ATTACHMENT D

Traffic Operations Analysis Report

HAM-32-4.47 (PID 86462) Newtown Feasibility Study

Traffic Operations Analysis

Prepared for:

Ohio Department of Transportation District 8
505 S. State Route 741
Lebanon, Ohio 45036

Prepared by:

Stantec Consulting Services Inc.
11687 Lebanon Road
Cincinnati, Ohio 45241

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Newtown Feasibility Study
Traffic Operations Analysis

Table of Contents

PROFESSIONAL ENGINEER'S CERTIFICATION i

INTRODUCTION 1

DATA COLLECTION 4

EXISTING AND FUTURE TRAFFIC VOLUME DEVELOPMENT 4

AM & PM PEAK-HOUR TRAFFIC VOLUMES 5

DAILY TRAFFIC VOLUMES 7

MARTIN MARIETTA BUILD 2042 TRAFFIC VOLUMES 8

2020 EXISTING TRAFFIC ANALYSIS 9

NO-BUILD TRAFFIC ANALYSIS 10

BUILD TRAFFIC ANALYSIS 12

TURN LANE ANALYSIS 17

CONCLUSION 19

LIST OF TABLES

Table 1: Data Collection Summary 4

Table 2: Annual Growth Between 2015/2017 Counts and 2018 Counts 5

Table 3: AM and PM Peak-Hour Growth in Certified Traffic Volumes 6

Table 4: AM and PM Peak-Hour Growth Between 2018 Counts and Opening Year Certified Traffic 6

Table 5: Annual Growth Between 2015 and 2018 Daily Approach Volumes 7

Table 6: Historic AADT Growth on SR 32 8

Table 7: 2020 Existing Intersection Conditions 9

Table 8: No-Build Intersection Conditions 11

Table 9: Build Alternative RB-1 Intersection Conditions 14

Table 10: Build Alternative RB-2 Intersection Conditions 15

Table 11: Percent Reduction in Overall Intersection Delay 16

Table 12: 2042 Percent Reduction in Eastbound SR 32 Queue Lengths 17

Table 13: 2042 Turn Lane Length Calculations 18

Table 14: 2042 Percent Reduction in Turn Lane Queue Lengths 18

LIST OF FIGURES

Figure 1: Study Intersections 3

Figure 2: SR 32/Round Bottom Road Build Alternative Geometry 12

LIST OF APPENDICES

APPENDIX A ..... INTERSECTION TURNING MOVEMENT COUNTS

APPENDIX B..... APPROVED CERTIFIED TRAFFIC VOLUMES

APPENDIX C ..... INTERSECTION VOLUME TABLES

APPENDIX D ..... REVISED CERTIFIED TRAFFIC PLATES

APPENDIX E..... MARTIN MARIETTA MATERIALS TRIP GENERATION AND DISTRIBUTION

APPENDIX F ..... EXISTING SIGNAL TIMING

APPENDIX G..... 2020 EXISTING SYNCHRO SUMMARY WORKSHEETS

APPENDIX H ..... NO-BUILD SYNCHRO SUMMARY WORKSHEETS

APPENDIX I..... BUILD ALTERNATIVE RB-1 SYNCHRO SUMMARY WORKSHEETS

APPENDIX J ..... BUILD ALTERNATIVE RB-2 SYNCHRO SUMMARY WORKSHEETS

APPENDIX K..... ODOT L&D MANUAL TURN LANE CALCULATIONS

Professional Engineer's Certification

I hereby certify that I am a Licensed Professional Engineer in the State of Ohio practicing with Stantec Consulting Services Inc. and that I have supervised the preparation of and approve the evaluations, findings, opinions, conclusions, and technical advice hereby reported for:

PROJECT: HAM-32-4.47 (PID 86462) Newtown Feasibility Study
Traffic Operations Analysis
173620124

LOCATION: SR 32 from Round Bottom Road to the East Corp. Limit, Newtown, Ohio

This document entitled HAM-32-4.47 (PID 86462) Newtown Feasibility Study Traffic Operations Analysis was prepared by Stantec Consulting Services Inc. for the account of the Ohio Department of Transportation. The material in it reflects Stantec's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Stantec Consulting Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Prepared by:

Introduction

In 2019, an Implementation Plan for Segment II/III of the Eastern Corridor Study (PID 86462) was prepared which identified 68 recommended transportation projects. The Eastern Corridor Study is a regional transportation initiative that integrates roadway network improvements, new rail transit options, expanded bus service, bikeways and walking paths to improve travel and access between Greater Cincinnati's eastern communities and its central employment, economic, and social centers. The Eastern Corridor Program is administered by the Ohio Department of Transportation (ODOT), in cooperation with the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the local Eastern Corridor Implementation Partners, which include Hamilton County Transportation Improvement District (TID), Clermont County TID, City of Cincinnati, Ohio-Kentucky-Indiana Regional Council of Governments (OKI), and Southwest Ohio Regional Transit Authority (SORTA).

The Newtown Feasibility Study focuses on four concepts identified in the Implementation Plan within the Village of Newtown, Ohio on or near SR 32. These projects include:

- Constructing improvements at the SR 32/Round Bottom Road intersection including dual southbound left turn lanes on Round Bottom Road, extension of the westbound right turn lane, and adding a second eastbound lane and shared use path on SR 32 from Round Bottom Road to Little Dry Run Road (Concept B2).
- Constructing a shared use path on Round Bottom Road from SR 32 to Valley Avenue (Concept B7).
- Constructing improvements at the SR 32/Little Dry Run Road intersection including adding an eastbound right turn lane and modifying the curve on Little Dry Run Road to improve visibility at the intersection (Concept C1).
- Widening SR 32 from Little Dry Run Road to the East Corp. Limit to construct a center two-way left turn lane (Concept C3).

The traffic operations analysis updates the certified traffic volumes developed and approved as part of the Segment II/III of the Implementation Plan and evaluates the no-build and build intersection geometry at the SR 32 intersections with Round Bottom Road, Ivy Hills Place, and Little Dry Run Road for the 2020 existing, 2022 opening, and 2042 design years. In addition, the impacts of the potential Martin Marietta Materials mine related traffic were analyzed for the no-build and build intersection geometry for the 2042 design year. The build improvements evaluated as part of this analysis consist of the improvements listed on the next page. The location of the three intersections evaluated as part of the traffic operations analysis are shown in **Figure 1**.

SR 32/Round Bottom Road

- Convert the southbound through lane to a shared through/left turn lane on Round Bottom Road (Build Alternative RB-1)
- Construct a second southbound left turn lane on Round Bottom Road (Build Alternative RB-2)
- Extend the westbound right turn lane on SR 32 (Build Alternative RB-1 and RB-2)
- Construct a second eastbound lane on SR 32 (Build Alternative RB-1 and RB-2)

SR 32/Ivy Hills Place

- Construct a second eastbound lane on SR 32 (Build Alternative RB-1 and RB-2)

SR 32/Little Dry Run Road

- Construct an eastbound drop right turn lane on SR 32 (Build Alternative RB-1 and RB-2)

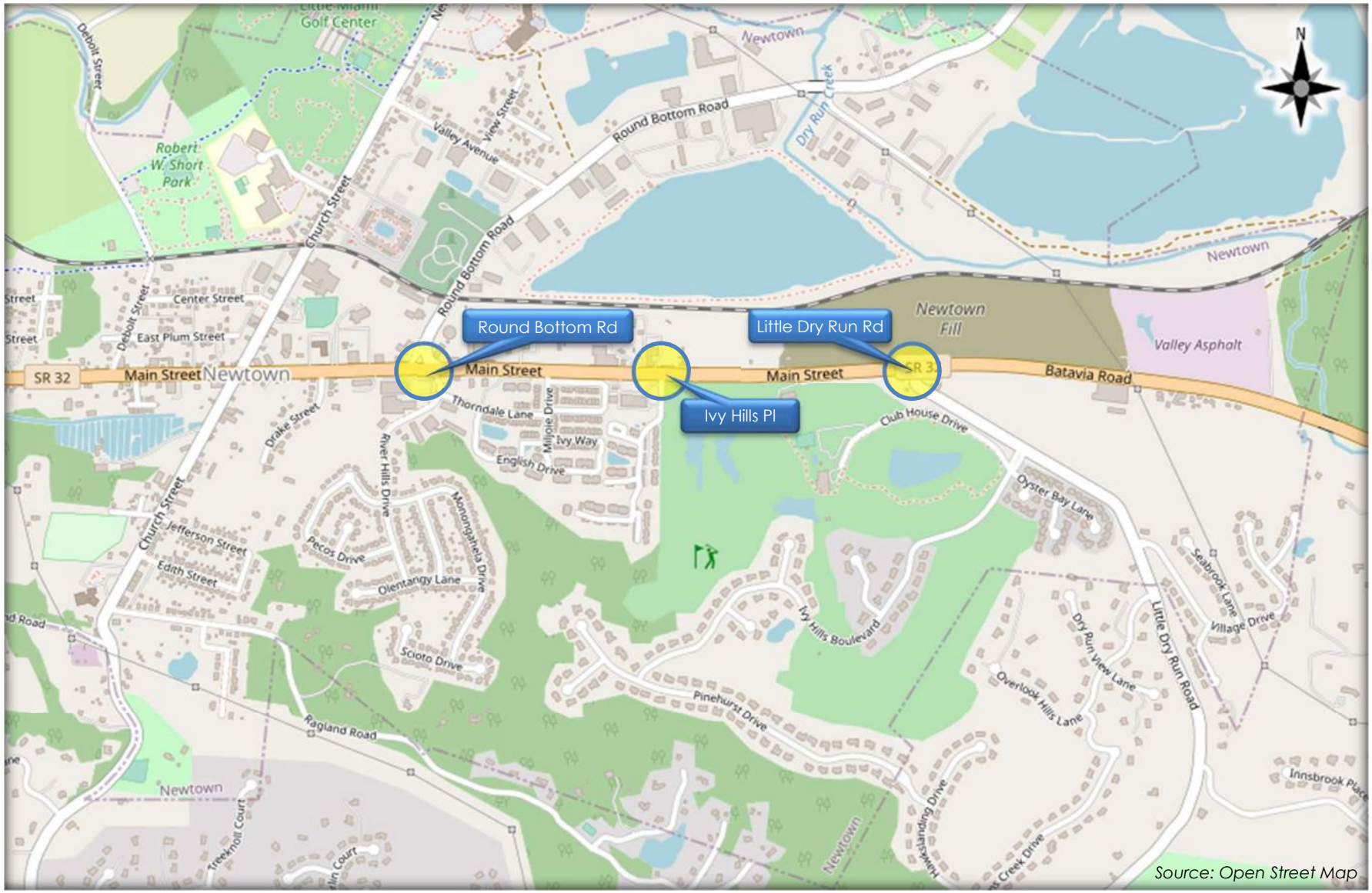


Figure 1: Study Intersections

Data Collection

Existing conditions within the study area were determined by collecting vehicle turning movement counts at the study intersections. Due to the significant traffic decreases which have occurred as a result of COVID-19-related telecommuting and stay-at-home restrictions, updated 2020 counts have not been collected. In lieu of collecting new data, counts performed as part of previous Eastern Corridor Segment II/III data collection efforts were used. Once traffic volumes normalize, data will be collected to verify the assumptions used to develop the existing traffic and future traffic projections. A summary of the data collected previously at the three study intersections is summarized in **Table 1**. The intersection turning movement counts are attached in **Appendix A**.

Table 1: Data Collection Summary

Intersection	Count Date	AM Peak-Hour	PM Peak-Hour
SR 32 & Round Bottom Rd	12/09/15	7:00 - 8:00 AM	4:45 - 5:45 PM
	5/15/17 & 5/16/17	7:00 - 8:00 AM	4:45 - 5:45 PM
	09/27/18	7:15 - 8:15 AM	4:30 - 5:30 PM
SR 32 & Ivy Hills Pl	05/16/17	6:45 - 7:45 AM	5:15 - 6:15 PM
SR 32 & Little Dry Run Rd	12/09/15	7:15 - 8:15 AM	4:45 - 5:45 PM
	09/19/18	7:15 - 8:15 AM	4:45 - 5:45 PM

Existing and Future Traffic Volume Development

The Eastern Corridor Segment II/III received certified traffic approval in June 2016 for the no-build scenario at 25 intersections and four interchanges within the study area. Base year 2015 traffic volumes, as well as opening year 2022 and design year 2042 volumes, were developed using the ODOT nchrp255_revised_volume_adjuster_v6.xlsx Excel Workbook (ODOT Excel adjuster). In June 2018, the certified traffic was updated with 2017 traffic volumes that were recollected at three of the original study area intersections, as well as eight additional intersection where further analysis needs had arisen.

The updated certified traffic volumes approved in June 2018 were used as the baseline 2022 opening year and 2042 design year traffic volumes for the Newtown Feasibility Study analysis. The approved certified traffic volumes are attached in **Appendix B**. Traffic trends within the study area were reviewed to develop 2020 existing traffic volumes, ensure that the 2022 opening year and 2042 design year traffic volumes still represent a reasonable traffic forecast, and identify any revisions needed to account for changes that have occurred.

Improvements within the study area are not anticipated to significantly change traffic volumes using the corridor but are expected to improve the efficiency in which traffic moves through the

study area. Traffic volumes were developed for the 2020 existing conditions, 2022 opening year, 2042 design year no-build/build conditions, and 2042 design year no-build/build conditions with buildout of the Martin Marietta Materials site.

AM & PM PEAK-HOUR TRAFFIC VOLUMES (NO-BUILD/BUILD INTERSECTION GEOMETRY)

Comparing the AM and PM peak-hour volumes at SR 32/Round Bottom Road and SR 32/Little Dry Run Road intersections used for the development of the certified traffic to additional data collected in 2018 at those intersections indicates that traffic has remained relatively constant. **Table 2** summarizes the annual growth rate between the AM and PM peak-hour volumes used in the approved certified traffic to the most recent available data at the intersections. It should be noted that the 2018 data includes traffic from the Forest Hills School District Bus Garage located on Round Bottom Road north of SR 32 that was not there in 2015 or 2017 when the certified traffic volumes were collected and developed.

Table 2: Annual Growth Between 2015/2017 Counts and 2018 Counts

Intersection	Count Date	Traffic Volume			Annual Growth		
		AM Peak-Hour	PM Peak-Hour	Combined	AM Peak-Hour	PM Peak-Hour	Combined
SR 32 & Round Bottom Rd	5/15/17 & 5/16/17	2039	2278	4317	-0.88%	0.75%	-0.02%
	09/27/18	2021	2295	4316			
SR 32 & Little Dry Run Rd	12/09/15	1779	1843	3622	-0.66%	2.42%	0.91%
	09/19/18	1744	1977	3721			

The annual growth in the AM and PM peak-hour certified traffic volumes between the existing and 2022 opening year represents growth greater than what has been observed historically. Additionally, the 2022 opening year volumes represent significant growth over the 2018 data collection at the SR 32/Round Bottom Road and SR 32/Little Dry Run Road intersections. Therefore, the 2022 certified traffic forecasts still represent a reasonable estimate of opening AM and PM peak-hour year traffic volumes. **Table 3** illustrates the annual growth between the AM and PM peak-hour existing and 2022 opening year certified traffic volumes and **Table 4** illustrates the annual growth between the AM and PM peak-hour 2018 counts and 2022 opening year certified traffic volumes. Because the annual growth is greater than what has historically occurred, the existing 2020 volumes were estimated by interpolating between the previously used existing traffic volumes and the 2022 opening year volumes.

Table 3: AM and PM Peak-Hour Growth in Certified Traffic Volumes

Intersection	Scenario	Traffic Volume			Annual Growth		
		AM Peak-Hour	PM Peak-Hour	Combined	AM Peak-Hour	PM Peak-Hour	Combined
SR 32 & Round Bottom Rd	2017 Existing	2150	2330	4480	2.23%	2.75%	2.50%
	2022 Opening Year	2390	2650	5040			
SR 32 & Ivy Hill Pl	2017 Existing	1800	1860	3660	2.44%	2.15%	2.30%
	2022 Opening Year	2020	2060	4080			
SR 32 & Little Dry Run Rd	2015 Existing	1790	1870	3660	1.76%	1.60%	1.68%
	2022 Opening Year	2010	2080	4090			

Table 4: AM and PM Peak-Hour Growth Between 2018 Counts and Opening Year Certified Traffic

Intersection	Scenario	Traffic Volume			Annual Growth		
		AM Peak-Hour	PM Peak-Hour	Combined	AM Peak-Hour	PM Peak-Hour	Combined
SR 32 & Round Bottom Rd	09/27/18	2021	2295	4316	4.56%	3.87%	4.19%
	2022 Opening Year	2390	2650	5040			
SR 32 & Little Dry Run Rd	09/19/18	1744	1977	3721	3.81%	1.30%	2.48%
	2022 Opening Year	2010	2080	4090			

In addition, bus volumes from the Forest Hills School District Bus Garage located on Round Bottom Road north of SR 32 (that was not there in 2015 or 2017 when the certified traffic volumes were collected and developed) were added to the certified traffic volumes. The Forest Hills School District runs 64 bus routes from the garage. About half access the garage via the SR 32/Round Bottom Road intersection and half access the garage via the SR 32/Church Street intersection. For school arrival service, buses leave the garage between 6:30 and 7:00 AM and return between 9:00 and 9:30 AM. For school dismissal service, buses leave the garage between 2:15 and 2:45 PM and return between 4:30 and 5:00 PM. Based on when the buses arrive and depart the garage, they are on the fringe of both the AM and PM peak hours. To be conservative, 20 buses leaving the garage were added to the AM certified traffic volumes and 20 buses entering the garage were added to the PM certified traffic volumes.

The growth between the 2022 and 2042 certified traffic forecasts was also reviewed. The Ohio-Kentucky-Indiana Regional Council of Governments (OKI) and Miami Valley Regional Planning Commission (MVRPC) Travel Demand Model Version 8.0 was used to establish future growth, in conjunction with the ODOT Excel adjuster, to develop the original 2022 and 2042 certified traffic volumes. The growth between the 2010 Base Year and 2040 Existing plus Committed (E+C) model scenarios indicates approximately a 0.20% annual growth rate at the SR 32 intersections with Round Bottom Road and Little Dry Run Road. The Ivy Hill Place intersection is not in the OKI model. Based on the historic growth trends analyzed above, the 0.20% growth rate appears to still be a reasonable estimate of future growth. Adjustments were made to the 2042 design year

traffic volumes to ensure that each movement had either a minimum 10 vehicle increase, or the equivalent of a 0.20% annual growth from the 2022 opening year conditions, whichever was greater. The intersection volume tables used to develop the 2020 existing volumes, 2022 opening year volumes, and 2042 design year volumes are attached in **Appendix C**. The revised certified traffic plates are shown in **Appendix D**.

DAILY TRAFFIC VOLUMES (NO-BUILD/BUILD INTERSECTION GEOMETRY)

The daily traffic volumes collected at each approach of the SR 32/Round Bottom Road and SR 32/Little Dry Run Road intersections in 2015 and again in 2018 were compared. **Table 5** summarizes the annual growth rate between the 2015 and 2018 daily approach volumes and indicates an annual growth rate of approximately 1.6%.

Table 5: Annual Growth Between 2015 and 2018 Daily Approach Volumes

Location	Count Date	Daily Traffic	Annual Growth
SR 32 west of Round Bottom Rd	12/09/15	13,232	-0.34%
	09/27/18	13,099	
SR 32 east of Round Bottom Rd	12/09/15	19,636	0.75%
	09/27/18	20,076	
Round Bottom Rd north of SR 32	12/09/15	11,897	3.38%
	09/27/18	13,103	
River Hills Dr south of SR 32	12/09/15	2,463	-0.83%
	09/27/18	2,402	
SR 32 & Round Bottom Rd Intersection	**12/09/15**	**47,228**	**1.02%**
	09/27/18	**48,680**	
SR 32 west of Little Dry Run Rd	12/09/15	19,788	2.14%
	09/19/18	21,058	
SR 32 east of Little Dry Run Rd	12/09/15	18,074	1.85%
	09/19/18	19,078	
Little Dry Run Rd south of SR 32	12/09/15	3,438	4.83%
	09/19/18	3,936	
SR 32 & Little Dry Run Rd Intersection	**12/09/15**	**41,300**	**2.24%**
	09/19/18	**44,072**	
OVERALL		**88,528**	**1.59%**
		92,752	

Additionally, 48-hour counts collected by ODOT on SR 32 east of Round Bottom Road used to calculate the SR 32 annual average daily traffic (AADT) in 2013, 2015, and 2018 were compared. **Table 6** summarizes the annual growth rate in AADT on SR 32 and indicates no growth over the three- and five-year periods.

Table 6: Historic AADT Growth on SR 32

Road Name and ODOT Count Station	2013 AADT	2015 AADT	2018 AADT	3-Year Growth Rate	5-Year Growth Rate
SR 32					
15731 - East of Round Bottom Rd	18,700	18,476	18,487	0.02%	-0.23%

Reviewing the 2018 daily traffic volumes at the SR 32/Round Bottom Road and SR 32/Little Dry Run Road intersections compared to the 2022 opening year volumes, there are certain movements where the 2018 traffic volumes are higher than the 2022 opening year traffic volumes. In those instances, the 2018 volume was used as the starting point. To account for additional growth and balance volumes between the intersections, a 1.0% annual growth was used to estimate the 2020 existing and 2022 opening year volumes at the Round Bottom Road intersection and a 0.5% annual growth was used to estimate the 2020 existing and 2022 opening year volumes at the Little Dry Run Road intersection. Because the 2018 volumes were used as a baseline and included bus volumes from the Forest Hills School District Bus Garage located on Round Bottom Road north of SR 32, no buses were added to the 2020 existing, 2022 opening year, or 2042 design year traffic volume like the AM and PM peak-hour volumes.

Like the AM and PM peak-hour volume development, and based on the historic growth trends analyzed above, the 0.20% growth rate appears to still be a reasonable estimate of future growth. The revised 2022 opening year volumes were grown at a 0.20% annual growth and the 2042 certified traffic volumes were adjusted accordingly. The intersection volume tables used to develop the 2020 existing volumes, 2022 opening year volumes, and 2042 design year volumes are attached in **Appendix C**. The revised certified traffic plates are shown in **Appendix D**.

MARTIN MARIETTA BUILD 2042 TRAFFIC VOLUMES

The proposed Martin Marietta Materials, Inc. development is located off Broadwell Road, north of SR 32 and east of Round Bottom Road. The proposed development will consist of a 2-million-ton mineral extraction operation. Traffic volumes generated from the project were obtained from the August 2008 Traffic Impact Study (TIS) prepared for the development. Based on the TIS, 120 AM peak-hour trips and 50 PM peak-hour trips will access the site via the SR 32/Round Bottom Road intersection. To estimate the daily traffic volumes, the AM peak-hour traffic was divided by a K factor of 0.09. This results in a daily traffic volume of 1,330 vehicles per day. Using StreetLight Data for the ANCOR Area, Martin Marietta Materials, Inc. development traffic to/from south of Broadwell Road on Round Bottom Road was distributed 70% to/from the east on SR 32, 15% to/from the west on SR 32, and 15% to/from US 50. The site traffic volumes figure from the TIS and StreetLight distribution is attached in **Appendix E**.

The proposed Martin Marietta Materials, Inc. volumes were added to the 2042 design year no-build/build conditions. The intersection volume tables used to develop the 2042 design year

volumes with the Martin Marietta Materials traffic are attached in **Appendix C**. The revised certified traffic plates are shown in **Appendix D**.

2020 Existing Traffic Analysis

The 2020 existing traffic conditions were analyzed using Trafficware's Synchro 10 Software. Intersections are graded using a level of service designation, expressed in terms of letter grades, with LOS A representing the highest quality traffic flow and minimal delay, and LOS F representing poor traffic operations and significant delay. As part of the analysis, existing lane geometry and signal timing was used at the study intersections. The existing signal timing is attached in **Appendix F**.

An overall intersection level-of-service standard of D was used as the acceptable performance standard. Additionally, each movement was checked to ensure that the volume to capacity (v/c) ratio was less than 1.0. Both the Highway Capacity Manual (HCM) 6th Edition methodology and Synchro 10 methodology were reviewed and produce similar overall intersection delays and level-of-service. The Synchro 10 results produced approach delays and level-of-service more representative of what has been observed in the field as part of the SR 32 signal timing analysis. Therefore, the Synchro 10 results have been summarized in the tables.

The results of the 2020 existing traffic AM and PM peak-hour Synchro intersection analysis are summarized in **Table 7** and indicate that all intersections currently operate at acceptable level-of-service standards during both the AM and PM peak hours. The 2020 existing conditions Synchro intersection worksheets are provided in **Appendix G** and electronic versions of the files are attached on the accompanying CD.

Table 7: 2020 Existing Intersection Conditions

Intersection	Time Period	Overall Intersection		Max v/c Ratio (mvmt)	Approach Delay (sec/veh) & LOS			
		LOS	Delay (sec/veh)		EB	WB	NB	SB
SR 32 & Round Bottom Rd	AM	C	25.0	0.74 (SBL)	14.1 B	16.5 B	63.8 E	76.6 E
	PM	D	45.7	0.95 (SBL)	36.1 D	31.7 D	77.4 E	69.0 E
SR 32 & Ivy Hills Pl	AM	B	14.3	0.90 (WBT)	3.6 A	15.0 B	77.3 E	
	PM	A	7.5	0.81 (EBT/R)	5.1 A	3.1 A	75.2 E	
SR 32 & Little Dry Run Rd	AM	C	23.5	0.83 (WBT)	8.5 A	18.1 B	90.3 F	
	PM	B	16.0	0.87 (EBT/R)	13.6 B	4.7 A	79.8 E	

No-Build Traffic Analysis

Using the existing geometry and signal timing, the no-build traffic conditions were analyzed for the 2022 opening year, 2042 design year, and 2042 design year with traffic from the Martin Marietta Materials, Inc. development. The results of the no-build AM and PM peak-hour Synchro intersection analysis are summarized in **Table 8** and indicate that all intersections are anticipated to operate at acceptable level-of-service standards during both the AM and PM peak hours for the 2022 opening year. For the 2042 design year (with and without the Martin Marietta Materials, Inc. traffic), the SR 32/Round Bottom Road intersection operates at level-of-service E with both the eastbound through/right and southbound left turn movements having a v/c ratio greater than 1.0. There are also movements at the SR 32/Ivy Hills Place and SR 32/Little Dry Run Road intersections that have v/c ratios greater than 1.0. The no-build conditions Synchro intersection worksheets are provided in **Appendix H** and electronic versions of the files are attached on the accompanying CD.

Table 8: No-Build Intersection Conditions

Scenario	Intersection	Time Period	Overall Intersection		Max v/c Ratio (mvmt)	Approach Delay (sec/veh) & LOS			
			LOS	Delay (sec/veh)		EB	WB	NB	SB
2022 Opening Year	SR 32 & Round Bottom Rd	AM	C	26.1	0.76 (SBL)	15.7 B	17.7 B	63.6 E	77.9 E
		PM	D	51.4	0.98 (EBT/R)	48.5 D	36.7 D	75.6 E	68.9 E
	SR 32 & Ivy Hills Pl	AM	B	16.9	0.95 (WBT)	2.9 A	19.0 B	77.3 E	
		PM	A	8.9	0.86 (EBT/R)	7.0 A	3.5 A	73.7 E	
	SR 32 & Little Dry Run Rd	AM	C	26.4	0.88 (WBT)	10.3 B	22.0 C	91.4 F	
		PM	C	20.4	0.94 (EBT/R)	19.9 B	6.1 A	81.3 F	
2042 Design Year	SR 32 & Round Bottom Rd	AM	C	28.1	0.78 (SBL)	19.3 B	18.5 B	71.0 E	76.5 E
		PM	**E**	**69.7**	**1.07 (EBT/R)**	**66.6 E**	38.1 D	87.5 F	**108.5 F**
	SR 32 & Ivy Hills Pl	AM	C	24.0	**1.00 (WBT)**	3.0 A	**28.1 C**	83.7 F	
		PM	B	19.0	**1.31 (WBL)**	12.8 B	**20.3 C**	81.5 F	
	SR 32 & Little Dry Run Rd	AM	C	30.3	0.97 (WBT)	12.2 B	27.4 C	89.3 F	
		PM	D	35.8	**1.05 (EBT/R)**	**43.8 D**	8.5 A	79.5 E	
2042 Design Year w/ Martin Marietta Traffic	SR 32 & Round Bottom Rd	AM	C	30.5	0.90 (SBL)	21.0 C	19.0 B	70.2 E	87.5 F
		PM	**E**	**69.1**	**1.10 (SBL)**	**66.6 E**	38.1 D	87.5 F	**106.0 F**
	SR 32 & Ivy Hills Pl	AM	C	32.0	**1.04 (WBT)**	2.6 A	**40.2 D**	83.7 F	
		PM	C	20.2	**1.31 (WBL)**	15.0 B	**20.1 C**	81.5 F	
	SR 32 & Little Dry Run Rd	AM	C	34.9	0.97 (WBT)	13.3 B	35.0 C	89.3 F	
		PM	D	41.2	**1.07 (EBT/R)**	**53.1 D**	8.5 A	79.5 E	

Overall intersection LOS is worse than D or an approach has a v/c ratio greater than 1.0

Build Traffic Analysis

The 2022 opening year, 2042 design year, and 2042 design year with traffic from the Martin Marietta Materials, Inc. development were again evaluated with the build improvements at the three study intersections. The build improvements evaluated consist of the improvements listed below and the geometry of the two build alternatives at the SR 32/Round Bottom Road intersection is shown in **Figure 2**.

SR 32/Round Bottom Road

- Convert the southbound through lane to a shared through/left turn lane on Round Bottom Road (Build Alternative RB-1)
- Construct a second southbound left turn lane on Round Bottom Road (Build Alternative RB-2)
- Extend the westbound right turn lane on SR 32 (Build Alternative RB-1 and RB-2)
- Construct a second eastbound lane on SR 32 (Build Alternative RB-1 and RB-2)

SR 32/Ivy Hills Place

- Construct a second eastbound lane on SR 32 (Build Alternative RB-1 and RB-2)

SR 32/Little Dry Run Road

- Construct an eastbound drop right turn lane on SR 32 (Build Alternative RB-1 and RB-2)

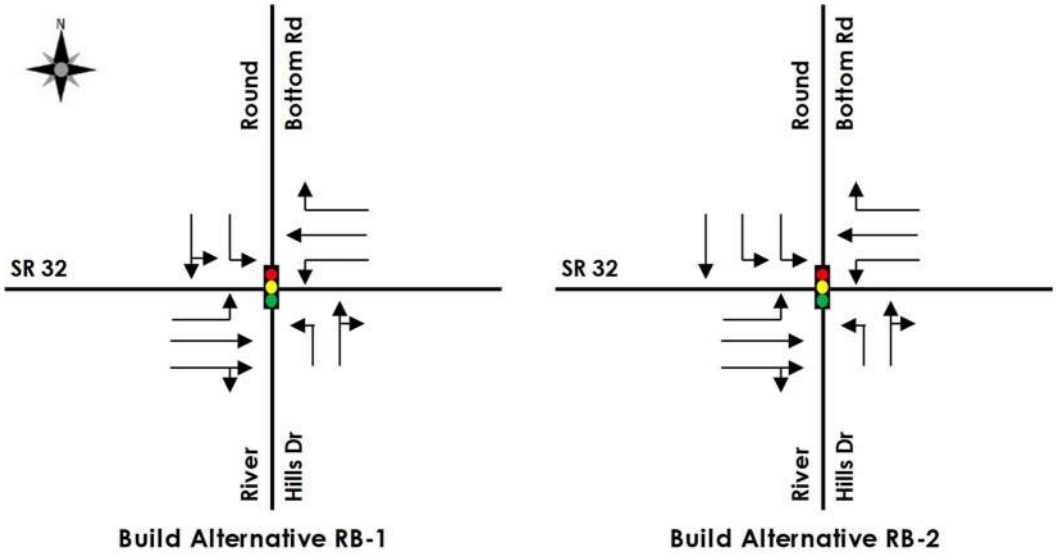


Figure 2: SR 32/Round Bottom Road Build Alternative Geometry

The build improvements are intended to relieve PM peak-hour congestion in the eastbound direction of SR 32 and for the southbound approach on Round Bottom Road at the SR 32 intersection. As shown in the no-build analysis, most of the failures are during the PM peak-hour

within the study area. The cycle lengths for the AM peak-hour remained at 180 seconds due to the single westbound lane on SR 32, but were optimized at the Round Bottom Road intersection to account for the revised minor street geometry. With the additional eastbound lane on SR 32, the PM peak-hour cycle lengths were reduced to 150 seconds and the phasing optimized.

The results of the build AM and PM peak-hour Synchro intersection analysis are summarized in **Table 9** and **Table 10** and indicate that all intersections are anticipated to operate at acceptable level-of-service standards during the PM peak-hour for the 2022 opening year, 2042 design year, and 2042 design year with traffic from the Martin Marietta Materials, Inc. development. During the AM peak-hour, the westbound through movement at the Ivy Hills Place intersection is anticipated to be over capacity by 2042, similar to the no-build conditions. The Build Alternative RB-1 conditions Synchro intersection worksheets are provided in **Appendix I**, the Build Alternative RB-2 conditions Synchro intersection worksheets are provided in **Appendix J**, and electronic versions of the files are attached on the accompanying CD.

Table 9: Build Alternative RB-1 Intersection Conditions

Scenario	Intersection	Time Period	Overall Intersection		Max v/c Ratio (mvmt)	Approach Delay (sec/veh) & LOS			
			LOS	Delay (sec/veh)		EB	WB	NB	SB
2022 Opening Year	SR 32 & Round Bottom Rd	AM	C	24.6	0.76 (SBL)	15.5 B	11.4 B	82.4 F	94.6 F
		PM	D	34.2	0.83 (SBL)	25.0 C	15.4 B	76.2 E	61.8 E
	SR 32 & Ivy Hills Pl	AM	B	13.0	0.95 (WBT)	0.7 A	14.3 B	77.3 E	
		PM	A	5.8	0.61 (NBL/R)	3.4 A	3.5 A	55.0 D	
	SR 32 & Little Dry Run Rd	AM	C	26.1	0.88 (WBT)	9.2 A	22.0 C	91.4 F	
		PM	B	16.5	0.83 (EBT/R)	15.6 B	5.1 A	69.4 E	
2042 Design Year	SR 32 & Round Bottom Rd	AM	C	26.9	0.77 (SBL)	17.1 B	12.8 B	85.8 F	95.0 F
		PM	D	37.1	0.85 (SBL)	28.5 C	17.0 B	85.1 F	61.9 E
	SR 32 & Ivy Hills Pl	AM	B	19.2	0.99 (WBT)	0.9 A	21.7 C	89.8 F	
		PM	A	6.8	0.67 (NBL/R)	3.6 A	4.1 A	62.4 E	
	SR 32 & Little Dry Run Rd	AM	C	29.6	0.92 (WBT)	10.2 B	26.7 C	91.7 F	
		PM	B	19.8	0.90 (EBT)	20.5 C	5.8 A	68.1 E	
2042 Design Year w/ Martin Marietta Traffic	SR 32 & Round Bottom Rd	AM	C	28.1	0.80 (SBL)	19.4 B	13.1 B	85.8 F	93.5 F
		PM	D	37.3	0.86 (SBL)	28.8 C	17.1 B	85.1 F	62.1 E
	SR 32 & Ivy Hills Pl	AM	C	24.6	**1.02 (WBT)**	0.9 A	**29.9 C**	89.8 F	
		PM	A	6.8	0.67 (NBL/R)	3.6 A	4.3 A	62.4 E	
	SR 32 & Little Dry Run Rd	AM	C	32.8	0.96 (WBT)	11.1 B	32.2 C	91.7 F	
		PM	C	20.6	0.91 (EBT)	21.6 C	6.4 A	68.1 E	

Overall intersection LOS is worse than D or an approach has a v/c ratio greater than 1.0

Table 10: Build Alternative RB-2 Intersection Conditions

Scenario	Intersection	Time Period	Overall Intersection		Max v/c Ratio (mvmt)	Approach Delay (sec/veh) & LOS			
			LOS	Delay (sec/veh)		EB	WB	NB	SB
2022 Opening Year	SR 32 & Round Bottom Rd	AM	C	20.1	0.65 (SBL)	9.5 A	8.3 A	77.3 E	83.7 F
		PM	D	33.0	0.76 (SBL)	26.7 C	13.3 B	73.6 E	58.0 E
	SR 32 & Ivy Hills Pl	AM	B	13.5	0.95 (WBT)	2.1 A	14.6 B	77.3 E	
		PM	A	5.7	0.61 (NBL/R)	3.1 A	3.5 A	55.0 D	
	SR 32 & Little Dry Run Rd	AM	C	26.1	0.88 (WBT)	9.0 A	22.0 C	91.4 F	
		PM	B	16.7	0.83 (EBT/R)	15.8 B	5.1 A	69.4 E	
2042 Design Year	SR 32 & Round Bottom Rd	AM	C	22.7	0.68 (WBT)	13.2 B	9.6 A	83.7 F	83.4 F
		PM	D	35.7	0.78 (SBL)	31.1 C	15.2 B	79.6 E	56.4 E
	SR 32 & Ivy Hills Pl	AM	B	19.7	0.99 (WBT)	2.3 A	21.8 C	89.8 F	
		PM	A	6.8	0.67 (NBL/R)	3.6 A	4.1 A	62.4 E	
	SR 32 & Little Dry Run Rd	AM	C	29.3	0.92 (WBT)	9.1 A	26.7 C	91.7 F	
		PM	B	19.3	0.90 (EBT)	19.7 B	5.8 A	68.1 E	
2042 Design Year w/ Martin Marietta Traffic	SR 32 & Round Bottom Rd	AM	C	23.8	0.70 (SBL)	14.6 B	9.9 A	83.4 F	82.6 F
		PM	D	35.8	0.79 (SBL)	31.5 C	15.3 B	79.6 E	56.3 E
	SR 32 & Ivy Hills Pl	AM	C	25.0	**1.02 (WBT)**	2.1 A	**30.0 C**	89.8 F	
		PM	A	6.6	0.67 (NBL/R)	3.2 A	4.3 A	62.4 E	
	SR 32 & Little Dry Run Rd	AM	C	32.7	0.96 (WBT)	10.6 B	32.2 C	91.7 F	
		PM	C	20.1	0.91 (EBT)	20.9 C	6.4 A	68.1 E	

Overall intersection LOS is worse than D or an approach has a v/c ratio greater than 1.0

As shown in **Table 9** and **Table 10**, both build alternatives provide improvement over the no-build conditions, with greater reductions in delay during the PM peak-hour compared to the AM peak-hour. Because there are no differences in geometry at the SR 32/Ivy Hill Place and SR 32/Little Dry Run Road intersections between the two build alternatives, the percent reduction of delay is essentially the same. The minor differences between the build alternatives at those

two intersections are due to the different phasing and signal timing at the SR 32/Round Bottom Road intersection and how that impacts the arrival of vehicles within the coordinated signal system.

At the SR 32/Round Bottom Road intersection, Build Alternative RB-2 reduces the overall intersection delay compared to the no-build conditions by about 15% more than Build Alternative RB-1 during the AM peak-hour and by about 2% more than Build Alternative RB-1 during the PM peak-hour. Build Alternative RB-1 requires the Round Bottom Road approach to be split phased. This phasing is less efficient than other types of left-turn phasing and reduces the time available to the intersecting road. The SR 32 phases receive five seconds less compared to Alternative RB-2 which allows the intersection to operate with protected only phasing for the Round Bottom Road approach. The percent reduction in overall intersection delay from Build Alternative RB-1 and Build Alternative RB-2 compared to the no-build conditions is summarized in **Table 11**.

Table 11: Percent Reduction in Overall Intersection Delay

Scenario	Intersection	Time Period	No-Build		Build Alternative RB-1			Build Alternative RB-2		
			Overall Intersection		Overall Intersection		Percent Reduction in Delay (Sec/veh)	Overall Intersection		Percent Reduction in Delay (Sec/veh)
			LOS	Delay (sec/veh)	LOS	Delay (sec/veh)		LOS	Delay (sec/veh)	
2022 Opening Year	SR 32 & Round Bottom Rd	AM	C	26.1	C	24.6	6%	C	20.1	23%
		PM	D	51.4	D	34.2	33%	D	33.0	36%
	SR 32 & Ivy Hills Pl	AM	B	16.9	B	13.0	23%	B	13.5	20%
		PM	A	8.9	A	5.8	35%	A	5.7	36%
	SR 32 & Little Dry Run Rd	AM	C	26.4	C	26.1	1%	C	26.1	1%
		PM	C	20.4	B	16.5	19%	B	16.7	18%
2042 Design Year	SR 32 & Round Bottom Rd	AM	C	28.1	C	26.9	4%	C	22.7	19%
		PM	E	69.7	D	37.1	47%	D	35.7	49%
	SR 32 & Ivy Hills Pl	AM	C	24.0	B	19.2	20%	B	19.7	18%
		PM	B	19.0	A	6.8	64%	A	6.8	64%
	SR 32 & Little Dry Run Rd	AM	C	30.3	C	29.6	2%	C	29.3	3%
		PM	D	35.8	B	19.8	45%	B	19.3	46%
2042 Design Year w/ Martin Marietta Traffic	SR 32 & Round Bottom Rd	AM	C	30.5	C	28.1	8%	C	23.8	22%
		PM	E	69.1	D	37.3	46%	D	35.8	48%
	SR 32 & Ivy Hills Pl	AM	C	32.0	C	24.6	23%	C	25.0	22%
		PM	C	20.2	A	6.8	66%	A	6.6	67%
	SR 32 & Little Dry Run Rd	AM	C	34.9	C	32.8	6%	C	32.7	6%
		PM	D	41.2	C	20.6	50%	C	20.1	51%

In addition to the percent reduction in delay at the three study intersections, the percent reduction in eastbound queues along SR 32 (the direction of the added lane) for the 2042 design year with the Martin Marietta Materials, Inc. development was evaluated between the build alternatives and the no-build conditions. The build alternatives will significantly shorten the queue lengths compared to the no-build conditions, with greater reductions during the PM peak-hour compared to the AM peak-hour and range from a 17% reduction to an 88% reduction. The percent reduction in eastbound 2042 queue lengths from Build Alternative RB-1 and Build Alternative RB-2 compared to the no-build conditions is summarized in **Table 12**.

Table 12: 2042 Percent Reduction in Eastbound SR 32 Queue Lengths

Through Approach	Time Period	No-Build 95th %tile Queue (ft)		Alternative RB-1 95th %tile Queue (ft)					Alternative RB-2 95th %tile Queue (ft)				
						95th %tile Queue Percent Reduction					95th %tile Queue Percent Reduction		
		HCM 6th	Synchro	HCM 6th	Synchro	HCM 6th	Synchro	Avg.	HCM 6th	Synchro	HCM 6th	Synchro	Avg.
EB SR 32 at Round Bottom Rd	AM	573	353	303	168	47%	52%	50%	143	149	75%	58%	66%
	PM	610	1,177	25	279	96%	76%	86%	15	251	98%	79%	88%
EB SR 32 at Ivy Hills Pl	AM	13	64	5	22	62%	66%	64%	5	54	62%	16%	39%
	PM	40	973	15	283	63%	71%	67%	18	270	55%	72%	64%
EB SR 32 at Little Dry Run	AM	20	593	18	455	10%	23%	17%	18	393	10%	34%	22%
	PM	295	2,136	153	1,497	48%	30%	39%	153	1,534	48%	28%	38%

Turn Lane Analysis

The required turn lane lengths were calculated for the extension of the southbound left turn lane on Round Bottom Road (Build Alternative RB-1) and the extension of the southbound left turn lane/construction of the second left turn lane (Build Alternative RB-2) at SR 32, the extension of the westbound right turn lane on SR 32 at Round Bottom Road, and the extension of the northbound left turn lane on Little Dry Run Road at SR 32. The 2042 design year with traffic from the Martin Marietta Materials, Inc. development was used for the analysis. The turn lane lengths were based on Figure 401-9 and Figure 401-10 of the ODOT *Location and Design Manual, Volume 1*. A design speed of 30 mph (posted 25 mph speed limit + 5 mph) was used to calculate the Round Bottom Road turn lane lengths and a design speed of 40 mph (posted 35 mph speed limit + 5 mph) was used to calculate the Little Dry Run Road turn lane length.

Additionally, the 95th percentile queues from the HCM 6th Edition methodology and Synchro 10 methodology were checked to ensure that the turn lane lengths calculated by the ODOT *Location and Design Manual, Volume 1* were long enough to accommodate the 95th percentile queue. **Table 13** summarizes the results of the analysis. The 95th percentile queue lengths are provided in **Appendix I** and **Appendix J**, and the ODOT *Location and Design Manual, Volume 1* turn lane length calculations are provided in **Appendix K**.

Table 13: 2042 Turn Lane Length Calculations

Turn Lane	Time Period	ODOT L&D Calc. Length (ft)	Alternative RB-1 95th %tile Queue (ft)		Alternative RB-2 95th %tile Queue (ft)		Recommended Turn Lane Length (ft)
			HCM 6th	Synchro	HCM 6th	Synchro	
Round Bottom Rd Southbound Left	AM	325	303	296	288	220	**600 (Alt RB-1)**
	PM	575	533	535	495	385	**575 (Alt RB-2)**
SR 32 Westbound Right at Round Bottom Rd	AM	1,325	--	27	--	47	**955**[1]
	PM	725	--	125	--	116	
Little Dry Run Rd Northbound Left	AM	515	430	349	430	349	**515**
	PM	365	263	214	263	214	

1. The right turn lane was stopped short of the Brewer Company property to avoid impacts to their asphalt operations.

The build alternatives will shorten the turn lane queue lengths compared to the no-build conditions. Significant reductions in the turn lane queue lengths are expected during both the AM and PM peak-hour for the southbound left and westbound right turn lanes at the SR 32/Round Bottom Road intersection. Given the minor capacity improvements at the SR 32/Little Dry Run, the northbound left turn queues are the same during the AM peak-hour and slightly better during the PM peak-hour. Build Alternative RB-2 reduce the turn lane queues at all three locations by about 3% more than Build Alternative RB-1. The percent reduction in turn lane queue lengths from Build Alternative RB-1 and Build Alternative RB-2 compared to the no-build conditions is summarized in **Table 14**.

Table 14: 2042 Percent Reduction in Turn Lane Queue Lengths

Turn Lane	Time Period	No-Build 95th %tile Queue (ft)		Alternative RB-1 95th %tile Queue (ft)					Alternative RB-2 95th %tile Queue (ft)				
						95th %tile Queue Percent Reduction					95th %tile Queue Percent Reduction		
		HCM 6th	Synchro	HCM 6th	Synchro	HCM 6th	Synchro	Avg.	HCM 6th	Synchro	HCM 6th	Synchro	Avg.
Round Bottom Rd Southbound Left	AM	513	426	303	296	41%	31%	36%	288	220	44%	48%	46%
	PM	1,290	1,160	533	535	59%	54%	56%	495	385	62%	67%	64%
SR 32 Westbound Right at Round Bottom Rd	AM	--	230	--	27	--	88%	88%	--	47	--	80%	80%
	PM	--	275	--	125	--	55%	55%	--	116	--	58%	58%
Little Dry Run Rd Northbound Left	AM	425	344	430	349	-1%	-1%	-1%	430	349	-1%	-1%	-1%
	PM	300	246	263	214	12%	13%	13%	263	214	12%	13%	13%

Conclusion

A traffic operations analysis was completed at the SR 32 intersections with Round Bottom Road, Ivy Hills Place, and Little Dry Run Road for the 2020 existing, 2022 opening, and 2042 design years. As part of the analysis, the certified traffic volumes developed and approved as part of the Segment II/III of the Eastern Corridor Study were updated and used for the analysis.

Deficiencies are anticipated at all three study area intersections by the 2042 design year for the no-build conditions. To alleviate congestion, specifically during the PM peak-hour in the eastbound direction of SR 32, the following build improvements were evaluated:

<u>SR 32/Round Bottom Road</u>

- Convert the southbound through lane to a shared through/left turn lane on Round Bottom Road (Build Alternative RB-1)
- Construct a second southbound left turn lane on Round Bottom Road (Build Alternative RB-2)
- Extend the westbound right turn lane on SR 32 (Build Alternative RB-1 and RB-2)
- Construct a second eastbound lane on SR 32 (Build Alternative RB-1 and RB-2)

<u>SR 32/Ivy Hills Place</u>

- Construct a second eastbound lane on SR 32 (Build Alternative RB-1 and RB-2)

<u>SR 32/Little Dry Run Road</u>

- Construct an eastbound drop right turn lane on SR 32 (Build Alternative RB-1 and RB-2)

The build improvements evaluated as part of the analysis will allow all the study area intersections to operate at acceptable level-of-service through the 2042 design year during the PM peak-hour. During the AM peak-hour, the westbound through movement at the Ivy Hills Place intersection is anticipated to be over capacity by 2042, similar to the no-build conditions. Both build alternatives at the SR 32/Round Bottom Road intersection provide improvement over the no-build conditions. While Build Alternative RB-2 has a higher percent reduction in delay at the SR 32/Round Bottom Road intersection compared to Build Alternative RB-1, it will result in impacts to the Hamilton County Engineer's Office Highway Maintenance property, located on the northeast quadrant of this intersection.

As part of the build improvements, the required turn lane lengths were calculated for the extension of the southbound left turn lane on Round Bottom Road (Build Alternative RB-1) and the extension of the southbound left turn lane/construction of the second left turn lane (Build Alternative RB-2) at SR 32, the extension of the westbound right turn lane on SR 32 at Round Bottom Road, and the extension of the northbound left turn lane on Little Dry Run Road at SR 32. Below are the recommended turn lane lengths.

- Round Bottom Road southbound left turn lane at SR 32 (Build Alternative RB-1) – 600 feet
- Round Bottom Road southbound left turn lane at SR 32 (Build Alternative RB-2) – 575 feet
- SR 32 westbound right turn lane at Round Bottom Road – 955 feet
- Little Dry Run Road northbound left turn lane at SR 32 – 515 feet

APPENDIX A

INTERSECTION TURNING MOVEMENT COUNTS

TRAFFIC VOLUME AT STUDY INTERSECTION - AM

Intersection: SR-32 & Round Bottom Road
Count Date: 12/09/15
A.M. Peak-Hour: 7:00 - 8:00 AM
Peak Hour Factor: 0.97

	SR-32			SR-32			River Hills Dr			Round Bottom Rd		
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	62	263	31	29	654	630	40	23	15	182	17	125
Cars	*58*	*256*	*31*	*28*	*621*	*615*	*39*	*23*	*14*	*159*	*17*	*113*
Trucks	*4*	*7*	*0*	*1*	*33*	*15*	*1*	*0*	*1*	*23*	*0*	*12*
2015 Existing Traffic	**60**	**260**	**30**	**30**	**650**	**630**	**40**	**20**	**20**	**180**	**20**	**130**
% Heavy Vehicles	**6.5%**	**2.7%**	**0.0%**	**3.4%**	**5.0%**	**2.4%**	**2.5%**	**0.0%**	**6.7%**	**12.6%**	**0.0%**	**9.6%**

Intersection: SR-32 & Round Bottom Road - Recount with Demand Volumes
Count Date: 05/16/17
A.M. Peak-Hour: 7:00 - 8:00 AM
Peak Hour Factor: 0.93

	SR-32			SR-32			River Hills Dr			Round Bottom Rd		
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	95	240	37	18	562	645	55	22	13	191	17	144
Cars	*87*	*224*	*37*	*18*	*534*	*625*	*54*	*22*	*13*	*175*	*17*	*118*
Trucks	*8*	*16*	*0*	*0*	*28*	*20*	*1*	*0*	*0*	*16*	*0*	*26*
2017 Existing Traffic	**100**	**240**	**40**	**20**	**560**	**650**	**60**	**20**	**10**	**190**	**20**	**140**
% Heavy Vehicles	**8.4%**	**6.7%**	**0.0%**	**0.0%**	**5.0%**	**3.1%**	**1.8%**	**0.0%**	**0.0%**	**8.4%**	**0.0%**	**18.1%**

Intersection: SR-32 & Round Bottom Road - Recount Post Signal Timing Study
Count Date: 09/27/18
A.M. Peak-Hour: 7:15 - 8:15 AM
Peak Hour Factor: 0.95

	SR-32			SR-32			River Hills Dr			Round Bottom Rd		
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	91	271	30	23	563	584	47	31	12	212	16	141
Cars	*85*	*255*	*27*	*23*	*539*	*567*	*45*	*31*	*12*	*195*	*16*	*131*
Trucks	*6*	*16*	*3*	*0*	*24*	*17*	*2*	*0*	*0*	*17*	*0*	*10*
2018 Existing Traffic	**90**	**270**	**30**	**20**	**560**	**580**	**50**	**30**	**10**	**210**	**20**	**140**
% Heavy Vehicles	**6.6%**	**5.9%**	**10.0%**	**0.0%**	**4.3%**	**2.9%**	**4.3%**	**0.0%**	**0.0%**	**8.0%**	**0.0%**	**7.1%**

Intersection: SR-32 & Ivy Hills Place
Count Date: 05/16/17
A.M. Peak-Hour: 6:45 - 7:45 AM
Peak Hour Factor: 0.92

	SR-32			SR-32			Ivy Hills Pl					
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	0	346	3	21	1205	0	44	0	27	0	0	0
Cars	*0*	*323*	*3*	*21*	*1168*	*0*	*44*	*0*	*27*	*0*	*0*	*0*
Trucks	*0*	*23*	*0*	*0*	*37*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2017 Existing Traffic	**0**	**350**	**0**	**20**	**1210**	**0**	**40**	**0**	**30**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**6.6%**	**0.0%**	**0.0%**	**3.1%**	**--**	**0.0%**	**--**	**0.0%**	**--**	**--**	**--**

Intersection: SR-32 & Little Dry Run
Count Date: 12/09/15
A.M. Peak-Hour: 7:00 - 8:00 AM
Peak Hour Factor: 0.97

	SR-32			SR-32			Little Dry Run					
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	0	429	35	20	1097	0	179	0	19	0	0	0
Cars	*0*	*394*	*29*	*19*	*1051*	*0*	*177*	*0*	*17*	*0*	*0*	*0*
Trucks	*0*	*35*	*6*	*1*	*46*	*0*	*2*	*0*	*2*	*0*	*0*	*0*
2015 Existing Traffic	**0**	**430**	**40**	**20**	**1100**	**0**	**180**	**0**	**20**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**8.2%**	**17.1%**	**5.0%**	**4.2%**	**--**	**1.1%**	**--**	**10.5%**	**--**	**--**	**--**

Intersection: SR-32 & Little Dry Run
Count Date: 09/19/18
A.M. Peak-Hour: 7:15 - 8:15 AM
Peak Hour Factor: 0.93

	SR-32			SR-32			Little Dry Run					
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	0	501	39	29	956	0	196	0	23	0	0	0
Cars	*0*	*394*	*29*	*19*	*1051*	*0*	*177*	*0*	*17*	*0*	*0*	*0*
Trucks	*0*	*67*	*8*	*5*	*29*	*0*	*7*	*0*	*5*	*0*	*0*	*0*
2018 Existing Traffic	**0**	**500**	**40**	**30**	**960**	**0**	**200**	**0**	**20**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**13.4%**	**20.5%**	**17.2%**	**3.0%**	**--**	**3.6%**	**--**	**21.7%**	**--**	**--**	**--**

TRAFFIC VOLUME AT STUDY INTERSECTION - PM

Intersection: SR-32 & Round Bottom Road
Count Date: 12/09/15
P.M. Peak-Hour: 4:45 - 5:45 PM
Peak Hour Factor: 0.95

	SR-32			SR-32			River Hills Dr			Round Bottom Rd		
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	99	563	41	26	284	299	47	45	36	540	46	99
Cars	*85*	*553*	*41*	*26*	*283*	*292*	*46*	*45*	*35*	*530*	*46*	*95*
Trucks	*14*	*10*	*0*	*0*	*1*	*7*	*1*	*0*	*1*	*10*	*0*	*4*
2015 Existing Traffic	**100**	**560**	**40**	**30**	**280**	**300**	**50**	**50**	**40**	**540**	**50**	**100**
% Heavy Vehicles	**14.1%**	**1.8%**	**0.0%**	**0.0%**	**0.4%**	**2.3%**	**2.1%**	**0.0%**	**2.8%**	**1.9%**	**0.0%**	**4.0%**

Intersection: SR-32 & Round Bottom Road - Recount with Demand Volumes
Count Date: 05/15/17
P.M. Peak-Hour: 4:45 - 5:45 PM
Peak Hour Factor: 0.94

	SR-32			SR-32			Church St			Church St		
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	139	569	43	23	304	378	37	41	39	548	52	105
Cars	*133*	*566*	*43*	*23*	*301*	*362*	*37*	*40*	*39*	*543*	*50*	*103*
Trucks	*6*	*3*	*0*	*0*	*3*	*16*	*0*	*1*	*0*	*5*	*2*	*2*
2017 Existing Traffic	**140**	**570**	**40**	**20**	**300**	**380**	**40**	**40**	**40**	**550**	**50**	**110**
% Heavy Vehicles	**4.3%**	**0.5%**	**0.0%**	**0.0%**	**1.0%**	**4.2%**	**0.0%**	**2.4%**	**0.0%**	**0.9%**	**3.8%**	**1.9%**

Intersection: SR-32 & Round Bottom Road - Recount Post Signal Timing Study
Count Date: 09/27/18
P.M. Peak-Hour: 4:30 - 5:30 PM
Peak Hour Factor: 0.99

	SR-32			SR-32			Church St			Church St		
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	118	524	44	20	285	365	53	43	39	616	43	145
Cars	*92*	*513*	*44*	*19*	*281*	*337*	*51*	*43*	*39*	*610*	*42*	*144*
Trucks	*26*	*11*	*0*	*1*	*4*	*28*	*2*	*0*	*0*	*6*	*1*	*1*
2018 Existing Traffic	**120**	**520**	**40**	**20**	**290**	**370**	**50**	**40**	**40**	**620**	**40**	**150**
% Heavy Vehicles	**22.0%**	**2.1%**	**0.0%**	**5.0%**	**1.4%**	**7.7%**	**3.8%**	**0.0%**	**0.0%**	**1.0%**	**2.3%**	**0.7%**

Intersection: SR-32 & Ivy Hills Place
Count Date: 05/16/17
P.M. Peak-Hour: 5:15 - 6:15 PM
Peak Hour Factor: 0.91

	SR-32			SR-32			Ivy Hills Pl					
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	0	988	30	36	801	0	39	0	49	0	0	0
Cars	*0*	*966*	*30*	*36*	*778*	*0*	*38*	*0*	*49*	*0*	*0*	*0*
Trucks	*0*	*22*	*0*	*0*	*23*	*0*	*1*	*0*	*0*	*0*	*0*	*0*
2017 Existing Traffic	**0**	**990**	**30**	**40**	**800**	**0**	**40**	**0**	**50**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**2.2%**	**0.0%**	**0.0%**	**2.9%**	**--**	**2.6%**	**--**	**0.0%**	**--**	**--**	**--**

Intersection: SR-32 & Little Dry Run
Count Date: 12/09/15
P.M. Peak-Hour: 5:00 - 6:00 PM
Peak Hour Factor: 0.97

	SR-32			SR-32			Little Dry Run					
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	0	964	154	44	539	0	109	0	33	0	0	0
Cars	*0*	*942*	*151*	*44*	*528*	*0*	*109*	*0*	*30*	*0*	*0*	*0*
Trucks	*0*	*22*	*3*	*0*	*11*	*0*	*0*	*0*	*3*	*0*	*0*	*0*
2015 Existing Traffic	**0**	**960**	**150**	**40**	**540**	**0**	**110**	**0**	**30**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**2.3%**	**1.9%**	**0.0%**	**2.0%**	**--**	**0.0%**	**--**	**9.1%**	**--**	**--**	**--**

Intersection: SR-32 & Little Dry Run
Count Date: 09/19/18
P.M. Peak-Hour: 4:30 - 5:30 PM
Peak Hour Factor: 0.97

	SR-32			SR-32			Little Dry Run					
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	0	1024	148	34	605	0	128	0	38	0	0	0
Cars	*0*	*942*	*151*	*44*	*528*	*0*	*109*	*0*	*30*	*0*	*0*	*0*
Trucks	*0*	*23*	*3*	*0*	*24*	*0*	*18*	*0*	*1*	*0*	*0*	*0*
2018 Existing Traffic	**0**	**1020**	**150**	**30**	**610**	**0**	**130**	**0**	**40**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**2.2%**	**2.0%**	**0.0%**	**4.0%**	**--**	**14.1%**	**--**	**2.6%**	**--**	**--**	**--**

BATAVIA PIKE AT ROUND BOTTOM RD

12/9/2015

TOTAL - CARS AND TRUCKS

	ROUND BOTTOM RD From North				BATAVIA RD From East				RIVER HILLS DR From South				BATAVIA PIKE From West				15-Min Total	Hour Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		
00:00 AM	1	0	4	0	1	6	0	0	1	0	1	0	0	11	1	0	26	
00:15 AM	1	1	5	0	5	2	0	0	0	0	0	0	1	9	0	0	24	
00:30 AM	0	0	4	0	0	5	0	0	0	0	0	0	1	3	0	0	13	
00:45 AM	0	2	12	0	1	0	0	0	0	0	0	0	2	6	1	0	24	87
01:00 AM	0	1	6	0	2	1	0	0	0	0	1	0	0	7	0	0	18	79
01:15 AM	1	0	0	0	2	3	1	0	0	0	0	0	0	7	0	0	14	69
01:30 AM	0	0	2	0	3	2	0	0	1	0	0	0	0	4	0	0	12	68
01:45 AM	1	0	2	0	0	2	0	0	0	0	0	0	0	6	1	0	12	56
02:00 AM	0	0	1	0	2	1	0	0	0	0	0	0	1	4	0	0	9	47
02:15 AM	1	0	2	0	0	3	2	0	0	0	0	0	0	1	0	0	9	42
02:30 AM	0	0	5	0	2	2	0	0	0	0	0	0	0	0	0	0	9	39
02:45 AM	1	0	2	0	2	2	0	0	0	0	0	0	0	4	0	0	11	38
03:00 AM	0	0	1	0	3	6	0	0	0	0	0	0	0	3	0	0	13	42
03:15 AM	0	0	1	0	2	6	0	0	0	0	0	0	0	0	2	0	11	44
03:30 AM	0	0	4	0	7	2	0	0	0	0	0	0	0	2	0	0	15	50
03:45 AM	0	0	5	0	7	5	0	0	0	0	0	0	0	4	1	0	22	61
04:00 AM	0	1	3	0	12	4	0	0	0	0	1	0	0	8	0	0	29	77
04:15 AM	0	1	7	0	17	8	2	0	0	1	0	0	1	3	0	0	40	106
04:30 AM	1	1	6	0	25	10	0	0	0	1	1	0	1	6	1	0	53	144
04:45 AM	2	0	6	0	27	12	1	0	0	0	1	0	1	5	1	0	56	178
05:00 AM	2	1	6	0	23	17	1	0	0	1	2	0	1	4	1	0	59	208
05:15 AM	2	0	8	0	47	31	3	0	5	1	1	0	2	10	5	0	115	283
05:30 AM	4	2	6	0	66	53	4	0	2	2	6	0	3	11	4	0	163	393
05:45 AM	9	1	11	0	71	60	6	0	1	0	3	0	3	12	9	0	186	523
06:00 AM	4	1	9	0	69	60	4	0	0	0	6	0	0	17	7	0	177	641
06:15 AM	9	0	18	0	78	110	3	0	2	2	4	0	2	20	13	0	261	787
06:30 AM	12	0	27	0	129	120	1	0	2	1	6	0	2	25	19	0	344	968
06:45 AM	25	1	25	0	153	156	5	0	4	2	15	0	4	31	19	0	440	1222
07:00 AM	29	3	34	0	141	180	6	0	4	4	16	0	3	57	9	0	486	1531
00:15 AM	27	3	52	0	176	160	9	0	5	7	11	0	6	55	13	0	524	1794
07:30 AM	32	4	40	0	169	165	7	0	3	4	6	0	10	70	15	0	525	1975
07:45 AM	37	7	56	0	144	149	7	0	3	8	7	0	12	81	25	0	536	2071
08:00 AM	36	11	51	0	110	131	3	0	4	4	8	0	10	75	12	0	455	2040
08:15 AM	38	4	50	0	144	148	3	1	3	5	13	0	4	57	14	0	484	2000
08:30 AM	15	11	52	0	118	126	4	0	2	3	5	0	5	53	25	0	419	1894
08:45 AM	29	0	46	0	82	119	4	0	4	12	12	0	8	53	12	0	381	1739
09:00 AM	22	4	33	0	58	76	2	0	6	3	9	0	9	61	13	0	296	1580
09:15 AM	12	4	35	0	72	64	2	0	3	5	6	0	3	61	5	0	272	1368
09:30 AM	10	5	45	0	74	81	1	0	7	4	8	0	3	47	7	0	292	1241
09:45 AM	23	4	32	0	62	58	2	0	7	4	8	0	4	41	10	0	255	1115
10:00 AM	9	2	31	0	71	57	2	0	5	2	5	0	6	70	19	0	279	1098
10:15 AM	12	4	45	0	63	60	4	0	1	6	13	0	6	44	10	0	268	1094
10:30 AM	13	4	34	0	63	69	1	0	3	5	3	0	4	66	10	0	275	1077
10:45 AM	11	4	49	0	55	58	8	0	6	8	7	0	4	55	12	0	277	1099
11:00 AM	17	6	49	0	62	56	6	0	4	5	14	0	3	64	11	0	297	1117
11:15 AM	14	6	48	0	67	65	5	0	8	4	12	0	5	56	18	0	308	1157
11:30 AM	16	7	62	0	59	66	4	0	4	8	10	0	2	75	18	0	331	1213
11:45 AM	26	6	54	0	36	67	8	0	3	12	12	0	9	68	10	0	311	1247
12:00 PM	18	10	57	0	37	55	8	0	8	12	10	0	11	79	14	0	319	1269
12:15 PM	17	7	51	0	46	68	2	0	5	12	18	0	5	60	9	0	300	1261
12:30 PM	19	11	55	0	59	75	3	0	8	10	6	0	11	62	14	0	333	1263
12:45 PM	14	5	54	0	39	81	7	0	9	8	9	0	3	68	20	0	317	1269
01:00 PM	22	10	76	0	51	58	10	0	6	6	10	0	4	68	13	0	334	1284
01:15 PM	16	3	76	0	60	66	4	0	5	6	11	0	9	75	9	0	340	1324
01:30 PM	20	5	61	0	49	60	7	0	2	12	11	0	6	61	13	0	307	1298
01:45 PM	20	6	75	0	45	57	11	0	4	5	11	0	9	81	13	0	337	1318
02:00 PM	31	2	68	0	51	66	6	0	5	3	10	0	4	79	13	0	338	1322
02:15 PM	18	9	64	0	65	50	5	0	3	11	10	0	6	103	15	0	359	1341
02:30 PM	22	5	84	0	60	69	7	0	12	5	8	0	10	89	18	0	389	1423
02:45 PM	23	6	58	0	70	71	7	0	6	4	5	0	9	110	17	0	386	1472
03:00 PM	25	6	100	0	50	75	6	0	6	6	6	0	3	117	17	0	417	1551
03:15 PM	16	7	103	0	60	74	7	0	5	11	10	0	10	108	17	0	428	1620
03:30 PM	32	5	97	0	55	63	4	0	9	10	8	0	7	102	20	0	412	1643
03:45 PM	23	6	134	0	65	70	3	0	7	10	14	0	13	121	23	0	489	1746
04:00 PM	25	10	129	0	60	69	1	0	11	7	11	0	17	119	19	0	478	1807
04:15 PM	24	11	135	0	48	68	3	0	2	12	13	0	9	123	31	0	479	1858
04:30 PM	13	9	133	0	76	66	3	0	10	10	10	0	9	153	29	0	521	1967
04:45 PM	20	15	113	0	77	70	5	0	6	5	8	0	10	147	28	0	504	1982
05:00 PM	30	11	123	0	66	63	8	0	11	20	12	0	11	158	26	0	539	2043
05:15 PM	27	11	144	0	77	81	5	0	8	7	13	0	9	147	28	0	557	2121
05:30 PM	22	9	160	0	79	70	8	0	11	13	14	0	11	111	17	0	525	2125
05:45 PM	37	10	98	0	64	81	3	0	3	5	4	0	7	155	33	0	500	2121
06:00 PM	27	12	111	0	63	83	6	0	4	11	6	0	11	129	20	0	483	2065
06:15 PM	11	5	95	0	78	70	3	0	3	6	5	0	8	118	15	0	417	1925
06:30 PM	13	6	74	0	39	59	3	0	2	6	9	0	10	102	4	0	327	1727
06:45 PM	11	8	84	0	45	47	2	0	4	4	4	0	9	65	10	0	293	1520
07:00 PM	11	6	75	0	34	48	3	0	2	6	5	0	6	76	7	0	279	1316
07:15 PM	16	9	61	0	38	49	4	0	2	1	7	0	4	73	3	0	267	1166
07:30 PM	5	8	65	0	28	29	3	0	3	2	2	0	5	60	7	0	217	1056
07:45 PM	7	7	47	0	30	33	2	0	2	2	6	0	5	61	4	0	206	969
08:00 PM	8	6	46	0	20	22	5	0	2	1	5	0	8	56	5	0	184	874
08:15 PM	8	5	48	0	18	40	2	0	1	4	11	0	6	43	7	0	193	800
08:30 PM	9	4	38	0	26	32	3	0	3	2	3	0	4	49	2	0	175	758
08:45 PM	9	5	37	0	13	25	4	0	1	5	1	0	7	43	7	0	157	709
09:00 PM	4	3	42	0	19	23	4	0	3	0	5	0	5	48	6	0	162	687
09:15 PM	6	7	44	0	23	23	3	0	0	1	5	0	3	58	6	0	179	673
09:30 PM	4	1	18	0	12	13	1	0	1	1	2	0	7	35	5	0	100	598
09:45 PM	2	2	25	0	17	13	6	0	0	2	2	0	5	33	7	0	114	555
10:00 PM	6	3	22	0	19	19	1	0	2	0	2	0	3	28	2	0	107	500
10:15 PM	0	2	18	0	12	14	4	0	1	3	4	0	5	20	4	0	87	408
10:30 PM	1	4	18	0	20	11	4	0	0	0	4	0	4	23	2	0	91	399
10:45 PM	4	1	19	0	4	9	0	0	4	2	0	0	3	11	1	0	58	343
11:00 PM	2	3	15	0	6	2	2	0	0	0	0	0	1	20	0	0	51	287
11:15 PM	3	1	33	0	4	4	2	0	0	1	1	0	2	13	0	0	64	264
11:30 PM	2	1	10	0	3	3	0	0	0	1	2	0	1	17	0	0	40	213
11:45 PM	1	0	5	0	5	2	0	0	0	0	0	0	0	7	0	0	20	175
Total	**1208**	**410**	**4384**	**0**	**4567**	**4943**	**321**	**1**	**305**	**395**	**566**	**0**	**466**	**5116**	**933**	**0**		

BATAVIA PIKE AT ROUND BOTTOM RD

12/9/2015

CARS

	ROUND BOTTOM RD From North				BATAVIA RD From East				RIVER HILLS DR From South				BATAVIA PIKE From West				15-Min Total	Hour Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		
00:00 AM	1	0	4	0	1	3	0	0	1	0	1	0	0	11	1	0	23	
00:15 AM	1	1	5	0	4	2	0	0	0	0	0	0	1	9	0	0	23	
00:30 AM	0	0	4	0	0	5	0	0	0	0	0	0	1	3	0	0	13	
00:45 AM	0	2	12	0	1	0	0	0	0	0	0	0	2	6	1	0	24	83
01:00 AM	0	1	6	0	2	1	0	0	0	0	1	0	0	6	0	0	17	77
01:15 AM	1	0	0	0	2	2	1	0	0	0	0	0	0	7	0	0	13	67
01:30 AM	0	0	2	0	3	2	0	0	1	0	0	0	0	4	0	0	12	66
01:45 AM	1	0	2	0	0	2	0	0	0	0	0	0	0	5	1	0	11	53
02:00 AM	0	0	1	0	2	1	0	0	0	0	0	0	0	4	0	0	8	44
02:15 AM	1	0	2	0	0	3	2	0	0	0	0	0	0	1	0	0	9	40
02:30 AM	0	0	5	0	2	1	0	0	0	0	0	0	0	0	0	0	8	36
02:45 AM	1	0	2	0	2	1	0	0	0	0	0	0	0	3	0	0	9	34
03:00 AM	0	0	1	0	3	6	0	0	0	0	0	0	0	3	0	0	13	39
03:15 AM	0	0	1	0	2	5	0	0	0	0	0	0	0	0	2	0	10	40
03:30 AM	0	0	3	0	7	2	0	0	0	0	0	0	0	1	0	0	13	45
03:45 AM	0	0	4	0	7	5	0	0	0	0	0	0	0	4	1	0	21	57
04:00 AM	0	1	3	0	12	4	0	0	0	0	1	0	0	4	0	0	25	69
04:15 AM	0	1	5	0	17	8	2	0	0	1	0	0	1	3	0	0	38	97
04:30 AM	0	1	5	0	25	10	0	0	0	1	1	0	1	4	1	0	49	133
04:45 AM	2	0	6	0	27	10	1	0	0	0	1	0	1	5	1	0	54	166
05:00 AM	2	1	4	0	23	17	0	0	0	1	2	0	1	4	1	0	56	197
05:15 AM	2	0	6	0	45	30	3	0	4	1	1	0	2	10	5	0	109	268
05:30 AM	4	2	5	0	66	53	4	0	2	2	6	0	3	10	4	0	161	380
05:45 AM	9	1	11	0	70	59	6	0	1	0	3	0	3	10	7	0	180	506
06:00 AM	4	1	8	0	66	60	4	0	0	0	6	0	0	17	6	0	172	622
06:15 AM	9	0	16	0	77	108	3	0	2	2	3	0	1	17	13	0	251	764
06:30 AM	11	0	23	0	126	117	1	0	2	1	6	0	2	24	17	0	330	933
06:45 AM	23	1	25	0	151	153	5	0	4	2	14	0	4	30	17	0	429	1182
07:00 AM	29	3	28	0	136	176	5	0	4	4	16	0	3	55	8	0	467	1477
00:15 AM	26	3	45	0	172	155	9	0	4	7	10	0	6	53	12	0	502	1728
07:30 AM	27	4	37	0	166	152	7	0	3	4	6	0	10	68	14	0	498	1896
07:45 AM	31	7	49	0	141	138	7	0	3	8	7	0	12	80	24	0	507	1974
08:00 AM	29	10	48	0	106	128	3	0	4	4	8	0	10	71	12	0	433	1940
08:15 AM	27	4	46	0	136	137	3	1	3	5	12	0	3	48	11	0	436	1874
08:30 AM	14	11	52	0	112	118	4	0	2	3	5	0	4	44	20	0	389	1765
08:45 AM	19	0	43	0	77	115	2	0	3	12	10	0	8	43	9	0	341	1599
09:00 AM	16	4	27	0	56	64	2	0	5	3	9	0	9	60	12	0	267	1433
09:15 AM	11	4	33	0	68	61	2	0	3	5	6	0	3	50	5	0	251	1248
09:30 AM	8	4	42	0	69	72	1	0	6	4	8	0	3	40	6	0	263	1122
09:45 AM	20	4	30	0	54	50	1	0	7	4	6	0	4	36	6	0	222	1003
10:00 AM	6	2	24	0	66	54	2	0	5	2	4	0	5	57	15	0	242	978
10:15 AM	9	4	40	0	57	56	2	0	1	6	12	0	6	38	7	0	238	965
10:30 AM	12	4	33	0	54	59	1	0	3	4	3	0	4	58	6	0	241	943
10:45 AM	7	4	44	0	49	53	8	0	6	8	7	0	4	53	10	0	253	974
11:00 AM	17	6	44	0	57	55	5	0	4	5	14	0	3	60	7	0	277	1009
11:15 AM	10	6	39	0	59	56	5	0	8	3	12	0	5	51	16	0	270	1041
11:30 AM	13	7	54	0	54	65	4	0	4	8	10	0	2	70	12	0	303	1103
11:45 AM	19	5	49	0	32	63	7	0	3	11	12	0	7	63	9	0	280	1130
12:00 PM	15	10	51	0	25	49	6	0	8	12	7	0	8	70	11	0	272	1125
12:15 PM	12	7	48	0	41	65	2	0	5	12	17	0	4	57	8	0	278	1133
12:30 PM	16	10	52	0	50	67	3	0	4	10	5	0	10	59	9	0	295	1125
12:45 PM	13	5	50	0	36	77	7	0	8	7	8	0	2	62	16	0	291	1136
01:00 PM	20	9	71	0	46	53	10	0	4	6	10	0	3	66	8	0	306	1170
01:15 PM	13	3	71	0	53	62	4	0	5	6	11	0	8	63	6	0	305	1197
01:30 PM	17	5	54	0	45	58	6	0	2	11	11	0	6	59	10	0	284	1186
01:45 PM	19	6	68	0	44	48	11	0	3	5	11	0	9	79	11	0	314	1209
02:00 PM	28	2	67	0	44	66	5	0	5	3	9	0	4	76	8	0	317	1220
02:15 PM	17	9	61	0	57	49	5	0	3	9	9	0	6	94	12	0	331	1246
02:30 PM	14	4	79	0	53	64	7	0	11	5	8	0	7	84	15	0	351	1313
02:45 PM	21	6	53	0	62	62	6	0	6	4	5	0	9	105	13	0	352	1351
03:00 PM	21	5	95	0	45	71	6	0	6	6	6	0	3	111	14	0	389	1423
03:15 PM	12	7	99	0	58	68	6	0	3	11	10	0	9	105	15	0	403	1495
03:30 PM	28	5	96	0	50	61	3	0	8	10	8	0	7	98	14	0	388	1532
03:45 PM	23	6	129	0	62	66	3	0	6	8	14	0	12	115	19	0	463	1643
04:00 PM	24	8	125	0	52	65	1	0	11	7	10	0	15	117	13	0	448	1702
04:15 PM	23	10	128	0	45	67	3	0	2	11	12	0	9	121	29	0	460	1759
04:30 PM	12	9	130	0	74	66	2	0	10	10	10	0	9	146	25	0	503	1874
04:45 PM	20	15	109	0	73	70	5	0	6	5	8	0	10	143	21	0	485	1896
05:00 PM	29	11	119	0	65	62	8	0	11	20	11	0	11	155	22	0	524	1972
05:15 PM	27	11	142	0	76	81	5	0	8	7	13	0	9	147	26	0	552	2064
05:30 PM	19	9	160	0	78	70	8	0	10	13	14	0	11	108	16	0	516	2077
05:45 PM	37	10	98	0	59	80	3	0	3	5	4	0	7	155	32	0	493	2085
06:00 PM	27	12	111	0	61	83	6	0	4	11	6	0	11	127	19	0	478	2039
06:15 PM	11	4	93	0	74	69	3	0	3	6	5	0	8	118	14	0	408	1895
06:30 PM	13	6	72	0	37	57	3	0	2	6	9	0	10	101	3	0	319	1698
06:45 PM	11	8	81	0	43	47	2	0	4	4	4	0	8	64	10	0	286	1491
07:00 PM	10	6	73	0	34	48	3	0	2	6	5	0	6	74	7	0	274	1287
07:15 PM	16	9	60	0	35	49	4	0	2	1	7	0	4	72	3	0	262	1141
07:30 PM	5	8	65	0	28	29	3	0	3	2	2	0	5	60	7	0	217	1039
07:45 PM	7	7	45	0	30	33	2	0	2	2	6	0	5	60	4	0	203	956
08:00 PM	8	6	46	0	19	22	5	0	2	1	5	0	8	55	5	0	182	864
08:15 PM	8	5	47	0	18	40	2	0	1	4	11	0	6	43	6	0	191	793
08:30 PM	9	4	38	0	26	31	3	0	3	2	3	0	4	49	2	0	174	750
08:45 PM	9	5	37	0	13	24	4	0	1	5	1	0	7	43	7	0	156	703
09:00 PM	4	3	42	0	19	22	4	0	3	0	5	0	5	48	5	0	160	681
09:15 PM	6	7	44	0	23	23	3	0	0	1	5	0	3	58	6	0	179	669
09:30 PM	4	1	18	0	11	11	1	0	1	1	2	0	7	34	5	0	96	591
09:45 PM	2	2	25	0	17	13	6	0	0	2	2	0	5	33	7	0	114	549
10:00 PM	6	3	22	0	19	19	1	0	2	0	2	0	3	28	2	0	107	496
10:15 PM	0	2	18	0	12	14	4	0	1	3	4	0	5	20	4	0	87	404
10:30 PM	1	4	18	0	20	11	4	0	0	0	4	0	4	23	2	0	91	399
10:45 PM	4	1	19	0	4	8	0	0	4	2	0	0	3	11	1	0	57	342
11:00 PM	2	3	15	0	6	2	2	0	0	0	0	0	1	20	0	0	51	286
11:15 PM	3	1	33	0	4	4	2	0	0	1	1	0	2	13	0	0	64	263
11:30 PM	2	1	10	0	3	3	0	0	0	1	2	0	1	17	0	0	40	212
11:45 PM	1	0	5	0	5	2	0	0	0	0	0	0	0	6	0	0	19	174
Total	**1071**	**399**	**4170**	**0**	**4318**	**4708**	**304**	**1**	**286**	**385**	**545**	**0**	**443**	**4875**	**791**	**0**		

