AUAR TRAFFIC IMPACT STUDY

UHG City West Office Campus

Eden Prairie, Minnesota

July 19, 2011

Prepared For:

Prepared By:

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Prepared for

City of Eden Prairie

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Project No. 2011-1066

AUAR TRAFFIC IMPACT STUDY

UHG City West Office Campus

Eden Prairie, Minnesota

REPORT CERTIFICATION

I hereby certify that this report was prepared by me or under my direct supervision an d that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

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July 19, 2011
Date

EXECUTIVE SUMMARY

Development plans for the UHG City West AUAR site are now proposed as 100% office as opposed to previous plans which contemplated mixed use. The proposed development includes 1.467 million square feet of single user office space that is capable of supporting up to 6,637 employees. Full development of the site is anticipated by 2017. Development will be phased, with space for 2,500 employees by 2013 and 5,000 employees (cumulative) by 2015.

In terms of traffic, the current proposal is expected to generate roughly 25% more trips in the peak direction (AM entering, PM exiting) compared with the land use mix proposed in the previous AUAR update (2008). The proposed office campus is expected to generate approximately 7,500 round-trips on a daily basis. During the AM and PM peak hours, roughly 2,000 trips are expected, primarily inbound in the AM and outbound in the PM.

In general the roadway improvements/mitigation measures identified in the most recent (2008) AUAR will be needed to accommodate the growth in background traffic as well as the traffic generated by the proposed office land use. Some additional improvements beyond these will also be needed. One of the more noteworthy additions is the need for a 2nd (dual) northbound left turn lane at the TH 62 North Ramp intersection. The previous two AUARs (completed in 2001 and 2008) identified this improvement as being very close to necessary. Analysis conducted for this report indicates that the increased traffic volumes expected as part of the new development plans will move the improvement fully into the "needed" category.

The complete set of roadway improvements recommended to provide adequate level of service for operations in the vicinity of the TH 62 interchange are detailed on page 28 of this report and illustrated in **Figure 4-1: TH 62 Interchange Area Concept Improvements**.

Like the earlier studies, analysis suggests that an upgrade of the existing Shady Oak Road bridge over TH 212 will be needed. The need for improvements at this interchange are driven by a combination of factors including existing traffic volumes (which approach current capacity), expected nearby development, growth in background traffic, and traffic generated by the proposed UHG development. This is in contrast to the improvements needed in the vicinity of the TH 62 interchange, the need for which is in large part driven by proposed UHG development.

The component of the TH 212 interchange that most limits its capacity is the short distance between the East Ramp intersection and the Flying Cloud Drive (east frontage road) intersection to the east. A 2009 study completed for the City of Eden Prairie by SRF Consulting Group identified two potential alternatives that would provide adequate capacity for the interchange through 2030. The more inexpensive of the two alternatives would be to reconstruct the interchange with

an 8-lane bridge and relocate the intersection of Flying Cloud Drive roughly 100 feet to the east.

Analysis performed for this report supports the SRF conclusion that an 8-lane bridge will be needed, assuming a worst case set of trip generation assumptions. Findings also indicate that shifting the Flying Cloud Drive intersection 100 feet to the east will provide further capacity enhancements. However, results of the current analysis do indicate that operations would remain acceptable if the Flying Cloud Drive intersection remained in its existing location under the worst case set of assumptions. **Figure 4-4** provides a conceptual plan for the ultimate roadway geometry potentially needed in the vicinity of the TH 212 interchange.

Although the ultimate design of the TH 212 interchange may not require relocation of the Flying Cloud Drive intersection, making this improvement does help to delay the need for bridge widening. **Figure 4-3** illustrates a concept plan for the TH 212 interchange that provides adequate capacity through 2030 under a base set of assumptions. This plan could be used as a lower cost alternative to construction of the full 8-lane alternative.

Because an 8-lane bridge provides adequate capacity for the interchange under worst case assumptions, it is the recommended design if and when reconstruction/retrofitting of the bridge is undertaken. If bridge improvements are made prior to relocation of the Flying Cloud Drive intersection, it is recommended that that intersection remain in its current location.

The table on the next page provides a summary of the recommended set of roadway improvements to be included for the various scenarios studied. The measures identified include both improvements needed because of background (non UHG-related) traffic growth and mitigation driven by the proposed UHG office development.

UHG City West Office AUAR
Recommended Geometric Mitigation Summary Matrix

No.	Scenario Name	TH 62 North Ramps	TH 62 South Ramps	West 62nd St Dwy	City West (North)	City West Dwy	City West (South)	TH 212 West Ramps	TH 212 East Ramps	Flying Cloud	Other
1.	2010 Existing	-	-	-	-	-	-	-	-	-	-
2.	2014 No-Build	-	-	-	-	-	-	●add SB lane	●add NB lane	●reconfigure SB lanes	-
3.	2014 Build	-	●2 lanes WB	●side street stop control (EB/WB Free) ●1 lane EB ●1 lane WB ●1 lane NB	●add NBR lane			●add SB lane ●channelize EBR	●add NB lane	●reconfigure SB lanes	
4.	2016 No-Build	-	-	-	-	-	-	●add SB lane	●add NB lane	●reconfigure SB lanes	-
5.	2016 Build	-	●add EBR lane ●3 lanes WB ●add 2nd SBL lane	●side street stop control (NB Free) ●2 lanes EB ●1 lane WB ●2 lanes NB	●add NBL lane ●add NBR lane ●add SBL lane			●add SB lane ●channelize EBR	●add NB lane	●reconfigure SB lanes	
6.	2018 No-Build	-	-	-	-	-	-	●add SB lane	●add 2 NB lanes	●reconfigure SB lanes	-
7.	2018 Build	●add 2nd NBL lane by building retaining wall for bridge embankment	●add EBR lane ●4 lanes WB ●add 3rd NBT lane ●add NBR lane ●add 2nd SBL lane	●side street stop control (NB Free) ●2 lanes EB ●2 lanes WB ●2 lanes NB	●add NBL lane ●add NBR lane ●add SBL lane	●side street stop control ●2 lane SB approach	●add EBL lane ●add WBL lane	●add SB lane ●channelize EBR	●add 2 NB lanes	●relocate intersection 100' east	-
8.	2018 Build + LRT	●add 2nd NBL lane by building retaining wall for bridge embankment	●add EBR lane ●4 lanes WB ●add 3rd NBT lane ●add NBR lane ●add 2nd SBL lane	●traffic signal control ●2 lanes EB ●2 lanes WB ●2 lanes NB	●add NBL lane ●add NBR lane ●add SBL lane	●side street stop control ●2 lane SB approach	●add EBL lane ●add WBL lane	●add SB lane ●channelize EBR	●add 2 NB lanes	●relocate intersection 100' east	-
9.	2030 No-Build	-	-	-	-	-	-	●add SB lane ●channelize EBR	●add 2 NB lanes	●relocate intersection 100' east	-
10.	2030 Build	●add 2nd NBL lane by building retaining wall for bridge embankment	●add EBR lane ●4 lanes WB ●add 3rd NBT lane ●add NBR lane ●add 2nd SBL lane	●side street stop control ●2 lanes EB ●2 lanes WB ●2 lanes NB	●add NBL lane ●add NBR lane ●add SBL lane	●side street stop control ●2 lane SB approach	●add EBL lane ●add WBL lane	●add SB lane ●add EB lane ●channelize EBR ●widen bridge to 6 lanes	●add WB lane ●add 2 NB lanes ●relocate intersection 50' west ●widen bridge to 6 lanes	●relocate intersection 100' east	-
11.	2030 Build + LRT	●add 2nd NBL lane by building retaining wall for bridge embankment	●add EBR lane ●4 lanes WB ●add 3rd NBT lane ●add NBR lane ●add 2nd SBL lane	●traffic signal control ●2 lanes EB ●2 lanes WB ●2 lanes NB	●add NBL lane ●add NBR lane ●add SBL lane	●side street stop control ●2 lane SB approach	●add EBL lane ●add WBL lane	●add SB lane ●add EB lane ●channelize EBR ●widen bridge to 6 lanes	●add WB lane ●add 2 NB lanes ●relocate intersection 50' west ●widen bridge to 6 lanes	●relocate intersection 100' east	-
12.	2018 Build + LRT Worst Case	●add 2nd NBL lane by building retaining wall for bridge embankment	●add EBR lane ●4 lanes WB ●add 3rd NBT lane ●add NBR lane ●add 2nd SBL lane	●traffic signal control ●2 lanes EB ●2 lanes WB ●2 lanes NB	●add NBL lane ●add NBR lane ●add SBL lane	●side street stop control ●2 lane SB approach	●add EBL lane ●add WBL lane	●add SB lane ●channelize EBR ●widen bridge to 6 lanes	●add 2 NB lanes ●widen bridge to 6 lanes	●relocate intersection 100' east	-
13.	2030 Build + LRT Worst Case	●add 2nd NBL lane by building retaining wall for bridge embankment	●add EBR lane ●4 lanes WB ●add 3rd NBT lane ●add NBR lane ●add 2nd SBL lane	●traffic signal control ●2 lanes EB ●2 lanes WB ●2 lanes NB	●add NBL lane ●add NBR lane ●add SBL lane	●side street stop control ●2 lane SB approach	●add EBL lane ●add WBL lane ●add WBR lane	●add SB lane ●add 2 EB lanes ●add WB lane ●channelize EBR ●widen bridge to 8 lanes	●add EB lane ●add 2 WB lanes ●add 2 NB lanes ●widen bridge to 8 lanes	●add WB lane	-
-	2008 Developer's Agreement	-	●add EBR lane ●3 lanes WB ●add NBR lane ●add 2nd SBL lane	-	●add NBL lane ●add NBR lane ●add SBL lane ●add SBR lane	-	●add EBL lane ●add EBR lane ●add WBL lane ●add WBR lane ●add 2nd SBL lane	●add SB lane ●channelize EBR	●add NB lane ●HOV ramp lane (1/3 share)	-	●4-lane Shady Oak ●trail on east side of Shady Oak along site frontage

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1. INTRODUCTION

1.1 Background

The City West site owned by UnitedHealth Group (UHG) just east of Shady Oak Road between Highways 62 and 212 in Eden Prairie has been the subject of two previous AUAR traffic studies. In 2001, URS/BRW studied a mixed-use plan of over one million square feet (the "2001 Study"). In 2008, RLK prepared an updated traffic study for a similar land use plan (the "2008 Study"). Although the 2008 AUAR is less than five years old and therefore remains in effect, current land use plans for the site have changed, necessitating an updated AUAR and traffic study. Current development plans call for the development of a 1.467 million square foot/6,637 employee single-tenant office campus.

The purpose of this report is similar to that of the previous two AUAR traffic studies, namely to identify traffic-related impacts anticipated due to site-generated and background traffic and to identify and recommend geometric or other measures to mitigate or offset these impacts.

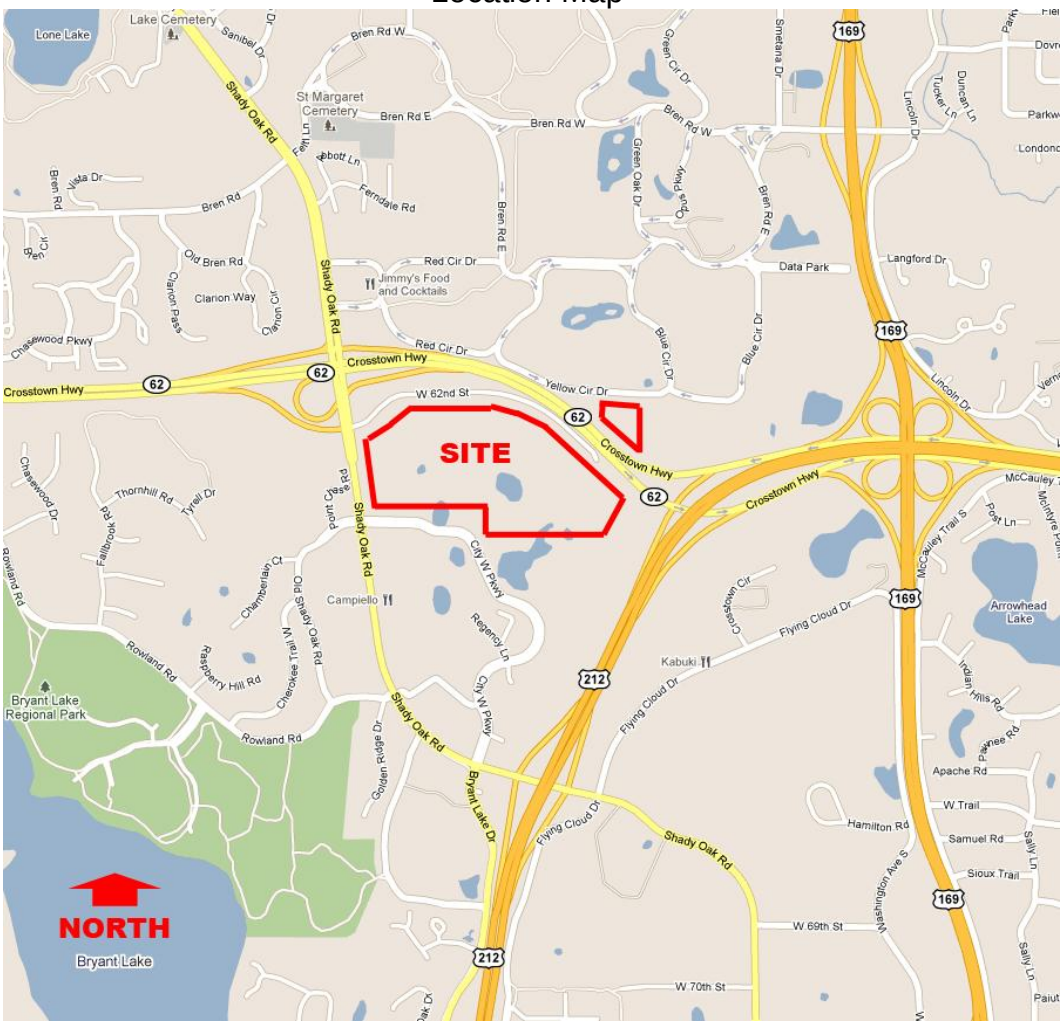
Particular areas of concern identified in the previous AUAR traffic studies that this report will address include:

- The need for an additional left turn lane for the northbound approach at the Shady Oak Road/TH 62 north ramp intersection.
- The interim and ultimate interchange configurations needed for the Shady Oak Road/TH 212 interchange.
- The impact of the planned Southwest LRT line and City West Park-and-Ride facility on traffic operations in the study area.
- The timing of needed mitigation measures.

1.2 Project Location

The site bounded by Trunk Highway (TH) 62 to the north, Shady Oak Road (Hennepin County State-Aid Highway 61) to the west, City West Parkway to the south and TH 212 to the east as shown on **Figure 1-1: Location Map** (the "Site").

Figure 1-1
Location Map



Source: Google

1.3 Site Access

Access to the Site is proposed at two locations. One driveway access will be from West 62nd Street and the other driveway access will be from City West Parkway, both of which are Eden Prairie City streets. The City West Parkway is constrained by limited connections to available right-of-way. The currently proposed access point would align with the opposing retail driveway along City West Parkway. The placement of the West 62nd Street driveway is constrained due to wetlands at the site. Access points and the site in general are depicted on **Figure 1-2: Concept Site Plan**.

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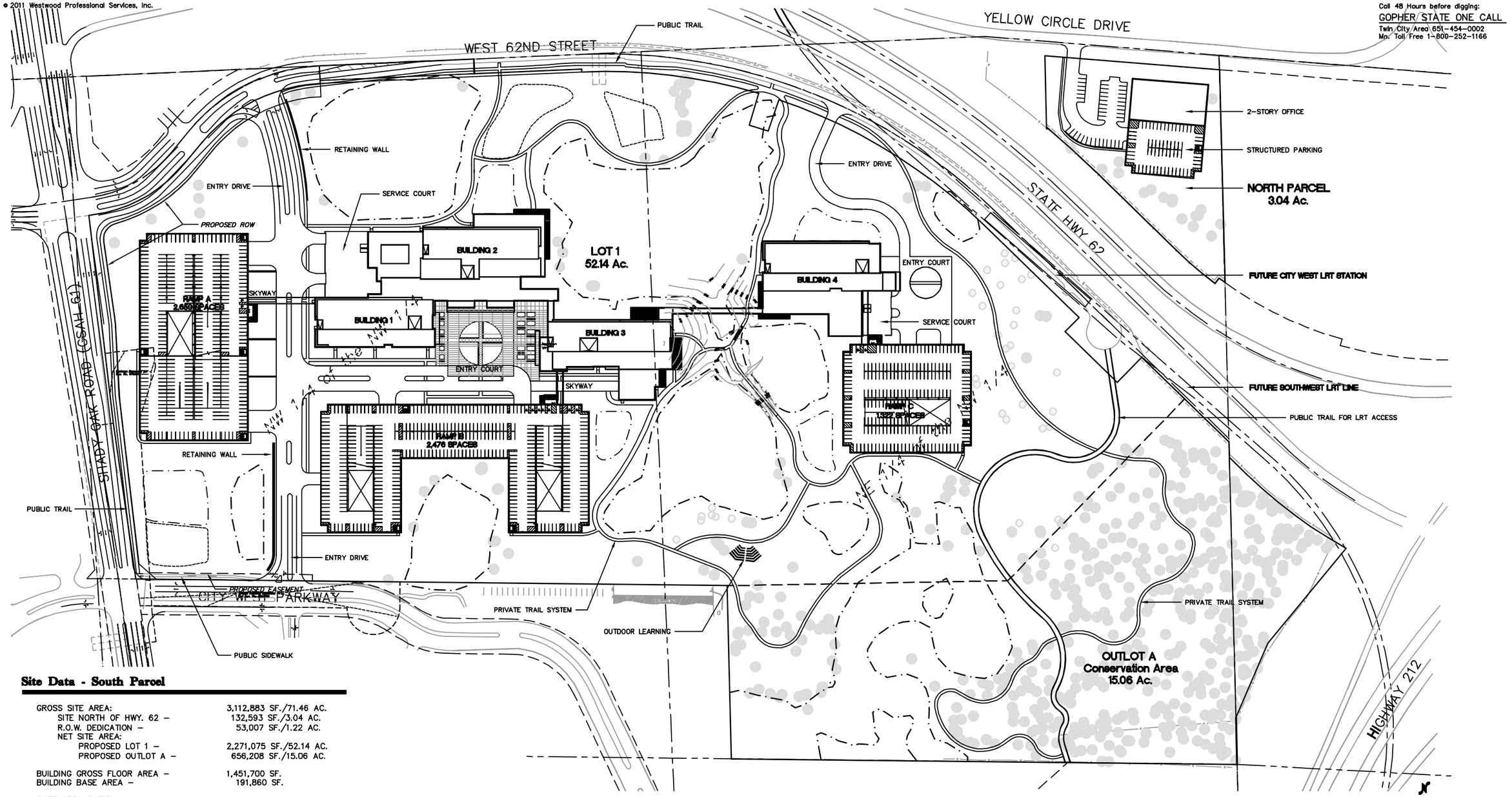

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Site Data - South Parcel

GROSS SITE AREA:	3,112,883 SF./71.46 AC.
SITE NORTH OF HWY. 62 –	132,593 SF./3.04 AC.
R.O.W. DEDICATION –	53,007 SF./1.22 AC.
NET SITE AREA:	
PROPOSED LOT 1 –	2,271,075 SF./52.14 AC.
PROPOSED OUTLOT A –	656,208 SF./15.06 AC.
BUILDING GROSS FLOOR AREA –	1,451,700 SF.
BUILDING BASE AREA –	191,860 SF.
BASE AREA RATIO:	
ZONING LOT ONLY –	0.08
LOT WITH CONSERVATION AREA –	0.07
FLOOR AREA RATIO:	
ZONING LOT ONLY –	0.64
LOT WITH CONSERVATION AREA –	0.50
PARKING TOTAL –	6,448 SPACES
PARKING RATIO –	4.40
IMPERVIOUS SURFACE AREA –	781,253 SF./17.93 AC. (34%)

Site South of Hwy 62

STRUCTURE	MINIMUM SETBACK	BUILDING HEIGHT
BLD 1 & 2 – GROUND LEVEL	335'	45' (44.5')
BUILDING 1	387'	139' (138.5')
BUILDING 2	305'	148' (147.5')
BUILDING 3	444'	243'
BUILDING 4	179'	178' (177.5')
RAMP A	30'	72' (71.83')
RAMP B	105'	64' (63.33')
RAMP C	237'	82' (81.83')

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Revisions:

Designed:	MAF
Checked:	MAF
Drawn:	CW

Round Drawing Initials:

Shady Oak Road Property

Shady Oak Road & Highway 62
Eden Prairie, Minnesota

Proposed Site Plan
Figure 1-2

Date: 07/18/11

C6

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2. ASSUMPTIONS AND METHODOLOGY

2.1 Unchanged Assumptions

A majority of the assumptions remain unchanged from the 2008 study. These include the following:

- The portion of the AUAR Site north of TH 62 continues to be planned for office development. Completion of this ancillary use is anticipated by 2017 and is included in the trip estimates for all of the 2018 and 2030 Build scenarios.
- The design peak hours for analysis continue to be the AM and PM peak hours, which coincide with the heaviest times of trip generation for office uses. No major retail generators in the study area exist that would necessitate analysis of weekend midday peak conditions.
- The Operational Analysis Methodology continues to be Synchro/SimTraffic, LOS and 95th percentile queuing. The impacts that would warrant mitigation continue to be a LOS E or F, movement LOS F with significant decrease in overall intersection efficiency, and 95th percentile queuing that significantly impacts upstream traffic.
- Similar to the 2008 Study, no ramp meter analysis was undertaken. As noted in the 2008 Study, the MnDOT ramp metering policy continues to be significantly less restrictive than it was in 2001.

New and updated assumptions are covered below.

2.2 Intersections Studied

The geographic scope includes the seven Shady Oak Road intersections included in the previous studies from and including the TH 62 interchange to and including the TH 212 interchange and east frontage road (Flying Cloud Drive). The scope for this study also includes the two internal site access driveway intersections – one each on West 62nd Street and City West Parkway. The City West Parkway driveway was analyzed in the 2001 Study. The West 62nd Street driveway was not analyzed in either study.

The geometry of the study-area intersections was verified by Westwood in a field review conducted in November 2010. No changes to existing geometry have occurred since publication of the 2008 AUAR.

2.3 Design Years

Consistent with the previous studies, the City of Eden Prairie Comprehensive Plan year 2030 was included as the ultimate design year for this study. The design years also included 2018, which is the year after full build out, and two interim years that correspond with UHG phases 1 and 2 (discussed in greater detail below).

2.4 Existing Traffic Volumes

Updated manual turning movement counts were collected by Westwood in November 2010. The current AM Peak Hour (7:15 – 8:15 AM) and PM Peak Hour (4:30 – 5:30 PM) volumes for each of the study area's seven intersections at the Site are illustrated in **Figure 2-1: Existing Peak Hour Turning Movement Counts**. The updated counts are similar to the counts conducted for the 2008 AUAR.

The most current Average Daily Traffic (ADT) volumes for the study area roadway network as published by the Minnesota Department of Transportation (MnDOT) are shown on **Figure 2-2: Existing Average Daily Traffic**.

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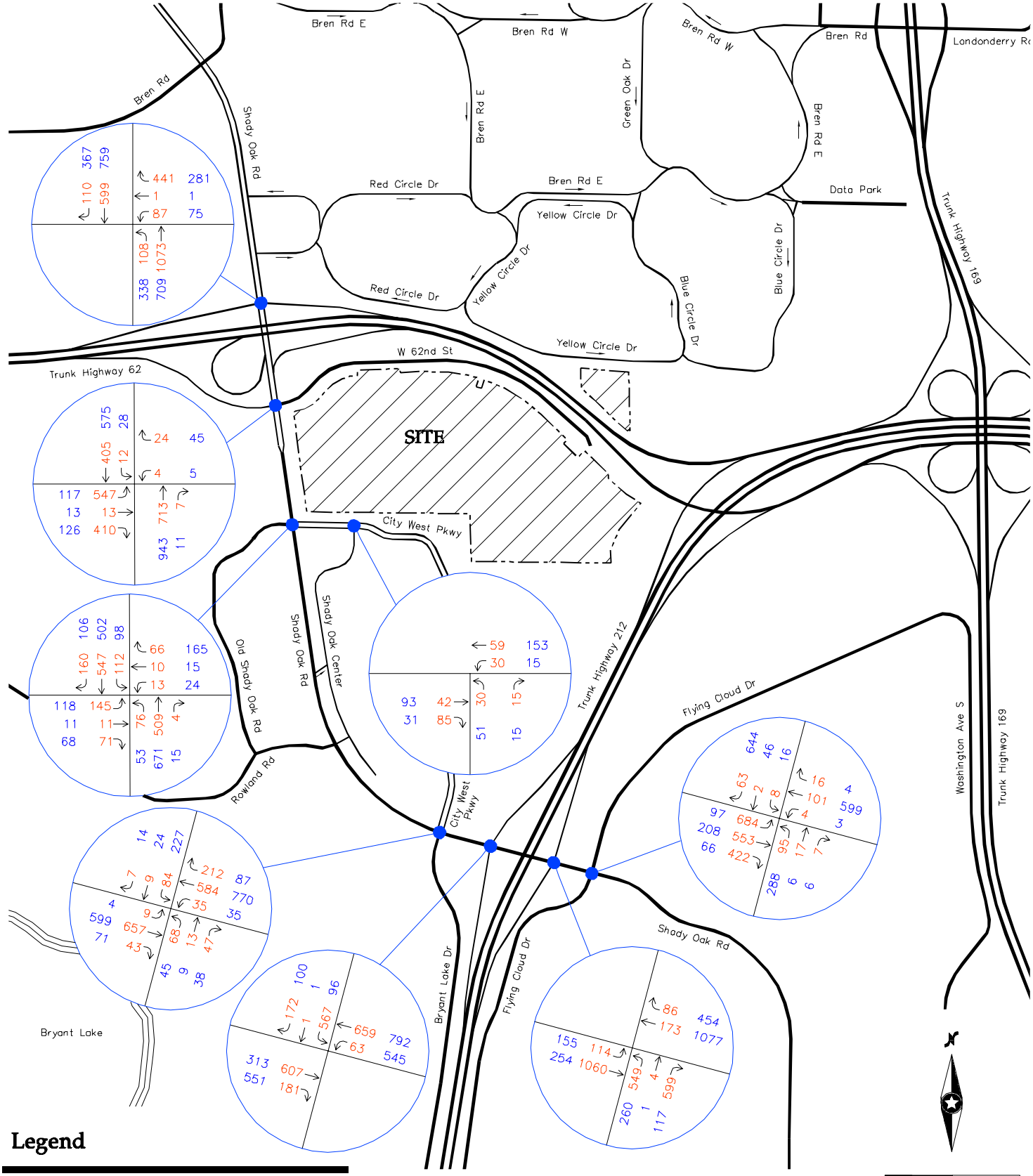

Legend

AM PEAK HOUR VOLUME XX

PM PEAK HOUR VOLUME XX

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2010 Existing Peak Hour Volumes

Figure 2-1

UHG
EP Campus

Eden Prairie, MN

UHG City West TIS Volumes.dwg

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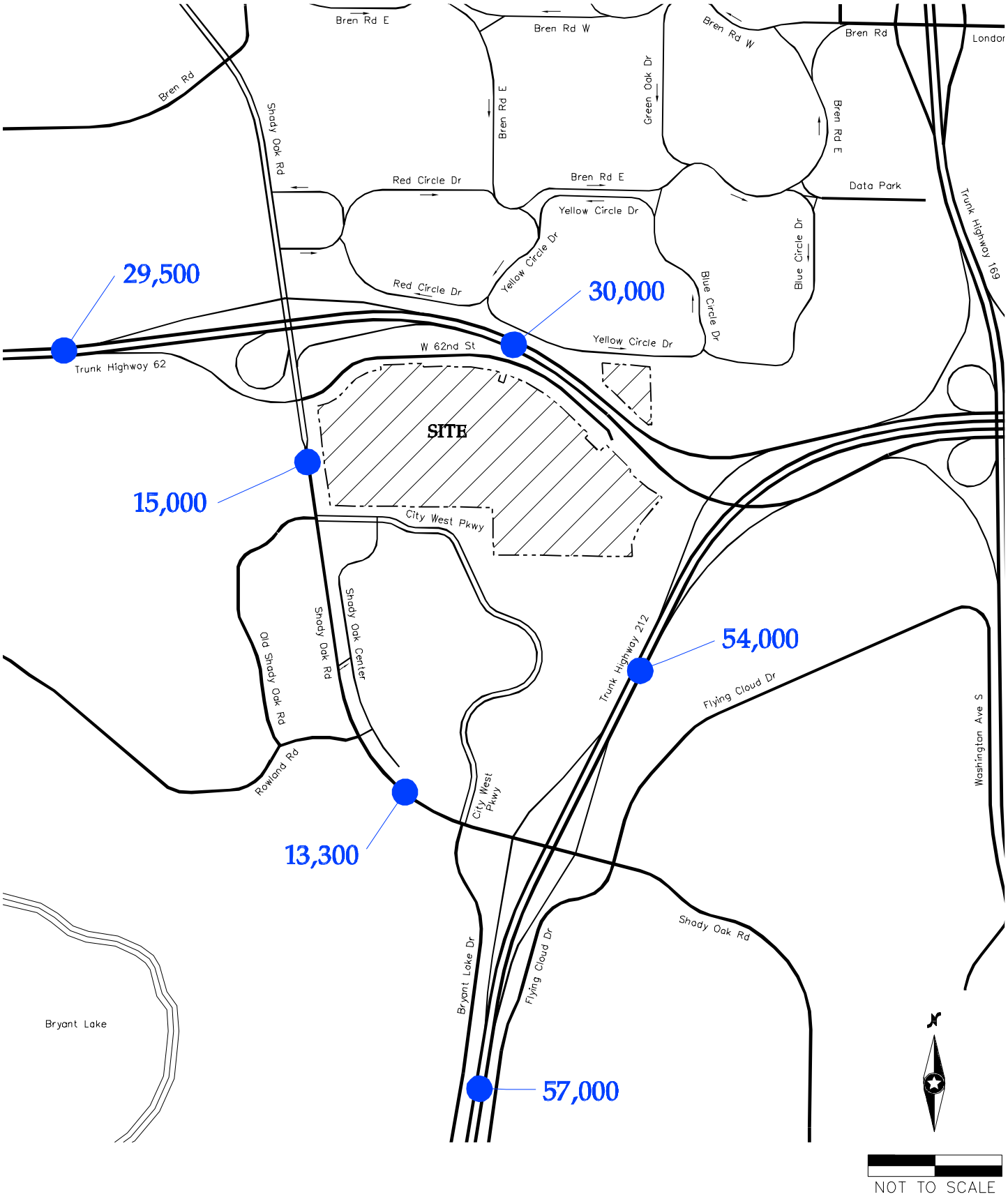

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2009 Average Daily Traffic

Figure 2-2

UHG
EP Campus

Eden Prairie, MN

UHG City West TIS Volumes.dwg

2.5 Background Growth

This study accounts for two components of background growth: (1) an annual rate applicable to all existing turning movements at all intersections; and (2) specific developments in and around the study area that are anticipated by the City of Eden Prairie to develop prior to the ultimate design horizon of the study (2030). This two-component process is similar to that used for the previous studies.

2.5.1 Specific Background Development

The sites expected to develop or redevelop prior to 2030, as identified by the City are:

- SuperValu Eastview Campus (on Flying Cloud Drive south of Shady Oak Road);
- Redevelopment within City West (although not formally proposed, City staff anticipates redevelopment of City West due to the change in UHG land use from mixed-use to office);
- Infill of existing vacancies within City West. These vacancies include general office space and general light industrial space. Current occupancy within the City West area is approximately 50%. Full occupancy is assumed by 2030 for all 2030 scenarios, including the No-Build scenario.
- UHG Data Park East Building (located in the Opus business park, currently under construction as of June 2011); and
- City West LRT Park and Ride facility. This facility is schematically shown in Southwest LRT planning documents.

The magnitude of trips anticipated to be generated by each of these developments is shown in the table below. Details on the calculations behind these estimates are available in the Appendix under **Trip Generation Components Matrix**, **Trip Generation Rates Summary** and **City West Redevelopment Internal Trip Capture Calculation**.

The LRT trip rate calculation involved a review of ITE's Trip Generation, 8th Edition (2008) estimates together with local data from a 2010 Spack Consulting study of the Metro Transit Maplewood Park-and-Ride station, a 2006 SRF Consulting Group study of the Bloomington 28th Avenue Park-and-Ride and data collected at Southwest Station (Eden Prairie) and the 28th Avenue LRT Park-and-Ride by U of M students as part of a 2011 Capstone Senior design project mentored by Nick Erpelding (Westwood) and Randy Newton (City of Eden Prairie). Details are available in the Appendix - See **City West Park-and-Ride Trip Generation Rate Estimate Calculations**.

Table 2-1
Background Trip Generation Estimates

Land Use	Size	Included Scenarios	AM		PM		Weekday	
			Enter	Exit	Enter	Exit	Enter	Exit
Best Buy Corporate	100,000 s.f.	2014 Build	136	19	25	124	551	551
	200,000 s.f. (cumulative)	2016 Build	273	37	51	247	1,101	1,101
	500,000 s.f. (cumulative)	All 2018 and 2030 Build Scenarios	682	93	127	618	2,753	2,753
City West Redevelopment and Infill	*see note	All 2030 Scenarios	365	210	228	334	3,596	3,596
UHG Data Park East Building	300,000 s.f.	All Future Scenarios (currently under construction)	409	56	76	371	1,652	1,652
City West LRT Park-and-Ride	300 stalls	2018 Build with LRT 2030 Build with LRT	168	42	42	168	375	375

***Note**: The assumed redevelopment of land within City West includes 50,000 s.f. of specialty retail, 320 multi-family residential units, a 125-room hotel, and 8,000 s.f. of restaurant(s). Assumed infill includes 140,000 s.f. of general office and 60,000 s.f. of general light industrial.

2.5.2 Overall Background Growth Rate

The method for forecasting an annual background growth rate was similar to that used in the 2008 Study. Daily trip estimates associated with all of the development anticipated in the City of Eden Prairie Comprehensive Plan were distributed and assigned throughout the study area and added to existing turning movement counts. Included were trips associated with the previous AUAR land uses for the UHG Site. Not included were trips generated by potential future redevelopment within City West (which is not included in the City's Comprehensive Plan). Westwood then calculated an annual growth rate to be applied solely to the existing traffic volumes so that the 2030 ADTs along Shady Oak Road matched the City Comprehensive Plan estimates. The resulting annual rate calculated was 0.55%. This rate is higher than that assumed in the 2008 Study (0.25%) and lower than the rate included in the 2001 Study (1.0%).

2.6 UHG Trip Generation

As mentioned, previous plans for the Site in the 2001 and 2008 Studies were for mixed-use development. Current development plans call for an office campus with 6,637 employees over 1,467,000 square feet. A comparison of the previously- and currently-planned uses is shown in **Table 2-2: AUAR Land Use Comparison**.

Table 2-2
AUAR Land Use Comparison

Location	Previous AUAR (2008)	Current Plan (2030)
Main Site (south of TH 62)	• 480,000 s.f. Corporate Headquarters Office • 630,000 s.f. General Office • 8,000 s.f. restaurant • 125-room hotel • 50,000 s.f. retail • 320 condominium units	• 6,637-employee UHG office campus (1,467,000 s.f.)
Opus Portion of Site (north of TH 62)	• 30,000 s.f. General Office	• 30,000 s.f. General Office

Phasing for the site construction is currently planned as follows:

- Phase 1 (construction complete in 2013): 2,500 employees
- Phase 2 (construction complete in 2015): 5,000 employees (cumulative)
- Full Build (construction complete in 2017): 6,637 employees (cumulative)

The interim design years for the study were selected to fit with the year after build-out of Phases 1 and 2, for 2014 and 2016 respectively.

To accurately gauge the trip generation potential of the UHG office land use, Westwood conducted counts at two current UHG sites in the Twin Cities Metro area. Counts were conducted for three hours in the morning and three hours in the afternoon to capture both the AM and PM peak hours. The total number of trips in the peak hours for both sites were combined to develop an overall UHG rate. Details are provided in the Appendix under **UHG Office Trip Rate Calculation**.

The rate developed was compared to Institute of Transportation Engineers (ITE) rates in Trip Generation, 8th Edition, for Corporate Headquarters (714) and Single Tenant (715). It was found that the UHG rates fell among the middle of the ITE range for these office land uses, indicating the use of the UHG data would not result in an underestimation of the trip generation potential of the site. See the **UHG vs. ITE Trip Generation** chart in the Appendix for more detail.

UHG rates were initially developed on both a per-1,000 s.f. and per-employee basis. Because a proposed employee count is available for the UHG office use, the rate chosen for the analysis was the per-employee rate. Using a per-employee rate eliminates the unknown of employee density per square foot, ostensibly resulting in a more accurate trip forecast.

2.6.1 "Large Campus" Reduction

The proposed UHG campus is significantly larger than the combined sizes of the two surrogate sites counted, and is also larger than the all of the data points in ITE's Trip Generation for ITE Corporate Headquarters (714) and Single Tenant

(715). For nearly all land use categories, including 714 and 715, the data points for a given plot show a decrease in trip generation rate (per employee or s.f.) as the size of the independent variable (square footage or number of employees) increases. This effect is the reason that a downward sloping fitted curve equation is provided for many of the land use categories, especially where a large number of data points are present. To avoid overestimating the trip generation of the UHG campus, a reduction factor was applied to account for this effect. Based on the sizes of the sites at which surrogate counts were taken, an reduction could be as large as 19% (see Appendix – **Large Campus Factor Calculation**). To avoid over-correcting, the reduction factor applied was 6% for Full Build, 4% for Phase 2, and was disregarded entirely for Phase 1.

2.6.2 TDM Reduction

An attempt was also made to forecast the impact that a Travel Demand Management (TDM) plan would have on the Site's trip generation. Very little information could be found in support of a particular percentage reduction that would be appropriate for a large office campus similar to UHG's proposed campus. Data provided by the 494 Corridor Commission points to a reduction rate in the low single digits. The fact that the UHG office campus is proposed as a single user familiar with successful implementation of TDM plans increases the likelihood that a TDM plan will be successful in eliminating peak hour trips. (It should be noted that the sites at which the surrogate trips counts were taken did not have formal TDM plans.) In view of these factors, a three percent (3%) reduction for TDM was applied to the trip forecasts for each of the time horizons. It should also be noted that the percentage reduction assumed applies to trip totals. Since there is not necessarily a 1:1 ratio between number of participants in a TDM plan and number of trips eliminated (a carpool of two employees eliminates only one trip), the percentage of participants in the UHG TDM program will likely need to be higher than 3%.

2.6.3 LRT Reduction

The Southwest LRT line is expected to be operational by 2018. This timeline means that that LRT service is expected to be available at the time full build-out of the UHG campus is complete. It is anticipated that there could be a fairly large Southwest LRT ridership among UHG employees given that the City West station would be less than half a mile (1/2 mile) from the UHG campus as currently planned. UHG ridership is further anticipated to increase over time as employees are able to make choices about where to live and how to commute. National data researched in support of a LRT ridership rate for suburban offices located near a LRT station was limited, but did show the potential for double-digit ridership. Because of the relatively new status of LRT in the Twin Cities, a two percent (2%) LRT ridership was assumed for 2018 increasing to five percent (5%) in 2030.

2.6.4 UHG Trip Generation Summary

The resulting trip generation estimates for the UHG campus for the various design scenarios are shown in **Table 2-3** below. The totals shown include the reductions for Large Campus, TDM and LRT.

Table 2-3
UHG Office Campus Trip Generation Estimates

Phase	Size	AM		PM		Weekday	
		Enter	Exit	Enter	Exit	Enter	Exit
Phase 1	2,500 employees 3% TDM	775	49	53	699	3,031	3,031
Phase 2	5,000 employees (cumulative) 4% Large Campus Factor, 3% TDM	1,486	95	101	1,341	5,813	5,813
Full Build	6,637 employees (cumulative) 6% Large Campus Factor, 3% TDM	1,930	123	131	1,741	7,550	7,550
2018 Full Build with LRT	6,637 employees (cumulative) 6% Large Campus Factor, 3% TDM, 2% LRT	1,888	121	128	1,703	7,384	7,384
2030 Full Build with LRT	6,637 employees (cumulative) 6% Large Campus Factor, 3% TDM, 5% LRT	1,824	116	124	1,646	7,135	7,135

Note: Trips from the planned 30,000 s.f. of office located north of TH 62 are not included in this table but were included in the forecasts for all 2018 and 2030 scenarios. For details, see **Trip Generation Components Matrix** and **Trip Generation Rates Summary** in the Appendix.

2.7 Trip Distribution

Four separate trip distribution patterns were used according to the specific trip being added:

- UHG site-generated trips and trips generated by redevelopment in the City West area were distributed according to data provided by the Metropolitan Council. This trip distribution pattern is illustrated in **Figure 2-3** below. For details, see **Metropolitan Council TAZ 545 Trip Distribution** in the Appendix.
- Trips generated by land uses in the Opus business park north of TH 62, including the ancillary office use portion of the AUAR site and the UHG Data Park East Building currently under construction were distributed according to a 2006 study prepared by WSB for the UHG Data Park development. See **Figure 2-4**.
- Best Buy Corporate Campus trips were distributed per a 2006 study prepared by Wenck. This distribution pattern is illustrated in **Figure 2-5**.
- Finally, trips generated by the City West Park-and-Ride were distributed according to data provided by the Metropolitan Council, as illustrated in **Figure 2-6**. Detailed calculation of the distribution for the LRT Park-and-Ride trips is provided in the Appendix under **Met Council Market Area Plot for City West LRT Park-and-Ride.**

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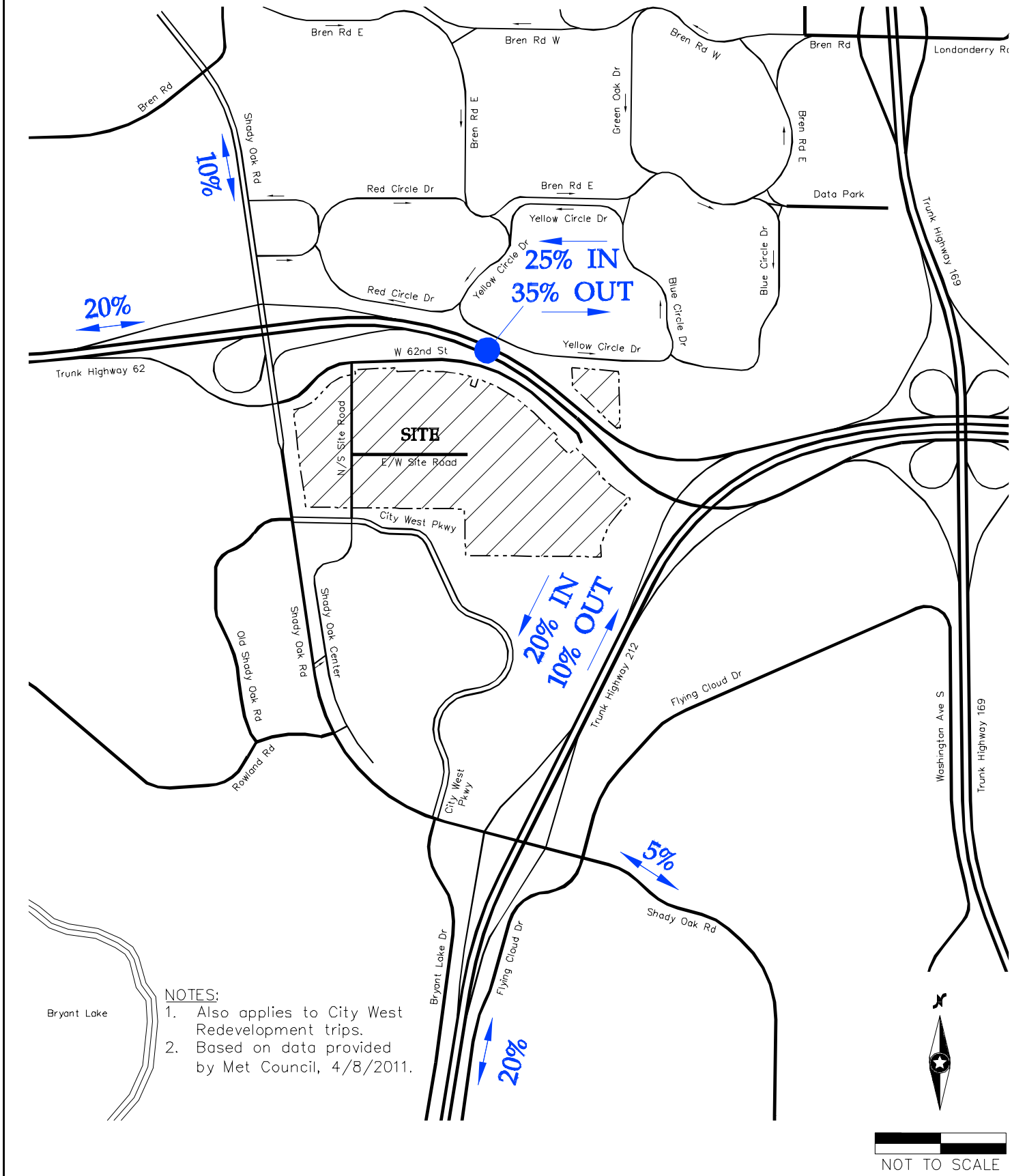

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Site-Generated Trip Distribution

Figure 2-3

UHG
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UHG City West TIS Volumes.dwg

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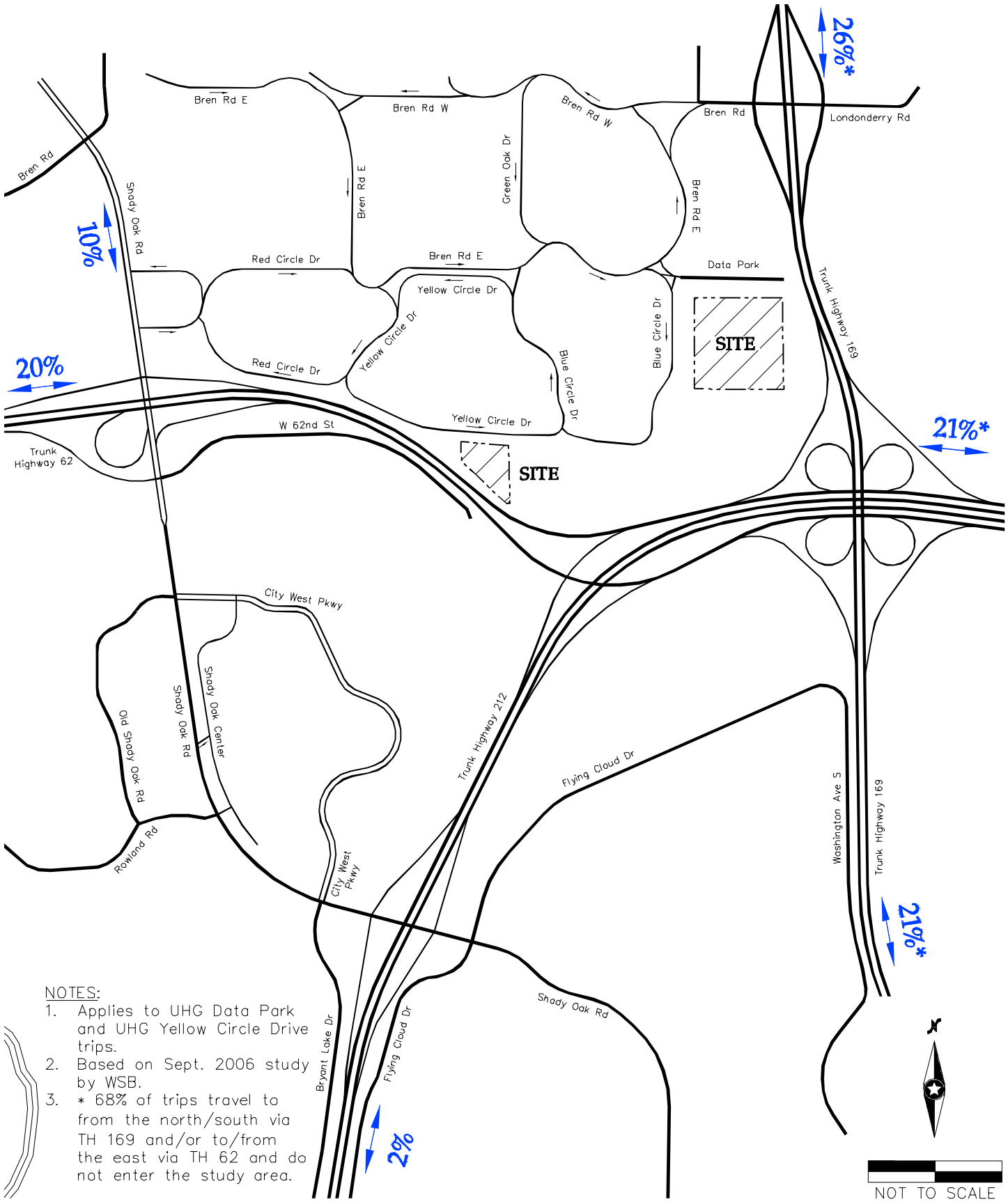

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Opus Area Trip Distribution

Figure 2-4

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UHG City West TIS Volumes.dwg

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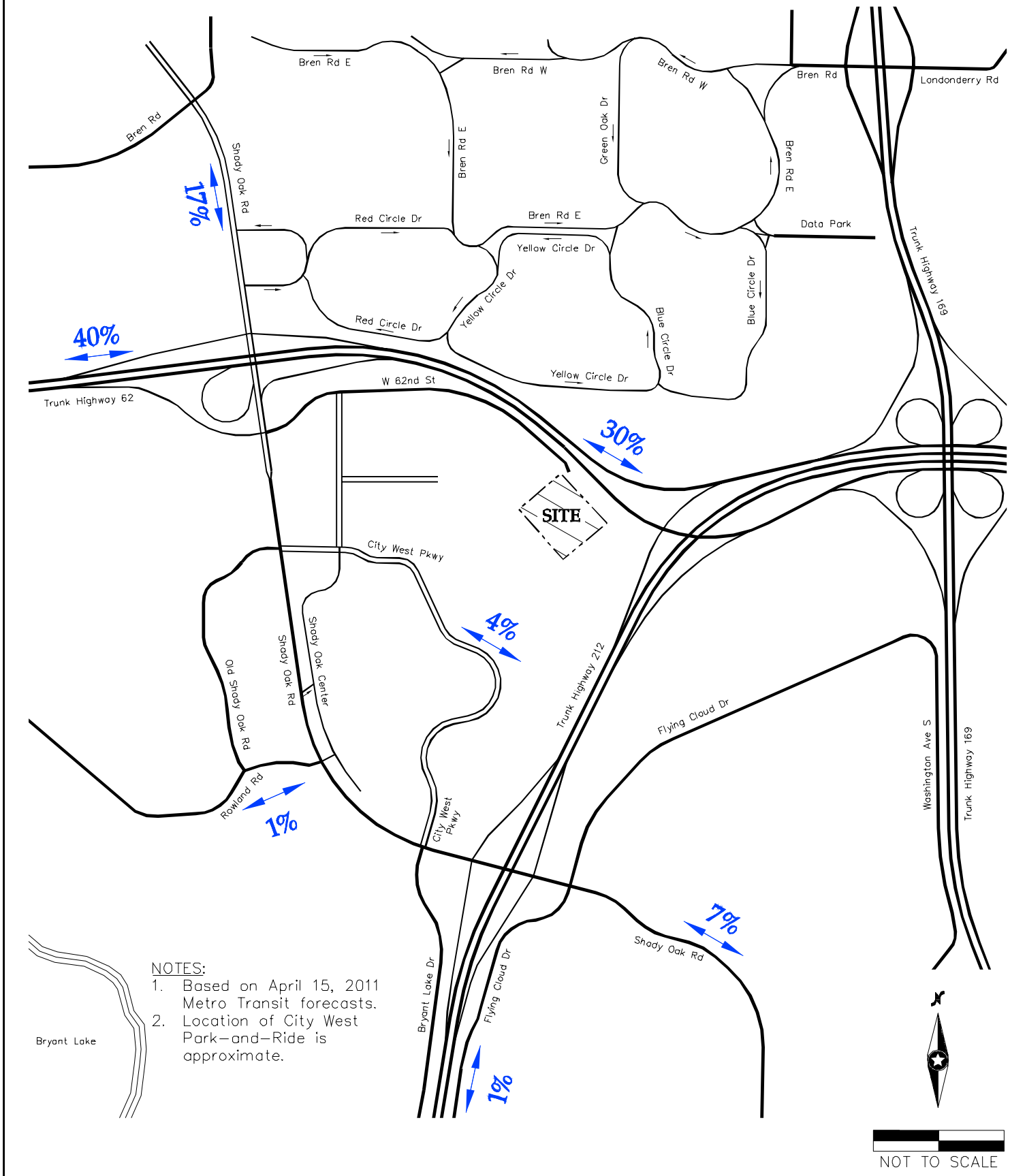

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City West Park-and-Ride Trip Distribution

Figure 2-5

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UHG City West TIS Volumes.dwg

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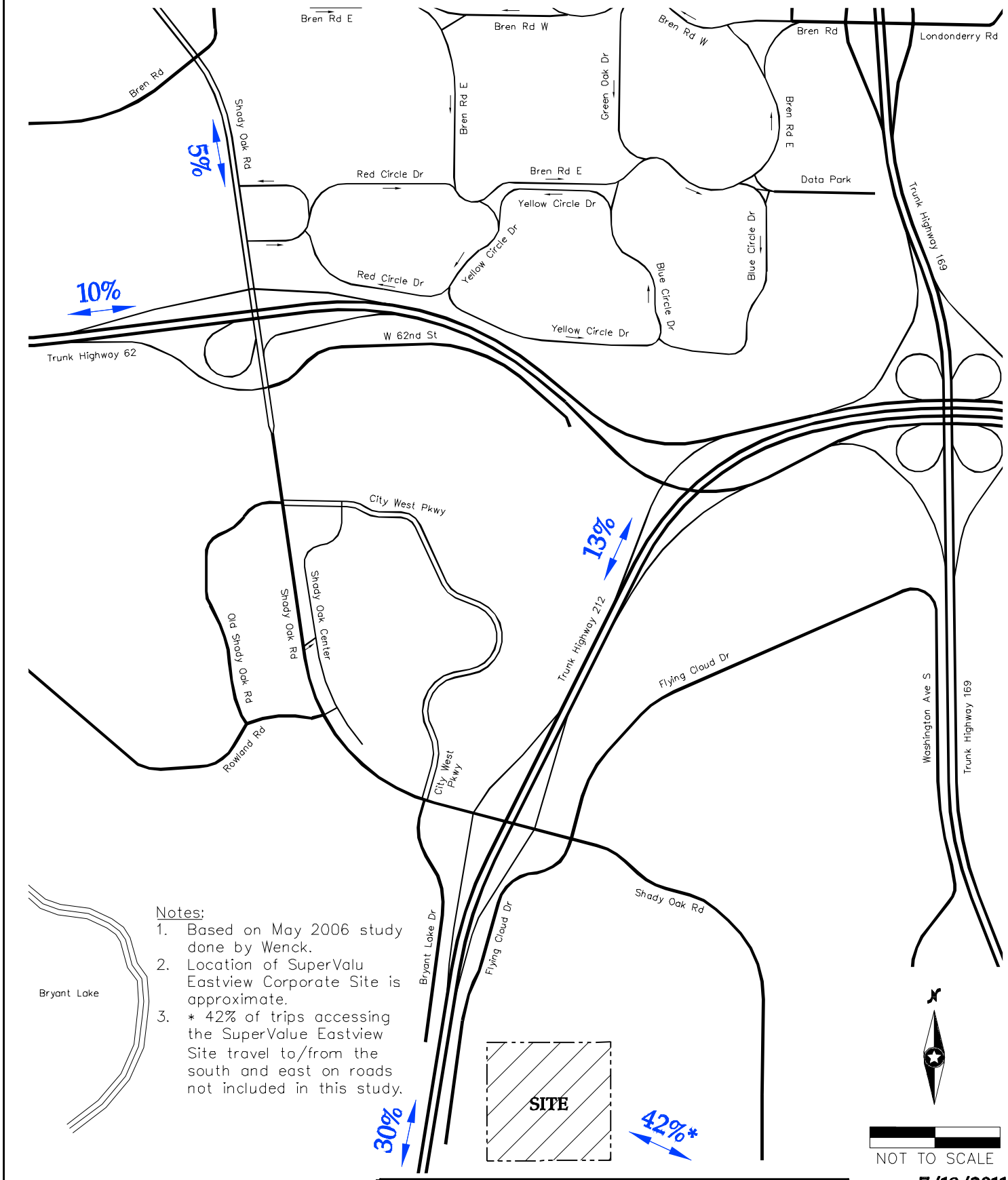

Notes:
1. Based on May 2006 study done by Wenck.
2. Location of SuperValu Eastview Corporate Site is approximate.
3. * 42% of trips accessing the SuperValue Eastview Site travel to/from the south and east on roads not included in this study.

