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November 4, 2019

Dan Romano  
Development Manager  
Aspen View Homes  
555 Middle Creek Parkway, Suite 500  
Colorado Springs, CO 80921

RE: Aspen Ranch  
Fountain, Colorado  
Updated Traffic Impact and Access Analysis  
LSC #184310

Dear Mr. Romano:

We have completed this updated traffic impact and access analysis for the proposed Aspen Ranch development in the City of Fountain. The site, shown in Figure 1, is to be located north of Kane Road and east of Link Road. Site access is proposed to Link Road and Crescent Moon Drive (a new north/south street).

This report is being prepared as part of a submittal to the City of Fountain. This report presents the estimated traffic impacts of the proposed development on the adjacent roads and the roadway system improvements to mitigate these traffic impacts. The report contains the following:

- A determination of the existing traffic and road conditions in the vicinity of the site, including lane geometry and traffic controls.
- The projected average weekday and peak-hour trips to be generated by the proposed development.
- The assignment of those trips on the adjacent roads.
- A projection of future background and resulting total traffic volumes on the roadway system.
- The resulting traffic impacts.

Based on the anticipated traffic impacts, LSC has made recommendations for roadway system improvements to mitigate these impacts.

## CRITERIA USED IN THIS ANALYSIS

City of Fountain Subdivision Regulations (2008)  
Trip Generation Estimate: ITE Trip Generation Manual 10<sup>th</sup> Edition  
City of Fountain Traffic Master Plan (2002)  
City of Fountain Street Design Standards Chart (January 2009)  
City of Colorado Springs Traffic Criteria Manual

## SITE DEVELOPMENT AND LAND USE

### Land Use

The approximately 60-acre Aspen Ranch site is currently undeveloped. The planned Eagleside residential development is located west of the site. The areas north, south, and east of the site are currently low-density residential and ranch land.

Figure 2 shows the proposed site plan. The site plan currently shows about 223 lots for single-family homes. However, to be conservative, this analysis assumes the site will be developed with 271 lots which is the maximum number of lots shown in the Overall Development Plan. A one-acre parcel northeast of the intersection of Link/Watchmen is planned to be developed for fire/public safety. A full-movement access is proposed to Link Road one-quarter mile north of Kane Road aligning with existing Watchmen Road. A new north/south street (Crescent Moon Drive) will form the east boundary of the site. Two full-movement access points are proposed to Crescent Moon Drive.

## ROADWAY AND TRAFFIC CONDITIONS

### Area Roadways

The roadways in the vicinity of the site are identified below, along with a brief description of each. The roadway system is shown in Figure 1.

- **Ohio Avenue** is a two-lane Community Arterial that extends east from Fountain Street to R.E.A. Road. Ohio Avenue has a posted speed limit of 35 miles per hour (mph) between Jimmy Camp Road and R.E.A. Road.
- **Kane Road** is a two-lane Community Arterial that extends east from R.E.A. Road to just east of Shumway Road. Kane Road is a paved road with one through lane in each direction west of Link Road and a gravel road east of Link Road.
- **Squirrel Creek Road** is a two-lane Community Arterial that extends east from Jimmy Camp Road. The *City of Fountain Comprehensive Development Plan* shows Squirrel Creek Road extended west to Fountain Mesa Road aligning with Comanche Village Drive. The posted speed limit on Squirrel Creek Road is 25 mph west of Link Road and 35 mph east of Link Road.

- **Link Road** is a two-lane Community Arterial extending east from Old Pueblo Road and then extending north to C&S Road/Marksheffel Road. The posted speed limit on Link Road is 40 mph in the vicinity of the site.

### **Future Major Thoroughfare Plans**

The *City of Fountain Traffic Master Plan* indicates that Ohio Avenue, Squirrel Creek Road, and Link Road are all classified as Community Arterials. As stated in the *City of Fountain Traffic Master Plan*:

*Community Arterial Streets serve as a means for the movement of traffic to locations along major highways and to commercial areas... Major intersection spacing along community arterials can occur every one-half mile... Over the next 20 years, Community Arterials will need to serve between 13,000 to 25,000 trips per day. The ultimate street width should accommodate either one or two lanes per direction with a center turn lane.*

The *City of Fountain Comprehensive Development Plan* has incorporated a Traffic and Circulation Plan that includes the extension and improvement of Fountain's system of roads and highways to provide a hierarchical grid of north/south and east/west connectors, which include Ohio Avenue, Squirrel Creek Road, and Link Road.

### **Existing Traffic Conditions**

Figure 3 shows the existing morning and afternoon peak-hour traffic volumes at the intersections of Link Road/Kane Road and Link Road/Watchmen Road. These are based on peak-hour traffic counts by LSC in November 2016 and December 2017. Figure 3 also shows estimated average weekday traffic volumes on Link Road and Kane Road based on the peak-hour counts. Traffic count data is attached.

### **Existing Intersection Level of Service**

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A represents control delay of less than 10 seconds for unsignalized and signalized intersections. LOS F represents control delay of more than 50 seconds for unsignalized intersections and more than 80 seconds for signalized intersections. Table 1 shows the level of service delay ranges.

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		

The intersections of Kane Road/Link Road and Watchman Road/Link Road were analyzed based on the unsignalized method of analysis procedures from the *Highway Capacity Manual, 6<sup>th</sup> Edition* by the Transportation Research Board. As shown in Figure 3, all movements at these intersections are currently operating at level of service (LOS) B or better during the peak hours. Please note that although the eastbound approach at the intersection of Watchman/Link is signed for right turns only, vehicles were observed making left-turn movements. The level of service reports are attached.

## BACKGROUND TRAFFIC

Background traffic is the traffic estimated to be on the adjacent roads without consideration of the proposed development. It includes through traffic as well as trips generated by adjacent developed and currently undeveloped parcels. Background traffic volumes for the year 2040 are shown in Figure 4. These volumes were estimated by LSC, based partly on the *City of Fountain Traffic Master Plan* and the *Kane Ranch Master Plan Traffic Study* prepared by Felsburg, Holt and Ullevig in October 2007. In addition, previous work completed in the area by LSC including Eagleside Ridge and the Cumberland Green Northeast Addition was used to develop 2040 background traffic volumes. The 2040 background traffic volumes assume only beginning development within Kane Ranch and assume Squirrel Creek Road **not yet** extended west to Comanche Village Drive via a new bridge.

The 2040 background traffic volumes shown in Figure 4 assume buildout of the Eagleside Ridge development which includes the area west of Link Road between Watchman Road and Ermel Road. As part of the Eagleside Ridge development Ohio Avenue is planned to be realigned between R.E.A. Road and Link Road. The sections of R.E.A. Road and Kane Road between Ohio and Link would be removed. The intersection of Ohio Avenue/Kane Road/Link Road is planned to be reconstructed as a one-lane roundabout. Figure 5 shows the projected 2040 background traffic volumes at the intersection of Ohio/Link/Kane should this development not occur prior to 2040.

## **TRIP GENERATION**

Estimates of the amount of traffic expected to be generated by the Aspen Ranch development have been made using nationally published trip generation rates by the Institute of Transportation Engineers (ITE) in its report *Trip Generation, 10th Edition, 2017*. The results of the trip generation estimate by phase are shown in Table 2.

As shown in the table, at buildout the site can be expected to generate about 2,585 “new” vehicle-trips on the average weekday (one-half entering and one-half exiting in a 24-hour period). During the morning peak hour (which occurs for one hour between 6:30 and 8:30 a.m.), about 56 vehicles would enter and 156 vehicles would exit the site. During the afternoon peak hour (which occurs for one hour between 4:30 and 6:30 p.m.), about 184 vehicles would enter and 111 vehicles would exit the site.

### **Trip Generation by Vehicle Type**

Table 2 also shows the estimated trip generation by vehicle type. As the ITE Trip Generation Manual does not provide information about vehicle type distribution the number of passenger vehicles and trucks shown on Table 2 are estimates by LSC. The estimated vehicle distribution during the average weekday was based on values taken from Table D-1 of the *El Paso County Engineering Criteria Manual (ECM)* which specifies the design values to be used for pavement design. The ECM requires the pavement design of Urban Local streets be based on four percent trucks. The peak-hour truck percentage was based on the requirements found in the City of Fountain Subdivision Regulars, which specify that a vehicle mix of two percent trucks be used in the analysis of both signalized and unsignalized intersections.

## **DISTRIBUTION AND ASSIGNMENT**

The directional distribution of site-generated traffic on the adjacent roads is an important factor in the determination of the traffic impacts of the site. The specific distribution estimates for the site-generated traffic are shown in Figure 6. The estimates are based on the following factors: the location of the site with respect to nearby employment, commercial, and activity centers including Fort Carson, Fountain, Colorado Springs, and Pueblo; the land use proposed for the site; the proposed access system for the site; and the roadway system serving the site.

When the distribution percentages are applied to the trip generation estimates shown in Table 2, the site-generated traffic volumes on the adjacent streets can be determined. Figure 7 shows the average weekday and peak-hour site-generated traffic volumes at buildout of the site.

## **TOTAL TRAFFIC**

Figure 8 shows the short-term total traffic volumes at intersections in the vicinity of the site. These volumes are based on the existing traffic volumes (from Figure 3) plus the site-generated traffic volumes (from Figure 7).

Figure 9 shows the 2040 total traffic volumes at intersections in the vicinity of the site. These volumes are based on the sum of 2040 background volumes (from Figure 4) plus the site-generated traffic volumes (from Figure 7). Figure 10 shows the projected 2040 total traffic volumes at the intersection of Ohio/Kane/Link should the area west of Link Road between Watchmen Road and Ermel Road not development before 2040.

## **PROJECTED INTERSECTION LEVEL OF SERVICE**

The intersections of Watchman/Link, Kane/Link, and Kane/Crescent Moon have been analyzed to determine the projected levels of service based on projected short-term and 2040 background and total traffic volumes. The results of the level of service analysis are shown in Figures 4, 5, 8, 9 and 10.

### **Link/Watchman**

The intersection of Link/Watchman is currently restricted to left-in/right-in/right-out only. This intersection is planned to be reconfigured as a full-movement intersection. All movements at this intersection are projected to operate at LOS C or better as a two-way, stop sign-controlled intersection based on the existing-plus-site-generated and 2040 traffic volumes during both the morning and afternoon peaks.

### **Link/Kane**

The intersection of Link/Kane is projected to operate at LOS C or better for all approaches during the peak hours as a two-way stop sign-controlled intersection with the addition of site-generated traffic. In the future, Ohio Avenue is planned to be realigned between R.E.A. Road and Link Road. The sections of R.E.A. Road and Kane Road between Ohio and Link would be removed. The intersection of Ohio Avenue/Kane Road/Link Road is planned to be reconstructed as a one-lane roundabout. This intersection is projected to operate at LOS B or better for all approaches based on the projected 2040 total traffic volumes as a one-lane roundabout. This intersection was analyzed using roundabout methods of analysis procedures from the *Highway Capacity Manual, 6<sup>th</sup> Edition* by the Transportation Research Board.

Should the areas west of Link Road between Watchmen Road and Ermel Road not be developed by 2040 and the intersection of Link/Kane remain as a two-way, stop sign-controlled intersection, the eastbound left-turn lane is projected to operate at LOS E during the morning peak hour and LOS F during the afternoon peak hour. If this intersection were to be converted to all-way, stop-

sign control (AWSC), the overall intersection level of service (weighted average of the delay on all approaches) would be LOS C during the peak hours.

### **Kane/Crescent Moon**

The future intersection of Kane/Crescent Moon is projected to operate at LOS A for all movements as a two-way, stop sign-controlled intersection during the peak hours based on the projected existing plus site-generated and 2040 total traffic volumes, assuming this intersection is stop sign-controlled.

### **TRAFFIC SIGNAL WARRANT ANALYSIS**

The intersection of Link/Watchman was analyzed to determine if a Four-Hour Vehicular Volume Traffic Signal Warrant combination-of-volumes threshold would be met or be close to being met based on the projected 2040 total peak-hour traffic volumes. This analysis using the peak hours is intended to provide an indication that a warrant may be met or is close to being met. In order for a Four-Hour Traffic Signal Warrant to be satisfied, the volume threshold would need to be met for both the morning and afternoon peak hours plus two additional hours of the day. For example, the four-hour warrant would be satisfied with the volume thresholds met for one hour in the morning, two hours (instead of the one-hour peak) during the afternoon peak period, and an hour during the mid-afternoon school peak.

Figure 11 shows the signal warrant analysis for the intersection of Link/Watchman. The analysis assumes the minor approach includes all the eastbound left-turn and through movements only. The projected 2040 total traffic volumes are **not** projected to meet the thresholds during either peak hour.

### **CONCLUSIONS/RECOMMENDATIONS**

#### **Trip Generation**

- At buildout the site can be expected to generate about 2,585 “new” vehicle-trips on the average weekday (one-half entering and one-half exiting in a 24-hour period). During the morning peak hour (which occurs for one hour between 6:30 and 8:30 a.m.), about 56 vehicles would enter and 156 vehicles would exit the site. During the afternoon peak hour (which occurs for one hour between 4:30 and 6:30 p.m.), about 184 vehicles would enter and 111 vehicles would exit the site.

#### **Level of Service**

- The intersection of Kane/Link is projected to operate at LOS C or better for all approaches during the peak hours as a two-way stop sign-controlled intersection with the addition of site-generated traffic. In the future the intersection of Ohio Avenue/Kane Road/Link Road is planned to be reconstructed as a one-lane roundabout. This intersection is projected

to operate at LOS B or better for all approaches based on the 2040 traffic volumes as a one-lane roundabout. Should the areas west of Link Road between Watchmen Road and Ermel Road not develop by 2040 and the intersection of Link/Kane remain as a two-way, stop sign-controlled intersection the eastbound left-turn lane is projected to operate at LOS E during the morning peak hour and LOS F during the afternoon peak hour. If this intersection were to be converted to all-way, stop sign control, the overall intersection level of service would be LOS C during the peak hours.

- The intersection of Link/Watchman is currently restricted to left-in/right-in/right-out only. This intersection is planned to be reconfigured as a full-movement intersection. All movements at this intersection are projected to operate at LOS C or better as a two-way stop sign-controlled intersection based on the existing-plus-site-generated and 2040 traffic volumes during both the morning and afternoon peaks.
- All movements at the future intersection of Kane/Crescent Moon are projected to operate at LOS A during the peak hours as a two-way stop sign-controlled intersection based on the projected 2040 total traffic volumes assuming this intersection is stop sign-controlled.

