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DRAFT

S Acadian Thruway/Perkins Road IMR

Data Collection Report

Introduction

This Data Collection Report (DCR) details the data collection for the Interchange Modification Report (IMR) for the South Acadian Thruway (Acadian) and Perkins Road (Perkins) interchanges at Interstate 10 (I-10) in East Baton Rouge Parish, Louisiana. This IMR was conducted as a part of the I-10 LA 415 to Essen Stage 1 Environmental Assessment (Stage 1) project (S.P. H.004100.2). The overall project is to add a lane in both directions to the I-10 mainline with interchange improvements at locations selected in the Stage 0 Feasibility Study (Stage 0).

A high-level interchange analysis (Tier 1) was completed during the Stage 0 Study which determined feasible interchange alternatives. As a result, the only alternative moving forward for further analysis for the Perkins location is the removal of the interchange. The alternatives for the Acadian interchange moving forward from the Tier 1 analysis are a diamond interchange, a single-point urban interchange (SPUI), and a diverging diamond interchange (DDI). Documentation from the Tier 1 is included in **DCR Appendix A**.

The study limits for this IMR are listed below:

- I-10 EB and WB – 1000 feet west of the interchange at I-10 and Perkins Road to 1000 feet east of the interchange at I-10 and Acadian Thruway, measured from the gore
- Acadian Thruway – from Perkins Road to Bawell Street
- Perkins Road – the existing intersection with I-10 ramps to Acadian Thruway

The purpose and need of the interchange modifications is “to increase interchange spacing and improve the geometry of entrance ramps.” **DCR Figure 1** presents the study area.



DCR Figure 1: Vicinity Map
Aerial Source: Google Earth

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Existing Conditions

The existing lane configuration of I-10 in the study area is six lanes west of the Acadian interchange and eight lanes to the east. The distance between the Perkins Road and Acadian Thruway interchanges is approximately 2,400 feet. The Perkins Road interchange provides a signalized I-10 eastbound off-ramp and an I-10 westbound on-ramp only. The Acadian Thruway interchange is a tight diamond with signalized ramp terminals. Both interchange ramp terminals are within 500 feet of the nearest traffic signal and less than a quarter mile from the Perkins Road at Acadian Thruway / Stanford Avenue signalized intersection.

Existing Volumes

Count data including 7-day 24-hour, 48-hour, and peak period turning movement counts was collected in October and November 2017 and provided by LADOTD. The peak hours based on the signalized intersections and mainline volume data were 7:00-8:00 AM and 4:45-5:45 PM. The raw count data is included in **DCR Appendix B. DCR Figure 2** presents the resulting 2017 peak hour volumes including the data sources. The specific peak volume data used is presented in **DCR Appendix C**.

The data collected included vehicle classification which is needed for capacity analysis. **DCR Table 1** presents the heavy vehicle percentages for the study area. The heavy vehicle data used is also presented in **DCR Appendix C**.

LEGEND:

- X AM Peak Hour Volume (7:00 - 8:00 AM)
- (X) PM Peak Hour Volume (4:45 - 5:45 PM)
- #X Data Source
- Signalized Intersection

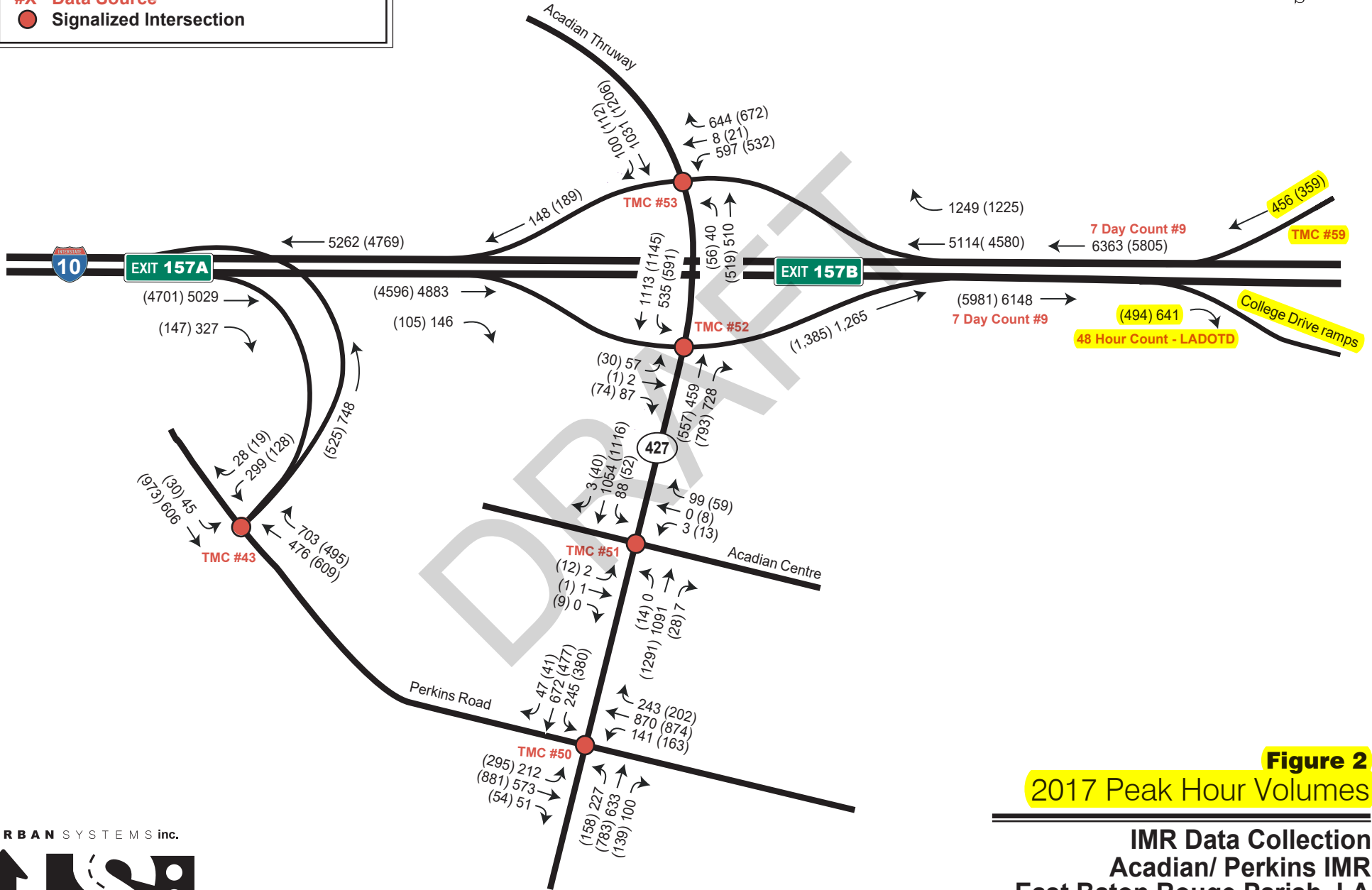


Figure 2
2017 Peak Hour Volumes

**IMR Data Collection
Acadian/ Perkins IMR
East Baton Rouge Parish, LA**

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DCR Table 1. - Heavy Vehicle Percentages

Intersection	Approach	Movement	Heavy Vehicle %	
			Base Conditions	
			AM	PM
I-10 EB	Eastbound	Thru	13.0%	11.0%
I-10 WB	Westbound	Thru	6.0%	8.0%
I-10 EB at Perkins Rd	Southbound	Left	2.0%	0.0%
		Thru	0.0%	0.0%
		Right	7.1%	0.0%
	Eastbound	Left	0.0%	2.6%
		Thru	1.0%	0.6%
	Westbound	Thru	2.1%	0.8%
Right		2.0%	2.0%	
Acadian at Perkins	Northbound	Left	3.8%	1.3%
		Thru	1.1%	0.8%
		Right	0.0%	0.0%
	Southbound	Left	2.3%	0.8%
		Thru	0.4%	0.2%
		Right	1.5%	0.0%
	Eastbound	Left	1.0%	0.0%
		Thru	0.4%	0.2%
		Right	4.5%	0.0%
	Westbound	Left	0.7%	0.0%
		Thru	2.0%	0.9%
		Right	3.2%	0.9%
Acadian at Acadian Centre	Northbound	Left	0.0%	0.0%
		Thru	1.5%	0.6%
		Right	14.3%	0.0%
	Southbound	Left	0.0%	0.0%
		Thru	0.8%	0.7%
		Right	25.0%	0.0%
	Eastbound	Left	50.0%	0.0%
		Thru	0.0%	0.0%
		Right	0.0%	0.0%
	Westbound	Left	0.0%	0.0%
		Thru	100.0%	0.0%
		Right	0.0%	1.7%
I-10 EB at Acadian	Northbound	Thru	3.7%	1.1%
		Right	0.1%	0.5%
	Southbound	Left	1.3%	0.5%
		Thru	0.9%	0.7%
	Eastbound	Left	0.0%	6.6%
		Thru	0.0%	0.0%
		Right	0.0%	1.2%

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DCR Table 1. - Heavy Vehicle Percentages (continued)

Intersection	Approach	Movement	Heavy Vehicle %	
			Base Conditions	
			AM	PM
I-10 WB at Acadian	Northbound	Left	7.9%	1.7%
		Thru	1.8%	1.4%
	Southbound	Thru	1.4%	0.5%
		Right	1.1%	0.7%
	Westbound	Left	0.6%	0.2%
		Thru	0.0%	0.0%
	Right	1.6%	0.4%	
I-10 EB at College Off Ramp	Data not available			
I-10 WB at College On Ramp	Westbound on ramp	Southbound Left	1.6%	0.0%
		Northbound Right	0.8%	0.0%

Growth Rate

The Capitol Region Planning Commission’s (CRPC) regional transportation model in TransCAD was used to estimate projected future growth in the study area. Output from the 2010 base condition and the 2037 no build condition models was used to calculate growth percentages for the I-10 mainline and surface streets within the study area based on the Average Daily Traffic (ADT) volumes. The growth rate factors are shown in DCR Table 2. The TransCAD output sheets and growth rate calculations are included in DCR Appendix D.

DCR Table 2 – Growth Rate Factor

Location	Percent Growth Rate per year	2017 - 2040
		Growth Factor over 23 years
I-10 Mainline	0.93%	1.24
Perkins Road	0.44%	1.11
Acadian Thruway	0.16%	1.04
College Drive	0.30%	1.07

Safety Analysis

A safety analysis was conducted of the crash history on the I-10 mainline to compare to similar roadway types in the state. The safety analysis included calculating the crash rate, presenting a summary of all crash types, comparing this data to the LADOTD statewide averages, and identifying conflict points.

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Crash Rate

Crash data on the I-10 mainline in the study area was used with the LADOTD Roadway Safety Triage to calculate crash rate and crash type percentages and is included in **DCR Appendix E**.

This section of I-10 varies between a six-lane and an eight-lane divided cross-section. LADOTD statewide averages are provided for four-lane and six-lane urban interstates; therefore, the statewide crash rate for a six-lane section was used for comparison to both sections. The statewide average crash rate for an urban six-lane interstate was 1.66 crashes per million vehicle-miles (MVM). **DCR Table 3** presents the crash rate calculation variables and result compared to the statewide average. As shown, the existing crash rate is above the statewide average for the six-lane segment.

DCR Table 3 – Interstate Mainline Crash Rate

Segment	Description	Number of Lanes	Number of Crashes	Segment Length (Miles)	AADT (Veh/Day)	Crash Rate (Crash/Million Veh-Miles) (R _{seg})	Statewide Average
1	1000' west of Perkins ramps to Acadian EB on/WB off ramp gores	6	453	0.99	153,500	2.71	1.66
2	Acadian EB on/WB off ramp gores to 1000' east on I-10	8	42	0.25	153,500	1.00	1.66

Mainline Crash Types

Crash type percentages were calculated using a three-year average (2013-2015) of the reported crash data. The data included corrections to the crash summaries that were made during the detailed crash report review process. **DCR Table 4 and Table 5** presents the crash type percentages and corresponding comparison to the statewide averages for a six-lane urban interstate segment. The highlights indicate the crash types that were above the statewide average.

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**DCR Table 4 – Crash Type Comparison
I-10 in vicinity of Perkins and Acadian – Segment 1**

Crash Type	Study Area	Statewide Average
A: Non-collision w/ Motor Vehicle	9.93%	9.72%
B: Rear-end	70.86%	61.98%
C: Head-on	0.00%	0.12%
D: Right angle	0.00%	1.41%
E: Left Turn Angle	0.00%	0.12%
F: Left Turn Opp Dir	0.00%	0.12%
G: Left Turn Same Dir	0.00%	0.18%
H: Right Same Dir	0.00%	0.06%
I: Right turn Opp Dir	0.00%	0.00%
J: Side Swipe Same Dir	18.76%	22.85%
K: Side Swipe Opp Dir	0.00%	0.18%
Z: Other	0.44%	3.22%

**DCR Table 5 – Crash Type Comparison
I-10 in vicinity of Perkins and Acadian – Segment 2**

Crash Type	Study Area	Statewide Average
A: Non-collision w/ Motor Vehicle	21.43%	9.72%
B: Rear-end	54.76%	61.98%
C: Head-on	0.00%	0.12%
D: Right angle	0.00%	1.41%
E: Left Turn Angle	0.00%	0.12%
F: Left Turn Opp Dir	0.00%	0.12%
G: Left Turn Same Dir	0.00%	0.18%
H: Right Same Dir	0.00%	0.06%
I: Right turn Opp Dir	0.00%	0.00%
J: Side Swipe Same Dir	21.43%	22.85%
K: Side Swipe Opp Dir	0.00%	0.18%
Z: Other	2.38%	3.22%

A review of **DCR Table 4 and 5** indicates non-collision with motor-vehicles were higher than the statewide averages. Additionally, rear end crashes were higher than the statewide average for I-10 Segment 1 as shown in **DCR Table 4**. Review of the non-collision and rear end crash reports indicated congestion was the main contributing factor.

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Intersection Safety Triage

The Intersection Safety Triage was used to calculate crash type percentages for a three-year average (2013-2015) of the reported crash data for each intersection in the IMR study area that may be impacted by the proposed interchange modifications. The crash data is included in **DCR Appendix F. DCR Tables 6-9** present the crash type percentages and corresponding comparison to the statewide averages. The highlights indicate the crash types that were above the statewide average.

**DCR Table 6 - Perkins Road at I-10 EB Off Ramp
Crash Type Comparison**

Category	Observed	Statewide Average
Non Collision	33.33%	7.56%
Rear End	50.00%	56.17%
Head On	0.00%	0.41%
Right Angle	0.00%	5.58%
Left Turn-e	0.00%	0.76%
Left Turn-f	0.00%	1.48%
Left Turn-g	0.00%	0.86%
Right Turn-h	0.00%	0.74%
Right Turn-i	0.00%	0.07%
S Swipe(sd)	16.67%	16.70%
S Swipe(od)	0.00%	0.14%
Other	0.00%	9.52%

**DCR Table 7 - Perkins Road at Acadian Thruway
Crash Type Comparison**

Category	Observed	Statewide Average
Non Collision	0.00%	2.51%
Rear End	47.37%	39.08%
Head On	0.00%	0.73%
Right Angle	10.53%	20.06%
Left Turn-e	0.00%	3.11%
Left Turn-f	17.54%	11.43%
Left Turn-g	1.75%	2.57%
Right Turn-h	3.51%	2.64%
Right Turn-i	0.00%	0.36%
S Swipe(sd)	15.79%	9.37%
S Swipe(od)	0.00%	0.38%
Other	3.51%	7.75%

**DCR Table 8 - Acadian Thruway at Acadian Centre
Crash Type Comparison**

Category	Observed	Statewide Average
Non Collision	0.00%	2.51%
Rear End	14.29%	39.08%
Head On	0.00%	0.73%
Right Angle	14.29%	20.06%
Left Turn-e	14.29%	3.11%
Left Turn-f	42.86%	11.43%
Left Turn-g	0.00%	2.57%
Right Turn-h	0.00%	2.64%
Right Turn-i	0.00%	0.36%
S Swipe(sd)	14.29%	9.37%
S Swipe(od)	0.00%	0.38%
Other	0.00%	7.75%

**DCR Table 9 - I-10 Ramps at Acadian Thruway
Crash Type Comparison**

Category	Observed	Statewide Average
Non Collision	4.24%	2.51%
Rear End	29.66%	39.08%
Head On	0.42%	0.73%
Right Angle	16.95%	20.06%
Left Turn-e	5.08%	3.11%
Left Turn-f	25.85%	11.43%
Left Turn-g	0.42%	2.57%
Right Turn-h	0.00%	2.64%
Right Turn-i	0.00%	0.36%
S Swipe(sd)	13.56%	9.37%
S Swipe(od)	0.00%	0.38%
Other	3.81%	7.75%

Conflict Points

The number and type of conflict points were determined for the existing condition for the locations within the study area that may be impacted by the proposed interchange modifications. This will be compared to the conflict points in the proposed interchange modifications. **DCR Figures 3-5** presents the existing conflict points.

● Diverging Conflict	6
● Merging Conflict	8
● Crossing Conflict	20
TOTAL Conflicts	34

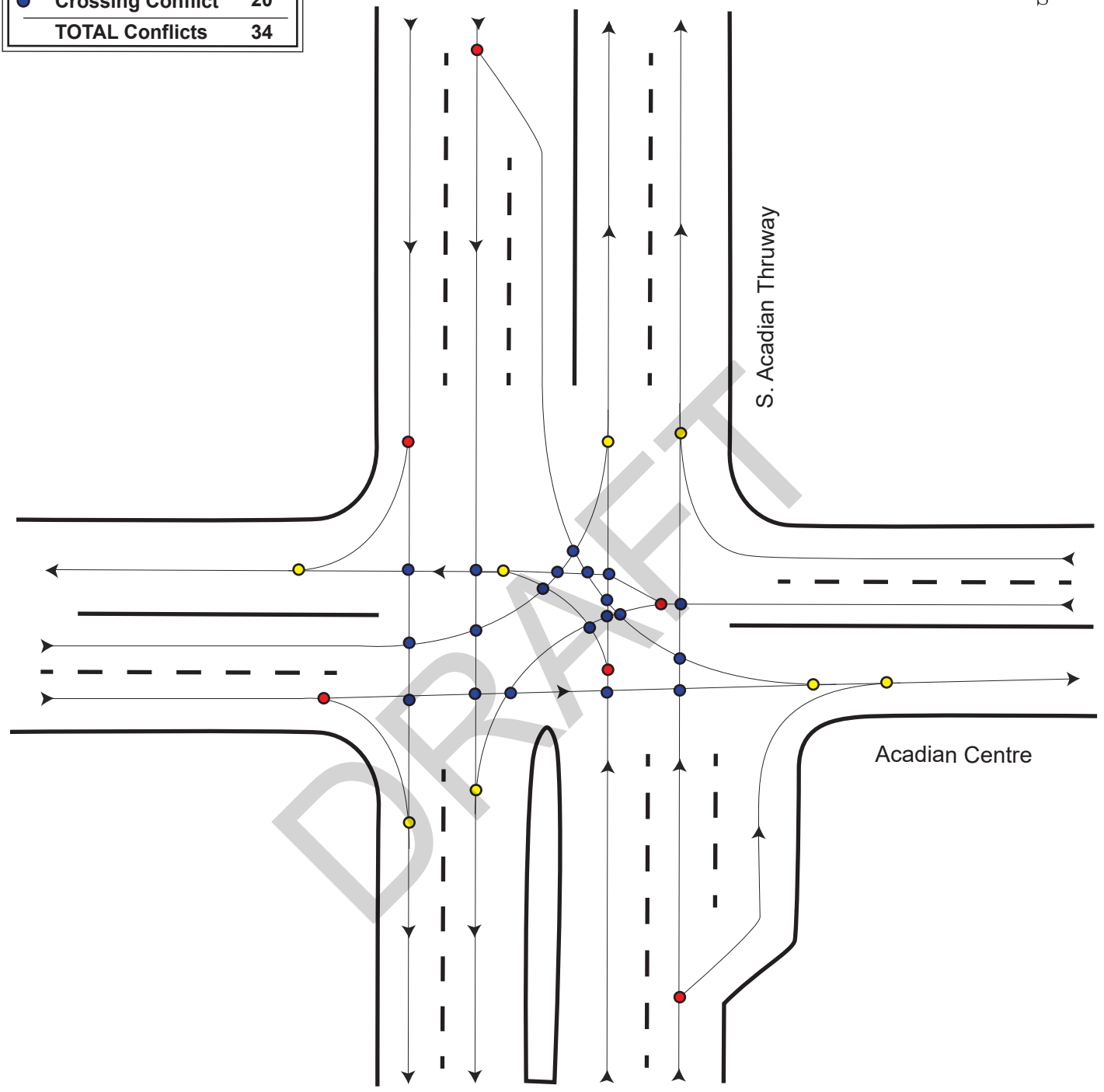


Figure 3
 Ramp Terminal Conflict Points
 Acadian at Acadian Centre Existing Conditions

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● Diverging Conflict	2
● Merging Conflict	2
● Crossing Conflict	0
I-10 Mainline Conflicts	4

● Diverging Conflict	9
● Merging Conflict	9
● Crossing Conflict	18
Intersection Conflicts	36

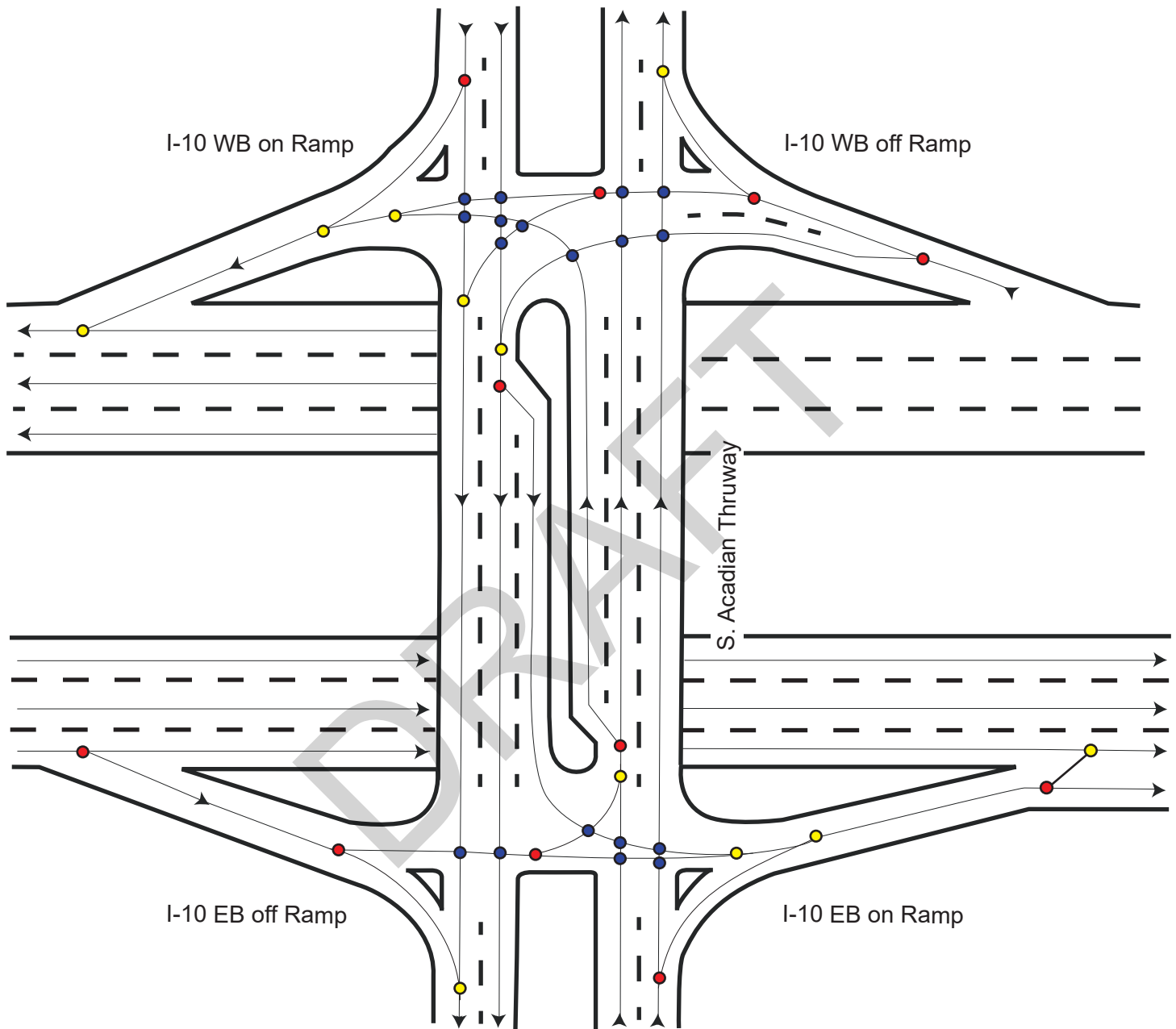
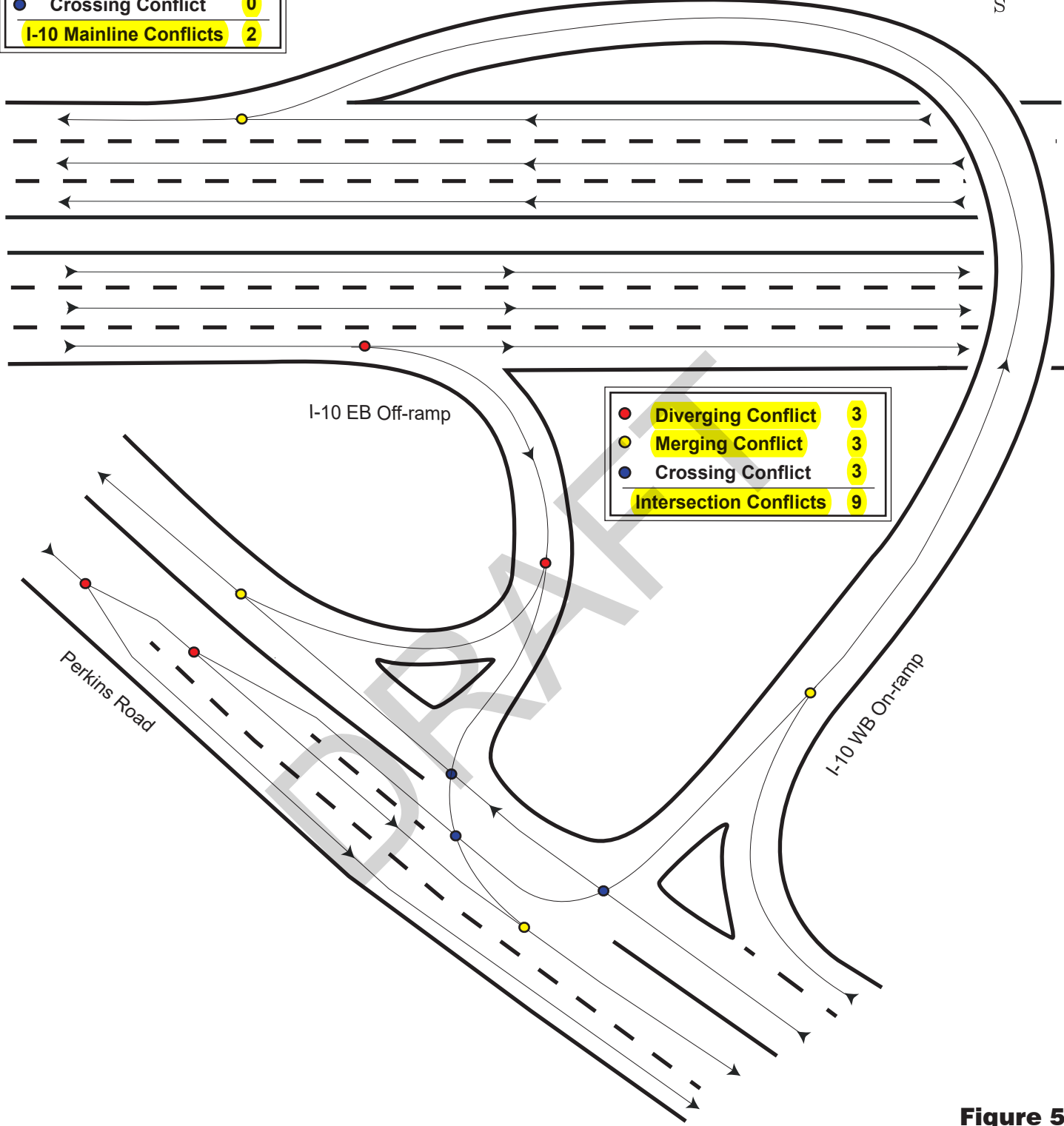


Figure 4
Ramp Terminal Conflict Points
I-10 at Acadian Thwy Existing Conditions



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● Diverging Conflict	1
● Merging Conflict	1
● Crossing Conflict	0
I-10 Mainline Conflicts	2



● Diverging Conflict	3
● Merging Conflict	3
● Crossing Conflict	3
Intersection Conflicts	9

Figure 5
Ramp Terminal Conflict Points
I-10 at Perkins Rd Existing Conditions

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Chapter 2. EXISTING AND NO BUILD ANALYSIS

This chapter outlines the results of the network analysis of the existing conditions. The information documents baseline operating conditions for use in comparing to future conditions. The following subsections summarize the existing road network characteristics, land use and demographics, operational conditions, and safety concerns within the study area.

