

Pikes Vista

Traffic Technical Memorandum

Prepared for:

Bill Guman, PLA, ASLA, APA
William Guman & Associates, Ltd.
731 North Weber Street
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SEPTEMBER 7, 2021

LSC Transportation Consultants
Prepared by: Jeffrey C. Hodsdon, P.E.

LSC #S214450



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Traffic Counts

Synchro LOS Reports



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September 7, 2021

Bill Guman, RLA, ASLA
William Guman & Associates, Ltd.
731 North Weber Street
Colorado Springs, CO 80903

RE: Pikes Vista
Traffic Technical Memorandum
Colorado Springs, CO
LSC # S214550

Dear Mr. Guman,

LSC Transportation Consultants, Inc. has prepared this traffic technical memorandum for the proposed Pikes Vista residential development in Colorado Springs, Colorado. The site is located generally southeast of the Templeton Gap/Tutt intersection at County parcel ID 5307002015. The project would include 45 small-lot, predominantly single-family attached residences.

A single access (Calton Place) is proposed to Tutt Boulevard, located approximately 800 feet northeast of the intersection of Templeton Gap Road/Tutt Boulevard. This access would be stop-sign-controlled and would provide full-movement access to the site.

This report has been prepared for submittal to the City of Colorado Springs.

REPORT CONTENTS

The preparation of this report included the following:

- Inventory of existing adjacent and nearby area street system. This included surface conditions, functional classifications, roadway widths, lane configurations, traffic control, posted speed limits, pavement markings, intersection and access spacing, roadway and intersection alignments, auxiliary turn lanes, intersection sight distances, etc.;
- Inventory of developed land uses in the vicinity of the site, and a review of other nearby approved/anticipated future developments;

- Existing morning and afternoon peak-hour traffic counts at the following “study-area” intersection:
 - Tutt Boulevard/Templeton Gap Road
- Estimates of current/short-term baseline traffic, with school-year and estimated COVID-19 adjustments to current count data;
- Estimates of average weekday traffic (AWT) volumes for Tutt Boulevard and Templeton Gap Road;
- Estimation of directional distribution of site-generated vehicle trips on the area street system, and at the study-area intersections;
- Projections of site-generated turning-movement traffic volumes at the following “study-area” intersections:
 - Tutt Boulevard/Templeton Gap Road
 - Tutt Boulevard/proposed site access
- Estimates of long-term background traffic volumes at the study-area intersections;
- Total traffic (site traffic-plus-background traffic) projections at these intersections for the short and long term;
- Level of service (LOS) analysis at the site access intersection and the intersection of Tutt/Templeton Gap;
- Evaluation of existing, short-term, and long-term projected intersection volumes to determine the potential need for any new auxiliary right-/left-turn lanes, based on the criteria in the City of Colorado Springs’ *Traffic Criteria Manual*;
- Other recommended improvements/modifications to the study-area streets and intersections, including street system/intersection improvements, intersection traffic control, and/or signage and pavement marking modifications as required; and
- Summary of compiled data, analysis, findings, and recommendations.

LAND USE AND ACCESS

The site is located generally southeast of the Templeton Gap/Tutt intersection at County parcel ID 5307002015. The project would include 45 small-lot, predominantly single-family attached residences.

A single access (Calton Place) is proposed to Tutt Boulevard, located approximately 800 feet northeast of the intersection of Templeton Gap Road/Tutt Boulevard. This access would be stop-sign-controlled and would provide full-movement access to the site.

The proposed site access would be about 1,075 feet south of the center of the Tutt/Templeton Gap roundabout, and about 225 feet south of Spring Breeze Drive (access to the Midtown Collection at Pathways Filing No. 1 on the west side of Tutt) and about 435 feet north of the existing north access to Church for all Nations (all centerline spacings).

A copy of the site plan is attached for reference.

ROAD AND TRAFFIC CONDITIONS

Figure 1 shows the streets adjacent to and in the vicinity of the site. Adjacent streets serving the site are identified below followed by a brief description of each:

Tutt Boulevard is a north/south Minor Arterial that extends north from Constitution Avenue to Cowpoke Road on the east side of Powers Boulevard. Tutt Boulevard is planned to be extended north to Research Parkway. North of the site, Tutt Boulevard has been improved to a four-lane Minor Arterial with a raised median and a posted speed limit of 30 mph. The segment adjacent to the site will be realigned and upgraded in the future to connect to the north leg of the Dublin/Tutt intersection.

Templeton Gap Road consists of many discontinuous sections that extend northeast through Colorado Springs. The section of Templeton Gap Road in the vicinity of the site extends northeast from the Tutt/Templeton Gap roundabout and has one through lane in each direction and has a posted speed limit of 30 mph.

TRAFFIC VOLUMES

Existing Traffic Volumes

Vehicular turning-movement counts were conducted at the following intersections and dates/time:

- Tutt Boulevard/Templeton Gap Road roundabout
 - Wednesday, June 30, 2021 from 6:30 – 8:30 a.m.
 - Wednesday, June 30, 2021 from 4:00 - 6:00 p.m.

Existing morning and evening weekday peak-hour traffic volumes at this intersection, as well as the estimated existing annual average daily traffic (ADT) volumes adjacent to the site, are shown in Figure 3. Raw count reports are attached.

Short-Term Baseline Traffic Volumes

The COVID-19 pandemic may still be affecting the study-area traffic volumes. LSC incorporated recent traffic data and estimated “typical” current daily and design-hour volumes. Short-term baseline volumes also include estimates of additional traffic to be generated by approved but not-yet-developed parcels in the vicinity of this site. Additional trips from the Church of All Nations site (located west and southwest of this site) were included as short-term baseline traffic volumes. Figure 5 shows the “short-term baseline” volume estimates.

The short-term background estimates also include estimated trips by future initial development on the west side of the Tutt/Templeton Gap roundabout. The short-term baseline volumes also reflect adjustments for school-year traffic, as counts were conducted in the summer.

TRIP GENERATION

The development is planned for 45 small-lot, predominantly single-family-attached residences. Estimates of the existing and projected vehicle trips to be generated by the site have been made using nationally-published average trip-generation rates for the following land-use code in *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE).

- “210 – Single-Family (Detached) Housing”

The estimate using land use 210 may be conservative, because the lots are small and the development is comprised primarily of attached/duplex units. Table 1 below presents a summary of the estimated site trip generation. A detailed trip-generation estimate for the development, including ITE rates for the proposed land use, is presented in Table 3 (attached).

Table 1: Estimated External Site Vehicle-Trip Generation

Analysis Period	Weekday		
	In	Out	Total
Morning Peak Hour	8	25	33
Evening Peak Hour	28	16	44
Daily/24-hour	213	213	425

Based on the ITE estimate for the proposed Pikes Vista residential development, the site is projected to generate about 425 external vehicle trips on the average weekday. During the weekday morning peak hour, approximately 8 vehicles would enter and 25 vehicles would exit the site. Approximately 28 entering vehicles and 16 exiting vehicles are projected during the weekday evening peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

Trip Directional Distribution

Estimating the directional distribution of site-generated vehicle trips to the study-area roads and intersections is a necessary component in determining the site's traffic impacts. Figure 5 shows the percentages of the site-generated vehicle trips projected to be oriented to and from the site's major approaches. Estimates have been based on the following factors: the proposed new land use, the area street and road system serving the site, the site's geographic location relative to the City of Colorado Springs, and to a limited extent, previously-conducted traffic studies for the site.

Site-Generated Traffic

Figure 6 shows short-term projected site-generated traffic volumes for the weekday morning and evening peak hours. Figure 6 shows long-term projected site-generated (site buildout) traffic volumes for the weekday morning and evening peak hours. Site-generated traffic volumes at the following intersections have been calculated by applying directional distribution percentages estimated by LSC (from Figure 5) to the trip-generation estimates (from Table 3):

- Tutt Boulevard/Templeton Gap Road
- Tutt Boulevard/proposed site access

Short-Term Total Traffic Volumes

Figure 7 shows the sum of short-term baseline traffic volumes (from Figure 4) and short-term site-generated (Phase 1) peak-hour traffic volumes (shown in Figure 6). These volumes represent the projected short-term total traffic.

Estimated Future 2041 Background Traffic Volumes

Figure 8 shows the projected 20-year background traffic volumes for the year 2041. Estimated 2041 background traffic volumes on adjacent roadways and at the study-area intersections are based on projected additional development (background traffic) in the vicinity of the site. A 2.1-percent annual growth rate was applied to existing northbound-through volumes to account for future increases on Templeton Gap Road and Tutt Boulevard. A 4.1-percent annual growth rate was applied to existing southbound-through volumes. Long-term background volumes also include estimates of additional traffic to be generated by approved/anticipated (but not-yet-developed) developments adjacent to this site, including *American Furniture Warehouse*, *Church for All Nations* expansion, and additional undeveloped residential parcels in the vicinity of the site. Traffic from the proposed Pikes Vista residential development is **not** included in the **background** traffic volumes.

Future 2041 Total Traffic Volumes

Figure 9 shows the projected 2041 total traffic volumes, which are the sum of 2041 background traffic volumes (from Figure 8) plus long-term site-generated traffic volumes (from Figure 6).

LEVEL OF SERVICE ANALYSIS

The following intersections have been analyzed to determine the projected intersection levels of service for short- and long-term traffic scenarios for the morning and evening peak-hour time periods:

- Tutt Boulevard/Templeton Gap Road
- Tutt Boulevard/proposed site access

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from "A" to "F." LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 2 shows the level of service delay ranges for signalized and unsignalized intersections.

Table 2: Intersection Levels of Service Delay Ranges

Level of Service	Signalized Intersections	Unsignalized Intersections
	Average Control Delay (Seconds per Vehicle)	Average Control Delay (Seconds per Vehicle) ¹
A	≤ 10.0	≤ 10.0
B	10.1 - 20.0	10.1 - 15.0
C	20.1 - 35.0	15.1 - 25.0
D	35.1 - 55.0	25.1 - 35.0
E	55.1 - 80.0	35.1 - 50.0
F	≥ 80.1	≥ 50.1

¹ For unsignalized intersections, if v/c is > 1.00, then LOS is LOS F, regardless of the projected average control delay per vehicle

Detailed Synchro reports are attached. A summary of LOS during the weekday morning and evening peak hours for the following unsignalized intersections is shown in the following figures:

- Figure 3: Existing Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 4: Short-Term Baseline Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 7: Short-Term Total Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 8: 2041 Background Traffic, Lane Geometry, Traffic Control, and LOS
- Figure 9: 2041 Background + Site Traffic, Lane Geometry, Traffic Control, and LOS

Templeton Gap Road/Tutt Boulevard

All single-lane approaches and individual turning movements at the roundabout intersection of Templeton Gap Road/Tutt Boulevard are projected to operate at LOS D or better during both peak hours through the 20-year horizon, with or without the addition of site-generated traffic.

