

Traffic Statement



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November 25, 2020
Updated October 6, 2021
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Church of the Nazarene Traffic Statement

Prepared for submittal to:

Town of Oro Valley, Arizona

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Table of Contents

1.	INTRODUCTION AND EXECUTIVE SUMMARY	1
	Purpose of Report and Study Objectives	1
	Summary of Findings	3
2.	PROPOSED DEVELOPMENT	4
	Site Location	4
	Land Use and Intensity	4
	Proposed Access	4
	Development Phasing and Timing	4
3.	STUDY AREA CONDITIONS	6
	Area Characteristics	6
	Access	6
	Study Area	7
	Physical Characteristics	7
	Existing Intersections	7
	Traffic Volumes	9
	Safety Related Deficiencies	13
4.	PROJECTED TRAFFIC	16
	Site Traffic Forecasting	16
	Total Traffic	20
5.	TRAFFIC AND IMPROVEMENT ANALYSIS	24
	Site Access	24
	Level of Service Analysis	24
	Traffic Safety	28
	Driveway Spacing	32
	Alternative Modes Considerations	32
6.	CONCLUSIONS AND RECOMMENDATIONS	33

List of Exhibits

Exhibit 1	Project Location.....	1
Exhibit 2	Tentative Development Plan	2
Exhibit 3	Preliminary Phasing Plan	5
Exhibit 4	Roadway Inventory	6
Exhibit 5	Calle Concordia/Calle Buena Vista	7
Exhibit 6	Ground Photographs	8
Exhibit 7	Roadway Daily Volumes (Year 2021).....	10
Exhibit 8	Roadway Daily Volumes (PAG).....	11
Exhibit 9	Intersection Volumes (2021)	12
Exhibit 10a	Crash History - Roadways.....	14
Exhibit 10b	Crash History - Intersections	15
Exhibit 11	Highest Impact During the Weekday	18
Exhibit 12	Existing Activity Trips (Wednesday, 6-7 PM)	19
Exhibit 13	Total Existing Volumes (Wednesday, 6-7 PM)	20
Exhibit 14	New Trips Phase 1 Only (Wednesday, 8-9 PM).....	21
Exhibit 15	Total Volumes with Phase 1 Only (Wednesday, 8-9 PM)	21
Exhibit 16	New Trips Phase 2 (Wednesday, 6-7 PM).....	22
Exhibit 17	Total Volumes Phase 2 (Wednesday, 6-7 PM).....	22
Exhibit 18	Phase 2 Site Trips (Wednesday, 8-9 PM).....	23
Exhibit 19	Phase 2 Total Volumes (Wednesday, 8-9 PM).....	23
Exhibit 20	Intersection Analysis Results With Phase 1 (8-9 PM)	25
Exhibit 21	Intersection Analysis Results With Phase 2 (6-7 PM)	26
Exhibit 22	Intersection Analysis Results With Phase 2 (8-9 PM)	27
Exhibit 23	Sight Distance Requirements (Calle Concordia/New Project Driveway).....	28
Exhibit 24	Right Turn Warrant Guidelines.....	29
Exhibit 25	Left Turn Warrant Guidelines	30
Exhibit 26	Total Volumes Phase 2 (Wednesday, 6-7 PM) with West Driveway Turn Lane Restrictions ...	31
Exhibit 27	Intersection Analysis Results With Lane Restrictions Phase 2 (6-7 PM)	32

As shown on the Tentative Development Plan (Exhibit 2), the project adds the following to the existing campus:

- Building G, Administration Expansion (3,300 square feet)
- “H”, Activity Field
- Building I, Activity Building (75,650)
- “J”, Outdoor Amphitheater

Exhibit 2 Tentative Development Plan



Source: Paradigm Land Design

The project also removes a youth worship building and a “portable” building.

The objectives of this traffic study are to determine the traffic impacts of the project on the local transportation system and to recommend improvements to maintain efficient and safe traffic operations for motor vehicle uses, pedestrians, and bicyclists. This report focuses on access management, trip generation and the potential for turn lanes at the project driveways on Calle Concordia and Calle Buena Vista.

Summary of Findings

Study Area

The campus is located on the north side of Calle Concordia between Calle Buena Vista and Canyon Del Oro high school.

Development Description

The project is an expansion of the existing Oro Valley Church of the Nazarene campus.

Principal Findings

1. All study area roadways operate at LOS C or better based on 2021 daily traffic volumes with the project new trips added, and FDOT level of service standards.
2. Adding the projected site trips to the recorded 2021 6-7 PM and 8-9 PM intersection volumes, the project intersections will operate at LOS C or better.
3. Hours of Operation for the activity field shall be 6:00 AM to 10:00 PM. No special events intended to draw additional visitors to the magnitude of an organized festival, game, event, or tournament will be permitted on Sundays before 1:00 PM, on Wednesdays between 6:00 – 7:30 PM, or to start or end during the hour surrounding the CDO High School arrival/dismissal times. Exceptions may be granted by the Town Engineer and Planning Director as a Special Use Permit. “Special events” do not include OVCN’s normally scheduled Ministries.
4. The driveway spacing, corner clearances and sight distances for the driveways and nearby intersections meet Oro Valley standards.
5. Turn lanes are not warranted on Calle Concordia or on Calle Buena Vista for the first phase of the project. For Phase 2, the projected turn lane volumes meet the warrants for left turn lanes on Calle Concordia at each project driveway during the weekday off-peak hour on Wednesday, the highest site traffic hour. It is recommended that a continuous left turn lane should be constructed beginning immediately east of the western driveway and continuing along the project frontage. During the final design stage, it should be determined if safety concerns dictate the extension of the continuous left turn lane past the bridge to connect to the existing continuous left turn lane terminus. If that is the case, such improvements will be the responsibility of the developer. The design of this continuous turn lane will be provided with the off-site plans for improvements to Calle Concordia by others.
6. An alternative for the western driveway could be to restrict access to right-in, right-out only by constructing a raised barrier, or “pork chop”. The Synchro analysis for this alternative found that the impacted intersections will continue to operate at LOS B or better conditions.
7. Roadway and subdivision design should conform to current jurisdictional standards. This includes ensuring that sight distance requirements are met.
8. All new traffic signs and markings, on-site and off-site, must comply fully with the *Manual on Uniform Traffic Control Devices* and Town requirements.

2. Proposed Development

Site Location

The project location is shown in Exhibit 1. It will have access from Calle Concordia on the south and on Calle Buena Vista on the west.

Land Use and Intensity

As shown on the Conceptual Site Plan (Exhibit 2), the project includes the following new buildings:

- Building G, Administration Expansion (3,300 square feet)
- “H”, Activity Field
- Building I, Activity Building (75,650)
- “J”, Outdoor Amphitheater

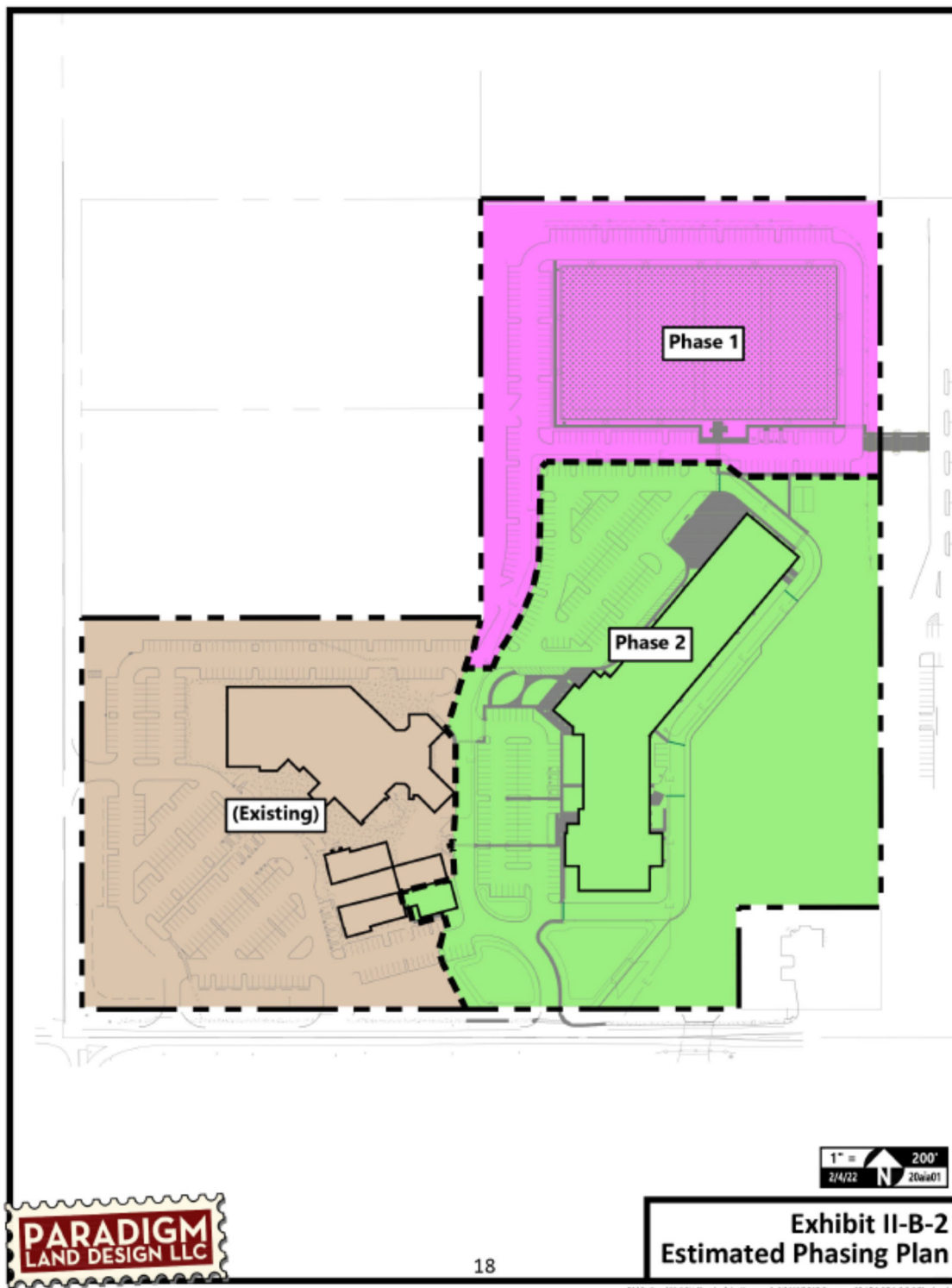
Proposed Access

As shown in the site plan, there are four access locations: three on Calle Concordia and one on Calle Buena Vista. The two west driveways on Calle Concordia and the one on Calle Buena Vista will continue to primarily serve the west campus. A new driveway on Calle Concordia will be constructed between the two existing eastern driveways. This access location was chosen to minimize headlight encroachment at an existing house across Calle Concordia. The two existing east driveways serving the east campus will be removed.

Development Phasing and Timing

For the purposes of this report, the buildout year is assumed to be 2022. As shown in Exhibit 3, the Activity Field is planned to be constructed first (Phase 1) with the remainder of the project to be constructed as Phase 2.

Exhibit 3 Preliminary Phasing Plan



3. Study Area Conditions

Area Characteristics

Land Use

The project is on the existing Oro Valley Church of the Nazarene campus. Existing buildings on the campus include the main sanctuary, classrooms, and an administration building. There is also a building for youth worship and a “portable” building, both of which will be removed with the expansion.

Anticipated Future Development

A rezoning for a mini-storage and offices building is planned for the northwest corner of the SR 77/Calle Concordia intersection, about ½ mile east of the project is currently under way.

Program for Completion of Roadway and Intersection Improvements

There are no projects in Oro Valley in the vicinity of the project listed in the current (2020-2024) Pima Association of Governments Transportation Improvement Program.

ADOT has a pavement preservation project on SR 77 from Calle Concordia to Miracle Mile that will underway later this year (2020).

Existing Roads

Calle Concordia is a minor arterial as designated in the Town of Oro Valley’s General Plan document. Calle Buena Vista is designated as a major collector. Exhibit 4 provides a physical inventory of the roadways within or near the study area.

Exhibit 4 Roadway Inventory

<i>Street</i>	<i>Segment</i>	<i>Travel Lanes</i>	<i>Speed Limit</i>	<i>Bike Route</i>	<i>Bus Route</i>
Calle Concordia	Calle Buena Vista to SR 77	2-3	25 MPH	Signed Bike Route with On-Street Bike	No
Calle Buena Vista	Vicinity of Project	2	25 MPH N. of Calle Concordia, 35 MPH S. of Calle Concordia	Signed Bike Route with On-Street Bike Lane (S. of Calle Concordia)	No

Bike route designation from the Town of Oro Valley Bikeways Map, 2017

Access

As shown in the site plan, there are four access locations: three on Calle Concordia and one on Calle Buena Vista. The two west driveways on Calle Concordia and the one on Calle Buena Vista will continue to serve the west campus. A new driveway on Calle Concordia will be constructed between the two existing eastern driveways as part of Phase 2. This access location was chosen to minimize headlight encroachment at an existing house across Calle Concordia. The two existing east driveways serving the east campus will be removed.

Study Area

The study area includes the roadways adjacent to the project (Calle Concordia, Calle Buena Vista).

Physical Characteristics

Roadway Characteristics

Calle Concordia is a two-lane road along the frontage of the property with striped bike lanes on both sides and a sidewalk along the north side. It is a minor arterial with a posted speed limit of 25 mph. Its east terminus is just east of SR 77 and its west continuous terminus is at La Canada Drive. West of the project site it widens to have a two-way left turn lane to SR 77. In the vicinity of the project, the pavement is in good condition. It provides access to the church, Canyon del Oro High School, and residential properties.

Calle Buena Vista is a two-lane major collector with unpaved shoulders and no sidewalks. It has a posted speed limit of 25 mph north of Calle Concordia and 35 mph south of Calle Concordia. Calle Buena Vista's northern terminus is at Linda Vista Road and continues south to Hardy Road. South of Hardy Road it becomes Northern Avenue.

Existing Intersections

The closest intersection is the unsignalized intersection of Calle Concordia/Calle Buena Vista (Exhibit 5). It is stop controlled on the north and south approaches (Calle Buena Vista). Each approach to the intersection has a single lane sharing the left, through and right turn movements except for the northbound approach. There is a stop controlled northbound right turn lane on Calle Buena Vista.

Ground Photos

Ground photos of the roadways adjacent to the project are provided in Exhibit 6.

Exhibit 5 Calle Concordia/Calle Buena Vista



Exhibit 6 Ground Photographs



Looking South on Calle Buena Vista – Project is on the Left



Looking East on Calle Concordia – Project is on the Left

Traffic Control Devices

The intersection of Calle Concordia/Calle Buena Vista is a four-leg intersection with stop control on Calle Buena Vista.

Transit Service

There are no fixed transit routes along Calle Concordia or Calle Buena Vista.

Pedestrian/Bicycle Facilities

There is a signed and striped bike route along Calle Concordia, and on Calle Buena Vista, south of Calle Concordia. There is an existing sidewalk along the north side of Calle Concordia.

Traffic Volumes

Daily Traffic Volumes

For this updated report, we collected traffic data on Calle Concordia and on Calle Buena Vista at locations approved by Town staff. The data were collected on Sunday, August 29, 2021, Tuesday, August 31, 2021, and Wednesday, September 1, 2021. Bidirectional counts were collected on each approach to the Calle Concordia/Calle Buena Vista intersection. Counts were also collected on Calle Buena Vista, north of the project driveway, and on Calle Concordia, east of the existing easternmost project driveway. These traffic data are shown in Exhibit 7.

Other daily traffic volumes for the study area roadways are available on PAG's website. Year 2019 daily volumes (pre-COVID 19) on Calle Concordia, east of the project site and on Calle Buena Vista, south of the project site are shown in Exhibit 8.

Intersection Traffic Volumes

For this updated report, we also collected 24-hour approach volume data at the intersection of Calle Concordia/Calle Buena Vista. The data were also collected on Sunday, August 29, 2021, Tuesday, August 31, 2021, and Wednesday, September 1, 2021. The purpose of these counts was to determine when the Sunday and weekday peak hours were at the intersection. Only the highest peak hour was determined for Sunday. The AM and PM peak hours at the intersection for the weekdays were determined. Based on the projected visitor activity at the church, we also determined that the highest weekday site traffic would occur on Wednesdays from 6:00-7:00 pm. This is based on the evening class schedule at the church and the sports related activities expected during this time period. Following a project meeting with Town staff, we also extracted the turning movement counts at the intersection from 8:00-9:00 pm.

During the periods when there will be a high number of non-sports activities, such as Sunday mornings and between 6:00 – 7:30 PM on Wednesdays when there are religious studies classes, there will be no sports practices or games at the activity field. On Sundays, sports activities will be scheduled after 1:00 PM, and on Wednesday evenings, sports related activities will not occur concurrently with the 6:00 to 7:30 classes. Sports activities during other times of the week and on Saturdays are not expected to contribute to create over-capacity conditions on the project roadways, and the combination of non-sports and sports related trips during these times will not exceed the total trips expected during the Wednesday 6:00-7:00 PM hour. The traffic data for these hours are shown in Exhibit 9.

Level of service (LOS) is a qualitative description of how well a roadway or intersection operates under prevailing traffic conditions. A grading system of A through F, similar to academic grades, is utilized. LOS A is free-flowing traffic, whereas LOS F is forced flow and extreme congestion.

Based on Florida Department of Transportation's *Generalized Annual Average Daily Volumes for Florida's Urbanized Areas* level of service table, the LOS D/E threshold for Calle Concordia is approximately 13,320 vehicles per day and the LOS D/E threshold for Calle Buena Vista is 10,660. The traffic volumes shown on Exhibits 7 and 8 are well below these thresholds.

Exhibit 7

Roadway Daily Volumes (Year 2021)

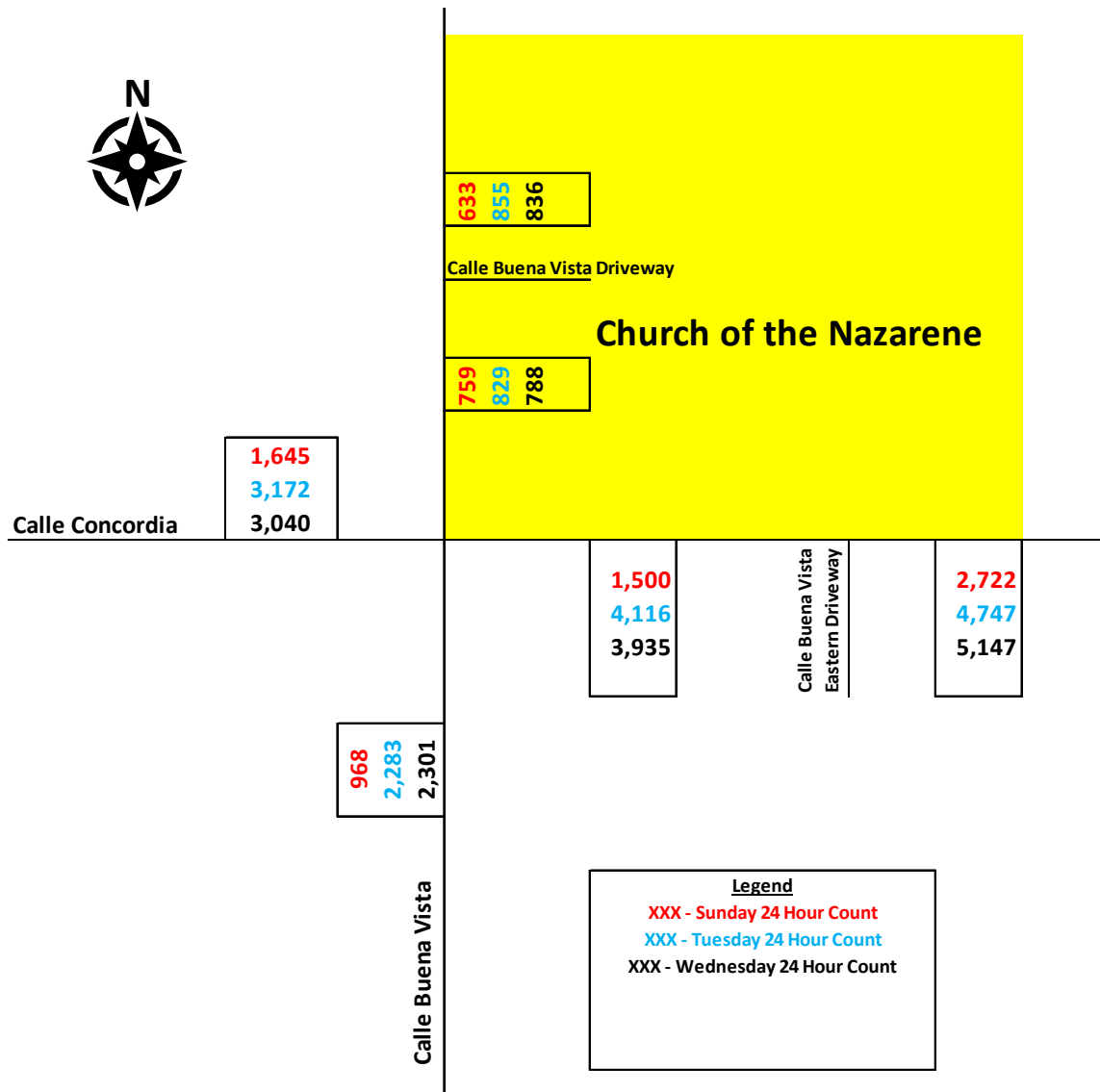
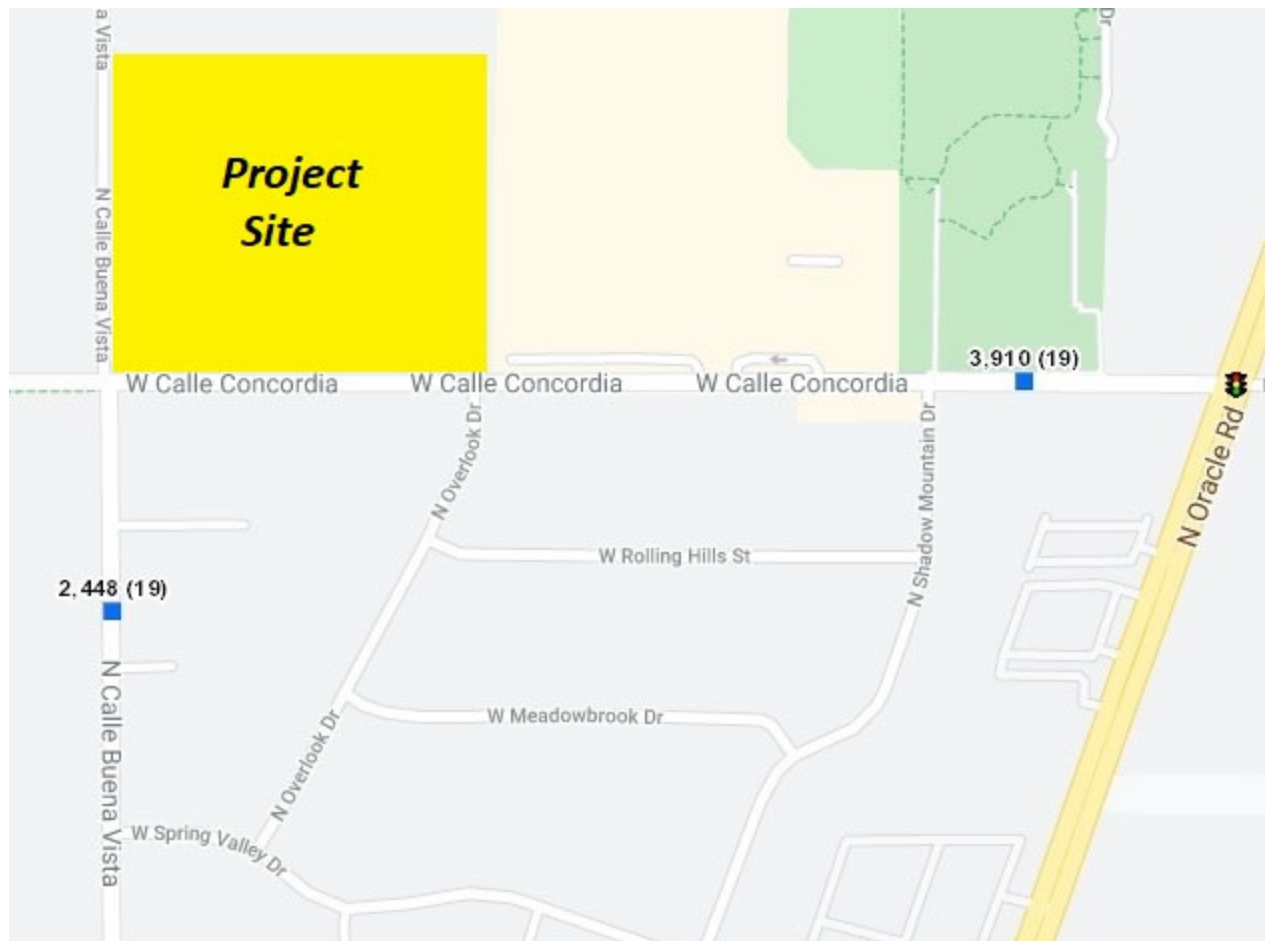