Existing Roadway Network

Roadway characteristic data was collected for each of the major road segments. **Figure 2.1** illustrates the LADOTD Functional Classification Map of the roadways in the vicinity of the study area.

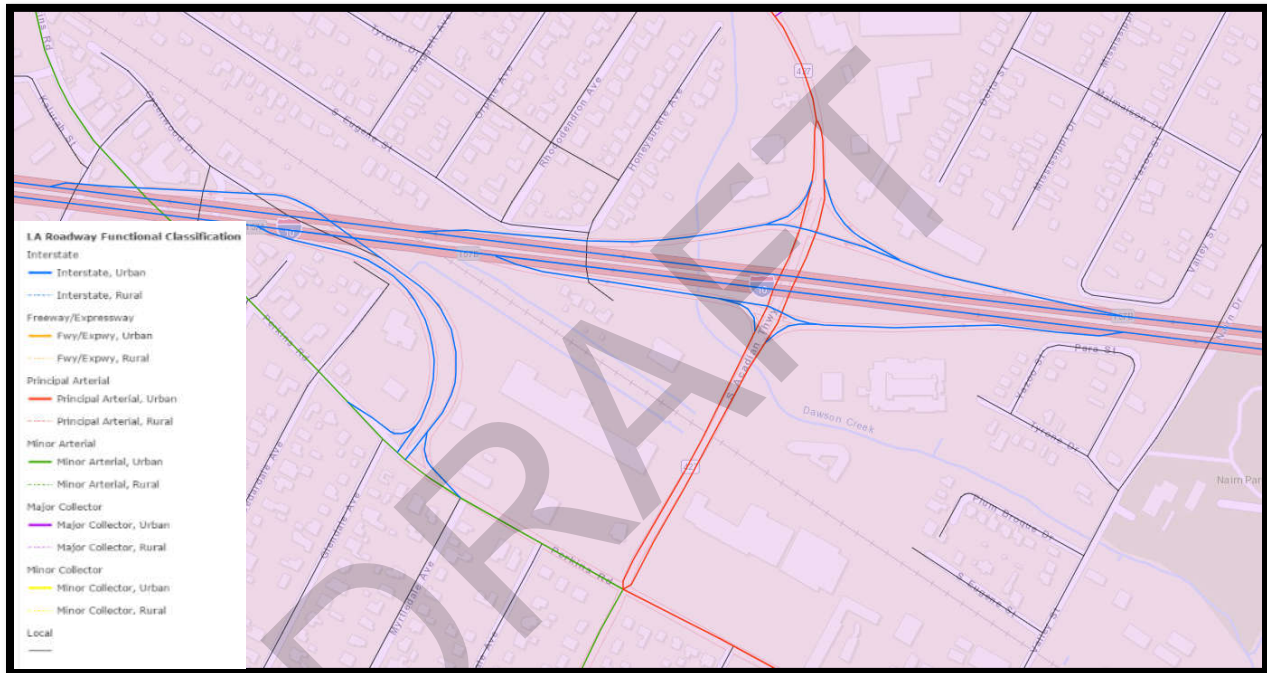


Figure 2.1 LADOTD Functional Classification Map

Source: LADOTD Website

Table 2.1 summarizes the number of lanes, functional classification, and posted speed limit of each major roadway within the study area that may be affected by modifications to the existing network. **Table 2.2** summarizes the Average Daily Traffic (ADT) data for the study area.

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**Table 2.1
Roadway Design Designations**

Route	Number of Lanes (Bi-directional)	Functional Classification	Posted Speed Limit (mph)
I-10	6-8	Interstate, Urban	60
Acadian Thruway	4	Principal Arterial, Urban	40
Perkins Road	2-4	Minor Arterial, Urban	35

**Table 2.2
Bi-Directional Average Daily Traffic (ADT)**

Route/Location	ADT (veh/day)	Year	Source
I-10 Between Dalrymple and Perkins	152,840	2014	LADOTD Count Station 206331
I-10 Between Perkins and Acadian	153,470	2014	LADOTD Count Station 206251
I-10 Between Acadian and College	170,912	2014	LADOTD Count Station 206231
Acadian Between Perkins and I-10	27,639	2014	LADOTD Count Station 206691
Acadian Between I-10 and Bawell	22,153	2014	LADOTD Count Station 206681
Perkins Between I-10 Ramps and Acadian	24,441	2014	LADOTD Count Station 206241

Figure 2.2 presents aerial images of the road network in the vicinity of the Perkins and Acadian interchanges.



Figure 2.2 Acadian Perkins Interchange
Source: Google Earth

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Existing Land Use and Demographics

Land use in the study area consists mainly of residential (yellow and beige); however, the land use directly adjacent the study area roadways is also commercial (red), industrial (purple) and mixed use (turquoise) as shown in **Figure 2.3**.

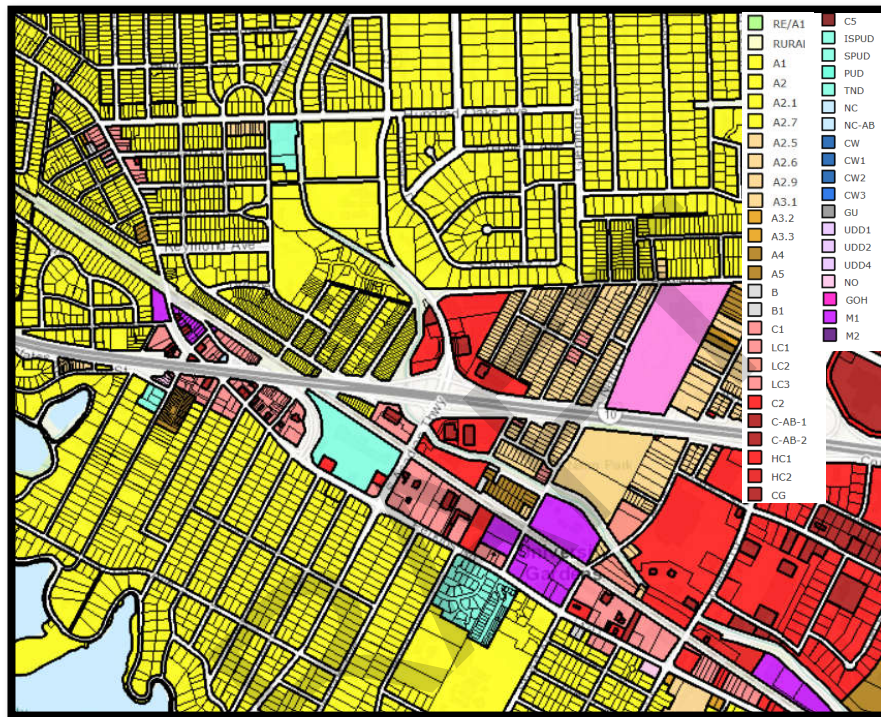


Figure 2.3 Land Use

Source: <http://ebrgis.maps.arcgis.com/apps/webappviewer/index.html?id=71eea5e62ce84b1d94be194ad8f2ac2e>

The demographics of the community surrounding the study area are included in EBR Tracts 23, 26.01 and 27 as presented in **Figure 2.4**.

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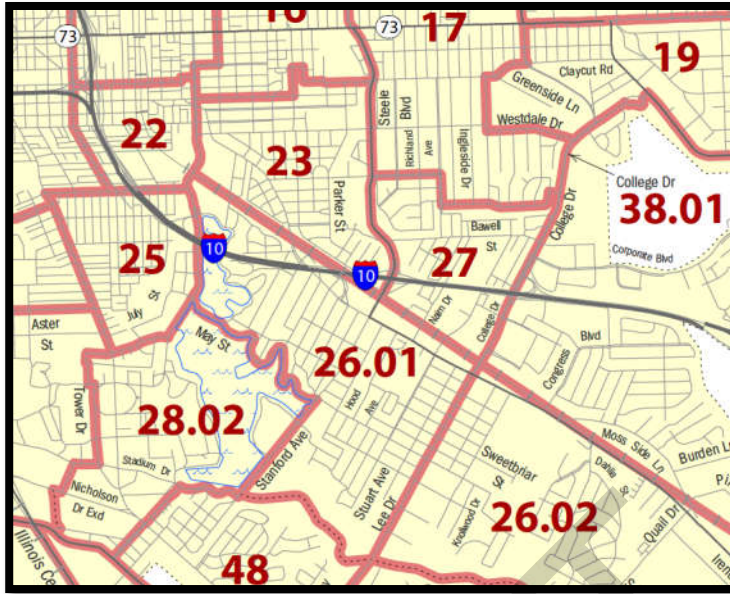


Figure 2.4 Census Tracts

Source: https://www2.census.gov/geo/maps/dc10map/tract/st22_la/c22033_east_baton_rouge/DC10CT_C22033_001.pdf

The population by race obtained for these tracts was sourced from the *USCB, 2010 Census Summary File 1 (DP-1) 100-Percent Data*. Tract 23 was approximately 3% African American, 94% Caucasian and 3% other races/two or more races. Tract 26.01 was approximately 4% African American, 92% Caucasian and 4% other races/two or more races. Tract 27 was approximately 66% African American, 32% Caucasian and 2% other races/two or more races.

Existing Operational Conditions

The following describes a typical weekday without incidents or inclement weather.

Interstate 10

AM Peak

Interstate 10 is heavily congested in the westbound direction with commuter traffic. Traffic typically slows or becomes stop-and-go approaching Acadian and remains slow-moving through the study area. The I-10 westbound at Acadian on ramp queues due to the congestion and queuing on I-10 mainline. The eastbound direction is less congested as this is not the main commuter route. The eastbound flows are typically faster with less congestion.

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PM Peak

Interstate 10 is congested in both eastbound and westbound directions; particularly in the eastbound direction which services the evening commuter traffic. The eastbound flows slow approaching Perkins and remain congested through the study area.

Acadian Thruway

AM Peak

At the I-10 interchanges, southbound queues on Acadian extend through the Bawell intersection at times. This is due in part to queuing on the westbound on-ramp and queuing on the eastbound on ramp due to the southbound left movement. Queues typically clear in one cycle. Queues also form on all approaches at the Perkins intersection and typically clear in one cycle.

PM Peak

In the PM peak, congestion is heavier than the AM peak for both northbound and southbound directions. Queues extend in all directions of Acadian at Perkins and most did not completely clear each cycle. The southbound queue extends to Acadian Centre at times. The northbound queue often originates from the heavy right turn movement onto I-10 eastbound that yields during the southbound left turn phase.

Existing Network Analysis

Purpose and Goals

The purpose of the existing conditions analysis is to develop baseline data that will be compared to future conditions both with and without the proposed interchange modification. The existing peak hour volumes were presented in **DCR Figure 2**.

Methodology

Capacity analysis was performed to determine operational conditions in the AM and PM peaks. This type of analysis is the industry standard and the methods are the widely accepted practice of evaluating impacts on traffic operations. The capacity analysis was performed using procedures developed by the Transportation Research Board and contained in the Hwy Capacity Manual Special Report 209. The Hwy Capacity Manual (HCM) procedures have been adapted to computer-based analysis packages. The input parameters for the existing conditions capacity analysis and the TSIs used for the intersections are included in **Appendix B**.

Capacity analysis was conducted using HCS version 7.5 for the freeway analyses. The Measures of Effectiveness (MOE) was density in passenger cars per mile per lane (pc/mi/ln). **A limitation of**

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the HCS software is that density is not reported when thresholds are exceeded, such as volume to capacity ratio greater than one.

I-10 eastbound between Acadian and College is a weave. A volume sensitivity weave analysis was conducted. The following three (3) volume scenarios were considered for the weave maneuvers (freeway to freeway, freeway to ramp, ramp to freeway, and ramp to ramp):

- Volume Scenario 1: 100% of vehicles exiting at College originate from Acadian
- Volume Scenario 2: 100% of vehicles exiting at College originate from I-10 eastbound
- Volume Scenario 3: 50% of vehicles exiting at College originate from Acadian and I-10 eastbound

The details are in the **Appendix B**.

Trafficware Synchro 8 was used to analyze the signalized intersection. For signalized intersections MOEs include delay in seconds, volume to capacity ratio (v/c) and 95th% queues. When the v/c is greater than 1.0, it is considered to be saturated conditions/demand exceeds available capacity. The 95th% queue is essentially the maximum queue that may be experienced. If this exceeds available storage spillback will occur into other lanes and/or through the upstream intersection. The highest v/c ratio and 95th percentile queue for each approach were reported. The queue results were reported in number of vehicles but then converted to feet by multiplying 25 feet/vehicle.

A summary of the existing analysis results for merge and diverge segment locations is presented in **Table 2.3**.

Table 2.3
Existing Conditions Freeway, Merge and Diverge Analysis
HCS Freeway/Merge/Diverge/Weave Segments

Location	AM	PM
	Density (pc/ln/mi)	Density (pc/ln/mi)
<i>I-10 Eastbound Freeway west of Perkins Road</i>	39.8	34.0
<i>I-10 Eastbound Diverge at Perkins Road</i>	39.0	34.4
<i>I-10 Eastbound Freeway between Perkins Road and Acadian Thruway</i>	37.4	34.1
<i>I-10 Eastbound Diverge at Acadian Thruway</i>	36.3	33.2
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #1</i>	38.5	38.5
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #2</i>	--	--
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #3</i>	42.6	41.3
<i>I-10 Westbound Merge at College Drive</i>	33.3	28.9
<i>I-10 Westbound Freeway between Acadian Thruway and College Drive</i>	32.6	28.8
<i>I-10 Westbound Merge at Acadian Thruway</i>	37.8	32.6
<i>I-10 Westbound Merge at Perkins Road</i>	44.9	37.3
<i>I-10 Westbound Freeway west of Perkins Road</i>	--	35.3

--Density not reported.

A summary of the existing analysis results for the subject intersections is presented in **Table 2.4**.

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Table 2.4
Existing Conditions Intersections
Synchro Analysis

Location	AM			PM		
	Delay (sec)	V/C Ratio	95 th % Queues (ft)	Delay (sec)	V/C Ratio	95 th % Queues (ft)
Acadian Thruway at I-10 Westbound Ramps	21.3			20.3		
<i>Acadian Thruway Northbound</i>	11.5	0.74	138	11.9	0.78	123
<i>Acadian Thruway Southbound</i>	14.3	0.54	370	14.2	0.59	418
<i>I-10 Off Ramp Westbound</i>	42.0	0.82	350	42.4	0.81	313
Acadian Thruway at I-10 Eastbound Ramps	16.7			15.1		
<i>Acadian Thruway Northbound</i>	50.1	0.82	300	38.9	0.67	303
<i>Acadian Thruway Southbound</i>	5.7	0.54	368	6.6	0.60	418
<i>I-10 Off Ramp Eastbound</i>	61.8	0.73	95	65.8	0.64	50
Acadian Thruway at Acadian Centre	8.5			8.4		
<i>Acadian Thruway Northbound</i>	8.4	0.50	320	8.7	0.54	373
<i>Acadian Thruway Southbound</i>	5.1	0.42	253	4.7	0.42	240
<i>Richland Plantation Eastbound</i>	84.4	0.41	5	51.8	0.29	18
<i>Acadian Centre Westbound</i>	46.0	0.59	140	47.7	0.51	78
Acadian Thruway at Perkins Road	44.0			53.2		
<i>Stanford Avenue Northbound</i>	44.2	0.90	375	65.0	0.89	598
<i>Acadian Thruway Southbound</i>	47.9	0.80	425	62.5	0.90	348
<i>Perkins Road Eastbound</i>	42.3	0.80	363	47.4	0.85	575
<i>Perkins Road Westbound</i>	42.0	0.81	530	42.0	0.77	550

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Table 2.4 (continued)
Existing Conditions Intersections
Synchro Analysis

Location	AM			PM		
	Delay (sec)	V/C Ratio	95 th % Queues (ft)	Delay (sec)	V/C Ratio	95 th % Queues (ft)
Perkins Road at I-10 Ramps	18.0			9.5		
I-10 Eastbound off ramp Southbound	54.5	0.91	398	55.2	0.66	213
Perkins Road Eastbound	6.1	0.24	158	4.2	0.38	233
Perkins Road Westbound	11.5	0.41	318	8.7	0.49	390

The documentation of the existing analysis is included in **Appendix B**.

Design Year 2040 No Build Analysis

Purpose and Goals

The purpose of the No Build analysis is to provide data for comparison to existing conditions and to future conditions with the proposed interchange modifications. The existing lane configurations at the time of this report were used for the No Build scenario analysis.

Methodology

No Build analysis was also conducted with only changes to volume inputs to provide a comparison of the existing network to the projected conditions. The No Build volumes are presented in **Figure 2.5**. The methodology for the No Build analysis was the same as for the existing conditions. The input parameters for the No Build capacity analysis, including the weave sensitivity volumes, are included in **Appendix C**.

Table 2.5 presents the results of the No Build analysis for the merge and diverge locations.

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LEGEND:

- X AM Peak Hour Volume (7:00 - 8:00 AM)
- (X) PM Peak Hour Volume (4:45 - 5:45 PM)
- Signalized Intersection

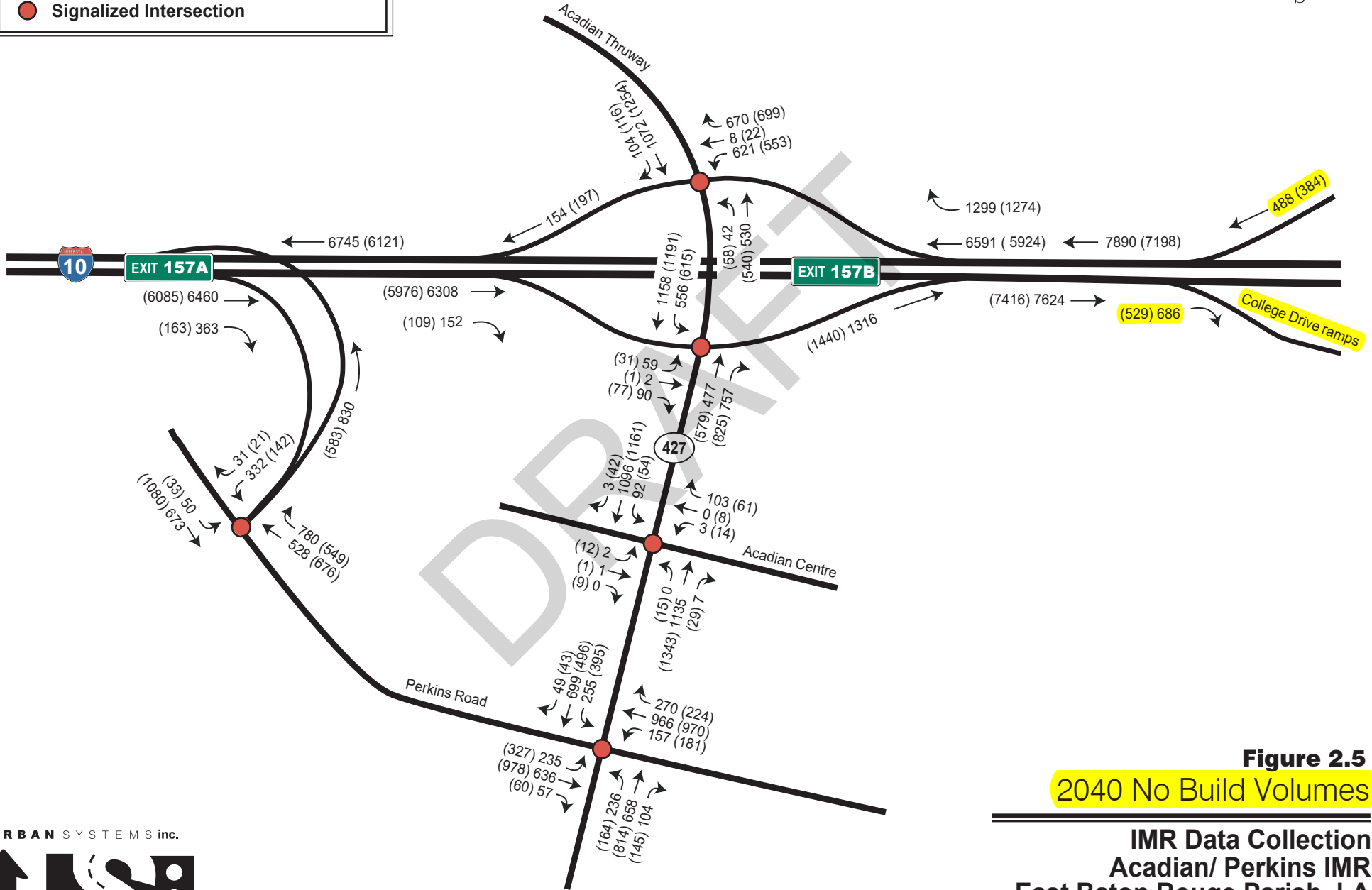


Figure 2.5
2040 No Build Volumes

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Acadian/ Perkins IMR
East Baton Rouge Parish, LA

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Table 2.5
No Build Conditions Freeway, Merge and Diverge Analysis
HCS Freeway/Merge/Diverge Segments

Location	AM	PM
	Density (pc/ln/mi)	Density (pc/ln/mi)
<i>I-10 Eastbound Freeway west of Perkins Road</i>	--	--
<i>I-10 Eastbound Diverge at Perkins Road</i>	--	--
<i>I-10 Eastbound Freeway between Perkins Road and Acadian Thruway</i>	--	--
<i>I-10 Eastbound Diverge at Acadian Thruway</i>	--	--
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #1</i>	--	--
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #2</i>	--	--
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #3</i>	--	--
<i>I-10 Westbound Merge at College Drive</i>	42.9	36.6
<i>I-10 Westbound Freeway between Acadian Thruway and College Drive</i>	44.1	36.2
<i>I-10 Westbound Merge at Acadian Thruway</i>	--	43.8
<i>I-10 Westbound Merge at Perkins Road</i>	--	--
<i>I-10 Westbound Freeway west of Perkins Road</i>	--	--

--Density not reported.

Table 2.6 presents the results of the No Build analysis for the study area intersections.

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Table 2.6
No Build Conditions Intersections
Synchro Analysis

Location	AM			PM		
	Delay (sec)	V/C Ratio	95 th % Queues (ft)	Delay (sec)	V/C Ratio	95 th % Queues (ft)
Acadian Thruway at I-10 Westbound Ramps	21.8			20.8		
<i>Acadian Thruway Northbound</i>	11.8	0.75	143	12.1	0.78	130
<i>Acadian Thruway Southbound</i>	15.2	0.57	393	15.2	0.62	448
<i>I-10 Off Ramp Westbound</i>	42.1	0.83	363	42.4	0.81	325
Acadian Thruway at I-10 Eastbound Ramps	17.2			15.4		
<i>Acadian Thruway Northbound</i>	51.9	0.83	315	38.5	0.68	313
<i>Acadian Thruway Southbound</i>	6.0	0.57	390	7.1	0.63	450
<i>I-10 Off Ramp Eastbound</i>	61.2	0.73	98	66.0	0.65	53
Acadian Thruway at Acadian Centre	8.8			8.6		
<i>Acadian Thruway Northbound</i>	8.9	0.53	343	9.1	0.57	393
<i>Acadian Thruway Southbound</i>	5.4	0.44	265	4.9	0.43	255
<i>Richland Plantation Eastbound</i>	84.4	0.41	5	51.8	0.29	18
<i>Acadian Centre Westbound</i>	46.1	0.60	145	47.5	0.52	80

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Table 2.6 (continued)
No Build Conditions Intersections
Synchro Analysis

Location	AM			PM		
	Delay (sec)	V/C Ratio	95 th % Queues (ft)	Delay (sec)	V/C Ratio	95 th % Queues (ft)
Acadian Thruway at Perkins Road	47.5			55.7		
<i>Stanford Avenue Northbound</i>	44.6	0.91	390	67.3	0.91	630
<i>Acadian Thruway Southbound</i>	48.7	0.81	448	63.0	0.90	363
<i>Perkins Road Eastbound</i>	45.2	0.82	410	51.4	0.87	668
<i>Perkins Road Westbound</i>	50.2	0.93	643	45.7	0.78	638
Perkins Rd at I-10 Ramps	18.9			10.1		
<i>I-10 Eastbound off ramp Southbound</i>	53.2	0.91	435	56.5	0.73	233
<i>Perkins Road Eastbound</i>	7.1	0.27	193	4.5	0.42	265
<i>Perkins Road Westbound</i>	13.5	0.47	375	9.5	0.55	448

The documentation of the No Build analysis and a comparison to the existing network analysis in tabular format is included in **Appendix C**.

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Safety Concerns

The safety concerns in the study area were identified in a detailed evaluation of the existing safety data that was presented in **Chapter 1**. The main factor identified as contributing to crashes was congestion. Also noted as a potential safety concern was the close proximity of the Acadian and Perkins ramps.

DRAFT

Chapter 3. ALTERNATIVE ANALYSIS

The results of the network analysis for the Build conditions, including the proposed Acadian interchange modifications and an additional lane on I-10 are presented in this chapter. The following subsections contain summaries of the Tier I and Tier II/III analyses and an overview of the study area network. The overview includes a general description of the network and the proposed changes within the study area to address issues identified in **Chapter 2**.

Summary of Tier I Analysis

A high-level interchange analysis (Tier I) was completed during the Stage 0 Study to determine feasible interchange alternatives. As a result, the only alternative moving forward for further analysis for the Perkins interchange is the removal of the ramps. This eliminates the inadequate spacing between interchanges. The alternatives for the Acadian interchange moving forward from the Tier 1 analysis were a diamond interchange, a single-point urban interchange (SPUI), and a diverging diamond interchange (DDI). Details of the Tier I analysis are in **DCR Appendix A**.

Summary of Tier II/III Analysis

The purpose of the Tier II/III analysis was to further refine the alternatives selected in Tier I. This included the critical geometry, alternative analysis, striping, and conflict point comparison. The geometric layout was refined through an iterative process between the geometric design team and the traffic analysis team to determine the lane configurations based on the environmental constraints and operations. The diamond interchange configuration was analyzed first to confirm it would meet the purpose and need of increasing the interchange spacing and improving the geometry of the entrance ramps. The SPUI or DDI would have increased environmental impacts and were only to be analyzed if needed.

