Kimley»Horn

Memorandum

To: Jack Varozza, P.E., QSD/P
Senior Engineer, City of Roseville

From: Pedro Cortes
Stephen Dillon, P.E.

Re: *Traffic Evaluation*
Cottages at the Terraces of Roseville
Roseville, California

Date: December 4, 2025

The purpose of this memorandum is to document the transportation analysis completed for the Cottages at the Terraces of Roseville (the "proposed project" or "project") to be located near the Coloma Way intersection with Sunrise Avene in Roseville, California (the "City") (**Exhibit 1**). This memorandum evaluates the weekday AM and PM peak-hours under Existing (2025) and Existing (2025) plus Approved Project plus Project conditions.

Project Understanding

Kimley-Horn understands that the Terraces of Roseville is proposing to construct up to 23 senior living townhomes ("cottages") on the existing parking lot and open space located on the southern part of the Terraces of Roseville Property (see **Exhibit 2**). Access to the project site will be accomplished using the existing, full access driveway onto Sunrise Avenue. A separate project, the Sunrise Office Center (the "approved project"), proposes to construct up to 7,300-square feet of medical office space on a vacant parcel along the existing Terraces of Roseville access driveway (see **Exhibit 3**).

This analysis has been prepared at the request of the City[1]. The primary purpose of this analysis is to evaluate the anticipated effects of the proposed project and the approved Sunrise Office Center on access to/from Sunrise Avenue via the existing site driveway and to document traffic circulation/emergency vehicle access (EVA).

Data Collection

Kimley-Horn manually collected (via traffic count subconsultant) weekday AM and PM peak-period traffic counts on Thursday, October 16, 2025 to establish weekday intersection turning movement traffic volumes at the following study intersections:

1. Sunrise Avenue at Terraces Access Road

Existing traffic count data sheets are provided in **Attachment A**. Using the above data, Kimley-Horn developed a weekday, AM and PM peak-hour intersection analysis (delay and queuing) using Synchro® traffic analysis software.

Kimley-Horn completed a field visit to the project site on Thursday, October 16, 2025 to observe study intersection lane configurations, vehicle storage lengths, existing traffic control, speed limits, lane utilization, adjacent land uses, and other readily apparent features.

[1] Email correspondence with Jack Varozza, City of Roseville, August 25, 2025.

Assessment of Proposed Project

Trip Generation

The number of trips anticipated to be generated by the approved Sunrise Office Center and proposed project was developed in a manner consistent with the methodology contained in the *Trip Generation Manual, 12th Edition*, published by the Institute of Transportation Engineers (ITE). ITE Land Use Code 720 (Medical-Dental Office Building) was used for the approved Sunrise Office Center and ITE Land Use Code 251 (Senior Adult Housing – Single Family) was used for the proposed project. The anticipated trip generation characteristics are depicted in **Table 1**. As shown in **Table 1**, the approved project and proposed project combined are anticipated to generate 37 and 35 trips in the weekday AM and PM peak-hours, respectively.

Table 1 – Proposed Project Trip Generation

Land Use (ITE Code)[1]	Units	Daily Trips	Weekday AM Peak-Hour					Weekday PM Peak-Hour				
			Total Trips	In		Out		Total Trips	In		Out	
				%	Trips	%	Trips		%	Trips	%	Trips
Approved Sunrise Office Center												
Medical-Dental Office Building (720)	7.3 KSF	248	23	78%	18	22%	5	21	30%	6	70%	15
Proposed Project												
Senior Adult Housing-Single Family (251)	23 DU	96	14	34%	5	66%	9	14	61%	8	39%	6
Approved and Proposed Project Trips:		**344**	**37**		**23**		**14**	**35**		**14**		**21**

[1] *ITE Trip Generation Manual, 12th Edition*

KSF = 1,000 sf, DU = Dwelling Units

Approved and Proposed Project Trip Distribution and Assignment

Approved project traffic and proposed project traffic was distributed and assigned to the adjacent transportation network based on the anticipated project site operations, existing traffic patterns, and engineering judgement. Project trip distribution percentages are provided in **Exhibit 4**. The associated assignment of AM and PM peak-hour trips associated with the approved project and the proposed project is depicted in **Exhibit 5**.

Evaluation Parameters and Study Facilities

A peak-hour intersection operations analysis (delay and queuing) was conducted for the weekday AM and PM peak-hours for the following scenarios:

A. Existing (2025)
B. Existing (2025) plus Approved Project plus Project

The peak-hour operations analysis was completed for the following intersections:

1. Sunrise Avenue at Terraces Access Road

Peak-hour operations were determined using methods defined in the *Highway Capacity Manual, 7th Edition,* using Synchro® traffic analysis software. **Exhibit 6** details the study intersection's geometry and the weekday AM and PM peak-hour volumes for both Existing (2025) conditions and Existing (2025) plus Approved Project plus Project conditions.

Access Evaluation

This analysis evaluates the anticipated effects of the approved Sunrise Office Center and proposed project on access to/from Sunrise Avenue via the existing site driveway.

Intersection Delay

Synchro® traffic analysis software was used to quantify the vehicular delay at the study intersection. **Table 2** summarizes anticipated delay for both Existing (2025) and Existing (2025) plus Approved Project plus Project conditions. Existing (2025) and Existing (2025) plus Approved Project plus Project technical analysis worksheets are provided in **Attachment B** and **Attachment C**, respectively. As shown in **Table 2**, the study intersection sees a nominal increase of no more than three (3) seconds in delay with the addition of trips associated with the approved and proposed land uses.

Table 2 – Intersection Delay

ID	Intersection	Peak Hour	Control	Existing (2025)	Existing (2025) plus Approved Project plus Project
				Delay (sec)	Delay (sec)
1	Sunrise Ave at Terraces Access Rd	AM	SSSC	0.9(25.2 WB)	1.3(27.3 WB)
		PM		0.8(24.9 WB)	1.0(26.2 WB)

Notes: **Bold** represents deficient operations. Shaded represents a project induced deficiency.
Side Street Stop Controlled (SSSC) reported as intersection delay followed by worst approach delay.

Intersection Queueing

Synchro® traffic analysis software was used to quantify queueing at the study intersection. **Table 3** summarizes select movements' 95th percentile queuing at the study intersection. All technical analysis worksheets are provided in **Attachment B** and **Attachment C**.

Table 3 – Intersection Queueing

Intersection / Analysis Scenario	Movement	Available Storage (ft)	AM Peak-Hour	PM Peak-Hour
			95th % Queue (ft)	95th % Queue (ft)
#1, Sunrise Ave at Terraces Access Rd	**WBL**			
Existing (2025)		100	25	25
Existing (2025) plus Approved Project plus Project			30	30
	WBR			
Existing (2025)		100	25	25
Existing (2025) plus Approved Project plus Project			25	25
	SBL			
Existing (2025)		250	25	25
Existing (2025) plus Approved Project plus Project			25	25

Notes: For approaches with dual left-turn lanes, the longest queue length is reported. Shaded cell indicates queue exceeds storage by > 25' (one vehicle length)

The queueing results presented in **Table 3** show that all queues at the study intersection are projected to be contained within their available storage capacity.

Minimum Required Throat Depth (MRTD)

The MRTD was calculated for the site access driveway location along Sunrise Avenue (see **Exhibit 1**). **Table 4** summarizes the findings of the MRTD evaluation based on the City's guidelines[2].