Tutt Boulevard/Proposed Site Access

All single-lane approaches and individual turning movements at the stop-sign-controlled site-access intersection to Tutt Boulevard is projected to operate at LOS C or better during both short-term and long-term peak hours. Please refer to the “Auxiliary Turn-Lane Analysis” section below for additional detail regarding assumed future left turn striping on Templeton Gap Road.

AUXILIARY TURN-LANE ANALYSIS

Table 2 of the City of Colorado Springs’ *Traffic Criteria Manual* contains turning-volume thresholds which require auxiliary left- or right-turn lanes by roadway classifications. Roadway classifications for key thoroughfares in the vicinity of the site are based on the City of Colorado Springs’ *Major Thoroughfare Plan* (MTP).

- Left-turn deceleration lane – left ingress turning volume of 25 vph or greater
- Right-turn deceleration lane – right ingress turning volume of 50 vph or greater
- Left-turn and right-turn acceleration lanes – generally not required

Tutt Boulevard is classified as a Minor Arterial with a posted speed limit of 30 mph.

Left-Turn Deceleration Lanes

Based on projected southbound-left turn volumes, a southbound-left turn lane would **not** be required at the proposed site access to Tutt Boulevard. Approximately 16 vehicles are projected to make a southbound left-turning movement during the evening peak hour, which does **not** exceed the *Traffic Criteria Manual* left-turn lane threshold of 25 vehicles per hour (vph). However, given that there are several closely-spaced proposed access points between the existing Tutt/Templeton Gap roundabout (to the north) and Vickie Lane (to the south), a striped two-way left-turn lane (TWLTL) has been assumed for this section of Tutt Boulevard. This would serve as left-turn “storage” for vehicles entering the site from the north. A left turn bay has been assumed in the long-term Synchro analysis.

Right-Turn Deceleration Lanes

Based on projected northbound right-turn volumes, a northbound right-turn deceleration lane would **not** be required at the proposed site-access intersection with Tutt Boulevard.

CONCLUSIONS

- Based on the ITE estimate for the Pikes Vista residential development, the overall site is projected to generate about 425 external vehicle trips on the average weekday. During the weekday morning peak hour, approximately 8 vehicles would enter and 25 vehicles would exit the site. Approximately 28 entering vehicles and 16 exiting vehicles are projected for the weekday evening peak hour.
- Please refer to the "Level of Service" section above for detailed LOS analysis results for individual turning movements and approaches at all studied intersections, during both peak hours through the 2041 horizon year.
- Neither a southbound left-turn deceleration lane nor a northbound right-turn deceleration lane would be required on Tutt Boulevard at the proposed site access, based on projected volumes. Please refer to the "Auxiliary Turn-Lane Analysis" section above for discussion/details.

* * * * *

Please contact me if you have any questions regarding this report.

Respectfully Submitted,

LSC TRANSPORTATION CONSULTANTS, INC.



By: Jeffrey C. Hodsdon, P.E.
Principal

JCH/JAB:jas

Enclosures: Table 3
Figure 1 - Figure 9
Traffic Counts
Synchro LOS Reports

Tables



Table 3: Detailed Trip Generation Estimate

ITE		Value	Units ¹	Trip Generation Rates ²				Total Trips Generated					
Code	Description			Average Weekday	A.M. In	A.M. Out	P.M. In	P.M. Out	Average Weekday	A.M. In	A.M. Out	P.M. In	P.M. Out
210	Single-Family (Detached) Housing	45	DU	9.44	0.19	0.56	0.62	0.37	425	8	25	28	16
¹ DU = dwelling units ² Source: Trip Generation, 10th Edition, 2017, by the Institute of Transportation Engineers (ITE)													

Figures



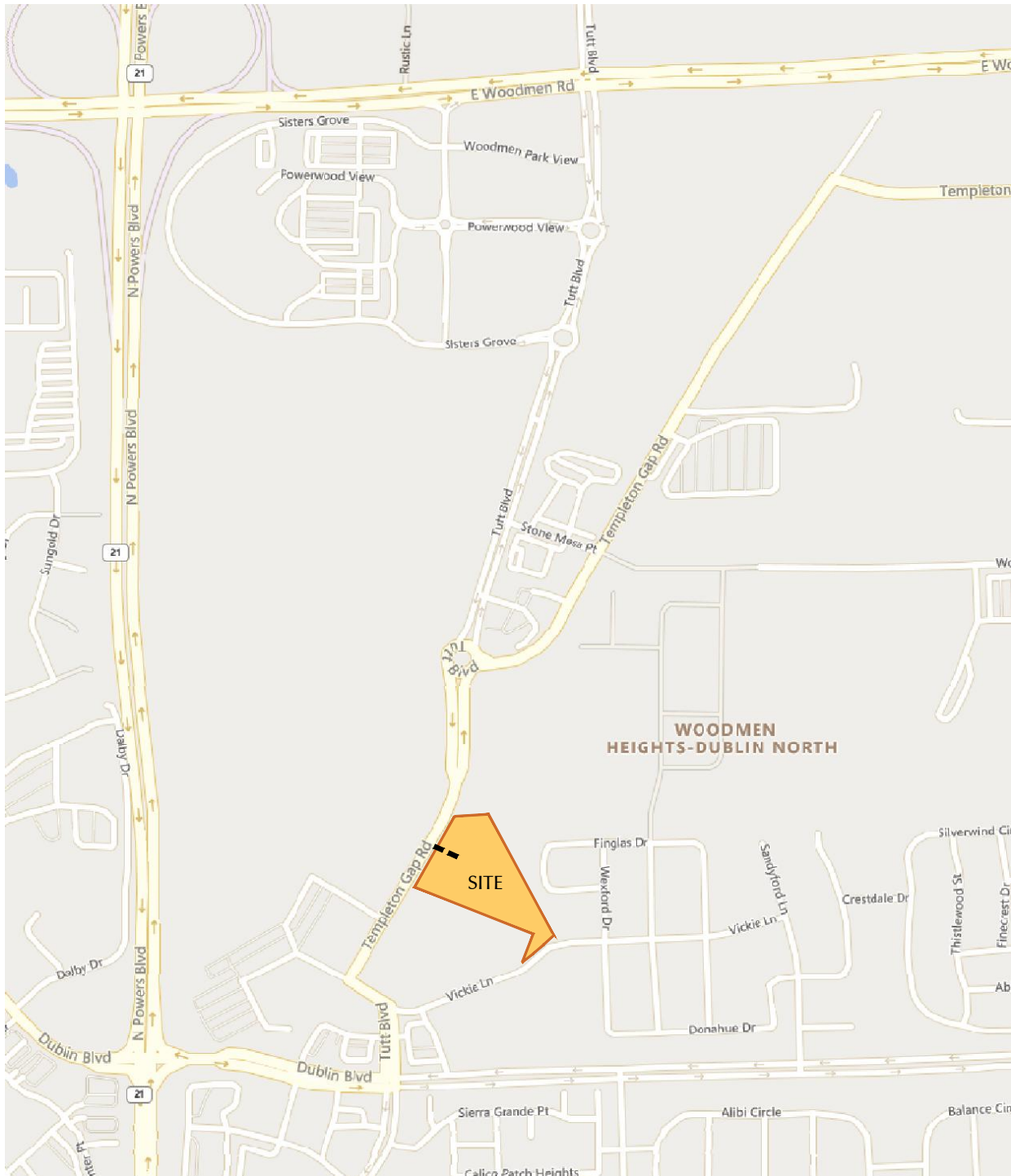
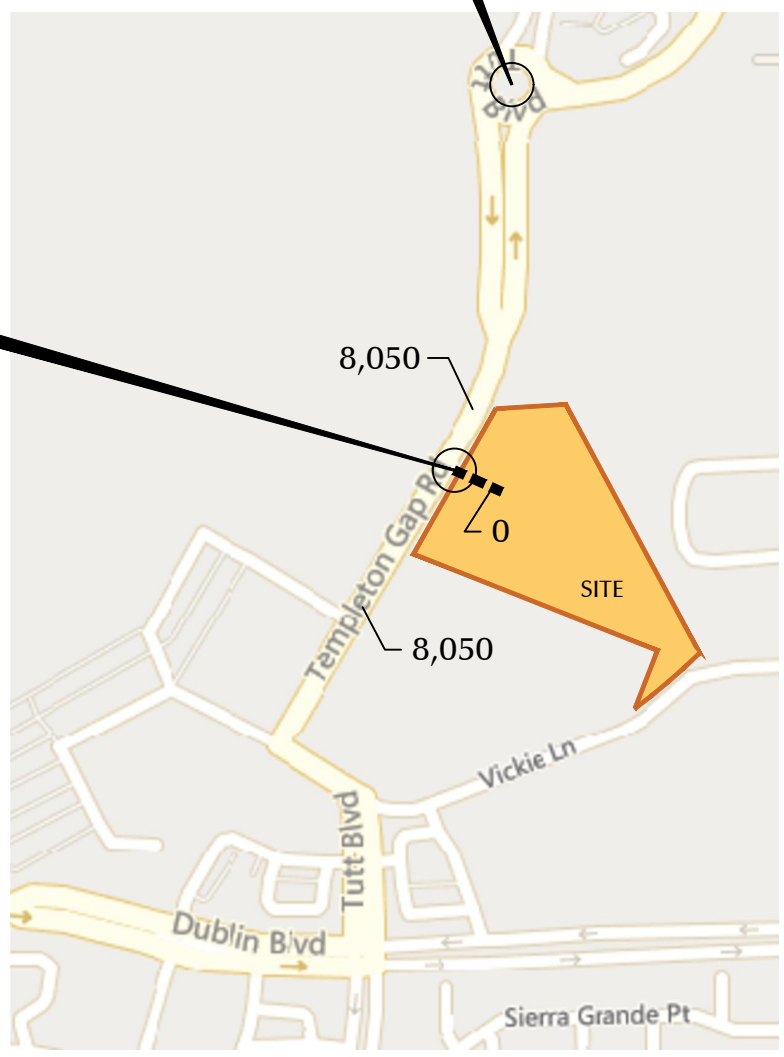
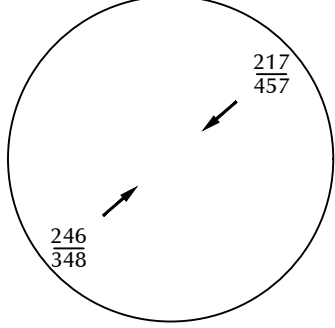
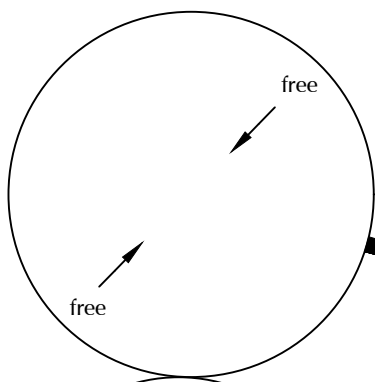
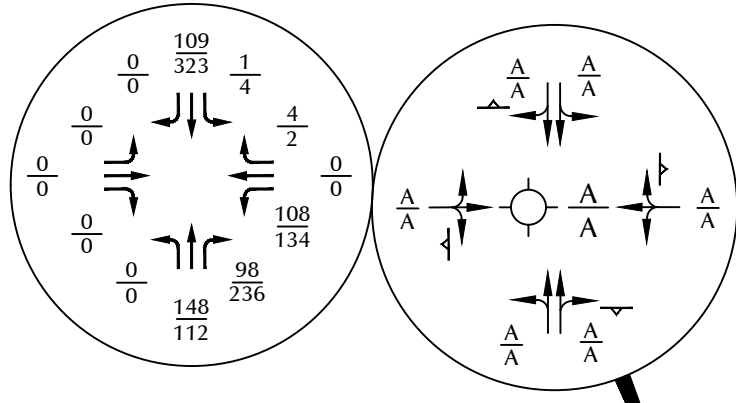


