Miller Ranch Self Storage Traffic Study

PREPARED FOR

CENTENNIAL
American Properties

February 2022

Balancing the Natural and Built Environment

PSOMAS

MILLER RANCH SELF STORAGE
TRAFFIC STUDY
ORO VALLEY, ARIZONA

PREPARED FOR

CENTENNIAL
American Properties

PREPARED BY

PSOMAS

PSOMAS PROJECT NO. 7CAP220201

FEBRUARY 2022

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1. EXECUTIVE SUMMARY

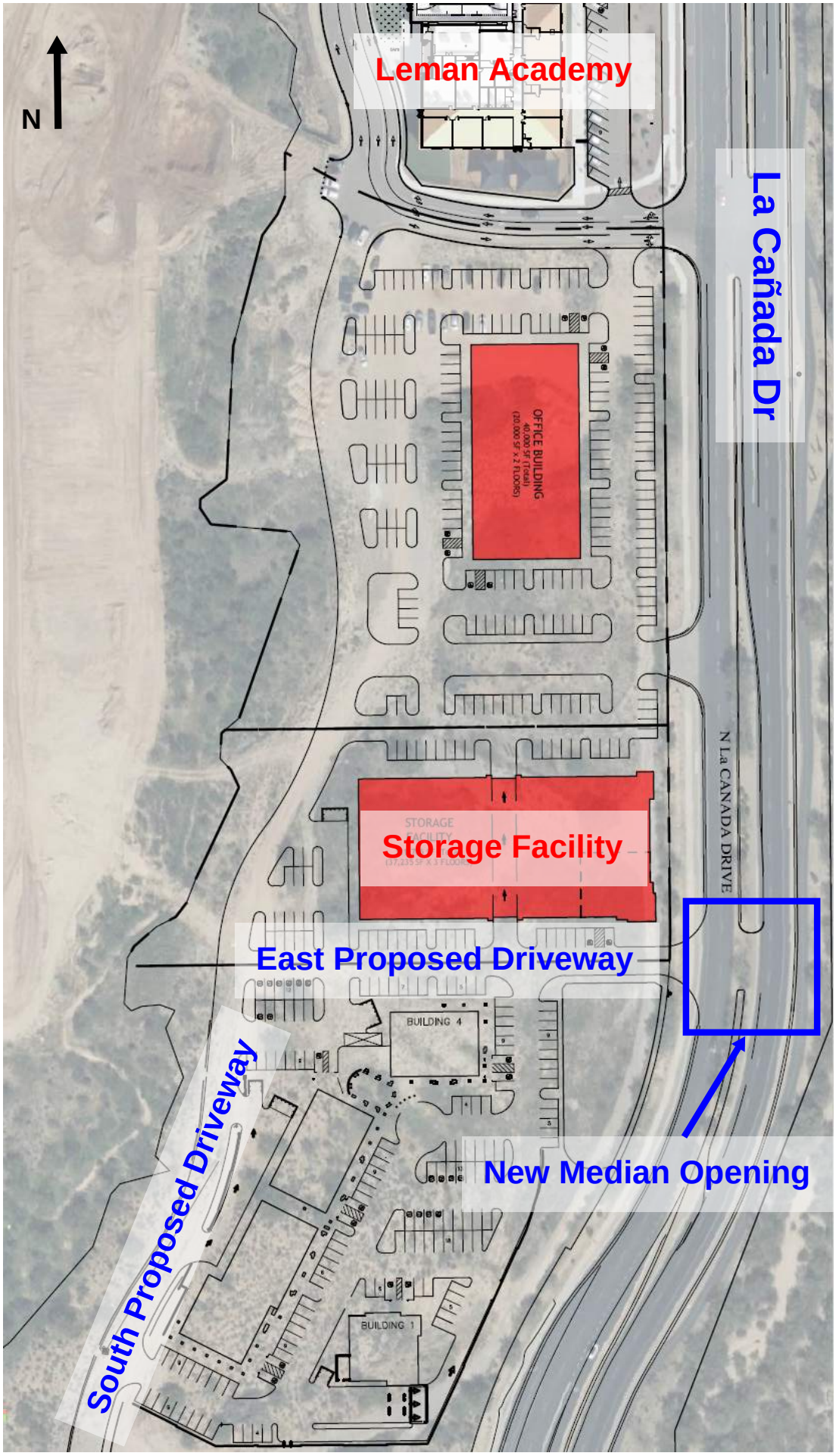
The purpose of this traffic study is to provide an evaluation of the self-storage facility located in the Miller Ranch development. The Miller Ranch development will be located on the north side of Tangerine Road west of La Cañada Drive and was originally expected to include commercial, bank and office uses. However, the development of the overall site is being updated.

This report focuses on a proposed 111,705 square foot (SF) self-storage facility which includes 750 storage units located near the center of the original Miller Ranch site. The project is expected to be completed in 2023. Figure 1 shows the location of the self-storage facility and Figure 2 shows the site plan.

Trip generation for the project was developed using the ITE *Trip Generation Manual, 11th Edition*[1]. The self-storage facility is expected to generate 162 daily trips, including 10 in the AM peak hour and 17 in the PM peak hour.

Operational analysis shows that the intersections of Tangerine Road and La Cañada Drive, La Cañada Drive and the East Proposed Driveway, and Tangerine Road and the South Proposed Driveway are expected to operate with acceptable LOS in the opening year with the project. A northbound left turn lane will be constructed on La Cañada Drive to serve the project, but right turn lanes are not warranted at either project driveway.

Figure 1. Miller Ranch Development Location



Miller Ranch Self Storage Traffic Study	*Figure 2. Site Plan*	PSOMAS February 2022

2. EXISTING CONDITIONS

2.1. EXISTING LAND USE

The land on which the Miller Ranch self-storage will be built is currently vacant. Leman Academy is located immediately north of the project site and a single-family residential development is located west of the site.

2.2. ROADWAY NETWORK

As previously mentioned, the project will have access from both Tangerine Road and La Cañada Drive.

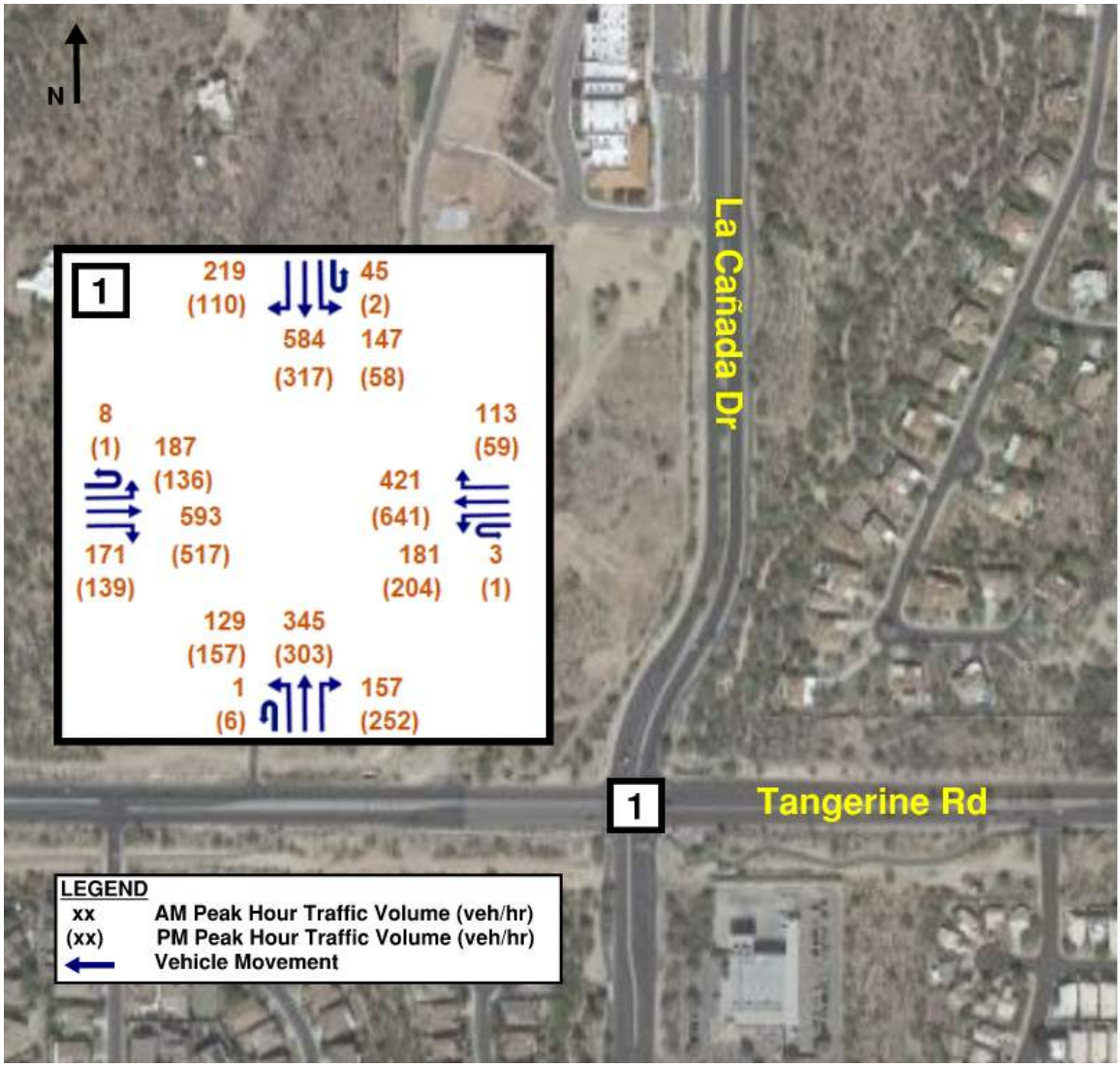
Tangerine Road is a four lane, divided roadway with a posted speed limit of 45 mph in the project area. Tangerine Road is classified as a major arterial[2] by the Town of Oro Valley.

La Cañada Drive is also a four lane, divided roadway in the project area. The roadway has a posted speed of 45 mph and is classified as a minor arterial[2].

2.3. TRAFFIC VOLUMES

Traffic volumes were collected at the intersection of Tangerine Road and La Cañada Drive in February 2021. The existing traffic volumes are shown in Figure 3 and the data is included in Appendix A.