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SuperValu Eastview Trip Distribution

Figure 2-6

UHG
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Eden Prairie, MN

UHG City West TIS Volumes.dwg

2.8 Sensitivity Analysis / Worst Case Scenarios

As discussed above, several assumptions regarding trip rate, LRT ridership, TDM compliance, and large campus trip reduction impacts were made when forecasting trip generation in order to get to estimates most likely to be accurate. While all of these assumptions are intended to be conservative and fact-based, given the uncertainty of combined assumptions, a sensitivity analysis of a worst case scenario was conducted for the 2018 and 2030 design years. For these Worst Case scenarios, the large campus effect and TDM participation are neglected and LRT ridership is assumed to remain at 2% for both the 2018 and 2030 design years (rather than increasing to 5% for the 2030 design year). The resulting UHG trip generation estimates for this sensitivity analysis are shown below.

Table 2-4
UHG Office Campus Trip Generation Estimates – Worst Case Scenarios

Size	AM		PM		Weekday	
	Enter	Exit	Enter	Exit	Enter	Exit
6,637 employees 2% LRT Reduction	2,079	133	141	1,875	8,130	8,130

In addition to changes related to assumptions for UHG trip generation, assumptions for the City West LRT Park-and-Ride were also adjusted for the Worst Case Scenarios. Based on information provided by Metro Transit, the range of sizes anticipated for the facility is 200 to 600 stalls. To provide a slightly more conservative look, 300 stalls were assumed for the base scenarios with LRT. For the Worst Case Scenarios, a 600-stall facility was assumed. The trip generation estimates associated with a 600-stall facility are as follows:

Table 2-5
City West Park-and-Ride Trip Generation Estimates – Worst Case Scenarios

Size	AM		PM		Weekday	
	Enter	Exit	Enter	Exit	Enter	Exit
600 stalls	336	84	84	336	750	750

3. TRAFFIC FORECASTS

Accounting for the specific background development, general background growth, and UHG trips (for Build scenarios) as discussed above, forecasts of future traffic volumes were developed.

3.1 2030 Average Daily Traffic

Figure 3-1: 2030 Average Daily Traffic provides a look at the forecasted daily traffic volumes for each of the 2030 scenarios. The figure includes the Eden Prairie Comprehensive Plan forecasts for comparison.

3.2 2018 and 2030 Build Turning Movement Counts

Forecasts for the 2018 Build with LRT, 2030 Build with LRT, and 2030 Build with LRT Worst Case Scenarios are presented below. Forecasts of turning movement volumes for the remaining scenarios are provided in the Appendix to preserve the continuity of the body of the report.[2]

[2] All turning movement count figures are included in the appendix for ease of comparison.

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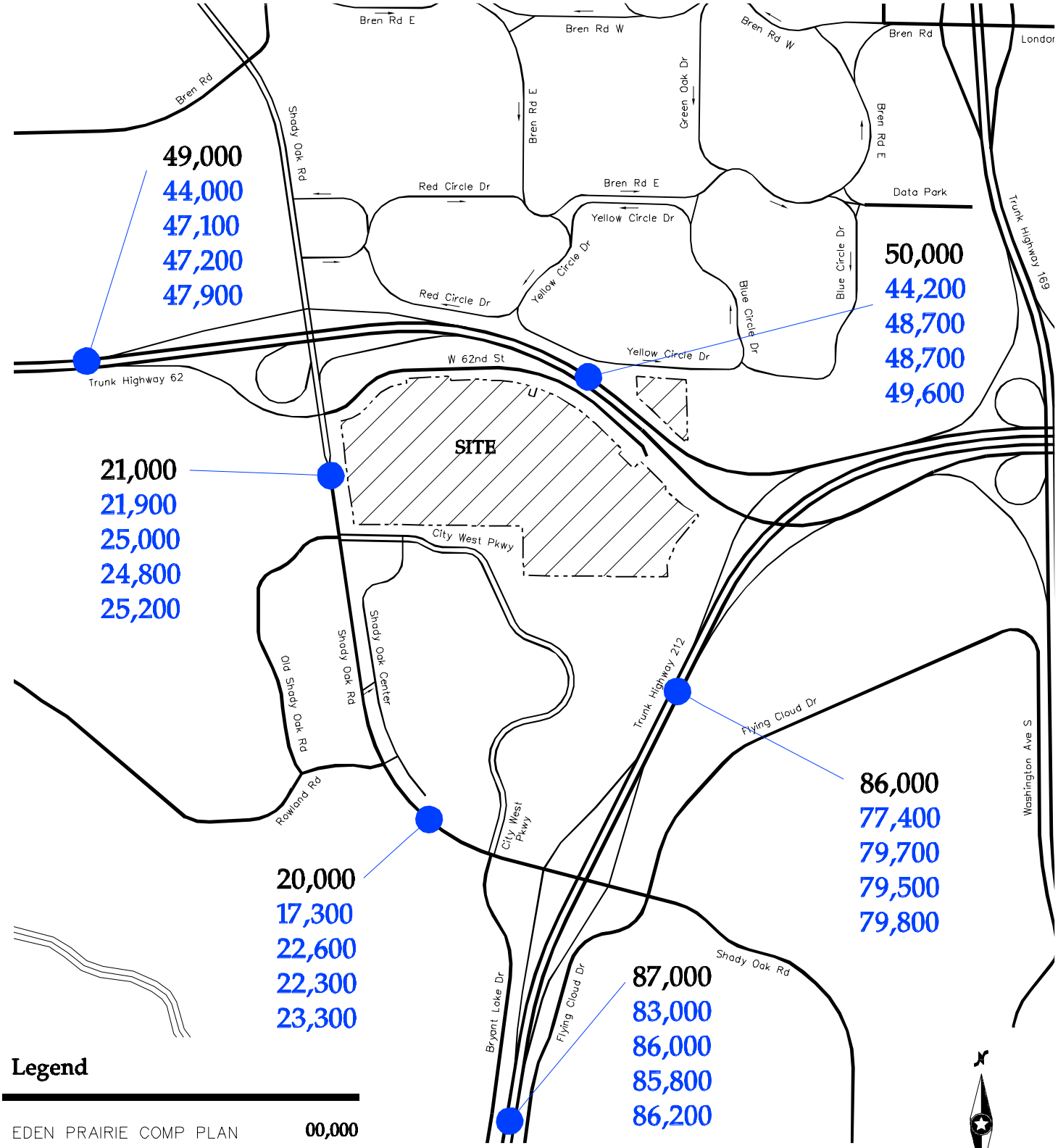

Legend

EDEN PRAIRIE COMP PLAN	00,000
NO–BUILD	00,000
BUILD	00,000
BUILD WITH LRT	00,000
BUILD WITH LRT WORST CASE	00,000

*NOTES:
1. 2.0% ANNUAL BACKGROUND GROWTH ASSUMED ON MAINLINE TH 212 & MAINLINE TH 62. 0.7% BACKGROUND GROWTH ASSUMED ELSEWHERE.
2. NO–BUILD SCENARIO ADTs INCLUDE BACKGROUND GROWTH AND ANTICIPATED OFF–SITE DEVELOPMENT. NO DEVELOPMENT WITHIN THE UHG AUAR SITE IS INCLUDED.

N

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2030 Average Daily Traffic

Figure 3-1

UHG
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UHG City West TIS Volumes.dwg

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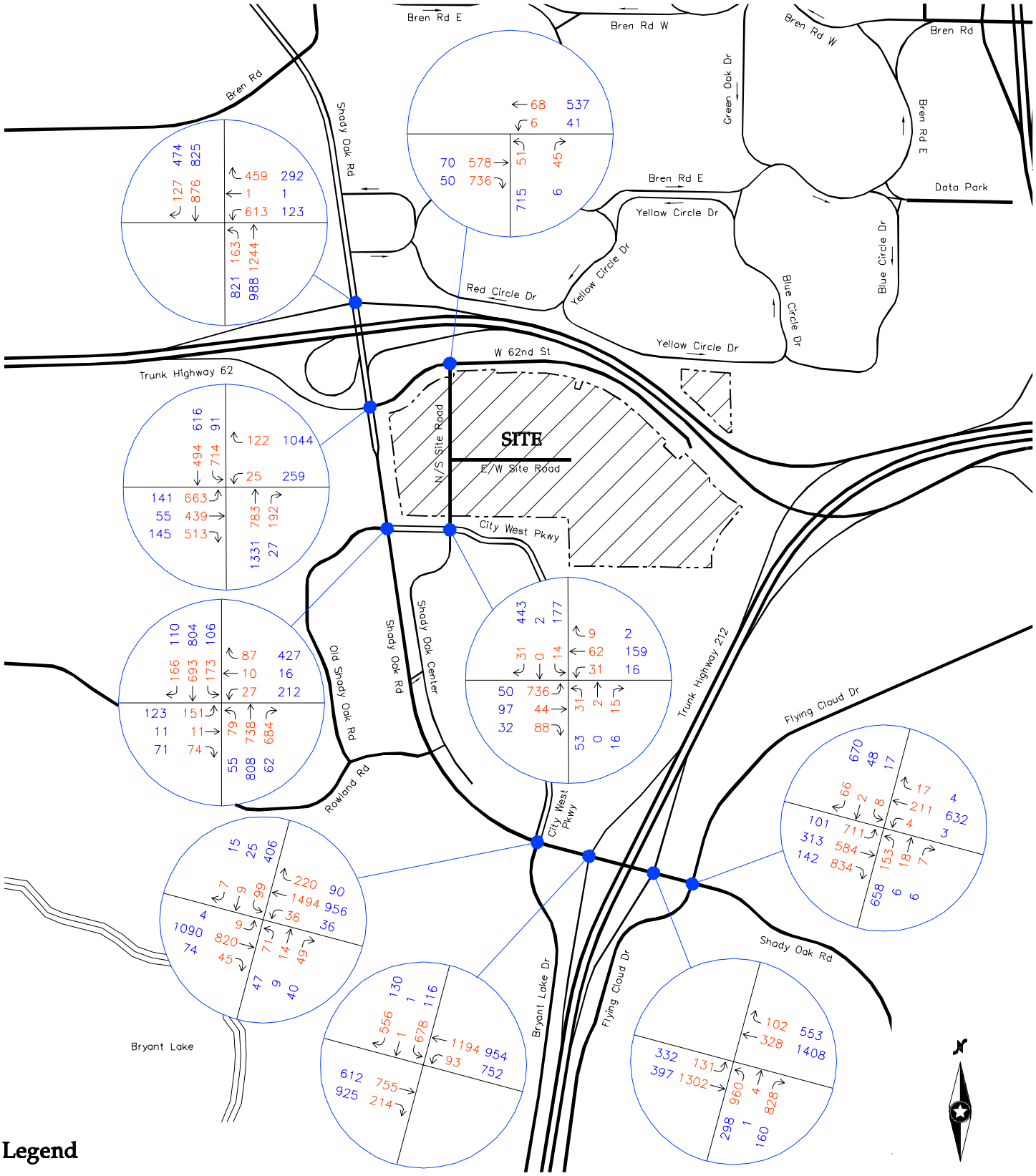

Legend

AM PEAK HOUR VOLUME XX

PM PEAK HOUR VOLUME XX

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2018 Build with LRT Peak Hour Volumes

Figure 3-2

UHG
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UHG City West TIS Volumes.dwg

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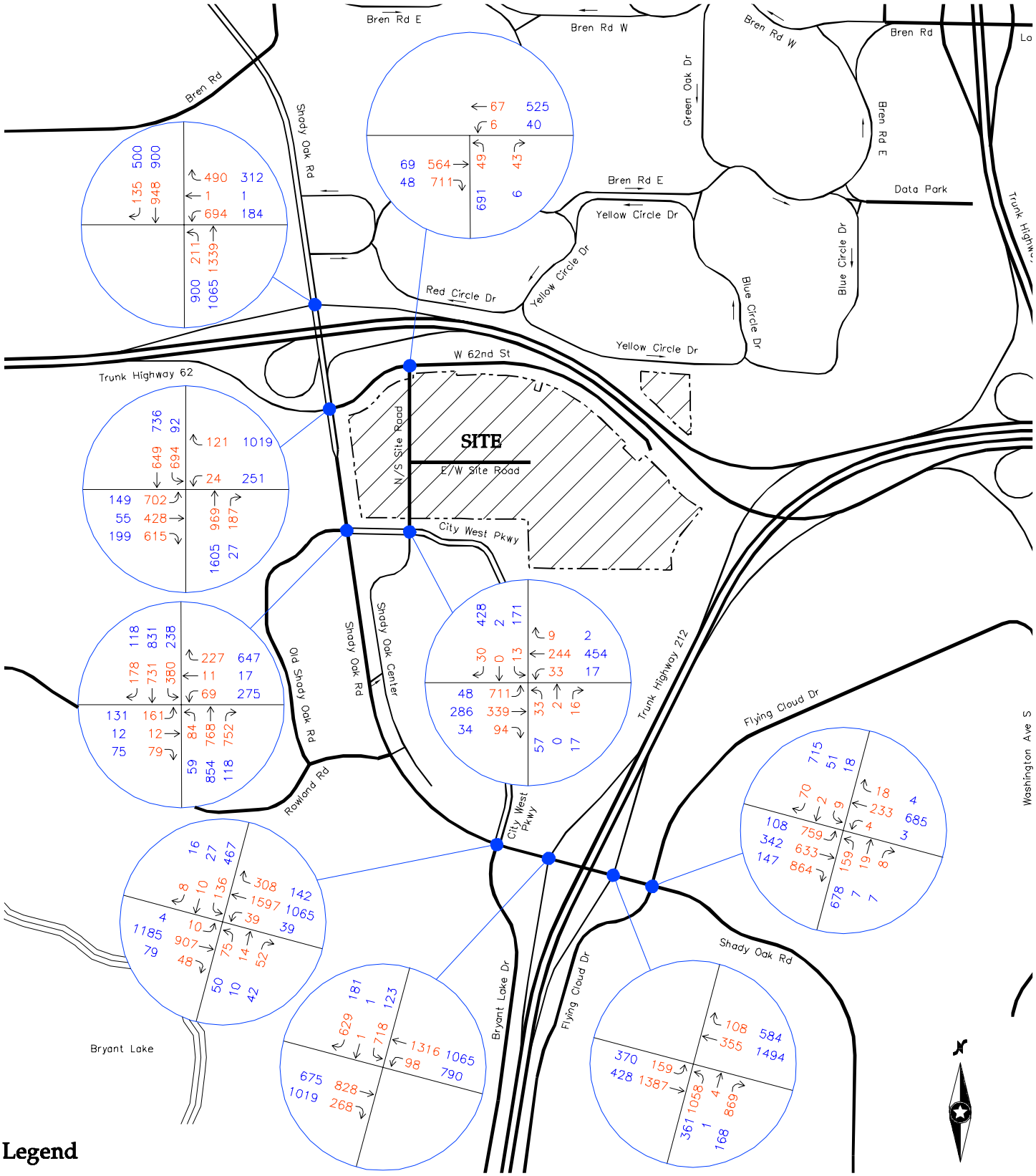

Legend

AM PEAK HOUR VOLUME XX

PM PEAK HOUR VOLUME XX

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2030 Build with LRT Peak Hour Volumes

Figure 3-3

UHG
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UHG City West TIS Volumes.dwg

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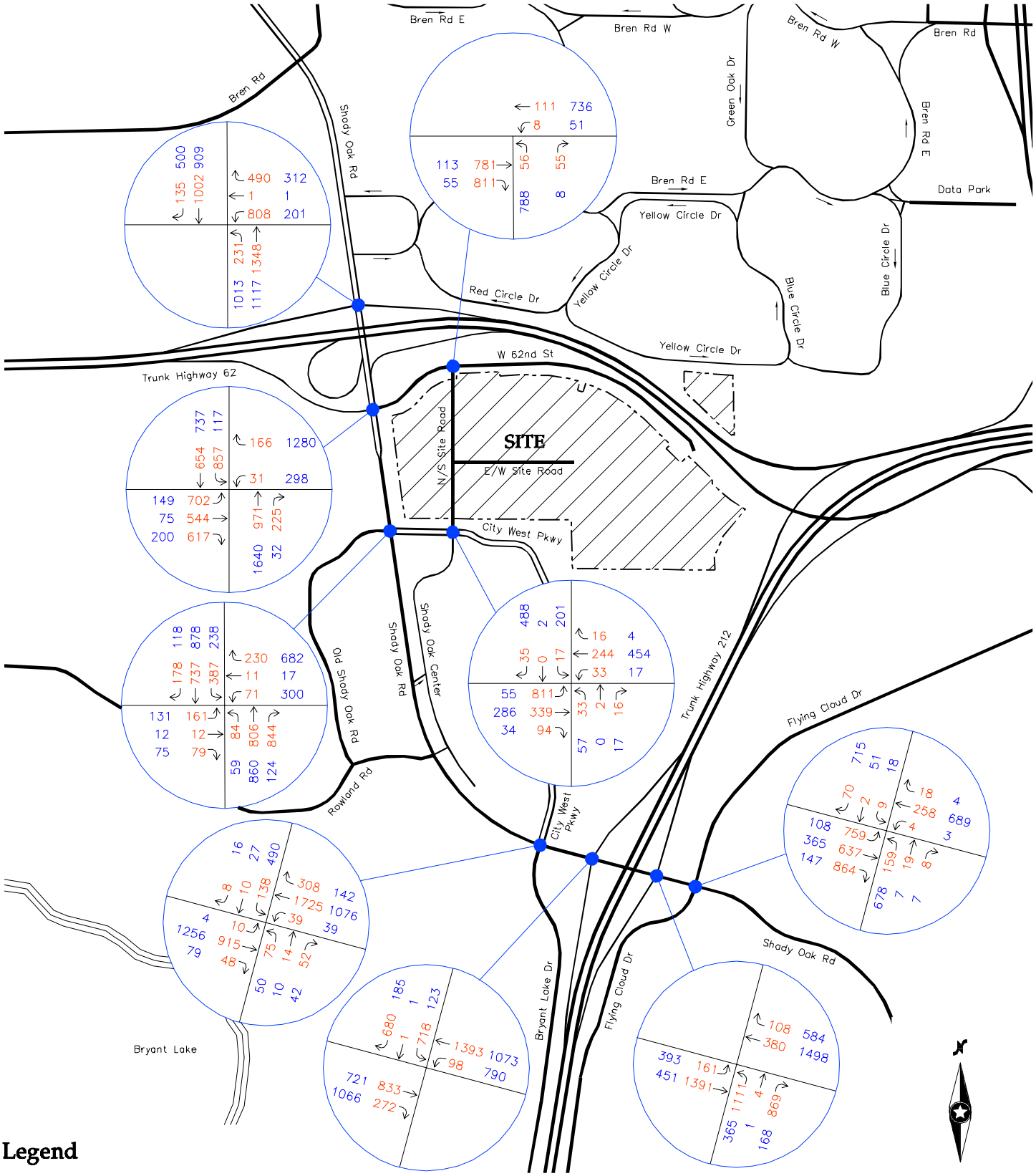

Legend

AM PEAK HOUR VOLUME XX

PM PEAK HOUR VOLUME XX

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2030 Build with LRT Worst Case Peak Hour Vol.

Figure 3-4

UHG
EP Campus

Eden Prairie, MN

UHG City West TIS Volumes.dwg

4. OPERATIONAL ANALYSIS

4.1 Terminology

Using the roadway geometric and traffic volume data described above as input, traffic operational analysis was performed per the standards set out in the 2000 Highway Capacity Manual, published by the Transportation Research Board. Synchro/SimTraffic 7 was used to complete the analysis.

Two fundamental outputs from the model are typically used to characterize traffic flow. The first is Level of Service (LOS), a letter grade ranging from "A" (free flow) to "F" (over-saturated forced flow). Generally, Level of Service D represents the threshold for acceptable overall intersection operating conditions during a peak hour in the Twin Cities metro area. On an individual movement basis, LOS E is typically considered the lowest acceptable LOS. LOS results from SimTraffic are reported in the tables in the following sections within the body of this report. LOS results from both Synchro and SimTraffic are reported in the Appendix.

For movements operating at LOS F, the second important output to consider from the model is queuing. A queue is a line of vehicles waiting to pass through an intersection. While an intersection may be reported as operating at an acceptable level of service, queues from the intersection extending to upstream intersections or driveways could create a potential safety issue. The 95th percentile queue is typically considered the standard for design purposes. The microsimulation component of the model, SimTraffic, is best suited for reporting queuing between closely-spaced intersections. An average of five simulations is reported both in the overall LOS tables in the text below as well as in the detailed results tables presented in the Appendix.

4.2 Reporting Process

The scenarios analyzed will be covered in the following order:

After summarizing existing results, conditions in 2018 (year after Full UHG Build out) will be described in order to gauge the full extent of improvements and mitigation needed. Second, 2030 build conditions will be examined to assess whether additional future improvements may be needed due to additional growth in background traffic.

Next, results from the Worst Case/Sensitivity Analysis will be described. Recommendations for improvements/mitigation that may be necessary if traffic volumes are higher than expected (or simply to provide additional reserve capacity) will be described.

Last, results from analysis of the interim (2014 and 2016) design years will be covered. The primary purpose of studying these design years is to assess when the recommended full-build improvements/mitigation measures will be required.

Complete details of the recommended improvements/mitigation measures for each scenario are included in the **Recommended Mitigation Summary Matrix** included at the beginning of this report in the Executive Summary. A detailed version of this table – **Detailed Mitigation Summary Matrix** – is included in the Appendix.

4.3 2010 Existing

2010 Existing

Intersection	AM LOS	PM LOS
TH 62 North Ramps	B	B
TH 62 South Ramps/West 62nd Street	B	A
City West Parkway (North)	C	C
City West Parkway Driveway	A	A
City West Parkway (South)	A	B
TH 212 West Ramps	D	B
TH 212 East Ramps	D	C
Flying Cloud Drive	A	D

In general, operations under existing conditions are acceptable. The only issues occur at the 212 interchange. Under existing signal timing, LOS F and long queues on the southbound approach to the East Ramp intersection are present. Analysis shows that updated signal timing for the AM peak would improve movement LOS and reduce queuing to acceptable levels.

4.4 2018 (Year After Full Build)

4.4.1 2018 No Build

2018 No-Build

Intersection	AM LOS	PM LOS
TH 62 North Ramps	B	B
TH 62 South Ramps/West 62nd Street	C	A
City West Parkway (North)	C	C
City West Parkway Driveway	A	A
City West Parkway (South)	A	B
TH 212 West Ramps	**F**	B
TH 212 East Ramps	**F**	C
Flying Cloud Drive	A	**F**

Operations for the 2018 No-Build scenario with existing geometry and signal timing show primarily acceptable conditions in the vicinity of the TH 62 interchange. The one exception is the need for minor signal retiming at the City West (North) intersection to improve LOS on the eastbound approach.

The analysis shows that additional capacity will be needed at the 212 interchange for No-Build conditions. The recommended capacity additions include an additional southbound approach lane at the west ramp, and two additional northbound approach lanes at the east ramp. At the Flying Cloud Drive intersection, conversion of the southbound through lane to a shared southbound through/right turn lane is also recommended. In addition to these geometric improvements, complete signal timing of the four-signal corridor is recommended.

2018 No-Build with Recommended Mitigation

Intersection	AM LOS	PM LOS
TH 62 North Ramps	B	B
TH 62 South Ramps/West 62nd Street	B	A
City West Parkway (North)	C	C
City West Parkway Driveway	A	A
City West Parkway (South)	B	B
TH 212 West Ramps	C	B
TH 212 East Ramps	C	B
Flying Cloud Drive	B	**D/E**

With these mitigation measures in place the capacity of the interchange is increased just enough to meet acceptable thresholds, with PM LOS at Flying Cloud Drive near the D/E border. The bottleneck at the interchange, and the reason for the marginal LOS in the PM at Flying Cloud, is actually the East Ramp intersection, where three critical movements compete for the available capacity: eastbound left, westbound through, and northbound left. Compounding the capacity issue is that many of the westbound through vehicles are looking to be in the left-most lane in anticipation of a left turn at the west ramp intersection.

Two options are available for further increasing capacity of the interchange beyond those already mentioned. The first is to increase the spacing of the east ramp and Flying Cloud intersections either by moving Flying Cloud east or by moving the east ramp intersection slightly west. The second is to widen the bridge over TH 212.

Though it appears that these additional mitigation measures can be avoided for 2018 No-Build conditions, very little spare capacity will be available at the interchange.

4.4.2 2018 Build

2018 Build

Intersection	AM LOS	PM LOS
TH 62 North Ramps	**F**	B
TH 62 South Ramps/West 62nd Street	**F**	**F**
City West Parkway (North)	**F**	**E**
City West Parkway Driveway	A	A
City West Parkway (South)	D	**F**
TH 212 West Ramps	**F**	B
TH 212 East Ramps	**F**	C
Flying Cloud Drive	B	D

As shown in the table above, a number of mitigation measures will be required to accommodate full build out of the planned UHG campus, with many of these concentrated in the TH 62 interchange area. The improvements needed in the vicinity of the TH 212 interchange area needed less as a direct result of UHG but rather as a combination of existing traffic, other background development, along with traffic from the proposed UHG City West campus.

TH 62 Interchange Area

In the vicinity of TH 62, the following improvements are recommended for 2018 Build conditions to accommodate UHG traffic (these are illustrated in **Figure 4-1** below):

- TH 62 North Ramps
  - Additional northbound left turn lane. Widening should occur to the east underneath the TH 62 bridges to avoid impacts to the existing bridge columns. This may result in the need for a retaining wall along the east bridge embankments.
  - Extension of the storage bays for the northbound left turn lanes. The right-most of the two lanes should extend back to and through the TH 62 South Ramps intersection.
- TH 62 South Ramps
  - Additional eastbound approach lane.
  - 4-lane westbound approach with 2 eastbound departure lanes.
  - Additional northbound approach lane (3 through lanes). This lane is an extension of the north ramps northbound left turn lane.
  - Northbound right turn lane (500 feet of storage).
  - Additional southbound left turn lane.
  - Extension of the storage bays for the southbound left turn lanes.
- City West (North)
  - The intersection should be reconstructed to include northbound and southbound left turn lanes to allow for left turn phasing (instead of split phasing). The southbound left turn lane should be designed with 500 feet of storage.
  - Northbound right turn lane (500 feet of storage).

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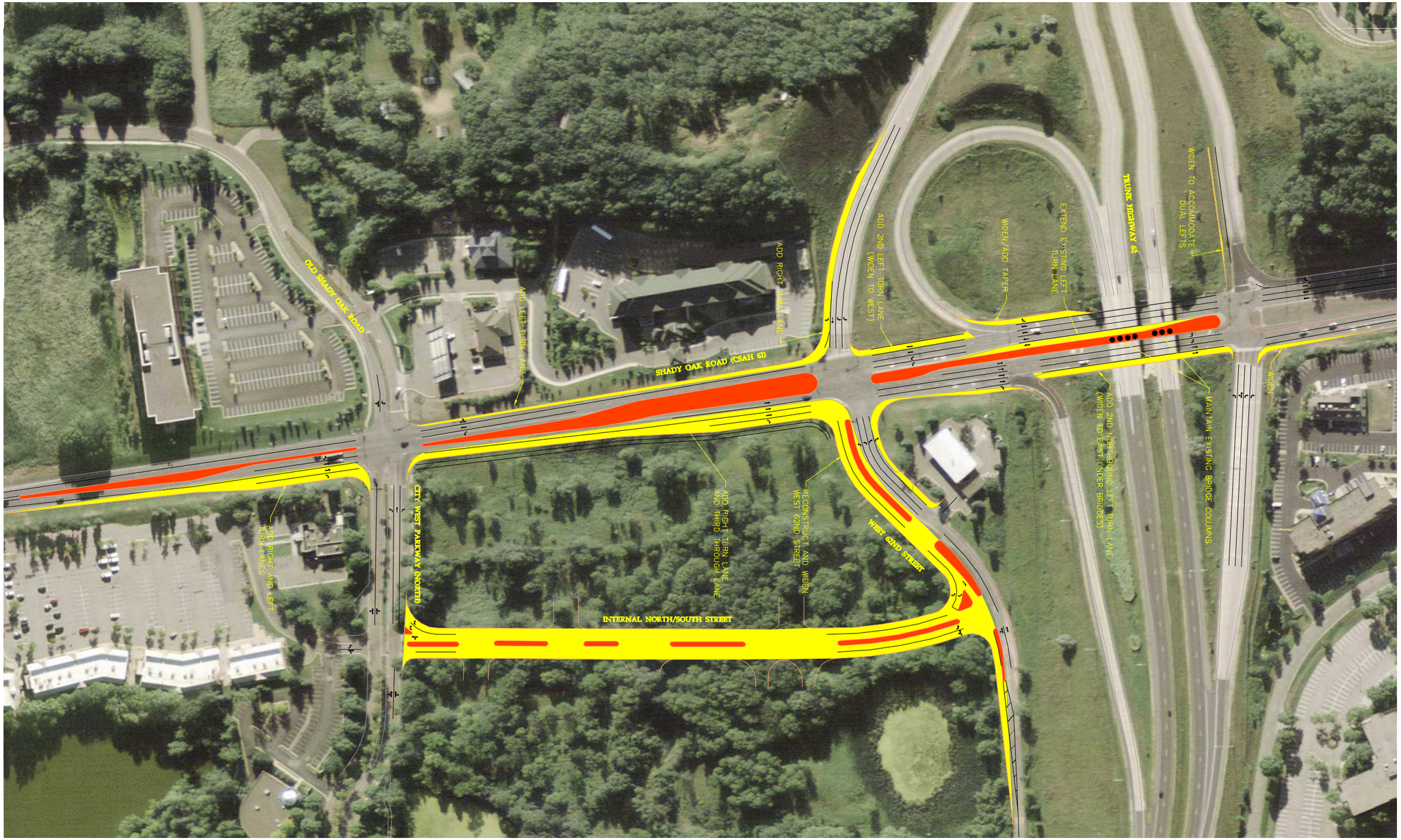

LEGEND

PROPOSED PAVEMENT

PROPOSED MEDIAN

0' 200' 400'

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Designed:	NJE
Checked:	NJE
Drawn:	CEF
Record Drawing by/date:	.

Prepared for:

City of Eden Prairie

MINNESOTA

TH 62 Interchange Area Concept Plan

Figure 4-1

UHG City West Office AUAR

Eden Prairie, MN

Site Driveways

The following changes are recommended at the site access driveways:

- West 62nd Street Driveway (new with site development)
  - All approaches should be two lanes.
  - Channelization should be provided to allow for dual rights eastbound (to ensure that both southbound left turn lanes on Shady Oak Road are fully utilized).
  - Left turns should be allowed from both northbound lanes to accommodate a heavy PM northbound left turn movement.
  - Side street stop control is recommended. The northbound approach should be considered the major street, with the eastbound and westbound legs receiving stop control. The eastbound right turn movement should be free flowing.
- City West Driveway (3-leg intersection currently exists; 4th (north) leg to be added with UHG development)
  - Two-lane southbound approach.
  - Channelization with yield control to accommodate the heavy PM southbound right turn movement.
  - Stop control for left lane (left turn and through movements) on the southbound approach.

TH 212 Interchange Area

A study of how best to accommodate additional traffic at the Shady Oak / TH 212 interchange was undertaken by the City of Eden Prairie and performed by SRF Consulting Group in 2009. The primary conclusion from this study was that a diamond interchange (as currently exists) is the most effective interchange configuration. Ultimately, SRF's projections show that an 8-lane bridge will be required (assuming a standard diamond configuration). SRF further recommends that the intersection of Flying Cloud Drive (the east frontage road) should be relocated as far east as feasible (approximately 100 feet) in order to maximize capacity of the interchange.

Reconstruction of the interchange to a single-point configuration would provide additional capacity compared with the 8-lane diamond, but at nearly double the cost.

Accordingly, the geometric improvements and mitigation recommended for the TH 212 interchange area are items that would continue to provide value after the interchange is reconstructed (assuming a standard diamond configuration).

The following improvements in the vicinity of the TH 212 interchange are recommended:

- City West (South)

    - The intersection should be reconstructed to include eastbound and westbound left turn lanes to allow for left turn phasing.
- TH 212 West Ramps
    - 3-lane southbound approach (recommended for No-Build).
    - Channelize eastbound right turn lane and allow for right turns from shared through/right middle lane. Widen southbound on ramp to accept dual rights.
- TH 212 East Ramps
    - 4-lane northbound approach (recommended for No-Build).
- Flying Cloud Drive
    - Reconstruct and relocate intersection approximately 100 feet east to maximize space for westbound queuing between the East Ramp intersection and Flying Cloud intersection. If intersection is not moved, the Shady Oak Road bridge over TH 212 should be widened.

2018 Build with Recommended Mitigation

Intersection	AM LOS	PM LOS
TH 62 North Ramps	C	B
TH 62 South Ramps/West 62nd Street	D	C
West 62nd Street Driveway	A	D
City West Parkway (North)	C	C
City West Parkway Driveway	A	A
City West Parkway (South)	B	C
TH 212 West Ramps	C	B
TH 212 East Ramps	C	C
Flying Cloud Drive	B	D

With these measures in place, acceptable operations are forecasted by the model.

4.4.3 2018 Build with LRT

Conditions with the Southwest LRT line and City West station and Park-and-Ride operations are similar to conditions without. Operations are slightly improved in most locations due to the 2% reduction in UHG traffic. The only intersections forecasted to see increased traffic are those in the vicinity of the City West Station due to park-and-ride traffic.

To accommodate the additional traffic at the West 62nd Street site driveway intersection conversion to traffic signal control may be necessary, and is recommended if and when warranted.

Operations with these additions in place show acceptable operations:

2018 Build with LRT (with Recommended Mitigation)

Intersection	AM LOS	PM LOS
TH 62 North Ramps	C	B
TH 62 South Ramps/West 62nd Street	D	C
West 62nd Street Driveway	A	B
City West Parkway (North)	C	C
City West Parkway Driveway	A	A
City West Parkway (South)	B	D
TH 212 West Ramps	C	B
TH 212 East Ramps	C	C
Flying Cloud Drive	B	D

An alternative mitigation option for the West 62nd Street site driveway is construction of a roundabout. A roundabout would provide the following benefits. First, northbound left turns during the PM would be nearly free flow, reducing delays and queuing. Similarly, AM eastbound rights would endure minimal delay.

A roundabout would also help in terms of access to the existing BP gas station on the northeast corner of Shady Oak Road and West 62nd Street. Due to the expected length of westbound queues on West 62nd Street approaching Shady Oak Road, the following access changes are recommended for the BP gas station driveways onto West 62nd Street:

- Full Closure of the westerly of the two driveways.
- Limitation of access at the easterly driveway to right-in/right-out only by construction of a full median on West 62nd Street.

With a roundabout at the West 62nd Street UHG driveway intersection, vehicles attempting to access the BP gas station from Shady Oak Road would turn onto West 62nd Street, pass the BP driveway, make a u-turn at the roundabout, then return to the gas station and make a right-in. All vehicles exiting the station would make a right out onto West 62nd Street (similar to existing operations).

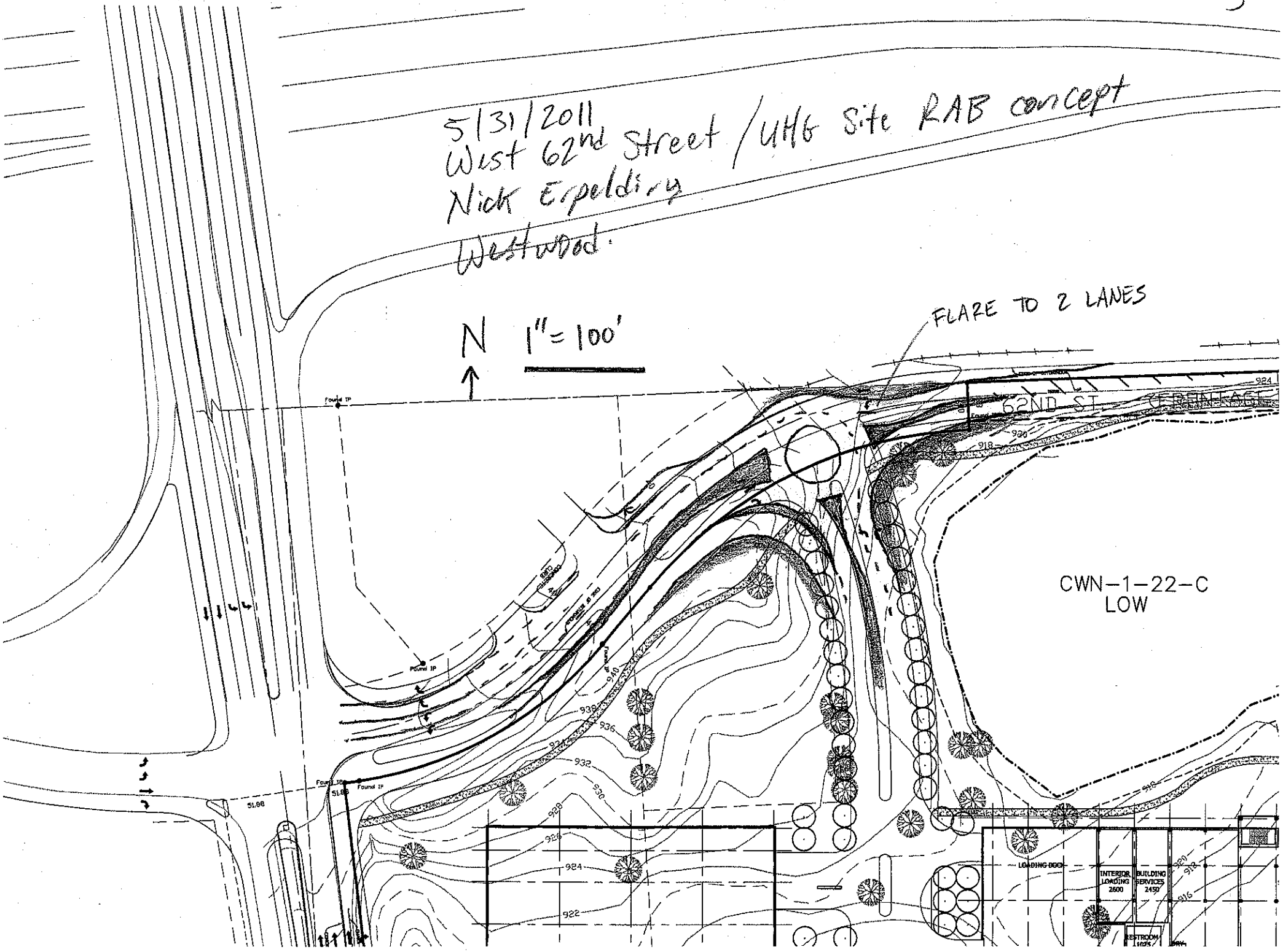
The primary disadvantage of a roundabout is the potential for westbound queues to extend from Shady Oak Road back into and through the roundabout. If queues extend far enough, access to West 62nd Street east of the roundabout could conceivably become blocked until the queue can clear. If eastbound traffic is heavy enough, the ensuing queue could extend back to Shady Oak Road. In theory, if this queue were to prevent the westbound queue from clearing, gridlock could ensure. In reality, the likelihood of this occurring is exceedingly low.

Another potential disadvantage of a roundabout is cost. Because West 62nd Street will need to be completely reconstructed at the time of UHG build out, the relative cost of a roundabout vs. a conventional intersection is similar. However, if a conventional intersection is constructed first, retrofitting the intersection with

a roundabout would be relatively expensive, due to the need to completely reconstruct the intersection.

Related to the cost concern is the potential for additional right-of-way to be needed for a roundabout. The figure below shows conceptually how a roundabout would fit at the intersection. If the size of the roundabout were to increase, as is sometimes needed as part of the design process to ensure proper geometrics, additional right-of-way may be required.

5/31/2011
West 62nd Street / UHG Site RAB concept
Nick Erpelding
Westwood.



The other site access intersection also presents an interesting design challenge. Though the City West Parkway driveway is forecasted to operate acceptably, the distance between this driveway and Shady Oak Road is even smaller compared to that of the West 62nd Street driveway. The likely way in which operations at the intersection would begin to break down if traffic volumes exceed expectations would be for westbound queues from Shady Oak Road to extend to and through the intersection, potentially blocking other movements from occurring.

Design solutions for this potential issue are not as apparent as for the issues present at the West 62nd Street driveway. First, an all-way stop is less desirable in this location due to both the shorter separation from Shady Oak Road and the comparatively higher traffic volumes on City West Parkway, particularly eastbound through traffic. The potential for eastbound queues from an all-way stop to spill back to Shady Oak Road is more significant at this driveway location. Further, experience has shown that all-way stop controlled intersections with moderate to high volumes on more than one approach tend to operate less efficiently and safely than they theoretically should, due to driver apprehension about navigating these relatively large intersections.

A roundabout is less desirable at the City West Parkway driveway intersection primarily because of similar reasons.

A traffic signal is a potential solution for this intersection. The primary issue with a traffic signal (but the reason for its potential value) would be the need to time the signal in coordination with Shady Oak Road to eliminate the possibility of eastbound queues extending back to Shady Oak Road.

The only time period for which a traffic signal would provide addition value beyond side-street stop control is during the AM peak period. During this time period vehicles looking to make a left turn out of the retail area to the south would need to look for a gap in the heavy eastbound to northbound left turning traffic flow entering the UHG site. Volumes on this northbound left turn movement during the AM peak are very low (less than 50 vph), however, and would not meet warrants for a traffic signal (100 – 150 vph). Experience has shown that drivers at side street stop controlled intersections not warranting signalization are able to find sufficient gaps to enter the mainline or will divert to another route. It is expected that this will be the case for this intersection.

During the PM peak, a traffic signal is not needed to allow minor street traffic to enter City West Parkway, due to the fact that the predominant flow is expected to southbound right turn movements out of the UHG campus toward Shady Oak Road. Traffic volumes on other movements, especially minor street to major street lefts and minor street crossing movements are expected to be low. Specifically, the number of southbound lefts and/or through movements are expected to be less than 50 vph. The model shows that volume for these movements would need to grow to over 300 vph to reach a failing level of service for 2018 conditions, and to over 150 vph for 2030 worst case conditions.

Three additional alternatives were explored for the City West site driveway intersection. The first was conversion to 3-way stop control, with the eastbound approach being free-flowing. The benefit of this approach would be to guarantee free flow for the heavy AM eastbound left turn movement. Because westbound approach volumes are relatively low for all scenarios, acceptable LOS is attainable via this configuration for all scenarios (including the worst case scenarios).

The second design alternative investigated was conversion to three-quarter access. Under three-quarter configuration no crossing or left turn movements from the minor approaches would be allowed. Although this configuration provides improved level of service, egress from the retail area to the south is negatively impacted. If a logical u-turn location can be found on City West parkway further to the east, this solution may be workable.

The final design alternative studied was conversion of the left-most eastbound approach lane to a dedicated left turn lane via striping and signage. This design alternative would not change the operational characteristics of the intersection, but could improve safety by lessening the likelihood for rear-end collisions in the left hand lane on the eastbound approach.

Since adequate (and available spare) capacity is forecasted for this and future scenarios, two-way stop control (or 3-way stop control) is the recommended intersection control configuration for this intersection. If and when warranted by observation and/or review of crash data, conversion of the left-hand eastbound approach lane to left turn movements only through striping and signage is recommended.

4.5 2030 (Comprehensive Plan Year)

4.5.1 2030 No Build

2030 No-Build (with Recommended Mitigation)

Intersection	AM LOS	PM LOS
TH 62 North Ramps	B	B
TH 62 South Ramps/West 62nd Street	B	A
City West Parkway (North)	D	D
City West Parkway Driveway	A	A
City West Parkway (South)	B	C
TH 212 West Ramps	C	B
TH 212 East Ramps	C	C
Flying Cloud Drive	B	D

For 2030 No-Build conditions, reconstruction/relocation of the Flying Cloud Drive intersection 100 feet east was assumed (based on the earlier conclusion that no additional spare capacity was available with the current configuration.)

Assuming this additional improvement, acceptable operations are observed throughout the model for 2030 No-Build conditions.

4.5.2 2030 Build

2030 Build (with Recommended Mitigation)

Intersection	AM LOS	PM LOS
TH 62 North Ramps	C	B
TH 62 South Ramps/West 62nd Street	**D/E**	D
West 62nd Street Driveway	A	**E**
City West Parkway (North)	C	D
City West Parkway Driveway	C	B
City West Parkway (South)	B	D
TH 212 West Ramps	C	B
TH 212 East Ramps	C	C
Flying Cloud Drive	B	**D/E**

Under the 2030 Build scenarios, the mitigation measures identified for 2018 Build conditions in the vicinity of the TH 62 interchange remain adequate.

In the vicinity of the TH 212 interchange, the interim improvement of shifting the intersection of Flying Cloud Drive 100 feet east is not sufficient to provide adequate capacity for the interchange.

The recommended additional mitigation measures for the 2030 Build scenario are to widen the TH 212 bridge to 6 lanes and to shift the location of the east ramp intersection west 50 feet. Widening the bridge to 6 lanes doubles the available storage for the westbound left turn lane at the West Ramp intersection. Shifting the east ramp intersection west 50 feet increases the available westbound storage space between the east ramp and Flying Cloud Drive enough to bring the Flying Cloud Drive intersection up to the D/E threshold. Being at this threshold suggests that little, if any, reserve capacity is available with this solution, and that long queues for many of movements are experienced. Observation of the SimTraffic model confirms that long queues on many movements do occur, but also that these queues do not result in significant upstream blockages that would limit capacity.

The figure on the following page illustrates the recommended mitigation for a 6-lane bridge solution.

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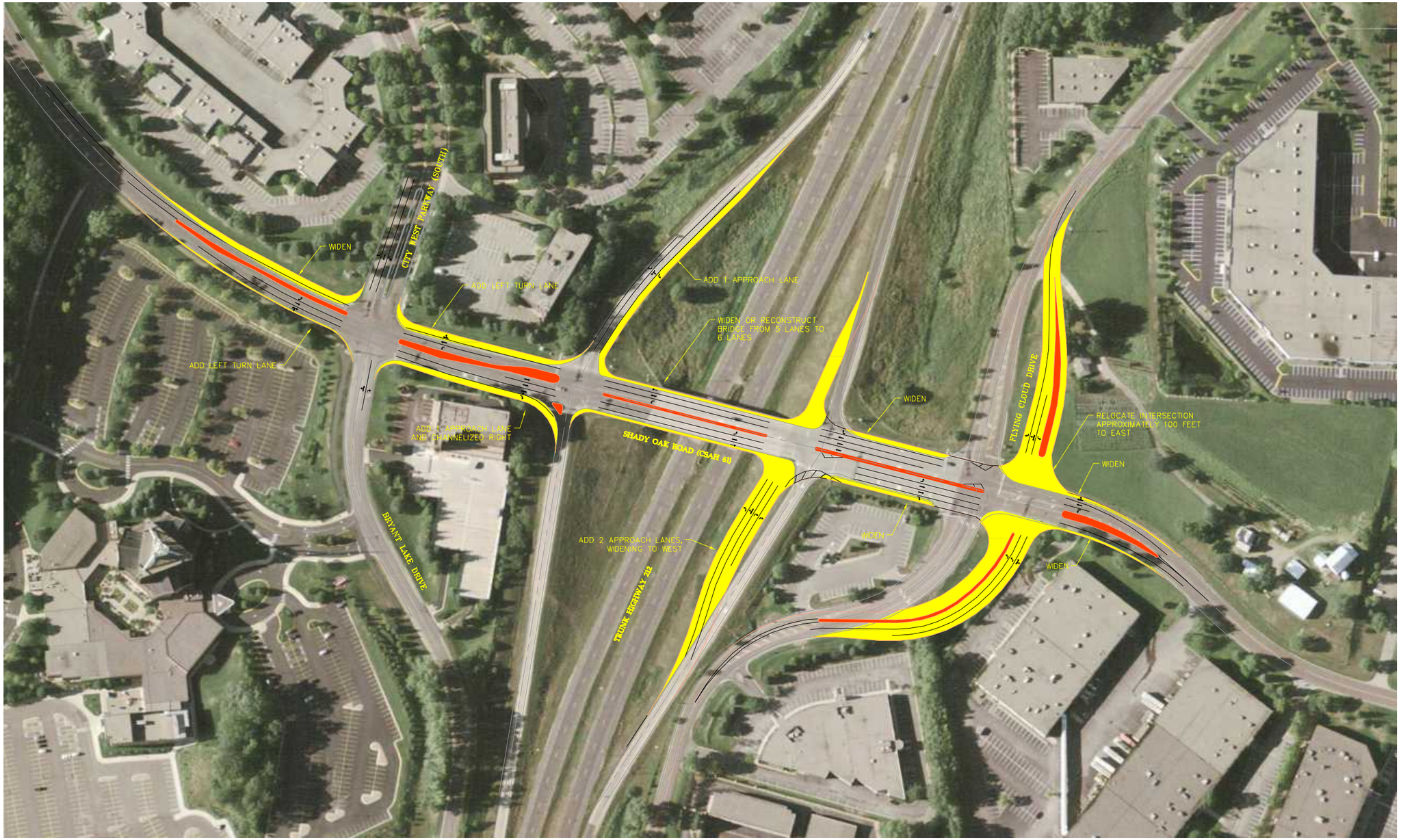

LEGEND

PROPOSED PAVEMENT

PROPOSED MEDIAN

N

0' 200' 400'

Date: 06/16/11

Concept Mitigation.dwg

TH 212 Interchange Area - 6-Lane Concept Plan

Exhibit

UHG City West Office AUAR

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Prepared for:

City of Eden Prairie

MINNESOTA

Also needed in the vicinity of the TH 212 interchange for the 2030 conditions is an additional (dual) southbound left turn lane at the intersection of Shady Oak Road and City West Parkway (South). The need for this additional lane is driven by the combination of site-generated traffic using City West Parkway in the PM peak hour to exit the site and additional traffic associated with Redevelopment and infill of existing vacancies within the City West area.