Exhibit 8 Roadway Daily Volumes (PAG)



Source: Pima Association of Governments

Exhibit 9 Intersection Volumes (2021)

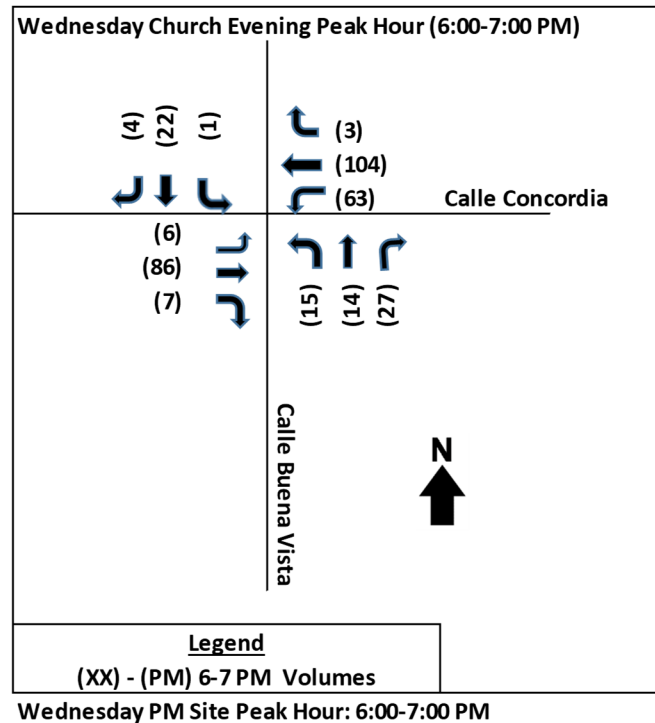
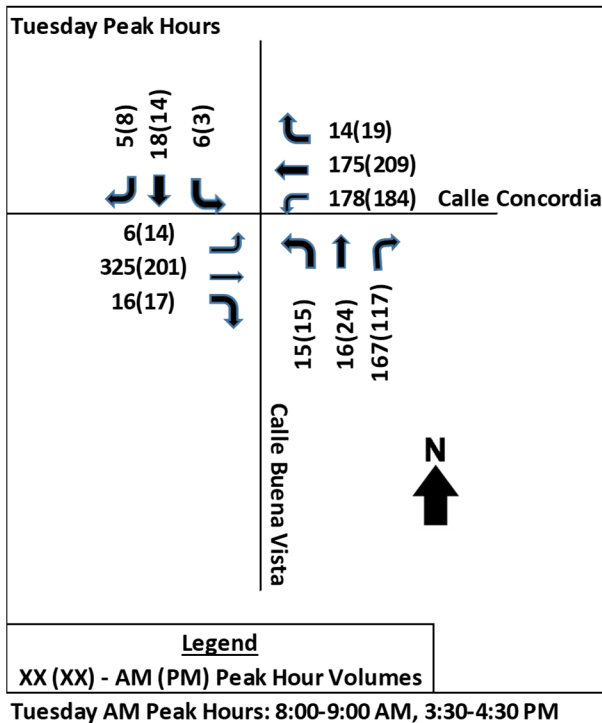
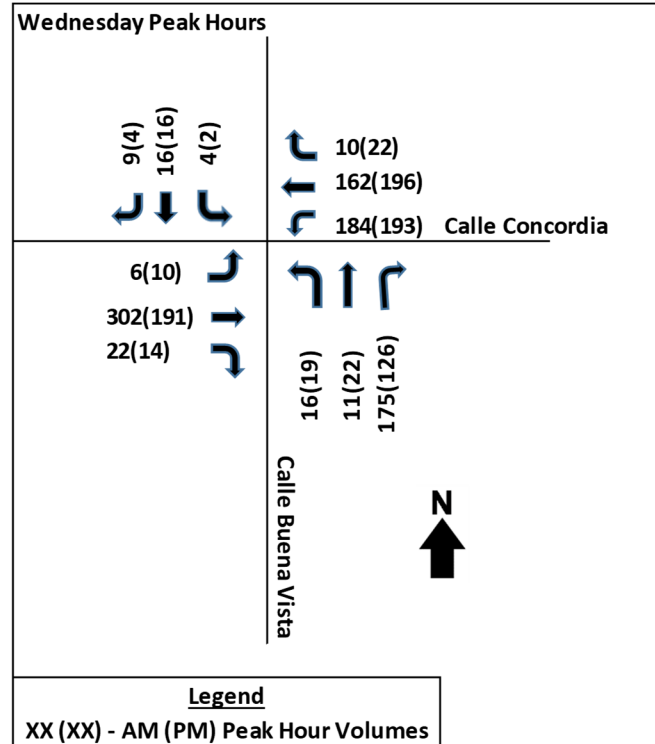
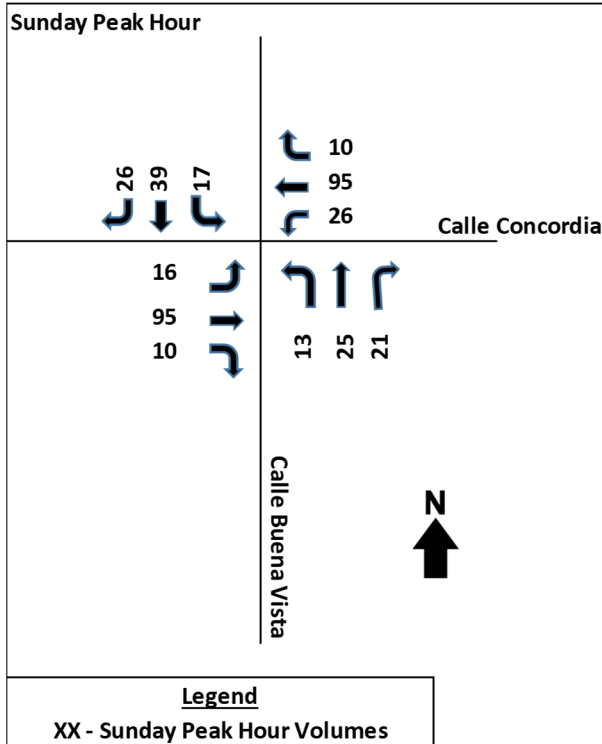
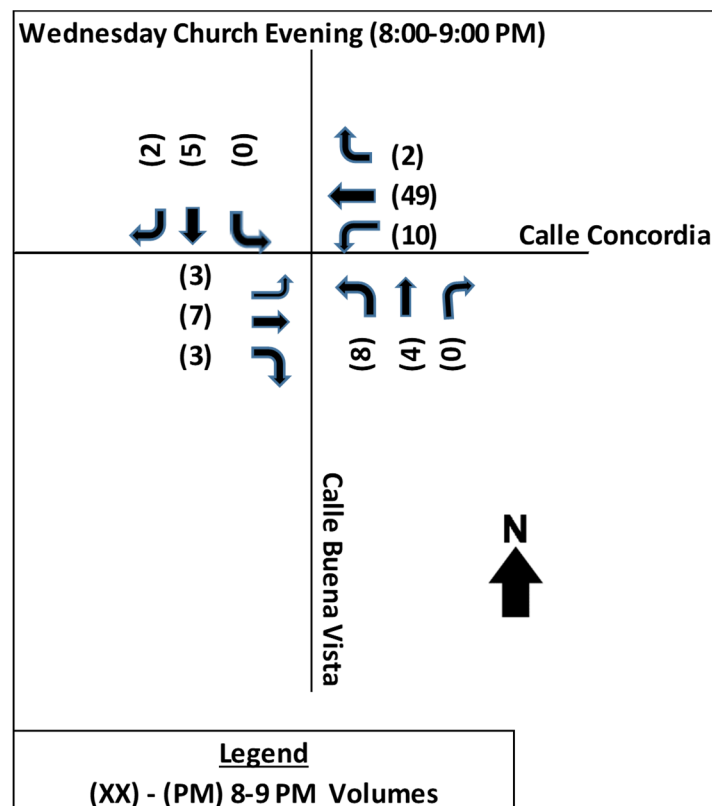


Exhibit 9 (cont.) Intersection Volumes (2021)



Safety Related Deficiencies

ADOT collects crash data for all roadways within the state. We reviewed the segments of Calle Concordia west of and east of Calle Buena Vista for the most recently available five-year period (2014-2018). There were no segment-related crashes on Calle Buena Vista during the five-year period. We also reviewed the “junction-related”, or intersection crashes in the vicinity of the project.

Roadway Segment Crashes

As shown in Exhibit 10a, on Calle Concordia between La Canada and Calle Buena Vista, there were four recorded crashes during the five-year period. Three were single-vehicle crashes with no injury. The five-year crash rate was 0.68 crashes per million vehicle-miles (MVM).

There were six crashes on the segment of Calle Concordia between Calle Buena Vista and Oracle Road. Four were rear-end crashes, and four were no-injury crashes. The five-year crash rate was 1.20 crashes per MVM. Although the crash rate on the east section seems high, one crash on this section results in a rate of 1.00 crashes per million-vehicle miles, indicating that the low traffic volumes on this segment result in a moderately high crash rate rather than an identifiable problem that can be mitigated.

Intersection Crashes

As shown in Exhibit 10b, there were nineteen “junction-related” crashes at the Calle Concordia intersection of Calle Buena Vista, Overlook Drive and Shadow Mountain Drive. Ten were at Calle Concordia/Calle Buena Vista and five were at Calle Concordia/Overlook Drive and four were at Calle Concordia/Shadow Mountain Drive. The most common crash types were left turn (six crashes) and rear end (five crashes). Thirteen of the crashes were no-injury crashes. The highest crash rate was at Calle Concordia/Calle Santa Cruz with 0.91 crashes per million entering vehicles.

Exhibit 10a Crash History - Roadways

Calle Concordia, La Canada Drive to Calle Buena Vista							
Crash Type	2014	2015	2016	2017	2018	5-Year Totals	%
Single Vehicle	1				2	3	75%
Other				1		1	25%
Total	1	0	0	1	2	4	
Crash Rate (per MVM)	0.86	0.00	0.00	0.86	1.71	0.68	
Severity	2014	2015	2016	2017	2018	Totals	%
Bodily Injury				1		1	25%
No Injury	1				2	3	75%

Calle Concordia, Calle Buena Vista to Oracle Road							
Crash Type	2014	2015	2016	2017	2018	5-Year Totals	%
Left Turn	1					1	17%
Rear End	1		2		1	4	67%
Sideswipe				1		1	17%
Total	2	0	2	1	1	6	
Crash Rate (per MVM)	2.01	0.00	2.01	1.00	1.00	1.20	
Severity	2014	2015	2016	2017	2018	Totals	%
Bodily Injury	1		1			2	33%
No Injury	1		1	1	1	4	67%

Exhibit 10b Crash History - Intersections

Calle Concordia/Calle Buena Vista							
Crash Type	2014	2015	2016	2017	2018	5-Year Totals	%
Single Vehicle	1					1	10%
Angle			1		1	2	20%
Left Turn	1			1		2	20%
Rear End			2	2		4	40%
Other		1				1	10%
Total	2	1	3	3	1	10	
Crash Rate (per MVE)	0.91	0.46	1.37	1.37	0.46	0.91	
Severity	2014	2015	2016	2017	2018	Totals	%
Bodily Injury	1	1	1			3	30%
No Injury	1		2	3	1	7	70%

Calle Concordia/Overlook Dr							
Crash Type	2014	2015	2016	2017	2018	5-Year Totals	%
Single Vehicle	1					1	20%
Angle		1				1	20%
Left Turn			2	1		3	60%
Total	1	1	2	1	0	5	
Crash Rate (per MVE)	0.55	0.55	1.10	0.55	0.00	0.55	
Severity	2014	2015	2016	2017	2018	Totals	%
Bodily Injury	1					1	20%
No Injury		1	2	1		4	80%

Calle Concordia/Shadow Mountain Dr							
Crash Type	2014	2015	2016	2017	2018	5-Year Totals	%
Single Vehicle	1					1	25%
Angle					1	1	25%
Left Turn			1			1	25%
Rear End		1				1	25%
Total	1	1	1	0	1	4	
Crash Rate (per MVE)	0.55	0.55	0.55	0.00	0.55	0.44	
Severity	2014	2015	2016	2017	2018	Totals	%
Bodily Injury	1				1	2	50%
No Injury		1	1			2	50%

4. Projected Traffic

Site Traffic Forecasting

Trip Generation

Trip generation is typically estimated using the trip rates contained in the Institute of Traffic Engineers' *Trip Generation Manual*, 11th Edition. The number of trips generated is the mathematical product of land use intensity (building square footage, number of dwelling units, etc.) and the trip generation rate, based on an average rate or from a fitted curve equation. The result is the total number of one-way trips (not round trips) expected to be generated by the project. These trips represent the number of vehicles estimated to enter and leave the project.

Although there are trip generation rates for the land use "Church" in the Trip Generation Manual, this project will include land use activities associated with sporting events and practices.

Current Sunday worship services are held at 8 am, 9:30 am and 11 am. There are activities for young church members during these services. Religious education classes for children between pre-kindergarten through high school are held on Wednesday evenings beginning at 6 pm. Other smaller weekly church events (women's Bible study, student ministry Bible study, etc.) are held during the week.

This project is expanding administrative buildings and adding supporting amenities to an existing church. Although the church wishes to increase its membership, the purpose of the expansion is to add resources such as youth participation facilities (classrooms, athletic spaces) to enhance the experiences of existing and potentially new church members. The church is working with a national sports ministry organization.

The expansion of the campus includes the addition of indoor sports facilities, an outdoor activity field, an auditorium, conference rooms and new classrooms. The indoor sports facilities include basketball courts and a turf area.

The church plans on having basketball, soccer, and other sports events within its new facilities. Currently, the church runs a small sports ministry program in Oro Valley utilizing middle school gymnasiums and fields. The church views this new facility as an opportunity to pursue new outreach to all ages in the community. Practices will generally occur during the week with games on Saturdays.

Because there are several church ministries, such as religious classes, that are attended between 6-7:30 PM on Wednesday nights, the church has committed to limiting sports practice times outside of this time period, such as after 8:00 PM on Wednesday nights, so as to not overburden the church parking areas at this time or to generate a high number of site trips at any particular time. Because there are fewer church related activities on other days in the evenings during the week, there may be sport practices that may begin at 5:30 pm on those days.

Estimates Provided by Church Staff

To determine when the site traffic peaks would occur, Church staff provided estimated attendance data for each of the activities (church services, classes, sports activities) at the church. The data provided includes estimated vehicles during four peak periods of each day of the week.

Based on these estimates, the highest attendance time will continue to be on Sunday during the highest attended morning service. The Sunday traffic count data indicates that this is associated with the 11 AM service. Monday and Wednesday evenings between 6:00-8:00 PM have the highest anticipated site trips during the weekdays with approximately 365 vehicular trips estimated on Monday evenings and 511

vehicular trips estimated on Wednesday evenings. Various church classes are held during the weekdays, generally beginning at 6:00 pm or 6:30 pm. On Saturdays, traffic is estimated to be split evenly between each the morning and afternoon peak hours.

The hours of Operation for the activity field shall be 6:00 AM to 10:00 PM. No special events intended to draw additional visitors to the magnitude of an organized festival, game, event, or tournament will be permitted on Sundays before 1:00 PM, on Wednesdays between 6:00 – 7:30 PM, or to start or end during the hour surrounding the CDO High School arrival/dismissal times. Exceptions may be granted by the Town Engineer and Planning Director as a Special Use Permit. “Special events” do not include OVCN’s normally scheduled Ministries.

To focus on the highest impact from the project, we used Wednesday evening estimates and the background traffic volumes for the periods from 6-7 PM and from 8-9 PM to estimate the impacts on Calle Concordia, the intersection of Calle Concordia/Calle Buena Vista and the project driveways. Although Sunday site trips will continue to be the highest of the week, we did not use this time due to the much lower background traffic volumes on Sunday.

We reviewed the collected peak hour data at the Calle Concordia/Calle Buena Vista intersection, the 24-hour counts collected on Calle Concordia east of the eastern project driveway and the 24-hour counts collected on Calle Buena Vista north of the project driveway. The counts indicate that although the Wednesday afternoon peak hour (3:30-4:30 pm) had the highest volumes during the day, the site related activities are less during this time than during the evening peak period (6-8 PM) for which the Church staff estimates 511 vehicles for staff and visitors. Of this number, 219 vehicular site trips are associated with existing activities, and the remaining 292 are associated with the proposed expansion. We also assumed that these numbers are represented over a two-hour period, and that half of these volumes would be entering and exiting the site during the 6:00-7:00 PM peak hour.

The activity field activities will generate an estimated maximum of 96 participating children. This number was derived by assuming that there would be four separate practices occurring with twelve children per team with potentially two teams practicing on each of the four fields (24 X 4 fields = 96 children). Assuming one car per participating child, there will be an estimated maximum of 96 vehicles entering and 96 vehicles exiting during practice and game times during the week and weekend.

The project will be constructed in two phases with the first phase being the activity field. The new eastern driveway will not be constructed as part Phase 1, and it is expected that most traffic for this phase will be through the existing driveway on Calle Buena Vista although some of the Phase 1 trips have been assigned to the two western driveways on Calle Concordia. These trips will occur between 8:00 and 9:00 PM. The highest weekday existing site trips and Phase 2 trips will occur between 6:00 and 7:00 PM.

Exhibit 11 shows the estimated existing and new vehicles during the Wednesday evening time periods.

Trip Distribution and Assignment

Based on the location of the new facilities, it is estimated that most of the site traffic will ultimately enter the site via Calle Concordia at one of three driveways. However, for the first phase of the project, the activity field, the church will promote access to and from the existing driveway on Calle Buena Vista by informing parents of this preference so that most activity field trips during the first phase will use this access. It is expected that some activity field trips will still use the two existing western driveways on Calle Concordia to access the activity field.

Exhibit 11 Highest Impact During the Weekday

	Persons	Vehicles
Activity Field (Phase 1)		
Activity Field (all during one hour, 8-9 PM)	96	96
Non-Activity Field Trips (Existing and Phase 2)		
Totals per 2 hour Peak	700	511
Wednesday Existing Activities (6-8 PM)	300	219
Wednesday Additional Future Activities (6-8 PM)	400	292
For peak hour, divide vehicle trips by 2		
Wednesday Existing Activities (6-7 PM)	150	109
Wednesday Future Activities (6-7 PM)	200	146
Total Future Activities (estimated for Phase 2, 6-7 PM)	350	255

Note 1: Activity Field and Non-Activity Field trips are not added together because they will occur at different hours on Wednesday evening.

Note 2: For the vehicles numbers, the number shown is assumed to be the same for the entering and exiting traffic during the hour. So for the activity field vehicles, there would be 96 trips entering and 96 trips exiting during the same hour.

For the next phase, the trips associated with sanctuary or classroom activities would use the existing driveways, and the new eastern driveway. Many of the trips associated with sports-related activities would be redistributed from the Calle Buena Vista access and will primarily use the new eastern driveway. A bridge will be constructed to provide access to the adjacent property, Canyon del Oro (CDO) High School, to the left to provide overflow parking spaces, if needed, via an agreement between the church and the high school. A copy of the written agreement between CDO and OVCN will be provided to the Town prior to construction of the bridge. A locking gate will be installed at the property line, or at another mutually agreed location. It is difficult to estimate how many trips would be distributed to this bridge to this overflow parking area, but there are approximately 300 parking spaces on the west side within the high school property so the number of overflow spaces should be adequate. The bridge will likely be open during the high school graduation ceremonies, big swim meets at the Oro Valley Aquatic Center, and possibly for services on Easter and Christmas and any other time CDO and the church agree to open it.

We reviewed the intersection data collected at Calle Concordia/Calle Buena Vista to determine the existing traffic pattern distribution for the 6:00-7:00 Wednesday peak hour. Balancing the entering and exiting volumes, this results in a distribution of 40% to/from the east, 32% to/from the west, 21% to/from the south and 7% to/from the north.

The existing site trips (110 in, 110 out) for the PM peak hour are shown in Exhibit 12. It should be noted that these trips are estimates provided by church staff based on existing activities during Wednesday nights and may be conservatively calculated. The site trips were integrated into the existing volume at the intersection and distributed to the driveway intersections on Calle Concordia and Calle Buena Vista. The total existing volumes for the Wednesday 6-7 PM peak hour are shown in Exhibit 13.

