TRAFFIC IMPACT ANALYSIS

Westward Look
Planned Area Development
at Westward Look and Ina Road

Tucson, Arizona

October 12, 2020

Prepared for:

Wyndham Westward Look Grand Resort and Spa

For submittal to:

Town of Oro Valley, AZ

Prepared by:

Kimley»Horn

Traffic Impact Analysis

WESTWARD LOOK
PLANNED AREA DEVELOPMENT

at Westward Look Dr and Ina Road
Tucson, Arizona

Prepared for:

Wyndham Westward Look Grand Resort and Spa
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OCTOBER 12, 2020 | VERSION 2.2

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1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

This Traffic Impact Analysis (TIA) report is prepared for a proposed mixed-use development located on currently undeveloped property owned by the Westward Look Wyndham Grand Resort and Spa, 245 West Ina Road, Tucson, Arizona. The project location is shown in **Figure 1** (*see page 8*).

Existing land uses near the proposed development are single-family residential housing, Westward Look Townhomes, and Westward Look Wyndham Grand Resort and Spa, all located north of Ina Road and along Westward Look Drive.

Three illustrative site plans have been prepared for the site. Illustrative Plan A, B, and C are described below.

Illustrative Plan A:	**Illustrative Plan B:**	**Illustrative Plan C:**
• 30,000 SF boutique retail/restaurants • 184 luxury apartment units • Hotel guest equestrian area	• 60,000 SF office • 45,000 SF mixed-use commercial • 6,000 SF restaurant • 58,000 SF hospitality (104 room hotel) • Hotel guest equestrian area	• 38 residential units • 250 hotel rooms or 400,000 SF resort • Hotel guest equestrian area

A decision has not yet been made as to which plan will be developed. A comparison of all three illustrative plans shows that Illustrative Plan B generates a higher number of trips. As such, this analysis evaluates the more aggressive of the three illustrative plans, Illustrative Plan B.

There is no anticipated time frame for the development. For analysis purposes, a build-out year of 2025 is assumed.

1.2 REPORT PURPOSE AND OBJECTIVES

This study addresses traffic impacts of the proposed Westward Look Development north of the Ina Road/Westward Look Drive intersection. The objectives of this Traffic Impact Analysis are:

- Evaluate the traffic operations of the signalized intersection at Ina Road and Westward Look Drive at opening year 2025;
- Evaluate new driveway entrances to the Westward Look Development from Ina Road;
- Determine the future level of service (LOS) for the existing intersections and access drives to the development and recommend needed capacity improvements.

1.3 PRINCIPAL FINDINGS AND RECOMMENDATIONS

The total project site area for the Westward Look Development is approximately 18.0 acres. Westward Look Resort owns a total of approximately 74.4 acres north of Ina Road on Westward Look Drive, including the site for the proposed development.

The development area located west of Westward Look Drive is referred to as Resort Gateway West and comprises 4.84 acres. The development area located east of Westward Look Drive is referred to as Resort Gateway East and comprises 13.15 acres.

The Westward Look Development at an assumed build out in 2025, is expected to generate up to **2,932** daily trips, with **163** trips occurring in the AM peak hour and **279** trips occurring in the PM peak hour.

This analysis concludes that the proposed Westward Look Development will be accommodated by the surrounding street network, with the following findings and recommendations:

- The intersection of Ina Road and Westward Look Drive is anticipated to operate at an acceptable LOS. No additional storage is recommended to improve the Level of Service.
- The cycle length for the existing signal at Westward Look and Ina Road is 150 seconds. The long cycle length results in high delay for the southbound left turn movement. Reducing the cycle length from 150 seconds to 90 seconds would improve the LOS/delay for the southbound left and maintain the current LOS for the rest of the intersection. However, modifying the cycle length is not recommended because it is coordinated with the intersection of Ina Road and Oracle Road.
- The westbound approaches to intersections of Ina Road/Resort Gateway West and Ina Road/Resort Gateway East were evaluated to determine the need for a westbound right-turn lane. A westbound right turn lane is warranted at the driveway to Resort Gateway East.
- Minimum storage lane length is recommended for the right-turn lane at Resort Gateway East of 150’ and 15:1 taper rate. As the site plan is further developed with site design, the driveway should be constructed at a minimum 300’ from the existing Sonya Way to accommodate a 10’ right turn lane: 150’ (right-turn lane length) and 150’ (turn bay taper). A continuous right turn lane adjacent to Resort Gateway East should be considered to provide the right turn lane to both Resort Gateway East and to Westward Look Drive.

2.0 PROPOSED DEVELOPMENT

2.1 SITE LOCATION

The proposed Westward Look Development would be located to the north of the intersection of Ina Road and Westward Look Drive in Tucson, Arizona. Resort Gateway West is located in the northwest quadrant of the intersection and consists of 4.84 acres made up of parcel 225-50-0180 and 225-50-021A. Resort Gateway East is in the northeast quadrant and consists of 13.15 acres made up of parcel 225-50-0200. Current zoning for the parcels is CR-1, single residence. The site is looking to be rezoned to support a planned area development. The project location is shown in **Figure 1**.

2.2 LAND USE AND SITE PLAN

The Westward Look development project site is approximately 18.0 acres. The Westward Look Resort owns a total of 74.4 acres including the development site along Westward Look Drive. North of the new development there is single-family residential housing, Westward Look Townhomes, and Westward Look Wyndham Grand Resort and Spa. Three illustrative plans have been prepared for the site. Illustrative Plan A, B, and C are described below. The developer has not yet determined a preferred plan.

Illustrative Plan A:

- 30,000 SF boutique retail/restaurants
- 184 luxury apartment units
- Hotel guest equestrian area

Illustrative Plan B:

- 60,000 SF office
- 45,000 SF mixed-use commercial
- 6,000 SF restaurant
- 58,000 SF hospitality (104 room hotel)
- Hotel guest equestrian area

Illustrative Plan C:

- 38 residential units
- 250 hotel rooms or 400,000 SF resort
- Hotel guest equestrian area

2.3 SITE ACCESSIBILITY

The site is proposed to be accessed locally by two right-in, right-out only driveways on Ina Road and the signalized intersection of Ina Road and Westward Look Drive. Regional access is provided by Oracle Road (SR 77) which is located approximately one-half mile west, and by Ina Road.

2.4 SITE CIRCULATION

Illustrative Plan B is shown in **Figure 2** and illustrates the proposed project access. From Resort Gateway West there is one right-in, right-out only access drive on Ina Road. From Resort Gateway East there is one right-in, right-out only access drive on Ina Road. Resort Gateway West and Resort Gateway East can both be accessed by Westward Look Drive.

For reference purposes, Illustrative Plan A and C are included in the Appendix D.

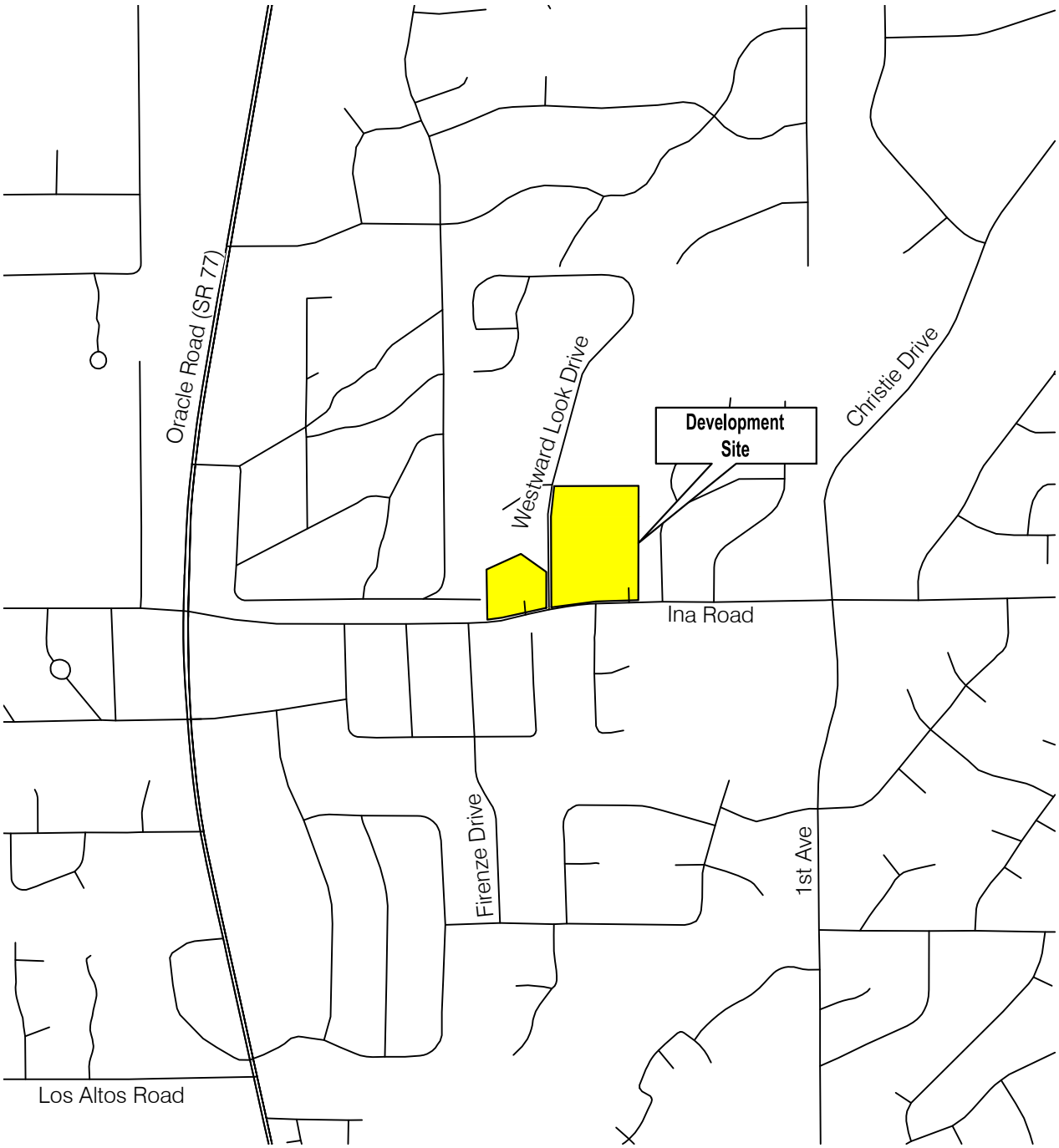

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Figure 1
Vicinity Map

Figure 2. Site Plan

3.0 EXISTING CONDITIONS

3.1 STUDY AREA

The study area for the Traffic Impact Analysis includes the signalized intersection of Ina Road and Westward Look Drive, and two proposed driveways into Resort Gateway East and Resort Gateway West.

3.2 ADJACENT LAND USE

Zoning adjacent to the Westward Look Development consists of Single Residence (CR-1).

3.3 PHYSICAL CHARACTERISTICS

The existing street network within the study area includes Ina Road and Westward Look Drive. The existing intersection lane configuration and traffic control is shown in **Figure 3**.

Ina Road runs east-west with two lanes in each direction divided by a raised median. The posted speed limit is 45 MPH. According to ADOT's Statewide Federal Functional System, Ina Road is a Principal Arterial. Ina Road extends west to I-10. Ina Road extends east to connect to Sunrise Drive. There are no plans for improvements on Ina Road within the vicinity of the development.

Westward Look Drive extends north from Ina Road and is one lane in each direction with a raised median for the first 250 feet from the intersection. The posted speed limit is 20 MPH. It is privately owned by Westward Look Resort LLC and serves as local access to single family residences, town homes, and the resort.

3.4 TRAFFIC VOLUMES

Turning movement counts were collected at the intersection of Westward Look Drive and Ina Road on Wednesday, June 24, 2020. The counts were conducted between 7:00 AM and 9:00 AM and between 4:00 PM and 6:00 PM. Traffic counts are included in **Appendix A.**

Count data for a 24-hour period was collected at two locations: 1) on Westward Look Drive north of the intersection, and 2) on Ina Road west of the intersection. Counts were conducted on Wednesday, June 24, 2020. Ina Road carries 34,500 vehicles per day, per the collected data. Westward Look Drive carried approximately 2,700 vehicles per day.

The Pima Association of Governments Transportation Data Management System reports count data at locations to the east and west of the intersection on Ina Road. These are reported in **Table 1**.

Traffic volumes in Arizona have been reduced due to impacts of the 2020 COVID pandemic. As such, the collected count data was adjusted to reflect typical conditions, by increasing the 24-hour traffic counts by 10%. This adjustment factor was determined from data available on ADOT's Midwest Software Solutions

(MS2) Daily Traffic Volume Trends (DTVT)[1] map and data, which showed that traffic volumes on June 24, 2020, were approximately 10% below typical traffic.

In **Table 1**, collected and adjusted traffic count data is listed. The 2020 Adjusted ADT is 97% of the 2020 PAG Adjusted daily volume, demonstrating that the adjustments bring the traffic count data to reflect typical conditions.

