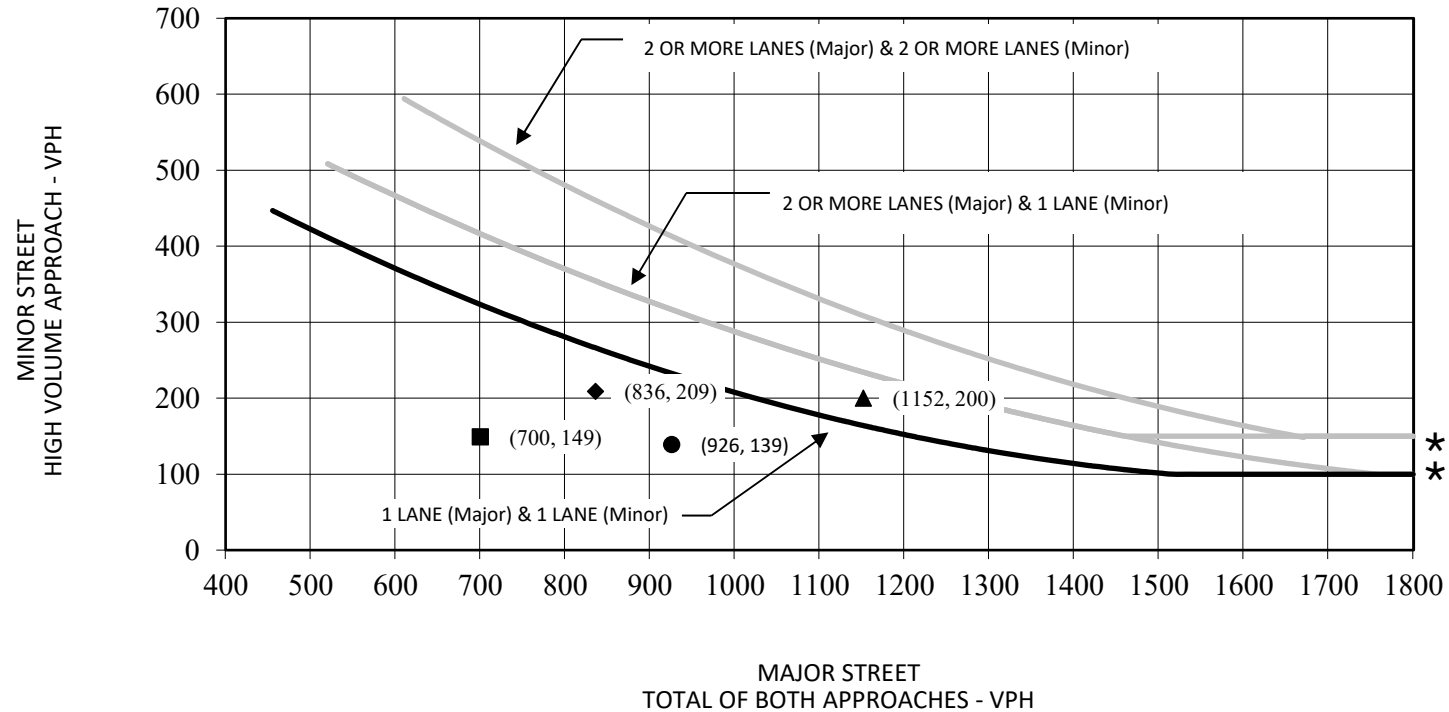
As shown in Figure 8-4, the intersection of Dauchy Avenue – Taft Street/Krameria Avenue meets the signal warrant for both a.m. and afternoon peak hours under the Cumulative (2045) with and without project scenario.