Because of the low through and right-turn volumes on the northbound approach at the City West (South) intersection, the addition of a 2nd southbound left turn lane does not provide a substantial increase in capacity, under the assumption that signal phasing for the southbound left turn movement must change from protected/permitted to protected only. It is recommended that protected/permitted phasing be considered for the southbound left turn movement if and when dual lefts are constructed for this movement in order to maximize green time on Shady Oak Road.

4.5.3 2030 Build with LRT

2030 Build with LRT (with Recommended Mitigation)

Intersection	AM LOS	PM LOS
TH 62 North Ramps	C	B
TH 62 South Ramps/West 62nd Street	D	D
West 62nd Street Driveway	A	B
City West Parkway (North)	C	D
City West Parkway Driveway	B	A
City West Parkway (South)	B	D
TH 212 West Ramps	C	B
TH 212 East Ramps	C	D
Flying Cloud Drive	B	D

Operations for the scenario with LRT are again very similar to those without. The reduced UHG traffic volumes associated with LRT usage do improve operations in the vicinity of the TH 212 interchange slightly.

The next section of the report looks at operations with an 8-lane bridge in place at TH 212, confirming that adequate capacity can be provided with this additional improvement, even under the additional traffic loading assumed as part of the set of worst case trip generation assumptions.

4.6 Sensitivity Analysis / Worst Case Scenario

4.6.1 2030 Build with LRT Worst Case

2030 Build with LRT Worst Case (with Recommended Mitigation)

Intersection	AM LOS	PM LOS
TH 62 North Ramps	C	B
TH 62 South Ramps/West 62nd Street	D	**D/E**

West 62nd Street Driveway	A	D
City West Parkway (North)	C	D
City West Parkway Driveway	B	B
City West Parkway (South)	B	C
TH 212 West Ramps	C	C
TH 212 East Ramps	C	C
Flying Cloud Drive	B	D

With expansion of the bridge over TH 212 to 8 lanes, the list of improvements/mitigation identified earlier is sufficient to provide acceptable operations throughout the network.

Further, relocation of the Flying Cloud intersection 100 feet to the east is not necessary to provide an acceptable level of service. Relocation of the Flying Cloud intersection, if undertaken however, will provide benefit in terms of reduced queuing and further improvements to LOS.

The figure on the next page illustrates the recommend configuration of the TH 212 interchange with an 8-lane bridge. Because an 8-lane bridge provides adequate capacity for the interchange under the set worst case assumptions analyzed for this study, it is recommended that it be the design chosen if and when reconstruction/retrofitting of the bridge is undertaken. If bridge improvements are made prior to relocation of the Flying Cloud Drive intersection, it is recommended that relocation of the Flying Cloud Drive intersection be postponed until the need for this improvement is demonstrated.

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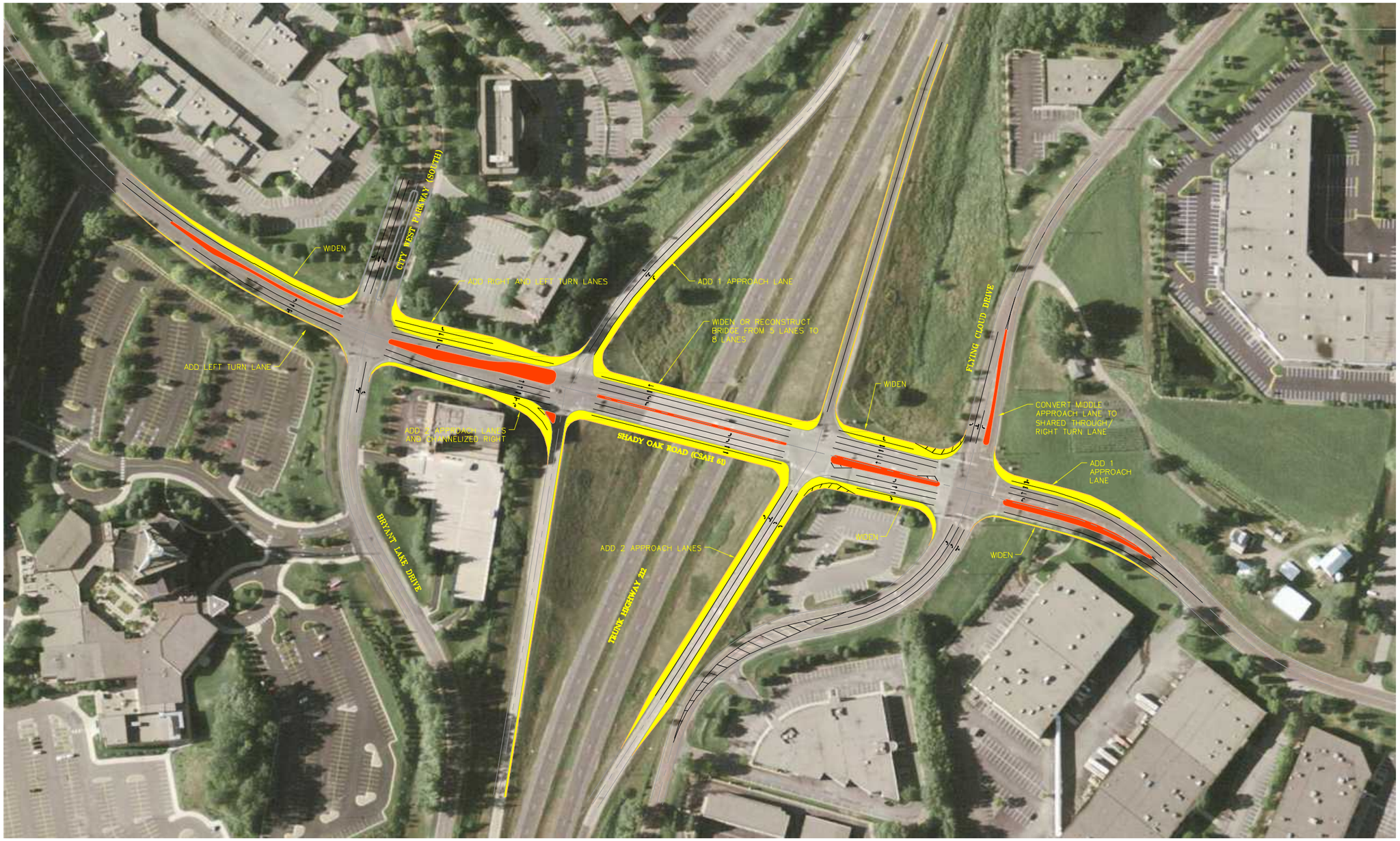

LEGEND

PROPOSED PAVEMENT

PROPOSED MEDIAN

N

0' 200' 400'

Date: 06/16/11

Concept Mitigation.dwg

TH 212 Interchange Area - 8-Lane Concept Plan

Exhibit

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Drawn:	CEF
Record Drawing by/date:	.

Prepared for:

City of Eden Prairie

MINNESOTA

Beyond the TH 212 interchange, the added traffic associated with the assumptions made for the worst case scenario also causes operations at the two site driveways to degrade noticeably. At the City West Parkway driveway during the AM peak, some diversion of vehicles from the northbound left movement will begin to occur, due to the long wait and reduction in available gaps. However, with a small number of vehicles diverting (roughly 20 vph, or half of the total amount), overall intersection LOS remains at an acceptable D.

At the West 62nd Street Driveway, traffic signal control continues to provide acceptable operations at the intersection. However, with slightly less traffic some form of stop control may remain adequate. Because of the potential that stop control may ultimately provide adequate capacity for the intersection, it is the recommended configuration for the intersection (as opposed to a roundabout). If and when signalization is needed a traffic signal can be installed with minimal or no changes to the intersection geometry.

At the intersection of Shady Oak Road and the TH 62 South Ramps/West 62nd Street, the additional traffic associated with the worst case scenario results in the need for some lane use and phasing changes to maximize capacity. Under the worst case scenarios (2030 and 2018), during the AM peak, additional capacity can be gained by altering the lane assignments on the eastbound approach. Specifically, converting the right-hand left turn lane to a shared left turn/through lane (to make L-LT-T-R) would better accommodate the heavy eastbound through movement.

Because of the shared lane, signal phasing changes would be required to eliminate the potential for rear-end collisions. The change recommended is the elimination of the protected westbound left turn phase during the AM peak period. During the AM peak period, traffic volume on the westbound left turn movement is very low and can be adequately served with permitted phasing only. Though dual lefts with permitted phasing are rare, they can operate acceptably, especially under low volume conditions. This signal phasing configuration is accordingly recommended for all of the 2018 and 2030 Build scenarios.

In order to be able to vary signal phasing and lane assignment by time of day, some additional signage and signal equipment will be required. First, to vary lane assignment by time of day, variable overhead lane assignment signs will be required. It is anticipated that the cost of such signage would be less than the alternative – addition of a fifth eastbound approach lane – after accounting for right-of-way costs. Second, to vary phasing by time of day, the use of flashing yellow arrow signal indications is recommended.

4.6.2 2018 Build with LRT Worst Case

Analysis of worst case conditions for the 2018 design year were also undertaken. Results indicate that a 6-lane bridge, similar to that needed for 2030 Build conditions (non worst-case) would be needed, with the modification that

relocation of the TH 212 East Ramp intersection 50 feet to the west would not be needed.

No changes to the set of improvements/mitigation in the vicinity of the TH 62 interchange would be required.

LOS results of the analysis of 2018 Worst Case conditions with the 6-lane bridge are shown in the table below:

2030 Build with LRT Worst Case (with Recommended Mitigation)

Intersection	AM LOS	PM LOS
TH 62 North Ramps	C	B
TH 62 South Ramps/West 62nd Street	D	**D/E**
West 62nd Street Driveway	B	D
City West Parkway (North)	B	C
City West Parkway Driveway	A	A
City West Parkway (South)	B	C
TH 212 West Ramps	C	B
TH 212 East Ramps	C	C
Flying Cloud Drive	B	D

4.7 Timing of Build improvements

Analysis of conditions post-Phase 1 (2014) and post-Phase 2 (2016) were conducted in order to identify when the recommended improvements/mitigation identified for 2018 would be needed.

4.7.1 Phase 1

Analysis of conditions post-Phase 1 (2014) indicates that the following improvements/mitigation identified for 2018 would **not** yet be needed:

- TH 62 North Ramps
  - Additional northbound left turn lane
- TH 62 South Ramps
  - Additional eastbound approach lane
  - 3rd and 4th westbound approach lanes
  - Additional northbound approach lane
  - Northbound right turn lane
  - Additional southbound left turn lane
- City West (North)
  - Northbound and southbound left turn lanes
- City West (South)
  - Eastbound and westbound left turn lanes
- TH 212 East Ramps
  - 4th northbound approach lane (3 lanes acceptable)

- Flying Cloud
    - Relocation of intersection 100 feet to the east

4.7.2 Phase 2

Analysis of 2016 conditions (post-Phase 2), indicated that the following improvements/mitigation could be postponed until full build out of the campus:

- TH 62 North Ramps
    - Additional northbound left turn lane. However, conversion to phasing changes would be required in lieu of this improvement.
- TH 62 South Ramps
    - 4th westbound approach lane
    - Additional northbound approach lane
    - Northbound right turn lane
- City West (South)
    - Eastbound and westbound left turn lanes
- TH 212 East Ramps
    - 4th northbound approach lane (3 lanes acceptable)
- Flying Cloud
    - Relocation of intersection 100 feet to the east

5. APPENDIX

A. Traffic Count Data

- Shady Oak Road Turning Movement Counts (November, 2010)

B. Traffic Forecasting Calculations

- Trip Generation Components Matrix
- Trip Generation Rates Summary
- Trip Generation Estimates Summary
- City West Redevelopment Internal Trip Capture Calculation
- City West Park-and-Ride Trip Rate Calculation
- UHG Office Trip Rate Calculations
    - Count Data – Similar Site 1
    - Count Data – Similar Site 2
    - Similar Sites Combined Trip Rate Calculation
    - UHG Daily Trip Gen Rate Calculation
    - Large Campus Reduction Calculation
    - UHG vs. ITE Trip Generation
- Metropolitan Council Trip Distribution for TAZ 545
- Metropolitan Council Market Area Plot for City West Park-and-Ride

C. Turning Movement Count Forecasts

- Existing
- Phase 1 Trip Assignment
- Phase 2 Trip Assignment
- Full Build Trip Assignment
- 2014 No-Build
- 2016 No-Build
- 2018 No-Build
- 2030 No-Build
- 2014 Build
- 2016 Build
- 2018 Build
- 2018 Build with LRT
- 2030 Build
- 2030 Build with LRT
- 2018 Build with LRT Worst Case
- 2030 Build with LRT Worst Case

D. Operational Analysis Results

- Detailed Recommended Mitigation Matrix
- 2010 Existing AM & PM No Mitigation
- 2010 Existing AM
- 2014 No-Build AM & PM
- 2014 Build AM & PM
- 2016 No-Build AM & PM
- 2016 Build AM & PM
- 2018 No-Build AM & PM No Mitigation
- 2018 No-Build AM & PM
- 2018 Build AM & PM with No-Build Mitigation Only
- 2018 Build AM & PM
- 2018 Build with LRT AM & PM
- 2030 No-Build AM & PM
- 2030 Build AM & PM
- 2030 Build with LRT AM & PM
- 2018 Build with LRT Worst Case AM & PM
- 2030 Build with LRT Worst Case AM & PM

E. Previous Traffic Studies

- 2009 - TH 212/Shady Oak Interchange Study (SRF Consulting Group)
- 2008 - UHG City West AUAR Update (RLK)
- 2006 - UHG Data Park (WSB & Associates)
- 2006 - Best Buy Corporate (Wenck)
- 2001 - UHG City West AUAR (URS/BRW)

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

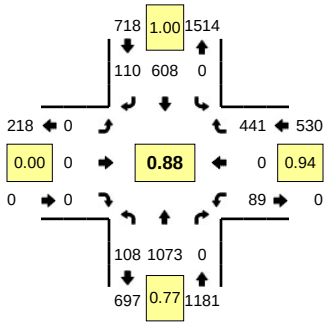
LOCATION: Shady Oak Rd -- WB Ramps at TH 62

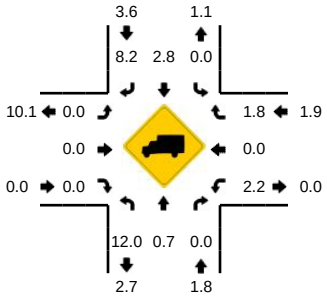
QC JOB #: 10555401

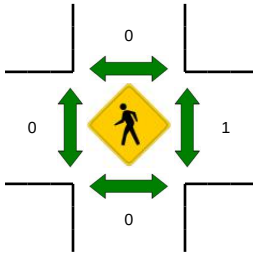
CITY/STATE: Eden Prairie, MN

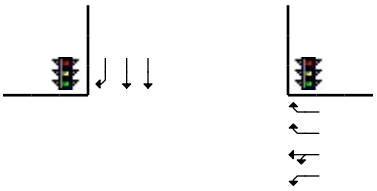
DATE: 11/9/2010

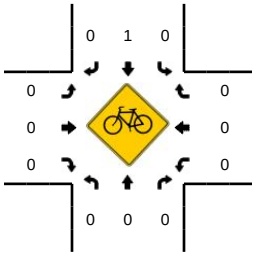
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

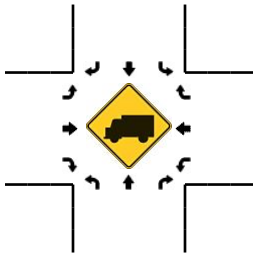


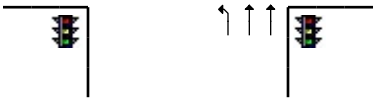


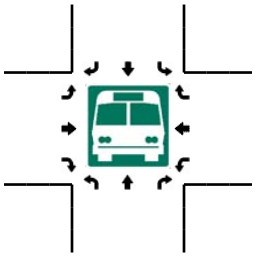












15-Min Count Period Beginning At	Shady Oak Rd (Northbound)				Shady Oak Rd (Southbound)				WB Ramps at TH 62 (Eastbound)				WB Ramps at TH 62 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	8	163	0	0	0	128	14	0	0	0	0	0	10	0	87	0	410	
7:15 AM	19	214	0	0	0	142	26	0	0	0	0	0	17	0	111	0	529	
7:30 AM	21	229	0	0	0	170	30	0	0	0	0	0	18	0	108	0	576	
7:45 AM	37	348	0	0	0	140	27	0	0	0	0	0	27	0	114	0	693	2208
8:00 AM	31	282	0	0	0	156	27	0	0	0	0	0	27	0	108	0	631	2429
8:15 AM	14	220	0	0	0	122	15	0	0	0	0	0	27	0	132	0	530	2430
8:30 AM	17	172	0	0	0	131	25	0	0	0	0	0	20	0	104	0	469	2323
8:45 AM	22	137	0	0	0	126	33	0	0	0	0	0	17	1	84	0	420	2050

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	148	1392	0	0	0	560	108	0	0	0	0	0	108	0	456	0	2772
Heavy Trucks	12	4	0		0	12	8		0	0	0		4	0	16		56
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/18/2010 1:14 PM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

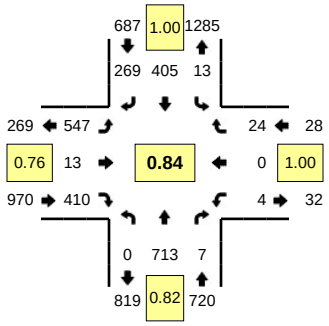
LOCATION: Shady Oak Rd -- EB Ramps at TH 62

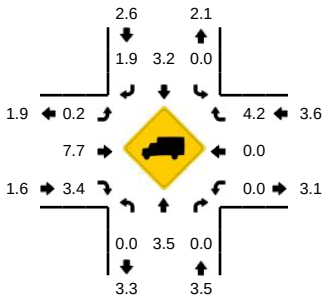
QC JOB #: 10555403

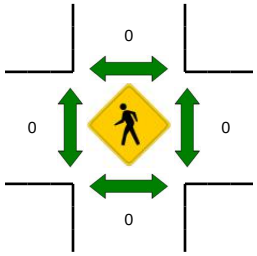
CITY/STATE: Eden Prairie, MN

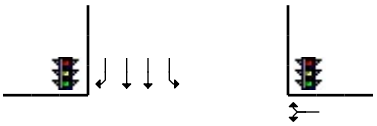
DATE: 11/9/2010

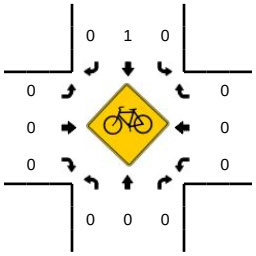
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

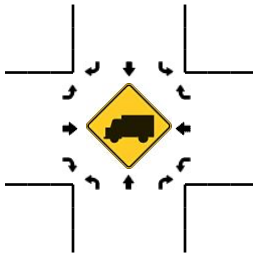


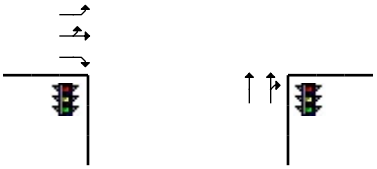


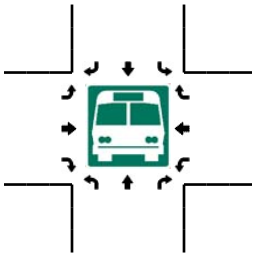












15-Min Count Period Beginning At	Shady Oak Rd (Northbound)				Shady Oak Rd (Southbound)				EB Ramps at TH 62 (Eastbound)				EB Ramps at TH 62 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	114	0	0	0	75	61	0	72	1	52	0	1	0	5	0	381	
7:15 AM	0	148	1	0	4	74	75	0	110	2	80	0	0	0	3	0	497	
7:30 AM	0	183	2	0	0	112	70	0	102	5	100	0	2	0	9	0	585	
7:45 AM	0	218	1	0	5	107	58	1	192	1	128	0	1	0	6	0	718	2181
8:00 AM	0	164	3	0	3	112	66	0	143	5	102	0	1	0	6	0	605	2405
8:15 AM	0	118	2	0	5	87	58	0	117	1	82	0	2	0	7	0	479	2387
8:30 AM	0	118	2	0	6	83	61	0	85	1	59	0	1	0	6	0	422	2224
8:45 AM	0	107	2	0	4	70	69	1	65	1	72	0	3	0	5	0	399	1905

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	872	4	0	20	428	232	4	768	4	512	0	4	0	24	0	2872
Heavy Trucks	0	20	0		0	12	8		0	0	24		0	0	0		64
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/18/2010 1:14 PM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

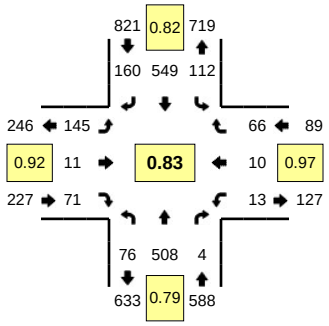
LOCATION: Shady Oak Rd -- City West Pkwy (N Junction)

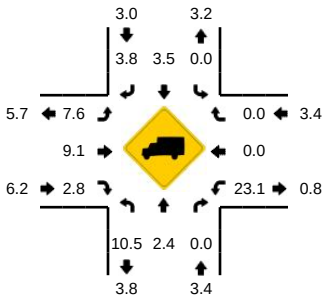
QC JOB #: 10555405

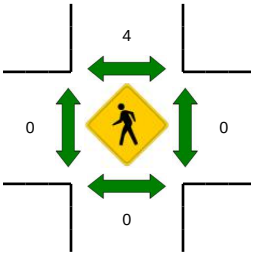
CITY/STATE: Eden Prairie, MN

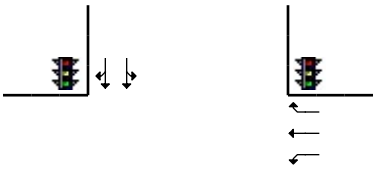
DATE: 11/9/2010

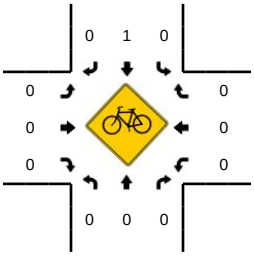
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

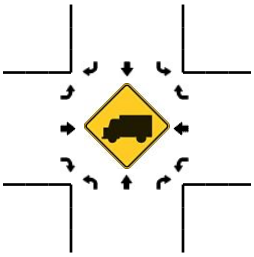


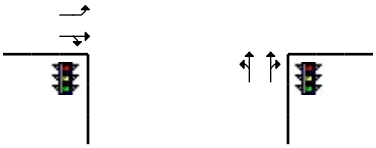


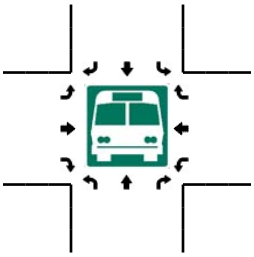












15-Min Count Period Beginning At	Shady Oak Rd (Northbound)				Shady Oak Rd (Southbound)				City West Pkwy (N Junction) (Eastbound)				City West Pkwy (N Junction) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	17	80	1	0	15	93	21	0	17	0	11	0	4	1	20	0	280	
7:15 AM	17	106	1	0	17	110	30	0	28	6	14	0	1	0	18	0	348	
7:30 AM	19	123	2	0	21	154	28	0	40	0	14	0	4	7	18	0	430	
7:45 AM	21	165	1	0	39	148	62	0	40	0	22	0	6	2	15	0	521	1579
8:00 AM	19	114	0	0	35	137	40	0	37	5	21	0	2	1	15	0	426	1725
8:15 AM	15	79	0	0	24	119	32	0	26	2	19	0	4	0	14	0	334	1711
8:30 AM	7	92	4	0	19	96	27	0	21	2	18	0	0	0	14	0	300	1581
8:45 AM	10	59	4	0	26	100	20	0	28	4	10	0	1	3	19	0	284	1344

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	84	660	4	0	156	592	248	0	160	0	88	0	24	8	60	0	2084
Heavy Trucks	4	12	0		0	20	12		4	0	0		8	0	0		60
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/18/2010 1:14 PM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

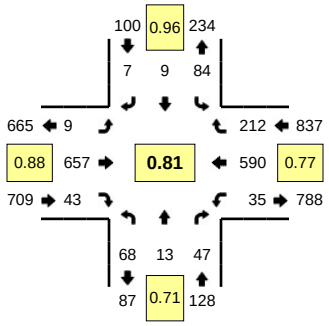
LOCATION: City West Pkwy (S Junction) -- Shady Oak Rd

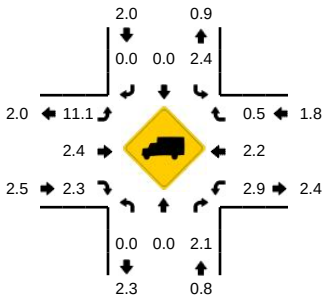
QC JOB #: 10555407

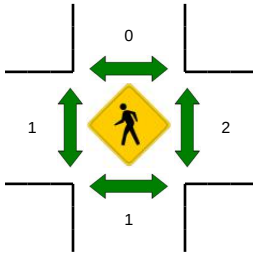
CITY/STATE: Eden Prairie, MN

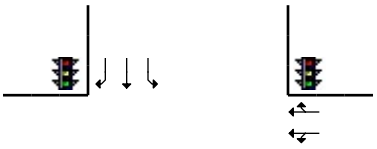
DATE: 11/9/2010

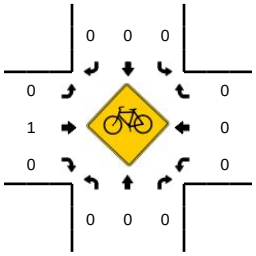
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

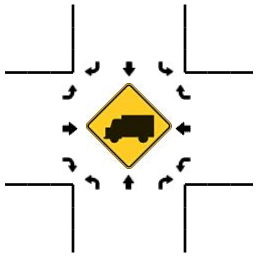


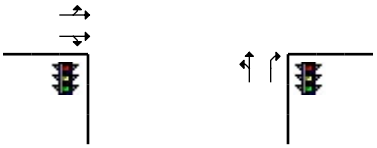


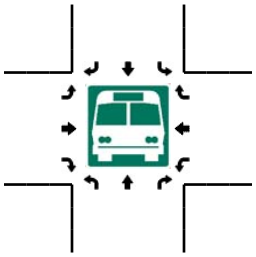












15-Min Count Period Beginning At	City West Pkwy (S Junction) (Northbound)				City West Pkwy (S Junction) (Southbound)				Shady Oak Rd (Eastbound)				Shady Oak Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	13	0	5	0	19	1	1	0	1	105	13	0	3	102	36	0	299	
7:15 AM	13	2	17	0	19	2	1	0	1	143	6	0	6	126	40	0	376	
7:30 AM	17	3	7	0	22	2	2	0	2	170	12	0	8	141	41	0	427	
7:45 AM	27	6	12	0	20	2	4	0	2	184	16	0	17	182	73	0	545	1647
8:00 AM	11	2	11	0	23	3	0	0	4	160	9	0	4	141	58	0	426	1774
8:15 AM	7	4	10	0	12	2	1	0	3	136	15	0	9	122	51	0	372	1770
8:30 AM	7	2	5	0	20	1	5	0	2	106	9	0	14	104	47	0	322	1665
8:45 AM	5	0	7	0	11	1	4	0	2	104	15	0	42	78	47	0	316	1436

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	108	24	48	0	80	8	16	0	8	736	64	0	68	728	292	0	2180
Heavy Trucks	0	0	0		0	0	0		0	20	0		0	8	4		32
Pedestrians		0				0				4				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/18/2010 1:14 PM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

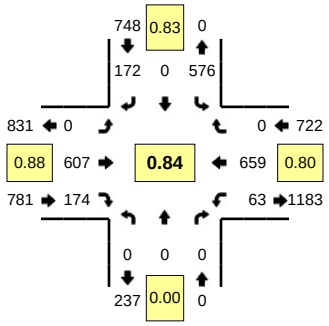
LOCATION: TH 212 SB Ramps -- Shady Oak Rd

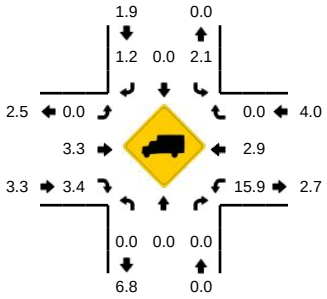
CITY/STATE: Eden Prairie, MN

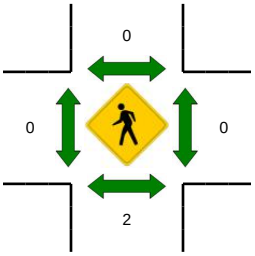
QC JOB #: 10555409

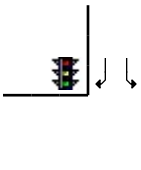
DATE: 11/9/2010

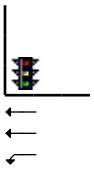
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

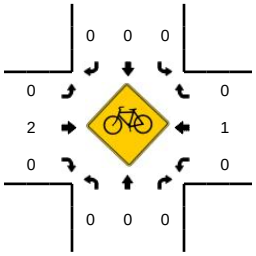


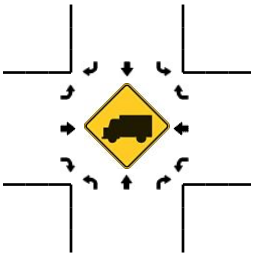


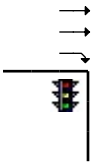


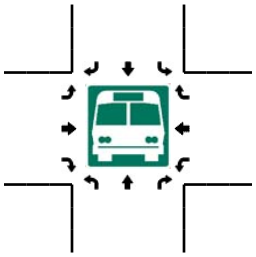












15-Min Count Period Beginning At	TH 212 SB Ramps (Northbound)				TH 212 SB Ramps (Southbound)				Shady Oak Rd (Eastbound)				Shady Oak Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	117	1	36	0	0	99	38	0	11	116	0	0	418	
7:15 AM	0	0	0	0	133	0	32	0	0	137	41	0	11	134	0	0	488	
7:30 AM	0	0	0	0	149	0	30	0	0	132	45	0	15	156	0	0	527	
7:45 AM	0	0	0	0	162	0	64	0	0	178	43	0	17	208	0	0	672	2105
8:00 AM	0	0	0	0	132	0	46	0	0	160	45	0	20	161	0	0	564	2251
8:15 AM	0	0	0	0	89	0	50	0	0	119	36	0	18	140	0	0	452	2215
8:30 AM	0	0	0	0	98	0	46	0	0	95	34	0	16	109	0	0	398	2086
8:45 AM	0	0	0	0	80	1	68	0	0	106	21	0	24	112	0	0	412	1826

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	648	0	256	0	0	712	172	0	68	832	0	0	2688
Heavy Trucks	0	0	0		16	0	4		0	20	4		8	20	0		72
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/18/2010 1:14 PM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

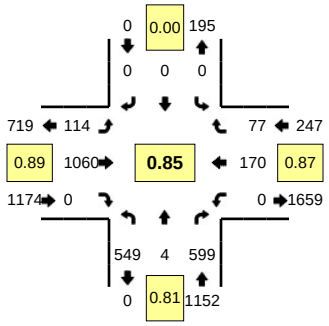
LOCATION: TH 212 NB Ramps -- Shady Oak Rd

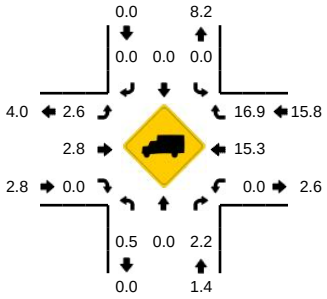
QC JOB #: 10555411

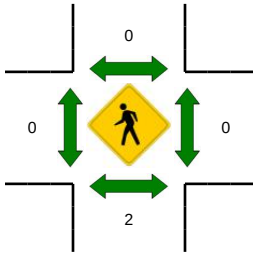
CITY/STATE: Eden Prairie, MN

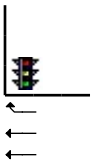
DATE: 11/9/2010

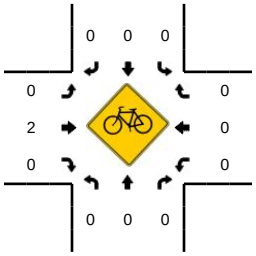
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

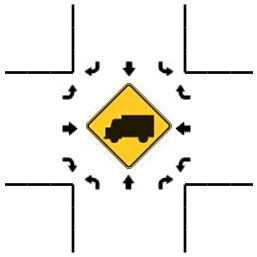


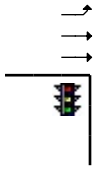


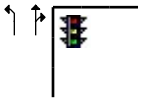


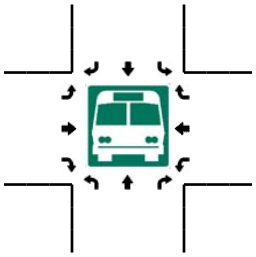












15-Min Count Period Beginning At	TH 212 NB Ramps (Northbound)				TH 212 NB Ramps (Southbound)				Shady Oak Rd (Eastbound)				Shady Oak Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	97	0	113	0	0	0	0	0	26	179	0	0	0	29	21	0	465	
7:15 AM	117	1	111	0	0	0	0	0	39	229	0	0	0	26	16	0	539	
7:30 AM	132	0	134	0	0	0	0	0	32	245	0	0	0	44	19	0	606	
7:45 AM	172	1	182	0	0	0	0	0	18	310	0	0	0	51	20	0	754	2364
8:00 AM	128	2	172	0	0	0	0	0	25	276	0	0	0	49	22	0	674	2573
8:15 AM	115	0	113	0	0	0	0	0	17	186	0	0	0	40	22	0	493	2527
8:30 AM	85	0	86	0	0	0	0	0	19	180	0	0	0	45	19	0	434	2355
8:45 AM	84	0	80	0	0	0	0	0	16	164	0	0	0	47	15	0	406	2007

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	688	4	728	0	0	0	0	0	72	1240	0	0	0	204	80	0	3016
Heavy Trucks	8	0	12		0	0	0		0	36	0		0	24	4		84
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/18/2010 1:14 PM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

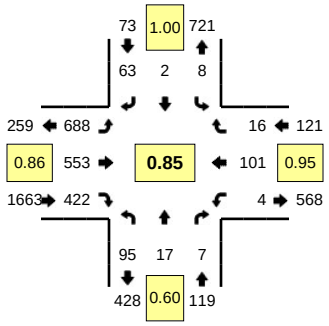
LOCATION: Flying Cloud Dr -- Shady Oak Rd

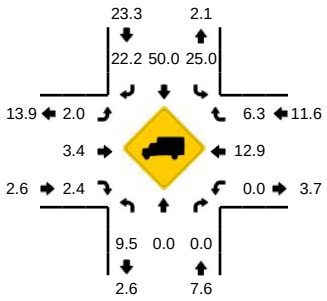
QC JOB #: 10555413

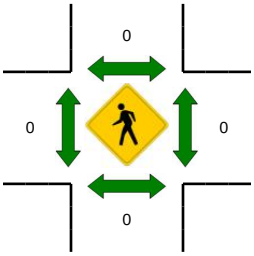
CITY/STATE: Eden Prairie, MN

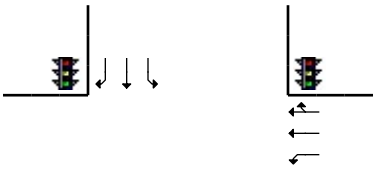
DATE: 11/9/2010

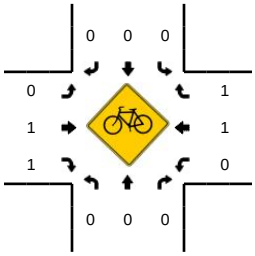
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

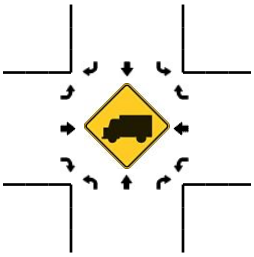


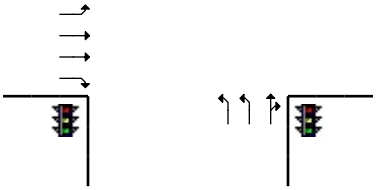


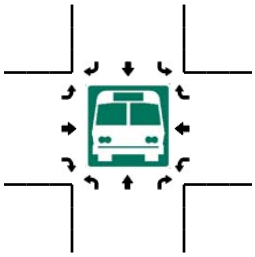












15-Min Count Period Beginning At	Flying Cloud Dr (Northbound)				Flying Cloud Dr (Southbound)				Shady Oak Rd (Eastbound)				Shady Oak Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	10	3	0	0	4	0	19	0	122	96	62	0	0	25	10	0	351	
7:15 AM	11	2	0	0	2	0	15	0	138	115	85	0	0	15	4	0	387	
7:30 AM	26	3	1	0	3	0	14	0	157	106	122	0	2	24	4	0	462	
7:45 AM	37	7	6	0	1	1	15	0	185	175	124	0	0	27	5	0	583	1783
8:00 AM	21	5	0	0	2	1	19	0	208	157	91	0	2	35	3	0	544	1976
8:15 AM	15	5	1	0	1	1	17	0	147	117	49	0	1	31	11	0	396	1985
8:30 AM	8	2	0	0	1	2	21	0	105	116	35	0	1	32	5	0	328	1851
8:45 AM	14	3	1	0	1	1	23	0	106	102	35	0	3	26	3	0	318	1586

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	148	28	24	0	4	4	60	0	740	700	496	0	0	108	20	0	2332
Heavy Trucks	4	0	0		0	4	12		8	24	20		0	16	4		92
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	1	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/18/2010 1:14 PM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

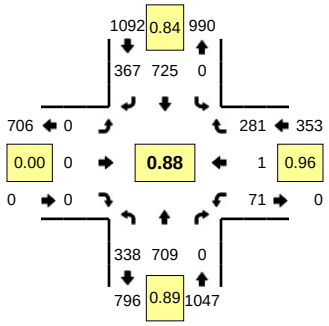
LOCATION: Shady Oaks Rd -- WB Ramps at TH 62

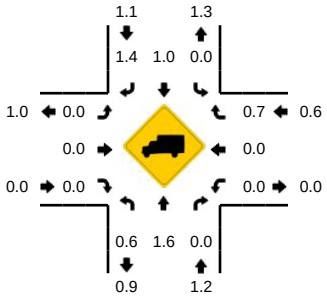
CITY/STATE: Eden Prairie, MN

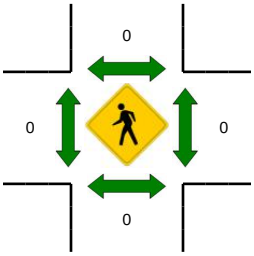
QC JOB #: 10555402

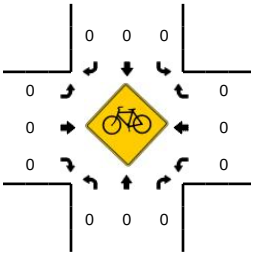
DATE: 11/16/2010

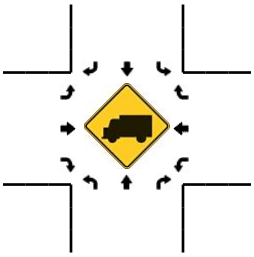
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

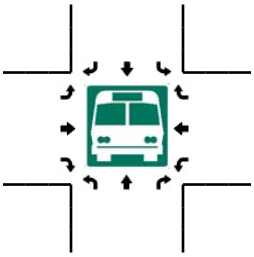












15-Min Count Period Beginning At	Shady Oaks Rd (Northbound)				Shady Oaks Rd (Southbound)				WB Ramps at TH 62 (Eastbound)				WB Ramps at TH 62 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	78	107	0	0	0	186	86	0	0	0	0	0	12	0	51	0	520	
4:15 PM	68	116	0	2	0	172	53	0	0	0	0	0	17	0	58	0	486	
4:30 PM	88	160	0	0	0	188	99	0	0	0	0	0	20	0	61	0	616	
4:45 PM	78	159	0	0	0	163	89	0	0	0	0	0	17	1	70	0	577	2199
5:00 PM	103	191	0	0	0	224	100	0	0	0	0	0	26	0	66	0	710	2389
5:15 PM	69	199	0	0	0	150	79	0	0	0	0	0	8	0	84	0	589	2492
5:30 PM	66	156	0	0	0	155	76	0	0	0	0	0	17	0	63	0	533	2409
5:45 PM	46	134	0	0	0	157	40	0	0	0	0	0	16	0	67	0	460	2292

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	412	764	0	0	0	896	400	0	0	0	0	0	104	0	264	0	2840
Heavy Trucks	0	8	0		0	12	8		0	0	0		0	0	4		32
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/22/2010 6:17 AM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

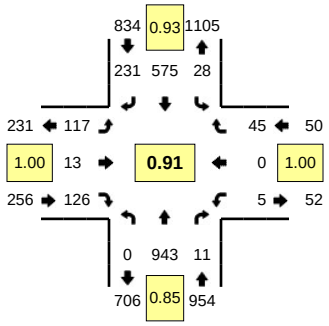
LOCATION: Shady Oak Rd -- EB Ramps at TH 62

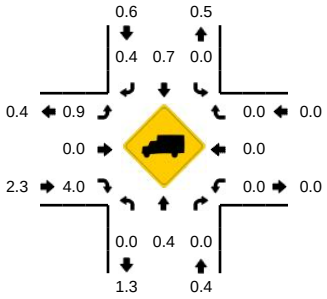
QC JOB #: 10555404

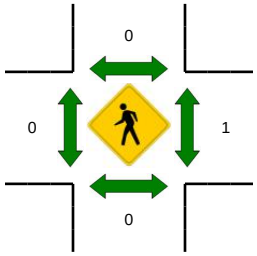
CITY/STATE: Eden Prairie, MN

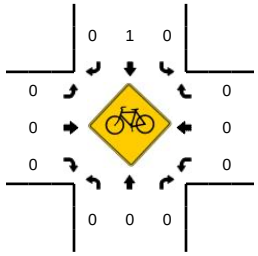
DATE: 11/9/2010

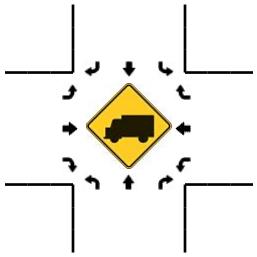
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

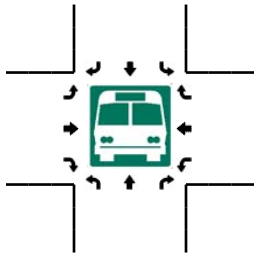












15-Min Count Period Beginning At	Shady Oak Rd (Northbound)				Shady Oak Rd (Southbound)				EB Ramps at TH 62 (Eastbound)				EB Ramps at TH 62 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	166	3	0	5	116	89	0	20	2	30	0	1	0	10	0	442	
4:15 PM	0	169	4	0	0	127	53	0	19	6	22	0	1	0	7	0	408	
4:30 PM	0	215	4	0	6	165	59	0	36	4	33	0	1	0	9	0	532	
4:45 PM	0	213	1	0	9	120	66	0	26	4	25	0	2	0	16	0	482	1864
5:00 PM	0	277	2	0	3	158	64	0	25	3	32	0	0	0	9	0	573	1995
5:15 PM	0	238	4	0	10	132	42	0	30	2	36	0	2	0	11	0	507	2094
5:30 PM	0	189	2	0	3	102	48	0	16	5	25	0	0	0	9	0	399	1961
5:45 PM	0	125	2	0	3	81	54	0	25	3	29	0	1	0	9	0	332	1811

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	1108	8	0	12	632	256	0	100	12	128	0	0	0	36	0	2292
Heavy Trucks	0	4	0		0	0	0		0	0	0		0	0	0		4
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/22/2010 6:17 AM

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

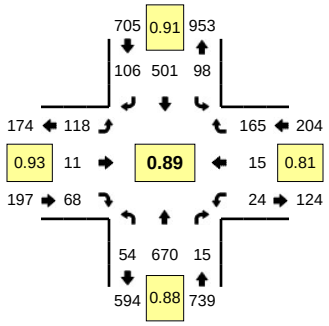
Type of peak hour being reported: System Peak

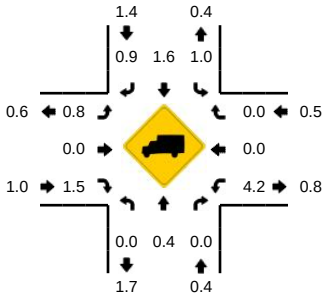
Method for determining peak hour: Total Entering Volume

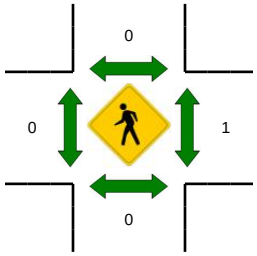
LOCATION: Shady Oak Rd -- City West Pkwy (N Junction)
CITY/STATE: Eden Prairie, MN

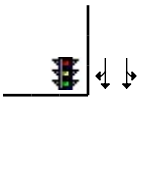
QC JOB #: 10555406
DATE: 11/9/2010

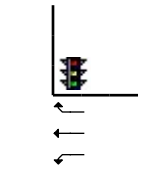
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

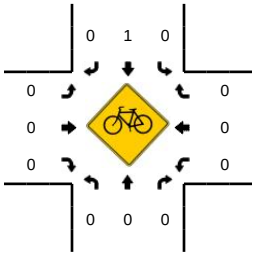


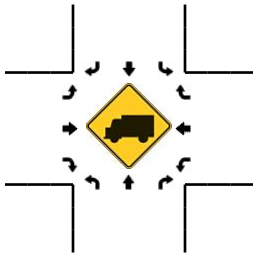


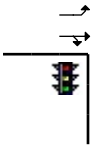


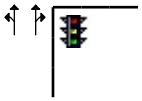


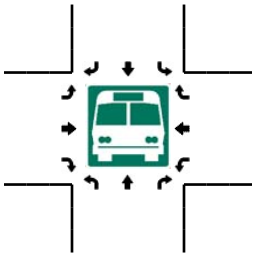












15-Min Count Period Beginning At	Shady Oak Rd (Northbound)				Shady Oak Rd (Southbound)				City West Pkwy (N Junction) (Eastbound)				City West Pkwy (N Junction) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	16	133	1	0	14	111	17	0	15	4	6	0	2	3	24	0	346	
4:15 PM	12	119	4	0	11	117	26	0	28	5	13	0	2	2	19	0	358	
4:30 PM	12	161	5	0	18	157	24	0	21	4	15	0	8	3	55	0	483	
4:45 PM	14	143	2	0	24	92	28	0	33	0	16	0	5	4	32	0	393	1580
5:00 PM	14	191	4	0	28	139	26	0	29	6	18	0	7	5	51	0	518	1752
5:15 PM	13	175	4	1	28	113	28	0	35	1	19	0	4	3	27	0	451	1845
5:30 PM	16	130	7	0	13	92	24	0	26	5	7	0	2	5	36	0	363	1725
5:45 PM	10	94	9	0	19	78	17	0	22	4	11	0	3	4	19	0	290	1622

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	56	764	16	0	112	556	104	0	116	24	72	0	28	20	204	0	2072
Heavy Trucks	0	8	0		0	0	0		0	0	0		0	0	0		8
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/22/2010 6:17 AM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

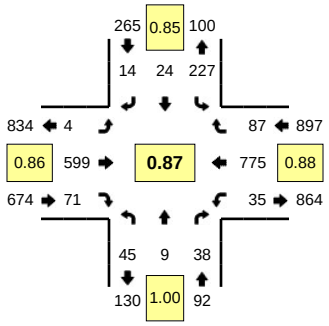
LOCATION: City West Pkwy (S Junction) -- Shady Oak Rd

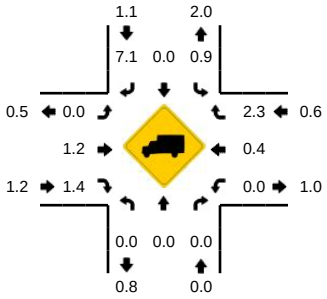
QC JOB #: 10555408

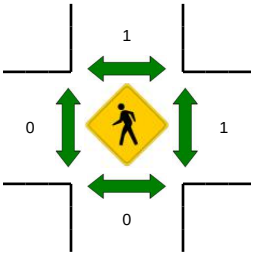
CITY/STATE: Eden Prairie, MN

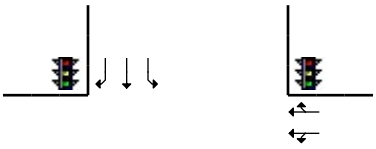
DATE: 11/9/2010

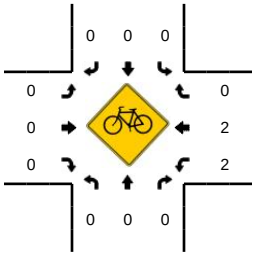
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

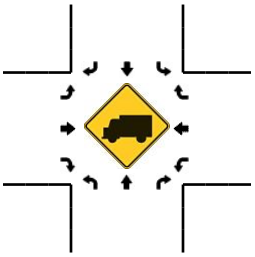


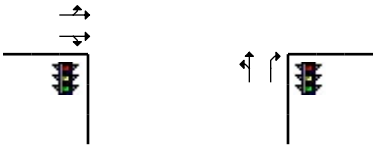


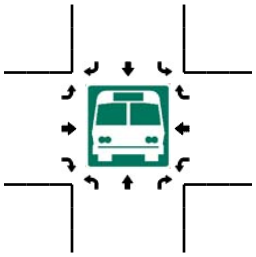












15-Min Count Period Beginning At	City West Pkwy (S Junction) (Northbound)				City West Pkwy (S Junction) (Southbound)				Shady Oak Rd (Eastbound)				Shady Oak Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	12	1	10	0	50	1	2	0	0	126	9	0	8	145	15	0	379	
4:15 PM	7	4	4	0	35	4	3	0	1	138	8	0	5	142	20	0	371	
4:30 PM	8	0	14	0	69	10	0	0	0	176	17	0	10	194	16	0	514	
4:45 PM	13	2	8	0	45	4	5	0	3	121	13	0	9	156	29	0	408	1672
5:00 PM	10	4	8	0	67	6	5	0	1	176	19	0	7	228	21	0	552	1845
5:15 PM	14	3	8	0	46	4	4	0	0	126	22	0	9	197	21	0	454	1928
5:30 PM	13	2	4	0	34	2	1	0	0	97	15	0	7	163	31	0	369	1783
5:45 PM	8	0	8	0	19	1	0	0	1	79	17	0	9	109	31	0	282	1657

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	40	16	32	0	268	24	20	0	4	704	76	0	28	912	84	0	2208
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	8	0		8
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/22/2010 6:17 AM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

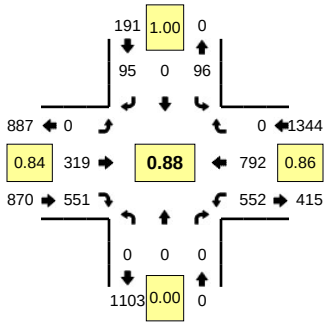
LOCATION: TH 212 SB Ramps -- Shady Oak Rd

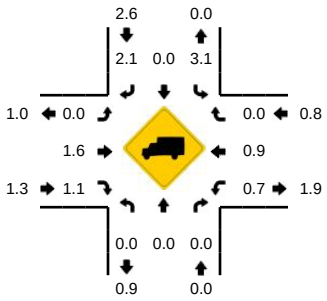
QC JOB #: 10555410

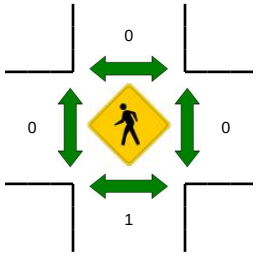
CITY/STATE: Eden Prairie, MN

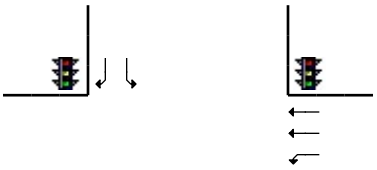
DATE: 11/9/2010

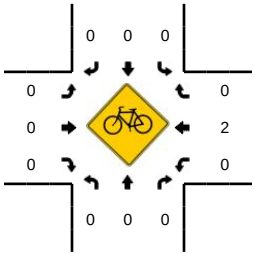
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

