Alternatives Assessment

Ina Road/Oracle Road (SR 77) Intersection Improvements

Tucson, Arizona

December 2009

Alternatives Assessment

Ina Road/Oracle Road Intersection Improvements

Tucson, Arizona

Prepared For:
Pima County Department of Transportation
201 N. Stone Avenue
Tucson, AZ 85701
(520) 740-6140

Prepared By:
Kittelson & Associates, Inc.
33 N. Stone Avenue
Tucson, AZ 85701
(520) 544-4067

Project Principal: James M. Schoen, PE
Project Manager: Jason A. Simmers, PE
Project Analyst: Ning Zou

Project No. 9397.00

December 2009

Table of Contents

Introduction 1
Background and Scope 1

Existing Conditions 4
Land Use 4
Access 4
Speed Limit 4
Roadway geometry 5
Transit, Pedestrian, and Bicycle Facilities 5
Crash History 6
Traffic Conditions 8

Improvement Alternatives Assessment 12
Approach 12
Traffic Operations Analysis 17

Discussion 28
Westbound Right-turn 28
Dual Eastbound/Westbound Left-turns 28
Indirect eastbound/westbound Left-turn 29

Conclusions 29

References 30

Appendix A – Crash Data

Appendix B – Traffic Count Data

Appendix C – Capacity Analysis Results

Appendix D – Simulation Analysis Resultsi

List of Figures

Figure 1 Location Map 2
Figure 2 Site Vicinity Map 3
Figure 3 Existing Peak Period Intersection Traffic Volumes 9
Figure 4 Existing Traffic Conditions- Ina Road at Oracle Road 10
Figure 5 Alternative 2 – Dual Left-Turns 13
Figure 6 Alternative 3 – Indirect Left-Turns 14
Figure 7 Alternative 4 – Jug Handle Indirect Left Turn 16
Figure 8 Indirect Left-Turn Capacity Analysis Results 21
Figure 9 Indirect Left-Turn Maximum Queue Lengths 25
Figure 10 Vehicle Turning Paths – East U-Turn 26
Figure 11 Vehicle Turning Paths – West U-Turn 27

List of Tables

Table 1 Pedestrian Counts 5
Table 2 Crash Data Summary (Oct. 2005 to Sept. 2008) 7
Table 3 Heavy Vehicle Percentage 10
Table 4 Alternatives 1, 2A and 2B Traffic Operations Comparison (HCM) 18
Table 5 Alt 3: Indirect Left-Turn Operations Evaluation - AM 22
Table 6 Alt 3: Indirect Left-Turn Operations Evaluation - PM 23

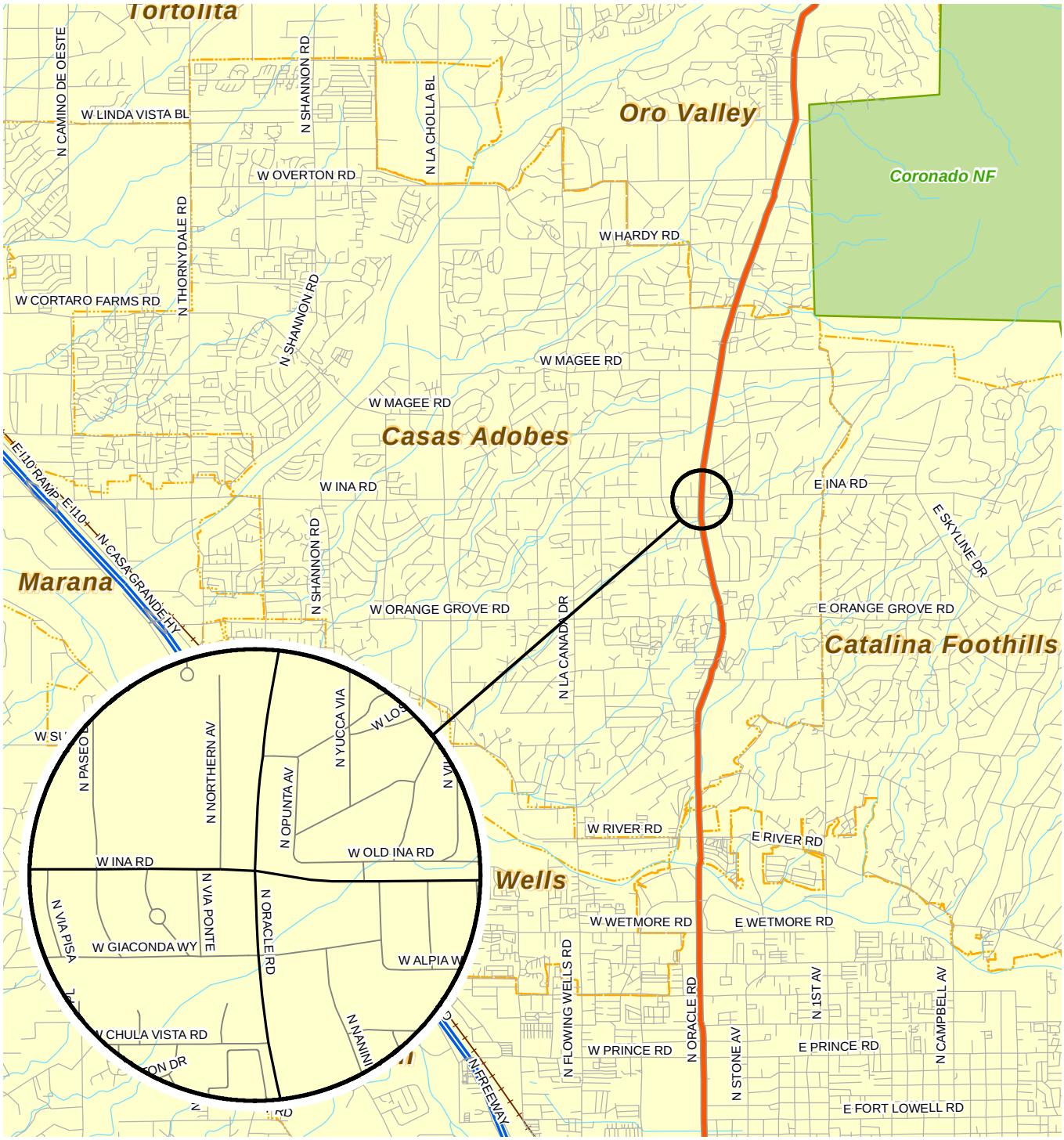
Introduction

BACKGROUND AND SCOPE

The Ina Road/Oracle Road intersection improvement project is a Regional Transportation Authority (RTA) funded roadway project. This alternatives assessment report was prepared as part of the design process for the Ina Road/Oracle Road intersection. Study area and vicinity maps are provided as Figures 1 and 2.

Currently, heavy traffic demand creates excessive delays and long queues during the morning, midday and evening peak periods at this intersection. This congestion has produced increasing neighborhood cut-through traffic as motorists divert onto local streets to avoid the intersection. While current traffic volumes, which are approaching 100,000 vpd, clearly indicate the need for a grade-separated intersection as recommended in the Oracle Road/SR 77 Corridor Study [1], current RTA funding for this intersection is limited. Therefore, the scope of this RTA project is to implement interim intersection improvements that will provide the most benefit to existing and future intersection operations.

The purpose of this report is to document existing intersection traffic conditions and the evaluation of alternatives for improving traffic flow and safety at this intersection.



LOCATION MAP
TUCSON, ARIZONA

FIGURE
1

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING

H:\profile\9397 - Ina Rd-Oracle Rd Inters Improvements\figures\Fig02

NTS

SITE VICINITY MAP FIGURE 2

H:\profile\9397 - Ina Rd-Oracle Rd Inters Improvements\figures\Fig02.dgn Default (Model) 12/29/2009 - 11:15:03 AM

Existing Conditions

LAND USE

The area surrounding the intersection is fully developed, including residential and retail commercial land uses. Casas Adobe Plaza (with retail stores, restaurants, a supermarket, etc.) is located at the southwest corner of the intersection. In the northwest corner of the intersection, there is a fitness center, office buildings, a gas station, and retail properties. A gas station and strip commercial center are located on the northeast corner. In the southeast corner, there is the Safeway shopping center, which includes several banks. While redevelopment of several of these properties, most notably the Casa Adobes Plaza, has occurred over the past five years, no new development in the area is anticipated.

ACCESS

Currently there are four median openings close to the Ina Road/Oracle Road intersection, which provide full access to the business developments within the surrounding area. The median opening at Via Ponte located approximately 600 feet west of the Ina Road/Oracle Road intersection provides full access to the Casas Adobe Plaza. Full access to the Safeway center from Ina Road is provided at the median opening located approximately 700 feet east of the intersection. On Oracle Road, the median opening at Giaconda Way located approximately 850 feet south of the Ina Road/Oracle Road intersection serves both the Casas Adobe Plaza and Safeway center, as well as residential areas. The median opening at Sahuaro Vista located approximately 1200 feet north of the intersection provides full access to the commercial properties on both sides of Oracle Road. All other driveways within the study area are right-in right-out only.

SPEED LIMIT

The existing posted speed limits on the roadways within the study area are as follows:

- Ina Road – 45 mph
- Oracle Road – 45 mph
- Side Streets – 25 mph

ROADWAY GEOMETRY

Geometry on Ina Road meets the AASHTO requirements for a 50 mph design speed, while the design speed on Oracle Road is at least 55 mph. The Oracle Road centerline is on a 14,000-ft radius through the intersection. The Ina Road centerline has a 6-degree angle point at the Oracle Road centerline. The combination of this angle point and the superelevation on Oracle Road creates a visibility problem for westbound traffic to see the far side lane lines. During the evening peak period, the setting sun can significantly exacerbate this problem. Westbound traffic tend to have to adjust their trajectory as they pass through the intersection. Through lane widths on all approaches are 12-ft. Left-turn lanes vary from 11-12 ft in width.

TRANSIT, PEDESTRIAN, AND BICYCLE FACILITIES

Bus stops are currently located on southbound Oracle Road at the Casas Adobes Plaza and on westbound Ina Road just west of Oracle Road. SunTran is planning for a northbound stop on Oracle Road just north of Ina Road. Pedestrian facilities in the area include access ramps at the intersection and limited sidewalk, including short sections on the south side of Ina Road fronting the Casas Adobes Plaza and the north side of Ina Road. While facilities may be limited, pedestrians frequently cross at the Ina Road/Oracle Road intersection, particularly during mid-day. Pedestrian counts are provided in Table 1. Striped bicycle lanes are provided in both directions on Oracle Road south of Ina Road and in both directions on Ina Road east of Oracle Road.

Table 1 Pedestrian Counts

	Peak Period	
Approach	Mid-day	PM
NB	16	1
SB	20	0
EB	11	2
WB	6	4

CRASH HISTORY

The Pima County Department of Transportation provided crash data along Ina Road (Ina Road/Oracle Road intersection was not included) for the 3-year period from October 1, 2005 to September 30, 2008. ADOT provided crash data along Oracle Road (Ina Road/Oracle Road intersection was included) for the 3-year period from December 1, 2004 to November 30, 2007. The segment and intersection crash data was reviewed and is summarized in Table 2. The crash data is provided in Appendix A.

A general review of these crash data suggests the following safety conditions within the vicinity of the Ina Road/Oracle Road intersection.

- At Ina Road/Oracle Road, the crash rate of 1.44 is higher than the average crash rate of 0.99 for signalized intersections within Pima County for the period January 2005 to December 2007 [2]. The vast majority (75%) of crashes at this intersection were rear-ends. The long queues that routinely occur on both Oracle Road and Ina Road during the morning and evening peak periods and the high speeds that vehicles travel on both roadways likely contribute to this type of accident. Reducing congestion will likely result in fewer rear end crashes. Considering the heavy entering traffic volume – 97,600 vehicles per day and high operating speeds on both roadways, the low number of turning crashes (10) and relative low accident severity (77% PDO and no fatalities) indicate that safety is the primary factor in intersection operations.
- At Ina Road/Via Ponte, the crash rate (0.49) is approximately at the average crash rate of 0.40 for unsignalized intersections within Pima County from January 2005 to December 2007 [1]. Ninety-one percent of the crashes are turning crashes and most of them were caused by westbound left-turning vehicles failing to yield to eastbound through vehicles. The eastbound right-turn lane into Via Ponte likely contributes to this situation since a majority of the right-turning traffic is not turning at Via Ponte, but is continuing through the intersection and turning at either the next driveway into Casas Adobes Plaza or at Oracle Road.

Table 2 Crash Data Summary (Oct. 2005 to Sept. 2008)

	Intersections												Segment	
	Ina Rd @ Via Ponte		Ina Rd @ Dwy 5		Ina Rd @ Oracle Rd		Giaconda Way @ Oracle Rd		Ina Rd @ Dwy3		Ina Rd @ Dwy 6		Oracle Rd, Giaconda Way to Sahuaro Vista	
Crash Type	**Number**	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**
Angle	1	5%	5	45%	6	4%	4	36%	2	25%	8	50%	5	9%
Rear-end	1	5%	2	18%	115	75%	4	36%	5	63%	2	13%	40	74%
Turning	20	91%	1	9%	13	8%	1	9%	0	0%	0	0%	0	0%
Sideswipe	0	0%	0	0%	13	8%	2	18%	1	13%	3	19%	5	9%
Single Vehicle	0	0%	2	18%	3	2%	0	0%	0	0%	1	6%	2	4%
Pedestrian	0	0%	0	0%	0	0%	0	0%	0	0%	1	6%	0	0%
U-turn	0	0%	1	9%	3	2%	0	0%	0	0%	0	0%	0	0%
Head-on	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Unknown	0	0%	0	0%	1	1%	0	0%	0	0%	0	0%	2	4%
Fixed Objects	0	0%	0		0	0%	0	0%	0	0%	1	6%	0	0%
Crash Rate														
Total Crashes	22		11		154		11		8		16		54	
Daily ADT	41000		41000		97650		53000		41000		41000		53000	
Crash Rate1,2	0.49		0.25		1.44		0.19		0.11		0.13		0.39	
Crash Rate														
Fatal	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Injury	11	50%	5	45%	35	23%	1	9%	3	38%	5	31%	11	20%
PDO	11	50%	6	55%	119	77%	10	91%	5	63%	11	69%	43	80%

1. Intersection accident rates refer to the number of accidents per million vehicles entering the intersection.
Rate = (number of 3-year accidents x 106)/(3 years x weekday entering volume x 365 days).

2. Segment accident rates refer to the number of accidents per million vehicles-miles of travel.
Rate = (number of 3-year accidents x 106)/(3 years x weekday volume x segment length x 365 days).

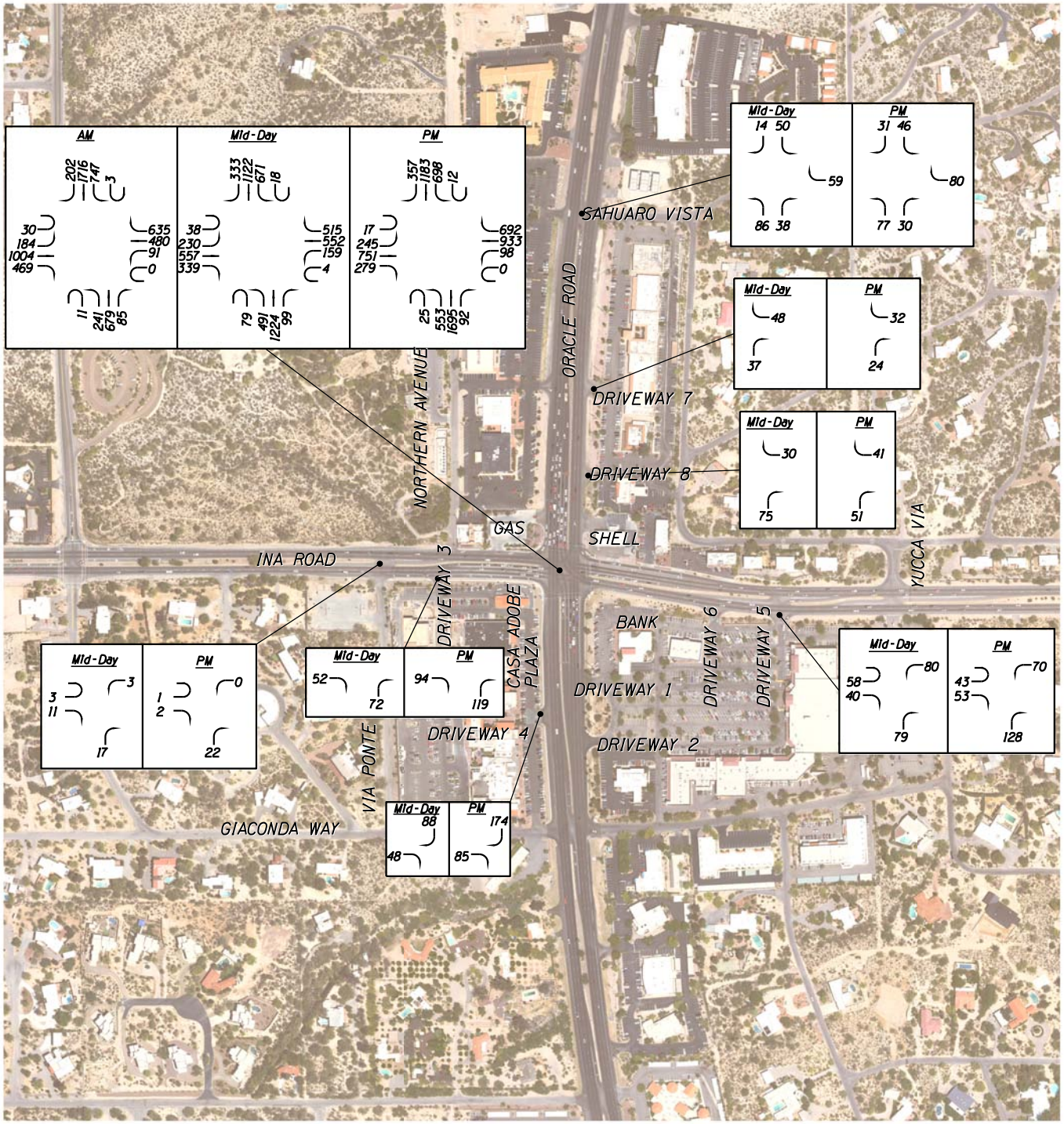
- At Ina Road/Dwy 5, the crash rate is relatively low considering that is the main access to the Safeway center from Ina Road.
- The crash rates to the minor driveways to both the Casas Adobes Plaza (Dwy 3) and Safeway center (Dwy 6) are significantly higher than the rates at the main driveways to each development (Via Ponte and Dwy 5), even though each of these minor driveways is right-in/right-out only compared to full access at the main driveways.
- Crash data at individual driveways on Oracle Road was not available, however the segment crash data indicates a higher than typical crash rate. The predominance of read-end crashes at these driveways is consistent with the trends in the vicinity of the intersection.
- Within the 3-year analysis period, no fatalities occurred in the vicinity of the Ina Road/Oracle Road intersection. One pedestrian related crash did occur on the Ina Road segment and was DUI related.
- The predominant crash types on road segments of Ina Road and Oracle Road are rear-ends and angle. Most of the angle crashes were caused by vehicles pulling out from driveways and failed to yield to through vehicles. Most of rear-end crashes were caused by front vehicles making sudden stops or reducing speed. Since the crashes appear random, no specific countermeasures are recommended.

TRAFFIC CONDITIONS

Traffic Data

Traffic counts collected on December 3, 2008 included weekday mid-day (11:00-1:00) and p.m. (4:00-6:00) peak period turning movement counts at the Ina Road/Oracle Road intersection, Sahuaro Vista/Oracle Road intersection and six site access points. These counts included heavy vehicles. Recent turning movement counts for the a.m. peak period (7:00 – 9:00) were obtained from Pima County Traffic Engineering and daily traffic counts were obtained from PAG. The peak hour traffic volume data are summarized in Figure 3. Detailed traffic count data is included in Appendix B.

(NO SCALE)



EXISTING PEAK HOUR TRAFFIC COUNTS

FIGURE 3

Current actuated signal timing plans were obtained from ADOT. The percentage of heavy vehicles on each approach at Ina Road/Oracle Road is provided in Table 3.

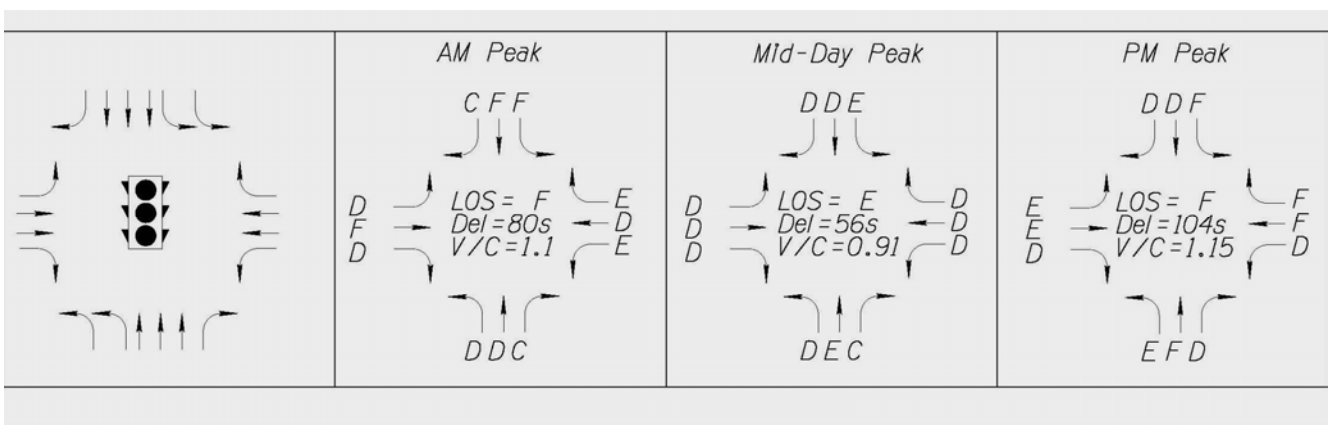
Table 3 Heavy Vehicle Percentage

	Peak Period	
Approach	Mid-day	PM
NB	2.0	0.8
SB	3.1	1.6
EB	3.0	0.9
WB	3.4	0.8

Traffic Operations

Existing traffic conditions at Ina Road/Oracle Road were evaluated based on the results from analytical analysis using the Highway Capacity manual procedures as well field observations made during peak traffic periods. Figure 4 summarizes the analysis results. The operations analysis worksheets are provided in Appendix C. Current intersection operations are summarized below.

Figure 4 Existing Traffic Conditions- Ina Road at Oracle Road



- During both the morning and evening peak periods, overall intersection operations are at LOS E and F, with significant congestion on several approaches. The signal cycle length during both periods often maxes out at 165 seconds.

- During the morning peak period, southbound left-turn demand is heavy. Queues typically fill up the 300-ft dual lanes and extend an additional 700-900 ft north of Sahuaro Vista in the inside through lane. Significant lane changing activity occurs as southbound through vehicles avoid the queue, while some left-turn traffic attempts to jump the queue. The overall affect is a reduction in through and left-turn capacity. Also in the morning, eastbound left-turns frequently fill up and extend past the 300-ft turn lane and block eastbound through traffic. The lagging left-turn phasing at the intersection contributes to the impact of the left-turn queues on through traffic.
- During the evening peak period, southbound left-turn demand is heavy, however the impact of the long queues to through traffic is not as pronounced. Northbound and westbound traffic demand during the evening is heavy. Queuing on Oracle Road routinely extends several thousand feet south of Ina Road. The westbound right-turn queue also routinely extends several thousand feet east of the intersection, at times reaching the signal at Westward Look a half-mile away. This right-turn queue typically stores in the 10-ft wide shoulder, however also can block the outside through lane creating significant lane changing activity.
- During the mid-day, overall intersection operation is LOS E. Similar to the morning period, the eastbound left-turns often block through traffic.
- As noted in the traffic counts provided in Figure 3, northbound to southbound U-turns at Ina Road/Oracle Road are heaviest, with 79 counted during the mid-day peak period. The vast majority of these U-turns are destined for the Casas Adobes Plaza. The median opening at Giaconda Way provides alternate access for northbound traffic to this shopping plaza. Comparatively, the southbound to northbound U-turn volume is fairly low with the highest count being 18 during the mid-day peak hour. These U-turns are primarily heading to the strip commercial center located on the northeast corner of the intersection. The median opening at Sahuaro Vista provides direct access to this center for southbound traffic. Eastbound to westbound U-turns, which are heaviest (30-40 vph) during the morning and mid-day, are accessing Northern Avenue that serves the commercial properties on the along the west side of Oracle Road. There is no other direct access to these properties from Ina Road. There are essentially no westbound to eastbound U-turns.

Improvement Alternatives Assessment

APPROACH

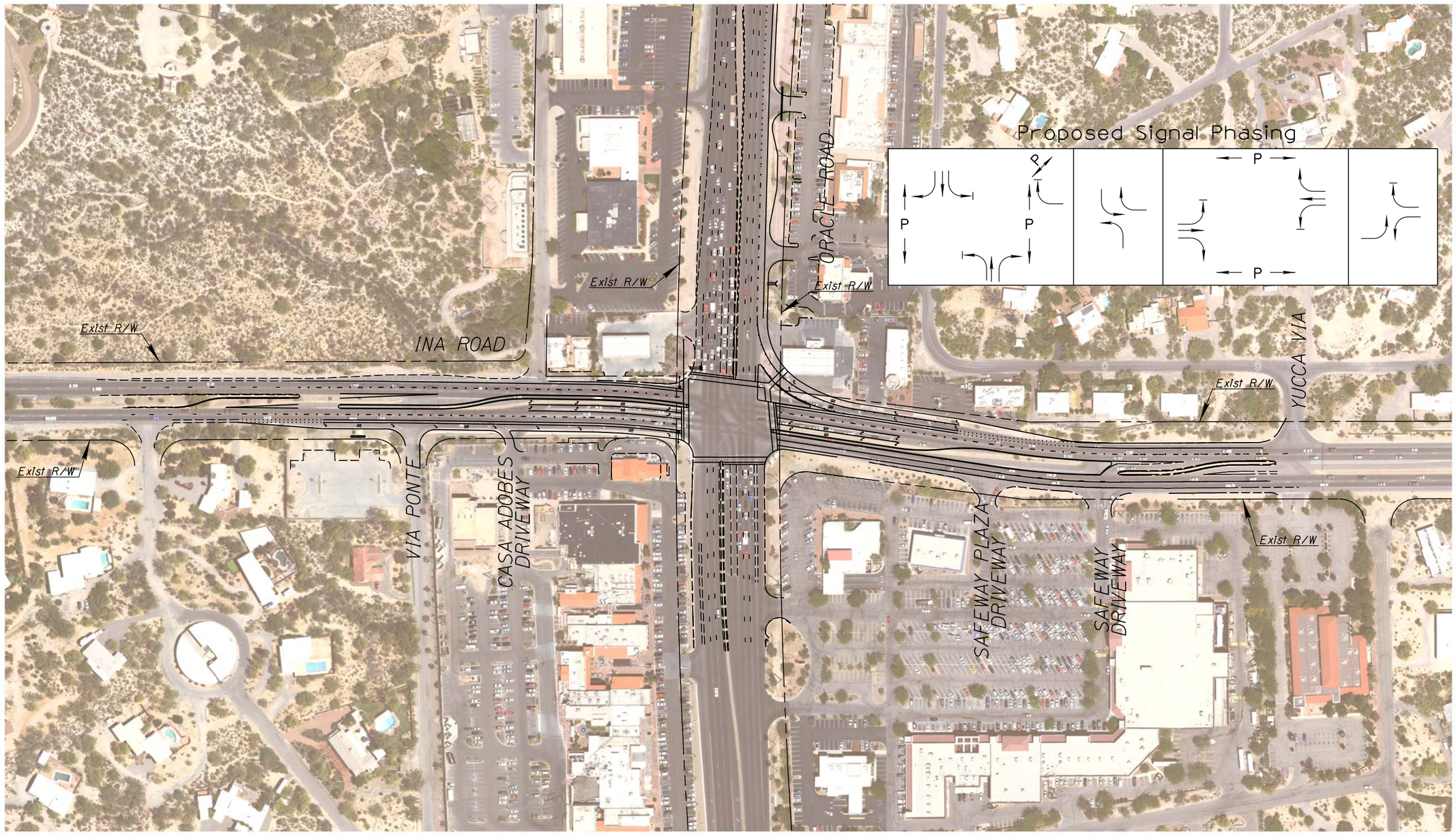
Improvement alternatives were developed to address specific capacity and operational problems, as well as overall intersection operation. Several alternatives were developed by the Pima County project team and were modified to reflect input provided by ADOT Baja Regional Traffic Engineering and Tucson District staff. Five alternatives were identified.

Alternative 1 – Dual Lefts/Free Flow Right: eastbound/westbound dual left-turn lanes; westbound free-flow right-turn lane ; a fourth lane is provided on the north leg of Oracle Road to accommodate the westbound free-flow right-turn movement.

Alternative 2A- Dual Lefts/Dual Rights: eastbound/westbound dual left-turn lanes; dual westbound right turn lanes.

Alternative 2B- Dual Lefts/Dual Rights: eastbound/westbound dual left-turn lanes; dual westbound right turn lanes; a fourth lane is provided on the north leg of Oracle Road to accommodate the westbound right-turn movement. This alternative is illustrated in Figure 5.

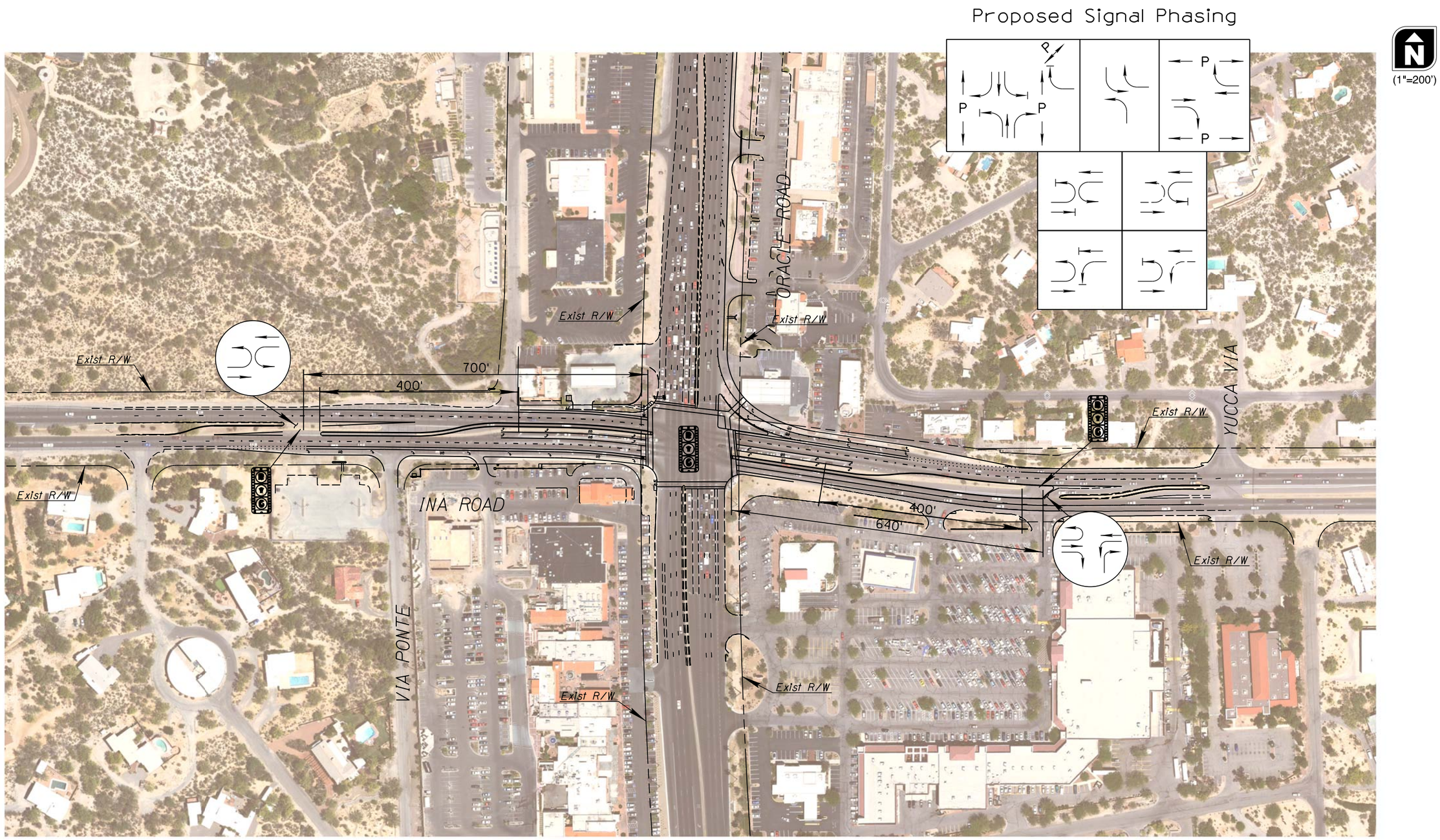
Alternative 3- Indirect Lefts/Dual Rights: indirect left-turns, commonly referred to as Michigan lefts, are provided for eastbound and westbound traffic. This alternative is illustrated in Figure 6. New signalized U-turn intersections would be located 700 feet west of Oracle Road, just west of Via Ponte, and approximately 640 feet east of Oracle Road at the main Safeway shopping center driveway. These locations for the U-turn signals are consistent with the Maricopa County Arizona Parkway design guidelines [3], which recommend 660 feet between the signalized intersection and the U-turn signal. Also included in Figure 6 are the movements and proposed signal phasing at each intersection. The median openings would each be signalized with a two-phase half signal. Since each U-turn signal would need to operate with no more than two phases in order to be coordinated with the signal at Oracle Road, no exiting left-turns at side streets or driveways would be allowed. Westbound left-turn traffic that currently turns at Oracle Road, would proceed straight through the and make a U-turn at the west signal, followed by an eastbound to southbound right-turn at Ina Road/Oracle Road.



DUEL LEFT-TURN ALTERNATIVE
INA ROAD & ORACLE ROAD INTERSECTION

FIGURE **5**

H:\projfile\9397 - Ina Rd-Oracle Rd Inters Improvements\figures\Fig5a.dgn Default (Model) 12/29/2009 - 11:18:38 AM



INDIRECT LEFT-TURN ALTERNATIVE
INA ROAD & ORACLE ROAD INTERSECTION

FIGURE 6

H:\projfile\9397 - Ina Rd-Oracle Rd Inters Improvements\figures\Fig5.dgn Default (Model) 12/29/2009 - 11:17:26 AM

Kittelson & Associates, Inc.
Transportation Engineering / Planning

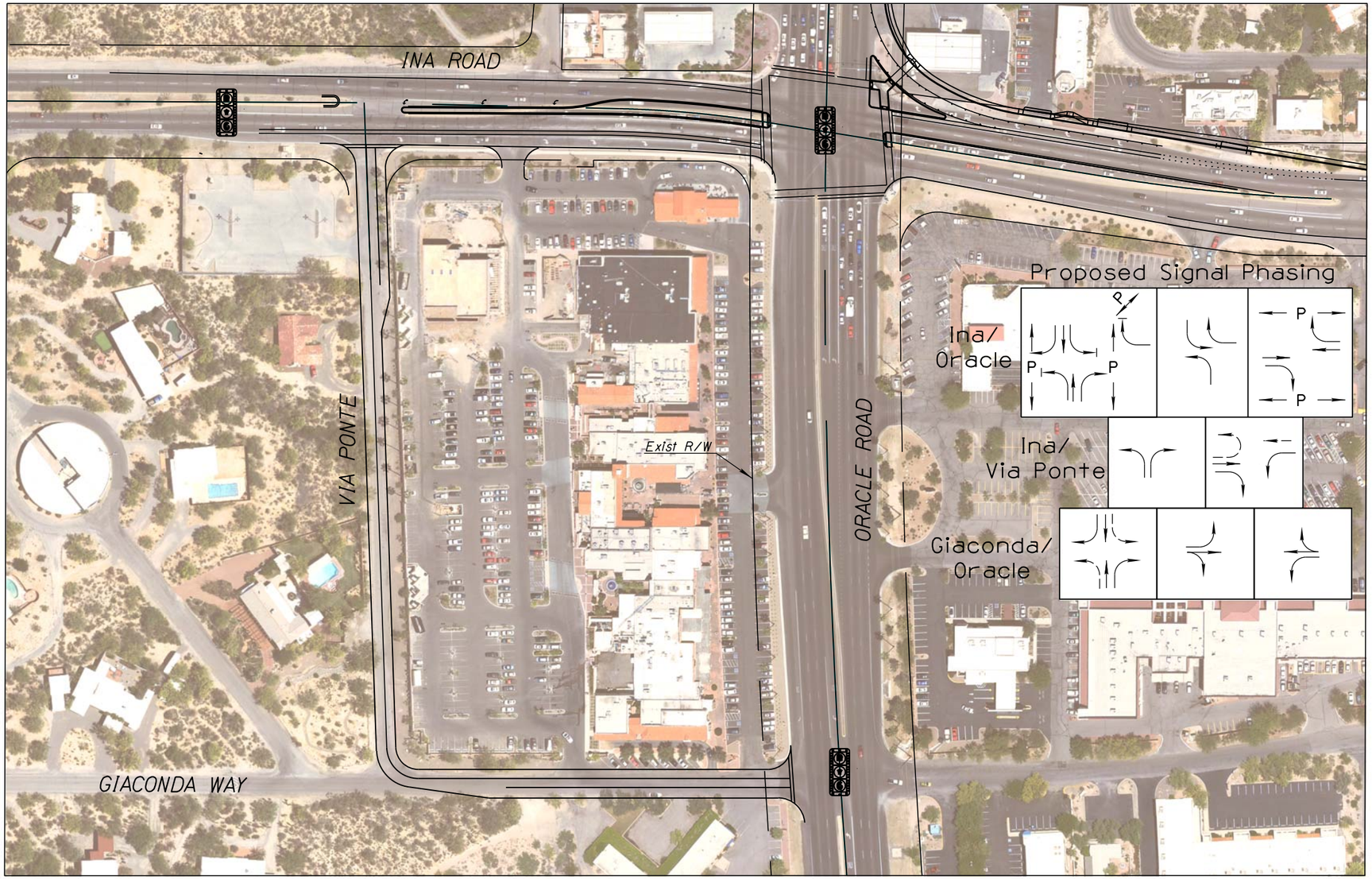
Eastbound left-turn traffic would make a similar maneuver. Dual westbound right-turn lanes at Ina Road/Oracle Road are included in this alternative.

Alternative 4- Jug-Handle Indirect Left: This is another form of an indirect left-turn intended to remove eastbound and westbound left-turn movements from the Ina Road/Oracle Road intersection. This alternative is illustrated in Figure 7. New traffic signals would be located at the Ina Road/Via Ponte intersection and the Giaconda Way/Oracle Road intersection. Westbound left-turn traffic would continue through the Ina Road/Oracle Road intersection and make a left-turn at the Ina Road/Via Ponte intersection, proceed to Oracle Road using the Via Ponte-Giaconda Way connection, making an eastbound to southbound right-turn at Giaconda Way/Oracle Road. Eastbound left-turn traffic would make a right-turn at the Ina Road/Via Ponte intersection, proceed to Oracle Road using the Via Ponte-Giaconda Way connection, making an eastbound to northbound left-turn at Giaconda Way/Oracle Road. Dual westbound right-turn lanes at Ina Road/Oracle Road are included in this alternative. After consultation with ADOT staff and since this alternative would require full reconstruction of a Via Ponte, a residential street, it was eliminated from consideration.

Methodology

Assessment of traffic operations was performed using a combination of the Highway Capacity Manual (HCM) methodologies and the microsimulation model SimTraffic. HCM methodologies were used to compare the operational benefits of the three westbound right-turn improvement alternatives, while SimTraffic was utilized to assess the indirect left-turn alternative. Simulation should be used to analyze areas with volume/capacity ratios at or greater than 1.0 because when oversaturated conditions exist, certain performance measures of effectiveness (MOEs), particularly queue length and travel time, generated by the HCM methods are often understated.

NTS



JUG HANDLE LEFT-TURN ALTERNATIVE
INA ROAD & ORACLE ROAD INTERSECTION

FIGURE 7

H:\profile\9397 - Ina Rd-Oracle Rd Inters Improvements\figures\Fig06.dgn Default (Model) 12/29/2009 - 12:21:07 PM

TRAFFIC OPERATIONS ANALYSIS

Dual Left-Turn Alternatives

The traffic operations assessment for Alts 1, 2A, and 2B was performed based on existing traffic volume data for mid-day and p.m. peak periods. It is during these periods that the westbound right-turn and eastbound left-turn volumes are heaviest and impact traffic operations to the greatest extent. Cycle lengths and phase splits were optimized for each alternative. Protected only eastbound and left-turn phasing was used since these alternatives include dual left-turn lanes. For the westbound dual right-turn lane alternatives, a right-turn overlap with the northbound/southbound protected left-turn phase was used. The analysis results are presented in Table 4. Detailed analysis worksheets are provided in Appendix C.

Traffic Operations: Adding eastbound and westbound dual left-turn lanes provides mixed benefits. While the added storage capacity will mitigate the impact of left-turn queues blocking eastbound through traffic, protected only left-turn phasing will add delay to the eastbound left-turn movement. The analysis results indicate that both the free-flow and dual right-turn options will significantly reduce delay and queuing for the westbound right-turn movement. Overall intersection delay throughout most of the day, with the exception of the p.m. peak period, will essentially be unaffected. During the p.m. peak, overall intersection delay could decrease by some 15% primarily due to the reduction in delay to the heavy westbound right-turn movement.

The pedestrian clearance times crossing Ina Road will increase with the added walking distance, however, this will not significantly increase delay during the morning and evening peak periods when the northbound/southbound through phase typically maxes out at 50 seconds.

Weaving on Oracle Road: Providing a westbound free-flow right-turn movement will require that a northbound auxiliary lane be provided to accommodate the weaving between right-turning vehicles and those turning into the two commercial driveways between Oracle Road and Sahuaro Vista. Weaving during the p.m. peak period will be particularly heavy with some 700 westbound right-turns and 150 vehicles entering/exiting the commercial driveways and Sahuaro Vista. The dual right-turn lane option would not require the addition of an auxiliary lane for weaving purposes since the

Table 4 Alternatives 1, 2A and 2B Traffic Operations Comparison (HCM)

AM Peak		Existing	Alt 1	Alt 2A & 2B
Avg. Delay (s/veh) Cycle Length = 140 s	Intersection	80	85	88
	EB LT	35	165	165
	EB RT	47	48	49
	WB RT	62	(1)	26
	SB LT	114	128	116
95th %tile Queue Length (ft)	EB LT	286	264	264
	EB RT	348	350	352
	WB LT	100	90	90
	WB RT	508	120	370
	NB LT	190	190	190
	SB LT	740	770	744
Mid-Day Peak		**Existing**	**Alt 1**	**Alt 2A & 2B**
Avg. Delay (s/veh) Cycle Length = 120 s	Intersection	56	49	50
	EB LT	44	83	83
	EB RT	41	43	42
	WB RT	46	(1)	23
	SB LT	77	58	58
95th %tile Queue Length (ft)	EB LT	292	226	226
	EB RT	176	180	180
	WB LT	186	138	140
	WB RT	260	80	260
	NB LT	366	350	348
	SB LT	546	492	490
PM Peak		**Existing**	**Alt 1**	**Alt 2A**
Avg. Delay (s/veh) Cycle Length = 150 s	Intersection	104	80	88
	EB LT	80	153	177
	EB RT	45	44	45
	WB RT	160	(1)	28
	SB LT	127	123	76
95th %tile Queue Length (ft)	EB LT	400	314	332
	EB RT	120	120	120
	WB LT	128	100	100
	WB RT	952	145	445
	NB LT	504	500	454
	SB LT	750	740	624

(1) The analysis method assumes a free-flow right will have no delay, however, some delay and queuing will occur due to vehicles slowing to make the right-turn.

westbound right-turns would be prohibited during the northbound/southbound through and eastbound/westbound protected left-turn phases. The dual right-turn lane option would minimize weaving conflicts.

Access Impacts: Adding eastbound dual left-turn lanes will require that the existing median opening at Via Ponte be moved further west. The current turn volumes at this intersection are fairly low, however are expected to increase with the planned addition of a driveway on Via Ponte that will provide access to Casas Adobes Plaza. Moving the median opening further west will replace the left-turn with a U-turn/right-turn movement. Left-turns onto Ina Road from Via Ponte would be prohibited. One potential solution to maintain this access is to realign Via Ponte through an existing parking lot to a new median opening some 150 feet to the west of the current opening. This realignment would likely require the acquisition of a residential property on Via Ponte.

Addition of westbound dual left-turn lanes would not impact the existing median opening at the Safeway center main entrance, however it would eliminate the existing eastbound U-turn movement at this median opening. Of note is that the U-turns at the Safeway center median opening are actually left-turners that by-pass turning left directly onto Oracle Road due to the lengthy queue in the eastbound left-turn lane.

Adding a westbound free-flow right-turn lane would significantly impact access at the Shell station driveway on Oracle Road since no gaps in right-turning traffic would be provided for vehicles exiting the station. Currently, access to this station is problematic, particularly during the evening peak period when the westbound right-turn volume is heavy.

Right-of-Way Impacts: Adding eastbound and westbound dual left-turn lanes will require additional right-of-way on Ina Road west of the intersection. Depending upon the alignment of Ina Road through the intersection, with the intent of reducing the existing angle point, additional right-of-way will be needed from either the Casas Adobes Plaza or the fuel station on the northwest corner. The impacts of right-of-way takes on each property will need to be assessed.

Adding dual westbound right-turn lanes can be accomplished with minor impact on the Shell station, however this would require eliminating the existing bicycle lane and prohibiting the southbound U-turn movement. Lack of either of these restrictions will require that a right-turn island be provided,

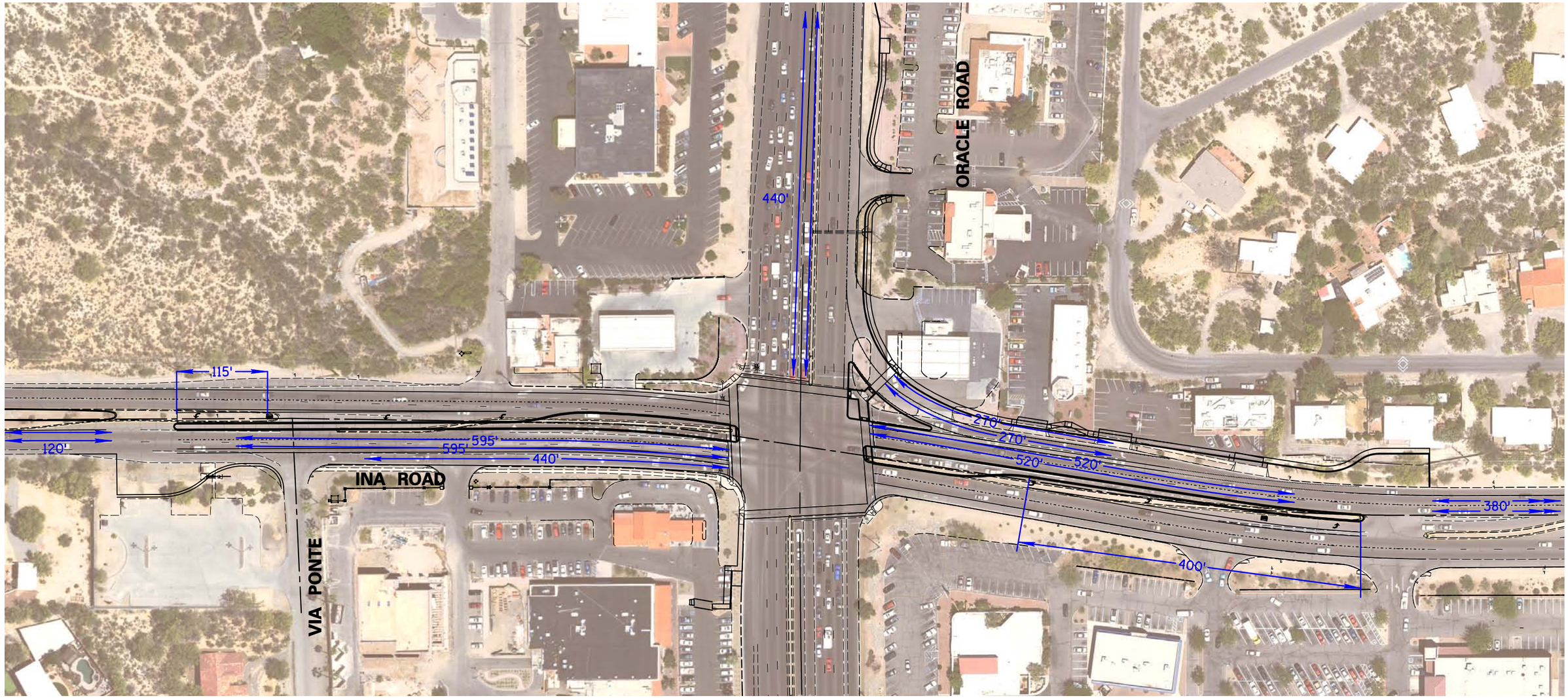
resulting in a full take of the station. In discussions with ADOT, maintaining northbound and southbound U-turn movements on Oracle Road is considered critical to providing appropriate access to adjacent properties. Adding a free-flow right-turn lane will also require a sizable amount of additional right-of-way from the station. The presence of a large 4-way power pole on the northwest corner complicates the addition of the needed westbound capacity without significantly impacting the Shell station.

Other Impacts: Adding a northbound auxiliary lane in conjunction with westbound free-flow or dual right-turn lanes will make it difficult to place a bus stop immediately north of the intersection. The bus stop will need to be further north to avoid conflicts with the right-turn traffic.

Indirect Left-Turns

Traffic Operations: Microscopic traffic simulation (SimTraffic) was used to evaluate the indirect left-turn alternative (Alt 3) due to its operational complexities and since the HCM methodologies are inadequate for evaluating traffic operations under congested conditions. Note that this alternative also includes adding dual westbound right-turn lanes. Simulation models were developed for the existing morning and evening peak traffic conditions. Each model was calibrated against existing queuing that was observed in the field. The southbound left-turn and westbound right-turn queues were of particular interest. Saturation flow rates, turning speed, lane assignment, vehicle lengths, and driver behavior parameters were adjusted in the models to achieve reasonable model calibration for the purposes of this evaluation. The traffic conditions generated by existing and indirect left-turn models are summarized in Figure 8 and Tables 5 and 6. These data represent the average of five runs of each simulation model. The models were used to evaluate existing traffic volumes, as well as 5% and 10% growth scenarios.

Currently, the signal cycle length during the morning and evening peak period typically reaches 165 seconds. The indirect left-turn alternative will shorten the cycle length on at Ina Road/Oracle Road by some 15 to 20 seconds, since the eastbound/westbound left-turn phase would no longer be required. Lost time would be reduced with the elimination of the left-turn phase. Combined with the additional capacity provided by dual westbound right-turn lanes, total average vehicle delay at Ina Road/Oracle Road and at the U-turn signals during the a.m. and p.m. peak periods is projected to decrease by 55%



Note: Queue lengths shown represent estimated maximum that will occur during the PM peak hour for each separate movement.

INDIRECT LEFT-TURN ESTIMATED QUEUEING (EXISTING,VOL.)
INA ROAD/ORACLE ROAD INTERSECTION

FIGURE 8

H:\profile\93997 - Ina Rd-Oracle Rd Inters Improvements\figures\Fig08.dgn Default (Model) 11/23/2009 - 12:42:33 PM

and 58%, respectively. Traffic operations at the Ina Road/Oracle Road intersection would improve from Levels of Service E and F to D during the morning and evening peak periods. Additional intersection capacity would become available to serve future traffic growth.

The existing queue lengths projected by the simulation model are consistent with queues that are routinely observed during the morning and evening peak periods. The simulation model results indicate a large reduction in both the southbound left-turn (78% during morning peak period and

Table 5 Alt 3: Indirect Left-Turn Operations Evaluation - AM

	Intersection or Movement	Existing (2009)	Alt 3: Indirect Left-Turn		
			Existing	5% Growth	10% Growth
Cycle Length (s)		165	140	150	150
Average Intersection Delay (s/veh)	Ina/Oracle	108	39	41	42
	West U-turn	N/A	4	4	5
	East U-turn	N/A	6	6	6
	Total	108	49	51	53
95th %tile Queue Length at Ina/Oracle Intersection (ft)	EB LT	338	N/A	N/A	N/A
	EB TH	1510	593	610	650
	EB RT	532	440	450	470
	WB LT	150	N/A	N/A	N/A
	WB TH	291	269	287	279
	SB LT	1200	423	443	455
	WB RT	387	225	248	243
95th %tile Queue at West U-turn (ft)	WB UT	N/A	115	117	122
	EB TH	N/A	122	145	240
95th %tile Queue East U-turn(ft)	EB UT	N/A	207	207	213
	WB TH	N/A	160	156	141

60% during evening peak period) and westbound right-turn (75% during evening peak period) queue lengths with the indirect left-turn alternative. The projected queue lengths for key movements are illustrated in Figure 9. Of particular importance will be the eastbound and westbound U-turn queues. The simulation results indicate that neither queue will back into the Ina Road/Oracle Road intersection. The heaviest queue, the eastbound U-turn during the evening peak period, is projected to extend some 425 feet while the separation between Ina Road/Oracle Road and the east U-turn

median opening is approximately 700 feet. The eastbound right-turn queue should not be problematic even with the added westbound U-turn volume. The projected queue for this movement could reach 470 ft with the additional U-turn traffic demand with nearly 500 feet of storage available.

U-turn Operations: Additional pavement will be required to accommodate the U-turn requirements of large trucks. Turning paths for a WB-67 truck were evaluated using Autoturn and are presented in Figures 10 and 11. At the east U-turn signal, the design will need to eliminate conflict between a WB-67 U-turn and westbound left-turn passenger car into the Safeway center. Since the Safeway center loading docks are located adjacent to Giaconda Way on the west side of the center, truck traffic enters the center from Oracle Road, not Ina Road. Therefore, a passenger car is considered the appropriate design vehicle for the westbound left-turn.

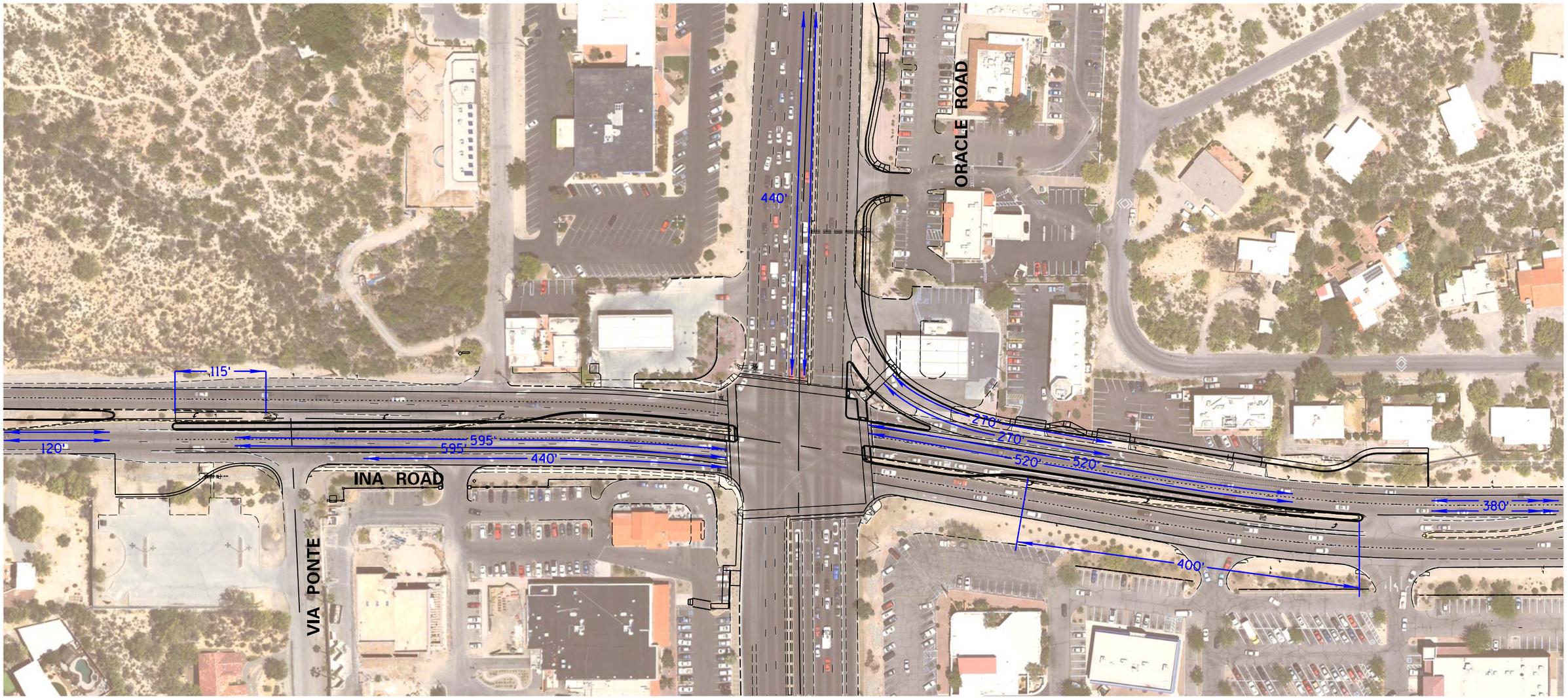
Table 6 Alt 3: Indirect Left-Turn Operations Evaluation - PM

	Intersection or Movement	Existing (2009)	Alt 3: Indirect Left-Turn		
			Existing	5% Growth	10% Growth
Cycle Length (s)		165	140	150	150
Average Intersection Delay (s/veh)	Ina/Oracle	115	42	44	44
	West U-turn	N/A	3	3	3
	East U-turn	N/A	13	13	13
	Total	115	58	60	60
95th %tile Queue Length at Ina/Oracle Intersection (ft)	EB LT	381	N/A	N/A	N/A
	EB TH	649	464	465	476
	EB RT	291	202	235	244
	WB LT	367	N/A	N/A	N/A
	WB TH	1878	519	542	546
	SB LT	1115	436	405	413
	WB RT	2028	271	297	297
95th %tile Queue at West U-turn (ft)	WB UT	N/A	110	109	110
	EB TH	N/A	<50	54	64
95th %tile Queue East U-turn(ft)	EB UT	N/A	400	423	424
	WB TH	N/A	380	367	375

Access: Adding a U-turn signal will have the same impact on access to Via Ponte as adding eastbound left-turn lanes. Left-turns into Via Ponte will need to make a U-turn followed by a right-

turn. Left-turns onto Oracle Road from Via Ponte would be prohibited. At the east U-turn signal, left-turns exiting the Safeway center would be prohibited.

Right-of-way: Additional right-of-way will be required at the U-turn signals impacting an existing parking lot at the west signal and two residential properties at the east signal. The two residential properties would likely be total takes. This alternative would not impact either the Casas Adobes Plaza or fuel station on the northwest corner, however, the Shell station on the northeast corner would be impacted with the addition of a free-flow or dual westbound right-turn lanes.

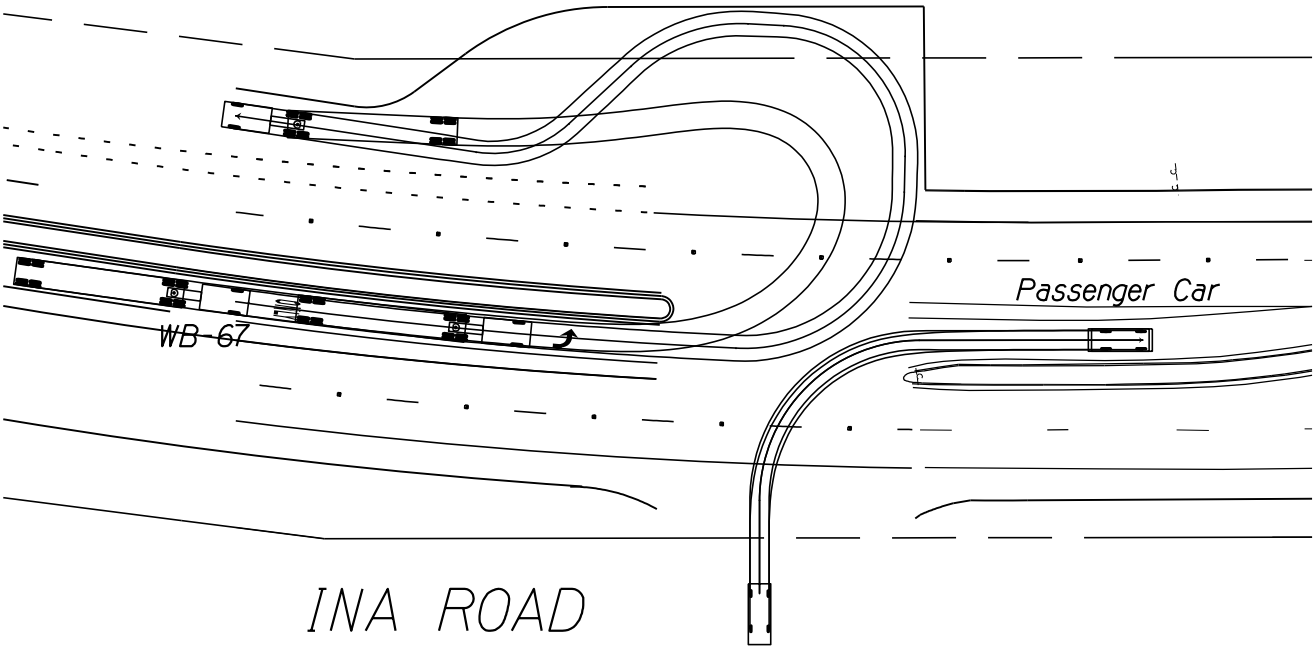


Note: Queue lengths shown represent estimated maximum that will occur during the PM peak hour for each separate movement.

INDIRECT LEFT-TURN ESTIMATED QUEUEING (EXISTING,VOL.)
INA ROAD/ORACLE ROAD INTERSECTION

FIGURE 9

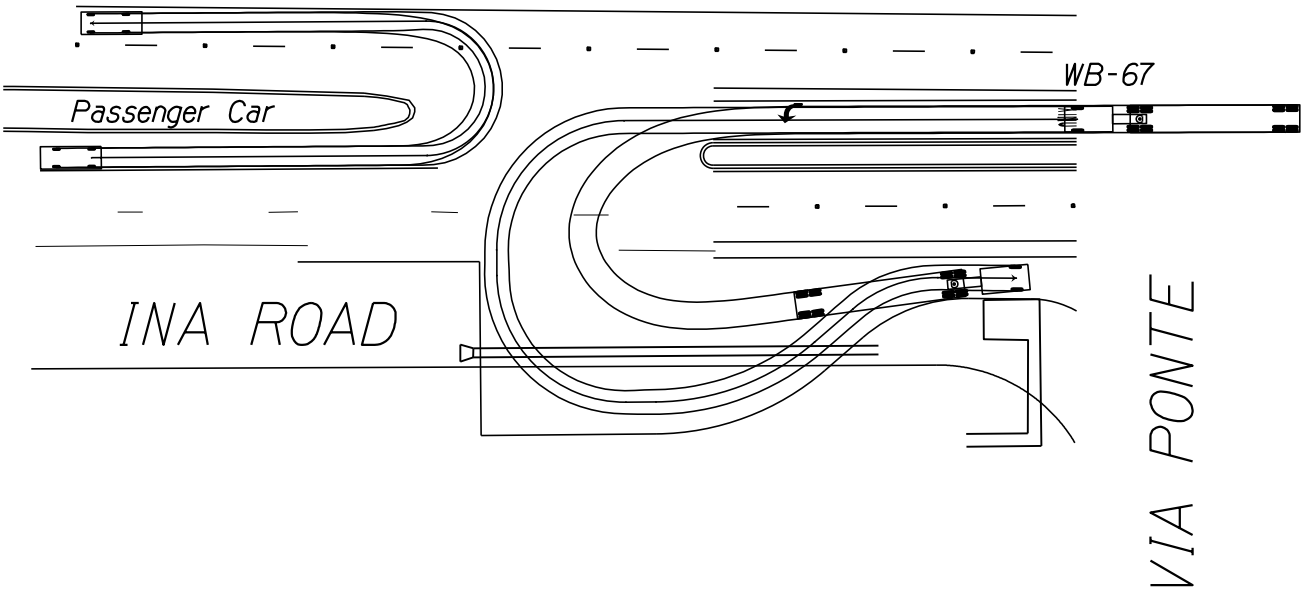
H:\projfile\9397 - Ina Rd-Oracle Rd Inters Improvements\figures\Fig08.dgn Default (Model) 12/29/2009 - 12:25:31 PM



TURNING PATHS AT EAST U-TURN SIGNAL

FIGURE **10**

H:\profile\9397 - Ina Rd-Oracle Rd Inters Improvements\figures\Fig09.dgn Default (Model) 12/29/2009 - 12:27:11 PM



TURNING PATHS AT WEST U-TURN SIGNAL

FIGURE **11**

H:\profile\9397 - Ina Rd-Oracle Rd Inters Improvements\figures\Fig10.dgn Default (Model) 12/29/2009 - 12:28:03 PM

Discussion

With the intent of implementing improvements that will benefit existing intersection operations and safety, as well as create additional capacity in anticipation of growth in traffic demand, all without requiring major reconstruction at Ina Road/Oracle Road, three improvements were identified and evaluated. These improvements include adding westbound right-turn capacity, adding eastbound left-turn storage, and implementing indirect left-turns for the eastbound and westbound movements.

WESTBOUND RIGHT-TURN

Both options to add capacity, a free-flow movement or dual right-turn lanes, will dramatically reduce delay and queuing for this movement. Although a free-flow movement will produce the greatest capacity benefits, dual right-turn lanes will have less impact on pedestrian crossing safety and southbound U-turns, and will not create a weaving situation north of Oracle Road between northbound through and westbound right-turn traffic. Both PCDOT and ADOT concur that the dual right-turn with a northbound auxiliary lane is the preferred option for this improvement. Should additional capacity be required, the dual lanes could be converted to free-flow. Implementation of this improvement will require acquisition of the Shell fuel station.

DUAL EASTBOUND/WESTBOUND LEFT-TURNS

This improvement will primarily benefit eastbound through traffic by mitigating the blockage caused by the left-turn queue. Delay to the eastbound and westbound left-turns will actually increase, depending upon the time of day, it the current permitted/protected left-turn phasing is replaced by protected only per ADOT standard practice. Maintaining the permitted/protected phasing with dual left-turn lanes, as is done at Oracle Road/River Road should be considered. Implementing dual left-turn lanes will require that additional right-of-way be acquired on the west side from either the Casas Adobes Plaza or fuel station as well as the commercial properties on the north side of Ina Road east of the intersection. Adding dual lanes will impact existing access at Via Ponte as the median opening will need to be moved further west. This impact could be mitigated by realigning Via Ponte to tie into the relocated median opening.

INDIRECT EASTBOUND/WESTBOUND LEFT-TURN

The simulation analysis of the indirect left-turn alternative indicates that a significant benefit to intersection capacity can be achieved. Overall delay, inclusive of delays incurred at the U-turn signals, and queues will decrease substantially. Additional capacity will become available to serve expected future traffic growth. The proposed separation of the indirect left-turn median openings with the intersection is consistent with the design guidelines recently developed by Maricopa County, which recommend 600 feet. Operationally, the U-turn signals can be coordinated with the Ina Road/Oracle Road signal so that the U-turn queues do not back into the intersection and the eastbound and westbound through and right-turn traffic (with dual westbound right-turn lanes) operates efficiently. In order to accommodate the turning paths of large trucks additional pavement will need to be provided at the U-turn signals, requiring right-of-way acquisition from a commercial parking lot and two residential properties. Since the west U-turn median opening would be located west of Via Ponte, current left-turn access at Via Ponte would be eliminated.

Conclusions/Recommendations

1. The addition of dual lanes with a northbound auxiliary lane will provide significant benefit to the westbound right-turn movement while minimizing impacts to the southbound U-turn and traffic operations associated with weaving movements on Oracle Road north of Ina Road. This improvement is fully supported by both PCDOT and ADOT.

2. Installation of indirect eastbound/westbound left-turns will provide substantial benefit to overall intersection capacity and operations, particularly to northbound/southbound through and left-turn movements on Oracle Road. Analysis of this alternative using microsimulation shows that it is operationally feasible and should not create undesirable impacts. As such, it is recommended for consideration by PCDOT and ADOT. If the indirect left-turn option does not move forward, eastbound/westbound dual left-turn lanes should be installed. At a minimum, the eastbound left-turn lane should be extended to provide additional storage in order to mitigate the blockage to through traffic caused by the left-turn queuing.

References

1. State Route 77/Oracle Road Multimodal Corridor Profile Study, Prepared by Transcore for ADOT, May 2007

2. PCDOT website: http://www.dot.co.pima.az.us/trafeng/.

3. Design Guideline Recommendations for the Arizona Parkway. Prepared by AECOM for the Maricopa County Department of Transportation, August 2008.

APPENDIX A

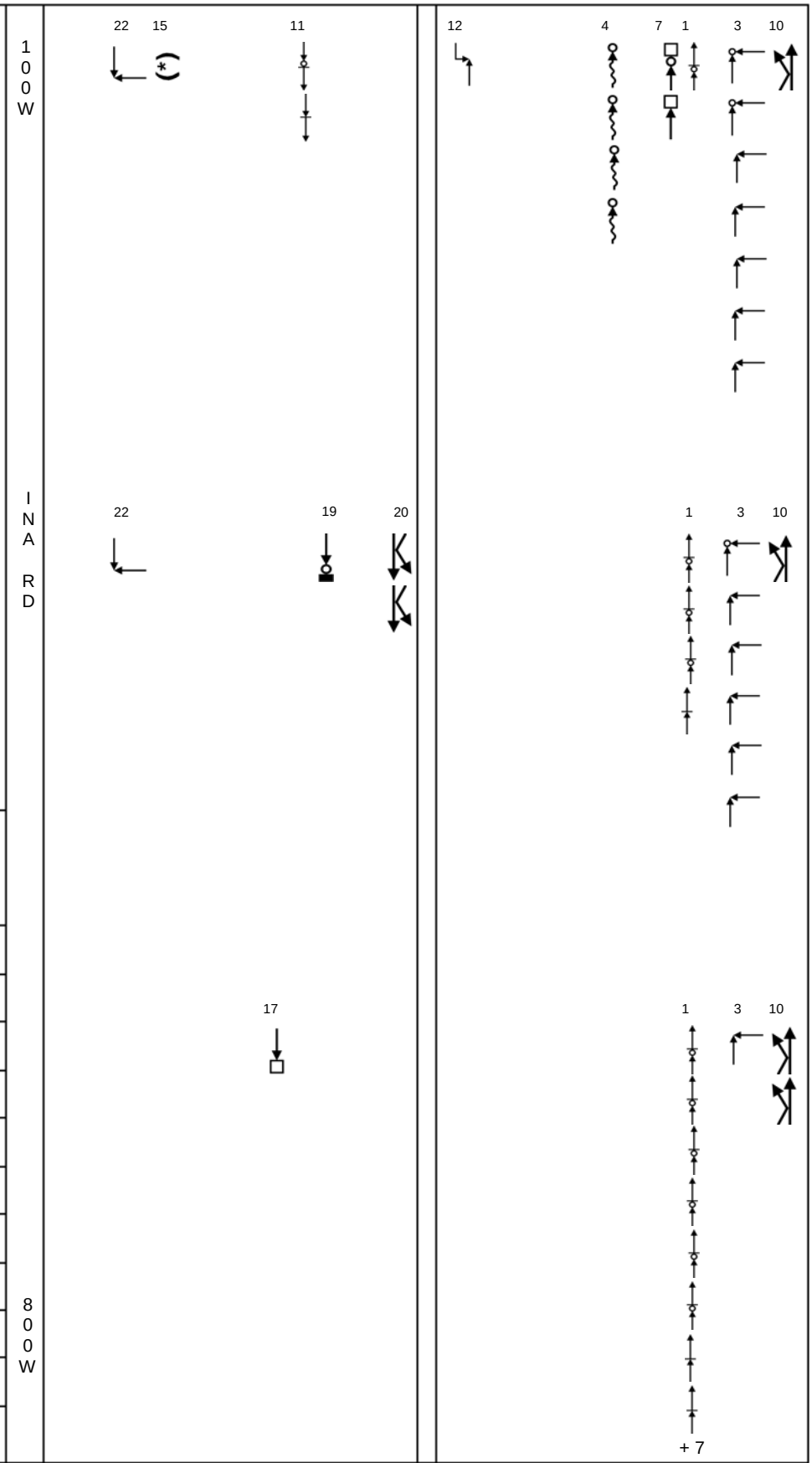
Crash Data

LEGEND

COLLISION DIAGRAM

- REAR END
- TURNING
- ANGLE
- OUT OF CONTROL
- MISC.
- FIXED OBJ.
- BACKING
- HEAD ON
- SIDE SWIPE
- PEDESTRIAN OR ANIMAL
- Bodilt Injury
- Fatality

COLLISION TYPE	FATAL	BODILY INJURY	PROP DAMAGE	TOTAL
REAR END		11	11	22
TURNING			1	1
ANGLE		3	13	16
OUT OF CONTROL		4		4
MISC			1	1
FIXED OBJ		1	2	3
BACKING				
HEAD ON				
SIDE SWIPE			6	6
PEDESTRIAN OR ANIMAL		1		1
TOTAL	0	20	34	54



PIMA COUNTY DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING DIVISION

COLLISION DIAGRAM

10/1/2005 THROUGH 9/30/2008

INA RD FROM 100 W TO 800 W

DATE 12/4/2008

Pima County Department of Transportation

Traffic Engineering Division

------ Accident Summary Sheet ------

INA RD 100 - 800 W

10/1/2005 to 9/30/2008

TYPE	DATE	TIME	SEVERITY	INJ	CITATION	LIGHT	DAY	BLOCK	CASE	NARRATIVE
1	07-09-08	7:45	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Wed	750 W	080709062	EB REAR ENDED EB (TRAFFIC STOPPED FOR UNKNOWN REASON)
	07-08-08	8:00	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Tue	670 W	080708089	EB REAR ENDED EB (TRAFFIC BACKED FOR UNKNOWN REASON)
	05-30-08	15:10	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	790 W	080530231	EB REARENDED EB STOPPED (TRAFFIC BACKED UP - UNKNOWN REASON)
	05-30-08	14:34	BODILY- 2	2	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	780 W	080530209	EB REAR ENDED EB STOPPED (TRAFFIC BACKED UP- UNKNOWN REASON)
	05-16-08	14:41	BODILY- 2	1	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	610 W	080516215	EB REAR ENDED A EB STOPPED IN TRAFFIC
	04-18-08	17:45	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	690 W	080418319	EB REARENDED EB STOPPED (TRAFFIC STOPPED FOR UNKNOWN REASON)
	12-14-07	14:30	BODILY- 3	2	FOLLOWED TOO CLOSELY	DAY	Fri	790 W	071214176	EB REAR END MULTI-CAR (TRAFFIC BACKED UP FOR UNKNOWN REASON)
	11-27-07	7:36	BODILY- 3	1	SPEED TO0 FAST FOR CONDITIONS	DAY	Tue	610 W	071127063	EB REAR END MULTI CAR (TRAFFIC BACKED UP-UNKNOWN REASON)
	11-16-07	14:57	BODILY- 2	1	INATTENTION	DAY	Fri	780 W	071116237	EB REAR ENDED AN EB
	10-19-07	15:50	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	790 W	071019245	EB REAR ENDED EB STOPPED IN TRAFFIC BACKED UP
	08-31-07	15:34	BODILY- 2	3	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	640 W	070831223	EB REAR END MULTI CAR
	05-15-07	8:21	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Tue	690 W	070515073	EB REAR ENDED EB THAT STOPPED FOR UNKNOWN REASON
	03-07-07	14:41	BODILY- 2	1	SPEED TO0 FAST FOR CONDITIONS	DAY	Wed	140 W	070307244	EB MERGING REARENDED EB (TEMP LANE CLOSURE)
	05-23-06	14:56	BODILY- 2	2	SPEED TO0 FAST FOR CONDITIONS	DAY	Tue	460 W	060523228	EB REAR END MULTI CAR (TRAFFIC SLOWING FOR UNKNOWN REASON)

** denoates alcohol-related accident

TYPE	DATE	TIME	SEVERITY	INJ		CITATION	LIGHT	DAY	BLOCK	CASE	NARRATIVE
1	05-22-06	8:48	BODILY- 2	1		FOLLOWED TOO CLOSELY	DAY	Mon	460 W	060522119	EB REAR ENDED EB STOPPED (TRAFFIC BACKED UP-UNKNOWN REASON)
	05-19-06	15:51	BODILY- 2	2		SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	540 W	060519266	EB REAR END MULTI CAR (TRAFFIC BACKED UP - UNKNOWN REASON)
	05-19-06	14:54	PROPERTY	0		SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	560 W	060519233	EB REAR ENDED EB SLOWING IN TRAFFIC
	04-28-06	7:20	PROPERTY	0		SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	640 W	060428049	EB REAR END MULTI CAR (TRAFFIC STOPPED FOR UNKNOWN REASON)
	04-25-06	7:35	PROPERTY	0		SPEED TO0 FAST FOR CONDITIONS	DAY	Tue	570 W	060425059	EB REAR ENDED EB STOPPED (TRAFFIC BACKED UP -UNKNOWN REASON)
	11-23-05	13:44	PROPERTY	0		SPEED TO0 FAST FOR CONDITIONS	DAY	Wed	690 W	051123224	EB REAR ENDED EB SLOWING (TRAFFIC BACKED UP- UNKNOWN REASON)
3	01-03-08	15:05	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DAY	Thu	470 W	080103203	NB RT FTY EXITING A PVT DR & HIT A EB
	12-19-07	15:15	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DAY	Wed	580 W	071219200	EB HIT NB RT THAT FTY EXITING PVT DR
	07-02-07	12:45	PROPERTY	0	**	FAILED TO YIELD RIGHT OF WAY	DAY	Mon	260 W	070702180	NB FTY EXITING A PRIVATE DRIVE AND HIT A EB (ALCOHOL)
	05-27-07	19:10	BODILY- 4	1	**	FAILED TO YIELD RIGHT OF WAY	TWILIGHT	Sun	250 W	070527283	EB MOTORCYCLE HIT A NB THAT FTY FROM PVT DR (ALCOHOL)
	04-04-07	13:50	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DAY	Wed	370 W	070404209	NB RT EXITING A PVT DR HIT A EB
	03-05-07	8:30	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DAY	Mon	420 W	070305079	NB RT FTY EXITING PVT DR & HIT EB
	12-18-06	15:36	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DAY	Mon	560 W	061218255	NB RT FTY EXITING PVT DR HIT EB
	12-11-06	16:34	BODILY- 3	1		FAILED TO YIELD RIGHT OF WAY	DAY	Mon	230 W	061211284	EB HIT A NB LT THAT FTY EXITING A PVT DR
	11-13-06	14:08	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DAY	Mon	200 W	061113223	EB HIT A NB THAT FTY EXITING PVT DR
	09-20-06	13:10	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DAY	Wed	320 W	060920197	NB EXITING PVT DR FTY & HIT A EB
	08-31-06	8:30	BODILY- 2	1		FAILED TO YIELD RIGHT OF WAY	DAY	Thu	370 W	060831078	EB HIT A NB RT THAT FTY EXITING PVT DR
	04-28-06	15:47	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DAY	Fri	460 W	060428247	NB FTY EXITING A PVT DR AND HIT A EB
	12-11-05	18:08	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DARK	Sun	300 W	051211260	EB HIT NB LT THAT FTY EXITING A PVT DR

** denoates alcohol-related accident

TYPE	DATE	TIME	SEVERITY	INJ		CITATION	LIGHT	DAY	BLOCK	CASE	NARRATIVE
3	10-18-05	18:41	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DARK	Tue	260 W	051018323	EB HIT NB LT THAT FTY EXITING PVT DR
4	08-17-08	18:41	BODILY- 2	1		UNKNOWN	TWILIGHT	Sun	210 W	080817298	EB MOTORCYCLE DRIVER LOST CONTROL AND FELL OFF THE BIKE
	08-09-08	14:51	BODILY- 3	1		SPEED TO0 FAST FOR CONDITIONS	DAY	Sat	310 W	080809219	EB LOST CONTROL HIT A WALL, LIGHT POLE & ROLLED
	05-16-08	6:00	BODILY- 2	1		FAILED TO YIELD RIGHT OF WAY	DAY	Fri	250 W	080516048	EB MOTORCYCLE LOST CTRL AVOIDING A NB RT EXITING PVT DR
	10-19-07	15:14	BODILY- 3	1		UNKNOWN	DAY	Fri	220 W	071019229	EB MOTORCYCLE AVOIDING A WB LT LOST CTRL & ROLLED
7	03-18-08	19:06	PROPERTY	0		SPEED TO0 FAST FOR CONDITIONS	TWILIGHT	Tue	330 W	080318329	EB U-TURN HIT SIGN
	12-19-05	15:00	BODILY- 4	2		SPEED TO0 FAST FOR CONDITIONS	DAY	Mon	110 W	051219208	EB BLACKED OUT LOST CTRL RAN OVER MEDIAN HIT A WB
10	12-04-07	8:55	PROPERTY	0		UNSAFE LANE CHANGE	DAY	Tue	780 W	071204091	EB CHANGING LANES SIDE SWIPED EB
	05-16-07	9:04	PROPERTY	0		UNSAFE LANE CHANGE	DAY	Wed	340 W	070516095	EB CHANGED LANES & SIDESWIPED A EB
	10-27-06	10:35	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DAY	Fri	330 W	061027116	EB CHANGED LANES & SIDESWIPED EB
	10-19-06	13:40	PROPERTY	0		UNSAFE LANE CHANGE	DAY	Thu	670 W	061019215	EB MERGING IN CONSTRUCTION ZONE HIT A EB
11	01-18-07	22:00	BODILY- 2	1			DARK	Thu	240 W	070118373	WB AVOIDING A EB IN WB LN REARENDED A WB
	03-11-06	21:03	PROPERTY	0		SPEED TO0 FAST FOR CONDITIONS	DARK	Sat	250 W	060311324	WB REAR ENDED A WB
12	10-21-05	16:21	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DAY	Fri	260 W	051021254	EB HIT WB LT THAT FTY ENTERING PVT DR HIT TREE
15	03-14-08	14:54	PROPERTY	0		NONE	DAY	Fri	230 W	080314244	EB U-TURN FTY AND HIT A WB
17	05-09-07	15:59	PROPERTY	0		INATTENTION	DAY	Wed	650 W	070509244	WB LOST CTRL HIT MEDIAN, TREE & ROLLED (TRAFFIC BACKED UP)
19	04-06-07	22:26	BODILY- 3	1	**	NONE	DARK	Fri	340 W	070406392	WB HIT A NB PEDESTRIAN (ALCOHOL & DRUGS)
20	02-18-08	11:30	PROPERTY	0		UNSAFE LANE CHANGE	DAY	Mon	540 W	080218106	WB CHANGING LANES SIDESWIPED WB
	04-01-07	10:25	PROPERTY	0		UNKNOWN	DAY	Sun	370 W	070401123	WB SIDESWIPED A WB
22	08-01-08	19:35	PROPERTY	0		FAILED TO YIELD RIGHT OF WAY	DARK	Fri	340 W	080801369	SB EXITING PVT DR FTY HIT A WB
	12-01-07	18:36	PROPERTY	0		UNKNOWN	DARK	Sat	230 W	071201359	WB HIT A NB LT THAT FTY EXITING A PRIVATE DRIVE

** denoates alcohol-related accident

LEGEND
COLLISION DIAGRAM

REAR END
TURNING
ANGLE
OUT OF CONTROL
MISC
FIXED OBJ
BACKING
HEAD ON
ANIMAL/ PED.
Bodily Injury
Fatality

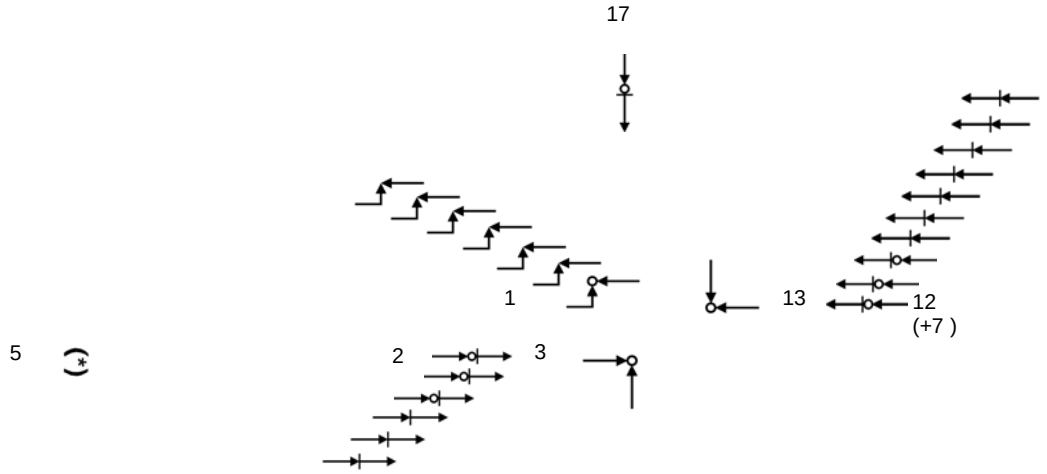
PIMA COUNTY DEPARTMENT OF TRANSPORTATION

TRAFFIC ENGINEERING DIVISION

COLLISION DIAGRAM

PASEO DEL NORTE/VIA

INA RD



COLLISION TYPE	FATAL	BODILY INJURY	PROP DAMAGE	TOTAL
REAR END		7	17	24
TURNING		1	6	7
ANGLE		2		2
OUT OF CONTROL				
MISC.			1	1
FIXED OBJ				
BACKING				
HEAD ON				
PEDESTRIAN/ ANIMAL				
TOTAL	0	10	24	34

PASEO DEL NORTE/VIA ASSISI at INA RD

10/1/2005 to 9/30/2008

Pima County Department of Transportation

Traffic Engineering Division

------ Crash Summary Sheet ------

PASEO DEL NORTE/VIA ASSISI at INA RD

10/1/2005 to 9/30/2008

TYPE	DATE	TIME	SEVERITY	INJ	CITATION	LIGHT	DAY	CASE	NARRATIVE
1	03-23-08	6:55	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Sun	080323076	WB HIT EB LT THAT FTY
	02-01-08	15:44	PROPERTY	0	MADE IMPROPER TURN	DAY	Fri	080201216	WB HIT EB LT THAT FTY
	12-14-07	18:45	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DARK	Fri	071214312	WB HIT A EB LT THAT FTY ON A YELLOW LIGHT
	01-31-07	7:30	BODILY- 2	2	FAILED TO YIELD RIGHT OF WAY	DAY	Wed	070131057	WB HIT A EB LT THAT FTY
	12-13-06	8:07	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Wed	061213079	EB LT FTY HIT A WB
	09-07-06	8:10	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Thu	060907134	EB LT FTY & HIT A WB
	11-11-05	9:20	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Fri	051111815	EB LT FTY HIT WB
2	08-08-08	13:37	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	080808199	EB REAR END MULTI CAR
	11-27-07	7:26	BODILY- 3	1	SPEED TO0 FAST FOR CONDITIONS	DAY	Tue	071127051	EB REAR END (TRAFFIC SLOWING FOR UNKNOWN REASON)
	11-27-07	7:26	BODILY- 3	1	SPEED TO0 FAST FOR CONDITIONS	DAY	Tue	071127070	EB REAR END (PREVIOUS ACCIDENT)
	10-28-07	6:50	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	TWILIG	Sun	071028093	EB REAR ENDED EB SLOWING (SIGNAL WAS NOT WORKING)
	09-25-07	8:48	BODILY- 2	1	SPEED TO0 FAST FOR CONDITIONS	DAY	Tue	070925070	EB REAR END MULTI CAR (TRAFFIC BACKED UP FROM INT.)
	02-09-06	11:55	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Thu	060209143	EB REAR END MULTI CAR (TRAFFIC BACKED UP FROM SIGNAL)
3	10-07-06	17:10	BODILY- 3	1 **	DISREGARDED TRAFFIC SIGNAL	DAY	Sat	061007278	NB RAN THE RED LIGHT & HIT A EB MOTORCYCLE (ALCOHOL)
5	01-31-08	8:35	PROPERTY	0	UNSAFE LANE CHANGE	DAY	Thu	080131070	EB SIDESWIPED EB (CHANGING LANES)
12	08-08-08	14:01	PROPERTY	0	FOLLOWED TOO CLOSELY	DAY	Fri	080808204	WB REAR END (TRAFFIC BACKED UP FROM SIGNAL & PREV. ACCIDENT)
	08-08-08	14:05	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	080808205	WB REAR END (TRAFFIC BACKED UP FROM SIGNAL& PREV. ACCIDENT)
	07-22-08	12:33	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Tue	080722157	WB REAR ENDED A WB THAT STOPPED FOR THE YELLOW LIGHT
	05-03-08	13:40	PROPERTY	0	FOLLOWED TOO CLOSELY	DAY	Sat	080503208	WB REARENDED WB THAT STOPPED (TRAFFIC BACKED UP FROM SIGNAL)

** denotes alcohol-related accident

TYPE	DATE	TIME	SEVERITY	INJ	CITATION	LIGHT	DAY	CASE	NARRATIVE
12	03-07-08	13:43	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	080307175	WB REAR ENDED WB STOPPED IN TRAFFIC (SIGNAL TURNED GREEN)
	01-22-08	15:27	PROPERTY	0	INATTENTION	DAY	Tue	080122212	WB REAR ENDED WB (STOPPED FOR TRAFFIC BACKED UP IN LEFT LN)
	01-16-08	12:10	PROPERTY	0	NONE	DAY	Wed	080116126	WB REAR ENDED WB STOPPED IN TRAFFIC
	12-22-07	14:11	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Sat	071222211	WB REAR ENDED A WB SLOWING (TRAFFIC BACKED UP FROM INT.)
	10-29-07	13:24	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Mon	071029167	WB REAR ENDED A WB STOPPED (TRAFFIC BACKED UP FROM INT)
	09-24-07	9:35	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Mon	070924096	WB REAR END MULTI CAR (TRAFFIC STOPPED FOR RED LIGHT)
	09-20-07	12:52	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Thu	070920170	WB REAR ENDED A WB (SIGNAL TURNED GREEN)
	03-09-07	23:16	BODILY- 3	1	SPEED TO0 FAST FOR CONDITIONS	DARK	Fri	070309492	WB REARENDED WB SLOWING FOR YELLOW TRAFFIC SIGNAL
	11-08-06	7:41	BODILY- 2	2	SPEED TO0 FAST FOR CONDITIONS	DAY	Wed	061108059	WB REARENDED WB SLOWING IN TRAFFIC FOR INTERSECTION
	09-26-06	6:50	PROPERTY	0	FOLLOWED TOO CLOSELY	DAY	Tue	060926050	WB REARENDED A WB THAT STOPPED FOR THE YELLOW LIGHT
	04-10-06	16:17	BODILY- 2	1	SPEED TO0 FAST FOR CONDITIONS	DAY	Mon	060410282	WB REAR ENDED A WB STOPPED AT THE RED LIGHT
	03-14-06	17:04	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Tue	060314260	WB REAR ENDED WB STOPPED AT THE SIGNAL LIGHT
	03-10-06	17:14	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	060310255	WB REAR END MULTI CAR (TRAFFIC BACKED UP FROM INT.)
13	08-28-07	19:42	BODILY- 3	1	UNKNOWN	DARK	Tue	070828332	WB HIT A SB LT
17	03-30-06	12:30	BODILY- 2	1	FOLLOWED TOO CLOSELY	DAY	Thu	060330168	SB LT REAR ENDED SB LT THAT STOPPED TO AVOID NB RT THAT FTY

** denotes alcohol-related accident

LEGEND
COLLISION DIAGRAM

REAR END
TURNING
ANGLE
OUT OF CONTROL
MISC
FIXED OBJ
BACKING
HEAD ON
ANIMAL/ PED.

Bodily Injury
Fatality

PIMA COUNTY DEPARTMENT OF TRANSPORTATION

TRAFFIC ENGINEERING DIVISION

COLLISION DIAGRAM

SIENA DR

INA RD

7

COLLISION TYPE	FATAL	BODILY INJURY	PROP DAMAGE	TOTAL
REAR END			1	1
TURNING				
ANGLE				
OUT OF CONTROL				
MISC.				
FIXED OBJ				
BACKING				
HEAD ON				
PEDESTRIAN/ ANIMAL				
TOTAL	0	0	1	1

SIENA DR at INA RD

10/1/2005 to 9/30/2008

Pima County Department of Transportation

Traffic Engineering Division

------ Crash Summary Sheet ------

SIENA DR at INA RD

10/1/2005 to 9/30/2008

TYPE	DATE	TIME	SEVERITY	INJ	CITATION	LIGHT	DAY	CASE	NARRATIVE
7	10-19-07	16:01	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	071019253	NB REAR ENDED A NB RT STOPPED AT THE STOP SIGN

** denotes alcohol-related accident

LEGEND
COLLISION DIAGRAM

REAR END
TURNING
ANGLE
OUT OF CONTROL
MISC
FIXED OBJ
BACKING
HEAD ON
ANIMAL/ PED.

Bodily Injury
Fatality

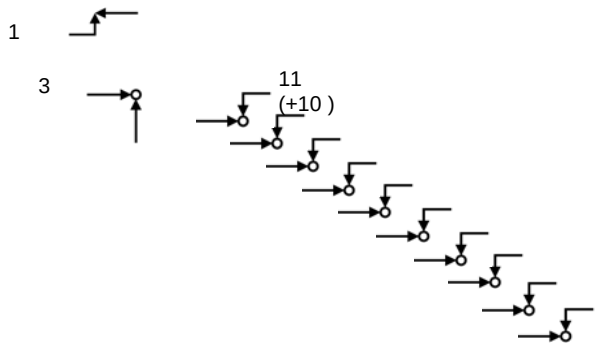
PIMA COUNTY DEPARTMENT OF TRANSPORTATION

TRAFFIC ENGINEERING DIVISION

COLLISION DIAGRAM

VIA PONTE

INA RD



COLLISION TYPE	FATAL	BODILY INJURY	PROP DAMAGE	TOTAL
REAR END				
TURNING		10	11	21
ANGLE		1		1
OUT OF CONTROL				
MISC.				
FIXED OBJ				
BACKING				
HEAD ON				
PEDESTRIAN/ ANIMAL				
TOTAL	0	11	11	22

VIA PONTE at INA RD

10/1/2005 to 9/30/2008

Pima County Department of Transportation

Traffic Engineering Division

------ Crash Summary Sheet ------

VIA PONTE at INA RD

10/1/2005 to 9/30/2008

TYPE	DATE	TIME	SEVERITY	INJ	CITATION	LIGHT	DAY	CASE	NARRATIVE
1	09-14-07	16:30	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	070914273	EB REAR ENDED EB THAT STOPPED FAST FOR EB CHANGING LANES
3	05-09-06	11:31	BODILY- 3	1	FAILED TO YIELD RIGHT OF WAY	DAY	Tue	060509148	EB MOTORCYCLE HIT A NB RT THAT FTY
11	08-08-08	13:15	BODILY- 3	1	FAILED TO YIELD RIGHT OF WAY	DAY	Fri	080808190	EB HIT A WB LT
	06-01-08	13:32	BODILY- 2	4	FAILED TO YIELD RIGHT OF WAY	DAY	Sun	080601173	WB LT HIT A EB RT
	03-28-08	17:07	BODILY- 4	1	FAILED TO YIELD RIGHT OF WAY	DAY	Fri	080328307	WB LT FTY & HIT EB GOING STRAIGHT IN RT LANE
	03-08-08	11:40	PROPERTY	0	MADE IMPROPER TURN	DAY	Sat	080308152	WB LT HIT A EB PASSING TRAFFIC THAT WAS STOPPED
	03-01-08	12:30	PROPERTY	0	UNSAFE LANE CHANGE	DAY	Sat	080301155	EB USING RT LANE TO PASS STOPPED TRAFFIC HIT A WB LT
	02-03-08	12:58	BODILY- 2	1	NONE	DAY	Sun	080203167	EB HIT WB LT (TRAVELING STRAIGHT AHEAD IN RIGHT TURN LN)
	12-28-07	12:00	BODILY- 2	2	FAILED TO YIELD RIGHT OF WAY	DAY	Fri	071228126	EB HIT A WB LT THAT FTY
	11-16-07	13:29	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Fri	071116193	EB DRIVING IN RT LANE ILLEGALLY HIT A WB LT THAT FTY
	11-14-07	15:01	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Wed	071114211	EB IN RT LANE HIT A WB LT THAT FTY (TRAFFIC BACKED UP)
	10-19-07	16:11	PROPERTY	0	NONE	DAY	Fri	071019257	EB USING RT ONLY LANE TO PASS HIT A WB LT
	08-03-07	12:22	BODILY- 2	1	FAILED TO YIELD RIGHT OF WAY	DAY	Fri	070803168	EB IN RT LANE HIT A WB LT THAT FTY
	07-17-07	7:40	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Tue	070717078	WB LT FTY & HIT A EB
	03-12-07	8:50	PROPERTY	0	MADE IMPROPER TURN	DAY	Mon	070312089	EB HIT WB LT THAT FTY
	03-01-07	15:46	BODILY- 3	2	FAILED TO YIELD RIGHT OF WAY	DAY	Thu	070301250	EB HIT WB LT THAT FTY
	02-23-07	17:11	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Fri	070223275	EB HIT A WB LT THAT FTY
	01-11-07	8:58	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Thu	070111079	EB IN RT LANE WENT STRAIGHT & HIT A WB LT
	08-09-06	7:50	BODILY- 2	1	FAILED TO YIELD RIGHT OF WAY	DAY	Wed	060809086	EB IN CURB LANE HIT A WB LT THAT FTY (VISION OBSTRUCTION)
	04-21-06	17:47	BODILY- 2	1	FAILED TO YIELD RIGHT OF WAY	DAY	Fri	060421310	EB HIT A WB LT THAT FTY
	01-20-06	15:06	BODILY- 4	2	FAILED TO YIELD RIGHT OF WAY	DAY	Fri	060120223	EB HIT A WB LT THAT FTY

** denotes alcohol-related accident

TYPE	DATE	TIME	SEVERITY	INJ	CITATION	LIGHT	DAY	CASE	NARRATIVE
11	12-20-05	12:08	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Tue	051220145	EB HIT A WB LT THAT FTY

** denotes alcohol-related accident

LEGEND
COLLISION DIAGRAM

- REAR END
- TURNING
- ANGLE
- OUT OF CONTROL
- MISC
- FIXED OBJ
- BACKING
- HEAD ON
- ANIMAL/ PED.
- Bodily Injury
- Fatality

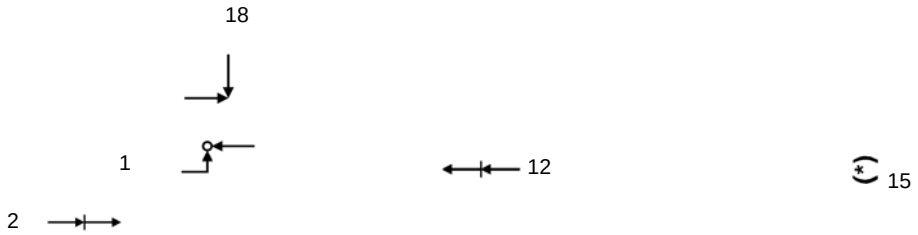
PIMA COUNTY DEPARTMENT OF TRANSPORTATION

TRAFFIC ENGINEERING DIVISION

COLLISION DIAGRAM

YUCCA VIA

INA RD



COLLISION TYPE	FATAL	BODILY INJURY	PROP DAMAGE	TOTAL
REAR END			2	2
TURNING		1		1
ANGLE			1	1
OUT OF CONTROL				
MISC.			1	1
FIXED OBJ				
BACKING				
HEAD ON				
PEDESTRIAN/ ANIMAL				
TOTAL	0	1	4	5

YUCCA VIA at INA RD

10/1/2005 to 9/30/2008

Pima County Department of Transportation

Traffic Engineering Division

------ Crash Summary Sheet ------

YUCCA VIA at INA RD

10/1/2005 to 9/30/2008

TYPE	DATE	TIME	SEVERITY	INJ	CITATION	LIGHT	DAY	CASE	NARRATIVE
1	05-03-06	16:00	BODILY- 3	1	FAILED TO YIELD RIGHT OF WAY	DAY	Wed	060503263	WB HIT A EB LT THAT FTY
2	03-24-06	9:00	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Fri	060324073	EB REAR ENDED EB SLOWING IN INT FOR PREVIOUS ACCIDENT
12	05-10-06	17:42	PROPERTY	0	SPEED TO0 FAST FOR CONDITIONS	DAY	Wed	060510296	WB REAR END MULTI CAR
15	02-22-08	16:30	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Fri	080222262	WB LT CHANGED LANES & SIDESWIPED WB (LT LANE BACKED UP)
18	01-21-08	14:12	PROPERTY	0	FAILED TO YIELD RIGHT OF WAY	DAY	Mon	080121199	SB LT FTY FROM STOP SIGN & SIDESWIPED EB

** denotes alcohol-related accident

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - SPECIFIC INTERSECTION

ROAD-1= << INA RD >> **BEG-DATE= Dec 01 2004 12:00AM** **END-DATE= Nov 30 2007 11:59PM**
ROAD-2= << ORACLE RD >>

<---------- LOCATION ---------->						<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>											<CTRL DVC>		<--- GENERAL --->						
ON STREET		DIR	DIST X.XXX	INTERSECT STREET		D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ		R I	R S J L	F A	I N	R C	U C	S C	M C
INA	RD	M	9	ORACLE	RD	4	041215	18:45	1000	153000	13931991	62	0201	0101	91	1401	0101	YY	EE	0103	15	16	Y	D	1	P		I	J	1	4		1	5
INA	RD	M	18	ORACLE	RD	2	041220	13:08	1000	000181	13960280	11	0104	0101	11	0101	0401	YY	WW	0401	11	16	N	L	1	P		I	J				1	5
INA	RD	P	3	ORACLE	RD	3	050104	12:12	1000	104169	14110191	11	0102	0101	11	0101	0101	YY	WW	0301	51	16	N	L	4	P		I	J				2	5
INA	RD	P	1	ORACLE	RD	3	050125	18:22	1000	125327	14110215	11	0115	0101	11	0101	0101	YY	WW	0305	41	16	N	D	1	P	P	I	J		1		1	5
INA	RD	P	3	ORACLE	RD	3	050621	18:00	1000	621304	14530892	21	0119	0101	11	0101	0101	YY	WW	0301	51	16	N	L	2	P		I	J	1			1	5
INA	RD			ORACLE	RD	5	050721	08:53	1000	721101	14622755	66	0105	0101	11	0101	0101	YY	WW	0505	11	16	N	L	1	P		I	I		4		1	5
INA	RD	P	3	ORACLE	RD	2	050808	11:40	1000	808229	14772156	12	1801	0101	11	0101	0101	YY	EE	0104	11	16	N	L	1	P		I	J	1			1	5
INA	RD	M	1	ORACLE	RD	5	050811	08:55	1000	811099	14772190	11	0115	0101	11	0101	0101	YY	EE	0301	51	16	N	L	1	P	P	I	J				1	5
INA	RD			ORACLE	RD	2	050815	17:41	1000	812309	14771187	11	1501	0113	11	0101	0101	YY	SS	0527	11	16	N	L	1	P		I	I				1	5
INA	RD	P	9	ORACLE	RD	7	050820	17:33	1000	820318	14821338	11	0115	0101	11	0101	0104	YY	WW	0101	11	16	N	L	1	P		I	J				1	5
INA	RD	M	22	ORACLE	RD	6	050826	09:00	1000	826097	14821397	11	0101	0101	11	0101	0401	YY	EE	0303	88	16	N	L	1			I	J		4		1	5
												1	15	01	1	01	01	Y	E	01	1														
INA	RD			ORACLE	RD	1	050828	10:00	1000	828137	14771804	11	0501	0101	11	0101	0104	YY	NN	0203	18	16	N	L	1	P		I	I		4		1	5
INA	RD	M	1	ORACLE	RD	6	050909	07:25	1000	909057	14900622	11	1801	0101	11	0101	0122	YY	EE	0103	13	16	N	L	2	P		I	J		4		1	5
INA	RD	M	1	ORACLE	RD	2	050926	17:30	1000	926340	14900630	11	0119	0101	11	0101	0101	YY	EE	0301	51	16	N	L	1	P		I	J				1	5
INA	RD	M	27	ORACLE	RD	2	051010	15:20	1000	010260	15011199	11	0115	0101	11	0101	0101	YY	EE	0301	51	16	N	L	1			I	J		4		1	5
INA	RD	P	1	ORACLE	RD	2	051010	18:59	1000	010347	15011203	11	0115	0101	11	0101	0401	YY	WW	0305	51	16	N	D	1			I	J				1	5
INA	RD	P	1	ORACLE	RD	1	051030	13:23	1000	030219	15012162	21	0501	0101	11	0101	0104	YY	WW	0503	18	16	N	L	1	P		I	J	1	4		1	5
INA	RD	P	7	ORACLE	RD	7	051126	05:30	1000	126078	15160247	11	1801	0101	11	0101	0101	YY	WW	0203	15	16	N	D	1	P	P	I	J		4		1	5
INA	RD	M	27	ORACLE	RD	4	051130	12:37	1000	130155	15240864	11	0101	0101	11	0101	0101	YY	EE	0101	11	16	N	L	1			I	J		4		1	5
												1	02	01	1	01	04	Y	E	01	1														
INA	RD	M	3	ORACLE	RD	1	051204	10:35	1000	204143	15241079	61	1801	1601	91	1401	0001	YY	EE	1103	15	16	Y	L	1			I	J		4		1	5
												1	01	01	1	01	01	Y	E	03	5														
INA	RD	M	2	ORACLE	RD	3	051206	07:15	1000	206042	15291171	11	1901	0101	11	0101	0101	YY	EE	0103	18	16	N	L	1	P		I	J	1	4		1	1
												1	01	01	1	01	01	Y	E	03	8														
INA	RD	P		ORACLE	RD	5	051222	12:30	1000	222157	15301524	11	0119	0101	11	0101	0101	YY	WW	0505	11	16	N	L	1	P		I	J		4		1	5
INA	RD	P	3	ORACLE	RD	4	060104	11:37	1000	104143	15361445	11	0501	0101	11	0101	0101	YY	WW	0103	15	16	N	L	1	P	PP	I	J		1		1	5
INA	RD	M	3	ORACLE	RD	6	060120	08:45	1000	120085	15333020	11	0501	0101	11	0101	0401	YY	EE	0203	18	16	N	L	1	P		I	J		4		1	5
INA	RD	M	9	ORACLE	RD	4	060201	19:11	0799	006270	15412344	11	0201	0101	11	0101	0101	YY	EE	0103	17	16	N	D	1	P	P	I	J				1	5
INA	RD	M	9	ORACLE	RD	4	060329	10:59	1000	329129	15690879	11	1501	0101	11	0101	0101	YY	EE	0203	15	16	N	L	1	P		I	J		4		1	5
INA	RD	P	1	ORACLE	RD	5	060330	18:18	1000	330294	15690895	11	0115	0101	11	0101	0101	YN	WW	0305	41	16	N	2	2	P	PP	I	J		3		1	5
INA	RD	P	1	ORACLE	RD	1	060402	22:00	1000	402374	15841519	11	1919	1616	99	1414	0101	YY	WW	0302	51	16	N	D	1	P	P	I	J				1	5

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - SPECIFIC INTERSECTION

ROAD-1= << INA RD >> **BEG-DATE= Dec 01 2004 12:00AM** **END-DATE= Nov 30 2007 11:59PM**
ROAD-2= << ORACLE RD >>

<---------- LOCATION ---------->						<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>										<CTRL DVC>		<--- GENERAL --->							
ON STREET		DIR	DIST X.XXX	INTERSECT STREET		D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ		R I	R J	S L	F A	I N	R C	U C	S C	M C
INA	RD	P	1	ORACLE	RD	3	070501	14:45	1000	501226	17653161	12	1801	0101	11	0101	0401	YY	WW	0103	15	16	Y	L	2	P		I	J		1	4		7	5
INA	RD	P	4	ORACLE	RD	4	070516	09:04	1000	516095	17656755	11	1901	0101	11	0101	0404	YY	EE	0101	11	16	N	L	1			I	J			4		1	1
INA	RD	M	18	ORACLE	RD	5	070614	18:30	1000	614275	17695777	12	0201	0101	11	0101	0104	YY	EE	0103	18	16	N	L	1	P		I	J		1	4		1	5
INA	RD			ORACLE	RD	1	070617	17:38	0799	032946	17690925	31	1919	0101	11	0101	0101	YY	EN	0101	11	16	N	L	1	P	P	I	I		1	1		1	3
INA	RD	P	3	ORACLE	RD	5	070712	14:52	1000	712197	17731378	11	0501	0101	11	0101	0104	YY	WW	0103	18	16	N	L	1	P		I	J		1	4		1	5
INA	RD			ORACLE	RD	1	070729	18:35	0799	040769	17723594	21	1818	0101	11	0101	0101	YY	WE	0104	11	16	N	2	1	P	P	I	I		1	4		1	4
INA	RD	P		ORACLE	RD	4	071010	10:30	1000	010108	17841312	11	0105	0101	11	0101	0104	YY	WW	0505	11	16	N	L	1	P		I	J			5		1	5
INA	RD	P		ORACLE	RD	2	071105	16:45	1000	105272	17882664	11	0105	0101	11	0101	0101	YY	WW	0505	11	16	N	2	1	P	P	I	J			4			5
INA	RD	P	13	ORACLE	RD	2	071119	13:00	1000	119207	17884857	11	0118	0101	11	0101	0101	YY	WW	0301	81	16	N	L	1	P		I	J			4	1		5
ORACLE	RD	P	3	INA	RD	2	050509	16:00	0799	024177	14272732	11	0801	0101	11	0101	0707	YY	SS	0505	11	16	N	L	1	P		I	J			4		1	1
ORACLE	RD	P		INA	RD	4	050831	11:00	1000	831128	14821417	12	1501	0101	11	0101	0101	NY	NN	0103	18	16	N	L	1	P		I	J		1	4		1	5
ORACLE	RD	P	3	INA	RD	4	060705	16:00	0799	036110	16101517	11	1501	0101	81	0101	0101	YY	SS	2603	14	16	N	L	2	P		I	J	2		5		1	5
ORACLE	RD	M	8	INA	RD	2	070709	12:00	0799	037074	17721583	11	1501	0101	11	0101	0101	YY	NN	0103	15	16	N	L	1	P		I	J			4		1	5

TOTAL RECORDS PRINTED ====> 70

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - SPECIFIC INTERSECTION

ROAD-1= << INA RD >> **BEG-DATE= Dec 01 2004 12:00AM** **END-DATE= Nov 30 2007 11:59PM**
ROAD-2= << ORACLE RD >>

<---------- LOCATION ---------->						<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>											<CTRL DVC>	<--- GENERAL --->							
ON STREET		DIR	DIST X.XXX	INTERSECT STREET		D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ	R I	R J	S L	F A	I N	R C	U C	S C	M C
INA	RD	P	18	ORACLE	RD	6	060414	16:20	1000	414275	15840283	11	0201	0101	11	0101	0101	YY	WW	0103	18	16	N	L	1	P	I	J			4		1	5
INA	RD	P	1	ORACLE	RD	2	060417	09:25	1000	417093	15840303	11	0501	0101	11	0101	2201	YY	WW	0203	14	16	N	L	1	P	I	J			4		1	5
INA	RD	M	9	ORACLE	RD	2	060501	09:40	1000	501095	15890585	12	1501	0101	61	0101	0401	YY	EE	0103	13	16	N	L	1	P	I	J		1			1	5
INA	RD	M	1	ORACLE	RD	2	060508	12:27	1000	508155	15890641	11	0115	0101	11	0101	0104	YY	EE	0304	31	16	N	L	1	P	I	J					1	5
INA	RD	P	2	ORACLE	RD	3	060509	07:53	1000	509065	15892936	11	0501	0101	11	0101	0101	YY	WW	0103	18	16	N	L	1			P	I	J		1	1	5
INA	RD	M	18	ORACLE	RD	6	060519	06:45	1000	519053	15970811	11	0102	0101	11	0101	0404	NY	EE	0201	11	16	N	L	1	P	I	J			4		1	5
INA	RD	M	4	ORACLE	RD	5	060525	10:45	1000	525152	15970887	12	0201	0101	11	1401	0404	YY	WW	0103	15	16	N	L	1	P		P	I	J		1	1	5
INA	RD	M		ORACLE	RD	4	060614	16:53	1000	014245	16060385	11	1901	0101	11	0101	0101	YY	EE	0303	55	16	Y	L	1	P	I	J			4		1	5
												6	19	01	1	01	00	Y	E	01	1														
INA	RD	M	11	ORACLE	RD	5	060629	11:07	1000	629119	16011298	11	0102	1616	11	0101	0101	YY	EE	0304	81	16	N	L	1	P	I	J			4		1	5
INA	RD	P	5	ORACLE	RD	1	060709	15:48	1000	709231	16122348	11	0115	0101	11	0101	0101	YN	WW	0301	81	16	N	L	1	P	I	J			4		1	5
INA	RD	M	27	ORACLE	RD	2	060717	16:50	1000	717253	16091116	11	0105	0101	11	0101	0104	YY	EE	0301	51	16	N	L	1	P	I	J			4		1	5
INA	RD	P	3	ORACLE	RD	3	060808	18:10	1000	808299	16181731	11	0115	1401	11	0101	0401	YY	WW	0302	81	16	N	L	2	P	I	J			4		1	5
INA	RD	M	3	ORACLE	RD	7	060812	14:45	1000	812201	16160999	21	0115	0101	11	0101	0104	YY	WW	0505	11	16	N	L	2	P		P	I	I		2		1	5
INA	RD	M	3	ORACLE	RD	6	060922	07:00	1000	922075	16322524	11	0201	1101	11	0101	0101	YY	EE	0103	18	16	N	2	1	P	I	J			4		1	5
INA	RD	P	18	ORACLE	RD	4	061004	16:59	1000	004309	16392503	11	0201	0101	11	0101	0101	YY	WW	0103	18	16	N	L	1	P	I	J			4		1	5
												1	01	01	1	01	01	Y	W	03	8														
INA	RD	M	18	ORACLE	RD	5	061012	15:56	1000	012280	16412322	11	1801	1301	11	0101	0404	YY	EE	0101	11	16	N	L	1			P	I	J		1	3	1	1
INA	RD	M	4	ORACLE	RD	6	061013	08:20	1000	013075	16412851	11	0401	0101	11	0101	0101	YY	EW	0601	11	16	N	L	1	P		P	I	J			1	1	D
INA	RD	P	1	ORACLE	RD	6	061013	21:08	1000	013465	16412853	11	1301	0101	91	1401	0401	YY	EE	0101	11	16	N	D	1	P		PP	I	J			1	1	1
INA	RD			ORACLE	RD	1	061105	13:04	0799	060344	16511712	11	0201	0101	11	0101	0101	YY	EW	0104	11	16	N	L	1	P			I	I			4	1	4
INA	RD	P	3	ORACLE	RD	5	061116	10:00	1000	116099	16890646	11	0501	0101	11	0101	0101	YY	NN	0103	12	16	N	L	1	P			I	J			4	1	5
INA	RD	M	18	ORACLE	RD	5	070208	14:55	1000	208237	17343067	11	1801	0101	11	0101	0101	YY	EE	0203	18	16	N	L	1	P			I	J			4	1	5
INA	RD	P	28	ORACLE	RD	5	070222	09:42	1000	222123	17362584	11	0201	0101	11	0101	0101	YY	WW	0203	15	16	N	L	1	P		D	I	J			4	1	5
INA	RD	P	18	ORACLE	RD	5	070222	16:30	1000	222275	17363020	11	1501	0101	11	0101	0101	YY	WW	0101	11	16	N	L	1	P			I	J			4	1	5
INA	RD	M	3	ORACLE	RD	4	070307	15:35	1000	307275	17470074	11	0101	0202	11	0101	0104	YY	EE	0101	11	16	N	L	1	P			I	J			4	1	5
												1	01	02	1	01	04	Y	E	01	1														
INA	RD			ORACLE	RD	2	070312	21:10	1000	312419	17472404	11	0501	0101	11	0101	0101	YY	EE	0102	11	16	N	D	1	P		P	I	I			4	1	5
INA	RD	M		ORACLE	RD	2	070319	18:19	1000	319328	17502531	12	0501	0101	11	0101	0101	YY	EE	0505	11	16	N	L	1	P		P	I	J		1		1	5
INA	RD			ORACLE	RD	3	070320	18:50	1000	320333	17502543	11	0105	0101	11	0000	0104	YY	WW	0505	11	16	N	2	1	P		P	I	I			4	1	5
INA	RD	M	13	ORACLE	RD	4	070411	17:20	1000	411295	17592216	11	0115	0101	11	0000	0104	YY	EE	0201	11	16	N	L	1	P			I	J				1	5
INA	RD	M	1	ORACLE	RD	6	070420	07:17	1000	420061	17600611	11	1501	0101	11	0101	0101	YY	EE	0404	11	16	N	L	1	P			I	J			4	1	5

TRAFFIC RECORDS SECTION
REPORT NO: SP970-C03-1

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - SPECIFIC INTERSECTION

RUN ON 02-DEC-2008 12:12

ROAD-1= << INA RD >> BEG-DATE= Dec 01 2004 12:00AM END-DATE= Nov 30 2007 11:59PM
ROAD-2= << S 0077 >>

<---------- LOCATION ---------->					<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>												<CTRL DVC>	<--- GENERAL --->							
ON STREET	DIR	DIST X.XXX	INTERSECT STREET		D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ	R I	R J	S L	F A	I N	R C	U C	S C	M C
S 0077			INA	RD	4	050504	07:50	0799	023171	14290482	12	0201	0101	11	0101	0101	YY	NN	0505	11	16	N	L	1	P D	I	I		1	4		1	5
S 0077	P	3	INA	RD	6	050513	11:45	0799	024896	14330021	11	0201	0101	91	0101	0104	YY	SS	0105	11	16	N	L	1	P D	I	J			4		1	5
S 0077			INA	RD	7	050625	02:05	0799	032781	14472914	36	1819	0101	29	0114	0101	YY	SW	0401	11	16	N	D	1 P		I	I	1				1	3
S 0077	M	5	INA	RD	5	050707	08:55	0799	035097	14550407	11	1501	0301	11	0101	0101	YY	SS	0404	11	16	N	L	1	P	I	J			4		1	5
S 0077			INA	RD	5	050721	18:04	0799	037728	14611192	11	0201	0101	11	0101	0104	YY	WW	0103	15	16	N	L	1	P	I	I			4		1	5
S 0077	M	9	INA	RD	2	050912	12:20	0799	047836	14852210	11	1501	0101	11	0101	2204	YY	SS	2603	18	16	N	L	1	P	I	J			4		1	5
S 0077			INA	RD	2	051107	19:15	0799	058226	15032623	12	0701	0101	11	0101	0101	NY	WN	0401	11	16	N	D	1	P	I	I	2		4		1	3
											2	01	01	1	01	01	Y	N	01	1																
S 0077	M	49	INA	RD	2	051114	17:10	0799	059608	15050040	11	1501	0101	11	0101	0101	YY	NN	0103	18	16	N	L	1		I	J			5		1	5
S 0077	P	3	INA	RD	3	051115	07:50	0799	059699	15050051	11	0201	0101	91	0101	0101	YY	SS	0103	15	16	N	L	1	P	I	J			4			5
											1	01	01	1	01	01	Y	S	03	5																
S 0077	P	3	INA	RD	2	051121	12:05	0799	060993	15050653	11	0102	0101	11	0114	0101	YY	SS	0404	11	16	N	L	1	P	I	J			4		1	5
S 0077	M	4	INA	RD	4	051123	14:45	0799	061829	15142911	13	0519	1601	99	1414	0104	YY	NN	0103	15	16	N	L	1		I	J		1	4		1	5
S 0077			INA	RD	7	051210	21:23	0799	064975	15231270	31	0401	0101	11	0101	0101	YY	WE	0401	11	16	N	D	1	P	I	I	1				1	4
S 0077			INA	RD	2	051212	16:58	0799	065396	15282191	11	0201	0101	11	0101	1201	YY	EE	0505	11	16	N	L	2	P	I	I					1	5
S 0077			INA	RD	6	060127	20:34	0799	005337	15390602	11	0401	0101	11	0101	0404	YN	WE	0401	11	16	N	D	1	P P	I	I			4		1	4
S 0077			INA	RD	6	060324	13:15	0799	016564	15581300	13	1501	0101	11	0101	0101	YY	NN	0403	18	16	N	L	1	P D	I	I	2	1	4		1	5
S 0077	P	1	INA	RD	5	060406	21:10	0799	019219	15811911	63	0815	1601	91	1400	01PD	Y	NW	0518	10	14	Y	D	1	P P	I	J	2	1	4		1	0
S 0077	P	9	INA	RD	5	060518	13:40	0799	026902	15931243	11	0201	0101	11	0101	0401	YY	SS	0103	15	16	N	L	1		I	J			4		1	5
S 0077			INA	RD	1	060604	21:11	0799	030353	16010563	13	0701	0101	11	0101	0101	YY	SW	0104	11	16	N	D	1	P P	I	I	1				1	3
S 0077			INA	RD	1	060618	19:15	0799	032913	15990544	11	0201	0101	11	1401	0104	YY	SS	0403	13	16	N	2	1	P P	I	J			4		1	5
S 0077	P	9	INA	RD	4	060621	18:40	0799	033475	16232724	11	0201	0101	11	0101	0401	YY	SS	0903	15	16	Y	L	1	P	I	J			4		1	1
S 0077	M	7	INA	RD	6	060630	16:12	0799	035164	16081068	11	0201	0101	11	0101	0101	YY	NN	1203	15	16	N	L	1	P	I	J			4		1	1
											1	01	01	1	01	01	Y	N	03	5																
S 0077			INA	RD	5	060727	07:52	0799	040283	16152790	11	0401	0101	11	0101	0104	YY	WN	0501	11	16	N	L	4	P	I	I					2	3
S 0077			INA	RD	2	060807	13:45	0799	042442	16201920	11	1919	0101	10	0000	0101	YY	SS	0503	14	16	N	L	1	P	I	I					1	5
S 0077	P	1	INA	RD	7	061014	15:40	0799	056122	16482163	11	0201	0101	11	0101	0103	YY	SS	0103	14	16	N	L	1	P	I	J	2		4	1	1	5
S 0077	P	5	INA	RD	7	061118	16:27	0799	063021	16932187	11	0201	0101	11	0101	0101	YY	SS	0104	11	16	N	L	1		I	J					1	5
S 0077	P	5	INA	RD	1	061119	17:37	0799	063179	16932165	31	1801	0101	81	0101	0101	YY	SS	0404	11	16	N	2	1	P	I	J		1	4		1	5
S 0077	P	5	INA	RD	2	061120	10:30	0799	063301	16922953	11	1501	0101	11	0101	0101	YY	SS	0505	11	16	N	L	1	PP	I	J		1	5		1	5
S 0077			INA	RD	6	070119	17:15	0799	003705	17221260	11	1501	0101	11	0101	0101	YY	SS	0503	16	16	N	L	1	P	I	I	2		4		1	5
S 0077	P	9	INA	RD	5	070301	13:25	0799	012057	17440461	11	0201	0101	11	0101	0101	YY	SS	0103	18	16	N	L	1	P	I	J					1	5

TRAFFIC RECORDS SECTION
REPORT NO: SP970-C03-1

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - SPECIFIC INTERSECTION

RUN ON 02-DEC-2008 12:12

ROAD-1= << INA RD >> **BEG-DATE= Dec 01 2004 12:00AM** **END-DATE= Nov 30 2007 11:59PM**
ROAD-2= << S 0077 >>

<---------- LOCATION ---------->					<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>											<CTRL DVC>	<--- GENERAL --->							
ON STREET		DIR	DIST X.XXX	INTERSECT STREET		D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ	R I	R J	S L	F A	I N	R C	U C	S C	M C
S 0077		P	2	INA	RD	7	070407	12:30	0799	019309	17542498	62	0201	1601	91	1401	0001	YY	SS	0103	13	16	Y	L	1	P	I	J		1	4		1	5
S 0077				INA	RD	3	070424	18:55	0799	022614	17562873	21	0701	0101	11	0101	0104	YY	WE	0104	11	16	N	2	1		I	I		1	5		1	4
S 0077		P	5	INA	RD	3	070515	11:00	0799	026656	17643101	11	0201	0101	11	0101	0101	YY	SS	0103	15	16	N	L	1	P	I	J		1	4		1	5
S 0077		P	9	INA	RD	3	070522	06:15	0799	027838	17642709	11	0201	0101	11	0101	0101	YY	SS	0103	18	16	N	L	1	P	I	J			4		1	5
S 0077				INA	RD	1	070610	11:51	0799	031620	17686135	11	0401	0101	11	0101	0104	YN	WE	0402	11	16	N	L	1	P	I	I			4		1	4
S 0077				INA	RD	2	070730	21:12	0799	040963	17723647	11	0201	0101	11	0101	0101	YY	NN	0101	11	16	N	D	4		I	I					2	5
S 0077				INA	RD	3	070807	15:16	0799	042411	17753849	11	0201	0101	11	0101	0101	YY	NN	0112	11	16	N	L	1	P	I	I			4		1	5
S 0077				INA	RD	6	071026	16:26	0799	058090	17830244	11	0401	0101	11	0101	0101	YY	WE	0401	11	16	N	L	1	P	I	I					1	4
S 0077				INA	RD	3	071106	11:37	0799	060304	17864854	11	0101	0101	11	0101	0404	YY	EW	0401	11	16	N	L	1	P	I	I						4
INA		RD		S 0077		5	050113	14:10	0799	002392	13822431	11	0102	0101	11	0101	0101	YY	EE	0101	11	16	N	L	1	P	I	I			4		1	5
INA		RD		S 0077		1	050213	13:10	0799	008223	13970092	11	1501	0101	11	0101	0101	YY	WW	0503	14	16	N	L	1	P	I	I	2				1	5
INA		RD		S 0077		7	060225	19:30	0799	011156	15501829	12	0401	0101	11	0101	0401	YY	WE	0401	11	16	N	D	1	P	I	I		1	5		1	4
INA		RD		S 0077		5	060406	10:10	0799	019069	15401004	11	0401	0101	11	0101	0104	YN	WE	0401	11	16	N	L	1	P	I	I					1	4
INA		RD	M	1 S 0077		3	060613	07:08	0799	031905	16030584	12	0401	0101	11	0101	0115	YY	SW	0506	11	16	N	L	2	P	I	J		1			1	D
INA		RD		S 0077		5	061026	19:14	0799	058404	16491985	11	0501	0101	11	0101	0104	YY	EE	0503	14	16	N	D	1		I	I			4		1	5
INA		RD	M	4 S 0077		4	070221	10:40	1000	221126	17363007	11	1301	0101	11	0101	0101	YY	EE	1001	11	16	N	L	1		I	J			4		1	1
INA		RD		S 0077		5	070628	22:30	0799	035094	17691010	11	0404	0101	11	0101	0101	YY	EW	0404	11	16	N	D	1	P	I	I					1	4
INA		RD		S 0077		4	070704	13:50	0799	036161	17715753	22	0401	0101	11	0101	0101	YN	EW	0401	11	16	N	L	1	P	I	I		3			1	4
INA		RD		S 0077		1	070930	07:43	0799	052879	17796733	11	0401	0101	11	0101	0401	YY	EW	0401	11	16	N	L	1	P	I	I					1	4
INA		RD		S 0077		5	071115	14:21	0799	062289	17866043	13	0401	1601	11	0101	0401	YY	WE	0412	11	16	N	L	2	P	I	I		1			1	4

TOTAL RECORDS PRINTED ====> 49

TRAFFIC RECORDS SECTION
REPORT NO: SP970-C02-1

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - BETWEEN X-ROADS

RUN ON 04-DEC-2008 13:44

ONROAD = << S 0077 >> **BEG-DATE= Dec 01 2004 12:00AM** **END-DATE= Nov 30 2007 11:59PM**
BEG-XROAD= <<10 CASAS ADOBES DR >>
END-XROAD= <<10 SUFFOLK DR >>

<---------- LOCATION ---------->					<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>										<CTRL DVC>		<--- GENERAL --->							
ON STREET		DIR	DIST X.XXX	INTERSECT STREET		D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ		R I	R J	S L	F A	I N	R C	U C	S C	M C
S 0077				CASAS ADOBES	DR	4	070328	19:57	0799	017337	17451317	11	0401	0101	11	0101	0104	YN	NS	0401	11	16	N	D	1	P		I	I			4		1	4
S 0077		P	18	CASAS ADOBES	DR	4	071024	08:52	0799	057523	17827157	11	0201	0101	11	0101	0101	YY	SS	0105	11	16	N	L	1			I	J			4		1	5
S 0077		P		CHULA VISTA	RD	3	050823	17:05	0799	043941	14720989	13	0201	0101	11	0101	0101	YY	WW	0505	11	16	N	L	2	P		I	J		1	4		2	5
S 0077		M	83	GIACONDA	WA	4	070307	14:22	0799	013213	17440552	11	0201	0101	11	0101	0101	YY	NN	0103	18	16	N	L	1			I				4		1	5
S 0077		M	5	GIACONDA	WA	5	051222	16:05	0799	067375	15090434	11	1501	0101	11	0101	0112	YY	NN	0204	11	16	N	L	1		D	I	J			5		1	5
S 0077				GIACONDA	WA	3	050517	12:10	0799	025596	14330654	11	0108	0101	11	0101	0101	YY	WE	0404	11	16	N	L	1	P		I	I					1	4
S 0077				GIACONDA	WA	7	051119	15:50	0799	060713	15091241	11	0401	0101	11	0101	0101	YN	ES	0401	11	16	N	L	1	P		I	I					1	3
S 0077				GIACONDA	WA	3	051129	13:38	0799	062592	15151202	11	0401	1601	11	0101	0101	YY	ES	2601	11	16	N	L	1	P		I	I			4		1	3
S 0077				GIACONDA	WA	1	061008	18:18	0799	054862	16422684	23	0401	0101	11	0101	0101	YY	WS	0101	11	16	N	2	2	P		I	I		6	4		1	3
S 0077				GIACONDA	WA	5	070816	15:35	0799	044153	17754127	11	0401	0101	11	0101	0101	YY	WN	0501	11	16	N	L	1	P		I	I			4		1	3
S 0077		P	9	GIACONDA	WA	5	060223	10:30	0799	010606	15460736	11	0201	0101	11	0101	0101	YY	NN	0102	11	16	N	L	1			I				4		1	5
GIACONDA	WA			S 0077		4	051109	07:50	0799	058503	15042345	11	1501	0101	11	0101	0401	YY	EE	0505	11	16	N	L	1	P		I	I					1	5
S 0077		M	54	INA	RD	1	060820	09:06	0799	044957	16231696	11	0401	0101	11	0101	0101	YY	SS	0801	11	16	N	L	2		P	D	D			1		1	3
S 0077		M	49	INA	RD	2	051114	17:10	0799	059608	15050040	11	1501	0101	11	0101	0101	YY	NN	0103	18	16	N	L	1			I	J			5		1	5
S 0077		M	9	INA	RD	2	050912	12:20	0799	047836	14852210	11	1501	0101	11	0101	2204	YY	SS	2603	18	16	N	L	1	P		I	J			4		1	5
S 0077		M	7	INA	RD	6	060630	16:12	0799	035164	16081068	11	0201	0101	11	0101	0101	YY	NN	1203	15	16	N	L	1	P		I	J			4		1	1
												1	01	01	1	01	01	Y	N	03	5														
S 0077		M	5	INA	RD	5	050707	08:55	0799	035097	14550407	11	1501	0301	11	0101	0101	YY	SS	0404	11	16	N	L	1	P		I	J			4		1	5
S 0077		M	4	INA	RD	4	051123	14:45	0799	061829	15142911	13	0519	1601	99	1414	0104	YY	NN	0103	15	16	N	L	1			I	J		1	4		1	5
S 0077				INA	RD	4	050504	07:50	0799	023171	14290482	12	0201	0101	11	0101	0101	YY	NN	0505	11	16	N	L	1	P	D	I	I		1	4		1	5
S 0077				INA	RD	7	050625	02:05	0799	032781	14472914	36	1819	0101	29	0114	0101	YY	SW	0401	11	16	N	D	1		P	I	I		1			1	3
S 0077				INA	RD	5	050721	18:04	0799	037728	14611192	11	0201	0101	11	0101	0104	YY	WW	0103	15	16	N	L	1	P		I	I			4		1	5
S 0077				INA	RD	2	051107	19:15	0799	058226	15032623	12	0701	0101	11	0101	0101	NY	WN	0401	11	16	N	D	1	P		I	I		2	4		1	3
												2	01	01	1	01	01	Y	N	01	1														
S 0077				INA	RD	7	051210	21:23	0799	064975	15231270	31	0401	0101	11	0101	0101	YY	WE	0401	11	16	N	D	1		P	I	I		1			1	4
S 0077				INA	RD	2	051212	16:58	0799	065396	15282191	11	0201	0101	11	0101	1201	YY	EE	0505	11	16	N	L	2	P		I	I					1	5
S 0077				INA	RD	6	060127	20:34	0799	005337	15390602	11	0401	0101	11	0101	0404	YN	WE	0401	11	16	N	D	1	P	P	I	I			4		1	4
S 0077				INA	RD	6	060324	13:15	0799	016564	15581300	13	1501	0101	11	0101	0101	YY	NN	0403	18	16	N	L	1	P	D	I	I	2	1	4		1	5
S 0077				INA	RD	1	060604	21:11	0799	030353	16010563	13	0701	0101	11	0101	0101	YY	SW	0104	11	16	N	D	1	P	P	I	I		1			1	3
S 0077				INA	RD	1	060618	19:15	0799	032913	15990544	11	0201	0101	11	1401	0104	YY	SS	0403	13	16	N	2	1	P	P	I	J			4		1	5
S 0077				INA	RD	5	060727	07:52	0799	040283	16152790	11	0401	0101	11	0101	0104	YY	WN	0501	11	16	N	L	4	P		I	I					2	3
S 0077				INA	RD	2	060807	13:45	0799	042442	16201920	11	1919	0101	10	0000	0101	YY	SS	0503	14	16	N	L	1	P		I	I					1	5

TRAFFIC RECORDS SECTION
REPORT NO: SP970-C02-1

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - BETWEEN X-ROADS

RUN ON 04-DEC-2008 13:44

ONROAD = << S 0077 >> **BEG-DATE= Dec 01 2004 12:00AM** **END-DATE= Nov 30 2007 11:59PM**
BEG-XROAD= <<10 CASAS ADOBES DR >>
END-XROAD= <<10 SUFFOLK DR >>

<---------- LOCATION ---------->						<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>										<CTRL DVC>	<--- GENERAL --->							
ON STREET		DIR	DIST X.XXX	INTERSECT STREET		D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ	R I	R J	S L	F A	I N	R C	U C	S C	M C
S 0077				INA	RD	7	070113	13:15	0799	002497	17220883	61	0201	0101	91	0101	0101	YY	SS	0103	15	16	Y	L	1			J			4		1	5
S 0077				INA	RD	6	070119	17:15	0799	003705	17221260	11	1501	0101	11	0101	0101	YY	SS	0503	16	16	N	L	1	P	I	I	2		4		1	5
S 0077				INA	RD	3	070424	18:55	0799	022614	17562873	21	0701	0101	11	0101	0104	YY	WE	0104	11	16	N	2	1	P	I	I		1	5		1	4
S 0077				INA	RD	1	070610	11:51	0799	031620	17686135	11	0401	0101	11	0101	0104	YN	WE	0402	11	16	N	L	1	P	I	I			4		1	4
S 0077				INA	RD	2	070730	21:12	0799	040963	17723647	11	0201	0101	11	0101	0101	YY	NN	0101	11	16	N	D	4	P	I	I					2	5
S 0077				INA	RD	3	070807	15:16	0799	042411	17753849	11	0201	0101	11	0101	0101	YY	NN	0112	11	16	N	L	1	P	I	I			4		1	5
S 0077				INA	RD	6	071026	16:26	0799	058090	17830244	11	0401	0101	11	0101	0101	YY	WE	0401	11	16	N	L	1	P	I	I					1	4
S 0077				INA	RD	3	071106	11:37	0799	060304	17864854	11	0101	0101	11	0101	0404	YY	EW	0401	11	16	N	L	1	P	I	I						4
S 0077		P	1	INA	RD	5	060406	21:10	0799	019219	15811911	63	0815	1601	91	1400	01PD	Y	NW	0518	10	14	Y	D	1	P	P	I	J	2	1	4		1	0
S 0077		P	1	INA	RD	7	061014	15:40	0799	056122	16482163	11	0201	0101	11	0101	0103	YY	SS	0103	14	16	N	L	1	P		I	J	2		4	1	1	5
S 0077		P	2	INA	RD	7	070407	12:30	0799	019309	17542498	62	0201	1601	91	1401	0001	YY	SS	0103	13	16	Y	L	1	P		I	J		1	4		1	5
S 0077		P	3	INA	RD	6	050513	11:45	0799	024896	14330021	11	0201	0101	91	0101	0104	YY	SS	0105	11	16	N	L	1	P	D	I	J			4		1	5
S 0077		P	3	INA	RD	3	051115	07:50	0799	059699	15050051	11	0201	0101	91	0101	0101	YY	SS	0103	15	16	N	L	1	P		I	J			4			5
												1	01	01	1	01	01	Y	S	03	5													
S 0077		P	3	INA	RD	2	051121	12:05	0799	060993	15050653	11	0102	0101	11	0114	0101	YY	SS	0404	11	16	N	L	1	P		I	J			4		1	5
S 0077		P	5	INA	RD	7	061118	16:27	0799	063021	16932187	11	0201	0101	11	0101	0101	YY	SS	0104	11	16	N	L	1			I	J					1	5
S 0077		P	5	INA	RD	1	061119	17:37	0799	063179	16932165	31	1801	0101	81	0101	0101	YY	SS	0404	11	16	N	2	1		P	I	J		1	4		1	5
S 0077		P	5	INA	RD	2	061120	10:30	0799	063301	16922953	11	1501	0101	11	0101	0101	YY	SS	0505	11	16	N	L	1	PP		I	J		1	5		1	5
S 0077		P	5	INA	RD	3	070515	11:00	0799	026656	17643101	11	0201	0101	11	0101	0101	YY	SS	0103	15	16	N	L	1	P		I	J		1	4		1	5
S 0077		P	8	INA	RD	4	070725	15:29	0799	040005	17721189	11	0201	0101	11	0101	0104	YY	NN	0301	61	16	N	L	2		D					4		1	5
S 0077		P	9	INA	RD	4	060621	18:40	0799	033475	16232724	11	0201	0101	11	0101	0401	YY	SS	0903	15	16	Y	L	1	P		I	J			4		1	1
S 0077		P	9	INA	RD	5	070301	13:25	0799	012057	17440461	11	0201	0101	11	0101	0101	YY	SS	0103	18	16	N	L	1	P		I	J					1	5
S 0077		P	9	INA	RD	3	070522	06:15	0799	027838	17642709	11	0201	0101	11	0101	0101	YY	SS	0103	18	16	N	L	1	P	D	I	J			4		1	5
S 0077		P	9	INA	RD	5	060518	13:40	0799	026902	15931243	11	0201	0101	11	0101	0401	YY	SS	0103	15	16	N	L	1			I	J			4		1	5
S 0077		P	11	INA	RD	7	060429	13:10	0799	023436	16571959	32	0201	0101	11	0101	0101	YY	SS	0103	15	16	N	L	1			I			2	4		1	5
												1	01	01	1	01	01	Y	S	03	5													
S 0077		P	38	INA	RD	6	060414	14:52	0799	021380	15810638	63	0201	1601	91	1401	0101	NN	SS	1002	11	16	Y	L	1	P		D	D		1	4		1	1
INA	RD	M	4	S 0077		4	070221	10:40	1000	221126	17363007	11	1301	0101	11	0101	0101	YY	EE	1001	11	16	N	L	1			I	J			4		1	1
INA	RD	M	1	S 0077		3	060613	07:08	0799	031905	16030584	12	0401	0101	11	0101	0115	YY	SW	0506	11	16	N	L	2	P	D	I	J		1			1	D
INA	RD			S 0077		5	050113	14:10	0799	002392	13822431	11	0102	0101	11	0101	0101	YY	EE	0101	11	16	N	L	1	P		I	I			4		1	5
INA	RD			S 0077		1	050213	13:10	0799	008223	13970092	11	1501	0101	11	0101	0101	YY	WW	0503	14	16	N	L	1	P		I	I	2				1	5
INA	RD			S 0077		7	060225	19:30	0799	011156	15501829	12	0401	0101	11	0101	0401	YY	WE	0401	11	16	N	D	1	P		I	I		1	5		1	4

TRAFFIC RECORDS SECTION
REPORT NO: SP970-C02-1

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - BETWEEN X-ROADS

RUN ON 04-DEC-2008 13:44

ONROAD = << S 0077 >> BEG-DATE= Dec 01 2004 12:00AM END-DATE= Nov 30 2007 11:59PM
BEG-XROAD= <<10 CASAS ADOBES DR >>
END-XROAD= <<10 SUFFOLK DR >>

<---------- LOCATION ---------->					<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>											<CTRL DVC>		<--- GENERAL --->							
ON STREET	DIR	DIST X.XXX	INTERSECT STREET	D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ		R I	R J	S L	E A	I N	R C	U C	S C	M C
INA	RD		S 0077	5	060406	10:10	0799	019069	15401004	11	0401	0101	11	0101	0104	YN	WE	0401	11	16	N	L	1	P		I	I					1	4
INA	RD		S 0077	5	061026	19:14	0799	058404	16491985	11	0501	0101	11	0101	0104	YY	EE	0503	14	16	N	D	1		P	I	I			4		1	5
INA	RD		S 0077	5	070628	22:30	0799	035094	17691010	11	0404	0101	11	0101	0101	YY	EW	0404	11	16	N	D	1		P	I	I					1	4
INA	RD		S 0077	4	070704	13:50	0799	036161	17715753	22	0401	0101	11	0101	0101	YN	EW	0401	11	16	N	L	1	P		I	I		3			1	4
INA	RD		S 0077	1	070930	07:43	0799	052879	17796733	11	0401	0101	11	0101	0401	YY	EW	0401	11	16	N	L	1	P		I	I					1	4
INA	RD		S 0077	5	071115	14:21	0799	062289	17866043	13	0401	1601	11	0101	0401	YY	WE	0412	11	16	N	L	2	P		I	I		1			1	4
S 0077		M 18	SUFFOLK	DR 7	070217	14:29	1007	020799	17361817	11	0201	0101	11	0101	0101	YY	NN	0102	11	16	N	L	1			I	J			4		1	5
S 0077			SUFFOLK	DR 4	060201	14:51	1007	020022	15500962	11	0401	0101	11	0101	0101	YY	NS	0401	11	16	N	L	1	P	D	I	I				1	1	4
S 0077		P 7	SUFFOLK	DR 2	070910	16:03	1007	090441	17806890	11	1518	0101	11	0101	0101	YY	SS	0103	15	16	N	L	1	P		I	J			4		1	5
S 0077		P 95	SUFFOLK	DR 2	070910	15:34	1007	090438	17806894	21	1501	0101	11	0101	0401	YY	SS	0103	15	16	N	L	1	P		I			2	4		1	5
										1	01	01	1	01	01	Y	S	03	5														
S 0077		P 189	SUFFOLK	DR 2	070226	15:14	1007	021234	17361847	22	1515	0101	11	0101	0104	NN	NN	0101	11	16	N	L	1						4	4		1	5
										21	1518	0101	11	0101	0101	NY	NN	0102	11														
										6	19	16	9	14	00	Y	N	03	8														

TOTAL RECORDS PRINTED ====> 71

TRAFFIC RECORDS SECTION
REPORT NO: SP970-C04-1

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - BY MILEPOST

RUN ON 04-DEC-2008 13:46

ROUTE = <<S 0077 X >> BEG-DATE= Dec 01 2004 12:00AM END-DATE= Nov 30 2007 11:59PM
BEG-MP= <<07416 >>
END-MP= <<07540 >>

<---------- LOCATION ---------->					<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>											<CTRL DVC>	<--- GENERAL --->							
ON STREET		DIR	DIST X.XXX	INTERSECT STREET	D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ	R I	R J	S L	F A	I N	R C	U C	S C	M C
S 0077		P	200	M074	6	041217	12:04	0799	119893	13752890	11	0201	0101	11	0101	0401	YY	SS	0203	18	16	N	L	1						4	1	1	5
S 0077		P	200	M074	6	050121	12:49	0799	003895	13872173	11	0401	0202	11	0101	0104	YY	WN	0501	11	16	N	L	2			I	I		4	1	1	3
S 0077		P	200	M074	3	060207	18:28	0799	007464	15432880	1	15	01	9	01	01	Y	S	01	1	32	N	D	1						4		1	0
S 0077		P	200	M074	3	061205	19:19	0799	066410	17110048	1	15	01	1	01	01	Y	N	12	1	42	N	D	1						4		1	0
S 0077		P	300	M074	1	051225	06:53	0799	067828	15310834	3	02	01	5	01	01	Y	N	01	1	27	N	2	1					1	4		1	0
S 0077		P	300	M074	2	060731	13:41	0799	041050	16171477	11	0401	0101	11	0101	0104	YN	SS	0401	11	16	N	L	2		D	D	D				1	1
S 0077		P	300	M074	6	060929	20:23	0799	053191	16631050	4	01	16	6	01	01	Y	S	01	1	27	N	D	1		P				1	4		1	0
S 0077	(0)	P	300	M074	5	061005	18:23	0799	054306	16421049	22	0401	0101	11	0101	0101	YY	ES	0801	11	16	N	D	2			D	D		2	4		1	3
S 0077		P	400	M074	2	050516	20:40	0799	025501	14330625	61	1802	1601	91	1401	0401	YY	SS	0301	91	16	Y	D	1						4		1	5
S 0077		P	400	M074	4	060215	12:35	0799	008969	15450660	11	1301	0101	11	0101	0401	YY	NN	1001	11	16	N	L	2						4		1	1
S 0077		P	400	M074	4	060726	07:56	0799	040071	16152237	61	0201	1601	91	1401	0004	YY	SS	0102	11	16	Y	L	2						4		1	5
S 0077		P	400	M074	2	060731	12:09	0799	041038	16172134	11	1301	0101	11	0101	0101	YY	NN	1001	11	16	N	L	1			D	D		4		1	1
S 0077		P	400	M074	6	061222	19:36	0799	069925	17142375	11	0401	0101	11	0101	0104	YY	WN	0701	11	16	N	D	4			D	D		4		2	3
S 0077		P	500	M074	7	050122	00:30	0799	004061	13900954	1	01	01	1	01	01	Y	N	01	1	37	N	D	1	P					4		1	0
S 0077		P	500	M074	4	050202	11:50	0799	006210	13932760	11	0401	0202	11	0101	0101	YY	NS	0402	11	16	N	L	1						4		1	4
S 0077		P	500	M074	6	050812	19:31	0799	041926	14701999	2	02	01	4	01	04	Y	N	01	1	27	N	D	1		P				1	4		1	0
S 0077		P	500	M074	6	070907	17:08	0799	048647	17792665	11	0201	0101	11	0101	0401	NY	NN	0203	18	16	N	L	1						4		1	5
											11	0101	0101	11	0101	0101	YY	NN	0303	88														
											1	01	01	1	01	01	Y	N	03	8														
S 0077		P	600	M074	6	060428	21:39	0799	023339	16572220	11	1301	0101	11	0101	0101	YN	SS	0801	11	16	N	D	1		P	D	D		4		1	5
S 0077		P	600	M074	3	060627	15:16	0799	034576	16051372	11	1501	0101	11	0101	0401	YY	SS	0101	11	16	N	L	1						4		1	5
S 0077		P	600	M074	6	070302	15:10	0799	012300	17440444	12	0101	0101	11	0101	0101	YY	NN	0303	88	16	N	L	1					2	4		1	5
											11	0202	0101	11	0101	0404	NY	NN	0101	11														
S 0077		P	600	M074	4	070404	15:31	0799	018790	17570139	61	1901	1601	91	1401	0104	YY	NN	0101	11	16	N	L	1						4		1	1
S 0077		P	600	M074	4	070905	16:29	0799	048203	17792655	11	0401	0101	11	0101	0404	YY	EN	0401	11	16	N	L	2		D				4		2	3
S 0077		P	600	M074	3	071106	09:20	0799	060279	17864698	11	1301	0101	11	0101	0101	YY	SS	1001	11	16	N	L	1		P				1		1	1
S 0077		P	700	M074	1	050904	21:22	0799	046498	14890190	11	0401	0101	11	0101	0415	YY	SS	0401	11	16	N	D	1			D	D		5		1	3
S 0077		P	700	M074	6	060203	11:36	0799	006625	15411748	11	0401	0101	11	0101	0104	YY	SS	0501	11	16	N	L	2	P		I	J		4		1	1
S 0077		P	700	M074	6	060203	13:10	0799	006631	15411751	12	0401	0101	11	0101	0115	YN	ES	0401	11	16	N	L	1	P			J		1	4		1	3
S 0077		P	700	M074	6	070309	15:33	0799	013658	17440527	11	0201	0101	11	0101	0104	YY	NN	1202	11	16	N	L	1						4		1	5
S 0077		P	700	M074	3	070410	17:22	0799	019862	17601987	11	1501	0101	11	0101	0101	YY	NN	0102	11	16	N	L	1		P				1		1	5
S 0077		P	700	M074	7	070602	15:49	0799	030213	17683368	11	0801	0101	11	0101	0101	YY	NN	1201	11	16	N	L	1			I			4		1	1

TRAFFIC RECORDS SECTION
REPORT NO: SP970-C04-1

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - BY MILEPOST

RUN ON 04-DEC-2008 13:46

ROUTE = <<S 0077 X >> BEG-DATE= Dec 01 2004 12:00AM END-DATE= Nov 30 2007 11:59PM
BEG-MP= <<07416 >>
END-MP= <<07540 >>

<---------- LOCATION ---------->					<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>											<CTRL DVC>		<--- GENERAL --->						
ON STREET	DIR	DIST X.XXX	INTERSECT STREET	D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ		R I	R J	S L	F A	I N	R C	U C	S C	M C
S 0077	P	700	M074	5	070726	15:01	0799	040206	17722632	11	0201	0101	11	0101	0101	YY	SS	0104	11	16	N	L	1							4		1	5
S 0077	P	800	M074	3	050125	18:18	0799	004678	13902191	11	1501	0101	11	0101	0101	YY	NN	0103	18	16	N	D	1							4		1	5
S 0077	P	800	M074	3	050201	16:00	0799	006012	13941548	11	1801	1301	81	0101	0104	YN	SS	0101	11	16	Y	L	2	P						4		1	1
S 0077	P	800	M074	4	050209	12:40	0799	007459	13960629	13	0801	0101	99	0101	0401	YN	WE	0401	11	16	N	L	1	P		I	I		1			1	4
S 0077	P	800	M074	5	050224	16:38	0799	010353	13982558	11	1301	0101	11	0101	0401	YN	SS	1001	11	16	N	L	1							4		1	5
S 0077	P	800	M074	7	050226	21:08	0799	010857	14022874	11	0401	0101	11	0101	0101	YY	EW	0401	11	16	N	D	1	P	P	I	I		1			1	4
S 0077	P	800	M074	2	050314	12:54	0799	013842	14080484	11	0401	0101	11	0101	0104	YY	SS	0505	11	16	N	L	1	P		I	I			4		1	5
S 0077	P	800	M074	6	050520	22:36	0799	026258	14511082	12	1501	0101	11	0101	0101	YY	NN	0103	18	16	N	D	1	P		I	J		1			1	5
S 0077	P	800	M074	2	050704	00:45	0799	034468	14550352	1	02	13	5	01	04	Y	N	01	1	34	N	D	1							4		1	0
S 0077	P	800	M074	6	050805	15:55	0799	040551	14701355	11	0401	0101	99	1414	0101	YN	SE	0401	11	16	N	L	1	P		I	I					1	3
S 0077	P	800	M074	6	050902	17:44	0799	046046	15160021	11	0801	0101	11	0101	0101	YY	WN	0501	11	16	N	L	1			D	D			5		1	8
										11	0101	0101	11	0101	0101	YY	NN	0103	18															
										1	01	01	1	01	04	Y	N	03	8															
S 0077	P	800	M074	3	051018	11:55	0799	054390	14970852	11	0201	0101	11	0101	0401	YY	NN	0101	11	16	N	L	1							4		1	5
S 0077	P	800	M074	2	051128	10:00	0799	062322	15091708	31	1601	0101	11	0001	PD04	Y	WN	1801	01	14	N	L	1						1	4		1	0
S 0077	P	800	M074	5	051215	15:05	0799	065958	15282806	11	1501	0101	11	0101	2201	YY	SS	0103	13	16	N	L	2	P		I	J			4		1	5
S 0077	P	800	M074	4	060104	11:50	0799	000620	15312495	11	0201	0101	11	0101	0401	YY	NN	0103	15	16	N	L	1			I	J			4		1	5
S 0077	P	800	M074	6	060203	13:28	0799	006642	15411756	11	1501	0101	21	0101	0101	YY	NN	0103	15	16	N	L	2	P		I	J			4		1	5
S 0077	P	800	M074	6	060428	13:47	0799	023242	16572102	11	0201	0101	11	0101	0104	YY	NN	0103	15	16	N	L	1	P		I	J			4		1	5
S 0077	P	800	M074	4	060531	10:50	0799	029446	15952362	11	1301	0101	11	0101	0404	YY	NN	1001	11	16	N	L	1							4		1	1
S 0077	P	800	M074	3	061017	17:10	0799	056703	16412527	11	0201	0101	11	0101	0104	YY	NN	0903	18	16	N	L	2							4		1	5
S 0077	P	800	M074	7	061209	18:21	0799	067262	17102948	11	1301	0101	11	0101	0104	YY	NN	1001	11	16	N	D	1	P	P	I	J			4		1	1
S 0077	P	800	M074	5	070215	21:51	0799	009266	17332713	11	0201	0101	11	0201	0401	YY	NN	0103	15	16	N	D	1	P	P	I	J			4		1	5
S 0077	P	800	M074	1	070304	18:46	0799	012675	17451354	62	0201	1601	91	1401	0001	YY	NN	0103	15	16	Y	D	1	P	P	I	J	9	1	4		1	5
S 0077	P	800	M074	3	070410	16:52	0799	019854	17541847	11	1501	0101	11	0101	0104	YY	SS	0103	15	16	N	L	1			I				4		1	5
S 0077	P	800	M074	7	070512	13:12	0799	026143	17643066	11	1501	0101	11	0101	0101	YY	NN	0103	17	16	N	L	2	P		I	J	2		4		1	5
S 0077	P	800	M074	1	070708	09:45	0799	036889	17716807	21	0201	0101	71	0101	0101	NY	SS	0103	15	16	N	L	1	P		I	J		1			1	5
S 0077	P	800	M074	6	070824	14:42	0799	045178	17754261	14	0213	0101	11	0101	0401	YY	NN	0103	18	16	N	L	1		P	D	D		1	4		1	5
S 0077	P	800	M074	5	070906	12:32	0799	048355	17792640	62	0501	1601	91	1401	0401	YY	SS	0101	11	16	N	L	2	P	P	I	J	9	1			1	5
S 0077	P	800	M074	6	071019	19:09	0799	056666	17827153	61	1901	1601	91	1401	0401	YY	SS	0505	11	16	Y	D	1	P	P	I	J					1	5
S 0077	(0) P	800	M074	3	050705	08:48	0799	034685	14550377	11	0201	0101	11	0101	0101	YY	SS	0403	12	16	N	L	1	P		I	I	9		4		1	5
S 0077	(0) P	800	M074	6	051230	20:10	0799	068715	15310875	11	1818	0101	11	0101	0101	YY	SS	2603	55	16	N	D	1	P	P	I	J			4		1	8

TRAFFIC RECORDS SECTION
REPORT NO: SP970-C04-1

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - BY MILEPOST

RUN ON 04-DEC-2008 13:46

ROUTE = <<S 0077 X >> BEG-DATE= Dec 01 2004 12:00AM END-DATE= Nov 30 2007 11:59PM
BEG-MP= <<07416 >>
END-MP= <<07540 >>

<---------- LOCATION ---------->					<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>											<CTRL DVC>	<--- GENERAL --->							
ON STREET		DIR	DIST X.XXX	INTERSECT STREET	D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ	R I	R J	S L	F A	I N	R C	U C	S C	M C
S 0077	(0)	P	800	M074	3	060829	11:56	0799	046706	16271397	12	0201	0101	11	0101	0104	NY	SS	0103	18	16	Y	L	1					1	4		1	5
S 0077	(0)	P	800	M074	4	061206	19:04	0799	066611	17151901	11	0201	0101	11	0101	0101	YY	SS	0101	11	16	N	2	1	P					4		1	5
											1	01	01	1	01	04	Y	S	01	1														
S 0077		P	820	M074	6	060421	13:40	0799	021964	15811890	12	0201	0101	11	0114	0101	YY	NN	0101	11	16	N	L	1					3	4		1	5
S 0077		P	850	M074	6	041217	09:30	0799	119866	13720055	11	0201	0101	11	0101	0401	YY	SS	0103	15	16	N	L	1	P		I	J		4		1	5
S 0077		P	850	M074	2	050228	10:00	0799	011135	13992415	11	0201	0101	11	0101	0101	NN	EE	0202	11	16	N	L	1	P		I	I		4		1	5
S 0077		P	850	M074	6	050304	13:00	0799	011977	14032230	11	1301	0101	11	0101	0401	YY	NN	1001	11	16	N	L	1			I	I		4	1	1	1
S 0077		P	850	M074	2	050321	17:30	0799	015150	14072855	11	0101	0101	11	0101	0104	YY	SS	0404	11	16	N	L	1	P		I	J		5		1	1
S 0077		P	850	M074	7	050326	05:08	0799	016025	14130886	1	02	01	2	01	04	Y	N	01	1	40	N	D	1	P	PP	I	I		3			0
S 0077		P	900	M074	2	041213	19:10	0799	119118	13712567	11	0201	0101	11	0101	0101	YY	SS	0103	15	16	N	D	1		P				4		1	5
S 0077		P	900	M074	1	050424	08:47	0799	021373	14211508	11	0501	0101	11	0101	0101	YY	WN	0701	11	16	N	L	1						4		1	3
S 0077		P	900	M074	3	050426	07:55	0799	021732	14270510	11	0201	0101	11	0101	0101	YY	SS	0103	18	16	N	L	1						4		1	3
											1	01	01	1	01	01	Y	S	03	8														
S 0077		P	900	M074	5	050519	11:50	0799	960514	14331142	11	1301	0101	11	0101	0404	YN	SS	1001	11	16	N	L	1				J		4		1	5
S 0077		P	900	M074	1	050626	14:20	0799	033014	14501900	11	0201	0101	11	0101	0104	YY	NN	0103	18	16	N	L	1	P	D	I	I		4		1	5
S 0077		P	900	M074	2	050627	22:38	0799	033254	14501644	12	0201	0101	11	0101	0101	YY	SS	0103	18	16	N	D	1			I	J	3	4		1	5
											2	01	01	1	01	01	Y	S	03	8														
S 0077		P	900	M074	3	050906	08:55	0799	046739	14841788	23	0201	0101	11	0101	0104	YY	SS	0203	15	16	N	L	1					2	4		1	5
											1	01	01	1	01	04	Y	S	03	5														
S 0077		P	900	M074	3	051004	09:25	0799	051736	14930702	11	0201	0101	11	0101	0104	YY	SS	0103	18	16	N	L	1	P			J	1	4		1	5
S 0077		P	900	M074	6	060113	15:42	0799	002463	15321742	11	0801	0101	11	0101	0104	YY	NS	0601	11	16	N	L	1		P	I	I		1		1	D
S 0077		P	900	M074	7	060429	14:35	0799	023451	16571700	11	0201	0101	11	0101	0104	NY	SS	0103	13	16	Y	L	1	P					4		1	5
S 0077		P	900	M074	2	060522	07:15	0799	027548	15952254	11	0201	0101	11	0101	0401	YY	SS	0103	18	16	N	L	1						4		1	5
S 0077		P	900	M074	5	060525	10:30	0799	028209	16640875	61	0201	0101	91	0101	0101	YY	SS	0102	11	16	Y	L	1						4		1	5
S 0077		P	900	M074	3	060919	11:05	0799	051044	16340021	16	1319	0116	19	0114	0104	YY	NN	1027	11	16	N	L	1		D				4		1	1
S 0077		P	900	M074	2	070115	16:28	0799	002829	17221272	11	1401	0101	11	0101	0101	YY	SS	1001	11	16	N	L	1						5		1	1
S 0077		P	900	M074	7	070310	14:00	0799	013849	17441978	11	0201	0101	11	0101	0101	YY	SS	0103	18	16	N	L	1			I	J		4		1	5
S 0077		P	900	M074	5	070517	18:25	0799	027108	17643830	11	1501	0201	11	0101	0101	YY	NN	0103	18	16	N	L	1		P	D	D		1		1	5
S 0077		P	900	M074	7	070519	20:30	0799	027487	17650448	31	0401	0101	12	0101	0101	YN	WN	0801	11	16	N	D	1		P	D	D	3	4		1	3
S 0077		P	900	M074	5	070906	08:28	0799	048300	17901437	11	0501	0101	11	0101	0404	YY	SS	0101	11	16	N	L	1		DP				1		1	5
S 0077		P	900	M074	2	071112	10:10	0799	061532	17866051	11	0201	1616	11	0101	0101	YY	SS	0103	18	16	N	L	1						5		1	5
S 0077				M075	4	041201	16:33	0799	116777	13702967	11	0201	0101	11	0101	0401	NY	SS	0102	11	16	N	L	1						8		1	5

TRAFFIC RECORDS SECTION
REPORT NO: SP970-C04-1

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - BY MILEPOST

RUN ON 04-DEC-2008 13:46

ROUTE = <<S 0077 X >> BEG-DATE= Dec 01 2004 12:00AM END-DATE= Nov 30 2007 11:59PM
BEG-MP= <<07416 >>
END-MP= <<07540 >>

<---------- LOCATION ---------->					<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>										<CTRL DVC>		<--- GENERAL --->						
ON STREET		DIR	DIST X XXX	INTERSECT STREET	D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ		R I	R J	S L	F A	I N	R C	U C	S C	M C
S 0077				M075	5	041202	17:48	0799	116999	13691544	11	0501	0101	11	0101	0101	NY	SS	0103	18	16	N	D	1							4		1	5
S 0077				M075	2	050110	06:40	0799	001694	13802657	11	1501	0101	11	0101	0401	YY	SS	0103	18	16	N	L	1							4		1	5
S 0077				M075	4	050112	15:40	0799	002201	13980857	12	0201	0101	11	0101	0101	NY	SS	0103	18	16	N	L	1						1	4		1	5
S 0077				M075	4	050112	17:20	0799	002218	13901638	11	0201	0101	11	0101	0101	NY	SS	0103	18	16	N	L	1							5		1	5
S 0077				M075	3	050201	17:24	0799	006031	13940055	11	0201	0101	11	0101	0101	YY	NN	0102	11	16	N	L	1							4		1	5
											1	01	01	1	01	04	Y	N	02	1														
S 0077				M075	5	050310	12:35	0799	013084	14042987	11	0201	0101	11	0101	0101	YN	NN	0203	15	16	N	L	1	P		I	I		1	4		1	5
											1	01	01	1	01	01	Y	N	03	5														
S 0077				M075	6	050401	07:25	0799	017070	14140663	11	0401	0101	11	0101	0404	YY	ES	0501	11	16	N	L	1			D	D			4		1	8
S 0077				M075	2	050404	13:20	0799	017714	14161323	11	0201	0101	11	0101	0101	NY	SS	0103	15	16	N	L	1							4		1	5
S 0077				M075	5	050407	14:59	0799	018308	14132392	11	0201	0101	11	0101	0101	YY	NN	0202	11	16	N	L	1							5		1	5
S 0077				M075	5	050407	15:00	0799	018309	14132394	11	0201	0101	11	0101	0101	YY	NN	0202	11	16	N	L	1							5		1	5
S 0077				M075	2	050815	11:55	0799	033922	14692578	11	0201	0101	11	0101	0401	NN	NN	0102	11	16	N	L	1							4		1	5
S 0077				M075	2	051226	17:14	0799	067980	15291278	33	0201	0101	11	0101	0104	NY	NN	0103	18	16	N	L	1						3	4		1	5
											1	01	01	1	01	01	N	N	03	8														
S 0077				M075	6	060127	15:25	0799	005268	15381571	22	1501	0101	11	0101	0101	NY	SS	0102	11	16	N	L	1	P					2	4		1	5
S 0077				M075	5	060209	07:00	0799	007751	15412255	11	1301	0101	11	0101	0401	YY	SS	1001	11	16	N	L	1	P		I	J			4		1	1
S 0077				M075	6	070202	12:50	0799	006473	17320242	11	0201	0101	11	0101	0104	NY	SS	0103	18	16	N	L	1							4		1	5
S 0077				M075	2	070507	16:09	0799	025106	17643869	11	0201	0101	11	0101	0404	YY	NN	0101	11	16	N	L	1	P	D					4		1	5
S 0077				M075	6	070824	18:14	0799	045768	17754254	11	0201	0101	11	0101	0404	YY	NN	0103	18	16	N	L	1	P								1	5
S 0077				M075	6	070831	13:57	0799	047103	17792638	11	0201	0101	11	0101	0101	YY	NN	0101	11	16	N	L	1	P	P					1		1	5
											1	01	01	1	01	01	Y	N	01	1														
S 0077				M075	3	071106	18:10	0799	060405	17866419	11	0201	0101	11	0101	0101	NY	NN	0103	18	16	N	2	1		P					4		1	5
											1	01	01	1	01	01	Y	N	03	8														
S 0077				M075	6	071109	11:07	0799	060997	17866310	12	0201	0101	11	0101	0104	YY	SS	0103	15	16	N	L	1	P		I			1	4		1	5
S 0077	(0)			M075	5	060914	08:33	0799	050116	16301608	11	0201	0101	11	0101	0101	YY	SS	0102	11	16	N	L	1							4		1	5
S 0077		P	90	M075	4	041215	02:05	0799	119349	13721806	1	02	01	2	01	01	Y	N	01	1	32	N	D	1			I	I			4		1	0
S 0077		P	100	M075	4	041222	10:50	0799	120823	13722324	11	0401	0202	11	0101	0101	YN	NS	0601	11	16	N	L	1							4		1	D
S 0077		P	100	M075	3	050111	17:18	0799	002023	13872313	31	0402	0101	11	0101	0104	YN	SN	0401	11	16	N	0	1						2	4		1	4
S 0077		P	100	M075	5	050113	07:20	0799	002301	13822381	11	0201	0101	11	0101	0101	YY	SS	0103	18	16	N	L	1							4		1	5
S 0077		P	100	M075	1	050227	14:15	0799	010951	13991967	11	1501	0101	11	0101	0104	YY	NN	0104	11	16	N	L	1							4		1	5
S 0077		P	100	M075	2	050314	18:02	0799	013903	14080512	11	0801	0101	11	0101	0401	YY	NN	0401	11	16	N	L	2		P					3		1	1

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - BY MILEPOST

ROUTE = <<S 0077 X >> BEG-DATE= Dec 01 2004 12:00AM END-DATE= Nov 30 2007 11:59PM
BEG-MP= <<07416 >>
END-MP= <<07540 >>

<---------- LOCATION ---------->						<DTE & TIME>					<--- DRIVER -->				<------ VEHICLE ------>										<CTRL DVC>		<--- GENERAL --->						
ON STREET		DIR	DIST X.XXX	INTERSECT STREET	D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ		R I	R J	S L	F A	I N	R C	U C	S C	M C
S 0077		P	100	M075	4	051109	17:28	0799	058617	15042359	21	0113	0101	11	0101	0104	NY	SS	0110	11	16	N	L	1						1	4		1	1
S 0077		P	100	M075	5	051201	17:48	0799	063074	15200017	11	0501	0101	11	0101	0101	YY	SS	0102	11	16	N	D	1							4		1	5
S 0077		P	100	M075	6	060310	12:35	0799	013613	15521336	11	0201	0101	11	0101	0401	NY	SS	0103	18	16	N	L	1							4		1	5
											11	0101	0101	11	0101	0401	YY	SS	0303	88														
S 0077		P	100	M075	2	060731	12:20	0799	041031	16172593	12	0102	0101	11	0101	0101	YY	NN	0301	51	16	N	L	2						1	4		1	5
S 0077		P	100	M075	5	061207	15:56	0799	066806	17112160	11	0201	0101	11	0101	1304	YY	SS	0103	18	16	N	2	1		P					4		1	5
											1	01	01	1	01	01	Y	S	03	8														
S 0077		P	100	M075	2	061211	18:49	0799	067605	17110052	11	0801	0101	90	0101	0101	YY	WN	0801	11	16	N	D	1	P		D	D			4		1	3
S 0077		P	100	M075	2	061211	18:50	0799	067612	17110054	11	0101	0101	11	0101	0101	NY	NN	0112	11	16	N	D	1							4		1	5
S 0077		P	100	M075	5	070510	17:07	0799	025774	17642759	13	0401	1616	11	0101	0101	YY	NS	0401	11	16	N	L	1			D	D		1	4		1	4
S 0077		P	100	M075	3	070522	12:15	0799	027902	17645861	11	0202	0202	11	0101	0101	YY	SN	0808	11	16	N	L	1	P	D	D	D			4		1	6
S 0077		P	100	M075	5	070712	10:54	0799	037704	17721508	11	0201	0101	11	0101	0101	YY	NN	0102	11	16	N	L	1							4		1	5
S 0077		P	100	M075	4	070718	12:14	0799	038766	17721899	11	1301	1601	11	0101	0101	YN	SS	1001	11	16	N	L	1							4		1	1
S 0077		P	100	M075	2	071112	12:03	0799	061549	17866853	11	0201	0101	11	0101	0104	YY	SS	0102	11	16	N	L	1							4		1	5
S 0077	(0)	P	100	M075	2	061016	14:42	0799	056451	16431104	61	0201	1601	01	1401	0001	NN	SS	2702	11	16	Y	0	1			I			1	4		1	5
											2	01	01	1	01	01	Y	S	02	1														
S 0077		P	200	M075	2	041213	15:56	0799	119078	13771223	11	0501	0101	11	0101	0401	YY	WW	0508	11	16	N	L	1			D	D			4		1	5
S 0077		P	200	M075	3	051213	09:25	0799	065429	15610633	12	0418	1301	11	0101	0101	YY	ES	0801	11	16	N	L	1			D	D		1	4		1	3
S 0077		P	200	M075	2	060206	08:30	0799	007124	15412829	11	1501	0101	11	0101	0101	YY	SS	0103	18	16	N	L	1							4		1	5
S 0077		P	200	M075	4	060215	23:10	0799	009107	15450648	41	0201	0101	91	0101	0104	NY	NN	0103	19	16	N	D	1	P	P				1	4	1	1	5
S 0077		P	200	M075	4	060322	08:30	0799	016083	15620648	32	1501	0101	11	0101	0104	NY	SS	0103	18	16	N	L	1						2	4		1	5
S 0077		P	200	M075	4	070124	07:04	0799	004627	17222951	11	1501	0101	11	0101	0401	YN	NS	0412	11	16	N	L	1			D	D			4		1	4
S 0077		P	200	M075	2	070723	16:21	0799	039740	17723636	11	0201	0101	11	0100	0401	YY	SS	0102	11	16	N	L	2							4		2	5
S 0077		P	200	M075	4	071024	07:40	0799	057507	17830009	11	0201	0101	11	0101	0401	YY	SS	0102	11	16	N	L	1							4		1	5
S 0077		P	300	M075	2	070813	16:15	0799	043565	17754063	11	0201	0101	11	0201	0101	YY	SS	0203	15	16	N	L	1	P	P	I	J			5		1	5
S 0077		P	300	M075	5	071115	17:48	0799	062337	17870348	11	0501	0101	11	0101	0101	YY	SS	0103	18	16	N	D	1							4		1	5
											1	01	01	1	01	01	Y	S	03	8														
S 0077		P	400	M075	4	051109	18:22	0799	005863	15042368	11	0501	0101	11	0101	0101	YY	SS	0203	18	16	N	D	1						1	4		1	5
S 0077		P	400	M075	6	051209	18:06	0799	064731	15172437	11	0219	0101	11	0101	0101	NY	SS	0203	18	16	N	D	1							4		1	5
S 0077	(0)	P	400	M075	6	051209	18:06	0799	064730	15282312	11	0201	0101	11	0101	0104	YY	SS	0103	18	16	N	D	1							4		1	5
S 0077	(0)	P	400	M075	6	051209	18:07	0799	064741	15282310	11	0201	0101	11	0101	0101	YY	SS	0103	18	16	N	D	1							4		1	5
S 0077	(0)	P	400	M075	7	051231	13:50	0799	068817	15300497	11	1501	0101	11	0101	0101	NY	SS	0203	19	16	N	L	1							4	1	1	5

TRAFFIC RECORDS SECTION
REPORT NO: SP970-C04-1

ARIZONA DEPARTMENT OF TRANSPORTATION
MOTOR VEHICLE CRASH LISTING - BY MILEPOST

RUN ON 04-DEC-2008 13:46

ROUTE = <<S 0077 X >> **BEG-DATE= Dec 01 2004 12:00AM END-DATE= Nov 30 2007 11:59PM**
BEG-MP= <<07416 >>
END-MP= <<07540 >>

<---------- LOCATION ---------->				<DTE & TIME>					<--- DRIVER -->			<------ VEHICLE ------>								<CTRL DVC>	<--- GENERAL --->								
ON STREET	DIR	DIST X.XXX	INTERSECT STREET	D W	YYMMDD	HH:MM	OFCR NCIC	RPT#	MICROFLM	IN 12	VIOL V1V2	VISN V1V2	PC 12	COND V1V2	TYPE V1V2	SO 12	DT 12	VACT V1V2	RS 12	HE CD	H R	L C	W C	QRSTUVWXYZ	R I	R J	S L	F A	I N	R C	U C	S C	M C
										1	01	01	1	01	04	Y	S	03	9												

TOTAL RECORDS PRINTED ====> 142

APPENDIX B

Traffic Count Data

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

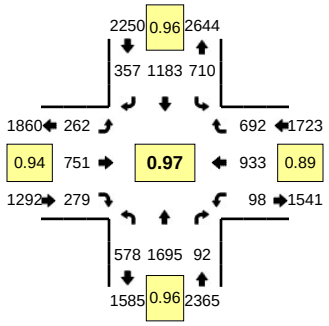
LOCATION: N Oracle Rd -- W Ina Rd

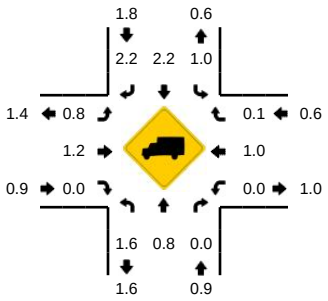
QC JOB #: 10379601

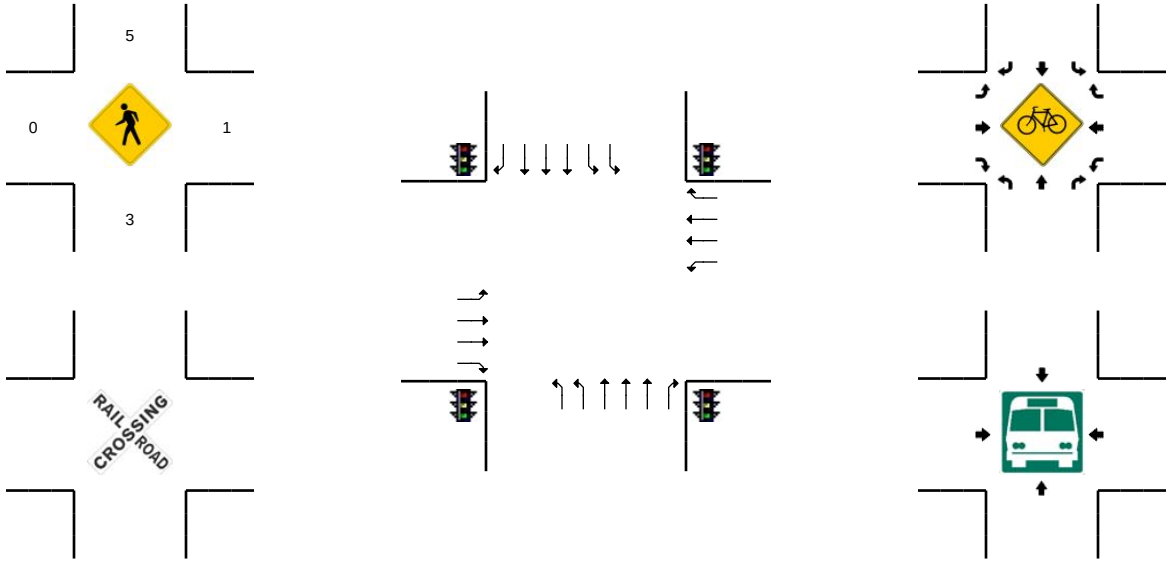
CITY/STATE: Tucson, AZ

DATE: 12/3/2008

Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:00 PM -- 5:15 PM







R* = RTOR

15-Min Count Period Beginning At	N Oracle Rd (Northbound)					N Oracle Rd (Southbound)					W Ina Rd (Eastbound)					W Ina Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	137	334	5	7	19	141	290	53	3	42	73	163	23	6	44	36	261	107	0	52	1796	
4:15 PM	106	388	10	8	15	168	335	36	2	37	64	165	19	5	46	32	205	104	2	41	1788	
4:30 PM	140	375	7	11	9	173	251	29	5	40	56	218	23	3	33	35	229	120	1	66	1824	
4:45 PM	119	441	4	7	12	152	317	59	5	38	67	148	29	6	43	25	220	96	0	57	1845	7253
5:00 PM	148	427	9	7	21	191	270	41	4	36	53	209	22	4	55	29	246	124	0	75	1971	7428
5:15 PM	134	464	10	4	14	159	321	70	2	35	66	184	18	5	42	17	210	88	0	52	1895	7535
5:30 PM	152	363	6	7	16	196	275	35	1	43	59	210	28	2	42	27	257	121	0	79	1919	7630
5:45 PM	122	468	8	6	15	162	286	42	2	32	51	146	17	14	43	27	215	88	0	73	1817	7602

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	592	1708	36	28	84	764	1080	164	16	144	212	836	88	16	220	116	984	496	0	300	7884
Heavy Trucks	0	8	0			4	20	8			4	4	0			0	12	0			60
Pedestrians		0					4					0					0				4
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

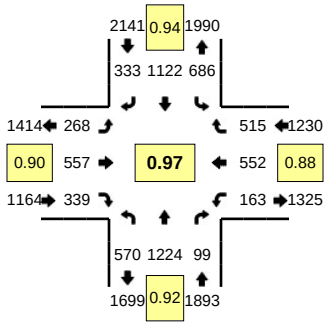
Method for determining peak hour: Total Entering Volume

LOCATION: N Oracle Rd -- W Ina Rd

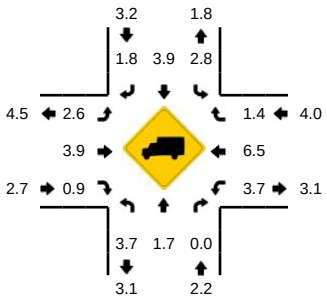
QC JOB #: 10379602

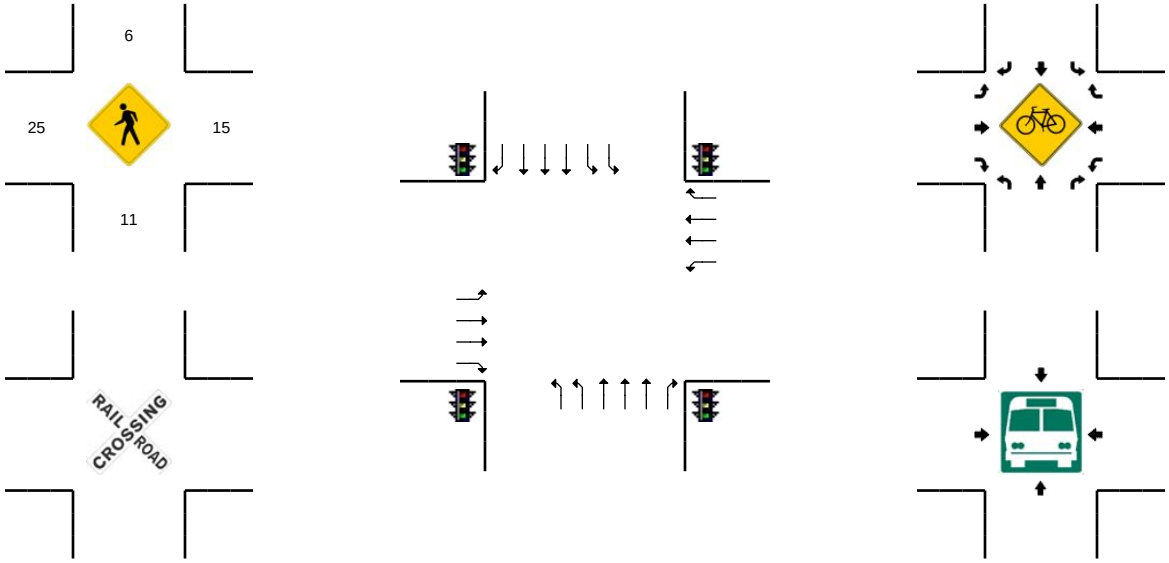
CITY/STATE: Tucson, AZ

DATE: 12/3/2008



Peak-Hour: 12:00 PM -- 1:00 PM
Peak 15-Min: 12:30 PM -- 12:45 PM





R* = RTOR

15-Min Count Period Beginning At	N Oracle Rd (Northbound)					N Oracle Rd (Southbound)					W Ina Rd (Eastbound)					W Ina Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
11:00 AM	102	250	13	10	12	168	330	52	4	41	57	139	36	11	46	26	113	39	1	36	1486	
11:15 AM	84	269	11	10	26	146	300	27	5	57	62	131	40	6	42	39	125	55	2	50	1487	
11:30 AM	87	287	8	18	18	160	338	26	6	40	68	165	57	8	51	38	115	56	2	53	1601	
11:45 AM	109	262	6	15	21	162	317	20	3	40	63	140	35	6	51	43	105	57	1	56	1512	6086
12:00 PM	108	302	13	28	14	191	315	39	3	40	55	162	35	13	60	38	109	44	2	42	1613	6213
12:15 PM	126	282	10	17	14	171	271	40	9	39	48	143	44	9	50	26	142	75	2	78	1596	6322
12:30 PM	115	307	6	19	16	168	265	49	5	49	70	162	28	6	45	53	162	69	0	66	1660	6381
12:45 PM	142	333	9	15	17	135	271	34	4	43	57	90	32	10	45	42	139	62	0	79	1559	6428

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	460	1228	24	76	64	672	1060	196	20	196	280	648	112	24	180	212	648	276	0	264	6640
Heavy Trucks	20	32	0			28	56	4			0	24	4			16	28	0			212
Pedestrians		4					4					8					8				24
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

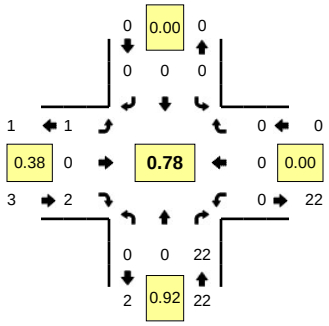
LOCATION: N Via Ponte -- W Ina Rd

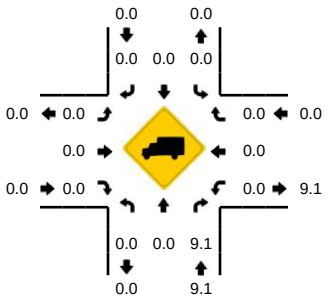
QC JOB #: 10379603

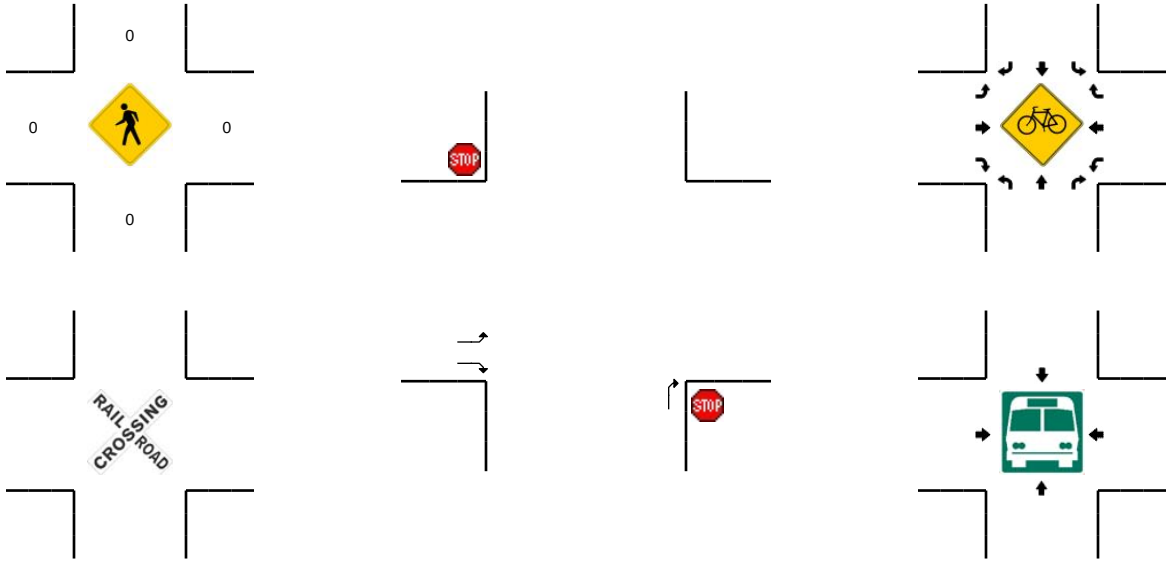
CITY/STATE: Tucson , AZ

DATE: 12/3/2008

Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:15 PM -- 4:30 PM







R* = RTOR

15-Min Count Period Beginning At	N Via Ponte (Northbound)					N Via Ponte (Southbound)					W Ina Rd (Eastbound)					W Ina Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
4:15 PM	0	0	6	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	8	
4:30 PM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
4:45 PM	0	0	6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	7	23
5:00 PM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	25
5:15 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	21
5:30 PM	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	20
5:45 PM	0	0	4	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	6	19

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	24	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	32
Heavy Trucks	0	0	4			0	0	0			0	0	0			0	0	0			4
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

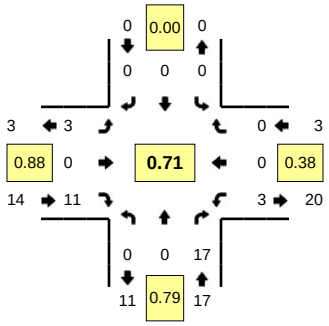
LOCATION: N Via Ponte -- W Ina Rd

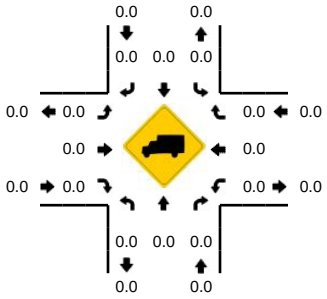
QC JOB #: 10379604

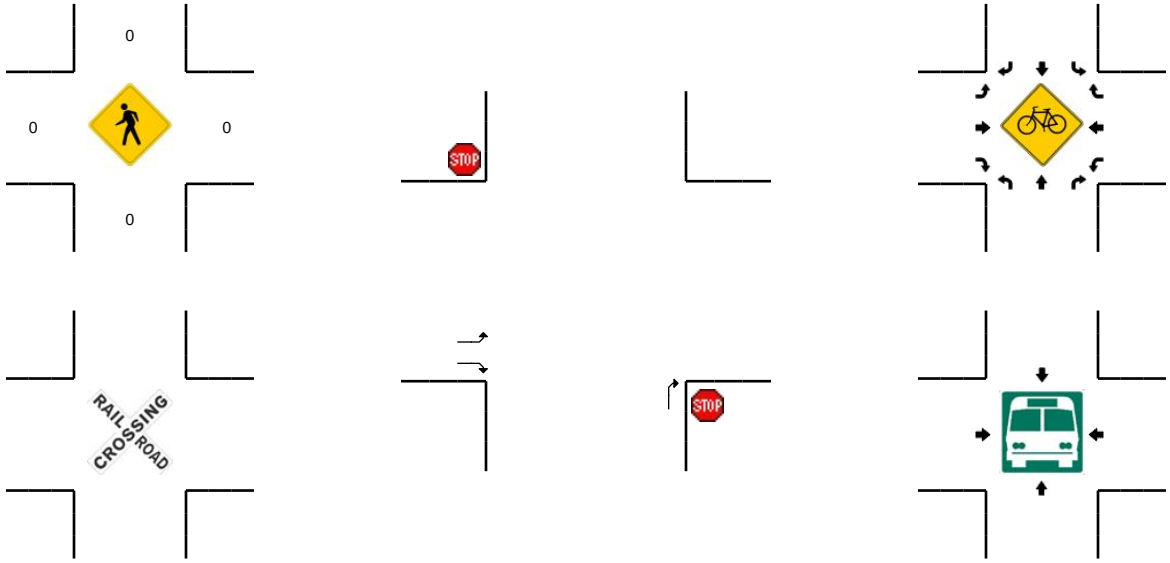
CITY/STATE: Tucson , AZ

DATE: 12/3/2008

Peak-Hour: 12:00 PM -- 1:00 PM
Peak 15-Min: 12:45 PM -- 1:00 PM







R* = RTOR

15-Min Count Period Beginning At	N Via Ponte (Northbound)					N Via Ponte (Southbound)					W Ina Rd (Eastbound)					W Ina Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
11:00 AM	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	
11:15 AM	0	0	5	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	8	
11:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	2	0	6	
11:45 AM	0	0	6	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	10	28
12:00 PM	0	0	4	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	1	0	9	33
12:15 PM	0	0	4	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	6	31
12:30 PM	0	0	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	7	32
12:45 PM	0	0	4	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	1	0	12	34

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	16	0	0	0	0	0	0	0	0	0	24	4	0	0	0	0	4	0	48
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

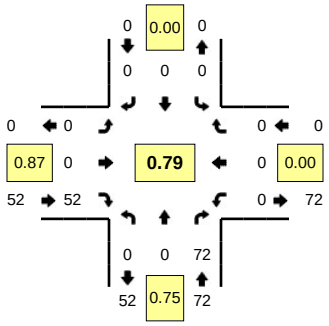
LOCATION: Site Driveway 3 -- W Ina Rd

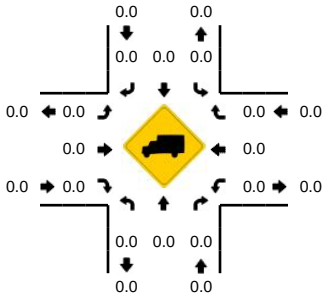
CITY/STATE: Tucson, AZ

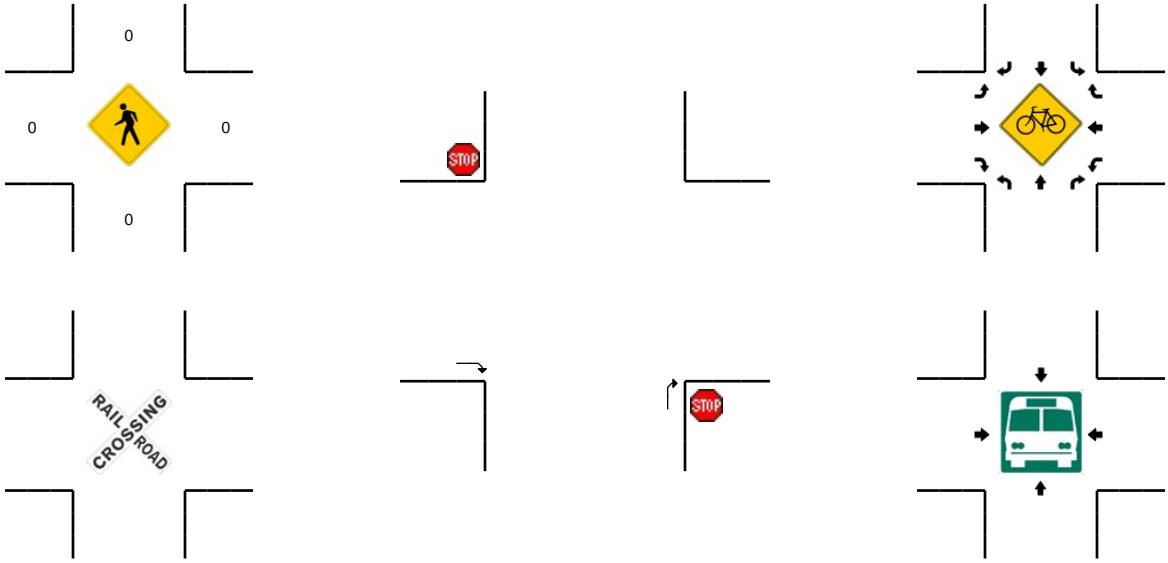
QC JOB #: 10379605

DATE: 12/3/2008

Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:45 PM -- 6:00 PM







R* = RTOR

15-Min Count Period Beginning At	Site Driveway 3 (Northbound)					Site Driveway 3 (Southbound)					W Ina Rd (Eastbound)					W Ina Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	0	14	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	26	
4:15 PM	0	0	17	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	25	
4:30 PM	0	0	9	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	19	
4:45 PM	0	0	10	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	16	86
5:00 PM	0	0	16	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	30	90
5:15 PM	0	0	16	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	27	92
5:30 PM	0	0	16	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	28	101
5:45 PM	0	0	24	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	39	124

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	96	0	0	0	0	0	0	0	0	0	60	0	0	0	0	0	0	0	156
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

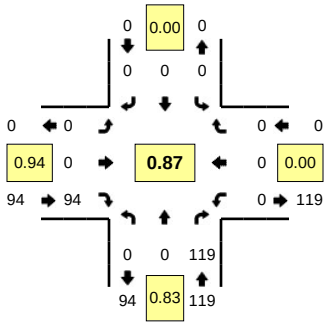
LOCATION: Site Driveway 3 -- W Ina Rd

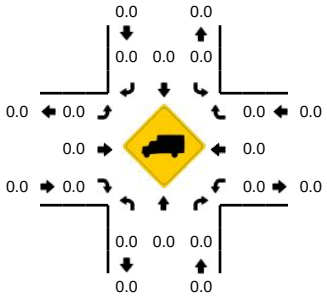
CITY/STATE: Tucson, AZ

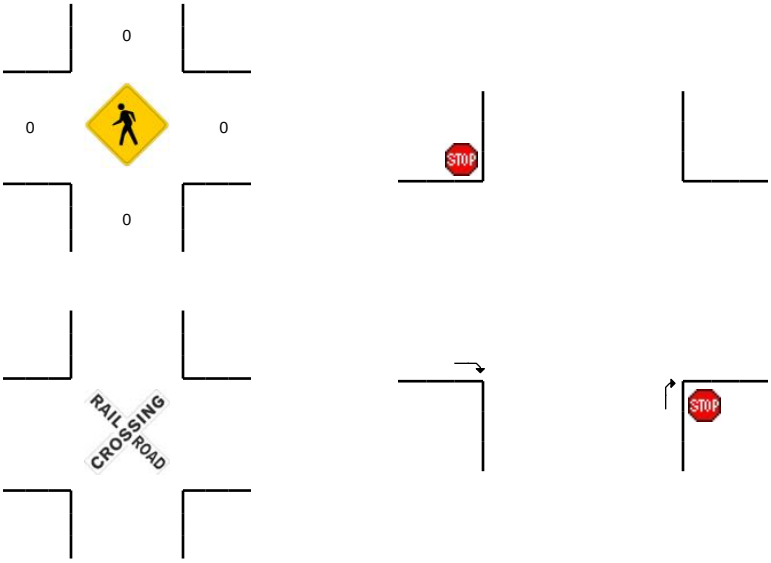
QC JOB #: 10379606

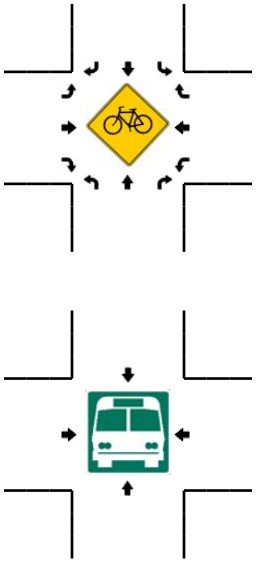
DATE: 12/3/2008

Peak-Hour: 11:45 AM -- 12:45 PM
Peak 15-Min: 12:15 PM -- 12:30 PM









R* = RTOR

15-Min Count Period Beginning At	Site Driveway 3 (Northbound)					Site Driveway 3 (Southbound)					W Ina Rd (Eastbound)					W Ina Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
11:00 AM	0	0	25	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	44	
11:15 AM	0	0	23	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	48	
11:30 AM	0	0	28	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	44	
11:45 AM	0	0	26	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	51	187
12:00 PM	0	0	25	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	46	189
12:15 PM	0	0	36	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	61	202
12:30 PM	0	0	32	0	0	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	55	213
12:45 PM	0	0	27	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	44	206

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	144	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	244
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

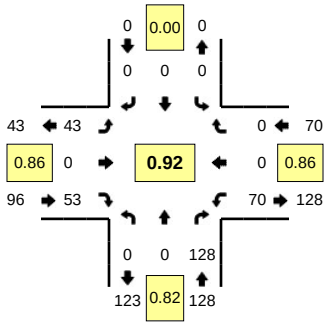
LOCATION: Site Driveway 5 -- W Ina Rd

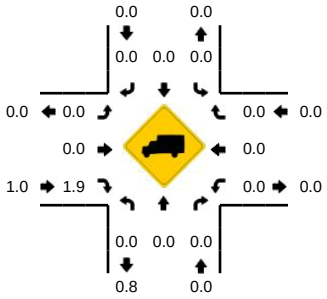
CITY/STATE: Tucson, AZ

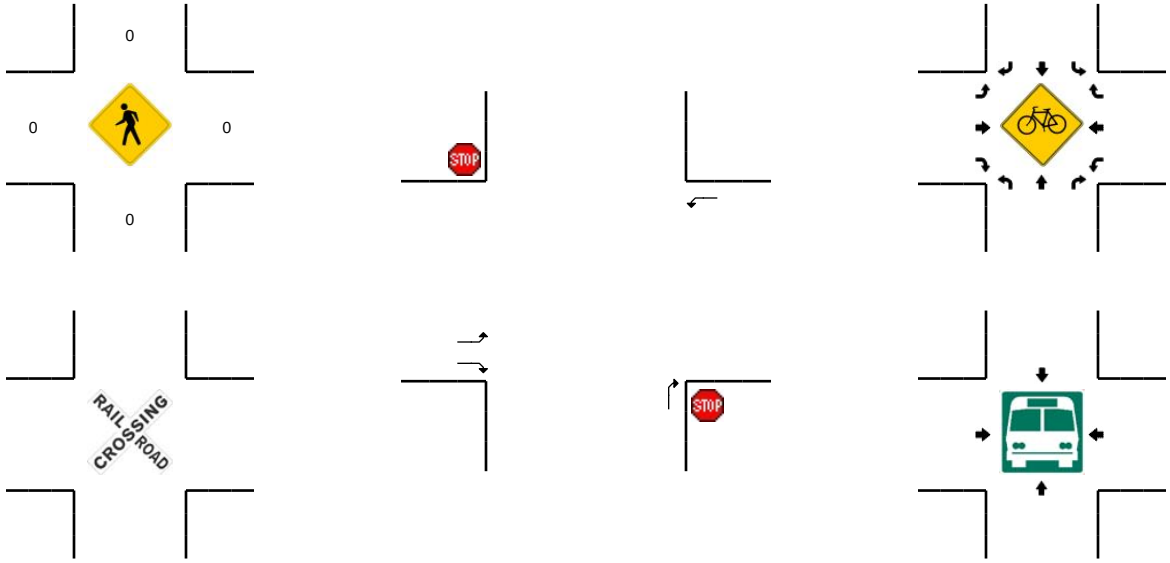
QC JOB #: 10379607

DATE: 12/3/2008

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM







R* = RTOR

15-Min Count Period Beginning At	Site Driveway 5 (Northbound)					Site Driveway 5 (Southbound)					W Ina Rd (Eastbound)					W Ina Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	0	39	0	0	0	0	0	0	0	0	0	11	17	0	13	0	0	0	0	80	
4:15 PM	0	0	28	0	0	0	0	0	0	0	0	0	16	10	0	22	0	0	0	0	76	
4:30 PM	0	0	24	0	0	0	0	0	0	0	0	0	10	7	0	19	0	0	0	0	60	
4:45 PM	0	0	37	0	0	0	0	0	0	0	0	0	16	9	0	16	0	0	0	0	78	294
5:00 PM	0	0	25	0	0	0	0	0	0	0	0	0	11	9	0	17	0	0	2	0	64	278
5:15 PM	0	0	31	0	0	0	0	0	0	0	0	0	5	8	0	13	0	0	2	0	59	261
5:30 PM	0	0	27	0	0	0	0	0	0	0	0	0	7	2	0	10	0	0	0	0	46	247
5:45 PM	0	0	26	0	0	0	0	0	0	0	0	0	5	2	0	17	0	0	0	0	50	219

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	156	0	0	0	0	0	0	0	0	0	44	68	0	52	0	0	0	0	320
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

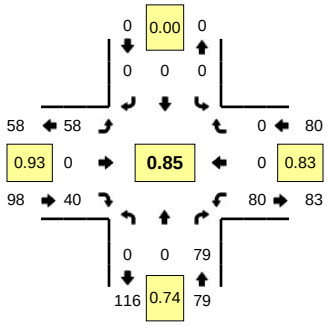
LOCATION: Site Driveway 5 -- W Ina Rd

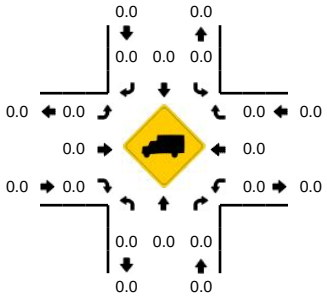
CITY/STATE: Tucson, AZ

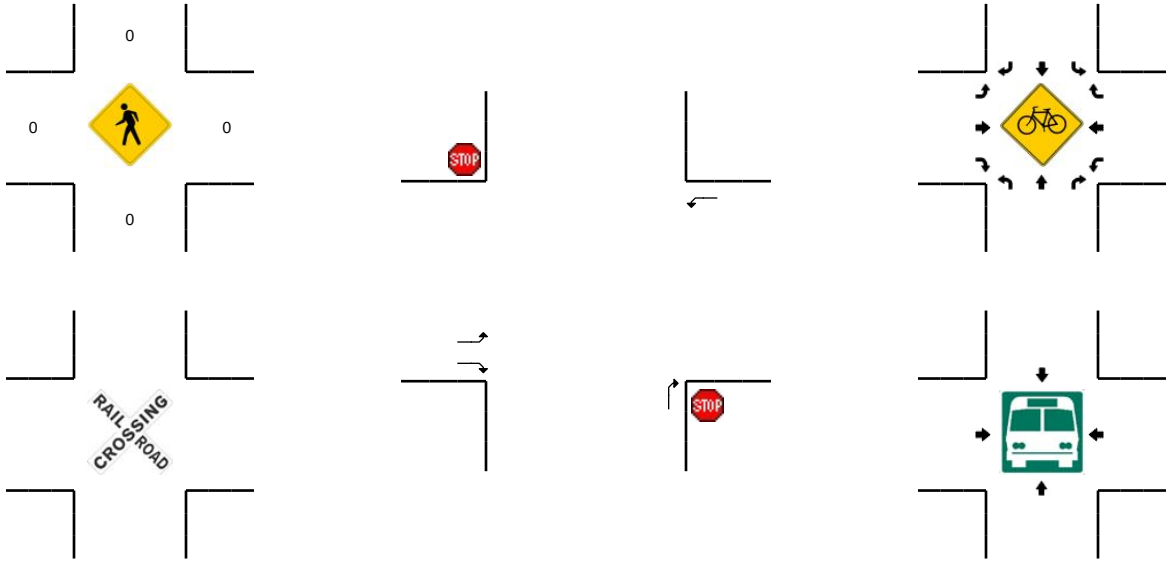
QC JOB #: 10379608

DATE: 12/3/2008

Peak-Hour: 11:00 AM -- 12:00 PM
Peak 15-Min: 11:15 AM -- 11:30 AM







R* = RTOR

15-Min Count Period Beginning At	Site Driveway 5 (Northbound)					Site Driveway 5 (Southbound)					W Ina Rd (Eastbound)					W Ina Rd (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
11:00 AM	0	0	18	0	0	0	0	0	0	0	0	0	7	18	0	18	0	0	3	0	64	
11:15 AM	0	0	16	0	0	0	0	0	0	0	0	0	20	16	0	24	0	0	0	0	76	
11:30 AM	0	0	30	0	0	0	0	0	0	0	0	0	6	7	0	22	0	0	0	0	65	
11:45 AM	0	0	15	0	0	0	0	0	0	0	0	0	7	17	0	12	0	0	1	0	52	257
12:00 PM	0	0	21	0	0	0	0	0	0	0	0	0	11	18	0	8	0	0	0	0	58	251
12:15 PM	0	0	23	0	0	0	0	0	0	0	0	0	10	15	0	12	0	0	1	0	61	236
12:30 PM	0	0	21	0	0	0	0	0	0	0	0	0	17	13	0	16	0	0	2	0	69	240
12:45 PM	0	0	24	0	0	0	0	0	0	0	0	0	8	19	0	11	0	0	1	0	63	251

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	64	0	0	0	0	0	0	0	0	0	80	64	0	96	0	0	0	0	304
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

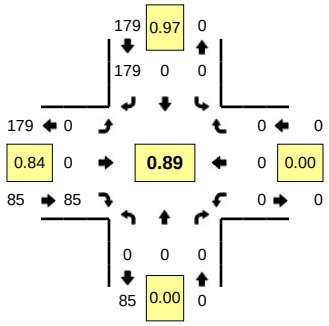
LOCATION: N Oracle Rd -- Site Driveway 4

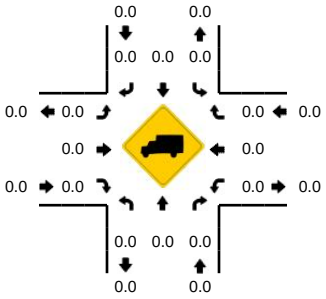
QC JOB #: 10379609

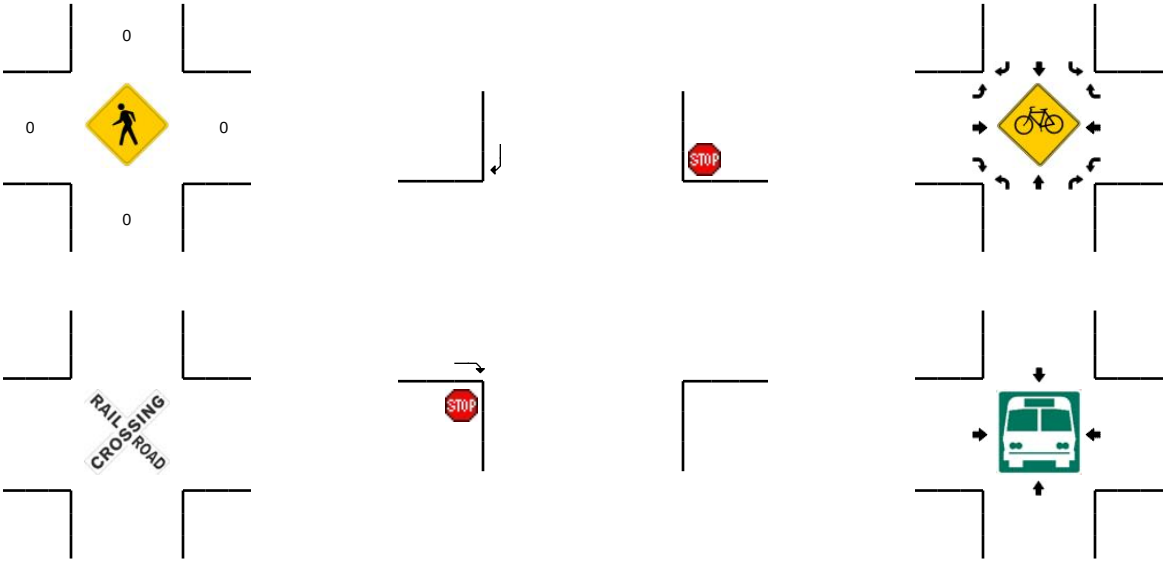
CITY/STATE: Tucson, AZ

DATE: 12/3/2008

Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:00 PM -- 5:15 PM







R* = RTOR

15-Min Count Period Beginning At	N Oracle Rd (Northbound)					N Oracle Rd (Southbound)					Site Driveway 4 (Eastbound)					Site Driveway 4 (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	0	0	0	0	0	0	34	0	0	0	0	5	0	0	0	0	0	0	0	39	
4:15 PM	0	0	0	0	0	0	0	44	0	0	0	0	13	0	0	0	0	0	0	0	57	
4:30 PM	0	0	0	0	0	0	0	46	0	0	0	0	17	0	0	0	0	0	0	0	63	
4:45 PM	0	0	0	0	0	0	0	44	0	0	0	0	20	0	0	0	0	0	0	0	64	223
5:00 PM	0	0	0	0	0	0	0	47	0	0	0	0	27	0	0	0	0	0	0	0	74	258
5:15 PM	0	0	0	0	0	0	0	46	0	0	0	0	15	0	0	0	0	0	0	0	61	262
5:30 PM	0	0	0	0	0	0	0	42	0	0	0	0	23	0	0	0	0	0	0	0	65	264
5:45 PM	0	0	0	0	0	0	0	38	0	0	0	0	26	0	0	0	0	0	0	0	64	264

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	0	0	188	0	0	0	0	108	0	0	0	0	0	0	0	296
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

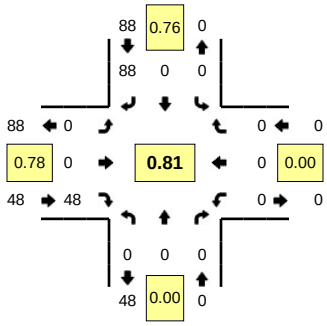
LOCATION: N Oracle Rd -- Site Driveway 4

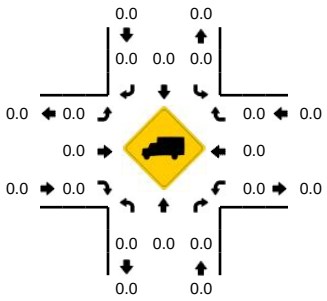
QC JOB #: 10379610

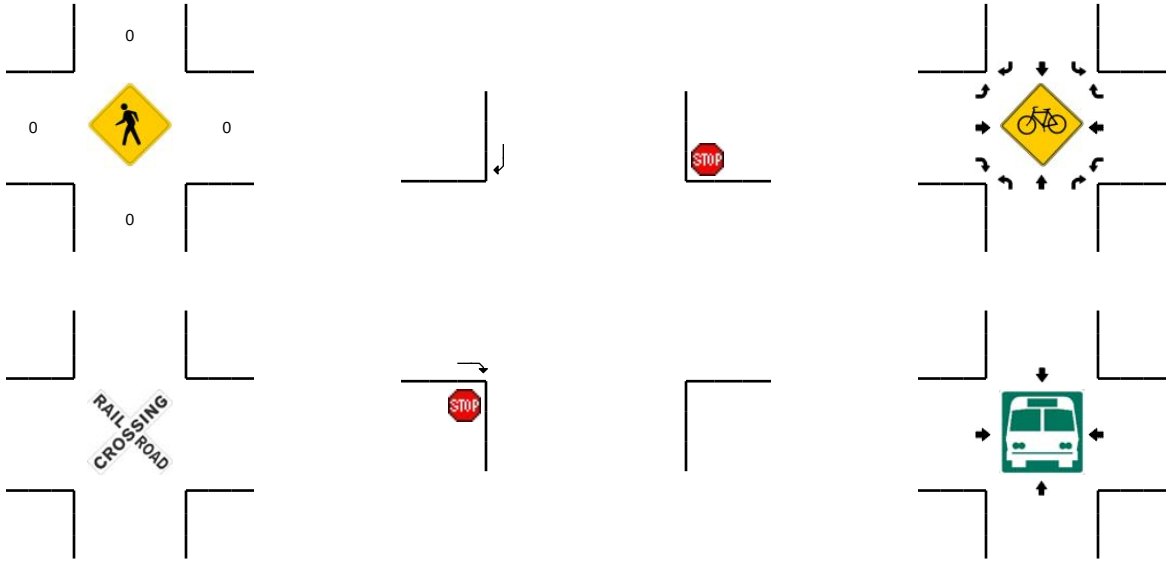
CITY/STATE: Tucson, AZ

DATE: 12/3/2008

Peak-Hour: 11:30 AM -- 12:30 PM
Peak 15-Min: 11:30 AM -- 11:45 AM







R* = RTOR

15-Min Count Period Beginning At	N Oracle Rd (Northbound)					N Oracle Rd (Southbound)					Site Driveway 4 (Eastbound)					Site Driveway 4 (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
11:00 AM	0	0	0	0	0	0	0	20	0	0	0	0	15	0	0	0	0	0	0	0	35	
11:15 AM	0	0	0	0	0	0	0	13	0	0	0	0	12	0	0	0	0	0	0	0	25	
11:30 AM	0	0	0	0	0	0	0	29	0	0	0	0	13	0	0	0	0	0	0	0	42	
11:45 AM	0	0	0	0	0	0	0	22	0	0	0	0	11	0	0	0	0	0	0	0	33	135
12:00 PM	0	0	0	0	0	0	0	16	0	0	0	0	17	0	0	0	0	0	0	0	33	133
12:15 PM	0	0	0	0	0	0	0	21	0	0	0	0	7	0	0	0	0	0	0	0	28	136
12:30 PM	0	0	0	0	0	0	0	19	0	0	0	0	14	0	0	0	0	0	0	0	33	127
12:45 PM	0	0	0	0	0	0	0	29	0	0	0	0	8	0	0	0	0	0	0	0	37	131

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	0	0	0	0	0	116	0	0	0	0	52	0	0	0	0	0	0	0	168
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

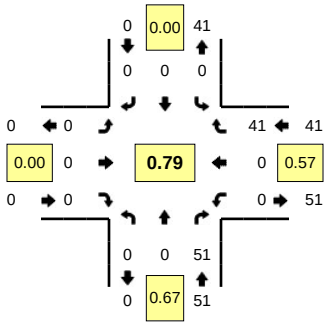
LOCATION: N Oracle Rd -- Site Driveway 6

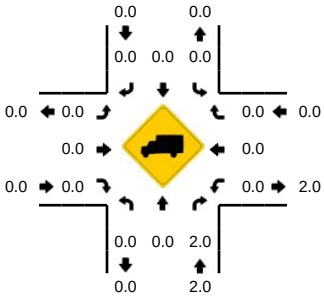
QC JOB #: 10379611

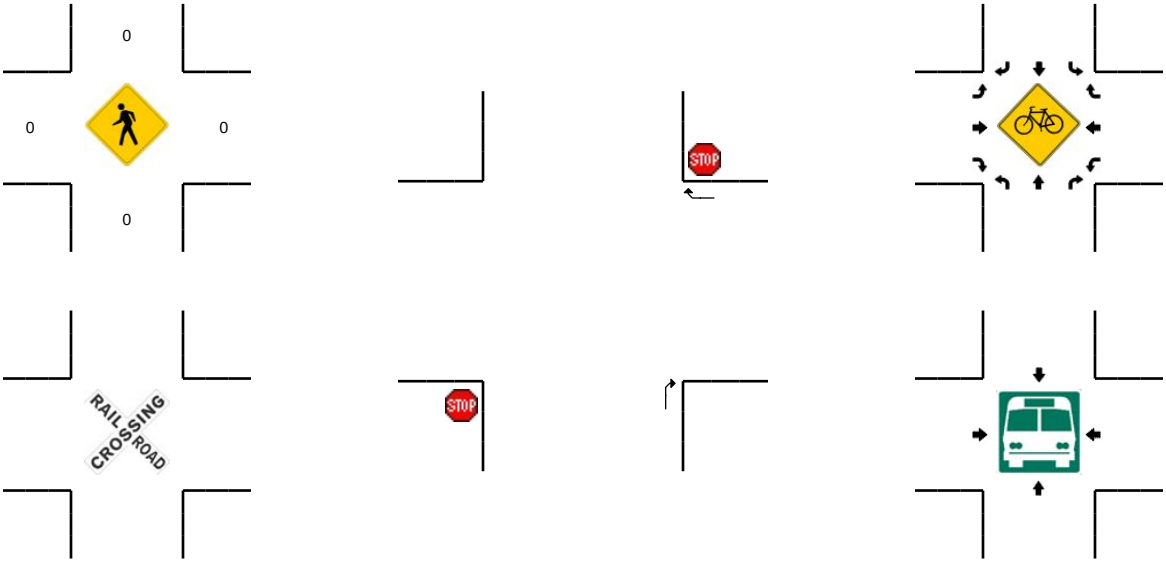
CITY/STATE: Tucson, AZ

DATE: 12/3/2008

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:30 PM -- 4:45 PM







R* = RTOR

15-Min Count Period Beginning At	N Oracle Rd (Northbound)					N Oracle Rd (Southbound)					Site Driveway 6 (Eastbound)					Site Driveway 6 (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	27	
4:15 PM	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	20	
4:30 PM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	29	
4:45 PM	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	16	92
5:00 PM	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	17	82
5:15 PM	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	19	81
5:30 PM	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	20	72
5:45 PM	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	19	75

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72	0	0	116
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

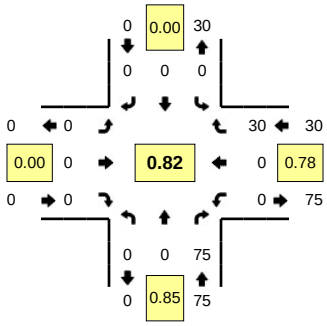
LOCATION: N Oracle Rd -- Site Driveway 6

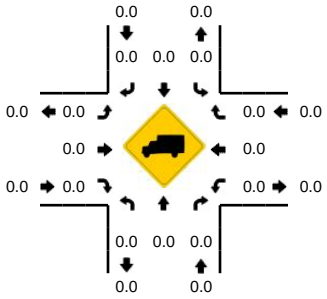
CITY/STATE: Tucson, AZ

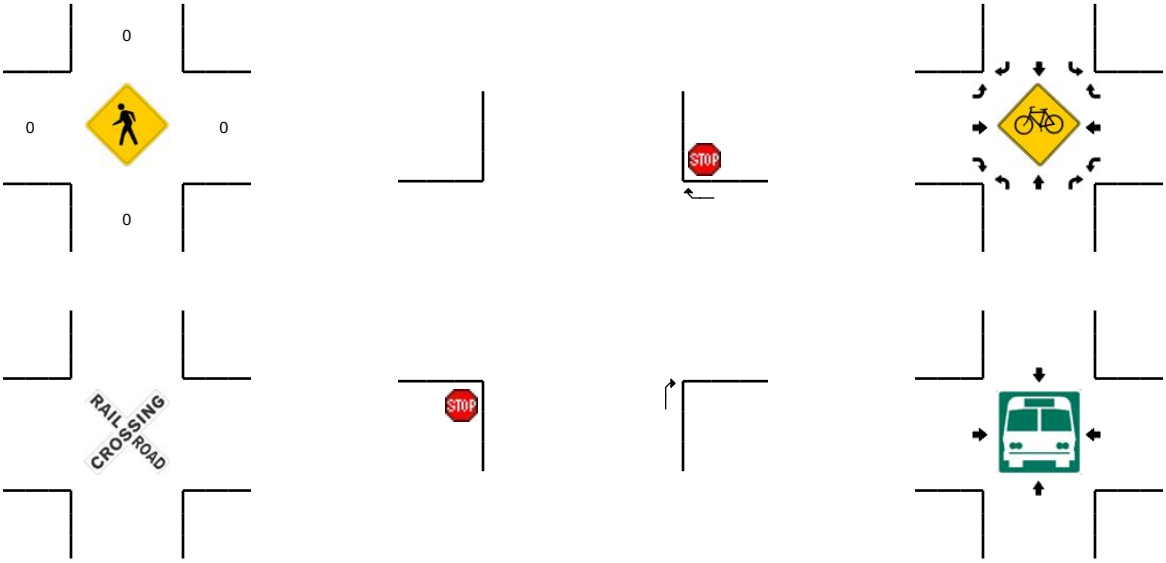
QC JOB #: 10379612

DATE: 12/3/2008

Peak-Hour: 11:45 AM -- 12:45 PM
Peak 15-Min: 12:30 PM -- 12:45 PM







R* = RTOR

15-Min Count Period Beginning At	N Oracle Rd (Northbound)					N Oracle Rd (Southbound)					Site Driveway 6 (Eastbound)					Site Driveway 6 (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
11:00 AM	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	19	
11:15 AM	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	17	
11:30 AM	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	21	
11:45 AM	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	29	86
12:00 PM	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	23	90
12:15 PM	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	21	94
12:30 PM	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	32	105
12:45 PM	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	24	100

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	0	0	128
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

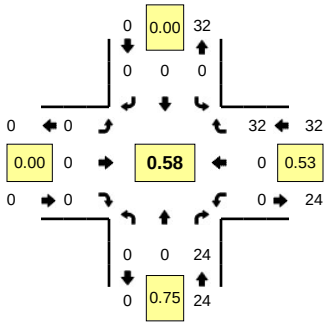
LOCATION: N Oracle Rd -- Site Driveway 7

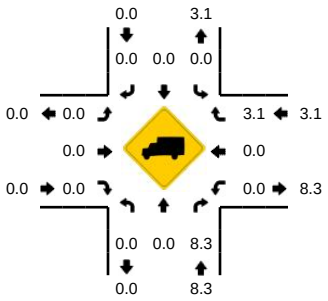
QC JOB #: 10379613

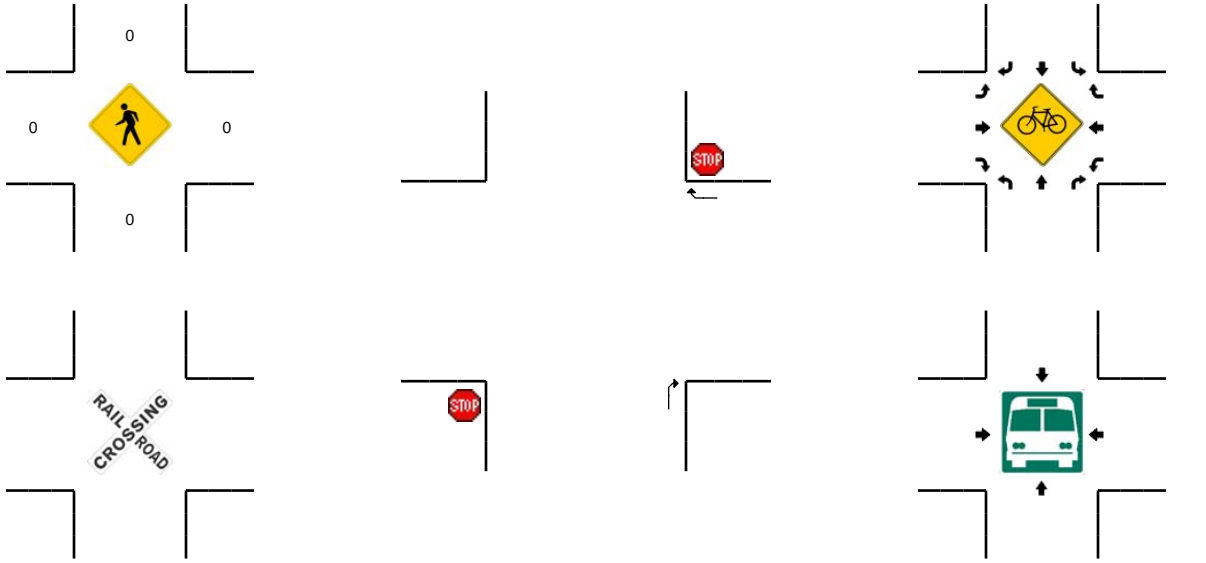
CITY/STATE: Tucson, AZ

DATE: 12/3/2008

Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:45 PM -- 5:00 PM







R* = RTOR

15-Min Count Period Beginning At	N Oracle Rd (Northbound)					N Oracle Rd (Southbound)					Site Driveway 7 (Eastbound)					Site Driveway 7 (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4	
4:15 PM	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	13	
4:30 PM	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	14	
4:45 PM	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	24	55
5:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	5	56
5:15 PM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	12	55
5:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	10	51
5:45 PM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	10	37

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64	0	0	96
Heavy Trucks	0	0	8			0	0	0			0	0	0			0	0	0			8
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

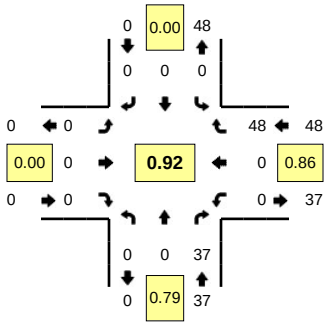
LOCATION: N Oracle Rd -- Site Driveway 7

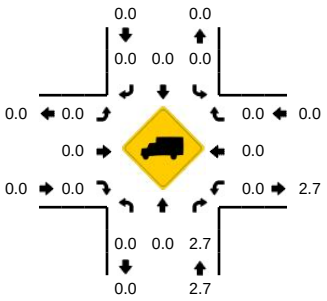
QC JOB #: 10379614

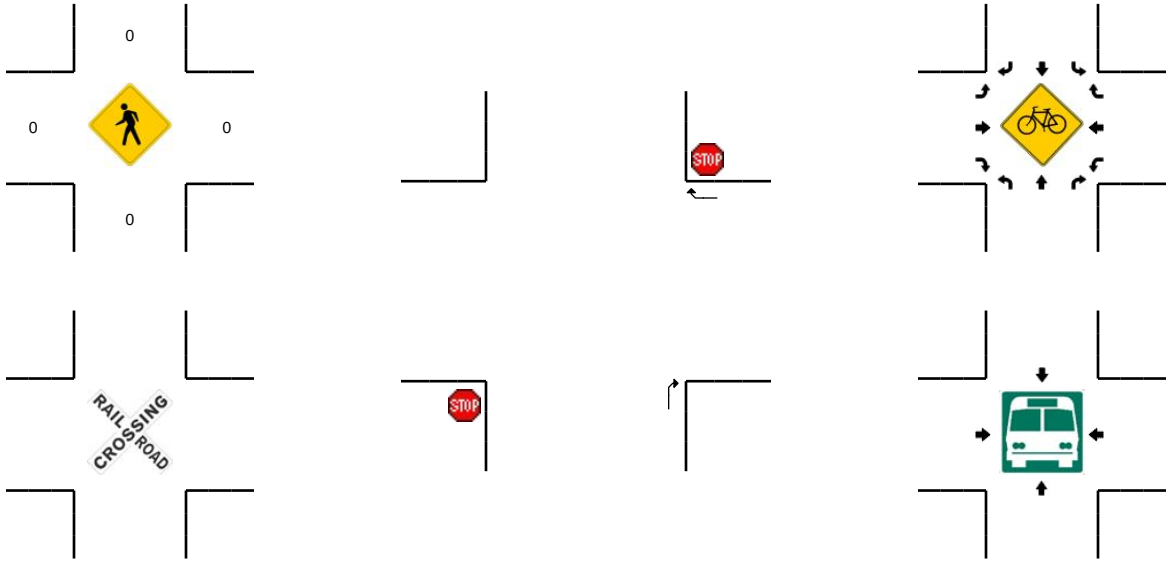
CITY/STATE: Tucson, AZ

DATE: 12/3/2008

Peak-Hour: 11:45 AM -- 12:45 PM
Peak 15-Min: 12:15 PM -- 12:30 PM







R* = RTOR

15-Min Count Period Beginning At	N Oracle Rd (Northbound)					N Oracle Rd (Southbound)					Site Driveway 7 (Eastbound)					Site Driveway 7 (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
11:00 AM	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	17	
11:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	5	
11:30 AM	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	13	
11:45 AM	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	21	56
12:00 PM	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	22	61
12:15 PM	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	23	79
12:30 PM	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	19	85
12:45 PM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	19	83

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	0	0	92
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	0			0
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

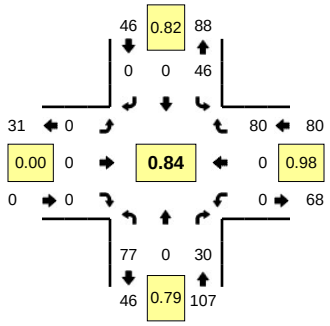
LOCATION: N Oracle Rd -- W Sahuaro Vista

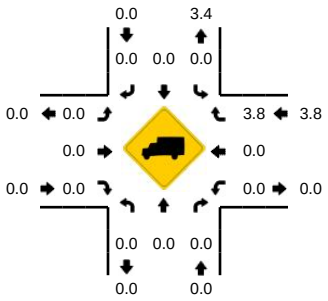
QC JOB #: 10379615

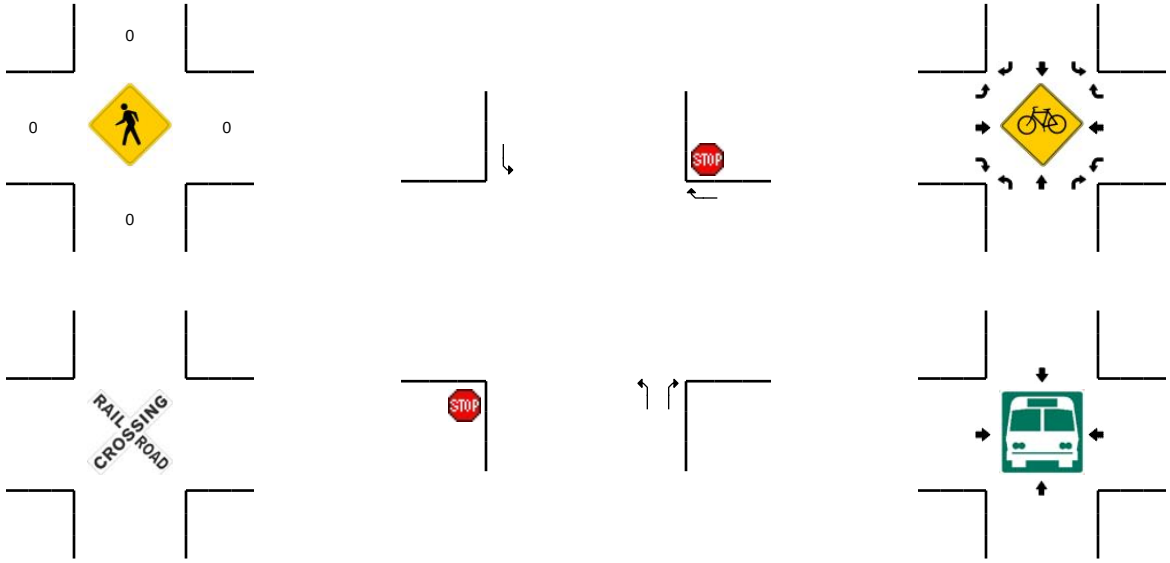
CITY/STATE: Tucson, AZ

DATE: 12/3/2008

Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:45 PM -- 5:00 PM







R* = RTOR

15-Min Count Period Beginning At	N Oracle Rd (Northbound)					N Oracle Rd (Southbound)					W Sahuaro Vista (Eastbound)					W Sahuaro Vista (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
4:00 PM	5	0	5	7	0	6	0	0	1	0	0	0	0	0	0	0	0	22	0	0	46	
4:15 PM	5	0	9	9	0	8	0	0	1	0	0	0	0	0	0	0	0	23	0	0	55	
4:30 PM	8	0	6	16	0	13	0	0	0	0	0	0	0	0	0	0	0	13	0	0	56	
4:45 PM	13	0	8	13	0	11	0	0	3	0	0	0	0	0	0	0	0	21	0	0	69	226
5:00 PM	5	0	7	8	0	6	0	0	4	0	0	0	0	0	0	0	0	23	0	0	53	233
5:15 PM	6	0	7	10	0	5	0	0	0	0	0	0	0	0	0	0	0	23	0	0	51	229
5:30 PM	4	0	6	8	0	12	0	0	0	0	0	0	0	0	0	0	0	24	0	0	54	227
5:45 PM	3	0	9	5	0	9	0	0	0	0	0	0	0	0	0	0	0	24	0	0	50	208

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	52	0	32	52	0	44	0	0	12	0	0	0	0	0	0	0	0	84	0	0	276
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	8			8
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

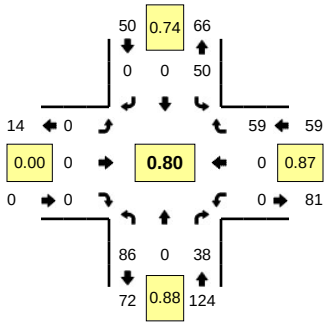
LOCATION: N Oracle Rd -- W Sahuaro Vista

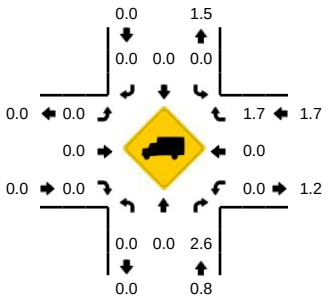
CITY/STATE: Tucson, AZ

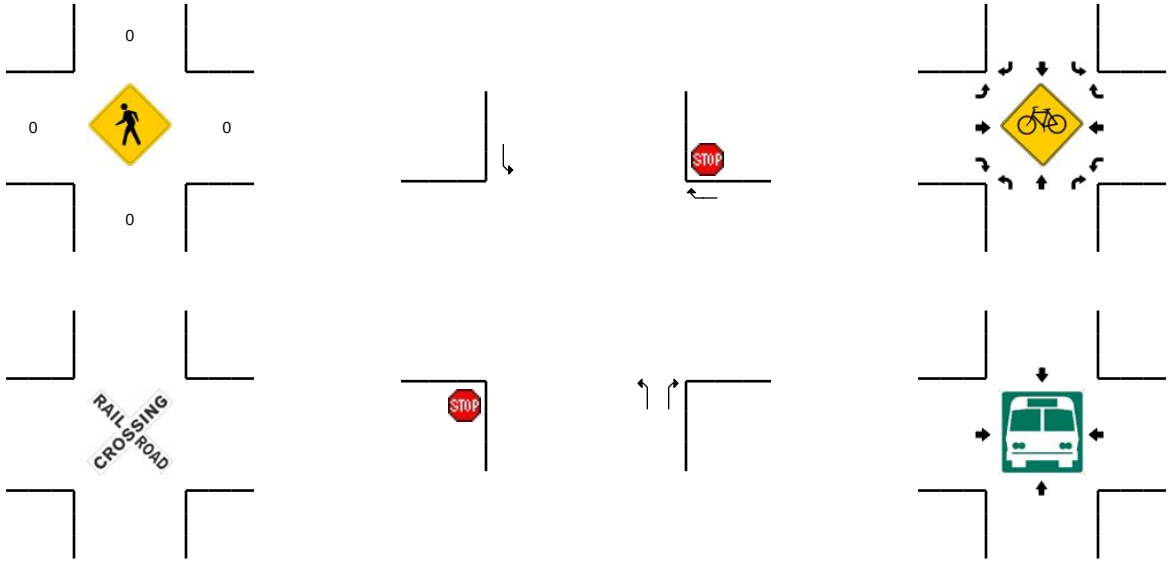
QC JOB #: 10379616

DATE: 12/3/2008

Peak-Hour: 12:00 PM -- 1:00 PM
Peak 15-Min: 12:15 PM -- 12:30 PM







R* = RTOR

15-Min Count Period Beginning At	N Oracle Rd (Northbound)					N Oracle Rd (Southbound)					W Sahuaro Vista (Eastbound)					W Sahuaro Vista (Westbound)					Total	Hourly Totals
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*		
11:00 AM	5	0	2	8	0	10	0	0	1	0	0	0	0	0	0	0	0	11	0	0	37	
11:15 AM	6	0	6	9	0	10	0	0	2	0	0	0	0	0	0	0	0	3	0	0	36	
11:30 AM	1	0	15	9	0	9	0	0	5	0	0	0	0	0	0	0	0	11	0	0	50	
11:45 AM	3	0	16	18	0	10	0	0	2	0	0	0	0	0	0	0	0	7	0	0	56	179
12:00 PM	4	0	10	17	0	10	0	0	1	0	0	0	0	0	0	0	0	10	0	0	52	194
12:15 PM	4	0	14	19	0	19	0	0	0	0	0	0	0	0	0	0	0	17	0	0	73	231
12:30 PM	2	0	5	18	0	7	0	0	2	0	0	0	0	0	0	0	0	17	0	0	51	232
12:45 PM	4	0	9	18	0	7	0	0	4	0	0	0	0	0	0	0	0	15	0	0	57	233

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	Left	Thru	Right	U	R*	
All Vehicles	16	0	56	76	0	76	0	0	0	0	0	0	0	0	0	0	0	68	0	0	292
Heavy Trucks	0	0	0			0	0	0			0	0	0			0	0	4			4
Pedestrians		0					0					0					0				0
Bicycles																					
Railroad																					
Stopped Buses																					

Comments:

Report generated on 12/12/2008 2:43 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

APPENDIX C

Capacity Analysis Results

CHAPTER 16 - OPERATIONAL ANALYSIS - SUMMARY WORKSHEET

General Information		***Site Information***		
Analyst	jms	Jurisdiction/Date	ADOT	11/13/2009
Agency or Company	kittelson	EB/WB Street	Ina Road	
Analysis Period/Year	am peak 2009	NB/SB Street	Oracle Road	
Comment	Existing Condtions			

Intersection Data

Area type: Others Analysis period: 0.25 h Signal type: Actuated % Back of queue: 95

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (veh/h)	214	1004	257	91	480	344	252	679	21	750	1716	22
RTOR volume (veh/h)			212			291			64			180
Peak-hour factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy vehicles (%)	3	3	3	3	3	3	3	3	3	3	3	3
Start-up lost time, l_1 (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e (s)	2.0	1.5	1.5	2.0	1.5	1.5	1.5	5.5	5.5	1.5	5.5	5.5
Arrival type, AT	3	3	3	3	3	3	3	3	3	3	3	3
Approach pedestrian volume (p/h)	0			0			0			0		
Approach bicycle volume (bic/h)	0			0			0			0		
Left/right parking (Y or N)	N	/	N	N	/	N	N	/	N	N	/	N

Signal Phasing Plan

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
EB								
WB								
NB								
SB								
Timing	G = 38.5 Y = 7.0	G = 5.2 Y = 5.3	G = 42.3 Y = 6.1	G = 30.1 Y = 5.5	G = Y =	G = Y =	G = Y =	G = Y =

Cycle (s): 140.0 Lost time per cycle (s): 23.1 Critical v/c Ratio: 1.089

Intersection Performance

	EB			WB			NB			SB		
Lane group configuration	L	T	R	L	T	R	L	T	R	L	T	R
No. of lanes	1	2	1	1	2	1	2	3	1	2	3	1
Flow rate (veh/h)	223	1046	268	95	500	358	263	707	22	781	1788	23
Capacity (veh/h)	329	953	426	205	953	426	720	1644	513	720	1644	513
Adjusted saturation flow (veh/h)	1752	3512	1568	1752	3512	1568	3403	5025	1568	3403	5025	1568
v/c ratio	0.677	1.097	0.629	0.461	0.524	0.842	0.365	0.430	0.043	1.086	1.087	0.045
g/C ratio	0.362	0.271	0.271	0.362	0.271	0.271	0.211	0.327	0.327	0.211	0.327	0.327
Average back of queue (veh)	7.9	31.5	10.0	3.1	9.3	15.4	4.8	8.4	0.6	23.0	36.9	0.6
Initial queue in next period (veh)	0.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	13.0	0.0
Uniform delay (s)	47.2	51.0	44.8	58.5	43.3	48.2	47.2	36.9	32.1	55.2	47.1	32.2
Incremental delay (s)	4.5	59.4	2.2	0.1	0.3	13.4	0.5	0.3	0.0	59.2	50.0	0.0
Initial queue delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay (s)	51.7	110.4	47.0	58.6	43.6	61.6	47.7	37.2	32.1	114.4	97.1	32.2
LOS	D	F	D	E	D	E	D	D	C	F	F	C
Approach delay (s)/LOS	90.8	/	F	51.9	/	D	39.8	/	D	101.7	/	F
Intersection delay (s)/ LOS	81.0			/			F					

CHAPTER 16 - OPERATIONAL ANALYSIS - SUMMARY WORKSHEET

General Information		***Site Information***		
Analyst	jms	Jurisdiction/Date	ADOT	11/13/2009
Agency or Company	kittelson	EB/WB Street	Ina Road	
Analysis Period/Year	am peak 2009	NB/SB Street	Oracle Road	
Comment	Alt 1 - Dual EB/WB LT; Fre-flow WB RT			

Intersection Data

Area type: Others | Analysis period: 0.25 h | Signal type: Actuated | % Back of queue: 95

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (veh/h)	214	1004	257	91	480	635	252	679	21	750	1716	22
RTOR volume (veh/h)			212			0			64			180
Peak-hour factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy vehicles (%)	3	3	3	3	3	3	3	3	3	3	3	3
Start-up lost time, l_1 (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e (s)	2.0	1.5	1.5	2.0	1.5	1.5	1.5	5.5	5.5	1.5	5.5	5.5
Arrival type, AT	3	3	3	3	3	3	3	3	3	3	3	3
Approach pedestrian volume (p/h)	0			0			0			0		
Approach bicycle volume (bic/h)	0			0			0			0		
Left/right parking (Y or N)	N	/	N	N	/	N	N	/	N	N	/	N

Signal Phasing Plan

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
EB								
WB								
NB								
SB								
Timing	G = 37.7 Y = 7.0	G = 8.2 Y = 5.3	G = 41.0 Y = 6.1	G = 29.2 Y = 5.5	G = Y =	G = Y =	G = Y =	G = Y =

Cycle (s): 140.0 | Lost time per cycle (s): 21.4 | Critical v/c Ratio: 1.120

Intersection Performance

	EB			WB			NB			SB		
Lane group configuration	L	T	R	L	T	R	L	T	R	L	T	R
No. of lanes	2	2	1	2	2	1	2	3	1	2	3	1
Flow rate (veh/h)	223	1046	268	95	500	661	263	707	22	781	1788	23
Capacity (veh/h)	199	933	417	199	933	1501	698	1597	498	698	1597	498
Adjusted saturation flow (veh/h)	3403	3512	1568	3403	3512	1568	3403	5025	1568	3403	5025	1568
v/c ratio	1.118	1.121	0.643	0.476	0.536	0.441	0.376	0.443	0.044	1.120	1.119	0.046
g/C ratio	0.059	0.266	0.266	0.059	0.266	0.957	0.205	0.318	0.318	0.205	0.318	0.318
Average back of queue (veh)	7.2	32.4	10.1	2.0	9.4	2.8	4.8	8.5	0.6	24.0	38.4	0.6
Initial queue in next period (veh)	3.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.0	17.0	0.0
Uniform delay (s)	65.9	51.4	45.5	63.8	44.0	0.2	47.9	37.9	33.0	55.7	47.8	33.1
Incremental delay (s)	99.1	68.5	2.6	0.3	0.3	0.0	0.5	0.4	0.0	72.0	62.7	0.0
Initial queue delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay (s)	165.0	119.9	48.1	64.1	44.3	0.2	48.4	38.3	33.0	127.7	110.5	33.1
LOS	F	F	D	E	D	A	D	D	C	F	F	C
Approach delay (s)/LOS	113.9	/	F	22.6	/	C	40.9	/	D	115.0	/	F
Intersection delay (s)/ LOS	85.0			/			F					

CHAPTER 16 - OPERATIONAL ANALYSIS - SUMMARY WORKSHEET

General Information		***Site Information***		
Analyst	jms	Jurisdiction/Date	ADOT	11/13/2009
Agency or Company	kittelson	EB/WB Street	Ina Road	
Analysis Period/Year	am peak 2009	NB/SB Street	Oracle Road	
Comment	Dual EB/WB LT Lanes; Dual WB RT Lanes			

Intersection Data

Area type: Others Analysis period: 0.25 h Signal type: Actuated % Back of queue: 95

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (veh/h)	214	1004	257	91	480	635	252	679	21	750	1716	22
RTOR volume (veh/h)			212			0			64			180
Peak-hour factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy vehicles (%)	3	3	3	3	3	3	3	3	3	3	3	3
Start-up lost time, l_1 (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e (s)	2.0	1.5	1.5	2.0	1.5	1.5	1.5	5.5	5.5	1.5	5.5	5.5
Arrival type, AT	3	3	3	3	3	3	3	3	3	3	3	3
Approach pedestrian volume (p/h)	0			0			0			0		
Approach bicycle volume (bic/h)	0			0			0			0		
Left/right parking (Y or N)	N	/	N	N	/	N	N	/	N	N	/	N

Signal Phasing Plan

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
EB								
WB								
NB								
SB								
Timing	G = 37.3 Y = 7.0	G = 8.2 Y = 5.3	G = 40.6 Y = 6.1	G = 30.0 Y = 5.5	G = Y =	G = Y =	G = Y =	G = Y =

Cycle (s): 140.0 Lost time per cycle (s): 21.4 Critical v/c Ratio: 1.130

Intersection Performance

	EB			WB			NB			SB		
Lane group configuration	L	T	R	L	T	R	L	T	R	L	T	R
No. of lanes	2	2	1	2	2	2	2	3	1	2	3	1
Flow rate (veh/h)	223	1046	268	95	500	661	263	707	22	781	1788	23
Capacity (veh/h)	199	923	412		923	1314	717	1583	494	717	1583	494
Adjusted saturation flow (veh/h)	3403	3512	1568	3403	3512	2775	3403	5025	1568	3403	5025	1568
v/c ratio	1.118	1.133	0.650		0.542	0.503	0.366	0.447	0.044	1.089	1.129	0.046
g/C ratio	0.059	0.263	0.263		0.263	0.474	0.211	0.315	0.315	0.211	0.315	0.315
Average back of queue (veh)	7.2	32.9	10.2		9.4	10.8	4.8	8.6	0.6	23.1	38.9	0.6
Initial queue in next period (veh)	3.0	16.0	0.0		0.0	0.0	0.0	0.0	0.0	8.0	19.0	0.0
Uniform delay (s)	65.9	51.6	45.9		44.4	25.5	47.3	38.2	33.3	55.3	48.0	33.3
Incremental delay (s)	99.1	73.3	2.8		0.4	0.1	0.5	0.4	0.0	60.6	66.8	0.0
Initial queue delay (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay (s)	165.0	124.9	48.7		44.8	25.6	47.8	38.6	33.3	115.8	114.8	33.3
LOS	F	F	D		D	C	D	D	C	F	F	C
Approach delay (s)/LOS	117.4	/	F	33.8	/	C	40.9	/	D	114.4	/	F
Intersection delay (s)/ LOS	87.8			/			F					

CHAPTER 16 - OPERATIONAL ANALYSIS - SUMMARY WORKSHEET

General Information

Analyst	jms
Agency or Company	kittelson
Analysis Period/Year	mid-day 2009
Comment	Existing Condtions

Site Information

Jurisdiction/Date	ADOT	11/13/2009
EB/WB Street	Ina Road	
NB/SB Street	Oracle Road	

Intersection Data

Area type: Others Analysis period: 0.25 h Signal type: Actuated % Back of queue: 95

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (veh/h)	256	594	135	167	533	200	548	1229	41	696	1152	143
RTOR volume (veh/h)			212			291			64			180
Peak-hour factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy vehicles (%)	3	3	3	3	3	3	3	3	3	3	3	3
Start-up lost time, l_1 (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT	3	3	3	3	3	3	3	3	3	3	3	3
Approach pedestrian volume (p/h)	0			0			0			0		
Approach bicycle volume (bic/h)	0			0			0			0		
Left/right parking (Y or N)	N	/	N	N	/	N	N	/	N	N	/	N

Signal Phasing Plan

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
EB								
WB								
NB								
SB								
Timing	G = 25.3 Y = 7.0	G = 13.8 Y = 5.3	G = 31.1 Y = 6.1	G = 25.9 Y = 5.5	G = Y =	G = Y =	G = Y =	G = Y =