Figure 1
Vicinity Map

Pikes Vista Subdivision (LSC # S214550)

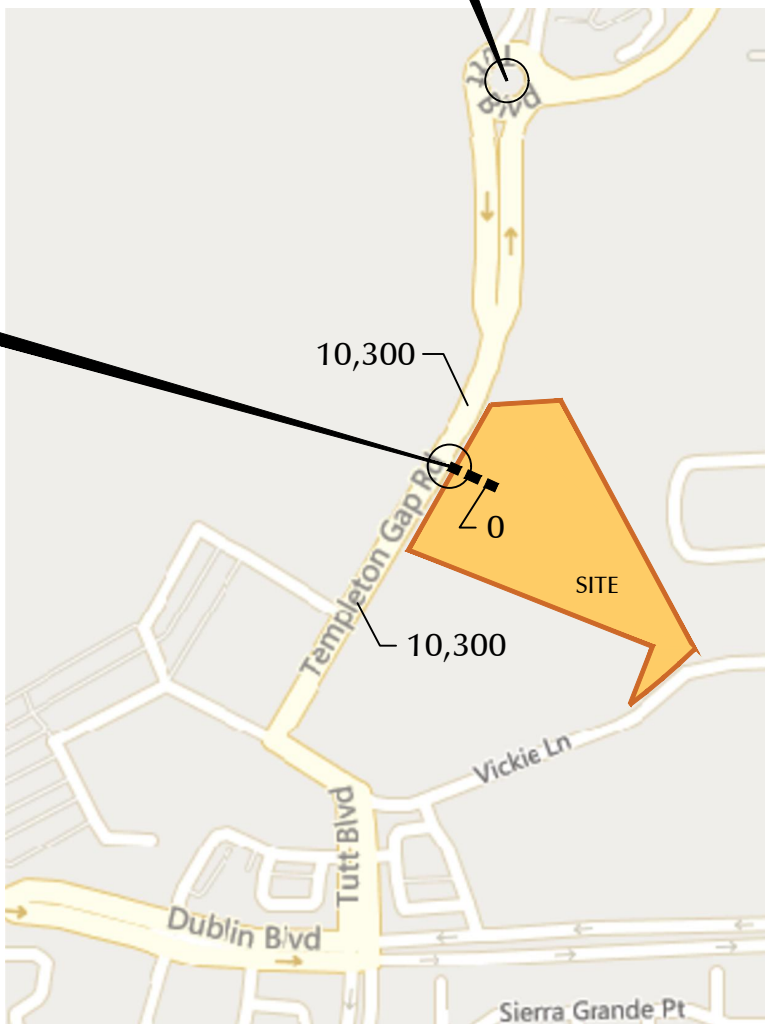
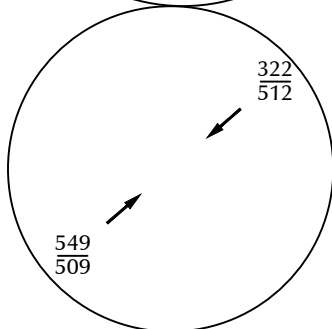
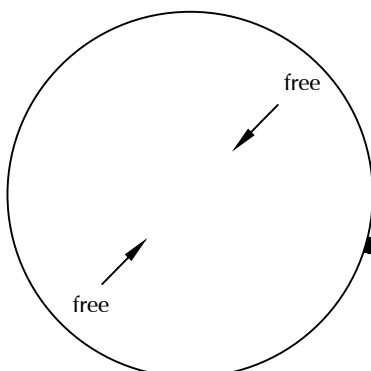
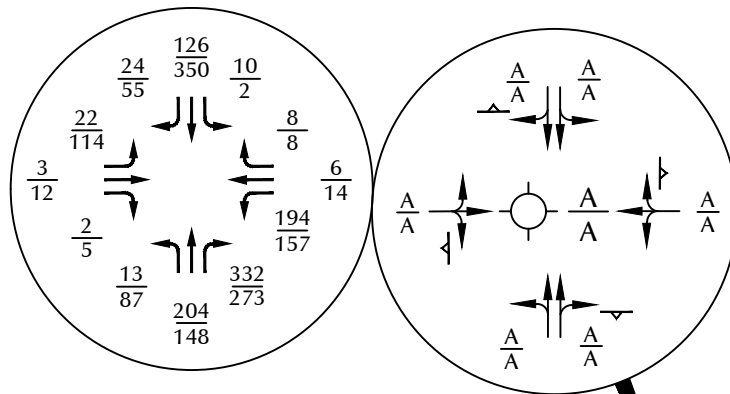


Counts by LSC (July 2021)

- = Roundabout
- = Stop Sign
- $\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS
PM Individual Movement Peak-Hour LOS
- $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
PM Weekday Peak-Hour Traffic (Veh/Hour)
- X,XXX = Average Daily Traffic (Vehicles/Day)



Figure 3
**Existing Traffic, Lane
 Geometry, Traffic
 Control, and LOS**
 Pikes Vista Subdivision (LSC # S214550)



NOTES: Short-term baseline volumes are adjustments to existing counts (shown in Figure 3) to account for school traffic and for effects of Covid-19 pandemic). Also included are estimates of initial development on the west side of the Tuttle/T-Gap roundabout.

- = Roundabout
- = Stop Sign
- $\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS
PM Individual Movement Peak-Hour LOS
- $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
PM Weekday Peak-Hour Traffic (Veh/Hour)
- X,XXX = Average Daily Traffic (Vehicles/Day)



Figure 4
**Short-Term Baseline
 Traffic, Lane Geometry,
 Traffic Control, and LOS**

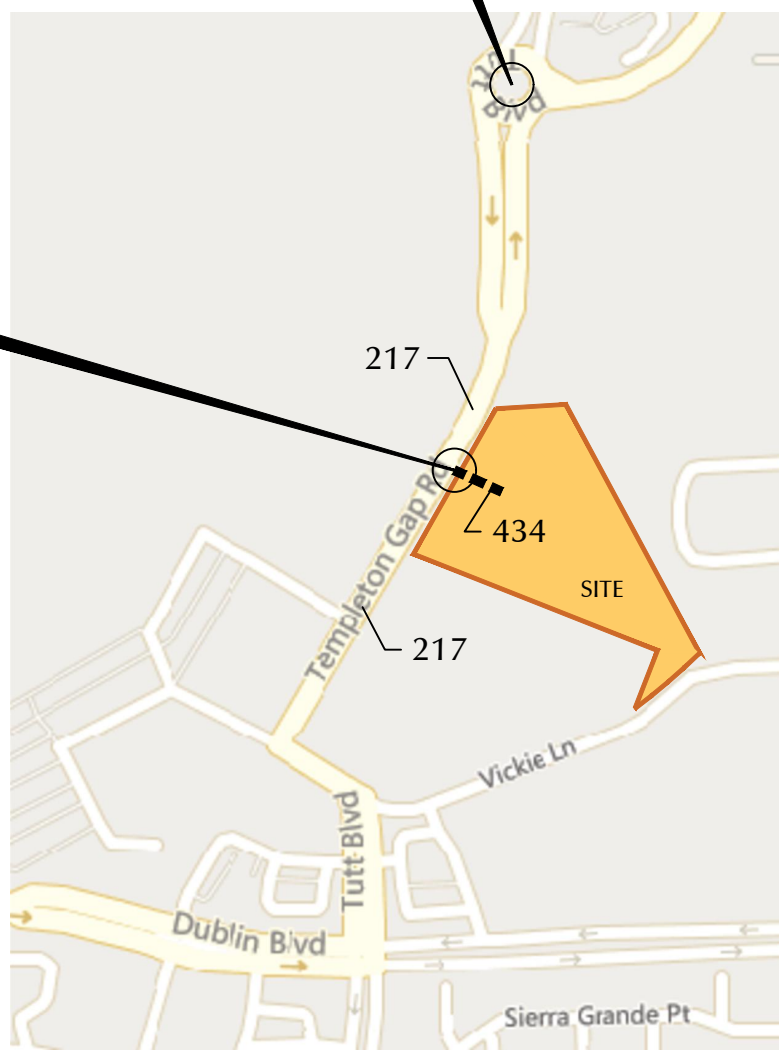
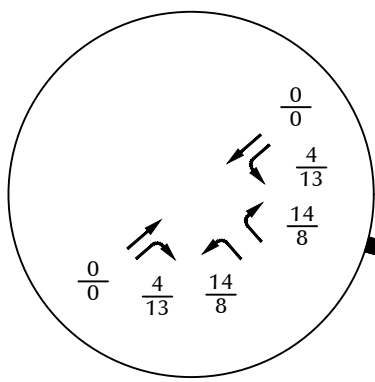
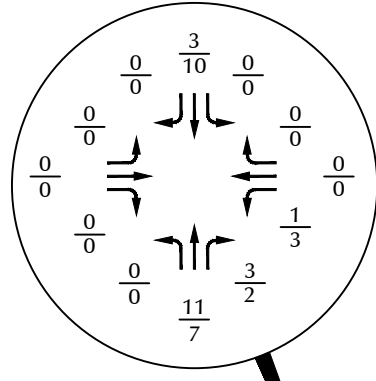
Pikes Vista Subdivision (LSC # S214550)