Table 1. Daily Traffic Volumes

	Daily Traffic, 6/24/2020	Adjusted VPD for COVID	Additional for Resort	2020 Adjusted ADT	2019 AADT (PAG TDMS)
Ina Road, west of Westward Look Resort	34,421	3,442	857[1]	38,720	-
PCS-10 (West)	-	-		-	39,847
A-225 (East)	-	-		-	39,252

Note 1: represents 50% of daily rate, see Table 2. 50% of daily rate is distributed on Ina Road east of Westward Look Resort, and 50% of daily rate is distributed to Ina Road west of Westward Look Resort.

Input from resort management is that the Westward Look Resort was operating at approximately 15% of normal business during the data collection period, due to COVID impacts. As such, in addition to the adjustment 10% applied to intersection turning movement counts, additional traffic volume was added to movements going to and from the Westward Look Wyndham Grand Resort and Spa, to reflect traffic generated by the resort under typical conditions. Daily volumes and peak hour volumes for the existing resort were estimated from ITE *Trip Generation Manual, 10th Edition*, using ITE Code 330 Resort Hotel. Note that ITE Code 330 does not report a daily trip generation rate. As such, the daily rate for Hotel, ITE Code 310 was reported in **Table 1**, in lieu of Code 330. See **Table 2** for additional trips generated.

Table 2. Additional Volume to Resort

Land Use	ITE Code	Quantity	Units	Daily Total	AM Total	PM Total	AM Trips		PM Trips	
							In	Out	In	Out
Resort	330	241	Room(s)	2016[1]	77	99	55	22	43	56
85% of Resort	330	241	Room(s)	1714[1]	66	85	47	19	37	48

Note 1: ITE Code 310 Hotel is used to estimate daily rate, and ITE Code 330 is used to estimate peak hour rates.

Of the generated volume, 85% of the daily traffic estimate was added to 24-hour counts and 85% of the peak hour traffic estimates were added to the turning movement counts. The results of these adjusted counts are shown in **Figure 3**. A copy of the count data is attached in the **Appendix.**

3.5 LEVEL OF SERVICE

The LOS at the intersection of Ina Road and Westward Look Drive was evaluated using *Synchro 10* methodology for signalized intersections. Analysis assumptions were:

- 2020 adjusted turning movement counts

[1] https://www.ms2soft.com/traffic-dashboard/

- Traffic signal timing for the intersection was obtained from Pima County
- Existing intersection geometry and control, as shown in **Figure 3**.

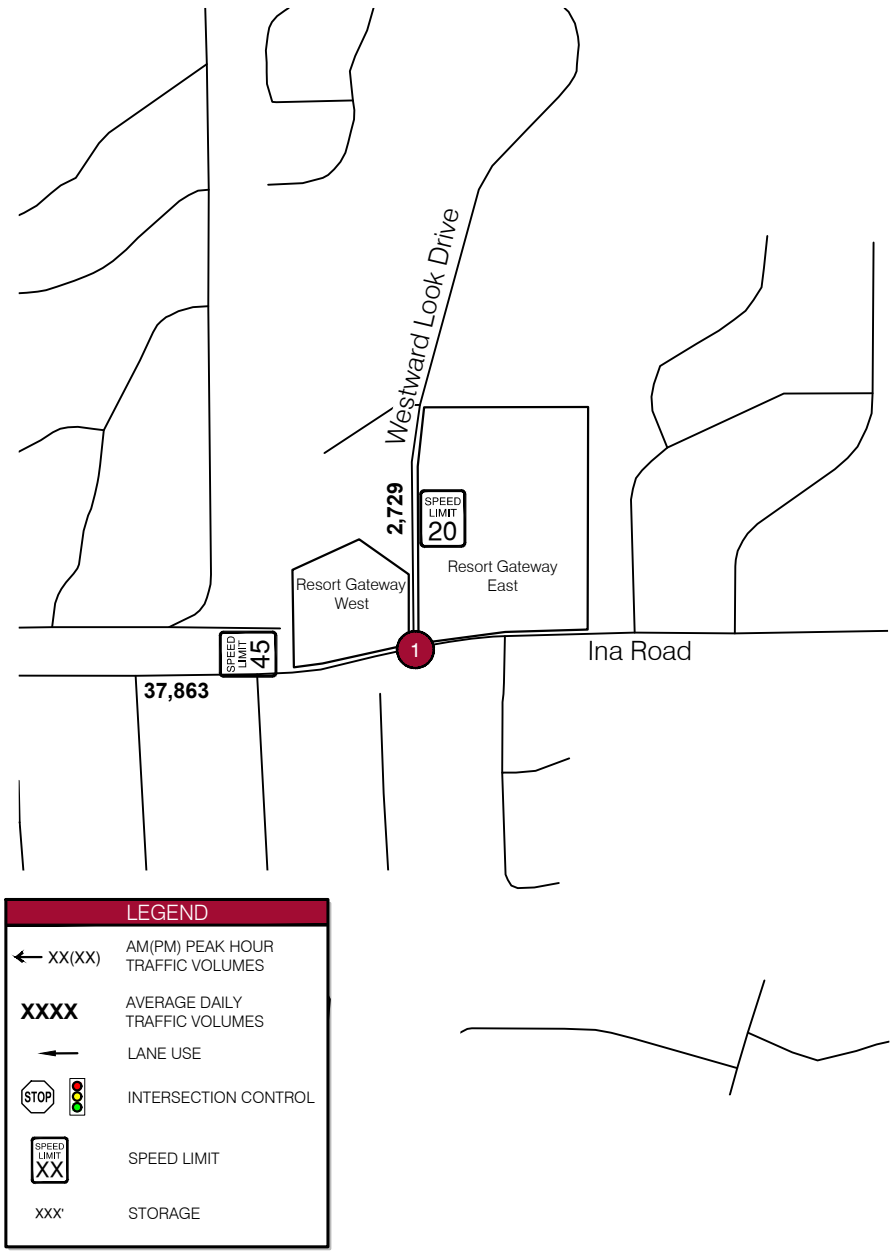
The results of this analysis are shown in **Table 3.**

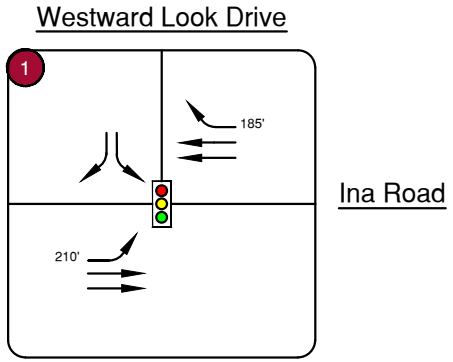
Table 3. Existing Level of Service

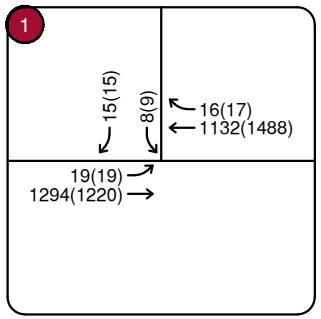
Intersection	NB			SB			EB			WB			Intersection LOS
	L	T	R	L	T	R	L	T	R	L	T	R	
Ina Road and Westward Look Drive													
AM Peak				E		C	A	A			A	A	A
PM Peak				E		D	A	A			A	A	A

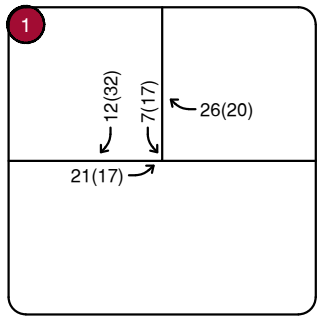
The Ina Road and Westward Look Drive intersection operates at an acceptable LOS (LOS A) in the existing condition. However, it is noted that the southbound left turn movement operates at LOS E.

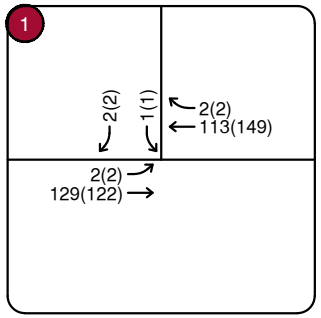
The cycle length for the existing signal is 150 seconds. Reducing the cycle lengths from 150 seconds to 90 seconds would improve the LOS for the southbound left and maintain the current LOS for the rest of the intersection. However, this is not recommended, as this signal is coordinated with the intersection of Ina Road and Oracle Road.

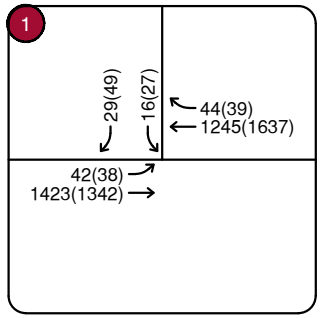












1. ADDITIONAL TRAFFIC VOLUMES THAT WOULD BE GENERATED BY EXISTING RESORT UNDER TYPICAL CONDITIONS.
2. ADDITIONAL TRAFFIC VOLUMES ADDED TO ADJUST FOR COVID-INDUCED REDUCED TRAVEL PATTERNS.

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Figure 3

Existing Lane Configuration and Control and Existing / Resort / COVID / Weekday Traffic Volumes

4.0 PROJECTED TRAFFIC

4.1 SITE TRAFFIC FORECASTS

4.1.1 TRIP GENERATION

The Institute of Transportation Engineers' (ITE) *Trip Generation, 10th Edition* peak-hour trip generation rates and inbound-outbound percentages were used to estimate the number of daily and peak hour trips that can be attributed to the Westward Look development. Note that ITE Land Use 310 Hotel was used for all calculations for the proposed hotel in both Illustrative Plan B and Illustrative Plan C. Trip generation rates for each Illustrative Plan are included below:

Illustrative Plan A

ITE Land Use 220:	**Multifamily Housing (Low-Rise)**	
Daily rate:	Trips = 7.32* Dwelling Unit(s)	(50% in / 50% out)
AM peak rate:	Trips = 0.46* Dwelling Unit(s)	(24% in / 76% out)
PM peak rate:	Trips = 0.56* Dwelling Unit(s)	(62% in / 48% out)
ITE Land Use 820:	**Shopping Center**	
Daily rate:	Trips = 37.75* 1,000 Sq Ft	(50% in / 50% out)
AM peak rate:	Trips = 0.94* 1,000 Sq Ft	(59% in / 41% out)
PM peak rate:	Trips = 3.81* 1,000 Sq Ft	(49% in / 51% out)

Illustrative Plan B

ITE Land Use 310:	**Hotel**	
Daily rate:	Trips = 8.36* Room(s)	(50% in / 50% out)
AM peak rate:	Trips = 0.47* Room(s)	(65% in / 35% out)
PM peak rate:	Trips = 0.60* Room(s)	(50% in / 50% out)
ITE Land Use 710:	**General Office Building**	
Daily rate:	Trips = 9.74* 1,000 Sq Ft	(50% in / 50% out)
AM peak rate:	Trips = 1.16* 1,000 Sq Ft	(98% in / 2% out)
PM peak rate:	Trips = 1.15* 1,000 Sq Ft	(14% in / 86% out)
ITE Land Use 820:	**Shopping Center**	
Daily rate:	Trips = 37.75* 1,000 Sq Ft	(50% in / 50% out)
AM peak rate:	Trips = 0.94* 1,000 Sq Ft	(63% in / 37% out)
PM peak rate:	Trips = 3.81* 1,000 Sq Ft	(47% in / 53% out)
ITE Land Use 240:	**High-Turnover (Sit-Down) Restaurant**	
Daily rate:	Trips = 112.18* 1,000 Sq Ft	(50% in / 50% out)
AM peak rate:	Trips = 9.94 * 1,000 Sq Ft	(59% in / 41% out)
PM peak rate:	Trips = 9.77* 1,000 Sq Ft	(69% in / 31% out)

Illustrative Plan C

ITE Land Use 220:	**Multifamily Housing (Low-Rise)**	
Daily rate:	Trips = 7.32* Dwelling Unit(s)	(50% in / 50% out)
AM peak rate:	Trips = 0.46* Dwelling Unit(s)	(24% in / 76% out)
PM peak rate:	Trips = 0.56* Dwelling Unit(s)	(62% in / 48% out)
ITE Land Use 310:	**Hotel**	
Daily rate:	Trips = 8.36* Room(s)	(50% in / 50% out)
AM peak rate:	Trips = 0.47* Room(s)	(65% in / 35% out)
PM peak rate:	Trips = 0.60* Room(s)	(50% in / 50% out)

The trip generation characteristics of the Illustrative Plan A are summarized in **Table 4,** Illustrative Plan B are summarized in **Table 5,** and Illustrative Plan C in **Table 6.**

The Illustrative Plan A for Westward Look Development is expected to generate **2,482** daily trips, with **113** trips occurring in the AM peak hour and **217** trips occurring in the PM peak hour.

The Illustrative Plan B for Westward Look Development is expected to generate **3,830** daily trips, with **221** trips occurring in the AM peak hour and **361** trips occurring in the PM peak hour.

The Illustrative Plan C for Westward Look Development is expected to generate **2,370** daily trips, with **135** trips occurring in the AM peak hour and **171** trips occurring in the PM peak hour.

Table 4. Total Project Trip Generation, Illustrative Plan A.