Proposed Diamond Interchange Build Layout

The proposed Build diamond interchange included the following features:

- An additional lane on mainline I-10 (in each direction), this creates a weave on I-10 westbound between College and Acadian (the current configuration is a merge from College and a lane drop at Acadian)
- Lengthened acceleration and deceleration lanes east of Acadian (I-10 westbound on-ramp and I-10 eastbound off-ramp)
- Acadian northbound at I-10 interchange
 - An additional northbound left turn lane onto the I-10 westbound on-ramp. The taper for the dual lefts starts just north of Acadian Centre
 - Two additional northbound right turn lanes onto the I-10 eastbound on-ramp starting just south of Acadian Centre
 - An additional northbound through lane between Perkins and Acadian Centre which becomes the inside right turn lane to I-10 eastbound on-ramp
 - The signal phases for the dual left and dual right turn lanes are protected only
- Acadian southbound at I-10 interchange

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- An additional southbound left turn lane onto the I-10 eastbound on-ramp. The dual left turn lanes start north of the westbound off-ramp.
- Additional storage for the southbound right turn lane onto the I-10 westbound on-ramp.
- I-10 eastbound off-ramp at Acadian - An additional right turn lane onto Acadian southbound creating dual right turn lanes.
- I-10 westbound off-ramp at Acadian - An additional right turn lane onto Acadian northbound creating dual turn lanes.
- Acadian/Stanford at Perkins
 - The northbound right turn lane converted to a shared through-right turn lane which becomes the inside right turn lane to the I-10 eastbound on-ramp.
 - The southbound right turn only lane eliminated and the outside through lane converted to include a shared through-right turn lane.

Figure 3.1 presents the proposed lane configuration. The proposed Line and Grade geometry is in **Appendix D**.

LEGEND:

- ← Lane Configuration
- Signalized Intersection

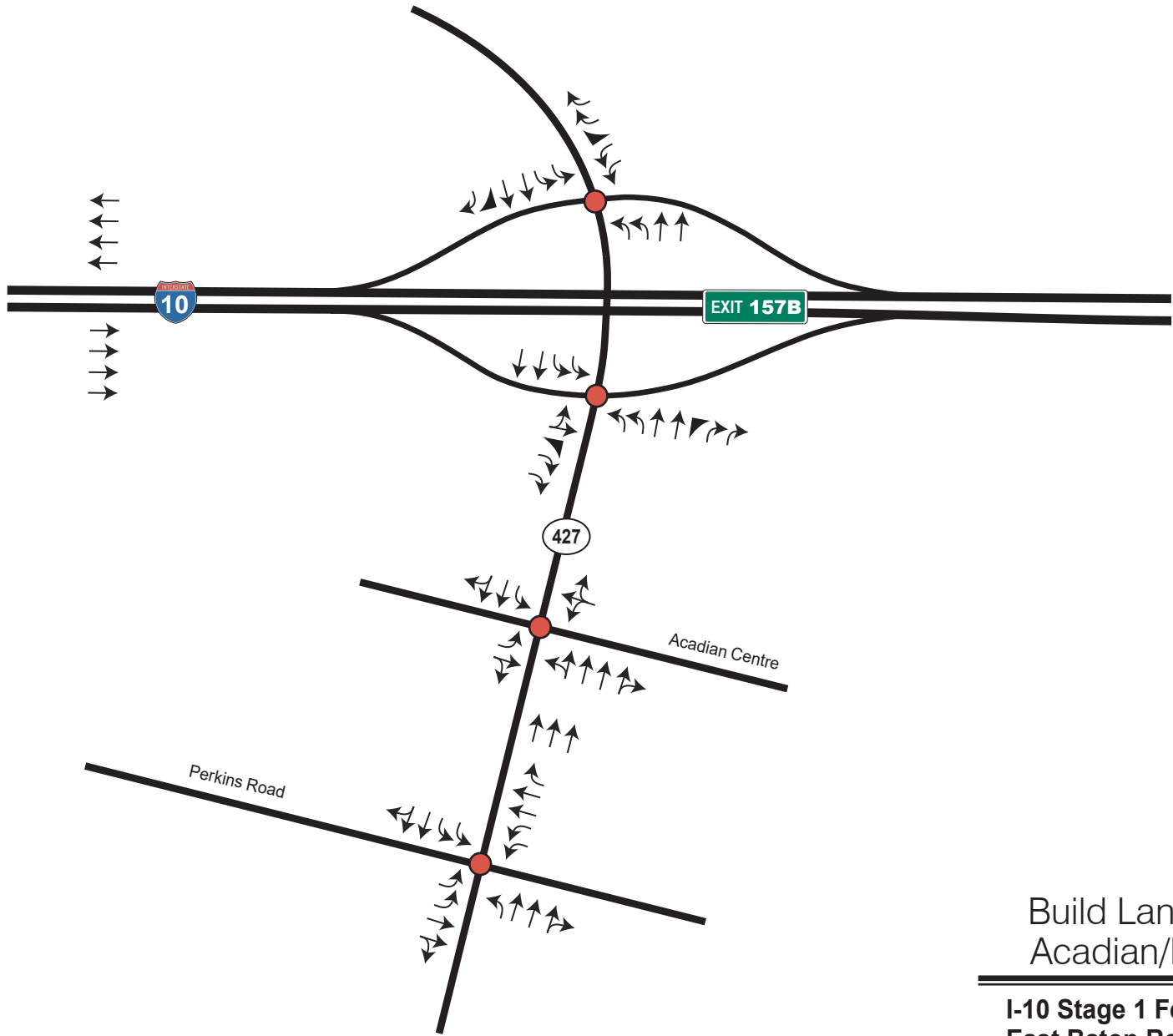


Figure 3.1
Build Lane Geometry
Acadian/Perkins IMR

I-10 Stage 1 Feasibility Study
East Baton Rouge Parish, LA

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Critical Geometry

The proposed geometric modifications to I-10, and the intersections of Acadian at the I-10 interchange and Acadian Centre were designed, with exceptions, to meet the LADOTD Minimum Design Guidelines and are in accordance with “A Policy on Geometric Design of Highways and Streets 2018”. The LADOTD Road Design Manuals and applicable memoranda were also utilized.

The Line and Grade geometry, proposed critical geometry criteria and design exceptions are presented in **Appendix D**.

Alternative Analysis

Analysis was conducted for the AM and PM peaks for the 2040 Build conditions and compared to the No Build analysis summarized in **Chapter 2**. The input parameters and analysis reports for the Build analysis are included in **Appendix D**. The 2040 Build volumes are presented in **Appendix C**.

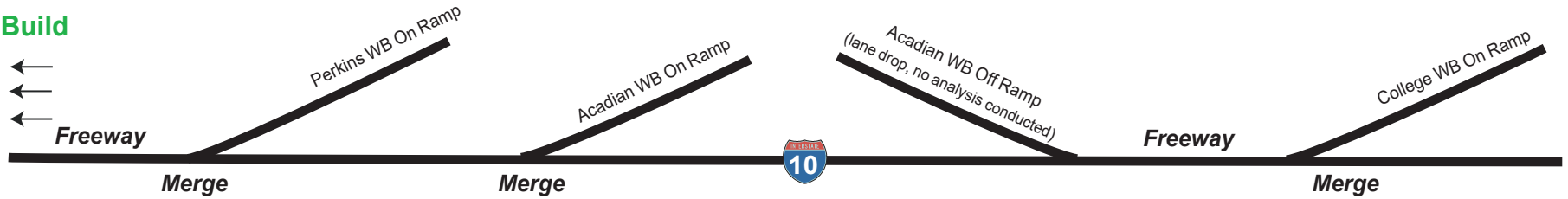
Freeway/Merge/Diverge/Weave

HCS version 7.5 was used for freeway, merge, diverge and weave analyses. Due to the geometry changes in the Build condition, analysis types differed between the No Build and Build by location. **Figure 3.2** was prepared to illustrate the differences and present the analysis type performed for each location.

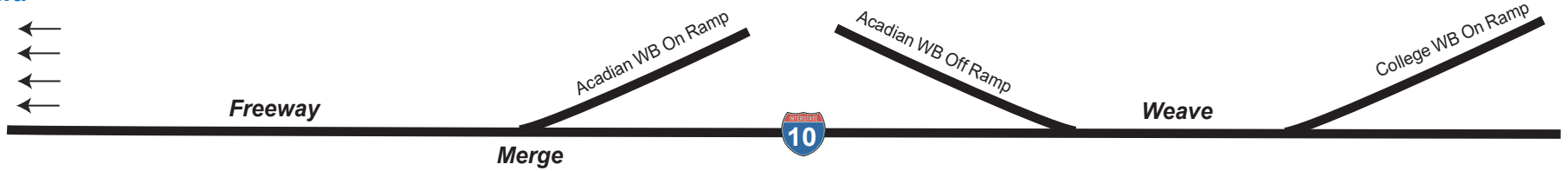
The measure of effectiveness was density, which is the number of vehicles occupying a given length of a lane or roadway at an instant, in passenger cars per lane per mile (pc/mi/ln). A limitation of the HCS software is that density is not reported when thresholds are exceeded, such as volume to capacity ratio greater than one.

I-10 Westbound

No Build

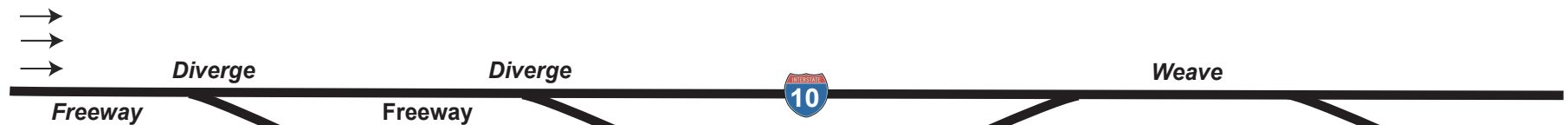


Build



I-10 Eastbound

No Build



Build

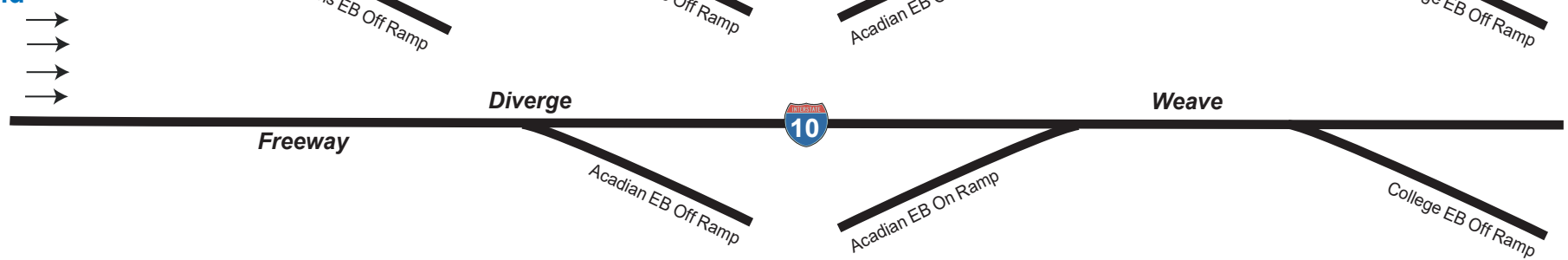


Figure 3.2
I-10 Analysis Types
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The analysis reports are in **Appendix D**.

I-10 Eastbound

The weave analysis included a sensitivity analysis for I-10 eastbound between Acadian and College, similar to the existing and No Build analysis detailed in **Chapter 2**. **Figure 3.3** presents the I-10 eastbound AM and PM peak analysis results. The analysis reports are in **Appendix D**.

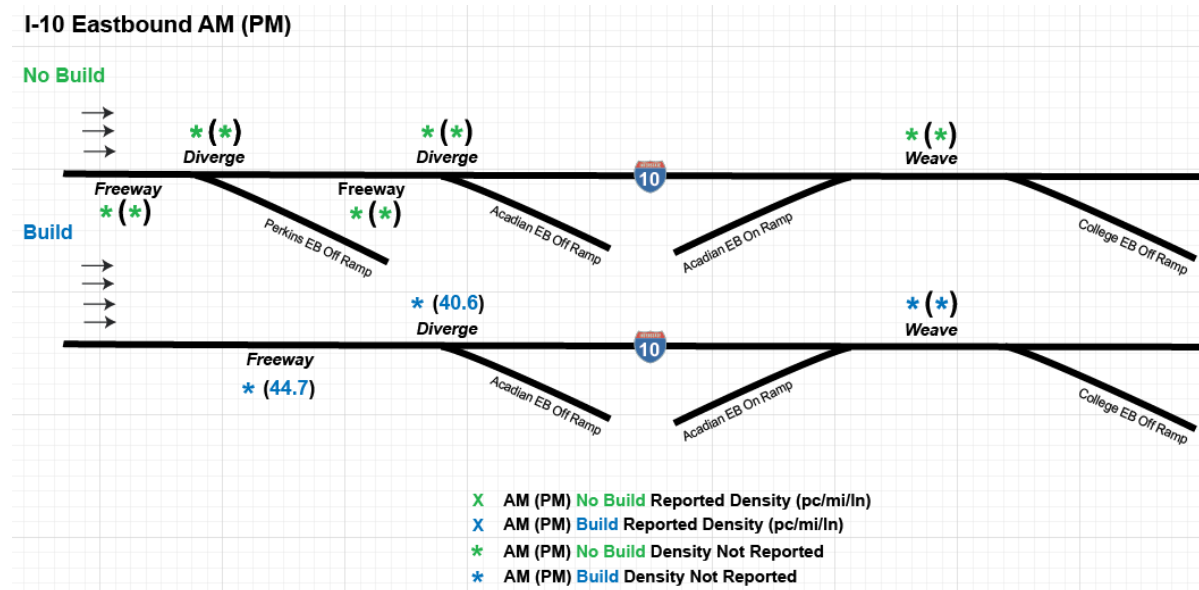


Figure 3.3 I-10 Eastbound AM and PM Results

The analysis results for I-10 eastbound indicated that in the AM peak the proposed improvements may not impact operations in the study area on the I-10 mainline. The PM peak analysis results indicate the widening and the removal of the Perkins ramps should improve the I-10 eastbound mainline operation west of Acadian. Therefore, the weave section between Acadian and College may become the bottleneck in the PM peak and inhibit traffic throughput along the remaining system.

I-10 Westbound

A sensitivity analysis was conducted for Build condition weave on I-10 westbound between College and Acadian with the following three (3) volume scenarios:

- Volume Scenario 1: 100% of vehicles entering from College exit at Acadian
- Volume Scenario 2: No vehicles entering from College exit at Acadian, 100% are from I-10 westbound

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- Volume Scenario 3: 50% of entering from College exit at Acadian

The details of the weave volumes are in **Appendix D**. **Figure 3.4** presents the I-10 westbound AM and PM peak analysis results.

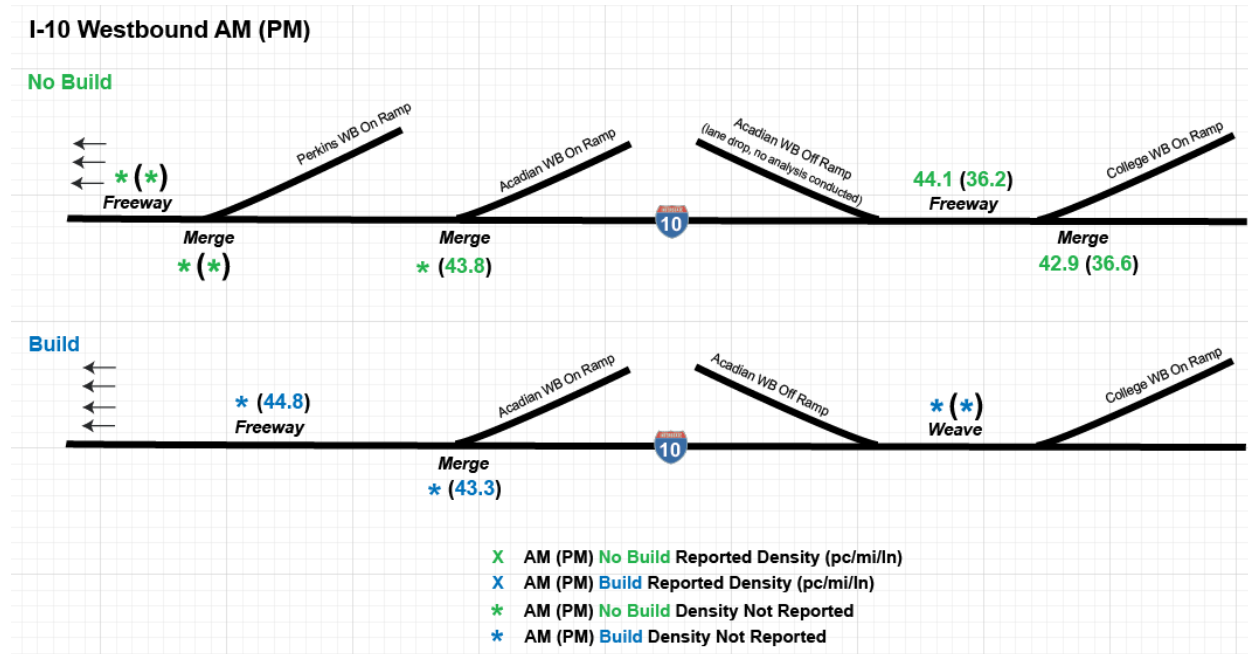


Figure 3.4 I-10 Westbound AM and PM Results

The analysis results for I-10 westbound indicated that in both the AM and PM peaks, the weave section between College and Acadian may become the bottleneck and inhibit traffic throughput along the remaining system. The results also indicate that in the PM peak, mainline traffic operations west of the Acadian off-ramp should improve with the proposed widening and interchange modifications.

Another limitation of HCS software is that downstream queues and bottlenecks are not fully evaluated. Therefore, analyses were conducted for the Build freeway segments by reducing the vehicular demand until the volume to capacity ratio reached one to estimate the maximum throughput. The results were 7,620 vph on I-10 eastbound and 7,975 vph on I-10 westbound. A comparison to the eastbound and westbound Build volumes at these locations of 7,843 vph and 8,162 vph respectively indicates that the demand in both cases may exceed the maximum throughput potentially resulting in bottlenecks.

A bottleneck on I-10 eastbound prior to the Acadian ramps may meter the throughput volume and then the weave operation between Acadian and College may not be the bottleneck point. A

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bottleneck on I-10 westbound west of Acadian may not occur if the weave between College and Acadian meters the westbound throughput volume.

Surface Street Intersections

Trafficware Synchro 8 was used to analyze the signalized intersections at the ramp terminal intersections on Acadian with the proposed Build condition geometry.

Signal timing parameters in the Build conditions analysis were developed to accommodate concurrent vehicle and pedestrian movements for proposed crosswalks, as presented in the Line and Grade in **Appendix D**. The signal phases accommodating concurrent pedestrian crossings were set to 'minimum recall' and the minimum green time plus the yellow time was adjusted to accommodate the calculated clearances.

The minimum pedestrian times were calculated as:

$$\text{Minimum Pedestrian Times (sec)} = \text{Walk Distance (ft)} \times 3.5 \text{ ft/sec} + 7 \text{ sec walk}$$

The crosswalk measurements and pedestrian timing calculations are presented in **Appendix D**. The pedestrian accommodations at the intersections on Acadian should be re-visited during design as pedestrian signals with actuation may be considered and/or the timing parameters should be re-calculated when exact sidewalk and crosswalk locations are confirmed.

Tables 3.1 and **3.2** presents the results of the Build analysis for the signalized intersections. The highest v/c ratio and 95th percentile queue for each approach were reported. The queue results were reported in number of vehicles but then converted to feet by multiplying 25 feet/vehicle.

Table 3.1
AM Scenario Comparison
Signalized Intersection Synchro Analysis

Location	AM								
	Existing			No Build			Build		
	Delay (sec)	V/C Ratio	95th % Queues (ft)	Delay (sec)	V/C Ratio	95th % Queues (ft)	Delay (sec)	V/C Ratio	95th % Queues (ft)
Acadian Thruway at I-10 Westbound Ramps	21.3			21.8			28.4		
<i>Acadian Thruway Northbound</i>	11.5	0.74	138	11.8	0.75	143	24.6	0.72	213
<i>Acadian Thruway Southbound</i>	14.3	0.54	370	15.2	0.57	393	27.0	0.54	273
<i>I-10 Off-ramp Westbound</i>	42.0	0.82	350	42.1	0.83	363	31.8	0.77	383
Acadian Thruway at I-10 Eastbound Ramps	16.7			17.2			27.6		
<i>Acadian Thruway Northbound</i>	50.1	0.82	300	51.9	0.83	315	35.5	0.86	415
<i>Acadian Thruway Southbound</i>	5.7	0.54	368	6.0	0.57	390	14.9	0.59	323
<i>I-10 Off-ramp Eastbound</i>	61.8	0.73	95	61.2	0.73	98	52.9	0.88	290
Acadian Thruway at Acadian Centre	8.5			8.8			9.4		
<i>Acadian Thruway Northbound</i>	8.4	0.50	320	8.9	0.53	343	7.1	0.32	208
<i>Acadian Thruway Southbound</i>	5.1	0.42	253	5.4	0.44	265	7.1	0.60	408
<i>Richland Plantation Eastbound</i>	84.4	0.41	5	84.4	0.41	5	84.4	0.41	5
<i>Acadian Centre Westbound</i>	46.0	0.59	140	46.1	0.60	145	69.8	0.82	188
Acadian Thruway at Perkins Road	44.0			47.5			53.9		
<i>Stanford Avenue Northbound</i>	44.2	0.90	375	44.6	0.91	390	54.5	0.92	460
<i>Acadian Thruway Southbound</i>	47.9	0.80	425	48.7	0.81	448	67.8	0.92	558
<i>Perkins Road Eastbound</i>	42.3	0.80	363	45.2	0.82	410	47.6	0.82	205
<i>Perkins Road Westbound</i>	42.0	0.81	530	50.2	0.93	643	42.4	0.90	830
Perkins Rd at I-10 Ramps	18.0			18.9			Intersection does not exist this scenario		
<i>I-10 Eastbound off-ramp Southbound</i>	54.5	0.91	398	53.2	0.91	435			
<i>Perkins Road Eastbound</i>	6.1	0.24	158	7.1	0.27	193			
<i>Perkins Road Westbound</i>	11.5	0.41	318	13.5	0.47	375			

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Table 3.2
PM Scenario Comparison
Signalized Intersection Synchro Analysis

Location	PM								
	Existing			No Build			Build		
	Delay (sec)	V/C Ratio	95th % Queues (ft)	Delay (sec)	V/C Ratio	95th % Queues (ft)	Delay (sec)	V/C Ratio	95th % Queues (ft)
Acadian Thruway at I-10 Westbound Ramps	20.3			20.8			26.6		
<i>Acadian Thruway Northbound</i>	11.9	0.78	123	12.1	0.78	130	19.1	0.50	183
<i>Acadian Thruway Southbound</i>	14.2	0.59	418	15.2	0.62	448	24.2	0.51	275
<i>I-10 Off-ramp Westbound</i>	42.4	0.81	313	42.4	0.81	325	33.6	0.76	358
Acadian Thruway at I-10 Eastbound Ramps	15.1			15.4			31.9		
<i>Acadian Thruway Northbound</i>	38.9	0.67	303	38.5	0.68	313	39.8	0.85	385
<i>Acadian Thruway Southbound</i>	6.6	0.60	418	7.1	0.63	450	17.6	0.63	333
<i>I-10 Off-ramp Eastbound</i>	65.8	0.64	50	66.0	0.65	53	52.9	0.91	365
Acadian Thruway at Acadian Centre	8.4			8.6			8.8		
<i>Acadian Thruway Northbound</i>	8.7	0.54	373	9.1	0.57	393	7.4	0.39	243
<i>Acadian Thruway Southbound</i>	4.7	0.42	240	4.9	0.43	255	7.2	0.61	418
<i>Richland Plantation Eastbound</i>	51.8	0.29	18	51.8	0.29	18	51.8	0.29	18
<i>Acadian Centre Westbound</i>	47.7	0.51	78	47.5	0.52	80	59.5	0.79	120
Acadian Thruway at Perkins Road	53.2			55.7			58.5		
<i>Stanford Avenue Northbound</i>	65.0	0.89	598	67.3	0.91	630	83.1	0.93	540
<i>Acadian Thruway Southbound</i>	62.5	0.90	348	63.0	0.90	363	54.1	0.94	745
<i>Perkins Road Eastbound</i>	47.4	0.85	575	51.4	0.87	668	60.6	0.87	305
<i>Perkins Road Westbound</i>	42.0	0.77	550	45.7	0.78	638	43.1	0.80	773
Perkins Rd at I-10 Ramps	9.5			10.1			Intersection does not exist this scenario		
<i>I-10 Eastbound off-ramp Southbound</i>	55.2	0.66	213	56.5	0.73	233			
<i>Perkins Road Eastbound</i>	4.2	0.38	233	4.5	0.42	265			
<i>Perkins Road Westbound</i>	8.7	0.49	390	9.5	0.55	448			

At Acadian Centre, the minimum green for the side streets were initially extended from the existing to accommodate pedestrians crossing Acadian concurrently with the vehicle phase. The longer side street phases resulted in shorter signal splits for the Acadian northbound and southbound phases, and southbound queues were reported exceeding 700'. An additional analysis was conducted to represent actuation at the Acadian crossing. With shorter side street splits and no minimum recall, the southbound queues were reported at approximately 400'. These results are presented in **Table 3.1** and **3.2**, and both sets of analysis reports are in **Appendix D**.

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The results in **Tables 3.1** and **3.2** indicated both increases and decreases in the delay, v/c ratio and queues compared to the No Build conditions.

The reported 95% queues on the I-10 eastbound and westbound off-ramps were compared to the proposed storage lengths in the Line and Grade. The comparison indicated that the queues would not extend onto the mainline.

Both the Acadian eastbound and westbound on-ramps are proposed to include two (2) lanes at the intersection to receive dual turning movements from either direction. The two (2) lanes would merge to one (1) prior to joining the mainline. The Highway Capacity Manual does not include a methodology to analyze the merge on the ramp from two (2) lanes to one (1). Should this merge on either ramp become a bottleneck point, traffic could back up into the intersection and block traffic on Acadian. This would not, however, affect operations on the mainline of I-10.

Safety Analysis

The number and type of conflict points were determined for the Build condition and compared to those for the existing conditions. The conflict point diagrams for the proposed configuration are presented in **Appendix D**. **Table 3.3** presents the comparison of existing vs Build conflict points.

**Table 3.3
Existing vs Build w/Improvements
Conflict Point Comparison**

Conflict Type	Existing	Build
Interstate Mainline		
Diverging Conflict	3	2
Merging Conflict	3	2
Crossing Conflict	0	0
TOTAL Mainline	6	4
Acadian at the I-10 Interchange (Intersection)		
Diverging Conflict	9	12
Merging Conflict	9	14
Crossing Conflict	18	45
Acadian at Acadian Centre (Intersection)		
Diverging Conflict	6	8
Merging Conflict	8	8
Crossing Conflict	20	26
Perkins at the I-10 Interchange* (Intersection)		
Diverging Conflict	3	0
Merging Conflict	3	0
Crossing Conflict	3	0
TOTAL Intersection	79	113

*Interchange removed in Build conditions

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Acadian / Perkins Interchange Modification Report

A review of **Table 3.3** indicated the number of conflict points on the mainline was reduced due to the removal of the Perkins Road ramps. The number of conflicts increases in the Build conditions for the intersections due to additional lanes on Acadian.

