

# Uintah Townhomes

## Traffic Impact Study

Prepared for:

RM3

René Mondejar III, President

50 Polo Pony Drive

Colorado Springs, CO 80906

**JULY 1, 2024**

---

LSC Transportation Consultants, Inc.

By: Jeffrey C. Hodsdon, P.E.

Principal

LSC #S224281



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July 1, 2024

RM3  
René Mondejar III, President  
50 Polo Pony Drive  
Colorado Springs, CO 80906

RE: Uintah Townhomes  
Traffic Impact Study  
Colorado Springs, Colorado  
LSC #S224281

Dear Mr. Mondejar:

LSC Transportation Consultants, Inc. has prepared this Traffic Impact Study for the proposed 26-unit townhome development to be located north of Uintah Street between 21<sup>st</sup> Street and 20<sup>th</sup> Street in Colorado Springs, Colorado. The site location is shown in Figure 1.

## **REPORT CONTENTS**

The preparation of this report included the following:

- An inventory of existing roadway and traffic conditions on the adjacent and nearby roadway system, including surface conditions, functional classification, widths, pavement markings, traffic-control signs, posted speed limits, intersection and access spacing, roadway and intersection alignments, roadway grades, and auxiliary turn lanes;
- Estimates of the site trip generation and trip distribution;
- Analysis of the intersection and stopping sight distance at the proposed access points on 21<sup>st</sup> Street and at the Uintah Street/21<sup>st</sup> Street intersection;
- Weekday peak-hour turning-movement traffic counts at the intersections of Uintah Street/21<sup>st</sup> Street and Uintah Street/20<sup>th</sup> Street; growth adjustment to the current year;
- Estimates of projected long-term traffic volumes;
- The projected average weekday and peak-hour vehicle trips to be generated by the proposed development;
- The assignment of the projected site-generated traffic volumes to the area roadways;
- The projected short-term and long-term total traffic volumes on the area roadways;
- The projected levels of service at the key intersections in the vicinity of the site; and
- Findings and recommendations.

## LAND USE AND ACCESS PLAN

The site is planned to be developed with 26 townhomes (multi-family residential dwelling units). Access is proposed to 20<sup>th</sup> Street and 21<sup>st</sup> Street via an east-west drive aisle approximately in the location of the existing public alley. An additional driveway access is proposed to 21<sup>st</sup> street about 73 feet north of the alley/south access. A right-in/right-out access is proposed to Uintah Street about 255 feet east of 21<sup>st</sup> Street. The site plan is shown in Figure 2.

The previously proposed plan for the site showed 56 apartments.

## SIGHT DISTANCE

Figure 3 shows the sight-distance analysis to/from the west at the intersection of 21<sup>st</sup>/Uintah. The existing available sight distance at this intersection was measured to be about 327 feet. Based on the posted speed limit of 30 miles per hour (mph) and the criteria contained in Table 1 the *City of Colorado Springs Traffic Criteria Manual*, the required intersection sight distance at this intersection is 335 feet. Based on the criteria contained in Table 10, the required stopping sight distance approaching this intersection is 305 feet.

Note: the sight-distance line-of-sight to/from the west along Uintah from 21<sup>st</sup> (north side) passes across private property on the northwest corner of the 21<sup>st</sup>/Uintah intersection. This property has a chain link fence along Uintah that allows for line-of-sight across the property. On the day of LSC's site visit, the vegetation, landscaping, and other obstacles were minimal, allowing good line-of-sight.

Figure 4a shows a sight-distance analysis at the proposed **north** access to 21<sup>st</sup> Street. The existing available sight distance at this location measures about 350 feet to the west and south through the intersection with Uintah (the sight distance has been shown to/from the north side of the intersection). Based on a speed limit of 25 mph and the criteria contained in Table 1 the *City of Colorado Springs Traffic Criteria Manual*, the required intersection sight distance at this intersection is 280 feet. Based on the criteria contained in Table 11, the required stopping sight distance approaching this intersection is 155 feet, which has been adjusted for grades, as shown in Figure 4a.

Figure 4b shows a sight-distance analysis at the alley/**south access** to 21<sup>st</sup> Street. The existing available intersection sight distance at this location measures about 170 feet to the north and 140 feet to the south through the intersection with Uintah. Based on a speed limit of 25 mph and the criteria contained in Table 1 the *City of Colorado Springs Traffic Criteria Manual* and **A Policy on Geometric Design of Highways and Streets 2018 7th Edition © 2018 by the American Association of State Highway and Transportation Officials (AASHTO)** the required **intersection** sight distance at this intersection is 280 feet. Based on the criteria contained in AASHTO Table 3.2,

- The required general sight distances shown in the table in Section 16.0 of the *Traffic Criteria Manual* are identified above. These values are for general conditions. However, the combination of street grades and the horizontal and vertical curve along 21<sup>st</sup> Street

just north of the alley/south access likely results in slower vehicle approach speeds. Also, volumes along this street are light.

- The required stopping sight distance for northbound vehicles approaching this access from the south is 104' for a 9-percent upgrade, based on a 20-mph design speed (the approximate speed of a vehicle following a turn onto the street from Uintah). The centerline radius is about 100-feet.
- The prescribed *City Traffic Criteria Manual* and *AASHTO* stopping sight distance approaching this access from the west/northwest is 173' for a 9-percent downgrade, based on a 25-mph (the city speed limit for local streets). However, Figure 4b shows 126' required for a 9-percent downgrade based on a 20-mph design speed (the estimated design speed of the combination horizontal and vertical curve to the north of the access). The available stopping sight distance is about 130 feet.

A few general notes regarding this analysis and results:

- In this situation, on a local, low-volume street, if the **entering** sight distance for the constructed driveway is short of the full city-standard length due to the 21<sup>st</sup> Street roadway geometry, this is unlikely to be a significant issue as long as the stopping sight distance along the street is met (stopping sight distance is shown to be met based on the field measurement and analysis).
- The drivers'-eye locations and relative heights were estimated in the field on the existing site terrain (prior to the construction of the access point). Therefore, the actual sight distance for the completed driveway may vary from the field measurement, depending on the final centerline profile/slope of the alley/access drive. Given the access-point locations on the **outside** of the horizontal curve on 21<sup>st</sup> Street, vehicles exiting the site will likely have a longer line of sight to the north/west from a "drivers eye" position farther back on the approach, before proceeding to the "stop line" at the access intersection with 21<sup>st</sup> Street.

## EXISTING ROAD AND TRAFFIC CONDITIONS

Figure 1 shows the streets adjacent to and in the vicinity of the site.

**Uintah Street** runs generally east-to-west through Colorado Springs between 30th Street and Academy Boulevard, although the roadway is not continuous. It is classified by the City of Colorado Springs as a Minor Arterial between 30<sup>th</sup> Street and Interstate 25. The segment of Uintah Street adjacent to the development has one through lane in each direction plus a center two-way left-turn lane and the posted speed limit is 30 miles per hour (mph).

### Existing (Baseline) Traffic Volumes

Attached to this report are the results of peak-hour traffic-volume counts at the intersections of Uintah/21<sup>st</sup> and Uintah/20<sup>th</sup> conducted in May 2022. Figure 5 presents 2024 existing (baseline)

traffic volumes, which are May 2022 volumes with a growth rate of 0.5 percent per year applied for two years. The figure also shows existing lane geometries and traffic controls.

**Existing Levels of Service**

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 1 shows the level of service delay ranges for signalized and unsignalized intersections.

**Table 1: 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) <sup>(1)</sup>
A	10.0 sec or less	10.0 sec or less
B	10.1-20.0 sec	10.1-15.0 sec
C	20.1-35.0 sec	15.1-25.0 sec
D	35.1-55.0 sec	25.1-35.0 sec
E	55.1-80.0 sec	35.1-50.0 sec
F	80.1 sec or more	50.1 sec or more

(1) For unsignalized intersections, if V/C ratio is greater than 1.0 the level of service is LOS F, regardless of the projected average control delay per vehicle.

The intersections of Uintah/21<sup>st</sup> and Uintah/20<sup>th</sup> were analyzed to determine the current intersection levels of service. The analysis was based on the unsignalized intersection analysis procedures from the *Highway Capacity Manual, 6th Edition*. Figure 5 shows the level of service analysis results. The level of service reports are attached.

The northbound left-turn movement at the intersection of Uintah/21<sup>st</sup> is currently operating at LOS E during the morning peak hour and LOS F during the afternoon peak hour.

All movements at the intersection of Uintah/20<sup>th</sup> are currently operating at LOS D or better during the peak hours.

**2045 BACKGROUND TRAFFIC**

Background traffic is the traffic estimated to be on the study-area roadways and at the study-area intersections without the proposed development. Figure 6 shows the projected 2045 background traffic volumes. These traffic volumes are based on the existing traffic volumes shown in Figure 5 assuming a 0.5 percent annual growth rate.

## **TRIP GENERATION**

Estimates of site-generated vehicle trips for the proposed development were made using the nationally published trip-generation rates from *Trip Generation, 11th Edition, 2021* by the Institute of Transportation Engineers (ITE). Table 2 provides a trip generation for the currently proposed development.

The site is projected to generate about 187 new external vehicle trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about 3 vehicles would enter and 9 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:15 and 6:15 p.m., about 9 vehicles would enter and 6 vehicles would exit the site.

Table 2 also includes a comparison of the trip generation to the previously proposed plan. The reduction in trip generation from the previous plan is about 55 percent.

## **TRIP DISTRIBUTION AND ASSIGNMENT**

The directional distribution of the site-generated traffic volumes on the street and roadway system serving the site is one of the most important factors in determining the site's traffic impacts. Figure 7 shows the external trip distribution estimates. The estimates have been based on the following factors: the location of the site with respect to the Colorado Springs metropolitan area, the planned access system for the site, the street and roadway system serving the site, the land uses proposed for the site, and the distribution of existing traffic volumes.

When the distribution percentages (from Figure 7) are applied to the trip-generation estimates (from Table 1), the resulting site-generated traffic volumes can be determined. Figure 8 shows the site-generated traffic-volume estimate.

## **EXISTING-PLUS-SITE-GENERATED TRAFFIC**

Figure 9 shows the sum of the existing traffic from Figure 5 plus the site-generated traffic volumes from Figure 8. These volumes represent the projected short-term impacts of the proposed development.

## **2045 TOTAL TRAFFIC**

Figure 10 shows the projected 2045 total traffic volumes. These volumes are the sum of the 2042 background traffic volumes (from Figure 4) and the site-generated traffic volumes (from Figure 8).