Figure 3. Existing Traffic Volumes (2022)



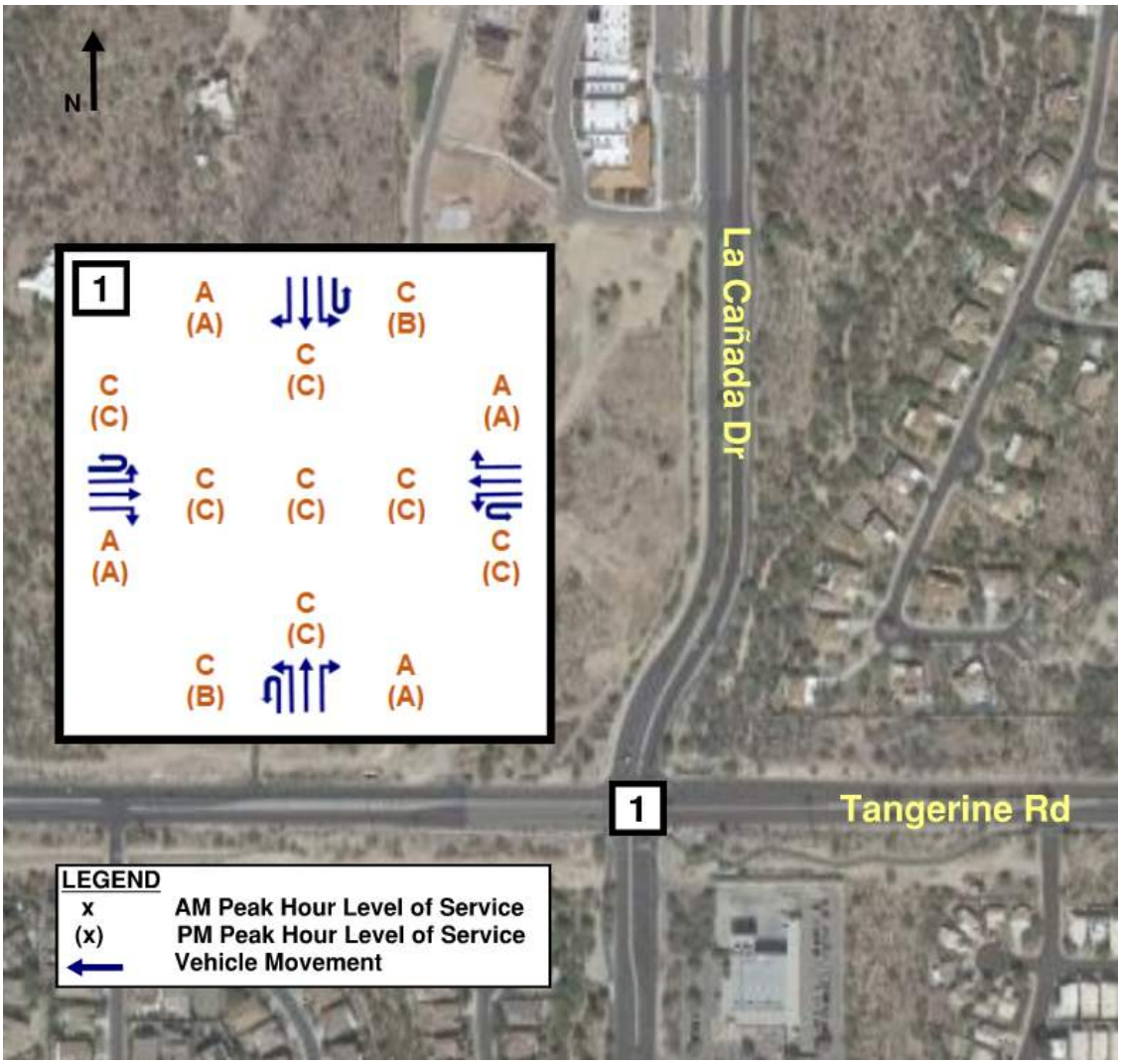
2.4. EXISTING OPERATIONS

Level of Service (LOS) is a qualitative measure that describes operational conditions in terms of travel speed (for arterials), density (for freeways and ramps), and delays (for intersections). LOS ranges from A to F, with A representing the best operating conditions and F representing the worst. The Town of Oro Valley adopted LOS standards in the Arizona Department of Transportation (ADOT) *Traffic Impact Analysis for Proposed Development*[3]. The LOS standards are when the roadways, intersections, intersection approaches, or lane groups will operate at LOS C or better without the development, the LOS with development shall be C or better in the horizon year(s); when the roadways,

intersections, intersection approaches, or lane groups will operate below LOS C, the LOS shall be the same with and without the development.

The intersection of Tangerine Road and La Cañada Drive was evaluated using the traffic modeling software *Synchro* which evaluates operations using methodology from the *Highway Capacity Manual*[4]. Figure 4 shows the LOS results for existing conditions, and the *Synchro* reports are included in Appendix B.

Figure 4. Existing Level of Service



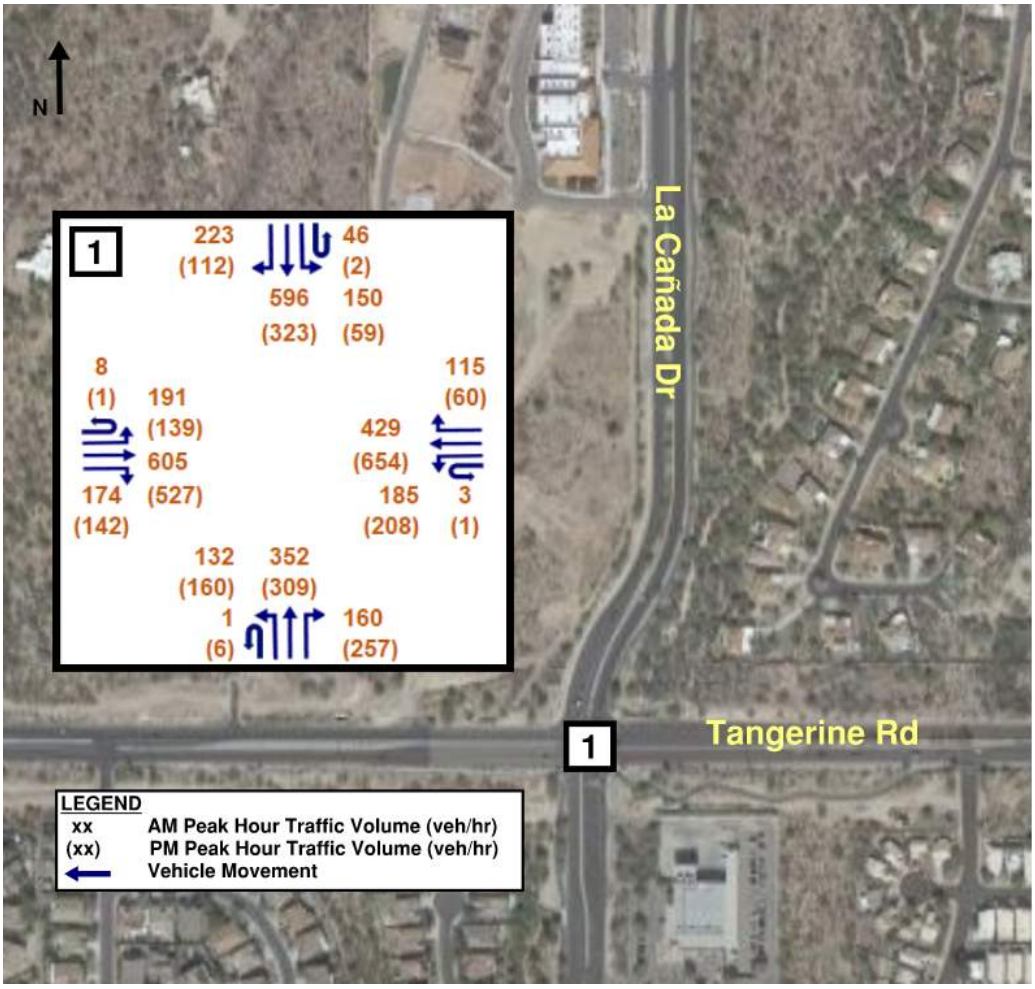
As seen in the figure, the intersection of Tangerine Road and La Cañada Drive is currently operating at LOS C in both peak hours. In addition, all of the movements at the intersection are currently operating at LOS C or better in both peak hours.

3. FUTURE TRAFFIC VOLUMES

3.1. BACKGROUND TRAFFIC

Based on historic PAG volumes at the intersection of Tangerine Road and La Cañada Drive, traffic volumes increased approximately 2% per year on Tangerine Road between 2013 and 2019. Therefore, a 2% annual growth rate was used to project future traffic volumes. Figure 5 shows the estimated background traffic in the opening year of 2023.

Figure 5. 2023 Background Traffic Volumes



3.2. PROJECT TRAFFIC

3.2.1. Project Information

The self-storage project will be located north of Tangerine Road and west of La Cañada Drive. The proposed project includes a 111,705 SF self-storage facility with 750 storage units. The development is expected to be served by Tangerine Road via a right-in right-out only access and by La Cañada Drive via a full median opening.

3.2.2. Trip Generation

The trip generation for the project was estimated using the ITE *Trip Generation Manual, 11th Edition.* Both the number of storage units and the building size were used to calculate the trip generation, shown in Tables 1 and 2. As shown, calculating the trip generation based on the building area is more conservative; therefore, the trip generation shown in Table 2 was used for the analyses in this report. The project is expected to generate 162 daily trips, including 10 in the AM peak hour and 17 in the PM peak hour.

Table 1. Project Trip Generation - Storage Units

ITE Land Use Code 151 - Mini-Warehouse						
Storage Units (100s)			**7.5**			
Period	**Trips/Unit**	**Trips**	**% In**	**% Out**	**Trips In**	**Trips Out**
AM Peak	1.21	9	51%	49%	5	4
PM Peak	1.68	13	50%	50%	6	6
Daily	17.96	135	50%	50%	67	67

Table 2. Project Trip Generation - Gross Floor Area

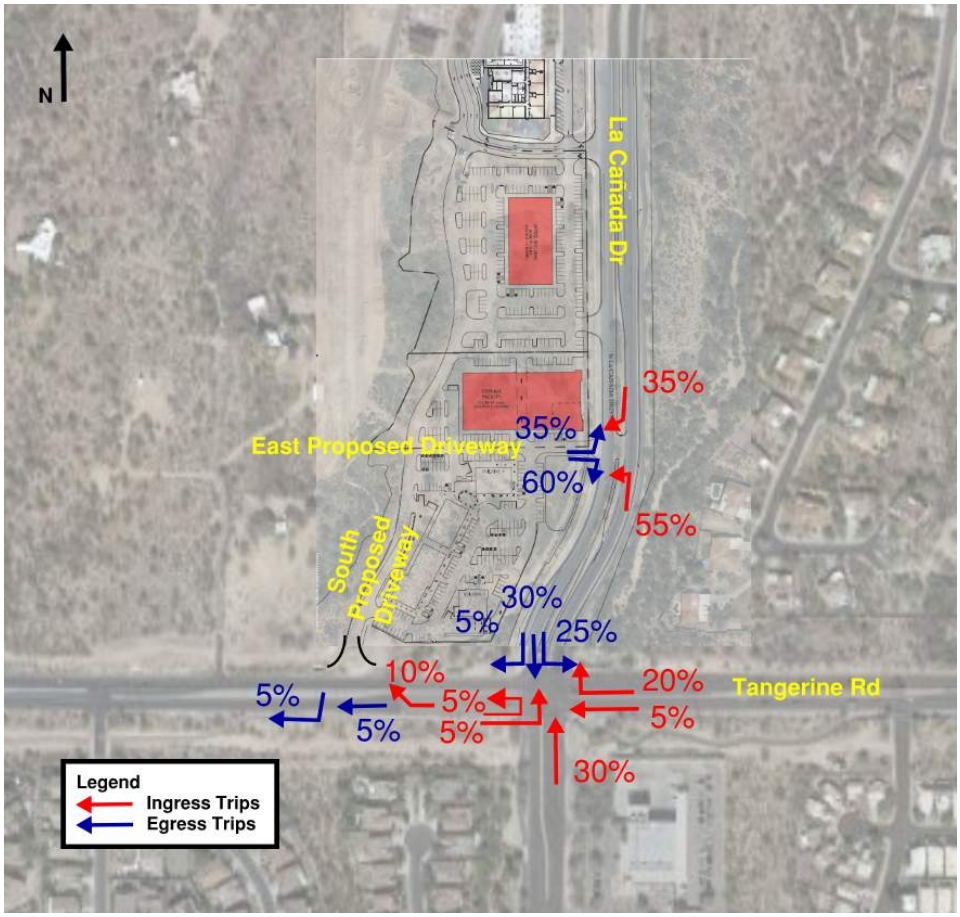
ITE Land Use Code 151 - Mini-Warehouse						
1000 Sq. Ft. GFA			**111.705**			
Period	**Trips/Unit**	**Trips**	**% In**	**% Out**	**Trips In**	**Trips Out**
AM Peak	0.09	10	59%	41%	6	4
PM Peak	0.15	17	47%	53%	8	9
Daily	1.45	162	50%	50%	81	81

3.2.3. Trip Distribution

Based on the location of the self-storage facility, potential users, and other similar developments, it is estimated that approximately 35% of traffic would access the site to/from the north, 25% to/from the east, 30% to/from the south and 10% to/from the west.