Striping and Signage layouts

The purpose of developing conceptual striping and signage layouts as part of an IMR is to ensure the alternative design could be adequately signed and striped with the proposed modifications. Striping and signing layouts are presented in **Appendix D**.

Study Area Network Overview

The main safety concern in the study area noted in **Chapter 2** was the inadequate spacing between the Perkins and Acadian interchanges. The proposed removal of the Perkins interchange eliminates this issue.

The signalized intersection analyses of the Acadian interchange for the diamond interchange alternative indicated the v/c ratios were less than one for all movements. Results also indicate queues on the off-ramps should not exceed available storage or back-up onto the mainline.

Analysis indicated the diamond interchange alternative would meet the purpose and need of increasing the interchange spacing and improving the geometry of the entrance ramps while servicing design year traffic. Other interchange improvements, such as the DDI and SPUI, are not needed due to the severe congestion on the interstate which may still cause Acadian Thruway I-10 on-ramps vehicles to queue.

Additional Considerations

In the No Build, vehicles entering from College must make two (2) lane changes to stay on I-10 westbound. With the proposed improvements, only one (1) lane change is required for this maneuver.

The I-10 westbound on-ramp from Acadian would include additional storage for queued vehicles in the Build condition and the longer merge length would be an improvement from the existing and No Build conditions.

If the weave section on I-10 eastbound between Acadian and College is still or becomes a bottleneck, queues would extend onto the on-ramp from Acadian. The proposed interchange modifications would provide additional storage for queued vehicles on the ramp and on Acadian compared to existing and No Build conditions.

The added lane would provide additional capacity of approximately 2,250 passenger cars per lane per hour on the interstate system. This may decrease the duration of congestion during the AM and PM periods and also provide benefits during the off-peak.

This is prepared solely for the purpose of identifying, evaluating and planning safety improvements on a public road; and is therefore exempt from discovery or admission under 23 U.S.C. 409

DCR APPENDIX A

Tier 1 Documentation

DRAFT

URBAN SYSTEMS inc.



2.0 ALTERNATIVES

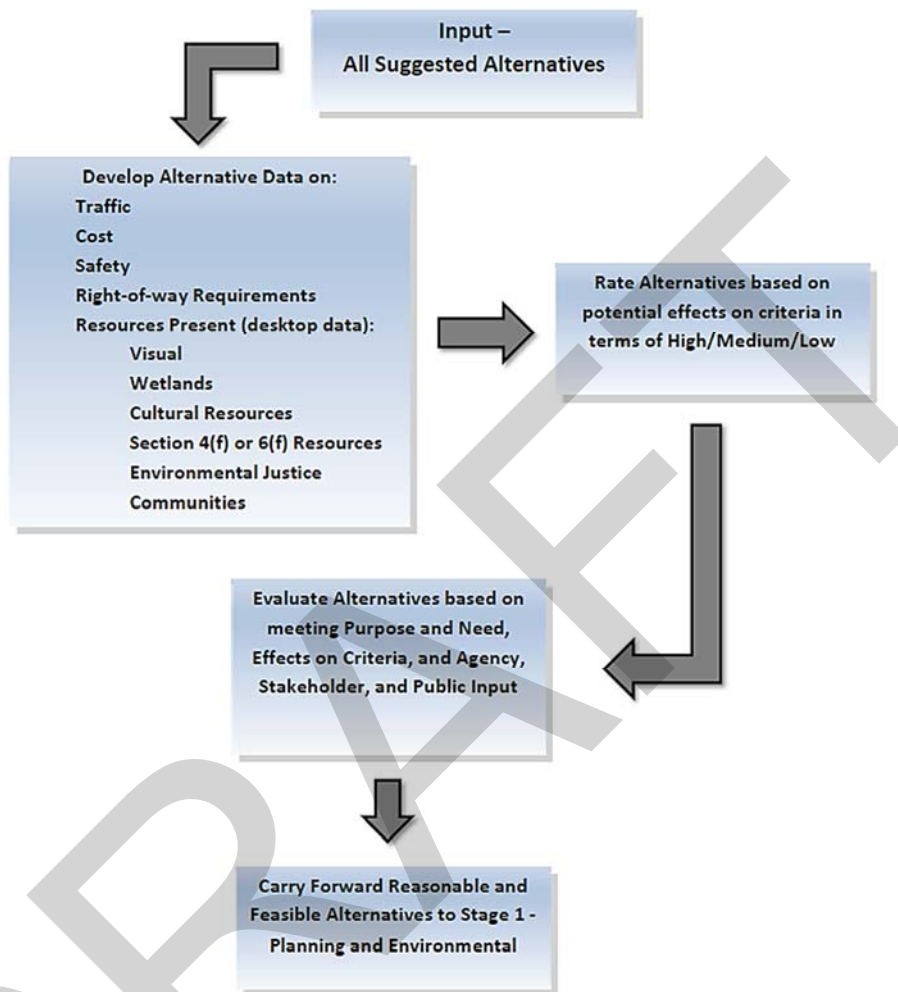
In order to effect positive change in the traffic conditions on I-10, traffic analysis and engineering data were used to help identify structural and operational deficiencies, after which reasonable alternatives were developed. Approximately 71 alternatives were initially considered for the mainline of I-10 and associated interchanges. The 8 mainline alternatives that were initially considered are shown in **Figure 2**. This figure is taken from the Tier 1 Analysis which is described below and included in **Appendix A**.

During alternatives development, it was determined that, in order to provide a mechanism to evaluate all construction alternatives, a Tier 1 Analysis would be developed. The Tier 1 Analysis is a process by which potential construction alternatives are screened against multiple categories of criteria including traffic operations, safety, right-of-way (ROW), environmental/social impacts, cost, and the ability to phase construction. **Exhibit 2-1** is a Tier 1 General Process Flow Chart.

**FIGURE 2
MAINLINE ALTERNATIVES INITIALLY CONSIDERED**

ALTERNATIVE CONCEPT	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL/ SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
One Additional Lane	MODERATE CAPACITY	MAJOR	LOW	LOW	LOW	YES	YES	Interchange modification will be required to add additional lane. Additional lane concept excludes adding lane to the bridge.	YES
Multi-Lane Addition	HIGH CAPACITY	MAJOR	HIGH	HIGH	HIGH	YES	YES	Requires MRB modification to include additional lane in both directions.	NO
New Adjacent Bridge	HIGH CAPACITY	MAJOR	MODERATE	HIGH	HIGH	NO	YES	Reconfiguration of I-10/110 Interchange required. Requires at least 1 but likely 2 or more additional lanes in each direction on I-10 from I-110 to Split.	NO
High Pass	HIGH CAPACITY	MAJOR	MODERATE	HIGH	HIGH	NO	YES	ROW Impacts depend on design speed of high pass. Visual impacts to the adjacent communities are extreme.	NO
Movable Barrier	LOW CAPACITY	NONE	NONE	LOW	LOW	NO	NO	PM volumes are very balanced. AM volumes may be a better alternative, but cost/benefit is low.	NO
I-110 Westbank Connection	MODERATE CAPACITY	MODERATE	MODERATE	MODERATE	HIGH	NO	YES	Traffic volumes TBD. Cost/Benefit questionable. If a new bridge is built with required ROW for tie-in, better served for I-10 traffic.	NO
LA1/LA30 Direct Connection	LOW CAPACITY	MODERATE	LOW	MODERATE	HIGH	NO	YES	High cost for potential low volume of traffic.	NO
I-110 Frontage Roads	MODERATE CAPACITY	MODERATE	MODERATE	HIGH	LOW	YES	NO	Provide frontage roads connecting Government St and Dalrymple utilizing existing infrastructure as much as possible. Would continue 9th and 10th. Reconfigure traffic signals to treat frontage as major movement.	YES

EXHIBIT 2-1 TIER 1 GENERAL PROCESS FLOW CHART



In order to determine the level of assessment, a more detailed background evaluation was necessary. Therefore, within each category, multiple items were considered. For instance, the ROW category considered total acreage and impacts to residential, commercial, and public structures (libraries, etc.). It was also determined that in order to screen projects fairly, comparable projects would be screened against the same level of criteria. Interchange alternatives were screened against a certain criteria level, while mainline alternatives were screened against another level. A simplistic assessment for each category, i.e. “high,” “medium,” “low”, was used.

The complete Tier 1 Analysis, which details the alternatives along with the differences in the level of screening of each criteria category, is included as **Appendix A**.

Although not a part of the Tier 1 Analysis, the closure of the Washington Street exit was also studied relative to relieving congestion and allowing the mainline I-10 infrastructure to remain unchanged. Because of the existing lane drop, closing the

exit would only provide around 400-feet of additional distance before vehicles would need to merge. The data shows that the volume of traffic exiting at Washington Street is only 1.5% of the total traffic in that area. Data also indicates that the majority, 88%, of the exiting traffic is coming from I-110 and needs to cross I-10 east bound traffic in order to exit at Washington Street. Based on this data, it was determined that closure of the Washington Street exit would not resolve congestion issues on I-10.

2.1 Tier 1 Alternatives Analysis

The Tier 1 Analysis concluded that of the 71 alternatives entered, two mainline alternatives and 14 interchange alternatives appeared reasonable and feasible to warrant additional study. These 16 viable alternatives moved on for further analysis. The interchange locations include LA 415, Louisiana Highway 1 (LA 1), Highland Road-Nicholson Drive, Washington Street, Dalrymple Drive, Perkins Road, Acadian Thruway, College Drive, and the I-10/I-12 Split. The Tier 1 Analysis alternatives are further discussed in Section 2.3.

2.2 Secondary Alternatives Analysis

Upon completion of the Tier 1 Analysis, all 16 viable alternatives were screened for the ability to obtain environmental approval. This secondary analysis utilized desktop data to assess the likelihood of significant environmental resources in the ROW of the viable alternatives.

The alternatives presented below represent one of the mainline alternatives and four interchange alternatives that were determined to likely adversely affect significant environmental resources. For this reason, these five alternatives were determined to be ineligible to move forward into Stage 1.

2.2.1 Frontage Roads – Mainline Alternative

The Frontage Roads alternative would provide frontage roads connecting Government Street and Dalrymple Drive utilizing existing infrastructure as much as possible along 9th and 10th Streets. This alternative would also reconfigure traffic signals to treat the frontage roads as a major movement.

This proposed alternative would affect the Expressway Park, a park that supports multiple public recreational interests operated by the Recreation and Park Commission for the Parish of East Baton Rouge (BREC). Expressway Park was made possible with funding obtained through Project Number 22-00148 of the Land and Water Conservation Fund Act. As such, the park is afforded protection from adverse effects resulting from federally funded projects under Section 6(f) of this act. Since the mainline alternative that adds one lane to I-10 in the project study area does not adversely affect

Expressway Park, the Frontage Roads mainline alternative was dropped from further study.

2.2.2 LA 1 – Interchange Alternative

The primary alternative studied at the LA 1 interchange is dependent upon the construction of the LA 1 to LA 415 Connector project. If the above project were constructed, this alternative would consider closing or restricting eastbound access to I-10 from LA 1. The steep grade and merging of the northbound and southbound movements from LA 1 cause poor traffic operations, especially for trucks. Restricting or eliminating access at this point could improve traffic flow both on LA 1 and I-10.

Since this interchange alternative depends on the construction and operation of the LA 1 to LA 415 Connector project, it has been dropped from further study.

2.2.3 Washington Street/Dalrymple Drive – Interchange Alternatives

All three braided ramp interchange alternatives listed below may affect the East Polk Street Park. This BREC facility supports a variety of outdoor public recreation opportunities. Section 4(f) of the Department of Transportation Act provides protections for significant recreational facilities. As alternatives exist that would not result in adverse effects to this facility, all three of the braided ramp alternatives have been removed from further study.

2.2.3.1 Braided Ramp with Frontage Roads

This interchange alternative included a new I-110 left exit and removed the existing I-10 westbound exit at Louise Street, replacing it with the Dalrymple Drive exit with a braided ramp. Louise Street would be accessible via a frontage road from the Dalrymple Drive exit. It also added a turnaround under I-10 near Washington Street that would allow motorists from the Dalrymple Drive area to get onto I-10 and travel eastbound.

2.2.3.2 Braided Ramp with no Frontage Roads

This interchange alternative relocated the existing eastbound Washington Street exit further west on I-10, thus eliminating the ability for motorists from I-110 to access it, created a braided ramp that moved the existing Dalrymple Drive exit further west, and moved the I-10 entrance ramp from Washington Street further east.

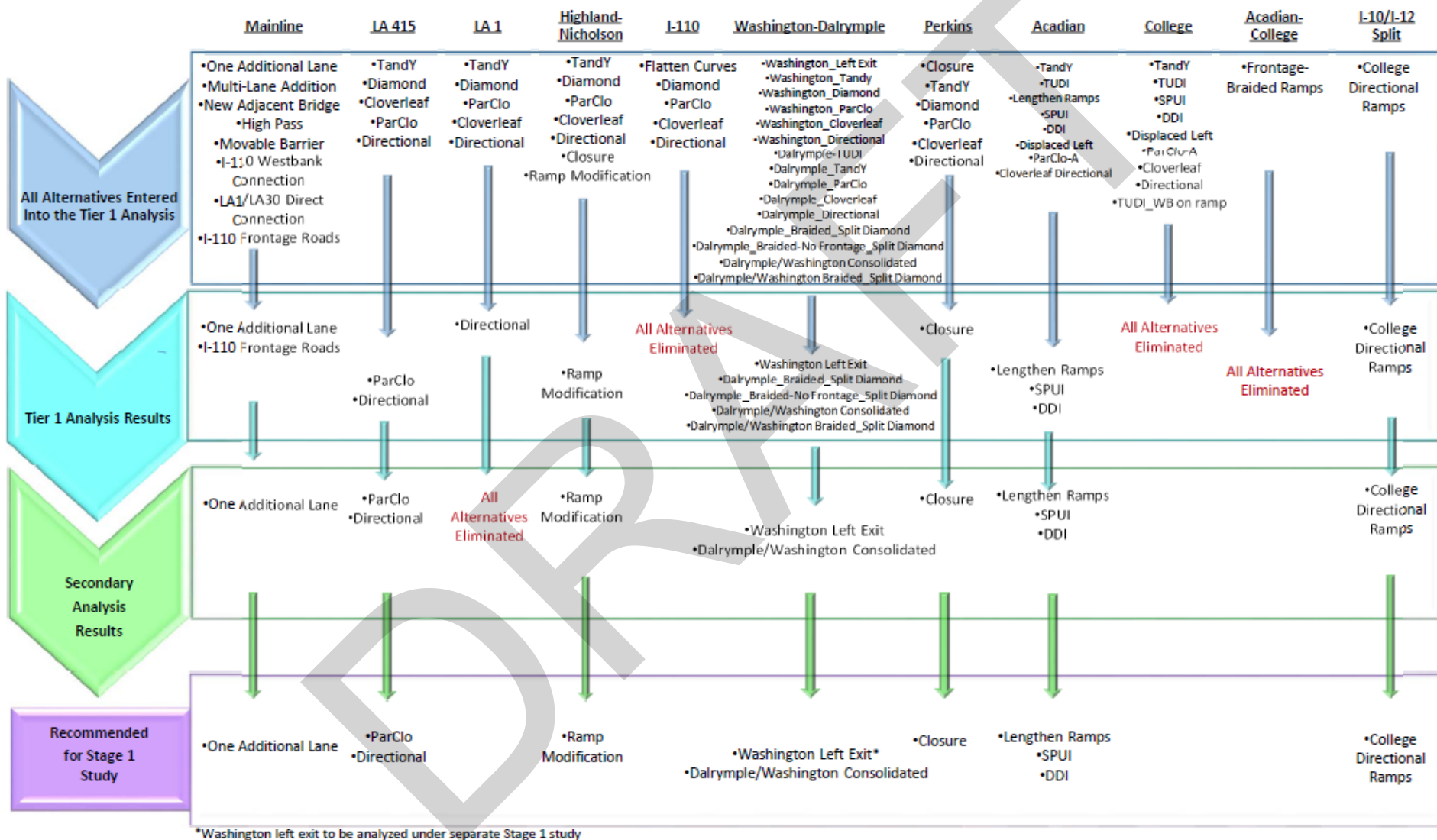
2.2.3.3 Braided Ramp

This interchange alternative created a braided ramp that moved the existing Dalrymple Drive exit further west and moved the I-10 entrance ramp from Washington Street further east without moving the existing eastbound Washington Street exit.

2.3 Alternatives Recommended for Stage 1

As a result of the removal of five of the 16 alternatives deemed viable during the Tier 1 Analysis, 11 alternatives are recommended to move forward into Stage 1. One of these 11 alternatives, the Washington Street I-110 Left Exit, has been proposed to be studied as a separate improvement project requiring an individual Stage 1 evaluation; therefore, it will not be studied in the Stage 1 process for the I-10 Corridor Improvements project. **Exhibit 2-2** outlines the I-10 alternatives development decision tree based on all alternatives that were entered into the Tier 1 Analysis. A description of the 10 alternatives recommended for further analysis in the Stage 1 process for the I-10 Corridor Improvements Project is included in this section.

EXHIBIT 2-2 ALTERNATIVES ANALYSIS DECISION TREE



Notes: ParClo–Partial Cloverleaf, TUDI–Tight Urban Diamond Interchange, SPUI–Single Point Urban Interchange, DDI–Diverging Diamond Interchange

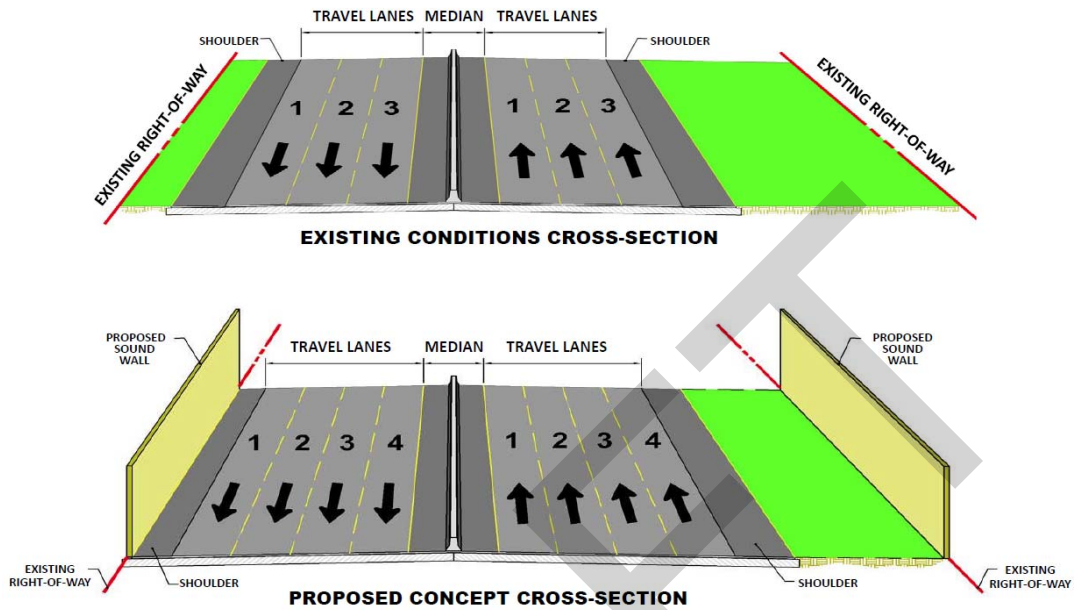
2.3.1 Mainline Alternative – One Additional Lane

The One Additional Lane mainline alternative would add one additional lane to both the eastbound and westbound directions on I-10 through the project study area, with the exception of the Mississippi River Bridge. In the majority of the corridor, adding one lane in each direction can be constructed within the existing ROW. In order for this improvement to take place, interchange modifications would be required. **Figure 3** shows the typical roadway sections for the existing and proposed roadway.

Widening the roadway may require the relocation of the existing sound walls. Due to the proximity of the existing sound walls to the piers of the Nairn Drive overpass, located between Acadian Thruway and College Drive, these piers may need to be moved which would require the reconstruction of the overpass. The removal and replacement of the Nairn Drive overpass will be included as a part of the mainline alternative being studied in this project's scope moving forward.

This alternative does not involve widening or other modifications to the Mississippi River Bridge. Adding a single lane to only one side of the bridge, as suggested by the LA 1 to LA 30 Direct Connection alternative, would have a high cost for a potentially low volume of traffic. An additional lane in each direction would require the reconfiguration of the I-10/I-110 interchange. The reconfiguration of this interchange would have high ROW impacts and costs.

**FIGURE 3
TYPICAL ROADWAY SECTION**



NOTE: Representative of an area that would be potentially eligible for sound walls.

2.3.2 Interchange Alternative - LA 415

Two interchange alternatives west of the Mississippi River Bridge are recommended to move forward. Those options are a partial cloverleaf interchange at LA 415 (Lobdell Highway), and a directional interchange at LA 415.

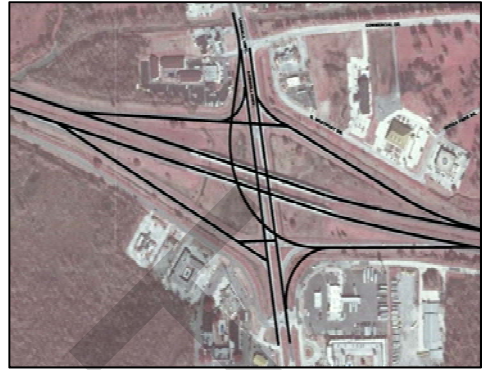
2.3.2.1 LA 415 Partial Cloverleaf

This interchange alternative replaces the diamond interchange in the southwest quadrant of this interchange with a partial cloverleaf. This concept would allow for improved south to east movements, which is the heaviest traffic movement at this interchange. The improvement entails eliminating the left turn conflict point and providing right-hand lane continuous movement.



2.3.2.2 LA 415 Directional

Similar to the partial cloverleaf, this alternative seeks to improve the south to east traffic movement. Currently, motorists travelling south on LA 415 desiring to proceed eastbound on I-10 make an unrestricted left hand turn from a dedicated turn lane. This alternative replaces that movement with a directional ramp. The ramp would cross over the interstate and combine (at-grade) with the existing north to east travel lane before merging with I-10 eastbound traffic.



2.3.3 Interchange Alternative - Highland-Nicholson

The alternative studied would lengthen the westbound acceleration and eastbound deceleration lanes on I-10 at this interchange. The lengthening would occur up to the overhead truss (the structure at the top of the bridge) portion of the bridge.

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2.3.4 Interchange Alternative - Washington-Dalrymple

Two interchange alternatives in the Washington Street and Dalrymple Drive area are recommended to move forward. The options studied were generated to address current operational deficiencies in the area. The improvements that are proposed include providing a means to access the Washington Street and Dalrymple Drive area from Interstate 110 (I-110) without crossing multiple lanes of traffic and providing an eastbound ramp onto I-10 in the Dalrymple Drive area.

2.3.4.1 Washington Street I-110 Left Exit

This alternative provides a left-hand exit ramp on I-110 South for the Washington Street/Dalrymple Drive area. This would improve safety by eliminating the double lane change that I-110 southbound traffic must make at the I-10/I-110 merge in order to exit at Washington Street. The new ramp would intersect at Terrace Street.



Due to the ongoing congestion issues associated with the Washington Street exit and minimal environmental effects, this proposed alternative will be analyzed under a separate Stage 1 evaluation in order to expedite its approval and advancement to funding and construction; it will not be included in the future Stage 1 process for the remaining 11 alternatives.

2.3.4.2 Dalrymple/Washington Consolidated Interchange

This alternative includes the concept discussed in Section 2.3.4.1 and adds four additional components. The first is the relocation of the existing eastbound Washington Street and Dalrymple Drive exits to create a dual exit located further west on I-10, thus eliminating the ability for motorists from I-110 to access the exit. This alternative would require eastbound motorists on I-10



to exit earlier to reach Dalrymple Drive. Those motorists desiring to get to the Dalrymple Drive area from I-110 would be required to exit at the new left-hand exit. The second is the removal of the existing I-10 westbound exit at Louise Street. Access to Louise Street would be via a new frontage road from the Dalrymple Drive exit. The third component is a turnaround under I-10 near Washington Street, which would allow motorists from the Dalrymple Drive area to get onto I-10 and travel eastbound. The fourth component is a new frontage road on the south side of I-10 between Washington Street and Dalrymple Drive.

2.3.5 Interchange Alternative - Perkins Road Closure

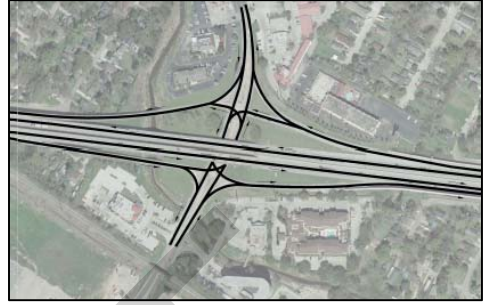
The Perkins Road interchange, as it exists, is a partial interchange with a westbound on-ramp and an eastbound off-ramp. The close proximity of the Perkins Road interchange to the Acadian Thruway interchange necessitates its closure to allow for improvements to the Acadian Thruway interchange.

2.3.6 Interchange Alternative - Acadian Thruway

Three alternatives were evaluated for the Acadian Thruway interchange. One alternative studied the effects of lengthening all the acceleration and deceleration lanes of the existing interchange. The other two alternatives studied the effects of replacing the existing tight urban diamond interchange with alternate interchange configurations.

2.3.6.1 Acadian Modification – Ramp Lengthening

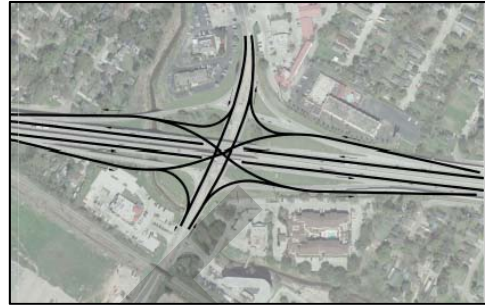
This alternative involves lengthening all the acceleration and deceleration lanes of the existing Acadian Thruway ramps in order to provide a safer merging distance.



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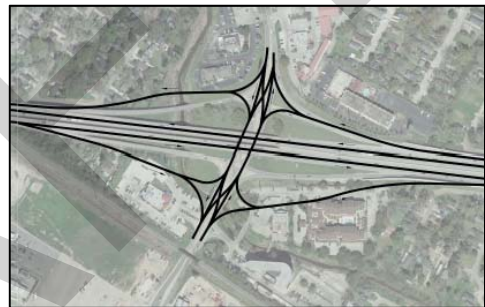
2.3.6.2 Acadian Modification – Single-Point Diamond

The single-point diamond interchange configuration would offer the operational advantage of allowing vehicles making opposing left turns to pass to the left of each other instead of to the right. This design can eliminate conflict and increase the overall efficiency of the interchange.



2.3.6.3 Acadian Modification – Diverging Diamond

The diverging diamond interchange more efficiently facilitates heavy left-turn movements than a traditional diamond. Traffic on the cross route moves to the left side of the roadway for the segment between signalized ramp intersections. By moving traffic left, left-turning vehicles can enter the highway without the need for a left-turn signal phase at the ramp intersections. Also, left-turning vehicles on the cross route do not conflict with opposing through traffic and may turn without stopping. This configuration may potentially require moving the existing southern ramp terminals.



2.3.7 Interchange Alternative - I-10/I-12 Split - College Directional Ramps

This alternative would provide dedicated exit lanes to College Drive from both I-10 and I-12. These lanes would separate from I-10 westbound and from I-12 westbound prior to the I-10/I-12 merge. Currently, westbound traffic from I-10 has to make a triple lane change across I-12 in order to exit at College Drive. This would eliminate the current weaving issue at the merge and improve safety by removing the triple lane change.