Table 4 – MRTD for Site Access Driveway

ID	Driveway	Peak Hour	Approach Volume	ConflVol	Minimum Required Throat Depth (MRTD)	Available Storage
1	Sunrise Ave at Terraces Access Rd	AM	42	1,308	**85**	**100**
		PM	37	1,349	**75**	

The available throat depth for the driveway (Intersection #1) is observed to be approximately 100-feet, as measured from back of walk to the first drive aisle at the Dutch Bros parking lot driveway. As shown in **Table 4**, the MRTD during the AM and PM peak-hours for the driveway is calculated to be 85-feet and 75-feet, respectively. As the calculated MRTD does not exceed the available storage by more than one vehicle length (25-feet), the throat depth provided is deemed sufficient to accommodate the anticipated site operations and not interfere with adjacent developments.

Emergency Vehicle and Refuse Service Access

The proposed project site plan (**Exhibit 2**) was reviewed for emergency vehicle and refuse service access. Per City of Roseville standards[3], a minimum of two EVA points are required. The City standards also specify that the minimum roadway width required to provide sufficient Emergency Vehicle Access (EVA) is 20-feet, with an inside turning radius of 30-feet or greater on all curves.

The provided project site plan shows a 24-foot wide internal roadway with a 30-foot turning radius from the Sunrise Boulevard approach, which conforms with the City standards. The proposed project site plan also shows a second EVA road connection to Trimble Way. The site plan annotates the existing right-of-way (ROW) width to Trimble Way along the proposed EVA roadway as 20-feet between property lines. The proposed second EVA would therefore satisfy the minimum 20-feet of width specified in the City standards.

Adequate on-site space is provided for refuse services to access the on-site refuse locations as depicted in **Exhibit 2**.

[2] *Section 4 Traffic Impact Studies, City of Roseville Design Standards,* City of Roseville, January 2023

[3] *Emergency Vehicle Access, City of Roseville - Fire & Life Safety Standard*, City of Roseville, 2023.

Conclusions

The following are the primary conclusions based on the analyses discussed herein:

- *The addition of project trips using the Terraces Access Road intersection with Sunrise Avenue (Intersection #1) will not adversely affect the delay or queueing* – the reported delay and queuing at Intersection #1 with the addition of the approved and proposed projects is not expected to result in discernable deterioration in operations. All queueing on approved project and proposed project-related movements is contained within the existing storage provided at the intersection.
- *The site plan provides adequate MRTD for egressing vehicles* – the current driveway provides adequate throat depth the accommodate the minimum required throat depth for the combination of on-site egressing traffic and background volumes along Sunrise Avenue.
- *The project must provide two EVA points that conform with the City of Roseville Emergency Vehicle Access Standards* – the City standards require a minimum of two EVA points. The City standards specify that the minimum roadway width required to provide sufficient access is 20-feet, with an inside turning radius of 30-feet or greater on all curves. The project proposes to provide one EVA point to Sunrise Boulevard and one EVA point to Trimble Way to satisfy these requirements. The Sunrise Boulevard EVA provides sufficient width and turning space per the City standards. The site plan annotates the existing right-of-way (ROW) width to Trimble Way along the proposed EVA roadway as 20-feet between property lines. The proposed second EVA would therefore satisfy the minimum 20-feet of width specified in the City standards.
- *The site plan provides adequate access to buildings to accommodate refuse service vehicles.*

Attachments

Exhibit 1 – Project Vicinity Map
Exhibit 2 – Cottages at the Terraces of Roseville Site Plan
Exhibit 3 – Sunrise Office Center Site Plan
Exhibit 4 – Approved and Proposed Project Trip Distribution
Exhibit 5 – Approved and Proposed Project Trip Assignment
Exhibit 6 – Existing (2025) and Existing (2025) plus Approved Project plus Project Peak-Hour Volumes, Traffic Control, and Lane Geometry

Attachment A – Traffic Count Data Sheets
Attachment B – Existing (2025) Analysis Worksheets
Attachment C – Existing (2025) plus Approved Project plus Project Analysis Worksheets