### 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

## 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 |

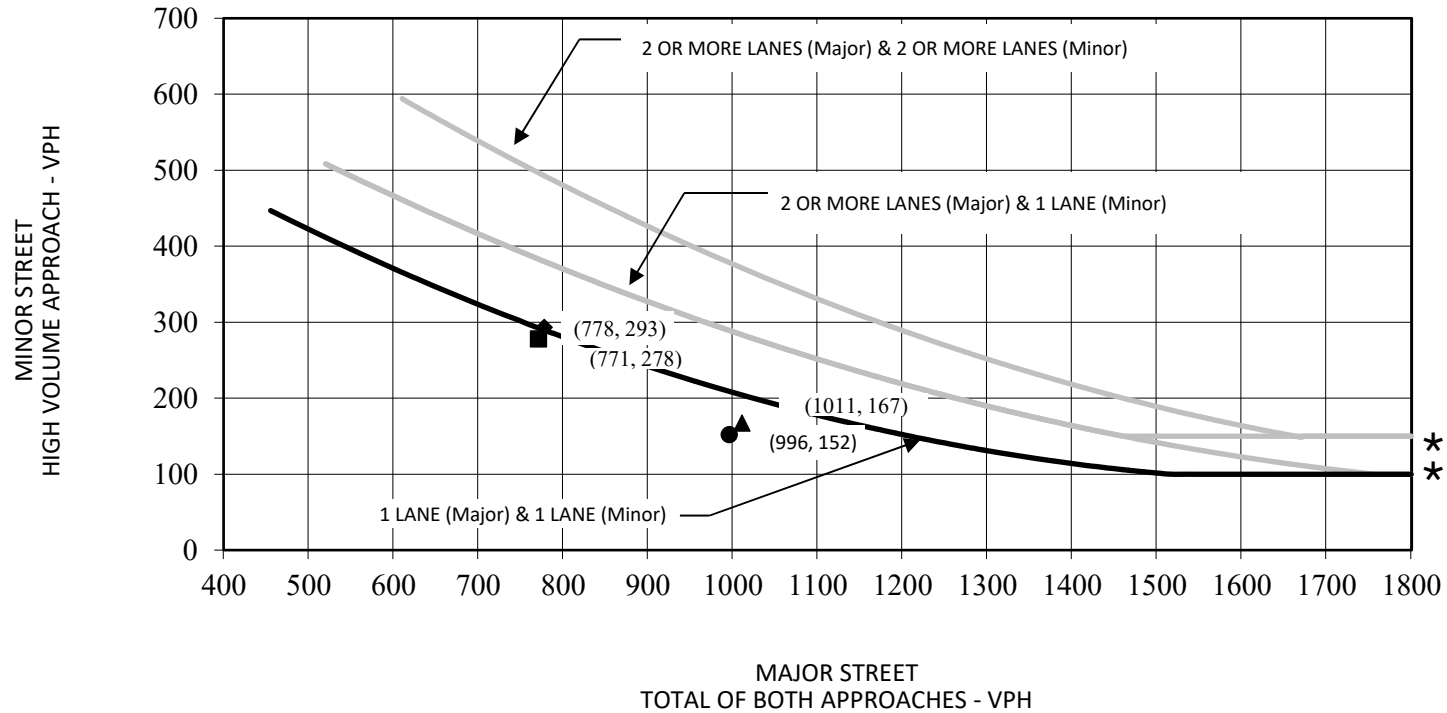
*Woodcrest Christian School Expansion Project  
Traffic Operational Analysis*

**Opening Year (2029) Peak Hour Warrant - Dauchy Avenue/Project Driveway 2-Ardenwood Lane**

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

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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*