BATAVIA PIKE AT ROUND BOTTOM RD

12/9/2015

TRUCKS

	ROUND BOTTOM RD From North				BATAVIA RD From East				RIVER HILLS DR From South				BATAVIA PIKE From West				15-Min Total	Hour Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		
00:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	
00:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
00:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
01:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3
02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3
02:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2	4
03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
03:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	4
03:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	5
03:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	8
04:15 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	9
04:30 AM	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	4	11
04:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	12
05:00 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	11
05:15 AM	0	0	2	0	2	1	0	0	1	0	0	0	0	0	0	0	6	15
05:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	2	13
05:45 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	2	2	0	6	17
06:00 AM	0	0	1	0	3	0	0	0	0	0	0	0	0	0	1	0	5	19
06:15 AM	0	0	2	0	1	2	0	0	0	0	1	0	1	3	0	0	10	23
06:30 AM	1	0	4	0	3	3	0	0	0	0	0	0	0	1	2	0	14	35
06:45 AM	2	0	0	0	2	3	0	0	0	0	1	0	0	1	2	0	11	40
07:00 AM	0	0	6	0	5	4	1	0	0	0	0	0	0	2	1	0	19	54
00:15 AM	1	0	7	0	4	5	0	0	1	0	1	0	0	2	1	0	22	66
07:30 AM	5	0	3	0	3	13	0	0	0	0	0	0	0	2	1	0	27	79
07:45 AM	6	0	7	0	3	11	0	0	0	0	0	0	0	1	1	0	29	97
08:00 AM	7	1	3	0	4	3	0	0	0	0	0	0	0	4	0	0	22	100
08:15 AM	11	0	4	0	8	11	0	0	0	0	1	0	1	9	3	0	48	126
08:30 AM	1	0	0	0	6	8	0	0	0	0	0	0	1	9	5	0	30	129
08:45 AM	10	0	3	0	5	4	2	0	1	0	2	0	0	10	3	0	40	140
09:00 AM	6	0	6	0	2	12	0	0	1	0	0	0	0	1	1	0	29	147
09:15 AM	1	0	2	0	4	3	0	0	0	0	0	0	0	11	0	0	21	120
09:30 AM	2	1	3	0	5	9	0	0	1	0	0	0	0	7	1	0	29	119
09:45 AM	3	0	2	0	8	8	1	0	0	0	2	0	0	5	4	0	33	112
10:00 AM	3	0	7	0	5	3	0	0	0	0	1	0	1	13	4	0	37	120
10:15 AM	3	0	5	0	6	4	2	0	0	0	1	0	0	6	3	0	30	129
10:30 AM	1	0	1	0	9	10	0	0	0	1	0	0	0	8	4	0	34	134
10:45 AM	4	0	5	0	6	5	0	0	0	0	0	0	0	2	2	0	24	125
11:00 AM	0	0	5	0	5	1	1	0	0	0	0	0	0	4	4	0	20	108
11:15 AM	4	0	9	0	8	9	0	0	0	1	0	0	0	5	2	0	38	116
11:30 AM	3	0	8	0	5	1	0	0	0	0	0	0	0	5	6	0	28	110
11:45 AM	7	1	5	0	4	4	1	0	0	1	0	0	2	5	1	0	31	117
12:00 PM	3	0	6	0	12	6	2	0	0	0	3	0	3	9	3	0	47	144
12:15 PM	5	0	3	0	5	3	0	0	0	0	1	0	1	3	1	0	22	128
12:30 PM	3	1	3	0	9	8	0	0	4	0	1	0	1	3	5	0	38	138
12:45 PM	1	0	4	0	3	4	0	0	1	1	1	0	1	6	4	0	26	133
01:00 PM	2	1	5	0	5	5	0	0	2	0	0	0	1	2	5	0	28	114
01:15 PM	3	0	5	0	7	4	0	0	0	0	0	0	1	12	3	0	35	127
01:30 PM	3	0	7	0	4	2	1	0	0	1	0	0	0	2	3	0	23	112
01:45 PM	1	0	7	0	1	9	0	0	1	0	0	0	0	2	2	0	23	109
02:00 PM	3	0	1	0	7	0	1	0	0	0	1	0	0	3	5	0	21	102
02:15 PM	1	0	3	0	8	1	0	0	0	2	1	0	0	9	3	0	28	95
02:30 PM	8	1	5	0	7	5	0	0	1	0	0	0	3	5	3	0	38	110
02:45 PM	2	0	5	0	8	9	1	0	0	0	0	0	0	5	4	0	34	121
03:00 PM	4	1	5	0	5	4	0	0	0	0	0	0	0	6	3	0	28	128
03:15 PM	4	0	4	0	2	6	1	0	2	0	0	0	1	3	2	0	25	125
03:30 PM	4	0	1	0	5	2	1	0	1	0	0	0	0	4	6	0	24	111
03:45 PM	0	0	5	0	3	4	0	0	1	2	0	0	1	6	4	0	26	103
04:00 PM	1	2	4	0	8	4	0	0	0	0	1	0	2	2	6	0	30	105
04:15 PM	1	1	7	0	3	1	0	0	0	1	1	0	0	2	2	0	19	99
04:30 PM	1	0	3	0	2	0	1	0	0	0	0	0	0	7	4	0	18	93
04:45 PM	0	0	4	0	4	0	0	0	0	0	0	0	0	4	7	0	19	86
05:00 PM	1	0	4	0	1	1	0	0	0	0	1	0	0	3	4	0	15	71
05:15 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	2	0	5	57
05:30 PM	3	0	0	0	1	0	0	0	1	0	0	0	0	3	1	0	9	48
05:45 PM	0	0	0	0	5	1	0	0	0	0	0	0	0	0	1	0	7	36
06:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	2	1	0	5	26
06:15 PM	0	1	2	0	4	1	0	0	0	0	0	0	0	0	1	0	9	30
06:30 PM	0	0	2	0	2	2	0	0	0	0	0	0	0	1	1	0	8	29
06:45 PM	0	0	3	0	2	0	0	0	0	0	0	0	1	1	0	0	7	29
07:00 PM	1	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	5	29
07:15 PM	0	0	1	0	3	0	0	0	0	0	0	0	0	1	0	0	5	25
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
07:45 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	3	13
08:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2	10
08:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2	7
08:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	8
08:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	6
09:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	6
09:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
09:30 PM	0	0	0	0	1	2	0	0	0	0	0	0	0	1	0	0	4	7
09:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	**137**	**11**	**214**	**0**	**249**	**235**	**17**	**0**	**19**	**10**	**21**	**0**	**23**	**241**	**142**	**0**		

SR 32 at Round Bottom Road
TOTAL VEHICLES

	ROUND BOTTOM RD From North						SR 32 From East						RIVER HILLS DR From South						SR 32 From West					
Start Time	Right		Thru		Left		Right		Thru		Left		Right		Thru		Left		Right		Thru		Left	
06:30 AM	16	18.75%	0	-	20	0.00%	158	1.27%	118	4.24%	0	-	3	0.00%	2	0.00%	16	6.25%	5	0.00%	32	9.38%	17	5.88%
06:45 AM	22	13.64%	1	0.00%	27	11.11%	159	1.89%	163	2.45%	4	0.00%	1	0.00%	4	0.00%	15	6.67%	3	0.00%	48	4.17%	27	11.11%
07:00 AM	32	12.50%	0	-	23	4.35%	166	3.01%	176	2.27%	6	0.00%	2	0.00%	3	0.00%	18	0.00%	6	0.00%	60	3.33%	22	9.09%
07:15 AM	46	19.57%	4	0.00%	45	8.89%	144	0.69%	137	7.30%	2	0.00%	5	0.00%	7	0.00%	7	0.00%	6	0.00%	42	16.67%	21	19.05%
07:30 AM	29	10.34%	6	0.00%	58	10.34%	159	1.89%	128	4.69%	6	0.00%	1	0.00%	8	0.00%	18	5.56%	12	0.00%	61	4.92%	26	3.85%
07:45 AM	37	27.03%	7	0.00%	65	7.69%	176	6.25%	121	6.61%	4	0.00%	5	0.00%	4	0.00%	12	0.00%	13	0.00%	77	5.19%	26	3.85%
08:00 AM	36	22.22%	7	0.00%	50	12.00%	147	5.44%	109	7.34%	5	0.00%	5	0.00%	4	0.00%	8	0.00%	6	16.67%	71	4.23%	22	4.55%
08:15 AM	45	17.78%	4	0.00%	63	7.94%	166	7.23%	122	6.56%	5	0.00%	4	0.00%	6	16.67%	8	12.50%	5	0.00%	53	5.66%	21	19.05%
7:00-8:00	144	18.06%	17	0.00%	191	8.38%	645	3.10%	562	4.98%	18	0.00%	13	0.00%	22	0.00%	55	1.82%	37	0.00%	240	6.67%	95	8.42%
4:00 PM	33	9.09%	7	0.00%	132	6.82%	81	6.17%	65	3.08%	4	0.00%	7	0.00%	5	0.00%	7	0.00%	10	0.00%	122	4.10%	35	2.86%
04:15 PM	26	7.69%	12	0.00%	143	1.40%	91	8.79%	72	5.56%	3	33.33%	9	11.11%	11	0.00%	9	0.00%	10	0.00%	138	1.45%	32	18.75%
04:30 PM	26	11.54%	10	0.00%	113	5.31%	89	3.37%	59	1.69%	4	25.00%	10	0.00%	8	0.00%	16	0.00%	11	0.00%	160	3.13%	36	11.11%
04:45 PM	31	0.00%	23	4.35%	147	1.36%	86	5.81%	79	0.00%	3	0.00%	17	0.00%	11	0.00%	11	0.00%	11	0.00%	125	0.80%	29	10.34%
05:00 PM	33	3.03%	6	0.00%	140	0.71%	82	3.66%	71	0.00%	6	0.00%	9	0.00%	9	11.11%	8	0.00%	10	0.00%	156	0.00%	36	2.78%
05:15 PM	29	3.45%	15	6.67%	145	0.69%	111	3.60%	89	1.12%	5	0.00%	7	0.00%	12	0.00%	9	0.00%	9	0.00%	139	0.72%	29	0.00%
05:30 PM	12	0.00%	8	0.00%	123	0.81%	126	3.97%	92	2.17%	9	0.00%	6	0.00%	9	0.00%	9	0.00%	13	0.00%	149	0.67%	45	4.44%
05:45 PM	38	0.00%	7	0.00%	108	0.93%	90	5.56%	68	0.00%	5	0.00%	10	0.00%	9	11.11%	10	0.00%	13	0.00%	118	2.54%	45	0.00%
4:45-5:45	105	1.90%	52	3.85%	555	0.90%	405	4.20%	331	0.91%	23	0.00%	39	0.00%	41	2.44%	37	0.00%	43	0.00%	569	0.53%	139	4.32%

Note - % value is percentage trucks

Count Date: 5/16/2017

SR 32 at Round Bottom Road

Total Vehicles (Cars ant Trucks)

	ROUND BOTTOM RD			SR 32			RIVER HILLS DR			SR 32				
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Hourly (as Counted)	PHF
06:30 AM	16	0	20	158	118	0	3	2	16	5	32	17	1841	0.90
06:45 AM	22	1	27	159	163	4	1	4	15	3	48	27	1966	0.96
07:00 AM	32	0	23	166	176	6	2	3	18	6	60	22	2039	0.93
07:15 AM	46	4	45	144	137	2	5	7	7	6	42	21	1995	0.91
07:30 AM	29	6	58	159	128	6	1	8	18	12	61	26	2031	0.93
07:45 AM	37	7	65	176	121	4	5	4	12	13	77	26		
08:00 AM	36	7	50	147	109	5	5	4	8	6	71	22		
08:15 AM	45	4	63	166	122	5	4	6	8	5	53	21		
													Total	
7:00-8:00 (As Counted)	144	17	191	645	562	18	13	22	55	37	240	95	2039	
7:00-8:00 (Demand)					Same as Counted Volumes									
2015 Existing	130	20	200	620	660	30	20	30	40	40	270	70	2130	

Note: Two cycle back ups were not observed in the AM peak hour

Count Date: 5/15/2017 (Monday)

SR 32 at Round Bottom Road

Total Vehicles (Cars ant Trucks)

	ROUND BOTTOM RD From North					SR 32 From East							RIVER HILLS DR From South			SR 32 From West						
Start Time	Right	Thru	Left	PEQL	Left Demand	Right	PEQL	Right Demand	Thru Counted	PEQL	Thru Demand	Left	Right	Thru	Left	Right	Thru	Left	Hourly (as Counted)	PHF	Hourly (Demand)	PHF
4:00 PM	33	7	132	24	156	81	4	85	65	4	69	4	7	5	7	10	122	35	2179	0.95	2221	0.89
04:15 PM	26	12	143	24	143	91	38	126	72	38	107	3	9	11	9	10	138	32	2237	0.98	2234	0.89
04:30 PM	26	10	113	7	96	89	41	92	59	41	62	4	10	8	16	11	160	36	2280	0.95	2199	0.93
04:45 PM	31	23	147	17	157	86	13	58	79	13	51	3	17	11	11	11	125	29	2339	0.97	2278	0.94
05:00 PM	33	6	140	13	136	82	8	77	71	8	66	6	9	9	8	10	156	36	2287	0.95	2272	0.93
05:15 PM	29	15	145	2	134	111	9	112	89	9	90	5	7	12	9	9	139	29				
05:30 PM	12	8	123	0	121	126	14	131	92	14	97	9	6	9	9	13	149	45				
05:45 PM	38	7	108	0	108	90	14	90	68	14	68	5	10	9	10	13	118	45				
PEQL = Period End Queue Length																			Total			
4:45-5:45 (As Counted)	105	52	555			405			331			23	39	41	37	43	569	139	2339			
4:45-5:45 (Demand)	105	52	548			378			304			23	39	41	37	43	569	139	2278			
2015 Existing	90	50	510			310			290			30	40	50	50	50	570	100	2140			

SR 32 @ Round Bottom Road

9/27/2018

TOTAL - CARS AND TRUCKS

	Round Bottom Road From North			SR 32 From East			River Hills Dr From South			SR 32 From West			15-Min Total	Hour Total
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
12:00 AM	1	0	8	4	3	1	0	0	0	2	9	2	30	
12:15 AM	0	0	8	3	1	1	0	0	1	1	7	0	22	
12:30 AM	0	0	2	1	5	0	0	0	0	1	5	0	14	
12:45 AM	0	1	6	2	0	0	1	1	0	0	5	0	16	82
01:00 AM	0	0	5	0	4	0	0	0	0	0	0	0	9	61
01:15 AM	1	0	2	1	4	0	0	1	0	0	8	0	17	56
01:30 AM	1	0	3	2	3	0	1	0	0	2	5	0	17	59
01:45 AM	0	0	3	3	2	1	0	0	0	0	3	3	15	58
02:00 AM	4	0	3	2	1	1	0	0	1	0	2	1	15	64
02:15 AM	2	0	11	3	0	0	0	0	0	0	3	1	20	67
02:30 AM	1	0	2	2	3	0	0	0	0	1	1	1	11	61
02:45 AM	0	0	2	4	1	0	0	0	0	2	3	2	14	60
03:00 AM	0	1	2	0	3	0	0	0	0	0	0	1	7	52
03:15 AM	0	0	2	4	2	0	1	0	0	0	1	1	11	43
03:30 AM	0	0	3	7	3	0	0	0	0	0	2	0	15	47
03:45 AM	0	0	0	3	3	1	0	0	0	0	3	0	10	43
04:00 AM	1	2	2	9	8	1	0	0	0	0	2	0	25	61
04:15 AM	2	0	5	21	9	1	3	1	0	0	7	1	50	100
04:30 AM	0	1	2	34	10	1	0	0	0	1	4	2	55	140
04:45 AM	0	4	2	27	13	0	0	1	1	1	5	1	55	185
05:00 AM	1	0	4	33	30	0	1	0	1	0	2	2	74	234
05:15 AM	5	1	8	44	31	5	2	0	0	1	6	3	106	290
05:30 AM	2	3	10	56	41	4	2	0	0	1	9	3	131	366
05:45 AM	8	1	8	68	41	8	0	2	0	0	6	6	148	459
06:00 AM	7	0	12	82	80	0	1	2	5	0	12	6	207	592
06:15 AM	10	0	21	118	99	1	1	3	3	1	23	20	300	786
06:30 AM	26	2	31	148	107	2	2	2	9	2	22	15	368	1023
06:45 AM	22	0	34	143	127	8	3	0	16	5	33	16	407	1282
07:00 AM	41	4	42	167	159	6	6	8	13	6	28	10	490	1565
07:15 AM	33	1	40	161	144	7	1	11	14	7	54	16	489	1754
07:30 AM	32	3	65	145	140	6	4	9	15	8	76	26	529	1915
07:45 AM	36	6	54	121	137	3	4	9	8	9	59	27	473	1981
08:00 AM	40	6	53	157	142	7	3	2	10	6	82	22	530	2021
08:15 AM	31	3	58	105	116	10	4	5	9	5	66	11	423	1955
08:30 AM	24	4	44	116	112	7	7	2	5	4	55	23	403	1829
08:45 AM	22	4	39	132	114	5	5	7	12	10	62	21	433	1789
09:00 AM	31	2	44	91	79	6	2	5	4	4	55	17	340	1599
09:15 AM	17	1	44	102	73	2	2	3	10	3	58	18	333	1509
09:30 AM	32	5	55	89	74	2	5	1	4	3	50	12	332	1438
09:45 AM	22	3	38	62	68	0	4	7	3	3	59	10	279	1284
10:00 AM	13	3	36	54	69	0	2	4	4	6	36	11	238	1182
10:15 AM	8	4	34	73	53	3	1	3	6	5	60	6	256	1105
10:30 AM	8	4	47	72	64	2	2	5	3	3	50	7	267	1040
10:45 AM	11	1	48	59	58	3	2	5	6	4	64	9	270	1031
11:00 AM	20	6	57	54	51	4	7	5	10	1	52	14	281	1074
11:15 AM	20	4	58	45	48	3	6	7	12	3	61	13	280	1098
11:30 AM	14	4	58	51	55	3	5	3	8	5	74	15	295	1126
11:45 AM	18	5	74	56	68	5	7	7	13	9	45	15	322	1178
12:00 PM	21	15	55	51	51	7	6	12	8	4	80	17	327	1224
12:15 PM	14	7	72	48	58	8	7	16	6	6	68	5	315	1259
12:30 PM	15	4	61	56	58	8	8	11	8	5	76	16	326	1290
12:45 PM	16	14	49	87	52	9	7	8	11	7	58	21	339	1307
01:00 PM	28	3	57	55	45	9	7	11	20	9	93	19	356	1336
01:15 PM	15	2	70	67	64	9	2	7	5	4	81	18	344	1365
01:30 PM	18	4	63	65	52	7	6	8	8	7	79	14	331	1370
01:45 PM	20	14	64	58	57	6	9	8	9	3	60	20	328	1359
02:00 PM	23	8	71	67	62	6	2	11	7	2	76	25	360	1363
02:15 PM	35	4	91	65	49	6	10	7	5	4	79	11	366	1385
02:30 PM	16	7	67	53	76	13	7	6	6	10	86	19	366	1420
02:45 PM	26	7	109	58	58	6	15	5	6	4	88	25	407	1499
03:00 PM	24	3	74	69	55	1	6	2	8	13	97	39	391	1530
03:15 PM	16	9	149	70	55	4	4	2	5	6	95	21	436	1600
03:30 PM	28	5	97	56	57	7	7	7	8	13	132	29	446	1680
03:45 PM	21	9	126	65	59	1	5	1	5	8	142	33	475	1748
04:00 PM	22	7	128	59	67	4	8	4	9	16	132	42	498	1855
04:15 PM	23	11	139	91	62	3	5	9	10	12	139	26	530	1949
04:30 PM	25	10	145	94	74	5	13	9	14	5	145	39	578	2081
04:45 PM	34	15	162	91	64	5	10	7	8	10	129	31	566	2172
05:00 PM	49	2	141	85	87	7	9	18	19	17	124	20	578	2252
05:15 PM	37	16	168	95	60	3	7	9	12	12	126	28	573	2295
05:30 PM	18	7	121	84	64	5	6	11	13	7	136	18	490	2207
05:45 PM	24	11	134	78	71	4	4	11	9	13	141	32	532	2173
06:00 PM	39	8	140	79	83	8	5	5	6	9	149	28	559	2154
06:15 PM	19	6	98	62	67	7	4	6	7	8	102	24	410	1991
06:30 PM	14	8	70	72	57	3	6	5	9	10	119	11	384	1885
06:45 PM	21	11	77	47	48	4	1	4	9	6	76	16	320	1673
07:00 PM	19	7	64	35	38	6	7	5	6	13	67	11	278	1392
07:15 PM	32	10	71	53	44	4	4	2	11	5	75	9	320	1302
07:30 PM	18	6	61	31	38	3	8	4	4	3	57	5	238	1156
07:45 PM	20	2	55	34	25	3	6	1	5	6	64	5	226	1062
08:00 PM	33	5	85	26	29	6	2	1	7	11	75	7	287	1071
08:15 PM	7	7	48	31	32	4	5	7	8	4	64	3	220	971
08:30 PM	6	4	37	25	22	2	0	3	2	5	52	2	160	893
08:45 PM	6	7	49	28	25	1	1	1	4	8	47	2	179	846
09:00 PM	5	5	47	21	24	2	4	2	0	9	42	2	163	722
09:15 PM	2	4	53	15	30	3	5	1	3	4	27	5	152	654
09:30 PM	3	4	28	15	22	1	2	0	2	3	30	4	114	608
09:45 PM	6	2	23	13	14	3	0	0	2	5	47	6	121	550
10:00 PM	6	2	18	13	15	6	1	0	2	4	18	7	92	479
10:15 PM	4	2	25	25	16	1	0	1	0	3	24	3	104	431
10:30 PM	15	3	19	9	10	0	3	2	2	3	19	2	87	404
10:45 PM	1	3	21	4	12	1	5	1	2	2	20	1	73	356
11:00 PM	2	2	10	5	3	1	1	1	0	3	11	0	39	303
11:15 PM	1	1	21	4	6	0	0	0	0	1	16	0	50	249
11:30 PM	2	0	14	4	3	0	0	0	1	1	14	2	41	203
11:45 PM	1	0	11	4	6	1	0	1	0	1	6	2	33	163
Total	**1417**	**392**	**4747**	**5058**	**4584**	**333**	**337**	**374**	**517**	**449**	**5017**	**1115**		

SR 32 @ Round Bottom Road

9/27/2018

TOTAL - CARS

	Round Bottom Road From North			SR 32 From East			River Hills Dr From South			SR 32 From West			15-Min Total	Hour Total
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
12:00 AM	1	0	8	4	3	1	0	0	0	2	7	2	28	
12:15 AM	0	0	8	3	1	1	0	0	1	1	7	0	22	
12:30 AM	0	0	2	1	5	0	0	0	0	1	5	0	14	
12:45 AM	0	1	5	2	0	0	1	1	0	0	5	0	15	79
01:00 AM	0	0	5	0	4	0	0	0	0	0	0	0	9	60
01:15 AM	1	0	2	0	4	0	0	1	0	0	7	0	15	53
01:30 AM	1	0	3	2	3	0	1	0	0	2	4	0	16	55
01:45 AM	0	0	3	3	0	1	0	0	0	0	3	1	11	51
02:00 AM	4	0	3	2	1	1	0	0	1	0	2	1	15	57
02:15 AM	2	0	11	2	0	0	0	0	0	0	2	0	17	59
02:30 AM	0	0	1	2	3	0	0	0	0	1	1	1	9	52
02:45 AM	0	0	2	4	1	0	0	0	0	2	3	2	14	55
03:00 AM	0	1	2	0	3	0	0	0	0	0	0	1	7	47
03:15 AM	0	0	2	4	2	0	1	0	0	0	1	0	10	40
03:30 AM	0	0	2	7	3	0	0	0	0	0	2	0	14	45
03:45 AM	0	0	0	3	3	1	0	0	0	0	2	0	9	40
04:00 AM	1	2	2	9	8	1	0	0	0	0	2	0	25	58
04:15 AM	1	0	4	21	9	1	3	1	0	0	4	1	45	93
04:30 AM	0	1	2	34	8	1	0	0	0	1	3	2	52	131
04:45 AM	0	4	2	26	12	0	0	1	1	1	5	1	53	175
05:00 AM	1	0	3	33	30	0	1	0	1	0	2	2	73	223
05:15 AM	4	1	8	44	31	5	2	0	0	1	6	3	105	283
05:30 AM	2	3	10	56	40	4	2	0	0	1	9	2	129	360
05:45 AM	8	1	6	68	39	8	0	2	0	0	6	6	144	451
06:00 AM	6	0	10	82	79	0	1	2	5	0	11	6	202	580
06:15 AM	10	0	16	116	98	1	1	3	3	1	22	20	291	766
06:30 AM	25	1	25	147	105	2	2	2	8	2	21	15	355	992
06:45 AM	21	0	20	143	125	7	2	0	16	4	31	16	385	1233
07:00 AM	39	4	31	162	156	6	6	8	13	6	26	10	467	1498
07:15 AM	32	1	37	160	141	7	1	11	13	6	50	16	475	1682
07:30 AM	29	3	62	141	132	6	4	9	14	8	73	25	506	1833
07:45 AM	32	6	49	117	132	3	4	9	8	8	53	24	445	1893
08:00 AM	38	6	47	149	134	7	3	2	10	5	79	20	500	1926
08:15 AM	29	2	52	100	112	9	3	5	8	5	64	9	398	1849
08:30 AM	23	4	41	109	109	6	7	2	3	4	49	17	374	1717
08:45 AM	20	4	35	122	110	4	5	6	10	10	55	14	395	1667
09:00 AM	29	2	37	87	74	6	2	5	4	4	50	11	311	1478
09:15 AM	16	1	33	69	66	2	2	3	10	3	51	3	259	1339
09:30 AM	31	5	51	79	67	2	5	1	4	3	49	9	306	1271
09:45 AM	21	3	33	56	66	0	3	7	3	2	50	4	248	1124
10:00 AM	12	3	27	47	60	0	2	4	4	6	29	7	201	1014
10:15 AM	6	4	31	63	51	3	1	3	6	5	51	2	226	981
10:30 AM	7	4	38	67	59	1	2	5	3	3	41	3	233	908
10:45 AM	10	1	48	49	49	2	2	5	5	4	56	6	237	897
11:00 AM	19	5	52	48	44	3	6	5	10	1	50	12	255	951
11:15 AM	20	4	48	41	46	3	6	7	11	3	59	11	259	984
11:30 AM	14	3	53	47	52	3	5	3	7	5	69	11	272	1023
11:45 AM	16	5	68	45	64	5	7	7	12	9	42	9	289	1075
12:00 PM	21	13	50	48	49	7	4	11	8	4	71	13	299	1119
12:15 PM	13	7	69	41	57	7	7	16	4	5	63	2	291	1151
12:30 PM	13	4	56	48	54	8	8	11	8	5	70	12	297	1176
12:45 PM	14	11	42	84	48	9	6	8	11	7	54	16	310	1197
01:00 PM	21	3	55	47	41	8	7	11	20	9	85	15	322	1220
01:15 PM	13	2	63	54	59	8	2	6	5	4	72	18	306	1235
01:30 PM	17	4	57	58	48	6	5	7	7	7	71	11	298	1236
01:45 PM	18	13	57	51	50	6	8	8	9	3	57	18	298	1224
02:00 PM	20	8	64	60	59	6	2	11	7	2	70	22	331	1233
02:15 PM	34	4	77	59	41	6	10	7	5	3	75	9	330	1257
02:30 PM	15	7	61	50	74	13	7	6	5	10	80	14	342	1301
02:45 PM	25	7	106	53	55	6	15	5	6	3	83	20	384	1387
03:00 PM	24	3	72	60	52	1	6	2	8	13	93	28	362	1418
03:15 PM	15	9	138	61	52	4	4	2	5	6	89	17	402	1490
03:30 PM	26	5	94	51	56	6	7	7	8	12	126	27	425	1573
03:45 PM	19	9	123	58	57	1	5	0	4	6	139	31	452	1641
04:00 PM	22	7	125	56	64	4	8	3	9	14	130	31	473	1752
04:15 PM	23	10	136	71	60	2	5	8	10	12	132	20	489	1839
04:30 PM	25	9	145	86	72	4	13	9	14	5	139	26	547	1961
04:45 PM	34	15	159	83	64	5	10	7	6	10	126	26	545	2054
05:00 PM	49	2	139	78	85	7	9	18	19	17	123	15	561	2142
05:15 PM	36	16	167	90	60	3	7	9	12	12	125	25	562	2215
05:30 PM	18	7	119	83	64	5	6	11	13	7	135	17	485	2153
05:45 PM	24	11	133	76	71	4	4	11	9	12	141	30	526	2134
06:00 PM	39	8	138	76	83	8	5	5	6	9	147	28	552	2125
06:15 PM	18	6	96	60	67	7	4	6	7	7	102	21	401	1964
06:30 PM	13	8	70	69	57	3	6	5	8	10	119	10	378	1857
06:45 PM	21	11	77	45	48	4	1	4	9	6	76	16	318	1649
07:00 PM	19	7	62	35	38	6	7	5	6	13	66	11	275	1372
07:15 PM	31	10	69	51	42	4	4	2	11	5	72	9	310	1281
07:30 PM	18	6	59	31	38	3	8	4	4	3	57	4	235	1138
07:45 PM	20	2	55	34	25	3	6	1	5	6	64	5	226	1046
08:00 PM	33	5	84	25	29	6	2	1	7	11	75	4	282	1053
08:15 PM	7	7	48	28	32	4	5	7	8	4	63	3	216	959
08:30 PM	6	4	37	25	22	2	0	3	2	5	52	2	160	884
08:45 PM	6	7	49	27	25	1	1	1	4	8	47	2	178	836
09:00 PM	5	5	47	18	23	2	4	2	0	9	42	2	159	713
09:15 PM	2	4	52	15	30	3	5	1	3	4	27	4	150	647
09:30 PM	3	4	27	14	22	1	2	0	2	3	30	4	112	599
09:45 PM	6	2	22	13	14	3	0	0	2	5	46	6	119	540
10:00 PM	6	2	18	12	15	5	1	0	2	4	18	7	90	471
10:15 PM	4	2	25	22	16	1	0	1	0	3	23	3	100	421
10:30 PM	15	3	17	9	10	0	3	2	2	3	19	2	85	394
10:45 PM	1	3	20	4	12	1	4	1	2	2	20	1	71	346
11:00 PM	2	2	10	5	3	1	1	1	0	3	10	0	38	294
11:15 PM	1	1	20	4	6	0	0	0	0	1	16	0	49	243
11:30 PM	2	0	14	4	3	0	0	0	1	1	14	2	41	199
11:45 PM	1	0	11	4	6	1	0	1	0	1	6	2	33	161
Total	**1349**	**380**	**4474**	**4712**	**4402**	**318**	**327**	**367**	**497**	**434**	**4779**	**916**		

SR 32 @ Round Bottom Road

9/27/2018

TOTAL - TRUCKS

	Round Bottom Road From North			SR 32 From East			River Hills Dr From South			SR 32 From West			15-Min Total	Hour Total
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
12:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	
12:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	3
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
01:15 AM	0	0	0	1	0	0	0	0	0	0	1	0	2	3
01:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	4
01:45 AM	0	0	0	0	2	0	0	0	0	0	0	2	4	7
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	7
02:15 AM	0	0	0	1	0	0	0	0	0	0	1	1	3	8
02:30 AM	1	0	1	0	0	0	0	0	0	0	0	0	2	9
02:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
03:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	3
03:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	2
03:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	3
04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:15 AM	1	0	1	0	0	0	0	0	0	0	3	0	5	7
04:30 AM	0	0	0	0	2	0	0	0	0	0	1	0	3	9
04:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	2	10
05:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	11
05:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	7
05:30 AM	0	0	0	0	1	0	0	0	0	0	0	1	2	6
05:45 AM	0	0	2	0	2	0	0	0	0	0	0	0	4	8
06:00 AM	1	0	2	0	1	0	0	0	0	0	1	0	5	12
06:15 AM	0	0	5	2	1	0	0	0	0	0	1	0	9	20
06:30 AM	1	1	6	1	2	0	0	0	1	0	1	0	13	31
06:45 AM	1	0	14	0	2	1	1	0	0	1	2	0	22	49
07:00 AM	2	0	11	5	3	0	0	0	0	0	2	0	23	67
07:15 AM	1	0	3	1	3	0	0	0	1	1	4	0	14	72
07:30 AM	3	0	3	4	8	0	0	0	1	0	3	1	23	82
07:45 AM	4	0	5	4	5	0	0	0	0	1	6	3	28	88
08:00 AM	2	0	6	8	8	0	0	0	0	1	3	2	30	95
08:15 AM	2	1	6	5	4	1	1	0	1	0	2	2	25	106
08:30 AM	1	0	3	7	3	1	0	0	2	0	6	6	29	112
08:45 AM	2	0	4	10	4	1	0	1	2	0	7	7	38	122
09:00 AM	2	0	7	4	5	0	0	0	0	0	5	6	29	121
09:15 AM	1	0	11	33	7	0	0	0	0	0	7	15	74	170
09:30 AM	1	0	4	10	7	0	0	0	0	0	1	3	26	167
09:45 AM	1	0	5	6	2	0	1	0	0	1	9	6	31	160
10:00 AM	1	0	9	7	9	0	0	0	0	0	7	4	37	168
10:15 AM	2	0	3	10	2	0	0	0	0	0	9	4	30	124
10:30 AM	1	0	9	5	5	1	0	0	0	0	9	4	34	132
10:45 AM	1	0	0	10	9	1	0	0	1	0	8	3	33	134
11:00 AM	1	1	5	6	7	1	1	0	0	0	2	2	26	123
11:15 AM	0	0	10	4	2	0	0	0	1	0	2	2	21	114
11:30 AM	0	1	5	4	3	0	0	0	1	0	5	4	23	103
11:45 AM	2	0	6	11	4	0	0	0	1	0	3	6	33	103
12:00 PM	0	2	5	3	2	0	2	1	0	0	9	4	28	105
12:15 PM	1	0	3	7	1	1	0	0	2	1	5	3	24	108
12:30 PM	2	0	5	8	4	0	0	0	0	0	6	4	29	114
12:45 PM	2	3	7	3	4	0	1	0	0	0	4	5	29	110
01:00 PM	7	0	2	8	4	1	0	0	0	0	8	4	34	116
01:15 PM	2	0	7	13	5	1	0	1	0	0	9	0	38	130
01:30 PM	1	0	6	7	4	1	1	1	1	0	8	3	33	134
01:45 PM	2	1	7	7	7	0	1	0	0	0	3	2	30	135
02:00 PM	3	0	7	7	3	0	0	0	0	0	6	3	29	130
02:15 PM	1	0	14	6	8	0	0	0	0	1	4	2	36	128
02:30 PM	1	0	6	3	2	0	0	0	1	0	6	5	24	119
02:45 PM	1	0	3	5	3	0	0	0	0	1	5	5	23	112
03:00 PM	0	0	2	9	3	0	0	0	0	0	4	11	29	112
03:15 PM	1	0	11	9	3	0	0	0	0	0	6	4	34	110
03:30 PM	2	0	3	5	1	1	0	0	0	1	6	2	21	107
03:45 PM	2	0	3	7	2	0	0	1	1	2	3	2	23	107
04:00 PM	0	0	3	3	3	0	0	1	0	2	2	11	25	103
04:15 PM	0	1	3	20	2	1	0	1	0	0	7	6	41	110
04:30 PM	0	1	0	8	2	1	0	0	0	0	6	13	31	120
04:45 PM	0	0	3	8	0	0	0	0	2	0	3	5	21	118
05:00 PM	0	0	2	7	2	0	0	0	0	0	1	5	17	110
05:15 PM	1	0	1	5	0	0	0	0	0	0	1	3	11	80
05:30 PM	0	0	2	1	0	0	0	0	0	0	1	1	5	54
05:45 PM	0	0	1	2	0	0	0	0	0	1	0	2	6	39
06:00 PM	0	0	2	3	0	0	0	0	0	0	2	0	7	29
06:15 PM	1	0	2	2	0	0	0	0	0	1	0	3	9	27
06:30 PM	1	0	0	3	0	0	0	0	1	0	0	1	6	28
06:45 PM	0	0	0	2	0	0	0	0	0	0	0	0	2	24
07:00 PM	0	0	2	0	0	0	0	0	0	0	1	0	3	20
07:15 PM	1	0	2	2	2	0	0	0	0	0	3	0	10	21
07:30 PM	0	0	2	0	0	0	0	0	0	0	0	1	3	18
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	16
08:00 PM	0	0	1	1	0	0	0	0	0	0	0	3	5	18
08:15 PM	0	0	0	3	0	0	0	0	0	0	1	0	4	12
08:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	9
08:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	1	10
09:00 PM	0	0	0	3	1	0	0	0	0	0	0	0	4	9
09:15 PM	0	0	1	0	0	0	0	0	0	0	0	1	2	7
09:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	2	9
09:45 PM	0	0	1	0	0	0	0	0	0	0	1	0	2	10
10:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	2	8
10:15 PM	0	0	0	3	0	0	0	0	0	0	1	0	4	10
10:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	2	10
10:45 PM	0	0	1	0	0	0	1	0	0	0	0	0	2	10
11:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	9
11:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	6
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	**68**	**12**	**273**	**346**	**182**	**15**	**10**	**7**	**20**	**15**	**238**	**199**		

SR 32 & Ivy Hills Place

5/16/2017

TOTAL - CARS AND TRUCKS

	From North				SR 32 From East				IVY HILLS PLACE From South				SR 32 From West				15-Min	Hour
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Total	Total
12:00 AM	0	0	0	0	0	8	1	0	1	0	0	0	0	19	0	0	29	
12:15 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	9	0	0	13	
12:30 AM	0	0	0	0	0	10	1	0	0	0	0	0	0	11	0	0	22	
12:45 AM	0	0	0	0	0	6	0	0	0	0	1	0	1	11	0	0	19	83
01:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	10	0	0	13	67
01:15 AM	0	0	0	0	0	1	0	0	0	0	2	0	1	23	0	0	27	81
01:30 AM	0	0	0	0	0	7	0	0	0	0	0	0	1	11	0	0	19	78
01:45 AM	0	0	0	0	0	6	0	0	0	0	0	0	0	5	0	0	11	70
02:00 AM	0	0	0	0	0	5	0	0	0	0	0	0	1	7	0	0	13	70
02:15 AM	0	0	0	0	0	5	0	0	0	0	0	0	0	9	0	0	14	57
02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	43
02:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	6	0	0	8	40
03:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	9	0	0	12	39
03:15 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	5	0	0	8	33
03:30 AM	0	0	0	0	0	11	0	0	0	0	0	0	0	2	0	0	13	41
03:45 AM	0	0	0	0	0	9	0	0	0	0	0	0	0	4	0	0	13	46
04:00 AM	0	0	0	0	0	9	0	0	0	0	0	0	0	6	0	0	15	49
04:15 AM	0	0	0	0	0	30	1	0	0	0	0	0	0	12	0	0	43	84
04:30 AM	0	0	0	0	0	34	0	0	0	0	0	0	0	7	0	0	41	112
04:45 AM	0	0	0	0	0	40	0	0	2	0	0	0	1	10	0	0	53	152
05:00 AM	0	0	0	0	0	44	0	0	2	0	3	0	1	3	0	0	53	190
05:15 AM	0	0	0	0	0	85	1	0	0	0	2	0	0	27	0	0	115	262
05:30 AM	0	0	0	0	0	128	0	0	0	0	1	0	0	21	0	0	150	371
05:45 AM	0	0	0	0	0	121	0	0	1	0	1	0	0	20	0	0	143	461
06:00 AM	0	0	0	0	0	138	1	0	2	0	3	0	0	29	0	0	173	581
06:15 AM	0	0	0	0	0	198	3	0	6	0	4	0	1	46	0	0	258	724
06:30 AM	0	0	0	0	0	251	4	0	4	0	5	0	0	51	0	0	315	889
06:45 AM	0	0	0	0	0	332	3	0	6	0	5	0	0	71	0	0	417	1163
07:00 AM	0	0	0	0	0	335	4	0	7	0	15	0	1	85	0	0	447	1437
07:15 AM	0	0	0	0	0	276	7	0	6	0	13	0	1	88	0	0	391	1570
07:30 AM	0	0	0	0	0	262	7	0	8	0	11	0	1	102	0	0	391	1646
07:45 AM	0	0	0	0	0	252	2	0	5	0	10	0	0	103	2	0	374	1603
08:00 AM	0	0	0	0	0	224	5	0	7	0	8	0	5	99	0	0	348	1504
08:15 AM	0	0	0	0	0	271	3	0	7	0	7	0	2	97	0	0	387	1500
08:30 AM	0	0	0	0	0	266	10	0	9	0	11	0	5	127	0	0	428	1537
08:45 AM	0	0	0	0	0	203	8	0	8	0	12	0	2	96	0	0	329	1492
09:00 AM	0	0	0	0	0	195	2	0	0	0	3	0	0	103	0	0	303	1447
09:15 AM	0	0	0	0	0	206	4	0	5	0	11	0	1	164	0	0	391	1451
09:30 AM	0	0	0	0	0	150	2	0	2	0	3	0	1	141	0	0	299	1322
09:45 AM	0	0	0	0	0	132	1	0	2	0	3	0	2	99	0	0	239	1232
10:00 AM	0	0	0	0	0	130	2	0	3	0	2	0	3	99	0	0	239	1168
10:15 AM	0	0	0	0	0	130	1	0	3	0	3	0	2	125	0	0	264	1041
10:30 AM	0	0	0	0	0	145	1	0	1	0	3	0	1	97	0	0	248	990
10:45 AM	0	0	0	0	0	151	8	0	5	0	4	0	2	110	0	0	280	1031
11:00 AM	0	0	0	0	0	140	5	0	7	0	2	0	1	123	0	0	278	1070
11:15 AM	0	0	0	0	0	116	3	0	5	0	5	0	4	103	0	0	236	1042
11:30 AM	0	0	0	0	0	107	8	0	4	0	7	0	1	120	0	0	247	1041
11:45 AM	0	0	0	0	0	102	5	0	6	0	7	0	1	147	0	0	268	1029
12:00 PM	0	0	0	0	0	134	4	0	3	0	4	0	2	131	0	0	278	1029
12:15 PM	0	0	0	0	0	154	9	0	4	0	9	0	7	155	0	0	338	1131
12:30 PM	0	0	0	0	0	100	5	0	8	0	12	0	3	103	0	0	231	1115
12:45 PM	0	0	0	0	0	131	3	0	4	0	6	0	7	130	0	0	281	1128
01:00 PM	0	0	0	0	0	136	4	0	5	0	2	0	2	123	0	0	272	1122
01:15 PM	0	0	0	0	0	107	7	0	1	0	6	0	2	129	0	0	252	1036
01:30 PM	0	0	0	0	0	130	5	0	4	0	6	0	4	141	0	0	290	1095
01:45 PM	0	0	0	0	0	149	5	0	5	0	4	0	1	143	0	0	307	1121
02:00 PM	0	0	0	0	0	133	4	0	1	0	4	0	3	136	0	0	281	1130
02:15 PM	0	0	0	0	0	107	5	0	3	0	6	0	2	171	0	0	294	1172
02:30 PM	0	0	0	0	0	135	10	0	4	0	10	0	7	180	0	0	346	1228
02:45 PM	0	0	0	0	0	136	0	0	7	0	4	0	6	175	0	0	328	1249
03:00 PM	0	0	0	0	0	133	3	0	2	0	1	0	3	196	0	0	338	1306
03:15 PM	0	0	0	0	0	149	6	0	5	0	6	0	5	236	0	0	407	1419
03:30 PM	0	0	0	0	0	160	2	0	7	0	5	0	3	236	0	0	413	1486
03:45 PM	0	0	0	0	0	124	3	0	5	0	2	0	7	212	0	0	353	1511
04:00 PM	0	0	0	0	0	126	7	0	8	0	5	0	4	224	0	0	374	1547
04:15 PM	0	0	0	0	0	158	7	0	8	0	4	0	3	244	0	0	424	1564
04:30 PM	0	0	0	0	0	147	7	0	8	0	1	0	4	267	0	0	434	1585
04:45 PM	0	0	0	0	0	160	14	0	15	0	8	0	5	254	0	0	456	1688
05:00 PM	0	0	0	0	0	161	5	0	15	0	12	0	3	252	0	0	448	1762
05:15 PM	0	0	0	0	0	237	6	0	14	0	10	0	7	262	0	0	536	1874
05:30 PM	0	0	0	0	0	189	15	0	16	0	6	0	9	233	0	0	468	1908
05:45 PM	0	0	0	0	0	180	6	0	10	0	13	0	8	263	0	0	480	1932
06:00 PM	0	0	0	0	0	195	9	0	9	0	10	0	6	230	0	0	459	1943
06:15 PM	0	0	0	0	0	158	10	0	7	0	8	0	7	183	0	0	373	1780
06:30 PM	0	0	0	0	0	131	4	0	5	0	3	0	4	182	0	0	329	1641
06:45 PM	0	0	0	0	0	166	9	0	3	0	7	0	11	163	0	0	359	1520
07:00 PM	0	0	0	0	0	109	5	0	4	0	6	0	7	185	0	0	316	1377
07:15 PM	0	0	0	0	0	83	11	0	5	0	5	0	6	138	0	0	248	1252
07:30 PM	0	0	0	0	0	70	3	0	7	0	2	0	10	154	0	0	246	1169
07:45 PM	0	0	0	0	0	95	5	0	4	0	5	0	4	139	0	0	252	1062
08:00 PM	0	0	0	0	0	88	4	0	1	0	3	0	8	160	0	0	264	1010
08:15 PM	0	0	0	0	0	90	5	0	2	0	4	0	6	172	0	0	279	1041
08:30 PM	0	0	0	0	0	81	3	0	3	0	3	0	6	123	0	0	219	1014
08:45 PM	0	0	0	0	0	57	7	0	5	0	1	0	3	128	0	0	201	963
09:00 PM	0	0	0	0	0	66	1	0	1	0	4	0	7	137	0	0	216	915
09:15 PM	0	0	0	0	0	59	4	0	3	0	1	0	2	103	0	0	172	808
09:30 PM	0	0	0	0	0	54	3	0	3	0	0	0	1	78	0	0	139	728
09:45 PM	0	0	0	0	0	43	3	0	0	0	0	0	2	71	0	0	119	646
10:00 PM	0	0	0	0	0	48	2	0	2	0	0	0	2	61	0	0	115	545
10:15 PM	0	0	0	0	0	32	2	0	0	0	1	0	1	43	0	0	79	452
10:30 PM	0	0	0	0	0	38	3	0	3	0	1	0	2	41	0	0	88	401
10:45 PM	0	0	0	0	0	19	1	0	0	0	0	0	0	36	0	0	56	338
11:00 PM	0	0	0	0	0	19	0	0	1	0	0	0	1	24	0	0	45	268
11:15 PM	0	0	0	0	0	22	1	0	0	0	0	0	1	41	0	0	65	254
11:30 PM	0	0	0	0	0	17	1	0	0	0	0	0	0	31	0	0	49	215
11:45 PM	0	0	0	0	0	14	0	0	1	0	0	0	1	32	0	0	48	207
Total	**0**	**0**	**0**	**0**	**0**	**10516**	**341**	**0**	**355**	**0**	**377**	**0**	**248**	**9928**	**2**	**0**		

SR 32 & Ivy Hills Place

5/16/2017

TOTAL - CARS

	From North				SR 32 From East				IVY HILLS PLACE From South				SR 32 From West				15-Min	Hour
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Total	Total
12:00 AM	0	0	0	0	0	7	1	0	1	0	0	0	0	15	0	0	24	
12:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	8	0	0	10	
12:30 AM	0	0	0	0	0	9	1	0	0	0	0	0	0	10	0	0	20	
12:45 AM	0	0	0	0	0	6	0	0	0	0	1	0	1	11	0	0	19	73
01:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	10	0	0	13	62
01:15 AM	0	0	0	0	0	1	0	0	0	0	2	0	1	23	0	0	27	79
01:30 AM	0	0	0	0	0	6	0	0	0	0	0	0	1	10	0	0	17	76
01:45 AM	0	0	0	0	0	6	0	0	0	0	0	0	0	5	0	0	11	68
02:00 AM	0	0	0	0	0	4	0	0	0	0	0	0	1	7	0	0	12	67
02:15 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	7	0	0	11	51
02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	38
02:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	6	0	0	8	35
03:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	7	0	0	10	33
03:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5	27
03:30 AM	0	0	0	0	0	11	0	0	0	0	0	0	0	1	0	0	12	35
03:45 AM	0	0	0	0	0	8	0	0	0	0	0	0	0	4	0	0	12	39
04:00 AM	0	0	0	0	0	9	0	0	0	0	0	0	0	4	0	0	13	42
04:15 AM	0	0	0	0	0	30	1	0	0	0	0	0	0	9	0	0	40	77
04:30 AM	0	0	0	0	0	34	0	0	0	0	0	0	0	7	0	0	41	106
04:45 AM	0	0	0	0	0	39	0	0	2	0	0	0	1	10	0	0	52	146
05:00 AM	0	0	0	0	0	43	0	0	2	0	3	0	1	3	0	0	52	185
05:15 AM	0	0	0	0	0	85	1	0	0	0	2	0	0	24	0	0	112	257
05:30 AM	0	0	0	0	0	126	0	0	0	0	1	0	0	18	0	0	145	361
05:45 AM	0	0	0	0	0	119	0	0	1	0	1	0	0	17	0	0	138	447
06:00 AM	0	0	0	0	0	135	1	0	2	0	3	0	0	28	0	0	169	564
06:15 AM	0	0	0	0	0	189	3	0	6	0	3	0	0	41	0	0	242	694
06:30 AM	0	0	0	0	0	246	3	0	4	0	4	0	0	47	0	0	304	853
06:45 AM	0	0	0	0	0	325	3	0	6	0	5	0	0	68	0	0	407	1122
07:00 AM	0	0	0	0	0	327	4	0	7	0	15	0	1	81	0	0	435	1388
07:15 AM	0	0	0	0	0	264	7	0	6	0	13	0	1	78	0	0	369	1515
07:30 AM	0	0	0	0	0	252	7	0	8	0	11	0	1	96	0	0	375	1586
07:45 AM	0	0	0	0	0	237	2	0	5	0	10	0	0	94	2	0	350	1529
08:00 AM	0	0	0	0	0	215	5	0	7	0	8	0	5	84	0	0	324	1418
08:15 AM	0	0	0	0	0	252	3	0	6	0	7	0	1	88	0	0	357	1406
08:30 AM	0	0	0	0	0	247	10	0	9	0	10	0	4	107	0	0	387	1418
08:45 AM	0	0	0	0	0	192	7	0	8	0	12	0	2	80	0	0	301	1369
09:00 AM	0	0	0	0	0	179	2	0	0	0	3	0	0	90	0	0	274	1319
09:15 AM	0	0	0	0	0	182	4	0	3	0	11	0	1	146	0	0	347	1309
09:30 AM	0	0	0	0	0	133	2	0	2	0	3	0	1	115	0	0	256	1178
09:45 AM	0	0	0	0	0	117	1	0	2	0	3	0	2	82	0	0	207	1084
10:00 AM	0	0	0	0	0	120	2	0	3	0	1	0	2	81	0	0	209	1019
10:15 AM	0	0	0	0	0	110	1	0	2	0	3	0	2	94	0	0	212	884
10:30 AM	0	0	0	0	0	132	1	0	1	0	3	0	1	87	0	0	225	853
10:45 AM	0	0	0	0	0	139	7	0	5	0	4	0	2	98	0	0	255	901
11:00 AM	0	0	0	0	0	127	5	0	7	0	2	0	1	112	0	0	254	946
11:15 AM	0	0	0	0	0	99	3	0	5	0	5	0	3	95	0	0	210	944
11:30 AM	0	0	0	0	0	94	8	0	4	0	6	0	1	109	0	0	222	941
11:45 AM	0	0	0	0	0	93	4	0	6	0	5	0	1	132	0	0	241	927
12:00 PM	0	0	0	0	0	120	4	0	3	0	4	0	2	121	0	0	254	927
12:15 PM	0	0	0	0	0	132	7	0	3	0	8	0	6	132	0	0	288	1005
12:30 PM	0	0	0	0	0	86	4	0	8	0	10	0	3	90	0	0	201	984
12:45 PM	0	0	0	0	0	120	3	0	3	0	6	0	6	122	0	0	260	1003
01:00 PM	0	0	0	0	0	126	4	0	3	0	2	0	2	109	0	0	246	995
01:15 PM	0	0	0	0	0	92	5	0	1	0	5	0	2	116	0	0	221	928
01:30 PM	0	0	0	0	0	121	5	0	4	0	5	0	4	129	0	0	268	995
01:45 PM	0	0	0	0	0	135	5	0	5	0	4	0	1	130	0	0	280	1015
02:00 PM	0	0	0	0	0	122	4	0	1	0	3	0	3	117	0	0	250	1019
02:15 PM	0	0	0	0	0	90	3	0	3	0	6	0	2	161	0	0	265	1063
02:30 PM	0	0	0	0	0	123	10	0	4	0	6	0	5	163	0	0	311	1106
02:45 PM	0	0	0	0	0	124	0	0	6	0	3	0	6	158	0	0	297	1123
03:00 PM	0	0	0	0	0	121	3	0	2	0	1	0	3	181	0	0	311	1184
03:15 PM	0	0	0	0	0	138	6	0	5	0	6	0	5	215	0	0	375	1294
03:30 PM	0	0	0	0	0	136	2	0	6	0	5	0	3	220	0	0	372	1355
03:45 PM	0	0	0	0	0	117	3	0	5	0	2	0	6	203	0	0	336	1394
04:00 PM	0	0	0	0	0	113	7	0	8	0	4	0	4	208	0	0	344	1427
04:15 PM	0	0	0	0	0	149	7	0	8	0	4	0	2	226	0	0	396	1448
04:30 PM	0	0	0	0	0	141	7	0	8	0	1	0	4	256	0	0	417	1493
04:45 PM	0	0	0	0	0	154	14	0	15	0	8	0	5	245	0	0	441	1598
05:00 PM	0	0	0	0	0	153	5	0	13	0	12	0	3	243	0	0	429	1683
05:15 PM	0	0	0	0	0	228	6	0	14	0	10	0	7	256	0	0	521	1808
05:30 PM	0	0	0	0	0	183	15	0	16	0	6	0	9	231	0	0	460	1851
05:45 PM	0	0	0	0	0	178	6	0	10	0	13	0	8	254	0	0	469	1879
06:00 PM	0	0	0	0	0	189	9	0	9	0	9	0	6	225	0	0	447	1897
06:15 PM	0	0	0	0	0	157	10	0	7	0	8	0	7	178	0	0	367	1743
06:30 PM	0	0	0	0	0	129	4	0	5	0	3	0	4	179	0	0	324	1607
06:45 PM	0	0	0	0	0	162	9	0	3	0	7	0	11	160	0	0	352	1490
07:00 PM	0	0	0	0	0	107	5	0	4	0	6	0	7	183	0	0	312	1355
07:15 PM	0	0	0	0	0	81	11	0	5	0	5	0	6	136	0	0	244	1232
07:30 PM	0	0	0	0	0	68	3	0	7	0	2	0	10	146	0	0	236	1144
07:45 PM	0	0	0	0	0	92	5	0	4	0	5	0	4	134	0	0	244	1036
08:00 PM	0	0	0	0	0	87	4	0	1	0	3	0	8	157	0	0	260	984
08:15 PM	0	0	0	0	0	87	5	0	2	0	4	0	6	168	0	0	272	1012
08:30 PM	0	0	0	0	0	79	3	0	3	0	3	0	5	122	0	0	215	991
08:45 PM	0	0	0	0	0	57	7	0	5	0	1	0	3	127	0	0	200	947
09:00 PM	0	0	0	0	0	64	1	0	1	0	4	0	7	134	0	0	211	898
09:15 PM	0	0	0	0	0	56	4	0	3	0	1	0	2	103	0	0	169	795
09:30 PM	0	0	0	0	0	54	3	0	3	0	0	0	1	77	0	0	138	718
09:45 PM	0	0	0	0	0	42	2	0	0	0	0	0	2	71	0	0	117	635
10:00 PM	0	0	0	0	0	48	2	0	2	0	0	0	2	60	0	0	114	538
10:15 PM	0	0	0	0	0	31	2	0	0	0	1	0	1	40	0	0	75	444
10:30 PM	0	0	0	0	0	34	3	0	3	0	1	0	2	36	0	0	79	385
10:45 PM	0	0	0	0	0	13	1	0	0	0	0	0	0	34	0	0	48	316
11:00 PM	0	0	0	0	0	18	0	0	1	0	0	0	1	24	0	0	44	246
11:15 PM	0	0	0	0	0	21	1	0	0	0	0	0	1	34	0	0	57	228
11:30 PM	0	0	0	0	0	12	1	0	0	0	0	0	0	28	0	0	41	190
11:45 PM	0	0	0	0	0	12	0	0	1	0	0	0	1	30	0	0	44	186
Total	**0**	**0**	**0**	**0**	**0**	**9855**	**329**	**0**	**342**	**0**	**357**	**0**	**235**	**9198**	**2**	**0**		

SR 32 & Ivy Hills Place

5/16/2017

TOTAL - TRUCKS

	From North				SR 32 From East				IVY HILLS PLACE From South				SR 32 From West				15-Min	Hour
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Total	Total
12:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	5	
12:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	3	
12:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2	
12:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
01:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
01:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
01:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2	2
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3
02:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3	6
02:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
02:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
03:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	6
03:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3	6
03:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	6
03:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	7
04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	7
04:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	7
04:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
04:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	6
05:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	5
05:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	5
05:30 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5	10
05:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5	14
06:00 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4	17
06:15 AM	0	0	0	0	0	9	0	0	0	0	1	0	1	5	0	0	16	30
06:30 AM	0	0	0	0	0	5	1	0	0	0	1	0	0	4	0	0	11	36
06:45 AM	0	0	0	0	0	7	0	0	0	0	0	0	0	3	0	0	10	41
07:00 AM	0	0	0	0	0	8	0	0	0	0	0	0	0	4	0	0	12	49
07:15 AM	0	0	0	0	0	12	0	0	0	0	0	0	0	10	0	0	22	55
07:30 AM	0	0	0	0	0	10	0	0	0	0	0	0	0	6	0	0	16	60
07:45 AM	0	0	0	0	0	15	0	0	0	0	0	0	0	9	0	0	24	74
08:00 AM	0	0	0	0	0	9	0	0	0	0	0	0	0	15	0	0	24	86
08:15 AM	0	0	0	0	0	19	0	0	1	0	0	0	1	9	0	0	30	94
08:30 AM	0	0	0	0	0	19	0	0	0	0	1	0	1	20	0	0	41	119
08:45 AM	0	0	0	0	0	11	1	0	0	0	0	0	0	16	0	0	28	123
09:00 AM	0	0	0	0	0	16	0	0	0	0	0	0	0	13	0	0	29	128
09:15 AM	0	0	0	0	0	24	0	0	2	0	0	0	0	18	0	0	44	142
09:30 AM	0	0	0	0	0	17	0	0	0	0	0	0	0	26	0	0	43	144
09:45 AM	0	0	0	0	0	15	0	0	0	0	0	0	0	17	0	0	32	148
10:00 AM	0	0	0	0	0	10	0	0	0	0	1	0	1	18	0	0	30	149
10:15 AM	0	0	0	0	0	20	0	0	1	0	0	0	0	31	0	0	52	157
10:30 AM	0	0	0	0	0	13	0	0	0	0	0	0	0	10	0	0	23	137
10:45 AM	0	0	0	0	0	12	1	0	0	0	0	0	0	12	0	0	25	130
11:00 AM	0	0	0	0	0	13	0	0	0	0	0	0	0	11	0	0	24	124
11:15 AM	0	0	0	0	0	17	0	0	0	0	0	0	1	8	0	0	26	98
11:30 AM	0	0	0	0	0	13	0	0	0	0	1	0	0	11	0	0	25	100
11:45 AM	0	0	0	0	0	9	1	0	0	0	2	0	0	15	0	0	27	102
12:00 PM	0	0	0	0	0	14	0	0	0	0	0	0	0	10	0	0	24	102
12:15 PM	0	0	0	0	0	22	2	0	1	0	1	0	1	23	0	0	50	126
12:30 PM	0	0	0	0	0	14	1	0	0	0	2	0	0	13	0	0	30	131
12:45 PM	0	0	0	0	0	11	0	0	1	0	0	0	1	8	0	0	21	125
01:00 PM	0	0	0	0	0	10	0	0	2	0	0	0	0	14	0	0	26	127
01:15 PM	0	0	0	0	0	15	2	0	0	0	1	0	0	13	0	0	31	108
01:30 PM	0	0	0	0	0	9	0	0	0	0	1	0	0	12	0	0	22	100
01:45 PM	0	0	0	0	0	14	0	0	0	0	0	0	0	13	0	0	27	106
02:00 PM	0	0	0	0	0	11	0	0	0	0	1	0	0	19	0	0	31	111
02:15 PM	0	0	0	0	0	17	2	0	0	0	0	0	0	10	0	0	29	109
02:30 PM	0	0	0	0	0	12	0	0	0	0	4	0	2	17	0	0	35	122
02:45 PM	0	0	0	0	0	12	0	0	1	0	1	0	0	17	0	0	31	126
03:00 PM	0	0	0	0	0	12	0	0	0	0	0	0	0	15	0	0	27	122
03:15 PM	0	0	0	0	0	11	0	0	0	0	0	0	0	21	0	0	32	125
03:30 PM	0	0	0	0	0	24	0	0	1	0	0	0	0	16	0	0	41	131
03:45 PM	0	0	0	0	0	7	0	0	0	0	0	0	1	9	0	0	17	117
04:00 PM	0	0	0	0	0	13	0	0	0	0	1	0	0	16	0	0	30	120
04:15 PM	0	0	0	0	0	9	0	0	0	0	0	0	1	18	0	0	28	116
04:30 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	11	0	0	17	92
04:45 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	9	0	0	15	90
05:00 PM	0	0	0	0	0	8	0	0	2	0	0	0	0	9	0	0	19	79
05:15 PM	0	0	0	0	0	9	0	0	0	0	0	0	0	6	0	0	15	66
05:30 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	2	0	0	8	57
05:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	9	0	0	11	53
06:00 PM	0	0	0	0	0	6	0	0	0	0	1	0	0	5	0	0	12	46
06:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	6	37
06:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5	34
06:45 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	3	0	0	7	30
07:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4	22
07:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4	20
07:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	8	0	0	10	25
07:45 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	5	0	0	8	26
08:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	4	26
08:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	4	0	0	7	29
08:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	1	1	0	0	4	23
08:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	16
09:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	3	0	0	5	17
09:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	13
09:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	10
09:45 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	11
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	7
10:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	4	8
10:30 PM	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0	0	9	16
10:45 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	2	0	0	8	22
11:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	22
11:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	7	0	0	8	26
11:30 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	3	0	0	8	25
11:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4	21
Total	**0**	**0**	**0**	**0**	**0**	**649**	**12**	**0**	**12**	**0**	**20**	**0**	**12**	**700**	**0**	**0**		

BATAVIA RD AT LITTLE DRY RUN RD

12/9/2015

TOTAL - CARS AND TRUCKS

	BATAVIA RD From North				BATAVIA RD From East				LITTLE DRY RUN RD From South				BATAVIA RD From West				15-Min	Hour
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Total	Total
00:00 AM	0	0	0	0	0	8	0	0	1	0	0	0	3	11	0	0	23	
00:15 AM	0	0	0	0	0	7	2	0	0	0	2	0	1	13	0	0	25	
00:30 AM	0	0	0	0	0	3	1	0	0	0	1	0	0	6	0	0	11	
00:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	18	0	0	20	79
01:00 AM	0	0	0	0	0	4	0	0	1	0	1	0	1	14	0	0	21	77
01:15 AM	0	0	0	0	0	7	0	0	0	0	0	0	1	6	0	0	14	66
01:30 AM	0	0	0	0	0	2	2	0	1	0	4	0	2	5	0	0	16	71
01:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	7	0	0	8	59
02:00 AM	0	0	0	0	0	4	1	0	0	0	0	0	1	4	0	0	10	48
02:15 AM	0	0	0	0	0	4	0	0	0	0	0	0	1	2	0	0	7	41
02:30 AM	0	0	0	0	0	3	1	0	0	0	0	0	0	4	0	0	8	33
02:45 AM	0	0	0	0	0	5	0	0	0	0	1	0	0	6	0	0	12	37
03:00 AM	0	0	0	0	0	5	1	0	0	0	3	0	1	3	0	0	13	40
03:15 AM	0	0	0	0	0	7	0	0	0	0	0	0	0	1	0	0	8	41
03:30 AM	0	0	0	0	0	8	0	0	0	0	0	0	0	5	0	0	13	46
03:45 AM	0	0	0	0	0	13	2	0	0	0	0	0	1	9	0	0	25	59
04:00 AM	0	0	0	0	0	15	2	0	0	0	3	0	1	9	0	0	30	76
04:15 AM	0	0	0	0	0	24	2	0	0	0	3	0	1	9	0	0	39	107
04:30 AM	0	0	0	0	0	36	0	0	0	0	3	0	1	10	0	0	50	144
04:45 AM	0	0	0	0	0	33	3	0	0	0	3	0	1	11	0	0	51	170
05:00 AM	0	0	0	0	0	46	1	0	1	0	3	0	0	9	0	0	60	200
05:15 AM	0	0	0	0	0	77	3	0	1	0	2	0	4	21	0	0	108	269
05:30 AM	0	0	0	0	0	113	3	0	2	0	11	0	0	19	0	0	148	367
05:45 AM	0	0	0	0	0	113	9	0	0	0	11	0	1	17	0	0	151	467
06:00 AM	0	0	0	0	0	111	6	0	1	0	15	0	0	31	0	0	164	571
06:15 AM	0	0	0	0	0	194	3	0	3	0	17	0	3	35	0	0	255	718
06:30 AM	0	0	0	0	0	220	4	0	8	0	18	0	9	45	0	0	304	874
06:45 AM	0	0	0	0	0	261	3	0	3	0	37	0	10	61	0	0	375	1098
07:00 AM	0	0	0	0	0	288	2	0	6	0	61	0	11	80	0	0	448	1382
00:15 AM	0	0	0	0	0	282	3	0	7	0	38	0	7	89	0	0	426	1553
07:30 AM	0	0	0	0	0	271	6	0	2	0	42	0	10	128	0	0	459	1708
07:45 AM	0	0	0	0	0	256	9	0	4	0	38	0	7	132	0	0	446	1779
08:00 AM	0	0	0	0	0	241	4	0	7	0	42	0	17	116	0	0	427	1758
08:15 AM	0	0	0	0	0	214	9	0	9	0	42	0	21	96	0	0	391	1723
08:30 AM	0	0	0	0	0	190	13	0	1	0	22	0	21	91	0	0	338	1602
08:45 AM	0	0	0	0	0	163	2	0	7	0	32	0	7	104	0	0	315	1471
09:00 AM	0	0	0	0	0	138	9	0	6	0	20	0	14	82	0	0	269	1313
09:15 AM	0	0	0	0	0	129	4	0	3	0	29	0	10	96	0	0	271	1193
09:30 AM	0	0	0	0	0	125	3	0	5	0	21	0	12	90	0	0	256	1111
09:45 AM	0	0	0	0	0	118	7	0	7	0	12	0	9	83	0	0	236	1032
10:00 AM	0	0	0	0	0	108	6	0	3	0	12	0	8	96	0	0	233	996
10:15 AM	0	0	0	0	0	123	5	0	12	0	20	0	16	75	0	0	251	976
10:30 AM	0	0	0	0	0	115	10	0	7	0	16	0	11	101	0	0	260	980
10:45 AM	0	0	0	0	0	103	8	0	7	0	19	0	20	92	0	0	249	993
11:00 AM	0	0	0	0	0	105	10	0	2	0	13	0	7	103	0	0	240	1000
11:15 AM	0	0	0	0	0	128	4	0	6	0	13	0	16	100	0	0	267	1016
11:30 AM	0	0	0	0	0	113	4	0	7	0	22	0	16	115	0	0	277	1033
11:45 AM	0	0	0	0	0	93	11	0	3	0	16	0	23	91	0	0	237	1021
12:00 PM	0	0	0	0	0	98	7	0	10	0	17	0	16	117	0	0	265	1046
12:15 PM	0	0	0	0	0	104	8	0	6	0	12	0	16	105	0	0	251	1030
12:30 PM	0	0	0	0	0	109	9	0	3	0	20	0	15	108	0	0	264	1017
12:45 PM	0	0	0	0	0	107	9	0	7	0	17	0	14	115	0	0	269	1049
01:00 PM	0	0	0	0	0	102	6	0	10	0	28	0	13	140	0	0	299	1083
01:15 PM	0	0	0	0	0	109	4	0	13	0	17	0	15	138	0	0	296	1128
01:30 PM	0	0	0	0	0	119	6	0	4	0	6	0	12	115	0	0	262	1126
01:45 PM	0	0	0	0	0	103	8	0	5	0	25	0	22	134	0	0	297	1154
02:00 PM	0	0	0	0	0	118	6	0	3	0	15	0	19	127	0	0	288	1143
02:15 PM	0	0	0	0	0	98	1	0	10	0	17	0	24	153	0	0	303	1150
02:30 PM	0	0	0	0	0	125	4	0	8	0	18	0	20	146	0	0	321	1209
02:45 PM	0	0	0	0	0	130	9	0	7	0	22	0	20	173	0	0	361	1273
03:00 PM	0	0	0	0	0	144	8	0	9	0	10	1	25	182	0	0	379	1364
03:15 PM	0	0	0	0	0	109	3	0	7	0	13	0	22	202	0	0	356	1417
03:30 PM	0	0	0	0	0	120	6	0	9	0	14	0	25	195	0	0	369	1465
03:45 PM	0	0	0	0	0	121	10	0	7	0	21	0	31	218	0	0	408	1512
04:00 PM	0	0	0	0	0	123	9	0	12	0	20	0	35	234	0	0	433	1566
04:15 PM	0	0	0	0	0	109	9	0	8	0	23	0	20	224	0	0	393	1603
04:30 PM	0	0	0	0	0	125	6	0	9	0	19	0	27	261	0	0	447	1681
04:45 PM	0	0	0	0	0	130	3	0	7	0	21	0	45	225	0	0	431	1704
05:00 PM	0	0	0	0	0	122	5	0	10	0	25	0	36	250	0	0	448	1719
05:15 PM	0	0	0	0	0	150	13	0	2	0	25	0	30	257	0	0	477	1803
05:30 PM	0	0	0	0	0	135	17	0	10	0	21	0	46	238	0	0	467	1823
05:45 PM	0	0	0	0	0	132	9	0	11	0	38	0	42	219	0	0	451	1843
06:00 PM	0	0	0	0	0	119	11	0	11	0	28	0	39	203	0	0	411	1806
06:15 PM	0	0	0	0	0	132	13	0	4	0	29	0	34	191	0	0	403	1732
06:30 PM	0	0	0	0	0	87	7	0	2	0	13	0	21	155	0	0	285	1550
06:45 PM	0	0	0	0	0	89	4	0	6	0	18	0	23	132	0	0	272	1371
07:00 PM	0	0	0	0	0	72	8	0	5	0	13	0	19	145	0	0	262	1222
07:15 PM	0	0	0	0	0	76	4	0	6	0	17	0	17	109	0	0	229	1048
07:30 PM	0	0	0	0	0	62	4	0	3	0	10	0	21	109	0	0	209	972
07:45 PM	0	0	0	0	0	53	4	0	7	0	23	0	17	86	0	0	190	890
08:00 PM	0	0	0	0	0	46	4	0	6	0	5	0	13	80	0	0	154	782
08:15 PM	0	0	0	0	0	60	11	0	3	0	14	0	10	88	0	0	186	739
08:30 PM	0	0	0	0	0	55	7	0	1	0	9	0	18	67	0	0	157	687
08:45 PM	0	0	0	0	0	37	4	0	1	0	9	0	10	65	0	0	126	623
09:00 PM	0	0	0	0	0	50	5	0	1	0	8	0	12	79	0	0	155	624
09:15 PM	0	0	0	0	0	43	3	0	14	0	4	0	20	81	0	0	165	603
09:30 PM	0	0	0	0	0	28	5	0	2	0	3	0	6	47	0	0	91	537
09:45 PM	0	0	0	0	0	38	5	0	0	0	4	0	4	50	0	0	101	512
10:00 PM	0	0	0	0	0	42	1	0	4	0	2	0	6	43	0	0	98	455
10:15 PM	0	0	0	0	0	28	3	0	1	0	2	0	9	31	0	0	74	364
10:30 PM	0	0	0	0	0	33	2	0	3	0	4	0	3	36	0	0	81	354
10:45 PM	0	0	0	0	0	13	1	0	1	0	1	0	7	26	0	0	49	302
11:00 PM	0	0	0	0	0	6	0	0	0	0	3	0	5	29	0	0	43	247
11:15 PM	0	0	0	0	0	9	2	0	0	0	3	0	3	40	0	0	57	230
11:30 PM	0	0	0	0	0	4	0	0	0	0	3	0	4	21	0	0	32	181
11:45 PM	0	0	0	0	0	6	0	0	0	0	2	0	0	13	0	0	21	153
Total	**0**	**0**	**0**	**0**	**0**	**8659**	**461**	**0**	**401**	**0**	**1359**	**1**	**1217**	**8553**	**0**	**0**		

BATAVIA RD AT LITTLE DRY RUN RD

12/9/2015

CARS

	From North				BATAVIA RD From East				LITTLE DRY RUN RD From South				BATAVIA RD From West				15-Min Total	Hour Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds		
00:00 AM	0	0	0	0	0	4	0	0	1	0	0	0	3	11	0	0	19	
00:15 AM	0	0	0	0	0	6	2	0	0	0	2	0	1	13	0	0	24	
00:30 AM	0	0	0	0	0	3	1	0	0	0	1	0	0	6	0	0	11	
00:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	18	0	0	20	74
01:00 AM	0	0	0	0	0	3	0	0	1	0	1	0	1	12	0	0	18	73
01:15 AM	0	0	0	0	0	6	0	0	0	0	0	0	1	6	0	0	13	62
01:30 AM	0	0	0	0	0	2	2	0	1	0	4	0	2	5	0	0	16	67
01:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	6	0	0	7	54
02:00 AM	0	0	0	0	0	4	1	0	0	0	0	0	1	4	0	0	10	46
02:15 AM	0	0	0	0	0	4	0	0	0	0	0	0	1	2	0	0	7	40
02:30 AM	0	0	0	0	0	2	1	0	0	0	0	0	0	4	0	0	7	31
02:45 AM	0	0	0	0	0	4	0	0	0	0	1	0	0	5	0	0	10	34
03:00 AM	0	0	0	0	0	5	0	0	0	0	2	0	1	3	0	0	11	35
03:15 AM	0	0	0	0	0	7	0	0	0	0	0	0	0	1	0	0	8	36
03:30 AM	0	0	0	0	0	8	0	0	0	0	0	0	0	3	0	0	11	40
03:45 AM	0	0	0	0	0	13	2	0	0	0	0	0	1	8	0	0	24	54
04:00 AM	0	0	0	0	0	15	2	0	0	0	3	0	0	7	0	0	27	70
04:15 AM	0	0	0	0	0	24	2	0	0	0	3	0	1	6	0	0	36	98
04:30 AM	0	0	0	0	0	36	0	0	0	0	2	0	1	7	0	0	46	133
04:45 AM	0	0	0	0	0	32	3	0	0	0	3	0	1	10	0	0	49	158
05:00 AM	0	0	0	0	0	44	1	0	1	0	3	0	0	7	0	0	56	187
05:15 AM	0	0	0	0	0	75	3	0	1	0	2	0	4	19	0	0	104	255
05:30 AM	0	0	0	0	0	113	3	0	2	0	11	0	0	16	0	0	145	354
05:45 AM	0	0	0	0	0	110	9	0	0	0	11	0	1	15	0	0	146	451
06:00 AM	0	0	0	0	0	106	6	0	1	0	15	0	0	30	0	0	158	553
06:15 AM	0	0	0	0	0	190	3	0	3	0	17	0	3	30	0	0	246	695
06:30 AM	0	0	0	0	0	216	3	0	7	0	18	0	8	40	0	0	292	842
06:45 AM	0	0	0	0	0	257	3	0	3	0	37	0	10	58	0	0	368	1064
07:00 AM	0	0	0	0	0	281	2	0	5	0	61	0	8	71	0	0	428	1334
00:15 AM	0	0	0	0	0	271	3	0	6	0	37	0	6	81	0	0	404	1492
07:30 AM	0	0	0	0	0	256	5	0	2	0	41	0	9	121	0	0	434	1634
07:45 AM	0	0	0	0	0	243	9	0	4	0	38	0	6	121	0	0	421	1687
08:00 AM	0	0	0	0	0	225	4	0	6	0	41	0	17	103	0	0	396	1655
08:15 AM	0	0	0	0	0	193	4	0	6	0	41	0	19	79	0	0	342	1593
08:30 AM	0	0	0	0	0	178	8	0	1	0	21	0	18	76	0	0	302	1461
08:45 AM	0	0	0	0	0	144	1	0	5	0	32	0	5	85	0	0	272	1312
09:00 AM	0	0	0	0	0	121	8	0	5	0	19	0	11	70	0	0	234	1150
09:15 AM	0	0	0	0	0	120	3	0	3	0	27	0	10	82	0	0	245	1053
09:30 AM	0	0	0	0	0	105	2	0	3	0	20	0	11	75	0	0	216	967
09:45 AM	0	0	0	0	0	97	6	0	7	0	11	0	8	71	0	0	200	895
10:00 AM	0	0	0	0	0	100	4	0	3	0	12	0	8	77	0	0	204	865
10:15 AM	0	0	0	0	0	105	4	0	10	0	19	0	15	60	0	0	213	833
10:30 AM	0	0	0	0	0	96	8	0	7	0	16	0	11	90	0	0	228	845
10:45 AM	0	0	0	0	0	89	8	0	6	0	18	0	18	79	0	0	218	863
11:00 AM	0	0	0	0	0	93	10	0	2	0	12	0	6	93	0	0	216	875
11:15 AM	0	0	0	0	0	109	4	0	5	0	13	0	15	81	0	0	227	889
11:30 AM	0	0	0	0	0	104	4	0	6	0	22	0	14	99	0	0	249	910
11:45 AM	0	0	0	0	0	79	10	0	2	0	15	0	22	82	0	0	210	902
12:00 PM	0	0	0	0	0	82	7	0	7	0	15	0	13	100	0	0	224	910
12:15 PM	0	0	0	0	0	91	7	0	5	0	12	0	16	93	0	0	224	907
12:30 PM	0	0	0	0	0	97	9	0	3	0	20	0	14	97	0	0	240	898
12:45 PM	0	0	0	0	0	96	9	0	7	0	17	0	13	104	0	0	246	934
01:00 PM	0	0	0	0	0	90	6	0	10	0	27	0	11	125	0	0	269	979
01:15 PM	0	0	0	0	0	91	4	0	13	0	15	0	15	112	0	0	250	1005
01:30 PM	0	0	0	0	0	109	6	0	4	0	6	0	10	104	0	0	239	1004
01:45 PM	0	0	0	0	0	93	7	0	5	0	24	0	20	121	0	0	270	1028
02:00 PM	0	0	0	0	0	104	6	0	2	0	15	0	19	118	0	0	264	1023
02:15 PM	0	0	0	0	0	90	1	0	10	0	16	0	23	140	0	0	280	1053
02:30 PM	0	0	0	0	0	107	4	0	6	0	17	0	19	129	0	0	282	1096
02:45 PM	0	0	0	0	0	117	7	0	7	0	20	0	18	159	0	0	328	1154
03:00 PM	0	0	0	0	0	130	8	0	7	0	10	1	23	170	0	0	349	1239
03:15 PM	0	0	0	0	0	97	3	0	6	0	13	0	21	187	0	0	327	1286
03:30 PM	0	0	0	0	0	107	6	0	8	0	13	0	24	186	0	0	344	1348
03:45 PM	0	0	0	0	0	113	10	0	7	0	19	0	29	202	0	0	380	1400
04:00 PM	0	0	0	0	0	113	8	0	11	0	19	0	34	226	0	0	411	1462
04:15 PM	0	0	0	0	0	102	9	0	7	0	23	0	19	217	0	0	377	1512
04:30 PM	0	0	0	0	0	120	6	0	9	0	19	0	27	246	0	0	427	1595
04:45 PM	0	0	0	0	0	126	3	0	6	0	21	0	44	214	0	0	414	1629
05:00 PM	0	0	0	0	0	119	5	0	9	0	25	0	36	240	0	0	434	1652
05:15 PM	0	0	0	0	0	148	13	0	2	0	25	0	29	252	0	0	469	1744
05:30 PM	0	0	0	0	0	135	17	0	10	0	21	0	45	232	0	0	460	1777
05:45 PM	0	0	0	0	0	126	9	0	9	0	38	0	41	218	0	0	441	1804
06:00 PM	0	0	0	0	0	118	10	0	10	0	28	0	39	201	0	0	406	1776
06:15 PM	0	0	0	0	0	128	13	0	4	0	28	0	34	186	0	0	393	1700
06:30 PM	0	0	0	0	0	84	7	0	2	0	13	0	21	151	0	0	278	1518
06:45 PM	0	0	0	0	0	86	4	0	6	0	18	0	23	129	0	0	266	1343
07:00 PM	0	0	0	0	0	71	8	0	5	0	13	0	19	139	0	0	255	1192
07:15 PM	0	0	0	0	0	73	4	0	6	0	17	0	17	107	0	0	224	1023
07:30 PM	0	0	0	0	0	62	4	0	3	0	10	0	21	108	0	0	208	953
07:45 PM	0	0	0	0	0	53	4	0	7	0	23	0	17	82	0	0	186	873
08:00 PM	0	0	0	0	0	45	4	0	5	0	5	0	13	79	0	0	151	769
08:15 PM	0	0	0	0	0	60	11	0	3	0	14	0	10	87	0	0	185	730
08:30 PM	0	0	0	0	0	54	7	0	1	0	9	0	18	66	0	0	155	677
08:45 PM	0	0	0	0	0	36	4	0	1	0	9	0	10	65	0	0	125	616
09:00 PM	0	0	0	0	0	50	5	0	1	0	8	0	12	78	0	0	154	619
09:15 PM	0	0	0	0	0	43	3	0	14	0	4	0	20	81	0	0	165	599
09:30 PM	0	0	0	0	0	26	5	0	2	0	3	0	6	47	0	0	89	533
09:45 PM	0	0	0	0	0	38	5	0	0	0	4	0	4	49	0	0	100	508
10:00 PM	0	0	0	0	0	42	1	0	4	0	2	0	6	42	0	0	97	451
10:15 PM	0	0	0	0	0	28	3	0	1	0	2	0	9	30	0	0	73	359
10:30 PM	0	0	0	0	0	33	2	0	3	0	4	0	3	36	0	0	81	351
10:45 PM	0	0	0	0	0	12	1	0	1	0	1	0	7	26	0	0	48	299
11:00 PM	0	0	0	0	0	6	0	0	0	0	3	0	5	29	0	0	43	245
11:15 PM	0	0	0	0	0	9	2	0	0	0	3	0	3	39	0	0	56	228
11:30 PM	0	0	0	0	0	4	0	0	0	0	3	0	4	21	0	0	32	179
11:45 PM	0	0	0	0	0	6	0	0	0	0	2	0	0	12	0	0	20	151
Total	**0**	**0**	**0**	**0**	**0**	**8071**	**431**	**0**	**364**	**0**	**1328**	**1**	**1162**	**7930**	**0**	**0**		