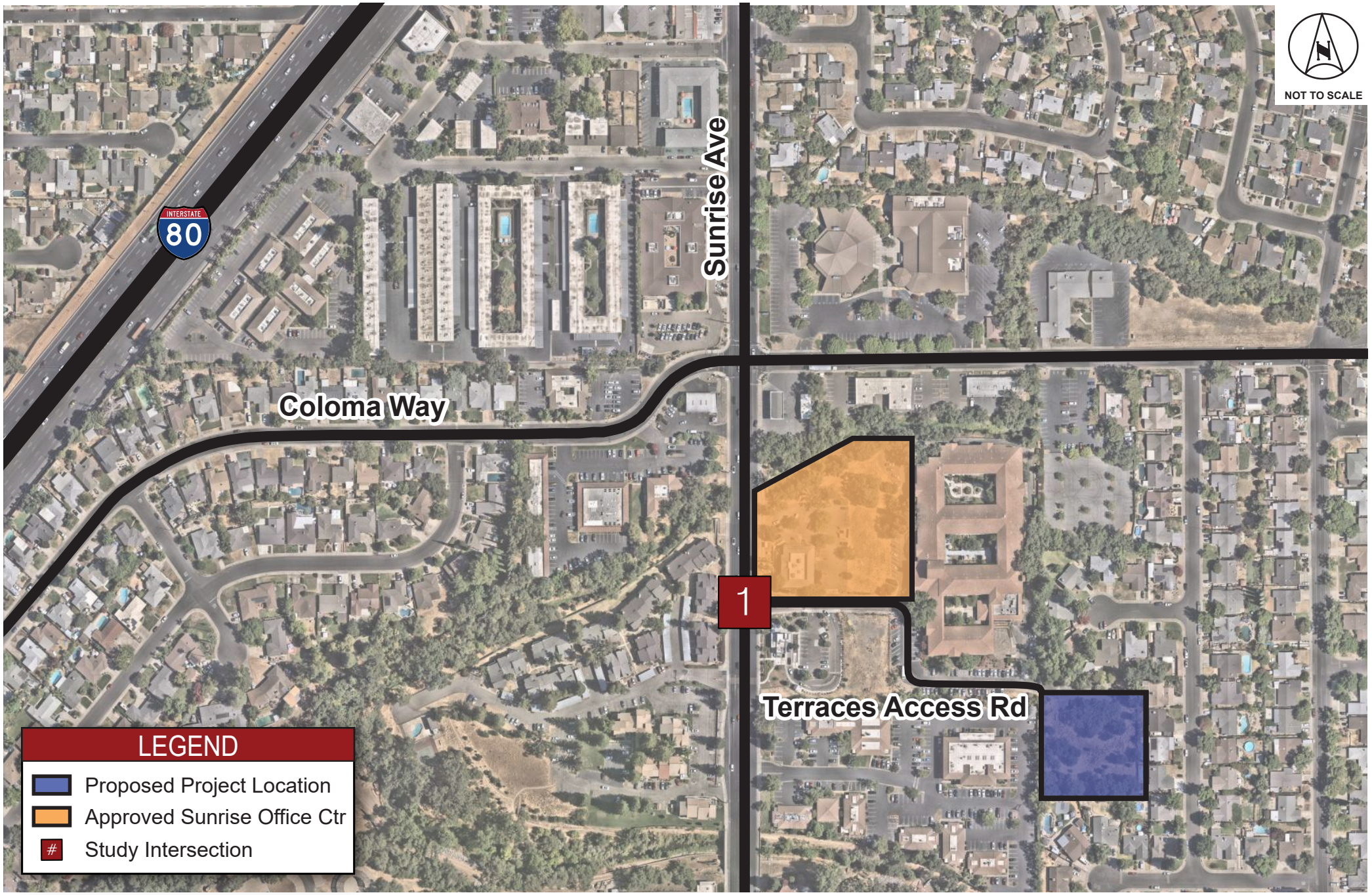

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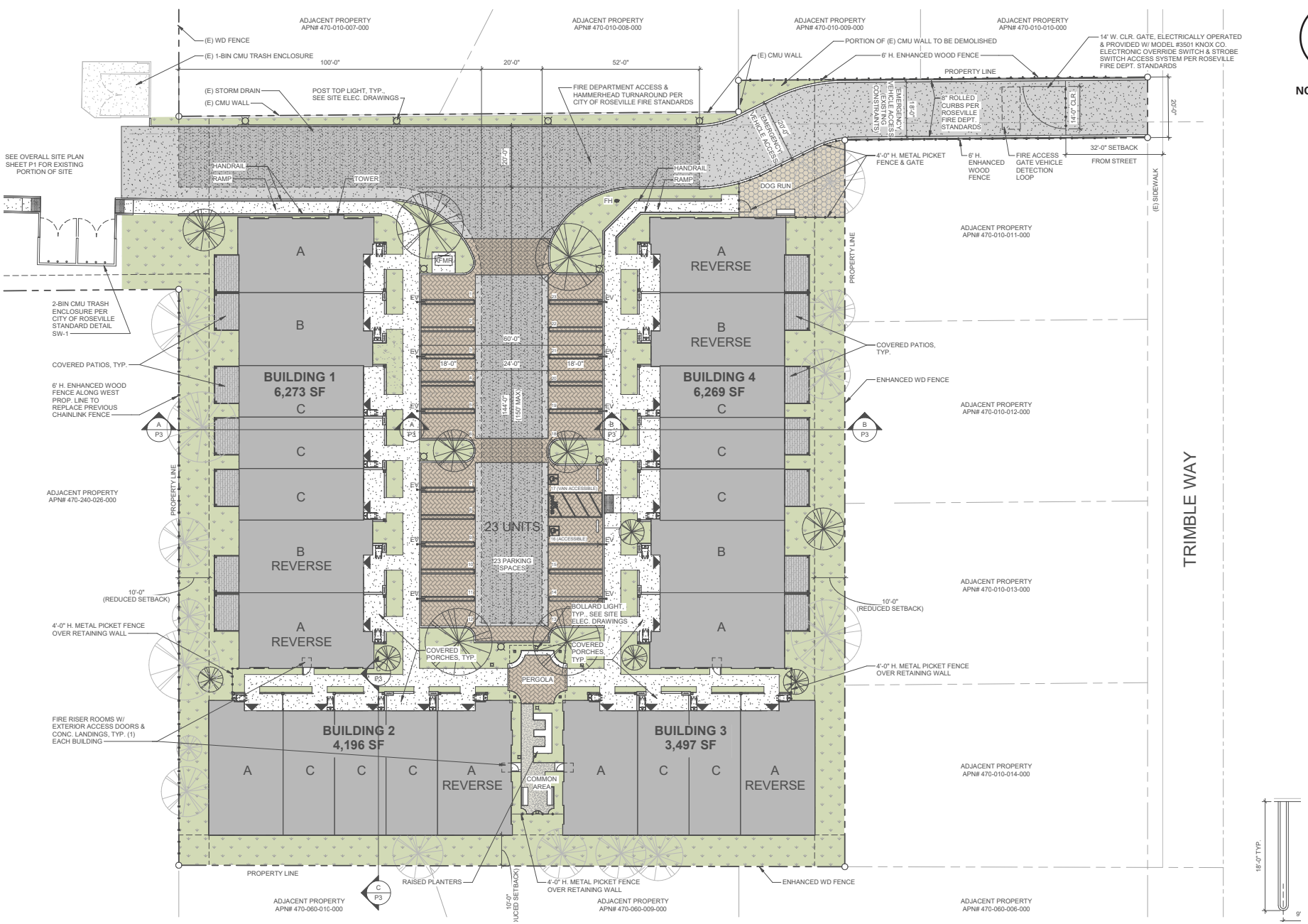
Exhibit 1
Project Vicinity Map



Site Plan Source: ELLIS Architects, 10/15/2025

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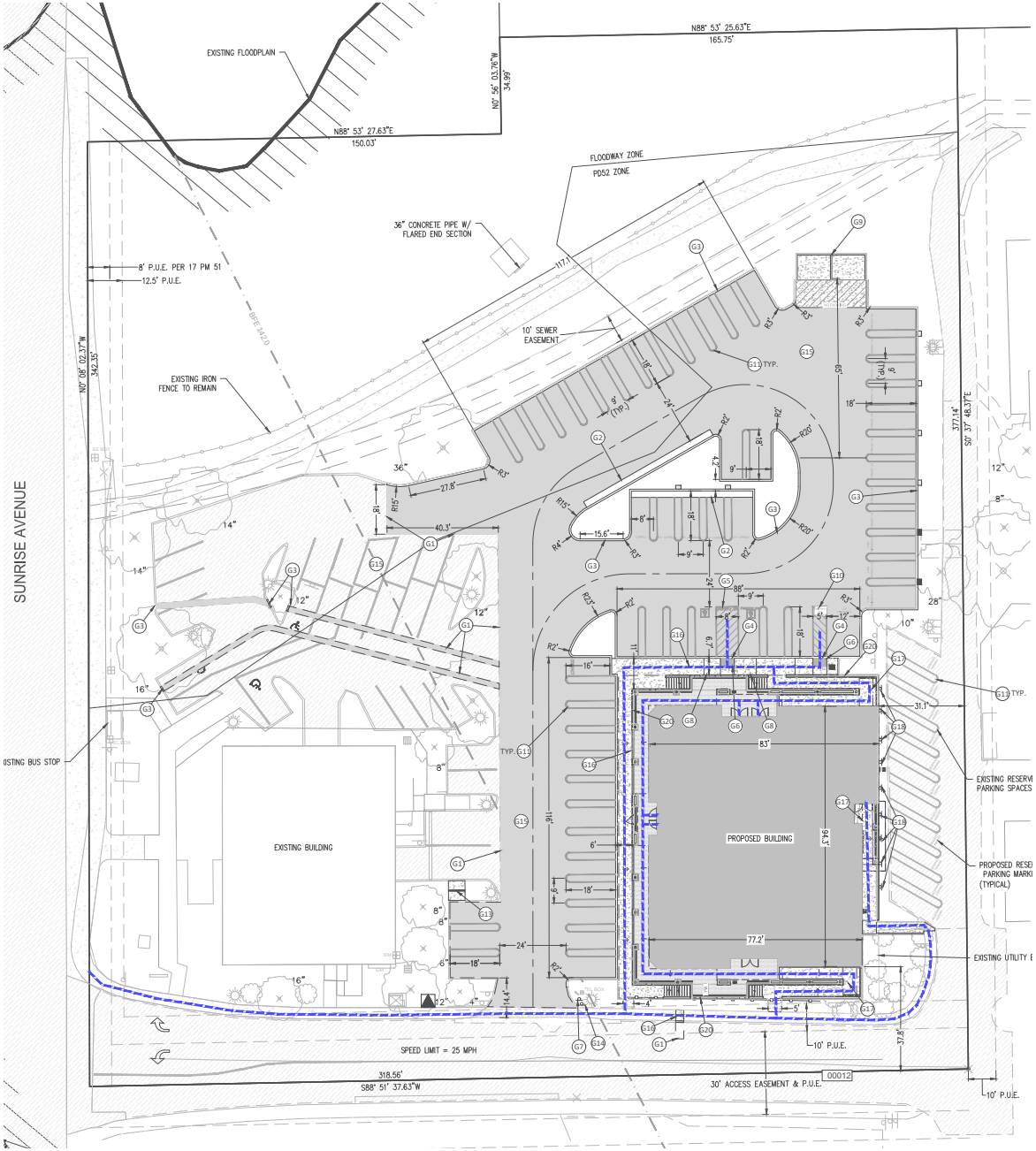
Exhibit 2
Cottages at the Terraces of Roseville Site Plan