In addition, it is assumed that 90% of traffic would enter the site via the new median opening at La Cañada Drive and 95% would exit the site via the median opening given that the median opening is the closest access point to the self-storage facility and allows drivers to travel in any direction to/from the site. Figure 6 shows the trip distribution for the self-storage facility.

Figure 6. Trip Distribution



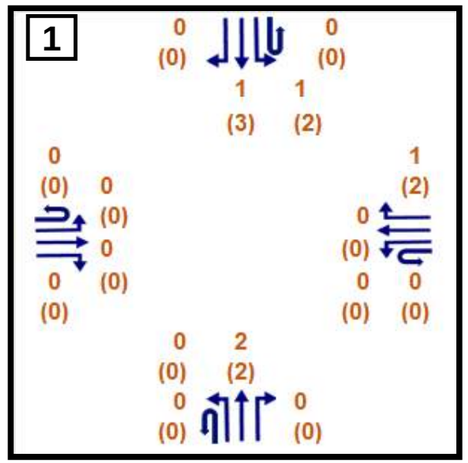
3.2.4. Total Traffic Volumes

The total traffic volumes in the project area are a combination of the background traffic and the site traffic from the self-storage facility. Figures 7 and 8 show the project traffic volumes and total traffic volumes (project + background), respectively.

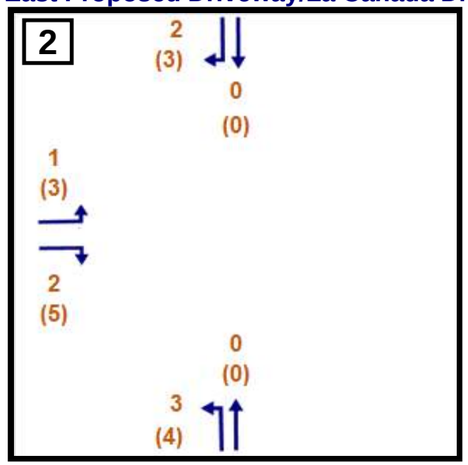
LEGEND

xx	AM Peak Hour Traffic Volume (veh/hr)
(xx)	PM Peak Hour Traffic Volume (veh/hr)
←	Vehicle Movement

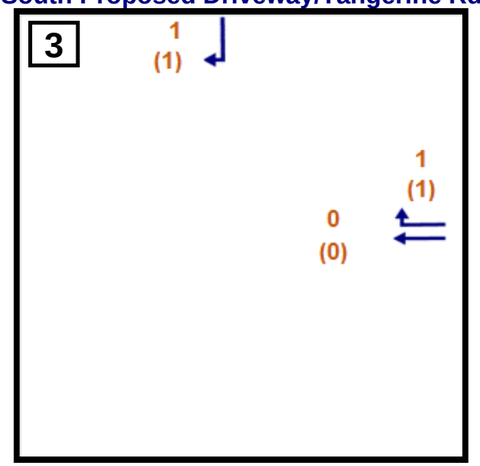
Tangerine Rd/La Cañada Dr



East Proposed Driveway/La Cañada Dr

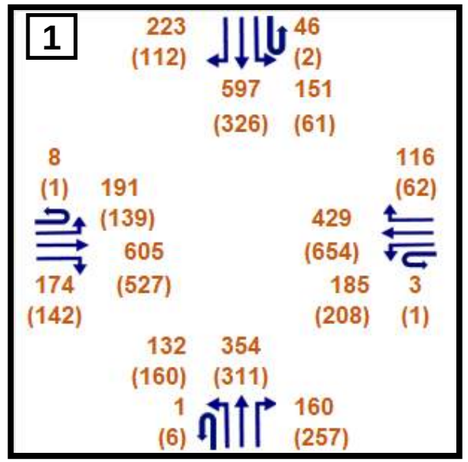


South Proposed Driveway/Tangerine Rd

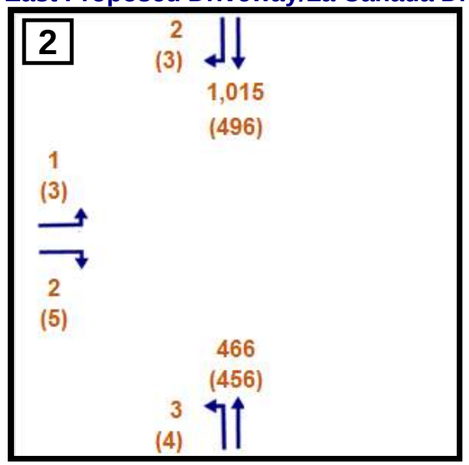


Miller Ranch Self Storage Traffic Study	*Figure 7. Project Traffic Volumes*	P S O M A S February 2022

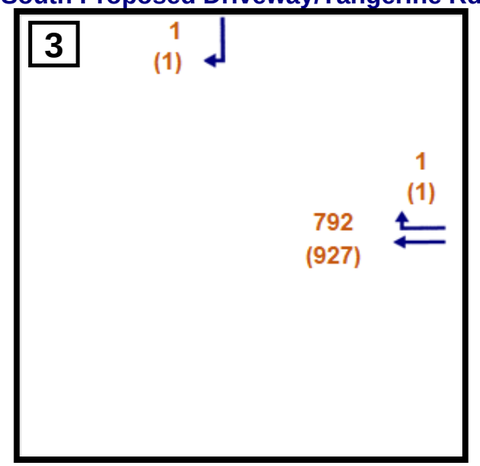
Tangerine Rd/La Cañada Dr



East Proposed Driveway/La Cañada Dr



South Proposed Driveway/Tangerine Rd



LEGEND

xx	AM Peak Hour Traffic Volume (veh/hr)
(xx)	PM Peak Hour Traffic Volume (veh/hr)
←	Vehicle Movement

Miller Ranch Self Storage Traffic Study	*Figure 8. 2023 Total Traffic Volumes*	PSOMAS February 2022

4. FUTURE CONDITIONS (2023)

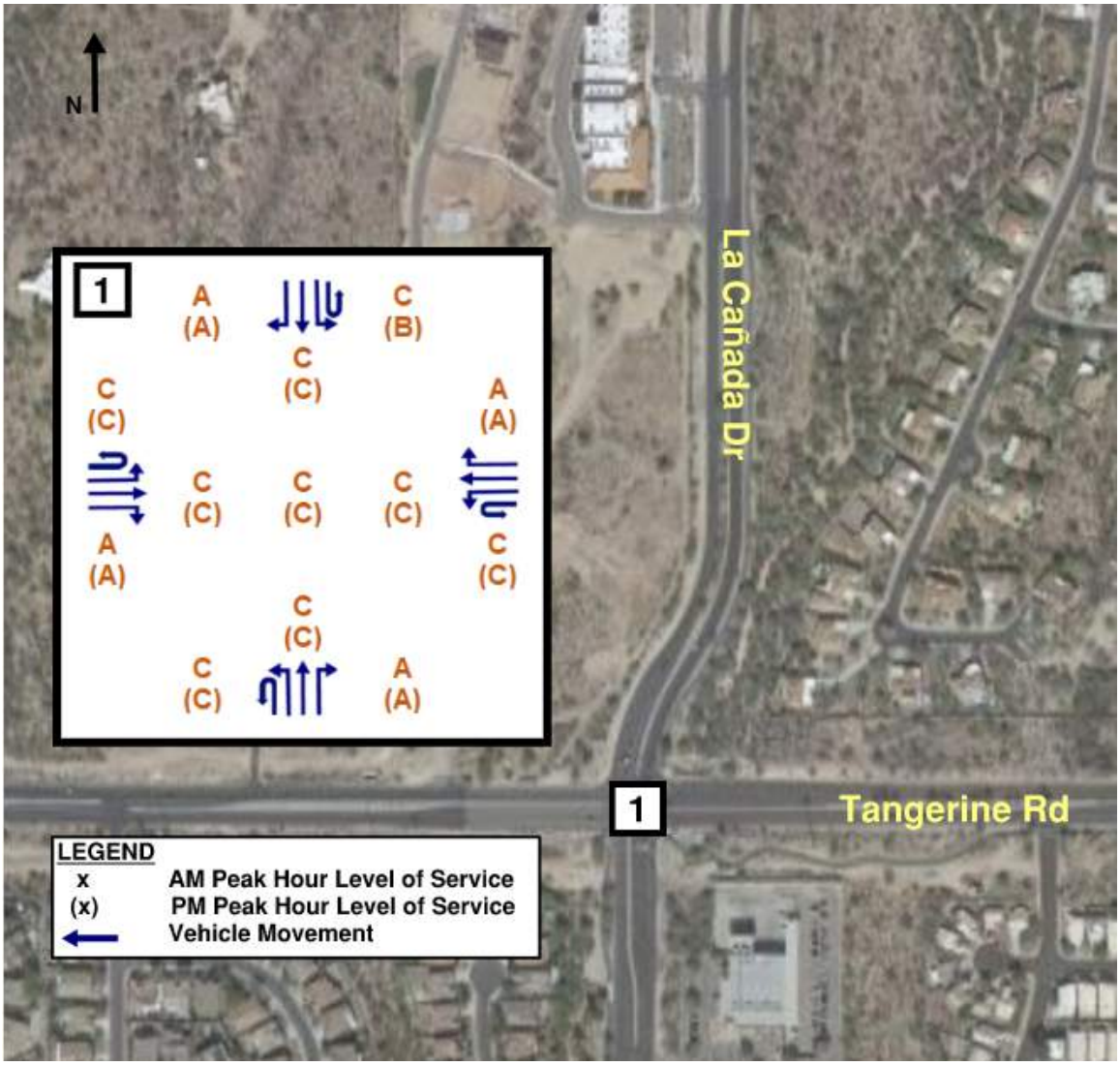
4.1. TRAFFIC OPERATIONS

As with existing conditions, the area was modeled in *Synchro* to evaluate the expected intersection operations with and without. Recall that Oro Valley's LOS targets are when the roadways, intersections, intersection approaches, or lane groups will operate at LOS C or better without the development, the LOS with development shall be C or better in the horizon year(s); when the roadways, intersections, intersection approaches, or lane groups will operate below LOS C, the LOS shall be the same with and without the development.

4.1.1. Without Project

Without the project, the intersection of Tangerine Road and La Cañada Drive is expected to operate at LOS C in both peak hours in 2023. In addition, all movements are expected to operate at LOS C or better in both peak hours. The LOS results are shown in Figure 9, and the *Synchro* reports are included in Appendix C.