XX% = Peak Hour % Distribution of Site-Generated Trips

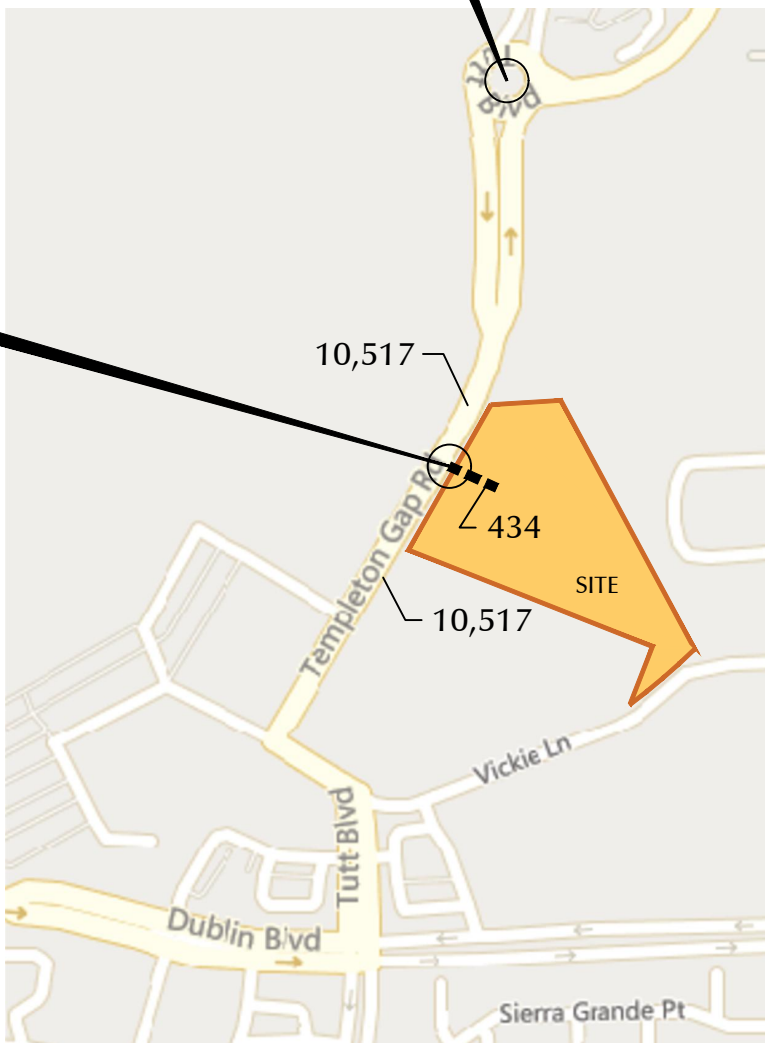
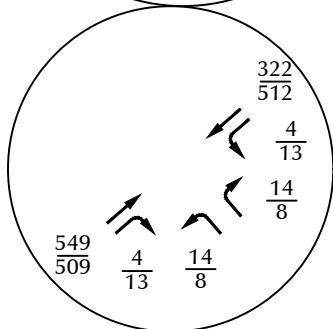
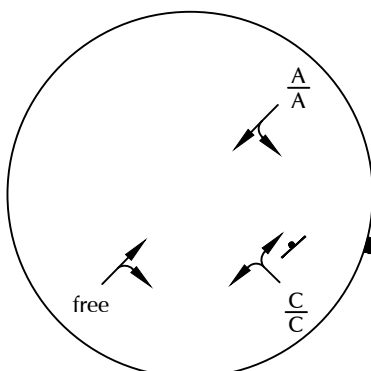
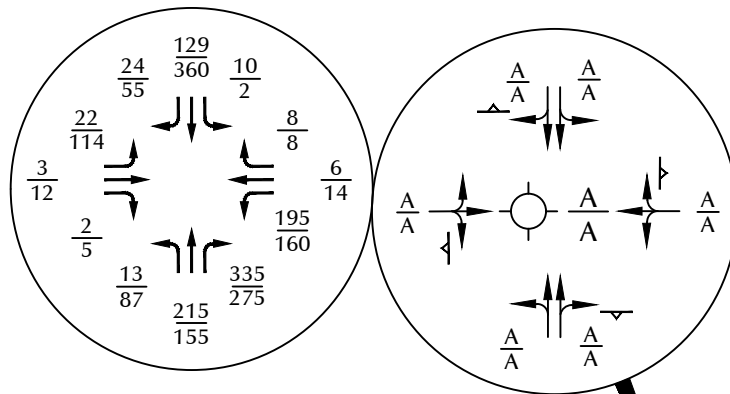
Figure 5
**Directional
Distribution**

Pikes Vista Subdivision (LSC # S214550)



$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
 $\frac{XX}{XX}$ = PM Weekday Peak-Hour Traffic (Veh/Hour)
 X,XXX = Average Daily Traffic (Vehicles/Day)

Figure 6
Site-Generated Traffic
 Pikes Vista Subdivision (LSC # S214550)

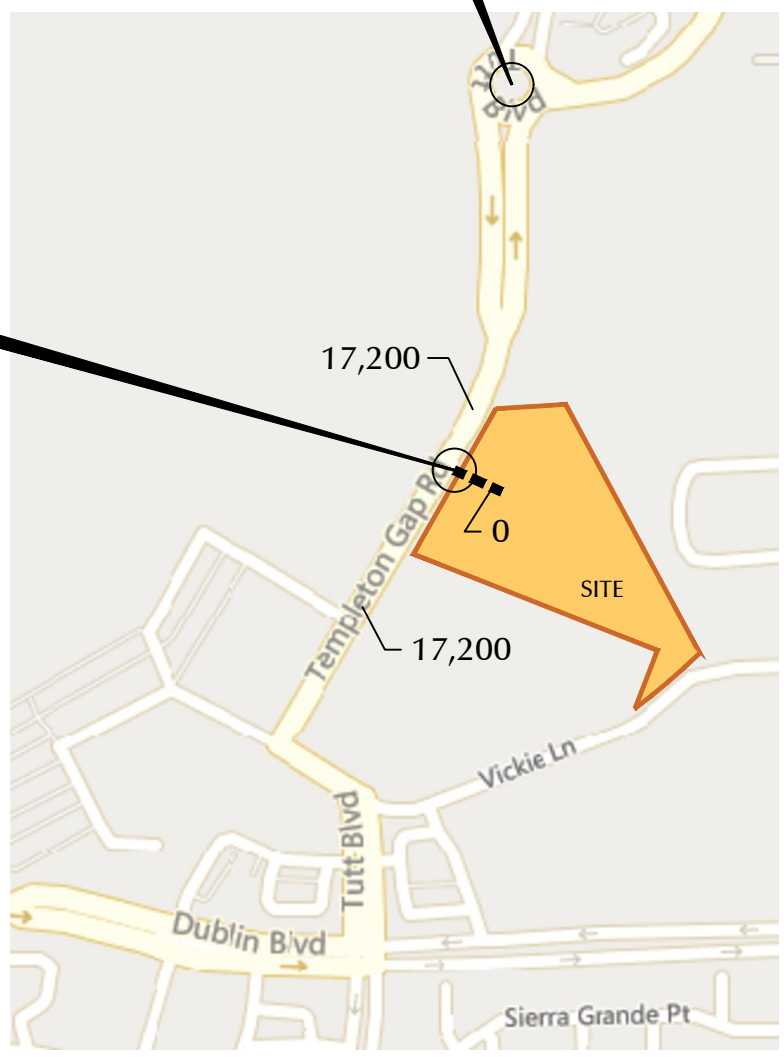
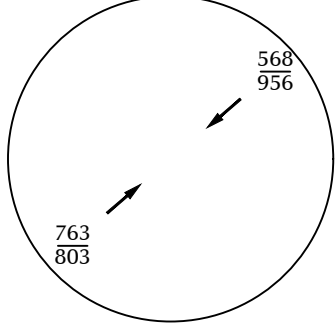
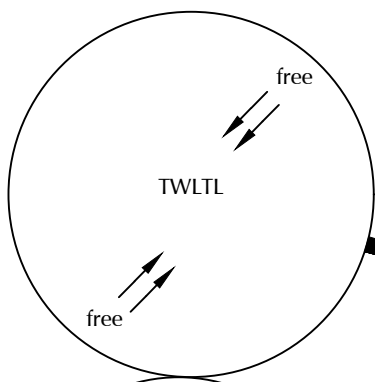
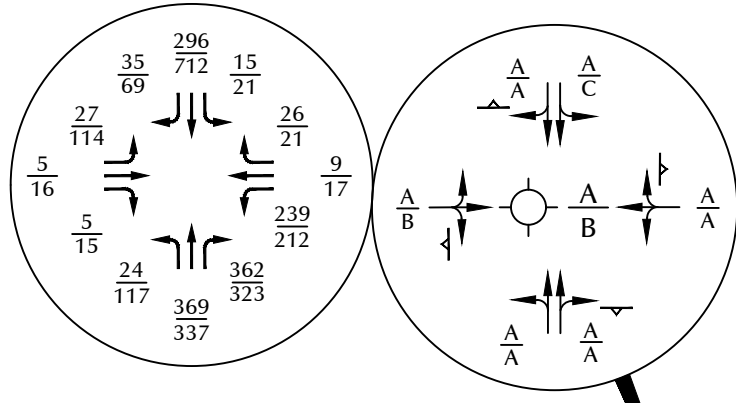


- = Roundabout
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- $\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS
PM Individual Movement Peak-Hour LOS
- $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
PM Weekday Peak-Hour Traffic (Veh/Hour)
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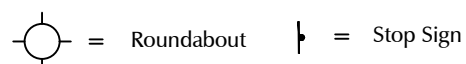


Figure 7
**Short-Term Total
 Traffic, Lane Geometry,
 Traffic Control, and LOS**

Pikes Vista Subdivision (LSC # S214550)