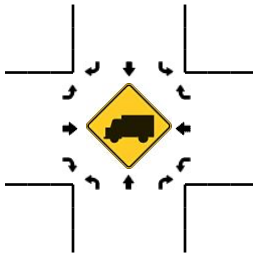


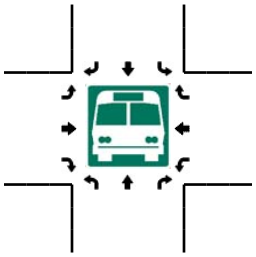












15-Min Count Period Beginning At	TH 212 SB Ramps (Northbound)				TH 212 SB Ramps (Southbound)				Shady Oak Rd (Eastbound)				Shady Oak Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	28	1	21	0	0	80	117	0	124	144	0	0	515	
4:15 PM	0	0	0	0	33	0	22	0	0	68	110	0	103	147	0	0	483	
4:30 PM	0	0	0	0	32	0	21	0	0	85	168	0	151	196	0	0	653	
4:45 PM	0	0	0	0	30	0	28	0	0	78	101	0	125	158	0	0	520	2171
5:00 PM	0	0	0	0	11	0	22	0	0	82	176	0	157	235	0	0	683	2339
5:15 PM	0	0	0	0	23	0	24	0	0	74	106	0	119	203	0	0	549	2405
5:30 PM	0	0	0	0	21	0	28	0	0	47	90	0	106	168	0	0	460	2212
5:45 PM	0	0	0	0	32	0	27	0	0	44	62	0	96	123	0	0	384	2076

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	44	0	88	0	0	328	704	0	628	940	0	0	2732
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	16	0		16
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	2	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/22/2010 6:18 AM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

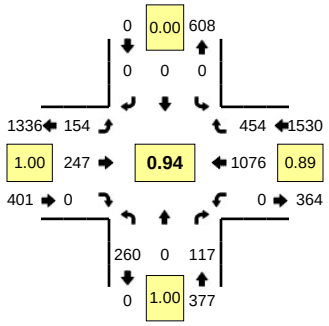
LOCATION: TH 212 NB Ramps -- Shady Oak Rd

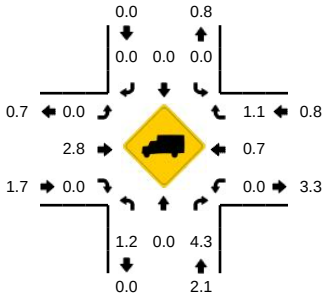
QC JOB #: 10555412

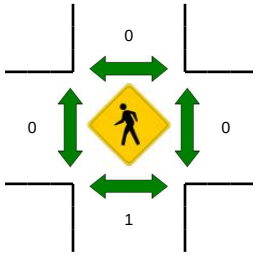
CITY/STATE: Eden Prairie, MN

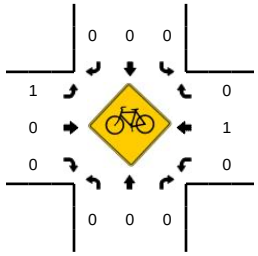
DATE: 11/9/2010

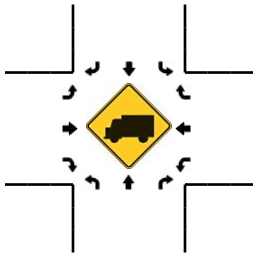
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

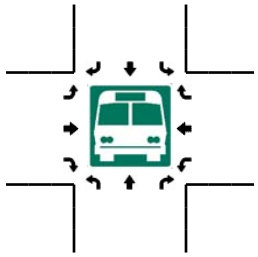












15-Min Count Period Beginning At	TH 212 NB Ramps (Northbound)				TH 212 NB Ramps (Southbound)				Shady Oak Rd (Eastbound)				Shady Oak Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	49	1	26	0	0	0	0	0	40	60	0	0	0	218	157	0	551	
4:15 PM	52	0	29	0	0	0	0	0	29	75	0	0	0	190	122	0	497	
4:30 PM	60	0	37	0	0	0	0	0	45	65	0	0	0	286	140	0	633	
4:45 PM	53	0	38	0	0	0	0	0	31	76	0	0	0	229	118	0	545	2226
5:00 PM	65	0	25	0	0	0	0	0	46	47	0	0	0	325	105	0	613	2288
5:15 PM	82	0	17	0	0	0	0	0	32	59	0	0	0	236	91	0	517	2308
5:30 PM	80	0	27	0	0	0	0	0	24	52	0	0	0	195	88	0	466	2141
5:45 PM	66	1	29	0	0	0	0	0	24	56	0	0	0	154	87	0	417	2013

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	260	0	100	0	0	0	0	0	184	188	0	0	0	1300	420	0	2452
Heavy Trucks	8	0	0		0	0	0		0	0	0		0	4	4		16
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/22/2010 6:18 AM

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

Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

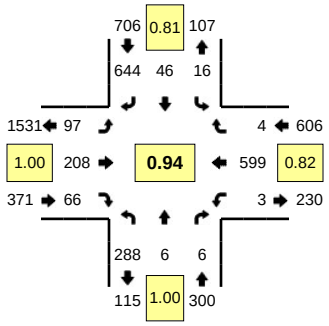
LOCATION: Flying Cloud Dr -- Shady Oak Rd

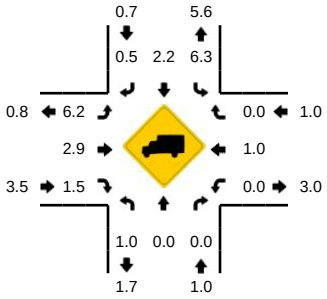
QC JOB #: 10555414

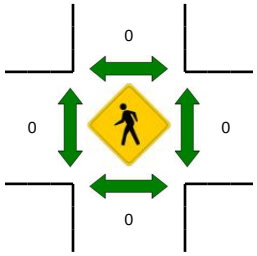
CITY/STATE: Eden Prairie, MN

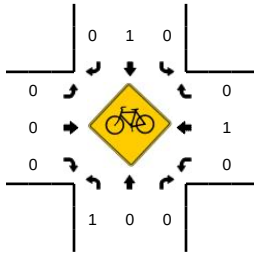
DATE: 11/9/2010

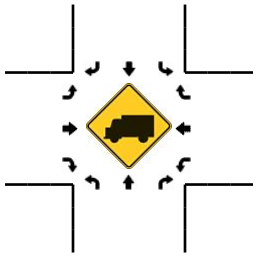
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

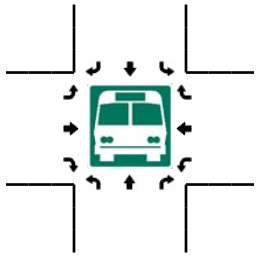












15-Min Count Period Beginning At	Flying Cloud Dr (Northbound)				Flying Cloud Dr (Southbound)				Shady Oak Rd (Eastbound)				Shady Oak Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	69	1	2	0	3	16	181	0	29	43	7	0	2	125	4	0	482	
4:15 PM	54	2	3	0	0	6	152	0	24	63	13	0	1	106	3	0	427	
4:30 PM	87	3	1	0	6	13	159	0	22	66	15	0	0	180	1	0	553	
4:45 PM	71	2	0	0	4	12	149	0	34	62	21	0	1	127	0	0	483	1945
5:00 PM	52	1	1	0	4	17	197	0	19	35	16	0	1	182	2	0	527	1990
5:15 PM	78	0	4	0	2	4	139	0	22	45	14	0	1	110	1	0	420	1983
5:30 PM	67	1	1	0	2	1	108	0	23	37	12	0	0	108	3	0	363	1793
5:45 PM	62	0	0	0	2	2	95	0	30	52	4	0	2	83	3	0	335	1645

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	208	4	4	0	16	68	788	0	76	140	64	0	4	728	8	0	2108
Heavy Trucks	4	0	0		0	4	0		0	0	0		0	4	0		12
Pedestrians		0				0				0				0			0
Bicycles	1	0	0		0	0	0		0	0	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 11/22/2010 6:18 AM

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

UHG Eden Prairie
Trip Generation Components Matrix

No.	Scenario Name	Background Growth	UHG Eden Prairie (AUAR Site)	UHG North of TH 62 (AUAR Site)	Best Buy Corporate	City West Area	UHG Data Park East Building (Opus)	LRT Park-and-Ride
1.	2010 Existing							
2.	2014 No-Build	1.02x			100,000 s.f. Gen Off.		300,000 s.f. Gen Off.	
3.	2014 Build	1.02x	2,500 employees @ UHG rate ●3% TDM		100,000 s.f. Gen Off.		300,000 s.f. Gen Off.	
4.	2016 No-Build	1.03x			200,000 s.f. Gen Off.		300,000 s.f. Gen Off.	
5.	2016 Build	1.03x	5,000 employees @ UHG rate ●4% Large Campus Effect ●3% TDM		200,000 s.f. Gen Off.		300,000 s.f. Gen Off.	
6.	2018 No-Build	1.04x			500,000 s.f. Gen Off.		300,000 s.f. Gen Off.	
7.	2018 Build	1.04x	6,637 employees @ UHG rate ●6% Large Campus Effect ●3% TDM	30,000 s.f. @ ITE General Office rate	500,000 s.f. Gen Off.		300,000 s.f. Gen Off.	
8.	2018 Build + LRT	1.04x	6,637 employees @ UHG rate ●6% Large Campus Effect ●3% TDM ●2% LRT	30,000 s.f. @ ITE General Office rate	500,000 s.f. Gen Off.		300,000 s.f. Gen Off.	300 stalls @ composite rate
9.	2030 No-Build	1.11x (20 yrs. @ 0.55%, straight line)			500,000 s.f. Gen Off.	●25,000 s.f. Retail ●324 multi-family ●125-room hotel ●78-seat restaurant ●140,000 s.f. office (infill) ●60,000 s.f. light ind. (infill)	300,000 s.f. Gen Off.	
10.	2030 Build	1.11x	6,637 employees @ UHG rate ●6% Large Campus Effect ●3% TDM	30,000 s.f. @ ITE General Office rate	500,000 s.f. Gen Off.	●25,000 s.f. Retail ●324 multi-family ●125-room hotel ●78-seat restaurant ●140,000 s.f. office (infill) ●60,000 s.f. light ind. (infill)	300,000 s.f. Gen Off.	
11.	2030 Build + LRT	1.11x	6,637 employees @ UHG rate ●6% Large Campus Effect ●3% TDM ●5% LRT	30,000 s.f. @ ITE General Office rate	500,000 s.f. Gen Off.	●25,000 s.f. Retail ●324 multi-family ●125-room hotel ●78-seat restaurant ●140,000 s.f. office (infill) ●60,000 s.f. light ind. (infill)	300,000 s.f. Gen Off.	300 stalls @ composite rate
12.	2018 Build + LRT Worst Case	1.04x	6,637 employees @ UHG rate ●2% LRT	30,000 s.f. @ ITE General Office rate	500,000 s.f. Gen Off.		300,000 s.f. Gen Off.	600 stalls @ composite rate
13.	2030 Build + LRT Worst Case	1.11x	6,637 employees @ UHG rate ●2% LRT	30,000 s.f. @ ITE General Office rate	500,000 s.f. Gen Off.	●25,000 s.f. Retail ●324 multi-family ●125-room hotel ●78-seat restaurant ●140,000 s.f. office (infill) ●60,000 s.f. light ind. (infill)	300,000 s.f. Gen Off.	600 stalls @ composite rate

Notes:

1. All amounts are cumulative for the given scenario.
2. For TDM, the percentage noted is the reduction in peak hour traffic. A higher rate of participation is, in general, required to achieve this level of trip reduction, due to carpooling/vanpooling not having a 1:1 relationship between participation and trip reduction.
3. All reductions (Large Campus Effect, TDM, LRT) are taken from the base trip rate.
4. Background growth is applied to existing traffic volumes, before specific development trips are added. Background growth is calcuated to match 2030 City of Eden Prairie Comprehensive Plan traffic estimates for the 2030 No-Build scenario without City West Redevelopment and with previously forecast UHG City West development. For interim years, background growth is interpolated (straight line).
5. The office and light industrial land uses included in City West area are anticipated to be infill of existing vacancies. The remaining uses are redevelopment.

UHG Eden Prairie
Trip Generation Rate Summary

Land Use	Location	Data Source	Size	Variable	AM			PM		
					Rate	Enter	Exit	Rate	Enter	Exit
AUAR Site										
UHG Eden Prairie Office (AUAR)	AUAR Site	estimated using local data from other UHG sites	6,637 employees	per employee	0.34	94%	6%	0.31	7%	93%
AUAR General Office	AUAR Site (North of TH 62)	ITE	30,000 s.f.	per 1,000 s.f.	ITE equation: General Office (710)					
Background										
City West Park-and-Ride	City West, near AUAR Site	estimated using local and ITE data	up to 600 parking stalls	per parking stall	0.70	80%	20%	0.70	20%	80%
SuperValu Eastview Campus (formerly Best Buy Corporate Campus)	east/south of TH 212	ITE (per Wenck 2006 study, Land Use Scenario 1)	200,000 s.f. infill of remaining space in existing bldg. + 300,000 s.f. space in new bldg.	per 1,000 s.f.	ITE rate: General Office (710)					
UHG Data Park East Building	Minnetonka, NW quad of 169/62	ITE (per WSB 2006 study)	300,000 s.f.	per 1,000 s.f.	ITE rate: General Office (710)					
City West Redevelopment / Infill	City West, near AUAR Site	ITE (similar to 2008 AUAR site uses)	25,000 s.f. retail, 324 multi family units, 125 room hotel, 78 seat restaurant	per 1,000 s.f., per unit, per room, per seat	ITE rate: retail (814), hotel (310), restaurant (932), gen. office (710), gen. lt. ind. (110) ITE equation: multi family/condo (230) 12% AM, 27% PM, 12% daily internal trip reduction assumed					

Notes:

1. Trip Generation, 8th Edition rates used where ITE rates are specified.

UHG Eden Prairie AUAR Traffic Study
Trip Generation Estimates

Land Use	ITE Code	Size	AM peak		PM Peak		Weekday		Method	Notes:
			Enter	Exit	Enter	Exit	Enter	Exit		
AUAR Site										
UHG Office		2,500 employees	799	51	54	721	3,125	3,125	UHG Rate	Phase 1 - Base Estimates
UHG Office		5,000 employees	1,598	102	109	1,442	6,250	6,250	UHG Rate	Phase 2 - Base Estimates
UHG Office		6,637 employees	2,121	135	144	1,913	8,296	8,296	UHG Rate	Full Build - Base Estimates
UHG Office		2,500 employees	775	49	53	699	3,031	3,031	UHG Rate	2014 Phase 1 Build (3% TDM)
UHG Office		5,000 employees	1,486	95	101	1,341	5,813	5,813	UHG Rate	2016 Phase 2 Build (4% Large Campus, 3% TDM)
UHG Office		6,637 employees	1,930	123	131	1,741	7,550	7,550	UHG Rate	2018 Full Build (6% Large Campus, 3% TDM)
UHG Office		6,637 employees	1,888	121	128	1,703	7,384	7,384	UHG Rate	2018 Full Build + LRT (6% Large Campus, 3% TDM, 2% LRT)
UHG Office		6,637 employees	1,930	123	131	1,741	7,550	7,550	UHG Rate	2030 Full Build (6% Large Campus, 3% TDM)
UHG Office		6,637 employees	1,824	116	124	1,646	7,135	7,135	UHG Rate	2030 Full Build + LRT (6% Large Campus, 3% TDM, 5% LRT)
UHG Office		6,637 employees	2,079	133	141	1,875	8,130	8,130	UHG Rate	2018 Full Build + LRT + Worst Case (2% LRT)
UHG Office		6,637 employees	2,079	133	141	1,875	8,130	8,130	UHG Rate	2030 Full Build + LRT + Worst Case (2% LRT)
General Office Building	710	30 k.s.f.	63	9	19	93	264	264	ITE Equation	UHG EP AUAR - North of TH 62
Background										
LRT Park-and-Ride	93	300 stalls	168	42	42	168	375	375	ITE/Local Rate	City West Park-and-Ride - Base Case
LRT Park-and-Ride	93	600 stalls	336	84	84	336	750	750	ITE/Local Rate	City West Park-and-Ride - Worst Case
General Office Building	710	300 k.s.f.	409	56	76	371	1,652	1,652	ITE Rate	Data Park Phase II - from 2006 WSB report (p. 8)
General Office Building	710	100 k.s.f.	136	19	25	124	551	551	ITE Rate	SuperValue Eastview - Phase 1 (formerly Best Buy)
General Office Building	710	200 k.s.f.	273	37	51	247	1,101	1,101	ITE Rate	SuperValue Eastview - Phase 2 (formerly Best Buy)
General Office Building	710	500 k.s.f.	682	93	127	618	2,753	2,753	ITE Rate	SuperValue Eastview - Ultimate Build (formerly Best Buy)
Specialty Retail Center	814	50 k.s.f.	31	20	60	76	1,108	1,108	ITE Rate	City West redevelopment
Condominium/Townhouse	230	320 units	22	109	105	51	885	885	ITE Equation	City West redevelopment
Hotel	310	125 rooms	43	27	39	35	511	511	ITE Rate	City West redevelopment
HTO (Sit-Down) Restaurant	932	8 k.s.f.	48	44	53	37	509	509	ITE Rate	City West redevelopment
General Office	710	140 k.s.f.	216	29	40	196	864	864	ITE Rate	City West infill of existing vacancies
General Light Industrial	110	60 k.s.f.	49	7	7	51	209	209	ITE Rate	City West infill of existing vacancies
City West Internal/Pass-by reduction		-	-44	-26	-76	-112	-490	-490	ITE*	Internal trip reduction*: 11% AM, 25% PM, 12% daily
City West Total			**365**	**210**	**228**	**334**	**3,596**	**3,596**		

*Internal/shared trip reduction per ITE Trip Generation Handbook, 2nd Edition.

City West Redevelopment Trips
Internal Trip Reduction Calculation Details
Calculations per the method outlined in Trip Generation Handbook, 2nd Edition, Chapter 7.

Weekday

Gross Trips

	Enter	Exit
Office	864	864
Retail	1,617	1,617
Restaurant	-	-
Entertainment	-	-
Residential	1,396	1,396
Hotel	-	-
Other	-	-

Origins

From:

To:	Office	Retail	Restaur.	Entertai	Residen	Hotel	Other
Office		3%					
Retail	22%				38%		
Restaurant							
Entertainment							
Residential	2%	11%					
Hotel							
Other							

Destinations

To:

From:	Office	Retail	Restaur.	Entertai	Residen	Hotel	Other
Office		4%			3%		
Retail	15%				33%		
Restaurant							
Entertainment							
Residential		9%					
Hotel							
Other							

Note:
Bold figures represent ITE data.
Source: Trip Generation Handbook, 2nd Ed.

Office

			In From:		Min	Out to:		Min
Enter	864	Office	-	-	-	-	-	-
Exit	864	Retail	130	49	49	190	65	65
Total	1,728	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	35	42	35
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**49**			**100**

Retail

			In From:		Min	Out to:		Min
Enter	1,617	Office	65	190	65	49	130	49
Exit	1,617	Retail	-	-	-	-	-	-
Total	3,234	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	146	530	146	178	461	178
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**211**			**227**

Restaurant

			In From:		Min	Out to:		Min
Enter	-	Office	-	-	-	-	-	-
Exit	-	Retail	-	-	-	-	-	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Entertainment

			In From:		Min	Out to:		Min
Enter	-	Office	-	-	-	-	-	-
Exit	-	Retail	-	-	-	-	-	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Residential

			In From:		Min	Out to:		Min
Enter	1,396	Office	42	35	35	-	-	-
Exit	1,396	Retail	461	178	178	530	146	146
Total	2,792	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**213**			**146**

Hotel

			In From:		Min	Out to:		Min
Enter	-	Office	-	-	-	-	-	-
Exit	-	Retail	-	-	-	-	-	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Other

			In From:		Min	Out to:		Min
Enter	-	Office	-	-	-	-	-	-
Exit	-	Retail	-	-	-	-	-	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Enter			Exit			**Total**		
Gross	Shared	%	Gross	Shared	%	Gross	Shared	%
3,877	473	12%	3,877	473	12%	7,754	946	**12%**

Design Assumption: 12%

Weekday AM Peak Hour

Gross Trips

	Enter	Exit
Office	216	29
Retail	79	64
Restaurant	-	-
Entertainment	-	-
Residential	65	136
Hotel	-	-
Other	-	-

Origins

From:

To:	Office	Retail	Restaur.	Entertai	Residen	Hotel	Other
Office		29%	31%		2%	75%	
Retail	28%		14%		1%	14%	
Restaurant	63%	13%			20%	9%	
Entertainment							
Residential	1%	14%	4%			0%	
Hotel	0%	0%	3%				
Other							

Destinations

To:

From:	Office	Retail	Restaur.	Entertai	Residen	Hotel	Other
Office		4%	14%		3%	3%	
Retail	32%		8%		17%	4%	
Restaurant	23%	50%			20%	6%	
Entertainment							
Residential	0%	2%	5%			0%	
Hotel	0%	0%	4%		0%		
Other							

Note:
Bold figures represent ITE data.
Source: ITE Journal, August 2010

Office

			In From:		Min	Out to:		Min
Enter	216	Office	-	-	-	-	-	-
Exit	29	Retail	69	19	19	8	3	3
Total	245	staurant	50	-	-	18	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	3	-	2	2	2
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**19**			**5**

Retail

			In From:		Min	Out to:		Min
Enter	79	Office	3	8	3	19	69	19
Exit	64	Retail	-	-	-	-	-	-
Total	143	staurant	40	-	-	8	-	-
		Entertainment	-	-	-	-	-	-
		Residential	2	1	1	9	11	9
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**4**			**28**

Restaurant

			In From:		Min	Out to:		Min
Enter	-	Office	-	18	-	-	50	-
Exit	-	Retail	-	8	-	-	40	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	27	-	-	13	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Entertainment

			In From:		Min	Out to:		Min
Enter	-	Office	-	-	-	-	-	-
Exit	-	Retail	-	-	-	-	-	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Residential

			In From:		Min	Out to:		Min
Enter	65	Office	2	2	2	3	-	-
Exit	136	Retail	11	9	9	1	2	1
Total	201	staurant	13	-	-	27	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**11**			**1**

Hotel

			In From:		Min	Out to:		Min
Enter	-	Office	-	-	-	-	-	-
Exit	-	Retail	-	-	-	-	-	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Other

			In From:		Min	Out to:		Min
Enter	-	Office	-	-	-	-	-	-
Exit	-	Retail	-	-	-	-	-	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Enter			Exit			**Total**		
Gross	Shared	%	Gross	Shared	%	Gross	Shared	%
360	34	9%	229	34	15%	589	68	**12%**

Design Assumption: 12%

Weekday PM Peak Hour

Gross Trips

	Enter	Exit
Office	40	196
Retail	113	113
Restaurant	-	-
Entertainment	-	-
Residential	144	86
Hotel	-	-
Other	-	-

Origins

From:

To:	Office	Retail	Restaur.	Entertai	Residen	Hotel	Other
Office		2%	3%	2%	4%	0%	
Retail	20%		41%	21%	42%	16%	
Restaurant	4%	29%		31%	21%	68%	
Entertainment	0%	4%	8%		0%	0%	
Residential	2%	26%	18%	8%		2%	
Hotel	0%	5%	7%	2%	3%		
Other							

Destinations

To:

From:	Office	Retail	Restaur.	Entertai	Residen	Hotel	Other
Office		31%	30%	6%	57%	0%	
Retail	8%		50%	4%	10%	2%	
Restaurant	2%	29%		3%	14%	5%	
Entertainment	1%	26%	32%		0%	0%	
Residential	4%	46%	16%	4%		0%	
Hotel	0%	17%	71%	1%	12%		
Other							

Note:
Bold figures represent ITE data.
Source: ITE Journal, August 2010

Office

			In From:		Min	Out to:		Min
Enter	40	Office	-	-	-	-	-	-
Exit	196	Retail	3	2	2	39	35	35
Total	236	staurant	1	-	-	8	-	-
		Entertainment	0	-	-	-	-	-
		Residential	2	3	2	5	82	5
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**4**			**40**

Retail

			In From:		Min	Out to:		Min
Enter	113	Office	35	39	35	2	3	2
Exit	113	Retail	-	-	-	-	-	-
Total	226	staurant	33	-	-	33	-	-
		Entertainment	29	-	-	5	-	-
		Residential	52	36	36	29	14	14
		Hotel	19	-	-	6	-	-
		Other	-	-	-	-	-	-
		Total			**71**			**16**

Restaurant

			In From:		Min	Out to:		Min
Enter	-	Office	-	8	-	-	1	-
Exit	-	Retail	-	33	-	-	33	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	18	-	-	20	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Entertainment

			In From:		Min	Out to:		Min
Enter	-	Office	-	-	-	-	0	-
Exit	-	Retail	-	5	-	-	29	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Residential

			In From:		Min	Out to:		Min
Enter	144	Office	82	5	5	3	2	2
Exit	86	Retail	14	29	14	36	52	36
Total	230	staurant	20	-	-	18	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	17	-	-	3	-	-
		Other	-	-	-	-	-	-
		Total			**19**			**38**

Hotel

			In From:		Min	Out to:		Min
Enter	-	Office	-	-	-	-	-	-
Exit	-	Retail	-	6	-	-	19	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	3	-	-	17	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Other

			In From:		Min	Out to:		Min
Enter	-	Office	-	-	-	-	-	-
Exit	-	Retail	-	-	-	-	-	-
Total	-	staurant	-	-	-	-	-	-
		Entertainment	-	-	-	-	-	-
		Residential	-	-	-	-	-	-
		Hotel	-	-	-	-	-	-
		Other	-	-	-	-	-	-
		Total			**-**			**-**

Enter			Exit			**Total**		
Gross	Shared	%	Gross	Shared	%	Gross	Shared	%
297	94	32%	395	94	24%	692	188	**27%**

Design Assumption: 27%

Park-and-Ride
Trip Generation Rate Estimate Calculations

ITE Trip Generation, 8th Edition (2008)
LRT Station with Parking
Portland, OR 1994-1996

Peak hour of adjacent street traffic (1 study)

	rate per st	Enter	Exit
AM	1.07	80%	20%
PM	1.24	58%	42%

Peak hour of adjacent street traffic (1 study)

	rate per oc	Enter	Exit
AM	1.14	80%	20%
PM	1.33	58%	42%

Metro Transit (per Spack, 2010)
(Maplewood park and ride station - busses only)
575 stalls

Peak hour of generator

	rate per st	Enter	Exit
AM	0.6	90%	10%
PM	0.6	10%	90%

SRF (2006)
(Bloomington 28th Ave park and ride)
(busses only)
approx. 500 stalls

Peak hour of adjacent street traffic

	rate per st	Enter	Exit
AM	0.34	89%	11%
PM	0.46	17%	83%

Peak hour of generator

	rate per st	Enter	Exit
AM	0.61	92%	8%
PM	0.56	15%	85%

ITE Trip Generation, 8th Edition (2008)
Park-and-Ride with Bus Service
1980s - 2000s OR, CA, WA, NJ

Peak hour of adjacent street traffic (10-13 studies)

	rate per st	Enter	Exit
AM	0.72	81%	19%
PM	0.62	23%	77%

Peak hour of adjacent street traffic (4-6 studies)

	rate per oc	Enter	Exit
AM	1.26	69%	31%
PM	0.81	28%	72%

Spring 2011 U of M Capstone Project
Alexander Jordan, et al.
Southwest Station (Eden Prairie) (bus service only)
915 occupied stalls (based on 2010 Metro Transit data)

Peak hour of adjacent street traffic

	rate per oc	Enter	Exit
AM	0.50	87%	13%
PM	0.43	10%	90%

Spring 2011 U of M Capstone Project
Alexander Jordan, et al.
28th Avenue LRT Park-and-ride
677 occupied stalls (based on 2010 Metro Transit data)

Peak hour of adjacent street traffic

	rate per oc	Enter	Exit
AM	0.29	95%	5%
PM	0.29	7%	93%

---

weighted averages:

trips:

	generator stall	street stall	street occ. Stall
AM	0.61	0.72	1.03
PM	0.58	0.65	0.76

entering %

	generator stall	street stall	street occ. Stall
AM	91%	82%	76%
PM	13%	25%	7%

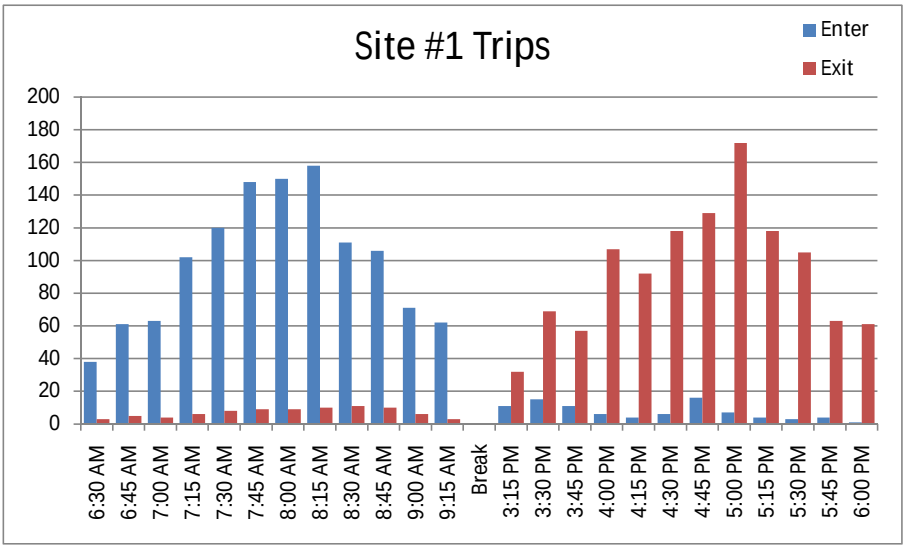
City West LRT Park and Ride
Trip Generation Rate Assumptions:

	Rate (per stall)	Enter	Exit
AM	0.7	80%	20%
PM	0.7	20%	80%

UHG West Metro (Site #1)
Cordon Count

Date: 1/12/2011
Times: 6:30 a.m. - 9:30 a.m. & 3:15 p.m. to 6:15 p.m.

	Driveway 1		Driveway 2		Driveway 3		Driveway 4		Totals		Hour Totals		
Start Time	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Both
6:30 AM	38	2	0	1	0	0	0	0	38	3	264	18	282
6:45 AM	60	4	0	1	1	0	0	0	61	5	346	23	369
7:00 AM	58	2	0	2	3	0	2	0	63	4	433	27	460
7:15 AM	99	6	0	0	1	0	2	0	102	6	520	32	552
7:30 AM	117	6	0	2	0	0	3	0	120	8	576	36	612
7:45 AM	143	5	0	3	2	1	3	0	148	9	567	39	606
8:00 AM	150	8	0	1	0	0	0	0	150	9	525	40	565
8:15 AM	154	5	0	2	4	1	0	2	158	10	446	37	483
8:30 AM	107	7	0	1	2	1	2	2	111	11	350	30	380
8:45 AM	105	8	0	0	1	0	0	2	106	10			
9:00 AM	71	6	0	0	0	0	0	0	71	6			
9:15 AM	62	3	0	0	0	0	0	0	62	3			
Break													
3:15 PM	10	17	0	14	1	0	0	1	11	32	43	265	308
3:30 PM	14	53	0	13	1	1	0	2	15	69	36	325	361
3:45 PM	11	42	0	12	0	2	0	1	11	57	27	374	401
4:00 PM	6	89	0	15	0	2	0	1	6	107	32	446	478
4:15 PM	4	76	0	15	0	1	0	0	4	92	33	511	544
4:30 PM	6	99	0	18	0	1	0	0	6	118	33	537	570
4:45 PM	16	113	0	15	0	0	0	1	16	129	30	524	554
5:00 PM	6	153	0	17	1	1	0	1	7	172	18	458	476
5:15 PM	4	101	0	15	0	1	0	1	4	118	12	347	359
5:30 PM	3	80	0	23	0	2	0	0	3	105			
5:45 PM	4	52	0	11	0	0	0	0	4	63			
6:00 PM	0	50	0	9	1	0	0	2	1	61			



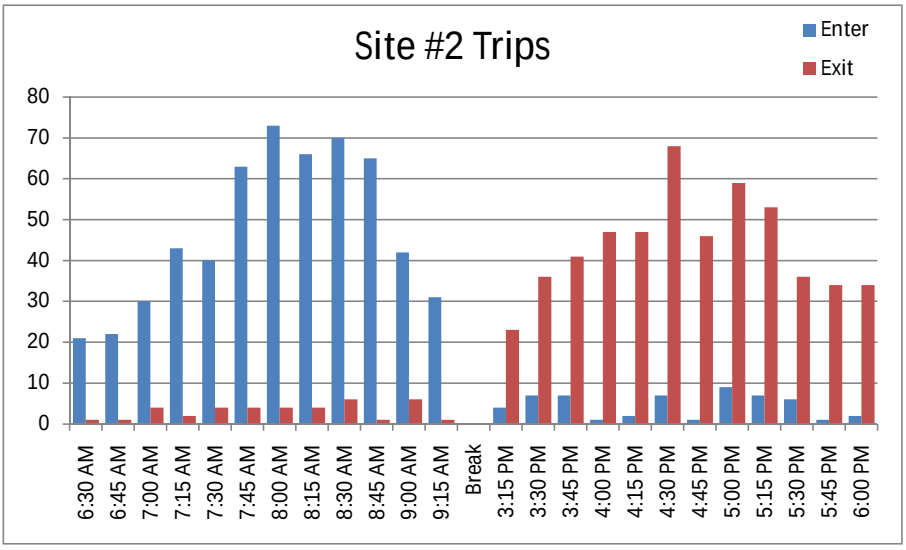
Site Data:

340,258 s.f.	Total s.f.
340,258 s.f.	Occupied s.f.
1,946 employees	Employee Capacity
1,698 employees	Actual Employees
200.39	Actual s.f. / employee

UHG SW Metro (Site #2)
Cordon Count

Date: 1/11/2011
Times: 6:30 a.m. - 9:30 a.m. & 3:15 p.m. to 6:15 p.m.

	Driveway 1		Driveway 2		Totals		Hour Totals		
Start Time	Enter	Exit	Enter	Exit	Enter	Exit	Enter	Exit	Both
6:30 AM	16	1	5	0	21	1	116	8	124
6:45 AM	18	0	4	1	22	1	135	11	146
7:00 AM	21	3	9	1	30	4	176	14	190
7:15 AM	32	2	11	0	43	2	219	14	233
7:30 AM	25	2	15	2	40	4	242	16	258
7:45 AM	36	2	27	2	63	4	272	18	290
8:00 AM	41	4	32	0	73	4	274	15	289
8:15 AM	42	4	24	0	66	4	243	17	260
8:30 AM	47	4	23	2	70	6	208	14	222
8:45 AM	41	0	24	1	65	1			
9:00 AM	27	4	15	2	42	6			
9:15 AM	28	1	3	0	31	1			
Break									
3:15 PM	1	13	3	10	4	23	19	147	166
3:30 PM	4	24	3	12	7	36	17	171	188
3:45 PM	3	29	4	12	7	41	17	203	220
4:00 PM	1	31	0	16	1	47	11	208	219
4:15 PM	1	23	1	24	2	47	19	220	239
4:30 PM	4	40	3	28	7	68	24	226	250
4:45 PM	0	28	1	18	1	46	23	194	217
5:00 PM	6	35	3	24	9	59	23	182	205
5:15 PM	5	35	2	18	7	53	16	157	173
5:30 PM	3	21	3	15	6	36			
5:45 PM	1	24	0	10	1	34			
6:00 PM	0	28	2	6	2	34			



Site Data:

155,650 s.f.	Total s.f.
155,650 s.f.	Occupied s.f.
1,016 employees	Employee Capacity
973 employees	Actual Employees
159.97	Actual s.f. / Employee

UHG Eden Prairie
Trip Generation Rate Calculation Using Site 1 & Site 2 Surrogate Counts
(Combined Rate - per employee)

Site 1:

Employees:

1,698

Trips:

	Enter	Exit	Total
AM	576	36	612
PM	33	537	570

Site 2:

Employees:

973

Trips:

	Enter	Exit	Total
AM	272	18	290
PM	24	226	250

Overall:

Employees:

2,671

Trips:

	Enter	Exit	Total
AM	848	54	902
PM	57	763	820

Rate per Employee:

	Rate	Enter	Exit
AM	0.34	94%	6%
PM	0.31	7%	93%

Trips @6,637 employees:

	Enter	Exit	Total
AM	2,107	134	2,241
PM	142	1,896	2,038

UHG Daily Trip Rate Calculation

K-Factors Using Base Rates per Employee

General Office (710)

	Peak Hour Rate	Daily Rate	K Factor
AM	0.48	3.32	6.9
PM	0.46	3.32	7.2

Corporate Headquarters Building (714)

	Peak Hour Rate	Daily Rate	K Factor
AM	0.45	2.33	5.2
PM	0.38	2.33	6.1

Single Tenant Office Building (715)

	Peak Hour Rate	Daily Rate	K Factor
AM	0.53	3.62	6.8
PM	0.50	3.62	7.2

K-Factors Using Effective Rates per Employee from Fitted Curve Equations

General Office (710)

	Effective Peak Hour Rate	Effective Daily Rate	K Factor
AM	0.37	2.27	6.1
PM	0.38	2.27	6.0

Corporate Headquarters Building (714)

	Peak Hour Rate	Effective Daily Rate	K Factor
AM	0.37	1.97	5.3
PM	0.26	1.97	7.6

Single Tenant Office Building (715)

	Peak Hour Rate	Effective Daily Rate	K Factor
AM	0.50	1.80	3.6
PM	0.45	1.80	4.0

Summary of Daily Rates/Effective Daily Rates and K Factors

	Daily Rate	K Factor
Average	2.55	6.0
Max	3.62	7.6
Min	1.80	3.6
Median	2.30	6.1

Resulting Base UHG Daily Trip Gen Rate

UHG Office

	Peak Hour Rate	K Factor Assumed	Daily Rate
AM	0.34	7.0	2.38
PM	0.31	7.0	2.17

Daily Rate Assumed	2.50

*a daily rate of 2.50 implies that 1/4 of all employees will make two round trips to the site daily.
(the additional trip being an offsite meeting, or lunch, for example)

UHG Eden Prairie

Trip Generation Rate Calculation of Large Campus Factor Using ITE Corporate Headquarters Land Use Equation

Total of Site 1 + Site 2

Employees:

2671

Trips per ITE Corp HQ, Employee, Equation

	Enter	Exit
AM	1,022	77
PM	93	754

Effective Rate per Employee:

	Rate	Enter	Exit
AM	0.41	93%	7%
PM	0.32	11%	89%

Entire UHG EP Campus

Employees:

6637

Trips per ITE Corp HQ, Employee, Equation

	Enter	Exit
AM	2,298	173
PM	193	1,562

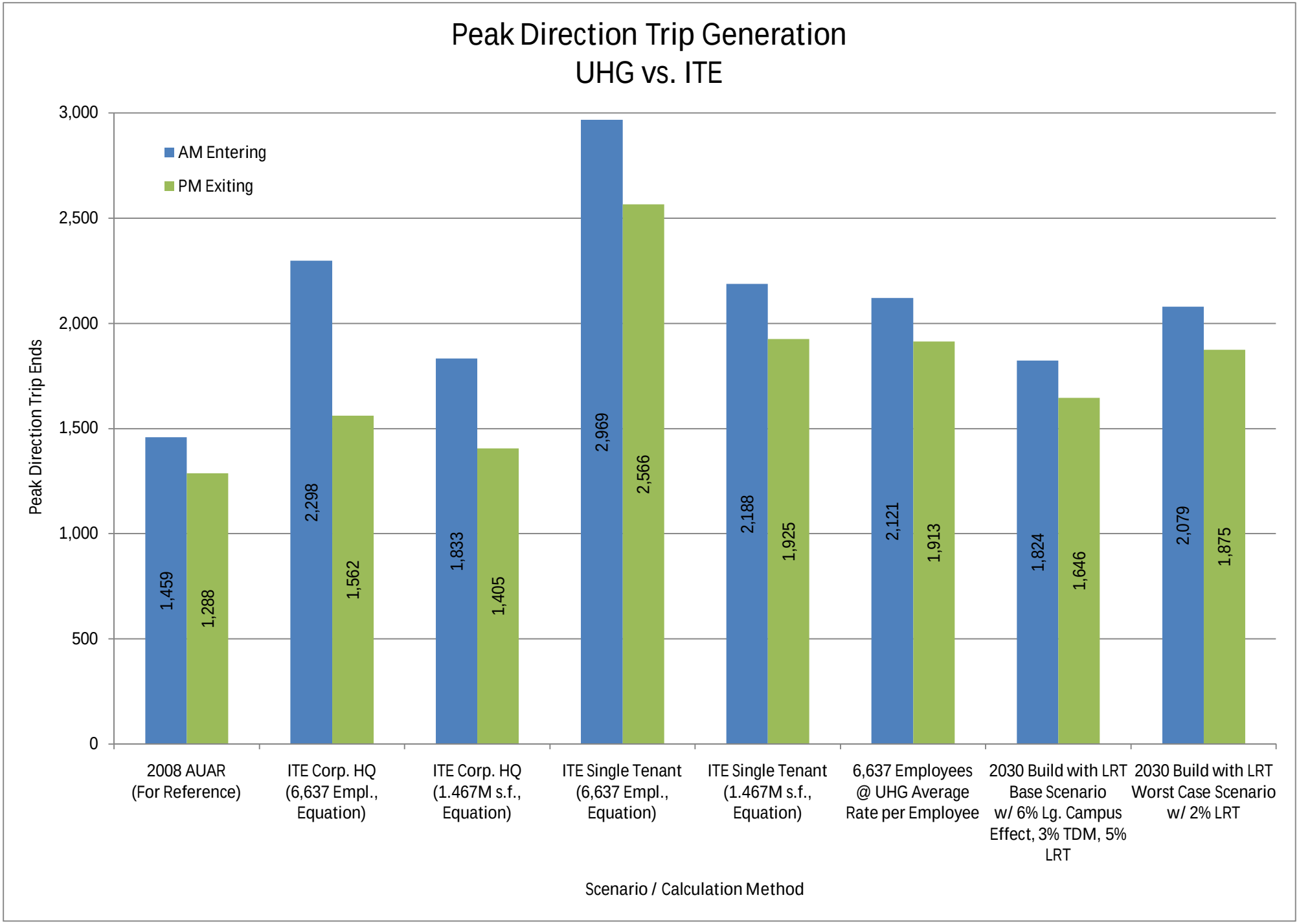
Effective Rate per Employee:

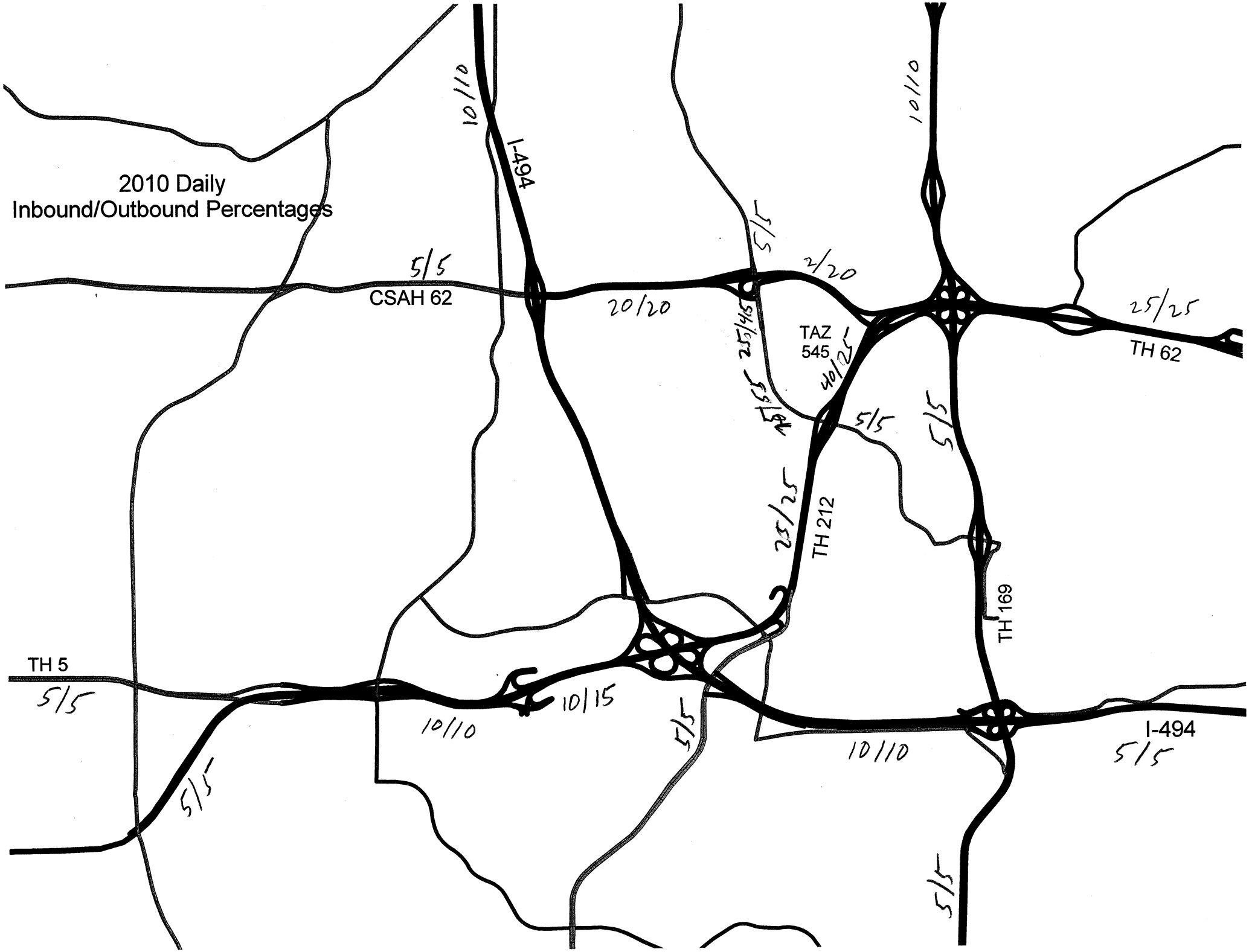
	Rate	Enter	Exit
AM	0.37	93%	7%
PM	0.26	11%	89%

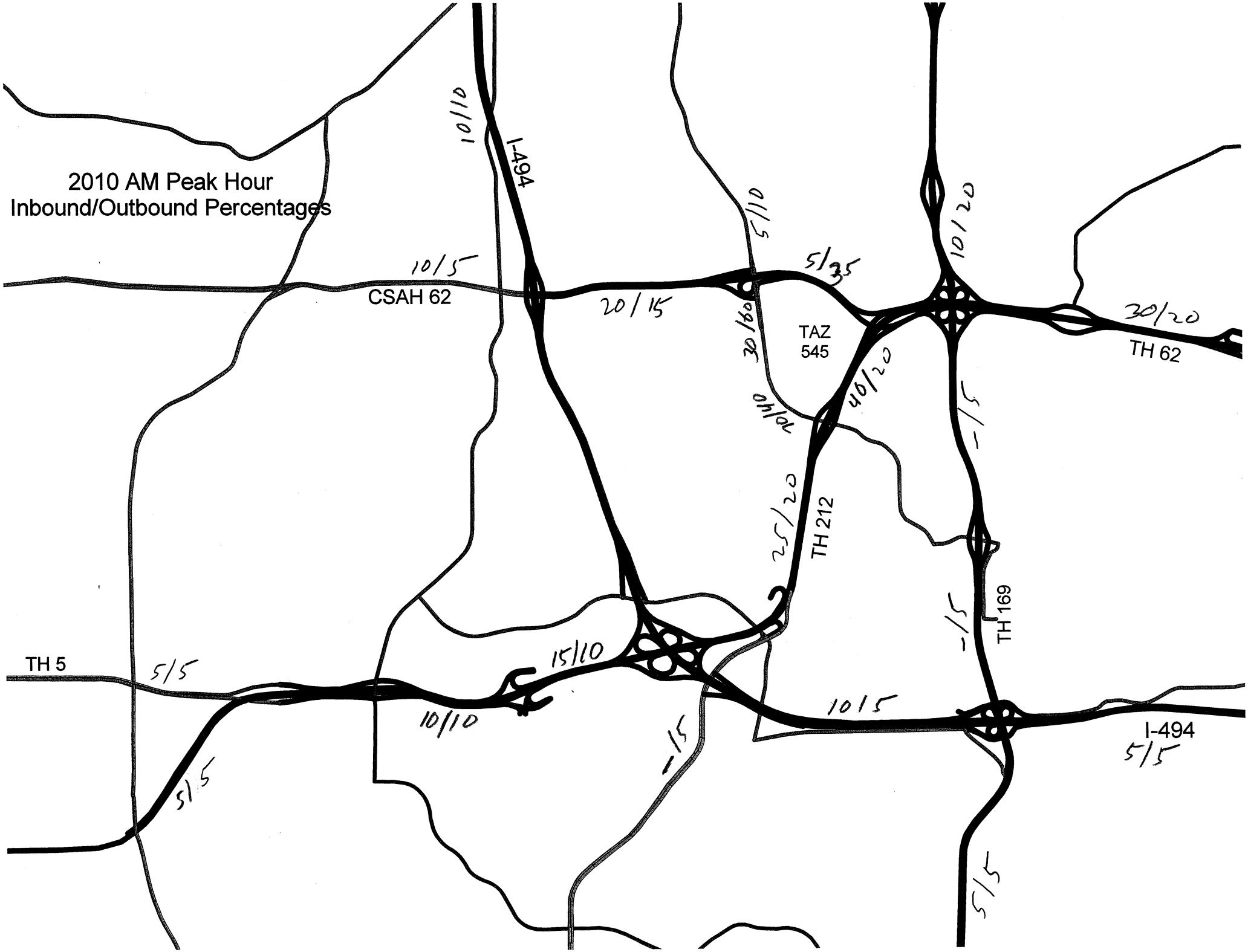
Large Campus Factor:

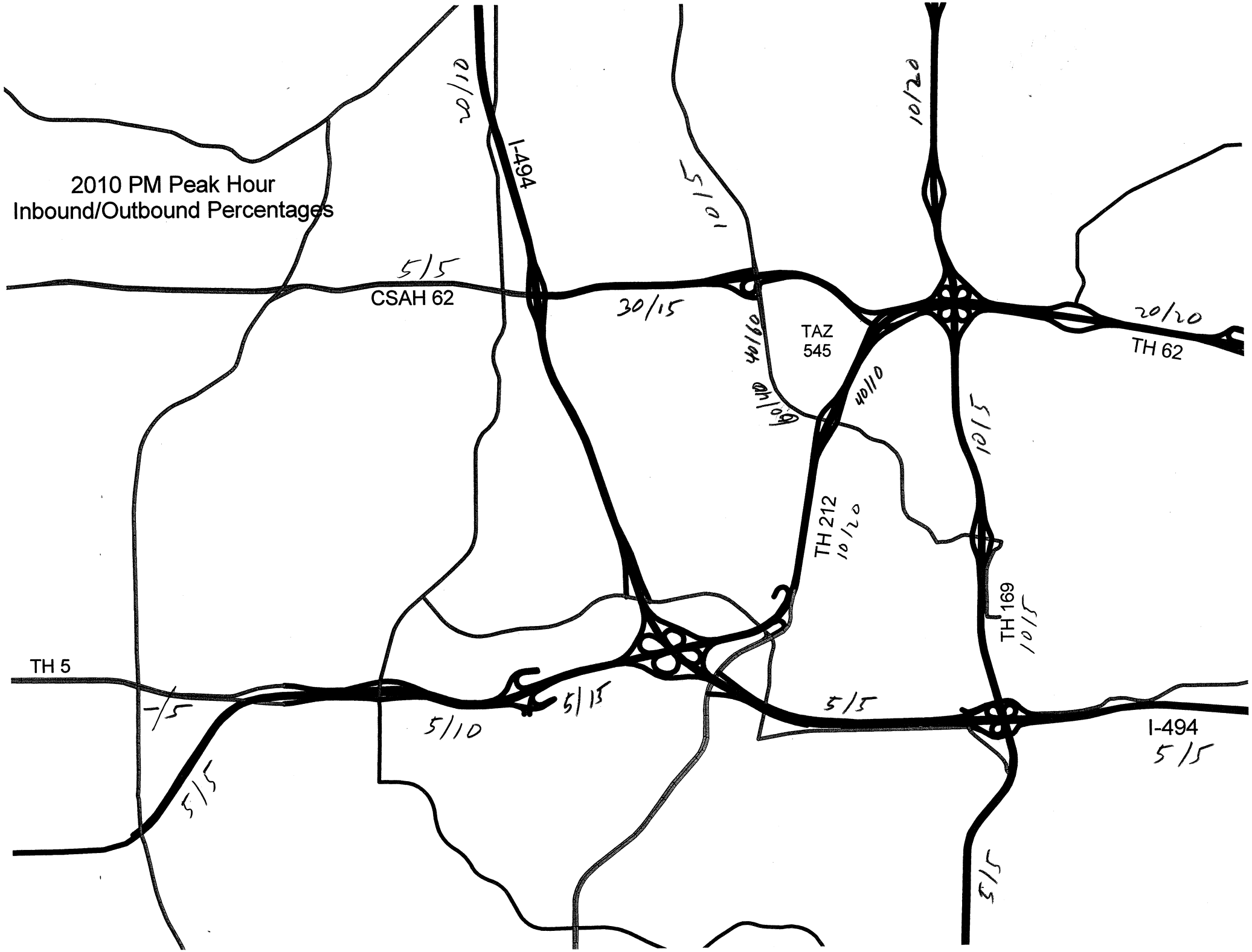
Large Campus Factor:
calculated as: (Smaller Rate - Larger Rate) / Smaller Rate