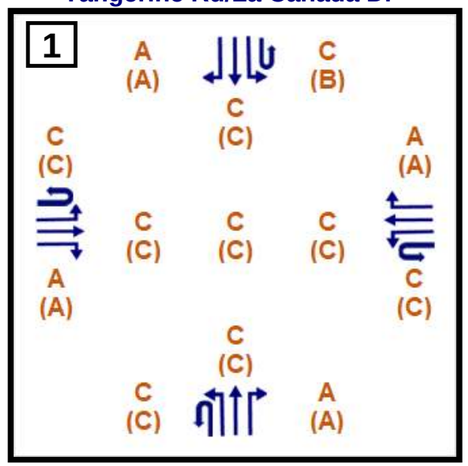
Figure 9. 2023 Background Level of Service



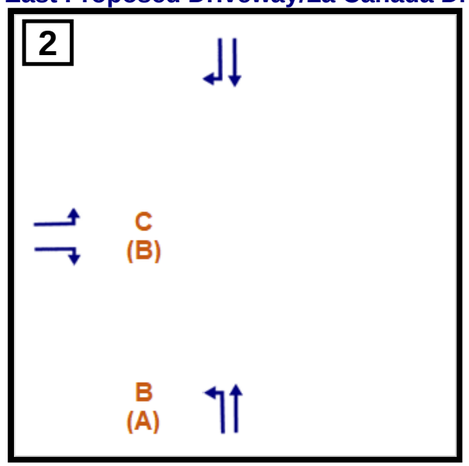
4.1.2. With Project

Figure 10 shows the LOS for the intersections of Tangerine Road and La Cañada Drive, La Cañada Drive and the East Proposed Driveway. and Tangerine Road and the South Proposed Driveway in the opening year with the project. As seen in the figure, the intersection of Tangerine Road and La Cañada Drive is expected to continue to operate at LOS C in both peak hours in 2023 with the project. All movements with delay at the three study intersections are expected to operate at LOS C or better in both peak hours.

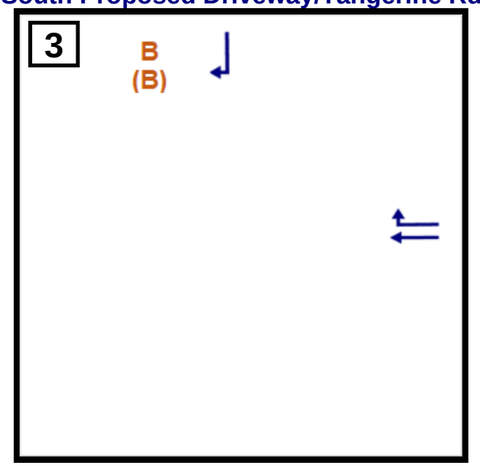
Tangerine Rd/La Cañada Dr



East Proposed Driveway/La Cañada Dr



South Proposed Driveway/Tangerine Rd



LEGEND

x	AM Peak Hour Level of Service
(x)	PM Peak Hour Level of Service
←	Vehicle Movement

5. RECOMMENDATIONS

5.1. TURN LANE WARRANTS

Per the ADOT Traffic Guidelines and Processes Section 245, turn lane warrants were evaluated for each of the three study intersections as applicable. The intersection of Tangerine Road and La Cañada Drive includes turn lanes for all turning movements; therefore, no turn lane warrants were evaluated at that intersection. In addition, because a left turn lane will be constructed at the new median opening on La Cañada Drive, and the intersection of Tangerine Road and South Proposed Driveway will be a three-leg intersection with right-in right-out only access for Tangerine, the left turn lane warrant was not evaluated at either project driveway.

The right turn lane warrant is shown in Table 3 and was evaluated for the intersection of Tangerine Road and the South Proposed Driveway and the intersection of the East Proposed Driveway and La Canada Drive. Both Tangerine Road and La Cañada Drive have two through lanes with a posted speed limit of 45 mph in the study area.

Based on the warrant, there would need to be a minimum of 11 right turn vehicles into the site from Tangerine Road and a minimum of 9 right turn vehicles into the site from La Cañada Drive to warrant a right turn lane based on the projected through volumes at each location. As previously shown in Figure 13, there is expected to be 1 peak hour right turn from Tangerine Road into the site and 3 peak hour right turns from La Cañada Drive into the site. Therefore, right turn lanes are not warranted at either project driveway.

Table 3. Right Turn Lane Warrant

Peak Hour Traffic Volume on the Highway in Advancing Direction	Minimum Peak Hour Right-turn Traffic Volume				
	# of thru lanes per direction				
	1		2		3
	< 45 MPH Posted Speed	≥ 45 MPH Posted Speed	< 45 MPH Posted Speed	≥ 45 MPH Posted Speed	All Speeds
≤ 200					
201 – 300	-	30	-	-	-
301 – 400	-	19	-	55	-
401 – 500	85	14	-	30	-
501 – 600	58	12	140	25	-
601 – 700	27	9	80	18	-
701 – 800	20	8	53	15	-
801 – 900	12	7	40	12	-
901 – 1000	9	6	30	11	-
1001 – 1100	8	5	23	9	18
1101 – 1200	7	5	18	8	16
1201 – 1300	6	4	14	8	15
1301 – 1400	6	4	11	6	12
1400+	5	3	8	6	10

5.2. TRAFFIC CONTROL IMPROVEMENTS

As previously discussed, the self-storage facility will generate a small amount of peak hour and daily traffic and all three study intersections are expected to operate with acceptable LOS in the opening year with the project. It is expected that both project driveways will operate with stop control and traffic on Tangerine Road and La Cañada Drive will continue to be free flowing. No traffic control improvements will be needed at the existing intersection of Tangerine Road and La Cañada Drive.

6. SUMMARY

This traffic study provided an evaluation of the proposed self-storage facility located in the Miller Ranch development area. The proposed 111,705 SF self-storage facility is expected to include 750 storage units and will be served by Tangerine Road with a right-in right-out only access and by La Cañada Drive with a full median opening. The project is expected to be completed in 2023.

Trip generation for the project was developed using the ITE *Trip Generation Manual, 11th Edition*. The self-storage facility is expected to generate 162 daily trips, including 10 in the AM peak hour and 17 in the PM peak hour.

Operational analysis shows that the intersections of Tangerine Road and La Cañada Drive, La Cañada Drive and the East Proposed Driveway, and Tangerine Road and the South Proposed Driveway are expected to operate with acceptable LOS in the opening year with the project. A northbound left turn lane will be constructed on La Cañada Drive to serve the project, but right turn lanes are not warranted at either project driveway.

7. REFERENCES

[1] *Trip Generation Manual, 11th Edition*. Institute of Transportation Engineers, 2021.

[2] *Town of Oro Valley Roadway Network.* https://www.orovalleyaz.gov/files/assets/public/documents/community-and-economic-development/planning-division/community-academy/traffic-roads-and-transportation-_ca-2021.pdf, accessed February 2022.

[3] *ADOT Traffic Guidelines and Processes 240 (Traffic Impact Analysis & Statement)*. Arizona Department of Transportation, August 2021.

[4] *Highway Capacity Manual, 6th Edition.* Transportation Research Board, 2016.

Appendix A – Traffic Volume Data

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	La Canada Dr	DATE:	02/03/22	LOCATION:	Oro Valley
E-W STREET:	Tangerine Rd	DAY:	THURSDAY	PROJECT#	22-1074-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	1	1	2	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	19	61	38	26	85	17	25	129	30	25	56	4	515
7:15 AM	27	75	39	14	101	26	54	151	40	42	108	26	703
7:30 AM	25	99	36	34	182	70	45	160	39	52	106	39	887
7:45 AM	42	106	36	55	178	73	55	158	40	45	126	34	948
8:00 AM	35	65	46	44	123	50	33	124	52	42	81	14	709
8:15 AM	32	61	33	4	82	17	38	130	49	47	101	5	599
8:30 AM	30	81	53	13	144	34	23	105	52	60	98	9	702
8:45 AM	34	59	13	15	97	34	31	144	45	49	88	6	615
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	244	607	294	205	992	321	304	1101	347	362	764	137	5678
Approach %	21.31	53.01	25.68	13.50	65.35	21.15	17.35	62.84	19.81	28.66	60.49	10.85	
App/Depart	1145	/	1048	1518	/	1701	1752	/	1600	1263	/	1329	

AM Peak Hr Begins at: 715 AM

PEAK													
Volumes	129	345	157	147	584	219	187	593	171	181	421	113	3247
Approach %	20.44	54.68	24.88	15.47	61.47	23.05	19.66	62.36	17.98	25.31	58.88	15.80	
PEAK HR. FACTOR:		0.857			0.776			0.940			0.872		0.856

CONTROL:	Signal
COMMENT 1:	
GPS:	32.423840, -110.995758

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	La Canada Dr 0	DATE:	02/03/22	LOCATION:	Oro Valley
E-W STREET:	Tangerine Rd	DAY:	THURSDAY	PROJECT#	22-1074-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	2	1	1	2	1	1	2	1	1	2	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	41	69	53	10	75	35	36	108	38	51	169	11	696
4:15 PM	45	74	76	17	89	28	39	133	42	49	178	11	781
4:30 PM	32	73	65	17	81	19	25	145	39	48	151	21	716
4:45 PM	39	87	58	14	72	28	36	131	20	56	143	16	700
5:00 PM	41	78	52	29	82	21	33	101	38	35	147	13	670
5:15 PM	35	59	55	17	54	15	41	126	40	41	164	12	659
5:30 PM	34	78	36	8	58	16	28	91	34	32	125	9	549
5:45 PM	31	84	41	13	57	11	27	103	30	35	110	8	550
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	298	602	436	125	568	173	265	938	281	347	1187	101	5321
Approach %	22.31	45.06	32.63	14.43	65.59	19.98	17.86	63.21	18.94	21.22	72.60	6.18	
App/Depart	1336	/	968	866	/	1196	1484	/	1499	1635	/	1658	

PM Peak Hr Begins at: 400 PM

PEAK													
Volumes	157	303	252	58	317	110	136	517	139	204	641	59	2893
Approach %	22.05	42.56	35.39	11.96	65.36	22.68	17.17	65.28	17.55	22.57	70.91	6.53	
PEAK HR. FACTOR:		0.913			0.905			0.925			0.950		0.926

CONTROL:	Signal
COMMENT 1:	0
GPS:	32.423840, -110.995758

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

Date: Thursday, February 3, 2022 **Project #:** 22-1074-001

Location: La Canada Dr & Tangerine Rd

	U - TURNS			
	NB	**SB**	**EB**	**WB**
7:00	0	0	0	0
7:15	1	1	3	0
7:30	0	21	4	0
7:45	0	22	1	2
8:00	0	1	0	1
8:15	0	1	0	0
8:30	0	0	0	0
8:45	0	0	2	0

16:00	4	1	0	0
16:15	0	0	1	0
16:30	1	0	0	1
16:45	1	1	0	0
17:00	0	0	0	0
17:15	0	0	0	1
17:30	2	0	0	0
17:45	0	1	1	0