## LEVEL OF SERVICE

The key area intersections have been analyzed to determine the projected levels of service based on the unsignalized method of analysis procedures from the *Highway Capacity Manual, 6th Edition* by the Transportation Research Board. Figures 6, 9, and 10 show the level of service analysis results. The level of service reports are attached.

The northbound approach at the intersection of Uintah/21<sup>st</sup> is currently operating at LOS E during the morning peak hour and LOS F during the afternoon peak hour. The southbound approach is projected to operate at LOS F during both the morning and afternoon peak hour, with the addition of site-generated traffic.

The southbound approach at the intersection of Uintah/20<sup>th</sup> is projected to operate at LOS D during the morning peak hour and LOS E during the afternoon peak hour, with the addition of site-generated traffic. By 2042, this approach is projected to operate at LOS E during the morning peak hour and LOS F during the afternoon peak hour.

The levels of service E and F during peak hours are a function of the high peak-period volumes on Uintah Street. The traffic signal at Uintah/19th creates gaps in traffic which improve the ability for traffic on the side streets (20th & 21st) to turn onto Uintah from the stop signs (or proceed straight across Uintah). There are alternatives to using the southbound approaches to Uintah at 20th & 21st Street. Existing 20th Street traffic and future site traffic (from two of the three buildings) has (and will have) the option to use Henderson Avenue to 19th Street during peak times. The northwest building would also have this option with the new alley connection between 21<sup>st</sup> Street and 20<sup>th</sup> Street. Also, another option will be to use St. Vrain Street to 23<sup>rd</sup> Street for egress during peak periods. The major-street volumes on Uintah are somewhat lower without the high conflicting turning movements at 21st/Uintah.

The southbound approach of the proposed right-in/right-out access to Uintah Street is projected to operate at LOS C or better during the peak hours, based on the projected existing-plus-site-generated and 2044 total traffic volumes.

## CONCLUSIONS AND RECOMMENDATIONS

- The site is projected to generate about 187 new external vehicle trips on the average weekday, with about half entering and half exiting the site during a 24-hour period. During the morning peak hour, about 3 vehicles would enter and 9 vehicles would exit the site. During the afternoon peak hour, about 9 vehicles would enter and 6 vehicles would exit the site.
- The proposed right-in/right-out-only access on Uintah Street is projected to operate at a satisfactory level of service as a stop-sign-controlled intersection.
- Based on the projected existing-plus-site-generated and 2044 total traffic volumes, a westbound right-turn deceleration lane would not be required on Uintah Street



approaching the proposed right-in/right-out access. LSC recommends installing appropriate signage indicating “no left-turn” movements.

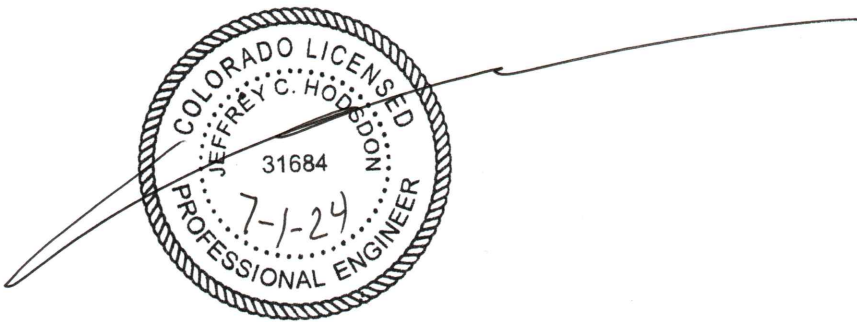
- The existing alley just north of Uintah Street between 21<sup>st</sup> Street and 20<sup>th</sup> Street will be improved, as shown on the site plan, to provide an east-west connection between the two streets.

\* \* \* \* \*

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

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.



By \_\_\_\_\_  
Jeffrey C. Hodsdon, P.E.  
Principal

JCH/KDF:jas

Enclosures: Table 2  
Figures 1-10  
Traffic Count Reports  
Level of Service Reports

# Table 2



**Table 2**  
**Trip Generation Estimate**  
 21st Street & Uintah Street Townhomes

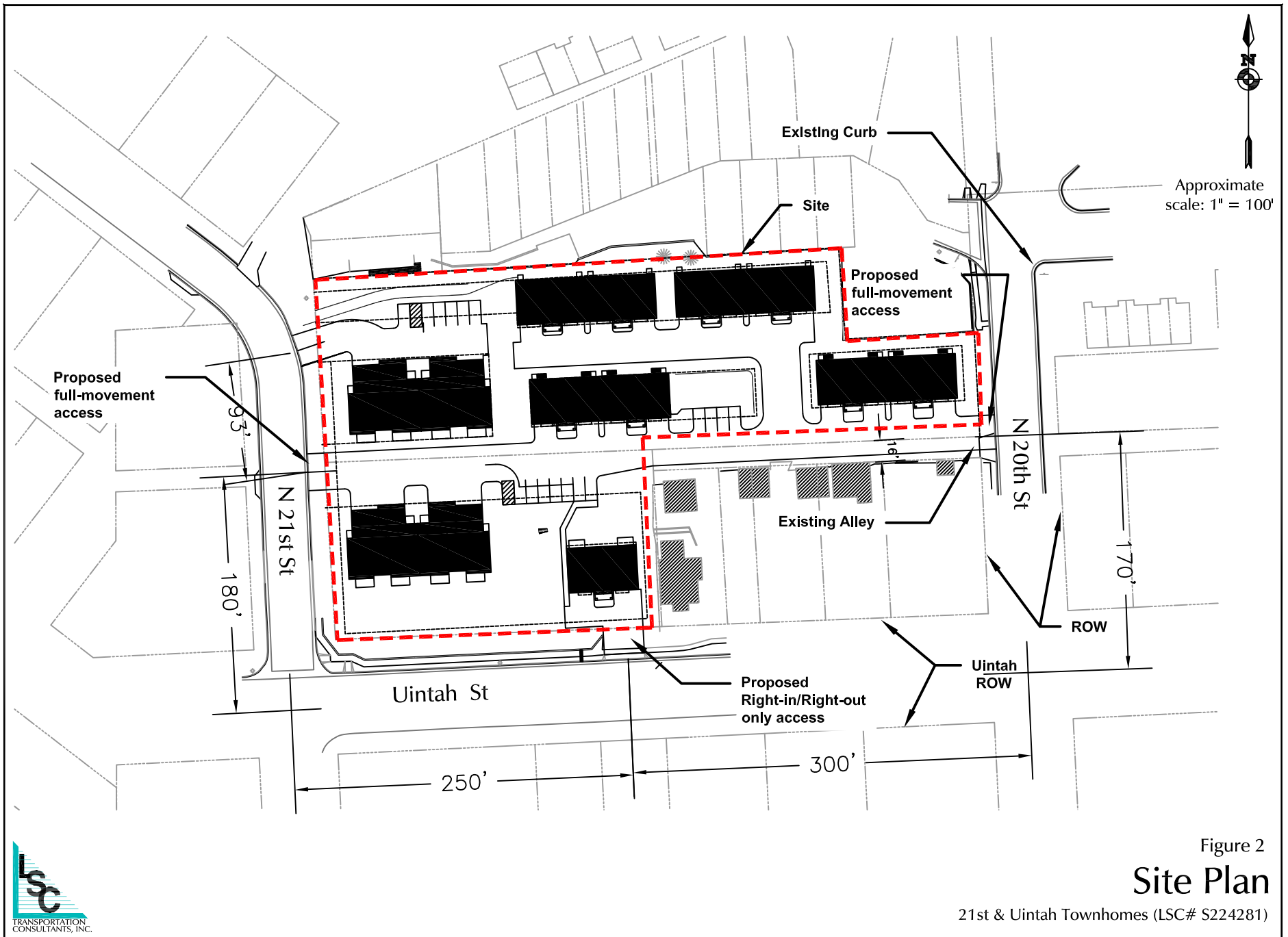
Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates <sup>(1)</sup>				Total Trips Generated					
			Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour		Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour	
				In	Out	In	Out		In	Out	In	Out
<b>Currently Proposed Plan</b>												
215	Single Family Attached Housing	26 DU	7.20	0.12	0.36	0.34	0.23	187	3	9	9	6
<b>Previously Proposed Plan</b>												
220	Multifamily Housing (Low-Rise)	56 DU	6.74	0.10	0.30	0.32	0.19	377	5	17	18	11
<b>Trip Generation Change (Reduction)</b>								-190	-2	-8	-9	-5
<b>Percent Reduction in Trips</b>								-50%	-45%	-48%		
Notes:												
(1) Source: "Trip Generation, 11th Edition, 2021" by the Institute of Transportation Engineers (ITE)												
(2) DU = dwelling unit												
Source: LSC Transportation Consultants, Inc.											5/24/2024	

# Figures 1-10

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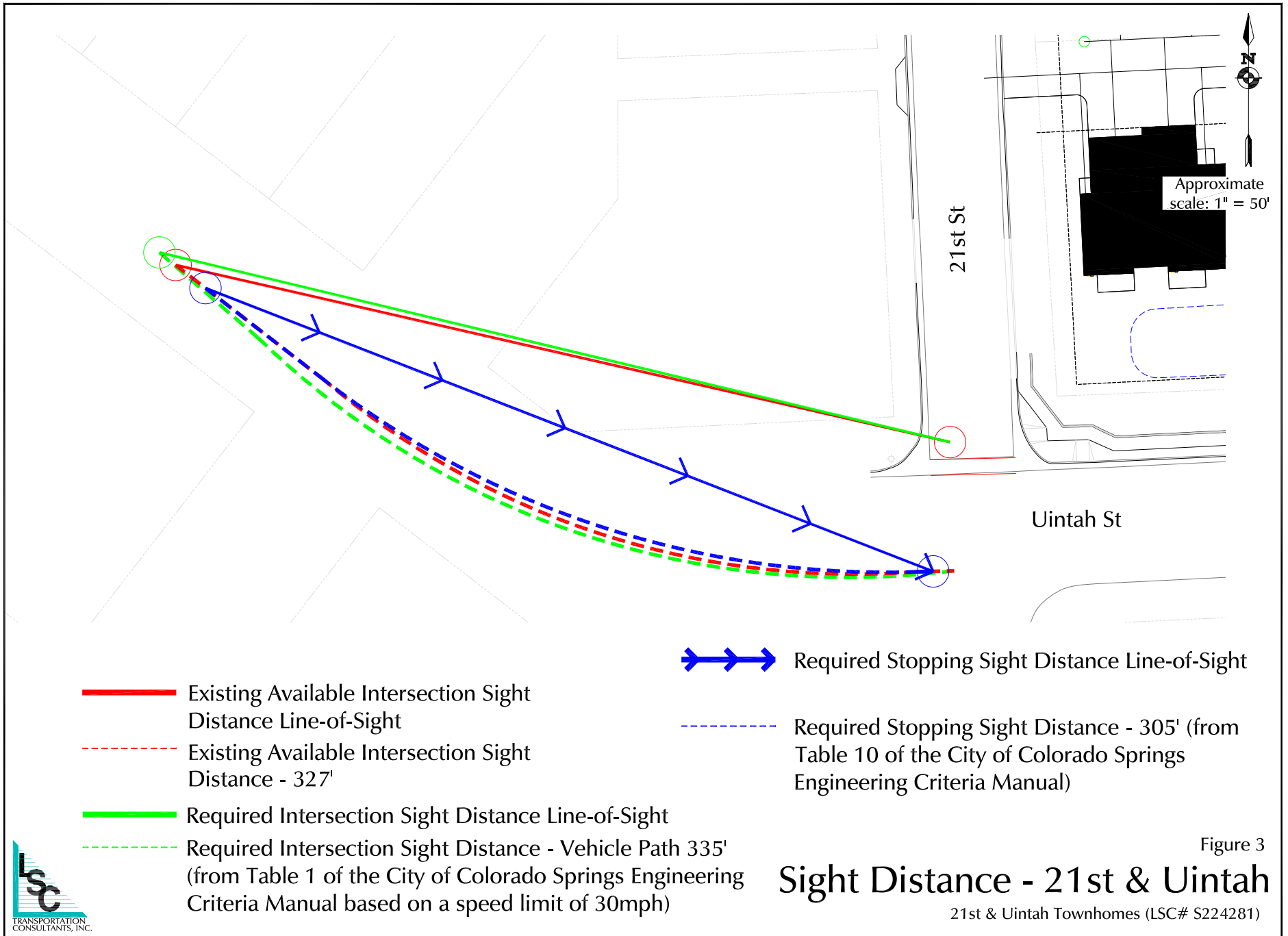