NOT TO SCALE

Site Plan Source: MILLENNIUM, June 2025

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Exhibit 3
Sunrise Office Center Site Plan

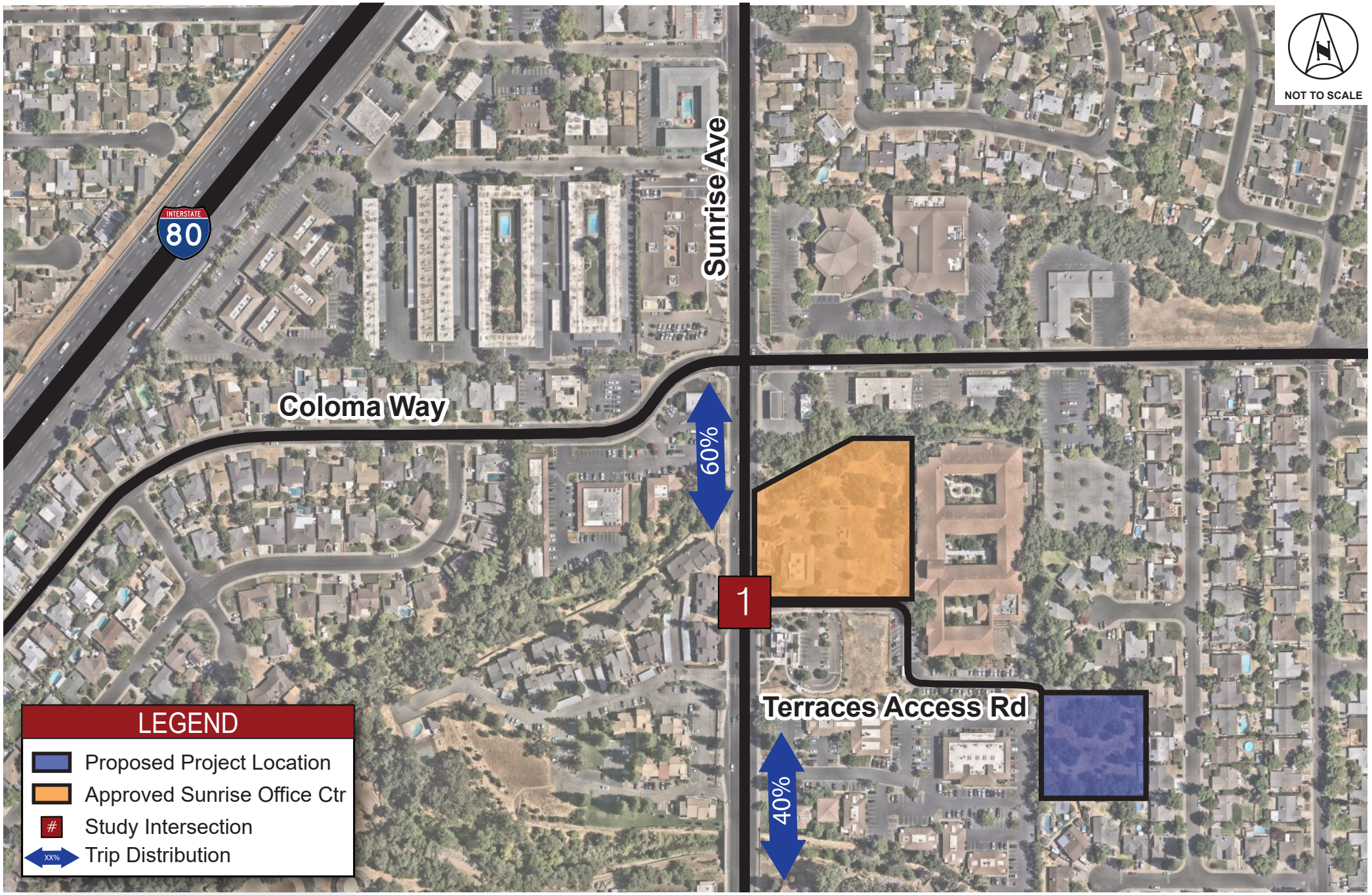

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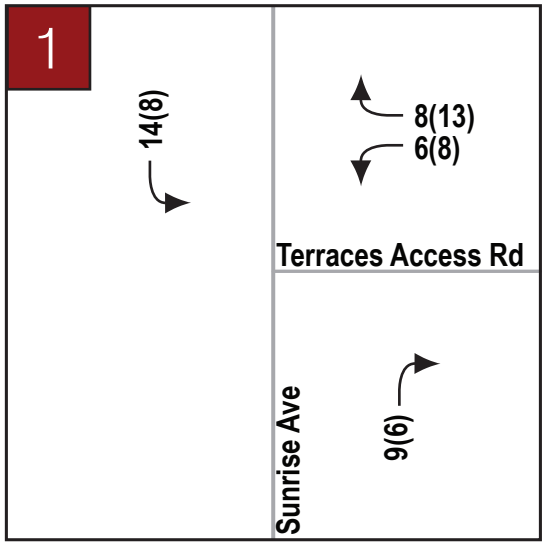
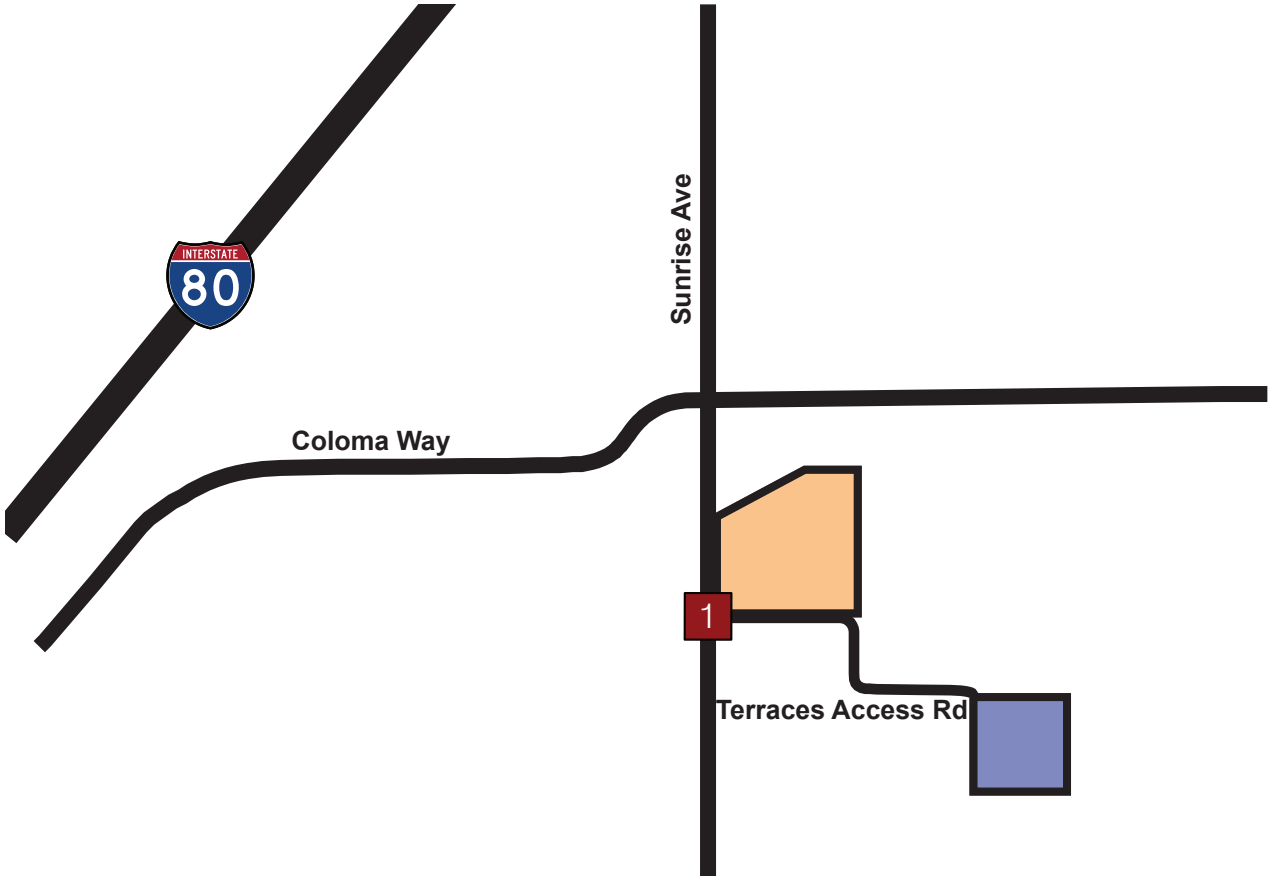
Exhibit 4
Approved and Proposed Project Trip Distribution