Appendix B – Synchro Reports – Existing Conditions

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	8	187	593	171	3	181	421	113	1	129	345	157
Future Volume (vph)	8	187	593	171	3	181	421	113	1	129	345	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		195		205		410		205		180		435
Storage Lanes		1		1		1		1		1		1
Taper Length (ft)		150				145				135		
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt				0.850				0.850				0.850
Flt Protected		0.950				0.950				0.950		
Satd. Flow (prot)	0	1770	3539	1583	0	1770	3539	1583	0	1770	3539	1583
Flt Permitted		0.374				0.244				0.276		
Satd. Flow (perm)	0	697	3539	1583	0	455	3539	1583	0	514	3539	1583
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)				186				127				171
Link Speed (mph)			30				30				30	
Link Distance (ft)			447				844				857	
Travel Time (s)			10.2				19.2				19.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	203	645	186	3	197	458	123	1	140	375	171
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	645	186	0	200	458	123	0	141	375	171
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	R NA	Left	Left	Right
Median Width(ft)			12				12				12	
Link Offset(ft)			0				0				0	
Crosswalk Width(ft)			16				16				16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	9	15		9
Number of Detectors	1	1	2	1	1	1	2	1	1	1	2	1
Detector Template	Left	Left	Thru	Right	Left	Left	Thru	Right	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20	20	20	100	20	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	20	6	20	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94				94				94	
Detector 2 Size(ft)			6				6				6	
Detector 2 Type			Cl+Ex				Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0				0.0	
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm
Protected Phases	7	7	4		3	3	8		5	5	2	
Permitted Phases	4	4		4	8	8		8	2	2		2

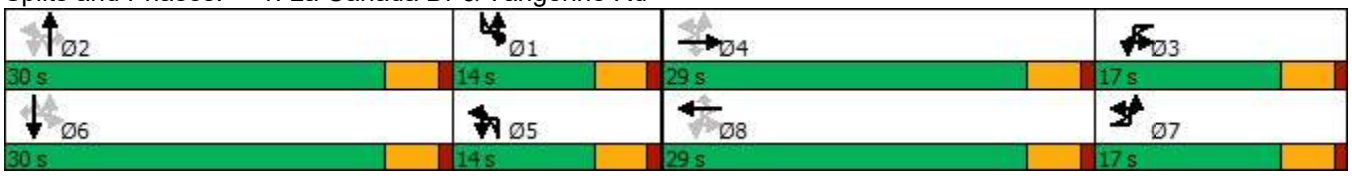
Lane Group	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	45	147	584	219
Future Volume (vph)	45	147	584	219
Ideal Flow (vphpl)	1900	1900	1900	1900
Storage Length (ft)		160		170
Storage Lanes		1		1
Taper Length (ft)		220		
Lane Util. Factor	0.95	1.00	0.95	1.00
Frt				0.850
Flt Protected		0.950		
Satd. Flow (prot)	0	1770	3539	1583
Flt Permitted		0.443		
Satd. Flow (perm)	0	825	3539	1583
Right Turn on Red				Yes
Satd. Flow (RTOR)				238
Link Speed (mph)			30	
Link Distance (ft)			969	
Travel Time (s)			22.0	
Peak Hour Factor	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	160	635	238
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	209	635	238
Enter Blocked Intersection	No	No	No	No
Lane Alignment	R NA	Left	Left	Right
Median Width(ft)			12	
Link Offset(ft)			0	
Crosswalk Width(ft)			16	
Two way Left Turn Lane				
Headway Factor	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9
Number of Detectors	1	1	2	1
Detector Template	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20
Trailing Detector (ft)	0	0	0	0
Detector 1 Position(ft)	0	0	0	0
Detector 1 Size(ft)	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel				
Detector 1 Extend (s)	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94	
Detector 2 Size(ft)			6	
Detector 2 Type			Cl+Ex	
Detector 2 Channel				
Detector 2 Extend (s)			0.0	
Turn Type	pm+pt	pm+pt	NA	Perm
Protected Phases	1	1	6	
Permitted Phases	6	6		6

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Detector Phase	7	7	4	4	3	3	8	8	5	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5
Total Split (s)	17.0	17.0	29.0	29.0	17.0	17.0	29.0	29.0	14.0	14.0	30.0	30.0
Total Split (%)	18.9%	18.9%	32.2%	32.2%	18.9%	18.9%	32.2%	32.2%	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	12.5	12.5	24.5	24.5	12.5	12.5	24.5	24.5	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	Min	None	None	Min	Min	None	None	None	None
Walk Time (s)			7.0	7.0			7.0	7.0			7.0	7.0
Flash Dont Walk (s)			11.0	11.0			11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)			0	0			0	0			0	0
Act Effct Green (s)		33.3	20.2	20.2		26.0	16.4	16.4		22.3	14.5	14.5
Actuated g/C Ratio		0.43	0.26	0.26		0.34	0.21	0.21		0.29	0.19	0.19
v/c Ratio		0.43	0.69	0.34		0.63	0.60	0.28		0.51	0.56	0.39
Control Delay		22.0	30.8	6.1		33.5	31.7	7.0		29.2	32.6	7.8
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		22.0	30.8	6.1		33.5	31.7	7.0		29.2	32.6	7.8
LOS		C	C	A		C	C	A		C	C	A
Approach Delay			24.6				28.3				25.8	
Approach LOS			C				C				C	
Queue Length 50th (ft)		62	148	0		58	109	0		42	90	0
Queue Length 95th (ft)		118	231	48		112	164	39		85	139	49
Internal Link Dist (ft)			367				764				777	
Turn Bay Length (ft)		195		205		410		205		180		435
Base Capacity (vph)		516	1169	647		395	1169	608		324	1217	656
Starvation Cap Reductn		0	0	0		0	0	0		0	0	0
Spillback Cap Reductn		0	0	0		0	0	0		0	0	0
Storage Cap Reductn		0	0	0		0	0	0		0	0	0
Reduced v/c Ratio		0.41	0.55	0.29		0.51	0.39	0.20		0.44	0.31	0.26

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 76.6
Natural Cycle: 65
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 25.1 Intersection LOS: C
Intersection Capacity Utilization 64.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: La Canada Dr & Tangerine Rd



Lane Group	SBU	SBL	SBT	SBR
Detector Phase	1	1	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5
Total Split (s)	14.0	14.0	30.0	30.0
Total Split (%)	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None
Walk Time (s)			7.0	7.0
Flash Dont Walk (s)			11.0	11.0
Pedestrian Calls (#/hr)			0	0
Act Effct Green (s)		32.8	20.4	20.4
Actuated g/C Ratio		0.43	0.27	0.27
v/c Ratio		0.40	0.67	0.40
Control Delay		21.4	29.9	5.8
Queue Delay		0.0	0.0	0.0
Total Delay		21.4	29.9	5.8
LOS		C	C	A
Approach Delay			23.0	
Approach LOS			C	
Queue Length 50th (ft)		65	146	0
Queue Length 95th (ft)		122	223	53
Internal Link Dist (ft)			889	
Turn Bay Length (ft)		160		170
Base Capacity (vph)		522	1217	700
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.40	0.52	0.34

Intersection Summary

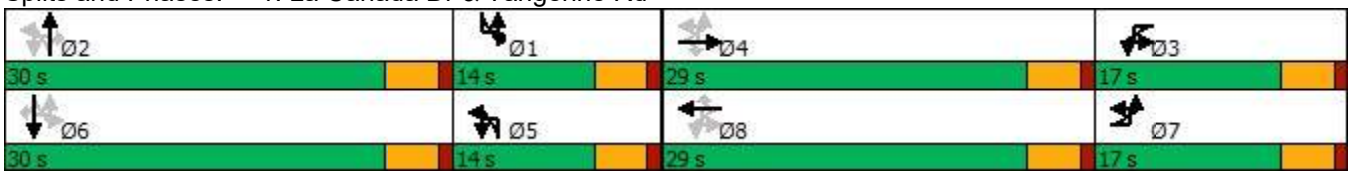
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	1	136	517	139	1	204	641	59	6	157	303	252
Future Volume (vph)	1	136	517	139	1	204	641	59	6	157	303	252
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		195		205		410		205		180		435
Storage Lanes		1		1		1		1		1		1
Taper Length (ft)		150				145				135		
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt				0.850				0.850				0.850
Flt Protected		0.950				0.950				0.950		
Satd. Flow (prot)	0	1770	3539	1583	0	1770	3539	1583	0	1770	3539	1583
Flt Permitted		0.213				0.283				0.513		
Satd. Flow (perm)	0	397	3539	1583	0	527	3539	1583	0	956	3539	1583
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)				151				127				274
Link Speed (mph)			30				30				30	
Link Distance (ft)			447				844				857	
Travel Time (s)			10.2				19.2				19.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	148	562	151	1	222	697	64	7	171	329	274
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	149	562	151	0	223	697	64	0	178	329	274
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	R NA	Left	Left	Right
Median Width(ft)			12				12				12	
Link Offset(ft)			0				0				0	
Crosswalk Width(ft)			16				16				16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	9	15		9
Number of Detectors	1	1	2	1	1	1	2	1	1	1	2	1
Detector Template	Left	Left	Thru	Right	Left	Left	Thru	Right	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20	20	20	100	20	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	20	6	20	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94				94				94	
Detector 2 Size(ft)			6				6				6	
Detector 2 Type			Cl+Ex				Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0				0.0	
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm
Protected Phases	7	7	4		3	3	8		5	5	2	
Permitted Phases	4	4		4	8	8		8	2	2		2

Lane Group	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	2	58	317	110
Future Volume (vph)	2	58	317	110
Ideal Flow (vphpl)	1900	1900	1900	1900
Storage Length (ft)		160		170
Storage Lanes		1		1
Taper Length (ft)		220		
Lane Util. Factor	0.95	1.00	0.95	1.00
Frt				0.850
Flt Protected		0.950		
Satd. Flow (prot)	0	1770	3539	1583
Flt Permitted		0.530		
Satd. Flow (perm)	0	987	3539	1583
Right Turn on Red				Yes
Satd. Flow (RTOR)				127
Link Speed (mph)			30	
Link Distance (ft)			969	
Travel Time (s)			22.0	
Peak Hour Factor	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	63	345	120
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	65	345	120
Enter Blocked Intersection	No	No	No	No
Lane Alignment	R NA	Left	Left	Right
Median Width(ft)			12	
Link Offset(ft)			0	
Crosswalk Width(ft)			16	
Two way Left Turn Lane				
Headway Factor	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9
Number of Detectors	1	1	2	1
Detector Template	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20
Trailing Detector (ft)	0	0	0	0
Detector 1 Position(ft)	0	0	0	0
Detector 1 Size(ft)	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel				
Detector 1 Extend (s)	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94	
Detector 2 Size(ft)			6	
Detector 2 Type			Cl+Ex	
Detector 2 Channel				
Detector 2 Extend (s)			0.0	
Turn Type	pm+pt	pm+pt	NA	Perm
Protected Phases	1	1	6	
Permitted Phases	6	6		6

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Detector Phase	7	7	4	4	3	3	8	8	5	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5
Total Split (s)	17.0	17.0	29.0	29.0	17.0	17.0	29.0	29.0	14.0	14.0	30.0	30.0
Total Split (%)	18.9%	18.9%	32.2%	32.2%	18.9%	18.9%	32.2%	32.2%	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	12.5	12.5	24.5	24.5	12.5	12.5	24.5	24.5	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	None	None	None	Max	Max
Walk Time (s)			7.0	7.0			7.0	7.0			7.0	7.0
Flash Dont Walk (s)			11.0	11.0			11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)			0	0			0	0			0	0
Act Effct Green (s)		27.2	18.8	18.8		31.6	21.0	21.0		32.6	27.9	27.9
Actuated g/C Ratio		0.34	0.24	0.24		0.40	0.27	0.27		0.41	0.35	0.35
v/c Ratio		0.53	0.67	0.31		0.59	0.74	0.12		0.39	0.26	0.37
Control Delay		29.6	31.5	6.2		29.6	32.2	0.7		19.4	21.2	4.8
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		29.6	31.5	6.2		29.6	32.2	0.7		19.4	21.2	4.8
LOS		C	C	A		C	C	A		B	C	A
Approach Delay			26.8				29.5				15.0	
Approach LOS			C				C				B	
Queue Length 50th (ft)		44	132	0		69	163	0		52	63	0
Queue Length 95th (ft)		79	190	43		116	240	3		106	109	54
Internal Link Dist (ft)			367				764				777	
Turn Bay Length (ft)		195		205		410		205		180		435
Base Capacity (vph)		375	1101	596		421	1101	580		535	1248	735
Starvation Cap Reductn		0	0	0		0	0	0		0	0	0
Spillback Cap Reductn		0	0	0		0	0	0		0	0	0
Storage Cap Reductn		0	0	0		0	0	0		0	0	0
Reduced v/c Ratio		0.40	0.51	0.25		0.53	0.63	0.11		0.33	0.26	0.37