### **Roadway Functional Classifications**

- Figure 12 shows the recommended street classifications for streets within and adjacent to Aspen Ranch. These recommendations have been based on the City Traffic Master Plan (2002) and, in part, on the City of Fountain Street Design Standards Chart (January 2009). The recommendations are based on other key factors such as the primary purpose of the street and street continuity.
- Regarding Watchmen Road just east of Link Road:
  - This street section should be posted “No Parking.”
  - Only a single lane approach eastbound will be needed at the first north/south local street east of Link Road.

### **Auxiliary Turn Lane Recommendations**

#### **Link Road/Watchman Road**

- With the addition of site-generated traffic volumes a southbound left-turn lane will likely be required on Link Road approaching Watchmen Road. As the City of Fountain Street Design Standards Chart does not specify auxiliary turn lane lengths, LSC recommends this lane be designed based on the criteria found in the *City of Colorado Springs Engineering Criteria Manual*. Based on a posted speed limit of 40 mph this lane should be 240 feet long, plus a 160-foot taper.
- With the addition of site-generated traffic volumes a northbound right-turn deceleration lane will likely be required on Link Road approaching Watchmen Road. As the City of Fountain Street Design Standards Chart does not specify auxiliary turn lane lengths, LSC recommends this lane be designed based on the criteria found in the *City of Colorado*



*Springs Engineering Criteria Manual.* Based on a posted speed limit of 40 mph this lane should be 155 feet long, plus a 160-foot taper.

- LSC recommends a westbound right-turn bay on Watchmen at Link Road (in addition to the shared through/left-turn lane) be incorporated into the design and construction of Watchmen with this project. Additional right-of-way (in excess of the standard 50-foot right-of-way for a Local street) may need to be dedicated on the north side adjacent to the right-turn lane and taper.
- The eastbound approach currently provides a single-lane approach. With removal of the right turn island, this lane would be converted to a shared through/left/right lane.

#### Ohio Avenue/Kane Road/Link Road

- Right-of-way should be preserved at the Link Road/Kane Road intersection to allow the future construction of a roundabout. Without this roundabout, several auxiliary lanes would likely become necessary over time as the background traffic volumes increase. Based on existing plus site-generated traffic projections, neither a southbound left-turn lane nor a northbound right-turn lane would be warranted based on peak-hour turning volumes.

#### Kane/Crescent Moon Drive

- No auxiliary turn lanes will likely be required on Kane Road approaching Crescent Moon Drive with this development. Auxiliary lanes may be needed in the future depending on the density of development of nearby parcels along Crescent Moon Drive.

#### **Roadway Improvements**

- This development is responsible for upgrading the east side of Link Road from the northern property boundary to Kane Road.. If the timing works for the applicant, the work along Link Road may be completed concurrently with the project to lower Link Road north of the site. The development would also be responsible for Crescent Moon Drive from Kane Road to Watchmen Road. The applicant would reserve the right-of-way for a future extension of this street to the north (by others).
- An agreement has been made between Oakwood Homes, Aspen View Homes, and the City of Fountain to reconstruct Link Road. The agreement is to remove the hill on Link Road as you approach Squirrel Creek Road northbound and to share the cost of a 2" mill and overlay 24' wide from the south end of the hill removal construction to Kane Road. This project would be responsible for one-third of cost.
- If the city-wide traffic impact fee program (or interim fee) is not in- place at the time of platting, an estimate of relative traffic impacts at select offsite intersections would be included with the plat submittal.

### City of Fountain Transportation Impact Fees

- The applicant is willing to participate in the city-wide traffic impact fee program once developed. This includes any established "interim fee" that may be set by the city during the process to develop a permanent fee.
- It is our understanding from a meeting between the applicant and staff, that except for the Link Road project described in the previous paragraph, participation on an ad-hoc basis for individual off-site intersections and other off-site transportation projects would not be required. However, if the city-wide traffic impact fee program (or interim fee) is not in-place at the time of platting, an estimate of relative traffic impacts at select offsite intersections would be included with the plat submittal.

\* \* \* \* \*

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 1-12  
Traffic Count Reports  
Level of Service Reports

# Tables and Figures

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**Table 2**  
**Trip Generation Estimate**  
**Aspen Ranch**

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
210	Single-Family Detached Housing	271 DU <sup>(2)</sup>	9.44	0.19	0.56	0.62	0.37	2,558	50	150	169	99
(3)	Safety Center	1 station	---	---	---	---	---	27	6	6	15	12
<b>Total</b>								<b>2,585</b>	<b>56</b>	<b>156</b>	<b>184</b>	<b>111</b>
<b>Passenger Vehicles<sup>(4)</sup></b>								96%	98%	98%	98%	98%
								2,482	55	153	180	109
<b>Trucks</b>								4%	2%	2%	2%	2%
								103	1	3	4	2

Notes:

(1) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE)

(2) DU = dwelling unit

(3) Based on a traffic count conducted at the Falcon Fire Station located at the US Highway 24/Old Meridian Road intersection.

(4) The percentage of trucks projected during the average weekday is based on Table D-1 from El Paso County Engineering Criteria Manual which specifies the values to be used in pavement design calculations. The peak-hour trucks percentages are based on the 2% truck percentage required for the analysis of unsignalized intersections by the City of Fountain Subdivision Regulations.

Source: LSC Transportation Consultants, Inc.



Approximate Scale  
Scale: 1" = 2,000'

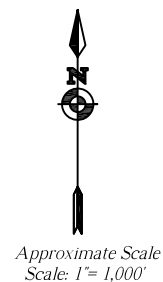
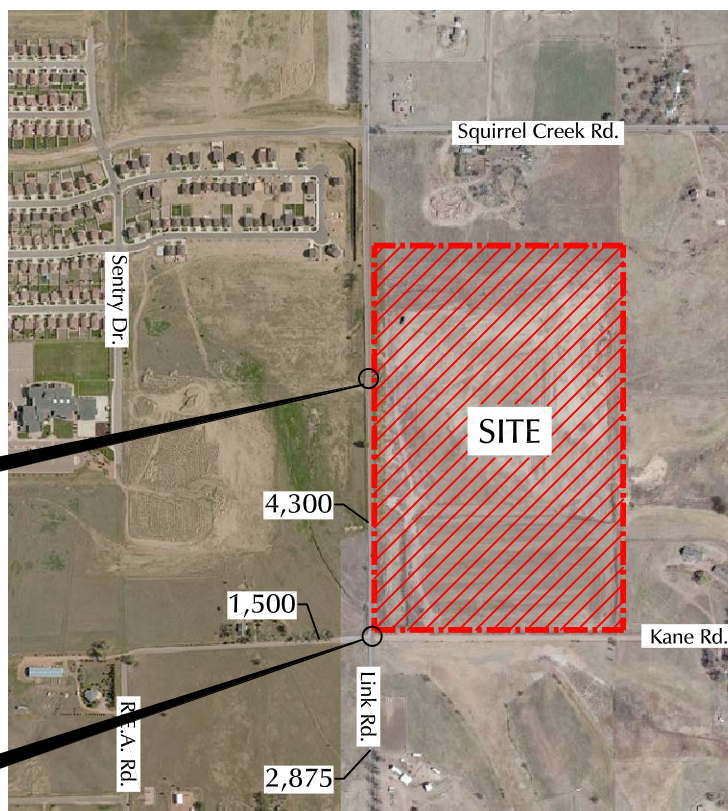
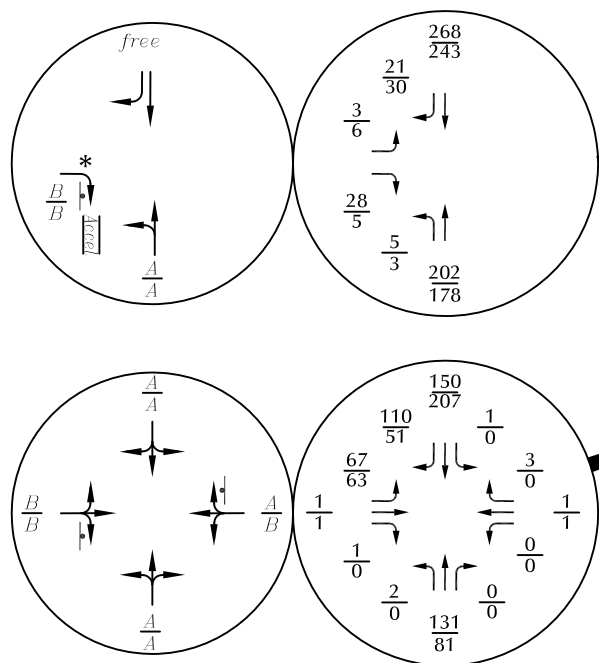
Figure 1  
**Vicinity  
Map**

Aspen Ranch (LSC #184310)





\* Although this approach is signed for right-turn only, vehicles were observed making left turns.



# LEGEND:

⊥ = Stop Sign

$\frac{26}{31}$  = AM Weekday Peak-Hour Traffic (vehicles per hour) Based on Counts  
PM Weekday Peak-Hour Traffic (vehicles per hour) by LSC Nov. 2016

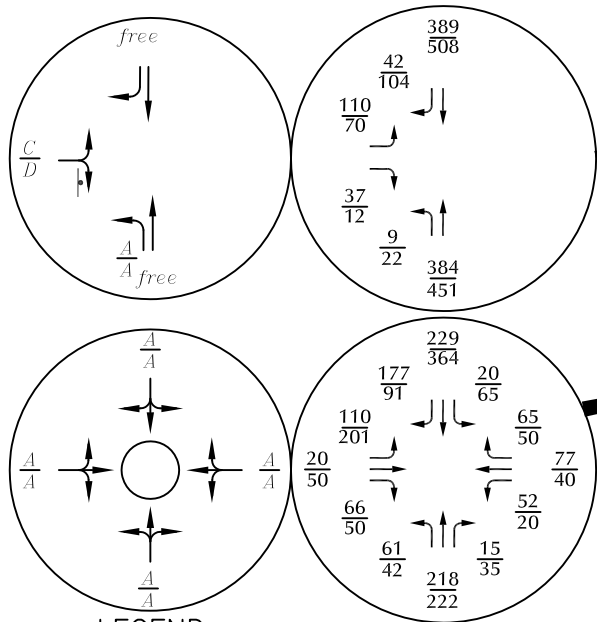
$\frac{A}{B}$  = AM Individual Movement Peak-Hour Level of Service  
PM Individual Movement Peak-Hour Level of Service

500 = Approximate Average Weekday Traffic (vehicles per day) (Estimate by LSC)

## Existing Traffic, Lane Geometry, Traffic Control and Level of Service

Aspen Ranch (LSC #184310)

Figure 3



#### LEGEND:

- = Stop Sign
- = Traffic Signal
- = Modern Roundabout

$\frac{26}{31}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)  
 $\frac{26}{31}$  = PM Weekday Peak-Hour Traffic (vehicles per hour)  
 $\frac{A}{B}$  = AM Individual Movement Peak-Hour Level of Service  
 $\frac{A}{B}$  = PM Individual Movement Peak-Hour Level of Service  
 $\frac{C}{D}$  = AM Entire Intersection Peak-Hour Level of Service  
 $\frac{C}{D}$  = PM Entire Intersection Peak-Hour Level of Service  
 500 = Average Weekday Traffic (vehicles per day)

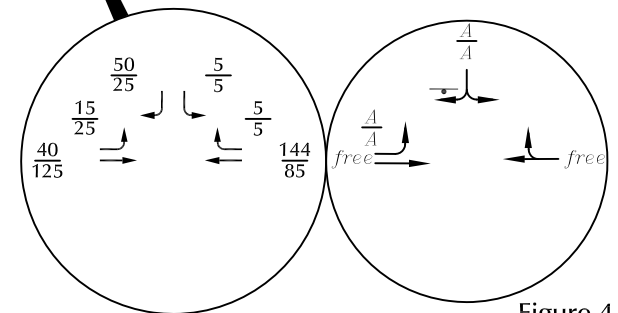
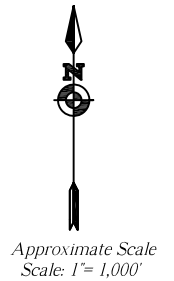
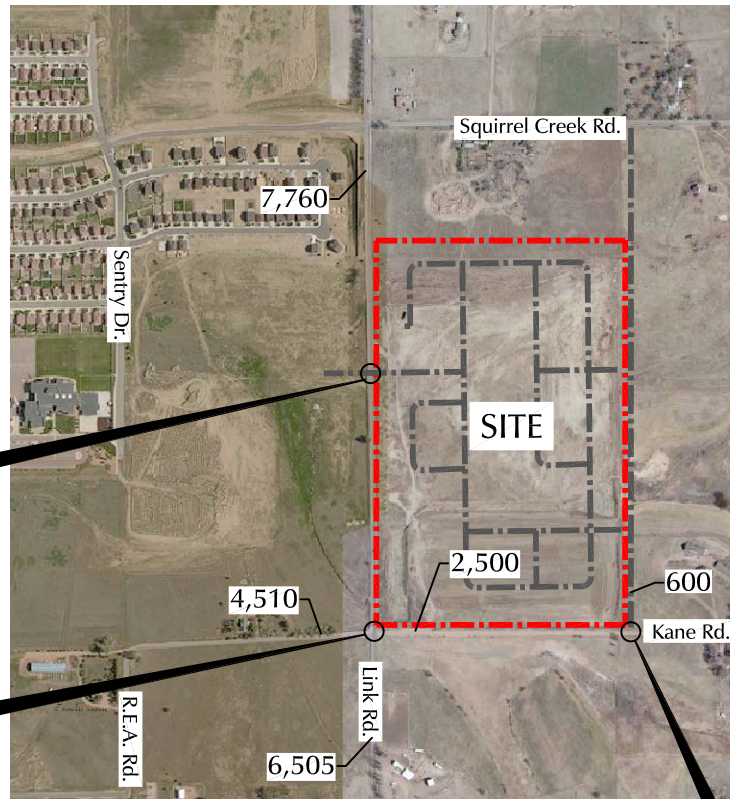
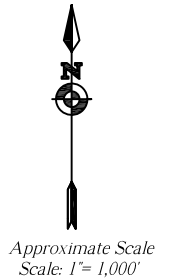
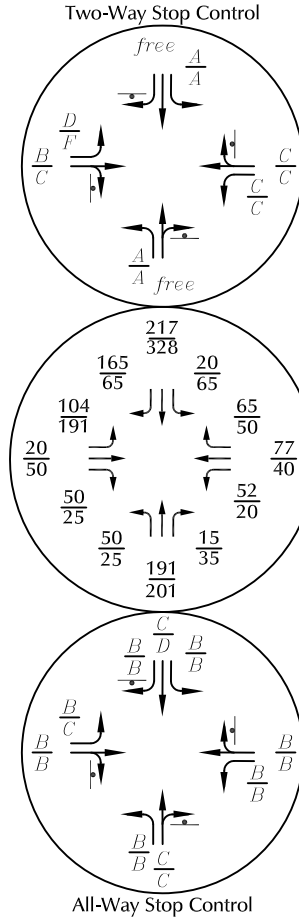