APPENDIX A
TIER 1 ANALYSIS

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The following worksheets analyze various project alternatives at various locations. In this Tier 1 analysis, mainline alternatives were compared to like projects as is the same with interchange projects. Each comparative category is given a comparative analysis level. Those levels are defined below. Within those categories may exist several factors taken into consideration. If any one of those factors has a level higher than the others, the highest level will govern that category.

MAINLINE INTERSTATE ALTERNATIVES

TRAFFIC OPERATIONS

High – Expected to improve operations at major bottleneck points and throughout the entire project area
 Moderate – Expected to improve operations through a portion of the project area
 Low – Expected to improve operations in spot locations only.

SAFETY IMPROVEMENT

Major - Expected to result in significant improvement
 Moderate - Expected to result in moderate improvement
 None - Expected to result in no improvement

RIGHT-OF-WAY

Right of way analysis takes into account several factors including impact to actual acreage, impacts to residential structures, impacts to businesses, and impacts to public buildings which includes churches, libraries, etc.
 Impact levels are as follows:

<u>Acreage (ac)</u>	<u>Residences, Businesses, Public Buildings (per occurrence)</u>
Low: 0-10	Low: 0-5 Residential, 0-2 Businesses, 0-2 Public Building
Moderate: 10-25	Moderate: 6-25 Residential, 3-10 Businesses, 3-6 Public Building
High: 25+	High: 26+ Residential, 11+ Businesses, 7+ Public Building

ENVIRONMENTAL/SOCIAL IMPACTS

This analysis takes into account several factors including impact to wetlands, environmental justice communities, 4f properties, historic properties and visual aesthetics.
 Impact levels are as follows:

<u>Wetlands (ac)</u>	<u>EJ Impacts (per)</u>	<u>4f (ac)</u>	<u>Historic Structures (per)</u>	<u>Visual</u>
Low: 0-3	Low: 0-3	Low: 0-3	Low: 0-1	Low: Little to no change
Moderate: 3-10	Moderate: 3-10	Moderate: 3-10	Moderate: 1-3	Moderate: Some change
High: 10+	High: 10+	High: 10+	High: 3+	High: Major change

COSTS

Low: Under \$250M
 Moderate: \$250M - \$500M
 High: \$500M +

INTERCHANGE ALTERNATIVES*

TRAFFIC OPERATIONS

High – Expected to accommodate the heavy demand movement with free flow and/or partially constrained operations
 Moderate – Expected to provide adequate operations for some but not all movements
 Low – Expected to provide poor operational conditions.

SAFETY

Major - Expected to result in significant improvement
 Moderate - Expected to result in moderate improvement
 None - Expected to result in no improvement

RIGHT-OF-WAY

Right of way analysis takes into account several factors including impact to actual acreage, impacts to residential structures, impacts to businesses, and impacts to public buildings
 Impact levels are as follows:

<u>Acreage (ac)</u>	<u>Residences, Businesses, Public Buildings (per occurrence)</u>
Low: 0-5	Low: 0-5 Residential, 0-2 Businesses, 0-2 Public Building
Moderate: 5-10	Moderate: 6-10 Residential, 3-6 Businesses, 3-6 Public Building
High: 10+	High: 10+ Residential, 6+ Businesses, 6+ Public Building

ENVIRONMENTAL/SOCIAL IMPACTS

This analysis takes into account several factors including impact to wetlands, environmental justice
 Impact levels are as follows:

<u>Wetlands (ac)</u>	<u>EJ Impacts (per)</u>	<u>4f (ac)</u>	<u>Historic Structures (per)</u>	<u>Visual</u>
Low: 0-3	Low: 0-3	Low: 0-2	Low: 0-1	Low: Little to no change
Moderate: 3-10	Moderate: 3-6	Moderate: 2-5	Moderate: 1-3	Moderate: Some change
High: 10+	High: 6+	High: 5+	High: 3+	High: Major change

COSTS



Low: Under \$30M
 Moderate: \$30M - \$60M
 High: \$60M +

*Interchange alternatives were developed to a very conceptual nature to be able to qualify the level of various categories. These interchange alternatives were not developed to design level detail


MAINLINE ALTERNATIVES

ALTERNATIVE CONCEPT	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL/SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
One Additional Lane	MODERATE CAPACITY	MAJOR	LOW	LOW	LOW	YES	YES	Interchange modification will be required to add additional lane. Additional lane concept excludes adding lane to the bridge.	YES
Multi-Lane Addition	HIGH CAPACITY	MAJOR	HIGH	HIGH	HIGH	YES	YES	Requires MRB modification to include additional lane in both directions.	NO
New Adjacent Bridge	HIGH CAPACITY	MAJOR	MODERATE	HIGH	HIGH	NO	YES	Reconfiguration of I-10/110 Interchange required. Requires at least 1 but likely 2 or more additional lanes in each direction on I-10 from I-110 to Split.	NO
High Pass	HIGH CAPACITY	MAJOR	MODERATE	HIGH	HIGH	NO	YES	ROW Impacts depend on design speed of high pass. Visual impacts to the adjacent communities are extreme.	NO
Movable Barrier	LOW CAPACITY	NONE	NONE	LOW	LOW	NO	NO	PM volumes are very balanced. AM volumes may be a better alternative, but cost/benefit is low.	NO
I-110 Westbank Connection	MODERATE CAPACITY	MODERATE	MODERATE	MODERATE	HIGH	NO	YES	Traffic volumes TBD. Cost/Benefit questionable. If a new bridge is built with required ROW for tie-in, better served for I-10 traffic.	NO
LA1/LA30 Direct Connection	LOW CAPACITY	MODERATE	LOW	MODERATE	HIGH	NO	YES	High cost for potential low volume of traffic.	NO
I-110 Frontage Roads	MODERATE CAPACITY	MODERATE	MODERATE	HIGH	LOW	YES	NO	Provide frontage roads connecting Government St and Dalrymple utilizing existing infrastructure as much as possible. Would continue 9th and 10th. Reconfigure traffic signals to treat frontage as major movement.	YES

LA HIGHWAY 415


INTERCHANGE FORM	ALTERNATIVE CONCEPT	INTERCHANGE TYPE	INTERCHANGE FORM	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL /SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION?	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
	LA 415	TandY							N/A		Does not apply for 4 legged interchange.	NO
	LA 415	Diamond		LOW CAPACITY	NONE				N/A		Current configuration.	N/A
	LA 415	Cloverleaf		HIGH CAPACITY	MAJOR	HIGH	LOW	MODERATE	N/A	YES	Right of way impacts extremely high	NO
	LA 415	PartialCloverleaf	PAR CLO-A	HIGH CAPACITY	MAJOR	MODERATE	LOW	LOW	N/A	YES	Potentially req'd for south side only. Diamond ramps on north.	YES
	LA 415	Directional		HIGH CAPACITY	MAJOR	LOW	LOW	MODERATE	N/A	YES	Current needs are sb to eb for directional ramp. With 415 connector, the nb to eb have to converge at I-10.	YES

LA HIGHWAY 1


INTERCHANGE FORM	ALTERNATIVE CONCEPT	INTERCHANGE TYPE	INTERCHANGE FORM	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL/SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION?	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
	Hwy. 1	TandY							N/A		Does not apply.	NO
	Hwy. 1	Diamond		LOW CAPACITY	NONE				N/A		Less capacity than existing.	NO
	Hwy. 1	Partial Cloverleaf		MODERATE CAPACITY	NONE				N/A		Less capacity than existing.	NO
	Hwy. 1	Cloverleaf	CLOVERLEAF WITH C-D ROADS	MODERATE CAPACITY	NONE				N/A		Limited by railroad	NO
	Hwy. 1	Directional	ALL-DIRECTIONAL	HIGH CAPACITY	NONE	LOW	LOW	HIGH	N/A	YES	Consider reconfiguration. One option is to eliminate the I-10 EB ramp and force traffic to use LA 415 connector.	YES

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HIGHLAND - NICHOLSON


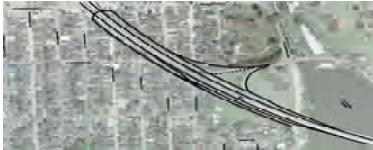

INTERCHANGE FORM	ALTERNATIVE CONCEPT	INTERCHANGE TYPE	INTERCHANGE FORM	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL /SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION?	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
	Highland - Nicholson	TandY							N/A		Does not apply.	NO
	Highland - Nicholson	Diamond		LOW CAPACITY	NONE				N/A		Half diamond exist. Full diamond proximity to other interchanges violates spacing creating unsafe conditions.	NO
	Highland - Nicholson	Partial Cloverleaf		MODERATE CAPACITY	NONE				N/A		Violates spacing creating unsafe conditions.	NO
	Highland - Nicholson	Cloverleaf		HIGH CAPACITY	NONE				N/A		Violates spacing creating unsafe conditions.	NO
	Highland - Nicholson	Directional		HIGH CAPACITY	NONE				N/A		Violates spacing creating unsafe conditions.	NO
	Highland - Nicholson_Closure				MAJOR				N/A		Interchange not currently hurting capacity of mainline.	NO
	Highland - Nicholson_Ramp Modification			MODERATE CAPACITY	NONE	LOW	LOW	LOW	N/A	YES	Adding additional lane for I-10 EB Nicholson. Extend WB accel lane to overhead truss portion of the bridge.	YES

I-110


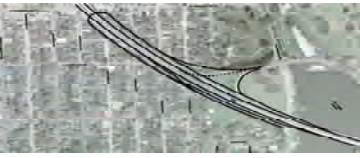
INTERCHANGE FORM	ALTERNATIVE CONCEPT	INTERCHANGE TYPE	INTERCHANGE FORM	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL/ SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION?	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
	I-110 _Flatten Curves	TandY	DIRECTIONAL-Y	HIGH CAPACITY	MODERATE	HIGH	HIGH	HIGH	N/A	YES	Alternative proposed to reconfigure interchange to provide 50 mph design speed for ramps. Cost/benefit questionable. High right of way impacts and costs.	NO
	I-110	Diamond							N/A		Does not apply.	NO
	I-110	PartialCloverleaf							N/A		Does not apply.	NO
	I-110	Cloverleaf							N/A		Does not apply.	NO
	I-110	Directional							N/A		Does not apply.	NO

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WASHINGTON - DALRYMPLE

INTERCHANGE FORM	ALTERNATIVE CONCEPT	INTERCHANGE TYPE	INTERCHANGE FORM	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL/SOCI AL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
	Washington Modification 1			MODERATE CAPACITY	MODERATE	NONE	LOW	MODERATE	N/A	YES	new left exit for Washington Street off of I-110.	YES
	Washington Modification 2	TandY							N/A		Does not apply.	NO
	Washington Modification 2	Diamond		LOW CAPACITY	NONE	HIGH	HIGH	HIGH	N/A	YES	Current configuration split diamond. Modification to full diamond would worsen current interchange spacing.	NO
	Washington Modification 2	PartialCloverleaf		MODERATE CAPACITY	MODERATE	HIGH	HIGH	HIGH	N/A	YES	High row impact. Proximity violation.	NO
	Washington Modification 2	Cloverleaf		HIGH CAPACITY	MAJOR	HIGH	HIGH	HIGH	N/A	YES	High row impact. Proximity violation.	NO
	Washington Modification 2	Directional		HIGH CAPACITY	MAJOR	HIGH	HIGH	HIGH	N/A	YES	High row impact. Proximity violation.	NO
	Dalrymple Modification_Direct	Diamond	TIGHT URBAN DIAMOND	MODERATE CAPACITY	NONE	HIGH	HIGH	MODERATE	N/A	YES	Alternative provides direct access ramp for Dalrymple across lakes to I-10 EB. High social impact for adding ramp. High right of way costs for acquisition on east side of lakes.	NO
	Dalrymple Modification	TandY							N/A		Does not apply.	NO
	Dalrymple Modification	PartialCloverleaf		MODERATE CAPACITY	MODERATE	HIGH	HIGH	HIGH	N/A	YES	High row impact. Proximity violation.	NO
	Dalrymple Modification	Cloverleaf		HIGH CAPACITY	MAJOR	HIGH	HIGH	HIGH	N/A	YES	High row impact. Proximity violation.	NO
	Dalrymple Modification	Directional		HIGH CAPACITY	MAJOR	HIGH	HIGH	HIGH	N/A	YES	High row impact. Proximity violation.	NO
	Dalrymple Modification_Braided	Diamond	SPLIT DIAMOND	HIGH CAPACITY	MAJOR	LOW	MODERATE	HIGH	N/A	YES	Provide an EB on ramp for Dalrymple. Route entering traffic to use current WB on ramp at Dalrymple and continue with a frontage road to Washington St. where a u-turn will be located. Entrance ramp would then be introduced and be braided with current EB Dalrymple exit.	YES
	Dalrymple Modification_Braided - No Frontage	Diamond	SPLIT DIAMOND	HIGH CAPACITY	MODERATE	LOW	MODERATE	HIGH	N/A	YES	Provide an EB on ramp for Dalrymple. Route entering traffic to use existing Washington Street. Entrance ramp would then be introduced and be braided with current EB Dalrymple exit.	YES




WASHINGTON - DALRYMPLE

INTERCHANGE FORM	ALTERNATIVE CONCEPT	INTERCHANGE TYPE	INTERCHANGE FORM	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL/SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
	Dalrymple/Washington Consolidated Interchange	Diamond	SPLIT DIAMOND	HIGH CAPACITY	MAJOR	HIGH	LOW	MODERATE	N/A	YES	Reconfigured interchange would serve both Washington and Dalrymple. Restrict EB exit at Washington to I-10 only. This would now serve Washington and Dalrymple. I-110 would use relocated Washington exit. Traffic destined for Dalrymple would then continue via frontage road to Dalrymple. Frontage roads would be constructed for both directions along I-10. Traffic wanting to use EB on ramp from Dalrymple would use existing WB Dalrymple on ramp but continue on frontage. U-turn location at Washington. EB on ramp located off of frontage. Current EB exit at Dalrymple would be closed to accommodate EB on ramp. Washington Street WB on ramp would be closed and traffic would be rerouted to use existing Dalrymple on ramp.	YES
	Dalrymple/Washington Braided Ramps Interchange _Relocate Washington EB exit	Diamond	SPLIT DIAMOND	HIGH CAPACITY	MAJOR	LOW	MODERATE	HIGH	N/A	YES	Same as "Dalrymple Modification - Braided" but relocates the existing EB Washington Street exit further west on I-10 to eliminate the ability to access it from I-110	YES

PERKINS ROAD

ALTERNATIVE CONCEPT	INTERCHANGE TYPE	INTERCHANGE FORM	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL /SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
Perkins_Closure				MODERATE				N/A		Partial interchange. Closure of both WB on-ramp and EB off-ramp due to its proximity to Acadian	YES
Perkins_Full Access Interchange	TandY							N/A		Does not apply.	NO
Perkins	Diamond		LOW CAPACITY	NONE	HIGH	HIGH	LOW	N/A	YES	High right of way impact and associated cost. Violates spacing creating unsafe conditions.	NO
Perkins	Partial Cloverleaf		MODERATE CAPACITY	NONE	HIGH	HIGH	MODERATE	N/A	YES	High right of way impact and associated cost. Violates spacing creating unsafe conditions.	NO
Perkins	Cloverleaf		HIGH CAPACITY	NONE	HIGH	HIGH	MODERATE	N/A	YES	High right of way impact and associated cost. Violates spacing creating unsafe conditions.	NO
Perkins	Directional		HIGH CAPACITY	NONE	HIGH	HIGH	MODERATE	N/A	YES	High right of way impact and associated cost. Violates spacing creating unsafe conditions.	NO

ACADIAN THRUWAY

INTERCHANGE FORM	ALTERNATIVE CONCEPT	INTERCHANGE TYPE	INTERCHANGE FORM	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL/SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
	Acadian Modification	TandY							N/A		Does not apply	NO
	Acadian Modification	Diamond	TIGHT URBAN DIAMOND	MODERATE CAPACITY	NONE	NONE	LOW	LOW	N/A	NO	Current configuration	N/A
	Acadian Modification - Ramp Lengthening	Diamond	TIGHT URBAN DIAMOND	MODERATE CAPACITY	MODERATE	LOW	LOW	LOW	N/A	NO	Lengthen acceleration/deceleration lengths of the current ramps to provide a safe merging distance.	YES
	Acadian Modification	Diamond	SINGLE-POINT DIAMOND	MODERATE CAPACITY	MODERATE	NONE	LOW	LOW	N/A	YES	May require additional right of way	YES
	Acadian Modification	Diamond	DDI	HIGH CAPACITY	MODERATE	LOW	LOW	LOW	N/A	YES	Potentially require moving southern ramp terminals.	YES
	Acadian Modification	Diamond	Displaced Left	HIGH CAPACITY	MODERATE	MODERATE	LOW	LOW	N/A	YES	Available right of way and proximity of railroad underpass makes this option difficult to construct.	NO
	Acadian Modification	PartialCloverleaf	PAR CLO-A	HIGH CAPACITY	MODERATE	HIGH	HIGH	MODERATE	N/A	YES	Right of way impacts and associated costs are high	NO
	Acadian Modification	Cloverleaf		HIGH CAPACITY	MAJOR	HIGH	HIGH	MODERATE	N/A	YES	Right of way impacts and associated costs are high	NO
	Acadian Modification	Directional		HIGH CAPACITY	MAJOR	HIGH	HIGH	MODERATE	N/A	YES	Right of way impacts and associated costs are high	NO

COLLEGE DRIVE


ALTERNATIVE CONCEPT	INTERCHANGE TYPE	INTERCHANGE FORM	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL/SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
College Modification	TandY			MAJOR				N/A		Does not apply	NO
College Modification	Diamond	TIGHT URBAN DIAMOND	MODERATE CAPACITY	NONE	NONE		LOW	N/A	NO	Current configuration with 2 quad par clo on north half.	NO
College Modification	Diamond	TIGHT URBAN DIAMOND	MODERATE CAPACITY	NONE	MODERATE	LOW	LOW	N/A	YES	Provide WB on ramp in standard diamond fashion. Would move WB off ramp closer to I-10. Would require row on the nw quadrant. Would require braided ramps with Acadian Interchange to not violate spacing.	NO
College Modification	Diamond	SINGLE-POINT DIAMOND	LOW CAPACITY	MODERATE	HIGH	LOW	LOW	N/A	YES	Right of way impacts and associated costs are high. Potentially have to widen span. Would affect Constitution Ave.	NO
College Modification	Diamond	DDI	LOW CAPACITY	MODERATE	HIGH	MODERATE	LOW	N/A	YES	Right of way impacts and associated costs are high. Potentially have to widen span. Would affect Constitution Ave.	NO
College Modification	Diamond	Displaced Left	MODERATE CAPACITY	MODERATE	HIGH	MODERATE	LOW	N/A	YES	Right of way impacts and associated costs are high. Potentially have to widen span. Would affect Constitution Ave.	NO
College Modification	PartialCloverleaf	PAR CLO-A	HIGH CAPACITY	MODERATE	HIGH	HIGH	MODERATE	N/A	YES	Right of way impacts and associated costs are high	NO
College Modification	Cloverleaf		HIGH CAPACITY	MAJOR	HIGH	HIGH	HIGH	N/A	YES	Right of way impacts and associated costs are high	NO
College Modification	Directional		HIGH CAPACITY	MAJOR	HIGH	HIGH	HIGH	N/A	YES	Right of way impacts and associated costs are high	NO

ACADIAN THRUWAY - COLLEGE DRIVE

INTERCHANGE FORM	ALTERNATIVE CONCEPT	INTERCHANGE TYPE	INTERCHANGE FORM	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL/SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
	College/Acadian Frontage	Diamond	TIGHT URBAN DIAMOND	HIGH CAPACITY	MAJOR	MODERATE	HIGH	MODERATE	N/A	YES	Construct frontage roads connecting College and Acadian for EB. Westbound ramps would have substantial impact. Eastbound ramps would have substantial visual impact and potential noise impact to park. Project would serve a small segment of metro area population and not greater Baton Rouge or corridor thru-traffic.	NO

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I-10 / I-12 SPLIT

INTERCHANGE FORM	ALTERNATIVE CONCEPT	INTERCHANGE TYPE	INTERCHANGE FORM	TRAFFIC OPERATIONS	SAFETY	RIGHT-OF-WAY	ENVIRONMENTAL/SOCIAL IMPACTS	COSTS	ABLE TO PHASE CONSTRUCTION	INTERCHANGE MODIFICATION REPORT REQ'D	REMARKS	CONSIDERATION TIER 2
	I-10 I-12 Split_College Directional Ramps			HIGH CAPACITY	MAJOR	NONE	LOW	MODERATE	N/A	YES	Provide dedicated exit lanes to College Drive and separate from I-10/12 WB prior to 10/12 merge. This would eliminate current weaving issue at merge.	YES

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DCR APPENDIX B

Raw Count Data

DRAFT

URBAN SYSTEMS inc.



MEMO

To:
Rina Patolic
Louisiana Department of
Transportation and Development

Arcadis U.S., Inc.
10352 Plaza Americana Drive
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Tel 225 292 1004
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From:
Skyler Waaso, PE

Date:
November 30, 2017

Arcadis Project No.:
TM170036.0001

Subject:
48-hour and TMC Data – QA/QC Documentation
I-10 Data Collection: LA 415 to Essen Lane
East and West Baton Rouge Parishes, Louisiana
State Project No. H.004100.2-2

INTRODUCTION

The 48-hour and turning movement count (TMC) locations along I-10 were collected during the week of October *** thru November ** for the designated locations along the I-10 corridor between the interchanges at LA 415 and Essen Lane. The complete list of 48-hour and TMC locations within the study area are included in this memorandum. The following summary of the data collection along I-10 is provided to help detail the quality checks that took place during the review of the raw data. Figure 1 shows the 48-day count locations for this project.



Figure 1. 48-Hour and TMC Locations

48-HOUR AND TMC LOCATIONS

LA 415 Interchange

SITE #13 (I-10 EB off-ramp)

- The turning movement count at Site #18 (I-10 EB Off Ramp at LA 415) had to be reset and as a result the 48-hour tube count at Site #13 was reset to ensure a tube count was taken at the same time as the TMC at the off-ramp.
- Site #13 matches with the TMC at Site #18

SITE #14 (I-10 WB off-ramp)

- The 48-hour tube count on the I-10 WB off-ramp was taken during the same time as the TMC at the I-10 WB terminal intersection (Site #17). Both AM and PM peak hours are similar when comparing the tubes to the turning movement count.

SITE #15, 16, 17, 19 (TMC locations along LA 415)

- All the TMC locations were taken during the same day except Site #18 (I-10 EB off-ramp at LA 415). The TMC locations were checked and no gaps were found in the data.

I-10 and I-110 Interchange

SITE #26 (I-10 EB to I-10 EB)

- Two types of traffic counts were obtained for the I-10 EB data at this location. A 24-hour classification count was performed on Wednesday, October 11th and a 7-day volume count (Site #4) was performed from October 11th to October 18th. The data collected on October 11th was compared for the classification count done by video and the volume collected from the tube count (as part of the 7-day count). The volume for the tube counts were significantly higher when compared to the volume provided in the 24-hour classification count. We spoke to Southern Traffic Services (STS) and they recommended focusing on the volume provided in the 24-hour classification count. The tubes at this location may have vibrated and picked up additional volume. The 24-hour classification counts were done by video and would be considered more accurate than the tube counts at this location.

SITE #27 (I-10 WB to I-110 NB)

- Site #27 had a 24-hour classification count performed on Wednesday, October 11th and a 7-day volume count (Site #3) performed from October 10th to October 17th. A comparison between traffic volumes collected on October 11th for both counts showed volumes for the tube counts (as part of the 7-day count) were significantly lower than the 24-hour classification count (video) in the AM peak period. The PM peak period was comparable between the two data sets. The I-10 WB volumes obtained from 7-day counts at Site #9 (I-10 West of Acadian Thwy) and Site #6 (I-10 East of Acadian Thwy) were also compared to the 24-hr volume for I-10 WB at the I-10 WB / I-110 NB split. The PM peak hour volumes were all similar in the I-10 WB direction. However, the AM peak hour volume obtained from the 7-day count at Site #3 / (I-10 WB to I-110 NB) differed from the 7-day counts at Site #9 (I-10 West of Acadian Thwy) and Site #6 (I-10 East of Acadian Thwy) was not comparable when looking at the 7-day count volume at Site #27. The AM peak hour volume is similar between the 24-hour classification count at Site #27 and the volumes from the 7-day counts at Site #6 and #9, indicating the 24-hour classification count is more accurate than the tube count at this location.

Washington Street Interchange

SITE #28 (I-10 EB off-ramp)

- This location was reset due to an error while collecting the TMC for Site #32. A tube was placed at Site #28 for one day (Thursday, November 9th) to ensure that a tube count was taken the same day as the recounted TMC.
- Both AM and PM were confirmed to be similar when comparing Site #28 and Site #32. It should be noted that the corridor peak for Washington Street is around 2:30pm. The early peak could be a result of McKinley Middle School located on Louise Street. However, looking at the nearby interchange at Dalrymple Drive and the overall network, it was determined that the PM peak hour for this interchange would be 4:30-5:30pm.

SITE #29 (Washington Street – east of interchange)

- The tube count on Washington Street was compared to the TMC at Washington Street and McCalop Street (Site #35). The volume is similar between the two count locations.

SITE #33, 34, 35, 36 (TMC's at the Washington Street interchange)

- The TMC's at Site #34, 35, and 36 were taken on the same day (Wednesday, October 25th). Site #33 (I-10 EB off-ramp) needed to be reset and was taken on Thursday, November 9th. The TMC locations at Site #33 (I-10 EB off-ramp) and Site #35 (Washington Street at McCalop Street) were compared against each other due to the counts being taken on different days. The counts were comparable and minimal volume balancing will need to be done between intersections.

Dalrymple Drive Interchange

SITE #37 (I-10 WB off-ramp)

- The volume on the tube count on the I-10 WB off-ramp (Site #37) was compared to the TMC at Site #38. The volume is similar for both count locations. The TMCs are also comparable along Dalrymple Drive when looking at TMC Site #38 and #39.

Acadian Thruway Interchange

SITE #47 (I-10 EB off-ramp)

- The tube count on Thursday, November 2nd couldn't be processed but data was obtained on Tuesday, October 31st and Wednesday, November 1st for Site #47. The tube data on Tuesday and Wednesday compare well to the TMC taken on Thursday for Site #52 (I-10 EB off-ramp at Acadian Thruway).

SITE #48 (I-10 WB off-ramp)

- The tube count on Thursday, November 2nd was compared to the TMC taken at Site #53 (I-10 WB off-ramp). The tube count data and the TMC on the I-10 WB off-ramp are comparable to one another.

SITE #45 (Stanford Avenue)

- The tube count data in the northbound direction along Stanford Avenue was compared to the TMC located at Perkins Road and Acadian Thruway (Site #50). The volumes compared very well to each other for the count performed on Thursday, November 2nd.

- The tube count data in the southbound direction along Stanford Avenue was compared to the TMC located at Perkins Road and Acadian Thruway (Site #50). The volumes on the tube count were approximately 100 vehicles more in the AM and PM peak hours when compared to the data in the TMC. Minor roads could be a contributing factor for the difference between the volume in the TMC and the tube count.

SITE #49 (Acadian Thruway near Bawell Drive)

- The tube count data in the northbound direction along Acadian Thruway was compared to the TMC located at Acadian Thruway and Bawell Drive (Site #54). The AM peak hour volumes are about 100 more with the tube count data when compared to the TMC data. The PM peak hour volume is comparable for both the tube count and the TMC location.
- The tube count data in the southbound direction along Acadian Thruway was compared to the TMC located at Acadian Thruway and Bawell Drive (Site #54). The volumes compared well to each other for the count performed on Thursday, November 2nd.