NOT TO SCALE





LEGEND

- Proposed Project Location
- Approved Sunrise Office Ctr
- # Study Intersection
- XX(XX) AM(PM) Trip Assignment

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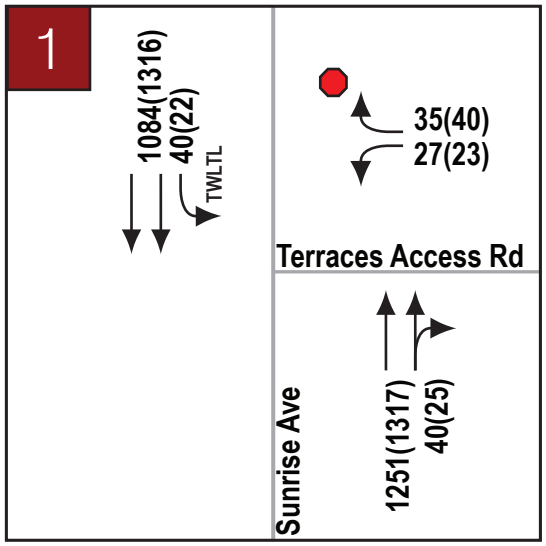
Exhibit 5
Approved and Proposed Project Trip Assignment

NOT TO SCALE

Existing (2025)



Existing (2025) plus Approved Project plus Project

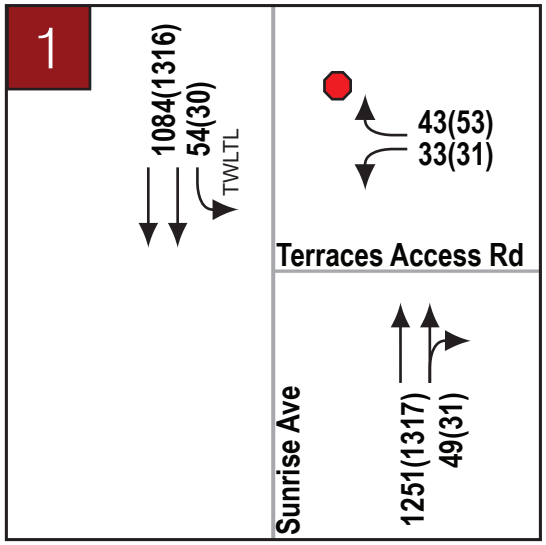


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Exhibit 6

Existing (2025) and Existing (2025) plus Approved Project plus Project Peak-Hour Volumes, Traffic Control, and Lane Geometry

Attachment A

Traffic Count Data Sheets

National Data & Surveying Services

Intersection Turning Movement Count

Location: Sunrise Ave & Terraces of Roseville Access Rd
City: Roseville
Control: 1-Way Stop(WB)

Project ID: 25-070223-001
Date: 10/16/2025

Data - Total

NS/EW Streets:	Sunrise Ave				Sunrise Ave				Terraces of Roseville Access Rd				Terraces of Roseville Access Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
6:00 AM	0	159	6	0	2	122	0	0	0	0	0	0	6	0	4	0	299
6:15 AM	0	175	6	0	2	139	0	0	0	0	0	0	3	0	4	0	329
6:30 AM	0	256	2	0	3	170	0	0	0	0	0	0	3	0	3	0	437
6:45 AM	0	249	7	0	6	175	0	0	0	0	0	0	2	0	2	0	441
7:00 AM	0	222	7	0	11	202	0	0	0	0	0	0	6	0	8	0	456
7:15 AM	0	299	9	0	5	229	0	0	0	0	0	0	7	0	7	0	556
7:30 AM	0	326	10	0	8	235	0	0	0	0	0	0	4	0	8	0	591
7:45 AM	0	329	11	0	8	262	0	0	0	0	0	0	2	0	11	0	623
8:00 AM	0	301	8	0	11	315	0	0	0	0	0	0	6	0	14	0	655
8:15 AM	0	305	12	0	9	270	0	0	0	0	0	0	7	0	5	0	608
8:30 AM	0	316	9	0	12	237	0	0	0	0	0	0	12	0	5	0	591
8:45 AM	0	316	11	0	9	258	0	0	0	0	0	0	11	0	7	0	612
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	3253	98	0	86	2614	0	0	0	0	0	0	69	0	78	0	6198
APPROACH %'s :	0.00%	97.08%	2.92%	0.00%	3.19%	96.81%	0.00%	0.00%					46.94%	0.00%	53.06%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	1251	40	0	40	1084	0	0	0	0	0	0	27	0	35	0	2477
PEAK HR FACTOR :	0.000	0.951	0.833	0.000	0.833	0.860	0.000	0.000	0.000	0.000	0.000	0.000	0.563	0.000	0.625	0.000	0.945
	0.949				0.862								0.775				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	2	0	0	0	2	0	0	0	0	0	0	1	0	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	334	8	0	6	314	0	0	0	0	0	0	8	0	16	0	686
4:15 PM	0	359	11	0	6	304	0	0	0	0	0	0	7	0	10	0	697
4:30 PM	0	291	9	0	5	294	0	0	0	0	0	0	5	0	6	0	610
4:45 PM	0	311	6	0	7	351	0	0	0	0	0	0	6	0	8	0	689
5:00 PM	0	342	6	0	4	345	0	1	0	0	0	0	8	0	11	0	717
5:15 PM	0	322	3	0	7	301	0	0	0	0	0	0	6	0	8	0	647
5:30 PM	0	342	10	0	3	319	0	0	0	0	0	0	3	0	13	0	690
5:45 PM	0	299	3	0	3	297	0	0	0	0	0	0	5	0	9	0	616
6:00 PM	0	276	0	0	9	273	0	0	0	0	0	0	4	0	6	0	568
6:15 PM	0	291	7	0	5	271	0	0	0	0	0	0	4	0	4	0	582
6:30 PM	0	242	3	0	5	262	0	0	0	0	0	0	3	0	11	0	526
6:45 PM	0	236	3	0	2	255	0	0	0	0	0	0	7	0	7	0	510
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	3645	69	0	62	3586	0	1	0	0	0	0	66	0	109	0	7538
APPROACH %'s :	0.00%	98.14%	1.86%	0.00%	1.70%	98.27%	0.00%	0.03%					37.71%	0.00%	62.29%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	1317	25	0	21	1316	0	1	0	0	0	0	23	0	40	0	2743
PEAK HR FACTOR :	0.000	0.963	0.625	0.000	0.750	0.937	0.000	0.250	0.000	0.000	0.000	0.000	0.719	0.000	0.769	0.000	0.956
	0.953				0.934								0.829				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Dutch Bros Coffee Dwy/Carbon Health Urgent Care Roseville Dwy & Terraces of Roseville Access Rd
City: Roseville
Control: No Control