Figure 4

## 2040 Background Traffic, Lane Geometry, Traffic Control and Level of Service

Aspen Ranch (LSC #184310)





LEGEND:

⊥ = Stop Sign

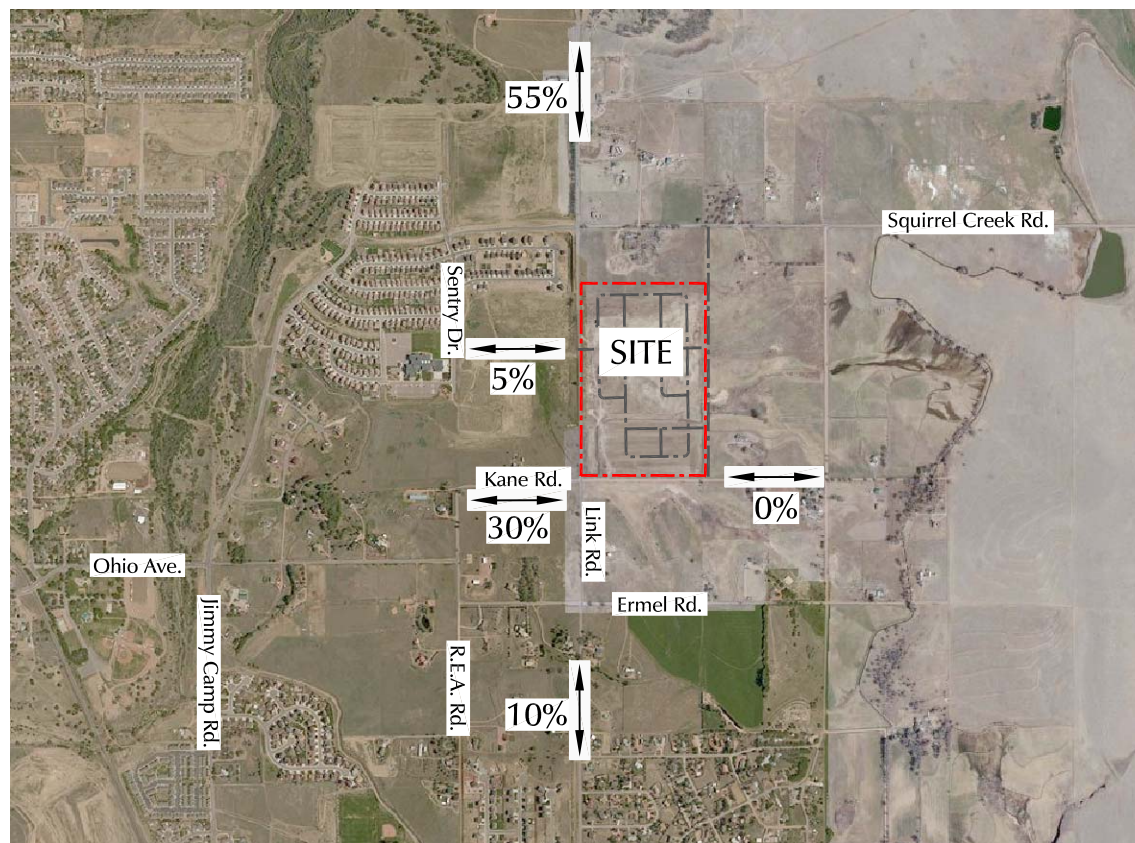
$\frac{26}{31}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)  
 PM Weekday Peak-Hour Traffic (vehicles per hour)  
 $\frac{A}{B}$  = AM Individual Movement Peak-Hour Level of Service  
 PM Individual Movement Peak-Hour Level of Service  
 500 = Average Weekday Traffic (vehicles per day)



# 2040 Background Traffic, Lane Geometry, Traffic Control and Level of Service Without Additional Development West of Link Road

Aspen Ranch (LSC #184310)

Figure 5



Approximate Scale  
Scale: 1" = 2,000'

LEGEND:



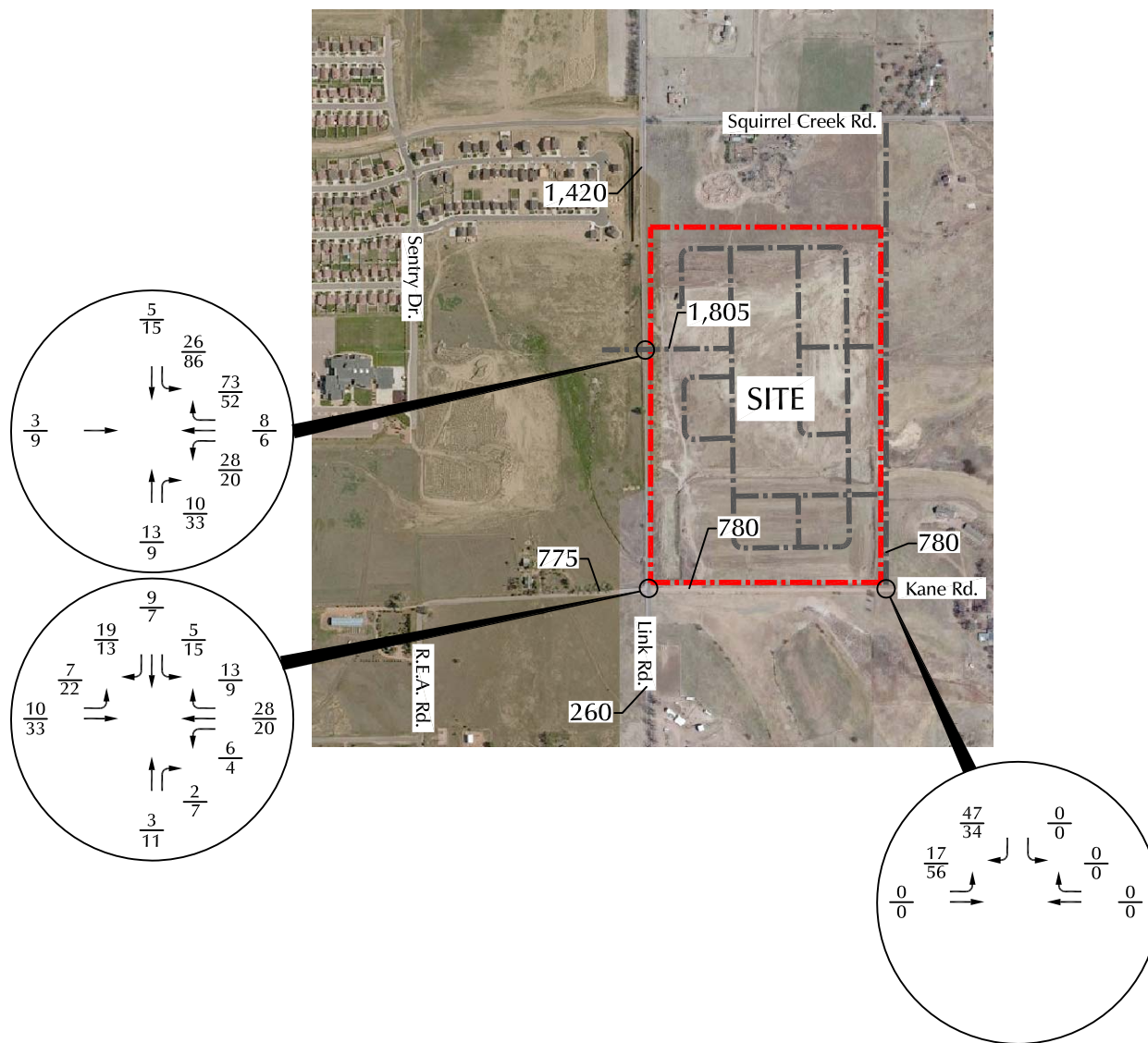
10% = Percent Directional Distribution



## Directional Distribution of Site-Generated Traffic

Aspen Ranch (LSC #164870)

Figure 6



LEGEND:

$\frac{26}{31}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)  
 $\frac{31}{26}$  = PM Weekday Peak-Hour Traffic (vehicles per hour)  
 500 = Average Weekday Traffic (vehicles per day)

Figure 7

# Assignment of Site-Generated Traffic

Aspen Ranch (LSC #184310)



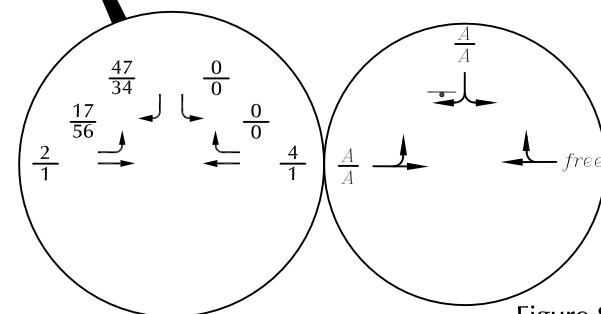
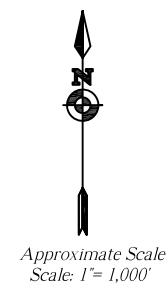
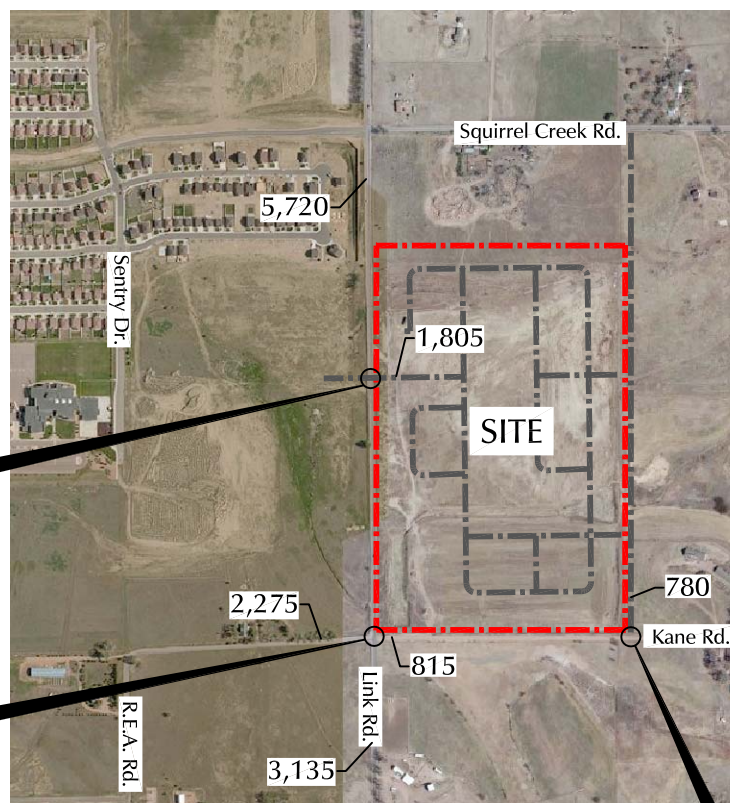
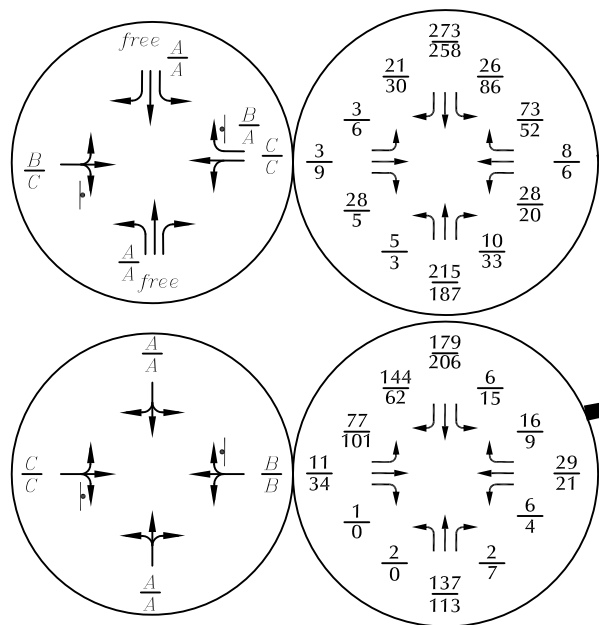


Figure 8

# LEGEND:

⊥ = Stop Sign

$\frac{26}{31}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)  
PM Weekday Peak-Hour Traffic (vehicles per hour)

$\frac{A}{B}$  = AM Individual Movement Peak-Hour Level of Service  
PM Individual Movement Peak-Hour Level of Service

$\frac{A}{B}$  = AM Individual Movement Peak-Hour Level of Service  
PM Individual Movement Peak-Hour Level of Service

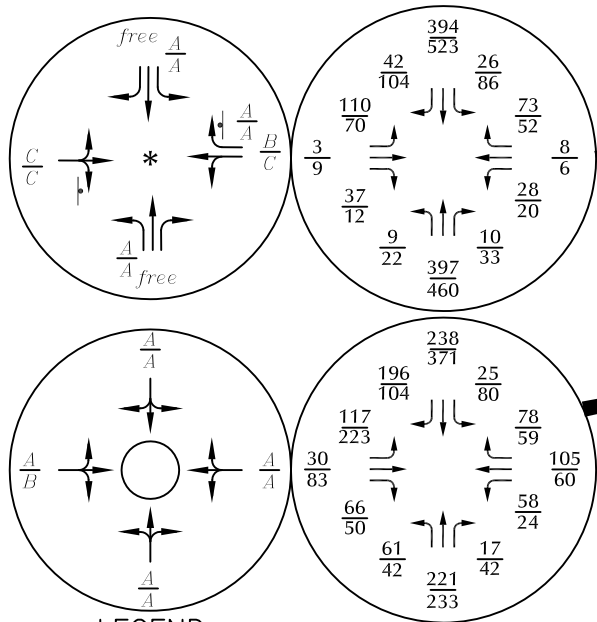
500 = Average Weekday Traffic (vehicles per day)



## Existing + Site-Generated Traffic, Lane Geometry Traffic Control and Level of Service

Aspen Ranch (LSC #184310)