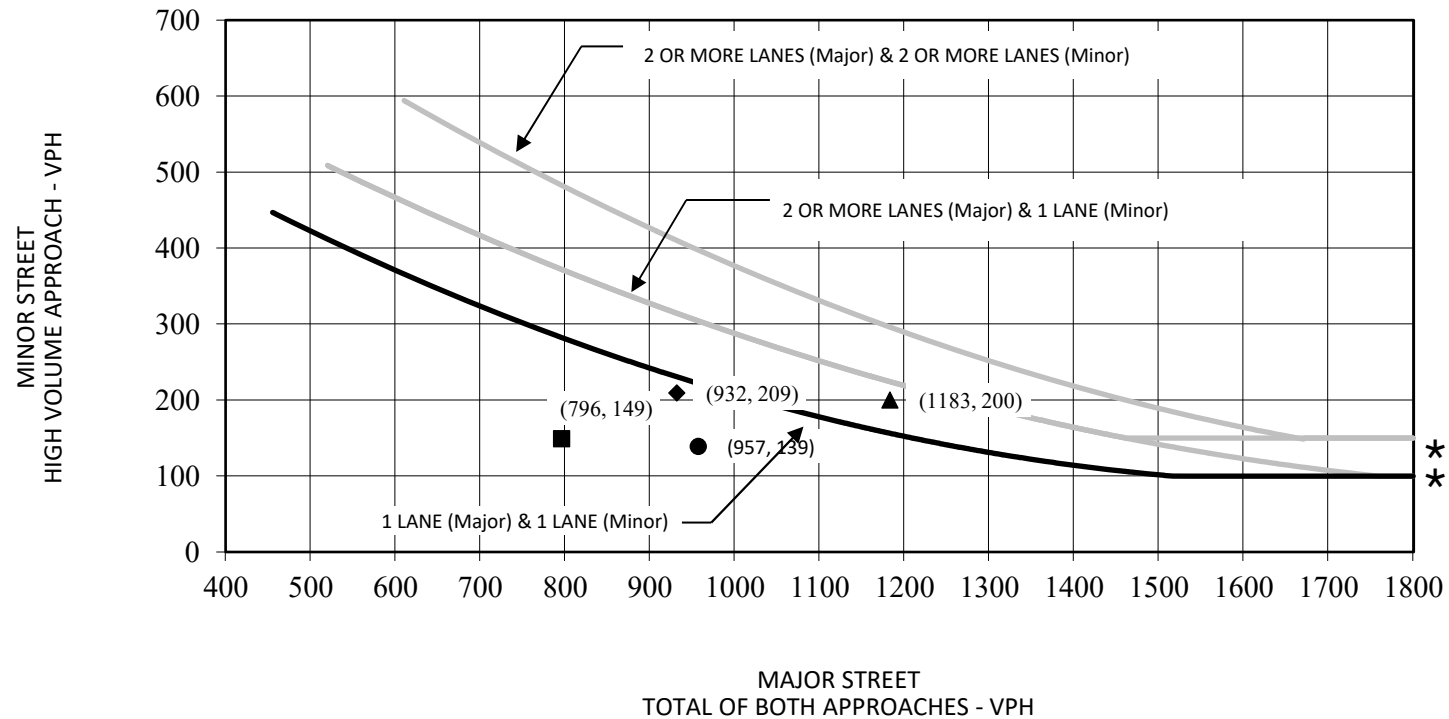
**Opening Year (2029) Peak Hour Warrant - Dauchy Avenue/Krameria Avenue**

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

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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

- |  |  |
|--|--|
| <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">●</span> Without Project AM Peak Hour | <span style="border: 1px solid black; padding: 2px;">▲</span> With Project AM Peak Hour        |
| <span style="border: 1px solid black; padding: 2px;">■</span> Without Project Afternoon Peak Hour              | <span style="border: 1px solid black; padding: 2px;">◆</span> With Project Afternoon Peak Hour |