Project ID: 25-070223-002
Date: 10/16/2025

Data - Total

NS/EW Streets:	Dutch Bros Coffee Dwy/Carbon Health Urgent Care Roseville Dwy					Dutch Bros Coffee Dwy/Carbon Health Urgent Care Roseville Dwy				Terraces of Roseville Access Rd					Terraces of Roseville Access Rd				
AM	NORTHBOUND					SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	EL	ET	ER	EU	ER2	WL	WT	WR	WU	TOTAL
6:00 AM	7	0	0	0	0	0	0	0	0	0	2	0	0	6	0	4	0	0	19
6:15 AM	4	0	0	0	0	0	0	0	0	0	3	0	0	5	0	2	0	0	14
6:30 AM	5	0	0	0	0	0	0	0	0	0	3	0	0	2	0	1	0	0	11
6:45 AM	4	0	0	0	0	0	0	0	0	0	3	2	0	8	0	0	0	0	17
7:00 AM	13	0	0	0	2	0	0	0	0	0	3	6	0	9	0	1	0	0	34
7:15 AM	14	0	0	0	0	0	0	0	0	0	2	1	0	11	0	0	0	0	28
7:30 AM	10	0	0	0	2	0	0	1	0	1	3	5	0	9	0	1	1	0	33
7:45 AM	13	0	0	0	0	0	0	0	0	4	3	3	0	8	0	0	0	0	31
8:00 AM	15	0	1	0	0	0	0	2	0	1	5	4	1	9	0	2	0	0	40
8:15 AM	13	0	0	0	1	0	0	0	0	1	2	2	1	14	0	0	0	0	34
8:30 AM	13	0	0	0	0	0	0	1	0	2	7	2	0	11	0	2	0	0	38
8:45 AM	13	0	1	0	0	0	0	2	0	2	3	2	0	12	0	2	0	0	37
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	EL	ET	ER	EU	ER2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	124	0	2	0	5	0	0	6	0	11	39	27	2	104	0	15	1	0	336
APPROACH %'s :	94.66%	0.00%	1.53%	0.00%	3.82%	0.00%	0.00%	100.00%	0.00%	6.01%	21.31%	14.75%	1.09%	56.83%	0.00%	93.75%	6.25%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																		TOTAL
PEAK HR VOL :	54	0	2	0	1	0	0	5	0	6	17	10	2	46	0	6	0	0	149
PEAK HR FACTOR :	0.900	0.000	0.500	0.000	0.250	0.000	0.000	0.625	0.000	0.750	0.607	0.625	0.500	0.821	0.000	0.750	0.000	0.000	0.931
			0.891					0.625				0.920					0.750		

PM	NORTHBOUND					SOUTHBOUND				EASTBOUND					WESTBOUND				
	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	EL	ET	ER	EU	ER2	WL	WT	WR	WU	TOTAL
4:00 PM	15	0	1	0	1	0	0	0	0	3	3	2	0	6	0	10	0	0	41
4:15 PM	10	0	0	0	1	0	0	1	0	0	6	3	0	8	0	5	0	0	34
4:30 PM	6	1	0	0	0	0	0	2	0	2	6	1	0	5	0	3	0	0	26
4:45 PM	5	0	0	0	0	0	0	3	0	3	3	0	0	7	0	7	0	0	28
5:00 PM	8	0	0	0	1	0	0	3	0	1	3	1	0	5	0	7	0	0	29
5:15 PM	5	0	0	0	1	0	0	1	0	0	4	2	0	4	0	8	0	0	25
5:30 PM	9	0	0	0	1	0	0	0	0	0	2	4	0	7	0	7	0	0	30
5:45 PM	8	0	0	0	0	0	0	1	0	0	1	1	0	3	0	5	0	0	19
6:00 PM	8	0	0	0	2	0	0	1	0	0	3	4	0	3	0	1	0	0	22
6:15 PM	6	0	0	0	1	0	0	1	0	0	4	2	1	5	0	2	0	0	22
6:30 PM	7	0	0	0	2	0	0	0	0	1	0	3	0	4	0	6	0	0	23
6:45 PM	4	0	0	0	0	0	0	0	0	1	1	0	0	3	0	9	0	0	18
	NL	NT	NR	NU	NU2	SL	ST	SR	SU	EL	ET	ER	EU	ER2	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	91	1	1	0	10	0	0	13	0	11	36	23	1	60	0	70	0	0	317
APPROACH %'s :	88.35%	0.97%	0.97%	0.00%	9.71%	0.00%	0.00%	100.00%	0.00%	8.40%	27.48%	17.56%	0.76%	45.80%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																		TOTAL
PEAK HR VOL :	36	1	1	0	2	0	0	6	0	8	18	6	0	26	0	25	0	0	129
PEAK HR FACTOR :	0.600	0.250	0.250	0.000	0.500	0.000	0.000	0.500	0.000	0.667	0.750	0.500	0.000	0.813	0.000	0.625	0.000	0.000	0.787
			0.588					0.500				0.853					0.625		