\* Based on SimTraffic simulation results



#### LEGEND:

- = Stop Sign
- = Traffic Signal
- = Modern Roundabout

$\frac{26}{31}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)  
 $\frac{31}{26}$  = PM Weekday Peak-Hour Traffic (vehicles per hour)  
 $\frac{A}{B}$  = AM Individual Movement Peak-Hour Level of Service  
 $\frac{B}{A}$  = PM Individual Movement Peak-Hour Level of Service  
 $\frac{C}{D}$  = AM Entire Intersection Peak-Hour Level of Service  
 $\frac{D}{C}$  = PM Entire Intersection Peak-Hour Level of Service  
 500 = Average Weekday Traffic (vehicles per day)

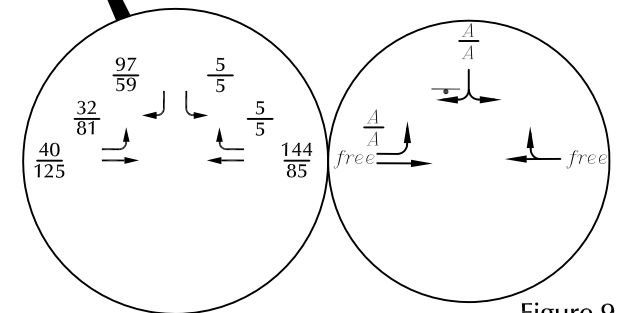
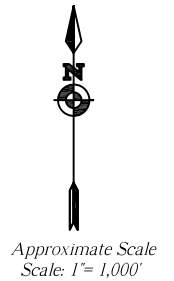
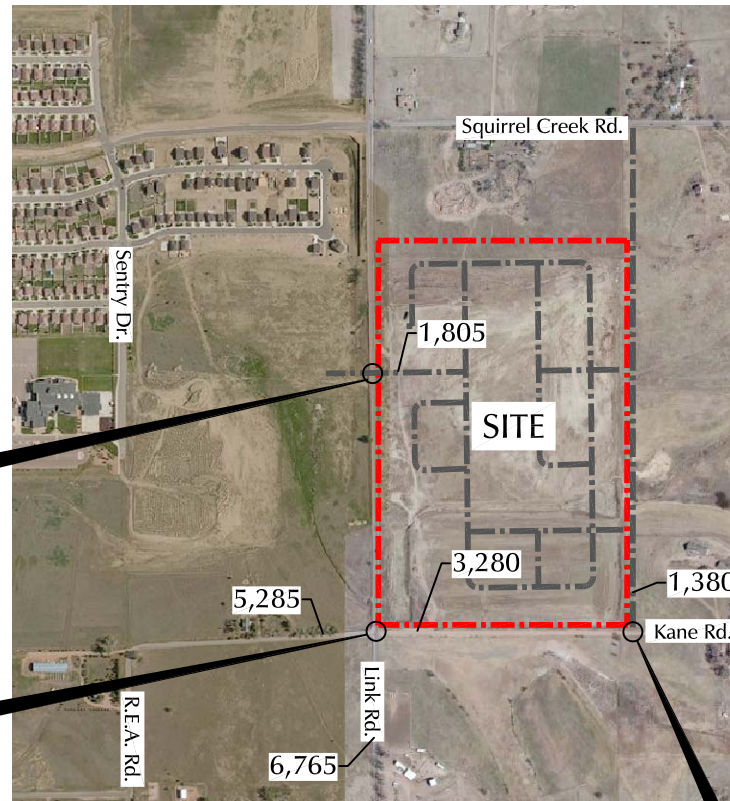
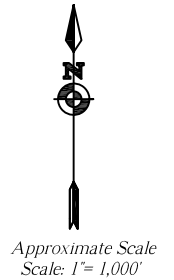
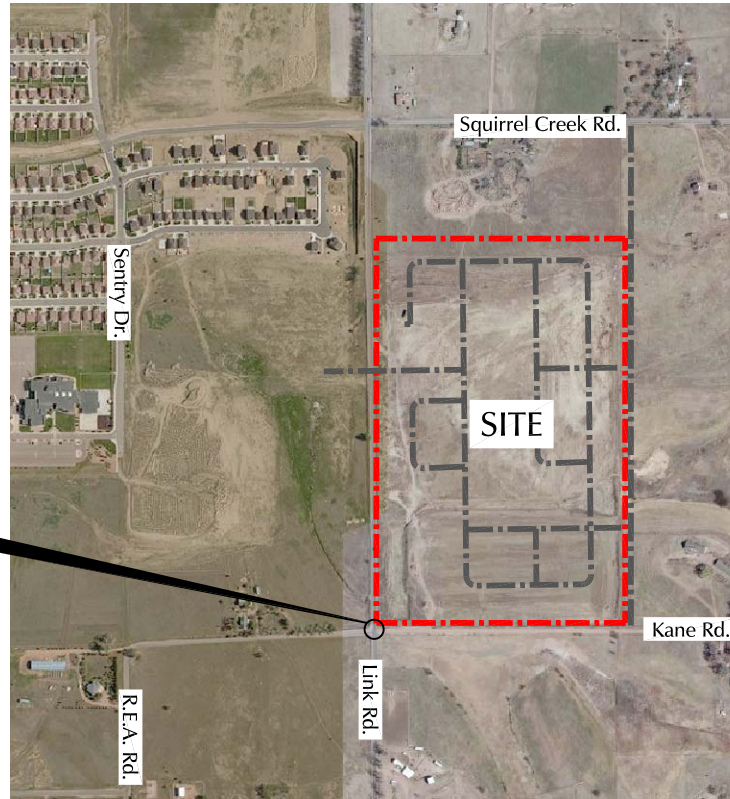
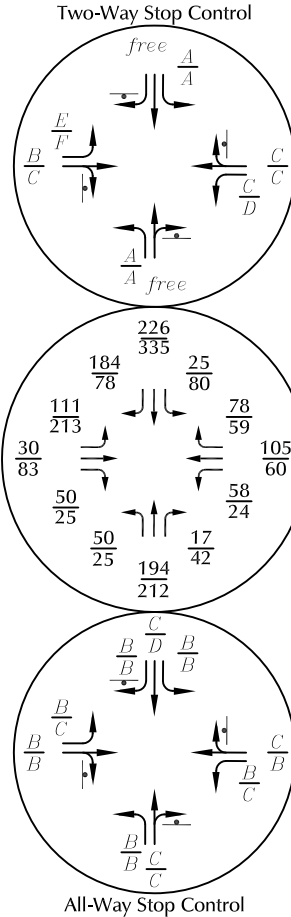


Figure 9

## 2040 Total Traffic, Lane Geometry, Traffic Control and Level of Service

Aspen Ranch (LSC #184310)



LEGEND:

⊥ = Stop Sign

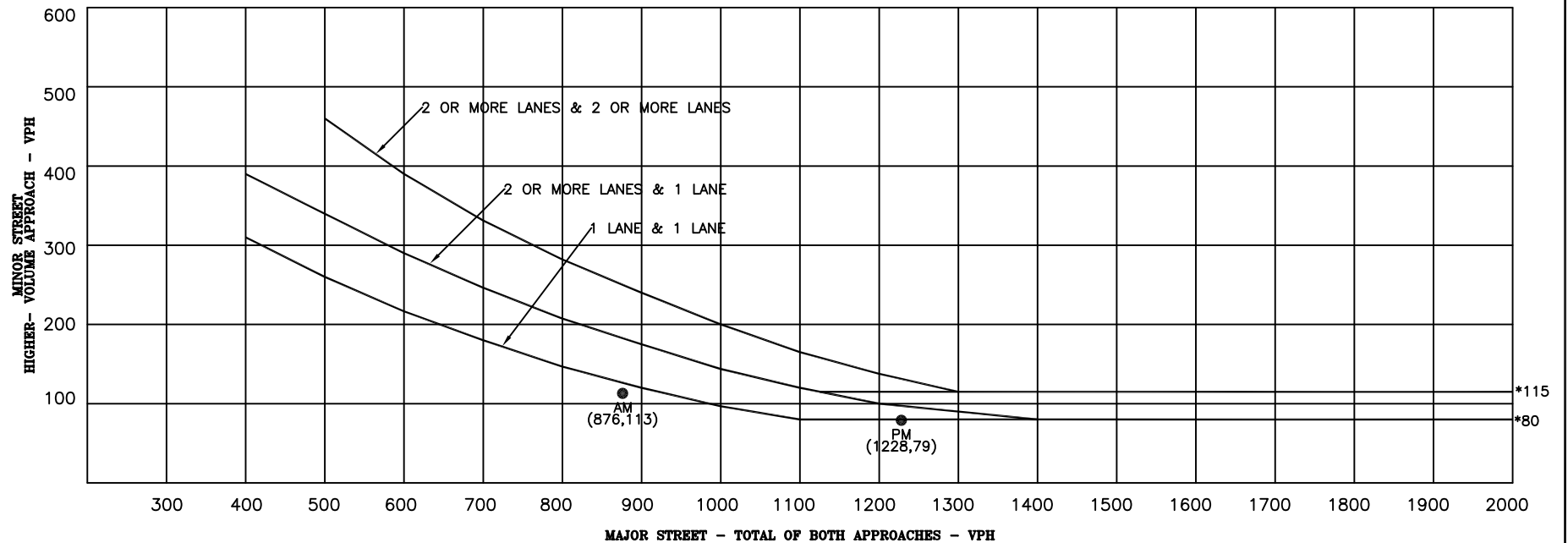
$\frac{26}{31}$  = AM Weekday Peak-Hour Traffic (vehicles per hour)  
 PM Weekday Peak-Hour Traffic (vehicles per hour)  
 $\frac{A}{B}$  = AM Individual Movement Peak-Hour Level of Service  
 PM Individual Movement Peak-Hour Level of Service  
 500 = Average Weekday Traffic (vehicles per day)



Figure 10  
 2040 Total Traffic, Lane Geometry,  
 Traffic Control and Level of Service  
 Without Additional Development West of Link Road

Aspen Ranch (LSC #184310)

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



\* Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 11

# Signal Warrant Analysis Link Road/Watchmen Road

Aspen Ranch (LSC #184310)



## LEGEND:

● = 2040 Total Traffic Volume







# Traffic Counts

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LSC Transportation Consultants, Inc.  
**545 E. Pikes Peak Ave., #210**  
**Colorado Springs, CO 80903**  
**(719) 633-2868**

LSC Transportation Consultants, Inc.

File Name : Link Rd-Kane Rd AM  
 Site Code : 00164870  
 Start Date : 11/17/2016  
 Page No : 1

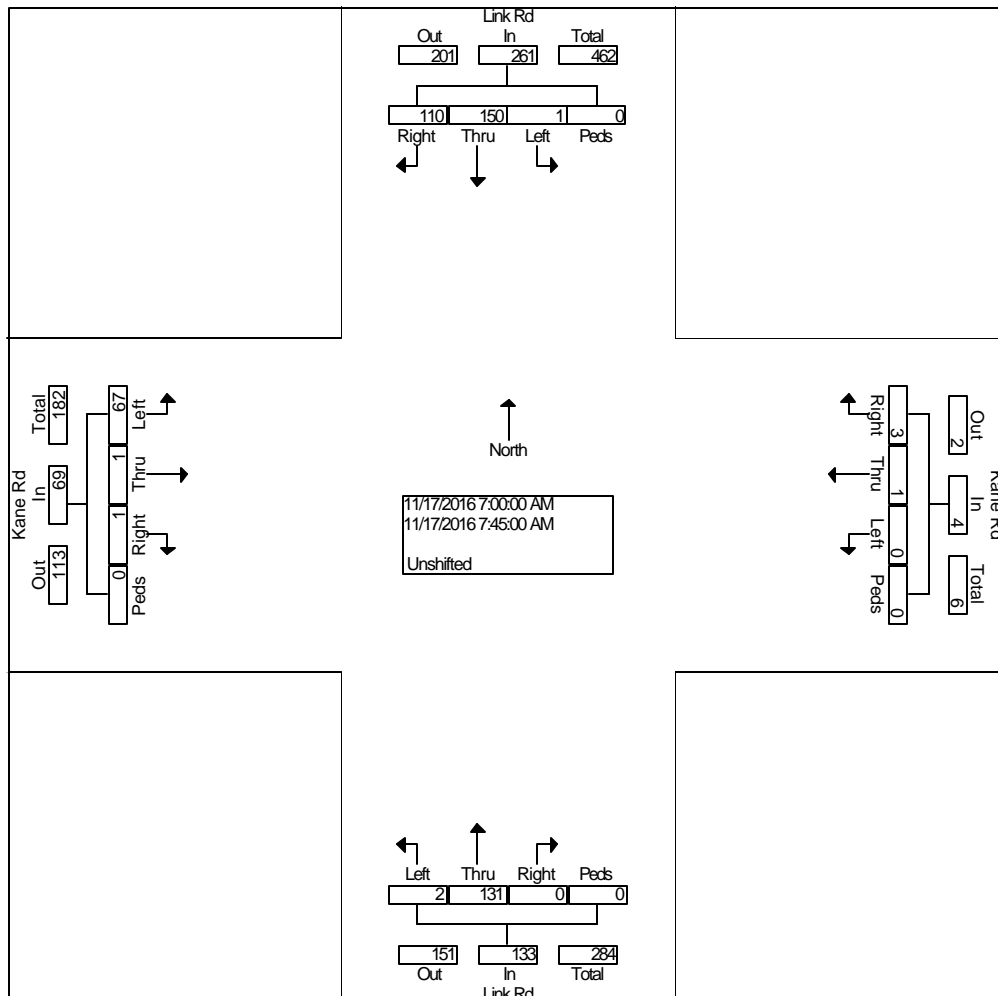
Groups Printed- Unshifted

	Link Rd From North				Kane Rd From East				Link Rd From South				Kane Rd From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	19	19	0	0	0	0	0	0	0	24	1	0	0	0	8	0	71
06:45 AM	24	20	0	0	0	0	0	0	0	27	1	0	0	0	6	0	78
Total	43	39	0	0	0	0	0	0	0	51	2	0	0	0	14	0	149
07:00 AM	31	26	0	0	1	1	0	0	0	39	0	0	0	0	18	0	116
07:15 AM	23	36	1	0	1	0	0	0	0	37	0	0	0	1	16	0	115
07:30 AM	35	61	0	0	0	0	0	0	0	25	1	0	1	0	11	0	134
07:45 AM	21	27	0	0	1	0	0	0	0	30	1	0	0	0	22	0	102
Total	110	150	1	0	3	1	0	0	0	131	2	0	1	1	67	0	467
08:00 AM	10	16	0	0	0	0	0	0	0	22	0	0	0	0	6	0	54
08:15 AM	9	10	1	0	1	0	0	0	0	18	0	0	0	0	7	0	46
Grand Total	172	215	2	0	4	1	0	0	0	222	4	0	1	1	94	0	716
Apprch %	44.2	55.3	0.5	0.0	80.0	20.0	0.0	0.0	0.0	98.2	1.8	0.0	1.0	1.0	97.9	0.0	
Total %	24.0	30.0	0.3	0.0	0.6	0.1	0.0	0.0	0.0	31.0	0.6	0.0	0.1	0.1	13.1	0.0	