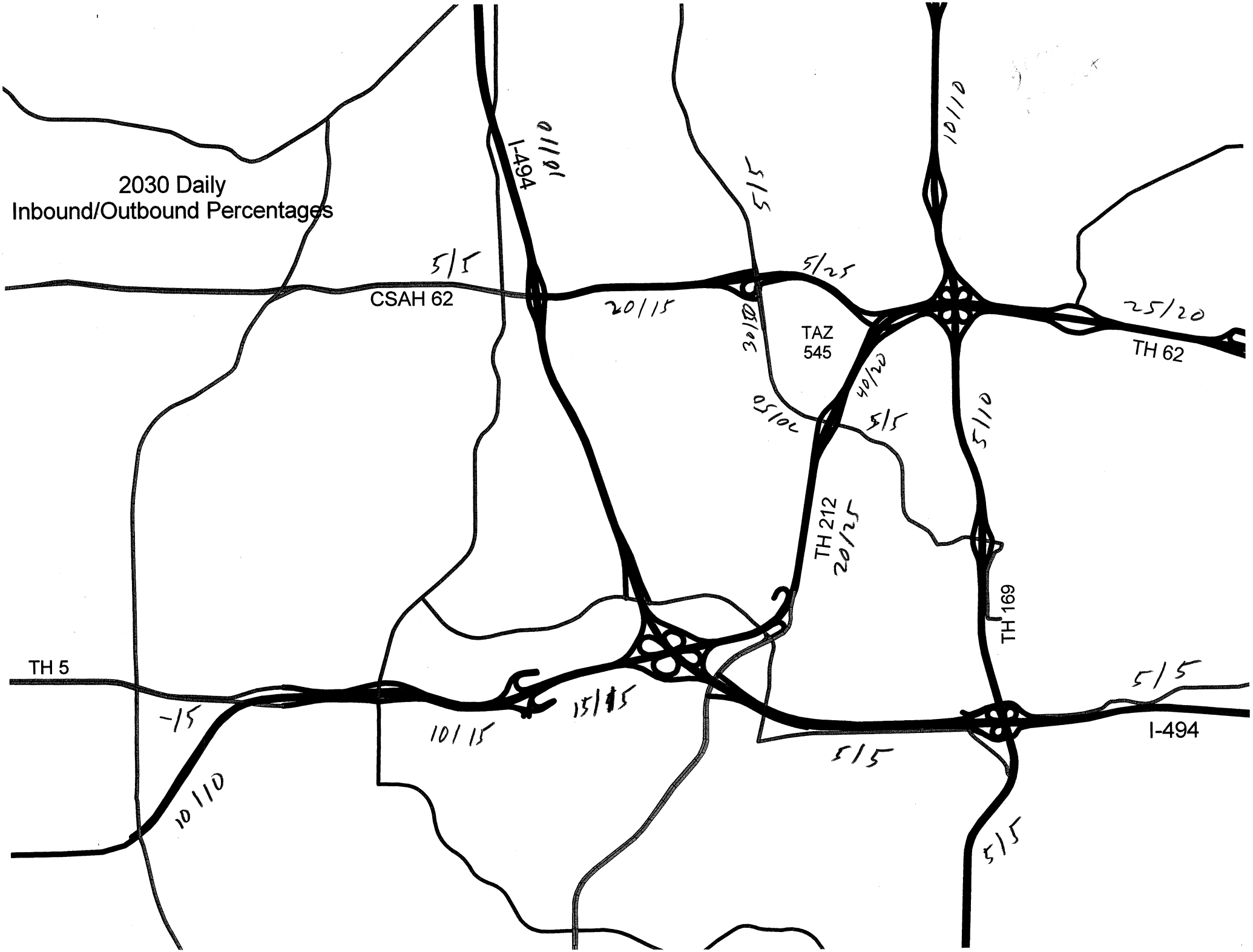
	Enter
AM	10%
PM	19%

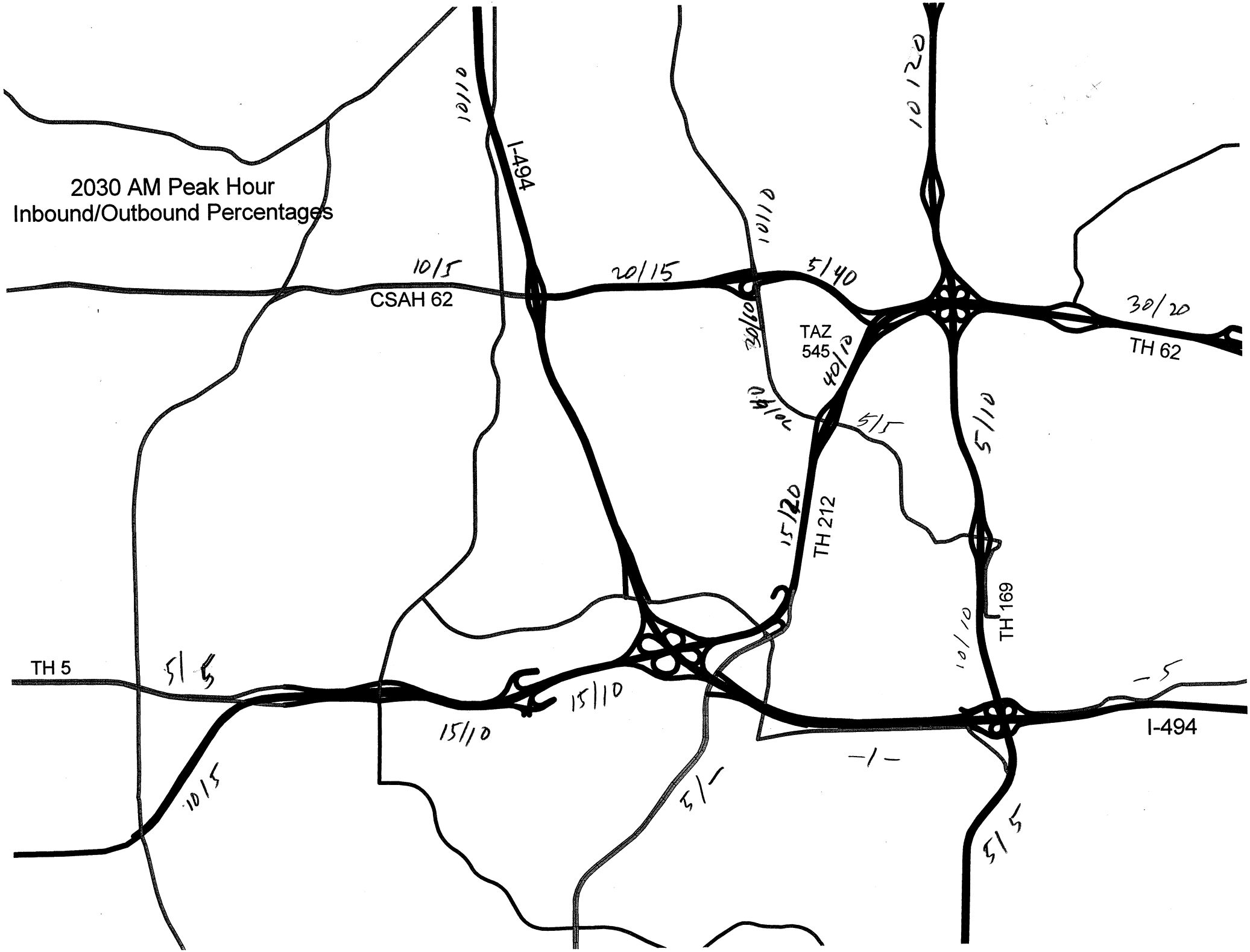

Peak Direction Trip Generation
UHG vs. ITE
AM Entering
PM Exiting
Peak Direction Trip Ends
3,000
2,500
2,000
1,500
1,000
500
0
1,459
1,288
2,298
1,562
1,833
1,405
2,969
2,566
2,188
1,925
2,121
1,913
1,824
1,646
2,079
1,875
2008 AUAR (For Reference)
ITE Corp. HQ (6,637 Empl., Equation)
ITE Corp. HQ (1.467M s.f., Equation)
ITE Single Tenant (6,637 Empl., Equation)
ITE Single Tenant (1.467M s.f., Equation)
6,637 Employees @ UHG Average Rate per Employee
2030 Build with LRT Base Scenario w/ 6% Lg. Campus Effect, 3% TDM, 5% LRT
2030 Build with LRT Worst Case Scenario w/ 2% LRT
Scenario / Calculation Method


2010 Daily
Inbound/Outbound Percentages
CSAH 62
I-494
TH 5
TH 212
TH 169
TH 62
TAZ
545
5/5
20/20
10/10
25/25
40/25
10/15


2010 AM Peak Hour
Inbound/Outbound Percentages
CSAH 62
I-494
TAZ
545
TH 62
TH 212
TH 169
TH 5
I-494


2010 PM Peak Hour
Inbound/Outbound Percentages
CSAH 62
5/5
I-494
20/10
10/5
10/20
30/15
TAZ
545
40/60
60/40
40/10
20/20
TH 62
10/5
TH 212
10/20
TH 169
10/5
TH 5
-/5
5/10
5/15
5/5
I-494
5/5
5/5
5/5


2030 Daily
Inbound/Outbound Percentages
CSAH 62
I-494
TAZ
545
TH 62
TH 212
TH 169
TH 5
I-494


2030 AM Peak Hour
Inbound/Outbound Percentages
CSAH 62
I-494
TAZ
545
TH 62
TH 212
TH 169
TH 5
I-494
10/15
20/15
5/40
10/10
10/20
30/20
30/10
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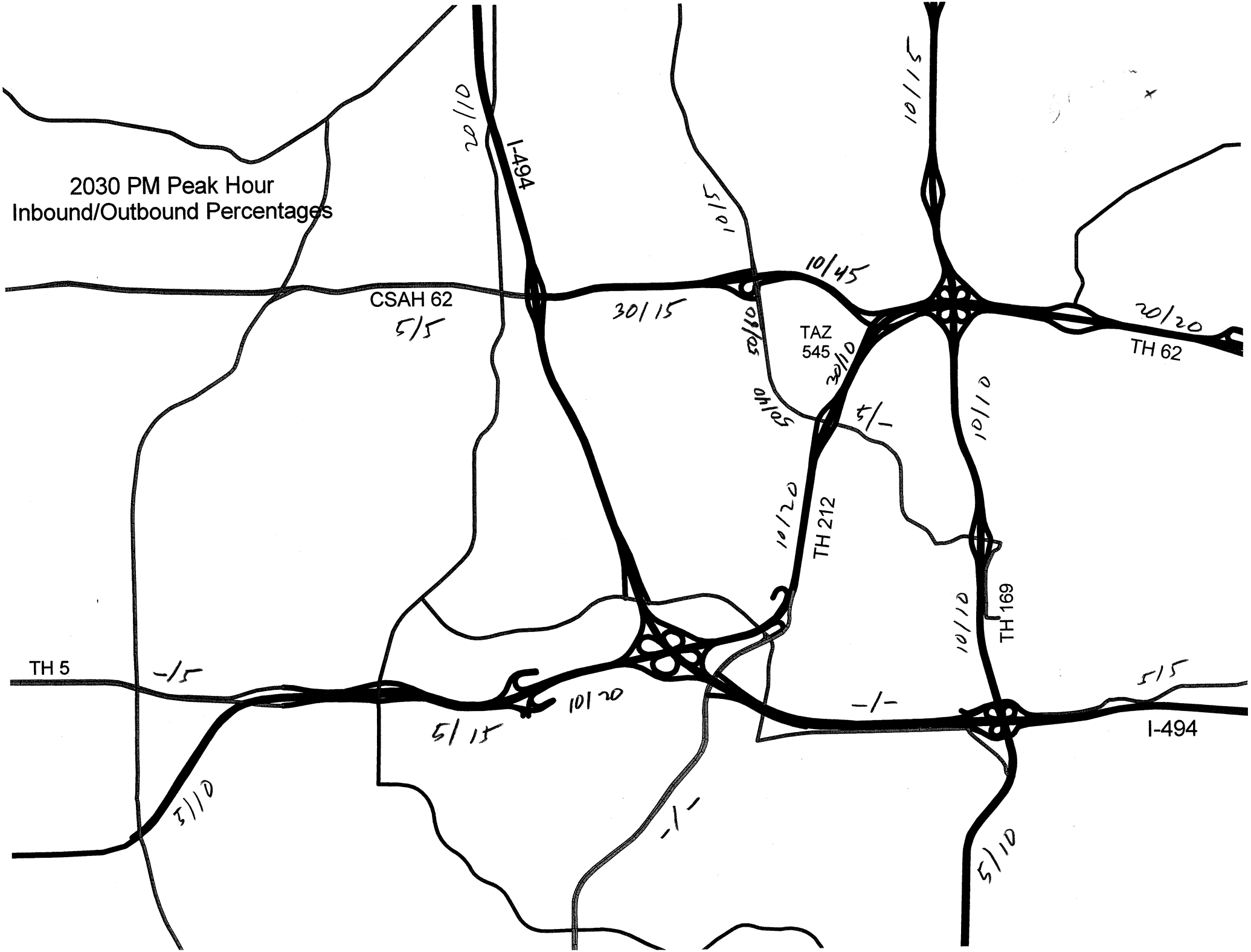
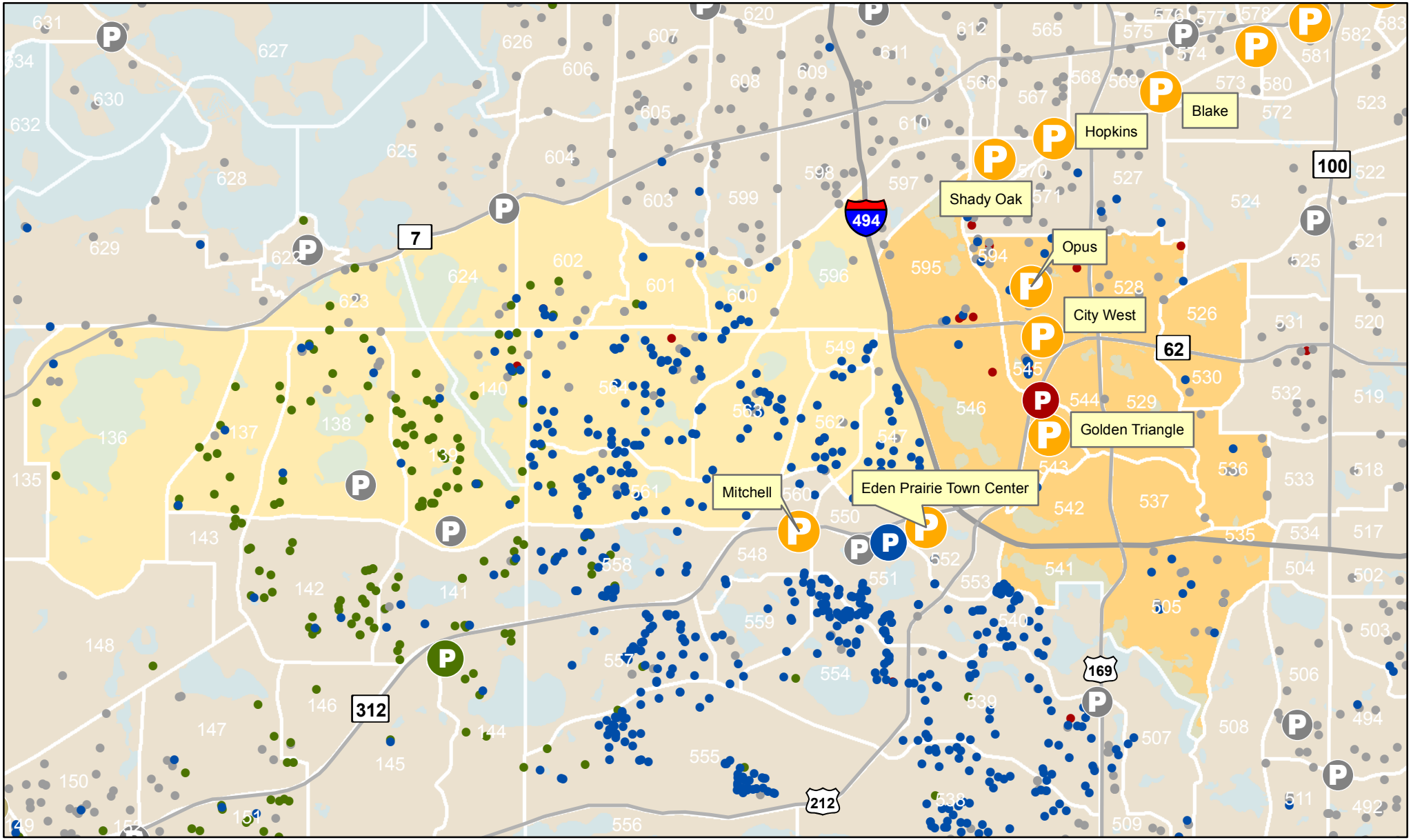
10/15
5/5
5/5


2030 PM Peak Hour
Inbound/Outbound Percentages
CSAH 62
5/5
I-494
20/10
30/15
10/15
10/45
10/15
TAZ
545
30/10
50/10
50/10
5/-
10/10
TH 62
20/20
10/20
TH 212
10/10
TH 169
TH 5
-/5
5/15
10/20
-/-
5/15
I-494
3/10
-/-
5/10



Southwest LRT Stations

Hwy 212 & Shady Oak Rd

SouthWest Station

SouthWest Village

Other Park-and-Ride Facilities

2010 Park-and-Ride Users

- Hwy 212 & Shady Oak Rd
- SouthWest Station
- SouthWest Village
- Other Facility

City West Market Area

- Full Demand (100%)
- Partial Demand (30%)
- Transportation Analysis Zones

N

Map Created: 4/14/2011

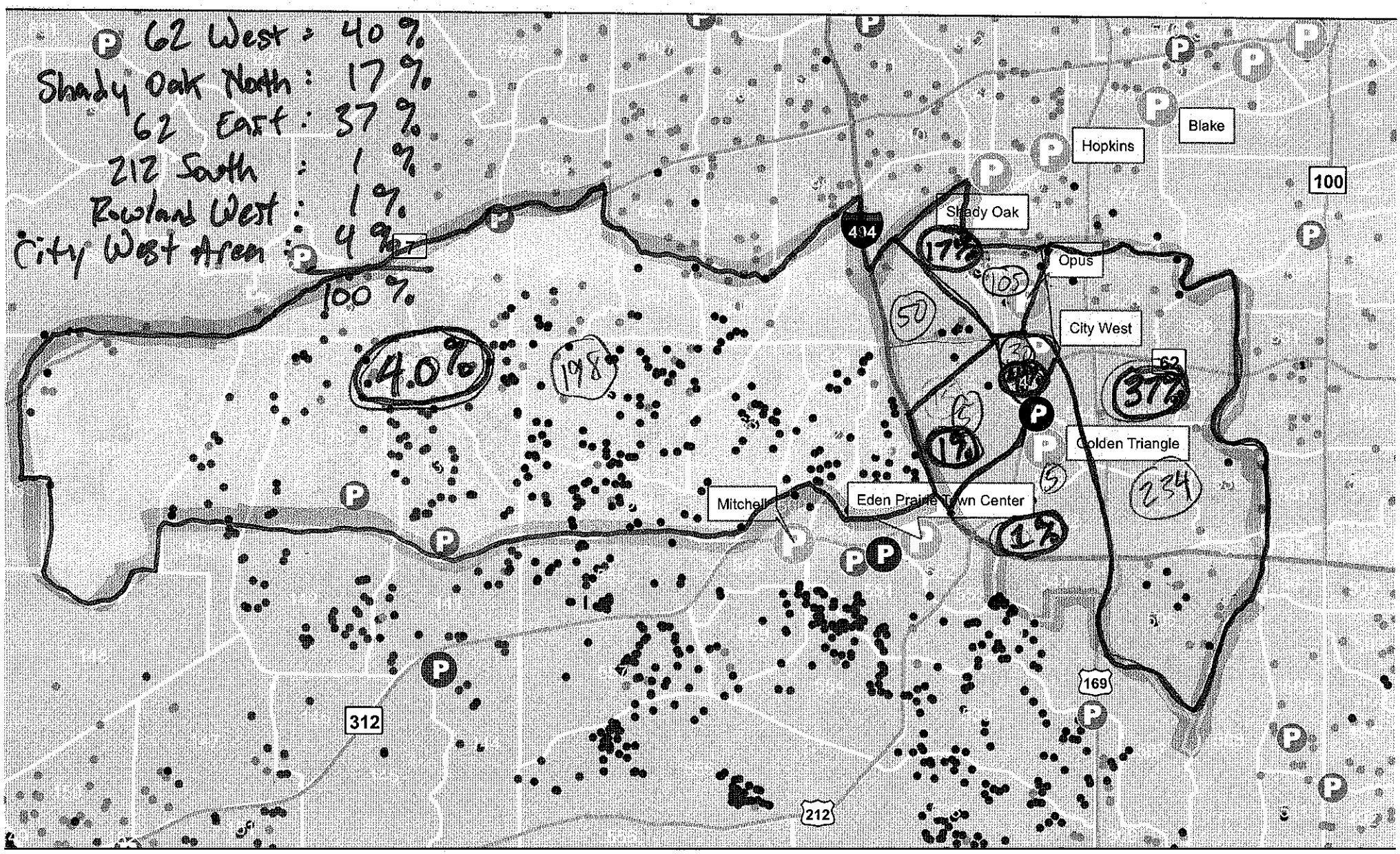
0 0.5 1 2 3 4 Miles

Demand from TAZ's	Total Est. Downtown Minneapolis Commuters 2008	Total Est. Downtown Minneapolis Commuters 2020	Total Est. Downtown Minneapolis Commuters 2030
Full Demand TAZ's (100% assigned to City West)	1064	1767	1896
Partial Demand TAZ's (30% assigned to City West)	1721	2118	2181
Total	2785	3885	4077

Demand from TAZ's	Total Est. Downtown Minneapolis Park-and-Riders 2008	Total Est. Downtown Minneapolis Park-and-Riders 2010
Full Demand TAZ's (100% assigned to City West)	91	118
Partial Demand TAZ's (30% assigned to City West)	344	371
Total	435	490

Demand from TAZ's	Total Est. Downtown Minneapolis Park-and-Riders 2020	City West 2020 Demand If No Adjacent Park-and-Ride Facilities	City West 2020 Demand If Shared w/ Adjacent Park-and-Ride Facilities
Full Demand TAZ's (100% assigned to City West)	317	317	106
Partial Demand TAZ's (30% assigned to City West)	523	157	52
Total	840	474	158

Demand from TAZ's	Total Est. Downtown Minneapolis Park-and-Riders 2030	City West 2030 Demand If No Adjacent Park-and-Ride Facilities	City West 2030 Demand If Shared w/ Adjacent Park-and-Ride Facilities
Full Demand TAZ's (100% assigned to City West)	429	429	143
Partial Demand TAZ's (30% assigned to City West)	660	198	66
Total	1089	627	209



Southwest LRT Stations

Hwy 212 & Shady Oak Rd

SouthWest Station

SouthWest Village

Other Park-and-Ride Facilities

2010 Park-and-Ride Users

- Hwy 212 & Shady Oak Rd
- SouthWest Station
- SouthWest Village
- Other Facility

City West Market Area

Full Demand (100%)

Partial Demand (30%)

Transportation Analysis Zones

N

0 0.5 1 2 3 4 Miles

Map Created: 4/14/2011

UHG Eden Prairie
City West Park-and-Ride
Distribution Notes

1.. Process used to estimate trip distribution was as follows:
   a. divide shaded sections into travelsheds
   b. count dots per travelshed
   c. factor number of dots in West 62 travelshed (light shading) by 0.30
   d. calculate distribution percentages from dot totals

2.. The travelshed with 37% of trips (to the east) was split afterwards: 30% assigned to 169/62, 7% assigned through golden triangle based on comments received from City of Eden Prairie.

3.. Distribution percentage to the south on TH 212 is low due to the anticipated availability of alternate LRT stations in that direction.

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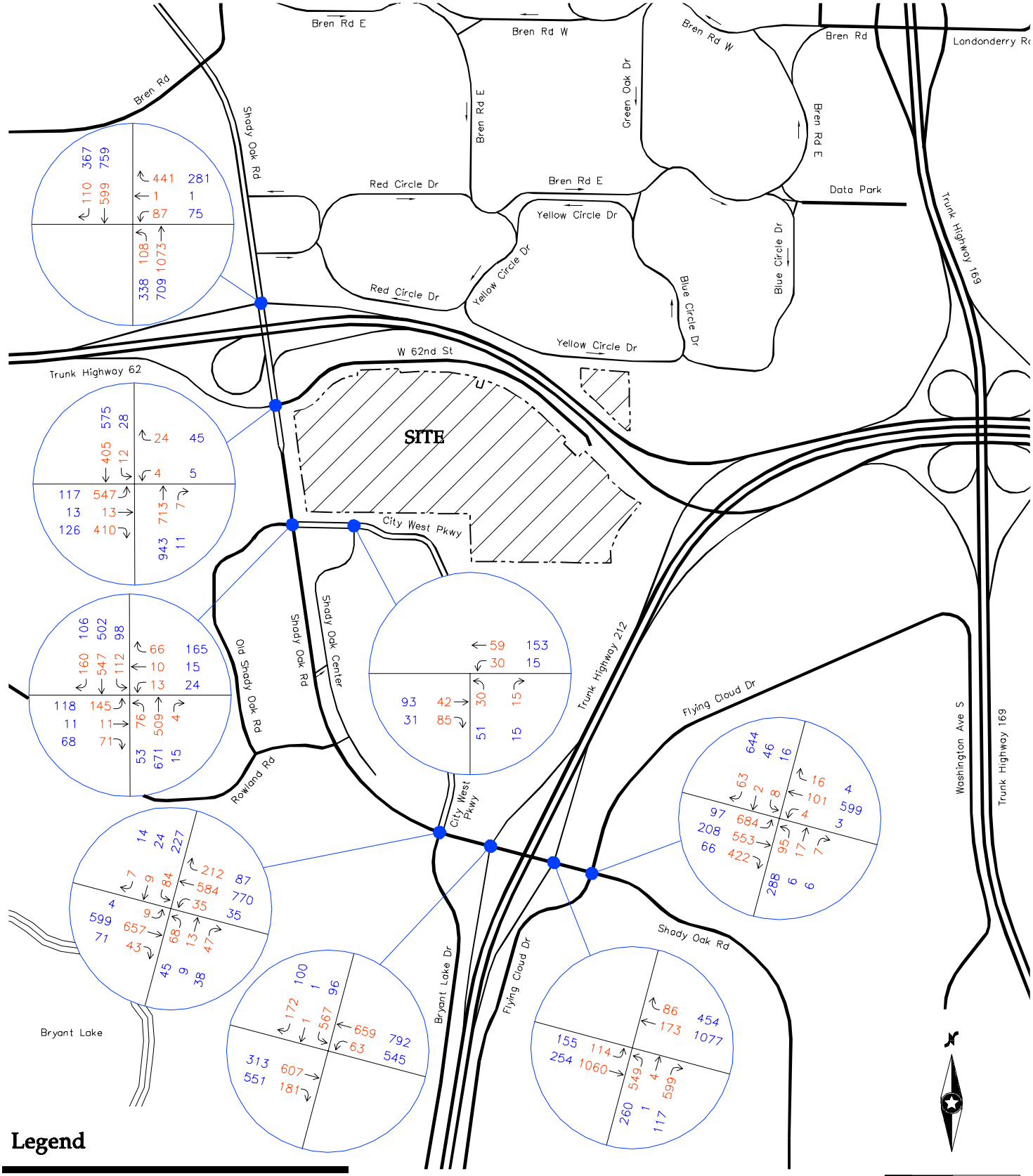

Legend

AM PEAK HOUR VOLUME XX

PM PEAK HOUR VOLUME XX

NOT TO SCALE

Date: 7/18/2011

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2010 Existing Peak Hour Volumes

Figure 2-1

UHG
EP Campus

Eden Prairie, MN

UHG City West TIS Volumes.dwg

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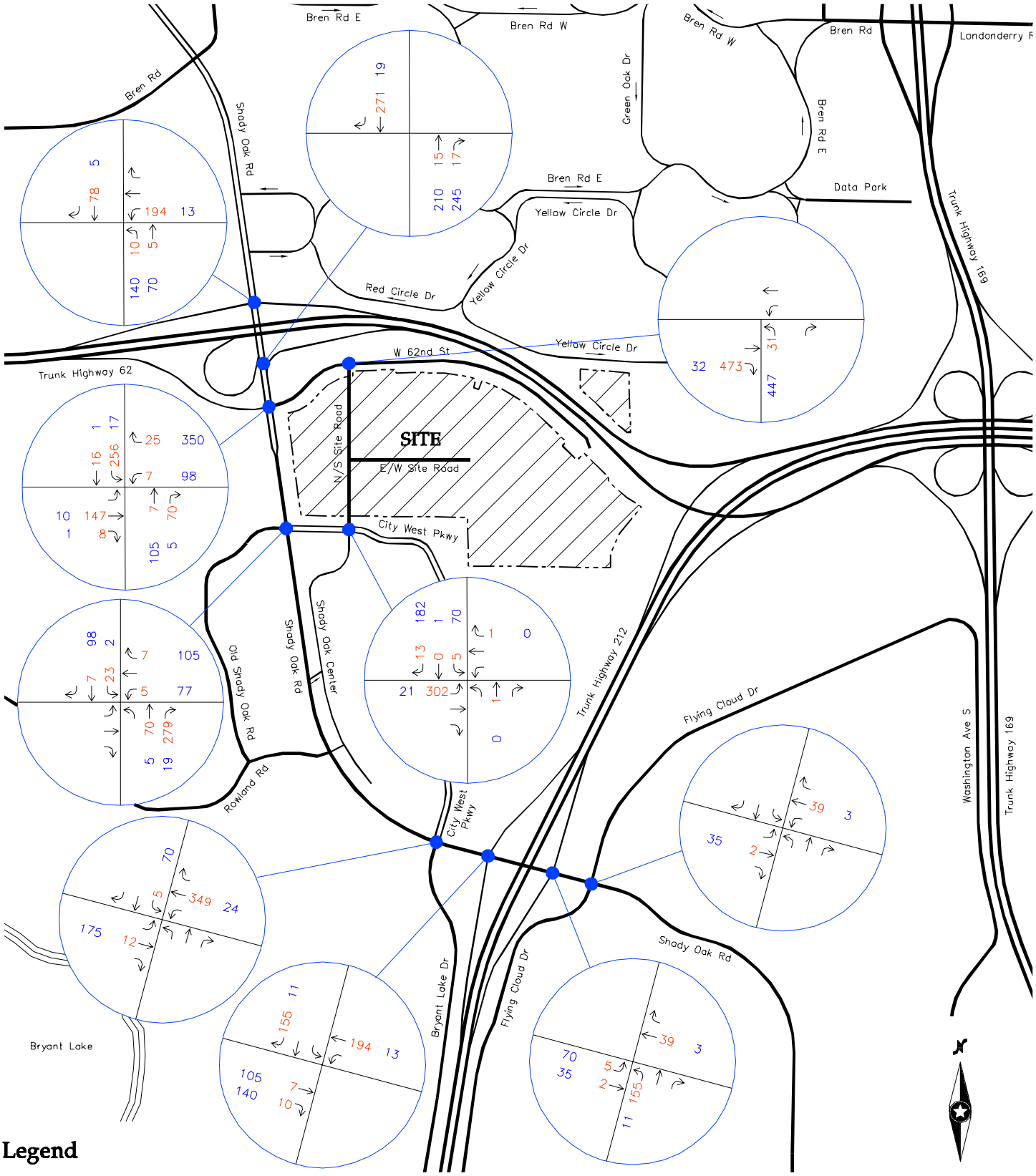

Legend

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Phase 1 Trip Assignment

Figure XX

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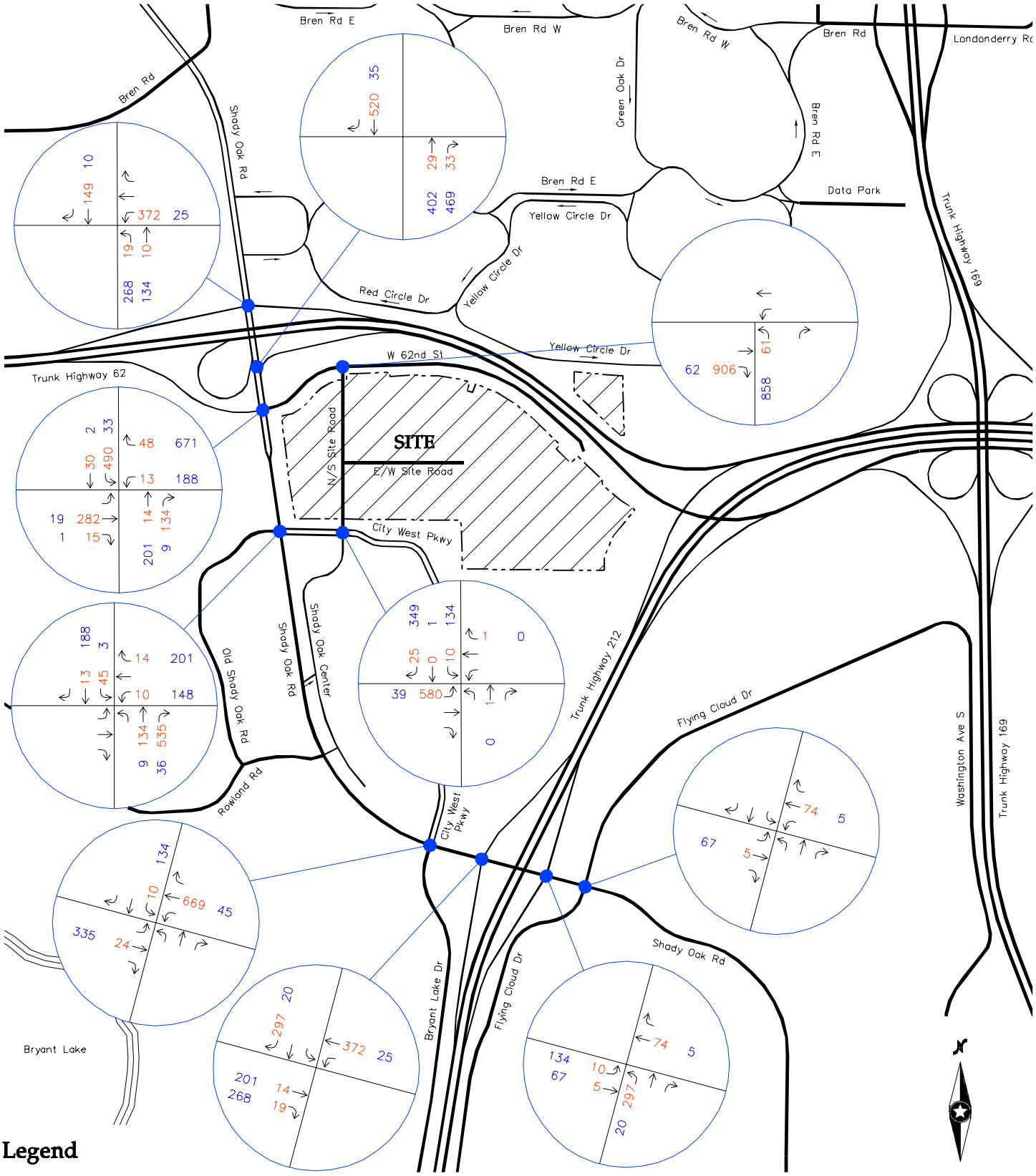

Legend

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Phase 2 Trip Assignment

Figure XX

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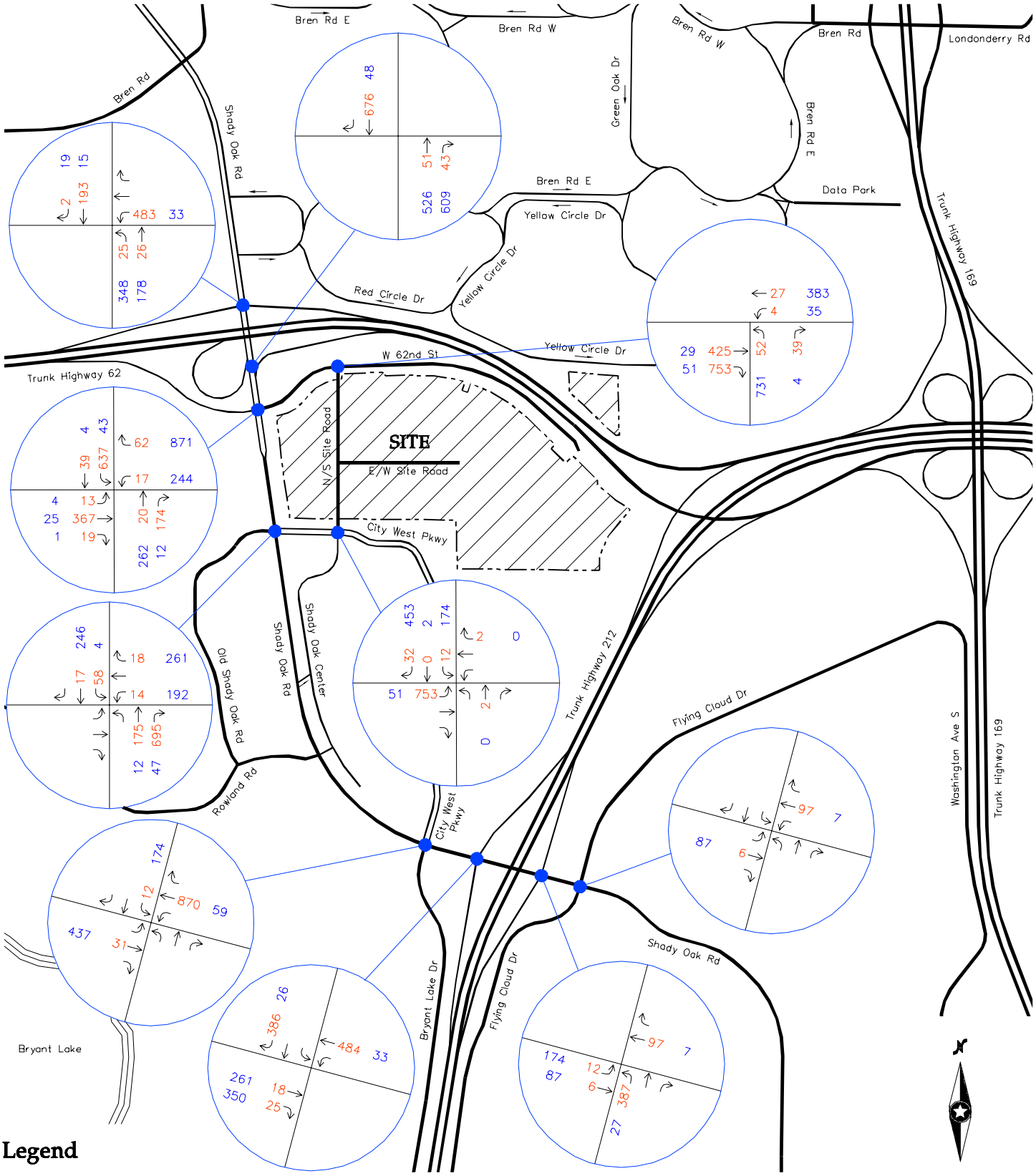

Legend

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Full Build Trip Assignment

Figure XX

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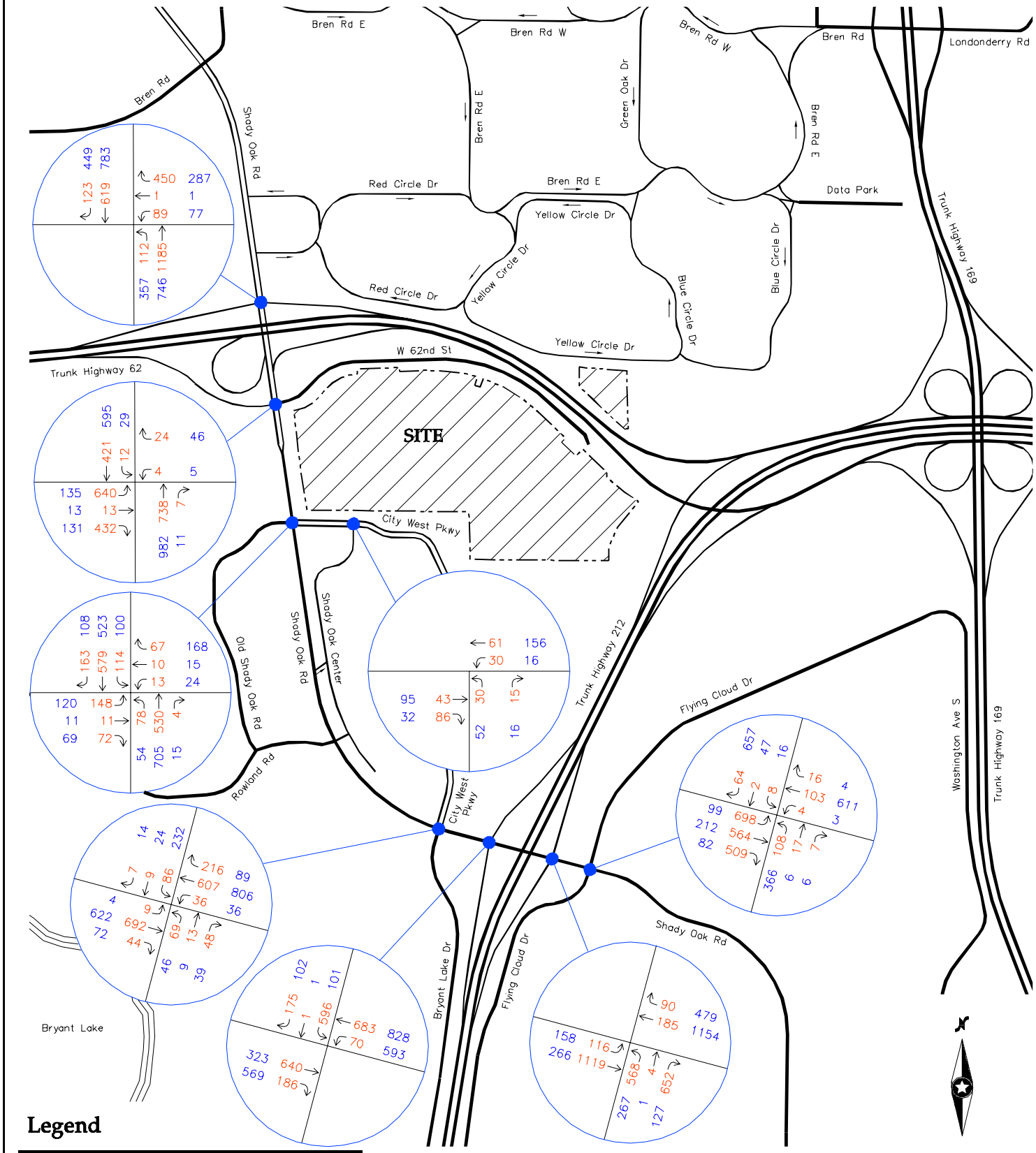

Legend

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2014 No-Build Peak Hour Volumes

Figure XX

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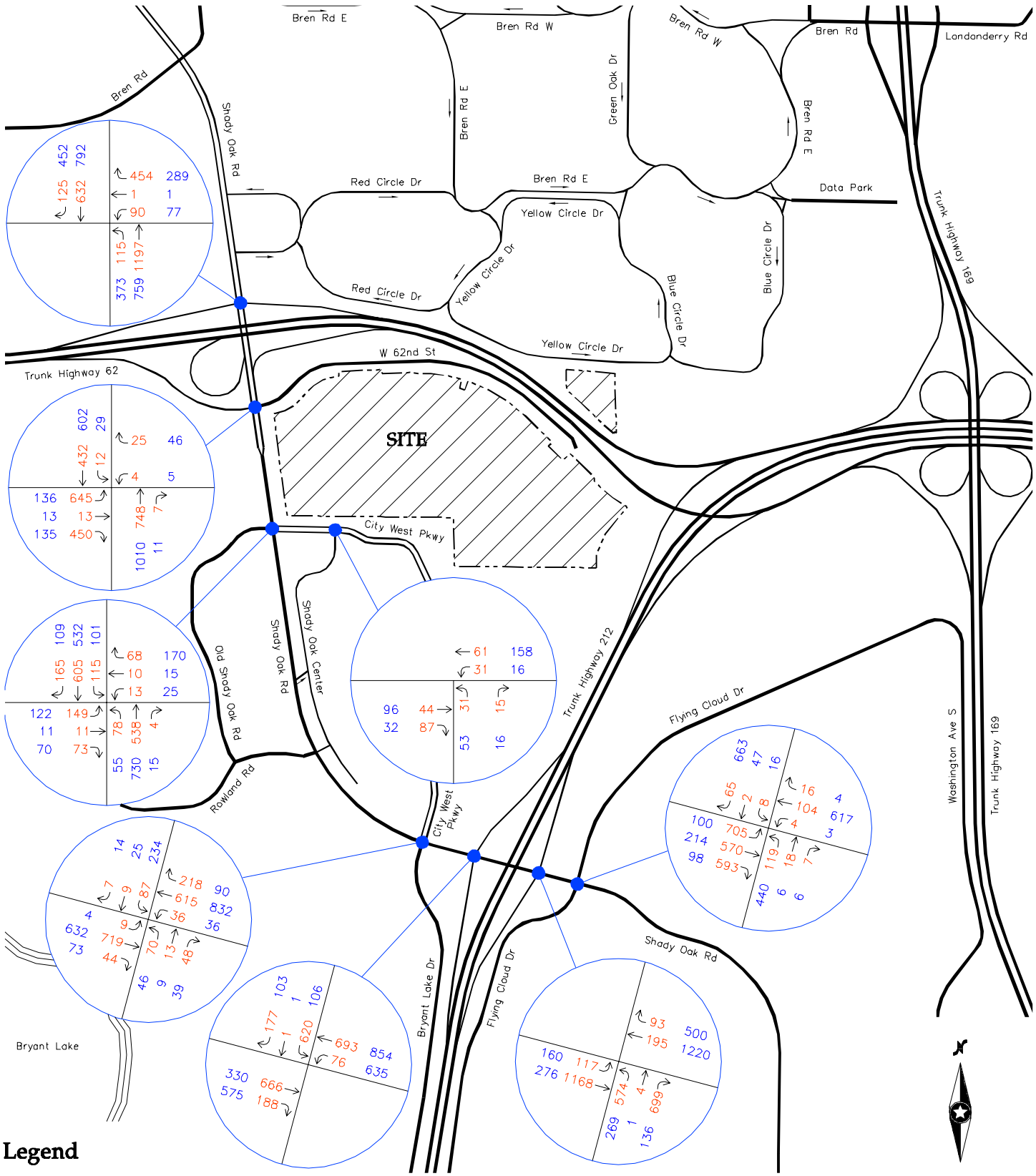

Date: 7/18/2011

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2016 No-Build Peak Hour Volumes

Figure XX

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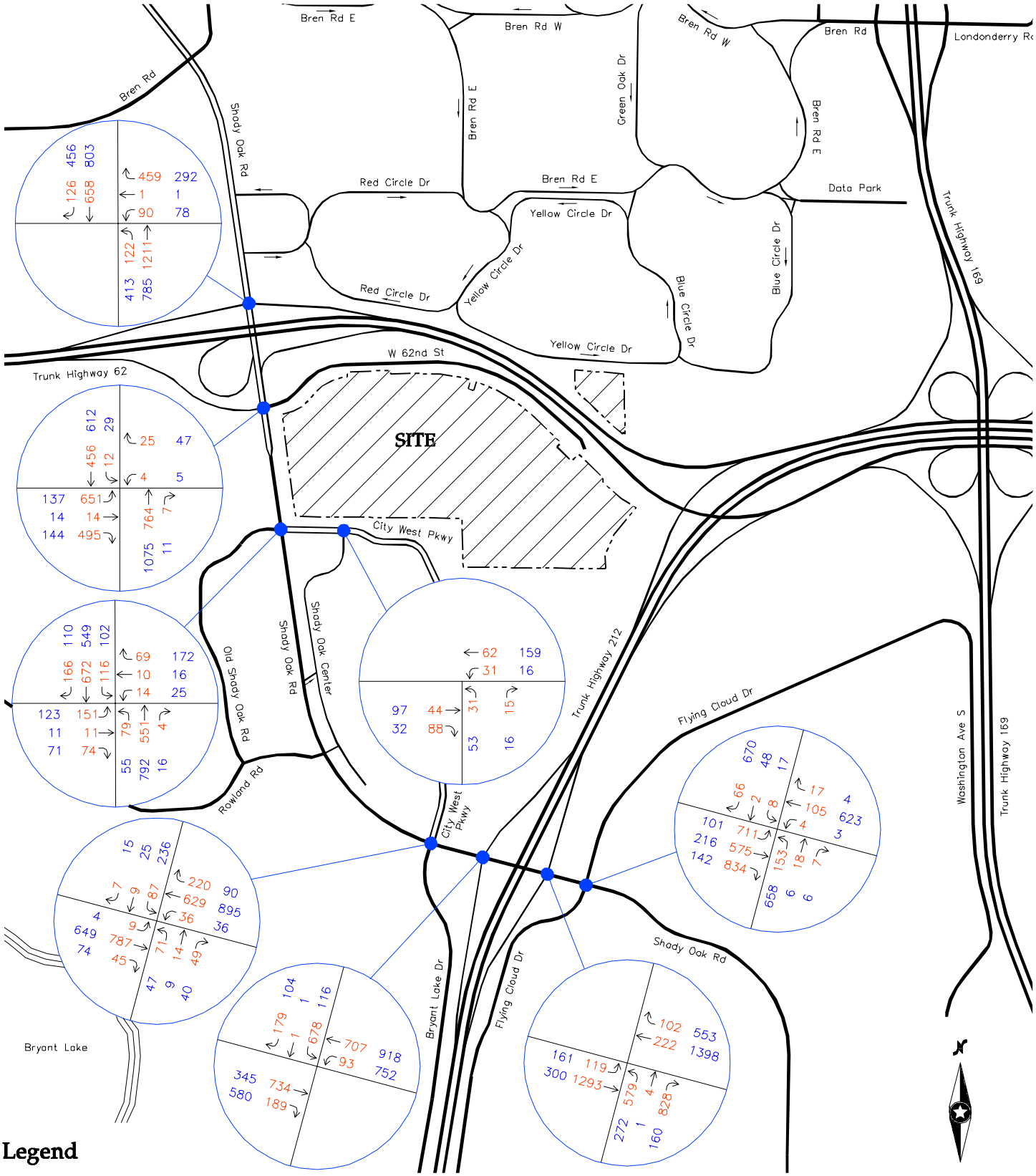

Legend

AM PEAK HOUR VOLUME XX

PM PEAK HOUR VOLUME XX

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2018 No-Build Peak Hour Volumes