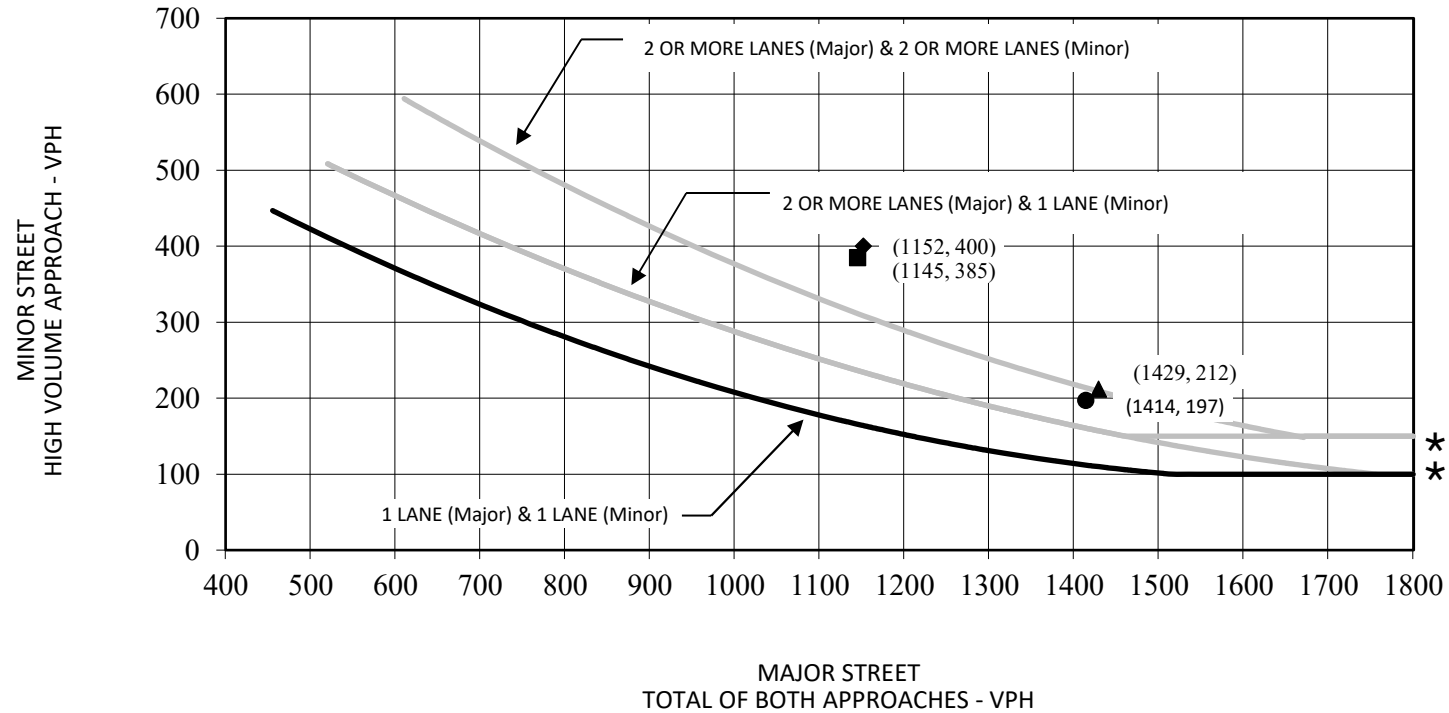
*Woodcrest Christian School Expansion Project  
Traffic Operational Analysis*

**Cumulative (2045) Peak Hour Warrant - Dauchy Avenue/Project Driveway 2-Ardenwood Lane**

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

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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 8-4

- |  |                                     |  |                                  |
|--|-------------------------------------|--|----------------------------------|
|  | 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*

**Cumulative (2045) Peak Hour Warrant - Dauchy Avenue/Krameria Avenue**

SOURCE: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FIGURE 4C-3

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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 85<sup>th</sup> 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 85<sup>th</sup> 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

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 BICYCLIST 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 95<sup>th</sup> 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. As 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. As 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

Table 12-A - Opening Year (2029) Intersection Queuing Analysis

Intersection	Movement	Existing Storage Length <sup>1</sup> (ft/lane)	Recommended Storage Length (ft/lane)	Opening Year (2029) With Project <sup>2</sup>		Opening Year (2029) With Project With Imp. <sup>2</sup>	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
6 . Dauchy Avenue/Van Buren Boulevard Signal	NBL	65	200	445	345	390	415
	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 TWSC/Signal <sup>3</sup>	NBLTR	90	90	85	105	155	95
	SBR	90	90	0	0	30	20
	WBLTR	460	460	710	95	20	15
8 . Dauchy Avenue - Taft Street/Krameria Avenue Signal	NBLTR	1240	1240	45	55	40	25
	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 OWSC	NBTL <sup>4</sup>	200	-	195	195	-	-
	SBTR	90	90	0	0	0	20
	NBL <sup>5</sup>	-	200	-	-	45	35
	NBT <sup>5</sup>	-	200	-	-	170	60
21 . Dauchy Avenue/Project Driveway 4 OWSC	NBTL <sup>4</sup>	400	-	125	70	-	-
	SBTR	200	200	0	0	15	0
	NBL <sup>5</sup>	-	100	-	-	45	25
	NBT <sup>5</sup>	-	400	-	-	40	0