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File Name : Link Rd-Kane Rd AM  
 Site Code : 00164870  
 Start Date : 11/17/2016  
 Page No : 2

	Link Rd From North					Kane Rd From East					Link Rd From South					Kane Rd From West					
Start Time	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	11	15	1	0	261	3	1	0	0	4	0	13	2	0	133	1	1	67	0	69	467
	0	0										1									
Percent	42.	57.	0.4	0.0		75.	25.	0.0	0.0		0.0	98.	1.5	0.0		1.4	1.4	97.	0.0		
	1	5				0	0					5						1			
07:30																					
Volume	35	61	0	0	96	0	0	0	0	0	0	25	1	0	26	1	0	11	0	12	134
Peak																					
Factor																					0.871
High Int.	07:30 AM					07:00 AM					07:00 AM					07:45 AM					
Volume	35	61	0	0	96	1	1	0	0	2	0	39	0	0	39	0	0	22	0	22	
Peak																					
Factor	0.68					0.50					0.85					0.78					
	0					0					3					4					



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**Colorado Springs, CO 80903**  
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 Site Code : 00164870  
 Start Date : 11/17/2016  
 Page No : 1

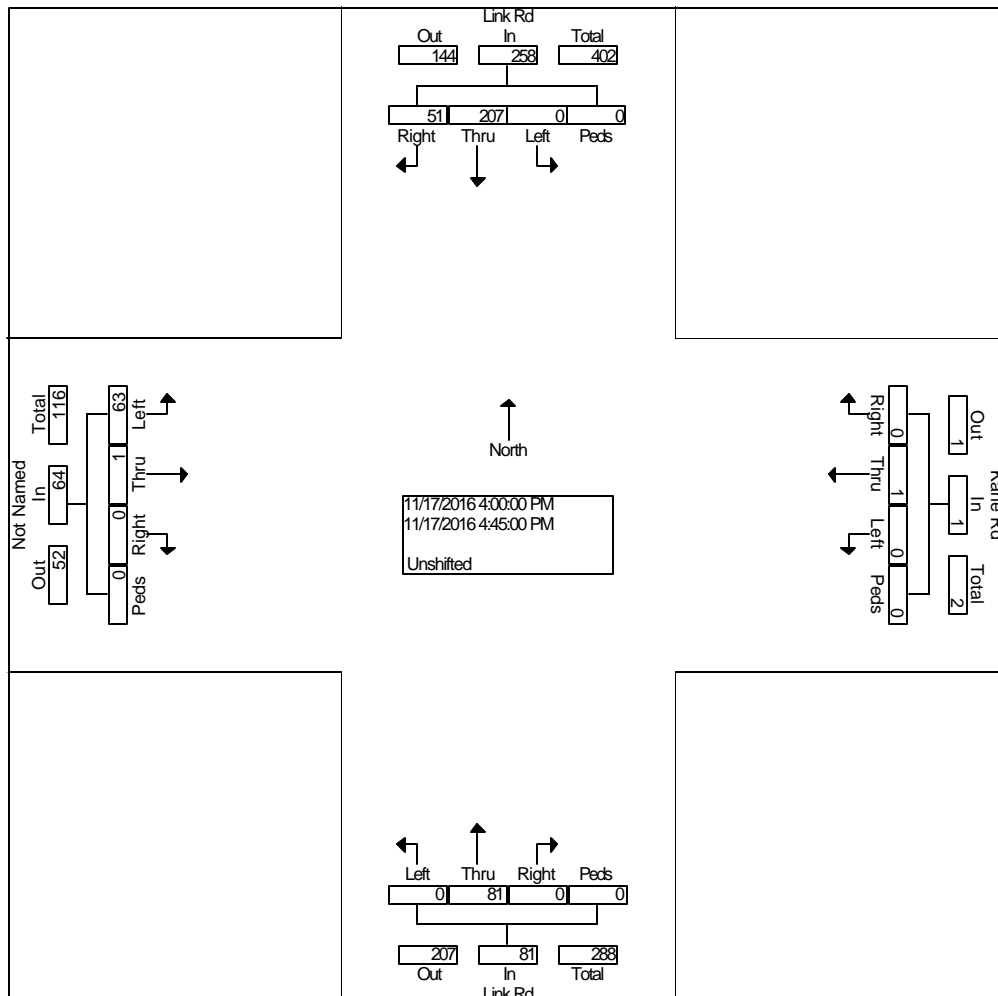
Groups Printed- Unshifted

	Link Rd From North				Kane Rd From East				Link Rd From South				From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	9	50	0	0	0	0	0	0	0	23	0	0	0	0	18	0	100
04:15 PM	15	58	0	0	0	0	0	0	0	19	0	0	0	0	15	0	107
04:30 PM	16	54	0	0	0	1	0	0	0	19	0	0	0	1	14	0	105
04:45 PM	11	45	0	0	0	0	0	0	0	20	0	0	0	0	16	0	92
Total	51	207	0	0	0	1	0	0	0	81	0	0	0	1	63	0	404
05:00 PM	19	43	0	0	0	0	0	0	0	17	1	0	0	0	19	0	99
05:15 PM	9	43	0	0	0	0	0	0	0	26	0	0	0	0	17	0	95
05:30 PM	13	39	0	0	0	0	0	0	0	16	0	0	0	1	16	0	85
05:45 PM	11	43	0	0	0	0	0	0	0	15	0	0	0	0	7	0	76
Total	52	168	0	0	0	0	0	0	0	74	1	0	0	1	59	0	355
Grand Total	103	375	0	0	0	1	0	0	0	155	1	0	0	2	122	0	759
Apprch %	21.5	78.5	0.0	0.0	0.0	100.0	0.0	0.0	0.0	99.4	0.6	0.0	0.0	1.6	98.4	0.0	
Total %	13.6	49.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	20.4	0.1	0.0	0.0	0.3	16.1	0.0	

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File Name : Link Rd-Kane Rd PM  
 Site Code : 00164870  
 Start Date : 11/17/2016  
 Page No : 2

	Link Rd From North					Kane Rd From East					Link Rd From South					From West					
Start Time	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	51	207	0	0	258	0	1	0	0	1	0	81	0	0	81	0	1	63	0	64	404
Percent	19.8	80.2	0.0	0.0		0.0	10.0	0.0	0.0		0.0	10.0	0.0	0.0		0.0	1.6	98.4	0.0		
04:15 Volume	15	58	0	0	73	0	0	0	0	0	0	19	0	0	19	0	0	15	0	15	107
Peak Factor																					0.944
High Int.	04:15 PM					04:30 PM					04:00 PM					04:00 PM					
Volume	15	58	0	0	73	0	1	0	0	1	0	23	0	0	23	0	0	18	0	18	
Peak Factor	0.88					0.25					0.88					0.88					
	4										0										



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LSC Transportation Consultants, Inc.

File Name : Link Rd - Watchmen Rd AM

Site Code : 00174460

Start Date : 12/06/2017

Page No : 1

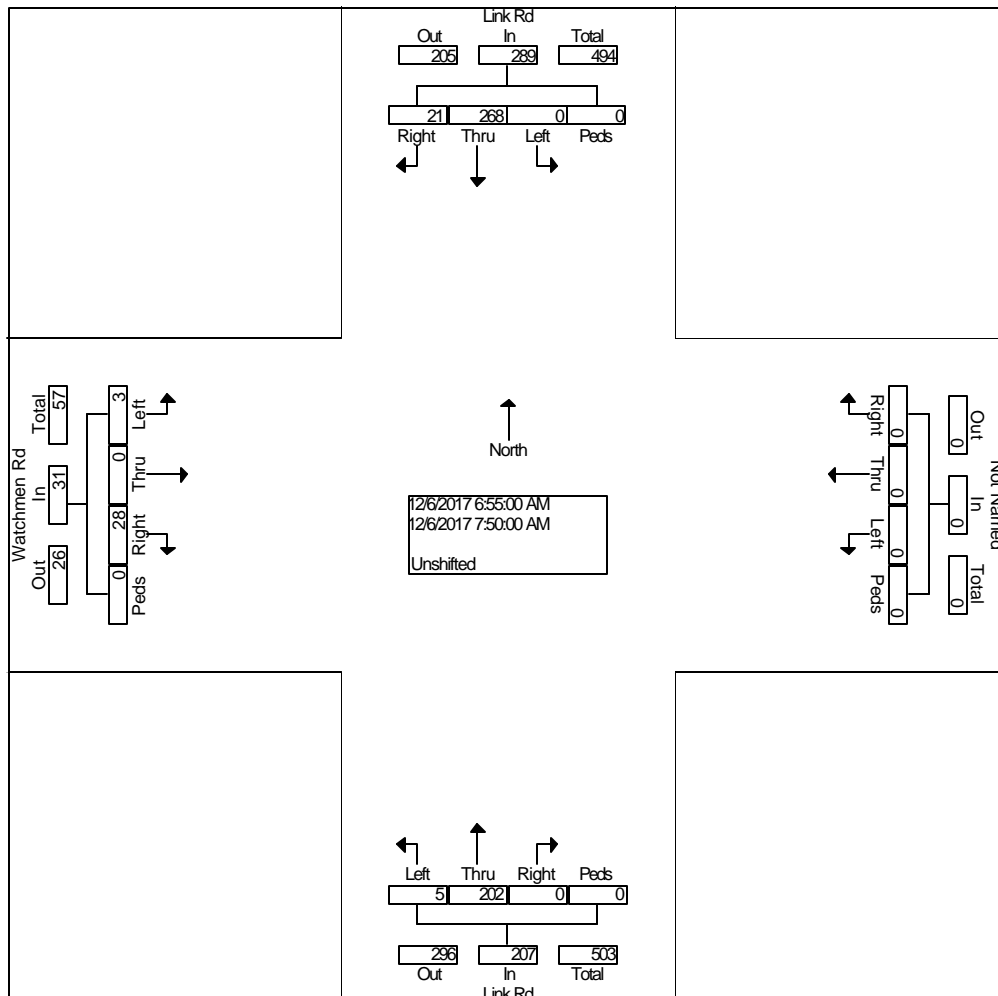
Groups Printed- Unshifted

	Link Rd From North				From East				Link Rd From South				Watchmen Rd From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	0	8	0	0	0	0	0	0	0	14	0	0	1	0	0	0	23
06:35 AM	1	6	0	0	0	0	0	0	0	12	0	0	0	0	0	0	19
06:40 AM	2	6	0	0	0	0	0	0	0	21	0	0	0	0	1	0	30
06:45 AM	1	22	0	0	0	0	0	0	0	11	1	0	1	0	0	0	36
06:50 AM	4	14	0	0	0	0	0	0	0	12	2	0	1	0	1	0	34
06:55 AM	5	15	0	0	0	0	0	0	0	24	0	0	3	0	1	0	48
Total	13	71	0	0	0	0	0	0	0	94	3	0	6	0	3	0	190
07:00 AM	3	16	0	0	0	0	0	0	0	19	0	0	2	0	0	0	40
07:05 AM	2	29	0	0	0	0	0	0	0	27	0	0	2	0	0	0	60
07:10 AM	8	16	0	0	0	0	0	0	0	14	3	0	3	0	0	0	44
07:15 AM	0	19	0	0	0	0	0	0	0	15	0	0	3	0	2	0	39
07:20 AM	2	24	0	0	0	0	0	0	0	18	2	0	3	0	0	0	49
07:25 AM	0	21	0	0	0	0	0	0	0	11	0	0	5	0	0	0	37
07:30 AM	0	21	0	0	0	0	0	0	0	13	0	0	4	0	0	0	38
07:35 AM	0	22	0	0	0	0	0	0	0	12	0	0	1	0	0	0	35
07:40 AM	1	30	0	0	0	0	0	0	0	10	0	0	1	0	0	0	42
07:45 AM	0	33	0	0	0	0	0	0	0	18	0	0	1	0	0	0	52
07:50 AM	0	22	0	0	0	0	0	0	0	21	0	0	0	0	0	0	43
07:55 AM	1	14	0	0	0	0	0	0	0	12	1	0	0	0	1	0	29
Total	17	267	0	0	0	0	0	0	0	190	6	0	25	0	3	0	508
08:00 AM	0	12	0	0	0	0	0	0	0	15	0	0	1	0	0	0	28
08:05 AM	0	16	0	0	0	0	0	0	0	11	0	0	0	0	0	0	27
08:10 AM	0	9	0	0	0	0	0	0	0	13	1	0	0	0	0	0	23
08:15 AM	0	8	0	0	0	0	0	0	0	12	1	0	0	0	0	0	21
08:20 AM	0	8	0	0	0	0	0	0	0	14	0	0	0	0	1	0	23
08:25 AM	1	17	0	0	0	0	0	0	0	16	0	0	1	0	1	0	36
Grand Total	31	408	0	0	0	0	0	0	0	365	11	0	33	0	8	0	856
Apprch %	7.1	92.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.1	2.9	0.0	80.5	0.0	19.5	0.0	
Total %	3.6	47.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.6	1.3	0.0	3.9	0.0	0.9	0.0	

# Counts by LSC

File Name : Link Rd - Watchmen Rd AM  
 Site Code : 00174460  
 Start Date : 12/06/2017  
 Page No : 2

	Link Rd From North					From East					Link Rd From South					Watchmen Rd From West					
Start Time	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:25 AM - Peak 1 of 1																					
Intersection	06:55 AM																				
Volume	21	26	0	0	289	0	0	0	0	0	0	20	5	0	207	28	0	3	0	31	527
Percent	7.3	92.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	97.6	2.4	0.0		90.3	0.0	9.7	0.0		
07:05																					
Volume	2	29	0	0	31	0	0	0	0	0	0	27	0	0	27	2	0	0	0	2	60
Peak Factor																					0.732
High Int.	07:45 AM					6:25:00 AM					07:05 AM					07:15 AM					
Volume	0	33	0	0	33	0	0	0	0	0	0	27	0	0	27	3	0	2	0	5	
Peak Factor																					0.517



Counts by LSC

LSC Transportation Consultants, Inc.