Land Use	ITE Code	Quantity	Units	Daily Total	AM Total	PM Total	AM Trips		PM Trips	
							In	Out	In	Out
Multifamily Housing (Low-Rise)	220	184	Dwelling Units	1,348	85	103	20	65	65	38
Shopping Center	820	30	KSF	1,134	28	114	17	11	55	59
			TOTAL	**2,482**	**113**	**217**	**37**	**76**	**120**	**97**

Table 5. Total Project Trip Generation, Illustrative Plan B.

Land Use	ITE Code	Quantity	Units	Daily Total	AM Total	PM Total	AM Trips		PM Trips	
							In	Out	In	Out
Hotel	310	104	Rooms	870	49	62	29	20	32	30
General Office Building	710	60	KSF	586	70	69	60	10	11	58
Shopping Center	820	45	KSF	1,700	42	171	26	16	82	89
High-Turnover (Sit-Down) Restaurant	932	6	KSF	674	60	59	33	27	37	22
			TOTAL	**3,830**	**221**	**361**	**148**	**73**	**162**	**199**

Table 6. Total Project Trip Generation, Illustrative Plan C.

Land Use	ITE Code	Quantity	Units	Daily Total	AM Total	PM Total	AM Trips		PM Trips	
							In	Out	In	Out
Hotel	310	250	Rooms	2090	118	150	70	48	77	73
Multifamily Housing (Low-Rise)	710	38	Units	280	17	21	4	13	13	8
			TOTAL	**2,370**	135	171	74	61	90	81

Illustrative Plan B for Westward Look Development generates more daily trips and both peak hours have a higher volume. Therefore, this traffic analysis will focus on Illustrative Plan B.

4.1.2 TRIP REDUCTIONS

The Westward Look development is expected to generate internal trips throughout the day. Internal Trip Capture is estimated using NCHRP 684 methodology. See **Appendix** for estimation sheets. The Internal Trip Capture percent for the development site is in **Table 7**. The reduced total trips or Net Trips After Internal Capture are found in **Table 8**.

Table 7. Internal Trip Capture Percent and Number of Trips Reduced

Land Use	ITE Code	Daily Total (%) and (trips reduced)	AM Total	PM Total	AM Trips		PM Trips	
					In	Out	In	Out
Hotel	310	14% (122)	12% (6)	16% (10)	3% (1)	25% (5)	19% (6)	13% (4)
General Office Building	710	23% (134)	30% (21)	16% (11)	20% (12)	90% (9)	27% (3)	14% (8)
Shopping Center	820	22% (376)	24% (10)	20% (35)	23% (6)	25% (4)	22% (18)	19% (17)
High-Turnover (Sit-Down) Restaurant	932	39% (266)	35% (21)	44% (26)	30% (10)	41% (11)	38% (14)	55% (12)
Total		**898**	**58**	**82**	**29**	**29**	**41**	**41**

Table 8. Net Trips After Internal Capture

Land Use	ITE Code	Quantity	Units	Daily Total	AM Total	PM Total	AM Trips		PM Trips	
							In	Out	In	Out
Hotel	310	104	Units	748	43	52	28	15	26	26
General Office Building	710	25	KSF	452	49	58	48	1	8	50
Shopping Center	820	45	KSF	1,324	32	136	20	12	64	72
High-Turnover (Sit-Down) Restaurant	932	6	KSF	408	39	33	23	16	23	10
			TOTAL	**2,932**	**163**	**279**	**119**	**44**	**121**	**158**

The Westward Look development is expected to generate **2,932** daily trips, with **163** trips occurring in the AM peak hour and **279** trips occurring in the PM peak hour, after internal capture was applied.

The Net Trips After Internal Capture are used as the trips generated by the Westward Look development.

4.1.3 TRIP DISTRIBUTION

Trips from the Westward Look development were distributed based on peak hour turning movement counts collected for this traffic study. **Figure 4** illustrates the trip distribution for the study area.

4.1.4 TRAFFIC ASSIGNMENT

Trips generated by the proposed development were assigned to the roadway network based on the trip distribution and the likely travel patterns to and from the site. **Figure 5** shows the results of the site generated traffic assignment for the build out year.

4.2 FUTURE YEAR BACKGROUND TRAFFIC

Future year (2025) background traffic data was projected based on the forecasts provided in the Pima Association of Governments (PAG) 2040 Regional Transportation Plan (RTP) compared to the traffic volumes collected on June 2020 with adjustments for COVID-19. The annual growth rates are provided in **Table 9** for the build out (2025) analysis timeframe.

Table 9. Traffic Growth

Location	2020 Initial Daily Volume	2020 Adjusted Daily Volume	PAG 2040 RTP Daily Volume	Growth Rate	Growth Factor	2025 Background Daily Volume
Ina Road West of Intersection	34,421	37,863	45,717	0.9%	1.05	39,690
Westward Look Drive North of Intersection	923	2,729	-			2,861

The annual growth rate was applied to the 2020 existing (COVID-19 adjusted) traffic volumes to estimate background traffic for the 2025 build out year. The 2025 background traffic volumes are shown in **Figure 6**.

4.3 TOTAL TRAFFIC

The results of the traffic assignment were added to 2025 background traffic volumes to produce total traffic volumes for the study area. The traffic volumes are provided in **Figure 7**.

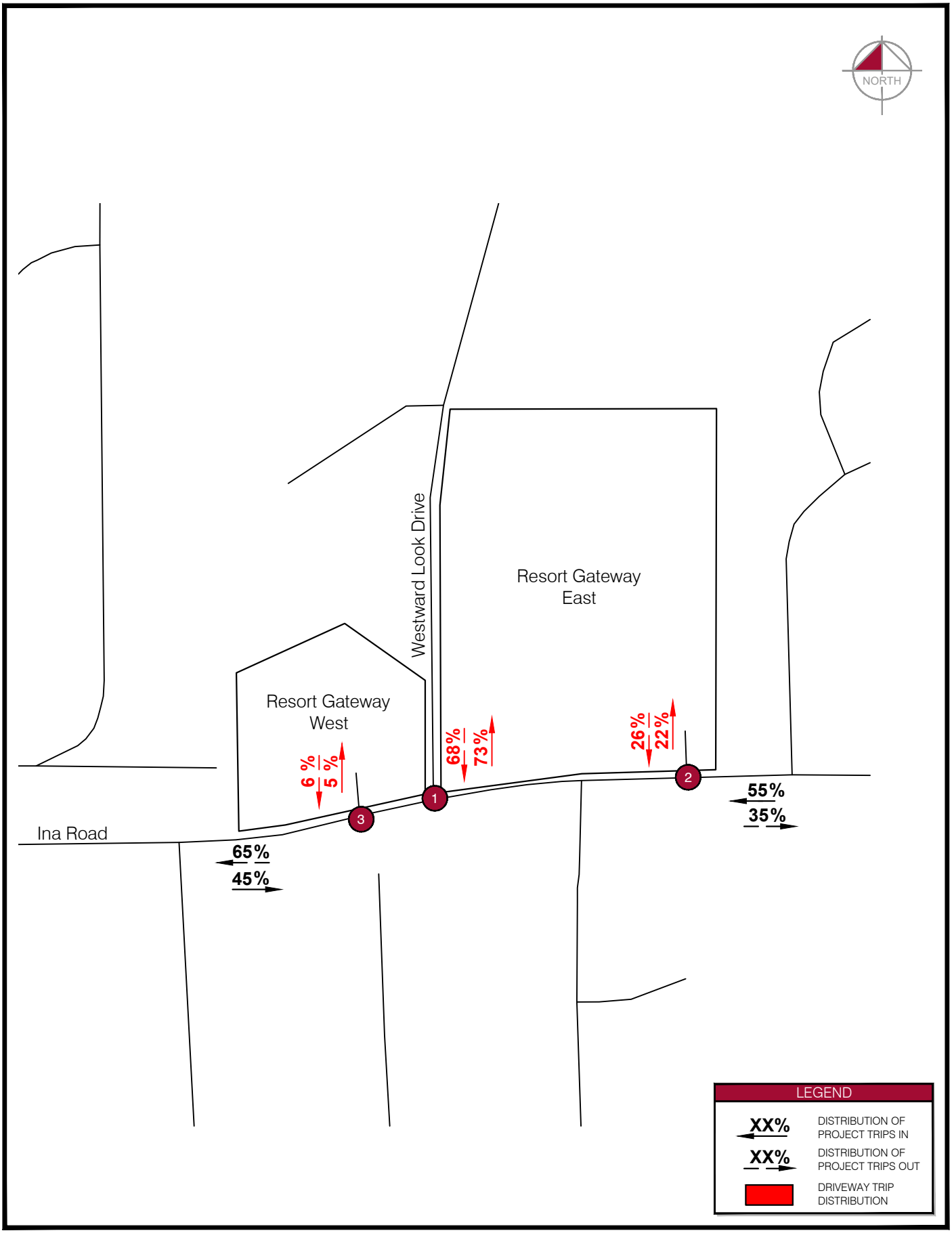

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Figure 4
Trip Distribution

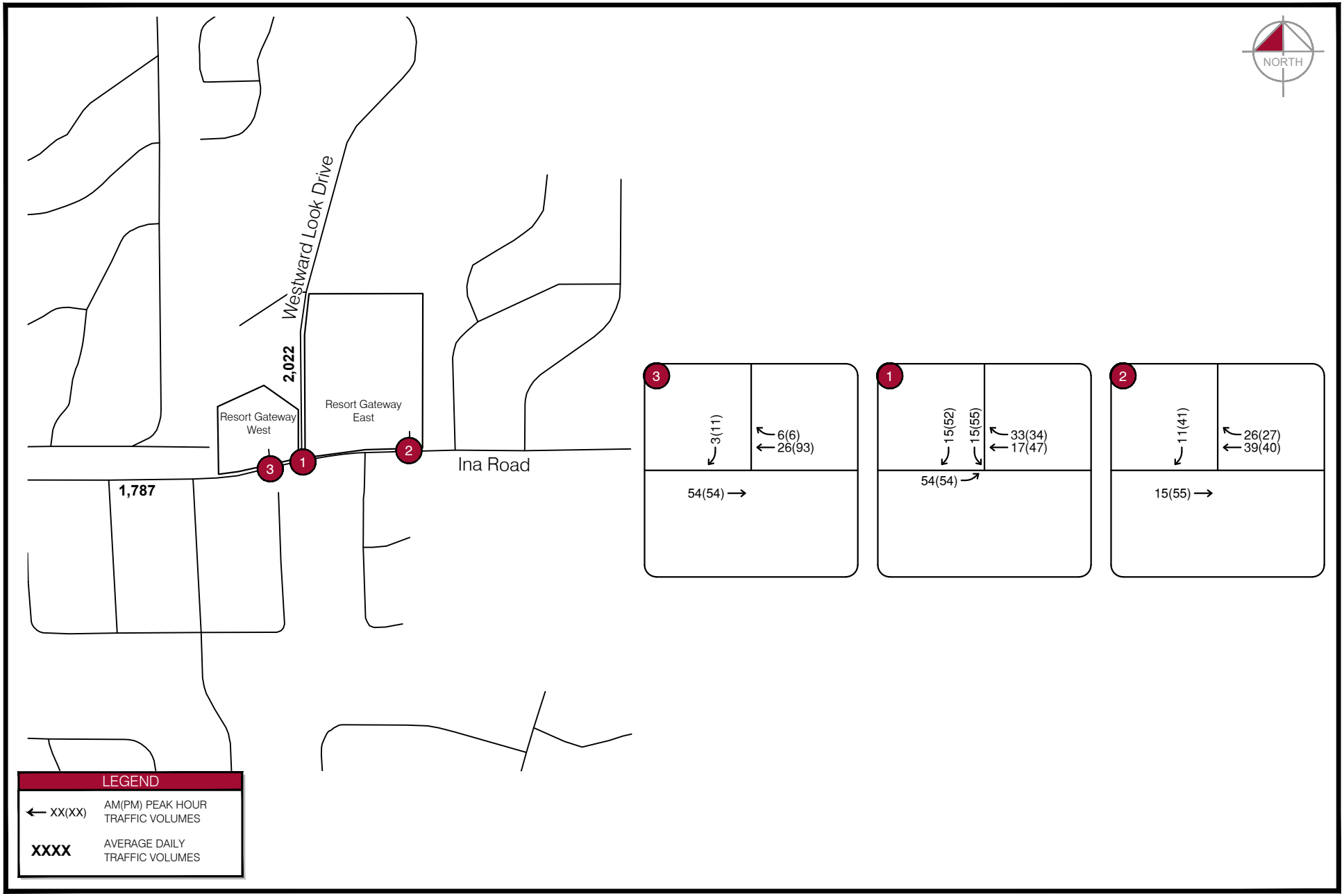

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Figure 5
2025 Development Weekday Assigned Volumes

