TECHNICAL MEMORANDUM

Date: April 8, 2020

To: Bryan Lindgren
Neumann Companies

From: Tammi Czewski, P.E., PTOE
Traffic Analysis & Design, Inc.

Subject: **Lake Country Lutheran "East 50 Acres" Residential Development**
Traffic Impact Analysis
Hartland, WI

Introduction

The east 50 acres of the Lake Country Lutheran land is proposed to be developed with residential housing. The land is located east of Campus Drive directly east of the Lake Country Lutheran High School in Hartland, Wisconsin (Exhibit 1). Access to the site will be at several locations along Campus Drive, which includes a new public road connecting Campus Drive and Willow Drive.

This technical memorandum was prepared to address the traffic impacts of the proposed development traffic to the Campus Drive intersections with the new public road and STH 83.

Study Area

Campus Drive is mostly a two-lane, north/south Collector roadway that extends to just over a mile between STH 83 and CTH K to the north. Development along Campus Drive consists of the Lake Country Lutheran High School and Family Church, which has four access driveways to the building's parking areas and sports fields. The posted speed limit along Campus Drive is 25 mph, and there is a paved multi-use trail that runs along the east side of the roadway between the four access driveways. The trail also runs between Campus Drive and Willow Drive, along what will be the alignment for the residential development's new public road.

STH 83 is a Principal Arterial that generally runs north/south through Waukesha County. In the study area, STH 83 extends north from STH 16 and then continues west along Hill Street. STH 83 has a 35-mph posted speed limit and no sidewalks. Development along STH

83 (Hill Street) is mostly single-family residential, with two churches (one with a school) located less than ½ mile west of the signalized intersection with Campus Drive.

Data Collection

At the start of this traffic study project, the State of Wisconsin was operating on the Governor's "stay-at-home" order for the Coronavirus Pandemic. Because this resulted in school closures and significantly lower traffic volumes than normal, TADI utilized WisDOT traffic counts collected in prior years for the intersections and roadways evaluated in this study. This data included a weekday turning movement traffic count at the STH 83/Campus Drive intersection (collected from 6:00 a.m. to 7:00 p.m. in October 2016), and annual average daily traffic volumes (AADT) on STH 83 (reported every three years from 2006 to 2018).

Based on the turning movement traffic count, the peak traffic hours at the STH 83/Campus Drive intersection occurs from 7:30-8:30 a.m. (AM peak hour) and from 3:00-4:00 p.m. (PM peak hour). These peak hours coincide with peak traffic periods for the schools located to the east and west of the intersection. The WisDOT traffic count data is located in Appendix A.

Because turning movement counts were not able to be collected at the Lake Country Lutheran High School driveways, this traffic was estimated in order to determine the Campus Drive through traffic that passes through the future public road intersection to the north of the school driveways. Using trip rates from the Institute of Transportation Engineer's (ITE) *Trip Generation Manual, 10th Edition*, the 193-student school is estimated to generate about 155 trips during the weekday AM peak hour and 110 trips during the weekday PM peak hour. These trips were assigned to/from the school based on existing traffic patterns on the study roadways. The school trip generation table and resulting 2016 peak hour turning movement volumes at the combined school driveways and study intersections are shown on Exhibit 2.

The historical WisDOT AADT data was compiled to forecast growth trends along STH 83, just west of the intersection with Campus Drive. Along that stretch of STH 83, the linear trendline shows that traffic has been relatively stagnant between 2006 and 2018. The calculated traffic growth (non-compounded) from 2006 to 2018 was only 0.1% per year. Since the most-recent data from 2018 shows a jump in traffic from 2015, however, this study estimates a more conservative traffic growth of 0.5% per year. This rate of growth was applied to the 2016 turning movement volumes at the study intersections to forecast traffic to 2020. The historical AADT volumes, plotted graph, and 2020 "background" peak hour turning movement volumes are shown on Exhibit 3.

Proposed Development

The conceptual site plan for the proposed residential development is shown on Exhibit 4. A new public roadway connecting Campus Drive to Willow Drive is proposed to be constructed along the existing alignment of the paved mixed-use trail through the property. The site plan includes 47 single-family residential units on the north side of the new public road, and 134 multi-family residential units on the south side of the new public road. Both

residential areas are proposed to have access driveways to Campus Drive and the new public road.

Based on the fitted curve equations published in the ITE *Trip Generation Manual, 10th Edition*, full buildout of the residential development is expected to generate 1,480 weekday daily trips, with 105 trips during the weekday AM peak hour and 125 trips during the weekday PM peak hour. Based on the existing traffic patterns and routes to/from nearby population centers, it is expected that these trips will travel to/from the site via the west on STH 83/Hill Street (10%), the north on Campus Drive (15%), and the south on STH 83, including STH 16 (75%). The new site trips were assigned to the site driveways and study intersections based on these distribution assumptions. The trip generation table, trip distribution, and traffic assignment for the proposed residential development is shown on Exhibit 5.

The new trips shown on Exhibit 5 were added to the 2020 background traffic volumes from Exhibit 3. The resulting build traffic volumes are shown on Exhibit 6. Exhibit 6 also shows the estimated daily traffic volumes for the new public road as 450 vehicles per day. This was calculated using the same PM peak hour-to-daily trips ratio calculated for STH 83/Hill Street (0.11). At this daily traffic volume level, it is considered a "low-volume" residential street that would likely operate with good traffic flow and low vehicle delays at the intersections with the residential access driveways.

Peak Hour Traffic Operations & Queues

The Campus Drive intersections with STH 83 and the new public road were analyzed using the Synchro 10 traffic analysis model (outputs based on the Highway Capacity Manual, 6th Edition) and the peak hour turning movement volumes estimated for each intersection. Intersection operation is defined by "level of service". Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS 'A', to very poor, represented by LOS 'F'. For the purpose of this study, LOS D or better was used to define acceptable peak hour operating conditions.

The Campus Drive/STH 83 intersection was evaluated with the existing geometrics and existing actuated-coordinated traffic signal control. The Campus Drive/new public road intersection was evaluated with single lanes at each approach and stop sign control for traffic turning from the new public road. Turning volumes at the new public road are not expected to be high enough to warrant separate left or right turn storage lanes on Campus Drive.

As shown on Exhibit 7, the study intersections are expected to operate acceptably at LOS C or better for all traffic movements during the peak hours, with both the 2020 background and the 2020 build traffic volumes. Traffic queues at the Campus Drive/STH 83 intersection are not expected to extend beyond the available turn lane storage. The Synchro peak hour traffic capacity analysis worksheets for the background and build conditions are located in Appendix B.

Recommendations/Conclusions

The Campus Drive/STH 83 intersection is expected to continue to operate acceptably during the peak hours with the additional traffic expected from the proposed residential development. Therefore, no changes to the geometrics or traffic control is recommended at this intersection.

The Campus Drive/new public road intersection is also expected to operate acceptably during the peak hours with the additional traffic expected from the proposed residential development. This new intersection is recommended to be constructed with the following geometrics:

- Single shared through/left-turn lane on southbound Campus Drive
- Single shared through/right-turn lane on northbound Campus Drive
- Single shared left-turn/right-turn lane on westbound "new public road"
- Stop sign control on the westbound approach for the new public road
- Two-lane, undivided cross-section on the new public road

It is recommended that the new public road and intersection with Campus Drive be designed according to the geometric standards for the respective road agency requirements.