Figure XX

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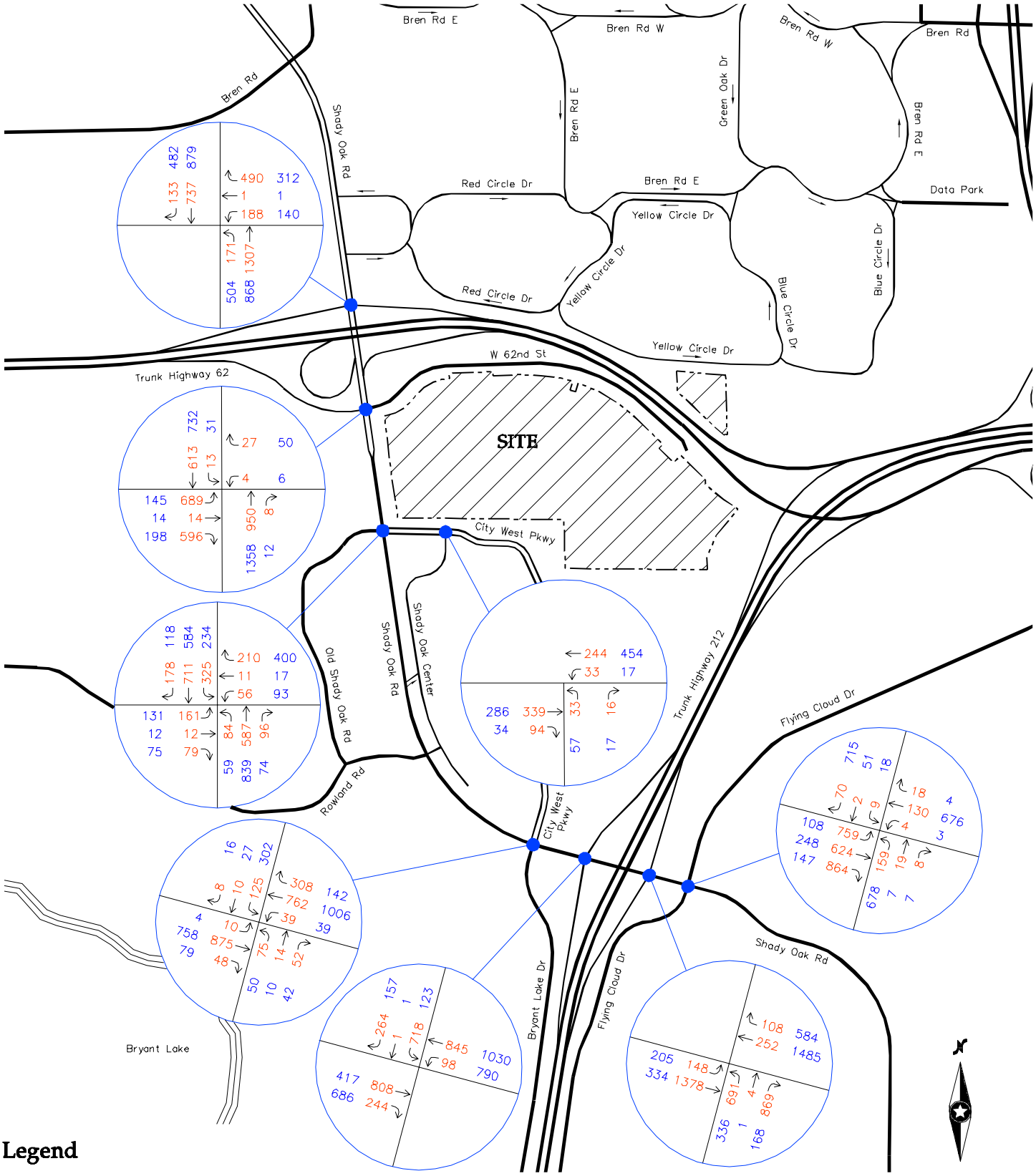

Legend

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2030 No-Build Peak Hour Volumes

Figure XX

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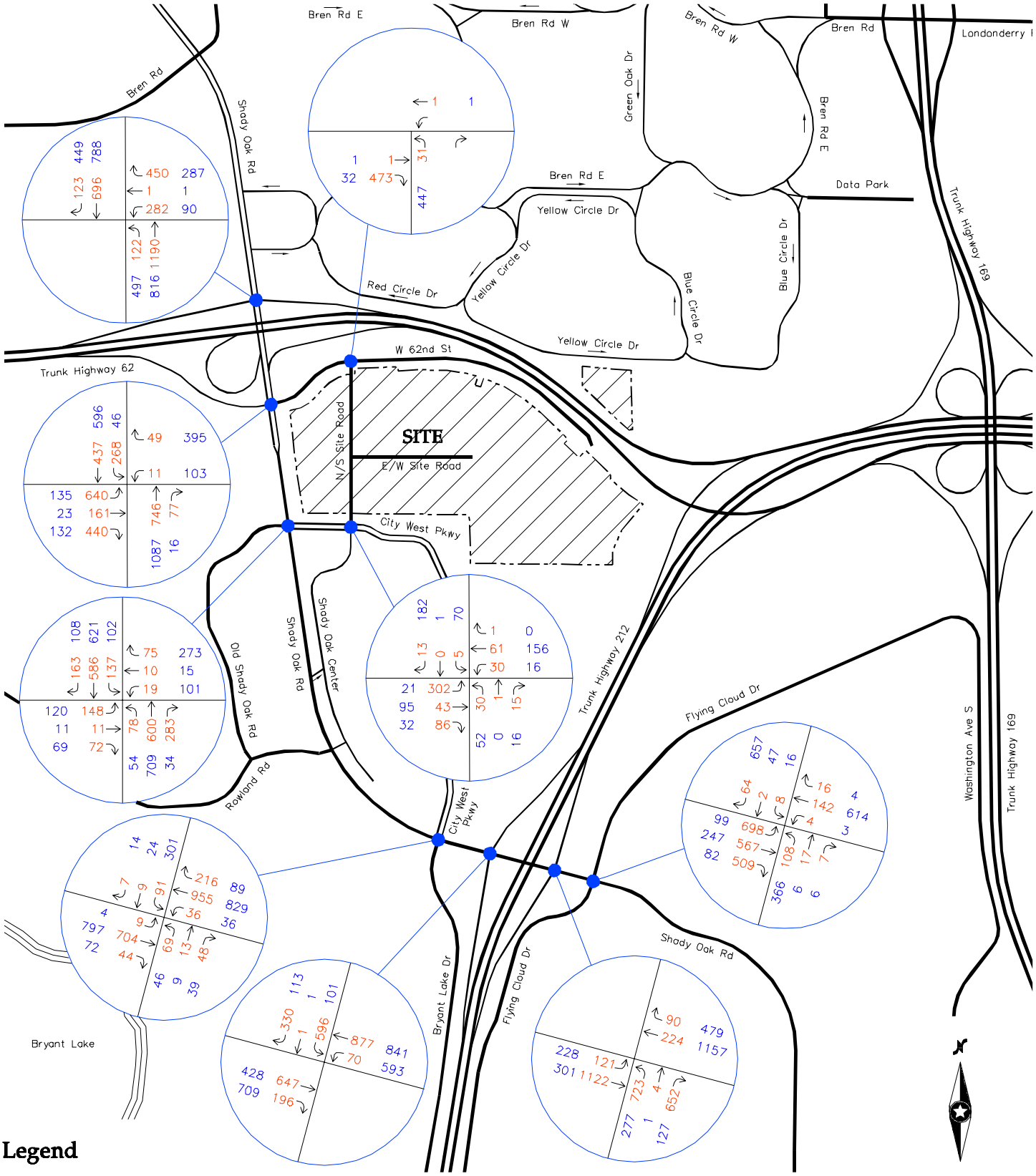

Legend

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PM PEAK HOUR VOLUME XX

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2014 Build Peak Hour Volumes

Figure XX

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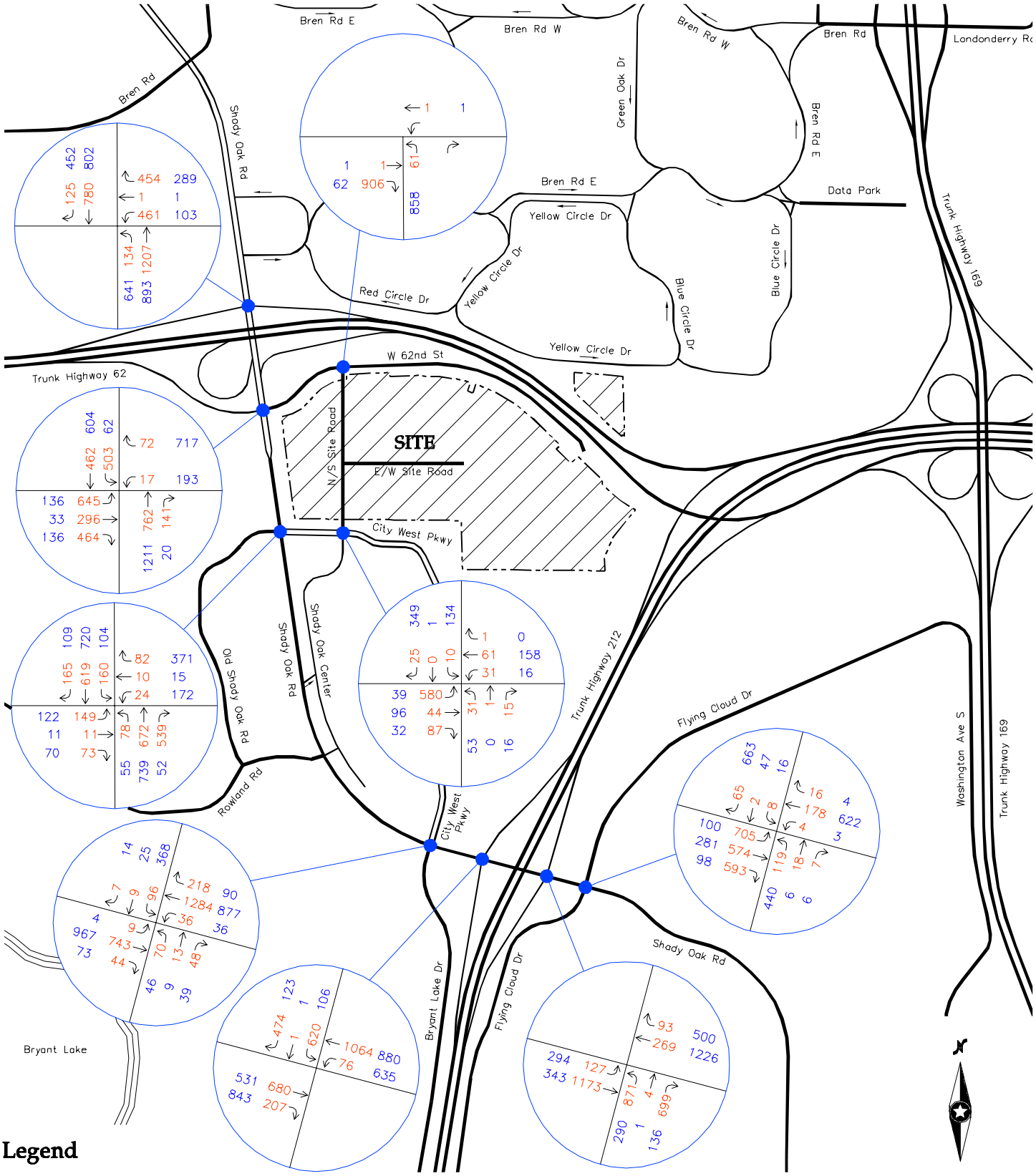

Legend

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PM PEAK HOUR VOLUME XX

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2016 Build Peak Hour Volumes

Figure XX

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UHG City West TIS Volumes.dwg

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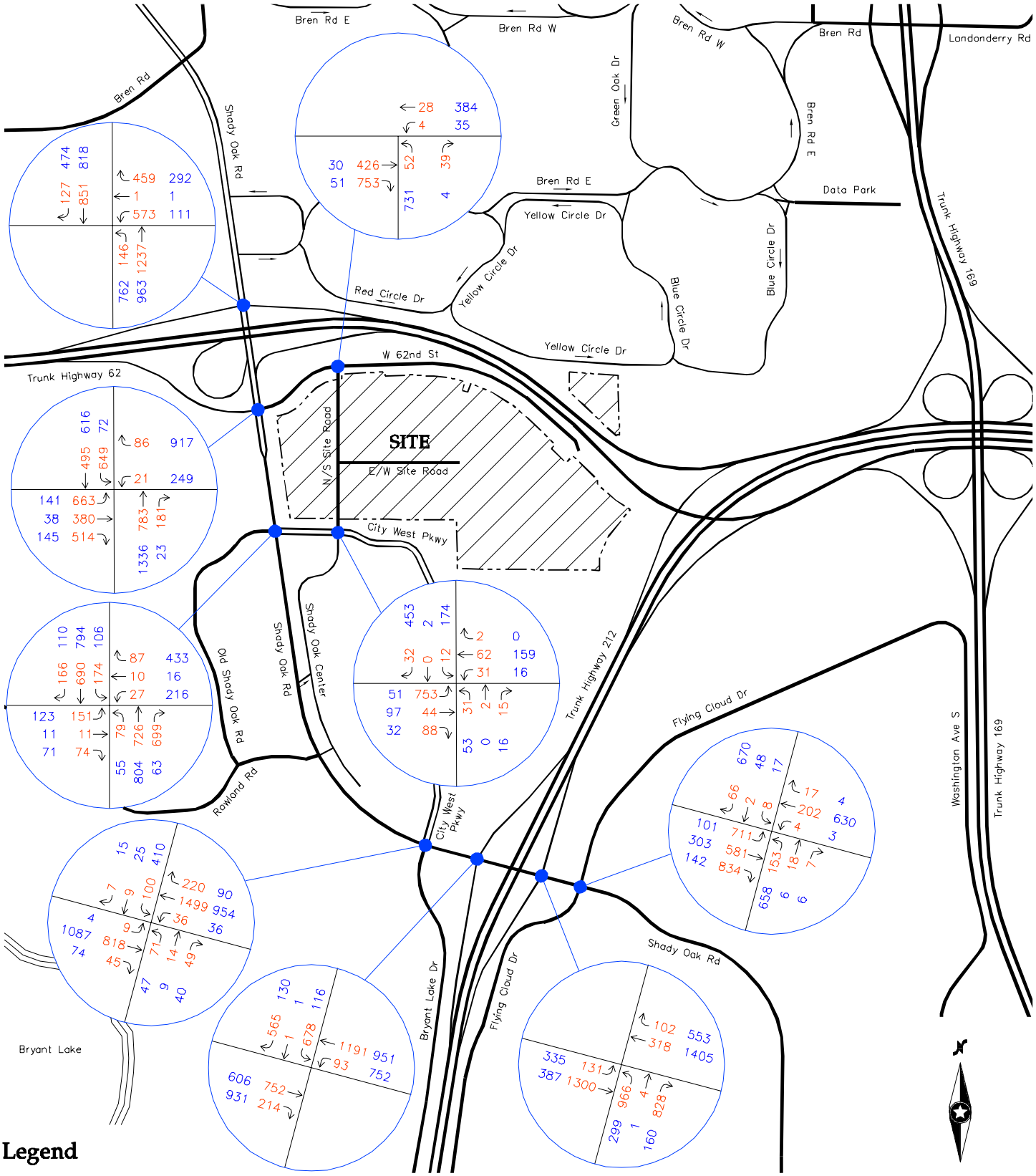

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2018 Build Peak Hour Volumes

Figure XX

UHG
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Eden Prairie, MN

UHG City West TIS Volumes.dwg

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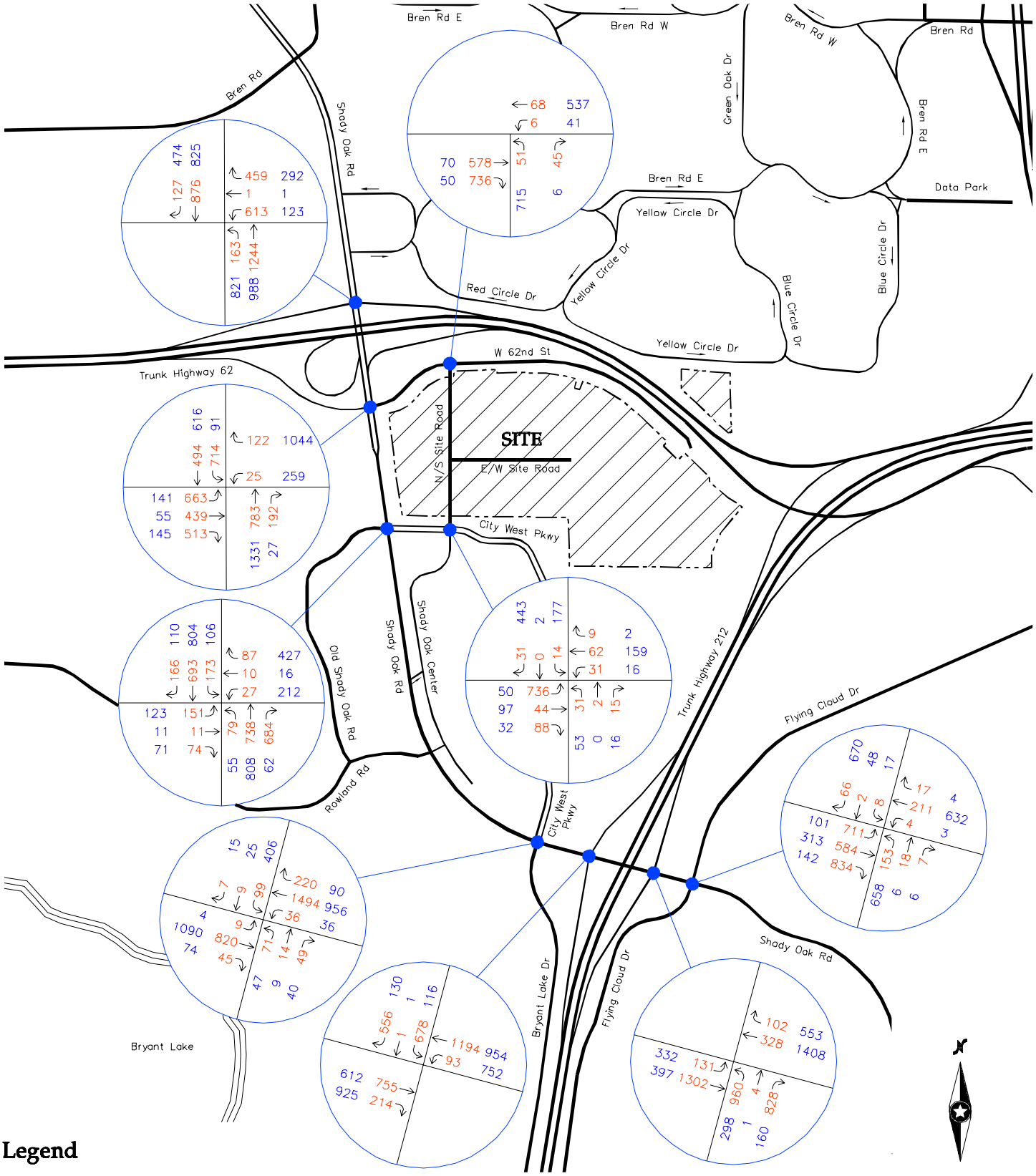

Legend

AM PEAK HOUR VOLUME XX

PM PEAK HOUR VOLUME XX

NOT TO SCALE

Date: 7/18/2011

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2018 Build with LRT Peak Hour Volumes

Figure 3-2

UHG
EP Campus

Eden Prairie, MN

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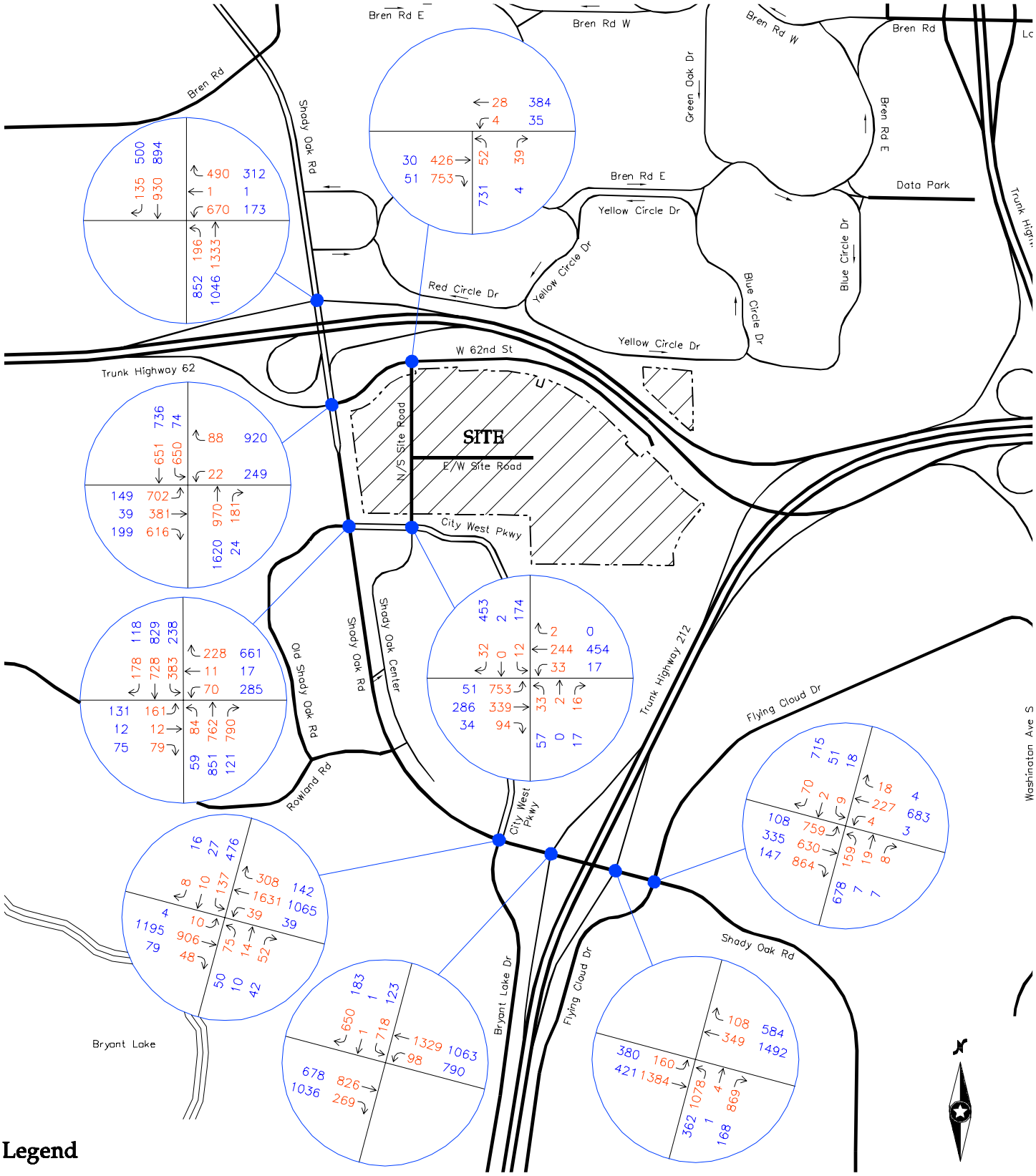

Legend

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2030 Build Peak Hour Volumes

Figure XX

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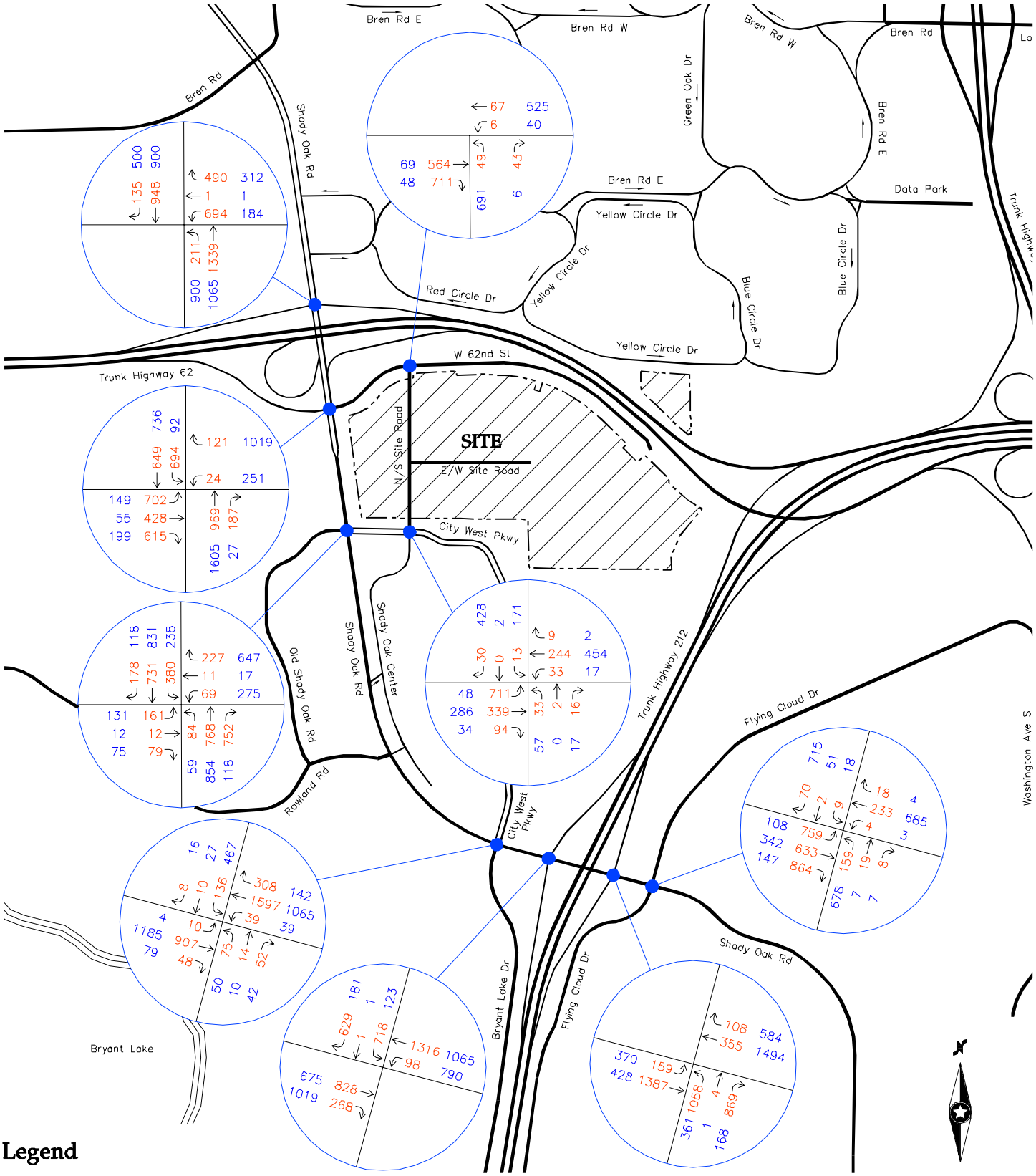

Legend

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2030 Build with LRT Peak Hour Volumes

Figure 3-3

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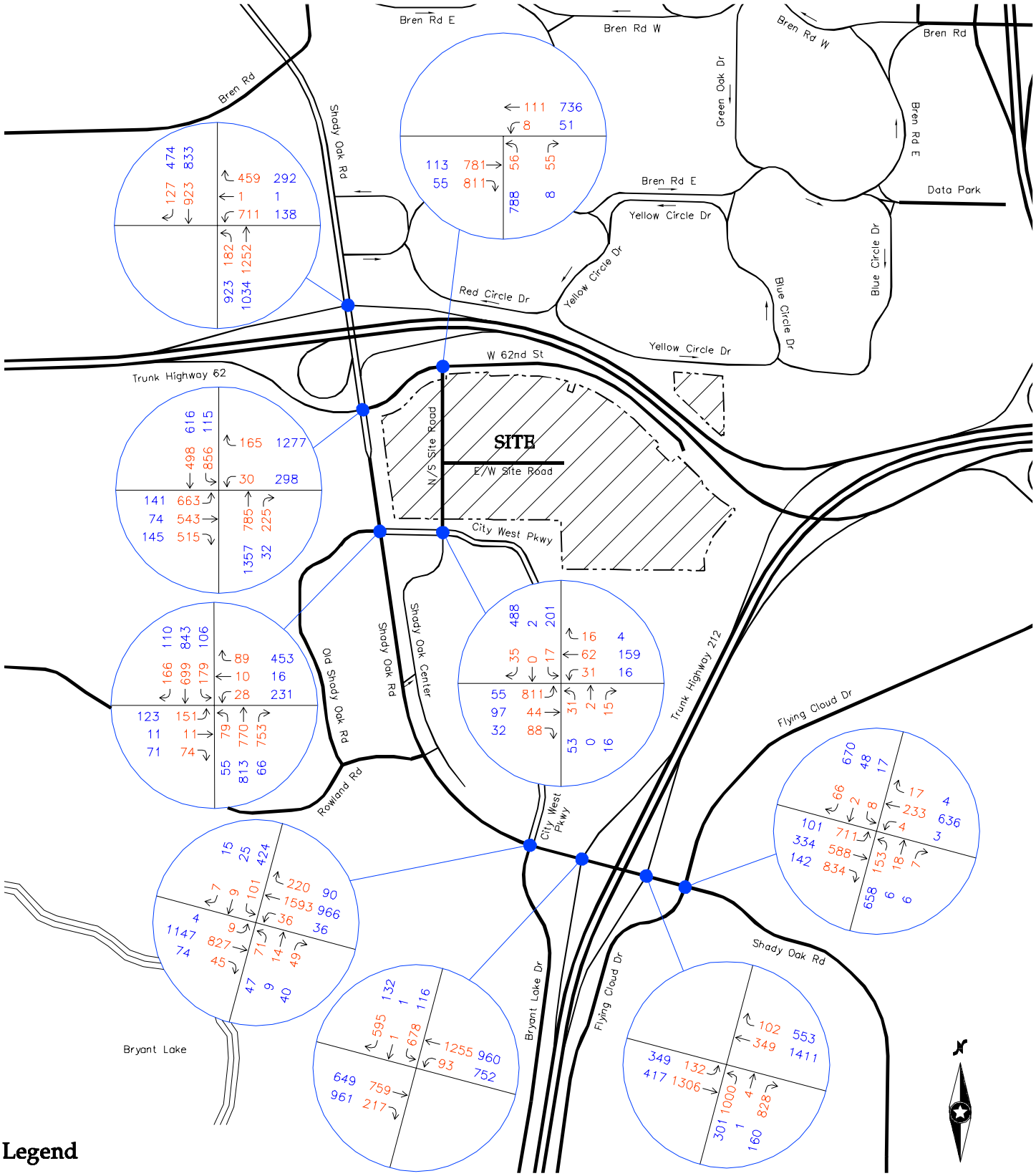

Legend

AM PEAK HOUR VOLUME XX

PM PEAK HOUR VOLUME XX

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2018 Build with LRT Worst Case Peak Hour Vol.

Figure XX

UHG
EP Campus

Eden Prairie, MN

UHG City West TIS Volumes.dwg

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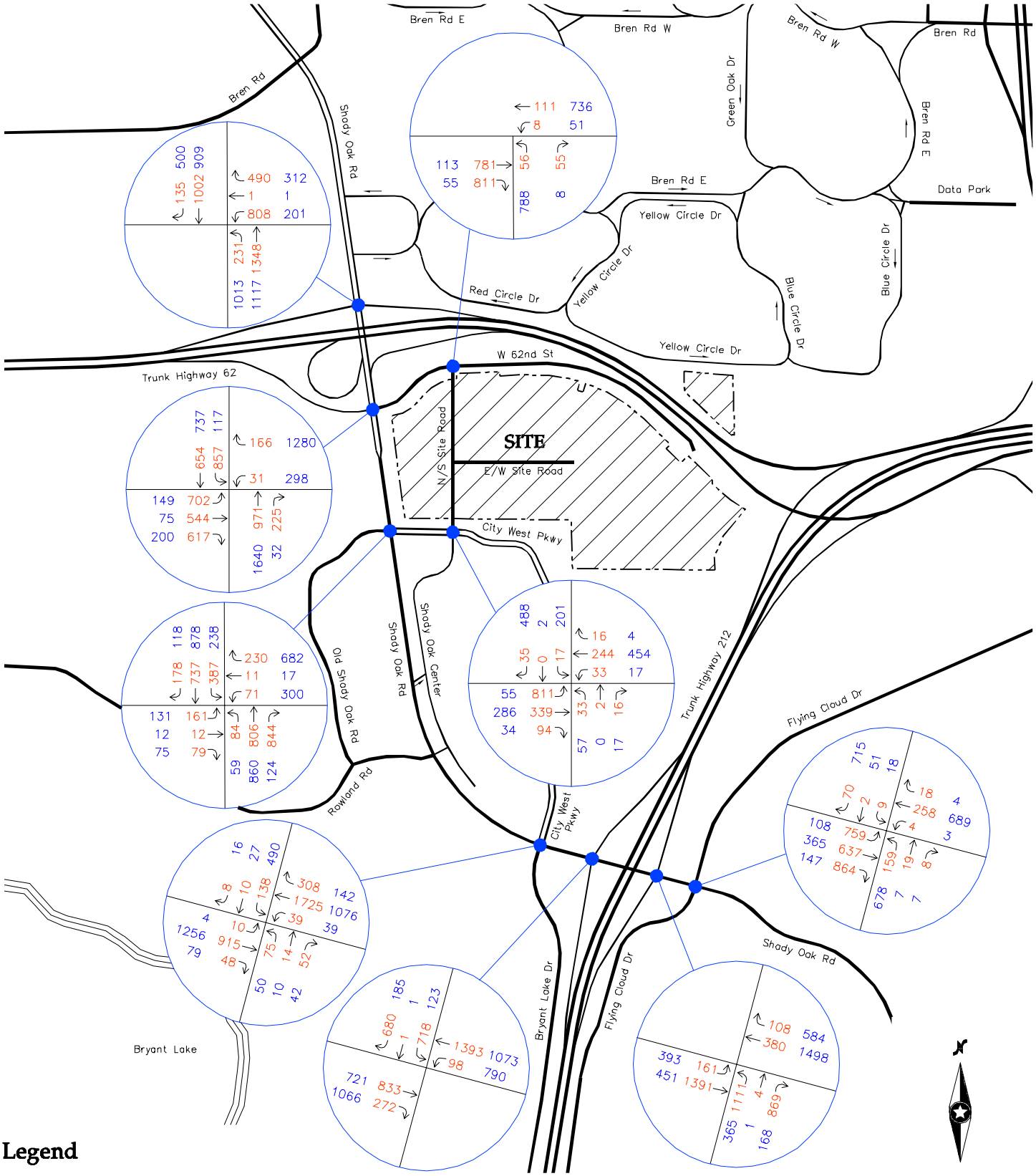

Legend

AM PEAK HOUR VOLUME XX

PM PEAK HOUR VOLUME XX

NOT TO SCALE

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2030 Build with LRT Worst Case Peak Hour Vol.

Figure 3-4

UHG
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UHG City West TIS Volumes.dwg

UHG City West Office AUAR
Detailed Recommended Mitigation Matrix

No.	Scenario Name	TH 62 North Ramps	TH 62 South Ramps	West 62nd St Dwy	City West (North)	City West Dwy	City West (South)	TH 212 West Ramps	TH 212 East Ramps	Flying Cloud
1.	2010 Existing	-	-	-	-	-	-	T1 (minor)	-	-
2.	2014 No-Build	-	-	-	-	-	T1 (full)	T1 (full) R1 (SBL) R2 (SB: L, LT, R)	T1 (full) T2 (minor) R1 (NBL) R2 (NB: L, LTR, R)	T1 (full) T2 (minor) R2 (SB: L,TR, R)
3.	2014 Build	T1 (full)	T1 (full) T2 (minor) R1 (WB +1 lane) R2 (WB: L, R)	T3 (EB/WB Free) R1 (EB T/R) R1 (WB T/L) R1 (NBL/R)	T1 (full) T2 (minor) R1 (NBR - 300')	R1 (SB LT) R1 (SBR) R3 (SBR)	T1 (full)	T1 (full) R1 (SBL) R2 (SB: L, LT, R)	T1 (full) T2 (minor) R1 (NBL) R2 (NB: L, LTR, R)	T1 (full) T2 (minor) R2 (SB: L,TR, R)
4.	2016 No-Build	-	-	-	-	-	T1 (full)	T1 (full) R1 (SBL) R2 (SB: L, LT, R)	T1 (full) T2 (minor) R1 (NBL) R2 (NB: L, LTR, R)	T1 (full) T2 (minor) R2 (SB: L,TR, R)
5.	2016 Build	T1 (full) T2 (minor)	T1 (full) T2 (full) R1 (EBR) R1 (WB +2 lanes) R1 (SBL - 400') R2 (EB: L, L, T, R) R2 (WB: L, R, R) R2 (SB: L, L, T, TR**) R5 (SBL 150' to 400')	T3 (NB Free) R1 (EB T/R) R1 (EBR) R1 (WBT/L) R1 (NBL) R1 (NBL/R) R3 (EBR)	T1 (full) T2 (full) R1 (NBL - 300') R1 (NBR - 300') R1 (SBL - 500')	R1 (SB LT) R1 (SBR) R3 (SBR)	T1 (full)	T1 (full) R1 (SBL) R2 (SB: L, LT, R)	T1 (full) T2 (minor) R1 (NBL) R2 (NB: L, LTR, R)	T1 (full) T2 (minor) R2 (SB: L,TR, R)
6.	2018 No-Build	-	-	n/a	T1 (minor)	-	T1 (full)	T1 (full) R1 (SBL) R2 (SB: L, LT, R)	T1 (full) T2 (minor) R1 (NBL) R1 (NBR) R2 (NB: L, LT, R, R)	T1 (full) T2 (minor) R2 (SB: L,TR, R)
7.	2018 Build	T1 (full) T2 (minor) R1 (NBL - 770') R2 (NB: L, L, T, TR*) R5 (NBL, 300' to 550') B1	T1 (full) T2 (full) R1 (EBR) R1 (WB +3 lanes) R1 (NBT - 400') R1 (NBR - 500') R1 (SBL - 770') R2 (EB: L, L, T, R) R2 (WB: L, L, R, R) (AM - WBL Perm only) R2 (SB: L, L, T, TR**) R5 (SBL 150' to 430')	T3 (NB Free) R1 (EB T/R) R1 (EBR) R1 (WBL - 100') R1 (WBT) R1 (NBL) R1 (NBL/R) R3 (EBR)	T1 (full) T2 (full) R1 (NBL - 300') R1 (NBR - 300') R1 (SBL - 500')	R1 (SB LT) R1 (SBR) R3 (SBR)	T1 (full) T2 (full) R1 (EBL - 175') R1 (WBL - 175')	T1 (full) R1 (SBL) R2 (EB: T, TR, R) R2 (SB: L, LT, R) R3 (EBR)	T1 (full) R1 (NBL) R1 (NBR) R2 (NB: L, LT, R, R) R5 (WBR, 175' to 200')	T1 (full) T2 (full) R2 (SB: L,TR, R) R4 (100' east) R5 (EBL 175' to 200') R5 (EBR 175' to 200')
8.	2018 Build + LRT	T1 (full) T2 (minor) R1 (NBL - 770') R2 (NB: L, L, T, TR*) R5 (NBL, 300' to 550') B1	T1 (full) T2 (full) R1 (EBR) R1 (WB +3 lanes) R1 (NBT - 400') R1 (NBR - 500') R1 (SBL - 770') R2 (EB: L, L, T, R) R2 (WB: L, L, R, R) (AM - WBL Perm only) R2 (SB: L, L, T, TR**) R5 (SBL 150' to 430')	T4 R1 (EB T/R) R1 (EBR) R1 (WBL - 100') R1 (WBT) R1 (NBL) R1 (NBL/R) R3 (EBR)	T1 (full) T2 (full) R1 (NBL - 300') R1 (NBR - 300') R1 (SBL - 500')	R1 (SB LT) R1 (SBR) R3 (SBR)	T1 (full) T2 (full) R1 (EBL - 175') R1 (WBL - 175')	T1 (full) R1 (SBL) R2 (EB: T, TR, R) R2 (SB: L, LT, R) R3 (EBR)	T1 (full) R1 (NBL) R1 (NBR) R2 (NB: L, LT, R, R) R5 (WBR, 175' to 200')	T1 (full) T2 (full) R2 (SB: L,TR, R) R4 (100' east) R5 (EBL 175' to 200') R5 (EBR 175' to 200')
9.	2030 No-Build	-	-	n/a	T1 (minor)	-	T1 (full)	T1 (full) R1 (SBL) R2 (EB: T, TR, R) R2 (SB: L, LT, R) R3 (EBR)	T1 (full) T2 (minor) R1 (NBL) R1 (NBR) R2 (NB: L, LT, R, R) R5 (WBR, 175' to 200')	T1 (full) T2 (full) R2 (SB: L,TR, R) R4 (100' east) R5 (EBL 175' to 200') R5 (EBR 175' to 200')
10.	2030 Build	T1 (full) T2 (minor) R1 (NBL - 770') R2 (NB: L, L, T, TR*) R5 (NBL, 300' to 550') B1	T1 (full) T2 (full) R1 (EBR) R1 (WB +3 lanes) R1 (NBT - 400') R1 (NBR - 500') R1 (SBL - 770') R2 (EB: L, L, T, R) R2 (WB: L, L, R, R) (AM - WBL Perm only) R2 (SB: L, L, T, TR**) R5 (SBL 150' to 430')	T3 (NB Free) R1 (EB T/R) R1 (EBR) R1 (WBL - 100') R1 (WBT) R1 (NBL) R1 (NBL/R) R3 (EBR)	T1 (full) T2 (full) R1 (NBL - 300') R1 (NBR - 300') R1 (SBL - 500')	R1 (SB LT) R1 (SBR) R3 (SBR)	T1 (full) T2 (full) R1 (EBL - 175') R1 (WBL - 175') R1 (SBL - 300')	T1 (full) T2 (full) R1 (SBL) R1 (EBR) R2 (EB: T, T, TR, R) R2 (SB: L, LT, R) R3 (EBR - 125') B2	T1 (full) T2 (full) R1 (WBT) R1 (NBL) R1 (NBR) R2 (NB: L, LT, R, R) R4 (50' west) R5 (WBR, 175' to 250') B2	T1 (full) T2 (full) R2 (SB: L,TR, R) R4 (100' east) R5 (EBL 175' to 250') R5 (EBR 175' to 250')
11.	2030 Build + LRT	T1 (full) T2 (minor) R1 (NBL - 770') R2 (NB: L, L, T, TR*) R5 (NBL, 300' to 550') B1	T1 (full) T2 (full) R1 (EBR) R1 (WB +3 lanes) R1 (NBT - 400') R1 (NBR - 500') R1 (SBL - 770') R2 (EB: L, L, T, R) R2 (WB: L, L, R, R) (AM - WBL Perm only) R2 (SB: L, L, T, TR**) R5 (SBL 150' to 430')	T4 R1 (EB T/R) R1 (EBR) R1 (WBL - 100') R1 (WBT) R1 (NBL) R1 (NBL/R) R3 (EBR)	T1 (full) T2 (full) R1 (NBL - 300') R1 (NBR - 300') R1 (SBL - 500')	R1 (SB LT) R1 (SBR) R3 (SBR)	T1 (full) T2 (full) R1 (EBL - 175') R1 (WBL - 175') R1 (SBL - 300')	T1 (full) T2 (full) R1 (SBL) R1 (EBR) R2 (EB: T, T, TR, R) R2 (SB: L, LT, R) R3 (EBR - 125') B2	T1 (full) T2 (full) R1 (WBT) R1 (NBL) R1 (NBR) R2 (NB: L, LT, R, R) R4 (50' west) R5 (WBR, 175' to 250') B2	T1 (full) T2 (full) R2 (SB: L,TR, R) R4 (100' east) R5 (EBL 175' to 250') R5 (EBR 175' to 250')
12.	2018 Build + LRT Worst Case	T1 (full) T2 (minor) R1 (NBL - 770') R2 (NB: L, L, T, TR*) R5 (NBL, 300' to 550') B1	T1 (full) T2 (full) R1 (EBR) R1 (WB +3 lanes) R1 (NBT - 400') R1 (NBR - 500') R1 (SBL - 770') R2 (EB: L, LT, T, R) (AM) R2 (EB: L, L, T, R) (PM) R2 (WB: L, L, R, R) (AM - WBL Perm only) R2 (SB: L, L, T, TR**) R5 (SBL 150' to 430')	T4 R1 (EB T/R) R1 (EBR) R1 (WBL - 100') R1 (WBT) R1 (NBL) R1 (NBL/R) R3 (EBR)	T1 (full) T2 (full) R1 (NBL - 300') R1 (NBR - 300') R1 (SBL - 500')	R1 (SB LT) R1 (SBR) R3 (SBR)	T1 (full) T2 (full) R1 (EBL - 175') R1 (WBL - 175')	T1 (full) R1 (EBR) R1 (SBL) R2 (EB: T, TR, R) R2 (SB: L, LT, R) R3 (EBR) B2	T1 (full) R1 (WBT) R1 (NBL) R1 (NBR) R2 (NB: L, LT, R, R) R5 (WBR, 175' to 200') B2	T1 (full) T2 (full) R2 (SB: L,TR, R) R4 (100' east) R5 (EBL 175' to 200') R5 (EBR 175' to 200')
13.	2030 Build + LRT Worst Case	T1 (full) T2 (minor) R1 (NBL - 770') R2 (NB: L, L, T, TR*) R5 (NBL, 300' to 550') B1	T1 (full) T2 (full) R1 (EBR) R1 (WB +3 lanes) R1 (NBT - 400') R1 (NBR - 500') R1 (SBL - 770') R2 (EB: L, LT, T, R) (AM) R2 (EB: L, L, T, R) (PM) R2 (WB: L, L, R, R) (AM - WBL Perm only) R2 (SB: L, L, T, TR**) R5 (SBL 150' to 430')	T4 R1 (EB T/R) R1 (EBR) R1 (WBL/T - 100') R1 (WBT) R1 (NBL) R1 (NBL/R) R3 (EBR)	T1 (full) T2 (full) R1 (NBL - 300') R1 (NBR - 300') R1 (SBL - 500')	R1 (SB LT) R1 (SBR) R3 (SBR)	T1 (full) T2 (full) R1 (EBL - 175') R1 (WBL - 175') R1 (WBR - 175') R1 (SBL - 300')	T1 (full) R1 (SBL) T2 (full) R1 (EBT - 100') R1 (EBR) R1 (WBL) R2 (EB: T, T, T, TR, R) R2 (SB: L, LT, R) R3 (EBR - 125') B3	T1 (full) R1 (EBL) R1 (WBT x2) R1 (NBL) R1 (NBR) R2 (NB: L, LT, R, R) B3	T1 (full) T2 (full) R1 (WBT) R2 (SB: L, TR, R)

Key:

Traffic Signals / Intersection Control

T1 Signal retiming (minor - optimize splits / full - optimize cycle length, splits, offsets)
T2 Traffic signal reconstruction (minor - move or modify 1 or 2 poles and heads / full - move or modify 3 or more poles and heads)
T3 New intersection with side street stop control
T4 Add traffic signal control (assumes warrants are met)

Roadways

R1 Add lane (movement [storage])
R2 Change lane use designation (approach: new designation)
R3 Add turn lane channelization (movement)
R4 Move/relocate intersection (description)
R5 Extend turn lane storage bay (movement, size [old to new])

Bridges

B1 Widen NB Shady Oak Road to east underneath TH 62 bridge by adding retaining wall on east embankment. Widening of road extends north and west of TH 62 WB North Ramp intersection.
B2 Widen TH 212 bridge to 6 full lanes (L, T, T in each direction))
B3 Widen TH 212 bridge to 8 full lanes (L, L, T, T in each direction)). Includes widening of on ramps to two lanes, narrowing to one lane.

Notes:

* Shared NB right turn lane is for the slip ramp to TH 62 EB south of the Nouth Ramp intersection. Includes short storage + taper.
** Shared SB right turn lane is for the slip ramp to TH 62 EB north of the South Ramp intersection. Includes short storage + taper.