## Notes:

ft/lane = 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.<sup>1</sup> Storage length for all movements obtained from Google Earth measurements.<sup>2</sup> 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.<sup>3</sup> This intersection is controlled by a TWSC under the opening year with project scenario and a signal under the opening year with project with improvement scenario.<sup>4</sup> This movement is the existing condition under the opening year with project scenario.<sup>5</sup> 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.

Table 12-B - Cumulative (2045) Intersection Queuing Analysis

Intersection	Movement	Existing Storage Length <sup>1</sup> (ft/lane)	Recommended Storage Length (ft/lane)	Cumulative (2045) With Project <sup>2</sup>		Cumulative (2045) With Project With Imp. <sup>2</sup>	
				AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
6 . Dauchy Avenue/Van Buren Boulevard Signal	NBL	65	200	540	360	585	400
	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 TWSC/Signal <sup>3</sup>	NBLTR	90	90	85	95	180	120
	SBR	90	90	0	0	30	20
	WBLTR	460	460	525	120	20	15
8 . Dauchy Avenue - Taft Street/Krameria Avenue Signal	NBLTR	1240	1240	50	55	45	35
	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 OWSC	NBLTR <sup>4</sup>	200	-	215	235	-	-
	SBTR	90	90	0	0	0	20
	NBL <sup>5</sup>	-	200	-	-	50	25
	NBT <sup>5</sup>	-	200	-	-	215	95
21 . Dauchy Avenue/Project Driveway 4 OWSC	NBLTR <sup>4</sup>	400	-	140	85	-	-
	SBTR	200	200	0	0	10	0
	NBL <sup>5</sup>	-	100	-	-	70	30
	NBT <sup>5</sup>	-	400	-	-	130	30

Notes:

ft/lane = 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.

<sup>1</sup> Storage length for all movements obtained from Google Earth measurements.

<sup>2</sup> 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.

<sup>3</sup> This intersection is controlled by a TWSC under the cumulative with project scenario and a signal under the cumulative with project with improvement scenario.

<sup>4</sup> This movement is the existing condition under the cumulative with project scenario.

<sup>5</sup> 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.