TWLTL = Center Two-Way, Left-Turn Lane

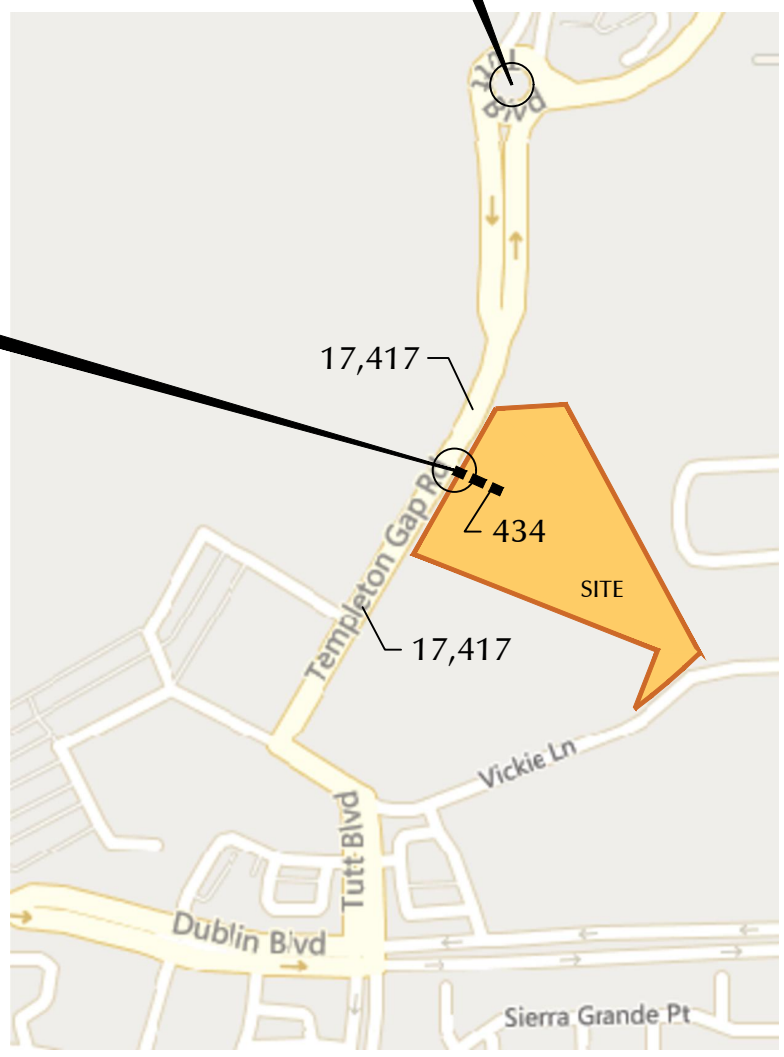
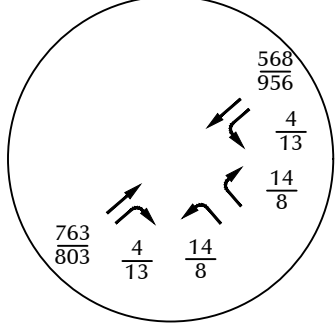
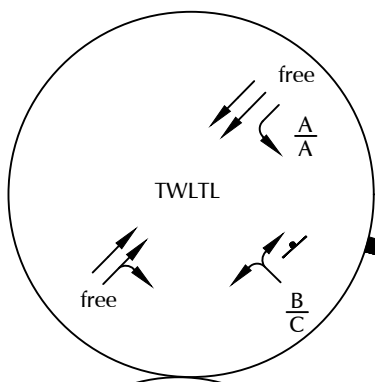
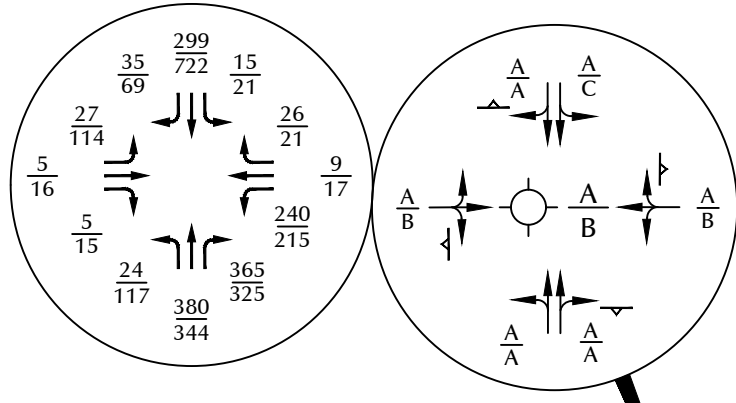


- $\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS
PM Individual Movement Peak-Hour LOS
- $\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
PM Weekday Peak-Hour Traffic (Veh/Hour)
- X,XXX = Average Daily Traffic (Vehicles/Day)



Figure 8
**2041 Background
 Traffic, Lane Geometry,
 Traffic Control, and LOS**

Pikes Vista Subdivision (LSC # S214550)



TWLTL= Center Two-Way, Left-Turn Lane

= Roundabout = Stop Sign

$\frac{X}{X}$ = AM Individual Movement Peak-Hour LOS
PM Individual Movement Peak-Hour LOS

$\frac{XX}{XX}$ = AM Weekday Peak-Hour Traffic (Veh/Hour)
PM Weekday Peak-Hour Traffic (Veh/Hour)

X,XXX = Average Daily Traffic (Vehicles/Day)



Figure 9
**2041 Background + Site
 Traffic, Lane Geometry,
 Traffic Control, and LOS**

Pikes Vista Subdivision (LSC # S214550)

Traffic Counts



LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210
 Colorado Springs, CO 80905
 719-633-2868

File Name : Tutt Blvd - Templeton Gap Rd AM
 Site Code : S214550
 Start Date : 6/30/2021
 Page No : 1

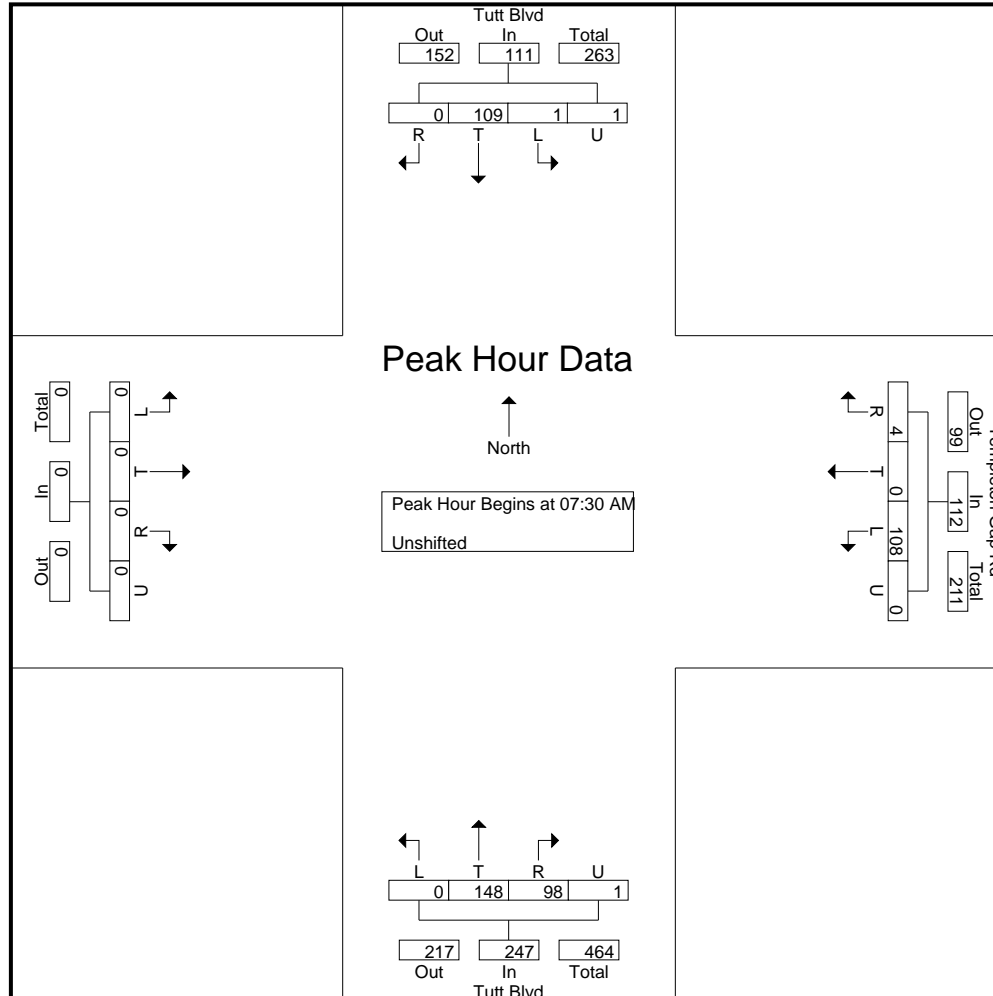
Groups Printed- Unshifted

Start Time	Tutt Blvd Southbound					Templeton Gap Rd Westbound					Tutt Blvd Northbound					Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
06:30 AM	0	7	0	0	7	12	0	0	0	12	0	39	29	0	68	0	0	0	0	0	87
06:45 AM	1	10	0	0	11	15	0	0	0	15	0	40	28	1	69	0	0	0	0	0	95
Total	1	17	0	0	18	27	0	0	0	27	0	79	57	1	137	0	0	0	0	0	182
07:00 AM	0	15	0	0	15	22	0	0	0	22	0	30	23	0	53	0	0	0	0	0	90
07:15 AM	2	16	0	0	18	24	0	1	0	25	0	25	20	0	45	0	0	0	0	0	88
07:30 AM	0	38	0	0	38	33	0	2	0	35	0	46	23	0	69	0	0	0	0	0	142
07:45 AM	1	29	0	1	31	30	0	0	0	30	0	40	21	0	61	0	0	0	0	0	122
Total	3	98	0	1	102	109	0	3	0	112	0	141	87	0	228	0	0	0	0	0	442
08:00 AM	0	21	0	0	21	25	0	1	0	26	0	31	32	0	63	0	0	0	0	0	110
08:15 AM	0	21	0	0	21	20	0	1	0	21	0	31	22	1	54	0	0	0	0	0	96
Grand Total	4	157	0	1	162	181	0	5	0	186	0	282	198	2	482	0	0	0	0	0	830
Apprch %	2.5	96.9	0	0.6		97.3	0	2.7	0		0	58.5	41.1	0.4		0	0	0	0		
Total %	0.5	18.9	0	0.1	19.5	21.8	0	0.6	0	22.4	0	34	23.9	0.2	58.1	0	0	0	0	0	

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 719-633-2868

File Name : Tutt Blvd - Templeton Gap Rd AM
 Site Code : S214550
 Start Date : 6/30/2021
 Page No : 3



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 719-633-2868

File Name : Tutt Blvd - Templeton Gap Rd AM
 Site Code : S214550
 Start Date : 6/30/2021
 Page No : 4

Start Time	Tutt Blvd Southbound					Templeton Gap Rd Westbound					Tutt Blvd Northbound					Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	

Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1

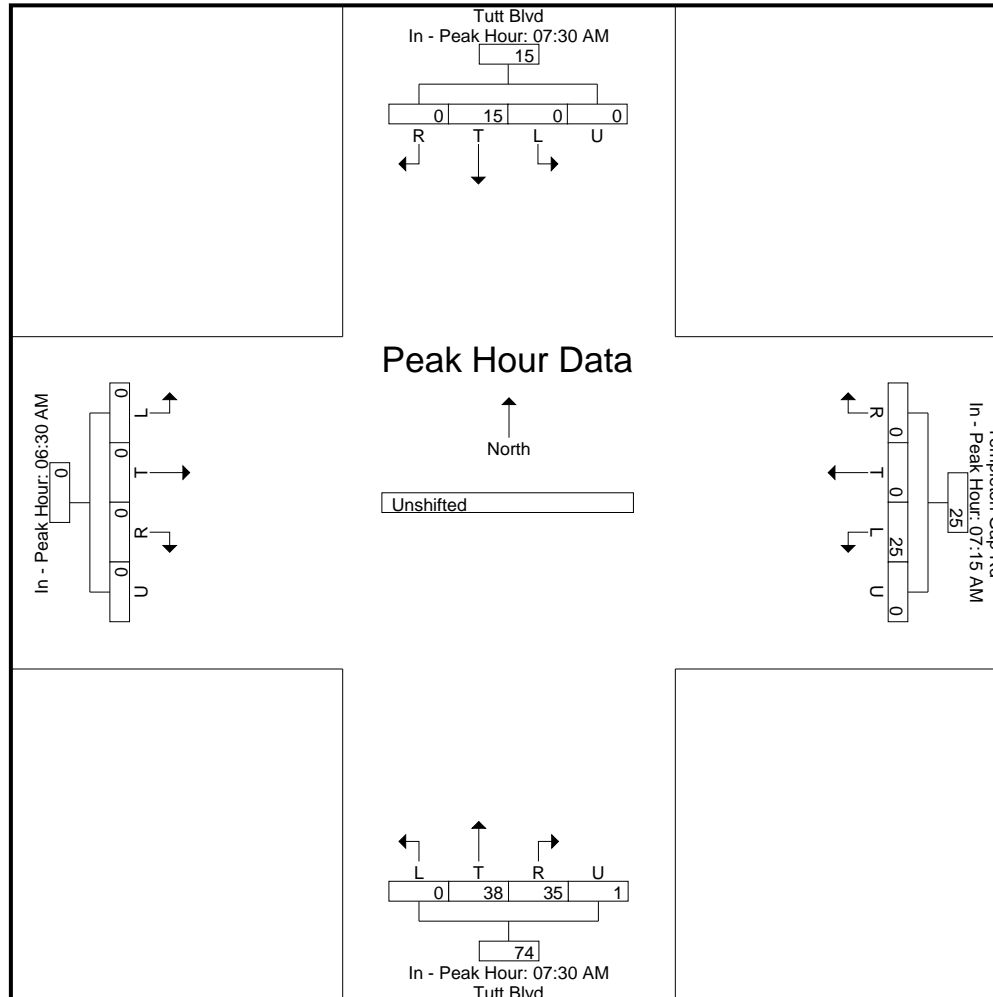
Peak Hour for Each Approach Begins at:

	7:30:00 AM					7:15:00 AM					7:30:00 AM					6:30:00 AM				
+0 mins.	0	38	0	0	38	24	0	1	0	25	0	46	23	0	69	0	0	0	0	0
+5 mins.	1	29	0	1	31	33	0	2	0	35	0	40	21	0	61	0	0	0	0	0
+10 mins.	0	21	0	0	21	30	0	0	0	30	0	31	32	0	63	0	0	0	0	0
+15 mins.	0	21	0	0	21	25	0	1	0	26	0	31	22	1	54	0	0	0	0	0
Total Volume	1	109	0	1	111	112	0	4	0	116	0	148	98	1	247	0	0	0	0	0
% App. Total	0.9	98.2	0	0.9		96.6	0	3.4	0		0	59.9	39.7	0.4		0	0	0	0	
PHF	.250	.717	.000	.250	.730	.848	.000	.500	.000	.829	.000	.804	.766	.250	.895	.000	.000	.000	.000	.000

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File Name : Tutt Blvd - Templeton Gap Rd AM
 Site Code : S214550
 Start Date : 6/30/2021
 Page No : 5



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File Name : Tutt Blvd - Templeton Gap Rd PM
 Site Code : S214550
 Start Date : 6/30/2021
 Page No : 1

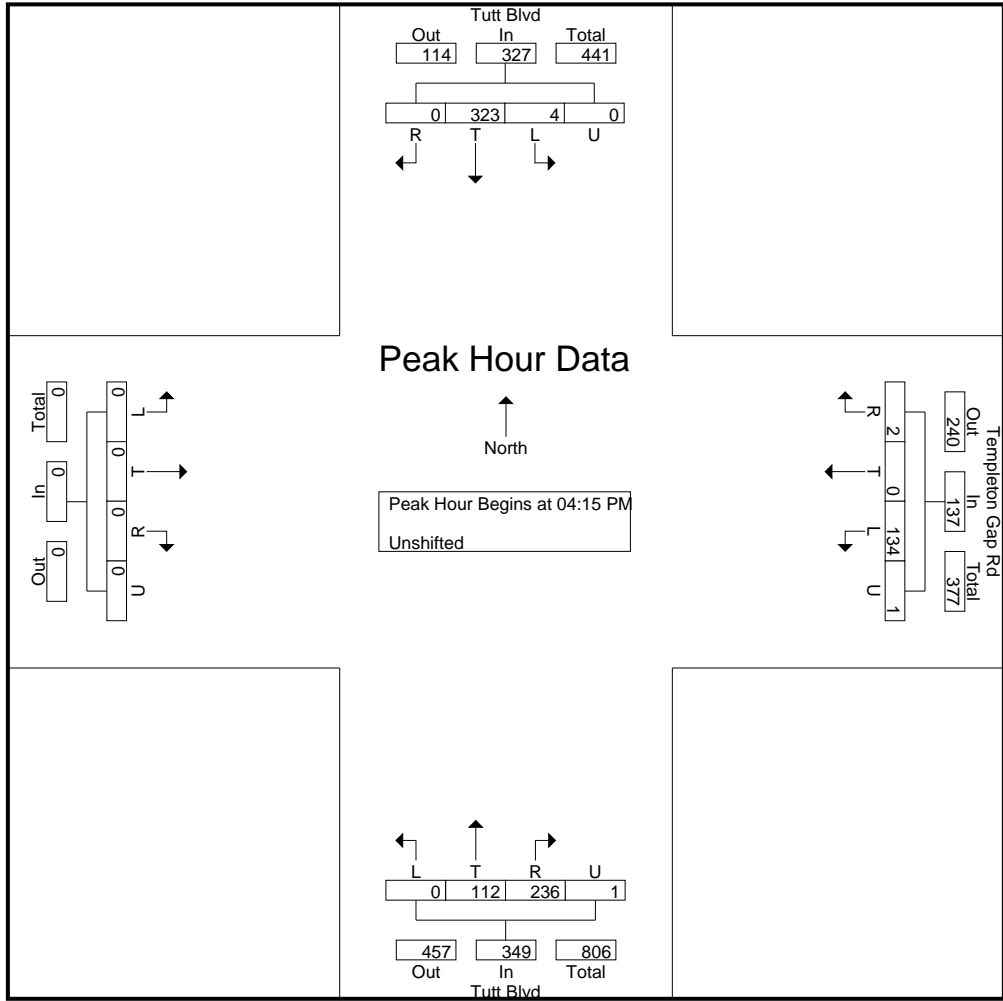
Groups Printed- Unshifted

Start Time	Tutt Blvd Southbound					Templeton Gap Rd Westbound					Tutt Blvd Northbound					Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
04:00 PM	0	54	0	0	54	43	0	0	0	43	0	23	47	0	70	0	0	0	0	0	167
04:15 PM	1	69	0	0	70	29	0	1	0	30	0	31	63	0	94	0	0	0	0	0	194
04:30 PM	1	100	0	0	101	31	0	1	1	33	0	36	60	0	96	0	0	0	0	0	230
04:45 PM	1	70	0	0	71	36	0	0	0	36	0	27	60	0	87	0	0	0	0	0	194
Total	3	293	0	0	296	139	0	2	1	142	0	117	230	0	347	0	0	0	0	0	785
05:00 PM	1	84	0	0	85	38	0	0	0	38	0	18	53	1	72	0	0	0	0	0	195
05:15 PM	1	55	0	0	56	45	0	1	0	46	0	18	51	0	69	0	0	0	0	0	171
05:30 PM	0	47	0	0	47	34	0	1	0	35	0	29	69	1	99	0	0	0	0	0	181
05:45 PM	0	28	0	0	28	46	0	0	0	46	0	34	58	1	93	0	0	0	0	0	167
Total	2	214	0	0	216	163	0	2	0	165	0	99	231	3	333	0	0	0	0	0	714
Grand Total	5	507	0	0	512	302	0	4	1	307	0	216	461	3	680	0	0	0	0	0	1499
Apprch %	1	99	0	0		98.4	0	1.3	0.3		0	31.8	67.8	0.4		0	0	0	0		
Total %	0.3	33.8	0	0	34.2	20.1	0	0.3	0.1	20.5	0	14.4	30.8	0.2	45.4	0	0	0	0	0	