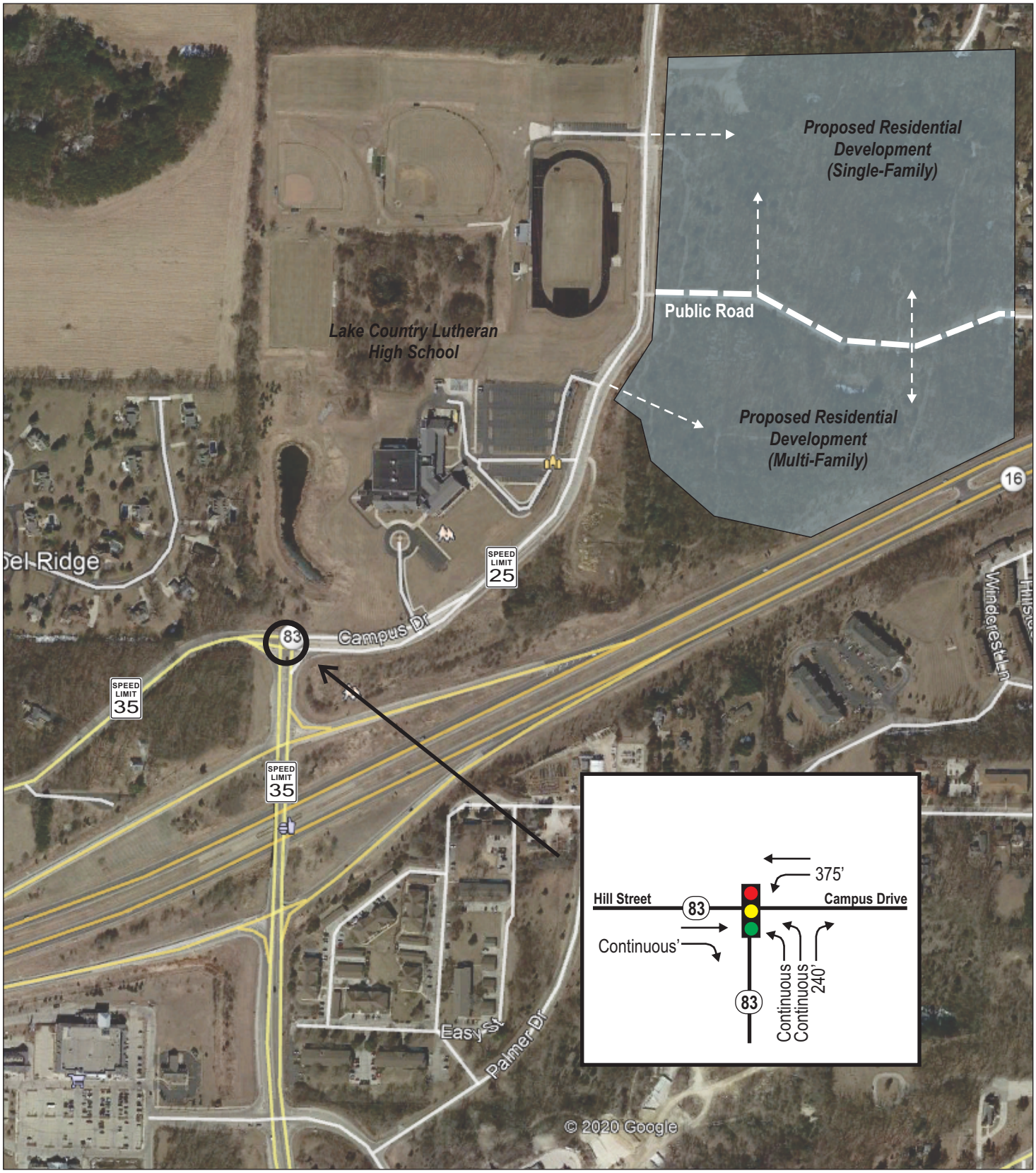

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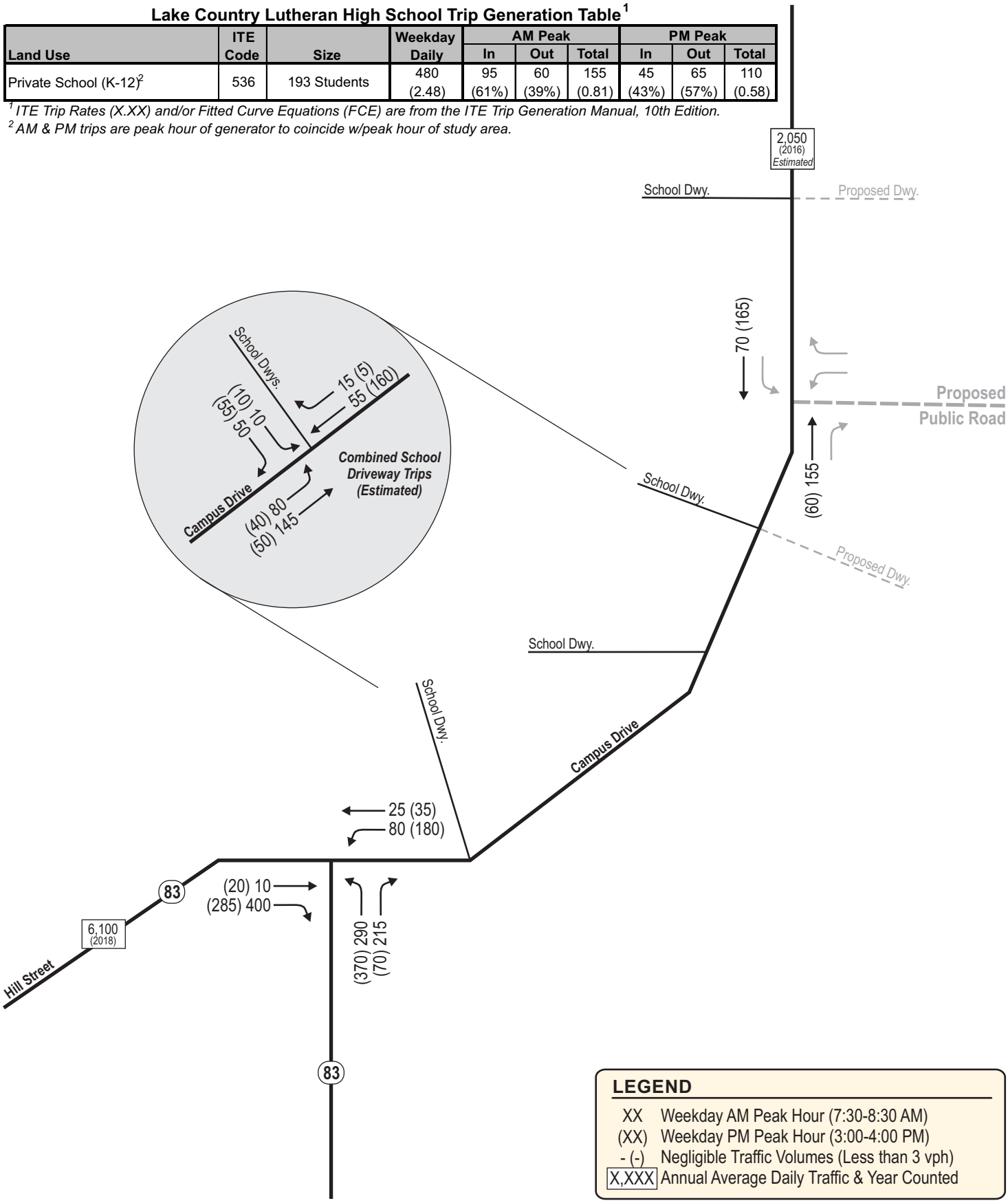
EXHIBIT 1
SITE LOCATION MAP

LAKE COUNTRY LUTHERAN LAND "EAST 50 ACRES" TIA - HARTLAND, WI

Lake Country Lutheran High School Trip Generation Table[1]

Land Use	ITE Code	Size	Weekday Daily	AM Peak In	AM Peak Out	AM Peak Total	PM Peak In	PM Peak Out	PM Peak Total
Private School (K-12)[2]	536	193 Students	480 (2.48)	95 (61%)	60 (39%)	155 (0.81)	45 (43%)	65 (57%)	110 (0.58)

[1] *ITE Trip Rates (X.XX) and/or Fitted Curve Equations (FCE) are from the ITE Trip Generation Manual, 10th Edition.*
[2] *AM & PM trips are peak hour of generator to coincide w/peak hour of study area.*



LEGEND

XX	Weekday AM Peak Hour (7:30-8:30 AM)
(XX)	Weekday PM Peak Hour (3:00-4:00 PM)
- (-)	Negligible Traffic Volumes (Less than 3 vph)
X,XXX	Annual Average Daily Traffic & Year Counted

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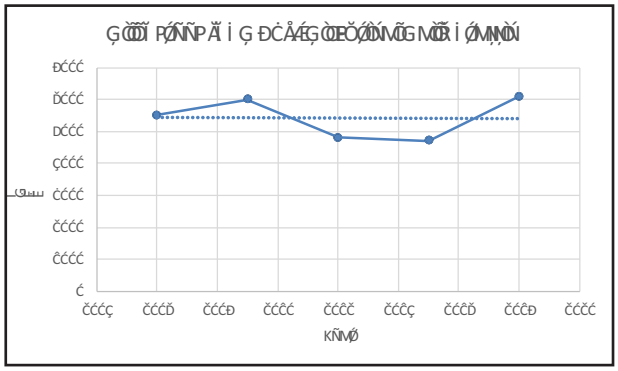
EXHIBIT 2
2016 TRAFFIC VOLUMES

LAKE COUNTRY LUTHERAN LAND "EAST 50 ACRES" TIA - HARTLAND, WI

WisDOT AADT	
Year	Hill Street
2006	5500
2009	6000
2012	4800
2015	4700
2018	6100
Growth/Yr.	0.1%
Est. Growth	0.5%



The calculated growth rate on Hill Street, just west of the STH 83/Campus Drive intersection was about 0.1% per year. For this study, a conservative 0.5% per year increase in volumes (not compounded) was applied to all turning movements to estimate 2020 traffic volume conditions.

LEGEND

XX	Weekday AM Peak Hour (7:30-8:30 AM)
(XX)	Weekday PM Peak Hour (3:00-4:00 PM)
- (-)	Negligible Traffic Volumes (Less than 3 vph)

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EXHIBIT 3
2020 BACKGROUND TRAFFIC VOLUMES

LAKE COUNTRY LUTHERAN LAND "EAST 50 ACRES" TIA - HARTLAND, WI

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EXHIBIT 4
CONCEPTUAL SITE PLAN

LAKE COUNTRY LUTHERAN LAND "EAST 50 ACRES" TIA - HARTLAND, WI

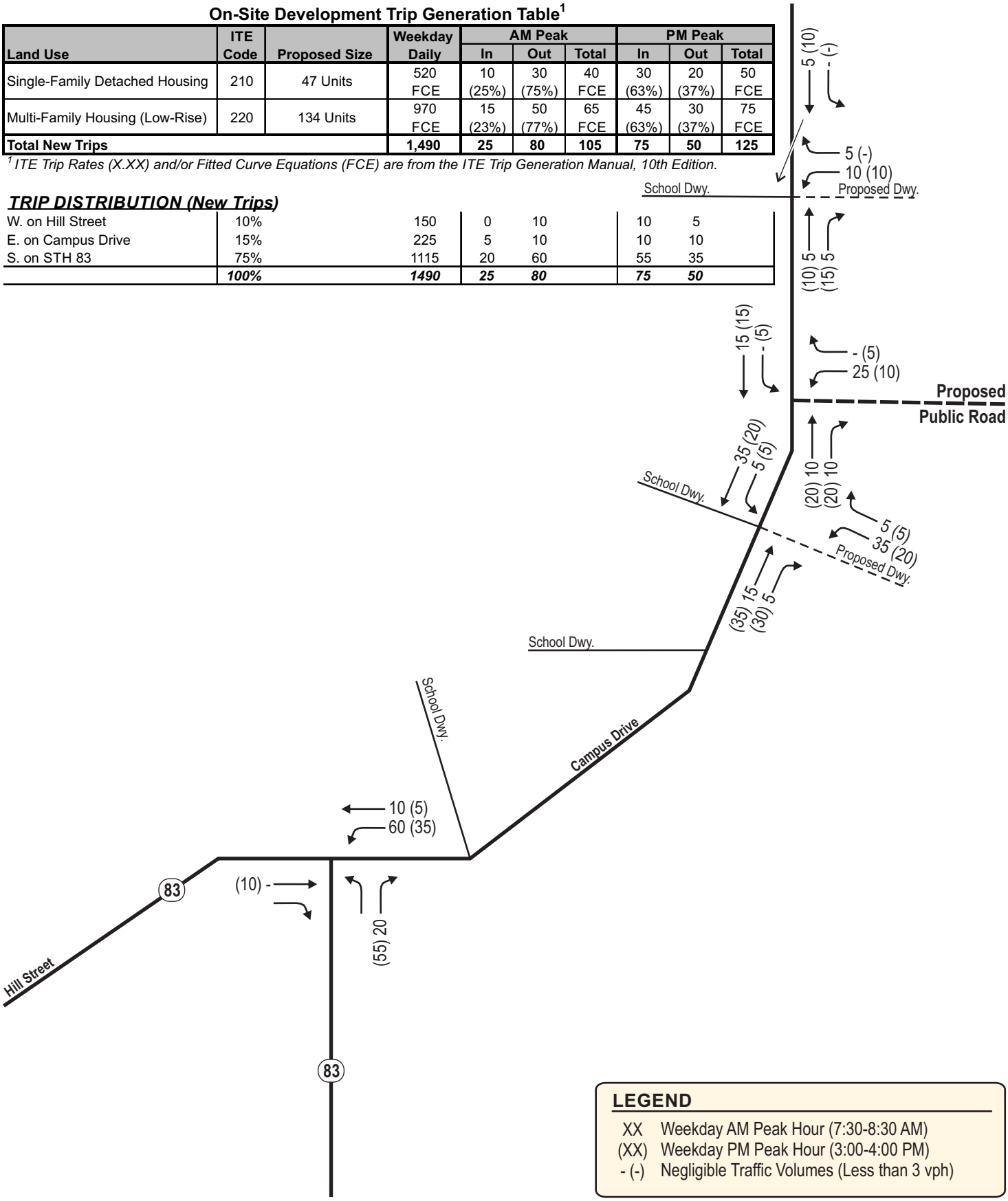
On-Site Development Trip Generation Table[1]