College Drive

SITE #55 (I-10 WB off-ramp)

- The TMC at I-10 WB off-ramp and College Drive (Site #59) needed to be reset. The 48-hour tube count was reset along with the TMC but only one day (Thursday, November 9th) was able to be captured for both the tube data and the TMC. When comparing the 24-hour tube count (Site #55) and the TMC at Site #59, similar volume was provided for each count.

To:
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Louisiana Department of
Transportation and Development

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From:
Skyler Waaso, PE

Date:
November 6, 2017

Arcadis Project No.:
TM170036.0001

Subject:
7-day 24-hour Count Data – QA/QC Documentation
I-10 Data Collection: LA 415 to Essen Lane
East and West Baton Rouge Parishes, Louisiana
State Project No. H.004100.2-2

INTRODUCTION

The 7-day 24-hour count locations along I-10 were collected during the week of October 9th thru October 30th for the interstate segments between LA 415 and Essen Lane. The complete list of 7-day 24-hour traffic counts on the interstate are included in this memorandum. The raw data for the count sites listed below can be found in the digital attachment. The following summary of the data collection along I-10 is provided to help detail the quality checks that took place during the review of the raw data. Figure 1 shows the 7-day count locations for this project. The 7-day counts on the arterial roadways were included in the *Peak-Period Determination Memorandum* submitted to LADOTD on October 31, 2017.



Figure 1. 7-Day Machine Tube Count Locations

7-DAY 24-HOUR COUNTS

SITE #1 (I-10 East of LA 415)

I-10 EB

- The I-10 EB volume was checked and the highest day out of the week occurred on Saturday, October 14th. An LSU football game took place at 2:30pm and this event could attribute to the higher weekend volume.

I-10 WB

- A reduction in volume on Thursday, October 19th is being shown from 2:15pm to 5:00pm. An accident occurred on I-10 WB on the Mississippi River Bridge around noon and all lanes were not clear until after 3pm. The accident took time to clear and is the reason for the volume discrepancy on Thursday October 19th.

SITE #3 (West of Washington Street Interchange)

I-10 WB

- The I-10 WB data was broken down into I-10 WB to I-110 NB and I-10 WB to I-10 WB. Data is comparable for each site. The Tuesday, Wednesday, Thursday volumes look to be similar and representative of the traffic on I-10 WB.

SITE #4 (West of Washington Street Interchange)

I-10 EB

- The I-10 EB data is very similar on Wednesday and Thursday of the 7-day count. The Tuesday counts looks to be about 300 less every 15-minutes from 5:00-6:30pm. Multiple accidents occurred on Tuesday, October 17th. The right lane was blocked at I-10 EB at Washington Street due to a disabled truck at approximately 3:00pm and congestion reached LA 415. Another accident occurred around 4:00pm with the right lane blocked on I-10 EB on the Mississippi River Bridge.

SITE #6 (West of Perkins Road on/off ramps)

I-10 EB

- Data collected on Wednesday, October 11th experienced issues with only about half of the daily volume captured when compared to the other six days of data collected.
- Volume on Tuesday, October 17th also appears to be having issues as the afternoon data is showing similar volume in the slow lane and the combined middle/fast lane. It should be noted that an accident occurred at Washington Street that blocked the right lane around 3:00pm.
- The volume on Thursday, October 12th appears to be valid.

I-10 WB

- The first day of data collection (Tuesday, October 10th) along I-10 WB at Site #6 resulted in no data from 8:00pm to 12:00pm. The tube counters at this location remained on the ground the next week to capture the data for Tuesday, October 17th.

SITE #7 (I-10 WB on-ramp at Perkins Road)

I-10 WB on-ramp

- Volume checked for I-10 WB off-ramp at Perkins Road and volume consistent for Tuesday-Thursday. Site #7 doesn't contain any noticeable data gaps.

SITE #8 (I-10 EB off-ramp at Perkins Road)

I-10 EB off-ramp

- Volume checked for I-10 EB on-ramp at Perkins Road and a significantly larger volume during Tuesday, October 17th was noticed. The accident log was reviewed on Tuesday, October 17th and no noticeable incident took place near the interchange or downstream of the interchange that would cause a higher volume to use the exit ramp to Perkins Road. The Wednesday and Thursday counts produce very similar volumes and is recommended that the average of the Wednesday/Thursday counts be used for this location.

SITE #9 (I-10 between Acadian Thruway and College Drive)

I-10 EB

- Volume checked for I-10 EB and data from 10/10/17 to 10/17/17 is complete

I-10 WB

- Volume checked for I-10 WB and data from 10/10/17 to 10/17/17 is complete

SITE #10 (I-10 WB prior to I-10/I-12 merge)

I-10 WB

- The data was taken from October 11th (Wednesday) to October 17th (Tuesday). Data is comparable on the weekdays and no noticeable issues were discovered during the QA/QC process.

SITE #11 (I-12 WB prior to I-10/I-12 merge)

I-12 WB

- The count location experienced issues with the tubes staying on the ground. The data collection started on October 11th (Wednesday) and was only able to collect data until Saturday, October 21st. The remaining days (Monday, Tuesday, Sunday) were collected on October 23rd, 24th, and 29th. Data is comparable for the weekdays (Tuesday, Wednesday, Thursday).

POTENTIAL RECOUNT LOCATIONS

The data was processed for Site #6 and a few issues were noted for the I-10 EB direction. The data obtained on Thursday, October 12th appears valid, but issues were noticed on the data collected for Tuesday and Wednesday. This could be a potential recount location along I-10 EB. If data needs to be recollected at this location, please let us know and we will coordinate with Southern Traffic Services.

DRAFT

ARCADIS INFRASTRUCTURE DIVISION
QA/QC ACKNOWLEDGEMENT FORM

Project Name: I-10 Data Collection: LA 415 to Essen Lane

Project No.: TM170036

Facility/Project Location: East and West Baton Rouge Parishes, Louisiana

Discipline: Infrastructure

Work Product: Traffic Data Analysis QC

(briefly describe the work being reviewed)

Milestone: 7-day 24-hour traffic count data – QA/QC

(briefly describe the status of work product being reviewed)

Notes:

The 7-day 24-hour count locations along I-10 have been reviewed following any recounts that were required. The breakdown of the quality checks performed by Arcadis is attached along with a digital attachment for the raw data for all 7-day 24-hour count data.

Preparer (Self-Checker): Southern Traffic Services

Date Submitted for Review: 10/23/2017
11/1/2017

Reviewer: Skyler Waaso / Jose Jarquin

Date Review Completed: 11/3/2017

Site #9 - I-10 EB (btwn Acadian/College)

0 0 1 300 101017 300 101717 15 2 1 100 678 200
 0 0 0 0 0 0 0 0 0 0 0 'Volume (TVP)

TIME	Lanes	
	Fast/Fast Middle	Slow/Slow Middle
1	315	28
1	330	112
1	345	164
1	400	139
1	415	185
1	430	189
1	445	238
1	500	335
1	515	333
1	530	318
1	545	465
1	600	527
1	615	563
1	630	665
1	645	717
1	700	861
1	715	889
1	730	912
1	745	955
1	800	976
1	815	824
1	830	868
1	845	795
1	900	739
1	915	728
1	930	789
1	945	776
1	1000	780
1	1015	745
1	1030	810
1	1045	807
1	1100	716
1	1115	778
1	1130	877
1	1145	851
1	1200	795
1	1215	816
1	1230	768
1	1245	825
1	1300	759
1	1315	790
1	1330	824
1	1345	866
1	1400	920
1	1415	882
1	1430	870
1	1445	942
1	1500	938
1	1515	945
1	1530	917
1	1545	981
1	1600	929
1	1615	973
1	1630	919
1	1645	919
1	1700	950
1	1715	893
1	1730	881
1	1745	898
1	1800	826
1	1815	829
1	1830	859
1	1845	825
1	1900	721
1	1915	610
1	1930	624
1	1945	603
1	2000	566
1	2015	504
1	2030	566
1	2045	493
1	2100	457
1	2115	403
1	2130	367
1	2145	320
1	2200	342
1	2215	311
1	2230	271
1	2245	281
1	2300	242
1	2315	216
1	2330	210
1	2345	156
1	2400	147
1	15	160
1	30	120
1	45	133
1	100	111
1	115	113
1	130	112

Site	Direction	Date	Time	Total
Site9	EB	10/10/2017	315	50
Site9	EB	10/10/2017	330	180
Site9	EB	10/10/2017	345	259
Site9	EB	10/10/2017	400	240
Site9	EB	10/10/2017	415	294
Site9	EB	10/10/2017	430	301
Site9	EB	10/10/2017	445	397
Site9	EB	10/10/2017	500	507
Site9	EB	10/10/2017	515	525
Site9	EB	10/10/2017	530	523
Site9	EB	10/10/2017	545	741
Site9	EB	10/10/2017	600	863
Site9	EB	10/10/2017	615	935
Site9	EB	10/10/2017	630	1115
Site9	EB	10/10/2017	645	1236
Site9	EB	10/10/2017	700	1457
Site9	EB	10/10/2017	715	1518
Site9	EB	10/10/2017	730	1614
Site9	EB	10/10/2017	745	1632
Site9	EB	10/10/2017	800	1641
Site9	EB	10/10/2017	815	1483
Site9	EB	10/10/2017	830	1486
Site9	EB	10/10/2017	845	1389
Site9	EB	10/10/2017	900	1319
Site9	EB	10/10/2017	915	1262
Site9	EB	10/10/2017	930	1297
Site9	EB	10/10/2017	945	1310
Site9	EB	10/10/2017	1000	1314
Site9	EB	10/10/2017	1015	1275
Site9	EB	10/10/2017	1030	1387
Site9	EB	10/10/2017	1045	1381
Site9	EB	10/10/2017	1100	1247
Site9	EB	10/10/2017	1115	1362
Site9	EB	10/10/2017	1130	1524
Site9	EB	10/10/2017	1145	1471
Site9	EB	10/10/2017	1200	1386
Site9	EB	10/10/2017	1215	1455
Site9	EB	10/10/2017	1230	1424
Site9	EB	10/10/2017	1245	1446
Site9	EB	10/10/2017	1300	1354
Site9	EB	10/10/2017	1315	1431
Site9	EB	10/10/2017	1330	1469
Site9	EB	10/10/2017	1345	1535
Site9	EB	10/10/2017	1400	1588
Site9	EB	10/10/2017	1415	1508
Site9	EB	10/10/2017	1430	1475
Site9	EB	10/10/2017	1445	1602
Site9	EB	10/10/2017	1500	1627
Site9	EB	10/10/2017	1515	1607
Site9	EB	10/10/2017	1530	1559
Site9	EB	10/10/2017	1545	1697
Site9	EB	10/10/2017	1600	1546
Site9	EB	10/10/2017	1615	1598
Site9	EB	10/10/2017	1630	1501
Site9	EB	10/10/2017	1645	1549
Site9	EB	10/10/2017	1700	1629
Site9	EB	10/10/2017	1715	1494
Site9	EB	10/10/2017	1730	1507
Site9	EB	10/10/2017	1745	1558
Site9	EB	10/10/2017	1800	1445
Site9	EB	10/10/2017	1815	1460
Site9	EB	10/10/2017	1830	1488
Site9	EB	10/10/2017	1845	1378
Site9	EB	10/10/2017	1900	1247
Site9	EB	10/10/2017	1915	1158
Site9	EB	10/10/2017	1930	1152
Site9	EB	10/10/2017	1945	1087
Site9	EB	10/10/2017	2000	1025
Site9	EB	10/10/2017	2015	954
Site9	EB	10/10/2017	2030	1003
Site9	EB	10/10/2017	2045	891
Site9	EB	10/10/2017	2100	815
Site9	EB	10/10/2017	2115	750
Site9	EB	10/10/2017	2130	669
Site9	EB	10/10/2017	2145	595
Site9	EB	10/10/2017	2200	596
Site9	EB	10/10/2017	2215	523
Site9	EB	10/10/2017	2230	482
Site9	EB	10/10/2017	2245	466
Site9	EB	10/10/2017	2300	408
Site9	EB	10/10/2017	2315	365
Site9	EB	10/10/2017	2330	342
Site9	EB	10/10/2017	2345	279
Site9	EB	10/11/2017	2400	244
Site9	EB	10/11/2017	15	243
Site9	EB	10/11/2017	30	197
Site9	EB	10/11/2017	45	203
Site9	EB	10/11/2017	100	176
Site9	EB	10/11/2017	115	208
Site9	EB	10/11/2017	130	171

1 1 0 315 172 124 296
1 1 0 330 160 117 277
1 1 0 345 148 80 228
1 1 0 400 144 93 237
1 1 0 415 171 95 266
1 1 0 430 165 89 254
1 1 0 445 169 91 260
1 1 0 500 203 114 317
1 1 0 515 247 120 367
1 1 0 530 241 141 382
1 1 0 545 281 167 448
1 1 0 600 314 182 496
1 1 0 615 287 208 495
1 1 0 630 349 188 537
1 1 0 645 355 218 573
1 1 0 700 398 264 662
1 1 0 715 355 240 595
1 1 0 730 383 265 648
1 1 0 745 452 304 756
1 1 0 800 531 369 900
1 1 0 815 482 322 804
1 1 0 830 553 359 912
1 1 0 845 643 404 1047
1 1 0 900 641 465 1106
1 1 0 915 668 448 1116
1 1 0 930 715 487 1202
1 1 0 945 667 472 1139
1 1 0 1000 734 520 1254
1 1 0 1015 748 496 1244
1 1 0 1030 755 536 1291
1 1 0 1045 747 516 1263
1 1 0 1100 766 506 1272
1 1 0 1115 764 502 1266
1 1 0 1130 779 504 1283
1 1 0 1145 830 508 1338
1 1 0 1200 748 524 1272
1 1 0 1215 808 501 1309
1 1 0 1230 833 528 1361
1 1 0 1245 805 537 1342
1 1 0 1300 864 510 1374
1 1 0 1315 818 512 1330
1 1 0 1330 757 537 1294
1 1 0 1345 815 497 1312
1 1 0 1400 847 592 1439
1 1 0 1415 790 502 1292
1 1 0 1430 767 525 1292
1 1 0 1445 746 511 1257
1 1 0 1500 817 528 1345
1 1 0 1515 858 540 1398
1 1 0 1530 869 554 1423
1 1 0 1545 749 544 1293
1 1 0 1600 748 497 1245
1 1 0 1615 815 549 1364
1 1 0 1630 777 537 1314
1 1 0 1645 853 553 1406
1 1 0 1700 827 576 1403
1 1 0 1715 757 525 1282
1 1 0 1730 834 508 1342
1 1 0 1745 735 507 1242
1 1 0 1800 716 500 1216
1 1 0 1815 812 588 1400
1 1 0 1830 853 614 1467
1 1 0 1845 898 598 1496
1 1 0 1900 878 587 1465
1 1 0 1915 849 558 1407
1 1 0 1930 826 548 1374
1 1 0 1945 827 593 1420
1 1 0 2000 810 570 1380
1 1 0 2015 795 608 1403
1 1 0 2030 631 547 1178
1 1 0 2045 585 461 1046
1 1 0 2100 528 435 963
1 1 0 2115 498 396 894
1 1 0 2130 454 346 800
1 1 0 2145 486 380 866
1 1 0 2200 443 313 756
1 1 0 2215 417 312 729
1 1 0 2230 378 301 679
1 1 0 2245 375 258 633
1 1 0 2300 375 281 656
1 1 0 2315 340 246 586
1 1 0 2330 322 226 548
1 1 0 2345 300 232 532
1 1 0 2400 308 209 517
1 1 0 15 260 186 446
1 1 0 30 242 150 392
1 1 0 45 236 149 385
1 1 0 100 223 154 377
1 1 0 115 231 120 351
1 1 0 130 210 144 354
1 1 0 145 220 122 342
1 1 0 200 221 124 345
1 1 0 215 245 159 404
1 1 0 230 242 173 415
1 1 0 245 174 121 295
1 1 0 300 116 96 212
1 1 0 315 129 79 208
1 1 0 330 123 83 206

Site9 EB 10/14/2017 315 296
Site9 EB 10/14/2017 330 277
Site9 EB 10/14/2017 345 228
Site9 EB 10/14/2017 400 237
Site9 EB 10/14/2017 415 266
Site9 EB 10/14/2017 430 254
Site9 EB 10/14/2017 445 260
Site9 EB 10/14/2017 500 317
Site9 EB 10/14/2017 515 367
Site9 EB 10/14/2017 530 382
Site9 EB 10/14/2017 545 448
Site9 EB 10/14/2017 600 496
Site9 EB 10/14/2017 615 495
Site9 EB 10/14/2017 630 537
Site9 EB 10/14/2017 645 573
Site9 EB 10/14/2017 700 662
Site9 EB 10/14/2017 715 595
Site9 EB 10/14/2017 730 648
Site9 EB 10/14/2017 745 756
Site9 EB 10/14/2017 800 900
Site9 EB 10/14/2017 815 804
Site9 EB 10/14/2017 830 912
Site9 EB 10/14/2017 845 1047
Site9 EB 10/14/2017 900 1106
Site9 EB 10/14/2017 915 1116
Site9 EB 10/14/2017 930 1202
Site9 EB 10/14/2017 945 1139
Site9 EB 10/14/2017 1000 1254
Site9 EB 10/14/2017 1015 1244
Site9 EB 10/14/2017 1030 1291
Site9 EB 10/14/2017 1045 1263
Site9 EB 10/14/2017 1100 1272
Site9 EB 10/14/2017 1115 1266
Site9 EB 10/14/2017 1130 1283
Site9 EB 10/14/2017 1145 1338
Site9 EB 10/14/2017 1200 1272
Site9 EB 10/14/2017 1215 1309
Site9 EB 10/14/2017 1230 1361
Site9 EB 10/14/2017 1245 1342
Site9 EB 10/14/2017 1300 1374
Site9 EB 10/14/2017 1315 1330
Site9 EB 10/14/2017 1330 1294
Site9 EB 10/14/2017 1345 1312
Site9 EB 10/14/2017 1400 1439
Site9 EB 10/14/2017 1415 1292
Site9 EB 10/14/2017 1430 1292
Site9 EB 10/14/2017 1445 1257
Site9 EB 10/14/2017 1500 1345
Site9 EB 10/14/2017 1515 1398
Site9 EB 10/14/2017 1530 1423
Site9 EB 10/14/2017 1545 1293
Site9 EB 10/14/2017 1600 1245
Site9 EB 10/14/2017 1615 1364
Site9 EB 10/14/2017 1630 1314
Site9 EB 10/14/2017 1645 1406
Site9 EB 10/14/2017 1700 1403
Site9 EB 10/14/2017 1715 1282
Site9 EB 10/14/2017 1730 1342
Site9 EB 10/14/2017 1745 1242
Site9 EB 10/14/2017 1800 1216
Site9 EB 10/14/2017 1815 1400
Site9 EB 10/14/2017 1830 1467
Site9 EB 10/14/2017 1845 1496
Site9 EB 10/14/2017 1900 1465
Site9 EB 10/14/2017 1915 1407
Site9 EB 10/14/2017 1930 1374
Site9 EB 10/14/2017 1945 1420
Site9 EB 10/14/2017 2000 1380
Site9 EB 10/14/2017 2015 1403
Site9 EB 10/14/2017 2030 1178
Site9 EB 10/14/2017 2045 1046
Site9 EB 10/14/2017 2100 963
Site9 EB 10/14/2017 2115 894
Site9 EB 10/14/2017 2130 800
Site9 EB 10/14/2017 2145 866
Site9 EB 10/14/2017 2200 756
Site9 EB 10/14/2017 2215 729
Site9 EB 10/14/2017 2230 679
Site9 EB 10/14/2017 2245 633
Site9 EB 10/14/2017 2300 656
Site9 EB 10/14/2017 2315 586
Site9 EB 10/14/2017 2330 548
Site9 EB 10/14/2017 2345 532
Site9 EB 10/15/2017 2400 517
Site9 EB 10/15/2017 15 446
Site9 EB 10/15/2017 30 392
Site9 EB 10/15/2017 45 385
Site9 EB 10/15/2017 100 377
Site9 EB 10/15/2017 115 351
Site9 EB 10/15/2017 130 354
Site9 EB 10/15/2017 145 342
Site9 EB 10/15/2017 200 345
Site9 EB 10/15/2017 215 404
Site9 EB 10/15/2017 230 415
Site9 EB 10/15/2017 245 295
Site9 EB 10/15/2017 300 212
Site9 EB 10/15/2017 315 208
Site9 EB 10/15/2017 330 206

SITE 9 - I-10 WB (btwn Acadian-College)

0 0 1 300 101017 300 101717 15 2 1 100 678 200
0 0 0 0 0 0 0 0 0 0 'Volume (TVP)

TIME	Lanes	
	Fast, Fast Middle, Middle	Slow/Slow Middle
0	315	185
0	330	200
0	345	217
0	400	256
0	415	330
0	430	423
0	445	579
0	500	619
0	515	795
0	530	825
0	545	899
0	600	968
0	615	996
0	630	1039
0	645	1147
0	700	1175
0	715	1229
0	730	1140
0	745	1086
0	800	965
0	815	1066
0	830	1110
0	845	1119
0	900	986
0	915	927
0	930	992
0	945	988
0	1000	947
0	1015	968
0	1030	745
0	1045	651
0	1100	970
0	1115	1102
0	1130	952
0	1145	932
0	1200	995
0	1215	936
0	1230	957
0	1245	932
0	1300	946
0	1315	1025
0	1330	1017
0	1345	1005
0	1400	996
0	1415	987
0	1430	1027
0	1445	1067
0	1500	1059
0	1515	1085
0	1530	1083
0	1545	1215
0	1600	1278
0	1615	1205
0	1630	1301
0	1645	1234
0	1700	1202
0	1715	1211
0	1730	1068
0	1745	708
0	1800	1117
0	1815	819
0	1830	879
0	1845	799
0	1900	815
0	1915	780
0	1930	775
0	1945	733
0	2000	641
0	2015	663
0	2030	618
0	2045	681
0	2100	507
0	2115	580
0	2130	559
0	2145	510
0	2200	407
0	2215	389
0	2230	402
0	2245	319
0	2300	307
0	2315	283
0	2330	266
0	2345	210
0	2400	192
0	15	169
0	30	175
0	45	169
0	100	187
0	115	169
0	130	141
0	145	144
0	200	142
0	215	143
0	230	144
0	245	149
0	300	174
0	315	180

Site	Direction	Date	Time	Total
Site9	WB	10/10/2017	315	203
Site9	WB	10/10/2017	330	213
Site9	WB	10/10/2017	345	242
Site9	WB	10/10/2017	400	277
Site9	WB	10/10/2017	415	354
Site9	WB	10/10/2017	430	459
Site9	WB	10/10/2017	445	620
Site9	WB	10/10/2017	500	678
Site9	WB	10/10/2017	515	870
Site9	WB	10/10/2017	530	919
Site9	WB	10/10/2017	545	1042
Site9	WB	10/10/2017	600	1091
Site9	WB	10/10/2017	615	1148
Site9	WB	10/10/2017	630	1331
Site9	WB	10/10/2017	645	1516
Site9	WB	10/10/2017	700	1595
Site9	WB	10/10/2017	715	1665
Site9	WB	10/10/2017	730	1577
Site9	WB	10/10/2017	745	1473
Site9	WB	10/10/2017	800	1357
Site9	WB	10/10/2017	815	1492
Site9	WB	10/10/2017	830	1538
Site9	WB	10/10/2017	845	1527
Site9	WB	10/10/2017	900	1293
Site9	WB	10/10/2017	915	1178
Site9	WB	10/10/2017	930	1247
Site9	WB	10/10/2017	945	1279
Site9	WB	10/10/2017	1000	1256
Site9	WB	10/10/2017	1015	1273
Site9	WB	10/10/2017	1030	1098
Site9	WB	10/10/2017	1045	1012
Site9	WB	10/10/2017	1100	1331
Site9	WB	10/10/2017	1115	1467
Site9	WB	10/10/2017	1130	1259
Site9	WB	10/10/2017	1145	1249
Site9	WB	10/10/2017	1200	1311
Site9	WB	10/10/2017	1215	1236
Site9	WB	10/10/2017	1230	1230
Site9	WB	10/10/2017	1245	1210
Site9	WB	10/10/2017	1300	1231
Site9	WB	10/10/2017	1315	1303
Site9	WB	10/10/2017	1330	1331
Site9	WB	10/10/2017	1345	1261
Site9	WB	10/10/2017	1400	1257
Site9	WB	10/10/2017	1415	1252
Site9	WB	10/10/2017	1430	1354
Site9	WB	10/10/2017	1445	1372
Site9	WB	10/10/2017	1500	1387
Site9	WB	10/10/2017	1515	1375
Site9	WB	10/10/2017	1530	1392
Site9	WB	10/10/2017	1545	1530
Site9	WB	10/10/2017	1600	1614
Site9	WB	10/10/2017	1615	1509
Site9	WB	10/10/2017	1630	1643
Site9	WB	10/10/2017	1645	1599
Site9	WB	10/10/2017	1700	1606
Site9	WB	10/10/2017	1715	1575
Site9	WB	10/10/2017	1730	1459
Site9	WB	10/10/2017	1745	1112
Site9	WB	10/10/2017	1800	1526
Site9	WB	10/10/2017	1815	1098
Site9	WB	10/10/2017	1830	1200
Site9	WB	10/10/2017	1845	1100
Site9	WB	10/10/2017	1900	1091
Site9	WB	10/10/2017	1915	1001
Site9	WB	10/10/2017	1930	984
Site9	WB	10/10/2017	1945	941
Site9	WB	10/10/2017	2000	828
Site9	WB	10/10/2017	2015	850
Site9	WB	10/10/2017	2030	804
Site9	WB	10/10/2017	2045	860
Site9	WB	10/10/2017	2100	646
Site9	WB	10/10/2017	2115	710
Site9	WB	10/10/2017	2130	703
Site9	WB	10/10/2017	2145	616
Site9	WB	10/10/2017	2200	494
Site9	WB	10/10/2017	2215	499
Site9	WB	10/10/2017	2230	506
Site9	WB	10/10/2017	2245	417
Site9	WB	10/10/2017	2300	380
Site9	WB	10/10/2017	2315	342
Site9	WB	10/10/2017	2330	319
Site9	WB	10/10/2017	2345	274
Site9	WB	10/11/2017	2400	243
Site9	WB	10/11/2017	15	213
Site9	WB	10/11/2017	30	213
Site9	WB	10/11/2017	45	207
Site9	WB	10/11/2017	100	213
Site9	WB	10/11/2017	115	191
Site9	WB	10/11/2017	130	163
Site9	WB	10/11/2017	145	161
Site9	WB	10/11/2017	200	158
Site9	WB	10/11/2017	215	163
Site9	WB	10/11/2017	230	154
Site9	WB	10/11/2017	245	164
Site9	WB	10/11/2017	300	190
Site9	WB	10/11/2017	315	190