Figure 3

# Sight Distance - 21st & Uintah

21st & Uintah Townhomes (LSC# S224281)





Approximate  
scale: 1" = 50'



- Existing Available Sight Distance - 225' NB/350' SB
- - - Existing Available Sight Distance Line-of-Sight
- Required Intersection Sight Distance - 280'\* (from Table 1 of the City of Colorado Springs Engineering Criteria Manual based on a speed limit of 25 mph)  
\*about 200' (based on a speed of between 15 and 20 mph)
- - - Required Intersection Sight Distance Line-of-Sight

- ↔ Required Stopping Sight Distance - 155' (from Table 11 of the City of Colorado Springs Engineering Criteria Manual)  
Northbound 140' (adjusted for grade)  
Southbound 155'



### Sight Distance - 21st Street & North Site Access

Figure 4a  
21st & Uintah Townhomes (LSC# S224281)





Approximate scale: 1" = 30'



Uintah St

- Existing Available Sight Distance - 170' NB/140' SB
- - - Existing Available Sight Distance Line-of-Sight
- Required Intersection Sight Distance - 280'\* (from Table 1 of the City of Colorado Springs Engineering Criteria Manual based on a speed limit of 25 mph)  
\*about 200' (based on a speed of between 15 and 20 mph)
- - - Required Intersection Sight Distance Line-of-Sight
- - - Required Stopping Sight Distance Line-of-Sight
- ↔ ↔ Required Stopping Sight Distance - 155' (for 25 mph from Table 11 of the City of Colorado Springs Engineering Criteria Manual)  
Adjusted for grades and estimated approach speeds: Northbound 104'/Southbound 126'\*  
Existing Sight Distance - NB 130'/SB 135'

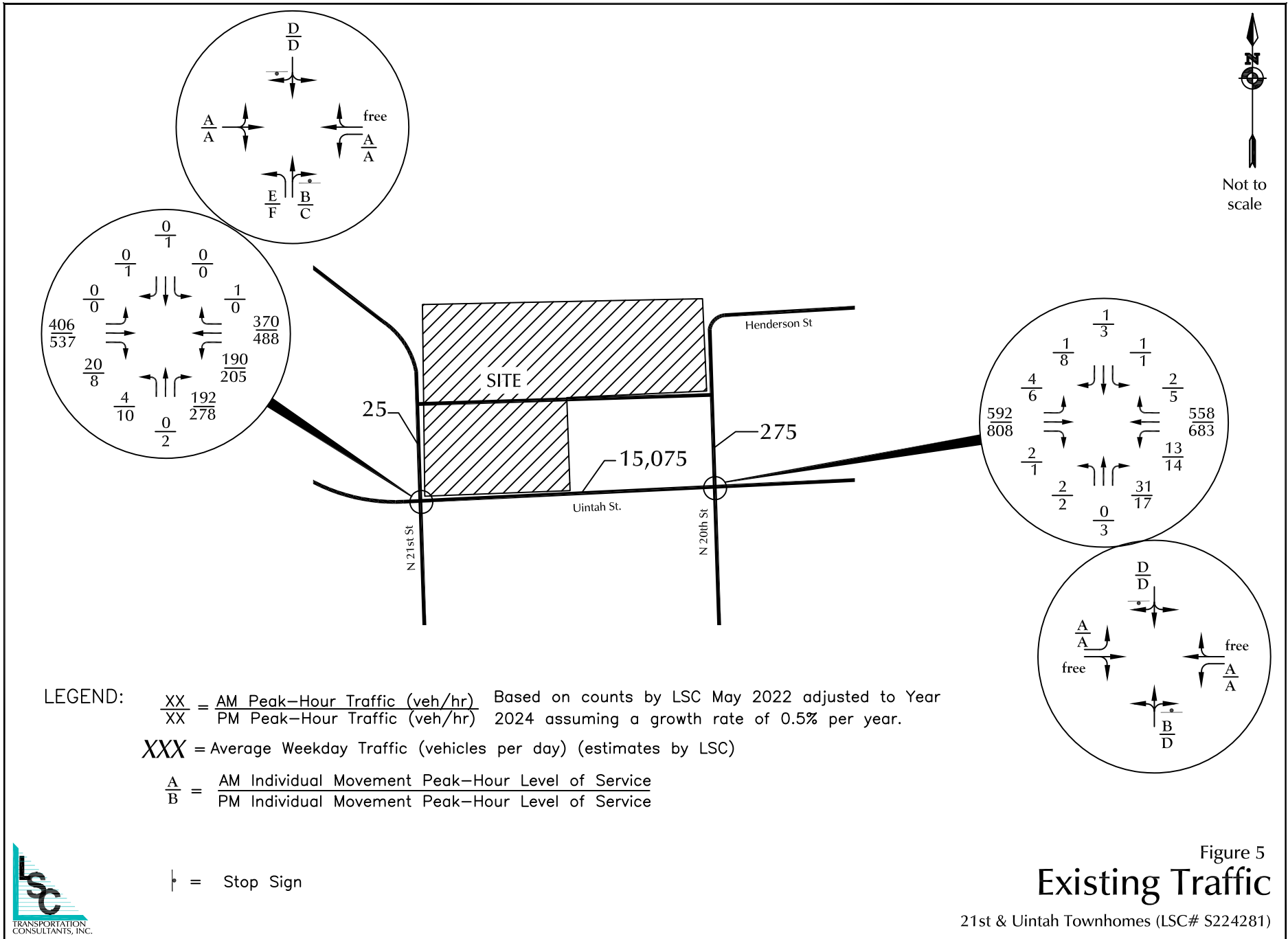
\*126' required for a 20mph speed and assuming a 9% downgrade for the length of the 126'