Land Use	ITE Code	Proposed Size	Weekday Daily	AM Peak In	AM Peak Out	AM Peak Total	PM Peak In	PM Peak Out	PM Peak Total
Single-Family Detached Housing	210	47 Units	520 FCE	10 (25%)	30 (75%)	40 FCE	30 (63%)	20 (37%)	50 FCE
Multi-Family Housing (Low-Rise)	220	134 Units	970 FCE	15 (23%)	50 (77%)	65 FCE	45 (63%)	30 (37%)	75 FCE
Total New Trips			**1,490**	**25**	**80**	**105**	**75**	**50**	**125**

[1] *ITE Trip Rates (X.XX) and/or Fitted Curve Equations (FCE) are from the ITE Trip Generation Manual, 10th Edition.*

TRIP DISTRIBUTION (New Trips)

W. on Hill Street	10%	150	0	10	10	5
E. on Campus Drive	15%	225	5	10	10	10
S. on STH 83	75%	1115	20	60	55	35
	100%	***1490***	***25***	***80***	***75***	***50***



LEGEND

XX	Weekday AM Peak Hour (7:30-8:30 AM)
(XX)	Weekday PM Peak Hour (3:00-4:00 PM)
- (-)	Negligible Traffic Volumes (Less than 3 vph)

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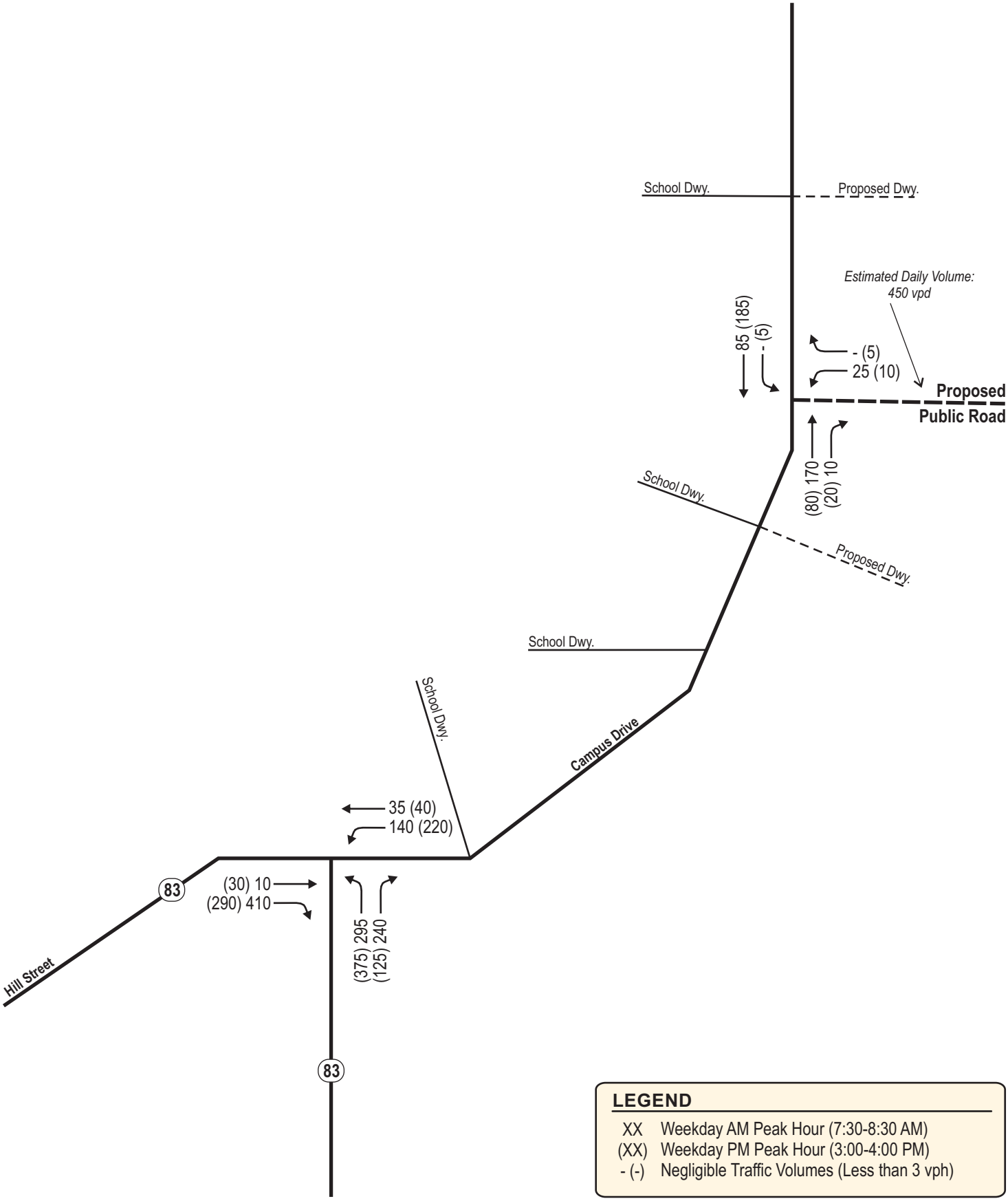
EXHIBIT 5
ON-SITE DEVELOPMENT TRIP GENERATION & ASSIGNMENT

LAKE COUNTRY LUTHERAN LAND "EAST 50 ACRES" TIA - HARTLAND, WI



LEGEND

XX	Weekday AM Peak Hour (7:30-8:30 AM)
(XX)	Weekday PM Peak Hour (3:00-4:00 PM)
- (-)	Negligible Traffic Volumes (Less than 3 vph)

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EXHIBIT 6
BUILD TRAFFIC VOLUMES

LAKE COUNTRY LUTHERAN LAND "EAST 50 ACRES" TIA - HARTLAND, WI

Year 2020 Background Traffic Operations & Queues

Intersection	Peak Hour	MOE[1,2]	Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Hill Street (STH 83)/Campus Drive & STH 83 (Traffic Signal)	AM	LOS	-	C	A	C	C	-	A	-	A	-		
		Queue	-	15	125	55	25	-	60	-	35	-		
	PM	LOS	-	C	A	C	B	-	B	-	A	-		
		Queue	-	30	45	110	30	-	75	-	15	-		

[1] *(--) indicates a movement that is prohibited, not analyzed, or does not exist; All free-flow movements shown as LOS A.*

[2] *Queue is maximum of the 50th & 95th percentile queue, measured in feet.*

Year 2020 Build Traffic Operations & Queues

Intersection	Peak Hour	MOE[1,2]	Level of Service per Movement by Approach											
			Eastbound			Westbound			Northbound			Southbound		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Hill Street (STH 83)/Campus Drive & STH 83 (Traffic Signal)	AM	LOS	-	C	A	C	B	-	A	-	A	-		
		Queue	-	15	60	90	30	-	60	-	40	-		
	PM	LOS	-	C	A	C	B	-	B	-	A	-		
		Queue	-	35	45	130	35	-	75	-	20	-		
Campus Drive & New Public Road (Stop Sign)	AM	LOS	-			B			-	A		A		-
		Queue	-			5			-	0		0		-
	PM	LOS	-			A			-	A		A		-
		Queue	-			5			-	0		0		-

[1] *(--) indicates a movement that is prohibited, not analyzed, or does not exist; All free-flow movements shown as LOS A.*

[2] *Queue is maximum of the 50th & 95th percentile queue, measured in feet.*

APPENDIX A

TRAFFIC COUNTS

Intersection Traffic Volume Report

Count Basics	Version 2013.J4.1		Page 1 of 11
Start Date:	Wednesday, October 26, 2016	Weekday	Schools in Session
Total Number of Hours Counted: 13		Non-Holiday	No Special Events