BATAVIA RD AT LITTLE DRY RUN RD

12/9/2015

TRUCKS

	From North				BATAVIA RD From East				LITTLE DRY RUN RD From South				BATAVIA RD From West				15-Min	Hour
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Total	Total
00:00 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	
00:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
00:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
00:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
01:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3	4
01:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	4
01:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
01:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
02:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
02:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
02:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2
02:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2	3
03:00 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	5
03:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
03:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	6
03:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
04:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	6
04:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	9
04:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	3	0	0	4	11
04:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2	12
05:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4	13
05:15 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	4	14
05:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	13
05:45 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	5	16
06:00 AM	0	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0	6	18
06:15 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	5	0	0	9	23
06:30 AM	0	0	0	0	0	4	1	0	1	0	0	0	1	5	0	0	12	32
06:45 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	3	0	0	7	34
07:00 AM	0	0	0	0	0	7	0	0	1	0	0	0	3	9	0	0	20	48
00:15 AM	0	0	0	0	0	11	0	0	1	0	1	0	1	8	0	0	22	61
07:30 AM	0	0	0	0	0	15	1	0	0	0	1	0	1	7	0	0	25	74
07:45 AM	0	0	0	0	0	13	0	0	0	0	0	0	1	11	0	0	25	92
08:00 AM	0	0	0	0	0	16	0	0	1	0	1	0	0	13	0	0	31	103
08:15 AM	0	0	0	0	0	21	5	0	3	0	1	0	2	17	0	0	49	130
08:30 AM	0	0	0	0	0	12	5	0	0	0	1	0	3	15	0	0	36	141
08:45 AM	0	0	0	0	0	19	1	0	2	0	0	0	2	19	0	0	43	159
09:00 AM	0	0	0	0	0	17	1	0	1	0	1	0	3	12	0	0	35	163
09:15 AM	0	0	0	0	0	9	1	0	0	0	2	0	0	14	0	0	26	140
09:30 AM	0	0	0	0	0	20	1	0	2	0	1	0	1	15	0	0	40	144
09:45 AM	0	0	0	0	0	21	1	0	0	0	1	0	1	12	0	0	36	137
10:00 AM	0	0	0	0	0	8	2	0	0	0	0	0	0	19	0	0	29	131
10:15 AM	0	0	0	0	0	18	1	0	2	0	1	0	1	15	0	0	38	143
10:30 AM	0	0	0	0	0	19	2	0	0	0	0	0	0	11	0	0	32	135
10:45 AM	0	0	0	0	0	14	0	0	1	0	1	0	2	13	0	0	31	130
11:00 AM	0	0	0	0	0	12	0	0	0	0	1	0	1	10	0	0	24	125
11:15 AM	0	0	0	0	0	19	0	0	1	0	0	0	1	19	0	0	40	127
11:30 AM	0	0	0	0	0	9	0	0	1	0	0	0	2	16	0	0	28	123
11:45 AM	0	0	0	0	0	14	1	0	1	0	1	0	1	9	0	0	27	119
12:00 PM	0	0	0	0	0	16	0	0	3	0	2	0	3	17	0	0	41	136
12:15 PM	0	0	0	0	0	13	1	0	1	0	0	0	0	12	0	0	27	123
12:30 PM	0	0	0	0	0	12	0	0	0	0	0	0	1	11	0	0	24	119
12:45 PM	0	0	0	0	0	11	0	0	0	0	0	0	1	11	0	0	23	115
01:00 PM	0	0	0	0	0	12	0	0	0	0	1	0	2	15	0	0	30	104
01:15 PM	0	0	0	0	0	18	0	0	0	0	2	0	0	26	0	0	46	123
01:30 PM	0	0	0	0	0	10	0	0	0	0	0	0	2	11	0	0	23	122
01:45 PM	0	0	0	0	0	10	1	0	0	0	1	0	2	13	0	0	27	126
02:00 PM	0	0	0	0	0	14	0	0	1	0	0	0	0	9	0	0	24	120
02:15 PM	0	0	0	0	0	8	0	0	0	0	1	0	1	13	0	0	23	97
02:30 PM	0	0	0	0	0	18	0	0	2	0	1	0	1	17	0	0	39	113
02:45 PM	0	0	0	0	0	13	2	0	0	0	2	0	2	14	0	0	33	119
03:00 PM	0	0	0	0	0	14	0	0	2	0	0	0	2	12	0	0	30	125
03:15 PM	0	0	0	0	0	12	0	0	1	0	0	0	1	15	0	0	29	131
03:30 PM	0	0	0	0	0	13	0	0	1	0	1	0	1	9	0	0	25	117
03:45 PM	0	0	0	0	0	8	0	0	0	0	2	0	2	16	0	0	28	112
04:00 PM	0	0	0	0	0	10	1	0	1	0	1	0	1	8	0	0	22	104
04:15 PM	0	0	0	0	0	7	0	0	1	0	0	0	1	7	0	0	16	91
04:30 PM	0	0	0	0	0	5	0	0	0	0	0	0	0	15	0	0	20	86
04:45 PM	0	0	0	0	0	4	0	0	1	0	0	0	1	11	0	0	17	75
05:00 PM	0	0	0	0	0	3	0	0	1	0	0	0	0	10	0	0	14	67
05:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	1	5	0	0	8	59
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	7	46
05:45 PM	0	0	0	0	0	6	0	0	2	0	0	0	1	1	0	0	10	39
06:00 PM	0	0	0	0	0	1	1	0	1	0	0	0	0	2	0	0	5	30
06:15 PM	0	0	0	0	0	4	0	0	0	0	1	0	0	5	0	0	10	32
06:30 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	4	0	0	7	32
06:45 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	6	28
07:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	6	0	0	7	30
07:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	5	25
07:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	19
07:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	17
08:00 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	1	0	0	3	13
08:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	9
08:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2	10
08:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	7
09:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
09:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
09:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	4
09:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4
10:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5
10:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
10:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	**0**	**0**	**0**	**0**	**0**	**588**	**30**	**0**	**37**	**0**	**31**	**0**	**55**	**623**	**0**	**0**		

SR 32 @ Little Dry Run

9/19/2018

TOTAL - CARS AND TRUCKS

	From North			SR 32 From East			Little Dry Run From South			SR 32 From West			15-Min Total	Hour Total
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
12:00 AM	0	0	0	0	6	1	0	0	0	1	16	0	24	
12:15 AM	0	0	0	0	4	0	0	0	0	0	14	0	18	
12:30 AM	0	0	0	0	1	0	0	0	0	0	9	0	10	
12:45 AM	0	0	0	0	3	0	0	0	1	0	10	0	14	66
01:00 AM	0	0	0	0	4	0	0	0	0	0	16	0	20	62
01:15 AM	0	0	0	0	7	0	0	0	0	1	14	0	22	66
01:30 AM	0	0	0	0	3	0	0	0	1	1	9	0	14	70
01:45 AM	0	0	0	0	7	1	0	0	2	0	7	0	17	73
02:00 AM	0	0	0	0	1	0	0	0	0	1	8	0	10	63
02:15 AM	0	0	0	0	4	0	0	0	1	1	17	0	23	64
02:30 AM	0	0	0	0	4	1	0	0	2	0	5	0	12	62
02:45 AM	0	0	0	0	2	0	0	0	0	0	4	0	6	51
03:00 AM	0	0	0	0	2	2	0	0	2	1	2	0	9	50
03:15 AM	0	0	0	0	4	0	0	0	0	0	8	0	12	39
03:30 AM	0	0	0	0	9	2	0	0	1	2	6	0	20	47
03:45 AM	0	0	0	0	9	0	0	0	3	0	4	0	16	57
04:00 AM	0	0	0	0	14	2	0	0	2	3	5	0	26	74
04:15 AM	0	0	0	0	28	0	0	0	2	1	11	0	42	104
04:30 AM	0	0	0	0	34	1	0	0	1	0	9	0	45	129
04:45 AM	0	0	0	0	31	0	0	0	2	1	4	0	38	151
05:00 AM	0	0	0	0	46	0	3	0	3	0	16	0	68	193
05:15 AM	0	0	0	0	72	4	0	0	3	2	13	0	94	245
05:30 AM	0	0	0	0	99	4	0	0	10	1	21	0	135	335
05:45 AM	0	0	0	0	126	5	1	0	8	0	15	0	155	452
06:00 AM	0	0	0	0	153	3	3	0	18	3	28	0	208	592
06:15 AM	0	0	0	0	187	6	2	0	19	3	34	0	251	749
06:30 AM	0	0	0	0	264	5	1	0	16	6	50	0	342	956
06:45 AM	0	0	0	0	283	2	4	0	36	6	73	0	404	1205
07:00 AM	0	0	0	0	281	2	4	0	42	13	56	0	398	1395
07:15 AM	0	0	0	0	243	6	3	0	49	8	112	0	421	1565
07:30 AM	0	0	0	0	278	7	7	0	56	12	111	0	471	1694
07:45 AM	0	0	0	0	218	9	6	0	50	8	149	0	440	1730
08:00 AM	0	0	0	0	217	7	7	0	41	11	129	0	412	1744
08:15 AM	0	0	0	0	219	7	10	0	38	21	113	0	408	1731
08:30 AM	0	0	0	0	185	10	5	0	46	13	108	0	367	1627
08:45 AM	0	0	0	0	194	10	9	0	22	11	112	0	358	1545
09:00 AM	0	0	0	0	135	12	7	0	18	8	76	0	256	1389
09:15 AM	0	0	0	0	149	4	9	0	34	16	85	0	297	1278
09:30 AM	0	0	0	0	131	9	7	0	23	19	99	0	288	1199
09:45 AM	0	0	0	0	110	4	7	0	20	20	85	0	246	1087
10:00 AM	0	0	0	0	103	10	4	0	22	10	69	0	218	1049
10:15 AM	0	0	0	0	116	6	1	0	14	17	96	0	250	1002
10:30 AM	0	0	0	0	110	7	1	0	18	13	83	0	232	946
10:45 AM	0	0	0	0	130	8	4	0	17	9	89	0	257	957
11:00 AM	0	0	0	0	94	12	10	0	10	19	109	0	254	993
11:15 AM	0	0	0	0	112	4	5	0	24	21	102	0	268	1011
11:30 AM	0	0	0	0	110	16	7	0	19	19	111	0	282	1061
11:45 AM	0	0	0	0	103	19	8	0	27	18	122	0	297	1101
12:00 PM	0	0	0	0	89	14	5	0	23	26	116	0	273	1120
12:15 PM	0	0	0	0	109	15	10	0	14	18	132	0	298	1150
12:30 PM	0	0	0	0	109	11	9	0	19	27	127	0	302	1170
12:45 PM	0	0	0	0	121	10	10	0	27	12	134	0	314	1187
01:00 PM	0	0	0	0	106	8	18	0	20	21	124	0	297	1211
01:15 PM	0	0	0	0	108	9	18	0	26	26	140	0	327	1240
01:30 PM	0	0	0	0	114	14	13	0	20	15	139	0	315	1253
01:45 PM	0	0	0	0	107	12	5	0	23	26	128	0	301	1240
02:00 PM	0	0	0	0	127	12	10	0	29	31	133	0	342	1285
02:15 PM	0	0	0	0	126	8	6	0	34	30	138	0	342	1300
02:30 PM	0	0	0	0	143	11	10	0	18	28	163	0	373	1358
02:45 PM	0	0	0	0	114	12	4	0	25	25	214	0	394	1451
03:00 PM	0	0	0	0	98	12	8	0	24	25	194	0	361	1470
03:15 PM	0	0	0	0	122	11	6	0	20	23	231	0	413	1541
03:30 PM	0	0	0	0	106	14	12	0	23	30	199	0	384	1552
03:45 PM	0	0	0	0	115	5	8	0	20	23	238	0	409	1567
04:00 PM	0	0	0	0	107	6	11	0	20	18	233	0	395	1601
04:15 PM	0	0	0	0	122	10	14	0	31	32	255	0	464	1652
04:30 PM	0	0	0	0	165	10	7	0	38	18	273	0	511	1779
04:45 PM	0	0	0	0	148	8	11	0	34	48	247	0	496	1866
05:00 PM	0	0	0	0	128	6	9	0	32	43	249	0	467	1938
05:15 PM	0	0	0	0	164	10	11	0	24	39	255	0	503	1977
05:30 PM	0	0	0	0	173	10	6	0	28	32	261	0	510	1976
05:45 PM	0	0	0	0	136	10	5	0	39	37	254	0	481	1961
06:00 PM	0	0	0	0	140	11	4	0	35	34	234	0	458	1952
06:15 PM	0	0	0	0	154	9	5	0	18	34	211	0	431	1880
06:30 PM	0	0	0	0	107	4	4	0	22	25	175	0	337	1707
06:45 PM	0	0	0	0	87	5	4	0	16	33	159	0	304	1530
07:00 PM	0	0	0	0	80	7	2	0	28	24	142	0	283	1355
07:15 PM	0	0	0	0	73	9	3	0	18	16	140	0	259	1183
07:30 PM	0	0	0	0	65	5	11	0	14	28	125	0	248	1094
07:45 PM	0	0	0	0	56	1	1	0	16	23	138	0	235	1025
08:00 PM	0	0	0	0	63	3	3	0	11	32	135	0	247	989
08:15 PM	0	0	0	0	62	5	4	0	15	20	107	0	213	943
08:30 PM	0	0	0	0	53	9	2	0	11	18	99	0	192	887
08:45 PM	0	0	0	0	45	6	3	0	14	19	67	0	154	806
09:00 PM	0	0	0	0	63	3	0	0	13	10	64	0	153	712
09:15 PM	0	0	0	0	43	9	4	0	5	15	58	0	134	633
09:30 PM	0	0	0	0	36	3	1	0	5	7	70	0	122	563
09:45 PM	0	0	0	0	28	4	0	0	2	5	49	0	88	497
10:00 PM	0	0	0	0	22	5	0	0	7	11	38	0	83	427
10:15 PM	0	0	0	0	35	4	1	0	5	9	28	0	82	375
10:30 PM	0	0	0	0	21	1	1	0	3	4	25	0	55	308
10:45 PM	0	0	0	0	16	0	0	0	3	4	32	0	55	275
11:00 PM	0	0	0	0	7	0	1	0	0	4	30	0	42	234
11:15 PM	0	0	0	0	10	2	0	0	1	3	27	0	43	195
11:30 PM	0	0	0	0	13	0	0	0	2	4	21	0	40	180
11:45 PM	0	0	0	0	8	2	0	0	1	4	16	0	31	156
Total	**0**	**0**	**0**	**0**	**8889**	**563**	**415**	**0**	**1599**	**1359**	**9211**	**0**		

SR 32 @ Little Dry Run

9/19/2018

TOTAL - CARS

	From North			SR 32 From East			Little Dry Run From South			SR 32 From West			15-Min Total	Hour Total
Start Time	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**	**Right**	**Thru**	**Left**		
06:00 AM	0	0	0	0	150	3	3	0	18	3	26	0	203	578
06:15 AM	0	0	0	0	186	6	2	0	19	3	32	0	248	735
06:30 AM	0	0	0	0	257	5	1	0	16	4	44	0	327	929
06:45 AM	0	0	0	0	277	2	3	0	36	4	59	0	381	1159
07:00 AM	0	0	0	0	277	1	4	0	42	8	45	0	377	1333
07:15 AM	0	0	0	0	239	5	3	0	48	4	93	0	392	1477
07:30 AM	0	0	0	0	271	7	6	0	54	10	95	0	443	1593
07:45 AM	0	0	0	0	211	5	4	0	49	6	129	0	404	1616
08:00 AM	0	0	0	0	206	7	5	0	38	11	117	0	384	1623
08:15 AM	0	0	0	0	199	6	10	0	38	18	101	0	372	1603
08:30 AM	0	0	0	0	176	8	4	0	45	12	101	0	346	1506
08:45 AM	0	0	0	0	189	10	8	0	22	11	96	0	336	1438
09:00 AM	0	0	0	0	130	9	7	0	17	8	71	0	242	1296
09:15 AM	0	0	0	0	130	3	9	0	25	14	77	0	258	1182
09:30 AM	0	0	0	0	121	8	6	0	22	19	89	0	265	1101
09:45 AM	0	0	0	0	102	3	7	0	20	19	82	0	233	998
10:00 AM	0	0	0	0	95	9	3	0	21	8	63	0	199	955
10:15 AM	0	0	0	0	103	5	1	0	13	17	85	0	224	921
10:30 AM	0	0	0	0	100	7	1	0	16	12	75	0	211	867
10:45 AM	0	0	0	0	122	8	4	0	17	9	84	0	244	878
11:00 AM	0	0	0	0	80	10	9	0	10	18	100	0	227	906
11:15 AM	0	0	0	0	103	4	5	0	24	19	97	0	252	934
11:30 AM	0	0	0	0	98	16	7	0	19	18	105	0	263	986
11:45 AM	0	0	0	0	97	19	6	0	26	17	113	0	278	1020
12:00 PM	0	0	0	0	76	12	3	0	22	24	107	0	244	1037
12:15 PM	0	0	0	0	103	12	8	0	14	16	123	0	276	1061
12:30 PM	0	0	0	0	102	10	8	0	15	26	119	0	280	1078
12:45 PM	0	0	0	0	105	9	8	0	26	12	126	0	286	1086
01:00 PM	0	0	0	0	96	6	18	0	19	21	117	0	277	1119
01:15 PM	0	0	0	0	92	9	17	0	26	25	131	0	300	1143
01:30 PM	0	0	0	0	103	13	12	0	20	14	128	0	290	1153
01:45 PM	0	0	0	0	102	9	4	0	22	24	120	0	281	1148
02:00 PM	0	0	0	0	123	11	9	0	29	27	126	0	325	1196
02:15 PM	0	0	0	0	110	8	4	0	34	24	128	0	308	1204
02:30 PM	0	0	0	0	133	9	9	0	18	28	153	0	350	1264
02:45 PM	0	0	0	0	103	10	4	0	25	22	203	0	367	1350
03:00 PM	0	0	0	0	90	12	7	0	24	24	185	0	342	1367
03:15 PM	0	0	0	0	114	11	5	0	20	21	220	0	391	1450
03:30 PM	0	0	0	0	92	14	10	0	21	29	188	0	354	1454
03:45 PM	0	0	0	0	102	5	8	0	19	23	232	0	389	1476
04:00 PM	0	0	0	0	99	6	11	0	17	16	220	0	369	1503
04:15 PM	0	0	0	0	109	9	9	0	20	31	252	0	430	1542
04:30 PM	0	0	0	0	155	10	6	0	29	17	267	0	484	1672
04:45 PM	0	0	0	0	139	8	11	0	29	47	243	0	477	1760
05:00 PM	0	0	0	0	125	6	9	0	29	42	244	0	455	1846
05:15 PM	0	0	0	0	162	10	11	0	23	39	247	0	492	1908
05:30 PM	0	0	0	0	171	9	5	0	28	31	258	0	502	1926
05:45 PM	0	0	0	0	135	10	5	0	39	37	248	0	474	1923
06:00 PM	0	0	0	0	138	11	4	0	35	34	232	0	454	1922
06:15 PM	0	0	0	0	152	9	4	0	18	34	211	0	428	1858
06:30 PM	0	0	0	0	106	4	3	0	22	25	173	0	333	1689
06:45 PM	0	0	0	0	85	5	4	0	16	33	157	0	300	1515
07:00 PM	0	0	0	0	80	7	2	0	28	23	138	0	278	1339
07:15 PM	0	0	0	0	73	8	3	0	18	16	138	0	256	1167
07:30 PM	0	0	0	0	63	5	10	0	14	28	124	0	244	1078
07:45 PM	0	0	0	0	55	1	1	0	16	23	137	0	233	1011
08:00 PM	0	0	0	0	63	3	3	0	10	32	133	0	244	977
08:15 PM	0	0	0	0	62	5	4	0	15	20	107	0	213	934
08:30 PM	0	0	0	0	53	9	2	0	11	18	95	0	188	878
08:45 PM	0	0	0	0	44	6	3	0	14	19	67	0	153	798
09:00 PM	0	0	0	0	63	3	0	0	13	10	63	0	152	706
09:15 PM	0	0	0	0	42	9	4	0	5	15	58	0	133	626
09:30 PM	0	0	0	0	36	3	1	0	5	7	69	0	121	559
09:45 PM	0	0	0	0	28	4	0	0	2	5	47	0	86	492
10:00 PM	0	0	0	0	21	5	0	0	7	11	38	0	82	422
10:15 PM	0	0	0	0	35	3	1	0	5	9	27	0	80	369
10:30 PM	0	0	0	0	21	1	0	0	3	4	25	0	54	302
10:45 PM	0	0	0	0	15	0	0	0	3	4	32	0	54	270
11:00 PM	0	0	0	0	7	0	1	0	0	4	29	0	41	229
11:15 PM	0	0	0	0	10	2	0	0	1	3	26	0	42	191
11:30 PM	0	0	0	0	13	0	0	0	2	4	21	0	40	177
11:45 PM	0	0	0	0	8	2	0	0	1	4	16	0	31	154
Total	**0**	**0**	**0**	**0**	**8442**	**522**	**372**	**0**	**1529**	**1291**	**8747**	**0**		

SR 32 @ Little Dry Run

9/19/2018

TOTAL - TRUCKS

	From North			SR 32 From East			Little Dry Run From South			SR 32 From West			15-Min Total	Hour Total
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		
06:00 AM	0	0	0	0	3	0	0	0	0	0	2	0	5	14
06:15 AM	0	0	0	0	1	0	0	0	0	0	2	0	3	14
06:30 AM	0	0	0	0	7	0	0	0	0	2	6	0	15	27
06:45 AM	0	0	0	0	6	0	1	0	0	2	14	0	23	46
07:00 AM	0	0	0	0	4	1	0	0	0	5	11	0	21	62
07:15 AM	0	0	0	0	4	1	0	0	1	4	19	0	29	88
07:30 AM	0	0	0	0	7	0	1	0	2	2	16	0	28	101
07:45 AM	0	0	0	0	7	4	2	0	1	2	20	0	36	114
08:00 AM	0	0	0	0	11	0	2	0	3	0	12	0	28	121
08:15 AM	0	0	0	0	20	1	0	0	0	3	12	0	36	128
08:30 AM	0	0	0	0	9	2	1	0	1	1	7	0	21	121
08:45 AM	0	0	0	0	5	0	1	0	0	0	16	0	22	107
09:00 AM	0	0	0	0	5	3	0	0	1	0	5	0	14	93
09:15 AM	0	0	0	0	19	1	0	0	9	2	8	0	39	96
09:30 AM	0	0	0	0	10	1	1	0	1	0	10	0	23	98
09:45 AM	0	0	0	0	8	1	0	0	0	1	3	0	13	89
10:00 AM	0	0	0	0	8	1	1	0	1	2	6	0	19	94
10:15 AM	0	0	0	0	13	1	0	0	1	0	11	0	26	81
10:30 AM	0	0	0	0	10	0	0	0	2	1	8	0	21	79
10:45 AM	0	0	0	0	8	0	0	0	0	0	5	0	13	79
11:00 AM	0	0	0	0	14	2	1	0	0	1	9	0	27	87
11:15 AM	0	0	0	0	9	0	0	0	0	2	5	0	16	77
11:30 AM	0	0	0	0	12	0	0	0	0	1	6	0	19	75
11:45 AM	0	0	0	0	6	0	2	0	1	1	9	0	19	81
12:00 PM	0	0	0	0	13	2	2	0	1	2	9	0	29	83
12:15 PM	0	0	0	0	6	3	2	0	0	2	9	0	22	89
12:30 PM	0	0	0	0	7	1	1	0	4	1	8	0	22	92
12:45 PM	0	0	0	0	16	1	2	0	1	0	8	0	28	101
01:00 PM	0	0	0	0	10	2	0	0	1	0	7	0	20	92
01:15 PM	0	0	0	0	16	0	1	0	0	1	9	0	27	97
01:30 PM	0	0	0	0	11	1	1	0	0	1	11	0	25	100
01:45 PM	0	0	0	0	5	3	1	0	1	2	8	0	20	92
02:00 PM	0	0	0	0	4	1	1	0	0	4	7	0	17	89
02:15 PM	0	0	0	0	16	0	2	0	0	6	10	0	34	96
02:30 PM	0	0	0	0	10	2	1	0	0	0	10	0	23	94
02:45 PM	0	0	0	0	11	2	0	0	0	3	11	0	27	101
03:00 PM	0	0	0	0	8	0	1	0	0	1	9	0	19	103
03:15 PM	0	0	0	0	8	0	1	0	0	2	11	0	22	91
03:30 PM	0	0	0	0	14	0	2	0	2	1	11	0	30	98
03:45 PM	0	0	0	0	13	0	0	0	1	0	6	0	20	91
04:00 PM	0	0	0	0	8	0	0	0	3	2	13	0	26	98
04:15 PM	0	0	0	0	13	1	5	0	11	1	3	0	34	110
04:30 PM	0	0	0	0	10	0	1	0	9	1	6	0	27	107
04:45 PM	0	0	0	0	9	0	0	0	5	1	4	0	19	106
05:00 PM	0	0	0	0	3	0	0	0	3	1	5	0	12	92
05:15 PM	0	0	0	0	2	0	0	0	1	0	8	0	11	69
05:30 PM	0	0	0	0	2	1	1	0	0	1	3	0	8	50
05:45 PM	0	0	0	0	1	0	0	0	0	0	6	0	7	38
06:00 PM	0	0	0	0	2	0	0	0	0	0	2	0	4	30
06:15 PM	0	0	0	0	2	0	1	0	0	0	0	0	3	22
06:30 PM	0	0	0	0	1	0	1	0	0	0	2	0	4	18
06:45 PM	0	0	0	0	2	0	0	0	0	0	2	0	4	15
07:00 PM	0	0	0	0	0	0	0	0	0	1	4	0	5	16
07:15 PM	0	0	0	0	0	1	0	0	0	0	2	0	3	16
07:30 PM	0	0	0	0	2	0	1	0	0	0	1	0	4	16
07:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2	14
08:00 PM	0	0	0	0	0	0	0	0	1	0	2	0	3	12
08:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	9
08:30 PM	0	0	0	0	0	0	0	0	0	0	4	0	4	9
08:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	8
09:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	6
09:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	7
09:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	4
09:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	5
10:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	5
10:15 PM	0	0	0	0	0	1	0	0	0	0	1	0	2	6
10:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	1	6
10:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	5
11:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	5
11:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	4
11:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	**0**	**0**	**0**	**0**	**447**	**41**	**43**	**0**	**70**	**68**	**464**	**0**		

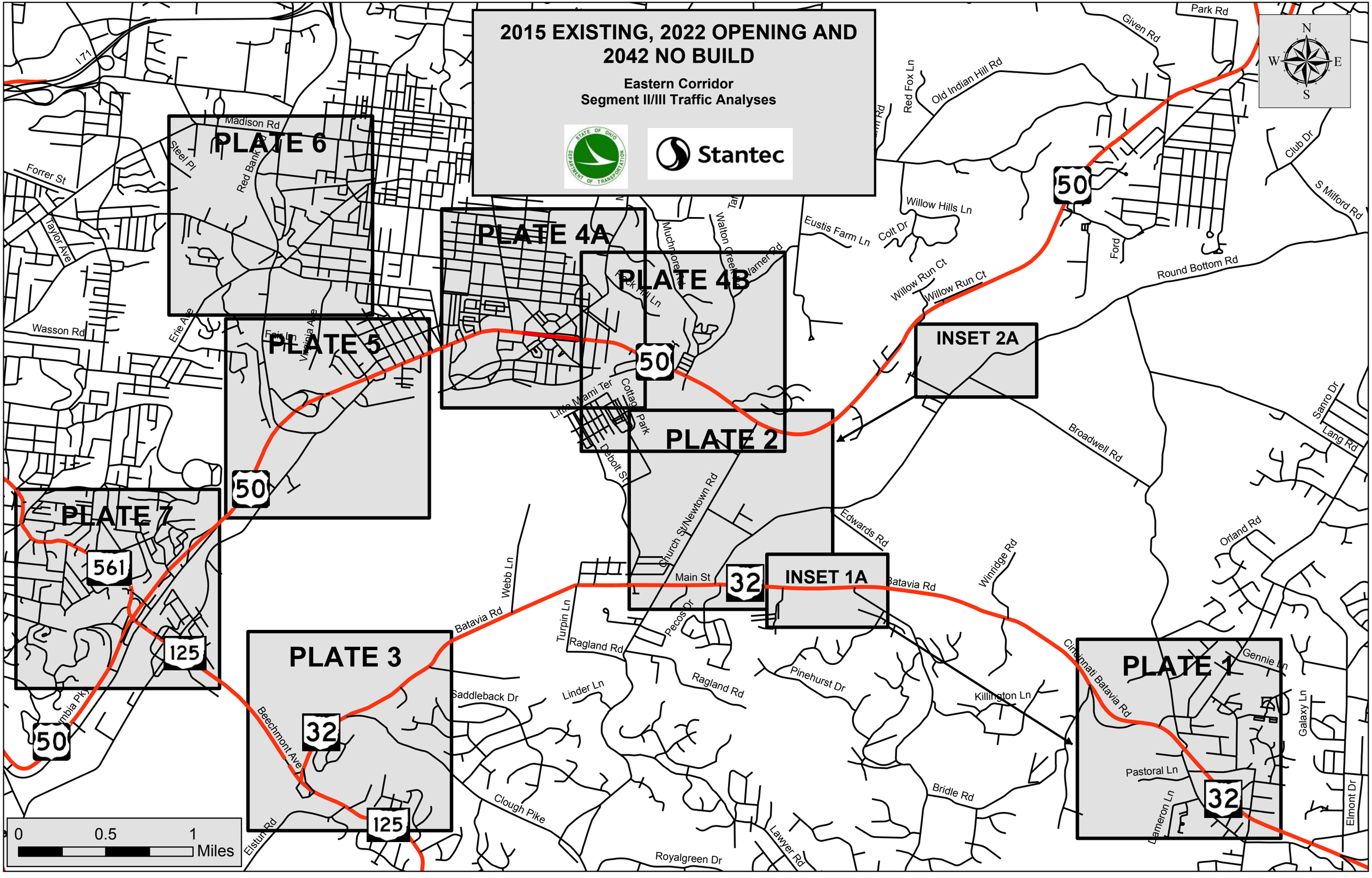
APPENDIX B

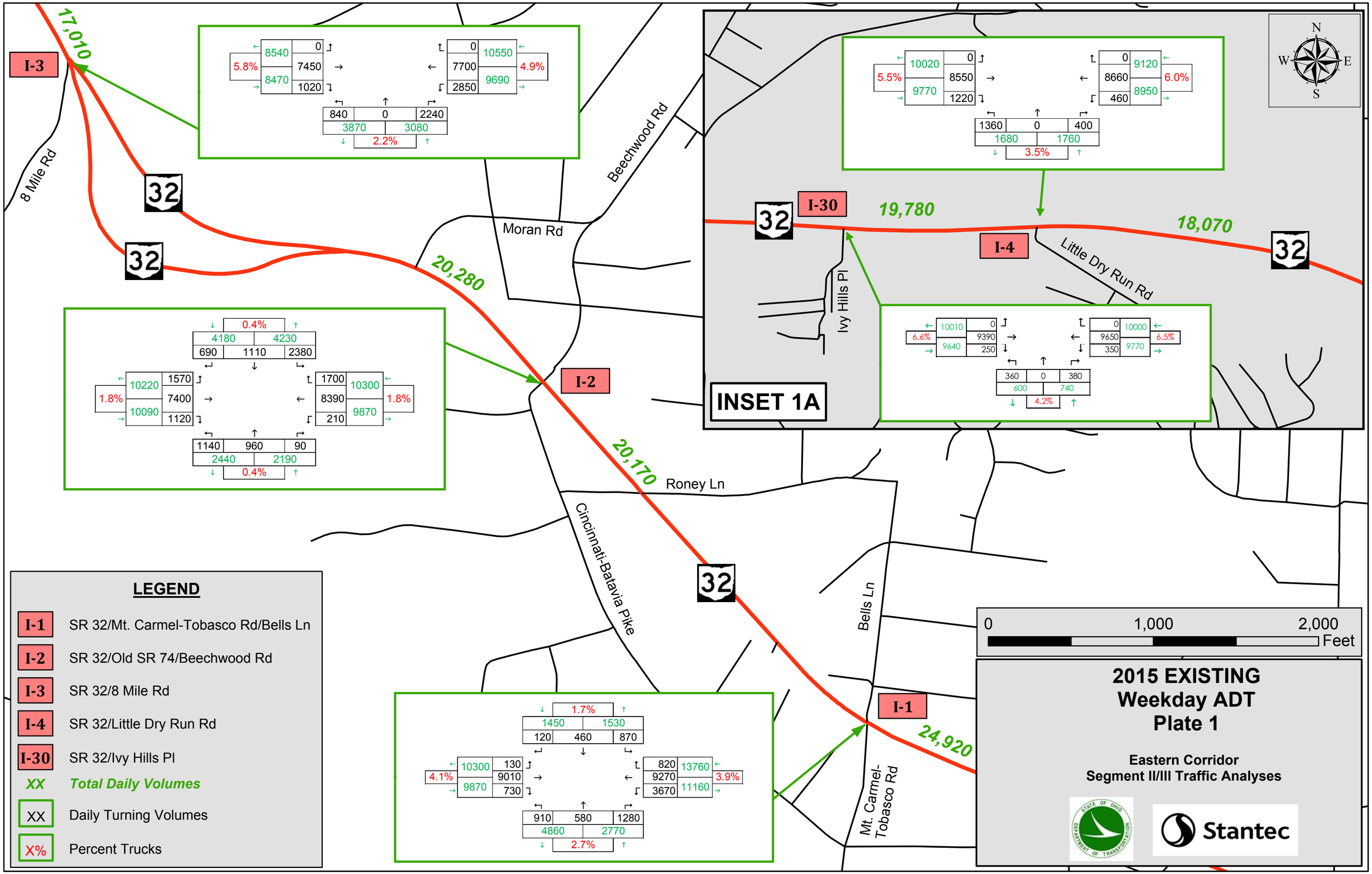
APPROVED CERTIFIED TRAFFIC VOLUMES

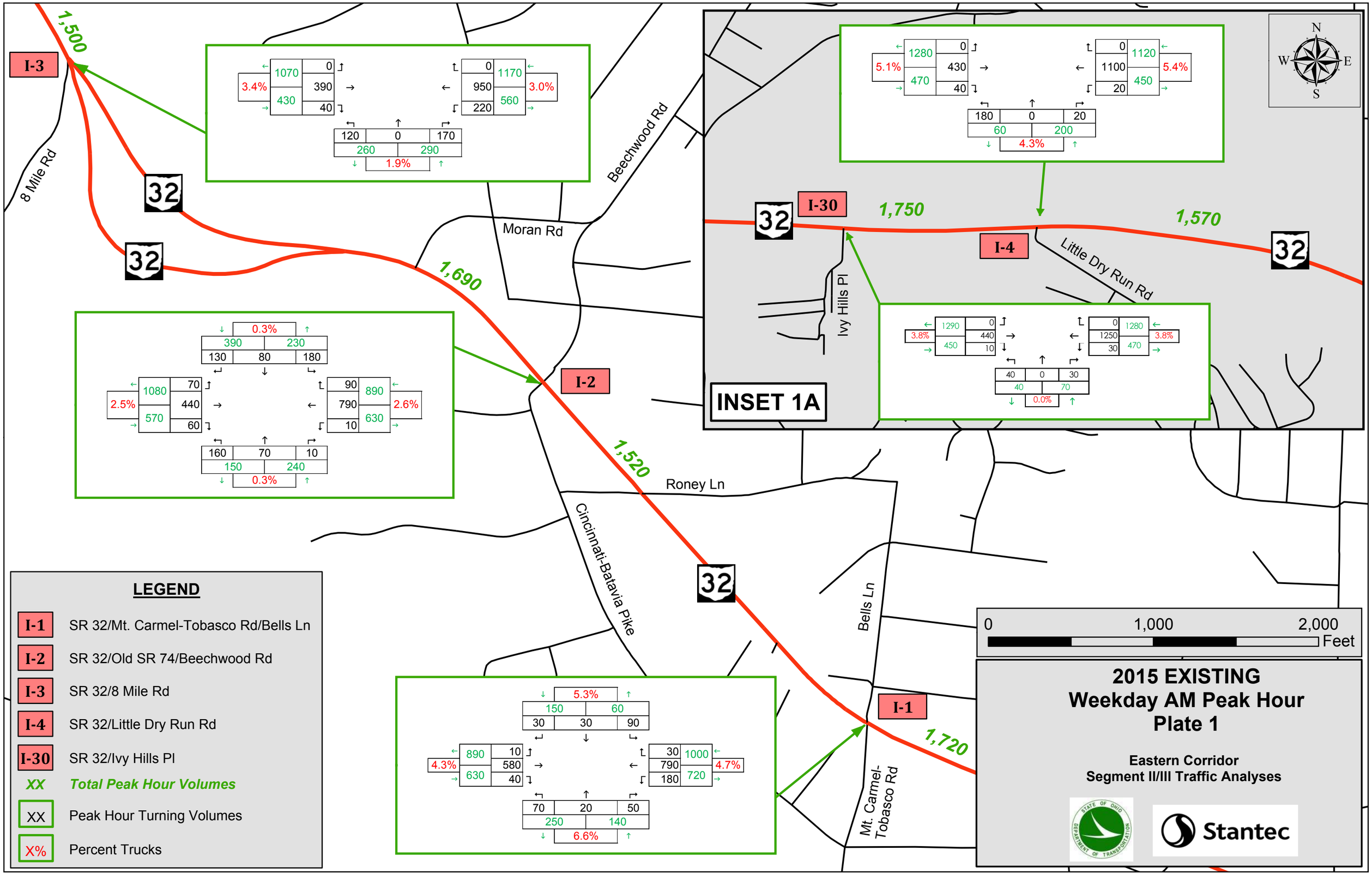
2015 EXISTING, 2022 OPENING AND 2042 NO BUILD

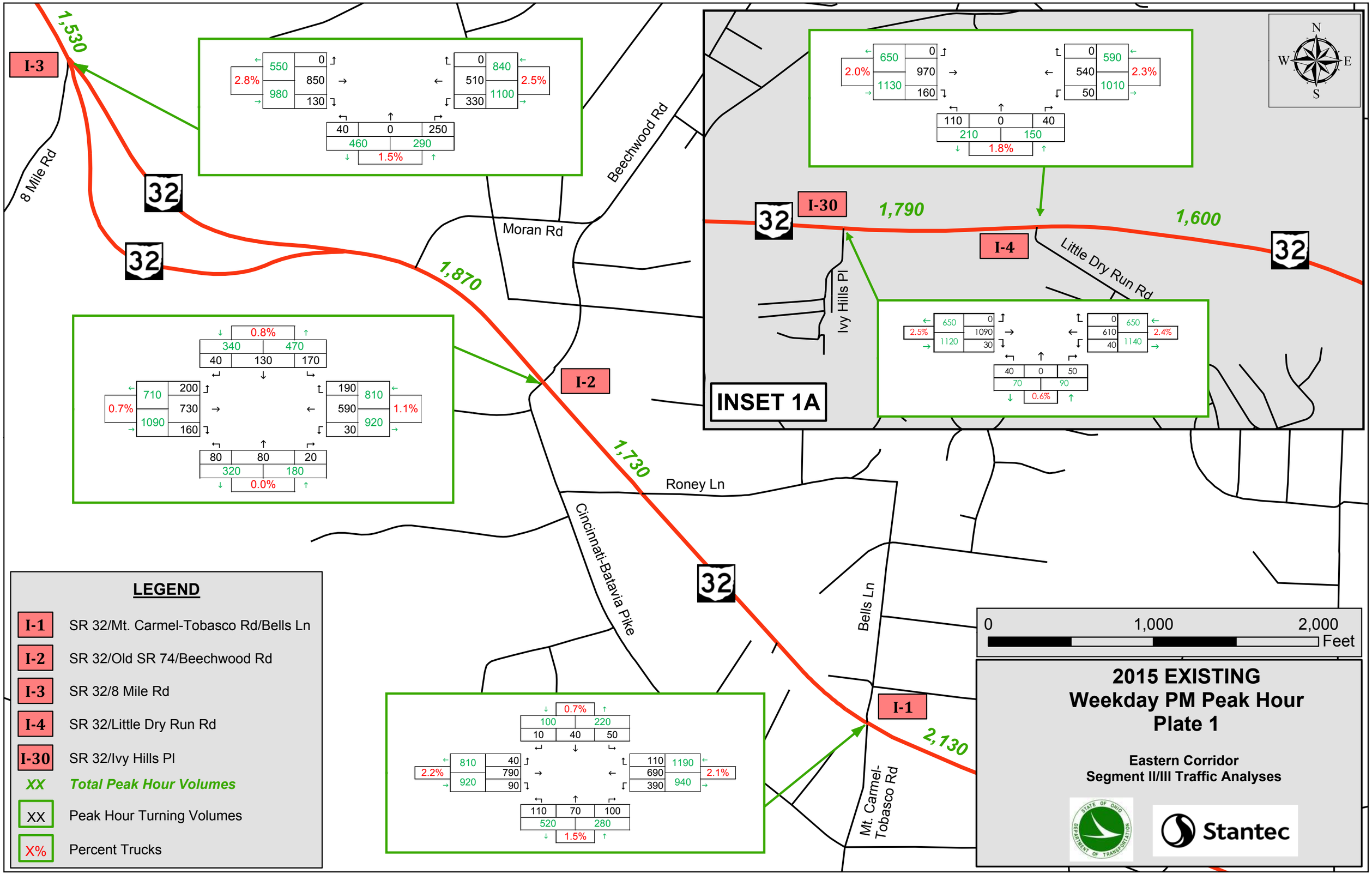
Eastern Corridor
Segment II/III Traffic Analyses

Stantec

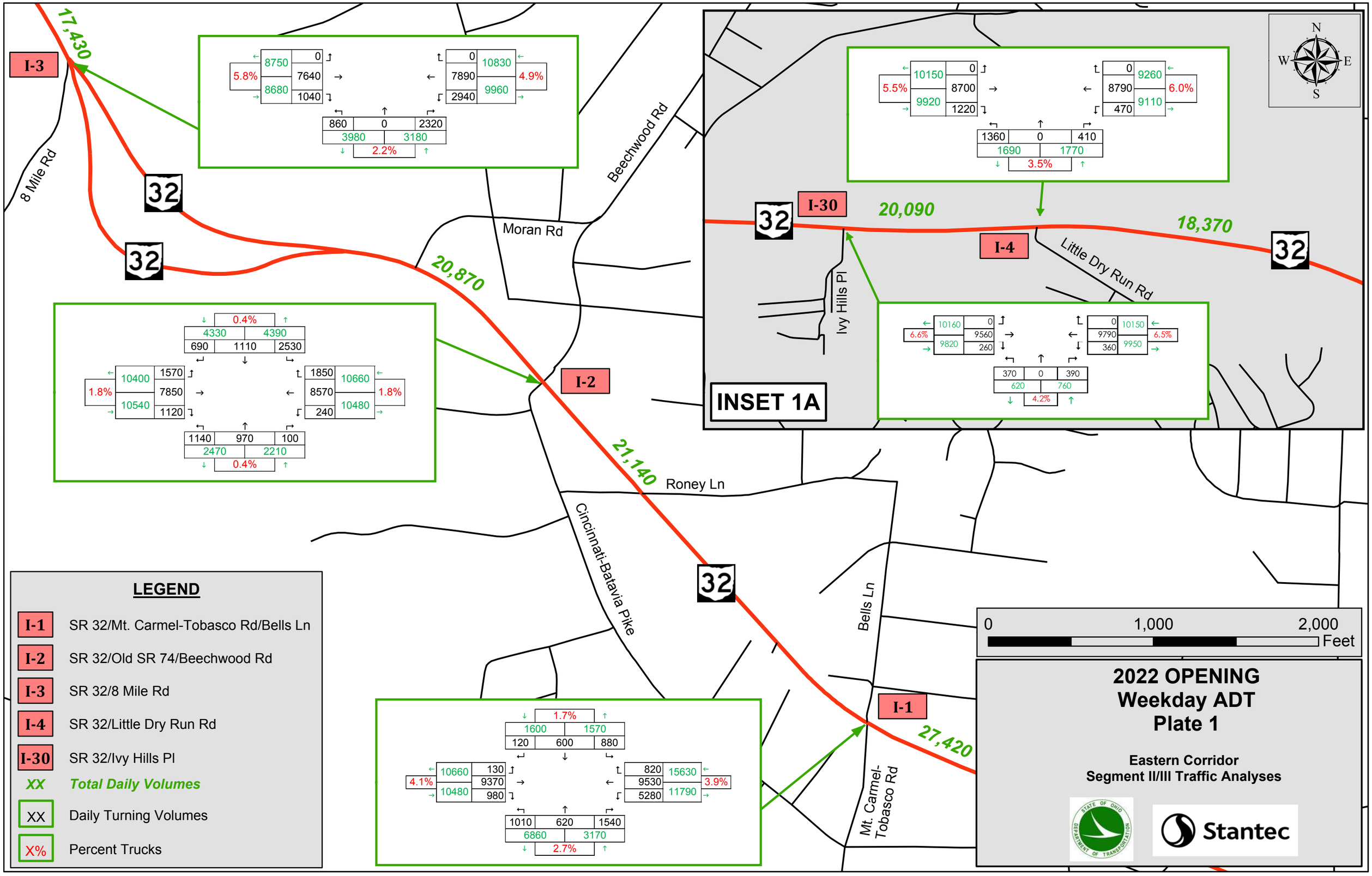


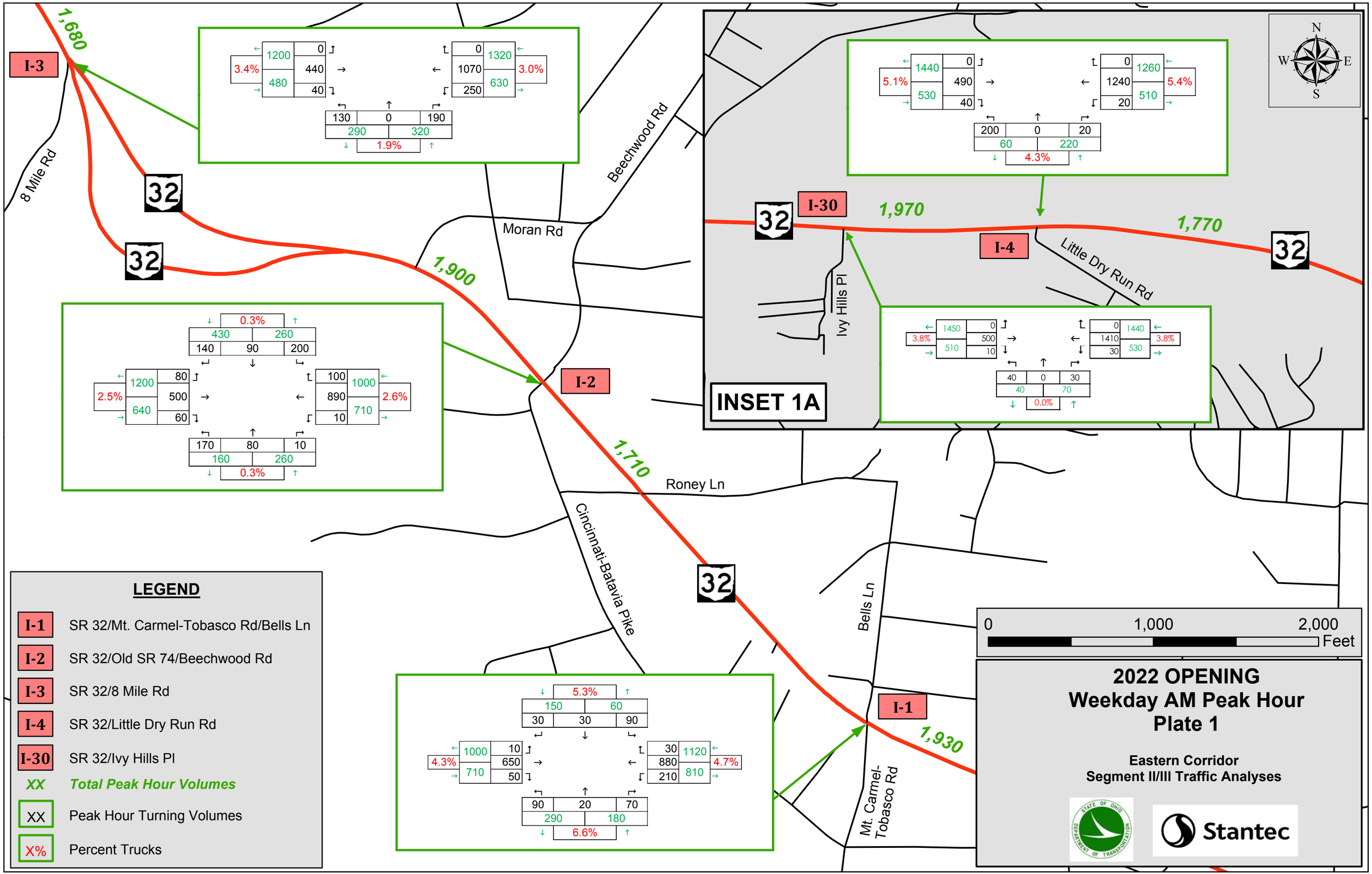

I-3
17,010
8 Mile Rd
32
32
20,280
Moran Rd
Beechwood Rd
I-2
20,170
Roney Ln
Cincinnati-Batavia Pike
32
Bells Ln
I-1
24,920
Mt. Carmel-Tobasco Rd
I-30
19,780
32
I-4
18,070
32
Little Dry Run Rd
Ivy Hills Pl
INSET 1A
N
W
E
S
0
1,000
2,000
Feet
LEGEND
I-1 SR 32/Mt. Carmel-Tobasco Rd/Bells Ln
I-2 SR 32/Old SR 74/Beechwood Rd
I-3 SR 32/8 Mile Rd
I-4 SR 32/Little Dry Run Rd
I-30 SR 32/Ivy Hills Pl
XX Total Daily Volumes
XX Daily Turning Volumes
X% Percent Trucks
2015 EXISTING
Weekday ADT
Plate 1
Eastern Corridor
Segment II/III Traffic Analyses
Stantec

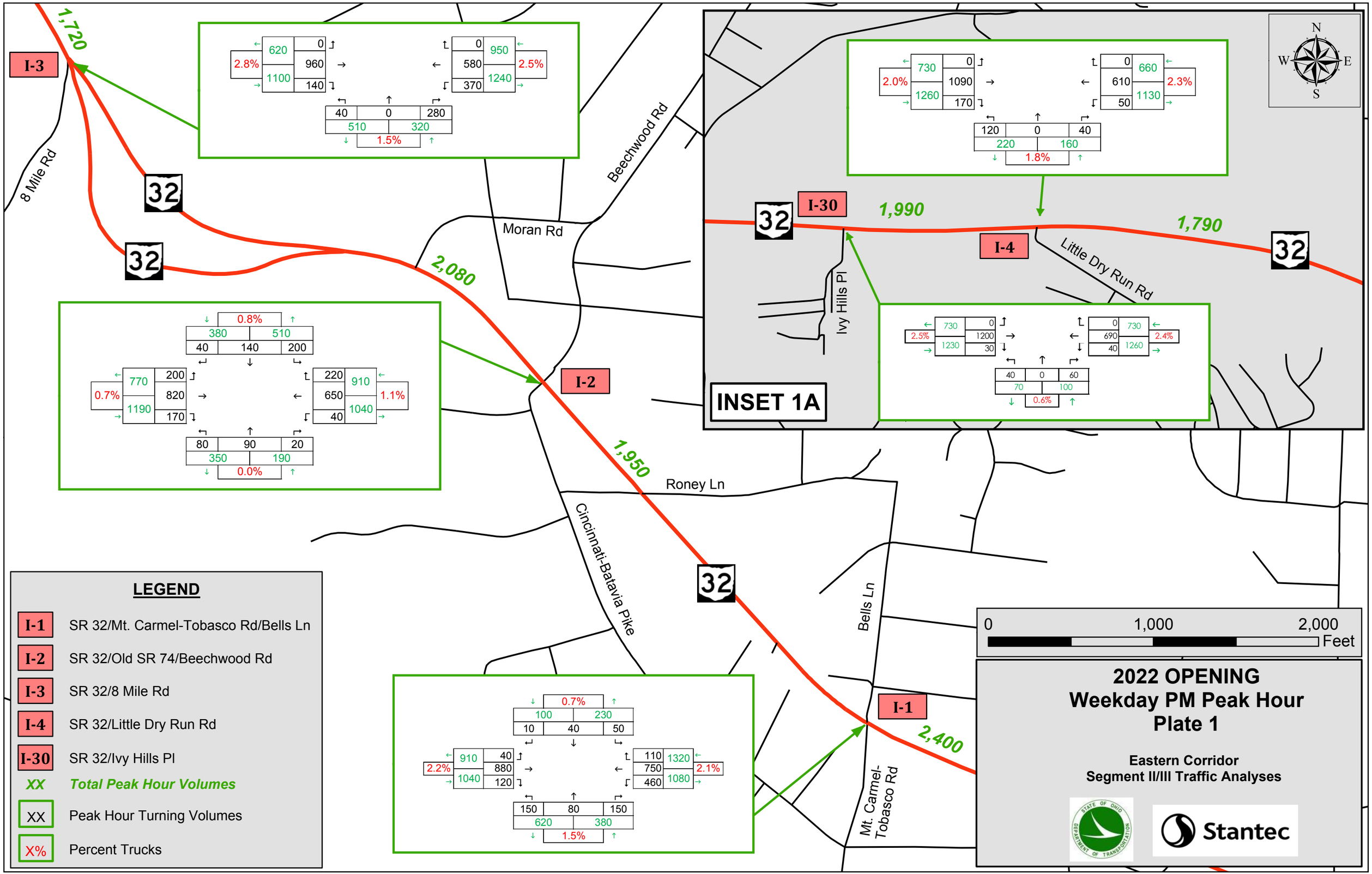

I-3
1,500
8 Mile Rd
32
32
1,690
Moran Rd
Beechwood Rd
I-2
1,520
Roney Ln
Cincinnati-Batavia Pike
32
Bells Ln
I-1
1,720
Mt. Carmel-Tobasco Rd
INSET 1A
I-30
32
1,750
1,570
I-4
Little Dry Run Rd
32
Ivy Hills Pl
N
W
E
S
0
1,000
2,000
Feet
LEGEND
I-1 SR 32/Mt. Carmel-Tobasco Rd/Bells Ln
I-2 SR 32/Old SR 74/Beechwood Rd
I-3 SR 32/8 Mile Rd
I-4 SR 32/Little Dry Run Rd
I-30 SR 32/Ivy Hills Pl
XX Total Peak Hour Volumes
XX Peak Hour Turning Volumes
X% Percent Trucks
2015 EXISTING
Weekday AM Peak Hour
Plate 1
Eastern Corridor
Segment II/III Traffic Analyses
Stantec

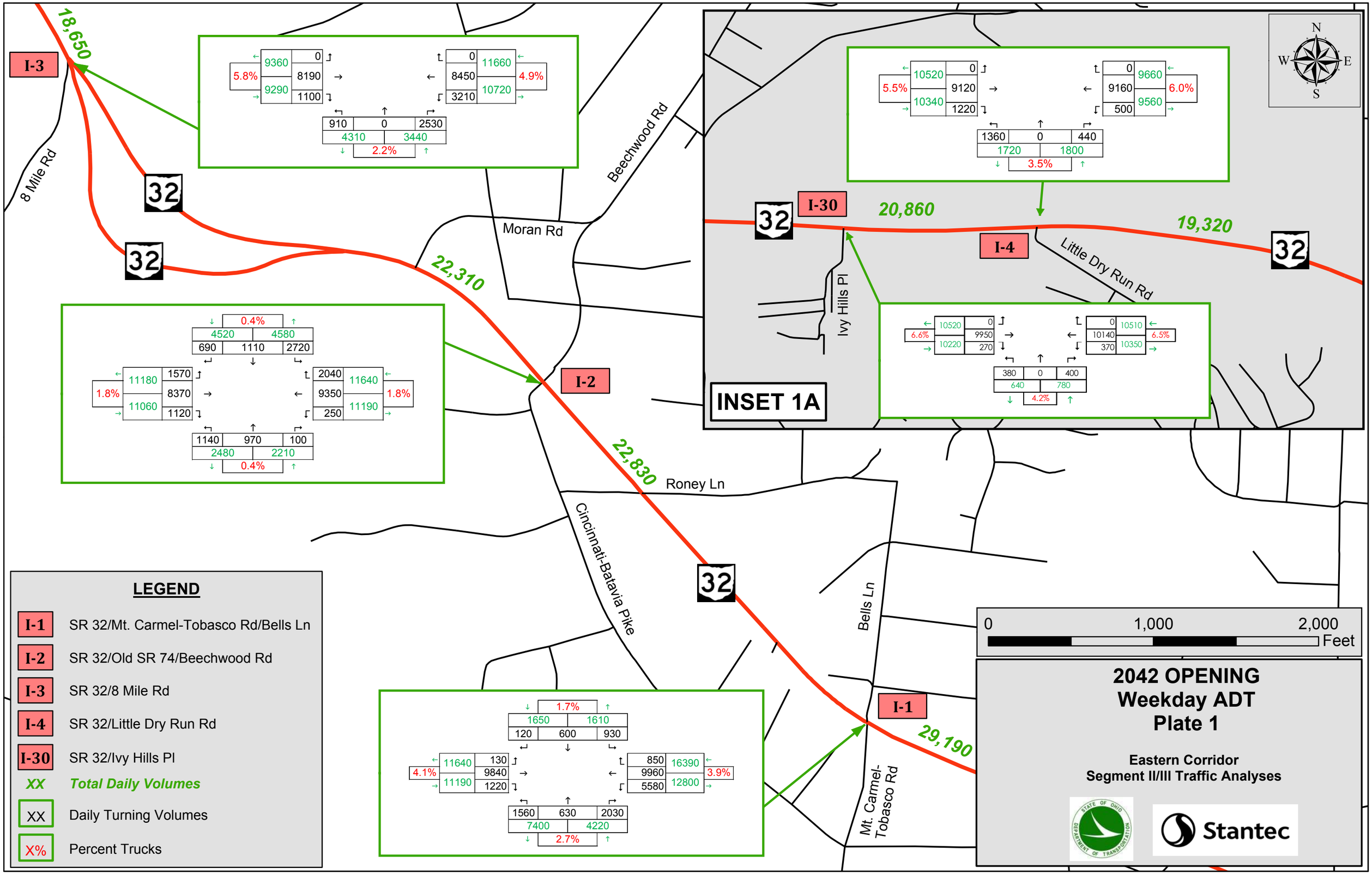


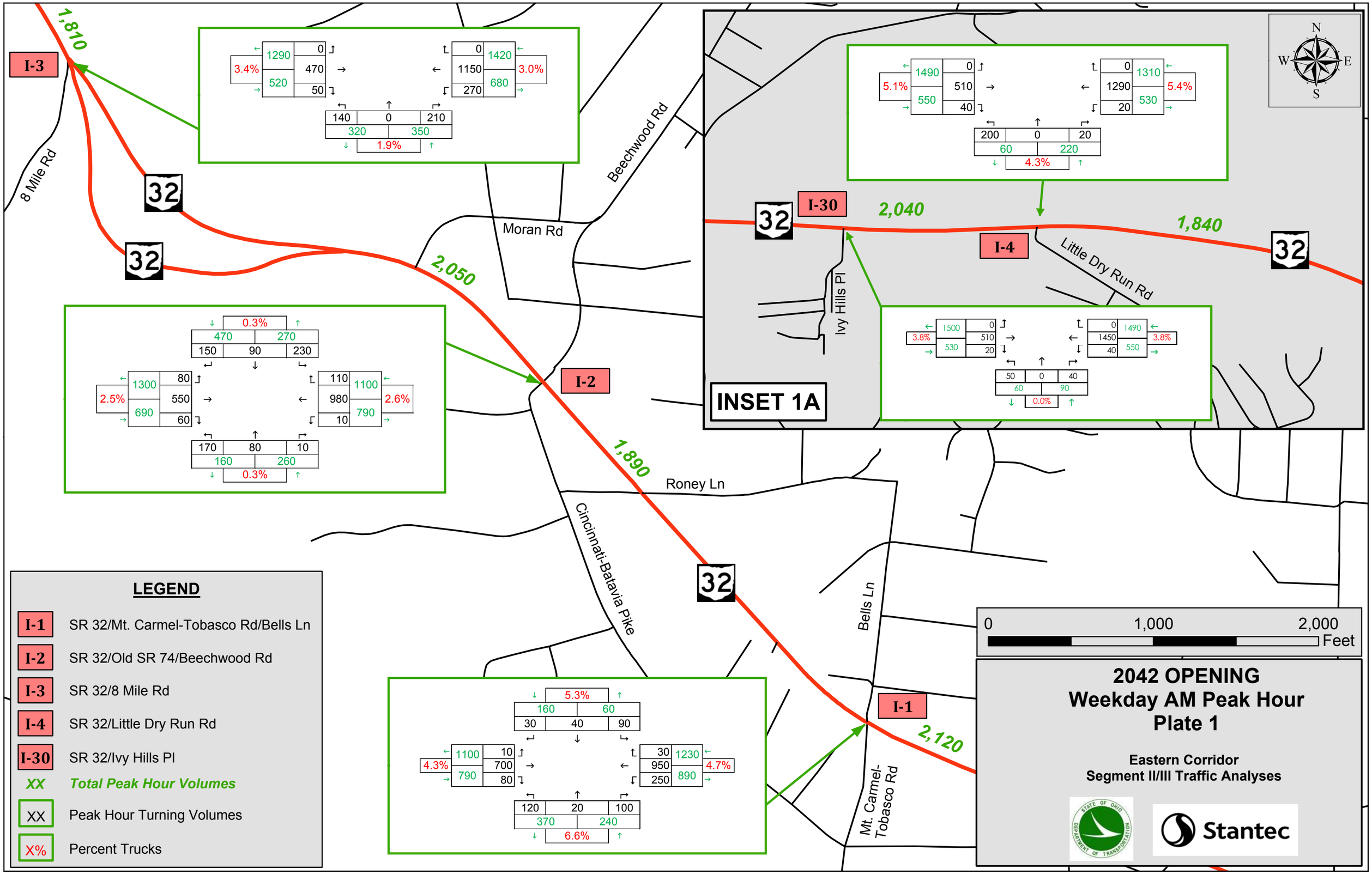
I-3
1,530
8 Mile Rd
32
32
Moran Rd
Beechwood Rd
1,870
I-2
1,730
Roney Ln
Cincinnati-Batavia Pike
32
Bells Ln
I-1
2,130
Mt. Carmel-Tobasco Rd
I-30
1,790
1,600
32
I-4
Little Dry Run Rd
32
Ivy Hills Pl
INSET 1A
N
W
E
S
0
1,000
2,000
Feet
LEGEND
I-1 SR 32/Mt. Carmel-Tobasco Rd/Bells Ln
I-2 SR 32/Old SR 74/Beechwood Rd
I-3 SR 32/8 Mile Rd
I-4 SR 32/Little Dry Run Rd
I-30 SR 32/Ivy Hills Pl
XX Total Peak Hour Volumes
XX Peak Hour Turning Volumes
X% Percent Trucks
2015 EXISTING
Weekday PM Peak Hour
Plate 1
Eastern Corridor
Segment II/III Traffic Analyses
Stantec

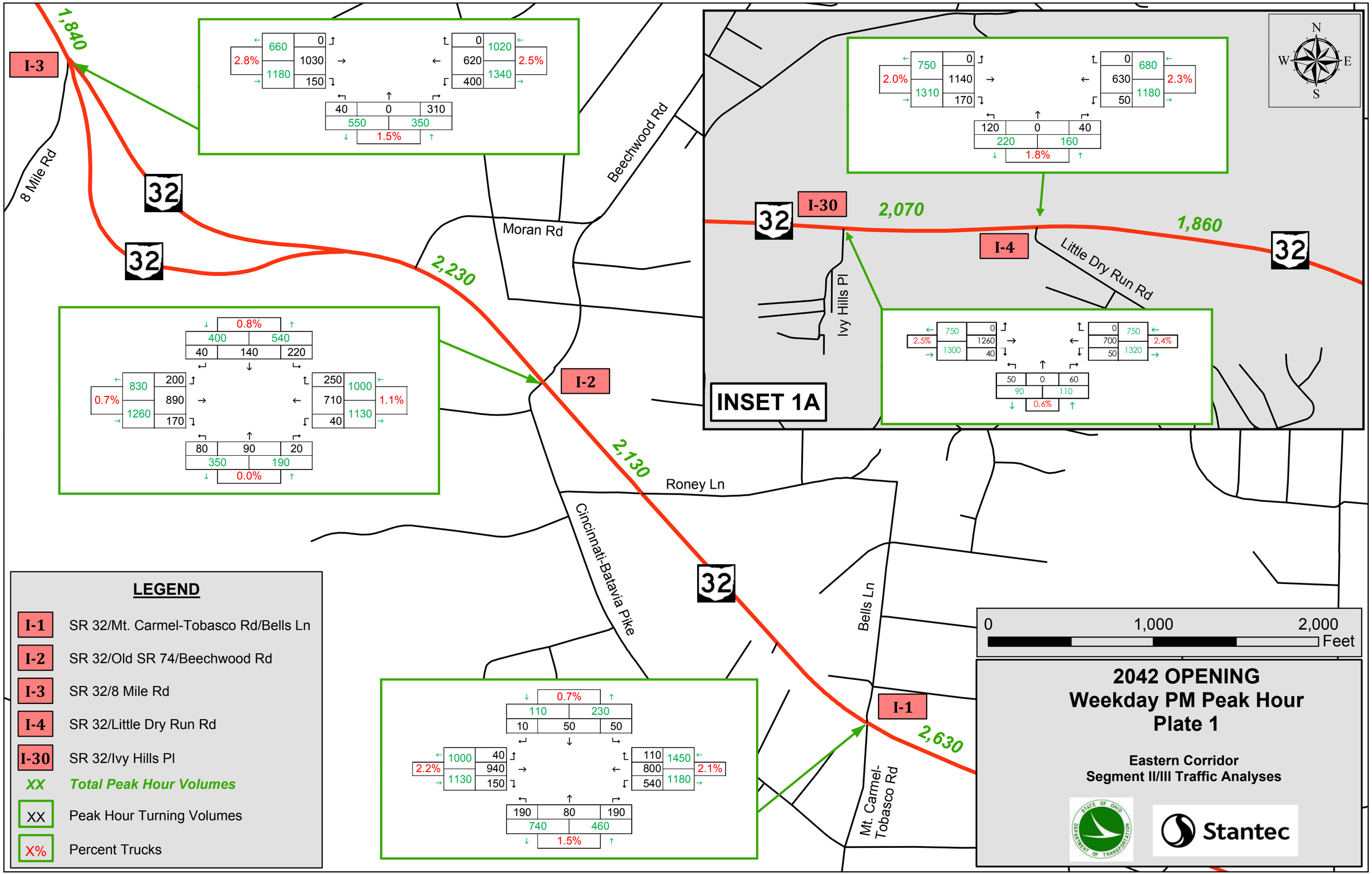

I-3
17,430
8 Mile Rd
32
32
20,870
Moran Rd
Beechwood Rd
8750
0
5.8%
7640
8680
1040
0
10830
7890
4.9%
2940
9960
860
0
2320
3980
3180
2.2%
0.4%
4330
4390
690
1110
2530
10400
1570
1.8%
7850
10540
1120
1850
10660
8570
1.8%
240
10480
1140
970
100
2470
2210
0.4%
I-2
21,140
Roney Ln
Cincinnati-Batavia Pike
32
Bells Ln
I-1
27,420
Mt. Carmel-Tobasco Rd
1.7%
1600
1570
120
600
880
10660
130
4.1%
9370
10480
980
820
15630
9530
3.9%
5280
11790
1010
620
1540
6860
3170
2.7%
INSET 1A
10150
0
5.5%
8700
9920
1220
0
9260
8790
6.0%
470
9110
1360
0
410
1690
1770
3.5%
32
I-30
20,090
18,370
I-4
32
Little Dry Run Rd
Ivy Hills Pl
10160
0
6.6%
9560
9820
260
0
10150
9790
6.5%
360
9950
370
0
390
620
760
4.2%
N
W
E
S
0
1,000
2,000
Feet
LEGEND
I-1 SR 32/Mt. Carmel-Tobasco Rd/Bells Ln
I-2 SR 32/Old SR 74/Beechwood Rd
I-3 SR 32/8 Mile Rd
I-4 SR 32/Little Dry Run Rd
I-30 SR 32/Ivy Hills Pl
XX Total Daily Volumes
XX Daily Turning Volumes
X% Percent Trucks
2022 OPENING
Weekday ADT
Plate 1
Eastern Corridor
Segment II/III Traffic Analyses
Stantec


I-3
1,680
8 Mile Rd
32
32
3.4%
1200
0
440
480
40
0
1320
1070
3.0%
250
630
130
0
190
290
320
1.9%
Beechwood Rd
Moran Rd
1,900
0.3%
430
260
140
90
200
2.5%
1200
80
500
640
60
100
1000
890
2.6%
10
710
170
80
10
160
260
0.3%
I-2
1,710
Roney Ln
Cincinnati-Batavia Pike
32
Bells Ln
5.3%
150
60
30
30
90
4.3%
1000
10
650
710
50
30
1120
880
4.7%
210
810
90
20
70
290
180
6.6%
I-1
1,930
Mt. Carmel-Tobasco Rd
INSET 1A
5.1%
1440
0
490
530
40
0
1260
1240
5.4%
20
510
200
0
20
60
220
4.3%
I-30
32
1,970
1,770
I-4
Little Dry Run Rd
32
Ivy Hills Pl
3.8%
1450
0
500
510
10
0
1440
1410
3.8%
30
530
40
0
30
40
70
0.0%
N
W
E
S
0
1,000
2,000
Feet
LEGEND
I-1 SR 32/Mt. Carmel-Tobasco Rd/Bells Ln
I-2 SR 32/Old SR 74/Beechwood Rd
I-3 SR 32/8 Mile Rd
I-4 SR 32/Little Dry Run Rd
I-30 SR 32/Ivy Hills Pl
XX Total Peak Hour Volumes
XX Peak Hour Turning Volumes
X% Percent Trucks
2022 OPENING
Weekday AM Peak Hour
Plate 1
Eastern Corridor
Segment II/III Traffic Analyses
Stantec


I-3
1,720
8 Mile Rd
32
32
620
0
2.8%
960
1100
140
0
950
580
2.5%
1240
370
40
0
280
510
320
1.5%
Beechwood Rd
Moran Rd
2,080
0.8%
380
510
40
140
200
770
200
0.7%
820
1190
170
220
910
650
1.1%
1040
40
80
90
20
350
190
0.0%
I-2
1,950
Roney Ln
Cincinnati-Batavia Pike
32
Bells Ln
0.7%
100
230
10
40
50
910
40
2.2%
880
1040
120
110
1320
750
2.1%
460
1080
150
80
150
620
380
1.5%
I-1
2,400
Mt. Carmel-Tobasco Rd
INSET 1A
730
0
2.0%
1090
1260
170
0
660
610
2.3%
1130
50
120
0
40
220
160
1.8%
32
I-30
1,990
1,790
I-4
32
Little Dry Run Rd
Ivy Hills Pl
730
0
2.5%
1200
1230
30
0
730
690
2.4%
1260
40
0
60
70
100
0.6%
N
W
E
S
0
1,000
2,000
Feet
2022 OPENING
Weekday PM Peak Hour
Plate 1
Eastern Corridor
Segment II/III Traffic Analyses
Stantec
LEGEND
I-1 SR 32/Mt. Carmel-Tobasco Rd/Bells Ln
I-2 SR 32/Old SR 74/Beechwood Rd
I-3 SR 32/8 Mile Rd
I-4 SR 32/Little Dry Run Rd
I-30 SR 32/Ivy Hills Pl
XX Total Peak Hour Volumes
XX Peak Hour Turning Volumes
X% Percent Trucks


I-3
18,650
8 Mile Rd
32
32
22,310
Moran Rd
Beechwood Rd
I-2
22,830
Roney Ln
Cincinnati-Batavia Pike
32
Bells Ln
I-1
29,190
Mt. Carmel-Tobasco Rd
INSET 1A
I-30
32
20,860
19,320
I-4
32
Little Dry Run Rd
Ivy Hills Pl
N
W
E
S
0
1,000
2,000
Feet
LEGEND
I-1 SR 32/Mt. Carmel-Tobasco Rd/Bells Ln
I-2 SR 32/Old SR 74/Beechwood Rd
I-3 SR 32/8 Mile Rd
I-4 SR 32/Little Dry Run Rd
I-30 SR 32/Ivy Hills Pl
XX Total Daily Volumes
XX Daily Turning Volumes
X% Percent Trucks
2042 OPENING
Weekday ADT
Plate 1
Eastern Corridor
Segment II/III Traffic Analyses
Stantec

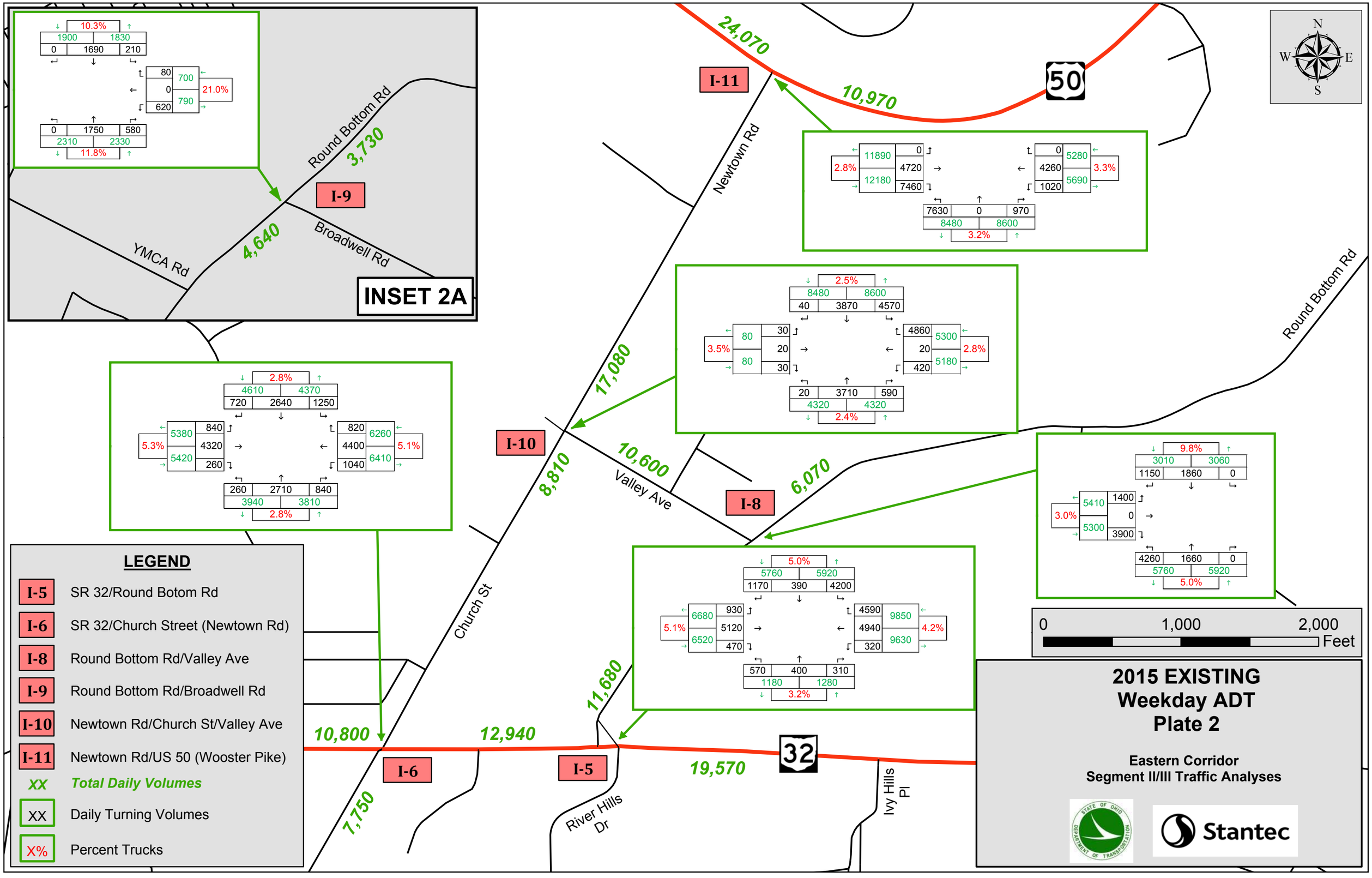

I-3
1,810
8 Mile Rd
32
32
Beechwood Rd
Moran Rd
2,050
I-2
1,890
Roney Ln
Cincinnati-Batavia Pike
32
Bells Ln
I-1
2,120
Mt. Carmel-Tobasco Rd
INSET 1A
I-30
32
2,040
I-4
1,840
32
Little Dry Run Rd
Ivy Hills Pl
N
W
E
S
0
1,000
2,000
Feet
LEGEND
I-1 SR 32/Mt. Carmel-Tobasco Rd/Bells Ln
I-2 SR 32/Old SR 74/Beechwood Rd
I-3 SR 32/8 Mile Rd
I-4 SR 32/Little Dry Run Rd
I-30 SR 32/Ivy Hills Pl
XX Total Peak Hour Volumes
XX Peak Hour Turning Volumes
X% Percent Trucks
2042 OPENING
Weekday AM Peak Hour
Plate 1
Eastern Corridor
Segment II/III Traffic Analyses
Stantec