Exhibit 12 Existing Activity Trips (Wednesday, 6-7 PM)

Wednesday 6:00-7:00 PM Existing Site Trips

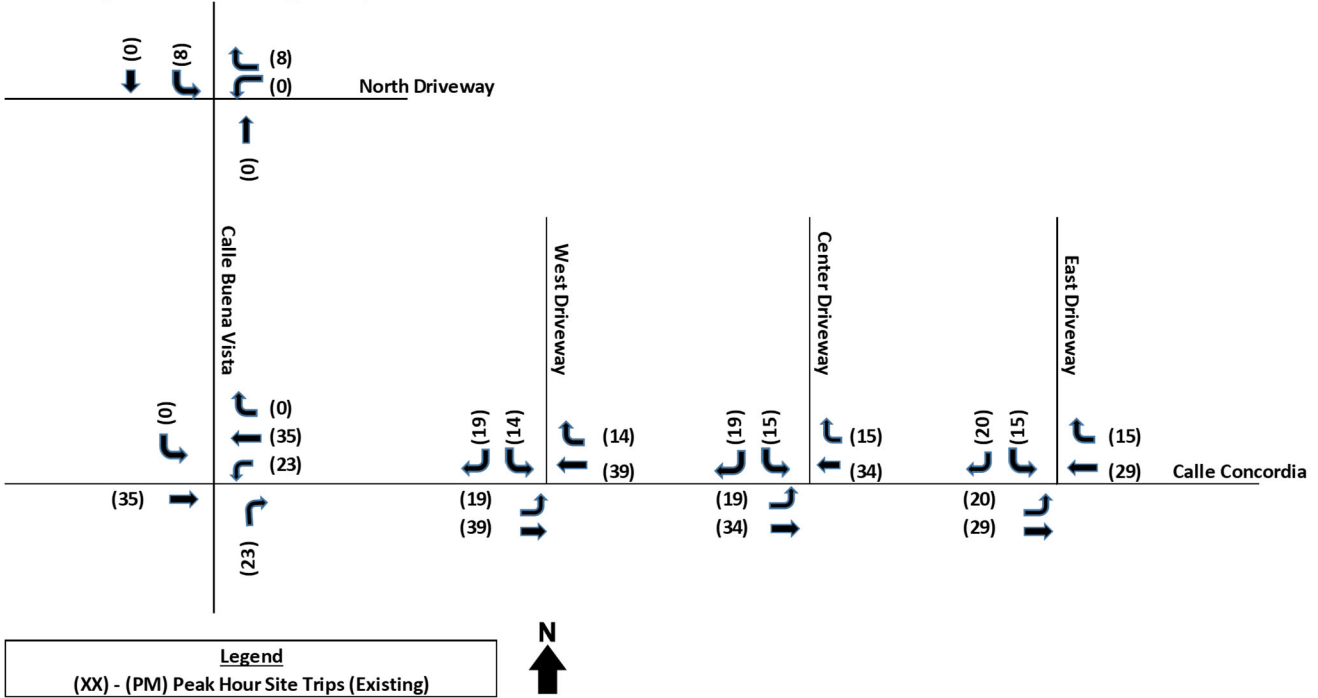
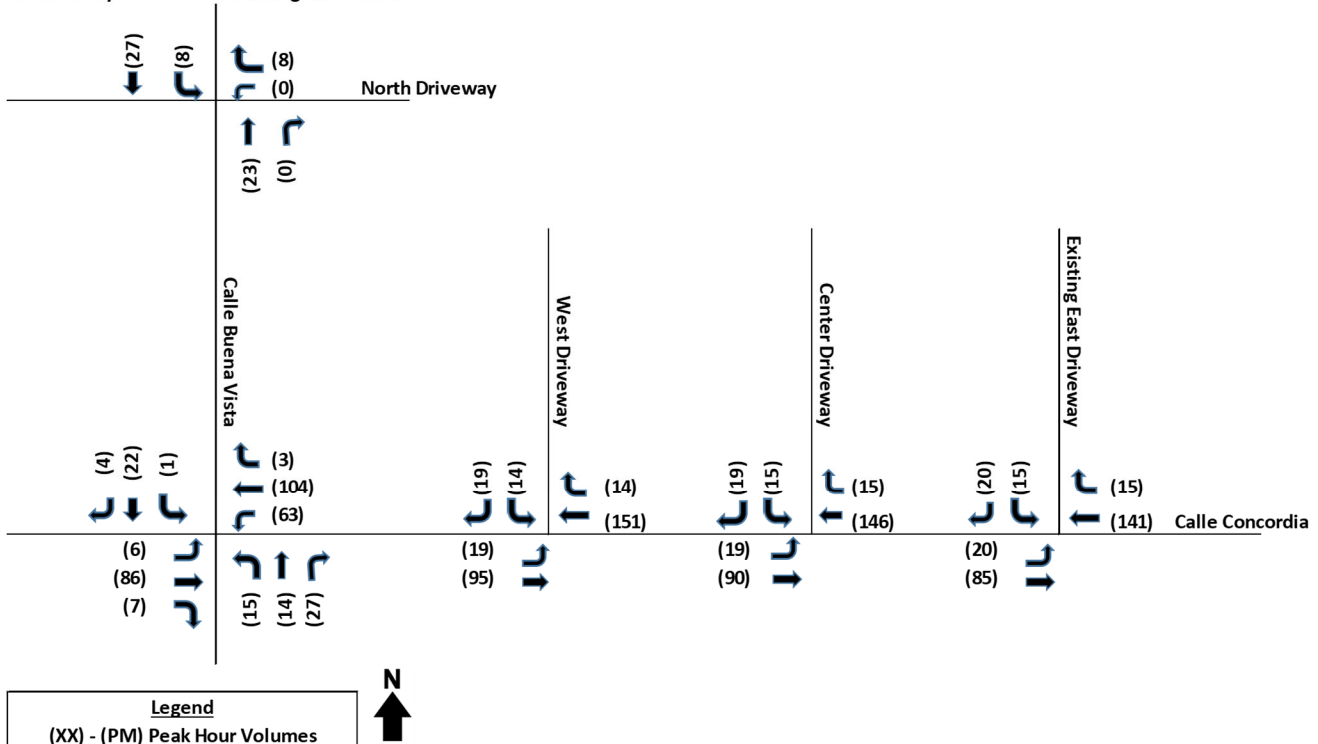


Exhibit 13 Total Existing Volumes (Wednesday, 6-7 PM)

Wednesday 6:00-7:00 PM Existing Total Volume



Total Traffic

Although access to the activity fields will be available from the Calle Concordia two western driveways, it is estimated that most of the new Phase 1 site trips will be via the Calle Buena Vista driveway. The construction of the activity field will be the only improvement for Phase 1. The projected activity field site trips are shown in Exhibit 14, and the total background plus site trip volumes are shown in Exhibit 15. These volumes are for the Wednesday 8:00-9:00 PM peak hour.

For Phase 2, the new east driveway will be constructed, and much of the activity field traffic will be primarily directed to and from this location. However, the non-activity field buildings will be constructed during this phase, and the majority of the site trips for the non-activity field activities will occur before 8:00 PM. The estimated trips between 6-7 PM are shown in Exhibit 16. The total volumes from 6:00-7:00 PM on Wednesdays are shown in Exhibit 17.

It should be noted that there are differences in the distribution of the 8:00 PM activity field traffic between the two phases because the new driveway on Calle Concordia will not be constructed until Phase 2. With the new east driveway open for Phase 2, the activity field site trips were redistributed as more activity field trips will enter/exit at this driveway. The Wednesday 8:00 PM activity field site trips and total volumes are shown in Exhibits 18 and 19.

Exhibit 14 New Trips Phase 1 Only (Wednesday, 8-9 PM)

Wednesday 8:00-9:00 PM Phase 1 Site Trips (Activity Field Only)

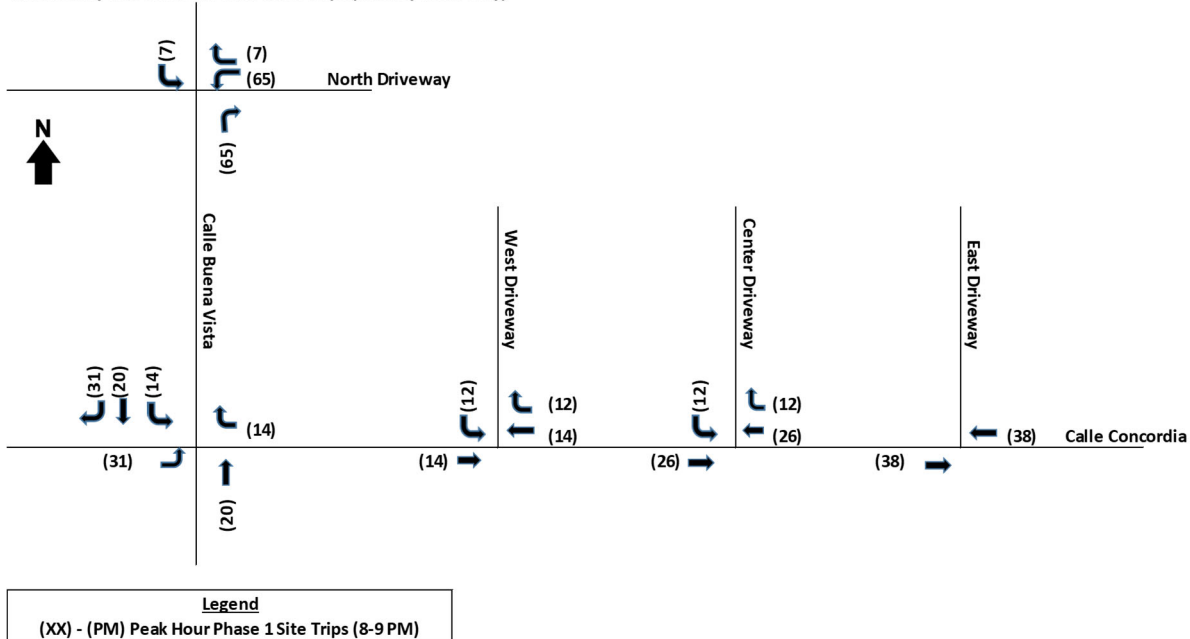


Exhibit 15 Total Volumes with Phase 1 Only (Wednesday, 8-9 PM)

Wednesday 8:00-9:00 PM Phase 1 Total Volumes

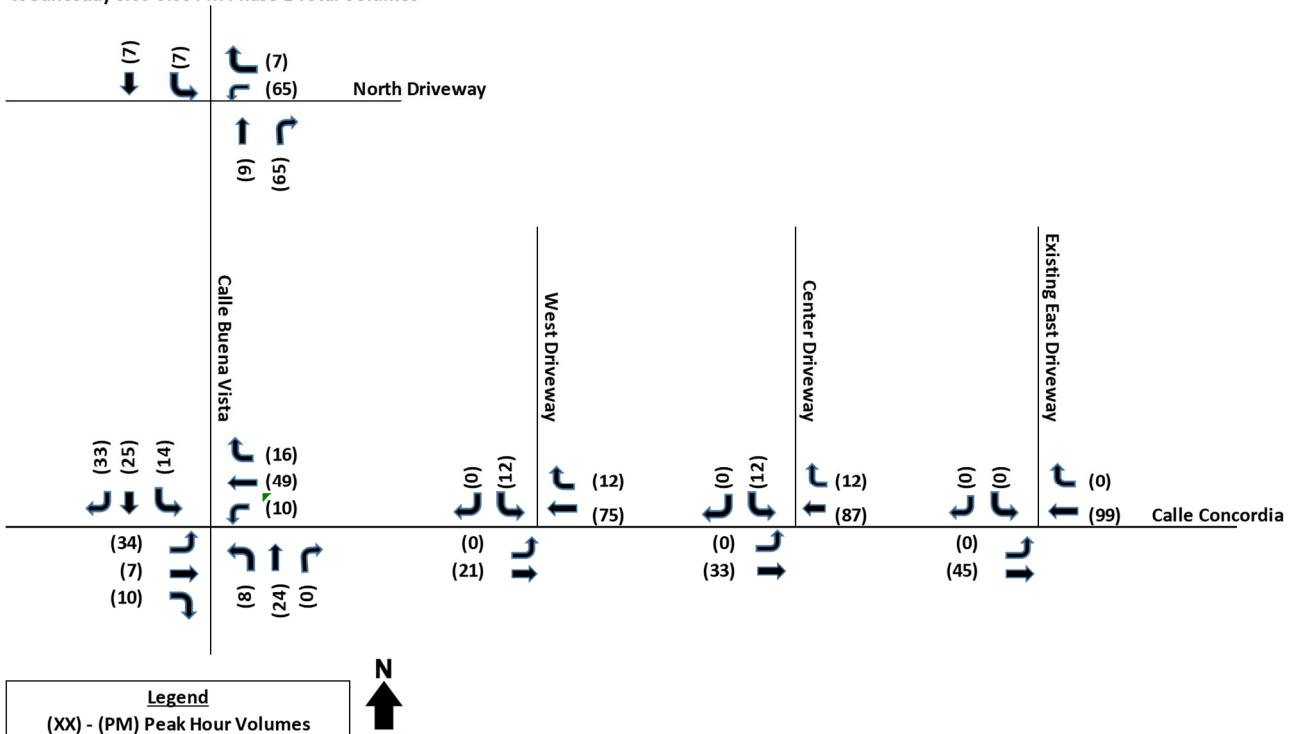


Exhibit 16 New Trips Phase 2 (Wednesday, 6-7 PM)

Wednesday 6:00-7:00 PM Phase 2 Site Trips (Non-Activity Field)

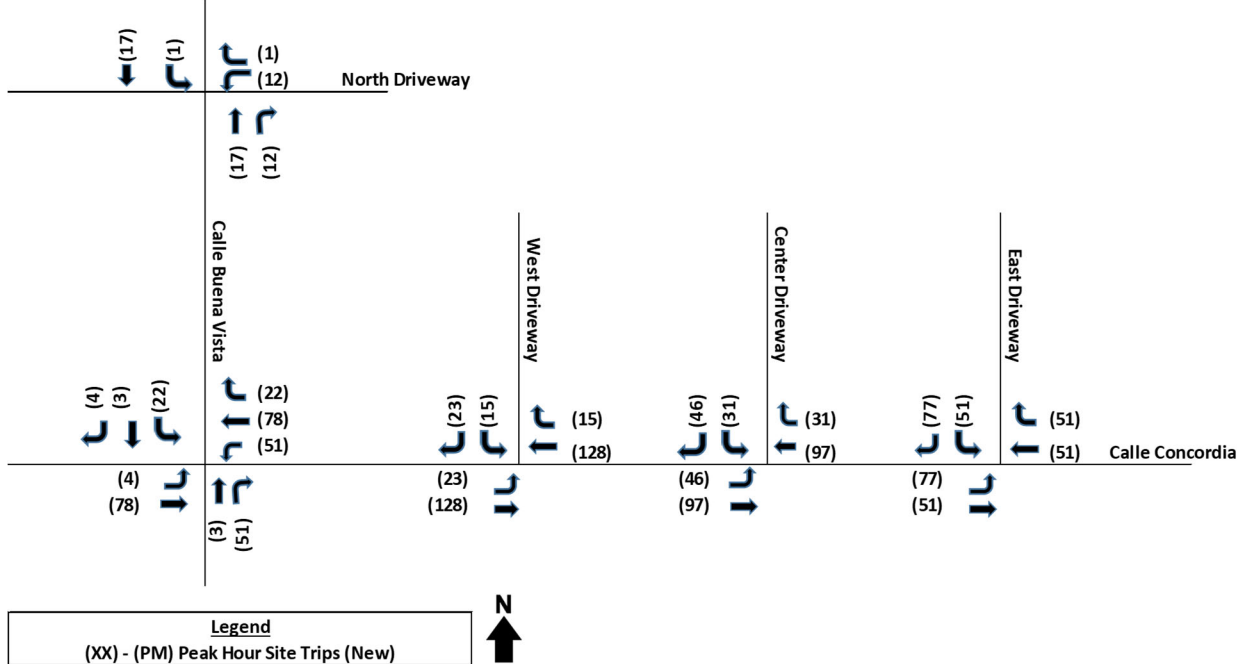


Exhibit 17 Total Volumes Phase 2 (Wednesday, 6-7 PM)

Wednesday 6:00-7:00 PM Phase 2 Total Volumes

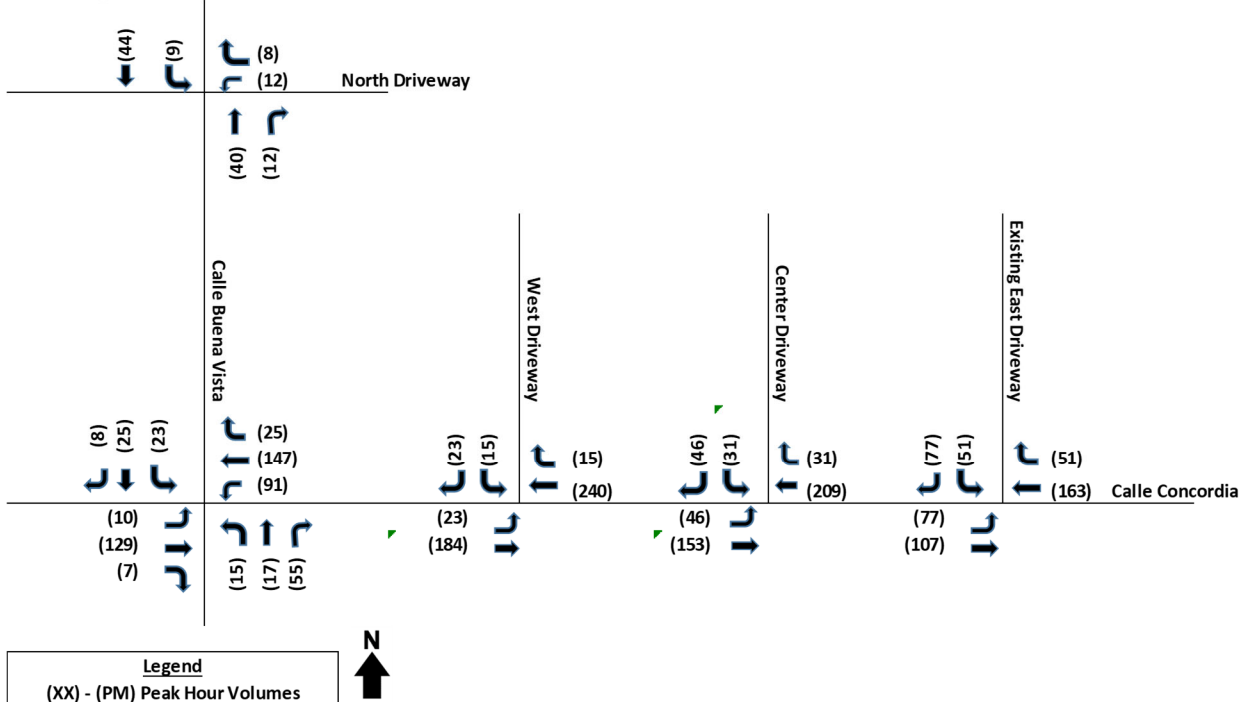


Exhibit 18 Phase 2 Site Trips (Wednesday, 8-9 PM)

Wednesday 6:00-7:00 PM Phase 2 Site Trips (Non-Activity Field)

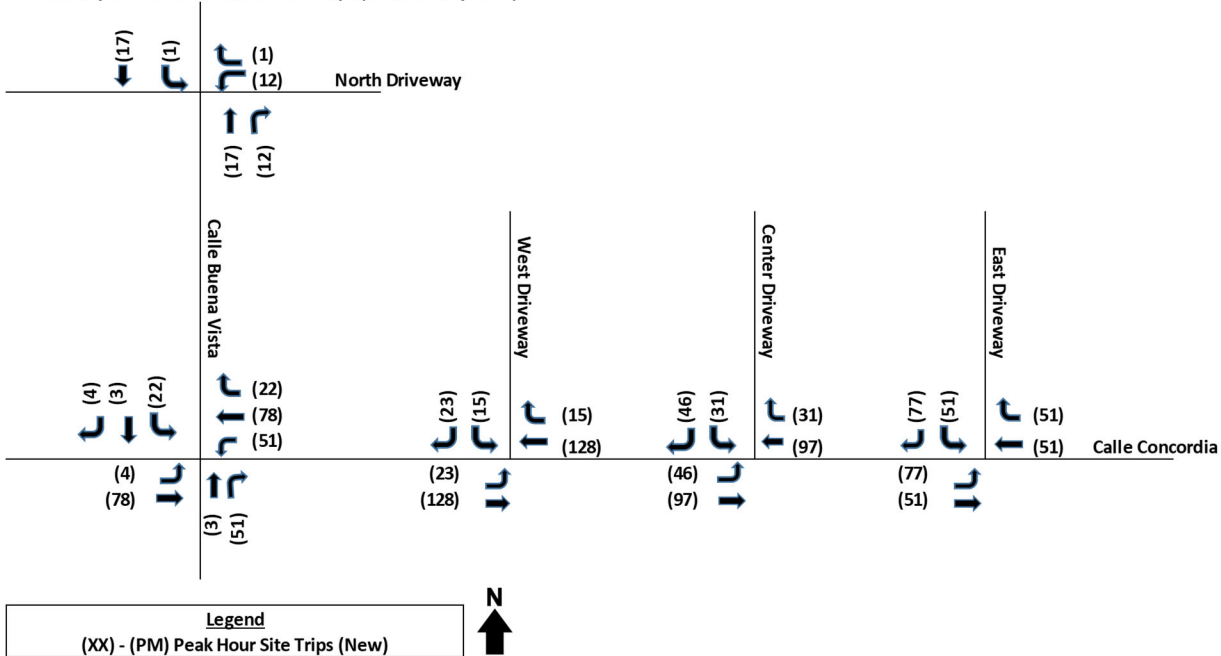
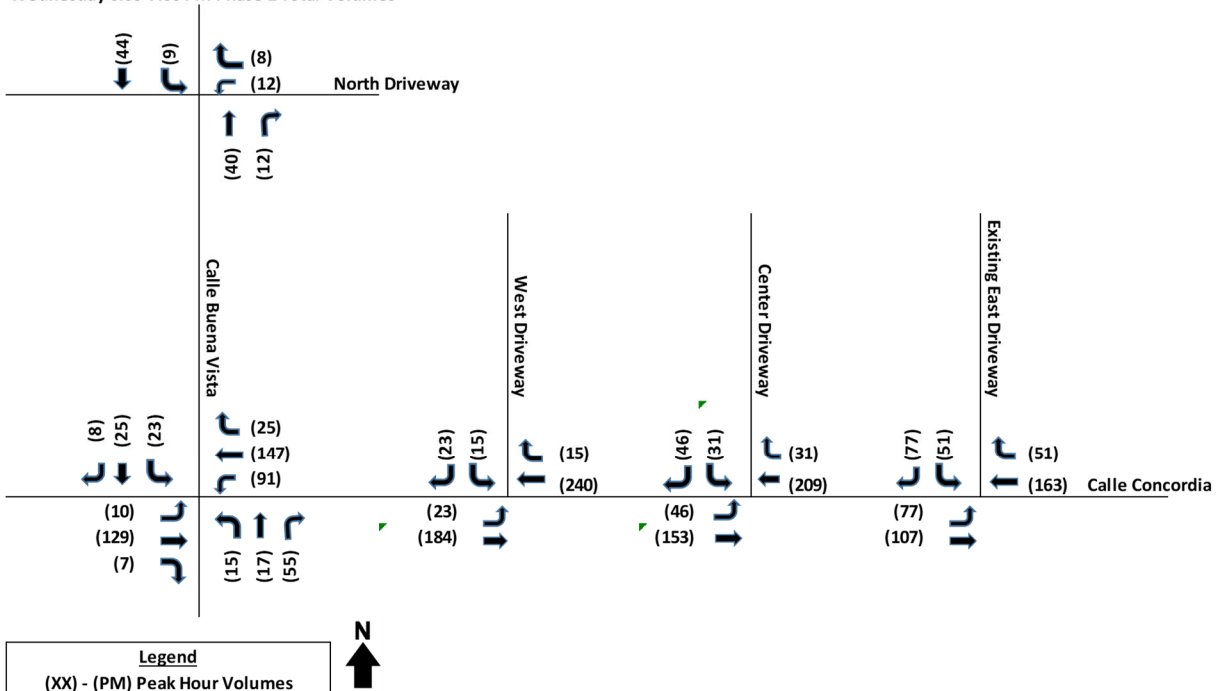


Exhibit 19 Phase 2 Total Volumes (Wednesday, 8-9 PM)

Wednesday 6:00-7:00 PM Phase 2 Total Volumes



5. Traffic and Improvement Analysis

Site Access

The locations of the proposed project access locations on Calle Concordia and Calle Buena Vista meet Pima County intersection spacing guidelines for a 25-mph roadway. The spacing requirement is 105 feet from driveway to driveway, and each of the driveways meet this minimum spacing requirement.