Base Information, Observed (13) Hour and Estimated (24) Hour Volume Summaries

Intersection of: STH 83 and Hill Street

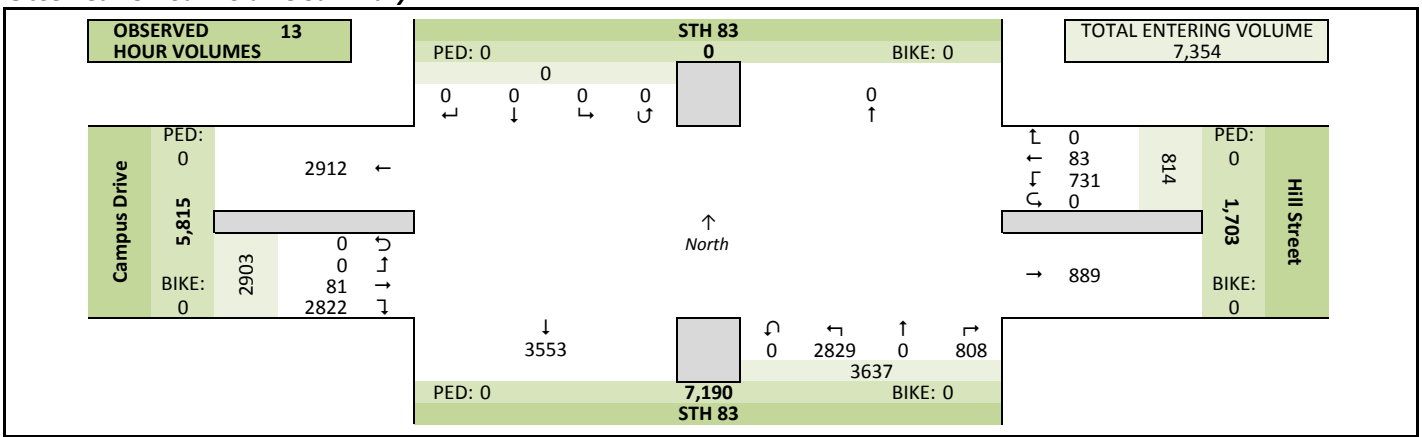
Site Information

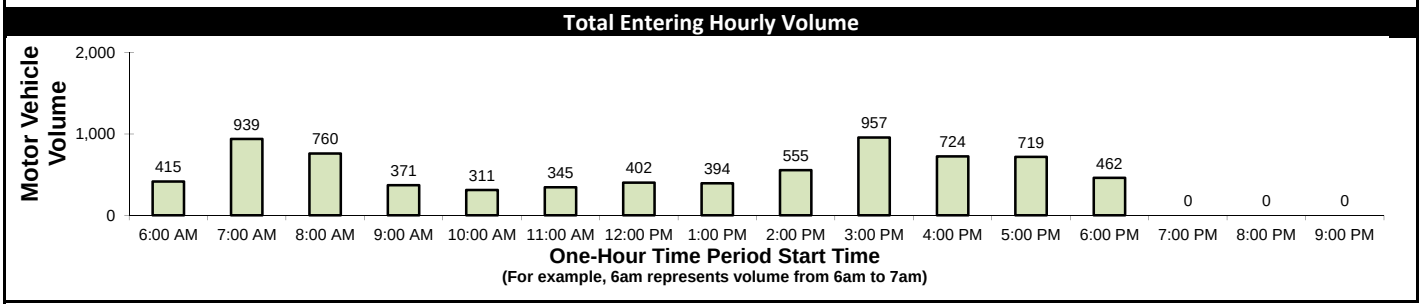
Municipality	Hartland		
County	Waukesha	WisDOT Region	SE
Traffic Control	Traffic Signal		
Roadway Names		North Direction	↑
North Leg	STH 83		
East Leg	Hill Street		
South Leg	STH 83		
West Leg	Campus Drive		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
Pre-school children	None		
Elementry school age children	None		
Visually impaired (white cane/helper dog)	None		
Elderly/disabled (except wheelchairs)	None		
Wheelchairs/electric scooters	None		
Other (describe)	None	None	

Count Information

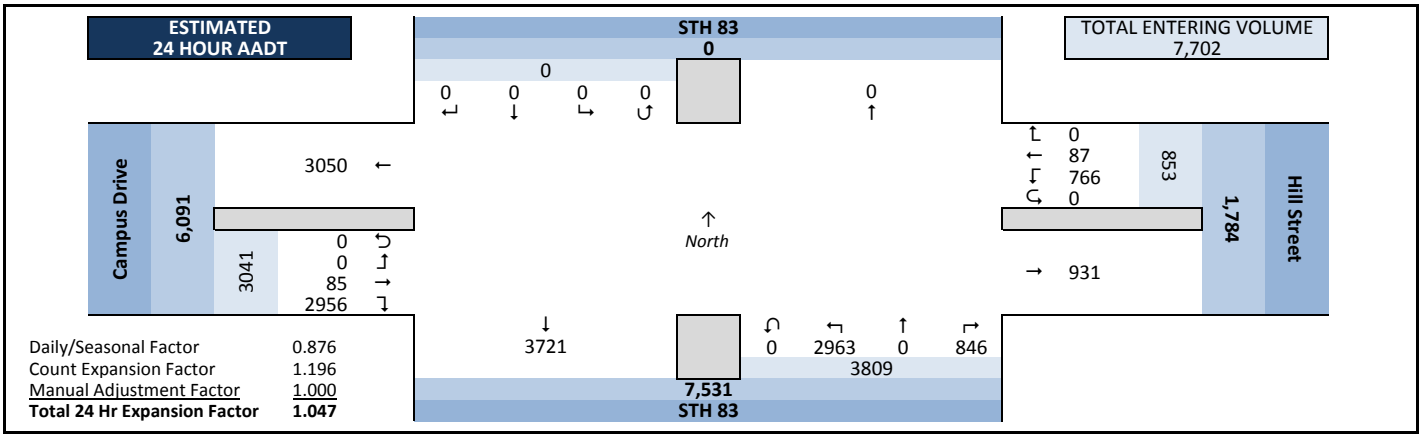
Hrs Counted:	6:00 AM-7:00 PM				
1st Day of Count	Wednesday, October 26, 2016			Weather	
AM Peak Period	Thursday, October 27, 2016			Clear & Dry	
Midday Peak Period	Wednesday, October 26, 2016			Clear & Dry	
PM Peak Period	Thursday, October 27, 2016			Clear & Dry	
Calculated Peak Hours					
AM	7:30-8:30am	MD	12:15-1:15pm	PM	3:00-4:00pm
Peak Hours Selected for Analysis					
AM	7:30-8:30am	MD	12:15-1:15pm	PM	3:00-4:00pm
Daily/Seasonal Adjustment Group	(2) Urban Arterials & Collectors				
Count Expansion Group	(2) Urban Arterials & Collectors				
Daily/Seasonal Adjustment Factor	0.876	Count Expansion Factor	1.196		
Company Name	TADi			Manual Adj.	1.000
Observers	AM Peak Period	Amy Scheuerlein			
	Midday Peak Period	Karlyn Bieberitz			
	PM Peak Period	Ted Atwell			
Comments	Version 2014.J4 [2014 DOT Factors]				

Observed 13 Hour Volume Summary





Estimated 24 Hour AADT



Intersection Traffic Volume Report

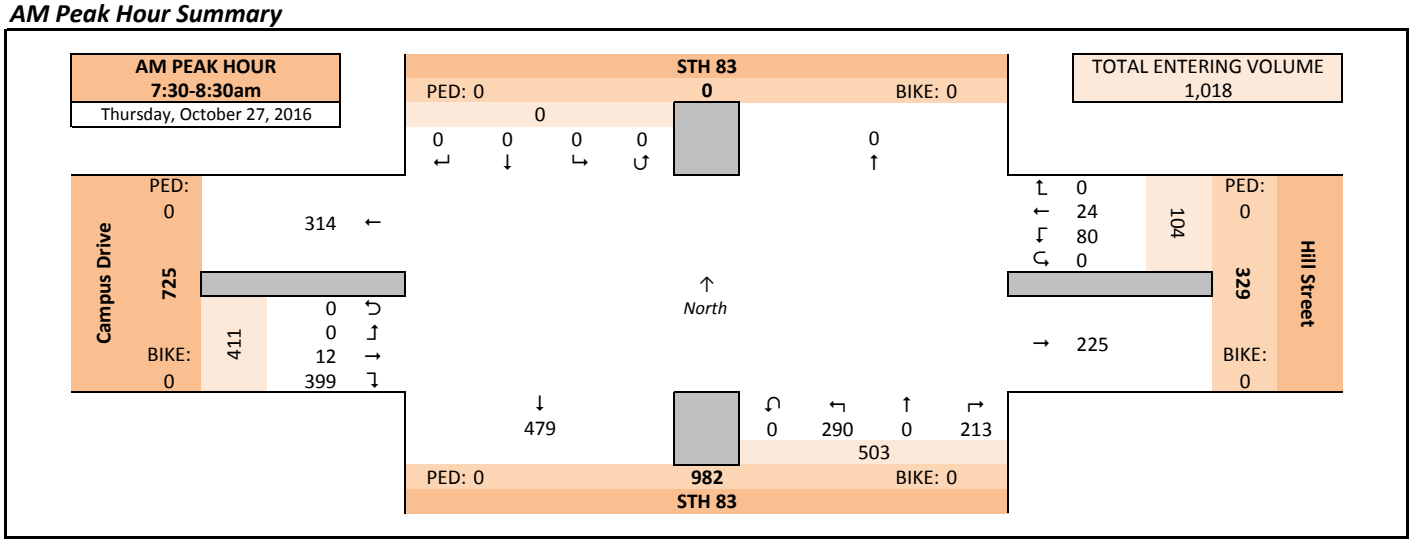
Count Basics			Page 2 of 11
Start Date:	Wednesday, October 26, 2016	Weekday	Schools in Session
Total Number of Hours Counted: 13		Non-Holiday	No Special Events