File Name : Link Rd - Watchmen Rd Schl

Site Code : 00174460

Start Date : 12/06/2017

Page No : 1

Groups Printed- Unshifted

	Link Rd From North				From East				Link Rd From South				Watchmen Rd From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
02:00 PM	0	8	0	0	0	0	0	0	0	9	0	0	0	0	0	0	17
02:05 PM	0	14	0	0	0	0	0	0	0	1	0	0	0	0	0	0	15
02:10 PM	0	11	0	0	0	0	0	0	0	4	1	0	0	0	0	0	16
02:15 PM	0	12	0	0	0	0	0	0	0	8	0	0	1	0	0	0	21
02:20 PM	0	11	0	0	0	0	0	0	0	2	1	0	1	0	0	0	15
02:25 PM	1	11	0	0	0	0	0	0	0	7	0	0	0	0	1	0	20
02:30 PM	0	10	0	0	0	0	0	0	0	9	0	0	1	0	0	0	20
02:35 PM	0	6	0	0	0	0	0	0	0	16	1	0	3	0	0	0	26
02:40 PM	2	11	0	0	0	0	0	0	0	14	0	0	0	0	0	0	27
02:45 PM	2	8	0	0	0	0	0	0	0	3	0	0	1	0	0	0	14
02:50 PM	0	13	0	0	0	0	0	0	0	10	0	0	1	0	0	0	24
02:55 PM	1	17	0	0	0	0	0	0	0	10	1	0	0	0	0	0	29
Total	6	132	0	0	0	0	0	0	0	93	4	0	8	0	1	0	244
03:00 PM	0	19	0	0	0	0	0	0	0	10	0	0	0	0	0	0	29
03:05 PM	1	16	0	0	0	0	0	0	0	8	0	0	1	0	0	0	26
03:10 PM	0	14	0	0	0	0	0	0	0	13	0	0	2	0	0	0	29
03:15 PM	1	17	0	0	0	0	0	0	0	8	0	0	0	0	0	0	26
03:20 PM	2	21	0	0	0	0	0	0	0	27	1	0	0	0	0	0	51
03:25 PM	2	14	0	0	0	0	0	0	0	24	0	0	0	0	1	0	41
03:30 PM	2	12	0	0	0	0	0	0	0	46	2	0	0	0	1	0	63
03:35 PM	1	20	0	0	0	0	0	0	0	43	4	0	0	0	1	0	69
03:40 PM	4	15	0	0	0	0	0	0	0	23	2	0	0	0	0	0	44
03:45 PM	3	17	0	0	0	0	0	0	0	10	1	0	1	0	0	0	32
03:50 PM	4	20	0	0	0	0	0	0	0	12	0	0	0	0	1	0	37
03:55 PM	2	21	0	0	0	0	0	0	0	14	0	0	0	0	0	0	37
Total	22	206	0	0	0	0	0	0	0	238	10	0	4	0	4	0	484
Grand Total	28	338	0	0	0	0	0	0	0	331	14	0	12	0	5	0	728
Apprch %	7.7	92.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	95.9	4.1	0.0	70.6	0.0	29.4	0.0	
Total %	3.8	46.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.5	1.9	0.0	1.6	0.0	0.7	0.0	



# Counts by LSC

File Name : Link Rd - Watchmen Rd Schl  
 Site Code : 00174460  
 Start Date : 12/06/2017  
 Page No : 2

	Link Rd From North					From East					Link Rd From South					Watchmen Rd From West					
Start Time	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Int. Total
Peak Hour	From 02:00 PM to 03:55 PM - Peak 1 of 1																				
Intersection	03:00 PM																				
Volume	22	206	0	0	228	0	0	0	0	0	0	238	10	0	248	4	0	4	0	8	484
Percent	9.6	90.4	0.0	0.0		0.0	0.0	0.0	0.0		0.0	96.0	4.0	0.0		50.0	0.0	50.0	0.0		
03:35																					
Volume	1	20	0	0	21	0	0	0	0	0	0	43	4	0	47	0	0	1	0	1	69
Peak Factor																					0.585
High Int.	03:50 PM					1:55:00 PM					03:30 PM					03:10 PM					
Volume	4	20	0	0	24	0	0	0	0	0	0	46	2	0	48	2	0	0	0	2	
Peak Factor																					
						</															

Counts by LSC

LSC Transportation Consultants, Inc.

File Name : Link Rd - Watchmen Rd PM

Site Code : 00174460

Start Date : 12/06/2017

Page No : 1

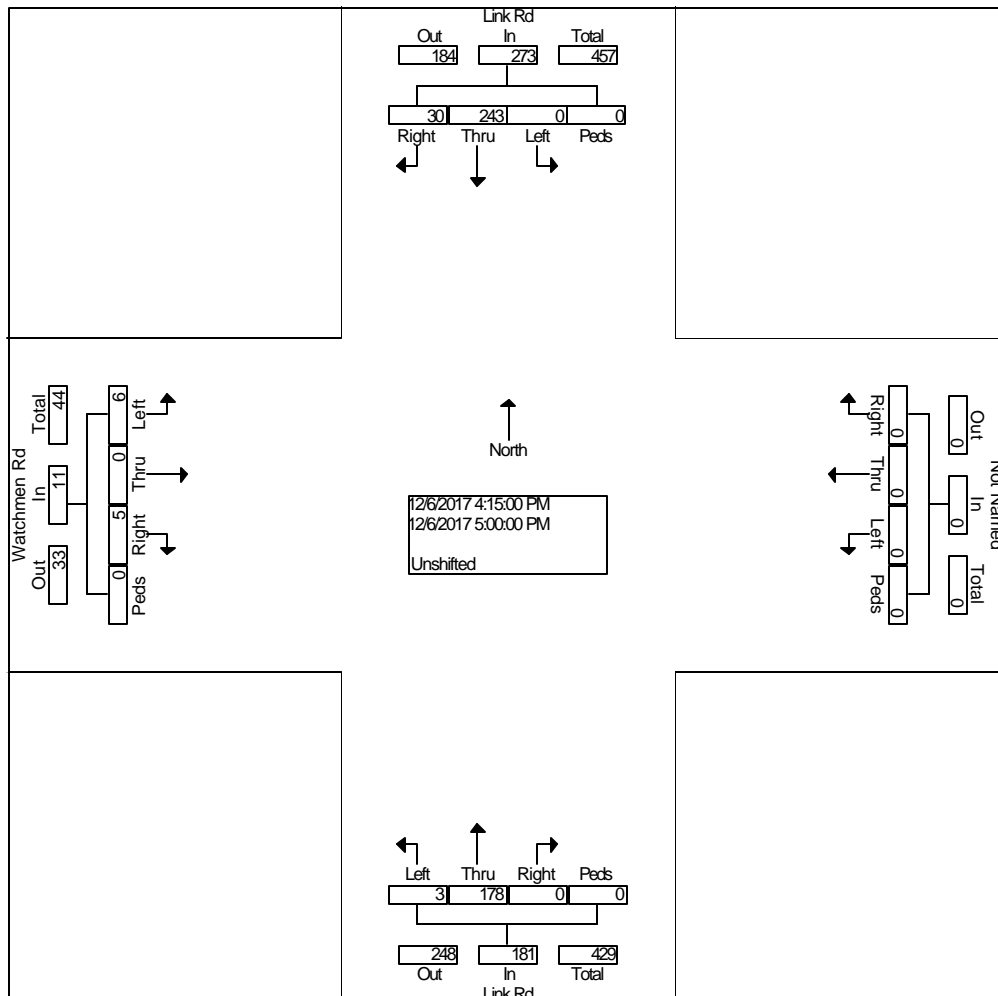
Groups Printed- Unshifted

	Link Rd From North				From East				Link Rd From South				Watchmen Rd From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	0	45	0	0	0	0	0	0	0	41	1	0	2	0	0	0	89
04:15 PM	11	72	0	0	0	0	0	0	0	41	0	0	0	0	2	0	126
04:30 PM	4	56	0	0	0	0	0	0	0	40	1	0	3	0	2	0	106
04:45 PM	8	63	0	0	0	0	0	0	0	44	1	0	1	0	0	0	117
Total	23	236	0	0	0	0	0	0	0	166	3	0	6	0	4	0	438
05:00 PM	7	52	0	0	0	0	0	0	0	53	1	0	1	0	2	0	116
05:15 PM	3	64	0	0	0	0	0	0	0	46	2	0	2	0	1	0	118
05:30 PM	5	63	0	0	0	0	0	0	0	40	1	0	2	0	0	0	111
05:45 PM	4	60	0	0	0	0	0	0	0	39	1	0	2	0	1	0	107
Total	19	239	0	0	0	0	0	0	0	178	5	0	7	0	4	0	452
Grand Total	42	475	0	0	0	0	0	0	0	344	8	0	13	0	8	0	890
Apprch %	8.1	91.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	97.7	2.3	0.0	61.9	0.0	38.1	0.0	
Total %	4.7	53.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	38.7	0.9	0.0	1.5	0.0	0.9	0.0	

# Counts by LSC

File Name : Link Rd - Watchmen Rd PM  
 Site Code : 00174460  
 Start Date : 12/06/2017  
 Page No : 2

	Link Rd From North					From East					Link Rd From South					Watchmen Rd From West					
Start Time	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Rig ht	Thr u	Lef t	Pe ds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	30	24	0	0	273	0	0	0	0	0	0	17	3	0	181	5	0	6	0	11	465
Percent	11.	89.	0.0	0.0		0.0	0.0	0.0	0.0		0.0	98.	1.7	0.0		45.	0.0	54.	0.0		
	0	0										3				5		5			
04:15 Volume	11	72	0	0	83	0	0	0	0	0	0	41	0	0	41	0	0	2	0	2	126
Peak Factor																					0.923
High Int.	04:15 PM					3:45:00 PM					05:00 PM					04:30 PM					
Volume	11	72	0	0	83	0	0	0	0	0	0	53	1	0	54	3	0	2	0	5	
Peak Factor					0.82										0.83					0.55	
					2										8					0	



# Levels of Service

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HCM 6th TWSC  
1: Link Road & Ohio Avenue

Existing Traffic  
AM Peak Hour

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	70	1	1	0	1	3	2	134	0	1	170	125
Future Vol, veh/h	70	1	1	0	1	3	2	134	0	1	170	125
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	68	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	70	1	1	0	1	3	2	134	0	1	250	184
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	484	482	342	483	574	134	434	0	0	134	0	0
Stage 1	344	344	-	138	138	-	-	-	-	-	-	-
Stage 2	140	138	-	345	436	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	493	484	701	494	429	915	1126	-	-	1451	-	-
Stage 1	671	637	-	865	782	-	-	-	-	-	-	-
Stage 2	863	782	-	671	580	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	490	483	701	492	428	915	1126	-	-	1451	-	-
Mov Cap-2 Maneuver	490	483	-	492	428	-	-	-	-	-	-	-
Stage 1	670	636	-	863	780	-	-	-	-	-	-	-
Stage 2	857	780	-	668	579	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	13.6		10.1			0.1			0			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1126	-	-	492	712	1451	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.146	0.006	0.001	-	-				
HCM Control Delay (s)	8.2	0	-	13.6	10.1	7.5	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.5	0	0	-	-				

HCM 6th TWSC  
15: Link Road & Watchman Rd

Existing Traffic  
AM Peak Hour

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	28	5	202	268	21
Future Vol, veh/h	3	28	5	202	268	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	74	74	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	29	7	273	268	21

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	555	268	289	0	-	0
Stage 1	268	-	-	-	-	-
Stage 2	287	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	493	771	1273	-	-	-
Stage 1	777	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	490	771	1273	-	-	-
Mov Cap-2 Maneuver	490	-	-	-	-	-
Stage 1	772	-	-	-	-	-
Stage 2	762	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1273	-	730	-	-
HCM Lane V/C Ratio	0.005	-	0.044	-	-
HCM Control Delay (s)	7.8	0	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC  
1: Link Road & Ohio Avenue

Existing Traffic  
PM Peak Hour

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	67	1	0	0	1	0	0	102	0	0	199	49
Future Vol, veh/h	67	1	0	0	1	0	0	102	0	0	199	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	1	0	0	1	0	0	102	0	0	226	56





Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	357	356	254	357	384	102	282	0	0	102	0	0
Stage 1	254	254	-	102	102	-	-	-	-	-	-	-
Stage 2	103	102	-	255	282	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	598	570	785	598	550	953	1280	-	-	1490	-	-
Stage 1	750	697	-	904	811	-	-	-	-	-	-	-
Stage 2	903	811	-	749	678	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	597	570	785	597	550	953	1280	-	-	1490	-	-
Mov Cap-2 Maneuver	597	570	-	597	550	-	-	-	-	-	-	-
Stage 1	750	697	-	904	811	-	-	-	-	-	-	-
Stage 2	902	811	-	748	678	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB				
HCM Control Delay, s	11.8		11.6		0			0				
HCM LOS	B		B									

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1280	-	-	597 550	1490	-	-
HCM Lane V/C Ratio	-	-	-	0.114 0.002	-	-	-
HCM Control Delay (s)	0	-	-	11.8 11.6	0	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4 0	0	-	-

HCM 6th TWSC  
15: Link Road & Watchman Rd

Existing Traffic  
PM Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	5	3	178	243	30
Future Vol, veh/h	6	5	3	178	243	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	5	3	178	296	37
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	480	296	333	0	-	0
Stage 1	296	-	-	-	-	-
Stage 2	184	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	545	743	1226	-	-	-
Stage 1	755	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	543	743	1226	-	-	-
Mov Cap-2 Maneuver	543	-	-	-	-	-
Stage 1	753	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.9	0.1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1226	-	619	-	-	
HCM Lane V/C Ratio	0.002	-	0.018	-	-	
HCM Control Delay (s)	7.9	0	10.9	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	



HCM 6th TWSC  
14: Link Road & Ohio Avenue

Existing + Site-Generated Traffic  
AM Peak Hour

Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	77	11	1	6	29	16	2	137	2	6	179	144
Future Vol, veh/h	77	11	1	6	29	16	2	137	2	6	179	144
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	92	100	92	92	92	100	100	92	92	68	68
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	12	1	7	32	17	2	137	2	7	263	212

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	550	526	369	532	631	138	475	0	0	139	0	0
Stage 1	383	383	-	142	142	-	-	-	-	-	-	-
Stage 2	167	143	-	390	489	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	446	457	677	458	398	910	1087	-	-	1445	-	-
Stage 1	640	612	-	861	779	-	-	-	-	-	-	-
Stage 2	835	779	-	634	549	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	408	453	677	445	394	910	1087	-	-	1445	-	-
Mov Cap-2 Maneuver	408	453	-	445	394	-	-	-	-	-	-	-
Stage 1	639	608	-	859	777	-	-	-	-	-	-	-
Stage 2	784	777	-	616	545	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	16.1		13.3		0.1		0.1	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1087	-	-	415 487	1445	-	-
HCM Lane V/C Ratio	0.002	-	-	0.217 0.114	0.005	-	-
HCM Control Delay (s)	8.3	0	-	16.1 13.3	7.5	0	-
HCM Lane LOS	A	A	-	C B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8 0.4	0	-	-