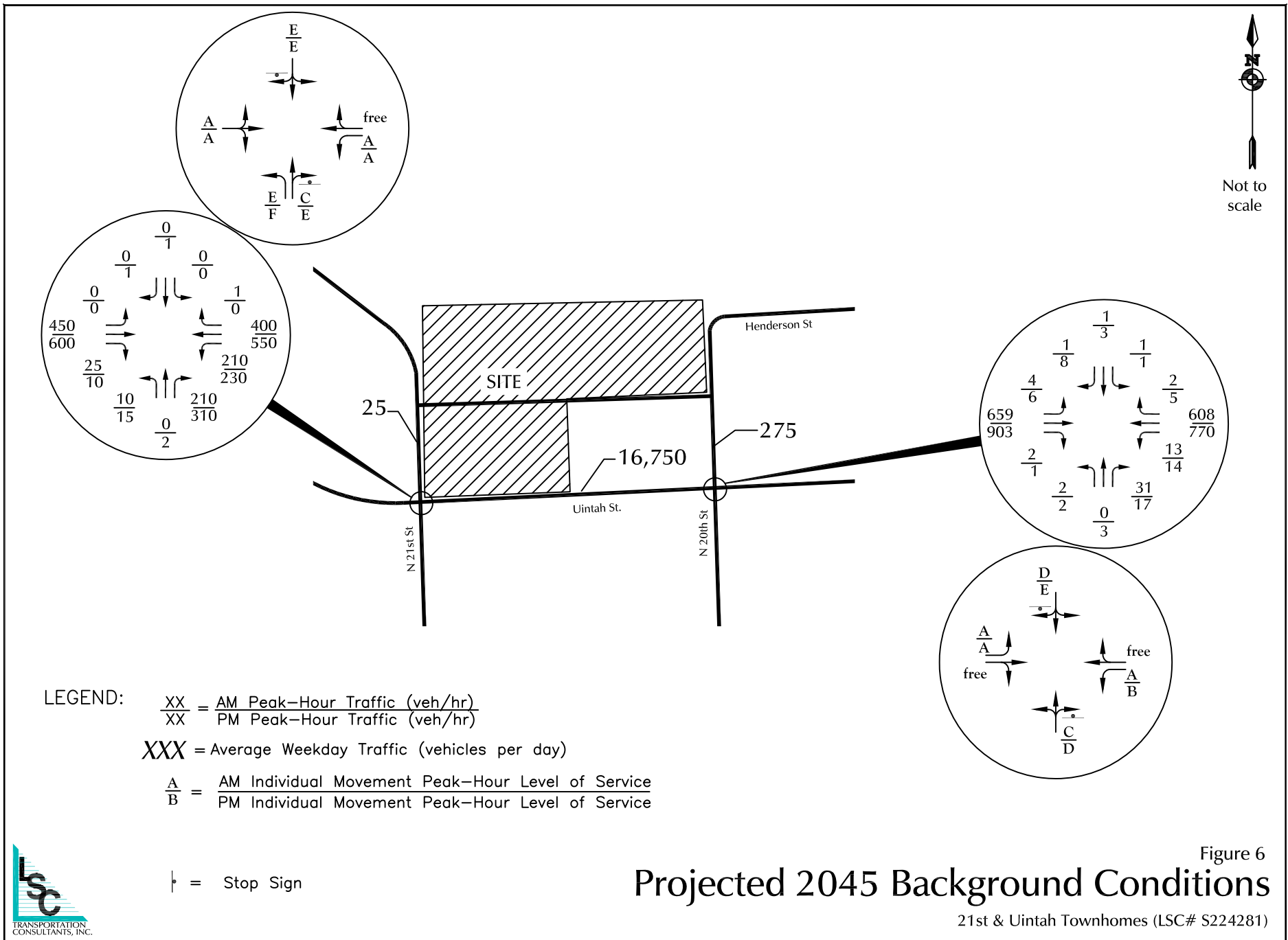


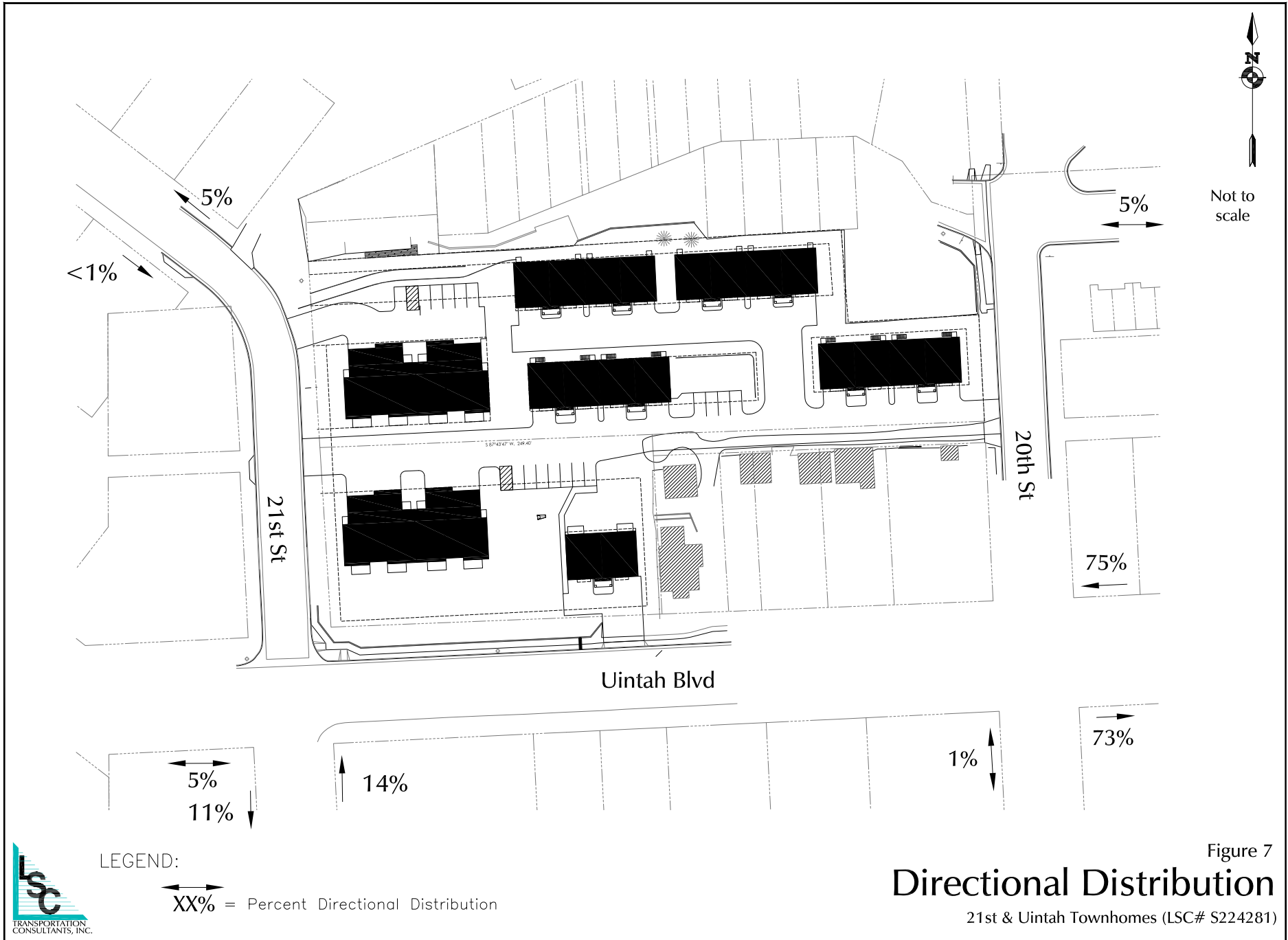
### Sight Distance - 21st Street & S Site Access/Alley

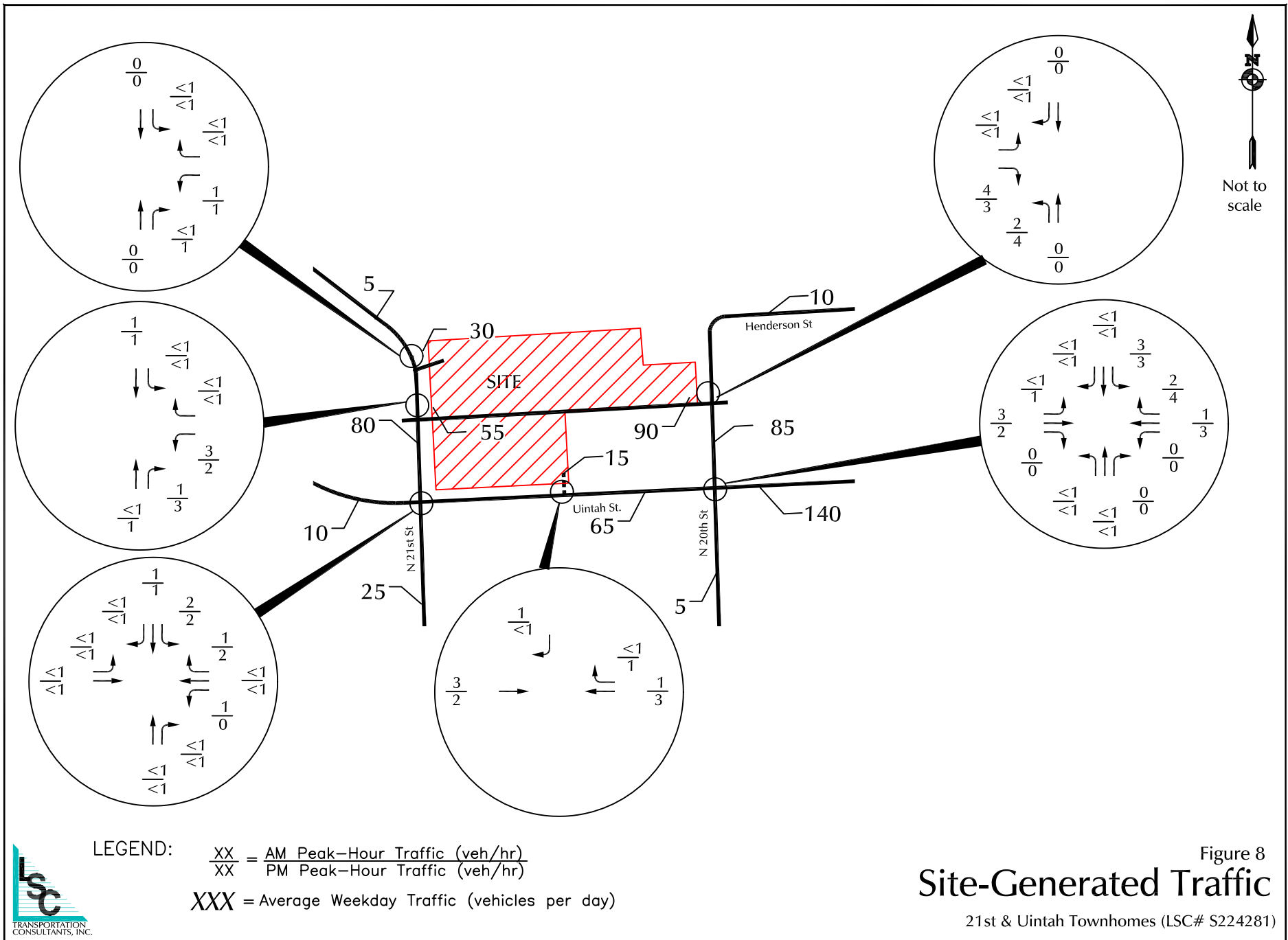
Figure 4b

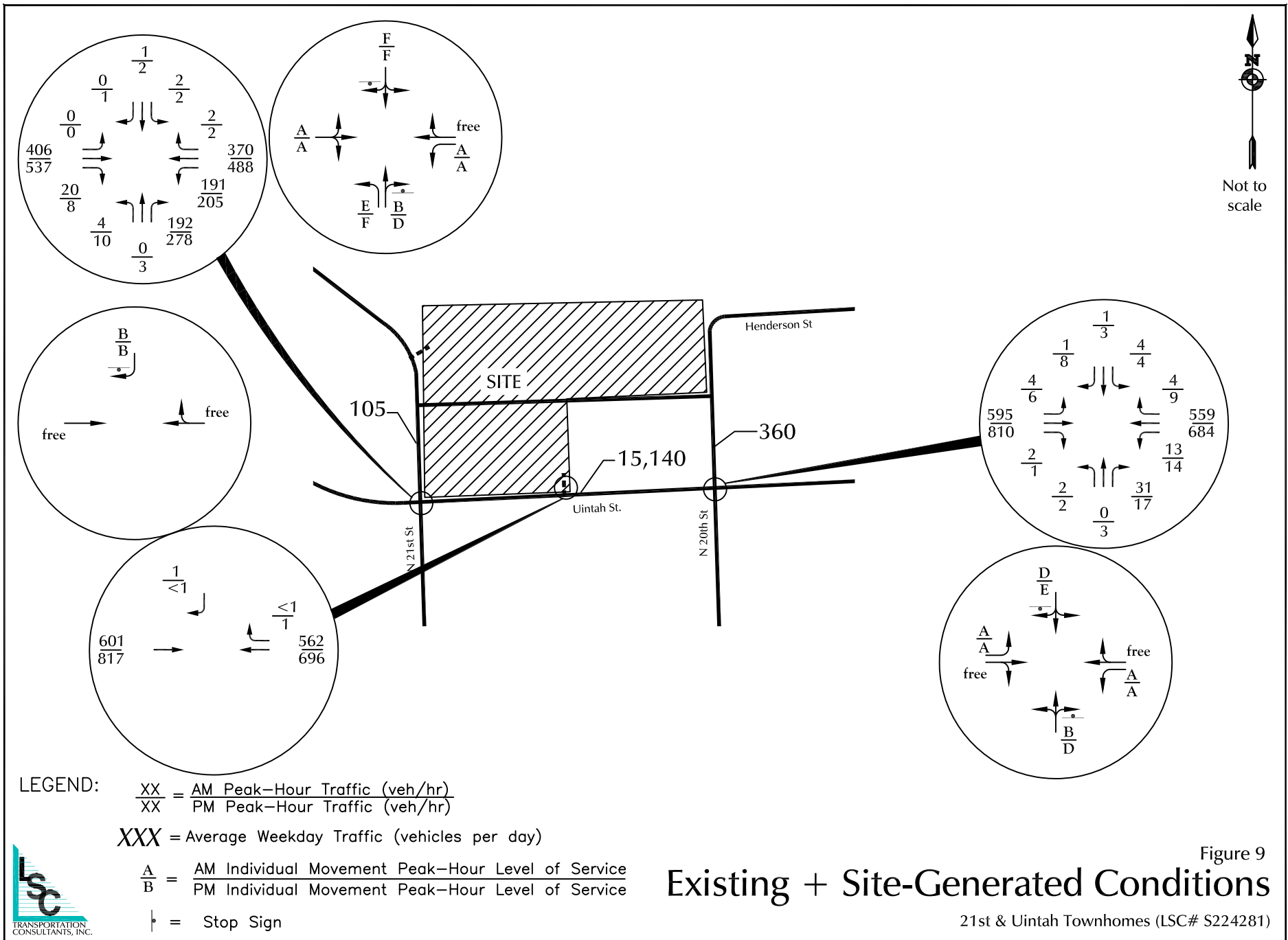
21st & Uintah Townhomes (LSC# S224281)