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File Name : Tutt Blvd - Templeton Gap Rd PM
 Site Code : S214550
 Start Date : 6/30/2021
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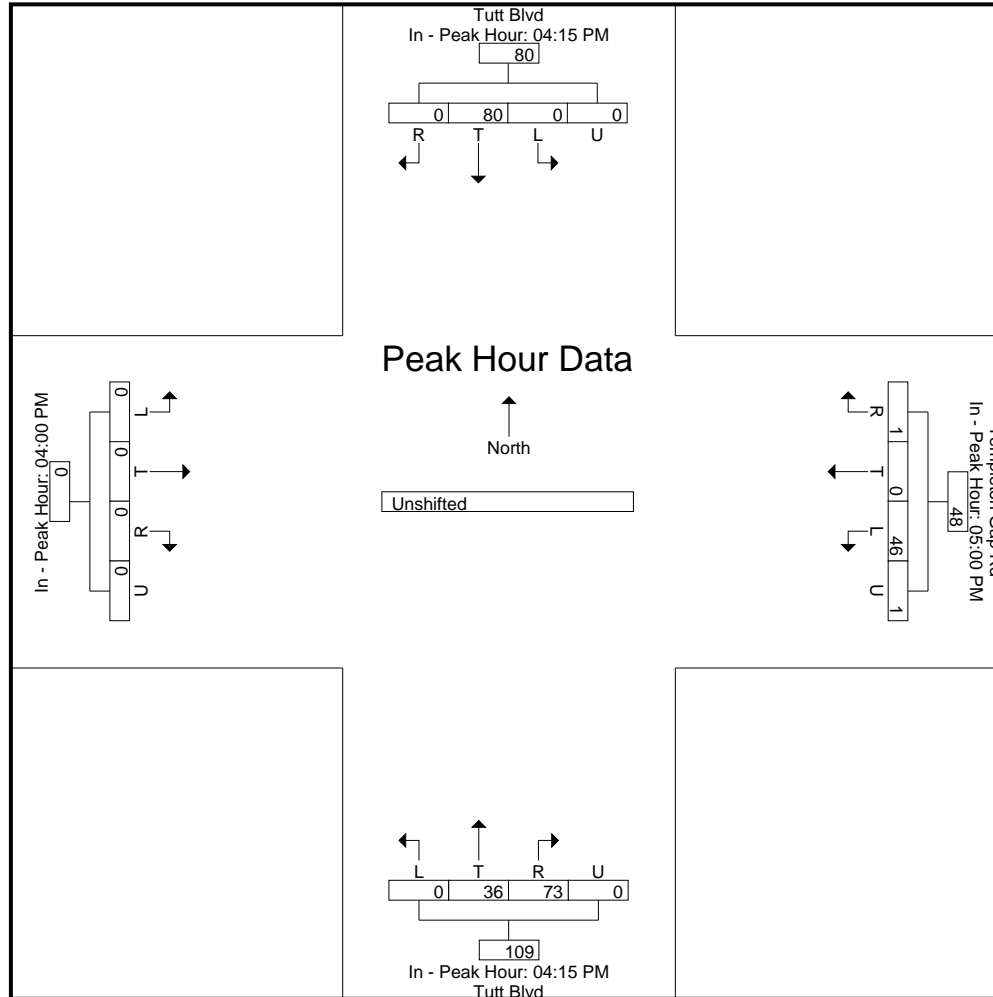
File Name : Tutt Blvd - Templeton Gap Rd PM
 Site Code : S214550
 Start Date : 6/30/2021
 Page No : 4

Start Time	Tutt Blvd Southbound					Templeton Gap Rd Westbound					Tutt Blvd Northbound					Eastbound					Int. Total
	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	L	T	R	U	App. Total	
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	4:15:00 PM					5:00:00 PM					4:15:00 PM					4:00:00 PM					
+0 mins.	1	69	0	0	70	38	0	0	0	38	0	31	63	0	94	0	0	0	0	0	
+5 mins.	1	100	0	0	101	45	0	1	0	46	0	36	60	0	96	0	0	0	0	0	
+10 mins.	1	70	0	0	71	34	0	1	0	35	0	27	60	0	87	0	0	0	0	0	
+15 mins.	1	84	0	0	85	46	0	0	0	46	0	18	53	1	72	0	0	0	0	0	
Total Volume	4	323	0	0	327	163	0	2	0	165	0	112	236	1	349	0	0	0	0	0	
% App. Total	1.2	98.8	0	0		98.8	0	1.2	0		0	32.1	67.6	0.3		0	0	0	0		
PHF	1.000	.808	.000	.000	.809	.886	.000	.500	.000	.897	.000	.778	.937	.250	.909	.000	.000	.000	.000	.000	

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File Name : Tutt Blvd - Templeton Gap Rd PM
 Site Code : S214550
 Start Date : 6/30/2021
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Levels of Service



Intersection				
Intersection Delay, s/veh	3.7			
Intersection LOS	A			
Approach	WB	NB		SB
Entry Lanes	1	2	2	
Conflicting Circle Lanes	1	1	1	
Adj Approach Flow, veh/h	135	283	132	
Demand Flow Rate, veh/h	136	286	133	
Vehicles Circulating, veh/h	172	1	131	
Vehicles Exiting, veh/h	115	263	177	
Ped Vol Crossing Leg, #/h	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	
Approach Delay, s/veh	4.1	3.4	3.8	
Approach LOS	A	A	A	
Lane	Left	Left	Right	Left
Designated Moves	LR	LT	R	LT
Assumed Moves	LR	LT	R	LT
RT Channelized				
Lane Util	1.000	0.601	0.399	1.000
Follow-Up Headway, s	2.609	2.535	2.535	2.535
Critical Headway, s	4.976	4.544	4.544	4.544
Entry Flow, veh/h	136	172	114	133
Cap Entry Lane, veh/h	1158	1419	1419	1261
Entry HV Adj Factor	0.993	0.990	0.991	0.990
Flow Entry, veh/h	135	170	113	132
Cap Entry, veh/h	1149	1405	1406	1248
V/C Ratio	0.117	0.121	0.080	0.106
Control Delay, s/veh	4.1	3.5	3.2	3.8
LOS	A	A	A	A
95th %tile Queue, veh	0	0	0	0

Intersection				
Intersection Delay, s/veh	4.6			
Intersection LOS	A			
Approach	WB	NB		SB
Entry Lanes	1	2	2	
Conflicting Circle Lanes	1	1	1	
Adj Approach Flow, veh/h	163	379	355	
Demand Flow Rate, veh/h	165	383	359	
Vehicles Circulating, veh/h	123	4	163	
Vehicles Exiting, veh/h	264	518	125	
Ped Vol Crossing Leg, #/h	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	
Approach Delay, s/veh	4.1	3.8	5.7	
Approach LOS	A	A	A	
Lane	Left	Left	Right	Left
Designated Moves	LR	LT	R	LT
Assumed Moves	LR	LT	R	LT
RT Channelized				
Lane Util	1.000	0.321	0.679	1.000
Follow-Up Headway, s	2.609	2.535	2.535	2.535
Critical Headway, s	4.976	4.544	4.544	4.544
Entry Flow, veh/h	165	123	260	359
Cap Entry Lane, veh/h	1217	1415	1415	1224
Entry HV Adj Factor	0.988	0.990	0.988	0.990
Flow Entry, veh/h	163	122	257	355
Cap Entry, veh/h	1202	1401	1399	1212
V/C Ratio	0.136	0.087	0.184	0.293
Control Delay, s/veh	4.1	3.2	4.1	5.7
LOS	A	A	A	A
95th %tile Queue, veh	0	0	1	1

HCM 6th Roundabout
1: Tutt Blvd & American Heights/Templeton Gap Rd

Short-Term Baseline
AM

Intersection						
Intersection Delay, s/veh	4.7					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	1	1	1		1	
Adj Approach Flow, veh/h	35	226	587		184	
Demand Flow Rate, veh/h	35	228	593		185	
Vehicles Circulating, veh/h	368	266	43		232	
Vehicles Exiting, veh/h	49	370	360		262	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	4.1	5.5	4.6		4.2	
Approach LOS	A	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	R	LT	R
Assumed Moves	LTR	LTR	LT	R	LT	R
RT Channelized						
Lane Util	1.000	1.000	0.401	0.599	0.849	0.151
Follow-Up Headway, s	2.609	2.609	2.535	2.535	2.535	2.535
Critical Headway, s	4.976	4.976	4.544	4.544	4.544	4.544
Entry Flow, veh/h	35	228	238	355	157	28
Cap Entry Lane, veh/h	948	1052	1366	1366	1150	1150
Entry HV Adj Factor	0.999	0.991	0.991	0.989	0.991	1.000
Flow Entry, veh/h	35	226	236	351	156	28
Cap Entry, veh/h	947	1042	1353	1350	1139	1150
V/C Ratio	0.037	0.217	0.174	0.260	0.137	0.024
Control Delay, s/veh	4.1	5.5	4.1	4.9	4.3	3.3
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	1	1	1	0	0

Intersection						
Intersection Delay, s/veh	5.9					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	1	1	1		1	
Adj Approach Flow, veh/h	157	200	550		445	
Demand Flow Rate, veh/h	158	202	556		450	
Vehicles Circulating, veh/h	566	398	154		289	
Vehicles Exiting, veh/h	173	312	570		311	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	6.9	6.2	4.9		6.5	
Approach LOS	A	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	R	LT	R
Assumed Moves	LTR	LTR	LT	R	LT	R
RT Channelized						
Lane Util	1.000	1.000	0.468	0.532	0.864	0.136
Follow-Up Headway, s	2.609	2.609	2.535	2.535	2.535	2.535
Critical Headway, s	4.976	4.976	4.544	4.544	4.544	4.544
Entry Flow, veh/h	158	202	260	296	389	61
Cap Entry Lane, veh/h	775	919	1234	1234	1092	1092
Entry HV Adj Factor	0.993	0.989	0.990	0.990	0.990	0.984
Flow Entry, veh/h	157	200	257	293	385	60
Cap Entry, veh/h	769	910	1222	1222	1081	1074
V/C Ratio	0.204	0.220	0.211	0.240	0.356	0.056
Control Delay, s/veh	6.9	6.2	4.8	5.1	6.9	3.8
LOS	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	1	2	0

HCM 6th Roundabout
 1: Tutt Blvd & American Heights/Templeton Gap Rd

Short-Term Baseline + Site
 AM

Intersection						
Intersection Delay, s/veh	4.8					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	1	1	1		1	
Adj Approach Flow, veh/h	35	240	605		187	
Demand Flow Rate, veh/h	35	242	611		188	
Vehicles Circulating, veh/h	386	275	43		247	
Vehicles Exiting, veh/h	49	379	378		270	
Ped Vol Crossing Leg, #/h	0					
Ped Cap Adj	1.000		1.000		1.000	
Approach Delay, s/veh	4.2	5.7	4.6		4.3	
Approach LOS	A		A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	R	LT	R
Assumed Moves	LTR	LTR	LT	R	LT	R
RT Channelized						
Lane Util	1.000	1.000	0.404	0.596	0.851	0.149
Follow-Up Headway, s	2.609	2.609	2.535	2.535	2.535	2.535
Critical Headway, s	4.976	4.976	4.544	4.544	4.544	4.544
Entry Flow, veh/h	35	242	247	364	160	28
Cap Entry Lane, veh/h	931	1042	1366	1366	1134	1134
Entry HV Adj Factor	0.999	0.991	0.991	0.989	0.991	1.000
Flow Entry, veh/h	35	240	245	360	159	28
Cap Entry, veh/h	930	1033	1353	1351	1124	1134
V/C Ratio	0.038	0.232	0.181	0.267	0.141	0.025
Control Delay, s/veh	4.2	5.7	4.2	5.0	4.4	3.4
LOS	A		A		A	
95th %tile Queue, veh	0	1	1	1	0	0