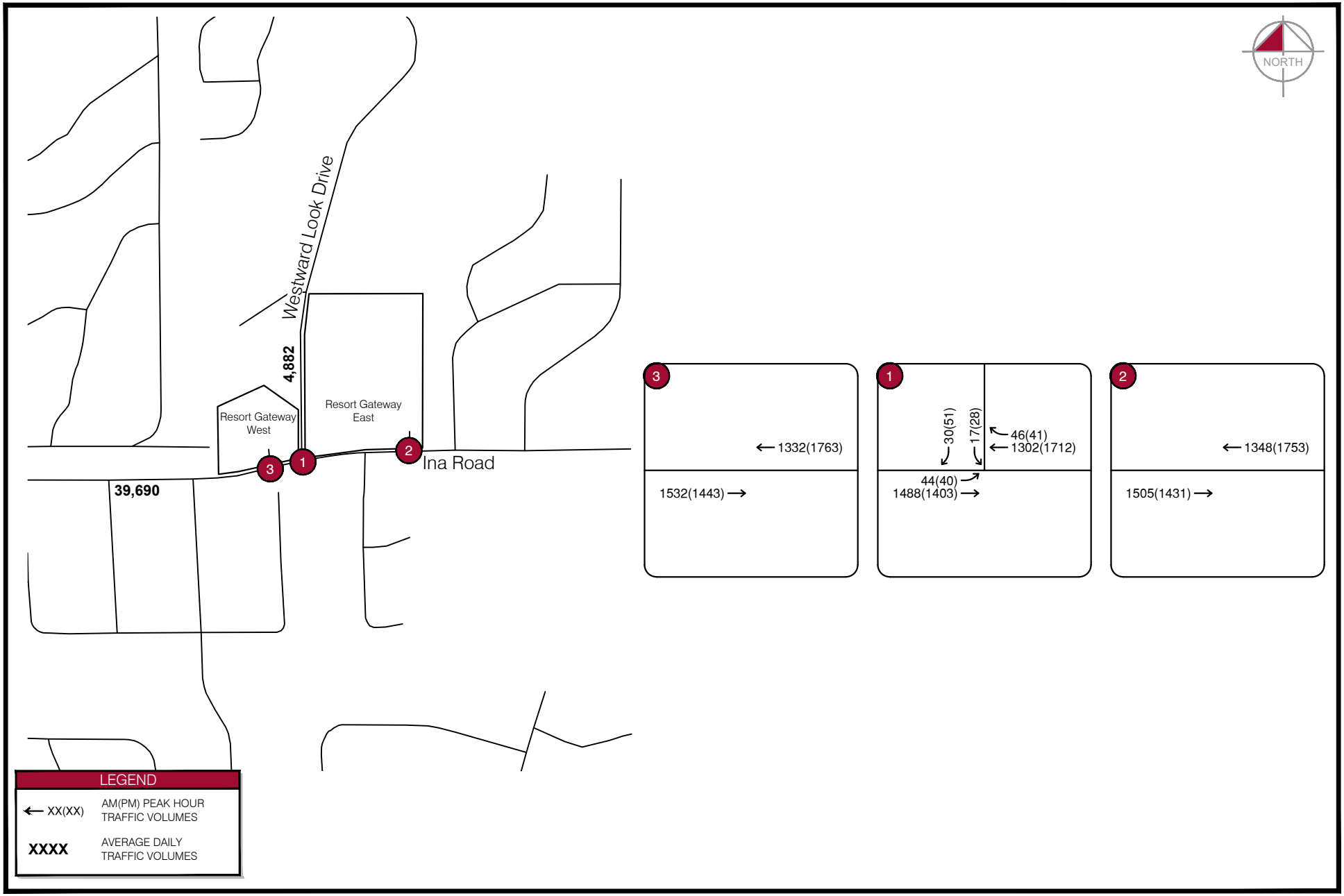

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Figure 6
2025 Background Weekday Traffic Volumes

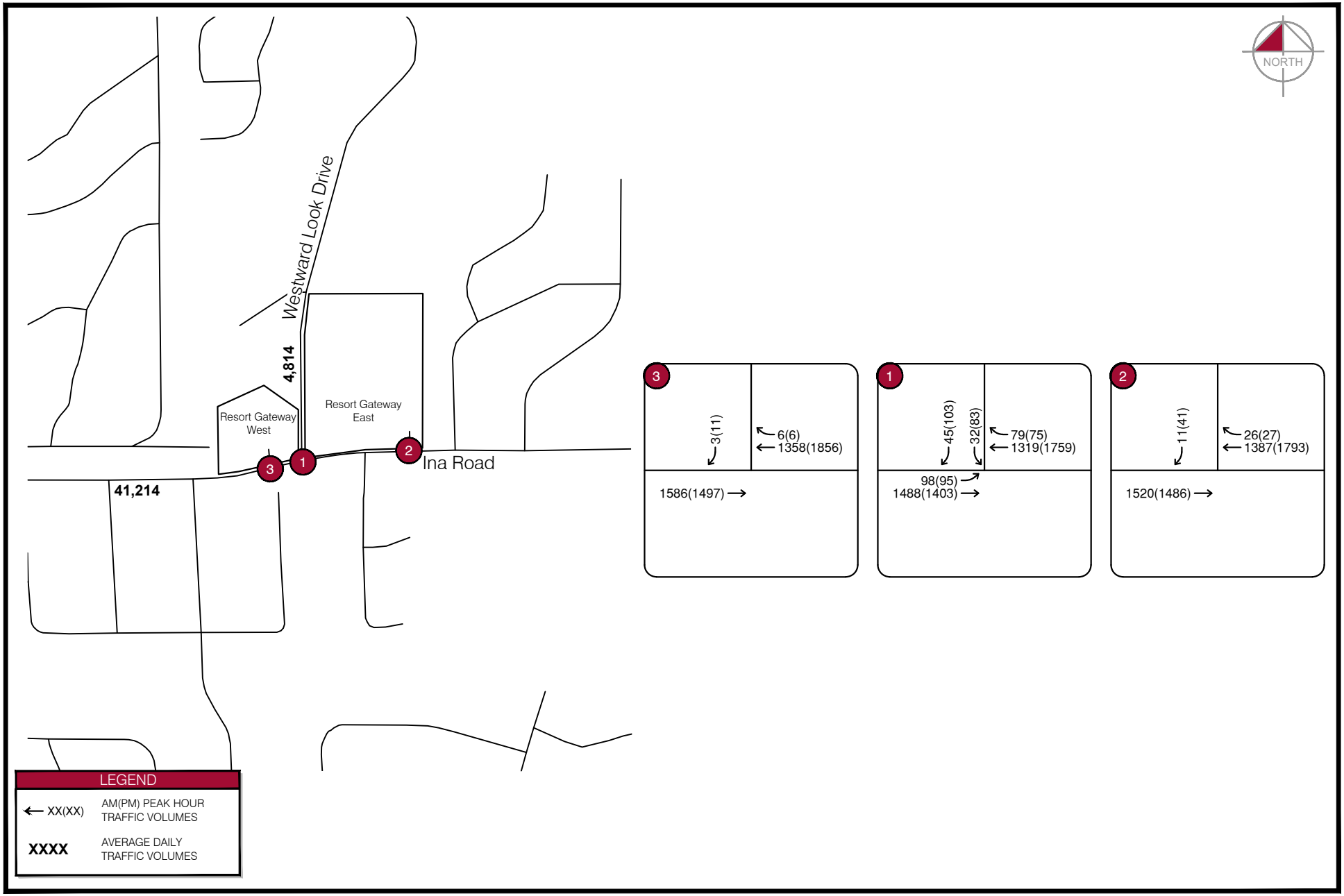

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Figure 7
2025 Total Weekday Traffic Volume

5.0 TRAFFIC AND IMPROVEMENT ANALYSIS

5.1 LEVEL OF SERVICE ANALYSIS

The LOS for the study area intersection for 2025 was evaluated using *Synchro 10* methodology. Synchro was used instead of HCM methodology because HCM analysis only supports link speeds between 25-55 MPH and the posted speed on Westward Look Drive is 20 MPH. The stop-controlled intersections at the driveways of Resort Gateway East and Resort Gateway West use the *HCM 6* methodology for two-way stop-controlled intersections. Synchro report worksheets are included in the **Appendix**.

5.1.1 BACKGROUND TRAFFIC LEVEL OF SERVICE ANALYSIS

The Ina Road and Westward Look Drive intersection was evaluated with 2025 background traffic as shown in **Figure 6** and the existing geometry shown in **Figure 3**. The results of the analysis for the signalized intersection is shown in **Table 10**.

Table 10. Background Level of Service

Intersection	NB			SB			EB			WB			Intersection LOS
	L	T	R	L	T	R	L	T	R	L	T	R	
Ina Road and Westward Look Drive													
AM Peak				E		C	A	A			A	A	A
PM Peak				E		E	A	A			A	A	A

The Ina Road and Westward Look Drive intersection is anticipated to operate at acceptable LOS in the 2021 background condition.

5.1.2 TOTAL TRAFFIC LEVEL OF SERVICE ANALYSIS

The Ina Road and Westward Look Drive intersection was evaluated with 2025 total traffic conditions as shown in **Figure 7** and the recommended geometry shown in **Figure 9**. The results of this analysis are shown in **Table 11**.

Table 11. Total Traffic Level of Service

Intersection	NB			SB			EB			WB			Intersection LOS
	L	T	R	L	T	R	L	T	R	L	T	R	
Ina Road and Resort Gateway West – Unsignalized													
AM Peak						C							
PM Peak						C							
Ina Road and Westward Look Drive - Signalized													
AM Peak				E		C	A	A			A	A	A
PM Peak				E		E	A	A			A	A	A
Ina Road and Resort Gateway East - Unsignalized													
AM Peak						C							
PM Peak						C							

The Ina Road and Westward Look Drive intersection is anticipated to operate at acceptable LOS in the 2025 total condition. Westward Look Drive's southbound left experiences a LOS E due to the long cycle length of 150 seconds at the intersection. If the cycle length could be shortened to a more natural 90 seconds cycle length this would improve the LOS at the movement while maintaining or improving the rest of the intersections movements LOS. This is acknowledging that the LOS could be improved but recommending not to because the timing is coordinated with the Ina Road / Oracle Road intersection.

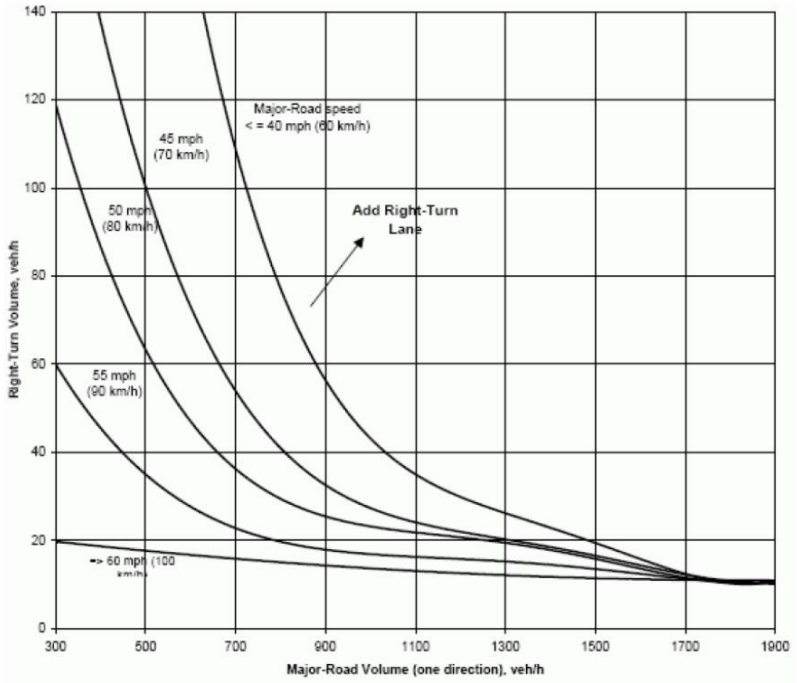
5.2 AUXILIARY TRAFFIC LANE ANALYSIS

The intersection of Ina Road and each proposed access driveway was analyzed to determine the need and storage requirements for westbound right-turn lanes at the new driveways. General auxiliary lane design considerations for auxiliary traffic lanes is provided below from the Pima County Subdivision and Development Street Standards Section 4.6 and Pima County Department of Transportation Pavement Marking Manual Sheet No. 4-7.

- **Lane Width:** Auxiliary lanes shall be at least ten (10') feet wide.
- **Taper Rates:** refers to ratio of length of taper to lateral offset of edgeline;
    - 8:1 for roadways with posed speed of 30 MPH or less;
    - 15:1 for roadways with posted speed of 35 MPH or more (applicable on Ina Road).
- **Minimum Right-Turn Lane Length:** Minimum storage length recommended;
    - 110' at unsignalized intersections with posted speed of 40 MPH or less;
    - 150' at unsignalized intersections with posted speed of 45 MPH or more (applicable on Ina Road).

Right-turn lanes are often recommended on roadways where turning vehicles create delays or safety problems for other traffic movements. The need for turn lanes depends on the speed of traffic on the road, the volume of traffic turning, and the through traffic volume. **Figure 8** provides guidelines for the recommended conditions for providing right-turn lanes.

Figure 8. Right-Turn Lane Warrant (*Appendix A-3, Pima County Subdivision and Development Standards 2016*)



The evaluation of the right-turn lane needs on Ina Road, a four-lane facility with a posted speed limit of 45 MPH, is summarized below.