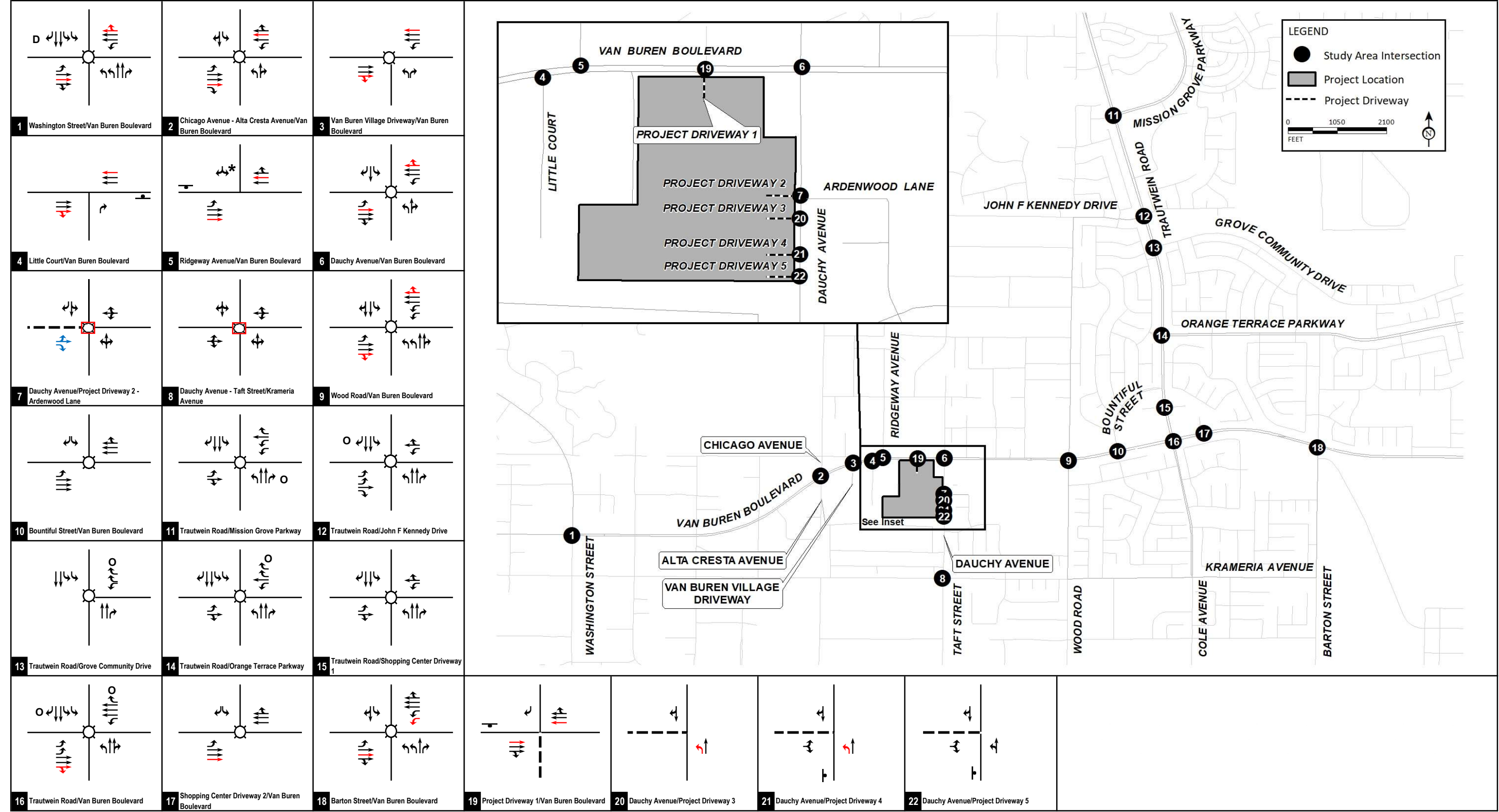
### 13.2.3 Project Fair Share (County of Riverside)

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





LSA

Legend

- Signal
- Stop Sign
- De-Facto Right
- 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.