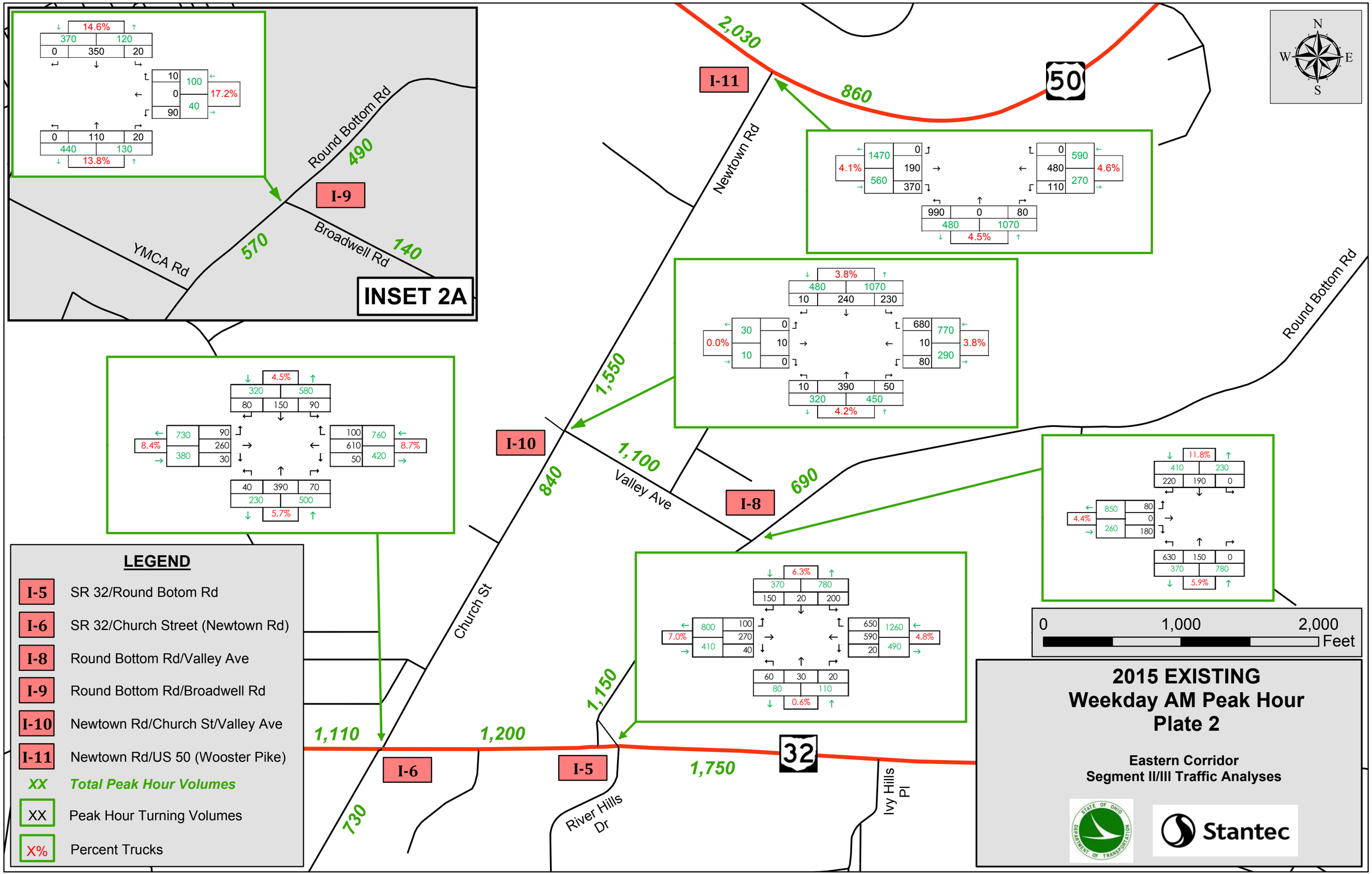


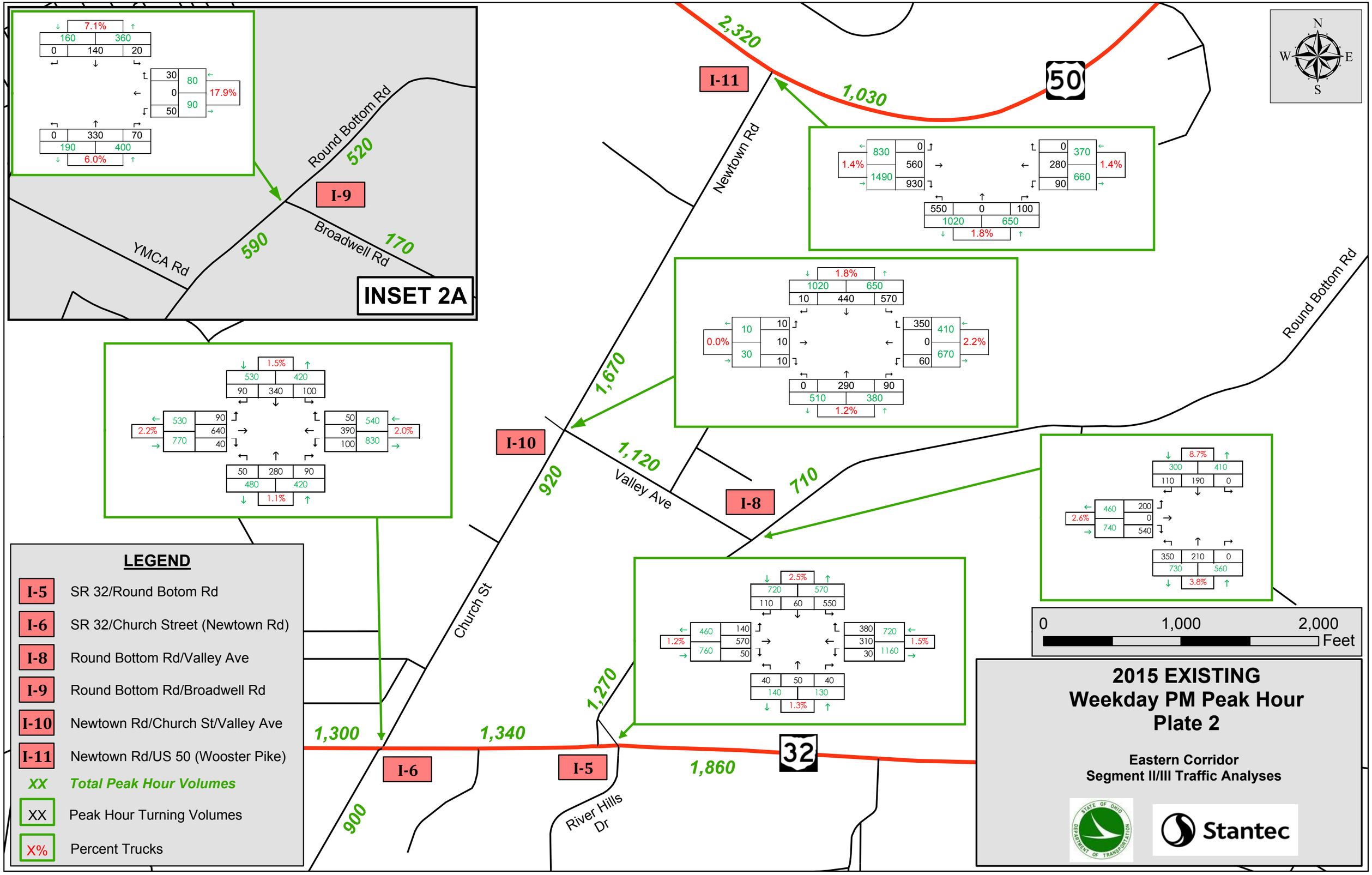
2042 OPENING
Weekday PM Peak Hour
Plate 1

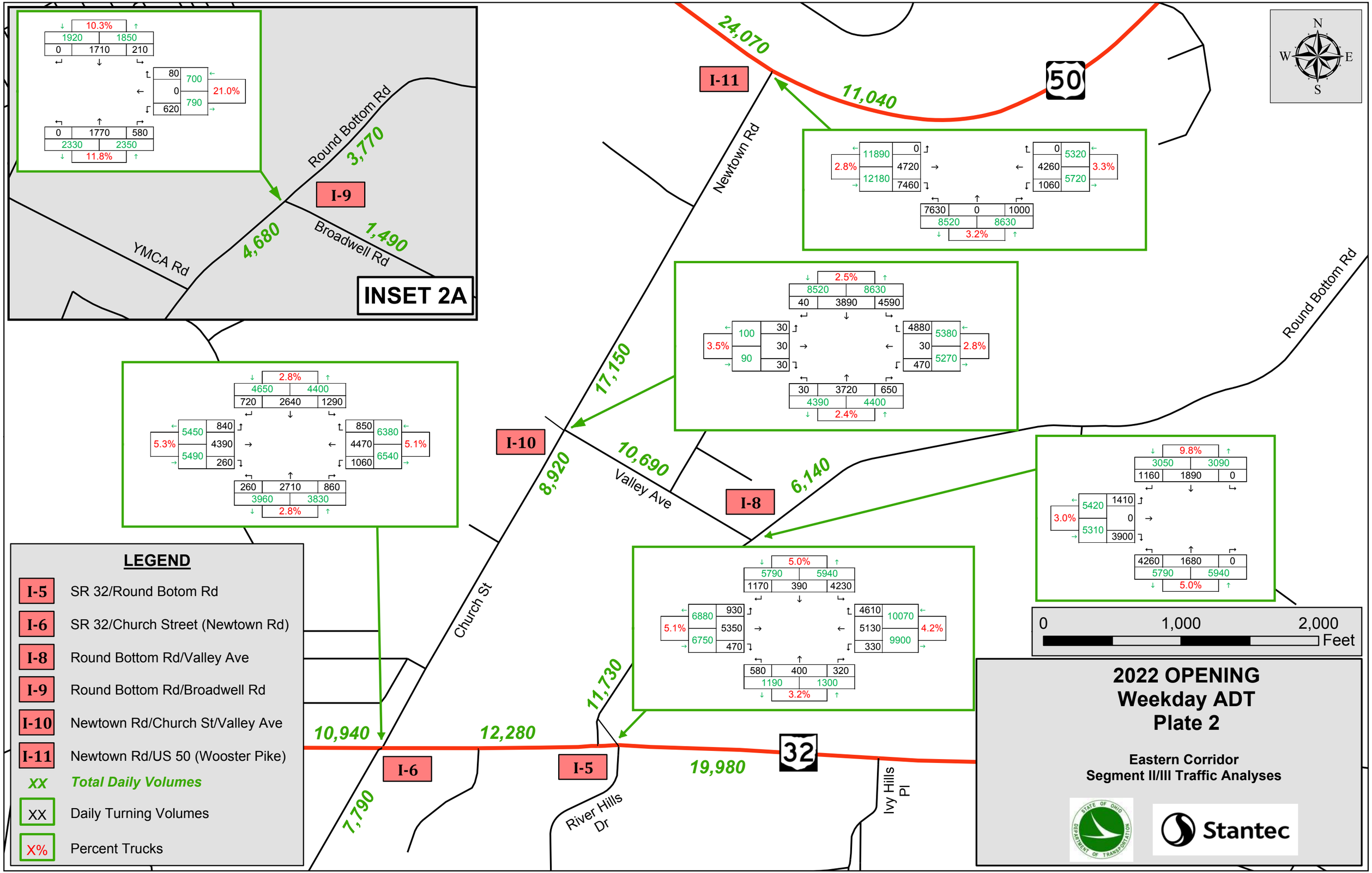
Eastern Corridor
Segment II/III Traffic Analyses

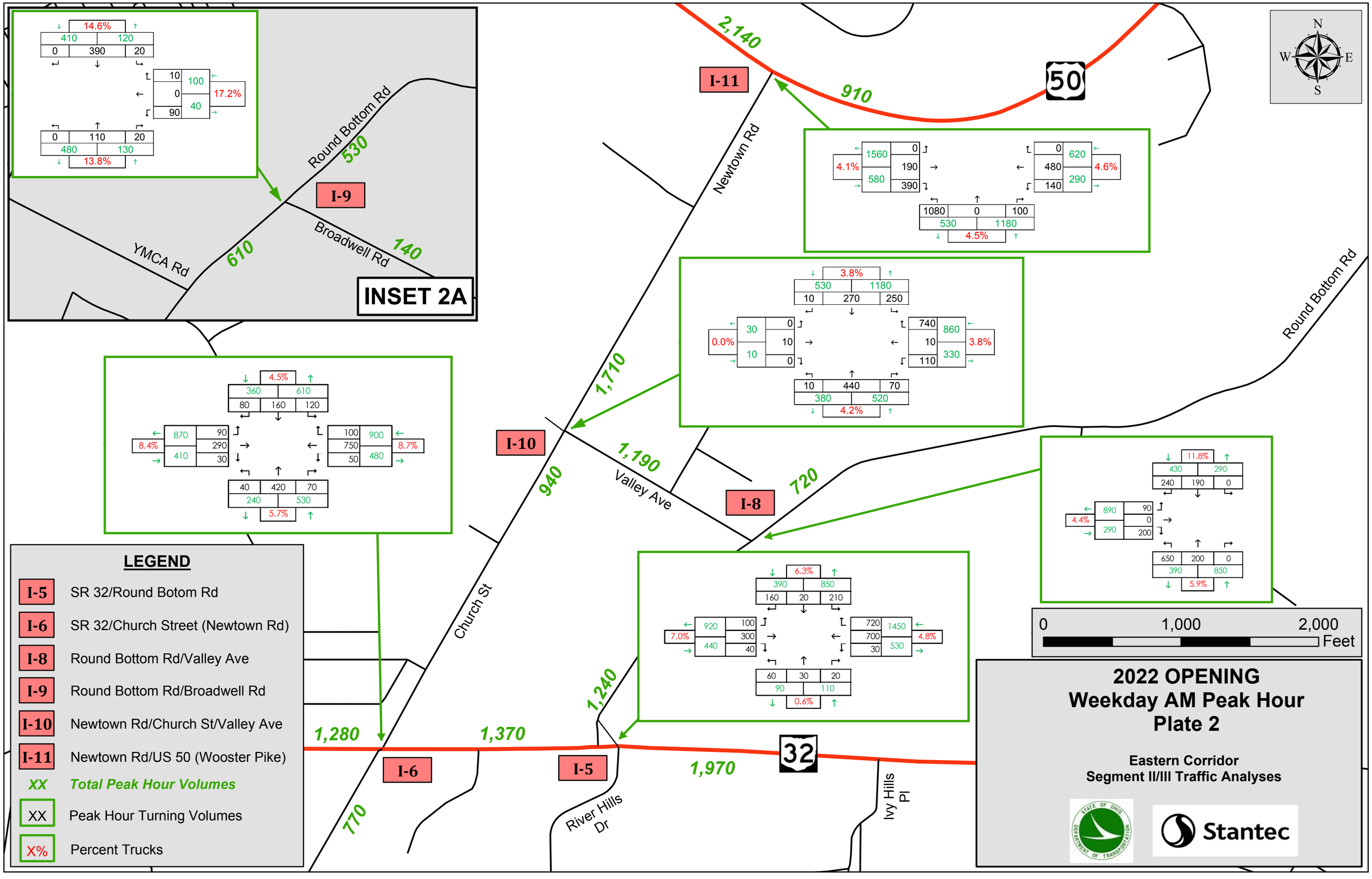
Stantec

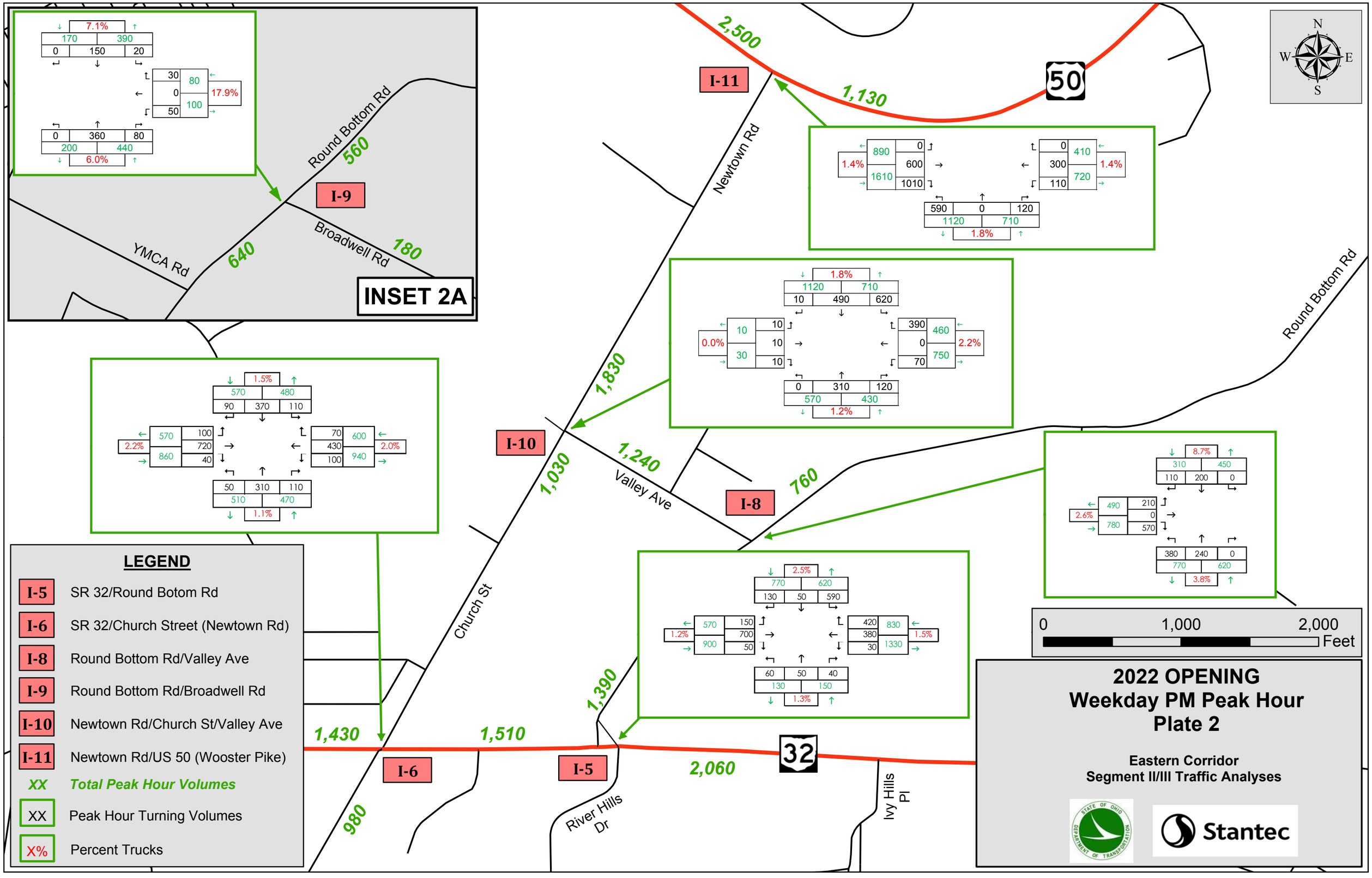

INSET 2A
Round Bottom Rd
YMCA Rd
Broadwell Rd
Newtown Rd
Church St
Valley Ave
River Hills Dr
Ivy Hills Pl
Round Bottom Rd
I-5
I-6
I-8
I-9
I-10
I-11
50
32
24,070
10,970
3,730
4,640
17,080
8,810
10,600
6,070
11,680
10,800
12,940
19,570
7,750
N
S
E
W
0
1,000
2,000
Feet
LEGEND
I-5 SR 32/Round Botom Rd
I-6 SR 32/Church Street (Newtown Rd)
I-8 Round Bottom Rd/Valley Ave
I-9 Round Bottom Rd/Broadwell Rd
I-10 Newtown Rd/Church St/Valley Ave
I-11 Newtown Rd/US 50 (Wooster Pike)
XX Total Daily Volumes
XX Daily Turning Volumes
X% Percent Trucks
2015 EXISTING
Weekday ADT
Plate 2
Eastern Corridor
Segment II/III Traffic Analyses
Stantec

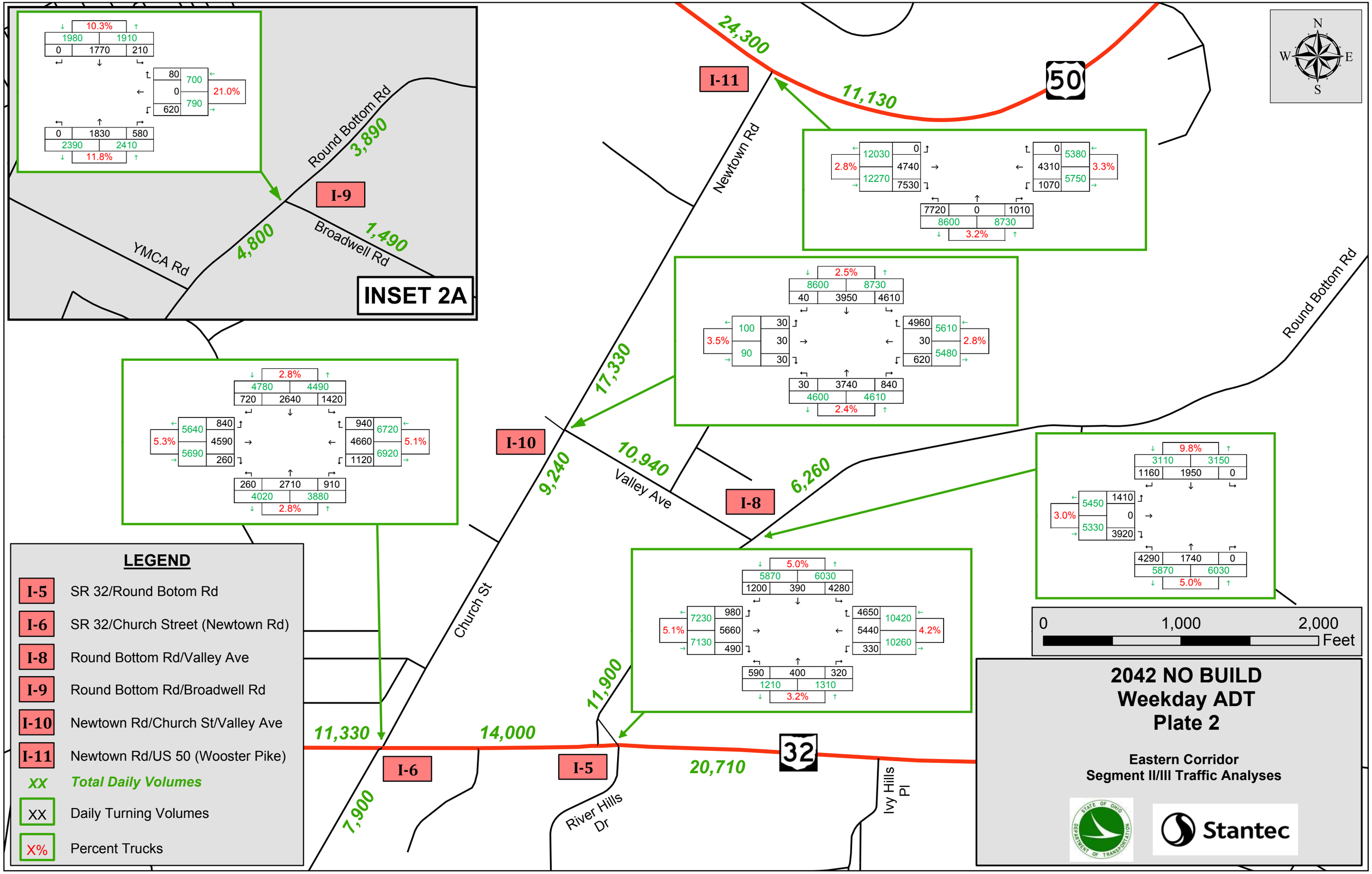

INSET 2A
14.6%
370 120
0 350 20
10 100 17.2%
0 40
90
0 110 20
440 130
13.8%
Round Bottom Rd
490
I-9
570
Broadwell Rd
140
YMCA Rd
I-11
2,030
860
50
Newtown Rd
1470 0 4.1%
190
560 370
0 590 4.6%
480
110 270
990 0 80
480 1070
4.5%
3.8%
480 1070
10 240 230
30 0 0.0%
10 10
0
680 770 3.8%
10
80 290
10 390 50
320 450
4.2%
1,550
Round Bottom Rd
4.5%
320 580
80 150 90
730 90 8.4%
260
380 30
100 760 8.7%
610
50 420
40 390 70
230 500
5.7%
I-10
840
1,100
Valley Ave
I-8
690
11.8%
410 230
220 190 0
850 80 4.4%
0
260 180
630 150 0
370 780
5.9%
6.3%
370 780
150 20 200
800 100 7.0%
270
410 40
650 1260 4.8%
590
20 490
60 30 20
80 110
0.6%
1,150
1,110
1,200
I-6
I-5
1,750
32
730
River Hills Dr
Ivy Hills Pl
Church St
N
W
E
S
0 1,000 2,000 Feet
LEGEND
I-5 SR 32/Round Botom Rd
I-6 SR 32/Church Street (Newtown Rd)
I-8 Round Bottom Rd/Valley Ave
I-9 Round Bottom Rd/Broadwell Rd
I-10 Newtown Rd/Church St/Valley Ave
I-11 Newtown Rd/US 50 (Wooster Pike)
XX Total Peak Hour Volumes
XX Peak Hour Turning Volumes
X% Percent Trucks
2015 EXISTING
Weekday AM Peak Hour
Plate 2
Eastern Corridor
Segment II/III Traffic Analyses
Stantec

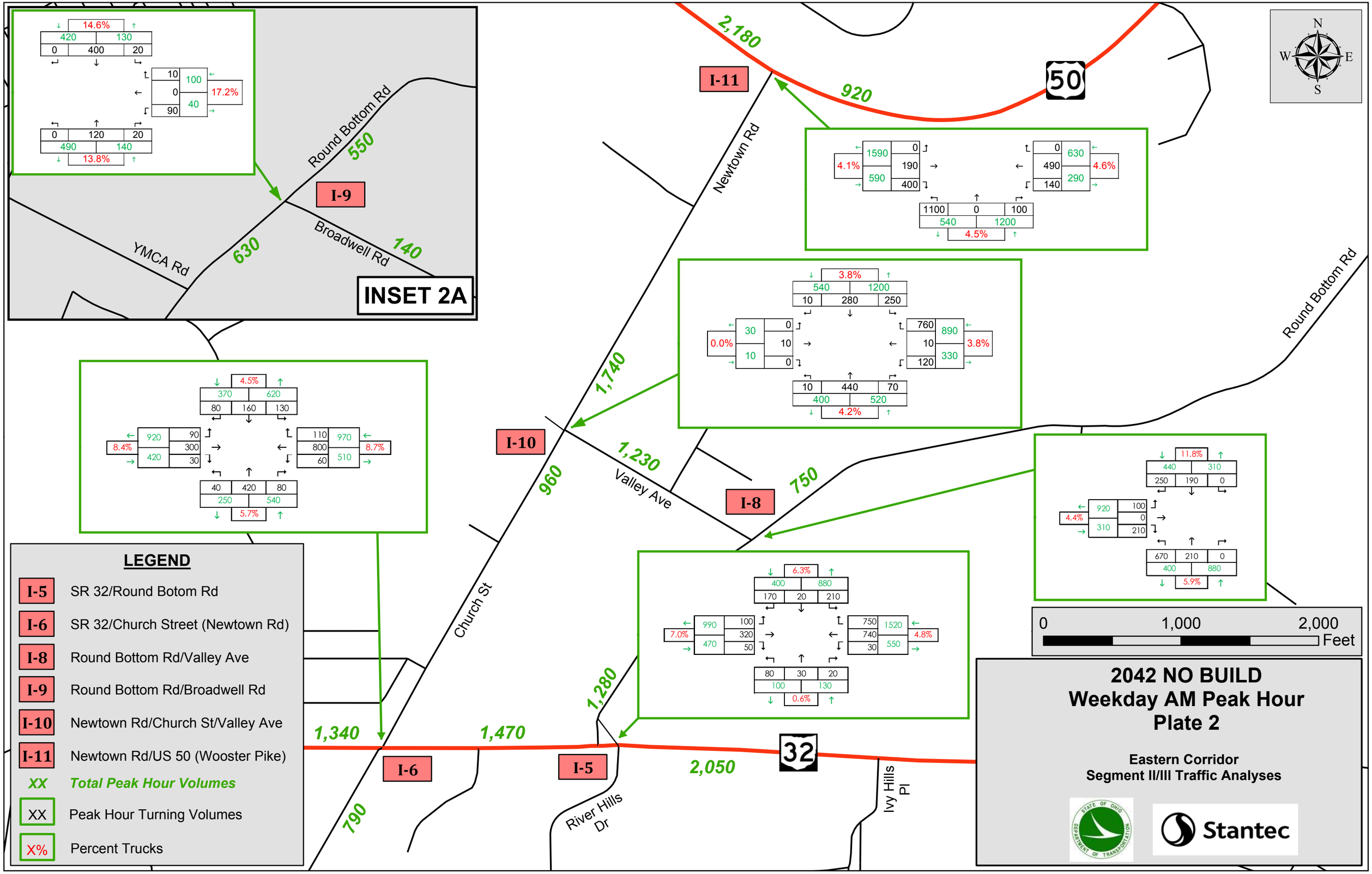

INSET 2A
Round Bottom Rd
Broadwell Rd
YMCA Rd
Newtown Rd
Valley Ave
Church St
River Hills Dr
I-5
I-6
I-8
I-9
I-10
I-11
50
32
2,320
1,030
520
590
170
1,670
920
1,120
710
1,300
1,340
1,270
1,860
900
N
S
E
W
0
1,000
2,000
Feet
LEGEND
I-5 SR 32/Round Botom Rd
I-6 SR 32/Church Street (Newtown Rd)
I-8 Round Bottom Rd/Valley Ave
I-9 Round Bottom Rd/Broadwell Rd
I-10 Newtown Rd/Church St/Valley Ave
I-11 Newtown Rd/US 50 (Wooster Pike)
XX Total Peak Hour Volumes
XX Peak Hour Turning Volumes
X% Percent Trucks
2015 EXISTING
Weekday PM Peak Hour
Plate 2
Eastern Corridor
Segment II/III Traffic Analyses
Stantec

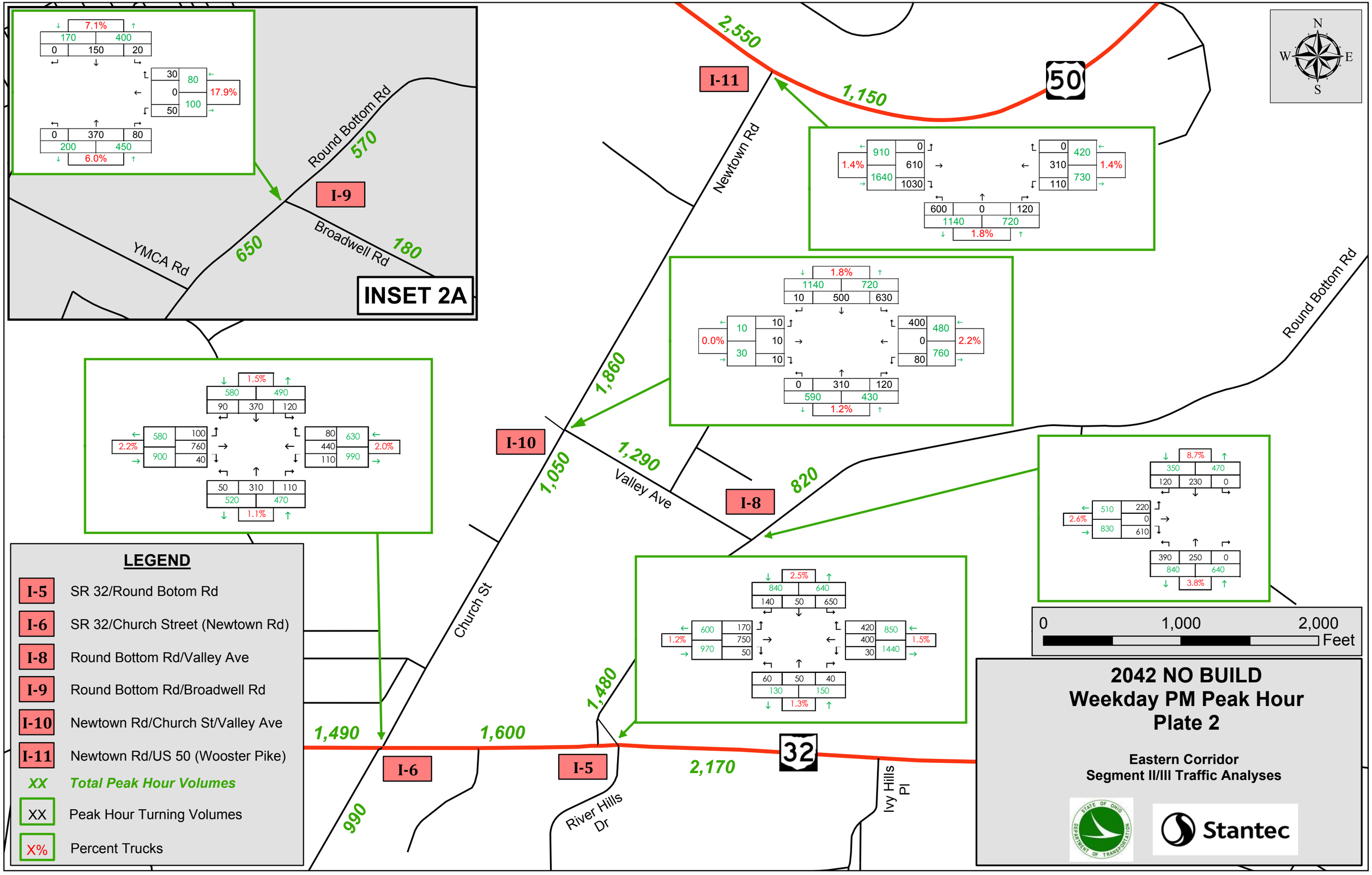

INSET 2A
Round Bottom Rd
YMCA Rd
Broadwell Rd
Newtown Rd
Church St
Valley Ave
River Hills Dr
Ivy Hills Pl
Round Bottom Rd
I-5
I-6
I-8
I-9
I-10
I-11
50
32
24,070
11,040
3,770
4,680
1,490
17,150
10,690
8,920
6,140
11,730
10,940
12,280
19,980
7,790
N
S
E
W
0
1,000
2,000
Feet
LEGEND
I-5 SR 32/Round Botom Rd
I-6 SR 32/Church Street (Newtown Rd)
I-8 Round Bottom Rd/Valley Ave
I-9 Round Bottom Rd/Broadwell Rd
I-10 Newtown Rd/Church St/Valley Ave
I-11 Newtown Rd/US 50 (Wooster Pike)
XX Total Daily Volumes
XX Daily Turning Volumes
X% Percent Trucks
2022 OPENING
Weekday ADT
Plate 2
Eastern Corridor
Segment II/III Traffic Analyses
Stantec


INSET 2A
Round Bottom Rd
Broadwell Rd
YMCA Rd
Newtown Rd
Valley Ave
Church St
River Hills Dr
Ivy Hills Pl
I-5
I-6
I-8
I-9
I-10
I-11
50
32
2,140
910
530
610
140
1,710
1,190
720
940
1,240
1,280
1,370
1,970
770
N
S
E
W
0
1,000
2,000
Feet
LEGEND
I-5 SR 32/Round Botom Rd
I-6 SR 32/Church Street (Newtown Rd)
I-8 Round Bottom Rd/Valley Ave
I-9 Round Bottom Rd/Broadwell Rd
I-10 Newtown Rd/Church St/Valley Ave
I-11 Newtown Rd/US 50 (Wooster Pike)
XX Total Peak Hour Volumes
XX Peak Hour Turning Volumes
X% Percent Trucks
2022 OPENING
Weekday AM Peak Hour
Plate 2
Eastern Corridor
Segment II/III Traffic Analyses
Stantec


INSET 2A
Round Bottom Rd
Broadwell Rd
YMCA Rd
Newtown Rd
Valley Ave
Church St
River Hills Dr
Ivy Hills Pl
Round Bottom Rd
I-5
I-6
I-8
I-9
I-10
I-11
50
32
2,500
1,130
560
640
180
1,830
1,240
1,030
760
1,390
1,430
1,510
2,060
980
LEGEND
I-5 SR 32/Round Botom Rd
I-6 SR 32/Church Street (Newtown Rd)
I-8 Round Bottom Rd/Valley Ave
I-9 Round Bottom Rd/Broadwell Rd
I-10 Newtown Rd/Church St/Valley Ave
I-11 Newtown Rd/US 50 (Wooster Pike)
XX Total Peak Hour Volumes
XX Peak Hour Turning Volumes
X% Percent Trucks
0 1,000 2,000 Feet
2022 OPENING
Weekday PM Peak Hour
Plate 2
Eastern Corridor
Segment II/III Traffic Analyses
Stantec


INSET 2A
10.3%
1980 1910
0 1770 210
80 700
0 21.0%
620 790
0 1830 580
2390 2410
11.8%
Round Bottom Rd
3,890
I-9
YMCA Rd
4,800
Broadwell Rd
1,490
I-11
24,300
11,130
50
Newtown Rd
12030 0
2.8% 4740
12270 7530
0 5380
4310 3.3%
1070 5750
7720 0 1010
8600 8730
3.2%
2.5%
8600 8730
40 3950 4610
100 30
3.5% 30
90 30
4960 5610
30 2.8%
620 5480
30 3740 840
4600 4610
2.4%
17,330
Round Bottom Rd
2.8%
4780 4490
720 2640 1420
5640 840
5.3% 4590
5690 260
940 6720
4660 5.1%
1120 6920
260 2710 910
4020 3880
2.8%
I-10
9,240
10,940
Valley Ave
I-8
6,260
9.8%
3110 3150
1160 1950 0
5450 1410
3.0% 0
5330 3920
4290 1740 0
5870 6030
5.0%
Church St
5.0%
5870 6030
1200 390 4280
7230 980
5.1% 5660
7130 490
4650 10420
5440 4.2%
330 10260
590 400 320
1210 1310
3.2%
11,900
11,330
14,000
I-6
I-5
20,710
32
7,900
River Hills Dr
Ivy Hills Pl
N
W
E
S
0 1,000 2,000
Feet
LEGEND
I-5 SR 32/Round Botom Rd
I-6 SR 32/Church Street (Newtown Rd)
I-8 Round Bottom Rd/Valley Ave
I-9 Round Bottom Rd/Broadwell Rd
I-10 Newtown Rd/Church St/Valley Ave
I-11 Newtown Rd/US 50 (Wooster Pike)
XX Total Daily Volumes
XX Daily Turning Volumes
X% Percent Trucks
2042 NO BUILD
Weekday ADT
Plate 2
Eastern Corridor
Segment II/III Traffic Analyses
Stantec


INSET 2A
Round Bottom Rd
YMCA Rd
Broadwell Rd
Newtown Rd
Valley Ave
Church St
River Hills Dr
Ivy Hills Pl
Round Bottom Rd
I-5
I-6
I-8
I-9
I-10
I-11
50
32
2,180
920
550
630
140
1,740
1,230
960
750
1,280
1,340
1,470
2,050
790
LEGEND
I-5 SR 32/Round Botom Rd
I-6 SR 32/Church Street (Newtown Rd)
I-8 Round Bottom Rd/Valley Ave
I-9 Round Bottom Rd/Broadwell Rd
I-10 Newtown Rd/Church St/Valley Ave
I-11 Newtown Rd/US 50 (Wooster Pike)
XX Total Peak Hour Volumes
XX Peak Hour Turning Volumes
X% Percent Trucks
0 1,000 2,000 Feet
2042 NO BUILD
Weekday AM Peak Hour
Plate 2
Eastern Corridor
Segment II/III Traffic Analyses
Stantec


INSET 2A
Round Bottom Rd
YMCA Rd
Broadwell Rd
Newtown Rd
Valley Ave
Church St
River Hills Dr
Ivy Hills Pl
I-5
I-6
I-8
I-9
I-10
I-11
50
32
2,550
1,150
570
650
180
1,860
1,290
1,050
820
1,480
1,490
1,600
2,170
990
N
S
E
W
0
1,000
2,000
Feet
LEGEND
I-5 SR 32/Round Botom Rd
I-6 SR 32/Church Street (Newtown Rd)
I-8 Round Bottom Rd/Valley Ave
I-9 Round Bottom Rd/Broadwell Rd
I-10 Newtown Rd/Church St/Valley Ave
I-11 Newtown Rd/US 50 (Wooster Pike)
XX Total Peak Hour Volumes
XX Peak Hour Turning Volumes
X% Percent Trucks
2042 NO BUILD
Weekday PM Peak Hour
Plate 2
Eastern Corridor
Segment II/III Traffic Analyses
Stantec

APPENDIX C

INTERSECTION VOLUME TABLES

TRAFFIC VOLUME AT STUDY INTERSECTION - AM

Intersection: SR-32 & Round Bottom Road
Count Date: 05/17/17
A.M. Peak-Hour: 7:00 - 8:00 AM
Peak Hour Factor: 0.93

	SR-32			SR-32			River Hills Dr			Round Bottom Rd		
2017 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	95	240	37	18	562	645	55	22	13	191	17	144
Cars	*87*	*224*	*37*	*18*	*534*	*625*	*54*	*22*	*13*	*175*	*17*	*118*
Trucks	*8*	*16*	*0*	*0*	*28*	*20*	*1*	*0*	*0*	*16*	*0*	*26*
Traffic Balancing		30			20							
2017 Existing Certified Traffic	**100**	**270**	**40**	**20**	**590**	**650**	**60**	**30**	**20**	**200**	**20**	**150**
% Heavy Vehicles	**8.4%**	**6.7%**	**0.0%**	**0.0%**	**5.0%**	**3.1%**	**1.8%**	**0.0%**	**0.0%**	**8.4%**	**0.0%**	**18.1%**

2020 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2017 Existing Certified Traffic	100	270	40	20	590	650	60	30	20	200	20	150
Interpolated Growth	0	10	0	10	60	40	0	0	0	0	0	0
Bus Volume										10		10
2020 Existing Traffic	**100**	**280**	**40**	**30**	**650**	**690**	**60**	**30**	**20**	**210**	**20**	**160**

Opening Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2022 Certified Traffic	100	300	40	30	700	720	60	30	20	210	20	160
Certified Traffic Adjustment												
Bus Volume										10		10
No-Build/Build 2022 Traffic	**100**	**300**	**40**	**30**	**700**	**720**	**60**	**30**	**20**	**220**	**20**	**170**

Design Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2042 Certified Traffic	100	320	50	30	740	750	80	30	20	210	20	170
Growth at 0.20% Annually	*104*	*312*	*42*	*31*	*728*	*749*	*62*	*31*	*21*	*218*	*21*	*166*
Growth b/t Opening & Design	*0.00%*	*0.33%*	*1.25%*	*0.00%*	*0.29%*	*0.21%*	*1.67%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.31%*
Certified Traffic Adjustment	10			10		10		10	10	10	10	
Bus Volume										10		10
No-Build/Build 2042 Traffic	**110**	**320**	**50**	**40**	**740**	**760**	**80**	**40**	**30**	**230**	**30**	**180**
Marietta Materials Traffic	10					50				40		10
Marietta Build 2042 Traffic	**120**	**320**	**50**	**40**	**740**	**810**	**80**	**40**	**30**	**270**	**30**	**190**

TRAFFIC VOLUME AT STUDY INTERSECTION - AM

Intersection: SR-32 & Ivy Hills Place
Count Date: 05/16/17
A.M. Peak-Hour: 6:45 - 7:45 AM
Peak Hour Factor: 0.92

	SR-32			SR-32			Ivy Hills Pl					
2017 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	0	346	3	21	1205	0	44	0	27	0	0	0
Cars	*0*	*323*	*3*	*21*	*1168*	*0*	*44*	*0*	*27*	*0*	*0*	*0*
Trucks	*0*	*23*	*0*	*0*	*37*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Traffic Balancing		90			40							
2017 Existing Certified Traffic	**0**	**440**	**10**	**30**	**1250**	**0**	**40**	**0**	**30**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**6.6%**	**0.0%**	**0.0%**	**3.1%**	**--**	**0.0%**	**--**	**0.0%**	**--**	**--**	**--**

2020 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2017 Existing Certified Traffic	0	440	10	30	1250	0	40	0	30	0	0	0
Interpolated Growth	0	30	0	0	90	0	0	0	0	0	0	0
Balancing												
Bus Volume		10										
2020 Existing Traffic	**0**	**480**	**10**	**30**	**1340**	**0**	**40**	**0**	**30**	**0**	**0**	**0**

Opening Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2022 Certified Traffic	0	500	10	30	1410	0	40	0	30	0	0	0
Certified Traffic Adjustment												
Bus Volume		10										
No-Build/Build 2022 Traffic	**0**	**510**	**10**	**30**	**1410**	**0**	**40**	**0**	**30**	**0**	**0**	**0**

Design Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2042 Certified Traffic	0	510	20	40	1450	0	50	0	40	0	0	0
Growth at 0.20% Annually	*0*	*520*	*10*	*31*	*1466*	*0*	*42*	*0*	*31*	*0*	*0*	*0*
Growth b/t Opening & Design	*--*	*0.10%*	*5.00%*	*1.67%*	*0.14%*	*--*	*1.25%*	*--*	*1.67%*	*--*	*--*	*--*
Certified Traffic Adjustment		10			20							
Bus Volume		10										
No-Build/Build 2042 Traffic	**0**	**530**	**20**	**40**	**1470**	**0**	**50**	**0**	**40**	**0**	**0**	**0**
Marietta Materials Traffic		40			50							
Marietta Build 2042 Traffic	**0**	**570**	**20**	**40**	**1520**	**0**	**50**	**0**	**40**	**0**	**0**	**0**

TRAFFIC VOLUME AT STUDY INTERSECTION - AM

Intersection: SR-32 & Little Dry Run
Count Date: 12/09/15
A.M. Peak-Hour: 7:00 - 8:00 AM
Peak Hour Factor: 0.97

	SR-32			SR-32			Little Dry Run					
2015 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	0	429	35	20	1097	0	179	0	19	0	0	0
Cars	*0*	*394*	*29*	*19*	*1051*	*0*	*177*	*0*	*17*	*0*	*0*	*0*
Trucks	*0*	*35*	*6*	*1*	*46*	*0*	*2*	*0*	*2*	*0*	*0*	*0*
Traffic Balancing												
2015 Existing Certified Traffic	**0**	**430**	**40**	**20**	**1100**	**0**	**180**	**0**	**20**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**8.2%**	**17.1%**	**5.0%**	**4.2%**	**--**	**1.1%**	**--**	**10.5%**	**--**	**--**	**--**

2020 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2015 Certified Traffic	0	430	40	20	1100	0	180	0	20	0	0	0
Interpolated Growth	0	40	0	0	100	0	10	0	0	0	0	0
Balancing		-10			-20							
Bus Volume			10									
2020 Existing Traffic	**0**	**460**	**50**	**20**	**1180**	**0**	**190**	**0**	**20**	**0**	**0**	**0**

Opening Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2022 Certified Traffic	0	490	40	20	1240	0	200	0	20	0	0	0
Certified Traffic Adjustment												
Bus Volume			10									
No-Build/Build 2022 Traffic	**0**	**490**	**50**	**20**	**1240**	**0**	**200**	**0**	**20**	**0**	**0**	**0**

Design Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2042 Certified Traffic	0	510	40	20	1290	0	200	0	20	0	0	0
Growth at 0.20% Annually	*0*	*510*	*42*	*21*	*1290*	*0*	*208*	*0*	*21*	*0*	*0*	*0*
Growth b/t Opening & Design	*--*	*0.20%*	*0.00%*	*0.00%*	*0.20%*	*--*	*0.00%*	*--*	*0.00%*	*--*	*--*	*--*
Certified Traffic Adjustment			10	10	10		10		10			
Bus Volume			10									
No-Build/Build 2042 Traffic	**0**	**510**	**60**	**30**	**1300**	**0**	**210**	**0**	**30**	**0**	**0**	**0**
Marietta Materials Traffic		40			50							
Marietta Build 2042 Traffic	**0**	**550**	**60**	**30**	**1350**	**0**	**210**	**0**	**30**	**0**	**0**	**0**

TRAFFIC VOLUME AT STUDY INTERSECTION - PM

Intersection: SR-32 & Round Bottom Road
Count Date: 05/17/17
P.M. Peak-Hour: 4:45 - 5:45 PM
Peak Hour Factor: 0.94

	SR-32			SR-32			River Hills Dr			Round Bottom Rd		
2017 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	139	569	43	23	304	378	37	41	39	548	52	105
Cars	*133*	*566*	*43*	*23*	*301*	*362*	*37*	*40*	*39*	*543*	*50*	*103*
Trucks	*6*	*3*	*0*	*0*	*3*	*16*	*0*	*1*	*0*	*5*	*2*	*2*
Traffic Balancing												
2017 Existing Certified Traffic	**140**	**570**	**50**	**30**	**310**	**380**	**40**	**50**	**40**	**550**	**60**	**110**
% Heavy Vehicles	**4.3%**	**0.5%**	**0.0%**	**0.0%**	**1.0%**	**4.2%**	**0.0%**	**2.4%**	**0.0%**	**0.9%**	**3.8%**	**1.9%**

2020 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2017 Existing Certified Traffic	140	570	50	30	310	380	40	50	40	550	60	110
Interpolated Growth	0	70	0	0	40	20	10	0	0	20	0	10
Bus Volume	10					10						
2020 Existing Traffic	**150**	**640**	**50**	**30**	**350**	**410**	**50**	**50**	**40**	**570**	**60**	**120**

Opening Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2022 Certified Traffic	150	700	50	30	380	420	60	50	40	590	50	130
Certified Traffic Adjustment											10	
Bus Volume	10					10						
No-Build/Build 2022 Traffic	**160**	**700**	**50**	**30**	**380**	**430**	**60**	**50**	**40**	**590**	**60**	**130**

Design Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2042 Certified Traffic	170	750	50	30	400	420	60	50	40	650	50	140
Growth at 0.20% Annually	*156*	*728*	*52*	*31*	*395*	*437*	*62*	*52*	*42*	*614*	*62*	*135*
Growth b/t Opening & Design	*0.67%*	*0.36%*	*0.00%*	*0.00%*	*0.26%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.51%*	*0.00%*	*0.38%*
Certified Traffic Adjustment			10	10		20	10	10	10		20	
Bus Volume	10					10						
No-Build/Build 2042 Traffic	**180**	**750**	**60**	**40**	**400**	**450**	**70**	**60**	**50**	**650**	**70**	**140**
Marietta Materials Traffic						20				20		10
Marietta Build 2042 Traffic	**180**	**750**	**60**	**40**	**400**	**470**	**70**	**60**	**50**	**670**	**70**	**150**

TRAFFIC VOLUME AT STUDY INTERSECTION - PM

Intersection: SR-32 & Ivy Hills Place
Count Date: 05/16/17
P.M. Peak-Hour: 5:15 - 6:15 PM
Peak Hour Factor: 0.91

	SR-32			SR-32			Ivy Hills Pl					
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	***0***	***988***	***30***	***36***	***801***	***0***	***39***	***0***	***49***	***0***	***0***	***0***
Cars	*0*	*966*	*30*	*36*	*778*	*0*	*38*	*0*	*49*	*0*	*0*	*0*
Trucks	*0*	*22*	*0*	*0*	*23*	*0*	*1*	*0*	*0*	*0*	*0*	*0*
Traffic Balancing		100			-200							
2017 Existing Certified Traffic	**0**	**1090**	**30**	**40**	**610**	**0**	**40**	**0**	**50**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**2.2%**	**0.0%**	**0.0%**	**2.9%**	**--**	**2.6%**	**--**	**0.0%**	**--**	**--**	**--**

2020 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2017 Existing Certified Traffic	0	1090	30	40	610	0	40	0	50	0	0	0
Interpolated Growth	0	60	0	0	40	0	0	0	0	0	0	0
Balancing		10			10							
Bus Volume					10							
2020 Existing Traffic	**0**	**1160**	**30**	**40**	**670**	**0**	**40**	**0**	**50**	**0**	**0**	**0**

Opening Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2022 Certified Traffic	0	1200	30	40	690	0	40	0	60	0	0	0
Certified Traffic Adjustment		40			20							
Bus Volume					10							
No-Build/Build 2022 Traffic	**0**	**1240**	**30**	**40**	**720**	**0**	**40**	**0**	**60**	**0**	**0**	**0**

Design Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2042 Certified Traffic	0	1260	40	50	700	0	50	0	60	0	0	0
Growth at 0.20% Annually	*0*	*1290*	*31*	*42*	*738*	*0*	*42*	*0*	*62*	*0*	*0*	*0*
Growth b/t Opening & Design	*--*	*0.25%*	*1.67%*	*1.25%*	*0.07%*	*--*	*1.25%*	*--*	*0.00%*	*--*	*--*	*--*
Certified Traffic Adjustment		80			40				10			
Bus Volume					10							
No-Build/Build 2042 Traffic	**0**	**1340**	**40**	**50**	**750**	**0**	**50**	**0**	**70**	**0**	**0**	**0**
Marietta Materials Traffic		20			20							
Marietta Build 2042 Traffic	**0**	**1360**	**40**	**50**	**770**	**0**	**50**	**0**	**70**	**0**	**0**	**0**

TRAFFIC VOLUME AT STUDY INTERSECTION - PM

Intersection: SR-32 & Little Dry Run
Count Date: 12/09/15
P.M. Peak-Hour: 5:00 - 6:00 PM
Peak Hour Factor: 0.97

	SR-32			SR-32			Little Dry Run					
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	0	964	154	44	539	0	109	0	33	0	0	0
Cars	*0*	*942*	*151*	*44*	*528*	*0*	*109*	*0*	*30*	*0*	*0*	*0*
Trucks	*0*	*22*	*3*	*0*	*11*	*0*	*0*	*0*	*3*	*0*	*0*	*0*
Traffic Balancing												
2015 Existing Certified Traffic	**0**	**970**	**160**	**50**	**540**	**0**	**110**	**0**	**40**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**2.3%**	**1.9%**	**0.0%**	**2.0%**	**--**	**0.0%**	**--**	**9.1%**	**--**	**--**	**--**

2020 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2015 Certified Traffic	0	970	160	50	540	0	110	0	40	0	0	0
Interpolated Growth	0	80	0	0	50	0	0	0	0	0	0	0
Balancing												
Bus Volume							10					
2020 Existing Traffic	**0**	**1050**	**160**	**50**	**590**	**0**	**120**	**0**	**40**	**0**	**0**	**0**

Opening Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2022 Certified Traffic	0	1090	170	50	610	0	120	0	40	0	0	0
Certified Traffic Adjustment		40			20							
Bus Volume							10					
No-Build/Build 2022 Traffic	**0**	**1130**	**170**	**50**	**630**	**0**	**130**	**0**	**40**	**0**	**0**	**0**

Design Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2042 Certified Traffic	0	1140	170	50	630	0	120	0	40	0	0	0
Growth at 0.20% Annually	*0*	*1175*	*177*	*52*	*655*	*0*	*125*	*0*	*42*	*0*	*0*	*0*
Growth b/t Opening & Design	*--*	*0.23%*	*0.00%*	*0.00%*	*0.16%*	*--*	*0.00%*	*--*	*0.00%*	*--*	*--*	*--*
Certified Traffic Adjustment		80	20	10	30		10		10			
Bus Volume							10					
No-Build/Build 2042 Traffic	**0**	**1220**	**190**	**60**	**660**	**0**	**140**	**0**	**50**	**0**	**0**	**0**
Marietta Materials Traffic		20			20							
Marietta Build 2042 Traffic	**0**	**1240**	**190**	**60**	**680**	**0**	**140**	**0**	**50**	**0**	**0**	**0**

TRAFFIC VOLUME AT STUDY INTERSECTION - DAILY

Intersection: SR-32 & Round Bottom Road
Count Date: 12/09/15

	SR-32			SR-32			River Hills Dr			Round Bottom Rd		
2015 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	933	5116	466	321	4943	4567	566	395	305	4384	410	1208
Cars	*791*	*4875*	*443*	*304*	*4708*	*4318*	*545*	*385*	*286*	*4170*	*399*	*1071*
Trucks	*142*	*241*	*23*	*17*	*235*	*249*	*21*	*10*	*19*	*214*	*11*	*137*
Traffic Balancing						*20*				*-180*	*-20*	*-40*
2015 Existing Certified Traffic	**930**	**5120**	**470**	**320**	**4940**	**4590**	**570**	**400**	**310**	**4200**	**390**	**1170**
% Heavy Vehicles	**15.2%**	**4.7%**	**4.9%**	**5.3%**	**4.8%**	**5.5%**	**3.7%**	**2.5%**	**6.2%**	**4.9%**	**2.7%**	**11.3%**
09/27/2018 Traffic	**1120**	**5020**	**450**	**330**	**4580**	**5060**	**520**	**370**	**340**	**4750**	**390**	**1420**
Difference from 2015 Traffic	**190**	-100	-20	**10**	-360	**470**	-50	-30	**30**	**550**	0	**250**
2020 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2015 Existing Certified Traffic	930	5120	470	320	4940	4590	570	400	310	4200	390	1170
Additional 2018 Traffic	190	0	0	10	0	470	0	0	30	550	0	250
2018 Adjusted Certified Traffic	1120	5120	470	330	4940	5060	570	400	340	4750	390	1420
Growth at 1.0% Annually	20	100	10	10	100	100	10	10	10	100	10	30
2020 Existing Traffic	**1140**	**5220**	**480**	**340**	**5040**	**5160**	**580**	**410**	**350**	**4850**	**400**	**1450**
Opening Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2022 Certified Traffic	930	5350	470	330	5130	4610	580	400	320	4230	390	1170
Certified Traffic Adjustment	190	0	0	10	0	470	0	0	30	550	0	250
Growth at 1.0% Annually	30	110	10	10	100	110	10	10	10	110	10	30
No-Build/Build 2022 Traffic	**1150**	**5460**	**480**	**350**	**5230**	**5190**	**590**	**410**	**360**	**4890**	**400**	**1450**
Design Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2042 Certified Traffic	980	5660	490	330	5440	4650	590	400	320	4280	390	1200
Growth at 0.20% Annually	1196	5678	499	364	5439	5398	614	426	374	5086	416	1508
Certified Traffic Adjustment	220	20	10	30	0	750	20	30	50	810	30	310
No-Build/Build 2042 Traffic	**1200**	**5680**	**500**	**360**	**5440**	**5400**	**610**	**430**	**370**	**5090**	**420**	**1510**
Marietta Materials Traffic	110					500				500		110
Marietta Build 2042 Traffic	**1310**	**5680**	**500**	**360**	**5440**	**5900**	**610**	**430**	**370**	**5590**	**420**	**1620**

TRAFFIC VOLUME AT STUDY INTERSECTION - DAILY

Intersection: SR-32 & Ivy Hills Place
Count Date: 05/16/17

	SR-32			SR-32			Ivy Hills Pl					
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	***0***	***9928***	***248***	***341***	***10516***	***0***	***377***	***0***	***355***	***0***	***0***	***0***
Cars	*0*	*9228*	*236*	*329*	*9867*	*0*	*357*	*0*	*343*	*0*	*0*	*0*
Trucks	*0*	*700*	*12*	*12*	*649*	*0*	*20*	*0*	*12*	*0*	*0*	*0*
Traffic Balancing		-540			-870		-20		20			
2017 Existing Certified Traffic	**0**	**9390**	**250**	**350**	**9650**	**0**	**360**	**0**	**380**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**7.1%**	**4.8%**	**3.5%**	**6.2%**	**--**	**5.3%**	**--**	**3.4%**	**--**	**--**	**--**

2020 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2017 Existing Certified Traffic	0	9390	250	350	9650	0	360	0	380	0	0	0
Certified Traffic Adjustment		900			600							
2020 Existing Traffic	**0**	**10290**	**250**	**350**	**10250**	**0**	**360**	**0**	**380**	**0**	**0**	**0**

Opening Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2022 Certified Traffic	0	9560	260	360	9790	0	370	0	390	0	0	0
Certified Traffic Adjustment		890			580							
No-Build/Build 2022 Traffic	**0**	**10450**	**260**	**360**	**10370**	**0**	**370**	**0**	**390**	**0**	**0**	**0**

Design Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2042 Certified Traffic	0	9950	270	370	10140	0	380	0	400	0	0	0
Growth at 0.20% Annually	*0*	*10868*	*270*	*374*	*10785*	*0*	*385*	*0*	*406*	*0*	*0*	*0*
Certified Traffic Adjustment		920			650		10		10			
No-Build/Build 2042 Traffic	**0**	**10870**	**270**	**370**	**10790**	**0**	**390**	**0**	**410**	**0**	**0**	**0**
Marietta Materials Traffic		500			500							
Marietta Build 2042 Traffic	**0**	**11370**	**270**	**370**	**11290**	**0**	**390**	**0**	**410**	**0**	**0**	**0**

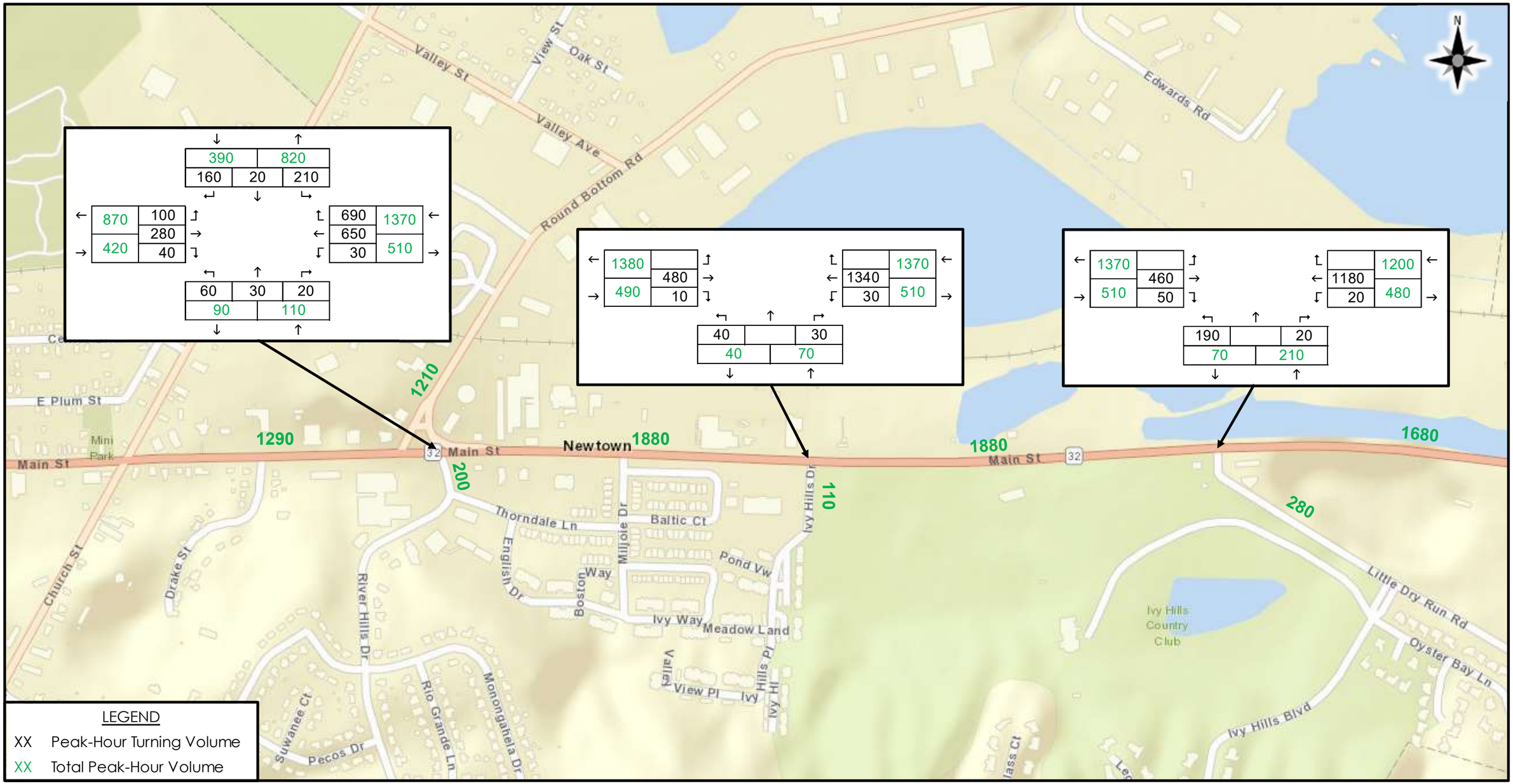
TRAFFIC VOLUME AT STUDY INTERSECTION - DAILY

Intersection: SR-32 & Little Dry Run
Count Date: 12/09/15

	SR-32			SR-32			Little Dry Run					
Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Cars and Trucks	0	8553	1217	461	8659	0	1359	0	401	0	0	0
Cars	*0*	*7930*	*1162*	*431*	*8071*	*0*	*1328*	*0*	*364*	*0*	*0*	*0*
Trucks	*0*	*623*	*55*	*30*	*588*	*0*	*31*	*0*	*37*	*0*	*0*	*0*
Traffic Balancing		-10		-10					-10			
2015 Existing Certified Traffic	**0**	**8550**	**1220**	**460**	**8660**	**0**	**1360**	**0**	**400**	**0**	**0**	**0**
% Heavy Vehicles	**--**	**7.3%**	**4.5%**	**6.5%**	**6.8%**	**--**	**2.3%**	**--**	**9.2%**	**--**	**--**	**--**
09/19/2018 Traffic	**0**	**9210**	**1360**	**560**	**8890**	**0**	**1600**	**0**	**420**	**0**	**0**	**0**
Difference from 2015 Traffic	0	**660**	**140**	**100**	**230**	0	**240**	0	**20**	0	0	0
2020 Existing	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2015 Certified Traffic	0	8550	1220	460	8660	0	1360	0	400	0	0	0
Additional 2018 Traffic	0	660	140	100	230	0	240	0	20	0	0	0
2018 Adjusted Certified Traffic	0	9210	1360	560	8890	0	1600	0	420	0	0	0
Growth at 0.50% Annually	0	90	10	10	90	0	20	0	0	0	0	0
2020 Existing Traffic	**0**	**9300**	**1370**	**570**	**8980**	**0**	**1620**	**0**	**420**	**0**	**0**	**0**
Opening Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2022 Certified Traffic	0	8700	1220	470	8790	0	1360	0	410	0	0	0
Certified Traffic Adjustment	0	660	140	100	230	0	240	0	20	0	0	0
Growth at 0.50% Annually	0	100	20	10	90	0	20	0	0	0	0	0
No-Build/Build 2022 Traffic	**0**	**9460**	**1380**	**580**	**9110**	**0**	**1620**	**0**	**430**	**0**	**0**	**0**
Design Year	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
2042 Certified Traffic	0	9120	1220	500	9160	0	1360	0	440	0	0	0
Growth at 0.20% Annually	0	9838	1435	603	9474	0	1685	0	447	0	0	0
Certified Traffic Adjustment	0	720	220	100	310	0	330	0	10	0	0	0
No-Build/Build 2042 Traffic	**0**	**9840**	**1440**	**600**	**9470**	**0**	**1690**	**0**	**450**	**0**	**0**	**0**
Marietta Materials Traffic		500			500							
Marietta Build 2042 Traffic	**0**	**10340**	**1440**	**600**	**9970**	**0**	**1690**	**0**	**450**	**0**	**0**	**0**