Peak Hour Volume Graphical Summary

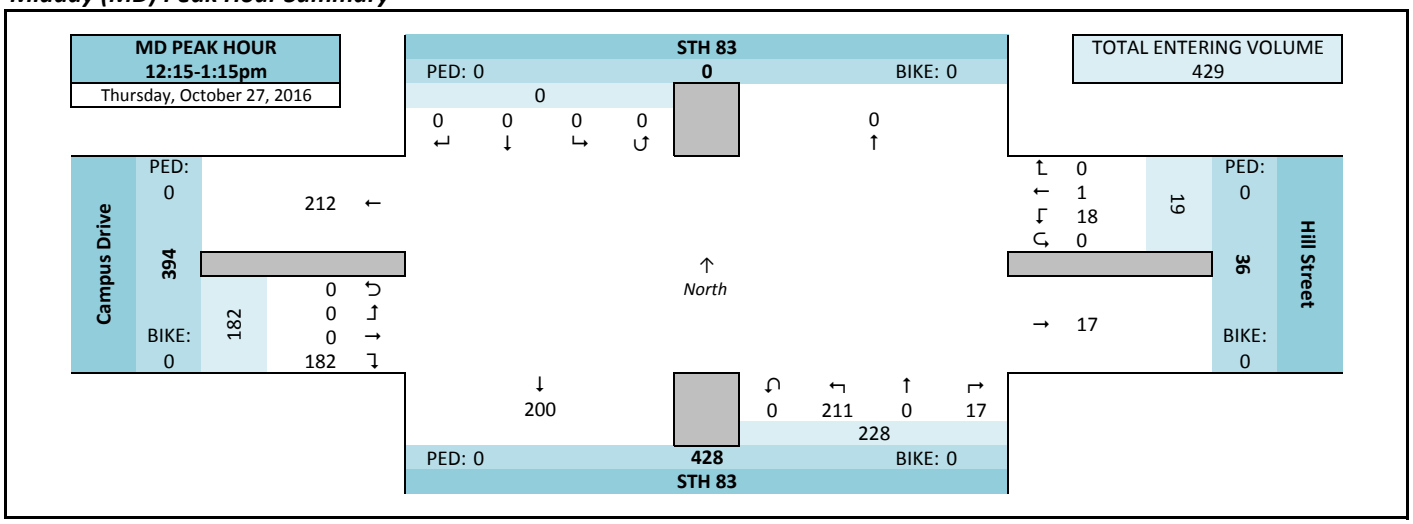
All Motor Vehicles

STH 83 and Hill Street

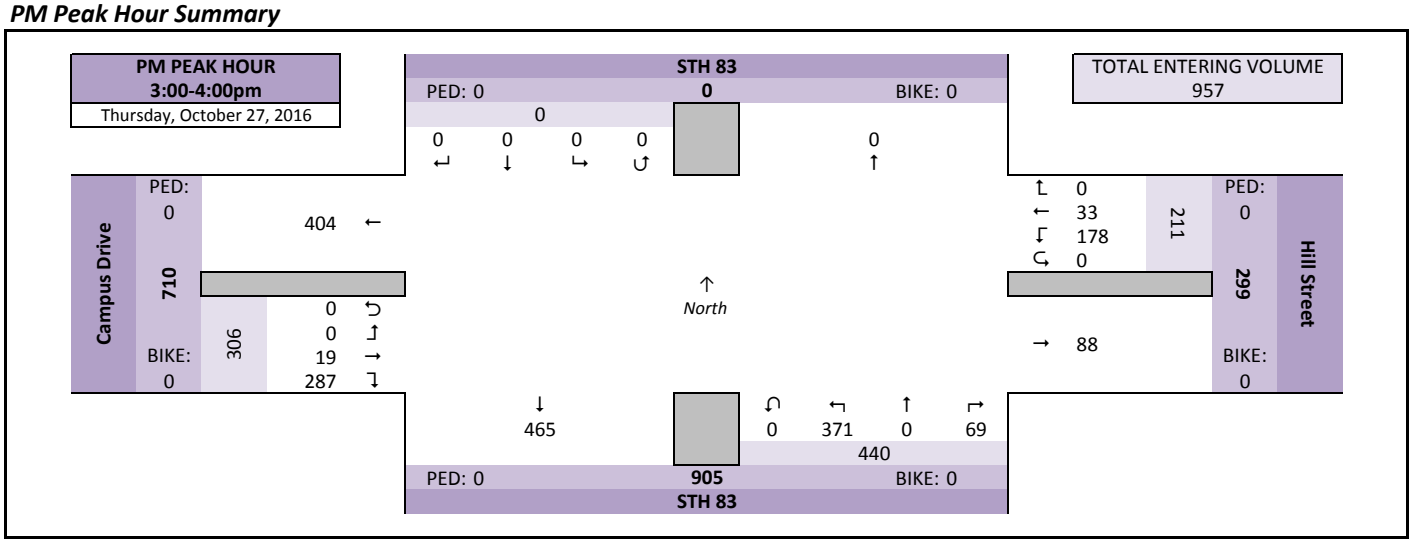
AM Peak Hour Summary



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics			Page 3 of 11
Start Date:	Wednesday, October 26, 2016	Weekday	Schools in Session
Total Number of Hours Counted: 13		Non-Holiday	No Special Events

Peak Hour Volume Summary

STH 83 and Hill Street

All Motor Vehicles

Peak Hour Volumes, Truck Percentages, and PHFs

Thursday, October 27, 2016		From North					From East					From South					From West					
	AM Peak Hour	STH 83					Hill Street					STH 83					Campus Drive					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
AM Peak Hour	7:30 AM	0	0	0	0	0	0	2	28	0	30	73	0	33	0	106	88	3	0	0	91	227
	7:45 AM	0	0	0	0	0	0	8	38	0	46	117	0	63	0	180	86	2	0	0	88	314
	8:00 AM	0	0	0	0	0	0	9	8	0	17	17	0	93	0	110	84	0	0	0	84	211
	8:15 AM	0	0	0	0	0	0	5	6	0	11	6	0	101	0	107	141	7	0	0	148	266
	Peak Hour Volume	0	0	0	0	0	0	24	80	0	104	213	0	290	0	503	399	12	0	0	411	1018
	Rounded Hourly Volume	0	0	0	0	0	0	25	80	0	105	215	0	290	0	505	400	10	0	0	410	1020
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	2.9	0.0	0.0	3.8	0.0	2.2	3.5	0.0	0.0	0.0	3.4	2.8
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.0	0.9	0.0	5.5	0.0	3.6	1.3	0.0	0.0	0.0	1.2	2.4
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	12.5	1.2	0.0	3.8	0.9	0.0	9.3	0.0	5.8	4.8	0.0	0.0	0.0	4.6	5.1
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.53	0.00	0.57	0.46	0.00	0.72	0.00	0.70	0.71	0.43	0.00	0.00	0.69	0.81

Thursday, October 27, 2016		From North					From East					From South					From West					
	MD Peak Hour	STH 83					Hill Street					STH 83					Campus Drive					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
Midday (MD) Peak Hour	12:15 PM	0	0	0	0	0	0	0	1	0	1	6	0	50	0	56	55	0	0	0	55	112
	12:30 PM	0	0	0	0	0	0	0	7	0	7	3	0	60	0	63	39	0	0	0	39	109
	12:45 PM	0	0	0	0	0	0	0	6	0	6	3	0	50	0	53	41	0	0	0	41	100
	1:00 PM	0	0	0	0	0	0	1	4	0	5	5	0	51	0	56	47	0	0	0	47	108
	Peak Hour Volume	0	0	0	0	0	0	1	18	0	19	17	0	211	0	228	182	0	0	0	182	429
	Rounded Hourly Volume	0	0	0	0	0	0	0	20	0	20	15	0	210	0	225	180	0	0	0	180	425
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0	3.3	0.0	3.9	5.5	0.0	0.0	0.0	5.5	4.4
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	5.3	5.9	0.0	5.2	0.0	5.3	1.6	0.0	0.0	0.0	1.6	3.7
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	5.3	17.6	0.0	8.5	0.0	9.2	7.1	0.0	0.0	0.0	7.1	8.2
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.64	0.00	0.68	0.71	0.00	0.88	0.00	0.90	0.83	0.00	0.00	0.00	0.83	0.96

Thursday, October 27, 2016		From North					From East					From South					From West					
	PM Peak Hour	STH 83					Hill Street					STH 83					Campus Drive					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
PM Peak Hour	3:00 PM	0	0	0	0	0	0	17	79	0	96	27	0	76	0	103	50	0	0	0	50	249
	3:15 PM	0	0	0	0	0	0	9	38	0	47	17	0	116	0	133	47	0	0	0	47	227
	3:30 PM	0	0	0	0	0	0	6	28	0	34	11	0	106	0	117	91	7	0	0	98	249
	3:45 PM	0	0	0	0	0	0	1	33	0	34	14	0	73	0	87	99	12	0	0	111	232
	Peak Hour Volume	0	0	0	0	0	0	33	178	0	211	69	0	371	0	440	287	19	0	0	306	957
	Rounded Hourly Volume	0	0	0	0	0	0	35	180	0	215	70	0	370	0	440	285	20	0	0	305	960
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	1.8	4.9	21.1	0.0	0.0	5.9	2.7
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.5	1.4	0.0	1.6	0.0	1.6	0.7	0.0	0.0	0.0	0.7	1.0
	% Trucks (Total)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.5	1.4	0.0	3.8	0.0	3.4	5.6	21.1	0.0	0.0	6.5	3.8
	Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.56	0.00	0.55	0.64	0.00	0.80	0.00	0.83	0.72	0.40	0.00	0.00	0.69	0.96

Peak Hour Pedestrian and Bicyclist Volumes

Pedestrians and Bicyclists		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			Total Ped & Bike
		STH 83			Hill Street			STH 83			Campus Drive			
	15-Minute Start Time	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Volume
AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
MD	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0

Intersection Traffic Volume Report

Count Basics		*Page 5 of 11*
Start Date: Wednesday, October 26, 2016	Weekday	Schools in Session
Total Number of Hours Counted: 13	Non-Holiday	No Special Events