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				142	0	58		700			760		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				C	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				97				100			115		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								700	814	193	709		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.									*301	200			
	SimTraffic 95th Queue									6	80			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				87	1	441	108	1,073			599	110	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				B	B	C	C	A			C	B	B
	SimTraffic LOS				C	D	B	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301		
	SimTraffic 95th Queue				51	51	157	125	227			113		
	Queue Block Time (%)													
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,181	103		417	269	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.									5				
	SimTraffic 95th Queue													
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	547	13	410	4		24		713	7	12	405		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	C	C	A	B		A		A		C	A		B
	SimTraffic LOS	C	D	B	B		A		B		C	A		B
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	234	234	101	12		44		102		23	60		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	145	11	71	13	10	66	76	509	4	112	547	160	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		C	C	A		C			C		C
	SimTraffic LOS	D	C		C	C	A		C			B		C
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	125	145		30	23	40		235			174		
	Queue Block Time (%)	13	1											
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		42	85	30	59		30		15				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.		*304		*756			*542		*542				
	SimTraffic 95th Queue		5		24			45		37				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	54	32	4	4	14	581	64	4	623	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	B		B	B			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	28		49	45			21			23			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 115)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	9	657	43	35	584	212	68	13	47	84	9	7	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	A			A			E		B	D	D	B	A
	SimTraffic LOS	A			A			D		B	D	D	A	A
	Storage / *Link Dist.	*943			*324			*798		150	*726	*726	220	
	SimTraffic 95th Queue	149			73			108		50	106	30	22	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 115)													
	Lanes		↑↑	→	←	↑↑					<↑		→	
	Volume		607	181	63	659					567	1	172	
	Phasing			Perm	pm+pt								Perm	
	Synchro LOS		B	A	C	A					E		A	C
	SimTraffic LOS		C	A	C	A					F		E	D
	Storage / *Link Dist.		*324	*324	175	*416					*1,183		500	
	SimTraffic 95th Queue		296	45	82	90					1,266		684	
	Queue Block Time (%)		1								29			
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑			↑↑	→	←	↑>					
	Volume	114	1,060			173	86	549	4	599				
	Phasing	pm+pt					Perm	Perm						
	Synchro LOS	C	B			C	B	D	D					C
	SimTraffic LOS	C	C			C	A	E	E					D
	Storage / *Link Dist.	175	*416			*236	175	500	*1,137					
	SimTraffic 95th Queue	267	454			99	62	444	554					
	Queue Block Time (%)		23						2					
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑	→	
	Volume	684	553	422	4	101	16	95	17	7	8	2	63	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	A	A	A	B	D		D	C		D	D	B	B
	SimTraffic LOS	A	A	A	C	D		E	E		E	E	A	A
	Storage / *Link Dist.	175	*236	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	193	117	56	18	103		78	39		25	14	46	
	Queue Block Time (%)	1												

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				142	0	58		700			760		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				C	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				93				82			109		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								700	814	193	709		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.								*301	*301	200			
	SimTraffic 95th Queue								4	9	88			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				87	1	441	108	1,073			599	110	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				B	B	C	C	A			C	B	B
	SimTraffic LOS				C	B	B	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301		
	SimTraffic 95th Queue				57	57	157	107	210			110		
	Queue Block Time (%)													
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,181	103		417	269	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.									5				
	SimTraffic 95th Queue													
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	547	13	410	4		24		713	7	12	405		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	C	C	A	B		A		A		C	A		B
	SimTraffic LOS	C	D	B	B		A		B		C	A		B
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	209	209	100	16		42		115		26	62		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	145	11	71	13	10	66	76	509	4	112	547	160	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		C	C	A		C			C		C
	SimTraffic LOS	D	C		C	C	A		C			C		C
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	129	156		29	18	44		259			183		
	Queue Block Time (%)	15	1											
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		42	85	30	59		30		15				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.		*304		*756			*542		*542				
	SimTraffic 95th Queue		6		25			45		35				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	54	32	4	4	14	581	64	4	623	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	B		B	B			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	29		56	45			33			19			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 115)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	9	657	43	35	584	212	68	13	47	84	9	7	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	A			A			E		B	D	D	B	B
	SimTraffic LOS	A			A			E		B	D	D	A	B
	Storage / *Link Dist.	*943			*324			*798		150	*726	*726	220	
	SimTraffic 95th Queue	179			99			112		49	126	28	22	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 115)													
	Lanes		↑↑	→	←	↑↑					<↑		→	
	Volume		607	181	63	659					567	1	172	
	Phasing			Perm	pm+pt								Perm	
	Synchro LOS		C	A	C	A					D		A	C
	SimTraffic LOS		C	A	C	B					A		B	C
	Storage / *Link Dist.		*324	*324	175	*416					*1,183		500	
	SimTraffic 95th Queue		352	51	91	122					853		396	
	Queue Block Time (%)		3								11			
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑			↑↑	→	←	↑>					
	Volume	114	1,060			173	86	549	4	599				
	Phasing	pm+pt					Perm	Perm						
	Synchro LOS	C	B			C	B	D	D					C
	SimTraffic LOS	C	C			C	A	E	E					D
	Storage / *Link Dist.	175	*416			*236	175	500	*1,137					
	SimTraffic 95th Queue	260	496			103	59	424	544					
	Queue Block Time (%)		22						1					
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑	→	
	Volume	684	553	422	4	101	16	95	17	7	8	2	63	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	A	A	A	B	D		D	C		D	D	B	B
	SimTraffic LOS	A	A	A	C	D		D	D		E	D	A	A
	Storage / *Link Dist.	175	*236	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	226	161	56	18	96		81	44		22	10	44	
	Queue Block Time (%)	3												

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				323	0	82		862			824		
	Phasing													
	Synchro LOS				C	A			A			A		B
	SimTraffic LOS				C	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				162				124			176		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								862	128	21	1,126		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.									*301	200			
	SimTraffic 95th Queue									4	34			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				75	1	281	338	709			759	367	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				C	C	A	C	A			B	A	B
	SimTraffic LOS				C	E	A	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301	*301	
	SimTraffic 95th Queue				57	57	103	266	153			140	55	
	Queue Block Time (%)													
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,047	58		603	231	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.									5				
	SimTraffic 95th Queue													
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	117	13	126	5		45		943	11	28	575		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	D	D	B	C		B		A		D	A		A
	SimTraffic LOS	D	C	A	D		B		A		D	A		A
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	82	82	58	24		54		43		50	41		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	118	11	68	24	15	165	53	671	15	98	502	106	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		C	C	A		C			B		C
	SimTraffic LOS	D	C		C	C	A		C			B		C
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	114	100		39	30	71		304			189		
	Queue Block Time (%)	7												
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		93	31	15	153		51		15				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.				*756			*542		*542				
	SimTraffic 95th Queue				19			52		33				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	44	44	4	4	54	731	44	4	586	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	D		B	C			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	26		53	52			90			21			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 115)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	4	599	71	35	770	87	45	9	38	227	24	14	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			A			E		B	D	C	B	B
	SimTraffic LOS	B			A			E		B	D	C	B	B
	Storage / *Link Dist.	*943			*324			*798		150	*726	*726	220	
	SimTraffic 95th Queue	244			168			89		46	257	45	33	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 115)													
	Lanes		↑↑	→	←	↑↑					<↑		→	
	Volume		313	551	545	792					96	1	100	
	Phasing			Perm	pm+pt								Perm	
	Synchro LOS		A	A	A	A					E		B	A
	SimTraffic LOS		A	A	D	A					B		B	B
	Storage / *Link Dist.		*324	*324	175	*416					*1,183		500	
	SimTraffic 95th Queue		140	152	271	581					139		66	
	Queue Block Time (%)				26	8								
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑			↑↑	→	←	↑>					
	Volume	155	254			1,077	454	260	1	117				
	Phasing	pm+pt					Perm	Perm						
	Synchro LOS	B	B			B	A	E	D					B
	SimTraffic LOS	D	A			B	A	E	C					C
	Storage / *Link Dist.	175	*416			*236	175	500	*1,137					
	SimTraffic 95th Queue	189	113			278	127	363	138					
	Queue Block Time (%)	3				6								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑	→	
	Volume	97	208	66	3	599	4	288	6	6	16	46	644	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	B	B	A	C	D		E	B		D	C	D	D
	SimTraffic LOS	C	A	A	D	D		E	C		E	D	D	D
	Storage / *Link Dist.	175	*236	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	105	96	43	13	291		159	18		48	467	482	
	Queue Block Time (%)					34						1	11	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				157	0	65		715			823		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				C	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				105				91			120		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								715	920	238	742		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.								*301	*301	200			
	SimTraffic 95th Queue								3	10	98			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				89	1	450	112	1,185			619	123	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				B	B	C	C	A			C	B	B
	SimTraffic LOS				C	D	B	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301		
	SimTraffic 95th Queue				54	54	158	117	281			116		
	Queue Block Time (%)													
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,297	105		433	274	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*226	5				
	SimTraffic 95th Queue								42	26				
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	640	13	432	4		24		738	7	12	421		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	C	C	B	B		A		A		C	A		B
	SimTraffic LOS	D	D	C	B		A		B		C	A		B
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	250	250	108	9		41		123		36	61		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	148	11	72	13	10	67	78	530	4	114	579	163	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		C	C	A		C			C		C
	SimTraffic LOS	D	C		C	C	A		C			C		C
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	127	137		27	24	45		268			194		
	Queue Block Time (%)	12												
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		43	86	30	61		30		15				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.				*756			*542		*542				
	SimTraffic 95th Queue				23			48		38				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	55	33	4	4	14	604	65	4	657	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	B		B	C			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	27		51	45			32			19			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 115)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	9	692	44	36	607	216	69	13	48	86	9	7	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	A			A			E		B	D	D	B	B
	SimTraffic LOS	A			A			D		B	D	D	B	B
	Storage / *Link Dist.	*943			*318			*798		150	*726	*726	220	
	SimTraffic 95th Queue	173			142			107		48	120	31	25	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 115)													
	Lanes		↑↑	→	←	↑↑					←	<↑	→	
	Volume		640	186	70	683					596	1	175	
	Phasing			Perm	pm+pt						Perm		Perm	
	Synchro LOS		C	A	B	A					D	D	B	C
	SimTraffic LOS		C	A	B	A					D	C	A	C
	Storage / *Link Dist.		*318	*318	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		322	47	76	117					310	229	102	
	Queue Block Time (%)		1											
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑			↑↑	→	←	<↑>	→				
	Volume	116	1,119			185	90	568	4	652				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	B	B			C	B	D	D	D				C
	SimTraffic LOS	C	B			C	A	C	C	C				C
	Storage / *Link Dist.	175	*410			*234	175	500	*1,137	500				
	SimTraffic 95th Queue	239	441			108	60	421	421	421				
	Queue Block Time (%)		13											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	698	564	509	4	103	16	108	17	7	8	2	64	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	B	A	A	B	D		D	C		D	C	B	B
	SimTraffic LOS	A	A	A	C	D		D	D		D	E	A	B
	Storage / *Link Dist.	175	*234	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	238	225	96	17	96		89	34		27	39	42	
	Queue Block Time (%)	3	1											

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				411	0	121		885			849		
	Phasing													
	Synchro LOS				C	A			A			A		B
	SimTraffic LOS				C	B			A			A		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				200				135			205		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								885	147	29	1,231		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.									*301	200			
	SimTraffic 95th Queue									4	43			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				77	1	287	357	746			783	449	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				C	C	A	C	A			B	A	B
	SimTraffic LOS				C	C	A	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301	*301	
	SimTraffic 95th Queue				57	57	108	286	191			139	98	
	Queue Block Time (%)							1						
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,103	59		624	236	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.									5				
	SimTraffic 95th Queue													
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	135	13	131	5		46		982	11	29	595		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	D	D	B	C		B		A		D	A		A
	SimTraffic LOS	D	D	B	C		B		A		D	A		A
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	87	87	63	23		52		46		46	50		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	120	11	69	24	15	168	54	705	15	100	523	108	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		C	C	A		D			B		C
	SimTraffic LOS	D	C		C	C	A		C			B		C
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	126	128		41	31	78		307			196		
	Queue Block Time (%)	12	1											
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		95	32	16	156		52		16				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.				*756			*542		*542				
	SimTraffic 95th Queue				11			47		37				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	45	45	4	4	55	766	45	4	609	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	C		B	C			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	28		53	55			98			23			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	4	622	72	36	806	89	46	9	39	232	24	14	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			B			E		B	D	C	B	B
	SimTraffic LOS	B			B			E		B	D	C	B	B
	Storage / *Link Dist.	*943			*318			*798		150	*726	*726	220	
	SimTraffic 95th Queue	246			247			102		53	258	46	33	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑	→	←	↑↑					←	<↑	→	
	Volume		323	569	593	828					101	1	102	
	Phasing			Perm	pm+pt						Perm		Perm	
	Synchro LOS		C	B	A	A					E	E	B	B
	SimTraffic LOS		C	C	B	A					E	E	A	B
	Storage / *Link Dist.		*318	*318	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		237	374	221	185					112	59	59	
	Queue Block Time (%)			3	2									
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑>	→				
	Volume	158	266			1,154	479	267	1	127				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	A			A	A	E	E	E				B
	SimTraffic LOS	B	A			A	A	E	E	E				B
	Storage / *Link Dist.	175	*410			*234	175	500	*1,137	500				
	SimTraffic 95th Queue	137	107			261	101	258	258	258				
	Queue Block Time (%)					3								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	99	212	82	3	611	4	366	6	6	16	47	657	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	C	B	A	C	D		E	B		E	B	B	C
	SimTraffic LOS	B	B	A	D	D		D	B		E	D	B	C
	Storage / *Link Dist.	175	*234	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	101	153	52	14	310		202	12		48	235	235	
	Queue Block Time (%)					39						20	20	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				157	0	65		720			900		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				D	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				123				135			122		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								720	920	238	820		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.								*301	*301	200			
	SimTraffic 95th Queue								4	7	135			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				282	1	450	122	1,190			696	123	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	E	F	B			C	A	C
	SimTraffic LOS				E	F	C	E	B			B	A	C
	Storage / *Link Dist.				425	*1,151	425	300	*366			*301		
	SimTraffic 95th Queue				231	166	220	188	478			197		
	Queue Block Time (%)								3					
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,312	122		705	274	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*230	25		*366		
	SimTraffic 95th Queue								85	29		55		
	Queue Block Time (%)								1					
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	640	161	440	11		49		746	77	268	437		
	Phasing	Split		Perm	D.Pm		Over				pm+pt			
	Synchro LOS	E	E	B	D		B		C		D	B		D
	SimTraffic LOS	D	E	B	D		C		E		E	B		D
	Storage / *Link Dist.	500	*1,549	400	*517		*517		*797		150	*230		
	SimTraffic 95th Queue	609	609	169	36		66		650		267	379		
	Queue Block Time (%)										32	3		
65	W 62nd St & Site Driveway (Unsignalized)													
	Lanes		<↑>			<↑		←>						
	Volume		1	473		1		31						
	Sign Control		Free			Free		Stop						
	Synchro LOS		n/a			n/a		n/a						n/a
	SimTraffic LOS		B			A		A						A
	Storage / *Link Dist.		*517					*958						
	SimTraffic 95th Queue		8					46						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes	←	↑>		←	↑	→	<↑↑		→	<↑↑>			
	Volume	148	11	72	19	10	75	78	600	283	137	586	163	
	Phasing	Perm			Perm		Perm			Perm				
	Synchro LOS	D	B		C	C	A	D		A	D			C
	SimTraffic LOS	D	C		C	C	A	D		A	C			C
	Storage / *Link Dist.	90	*568		*280	*280	200	*851		300	*797			
	SimTraffic 95th Queue	128	205		39	21	51	314		117	348			

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)	15						2						
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→			→	
	Volume	302	43	86	30	61	1	30	1	15	5		13	
	Sign Control	Free			Free			Stop						
	Synchro LOS	n/a			n/a			n/a		n/a			n/a	n/a
	SimTraffic LOS	A			A			A		A			A	A
	Storage / *Link Dist.	*280			*750			*543		*543			*886	
	SimTraffic 95th Queue	38			11			49		33			31	
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	55	33	4	4	14	952	65	4	669	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	C		B	D			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	30		49	63			69			16			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	9	704	44	36	955	216	69	13	48	91	9	7	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	A			A			E		B	D	C	B	B
	SimTraffic LOS	B			A			D		B	D	C	B	B
	Storage / *Link Dist.	*943			*314			*798		150	*726	*726	220	
	SimTraffic 95th Queue	348			174			135		63	129	29	21	
	Queue Block Time (%)							1						
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑>	→	←	↑↑					←	<↑	→	
	Volume		647	196	70	877					596	1	330	
	Phasing			Perm	pm+pt						Perm		Perm	
	Synchro LOS		B	A	C	A					D	D	D	C
	SimTraffic LOS		B	A	C	A					D	C	B	B
	Storage / *Link Dist.		*314	*314	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		268	201	93	183					282	261	186	
	Queue Block Time (%)													
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑>	→				
	Volume	121	1,122			224	90	723	4	652				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	B			C	A	D	D	D				C
	SimTraffic LOS	C	B			C	A	C	D	C				C
	Storage / *Link Dist.	175	*410			*232	200	500	*1,137	500				
	SimTraffic 95th Queue	217	355			110	60	400	400	400				
	Queue Block Time (%)		11											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	698	567	509	4	142	16	108	17	7	8	2	64	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	B	A	A	C	C		E	C		D	C	B	B
	SimTraffic LOS	A	A	A	C	B		D	D		E	F	A	A
	Storage / *Link Dist.	200	*232	200	100	*848		300	*784		100	*808	300	
	SimTraffic 95th Queue	220	185	74	14	61		89	38		26	38	44	
	Queue Block Time (%)	2	1											

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				411	0	121		955			855		
	Phasing													
	Synchro LOS				D	A			A			A		B
	SimTraffic LOS				D	D			A			A		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				332				145			256		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								955	147	29	1,237		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.										200			
	SimTraffic 95th Queue										42			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				90	1	287	497	816			788	449	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	B	D	A			C	A	B
	SimTraffic LOS				E	D	B	D	A			C	A	B
	Storage / *Link Dist.				425	*1,151	425	300	*366			*301	*301	
	SimTraffic 95th Queue				75	73	140	403	462			201	130	
	Queue Block Time (%)							12	2					
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,313	304		642	236	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*230	25				
	SimTraffic 95th Queue								76					
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	135	23	132	103		395		1,087	16	46	596		
	Phasing	Prot		Perm	D.Pm		Over				pm+pt			
	Synchro LOS	D	D	A	D		C		D		B	A		C
	SimTraffic LOS	D	D	A	E		C		C		B	A		B
	Storage / *Link Dist.	500	*1,549	400	*517		*517		*797		150	*230		
	SimTraffic 95th Queue	110	110	65	174		266		349		62	9		
	Queue Block Time (%)													
65	W 62nd St & Site Driveway (Unsignalized)													
	Lanes		<↑>			<↑		←>						
	Volume		1	32		1		447						
	Sign Control		Free			Free		Stop						
	Synchro LOS		n/a			n/a		n/a						n/a
	SimTraffic LOS		A			A		A						A
	Storage / *Link Dist.		*517					*958						
	SimTraffic 95th Queue		6					138						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←	↑>		←	↑	→	<↑↑		→	<↑↑>			
	Volume	120	11	69	101	15	273	54	709	34	102	621	108	
	Phasing	Perm			Perm		Perm			Perm				
	Synchro LOS	E	B		E	D	B	D		A	B			C
	SimTraffic LOS	E	D		D	D	B	D		A	B			C
	Storage / *Link Dist.	90	*568		*280	*280	200	*851		300	*797			
	SimTraffic 95th Queue	128	176		140	34	127	379		42	255			

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)	19	2											
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>					→	<↑		→	
	Volume	21	95	32	16	156		52		16	70	1	182	
	Sign Control	Free			Free						Stop			
	Synchro LOS	n/a			n/a					n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A					A	A		A	A
	Storage / *Link Dist.	*280			*750					*543	*886		*886	
	SimTraffic 95th Queue	9			6					36	49		77	
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	45	45	4	4	55	790	45	4	784	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	C		B	D			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	28		54	58			97			16			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	4	797	72	36	829	89	46	9	39	301	24	14	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			A			E		B	D	C	B	B
	SimTraffic LOS	B			A			E		B	D	C	A	B
	Storage / *Link Dist.	*943			*314			*798		150	*726	*726	220	
	SimTraffic 95th Queue	244			211			85		50	320	38	22	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑>	→	←	↑↑					←	<↑	→	
	Volume		428	709	593	841					101	1	113	
	Phasing			Perm	pm+pt						Perm		Perm	
	Synchro LOS		B	A	B	A					E	E	B	B
	SimTraffic LOS		B	A	B	A					E	D	A	A
	Storage / *Link Dist.		*314	*314	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		228	165	197	160					92	92	57	
	Queue Block Time (%)				2									
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑>	→				
	Volume	228	301			1,157	479	277	1	127				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	A			A	A	E	E	E				B
	SimTraffic LOS	C	A			B	A	E	D	D				B
	Storage / *Link Dist.	175	*410			*232	200	500	*1,137	500				
	SimTraffic 95th Queue	212	117			276	119	200	200	200				
	Queue Block Time (%)	3				6								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	99	247	82	3	614	4	366	6	6	16	47	657	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	C	B	A	D	D		E	B		E	B	B	C
	SimTraffic LOS	B	B	A	D	D		D	A		E	D	C	C
	Storage / *Link Dist.	200	*232	200	100	*848		300	*784		100	*808	300	
	SimTraffic 95th Queue	107	126	59	13	320		205	10		49	267	267	
	Queue Block Time (%)					38						23	23	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				159	0	65		723			837		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				C	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				101				87			114		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								723	928	240	756		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.								*301	*301	200			
	SimTraffic 95th Queue								3	10	99			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				90	1	454	115	1,197			632	125	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				B	B	C	C	A			C	B	B
	SimTraffic LOS				C	A	B	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301		
	SimTraffic 95th Queue				56	56	149	117	281			114		
	Queue Block Time (%)								1					
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,312	106		444	277	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*226	5				
	SimTraffic 95th Queue								85	26				
	Queue Block Time (%)								1					
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	645	13	450	4		25		748	7	12	432		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	C	C	B	B		A		A		C	A		B
	SimTraffic LOS	D	D	B	C		A		B		C	A		B
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	267	267	108	14		41		105		22	63		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	149	11	73	13	10	68	78	538	4	115	605	165	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		C	C	A		C			C		C
	SimTraffic LOS	D	C		C	C	A		C			C		C
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	124	138		29	21	46		250			206		
	Queue Block Time (%)	11												
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		44	87	31	61		31		15				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.		*304		*756			*542		*542				
	SimTraffic 95th Queue		6		23			44		37				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	56	33	4	4	14	612	66	4	684	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	C		B	B			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	31		55	52			36			21			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 115)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	9	719	44	36	615	218	70	13	48	87	9	7	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	A			A			E		B	D	D	B	B
	SimTraffic LOS	A			A			D		B	D	D	A	B
	Storage / *Link Dist.	*943			*318			*798		150	*726	*726	220	
	SimTraffic 95th Queue	185			134			123		52	123	30	23	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 115)													
	Lanes		↑↑	→	←	↑↑					←	<↑	→	
	Volume		666	188	76	693					620	1	177	
	Phasing			Perm	pm+pt						Perm		Perm	
	Synchro LOS		C	A	B	A					D	D	B	C
	SimTraffic LOS		C	A	B	A					D	A	A	C
	Storage / *Link Dist.		*318	*318	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		317	54	81	115					321	240	101	
	Queue Block Time (%)		1											
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑			↑↑	→	←	<↑>	→				
	Volume	117	1,168			195	93	574	4	699				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	B			C	B	D	D	D				C
	SimTraffic LOS	C	B			C	A	C	D	C				C
	Storage / *Link Dist.	175	*410			*234	175	500	*1,137	500				
	SimTraffic 95th Queue	250	476			117	63	436	436	436				
	Queue Block Time (%)		15											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	705	570	593	4	104	16	119	18	7	8	2	65	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	B	A	A	B	D		D	C		D	B	B	B
	SimTraffic LOS	A	A	A	C	D		D	D		E	D	A	B
	Storage / *Link Dist.	175	*234	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	241	238	96	14	102		96	38		36	43	44	
	Queue Block Time (%)	4	1			1								

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				414	0	122		900			859		
	Phasing													
	Synchro LOS				C	A			A			A		B
	SimTraffic LOS				C	B			A			B		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				221				140			213		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								900	149	29	1,244		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.									*301	200			
	SimTraffic 95th Queue									8	40			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				77	1	289	373	759			792	452	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				C	C	A	C	A			B	A	B
	SimTraffic LOS				C	B	A	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301	*301	
	SimTraffic 95th Queue				60	60	111	301	182			138	95	
	Queue Block Time (%)							1						
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,132	60		631	238	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.									5				
	SimTraffic 95th Queue													
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	136	13	135	5		46		1,010	11	29	602		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	D	D	B	C		B		A		D	A		A
	SimTraffic LOS	D	C	B	C		A		A		D	A		A
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	83	83	59	22		53		41		41	45		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	122	11	70	25	15	170	55	730	15	101	532	109	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		C	C	A		D			B		C
	SimTraffic LOS	D	C		C	C	A		C			B		C
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	119	124		51	33	79		319			207		
	Queue Block Time (%)	10												
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		96	32	16	158		53		16				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.				*756			*542		*542				
	SimTraffic 95th Queue				15			53		37				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	45	45	4	4	56	792	45	4	619	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	C		B	C			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	27		51	60			87			26			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	4	632	73	36	832	90	46	9	39	234	25	14	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			B			E		B	D	C	B	B
	SimTraffic LOS	B			B			D		B	D	C	A	B
	Storage / *Link Dist.	*943			*318			*798		150	*726	*726	220	
	SimTraffic 95th Queue	239			250			94		52	274	49	29	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑	→	←	↑↑					←	<↑	→	
	Volume		330	575	635	854					106	1	103	
	Phasing			Perm	pm+pt						Perm		Perm	
	Synchro LOS		C	B	B	A					E	E	B	B
	SimTraffic LOS		C	C	B	A					E	D	A	B
	Storage / *Link Dist.		*318	*318	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		246	366	255	285					104	63	58	
	Queue Block Time (%)			4	4									
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑>	→				
	Volume	160	276			1,220	500	269	1	136				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	A			A	A	E	E	E				B
	SimTraffic LOS	B	A			B	A	F	F	E				C
	Storage / *Link Dist.	175	*410			*234	175	500	*1,137	500				
	SimTraffic 95th Queue	132	105			279	118	287	287	287				
	Queue Block Time (%)					6								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	100	214	98	3	617	4	440	6	6	16	47	663	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	C	B	A	C	D		D	B		E	B	B	C
	SimTraffic LOS	B	B	A	D	D		D	B		E	D	C	C
	Storage / *Link Dist.	175	*234	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	121	160	57	35	336		214	13		55	289	289	
	Queue Block Time (%)					43						27	27	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				159	0	65		732			986		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				D	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				118				175			128		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								732	928	240	905		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.									*301	200	*368		
	SimTraffic 95th Queue									10	129	11		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				461	1	454	134	1,207			780	125	
	Phasing				Split		Perm	pm+pt					Perm	
	Synchro LOS				E	E	E	C	C			B	A	C
	SimTraffic LOS				E	D	C	C	C			B	A	C
	Storage / *Link Dist.				425	*1,150	425	300	*374			*301		
	SimTraffic 95th Queue				327	301	243	158	539			213		
	Queue Block Time (%)								9					
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑↑↑	→	
	Volume								1,340	139		964	277	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*207	25		*374	25	
	SimTraffic 95th Queue								147	42		31	14	
	Queue Block Time (%)								3			1		
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes	←←	↑	→	←		→→		↑↑>		←←	↑↑		
	Volume	645	296	464	17		72		762	41	503	462		
	Phasing	Perm		Perm	D.Pm		custom				pm+pt			
	Synchro LOS	E	E	C	D		A		C		D	B		D
	SimTraffic LOS	D	D	B	D		B		E		E	B		D
	Storage / *Link Dist.	500	*1,547	400	*506		400		*790		*207	*207		
	SimTraffic 95th Queue	405	315	200	47		47		672		314	213		
	Queue Block Time (%)								2		15			
65	W 62nd St & Site Driveway (All-way stop)													
	Lanes		<↑>	→	<↑			←←>	0					
	Volume		1	806	1	1		61	0	1				
	Sign Control		Stop		Stop			Stop						
	Synchro LOS		n/a	n/a	n/a			n/a	n/a					n/a
	SimTraffic LOS		A	A	A			A	A					A
	Storage / *Link Dist.		*506	*506	*843			*952						
	SimTraffic 95th Queue		45	45	16			45						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	149	11	73	24	10	82	78	572	639	160	619	165	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	C	B		C	C	B	C	C	A	C	C		C
	SimTraffic LOS	D	D		C	D	A	C	C	B	B	B		C

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*790		
	SimTraffic 95th Queue	124	134		45	27	51	88	249	228	126	248		
	Queue Block Time (%)	10	1											
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→	<↑		→	
	Volume	680	44	87	31	61	1	31	1	15	10	1	25	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			D		A	E		A	A
	Storage / *Link Dist.	*282			*751			*543		*543	*888			
	SimTraffic 95th Queue	103			19			68		33	40			
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	56	33	4	4	14	1,281	66	4	708	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	F		B	E			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	41		53	69			50			66			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	9	743	44	36	1,284	218	70	13	48	96	9	7	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	A			A			E		B	D	C	B	B
	SimTraffic LOS	B			B			D		B	D	C	B	B
	Storage / *Link Dist.	*943			*314			*798		150	*726	*726	220	
	SimTraffic 95th Queue	488			304			117		49	115	24	22	
	Queue Block Time (%)				1									
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑>	→	←	↑↑					←	<↑	→	
	Volume		680	207	76	1,064					620	1	474	
	Phasing			Perm	pm+pt						Perm		Perm	
	Synchro LOS		C	A	D	A					C	C	D	C
	SimTraffic LOS		C	A	C	B					C	A	C	B
	Storage / *Link Dist.		*314	*314	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		314	243	96	244					269	266	349	
	Queue Block Time (%)		1											
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑>	→				
	Volume	127	1,173			269	93	871	4	699				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	C			C	A	D	D	D				C
	SimTraffic LOS	C	C			C	A	C	D	C				C
	Storage / *Link Dist.	175	*410			*232	200	500	*1,137	500				
	SimTraffic 95th Queue	219	431			133	75	456	456	456				
	Queue Block Time (%)	1	15											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	705	574	593	4	178	16	119	18	7	8	2	65	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	B	A	A	C	C		E	C		D	C	B	B
	SimTraffic LOS	B	A	A	C	B		D	E		E	E	A	A
	Storage / *Link Dist.	200	*232	200	100	*848		300	*784		100	*808	300	
	SimTraffic 95th Queue	250	253	77	15	81		92	37		33	35	40	
	Queue Block Time (%)	4	2											

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				414	0	122		1,034			869		
	Phasing													
	Synchro LOS				D	A			A			A		B
	SimTraffic LOS				D	D			B			B		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				366				224			272		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								1,034	149	29	1,254		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.										200	*368		
	SimTraffic 95th Queue										45	55		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				103	1	289	641	893			802	452	
	Phasing				Split		Perm	pm+pt					Perm	
	Synchro LOS				E	E	B	C	A			C	A	B
	SimTraffic LOS				D	C	B	C	A			C	A	B
	Storage / *Link Dist.				425	*1,150	425	300	*374			*301	*301	
	SimTraffic 95th Queue				111	111	139	422	500			271	235	
	Queue Block Time (%)							11	3				1	
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑↑↑	→	
	Volume								1,534	529		666	238	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*207	25			25	
	SimTraffic 95th Queue								135				28	
	Queue Block Time (%)								1					
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←←	↑	→	←		→→		↑↑>		←←	↑↑		
	Volume	136	33	136	193		717		1,211	20	62	604		
	Phasing	Prot		Perm	D.Pm		Over				pm+pt			
	Synchro LOS	D	D	A	E		D		C		A	A		C
	SimTraffic LOS	D	D	A	E		C		C		C	A		C
	Storage / *Link Dist.	500	*1,547	400	*506		400		*790		*207	*207		
	SimTraffic 95th Queue	97	61	68	259		298		379		56	3		
	Queue Block Time (%)													
65	W 62nd St & Site Driveway (Unsignalized)													
	Lanes		<↑>	→	<↑			←←>	0					
	Volume		1	62	1	1		858	0	1				
	Sign Control		Stop		Stop			Free						
	Synchro LOS		n/a	n/a	n/a			n/a	n/a					n/a
	SimTraffic LOS		A	A	E			A	A					A
	Storage / *Link Dist.		*506	*506	*843			*952						
	SimTraffic 95th Queue		84	84	11			5						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	122	11	70	172	15	371	55	739	52	104	720	109	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	D	C		D	D	B	C	C	A	B	A		C
	SimTraffic LOS	E	E		D	D	B	C	C	A	C	B		C

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*790		
	SimTraffic 95th Queue	131	182		196	147	229	104	289	40	108	215		
	Queue Block Time (%)	15	2						1					
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→	<↑		→	
	Volume	39	96	32	16	158	1	53	1	16	134	1	349	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			A		A	A		A	A
	Storage / *Link Dist.	*282			*751			*543		*543	*888		*888	
	SimTraffic 95th Queue	27			14			51		38	71		15	
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	45	45	4	4	56	837	45	4	954	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	E		B	D			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	28		53	66			104			13			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	4	967	73	36	877	90	46	9	39	368	25	14	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			A			E		B	E	C	B	C
	SimTraffic LOS	B			B			E		B	E	C	B	C
	Storage / *Link Dist.	*943			*314			*798		150	*726	*726	220	
	SimTraffic 95th Queue	299			250			80		53	533	184	29	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑>	→	←	↑↑					←	<↑	→	
	Volume		531	843	635	880					106	1	123	
	Phasing			Perm	pm+pt						Perm		Perm	
	Synchro LOS		C	B	C	A					E	E	B	B
	SimTraffic LOS		C	A	B	A					E	D	A	B
	Storage / *Link Dist.		*314	*314	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		316	211	247	332					86	86	66	
	Queue Block Time (%)		1		9	1								
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑>	→				
	Volume	294	343			1,226	500	290	1	136				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	D	A			A	A	E	E	E				C
	SimTraffic LOS	D	A			B	A	E	D	D				C
	Storage / *Link Dist.	175	*410			*232	200	500	*1,137	500				
	SimTraffic 95th Queue	267	363			290	131	209	209	209				
	Queue Block Time (%)	17	1			12								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	100	281	98	3	622	4	440	6	6	16	47	663	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	C	B	A	D	D		D	B		E	B	B	C
	SimTraffic LOS	C	B	A	D	D		D	B		E	D	C	D
	Storage / *Link Dist.	200	*232	200	100	*848		300	*784		100	*808	300	
	SimTraffic 95th Queue	115	136	57	33	319		246	13		52	299	299	
	Queue Block Time (%)					44						33	33	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				160	0	66		733			865		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				C	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				103				98			113		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								733	937	242	784		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.								*301		200			
	SimTraffic 95th Queue								7		114			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				90	1	459	122	1,211			658	126	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				B	B	C	D	A			C	B	B
	SimTraffic LOS				C	A	B	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301		
	SimTraffic 95th Queue				60	60	144	131	237			96		
	Queue Block Time (%)													
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,332	107		469	280	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.									5				
	SimTraffic 95th Queue													
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	651	14	495	4		25		764	7	12	456		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	C	C	B	B		A		A		C	A		B
	SimTraffic LOS	D	D	C	B		A		B		C	A		C
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	248	248	128	15		44		129		24	58		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 70)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	151	11	74	14	10	69	79	551	4	116	672	166	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		C	C	A		C			C		C
	SimTraffic LOS	D	C		C	B	A		C			C		C
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	123	79		27	16	40		250			209		
	Queue Block Time (%)	12												
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		44	88	31	62		31		15				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.				*756			*542		*542				
	SimTraffic 95th Queue				24			46		36				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	56	33	4	4	15	626	67	4	751	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	D		B	B			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	43		44	42			36			24			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 115)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	9	787	45	36	629	220	71	14	49	87	9	7	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	A			A			E		B	D	D	B	B
	SimTraffic LOS	A			A			C		B	D	D	A	A
	Storage / *Link Dist.	*943			*324			*798		150	*726	*726	220	
	SimTraffic 95th Queue	143			81			113		60	126	35	22	
	Queue Block Time (%)							1						
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 115)													
	Lanes		↑↑	→	←	↑↑					<↑		→	
	Volume		734	189	93	707					678	1	179	
	Phasing			Perm	pm+pt								Perm	
	Synchro LOS		B	A	C	A					F		A	D
	SimTraffic LOS		C	A	C	A							F	F
	Storage / *Link Dist.		*324	*324	175	*416							500	
	SimTraffic 95th Queue		249	47	113	112							893	
	Queue Block Time (%)													
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑			↑↑	→	←	↑>					
	Volume	119	1,293			222	102	579	4	828				
	Phasing	pm+pt					Perm	Perm						
	Synchro LOS	C	D			C	B	C	F					E
	SimTraffic LOS	C	C			D	A	F	F					F
	Storage / *Link Dist.	175	*416			*236	175	500	*1,137					
	SimTraffic 95th Queue	266	425			147	58	767	1,377					
	Queue Block Time (%)		23						32					
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑	→	
	Volume	711	575	834	4	105	17	153	18	7	8	2	66	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	B	A	A	B	D		D	C		D	D	B	B
	SimTraffic LOS	A	A	A	C	D		D	D		E		A	A
	Storage / *Link Dist.	175	*236	175	100	*540		300	*785		100		300	
	SimTraffic 95th Queue	208	111	67	12	92		129	35		35		41	
	Queue Block Time (%)	1												

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				160	0	66		733			865		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				D	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				119				88			119		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								733	937	242	784		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.									*301	200			
	SimTraffic 95th Queue									6	124			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				90	1	459	122	1,211			658	126	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				C	C	C	C	A			B	A	B
	SimTraffic LOS				C	C	C	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301		
	SimTraffic 95th Queue				60	60	174	144	191			122		
	Queue Block Time (%)													
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,332	107		469	280	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*226	5				
	SimTraffic 95th Queue								1					
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	651	14	495	4		25		764	7	12	456		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	C	C	C	B		A		B		D	A		B
	SimTraffic LOS	C	D	A	C		A		B		C	A		B
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	285	285	167	14		41		176		32	89		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	151	11	74	14	10	69	79	551	4	116	672	166	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	E	B		C	C	B		D			B		C
	SimTraffic LOS	D	D		D	C	A		D			C		C
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	130	157		31	23	46		294			224		
	Queue Block Time (%)	16	1											
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		44	88	31	62		31		15				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.		*304		*756			*542		*542				
	SimTraffic 95th Queue		3		26			47		36				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	56	33	4	4	15	626	67	4	751	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	C		B	C			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	30		60	52			43			21			
	Queue Block Time (%)			1										
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	9	787	45	36	629	220	71	14	49	87	9	7	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			A			E		B	D	C	B	B
	SimTraffic LOS	B			A			D		B	D	C	A	B
	Storage / *Link Dist.	*943			*318			*798		150	*726	*726	220	
	SimTraffic 95th Queue	225			139			117		50	104	24	24	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑	→	←	↑↑					←	<↑	→	
	Volume		734	189	93	707					678	1	179	
	Phasing			Perm	pm+pt						Perm		Perm	
	Synchro LOS		C	A	C	A					D	D	A	C
	SimTraffic LOS		C	A	C	A					D	C	A	C
	Storage / *Link Dist.		*318		175	*410					500	*1,182	500	
	SimTraffic 95th Queue		355		89	86					357	303	102	
	Queue Block Time (%)		2											
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑	→→				
	Volume	119	1,293			222	102	579	4	828				
	Phasing	pm+pt					Perm	Perm		Free				
	Synchro LOS	A	A			B	A	E	E	A				B
	SimTraffic LOS	B	B			B	A	D	D	B				C
	Storage / *Link Dist.	175	*410			*222	175	500	*1,137	500				
	SimTraffic 95th Queue	198	465			124	57	279	279	316				
	Queue Block Time (%)		12											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	711	575	834	4	105	17	153	18	7	8	2	66	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	A	A	A	C	D		E	C		E	C	B	B
	SimTraffic LOS	A	A	A	C	D		D	D		E	F	A	B
	Storage / *Link Dist.	175	*222	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	255	296	159	14	93		117	36		32	43	43	
	Queue Block Time (%)	7	3											

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				418	0	122		927			871		
	Phasing													
	Synchro LOS				C	A			A			B		B
	SimTraffic LOS				C	B			A			A		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				214				139			230		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								927	150	29	1,259		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.										200			
	SimTraffic 95th Queue										41			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				78	1	292	413	785			803	456	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				C	C	A	C	A			C	A	B
	SimTraffic LOS				C		A	B	A			B	A	B
	Storage / *Link Dist.				425		425	300	*351			*301	*301	
	SimTraffic 95th Queue				59		113	251	154			137	100	
	Queue Block Time (%)													
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,198	60		641	240	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.									5				
	SimTraffic 95th Queue													
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	137	14	144	5		47		1,075	11	29	612		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	D	D	B	C		B		A		D	A		A
	SimTraffic LOS	C	C	B	D		B		A		D	A		A
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	89	89	78	27		61		52		42	44		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	123	11	71	25	16	172	55	792	16	102	549	110	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		C	C	A		D			B		C
	SimTraffic LOS	E	C		C	C	A		C			B		C
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	126	185		37	34	74		282			232		
	Queue Block Time (%)	21												
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		97	32	16	159		53		16				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.				*756			*542		*542				
	SimTraffic 95th Queue				10			51		30				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	46	46	4	4	56	854	46	4	636	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	C		B	D			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	38		51	60			91			15			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 115)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	4	649	74	36	895	90	47	9	40	236	25	15	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			A			E		B	D	C	B	B
	SimTraffic LOS	B			A			E		B	D	C	A	B
	Storage / *Link Dist.	*943			*324			*798		150	*726	*726	220	
	SimTraffic 95th Queue	211			184			85		54	250	54	30	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 115)													
	Lanes		↑↑	→	←	↑↑					<↑		→	
	Volume		345	580	752	918					116	1	104	
	Phasing			Perm	pm+pt								Perm	
	Synchro LOS		A	A	B	A					E		B	A
	SimTraffic LOS		B	A	D	A							B	B
	Storage / *Link Dist.		*324	*324	175	*416							500	
	SimTraffic 95th Queue		119	191	235	471							55	
	Queue Block Time (%)				37	19								
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑			↑↑	→	←	↑>					
	Volume	161	300			1,398	553	272	1	160				
	Phasing	pm+pt					Perm	Perm						
	Synchro LOS	D	B			B	A	E	D					C
	SimTraffic LOS	D	A			C	A	E	C					C
	Storage / *Link Dist.	175	*416			*236	175	500	*1,137					
	SimTraffic 95th Queue	178	106			259	97	328	191					
	Queue Block Time (%)	2				33								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 115)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑	→	
	Volume	101	216	142	3	623	4	658	6	6	17	48	670	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	C	B	A	C	D		F	B		D	C	E	F
	SimTraffic LOS	D	B	A		E		F	F		F	F	F	F
	Storage / *Link Dist.	175	*236	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	128	87	60		404		806	775		33	837	480	
	Queue Block Time (%)					58		89				50	74	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				418	0	122		927			871		
	Phasing													
	Synchro LOS				C	A			A			B		B
	SimTraffic LOS				C	B			A			A		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				218				135			221		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								927	150	29	1,259		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.									*301	200	*368		
	SimTraffic 95th Queue									5	44	15		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				78	1	292	413	785			803	456	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				C	C	A	C	A			C	A	B
	SimTraffic LOS				C	B	A	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301	*301	
	SimTraffic 95th Queue				61	61	114	323	198			157	163	
	Queue Block Time (%)							1						
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,198	60		641	240	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*226	5				
	SimTraffic 95th Queue								23					
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	137	14	144	5		47		1,075	11	29	612		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	D	D	B	C		B		A		D	A		A
	SimTraffic LOS	C	C	A	C		B		A		D	A		A
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	84	84	62	23		60		92		43	54		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	123	11	71	25	16	172	55	792	16	102	549	110	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		C	C	A		D			C		C
	SimTraffic LOS	D	C		C	C	A		C			B		C
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	116	119		43	33	78		341			221		
	Queue Block Time (%)	8												
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		97	32	16	159		53		16				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.				*756			*542		*542				
	SimTraffic 95th Queue				13			49		35				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	46	46	4	4	56	854	46	4	636	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	C		B	C			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	29		52	62			101			29			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	4	649	74	36	895	90	47	9	40	236	25	15	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			B			E		B	D	C	B	B
	SimTraffic LOS	B			B			E		B	D	C	B	B
	Storage / *Link Dist.	*943			*318			*798		150	*726	*726	220	
	SimTraffic 95th Queue	262			274			94		50	271	44	28	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑	→	←	↑↑					←	<↑	→	
	Volume		345	580	752	918					116	1	104	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		C	A	B	A					E	E	B	B
	SimTraffic LOS		C	B	B	A					E	F	A	B
	Storage / *Link Dist.		*318	*318	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		240	405	237	179					111	77	60	
	Queue Block Time (%)			4	4									
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑	→→				
	Volume	161	300			1,398	553	272	1	160				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	A			A	A	E	E	E				B
	SimTraffic LOS	B	A			B	A	E	F	D				B
	Storage / *Link Dist.	175	*410			*222	175	500	*1,137	500				
	SimTraffic 95th Queue	132	104			266	178	162	162	125				
	Queue Block Time (%)					19								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	101	216	142	3	623	4	658	6	6	17	48	670	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	C	B	B	C	D		E	B		E	C	C	D
	SimTraffic LOS	C	B	A	E	D		E	B		F	F	F	E
	Storage / *Link Dist.	175	*222	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	124	162	71	15	396		399	17		126	816	816	
	Queue Block Time (%)					47		7				63	63	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				162	0	67		745			1,065		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				F	F			A			F		F
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				1,551				26			1,247		
	Queue Block Time (%)				31							61		
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								745	950	248	979		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	D	F		D
	Storage / *Link Dist.									*301	200	*368		
	SimTraffic 95th Queue									7	448	389		
	Queue Block Time (%)											88		
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				573	1	459	146	1,237			851	127	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				D	D	C	C	A			C	A	B
	SimTraffic LOS				F		F	D	A			F	A	F
	Storage / *Link Dist.				425		425	300	*351			*301		
	SimTraffic 95th Queue				980		8	113	151			312		
	Queue Block Time (%)				100							82		
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,383	150		1,145	280	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		F	A	E
	Storage / *Link Dist.									5		*351	*351	
	SimTraffic 95th Queue											380	125	
	Queue Block Time (%)											79		
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	663	380	514	21		86		783	181	649	495		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	D	D	B	C		A		C		F	B		F
	SimTraffic LOS	F	F	F	C		A		B		F	A		F
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	1,668	1,667	1,683	62		59		262		228	319		
	Queue Block Time (%)	20	59	16							89	84		
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	151	11	74	27	10	87	79	726	699	174	690	166	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	E	B		C	C	A		F			C		F
	SimTraffic LOS	D	C		C	D	A		F			C		F
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	119	131		51	20	29		943			253		
	Queue Block Time (%)	9							22					
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		44	88	31	62		31		15				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.				*756			*542		*542				
	SimTraffic 95th Queue				12			43		38				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	56	33	4	4	15	1,496	67	4	782	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	D		B	B			F			A			F
	Storage / *Link Dist.	*674		65	*451			*943						
	SimTraffic 95th Queue	18		44	97			1,102						
	Queue Block Time (%)							40						
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	9	818	45	36	1,499	220	71	14	49	100	9	7	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			C			E		B	D	C	B	C
	SimTraffic LOS	B			E			D		B	D	C	C	D
	Storage / *Link Dist.	*943			*318			*798		150	*726	*726	220	
	SimTraffic 95th Queue	157			422			165		50	129	20	24	
	Queue Block Time (%)				35			3						
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑	→	←	↑↑					←	<↑	→	
	Volume		752	214	93	1,191					678	1	565	
	Phasing			Perm	pm+pt						Perm		Perm	
	Synchro LOS		C	A	D	A					C	C	E	C
	SimTraffic LOS		C	A	E	F					F	E	F	F
	Storage / *Link Dist.		*318		175	*410					500	*1,182	500	
	SimTraffic 95th Queue		310		249	594					1,654	1,654	1,558	
	Queue Block Time (%)		1			59					31	31	62	
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑	→→				
	Volume	131	1,300			318	102	966	4	828				
	Phasing	pm+pt					Perm	Perm		Free				
	Synchro LOS	B	B			C	B	D	D	A				C
	SimTraffic LOS	C	C			D	A	F	A	F				F
	Storage / *Link Dist.	175	*410			*222	175	500	*1,137	500				
	SimTraffic 95th Queue	224	426			196	55	1,535	1,533	1,564				
	Queue Block Time (%)		17			1		51	54	27				
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	711	581	834	4	202	17	153	18	7	8	2	66	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	A	A	A	C	D		E	C		E	C	B	B
	SimTraffic LOS	A	A	A	C	D		D	D		D	D	A	B
	Storage / *Link Dist.	175	*222	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	238	230	104	8	138		104	34		27	37	42	
	Queue Block Time (%)	3	1			2								

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				162	0	67		745			1,065		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				C	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				123				111			138		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								745	950	248	979		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.								*299	*299	200	*368		
	SimTraffic 95th Queue								4	15	121	26		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				573	1	459	146	1,237			851	127	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	D	D	A			C	A	C
	SimTraffic LOS				E	D	C	D	A			C	A	C
	Storage / *Link Dist.				425	*1,134	425	*351	*351			*299		
	SimTraffic 95th Queue				387	361	223	104	250			290		
	Queue Block Time (%)											1		
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								1,383	150		1,145	280	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.									25			25	
	SimTraffic 95th Queue											57	16	
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes	←←	↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	663	380	514	21		86		783	181	649	495		
	Phasing	Prot		Perm	Prot		Over			Perm	Prot			
	Synchro LOS	E	E	D	F		A		C	B	E	A		D
	SimTraffic LOS	D	E	B	E		B		D	B	E	A		D
	Storage / *Link Dist.	500	*1,543	500	300		300		*783	500	*200	*200		
	SimTraffic 95th Queue	385	456	245	30		35		331	138	356	76		
	Queue Block Time (%)										28			
65	W 62nd St & Site Driveway (Unsignalized)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		426	753	4	28		52	0	39				
	Sign Control		Stop		Stop			Free						
	Synchro LOS		n/a	n/a	n/a			n/a	n/a					n/a
	SimTraffic LOS		C	A	A			A	A					A
	Storage / *Link Dist.		*476	*476	*843			*949						
	SimTraffic 95th Queue		271	271	39			21						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	151	11	74	27	10	87	79	726	699	174	690	166	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	C	B		C	C	B	C	D	A	B	B		C
	SimTraffic LOS	D	D		C	C	A	C	C	B	C	B		C

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*783		
	SimTraffic 95th Queue	127	156		47	30	57	98	271	245	150	218		
	Queue Block Time (%)	11	1											
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→	<↑		→	
	Volume	753	44	88	31	62	2	31	2	15	12	1	32	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			C		A	E		A	A
	Storage / *Link Dist.	*282			*751			*543		*543	*888			
	SimTraffic 95th Queue	102			20			68		38	40			
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	56	33	4	4	15	1,496	67	4	782	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	E		B	F			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	28		54	80			82			70			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑>		<↑		→	←	↑	→	
	Volume	9	818	45	36	1,499	220	71	14	49	100	9	7	
	Phasing	pm+pt			pm+pt					Perm	pm+pt		Perm	
	Synchro LOS	A	B		A	A		E		B	D	D	B	B
	SimTraffic LOS	C	B		B	A		D		B	D	D	B	B
	Storage / *Link Dist.	175	*943		175	*313		*790		150	*718	*718	220	
	SimTraffic 95th Queue	44	352		48	292		108		54	135	25	24	
	Queue Block Time (%)		5			3								
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑>	→	←	↑↑					←	<↑	→	
	Volume		752	214	93	1,191					678	1	565	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		C	A	D	B					C	C	D	C
	SimTraffic LOS		C	A	C	B					C	C	C	C
	Storage / *Link Dist.		*313	*313	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		329	305	126	222					279	279	413	
	Queue Block Time (%)		1	1		2								
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑	→→				
	Volume	131	1,300			318	102	966	4	828				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	C			C	A	D	D	D				C
	SimTraffic LOS	C	C			C	A	C	D	C				C
	Storage / *Link Dist.	175	*410			*324	200	500	*1,137	500				
	SimTraffic 95th Queue	226	435			140	45	380	380	319				
	Queue Block Time (%)		13											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	711	581	834	4	202	17	153	18	7	8	2	66	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	B	A	A	C	C		E	C		D	C	B	B
	SimTraffic LOS	B	A	A	C	B		D	D		E	D	A	B
	Storage / *Link Dist.	200	*324	200	100	*848		300	*785		100	*808	300	
	SimTraffic 95th Queue	300	214	104	18	89		111	38		28	38	43	
	Queue Block Time (%)	5	1											

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				438	0	132		1,101			886		
	Phasing													
	Synchro LOS				C	A			A			B		B
	SimTraffic LOS				C	B			A			B		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				200				143			223		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								1,101	154	31	1,293		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.										200			
	SimTraffic 95th Queue										47			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				111	1	292	762	963			818	474	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				D	D	B	F	A			C	B	D
	SimTraffic LOS				C		A	D	A			B	A	B
	Storage / *Link Dist.				425		425	300	*351			*301	*301	
	SimTraffic 95th Queue				76		116	429	527			171	172	
	Queue Block Time (%)							20	9					
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,725	670		689	240	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*226	5		*351		
	SimTraffic 95th Queue								152			2		
	Queue Block Time (%)								1					
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	141	38	145	249		917		1,336	23	72	616		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	D	D	A	F		F		A		D	A		F
	SimTraffic LOS	D	C	B	F		F		B		D	A		F
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	126	86	94	563		1,503		211		125	111		
	Queue Block Time (%)						78					2		
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	123	11	71	216	16	433	55	804	63	106	794	110	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		F	C	A		D			F		E
	SimTraffic LOS	E	C		F	E	D		D			F		E
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	123	127		255	161	239		447			896		
	Queue Block Time (%)	17	2			1	4					7		
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		97	32	16	159		53		16				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			A		A				A
	Storage / *Link Dist.				*756			*542		*542				
	SimTraffic 95th Queue				28			52		35				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	46	46	4	4	56	914	46	4	1,073	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	F		F	A			C			F			F
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	721		104	548			625			1,062			
	Queue Block Time (%)	9		65	33						7			
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	4	1,087	74	36	954	90	47	9	40	410	25	15	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			B			E		B	F	C	B	C
	SimTraffic LOS	F			B			D		C	F	E	D	F
	Storage / *Link Dist.	*943			*318			*798		150	*726	*726	220	
	SimTraffic 95th Queue	1,443			263			89		48	824	881	41	
	Queue Block Time (%)	33									22	3		
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑	→	←	↑↑					←	<↑	→	
	Volume		606	931	752	951					116	1	130	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		C	A	B	A					E	E	B	B
	SimTraffic LOS		C	C	B	A					E	A	A	B
	Storage / *Link Dist.		*318	*318	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		366	343	255	264					114	88	93	
	Queue Block Time (%)		2	27	6									
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑	→→				
	Volume	335	387			1,405	553	299	1	160				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	D	A			B	A	E	E	E				C
	SimTraffic LOS	D	A			B	A	E	E	D				C
	Storage / *Link Dist.	175	*410			*222	175	500	*1,137	500				
	SimTraffic 95th Queue	265	301			270	149	201	201	131				
	Queue Block Time (%)	9				18	1							
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	101	303	142	3	630	4	658	6	6	17	48	670	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	C	B	A	C	D		E	B		E	C	C	D
	SimTraffic LOS	B	B	A	F	E		E	B		E	E	C	D
	Storage / *Link Dist.	175	*222	175	100	*540		300	*785		100	*809	300	
	SimTraffic 95th Queue	83	184	61	8	375		359	16		41	353	353	
	Queue Block Time (%)		1			57		4				46	46	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				438	0	132		1,101			886		
	Phasing													
	Synchro LOS				D	A			A			B		B
	SimTraffic LOS				D	D			A			B		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				397				188			287		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								1,101	154	31	1,293		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.									*299	200	*368		
	SimTraffic 95th Queue									6	47	17		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				111	1	292	762	963			818	474	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	B	D	A			C	A	B
	SimTraffic LOS				D	E	A	C	A			B	A	B
	Storage / *Link Dist.				*1,134	*1,134	*1,134	*351	*351			*299	*299	
	SimTraffic 95th Queue				99	99	103	339	128			260	88	
	Queue Block Time (%)													
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								1,725	670		689	240	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.									25			25	
	SimTraffic 95th Queue												9	
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←←	↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	141	38	145	249		917		1,336	23	72	616		
	Phasing	Prot		Perm	Prot		Over			Perm	Prot			
	Synchro LOS	D	E	C	F		D		C	A	C	A		C
	SimTraffic LOS	D	E	A	E		C		C	A	C	A		C
	Storage / *Link Dist.	500	*1,543	500	300		300		*783	500	*200	*200		
	SimTraffic 95th Queue	154	72	74	224		342		384	27	68	12		
	Queue Block Time (%)						2							
65	W 62nd St & Site Driveway (Unsignalized)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		30	51	35	384		731	0	4				
	Sign Control		Stop		Stop			Free						
	Synchro LOS		n/a	n/a	n/a			n/a	n/a					n/a
	SimTraffic LOS		E	A	F			A	A					D
	Storage / *Link Dist.		*476	*476	*843			*949						
	SimTraffic 95th Queue		119	119	354			36						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	123	11	71	216	16	433	55	804	63	106	794	110	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	D	B		D	D	C	C	C	A	B	A		C
	SimTraffic LOS	E	E		D	D	B	D	C	A	C	B		C