1	1	0	1445	1018	322	1340	Site9	WB	10/16/2017	1445	1340
1	1	0	1500	959	329	1288	Site9	WB	10/16/2017	1500	1288
1	1	0	1515	976	293	1269	Site9	WB	10/16/2017	1515	1269
1	1	0	1530	1047	337	1384	Site9	WB	10/16/2017	1530	1384
1	1	0	1545	1008	319	1327	Site9	WB	10/16/2017	1545	1327
1	1	0	1600	981	292	1273	Site9	WB	10/16/2017	1600	1273
1	1	0	1615	1036	330	1366	Site9	WB	10/16/2017	1615	1366
1	1	0	1630	1121	355	1476	Site9	WB	10/16/2017	1630	1476
1	1	0	1645	972	357	1329	Site9	WB	10/16/2017	1645	1329
1	1	0	1700	1090	425	1515	Site9	WB	10/16/2017	1700	1515
1	1	0	1715	1034	353	1387	Site9	WB	10/16/2017	1715	1387
1	1	0	1730	1025	354	1379	Site9	WB	10/16/2017	1730	1379
1	1	0	1745	949	327	1276	Site9	WB	10/16/2017	1745	1276
1	1	0	1800	904	308	1212	Site9	WB	10/16/2017	1800	1212
1	1	0	1815	764	283	1047	Site9	WB	10/16/2017	1815	1047
1	1	0	1830	853	284	1137	Site9	WB	10/16/2017	1830	1137
1	1	0	1845	664	246	910	Site9	WB	10/16/2017	1845	910
1	1	0	1900	694	275	969	Site9	WB	10/16/2017	1900	969
1	1	0	1915	690	204	894	Site9	WB	10/16/2017	1915	894
1	1	0	1930	691	209	900	Site9	WB	10/16/2017	1930	900
1	1	0	1945	627	181	808	Site9	WB	10/16/2017	1945	808
1	1	0	2000	566	171	737	Site9	WB	10/16/2017	2000	737
1	1	0	2015	562	157	719	Site9	WB	10/16/2017	2015	719
1	1	0	2030	582	180	762	Site9	WB	10/16/2017	2030	762
1	1	0	2045	542	139	681	Site9	WB	10/16/2017	2045	681
1	1	0	2100	438	142	580	Site9	WB	10/16/2017	2100	580
1	1	0	2115	373	123	496	Site9	WB	10/16/2017	2115	496
1	1	0	2130	381	113	494	Site9	WB	10/16/2017	2130	494
1	1	0	2145	366	107	473	Site9	WB	10/16/2017	2145	473
1	1	0	2200	307	96	403	Site9	WB	10/16/2017	2200	403
1	1	0	2215	343	91	434	Site9	WB	10/16/2017	2215	434
1	1	0	2230	327	83	410	Site9	WB	10/16/2017	2230	410
1	1	0	2245	269	83	352	Site9	WB	10/16/2017	2245	352
1	1	0	2300	319	80	399	Site9	WB	10/16/2017	2300	399
1	1	0	2315	249	64	313	Site9	WB	10/16/2017	2315	313
1	1	0	2330	247	62	309	Site9	WB	10/16/2017	2330	309
1	1	0	2345	176	49	225	Site9	WB	10/16/2017	2345	225
1	1	0	2400	142	29	171	Site9	WB	10/17/2017	2400	171
1	1	0	15	145	29	174	Site9	WB	10/17/2017	15	174
1	1	0	30	132	30	162	Site9	WB	10/17/2017	30	162
1	1	0	45	114	19	133	Site9	WB	10/17/2017	45	133
1	1	0	100	162	32	194	Site9	WB	10/17/2017	100	194
1	1	0	115	178	28	206	Site9	WB	10/17/2017	115	206
1	1	0	130	89	21	110	Site9	WB	10/17/2017	130	110
1	1	0	145	69	15	84	Site9	WB	10/17/2017	145	84
1	1	0	200	177	18	195	Site9	WB	10/17/2017	200	195
1	1	0	215	325	31	356	Site9	WB	10/17/2017	215	356
1	1	0	230	242	22	264	Site9	WB	10/17/2017	230	264
1	1	0	245	137	17	154	Site9	WB	10/17/2017	245	154
1	1	0	300	157	11	168	Site9	WB	10/17/2017	300	168

DRAFT

1400	727	3087	3	501	152	9	23	2	1	15	20	1	0	0	0	65.5	71.6
1415	785	3175	1	523	184	3	30	4	0	9	25	5	0	0	1	63.4	69.8
1430	817	3185	2	516	222	3	34	1	0	7	30	2	0	0	0	62.4	69.8
1445	758	3207	1	494	195	5	26	2	0	12	23	0	0	0	0	64.6	70.5
1500	815	3259	1	532	186	5	32	5	0	10	38	5	0	0	1	61.9	68.5
1515	795	3232	0	523	210	5	30	1	0	7	19	0	0	0	0	64.9	71.1
1530	839	3339	1	547	219	3	26	2	0	12	28	1	0	0	0	65.1	71.1
1545	810	3379	1	519	225	8	31	2	0	5	18	1	0	0	0	63.8	70.5
1600	788	3476	4	530	187	5	28	4	0	8	20	1	0	1	0	66.3	71.1
1615	902	3522	0	646	202	6	25	2	0	3	17	0	0	0	1	64.3	70.5
1630	879	3565	3	619	200	3	23	4	0	3	23	1	0	0	0	62	68.7
1645	907	3506	1	674	192	3	14	0	0	5	16	1	0	0	1	55.9	60.4
1700	834	3307	0	605	184	3	23	2	0	5	12	0	0	0	0	60.9	68
1715	945	3140	1	678	202	4	24	1	0	15	18	2	0	0	0	60.3	65.8
1730	820	2883	0	595	173	1	27	1	0	6	17	0	0	0	0	62.9	68.7
1745	708	2667	1	501	173	6	13	2	0	3	9	0	0	0	0	65.7	71.4
1800	667	2525	1	468	159	3	22	0	0	5	9	0	0	0	0	65.1	71.6
1815	688	2411	0	510	130	2	24	1	0	5	16	0	0	0	0	65.2	70.5
1830	604	2311	1	445	119	0	21	0	0	4	14	0	0	0	0	68.2	74.3
1845	566	2237	1	408	120	2	13	1	0	6	15	0	0	0	0	67.3	73.6
1900	553	2149	2	390	130	0	17	1	0	1	12	0	0	0	0	66.3	72.7
1915	588	2106	3	435	118	3	19	2	0	3	5	0	0	0	0	65.7	72.9
1930	530	1963	0	405	100	2	14	0	0	2	7	0	0	0	0	64.6	71.1
1945	478	1902	0	349	95	5	13	0	0	4	11	0	0	1	0	68.1	73.4
2000	510	1843	2	392	91	1	14	0	0	3	7	0	0	0	0	67.2	72.5
2015	445	1788	0	344	77	0	11	1	0	3	8	0	1	0	0	67.7	73.1
2030	469	1700	0	353	89	1	8	0	0	5	13	0	0	0	0	67.1	73.1
2045	419	1569	0	304	93	1	12	0	0	1	7	0	1	0	0	68.2	73.8
2100	455	1456	0	348	83	1	9	0	0	1	9	1	3	0	0	68.1	74.3
2115	357	1300	1	269	69	0	5	1	0	2	9	0	1	0	0	69.3	75.2
2130	338	1193	1	256	62	2	6	0	0	1	7	1	1	1	0	68.7	74
2145	306	1104	0	240	41	2	12	1	0	0	7	0	2	1	0	68.5	73.8
2200	299	1003	0	237	44	0	6	1	0	0	6	0	1	4	0	69.1	74.7
2215	250	880	0	195	40	0	9	0	0	0	4	0	1	1	0	69.3	76.3
2230	249	780	0	200	24	0	5	0	0	2	14	0	1	2	1	69.2	75.4
2245	205	647	0	159	31	0	4	0	0	1	8	0	0	2	0	68.8	75.2
2300	176	572	0	133	30	0	5	1	0	3	3	0	0	1	0	70.8	77.2
2315	150		0	119	20	2	1	0	0	1	5	0	1	0	1	69.9	74.7
2330	116		0	91	10	1	2	0	0	1	9	0	1	1	0	70.6	77.4
2345	130		0	99	21	0	5	0	0	0	3	1	0	1	0	69.9	77.2
36964	52		25095	8433	248	1279	132	8	384	1222	83	3	8	17	61.1	69.8	
45652	65		31318	10320	298	1533	143	8	432	1401	92	12	12	18	62	70.5	
51030	72		34508	11763	348	1723	183	8	494	1727	105	31	42	26	62.9	71.4	

3	653	35	36
1	707	37	40
2	738	38	39
1	689	33	35
1	718	42	54
0	733	36	26
1	766	31	41
1	744	41	24
4	717	37	30
0	848	33	21
3	819	30	27
1	866	17	23
0	789	28	17
1	880	29	35
0	768	29	23
1	674	21	12
1	627	25	14
0	640	27	21
1	564	21	18
1	528	16	21
2	520	18	13
3	553	24	8
0	505	16	9
0	444	18	16
2	483	15	10
0	421	12	12
0	442	9	18
0	397	13	9
0	431	10	14
1	338	6	12
1	318	8	11
0	281	15	10
0	281	7	11
0	235	9	6
0	224	5	20
0	190	4	11
0	163	6	7
0	139	3	8
0	101	3	12
0	120	5	5

0%	90%	5%	5%
0%	90%	5%	5%
0%	90%	5%	5%
0%	91%	4%	5%
0%	88%	5%	7%
0%	92%	5%	3%
0%	91%	4%	5%
0%	92%	5%	3%
1%	91%	5%	4%
0%	94%	4%	2%
0%	93%	3%	3%
0%	95%	2%	3%
0%	95%	3%	2%
0%	93%	3%	4%
0%	94%	4%	3%
0%	95%	3%	2%
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0%	94%	4%	2%
0%	93%	4%	3%
0%	94%	2%	4%
0%	94%	4%	2%
0%	93%	3%	4%
0%	94%	2%	5%
0%	92%	3%	10%
0%	92%	4%	4%

7	2787	143	150
5	2852	150	168
4	2878	149	154
3	2906	142	156
3	2961	150	145
6	2960	145	121
6	3075	142	116
8	3128	141	102
8	3250	117	101
4	3322	108	88
5	3354	104	102
2	3303	103	98
2	3111	107	87
3	2949	104	84
2	2709	102	70
3	2505	94	65
3	2359	89	74
4	2252	82	73
7	2165	79	60
6	2106	74	51
5	2022	76	46
5	1985	73	43
2	1853	61	47
2	1790	54	56
2	1743	49	49
0	1691	44	53
1	1608	38	53
2	1484	37	46
2	1368	39	47
2	1218	36	44
1	1115	39	38
0	1021	36	47
0	930	25	48
0	812	24	44
0	716	18	46
0	593	16	38
0	523	17	32

0%	90%	5%	5%
0%	90%	5%	5%
0%	90%	5%	5%
0%	91%	4%	5%
0%	91%	5%	4%
0%	92%	4%	4%
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0%	95%	4%	3%
0%	95%	3%	3%
0%	94%	2%	4%
0%	94%	4%	2%
0%	93%	3%	4%
0%	92%	3%	4%
0%	93%	2%	5%
0%	92%	3%	5%
0%	92%	2%	6%
0%	91%	3%	6%

Thursday, Time	October Total	12, Cls	2017 Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Mean	Vpp
0	118	1	2	3	4	5	6	7	8	9	10	11	12	13	85	
15	84	0	89	16	0	2	1	0	3	5	1	0	1	0	68	73.6
30	104	1	56	14	0	3	0	0	1	6	0	2	1	0	69.5	77.8
45	83	1	77	12	1	3	0	0	0	6	1	0	3	0	69.5	76.1
100	73	0	55	9	1	4	0	0	0	11	0	0	3	0	70	76.7
115	58	0	46	13	2	5	0	0	1	6	0	0	0	0	70.7	79.2
130	65	0	42	9	1	0	2	0	1	2	0	1	0	0	70.8	78.3
145	43	0	40	7	1	3	1	0	2	11	0	0	0	0	69.2	75.8
200	53	0	27	8	1	0	1	0	1	5	0	0	0	0	68.6	74.5
215	52	0	36	5	2	2	1	0	0	6	0	0	1	0	68.1	73.4
230	65	0	33	9	2	1	0	0	1	6	0	0	0	0	69.7	76.1
245	49	1	35	12	4	1	1	0	1	10	0	1	0	0	68.8	73.6
300	61	0	18	5	3	3	3	0	3	13	0	0	0	0	68.5	73.8
315	76	0	28	17	3	2	0	0	1	7	0	1	2	0	69	74.3
330	87	0	32	15	1	2	2	0	0	22	0	2	0	0	68.1	74.3
345	86															

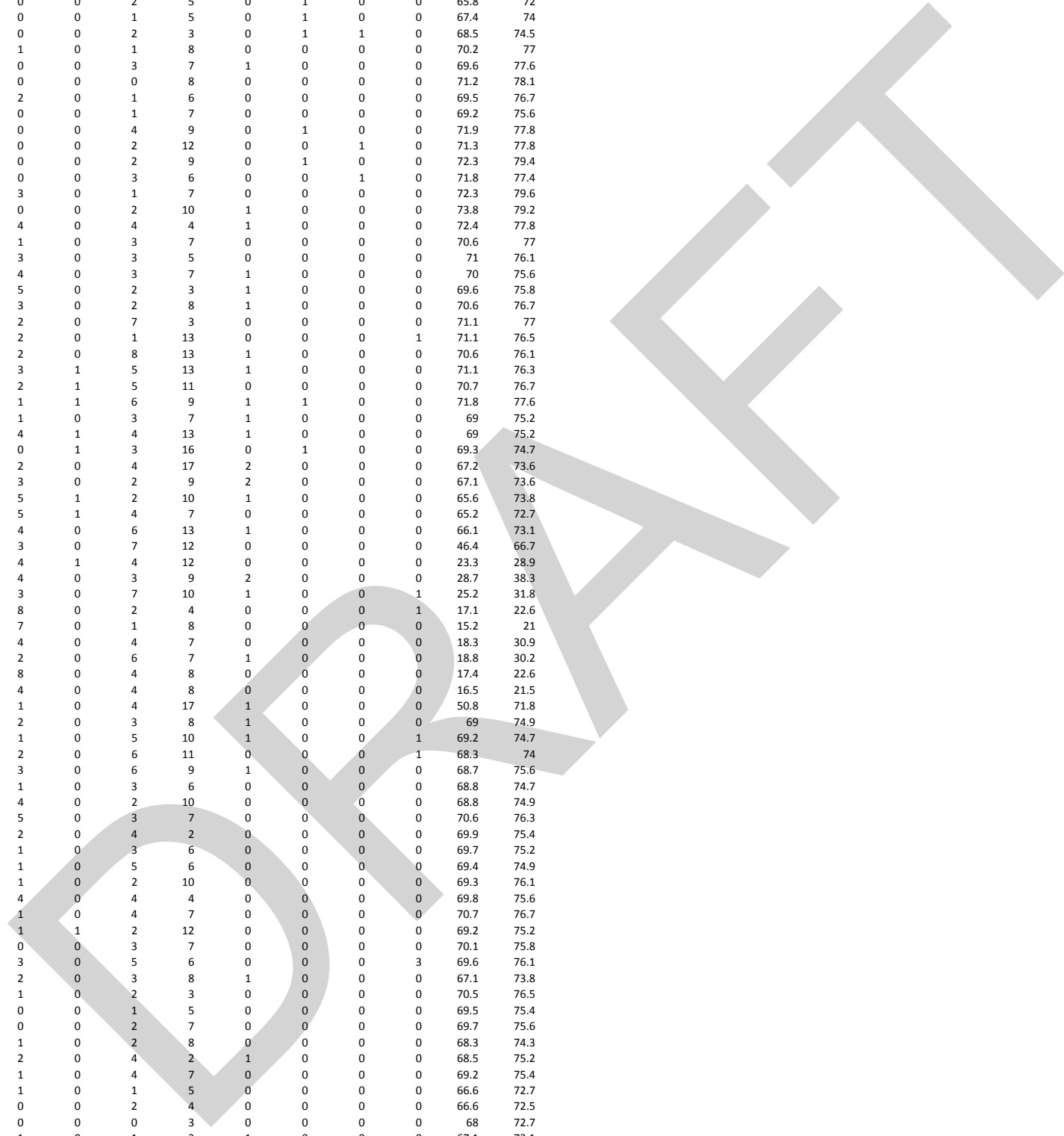
930	714	1	476	150	5	30	5	0	7	38	1	0	1	0	64.7	71.1
945	722	2	444	190	3	37	9	0	4	32	0	0	0	1	66.4	72.3
1000	699	0	449	153	12	31	3	0	10	37	3	1	0	0	64.3	70.7
1015	737	1	456	199	7	34	3	1	10	21	2	0	0	3	65.3	70.9
1030	682	0	428	178	5	24	2	0	10	33	1	0	1	0	65.6	71.8
1045	632	2	403	141	5	23	7	1	9	38	3	0	0	0	66.5	72.3
1100	759	1	479	195	4	34	2	0	10	32	2	0	0	0	65.5	71.1
1115	750	0	502	160	2	26	7	1	9	38	5	0	0	0	65.3	71.1
1130	751	1	518	156	4	32	3	0	9	27	1	0	0	0	64.2	71.1
1145	796	1	533	194	5	19	2	0	13	26	3	0	0	0	64.3	70.5
1200	723	3	480	177	6	22	0	1	7	26	1	0	0	0	65.8	71.6
1215	751	0	478	181	3	25	5	1	7	48	2	0	0	1	63.7	69.6
1230	765	0	494	188	6	21	5	0	12	36	3	0	0	0	62.7	70
1245	733	2	500	159	3	26	2	0	9	30	2	0	0	0	64.8	70.9
1300	721	1	484	158	7	26	3	1	12	28	0	0	0	1	64.8	71.1
1315	729	1	466	189	4	26	3	0	8	29	2	0	0	1	65.6	71.1
1330	727	2	475	170	9	25	5	1	12	26	2	0	0	0	64.2	70
1345	774	0	508	165	7	39	2	1	9	39	2	0	0	2	65.3	70.9
1400	822	7	540	167	10	49	3	1	17	28	0	0	0	0	64.9	70.7
1415	813	0	560	175	7	26	1	0	18	24	2	0	0	0	62.9	70.2
1430	841	2	549	209	4	31	7	1	12	21	3	0	0	2	62.3	70.2
1445	830	1	571	194	5	17	3	0	5	32	1	0	0	1	62	68.9
1500	802	0	514	221	2	25	5	1	5	28	1	0	0	0	64.5	70.7
1515	883	0	576	211	6	38	5	1	12	34	0	0	0	0	56.5	64.6
1530	797	2	516	212	8	26	4	1	6	21	1	0	0	0	49.8	57.5
1545	868	1	587	204	7	23	2	0	14	29	0	0	1	0	56.3	63.1
1600	850	1	579	205	5	24	2	0	6	25	3	0	0	0	61.4	70
1615	882	1	608	223	7	17	2	0	5	18	1	0	0	0	62.2	69.3
1630	561	3	387	121	12	20	4	0	5	8	0	0	0	1	40.1	65.3
1645	774	2	544	166	7	34	2	0	2	16	1	0	0	0	33.2	42.5
1700	842	1	598	193	5	23	1	0	5	15	1	0	0	0	52.2	57.5
1715	829	0	604	173	1	32	1	0	3	14	0	1	0	0	53.5	57.9
1730	811	2	580	183	2	22	0	0	3	19	0	0	0	0	61.2	69.3
1745	730	0	527	162	0	19	0	0	2	18	2	0	0	0	65.6	72.3
1800	666	1	494	136	2	17	0	0	5	10	1	0	0	0	66.7	72.5
1815	713	0	518	161	2	16	2	0	3	10	1	0	0	0	66.3	72.3
1830	657	0	479	138	5	18	3	0	2	8	2	0	0	2	67.4	72.9
1845	657	1	486	130	3	18	2	0	4	13	0	0	0	0	65.4	71.6
1900	605	0	446	128	1	17	0	0	5	6	2	0	0	0	66.2	72.3
1915	593	0	431	124	0	18	1	0	9	10	0	0	0	0	66.6	72.7
1930	593	3	434	125	2	13	1	0	5	10	0	0	0	0	65.3	71.1
1945	550	1	382	134	1	17	0	0	4	10	0	1	0	0	66.2	72
2000	539	0	417	99	0	14	2	0	3	4	0	0	0	0	67.2	72.7
2015	524	0	397	103	0	10	0	0	4	8	0	2	0	0	67.3	73.4
2030	423	2	327	73	1	5	0	0	3	11	0	0	1	0	68.5	73.8
2045	438	3	331	86	2	11	1	0	0	3	0	1	0	0	68.2	74.5
2100	461	5	353	79	0	10	1	0	1	10	0	1	0	1	65.9	71.8
2115	464	4	347	87	0	8	1	0	1	13	0	2	1	0	68.1	74.5
2130	373	0	286	67	1	5	0	0	2	10	1	1	0	0	68.3	74.7
2145	355	0	273	68	3	5	0	0	0	6	0	0	0	0	68.9	75.6
2200	293	0	226	49	1	4	1	0	4	4	0	1	3	0	69.6	75.2
2215	309	0	246	46	1	5	0	0	1	9	0	0	1	0	68.6	74.7
2230	239	1	175	44	0	9	0	0	1	5	0	2	2	0	69.2	74.5
2245	221	4	167	32	0	5	0	0	1	7	0	2	3	0	69.8	77.2
2300	237	2	178	46	3	4	0	0	0	4	0	0	0	0	70.6	77.6
2315	186	0	158	21	0	1	0	0	2	4	0	0	0	0	69.5	76.3
2330	174	1	134	20	0	4	0	0	1	10	0	2	2	0	69.3	74
2345	150	0	108	29	0	7	0	0	0	4	1	0	1	0	69.8	76.3
36201	69	24421	8335	268	1277	170	13	364	1178	77	3	6	20	56.5	69.3	
45300	94	30932	10342	304	1531	184	14	422	1349	85	12	10	21	58	70.2	
50942	115	34379	11769	363	1733	209	14	481	1694	91	32	36	26	59.4	71.4	

Friday, Time	October Total	2017													Mean	Vpp
		13, Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls		
1	2	3	4	5	6	7	8	9	10	11	12	13	85			
0	151	0	122	15	2	4	0	0	0	5	1	1	1	0	69.8	77
15	120	1	88	18	0	4	0	0	1	7	0	1	0	0	70.3	75.2
30	116	0	91	12	2	3	0	0	0	5	1	0	2	0	70.6	76.5
45	119	0	87	17	2	2	0	0	1	8	0	1	1	0	70	76.5
100	100	0	68	24	1	1	0	0	1	5	0	0	0	0	69.3	73.8
115	89	0	62	10	2	3	0	0	1	11	0	0	0	0	70.6	77.6
130	75	0	50	12	1	3	0	0	1	6	0	0	2	0	69.8	77.4
145	64	0	43	12	0	4	0	0	1	2	1	1	0	0	71.2	79.4
200	62	0	43	7	2	1	0	0	0	9	0	0	0	0	72.6	80.5
215	57	0	43	3	2	2	0	0	2	5	0	0	0	0	70.5	76.1
230	62	0	29	12	2	2	0	0	3	12	0	2	0	0	69.7	75.2
245	44	0	19	11	2	2	1	0	2	5	0	2	0	0	69.8	74.5
300	81	0	48	19	3	1	0	0	2	6	0	1	1	0	69	73.6
315	30	0	16	2	1	3	0	0	0	6	1	1	0	0	69.2	75.4
330	92	0	38	19	4	4	0	0	3	21	0	0	3	0	69.4	74.5
345	93	1	56	17	1	5	1	0	0	11	0	1	0	0	71.9	78.3
400	126	0	63	32	2	6	0	0	3	17	0	0	3	0	70.5	75.6
415	163	0	94	44	1	8	0	0	2	13	1	0	0	0	72.8	78.7
430	205	0	103	73	0	9	2	0	4	13	1	0	0	0	73.6	79.9
445	284	0	150	90	6	11	1	0	3	18	2	1	2	0	73.3	79.9

500	329	2	155	126	3	15	0	0	2	25	0	0	1	0	73.9	79.9
515	369	0	198	131	5	17	0	0	3	11	2	0	2	0	73.6	79.9
530	403	0	234	121	1	16	2	0	8	20	0	1	0	0	73.1	78.7
545	483	2	274	141	1	28	1	0	10	22	4	0	0	0	71	76.7
600	516	3	303	144	7	30	2	0	9	14	2	0	0	2	70.1	76.1
615	703	2	437	199	7	27	5	0	7	18	1	0	0	0	66.2	73.4
630	799	2	530	200	9	27	2	0	6	21	1	0	0	1	57.1	67.6
645	926	2	648	207	6	29	6	0	7	18	1	0	2	0	51.6	57.9
700	955	1	662	220	6	31	4	0	5	24	1	0	1	0	50	56.4
715	781	5	543	177	8	27	5	0	3	11	2	0	0	0	38	52.6
730	785	1	572	157	5	27	4	0	5	12	2	0	0	0	36.4	48.1
745	824	2	581	181	10	22	4	0	8	15	1	0	0	0	38.3	48.1
800	629	7	448	119	7	19	10	0	4	14	0	0	1	0	23.6	32.7
815	792	2	529	174	10	36	8	0	12	19	2	0	0	0	38.5	47
830	800	1	534	190	7	22	5	0	15	22	2	0	0	2	57.4	67.3
845	700	1	453	162	10	25	4	0	8	34	2	0	0	1	65.8	72
900	683	0	445	167	8	36	2	0	9	16	0	0	0	0	66.5	72.9
915	768	3	456	216	4	31	2	3	10	41	1	0	0	1	63.8	70.9
930	711	0	478	153	8	25	3	0	7	33	2	0	0	2	66.1	72
945	710	2	452	176	8	29	3	0	5	33	0	0	0	2	64	71.6
1000	777	0	482	192	12	28	2	0	11	48	1	0	1	0	56.7	64.4
1015	783	1	502	187	6	36	2	0	8	37	2	1	0	1	65	70.2
1030	732	0	456	191	5	30	4	0	12	34	0	0	0	0	63.9	69.6
1045	774	0	522	172	3	29	4	2	11	28	3	0	0	0	62.4	68.7
1100	782	2	489	199	7	41	2	0	9	30	1	0	2	0	64.7	70.2
1115	733	2	449	197	9	29	4	0	7	34	0	0	0	2	60.7	68.7
1130	782	0	511	186	10	27	6	2	7	31	2	0	0	0	54.1	59.5
1145	735	4	466	188	4	30	4	0	5	29	3	0	0	2	55.5	60.6
1200	876	0	560	227	8	30	4	0	8	37	2	0	0	0	52.8	58.2
1215	889	1	573	223	7	30	4	0	18	28	2	0	1	2	59.2	68.5
1230	796	0	495	215	7	31	1	0	12	33	1	0	0	1	65.3	71.6
1245	824	0	544	196	5	27	3	1	9	36	3	0	0	0	62.8	69.8
1300	807	2	524	204	7	28	3	1	11	25	1	0	0	1	65.5	71.4
1315	836	3	552	208	2	32	1	0	6	31	0	0	1	0	64.8	70.2
1330	815	1	537	186	9	30	6	1	10	34	1	0	0	0	65.8	71.1
1345	827	0	578	177	3	25	4	1	14	24	0	0	0	1	64.3	70.7
1400	822	2	553	204	11	16	1	0	13	20	2	0	0	0	55.7	66.9
1415	705	2	506	148	6	20	4	0	3	16	0	0	0	0	37	52.3
1430	667	4	453	145	9	29	6	0	4	16	0	0	0	1	30.9	46.5
1445	834	2	571	185	7	28	4	0	15	21	1	0	0	0	51.6	55.9
1500	854	0	577	203	6	29	7	0	5	24	3	0	0	0	52.7	57.3
1515	855	0	573	224	4	22	1	0	8	21	2	0	0	0	52.8	57.3
1530	856	0	590	196	7	37	1	0	10	14	1	0	0	0	52	56.4
1545	885	3	600	211	3	26	3	0	11	26	2	0	0	0	53.4	57.7
1600	862	0	619	180	5	28	3	0	11	15	1	0	0	0	57.6	65.8
1615	826	0	584	182	7	29	3	0	7	14	0	0	0	0	55.8	69.1
1630	875	1	625	200	3	27	0	0	8	11	0	0	0	0	61.7	70.2
1645	811	0	561	205	2	24	1	0	5	13	0	0	0	0	63.6	71.6
1700	776	2	536	181	3	22	1	0	15	16	0	0	0	0	65	71.6
1715	782	1	576	159	2	21	4	0	5	13	1	0	0	0	65.8	72.3
1730	735	3	533	161	1	17	0	0	5	14	1	0	0	0	66.7	73.6
1745	759	0	543	163	0	27	1	0	9	14	1	0	0	1	66.5	72.5
1800	761	1	568	153	4	13	1	0	9	12	0	0	0	0	65.2	72
1815	823	0	625	156	5	20	1	0	6	10	0	0	0	0	64.9	72
1830	769	1	561	171	1	19	1	0	5	10	0	0	0	0	63.3	70.2
1845	822	1	601	171	0	30	4	0	5	9	0	0	1	0	62.4	69.3
1900	736	2	537	152	4	21	3	0	2	15	0	0	0	0	63.6	70.5
1915	814	0	641	140	3	11	2	0	4	12	0	1	0	0	61.8	69.6
1930	785	1	593	166	3	13	1	0	2	6	0	0	0	0	63.4	69.6
1945	658	1	505	121	2	16	3	0	1	8	0	1	0	0	65	71.4
2000	598	0	452	114	4	11	1	0	5	11	0	0	0	0	66.9	72.7
2015	583	2	464	91	0	16	0	0	2	8	0	0	0	0	66.3	73.1
2030	600	3	462	111	0	10	0	0	1	13	0	0	0	0	66	72
2045	585	0	440	114	2	12	1	0	5	8	0	2	1	0	66.4	72.3
2100	545	2	415	103	1	12	1	0	4	6	0	1	0	0	67.2	73.8
2115	541	1	437	82	1	12	1	0	1	5	0	1	0	0	67.1	72.5
2130	485	2	381	83	2	7	0	0	1	9	0	0	0	0	67	73.1
2145	517	0	418	71	1	10	1	0	2	12	0	1	1	0	66.7	72.3
2200	524	0	420	85	1	8	0	0	0	5	0	2	2	1	67.3	73.4
2215	462	1	366	82	0	6	1	0	0	5	0	0	1	0	67.5	72.9
2230	389	0	320	52	1	5	0	0	0	9	0	1	1	0	69.5	75.2
2245	378	1	310	50	0	6	0	0	1	10	0	0	0	0	69.4	74.5
2300	302	0	237	50	0	7	0	0	0	8	0	0	0	0	70	75.8
2315	283	0	233	35	1	4	0	0	0	9	0	0	1	0	70.1	76.3
2330	288	0	232	45	0	5	1	0	1	4	0	0	0	0	69.6	75.8
2345	258	0	210	36	0	5	1	0	1	4	0	1	0	0	69.2	75.6
37985	64	25747	8839	281	1297	155	11	408	1102	52	1	8	20	57.1	68.9	
48377	87	33411	10937	333	1561	184	11	467	1286	57	8	12	23	58.5	69.6	
54977	95	37913	12339	382	1761	195	11	523	1603	71	25	35	24	60	71.1	