HCM 6th TWSC  
15: Link Road & Watchman Rd




Existing + Site-Generated Traffic  
AM Peak Hour

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕	↕	↕	↕	↕
Traffic Vol, veh/h	3	3	28	28	8	73	5	215	10	26	273	21
Future Vol, veh/h	3	3	28	28	8	73	5	215	10	26	273	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	200	-	175	200	-	175
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	92	97	92	92	92	74	74	92	92	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	3	29	30	9	79	7	291	11	28	273	21

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	684	645	273	661	655	291	294	0	0	302	0	0
Stage 1	329	329	-	305	305	-	-	-	-	-	-	-
Stage 2	355	316	-	356	350	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	363	391	766	376	386	748	1268	-	-	1259	-	-
Stage 1	684	646	-	705	662	-	-	-	-	-	-	-
Stage 2	662	655	-	661	633	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	312	380	766	352	375	748	1268	-	-	1259	-	-
Mov Cap-2 Maneuver	312	380	-	352	375	-	-	-	-	-	-	-
Stage 1	680	632	-	701	658	-	-	-	-	-	-	-
Stage 2	581	651	-	619	619	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.1		12.3		0.2		0.7	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1268	-	-	627 357 748	1259	-	-
HCM Lane V/C Ratio	0.005	-	-	0.056 0.11 0.106	0.022	-	-
HCM Control Delay (s)	7.9	-	-	11.1 16.3 10.4	7.9	-	-
HCM Lane LOS	A	-	-	B C B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2 0.4 0.4	0.1	-	-

Intersection						
Int Delay, s/veh	7.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	2	4	0	0	47
Future Vol, veh/h	17	2	4	0	0	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	2	4	0	0	51
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	4	0	-	0	42	4
Stage 1	-	-	-	-	4	-
Stage 2	-	-	-	-	38	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1618	-	-	-	969	1080
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1618	-	-	-	958	1080
Mov Cap-2 Maneuver	-	-	-	-	958	-
Stage 1	-	-	-	-	1008	-
Stage 2	-	-	-	-	984	-
Approach	EB	WB		SB		
HCM Control Delay, s	6.5	0		8.5		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1618	-	-	-	1080	
HCM Lane V/C Ratio	0.011	-	-	-	0.047	
HCM Control Delay (s)	7.3	0	-	-	8.5	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

HCM 6th TWSC  
14: Link Road & Ohio Avenue

Existing + Site-Generated Traffic  
PM Peak Hour

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	101	34	0	4	21	9	0	113	7	15	206	62
Future Vol, veh/h	101	34	0	4	21	9	0	113	7	15	206	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	92	100	92	92	92	100	100	92	92	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	101	37	0	4	23	10	0	113	8	16	234	70

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	435	422	269	437	453	117	304	0	0	121	0	0
Stage 1	301	301	-	117	117	-	-	-	-	-	-	-
Stage 2	134	121	-	320	336	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	531	523	770	530	503	935	1257	-	-	1467	-	-
Stage 1	708	665	-	888	799	-	-	-	-	-	-	-
Stage 2	869	796	-	692	642	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	502	516	770	496	496	935	1257	-	-	1467	-	-
Mov Cap-2 Maneuver	502	516	-	496	496	-	-	-	-	-	-	-
Stage 1	708	656	-	888	799	-	-	-	-	-	-	-
Stage 2	835	796	-	645	634	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.8		11.8		0		0.4	
HCM LOS	B		B					




Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1257	-	-	506	566	1467	-
HCM Lane V/C Ratio	-	-	-	0.273	0.065	0.011	-
HCM Control Delay (s)	0	-	-	14.8	11.8	7.5	0
HCM Lane LOS	A	-	-	B	B	A	A
HCM 95th %tile Q(veh)	0	-	-	1.1	0.2	0	-

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕	↕	↕	↕	↕
Traffic Vol, veh/h	6	9	5	20	6	52	3	187	33	86	258	30
Future Vol, veh/h	6	9	5	20	6	52	3	187	33	86	258	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	200	-	175	200	-	175
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	92	100	92	92	92	100	100	92	92	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	10	5	22	7	57	3	187	36	93	315	37






Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	744	730	315	720	731	187	352	0	0	223	0	0
Stage 1	501	501	-	193	193	-	-	-	-	-	-	-
Stage 2	243	229	-	527	538	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	331	349	725	343	349	855	1207	-	-	1346	-	-
Stage 1	552	543	-	809	741	-	-	-	-	-	-	-
Stage 2	761	715	-	535	522	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	288	324	725	315	324	855	1207	-	-	1346	-	-
Mov Cap-2 Maneuver	288	324	-	315	324	-	-	-	-	-	-	-
Stage 1	551	506	-	807	740	-	-	-	-	-	-	-
Stage 2	703	714	-	485	486	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.6		12.2		0.1		1.7	
HCM LOS	C		B					





Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1207	-	-	359 317 855	1346	-	-
HCM Lane V/C Ratio	0.002	-	-	0.058 0.089 0.066	0.069	-	-
HCM Control Delay (s)	8	-	-	15.6 17.5 9.5	7.9	-	-
HCM Lane LOS	A	-	-	C C A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2 0.3 0.2	0.2	-	-

Intersection						
Int Delay, s/veh	7.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	56	1	1	0	0	34
Future Vol, veh/h	56	1	1	0	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	1	1	0	0	37
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	1	0	-	0	124	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	123	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1622	-	-	-	871	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	902	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1622	-	-	-	838	1084
Mov Cap-2 Maneuver	-	-	-	-	838	-
Stage 1	-	-	-	-	983	-
Stage 2	-	-	-	-	902	-
Approach	EB	WB		SB		
HCM Control Delay, s	7.2	0		8.4		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1622	-	-	-	-	1084
HCM Lane V/C Ratio	0.038	-	-	-	-	0.034
HCM Control Delay (s)	7.3	0	-	-	-	8.4
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.1

Intersection				
Intersection Delay, s/veh	6.5			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	206	204	309	448
Demand Flow Rate, veh/h	209	208	315	457
Vehicles Circulating, veh/h	323	417	160	204
Vehicles Exiting, veh/h	338	58	372	421
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.7	6.4	5.6	7.6
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	209	208	315	457
Cap Entry Lane, veh/h	993	902	1172	1121
Entry HV Adj Factor	0.984	0.983	0.982	0.981
Flow Entry, veh/h	206	204	309	448
Cap Entry, veh/h	976	886	1151	1099
V/C Ratio	0.211	0.231	0.269	0.408
Control Delay, s/veh	5.7	6.4	5.6	7.6
LOS	A	A	A	A
95th %tile Queue, veh	1	1	1	2

Intersection						
Int Delay, s/veh	3.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	110	37	9	384	389	42
Future Vol, veh/h	110	37	9	384	389	42
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	-	205	-	-	155
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	116	39	9	404	409	44
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	831	409	453	0	-	0
Stage 1	409	-	-	-	-	-
Stage 2	422	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	340	642	1108	-	-	-
Stage 1	671	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	337	642	1108	-	-	-
Mov Cap-2 Maneuver	337	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	662	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	20.6	0.2		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1108	-	383	-	-	
HCM Lane V/C Ratio	0.009	-	0.404	-	-	
HCM Control Delay (s)	8.3	-	20.6	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0	-	1.9	-	-	








Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	40	144	5	5	50
Future Vol, veh/h	15	40	144	5	5	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	43	157	5	5	54





Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	162	0	0	235	160
Stage 1	-	-	-	160	-
Stage 2	-	-	-	75	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1417	-	-	753	885
Stage 1	-	-	-	869	-
Stage 2	-	-	-	948	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1417	-	-	745	885
Mov Cap-2 Maneuver	-	-	-	745	-
Stage 1	-	-	-	859	-
Stage 2	-	-	-	948	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	9.4
HCM LOS	A		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1417	-	-	-	870
HCM Lane V/C Ratio	0.012	-	-	-	0.069
HCM Control Delay (s)	7.6	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection				
Intersection Delay, s/veh	7.7			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	318	116	315	547
Demand Flow Rate, veh/h	324	118	322	558
Vehicles Circulating, veh/h	481	500	339	109
Vehicles Exiting, veh/h	186	161	466	509
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.9	5.9	7.3	7.7
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	324	118	322	558
Cap Entry Lane, veh/h	845	829	977	1235
Entry HV Adj Factor	0.981	0.984	0.979	0.981
Flow Entry, veh/h	318	116	315	547
Cap Entry, veh/h	829	816	956	1211
V/C Ratio	0.383	0.142	0.330	0.452
Control Delay, s/veh	8.9	5.9	7.3	7.7
LOS	A	A	A	A
95th %tile Queue, veh	2	0	1	2

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	70	12	22	451	508	104
Future Vol, veh/h	70	12	22	451	508	104
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	-	205	-	-	155
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	13	23	475	535	109
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1056	535	644	0	-	0
Stage 1	535	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	250	545	941	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	244	545	941	-	-	-
Mov Cap-2 Maneuver	244	-	-	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	25	0.4		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	941	-	265	-	-	
HCM Lane V/C Ratio	0.025	-	0.326	-	-	
HCM Control Delay (s)	8.9	-	25	-	-	
HCM Lane LOS	A	-	D	-	-	
HCM 95th %tile Q(veh)	0.1	-	1.4	-	-	

Intersection						
Int Delay, s/veh	1.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	125	85	5	5	25
Future Vol, veh/h	25	125	85	5	5	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	136	92	5	5	27
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	97	0	-	0	285	95
Stage 1	-	-	-	-	95	-
Stage 2	-	-	-	-	190	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1496	-	-	-	705	962
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	842	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1496	-	-	-	692	962
Mov Cap-2 Maneuver	-	-	-	-	692	-
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	842	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.2	0		9.1		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1496	-	-	-	903	
HCM Lane V/C Ratio	0.018	-	-	-	0.036	
HCM Control Delay (s)	7.5	-	-	-	9.1	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	





HCM 6th Roundabout  
14: Link Rd & Ohio Ave/Kane Rd

2040 Total Traffic  
AM Peak Hour

Intersection				
Intersection Delay, s/veh	7.4			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	232	262	324	499
Demand Flow Rate, veh/h	237	267	330	509
Vehicles Circulating, veh/h	356	442	192	247
Vehicles Exiting, veh/h	400	80	401	462
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.3	7.5	6.0	8.9
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	237	267	330	509
Cap Entry Lane, veh/h	960	879	1134	1073
Entry HV Adj Factor	0.980	0.980	0.982	0.980
Flow Entry, veh/h	232	262	324	499
Cap Entry, veh/h	941	862	1115	1051
V/C Ratio	0.247	0.304	0.291	0.475
Control Delay, s/veh	6.3	7.5	6.0	8.9
LOS	A	A	A	A
95th %tile Queue, veh	1	1	1	3

HCM 6th TWSC  
83: Kane Rd & Crescent Moon Dr

2040 Total Traffic  
AM Peak Hour

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	32	40	144	5	5	97
Future Vol, veh/h	32	40	144	5	5	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	35	43	157	5	5	105

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	162	0	0	273	160
Stage 1	-	-	-	160	-
Stage 2	-	-	-	113	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1417	-	-	716	885
Stage 1	-	-	-	869	-
Stage 2	-	-	-	912	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1417	-	-	698	885
Mov Cap-2 Maneuver	-	-	-	698	-
Stage 1	-	-	-	847	-
Stage 2	-	-	-	912	-

Approach	EB	WB	SB
HCM Control Delay, s	3.4	0	9.7
HCM LOS	A		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1417	-	-	-	874
HCM Lane V/C Ratio	0.025	-	-	-	0.127
HCM Control Delay (s)	7.6	-	-	-	9.7
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

## 15: Link Rd &amp; Watchman Rd Performance by lane Interval #1 7:00

Lane	EB	WB	WB	NB	NB	NB	SB	SB	SB	All
Movements Served	LTR	LT	R	L	T	R	L	T	R	
Stop Del/Veh (s)	14.1	11.5	4.5	1.9	0.1	0.0	1.3	0.1	0.0	2.7

## 15: Link Rd &amp; Watchman Rd Performance by lane Interval #2 7:15

Lane	EB	WB	WB	NB	NB	NB	SB	SB	SB	All
Movements Served	LTR	LT	R	L	T	R	L	T	R	
Stop Del/Veh (s)	20.1	13.2	7.1	2.3	0.2	0.0	1.4	0.1	0.0	3.7

## 15: Link Rd &amp; Watchman Rd Performance by lane Interval #3 7:30

Lane	EB	WB	WB	NB	NB	NB	SB	SB	SB	All
Movements Served	LTR	LT	R	L	T	R	L	T	R	
Stop Del/Veh (s)	14.1	9.5	5.1	3.3	0.1	0.0	2.1	0.1	0.0	2.6

## 15: Link Rd &amp; Watchman Rd Performance by lane Interval #4 7:45

Lane	EB	WB	WB	NB	NB	NB	SB	SB	SB	All
Movements Served	LTR	LT	R	L	T	R	L	T	R	
Stop Del/Veh (s)	10.9	9.3	7.0	3.4	0.1	0.0	2.7	0.1	0.0	2.2

## 15: Link Rd &amp; Watchman Rd Performance by lane Entire Run





Lane	EB	WB	WB	NB	NB	NB	SB	SB	SB	All
Movements Served	LTR	LT	R	L	T	R	L	T	R	
Stop Del/Veh (s)	15.6	10.9	6.3	2.6	0.1	0.0	1.8	0.1	0.0	2.9

HCM 6th Roundabout  
14: Link Rd & Ohio Ave/Kane Rd

2040 Total Traffic  
PM Peak Hour

Intersection				
Intersection Delay, s/veh	8.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	375	150	333	584
Demand Flow Rate, veh/h	383	153	340	596
Vehicles Circulating, veh/h	510	535	415	134
Vehicles Exiting, veh/h	220	220	478	553
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.7	6.6	8.4	8.5
Approach LOS	B	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	383	153	340	596
Cap Entry Lane, veh/h	820	800	904	1204
Entry HV Adj Factor	0.980	0.979	0.980	0.980
Flow Entry, veh/h	375	150	333	584
Cap Entry, veh/h	804	783	885	1180
V/C Ratio	0.467	0.191	0.376	0.495
Control Delay, s/veh	10.7	6.6	8.4	8.5
LOS	B	A	A	A
95th %tile Queue, veh	3	1	2	3



Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	81	125	85	5	5	59
Future Vol, veh/h	81	125	85	5	5	59
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	136	92	5	5	64
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	97	0	-	0	407	95
Stage 1	-	-	-	-	95	-
Stage 2	-	-	-	-	312	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1496	-	-	-	600	962
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	742	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1496	-	-	-	565	962
Mov Cap-2 Maneuver	-	-	-	-	565	-
Stage 1	-	-	-	-	874	-
Stage 2	-	-	-	-	742	-
Approach	EB	WB		SB		
HCM Control Delay, s	3	0		9.3		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1496	-	-	-	912	
HCM Lane V/C Ratio	0.059	-	-	-	0.076	
HCM Control Delay (s)	7.6	-	-	-	9.3	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	

## 15: Link Rd &amp; Watchman Rd Performance by lane Interval #1 5:00

Lane	EB	WB	WB	NB	NB	NB	SB	SB	SB	All
Movements Served	LTR	LT	R	L	T	R	L	T	R	
Stop Del/Veh (s)	23.0	14.7	7.1	4.0	0.3	0.0	2.4	0.1	0.0	2.4

## 15: Link Rd &amp; Watchman Rd Performance by lane Interval #2 5:15

Lane	EB	WB	WB	NB	NB	NB	SB	SB	SB	All
Movements Served	LTR	LT	R	L	T	R	L	T	R	
Stop Del/Veh (s)	18.5	16.8	6.1	2.0	0.3	0.0	1.7	0.1	0.0	1.9

## 15: Link Rd &amp; Watchman Rd Performance by lane Interval #3 5:30

Lane	EB	WB	WB	NB	NB	NB	SB	SB	SB	All
Movements Served	LTR	LT	R	L	T	R	L	T	R	
Stop Del/Veh (s)	16.1	9.1	5.4	1.5	0.3	0.0	2.1	0.1	0.0	1.7










## 15: Link Rd &amp; Watchman Rd Performance by lane Interval #4 5:45

Lane	EB	WB	WB	NB	NB	NB	SB	SB	SB	All
Movements Served	LTR	LT	R	L	T	R	L	T	R	
Stop Del/Veh (s)	23.9	19.5	5.2	2.6	0.3	0.0	2.0	0.1	0.0	2.2

## 15: Link Rd &amp; Watchman Rd Performance by lane Entire Run

Lane	EB	WB	WB	NB	NB	NB	SB	SB	SB	All
Movements Served	LTR	LT	R	L	T	R	L	T	R	
Stop Del/Veh (s)	21.4	15.4	6.1	2.7	0.3	0.0	2.1	0.1	0.0	2.1

HCM 6th TWSC 2040 Background Traffic (Without Development of Eagleside Ranch)  
 14: Link Rd & Ohio Ave/Kane Rd AM Peak Hour

Intersection												
Int Delay, s/veh	8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	104	20	50	52	77	65	50	191	15	20	217	165
Future Vol, veh/h	104	20	50	52	77	65	50	191	15	20	217	165
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	113	22	54	57	84	71	54	208	16	22	236	179










Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	682	612	236	732	783	216	415	0	0	224	0	0
Stage 1	280	280	-	324	324	-	-	-	-	-	-	-
Stage 2	402	332	-	408	459	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	364	408	803	337	325	824	1144	-	-	1345	-	-
Stage 1	727	679	-	688	650	-	-	-	-	-	-	-
Stage 2	625	644	-	620	566	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	250	383	803	286	305	824	1144	-	-	1345	-	-
Mov Cap-2 Maneuver	250	383	-	286	305	-	-	-	-	-	-	-
Stage 1	693	668	-	656	619	-	-	-	-	-	-	-
Stage 2	471	614	-	550	557	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	23.1		18.7		1.6		0.4	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1144	-	-	250	611	286	429	1345	-	-
HCM Lane V/C Ratio	0.048	-	-	0.452	0.125	0.198	0.36	0.016	-	-
HCM Control Delay (s)	8.3	-	-	30.8	11.7	20.7	18	7.7	-	-
HCM Lane LOS	A	-	-	D	B	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.2	0.4	0.7	1.6	0	-	-

HCM 6th AWSC 2040 Background Traffic (Without Development of Eagleside Ranch)  
 14: Link Rd & Ohio Ave/Kane Rd AM Peak Hour










Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	104	20	50	52	77	65	50	191	15	20	217	165
Future Vol, veh/h	104	20	50	52	77	65	50	191	15	20	217	165
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	113	22	54	57	84	71	54	208	16	22	236	179
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay	12.6	12.9	14.9	13.7
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	93%	0%	29%	0%	54%	0%	100%	0%
Vol Right, %	0%	7%	0%	71%	0%	46%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	206	104	70	52	142	20	217	165
LT Vol	50	0	104	0	52	0	20	0	0
Through Vol	0	191	0	20	0	77	0	217	0
RT Vol	0	15	0	50	0	65	0	0	165
Lane Flow Rate	54	224	113	76	57	154	22	236	179
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.117	0.448	0.254	0.15	0.126	0.309	0.045	0.457	0.312
Departure Headway (Hd)	7.77	7.208	8.099	7.082	8.046	7.211	7.477	6.969	6.256
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	461	499	443	506	445	499	479	517	574
Service Time	5.515	4.952	5.849	4.831	5.795	4.96	5.217	4.708	3.996
HCM Lane V/C Ratio	0.117	0.449	0.255	0.15	0.128	0.309	0.046	0.456	0.312
HCM Control Delay	11.5	15.7	13.6	11.1	12	13.2	10.6	15.5	11.8
HCM Lane LOS	B	C	B	B	B	B	B	C	B
HCM 95th-tile Q	0.4	2.3	1	0.5	0.4	1.3	0.1	2.4	1.3

HCM 6th TWSC 2040 Background Traffic (Without Development of Eagleside Ranch)  
 14: Link Rd & Ohio Ave/Kane Rd PM Peak Hour

Intersection												
Int Delay, s/veh	20.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	191	50	25	20	40	50	25	201	35	65	328	65
Future Vol, veh/h	191	50	25	20	40	50	25	201	35	65	328	65
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	208	54	27	22	43	54	27	218	38	71	357	71










Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	839	809	357	866	861	237	428	0	0	256	0	0
Stage 1	499	499	-	291	291	-	-	-	-	-	-	-
Stage 2	340	310	-	575	570	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	285	314	687	274	293	802	1131	-	-	1309	-	-
Stage 1	554	544	-	717	672	-	-	-	-	-	-	-
Stage 2	675	659	-	503	505	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	219	290	687	212	270	802	1131	-	-	1309	-	-
Mov Cap-2 Maneuver	219	290	-	212	270	-	-	-	-	-	-	-
Stage 1	541	515	-	700	656	-	-	-	-	-	-	-
Stage 2	574	643	-	409	478	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	72.8		17.4		0.8		1.1	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1131	-	-	219	359	212	428	1309	-	-
HCM Lane V/C Ratio	0.024	-	-	0.948	0.227	0.103	0.229	0.054	-	-
HCM Control Delay (s)	8.3	-	-	94.3	17.9	23.9	15.9	7.9	-	-
HCM Lane LOS	A	-	-	F	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	8.1	0.9	0.3	0.9	0.2	-	-

HCM 6th AWSC 2040 Background Traffic (Without Development of Eagleside Ranch)  
 14: Link Rd & Ohio Ave/Kane Rd PM Peak Hour

Intersection	
Intersection Delay, s/veh	18.5
Intersection LOS	C










Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	191	50	25	20	40	50	25	201	35	65	328	65
Future Vol, veh/h	191	50	25	20	40	50	25	201	35	65	328	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	208	54	27	22	43	54	27	218	38	71	357	71
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay	16.3	12.7	18	21.4
HCM LOS	C	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	85%	0%	67%	0%	44%	0%	100%	0%
Vol Right, %	0%	15%	0%	33%	0%	56%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	25	236	191	75	20	90	65	328	65
LT Vol	25	0	191	0	20	0	65	0	0
Through Vol	0	201	0	50	0	40	0	328	0
RT Vol	0	35	0	25	0	50	0	0	65
Lane Flow Rate	27	257	208	82	22	98	71	357	71
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.061	0.536	0.472	0.168	0.053	0.214	0.15	0.708	0.126
Departure Headway (Hd)	8.134	7.516	8.187	7.44	8.789	7.879	7.662	7.153	6.439
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	440	480	440	481	407	454	468	506	555
Service Time	5.891	5.273	5.946	5.199	6.56	5.649	5.415	4.905	4.192
HCM Lane V/C Ratio	0.061	0.535	0.473	0.17	0.054	0.216	0.152	0.706	0.128
HCM Control Delay	11.4	18.7	18.1	11.7	12.1	12.8	11.8	25.5	10.1
HCM Lane LOS	B	C	C	B	B	B	B	D	B
HCM 95th-tile Q	0.2	3.1	2.5	0.6	0.2	0.8	0.5	5.6	0.4

## Intersection

Int Delay, s/veh 11

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	111	30	50	58	105	78	50	194	17	25	226	184
Future Vol, veh/h	111	30	50	58	105	78	50	194	17	25	226	184
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	121	33	54	63	114	85	54	211	18	27	246	200

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	728	637	246	772	828	220	446	0	0	229	0	0
Stage 1	300	300	-	328	328	-	-	-	-	-	-	-
Stage 2	428	337	-	444	500	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	339	395	793	317	306	820	1114	-	-	1339	-	-
Stage 1	709	666	-	685	647	-	-	-	-	-	-	-
Stage 2	605	641	-	593	543	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	199	369	793	261	285	820	1114	-	-	1339	-	-
Mov Cap-2 Maneuver	199	369	-	261	285	-	-	-	-	-	-	-
Stage 1	675	653	-	652	616	-	-	-	-	-	-	-
Stage 2	421	610	-	514	532	-	-	-	-	-	-	-










Approach	EB		WB		NB		SB	
HCM Control Delay, s	33		23		1.6		0.4	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1114	-	-	199	554	261	395	1339	-	-
HCM Lane V/C Ratio	0.049	-	-	0.606	0.157	0.242	0.504	0.02	-	-
HCM Control Delay (s)	8.4	-	-	47.6	12.7	23.1	23	7.7	-	-
HCM Lane LOS	A	-	-	E	B	C	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	3.4	0.6	0.9	2.7	0.1	-	-

**Intersection**

Intersection Delay, s/veh 15.2

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	111	30	50	58	105	78	50	194	17	25	226	184
Future Vol, veh/h	111	30	50	58	105	78	50	194	17	25	226	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	121	33	54	63	114	85	54	211	18	27	246	200
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	1










Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay	13.6	15	16.6	15.3
HCM LOS	B	B	C	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	92%	0%	38%	0%	57%	0%	100%	0%
Vol Right, %	0%	8%	0%	62%	0%	43%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	50	211	111	80	58	183	25	226	184
LT Vol	50	0	111	0	58	0	25	0	0
Through Vol	0	194	0	30	0	105	0	226	0
RT Vol	0	17	0	50	0	78	0	0	184
Lane Flow Rate	54	229	121	87	63	199	27	246	200
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.125	0.489	0.286	0.183	0.147	0.418	0.059	0.503	0.37
Departure Headway (Hd)	8.248	7.678	8.531	7.573	8.372	7.558	7.877	7.367	6.652
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	434	468	420	472	427	475	454	489	540
Service Time	6.019	5.449	6.306	5.348	6.141	5.327	5.642	5.131	4.416
HCM Lane V/C Ratio	0.124	0.489	0.288	0.184	0.148	0.419	0.059	0.503	0.37
HCM Control Delay	12.2	17.6	14.7	12.1	12.6	15.7	11.1	17.4	13.3
HCM Lane LOS	B	C	B	B	B	C	B	C	B
HCM 95th-tile Q	0.4	2.6	1.2	0.7	0.5	2	0.2	2.8	1.7



## Intersection

Int Delay, s/veh 46.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	213	83	25	24	60	59	25	212	42	80	335	78
Future Vol, veh/h	213	83	25	24	60	59	25	212	42	80	335	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	0	-	-	0	-	-	0	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	232	90	27	26	65	64	27	230	46	87	364	85

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	910	868	364	946	930	253	449	0	0	276	0	0
Stage 1	538	538	-	307	307	-	-	-	-	-	-	-
Stage 2	372	330	-	639	623	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	255	290	681	241	267	786	1111	-	-	1287	-	-
Stage 1	527	522	-	703	661	-	-	-	-	-	-	-
Stage 2	648	646	-	464	478	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 173	264	681	159	243	786	1111	-	-	1287	-	-
Mov Cap-2 Maneuver	~ 173	264	-	159	243	-	-	-	-	-	-	-
Stage 1	514	487	-	686	645	-	-	-	-	-	-	-
Stage 2	522	630	-	338	445	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	165.4	21.9	0.7	1.3
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1111	-	-	173	308	159	370	1287	-	-
HCM Lane V/C Ratio	0.024	-	-	1.338	0.381	0.164	0.35	0.068	-	-
HCM Control Delay (s)	8.3	-	-	237.3	23.7	32	19.9	8	-	-
HCM Lane LOS	A	-	-	F	C	D	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	13.7	1.7	0.6	1.5	0.2	-	-










## Notes

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

**Intersection**

Intersection Delay, s/veh 23.1

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	213	83	25	24	60	59	25	212	42	80	335	78
Future Vol, veh/h	213	83	25	24	60	59	25	212	42	80	335	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	232	90	27	26	65	64	27	230	46	87	364	85
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	3	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	3	2	2
HCM Control Delay	19.6	14.9	23.2	27.6
HCM LOS	C	B	C	D

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%	0%
Vol Thru, %	0%	83%	0%	77%	0%	50%	0%	100%	0%
Vol Right, %	0%	17%	0%	23%	0%	50%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	25	254	213	108	24	119	80	335	78
LT Vol	25	0	213	0	24	0	80	0	0
Through Vol	0	212	0	83	0	60	0	335	0
RT Vol	0	42	0	25	0	59	0	0	78
Lane Flow Rate	27	276	232	117	26	129	87	364	85
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.067	0.634	0.568	0.266	0.069	0.311	0.203	0.796	0.168
Departure Headway (Hd)	8.901	8.266	8.832	8.154	9.527	8.654	8.385	7.872	7.154
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	403	436	410	443	376	415	430	462	503
Service Time	6.65	6.015	6.553	5.875	7.285	6.411	6.104	5.591	4.873
HCM Lane V/C Ratio	0.067	0.633	0.566	0.264	0.069	0.311	0.202	0.788	0.169
HCM Control Delay	12.3	24.3	22.6	13.8	13	15.3	13.2	34.9	11.3
HCM Lane LOS	B	C	C	B	B	C	B	D	B
HCM 95th-tile Q	0.2	4.3	3.4	1.1	0.2	1.3	0.8	7.2	0.6