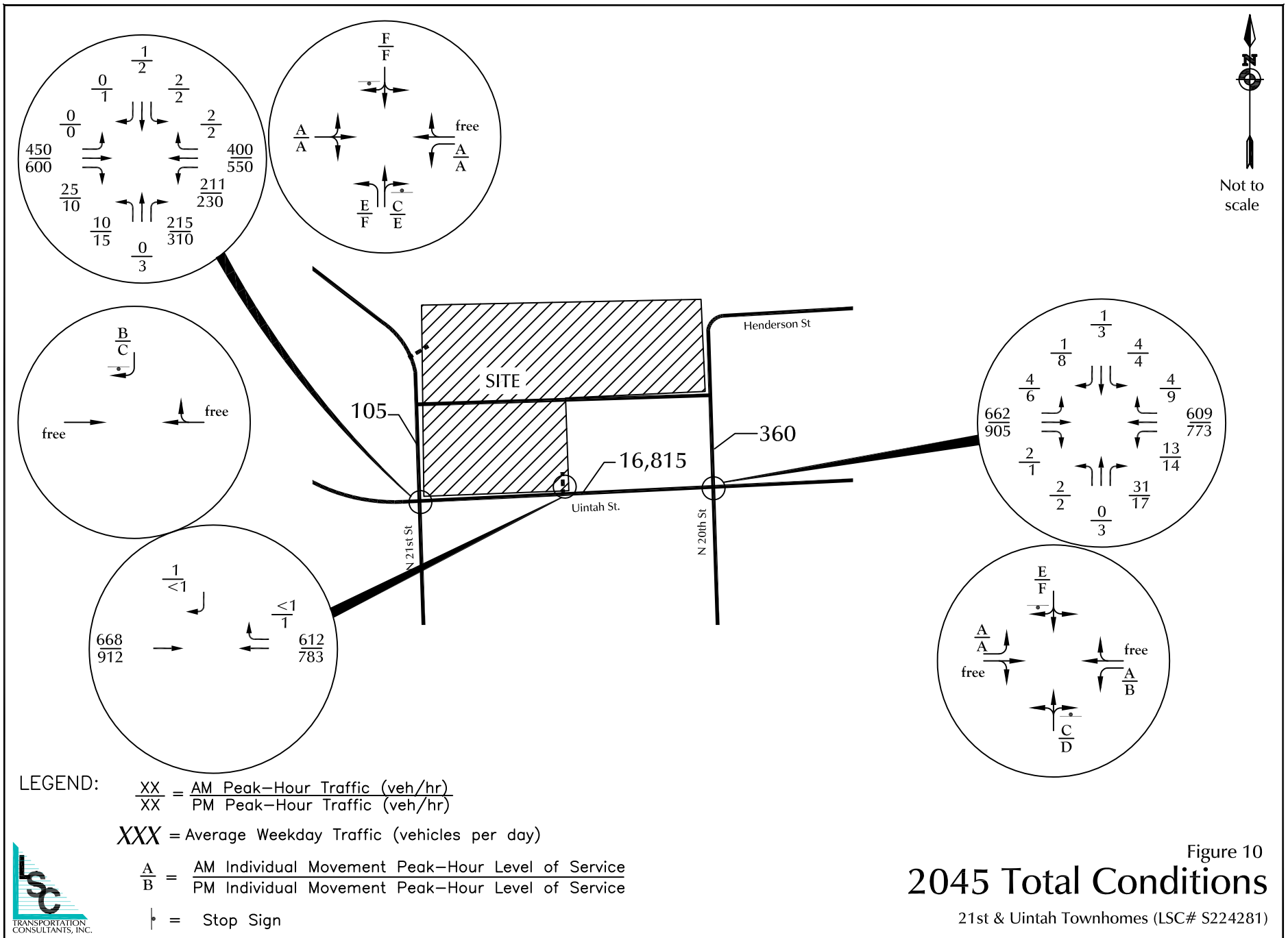












# Traffic Counts

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# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : 21th St = Uintah St AM  
 Site Code : S224280  
 Start Date : 5/12/2022  
 Page No : 1

### Groups Printed- Unshifted

Start Time	21th St Southbound					Uintah St Westbound					21th St Northbound					Uintah St Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
06:30	0	0	0	0	0	0	20	17	0	37	18	0	0	0	18	1	81	0	0	82	137
06:45	0	0	0	0	0	0	30	28	0	58	31	0	1	0	32	0	70	0	0	70	160
<b>Total</b>	0	0	0	0	0	0	50	45	0	95	49	0	1	0	50	1	151	0	0	152	297
07:00	0	0	0	0	0	0	43	31	0	74	18	0	0	0	18	6	77	0	0	83	175
07:15	0	0	0	0	0	0	54	38	0	92	30	0	0	0	30	1	95	0	0	96	218
07:30	0	0	0	0	0	0	63	51	0	114	37	0	2	0	39	8	105	0	0	113	266
07:45	0	0	0	0	0	0	96	56	0	152	60	0	0	0	60	6	78	0	0	84	296
<b>Total</b>	0	0	0	0	0	0	256	176	0	432	145	0	2	0	147	21	355	0	0	376	955
08:00	0	0	0	0	0	0	104	45	0	149	47	0	1	0	48	4	103	0	0	107	304
08:15	0	0	0	0	0	1	103	36	0	140	46	0	1	0	47	2	116	0	0	118	305
<b>Grand Total</b>	0	0	0	0	0	1	513	302	0	816	287	0	5	0	292	28	725	0	0	753	1861
<b>Apprch %</b>	0	0	0	0		0.1	62.9	37	0		98.3	0	1.7	0		3.7	96.3	0	0		
<b>Total %</b>	0	0	0	0	0	0.1	27.6	16.2	0	43.8	15.4	0	0.3	0	15.7	1.5	39	0	0	40.5	

# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : 21th St = Uintah St AM  
 Site Code : S224280  
 Start Date : 5/12/2022  
 Page No : 2

Start Time	21th St Southbound					Uintah St Westbound					21th St Northbound					Uintah St Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 6:30:00 AM to 8:15:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 7:30:00 AM																					
7:30:00 AM	0	0	0	0	0	0	63	51	0	114	37	0	2	0	39	8	105	0	0	113	266
7:45:00 AM	0	0	0	0	0	0	96	56	0	152	60	0	0	0	60	6	78	0	0	84	296
8:00:00 AM	0	0	0	0	0	0	104	45	0	149	47	0	1	0	48	4	103	0	0	107	304
8:15:00 AM	0	0	0	0	0	1	103	36	0	140	46	0	1	0	47	2	116	0	0	118	305
Total Volume	0	0	0	0	0	1	366	188	0	555	190	0	4	0	194	20	402	0	0	422	1171
% App. Total	0	0	0	0	0	0.2	65.9	33.9	0		97.9	0	2.1	0		4.7	95.3	0	0		
PHF	.000	.000	.000	.000	.000	.250	.880	.839	.000	.913	.792	.000	.500	.000	.808	.625	.866	.000	.000	.894	.960

# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : 21st St - Uintah St PM  
 Site Code : S224280  
 Start Date : 5/12/2022  
 Page No : 1

### Groups Printed- Unshifted

Start Time	21st St Southbound					Uintah St Westbound					21st St Northbound					Uintah St Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
16:00	0	0	0	0	0	0	110	54	0	164	62	0	4	0	66	3	146	0	0	149	379
16:15	0	1	0	0	1	0	113	61	0	174	58	0	1	0	59	1	147	0	0	148	382
16:30	0	0	0	0	0	1	112	53	0	166	61	0	1	0	62	1	112	0	0	113	341
16:45	0	0	0	0	0	0	126	48	0	174	69	0	1	0	70	3	113	0	0	116	360
Total	0	1	0	0	1	1	461	216	0	678	250	0	7	0	257	8	518	0	0	526	1462
17:00	1	0	0	0	1	0	107	49	0	156	69	1	3	0	73	2	150	0	0	152	382
17:15	0	0	0	0	0	0	112	48	0	160	62	1	0	0	63	3	144	0	0	147	370
17:30	0	1	0	0	1	0	138	58	0	196	75	0	6	0	81	0	125	0	0	125	403
17:45	0	0	0	0	0	0	120	60	0	180	51	0	1	2	54	3	107	0	0	110	344
Total	1	1	0	0	2	0	477	215	0	692	257	2	10	2	271	8	526	0	0	534	1499
Grand Total	1	2	0	0	3	1	938	431	0	1370	507	2	17	2	528	16	1044	0	0	1060	2961
Apprch %	33.3	66.7	0	0		0.1	68.5	31.5	0		96	0.4	3.2	0.4		1.5	98.5	0	0		
Total %	0	0.1	0	0	0.1	0	31.7	14.6	0	46.3	17.1	0.1	0.6	0.1	17.8	0.5	35.3	0	0	35.8	

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 Colorado Springs, CO 80909  
 719-633-2868