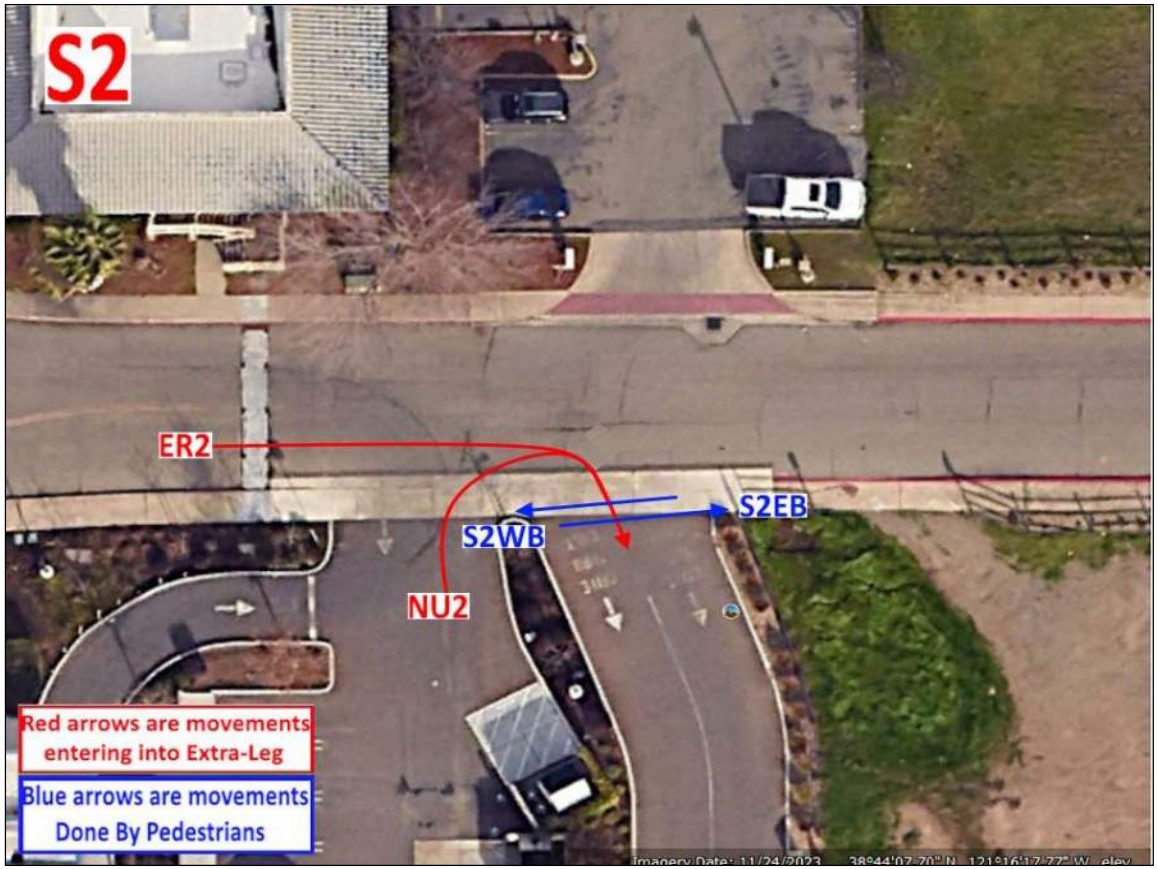
National Data & Surveying Services

Intersection Turning Movement Count

Explanation for extra leg movements

Movements entering the extra leg

ER2	Movements coming from EB on Terraces of Roseville Access Rd entering into the Extra Leg (Dutch Bros Coffee Drive Thru Dwy)
NU2	Movements coming from NB on Dutch Bros Coffee Dwy entering into the Extra Leg (Dutch Bros Coffee Drive Thru Dwy)



Prepared by National Data & Surveying Services

VOLUME

Terraces of Roseville Access Rd W/O Dutch Bros Coffee Dwy/Carbon Health Urgent Care Roseville Dwy (38.735374, -121.271726)

Day: Thursday
Date: 10/16/2025

City: Roseville
Project #: CA25_070224_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,006	1,002	2,008

15-Minutes Interval

TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			0	0	0	12:00			13	10	23
0:15			0	0	0	12:15			20	22	42
0:30			0	0	0	12:30			22	21	43
0:45			0	0	0	12:45			26	20	46
1:00			0	0	0	13:00			22	16	38
1:15			0	0	0	13:15			16	21	37
1:30			1	0	1	13:30			30	25	55
1:45			0	0	0	13:45			25	26	51
2:00			2	0	2	14:00			22	25	47
2:15			0	0	0	14:15			22	24	46
2:30			1	1	2	14:30			15	17	32
2:45			0	2	2	14:45			25	18	43
3:00			0	1	1	15:00			18	23	41
3:15			0	0	0	15:15			18	27	45
3:30			0	0	0	15:30			29	25	54
3:45			0	0	0	15:45			21	21	42
4:00			0	0	0	16:00			14	24	38
4:15			1	1	2	16:15			17	17	34
4:30			3	0	3	16:30			14	11	25
4:45			3	0	3	16:45			13	14	27
5:00			4	3	7	17:00			10	19	29
5:15			8	7	15	17:15			10	14	24
5:30			9	8	17	17:30			13	16	29
5:45			10	9	19	17:45			6	14	20
6:00			8	10	18	18:00			9	10	19
6:15			8	7	15	18:15			12	8	20
6:30			5	6	11	18:30			8	14	22
6:45			13	4	17	18:45			5	14	19
7:00			18	14	32	19:00			6	7	13
7:15			14	14	28	19:15			7	6	13
7:30			18	12	30	19:30			5	8	13
7:45			19	13	32	19:45			8	6	14
8:00			19	20	39	20:00			7	8	15
8:15			21	12	33	20:15			6	4	10
8:30			21	17	38	20:30			7	9	16
8:45			20	18	38	20:45			8	6	14
9:00			22	20	42	21:00			8	5	13
9:15			17	17	34	21:15			2	9	11
9:30			20	12	32	21:30			6	4	10
9:45			19	21	40	21:45			4	8	12
10:00			14	19	33	22:00			0	9	9
10:15			24	17	41	22:15			1	1	2
10:30			23	18	41	22:30			2	1	3
10:45			20	17	37	22:45			2	2	4
11:00			20	17	37	23:00			1	3	4
11:15			13	20	33	23:15			0	0	0
11:30			20	22	42	23:30			0	0	0
11:45			13	11	24	23:45			0	0	0
TOTALS	0	0	451	390	841	TOTALS	0	0	555	612	1167
SPLIT %	0%	0%	54%	46%	42%	SPLIT %	0%	0%	48%	52%	58%

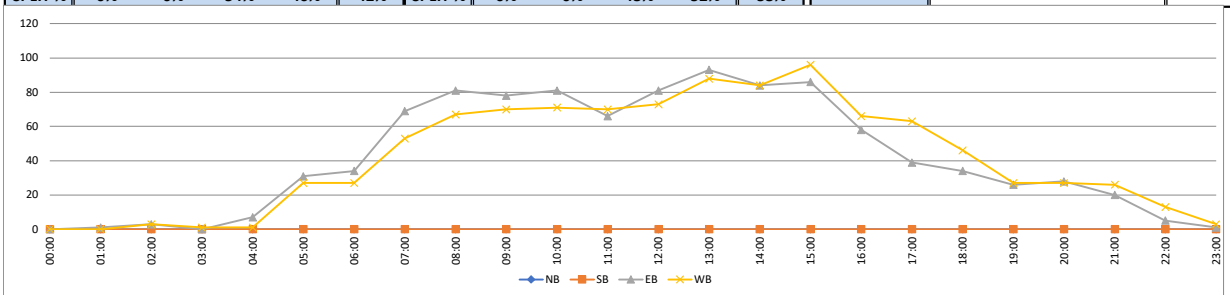
DAILY TOTALS

Hourly Intervals

TIME	NB	SB	EB	WB	TOTAL
00:00 01:00			0	0	0
01:00 02:00			1	0	1
02:00 03:00			3	3	6
03:00 04:00			0	1	1
04:00 05:00			7	1	8
05:00 06:00			31	27	58
06:00 07:00			34	27	61
07:00 08:00			69	53	122
08:00 09:00			81	67	148
09:00 10:00			78	70	148
10:00 11:00			81	71	152
11:00 12:00			66	70	136
12:00 13:00			81	73	154
13:00 14:00			93	88	181
14:00 15:00			84	84	168
15:00 16:00			86	96	182
16:00 17:00			58	66	124
17:00 18:00			39	63	102
18:00 19:00			34	46	80
19:00 20:00			26	27	53
20:00 21:00			28	27	55
21:00 22:00			20	26	46
22:00 23:00			5	13	18
23:00 00:00			1	3	4

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume			451	390	841
Peak Hour			10:15	10:45	10:15
Peak Volume			87	76	156
Peak Hour Factor			0.906	0.864	0.951
Peak Period	12:00	to	00:00		
Volume			555	612	1167
Peak Hour			13:30	13:30	13:30
Peak Volume			99	100	199
Peak Hour Factor			0.825	0.962	0.905
Peak Period	07:00	to	09:00		
Volume			150	120	270
Peak Hour			8:00	8:00	8:00
Peak Volume			81	67	148
Peak Hour Factor			0.964	0.838	0.949
Peak Period	16:00	to	18:00		
Volume			97	129	226
Peak Hour			16:00	16:00	16:00
Peak Volume			58	66	124
Peak Hour Factor			0.853	0.688	0.816



Prepared by National Data & Surveying Services

VOLUME

Terraces of Roseville Access Rd E/O Dutch Bros Coffee Dwy/Carbon Health Urgent Care Roseville Dwy (38.735357, -121.270940)

Day: Thursday
Date: 10/16/2025

City: Roseville
Project #: CA25_070224_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	302	305	607