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 79.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 23.2		Intersection LOS: C	
Intersection Capacity Utilization 60.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: La Canada Dr & Tangerine Rd



Lane Group	SBU	SBL	SBT	SBR
Detector Phase	1	1	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5
Total Split (s)	14.0	14.0	30.0	30.0
Total Split (%)	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	None	None	Max	Max
Walk Time (s)			7.0	7.0
Flash Dont Walk (s)			11.0	11.0
Pedestrian Calls (#/hr)			0	0
Act Effct Green (s)		31.6	25.6	25.6
Actuated g/C Ratio		0.40	0.32	0.32
v/c Ratio		0.14	0.30	0.20
Control Delay		15.6	22.1	5.1
Queue Delay		0.0	0.0	0.0
Total Delay		15.6	22.1	5.1
LOS		B	C	A
Approach Delay			17.4	
Approach LOS			B	
Queue Length 50th (ft)		18	67	0
Queue Length 95th (ft)		45	114	35
Internal Link Dist (ft)			889	
Turn Bay Length (ft)		160		170
Base Capacity (vph)		533	1146	598
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.12	0.30	0.20

Intersection Summary

Appendix C – Synchro Reports – 2023 Background Conditions

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	8	191	605	174	3	185	429	115	1	132	352	160
Future Volume (vph)	8	191	605	174	3	185	429	115	1	132	352	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		195		205		410		205		180		435
Storage Lanes		1		1		1		1		1		1
Taper Length (ft)		150				145				135		
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt				0.850				0.850				0.850
Flt Protected		0.950				0.950				0.950		
Satd. Flow (prot)	0	1770	3539	1583	0	1770	3539	1583	0	1770	3539	1583
Flt Permitted		0.366				0.240				0.270		
Satd. Flow (perm)	0	682	3539	1583	0	447	3539	1583	0	503	3539	1583
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)				189				127				174
Link Speed (mph)			30				30				30	
Link Distance (ft)			447				844				857	
Travel Time (s)			10.2				19.2				19.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	208	658	189	3	201	466	125	1	143	383	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	217	658	189	0	204	466	125	0	144	383	174
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	R NA	Left	Left	Right
Median Width(ft)			12				12				12	
Link Offset(ft)			0				0				0	
Crosswalk Width(ft)			16				16				16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	9	15		9
Number of Detectors	1	1	2	1	1	1	2	1	1	1	2	1
Detector Template	Left	Left	Thru	Right	Left	Left	Thru	Right	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20	20	20	100	20	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	20	6	20	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94				94				94	
Detector 2 Size(ft)			6				6				6	
Detector 2 Type			Cl+Ex				Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0				0.0	
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm
Protected Phases	7	7	4		3	3	8		5	5	2	
Permitted Phases	4	4		4	8	8		8	2	2		2

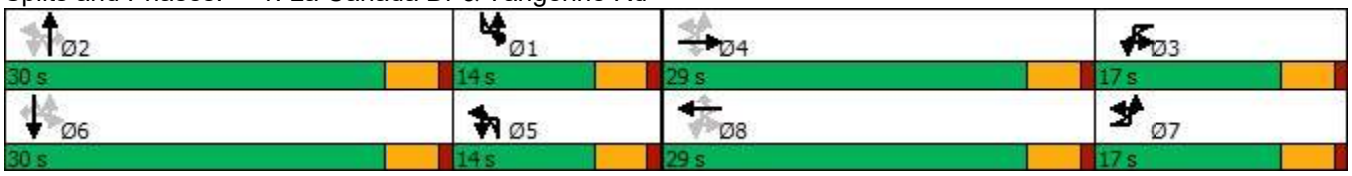
Lane Group	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	46	150	596	223
Future Volume (vph)	46	150	596	223
Ideal Flow (vphpl)	1900	1900	1900	1900
Storage Length (ft)		160		170
Storage Lanes		1		1
Taper Length (ft)		220		
Lane Util. Factor	0.95	1.00	0.95	1.00
Frt				0.850
Flt Protected		0.950		
Satd. Flow (prot)	0	1770	3539	1583
Flt Permitted		0.434		
Satd. Flow (perm)	0	808	3539	1583
Right Turn on Red				Yes
Satd. Flow (RTOR)				242
Link Speed (mph)			30	
Link Distance (ft)			969	
Travel Time (s)			22.0	
Peak Hour Factor	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	163	648	242
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	213	648	242
Enter Blocked Intersection	No	No	No	No
Lane Alignment	R NA	Left	Left	Right
Median Width(ft)			12	
Link Offset(ft)			0	
Crosswalk Width(ft)			16	
Two way Left Turn Lane				
Headway Factor	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9
Number of Detectors	1	1	2	1
Detector Template	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20
Trailing Detector (ft)	0	0	0	0
Detector 1 Position(ft)	0	0	0	0
Detector 1 Size(ft)	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel				
Detector 1 Extend (s)	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94	
Detector 2 Size(ft)			6	
Detector 2 Type			Cl+Ex	
Detector 2 Channel				
Detector 2 Extend (s)			0.0	
Turn Type	pm+pt	pm+pt	NA	Perm
Protected Phases	1	1	6	
Permitted Phases	6	6		6

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Detector Phase	7	7	4	4	3	3	8	8	5	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5
Total Split (s)	17.0	17.0	29.0	29.0	17.0	17.0	29.0	29.0	14.0	14.0	30.0	30.0
Total Split (%)	18.9%	18.9%	32.2%	32.2%	18.9%	18.9%	32.2%	32.2%	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	12.5	12.5	24.5	24.5	12.5	12.5	24.5	24.5	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	Min	None	None	Min	Min	None	None	None	None
Walk Time (s)			7.0	7.0			7.0	7.0			7.0	7.0
Flash Dont Walk (s)			11.0	11.0			11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)			0	0			0	0			0	0
Act Effct Green (s)		33.7	20.4	20.4		26.4	16.7	16.7		22.7	14.8	14.8
Actuated g/C Ratio		0.44	0.26	0.26		0.34	0.22	0.22		0.29	0.19	0.19
v/c Ratio		0.45	0.70	0.34		0.64	0.61	0.28		0.52	0.57	0.39
Control Delay		22.7	31.4	6.1		34.3	31.9	7.1		30.0	32.9	7.8
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		22.7	31.4	6.1		34.3	31.9	7.1		30.0	32.9	7.8
LOS		C	C	A		C	C	A		C	C	A
Approach Delay			25.1				28.6				26.1	
Approach LOS			C				C				C	
Queue Length 50th (ft)		65	156	0		61	114	0		44	94	0
Queue Length 95th (ft)		121	236	49		115	166	40		87	142	49
Internal Link Dist (ft)			367				764				777	
Turn Bay Length (ft)		195		205		410		205		180		435
Base Capacity (vph)		510	1156	644		391	1156	602		320	1203	653
Starvation Cap Reductn		0	0	0		0	0	0		0	0	0
Spillback Cap Reductn		0	0	0		0	0	0		0	0	0
Storage Cap Reductn		0	0	0		0	0	0		0	0	0
Reduced v/c Ratio		0.43	0.57	0.29		0.52	0.40	0.21		0.45	0.32	0.27

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 77.3
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 25.5 Intersection LOS: C
Intersection Capacity Utilization 66.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: La Canada Dr & Tangerine Rd



Lane Group	SBU	SBL	SBT	SBR
Detector Phase	1	1	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5
Total Split (s)	14.0	14.0	30.0	30.0
Total Split (%)	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None
Walk Time (s)			7.0	7.0
Flash Dont Walk (s)			11.0	11.0
Pedestrian Calls (#/hr)			0	0
Act Effct Green (s)		33.1	20.7	20.7
Actuated g/C Ratio		0.43	0.27	0.27
v/c Ratio		0.41	0.68	0.40
Control Delay		21.9	30.4	5.8
Queue Delay		0.0	0.0	0.0
Total Delay		21.9	30.4	5.8
LOS		C	C	A
Approach Delay			23.4	
Approach LOS			C	
Queue Length 50th (ft)		68	154	0
Queue Length 95th (ft)		125	228	54
Internal Link Dist (ft)			889	
Turn Bay Length (ft)		160		170
Base Capacity (vph)		518	1203	698
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.41	0.54	0.35

Intersection Summary

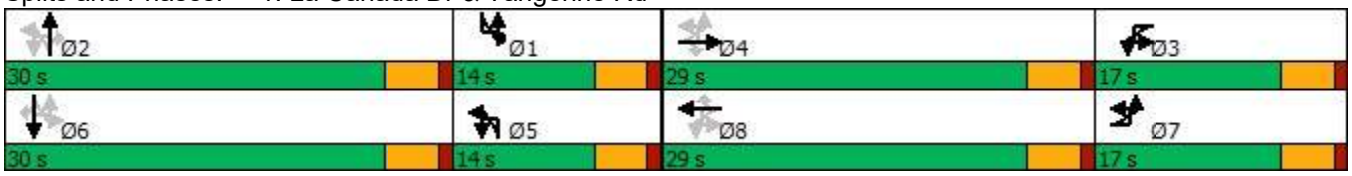
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	1	139	527	142	1	208	654	60	6	160	309	257
Future Volume (vph)	1	139	527	142	1	208	654	60	6	160	309	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		195		205		410		205		180		435
Storage Lanes		1		1		1		1		1		1
Taper Length (ft)		150				145				135		
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt				0.850				0.850				0.850
Flt Protected		0.950				0.950				0.950		
Satd. Flow (prot)	0	1770	3539	1583	0	1770	3539	1583	0	1770	3539	1583
Flt Permitted		0.229				0.313				0.485		
Satd. Flow (perm)	0	427	3539	1583	0	583	3539	1583	0	903	3539	1583
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)				154				127				279
Link Speed (mph)			30				30				30	
Link Distance (ft)			447				844				857	
Travel Time (s)			10.2				19.2				19.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	151	573	154	1	226	711	65	7	174	336	279
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	573	154	0	227	711	65	0	181	336	279
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	R NA	Left	Left	Right
Median Width(ft)			12				12				12	
Link Offset(ft)			0				0				0	
Crosswalk Width(ft)			16				16				16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	9	15		9
Number of Detectors	1	1	2	1	1	1	2	1	1	1	2	1
Detector Template	Left	Left	Thru	Right	Left	Left	Thru	Right	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20	20	20	100	20	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	20	6	20	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94				94				94	
Detector 2 Size(ft)			6				6				6	
Detector 2 Type			Cl+Ex				Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0				0.0	
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm
Protected Phases	7	7	4		3	3	8		5	5	2	
Permitted Phases	4	4		4	8	8		8	2	2		2