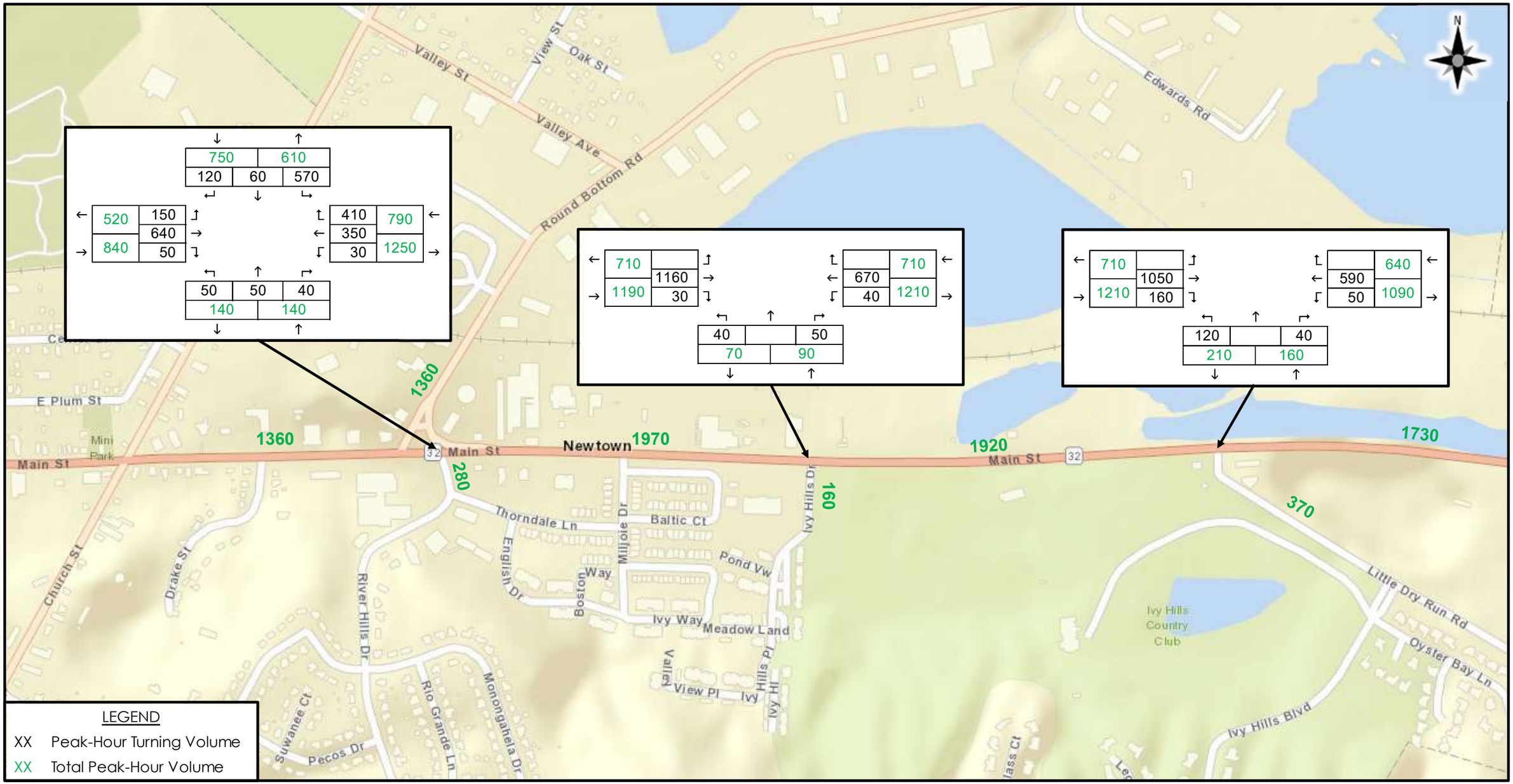
APPENDIX D

REVISED CERTIFIED TRAFFIC PLATES



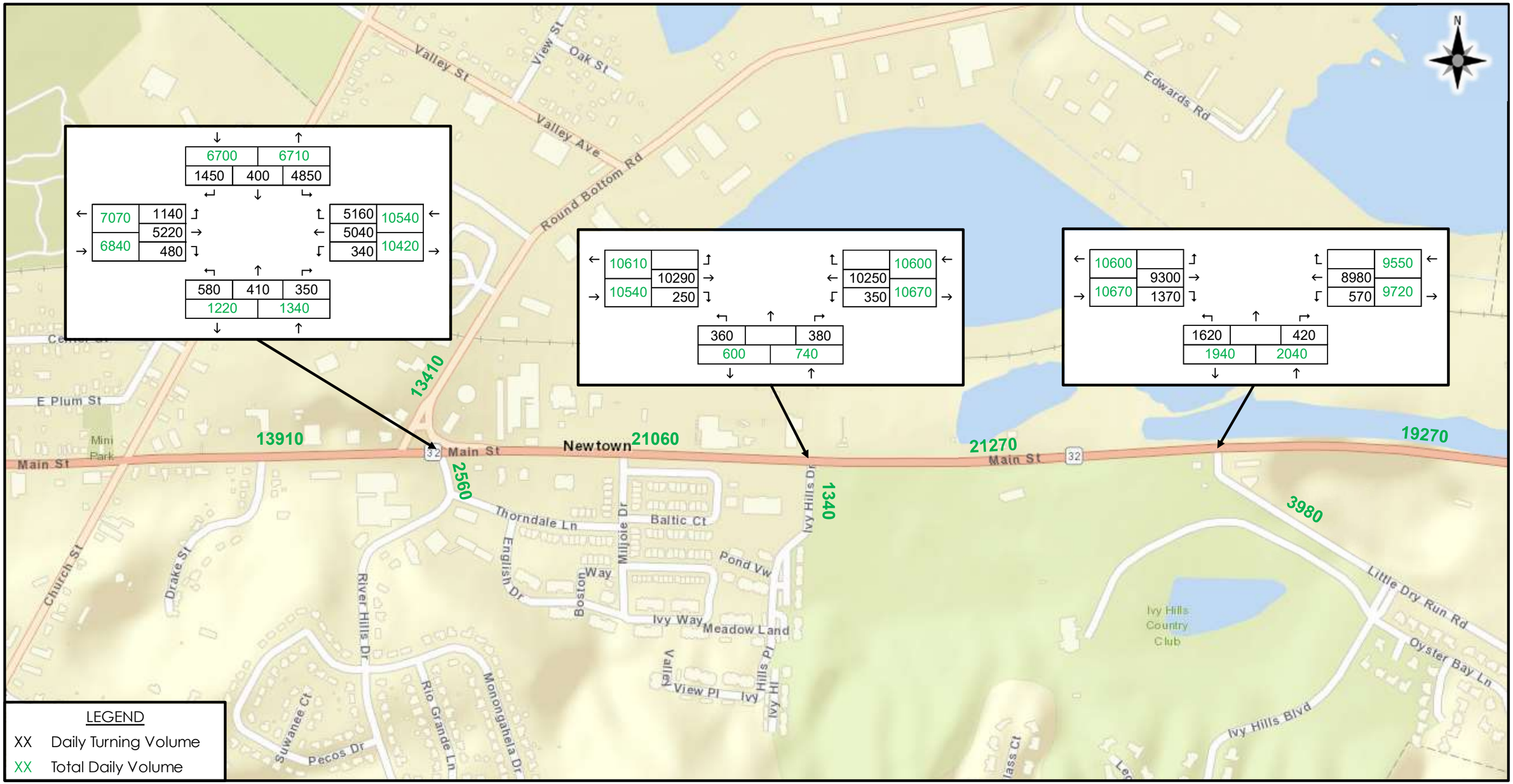
2020 EXITING

Weekday AM Peak-Hour



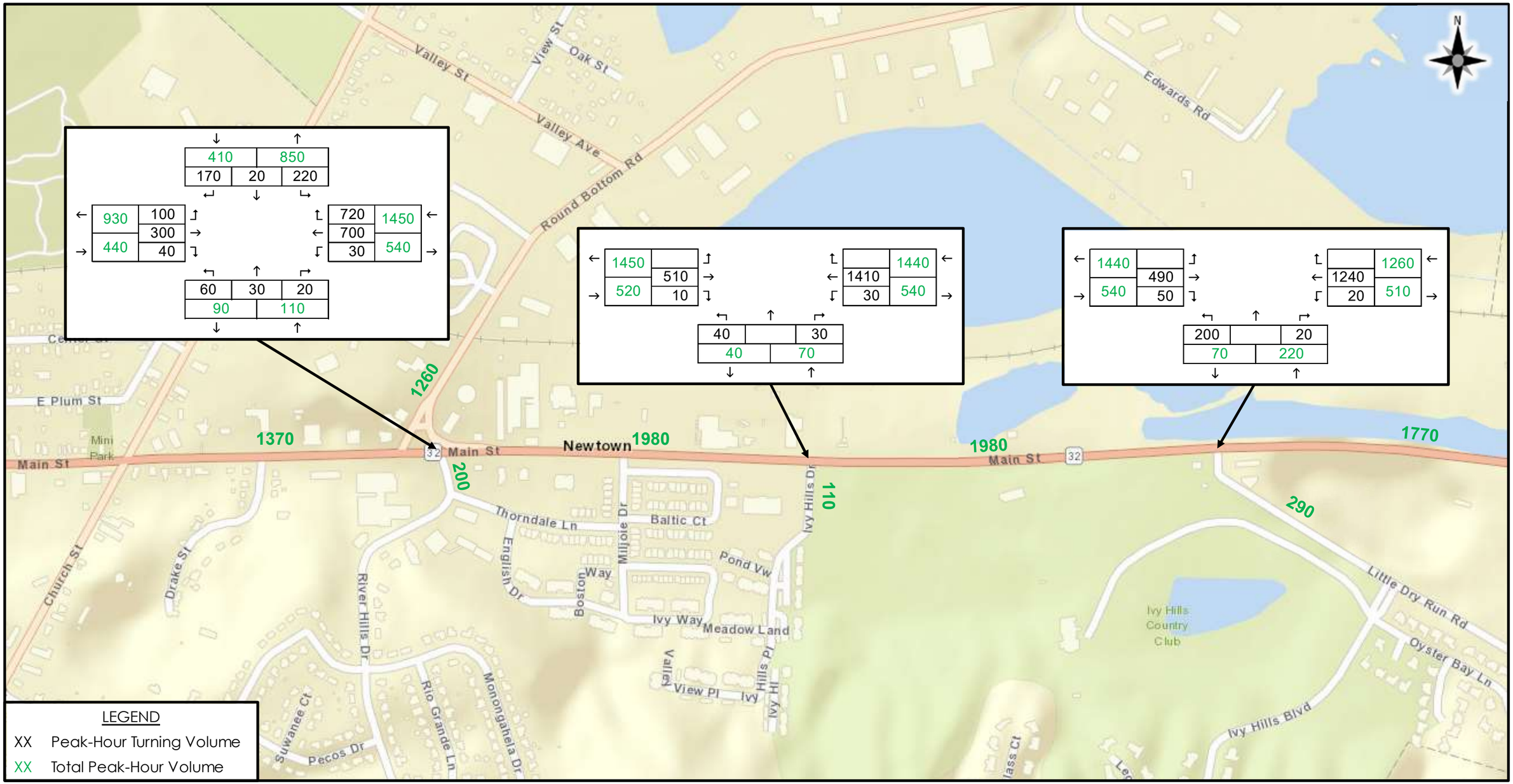
2020 EXITING

Weekday PM Peak-Hour



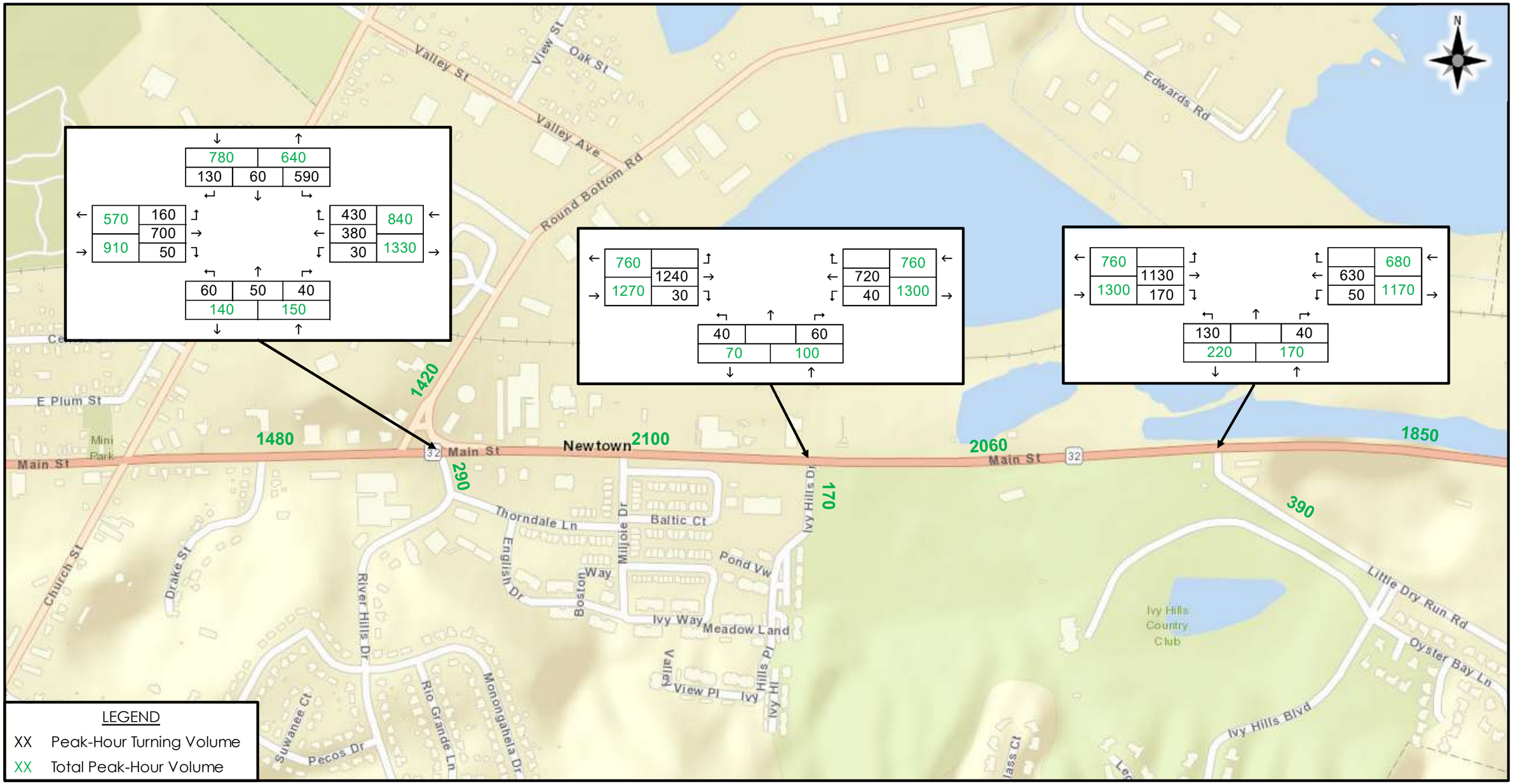
2020 EXITING

Weekday Daily



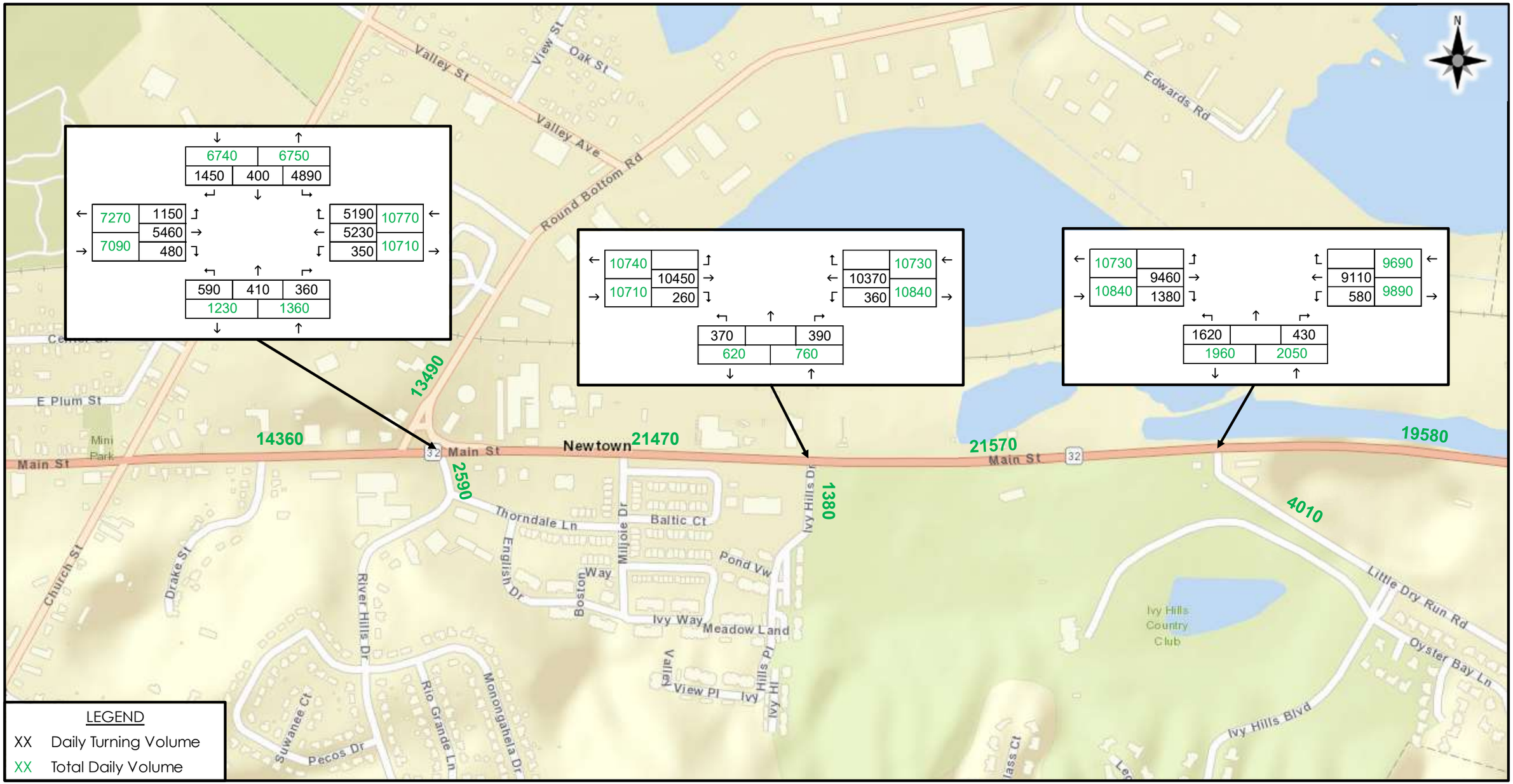
2022 OPENING YEAR

Weekday AM Peak-Hour



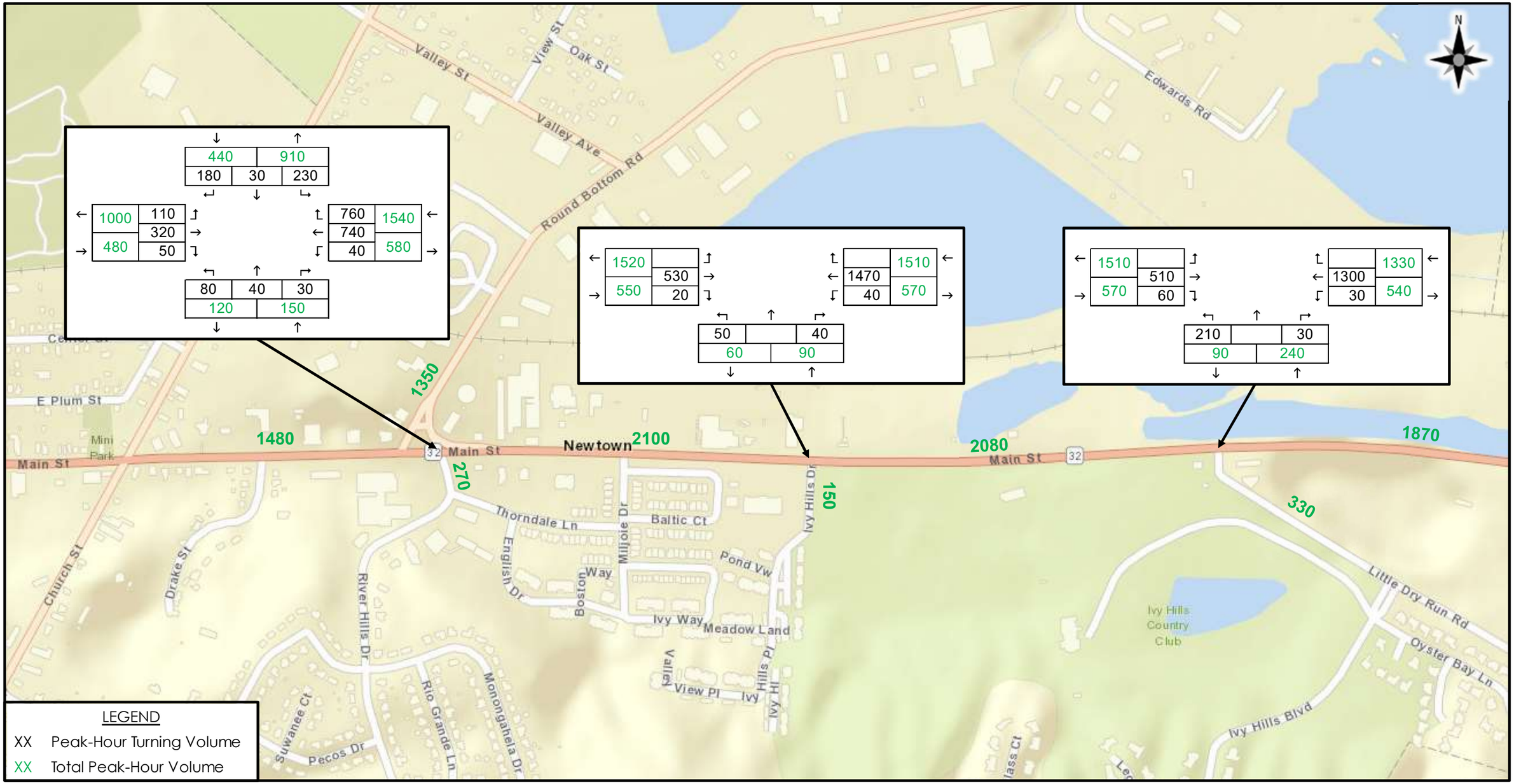
2022 OPENING YEAR

Weekday PM Peak-Hour



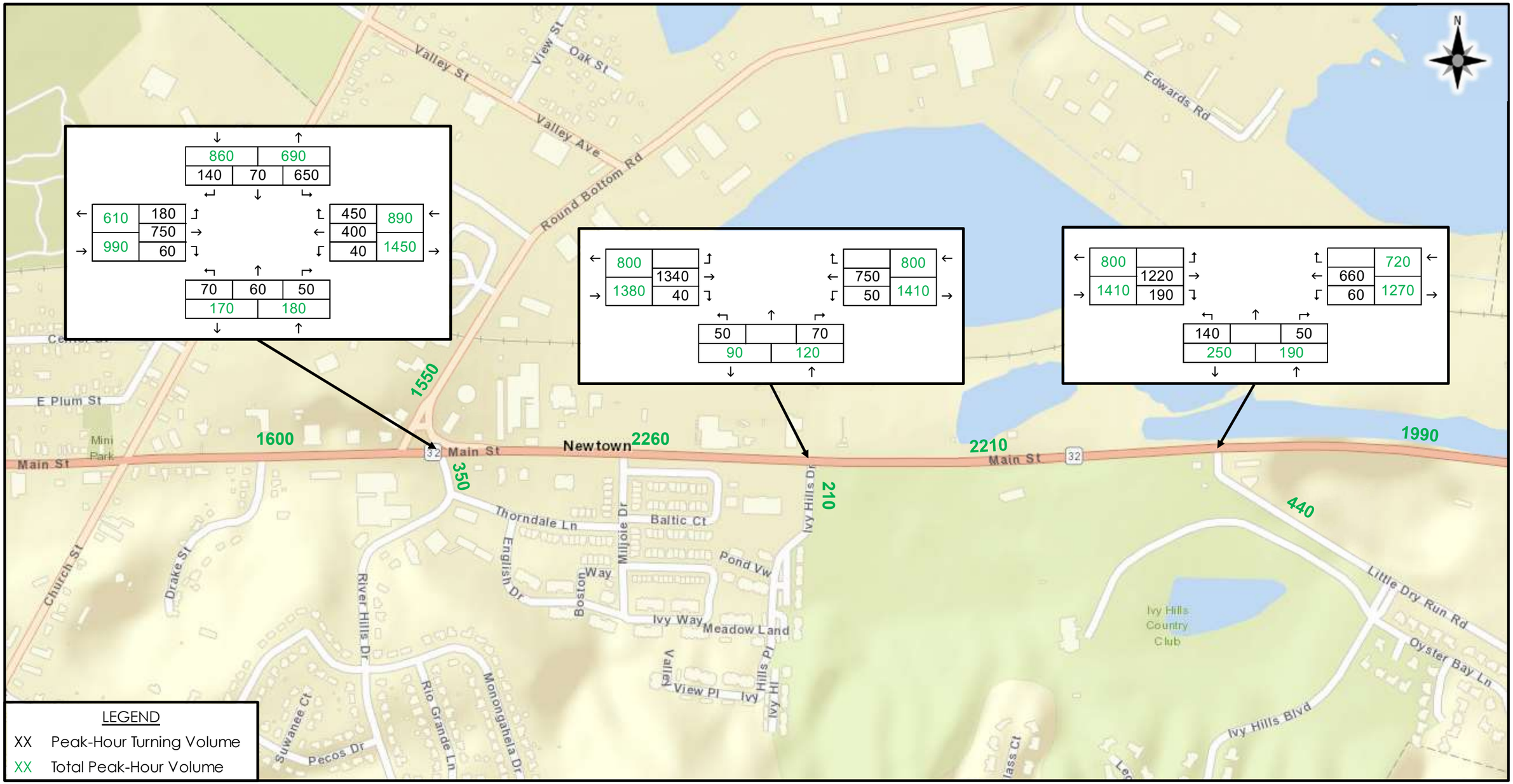
2022 OPENING YEAR

Weekday Daily



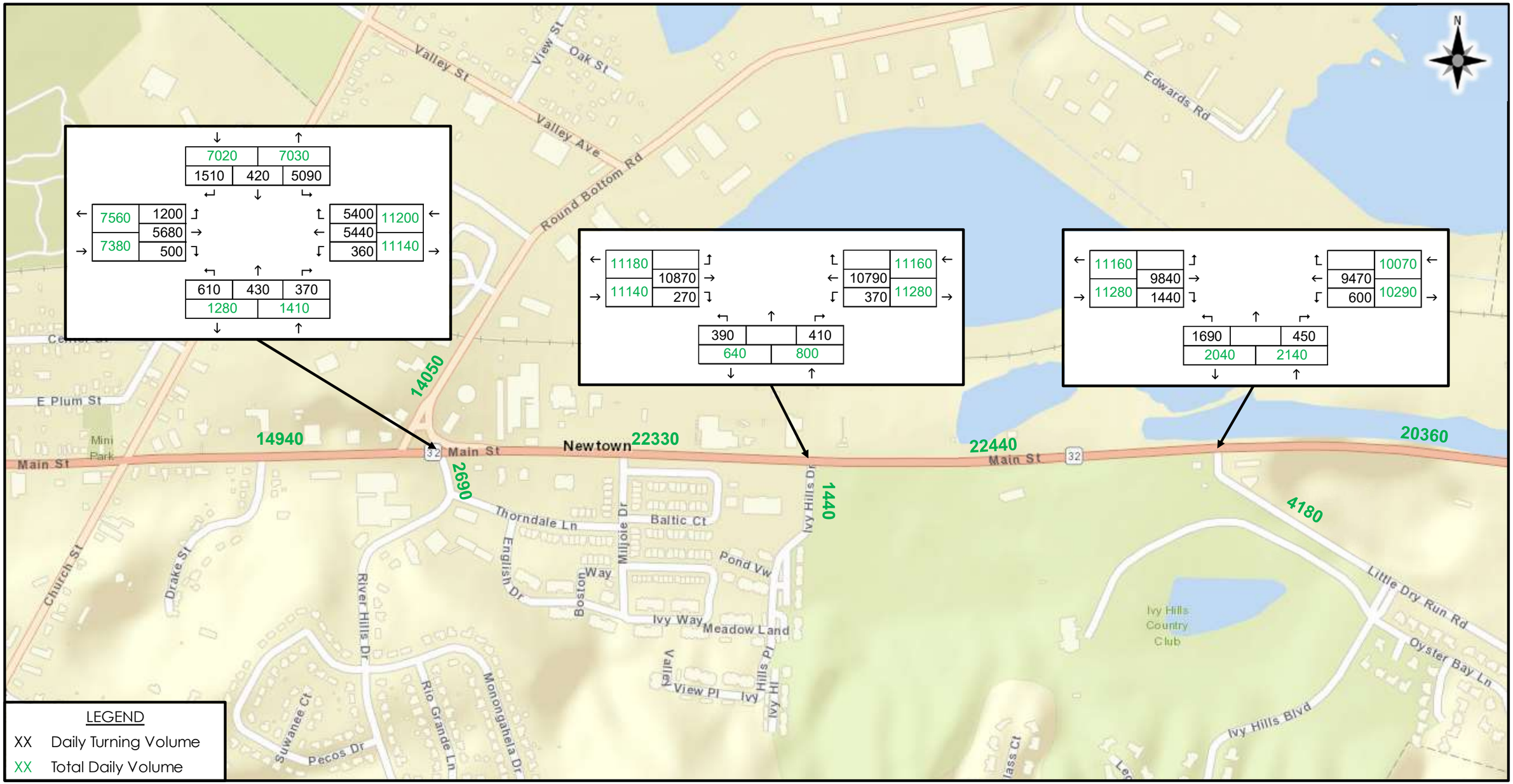
2042 DESIGN YEAR

Weekday AM Peak-Hour



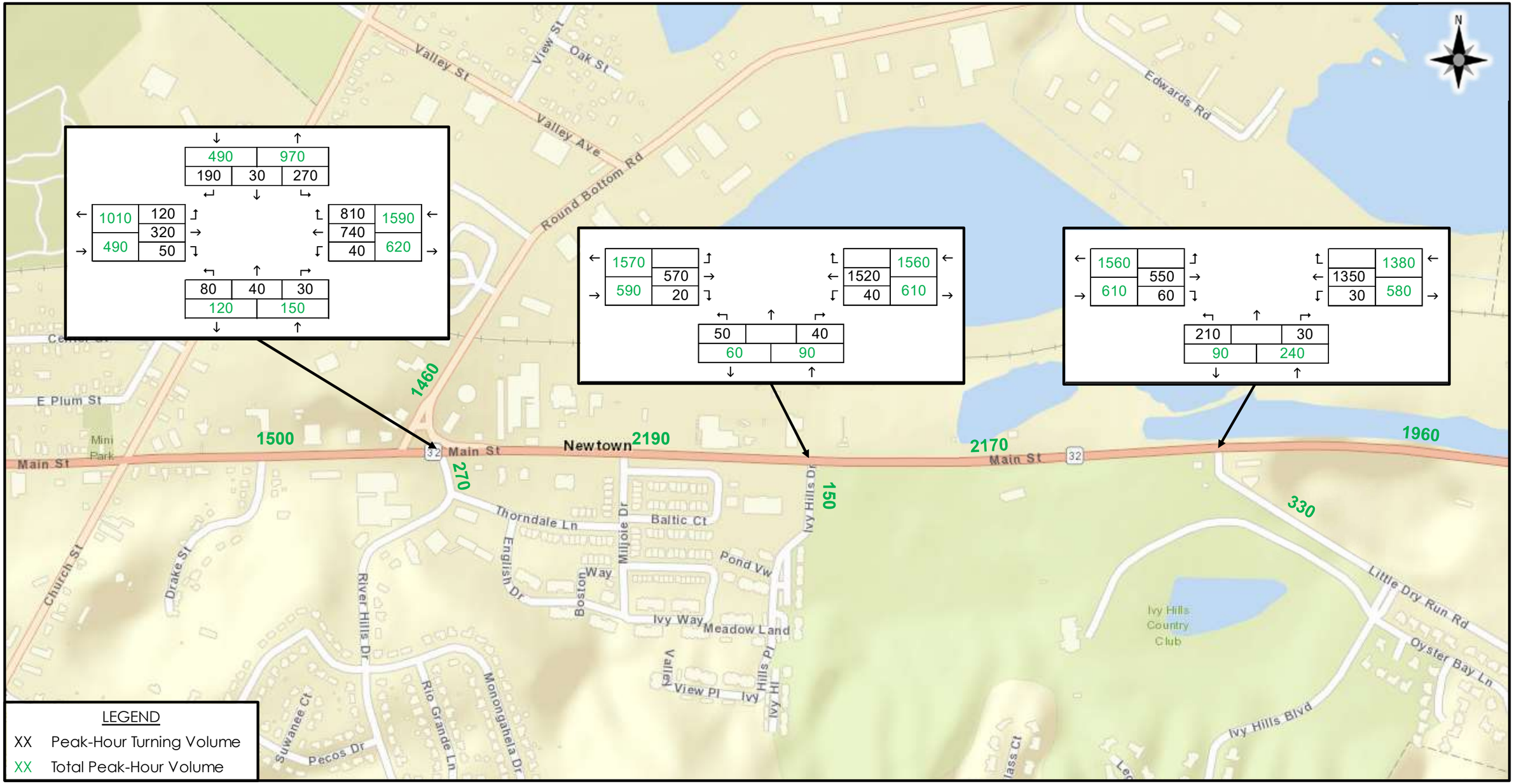
2042 DESIGN YEAR

Weekday PM Peak-Hour



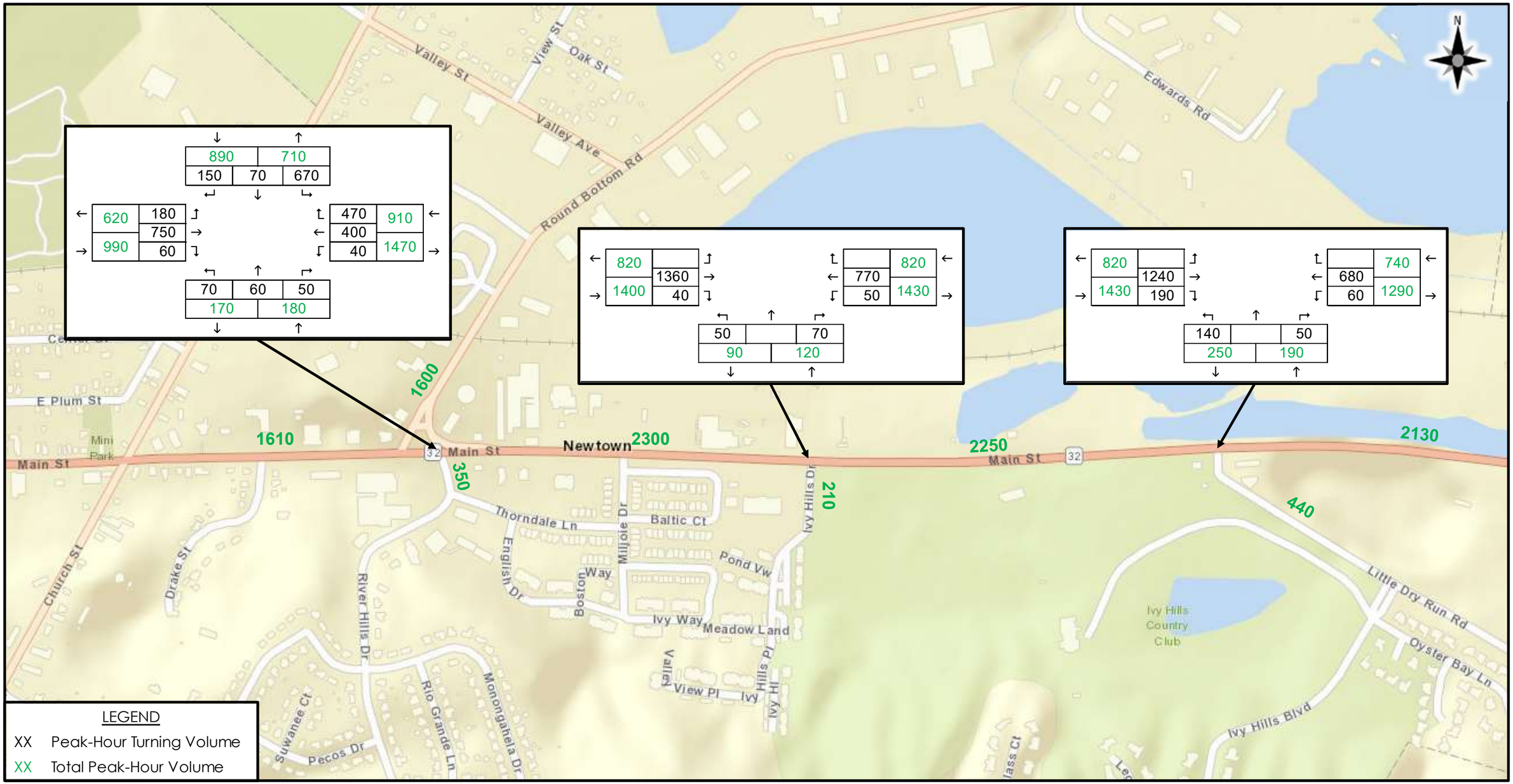
2042 DESIGN YEAR

Weekday Daily



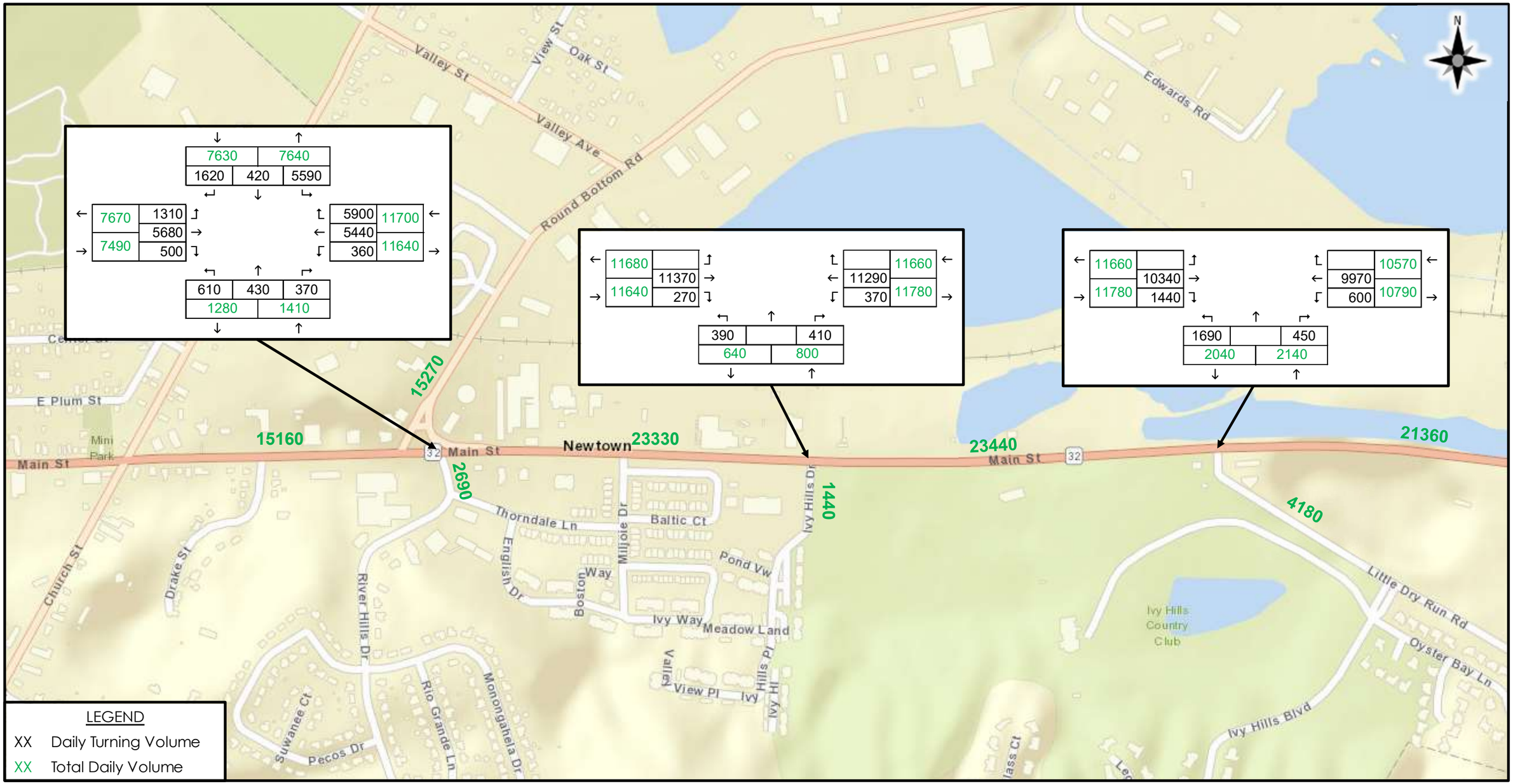
2042 DESIGN YEAR WITH MARIETTA TRAFFIC

Weekday AM Peak-Hour



2042 DESIGN YEAR WITH MARIETTA TRAFFIC

Weekday PM Peak-Hour



2042 DESIGN YEAR WITH MARIETTA TRAFFIC

Weekday Daily

APPENDIX E

MARTIN MARIETTA MATERIALS
TRIP GENERATION AND DISTRIBUTION

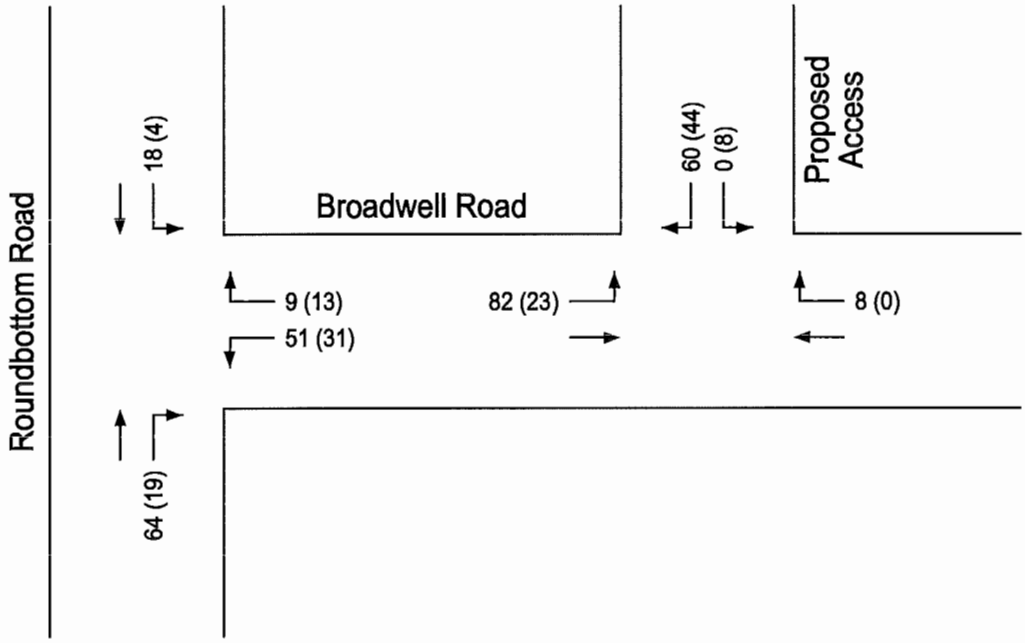


Figure 3

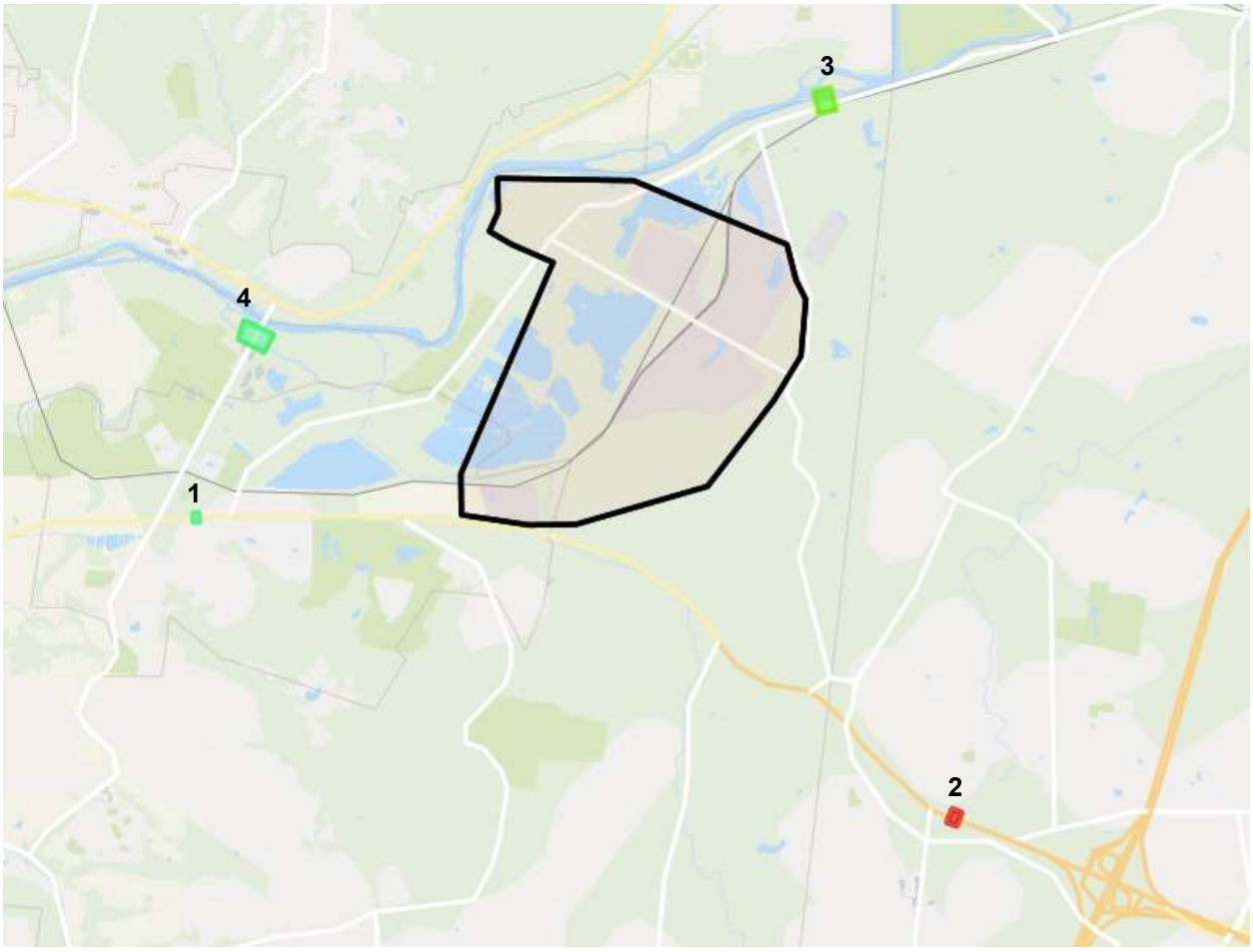
Martin-Marietta Materials, Inc.
Roundbottom Road & Broadwell Road

Site Traffic Volumes

xx - AM Peak
(xx) - PM Peak

N.T.S.

bayer becker
www.bayerbecker.com
6900 Tylersville Road, Suite A
Mason, OH 45040 - 513.336.6600



ANCOR Origin – Destination Zones

ANCOR Distribution
Personal + Commercial

O/D	Time Period	O/D	Flow Percent
ANCOR	All Day	1 - SR 32 w/o Roundbottom	13%
		2 - SR 32 w/o I-275	46%
		3 - Roundbottom n/o Mt Carmel	29%
		4 - Newtown Rd s/o US 50	12%

O/D	Time Period	O/D	Flow Percent
ANCOR	Peak AM	1 - SR 32 w/o Roundbottom	19%
		2 - SR 32 w/o I-275	47%
		3 - Roundbottom n/o Mt Carmel	19%
		4 - Newtown Rd s/o US 50	15%

O/D	Time Period	O/D	Flow Percent
ANCOR	Peak PM	1 - SR 32 w/o Roundbottom	12%
		2 - SR 32 w/o I-275	47%
		3 - Roundbottom n/o Mt Carmel	32%
		4 - Newtown Rd s/o US 50	9%

APPENDIX F

EXISTING SIGNAL TIMING

Eastern Corridor II/III Signal Timing Updates

Proposed Local Controller Data

INTERSECTION: SR 32 @ Roundbottom Road/River Hills Drive
MAINTAINING AGENCY:

START UP

START IN: ALL RED
TIME FOR FLASH OR ALL RED: 6
FIRST PHASE(S): 2, 6
COLOR DISPLAYED: GREEN

DUAL ENTRY:	YES	PHASES:	2,4,6,8		
REST IN RED:	RING 1	NO	RING 2	NO	
OVERLAP	A	B	C	D	
PHASES	-	-	-	-	

INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		WBL	EB	SBL	NB	EBL	WB	NBL	SB
MINIMUM GREEN (INITIAL)	(SEC.)	7	20	7	10	7	20	7	10
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	3.0	0.0	5.0	3.0	3.0	0.0	3.0	3.0
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	15	60	30	45	15	60	15	45
MAXIMUM GREEN II	(SEC.)	20	75	45	60	20	75	20	60
YELLOW CHANGE	(SEC.)	3.0	3.5	3.0	3.5	3.0	3.5	3.0	3.5
ALL RED CLEARANCE	(SEC.)	2.0	2.5	3.0	1.5	2.0	2.5	3.0	1.5
WALK	(SEC.)	-	12	-	-	-	-	-	-
PEDESTRIAN CLEARANCE	(SEC.)	-	20	-	-	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	-	ON	-	-	-	ON	-	-
	MINIMUM (ON/OFF)	-	-	-	-	-	-	-	-
	PEDESTRIAN (ON/OFF)	-	-	-	-	-	-	-	-
MEMORY	(ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

ECONOLITE COORD SETTINGS	
MANUAL PATTERN	FREE
SYSTEM SOURCE	SYS
SPLITS IN	SECONDS
TRANSITION	SMOOTH
DWELL/ADD TIME	0
OFFSET REFERNECE	YELLOW
PED RECALL	NO
CAL ZERO OVERRIDE	NO
RE-SYNC COUNT	0
ECPI COORD	YES
SYSTEM FORMAT	STD
OFFSET IN	SECONDS
MAX SELECT	MAXINH
FORCE OFF	FLOAT
USE PED TIME	YES
PED RESERVICE	NO
FO ADD INI GRN	NO
MULTISYNC	NO

SIEMENS COORD SETTINGS	
OPERATION	1 - AUTO
MODE (NORMAL)	0 - PERMISSIVE
MAXIMUM	0 - INHIBIT
CORRECTION	2 - SHORT WAY
OFFSET MODE	1 - END GREEN
FORCE MODE	2 - FLOATING
MAX DWELL TIME	-
YIELD PERIOD	-
MANUAL CONTROL: DIAL	-
MANUAL CONTROL: SPLIT	-
MANUAL CONTROL: OFFSET	-

Eastern Corridor II/III Signal Timing Updates
Signal Timing Summary - PROPOSED

General Notes:

1. All offsets are measured from the referenced phase **END OF GREEN / BEGINNING OF YELLOW**
2. All offsets are measured from **φ 2 & φ 6**

COORDINATION TIMING PLANS				
DAY(S) OF WEEK	PLAN NAME	HOURS	CYCLE/SPLIT/OFFSET	CYCLE LENGTH (SEC)
2,3,4,5,6	OVERNIGHT	0000-0530	-	FREE
2,3,4,5,6	AM	0530-0642	1	120
2,3,4,5,6	AM	0642-0812	11	180
2,3,4,5,6	AM	0812-0930	1	120
2,3,4,5,6	MID	0930-1400	2	100
2,3,4,5,6	PM	1400-1618	3	120
2,3,4,5,6	PM	1618-1818	13	180
2,3,4,5,6	PM	1818-1900	3	120
2,3,4,5,6	OVERNIGHT	1900-0000	-	FREE
1,7	OVERNIGHT	0000-0900	-	FREE
1,7	WEEKEND	0900-1900	4	100
1,7	OVERNIGHT	1900-0000	-	FREE
-	-	-	-	-

SR 32 @ Roundbottom Road/River Hills Drive										
PHASE	1	2	3	4	5	6	7	8	OFFSET 1 (SEC)	OFFSET 2 (SEC)
DIRECTION	WBL	EB	SBL	NB	EBL	WB	NBL	SB		
PLAN NO.	SPLITS (G+Y+AR) IN SECONDS									
1	14	61	25	20	14	61	14	31	79	-
11	14	111	38	17	14	111	17	38	72	-
2	14	42	28	16	14	42	15	29	53	-
3	14	48	42	16	16	46	14	44	33	-
13	14	80	68	18	18	76	17	69	25	-
4	14	45	25	16	14	45	15	26	53	-
-	-	-	-	-	-	-	-	-	-	-

Eastern Corridor Signal Timing Updates

Proposed Local Controller Data

INTERSECTION: SR 32 @ Ivy Hills Place
MAINTAINING AGENCY:

START UP								
START IN:	ALL RED	DUAL ENTRY:	YES	PHASES:		2,6		
TIME FOR FLASH OR ALL RED:	6	REST IN RED:		RING 1	NO		RING 2	NO
FIRST PHASE(S):	2, 6	OVERLAP			A	B	C	D
COLOR DISPLAYED:	GREEN	PHASES			-	-	-	-

INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		-	EB	-	NB	-	WB	-	-
MINIMUM GREEN (INITIAL)	(SEC.)	-	20	-	10	-	20	-	-
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	-	4.0	-	3.0	-	4.0	-	-
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	-	60	-	45	-	60	-	-
MAXIMUM GREEN II	(SEC.)	-	75	-	60	-	75	-	-
YELLOW CHANGE	(SEC.)	-	4.0	-	3.0	-	4.0	-	-
ALL RED CLEARANCE	(SEC.)	-	1.0	-	1.5	-	1.0	-	-
WALK	(SEC.)	-	-	-	9	-	-	-	-
PEDESTRIAN CLEARANCE	(SEC.)	-	-	-	10	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	-	-	-	-	-	-	-	-
	MINIMUM (ON/OFF)	-	ON	-	-	-	ON	-	-
	PEDESTRIAN (ON/OFF)	-	-	-	-	-	-	-	-
MEMORY	(ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

ECONOLITE COORD SETTINGS	
MANUAL PATTERN	FREE
SYSTEM SOURCE	SYS
SPLITS IN	SECONDS
TRANSITION	SMOOTH
DWELL/ADD TIME	0
OFFSET REFERNECE	YELLOW
PED RECALL	NO
CAL ZERO OVERRIDE	NO
RE-SYNC COUNT	0
ECPI COORD	YES
SYSTEM FORMAT	STD
OFFSET IN	SECONDS
MAX SELECT	MAXINH
FORCE OFF	FLOAT
USE PED TIME	YES
PED RESERVICE	NO
FO ADD INI GRN	NO
MULTISYNC	NO

SIEMENS COORD SETTINGS	
OPERATION	1 - AUTO
MODE (NORMAL)	0 - PERMISSIVE
MAXIMUM	0 - INHIBIT
CORRECTION	2 - SHORT WAY
OFFSET MODE	1 - END GREEN
FORCE MODE	2 - FLOATING
MAX DWELL TIME	-
YIELD PERIOD	-
MANUAL CONTROL: DIAL	-
MANUAL CONTROL: SPLIT	-
MANUAL CONTROL: OFFSET	-

Eastern Corridor Signal Timing Updates
Signal Timing Summary - PROPOSED

General Notes:

1. All offsets are measured from the referenced phase **END OF GREEN / BEGINNING OF YELLOW**
2. All offsets are measured from **φ 2 & φ 6**

COORDINATION TIMING PLANS				
DAY(S) OF WEEK	PLAN NAME	HOURS	CYCLE/SPLIT/OFFSET	CYCLE LENGTH (SEC)
2,3,4,5,6	OVERNIGHT	0000-0530	-	FREE
2,3,4,5,6	AM	0530-0642	1	120
2,3,4,5,6	AM	0642-0800	11	180
2,3,4,5,6	AM	0800-0930	1	120
2,3,4,5,6	MID	0930-1400	-	FREE
2,3,4,5,6	PM	1400-1618	3	120
2,3,4,5,6	PM	1618-1818	13	180
2,3,4,5,6	PM	1818-1900	3	120
2,3,4,5,6	OVERNIGHT	1900-0000	-	FREE
1,7	OVERNIGHT	0000-0000	-	FREE
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

SR 32 @ Ivy Hills Place										
PHASE	1	2	3	4	5	6	7	8	OFFSET 1 (SEC)	OFFSET 2 (SEC)
DIRECTION	-	EB	-	NB	-	WB	-	-		
PLAN NO.	SPLITS (G+Y+AR) IN SECONDS									
1	-	95	-	25	-	95	-	-	33	-
11	-	153	-	27	-	153	-	-	43	-
3	-	95	-	25	-	95	-	-	112	-
13	-	152	-	28	-	152	-	-	141	-
-	-	-	-	-	-	-	-	-	-	-

Eastern Corridor II/III Signal Timing Updates

Proposed Local Controller Data

INTERSECTION: SR 32 @ Little Dry Run
MAINTAINING AGENCY:

START UP								
START IN:	ALL RED	DUAL ENTRY:	YES	PHASES:		2,6		
TIME FOR FLASH OR ALL RED:	6	REST IN RED:		RING 1	NO		RING 2	NO
FIRST PHASE(S):	2, 6	OVERLAP			A	B	C	D
COLOR DISPLAYED:	GREEN	PHASES			-	-	-	-

INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		WBL	EB	-	NB	-	WB	-	-
MINIMUM GREEN (INITIAL)	(SEC.)	7	20	-	10	-	20	-	-
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	3	5.0	-	3.0	-	5.0	-	-
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	15	60	-	45	-	60	-	-
MAXIMUM GREEN II	(SEC.)	20	75	-	60	-	75	-	-
YELLOW CHANGE	(SEC.)	3.5	5.0	-	3.5	-	5.0	-	-
ALL RED CLEARANCE	(SEC.)	1.5	1.0	-	1.5	-	1.0	-	-
WALK	(SEC.)	-	-	-	-	-	-	-	-
PEDESTRIAN CLEARANCE	(SEC.)	-	-	-	-	-	-	-	-
RECALL	MAXIMUM (ON/OFF)	-	-	-	-	-	-	-	-
	MINIMUM (ON/OFF)	-	ON	-	-	-	ON	-	-
	PEDESTRIAN (ON/OFF)	-	-	-	-	-	-	-	-
MEMORY	(ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

ECONOLITE COORD SETTINGS	
MANUAL PATTERN	FREE
SYSTEM SOURCE	SYS
SPLITS IN	SECONDS
TRANSITION	SMOOTH
DWELL/ADD TIME	0
OFFSET REFERNECE	YELLOW
PED RECALL	NO
CAL ZERO OVERRIDE	NO
RE-SYNC COUNT	0
ECPI COORD	YES
SYSTEM FORMAT	STD
OFFSET IN	SECONDS
MAX SELECT	MAXINH
FORCE OFF	FLOAT
USE PED TIME	YES
PED RESERVICE	NO
FO ADD INI GRN	NO
MULTISYNC	NO

SIEMENS COORD SETTINGS	
OPERATION	1 - AUTO
MODE (NORMAL)	0 - PERMISSIVE
MAXIMUM	0 - INHIBIT
CORRECTION	2 - SHORT WAY
OFFSET MODE	1 - END GREEN
FORCE MODE	2 - FLOATING
MAX DWELL TIME	-
YIELD PERIOD	-
MANUAL CONTROL: DIAL	-
MANUAL CONTROL: SPLIT	-
MANUAL CONTROL: OFFSET	-

Eastern Corridor II/III Signal Timing Updates
Signal Timing Summary - PROPOSED

General Notes:

1. All offsets are measured from the referenced phase **END OF GREEN / BEGINNING OF YELLOW**
2. All offsets are measured from **φ 2 & φ 6**

COORDINATION TIMING PLANS				
DAY(S) OF WEEK	PLAN NAME	HOURS	CYCLE/SPLIT/OFFSET	CYCLE LENGTH (SEC)
2,3,4,5,6	OVERNIGHT	0000-0530	-	FREE
2,3,4,5,6	AM	0530-0642	1	120
2,3,4,5,6	AM	0642-0800	11	180
2,3,4,5,6	AM	0800-0930	1	120
2,3,4,5,6	MID	0930-1400	-	FREE
2,3,4,5,6	PM	1400-1618	3	120
2,3,4,5,6	PM	1618-1818	13	180
2,3,4,5,6	PM	1818-1900	3	120
2,3,4,5,6	OVERNIGHT	1900-0000	-	FREE
1,7	OVERNIGHT	0000-0000	-	FREE
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

SR 32 @ Little Dry Run										
PHASE	1	2	3	4	5	6	7	8	OFFSET 1 (SEC)	OFFSET 2 (SEC)
DIRECTION	WBL	EB	-	NB	-	WB	-	-		
PLAN NO.	SPLITS (G+Y+AR) IN SECONDS									
1	14	79	0	27	0	93	0	0	13	-
11	14	129	0	37	0	143	0	0	163	-
3	14	79	0	27	0	93	0	0	13	-
13	15	135	0	30	0	150	0	0	156	-
-	-	-	-	-	-	-	-	-	-	-

APPENDIX G

2020 EXISTING
SYNCHRO SUMMARY WORKSHEETS

HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	280	40	30	650	690	60	30	20	210	20	0
Future Volume (veh/h)	100	280	40	30	650	690	60	30	20	210	20	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1796	1900	1900	1826	1856	1870	1900	1900	1752	1900	0
Adj Flow Rate, veh/h	108	301	43	32	699	0	65	32	22	226	22	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	7	0	0	5	3	2	0	0	10	0	0
Cap, veh/h	563	1001	143	609	1175		195	58	40	306	289	0
Arrive On Green	0.01	0.21	0.21	0.05	1.00	0.00	0.04	0.06	0.06	0.14	0.15	0.00
Sat Flow, veh/h	1697	1537	220	1810	1826	1572	1781	1049	721	1668	1900	0
Grp Volume(v), veh/h	108	0	344	32	699	0	65	0	54	226	22	0
Grp Sat Flow(s),veh/h/ln	1697	0	1757	1810	1826	1572	1781	0	1770	1668	1900	0
Q Serve(g_s), s	3.8	0.0	29.6	1.0	0.0	0.0	6.1	0.0	5.3	22.4	1.8	0.0
Cycle Q Clear(g_c), s	3.8	0.0	29.6	1.0	0.0	0.0	6.1	0.0	5.3	22.4	1.8	0.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.41	1.00		0.00
Lane Grp Cap(c), veh/h	563	0	1144	609	1175		195	0	98	306	289	0
V/C Ratio(X)	0.19	0.00	0.30	0.05	0.59		0.33	0.00	0.55	0.74	0.08	0.00
Avail Cap(c_a), veh/h	583	0	1144	643	1175		226	0	118	369	348	0
HCM Platoon Ratio	0.33	0.33	0.33	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.00	0.86	0.35	0.35	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.0	0.0	36.3	11.7	0.0	0.0	75.8	0.0	82.8	65.7	65.5	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.6	0.0	0.8	0.0	1.0	0.0	4.7	9.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	0.0	20.0	0.8	0.5	0.0	5.2	0.0	4.7	15.7	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.1	0.0	36.8	11.7	0.8	0.0	76.8	0.0	87.5	74.6	65.6	0.0
LnGrp LOS	B	A	D	B	A		E	A	F	E	E	A
Approach Vol, veh/h		452			731	A		119			248	
Approach Delay, s/veh		30.5			1.3			81.7			73.8	
Approach LOS		C			A			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	123.2	31.2	15.0	12.0	121.8	13.9	32.4
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.0	105.0	32.0	12.0	9.0	105.0	11.0	33.0
Max Q Clear Time (g_c+I1), s	3.0	31.6	24.4	7.3	5.8	2.0	8.1	3.8
Green Ext Time (p_c), s	0.0	0.4	0.8	0.1	0.1	1.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

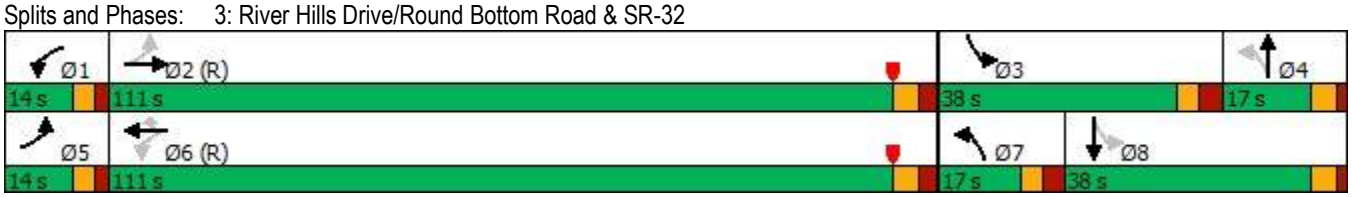
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	280	40	30	650	690	60	30	20	210	20	0
Future Volume (vph)	100	280	40	30	650	690	60	30	20	210	20	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		175	150		0	325		250
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981				0.850		0.939				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	1756	0	1805	1810	1568	1770	1784	0	1641	1900	0
Flt Permitted	0.256			0.520			0.743			0.432		
Satd. Flow (perm)	450	1756	0	988	1810	1568	1384	1784	0	746	1900	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				408		15				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	8%	7%	0%	0%	5%	3%	2%	0%	0%	10%	0%	19%
Adj. Flow (vph)	108	301	43	32	699	742	65	32	22	226	22	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	344	0	32	699	742	65	54	0	226	22	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6	4			8		
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	58.0		12.0	58.0	58.0	14.0	15.0		13.0	15.0	
Total Split (s)	14.0	111.0		14.0	111.0	111.0	17.0	17.0		38.0	38.0	
Total Split (%)	7.8%	61.7%		7.8%	61.7%	61.7%	9.4%	9.4%		21.1%	21.1%	
Maximum Green (s)	9.0	105.0		9.0	105.0	105.0	11.0	12.0		32.0	33.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	124.6	116.5		120.9	112.8	112.8	26.0	10.6		38.7	22.7	
Actuated g/C Ratio	0.69	0.65		0.67	0.63	0.63	0.14	0.06		0.22	0.13	
v/c Ratio	0.29	0.30		0.05	0.62	0.65	0.27	0.45		0.74	0.09	
Control Delay	9.7	15.5		11.3	22.9	10.8	57.0	72.1		77.7	64.8	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	9.7	15.5		11.3	22.9	10.8	57.0	72.1		77.7	64.8	
LOS	A	B		B	C	B	E	E		E	E	
Approach Delay		14.1			16.5			63.8			76.6	
Approach LOS		B			B			E			E	
Queue Length 50th (ft)	23	241		12	431	227	61	45		237	23	
Queue Length 95th (ft)	m87	m288		m16	m568	m222	104	97		323	51	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		175	150			325		
Base Capacity (vph)	372	1139		715	1134	1134	243	132		329	348	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.29	0.30		0.04	0.62	0.65	0.27	0.41		0.69	0.06	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 72 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 25.0 Intersection LOS: C
Intersection Capacity Utilization 71.7% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	640	50	30	350	410	50	50	40	570	60	0
Future Volume (veh/h)	150	640	50	30	350	410	50	50	40	570	60	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1900	1900	1885	1826	1900	1870	1900	1885	1841	0
Adj Flow Rate, veh/h	160	681	53	32	372	0	53	53	43	606	64	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	1	0	0	1	5	0	2	0	1	4	0
Cap, veh/h	382	784	61	303	791		195	63	51	642	657	0
Arrive On Green	0.13	0.91	0.91	0.01	0.14	0.00	0.04	0.07	0.07	0.33	0.36	0.00
Sat Flow, veh/h	1711	1727	134	1810	1885	1547	1810	956	775	1795	1841	0
Grp Volume(v), veh/h	160	0	734	32	372	0	53	0	96	606	64	0
Grp Sat Flow(s),veh/h/ln	1711	0	1861	1810	1885	1547	1810	0	1731	1795	1841	0
Q Serve(g_s), s	9.7	0.0	31.1	1.8	32.7	0.0	4.9	0.0	9.9	54.7	4.2	0.0
Cycle Q Clear(g_c), s	9.7	0.0	31.1	1.8	32.7	0.0	4.9	0.0	9.9	54.7	4.2	0.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	382	0	845	303	791		195	0	115	642	657	0
V/C Ratio(X)	0.42	0.00	0.87	0.11	0.47		0.27	0.00	0.84	0.94	0.10	0.00
Avail Cap(c_a), veh/h	394	0	845	337	791		241	0	125	673	657	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.51	0.00	0.51	0.87	0.87	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	27.2	0.0	6.0	30.1	59.1	0.0	74.7	0.0	83.1	48.8	38.6	0.0
Incr Delay (d2), s/veh	0.4	0.0	6.5	0.1	1.7	0.0	0.7	0.0	35.0	22.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.0	0.0	7.4	1.5	23.5	0.0	4.2	0.0	9.5	37.6	3.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	0.0	12.5	30.2	60.9	0.0	75.5	0.0	118.1	71.2	38.6	0.0
LnGrp LOS	C	A	B	C	E		E	A	F	E	D	A
Approach Vol, veh/h		894			404	A		149			670	
Approach Delay, s/veh		15.2			58.4			102.9			68.1	
Approach LOS		B			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	87.7	64.8	16.9	16.8	81.5	12.5	69.2
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.0	74.0	62.0	13.0	13.0	70.0	11.0	64.0
Max Q Clear Time (g_c+I1), s	3.8	33.1	56.7	11.9	11.7	34.7	6.9	6.2
Green Ext Time (p_c), s	0.0	1.0	2.2	0.0	0.1	0.4	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	46.4
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

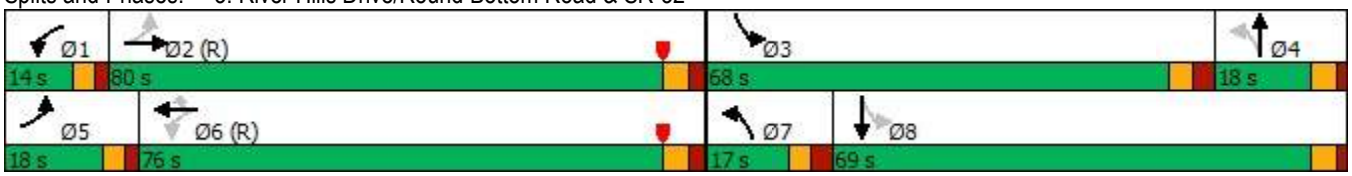
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	640	50	30	350	410	50	50	40	570	60	0
Future Volume (vph)	150	640	50	30	350	410	50	50	40	570	60	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		175	150		0	325		250
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989				0.850		0.933				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	1862	0	1805	1881	1538	1805	1753	0	1787	1827	0
Flt Permitted	0.359			0.092			0.715			0.321		
Satd. Flow (perm)	637	1862	0	175	1881	1538	1358	1753	0	604	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				307		17				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	1%	0%	0%	1%	5%	0%	2%	0%	1%	4%	2%
Adj. Flow (vph)	160	681	53	32	372	436	53	53	43	606	64	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	160	734	0	32	372	436	53	96	0	606	64	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6	4			8		
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	38.0		12.0	26.0	26.0	13.0	15.0		13.0	15.0	
Total Split (s)	18.0	80.0		14.0	76.0	76.0	17.0	18.0		68.0	69.0	
Total Split (%)	10.0%	44.4%		7.8%	42.2%	42.2%	9.4%	10.0%		37.8%	38.3%	
Maximum Green (s)	13.0	74.0		9.0	70.0	70.0	11.0	13.0		62.0	64.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	93.4	82.4		83.9	75.4	75.4	19.8	12.1		75.4	64.3	
Actuated g/C Ratio	0.52	0.46		0.47	0.42	0.42	0.11	0.07		0.42	0.36	
v/c Ratio	0.40	0.86		0.21	0.47	0.53	0.31	0.72		0.95	0.10	
Control Delay	22.2	39.1		28.0	45.3	20.4	44.1	95.8		72.1	39.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	22.2	39.1		28.0	45.3	20.4	44.1	95.8		72.1	39.1	
LOS	C	D		C	D	C	D	F		E	D	
Approach Delay		36.1			31.7			77.4			69.0	
Approach LOS		D			C			E			E	
Queue Length 50th (ft)	62	586		23	372	192	36	93		599	50	
Queue Length 95th (ft)	m99	#1099		45	495	327	66	#176		#830	90	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		175	150			325		
Base Capacity (vph)	406	854		164	787	822	193	142		660	659	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.39	0.86		0.20	0.47	0.53	0.27	0.68		0.92	0.10	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 25 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 45.7 Intersection LOS: D
Intersection Capacity Utilization 94.1% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	480	10	30	1340	40	30
Future Volume (veh/h)	480	10	30	1340	40	30
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	1781	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	522	11	33	1457	43	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	0	3	0	0
Cap, veh/h	1551	33	830	1656	53	40
Arrive On Green	1.00	1.00	1.00	1.00	0.05	0.05
Sat Flow, veh/h	1738	37	885	1856	960	737
Grp Volume(v), veh/h	0	533	33	1457	77	0
Grp Sat Flow(s),veh/h/ln	0	1775	885	1856	1719	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.0	0.0
Prop In Lane		0.02	1.00		0.56	0.43
Lane Grp Cap(c), veh/h	0	1584	830	1656	94	0
V/C Ratio(X)	0.00	0.34	0.04	0.88	0.82	0.00
Avail Cap(c_a), veh/h	0	1584	830	1656	215	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.00	0.88	0.45	0.45	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	84.2	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	3.4	15.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.4	0.0	2.8	7.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	0.5	0.0	3.4	99.5	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	533			1490	77	
Approach Delay, s/veh	0.5			3.3	99.5	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		165.6		14.4		165.6
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		148.0		22.5		148.0
Max Q Clear Time (g_c+I1), s		2.0		10.0		2.0
Green Ext Time (p_c), s		5.9		0.1		73.4

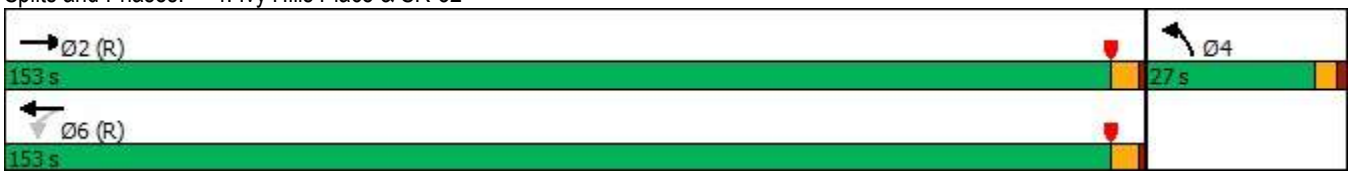
Intersection Summary	
HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	480	10	30	1340	40	30
Future Volume (vph)	480	10	30	1340	40	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.997				0.941	
Flt Protected			0.950		0.972	
Satd. Flow (prot)	1757	0	1805	1845	1738	0
Flt Permitted			0.453		0.972	
Satd. Flow (perm)	1757	0	861	1845	1738	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				18	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	0%	0%	3%	0%	0%
Adj. Flow (vph)	522	11	33	1457	43	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	533	0	33	1457	76	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	66.0		66.0	66.0	24.5	
Total Split (s)	153.0		153.0	153.0	27.0	
Total Split (%)	85.0%		85.0%	85.0%	15.0%	
Maximum Green (s)	148.0		148.0	148.0	22.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	158.2		158.2	158.2	12.3	
Actuated g/C Ratio	0.88		0.88	0.88	0.07	
v/c Ratio	0.35		0.04	0.90	0.56	
Control Delay	3.6		1.3	15.3	77.3	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	3.6		1.3	15.3	77.3	
LOS	A		A	B	E	
Approach Delay	3.6			15.0	77.3	
Approach LOS	A			B	E	
Queue Length 50th (ft)	257		2	1193	68	
Queue Length 95th (ft)	45		m4	1839	126	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	1544		756	1621	233	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.35		0.04	0.90	0.33	

Intersection Summary	
Area Type: Other	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 43 (24%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 135	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 86.8%	ICU Level of Service E
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1160	30	40	670	40	50
Future Volume (veh/h)	1160	30	40	670	40	50
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	1870	1900	1900	1841	1856	1900
Adj Flow Rate, veh/h	1275	33	44	736	44	55
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	0	4	3	0
Cap, veh/h	1590	41	414	1612	52	65
Arrive On Green	1.00	1.00	1.00	1.00	0.07	0.07
Sat Flow, veh/h	1815	47	427	1841	728	910
Grp Volume(v), veh/h	0	1308	44	736	100	0
Grp Sat Flow(s),veh/h/ln	0	1862	427	1841	1655	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.7	0.0
Prop In Lane		0.03	1.00		0.44	0.55
Lane Grp Cap(c), veh/h	0	1631	414	1612	118	0
V/C Ratio(X)	0.00	0.80	0.11	0.46	0.85	0.00
Avail Cap(c_a), veh/h	0	1631	414	1612	216	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.00	0.31	0.89	0.89	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	82.6	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.5	0.8	15.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	1.1	0.1	0.7	8.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	1.4	0.5	0.8	97.7	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	1308			780	100	
Approach Delay, s/veh	1.4			0.8	97.7	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		162.7		17.3		162.7
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		147.0		23.5		147.0
Max Q Clear Time (g_c+I1), s		2.0		12.7		2.0
Green Ext Time (p_c), s		46.1		0.2		11.4

Intersection Summary	
HCM 6th Ctrl Delay	5.6
HCM 6th LOS	A

Notes

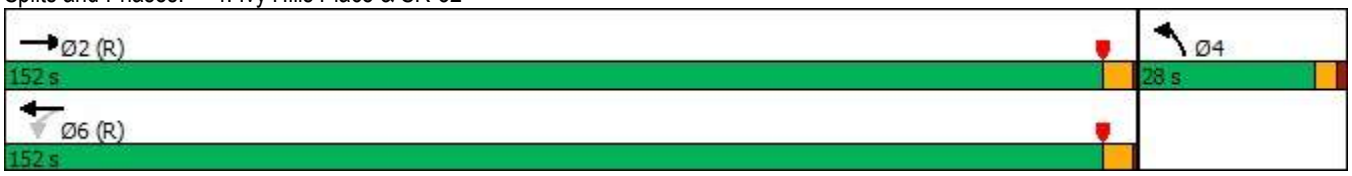
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1160	30	40	670	40	50
Future Volume (vph)	1160	30	40	670	40	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.997				0.925	
Flt Protected			0.950		0.978	
Satd. Flow (prot)	1858	0	1805	1827	1696	0
Flt Permitted			0.144		0.978	
Satd. Flow (perm)	1858	0	274	1827	1696	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				29	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	0%	0%	4%	3%	0%
Adj. Flow (vph)	1275	33	44	736	44	55
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1308	0	44	736	99	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	25.0		25.0	25.0	23.5	
Total Split (s)	152.0		152.0	152.0	28.0	
Total Split (%)	84.4%		84.4%	84.4%	15.6%	
Maximum Green (s)	147.0		147.0	147.0	23.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	156.9		156.9	156.9	13.6	
Actuated g/C Ratio	0.87		0.87	0.87	0.08	
v/c Ratio	0.81		0.18	0.46	0.64	
Control Delay	4.8		3.5	3.0	75.2	
Queue Delay	0.3		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	5.1		3.5	3.0	75.2	
LOS	A		A	A	E	
Approach Delay	5.1			3.1	75.2	
Approach LOS	A			A	E	
Queue Length 50th (ft)	54		5	107	82	
Queue Length 95th (ft)	107		15	181	148	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	1620		238	1593	246	
Starvation Cap Reductn	51		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.83		0.18	0.46	0.40	

Intersection Summary	
Area Type:	Other
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 141 (78%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 7.5	Intersection LOS: A
Intersection Capacity Utilization 79.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	460	50	20	1180	190	20
Future Volume (veh/h)	460	50	20	1180	190	20
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	1781	1574	1826	1841	1885	1737
Adj Flow Rate, veh/h	474	52	21	1216	196	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	22	5	4	1	11
Cap, veh/h	1206	132	738	1505	218	178
Arrive On Green	1.00	1.00	0.03	0.82	0.12	0.12
Sat Flow, veh/h	1577	173	1739	1841	1795	1472
Grp Volume(v), veh/h	0	526	21	1216	196	21
Grp Sat Flow(s),veh/h/ln	0	1750	1739	1841	1795	1472
Q Serve(g_s), s	0.0	0.0	0.4	63.9	19.4	2.3
Cycle Q Clear(g_c), s	0.0	0.0	0.4	63.9	19.4	2.3
Prop In Lane		0.10	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1338	738	1505	218	178
V/C Ratio(X)	0.00	0.39	0.03	0.81	0.90	0.12
Avail Cap(c_a), veh/h	0	1338	781	1505	319	262
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.95	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	3.6	8.8	78.0	70.5
Incr Delay (d2), s/veh	0.0	0.8	0.0	4.8	20.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.6	0.2	28.7	15.5	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	0.8	3.6	13.6	98.4	70.8
LnGrp LOS	A	A	A	B	F	E
Approach Vol, veh/h	526			1237	217	
Approach Delay, s/veh	0.8			13.4	95.7	
Approach LOS	A			B	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	143.6		26.8		153.2
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	123.0		32.0		137.0
Max Q Clear Time (g_c+I1), s	2.4	2.0		21.4		65.9
Green Ext Time (p_c), s	0.0	7.6		0.4		37.7

Intersection Summary			
HCM 6th Ctrl Delay			19.1
HCM 6th LOS			B

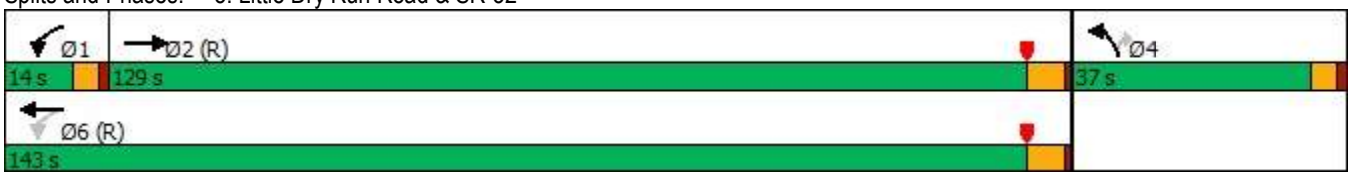
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	460	50	20	1180	190	20
Future Volume (vph)	460	50	20	1180	190	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		125	0
Storage Lanes		0	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.987					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1714	0	1719	1827	1787	1455
Flt Permitted			0.410		0.950	
Satd. Flow (perm)	1714	0	742	1827	1787	1455
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	7					21
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	8%	22%	5%	4%	1%	11%
Adj. Flow (vph)	474	52	21	1216	196	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	526	0	21	1216	196	21
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Detector Phase	2		1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0		7.0	20.0	10.0	10.0
Minimum Split (s)	66.5		12.0	66.5	15.0	15.0
Total Split (s)	129.0		14.0	143.0	37.0	37.0
Total Split (%)	71.7%		7.8%	79.4%	20.6%	20.6%
Maximum Green (s)	123.0		9.0	137.0	32.0	32.0
Yellow Time (s)	5.0		3.5	5.0	3.5	3.5
All-Red Time (s)	1.0		1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		3.0	5.0	3.0	3.0
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	137.0		145.2	144.2	24.8	24.8
Actuated g/C Ratio	0.76		0.81	0.80	0.14	0.14
v/c Ratio	0.40		0.03	0.83	0.80	0.10
Control Delay	8.5		4.3	18.4	97.6	21.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	8.5		4.3	18.4	97.6	21.9
LOS	A		A	B	F	C
Approach Delay	8.5			18.1	90.3	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	A			B	F	
Queue Length 50th (ft)	88		4	759	228	0
Queue Length 95th (ft)	306		13	1244	312	29
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		125	
Base Capacity (vph)	1306		647	1463	317	275
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.40		0.03	0.83	0.62	0.08

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 163 (91%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 23.5 Intersection LOS: C
Intersection Capacity Utilization 81.8% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 5: Little Dry Run Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1050	160	50	590	120	40
Future Volume (veh/h)	1050	160	50	590	120	40
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	1870	1870	1900	1856	1841	1767
Adj Flow Rate, veh/h	1082	165	52	608	124	41
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	3	4	9
Cap, veh/h	1256	192	464	1589	145	124
Arrive On Green	1.00	1.00	0.04	0.86	0.08	0.08
Sat Flow, veh/h	1585	242	1810	1856	1753	1497
Grp Volume(v), veh/h	0	1247	52	608	124	41
Grp Sat Flow(s),veh/h/ln	0	1827	1810	1856	1753	1497
Q Serve(g_s), s	0.0	0.0	0.9	12.6	12.6	4.6
Cycle Q Clear(g_c), s	0.0	0.0	0.9	12.6	12.6	4.6
Prop In Lane		0.13	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1448	464	1589	145	124
V/C Ratio(X)	0.00	0.86	0.11	0.38	0.86	0.33
Avail Cap(c_a), veh/h	0	1448	499	1589	243	208
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.49	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	2.4	2.8	81.5	77.9
Incr Delay (d2), s/veh	0.0	3.6	0.1	0.7	14.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	2.6	0.4	6.1	10.4	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	3.6	2.5	3.5	95.6	79.4
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	1247			660	165	
Approach Delay, s/veh	3.6			3.4	91.5	
Approach LOS	A			A	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.5	148.7		19.9		160.1
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	10.0	129.0		25.0		144.0
Max Q Clear Time (g_c+I1), s	2.9	2.0		14.6		14.6
Green Ext Time (p_c), s	0.0	52.3		0.3		9.3

Intersection Summary	
HCM 6th Ctrl Delay	10.5
HCM 6th LOS	B

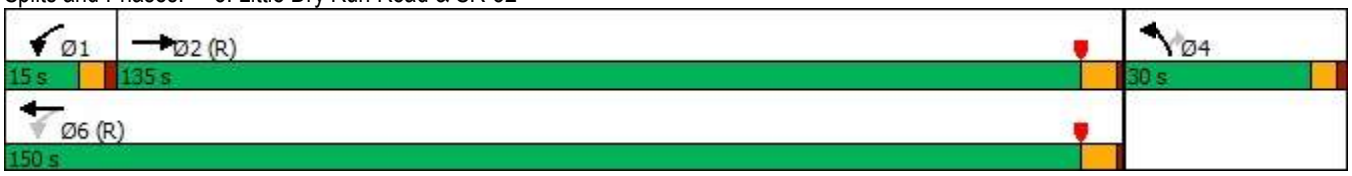
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1050	160	50	590	120	40
Future Volume (vph)	1050	160	50	590	120	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		125	0
Storage Lanes		0	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.982					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1829	0	1805	1845	1736	1482
Flt Permitted			0.091		0.950	
Satd. Flow (perm)	1829	0	173	1845	1736	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	11					41
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	0%	3%	4%	9%
Adj. Flow (vph)	1082	165	52	608	124	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1247	0	52	608	124	41
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Detector Phase	2		1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0		7.0	20.0	10.0	10.0
Minimum Split (s)	26.0		12.0	26.0	15.0	15.0
Total Split (s)	135.0		15.0	150.0	30.0	30.0
Total Split (%)	75.0%		8.3%	83.3%	16.7%	16.7%
Maximum Green (s)	129.0		10.0	144.0	25.0	25.0
Yellow Time (s)	5.0		3.5	5.0	3.5	3.5
All-Red Time (s)	1.0		1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		3.0	5.0	3.0	3.0
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	140.8		151.9	150.9	18.1	18.1
Actuated g/C Ratio	0.78		0.84	0.84	0.10	0.10
v/c Ratio	0.87		0.24	0.39	0.71	0.22
Control Delay	13.6		5.4	4.7	99.4	20.4
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	13.6		5.4	4.7	99.4	20.4
LOS	B		A	A	F	C
Approach Delay	13.6			4.7	79.8	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			A	E	
Queue Length 50th (ft)	836		8	146	145	0
Queue Length 95th (ft)	#1690		20	237	215	41
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		125	
Base Capacity (vph)	1433		236	1546	241	241
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.87		0.22	0.39	0.51	0.17

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 156 (87%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 16.0 Intersection LOS: B
Intersection Capacity Utilization 82.5% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Little Dry Run Road & SR-32



APPENDIX H

NO-BUILD
SYNCHRO SUMMARY WORKSHEETS

2022 NO-BUILD

HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	300	40	30	700	720	60	30	20	220	20	0
Future Volume (veh/h)	100	300	40	30	700	720	60	30	20	220	20	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1796	1900	1900	1826	1856	1870	1900	1900	1752	1900	0
Adj Flow Rate, veh/h	108	323	43	32	753	0	65	32	22	237	22	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	7	0	0	5	3	2	0	0	10	0	0
Cap, veh/h	537	1002	133	581	1164		195	58	40	316	300	0
Arrive On Green	0.01	0.21	0.21	0.05	1.00	0.00	0.04	0.06	0.06	0.15	0.16	0.00
Sat Flow, veh/h	1697	1552	207	1810	1826	1572	1781	1049	721	1668	1900	0
Grp Volume(v), veh/h	108	0	366	32	753	0	65	0	54	237	22	0
Grp Sat Flow(s),veh/h/ln	1697	0	1759	1810	1826	1572	1781	0	1770	1668	1900	0
Q Serve(g_s), s	3.9	0.0	31.6	1.1	0.0	0.0	6.1	0.0	5.3	23.5	1.8	0.0
Cycle Q Clear(g_c), s	3.9	0.0	31.6	1.1	0.0	0.0	6.1	0.0	5.3	23.5	1.8	0.0
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.41	1.00		0.00
Lane Grp Cap(c), veh/h	537	0	1135	581	1164		195	0	98	316	300	0
V/C Ratio(X)	0.20	0.00	0.32	0.06	0.65		0.33	0.00	0.55	0.75	0.07	0.00
Avail Cap(c_a), veh/h	556	0	1135	615	1164		226	0	118	369	348	0
HCM Platoon Ratio	0.33	0.33	0.33	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.00	0.83	0.26	0.26	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.3	0.0	37.6	12.4	0.0	0.0	75.8	0.0	82.8	65.2	64.6	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.6	0.0	0.7	0.0	1.0	0.0	4.7	9.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	0.0	21.2	0.8	0.4	0.0	5.2	0.0	4.7	16.4	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	0.0	38.2	12.4	0.7	0.0	76.8	0.0	87.5	74.9	64.7	0.0
LnGrp LOS	B	A	D	B	A		E	A	F	E	E	A
Approach Vol, veh/h		474			785	A		119			259	
Approach Delay, s/veh		31.9			1.2			81.7			74.0	
Approach LOS		C			A			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	122.1	32.3	15.0	12.0	120.8	13.9	33.4
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.0	105.0	32.0	12.0	9.0	105.0	11.0	33.0
Max Q Clear Time (g_c+I1), s	3.1	33.6	25.5	7.3	5.9	2.0	8.1	3.8
Green Ext Time (p_c), s	0.0	0.5	0.8	0.1	0.1	1.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
3: River Hills Drive/Round Bottom Road & SR-32

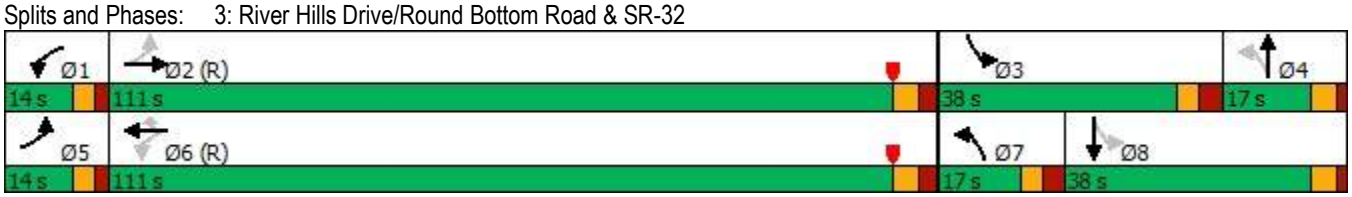
08/05/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	300	40	30	700	720	60	30	20	220	20	0
Future Volume (vph)	100	300	40	30	700	720	60	30	20	220	20	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		175	150		0	325		250
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982				0.850		0.939				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	1757	0	1805	1810	1568	1770	1784	0	1641	1900	0
Flt Permitted	0.222			0.502			0.743			0.432		
Satd. Flow (perm)	391	1757	0	954	1810	1568	1384	1784	0	746	1900	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				395		15				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	8%	7%	0%	0%	5%	3%	2%	0%	0%	10%	0%	19%
Adj. Flow (vph)	108	323	43	32	753	774	65	32	22	237	22	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	366	0	32	753	774	65	54	0	237	22	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6	4			8		
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	58.0		12.0	58.0	58.0	14.0	15.0		13.0	15.0	
Total Split (s)	14.0	111.0		14.0	111.0	111.0	17.0	17.0		38.0	38.0	
Total Split (%)	7.8%	61.7%		7.8%	61.7%	61.7%	9.4%	9.4%		21.1%	21.1%	
Maximum Green (s)	9.0	105.0		9.0	105.0	105.0	11.0	12.0		32.0	33.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	124.0	115.9		120.3	112.2	112.2	26.5	10.6		39.3	22.9	
Actuated g/C Ratio	0.69	0.64		0.67	0.62	0.62	0.15	0.06		0.22	0.13	
v/c Ratio	0.33	0.32		0.05	0.67	0.69	0.26	0.45		0.76	0.09	
Control Delay	11.0	17.1		11.0	24.1	11.8	56.5	72.1		79.1	64.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	11.0	17.1		11.0	24.1	11.8	56.5	72.1		79.1	64.7	
LOS	B	B		B	C	B	E	E		E	E	
Approach Delay		15.7			17.7			63.6			77.9	
Approach LOS		B			B			E			E	
Queue Length 50th (ft)	24	254		13	458	267	61	45		248	22	
Queue Length 95th (ft)	m90	m319		m13	m595	m245	104	97		339	51	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		175	150			325		
Base Capacity (vph)	333	1133		690	1128	1126	247	132		329	348	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.32	0.32		0.05	0.67	0.69	0.26	0.41		0.72	0.06	

Intersection Summary	
Area Type:	Other
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 72 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 26.1	Intersection LOS: C
Intersection Capacity Utilization 74.9%	ICU Level of Service D
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	700	50	30	380	430	60	50	40	590	60	0
Future Volume (veh/h)	160	700	50	30	380	430	60	50	40	590	60	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1900	1900	1885	1826	1900	1870	1900	1885	1841	0
Adj Flow Rate, veh/h	170	745	53	32	404	0	64	53	43	628	64	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	1	0	0	1	5	0	2	0	1	4	0
Cap, veh/h	355	775	55	179	766		206	63	51	656	661	0
Arrive On Green	0.14	0.89	0.89	0.01	0.13	0.00	0.04	0.07	0.07	0.34	0.36	0.00
Sat Flow, veh/h	1711	1739	124	1810	1885	1547	1810	956	775	1795	1841	0
Grp Volume(v), veh/h	170	0	798	32	404	0	64	0	96	628	64	0
Grp Sat Flow(s),veh/h/ln	1711	0	1863	1810	1885	1547	1810	0	1731	1795	1841	0
Q Serve(g_s), s	10.6	0.0	58.7	1.8	35.9	0.0	5.9	0.0	9.9	56.9	4.2	0.0
Cycle Q Clear(g_c), s	10.6	0.0	58.7	1.8	35.9	0.0	5.9	0.0	9.9	56.9	4.2	0.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	355	0	830	179	766		206	0	115	656	661	0
V/C Ratio(X)	0.48	0.00	0.96	0.18	0.53		0.31	0.00	0.84	0.96	0.10	0.00
Avail Cap(c_a), veh/h	358	0	830	213	766		241	0	125	673	661	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.35	0.00	0.35	0.84	0.84	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.8	0.0	8.6	37.6	61.8	0.0	74.2	0.0	83.1	48.3	38.3	0.0
Incr Delay (d2), s/veh	0.4	0.0	11.4	0.4	2.2	0.0	0.8	0.0	35.0	24.7	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.9	0.0	9.5	1.6	25.4	0.0	5.1	0.0	9.5	39.3	3.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.1	0.0	20.1	38.0	64.0	0.0	75.0	0.0	118.1	73.0	38.4	0.0
LnGrp LOS	C	A	C	D	E		E	A	F	E	D	A
Approach Vol, veh/h		968			436	A		160			692	
Approach Delay, s/veh		21.7			62.1			100.9			69.8	
Approach LOS		C			E			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	86.2	66.3	16.9	17.6	79.2	13.6	69.6
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.0	74.0	62.0	13.0	13.0	70.0	11.0	64.0
Max Q Clear Time (g_c+I1), s	3.8	60.7	58.9	11.9	12.6	37.9	7.9	6.2
Green Ext Time (p_c), s	0.0	1.1	1.4	0.0	0.0	0.5	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