Level of Service Analysis

Roadway Performance

The highest number of parked vehicles during a weekday is projected to be on Wednesday with 899 vehicles during the three peak periods (morning, afternoon, and evening). Doubling this volume to estimate the total number of inbound and outbound trips results in approximately 1,800 new peak period (morning, afternoon, and evening) trips associated with the project based on the data provided by the church staff. Assuming another 1,000 site trips during the non-peak hours results in potentially 3,000 trips during a Wednesday.

The highest recorded existing volume on Calle Concordia in the vicinity of the site is 5,147 vpd. The highest recorded existing volume on Calle Buena Vista is 2,301 vpd. Based on Florida Department of Transportation's *Generalized Annual Average Daily Volumes for Florida's Urbanized Areas* level of service table, the LOS D/E threshold for Calle Concordia is approximately 13,320 vehicles per day and the LOS D/E threshold for Calle Buena Vista is 10,660. The new trips added to the recorded volumes result in traffic volume projections well below the FDOT daily volume thresholds for LOS D conditions.

Intersection Performance

Three scenarios were analyzed: Phase 1 from 8-9 PM, which includes background traffic and activity field trips; Phase 2 from 6-7 PM which includes all new non-activity field trips, distributed to all driveways, and Phase 2 from 8-9 PM which includes only activity field trips distributed mainly to the new eastern driveway on Calle Concordia. There is no Phase 1 from 6-7 PM scenario because this there will be no new non-activity field site traffic during this hour for Phase 1, and this time period includes only existing church site traffic.

For each scenario, all movements will operate at LOS C or better. The results are shown in Exhibits 20-22.

Exhibit 20 Intersection Analysis Results With Phase 1 (8-9 PM)

Phase 1 - 8:00-9:00 PM		
Calle Concordia/Calle Buena Vista	Delay (sec/veh)	LOS
Eastbound		
Left	7.4	A
Westbound		
Left	7.3	A
Northbound		
Left/Through	10.7	B
Right	0	A
Southbound		
Left/Through/Right	10.2	B
Calle Concordia/West Driveway	Delay (sec/veh)	LOS
Southbound		
Left/Right	9.1	A
Eastbound		
Left	0	A
Calle Concordia/Center Driveway	Delay (sec/veh)	LOS
Southbound		
Left/Right	9.3	A
Eastbound		
Left	0	A
Calle Concordia/East Driveway	Delay (sec/veh)	LOS
Southbound		
Left/Right	0	A
Eastbound		
Left	0	A
Calle Buena Vista/North Driveway	Delay (sec/veh)	LOS
Westbound		
Left/Right	9.2	A
Southbound		
Left	7.4	A

Exhibit 21 Intersection Analysis Results With Phase 2 (6-7 PM)

Phase 2 - 6:00-7:00 PM		
Calle Concordia/Calle Buena Vista	Delay (sec/veh)	LOS
Eastbound		
Left	7.6	A
Westbound		
Left	7.8	A
Northbound		
Left/Through	16.1	C
Right	9.4	A
Southbound		
Left/Through/Right	16.8	C
Calle Concordia/West Driveway	Delay (sec/veh)	LOS
Southbound		
Left/Right	11.0	B
Eastbound		
Left	7.9	A
Calle Concordia/Center Driveway	Delay (sec/veh)	LOS
Southbound		
Left/Right	11.4	B
Eastbound		
Left	7.9	A
Calle Concordia/East Driveway	Delay (sec/veh)	LOS
Southbound		
Left/Right	11.9	B
Eastbound		
Left	7.9	A
Calle Buena Vista/North Driveway	Delay (sec/veh)	LOS
Westbound		
Left/Right	9.0	A
Southbound		
Left	7.3	A

Exhibit 22 Intersection Analysis Results With Phase 2 (8-9 PM)

Phase 2 - 8:00-9:00 PM		
Calle Concordia/Calle Buena Vista	Delay (sec/veh)	LOS
Eastbound		
Left	7.4	A
Westbound		
Left	7.4	A
Northbound		
Left/Through	10.5	B
Right	8.5	A
Southbound		
Left/Through/Right	10	B

Calle Concordia/West Driveway	Delay (sec/veh)	LOS
Southbound		
Left/Right	8.7	A
Eastbound		
Left	7.4	A

Calle Concordia/Center Driveway	Delay (sec/veh)	LOS
Southbound		
Left/Right	8.7	A
Eastbound		
Left	7.4	A

Calle Concordia/East Driveway	Delay (sec/veh)	LOS
Southbound		
Left/Right	9.4	A
Eastbound		
Left	7.5	A

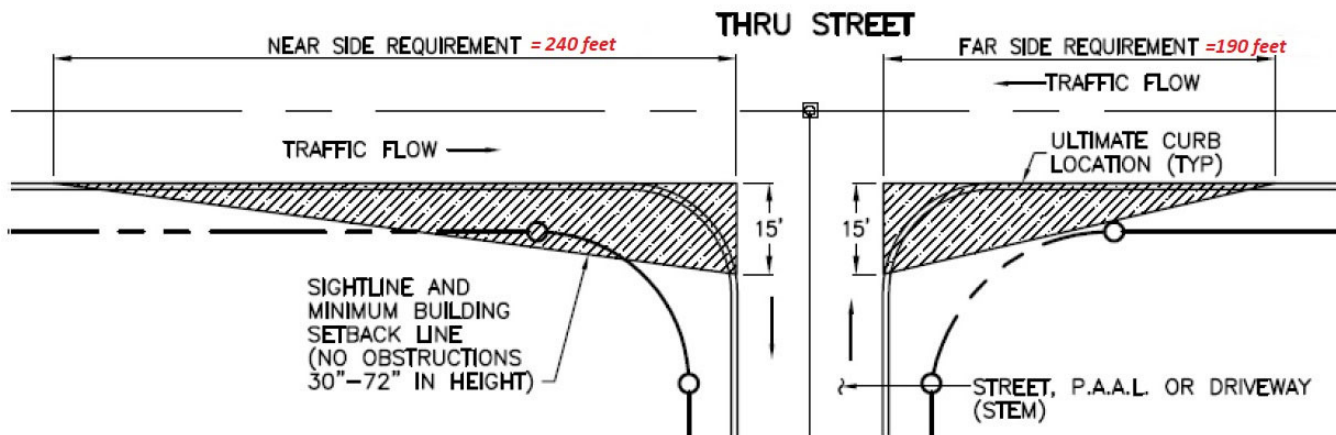
Calle Buena Vista/North Driveway	Delay (sec/veh)	LOS
Westbound		
Left/Right	8.8	A
Southbound		
Left	7.3	A

Traffic Safety

Sight Distance

Sight distances at the project driveways should meet the criteria in Oro Valley's Subdivision Street Standards and Policies Manual. Based on the speed limit of 25 mph on Calle Concordia (see Exhibit 23), the near side distance should be 240 feet. The far side distance should be 190 feet.

Exhibit 23 Sight Distance Requirements (Calle Concordia/New Project Driveway)



Speed Limit on Calle Concordia is 25 mph.

Acceleration/Deceleration Lanes, Auxiliary Lanes

Turn lane warrant criteria from the *Pima County Subdivision and Development Street Standards* are applied by Oro Valley to determine whether turn lanes are warranted at the project driveways. The volumes from Exhibits 24 and 25 were applied to the peak hour warrant criteria for right turn lanes and left turn lanes.

As shown in Exhibits 24 and 25, neither a southbound left turn lane nor a northbound right turn lane warrant are warranted at the existing driveway on Calle Buena Vista when all activity field traffic will enter at this driveway during Phase 1. Because there will be few project traffic entering at the driveways on Calle Concordia, left turn lanes are not warranted on Calle Concordia during Phase 1.

For Phase 2, right turn lanes are not warranted on Calle Concordia into the project driveways based on the expected volumes. Only the highest volume driveway was checked as the lower volume driveways would not meet the criteria.

As shown on Exhibit 25, the left turn lane warrant is met during the 6-7 PM peak hour at each of the three driveways on Calle Concordia with Phase 2. Because the distance from the existing western driveway on Calle Concordia is only 115 feet from Calle Buena Vista, it will not be possible to provide a standard minimum turn lane length (110 feet) and taper for this driveway. This driveway will also experience fewer left turns than the other driveways. Also, although the traffic volumes for Phase 2 between 6-7 PM will all occur within the same hour, it is likely that the inbound left turns will not conflict with the outbound right turns at the center and eastern driveways which will comprise the westbound opposing volumes. This is because the inbound trips may occur at the beginning of the hour and the outbound trips will occur at the end of the hour. For these reasons, it is recommended that a left turn lane not be constructed on Calle Concordia at the west driveway.

Exhibit 24 Right Turn Warrant Guidelines

A-2 RIGHT TURN LANE GUIDELINES FOR TWO-LANE ROADS⁹

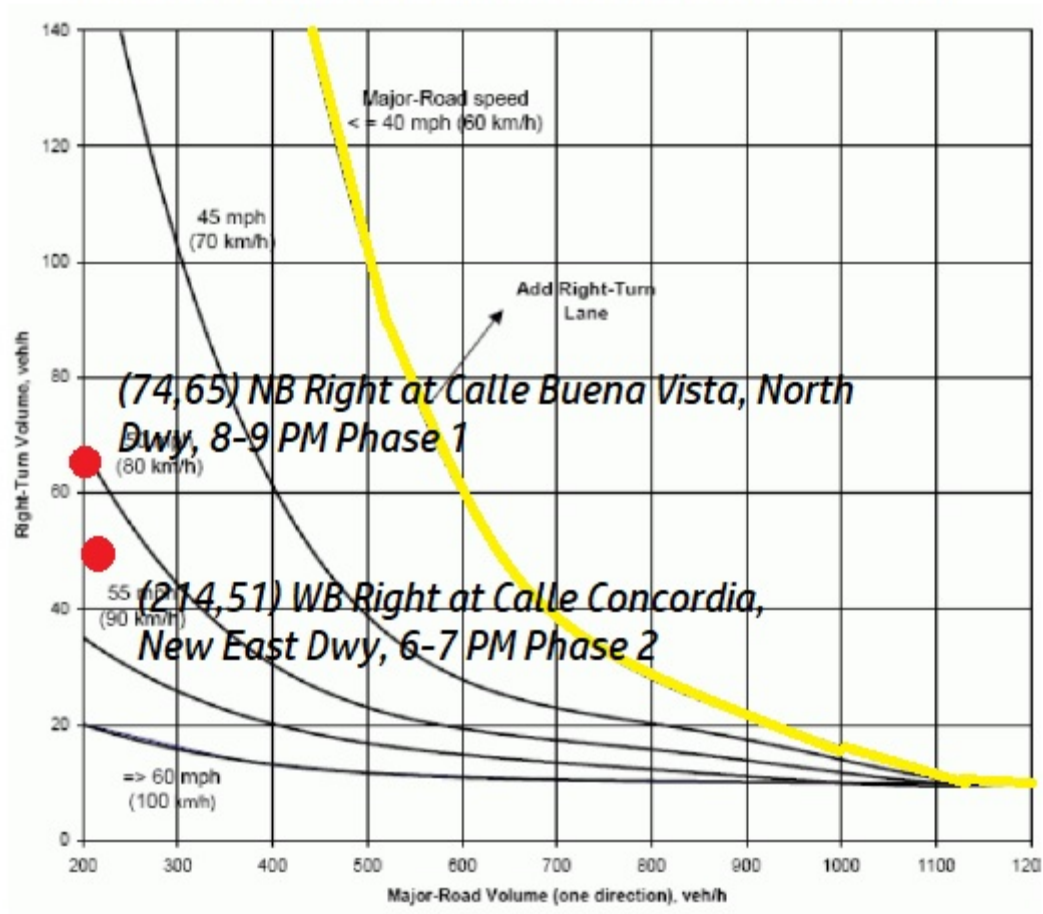
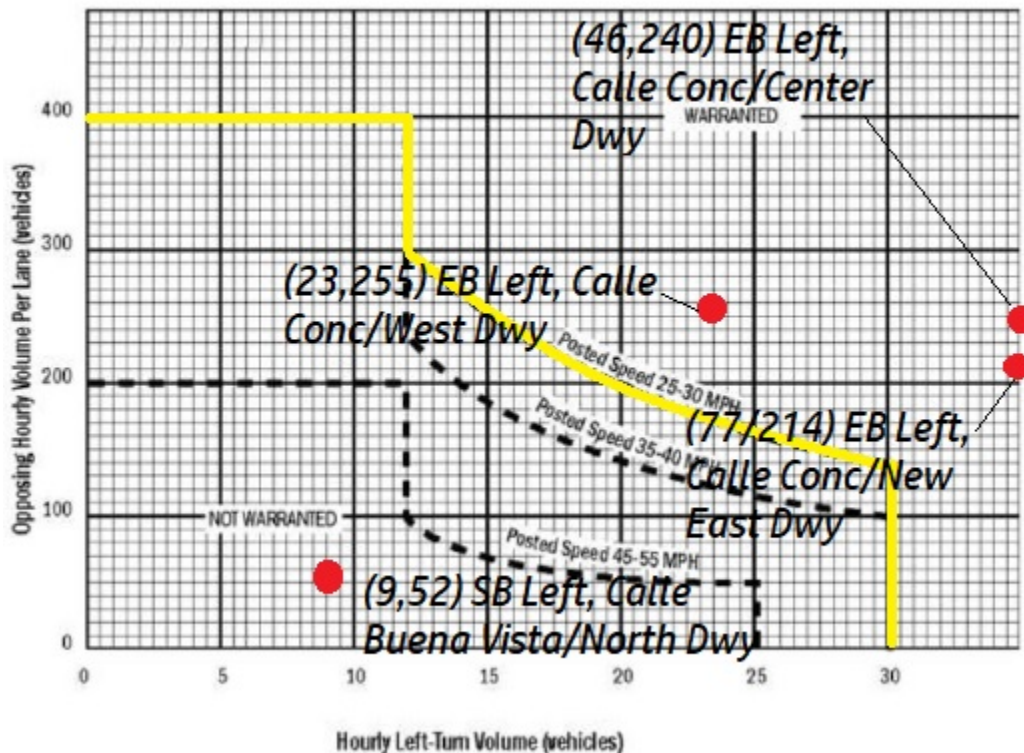


Exhibit 25 Left Turn Warrant Guidelines

A-1 LEFT TURN LANE GUIDELINES⁹



Note 1: Turn lane warrant analysis shown on Calle Concordia will be met with Phase 2. Turn lanes are not warranted with Phase 1.

Note 2: Left turn lane storage should be a minimum 110 feet. A continuous two-way left turn lane is recommended on Calle Concordia from just east of the western driveway to the east project driveway.

The center driveway on Calle Concordia is spaced approximately 225 feet from the western driveway. The existing lanes are eleven feet wide on Calle Concordia. The Synchro analysis calculates the 95th percentile queue at all driveways on Calle Concordia will be below 110 feet, the minimum storage lane length, per Pima County standards. If the roadway is widened symmetrically, the taper length for the left turn lane would be $(25 \times 25 \times 11) / 60 / 2$, or about 58 feet. The gap length for the turn lane would be 60 feet. Therefore, the minimum full turn lane system for this driveway and the eastern driveway would be $110 + 58 + 60 = 228$ feet which is close to the spacing distance between the western and center driveways. The spacing between the center driveway and the new eastern driveway is over 228 feet. Because of the proximity of these two driveways, and because both driveways will meet the left turn lane warrant criteria, and because the taper to the east of the east driveway is approximately 80 feet west of the beginning of the existing taper for the existing continuous left turn lane, it is recommended that a continuous left turn lane should be constructed beginning immediately east of the western driveway and continuing along the project frontage. During the final design stage, it should be determined if safety concerns dictate the extension of the continuous left turn lane past the bridge to connect to the existing continuous left turn lane terminus. If that is the case, such improvements will be the responsibility of the developer. The design

of this continuous turn lane will be provided with the off-site plans for improvements to Calle Concordia by others. The existing right-of-way on Calle Concordia is approximately 90 feet wide and the widening of the continuous left turn lane should fit within the existing right-of-way with the relocation of the bike lane and sidewalk on the north side of Calle Concordia. This will be verified by the project civil engineer.

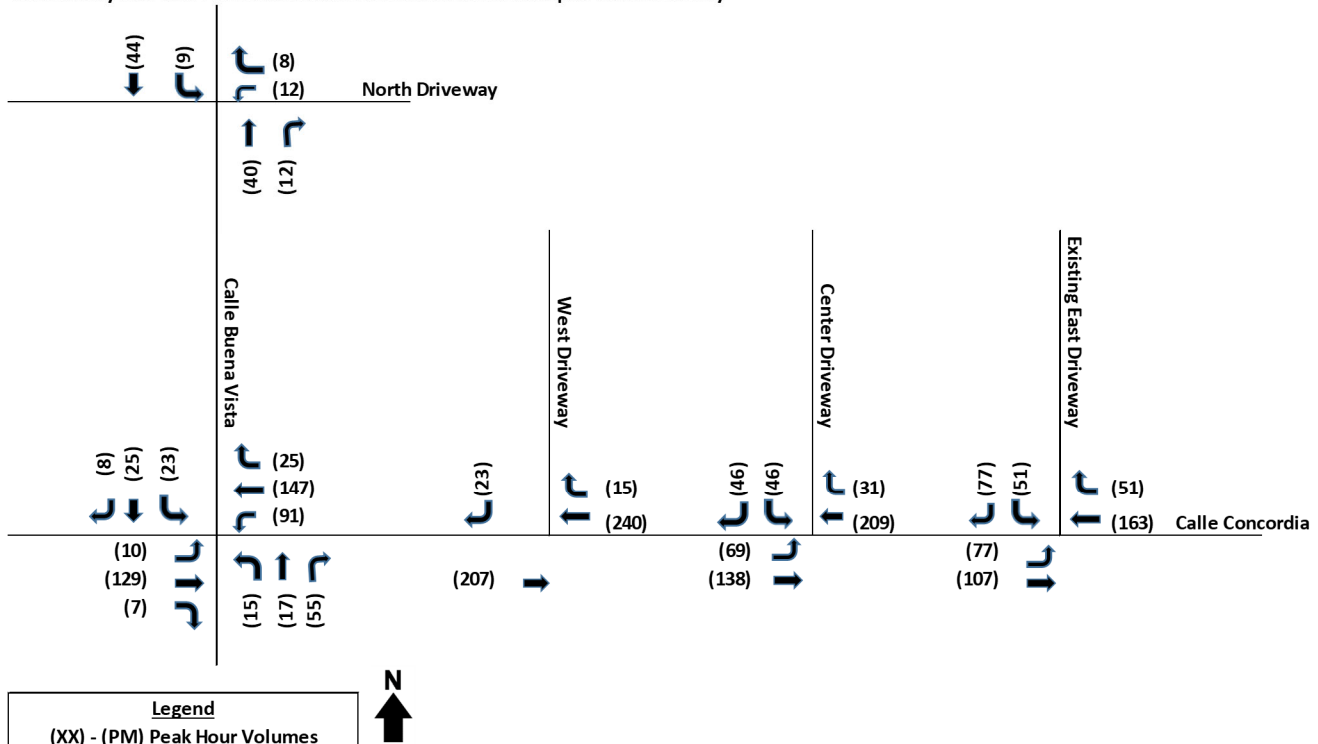
The driveways onto Calle Concordia will share a lane for left and right turning vehicles exiting the site.

Restriction of Left Turns at West Driveway

Town staff has suggested that the west driveway on Calle Concordia be restricted to right turn movements only. A raised “pork chop” could be constructed that would restrict left turns in and out at this driveway. This is recommended because of the added traffic volumes at this driveway and to remove potential traffic conflicts between traffic at the driveway and the Calle Concordia/Calle Buena Vista intersection. Because the highest traffic volumes at this driveway would occur with Phase 2 during the 6-7 PM period, a redistribution of traffic at the west and center driveways would occur. For simplicity, we reassigned all left out and left in volumes from the west driveway to the center driveway as shown in Exhibit 26.

Exhibit 26 Total Volumes Phase 2 (Wednesday, 6-7 PM) with West Driveway Turn Lane Restrictions

Wednesday 6:00-7:00 PM Phase 2 Total Volumes With Pork Chop at West Driveway



We analyzed conditions at the west and center driveways with the turn lane restrictions and the results are shown in Exhibit 27. Both driveways will continue to operate at LOS B or better conditions. The

Synchro analysis also found that the 95th percentile queues for turns into the center driveway will be below the minimum 110 feet storage length.

Exhibit 27 Intersection Analysis Results With Lane Restrictions Phase 2 (6-7 PM)

Phase 2 - 6:00-7:00 PM With Turn Lane Restrictions at West Driveway		
Calle Concordia/West Driveway	Delay (sec/veh)	LOS
Southbound Left/Right	9.8	B
Eastbound Left	N/A	N/A

Calle Concordia/Center Driveway	Delay (sec/veh)	LOS
Southbound Left/Right	12.3	B
Eastbound Left	7.9	A

Driveway Spacing

As shown in the site plan, the location of the driveways meets Pima County standards for driveway spacing on a 25-mph road. Oro Valley defers to Pima County standards for driveway spacing.

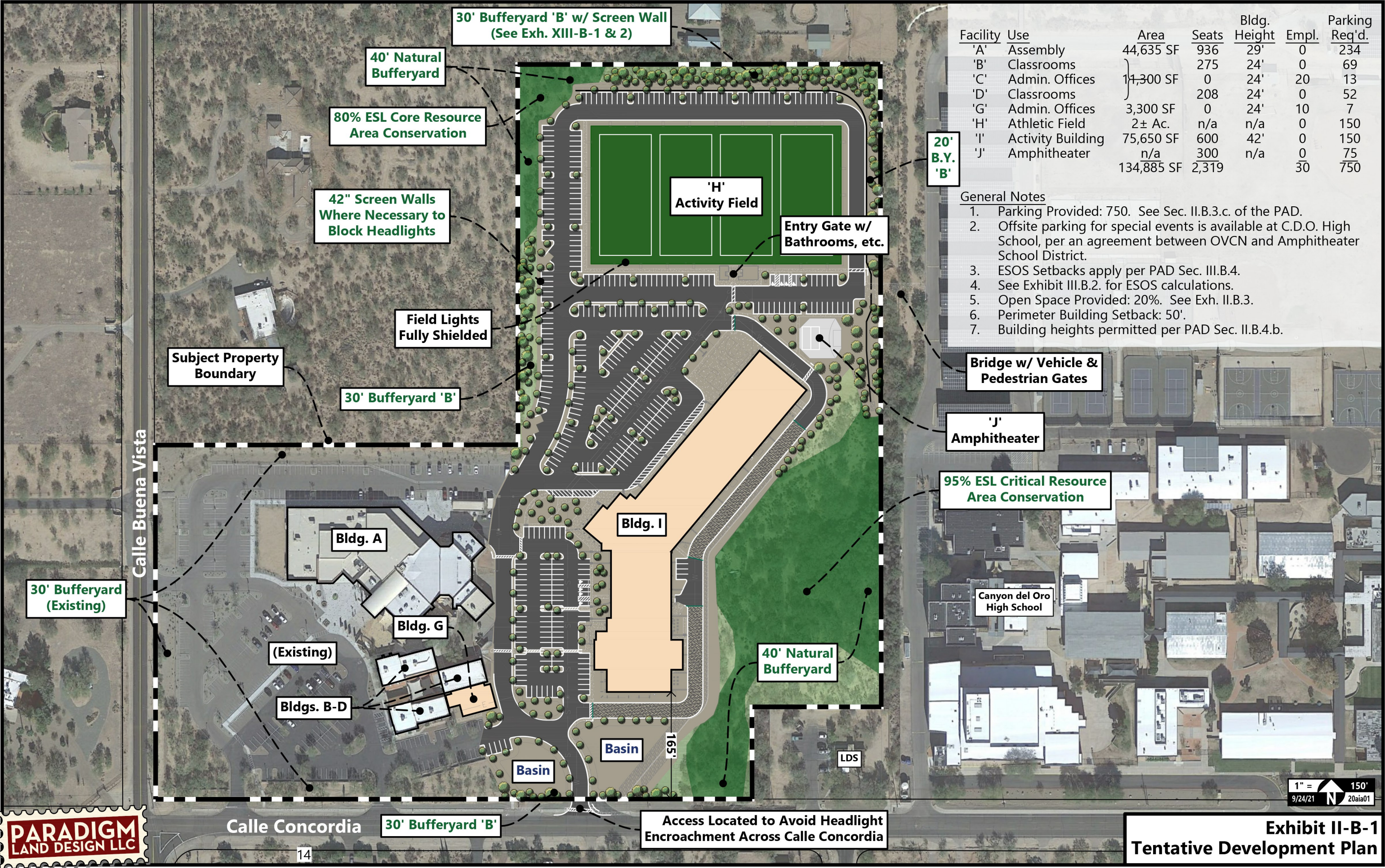
Alternative Modes Considerations

Calle Concordia has sidewalks and bike routes in the vicinity of the project. The area is well served for alternate modes.