15-Minute Motor Vehicle Data

All Motor Vehicles

STH 83 and Hill Street

15-Minute Motor Vehicle Data

	15-Minute Time Period Start Time	From North (↓) STH 83					From East (←) Hill Street					From South (↑) STH 83					From West (→) Campus Drive					15-Min Totals	Hourly Sum	PHF
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	4	0	4	1	0	19	0	20	38	0	0	0	38	62	415	0.66
	6:15 AM	0	0	0	0	0	0	1	5	0	6	2	0	34	0	36	57	0	0	0	57	99	561	0.67
	6:30 AM	0	0	0	0	0	0	1	1	0	2	13	0	30	0	43	49	2	0	0	51	96	652	0.78
	6:45 AM	0	0	0	0	0	0	1	7	0	8	49	0	29	0	78	71	1	0	0	72	158	783	0.86
	7:00 AM	0	0	0	0	0	0	0	13	0	13	85	0	43	0	128	64	3	0	0	67	208	939	0.75
	7:15 AM	0	0	0	0	0	0	1	15	0	16	47	0	52	0	99	73	2	0	0	75	190	942	0.75
	7:30 AM	0	0	0	0	0	0	2	28	0	30	73	0	33	0	106	88	3	0	0	91	227	1018	0.81
	7:45 AM	0	0	0	0	0	0	8	38	0	46	117	0	63	0	180	86	2	0	0	88	314	946	0.75
	8:00 AM	0	0	0	0	0	0	9	8	0	17	17	0	93	0	110	84	0	0	0	84	211	760	0.71
	8:15 AM	0	0	0	0	0	0	5	6	0	11	6	0	101	0	107	141	7	0	0	148	266	658	0.62
	8:30 AM	0	0	0	0	0	0	0	13	0	13	3	0	39	0	42	97	3	0	0	100	155	477	0.77
	8:45 AM	0	0	0	0	0	0	2	14	0	16	5	0	35	0	40	72	0	0	0	72	128	410	0.80
	9:00 AM	0	0	0	0	0	0	0	6	0	6	9	0	38	0	47	55	1	0	0	56	109	371	0.85
	9:15 AM	0	0	0	0	0	0	0	6	0	6	6	0	28	0	34	43	2	0	0	45	85	342	0.96
	9:30 AM	0	0	0	0	0	0	0	4	0	4	4	0	37	0	41	43	0	0	0	43	88	345	0.97
	9:45 AM	0	0	0	0	0	0	0	4	0	4	3	0	42	0	45	40	0	0	0	40	89	323	0.91
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	2	0	2	5	0	41	0	46	31	1	0	0	32	80	311	0.88
	10:15 AM	0	0	0	0	0	0	0	4	0	4	4	0	33	0	37	46	1	0	0	47	88	289	0.82
	10:30 AM	0	0	0	0	0	0	0	3	0	3	7	0	32	0	39	23	1	0	0	24	66	293	0.80
	10:45 AM	0	0	0	0	0	0	1	7	0	8	7	0	34	0	41	28	0	0	0	28	77	344	0.74
	11:00 AM	0	0	0	0	0	0	0	5	0	5	1	0	25	0	26	27	0	0	0	27	58	345	0.74
	11:15 AM	0	0	0	0	0	0	1	2	0	3	6	0	39	0	45	43	1	0	0	44	92	368	0.79
	11:30 AM	0	0	0	0	0	0	2	7	0	9	6	0	58	0	64	43	1	0	0	44	117	388	0.83
	11:45 AM	0	0	0	0	0	0	0	0	0	0	3	0	38	0	41	37	0	0	0	37	78	380	0.85
	12:00 PM	0	0	0	0	0	0	0	6	0	6	3	0	27	0	30	42	3	0	0	45	81	402	0.90
	12:15 PM	0	0	0	0	0	0	0	1	0	1	6	0	50	0	56	55	0	0	0	55	112	429	0.96
	12:30 PM	0	0	0	0	0	0	0	7	0	7	3	0	60	0	63	39	0	0	0	39	109	421	0.97
	12:45 PM	0	0	0	0	0	0	0	6	0	6	3	0	50	0	53	41	0	0	0	41	100	395	0.91
	1:00 PM	0	0	0	0	0	0	1	4	0	5	5	0	51	0	56	47	0	0	0	47	108	394	0.91
	1:15 PM	0	0	0	0	0	0	1	8	0	9	7	0	47	0	54	41	0	0	0	41	104	398	0.89
	1:30 PM	0	0	0	0	0	0	1	7	0	8	5	0	33	0	38	35	2	0	0	37	83	401	0.90
	1:45 PM	0	0	0	0	0	0	0	9	0	9	11	0	38	0	49	41	0	0	0	41	99	457	0.82
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	11	0	11	5	0	54	0	59	40	2	0	0	42	112	555	0.70
	2:15 PM	0	0	0	0	0	0	1	17	0	18	4	0	43	0	47	40	2	0	0	42	107	692	0.69
	2:30 PM	0	0	0	0	0	0	2	41	0	43	7	0	51	0	58	37	1	0	0	38	139	812	0.82
	2:45 PM	0	0	0	0	0	0	0	55	0	55	22	0	58	0	80	62	0	0	0	62	197	922	0.93
	3:00 PM	0	0	0	0	0	0	17	79	0	96	27	0	76	0	103	50	0	0	0	50	249	957	0.96
	3:15 PM	0	0	0	0	0	0	9	38	0	47	17	0	116	0	133	47	0	0	0	47	227	887	0.89
	3:30 PM	0	0	0	0	0	0	6	28	0	34	11	0	106	0	117	91	7	0	0	98	249	852	0.86
	3:45 PM	0	0	0	0	0	0	1	33	0	34	14	0	73	0	87	99	12	0	0	111	232	763	0.82
	4:00 PM	0	0	0	0	0	0	1	22	0	23	20	0	78	0	98	57	1	0	0	58	179	724	0.94
	4:15 PM	0	0	0	0	0	0	1	16	0	17	16	0	92	0	108	65	2	0	0	67	192	736	0.95
	4:30 PM	0	0	0	0	0	0	0	15	0	15	13	0	68	0	81	61	3	0	0	64	160	774	0.84
	4:45 PM	0	0	0	0	0	0	3	21	0	24	15	0	100	0	115	52	2	0	0	54	193	774	0.84
	5:00 PM	0	0	0	0	0	0	1	20	0	21	26	0	88	0	114	53	3	0	0	56	191	719	0.78
	5:15 PM	0	0	0	0	0	0	2	24	0	26	15	0	94	0	109	89	6	0	0	95	230	662	0.72
	5:30 PM	0	0	0	0	0	0	1	19	0	20	18	0	66	0	84	55	1	0	0	56	160	550	0.86
	5:45 PM	0	0	0	0	0	0	0	11	0	11	10	0	72	0	82	45	0	0	0	45	138	487	0.88
	6:00 PM	0	0	0	0	0	0	0	5	0	5	15	0	71	0	86	43	0	0	0	43	134	462	0.86
	6:15 PM	0	0	0	0	0	0	0	12	0	12	12	0	56	0	68	37	1	0	0	38	118		
	6:30 PM	0	0	0	0	0	0	0	6	0	6	10	0	46	0	56	34	1	0	0	35	97		
	6:45 PM	0	0	0	0	0	0	1	8	0	9	9	0	49	0	58	45	1	0	0	46	113		
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		0	0	0	0	0	0	83	731	0	814	808	0	2829	0	3637	2822	81	0	0	2903	7354		

Peak Hour All Vehicle Volume Summary

	Hourly Time Period Start Time	From North (↓) STH 83					From East (←) Hill Street					From South (↑) STH 83					From West (→) Campus Drive					Total Hourly Volume	PHF
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM	7:30 AM	0	0	0	0	0	0	24	80	0	104	213	0	290	0	503	399	12	0	0	411	1018	0.81
MD	12:15 PM	0	0	0	0	0	0	1	18	0	19	17	0	211	0	228	182	0	0	0	182	429	0.96
PM	3:00 PM	0	0	0	0	0	0	33	178	0	211	69	0	371	0	440	287	19	0	0	306	957	0.96

Intersection Traffic Volume Report

Count Basics			*Page 9 of 11*
Start Date:	Wednesday, October 26, 2016	Weekday	Schools in Session
Total Number of Hours Counted: 13		Non-Holiday	No Special Events

15-Minute Heavy Vehicle Data

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

STH 83 and Hill Street

15-Minute Heavy Vehicle Data

15-Minute Time Period		From North (↓) STH 83					From East (←) Hill Street					From South (↑) STH 83					From West (→) Campus Drive					15-Min	Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	2	0	0	0	2	4	20
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4	0	0	0	4	5	22
	6:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	2	25
	6:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4	5	0	0	0	5	9	34
	7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	4	0	5	1	0	0	0	1	6	40
	7:15 AM	0	0	0	0	0	0	0	2	0	2	1	0	3	0	4	2	0	0	0	2	8	47
	7:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	5	0	6	5	0	0	0	5	11	52
	7:45 AM	0	0	0	0	0	0	2	0	0	2	1	0	9	0	10	3	0	0	0	3	15	51
	8:00 AM	0	0	0	0	0	0	1	1	0	2	0	0	7	0	7	4	0	0	0	4	13	50
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	7	0	0	0	7	13	50
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	7	0	0	0	7	10	49
	8:45 AM	0	0	0	0	0	0	0	1	0	1	0	0	7	0	7	6	0	0	0	6	14	46
	9:00 AM	0	0	0	0	0	0	0	2	0	2	1	0	4	0	5	6	0	0	0	6	13	42
	9:15 AM	0	0	0	0	0	0	0	2	0	2	2	0	2	0	4	6	0	0	0	6	12	37
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6	0	0	0	6	7	29
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5	0	0	0	5	10	25
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	1	0	0	0	1	8	20
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	0	0	2	4	16
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	3	18
	10:45 AM	0	0	0	0	0	0	0	2	0	2	0	0	2	0	2	1	0	0	0	1	5	20
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0	0	0	3	4	17
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4	0	0	0	4	6	25
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	2	0	0	0	2	5	32
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2	37
	12:00 PM	0	0	0	0	0	0	0	2	0	2	0	0	4	0	4	5	1	0	0	6	12	37
	12:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	8	0	9	4	0	0	0	4	13	35
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	4	0	0	0	4	10	28
	12:45 PM	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	2	22
	1:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	4	0	5	5	0	0	0	5	10	25
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	2	0	0	0	2	6	24
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	1	0	0	0	1	4	26
	1:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	3	0	3	1	0	0	0	1	5	30
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	5	0	0	0	5	9	38
	2:15 PM	0	0	0	0	0	0	0	1	0	1	0	0	5	0	5	2	0	0	0	2	8	37
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	5	0	0	0	5	8	33
	2:45 PM	0	0	0	0	0	0	0	4	0	4	0	0	3	0	3	6	0	0	0	6	13	36
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	6	0	0	0	6	8	36
	3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	3	0	4	0	0	0	0	0	4	32
	3:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	7	0	7	3	0	0	0	3	11	38
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	7	4	0	0	11	13	35
	4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0	0	0	0	0	4	30
	4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	8	0	9	1	0	0	0	1	10	29
	4:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	5	0	5	2	0	0	0	2	8	21
	4:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	6	0	6	1	0	0	0	1	8	19
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	3	14
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	2	11
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	1	0	0	0	1	6	16
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	0	1	3	11
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	6	0	0	0	6	7	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Totals		0	0	0	0	0	0	3	23	0	26	17	0	176	0	193	154	5	0	0	159	378	

Peak Hour Heavy Vehicle Volume Summary

Hourly Time Period		From North (↓) STH 83					From East (←) Hill Street					From South (↑) STH 83					From West (→) Campus Drive					Total Hourly
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Volume
AM	7:30 AM	0	0	0	0	0	0	3	1	0	4	2	0	27	0	29	19	0	0	0	19	52
MD	12:15 PM	0	0	0	0	0	0	0	1	0	1	3	0	18	0	21	13	0	0	0	13	35
PM	3:00 PM	0	0	0	0	0	0	0	1	0	1	1	0	14	0	15	16	4	0	0	20	36