Lane Group	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	2	59	323	112
Future Volume (vph)	2	59	323	112
Ideal Flow (vphpl)	1900	1900	1900	1900
Storage Length (ft)		160		170
Storage Lanes		1		1
Taper Length (ft)		220		
Lane Util. Factor	0.95	1.00	0.95	1.00
Frt				0.850
Flt Protected		0.950		
Satd. Flow (prot)	0	1770	3539	1583
Flt Permitted		0.510		
Satd. Flow (perm)	0	950	3539	1583
Right Turn on Red				Yes
Satd. Flow (RTOR)				127
Link Speed (mph)			30	
Link Distance (ft)			969	
Travel Time (s)			22.0	
Peak Hour Factor	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	64	351	122
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	66	351	122
Enter Blocked Intersection	No	No	No	No
Lane Alignment	R NA	Left	Left	Right
Median Width(ft)			12	
Link Offset(ft)			0	
Crosswalk Width(ft)			16	
Two way Left Turn Lane				
Headway Factor	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9
Number of Detectors	1	1	2	1
Detector Template	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20
Trailing Detector (ft)	0	0	0	0
Detector 1 Position(ft)	0	0	0	0
Detector 1 Size(ft)	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel				
Detector 1 Extend (s)	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94	
Detector 2 Size(ft)			6	
Detector 2 Type			Cl+Ex	
Detector 2 Channel				
Detector 2 Extend (s)			0.0	
Turn Type	pm+pt	pm+pt	NA	Perm
Protected Phases	1	1	6	
Permitted Phases	6	6		6

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Detector Phase	7	7	4	4	3	3	8	8	5	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5
Total Split (s)	17.0	17.0	29.0	29.0	17.0	17.0	29.0	29.0	14.0	14.0	30.0	30.0
Total Split (%)	18.9%	18.9%	32.2%	32.2%	18.9%	18.9%	32.2%	32.2%	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	12.5	12.5	24.5	24.5	12.5	12.5	24.5	24.5	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	Min	None	None	Min	Min	None	None	None	None
Walk Time (s)			7.0	7.0			7.0	7.0			7.0	7.0
Flash Dont Walk (s)			11.0	11.0			11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)			0	0			0	0			0	0
Act Effct Green (s)		25.6	17.5	17.5		30.6	19.9	19.9		21.9	18.0	18.0
Actuated g/C Ratio		0.39	0.26	0.26		0.46	0.30	0.30		0.33	0.27	0.27
v/c Ratio		0.46	0.61	0.29		0.49	0.67	0.11		0.47	0.35	0.44
Control Delay		21.4	25.0	5.7		20.1	24.4	0.8		23.4	23.5	6.1
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		21.4	25.0	5.7		20.1	24.4	0.8		23.4	23.5	6.1
LOS		C	C	A		C	C	A		C	C	A
Approach Delay			21.0				21.9				17.4	
Approach LOS			C				C				B	
Queue Length 50th (ft)		31	105	0		48	126	0		51	63	0
Queue Length 95th (ft)		72	178	41		105	226	4		109	114	58
Internal Link Dist (ft)			367				764				777	
Turn Bay Length (ft)		195		205		410		205		180		435
Base Capacity (vph)		456	1348	698		520	1348	681		469	1403	796
Starvation Cap Reductn		0	0	0		0	0	0		0	0	0
Spillback Cap Reductn		0	0	0		0	0	0		0	0	0
Storage Cap Reductn		0	0	0		0	0	0		0	0	0
Reduced v/c Ratio		0.33	0.43	0.22		0.44	0.53	0.10		0.39	0.24	0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 66.1			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 61.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: La Canada Dr & Tangerine Rd



Lane Group	SBU	SBL	SBT	SBR
Detector Phase	1	1	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5
Total Split (s)	14.0	14.0	30.0	30.0
Total Split (%)	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None
Walk Time (s)			7.0	7.0
Flash Dont Walk (s)			11.0	11.0
Pedestrian Calls (#/hr)			0	0
Act Effct Green (s)		19.2	12.8	12.8
Actuated g/C Ratio		0.29	0.19	0.19
v/c Ratio		0.19	0.51	0.30
Control Delay		17.7	27.7	7.4
Queue Delay		0.0	0.0	0.0
Total Delay		17.7	27.7	7.4
LOS		B	C	A
Approach Delay			21.9	
Approach LOS			C	
Queue Length 50th (ft)		17	66	0
Queue Length 95th (ft)		47	122	39
Internal Link Dist (ft)			889	
Turn Bay Length (ft)		160		170
Base Capacity (vph)		446	1403	704
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.15	0.25	0.17

Intersection Summary

Appendix D – Synchro Reports – 2023 With Project Conditions

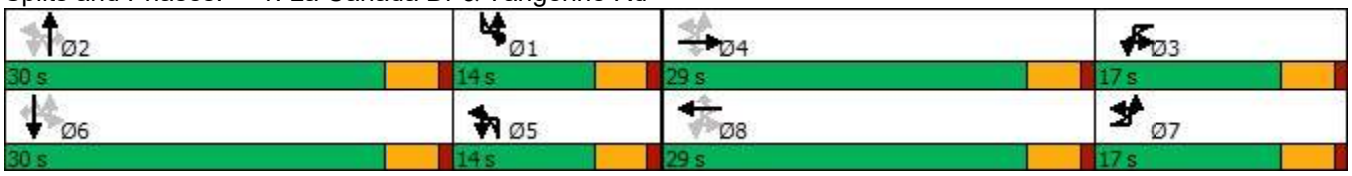
Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	8	191	605	174	3	185	429	116	1	132	354	160
Future Volume (vph)	8	191	605	174	3	185	429	116	1	132	354	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		195		205		410		205		180		435
Storage Lanes		1		1		1		1		1		1
Taper Length (ft)		150				145				135		
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt				0.850				0.850				0.850
Flt Protected		0.950				0.950				0.950		
Satd. Flow (prot)	0	1770	3539	1583	0	1770	3539	1583	0	1770	3539	1583
Flt Permitted		0.367				0.240				0.270		
Satd. Flow (perm)	0	684	3539	1583	0	447	3539	1583	0	503	3539	1583
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)				189				127				174
Link Speed (mph)			30				30				30	
Link Distance (ft)			447				844				857	
Travel Time (s)			10.2				19.2				19.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	208	658	189	3	201	466	126	1	143	385	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	217	658	189	0	204	466	126	0	144	385	174
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	R NA	Left	Left	Right
Median Width(ft)			12				12				12	
Link Offset(ft)			0				0				0	
Crosswalk Width(ft)			16				16				16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	9	15		9
Number of Detectors	1	1	2	1	1	1	2	1	1	1	2	1
Detector Template	Left	Left	Thru	Right	Left	Left	Thru	Right	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20	20	20	100	20	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	20	6	20	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94				94				94	
Detector 2 Size(ft)			6				6				6	
Detector 2 Type			Cl+Ex				Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0				0.0	
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm
Protected Phases	7	7	4		3	3	8		5	5	2	
Permitted Phases	4	4		4	8	8		8	2	2		2

Lane Group	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	46	151	597	223
Future Volume (vph)	46	151	597	223
Ideal Flow (vphpl)	1900	1900	1900	1900
Storage Length (ft)		160		170
Storage Lanes		1		1
Taper Length (ft)		220		
Lane Util. Factor	0.95	1.00	0.95	1.00
Frt				0.850
Flt Protected		0.950		
Satd. Flow (prot)	0	1770	3539	1583
Flt Permitted		0.433		
Satd. Flow (perm)	0	807	3539	1583
Right Turn on Red				Yes
Satd. Flow (RTOR)				242
Link Speed (mph)			30	
Link Distance (ft)			969	
Travel Time (s)			22.0	
Peak Hour Factor	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	164	649	242
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	214	649	242
Enter Blocked Intersection	No	No	No	No
Lane Alignment	R NA	Left	Left	Right
Median Width(ft)			12	
Link Offset(ft)			0	
Crosswalk Width(ft)			16	
Two way Left Turn Lane				
Headway Factor	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9
Number of Detectors	1	1	2	1
Detector Template	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20
Trailing Detector (ft)	0	0	0	0
Detector 1 Position(ft)	0	0	0	0
Detector 1 Size(ft)	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel				
Detector 1 Extend (s)	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94	
Detector 2 Size(ft)			6	
Detector 2 Type			Cl+Ex	
Detector 2 Channel				
Detector 2 Extend (s)			0.0	
Turn Type	pm+pt	pm+pt	NA	Perm
Protected Phases	1	1	6	
Permitted Phases	6	6		6

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Detector Phase	7	7	4	4	3	3	8	8	5	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5
Total Split (s)	17.0	17.0	29.0	29.0	17.0	17.0	29.0	29.0	14.0	14.0	30.0	30.0
Total Split (%)	18.9%	18.9%	32.2%	32.2%	18.9%	18.9%	32.2%	32.2%	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	12.5	12.5	24.5	24.5	12.5	12.5	24.5	24.5	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	Min	None	None	Min	Min	None	None	None	None
Walk Time (s)			7.0	7.0			7.0	7.0			7.0	7.0
Flash Dont Walk (s)			11.0	11.0			11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)			0	0			0	0			0	0
Act Effct Green (s)		33.8	20.5	20.5		26.4	16.7	16.7		22.8	14.8	14.8
Actuated g/C Ratio		0.44	0.26	0.26		0.34	0.22	0.22		0.29	0.19	0.19
v/c Ratio		0.45	0.70	0.34		0.64	0.61	0.29		0.52	0.57	0.39
Control Delay		22.6	31.3	6.1		34.3	32.0	7.2		30.0	32.8	7.8
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		22.6	31.3	6.1		34.3	32.0	7.2		30.0	32.8	7.8
LOS		C	C	A		C	C	A		C	C	A
Approach Delay			25.1				28.6				26.0	
Approach LOS			C				C				C	
Queue Length 50th (ft)		65	156	0		61	114	0		44	95	0
Queue Length 95th (ft)		121	236	49		115	166	41		87	142	49
Internal Link Dist (ft)			367				764				777	
Turn Bay Length (ft)		195		205		410		205		180		435
Base Capacity (vph)		510	1156	644		391	1156	602		320	1203	653
Starvation Cap Reductn		0	0	0		0	0	0		0	0	0
Spillback Cap Reductn		0	0	0		0	0	0		0	0	0
Storage Cap Reductn		0	0	0		0	0	0		0	0	0
Reduced v/c Ratio		0.43	0.57	0.29		0.52	0.40	0.21		0.45	0.32	0.27

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 77.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 25.5		Intersection LOS: C	
Intersection Capacity Utilization 66.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: La Canada Dr & Tangerine Rd



Lane Group	SBU	SBL	SBT	SBR
Detector Phase	1	1	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5
Total Split (s)	14.0	14.0	30.0	30.0
Total Split (%)	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None
Walk Time (s)			7.0	7.0
Flash Dont Walk (s)			11.0	11.0
Pedestrian Calls (#/hr)			0	0
Act Effct Green (s)		33.1	20.7	20.7
Actuated g/C Ratio		0.43	0.27	0.27
v/c Ratio		0.41	0.69	0.40
Control Delay		22.0	30.4	5.8
Queue Delay		0.0	0.0	0.0
Total Delay		22.0	30.4	5.8
LOS		C	C	A
Approach Delay			23.4	
Approach LOS			C	
Queue Length 50th (ft)		68	154	0
Queue Length 95th (ft)		125	229	54
Internal Link Dist (ft)			889	
Turn Bay Length (ft)		160		170
Base Capacity (vph)		517	1203	697
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.41	0.54	0.35