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*783		
	SimTraffic 95th Queue	126	178		217	190	285	82	365	46	97	177		
	Queue Block Time (%)	15	2				1		3					
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→	<↑		→	
	Volume	51	97	32	16	159	1	53	1	16	174	2	453	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			C		A	A		A	A
	Storage / *Link Dist.	*282			*751			*543		*543	*888		*888	
	SimTraffic 95th Queue	29			11			52		39	82		41	
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	46	46	4	4	56	914	46	4	1,073	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	D		D	F			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	36		67	207			109			159			
	Queue Block Time (%)			4	3									
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑>		<↑		→	←	↑	→	
	Volume	4	1,087	74	36	954	90	47	9	40	410	25	15	
	Phasing	pm+pt			pm+pt					Perm	pm+pt		Perm	
	Synchro LOS	B	C		A	B		E		B	D	C	B	C
	SimTraffic LOS	D	D		C	B		E		B	D	C	B	C
	Storage / *Link Dist.	175	*943		175	*313		*790		150	*718	*718	220	
	SimTraffic 95th Queue	61	708		51	303		92		54	525	198	30	
	Queue Block Time (%)		21			3					1			
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑>	→	←	↑↑					←	<↑	→	
	Volume		606	931	752	951					116	1	130	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		D	A	D	A					E	E	B	C
	SimTraffic LOS		D	A	B	A					D	D	A	B
	Storage / *Link Dist.		*313	*313	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		361	271	233	163					90	90	71	
	Queue Block Time (%)		8		10									
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑	→→				
	Volume	335	387			1,405	553	299	1	160				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	A			B	A	E	E	E				B
	SimTraffic LOS	E	A			B	A	E	F	D				C
	Storage / *Link Dist.	175	*410			*324	200	500	*1,137	500				
	SimTraffic 95th Queue	285	541			371	158	201	201	105				
	Queue Block Time (%)	38	4			5								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	101	303	142	3	630	4	658	6	6	17	48	670	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	C	B	A	C	D		E	B		E	C	C	D
	SimTraffic LOS	C	A	A	F	E		E	B		E	D	C	D
	Storage / *Link Dist.	200	*324	200	100	*848		300	*785		100	*808	300	
	SimTraffic 95th Queue	98	97	61	13	476		335	12		68	312	312	
	Queue Block Time (%)					56		3				33	33	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				162	0	67		752			1,089		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				C	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				124				117			132		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								752	950	248	1,003		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.								*299	*299	200	*368		
	SimTraffic 95th Queue								11	13	108	15		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				613	1	459	163	1,244			876	127	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	D	D	A			C	A	C
	SimTraffic LOS				E	D	C	D	B			C	A	C
	Storage / *Link Dist.				425	*1,134	425	*351	*351			*299		
	SimTraffic 95th Queue				433	407	224	118	258			293		
	Queue Block Time (%)											1		
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								1,406	162		1,209	280	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.									25			25	
	SimTraffic 95th Queue											109	19	
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes	←←	↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	663	439	513	25		122		783	192	714	494		
	Phasing	Prot		Perm	Prot		Over			Perm	Prot			
	Synchro LOS	D	E	C	E		B		D	B	E	A		D
	SimTraffic LOS	D	E	B	E		B		D	C	E	A		D
	Storage / *Link Dist.	500	*1,543	500	300		300		*783	500	*200	*200		
	SimTraffic 95th Queue	398	539	247	33		46		351	141	378	75		
	Queue Block Time (%)										38			
65	W 62nd St & Site Driveway (Signalized -- Cycle Length: 85)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		578	736	6	68		51	0	45				
	Phasing			Perm										
	Synchro LOS		A	A	A			B	A					A
	SimTraffic LOS		A	A	A			D	B					A
	Storage / *Link Dist.		*473	*473	*843			*941						
	SimTraffic 95th Queue		253	253	34			70						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	151	11	74	27	10	87	79	738	684	173	693	166	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	C	B		C	C	B	C	D	A	B	B		C
	SimTraffic LOS	D	D		C	C	A	C	C	B	C	B		C

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*783		
	SimTraffic 95th Queue	128	139		46	27	55	91	293	242	127	213		
	Queue Block Time (%)	12												
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→	<↑		→	
	Volume	736	44	88	31	62	9	31	2	15	14	1	31	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			F		A	F		A	A
	Storage / *Link Dist.	*282			*751			*543		*543	*888			
	SimTraffic 95th Queue	117			22			108		35	47			
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	6	4	56	33	4	4	15	1,491	67	4	785	5	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	F		B	E			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	34		56	74			90			54			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑>		<↑		→	←	↑	→	
	Volume	9	820	45	36	1,494	220	71	14	49	99	9	7	
	Phasing	pm+pt			pm+pt					Perm	pm+pt		Perm	
	Synchro LOS	A	B		A	A		E		B	D	D	B	B
	SimTraffic LOS	C	B		B	A		E		B	D	D	B	B
	Storage / *Link Dist.	175	*943		175	*313		*790		150	*718	*718	220	
	SimTraffic 95th Queue	14	331		46	288		118		53	140	26	22	
	Queue Block Time (%)		5			3								
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑>	→	←	↑↑					←	<↑	→	
	Volume		755	214	93	1,194					678	1	556	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		C	A	D	B					C	C	D	C
	SimTraffic LOS		C	A	D	B					C	D	C	C
	Storage / *Link Dist.		*313	*313	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		320	303	132	229					292	292	419	
	Queue Block Time (%)		1		1	1								
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑	→→				
	Volume	131	1,302			328	102	960	4	828				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	C			C	A	D	D	D				C
	SimTraffic LOS	C	C			C	A	C	C	C				C
	Storage / *Link Dist.	175	*410			*324	200	500	*1,137	500				
	SimTraffic 95th Queue	225	460			140	42	369	369	319				
	Queue Block Time (%)		13											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	711	584	834	4	211	17	153	18	7	8	2	66	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	B	A	A	C	C		E	C		D	C	B	B
	SimTraffic LOS	B	A	A	D	B		D	D		E	E	A	B
	Storage / *Link Dist.	200	*324	200	100	*848		300	*785		100	*808	300	
	SimTraffic 95th Queue	316	247	119	12	85		109	37		31	38	42	
	Queue Block Time (%)	6	1											

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				438	0	132		1,126			893		
	Phasing													
	Synchro LOS				D	A			A			B		B
	SimTraffic LOS				D	D			A			B		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				407				207			294		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								1,126	154	31	1,299		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	C	A		A
	Storage / *Link Dist.								*299	*299	200			
	SimTraffic 95th Queue								3	4	53			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				126	1	292	821	988			825	474	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	B	C	A			C	A	B
	SimTraffic LOS				D	B	A	C	A			C	A	B
	Storage / *Link Dist.				425	*1,134	425	*351	*351			*299	*299	
	SimTraffic 95th Queue				108	108	106	362	140			251	120	
	Queue Block Time (%)							1						
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								1,809	719		710	240	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.									25			25	
	SimTraffic 95th Queue												15	
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←←	↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	141	55	145	247		1,056		1,331	24	94	616		
	Phasing	Prot		Perm	Prot		Over			Perm	Prot			
	Synchro LOS	D	E	C	F		E		C	A	C	A		D
	SimTraffic LOS	D	E	B	E		C		C	A	C	A		C
	Storage / *Link Dist.	500	*1,543	500	300		300		*783	500	*200	*200		
	SimTraffic 95th Queue	143	93	81	384		456		399	30	99	4		
	Queue Block Time (%)				1		8							
65	W 62nd St & Site Driveway (Signalized -- Cycle Length: 65)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		70	50	41	537		715	0	6				
	Phasing			Perm										
	Synchro LOS		B	A	B			C	A					B
	SimTraffic LOS		C	A	B			B	C					B
	Storage / *Link Dist.		*473	*473	*843			*941						
	SimTraffic 95th Queue		125	125	180			209						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	123	11	71	212	16	427	55	805	62	106	792	110	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	D	B		D	D	C	C	C	A	A	A		C
	SimTraffic LOS	E	E		D	C	B	D	C	A	C	B		C

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*783		
	SimTraffic 95th Queue	133	200		231	174	275	88	364	43	108	176		
	Queue Block Time (%)	21	3				1		2					
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→	<↑		→	
	Volume	50	97	32	16	159	2	53	1	16	177	2	443	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			A		A	A		A	A
	Storage / *Link Dist.	*282			*751			*543		*543	*888		*888	
	SimTraffic 95th Queue	30			17			53		40	88		29	
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	5	4	46	46	4	4	56	913	46	4	1,065	6	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	E		C	F			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	32		62	80			115			111			
	Queue Block Time (%)			1										
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑>		<↑		→	←	↑	→	
	Volume	4	1,079	74	36	953	90	47	9	40	406	25	15	
	Phasing	pm+pt			pm+pt					Perm	pm+pt		Perm	
	Synchro LOS	B	C		A	B		E		B	D	C	B	C
	SimTraffic LOS	F	E		C	B		D		C	D	C	B	D
	Storage / *Link Dist.	175	*943		175	*313		*790		150	*718	*718	220	
	SimTraffic 95th Queue	74	825		72	284		104		58	513	153	31	
	Queue Block Time (%)		36			3								
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑>	→	←	↑↑					←	<↑	→	
	Volume		600	925	752	951					116	1	130	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		D	A	D	A					E	E	B	C
	SimTraffic LOS		D	A	B	A					E	D	A	B
	Storage / *Link Dist.		*313	*313	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		397	232	258	285					93	93	71	
	Queue Block Time (%)		20		13	1								
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑	→→				
	Volume	332	385			1,405	553	298	1	160				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	A			A	A	E	E	E				B
	SimTraffic LOS	F	B			B	A	F	F	D				C
	Storage / *Link Dist.	175	*410			*324	200	500	*1,137	500				
	SimTraffic 95th Queue	278	586			365	145	240	240	112				
	Queue Block Time (%)	64	11			4								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	101	301	142	3	629	4	658	6	6	17	48	670	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	C	B	A	C	D		E	B		E	C	C	D
	SimTraffic LOS	C	A	A	F	E		E	B		E	D	C	D
	Storage / *Link Dist.	200	*324	200	100	*848		300	*785		100	*808	300	
	SimTraffic 95th Queue	102	98	60	32	526		437	13		80	316	316	
	Queue Block Time (%)					57		10				29	29	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				170	0	70		803			955		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				D	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				127				93			115		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								803	994	255	870		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.								*301	*301	200			
	SimTraffic 95th Queue								10	6	127			
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				188	1	490	171	1,307			737	133	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				C	C	C	C	A			B	A	B
	SimTraffic LOS				C	C	C	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301		
	SimTraffic 95th Queue				101	92	198	148	302			122		
	Queue Block Time (%)													
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,478	188		626	299	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*226	5				
	SimTraffic 95th Queue								21					
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	689	14	596	4		27		950	8	13	613		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	C	C	D	B		A		B		D	B		C
	SimTraffic LOS	C	C	B	C		B		B		D	A		B
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	293	293	260	13		44		317		35	123		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 90)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	161	12	79	56	11	210	84	587	96	325	711	178	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	E	B		D	C	B		E			C		D
	SimTraffic LOS	E	D		D	C	A		F			C		D
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	137	277		74	26	81		720			347		
	Queue Block Time (%)	37	1											
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		339	94	33	244		33		16				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			B		A				A
	Storage / *Link Dist.		*304		*756			*542		*542				
	SimTraffic 95th Queue		6		38			48		40				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	60	36	4	4	16	758	71	4	837	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	C		B	C			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	23		58	61			51			25			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	10	875	48	39	762	308	75	14	52	125	10	8	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			A			E		B	D	C	B	B
	SimTraffic LOS	B			A			E		B	D	C	B	B
	Storage / *Link Dist.	*943			*314			*798		150	*726	*726	220	
	SimTraffic 95th Queue	231			185			116		56	151	29	21	
	Queue Block Time (%)							1						
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑>	→	←	↑↑					←	<↑	→	
	Volume		808	244	98	845					718	1	264	
	Phasing			Perm	pm+pt						Perm		Perm	
	Synchro LOS		C	A	D	A					D	D	C	C
	SimTraffic LOS		C	A	D	A					D	D	B	C
	Storage / *Link Dist.		*314	*314	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		339	289	121	82					328	328	143	
	Queue Block Time (%)		1		1									
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑	→→				
	Volume	148	1,378			252	108	691	4	869				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	B	B			C	B	C	C	D				C
	SimTraffic LOS	C	B			C	A	C	D	C				C
	Storage / *Link Dist.	175	*410			*325	200	500	*1,137	500				
	SimTraffic 95th Queue	245	445			141	53	300	300	336				
	Queue Block Time (%)	1	10											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	759	624	864	4	130	18	159	19	8	9	2	70	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	B	A	A	C	D		E	C		E	C	B	B
	SimTraffic LOS	B	A	A	C	D		D	D		D	D	A	B
	Storage / *Link Dist.	200	*325	200	100	*850		300	*786		100	*808	300	
	SimTraffic 95th Queue	329	249	118	13	97		118	39		27	39	48	
	Queue Block Time (%)	7	1											

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				440	0	128		1,021			951		
	Phasing													
	Synchro LOS				C	A			A			B		B
	SimTraffic LOS				C	B			A			B		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				217				160			219		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								1,021	159	31	1,361		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	A	A		A
	Storage / *Link Dist.										200	*368		
	SimTraffic 95th Queue										46	4		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes				←	<↑	→→	←	↑↑			↑↑↑	→	
	Volume				140	1	312	504	868			879	482	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				D	D	A	D	A			C	B	B
	SimTraffic LOS				C	E	B	C	A			B	A	B
	Storage / *Link Dist.				425	*979	425	300	*351			*301	*301	
	SimTraffic 95th Queue				83	80	130	346	251			182	156	
	Queue Block Time (%)							3	1					
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→		↑↑	→	
	Volume								1,372	181		763	256	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*226	5				
	SimTraffic 95th Queue								27					
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	<↑	→	←		→		↑↑>		←	↑↑		
	Volume	145	14	198	6		50		1,358	12	31	732		
	Phasing	Perm		Perm	D.Pm		custom				Prot			
	Synchro LOS	D	D	B	C		B		A		D	A		A
	SimTraffic LOS	C	C	A	C		B		A		C	A		A
	Storage / *Link Dist.	500	*1,549	400	300		*1,480		*795		150	*226		
	SimTraffic 95th Queue	90	83	87	21		58		139		58	71		
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 75)													
	Lanes	←	↑>		←	↑	→		<↑↑>			<↑↑>		
	Volume	131	12	75	93	17	400	59	839	74	234	584	118	
	Phasing	Perm			Perm		Perm							
	Synchro LOS	D	B		D	C	B		D			D		D
	SimTraffic LOS	E	C		C	C	B		E			C		D
	Storage / *Link Dist.	90	*568		*304	*304	200		*853			*795		
	SimTraffic 95th Queue	129	183		101	30	188		518			444		
	Queue Block Time (%)	21	1											
75	City West Pkwy N & Retail Driveway (Unsignalized)													
	Lanes		↑↑		↑↑			←		→				
	Volume		286	34	17	454		57		17				
	Sign Control		Free		Free			Stop						
	Synchro LOS		n/a		n/a			n/a		n/a				n/a
	SimTraffic LOS		A		A			B		A				A
	Storage / *Link Dist.		*304		*756			*542		*542				
	SimTraffic 95th Queue		3		28			63		40				

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	49	49	4	4	60	963	49	4	744	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	E		B	D			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	33		55	71			110			36			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	<↑↑>			<↑↑>			<↑		→	←	↑	→	
	Volume	4	758	79	39	1,006	142	50	10	42	302	27	16	
	Phasing									Perm	pm+pt		Perm	
	Synchro LOS	B			B			E		B	D	C	B	B
	SimTraffic LOS	B			B			E		B	D	C	B	C
	Storage / *Link Dist.	*943			*314			*798		150	*726	*726	220	
	SimTraffic 95th Queue	291			273			94		47	365	94	32	
	Queue Block Time (%)													
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑>	→	←	↑↑					←	<↑	→	
	Volume		417	686	790	1,030					123	1	157	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		C	A	B	A					E	E	B	B
	SimTraffic LOS		D	A	B	A					D	D	B	B
	Storage / *Link Dist.		*314	*314	175	*410					500	*1,182	500	
	SimTraffic 95th Queue		332	249	272	396					108	108	84	
	Queue Block Time (%)		5		22	1								
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑	→	←	<↑	→→				
	Volume	205	334			1,485	584	336	1	168				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	A			A	A	E	E	E				B
	SimTraffic LOS	F	B			A	A	F	F	D				C
	Storage / *Link Dist.	175	*410			*325	200	500	*1,137	500				
	SimTraffic 95th Queue	296	532			412	91	310	310	107				
	Queue Block Time (%)	52	7			4								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	108	248	147	3	676	4	678	7	7	18	51	715	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	C	A	A	C	D		D	B		E	C	C	D
	SimTraffic LOS	D	A	A	F	E		E	B		E	D	C	D
	Storage / *Link Dist.	200	*325	200	100	*850		300	*786		100	*808	300	
	SimTraffic 95th Queue	146	15	36	15	587		451	80		66	355	355	
	Queue Block Time (%)					59		8				39	39	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				172	0	71		815			1,154		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				C	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				127				124			150		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								815	1,007	261	1,065		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	C	A		A
	Storage / *Link Dist.								*299	*299	200	*368		
	SimTraffic 95th Queue								6	11	167	75		
	Queue Block Time (%)										1			
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				670	1	490	196	1,333			930	135	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	D	D	A			C	A	C
	SimTraffic LOS				D	C	C	D	B			C	A	C
	Storage / *Link Dist.				425	*1,134	425	*351	*351			*299		
	SimTraffic 95th Queue				422	381	243	141	319			306		
	Queue Block Time (%)								1			1		
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								1,529	231		1,302	299	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*200	25			25	
	SimTraffic 95th Queue								4			55	15	
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes	←←	↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	702	381	616	22		88		970	181	650	651		
	Phasing	Prot		Perm	D.Pm		Over			Perm	Prot			
	Synchro LOS	E	E	F	D		B		C	B	E	A		E
	SimTraffic LOS	D	D	C	F		B		E	B	E	A		D
	Storage / *Link Dist.	500	*1,543	500	300		300		*783	500	*200	*200		
	SimTraffic 95th Queue	407	441	419	31		42		497	151	346	92		
	Queue Block Time (%)								3		26			
65	W 62nd St & Site Driveway (Unsignalized)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		426	753	4	28		52	0	39				
	Sign Control		Stop		Stop			Free						
	Synchro LOS		n/a	n/a	n/a			n/a	n/a					n/a
	SimTraffic LOS		C	A	A			A	A					A
	Storage / *Link Dist.		*476	*476	*843			*949						
	SimTraffic 95th Queue		236	236	41			12						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	161	12	79	70	11	228	84	762	790	383	728	178	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	C	B		C	C	B	C	D	D	D	B		C
	SimTraffic LOS	D	D		C	C	A	D	D	C	D	B		C
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*783		
	SimTraffic 95th Queue	130	163		78	23	106	119	525	433	437	251		

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)	15	2						1	6	1			
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→	<↑		→	
	Volume	753	339	94	33	244	2	33	2	16	12	1	32	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			F		E	F		A	C
	Storage / *Link Dist.	*282			*751			*543		*543	*888			
	SimTraffic 95th Queue	227			34			408		209	79			
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	60	36	4	4	16	1,628	71	4	868	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	F		B	F			A			A			A
	Storage / *Link Dist.	*674		65	*451			*940			*688			
	SimTraffic 95th Queue	38		59	132			122			56			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑>		<↑		→	←←	↑	→	
	Volume	10	906	48	39	1,631	308	75	14	52	137	10	8	
	Phasing	pm+pt			pm+pt					Perm	pm+pt		Perm	
	Synchro LOS	A	B		A	B		E		B	D	D	B	B
	SimTraffic LOS	D	B		B	B		E		B	D	D	C	B
	Storage / *Link Dist.	175	*940		175	*311		*790		150	300	*718	220	
	SimTraffic 95th Queue	14	266		94	359		146		55	113	30	25	
	Queue Block Time (%)		2			10		2						
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑↑>	→	←	↑↑					←	<↑	→	
	Volume		826	269	98	1,329					718	1	650	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		C	A	D	B					C	C	D	C
	SimTraffic LOS		C	A	D	B					C	D	D	C
	Storage / *Link Dist.		*311	125	*346	*346					*1,178	*1,178	500	
	SimTraffic 95th Queue		334	334	126	346					440	440	636	
	Queue Block Time (%)		18	18		1								
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑↑	→	←	<↑	→→				
	Volume	160	1,384			349	108	1,078	4	869				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	C			C	A	D	D	D				C
	SimTraffic LOS	C	C			C	A	D	E	C				C
	Storage / *Link Dist.	*346	*346			*383	250	500	*1,134	500				
	SimTraffic 95th Queue	211	411			109	46	514	514	322				
	Queue Block Time (%)		7											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	759	630	864	4	227	18	159	19	8	9	2	70	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	B	A	A	C	C		E	C		E	C	B	B
	SimTraffic LOS	B	A	A	D	B		D	D		E	E	A	B
	Storage / *Link Dist.	250	*383	250	100	*848		300	*781		100	*793	300	
	SimTraffic 95th Queue	378	275	114	15	95		108	35		22	36	42	
	Queue Block Time (%)	6	1											

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				461	0	137		1,195			966		
	Phasing													
	Synchro LOS				D	A			A			B		B
	SimTraffic LOS				D	D			A			B		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				418				201			329		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								1,195	163	33	1,394		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	C	A		A
	Storage / *Link Dist.								*299	*299	200	*368		
	SimTraffic 95th Queue								3	5	53	50		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				173	1	312	852	1,046			894	500	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	B	D	A			C	A	B
	SimTraffic LOS				D	D	A	C	A			C	A	B
	Storage / *Link Dist.				425	*1,134	425	*351	*351			*299	*299	
	SimTraffic 95th Queue				131	131	117	387	165			272	154	
	Queue Block Time (%)							2						
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								1,898	791		811	256	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*200	25			25	
	SimTraffic 95th Queue								6				16	
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←←	↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	149	39	199	249		920		1,620	24	74	736		
	Phasing	Prot		Perm	Prot		Over			Perm	Prot			
	Synchro LOS	D	E	C	F		D		C	A	C	A		C
	SimTraffic LOS	D	E	B	E		C		E	A	C	A		D
	Storage / *Link Dist.	500	*1,543	500	300		300		*783	500	*200			
	SimTraffic 95th Queue	153	81	119	240		354		763	211	69			
	Queue Block Time (%)						2		7					
65	W 62nd St & Site Driveway (Unsignalized)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		30	51	35	384		731	0	4				
	Sign Control		Stop		Stop			Free						
	Synchro LOS		n/a	n/a	n/a			n/a	n/a					n/a
	SimTraffic LOS		E	A	F			A	A					E
	Storage / *Link Dist.		*476	*476	*843			*949						
	SimTraffic 95th Queue		150	150	520			33						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	131	12	75	285	17	661	59	851	121	238	829	118	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	C	B		C	D	D	D	D	A	D	B		C
	SimTraffic LOS	E	E		D	C	D	F	E	A	E	C		D
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*783		
	SimTraffic 95th Queue	135	249		271	434	380	227	533	163	387	264		

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)	22	4		1	17	31		16					
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→	<↑		→	
	Volume	51	286	34	17	454		57	1	17	174	2	453	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			A		A	D		C	B
	Storage / *Link Dist.	*282			*751			*543		*543	*888		*888	
	SimTraffic 95th Queue	59			129			84		33	211		353	
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	4	4	49	49	4	4	60	1,022	49	4	1,181	4	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	F		D	F			A			A			A
	Storage / *Link Dist.	*674		65	*451			*940			*688			
	SimTraffic 95th Queue	50		70	201			219			174			
	Queue Block Time (%)			4										
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑>		<↑		→	←←	↑	→	
	Volume	4	1,195	79	39	1,065	142	50	10	42	476	27	16	
	Phasing	pm+pt			pm+pt					Perm	pm+pt		Perm	
	Synchro LOS	A	C		A	A		E		B	D	C	B	C
	SimTraffic LOS	E	E		C	B		D		C	E	D	B	D
	Storage / *Link Dist.	175	*940		175	*311		*790		150	300	*718	220	
	SimTraffic 95th Queue	42	892		50	353		107		66	560	243	34	
	Queue Block Time (%)		45			6		1			14			
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑↑>	→	←	↑↑					←	<↑	→	
	Volume		678	1,036	790	1,063					123	1	183	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		C	A	C	A					E	E	C	B
	SimTraffic LOS		E	A	C	A					E	D	B	B
	Storage / *Link Dist.		*311	125	*346	*346					*1,178	*1,178	500	
	SimTraffic 95th Queue		416	255	403	28					97	97	98	
	Queue Block Time (%)		33	4	5									
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑↑	→	←	<↑	→→				
	Volume	380	421			1,492	584	362	1	168				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	F	A			B	A	E	E	D				C
	SimTraffic LOS	E	A			C	B	F	A	D				C
	Storage / *Link Dist.	*346	*346			*383	250	500	*1,134	500				
	SimTraffic 95th Queue	450	100			472	237	253	253	106				
	Queue Block Time (%)	15				11	1							
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	108	335	147	3	683	4	678	7	7	18	51	715	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	B	A	A	C	D		D	B		E	D	D	D
	SimTraffic LOS	C	B	A	F	F		E	C		E	E	D	E
	Storage / *Link Dist.	250	*383	250	100	*848		300	*781		100	*793	300	
	SimTraffic 95th Queue	120	113	64	56	906		406	19		36	405	405	
	Queue Block Time (%)					70		6				46	46	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				172	0	71		821			1,172		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				D	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				129				125			135		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								821	1,007	261	1,083		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.								*299	*299	200	*368		
	SimTraffic 95th Queue								3	13	129	34		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				694	1	490	211	1,339			948	135	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	D	D	A			C	A	C
	SimTraffic LOS				E	D	D	D	B			C	A	C
	Storage / *Link Dist.				425	*1,134	425	*351	*351			*299		
	SimTraffic 95th Queue				427	423	229	149	281			309		
	Queue Block Time (%)				1							1		
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								1,550	241		1,343	299	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*200	25			25	
	SimTraffic 95th Queue								6			66	24	
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes	←←	↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	702	428	615	24		121		969	187	694	649		
	Phasing	Prot		Perm	D.Pm		Over			Perm	Prot			
	Synchro LOS	E	E	F	D		C		D	B	E	A		D
	SimTraffic LOS	D	D	C	F		B		E	B	E	A		D
	Storage / *Link Dist.	500	*1,543	500	300		300		*783	500	*200	*200		
	SimTraffic 95th Queue	399	493	460	40		50		510	124	353	97		
	Queue Block Time (%)								4		32			
65	W 62nd St & Site Driveway (Signalized -- Cycle Length: 85)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		564	711	6	67		49	0	43				
	Phasing			Perm										
	Synchro LOS		A	A	A			B	A					A
	SimTraffic LOS		A	A	A			C	B					A
	Storage / *Link Dist.		*473	*473	*843			*941						
	SimTraffic 95th Queue		185	185	36			71						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	161	12	79	69	11	227	84	768	752	380	731	178	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	C	B		C	C	B	C	D	C	C	B		C
	SimTraffic LOS	D	D		C	D	A	D	D	C	D	B		C
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*783		
	SimTraffic 95th Queue	130	160		76	30	94	123	420	393	413	264		

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)	14	1						3	3				
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→	<↑		→	
	Volume	711	339	94	33	244	9	33	2	16	13	1	30	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			F		A	F		A	B
	Storage / *Link Dist.	*282			*751			*543		*543	*888			
	SimTraffic 95th Queue	215			39			181		37	52			
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	6	4	60	36	4	4	16	1,594	71	4	869	5	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	F		B	F			A			A			A
	Storage / *Link Dist.	*674		65	*451			*940			*688			
	SimTraffic 95th Queue	37		58	79			92			41			
	Queue Block Time (%)			1										
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑>		<↑		→	←←	↑	→	
	Volume	10	907	48	39	1,597	308	75	14	52	136	10	8	
	Phasing	pm+pt			pm+pt					Perm	pm+pt		Perm	
	Synchro LOS	A	B		A	A		E		B	D	D	B	B
	SimTraffic LOS	C	B		B	B		E		B	D	D	B	B
	Storage / *Link Dist.	175	*940		175	*311		*790		150	300	*718	220	
	SimTraffic 95th Queue	11	262		48	359		123		57	137	26	20	
	Queue Block Time (%)		1			10								
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑↑>	→	←	↑↑					←	<↑	→	
	Volume		828	268	98	1,316					718	1	629	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		C	A	D	B					C	C	D	C
	SimTraffic LOS		C	A	D	B					C	A	D	C
	Storage / *Link Dist.		*311	125	*346	*346					*1,178	*1,178	500	
	SimTraffic 95th Queue		355	355	144	314					456	456	656	
	Queue Block Time (%)		26	26		1								
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑↑	→	←	<↑	→→				
	Volume	159	1,387			355	108	1,058	4	869				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	C			C	A	D	D	D				C
	SimTraffic LOS	C	C			C	A	D	D	C				C
	Storage / *Link Dist.	*346	*346			*383	250	500	*1,134	500				
	SimTraffic 95th Queue	194	416			105	48	438	438	360				
	Queue Block Time (%)		9											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	759	633	864	4	233	18	159	19	8	9	2	70	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	B	A	A	C	C		E	C		E	C	B	B
	SimTraffic LOS	B	A	A	D	C		D	D		E	F	A	B
	Storage / *Link Dist.	250	*383	250	100	*848		300	*781		100	*793	300	
	SimTraffic 95th Queue	403	343	105	13	105		105	54		26	35	45	
	Queue Block Time (%)	10	2			1								

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				461	0	137		1,214			973		
	Phasing													
	Synchro LOS				D	A			A			B		B
	SimTraffic LOS				D	D			A			B		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				395				206			337		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								1,214	163	33	1,401		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	C	A		A
	Storage / *Link Dist.								*299	*299	200	*368		
	SimTraffic 95th Queue								3	6	60	39		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				184	1	312	900	1,065			900	500	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	B	D	A			C	A	C
	SimTraffic LOS				E	D	A	C	A			C	A	B
	Storage / *Link Dist.				425	*1,134	425	*351	*351			*299	*299	
	SimTraffic 95th Queue				159	159	123	400	174			279	179	
	Queue Block Time (%)							3				1		
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								1,966	808		828	256	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*200	25			25	
	SimTraffic 95th Queue								8				19	
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←←	↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	149	55	199	251		1,019		1,605	27	92	736		
	Phasing	Prot		Perm	Prot		Over			Perm	Prot			
	Synchro LOS	D	E	C	F		E		C	A	C	A		D
	SimTraffic LOS	D	E	B	E		C		D	A	C	A		D
	Storage / *Link Dist.	500	*1,543	500	300		300		*783	500	*200	*200		
	SimTraffic 95th Queue	152	90	126	276		415		704	165	86	3		
	Queue Block Time (%)				1		5		6					
65	W 62nd St & Site Driveway (Signalized -- Cycle Length: 65)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		69	48	40	525		691	0	6				
	Phasing			Perm										
	Synchro LOS		B	A	B			C	A					B
	SimTraffic LOS		B	A	B			B	B					B
	Storage / *Link Dist.		*473	*473	*843			*941						
	SimTraffic 95th Queue		122	122	168			195						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	131	12	75	275	17	647	59	854	118	238	831	118	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	C	B		C	D	E	D	D	A	D	B		D
	SimTraffic LOS	E	E		D	C	C	E	D	A	E	C		D
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*783		
	SimTraffic 95th Queue	135	212		246	426	381	165	467	56	316	257		

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)	21	3			11	19		11					
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→	<↑		→	
	Volume	48	286	34	17	454	2	57	1	17	171	2	428	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			B		A	C		B	A
	Storage / *Link Dist.	*282			*751			*543		*543	*888		*888	
	SimTraffic 95th Queue	51			105			95		41	197		311	
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	5	4	49	49	4	4	60	1,022	49	4	1,171	6	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	F		F	F			A			A			B
	Storage / *Link Dist.	*674		65	*451			*940			*688			
	SimTraffic 95th Queue	216		77	289			212			186			
	Queue Block Time (%)			10	5									
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑>		<↑		→	←←	↑	→	
	Volume	4	1,185	79	39	1,065	142	50	10	42	467	27	16	
	Phasing	pm+pt			pm+pt					Perm	pm+pt		Perm	
	Synchro LOS	A	C		A	A		E		B	D	C	B	C
	SimTraffic LOS	D	E		C	B		E		C	D	C	B	D
	Storage / *Link Dist.	175	*940		175	*311		*790		150	300	*718	220	
	SimTraffic 95th Queue	60	903		73	352		96		63	400	98	35	
	Queue Block Time (%)		32			5					5			
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑↑>	→	←	↑↑					←	<↑	→	
	Volume		675	1,019	790	1,065					123	1	181	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		C	A	C	A					E	E	C	B
	SimTraffic LOS		D	A	C	A					D	E	B	B
	Storage / *Link Dist.		*311	125	*346	*346					*1,178	*1,178	500	
	SimTraffic 95th Queue		421	240	367	25					97	97	97	
	Queue Block Time (%)		26	6	4									
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑↑	→	←	<↑	→→				
	Volume	370	428			1,494	584	361	1	168				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	E	A			B	A	E	E	D				C
	SimTraffic LOS	E	A			C	B	F	A	D				D
	Storage / *Link Dist.	*346	*346			*383	250	500	*1,134	500				
	SimTraffic 95th Queue	443	119			466	221	518	518	149				
	Queue Block Time (%)	9				7								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	108	342	147	3	685	4	678	7	7	18	51	715	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	B	A	A	C	D		D	B		E	D	D	D
	SimTraffic LOS	C	A	A	E	F		E	D		E	E	C	D
	Storage / *Link Dist.	250	*383	250	100	*848		300	*781		100	*793	300	
	SimTraffic 95th Queue	117	101	53	47	755		370	22		84	385	385	
	Queue Block Time (%)					58		4				39	39	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				162	0	67		760			1,137		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				D	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				121				106			131		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								760	950	248	1,051		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.								*299	*299	200	*368		
	SimTraffic 95th Queue								4	6	123	56		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				711	1	459	182	1,252			923	127	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	D	E	B			C	A	C
	SimTraffic LOS				E	C	C	E	C			C	A	C
	Storage / *Link Dist.				425	*1,134	425	*351	*351			*299		
	SimTraffic 95th Queue				507	492	211	133	322			327		
	Queue Block Time (%)								1			2		
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								1,434	179		1,355	280	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		B	A	A
	Storage / *Link Dist.								*200	25		*351	25	
	SimTraffic 95th Queue								9			310	10	
	Queue Block Time (%)											5		
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes	←	<↑↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	663	543	515	30		165		785	225	856	498		
	Phasing	Prot		Perm	D.Pm		Over			Perm	Prot			
	Synchro LOS	E	E	C	E		C		D	C	E	A		D
	SimTraffic LOS	E	E	B	F		B		D	C	E	A		D
	Storage / *Link Dist.	500	*1,544	500	350		400		*781	500	*200	*200		
	SimTraffic 95th Queue	498	498	266	39		62		369	164	377	52		
	Queue Block Time (%)										50			
65	W 62nd St & Site Driveway (Signalized -- Cycle Length: 85)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		781	811	8	111		56	0	55				
	Phasing			Perm										
	Synchro LOS		B	A	A			B	A					A
	SimTraffic LOS		B	A	A			C	B					B
	Storage / *Link Dist.		*473	*473	*843			*941						
	SimTraffic 95th Queue		319	319	45			81						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	151	11	74	28	10	89	79	770	753	179	699	166	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	C	B		C	C	B	C	C	A	C	C		B
	SimTraffic LOS	D	D		D	D	A	C	C	B	C	B		B
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*781		
	SimTraffic 95th Queue	124	103		54	28	52	86	258	193	167	228		

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)	10												
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>			<↑		→	<↑		→	
	Volume	811	44	88	31	62	16	31	2	15	17	1	35	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			F		A	F		A	A
	Storage / *Link Dist.	*282			*751			*543		*543	*888			
	SimTraffic 95th Queue	140			16			101		35	61			
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	8	4	56	33	4	4	15	1,590	67	4	791	5	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	F		B	F			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	43		55	101			72			50			
	Queue Block Time (%)													
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑>		<↑		→	←	↑	→	
	Volume	9	827	45	36	1,593	220	71	14	49	101	9	7	
	Phasing	pm+pt			pm+pt					Perm	pm+pt		Perm	
	Synchro LOS	A	B		A	A		E		B	D	D	B	B
	SimTraffic LOS	C	B		B	B		E		B	D	C	B	B
	Storage / *Link Dist.	175	*943		175	*314		*790		150	*718	*718	220	
	SimTraffic 95th Queue	13	222		41	325		114		62	132	24	23	
	Queue Block Time (%)					5								
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑↑>	→	←	↑↑					←	<↑	→	
	Volume		759	217	93	1,255					678	1	595	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		C	A	C	B					C	C	D	C
	SimTraffic LOS		C	A	C	B					C	C	C	C
	Storage / *Link Dist.		*314	125	*406	*406					*1,178	*1,178	500	
	SimTraffic 95th Queue		321	321	117	229					278	278	454	
	Queue Block Time (%)		18	18										
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑↑	→	←	<↑	→→				
	Volume	132	1,306			349	102	1,000	4	828				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	C	C			C	A	D	D	D				C
	SimTraffic LOS	C	C			C	A	C	C	C				C
	Storage / *Link Dist.	*406	*406			*324	250	500	*1,134	500				
	SimTraffic 95th Queue	157	439			91	44	408	408	322				
	Queue Block Time (%)		2											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	711	588	834	4	233	17	153	18	7	8	2	66	
	Phasing	pm+pt		Perm	pm+pt			Prot			Prot		Perm	
	Synchro LOS	B	A	A	B	D		E	C		E	C	B	B
	SimTraffic LOS	B	A	A	E	D		D	E		E	D	A	B
	Storage / *Link Dist.	250	*324	250	100	*848		300	*782		100	*792	300	
	SimTraffic 95th Queue	339	304	119	15	129		95	42		22	36	42	
	Queue Block Time (%)	6	2			1								

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				438	0	132		1,172			901		
	Phasing													
	Synchro LOS				D	A			B			B		B
	SimTraffic LOS				D	D			A			B		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				377				210			285		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								1,172	154	31	1,308		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.								*299	*299	200	*368		
	SimTraffic 95th Queue								3	6	47	10		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				138	1	292	923	1,034			833	474	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	B	C	A			C	A	B
	SimTraffic LOS				D	E	A	C	A			C	A	B
	Storage / *Link Dist.				425	*1,134	425	*351	*351			*299	*299	
	SimTraffic 95th Queue				111	111	91	402	171			243	141	
	Queue Block Time (%)							2						
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								1,957	817		732	240	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*200	25			25	
	SimTraffic 95th Queue								5				9	
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←←	↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	141	74	145	298		1,277		1,357	32	115	616		
	Phasing	Prot		Perm	Prot		Over			Perm	Prot			
	Synchro LOS	D	F	C	F		F		D	A	C	A		E
	SimTraffic LOS	D	E	A	F		C		D	A	C	A		D
	Storage / *Link Dist.	500	*1,543	500	350		400		*783	500	*200	*200		
	SimTraffic 95th Queue	153	107	74	544		538		512	32	105	1		
	Queue Block Time (%)				2		9		1					
65	W 62nd St & Site Driveway (Signalized -- Cycle Length: 65)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		113	55	51	736		788	0	8				
	Phasing			Perm										
	Synchro LOS		A	A	C			C	A					B
	SimTraffic LOS		C	A	E			C	C					D
	Storage / *Link Dist.		*473	*473	*843			*941						
	SimTraffic 95th Queue		139	139	581			248						
	Queue Block Time (%)				3									
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	123	11	71	231	16	453	55	813	66	106	843	110	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	D	B		D	D	C	C	C	A	B	A		C
	SimTraffic LOS	E	E		D	C	C	D	C	A	C	B		C
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*783		
	SimTraffic 95th Queue	130	171		245	233	305	128	391	45	122	186		

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)	15	2				2		4					
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			<↑↑>					→	<↑		→	
	Volume	55	97	32	16	159	4	53		16	201	2	488	
	Sign Control	Free			Free						Stop			
	Synchro LOS	n/a			n/a					n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A					A	A		A	A
	Storage / *Link Dist.	*282			*751					*543	*888		*888	
	SimTraffic 95th Queue	31			9					39	95		59	
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	5	4	46	46	4	4	56	925	46	4	1,133	8	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	F		C	E			A			A			A
	Storage / *Link Dist.	*674		65	*451			*943			*688			
	SimTraffic 95th Queue	34		61	104			180			49			
	Queue Block Time (%)			1										
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑>		<↑		→	←	↑	→	
	Volume	4	1,147	74	36	966	90	47	9	40	424	25	15	
	Phasing	pm+pt			pm+pt					Perm	pm+pt		Perm	
	Synchro LOS	B	C		A	B		E		B	E	C	B	C
	SimTraffic LOS	C	C		C	B		D		C	E	C	B	C
	Storage / *Link Dist.	175	*943		175	*314		*790		150	*718	*718	220	
	SimTraffic 95th Queue	8	552		72	345		86		65	608	330	33	
	Queue Block Time (%)		6			6					4			
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes		↑↑↑>	→	←	↑↑					←	<↑	→	
	Volume		649	961	752	960					116	1	132	
	Phasing			Free	pm+pt						Perm		Perm	
	Synchro LOS		C	A	C	A					E	E	B	B
	SimTraffic LOS		C	A	C	A					D	D	A	B
	Storage / *Link Dist.		*314	125	*406	*406					*1,178	*1,178	500	
	SimTraffic 95th Queue		334	188	441	31					101	101	73	
	Queue Block Time (%)		1	3	3									
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑			↑↑↑	→	←	<↑	→→				
	Volume	349	417			1,411	553	301	1	160				
	Phasing	pm+pt					Perm	Perm		Perm				
	Synchro LOS	D	A			B	A	E	E	E				C
	SimTraffic LOS	D	A			B	A	E	C	D				C
	Storage / *Link Dist.	*406	*406			*324	250	500	*1,134	500				
	SimTraffic 95th Queue	436	97			396	185	205	202	97				
	Queue Block Time (%)	2				6								
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑>		←←	↑>		←	↑>	→	
	Volume	101	334	142	3	636	4	658	6	6	17	48	670	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	A	A	A	C	D		D	B		E	D	D	D
	SimTraffic LOS	C	A	A	F	F		E	C		E	D	C	D
	Storage / *Link Dist.	250	*324	250	100	*848		300	*782		100	*792	300	
	SimTraffic 95th Queue	116	107	60	34	821		377	15		39	288	288	
	Queue Block Time (%)					55		5				30	30	

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				172	0	71		830			1,226		
	Phasing													
	Synchro LOS				C	A			A			A		A
	SimTraffic LOS				D	B			A			A		A
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				120				105			146		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								830	1,007	261	1,137		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	B	A		A
	Storage / *Link Dist.								*299	*299	200	*368		
	SimTraffic 95th Queue								5	16	156	61		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				808	1	490	231	1,348			1,002	135	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	D	E	B			C	A	C
	SimTraffic LOS				E	D	C	E	C			C	A	C
	Storage / *Link Dist.				425	*1,134	425	*351	*351			*299		
	SimTraffic 95th Queue				578	535	304	181	335			336		
	Queue Block Time (%)								1			3		
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								1,579	260		1,512	299	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*200	25		*351	25	
	SimTraffic 95th Queue								4			241	14	
	Queue Block Time (%)											3		
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 170)													
	Lanes	←	<↑↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	702	544	617	31		166		971	225	857	654		
	Phasing	Prot		Perm	D.Pm		Over			Perm	Prot			
	Synchro LOS	E	E	E	E		C		D	C	E	A		D
	SimTraffic LOS	E	E	C	F		C		F	C	E	A		D
	Storage / *Link Dist.	500	*1,544	500	350		400		*781	500	*200	*200		
	SimTraffic 95th Queue	638	621	450	39		69		678	340	367	86		
	Queue Block Time (%)								14		51			
65	W 62nd St & Site Driveway (Signalized -- Cycle Length: 85)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		781	811	8	111		56	0	55				
	Phasing			Perm										
	Synchro LOS		B	A	A			B	A					A
	SimTraffic LOS		B	A	A			C	B					A
	Storage / *Link Dist.		*473	*473	*843			*941						
	SimTraffic 95th Queue		338	338	47			81						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 85)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	161	12	79	71	11	230	84	806	844	387	737	178	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	C	B		C	C	B	C	D	E	D	C		D
	SimTraffic LOS	D	D		C	D	B	D	D	C	D	B		C
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*781		
	SimTraffic 95th Queue	130	153		82	29	116	104	539	414	368	229		

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Queue Block Time (%)	14	1						1	6				
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			↑↑>			<↑		→			→	
	Volume	811	339	94	33	264	16	13	2	36	17		35	
	Sign Control	Free			Free			Stop						
	Synchro LOS	n/a			n/a			n/a		n/a			n/a	n/a
	SimTraffic LOS	A			A			F		A			A	B
	Storage / *Link Dist.	*282			*751			*543		*543				
	SimTraffic 95th Queue	231			37			124		50				
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	8	4	60	36	4	4	16	1,722	71	4	877	5	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	F		B	F			A			A			A
	Storage / *Link Dist.	*674		65	*451			*940			*688			
	SimTraffic 95th Queue	47		61	151			85			80			
	Queue Block Time (%)	1												
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑	→	<↑		→	←←	↑	→	
	Volume	10	915	48	39	1,725	308	75	14	52	138	10	8	
	Phasing	pm+pt			pm+pt		Perm			Perm	pm+pt		Perm	
	Synchro LOS	A	B		A	A	A	E		B	D	D	B	B
	SimTraffic LOS	D	B		B	A	A	D		B	D	D	C	B
	Storage / *Link Dist.	175	*940		175	*312	175	*788		150	300	*704	220	
	SimTraffic 95th Queue	14	280		63	298	141	117		61	116	22	18	
	Queue Block Time (%)		1			6		1						
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes	↑↑↑↑>		→	←←	↑↑					←	<↑	→	
	Volume		833	272	98	1,393					718	1	680	
	Phasing			Free	Prot						Perm		Perm	
	Synchro LOS		C	A	D	C					C	C	E	C
	SimTraffic LOS		D	A	D	B					C	A	D	C
	Storage / *Link Dist.		*312	125	*399	*399					*1,171	*1,171	500	
	SimTraffic 95th Queue		337	337	76	359					416	416	650	
	Queue Block Time (%)		24	24		1								
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←←	↑↑			↑↑↑↑	→	←	<↑	→→				
	Volume	161	1,391			380	108	1,111	4	869				
	Phasing	Prot					Perm	Perm		Perm				
	Synchro LOS	C	C			C	A	D	D	D				C
	SimTraffic LOS	C	C			C	A	D	D	D				C
	Storage / *Link Dist.	*399	*399			*219	175	500	*1,127	500				
	SimTraffic 95th Queue	160	461			131	60	522	522	374				
	Queue Block Time (%)		5											
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑↑>		←←	↑>		←	↑>	→	
	Volume	759	637	864	4	258	18	159	19	8	9	2	70	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	B	A	A	C	C		E	C		E	C	B	B
	SimTraffic LOS	B	A	A	D	C		D	D		E	E	A	B
	Storage / *Link Dist.	175	*219	175	100	*950		300	*780		100	*780	300	
	SimTraffic 95th Queue	244	375	108	17	106		109	43		22	18	43	
	Queue Block Time (%)	19	11			2								

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
20	Red Circle Dr N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←←>	0			↑↑			↑↑		
	Volume				461	0	137		1,266			982		
	Phasing													
	Synchro LOS				D	A			B			B		B
	SimTraffic LOS				D	D			A			B		B
	Storage / *Link Dist.				*1,328				*368			*984		
	SimTraffic 95th Queue				395				223			299		
	Queue Block Time (%)													
30	Red Circle Dr S & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑	→	←	↑↑↑		
	Volume								1,266	163	33	1,409		
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a	n/a	n/a		n/a
	SimTraffic LOS								A	A	C	A		A
	Storage / *Link Dist.									*299	200	*368		
	SimTraffic 95th Queue									6	55	10		
	Queue Block Time (%)													
40	TH 62 North Ramps & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes				←	<↑	→→	←←	↑↑			↑↑↑	→	
	Volume				201	1	312	1,013	1,117			909	500	
	Phasing				Split		Perm	Prot					Perm	
	Synchro LOS				E	E	C	C	A			C	A	C
	SimTraffic LOS				D	E	A	D	A			C	A	B
	Storage / *Link Dist.				*1,134	*1,134	*1,134	*351	*351			*299	*299	
	SimTraffic 95th Queue				137	137	139	435	211			283	220	
	Queue Block Time (%)							5						
50	TH 62 South On Ramps & Shady Oak Rd (Unsignalized)													
	Lanes								↑↑↑↑	→		↑↑↑↑	→	
	Volume								2,130	938		854	256	
	Sign Control								Free			Free		
	Synchro LOS								n/a	n/a		n/a	n/a	n/a
	SimTraffic LOS								A	A		A	A	A
	Storage / *Link Dist.								*200	25			25	
	SimTraffic 95th Queue								14				28	
	Queue Block Time (%)													
60	TH 62 South Off Ramp & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←←	↑	→	←←		→→		↑↑↑	→	←←	↑↑		
	Volume	149	75	200	298		1,280		1,640	32	117	737		
	Phasing	Prot		Perm	Prot		Over			Perm	Prot			
	Synchro LOS	D	E	C	E		F		D	A	D	A		E
	SimTraffic LOS	D	E	B	F		D		D	A	C	A		D
	Storage / *Link Dist.	500	*1,543	500	350		400		*783	500	*200	*200		
	SimTraffic 95th Queue	144	109	120	616		582		708	166	116	8		
	Queue Block Time (%)				7		22		4					
65	W 62nd St & Site Driveway (Signalized -- Cycle Length: 65)													
	Lanes		<↑>	→	<↑↑			←←>	0					
	Volume		113	55	51	736		788	0	8				
	Phasing			Perm										
	Synchro LOS		A	A	B			C	A					B
	SimTraffic LOS		D	A	E			E	E					D
	Storage / *Link Dist.		*473	*473	*843			*941						
	SimTraffic 95th Queue		236	236	509			469						
	Queue Block Time (%)													
70	City West Pkwy N & Shady Oak Rd (Signalized -- Cycle Length: 130)													
	Lanes	←	↑>		←	↑	→	←	↑↑	→	←	↑↑>		
	Volume	131	12	75	300	17	682	59	860	124	238	878	118	
	Phasing	pm+pt			pm+pt		Perm	pm+pt		Perm	pm+pt			
	Synchro LOS	C	B		C	C	E	D	D	A	E	B		D
	SimTraffic LOS	E	E		D	C	C	F	D	A	F	C		D

Node	Intersection	Eastbound			Westbound			Northbound			Southbound			Overall
	Storage / *Link Dist.	90	*556		*282	*282	*282	300	*851	300	500	*783		
	SimTraffic 95th Queue	127	201		256	433	388	145	486	95	441	305		
	Queue Block Time (%)	15	4			11	23		10		2			
75	City West Pkwy N & Site Driveway (Unsignalized)													
	Lanes	<↑↑>			↑↑>			<↑		→	<↑		→	
	Volume	55	286	34	17	454	4	57	1	17	201	2	488	
	Sign Control	Free			Free			Stop			Stop			
	Synchro LOS	n/a			n/a			n/a		n/a	n/a		n/a	n/a
	SimTraffic LOS	A			A			E		A	D		B	B
	Storage / *Link Dist.	*282			*751			*543		*543	*888		*888	
	SimTraffic 95th Queue	59			117			92		38	276		337	
	Queue Block Time (%)													
90	Rowland Road & Shady Oak Rd (Unsignalized)													
	Lanes	<↑		→	<↑>			<↑↑>			<↑↑>			
	Volume	5	4	49	49	4	4	60	1,033	49	4	1,241	8	
	Sign Control	Stop			Stop			Free			Free			
	Synchro LOS	n/a		n/a	n/a			n/a			n/a			n/a
	SimTraffic LOS	F		C	F			A			A			A
	Storage / *Link Dist.	*674		65	*451			*940			*688			
	SimTraffic 95th Queue	35		57	119			182			61			
	Queue Block Time (%)			1										
100	Shady Oak Rd & City West Pkwy S (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑>		←	↑↑	→	<↑		→	←←	↑	→	
	Volume	4	1,256	79	39	1,076	142	50	10	42	490	27	16	
	Phasing	pm+pt			pm+pt		Perm			Perm	pm+pt		Perm	
	Synchro LOS	A	C		A	A	A	E		B	D	C	B	C
	SimTraffic LOS	C	C		C	A	A	D		C	E	D	B	C
	Storage / *Link Dist.	175	*940		175	*312	175	*788		150	300	*704	220	
	SimTraffic 95th Queue	5	591		48	238	45	94		62	508	262	20	
	Queue Block Time (%)		6			2					9			
110	Shady Oak Rd & TH 212 West Ramps (Signalized -- Cycle Length: 120)													
	Lanes	↑↑↑↑>		→	←←	↑↑					←	<↑	→	
	Volume		721	1,066	790	1,073					123	1	185	
	Phasing			Free	Prot						Perm		Perm	
	Synchro LOS		B	A	D	A					D	D	C	B
	SimTraffic LOS		B	A	E	A					D	D	B	C
	Storage / *Link Dist.		*312	125	175	*399					*1,171	*1,171	500	
	SimTraffic 95th Queue		258	260	536	116					95	95	98	
	Queue Block Time (%)		5	7	11									
120	Shady Oak Rd & TH 212 East Ramps (Signalized -- Cycle Length: 120)													
	Lanes	←←	↑↑			↑↑↑↑	→	←	<↑	→→				
	Volume	393	451			1,498	584	365	1	168				
	Phasing	Prot					Perm	Perm		Perm				
	Synchro LOS	D	A			B	A	E	E	D				C
	SimTraffic LOS	C	B			C	A	D	D	D				C
	Storage / *Link Dist.	175	*399			*219	175	500	*1,127	500				
	SimTraffic 95th Queue	212	143			258	193	196	196	100				
	Queue Block Time (%)					5	1							
130	Shady Oak Rd & Flying Cloud Dr (Signalized -- Cycle Length: 120)													
	Lanes	←	↑↑	→	←	↑↑↑>		←←	↑>		←	↑>	→	
	Volume	108	365	147	3	689	4	678	7	7	18	51	715	
	Phasing	pm+pt		Perm	Perm			Prot			Prot		Perm	
	Synchro LOS	B	B	A	D	D		D	B		E	D	D	D
	SimTraffic LOS	C	B	A	D	D		F	E		D	D	C	D
	Storage / *Link Dist.	175	*219	175	100	*950		300	*780		100	*780	300	
	SimTraffic 95th Queue	121	150	75	14	263		583	277		42	210	343	
	Queue Block Time (%)					30		11				14	14	