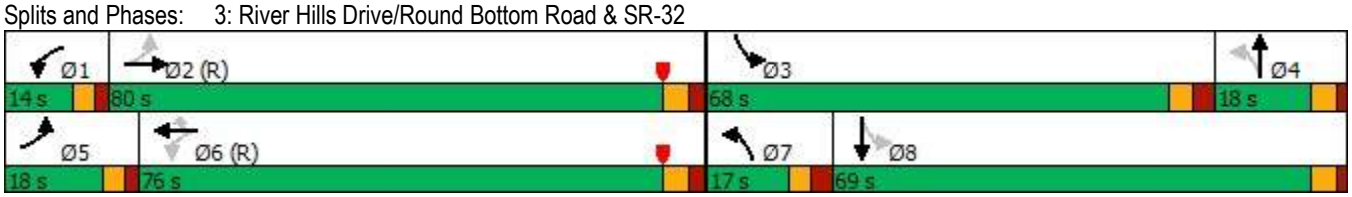
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	700	50	30	380	430	60	50	40	590	60	0
Future Volume (vph)	160	700	50	30	380	430	60	50	40	590	60	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		175	150		0	325		250
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990				0.850		0.933				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	1864	0	1805	1881	1538	1805	1753	0	1787	1827	0
Flt Permitted	0.310			0.057			0.715			0.321		
Satd. Flow (perm)	550	1864	0	108	1881	1538	1358	1753	0	604	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				296		17				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	1%	0%	0%	1%	5%	0%	2%	0%	1%	4%	2%
Adj. Flow (vph)	170	745	53	32	404	457	64	53	43	628	64	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	170	798	0	32	404	457	64	96	0	628	64	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6	4			8		
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	38.0		12.0	26.0	26.0	13.0	15.0		13.0	15.0	
Total Split (s)	18.0	80.0		14.0	76.0	76.0	17.0	18.0		68.0	69.0	
Total Split (%)	10.0%	44.4%		7.8%	42.2%	42.2%	9.4%	10.0%		37.8%	38.3%	
Maximum Green (s)	13.0	74.0		9.0	70.0	70.0	11.0	13.0		62.0	64.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	89.8	78.8		79.9	71.4	71.4	20.2	12.1		79.1	67.6	
Actuated g/C Ratio	0.50	0.44		0.44	0.40	0.40	0.11	0.07		0.44	0.38	
v/c Ratio	0.48	0.98		0.27	0.54	0.58	0.37	0.72		0.93	0.09	
Control Delay	24.7	53.5		30.4	50.5	24.9	45.2	95.8		66.5	38.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		5.6	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	24.7	53.5		30.4	50.5	24.9	45.2	95.8		72.1	38.4	
LOS	C	D		C	D	C	D	F		E	D	
Approach Delay		48.5			36.7			75.6			68.9	
Approach LOS		D			D			E			E	
Queue Length 50th (ft)	81	~885		23	412	232	43	93		637	50	
Queue Length 95th (ft)	m99	m#1191		m41	543	374	77	#176		#887	90	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		175	150			325		
Base Capacity (vph)	356	816		133	745	788	193	142		672	685	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		28	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.48	0.98		0.24	0.54	0.58	0.33	0.68		0.98	0.09	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 25 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 51.4 Intersection LOS: D
Intersection Capacity Utilization 98.4% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	510	10	30	1410	40	30
Future Volume (veh/h)	510	10	30	1410	40	30
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	1781	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	554	11	33	1533	43	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	0	3	0	0
Cap, veh/h	1553	31	807	1656	53	40
Arrive On Green	1.00	1.00	1.00	1.00	0.05	0.05
Sat Flow, veh/h	1741	35	859	1856	960	737
Grp Volume(v), veh/h	0	565	33	1533	77	0
Grp Sat Flow(s),veh/h/ln	0	1775	859	1856	1719	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.0	0.0
Prop In Lane		0.02	1.00		0.56	0.43
Lane Grp Cap(c), veh/h	0	1584	807	1656	94	0
V/C Ratio(X)	0.00	0.36	0.04	0.93	0.82	0.00
Avail Cap(c_a), veh/h	0	1584	807	1656	215	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.00	0.86	0.37	0.37	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	84.2	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.0	4.4	15.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.4	0.0	3.5	7.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	0.5	0.0	4.4	99.5	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	565			1566	77	
Approach Delay, s/veh	0.5			4.3	99.5	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		165.6		14.4		165.6
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		148.0		22.5		148.0
Max Q Clear Time (g_c+I1), s		2.0		10.0		2.0
Green Ext Time (p_c), s		6.5		0.1		89.7

Intersection Summary	
HCM 6th Ctrl Delay	6.7
HCM 6th LOS	A

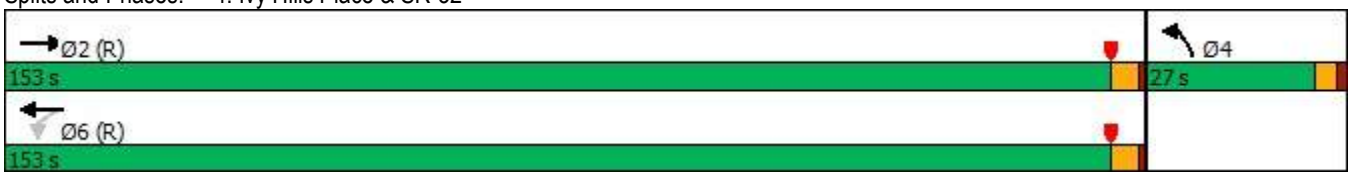
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	510	10	30	1410	40	30
Future Volume (vph)	510	10	30	1410	40	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.997				0.941	
Flt Protected			0.950		0.972	
Satd. Flow (prot)	1757	0	1805	1845	1738	0
Flt Permitted			0.438		0.972	
Satd. Flow (perm)	1757	0	832	1845	1738	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				18	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	0%	0%	3%	0%	0%
Adj. Flow (vph)	554	11	33	1533	43	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	565	0	33	1533	76	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	66.0		66.0	66.0	24.5	
Total Split (s)	153.0		153.0	153.0	27.0	
Total Split (%)	85.0%		85.0%	85.0%	15.0%	
Maximum Green (s)	148.0		148.0	148.0	22.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	158.2		158.2	158.2	12.3	
Actuated g/C Ratio	0.88		0.88	0.88	0.07	
v/c Ratio	0.37		0.05	0.95	0.56	
Control Delay	2.9		1.3	19.4	77.3	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	2.9		1.3	19.4	77.3	
LOS	A		A	B	E	
Approach Delay	2.9			19.0	77.3	
Approach LOS	A			B	E	
Queue Length 50th (ft)	21		3	1445	68	
Queue Length 95th (ft)	42		m4	#2092	126	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	1544		731	1621	233	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.37		0.05	0.95	0.33	

Intersection Summary	
Area Type: Other	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 43 (24%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 16.9	Intersection LOS: B
Intersection Capacity Utilization 90.5%	ICU Level of Service E
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1240	30	40	720	40	60
Future Volume (veh/h)	1240	30	40	720	40	60
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	1870	1900	1900	1841	1856	1900
Adj Flow Rate, veh/h	1363	33	44	791	44	66
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	0	4	3	0
Cap, veh/h	1580	38	381	1599	51	77
Arrive On Green	1.00	1.00	1.00	1.00	0.08	0.08
Sat Flow, veh/h	1818	44	393	1841	653	979
Grp Volume(v), veh/h	0	1396	44	791	111	0
Grp Sat Flow(s),veh/h/ln	0	1862	393	1841	1647	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	12.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	12.0	0.0
Prop In Lane		0.02	1.00		0.40	0.59
Lane Grp Cap(c), veh/h	0	1618	381	1599	129	0
V/C Ratio(X)	0.00	0.86	0.12	0.49	0.86	0.00
Avail Cap(c_a), veh/h	0	1618	381	1599	215	0
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.00	0.19	0.88	0.88	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	82.0	0.0
Incr Delay (d2), s/veh	0.0	1.3	0.5	1.0	16.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	1.1	0.1	0.8	9.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	1.3	0.5	1.0	98.3	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	1396			835	111	
Approach Delay, s/veh	1.3			0.9	98.3	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		161.4		18.6		161.4
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		147.0		23.5		147.0
Max Q Clear Time (g_c+I1), s		2.0		14.0		2.0
Green Ext Time (p_c), s		60.2		0.2		13.1

Intersection Summary	
HCM 6th Ctrl Delay	5.8
HCM 6th LOS	A

Notes

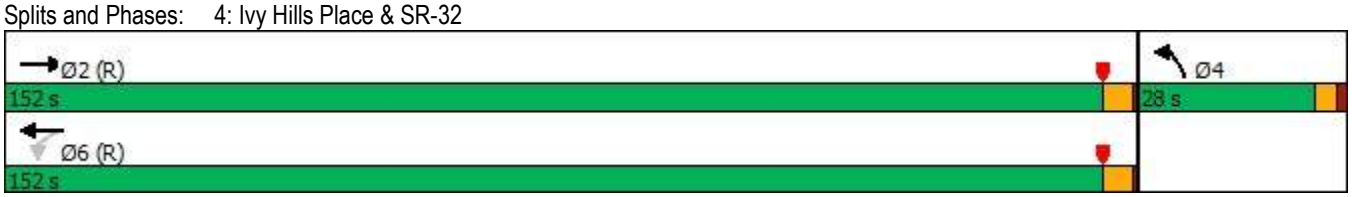
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1240	30	40	720	40	60
Future Volume (vph)	1240	30	40	720	40	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.997				0.919	
Flt Protected			0.950		0.980	
Satd. Flow (prot)	1858	0	1805	1827	1691	0
Flt Permitted			0.106		0.980	
Satd. Flow (perm)	1858	0	201	1827	1691	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				35	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	0%	0%	4%	3%	0%
Adj. Flow (vph)	1363	33	44	791	44	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1396	0	44	791	110	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	25.0		25.0	25.0	23.5	
Total Split (s)	152.0		152.0	152.0	28.0	
Total Split (%)	84.4%		84.4%	84.4%	15.6%	
Maximum Green (s)	147.0		147.0	147.0	23.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	156.4		156.4	156.4	14.1	
Actuated g/C Ratio	0.87		0.87	0.87	0.08	
v/c Ratio	0.86		0.25	0.50	0.67	
Control Delay	6.4		5.4	3.4	73.7	
Queue Delay	0.6		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	7.0		5.4	3.4	73.7	
LOS	A		A	A	E	
Approach Delay	7.0			3.5	73.7	
Approach LOS	A			A	E	
Queue Length 50th (ft)	54		5	124	88	
Queue Length 95th (ft)	m1027		m17	209	156	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	1615		174	1587	251	
Starvation Cap Reductn	49		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.89		0.25	0.50	0.44	

Intersection Summary	
Area Type:	Other
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 141 (78%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 8.9	Intersection LOS: A
Intersection Capacity Utilization 83.3%	ICU Level of Service E
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	490	50	20	1240	200	20
Future Volume (veh/h)	490	50	20	1240	200	20
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	1781	1574	1826	1841	1885	1737
Adj Flow Rate, veh/h	505	52	21	1278	206	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	22	5	4	1	11
Cap, veh/h	1206	124	715	1495	227	187
Arrive On Green	1.00	1.00	0.03	0.81	0.13	0.13
Sat Flow, veh/h	1588	164	1739	1841	1795	1472
Grp Volume(v), veh/h	0	557	21	1278	206	21
Grp Sat Flow(s),veh/h/ln	0	1752	1739	1841	1795	1472
Q Serve(g_s), s	0.0	0.0	0.4	76.8	20.4	2.3
Cycle Q Clear(g_c), s	0.0	0.0	0.4	76.8	20.4	2.3
Prop In Lane		0.09	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1330	715	1495	227	187
V/C Ratio(X)	0.00	0.42	0.03	0.85	0.91	0.11
Avail Cap(c_a), veh/h	0	1330	758	1495	319	262
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.94	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	3.8	10.4	77.5	69.6
Incr Delay (d2), s/veh	0.0	0.9	0.0	6.5	22.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.6	0.3	34.6	16.2	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	0.9	3.8	16.8	99.7	69.9
LnGrp LOS	A	A	A	B	F	E
Approach Vol, veh/h	557			1299	227	
Approach Delay, s/veh	0.9			16.6	96.9	
Approach LOS	A			B	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	142.6		27.8		152.2
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	123.0		32.0		137.0
Max Q Clear Time (g_c+I1), s	2.4	2.0		22.4		78.8
Green Ext Time (p_c), s	0.0	8.3		0.4		37.5

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

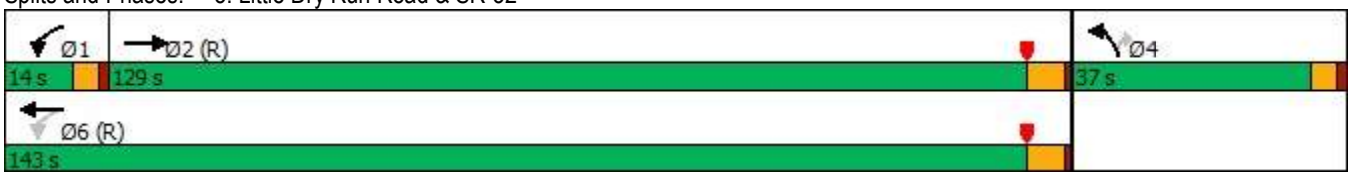
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	490	50	20	1240	200	20
Future Volume (vph)	490	50	20	1240	200	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		125	0
Storage Lanes		0	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.987					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1716	0	1719	1827	1787	1455
Flt Permitted			0.392		0.950	
Satd. Flow (perm)	1716	0	709	1827	1787	1455
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	7					21
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	8%	22%	5%	4%	1%	11%
Adj. Flow (vph)	505	52	21	1278	206	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	557	0	21	1278	206	21
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Detector Phase	2		1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0		7.0	20.0	10.0	10.0
Minimum Split (s)	66.5		12.0	66.5	15.0	15.0
Total Split (s)	129.0		14.0	143.0	37.0	37.0
Total Split (%)	71.7%		7.8%	79.4%	20.6%	20.6%
Maximum Green (s)	123.0		9.0	137.0	32.0	32.0
Yellow Time (s)	5.0		3.5	5.0	3.5	3.5
All-Red Time (s)	1.0		1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		3.0	5.0	3.0	3.0
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	136.3		144.5	143.5	25.5	25.5
Actuated g/C Ratio	0.76		0.80	0.80	0.14	0.14
v/c Ratio	0.43		0.03	0.88	0.81	0.09
Control Delay	10.3		4.5	22.3	98.5	21.9
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	10.3		4.5	22.3	98.5	21.9
LOS	B		A	C	F	C
Approach Delay	10.3			22.0	91.4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			C	F	
Queue Length 50th (ft)	187		4	917	239	0
Queue Length 95th (ft)	394		13	1482	329	29
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		125	
Base Capacity (vph)	1300		619	1455	317	275
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.43		0.03	0.88	0.65	0.08

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 163 (91%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 26.4 Intersection LOS: C
Intersection Capacity Utilization 85.5% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 5: Little Dry Run Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1130	170	50	630	130	40
Future Volume (veh/h)	1130	170	50	630	130	40
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	1870	1870	1900	1856	1841	1767
Adj Flow Rate, veh/h	1165	175	52	649	134	41
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	3	4	9
Cap, veh/h	1250	188	431	1578	155	132
Arrive On Green	1.00	1.00	0.04	0.85	0.09	0.09
Sat Flow, veh/h	1589	239	1810	1856	1753	1497
Grp Volume(v), veh/h	0	1340	52	649	134	41
Grp Sat Flow(s),veh/h/ln	0	1827	1810	1856	1753	1497
Q Serve(g_s), s	0.0	0.0	0.9	14.5	13.6	4.6
Cycle Q Clear(g_c), s	0.0	0.0	0.9	14.5	13.6	4.6
Prop In Lane		0.13	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1438	431	1578	155	132
V/C Ratio(X)	0.00	0.93	0.12	0.41	0.87	0.31
Avail Cap(c_a), veh/h	0	1438	467	1578	243	208
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.38	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	2.6	3.1	81.0	76.9
Incr Delay (d2), s/veh	0.0	5.5	0.1	0.8	17.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	3.7	0.5	7.2	11.2	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	5.5	2.7	3.9	98.3	78.2
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	1340			701	175	
Approach Delay, s/veh	5.5			3.8	93.6	
Approach LOS	A			A	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.5	147.6		20.9		159.1
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	10.0	129.0		25.0		144.0
Max Q Clear Time (g_c+I1), s	2.9	2.0		15.6		16.5
Green Ext Time (p_c), s	0.0	66.5		0.3		10.4

Intersection Summary			
HCM 6th Ctrl Delay			11.9
HCM 6th LOS			B

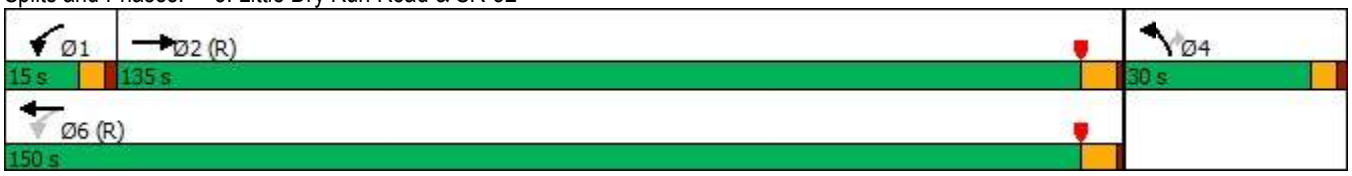
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1130	170	50	630	130	40
Future Volume (vph)	1130	170	50	630	130	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		125	0
Storage Lanes		0	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.982					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1829	0	1805	1845	1736	1482
Flt Permitted			0.037		0.950	
Satd. Flow (perm)	1829	0	70	1845	1736	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	11					41
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	0%	3%	4%	9%
Adj. Flow (vph)	1165	175	52	649	134	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1340	0	52	649	134	41
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Detector Phase	2		1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0		7.0	20.0	10.0	10.0
Minimum Split (s)	26.0		12.0	26.0	15.0	15.0
Total Split (s)	135.0		15.0	150.0	30.0	30.0
Total Split (%)	75.0%		8.3%	83.3%	16.7%	16.7%
Maximum Green (s)	129.0		10.0	144.0	25.0	25.0
Yellow Time (s)	5.0		3.5	5.0	3.5	3.5
All-Red Time (s)	1.0		1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		3.0	5.0	3.0	3.0
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	139.7		151.0	150.0	19.0	19.0
Actuated g/C Ratio	0.78		0.84	0.83	0.11	0.11
v/c Ratio	0.94		0.39	0.42	0.73	0.21
Control Delay	19.9		18.3	5.1	100.1	20.0
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	19.9		18.3	5.1	100.1	20.0
LOS	B		B	A	F	B
Approach Delay	19.9			6.1	81.3	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			A	F	
Queue Length 50th (ft)	1036		9	168	156	0
Queue Length 95th (ft)	#1929		45	265	230	40
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		125	
Base Capacity (vph)	1421		155	1537	241	241
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.94		0.34	0.42	0.56	0.17

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 156 (87%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 20.4 Intersection LOS: C
Intersection Capacity Utilization 87.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Little Dry Run Road & SR-32



2042 NO-BUILD

HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	320	50	40	740	760	80	40	30	230	30	0
Future Volume (veh/h)	110	320	50	40	740	760	80	40	30	230	30	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1796	1900	1900	1826	1856	1870	1900	1900	1752	1900	0
Adj Flow Rate, veh/h	118	344	54	43	796	0	86	43	32	247	32	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	7	0	0	5	3	2	0	0	10	0	0
Cap, veh/h	517	965	151	546	1154		215	56	42	309	287	0
Arrive On Green	0.01	0.21	0.21	0.06	1.00	0.00	0.06	0.06	0.06	0.15	0.15	0.00
Sat Flow, veh/h	1697	1516	238	1810	1826	1572	1781	1012	753	1668	1900	0
Grp Volume(v), veh/h	118	0	398	43	796	0	86	0	75	247	32	0
Grp Sat Flow(s),veh/h/ln	1697	0	1753	1810	1826	1572	1781	0	1764	1668	1900	0
Q Serve(g_s), s	4.3	0.0	34.9	1.4	0.0	0.0	8.1	0.0	7.5	24.5	2.6	0.0
Cycle Q Clear(g_c), s	4.3	0.0	34.9	1.4	0.0	0.0	8.1	0.0	7.5	24.5	2.6	0.0
Prop In Lane	1.00		0.14	1.00		1.00	1.00		0.43	1.00		0.00
Lane Grp Cap(c), veh/h	517	0	1116	546	1154		215	0	98	309	287	0
V/C Ratio(X)	0.23	0.00	0.36	0.08	0.69		0.40	0.00	0.77	0.80	0.11	0.00
Avail Cap(c_a), veh/h	536	0	1116	574	1154		225	0	118	354	348	0
HCM Platoon Ratio	0.33	0.33	0.33	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.00	0.77	0.15	0.15	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.7	0.0	39.6	13.3	0.0	0.0	74.7	0.0	83.8	64.9	66.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.7	0.0	0.5	0.0	1.2	0.0	21.5	13.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	0.0	22.7	1.1	0.3	0.0	6.9	0.0	7.3	17.3	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.9	0.0	40.3	13.3	0.5	0.0	75.9	0.0	105.3	78.6	66.1	0.0
LnGrp LOS	B	A	D	B	A		E	A	F	E	E	A
Approach Vol, veh/h		516			839	A		161			279	
Approach Delay, s/veh		33.6			1.2			89.6			77.1	
Approach LOS		C			A			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	120.6	33.2	15.0	12.0	119.8	16.0	32.2
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.0	105.0	32.0	12.0	9.0	105.0	11.0	33.0
Max Q Clear Time (g_c+I1), s	3.4	36.9	26.5	9.5	6.3	2.0	10.1	4.6
Green Ext Time (p_c), s	0.0	0.5	0.7	0.1	0.1	1.1	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	30.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

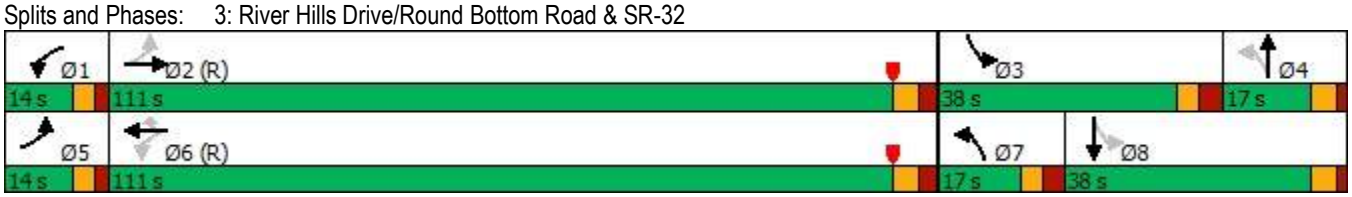
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	320	50	40	740	760	80	40	30	230	30	0
Future Volume (vph)	110	320	50	40	740	760	80	40	30	230	30	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		175	150		0	325		250
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980				0.850		0.936				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	1756	0	1805	1810	1568	1770	1778	0	1641	1900	0
Flt Permitted	0.188			0.473			0.736			0.383		
Satd. Flow (perm)	331	1756	0	899	1810	1568	1371	1778	0	662	1900	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				394		16				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	8%	7%	0%	0%	5%	3%	2%	0%	0%	10%	0%	19%
Adj. Flow (vph)	118	344	54	43	796	817	86	43	32	247	32	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	398	0	43	796	817	86	75	0	247	32	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6	4			8		
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	58.0		12.0	58.0	58.0	14.0	15.0		13.0	15.0	
Total Split (s)	14.0	111.0		14.0	111.0	111.0	17.0	17.0		38.0	38.0	
Total Split (%)	7.8%	61.7%		7.8%	61.7%	61.7%	9.4%	9.4%		21.1%	21.1%	
Maximum Green (s)	9.0	105.0		9.0	105.0	105.0	11.0	12.0		32.0	33.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	120.7	112.6		117.3	109.0	109.0	25.0	11.1		42.5	26.7	
Actuated g/C Ratio	0.67	0.63		0.65	0.61	0.61	0.14	0.06		0.24	0.15	
v/c Ratio	0.41	0.36		0.07	0.73	0.74	0.38	0.60		0.78	0.11	
Control Delay	15.1	20.6		10.1	25.4	12.2	58.9	85.0		78.2	63.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	15.1	20.6		10.1	25.4	12.2	58.9	85.0		78.2	63.3	
LOS	B	C		B	C	B	E	F		E	E	
Approach Delay		19.3			18.5			71.0			76.5	
Approach LOS		B			B			E			E	
Queue Length 50th (ft)	47	266		18	583	299	80	69		256	32	
Queue Length 95th (ft)	m84	m333		m11	m591	m231	131	131		355	68	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		175	150			325		
Base Capacity (vph)	288	1101		639	1095	1104	228	133		335	348	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.41	0.36		0.07	0.73	0.74	0.38	0.56		0.74	0.09	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 72 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 28.1 Intersection LOS: C
Intersection Capacity Utilization 77.8% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	750	60	40	400	450	70	60	50	650	70	0
Future Volume (veh/h)	180	750	60	40	400	450	70	60	50	650	70	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1900	1900	1885	1826	1900	1870	1900	1885	1841	0
Adj Flow Rate, veh/h	191	798	64	43	426	0	74	64	53	691	74	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	1	0	0	1	5	0	2	0	1	4	0
Cap, veh/h	326	735	59	102	733		223	68	57	665	679	0
Arrive On Green	0.14	0.85	0.85	0.01	0.13	0.00	0.05	0.07	0.07	0.34	0.37	0.00
Sat Flow, veh/h	1711	1722	138	1810	1885	1547	1810	946	783	1795	1841	0
Grp Volume(v), veh/h	191	0	862	43	426	0	74	0	117	691	74	0
Grp Sat Flow(s),veh/h/ln	1711	0	1860	1810	1885	1547	1810	0	1729	1795	1841	0
Q Serve(g_s), s	12.6	0.0	76.8	2.5	38.3	0.0	6.8	0.0	12.1	62.0	4.8	0.0
Cycle Q Clear(g_c), s	12.6	0.0	76.8	2.5	38.3	0.0	6.8	0.0	12.1	62.0	4.8	0.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	326	0	794	102	733		223	0	125	665	679	0
V/C Ratio(X)	0.59	0.00	1.09	0.42	0.58		0.33	0.00	0.94	1.04	0.11	0.00
Avail Cap(c_a), veh/h	326	0	794	130	733		248	0	125	665	679	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.14	0.00	0.14	0.81	0.81	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.3	0.0	13.2	45.3	64.6	0.0	72.7	0.0	83.1	49.7	37.3	0.0
Incr Delay (d2), s/veh	0.4	0.0	42.3	2.2	2.7	0.0	0.9	0.0	61.1	45.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.0	0.0	24.4	2.2	26.8	0.0	5.8	0.0	12.1	47.7	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.7	0.0	55.5	47.6	67.4	0.0	73.6	0.0	144.2	95.2	37.4	0.0
LnGrp LOS	C	A	F	D	E		E	A	F	F	D	A
Approach Vol, veh/h		1053			469	A		191			765	
Approach Delay, s/veh		51.1			65.5			116.8			89.7	
Approach LOS		D			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	82.8	68.0	18.0	18.0	76.0	14.6	71.4
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.0	74.0	62.0	13.0	13.0	70.0	11.0	64.0
Max Q Clear Time (g_c+I1), s	4.5	78.8	64.0	14.1	14.6	40.3	8.8	6.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	70.8
HCM 6th LOS	E

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

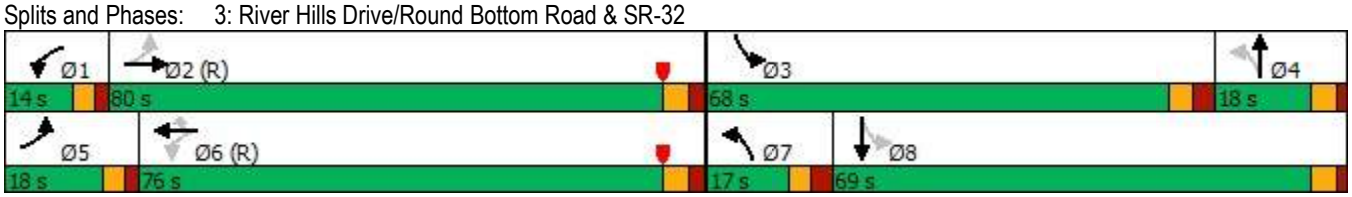
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	750	60	40	400	450	70	60	50	650	70	0
Future Volume (vph)	180	750	60	40	400	450	70	60	50	650	70	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		175	150		0	325		250
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989				0.850		0.932				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	1862	0	1805	1881	1538	1805	1752	0	1787	1827	0
Flt Permitted	0.291			0.056			0.709			0.216		
Satd. Flow (perm)	517	1862	0	106	1881	1538	1347	1752	0	406	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				294		18				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	1%	0%	0%	1%	5%	0%	2%	0%	1%	4%	2%
Adj. Flow (vph)	191	798	64	43	426	479	74	64	53	691	74	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	191	862	0	43	426	479	74	117	0	691	74	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6	4			8		
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	38.0		12.0	26.0	26.0	13.0	15.0		13.0	15.0	
Total Split (s)	18.0	80.0		14.0	76.0	76.0	17.0	18.0		68.0	69.0	
Total Split (%)	10.0%	44.4%		7.8%	42.2%	42.2%	9.4%	10.0%		37.8%	38.3%	
Maximum Green (s)	13.0	74.0		9.0	70.0	70.0	11.0	13.0		62.0	64.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	89.2	78.1		79.6	70.8	70.8	20.9	12.5		79.5	65.1	
Actuated g/C Ratio	0.50	0.43		0.44	0.39	0.39	0.12	0.07		0.44	0.36	
v/c Ratio	0.56	1.07		0.36	0.58	0.61	0.41	0.85		1.05	0.11	
Control Delay	26.0	75.6		33.0	51.7	26.4	46.1	112.7		98.1	39.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	1.1		17.8	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	26.0	75.6		33.0	51.7	26.4	46.1	113.8		115.9	39.1	
LOS	C	E		C	D	C	D	F		F	D	
Approach Delay		66.6			38.1			87.5			108.5	
Approach LOS		E			D			F			F	
Queue Length 50th (ft)	97	~1141		30	442	261	50	118		~838	58	
Queue Length 95th (ft)	m100	m#1177		m54	576	407	86	#238		#1097	101	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		175	150			325		
Base Capacity (vph)	340	809		132	739	782	196	143		655	660	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	2		65	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.56	1.07		0.33	0.58	0.61	0.38	0.83		1.17	0.11	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 25 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 69.7 Intersection LOS: E
Intersection Capacity Utilization 105.0% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	530	20	40	1470	50	40
Future Volume (veh/h)	530	20	40	1470	50	40
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	1781	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	576	22	43	1598	54	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	0	3	0	0
Cap, veh/h	1499	57	773	1632	64	51
Arrive On Green	1.00	1.00	1.00	1.00	0.07	0.07
Sat Flow, veh/h	1705	65	833	1856	946	753
Grp Volume(v), veh/h	0	598	43	1598	98	0
Grp Sat Flow(s),veh/h/ln	0	1770	833	1856	1717	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.2	0.0
Prop In Lane		0.04	1.00		0.55	0.44
Lane Grp Cap(c), veh/h	0	1556	773	1632	117	0
V/C Ratio(X)	0.00	0.38	0.06	0.98	0.84	0.00
Avail Cap(c_a), veh/h	0	1556	773	1632	215	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.00	0.84	0.29	0.29	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	82.9	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	8.1	14.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.5	0.0	5.4	8.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	0.6	0.0	8.1	97.6	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	598			1641	98	
Approach Delay, s/veh	0.6			7.9	97.6	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		163.3		16.7		163.3
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		148.0		22.5		148.0
Max Q Clear Time (g_c+I1), s		2.0		12.2		2.0
Green Ext Time (p_c), s		7.0		0.2		104.2

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

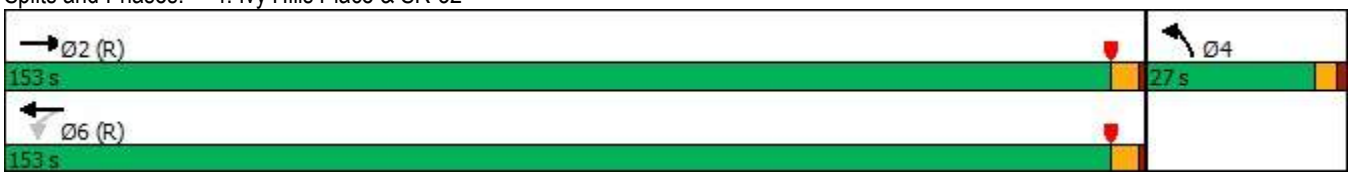
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	530	20	40	1470	50	40
Future Volume (vph)	530	20	40	1470	50	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995				0.940	
Flt Protected			0.950		0.973	
Satd. Flow (prot)	1755	0	1805	1845	1738	0
Flt Permitted			0.420		0.973	
Satd. Flow (perm)	1755	0	798	1845	1738	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	4				18	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	0%	0%	3%	0%	0%
Adj. Flow (vph)	576	22	43	1598	54	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	598	0	43	1598	97	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	66.0		66.0	66.0	24.5	
Total Split (s)	153.0		153.0	153.0	27.0	
Total Split (%)	85.0%		85.0%	85.0%	15.0%	
Maximum Green (s)	148.0		148.0	148.0	22.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	156.5		156.5	156.5	14.0	
Actuated g/C Ratio	0.87		0.87	0.87	0.08	
v/c Ratio	0.39		0.06	1.00	0.64	
Control Delay	3.0		1.6	28.8	83.7	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	3.0		1.6	28.8	83.7	
LOS	A		A	C	F	
Approach Delay	3.0			28.1	83.7	
Approach LOS	A			C	F	
Queue Length 50th (ft)	37		4	1811	92	
Queue Length 95th (ft)	64		m6	#2284	157	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	1525		693	1603	233	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.39		0.06	1.00	0.42	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 43 (24%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 24.0 Intersection LOS: C
Intersection Capacity Utilization 93.6% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1340	40	50	750	50	70
Future Volume (veh/h)	1340	40	50	750	50	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	1870	1900	1900	1841	1856	1900
Adj Flow Rate, veh/h	1473	44	55	824	55	77
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	0	4	3	0
Cap, veh/h	1546	46	339	1575	63	88
Arrive On Green	1.00	1.00	1.00	1.00	0.09	0.09
Sat Flow, veh/h	1807	54	350	1841	682	955
Grp Volume(v), veh/h	0	1517	55	824	133	0
Grp Sat Flow(s),veh/h/ln	0	1861	350	1841	1650	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	14.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	14.3	0.0
Prop In Lane		0.03	1.00		0.41	0.58
Lane Grp Cap(c), veh/h	0	1592	339	1575	151	0
V/C Ratio(X)	0.00	0.95	0.16	0.52	0.88	0.00
Avail Cap(c_a), veh/h	0	1592	339	1575	215	0
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.86	0.86	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	80.8	0.0
Incr Delay (d2), s/veh	0.0	1.9	0.9	1.1	24.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	1.3	0.1	0.8	11.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	1.9	0.9	1.1	104.8	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	1517			879	133	
Approach Delay, s/veh	1.9			1.1	104.8	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		159.0		21.0		159.0
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		147.0		23.5		147.0
Max Q Clear Time (g_c+I1), s		2.0		16.3		2.0
Green Ext Time (p_c), s		84.7		0.2		15.0

Intersection Summary	
HCM 6th Ctrl Delay	7.0
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

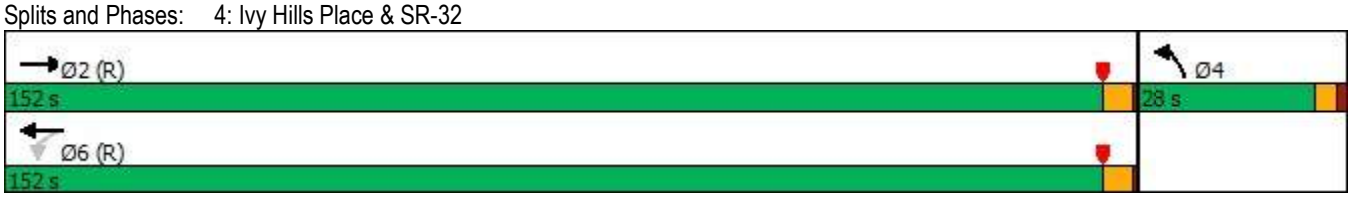
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1340	40	50	750	50	70
Future Volume (vph)	1340	40	50	750	50	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.996				0.921	
Flt Protected			0.950		0.980	
Satd. Flow (prot)	1856	0	1805	1827	1694	0
Flt Permitted			0.026		0.980	
Satd. Flow (perm)	1856	0	49	1827	1694	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				32	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	0%	0%	4%	3%	0%
Adj. Flow (vph)	1473	44	55	824	55	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1517	0	55	824	132	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	25.0		25.0	25.0	23.5	
Total Split (s)	152.0		152.0	152.0	28.0	
Total Split (%)	84.4%		84.4%	84.4%	15.6%	
Maximum Green (s)	147.0		147.0	147.0	23.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	154.2		154.2	154.2	16.3	
Actuated g/C Ratio	0.86		0.86	0.86	0.09	
v/c Ratio	0.95		1.31	0.53	0.73	
Control Delay	8.9		264.3	4.0	81.5	
Queue Delay	3.9		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	12.8		264.3	4.0	81.5	
LOS	B		F	A	F	
Approach Delay	12.8			20.3	81.5	
Approach LOS	B			C	F	
Queue Length 50th (ft)	56		~84	151	117	
Queue Length 95th (ft)	m989		m#184	252	192	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	1590		42	1565	248	
Starvation Cap Reductn	49		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.98		1.31	0.53	0.53	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 141 (78%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 19.0 Intersection LOS: B
Intersection Capacity Utilization 89.2% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	510	60	30	1300	210	30
Future Volume (veh/h)	510	60	30	1300	210	30
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	1781	1574	1826	1841	1885	1737
Adj Flow Rate, veh/h	526	62	31	1340	216	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	22	5	4	1	11
Cap, veh/h	1170	138	698	1485	238	195
Arrive On Green	1.00	1.00	0.03	0.81	0.13	0.13
Sat Flow, veh/h	1564	184	1739	1841	1795	1472
Grp Volume(v), veh/h	0	588	31	1340	216	31
Grp Sat Flow(s),veh/h/ln	0	1748	1739	1841	1795	1472
Q Serve(g_s), s	0.0	0.0	0.7	93.2	21.4	3.4
Cycle Q Clear(g_c), s	0.0	0.0	0.7	93.2	21.4	3.4
Prop In Lane		0.11	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1308	698	1485	238	195
V/C Ratio(X)	0.00	0.45	0.04	0.90	0.91	0.16
Avail Cap(c_a), veh/h	0	1308	732	1485	319	262
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	4.1	12.4	77.0	69.2
Incr Delay (d2), s/veh	0.0	1.0	0.0	9.3	23.7	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	0.0	0.7	0.4	42.4	17.0	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	1.0	4.1	21.6	100.7	69.6
LnGrp LOS	A	A	A	C	F	E
Approach Vol, veh/h	588			1371	247	
Approach Delay, s/veh	1.0			21.2	96.8	
Approach LOS	A			C	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.5	140.7		28.8		151.2
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	123.0		32.0		137.0
Max Q Clear Time (g_c+I1), s	2.7	2.0		23.4		95.2
Green Ext Time (p_c), s	0.0	9.0		0.5		32.1

Intersection Summary	
HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

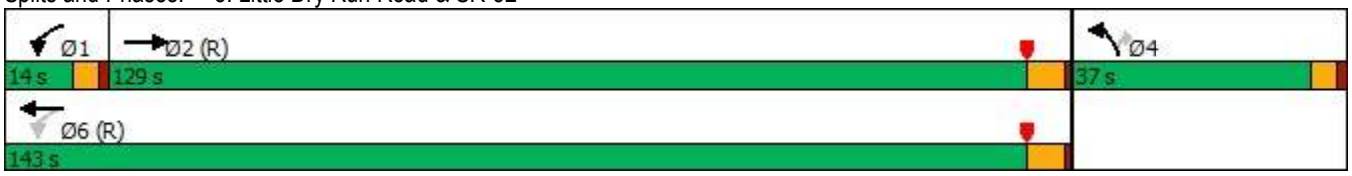
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	510	60	30	1300	210	30
Future Volume (vph)	510	60	30	1300	210	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		125	0
Storage Lanes		0	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.986					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1711	0	1719	1827	1787	1455
Flt Permitted			0.371		0.950	
Satd. Flow (perm)	1711	0	671	1827	1787	1455
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	7					31
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	8%	22%	5%	4%	1%	11%
Adj. Flow (vph)	526	62	31	1340	216	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	588	0	31	1340	216	31
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Detector Phase	2		1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0		7.0	20.0	10.0	10.0
Minimum Split (s)	66.5		12.0	66.5	15.0	15.0
Total Split (s)	129.0		14.0	143.0	37.0	37.0
Total Split (%)	71.7%		7.8%	79.4%	20.6%	20.6%
Maximum Green (s)	123.0		9.0	137.0	32.0	32.0
Yellow Time (s)	5.0		3.5	5.0	3.5	3.5
All-Red Time (s)	1.0		1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		3.0	5.0	3.0	3.0
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	133.1		143.7	142.7	26.3	26.3
Actuated g/C Ratio	0.74		0.80	0.79	0.15	0.15
v/c Ratio	0.46		0.05	0.93	0.83	0.13
Control Delay	12.2		4.7	28.0	99.3	19.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	12.2		4.7	28.0	99.3	19.1
LOS	B		A	C	F	B
Approach Delay	12.2			27.4	89.3	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			C	F	
Queue Length 50th (ft)	262		7	1119	251	0
Queue Length 95th (ft)	537		17	#1841	344	34
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		125	
Base Capacity (vph)	1266		587	1448	317	284
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.46		0.05	0.93	0.68	0.11

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 163 (91%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 30.3 Intersection LOS: C
Intersection Capacity Utilization 89.2% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Little Dry Run Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1220	190	60	660	140	50
Future Volume (veh/h)	1220	190	60	660	140	50
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	1870	1870	1900	1856	1841	1767
Adj Flow Rate, veh/h	1258	196	62	680	144	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	3	4	9
Cap, veh/h	1232	192	107	1568	165	141
Arrive On Green	1.00	1.00	0.04	0.84	0.09	0.09
Sat Flow, veh/h	1580	246	1810	1856	1753	1497
Grp Volume(v), veh/h	0	1454	62	680	144	52
Grp Sat Flow(s),veh/h/ln	0	1826	1810	1856	1753	1497
Q Serve(g_s), s	0.0	140.4	2.0	16.2	14.6	5.9
Cycle Q Clear(g_c), s	0.0	140.4	2.0	16.2	14.6	5.9
Prop In Lane		0.13	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1424	107	1568	165	141
V/C Ratio(X)	0.00	1.02	0.58	0.43	0.87	0.37
Avail Cap(c_a), veh/h	0	1424	141	1568	243	208
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.20	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	63.8	3.4	80.5	76.5
Incr Delay (d2), s/veh	0.0	16.5	4.9	0.9	20.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	8.6	5.3	8.2	12.0	4.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	16.5	68.7	4.3	100.5	78.1
LnGrp LOS	A	F	E	A	F	E
Approach Vol, veh/h	1454			742	196	
Approach Delay, s/veh	16.5			9.7	94.6	
Approach LOS	B			A	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.7	146.4		21.9		158.1
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	10.0	129.0		25.0		144.0
Max Q Clear Time (g_c+I1), s	4.0	142.4		16.6		18.2
Green Ext Time (p_c), s	0.0	0.0		0.3		11.2

Intersection Summary	
HCM 6th Ctrl Delay	20.8
HCM 6th LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1220	190	60	660	140	50
Future Volume (vph)	1220	190	60	660	140	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		125	0
Storage Lanes		0	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.982					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1829	0	1805	1845	1736	1482
Flt Permitted			0.028		0.950	
Satd. Flow (perm)	1829	0	53	1845	1736	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	11					52
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	0%	3%	4%	9%
Adj. Flow (vph)	1258	196	62	680	144	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1454	0	62	680	144	52
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Detector Phase	2		1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0		7.0	20.0	10.0	10.0
Minimum Split (s)	26.0		12.0	26.0	15.0	15.0
Total Split (s)	135.0		15.0	150.0	30.0	30.0
Total Split (%)	75.0%		8.3%	83.3%	16.7%	16.7%
Maximum Green (s)	129.0		10.0	144.0	25.0	25.0
Yellow Time (s)	5.0		3.5	5.0	3.5	3.5
All-Red Time (s)	1.0		1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		3.0	5.0	3.0	3.0
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	136.3		150.3	149.3	19.7	19.7
Actuated g/C Ratio	0.76		0.84	0.83	0.11	0.11
v/c Ratio	1.05		0.51	0.44	0.76	0.25
Control Delay	43.8		40.7	5.5	101.7	18.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	43.8		40.7	5.5	101.7	18.2
LOS	D		D	A	F	B
Approach Delay	43.8			8.5	79.5	

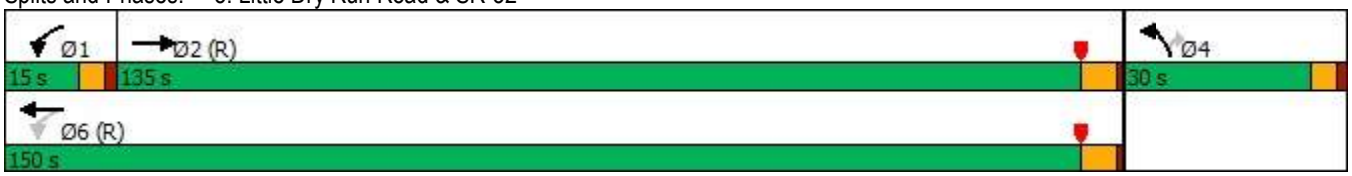
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	D			A	E	
Queue Length 50th (ft)	~1847		20	189	168	0
Queue Length 95th (ft)	m#2125		78	285	246	46
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		125	
Base Capacity (vph)	1387		141	1530	241	250
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.05		0.44	0.44	0.60	0.21

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 156 (87%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 35.8 Intersection LOS: D
Intersection Capacity Utilization 93.2% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Little Dry Run Road & SR-32



2042 NO-BUILD WITH MARTIN MARIETTA TRAFFIC

HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	320	50	40	740	810	80	40	30	270	30	0
Future Volume (veh/h)	120	320	50	40	740	810	80	40	30	270	30	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1737	1796	1900	1900	1826	1811	1870	1900	1900	1678	1900	0
Adj Flow Rate, veh/h	129	344	54	43	796	0	86	43	32	290	32	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	11	7	0	0	5	6	2	0	0	15	0	0
Cap, veh/h	490	925	145	517	1103		215	56	42	340	338	0
Arrive On Green	0.01	0.20	0.20	0.06	1.00	0.00	0.06	0.06	0.06	0.18	0.18	0.00
Sat Flow, veh/h	1654	1516	238	1810	1826	1535	1781	1012	753	1598	1900	0
Grp Volume(v), veh/h	129	0	398	43	796	0	86	0	75	290	32	0
Grp Sat Flow(s),veh/h/ln	1654	0	1753	1810	1826	1535	1781	0	1764	1598	1900	0
Q Serve(g_s), s	5.3	0.0	35.3	1.6	0.0	0.0	8.1	0.0	7.5	30.2	2.5	0.0
Cycle Q Clear(g_c), s	5.3	0.0	35.3	1.6	0.0	0.0	8.1	0.0	7.5	30.2	2.5	0.0
Prop In Lane	1.00		0.14	1.00		1.00	1.00		0.43	1.00		0.00
Lane Grp Cap(c), veh/h	490	0	1070	517	1103		215	0	98	340	338	0
V/C Ratio(X)	0.26	0.00	0.37	0.08	0.72		0.40	0.00	0.77	0.85	0.09	0.00
Avail Cap(c_a), veh/h	505	0	1070	545	1103		225	0	118	340	348	0
HCM Platoon Ratio	0.33	0.33	0.33	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.00	0.76	0.09	0.09	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.7	0.0	42.1	15.1	0.0	0.0	74.7	0.0	83.8	63.1	61.9	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.8	0.0	0.4	0.0	1.2	0.0	21.5	19.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.0	0.0	22.9	1.1	0.2	0.0	6.9	0.0	7.3	20.5	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.9	0.0	42.9	15.1	0.4	0.0	75.9	0.0	105.3	82.9	62.0	0.0
LnGrp LOS	B	A	D	B	A		E	A	F	F	E	A
Approach Vol, veh/h		527			839	A		161			322	
Approach Delay, s/veh		35.5			1.1			89.6			80.8	
Approach LOS		D			A			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	115.8	38.0	15.0	12.3	114.7	16.0	37.0
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.0	105.0	32.0	12.0	9.0	105.0	11.0	33.0
Max Q Clear Time (g_c+I1), s	3.6	37.3	32.2	9.5	7.3	2.0	10.1	4.5
Green Ext Time (p_c), s	0.0	0.5	0.0	0.1	0.1	1.1	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	32.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

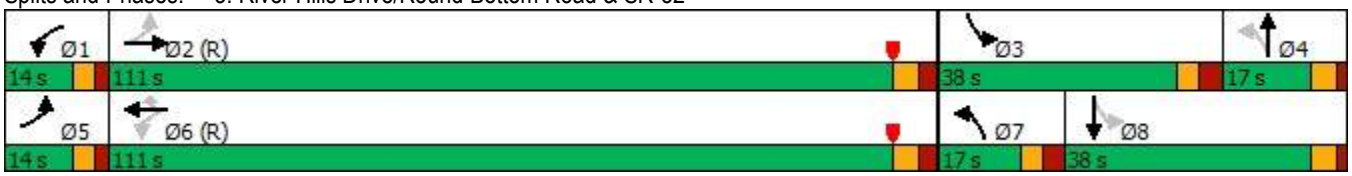
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	320	50	40	740	810	80	40	30	270	30	0
Future Volume (vph)	120	320	50	40	740	810	80	40	30	270	30	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		175	150		0	325		250
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.980				0.850		0.936				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1626	1756	0	1805	1810	1524	1770	1778	0	1570	1900	0
Flt Permitted	0.175			0.470			0.736			0.383		
Satd. Flow (perm)	300	1756	0	893	1810	1524	1371	1778	0	633	1900	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8				420		16				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	11%	7%	0%	0%	5%	6%	2%	0%	0%	15%	0%	19%
Adj. Flow (vph)	129	344	54	43	796	871	86	43	32	290	32	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	129	398	0	43	796	871	86	75	0	290	32	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6	4			8		
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	58.0		12.0	58.0	58.0	14.0	15.0		13.0	15.0	
Total Split (s)	14.0	111.0		14.0	111.0	111.0	17.0	17.0		38.0	38.0	
Total Split (%)	7.8%	61.7%		7.8%	61.7%	61.7%	9.4%	9.4%		21.1%	21.1%	
Maximum Green (s)	9.0	105.0		9.0	105.0	105.0	11.0	12.0		32.0	33.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	118.2	110.0		114.5	106.2	106.2	26.4	11.1		45.1	28.0	
Actuated g/C Ratio	0.66	0.61		0.64	0.59	0.59	0.15	0.06		0.25	0.16	
v/c Ratio	0.49	0.37		0.07	0.75	0.81	0.36	0.60		0.90	0.11	
Control Delay	18.0	21.9		10.3	26.0	13.0	57.3	85.0		90.3	62.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	18.0	21.9		10.3	26.0	13.0	57.3	85.0		90.3	62.5	
LOS	B	C		B	C	B	E	F		F	E	
Approach Delay		21.0			19.0			70.2			87.5	
Approach LOS		C			B			E			F	
Queue Length 50th (ft)	65	269		18	605	280	79	69		310	32	
Queue Length 95th (ft)	m94	m353		m11	m545	m230	131	131		#426	68	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		175	150			325		
Base Capacity (vph)	263	1076		622	1067	1071	241	133		324	348	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.49	0.37		0.07	0.75	0.81	0.36	0.56		0.90	0.09	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 72 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 30.5 Intersection LOS: C
Intersection Capacity Utilization 80.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	750	60	40	400	470	70	60	50	670	70	0
Future Volume (veh/h)	180	750	60	40	400	470	70	60	50	670	70	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1900	1900	1885	1796	1900	1870	1900	1870	1841	0
Adj Flow Rate, veh/h	191	798	64	43	426	0	74	64	53	713	74	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	1	0	0	1	7	0	2	0	2	4	0
Cap, veh/h	326	735	59	102	733		223	68	57	660	679	0
Arrive On Green	0.14	0.85	0.85	0.01	0.13	0.00	0.05	0.07	0.07	0.34	0.37	0.00
Sat Flow, veh/h	1711	1722	138	1810	1885	1522	1810	946	783	1781	1841	0
Grp Volume(v), veh/h	191	0	862	43	426	0	74	0	117	713	74	0
Grp Sat Flow(s),veh/h/ln	1711	0	1860	1810	1885	1522	1810	0	1729	1781	1841	0
Q Serve(g_s), s	12.6	0.0	76.8	2.5	38.3	0.0	6.8	0.0	12.1	62.0	4.8	0.0
Cycle Q Clear(g_c), s	12.6	0.0	76.8	2.5	38.3	0.0	6.8	0.0	12.1	62.0	4.8	0.0
Prop In Lane	1.00		0.07	1.00		1.00	1.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	326	0	794	102	733		223	0	125	660	679	0
V/C Ratio(X)	0.59	0.00	1.09	0.42	0.58		0.33	0.00	0.94	1.08	0.11	0.00
Avail Cap(c_a), veh/h	326	0	794	130	733		248	0	125	660	679	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.14	0.00	0.14	0.80	0.80	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.3	0.0	13.2	45.3	64.6	0.0	72.7	0.0	83.1	49.6	37.3	0.0
Incr Delay (d2), s/veh	0.4	0.0	42.3	2.2	2.7	0.0	0.9	0.0	61.1	58.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.0	0.0	24.4	2.2	26.8	0.0	5.8	0.0	12.1	51.6	4.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.7	0.0	55.5	47.5	67.3	0.0	73.6	0.0	144.2	108.4	37.4	0.0
LnGrp LOS	C	A	F	D	E		E	A	F	F	D	A
Approach Vol, veh/h		1053			469	A		191			787	
Approach Delay, s/veh		51.1			65.5			116.8			101.8	
Approach LOS		D			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	82.8	68.0	18.0	18.0	76.0	14.6	71.4
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.0	74.0	62.0	13.0	13.0	70.0	11.0	64.0
Max Q Clear Time (g_c+I1), s	4.5	78.8	64.0	14.1	14.6	40.3	8.8	6.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	74.8
HCM 6th LOS	E

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
3: River Hills Drive/Round Bottom Road & SR-32

08/05/2020

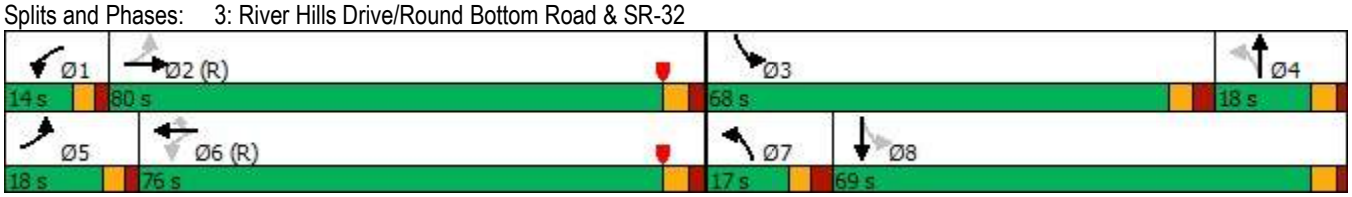
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	750	60	40	400	470	70	60	50	670	70	0
Future Volume (vph)	180	750	60	40	400	470	70	60	50	670	70	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		175	150		0	325		250
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989				0.850		0.932				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	1862	0	1805	1881	1509	1805	1752	0	1770	1827	0
Flt Permitted	0.291			0.056			0.709			0.216		
Satd. Flow (perm)	517	1862	0	106	1881	1509	1347	1752	0	402	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				307		18				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	1%	0%	0%	1%	7%	0%	2%	0%	2%	4%	5%
Adj. Flow (vph)	191	798	64	43	426	500	74	64	53	713	74	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	191	862	0	43	426	500	74	117	0	713	74	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6	4			8		
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	38.0		12.0	26.0	26.0	13.0	15.0		13.0	15.0	
Total Split (s)	18.0	80.0		14.0	76.0	76.0	17.0	18.0		68.0	69.0	
Total Split (%)	10.0%	44.4%		7.8%	42.2%	42.2%	9.4%	10.0%		37.8%	38.3%	
Maximum Green (s)	13.0	74.0		9.0	70.0	70.0	11.0	13.0		62.0	64.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	89.2	78.1		79.6	70.8	70.8	20.9	12.5		79.5	65.1	
Actuated g/C Ratio	0.50	0.43		0.44	0.39	0.39	0.12	0.07		0.44	0.36	
v/c Ratio	0.56	1.07		0.36	0.58	0.64	0.41	0.85		1.10	0.11	
Control Delay	26.0	75.6		32.8	51.5	27.2	46.1	112.7		112.2	39.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	1.1		0.8	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	26.0	75.6		32.8	51.5	27.2	46.1	113.8		112.9	39.1	
LOS	C	E		C	D	C	D	F		F	D	
Approach Delay		66.6			38.1			87.5			106.0	
Approach LOS		E			D			F			F	
Queue Length 50th (ft)	97	~1141		30	442	279	50	118		~900	58	
Queue Length 95th (ft)	m100	m#1177		m53	578	275	86	#238		#1160	101	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		175	150			325		
Base Capacity (vph)	340	809		132	739	779	196	143		648	660	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	2		68	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.56	1.07		0.33	0.58	0.64	0.38	0.83		1.23	0.11	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 25 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 69.1 Intersection LOS: E
Intersection Capacity Utilization 106.1% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	570	20	40	1520	50	40
Future Volume (veh/h)	570	20	40	1520	50	40
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	1781	1900	1900	1841	1900	1900
Adj Flow Rate, veh/h	620	22	43	1652	54	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	0	4	0	0
Cap, veh/h	1504	53	743	1619	64	51
Arrive On Green	1.00	1.00	1.00	1.00	0.07	0.07
Sat Flow, veh/h	1710	61	800	1841	946	753
Grp Volume(v), veh/h	0	642	43	1652	98	0
Grp Sat Flow(s),veh/h/ln	0	1771	800	1841	1717	0
Q Serve(g_s), s	0.0	0.0	0.0	158.3	10.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	158.3	10.2	0.0
Prop In Lane		0.03	1.00		0.55	0.44
Lane Grp Cap(c), veh/h	0	1557	743	1619	117	0
V/C Ratio(X)	0.00	0.41	0.06	1.02	0.84	0.00
Avail Cap(c_a), veh/h	0	1557	743	1619	215	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.00	0.78	0.20	0.20	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	82.9	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	15.8	14.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.5	0.0	9.2	8.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	0.6	0.0	15.8	97.6	0.0
LnGrp LOS	A	A	A	F	F	A
Approach Vol, veh/h	642			1695	98	
Approach Delay, s/veh	0.6			15.4	97.6	
Approach LOS	A			B	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		163.3		16.7		163.3
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		148.0		22.5		148.0
Max Q Clear Time (g_c+I1), s		2.0		12.2		160.3
Green Ext Time (p_c), s		7.9		0.2		0.0

Intersection Summary	
HCM 6th Ctrl Delay	14.8
HCM 6th LOS	B

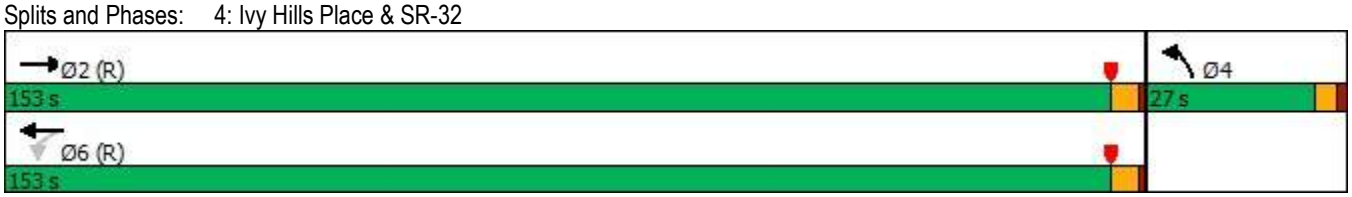
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	570	20	40	1520	50	40
Future Volume (vph)	570	20	40	1520	50	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995				0.940	
Flt Protected			0.950		0.973	
Satd. Flow (prot)	1755	0	1805	1827	1738	0
Flt Permitted			0.399		0.973	
Satd. Flow (perm)	1755	0	758	1827	1738	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	4				18	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	0%	0%	4%	0%	0%
Adj. Flow (vph)	620	22	43	1652	54	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	642	0	43	1652	97	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	66.0		66.0	66.0	24.5	
Total Split (s)	153.0		153.0	153.0	27.0	
Total Split (%)	85.0%		85.0%	85.0%	15.0%	
Maximum Green (s)	148.0		148.0	148.0	22.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	156.5		156.5	156.5	14.0	
Actuated g/C Ratio	0.87		0.87	0.87	0.08	
v/c Ratio	0.42		0.07	1.04	0.64	
Control Delay	2.6		1.6	41.2	83.7	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	2.6		1.6	41.2	83.7	
LOS	A		A	D	F	
Approach Delay	2.6			40.2	83.7	
Approach LOS	A			D	F	
Queue Length 50th (ft)	38		4	~2093	92	
Queue Length 95th (ft)	m64		m5	m#2328	157	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	1525		658	1588	233	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.42		0.07	1.04	0.42	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 43 (24%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.04
Intersection Signal Delay: 32.0 Intersection LOS: C
Intersection Capacity Utilization 96.3% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1360	40	50	770	50	70
Future Volume (veh/h)	1360	40	50	770	50	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	1870	1900	1900	1826	1856	1900
Adj Flow Rate, veh/h	1495	44	55	846	55	77
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	0	5	3	0
Cap, veh/h	1546	46	333	1562	63	88
Arrive On Green	1.00	1.00	1.00	1.00	0.09	0.09
Sat Flow, veh/h	1808	53	342	1826	682	955
Grp Volume(v), veh/h	0	1539	55	846	133	0
Grp Sat Flow(s),veh/h/ln	0	1861	342	1826	1650	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	14.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	14.3	0.0
Prop In Lane		0.03	1.00		0.41	0.58
Lane Grp Cap(c), veh/h	0	1592	333	1562	151	0
V/C Ratio(X)	0.00	0.97	0.17	0.54	0.88	0.00
Avail Cap(c_a), veh/h	0	1592	333	1562	215	0
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.85	0.85	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	80.8	0.0
Incr Delay (d2), s/veh	0.0	2.5	0.9	1.2	24.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	1.6	0.2	0.9	11.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	2.5	0.9	1.2	104.8	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	1539			901	133	
Approach Delay, s/veh	2.5			1.1	104.8	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		159.0		21.0		159.0
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		147.0		23.5		147.0
Max Q Clear Time (g_c+I1), s		2.0		16.3		2.0
Green Ext Time (p_c), s		89.5		0.2		15.8

Intersection Summary	
HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

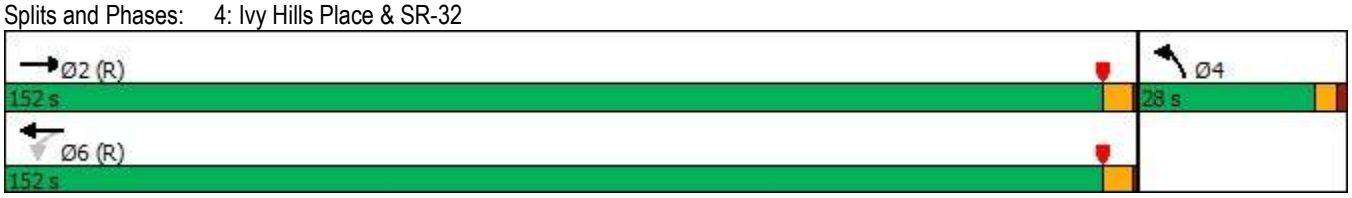
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1360	40	50	770	50	70
Future Volume (vph)	1360	40	50	770	50	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.996				0.921	
Flt Protected			0.950		0.980	
Satd. Flow (prot)	1856	0	1805	1810	1694	0
Flt Permitted			0.026		0.980	
Satd. Flow (perm)	1856	0	49	1810	1694	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				32	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	0%	0%	5%	3%	0%
Adj. Flow (vph)	1495	44	55	846	55	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1539	0	55	846	132	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	25.0		25.0	25.0	23.5	
Total Split (s)	152.0		152.0	152.0	28.0	
Total Split (%)	84.4%		84.4%	84.4%	15.6%	
Maximum Green (s)	147.0		147.0	147.0	23.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	154.2		154.2	154.2	16.3	
Actuated g/C Ratio	0.86		0.86	0.86	0.09	
v/c Ratio	0.97		1.31	0.55	0.73	
Control Delay	9.7		263.9	4.2	81.5	
Queue Delay	5.3		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	15.0		263.9	4.2	81.5	
LOS	B		F	A	F	
Approach Delay	15.0			20.1	81.5	
Approach LOS	B			C	F	
Queue Length 50th (ft)	57		~83	160	117	
Queue Length 95th (ft)	m973		m#184	266	192	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	1590		42	1550	248	
Starvation Cap Reductn	49		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	1.00		1.31	0.55	0.53	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 141 (78%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 20.2 Intersection LOS: C
Intersection Capacity Utilization 90.3% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	550	60	30	1350	210	30
Future Volume (veh/h)	550	60	30	1350	210	30
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	1752	1574	1826	1826	1885	1737
Adj Flow Rate, veh/h	567	62	31	1392	216	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	22	5	5	1	11
Cap, veh/h	1161	127	675	1473	238	195
Arrive On Green	1.00	1.00	0.03	0.81	0.13	0.13
Sat Flow, veh/h	1552	170	1739	1826	1795	1472
Grp Volume(v), veh/h	0	629	31	1392	216	31
Grp Sat Flow(s),veh/h/ln	0	1721	1739	1826	1795	1472
Q Serve(g_s), s	0.0	0.0	0.7	111.7	21.4	3.4
Cycle Q Clear(g_c), s	0.0	0.0	0.7	111.7	21.4	3.4
Prop In Lane		0.10	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1288	675	1473	238	195
V/C Ratio(X)	0.00	0.49	0.05	0.95	0.91	0.16
Avail Cap(c_a), veh/h	0	1288	709	1473	319	262
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	4.1	14.2	77.0	69.2
Incr Delay (d2), s/veh	0.0	1.2	0.0	13.6	23.7	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	0.0	0.8	0.4	50.6	17.0	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	1.2	4.1	27.8	100.7	69.6
LnGrp LOS	A	A	A	C	F	E
Approach Vol, veh/h	629			1423	247	
Approach Delay, s/veh	1.2			27.2	96.8	
Approach LOS	A			C	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.5	140.7		28.8		151.2
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	123.0		32.0		137.0
Max Q Clear Time (g_c+I1), s	2.7	2.0		23.4		113.7
Green Ext Time (p_c), s	0.0	10.0		0.5		20.4

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

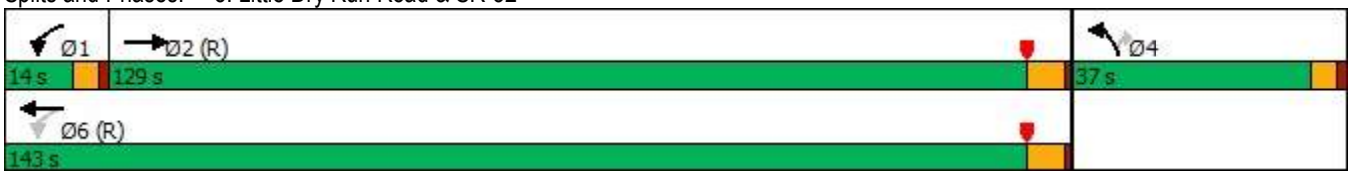
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	550	60	30	1350	210	30
Future Volume (vph)	550	60	30	1350	210	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		125	0
Storage Lanes		0	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.987					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1687	0	1719	1810	1787	1455
Flt Permitted			0.349		0.950	
Satd. Flow (perm)	1687	0	632	1810	1787	1455
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	7					31
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	22%	5%	5%	1%	11%
Adj. Flow (vph)	567	62	31	1392	216	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	629	0	31	1392	216	31
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Detector Phase	2		1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0		7.0	20.0	10.0	10.0
Minimum Split (s)	66.5		12.0	66.5	15.0	15.0
Total Split (s)	129.0		14.0	143.0	37.0	37.0
Total Split (%)	71.7%		7.8%	79.4%	20.6%	20.6%
Maximum Green (s)	123.0		9.0	137.0	32.0	32.0
Yellow Time (s)	5.0		3.5	5.0	3.5	3.5
All-Red Time (s)	1.0		1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		3.0	5.0	3.0	3.0
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	133.1		143.7	142.7	26.3	26.3
Actuated g/C Ratio	0.74		0.80	0.79	0.15	0.15
v/c Ratio	0.50		0.06	0.97	0.83	0.13
Control Delay	13.3		4.7	35.7	99.3	19.1
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	13.3		4.7	35.7	99.3	19.1
LOS	B		A	D	F	B
Approach Delay	13.3			35.0	89.3	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			C	F	
Queue Length 50th (ft)	257		7	1341	251	0
Queue Length 95th (ft)	593		17	#1981	344	34
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		125	
Base Capacity (vph)	1249		558	1434	317	284
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.50		0.06	0.97	0.68	0.11

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 163 (91%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 34.9 Intersection LOS: C
Intersection Capacity Utilization 91.9% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Little Dry Run Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1240	190	60	680	140	50
Future Volume (veh/h)	1240	190	60	680	140	50
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	1856	1870	1900	1856	1841	1767
Adj Flow Rate, veh/h	1278	196	62	701	144	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	2	0	3	4	9
Cap, veh/h	1225	188	117	1568	165	141
Arrive On Green	1.00	1.00	0.04	0.84	0.09	0.09
Sat Flow, veh/h	1571	241	1810	1856	1753	1497
Grp Volume(v), veh/h	0	1474	62	701	144	52
Grp Sat Flow(s),veh/h/ln	0	1812	1810	1856	1753	1497
Q Serve(g_s), s	0.0	135.4	1.1	17.0	14.6	5.9
Cycle Q Clear(g_c), s	0.0	135.4	1.1	17.0	14.6	5.9
Prop In Lane		0.13	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	0	1413	117	1568	165	141
V/C Ratio(X)	0.00	1.04	0.53	0.45	0.87	0.37
Avail Cap(c_a), veh/h	0	1413	151	1568	243	208
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.17	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	58.7	3.5	80.5	76.5
Incr Delay (d2), s/veh	0.0	23.6	3.6	0.9	20.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	11.8	4.2	8.5	12.0	4.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	23.6	62.3	4.4	100.5	78.1
LnGrp LOS	A	F	E	A	F	E
Approach Vol, veh/h	1474			763	196	
Approach Delay, s/veh	23.6			9.1	94.6	
Approach LOS	C			A	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.7	146.4		21.9		158.1
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	10.0	129.0		25.0		144.0
Max Q Clear Time (g_c+I1), s	3.1	137.4		16.6		19.0
Green Ext Time (p_c), s	0.0	0.0		0.3		11.8

Intersection Summary	
HCM 6th Ctrl Delay	24.8
HCM 6th LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1240	190	60	680	140	50
Future Volume (vph)	1240	190	60	680	140	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		125	0
Storage Lanes		0	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.982					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1814	0	1805	1845	1736	1482
Flt Permitted			0.028		0.950	
Satd. Flow (perm)	1814	0	53	1845	1736	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	11					52
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	3%	2%	0%	3%	4%	9%
Adj. Flow (vph)	1278	196	62	701	144	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1474	0	62	701	144	52
Turn Type	NA		pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases			6			4
Detector Phase	2		1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0		7.0	20.0	10.0	10.0
Minimum Split (s)	26.0		12.0	26.0	15.0	15.0
Total Split (s)	135.0		15.0	150.0	30.0	30.0
Total Split (%)	75.0%		8.3%	83.3%	16.7%	16.7%
Maximum Green (s)	129.0		10.0	144.0	25.0	25.0
Yellow Time (s)	5.0		3.5	5.0	3.5	3.5
All-Red Time (s)	1.0		1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0		5.0	6.0	5.0	5.0
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0		3.0	5.0	3.0	3.0
Recall Mode	C-Max		None	C-Max	None	None
Act Effct Green (s)	136.3		150.3	149.3	19.7	19.7
Actuated g/C Ratio	0.76		0.84	0.83	0.11	0.11
v/c Ratio	1.07		0.51	0.46	0.76	0.25
Control Delay	53.1		40.7	5.7	101.7	18.2
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	53.1		40.7	5.7	101.7	18.2
LOS	D		D	A	F	B
Approach Delay	53.1			8.5	79.5	

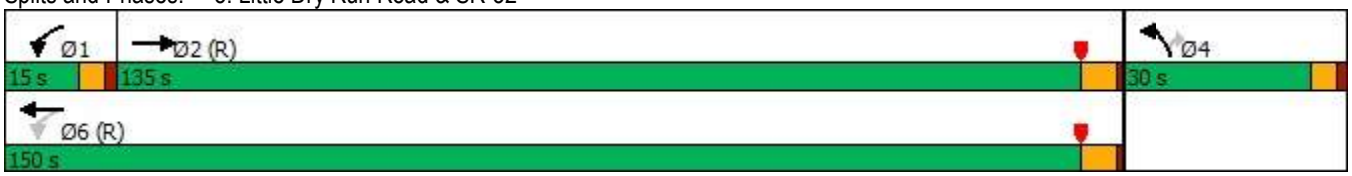
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	D			A	E	
Queue Length 50th (ft)	~1910		20	198	168	0
Queue Length 95th (ft)	m#2136		78	299	246	46
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		125	
Base Capacity (vph)	1376		141	1530	241	250
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.07		0.44	0.46	0.60	0.21

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 156 (87%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 41.2 Intersection LOS: D
Intersection Capacity Utilization 94.3% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Little Dry Run Road & SR-32



APPENDIX I

BUILD ALTERNATIVE RB-1
SYNCHRO SUMMARY WORKSHEETS

2022 BUILD ALTERNATIVE RB-1

HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	300	40	30	700	720	60	30	20	220	20	0
Future Volume (veh/h)	100	300	40	30	700	720	60	30	20	220	20	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1796	1900	1900	1826	1856	1870	1900	1900	1752	1900	0
Adj Flow Rate, veh/h	108	323	43	32	753	0	65	32	22	253	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	7	0	0	5	3	2	0	0	10	0	0
Cap, veh/h	567	2091	276	770	1246		99	58	40	301	172	0
Arrive On Green	0.04	0.69	0.69	0.05	1.00	0.00	0.06	0.06	0.06	0.09	0.00	0.00
Sat Flow, veh/h	1697	3031	400	1810	1826	1572	1781	1049	721	3337	1900	0
Grp Volume(v), veh/h	108	181	185	32	753	0	65	0	54	253	0	0
Grp Sat Flow(s),veh/h/ln	1697	1706	1724	1810	1826	1572	1781	0	1770	1668	1900	0
Q Serve(g_s), s	3.4	6.6	6.7	0.9	0.0	0.0	6.4	0.0	5.3	13.4	0.0	0.0
Cycle Q Clear(g_c), s	3.4	6.6	6.7	0.9	0.0	0.0	6.4	0.0	5.3	13.4	0.0	0.0
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.41	1.00		0.00
Lane Grp Cap(c), veh/h	567	1177	1190	770	1246		99	0	98	301	172	0
V/C Ratio(X)	0.19	0.15	0.16	0.04	0.60		0.66	0.00	0.55	0.84	0.00	0.00
Avail Cap(c_a), veh/h	586	1177	1190	804	1246		183	0	182	621	354	0
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.26	0.26	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.5	9.7	9.7	7.4	0.0	0.0	83.3	0.0	82.8	80.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.2	0.0	0.6	0.0	7.3	0.0	4.7	6.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.4	4.8	4.9	0.7	0.4	0.0	5.8	0.0	4.7	10.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	9.9	9.9	7.5	0.6	0.0	90.6	0.0	87.6	86.8	0.0	0.0
LnGrp LOS	A	A	A	A	A		F	A	F	F	A	A
Approach Vol, veh/h		474			785	A		119			253	
Approach Delay, s/veh		9.4			0.9			89.2			86.8	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.6	130.2		16.5	12.0	128.8		22.8
Change Period (Y+Rc), s	5.0	6.0		6.5	5.0	6.0		6.5
Max Green Setting (Gmax), s	9.0	95.0		18.5	9.0	95.0		33.5
Max Q Clear Time (g_c+I1), s	2.9	8.7		8.4	5.4	2.0		15.4
Green Ext Time (p_c), s	0.0	0.4		0.3	0.1	1.0		0.8

Intersection Summary	
HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

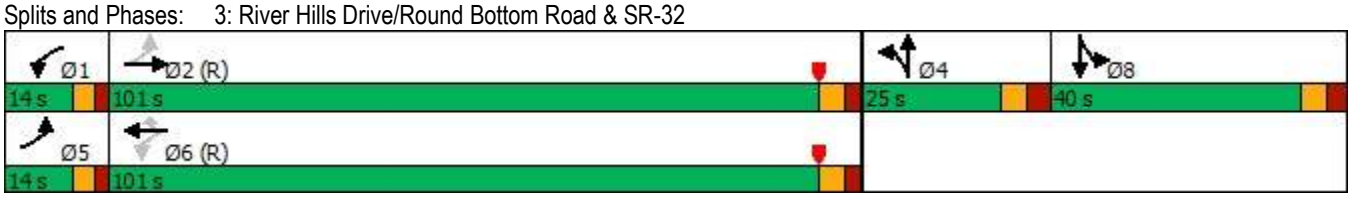
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	300	40	30	700	720	60	30	20	220	20	0
Future Volume (vph)	100	300	40	30	700	720	60	30	20	220	20	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	550		250
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.982				0.850		0.939				
Flt Protected	0.950			0.950			0.950			0.950	0.961	
Satd. Flow (prot)	1671	3339	0	1805	1810	1568	1770	1784	0	1559	1604	0
Flt Permitted	0.234			0.534			0.950			0.950	0.961	
Satd. Flow (perm)	412	3339	0	1015	1810	1568	1770	1784	0	1559	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				774		15				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	8%	7%	0%	0%	5%	3%	2%	0%	0%	10%	0%	19%
Adj. Flow (vph)	108	323	43	32	753	774	65	32	22	237	22	0
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	108	366	0	32	753	774	65	54	0	142	117	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	58.0		12.0	58.0	58.0	16.5	16.5		16.5	16.5	
Total Split (s)	14.0	101.0		14.0	101.0	101.0	25.0	25.0		40.0	40.0	
Total Split (%)	7.8%	56.1%		7.8%	56.1%	56.1%	13.9%	13.9%		22.2%	22.2%	
Maximum Green (s)	9.0	95.0		9.0	95.0	95.0	18.5	18.5		33.5	33.5	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	125.0	117.0		121.6	113.4	113.4	12.5	12.5		21.7	21.7	
Actuated g/C Ratio	0.69	0.65		0.68	0.63	0.63	0.07	0.07		0.12	0.12	
v/c Ratio	0.31	0.17		0.04	0.66	0.61	0.53	0.39		0.76	0.61	
Control Delay	13.8	16.0		9.2	21.2	1.9	95.8	66.1		100.3	87.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	13.8	16.0		9.2	21.2	1.9	95.8	66.1		100.3	87.5	
LOS	B	B		A	C	A	F	E		F	F	
Approach Delay		15.5			11.4			82.4			94.6	
Approach LOS		B			B			F			F	
Queue Length 50th (ft)	23	111		11	407	26	76	45		173	140	
Queue Length 95th (ft)	m0	m171		m10	m646	m31	131	94		252	210	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			550		
Base Capacity (vph)	349	2175		735	1140	1274	181	196		290	298	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.31	0.17		0.04	0.66	0.61	0.36	0.28		0.49	0.39	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 66 (37%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 24.6 Intersection LOS: C
Intersection Capacity Utilization 73.3% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	700	50	30	380	430	60	50	40	590	60	0
Future Volume (veh/h)	160	700	50	30	380	430	60	50	40	590	60	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1900	1900	1885	1826	1900	1870	1900	1885	1841	0
Adj Flow Rate, veh/h	170	745	53	32	404	0	64	53	43	674	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	1	0	0	1	5	0	2	0	1	4	0
Cap, veh/h	430	1779	127	465	966		124	65	53	763	391	0
Arrive On Green	0.09	1.00	1.00	0.01	0.17	0.00	0.07	0.07	0.07	0.21	0.00	0.00
Sat Flow, veh/h	1711	3392	241	1810	1885	1547	1810	956	775	3591	1841	0
Grp Volume(v), veh/h	170	393	405	32	404	0	64	0	96	674	0	0
Grp Sat Flow(s),veh/h/ln	1711	1791	1842	1810	1885	1547	1810	0	1731	1795	1841	0
Q Serve(g_s), s	7.0	0.0	0.0	1.2	28.7	0.0	5.1	0.0	8.2	27.3	0.0	0.0
Cycle Q Clear(g_c), s	7.0	0.0	0.0	1.2	28.7	0.0	5.1	0.0	8.2	27.3	0.0	0.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	430	939	966	465	966		124	0	119	763	391	0
V/C Ratio(X)	0.40	0.42	0.42	0.07	0.42		0.52	0.00	0.81	0.88	0.00	0.00
Avail Cap(c_a), veh/h	430	939	966	487	966		139	0	133	1209	620	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.36	0.36	0.84	0.84	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.2	0.0	0.0	16.1	42.3	0.0	67.5	0.0	68.9	57.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.5	0.5	0.1	1.1	0.0	3.3	0.0	27.7	5.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.5	0.2	0.2	1.0	20.8	0.0	4.5	0.0	8.1	19.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.4	0.5	0.5	16.1	43.5	0.0	70.8	0.0	96.6	62.2	0.0	0.0
LnGrp LOS	C	A	A	B	D		E	A	F	E	A	A
Approach Vol, veh/h		968			436	A		160			674	
Approach Delay, s/veh		4.0			41.5			86.3			62.2	
Approach LOS		A			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.2	84.7		16.8	12.0	82.8		38.4
Change Period (Y+Rc), s	5.0	6.0		6.5	5.0	6.0		6.5
Max Green Setting (Gmax), s	7.0	57.0		11.5	7.0	57.0		50.5
Max Q Clear Time (g_c+I1), s	3.2	2.0		10.2	9.0	30.7		29.3
Green Ext Time (p_c), s	0.0	1.0		0.1	0.0	0.5		2.6