Ina Road / Resort Gateway East Driveway

WB Right-Turn Lane:

- AM Forecasted Volume in Advancing Direction: 1,364 vehicles per hour
- AM Forecasted Right-turn Volumes: 6 vehicles per hour
- **Right turn lane does not meet warrants**

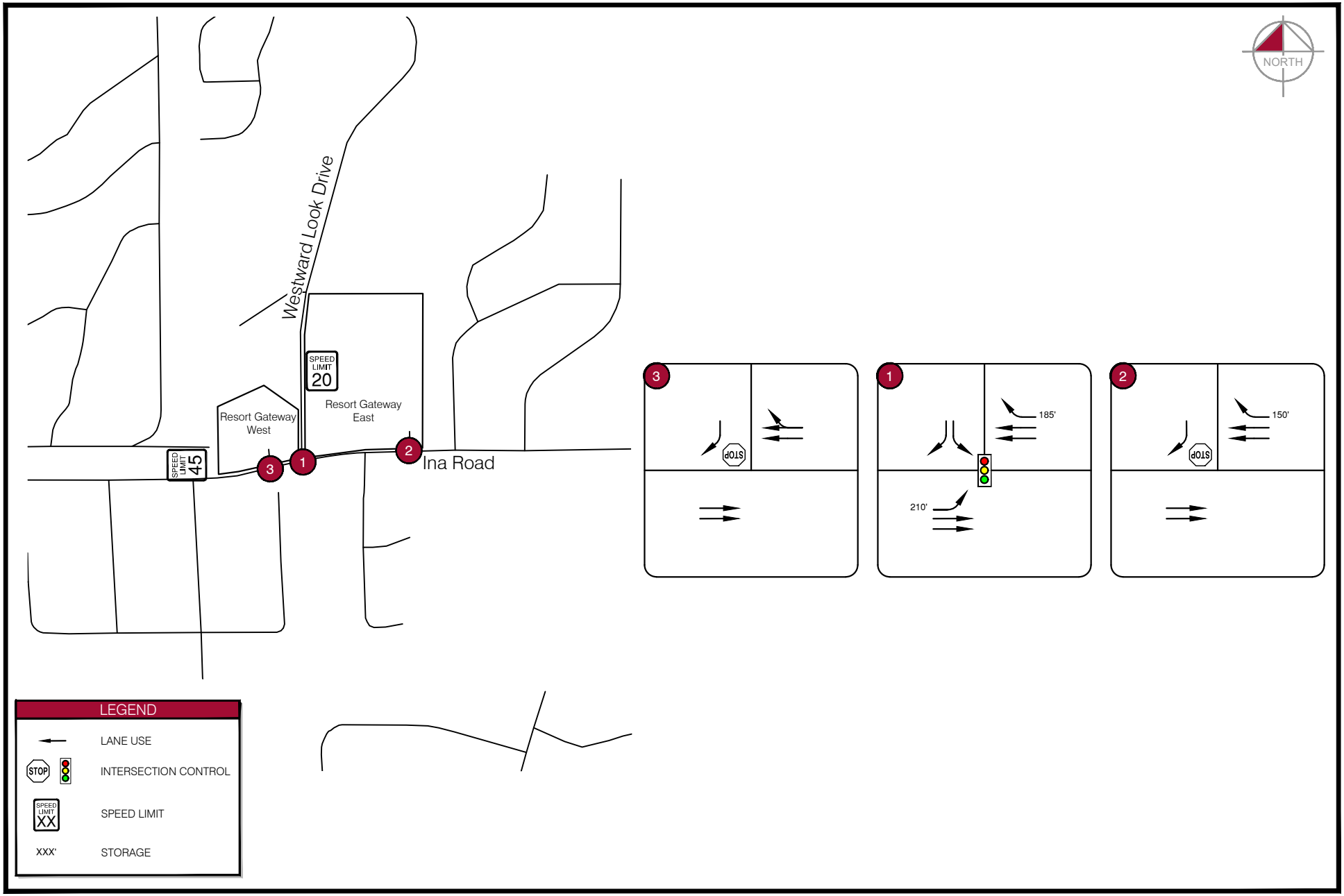
- PM Forecasted Volume in Advancing Direction: 1,860 vehicles per hour
- PM Forecasted Right-turn Volumes: 6 vehicles per hour
- **Right turn lane does not meet warrants**

Ina Road / Resort Gateway West Driveway

AM WB Right-Turn Lane:

- Forecasted Volume in Advancing Direction: 1,413 vehicles per hour
- AM Forecasted Right-turn Volumes: 26 vehicles per hour
- **Right turn lane meets warrants**

- PM Forecasted Volume in Advancing Direction: 1,826 vehicles per hour
- PM Forecasted Right-turn Volumes: 27 vehicles per hour
- **Right turn lane meets warrants**



Kimley»Horn

Figure 9
Recommended Lane Configuration and Control

6.0 CONCLUSIONS AND RECOMMENDATIONS

The total project site area for the Westward Look Development is approximately 18.0 acres. Westward Look Resort owns a total of approximately 74.4 acres north of Ina Road on Westward Look Drive, including the site for the proposed development.

The Westward Look Development, at an assumed build out in 2025, is expected to generate **2,932** daily trips, with **163** trips occurring in the AM peak hour and **279** trips occurring in the PM peak hour.

This analysis concludes that the proposed Westward Look Development will be accommodated by the surrounding street network, with the following findings and recommendations:

- The intersection of Ina Road/Westward Look Drive is anticipated to operate at an acceptable LOS. No additional storage is recommended to improve the Level of Service.
- The cycle length for the existing signal at Ina Road/Westward Look Drive is 150 seconds. The long cycle length results in high delay for the southbound left turn movement. Reducing the cycle length from 150 seconds to 90 seconds would improve the LOS/delay for the southbound left and maintain the current LOS for the rest of the intersection. However, modifying the cycle length is not recommended because it is coordinated with the intersection of Ina Road/Oracle Road.
- The westbound approaches to intersections of Ina Road/Resort Gateway West and Ina Road/Resort Gateway East were evaluated to determine the need for a westbound right-turn lane. A westbound right turn lane is warranted at the driveway to Resort Gateway East per the Pima County Subdivision and Development Street Standards Section 4.6.
- Minimum storage lane length is recommended for the right-turn lane at Resort Gateway East of 150’ and 15:1 taper rate. As the site plan is further developed with site design, the driveway should be constructed at a minimum 300’ from the existing Sonya Way to accommodate a 10’ right turn lane: 150’ (right-turn lane length) and 150’ (turn bay taper). A continuous right turn lane adjacent to Resort Gateway East should be considered to provide the right turn lane to both Resort Gateway East and to Westward Look Drive.

APPENDIX

A – Traffic Count Data

B – Internal Trip Capture

C – Synchro Results

D – Illustrative Plan A

E – Illustrative Plan C

A – Counts

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

Volumes for: Wednesday, June 24, 2020 City: Tucson Project #: 20-1243-002

Location: Ina Rd. west of Westward Look Dr.

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			26		18			12:00			287		263		
00:15			13		16			12:15			325		328		
00:30			13		18			12:30			309		255		
00:45			8	60	9	61	121	12:45			271	1192	308	1154	2346
01:00			11		16			13:00			295		299		
01:15			8		6			13:15			277		305		
01:30			4		8			13:30			308		307		
01:45			3	26	16	46	72	13:45			310	1190	318	1229	2419
02:00			11		16			14:00			296		295		
02:15			4		15			14:15			312		318		
02:30			7		11			14:30			282		318		
02:45			2	24	7	49	73	14:45			274	1164	339	1270	2434
03:00			5		4			15:00			306		295		
03:15			10		10			15:15			241		334		
03:30			10		11			15:30			260		304		
03:45			10	35	12	37	72	15:45			284	1091	345	1278	2369
04:00			16		21			16:00			251		344		
04:15			33		24			16:15			298		353		
04:30			33		53			16:30			315		363		
04:45			58	140	54	152	292	16:45			309	1173	339	1399	2572
05:00			42		71			17:00			275		394		
05:15			94		78			17:15			340		407		
05:30			113		118			17:30			269		355		
05:45			118	367	116	383	750	17:45			255	1139	306	1462	2601
06:00			124		126			18:00			233		262		
06:15			197		161			18:15			250		250		
06:30			222		206			18:30			211		266		
06:45			264	807	220	713	1520	18:45			171	865	203	981	1846
07:00			275		198			19:00			150		160		
07:15			320		234			19:15			164		181		
07:30			381		303			19:30			135		158		
07:45			315	1291	339	1074	2365	19:45			132	581	139	638	1219
08:00			297		271			20:00			112		137		
08:15			254		251			20:15			131		130		
08:30			308		294			20:30			123		182		
08:45			267	1126	324	1140	2266	20:45			99	465	89	538	1003
09:00			297		258			21:00			94		113		
09:15			312		292			21:15			98		89		
09:30			281		270			21:30			80		82		
09:45			300	1190	286	1106	2296	21:45			82	354	68	352	706
10:00			242		258			22:00			56		60		
10:15			256		291			22:15			62		64		
10:30			282		248			22:30			40		51		
10:45			283	1063	277	1074	2137	22:45			47	205	47	222	427
11:00			265		252			23:00			34		38		
11:15			273		291			23:15			36		37		
11:30			287		310			23:30			19		26		
11:45			314	1139	291	1144	2283	23:45			18	107	24	125	232
Total Vol.				7268		6979	**14247**					9526		10648	**20174**

GPS Coordinates: 32.337043, -110.968657

Daily Totals

NB	SB	EB	WB	Combined
		16794	17627	**34421**

	AM			PM		
Split %	51.0%	49.0%	**41.4%**	47.2%	52.8%	**58.6%**
Peak Hour	07:15	11:30	**07:15**	16:30	16:30	**16:30**
Volume	1313	1192	**2460**	1239	1503	**2742**
P.H.F.	0.86	0.91	**0.90**	0.91	0.92	**0.92**

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

Volumes for: Wednesday, June 24, 2020 City: Tucson Project #: 20-1243-003

Location: Westward Look Dr. north of Ina Rd.

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	0		0					12:00	4		6				
00:15	0		2					12:15	8		2				
00:30	0		1					12:30	4		9				
00:45	0	0	0	3			3	12:45	3	19	7	24			43
01:00	0		0					13:00	7		5				
01:15	0		0					13:15	6		12				
01:30	0		0					13:30	11		5				
01:45	1	1	0	0			1	13:45	8	32	7	29			61
02:00	1		0					14:00	7		7				
02:15	0		0					14:15	5		8				
02:30	1		1					14:30	2		6				
02:45	0	2	0	1			3	14:45	5	19	6	27			46
03:00	0		0					15:00	10		4				
03:15	1		0					15:15	7		12				
03:30	1		0					15:30	9		11				
03:45	0	2	0	0			2	15:45	2	28	5	32			60
04:00	0		1					16:00	6		6				
04:15	1		0					16:15	10		6				
04:30	0		0					16:30	8		4				
04:45	6	7	1	2			9	16:45	9	33	4	20			53
05:00	1		1					17:00	8		9				
05:15	2		1					17:15	11		7				
05:30	6		2					17:30	10		7				
05:45	6	15	2	6			21	17:45	8	37	1	24			61
06:00	1		2					18:00	9		6				
06:15	3		2					18:15	10		9				
06:30	8		3					18:30	9		9				
06:45	8	20	7	14			34	18:45	8	36	5	29			65
07:00	5		4					19:00	8		4				
07:15	5		2					19:15	9		4				
07:30	14		5					19:30	8		7				
07:45	10	34	8	19			53	19:45	1	26	10	25			51
08:00	6		8					20:00	4		4				
08:15	8		9					20:15	6		4				
08:30	5		14					20:30	3		3				
08:45	8	27	7	38			65	20:45	10	23	2	13			36
09:00	3		6					21:00	8		6				
09:15	10		16					21:15	1		8				
09:30	5		4					21:30	5		4				
09:45	7	25	4	30			55	21:45	2	16	1	19			35
10:00	4		6					22:00	5		3				
10:15	5		9					22:15	3		4				
10:30	7		16					22:30	1		4				
10:45	8	24	10	41			65	22:45	1	10	7	18			28
11:00	5		7					23:00	1		2				
11:15	8		7					23:15	0		1				
11:30	12		10					23:30	1		1				
11:45	6	31	10	34			65	23:45	1	3	1	5			8
Total Vol.		188		188			**376**			282		265			**547**