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	14	14	549	4	4	322
Future Vol, veh/h	14	14	549	4	4	322
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	93	93	92	92
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	18	18	590	4	4	350

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	950	592	0	0	594
Stage 1	592	-	-	-	-
Stage 2	358	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	290	508	-	-	987
Stage 1	555	-	-	-	-
Stage 2	710	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	289	508	-	-	987
Mov Cap-2 Maneuver	289	-	-	-	-
Stage 1	555	-	-	-	-
Stage 2	706	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.8	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	368	987
HCM Lane V/C Ratio	-	-	0.098	0.004
HCM Control Delay (s)	-	-	15.8	8.7
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	0

HCM 6th Roundabout
 1: Tutt Blvd & American Heights/Templeton Gap Rd

Short-Term Baseline + Site
 PM

Intersection						
Intersection Delay, s/veh	6.0					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	1	1	1		1	
Adj Approach Flow, veh/h	157	209	562		453	
Demand Flow Rate, veh/h	158	211	568		458	
Vehicles Circulating, veh/h	583	404	154		298	
Vehicles Exiting, veh/h	173	318	587		317	
Ped Vol Crossing Leg, #/h	0		0		0	
Ped Cap Adj	1.000		1.000		1.000	
Approach Delay, s/veh	7.0	6.3	5.0		6.7	
Approach LOS	A	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	R	LT	R
Assumed Moves	LTR	LTR	LT	R	LT	R
RT Channelized						
Lane Util	1.000	1.000	0.468	0.532	0.867	0.133
Follow-Up Headway, s	2.609	2.609	2.535	2.535	2.535	2.535
Critical Headway, s	4.976	4.976	4.544	4.544	4.544	4.544
Entry Flow, veh/h	158	211	266	302	397	61
Cap Entry Lane, veh/h	761	914	1234	1234	1083	1083
Entry HV Adj Factor	0.993	0.990	0.990	0.990	0.990	0.984
Flow Entry, veh/h	157	209	263	299	393	60
Cap Entry, veh/h	756	905	1222	1222	1072	1065
V/C Ratio	0.208	0.231	0.215	0.245	0.367	0.056
Control Delay, s/veh	7.0	6.3	4.8	5.1	7.1	3.9
LOS	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	1	2	0

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	8	509	13	13	512
Future Vol, veh/h	8	8	509	13	13	512
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	92	92	92	92
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	10	10	553	14	14	557

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1145	560	0	0	567
Stage 1	560	-	-	-	-
Stage 2	585	-	-	-	-
Critical Hdwy	6.41	6.21	-	-	4.11
Critical Hdwy Stg 1	5.41	-	-	-	-
Critical Hdwy Stg 2	5.41	-	-	-	-
Follow-up Hdwy	3.509	3.309	-	-	2.209
Pot Cap-1 Maneuver	222	530	-	-	1010
Stage 1	574	-	-	-	-
Stage 2	559	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	218	530	-	-	1010
Mov Cap-2 Maneuver	218	-	-	-	-
Stage 1	574	-	-	-	-
Stage 2	548	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.5	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	309	1010
HCM Lane V/C Ratio	-	-	0.066	0.014
HCM Control Delay (s)	-	-	17.5	8.6
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Intersection						
Intersection Delay, s/veh	6.1					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	1	1	1		1	
Adj Approach Flow, veh/h	47	296	808		376	
Demand Flow Rate, veh/h	47	299	816		379	
Vehicles Circulating, veh/h	602	464	57		297	
Vehicles Exiting, veh/h	74	409	592		466	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	5.5	8.2	5.4		6.2	
Approach LOS	A	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	R	LT	R
Assumed Moves	LTR	LTR	LT	R	LT	R
RT Channelized						
Lane Util	1.000	1.000	0.526	0.474	0.900	0.100
Follow-Up Headway, s	2.609	2.609	2.535	2.535	2.535	2.535
Critical Headway, s	4.976	4.976	4.544	4.544	4.544	4.544
Entry Flow, veh/h	47	299	429	387	341	38
Cap Entry Lane, veh/h	747	860	1348	1348	1084	1084
Entry HV Adj Factor	0.999	0.990	0.991	0.990	0.991	1.000
Flow Entry, veh/h	47	296	425	383	338	38
Cap Entry, veh/h	746	851	1336	1334	1074	1084
V/C Ratio	0.063	0.348	0.318	0.287	0.315	0.035
Control Delay, s/veh	5.5	8.2	5.5	5.2	6.5	3.6
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	2	1	1	1	0

Intersection						
Intersection Delay, s/veh	12.2					
Intersection LOS	B					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	1	1	1		1	
Adj Approach Flow, veh/h	174	266	833		865	
Demand Flow Rate, veh/h	175	268	841		874	
Vehicles Circulating, veh/h	1026	632	180		372	
Vehicles Exiting, veh/h	220	389	1021		528	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	13.5	9.8	6.5		18.2	
Approach LOS	B	A	A		C	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	R	LT	R
Assumed Moves	LTR	LTR	LT	R	LT	R
RT Channelized						
Lane Util	1.000	1.000	0.587	0.413	0.914	0.086
Follow-Up Headway, s	2.609	2.609	2.535	2.535	2.535	2.535
Critical Headway, s	4.976	4.976	4.544	4.544	4.544	4.544
Entry Flow, veh/h	175	268	494	347	799	75
Cap Entry Lane, veh/h	485	724	1206	1206	1012	1012
Entry HV Adj Factor	0.993	0.992	0.991	0.991	0.990	0.987
Flow Entry, veh/h	174	266	489	344	791	74
Cap Entry, veh/h	481	718	1194	1195	1003	999
V/C Ratio	0.361	0.370	0.410	0.288	0.789	0.074
Control Delay, s/veh	13.5	9.8	7.1	5.7	19.5	4.3
LOS	B	A	A	A	C	A
95th %tile Queue, veh	2	2	2	1	9	0

Intersection						
Intersection Delay, s/veh	6.2					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	1	1	1		1	
Adj Approach Flow, veh/h	47	299	827		379	
Demand Flow Rate, veh/h	47	302	835		382	
Vehicles Circulating, veh/h	608	474	57		300	
Vehicles Exiting, veh/h	74	418	598		476	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	5.5	8.4	5.5		6.2	
Approach LOS	A	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	R	LT	R
Assumed Moves	LTR	LTR	LT	R	LT	R
RT Channelized						
Lane Util	1.000	1.000	0.526	0.474	0.901	0.099
Follow-Up Headway, s	2.609	2.609	2.535	2.535	2.535	2.535
Critical Headway, s	4.976	4.976	4.544	4.544	4.544	4.544
Entry Flow, veh/h	47	302	439	396	344	38
Cap Entry Lane, veh/h	742	851	1348	1348	1081	1081
Entry HV Adj Factor	0.999	0.990	0.991	0.990	0.991	1.000
Flow Entry, veh/h	47	299	435	392	341	38
Cap Entry, veh/h	741	842	1336	1335	1071	1081
V/C Ratio	0.063	0.355	0.326	0.294	0.318	0.035
Control Delay, s/veh	5.5	8.4	5.6	5.3	6.5	3.6
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	2	1	1	1	0

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	14	14	763	4	4	568
Future Vol, veh/h	14	14	763	4	4	568
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	93	93	93	93
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	18	18	820	4	4	611

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1136	412	0	0	824	0
Stage 1	822	-	-	-	-	-
Stage 2	314	-	-	-	-	-
Critical Hdwy	6.82	6.92	-	-	4.12	-
Critical Hdwy Stg 1	5.82	-	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-	-
Follow-up Hdwy	3.51	3.31	-	-	2.21	-
Pot Cap-1 Maneuver	197	592	-	-	808	-
Stage 1	395	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	196	592	-	-	808	-
Mov Cap-2 Maneuver	310	-	-	-	-	-
Stage 1	395	-	-	-	-	-
Stage 2	713	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14.7	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	407	808
HCM Lane V/C Ratio	-	-	0.088	0.005
HCM Control Delay (s)	-	-	14.7	9.5
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0

Intersection						
Intersection Delay, s/veh	12.6					
Intersection LOS	B					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	1	1	1		1	
Adj Approach Flow, veh/h	174	275	845		871	
Demand Flow Rate, veh/h	175	277	853		880	
Vehicles Circulating, veh/h	1041	639	178		381	
Vehicles Exiting, veh/h	220	392	1038		535	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	13.8	10.1	6.6		19.1	
Approach LOS	B	B	A		C	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	R	LT	R
Assumed Moves	LTR	LTR	LT	R	LT	R
RT Channelized						
Lane Util	1.000	1.000	0.587	0.413	0.915	0.085
Follow-Up Headway, s	2.609	2.609	2.535	2.535	2.535	2.535
Critical Headway, s	4.976	4.976	4.544	4.544	4.544	4.544
Entry Flow, veh/h	175	277	501	352	805	75
Cap Entry Lane, veh/h	477	719	1208	1208	1004	1004
Entry HV Adj Factor	0.993	0.992	0.991	0.991	0.990	0.987
Flow Entry, veh/h	174	275	496	349	797	74
Cap Entry, veh/h	474	713	1196	1197	994	991
V/C Ratio	0.367	0.385	0.415	0.291	0.802	0.075
Control Delay, s/veh	13.8	10.1	7.2	5.7	20.4	4.3
LOS	B	B	A	A	C	A
95th %tile Queue, veh	2	2	2	1	9	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT		T	TT
Traffic Vol, veh/h	8	8	803	13	13	956
Future Vol, veh/h	8	8	803	13	13	956
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	-	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	93	93	93	93
Heavy Vehicles, %	1	1	1	1	1	1
Mvmt Flow	10	10	863	14	14	1028

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1412	439	0	0	877
Stage 1	870	-	-	-	-
Stage 2	542	-	-	-	-
Critical Hdwy	6.82	6.92	-	-	4.12
Critical Hdwy Stg 1	5.82	-	-	-	-
Critical Hdwy Stg 2	5.82	-	-	-	-
Follow-up Hdwy	3.51	3.31	-	-	2.21
Pot Cap-1 Maneuver	130	568	-	-	772
Stage 1	373	-	-	-	-
Stage 2	550	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	128	568	-	-	772
Mov Cap-2 Maneuver	257	-	-	-	-
Stage 1	373	-	-	-	-
Stage 2	540	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.8	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	354	772
HCM Lane V/C Ratio	-	-	0.058	0.018
HCM Control Delay (s)	-	-	15.8	9.7
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1