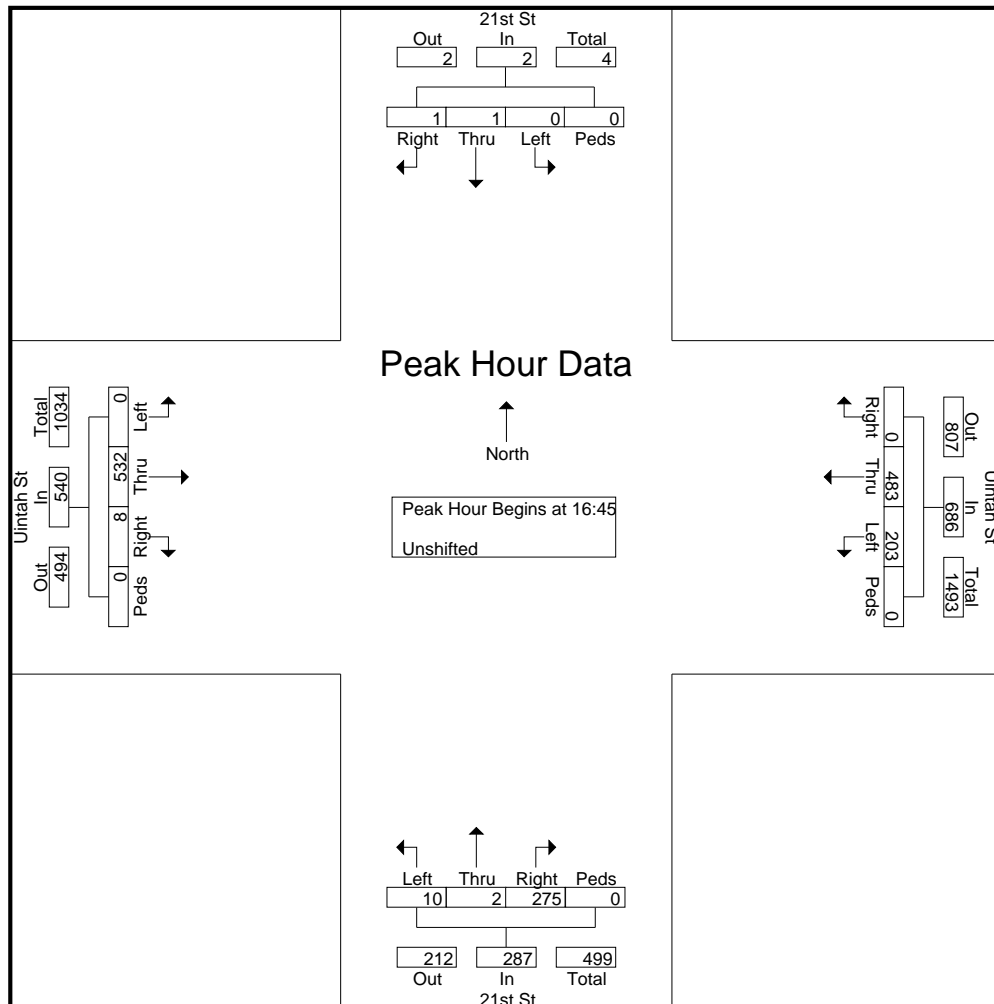
File Name : 21st St - Uintah St PM

Site Code : S224280

Start Date : 5/12/2022

Page No : 2

Start Time	21st St Southbound					Uintah St Westbound					21st St Northbound					Uintah St Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 4:00:00 PM to 5:45:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 4:45:00 PM																					
4:45:00 PM	0	0	0	0	0	0	126	48	0	174	69	0	1	0	70	3	113	0	0	116	360
5:00:00 PM	1	0	0	0	1	0	107	49	0	156	69	1	3	0	73	2	150	0	0	152	382
5:15:00 PM	0	0	0	0	0	0	112	48	0	160	62	1	0	0	63	3	144	0	0	147	370
5:30:00 PM	0	1	0	0	1	0	138	58	0	196	75	0	6	0	81	0	125	0	0	125	403
Total Volume	1	1	0	0	2	0	483	203	0	686	275	2	10	0	287	8	532	0	0	540	1515
% App. Total	50	50	0	0		0	70.4	29.6	0		95.8	0.7	3.5	0		1.5	98.5	0	0		
PHF	.250	.250	.000	.000	.500	.000	.875	.875	.000	.875	.917	.500	.417	.000	.886	.667	.887	.000	.000	.888	.940



# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : 20th St = Uintah St AM  
 Site Code : S224280  
 Start Date : 5/12/2022  
 Page No : 1

### Groups Printed- Bank 1

Start Time	20th St Southbound					Uintah St Westbound					20th St Northbound					Uintah St Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
06:30	0	0	0	0	0	3	0	3	0	6	0	0	0	0	0	0	0	0	0	0	0
06:45	1	0	1	0	2	0	0	5	0	5	3	0	0	0	3	1	0	0	0	1	11
<b>Total</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>11</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>17</b>
07:00	1	0	2	0	3	0	0	7	0	7	4	0	0	0	4	1	0	0	0	1	15
07:15	0	0	0	0	0	0	0	6	0	6	4	0	1	0	5	1	0	1	0	2	13
07:30	0	1	0	0	1	1	0	6	0	7	13	0	0	0	13	1	0	2	0	3	24
07:45	0	0	0	0	0	0	0	4	0	4	10	0	0	0	10	1	0	1	0	2	16
<b>Total</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>23</b>	<b>0</b>	<b>24</b>	<b>31</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>32</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>8</b>	<b>68</b>
08:00	1	0	0	0	1	0	0	1	0	1	4	0	2	0	6	0	0	1	0	1	9
08:15	0	0	1	0	1	1	0	2	0	3	4	0	0	0	4	0	0	0	0	0	8
<b>Grand Total</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>8</b>	<b>5</b>	<b>0</b>	<b>34</b>	<b>0</b>	<b>39</b>	<b>42</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>45</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>10</b>	<b>102</b>
<b>Apprch %</b>	<b>37.5</b>	<b>12.5</b>	<b>50</b>	<b>0</b>		<b>12.8</b>	<b>0</b>	<b>87.2</b>	<b>0</b>		<b>93.3</b>	<b>0</b>	<b>6.7</b>	<b>0</b>		<b>50</b>	<b>0</b>	<b>50</b>	<b>0</b>		
<b>Total %</b>	<b>2.9</b>	<b>1</b>	<b>3.9</b>	<b>0</b>	<b>7.8</b>	<b>4.9</b>	<b>0</b>	<b>33.3</b>	<b>0</b>	<b>38.2</b>	<b>41.2</b>	<b>0</b>	<b>2.9</b>	<b>0</b>	<b>44.1</b>	<b>4.9</b>	<b>0</b>	<b>4.9</b>	<b>0</b>	<b>9.8</b>	

# LSC Transportation Consultants, Inc.

2504 E. Pikes Peak Ave, Suite 304  
 Colorado Springs, CO 80909  
 719-633-2868

File Name : 20th St - Uintah St PM  
 Site Code : S224280  
 Start Date : 5/12/2022  
 Page No : 1

### Groups Printed- Bank 1

Start Time	20 th St Southbound					Uintah St Westbound					20 th St Northbound					Uintah St Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
16:00	3	0	0	0	3	2	0	2	0	4	6	0	2	0	8	0	0	2	0	2	17
16:15	1	0	0	0	1	1	0	4	0	5	5	0	0	0	5	0	0	5	0	5	16
16:30	4	0	0	0	4	1	0	3	0	4	8	0	1	0	9	0	0	3	0	3	20
16:45	2	0	1	0	3	2	0	4	0	6	3	1	0	0	4	0	0	2	0	2	15
<b>Total</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>6</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>19</b>	<b>22</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>68</b>
17:00	3	3	0	0	6	3	0	5	0	8	2	1	0	0	3	0	0	0	0	0	17
17:15	0	0	0	0	0	0	0	1	0	1	7	1	1	0	9	0	0	3	0	3	13
17:30	3	0	0	0	3	0	0	4	0	4	5	0	1	0	6	1	0	1	0	2	15
17:45	4	0	1	0	5	2	0	4	0	6	12	1	0	0	13	1	0	4	0	5	29
<b>Total</b>	<b>10</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>14</b>	<b>5</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>19</b>	<b>26</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>31</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>10</b>	<b>74</b>
<b>Grand Total</b>	<b>20</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>25</b>	<b>11</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>38</b>	<b>48</b>	<b>4</b>	<b>5</b>	<b>0</b>	<b>57</b>	<b>2</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>22</b>	<b>142</b>
<b>Apprch %</b>	<b>80</b>	<b>12</b>	<b>8</b>	<b>0</b>		<b>28.9</b>	<b>0</b>	<b>71.1</b>	<b>0</b>		<b>84.2</b>	<b>7</b>	<b>8.8</b>	<b>0</b>		<b>9.1</b>	<b>0</b>	<b>90.9</b>	<b>0</b>		
<b>Total %</b>	<b>14.1</b>	<b>2.1</b>	<b>1.4</b>	<b>0</b>	<b>17.6</b>	<b>7.7</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>26.8</b>	<b>33.8</b>	<b>2.8</b>	<b>3.5</b>	<b>0</b>	<b>40.1</b>	<b>1.4</b>	<b>0</b>	<b>14.1</b>	<b>0</b>	<b>15.5</b>	

# Level of Service Reports

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Intersection												
Int Delay, s/veh	4.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕			↕	
Traffic Vol, veh/h	0	406	20	190	370	1	4	0	192	0	1	0
Future Vol, veh/h	0	406	20	190	370	1	4	0	192	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	92	92	92	83	83	83	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	456	22	207	402	1	5	0	231	0	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	403	0	0	478	0	0	1284	1284	467	1400	1295	403
Stage 1	-	-	-	-	-	-	467	467	-	817	817	-
Stage 2	-	-	-	-	-	-	817	817	-	583	478	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1156	-	-	1084	-	-	142	165	596	118	162	647
Stage 1	-	-	-	-	-	-	576	562	-	370	390	-
Stage 2	-	-	-	-	-	-	370	390	-	498	556	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1156	-	-	1084	-	-	120	133	596	62	131	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	120	133	-	62	131	-
Stage 1	-	-	-	-	-	-	576	562	-	370	316	-
Stage 2	-	-	-	-	-	-	298	316	-	305	556	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.1			15.2			32.7		
HCM LOS							C			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	120	596	1156	-	-	1084	-	-	131
HCM Lane V/C Ratio	0.04	0.388	-	-	-	0.191	-	-	0.009
HCM Control Delay (s)	36.3	14.8	0	-	-	9.1	-	-	32.7
HCM Lane LOS	E	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.1	1.8	0	-	-	0.7	-	-	0



Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	4	592	2	13	558	2	2	0	31	1	1	1
Future Vol, veh/h	4	592	2	13	558	2	2	0	31	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	92	92	92	78	78	78	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	651	2	14	607	2	3	0	40	1	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	609	0	0	653	0	0	1297	1297	652	1316	1297	608
Stage 1	-	-	-	-	-	-	660	660	-	636	636	-
Stage 2	-	-	-	-	-	-	637	637	-	680	661	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	970	-	-	934	-	-	139	162	468	135	162	496
Stage 1	-	-	-	-	-	-	452	460	-	466	472	-
Stage 2	-	-	-	-	-	-	465	471	-	441	460	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	970	-	-	934	-	-	136	159	468	122	159	496
Mov Cap-2 Maneuver	-	-	-	-	-	-	136	159	-	122	159	-
Stage 1	-	-	-	-	-	-	450	458	-	464	465	-
Stage 2	-	-	-	-	-	-	455	464	-	402	458	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			14.8			25.2		
HCM LOS							B			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	408	970	-	-	934	-	-	182
HCM Lane V/C Ratio	0.104	0.005	-	-	0.015	-	-	0.022
HCM Control Delay (s)	14.8	8.7	-	-	8.9	-	-	25.2
HCM Lane LOS	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	6.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕			↕	
Traffic Vol, veh/h	0	537	8	205	488	0	10	2	278	0	1	1
Future Vol, veh/h	0	537	8	205	488	0	10	2	278	0	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	88	88	88	89	89	89	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	584	9	233	555	0	11	2	312	0	2	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	555	0	0	593	0	0	1612	1610	589	1767	1614	555
Stage 1	-	-	-	-	-	-	589	589	-	1021	1021	-
Stage 2	-	-	-	-	-	-	1023	1021	-	746	593	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1015	-	-	983	-	-	84	105	508	65	104	531
Stage 1	-	-	-	-	-	-	494	495	-	285	314	-
Stage 2	-	-	-	-	-	-	284	314	-	405	493	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1015	-	-	983	-	-	67	80	508	20	79	531
Mov Cap-2 Maneuver	-	-	-	-	-	-	67	80	-	20	79	-
Stage 1	-	-	-	-	-	-	494	495	-	285	240	-
Stage 2	-	-	-	-	-	-	214	240	-	155	493	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			2.9			26.2			31.9		
HCM LOS							D			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	67	489	1015	-	-	983	-	-	138
HCM Lane V/C Ratio	0.168	0.643	-	-	-	0.237	-	-	0.029
HCM Control Delay (s)	69.3	24.7	0	-	-	9.8	-	-	31.9
HCM Lane LOS	F	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.6	4.5	0	-	-	0.9	-	-	0.1

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	6	808	1	14	683	5	2	3	17	1	3	8
Future Vol, veh/h	6	808	1	14	683	5	2	3	17	1	3	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	89	89	89	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	878	1	16	767	6	3	4	22	1	4	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	773	0	0	879	0	0	1702	1698	879	1708	1695	770
Stage 1	-	-	-	-	-	-	893	893	-	802	802	-
Stage 2	-	-	-	-	-	-	809	805	-	906	893	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	842	-	-	769	-	-	72	92	347	72	93	401
Stage 1	-	-	-	-	-	-	336	360	-	378	396	-
Stage 2	-	-	-	-	-	-	374	395	-	331	360	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	842	-	-	769	-	-	66	89	347	64	90	401
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	89	-	64	90	-
Stage 1	-	-	-	-	-	-	333	357	-	375	388	-
Stage 2	-	-	-	-	-	-	353	387	-	304	357	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			26.6			27.7		
HCM LOS							D			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	195	842	-	-	769	-	-	174
HCM Lane V/C Ratio	0.145	0.008	-	-	0.02	-	-	0.088
HCM Control Delay (s)	26.6	9.3	-	-	9.8	-	-	27.7
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.3

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕			↕	
Traffic Vol, veh/h	0	450	25	210	400	1	10	0	215	0	1	0
Future Vol, veh/h	0	450	25	210	400	1	10	0	215	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	92	92	92	83	83	83	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	506	28	228	435	1	12	0	259	0	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	436	0	0	534	0	0	1412	1412	520	1542	1426	436
Stage 1	-	-	-	-	-	-	520	520	-	892	892	-
Stage 2	-	-	-	-	-	-	892	892	-	650	534	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1124	-	-	1034	-	-	116	138	556	94	135	620
Stage 1	-	-	-	-	-	-	539	532	-	337	360	-
Stage 2	-	-	-	-	-	-	337	360	-	458	524	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1124	-	-	1034	-	-	95	108	556	42	105	620
Mov Cap-2 Maneuver	-	-	-	-	-	-	95	108	-	42	105	-
Stage 1	-	-	-	-	-	-	539	532	-	337	280	-
Stage 2	-	-	-	-	-	-	262	280	-	245	524	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.3			18.4			39.7		
HCM LOS							C			E		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	95	556	1124	-	-	1034	-	-	105
HCM Lane V/C Ratio	0.127	0.466	-	-	-	0.221	-	-	0.011
HCM Control Delay (s)	48.3	17	0	-	-	9.5	-	-	39.7
HCM Lane LOS	E	C	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	0.4	2.5	0	-	-	0.8	-	-	0

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	4	659	2	13	608	2	2	0	31	1	1	1
Future Vol, veh/h	4	659	2	13	608	2	2	0	31	1	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	92	92	92	78	78	78	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	724	2	14	661	2	3	0	40	1	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	663	0	0	726	0	0	1424	1424	725	1443	1424	662
Stage 1	-	-	-	-	-	-	733	733	-	690	690	-
Stage 2	-	-	-	-	-	-	691	691	-	753	734	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	926	-	-	877	-	-	113	136	425	110	136	462
Stage 1	-	-	-	-	-	-	412	426	-	435	446	-
Stage 2	-	-	-	-	-	-	435	446	-	402	426	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	926	-	-	877	-	-	110	133	425	98	133	462
Mov Cap-2 Maneuver	-	-	-	-	-	-	110	133	-	98	133	-
Stage 1	-	-	-	-	-	-	410	424	-	433	439	-
Stage 2	-	-	-	-	-	-	426	439	-	363	424	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			16.3			29.5		
HCM LOS							C			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	362	926	-	-	877	-	-	151
HCM Lane V/C Ratio	0.117	0.005	-	-	0.016	-	-	0.026
HCM Control Delay (s)	16.3	8.9	-	-	9.2	-	-	29.5
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.1

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕			↕	
Traffic Vol, veh/h	0	600	10	230	550	0	15	2	310	0	1	1
Future Vol, veh/h	0	600	10	230	550	0	15	2	310	0	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	88	88	88	89	89	89	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	652	11	261	625	0	17	2	348	0	2	2

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	625	0	0	663	0	0	1807	1805	658	1980	1810	625
Stage 1	-	-	-	-	-	-	658	658	-	1147	1147	-
Stage 2	-	-	-	-	-	-	1149	1147	-	833	663	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	956	-	-	926	-	-	61	79	464	46	79	485
Stage 1	-	-	-	-	-	-	453	461	-	242	274	-
Stage 2	-	-	-	-	-	-	242	274	-	363	459	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	956	-	-	926	-	-	46	57	464	9	57	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	46	57	-	9	57	-
Stage 1	-	-	-	-	-	-	453	461	-	242	197	-
Stage 2	-	-	-	-	-	-	171	197	-	90	459	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		3.1		41.2		41.7	
HCM LOS					E		E	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	46	444	956	-	-	926	-	-	102
HCM Lane V/C Ratio	0.366	0.79	-	-	-	0.282	-	-	0.039
HCM Control Delay (s)	123	37.3	0	-	-	10.4	-	-	41.7
HCM Lane LOS	F	E	A	-	-	B	-	-	E
HCM 95th %tile Q(veh)	1.3	7	0	-	-	1.2	-	-	0.1

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	6	903	1	14	770	5	2	3	17	1	3	8
Future Vol, veh/h	6	903	1	14	770	5	2	3	17	1	3	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	89	89	89	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	982	1	16	865	6	3	4	22	1	4	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	871	0	0	983	0	0	1904	1900	983	1910	1897	868
Stage 1	-	-	-	-	-	-	997	997	-	900	900	-
Stage 2	-	-	-	-	-	-	907	903	-	1010	997	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	774	-	-	703	-	-	52	69	302	52	69	352
Stage 1	-	-	-	-	-	-	294	322	-	333	357	-
Stage 2	-	-	-	-	-	-	330	356	-	289	322	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	774	-	-	703	-	-	47	67	302	45	67	352
Mov Cap-2 Maneuver	-	-	-	-	-	-	47	67	-	45	67	-
Stage 1	-	-	-	-	-	-	291	319	-	330	349	-
Stage 2	-	-	-	-	-	-	310	348	-	263	319	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			33.8			35.3		
HCM LOS							D			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	153	774	-	-	703	-	-	134
HCM Lane V/C Ratio	0.184	0.008	-	-	0.022	-	-	0.115
HCM Control Delay (s)	33.8	9.7	-	-	10.2	-	-	35.3
HCM Lane LOS	D	A	-	-	B	-	-	E
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.4

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕			↕	
Traffic Vol, veh/h	0	406	20	191	370	2	4	0	192	2	1	0
Future Vol, veh/h	0	406	20	191	370	2	4	0	192	2	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	92	92	92	83	83	83	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	456	22	208	402	2	5	0	231	2	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	404	0	0	478	0	0	1287	1287	467	1402	1297	403
Stage 1	-	-	-	-	-	-	467	467	-	819	819	-
Stage 2	-	-	-	-	-	-	820	820	-	583	478	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1155	-	-	1084	-	-	141	164	596	117	162	647
Stage 1	-	-	-	-	-	-	576	562	-	369	389	-
Stage 2	-	-	-	-	-	-	369	389	-	498	556	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1155	-	-	1084	-	-	119	133	596	61	131	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	119	133	-	61	131	-
Stage 1	-	-	-	-	-	-	576	562	-	369	314	-
Stage 2	-	-	-	-	-	-	297	314	-	305	556	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.1			15.2			56.1		
HCM LOS							C			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	119	596	1155	-	-	1084	-	-	74
HCM Lane V/C Ratio	0.04	0.388	-	-	-	0.192	-	-	0.048
HCM Control Delay (s)	36.5	14.8	0	-	-	9.1	-	-	56.1
HCM Lane LOS	E	B	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.1	1.8	0	-	-	0.7	-	-	0.1



Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	601	562	0	0	1
Future Vol, veh/h	0	601	562	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	92	92	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	675	611	0	0	1