GPS Coordinates: 32.337594, -110.968113

Daily Totals

NB	SB	EB	WB	**Combined**
470	453			**923**

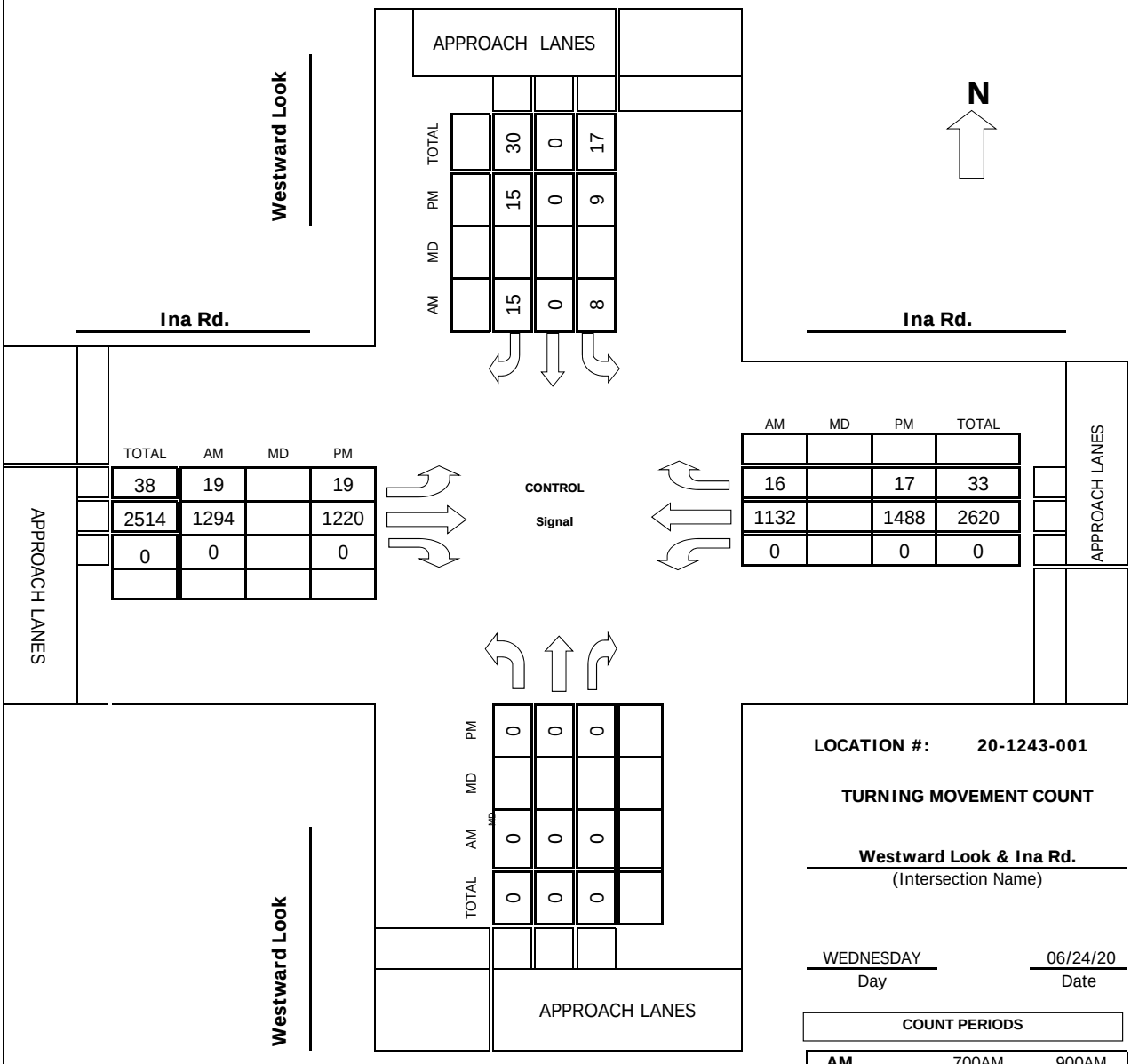
	AM			PM		
Split %	50.0%	50.0%	**40.7%**	51.6%	48.4%	**59.3%**
Peak Hour	07:30	08:30	**08:30**	16:45	15:15	**16:45**
Volume	38	43	**69**	38	34	**65**
P.H.F.	0.68	0.67	**0.66**	0.86	0.71	**0.90**

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 20-1243-001

TMC SUMMARY OF Westward Look & Ina Rd.



LOCATION #: 20-1243-001

TURNING MOVEMENT COUNT

Westward Look & Ina Rd.
(Intersection Name)

WEDNESDAY (Day) 06/24/20 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 715 AM

NOON PEAK HOUR

PM PEAK HOUR 430 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Westward Look	DATE:	06/24/20	LOCATION:	Tucson
E-W STREET:	Ina Rd.	DAY:	WEDNESDAY	PROJECT#	20-1243-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1	0	1	1	2	0	0	2	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	0	0	0	2	0	2	2	273	0	0	196	3	478
7:15 AM	0	0	0	1	0	1	1	319	0	0	233	4	559
7:30 AM	0	0	0	2	0	3	12	369	0	0	300	2	688
7:45 AM	0	0	0	3	0	5	3	312	0	0	334	7	664
8:00 AM	0	0	0	2	0	6	3	294	0	0	265	3	573
8:15 AM	0	0	0	4	0	5	6	248	0	0	246	2	511
8:30 AM	0	0	0	5	0	9	3	305	0	0	285	2	609
8:45 AM	0	0	0	2	0	5	6	261	0	0	319	2	595
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	0	21	0	36	36	2381	0	0	2178	25	4677
Approach %	####	####	####	36.84	0.00	63.16	1.49	98.51	0.00	0.00	98.87	1.13	
App/Depart	0	/	61	57	/	0	2417	/	2402	2203	/	2214	

AM Peak Hr Begins at: 715 AM

PEAK													
Volumes	0	0	0	8	0	15	19	1294	0	0	1132	16	2484
Approach %	####	####	####	34.78	0.00	65.22	1.45	98.55	0.00	0.00	98.61	1.39	
PEAK HR. FACTOR:		0.000			0.719			0.862			0.842		0.903

CONTROL: Signal
COMMENT 1:
GPS: 32.337138, -110.968067

Intersection Turning Movement

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

veracitytrafficgroup

N-S STREET:	Westward Look 0	DATE:	06/24/20	LOCATION:	Tucson
E-W STREET:	Ina Rd.	DAY:	WEDNESDAY	PROJECT#	20-1243-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	1	0	1	1	2	0	0	2	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	0	0	0	3	0	3	5	246	0	0	341	1	599
4:15 PM	0	0	0	0	0	6	6	292	0	0	347	4	655
4:30 PM	0	0	0	1	0	3	4	311	0	0	360	4	683
4:45 PM	0	0	0	2	0	2	7	302	0	0	337	2	652
5:00 PM	0	0	0	4	0	5	5	270	0	0	389	3	676
5:15 PM	0	0	0	2	0	5	3	337	0	0	402	8	757
5:30 PM	0	0	0	1	0	6	4	265	0	0	349	6	631
5:45 PM	0	0	0	0	0	1	6	249	0	0	305	2	563
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													

TOTAL	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
Volumes	0	0	0	13	0	31	40	2272	0	0	2830	30	5216
Approach %	####	####	####	29.55	0.00	70.45	1.73	98.27	0.00	0.00	98.95	1.05	
App/Depart	0	/	70	44	/	0	2312	/	2285	2860	/	2861	

PM Peak Hr Begins at: 430 PM

PEAK													
Volumes	0	0	0	9	0	15	19	1220	0	0	1488	17	2768
Approach %	####	####	####	37.50	0.00	62.50	1.53	98.47	0.00	0.00	98.87	1.13	
PEAK HR. FACTOR:		0.000			0.667			0.911			0.918		0.914

CONTROL:	Signal
COMMENT 1:	0
GPS:	32.337138, -110.968067

B – Internal Trip Capture

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Westward Look Development TIS	**Organization:**	Kimley-Horn and Associates, Inc.
Project Location:	Westward Look and Ina Road	**Performed By:**	DTI
Scenario Description:		**Date:**	7/6/2020
Analysis Year:	2025	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office		-	1,000 Sq Ft	70	60	10
Retail		45	1,000 Sq Ft	42	26	16
Restaurant		-	1,000 Sq Ft	60	33	27
Cinema/Entertainment		-	Screen(s)	0	0	0
Residential		-	Dwelling Unit(s)	0	0	0
Hotel		104	Room(s)	49	29	20
All Other Land Uses[2]		-	0	0	0	0
				221	148	73

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	0%	0%	1.00	0%	0%
Residential	1.00	0%	0%	1.00	0%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	6	0	0	0
Retail	2		2	0	0	0
Restaurant	8	2		0	0	1
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	2	1	2	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	221	148	73
Internal Capture Percentage	26%	20%	40%
External Vehicle-Trips[5]	163	119	44
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	20%	90%
Retail	23%	25%
Restaurant	30%	41%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	3%	25%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Westward Look Development TIS	**Organization:**	Kimley-Horn and Associates, Inc.
Project Location:	Westward Look and Ina Road	**Performed By:**	DTI
Scenario Description:		**Date:**	7/6/2020
Analysis Year:	2025	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office		-	1,000 Sq Ft	69	11	58
Retail		45	1,000 Sq Ft	171	82	89
Restaurant		-	1,000 Sq Ft	59	37	22
Cinema/Entertainment		-	Screen(s)	0	0	0
Residential		-	Dwelling Unit(s)	0	0	0
Hotel		104	Room(s)	62	32	30
All Other Land Uses[2]		-	0	0	0	0
				361	162	199

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	0%	0%	1.00	0%	0%
Residential	1.00	0%	0%	1.00	0%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		7	1	0	0	0
Retail	2		11	0	0	4
Restaurant	1	9		0	0	2
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	2	2	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	361	162	199
Internal Capture Percentage	23%	25%	21%
External Vehicle-Trips[5]	279	121	158
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	27%	14%
Retail	22%	19%
Restaurant	38%	55%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	19%	13%

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

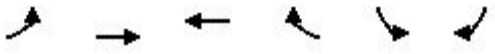
[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

C – Synchro Results

Existing AM

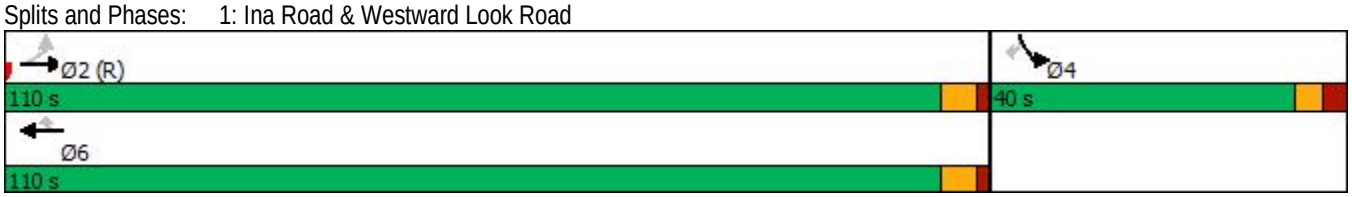


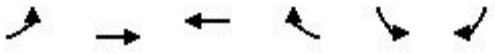
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	42	1423	1245	44	16	29
Future Volume (vph)	42	1423	1245	44	16	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210			185	0	100
Storage Lanes	1			1	1	1
Taper Length (ft)	125				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.166				0.950	
Satd. Flow (perm)	309	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				44		40
Link Speed (mph)		45	45		20	
Link Distance (ft)		641	838		583	
Travel Time (s)		9.7	12.7		19.9	
Peak Hour Factor	0.86	0.86	0.84	0.84	0.72	0.72
Adj. Flow (vph)	49	1655	1482	52	22	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	49	1655	1482	52	22	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	25		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0
Minimum Split (s)	12.6	12.6	32.6	32.6	38.0	38.0
Total Split (s)	110.0	110.0	110.0	110.0	40.0	40.0
Total Split (%)	73.3%	73.3%	73.3%	73.3%	26.7%	26.7%
Maximum Green (s)	104.4	104.4	104.4	104.4	34.0	34.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	1.6	1.6	1.6	1.6	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	Min	Min	None	None
Walk Time (s)			5.0	5.0	5.0	5.0
Flash Dont Walk (s)			22.0	22.0	27.0	27.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	134.4	134.4	134.4	134.4	7.4	7.4
Actuated g/C Ratio	0.90	0.90	0.90	0.90	0.05	0.05
v/c Ratio	0.18	0.52	0.47	0.04	0.25	0.34
Control Delay	3.1	2.7	2.4	0.5	74.9	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.1	2.7	2.4	0.5	74.9	26.9
LOS	A	A	A	A	E	C
Approach Delay		2.7	2.4		43.9	
Approach LOS		A	A		D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 33 (22%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 3.3		Intersection LOS: A	
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Ina Road & Westward Look Road





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	49	1655	1482	52	22	40
v/c Ratio	0.18	0.52	0.47	0.04	0.25	0.34
Control Delay	3.1	2.7	2.4	0.5	74.9	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.1	2.7	2.4	0.5	74.9	26.9
Queue Length 50th (ft)	5	146	121	1	21	0
Queue Length 95th (ft)	14	184	146	5	41	25
Internal Link Dist (ft)		561	758		503	
Turn Bay Length (ft)	210			185		100
Base Capacity (vph)	277	3171	3171	1423	401	389
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.52	0.47	0.04	0.05	0.10

Intersection Summary

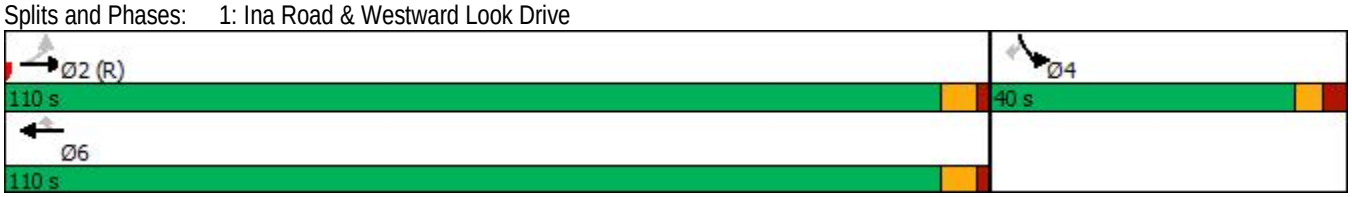
Existing PM

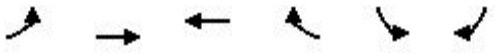
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	38	1342	1637	45	28	47
Future Volume (vph)	38	1342	1637	45	28	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210			185	0	100
Storage Lanes	1			1	1	1
Taper Length (ft)	125				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.113				0.950	
Satd. Flow (perm)	210	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				35		35
Link Speed (mph)		45	45		20	
Link Distance (ft)		641	838		583	
Travel Time (s)		9.7	12.7		19.9	
Peak Hour Factor	0.91	0.91	0.92	0.92	0.67	0.67
Adj. Flow (vph)	42	1475	1779	49	42	70
Shared Lane Traffic (%)						
Lane Group Flow (vph)	42	1475	1779	49	42	70
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	25		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0
Minimum Split (s)	23.6	23.6	38.0	38.0	38.0	38.0
Total Split (s)	110.0	110.0	110.0	110.0	40.0	40.0
Total Split (%)	73.3%	73.3%	73.3%	73.3%	26.7%	26.7%
Maximum Green (s)	104.4	104.4	104.4	104.4	34.0	34.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	1.6	1.6	1.6	1.6	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	Min	Min	None	None
Walk Time (s)			5.0	5.0	5.0	5.0
Flash Dont Walk (s)			22.0	22.0	27.0	27.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	129.0	129.0	129.0	129.0	9.4	9.4
Actuated g/C Ratio	0.86	0.86	0.86	0.86	0.06	0.06
v/c Ratio	0.23	0.48	0.58	0.04	0.38	0.53
Control Delay	5.6	3.3	4.1	0.9	76.1	51.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	3.3	4.1	0.9	76.1	51.4
LOS	A	A	A	A	E	D
Approach Delay		3.4	4.0		60.7	
Approach LOS		A	A		E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 5.5		Intersection LOS: A	
Intersection Capacity Utilization 59.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Ina Road & Westward Look Drive

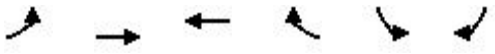




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	42	1475	1779	49	42	70
v/c Ratio	0.23	0.48	0.58	0.04	0.38	0.53
Control Delay	5.6	3.3	4.1	0.9	76.1	51.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	3.3	4.1	0.9	76.1	51.4
Queue Length 50th (ft)	5	135	191	1	40	34
Queue Length 95th (ft)	19	210	295	8	59	54
Internal Link Dist (ft)		561	758		503	
Turn Bay Length (ft)	210			185		100
Base Capacity (vph)	180	3044	3044	1366	401	385
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.48	0.58	0.04	0.10	0.18

Intersection Summary

2025 Background AM

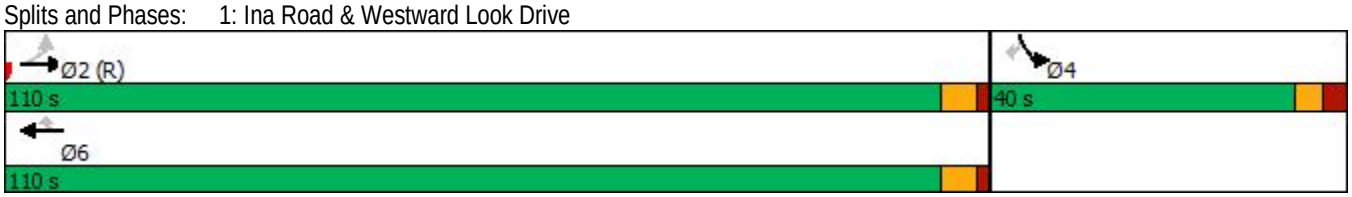


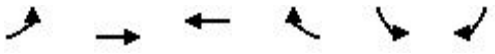
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	44	1488	1302	46	17	30
Future Volume (vph)	44	1488	1302	46	17	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210			185	0	100
Storage Lanes	1			1	1	1
Taper Length (ft)	125				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.153				0.950	
Satd. Flow (perm)	285	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				45		42
Link Speed (mph)		45	45		20	
Link Distance (ft)		248	632		483	
Travel Time (s)		3.8	9.6		16.5	
Peak Hour Factor	0.86	0.86	0.84	0.84	0.72	0.72
Adj. Flow (vph)	51	1730	1550	55	24	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	51	1730	1550	55	24	42
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	25		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0
Minimum Split (s)	22.5	22.5	39.0	39.0	38.0	38.0
Total Split (s)	110.0	110.0	110.0	110.0	40.0	40.0
Total Split (%)	73.3%	73.3%	73.3%	73.3%	26.7%	26.7%
Maximum Green (s)	104.4	104.4	104.4	104.4	34.0	34.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	1.6	1.6	1.6	1.6	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	Min	Min	None	None
Walk Time (s)			5.0	5.0	5.0	5.0
Flash Dont Walk (s)			22.0	22.0	27.0	27.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	134.3	134.3	134.3	134.3	7.6	7.6
Actuated g/C Ratio	0.90	0.90	0.90	0.90	0.05	0.05
v/c Ratio	0.20	0.55	0.49	0.04	0.27	0.35
Control Delay	3.6	2.9	2.6	0.6	75.4	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.6	2.9	2.6	0.6	75.4	26.6
LOS	A	A	A	A	E	C
Approach Delay		3.0	2.5		44.3	
Approach LOS		A	A		D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 3.5		Intersection LOS: A	
Intersection Capacity Utilization 55.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Ina Road & Westward Look Drive

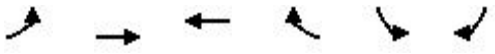




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	51	1730	1550	55	24	42
v/c Ratio	0.20	0.55	0.49	0.04	0.27	0.35
Control Delay	3.6	2.9	2.6	0.6	75.4	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.6	2.9	2.6	0.6	75.4	26.6
Queue Length 50th (ft)	6	161	131	1	23	0
Queue Length 95th (ft)	15	203	160	6	43	25
Internal Link Dist (ft)		168	552		403	
Turn Bay Length (ft)	210			185		100
Base Capacity (vph)	254	3167	3167	1421	401	391
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.55	0.49	0.04	0.06	0.11

Intersection Summary

2025 Background PM

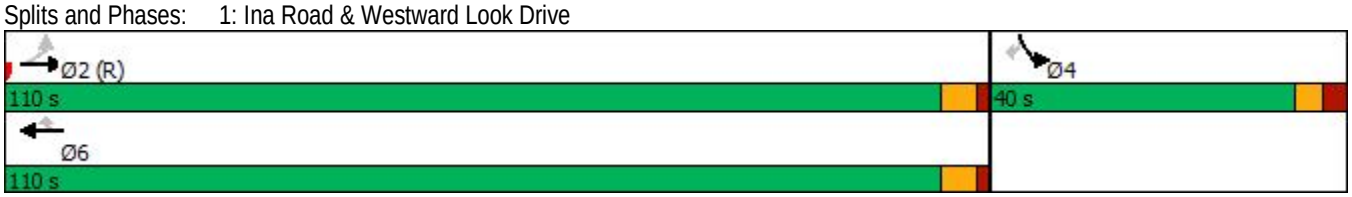


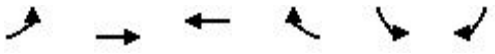
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	40	1403	1712	47	29	49
Future Volume (vph)	40	1403	1712	47	29	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210			185	0	100
Storage Lanes	1			1	1	1
Taper Length (ft)	125				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.101				0.950	
Satd. Flow (perm)	188	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				35		29
Link Speed (mph)		45	45		20	
Link Distance (ft)		248	632		483	
Travel Time (s)		3.8	9.6		16.5	
Peak Hour Factor	0.91	0.91	0.92	0.92	0.67	0.67
Adj. Flow (vph)	44	1542	1861	51	43	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	44	1542	1861	51	43	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	25		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0
Minimum Split (s)	22.5	22.5	32.6	32.6	38.0	38.0
Total Split (s)	110.0	110.0	110.0	110.0	40.0	40.0
Total Split (%)	73.3%	73.3%	73.3%	73.3%	26.7%	26.7%
Maximum Green (s)	104.4	104.4	104.4	104.4	34.0	34.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	1.6	1.6	1.6	1.6	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	Min	Min	None	None
Walk Time (s)			5.0	5.0	5.0	5.0
Flash Dont Walk (s)			22.0	22.0	27.0	27.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	128.5	128.5	128.5	128.5	9.9	9.9
Actuated g/C Ratio	0.86	0.86	0.86	0.86	0.07	0.07
v/c Ratio	0.28	0.51	0.61	0.04	0.37	0.56
Control Delay	7.2	3.6	4.5	1.0	74.7	57.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	3.6	4.5	1.0	74.7	57.9
LOS	A	A	A	A	E	E
Approach Delay		3.7	4.4		64.1	
Approach LOS		A	A		E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 32 (21%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 6.0		Intersection LOS: A	
Intersection Capacity Utilization 61.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Ina Road & Westward Look Drive

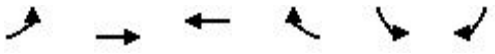




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	44	1542	1861	51	43	73
v/c Ratio	0.28	0.51	0.61	0.04	0.37	0.56
Control Delay	7.2	3.6	4.5	1.0	74.7	57.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	3.6	4.5	1.0	74.7	57.9
Queue Length 50th (ft)	6	152	218	2	41	42
Queue Length 95th (ft)	23	236	338	9	60	62
Internal Link Dist (ft)		168	552		403	
Turn Bay Length (ft)	210			185		100
Base Capacity (vph)	160	3032	3032	1361	401	381
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.51	0.61	0.04	0.11	0.19

Intersection Summary

2025 Buildout AM

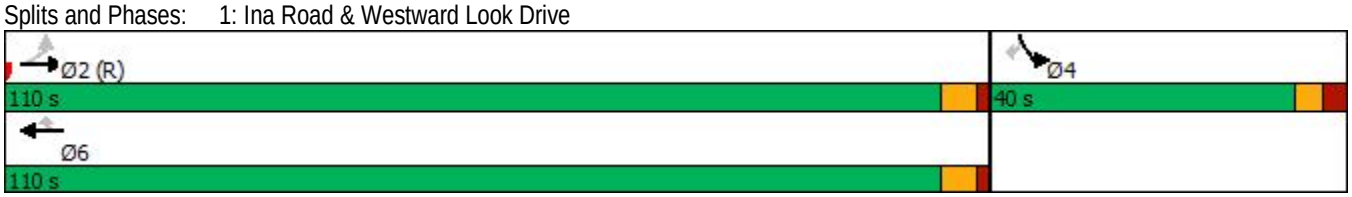


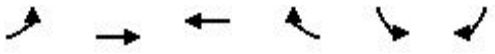
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	98	1488	1319	79	32	45
Future Volume (vph)	98	1488	1319	79	32	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210			185	0	100
Storage Lanes	1			1	1	1
Taper Length (ft)	125				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.148				0.950	
Satd. Flow (perm)	276	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				75		53
Link Speed (mph)		45	45		20	
Link Distance (ft)		248	632		483	
Travel Time (s)		3.8	9.6		16.5	
Peak Hour Factor	0.86	0.86	0.84	0.84	0.72	0.72
Adj. Flow (vph)	114	1730	1570	94	44	63
Shared Lane Traffic (%)						
Lane Group Flow (vph)	114	1730	1570	94	44	63
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	25		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0
Minimum Split (s)	22.5	22.5	39.0	39.0	38.0	38.0
Total Split (s)	110.0	110.0	110.0	110.0	40.0	40.0
Total Split (%)	73.3%	73.3%	73.3%	73.3%	26.7%	26.7%
Maximum Green (s)	104.4	104.4	104.4	104.4	34.0	34.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	1.6	1.6	1.6	1.6	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	Min	Min	None	None
Walk Time (s)			5.0	5.0	5.0	5.0
Flash Dont Walk (s)			22.0	22.0	27.0	27.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	132.7	132.7	132.7	132.7	9.1	9.1
Actuated g/C Ratio	0.88	0.88	0.88	0.88	0.06	0.06
v/c Ratio	0.47	0.55	0.50	0.07	0.41	0.43
Control Delay	9.7	3.4	3.1	0.7	78.3	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.7	3.4	3.1	0.7	78.3	30.0
LOS	A	A	A	A	E	C
Approach Delay		3.8	2.9		49.9	
Approach LOS		A	A		D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 120			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 4.8		Intersection LOS: A	
Intersection Capacity Utilization 60.8%		ICU Level of Service B	
Analysis Period (min) 15			

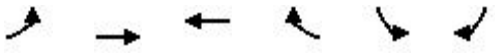
Splits and Phases: 1: Ina Road & Westward Look Drive





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	114	1730	1570	94	44	63
v/c Ratio	0.47	0.55	0.50	0.07	0.41	0.43
Control Delay	9.7	3.4	3.1	0.7	78.3	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.7	3.4	3.1	0.7	78.3	30.0
Queue Length 50th (ft)	20	182	152	2	42	9
Queue Length 95th (ft)	58	238	192	9	66	36
Internal Link Dist (ft)		168	552		403	
Turn Bay Length (ft)	210			185		100
Base Capacity (vph)	244	3131	3131	1409	401	399
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.55	0.50	0.07	0.11	0.16