6. Conclusions and Recommendations

1. All study area roadways operate at LOS C or better based on 2021 daily traffic volumes with the project new trips added, and FDOT level of service standards.
2. Adding the projected site trips to the recorded 2021 6-7 PM and 8-9 PM intersection volumes, the project intersections will operate at LOS C or better.
3. Hours of Operation for the activity field shall be 6:00 AM to 10:00 PM. No special events intended to draw additional visitors to the magnitude of an organized festival, game, event, or tournament will be permitted on Sundays before 1:00 PM, on Wednesdays between 6:00 – 7:30 PM, or to start or end during the hour surrounding the CDO High School arrival/dismissal times. Exceptions may be granted by the Town Engineer and Planning Director as a Special Use Permit. “Special events” do not include OVCN’s normally scheduled Ministries.
4. The driveway spacing, corner clearances and sight distances for the driveways and nearby intersections meet Oro Valley standards.
5. Turn lanes are not warranted on Calle Concordia or on Calle Buena Vista for the first phase of the project. For Phase 2, the projected turn lane volumes meet the warrants for left turn lanes on Calle Concordia at each project driveway during the weekday off-peak hour on Wednesday, the highest site traffic hour. It is recommended that a continuous left turn lane should be constructed beginning immediately east of the western driveway and continuing along the project frontage. During the final design stage, it should be determined if safety concerns dictate the extension of the continuous left turn lane past the bridge to connect to the existing continuous left turn lane terminus. If that is the case, such improvements will be the responsibility of the developer. The design of this continuous turn lane will be provided with the off-site plans for improvements to Calle Concordia by others.
6. An alternative for the western driveway could be to restrict access to right-in, right-out only by constructing a raised barrier, or “pork chop”. The Synchro analysis for this alternative found that the impacted intersections will continue to operate at LOS B or better conditions.
7. Roadway and subdivision design should conform to current jurisdictional standards. This includes ensuring that sight distance requirements are met.
8. All new traffic signs and markings, on-site and off-site, must comply fully with the *Manual on Uniform Traffic Control Devices* and Town requirements.

- Site Plan
- ADT Location Map
- Traffic Data
- Synchro Analysis Sheets



Facility	Use	Area	Seats	Bldg. Height	Empl.	Parking Req'd.
'A'	Assembly	44,635 SF	936	29'	0	234
'B'	Classrooms	11,300 SF	275	24'	0	69
'C'	Admin. Offices		0	24'	20	13
'D'	Classrooms		208	24'	0	52
'G'	Admin. Offices	3,300 SF	0	24'	10	7
'H'	Athletic Field	2± Ac.	n/a	n/a	0	150
'I'	Activity Building	75,650 SF	600	42'	0	150
'J'	Amphitheater	n/a	300	n/a	0	75
		134,885 SF	2,319		30	750

- General Notes
1. Parking Provided: 750. See Sec. II.B.3.c. of the PAD.
 2. Offsite parking for special events is available at C.D.O. High School, per an agreement between OVCN and Amphitheater School District.
 3. ESOS Setbacks apply per PAD Sec. III.B.4.
 4. See Exhibit III.B.2. for ESOS calculations.
 5. Open Space Provided: 20%. See Exh. II.B.3.
 6. Perimeter Building Setback: 50'.
 7. Building heights permitted per PAD Sec. II.B.4.b.

ADT Count Locations



Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: Calle Buena Vista

DATE: 08/29/21

LOCATION: Oro Valley

E-W STREET: Calle Concordia

DAY: SUNDAY

PROJECT# 21-1517-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	
12:00 AM	1	0	0	0	0	0	0	1	0	0	0	0	2
12:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
12:30 AM	0	0	0	0	0	0	0	2	1	0	1	0	4
12:45 AM	0	1	0	0	1	0	0	0	0	1	0	0	3
1:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
1:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
1:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
2:00 AM	1	0	0	0	0	0	0	0	0	0	1	0	2
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 AM	1	0	0	0	0	0	0	0	0	0	2	0	3
3:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
3:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
3:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
4:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
4:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:00 AM	0	0	1	0	0	0	0	1	0	0	1	0	3
5:15 AM	0	0	0	0	0	0	1	3	2	0	0	0	6
5:30 AM	1	0	1	0	1	0	0	0	2	0	1	0	6
5:45 AM	0	1	1	0	1	0	0	0	3	0	0	0	6
6:00 AM	1	0	1	1	0	0	1	2	1	0	0	0	7
6:15 AM	0	1	0	0	2	0	0	2	1	0	3	0	9
6:30 AM	1	1	2	0	2	0	2	8	0	0	1	0	17
6:45 AM	0	2	2	1	0	1	0	1	0	2	2	0	11
7:00 AM	0	0	2	1	2	0	0	8	0	0	1	0	14
7:15 AM	1	0	5	0	4	2	3	9	1	3	2	0	30
7:30 AM	1	2	3	1	0	3	3	13	0	2	2	1	31
7:45 AM	1	5	9	1	6	0	10	30	3	0	2	0	67
8:00 AM	4	2	4	0	1	1	2	1	3	0	5	0	23
8:15 AM	2	2	2	0	2	1	0	4	3	3	1	1	21
8:30 AM	2	0	2	0	2	1	1	11	0	1	6	0	26
8:45 AM	4	1	1	0	3	1	6	7	4	1	1	0	29
9:00 AM	5	7	4	1	5	4	12	18	2	6	18	1	83
9:15 AM	3	8	10	2	5	3	17	73	2	3	9	2	137
9:30 AM	0	10	8	1	7	5	12	37	2	2	6	1	91
9:45 AM	2	2	4	0	2	1	2	12	0	2	9	0	36
10:00 AM	3	4	3	1	3	0	3	10	3	3	3	1	37
10:15 AM	4	5	3	0	6	3	3	10	3	3	1	0	41

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: Calle Buena Vista

DATE: 08/29/21

LOCATION: Oro Valley

E-W STREET: Calle Concordia

DAY: SUNDAY

PROJECT# 21-1517-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 1	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
10:30 AM	0	4	5	0	1	0	3	19	3	2	8	1	46
10:45 AM	5	7	9	9	18	15	6	50	0	13	48	6	186
11:00 AM	4	8	6	7	13	8	3	15	5	8	24	2	103
11:15 AM	4	6	1	1	7	3	4	11	2	3	15	1	58
11:30 AM	4	4	2	0	3	4	0	5	5	0	5	1	33
11:45 AM	3	3	4	1	5	0	1	10	2	1	14	0	44
12:00 PM	2	7	0	1	2	4	1	5	0	1	7	0	30
12:15 PM	1	3	0	5	10	13	2	7	4	13	32	2	92
12:30 PM	5	7	2	3	6	17	3	6	4	8	26	1	88
12:45 PM	3	5	2	2	2	2	2	18	1	1	13	1	52
1:00 PM	2	2	3	1	7	2	2	9	2	4	17	2	53
1:15 PM	2	3	3	0	7	4	1	7	1	0	10	2	40
1:30 PM	4	1	0	0	3	2	2	14	2	1	10	1	40
1:45 PM	2	2	2	0	1	3	2	15	1	2	7	1	38
2:00 PM	1	6	1	0	1	1	1	2	4	2	4	0	23
2:15 PM	3	3	4	0	2	1	2	5	1	1	9	0	31
2:30 PM	3	3	2	0	4	0	1	6	4	2	11	0	36
2:45 PM	0	4	1	0	1	1	0	5	1	0	11	0	24
3:00 PM	3	1	1	1	7	0	1	5	1	3	8	1	32
3:15 PM	4	4	1	0	4	2	1	3	1	0	10	1	31
3:30 PM	2	4	1	0	3	2	2	1	0	4	8	1	28
3:45 PM	2	3	4	0	5	0	2	6	2	3	6	0	33
4:00 PM	5	2	2	0	2	1	3	2	1	2	13	0	33
4:15 PM	4	2	1	0	1	0	0	5	2	1	10	0	26
4:30 PM	3	3	1	1	4	0	1	12	1	0	2	0	28
4:45 PM	2	4	6	1	2	2	0	11	4	1	11	0	44
5:00 PM	4	3	1	0	2	0	2	16	3	2	5	0	38
5:15 PM	8	3	3	0	3	2	2	8	2	1	6	0	38
5:30 PM	3	1	0	0	1	1	3	4	2	11	24	2	52
5:45 PM	2	10	3	0	4	0	0	5	0	3	6	1	34
6:00 PM	0	3	1	0	2	0	1	7	2	2	5	0	23
6:15 PM	3	1	2	0	3	0	0	1	1	0	6	0	17
6:30 PM	1	0	1	2	1	0	0	4	1	2	7	2	21
6:45 PM	3	2	1	0	2	1	2	3	2	1	0	0	17
7:00 PM	2	3	1	0	2	1	2	2	0	1	7	0	21
7:15 PM	1	1	1	0	2	0	0	4	1	0	6	1	17
7:30 PM	0	0	0	0	3	1	1	5	1	0	1	0	12
7:45 PM	1	3	3	0	3	2	1	2	1	0	2	0	18
8:00 PM	1	3	1	0	0	0	2	4	1	2	2	0	16
8:15 PM	0	1	0	0	1	0	2	4	1	0	1	0	10
8:30 PM	1	1	2	0	0	0	0	3	1	1	1	0	10
8:45 PM	0	1	1	0	2	0	0	1	1	0	4	0	10

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: Calle Buena Vista

DATE: 08/29/21

LOCATION: Oro Valley

E-W STREET: Calle Concordia

DAY: SUNDAY

PROJECT# 21-1517-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	
9:00 PM	0	2	0	0	0	0	0	2	0	0	7	0	11
9:15 PM	2	1	1	0	1	0	1	1	0	0	2	0	9
9:30 PM	0	1	0	0	0	1	1	0	0	1	1	0	5
9:45 PM	0	0	3	0	1	0	0	3	0	1	2	0	10
10:00 PM	0	0	1	0	0	0	0	2	0	4	0	0	7
10:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
10:30 PM	1	0	0	0	0	0	0	0	1	0	0	0	2
10:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
11:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
11:30 PM	0	0	0	0	0	0	0	1	2	0	0	0	3
11:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	146	200	159	45	210	122	145	604	113	140	515	37	2436
Approach %	28.91	39.60	31.49	11.94	55.70	32.36	16.82	70.07	13.11	20.23	74.42	5.35	
App/Depart	505	/	382	377	/	463	862	/	808	692	/	783	

AM Peak Hr Begins at: 1030 AM

PEAK

Volumes	13	25	21	17	39	26	16	95	10	26	95	10	393
Approach %	22.03	42.37	35.59	20.73	47.56	31.71	13.22	78.51	8.26	19.85	72.52	7.63	

PEAK HR.

FACTOR:	0.702	0.488	0.540	0.489	0.528
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CONTROL: 2-Way Stop (NB & SB)

COMMENT 1:

GPS: 32.373613, -110.978624

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Sunday, August 29, 2021

City: Oro Valley

Project #: 21-1517-003

Location: Calle Buena Vista north of Calle Concordia

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	0			12:00	8	7		
00:15	0	0			12:15	7	28		
00:30	0	0			12:30	11	26		
00:45	1	1	1	1	12:45	8	34	6	67
01:00	0	0			13:00	6	10		
01:15	0	0			13:15	6	11		
01:30	0	1			13:30	4	5		
01:45	0	0	0	1	13:45	5	21	4	30
02:00	0	0			14:00	7	2		
02:15	0	0			14:15	5	3		
02:30	0	0			14:30	4	4		
02:45	0	0	0	0	14:45	4	20	2	11
03:00	0	0			15:00	3	8		
03:15	0	0			15:15	6	6		
03:30	0	0			15:30	7	5		
03:45	0	0	0	0	15:45	5	21	5	24
04:00	0	0			16:00	5	3		
04:15	2	0			16:15	2	1		
04:30	0	0			16:30	4	5		
04:45	0	2	0	0	16:45	4	15	5	14
05:00	0	0			17:00	5	2		
05:15	1	0			17:15	5	5		
05:30	0	1			17:30	6	2		
05:45	1	2	1	2	17:45	11	27	4	13
06:00	1	1			18:00	4	2		
06:15	1	2			18:15	1	3		
06:30	3	2			18:30	2	3		
06:45	2	7	2	7	18:45	4	11	3	11
07:00	0	3			19:00	5	3		
07:15	3	6			19:15	2	2		
07:30	6	4			19:30	1	4		
07:45	15	24	7	20	19:45	4	12	5	14
08:00	4	2			20:00	5	0		
08:15	3	3			20:15	3	1		
08:30	1	3			20:30	1	0		
08:45	7	15	4	12	20:45	1	10	2	3
09:00	20	10			21:00	2	0		
09:15	27	10			21:15	2	1		
09:30	23	13			21:30	2	1		
09:45	4	74	3	36	21:45	0	6	1	3
10:00	8	4			22:00	0	0		
10:15	8	9			22:15	2	0		
10:30	8	1			22:30	0	0		
10:45	19	43	42	56	22:45	1	3	0	0
11:00	13	28			23:00	0	0		
11:15	11	11			23:15	0	0		
11:30	5	7			23:30	0	0		
11:45	4	33	6	52	23:45	1	1	0	0

Total Vol. 201 187 **388** 181 190 **371**

GPS Coordinates: 32.373895, -110.978625

Daily Totals

NB	SB	EB	WB	Combined
382	377			759

AM

PM

Split %	51.8%	48.2%	51.1%	48.8%	51.2%	48.9%
Peak Hour	08:45	10:45	10:45	12:00	12:15	12:15
Volume	77	88	136	34	70	102
P.H.F.	0.71	0.52	0.56	0.77	0.63	0.69

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Sunday, August 29, 2021

City: Oro Valley

Project #: 21-1517-003

Location: Calle Buena Vista south of Calle Concordia

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	1	0			12:00	9	3		
00:15	1	0			12:15	4	27		
00:30	0	1			12:30	14	18		
00:45	1	3	2	3	12:45	10	37	4	52
01:00	0	0			13:00	7	13		
01:15	0	0			13:15	8	8		
01:30	0	1			13:30	5	6		
01:45	0	0	0	1	13:45	6	26	4	31
02:00	1	0			14:00	8	7		
02:15	0	0			14:15	10	4		
02:30	0	0			14:30	8	10		
02:45	0	1	0	0	14:45	5	31	2	23
03:00	1	0			15:00	5	11		
03:15	1	0			15:15	9	5		
03:30	0	0			15:30	7	7		
03:45	0	2	0	0	15:45	9	30	10	33
04:00	1	0			16:00	9	5		
04:15	2	0			16:15	7	4		
04:30	0	0			16:30	7	5		
04:45	0	3	0	0	16:45	12	35	7	21
05:00	1	0			17:00	8	7		
05:15	0	2			17:15	14	6		
05:30	2	3			17:30	4	14		
05:45	2	5	4	9	17:45	15	41	7	34
06:00	2	1			18:00	4	6		
06:15	1	3			18:15	6	4		
06:30	4	2			18:30	2	4		
06:45	4	11	2	8	18:45	6	18	5	19
07:00	2	2			19:00	6	3		
07:15	6	8			19:15	3	3		
07:30	6	2			19:30	0	4		
07:45	15	29	9	21	19:45	7	16	4	14
08:00	10	4			20:00	5	3		
08:15	6	8			20:15	1	2		
08:30	4	3			20:30	4	2		
08:45	6	26	8	23	20:45	2	12	3	10
09:00	16	13			21:00	2	0		
09:15	21	10			21:15	4	1		
09:30	18	11			21:30	1	1		
09:45	8	63	4	38	21:45	3	10	2	4
10:00	10	9			22:00	1	4		
10:15	12	12			22:15	2	0		
10:30	9	6			22:30	1	1		
10:45	21	52	31	58	22:45	0	4	0	5
11:00	18	26			23:00	0	0		
11:15	11	12			23:15	0	0		
11:30	10	8			23:30	0	2		
11:45	10	49	8	54	23:45	1	1	0	2

Total Vol. 244 215 **459** 261 248 **509**

GPS Coordinates: 32.373313, -110.978553

Daily Totals

NB	SB	EB	WB	Combined
505	463			968

AM

PM

Split %	53.2%	46.8%	47.4%	51.3%	48.7%	52.6%
Peak Hour	09:00	10:45	10:45	16:30	12:15	12:15
Volume	63	77	137	41	62	97
P.H.F.	0.75	0.62	0.66	0.73	0.57	0.76

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Sunday, August 29, 2021

City: Oro Valley

Project #: 21-1517-003

Location: Calle Concordia east of Calle Buena Vista

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			1	0	12:00			6	8
00:15			0	0	12:15			12	47
00:30			2	1	12:30			11	35
00:45			0	3	12:45			22	51
01:00			0	1	13:00			13	23
01:15			0	0	13:15			10	12
01:30			0	0	13:30			14	12
01:45			1	1	13:45			17	54
02:00			0	1	14:00			3	6
02:15			0	0	14:15			9	10
02:30			0	0	14:30			8	13
02:45			0	0	14:45			6	26
03:00			0	2	15:00			7	12
03:15			1	0	15:15			4	11
03:30			0	0	15:30			2	13
03:45			1	2	15:45			10	23
04:00			0	0	16:00			4	15
04:15			0	0	16:15			6	11
04:30			0	0	16:30			14	2
04:45			1	1	16:45			18	42
05:00			2	1	17:00			17	7
05:15			3	0	17:15			11	7
05:30			1	1	17:30			4	37
05:45			1	7	17:45			8	40
06:00			4	0	18:00			8	7
06:15			2	3	18:15			3	6
06:30			10	1	18:30			7	11
06:45			4	20	18:45			4	22
07:00			11	1	19:00			3	8
07:15			14	5	19:15			5	7
07:30			17	5	19:30			5	1
07:45			40	82	19:45			5	18
08:00			5	5	20:00			5	4
08:15			6	5	20:15			4	1
08:30			13	7	20:30			5	2
08:45			8	32	20:45			2	16
09:00			23	25	21:00			2	7
09:15			85	14	21:15			2	2
09:30			46	9	21:30			0	2
09:45			16	170	21:45			6	10
10:00			14	7	22:00			3	4
10:15			13	4	22:15			0	0
10:30			24	11	22:30			0	0
10:45			68	119	22:45			0	3
11:00			28	34	23:00			0	0
11:15			13	19	23:15			2	2
11:30			7	6	23:30			1	0
11:45			15	63	23:45			0	3

Total Vol. 500 270 **770** 308 422 **730**

GPS Coordinates: 32.373616, -110.978319

Daily Totals

NB	SB	EB	WB	Combined
		808	692	1500

AM

PM

Split %	64.9%	35.1%	51.3%	42.2%	57.8%	48.7%
Peak Hour	09:00	10:30	10:30	16:30	12:15	12:15
Volume	170	131	264	60	120	178
P.H.F.	0.50	0.49	0.49	0.83	0.64	0.75

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Sunday, August 29, 2021

City: Oro Valley

Project #: 21-1517-003

Location: Calle Concordia west of Calle Buena Vista

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB			
00:00			1	1	12:00			6	13			
00:15			0	1	12:15			13	46			
00:30			3	1	12:30			13	48			
00:45			0	4	0	3	7	21	53	18	125	178
01:00			0	1	13:00			13	21			
01:15			0	0	13:15			9	16			
01:30			0	0	13:30			18	16			
01:45			1	1	0	1	2	18	58	12	65	123
02:00			0	2	14:00			7	6			
02:15			0	0	14:15			8	13			
02:30			0	0	14:30			11	14			
02:45			0	0	0	2	2	6	32	12	45	77
03:00			0	3	15:00			7	11			
03:15			0	0	15:15			5	16			
03:30			0	0	15:30			3	12			
03:45			1	1	0	3	4	10	25	8	47	72
04:00			0	1	16:00			6	19			
04:15			0	0	16:15			7	14			
04:30			0	0	16:30			14	5			
04:45			1	1	0	1	2	15	42	15	53	95
05:00			1	1	17:00			21	9			
05:15			6	0	17:15			12	16			
05:30			2	2	17:30			9	28			
05:45			3	12	0	3	15	5	47	8	61	108
06:00			4	1	18:00			10	5			
06:15			3	3	18:15			2	9			
06:30			10	2	18:30			5	8			
06:45			1	18	3	9	27	7	24	4	26	50
07:00			8	1	19:00			4	10			
07:15			13	5	19:15			5	7			
07:30			16	6	19:30			7	2			
07:45			43	80	3	15	95	4	20	5	24	44
08:00			6	10	20:00			7	3			
08:15			7	4	20:15			7	1			
08:30			12	9	20:30			4	2			
08:45			17	42	6	29	71	2	20	4	10	30
09:00			32	27	21:00			2	7			
09:15			92	15	21:15			2	4			
09:30			51	11	21:30			1	2			
09:45			14	189	12	65	254	3	8	2	15	23
10:00			16	6	22:00			2	0			
10:15			16	8	22:15			0	0			
10:30			25	8	22:30			1	1			
10:45			56	113	68	90	203	1	4	0	1	5
11:00			23	36	23:00			0	0			
11:15			17	22	23:15			2	2			
11:30			10	13	23:30			3	0			
11:45			13	63	17	88	151	0	5	0	2	7

Total Vol. 524 309 **833** 338 474 **812**

GPS Coordinates: 32.373614, -110.978912

Daily Totals

NB	SB	EB	WB	Combined
		862	783	1645

AM

PM

Split %	62.9%	37.1%	50.6%	41.6%	58.4%	49.4%
Peak Hour	08:45	10:45	10:30	16:30	12:15	12:15
Volume	192	139	255	62	133	193
P.H.F.	0.52	0.51	0.51	0.74	0.69	0.79

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Sunday, August 29, 2021

City: Oro Valley

Project #: 21-1517-004

Location: Calle Buena Vista north of Church Driveway

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	1	0			12:00	9	8		
00:15	0	0			12:15	18	8		
00:30	0	0			12:30	15	4		
00:45	0	1	1	1	12:45	9	51	3	23
01:00	0	0			13:00	6	6		
01:15	0	0			13:15	7	7		
01:30	0	1			13:30	4	2		
01:45	0	0	0	1	13:45	4	21	2	17
02:00	0	0			14:00	6	1		
02:15	0	0			14:15	4	3		
02:30	0	0			14:30	4	4		
02:45	0	0	0	0	14:45	4	18	3	11
03:00	0	0			15:00	3	8		
03:15	0	0			15:15	6	8		
03:30	0	0			15:30	6	5		
03:45	0	0	0	0	15:45	3	18	4	25
04:00	0	0			16:00	4	4		
04:15	2	0			16:15	2	3		
04:30	0	0			16:30	6	4		
04:45	0	2	0	0	16:45	3	15	5	16
05:00	0	0			17:00	5	2		
05:15	1	0			17:15	5	4		
05:30	0	1			17:30	9	3		
05:45	2	3	2	3	17:45	10	29	4	13
06:00	0	1			18:00	4	2		
06:15	0	2			18:15	1	3		
06:30	2	3			18:30	3	3		
06:45	1	3	1	7	18:45	4	12	3	11
07:00	0	3			19:00	3	3		
07:15	1	7			19:15	2	2		
07:30	2	12			19:30	2	1		
07:45	2	5	26	48	19:45	3	10	5	11
08:00	2	3			20:00	5	0		
08:15	1	2			20:15	3	1		
08:30	0	2			20:30	1	1		
08:45	1	4	5	12	20:45	1	10	1	3
09:00	12	8			21:00	2	0		
09:15	9	23			21:15	2	1		
09:30	8	10			21:30	2	1		
09:45	4	33	3	44	21:45	0	6	1	3
10:00	5	5			22:00	0	0		
10:15	6	11			22:15	2	0		
10:30	7	4			22:30	0	0		
10:45	25	43	12	32	22:45	1	3	0	0
11:00	15	13			23:00	0	0		
11:15	11	6			23:15	0	0		
11:30	6	3			23:30	0	0		
11:45	5	37	5	27	23:45	1	1	0	0

Total Vol. 131 175 **306** 194 133 **327**

GPS Coordinates: 32.375627, -110.978601

Daily Totals

NB	SB	EB	WB	Combined
325	308			633

AM

PM

Split %	42.8%	57.2%	48.3%	59.3%	40.7%	51.7%
Peak Hour	10:30	07:00	10:15	12:00	15:00	12:00
Volume	58	48	93	51	25	74
P.H.F.	0.58	0.46	0.63	0.71	0.78	0.71

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Sunday, August 29, 2021

City: Oro Valley

Project #: 21-1517-005

Location: Calle Concordia east of Church Driveway

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			1	1	12:00			9	13
00:15			2	0	12:15			87	86
00:30			0	3	12:30			55	57
00:45			0	3	12:45			63	214
01:00			0	0	13:00			28	26
01:15			0	0	13:15			24	27
01:30			0	0	13:30			21	26
01:45			1	1	13:45			41	114
02:00			2	1	14:00			8	9
02:15			0	0	14:15			11	20
02:30			0	0	14:30			10	18
02:45			0	2	14:45			14	43
03:00			0	2	15:00			16	20
03:15			1	1	15:15			13	15
03:30			1	0	15:30			18	18
03:45			2	4	15:45			11	58
04:00			0	0	16:00			10	17
04:15			0	0	16:15			14	16
04:30			0	0	16:30			19	14
04:45			1	1	16:45			16	59
05:00			3	3	17:00			13	18
05:15			5	3	17:15			11	12
05:30			2	3	17:30			10	29
05:45			8	18	17:45			14	48
06:00			5	4	18:00			8	17
06:15			9	5	18:15			5	8
06:30			11	12	18:30			9	16
06:45			14	39	18:45			6	28
07:00			19	10	19:00			11	12
07:15			19	16	19:15			10	10
07:30			20	17	19:30			7	8
07:45			56	114	19:45			4	32
08:00			7	7	20:00			8	9
08:15			4	12	20:15			5	6
08:30			8	19	20:30			6	5
08:45			13	32	20:45			3	22
09:00			28	47	21:00			2	8
09:15			87	91	21:15			5	5
09:30			55	40	21:30			2	2
09:45			14	184	21:45			4	13
10:00			19	20	22:00			1	6
10:15			20	15	22:15			1	0
10:30			28	38	22:30			0	0
10:45			122	189	22:45			0	2
11:00			28	49	23:00			0	0
11:15			16	27	23:15			1	4
11:30			9	14	23:30			1	1
11:45			13	66	23:45			2	4

Total Vol. 653 687 **1340** 637 745 **1382**

GPS Coordinates: 32.373618, -110.976633

Daily Totals

NB	SB	EB	WB	Combined
		1290	1432	2722

AM

PM

Split %	48.7%	51.3%	49.2%	46.1%	53.9%	50.8%
Peak Hour	10:15	10:30	10:30	12:15	12:15	12:15
Volume	198	232	426	233	209	442
P.H.F.	0.41	0.49	0.44	0.67	0.61	0.64

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: Calle Buena Vista

DATE: 08/31/21

LOCATION: Oro Valley

E-W STREET: Calle Concordia

DAY: TUESDAY

PROJECT# 21-1517-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 AM	0	0	0	0	1	0	0	0	0	1	2	0	4
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
1:15 AM	0	0	0	0	0	0	0	1	0	1	0	0	2
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
2:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
3:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:15 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
3:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	2
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
4:15 AM	0	0	2	0	0	0	1	2	0	0	1	0	6
4:30 AM	0	0	0	0	1	0	0	2	0	0	0	0	3
4:45 AM	0	0	6	0	1	1	1	12	0	0	2	0	23
5:00 AM	0	2	0	0	0	0	1	2	0	0	1	0	6
5:15 AM	0	1	2	0	0	1	2	6	1	1	4	0	18
5:30 AM	0	1	2	0	0	1	1	5	1	0	4	0	15
5:45 AM	2	0	4	1	0	1	0	8	0	0	5	0	21
6:00 AM	2	0	2	1	2	0	1	9	1	1	11	0	30
6:15 AM	0	0	8	0	2	0	2	12	3	1	8	0	36
6:30 AM	4	3	2	2	4	0	2	7	1	2	5	0	32
6:45 AM	1	3	4	0	1	1	0	13	1	1	4	1	30
7:00 AM	2	0	13	0	2	1	0	18	8	7	8	1	60
7:15 AM	5	5	42	3	6	1	4	60	9	29	23	2	189
7:30 AM	2	3	16	1	6	0	1	34	4	14	21	1	103
7:45 AM	2	5	8	4	8	1	2	48	5	6	7	1	97
8:00 AM	2	6	26	2	6	1	5	47	9	9	16	1	130
8:15 AM	6	6	39	1	3	0	0	77	1	28	35	2	198
8:30 AM	6	3	52	2	6	1	1	103	3	64	53	2	296
8:45 AM	1	1	50	1	3	3	0	98	3	77	71	9	317
9:00 AM	3	7	3	0	2	1	1	25	8	9	26	0	85
9:15 AM	4	5	4	0	6	3	1	7	2	1	8	0	41
9:30 AM	8	2	8	1	8	4	0	10	7	3	10	0	61
9:45 AM	3	2	11	0	9	0	1	16	1	2	11	0	56
10:00 AM	7	5	2	0	5	1	2	6	3	4	14	0	49
10:15 AM	1	7	3	0	7	1	0	10	1	1	9	0	40

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: Calle Buena Vista

DATE: 08/31/21

LOCATION: Oro Valley

E-W STREET: Calle Concordia

DAY: TUESDAY

PROJECT# 21-1517-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 1	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
10:30 AM	2	3	2	0	4	0	0	14	2	4	8	0	39
10:45 AM	2	5	3	0	4	3	7	11	1	2	13	0	51
11:00 AM	4	2	5	1	9	4	2	8	4	5	15	1	60
11:15 AM	7	3	2	0	5	2	3	8	2	7	8	2	49
11:30 AM	6	0	3	0	3	3	5	13	2	5	10	0	50
11:45 AM	5	4	6	0	3	1	3	22	2	1	19	0	66
12:00 PM	3	3	5	0	0	1	0	16	1	7	7	1	44
12:15 PM	5	4	1	0	6	5	2	16	2	16	26	3	86
12:30 PM	2	9	12	2	4	2	1	16	3	4	12	1	68
12:45 PM	1	5	5	0	2	1	3	11	0	2	10	0	40
1:00 PM	3	7	2	1	4	1	1	8	4	1	8	2	42
1:15 PM	3	6	8	1	4	3	0	5	3	16	19	0	68
1:30 PM	0	1	5	2	5	1	2	13	2	6	9	0	46
1:45 PM	1	4	7	0	7	0	2	23	6	16	17	4	87
2:00 PM	3	6	5	0	3	5	2	10	3	8	9	0	54
2:15 PM	8	3	2	0	6	1	1	14	4	5	11	1	56
2:30 PM	4	3	5	0	3	1	0	11	4	7	18	0	56
2:45 PM	1	5	10	1	7	1	2	21	2	10	16	1	77
3:00 PM	1	5	9	0	5	2	3	22	1	29	33	2	112
3:15 PM	3	5	10	1	8	1	4	22	4	8	6	1	73
3:30 PM	6	10	36	1	4	1	4	41	2	3	8	1	117
3:45 PM	0	5	36	0	6	0	5	79	4	6	22	2	165
4:00 PM	4	3	28	2	2	4	4	51	4	109	97	11	319
4:15 PM	5	6	17	0	2	3	1	30	7	66	82	5	224
4:30 PM	6	6	10	1	6	1	4	16	5	7	17	0	79
4:45 PM	4	5	2	0	3	2	1	12	1	5	18	1	54
5:00 PM	3	3	6	0	2	1	5	15	2	10	17	1	65
5:15 PM	4	7	7	1	5	0	1	20	4	6	15	1	71
5:30 PM	0	7	15	2	6	4	2	28	3	14	27	1	109
5:45 PM	2	6	11	2	3	2	7	29	1	14	24	2	103
6:00 PM	0	3	12	0	3	4	0	29	1	11	12	0	75
6:15 PM	3	2	12	0	4	3	1	29	3	15	31	0	103
6:30 PM	1	6	13	0	1	0	2	18	1	17	30	1	90
6:45 PM	1	3	3	0	3	0	0	10	3	24	20	0	67
7:00 PM	4	5	1	0	4	1	0	11	1	2	11	1	41
7:15 PM	3	4	0	0	2	2	2	5	1	0	2	0	21
7:30 PM	2	0	2	0	2	0	0	7	1	1	13	0	28
7:45 PM	2	2	4	0	2	0	2	9	0	3	6	1	31
8:00 PM	2	3	1	1	5	4	4	5	1	2	16	0	44
8:15 PM	2	3	1	0	1	0	1	7	2	0	8	0	25
8:30 PM	0	3	3	0	2	1	0	5	0	7	23	0	44
8:45 PM	1	0	5	0	0	0	0	6	0	4	16	0	32

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: Calle Buena Vista

DATE: 08/31/21

LOCATION: Oro Valley

E-W STREET: Calle Concordia

DAY: TUESDAY

PROJECT# 21-1517-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	
9:00 PM	1	0	3	1	2	0	0	15	0	10	11	0	43
9:15 PM	0	0	1	0	0	1	1	3	0	7	15	0	28
9:30 PM	1	2	1	0	3	2	0	1	0	1	0	0	11
9:45 PM	1	1	1	0	0	1	1	2	0	1	0	0	8
10:00 PM	0	0	0	0	1	0	0	3	2	1	1	0	8
10:15 PM	0	0	0	0	0	0	1	0	0	0	1	0	2
10:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
10:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
11:00 PM	1	0	1	0	0	0	0	0	0	0	1	0	3
11:15 PM	2	0	0	0	0	0	0	0	1	2	0	0	5
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
11:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	187	246	649	39	257	99	121	1409	174	770	1182	67	5200
Approach %	17.28	22.74	59.98	9.87	65.06	25.06	7.10	82.69	10.21	38.14	58.54	3.32	
App/Depart	1082	/	434	395	/	1201	1704	/	2097	2019	/	1468	

AM Peak Hr Begins at: 800 AM

PEAK

Volumes	15	16	167	6	18	5	6	325	16	178	175	14	941
Approach %	7.58	8.08	84.34	20.69	62.07	17.24	1.73	93.66	4.61	48.50	47.68	3.81	

PEAK HR.

FACTOR:	0.811	0.806	0.811	0.584	0.742
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CONTROL: 2-Way Stop (NB & SB)

COMMENT 1:

GPS: 32.373613, -110.978624

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Tuesday, August 31, 2021

City: Oro Valley

Project #: 21-1517-001

Location: Calle Buena Vista north of Calle Concordia

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	0			12:00	4	1		
00:15	0	1			12:15	9	11		
00:30	0	0			12:30	11	8		
00:45	0	0	0	1	12:45	8	32	3	23
01:00	0	0			13:00	10	6		
01:15	0	0			13:15	6	8		
01:30	0	0			13:30	3	8		
01:45	0	0	0	0	13:45	10	29	7	29
02:00	0	0			14:00	8	8		
02:15	0	0			14:15	5	7		
02:30	0	0			14:30	3	4		
02:45	0	0	0	0	14:45	8	24	9	28
03:00	0	1			15:00	10	7		
03:15	0	1			15:15	10	10		
03:30	1	1			15:30	15	6		
03:45	0	1	0	3	15:45	12	47	6	29
04:00	0	0			16:00	18	8		
04:15	1	0			16:15	12	5		
04:30	0	1			16:30	10	8		
04:45	1	2	2	3	16:45	7	47	5	26
05:00	3	0			17:00	9	3		
05:15	3	1			17:15	9	6		
05:30	2	1			17:30	10	12		
05:45	0	8	2	4	17:45	15	43	7	28
06:00	1	3			18:00	3	7		
06:15	2	2			18:15	3	7		
06:30	5	6			18:30	9	1		
06:45	4	12	2	13	18:45	3	18	3	18
07:00	1	3			19:00	6	5		
07:15	11	10			19:15	6	4		
07:30	5	7			19:30	0	2		
07:45	8	25	13	33	19:45	5	17	2	13
08:00	12	9			20:00	7	10		
08:15	8	4			20:15	4	1		
08:30	6	9			20:30	3	3		
08:45	10	36	7	29	20:45	0	14	0	14
09:00	8	3			21:00	0	3		
09:15	6	9			21:15	1	1		
09:30	2	13			21:30	2	5		
09:45	3	19	9	34	21:45	2	5	1	10
10:00	7	6			22:00	0	1		
10:15	7	8			22:15	1	0		
10:30	3	4			22:30	0	0		
10:45	12	29	7	25	22:45	0	1	0	1
11:00	5	14			23:00	0	0		
11:15	8	7			23:15	0	0		
11:30	5	6			23:30	0	0		
11:45	7	25	4	31	23:45	0	0	0	0

Total Vol. 157 176 **333** 277 219 **496**

GPS Coordinates: 32.373895, -110.978625

Daily Totals

NB	SB	EB	WB	Combined
434	395			829

AM

PM

Split %	47.1%	52.9%	40.2%	55.8%	44.2%	59.8%
Peak Hour	07:15	07:15	07:15	15:30	17:30	15:15
Volume	36	39	75	57	33	85
P.H.F.	0.75	0.75	0.89	0.79	0.69	0.82

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Tuesday, August 31, 2021

City: Oro Valley

Project #: 21-1517-001

Location: Calle Buena Vista south of Calle Concordia

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	0			12:00	11	8		
00:15	0	2			12:15	10	24		
00:30	0	0			12:30	23	11		
00:45	0	0	0	2	12:45	11	55	4	47
01:00	0	0			13:00	12	9		
01:15	0	1			13:15	17	23		
01:30	0	0			13:30	6	13		
01:45	0	0	0	1	13:45	12	47	29	74
02:00	1	0			14:00	14	14		
02:15	0	0			14:15	13	15		
02:30	1	0			14:30	12	14		
02:45	0	2	1	1	14:45	16	55	19	62
03:00	0	1			15:00	15	35		
03:15	0	1			15:15	18	20		
03:30	1	0			15:30	52	9		
03:45	0	1	0	2	15:45	41	126	16	80
04:00	0	0			16:00	35	115		
04:15	2	0			16:15	28	75		
04:30	0	1			16:30	22	18		
04:45	6	8	1	2	16:45	11	96	9	217
05:00	2	0			17:00	12	14		
05:15	3	2			17:15	18	15		
05:30	3	1			17:30	22	23		
05:45	6	14	0	3	17:45	19	71	18	70
06:00	4	4			18:00	15	15		
06:15	8	6			18:15	17	22		
06:30	9	7			18:30	20	19		
06:45	8	29	3	20	18:45	7	59	30	86
07:00	15	17			19:00	10	7		
07:15	52	44			19:15	7	3		
07:30	21	24			19:30	4	4		
07:45	15	103	19	104	19:45	8	29	5	19
08:00	34	24			20:00	6	8		
08:15	51	32			20:15	6	3		
08:30	61	73			20:30	6	9		
08:45	52	198	83	212	20:45	6	24	4	24
09:00	13	19			21:00	4	12		
09:15	13	9			21:15	1	7		
09:30	18	18			21:30	4	4		
09:45	16	60	12	58	21:45	3	12	1	24
10:00	14	12			22:00	0	4		
10:15	11	9			22:15	0	0		
10:30	7	10			22:30	0	0		
10:45	10	42	7	38	22:45	0	0	0	4
11:00	11	18			23:00	2	0		
11:15	12	14			23:15	2	3		
11:30	9	10			23:30	0	0		
11:45	15	47	6	48	23:45	0	4	0	3

Total Vol. 504 491 **995** 578 710 **1288**

GPS Coordinates: 32.373313, -110.978553

Daily Totals

NB	SB	EB	WB	Combined
1082	1201			2283

AM

PM

Split %	50.7%	49.3%	43.6%	44.9%	55.1%	56.4%
Peak Hour	08:00	08:00	08:00	15:30	15:45	15:30
Volume	198	212	410	156	224	371
P.H.F.	0.81	0.64	0.76	0.75	0.49	0.62

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Tuesday, August 31, 2021

City: Oro Valley

Project #: 21-1517-001

Location: Calle Concordia east of Calle Buena Vista

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			0	0	12:00			21	15
00:15			0	3	12:15			17	45
00:30			0	0	12:30			30	17
00:45			0	0	12:45			16	84
01:00			0	0	13:00			11	11
01:15			1	1	13:15			14	35
01:30			0	0	13:30			20	15
01:45			0	1	13:45			30	75
02:00			1	0	14:00			15	17
02:15			0	0	14:15			16	17
02:30			0	0	14:30			16	25
02:45			0	1	14:45			32	79
03:00			0	0	15:00			31	64
03:15			0	1	15:15			33	15
03:30			0	0	15:30			78	12
03:45			0	0	15:45			115	257
04:00			1	0	16:00			81	217
04:15			4	1	16:15			47	153
04:30			2	0	16:30			27	24
04:45			18	25	16:45			14	169
05:00			2	1	17:00			21	28
05:15			8	5	17:15			28	22
05:30			7	4	17:30			45	42
05:45			13	30	17:45			42	136
06:00			12	12	18:00			41	23
06:15			20	9	18:15			41	46
06:30			11	7	18:30			31	48
06:45			17	60	18:45			13	126
07:00			31	16	19:00			12	14
07:15			105	54	19:15			5	2
07:30			51	36	19:30			9	14
07:45			60	247	19:45			13	39
08:00			75	26	20:00			7	18
08:15			117	65	20:15			8	8
08:30			157	119	20:30			8	30
08:45			149	498	20:45			11	34
09:00			28	35	21:00			19	21
09:15			11	9	21:15			4	22
09:30			19	13	21:30			2	1
09:45			27	85	21:45			3	28
10:00			8	18	22:00			3	2
10:15			13	10	22:15			0	1
10:30			16	12	22:30			0	2
10:45			14	51	22:45			0	3
11:00			14	21	23:00			1	1
11:15			10	17	23:15			0	2
11:30			16	15	23:30			0	0
11:45			28	68	23:45			0	1

Total Vol. 1066 743 **1809** 1031 1276 **2307**

GPS Coordinates: 32.373616, -110.978319

Daily Totals

NB	SB	EB	WB	Combined
		2097	2019	4116

AM

PM

Split %	58.9%	41.1%	44.0%	44.7%	55.3%	56.0%
Peak Hour	08:00	08:15	08:00	15:30	15:45	15:30
Volume	498	376	865	321	424	733
P.H.F.	0.79	0.60	0.71	0.70	0.49	0.61

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Tuesday, August 31, 2021

City: Oro Valley

Project #: 21-1517-001

Location: Calle Concordia west of Calle Buena Vista

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			0	0	12:00			17	11
00:15			0	2	12:15			20	36
00:30			0	0	12:30			20	16
00:45			0	0	12:45			14	71
01:00			0	0	13:00			13	12
01:15			1	0	13:15			8	25
01:30			0	0	13:30			17	10
01:45			0	1	13:45			31	69
02:00			0	0	14:00			15	17
02:15			0	0	14:15			19	20
02:30			0	1	14:30			15	23
02:45			0	0	14:45			25	74
03:00			0	0	15:00			26	36
03:15			0	1	15:15			30	10
03:30			0	1	15:30			47	15
03:45			0	0	15:45			88	191
04:00			1	0	16:00			59	105
04:15			3	1	16:15			38	90
04:30			2	0	16:30			25	24
04:45			13	19	16:45			14	136
05:00			3	1	17:00			22	21
05:15			9	5	17:15			25	19
05:30			7	5	17:30			33	31
05:45			8	27	17:45			37	117
06:00			11	13	18:00			30	16
06:15			17	8	18:15			33	37
06:30			10	9	18:30			21	31
06:45			14	52	18:45			13	97
07:00			26	11	19:00			12	16
07:15			73	29	19:15			8	7
07:30			39	23	19:30			8	15
07:45			55	193	19:45			11	39
08:00			61	19	20:00			10	22
08:15			78	41	20:15			10	10
08:30			107	60	20:30			5	24
08:45			101	347	20:45			6	31
09:00			34	30	21:00			15	12
09:15			10	15	21:15			4	16
09:30			17	22	21:30			1	3
09:45			18	79	21:45			3	23
10:00			11	22	22:00			5	1
10:15			11	11	22:15			1	1
10:30			16	10	22:30			0	2
10:45			19	57	22:45			0	6
11:00			14	23	23:00			0	2
11:15			13	17	23:15			1	2
11:30			20	19	23:30			0	0
11:45			27	74	23:45			0	1

Total Vol. 849 558 **1407** 855 910 **1765**

GPS Coordinates: 32.373614, -110.978912

Daily Totals

NB	SB	EB	WB	Combined
		1704	1468	3172

AM

PM

Split %	60.3%	39.7%	44.4%	48.4%	51.6%	55.6%
Peak Hour	08:00	08:15	08:00	15:30	16:00	15:30
Volume	347	206	542	232	243	464
P.H.F.	0.81	0.69	0.77	0.66	0.58	0.71

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Tuesday, August 31, 2021

City: Oro Valley

Project #: 21-1517-004

Location: Calle Buena Vista north of Church Driveway

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	0			12:00	4	4		
00:15	0	1			12:15	9	14		
00:30	0	0			12:30	12	8		
00:45	0	0	0	1	12:45	9	34	6	32
01:00	0	0			13:00	8	4		
01:15	0	0			13:15	7	8		
01:30	0	0			13:30	3	6		
01:45	0	0	0	0	13:45	9	27	10	28
02:00	0	0			14:00	8	4		
02:15	0	0			14:15	5	7		
02:30	0	0			14:30	6	4		
02:45	0	0	0	0	14:45	9	28	13	28
03:00	0	1			15:00	9	6		
03:15	0	1			15:15	11	12		
03:30	1	1			15:30	14	5		
03:45	0	1	0	3	15:45	10	44	7	30
04:00	0	0			16:00	22	7		
04:15	1	0			16:15	12	4		
04:30	0	1			16:30	9	9		
04:45	0	1	2	3	16:45	8	51	5	25
05:00	2	1			17:00	12	3		
05:15	3	0			17:15	7	6		
05:30	3	1			17:30	14	9		
05:45	0	8	1	3	17:45	11	44	11	29
06:00	0	4			18:00	3	8		
06:15	2	1			18:15	3	7		
06:30	6	4			18:30	9	2		
06:45	3	11	2	11	18:45	4	19	2	19
07:00	1	3			19:00	6	6		
07:15	12	8			19:15	6	3		
07:30	7	10			19:30	1	1		
07:45	5	25	8	29	19:45	5	18	3	13
08:00	11	10			20:00	7	10		
08:15	8	7			20:15	5	2		
08:30	5	8			20:30	6	4		
08:45	10	34	9	34	20:45	0	18	0	16
09:00	8	3			21:00	3	2		
09:15	8	10			21:15	0	2		
09:30	2	12			21:30	2	7		
09:45	4	22	7	32	21:45	3	8	3	14
10:00	7	7			22:00	0	1		
10:15	8	8			22:15	1	0		
10:30	2	4			22:30	1	0		
10:45	11	28	12	31	22:45	0	2	0	1
11:00	7	5			23:00	0	0		
11:15	8	6			23:15	0	0		
11:30	8	6			23:30	0	0		
11:45	6	29	4	21	23:45	0	0	0	0

Total Vol. 159 168 **327** 293 235 **528**

GPS Coordinates: 32.375627, -110.978601

Daily Totals

NB	SB	EB	WB	Combined
452	403			855

AM

PM

Split %	48.6%	51.4%	38.2%	55.5%	44.5%	61.8%
Peak Hour	07:15	07:15	07:15	15:30	14:45	15:15
Volume	35	36	71	58	36	88
P.H.F.	0.73	0.90	0.85	0.66	0.69	0.76

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Tuesday, August 31, 2021

City: Oro Valley

Project #: 21-1517-005

Location: Calle Concordia east of Church Driveway

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			0	0	12:00			28	19
00:15			0	1	12:15			24	41
00:30			0	1	12:30			29	42
00:45			0	0	12:45			25	106
01:00			0	0	13:00			21	18
01:15			0	2	13:15			20	25
01:30			0	0	13:30			21	24
01:45			0	0	13:45			25	87
02:00			0	0	14:00			16	28
02:15			1	0	14:15			19	24
02:30			0	0	14:30			20	21
02:45			0	1	14:45			24	79
03:00			0	0	15:00			41	69
03:15			0	1	15:15			45	16
03:30			0	0	15:30			89	54
03:45			1	1	15:45			128	303
04:00			2	0	16:00			89	226
04:15			1	1	16:15			40	166
04:30			7	3	16:30			43	28
04:45			11	21	16:45			33	205
05:00			16	1	17:00			30	21
05:15			13	4	17:15			24	28
05:30			11	1	17:30			41	24
05:45			10	50	17:45			43	138
06:00			14	11	18:00			41	43
06:15			18	10	18:15			45	39
06:30			20	14	18:30			39	30
06:45			24	76	18:45			16	141
07:00			74	22	19:00			13	41
07:15			89	44	19:15			11	14
07:30			55	43	19:30			7	19
07:45			69	287	19:45			11	42
08:00			88	69	20:00			10	20
08:15			136	88	20:15			7	14
08:30			166	136	20:30			4	19
08:45			158	548	20:45			8	29
09:00			28	28	21:00			5	10
09:15			21	10	21:15			16	14
09:30			19	14	21:30			9	8
09:45			16	84	21:45			6	36
10:00			13	20	22:00			3	9
10:15			16	21	22:15			2	2
10:30			18	14	22:30			1	1
10:45			17	64	22:45			0	6
11:00			18	20	23:00			0	1
11:15			16	21	23:15			1	2
11:30			20	28	23:30			0	1
11:45			27	81	23:45			0	1

Total Vol. 1213 905 **2118** 1173 1456 **2629**

GPS Coordinates: 32.373618, -110.976633

Daily Totals

NB	SB	EB	WB	Combined
		2386	2361	4747

AM

PM

Split %	57.3%	42.7%	44.6%	44.6%	55.4%	55.4%
Peak Hour	08:00	08:00	08:00	15:15	15:30	15:30
Volume	548	459	1007	351	535	881
P.H.F.	0.83	0.69	0.78	0.69	0.59	0.70

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: Calle Buena Vista

DATE: 09/01/21

LOCATION: Oro Valley

E-W STREET: Calle Concordia

DAY: WEDNESDAY

PROJECT# 21-1517-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
1:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
1:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
1:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
2:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	
2:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
2:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
3:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	2
3:30 AM	0	1	0	0	0	0	0	0	0	1	0	0	2
3:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	2
4:30 AM	0	0	1	0	0	0	0	4	1	0	2	1	9
4:45 AM	0	0	2	1	1	0	0	14	0	0	3	0	21
5:00 AM	0	1	0	1	1	0	1	2	0	0	2	0	8
5:15 AM	0	0	0	0	0	0	1	5	1	1	2	0	10
5:30 AM	0	0	3	0	1	0	2	2	0	0	2	0	10
5:45 AM	1	1	0	1	0	0	1	9	1	1	6	0	21
6:00 AM	0	1	0	1	1	0	0	3	1	1	9	0	17
6:15 AM	1	1	0	0	0	0	1	8	2	2	5	1	21
6:30 AM	1	1	5	0	2	2	1	10	3	1	7	2	35
6:45 AM	2	1	3	1	2	0	1	16	1	0	2	1	30
7:00 AM	5	2	3	2	8	0	0	14	7	0	8	0	49
7:15 AM	2	3	10	1	6	2	2	31	6	4	13	0	80
7:30 AM	2	3	18	0	3	0	1	41	3	3	12	0	86
7:45 AM	3	3	49	1	7	2	3	89	2	27	19	0	205
8:00 AM	4	4	32	0	2	3	3	47	2	19	22	0	138
8:15 AM	3	3	17	2	4	2	1	61	4	19	24	0	140
8:30 AM	5	1	66	0	7	3	1	103	5	60	42	1	294
8:45 AM	4	3	60	2	3	1	1	91	11	86	74	9	345
9:00 AM	6	4	5	0	0	3	2	19	6	23	28	0	96
9:15 AM	4	1	4	2	9	1	3	9	3	2	6	1	45
9:30 AM	4	3	8	1	6	1	2	13	1	6	4	0	49
9:45 AM	2	2	6	1	8	3	0	14	4	8	7	1	56
10:00 AM	4	10	5	1	3	4	4	7	5	3	11	1	58
10:15 AM	3	1	2	0	5	1	2	7	5	2	6	0	34

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: Calle Buena Vista

DATE: 09/01/21

LOCATION: Oro Valley

E-W STREET: Calle Concordia

DAY: WEDNESDAY

PROJECT# 21-1517-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 1	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
10:30 AM	2	1	4	0	6	0	0	6	1	3	8	1	32
10:45 AM	7	9	2	1	9	3	2	14	3	2	9	2	63
11:00 AM	4	6	0	0	4	1	1	10	2	5	9	0	42
11:15 AM	8	3	5	0	0	3	3	10	2	4	5	2	45
11:30 AM	5	4	5	1	3	2	2	15	6	3	4	1	51
11:45 AM	2	8	4	0	2	0	2	8	5	4	9	1	45
12:00 PM	5	3	5	1	2	2	1	8	6	7	14	2	56
12:15 PM	6	5	4	0	1	3	3	6	4	26	15	3	76
12:30 PM	2	7	11	2	6	1	3	7	1	4	8	1	53
12:45 PM	4	7	2	0	4	0	3	9	5	3	6	0	43
1:00 PM	4	7	2	0	3	2	0	15	3	0	6	0	42
1:15 PM	5	6	7	1	2	2	1	8	3	16	24	4	79
1:30 PM	6	6	7	1	1	5	3	16	5	3	9	0	62
1:45 PM	4	3	8	1	4	4	3	20	8	20	9	0	84
2:00 PM	6	3	6	1	6	1	1	6	3	3	10	1	47
2:15 PM	6	6	6	0	5	0	2	12	3	5	9	2	56
2:30 PM	3	4	7	0	7	0	2	12	3	2	12	1	53
2:45 PM	3	5	20	0	4	3	5	36	5	7	16	1	105
3:00 PM	5	7	8	2	1	1	0	13	6	33	37	5	118
3:15 PM	3	3	9	2	2	0	3	17	2	7	17	1	66
3:30 PM	8	8	28	1	7	1	2	37	2	13	13	1	121
3:45 PM	4	3	46	0	4	0	2	69	1	9	14	1	153
4:00 PM	3	7	34	1	2	3	5	51	3	100	87	14	310
4:15 PM	4	4	18	0	3	0	1	34	8	71	82	6	231
4:30 PM	5	11	4	0	3	3	3	18	1	18	26	3	95
4:45 PM	5	6	7	0	2	2	1	21	4	10	23	1	82
5:00 PM	9	6	8	0	6	2	0	20	4	15	30	1	101
5:15 PM	1	5	8	0	3	0	3	21	3	4	17	1	66
5:30 PM	8	4	8	1	4	2	3	30	4	3	21	0	88
5:45 PM	3	5	9	0	2	0	2	41	3	10	19	2	96
6:00 PM	4	3	9	0	3	2	2	37	2	12	19	0	93
6:15 PM	3	4	8	1	8	0	1	24	2	21	51	2	125
6:30 PM	4	5	6	0	8	0	1	11	2	21	15	1	74
6:45 PM	4	2	4	0	3	2	2	14	1	9	19	0	60
7:00 PM	0	2	1	1	2	1	1	7	0	8	19	1	43
7:15 PM	2	4	0	0	1	0	0	7	6	3	6	0	29
7:30 PM	2	2	0	0	2	1	1	1	1	2	5	0	17
7:45 PM	0	1	2	0	2	1	0	6	1	3	5	0	21
8:00 PM	3	0	0	0	0	0	0	2	2	6	24	1	38
8:15 PM	2	2	0	0	1	1	1	2	0	4	15	0	28
8:30 PM	1	2	0	0	1	1	2	2	1	0	7	1	18
8:45 PM	2	0	0	0	3	0	0	1	0	0	3	0	9

Intersection Turning Movement

Prepared by:



FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745



veracitytrafficgroup

N-S STREET: Calle Buena Vista

DATE: 09/01/21

LOCATION: Oro Valley

E-W STREET: Calle Concordia

DAY: WEDNESDAY

PROJECT# 21-1517-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	
9:00 PM	0	2	1	1	2	1	0	0	0	0	5	0	12
9:15 PM	0	2	0	0	0	0	0	3	0	0	2	0	7
9:30 PM	1	1	0	0	3	0	0	1	0	1	0	0	7
9:45 PM	0	1	1	0	0	0	1	1	0	0	1	0	5
10:00 PM	1	0	0	0	1	0	0	2	0	0	1	0	5
10:15 PM	0	0	2	0	0	0	0	0	0	1	0	0	3
10:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
10:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
11:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	2
11:15 PM	0	0	0	0	0	0	2	0	0	0	2	0	4
11:30 PM	2	0	0	0	0	0	0	0	0	0	0	0	2
11:45 PM	0	0	1	0	0	0	0	0	0	1	1	0	3

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	227	245	627	37	229	84	110	1333	202	771	1084	83	5032
Approach %	20.66	22.29	57.05	10.57	65.43	24.00	6.69	81.03	12.28	39.78	55.93	4.28	
App/Depart	1099	/	438	350	/	1202	1645	/	1997	1938	/	1395	

AM Peak Hr Begins at: 800 AM

PEAK

Volumes	16	11	175	4	16	9	6	302	22	184	162	10	917
Approach %	7.92	5.45	86.63	13.79	55.17	31.03	1.82	91.52	6.67	51.69	45.51	2.81	

PEAK HR.

FACTOR:	0.701	0.725	0.757	0.527	0.664
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CONTROL: 2-Way Stop (NB & SB)

COMMENT 1:

GPS: 32.373613, -110.978624

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, September 1, 2021

City: Oro Valley

Project #: 21-1517-002

Location: Calle Buena Vista north of Calle Concordia

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	0			12:00	6	5		
00:15	0	0			12:15	11	4		
00:30	1	0			12:30	11	9		
00:45	0	1	0	0	12:45	10	38	4	22
01:00	0	0			13:00	7	5		
01:15	0	0			13:15	11	5		
01:30	0	0			13:30	9	7		
01:45	0	0	0	0	13:45	6	33	9	26
02:00	0	0			14:00	5	8		
02:15	0	0			14:15	10	5		
02:30	0	0			14:30	7	7		
02:45	0	0	0	0	14:45	11	33	7	27
03:00	0	0			15:00	12	4		
03:15	0	1			15:15	7	4		
03:30	1	0			15:30	11	9		
03:45	0	1	0	1	15:45	6	36	4	21
04:00	0	0			16:00	26	6		
04:15	1	0			16:15	11	3		
04:30	1	0			16:30	17	6		
04:45	0	2	2	2	16:45	8	62	4	19
05:00	2	2			17:00	7	8		
05:15	1	0			17:15	9	3		
05:30	2	1			17:30	7	7		
05:45	2	7	1	4	17:45	9	32	2	20
06:00	1	2			18:00	5	5		
06:15	3	0			18:15	7	9		
06:30	4	4			18:30	7	8		
06:45	3	11	3	9	18:45	4	23	5	27
07:00	2	10			19:00	4	4		
07:15	5	9			19:15	4	1		
07:30	4	3			19:30	3	3		
07:45	6	17	10	32	19:45	1	12	3	11
08:00	7	5			20:00	1	0		
08:15	4	8			20:15	3	2		
08:30	3	10			20:30	5	2		
08:45	13	27	6	29	20:45	0	9	3	7
09:00	6	3			21:00	2	4		
09:15	5	12			21:15	2	0		
09:30	5	8			21:30	1	3		
09:45	3	19	12	35	21:45	2	7	0	7
10:00	15	8			22:00	0	1		
10:15	3	6			22:15	0	0		
10:30	2	6			22:30	0	0		
10:45	13	33	13	33	22:45	0	0	0	1
11:00	7	5			23:00	0	1		
11:15	8	3			23:15	2	0		
11:30	7	6			23:30	0	0		
11:45	11	33	2	16	23:45	0	2	0	1

Total Vol. 151 161 **312** 287 189 **476**

GPS Coordinates: 32.373895, -110.978625

Daily Totals

NB	SB	EB	WB	Combined
438	350			788

AM

PM

Split %	48.4%	51.6%	39.6%	60.3%	39.7%	60.4%
Peak Hour	11:45	09:15	09:15	16:00	13:15	16:00
Volume	39	40	68	62	29	81
P.H.F.	0.89	0.83	0.74	0.60	0.81	0.63

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, September 1, 2021

City: Oro Valley

Project #: 21-1517-002

Location: Calle Buena Vista south of Calle Concordia

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	0			12:00	13	15		
00:15	0	0			12:15	15	31		
00:30	0	0			12:30	20	11		
00:45	0	0	0	0	12:45	13	61	12	69
01:00	0	0			13:00	13	6		
01:15	0	0			13:15	18	21		
01:30	0	0			13:30	19	9		
01:45	0	0	0	0	13:45	15	65	32	68
02:00	0	0			14:00	15	12		
02:15	0	0			14:15	18	13		
02:30	0	0			14:30	14	12		
02:45	0	0	0	0	14:45	28	75	16	53
03:00	0	0			15:00	20	40		
03:15	1	1			15:15	15	11		
03:30	1	1			15:30	44	22		
03:45	0	2	0	2	15:45	53	132	14	87
04:00	0	0			16:00	44	105		
04:15	0	0			16:15	26	82		
04:30	1	1			16:30	20	22		
04:45	2	3	1	2	16:45	18	108	16	225
05:00	1	1			17:00	23	25		
05:15	0	2			17:15	14	10		
05:30	3	1			17:30	20	11		
05:45	2	6	2	6	17:45	17	74	15	61
06:00	1	3			18:00	16	17		
06:15	2	4			18:15	15	31		
06:30	7	6			18:30	15	31		
06:45	6	16	3	16	18:45	10	56	13	92
07:00	10	15			19:00	3	10		
07:15	15	16			19:15	6	10		
07:30	23	9			19:30	4	5		
07:45	55	103	36	76	19:45	3	16	6	31
08:00	40	23			20:00	3	8		
08:15	23	27			20:15	4	5		
08:30	72	72			20:30	3	2		
08:45	67	202	100	222	20:45	2	12	3	18
09:00	15	29			21:00	3	2		
09:15	9	14			21:15	2	0		
09:30	15	13			21:30	2	4		
09:45	10	49	20	76	21:45	2	9	0	6
10:00	19	11			22:00	1	1		
10:15	6	12			22:15	2	1		
10:30	7	10			22:30	0	0		
10:45	18	50	14	47	22:45	0	3	1	3
11:00	10	11			23:00	0	1		
11:15	16	6			23:15	0	0		
11:30	14	12			23:30	2	0		
11:45	14	54	11	40	23:45	1	3	1	2

Total Vol. 485 487 **972** 614 715 **1329**

GPS Coordinates: 32.373313, -110.978553

Daily Totals

NB	SB	EB	WB	Combined
1099	1202			2301

AM

PM

Split %	49.9%	50.1%	42.2%	46.2%	53.8%	57.8%
Peak Hour	08:00	08:15	08:00	15:30	16:00	15:30
Volume	202	228	424	167	225	390
P.H.F.	0.70	0.57	0.63	0.79	0.54	0.65

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, September 1, 2021

City: Oro Valley

Project #: 21-1517-002

Location: Calle Concordia east of Calle Buena Vista

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			0	0	12:00			14	23
00:15			0	0	12:15			10	44
00:30			0	1	12:30			20	13
00:45			0	0	12:45			11	55
01:00			0	0	13:00			17	6
01:15			0	0	13:15			16	44
01:30			0	0	13:30			24	12
01:45			0	0	13:45			29	86
02:00			0	0	14:00			13	14
02:15			0	0	14:15			18	16
02:30			0	0	14:30			19	15
02:45			0	0	14:45			56	106
03:00			0	0	15:00			23	75
03:15			1	0	15:15			28	25
03:30			0	1	15:30			66	27
03:45			0	1	15:45			115	232
04:00			0	0	16:00			86	201
04:15			1	0	16:15			52	159
04:30			5	3	16:30			22	47
04:45			17	23	16:45			28	188
05:00			3	2	17:00			28	46
05:15			5	3	17:15			29	22
05:30			5	2	17:30			39	24
05:45			10	23	17:45			50	146
06:00			4	10	18:00			46	31
06:15			8	8	18:15			33	74
06:30			15	10	18:30			17	37
06:45			20	47	18:45			18	114
07:00			19	8	19:00			9	28
07:15			42	17	19:15			7	9
07:30			59	15	19:30			1	7
07:45			139	259	19:45			8	25
08:00			79	41	20:00			2	31
08:15			80	43	20:15			2	19
08:30			169	103	20:30			2	8
08:45			153	481	20:45			1	7
09:00			24	51	21:00			2	5
09:15			15	9	21:15			3	2
09:30			22	10	21:30			1	1
09:45			21	82	21:45			2	8
10:00			13	15	22:00			2	1
10:15			9	8	22:15			2	1
10:30			10	12	22:30			1	0
10:45			17	49	22:45			0	5
11:00			10	14	23:00			1	0
11:15			15	11	23:15			0	2
11:30			21	8	23:30			0	0
11:45			12	58	23:45			1	2

Total Vol. 1023 676 **1699** 974 1262 **2236**

GPS Coordinates: 32.373616, -110.978319

Daily Totals

NB	SB	EB	WB	Combined
		1997	1938	3935

AM

PM

Split %	60.2%	39.8%	43.2%	43.6%	56.4%	56.8%
Peak Hour	08:00	08:15	08:00	15:30	16:00	15:30
Volume	481	366	837	319	441	730
P.H.F.	0.71	0.54	0.65	0.69	0.55	0.64

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, September 1, 2021

City: Oro Valley

Project #: 21-1517-002

Location: Calle Concordia west of Calle Buena Vista

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			0	0	12:00			15	21
00:15			0	0	12:15			13	24
00:30			0	0	12:30			11	11
00:45			0	0	12:45			17	56
01:00			0	0	13:00			18	12
01:15			0	0	13:15			12	31
01:30			0	0	13:30			24	20
01:45			0	0	13:45			31	85
02:00			0	0	14:00			10	17
02:15			0	0	14:15			17	15
02:30			0	0	14:30			17	15
02:45			0	0	14:45			46	90
03:00			0	0	15:00			19	43
03:15			0	0	15:15			22	20
03:30			0	0	15:30			41	22
03:45			0	0	15:45			72	154
04:00			0	0	16:00			59	93
04:15			2	0	16:15			43	86
04:30			5	2	16:30			22	34
04:45			14	21	16:45			26	150
05:00			3	2	17:00			24	41
05:15			7	2	17:15			27	18
05:30			4	2	17:30			37	31
05:45			11	25	17:45			46	134
06:00			4	9	18:00			41	25
06:15			11	6	18:15			27	54
06:30			14	10	18:30			14	19
06:45			18	47	18:45			17	99
07:00			21	13	19:00			8	20
07:15			39	17	19:15			13	8
07:30			45	14	19:30			3	8
07:45			94	199	19:45			7	31
08:00			52	29	20:00			4	27
08:15			66	29	20:15			3	18
08:30			109	50	20:30			5	9
08:45			103	330	20:45			1	13
09:00			27	37	21:00			0	6
09:15			15	11	21:15			3	2
09:30			16	9	21:30			1	1
09:45			18	76	21:45			2	6
10:00			16	19	22:00			2	2
10:15			14	10	22:15			0	0
10:30			7	10	22:30			1	0
10:45			19	56	22:45			1	4
11:00			13	14	23:00			1	0
11:15			15	16	23:15			2	2
11:30			23	11	23:30			0	2
11:45			15	66	23:45			0	3

Total Vol. 820 481 **1301** 825 914 **1739**

GPS Coordinates: 32.373614, -110.978912

Daily Totals

NB	SB	EB	WB	Combined
		1645	1395	3040

AM

PM

Split %	63.0%	37.0%	42.8%	47.4%	52.6%	57.2%
Peak Hour	08:00	08:15	08:00	15:30	16:00	15:30
Volume	330	195	517	215	243	434
P.H.F.	0.76	0.62	0.71	0.75	0.65	0.71

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, September 1, 2021

City: Oro Valley

Project #: 21-1517-004

Location: Calle Buena Vista north of Church Driveway

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00	0	0			12:00	6	8		
00:15	0	0			12:15	10	9		
00:30	1	0			12:30	4	6		
00:45	0	1	0	0	12:45	9	29	9	32
01:00	0	0			13:00	10	9		
01:15	0	0			13:15	4	13		
01:30	0	0			13:30	13	8		
01:45	0	0	0	0	13:45	18	45	5	35
02:00	0	0			14:00	6	14		
02:15	0	0			14:15	6	1		
02:30	0	0			14:30	14	4		
02:45	0	0	0	0	14:45	7	33	8	27
03:00	0	1			15:00	13	14		
03:15	0	0			15:15	9	8		
03:30	1	0			15:30	7	4		
03:45	0	1	0	1	15:45	7	36	8	34
04:00	0	0			16:00	14	1		
04:15	1	0			16:15	10	4		
04:30	1	0			16:30	4	6		
04:45	0	2	2	2	16:45	9	37	4	15
05:00	2	2			17:00	12	4		
05:15	1	0			17:15	12	4		
05:30	2	1			17:30	11	8		
05:45	2	7	1	4	17:45	9	44	7	23
06:00	1	2			18:00	9	4		
06:15	3	0			18:15	10	5		
06:30	3	5			18:30	8	7		
06:45	3	10	5	12	18:45	3	30	5	21
07:00	2	13			19:00	5	2		
07:15	6	8			19:15	3	3		
07:30	3	3			19:30	4	1		
07:45	6	17	13	37	19:45	5	17	0	6
08:00	7	4			20:00	4	4		
08:15	5	5			20:15	2	3		
08:30	12	11			20:30	6	1		
08:45	13	37	7	27	20:45	3	15	1	9
09:00	7	9			21:00	1	1		
09:15	7	7			21:15	0	2		
09:30	8	10			21:30	4	1		
09:45	2	24	12	38	21:45	5	10	1	5
10:00	6	8			22:00	1	0		
10:15	3	3			22:15	0	0		
10:30	9	8			22:30	0	0		
10:45	7	25	5	24	22:45	0	1	1	1
11:00	7	8			23:00	0	0		
11:15	8	4			23:15	0	0		
11:30	7	7			23:30	1	0		
11:45	12	34	8	27	23:45	0	1	0	0

Total Vol. 158 172 **330** 298 208 **506**

GPS Coordinates: 32.375627, -110.978601

Daily Totals

NB	SB	EB	WB	Combined
456	380			836

AM

PM

Split %	47.9%	52.1%	39.5%	58.9%	41.1%	60.5%
Peak Hour	08:30	09:00	08:30	13:00	13:15	13:15
Volume	39	38	73	45	40	81
P.H.F.	0.75	0.79	0.79	0.63	0.71	0.88

Prepared by: Field Data Services of Arizona/Veracity Traffic Group (520) 316-6745

Volumes for: Wednesday, September 1, 2021

City: Oro Valley

Project #: 21-1517-005

Location: Calle Concordia east of Church Driveway

AM Period	NB	SB	EB	WB	PM Period	NB	SB	EB	WB
00:00			0	0	12:00			28	29
00:15			0	0	12:15			24	41
00:30			0	1	12:30			19	12
00:45			0	0	12:45			20	91
01:00			0	0	13:00			24	10
01:15			0	0	13:15			41	46
01:30			0	0	13:30			45	60
01:45			0	0	13:45			28	138
02:00			0	0	14:00			24	41
02:15			0	0	14:15			59	42
02:30			0	0	14:30			66	28
02:45			1	1	14:45			60	209
03:00			0	0	15:00			85	79
03:15			0	0	15:15			74	50
03:30			1	0	15:30			89	41
03:45			0	1	15:45			141	389
04:00			0	1	16:00			101	263
04:15			1	2	16:15			55	169
04:30			2	1	16:30			41	41
04:45			8	11	16:45			43	240
05:00			11	2	17:00			39	39
05:15			7	1	17:15			30	30
05:30			9	4	17:30			32	32
05:45			6	33	17:45			54	155
06:00			9	5	18:00			41	27
06:15			11	9	18:15			28	69
06:30			10	11	18:30			21	50
06:45			24	54	18:45			19	109
07:00			41	14	19:00			11	28
07:15			45	28	19:15			10	14
07:30			69	59	19:30			7	16
07:45			166	321	19:45			6	34
08:00			89	60	20:00			3	28
08:15			87	89	20:15			2	21
08:30			176	128	20:30			5	8
08:45			169	521	20:45			2	12
09:00			28	55	21:00			1	9
09:15			26	41	21:15			4	6
09:30			22	19	21:30			1	3
09:45			20	96	21:45			2	8
10:00			24	18	22:00			1	5
10:15			28	16	22:15			3	2
10:30			21	13	22:30			2	1
10:45			19	92	22:45			1	7
11:00			16	17	23:00			0	1
11:15			20	19	23:15			0	0
11:30			21	16	23:30			1	0
11:45			17	74	23:45			1	2

Total Vol. 1204 942 **2146** 1394 1607 **3001**

GPS Coordinates: 32.373618, -110.976633

Daily Totals

NB	SB	EB	WB	Combined
		2598	2549	5147

AM

PM

Split %	56.1%	43.9%	41.7%	46.5%	53.5%	58.3%
Peak Hour	08:00	08:00	08:00	15:15	15:30	15:30
Volume	521	458	979	405	518	904
P.H.F.	0.74	0.63	0.70	0.72	0.49	0.62

HCM 6th TWSC

3: Calle Buena Vista & Calle Concordia




01/31/2022

Intersection												
Int Delay, s/veh	6.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	34	7	10	10	49	16	8	24	0	14	25	33
Future Vol, veh/h	34	7	10	10	49	16	8	24	0	14	25	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	87	87	87	84	84	84	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	41	9	12	11	56	18	10	29	0	23	41	54
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	74	0	0	21	0	0	232	193	15	199	190	65
Stage 1	-	-	-	-	-	-	97	97	-	87	87	-
Stage 2	-	-	-	-	-	-	135	96	-	112	103	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1526	-	-	1595	-	-	723	702	1065	760	705	999
Stage 1	-	-	-	-	-	-	910	815	-	921	823	-
Stage 2	-	-	-	-	-	-	868	815	-	893	810	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1526	-	-	1595	-	-	636	678	1065	717	681	999
Mov Cap-2 Maneuver	-	-	-	-	-	-	636	678	-	717	681	-
Stage 1	-	-	-	-	-	-	885	793	-	896	817	-
Stage 2	-	-	-	-	-	-	774	809	-	838	788	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	4.9			1			10.7			10.2		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	667		-	1526	-	-	1595	-	-	807		
HCM Lane V/C Ratio	0.057		-	0.027	-	-	0.007	-	-	0.146		
HCM Control Delay (s)	10.7		0	7.4	0	-	7.3	0	-	10.2		
HCM Lane LOS	B		A	A	A	-	A	A	-	B		
HCM 95th %tile Q(veh)	0.2		-	0.1	-	-	0	-	-	0.5		

HCM 6th TWSC

6: Calle Buena Vista & North Driveway

01/31/2022

Intersection						
Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	65	7	9	65	7	7
Future Vol, veh/h	65	7	9	65	7	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	71	8	10	71	8	8
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	70	46	0	0	81	0
Stage 1	46	-	-	-	-	-
Stage 2	24	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	934	1023	-	-	1517	-
Stage 1	976	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	929	1023	-	-	1517	-
Mov Cap-2 Maneuver	929	-	-	-	-	-
Stage 1	971	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.2	0		3.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	937		1517	-	
HCM Lane V/C Ratio	-	0.084		0.005	-	
HCM Control Delay (s)	-	9.2		7.4	0	
HCM Lane LOS	-	A		A	A	
HCM 95th %tile Q(veh)	-	0.3		0	-	




HCM 6th TWSC

8: Calle Concordia & West Driveway

01/31/2022

Intersection

Int Delay, s/veh 0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	21	75	12	12	0
Future Vol, veh/h	0	21	75	12	12	0
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	23	82	13	13	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	95	0	0 112 89
Stage 1	-	-	- 89 -
Stage 2	-	-	- 23 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1499	-	- 885 969
Stage 1	-	-	- 934 -
Stage 2	-	-	- 1000 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1499	-	- 885 969
Mov Cap-2 Maneuver	-	-	- 885 -
Stage 1	-	-	- 934 -
Stage 2	-	-	- 1000 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.1
HCM LOS			A




Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1499	-	-	-	885
HCM Lane V/C Ratio	-	-	-	-	0.015
HCM Control Delay (s)	0	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 6th TWSC
10: Calle Concordia & Center Driveway

01/31/2022

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	33	87	12	12	0
Future Vol, veh/h	0	33	87	12	12	0
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	36	95	13	13	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	108	0	0 138 102
Stage 1	-	-	- - 102 -
Stage 2	-	-	- - 36 -
Critical Hdwy	4.12	-	- - 6.42 6.22
Critical Hdwy Stg 1	-	-	- - 5.42 -
Critical Hdwy Stg 2	-	-	- - 5.42 -
Follow-up Hdwy	2.218	-	- - 3.518 3.318
Pot Cap-1 Maneuver	1483	-	- - 855 953
Stage 1	-	-	- - 922 -
Stage 2	-	-	- - 986 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1483	-	- - 855 953
Mov Cap-2 Maneuver	-	-	- - 855 -
Stage 1	-	-	- - 922 -
Stage 2	-	-	- - 986 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.3
HCM LOS			A




Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1483	-	-	-	855
HCM Lane V/C Ratio	-	-	-	-	0.015
HCM Control Delay (s)	0	-	-	-	9.3
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 6th TWSC 12: Calle Concordia & East Driveway

01/31/2022

Intersection

Int Delay, s/veh 0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	45	99	0	0	0
Future Vol, veh/h	0	45	99	0	0	0
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	49	108	0	0	0

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	108	0	0 157 108
Stage 1	-	-	- 108 -
Stage 2	-	-	- 49 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1483	-	- 834 946
Stage 1	-	-	- 916 -
Stage 2	-	-	- 973 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1483	-	- 834 946
Mov Cap-2 Maneuver	-	-	- 834 -
Stage 1	-	-	- 916 -
Stage 2	-	-	- 973 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1483	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

HCM 6th TWSC

3: Calle Buena Vista & Calle Concordia




02/01/2022

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	10	129	7	91	147	25	15	17	55	23	25	8
Future Vol, veh/h	10	129	7	91	147	25	15	17	55	23	25	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	87	87	87	84	84	84	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	157	9	105	169	29	18	20	65	38	41	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	166	0	0	607	594	162	590	584	184
Stage 1	-	-	-	-	-	-	186	186	-	394	394	-
Stage 2	-	-	-	-	-	-	421	408	-	196	190	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1375	-	-	1412	-	-	408	418	883	419	423	858
Stage 1	-	-	-	-	-	-	816	746	-	631	605	-
Stage 2	-	-	-	-	-	-	610	597	-	806	743	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1375	-	-	1412	-	-	343	379	883	346	384	858
Mov Cap-2 Maneuver	-	-	-	-	-	-	343	379	-	346	384	-
Stage 1	-	-	-	-	-	-	808	739	-	625	554	-
Stage 2	-	-	-	-	-	-	510	547	-	719	736	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			2.7			11.9			16.8		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	361	883	1375	-	-	1412	-	-	397			
HCM Lane V/C Ratio	0.106	0.074	0.009	-	-	0.074	-	-	0.231			
HCM Control Delay (s)	16.1	9.4	7.6	0	-	7.8	0	-	16.8			
HCM Lane LOS	C	A	A	A	-	A	A	-	C			
HCM 95th %tile Q(veh)	0.4	0.2	0	-	-	0.2	-	-	0.9			

HCM 6th TWSC

6: Calle Buena Vista & North Driveway




02/01/2022

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	8	40	12	9	44
Future Vol, veh/h	12	8	40	12	9	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	9	43	13	10	48
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	118	50	0	0	56	0
Stage 1	50	-	-	-	-	-
Stage 2	68	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	878	1018	-	-	1549	-
Stage 1	972	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	872	1018	-	-	1549	-
Mov Cap-2 Maneuver	872	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9	0	1.2			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	925	1549	-	
HCM Lane V/C Ratio	-	-	0.024	0.006	-	
HCM Control Delay (s)	-	-	9	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

HCM 6th TWSC




8: Calle Concordia & West Driveway

02/01/2022

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	23	184	240	15	15	23
Future Vol, veh/h	23	184	240	15	15	23
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	25	200	261	16	16	25
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	277	0	-	0	519	269
Stage 1	-	-	-	-	269	-
Stage 2	-	-	-	-	250	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1286	-	-	-	517	770
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	792	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1286	-	-	-	506	770
Mov Cap-2 Maneuver	-	-	-	-	506	-
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	792	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.9	0		11		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1286	-	-	-	639	
HCM Lane V/C Ratio	0.019	-	-	-	0.065	
HCM Control Delay (s)	7.9	0	-	-	11	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2	

HCM 6th TWSC
10: Calle Concordia & Center Driveway

02/01/2022

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	46	153	209	31	31	46
Future Vol, veh/h	46	153	209	31	31	46
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	50	166	227	34	34	50
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	261	0	-	0	510	244
Stage 1	-	-	-	-	244	-
Stage 2	-	-	-	-	266	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1303	-	-	-	523	795
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	779	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1303	-	-	-	501	795
Mov Cap-2 Maneuver	-	-	-	-	501	-
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	779	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.8	0		11.4		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1303	-	-	-	643	
HCM Lane V/C Ratio	0.038	-	-	-	0.13	
HCM Control Delay (s)	7.9	0	-	-	11.4	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4	




HCM 6th TWSC

12: Calle Concordia & East Driveway

02/01/2022

Intersection

Int Delay, s/veh 4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	77	107	163	51	51	77
Future Vol, veh/h	77	107	163	51	51	77
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	84	116	177	55	55	84

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	232	0	0 489 205
Stage 1	-	-	- 205 -
Stage 2	-	-	- 284 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1336	-	- 538 836
Stage 1	-	-	- 829 -
Stage 2	-	-	- 764 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1336	-	- 502 836
Mov Cap-2 Maneuver	-	-	- 502 -
Stage 1	-	-	- 773 -
Stage 2	-	-	- 764 -

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1336	-	-	-	661
HCM Lane V/C Ratio	0.063	-	-	-	0.21
HCM Control Delay (s)	7.9	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8

HCM 6th TWSC




3: Calle Buena Vista & Calle Concordia

02/02/2022

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	13	17	3	26	59	2	8	19	16	0	20	12
Future Vol, veh/h	13	17	3	26	59	2	8	19	16	0	20	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	87	87	87	84	84	84	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	21	4	30	68	2	10	23	19	0	33	20
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	70	0	0	25	0	0	211	185	23	196	186	69
Stage 1	-	-	-	-	-	-	55	55	-	129	129	-
Stage 2	-	-	-	-	-	-	156	130	-	67	57	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1531	-	-	1589	-	-	746	709	1054	763	708	994
Stage 1	-	-	-	-	-	-	957	849	-	875	789	-
Stage 2	-	-	-	-	-	-	846	789	-	943	847	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1531	-	-	1589	-	-	688	687	1054	713	686	994
Mov Cap-2 Maneuver	-	-	-	-	-	-	688	687	-	713	686	-
Stage 1	-	-	-	-	-	-	946	840	-	865	773	-
Stage 2	-	-	-	-	-	-	778	773	-	891	838	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.9			2.2			9.8			10		
HCM LOS							A			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	687	1054	1531	-	-	1589	-	-	776			
HCM Lane V/C Ratio	0.047	0.018	0.01	-	-	0.019	-	-	0.068			
HCM Control Delay (s)	10.5	8.5	7.4	0	-	7.3	0	-	10			
HCM Lane LOS	B	A	A	A	-	A	A	-	B			
HCM 95th %tile Q(veh)	0.1	0.1	0	-	-	0.1	-	-	0.2			

HCM 6th TWSC 6: Calle Buena Vista & North Driveway




02/02/2022

Intersection						
Int Delay, s/veh	4.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	7	9	25	7	7
Future Vol, veh/h	25	7	9	25	7	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	8	10	27	8	8
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	48	24	0	0	37	0
Stage 1	24	-	-	-	-	-
Stage 2	24	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	962	1052	-	-	1574	-
Stage 1	999	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	957	1052	-	-	1574	-
Mov Cap-2 Maneuver	957	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.8	0		3.6		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		976	1574	-
HCM Lane V/C Ratio	-	-		0.036	0.005	-
HCM Control Delay (s)	-	-		8.8	7.3	0
HCM Lane LOS	-	-		A	A	A
HCM 95th %tile Q(veh)	-	-		0.1	0	-

HCM 6th TWSC

8: Calle Concordia & West Driveway

02/02/2022

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	31	85	0	0	2
Future Vol, veh/h	2	31	85	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	34	92	0	0	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	92	0	-	0	130	92
Stage 1	-	-	-	-	92	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1503	-	-	-	864	965
Stage 1	-	-	-	-	932	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1503	-	-	-	863	965
Mov Cap-2 Maneuver	-	-	-	-	863	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	984	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.4	0		8.7		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1503	-	-	-	-	965
HCM Lane V/C Ratio	0.001	-	-	-	-	0.002
HCM Control Delay (s)	7.4	0	-	-	-	8.7
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	0




HCM 6th TWSC

10: Calle Concordia & Center Driveway

02/02/2022

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	29	83	0	0	2
Future Vol, veh/h	2	29	83	0	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	32	90	0	0	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	90	0	0 126 90
Stage 1	-	-	- 90 -
Stage 2	-	-	- 36 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1505	-	- 869 968
Stage 1	-	-	- 934 -
Stage 2	-	-	- 986 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1505	-	- 868 968
Mov Cap-2 Maneuver	-	-	- 868 -
Stage 1	-	-	- 933 -
Stage 2	-	-	- 986 -

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	8.7
HCM LOS			A




Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1505	-	-	-	968
HCM Lane V/C Ratio	0.001	-	-	-	0.002
HCM Control Delay (s)	7.4	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

HCM 6th TWSC
12: Calle Concordia & East Driveway

02/02/2022

Intersection

Int Delay, s/veh 3.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	7	61	38	38	22
Future Vol, veh/h	22	7	61	38	38	22
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	24	8	66	41	41	24

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	107	0	0 143 87
Stage 1	-	-	- 87 -
Stage 2	-	-	- 56 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1484	-	- 850 971
Stage 1	-	-	- 936 -
Stage 2	-	-	- 967 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1484	-	- 836 971
Mov Cap-2 Maneuver	-	-	- 836 -
Stage 1	-	-	- 921 -
Stage 2	-	-	- 967 -






Approach	EB	WB	SB
HCM Control Delay, s	5.7	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1484	-	-	-	881
HCM Lane V/C Ratio	0.016	-	-	-	0.074
HCM Control Delay (s)	7.5	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

HCM 6th TWSC

3: Calle Buena Vista & Calle Concordia




02/01/2022

Intersection												
Int Delay, s/veh	5.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	129	7	91	147	25	15	17	55	23	25	8
Future Vol, veh/h	10	129	7	91	147	25	15	17	55	23	25	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	-	-	50	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	87	87	87	84	84	84	61	61	61
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	157	9	105	169	29	18	20	65	38	41	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	166	0	0	607	594	162	590	584	184
Stage 1	-	-	-	-	-	-	186	186	-	394	394	-
Stage 2	-	-	-	-	-	-	421	408	-	196	190	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1375	-	-	1412	-	-	408	418	883	419	423	858
Stage 1	-	-	-	-	-	-	816	746	-	631	605	-
Stage 2	-	-	-	-	-	-	610	597	-	806	743	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1375	-	-	1412	-	-	343	379	883	346	384	858
Mov Cap-2 Maneuver	-	-	-	-	-	-	343	379	-	346	384	-
Stage 1	-	-	-	-	-	-	808	739	-	625	554	-
Stage 2	-	-	-	-	-	-	510	547	-	719	736	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			2.7			11.9			16.8		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1		NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1		
Capacity (veh/h)	361		883	1375	-	-	1412	-	-	397		
HCM Lane V/C Ratio	0.106		0.074	0.009	-	-	0.074	-	-	0.231		
HCM Control Delay (s)	16.1		9.4	7.6	0	-	7.8	0	-	16.8		
HCM Lane LOS	C		A	A	A	-	A	A	-	C		
HCM 95th %tile Q(veh)	0.4		0.2	0	-	-	0.2	-	-	0.9		

HCM 6th TWSC

6: Calle Buena Vista & North Driveway

02/01/2022

Intersection						
Int Delay, s/veh	1.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	8	40	12	9	44
Future Vol, veh/h	12	8	40	12	9	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	9	43	13	10	48
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	118	50	0	0	56	0
Stage 1	50	-	-	-	-	-
Stage 2	68	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	878	1018	-	-	1549	-
Stage 1	972	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	872	1018	-	-	1549	-
Mov Cap-2 Maneuver	872	-	-	-	-	-
Stage 1	965	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9	0	1.2			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	925	1549	-	
HCM Lane V/C Ratio	-	-	0.024	0.006	-	
HCM Control Delay (s)	-	-	9	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

HCM 6th TWSC

8: Calle Concordia & West Driveway

02/01/2022




Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	207	240	15	0	23
Future Vol, veh/h	0	207	240	15	0	23
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	225	261	16	0	25
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	269
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	770
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	770
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		9.8		
HCM LOS	A					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	770		
HCM Lane V/C Ratio	-	-	-	0.032		
HCM Control Delay (s)	-	-	-	9.8		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0.1		

HCM 6th TWSC
10: Calle Concordia & Center Driveway

02/01/2022

Intersection

Int Delay, s/veh 3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	69	138	209	31	46	46
Future Vol, veh/h	69	138	209	31	46	46
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	75	150	227	34	50	50

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	261	0	0 544 244
Stage 1	-	-	- 244 -
Stage 2	-	-	- 300 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1303	-	- 500 795
Stage 1	-	-	- 797 -
Stage 2	-	-	- 752 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1303	-	- 469 795
Mov Cap-2 Maneuver	-	-	- 469 -
Stage 1	-	-	- 747 -
Stage 2	-	-	- 752 -

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	12.3
HCM LOS			B




Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1303	-	-	-	590
HCM Lane V/C Ratio	0.058	-	-	-	0.169
HCM Control Delay (s)	7.9	0	-	-	12.3
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.6

HCM 6th TWSC
12: Calle Concordia & East Driveway

02/01/2022

Intersection

Int Delay, s/veh 4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	77	107	163	51	51	77
Future Vol, veh/h	77	107	163	51	51	77
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	84	116	177	55	55	84

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	232	0	0 489 205
Stage 1	-	-	- 205 -
Stage 2	-	-	- 284 -
Critical Hdwy	4.12	-	- 6.42 6.22
Critical Hdwy Stg 1	-	-	- 5.42 -
Critical Hdwy Stg 2	-	-	- 5.42 -
Follow-up Hdwy	2.218	-	- 3.518 3.318
Pot Cap-1 Maneuver	1336	-	- 538 836
Stage 1	-	-	- 829 -
Stage 2	-	-	- 764 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1336	-	- 502 836
Mov Cap-2 Maneuver	-	-	- 502 -
Stage 1	-	-	- 773 -
Stage 2	-	-	- 764 -

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	11.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1336	-	-	-	661
HCM Lane V/C Ratio	0.063	-	-	-	0.21
HCM Control Delay (s)	7.9	0	-	-	11.9
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8