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

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

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	494
HCM Lane V/C Ratio	-	-	0.002
HCM Control Delay (s)	-	-	12.3
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

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	4	595	2	13	559	4	2	0	31	4	1	1
Future Vol, veh/h	4	595	2	13	559	4	2	0	31	4	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	92	92	92	78	78	78	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	654	2	14	608	4	3	0	40	5	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	612	0	0	656	0	0	1302	1303	655	1321	1302	610
Stage 1	-	-	-	-	-	-	663	663	-	638	638	-
Stage 2	-	-	-	-	-	-	639	640	-	683	664	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	967	-	-	931	-	-	138	161	466	134	161	494
Stage 1	-	-	-	-	-	-	450	459	-	465	471	-
Stage 2	-	-	-	-	-	-	464	470	-	439	458	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	967	-	-	931	-	-	135	158	466	121	158	494
Mov Cap-2 Maneuver	-	-	-	-	-	-	135	158	-	121	158	-
Stage 1	-	-	-	-	-	-	448	457	-	463	464	-
Stage 2	-	-	-	-	-	-	454	463	-	400	456	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			14.9			31.3		
HCM LOS							B			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	406	967	-	-	931	-	-	145
HCM Lane V/C Ratio	0.104	0.005	-	-	0.015	-	-	0.055
HCM Control Delay (s)	14.9	8.7	-	-	8.9	-	-	31.3
HCM Lane LOS	B	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2

Intersection												
Int Delay, s/veh	7.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕			↕	
Traffic Vol, veh/h	0	537	8	205	488	2	10	3	278	2	2	1
Future Vol, veh/h	0	537	8	205	488	2	10	3	278	2	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	88	88	88	89	89	89	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	584	9	233	555	2	11	3	312	4	4	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	557	0	0	593	0	0	1614	1612	589	1768	1615	556
Stage 1	-	-	-	-	-	-	589	589	-	1022	1022	-
Stage 2	-	-	-	-	-	-	1025	1023	-	746	593	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1014	-	-	983	-	-	84	104	508	65	104	531
Stage 1	-	-	-	-	-	-	494	495	-	285	313	-
Stage 2	-	-	-	-	-	-	284	313	-	405	493	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1014	-	-	983	-	-	66	79	508	20	79	531
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	79	-	20	79	-
Stage 1	-	-	-	-	-	-	494	495	-	285	239	-
Stage 2	-	-	-	-	-	-	212	239	-	155	493	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			2.9			27.3			126.6		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	66	480	1014	-	-	983	-	-	39
HCM Lane V/C Ratio	0.17	0.658	-	-	-	0.237	-	-	0.256
HCM Control Delay (s)	70.4	25.8	0	-	-	9.8	-	-	126.6
HCM Lane LOS	F	D	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.6	4.7	0	-	-	0.9	-	-	0.8

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	817	696	1	0	1
Future Vol, veh/h	0	817	696	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	92	92	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	918	757	1	0	1

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

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	407
HCM Lane V/C Ratio	-	-	-	0.003
HCM Control Delay (s)	-	-	-	13.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷			↕			↕	
Traffic Vol, veh/h	6	810	1	14	686	9	2	3	17	4	3	8
Future Vol, veh/h	6	810	1	14	686	9	2	3	17	4	3	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	89	89	89	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	880	1	16	771	10	3	4	22	5	4	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	781	0	0	881	0	0	1710	1708	881	1716	1703	776
Stage 1	-	-	-	-	-	-	895	895	-	808	808	-
Stage 2	-	-	-	-	-	-	815	813	-	908	895	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	837	-	-	767	-	-	72	91	346	71	92	397
Stage 1	-	-	-	-	-	-	335	359	-	375	394	-
Stage 2	-	-	-	-	-	-	371	392	-	330	359	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	837	-	-	767	-	-	66	88	346	63	89	397
Mov Cap-2 Maneuver	-	-	-	-	-	-	66	88	-	63	89	-
Stage 1	-	-	-	-	-	-	332	356	-	372	386	-
Stage 2	-	-	-	-	-	-	350	384	-	303	356	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			26.7			38		
HCM LOS							D			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	194	837	-	-	767	-	-	128
HCM Lane V/C Ratio	0.145	0.008	-	-	0.021	-	-	0.15
HCM Control Delay (s)	26.7	9.3	-	-	9.8	-	-	38
HCM Lane LOS	D	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.5

Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕			↕	
Traffic Vol, veh/h	0	450	25	211	400	2	10	0	215	2	1	0
Future Vol, veh/h	0	450	25	211	400	2	10	0	215	2	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	92	92	92	83	83	83	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	506	28	229	435	2	12	0	259	2	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	437	0	0	534	0	0	1415	1415	520	1544	1428	436
Stage 1	-	-	-	-	-	-	520	520	-	894	894	-
Stage 2	-	-	-	-	-	-	895	895	-	650	534	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1123	-	-	1034	-	-	115	137	556	94	135	620
Stage 1	-	-	-	-	-	-	539	532	-	336	360	-
Stage 2	-	-	-	-	-	-	335	359	-	458	524	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1123	-	-	1034	-	-	95	107	556	42	105	620
Mov Cap-2 Maneuver	-	-	-	-	-	-	95	107	-	42	105	-
Stage 1	-	-	-	-	-	-	539	532	-	336	280	-
Stage 2	-	-	-	-	-	-	260	280	-	245	524	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			3.3			18.4			77.7		
HCM LOS							C			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	95	556	1123	-	-	1034	-	-	53
HCM Lane V/C Ratio	0.127	0.466	-	-	-	0.222	-	-	0.067
HCM Control Delay (s)	48.3	17	0	-	-	9.5	-	-	77.7
HCM Lane LOS	E	C	A	-	-	A	-	-	F
HCM 95th %tile Q(veh)	0.4	2.5	0	-	-	0.8	-	-	0.2

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	668	612	0	0	1
Future Vol, veh/h	0	668	612	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	92	92	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	751	665	0	0	1

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

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	SBLn1
Capacity (veh/h)	-	-	460
HCM Lane V/C Ratio	-	-	0.003
HCM Control Delay (s)	-	-	12.8
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0

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	4	662	2	13	609	4	2	0	31	4	1	1
Future Vol, veh/h	4	662	2	13	609	4	2	0	31	4	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	92	92	92	78	78	78	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	727	2	14	662	4	3	0	40	5	1	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	666	0	0	729	0	0	1429	1430	728	1448	1429	664
Stage 1	-	-	-	-	-	-	736	736	-	692	692	-
Stage 2	-	-	-	-	-	-	693	694	-	756	737	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	923	-	-	875	-	-	112	135	423	109	135	461
Stage 1	-	-	-	-	-	-	411	425	-	434	445	-
Stage 2	-	-	-	-	-	-	434	444	-	400	425	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	923	-	-	875	-	-	109	132	423	97	132	461
Mov Cap-2 Maneuver	-	-	-	-	-	-	109	132	-	97	132	-
Stage 1	-	-	-	-	-	-	409	423	-	432	438	-
Stage 2	-	-	-	-	-	-	425	437	-	361	423	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			16.3			37.7		
HCM LOS							C			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	360	923	-	-	875	-	-	118
HCM Lane V/C Ratio	0.118	0.005	-	-	0.016	-	-	0.068
HCM Control Delay (s)	16.3	8.9	-	-	9.2	-	-	37.7
HCM Lane LOS	C	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.2



Intersection												
Int Delay, s/veh	11.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘		↗	↘			↕	
Traffic Vol, veh/h	0	600	10	230	550	2	15	3	310	2	2	1
Future Vol, veh/h	0	600	10	230	550	2	15	3	310	2	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	75	-	-	50	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	88	88	88	89	89	89	50	50	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	652	11	261	625	2	17	3	348	4	4	2

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	627	0	0	663	0	0	1809	1807	658	1981	1811	626
Stage 1	-	-	-	-	-	-	658	658	-	1148	1148	-
Stage 2	-	-	-	-	-	-	1151	1149	-	833	663	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	955	-	-	926	-	-	61	79	464	46	79	484
Stage 1	-	-	-	-	-	-	453	461	-	242	273	-
Stage 2	-	-	-	-	-	-	241	273	-	363	459	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	955	-	-	926	-	-	45	57	464	9	57	484
Mov Cap-2 Maneuver	-	-	-	-	-	-	45	57	-	9	57	-
Stage 1	-	-	-	-	-	-	453	461	-	242	196	-
Stage 2	-	-	-	-	-	-	169	196	-	90	459	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		3.1		44.2		\$ 325	
HCM LOS					E		F	

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	45	434	955	-	-	926	-	-	19
HCM Lane V/C Ratio	0.375	0.81	-	-	-	0.282	-	-	0.526
HCM Control Delay (s)	126.7	40.2	0	-	-	10.4	-	-	\$ 325
HCM Lane LOS	F	E	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	1.3	7.4	0	-	-	1.2	-	-	1.5

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

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑			↑
Traffic Vol, veh/h	0	912	783	1	0	1
Future Vol, veh/h	0	912	783	1	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	92	92	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1025	851	1	0	1

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	- 0 - 852
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - 6.22
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - 3.318
Pot Cap-1 Maneuver	0	-	- 0 359
Stage 1	0	-	- 0 -
Stage 2	0	-	- 0 -
Platoon blocked, %	-	-	- - -
Mov Cap-1 Maneuver	-	-	- - 359
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

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

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	359
HCM Lane V/C Ratio	-	-	-	0.003
HCM Control Delay (s)	-	-	-	15.1
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	0

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	6	905	1	14	773	9	2	3	17	4	3	8
Future Vol, veh/h	6	905	1	14	773	9	2	3	17	4	3	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	89	89	89	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	984	1	16	869	10	3	4	22	5	4	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	879	0	0	985	0	0	1912	1910	985	1918	1905	874
Stage 1	-	-	-	-	-	-	999	999	-	906	906	-
Stage 2	-	-	-	-	-	-	913	911	-	1012	999	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	769	-	-	701	-	-	52	68	301	51	69	349
Stage 1	-	-	-	-	-	-	293	321	-	331	355	-
Stage 2	-	-	-	-	-	-	328	353	-	288	321	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	769	-	-	701	-	-	47	66	301	44	67	349
Mov Cap-2 Maneuver	-	-	-	-	-	-	47	66	-	44	67	-
Stage 1	-	-	-	-	-	-	290	318	-	328	347	-
Stage 2	-	-	-	-	-	-	308	345	-	262	318	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			34			52.3		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	152	769	-	-	701	-	-	95
HCM Lane V/C Ratio	0.186	0.008	-	-	0.022	-	-	0.202
HCM Control Delay (s)	34	9.7	-	-	10.3	-	-	52.3
HCM Lane LOS	D	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	0.7