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1586	1358	6	0	3
Future Volume (vph)	0	1586	1358	6	0	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.999			0.865
Flt Protected						
Satd. Flow (prot)	0	3539	3536	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	3539	3536	0	0	1611
Link Speed (mph)		30	30		30	
Link Distance (ft)		412	248		139	
Travel Time (s)		9.4	5.6		3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1724	1476	7	0	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1724	1483	0	0	3
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1586	1358	6	0	3
Future Vol, veh/h	0	1586	1358	6	0	3
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	1724	1476	7	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	742
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	358
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	358
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	358
HCM Lane V/C Ratio	-	-	-	0.009
HCM Control Delay (s)	-	-	-	15.1
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0

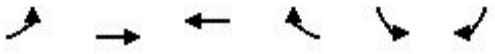
Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1586	1358	6	0	3
Future Vol, veh/h	0	1586	1358	6	0	3
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	1724	1476	7	0	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	742
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	358
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	358
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	358
HCM Lane V/C Ratio	-	-	-	0.009
HCM Control Delay (s)	-	-	-	15.1
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1520	1387	26	0	11
Future Volume (vph)	0	1520	1387	26	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.997			0.865
Flt Protected						
Satd. Flow (prot)	0	3539	3529	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	3539	3529	0	0	1611
Link Speed (mph)		30	30		30	
Link Distance (ft)		632	291		137	
Travel Time (s)		14.4	6.6		3.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1652	1508	28	0	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1652	1536	0	0	12
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1520	1387	26	0	11
Future Vol, veh/h	0	1520	1387	26	0	11
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	1652	1508	28	0	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	768
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	344
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	344
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	344
HCM Lane V/C Ratio	-	-	-	0.035
HCM Control Delay (s)	-	-	-	15.8
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	0.1

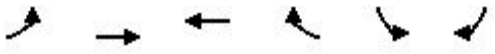
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1520	1387	26	0	11
Future Vol, veh/h	0	1520	1387	26	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	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	1652	1508	28	0	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	768
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	344
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	344
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.8
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	344
HCM Lane V/C Ratio	-	-	-	0.035
HCM Control Delay (s)	-	-	-	15.8
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.1

2025 Buildout PM

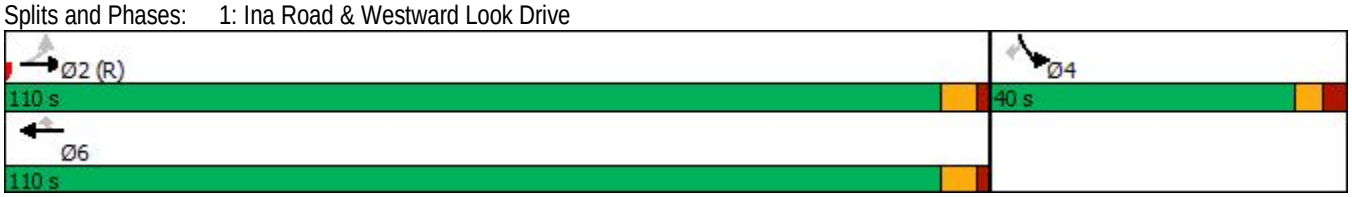


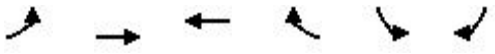
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	94	1403	1759	81	84	101
Future Volume (vph)	94	1403	1759	81	84	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210			185	0	100
Storage Lanes	1			1	1	1
Taper Length (ft)	125				0	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.084				0.950	
Satd. Flow (perm)	156	3539	3539	1583	1770	1583
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				58		26
Link Speed (mph)		45	45		20	
Link Distance (ft)		248	632		483	
Travel Time (s)		3.8	9.6		16.5	
Peak Hour Factor	0.91	0.91	0.92	0.92	0.67	0.67
Adj. Flow (vph)	103	1542	1912	88	125	151
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	1542	1912	88	125	151
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	25		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Perm	NA	NA	Perm	Prot	Perm
Protected Phases		2	6		4	
Permitted Phases	2			6		4

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase	2	2	6	6	4	4
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0
Minimum Split (s)	22.5	22.5	32.6	32.6	38.0	38.0
Total Split (s)	110.0	110.0	110.0	110.0	40.0	40.0
Total Split (%)	73.3%	73.3%	73.3%	73.3%	26.7%	26.7%
Maximum Green (s)	104.4	104.4	104.4	104.4	34.0	34.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	3.0
All-Red Time (s)	1.6	1.6	1.6	1.6	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6	5.6	5.6	6.0	6.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min	Min	Min	None	None
Walk Time (s)			5.0	5.0	5.0	5.0
Flash Dont Walk (s)			22.0	22.0	27.0	27.0
Pedestrian Calls (#/hr)			0	0	0	0
Act Effct Green (s)	121.0	121.0	121.0	121.0	17.4	17.4
Actuated g/C Ratio	0.81	0.81	0.81	0.81	0.12	0.12
v/c Ratio	0.82	0.54	0.67	0.07	0.61	0.73
Control Delay	59.9	6.3	8.2	1.7	74.8	72.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	6.3	8.2	1.7	74.8	72.4
LOS	E	A	A	A	E	E
Approach Delay		9.6	7.9		73.5	
Approach LOS		A	A		E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 32 (21%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 150			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 13.2		Intersection LOS: B	
Intersection Capacity Utilization 73.4%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Ina Road & Westward Look Drive

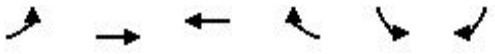




Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	103	1542	1912	88	125	151
v/c Ratio	0.82	0.54	0.67	0.07	0.61	0.73
Control Delay	59.9	6.3	8.2	1.7	74.8	72.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.9	6.3	8.2	1.7	74.8	72.4
Queue Length 50th (ft)	49	229	350	5	118	120
Queue Length 95th (ft)	#101	351	532	20	130	130
Internal Link Dist (ft)		168	552		403	
Turn Bay Length (ft)	210			185		100
Base Capacity (vph)	125	2855	2855	1288	401	378
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.54	0.67	0.07	0.31	0.40

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1497	1854	6	0	11
Future Volume (vph)	0	1497	1854	6	0	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.999			0.865
Flt Protected						
Satd. Flow (prot)	0	3539	3536	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	3539	3536	0	0	1611
Link Speed (mph)		30	30		30	
Link Distance (ft)		412	248		139	
Travel Time (s)		9.4	5.6		3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1627	2015	7	0	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1627	2022	0	0	12
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			

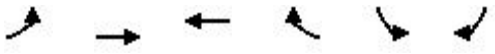
Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1497	1854	6	0	11
Future Vol, veh/h	0	1497	1854	6	0	11
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	1627	2015	7	0	12

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	1011
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	237
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	237
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	21
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	237
HCM Lane V/C Ratio	-	-	-	0.05
HCM Control Delay (s)	-	-	-	21
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.2



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1487	1799	27	0	41
Future Volume (vph)	0	1487	1799	27	0	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.998			0.865
Flt Protected						
Satd. Flow (prot)	0	3539	3532	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	3539	3532	0	0	1611
Link Speed (mph)		30	30		30	
Link Distance (ft)		632	291		137	
Travel Time (s)		14.4	6.6		3.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1616	1955	29	0	45
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1616	1984	0	0	45
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		20	20		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 60.6%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1487	1799	27	0	41
Future Vol, veh/h	0	1487	1799	27	0	41
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	1616	1955	29	0	45

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	992
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	244
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	244
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	23
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	244
HCM Lane V/C Ratio	-	-	-	0.183
HCM Control Delay (s)	-	-	-	23
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0.7

D – Illustrative Plan A

ILLUSTRATIVE PLAN 'A'

NOTES

PARCELS: 225-50-021A, 225-50-0180, 225-50-0200
JURISDICTION: PIMA COUNTY, ARIZONA
EXISTING ZONING: CR-1
PARCELS AREA: 18.0 ACRES

RESORT GATEWAY WEST - BOUTIQUE RETAIL / RESTAURANT
GROSS FLOOR AREA: APPROX 30,000 SF
BUILDING HEIGHT: 1-2 STORIES
PARKING PROVIDED: 200 SPACES (1 SPACE PER 150 SF GFA)
PARKING REQUIRED: TBD THROUGH INDIVIDUAL PARKING PLAN

RESORT GATEWAY EAST - LUXURY GATED APARTMENT COMPLEX
UNIT QUANTITY: APPROX 184
BUILDING HEIGHT: 2-3 STORIES
PARKING PROVIDED: 334 SPACES (1.5 SPACES PER ROOM + GUEST)
PARKING REQUIRED: TBD THROUGH INDIVIDUAL PARKING PLAN

RESORT GATEWAY EAST - RESORT EQUESTRIAN AND EVENT SPACE
USE: RESORT EQUESTRIAN STABLES AND EVENT AREA

PLANNED AREA DEVELOPMENT (PAD) NOTE:
PAD TO PROVIDE FLEXIBILITY REGARDING LAND USE, BUILDING HEIGHT, BUILDING SETBACK, LANDSCAPE BUFFERS, AND PARKING REQUIREMENTS, AMONG OTHERS. THIS CONCEPTUAL SITE PLAN REFLECTS LOCAL STANDARDS (BUT DOES NOT ADHERE ENTIRELY TO ORO VALLEY STANDARDS WHERE PIMA COUNTY DEVELOPMENT STANDARDS PROVIDE GREATER FLEXIBILITY).

LOCAL PRECEDENTS

BOUTIQUE RETAIL / RESTAURANT: BROADWAY VILLAGE

LUXURY APARTMENTS: VILLAS AT SAN DORADO

WESTWARD LOOK

PROJECT: WWL-01 DATE: 7/29/2020
FILE NAME: WWL-01_ILLUSTRATIVE A 7.29.2020.DWG

THIS EXHIBIT WAS CREATED USING THE MOST RECENT AVAILABLE BOUNDARIES, ROAD ALIGNMENT, AND EASEMENT DATA PROVIDED BY THE DIFFERENT GOVERNMENTAL ENTITIES AND ENGINEERING FIRMS AND IS FOR PLANNING PURPOSES ONLY. FINAL AREA TOTALS BASED ON ENGINEERED DATA MAY VARY FROM THOSE SHOWN ON THIS EXHIBIT.

0' 60' 120'
SCALE: 1"=120'-0"

NORTH

THE PLANNING CENTER
a division of TPC Group, Inc.
2 e congress ste 600 tucson az 85701

E – Illustrative Plan C

ILLUSTRATIVE PLAN 'C'

NOTES

PARCELS: 225-50-021A, 225-50-0180, 225-50-0200
JURISDICTION: PIMA COUNTY, ARIZONA
EXISTING ZONING: CR-1
PARCELS AREA: 18.0 ACRES

RESORT GATEWAY WEST - RESIDENTIAL VILLAS
TOTAL UNITS: 38 (16 - 1 BEDROOM, 22 - 2 BEDROOM)
BUILDING HEIGHT: 1-2 STORIES
PARKING PROVIDED: 63 SPACES (38 GARAGE, 25 GUEST PARKING)
PARKING REQUIRED: TBD THROUGH INDIVIDUAL PARKING PLAN

RESORT GATEWAY EAST -LUXURY APARTMENT COMPLEX /CONVENTION HOTEL
GROSS FLOOR AREA: APPROX 400,000 SF OR 250 UNITS
BUILDING HEIGHT: 3-4 STORIES
PARKING PROVIDED: 418 SPACES*
PARKING REQUIRED: TBD THROUGH INDIVIDUAL PARKING PLAN
*Note: For the purpose of this concept the parking was determined using apartment parking ratios.

RESORT GATEWAY EAST - RESORT EQUESTRIAN AND EVENT SPACE
USE: RESORT PARK AND EVENT AREA

PLANNED AREA DEVELOPMENT (PAD) NOTE:
PAD TO PROVIDE FLEXIBILITY REGARDING LAND USE, BUILDING HEIGHT, BUILDING SETBACK, LANDSCAPE BUFFERS, AND PARKING REQUIREMENTS, AMONG OTHERS. THIS CONCEPTUAL SITE PLAN REFLECTS LOCAL STANDARDS (BUT DOES NOT ADHERE ENTIRELY TO ORO VALLEY STANDARDS WHERE PIMA COUNTY DEVELOPMENT STANDARDS PROVIDE GREATER FLEXIBILITY).

LOCAL PRECEDENTS

HACIENDA AT THE CANYON

RESIDENTIAL VILLAS: MIRAMONTE AT THE RIVER

WESTWARD LOOK

PROJECT: WWL-01 DATE: 7/29/2020
FILE NAME: WWL-01_ILLUSTRATIVE C 7.29.2020.DWG

THIS EXHIBIT WAS CREATED USING THE MOST RECENT AVAILABLE BOUNDARIES, ROAD ALIGNMENT, AND EASEMENT DATA PROVIDED BY THE DIFFERENT GOVERNMENTAL ENTITIES AND ENGINEERING FIRMS AND IS FOR PLANNING PURPOSES ONLY. FINAL AREA TOTALS BASED ON ENGINEERED DATA MAY VARY FROM THOSE SHOWN ON THIS EXHIBIT.

0' 60' 120'
SCALE: 1"-120'-0"

NORTH

THE PLANNING CENTER
a division of TPC Group, Inc.
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