APPENDIX B

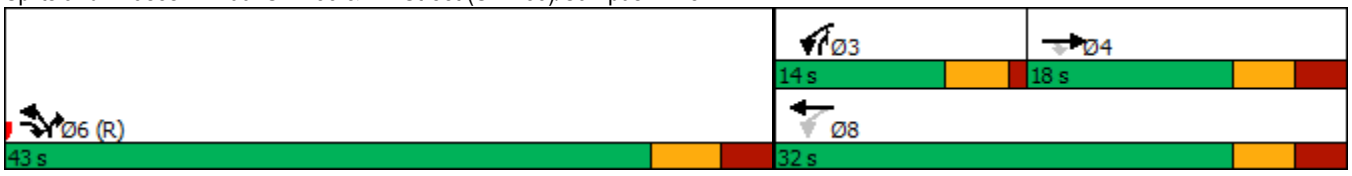
SYNCHRO TRAFFIC ANALYSIS

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	10	410	80	25	295	220
Future Volume (vph)	10	410	80	25	295	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	240
Storage Lanes		1	1		2	1
Taper Length (ft)			25		25	
Right Turn on Red		No				No
Link Speed (mph)	35			25	35	
Link Distance (ft)	507			460	758	
Travel Time (s)	9.9			12.5	14.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	100%	62%	100%	100%	100%	62%
Heavy Vehicles (%)	5%	5%	4%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	314	99	31	364	168
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type	NA	pm+ov	pm+pt	NA	Prot	pt+ov
Protected Phases	4	6	3	8	6	6 3
Permitted Phases		4	8			
Detector Phase	4	6	3	8	6	6 3
Switch Phase						
Minimum Initial (s)	10.0	15.0	6.0	10.0	15.0	
Minimum Split (s)	16.5	21.9	10.5	16.5	21.9	
Total Split (s)	18.0	43.0	14.0	32.0	43.0	
Total Split (%)	24.0%	57.3%	18.7%	42.7%	57.3%	
Maximum Green (s)	11.5	36.1	9.5	25.5	36.1	
Yellow Time (s)	3.5	3.9	3.5	3.5	3.9	
All-Red Time (s)	3.0	3.0	1.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.9	4.5	6.5	6.9	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5	5.3	1.5	1.5	5.3	
Minimum Gap (s)	1.5	2.0	1.5	1.5	2.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Time Before Reduce (s)	30.0	26.0	20.0	30.0	26.0	
Time To Reduce (s)	0.0	14.0	0.0	0.0	14.0	
Recall Mode	None	C-Max	None	None	C-Max	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
v/c Ratio	0.05	0.29	0.31	0.10	0.17	0.12
Control Delay	29.1	5.1	26.9	24.5	6.3	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	5.1	26.9	24.5	6.3	1.7
Queue Length 50th (ft)	5	48	42	13	25	0
Queue Length 95th (ft)	17	60	57	25	61	37
Internal Link Dist (ft)	427			380	678	
Turn Bay Length (ft)						240
Base Capacity (vph)	277	1068	315	621	2149	1429
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.29	0.31	0.05	0.17	0.12

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 35 (47%), Referenced to phase 2: and 6:NBL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Description: EB RT changed to pm+ov to get output in HCM6	

Splits and Phases: 100: STH 83 & Hill Street (STH 83)/Campus Drive



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	10	410	80	25	295	220
Future Volume (veh/h)	10	410	80	25	295	220
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1841	1841	1811	1811
Adj Flow Rate, veh/h	12	314	99	31	364	168
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	5	5	4	4	6	6
Cap, veh/h	243	1070	351	484	1868	964
Arrive On Green	0.13	0.13	0.07	0.26	0.56	0.56
Sat Flow, veh/h	1826	1547	1753	1841	3346	1535
Grp Volume(v), veh/h	12	314	99	31	364	168
Grp Sat Flow(s),veh/h/ln	1826	1547	1753	1841	1673	1535
Q Serve(g_s), s	0.4	5.9	3.5	0.9	4.0	3.4
Cycle Q Clear(g_c), s	0.4	5.9	3.5	0.9	4.0	3.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	243	1070	351	484	1868	964
V/C Ratio(X)	0.05	0.29	0.28	0.06	0.19	0.17
Avail Cap(c_a), veh/h	280	1101	450	626	1868	964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	4.5	23.6	20.7	8.2	5.8
Incr Delay (d2), s/veh	0.0	0.1	0.2	0.0	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	9.5	2.5	0.7	2.3	1.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.4	4.5	23.8	20.7	8.4	6.2
LnGrp LOS	C	A	C	C	A	A
Approach Vol, veh/h	326			130	532	
Approach Delay, s/veh	5.4			23.1	7.7	
Approach LOS	A			C	A	

Timer - Assigned Phs			3	4		6	8
Phs Duration (G+Y+Rc), s			9.7	16.5		48.8	26.2
Change Period (Y+Rc), s			4.5	6.5		6.9	6.5
Max Green Setting (Gmax), s			9.5	11.5		36.1	25.5
Max Q Clear Time (g_c+I1), s			5.5	7.9		6.0	2.9
Green Ext Time (p_c), s			0.0	0.2		5.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Notes

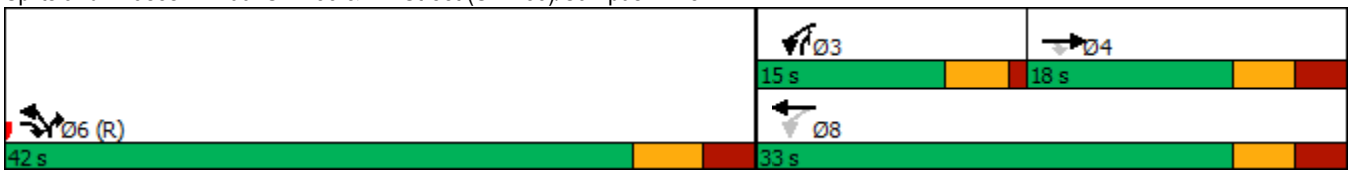
User approved changes to right turn type.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	20	290	185	35	375	70
Future Volume (vph)	20	290	185	35	375	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	240
Storage Lanes		1	1		2	1
Taper Length (ft)			25		25	
Right Turn on Red		No				No
Link Speed (mph)	35			25	35	
Link Distance (ft)	507			460	758	
Travel Time (s)	9.9			12.5	14.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	62%	100%	100%	100%	62%
Heavy Vehicles (%)	7%	7%	1%	1%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	21	187	193	36	391	45
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type	NA	pm+ov	pm+pt	NA	Prot	pt+ov
Protected Phases	4	6	3	8	6	6 3
Permitted Phases		4	8			
Detector Phase	4	6	3	8	6	6 3
Switch Phase						
Minimum Initial (s)	10.0	15.0	6.0	10.0	15.0	
Minimum Split (s)	16.5	21.9	10.5	16.5	21.9	
Total Split (s)	18.0	42.0	15.0	33.0	42.0	
Total Split (%)	24.0%	56.0%	20.0%	44.0%	56.0%	
Maximum Green (s)	11.5	35.1	10.5	26.5	35.1	
Yellow Time (s)	3.5	3.9	3.5	3.5	3.9	
All-Red Time (s)	3.0	3.0	1.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.9	4.5	6.5	6.9	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5	5.3	1.5	1.5	5.3	
Minimum Gap (s)	1.5	2.0	1.5	1.5	2.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Time Before Reduce (s)	30.0	26.0	20.0	30.0	26.0	
Time To Reduce (s)	0.0	14.0	0.0	0.0	14.0	
Recall Mode	None	C-Max	None	None	C-Max	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
v/c Ratio	0.09	0.18	0.55	0.09	0.19	0.03
Control Delay	29.6	4.3	28.9	20.7	8.2	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.6	4.3	28.9	20.7	8.2	2.8
Queue Length 50th (ft)	9	26	86	15	27	0
Queue Length 95th (ft)	28	43	112	30	76	14
Internal Link Dist (ft)	427			380	678	
Turn Bay Length (ft)						240
Base Capacity (vph)	272	1050	349	664	2067	1372
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.18	0.55	0.05	0.19	0.03

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 35 (47%), Referenced to phase 2: and 6:NBL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Description: EB RT changed to pm+ov to get output in HCM6	

Splits and Phases: 100: STH 83 & Hill Street (STH 83)/Campus Drive



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	20	290	185	35	375	70
Future Volume (veh/h)	20	290	185	35	375	70
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1796	1885	1885	1856	1856
Adj Flow Rate, veh/h	21	187	193	36	391	45
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	7	7	1	1	3	3
Cap, veh/h	238	987	443	576	1769	989
Arrive On Green	0.13	0.13	0.11	0.31	0.52	0.52
Sat Flow, veh/h	1796	1522	1795	1885	3428	1572
Grp Volume(v), veh/h	21	187	193	36	391	45
Grp Sat Flow(s),veh/h/ln	1796	1522	1795	1885	1714	1572
Q Serve(g_s), s	0.8	3.7	6.6	1.0	4.7	0.8
Cycle Q Clear(g_c), s	0.8	3.7	6.6	1.0	4.7	0.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	238	987	443	576	1769	989
V/C Ratio(X)	0.09	0.19	0.44	0.06	0.22	0.05
Avail Cap(c_a), veh/h	275	1019	492	666	1769	989
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.6	5.3	22.3	18.5	9.9	5.3
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	5.8	4.9	0.8	2.9	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.6	5.3	22.6	18.5	10.2	5.4
LnGrp LOS	C	A	C	B	B	A
Approach Vol, veh/h	208			229	436	
Approach Delay, s/veh	7.7			21.9	9.7	
Approach LOS	A			C	A	

Timer - Assigned Phs			3	4		6	8
Phs Duration (G+Y+Rc), s			13.0	16.4		45.6	29.4
Change Period (Y+Rc), s			4.5	6.5		6.9	6.5
Max Green Setting (Gmax), s			10.5	11.5		35.1	26.5
Max Q Clear Time (g_c+I1), s			8.6	5.7		6.7	3.0
Green Ext Time (p_c), s			0.0	0.1		4.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B

Notes

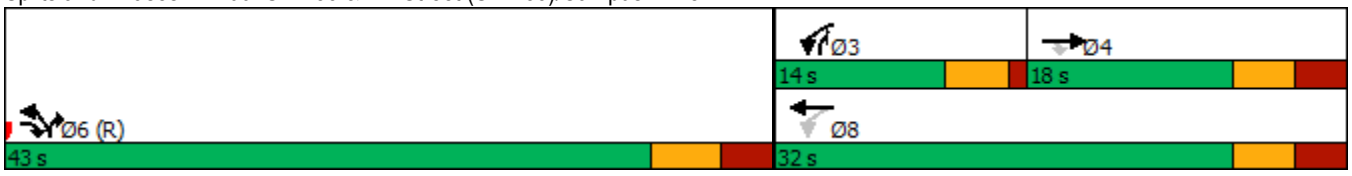
User approved changes to right turn type.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	10	410	140	35	295	240
Future Volume (vph)	10	410	140	35	295	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	240
Storage Lanes		1	1		2	1
Taper Length (ft)			25		25	
Right Turn on Red		No				No
Link Speed (mph)	35			25	35	
Link Distance (ft)	507			460	758	
Travel Time (s)	9.9			12.5	14.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	100%	62%	100%	100%	100%	62%
Heavy Vehicles (%)	5%	5%	4%	4%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	314	173	43	364	184
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type	NA	pm+ov	pm+pt	NA	Prot	pt+ov
Protected Phases	4	6	3	8	6	6 3
Permitted Phases		4	8			
Detector Phase	4	6	3	8	6	6 3
Switch Phase						
Minimum Initial (s)	10.0	15.0	6.0	10.0	15.0	
Minimum Split (s)	16.5	21.9	10.5	16.5	21.9	
Total Split (s)	18.0	43.0	14.0	32.0	43.0	
Total Split (%)	24.0%	57.3%	18.7%	42.7%	57.3%	
Maximum Green (s)	11.5	36.1	9.5	25.5	36.1	
Yellow Time (s)	3.5	3.9	3.5	3.5	3.9	
All-Red Time (s)	3.0	3.0	1.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.9	4.5	6.5	6.9	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5	5.3	1.5	1.5	5.3	
Minimum Gap (s)	1.5	2.0	1.5	1.5	2.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Time Before Reduce (s)	30.0	26.0	20.0	30.0	26.0	
Time To Reduce (s)	0.0	14.0	0.0	0.0	14.0	
Recall Mode	None	C-Max	None	None	C-Max	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
v/c Ratio	0.05	0.29	0.55	0.14	0.17	0.13
Control Delay	29.1	5.1	32.7	25.2	6.3	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	5.1	32.7	25.2	6.3	1.7
Queue Length 50th (ft)	5	48	76	18	25	0
Queue Length 95th (ft)	17	60	92	32	61	41
Internal Link Dist (ft)	427			380	678	
Turn Bay Length (ft)						240
Base Capacity (vph)	277	1068	315	621	2149	1429
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.29	0.55	0.07	0.17	0.13