DAILY TOTALS

15-Minutes Interval

TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			0	0	0	12:00			7	2	9
0:15			0	0	0	12:15			7	8	15
0:30			0	0	0	12:30			8	9	17
0:45			0	0	0	12:45			7	6	13
1:00			0	0	0	13:00			7	4	11
1:15			0	0	0	13:15			10	9	19
1:30			0	0	0	13:30			10	11	21
1:45			0	0	0	13:45			10	10	20
2:00			1	0	1	14:00			6	9	15
2:15			0	0	0	14:15			5	4	9
2:30			1	0	1	14:30			3	8	11
2:45			0	2	2	14:45			5	6	11
3:00			0	0	0	15:00			9	7	16
3:15			0	0	0	15:15			3	8	11
3:30			0	0	0	15:30			8	9	17
3:45			0	0	0	15:45			7	5	12
4:00			0	0	0	16:00			4	10	14
4:15			1	1	2	16:15			6	5	11
4:30			0	0	0	16:30			6	3	9
4:45			2	0	2	16:45			3	7	10
5:00			0	0	0	17:00			3	7	10
5:15			0	0	0	17:15			4	8	12
5:30			1	0	1	17:30			2	7	9
5:45			4	3	7	17:45			1	5	6
6:00			2	4	6	18:00			3	1	4
6:15			3	2	5	18:15			4	2	6
6:30			3	1	4	18:30			0	6	6
6:45			3	0	3	18:45			1	9	10
7:00			3	1	4	19:00			4	2	6
7:15			2	0	2	19:15			1	0	1
7:30			3	2	5	19:30			3	4	7
7:45			3	0	3	19:45			3	2	5
8:00			6	2	8	20:00			2	3	5
8:15			2	0	2	20:15			2	3	5
8:30			7	2	9	20:30			2	1	3
8:45			4	2	6	20:45			2	1	3
9:00			6	4	10	21:00			0	0	0
9:15			4	3	7	21:15			1	2	3
9:30			8	4	12	21:30			3	4	7
9:45			7	6	13	21:45			1	1	2
10:00			7	9	16	22:00			0	8	8
10:15			10	6	16	22:15			0	0	0
10:30			9	5	14	22:30			1	1	2
10:45			7	6	13	22:45			0	0	0
11:00			5	5	10	23:00			0	0	0
11:15			2	7	9	23:15			0	0	0
11:30			8	7	15	23:30			0	0	0
11:45			4	4	8	23:45			0	0	0
TOTALS	0	0	128	88	216	TOTALS	0	0	174	217	391
SPLIT %	0%	0%	59%	41%	36%	SPLIT %	0%	0%	45%	55%	64%

Hourly Intervals

TIME		NB	SB	EB	WB	TOTAL
00:00	01:00			0	0	0
01:00	02:00			0	0	0
02:00	03:00			2	2	4
03:00	04:00			0	0	0
04:00	05:00			3	1	4
05:00	06:00			5	3	8
06:00	07:00			11	7	18
07:00	08:00			11	3	14
08:00	09:00			19	6	25
09:00	10:00			25	17	42
10:00	11:00			33	26	59
11:00	12:00			19	23	42
12:00	13:00			29	25	54
13:00	14:00			37	34	71
14:00	15:00			19	27	46
15:00	16:00			27	29	56
16:00	17:00			19	25	44
17:00	18:00			10	27	37
18:00	19:00			8	18	26
19:00	20:00			11	8	19
20:00	21:00			8	8	16
21:00	22:00			5	7	12
22:00	23:00			1	9	10
23:00	00:00			0	0	0

STATISTICS

	NB	SB	EB	WB	TOTAL
Peak Period	00:00	to	12:00		
Volume			128	88	216
Peak Hour			9:45	9:45	9:45
Peak Volume			33	26	59
Peak Hour Factor			0.825	0.722	0.922
Peak Period	12:00	to	00:00		
Volume			174	217	391
Peak Hour			13:00	13:15	13:15
Peak Volume			37	39	75
Peak Hour Factor			0.925	0.886	0.893
Peak Period	07:00	to	09:00		
Volume			30	9	39
Peak Hour			8:00	8:00	8:00
Peak Volume			19	6	25
Peak Hour Factor			0.679	0.750	0.694
Peak Period	16:00	to	18:00		
Volume			29	52	81
Peak Hour			16:00	16:45	16:00
Peak Volume			19	29	44
Peak Hour Factor			0.792	0.906	0.786

Attachment B

Existing (2025) Analysis Worksheets

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	35	1251	40	40	1084
Future Vol, veh/h	27	35	1251	40	40	1084
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	95	95	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	45	1317	42	47	1260

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2061	679	0	0	1359	0
Stage 1	1338	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	47	394	-	-	502	-
Stage 1	209	-	-	-	-	-
Stage 2	441	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	43	394	-	-	502	-
Mov Cap-2 Maneuver	143	-	-	-	-	-
Stage 1	209	-	-	-	-	-
Stage 2	400	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	25.23	0	0.46
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	143	394	502	-
HCM Lane V/C Ratio	-	-	0.242	0.114	0.093	-
HCM Control Delay (s/veh)	-	-	38.1	15.3	12.9	-
HCM Lane LOS	-	-	E	C	B	-
HCM 95th %tile Q(veh)	-	-	0.9	0.4	0.3	-

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	40	1317	25	22	1316
Future Vol, veh/h	23	40	1317	25	22	1316
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	95	95	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	51	1386	26	26	1530

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2216	706	0	0	1413	0
Stage 1	1399	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	37	378	-	-	479	-
Stage 1	194	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	35	378	-	-	479	-
Mov Cap-2 Maneuver	131	-	-	-	-	-
Stage 1	194	-	-	-	-	-
Stage 2	374	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	24.9	0	0.21
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	131	378	479	-
HCM Lane V/C Ratio	-	-	0.226	0.136	0.053	-
HCM Control Delay (s/veh)	-	-	40.4	16	12.9	-
HCM Lane LOS	-	-	E	C	B	-
HCM 95th %tile Q(veh)	-	-	0.8	0.5	0.2	-

Attachment C

Existing (2025) plus Approved Project plus Project Analysis Worksheets

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	43	1251	49	54	1084
Future Vol, veh/h	33	43	1251	49	54	1084
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	95	95	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	55	1317	52	63	1260

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2098	684	0	0	1368	0
Stage 1	1343	-	-	-	-	-
Stage 2	756	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	45	391	-	-	498	-
Stage 1	208	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 39	391	-	-	498	-
Mov Cap-2 Maneuver	138	-	-	-	-	-
Stage 1	208	-	-	-	-	-
Stage 2	371	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	27.25	0	0.63
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	138	391	498	-
HCM Lane V/C Ratio	-	-	0.307	0.141	0.126	-
HCM Control Delay (s/veh)	-	-	42.3	15.7	13.3	-
HCM Lane LOS	-	-	E	C	B	-
HCM 95th %tile Q(veh)	-	-	1.2	0.5	0.4	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	31	53	1317	31	30	1316
Future Vol, veh/h	31	53	1317	31	30	1316
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	95	95	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	64	1386	33	32	1415

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2175	709	0	0	1419	0
Stage 1	1403	-	-	-	-	-
Stage 2	772	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	40	376	-	-	476	-
Stage 1	193	-	-	-	-	-
Stage 2	416	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 37	376	-	-	476	-
Mov Cap-2 Maneuver	132	-	-	-	-	-
Stage 1	193	-	-	-	-	-
Stage 2	388	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	26.12	0	0.29
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	132	376	476	-
HCM Lane V/C Ratio	-	-	0.282	0.17	0.068	-
HCM Control Delay (s/veh)	-	-	42.5	16.5	13.1	-
HCM Lane LOS	-	-	E	C	B	-
HCM 95th %tile Q(veh)	-	-	1.1	0.6	0.2	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon