



June 24, 2022

Mr. Givi Peradze, Senior Vice President
Fifield Companies/FRC Realty, Inc.
600 W Jackson Boulevard, Suite 600
Chicago, Illinois 60661



**RE: ENHANCED TRIP GENERATION STATEMENT FOR A PROPOSED MULTI-FAMILY HOUSING DEVELOPMENT,
ON THE WEST SIDE OF 29TH AVENUE AND SOUTH OF DOVE VALLEY ROAD – PHOENIX, ARIZONA**

Dear Mr. Peradze:

Thank you for retaining CivTech to provide a trip generation statement for Fifield Companies/FRC Realty, Inc. ("Fifield"). Consisting of approximately 250 dwelling units of multi-family residences, on an approximately 6.9-acre parcel west of 29th Avenue south of Dove Valley Road (the "Project") is located in the City of Phoenix, Arizona. The existing parcel is currently vacant.

BACKGROUND AND PURPOSE

This trip generation statement is required as part of Fifield's application to the City requesting a rezoning of the project site. The purpose of this statement is to document the expected number of daily and peak hour trips generated by the site. CivTech does not expect this statement to be sufficient to serve a Traffic Impact Study, which may be required later by the City for approval of the development.

PROPOSED DEVELOPMENT

The Project is proposed as a multi-family development with 250 units ranging from one through three bedrooms. A breakdown of units by unit type is summarized in **Table 1**. The development is proposed to include 385 unreserved parking spaces, 8 of which must be accessible spaces. The site plan is included in **Attachment A**.

Table 1 – Proposed Development by Unit Type

Unit Type	Number of Units
1 Bedroom	115
2 Bedroom	115
3 Bedroom	20
Total	250

TRIP GENERATION

The potential trip generation for the proposed development was estimated utilizing the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* and *Trip Generation Handbook, 3^d Edition*. The ITE *Trip Generation Manual* contains data collected by various transportation

professionals for a wide range of different land uses. The data are summarized in the report and average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized land use. The report provides information for daily and peak hour trips.

These values do not include reductions for Internal Capture, Alternate Mode Use, or Pass-By Trips. The anticipated trip generation is summarized in **Table 2**.

Table 2 – Trip Generation

Land Use	ITE Code	ITE Land Use Name	Acreage	Quantity	Units ⁺	AM Distribution		PM Distribution		
						In	Out	In	Out	
<i>Dove Valley Apartments</i>										
Apartments(Low-Rise) Not Close to Rail	220	Apartments	6.9	250 DUs	24%	76%	63%	37%		
Land Use	ADT		AM Peak Hour				PM Peak Hour			
	Avg. Rate*	Total	Avg. Rate*	In	Out	Total	Avg. Rate*	In	Out	Total
Apartments	6.71	1,678	0.40	24	76	100	0.51	81	47	128
Notes: ⁺ All average rates were calculated by dividing total trips generated using regression equation by the number of dwelling units. (See below.) DUs = Dwelling Units										
<i>CALCULATIONS (Equations shown only where applicable)</i>										
<i>Land Use [Units]</i>	<i>Daily</i>		<i>AM Peak Hour</i>				<i>PM Peak Hour</i>			
Apartments [250 DUs]	T _{Day} = 250 x 6.41 + 75.31 = 1,678		T _{AM} = 250 x 0.31+ 3.73 = 100				T _{PM} = 250 x 0.51 + 20.55 = 128			

The proposed development is anticipated to generate 1,678 weekday daily trips, 100 trips (24 in/ 76 out) during the AM peak hour, and 128 trips (81 in/ 47 out) during the PM peak hour.

VEHICLE TRIP DISTRIBUTION AND ASSIGNMENT

A single trip distribution pattern was assumed for the proposed development. It is expected that the proposed development will generate trips generally based on its proximity to the major arterial roadways of Dove Valley Road and Sonoran Desert Drive. The resulting trip distribution percentages for the study area are shown in **Table 3**.

Table 3 – Site Trip Distribution

Direction (To/From)	Percentage
North 29 th Avenue (north of the site)	60%
South on 29 th Avenue (south of the site)	40%
Total	100 %

The percentages presented in **Table 3** were applied to the site trips generated to determine the AM and PM peak hour site traffic at the proposed driveways. **Figure 1** presents the resulting site generated traffic for the proposed development.

MEDIAN OPENING ASSESSMENT

Per the City of Phoenix, *Street Planning and Design Guidelines, Street Transportation – December 1, 2009, Section 3.4.5 Spacing and Location of Median Openings*, “Median island openings will be allowed at 660-foot intervals as required in the *City of Phoenix Street Classification System General Policy Document and Technical Supplement*. Openings other than at the 660-foot locations may be permitted if approved by the Street Transportation Department.” An excerpt of the guidelines is included as **Attachment B**.

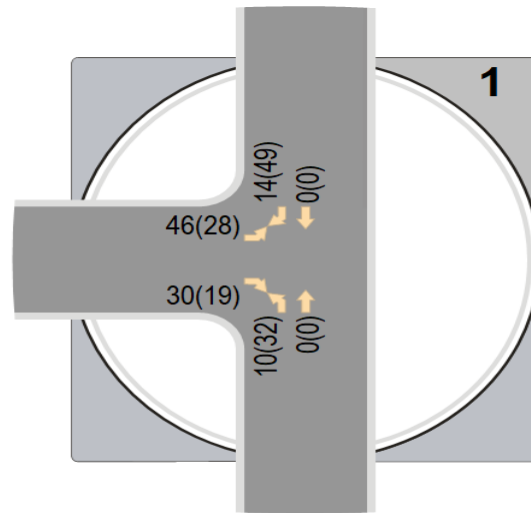
The driveway spacing depicted in the site plan dated February 2, 2022, indicates that the proposed full movement driveway will be approximately 333-ft north of the edge of the property line (measured property-line to driveway centerline) and approximately 229 ft north of the future W.L. Gore expansion facility (“Gore”) exit-only driveway (measured from edge-of curb). The buildout date of the Gore facility is unknown.

29TH AVENUE CROSS SECTION

In coordination with adjacent developers, CivTech developed a due diligence model to anticipate future the traffic demand on 29th Avenue. A trip generation including all the future developments anticipated to use 29th Avenue was developed to anticipate the annual daily traffic (ADT) that 29th Avenue could experience at the buildout of the developments along 29th Avenue.

The typical section of 29th Avenue is planned as a modified “CM” in accordance with *City of Phoenix Street Planning and Design Guidelines*. The modification will allow for an 80 foot right of way with 10-foot easements for sidewalk on each side, and a 14-foot raised median. The initial striping is proposed with one lane and a bike lane separated by a bike buffer in each direction of travel. The ultimate buildout roadway condition of 29th Avenue as anticipated by CivTech is included as **Attachment C**.

Figure 1 - Site Generated Traffic Volume



29th Avenue & Proposed Access

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QUEUE LENGTH ANALYSIS

QUEUE STORAGE

Adequate turn storage should be supplied on any approach where turn lanes are permitted and/or warranted. A queuing analysis was prepared according to the methodology documented in *AASHTO's A Policy on Geometric Design of Highways and Streets*. The study intersections were analyzed to determine the left-turn and right-turn storage needed to accommodate the expected traffic volumes developed in an earlier study CivTech prepared. That study was used to determine the appropriate roadway cross-section for 29th Avenue. The projected volumes at the future intersection of **29th Avenue and Bronco Butte Trail** were used to estimate the through traffic volumes anticipated to conflict with the site volumes. The resulting turn lane storage requirements for the study intersections are summarized in **Table 4**.

Table 4 – Queue Storage Lengths

ID	Intersection	Control	Movement	Queue Storage	
				HCM ⁽²⁾	Recommended
1	29 th Avenue & Dove Valley Apartments Driveway	1-Way stop (EB)	NB Left	<25'	75'

(1) Measured from beginning of stop bar

(2) HCM 95th percentile queue reported in vehicles/lane, assuming 1 vehicle ~ 25 feet.

(3) TWLTL provides excess storage for the left-turn lane

The proposed northbound left turn lane is anticipated to experience a queueing of less than one vehicle during the AM and PM peak hours. It is anticipated that the future W.L. Gore project will be required to construct their half street to match the approved 29th Avenue cross-section. It is recommended that a TWLTL be implemented in the interim condition until the opposing half-street is constructed. The capacity and queue storage analysis are included in **Attachment D**.

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CONCLUSIONS

From the above, the following can be concluded:

- The proposed development is anticipated to generate 1,678 weekday daily trips, 100 trips (24 in/ 76 out) during the AM peak hour, and 128 trips (81 in/ 47 out) during the PM peak hour.
- The proposed northbound left turn lane is anticipated to experience a queueing of less than one vehicle during the AM and PM peak hours.
- The typical section of 29th Avenue is planned as a modified “CM” in accordance with *City of Phoenix Street Planning and Design Guidelines*. The modification will allow for an 80 foot right of way with 10-foot easements for sidewalk on each side, and a 14-foot raised median. The initial striping is proposed with one lane and a bike lane separated by a bike buffer in each direction of travel.
- It is recommended that a TWLTL be implemented in the interim condition until the opposing half-street is constructed.
- Based on CivTech’s experience, the driveway spacing proposed is sufficient to provide acceptable queue storage lengths.

Thank you for allowing CivTech to assist you on this project. Please contact me with any questions you may have on this Traffic Statement.

Sincerely,

CivTech



Dawn Cartier, P.E., PTOE
President

Attachments (4)

- A. Site Plan
- B. City of Phoenix Zoning Ordinance, Chapter 7 excerpts
- C. 29th Avenue Cross Section
- D. HCM 6th Queueing Analysis

Project Summary

6.9 acres

36.2 du/ac

- 1 Main vehicular entry
- 2 Leasing/Guest Parking Area
- 3 Leasing Office/Amenity
- 4 Pool/Recreation Area
- 5 Secured/Assigned Residential Parking Area
- 6 Residential: 4 Stories Stacked Flats

Unit Mix

Unit Type	Area	Mix	Count	Net Rentable
1BR	750 s.f.	46%	115 du	86,239 s.f.
2BR	1,100 s.f.	46%	115 du	126,484 s.f.
3BR	1,300 s.f.	8%	20 du	25,997 s.f.
avg.	955 s.f.	100%	250 du	238,721 s.f.

Parking Summary

Unit Type	Count	Parking Ratio	Stalls Req'd
1BR	115 du	1.5	172 stalls
2BR	115 du	1.5	172 stalls
3BR	20 du	2.0	40 stalls
	250 du	1.54	385 stalls

Stalls Provided

Private Garages	28 stalls	11%
Carports	224 stalls	89%
Open Stalls	133 stalls	
	385 stalls	

Notes:

- Fire access to the buildings on the creek edge will need to be negotiated with the Fire Dept. Standpipes (2 max) are a possible solution.
- Definition of lot coverage and calculations need to be confirmed.

20220202ktgy

DOVE VALLEY APARTMENTS

PHOENIX, ARIZONA

FIFIELD COMPANIES

0 50' 100'

1" = 50'

02

2022-03-30

3.3.2 Cross-Sections in Street Dip Sections (Wet Crossings)

Street Dip crossings shall be avoided. All lots within new subdivisions shall be provided with a “dry” access from at least one direction. “Dry” means no more than 6" of water at no greater than 5 feet per second flow across the road in a 50 year storm event. This will allow emergency vehicle access. The pavements through the dip section should have a one-way slope (no crown), curbing and medians must not be raised, and cut-off walls shall be installed in accordance with designs approved by the City of Phoenix Development Services Department. Transitions back to normal street cross-slopes will be needed at both ends of the dip section.

*See March 2004 *City of Phoenix Storm Water Policies and Standards*, for public street design and drainage requirements.

3.4 Medians

Medians shall be provided on all Arterial streets and may be permitted on collector and local streets. Medians shall either be raised or flush depending upon the classification of the street. Raised median islands are intended to separate opposing traffic flows, restrict indiscriminate crossing maneuvers, control turns, provide pedestrian refuge and, if of sufficient width, protect vehicles waiting to turn left. The basic purpose of a median island is to expedite traffic and increase vehicle and pedestrian safety. Too frequent openings may void these benefits.

3.4.1 Median Widths

The width of a raised median is measured from the *face* of median curb to the *face* of median curb. The nominal width of a raised median island should be fourteen (14) feet wide with twenty four (24) feet being approved for streets built to Cross-section “A” standards, see **Figure 2.1**. When a raised median island is narrowed for a left-turn pocket, the minimum width should be four (4) feet. The Street Transportation Department may approve raised median islands widths other than 14 or 24 feet, but only in extremely special circumstances will a raised median be approved to a width of less than four (4) feet. For a flush median, the width is measured between the centers of the continuous, painted median stripes. The ideal minimum width for a flush or painted median is ten (10) feet, but any separation between opposing flows of traffic is desirable.

3.4.2 Raised Medians

Raised medians that are more than four (4) feet in width are normally landscaped. Landscaping and other median features shall not restrict the sight distance for vehicles turning left on the through street. Decorative rocks shall not be used in raised medians. Median landscaping shall not restrict sight distance in the vicinity of intersections for side street traffic. Raised medians on Collector and Local public streets should be placed in a “tract” and shall be maintained by the Development’s Home Owners Association.

*See City of Phoenix, Parks and Recreation *2006 Street Landscape Standards* for additional information.

3.4.3 Flush Medians

Flush medians should be striped to provide a continuous left turn lane. The median shall be paved with asphalt, concrete or brick pavers, matching the grade of the adjacent street paving.

3.4.4 Median Nose Islands

A median island nose from four (4) feet to five (5) feet in width should be paved. The paved surface should have the same cross-slope as the street pavement. Acceptable paving materials are Portland concrete cement or brick pavers.

3.4.5 Spacing and Location of Median Openings

Median island openings will be allowed at 660 foot intervals as required in the City of Phoenix Street Classification System General Policy Document and Technical Supplement. Openings other than at the 660 foot locations may be permitted if approved by the Street Transportation Department.

3.5 Curbs

Typical curb and gutters shall be constructed using the Maricopa Association of Governments (MAG) Standard Detail 220 - Type A and Type C

3.5.1 Vertical Curbs

Vertical curbs (6" typical) are required for all streets except local single family residential streets (see **Figures 2.1- 2.12**) where traffic calming is not being implemented. Local single family residential streets with special narrower cross-sections will be constructed with vertical curbs and offset (separated) sidewalks. Vertical curbs should also be used where drainage considerations make such use desirable. Vertical curbs with gutter are to be constructed in accordance with the current City of Phoenix supplements to the MAG (Maricopa Association of Governments) standard details. Vertical curb and gutter type shall match the adjacent pavement slope to the gutter cross slope direction. The curb height shown on the standard detail is 6 inches, but the following variations may be used where appropriate:

- Where fire lane or public maintenance vehicle access to abutting property must be provided over the curb, use mountable curb and gutter.
- If special drainage requirements make a higher curb necessary, the height may be increased to eight (8) inches maximum and the width of the gutter may be increased to 24 inches.
- Historical areas with variable curb dimensions.

Attachment D

21-0390 29th Ave & Sonoran Desert Dr
Total AM

5: 29th Ave & Bronco Butte Trl
HCM 6th TWSC

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	N	N	S	S
Traffic Vol, veh/h	34	17	450	128	27	242
Future Vol, veh/h	34	17	450	128	27	242
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	37	18	489	139	29	263

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	880	559	0 0 628 0
Stage 1	559	-	- - - -
Stage 2	321	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	318	529	- - 954 -
Stage 1	572	-	- - - -
Stage 2	735	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	308	529	- - 954 -
Mov Cap-2 Maneuver	308	-	- - - -
Stage 1	572	-	- - - -
Stage 2	713	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	16.9	0	0.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 358	954	-
HCM Lane V/C Ratio	-	- 0.155	0.031	-
HCM Control Delay (s)	-	- 16.9	8.9	-
HCM Lane LOS	-	- C	A	-
HCM 95th %tile Q(veh)	-	- 0.5	0.1	-

21-0390 29th Ave & Sonoran Desert Dr
Total PM

5: 29th Ave & Bronco Butte Trl
HCM 6th TWSC

Intersection						
Int Delay, s/veh	19.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	N	N	S	S
Traffic Vol, veh/h	78	56	718	40	52	873
Future Vol, veh/h	78	56	718	40	52	873
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	61	780	43	57	949

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1865	802	0 0 823 0
Stage 1	802	-	- - - -
Stage 2	1063	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	~ 80	384	- - 807 -
Stage 1	441	-	- - - -
Stage 2	332	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	~ 74	384	- - 807 -
Mov Cap-2 Maneuver	~ 74	-	- - - -
Stage 1	441	-	- - - -
Stage 2	308	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	257.7	0	0.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 112	807	-
HCM Lane V/C Ratio	-	- 1.3	0.07	-
HCM Control Delay (s)	-	- 257.7	9.8	-
HCM Lane LOS	-	- F	A	-
HCM 95th %tile Q(veh)	-	- 9.8	0.2	-

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

Attachment D

21-0390 29th Ave & Sonoran Dr at 29th Ave & North Valley Apartments Drwy/W.L. Gore Ingress
Total AM HCM 6th TWSC

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	0	20	0	0	0	4	463	0	0	249	10
Future Vol, veh/h	27	0	20	0	0	0	4	463	0	0	249	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	0	22	0	0	0	4	503	0	0	271	11

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	788	788	277	282	0	0	503	0	0
Stage 1	277	277	-	-	-	-	-	-	-
Stage 2	511	511	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	360	323	762	1280	-	-	1061	-	-
Stage 1	770	681	-	-	-	-	-	-	-
Stage 2	602	537	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	359	0	762	1280	-	-	1061	-	-
Mov Cap-2 Maneuver	467	0	-	-	-	-	-	-	-
Stage 1	768	0	-	-	-	-	-	-	-
Stage 2	602	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	1280	-	-	559	1061	-	-
HCM Lane V/C Ratio	0.003	-	-	0.091	-	-	-
HCM Control Delay (s)	7.8	-	-	12.1	0	-	-
HCM Lane LOS	A	-	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	-	-

21-0390 29th Ave & Sonoran Dr at 29th Ave & North Valley Apartments Drwy/W.L. Gore Ingress
Total PM HCM 6th TWSC

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	0	10	0	0	0	20	754	0	0	915	23
Future Vol, veh/h	15	0	10	0	0	0	20	754	0	0	915	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	25	-	-
Veh in Median Storage, #	-	1	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	0	11	0	0	0	22	820	0	0	995	25

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	1872	1872	1008	1020	0	0	820	0	0
Stage 1	1008	1008	-	-	-	-	-	-	-
Stage 2	864	864	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	79	72	292	680	-	-	809	-	-
Stage 1	353	318	-	-	-	-	-	-	-
Stage 2	413	371	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	76	0	292	680	-	-	809	-	-
Mov Cap-2 Maneuver	205	0	-	-	-	-	-	-	-
Stage 1	342	0	-	-	-	-	-	-	-
Stage 2	413	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	22.5	0.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	SBL	SBT	SBR
Capacity (veh/h)	680	-	-	233	809	-	-
HCM Lane V/C Ratio	0.032	-	-	0.117	-	-	-
HCM Control Delay (s)	10.5	-	-	22.5	0	-	-
HCM Lane LOS	B	-	-	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0	-	-

Attachment D

21-0390 29th Ave & Sonoran Desert Dr
Total AM

100: 29th Ave & W.L. Gore Egress
HCM 6th TWSC

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↱	↱	↱			↱
Traffic Vol, veh/h	0	0	490	0	0	259
Future Vol, veh/h	0	0	490	0	0	259
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	533	0	0	282

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	815	533	0
Stage 1	533	-	-
Stage 2	282	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	347	547	-
Stage 1	588	-	0
Stage 2	766	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	347	547	-
Mov Cap-2 Maneuver	347	-	-
Stage 1	588	-	-
Stage 2	766	-	-

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

Minor Lane/Major Mvmt	NBTWBLn1WBLn2	SBT
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	0
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	-

21-0390 29th Ave & Sonoran Desert Dr
Total PM

100: 29th Ave & W.L. Gore Egress
HCM 6th TWSC

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↱	↱	↱			↱
Traffic Vol, veh/h	0	0	769	0	0	938
Future Vol, veh/h	0	0	769	0	0	938
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	836	0	0	1020

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	1856	836	0
Stage 1	836	-	-
Stage 2	1020	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	81	367	-
Stage 1	425	-	0
Stage 2	348	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	81	367	-
Mov Cap-2 Maneuver	81	-	-
Stage 1	425	-	-
Stage 2	348	-	-

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

Minor Lane/Major Mvmt	NBTWBLn1WBLn2	SBT
Capacity (veh/h)	-	-
HCM Lane V/C Ratio	-	-
HCM Control Delay (s)	-	0
HCM Lane LOS	-	A
HCM 95th %tile Q(veh)	-	-

Attachment D

21-0390 29th Ave & Sonoran Desert Dr
Total AM

101: 29th Ave & Dove Valley Apartments Drwy
HCM 6th TWSC

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	W	W	
Traffic Vol, veh/h	46	30	10	480	229	14
Future Vol, veh/h	46	30	10	480	229	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	25	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	33	11	522	249	15

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	801	257	264
Stage 1	257	-	-
Stage 2	544	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	354	782	1300
Stage 1	786	-	-
Stage 2	582	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	351	782	1300
Mov Cap-2 Maneuver	457	-	-
Stage 1	780	-	-
Stage 2	582	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT EBLn1	SBT	SBR
Capacity (veh/h)	1300	-	547	-
HCM Lane V/C Ratio	0.008	-	0.151	-
HCM Control Delay (s)	7.8	-	12.7	-
HCM Lane LOS	A	-	B	-
HCM 95th %tile Q(veh)	0	-	0.5	-

21-0390 29th Ave & Sonoran Desert Dr
Total PM

101: 29th Ave & Dove Valley Apartments Drwy
HCM 6th TWSC

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W		W	W	W	
Traffic Vol, veh/h	28	19	32	737	919	49
Future Vol, veh/h	28	19	32	737	919	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	25	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	21	35	801	999	53

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1897	1026	1052
Stage 1	1026	-	-
Stage 2	871	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	76	285	662
Stage 1	346	-	-
Stage 2	410	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	72	285	662
Mov Cap-2 Maneuver	199	-	-
Stage 1	328	-	-
Stage 2	410	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.4	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT EBLn1	SBT	SBR
Capacity (veh/h)	662	-	227	-
HCM Lane V/C Ratio	0.053	-	0.225	-
HCM Control Delay (s)	10.7	-	25.4	-
HCM Lane LOS	B	-	D	-
HCM 95th %tile Q(veh)	0.2	-	0.8	-