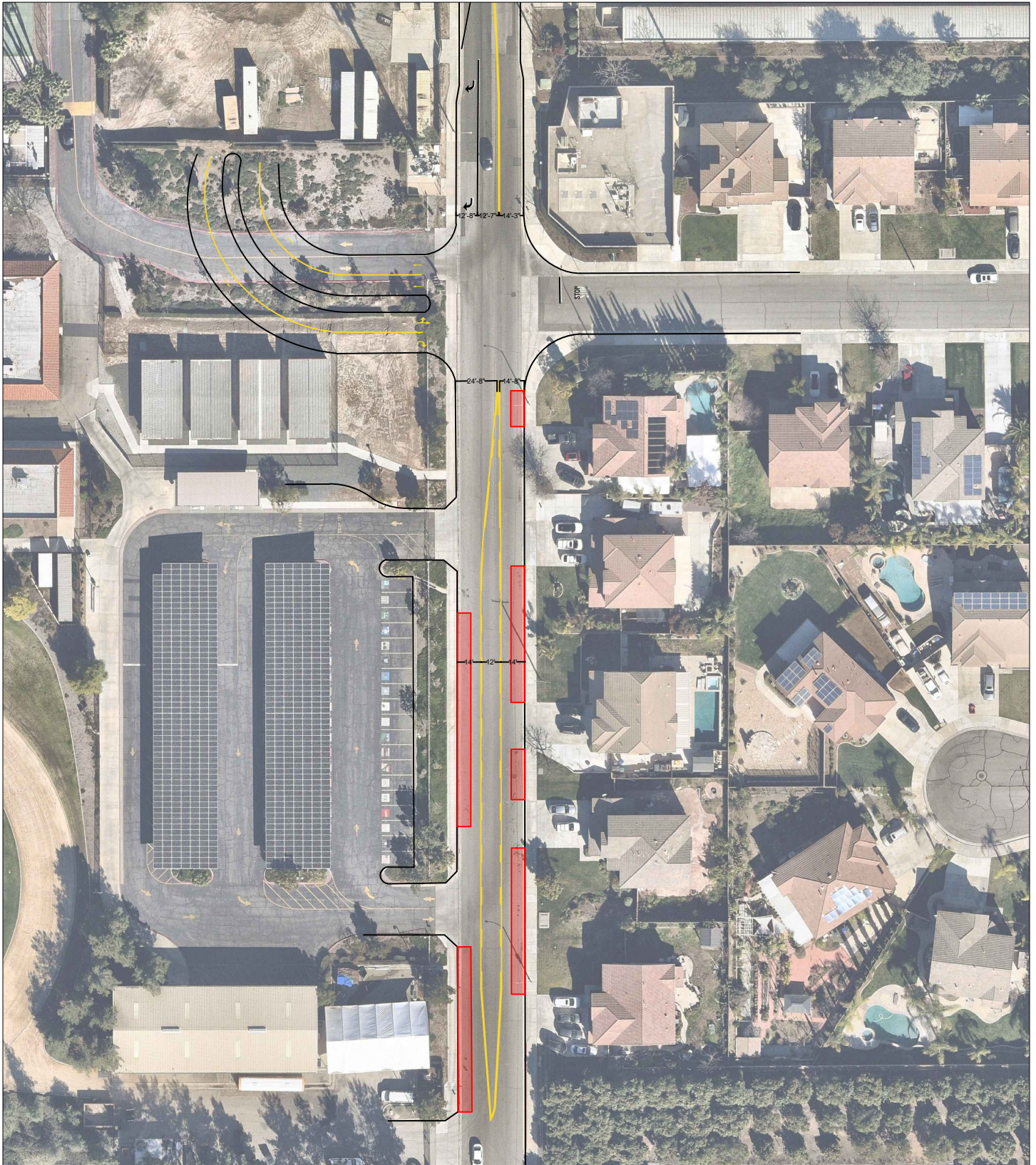
FIGURE 13-1

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

LEGEND

- Parking Restriction



FIGURE 13-2

*Woodcrest Christian School  
Traffic Operational Analysis*

## Conceptual Striping and Parking Restriction



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 additional improvements required.	Add EBT.		Restripe WBR to WBTR.	3.27%
2 . Chicago Avenue - Alta Cresta Avenue/Van Buren Boulevard	Add EBT. Add WBT.	No additional improvements required.	Add EBT. Add WBT.			N/A
4 . Little Court/Van Buren Boulevard	Restripe EBR to EBTR.	No additional 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 additional 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 additional 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 additional improvements required.		Add signal. (Project Responsibility)		N/A
8 . Dauchy Avenue - Taft Street/Krameria Avenue	Add signal.	No additional 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 additional 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.

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					
		Control	A.M. Peak Hour		Afternoon Peak Hour		Control	A.M. Peak Hour		Afternoon Peak Hour		Control	A.M. Peak Hour		Afternoon Peak Hour		Control	A.M. Peak Hour	
			Delay (sec.)	LOS	Delay (sec.)	LOS		Delay (sec.)	LOS	Delay (sec.)	LOS		Delay (sec.)	LOS	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			Signal	37.1	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			Signal	33.1	C
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			OWSC	13.9	B
5 . Ridgeway Avenue/Van Buren Boulevard	County of Riverside/City of Riverside	OWSC	-	F *	-	F *	OWSC	>100	F *	-	F *	OWSC	25.3	D			OWSC	25.3	D
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			Signal	51.8	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			Signal	6.8	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			Signal	16.4	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 *			Signal	88.6	F *
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 *			Signal	93.4	F *
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 *			Signal	73.0	E *
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			Signal	44.9	D
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 *			Signal	55.8	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			TWSC	0.0	A
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			OWSC	16.9	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

<sup>1</sup> 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.