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	2	3	466	1015	2
Future Volume (vph)	1	2	3	466	1015	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	125			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.910					
Flt Protected	0.984		0.950			
Satd. Flow (prot)	1668	0	1770	3539	3539	0
Flt Permitted	0.984		0.950			
Satd. Flow (perm)	1668	0	1770	3539	3539	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	412			969	442	
Travel Time (s)	9.4			22.0	10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	2	3	507	1103	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	3	507	1105	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	2	3	466	1015	2
Future Vol, veh/h	1	2	3	466	1015	2
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	-	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	3	507	1103	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1364	553	1105	0	-	0
Stage 1	1104	-	-	-	-	-
Stage 2	260	-	-	-	-	-
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	139	477	628	-	-	-
Stage 1	279	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	138	477	628	-	-	-
Mov Cap-2 Maneuver	138	-	-	-	-	-
Stage 1	278	-	-	-	-	-
Stage 2	760	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.9	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	628	-	262	-	-
HCM Lane V/C Ratio	0.005	-	0.012	-	-
HCM Control Delay (s)	10.8	-	18.9	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	792	1	0	1
Future Volume (vph)	0	0	792	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	3539	3539	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	3539	3539	0	0	1611
Link Speed (mph)		30	30		30	
Link Distance (ft)		210	447		338	
Travel Time (s)		4.8	10.2		7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	861	1	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	862	0	0	1
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	792	1	0	1
Future Vol, veh/h	0	0	792	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage,-#		0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	861	1	0	1

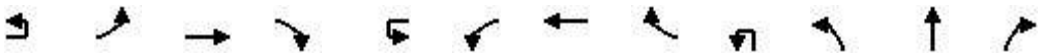
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	431
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	573
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	573
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	573
HCM Lane V/C Ratio	-	-	-	0.002
HCM Control Delay (s)	-	-	-	11.3
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	1	139	527	142	1	208	654	62	6	160	311	257
Future Volume (vph)	1	139	527	142	1	208	654	62	6	160	311	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		195		205		410		205		180		435
Storage Lanes		1		1		1		1		1		1
Taper Length (ft)		150				145				135		
Lane Util. Factor	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Frt				0.850				0.850				0.850
Flt Protected		0.950				0.950				0.950		
Satd. Flow (prot)	0	1770	3539	1583	0	1770	3539	1583	0	1770	3539	1583
Flt Permitted		0.229				0.317				0.481		
Satd. Flow (perm)	0	427	3539	1583	0	590	3539	1583	0	896	3539	1583
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)				154				127				279
Link Speed (mph)			30				30				30	
Link Distance (ft)			447				844				857	
Travel Time (s)			10.2				19.2				19.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	151	573	154	1	226	711	67	7	174	338	279
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	152	573	154	0	227	711	67	0	181	338	279
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	R NA	Left	Left	Right	R NA	Left	Left	Right	R NA	Left	Left	Right
Median Width(ft)			12				12				12	
Link Offset(ft)			0				0				0	
Crosswalk Width(ft)			16				16				16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9	9	15		9	9	15		9
Number of Detectors	1	1	2	1	1	1	2	1	1	1	2	1
Detector Template	Left	Left	Thru	Right	Left	Left	Thru	Right	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20	20	20	100	20	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	20	6	20	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94				94				94	
Detector 2 Size(ft)			6				6				6	
Detector 2 Type			Cl+Ex				Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)			0.0				0.0				0.0	
Turn Type	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm	pm+pt	pm+pt	NA	Perm
Protected Phases	7	7	4		3	3	8		5	5	2	
Permitted Phases	4	4		4	8	8		8	2	2		2

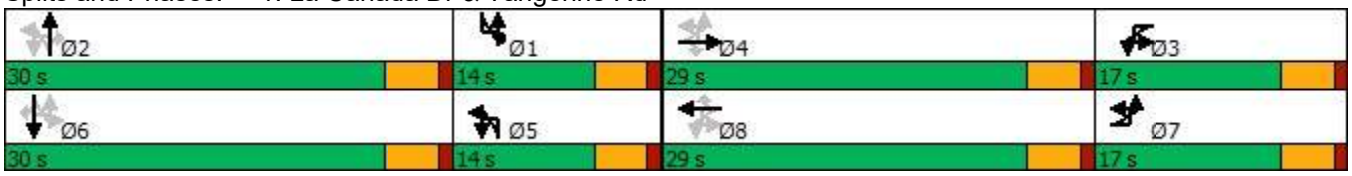
Lane Group	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Volume (vph)	2	61	326	112
Future Volume (vph)	2	61	326	112
Ideal Flow (vphpl)	1900	1900	1900	1900
Storage Length (ft)		160		170
Storage Lanes		1		1
Taper Length (ft)		220		
Lane Util. Factor	0.95	1.00	0.95	1.00
Frt				0.850
Flt Protected		0.950		
Satd. Flow (prot)	0	1770	3539	1583
Flt Permitted		0.501		
Satd. Flow (perm)	0	933	3539	1583
Right Turn on Red				Yes
Satd. Flow (RTOR)				127
Link Speed (mph)			30	
Link Distance (ft)			969	
Travel Time (s)			22.0	
Peak Hour Factor	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	66	354	122
Shared Lane Traffic (%)				
Lane Group Flow (vph)	0	68	354	122
Enter Blocked Intersection	No	No	No	No
Lane Alignment	R NA	Left	Left	Right
Median Width(ft)			12	
Link Offset(ft)			0	
Crosswalk Width(ft)			16	
Two way Left Turn Lane				
Headway Factor	1.00	1.00	1.00	1.00
Turning Speed (mph)	9	15		9
Number of Detectors	1	1	2	1
Detector Template	Left	Left	Thru	Right
Leading Detector (ft)	20	20	100	20
Trailing Detector (ft)	0	0	0	0
Detector 1 Position(ft)	0	0	0	0
Detector 1 Size(ft)	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel				
Detector 1 Extend (s)	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94	
Detector 2 Size(ft)			6	
Detector 2 Type			Cl+Ex	
Detector 2 Channel				
Detector 2 Extend (s)			0.0	
Turn Type	pm+pt	pm+pt	NA	Perm
Protected Phases	1	1	6	
Permitted Phases	6	6		6



Lane Group	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Detector Phase	7	7	4	4	3	3	8	8	5	5	2	2
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5
Total Split (s)	17.0	17.0	29.0	29.0	17.0	17.0	29.0	29.0	14.0	14.0	30.0	30.0
Total Split (%)	18.9%	18.9%	32.2%	32.2%	18.9%	18.9%	32.2%	32.2%	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	12.5	12.5	24.5	24.5	12.5	12.5	24.5	24.5	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5		4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead	Lag	Lag	Lead	Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	Min	Min	None	None	Min	Min	None	None	None	None
Walk Time (s)			7.0	7.0			7.0	7.0			7.0	7.0
Flash Dont Walk (s)			11.0	11.0			11.0	11.0			11.0	11.0
Pedestrian Calls (#/hr)			0	0			0	0			0	0
Act Effct Green (s)		25.6	17.5	17.5		30.7	20.0	20.0		21.2	15.9	15.9
Actuated g/C Ratio		0.39	0.26	0.26		0.46	0.30	0.30		0.32	0.24	0.24
v/c Ratio		0.46	0.61	0.29		0.49	0.67	0.12		0.48	0.40	0.47
Control Delay		21.5	25.1	5.7		20.0	24.5	1.0		23.9	25.2	6.6
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		21.5	25.1	5.7		20.0	24.5	1.0		23.9	25.2	6.6
LOS		C	C	A		C	C	A		C	C	A
Approach Delay			21.1				21.9				18.4	
Approach LOS			C				C				B	
Queue Length 50th (ft)		31	105	0		48	126	0		51	64	0
Queue Length 95th (ft)		72	179	41		105	227	5		109	115	58
Internal Link Dist (ft)			367				764				777	
Turn Bay Length (ft)		195		205		410		205		180		435
Base Capacity (vph)		455	1344	696		522	1344	680		455	1399	794
Starvation Cap Reductn		0	0	0		0	0	0		0	0	0
Spillback Cap Reductn		0	0	0		0	0	0		0	0	0
Storage Cap Reductn		0	0	0		0	0	0		0	0	0
Reduced v/c Ratio		0.33	0.43	0.22		0.43	0.53	0.10		0.40	0.24	0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 66.3			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 20.8		Intersection LOS: C	
Intersection Capacity Utilization 61.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: La Canada Dr & Tangerine Rd



Lane Group	SBU	SBL	SBT	SBR
Detector Phase	1	1	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	9.5	22.5	22.5
Total Split (s)	14.0	14.0	30.0	30.0
Total Split (%)	15.6%	15.6%	33.3%	33.3%
Maximum Green (s)	9.5	9.5	25.5	25.5
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0	0.0	0.0
Total Lost Time (s)		4.5	4.5	4.5
Lead/Lag	Lag	Lag	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None
Walk Time (s)			7.0	7.0
Flash Dont Walk (s)			11.0	11.0
Pedestrian Calls (#/hr)			0	0
Act Effct Green (s)		19.2	12.9	12.9
Actuated g/C Ratio		0.29	0.19	0.19
v/c Ratio		0.19	0.51	0.30
Control Delay		17.9	27.8	7.4
Queue Delay		0.0	0.0	0.0
Total Delay		17.9	27.8	7.4
LOS		B	C	A
Approach Delay			22.0	
Approach LOS			C	
Queue Length 50th (ft)		18	67	0
Queue Length 95th (ft)		48	123	39
Internal Link Dist (ft)			889	
Turn Bay Length (ft)		160		170
Base Capacity (vph)		442	1399	702
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.15	0.25	0.17

Intersection Summary

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	5	4	456	496	3
Future Volume (vph)	3	5	4	456	496	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	125			0
Storage Lanes	1	0	1			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt	0.916				0.999	
Flt Protected	0.982		0.950			
Satd. Flow (prot)	1676	0	1770	3539	3536	0
Flt Permitted	0.982		0.950			
Satd. Flow (perm)	1676	0	1770	3539	3536	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	412			969	442	
Travel Time (s)	9.4			22.0	10.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	5	4	496	539	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	8	0	4	496	542	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	5	4	456	496	3
Future Vol, veh/h	3	5	4	456	496	3
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	-	125	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	4	496	539	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	797	271	542	0	-	0
Stage 1	541	-	-	-	-	-
Stage 2	256	-	-	-	-	-
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	324	727	1023	-	-	-
Stage 1	548	-	-	-	-	-
Stage 2	763	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	323	727	1023	-	-	-
Mov Cap-2 Maneuver	323	-	-	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	763	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1023	-	495	-	-
HCM Lane V/C Ratio	0.004	-	0.018	-	-
HCM Control Delay (s)	8.5	-	12.4	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	927	1	0	1
Future Volume (vph)	0	0	927	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	3539	3539	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	3539	3539	0	0	1611
Link Speed (mph)		30	30		30	
Link Distance (ft)		210	447		338	
Travel Time (s)		4.8	10.2		7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	1008	1	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1009	0	0	1
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	927	1	0	1
Future Vol, veh/h	0	0	927	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage,#	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	1008	1	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	505
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	512
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	512
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	512
HCM Lane V/C Ratio	-	-	-	0.002
HCM Control Delay (s)	-	-	-	12
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

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