Cycle (s): 120.0 Lost time per cycle (s): 25.6 Critical v/c Ratio: 0.987

Intersection Performance

	EB			WB			NB			SB		
Lane group configuration	L	T	R	L	T	R	L	T	R	L	T	R
No. of lanes	1	2	1	1	2	1	2	3	1	2	3	1
Flow rate (veh/h)	267	619	141	174	555	208	571	1280	43	725	1200	149
Capacity (veh/h)	399	740	331	377	740	331	735	1302	406	735	1302	406
Adjusted saturation flow (veh/h)	1752	3512	1568	1752	3512	1568	3403	5025	1568	3403	5025	1568
v/c ratio	0.668	0.836	0.425	0.461	0.750	0.630	0.777	0.983	0.105	0.987	0.921	0.367
g/C ratio	0.384	0.211	0.211	0.384	0.211	0.211	0.216	0.259	0.259	0.216	0.259	0.259
Average back of queue (veh)	8.1	12.3	4.4	4.7	10.4	7.0	10.6	20.7	1.1	16.7	17.8	4.3
Initial queue in next period (veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uniform delay (s)	40.9	45.4	41.0	39.7	44.4	43.1	44.3	44.2	33.9	46.9	43.3	36.4
Incremental delay (s)	3.4	7.8	0.0	0.0	3.8	2.9	6.1	21.0	0.0	30.0	11.3	0.8
Initial queue delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay (s)	44.3	53.2	41.0	39.7	48.2	46.0	50.4	65.2	33.9	76.9	54.6	37.2
LOS	D	D	D	D	D	D	D	E	C	E	D	D
Approach delay (s)/LOS	49.2	/	D	46.1	/	D	60.0	/	E	61.1	/	E
Intersection delay (s)/ LOS	56.3				/			E				

CHAPTER 16 - OPERATIONAL ANALYSIS - SUMMARY WORKSHEET

General Information

Analyst	jms
Agency or Company	kittelson
Analysis Period/Year	mid-day 2009
Comment	Alt 1 - Dual EB/WB LT; Fre-flow WB RT

Site Information

Jurisdiction/Date	ADOT 11/13/2009
EB/WB Street	Ina Road
NB/SB Street	Oracle Road

Intersection Data

Area type: Others Analysis period: 0.25 h Signal type: Actuated % Back of queue: 95

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (veh/h)	256	594	135	167	533	491	548	1229	41	696	1152	143
RTOR volume (veh/h)			212			0			64			180
Peak-hour factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy vehicles (%)	3	3	3	3	3	3	3	3	3	3	3	3
Start-up lost time, l_1 (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT	3	3	3	3	3	3	3	3	3	3	3	3
Approach pedestrian volume (p/h)	0			0			0			0		
Approach bicycle volume (bic/h)	0			0			0			0		
Left/right parking (Y or N)	N	/	N	N	/	N	N	/	N	N	/	N

Signal Phasing Plan

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
EB								
WB								
NB								
SB								
Timing	G = 23.4 Y = 7.0	G = 10.4 Y = 5.3	G = 33.9 Y = 6.1	G = 28.4 Y = 5.5	G = Y =	G = Y =	G = Y =	G = Y =

Cycle (s): 120.0 Lost time per cycle (s): 23.9 Critical v/c Ratio: 0.902

Intersection Performance

	EB			WB			NB			SB		
Lane group configuration	L	T	R	L	T	R	L	T	R	L	T	R
No. of lanes	2	2	1	2	2	1	2	3	1	2	3	1
Flow rate (veh/h)	267	619	141	174	555	511	571	1280	43	725	1200	149
Capacity (veh/h)	295	685	306	295	685	1496	805	1420	443	805	1420	443
Adjusted saturation flow (veh/h)	3403	3512	1568	3403	3512	1568	3403	5025	1568	3403	5025	1568
v/c ratio	0.904	0.903	0.460	0.590	0.811	0.342	0.709	0.902	0.096	0.900	0.845	0.336
g/C ratio	0.087	0.195	0.195	0.087	0.195	0.954	0.237	0.282	0.282	0.237	0.282	0.282
Average back of queue (veh)	5.9	13.2	4.5	3.2	10.9	1.7	10.1	18.4	1.1	14.9	16.3	4.2
Initial queue in next period (veh)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uniform delay (s)	54.3	47.2	42.7	52.7	46.2	0.2	42.0	41.4	31.8	44.4	40.6	34.1
Incremental delay (s)	28.5	15.0	0.0	2.1	6.8	0.0	3.6	8.7	0.0	13.8	5.4	0.6
Initial queue delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay (s)	82.8	62.2	42.7	54.8	53.0	0.2	45.6	50.1	31.8	58.2	46.0	34.7
LOS	F	E	D	D	D	A	D	D	C	E	D	C
Approach delay (s)/LOS	64.9	/	E	31.5	/	C	48.4	/	D	49.5	/	D
Intersection delay (s)/ LOS	48.1				/				D			

CHAPTER 16 - OPERATIONAL ANALYSIS - SUMMARY WORKSHEET

General Information

Analyst	jms
Agency or Company	kittelson
Analysis Period/Year	mid-day 2009
Comment	Dual EB/WB LT Lanes; Dual WB RT Lanes

Site Information

Jurisdiction/Date	ADOT 11/13/2009
EB/WB Street	Ina Road
NB/SB Street	Oracle Road

Intersection Data

Area type: Others Analysis period: 0.25 h Signal type: Actuated % Back of queue: 95

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (veh/h)	256	594	135	167	533	491	548	1229	41	696	1152	143
RTOR volume (veh/h)			212			0			64			180
Peak-hour factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy vehicles (%)	3	3	3	3	3	3	3	3	3	3	3	3
Start-up lost time, l_1 (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT	3	3	3	3	3	3	3	3	3	3	3	3
Approach pedestrian volume (p/h)	0			0			0			0		
Approach bicycle volume (bic/h)	0			0			0			0		
Left/right parking (Y or N)	N	/	N	N	/	N	N	/	N	N	/	N

Signal Phasing Plan

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
EB								
WB								
NB								
SB								
Timing	G = 24.6 Y = 7.0	G = 10.4 Y = 5.3	G = 32.6 Y = 6.1	G = 28.5 Y = 5.5	G = Y =	G = Y =	G = Y =	G = Y =

Cycle (s): 120.0 Lost time per cycle (s): 22.4 Critical v/c Ratio: 0.898

Intersection Performance

	EB			WB			NB			SB		
Lane group configuration	L	T	R	L	T	R	L	T	R	L	T	R
No. of lanes	2	2	1	2	2	2	2	3	1	2	3	1
Flow rate (veh/h)	267	619	141	174	555	511	571	1280	43	725	1200	149
Capacity (veh/h)	295	720	321		720	1228	808	1365	426	808	1365	426
Adjusted saturation flow (veh/h)	3403	3512	1568	3403	3512	2775	3403	5025	1568	3403	5025	1568
v/c ratio	0.904	0.859	0.437		0.771	0.416	0.706	0.938	0.100	0.897	0.879	0.350
g/C ratio	0.087	0.205	0.205		0.205	0.443	0.237	0.272	0.272	0.237	0.272	0.272
Average back of queue (veh)	5.9	12.6	4.4		10.5	7.0	10.1	19.3	1.1	14.8	16.9	4.3
Initial queue in next period (veh)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uniform delay (s)	54.3	46.0	41.7		45.0	22.9	41.9	42.7	32.7	44.3	41.8	35.2
Incremental delay (s)	28.5	9.8	0.0		4.7	0.0	3.6	12.7	0.0	13.4	7.3	0.7
Initial queue delay (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay (s)	82.8	55.8	41.7		49.7	22.9	45.5	55.4	32.7	57.7	49.1	35.9
LOS	F	E	D		D	C	D	E	C	E	D	D
Approach delay (s)/LOS	60.9	/	E	36.9	/	D	51.9	/	D	51.2	/	D
Intersection delay (s)/ LOS	50.1				/		D					

CHAPTER 16 - OPERATIONAL ANALYSIS - SUMMARY WORKSHEET

General Information

Analyst	jms
Agency or Company	kittelson
Analysis Period/Year	pm peak 2009
Comment	Existing Condtions

Site Information

Jurisdiction/Date	ADOT 11/13/2009
EB/WB Street	Ina Road
NB/SB Street	Oracle Road

Intersection Data

Area type: Others Analysis period: 0.25 h Signal type: Actuated % Back of queue: 95

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (veh/h)	259	758	77	94	939	426	571	1724	30	699	1180	191
RTOR volume (veh/h)			188			271			66			160
Peak-hour factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy vehicles (%)	3	3	3	3	3	3	3	3	3	3	3	3
Start-up lost time, l_1 (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e (s)	2.0	1.5	1.5	2.0	1.5	1.5	1.5	5.5	5.5	1.5	5.5	5.5
Arrival type, AT	3	3	3	3	3	3	3	3	3	3	3	3
Approach pedestrian volume (p/h)	0			0			0			0		
Approach bicycle volume (bic/h)	0			0			0			0		
Left/right parking (Y or N)	N	/	N	N	/	N	N	/	N	N	/	N

Signal Phasing Plan

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
EB								
WB								
NB								
SB								
Timing	G = 37.0 Y = 7.0	G = 16.6 Y = 5.3	G = 42.6 Y = 6.1	G = 29.9 Y = 5.5	G = Y =	G = Y =	G = Y =	G = Y =

Cycle (s): 150.0 Lost time per cycle (s): 23.1 Critical v/c Ratio: 1.171

Intersection Performance

	EB			WB			NB			SB		
Lane group configuration	L	T	R	L	T	R	L	T	R	L	T	R
No. of lanes	1	2	1	1	2	1	2	3	1	2	3	1
Flow rate (veh/h)	273	798	81	99	988	448	601	1815	32	736	1242	201
Capacity (veh/h)	325	855	382	325	855	382	667	1544	482	667	1544	482
Adjusted saturation flow (veh/h)	1752	3512	1568	1752	3512	1568	3403	5025	1568	3403	5025	1568
v/c ratio	0.839	0.934	0.212	0.305	1.157	1.175	0.901	1.175	0.066	1.103	0.804	0.417
g/C ratio	0.404	0.243	0.243	0.404	0.243	0.243	0.196	0.307	0.307	0.196	0.307	0.307
Average back of queue (veh)	12.0	21.0	2.8	3.0	33.6	29.7	15.3	43.7	1.0	23.3	19.8	7.1
Initial queue in next period (veh)	0.0	0.0	0.0	0.0	18.0	17.0	0.0	25.0	0.0	9.0	0.0	0.0
Uniform delay (s)	63.1	55.6	45.3	51.3	56.8	56.8	58.9	51.9	36.7	60.3	47.8	41.3
Incremental delay (s)	16.6	16.7	0.0	0.0	83.6	103.1	16.1	86.0	0.0	66.5	3.6	1.0
Initial queue delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay (s)	79.7	72.3	45.3	51.3	140.3	159.8	75.0	137.9	36.7	126.8	51.4	42.3
LOS	E	E	D	D	F	F	E	F	D	F	D	D
Approach delay (s)/LOS	72.1	/	E	140.3	/	F	121.2	/	F	76.0	/	E
Intersection delay (s)/ LOS	104.0			/			F					

CHAPTER 16 - OPERATIONAL ANALYSIS - SUMMARY WORKSHEET

General Information

Analyst	jms
Agency or Company	kittelson
Analysis Period/Year	pm peak 2009
Comment	Alt 1: Dual EB/WB LT Lanes; FF WB RT Lane

Site Information

Jurisdiction/Date	ADOT	11/13/2009
EB/WB Street	Ina Road	
NB/SB Street	Oracle Road	

Intersection Data

Area type Others Analysis period 0.25 h Signal type Actuated % Back of queue 95

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (veh/h)	259	758	77	94	939	697	571	1724	30	699	1180	191
RTOR volume (veh/h)			188			0			66			160
Peak-hour factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy vehicles (%)	3	3	3	3	3	3	3	3	3	3	3	3
Start-up lost time, l_1 (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e (s)	2.0	1.5	1.5	2.0	1.5	1.5	1.5	5.5	5.5	1.5	5.5	5.5
Arrival type, AT	3	3	3	3	3	3	3	3	3	3	3	3
Approach pedestrian volume (p/h)	0			0			0			0		
Approach bicycle volume (bic/h)	0			0			0			0		
Left/right parking (Y or N)	N	/	N	N	/	N	N	/	N	N	/	N

Signal Phasing Plan

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
EB								
WB								
NB								
SB								
Timing	G = 39.0 Y = 7.0	G = 11.0 Y = 5.3	G = 45.9 Y = 6.1	G = 30.2 Y = 5.5	G = Y =	G = Y =	G = Y =	G = Y =

Cycle (s) 150.0 Lost time per cycle (s) 21.4 Critical v/c Ratio 1.095

Intersection Performance

	EB			WB			NB			SB		
Lane group configuration	L	T	R	L	T	R	L	T	R	L	T	R
No. of lanes	2	2	1	2	2	1	2	3	1	2	3	1
Flow rate (veh/h)	273	798	81	99	988	734	601	1815	32	736	1242	201
Capacity (veh/h)	250	901	402	250	901	1505	674	1655	516	674	1655	516
Adjusted saturation flow (veh/h)	3403	3512	1568	3403	3512	1568	3403	5025	1568	3403	5025	1568
v/c ratio	1.092	0.885	0.201	0.396	1.096	0.487	0.892	1.097	0.061	1.092	0.751	0.389
g/C ratio	0.073	0.257	0.257	0.073	0.257	0.960	0.198	0.329	0.329	0.198	0.329	0.329
Average back of queue (veh)	8.9	19.9	2.8	2.2	31.3	3.4	15.2	39.9	0.9	23.0	18.8	6.8
Initial queue in next period (veh)	3.0	0.0	0.0	0.0	11.0	0.0	0.0	15.0	0.0	8.0	0.0	0.0
Uniform delay (s)	69.5	53.6	43.7	66.3	55.7	0.2	58.6	50.3	34.4	60.1	44.8	38.7
Incremental delay (s)	83.9	10.1	0.0	0.0	59.9	0.1	14.9	53.5	0.0	62.4	2.3	0.8
Initial queue delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay (s)	153.4	63.7	43.7	66.3	115.6	0.3	73.5	103.8	34.4	122.5	47.1	39.5
LOS	F	E	D	E	F	A	E	F	C	F	D	D
Approach delay (s)/LOS	83.5	/	F	66.5	/	E	95.5	/	F	71.9	/	E
Intersection delay (s)/ LOS	80.0			/			E					

CHAPTER 16 - OPERATIONAL ANALYSIS - SUMMARY WORKSHEET

General Information

Analyst	jms
Agency or Company	kittelson
Analysis Period/Year	pm peak 2009
Comment	Alt 2: Dual EB/WB LT Lanes; Dual WB RT Lane

Site Information

Jurisdiction/Date	ADOT 11/13/2009
EB/WB Street	Ina Road
NB/SB Street	Oracle Road

Intersection Data

Area type: Others Analysis period: 0.25 h Signal type: Actuated % Back of queue: 95

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Volume (veh/h)	259	758	77	94	939	697	571	1724	30	699	1180	191
RTOR volume (veh/h)			188			0			66			160
Peak-hour factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy vehicles (%)	3	3	3	3	3	3	3	3	3	3	3	3
Start-up lost time, l_1 (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e (s)	2.0	1.5	1.5	2.0	1.5	1.5	1.5	5.5	5.5	1.5	5.5	5.5
Arrival type, AT	3	3	3	3	3	3	3	3	3	3	3	3
Approach pedestrian volume (p/h)	0			0			0			0		
Approach bicycle volume (bic/h)	0			0			0			0		
Left/right parking (Y or N)	N	/	N	N	/	N	N	/	N	N	/	N

Signal Phasing Plan

	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8
EB								
WB								
NB								
SB								
Timing	G = 37.1 Y = 7.0	G = 10.4 Y = 5.3	G = 43.5 Y = 6.1	G = 35.1 Y = 5.5	G = Y =	G = Y =	G = Y =	G = Y =

Cycle (s): 150.0 Lost time per cycle (s): 21.4 Critical v/c Ratio: 1.151

Intersection Performance

	EB			WB			NB			SB		
Lane group configuration	L	T	R	L	T	R	L	T	R	L	T	R
No. of lanes	2	2	1	2	2	2	2	3	1	2	3	1
Flow rate (veh/h)	273	798	81	99	988	734	601	1815	32	736	1242	201
Capacity (veh/h)	236	857	383	236	857	1317	785	1574	491	785	1574	491
Adjusted saturation flow (veh/h)	3403	3512	1568	3403	3512	2775	3403	5025	1568	3403	5025	1568
v/c ratio	1.155	0.931	0.212	0.419	1.153	0.557	0.766	1.153	0.064	0.937	0.789	0.409
g/C ratio	0.069	0.244	0.244	0.069	0.244	0.475	0.231	0.313	0.313	0.231	0.313	0.313
Average back of queue (veh)	9.5	21.0	2.8	2.2	33.4	13.3	13.6	42.6	1.0	19.2	19.5	7.0
Initial queue in next period (veh)	5.0	0.0	0.0	0.0	17.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0
Uniform delay (s)	69.8	55.5	45.2	66.9	56.7	28.1	53.9	51.5	36.1	56.6	47.0	40.6
Incremental delay (s)	107.0	16.3	0.0	0.0	82.3	0.3	5.3	76.4	0.0	19.1	3.2	0.9
Initial queue delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay (s)	176.8	71.8	45.2	66.9	139.0	28.4	59.2	127.9	36.1	75.7	50.2	41.5
LOS	F	E	D	E	F	C	E	F	D	E	D	D
Approach delay (s)/LOS	94.8	/	F	90.5	/	F	109.8	/	F	58.0	/	E
Intersection delay (s)/ LOS	88.1			/			F					

APPENDIX D

Simulation Analysis Results

1: Ina Road & Oracle Road Performance by movement

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Delay / Veh (s)	88.2	82.9	56.1	18.4	57.8	56.8	24.6	66.1	64.1	54.0	28.2	90.6

1: Ina Road & Oracle Road Performance by movement

Movement	SBL	SBT	SBR	All
Delay / Veh (s)	91.8	44.9	21.6	52.7

Total Network Performance

Delay / Veh (s)	55.1

Intersection: 1: Ina Road & Oracle Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	UL	T	T	R	L	T	T	R	UL	L	T	T
Maximum Queue (ft)	329	520	450	309	233	382	386	410	307	314	426	451
Average Queue (ft)	237	267	253	109	118	216	222	187	210	207	279	305
95th Queue (ft)	367	464	409	224	206	336	345	332	294	296	396	426
Link Distance (ft)		903	903			2472	2472	2472			1829	1829
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	260			300	280				250	250		
Storage Blk Time (%)	16	4	2	0	0	3			3	4	10	
Queuing Penalty (veh)	48	12	8	0	0	5			14	17	58	

Intersection: 1: Ina Road & Oracle Road

Movement	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	470	232	563	587	445	398	399	266
Average Queue (ft)	317	49	360	372	269	275	274	125
95th Queue (ft)	442	139	551	567	391	383	377	224
Link Distance (ft)	1829		4937	4937	4937	4937	4937	
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		250						175
Storage Blk Time (%)	17						26	4
Queuing Penalty (veh)	18						86	14

Network Summary

Network wide Queuing Penalty: 280

1: Ina Road & Oracle Road Performance by movement

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Delay / Veh (s)	87.7	85.5	71.2	18.9	177.8	259.4	185.3	85.8	81.3	71.2	45.1	229.8

1: Ina Road & Oracle Road Performance by movement

Movement	SBL	SBT	SBR	All
Delay / Veh (s)	241.0	49.0	30.1	114.5

Intersection: 1: Ina Road & Oracle Road

Movement	EB	EB	EB	EB	B18	B18	WB	WB	WB	WB	NB	NB
Directions Served	UL	T	T	R	T	T	L	T	T	R	UL	L
Maximum Queue (ft)	330	734	734	398	25	21	449	1702	1744	1817	379	513
Average Queue (ft)	256	387	393	106	1	1	106	1132	1197	1204	247	275
95th Queue (ft)	381	641	656	291	19	16	367	1827	1928	2028	356	454
Link Distance (ft)		903	903		1130	1130		2472	2472	2472		
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	260			300			280				250	250
Storage Blk Time (%)	11	23	18					70			9	10
Queuing Penalty (veh)	44	59	47					65			53	60

Intersection: 1: Ina Road & Oracle Road

Movement	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	T	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	800	816	860	500	968	988	923	801	512	431
Average Queue (ft)	482	528	551	85	707	715	401	359	298	179
95th Queue (ft)	723	751	783	285	1114	1115	826	676	427	327
Link Distance (ft)	1829	1829	1829		4937	4937	4937	4937	4937	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)				250						175
Storage Blk Time (%)	33		39						30	10
Queuing Penalty (veh)	187		37						105	39

1: Ina Road & Oracle Road Performance by movement

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Delay / Veh (s)	100.9	84.7	47.4	15.0	58.2	47.4	7.5	67.7	61.0	38.1	16.3	173.5

1: Ina Road & Oracle Road Performance by movement

Movement	SBL	SBT	SBR	All
Delay / Veh (s)	176.9	37.3	20.5	53.8

Intersection: 1: Ina Road & Oracle Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	UL	L	T	T	R	L	L	T	T	R	R	UL
Maximum Queue (ft)	219	217	348	359	226	127	117	320	325	120	134	344
Average Queue (ft)	127	116	204	211	98	50	53	173	177	50	61	223
95th Queue (ft)	213	218	315	324	187	97	99	274	288	105	120	323
Link Distance (ft)			2041	2041	2041			1744	1744	1744		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	260	260				280	280				335	230
Storage Blk Time (%)	1	1	2					1				9
Queuing Penalty (veh)	4	2	6					2				36

Intersection: 1: Ina Road & Oracle Road

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	362	351	386	391	107	760	781	554	548	348	283
Average Queue (ft)	220	227	244	262	40	547	555	255	250	234	119
95th Queue (ft)	323	308	336	354	82	851	855	496	412	321	217
Link Distance (ft)		3308	3308	3308		5135	5135	5135	5135	5135	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	230				250						175
Storage Blk Time (%)	8	6		8						19	3
Queuing Penalty (veh)	33	32		9						60	12

1: Ina Road & Oracle Road Performance by movement

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU
Delay / Veh (s)	80.3	72.5	56.2	3.8	116.4	155.5	11.1	60.5	60.1	65.7	37.7	77.1

1: Ina Road & Oracle Road Performance by movement

Movement	SBL	SBT	SBR	All
Delay / Veh (s)	71.4	33.6	26.0	67.0

Total Network Performance

Delay / Veh (s)	71.1

Intersection: 1: Ina Road & Oracle Road

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	WB	WB	NB
Directions Served	UL	L	T	T	R	L	L	T	T	R	R	UL
Maximum Queue (ft)	194	329	468	484	72	84	449	1007	1021	228	226	330
Average Queue (ft)	113	127	290	308	32	26	79	702	714	108	120	210
95th Queue (ft)	170	261	429	452	58	63	295	1239	1247	194	202	305
Link Distance (ft)			2041	2041	2041			1751	1751	1751	1751	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	260	260				280	280					230
Storage Blk Time (%)	0		12					53				6
Queuing Penalty (veh)	0		31					49				33

Intersection: 1: Ina Road & Oracle Road

Movement	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	L	T	T	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	529	770	808	832	500	499	522	54	58	140	363
Average Queue (ft)	262	475	525	557	100	317	328	22	21	31	164
95th Queue (ft)	462	680	737	778	341	464	479	48	49	98	302
Link Distance (ft)		3311	3311	3311		5134	5134	5134	5134	5134	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	230				250						175
Storage Blk Time (%)	7	36		41							8
Queuing Penalty (veh)	39	206		39							3

Network Summary

Network wide Queuing Penalty: 400

1: Ina Road & Oracle Road Performance by movement

Movement	EBT	EBR	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Delay / Veh (s)	24.9	16.0	25.4	5.9	41.4	38.8	29.6	13.5	35.1	38.5	25.7	11.4

1: Ina Road & Oracle Road Performance by movement

Movement	All
Delay / Veh (s)	25.0

2: Ina Road & Via Ponte Performance by movement

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBR	All
Delay / Veh (s)	9.1	5.0	7.4	17.4	12.4	2.9	5.2	4.7

5: Ina Road & Performance by movement

Movement	EBU	EBT	EBR	WBL	WBT	WBR	NBR	SBR	All
Delay / Veh (s)	18.2	4.1	2.7	21.4	5.0	1.4	6.8	5.1	6.4

Total Network Performance

Delay / Veh (s)	32.7

Intersection: 1: Ina Road & Oracle Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	T	R	T	T	T	R	R	UL	L	T
Maximum Queue (ft)	220	204	205	336	195	201	208	155	168	225	223	257
Average Queue (ft)	127	124	125	155	83	106	108	64	73	135	144	160
95th Queue (ft)	198	191	192	285	153	170	175	135	146	203	212	236
Link Distance (ft)	596	596	596	596	989	989	989					2199
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)								1000	1000	230	230	
Storage Blk Time (%)										0	0	1
Queuing Penalty (veh)										1	1	4

Intersection: 1: Ina Road & Oracle Road

Movement	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	278	298	80	317	332	253	265	263	208
Average Queue (ft)	175	191	30	186	198	159	172	171	89
95th Queue (ft)	255	272	60	290	303	227	243	241	165
Link Distance (ft)	2199	2199		3738	3738	3738	3738	3738	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			250						175
Storage Blk Time (%)		1						5	0
Queuing Penalty (veh)		1						16	2

Intersection: 2: Ina Road & Via Ponte

Movement	EB	EB	EB	EB	WB	NB
Directions Served	U	T	T	R	UL	R
Maximum Queue (ft)	25	196	204	104	215	78
Average Queue (ft)	2	53	78	16	87	38
95th Queue (ft)	12	130	159	56	159	73
Link Distance (ft)	990	990	990		596	63
Upstream Blk Time (%)						2
Queuing Penalty (veh)						0
Storage Bay Dist (ft)				155		
Storage Blk Time (%)			1	0		
Queuing Penalty (veh)			1	0		

Intersection: 5: Ina Road &

Movement	EB	EB	WB	WB	WB	NB	SB
Directions Served	U	TR	L	T	TR	R	R
Maximum Queue (ft)	290	23	113	155	230	80	31
Average Queue (ft)	138	1	34	43	82	31	8
95th Queue (ft)	241	8	73	108	182	62	27
Link Distance (ft)	989	989		1125	1125	182	306
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)			130				
Storage Blk Time (%)			0	0			
Queuing Penalty (veh)			1	0			

Network Summary

Network wide Queuing Penalty: 27

1: Ina Road & Oracle Road Performance by movement

Movement	EBT	EBR	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Delay / Veh (s)	37.6	14.1	56.3	14.7	62.3	59.7	41.5	16.7	57.3	62.6	33.9	20.0

1: Ina Road & Oracle Road Performance by movement

Movement	All
Delay / Veh (s)	39.3

2: Ina Road & Via Ponte Performance by movement

Movement	EBT	EBR	WBU	WBT	NBR	All
Delay / Veh (s)	1.5	5.7	24.3	3.4	2.4	3.3

5: Ina Road & Yucca Via Performance by movement

Movement	EBU	EBT	EBR	WBL	WBT	WBR	NBR	SBR	All
Delay / Veh (s)	40.0	5.0	3.1	32.8	8.7	7.8	11.2	22.2	10.2

Total Network Performance

Delay / Veh (s)	48.8

Intersection: 1: Ina Road & Oracle Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	T	R	T	T	T	R	R	UL	L	T
Maximum Queue (ft)	305	325	319	225	500	534	547	337	274	330	353	454
Average Queue (ft)	195	200	201	102	209	297	298	166	173	193	223	314
95th Queue (ft)	283	290	289	185	429	477	484	263	257	289	316	422
Link Distance (ft)	601	601	601	601	991	991	991					2415
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)								1000	1000	230	230	
Storage Blk Time (%)										4	8	16
Queuing Penalty (veh)										24	44	92

Intersection: 1: Ina Road & Oracle Road

Movement	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	530	545	218	436	456	351	359	357	309
Average Queue (ft)	353	373	33	278	295	207	215	222	139
95th Queue (ft)	484	502	122	428	448	293	299	310	248
Link Distance (ft)	2415	2415		3572	3572	3572	3572	3572	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			250						175
Storage Blk Time (%)		21						16	4
Queuing Penalty (veh)		20						58	18

Intersection: 2: Ina Road & Via Ponte

Movement	EB	EB	EB	WB	WB	NB
Directions Served	T	T	R	UL	T	R
Maximum Queue (ft)	99	118	35	248	250	60
Average Queue (ft)	14	19	3	68	9	18
95th Queue (ft)	54	69	17	171	141	47
Link Distance (ft)	871	871		601	601	216
Upstream Blk Time (%)				0		
Queuing Penalty (veh)				0		
Storage Bay Dist (ft)			155			
Storage Blk Time (%)		0				
Queuing Penalty (veh)		0				

Intersection: 5: Ina Road & Yucca Via

Movement	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	U	TR	L	T	T	TR	R	R
Maximum Queue (ft)	397	24	97	149	250	332	120	41
Average Queue (ft)	232	2	38	48	104	158	50	13
95th Queue (ft)	364	13	79	115	204	292	93	37
Link Distance (ft)	991	991		1127	1127	1127	192	234
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)			130					
Storage Blk Time (%)			0	0				
Queuing Penalty (veh)			0	0				

Network Summary

Network wide Queuing Penalty: 257

1: Ina Road & Oracle Road Performance by movement

Movement	EBT	EBR	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Delay / Veh (s)	38.8	10.5	47.2	14.3	52.2	53.0	24.4	9.7	47.4	49.1	27.3	19.1

1: Ina Road & Oracle Road Performance by movement

Movement	All
Delay / Veh (s)	32.5

2: Ina Road & Via Ponte Performance by movement

Movement	EBU	EBT	EBR	WBL	WBT	NBT	NBR	All
Delay / Veh (s)	12.9	10.4	13.6	22.2	2.8		0.8	7.4

6: Giaconda Way & Oracle Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	All
Delay / Veh (s)	45.7	6.6	18.9	60.5	64.0	14.6	22.3	8.9	46.4	6.7	12.3

Total Network Performance

Delay / Veh (s)	44.0

Intersection: 1: Ina Road & Oracle Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	T	T	T	R	T	T	T	R	R	UL	L	T
Maximum Queue (ft)	204	206	216	144	247	291	288	124	140	350	428	324
Average Queue (ft)	114	120	121	48	92	173	174	62	67	215	250	192
95th Queue (ft)	179	181	183	103	212	254	257	120	130	316	357	291
Link Distance (ft)	520	520	520	520	1768	1768	1768					738
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)								1000	1000	230	230	
Storage Blk Time (%)										6	10	2
Queuing Penalty (veh)										30	49	9

Intersection: 1: Ina Road & Oracle Road

Movement	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	T	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	358	385	77	370	371	281	292	306	248
Average Queue (ft)	218	242	26	248	256	169	184	187	104
95th Queue (ft)	326	363	58	344	349	258	277	276	198
Link Distance (ft)	738	738		1925	1925	1925	1925	1925	
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			250						175
Storage Blk Time (%)		5						9	2
Queuing Penalty (veh)		5						28	7

Intersection: 2: Ina Road & Via Ponte

Movement	EB	EB	EB	EB	WB	NB
Directions Served	U	T	T	R	L	R
Maximum Queue (ft)	21	179	242	179	342	53
Average Queue (ft)	1	29	39	45	71	13
95th Queue (ft)	10	118	146	130	216	40
Link Distance (ft)	1002	1002	1002		520	785
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				155		
Storage Blk Time (%)			1	1		
Queuing Penalty (veh)			4	3		

Intersection: 6: Giaconda Way & Oracle Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	TR	LT	R	L	T	T	TR	L	T	T
Maximum Queue (ft)	178	248	355	117	52	76	310	258	277	79	82	95
Average Queue (ft)	106	105	146	47	15	17	144	116	135	22	31	46
95th Queue (ft)	164	174	270	95	41	52	261	214	234	56	69	83
Link Distance (ft)			516	504	504		1527	1527	1527		738	738
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300	300				160				110		
Storage Blk Time (%)		0	1				5				0	
Queuing Penalty (veh)		0	2				1				0	

Intersection: 6: Giaconda Way & Oracle Road

Movement	SB
Directions Served	TR
Maximum Queue (ft)	87
Average Queue (ft)	41
95th Queue (ft)	79
Link Distance (ft)	738
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 138

1: Ina Road & Oracle Road Performance by movement

Movement	EBT	EBR	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Delay / Veh (s)	42.2	7.3	124.3	17.3	53.3	54.2	30.4	8.8	72.5	72.8	28.9	25.8

1: Ina Road & Oracle Road Performance by movement

Movement	All
Delay / Veh (s)	47.6

2: Ina Road & Via Ponte Performance by movement

Movement	EBU	EBT	EBR	WBL	WBT	NBT	NBR	All
Delay / Veh (s)		4.6	8.6	16.1	2.7		0.5	4.2

6: Giaconda Way & Oracle Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	54.6	16.9	20.2	72.3	71.8	19.1	20.6	7.7	6.1	65.5	4.6	11.4

Total Network Performance

Delay / Veh (s)	57.8

Intersection: 1: Ina Road & Oracle Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	B5	B5	B5
Directions Served	T	T	T	R	T	T	T	R	R	T	T	T
Maximum Queue (ft)	270	268	258	88	622	635	648	252	269	159	174	174
Average Queue (ft)	158	168	166	25	431	506	514	143	155	42	48	49
95th Queue (ft)	238	245	240	62	766	742	748	228	243	199	212	217
Link Distance (ft)	500	500	500	500	617	617	617	617		439	439	439
Upstream Blk Time (%)					11	16	16				0	0
Queuing Penalty (veh)					0	0	0				0	0
Storage Bay Dist (ft)									500			
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: Ina Road & Oracle Road

Movement	NB	NB	NB	NB	NB	NB	SB	SB	SB	SB	SB	SB
Directions Served	UL	L	T	T	T	R	UL	L	T	T	T	R
Maximum Queue (ft)	336	342	576	660	677	422	517	521	384	342	344	331
Average Queue (ft)	230	227	346	387	414	64	305	313	200	206	213	165
95th Queue (ft)	311	314	509	563	587	284	495	506	313	305	307	281
Link Distance (ft)			760	760	760		3347	3347	3347	3347	3347	
Upstream Blk Time (%)				0	0							
Queuing Penalty (veh)				0	0							
Storage Bay Dist (ft)	500	500				250						175
Storage Blk Time (%)			1		13						13	7
Queuing Penalty (veh)			3		12						47	30

Intersection: 2: Ina Road & Via Ponte

Movement	EB	EB	EB	EB	WB	NB
Directions Served	U	T	T	R	L	R
Maximum Queue (ft)	8	81	101	73	170	30
Average Queue (ft)	0	6	10	13	39	6
95th Queue (ft)	5	37	51	44	110	25
Link Distance (ft)	988	988	988		500	781
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				155		
Storage Blk Time (%)			0			
Queuing Penalty (veh)			0			

Intersection: 6: Giaconda Way & Oracle Road

Movement	EB	EB	EB	WB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	L	L	TR	LT	R	L	T	T	TR	L	T	T
Maximum Queue (ft)	182	210	266	106	42	94	342	338	367	84	46	54
Average Queue (ft)	105	105	109	44	11	17	174	157	175	27	11	21
95th Queue (ft)	158	167	213	92	35	55	306	283	305	72	34	48
Link Distance (ft)			518	385	385		790	790	790		760	760
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300	300				160				110		
Storage Blk Time (%)			0				6			1		
Queuing Penalty (veh)			1				2			6		

Intersection: 6: Giaconda Way & Oracle Road

Movement	SB
Directions Served	TR
Maximum Queue (ft)	57
Average Queue (ft)	18
95th Queue (ft)	46
Link Distance (ft)	760
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 102