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 35 (47%), Referenced to phase 2: and 6:NBL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Description: EB RT changed to pm+ov to get output in HCM6	

Splits and Phases: 100: STH 83 & Hill Street (STH 83)/Campus Drive



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	10	410	140	35	295	240
Future Volume (veh/h)	10	410	140	35	295	240
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1841	1841	1811	1811
Adj Flow Rate, veh/h	12	314	173	43	364	184
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	5	5	4	4	6	6
Cap, veh/h	243	1016	412	548	1752	964
Arrive On Green	0.13	0.13	0.10	0.30	0.52	0.52
Sat Flow, veh/h	1826	1547	1753	1841	3346	1535
Grp Volume(v), veh/h	12	314	173	43	364	184
Grp Sat Flow(s),veh/h/ln	1826	1547	1753	1841	1673	1535
Q Serve(g_s), s	0.4	6.6	6.0	1.3	4.4	3.8
Cycle Q Clear(g_c), s	0.4	6.6	6.0	1.3	4.4	3.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	243	1016	412	548	1752	964
V/C Ratio(X)	0.05	0.31	0.42	0.08	0.21	0.19
Avail Cap(c_a), veh/h	280	1047	450	626	1752	964
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	5.5	22.6	18.9	9.6	5.9
Incr Delay (d2), s/veh	0.0	0.1	0.3	0.0	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	9.5	4.4	1.0	2.6	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.4	5.6	22.8	19.0	9.8	6.3
LnGrp LOS	C	A	C	B	A	A
Approach Vol, veh/h	326			216	548	
Approach Delay, s/veh	6.4			22.0	8.7	
Approach LOS	A			C	A	

Timer - Assigned Phs			3	4		6	8
Phs Duration (G+Y+Rc), s			12.3	16.5		46.2	28.8
Change Period (Y+Rc), s			4.5	6.5		6.9	6.5
Max Green Setting (Gmax), s			9.5	11.5		36.1	25.5
Max Q Clear Time (g_c+I1), s			8.0	8.6		6.4	3.3
Green Ext Time (p_c), s			0.0	0.1		5.2	0.1

Intersection Summary	
HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

User approved changes to right turn type.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	25	1	170	10	1	85
Future Volume (vph)	25	1	170	10	1	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		25			25
Link Distance (ft)	642		203			449
Travel Time (s)	17.5		5.5			12.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	1%	1%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	0	222	0	0	106
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	1	170	10	1	85
Future Vol, veh/h	25	1	170	10	1	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	2	2	1	1	4	4
Mvmt Flow	31	1	210	12	1	105

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	323	216	0	0	222	0
Stage 1	216	-	-	-	-	-
Stage 2	107	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	671	824	-	-	1335	-
Stage 1	820	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	670	824	-	-	1335	-
Mov Cap-2 Maneuver	670	-	-	-	-	-
Stage 1	820	-	-	-	-	-
Stage 2	916	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0.1
HCM LOS	B		

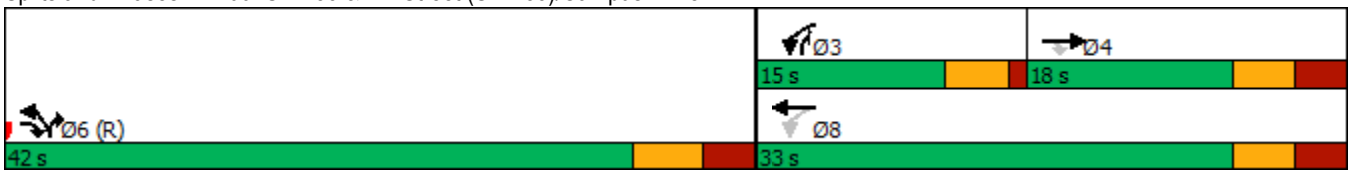
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	675	1335	-
HCM Lane V/C Ratio	-	-	0.048	0.001	-
HCM Control Delay (s)	-	-	10.6	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

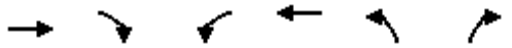
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	30	290	220	40	375	125
Future Volume (vph)	30	290	220	40	375	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	240
Storage Lanes		1	1		2	1
Taper Length (ft)			25		25	
Right Turn on Red		No				No
Link Speed (mph)	35			25	35	
Link Distance (ft)	507			460	758	
Travel Time (s)	9.9			12.5	14.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	62%	100%	100%	100%	62%
Heavy Vehicles (%)	7%	7%	1%	1%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Shared Lane Traffic (%)						
Lane Group Flow (vph)	31	187	229	42	391	81
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	24	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Turn Type	NA	pm+ov	pm+pt	NA	Prot	pt+ov
Protected Phases	4	6	3	8	6	6 3
Permitted Phases		4	8			
Detector Phase	4	6	3	8	6	6 3
Switch Phase						
Minimum Initial (s)	10.0	15.0	6.0	10.0	15.0	
Minimum Split (s)	16.5	21.9	10.5	16.5	21.9	
Total Split (s)	18.0	42.0	15.0	33.0	42.0	
Total Split (%)	24.0%	56.0%	20.0%	44.0%	56.0%	
Maximum Green (s)	11.5	35.1	10.5	26.5	35.1	
Yellow Time (s)	3.5	3.9	3.5	3.5	3.9	
All-Red Time (s)	3.0	3.0	1.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.9	4.5	6.5	6.9	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	1.5	5.3	1.5	1.5	5.3	
Minimum Gap (s)	1.5	2.0	1.5	1.5	2.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Time Before Reduce (s)	30.0	26.0	20.0	30.0	26.0	
Time To Reduce (s)	0.0	14.0	0.0	0.0	14.0	
Recall Mode	None	C-Max	None	None	C-Max	
Walk Time (s)						
Flash Dont Walk (s)						
Pedestrian Calls (#/hr)						
v/c Ratio	0.13	0.18	0.66	0.10	0.19	0.06
Control Delay	30.3	4.3	32.8	21.0	8.2	2.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	4.3	32.8	21.0	8.2	2.8
Queue Length 50th (ft)	13	26	104	18	27	0
Queue Length 95th (ft)	37	43	132	34	76	22
Internal Link Dist (ft)	427			380	678	
Turn Bay Length (ft)						240
Base Capacity (vph)	272	1050	349	664	2067	1372
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.18	0.66	0.06	0.19	0.06

Intersection Summary	
Area Type:	Other
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 35 (47%), Referenced to phase 2: and 6:NBL, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Description: EB RT changed to pm+ov to get output in HCM6	

Splits and Phases: 100: STH 83 & Hill Street (STH 83)/Campus Drive





Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	30	290	220	40	375	125
Future Volume (veh/h)	30	290	220	40	375	125
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1796	1885	1885	1856	1856
Adj Flow Rate, veh/h	31	187	229	42	391	81
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	7	7	1	1	3	3
Cap, veh/h	238	961	467	608	1710	988
Arrive On Green	0.13	0.13	0.13	0.32	0.50	0.50
Sat Flow, veh/h	1796	1522	1795	1885	3428	1572
Grp Volume(v), veh/h	31	187	229	42	391	81
Grp Sat Flow(s),veh/h/ln	1796	1522	1795	1885	1714	1572
Q Serve(g_s), s	1.1	3.9	7.8	1.2	4.8	1.5
Cycle Q Clear(g_c), s	1.1	3.9	7.8	1.2	4.8	1.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	238	961	467	608	1710	988
V/C Ratio(X)	0.13	0.19	0.49	0.07	0.23	0.08
Avail Cap(c_a), veh/h	275	993	485	666	1710	988
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	5.8	21.8	17.6	10.6	5.5
Incr Delay (d2), s/veh	0.1	0.0	0.3	0.0	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	5.8	5.8	0.9	3.0	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.8	5.8	22.1	17.6	10.9	5.6
LnGrp LOS	C	A	C	B	B	A
Approach Vol, veh/h	218			271	472	
Approach Delay, s/veh	9.1			21.4	10.0	
Approach LOS	A			C	B	

Timer - Assigned Phs			3	4		6	8
Phs Duration (G+Y+Rc), s			14.2	16.5		44.3	30.7
Change Period (Y+Rc), s			4.5	6.5		6.9	6.5
Max Green Setting (Gmax), s			10.5	11.5		35.1	26.5
Max Q Clear Time (g_c+I1), s			9.8	5.9		6.8	3.2
Green Ext Time (p_c), s			0.0	0.1		4.4	0.1

Intersection Summary	
HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

User approved changes to right turn type.

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	5	80	20	5	185
Future Volume (vph)	10	5	80	20	5	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	0	0		0	0	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Link Speed (mph)	25		25			25
Link Distance (ft)	642		203			449
Travel Time (s)	17.5		5.5			12.2
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	6%	6%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	104	0	0	198
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	5	80	20	5	185
Future Vol, veh/h	10	5	80	20	5	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	6	6	1	1
Mvmt Flow	10	5	83	21	5	193

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	297	94	0	0	104	0
Stage 1	94	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	694	963	-	-	1494	-
Stage 1	930	-	-	-	-	-
Stage 2	831	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	691	963	-	-	1494	-
Mov Cap-2 Maneuver	691	-	-	-	-	-
Stage 1	930	-	-	-	-	-
Stage 2	828	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.8	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	763	1494	-
HCM Lane V/C Ratio	-	-	0.02	0.003	-
HCM Control Delay (s)	-	-	9.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-