Intersection Summary	
HCM 6th Ctrl Delay	34.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

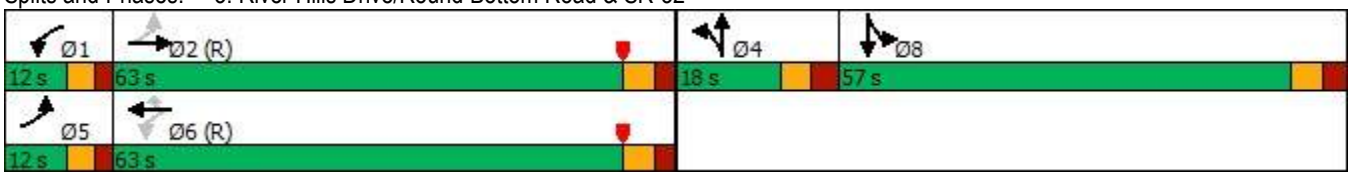
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	700	50	30	380	430	60	50	40	590	60	0
Future Volume (vph)	160	700	50	30	380	430	60	50	40	590	60	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	550		250
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.990				0.850		0.933				
Flt Protected	0.950			0.950			0.950			0.950	0.962	
Satd. Flow (prot)	1687	3541	0	1805	1881	1538	1805	1753	0	1698	1709	0
Flt Permitted	0.372			0.271			0.950			0.950	0.962	
Satd. Flow (perm)	661	3541	0	515	1881	1538	1805	1753	0	1698	1709	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				457		21				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	1%	0%	0%	1%	5%	0%	2%	0%	1%	4%	2%
Adj. Flow (vph)	170	745	53	32	404	457	64	53	43	628	64	0
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	170	798	0	32	404	457	64	96	0	377	315	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	38.0		12.0	26.0	26.0	16.5	16.5		16.5	16.5	
Total Split (s)	12.0	63.0		12.0	63.0	63.0	18.0	18.0		57.0	57.0	
Total Split (%)	8.0%	42.0%		8.0%	42.0%	42.0%	12.0%	12.0%		38.0%	38.0%	
Maximum Green (s)	7.0	57.0		7.0	57.0	57.0	11.5	11.5		50.5	50.5	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	77.8	72.6		75.8	67.8	67.8	10.9	10.9		40.3	40.3	
Actuated g/C Ratio	0.52	0.48		0.51	0.45	0.45	0.07	0.07		0.27	0.27	
v/c Ratio	0.44	0.47		0.10	0.48	0.48	0.49	0.66		0.83	0.69	
Control Delay	21.5	25.7		15.8	26.6	5.4	79.8	73.8		66.4	56.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	21.5	25.7		15.8	26.6	5.4	79.8	73.8		66.4	56.3	
LOS	C	C		B	C	A	E	E		E	E	
Approach Delay		25.0			15.4			76.2			61.8	
Approach LOS		C			B			E			E	
Queue Length 50th (ft)	79	227		13	223	33	61	72		366	292	
Queue Length 95th (ft)	m82	m205		m30	397	114	113	#144		457	371	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			550		
Base Capacity (vph)	390	1716		320	849	945	138	153		571	575	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.44	0.47		0.10	0.48	0.48	0.46	0.63		0.66	0.55	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 44 (29%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 34.2 Intersection LOS: C
Intersection Capacity Utilization 68.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	510	10	30	1410	40	30
Future Volume (veh/h)	510	10	30	1410	40	30
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	1781	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	554	11	33	1533	43	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	0	3	0	0
Cap, veh/h	3029	60	807	1656	53	40
Arrive On Green	1.00	1.00	1.00	1.00	0.05	0.05
Sat Flow, veh/h	3483	67	859	1856	960	737
Grp Volume(v), veh/h	276	289	33	1533	77	0
Grp Sat Flow(s),veh/h/ln	1692	1769	859	1856	1719	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.0	0.0
Prop In Lane		0.04	1.00		0.56	0.43
Lane Grp Cap(c), veh/h	1510	1579	807	1656	94	0
V/C Ratio(X)	0.18	0.18	0.04	0.93	0.82	0.00
Avail Cap(c_a), veh/h	1510	1579	807	1656	215	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.37	0.37	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	84.2	0.0
Incr Delay (d2), s/veh	0.3	0.2	0.0	4.4	15.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.2	0.0	3.5	7.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.3	0.2	0.0	4.4	99.5	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	565			1566	77	
Approach Delay, s/veh	0.2			4.3	99.5	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		165.6		14.4		165.6
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		148.0		22.5		148.0
Max Q Clear Time (g_c+I1), s		2.0		10.0		2.0
Green Ext Time (p_c), s		5.7		0.1		89.7

Intersection Summary	
HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A

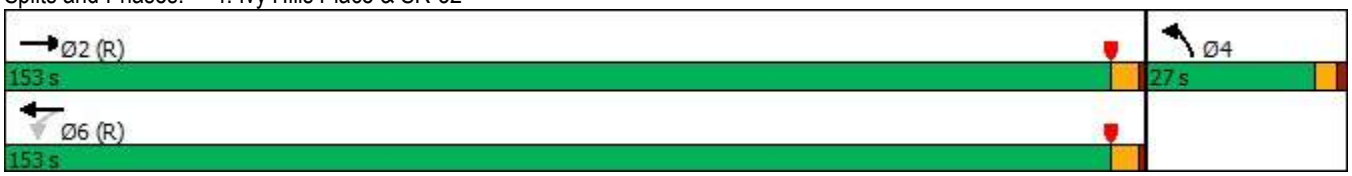
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	510	10	30	1410	40	30
Future Volume (vph)	510	10	30	1410	40	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.997				0.941	
Flt Protected			0.950		0.972	
Satd. Flow (prot)	3337	0	1805	1845	1738	0
Flt Permitted			0.440		0.972	
Satd. Flow (perm)	3337	0	836	1845	1738	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	4				18	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	0%	0%	3%	0%	0%
Adj. Flow (vph)	554	11	33	1533	43	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	565	0	33	1533	76	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	66.0		66.0	66.0	24.5	
Total Split (s)	153.0		153.0	153.0	27.0	
Total Split (%)	85.0%		85.0%	85.0%	15.0%	
Maximum Green (s)	148.0		148.0	148.0	22.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	158.2		158.2	158.2	12.3	
Actuated g/C Ratio	0.88		0.88	0.88	0.07	
v/c Ratio	0.19		0.04	0.95	0.56	
Control Delay	0.7		1.3	14.6	77.3	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	0.7		1.3	14.6	77.3	
LOS	A		A	B	E	
Approach Delay	0.7			14.3	77.3	
Approach LOS	A			B	E	
Queue Length 50th (ft)	13		2	357	68	
Queue Length 95th (ft)	20		m5	#2080	126	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	2933		734	1621	233	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.19		0.04	0.95	0.33	

Intersection Summary	
Area Type: Other	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 36 (20%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 13.0	Intersection LOS: B
Intersection Capacity Utilization 90.5%	ICU Level of Service E
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1240	30	40	720	40	60
Future Volume (veh/h)	1240	30	40	720	40	60
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	1870	1900	1900	1841	1856	1900
Adj Flow Rate, veh/h	1363	33	44	791	44	66
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	0	4	3	0
Cap, veh/h	3037	73	384	1577	52	78
Arrive On Green	1.00	1.00	1.00	1.00	0.08	0.08
Sat Flow, veh/h	3639	86	393	1841	653	979
Grp Volume(v), veh/h	682	714	44	791	111	0
Grp Sat Flow(s),veh/h/ln	1777	1855	393	1841	1647	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.0	0.0
Prop In Lane		0.05	1.00		0.40	0.59
Lane Grp Cap(c), veh/h	1522	1589	384	1577	132	0
V/C Ratio(X)	0.45	0.45	0.11	0.50	0.84	0.00
Avail Cap(c_a), veh/h	1522	1589	384	1577	225	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.87	0.87	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	68.0	0.0
Incr Delay (d2), s/veh	0.8	0.7	0.5	1.0	13.2	0.0
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	0.6	0.1	0.8	8.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.8	0.7	0.5	1.0	81.2	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	1396			835	111	
Approach Delay, s/veh	0.7			1.0	81.2	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		133.5		16.5		133.5
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		120.0		20.5		120.0
Max Q Clear Time (g_c+I1), s		2.0		12.0		2.0
Green Ext Time (p_c), s		25.2		0.2		13.0

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Notes

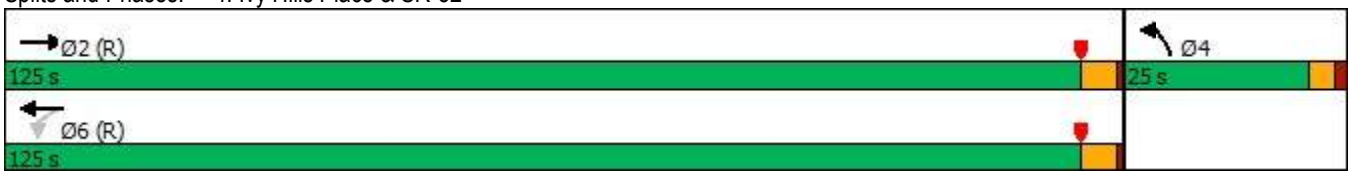
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1240	30	40	720	40	60
Future Volume (vph)	1240	30	40	720	40	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.996				0.919	
Flt Protected			0.950		0.980	
Satd. Flow (prot)	3527	0	1805	1827	1691	0
Flt Permitted			0.177		0.980	
Satd. Flow (perm)	3527	0	336	1827	1691	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	6				42	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	0%	0%	4%	3%	0%
Adj. Flow (vph)	1363	33	44	791	44	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1396	0	44	791	110	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	25.0		25.0	25.0	23.5	
Total Split (s)	125.0		125.0	125.0	25.0	
Total Split (%)	83.3%		83.3%	83.3%	16.7%	
Maximum Green (s)	120.0		120.0	120.0	20.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	127.9		127.9	127.9	12.6	
Actuated g/C Ratio	0.85		0.85	0.85	0.08	
v/c Ratio	0.46		0.15	0.51	0.61	
Control Delay	3.4		3.0	3.5	55.0	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	3.4		3.0	3.5	55.0	
LOS	A		A	A	D	
Approach Delay	3.4			3.5	55.0	
Approach LOS	A			A	D	
Queue Length 50th (ft)	241		4	109	65	
Queue Length 95th (ft)	13		m13	193	130	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	3009		286	1558	267	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.46		0.15	0.51	0.41	

Intersection Summary	
Area Type:	Other
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 135 (90%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 5.8	Intersection LOS: A
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	490	50	20	1240	200	20
Future Volume (veh/h)	490	50	20	1240	200	20
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	1781	1574	1826	1841	1885	1737
Adj Flow Rate, veh/h	505	52	21	1278	206	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	22	5	4	1	11
Cap, veh/h	1352	1013	715	1495	227	187
Arrive On Green	1.00	1.00	0.03	0.81	0.13	0.13
Sat Flow, veh/h	1781	1334	1739	1841	1795	1472
Grp Volume(v), veh/h	505	52	21	1278	206	21
Grp Sat Flow(s),veh/h/ln	1781	1334	1739	1841	1795	1472
Q Serve(g_s), s	0.0	0.0	0.4	76.8	20.4	2.3
Cycle Q Clear(g_c), s	0.0	0.0	0.4	76.8	20.4	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1352	1013	715	1495	227	187
V/C Ratio(X)	0.37	0.05	0.03	0.85	0.91	0.11
Avail Cap(c_a), veh/h	1352	1013	758	1495	319	262
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	3.8	10.4	77.5	69.6
Incr Delay (d2), s/veh	0.8	0.1	0.0	6.5	22.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.3	34.6	16.2	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.8	0.1	3.8	16.8	99.7	69.9
LnGrp LOS	A	A	A	B	F	E
Approach Vol, veh/h	557			1299	227	
Approach Delay, s/veh	0.7			16.6	96.9	
Approach LOS	A			B	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	142.6		27.8		152.2
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	123.0		32.0		137.0
Max Q Clear Time (g_c+I1), s	2.4	2.0		22.4		78.8
Green Ext Time (p_c), s	0.0	7.6		0.4		37.5

Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

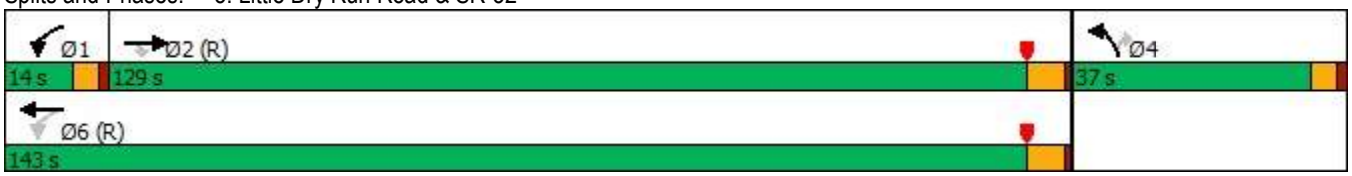
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	490	50	20	1240	200	20
Future Volume (vph)	490	50	20	1240	200	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1759	1324	1719	1827	1787	1455
Flt Permitted			0.420		0.950	
Satd. Flow (perm)	1759	1324	760	1827	1787	1455
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				21
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	8%	22%	5%	4%	1%	11%
Adj. Flow (vph)	505	52	21	1278	206	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	505	52	21	1278	206	21
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	66.5	66.5	12.0	66.5	15.0	15.0
Total Split (s)	129.0	129.0	14.0	143.0	37.0	37.0
Total Split (%)	71.7%	71.7%	7.8%	79.4%	20.6%	20.6%
Maximum Green (s)	123.0	123.0	9.0	137.0	32.0	32.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	136.3	136.3	144.5	143.5	25.5	25.5
Actuated g/C Ratio	0.76	0.76	0.80	0.80	0.14	0.14
v/c Ratio	0.38	0.05	0.03	0.88	0.81	0.09
Control Delay	9.9	2.4	4.5	22.3	98.5	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.9	2.4	4.5	22.3	98.5	21.9
LOS	A	A	A	C	F	C
Approach Delay	9.2			22.0	91.4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	A			C	F	
Queue Length 50th (ft)	58	0	4	917	239	0
Queue Length 95th (ft)	398	27	13	1482	329	29
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1331	1014	657	1455	317	275
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	0.38	0.05	0.03	0.88	0.65	0.08

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 3 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 26.1 Intersection LOS: C
Intersection Capacity Utilization 85.5% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 5: Little Dry Run Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1130	170	50	630	130	40
Future Volume (veh/h)	1130	170	50	630	130	40
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	1870	1870	1900	1856	1841	1767
Adj Flow Rate, veh/h	1165	175	52	649	134	41
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	3	4	9
Cap, veh/h	1425	1208	438	1552	158	135
Arrive On Green	1.00	1.00	0.04	0.84	0.09	0.09
Sat Flow, veh/h	1870	1585	1810	1856	1753	1497
Grp Volume(v), veh/h	1165	175	52	649	134	41
Grp Sat Flow(s),veh/h/ln	1870	1585	1810	1856	1753	1497
Q Serve(g_s), s	0.0	0.0	0.8	13.2	11.3	3.8
Cycle Q Clear(g_c), s	0.0	0.0	0.8	13.2	11.3	3.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1425	1208	438	1552	158	135
V/C Ratio(X)	0.82	0.14	0.12	0.42	0.85	0.30
Avail Cap(c_a), veh/h	1425	1208	448	1552	234	200
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	2.6	3.1	67.2	63.8
Incr Delay (d2), s/veh	4.7	0.2	0.1	0.8	16.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	0.1	0.4	6.1	9.7	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.7	0.2	2.7	3.9	84.0	65.1
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	1340			701	175	
Approach Delay, s/veh	4.1			3.8	79.6	
Approach LOS	A			A	E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.2	120.3		18.5		131.5
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	7.0	107.0		20.0		119.0
Max Q Clear Time (g_c+I1), s	2.8	2.0		13.3		15.2
Green Ext Time (p_c), s	0.0	43.9		0.2		10.4

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	A

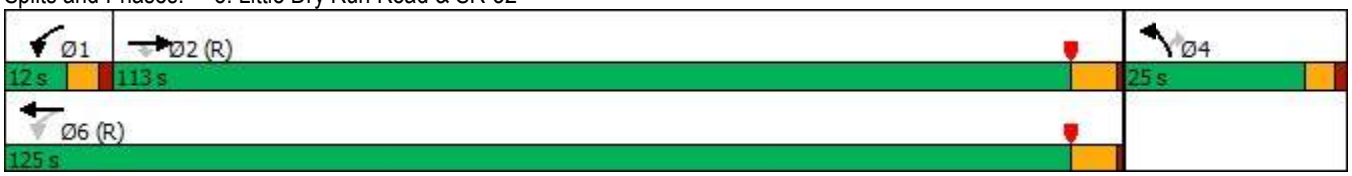
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1130	170	50	630	130	40
Future Volume (vph)	1130	170	50	630	130	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1805	1845	1736	1482
Flt Permitted			0.107		0.950	
Satd. Flow (perm)	1863	1583	203	1845	1736	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		138				41
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	0%	3%	4%	9%
Adj. Flow (vph)	1165	175	52	649	134	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1165	175	52	649	134	41
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	26.0	26.0	12.0	26.0	15.0	15.0
Total Split (s)	113.0	113.0	12.0	125.0	25.0	25.0
Total Split (%)	75.3%	75.3%	8.0%	83.3%	16.7%	16.7%
Maximum Green (s)	107.0	107.0	7.0	119.0	20.0	20.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	113.2	113.2	123.8	122.8	16.2	16.2
Actuated g/C Ratio	0.75	0.75	0.83	0.82	0.11	0.11
v/c Ratio	0.83	0.14	0.21	0.43	0.72	0.21
Control Delay	17.8	0.9	4.8	5.1	85.1	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.8	0.9	4.8	5.1	85.1	18.2
LOS	B	A	A	A	F	B
Approach Delay	15.6			5.1	69.4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			A	E	
Queue Length 50th (ft)	685	15	8	152	128	0
Queue Length 95th (ft)	841	13	18	229	199	38
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1405	1228	242	1510	231	233
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	0.83	0.14	0.21	0.43	0.58	0.18

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 8 (5%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 16.5 Intersection LOS: B
Intersection Capacity Utilization 77.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 5: Little Dry Run Road & SR-32



2042 BUILD ALTERNATIVE RB-1

HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	320	50	40	740	760	80	40	30	230	30	0
Future Volume (veh/h)	110	320	50	40	740	760	80	40	30	230	30	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1796	1900	1900	1826	1856	1870	1900	1900	1752	1900	0
Adj Flow Rate, veh/h	118	344	54	43	796	0	86	43	32	270	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	7	0	0	5	3	2	0	0	10	0	0
Cap, veh/h	470	2001	311	710	1226		108	61	46	319	182	0
Arrive On Green	0.03	0.45	0.45	0.05	0.89	0.00	0.06	0.06	0.06	0.10	0.00	0.00
Sat Flow, veh/h	1697	2960	460	1810	1826	1572	1781	1012	753	3337	1900	0
Grp Volume(v), veh/h	118	197	201	43	796	0	86	0	75	270	0	0
Grp Sat Flow(s),veh/h/ln	1697	1706	1713	1810	1826	1572	1781	0	1764	1668	1900	0
Q Serve(g_s), s	3.9	12.3	12.5	1.3	19.9	0.0	8.6	0.0	7.5	14.3	0.0	0.0
Cycle Q Clear(g_c), s	3.9	12.3	12.5	1.3	19.9	0.0	8.6	0.0	7.5	14.3	0.0	0.0
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.43	1.00		0.00
Lane Grp Cap(c), veh/h	470	1154	1158	710	1226		108	0	107	319	182	0
V/C Ratio(X)	0.25	0.17	0.17	0.06	0.65		0.80	0.00	0.70	0.85	0.00	0.00
Avail Cap(c_a), veh/h	489	1154	1158	738	1226		183	0	181	621	354	0
HCM Platoon Ratio	0.67	0.67	0.67	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.15	0.15	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.6	19.3	19.4	8.3	4.2	0.0	83.4	0.0	82.9	80.1	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.2	0.3	0.0	0.4	0.0	12.3	0.0	8.0	6.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	8.9	9.1	0.9	5.6	0.0	7.8	0.0	6.7	10.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.8	19.6	19.6	8.3	4.6	0.0	95.8	0.0	90.9	86.3	0.0	0.0
LnGrp LOS	A	B	B	A	A		F	A	F	F	A	A
Approach Vol, veh/h		516			839	A		161			270	
Approach Delay, s/veh		17.4			4.8			93.5			86.3	
Approach LOS		B			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.2	127.7		17.4	12.0	126.9		23.7
Change Period (Y+Rc), s	5.0	6.0		6.5	5.0	6.0		6.5
Max Green Setting (Gmax), s	9.0	95.0		18.5	9.0	95.0		33.5
Max Q Clear Time (g_c+I1), s	3.3	14.5		10.6	5.9	21.9		16.3
Green Ext Time (p_c), s	0.0	0.5		0.3	0.1	1.1		0.9

Intersection Summary	
HCM 6th Ctrl Delay	28.8
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

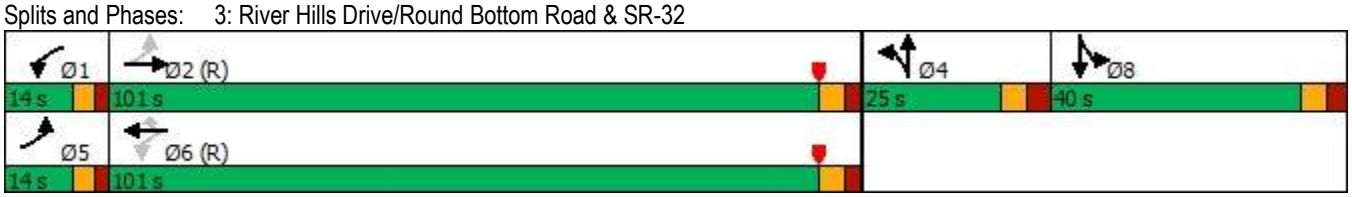
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	320	50	40	740	760	80	40	30	230	30	0
Future Volume (vph)	110	320	50	40	740	760	80	40	30	230	30	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	550		250
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.980				0.850		0.936				
Flt Protected	0.950			0.950			0.950			0.950	0.964	
Satd. Flow (prot)	1671	3336	0	1805	1810	1568	1770	1778	0	1559	1618	0
Flt Permitted	0.200			0.516			0.950			0.950	0.964	
Satd. Flow (perm)	352	3336	0	980	1810	1568	1770	1778	0	1559	1618	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				817		17				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	8%	7%	0%	0%	5%	3%	2%	0%	0%	10%	0%	19%
Adj. Flow (vph)	118	344	54	43	796	817	86	43	32	247	32	0
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	118	398	0	43	796	817	86	75	0	148	131	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	58.0		12.0	58.0	58.0	16.5	16.5		16.5	16.5	
Total Split (s)	14.0	101.0		14.0	101.0	101.0	25.0	25.0		40.0	40.0	
Total Split (%)	7.8%	56.1%		7.8%	56.1%	56.1%	13.9%	13.9%		22.2%	22.2%	
Maximum Green (s)	9.0	95.0		9.0	95.0	95.0	18.5	18.5		33.5	33.5	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	122.5	114.5		119.4	111.0	111.0	14.2	14.2		22.4	22.4	
Actuated g/C Ratio	0.68	0.64		0.66	0.62	0.62	0.08	0.08		0.12	0.12	
v/c Ratio	0.39	0.19		0.06	0.71	0.64	0.62	0.48		0.77	0.65	
Control Delay	15.9	17.5		10.0	24.2	1.8	98.8	70.9		100.0	89.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	15.9	17.5		10.0	24.2	1.8	98.8	70.9		100.0	89.4	
LOS	B	B		B	C	A	F	E		F	F	
Approach Delay		17.1			12.8			85.8			95.0	
Approach LOS		B			B			F			F	
Queue Length 50th (ft)	48	123		17	541	36	100	67		181	157	
Queue Length 95th (ft)	m0	m162		m14	m705	m24	163	125		258	231	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			550		
Base Capacity (vph)	305	2126		700	1116	1280	181	197		290	301	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.39	0.19		0.06	0.71	0.64	0.48	0.38		0.51	0.44	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 66 (37%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 26.9 Intersection LOS: C
Intersection Capacity Utilization 76.1% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	750	60	40	400	450	70	60	50	650	70	0
Future Volume (veh/h)	180	750	60	40	400	450	70	60	50	650	70	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1900	1900	1885	1826	1900	1870	1900	1885	1841	0
Adj Flow Rate, veh/h	191	798	64	43	426	0	74	64	53	744	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	1	0	0	1	5	0	2	0	1	4	0
Cap, veh/h	385	1651	132	434	912		139	73	60	836	428	0
Arrive On Green	0.09	0.98	0.98	0.01	0.16	0.00	0.08	0.08	0.08	0.23	0.00	0.00
Sat Flow, veh/h	1711	3358	269	1810	1885	1547	1810	946	783	3591	1841	0
Grp Volume(v), veh/h	191	425	437	43	426	0	74	0	117	744	0	0
Grp Sat Flow(s),veh/h/ln	1711	1791	1837	1810	1885	1547	1810	0	1729	1795	1841	0
Q Serve(g_s), s	7.0	1.1	1.1	1.8	30.8	0.0	5.9	0.0	10.1	30.1	0.0	0.0
Cycle Q Clear(g_c), s	7.0	1.1	1.1	1.8	30.8	0.0	5.9	0.0	10.1	30.1	0.0	0.0
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	385	881	903	434	912		139	0	133	836	428	0
V/C Ratio(X)	0.50	0.48	0.48	0.10	0.47		0.53	0.00	0.88	0.89	0.00	0.00
Avail Cap(c_a), veh/h	385	881	903	448	912		139	0	133	1209	620	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.18	0.18	0.18	0.81	0.81	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.4	0.6	0.6	18.0	45.5	0.0	66.7	0.0	68.6	55.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.3	0.3	0.1	1.4	0.0	3.9	0.0	44.9	6.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	0.6	0.6	1.4	22.0	0.0	5.2	0.0	10.2	20.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	1.0	1.0	18.1	46.8	0.0	70.6	0.0	113.5	61.9	0.0	0.0
LnGrp LOS	C	A	A	B	D		E	A	F	E	A	A
Approach Vol, veh/h		1053			469	A		191			744	
Approach Delay, s/veh		5.6			44.2			96.9			61.9	
Approach LOS		A			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.8	79.8		18.0	12.0	78.6		41.4
Change Period (Y+Rc), s	5.0	6.0		6.5	5.0	6.0		6.5
Max Green Setting (Gmax), s	7.0	57.0		11.5	7.0	57.0		50.5
Max Q Clear Time (g_c+I1), s	3.8	3.1		12.1	9.0	32.8		32.1
Green Ext Time (p_c), s	0.0	1.1		0.0	0.0	0.5		2.8

Intersection Summary	
HCM 6th Ctrl Delay	37.1
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

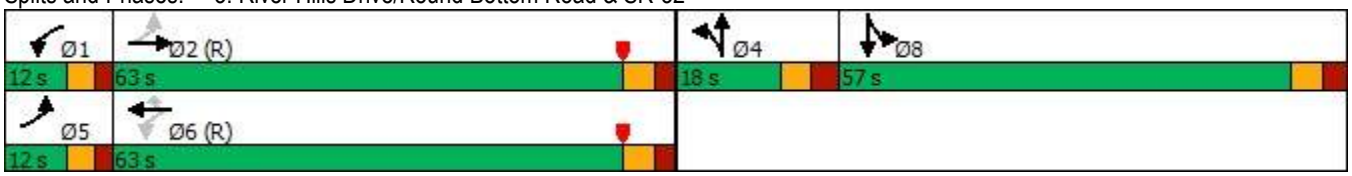
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	750	60	40	400	450	70	60	50	650	70	0
Future Volume (vph)	180	750	60	40	400	450	70	60	50	650	70	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	550		250
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.989				0.850		0.932				
Flt Protected	0.950			0.950			0.950			0.950	0.962	
Satd. Flow (prot)	1687	3538	0	1805	1881	1538	1805	1752	0	1698	1708	0
Flt Permitted	0.345			0.223			0.950			0.950	0.962	
Satd. Flow (perm)	613	3538	0	424	1881	1538	1805	1752	0	1698	1708	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				479		22				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	1%	0%	0%	1%	5%	0%	2%	0%	1%	4%	2%
Adj. Flow (vph)	191	798	64	43	426	479	74	64	53	691	74	0
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	191	862	0	43	426	479	74	117	0	415	350	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	38.0		12.0	26.0	26.0	16.5	16.5		16.5	16.5	
Total Split (s)	12.0	63.0		12.0	63.0	63.0	18.0	18.0		57.0	57.0	
Total Split (%)	8.0%	42.0%		8.0%	42.0%	42.0%	12.0%	12.0%		38.0%	38.0%	
Maximum Green (s)	7.0	57.0		7.0	57.0	57.0	11.5	11.5		50.5	50.5	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	73.8	67.2		72.8	64.8	64.8	11.2	11.2		43.0	43.0	
Actuated g/C Ratio	0.49	0.45		0.49	0.43	0.43	0.07	0.07		0.29	0.29	
v/c Ratio	0.54	0.54		0.16	0.52	0.51	0.55	0.77		0.85	0.71	
Control Delay	23.9	29.6		17.4	29.5	6.0	82.7	86.6		66.9	55.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	23.9	29.6		17.4	29.5	6.0	82.7	86.6		66.9	55.9	
LOS	C	C		B	C	A	F	F		E	E	
Approach Delay		28.5			17.0			85.1			61.9	
Approach LOS		C			B			F			E	
Queue Length 50th (ft)	93	238		19	292	40	71	93		400	321	
Queue Length 95th (ft)	m78	m279		m37	443	122	128	#196		513	418	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			550		
Base Capacity (vph)	351	1587		270	812	936	138	154		571	575	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.54	0.54		0.16	0.52	0.51	0.54	0.76		0.73	0.61	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 44 (29%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 37.1 Intersection LOS: D
Intersection Capacity Utilization 72.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	530	20	40	1470	50	40
Future Volume (veh/h)	530	20	40	1470	50	40
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	1781	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	576	22	43	1598	54	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	0	3	0	0
Cap, veh/h	2925	112	773	1633	64	51
Arrive On Green	1.00	1.00	1.00	1.00	0.07	0.07
Sat Flow, veh/h	3413	127	833	1856	946	753
Grp Volume(v), veh/h	293	305	43	1598	98	0
Grp Sat Flow(s),veh/h/ln	1692	1759	833	1856	1717	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.2	0.0
Prop In Lane		0.07	1.00		0.55	0.44
Lane Grp Cap(c), veh/h	1489	1547	773	1633	116	0
V/C Ratio(X)	0.20	0.20	0.06	0.98	0.85	0.00
Avail Cap(c_a), veh/h	1489	1547	773	1633	148	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.29	0.29	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	83.0	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.0	8.0	28.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.2	0.0	5.3	9.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.3	0.3	0.0	8.0	111.6	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	598			1641	98	
Approach Delay, s/veh	0.3			7.8	111.6	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		163.4		16.6		163.4
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		155.0		15.5		155.0
Max Q Clear Time (g_c+I1), s		2.0		12.2		2.0
Green Ext Time (p_c), s		6.1		0.1		107.6

Intersection Summary	
HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

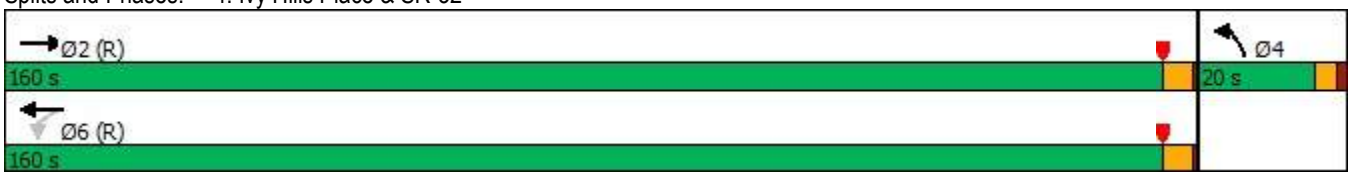
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	530	20	40	1470	50	40
Future Volume (vph)	530	20	40	1470	50	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.994				0.940	
Flt Protected			0.950		0.973	
Satd. Flow (prot)	3332	0	1805	1845	1738	0
Flt Permitted			0.426		0.973	
Satd. Flow (perm)	3332	0	809	1845	1738	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	11				17	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	0%	0%	3%	0%	0%
Adj. Flow (vph)	576	22	43	1598	54	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	598	0	43	1598	97	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	66.0		66.0	66.0	24.5	
Total Split (s)	160.0		160.0	160.0	20.0	
Total Split (%)	88.9%		88.9%	88.9%	11.1%	
Maximum Green (s)	155.0		155.0	155.0	15.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	157.3		157.3	157.3	13.2	
Actuated g/C Ratio	0.87		0.87	0.87	0.07	
v/c Ratio	0.21		0.06	0.99	0.68	
Control Delay	0.9		1.4	22.2	89.8	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	0.9		1.4	22.2	89.8	
LOS	A		A	C	F	
Approach Delay	0.9			21.7	89.8	
Approach LOS	A			C	F	
Queue Length 50th (ft)	17		3	1740	94	
Queue Length 95th (ft)	23		m5	#2221	162	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	2913		706	1612	165	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.21		0.06	0.99	0.59	

Intersection Summary	
Area Type:	Other
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 36 (20%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 93.6%	ICU Level of Service F
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1340	40	50	750	50	70
Future Volume (veh/h)	1340	40	50	750	50	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	1870	1900	1900	1841	1856	1900
Adj Flow Rate, veh/h	1473	44	55	824	55	77
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	0	4	3	0
Cap, veh/h	2970	89	343	1552	64	89
Arrive On Green	1.00	1.00	1.00	1.00	0.09	0.09
Sat Flow, veh/h	3617	105	350	1841	682	955
Grp Volume(v), veh/h	742	775	55	824	133	0
Grp Sat Flow(s),veh/h/ln	1777	1851	350	1841	1650	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	11.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	11.9	0.0
Prop In Lane		0.06	1.00		0.41	0.58
Lane Grp Cap(c), veh/h	1498	1561	343	1552	154	0
V/C Ratio(X)	0.50	0.50	0.16	0.53	0.86	0.00
Avail Cap(c_a), veh/h	1498	1561	343	1552	225	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.86	0.86	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	67.0	0.0
Incr Delay (d2), s/veh	0.8	0.8	0.9	1.1	19.6	0.0
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	0.6	0.1	0.9	9.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.8	0.8	0.9	1.1	86.6	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	1517			879	133	
Approach Delay, s/veh	0.8			1.1	86.6	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		131.5		18.5		131.5
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		120.0		20.5		120.0
Max Q Clear Time (g_c+I1), s		2.0		13.9		2.0
Green Ext Time (p_c), s		30.9		0.2		14.9

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

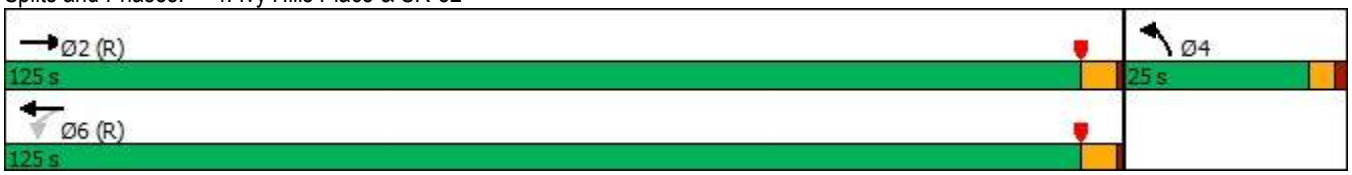
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1340	40	50	750	50	70
Future Volume (vph)	1340	40	50	750	50	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.996				0.921	
Flt Protected			0.950		0.980	
Satd. Flow (prot)	3527	0	1805	1827	1694	0
Flt Permitted			0.152		0.980	
Satd. Flow (perm)	3527	0	289	1827	1694	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	7				39	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	0%	0%	4%	3%	0%
Adj. Flow (vph)	1473	44	55	824	55	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1517	0	55	824	132	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	25.0		25.0	25.0	23.5	
Total Split (s)	125.0		125.0	125.0	25.0	
Total Split (%)	83.3%		83.3%	83.3%	16.7%	
Maximum Green (s)	120.0		120.0	120.0	20.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	126.2		126.2	126.2	14.3	
Actuated g/C Ratio	0.84		0.84	0.84	0.10	
v/c Ratio	0.51		0.23	0.54	0.67	
Control Delay	3.6		4.5	4.1	62.4	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	3.6		4.5	4.1	62.4	
LOS	A		A	A	E	
Approach Delay	3.6			4.1	62.4	
Approach LOS	A			A	E	
Queue Length 50th (ft)	286		7	133	90	
Queue Length 95th (ft)	40		m19	231	159	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	2969		243	1537	265	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.51		0.23	0.54	0.50	

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 135 (90%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	510	60	30	1300	210	30
Future Volume (veh/h)	510	60	30	1300	210	30
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	1781	1574	1826	1841	1885	1737
Adj Flow Rate, veh/h	526	62	31	1340	216	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	22	5	4	1	11
Cap, veh/h	1333	998	698	1485	237	194
Arrive On Green	1.00	1.00	0.03	0.81	0.13	0.13
Sat Flow, veh/h	1781	1334	1739	1841	1795	1472
Grp Volume(v), veh/h	526	62	31	1340	216	31
Grp Sat Flow(s),veh/h/ln	1781	1334	1739	1841	1795	1472
Q Serve(g_s), s	0.0	0.0	0.7	93.0	21.4	3.4
Cycle Q Clear(g_c), s	0.0	0.0	0.7	93.0	21.4	3.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1333	998	698	1485	237	194
V/C Ratio(X)	0.39	0.06	0.04	0.90	0.91	0.16
Avail Cap(c_a), veh/h	1333	998	732	1485	299	245
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	4.0	12.3	77.1	69.3
Incr Delay (d2), s/veh	0.9	0.1	0.0	9.2	26.5	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	0.6	0.1	0.4	42.2	17.2	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.1	4.1	21.6	103.6	69.7
LnGrp LOS	A	A	A	C	F	E
Approach Vol, veh/h	588			1371	247	
Approach Delay, s/veh	0.8			21.2	99.4	
Approach LOS	A			C	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.5	140.7		28.8		151.2
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	125.0		30.0		139.0
Max Q Clear Time (g_c+I1), s	2.7	2.0		23.4		95.0
Green Ext Time (p_c), s	0.0	8.2		0.4		33.4

Intersection Summary			
HCM 6th Ctrl Delay			24.5
HCM 6th LOS			C

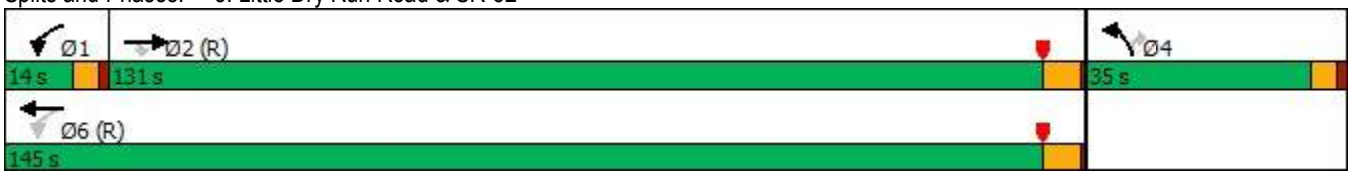
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	510	60	30	1300	210	30
Future Volume (vph)	510	60	30	1300	210	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1759	1324	1719	1827	1787	1455
Flt Permitted			0.406		0.950	
Satd. Flow (perm)	1759	1324	735	1827	1787	1455
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		62				31
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	8%	22%	5%	4%	1%	11%
Adj. Flow (vph)	526	62	31	1340	216	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	526	62	31	1340	216	31
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	66.5	66.5	12.0	66.5	15.0	15.0
Total Split (s)	131.0	131.0	14.0	145.0	35.0	35.0
Total Split (%)	72.8%	72.8%	7.8%	80.6%	19.4%	19.4%
Maximum Green (s)	125.0	125.0	9.0	139.0	30.0	30.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	133.6	133.6	144.2	143.2	25.8	25.8
Actuated g/C Ratio	0.74	0.74	0.80	0.80	0.14	0.14
v/c Ratio	0.40	0.06	0.05	0.92	0.84	0.13
Control Delay	11.0	3.7	4.4	27.3	102.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	3.7	4.4	27.3	102.0	19.5
LOS	B	A	A	C	F	B
Approach Delay	10.2			26.7	91.7	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			C	F	
Queue Length 50th (ft)	77	0	7	1119	251	0
Queue Length 95th (ft)	400	m37	16	#1816	349	35
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1305	998	637	1452	297	268
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	0.40	0.06	0.05	0.92	0.73	0.12

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 5 (3%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 29.6 Intersection LOS: C
Intersection Capacity Utilization 89.2% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Little Dry Run Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1220	190	60	660	140	50
Future Volume (veh/h)	1220	190	60	660	140	50
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	1870	1870	1900	1856	1841	1767
Adj Flow Rate, veh/h	1258	196	62	680	144	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	3	4	9
Cap, veh/h	1411	1196	406	1541	168	144
Arrive On Green	1.00	1.00	0.04	0.83	0.10	0.10
Sat Flow, veh/h	1870	1585	1810	1856	1753	1497
Grp Volume(v), veh/h	1258	196	62	680	144	52
Grp Sat Flow(s),veh/h/ln	1870	1585	1810	1856	1753	1497
Q Serve(g_s), s	0.0	0.0	1.0	14.7	12.1	4.9
Cycle Q Clear(g_c), s	0.0	0.0	1.0	14.7	12.1	4.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1411	1196	406	1541	168	144
V/C Ratio(X)	0.89	0.16	0.15	0.44	0.86	0.36
Avail Cap(c_a), veh/h	1411	1196	413	1541	234	200
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	2.8	3.4	66.8	63.5
Incr Delay (d2), s/veh	7.7	0.3	0.2	0.9	19.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.4	0.1	0.5	7.0	10.5	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.7	0.3	3.0	4.3	86.3	65.0
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	1454			742	196	
Approach Delay, s/veh	6.7			4.2	80.6	
Approach LOS	A			A	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.5	119.1		19.4		130.6
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	7.0	107.0		20.0		119.0
Max Q Clear Time (g_c+I1), s	3.0	2.0		14.1		16.7
Green Ext Time (p_c), s	0.0	54.9		0.3		11.2

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

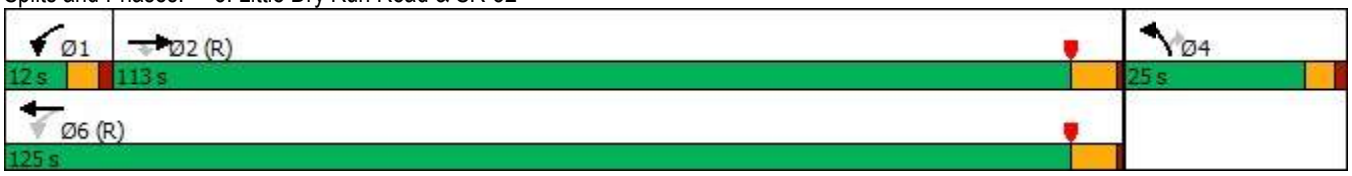
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1220	190	60	660	140	50
Future Volume (vph)	1220	190	60	660	140	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1805	1845	1736	1482
Flt Permitted			0.058		0.950	
Satd. Flow (perm)	1863	1583	110	1845	1736	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		143				52
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	0%	3%	4%	9%
Adj. Flow (vph)	1258	196	62	680	144	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1258	196	62	680	144	52
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	26.0	26.0	12.0	26.0	15.0	15.0
Total Split (s)	113.0	113.0	12.0	125.0	25.0	25.0
Total Split (%)	75.3%	75.3%	8.0%	83.3%	16.7%	16.7%
Maximum Green (s)	107.0	107.0	7.0	119.0	20.0	20.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	112.6	112.6	123.2	122.2	16.8	16.8
Actuated g/C Ratio	0.75	0.75	0.82	0.81	0.11	0.11
v/c Ratio	0.90	0.16	0.37	0.45	0.74	0.25
Control Delay	23.5	0.9	9.1	5.5	86.6	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.5	0.9	9.1	5.5	86.6	17.0
LOS	C	A	A	A	F	B
Approach Delay	20.5			5.8	68.1	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	C			A	E	
Queue Length 50th (ft)	740	12	10	170	138	0
Queue Length 95th (ft)	#1456	3	23	246	214	42
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1398	1224	169	1502	231	242
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	0.90	0.16	0.37	0.45	0.62	0.21

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 8 (5%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 19.8 Intersection LOS: B
Intersection Capacity Utilization 81.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Little Dry Run Road & SR-32



2042 BUILD ALTERNATIVE RB-1 WITH MARTIN MARIETTA TRAFFIC

HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	320	50	40	740	810	80	40	30	270	30	0
Future Volume (veh/h)	120	320	50	40	740	810	80	40	30	270	30	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1796	1900	1900	1826	1856	1870	1900	1900	1752	1900	0
Adj Flow Rate, veh/h	129	344	54	43	796	0	86	43	32	313	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	7	0	0	5	3	2	0	0	10	0	0
Cap, veh/h	450	1962	305	671	1202		108	61	46	363	207	0
Arrive On Green	0.01	0.22	0.22	0.05	0.88	0.00	0.06	0.06	0.06	0.11	0.00	0.00
Sat Flow, veh/h	1697	2960	460	1810	1826	1572	1781	1012	753	3337	1900	0
Grp Volume(v), veh/h	129	197	201	43	796	0	86	0	75	313	0	0
Grp Sat Flow(s),veh/h/ln	1697	1706	1713	1810	1826	1572	1781	0	1764	1668	1900	0
Q Serve(g_s), s	4.4	16.9	17.2	1.3	23.2	0.0	8.6	0.0	7.5	16.6	0.0	0.0
Cycle Q Clear(g_c), s	4.4	16.9	17.2	1.3	23.2	0.0	8.6	0.0	7.5	16.6	0.0	0.0
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.43	1.00		0.00
Lane Grp Cap(c), veh/h	450	1131	1136	671	1202		108	0	107	363	207	0
V/C Ratio(X)	0.29	0.17	0.18	0.06	0.66		0.80	0.00	0.70	0.86	0.00	0.00
Avail Cap(c_a), veh/h	469	1131	1136	699	1202		183	0	181	621	354	0
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	0.09	0.09	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	11.1	30.3	30.4	9.4	5.3	0.0	83.4	0.0	82.9	78.9	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.3	0.0	0.3	0.0	12.3	0.0	8.0	6.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	11.9	12.1	0.9	6.2	0.0	7.8	0.0	6.7	12.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.4	30.6	30.7	9.4	5.5	0.0	95.8	0.0	90.9	85.1	0.0	0.0
LnGrp LOS	B	C	C	A	A		F	A	F	F	A	A
Approach Vol, veh/h		527			839	A		161			313	
Approach Delay, s/veh		25.9			5.7			93.5			85.1	
Approach LOS		C			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.2	125.3		17.4	12.0	124.5		26.1
Change Period (Y+Rc), s	5.0	6.0		6.5	5.0	6.0		6.5
Max Green Setting (Gmax), s	9.0	95.0		18.5	9.0	95.0		33.5
Max Q Clear Time (g_c+I1), s	3.3	19.2		10.6	6.4	25.2		18.6
Green Ext Time (p_c), s	0.0	0.5		0.3	0.1	1.1		1.0

Intersection Summary	
HCM 6th Ctrl Delay	32.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

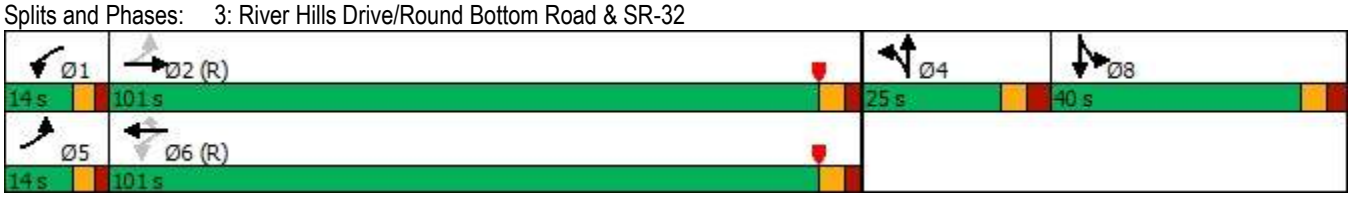
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	320	50	40	740	810	80	40	30	270	30	0
Future Volume (vph)	120	320	50	40	740	810	80	40	30	270	30	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	550		250
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.980				0.850		0.936				
Flt Protected	0.950			0.950			0.950			0.950	0.962	
Satd. Flow (prot)	1671	3336	0	1805	1810	1568	1770	1778	0	1559	1610	0
Flt Permitted	0.188			0.515			0.950			0.950	0.962	
Satd. Flow (perm)	331	3336	0	978	1810	1568	1770	1778	0	1559	1610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15				848		17				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	8%	7%	0%	0%	5%	3%	2%	0%	0%	10%	0%	19%
Adj. Flow (vph)	129	344	54	43	796	871	86	43	32	290	32	0
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	129	398	0	43	796	871	86	75	0	174	148	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	58.0		12.0	58.0	58.0	16.5	16.5		16.5	16.5	
Total Split (s)	14.0	101.0		14.0	101.0	101.0	25.0	25.0		40.0	40.0	
Total Split (%)	7.8%	56.1%		7.8%	56.1%	56.1%	13.9%	13.9%		22.2%	22.2%	
Maximum Green (s)	9.0	95.0		9.0	95.0	95.0	18.5	18.5		33.5	33.5	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	119.7	111.6		116.5	108.0	108.0	14.2	14.2		25.2	25.2	
Actuated g/C Ratio	0.66	0.62		0.65	0.60	0.60	0.08	0.08		0.14	0.14	
v/c Ratio	0.45	0.19		0.06	0.73	0.68	0.62	0.48		0.80	0.66	
Control Delay	19.2	19.4		10.8	25.7	1.7	98.8	70.9		99.5	86.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	19.2	19.4		10.8	25.7	1.7	98.8	70.9		99.5	86.4	
LOS	B	B		B	C	A	F	E		F	F	
Approach Delay		19.4			13.1			85.8			93.5	
Approach LOS		B			B			F			F	
Queue Length 50th (ft)	66	126		18	578	46	100	67		212	176	
Queue Length 95th (ft)	m0	m168		m15	m701	m27	163	125		296	252	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			550		
Base Capacity (vph)	287	2073		682	1086	1280	181	197		290	299	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.45	0.19		0.06	0.73	0.68	0.48	0.38		0.60	0.49	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 66 (37%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 28.1 Intersection LOS: C
Intersection Capacity Utilization 79.7% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	750	60	40	400	470	70	60	50	670	70	0
Future Volume (veh/h)	180	750	60	40	400	470	70	60	50	670	70	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1900	1900	1885	1826	1900	1870	1900	1885	1841	0
Adj Flow Rate, veh/h	191	798	64	43	426	0	74	64	53	766	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	1	0	0	1	5	0	2	0	1	4	0
Cap, veh/h	379	1630	131	426	901		139	73	60	858	440	0
Arrive On Green	0.09	0.97	0.97	0.01	0.16	0.00	0.08	0.08	0.08	0.24	0.00	0.00
Sat Flow, veh/h	1711	3358	269	1810	1885	1547	1810	946	783	3591	1841	0
Grp Volume(v), veh/h	191	425	437	43	426	0	74	0	117	766	0	0
Grp Sat Flow(s),veh/h/ln	1711	1791	1837	1810	1885	1547	1810	0	1729	1795	1841	0
Q Serve(g_s), s	7.0	2.0	2.0	1.8	30.9	0.0	5.9	0.0	10.1	31.0	0.0	0.0
Cycle Q Clear(g_c), s	7.0	2.0	2.0	1.8	30.9	0.0	5.9	0.0	10.1	31.0	0.0	0.0
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	379	869	892	426	901		139	0	133	858	440	0
V/C Ratio(X)	0.50	0.49	0.49	0.10	0.47		0.53	0.00	0.88	0.89	0.00	0.00
Avail Cap(c_a), veh/h	379	869	892	440	901		139	0	133	1209	620	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.18	0.18	0.18	0.80	0.80	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.1	1.1	1.1	18.4	46.0	0.0	66.7	0.0	68.6	55.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.4	0.3	0.1	1.4	0.0	3.9	0.0	44.9	6.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	1.0	1.0	1.4	22.0	0.0	5.2	0.0	10.2	21.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	1.5	1.5	18.5	47.4	0.0	70.6	0.0	113.5	61.8	0.0	0.0
LnGrp LOS	C	A	A	B	D		E	A	F	E	A	A
Approach Vol, veh/h		1053			469	A		191			766	
Approach Delay, s/veh		6.2			44.8			96.9			61.8	
Approach LOS		A			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.8	78.8		18.0	12.0	77.7		42.3
Change Period (Y+Rc), s	5.0	6.0		6.5	5.0	6.0		6.5
Max Green Setting (Gmax), s	7.0	57.0		11.5	7.0	57.0		50.5
Max Q Clear Time (g_c+I1), s	3.8	4.0		12.1	9.0	32.9		33.0
Green Ext Time (p_c), s	0.0	1.1		0.0	0.0	0.5		2.9

Intersection Summary	
HCM 6th Ctrl Delay	37.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

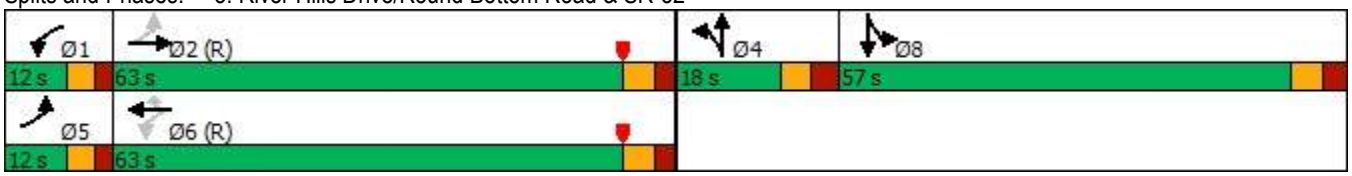
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	750	60	40	400	470	70	60	50	670	70	0
Future Volume (vph)	180	750	60	40	400	470	70	60	50	670	70	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	550		250
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.989				0.850		0.932				
Flt Protected	0.950			0.950			0.950			0.950	0.962	
Satd. Flow (prot)	1687	3538	0	1805	1881	1538	1805	1752	0	1698	1709	0
Flt Permitted	0.341			0.220			0.950			0.950	0.962	
Satd. Flow (perm)	606	3538	0	418	1881	1538	1805	1752	0	1698	1709	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				500		22				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	1%	0%	0%	1%	5%	0%	2%	0%	1%	4%	2%
Adj. Flow (vph)	191	798	64	43	426	500	74	64	53	713	74	0
Shared Lane Traffic (%)										40%		
Lane Group Flow (vph)	191	862	0	43	426	500	74	117	0	428	359	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Split	NA		Split	NA	
Protected Phases	5	2		1	6		4	4		8	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	12.0	38.0		12.0	26.0	26.0	16.5	16.5		16.5	16.5	
Total Split (s)	12.0	63.0		12.0	63.0	63.0	18.0	18.0		57.0	57.0	
Total Split (%)	8.0%	42.0%		8.0%	42.0%	42.0%	12.0%	12.0%		38.0%	38.0%	
Maximum Green (s)	7.0	57.0		7.0	57.0	57.0	11.5	11.5		50.5	50.5	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.5	6.5		6.5	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	73.0	66.4		72.0	64.0	64.0	11.2	11.2		43.8	43.8	
Actuated g/C Ratio	0.49	0.44		0.48	0.43	0.43	0.07	0.07		0.29	0.29	
v/c Ratio	0.55	0.55		0.16	0.53	0.53	0.55	0.77		0.86	0.72	
Control Delay	24.2	29.8		17.7	29.9	6.1	82.7	86.6		67.5	55.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	24.2	29.8		17.7	29.9	6.1	82.7	86.6		67.5	55.6	
LOS	C	C		B	C	A	F	F		E	E	
Approach Delay		28.8			17.1			85.1			62.1	
Approach LOS		C			B			F			E	
Queue Length 50th (ft)	94	236		19	292	43	71	93		412	327	
Queue Length 95th (ft)	m78	m279		m36	436	125	128	#196		535	431	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			550		
Base Capacity (vph)	345	1568		265	802	942	138	154		571	575	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.55	0.55		0.16	0.53	0.53	0.54	0.76		0.75	0.62	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 44 (29%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 37.3 Intersection LOS: D
Intersection Capacity Utilization 72.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



HCM 6th Signalized Intersection Summary
4: Ivy Hills Place & SR-32

08/10/2020

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	570	20	40	1520	50	40
Future Volume (veh/h)	570	20	40	1520	50	40
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	1781	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	620	22	43	1652	54	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	0	3	0	0
Cap, veh/h	2934	104	744	1633	64	51
Arrive On Green	1.00	1.00	1.00	1.00	0.07	0.07
Sat Flow, veh/h	3423	118	800	1856	946	753
Grp Volume(v), veh/h	314	328	43	1652	98	0
Grp Sat Flow(s),veh/h/ln	1692	1760	800	1856	1717	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.2	0.0
Prop In Lane		0.07	1.00		0.55	0.44
Lane Grp Cap(c), veh/h	1489	1549	744	1633	116	0
V/C Ratio(X)	0.21	0.21	0.06	1.01	0.85	0.00
Avail Cap(c_a), veh/h	1489	1549	744	1633	148	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.93	0.93	0.22	0.22	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	83.0	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.0	13.5	28.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.2	0.0	8.1	9.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.3	0.3	0.0	13.5	111.6	0.0
LnGrp LOS	A	A	A	F	F	A
Approach Vol, veh/h	642			1695	98	
Approach Delay, s/veh	0.3			13.2	111.6	
Approach LOS	A			B	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		163.4		16.6		163.4
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		155.0		15.5		155.0
Max Q Clear Time (g_c+I1), s		2.0		12.2		2.0
Green Ext Time (p_c), s		6.7		0.1		119.5

Intersection Summary	
HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

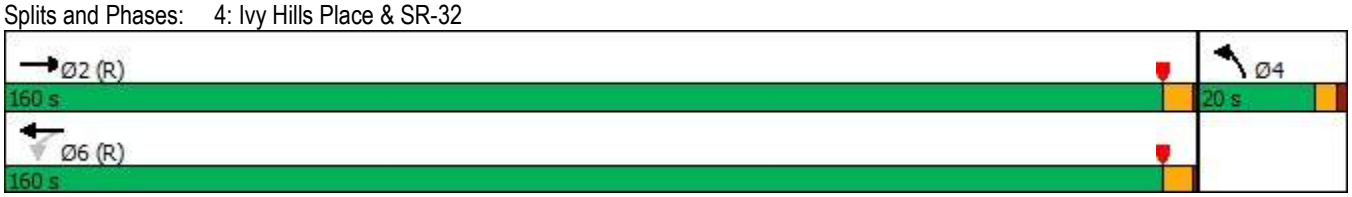
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	570	20	40	1520	50	40
Future Volume (vph)	570	20	40	1520	50	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.995				0.940	
Flt Protected			0.950		0.973	
Satd. Flow (prot)	3334	0	1805	1845	1738	0
Flt Permitted			0.407		0.973	
Satd. Flow (perm)	3334	0	773	1845	1738	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10				17	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	0%	0%	3%	0%	0%
Adj. Flow (vph)	620	22	43	1652	54	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	642	0	43	1652	97	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	66.0		66.0	66.0	24.5	
Total Split (s)	160.0		160.0	160.0	20.0	
Total Split (%)	88.9%		88.9%	88.9%	11.1%	
Maximum Green (s)	155.0		155.0	155.0	15.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	157.3		157.3	157.3	13.2	
Actuated g/C Ratio	0.87		0.87	0.87	0.07	
v/c Ratio	0.22		0.06	1.02	0.68	
Control Delay	0.9		1.5	30.7	89.8	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	0.9		1.5	30.7	89.8	
LOS	A		A	C	F	
Approach Delay	0.9			29.9	89.8	
Approach LOS	A			C	F	
Queue Length 50th (ft)	17		3	~2084	94	
Queue Length 95th (ft)	22		m5	m#2290	162	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	2914		675	1612	165	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.22		0.06	1.02	0.59	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 36 (20%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 24.6 Intersection LOS: C
Intersection Capacity Utilization 96.3% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1360	40	50	770	50	70
Future Volume (veh/h)	1360	40	50	770	50	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	1870	1900	1900	1841	1856	1900
Adj Flow Rate, veh/h	1495	44	55	846	55	77
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	0	4	3	0
Cap, veh/h	2972	87	337	1552	64	89
Arrive On Green	1.00	1.00	1.00	1.00	0.09	0.09
Sat Flow, veh/h	3619	104	342	1841	682	955
Grp Volume(v), veh/h	752	787	55	846	133	0
Grp Sat Flow(s),veh/h/ln	1777	1852	342	1841	1650	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	11.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	11.9	0.0
Prop In Lane		0.06	1.00		0.41	0.58
Lane Grp Cap(c), veh/h	1498	1561	337	1552	154	0
V/C Ratio(X)	0.50	0.50	0.16	0.55	0.86	0.00
Avail Cap(c_a), veh/h	1498	1561	337	1552	225	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.85	0.85	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	67.0	0.0
Incr Delay (d2), s/veh	0.9	0.8	0.9	1.2	19.6	0.0
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	0.6	0.1	0.9	9.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.8	0.9	1.2	86.6	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	1539			901	133	
Approach Delay, s/veh	0.8			1.2	86.6	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		131.5		18.5		131.5
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		120.0		20.5		120.0
Max Q Clear Time (g_c+I1), s		2.0		13.9		2.0
Green Ext Time (p_c), s		32.1		0.2		15.8

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

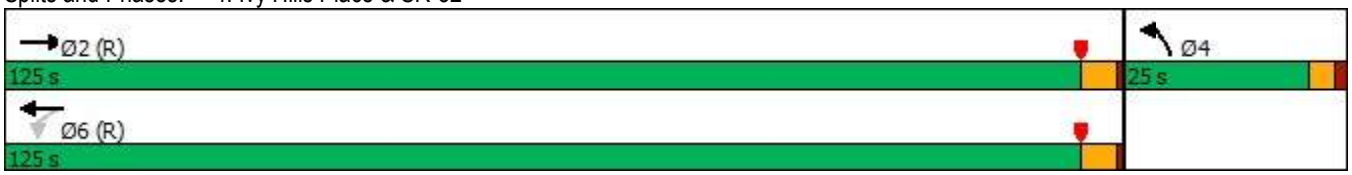
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1360	40	50	770	50	70
Future Volume (vph)	1360	40	50	770	50	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.996				0.921	
Flt Protected			0.950		0.980	
Satd. Flow (prot)	3527	0	1805	1827	1694	0
Flt Permitted			0.148		0.980	
Satd. Flow (perm)	3527	0	281	1827	1694	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	7				39	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	0%	0%	4%	3%	0%
Adj. Flow (vph)	1495	44	55	846	55	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1539	0	55	846	132	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	25.0		25.0	25.0	23.5	
Total Split (s)	125.0		125.0	125.0	25.0	
Total Split (%)	83.3%		83.3%	83.3%	16.7%	
Maximum Green (s)	120.0		120.0	120.0	20.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	126.2		126.2	126.2	14.3	
Actuated g/C Ratio	0.84		0.84	0.84	0.10	
v/c Ratio	0.52		0.23	0.55	0.67	
Control Delay	3.6		4.6	4.2	62.4	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	3.6		4.6	4.2	62.4	
LOS	A		A	A	E	
Approach Delay	3.6			4.3	62.4	
Approach LOS	A			A	E	
Queue Length 50th (ft)	283		7	140	90	
Queue Length 95th (ft)	80		m20	242	159	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	2969		236	1537	265	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.52		0.23	0.55	0.50	

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 135 (90%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	550	60	30	1350	210	30
Future Volume (veh/h)	550	60	30	1350	210	30
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	1781	1574	1826	1841	1885	1737
Adj Flow Rate, veh/h	567	62	31	1392	216	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	22	5	4	1	11
Cap, veh/h	1333	998	676	1485	237	194
Arrive On Green	1.00	1.00	0.03	0.81	0.13	0.13
Sat Flow, veh/h	1781	1334	1739	1841	1795	1472
Grp Volume(v), veh/h	567	62	31	1392	216	31
Grp Sat Flow(s),veh/h/ln	1781	1334	1739	1841	1795	1472
Q Serve(g_s), s	0.0	0.0	0.7	107.8	21.4	3.4
Cycle Q Clear(g_c), s	0.0	0.0	0.7	107.8	21.4	3.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1333	998	676	1485	237	194
V/C Ratio(X)	0.43	0.06	0.05	0.94	0.91	0.16
Avail Cap(c_a), veh/h	1333	998	709	1485	299	245
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	4.0	13.8	77.1	69.3
Incr Delay (d2), s/veh	1.0	0.1	0.0	12.5	26.5	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	0.7	0.1	0.4	48.9	17.2	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.0	0.1	4.1	26.3	103.6	69.7
LnGrp LOS	A	A	A	C	F	E
Approach Vol, veh/h	629			1423	247	
Approach Delay, s/veh	0.9			25.8	99.4	
Approach LOS	A			C	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.5	140.7		28.8		151.2
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	125.0		30.0		139.0
Max Q Clear Time (g_c+I1), s	2.7	2.0		23.4		109.8
Green Ext Time (p_c), s	0.0	9.1		0.4		24.9

Intersection Summary	
HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C

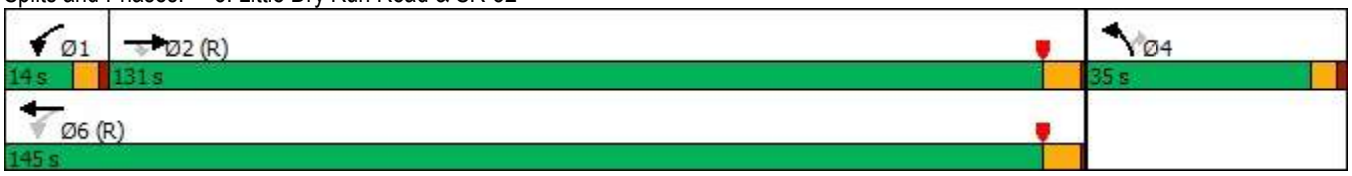
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	550	60	30	1350	210	30
Future Volume (vph)	550	60	30	1350	210	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1759	1324	1719	1827	1787	1455
Flt Permitted			0.383		0.950	
Satd. Flow (perm)	1759	1324	693	1827	1787	1455
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		62				31
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	8%	22%	5%	4%	1%	11%
Adj. Flow (vph)	567	62	31	1392	216	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	567	62	31	1392	216	31
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	66.5	66.5	12.0	66.5	15.0	15.0
Total Split (s)	131.0	131.0	14.0	145.0	35.0	35.0
Total Split (%)	72.8%	72.8%	7.8%	80.6%	19.4%	19.4%
Maximum Green (s)	125.0	125.0	9.0	139.0	30.0	30.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	133.6	133.6	144.2	143.2	25.8	25.8
Actuated g/C Ratio	0.74	0.74	0.80	0.80	0.14	0.14
v/c Ratio	0.43	0.06	0.05	0.96	0.84	0.13
Control Delay	11.9	3.4	4.4	32.9	102.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.9	3.4	4.4	32.9	102.0	19.5
LOS	B	A	A	C	F	B
Approach Delay	11.1			32.2	91.7	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			C	F	
Queue Length 50th (ft)	103	1	7	1303	251	0
Queue Length 95th (ft)	455	m35	16	#1940	349	35
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1305	998	606	1452	297	268
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	0.43	0.06	0.05	0.96	0.73	0.12

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 5 (3%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 32.8 Intersection LOS: C
Intersection Capacity Utilization 91.9% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Little Dry Run Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1240	190	60	680	140	50
Future Volume (veh/h)	1240	190	60	680	140	50
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	1870	1870	1900	1856	1841	1767
Adj Flow Rate, veh/h	1278	196	62	701	144	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	3	4	9
Cap, veh/h	1411	1196	401	1541	168	144
Arrive On Green	1.00	1.00	0.04	0.83	0.10	0.10
Sat Flow, veh/h	1870	1585	1810	1856	1753	1497
Grp Volume(v), veh/h	1278	196	62	701	144	52
Grp Sat Flow(s),veh/h/ln	1870	1585	1810	1856	1753	1497
Q Serve(g_s), s	0.0	0.0	1.0	15.4	12.1	4.9
Cycle Q Clear(g_c), s	0.0	0.0	1.0	15.4	12.1	4.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1411	1196	401	1541	168	144
V/C Ratio(X)	0.91	0.16	0.15	0.45	0.86	0.36
Avail Cap(c_a), veh/h	1411	1196	407	1541	234	200
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	2.8	3.5	66.8	63.5
Incr Delay (d2), s/veh	8.6	0.2	0.2	1.0	19.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.1	0.1	0.5	7.3	10.5	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.6	0.2	3.0	4.4	86.3	65.0
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	1474			763	196	
Approach Delay, s/veh	7.5			4.3	80.6	
Approach LOS	A			A	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.5	119.1		19.4		130.6
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	7.0	107.0		20.0		119.0
Max Q Clear Time (g_c+I1), s	3.0	2.0		14.1		17.4
Green Ext Time (p_c), s	0.0	57.2		0.3		11.8

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

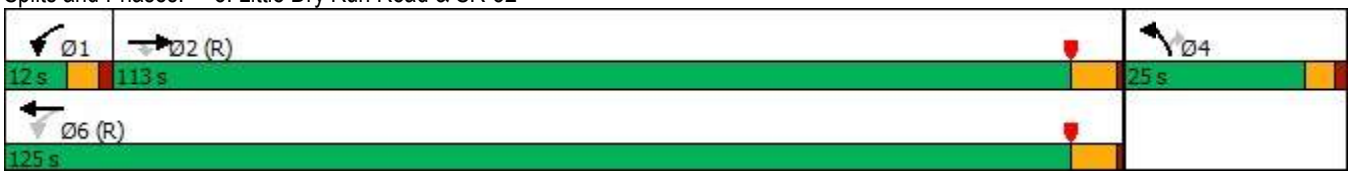
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1240	190	60	680	140	50
Future Volume (vph)	1240	190	60	680	140	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1805	1845	1736	1482
Flt Permitted			0.047		0.950	
Satd. Flow (perm)	1863	1583	89	1845	1736	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		141				52
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	0%	3%	4%	9%
Adj. Flow (vph)	1278	196	62	701	144	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1278	196	62	701	144	52
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	26.0	26.0	12.0	26.0	15.0	15.0
Total Split (s)	113.0	113.0	12.0	125.0	25.0	25.0
Total Split (%)	75.3%	75.3%	8.0%	83.3%	16.7%	16.7%
Maximum Green (s)	107.0	107.0	7.0	119.0	20.0	20.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	112.6	112.6	123.2	122.2	16.8	16.8
Actuated g/C Ratio	0.75	0.75	0.82	0.81	0.11	0.11
v/c Ratio	0.91	0.16	0.41	0.47	0.74	0.25
Control Delay	24.8	0.9	15.4	5.6	86.6	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.8	0.9	15.4	5.6	86.6	17.0
LOS	C	A	B	A	F	B
Approach Delay	21.6			6.4	68.1	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	C			A	E	
Queue Length 50th (ft)	741	12	10	178	138	0
Queue Length 95th (ft)	#1497	3	40	258	214	42
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1398	1223	153	1502	231	242
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	0.91	0.16	0.41	0.47	0.62	0.21

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 8 (5%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 20.6 Intersection LOS: C
Intersection Capacity Utilization 82.8% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Little Dry Run Road & SR-32



APPENDIX J

BUILD ALTERNATIVE RB-2
SYNCHRO SUMMARY WORKSHEETS

2022 BUILD ALTERNATIVE RB-2

HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	300	40	30	700	720	60	30	20	220	20	0
Future Volume (veh/h)	100	300	40	30	700	720	60	30	20	220	20	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1796	1900	1900	1826	1856	1870	1900	1900	1752	1900	0
Adj Flow Rate, veh/h	108	323	43	32	753	0	65	32	22	237	22	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	7	0	0	5	3	2	0	0	10	0	0
Cap, veh/h	524	2119	280	810	1262		82	58	40	298	193	0
Arrive On Green	0.08	1.00	1.00	0.04	0.92	0.00	0.05	0.06	0.06	0.09	0.10	0.00
Sat Flow, veh/h	1697	3031	400	1810	1826	1572	1781	1049	721	3237	1900	0
Grp Volume(v), veh/h	108	181	185	32	753	0	65	0	54	237	22	0
Grp Sat Flow(s),veh/h/ln	1697	1706	1724	1810	1826	1572	1781	0	1770	1618	1900	0
Q Serve(g_s), s	3.4	0.0	0.0	0.9	13.2	0.0	6.5	0.0	5.3	12.9	1.9	0.0
Cycle Q Clear(g_c), s	3.4	0.0	0.0	0.9	13.2	0.0	6.5	0.0	5.3	12.9	1.9	0.0
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.41	1.00		0.00
Lane Grp Cap(c), veh/h	524	1193	1205	810	1262		82	0	98	298	193	0
V/C Ratio(X)	0.21	0.15	0.15	0.04	0.60		0.80	0.00	0.55	0.79	0.11	0.00
Avail Cap(c_a), veh/h	543	1193	1205	844	1262		188	0	148	611	317	0
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.26	0.26	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.3	0.0	0.0	7.0	2.8	0.0	85.0	0.0	82.8	80.0	73.5	0.0
Incr Delay (d2), s/veh	0.2	0.2	0.2	0.0	0.5	0.0	15.8	0.0	4.7	9.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	0.1	0.1	0.7	4.4	0.0	6.1	0.0	4.7	9.8	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.4	0.2	0.2	7.0	3.3	0.0	100.9	0.0	87.5	89.8	73.7	0.0
LnGrp LOS	A	A	A	A	A		F	A	F	F	E	A
Approach Vol, veh/h		474			785	A		119			259	
Approach Delay, s/veh		1.9			3.5			94.8			88.4	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	131.8	22.6	15.0	12.0	130.5	14.3	23.3
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.0	100.0	34.0	15.0	9.0	100.0	19.0	30.0
Max Q Clear Time (g_c+I1), s	2.9	2.0	14.9	7.3	5.4	15.2	8.5	3.9
Green Ext Time (p_c), s	0.0	0.4	1.7	0.1	0.1	1.0	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

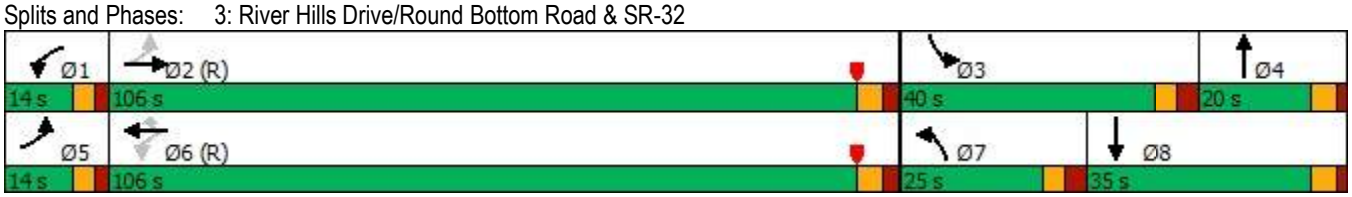
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	300	40	30	700	720	60	30	20	220	20	0
Future Volume (vph)	100	300	40	30	700	720	60	30	20	220	20	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	525		250
Storage Lanes	1		1	1		1	1		0	2		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.982				0.850		0.939				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	3339	0	1805	1810	1568	1770	1784	0	3183	1900	0
Flt Permitted	0.254			0.534			0.950			0.950		
Satd. Flow (perm)	447	3339	0	1015	1810	1568	1770	1784	0	3183	1900	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13				774		15				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	8%	7%	0%	0%	5%	3%	2%	0%	0%	10%	0%	19%
Adj. Flow (vph)	108	323	43	32	753	774	65	32	22	237	22	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	108	366	0	32	753	774	65	54	0	237	22	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	58.0		12.0	58.0	58.0	14.0	15.0		13.0	15.0	
Total Split (s)	14.0	106.0		14.0	106.0	106.0	25.0	20.0		40.0	35.0	
Total Split (%)	7.8%	58.9%		7.8%	58.9%	58.9%	13.9%	11.1%		22.2%	19.4%	
Maximum Green (s)	9.0	100.0		9.0	100.0	100.0	19.0	15.0		34.0	30.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	132.7	124.8		129.3	121.2	121.2	18.4	10.9		20.6	16.2	
Actuated g/C Ratio	0.74	0.69		0.72	0.67	0.67	0.10	0.06		0.11	0.09	
v/c Ratio	0.28	0.16		0.04	0.62	0.59	0.36	0.44		0.65	0.13	
Control Delay	7.7	10.0		6.9	15.5	1.4	82.7	70.8		84.6	74.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	7.7	10.0		6.9	15.5	1.4	82.7	70.8		84.6	74.2	
LOS	A	B		A	B	A	F	E		F	E	
Approach Delay		9.5			8.3			77.3			83.7	
Approach LOS		A			A			E			F	
Queue Length 50th (ft)	15	73		9	342	12	76	45		140	24	
Queue Length 95th (ft)	m86	m145		m8	m532	m20	131	96		186	55	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			525		
Base Capacity (vph)	391	2318		779	1218	1308	215	162		601	316	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.28	0.16		0.04	0.62	0.59	0.30	0.33		0.39	0.07	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 72 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 20.1 Intersection LOS: C
Intersection Capacity Utilization 72.1% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	700	50	30	380	430	60	50	40	590	60	0
Future Volume (veh/h)	160	700	50	30	380	430	60	50	40	590	60	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1900	1900	1885	1826	1900	1870	1900	1885	1841	0
Adj Flow Rate, veh/h	170	745	53	32	404	0	64	53	43	628	64	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	1	0	0	1	5	0	2	0	1	4	0
Cap, veh/h	494	1804	128	470	980		82	66	53	760	444	0
Arrive On Green	0.09	1.00	1.00	0.03	0.52	0.00	0.05	0.07	0.07	0.22	0.24	0.00
Sat Flow, veh/h	1711	3392	241	1810	1885	1547	1810	956	775	3483	1841	0
Grp Volume(v), veh/h	170	393	405	32	404	0	64	0	96	628	64	0
Grp Sat Flow(s),veh/h/ln	1711	1791	1842	1810	1885	1547	1810	0	1731	1742	1841	0
Q Serve(g_s), s	7.0	0.0	0.0	1.2	19.6	0.0	5.2	0.0	8.2	25.8	4.1	0.0
Cycle Q Clear(g_c), s	7.0	0.0	0.0	1.2	19.6	0.0	5.2	0.0	8.2	25.8	4.1	0.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	494	953	980	470	980		82	0	119	760	444	0
V/C Ratio(X)	0.34	0.41	0.41	0.07	0.41		0.78	0.00	0.81	0.83	0.14	0.00
Avail Cap(c_a), veh/h	494	953	980	492	980		253	0	150	1068	466	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.36	0.36	0.84	0.84	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.3	0.0	0.0	15.2	22.0	0.0	70.8	0.0	68.9	55.9	44.7	0.0
Incr Delay (d2), s/veh	0.1	0.5	0.5	0.1	1.1	0.0	14.3	0.0	22.1	5.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	0.2	0.2	0.9	13.8	0.0	5.0	0.0	7.8	17.8	3.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.5	0.5	0.5	15.2	23.1	0.0	85.1	0.0	91.0	61.7	44.9	0.0
LnGrp LOS	B	A	A	B	C		F	A	F	E	D	A
Approach Vol, veh/h		968			436	A		160			692	
Approach Delay, s/veh		3.5			22.5			88.6			60.2	
Approach LOS		A			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	85.8	38.7	15.3	12.0	84.0	12.8	41.2
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	7.0	62.0	46.0	13.0	7.0	62.0	21.0	38.0
Max Q Clear Time (g_c+I1), s	3.2	2.0	27.8	10.2	9.0	21.6	7.2	6.1
Green Ext Time (p_c), s	0.0	1.0	4.9	0.1	0.0	0.5	0.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

Notes

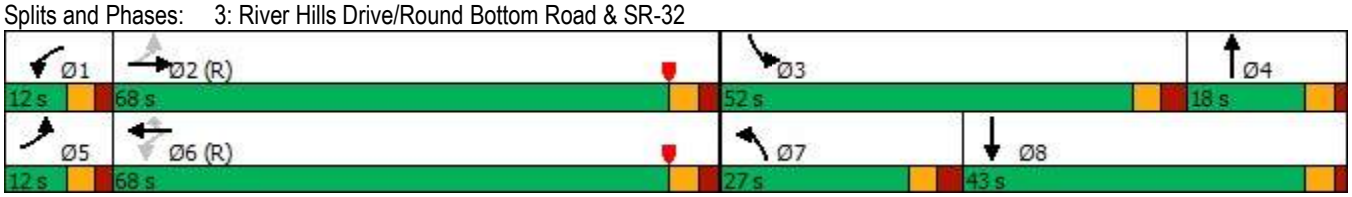
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	700	50	30	380	430	60	50	40	590	60	0
Future Volume (vph)	160	700	50	30	380	430	60	50	40	590	60	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	525		250
Storage Lanes	1		1	1		1	1		0	2		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.990				0.850		0.933				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3541	0	1805	1881	1538	1805	1753	0	3467	1827	0
Flt Permitted	0.391			0.283			0.950			0.950		
Satd. Flow (perm)	694	3541	0	538	1881	1538	1805	1753	0	3467	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				457		21				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	1%	0%	0%	1%	5%	0%	2%	0%	1%	4%	2%
Adj. Flow (vph)	170	745	53	32	404	457	64	53	43	628	64	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	170	798	0	32	404	457	64	96	0	628	64	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	38.0		12.0	26.0	26.0	13.0	15.0		13.0	15.0	
Total Split (s)	12.0	68.0		12.0	68.0	68.0	27.0	18.0		52.0	43.0	
Total Split (%)	8.0%	45.3%		8.0%	45.3%	45.3%	18.0%	12.0%		34.7%	28.7%	
Maximum Green (s)	7.0	62.0		7.0	62.0	62.0	21.0	13.0		46.0	38.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	83.8	78.6		81.8	73.8	73.8	10.8	11.6		35.6	39.0	
Actuated g/C Ratio	0.56	0.52		0.55	0.49	0.49	0.07	0.08		0.24	0.26	
v/c Ratio	0.39	0.43		0.09	0.44	0.46	0.50	0.62		0.76	0.13	
Control Delay	22.7	27.5		12.8	22.4	5.2	79.2	69.8		59.4	43.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	22.7	27.5		12.8	22.4	5.2	79.2	69.8		59.4	43.7	
LOS	C	C		B	C	A	E	E		E	D	
Approach Delay		26.7			13.3			73.6			58.0	
Approach LOS		C			B			E			E	
Queue Length 50th (ft)	90	268		12	204	33	61	72		296	49	
Queue Length 95th (ft)	m100	m273		m27	342	107	110	136		344	88	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			525		
Base Capacity (vph)	434	1858		352	925	988	252	171		1063	488	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.39	0.43		0.09	0.44	0.46	0.25	0.56		0.59	0.13	

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 39 (26%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 33.0	Intersection LOS: C
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	510	10	30	1410	40	30
Future Volume (veh/h)	510	10	30	1410	40	30
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	1781	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	554	11	33	1533	43	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	0	3	0	0
Cap, veh/h	3029	60	807	1656	53	40
Arrive On Green	1.00	1.00	1.00	1.00	0.05	0.05
Sat Flow, veh/h	3483	67	859	1856	960	737
Grp Volume(v), veh/h	276	289	33	1533	77	0
Grp Sat Flow(s),veh/h/ln	1692	1769	859	1856	1719	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.0	0.0
Prop In Lane		0.04	1.00		0.56	0.43
Lane Grp Cap(c), veh/h	1510	1579	807	1656	94	0
V/C Ratio(X)	0.18	0.18	0.04	0.93	0.82	0.00
Avail Cap(c_a), veh/h	1510	1579	807	1656	215	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.37	0.37	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	84.2	0.0
Incr Delay (d2), s/veh	0.3	0.2	0.0	4.4	15.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.2	0.0	3.5	7.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.3	0.2	0.0	4.4	99.5	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	565			1566	77	
Approach Delay, s/veh	0.2			4.3	99.5	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		165.6		14.4		165.6
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		148.0		22.5		148.0
Max Q Clear Time (g_c+I1), s		2.0		10.0		2.0
Green Ext Time (p_c), s		5.7		0.1		89.7

Intersection Summary	
HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A

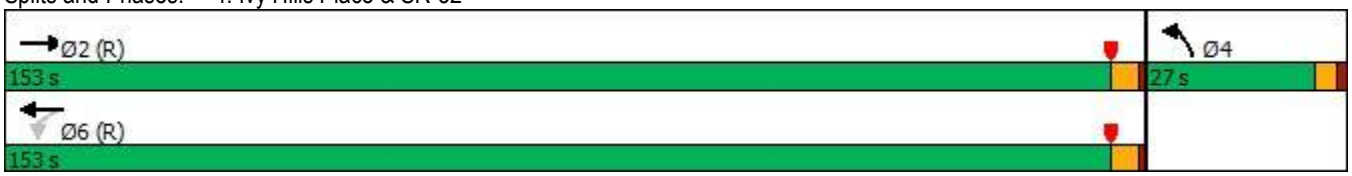
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	510	10	30	1410	40	30
Future Volume (vph)	510	10	30	1410	40	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.997				0.941	
Flt Protected			0.950		0.972	
Satd. Flow (prot)	3337	0	1805	1845	1738	0
Flt Permitted			0.440		0.972	
Satd. Flow (perm)	3337	0	836	1845	1738	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	4				18	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	0%	0%	3%	0%	0%
Adj. Flow (vph)	554	11	33	1533	43	33
Shared Lane Traffic (%)						
Lane Group Flow (vph)	565	0	33	1533	76	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	66.0		66.0	66.0	24.5	
Total Split (s)	153.0		153.0	153.0	27.0	
Total Split (%)	85.0%		85.0%	85.0%	15.0%	
Maximum Green (s)	148.0		148.0	148.0	22.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	158.2		158.2	158.2	12.3	
Actuated g/C Ratio	0.88		0.88	0.88	0.07	
v/c Ratio	0.19		0.04	0.95	0.56	
Control Delay	2.1		1.2	14.9	77.3	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	2.1		1.2	14.9	77.3	
LOS	A		A	B	E	
Approach Delay	2.1			14.6	77.3	
Approach LOS	A			B	E	
Queue Length 50th (ft)	35		2	321	68	
Queue Length 95th (ft)	0		m4	#2080	126	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	2933		734	1621	233	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.19		0.04	0.95	0.33	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 20 (11%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 13.5 Intersection LOS: B
Intersection Capacity Utilization 90.5% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1240	30	40	720	40	60
Future Volume (veh/h)	1240	30	40	720	40	60
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	1870	1900	1900	1841	1856	1900
Adj Flow Rate, veh/h	1363	33	44	791	44	66
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	0	4	3	0
Cap, veh/h	3037	73	384	1577	52	78
Arrive On Green	1.00	1.00	1.00	1.00	0.08	0.08
Sat Flow, veh/h	3639	86	393	1841	653	979
Grp Volume(v), veh/h	682	714	44	791	111	0
Grp Sat Flow(s),veh/h/ln	1777	1855	393	1841	1647	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.0	0.0
Prop In Lane		0.05	1.00		0.40	0.59
Lane Grp Cap(c), veh/h	1522	1589	384	1577	132	0
V/C Ratio(X)	0.45	0.45	0.11	0.50	0.84	0.00
Avail Cap(c_a), veh/h	1522	1589	384	1577	225	0
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.87	0.87	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	68.0	0.0
Incr Delay (d2), s/veh	0.8	0.7	0.5	1.0	13.2	0.0
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	0.6	0.1	0.8	8.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.8	0.7	0.5	1.0	81.2	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	1396			835	111	
Approach Delay, s/veh	0.7			1.0	81.2	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		133.5		16.5		133.5
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		120.0		20.5		120.0
Max Q Clear Time (g_c+I1), s		2.0		12.0		2.0
Green Ext Time (p_c), s		25.2		0.2		13.0

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Notes

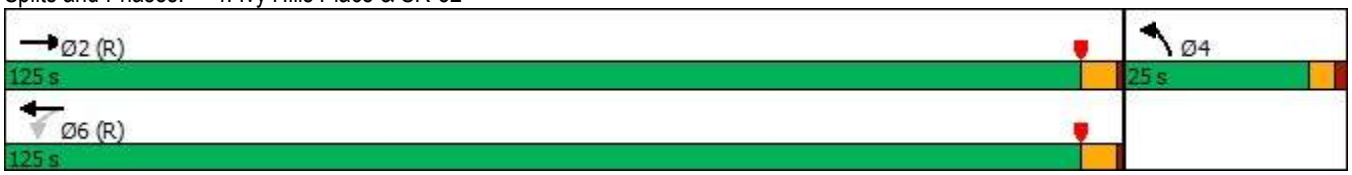
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1240	30	40	720	40	60
Future Volume (vph)	1240	30	40	720	40	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.996				0.919	
Flt Protected			0.950		0.980	
Satd. Flow (prot)	3527	0	1805	1827	1691	0
Flt Permitted			0.177		0.980	
Satd. Flow (perm)	3527	0	336	1827	1691	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	6				42	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	0%	0%	4%	3%	0%
Adj. Flow (vph)	1363	33	44	791	44	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1396	0	44	791	110	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	25.0		25.0	25.0	23.5	
Total Split (s)	125.0		125.0	125.0	25.0	
Total Split (%)	83.3%		83.3%	83.3%	16.7%	
Maximum Green (s)	120.0		120.0	120.0	20.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	127.9		127.9	127.9	12.6	
Actuated g/C Ratio	0.85		0.85	0.85	0.08	
v/c Ratio	0.46		0.15	0.51	0.61	
Control Delay	3.1		3.0	3.5	55.0	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	3.1		3.0	3.5	55.0	
LOS	A		A	A	D	
Approach Delay	3.1			3.5	55.0	
Approach LOS	A			A	D	
Queue Length 50th (ft)	263		4	109	65	
Queue Length 95th (ft)	7		m13	193	130	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	3009		286	1558	267	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.46		0.15	0.51	0.41	

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 115 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 5.7	Intersection LOS: A
Intersection Capacity Utilization 54.1%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	490	50	20	1240	200	20
Future Volume (veh/h)	490	50	20	1240	200	20
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	1781	1574	1826	1841	1885	1737
Adj Flow Rate, veh/h	505	52	21	1278	206	21
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	22	5	4	1	11
Cap, veh/h	1352	1013	715	1495	227	187
Arrive On Green	1.00	1.00	0.03	0.81	0.13	0.13
Sat Flow, veh/h	1781	1334	1739	1841	1795	1472
Grp Volume(v), veh/h	505	52	21	1278	206	21
Grp Sat Flow(s),veh/h/ln	1781	1334	1739	1841	1795	1472
Q Serve(g_s), s	0.0	0.0	0.4	76.8	20.4	2.3
Cycle Q Clear(g_c), s	0.0	0.0	0.4	76.8	20.4	2.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1352	1013	715	1495	227	187
V/C Ratio(X)	0.37	0.05	0.03	0.85	0.91	0.11
Avail Cap(c_a), veh/h	1352	1013	758	1495	319	262
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	3.8	10.4	77.5	69.6
Incr Delay (d2), s/veh	0.8	0.1	0.0	6.5	22.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.3	34.6	16.2	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.8	0.1	3.8	16.8	99.7	69.9
LnGrp LOS	A	A	A	B	F	E
Approach Vol, veh/h	557			1299	227	
Approach Delay, s/veh	0.7			16.6	96.9	
Approach LOS	A			B	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.6	142.6		27.8		152.2
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	123.0		32.0		137.0
Max Q Clear Time (g_c+I1), s	2.4	2.0		22.4		78.8
Green Ext Time (p_c), s	0.0	7.6		0.4		37.5

Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

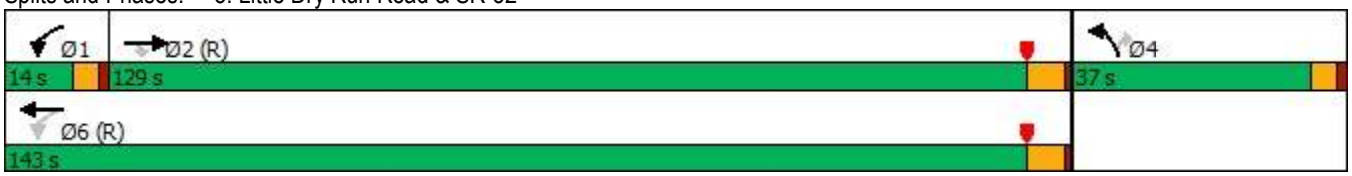
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	490	50	20	1240	200	20
Future Volume (vph)	490	50	20	1240	200	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1759	1324	1719	1827	1787	1455
Flt Permitted			0.420		0.950	
Satd. Flow (perm)	1759	1324	760	1827	1787	1455
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		52				21
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	8%	22%	5%	4%	1%	11%
Adj. Flow (vph)	505	52	21	1278	206	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	505	52	21	1278	206	21
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	66.5	66.5	12.0	66.5	15.0	15.0
Total Split (s)	129.0	129.0	14.0	143.0	37.0	37.0
Total Split (%)	71.7%	71.7%	7.8%	79.4%	20.6%	20.6%
Maximum Green (s)	123.0	123.0	9.0	137.0	32.0	32.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	136.3	136.3	144.5	143.5	25.5	25.5
Actuated g/C Ratio	0.76	0.76	0.80	0.80	0.14	0.14
v/c Ratio	0.38	0.05	0.03	0.88	0.81	0.09
Control Delay	9.5	3.9	4.5	22.3	98.5	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	3.9	4.5	22.3	98.5	21.9
LOS	A	A	A	C	F	C
Approach Delay	9.0			22.0	91.4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	A			C	F	
Queue Length 50th (ft)	79	0	4	917	239	0
Queue Length 95th (ft)	255	21	13	1482	329	29
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1331	1014	657	1455	317	275
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	0.38	0.05	0.03	0.88	0.65	0.08

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 163 (91%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 26.1 Intersection LOS: C
Intersection Capacity Utilization 85.5% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 5: Little Dry Run Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1130	170	50	630	130	40
Future Volume (veh/h)	1130	170	50	630	130	40
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	1870	1870	1900	1856	1841	1767
Adj Flow Rate, veh/h	1165	175	52	649	134	41
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	3	4	9
Cap, veh/h	1425	1208	438	1552	158	135
Arrive On Green	1.00	1.00	0.04	0.84	0.09	0.09
Sat Flow, veh/h	1870	1585	1810	1856	1753	1497
Grp Volume(v), veh/h	1165	175	52	649	134	41
Grp Sat Flow(s),veh/h/ln	1870	1585	1810	1856	1753	1497
Q Serve(g_s), s	0.0	0.0	0.8	13.2	11.3	3.8
Cycle Q Clear(g_c), s	0.0	0.0	0.8	13.2	11.3	3.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1425	1208	438	1552	158	135
V/C Ratio(X)	0.82	0.14	0.12	0.42	0.85	0.30
Avail Cap(c_a), veh/h	1425	1208	448	1552	234	200
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	2.6	3.1	67.2	63.8
Incr Delay (d2), s/veh	4.7	0.2	0.1	0.8	16.8	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	0.1	0.4	6.1	9.7	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.7	0.2	2.7	3.9	84.0	65.1
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	1340			701	175	
Approach Delay, s/veh	4.1			3.8	79.6	
Approach LOS	A			A	E	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.2	120.3		18.5		131.5
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	7.0	107.0		20.0		119.0
Max Q Clear Time (g_c+I1), s	2.8	2.0		13.3		15.2
Green Ext Time (p_c), s	0.0	43.9		0.2		10.4

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	A

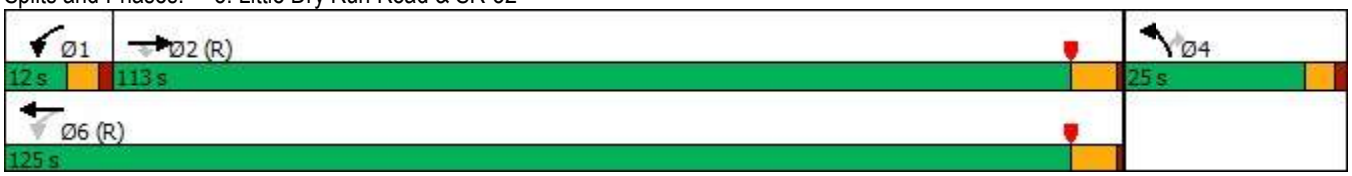
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1130	170	50	630	130	40
Future Volume (vph)	1130	170	50	630	130	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1805	1845	1736	1482
Flt Permitted			0.107		0.950	
Satd. Flow (perm)	1863	1583	203	1845	1736	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		138				41
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	0%	3%	4%	9%
Adj. Flow (vph)	1165	175	52	649	134	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1165	175	52	649	134	41
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	26.0	26.0	12.0	26.0	15.0	15.0
Total Split (s)	113.0	113.0	12.0	125.0	25.0	25.0
Total Split (%)	75.3%	75.3%	8.0%	83.3%	16.7%	16.7%
Maximum Green (s)	107.0	107.0	7.0	119.0	20.0	20.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	113.2	113.2	123.8	122.8	16.2	16.2
Actuated g/C Ratio	0.75	0.75	0.83	0.82	0.11	0.11
v/c Ratio	0.83	0.14	0.21	0.43	0.72	0.21
Control Delay	18.1	0.9	4.8	5.1	85.1	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	0.9	4.8	5.1	85.1	18.2
LOS	B	A	A	A	F	B
Approach Delay	15.8			5.1	69.4	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			A	E	
Queue Length 50th (ft)	1182	15	8	152	128	0
Queue Length 95th (ft)	1336	13	18	229	199	38
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1405	1228	242	1510	231	233
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	0.83	0.14	0.21	0.43	0.58	0.18

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 138 (92%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 16.7 Intersection LOS: B
Intersection Capacity Utilization 77.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 5: Little Dry Run Road & SR-32



2042 BUILD ALTERNATIVE RB-2

HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	320	50	40	740	760	80	40	30	230	30	0
Future Volume (veh/h)	110	320	50	40	740	760	80	40	30	230	30	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1796	1900	1900	1826	1856	1870	1900	1900	1752	1900	0
Adj Flow Rate, veh/h	118	344	54	43	796	0	86	43	32	247	32	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	7	0	0	5	3	2	0	0	10	0	0
Cap, veh/h	396	2049	319	785	1256		104	56	42	309	176	0
Arrive On Green	0.05	0.92	0.92	0.03	0.69	0.00	0.06	0.06	0.06	0.10	0.09	0.00
Sat Flow, veh/h	1697	2960	460	1810	1826	1572	1781	1012	753	3237	1900	0
Grp Volume(v), veh/h	118	197	201	43	796	0	86	0	75	247	32	0
Grp Sat Flow(s),veh/h/ln	1697	1706	1713	1810	1826	1572	1781	0	1764	1618	1900	0
Q Serve(g_s), s	3.7	1.9	2.0	1.2	43.4	0.0	8.6	0.0	7.5	13.5	2.8	0.0
Cycle Q Clear(g_c), s	3.7	1.9	2.0	1.2	43.4	0.0	8.6	0.0	7.5	13.5	2.8	0.0
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.43	1.00		0.00
Lane Grp Cap(c), veh/h	396	1182	1186	785	1256		104	0	98	309	176	0
V/C Ratio(X)	0.30	0.17	0.17	0.05	0.63		0.82	0.00	0.77	0.80	0.18	0.00
Avail Cap(c_a), veh/h	415	1182	1186	813	1256		188	0	147	611	317	0
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	0.15	0.15	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.4	2.3	2.3	7.1	15.5	0.0	83.8	0.0	83.8	79.7	75.4	0.0
Incr Delay (d2), s/veh	0.3	0.2	0.2	0.0	0.4	0.0	14.7	0.0	12.4	9.7	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	1.3	1.4	0.9	21.1	0.0	7.9	0.0	6.9	10.2	2.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	2.5	2.5	7.1	15.9	0.0	98.5	0.0	96.3	89.4	75.9	0.0
LnGrp LOS	B	A	A	A	B		F	A	F	F	E	A
Approach Vol, veh/h		516			839	A		161			279	
Approach Delay, s/veh		5.1			15.5			97.4			87.8	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	130.6	23.2	15.0	12.0	129.8	16.6	21.6
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.0	100.0	34.0	15.0	9.0	100.0	19.0	30.0
Max Q Clear Time (g_c+I1), s	3.2	4.0	15.5	9.5	5.7	45.4	10.6	4.8
Green Ext Time (p_c), s	0.0	0.5	1.7	0.1	0.1	1.1	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	31.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

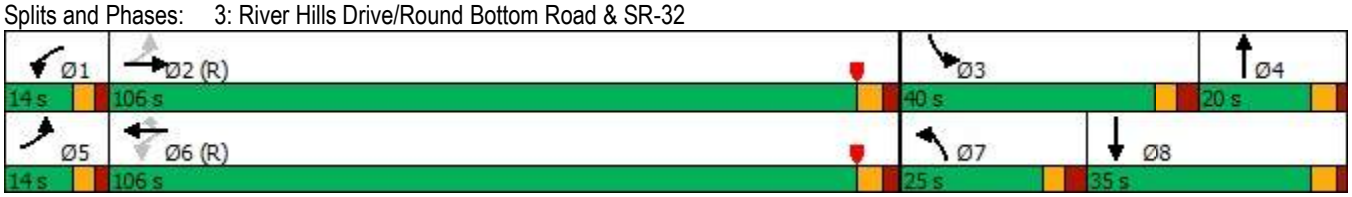
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	320	50	40	740	760	80	40	30	230	30	0
Future Volume (vph)	110	320	50	40	740	760	80	40	30	230	30	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	525		250
Storage Lanes	1		1	1		1	1		0	2		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.980				0.850		0.936				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	3336	0	1805	1810	1568	1770	1778	0	3183	1900	0
Flt Permitted	0.218			0.517			0.950			0.950		
Satd. Flow (perm)	384	3336	0	982	1810	1568	1770	1778	0	3183	1900	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				817		16				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	8%	7%	0%	0%	5%	3%	2%	0%	0%	10%	0%	19%
Adj. Flow (vph)	118	344	54	43	796	817	86	43	32	247	32	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	118	398	0	43	796	817	86	75	0	247	32	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	58.0		12.0	58.0	58.0	14.0	15.0		13.0	15.0	
Total Split (s)	14.0	106.0		14.0	106.0	106.0	25.0	20.0		40.0	35.0	
Total Split (%)	7.8%	58.9%		7.8%	58.9%	58.9%	13.9%	11.1%		22.2%	19.4%	
Maximum Green (s)	9.0	100.0		9.0	100.0	100.0	19.0	15.0		34.0	30.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	128.1	120.1		124.8	116.5	116.5	18.5	12.0		21.1	17.6	
Actuated g/C Ratio	0.71	0.67		0.69	0.65	0.65	0.10	0.07		0.12	0.10	
v/c Ratio	0.35	0.18		0.06	0.68	0.63	0.48	0.57		0.66	0.17	
Control Delay	11.5	13.7		6.5	17.8	1.7	86.8	80.1		84.5	74.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	11.5	13.7		6.5	17.8	1.7	86.8	80.1		84.5	74.7	
LOS	B	B		A	B	A	F	F		F	E	
Approach Delay		13.2			9.6			83.7			83.4	
Approach LOS		B			A			F			F	
Queue Length 50th (ft)	25	114		14	467	27	100	69		146	35	
Queue Length 95th (ft)	m82	m142		m11	m582	m35	162	129		192	73	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			525		
Base Capacity (vph)	337	2230		731	1171	1303	210	162		601	316	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.35	0.18		0.06	0.68	0.63	0.41	0.46		0.41	0.10	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 72 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 22.7 Intersection LOS: C
Intersection Capacity Utilization 74.8% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



HCM 6th Signalized Intersection Summary
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	750	60	40	400	450	70	60	50	650	70	0
Future Volume (veh/h)	180	750	60	40	400	450	70	60	50	650	70	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1900	1900	1885	1826	1900	1870	1900	1885	1841	0
Adj Flow Rate, veh/h	191	798	64	43	426	0	74	64	53	691	74	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	1	0	0	1	5	0	2	0	1	4	0
Cap, veh/h	415	1671	134	438	924		94	76	63	823	487	0
Arrive On Green	0.09	1.00	1.00	0.03	0.33	0.00	0.05	0.08	0.08	0.24	0.26	0.00
Sat Flow, veh/h	1711	3358	269	1810	1885	1547	1810	946	783	3483	1841	0
Grp Volume(v), veh/h	191	425	437	43	426	0	74	0	117	691	74	0
Grp Sat Flow(s),veh/h/ln	1711	1791	1837	1810	1885	1547	1810	0	1729	1742	1841	0
Q Serve(g_s), s	7.0	0.3	0.3	1.7	26.8	0.0	6.1	0.0	10.0	28.3	4.6	0.0
Cycle Q Clear(g_c), s	7.0	0.3	0.3	1.7	26.8	0.0	6.1	0.0	10.0	28.3	4.6	0.0
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	415	891	914	438	924		94	0	139	823	487	0
V/C Ratio(X)	0.46	0.48	0.48	0.10	0.46		0.79	0.00	0.84	0.84	0.15	0.00
Avail Cap(c_a), veh/h	415	891	914	452	924		253	0	150	1068	487	0
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.18	0.18	0.18	0.81	0.81	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.2	0.2	0.2	17.3	34.7	0.0	70.3	0.0	68.0	54.6	42.2	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.1	1.3	0.0	13.3	0.0	31.4	6.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	0.3	0.3	1.4	18.9	0.0	5.7	0.0	9.6	19.3	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	0.5	0.5	17.4	36.1	0.0	83.6	0.0	99.4	61.1	42.4	0.0
LnGrp LOS	C	A	A	B	D		F	A	F	E	D	A
Approach Vol, veh/h		1053			469	A		191			765	
Approach Delay, s/veh		4.8			34.3			93.3			59.3	
Approach LOS		A			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	80.7	41.5	17.1	12.0	79.5	13.8	44.7
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	7.0	62.0	46.0	13.0	7.0	62.0	21.0	38.0
Max Q Clear Time (g_c+I1), s	3.7	2.3	30.3	12.0	9.0	28.8	8.1	6.6
Green Ext Time (p_c), s	0.0	1.1	5.1	0.0	0.0	0.5	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
3: River Hills Drive/Round Bottom Road & SR-32

08/10/2020

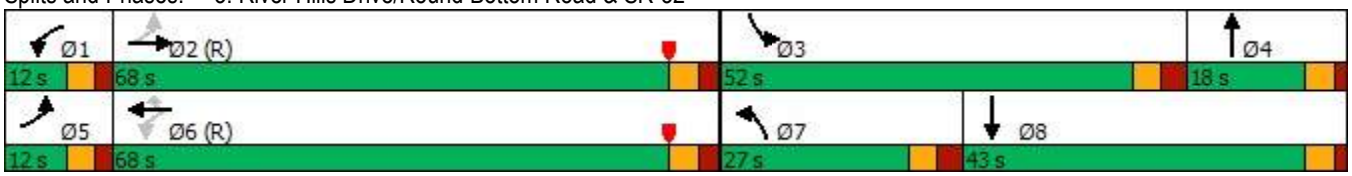
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	750	60	40	400	450	70	60	50	650	70	0
Future Volume (vph)	180	750	60	40	400	450	70	60	50	650	70	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	525		250
Storage Lanes	1		1	1		1	1		0	2		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.989				0.850		0.932				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3538	0	1805	1881	1538	1805	1752	0	3467	1827	0
Flt Permitted	0.365			0.237			0.950			0.950		
Satd. Flow (perm)	648	3538	0	450	1881	1538	1805	1752	0	3467	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				479		22				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	1%	0%	0%	1%	5%	0%	2%	0%	1%	4%	2%
Adj. Flow (vph)	191	798	64	43	426	479	74	64	53	691	74	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	191	862	0	43	426	479	74	117	0	691	74	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	38.0		12.0	26.0	26.0	13.0	15.0		13.0	15.0	
Total Split (s)	12.0	68.0		12.0	68.0	68.0	27.0	18.0		52.0	43.0	
Total Split (%)	8.0%	45.3%		8.0%	45.3%	45.3%	18.0%	12.0%		34.7%	28.7%	
Maximum Green (s)	7.0	62.0		7.0	62.0	62.0	21.0	13.0		46.0	38.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	79.4	72.8		78.4	70.4	70.4	11.5	12.1		38.5	41.7	
Actuated g/C Ratio	0.53	0.49		0.52	0.47	0.47	0.08	0.08		0.26	0.28	
v/c Ratio	0.49	0.50		0.14	0.48	0.49	0.54	0.73		0.78	0.15	
Control Delay	25.7	32.3		14.9	25.7	5.9	80.1	79.3		58.0	42.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	25.7	32.3		14.9	25.7	5.9	80.1	79.3		58.0	42.1	
LOS	C	C		B	C	A	F	E		E	D	
Approach Delay		31.1			15.2			79.6			56.4	
Approach LOS		C			B			E			E	
Queue Length 50th (ft)	106	297		17	272	40	71	92		326	56	
Queue Length 95th (ft)	m99	m252		m35	429	115	124	#178		374	98	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			525		
Base Capacity (vph)	391	1721		298	882	976	252	171		1063	509	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.49	0.50		0.14	0.48	0.49	0.29	0.68		0.65	0.15	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 39 (26%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 35.7 Intersection LOS: D
Intersection Capacity Utilization 69.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	530	20	40	1470	50	40
Future Volume (veh/h)	530	20	40	1470	50	40
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	1781	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	576	22	43	1598	54	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	0	3	0	0
Cap, veh/h	2925	112	773	1633	64	51
Arrive On Green	1.00	1.00	1.00	1.00	0.07	0.07
Sat Flow, veh/h	3413	127	833	1856	946	753
Grp Volume(v), veh/h	293	305	43	1598	98	0
Grp Sat Flow(s),veh/h/ln	1692	1759	833	1856	1717	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.2	0.0
Prop In Lane		0.07	1.00		0.55	0.44
Lane Grp Cap(c), veh/h	1489	1547	773	1633	116	0
V/C Ratio(X)	0.20	0.20	0.06	0.98	0.85	0.00
Avail Cap(c_a), veh/h	1489	1547	773	1633	148	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.29	0.29	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	83.0	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.0	8.0	28.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.2	0.0	5.3	9.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.3	0.3	0.0	8.0	111.6	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	598			1641	98	
Approach Delay, s/veh	0.3			7.8	111.6	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		163.4		16.6		163.4
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		155.0		15.5		155.0
Max Q Clear Time (g_c+I1), s		2.0		12.2		2.0
Green Ext Time (p_c), s		6.1		0.1		107.6

Intersection Summary	
HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

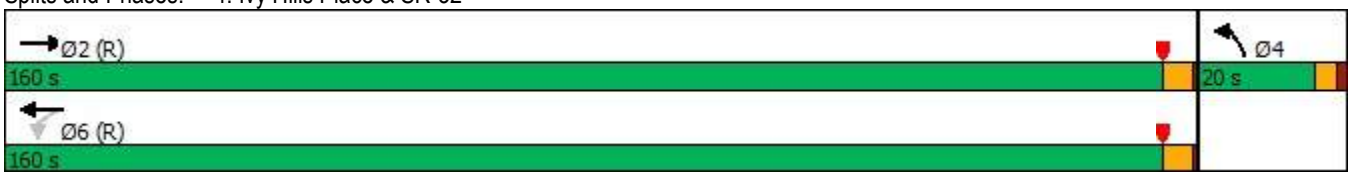
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	530	20	40	1470	50	40
Future Volume (vph)	530	20	40	1470	50	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.994				0.940	
Flt Protected			0.950		0.973	
Satd. Flow (prot)	3332	0	1805	1845	1738	0
Flt Permitted			0.426		0.973	
Satd. Flow (perm)	3332	0	809	1845	1738	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	11				17	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	0%	0%	3%	0%	0%
Adj. Flow (vph)	576	22	43	1598	54	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	598	0	43	1598	97	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	66.0		66.0	66.0	24.5	
Total Split (s)	160.0		160.0	160.0	20.0	
Total Split (%)	88.9%		88.9%	88.9%	11.1%	
Maximum Green (s)	155.0		155.0	155.0	15.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	157.3		157.3	157.3	13.2	
Actuated g/C Ratio	0.87		0.87	0.87	0.07	
v/c Ratio	0.21		0.06	0.99	0.68	
Control Delay	2.3		1.4	22.4	89.8	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	2.3		1.4	22.4	89.8	
LOS	A		A	C	F	
Approach Delay	2.3			21.8	89.8	
Approach LOS	A			C	F	
Queue Length 50th (ft)	45		4	1740	94	
Queue Length 95th (ft)	56		m5	#2223	162	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	2913		706	1612	165	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.21		0.06	0.99	0.59	

Intersection Summary	
Area Type:	Other
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 20 (11%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.99	
Intersection Signal Delay: 19.7	Intersection LOS: B
Intersection Capacity Utilization 93.6%	ICU Level of Service F
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1340	40	50	750	50	70
Future Volume (veh/h)	1340	40	50	750	50	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	1870	1900	1900	1841	1856	1900
Adj Flow Rate, veh/h	1473	44	55	824	55	77
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	0	4	3	0
Cap, veh/h	2970	89	343	1552	64	89
Arrive On Green	1.00	1.00	1.00	1.00	0.09	0.09
Sat Flow, veh/h	3617	105	350	1841	682	955
Grp Volume(v), veh/h	742	775	55	824	133	0
Grp Sat Flow(s),veh/h/ln	1777	1851	350	1841	1650	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	11.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	11.9	0.0
Prop In Lane		0.06	1.00		0.41	0.58
Lane Grp Cap(c), veh/h	1498	1561	343	1552	154	0
V/C Ratio(X)	0.50	0.50	0.16	0.53	0.86	0.00
Avail Cap(c_a), veh/h	1498	1561	343	1552	225	0
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.74	0.74	0.86	0.86	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	67.0	0.0
Incr Delay (d2), s/veh	0.9	0.8	0.9	1.1	19.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.7	0.1	0.9	9.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.8	0.9	1.1	86.6	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	1517			879	133	
Approach Delay, s/veh	0.9			1.1	86.6	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		131.5		18.5		131.5
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		120.0		20.5		120.0
Max Q Clear Time (g_c+I1), s		2.0		13.9		2.0
Green Ext Time (p_c), s		30.9		0.2		14.9

Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

Notes

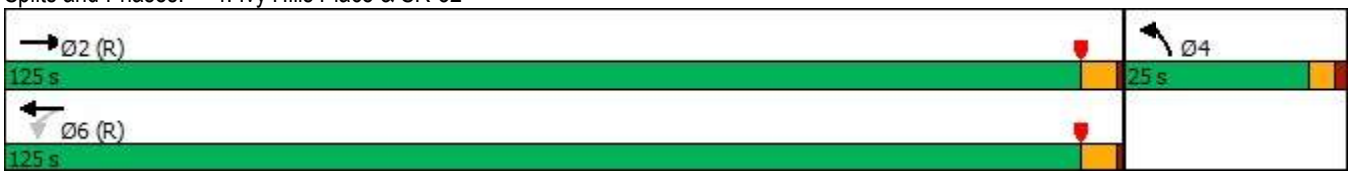
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1340	40	50	750	50	70
Future Volume (vph)	1340	40	50	750	50	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.996				0.921	
Flt Protected			0.950		0.980	
Satd. Flow (prot)	3527	0	1805	1827	1694	0
Flt Permitted			0.152		0.980	
Satd. Flow (perm)	3527	0	289	1827	1694	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	7				39	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	0%	0%	4%	3%	0%
Adj. Flow (vph)	1473	44	55	824	55	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1517	0	55	824	132	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	25.0		25.0	25.0	23.5	
Total Split (s)	125.0		125.0	125.0	25.0	
Total Split (%)	83.3%		83.3%	83.3%	16.7%	
Maximum Green (s)	120.0		120.0	120.0	20.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	126.2		126.2	126.2	14.3	
Actuated g/C Ratio	0.84		0.84	0.84	0.10	
v/c Ratio	0.51		0.23	0.54	0.67	
Control Delay	3.5		4.5	4.1	62.4	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	3.5		4.5	4.1	62.4	
LOS	A		A	A	E	
Approach Delay	3.5			4.1	62.4	
Approach LOS	A			A	E	
Queue Length 50th (ft)	272		7	133	90	
Queue Length 95th (ft)	25		m19	231	159	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	2969		243	1537	265	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.51		0.23	0.54	0.50	

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 115 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	510	60	30	1300	210	30
Future Volume (veh/h)	510	60	30	1300	210	30
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	1781	1574	1826	1841	1885	1737
Adj Flow Rate, veh/h	526	62	31	1340	216	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	22	5	4	1	11
Cap, veh/h	1333	998	698	1485	237	194
Arrive On Green	1.00	1.00	0.03	0.81	0.13	0.13
Sat Flow, veh/h	1781	1334	1739	1841	1795	1472
Grp Volume(v), veh/h	526	62	31	1340	216	31
Grp Sat Flow(s),veh/h/ln	1781	1334	1739	1841	1795	1472
Q Serve(g_s), s	0.0	0.0	0.7	93.0	21.4	3.4
Cycle Q Clear(g_c), s	0.0	0.0	0.7	93.0	21.4	3.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1333	998	698	1485	237	194
V/C Ratio(X)	0.39	0.06	0.04	0.90	0.91	0.16
Avail Cap(c_a), veh/h	1333	998	732	1485	299	245
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.99	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	4.0	12.3	77.1	69.3
Incr Delay (d2), s/veh	0.9	0.1	0.0	9.2	26.5	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	0.6	0.1	0.4	42.2	17.2	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.1	4.1	21.6	103.6	69.7
LnGrp LOS	A	A	A	C	F	E
Approach Vol, veh/h	588			1371	247	
Approach Delay, s/veh	0.8			21.2	99.4	
Approach LOS	A			C	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.5	140.7		28.8		151.2
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	125.0		30.0		139.0
Max Q Clear Time (g_c+I1), s	2.7	2.0		23.4		95.0
Green Ext Time (p_c), s	0.0	8.2		0.4		33.4

Intersection Summary			
HCM 6th Ctrl Delay			24.5
HCM 6th LOS			C

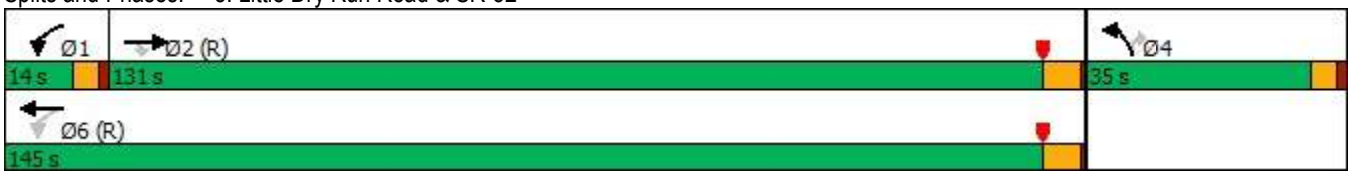
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	510	60	30	1300	210	30
Future Volume (vph)	510	60	30	1300	210	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1759	1324	1719	1827	1787	1455
Flt Permitted			0.406		0.950	
Satd. Flow (perm)	1759	1324	735	1827	1787	1455
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		62				31
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	8%	22%	5%	4%	1%	11%
Adj. Flow (vph)	526	62	31	1340	216	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	526	62	31	1340	216	31
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	66.5	66.5	12.0	66.5	15.0	15.0
Total Split (s)	131.0	131.0	14.0	145.0	35.0	35.0
Total Split (%)	72.8%	72.8%	7.8%	80.6%	19.4%	19.4%
Maximum Green (s)	125.0	125.0	9.0	139.0	30.0	30.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	133.6	133.6	144.2	143.2	25.8	25.8
Actuated g/C Ratio	0.74	0.74	0.80	0.80	0.14	0.14
v/c Ratio	0.40	0.06	0.05	0.92	0.84	0.13
Control Delay	10.0	2.0	4.4	27.3	102.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.0	2.0	4.4	27.3	102.0	19.5
LOS	A	A	A	C	F	B
Approach Delay	9.1			26.7	91.7	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	A			C	F	
Queue Length 50th (ft)	110	0	7	1119	251	0
Queue Length 95th (ft)	312	m4	16	#1816	349	35
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1305	998	637	1452	297	268
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	0.40	0.06	0.05	0.92	0.73	0.12

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 165 (92%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 29.3 Intersection LOS: C
Intersection Capacity Utilization 89.2% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Little Dry Run Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1220	190	60	660	140	50
Future Volume (veh/h)	1220	190	60	660	140	50
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	1870	1870	1900	1856	1841	1767
Adj Flow Rate, veh/h	1258	196	62	680	144	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	3	4	9
Cap, veh/h	1411	1196	406	1541	168	144
Arrive On Green	1.00	1.00	0.04	0.83	0.10	0.10
Sat Flow, veh/h	1870	1585	1810	1856	1753	1497
Grp Volume(v), veh/h	1258	196	62	680	144	52
Grp Sat Flow(s),veh/h/ln	1870	1585	1810	1856	1753	1497
Q Serve(g_s), s	0.0	0.0	1.0	14.7	12.1	4.9
Cycle Q Clear(g_c), s	0.0	0.0	1.0	14.7	12.1	4.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1411	1196	406	1541	168	144
V/C Ratio(X)	0.89	0.16	0.15	0.44	0.86	0.36
Avail Cap(c_a), veh/h	1411	1196	413	1541	234	200
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	2.8	3.4	66.8	63.5
Incr Delay (d2), s/veh	7.7	0.3	0.2	0.9	19.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.4	0.1	0.5	7.0	10.5	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.7	0.3	3.0	4.3	86.3	65.0
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	1454			742	196	
Approach Delay, s/veh	6.7			4.2	80.6	
Approach LOS	A			A	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.5	119.1		19.4		130.6
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	7.0	107.0		20.0		119.0
Max Q Clear Time (g_c+I1), s	3.0	2.0		14.1		16.7
Green Ext Time (p_c), s	0.0	54.9		0.3		11.2

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

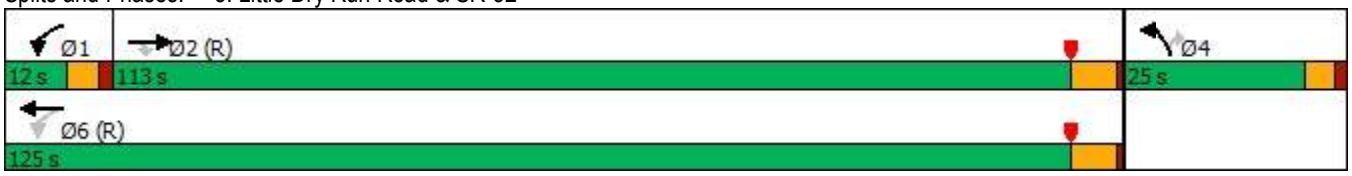
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1220	190	60	660	140	50
Future Volume (vph)	1220	190	60	660	140	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1805	1845	1736	1482
Flt Permitted			0.058		0.950	
Satd. Flow (perm)	1863	1583	110	1845	1736	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		143				52
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	0%	3%	4%	9%
Adj. Flow (vph)	1258	196	62	680	144	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1258	196	62	680	144	52
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	26.0	26.0	12.0	26.0	15.0	15.0
Total Split (s)	113.0	113.0	12.0	125.0	25.0	25.0
Total Split (%)	75.3%	75.3%	8.0%	83.3%	16.7%	16.7%
Maximum Green (s)	107.0	107.0	7.0	119.0	20.0	20.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	112.6	112.6	123.2	122.2	16.8	16.8
Actuated g/C Ratio	0.75	0.75	0.82	0.81	0.11	0.11
v/c Ratio	0.90	0.16	0.37	0.45	0.74	0.25
Control Delay	22.6	0.8	9.1	5.5	86.6	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.6	0.8	9.1	5.5	86.6	17.0
LOS	C	A	A	A	F	B
Approach Delay	19.7			5.8	68.1	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			A	E	
Queue Length 50th (ft)	1273	12	10	170	138	0
Queue Length 95th (ft)	#1498	3	23	246	214	42
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1398	1224	169	1502	231	242
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	0.90	0.16	0.37	0.45	0.62	0.21

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 138 (92%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 19.3 Intersection LOS: B
Intersection Capacity Utilization 81.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Little Dry Run Road & SR-32



2042 BUILD ALTERNATIVE RB-2 WITH MARTIN MARIETTA TRAFFIC

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	320	50	40	740	810	80	40	30	270	30	0
Future Volume (veh/h)	120	320	50	40	740	810	80	40	30	270	30	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1796	1900	1900	1826	1856	1870	1900	1900	1752	1900	0
Adj Flow Rate, veh/h	129	344	54	43	796	0	86	43	32	290	32	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	8	7	0	0	5	3	2	0	0	10	0	0
Cap, veh/h	380	2007	312	739	1230		104	56	42	355	203	0
Arrive On Green	0.04	0.68	0.68	0.03	0.67	0.00	0.06	0.06	0.06	0.11	0.11	0.00
Sat Flow, veh/h	1697	2960	460	1810	1826	1572	1781	1012	753	3237	1900	0
Grp Volume(v), veh/h	129	197	201	43	796	0	86	0	75	290	32	0
Grp Sat Flow(s),veh/h/ln	1697	1706	1713	1810	1826	1572	1781	0	1764	1618	1900	0
Q Serve(g_s), s	4.3	7.6	7.7	1.3	45.4	0.0	8.6	0.0	7.5	15.8	2.8	0.0
Cycle Q Clear(g_c), s	4.3	7.6	7.7	1.3	45.4	0.0	8.6	0.0	7.5	15.8	2.8	0.0
Prop In Lane	1.00		0.27	1.00		1.00	1.00		0.43	1.00		0.00
Lane Grp Cap(c), veh/h	380	1157	1162	739	1230		104	0	98	355	203	0
V/C Ratio(X)	0.34	0.17	0.17	0.06	0.65		0.82	0.00	0.77	0.82	0.16	0.00
Avail Cap(c_a), veh/h	399	1157	1162	767	1230		188	0	147	611	317	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	0.09	0.09	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.2	10.5	10.6	8.0	17.0	0.0	83.8	0.0	83.8	78.4	73.1	0.0
Incr Delay (d2), s/veh	0.4	0.2	0.2	0.0	0.2	0.0	14.7	0.0	12.4	9.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	5.5	5.7	0.9	21.5	0.0	7.9	0.0	6.9	11.5	2.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.6	10.8	10.8	8.0	17.2	0.0	98.5	0.0	96.3	87.8	73.4	0.0
LnGrp LOS	B	B	B	A	B		F	A	F	F	E	A
Approach Vol, veh/h		527			839	A		161			322	
Approach Delay, s/veh		12.0			16.8			97.4			86.3	
Approach LOS		B			B			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	128.1	25.7	15.0	12.0	127.3	16.6	24.2
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	9.0	100.0	34.0	15.0	9.0	100.0	19.0	30.0
Max Q Clear Time (g_c+I1), s	3.3	9.7	17.8	9.5	6.3	47.4	10.6	4.8
Green Ext Time (p_c), s	0.0	0.5	2.0	0.1	0.1	1.1	0.1	0.1

Intersection Summary	
HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

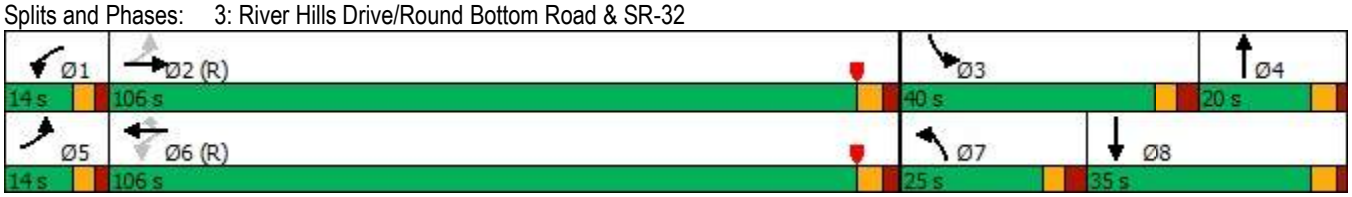
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	320	50	40	740	810	80	40	30	270	30	0
Future Volume (vph)	120	320	50	40	740	810	80	40	30	270	30	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	525		250
Storage Lanes	1		1	1		1	1		0	2		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.980				0.850		0.936				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	3336	0	1805	1810	1568	1770	1778	0	3183	1900	0
Flt Permitted	0.208			0.517			0.950			0.950		
Satd. Flow (perm)	366	3336	0	982	1810	1568	1770	1778	0	3183	1900	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16				822		16				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	8%	7%	0%	0%	5%	3%	2%	0%	0%	10%	0%	19%
Adj. Flow (vph)	129	344	54	43	796	871	86	43	32	290	32	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	129	398	0	43	796	871	86	75	0	290	32	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	58.0		12.0	58.0	58.0	14.0	15.0		13.0	15.0	
Total Split (s)	14.0	106.0		14.0	106.0	106.0	25.0	20.0		40.0	35.0	
Total Split (%)	7.8%	58.9%		7.8%	58.9%	58.9%	13.9%	11.1%		22.2%	19.4%	
Maximum Green (s)	9.0	100.0		9.0	100.0	100.0	19.0	15.0		34.0	30.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	125.7	117.6		122.3	114.0	114.0	18.9	12.0		23.5	19.6	
Actuated g/C Ratio	0.70	0.65		0.68	0.63	0.63	0.10	0.07		0.13	0.11	
v/c Ratio	0.41	0.18		0.06	0.69	0.67	0.46	0.57		0.70	0.16	
Control Delay	13.5	15.0		7.0	18.8	1.8	86.2	80.1		83.8	72.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	13.5	15.0		7.0	18.8	1.8	86.2	80.1		83.8	72.0	
LOS	B	B		A	B	A	F	F		F	E	
Approach Delay		14.6			9.9			83.4			82.6	
Approach LOS		B			A			F			F	
Queue Length 50th (ft)	38	122		14	499	44	100	69		171	35	
Queue Length 95th (ft)	m93	m149		m12	m581	m47	162	129		220	72	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			525		
Base Capacity (vph)	320	2185		717	1146	1294	214	162		601	316	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.40	0.18		0.06	0.69	0.67	0.40	0.46		0.48	0.10	

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 72 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 23.8 Intersection LOS: C
Intersection Capacity Utilization 78.5% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	750	60	40	400	470	70	60	50	670	70	0
Future Volume (veh/h)	180	750	60	40	400	470	70	60	50	670	70	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1885	1900	1900	1885	1826	1900	1870	1900	1885	1841	0
Adj Flow Rate, veh/h	191	798	64	43	426	0	74	64	53	713	74	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	7	1	0	0	1	5	0	2	0	1	4	0
Cap, veh/h	408	1651	132	434	912		94	76	63	844	498	0
Arrive On Green	0.09	0.98	0.98	0.03	0.32	0.00	0.05	0.08	0.08	0.24	0.27	0.00
Sat Flow, veh/h	1711	3358	269	1810	1885	1547	1810	946	783	3483	1841	0
Grp Volume(v), veh/h	191	425	437	43	426	0	74	0	117	713	74	0
Grp Sat Flow(s),veh/h/ln	1711	1791	1837	1810	1885	1547	1810	0	1729	1742	1841	0
Q Serve(g_s), s	7.0	1.1	1.1	1.8	27.0	0.0	6.1	0.0	10.0	29.2	4.6	0.0
Cycle Q Clear(g_c), s	7.0	1.1	1.1	1.8	27.0	0.0	6.1	0.0	10.0	29.2	4.6	0.0
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.45	1.00		0.00
Lane Grp Cap(c), veh/h	408	880	903	434	912		94	0	139	844	498	0
V/C Ratio(X)	0.47	0.48	0.48	0.10	0.47		0.79	0.00	0.84	0.84	0.15	0.00
Avail Cap(c_a), veh/h	408	880	903	448	912		253	0	150	1068	498	0
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.18	0.18	0.18	0.80	0.80	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.0	0.6	0.6	17.7	35.3	0.0	70.3	0.0	68.0	54.1	41.6	0.0
Incr Delay (d2), s/veh	0.2	0.3	0.3	0.1	1.4	0.0	13.3	0.0	31.4	6.8	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	0.6	0.6	1.4	19.0	0.0	5.7	0.0	9.6	19.8	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	1.0	1.0	17.8	36.7	0.0	83.6	0.0	99.4	60.9	41.7	0.0
LnGrp LOS	C	A	A	B	D		F	A	F	E	D	A
Approach Vol, veh/h		1053			469	A		191			787	
Approach Delay, s/veh		5.4			34.9			93.3			59.1	
Approach LOS		A			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	79.7	42.4	17.1	12.0	78.6	13.8	45.6
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	5.0	6.0	6.0	5.0
Max Green Setting (Gmax), s	7.0	62.0	46.0	13.0	7.0	62.0	21.0	38.0
Max Q Clear Time (g_c+I1), s	3.8	3.1	31.2	12.0	9.0	29.0	8.1	6.6
Green Ext Time (p_c), s	0.0	1.1	5.1	0.0	0.0	0.5	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	34.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

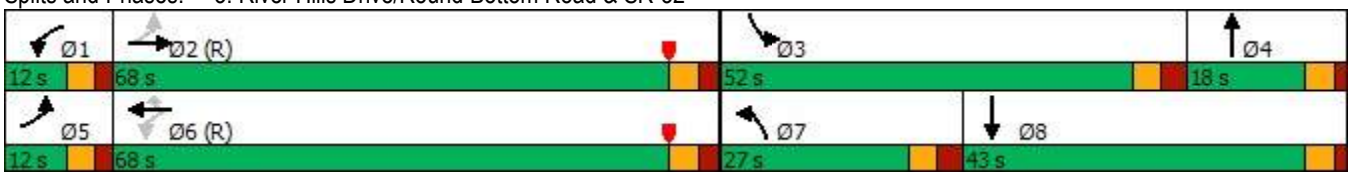
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	750	60	40	400	470	70	60	50	670	70	0
Future Volume (vph)	180	750	60	40	400	470	70	60	50	670	70	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		800	200		1000	150		0	525		250
Storage Lanes	1		1	1		1	1		0	2		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt		0.989				0.850		0.932				
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1687	3538	0	1805	1881	1538	1805	1752	0	3467	1827	0
Flt Permitted	0.362			0.234			0.950			0.950		
Satd. Flow (perm)	643	3538	0	445	1881	1538	1805	1752	0	3467	1827	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7				500		22				
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1674			1933			908			943	
Travel Time (s)		45.7			52.7			24.8			25.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	1%	0%	0%	1%	5%	0%	2%	0%	1%	4%	2%
Adj. Flow (vph)	191	798	64	43	426	500	74	64	53	713	74	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	191	862	0	43	426	500	74	117	0	713	74	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6		6						
Detector Phase	5	2		1	6	6	7	4		3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0		7.0	20.0	20.0	7.0	10.0		7.0	10.0	
Minimum Split (s)	12.0	38.0		12.0	26.0	26.0	13.0	15.0		13.0	15.0	
Total Split (s)	12.0	68.0		12.0	68.0	68.0	27.0	18.0		52.0	43.0	
Total Split (%)	8.0%	45.3%		8.0%	45.3%	45.3%	18.0%	12.0%		34.7%	28.7%	
Maximum Green (s)	7.0	62.0		7.0	62.0	62.0	21.0	13.0		46.0	38.0	
Yellow Time (s)	3.0	3.5		3.0	3.5	3.5	3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.5		2.0	2.5	2.5	3.0	1.5		3.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	6.0		5.0	6.0	6.0	6.0	5.0		6.0	5.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	0.2		3.0	0.2	0.2	3.0	3.0		5.0	3.0	
Recall Mode	None	C-Min		None	C-Min	C-Min	None	None		None	None	
Walk Time (s)		12.0										
Flash Dont Walk (s)		20.0										
Pedestrian Calls (#/hr)		0										
Act Effct Green (s)	78.6	72.0		77.6	69.6	69.6	11.5	12.1		39.3	42.5	
Actuated g/C Ratio	0.52	0.48		0.52	0.46	0.46	0.08	0.08		0.26	0.28	
v/c Ratio	0.50	0.51		0.15	0.49	0.51	0.54	0.73		0.79	0.14	
Control Delay	26.0	32.7		15.2	26.2	6.1	80.1	79.3		57.8	41.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	26.0	32.7		15.2	26.2	6.1	80.1	79.3		57.8	41.5	
LOS	C	C		B	C	A	F	E		E	D	
Approach Delay		31.5			15.3			79.6			56.3	
Approach LOS		C			B			E			E	
Queue Length 50th (ft)	106	295		18	272	43	71	92		336	55	
Queue Length 95th (ft)	m99	m251		m35	428	116	124	#178		385	97	
Internal Link Dist (ft)		1594			1853			828			863	
Turn Bay Length (ft)	150			200		1000	150			525		
Base Capacity (vph)	385	1702		293	873	981	252	171		1063	517	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.50	0.51		0.15	0.49	0.51	0.29	0.68		0.67	0.14	

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 39 (26%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 35.8 Intersection LOS: D
Intersection Capacity Utilization 70.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: River Hills Drive/Round Bottom Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	570	20	40	1520	50	40
Future Volume (veh/h)	570	20	40	1520	50	40
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	1781	1900	1900	1856	1900	1900
Adj Flow Rate, veh/h	620	22	43	1652	54	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	0	0	3	0	0
Cap, veh/h	2934	104	744	1633	64	51
Arrive On Green	1.00	1.00	1.00	1.00	0.07	0.07
Sat Flow, veh/h	3423	118	800	1856	946	753
Grp Volume(v), veh/h	314	328	43	1652	98	0
Grp Sat Flow(s),veh/h/ln	1692	1760	800	1856	1717	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	10.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	10.2	0.0
Prop In Lane		0.07	1.00		0.55	0.44
Lane Grp Cap(c), veh/h	1489	1549	744	1633	116	0
V/C Ratio(X)	0.21	0.21	0.06	1.01	0.85	0.00
Avail Cap(c_a), veh/h	1489	1549	744	1633	148	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.22	0.22	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	83.0	0.0
Incr Delay (d2), s/veh	0.3	0.3	0.0	13.5	28.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.2	0.0	8.1	9.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.3	0.3	0.0	13.5	111.6	0.0
LnGrp LOS	A	A	A	F	F	A
Approach Vol, veh/h	642			1695	98	
Approach Delay, s/veh	0.3			13.2	111.6	
Approach LOS	A			B	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		163.4		16.6		163.4
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		155.0		15.5		155.0
Max Q Clear Time (g_c+I1), s		2.0		12.2		2.0
Green Ext Time (p_c), s		6.7		0.1		119.5

Intersection Summary	
HCM 6th Ctrl Delay	13.7
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	570	20	40	1520	50	40
Future Volume (vph)	570	20	40	1520	50	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.995				0.940	
Flt Protected			0.950		0.973	
Satd. Flow (prot)	3334	0	1805	1845	1738	0
Flt Permitted			0.407		0.973	
Satd. Flow (perm)	3334	0	773	1845	1738	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	10				17	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	0%	0%	3%	0%	0%
Adj. Flow (vph)	620	22	43	1652	54	43
Shared Lane Traffic (%)						
Lane Group Flow (vph)	642	0	43	1652	97	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	66.0		66.0	66.0	24.5	
Total Split (s)	160.0		160.0	160.0	20.0	
Total Split (%)	88.9%		88.9%	88.9%	11.1%	
Maximum Green (s)	155.0		155.0	155.0	15.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	157.3		157.3	157.3	13.2	
Actuated g/C Ratio	0.87		0.87	0.87	0.07	
v/c Ratio	0.22		0.06	1.02	0.68	
Control Delay	2.1		1.4	30.8	89.8	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	2.1		1.4	30.8	89.8	
LOS	A		A	C	F	
Approach Delay	2.1			30.0	89.8	
Approach LOS	A			C	F	
Queue Length 50th (ft)	44		4	~2084	94	
Queue Length 95th (ft)	54		m5	m#2290	162	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	2914		675	1612	165	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.22		0.06	1.02	0.59	

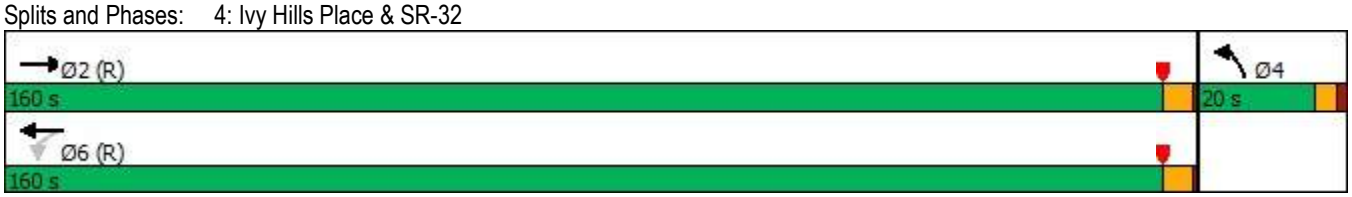
Intersection Summary	
Area Type: Other	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 20 (11%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 96.3%	ICU Level of Service F
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1360	40	50	770	50	70
Future Volume (veh/h)	1360	40	50	770	50	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	1870	1900	1900	1841	1856	1900
Adj Flow Rate, veh/h	1495	44	55	846	55	77
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	0	0	4	3	0
Cap, veh/h	2972	87	337	1552	64	89
Arrive On Green	1.00	1.00	1.00	1.00	0.09	0.09
Sat Flow, veh/h	3619	104	342	1841	682	955
Grp Volume(v), veh/h	752	787	55	846	133	0
Grp Sat Flow(s),veh/h/ln	1777	1852	342	1841	1650	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	11.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	11.9	0.0
Prop In Lane		0.06	1.00		0.41	0.58
Lane Grp Cap(c), veh/h	1498	1561	337	1552	154	0
V/C Ratio(X)	0.50	0.50	0.16	0.55	0.86	0.00
Avail Cap(c_a), veh/h	1498	1561	337	1552	225	0
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.85	0.85	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	67.0	0.0
Incr Delay (d2), s/veh	0.9	0.9	0.9	1.2	19.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.7	0.1	0.9	9.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.9	0.9	1.2	86.6	0.0
LnGrp LOS	A	A	A	A	F	A
Approach Vol, veh/h	1539			901	133	
Approach Delay, s/veh	0.9			1.2	86.6	
Approach LOS	A			A	F	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		131.5		18.5		131.5
Change Period (Y+Rc), s		5.0		4.5		5.0
Max Green Setting (Gmax), s		120.0		20.5		120.0
Max Q Clear Time (g_c+I1), s		2.0		13.9		2.0
Green Ext Time (p_c), s		32.1		0.2		15.8

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

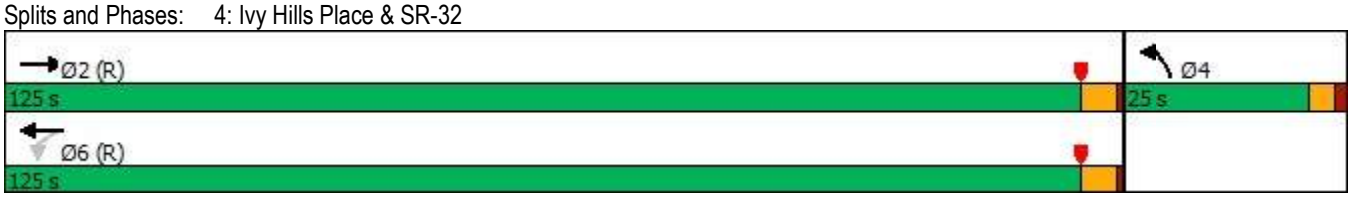
User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1360	40	50	770	50	70
Future Volume (vph)	1360	40	50	770	50	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	250		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			50		50	
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00
Frt	0.996				0.921	
Flt Protected			0.950		0.980	
Satd. Flow (prot)	3527	0	1805	1827	1694	0
Flt Permitted			0.148		0.980	
Satd. Flow (perm)	3527	0	281	1827	1694	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	7				39	
Link Speed (mph)	35			35	25	
Link Distance (ft)	1933			2169	552	
Travel Time (s)	37.7			42.3	15.1	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	0%	0%	4%	3%	0%
Adj. Flow (vph)	1495	44	55	846	55	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1539	0	55	846	132	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	2			6	4	
Permitted Phases			6			
Detector Phase	2		6	6	4	
Switch Phase						
Minimum Initial (s)	20.0		20.0	20.0	10.0	
Minimum Split (s)	25.0		25.0	25.0	23.5	
Total Split (s)	125.0		125.0	125.0	25.0	
Total Split (%)	83.3%		83.3%	83.3%	16.7%	
Maximum Green (s)	120.0		120.0	120.0	20.5	
Yellow Time (s)	4.0		4.0	4.0	3.0	
All-Red Time (s)	1.0		1.0	1.0	1.5	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	5.0		5.0	5.0	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	4.0		4.0	4.0	3.0	
Recall Mode	C-Max		C-Max	C-Max	None	
Walk Time (s)					9.0	
Flash Dont Walk (s)					10.0	
Pedestrian Calls (#/hr)					0	
Act Effct Green (s)	126.2		126.2	126.2	14.3	
Actuated g/C Ratio	0.84		0.84	0.84	0.10	
v/c Ratio	0.52		0.23	0.55	0.67	
Control Delay	3.2		4.6	4.2	62.4	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	3.2		4.6	4.2	62.4	
LOS	A		A	A	E	
Approach Delay	3.2			4.3	62.4	
Approach LOS	A			A	E	
Queue Length 50th (ft)	270		7	140	90	
Queue Length 95th (ft)	26		m20	242	159	
Internal Link Dist (ft)	1853			2089	472	
Turn Bay Length (ft)			250			
Base Capacity (vph)	2969		236	1537	265	
Starvation Cap Reductn	0		0	0	0	
Spillback Cap Reductn	0		0	0	0	
Storage Cap Reductn	0		0	0	0	
Reduced v/c Ratio	0.52		0.23	0.55	0.50	

Intersection Summary	
Area Type: Other	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 115 (77%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 6.6	Intersection LOS: A
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: Ivy Hills Place & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	550	60	30	1350	210	30
Future Volume (veh/h)	550	60	30	1350	210	30
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	1781	1574	1826	1841	1885	1737
Adj Flow Rate, veh/h	567	62	31	1392	216	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	8	22	5	4	1	11
Cap, veh/h	1333	998	676	1485	237	194
Arrive On Green	1.00	1.00	0.03	0.81	0.13	0.13
Sat Flow, veh/h	1781	1334	1739	1841	1795	1472
Grp Volume(v), veh/h	567	62	31	1392	216	31
Grp Sat Flow(s),veh/h/ln	1781	1334	1739	1841	1795	1472
Q Serve(g_s), s	0.0	0.0	0.7	107.8	21.4	3.4
Cycle Q Clear(g_c), s	0.0	0.0	0.7	107.8	21.4	3.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1333	998	676	1485	237	194
V/C Ratio(X)	0.43	0.06	0.05	0.94	0.91	0.16
Avail Cap(c_a), veh/h	1333	998	709	1485	299	245
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.98	0.98	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	4.0	13.8	77.1	69.3
Incr Delay (d2), s/veh	1.0	0.1	0.0	12.5	26.5	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	0.7	0.1	0.4	48.9	17.2	2.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.0	0.1	4.1	26.3	103.6	69.7
LnGrp LOS	A	A	A	C	F	E
Approach Vol, veh/h	629			1423	247	
Approach Delay, s/veh	0.9			25.8	99.4	
Approach LOS	A			C	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.5	140.7		28.8		151.2
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	9.0	125.0		30.0		139.0
Max Q Clear Time (g_c+I1), s	2.7	2.0		23.4		109.8
Green Ext Time (p_c), s	0.0	9.1		0.4		24.9

Intersection Summary	
HCM 6th Ctrl Delay	26.9
HCM 6th LOS	C

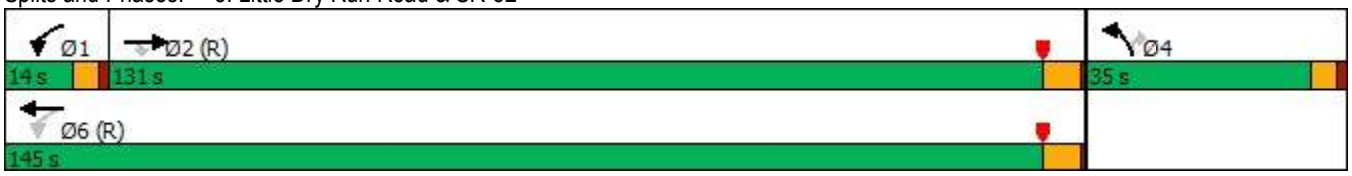
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	550	60	30	1350	210	30
Future Volume (vph)	550	60	30	1350	210	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1759	1324	1719	1827	1787	1455
Flt Permitted			0.383		0.950	
Satd. Flow (perm)	1759	1324	693	1827	1787	1455
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		62				31
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	8%	22%	5%	4%	1%	11%
Adj. Flow (vph)	567	62	31	1392	216	31
Shared Lane Traffic (%)						
Lane Group Flow (vph)	567	62	31	1392	216	31
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	66.5	66.5	12.0	66.5	15.0	15.0
Total Split (s)	131.0	131.0	14.0	145.0	35.0	35.0
Total Split (%)	72.8%	72.8%	7.8%	80.6%	19.4%	19.4%
Maximum Green (s)	125.0	125.0	9.0	139.0	30.0	30.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	133.6	133.6	144.2	143.2	25.8	25.8
Actuated g/C Ratio	0.74	0.74	0.80	0.80	0.14	0.14
v/c Ratio	0.43	0.06	0.05	0.96	0.84	0.13
Control Delay	11.6	1.9	4.4	32.9	102.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.6	1.9	4.4	32.9	102.0	19.5
LOS	B	A	A	C	F	B
Approach Delay	10.6			32.2	91.7	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	B			C	F	
Queue Length 50th (ft)	171	0	7	1303	251	0
Queue Length 95th (ft)	393	m1	16	#1940	349	35
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1305	998	606	1452	297	268
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	0.43	0.06	0.05	0.96	0.73	0.12

Intersection Summary

Area Type: Other
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 165 (92%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 32.7 Intersection LOS: C
Intersection Capacity Utilization 91.9% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Little Dry Run Road & SR-32



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1240	190	60	680	140	50
Future Volume (veh/h)	1240	190	60	680	140	50
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	1870	1870	1900	1856	1841	1767
Adj Flow Rate, veh/h	1278	196	62	701	144	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	3	4	9
Cap, veh/h	1411	1196	401	1541	168	144
Arrive On Green	1.00	1.00	0.04	0.83	0.10	0.10
Sat Flow, veh/h	1870	1585	1810	1856	1753	1497
Grp Volume(v), veh/h	1278	196	62	701	144	52
Grp Sat Flow(s),veh/h/ln	1870	1585	1810	1856	1753	1497
Q Serve(g_s), s	0.0	0.0	1.0	15.4	12.1	4.9
Cycle Q Clear(g_c), s	0.0	0.0	1.0	15.4	12.1	4.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1411	1196	401	1541	168	144
V/C Ratio(X)	0.91	0.16	0.15	0.45	0.86	0.36
Avail Cap(c_a), veh/h	1411	1196	407	1541	234	200
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	2.8	3.5	66.8	63.5
Incr Delay (d2), s/veh	8.6	0.2	0.2	1.0	19.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.1	0.1	0.5	7.3	10.5	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.6	0.2	3.0	4.4	86.3	65.0
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h	1474			763	196	
Approach Delay, s/veh	7.5			4.3	80.6	
Approach LOS	A			A	F	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.5	119.1		19.4		130.6
Change Period (Y+Rc), s	5.0	6.0		5.0		6.0
Max Green Setting (Gmax), s	7.0	107.0		20.0		119.0
Max Q Clear Time (g_c+I1), s	3.0	2.0		14.1		17.4
Green Ext Time (p_c), s	0.0	57.2		0.3		11.8

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

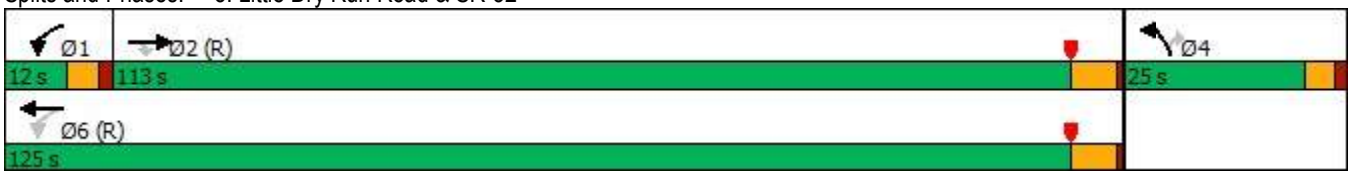
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1240	190	60	680	140	50
Future Volume (vph)	1240	190	60	680	140	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	175		465	0
Storage Lanes		1	1		1	1
Taper Length (ft)			50		50	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1863	1583	1805	1845	1736	1482
Flt Permitted			0.047		0.950	
Satd. Flow (perm)	1863	1583	89	1845	1736	1482
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		141				52
Link Speed (mph)	50			50	35	
Link Distance (ft)	2169			1379	963	
Travel Time (s)	29.6			18.8	18.8	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	0%	3%	4%	9%
Adj. Flow (vph)	1278	196	62	701	144	52
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1278	196	62	701	144	52
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2	6			4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	20.0	20.0	7.0	20.0	10.0	10.0
Minimum Split (s)	26.0	26.0	12.0	26.0	15.0	15.0
Total Split (s)	113.0	113.0	12.0	125.0	25.0	25.0
Total Split (%)	75.3%	75.3%	8.0%	83.3%	16.7%	16.7%
Maximum Green (s)	107.0	107.0	7.0	119.0	20.0	20.0
Yellow Time (s)	5.0	5.0	3.5	5.0	3.5	3.5
All-Red Time (s)	1.0	1.0	1.5	1.0	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.0	6.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Vehicle Extension (s)	5.0	5.0	3.0	5.0	3.0	3.0
Recall Mode	C-Max	C-Max	None	C-Max	None	None
Act Effct Green (s)	112.6	112.6	123.2	122.2	16.8	16.8
Actuated g/C Ratio	0.75	0.75	0.82	0.81	0.11	0.11
v/c Ratio	0.91	0.16	0.41	0.47	0.74	0.25
Control Delay	23.9	0.7	15.4	5.6	86.6	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	0.7	15.4	5.6	86.6	17.0
LOS	C	A	B	A	F	B
Approach Delay	20.9			6.4	68.1	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Approach LOS	C			A	E	
Queue Length 50th (ft)	1295	12	10	178	138	0
Queue Length 95th (ft)	#1534	3	40	258	214	42
Internal Link Dist (ft)	2089			1299	883	
Turn Bay Length (ft)			175		465	
Base Capacity (vph)	1398	1223	153	1502	231	242
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	0.91	0.16	0.41	0.47	0.62	0.21

Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 138 (92%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 20.1 Intersection LOS: C
Intersection Capacity Utilization 82.8% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Little Dry Run Road & SR-32



APPENDIX K

ODOT L&D MANUAL
TURN LANE CALCULATIONS

TURN LANE LENGTH CALCULATION

TURN LANE =	**Round Bottom Rd Southbound Left @ SR 32**	
ANALYSIS PERIOD =	**AM Peak-Hour**	
DESIGN SPEED =	30	mph
# OF THRU LANES =	1	
THRU LANES DHV =	30	vehicles
TURN LANE DHV =	140	vehicles
LT % OF APP. TRAFFIC =	82.4% High	
TYPE OF TRAFFIC CONTROL =	1	

1) SIGNALIZED
2) UNSIGNALIZED STOPPED CROSSROAD
3) UNSIGNALIZED THROUGH ROAD

CONDTION =	A	
CYCLES/HOUR =	20	

60 - (UNSIGNALIZED OR 2 PHASE) (60 sec.)
40 - (3 PHASE) (90 sec.)
30 - (4 PHASE) (120 sec.)

VEHICLES PER CYCLE =	7	veh/cycle
STORAGE LENGTH =	275	feet
CONDTION A =	325	feet
CONDTION B =	n/a	feet
CONDTION C =	n/a	feet
CALC. TURN LANE LT. =	**325**	**feet**

CHECK:

THRU MOVEMENT BACKUP =	2	veh/lane/cycle
	150	feet/lane

ODOT L&D GUIDELINES

MIN. TURN LANE LENGTH =	100'
MAX. TURN LANE LENGTH =	**600'**

TURN LANE LENGTH CALCULATION

TURN LANE =	**Round Bottom Rd Southbound Left @ SR 32**	
ANALYSIS PERIOD =	**PM Peak-Hour**	
DESIGN SPEED =	30	mph
# OF THRU LANES =	1	
THRU LANES DHV =	70	vehicles
TURN LANE DHV =	340	vehicles
LT % OF APP. TRAFFIC =	82.9% High	
TYPE OF TRAFFIC CONTROL =	1	

1) SIGNALIZED
2) UNSIGNALIZED STOPPED CROSSROAD
3) UNSIGNALIZED THROUGH ROAD

CONDTION =	A	
CYCLES/HOUR =	24	

60 - (UNSIGNALIZED OR 2 PHASE) (60 sec.)
40 - (3 PHASE) (90 sec.)
30 - (4 PHASE) (120 sec.)

VEHICLES PER CYCLE =	15	veh/cycle
STORAGE LENGTH =	525	feet
CONDTION A =	575	feet
CONDTION B =	n/a	feet
CONDTION C =	n/a	feet
CALC. TURN LANE LT. =	**575**	**feet**

CHECK:

THRU MOVEMENT BACKUP =	3	veh/lane/cycle
	200	feet/lane

ODOT L&D GUIDELINES

MIN. TURN LANE LENGTH =	100'
MAX. TURN LANE LENGTH =	**600'**

TURN LANE LENGTH CALCULATION

TURN LANE =	**SR-32 Westbound Right @ Round Bottom Rd**	
ANALYSIS PERIOD =	**AM Peak-Hour**	
DESIGN SPEED =	30	mph
# OF THRU LANES =	1	
THRU LANES DHV =	740	vehicles
TURN LANE DHV =	810	vehicles
LT % OF APP. TRAFFIC =	52.3% High	
TYPE OF TRAFFIC CONTROL =	1	

1) SIGNALIZED
2) UNSIGNALIZED STOPPED CROSSROAD
3) UNSIGNALIZED THROUGH ROAD

CONDTION =	A	
CYCLES/HOUR =	20	

60 - (UNSIGNALIZED OR 2 PHASE) (60 sec.)
40 - (3 PHASE) (90 sec.)
30 - (4 PHASE) (120 sec.)

VEHICLES PER CYCLE =	41	veh/cycle
STORAGE LENGTH =	1275	feet
CONDTION A =	1325	feet
CONDTION B =	n/a	feet
CONDTION C =	n/a	feet
CALC. TURN LANE LT. =	**1325**	**feet**

CHECK:

THRU MOVEMENT BACKUP =	37	veh/lane/cycle
	1225	feet/lane

ODOT L&D GUIDELINES

MIN. TURN LANE LENGTH =	100'
MAX. TURN LANE LENGTH =	**800'**

TURN LANE LENGTH CALCULATION

TURN LANE =	**SR-32 Westbound Right @ Round Bottom Rd**	
ANALYSIS PERIOD =	**PM Peak-Hour**	
DESIGN SPEED =	30	mph
# OF THRU LANES =	1	
THRU LANES DHV =	400	vehicles
TURN LANE DHV =	470	vehicles
LT % OF APP. TRAFFIC =	54.0% High	
TYPE OF TRAFFIC CONTROL =	1	

1) SIGNALIZED
2) UNSIGNALIZED STOPPED CROSSROAD
3) UNSIGNALIZED THROUGH ROAD

CONDTION =	A	
CYCLES/HOUR =	24	

60 - (UNSIGNALIZED OR 2 PHASE) (60 sec.)
40 - (3 PHASE) (90 sec.)
30 - (4 PHASE) (120 sec.)

VEHICLES PER CYCLE =	20	veh/cycle
STORAGE LENGTH =	675	feet
CONDTION A =	725	feet
CONDTION B =	n/a	feet
CONDTION C =	n/a	feet
CALC. TURN LANE LT. =	**725**	**feet**

CHECK:

THRU MOVEMENT BACKUP =	17	veh/lane/cycle
	650	feet/lane

ODOT L&D GUIDELINES

MIN. TURN LANE LENGTH =	100'
MAX. TURN LANE LENGTH =	**800'**

TURN LANE LENGTH CALCULATION

TURN LANE =	**Little Dry Run Rd Northbound Left @ SR 32**	
ANALYSIS PERIOD =	**AM Peak-Hour**	
DESIGN SPEED =	40	mph
# OF THRU LANES =	1	
THRU LANES DHV =	30	vehicles
TURN LANE DHV =	210	vehicles
LT % OF APP. TRAFFIC =	87.5% High	
TYPE OF TRAFFIC CONTROL =	1	

1) SIGNALIZED
2) UNSIGNALIZED STOPPED CROSSROAD
3) UNSIGNALIZED THROUGH ROAD

CONDTION =	B or C	
CYCLES/HOUR =	20	

60 - (UNSIGNALIZED OR 2 PHASE) (60 sec.)
40 - (3 PHASE) (90 sec.)
30 - (4 PHASE) (120 sec.)

VEHICLES PER CYCLE =	11	veh/cycle
STORAGE LENGTH =	400	feet
CONDTION A =	n/a	feet
CONDTION B =	125	feet
CONDTION C =	515	feet
CALC. TURN LANE LT. =	**515**	**feet**

CHECK:

THRU MOVEMENT BACKUP =	2	veh/lane/cycle
	150	feet/lane

ODOT L&D GUIDELINES

MIN. TURN LANE LENGTH =	100'
MAX. TURN LANE LENGTH =	**600'**

TURN LANE LENGTH CALCULATION

TURN LANE =	**Little Dry Run Rd Northbound Left @ SR 32**	
ANALYSIS PERIOD =	**PM Peak-Hour**	
DESIGN SPEED =	40	mph
# OF THRU LANES =	1	
THRU LANES DHV =	50	vehicles
TURN LANE DHV =	140	vehicles
LT % OF APP. TRAFFIC =	73.7% High	
TYPE OF TRAFFIC CONTROL =	1	

1) SIGNALIZED
2) UNSIGNALIZED STOPPED CROSSROAD
3) UNSIGNALIZED THROUGH ROAD

CONDTION =	B or C	
CYCLES/HOUR =	24	

60 - (UNSIGNALIZED OR 2 PHASE) (60 sec.)
40 - (3 PHASE) (90 sec.)
30 - (4 PHASE) (120 sec.)

VEHICLES PER CYCLE =	6	veh/cycle
STORAGE LENGTH =	250	feet
CONDTION A =	n/a	feet
CONDTION B =	125	feet
CONDTION C =	365	feet
CALC. TURN LANE LT. =	**365**	**feet**

CHECK:

THRU MOVEMENT BACKUP =	3	veh/lane/cycle
	200	feet/lane

ODOT L&D GUIDELINES

MIN. TURN LANE LENGTH =	100'
MAX. TURN LANE LENGTH =	**600'**