Saturday, Time	October Total	14, Cls	2017														Mean	Vpp	
		Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
0	239	1	191	29	2	6	1	0	1	5	0	2	1	0	0	0	0	69.1	75.4
15	203	0	164	28	0	4	0	0	0	5	0	0	2	0	0	0	0	70.3	77.4

30	188	0	153	28	1	2	0	0	1	2	1	0	0	0	66.8	73.1
45	183	0	133	30	1	6	0	0	3	7	0	2	1	0	68.5	74.3
100	185	0	143	25	0	4	4	0	2	7	0	0	0	0	68.5	75.6
115	147	0	106	28	0	4	2	0	0	7	0	0	0	0	68	74.3
130	128	0	100	18	0	1	0	0	0	9	0	0	0	0	70.1	77.2
145	131	0	93	18	4	6	0	0	4	5	1	0	0	0	68.4	74.3
200	92	0	68	15	0	1	0	0	2	5	0	1	0	0	65.8	72
215	122	2	94	15	2	2	0	0	1	5	0	1	0	0	67.4	74
230	88	0	69	6	3	3	0	0	2	3	0	1	1	0	68.5	74.5
245	81	0	58	8	4	1	1	0	1	8	0	0	0	0	70.2	77
300	88	0	57	14	3	3	0	0	3	7	1	0	0	0	69.6	77.6
315	79	0	50	17	1	3	0	0	0	8	0	0	0	0	71.2	78.1
330	69	1	39	16	3	1	2	0	1	6	0	0	0	0	69.5	76.7
345	69	0	39	13	0	9	0	0	1	7	0	0	0	0	69.2	75.6
400	101	0	59	22	0	6	0	0	4	9	0	1	0	0	71.9	77.8
415	138	1	74	42	0	6	0	0	2	12	0	0	1	0	71.3	77.8
430	159	0	85	56	2	4	0	0	2	9	0	1	0	0	72.3	79.4
445	165	2	84	52	4	13	0	0	3	6	0	0	1	0	71.8	77.4
500	182	1	96	67	2	5	3	0	1	7	0	0	0	0	72.3	79.6
515	212	2	113	69	2	13	0	0	2	10	1	0	0	0	73.8	79.2
530	235	2	132	74	1	13	4	0	4	4	1	0	0	0	72.4	77.8
545	222	0	131	69	4	7	1	0	3	7	0	0	0	0	70.6	77
600	252	2	142	85	2	10	3	0	3	5	0	0	0	0	71	76.1
615	296	1	190	74	3	13	4	0	3	7	1	0	0	0	70	75.6
630	298	0	189	81	0	17	5	0	2	3	1	0	0	0	69.6	75.8
645	297	1	181	89	3	9	3	0	2	8	1	0	0	0	70.6	76.7
700	392	0	233	130	2	15	2	0	7	3	0	0	0	0	71.1	77
715	454	1	289	131	4	12	2	0	1	13	0	0	0	1	71.1	76.5
730	452	4	283	128	3	10	2	0	8	13	1	0	0	0	70.6	76.1
745	466	1	308	122	1	11	3	1	5	13	1	0	0	0	71.1	76.3
800	519	2	348	132	1	17	2	1	5	11	0	0	0	0	70.7	76.7
815	559	3	389	127	4	17	1	1	6	9	1	1	0	0	71.8	77.6
830	585	3	416	139	3	12	1	0	3	7	1	0	0	0	69	75.2
845	700	5	495	157	4	16	4	1	4	13	1	0	0	0	69	75.2
900	691	3	499	148	3	17	0	1	3	16	0	1	0	0	69.3	74.7
915	783	2	559	179	6	12	2	0	4	17	2	0	0	0	67.2	73.6
930	783	1	569	173	5	19	3	0	2	9	2	0	0	0	67.1	73.6
945	783	1	570	182	0	11	5	1	2	10	1	0	0	0	65.6	73.8
1000	866	3	641	182	5	18	5	1	4	7	0	0	0	0	65.2	72.7
1015	795	3	558	196	1	13	4	0	6	13	1	0	0	0	66.1	73.1
1030	706	1	504	160	4	15	3	0	7	12	0	0	0	0	46.4	66.7
1045	621	9	444	130	3	14	4	1	4	12	0	0	0	0	23.3	28.9
1100	659	3	467	149	3	19	4	0	3	9	2	0	0	0	28.7	38.3
1115	645	7	434	159	3	20	3	0	7	10	1	0	0	1	25.2	31.8
1130	549	11	383	114	8	18	8	0	2	4	0	0	0	1	17.1	22.6
1145	467	7	339	87	3	15	7	0	1	8	0	0	0	0	15.2	21
1200	470	4	335	97	7	12	4	0	4	7	0	0	0	0	18.3	30.9
1215	417	5	291	95	4	6	2	0	6	7	1	0	0	0	18.8	30.2
1230	541	6	400	97	4	14	8	0	4	8	0	0	0	0	17.4	22.6
1245	521	4	381	102	7	11	4	0	4	8	0	0	0	0	16.5	21.5
1300	640	1	485	116	1	14	1	0	4	17	1	0	0	0	50.8	71.8
1315	634	4	470	140	0	6	2	0	3	8	1	0	0	0	69	74.9
1330	637	6	485	117	0	11	1	0	5	10	1	0	0	1	69.2	74.7
1345	647	3	484	122	1	17	2	0	6	11	0	0	0	1	68.3	74
1400	609	2	467	106	1	14	3	0	6	9	1	0	0	0	68.7	75.6
1415	654	2	505	119	2	16	1	0	3	6	0	0	0	0	68.8	74.7
1430	610	1	469	113	0	11	4	0	2	10	0	0	0	0	68.8	74.9
1445	561	6	418	112	1	9	5	0	3	7	0	0	0	0	70.6	76.3
1500	633	2	481	126	2	14	2	0	4	2	0	0	0	0	69.9	75.4
1515	658	2	505	124	2	15	1	0	3	6	0	0	0	0	69.7	75.2
1530	634	2	501	109	1	9	1	0	5	6	0	0	0	0	69.4	74.9
1545	601	4	447	123	1	13	1	0	2	10	0	0	0	0	69.3	76.1
1600	643	6	507	111	2	5	4	0	4	4	0	0	0	0	69.8	75.6
1615	576	1	442	115	1	5	1	0	4	7	0	0	0	0	70.7	76.7
1630	646	1	484	131	0	14	1	1	2	12	0	0	0	0	69.2	75.2
1645	597	3	457	114	0	13	0	0	3	7	0	0	0	0	70.1	75.8
1700	662	1	486	140	2	16	3	0	5	6	0	0	0	3	69.6	76.1
1715	704	2	561	114	3	10	2	0	3	8	1	0	0	0	67.1	73.8
1730	597	1	459	122	2	7	1	0	2	3	0	0	0	0	70.5	76.5
1745	569	0	454	94	0	15	0	0	1	5	0	0	0	0	69.5	75.4
1800	529	2	417	81	2	18	0	0	2	7	0	0	0	0	69.7	75.6
1815	613	2	469	124	1	6	1	0	2	8	0	0	0	0	68.3	74.3
1830	612	3	484	108	3	5	2	0	4	2	1	0	0	0	68.5	75.2
1845	585	3	439	120	1	10	1	0	4	7	0	0	0	0	69.2	75.4
1900	605	2	471	119	0	6	1	0	1	5	0	0	0	0	66.6	72.7
1915	677	1	526	134	2	8	0	0	2	4	0	0	0	0	66.6	72.5
1930	582	4	444	123	0	8	0	0	0	3	0	0	0	0	68	72.7
1945	634	0	480	128	4	16	1	0	1	3	1	0	0	0	67.1	73.1
2000	591	4	454	117	0	8	0	0	1	7	0	0	0	0	66.2	72
2015	648	1	517	114	0	6	0	0	4	4	0	1	0	1	64.9	70.9
2030	589	1	457	116	1	9	0	0	2	3	0	0	0	0	67.5	73.1
2045	520	2	405	102	0	5	0	0	1	5	0	0	0	0	66.7	72.5
2100	523	1	405	93	0	17	0	0	2	5	0	0	0	0	66.6	72.9
2115	511	0	421	77	5	6	0	0	1	1	0	0	0	0	69.2	74.7
2130	470	4	374	77	2	6	0	0	0	7	0	0	0	0	69.6	75.8



2145	473	4	371	79	1	11	2	0	1	4	0	0	0	0	68.5	74.7
2200	492	0	412	66	2	10	0	0	0	2	0	0	0	0	68.6	74.3
2215	493	0	397	86	0	6	0	0	2	2	0	0	0	0	68.4	74.5
2230	401	1	330	60	0	6	1	0	0	3	0	0	0	0	69.2	75.2
2245	351	0	284	55	1	3	0	0	1	6	1	0	0	0	70.7	77.4
2300	343	2	289	43	0	5	0	0	1	3	0	0	0	0	70.3	77
2315	303	1	239	53	0	4	0	0	0	6	0	0	0	0	70	76.3
2330	304	3	231	57	1	8	0	0	0	4	0	0	0	0	70.3	76.7
2345	216	0	170	32	1	8	0	0	2	3	0	0	0	0	70.8	77.6
29274	149	21510	6117	117	617	123	9	184	417	21	2	0	8	59.9	74.3	
37241	177	27538	7725	140	772	142	9	210	491	25	3	0	9	61.6	74.3	
43650	196	32221	8936	184	945	161	9	259	680	31	12	7	9	62.8	74.5	

Sunday, Time	October Total	15, Cls	2017 Cls												Mean	Vpp
1	2	3	4	5	6	7	8	9	10	11	12	13	85	0	71.1	77.8
0	224	0	185	35	0	2	0	0	2	0	0	0	0	0	70.5	76.5
15	196	0	156	32	0	0	1	0	2	5	0	0	0	0	70.3	77.4
30	192	0	146	33	3	3	0	0	1	6	0	0	0	0	71	77.8
45	169	0	140	25	0	0	0	0	2	2	0	0	0	0	70.8	78.3
100	148	0	121	19	2	2	0	0	1	3	0	0	0	0	70	76.7
115	140	0	107	25	0	3	0	0	0	5	0	0	0	0	70.1	77.6
130	110	0	83	24	1	1	0	0	0	1	0	0	0	0	72	78.7
145	97	2	80	10	0	2	0	0	0	3	0	0	0	0	69.2	74.7
200	108	0	79	16	0	4	0	0	3	6	0	0	0	0	69.3	74.3
215	81	1	65	9	0	1	0	0	1	4	0	0	0	0	70.3	76.3
230	68	0	47	11	1	2	0	0	1	6	0	0	0	0	70.9	79.4
245	69	0	53	12	2	1	0	0	1	0	0	0	0	0	71.8	77.6
300	57	0	42	12	1	1	0	0	0	1	0	0	0	0	70.4	77.4
315	57	0	43	9	0	1	0	0	0	4	0	0	0	0	70.5	77.6
330	61	0	47	8	0	3	0	0	0	2	1	0	0	0	69.9	75.4
345	71	0	51	16	0	2	0	0	0	2	0	0	0	0	71.6	78.3
400	65	0	33	19	0	4	0	0	2	7	0	0	0	0	71.6	77.8
415	105	0	62	30	1	3	0	0	3	5	1	0	0	0	70.9	76.7
430	92	0	49	35	0	5	0	0	0	3	0	0	0	0	72.4	78.7
445	103	0	56	40	0	3	0	0	2	2	0	0	0	0	71.1	78.5
500	130	0	73	45	1	3	0	0	2	6	0	0	0	0	71.6	77.8
515	135	0	86	32	2	8	0	0	1	6	0	0	0	0	70.5	77.6
530	136	0	89	30	2	8	0	0	0	6	1	0	0	0	72	78.7
545	128	1	77	33	4	5	4	0	2	2	0	0	0	0	70.5	79.6
600	155	0	95	44	1	7	1	0	3	4	0	0	0	0	70	76.3
615	175	0	119	41	1	5	4	0	1	4	0	0	0	0	70.5	76.1
630	197	2	126	49	0	14	0	0	2	4	0	0	0	0	71	77.2
645	203	2	129	52	0	7	0	0	3	9	0	0	0	1	70.3	76.5
700	244	2	177	52	0	2	0	0	4	7	0	0	0	0	70.7	77
715	285	0	199	71	1	7	0	0	4	3	0	0	0	0	71	77
730	350	0	241	90	2	5	0	0	4	8	0	0	0	0	71.6	77.2
745	375	0	279	75	1	8	0	0	5	6	1	0	0	0	72.3	78.7
800	329	1	233	81	0	9	0	0	2	3	0	0	0	0	72.3	78.5
815	374	2	282	78	0	6	1	0	2	3	0	0	0	0	71.4	76.5
830	395	2	276	101	0	6	2	0	2	6	0	0	0	0	71	77.2
845	462	0	324	114	2	7	2	0	7	6	0	0	0	0	70.1	76.7
900	457	1	329	106	0	10	0	0	4	7	0	0	0	0	70.3	75.4
915	518	1	396	94	1	14	3	0	2	6	0	0	0	1	69.3	75.2
930	635	0	475	123	2	18	2	0	7	8	0	0	0	0	68.9	74.9
945	634	3	464	132	1	20	1	0	7	6	0	0	0	0	70.3	75.2
1000	578	2	434	112	2	9	2	0	5	12	0	0	0	0	69	74
1015	678	6	495	145	2	14	0	0	3	13	0	0	0	0	67.8	74.5
1030	692	0	529	129	1	11	0	0	10	12	0	0	0	0	67.3	73.1
1045	759	4	572	150	3	12	0	0	6	12	0	0	0	0	69	74.5
1100	686	3	525	136	0	9	0	0	9	4	0	0	0	0	69.2	74.9
1115	687	1	515	137	0	20	1	0	4	9	0	0	0	0	68.5	74.7
1130	662	9	484	134	1	11	0	0	6	12	2	0	0	3	67.9	74.7
1145	673	0	493	142	0	16	1	0	5	15	1	0	0	0	67.9	74
1200	645	0	483	136	2	8	1	0	4	11	0	0	0	0	67.9	73.8
1215	705	3	531	138	5	14	1	0	5	8	0	0	0	0	66.6	72.9
1230	744	2	565	145	1	10	0	0	11	10	0	0	0	0	67.3	73.4
1245	753	1	567	158	0	14	0	0	6	7	0	0	0	0	65.7	71.4
1300	840	4	634	167	2	10	0	0	5	18	0	0	0	0	64.7	71.6
1315	849	3	645	163	0	17	1	0	5	14	1	0	0	0	63.4	73.1
1330	762	2	585	143	2	16	1	0	6	7	0	0	0	0	68.6	74.5
1345	738	0	582	131	0	13	3	0	6	3	0	0	0	0	67.1	72.7
1400	758	2	560	162	2	14	2	0	5	10	1	0	0	0	68.6	74.9
1415	714	1	554	135	0	13	1	0	3	7	0	0	0	0	67.3	73.6
1430	762	1	588	139	2	15	0	0	5	12	0	0	0	0	67.8	73.4
1445	752	0	601	125	2	10	0	0	6	7	0	0	0	1	66.3	72.5
1500	762	1	575	156	1	15	0	0	8	6	0	0	0	0	67.1	73.6
1515	745	2	575	142	1	11	0	0	6	8	0	0	0	0	67.3	73.4
1530	816	2	636	156	1	13	1	0	2	5	0	0	0	0	67.2	73.1
1545	754	1	587	144	1	7	1	0	4	9	0	0	0	0	68.5	73.8
1600	770	3	587	165	1	7	0	0	2	5	0	0	0	0	68.9	75.4
1615	621	0	464	141	0	8	0	0	1	6	0	0	0	1	68.7	74.7
1630	626	4	483	122	0	10	0	0	2	5	0	0	0	0	70	75.4
1645	621	1	488	113	0	12	1	0	0	6	0	0	0	0	68.5	74
1700	696	0	546	137	2	4	1	0	1	5	0	0	0	0	68.5	74

1715	854	1	632	200	0	14	1	0	2	4	0	0	0	0	65.5	72.9
1730	882	0	678	175	3	17	0	0	3	6	0	0	0	0	53.5	57.9
1745	917	5	706	173	3	12	1	0	5	12	0	0	0	0	54.4	59.7
1800	793	1	617	152	0	7	0	0	7	7	1	0	0	1	65.5	72.3
1815	810	0	645	152	0	10	0	0	0	3	0	0	0	0	66.5	72.7
1830	723	2	555	134	2	16	1	0	3	9	0	0	0	1	66.9	72.7
1845	568	0	444	104	0	14	1	0	1	4	0	0	0	0	68.5	75.4
1900	610	2	470	120	1	12	1	0	1	3	0	0	0	0	67.7	73.1
1915	724	4	573	128	2	8	0	0	3	6	0	0	0	0	65.4	72
1930	696	2	556	121	0	9	0	0	2	5	0	0	0	1	65.6	72.3
1945	703	2	567	113	2	7	0	0	1	11	0	0	0	0	66.3	72
2000	632	0	497	111	2	10	0	0	4	6	1	0	0	1	65.7	71.1
2015	579	1	450	113	2	6	0	0	3	4	0	0	0	0	66.6	72.3
2030	461	4	356	88	0	6	0	0	3	3	1	0	0	0	68.7	74.9
2045	406	0	318	71	1	9	0	0	1	6	0	0	0	0	69.3	75.4
2100	373	2	297	59	0	8	0	0	2	4	0	0	0	1	69.5	75.2
2115	340	1	274	53	0	5	0	0	1	6	0	0	0	0	70.7	76.3
2130	306	1	246	51	0	1	0	0	0	4	1	0	2	0	70.3	75.8
2145	268	0	229	26	0	2	0	0	0	9	0	1	1	0	70.8	77.2
2200	272	0	220	47	0	4	0	0	0	1	0	0	0	0	70	76.1
2215	251	2	198	43	0	3	0	0	0	4	0	0	1	0	70.5	76.5
2230	240	0	198	37	0	3	0	0	0	1	0	0	1	0	72	78.5
2245	186	0	146	27	0	5	1	0	1	5	0	0	1	0	69.8	76.3
2300	198	0	153	34	1	6	0	0	0	2	1	0	1	0	69.4	75.2
2315	177	0	150	18	0	4	0	0	1	3	1	0	0	0	68.4	75.2
2330	160	0	136	16	0	2	0	0	0	6	0	0	0	0	69	75.4
2345	127	0	105	14	0	4	0	0	0	4	0	0	0	0	68.1	73.8
31453	79	23835	6310	52	545	33	0	212	372	7	0	0	8	67.2	74	
38282	102	29137	7551	64	661	39	0	242	460	10	1	3	12	67.3	74	
42634	108	32413	8346	85	759	45	0	270	573	15	1	7	12	67.6	74.5	

Monday, Time	October Total	16, Cls	2017 Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Mean	Vpp
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	68.8	74.7
0	113	0	92	12	0	3	0	0	1	5	0	0	0	0	0	68.7	74.5
15	107	1	80	15	2	3	0	0	0	6	0	0	0	0	0	68.4	75.6
30	84	0	65	13	1	2	0	0	0	3	0	0	0	0	0	68.9	75.6
45	80	0	59	12	0	1	0	0	1	3	0	0	4	0	0	68.5	75.8
100	73	1	58	7	1	1	0	0	0	5	0	0	0	0	0	68.8	75.2
115	85	0	60	15	1	1	0	0	0	7	0	0	1	0	0	70	75.2
130	66	0	52	6	1	1	1	0	0	5	0	0	0	0	0	68.8	76.7
145	66	0	40	14	0	2	1	0	1	8	0	0	0	0	0	70.2	75.8
200	66	0	44	13	0	2	2	0	0	5	0	0	0	0	0	71.6	78.5
215	78	0	50	13	2	3	2	0	0	8	0	0	0	0	0	70.3	75.6
230	69	0	35	9	5	2	4	0	2	9	0	1	2	0	0	69.7	75.6
245	72	0	45	9	1	5	3	0	2	6	0	0	1	0	0	68.7	73.6
300	72	0	33	22	1	1	3	0	2	9	1	0	0	0	0	70.7	77.4
315	82	0	37	21	3	3	2	0	3	11	0	1	1	0	0	69.7	76.7
330	96	0	46	21	1	7	3	0	2	16	0	0	0	0	0	71.3	79
345	113	0	51	32	1	9	2	1	4	12	1	0	0	0	0	70.4	75.6
400	141	1	64	52	2	8	4	0	2	8	0	0	0	0	0	72.2	78.3
415	203	0	102	70	1	6	2	0	2	16	1	0	3	0	0	70.6	77
430	247	1	132	87	1	8	5	0	2	11	0	0	0	0	0	63.6	68.9
445	298	1	151	114	2	10	1	0	4	13	0	0	2	0	0	66.7	72
500	357	0	196	128	4	8	2	0	5	13	1	0	0	0	0	69	74.5
515	483	1	249	175	5	25	2	1	4	19	1	0	1	0	0	69.7	74.7
530	507	0	259	192	4	24	0	0	4	24	0	0	0	0	0	6	19
545	533	1	307	167	0	31	2	0	6	19	0	0	0	0	0	6	13
600	526	0	309	175	6	17	1	0	3	13	2	0	0	0	0	6	17
615	755	0	499	193	8	28	1	0	6	18	2	0	0	0	0	6	18
630	904	0	629	219	14	26	1	0	2	11	1	0	0	1	0	6	19
645	960	0	687	220	5	19	2	0	6	17	2	0	2	0	0	6	17
700	920	0	662	186	5	27	3	1	7	27	1	0	0	1	0	6	17
715	861	3	617	180	6	23	7	0	4	20	1	0	0	0	0	6	17
730	848	3	620	176	5	22	6	0	3	13	0	0	0	0	0	6	17
745	847	2	614	175	5	24	6	1	2	17	1	0	0	0	0	6	17
800	661	2	474	127	6	29	8	1	3	10	1	0	0	0	0	6	17
815	677	3	469	132	8	20	13	0	5	23	3	0	0	1	0	6	17
830	617	6	427	127	8	20	8	0	5	13	2	0	0	1	0	6	17
845	668	3	458	142	3	30	5	1	5	18	3	0	0	0	0	6	17
900	790	2	498	191	7	30	7	0	11	42	2	0	0	0	0	6	17
915	708	2	463	166	7	30	5	0	6	27	2	0	0	0	0	6	17
930	734	1	488	156	5	24	3	0	16	38	2	0	1	0	0	6	17
945	745	1	498	161	6	22	2	1	12	39	2	0	0	1	0	6	17
1000	707	2	456	162	5	29	4	0	8	38	3	0	0	0	0	6	17
1015	747	1	488	170	4	22	5	0	7	46	2	0	1	1	0	6	17
1030	769	2	475	185	5	34	6	0	13	42	6	0	0	1	0	6	17
1045	763	0	473	207	6	30	7	0	8	30	1	0	1	0	0	6	17
1100	699	0	444	176	7	24	5	0	7	35	1	0	0	0	0	6	17
1115	793	1	516	198	5	25	1	1	11	32	3	0	0	0	0	6	17
1130	716	0	488	167	2	19	3	0	11	26	0	0	0	0	0	6	17
1145	708	0	476	166	5	23	4	1	10	19	4	0	0	0	0	6	17
1200	701	1	454	190	5	15	3	0	6	25	2	0	0	0	0	6	17
1215	730	2	503	159	2	21	6	0	2	33	1	0	0	1	0	6	17
1230	794	2	516	191	3	26	2	0	5	44	3	0	0	2	0	6	17

1245	820	0	556	174	3	25	2	0	12	48	0	0	0	0	63.1	70
1300	809	0	532	178	8	31	3	0	9	45	3	0	0	0	63.1	69.6
1315	698	0	488	151	5	20	4	0	6	22	2	0	0	0	66.3	72.5
1330	748	0	495	153	8	32	3	0	13	41	2	0	1	0	65.1	71.1
1345	828	0	560	195	9	20	2	1	13	22	6	0	0	0	64.7	70.5
1400	795	1	542	176	5	26	1	0	8	32	3	0	0	1	63.8	70
1415	823	2	572	176	8	33	3	0	9	20	0	0	0	0	63	69.1
1430	828	2	547	198	7	28	3	0	4	35	4	0	0	0	63.8	70.2
1445	793	1	537	182	2	22	6	0	11	30	2	0	0	0	64	70.2
1500	751	1	512	169	3	26	5	0	7	27	1	0	0	0	64.6	70.9
1515	854	0	595	190	4	25	4	0	10	25	1	0	0	0	63.3	70.2
1530	754	1	510	182	4	25	5	0	3	23	1	0	0	0	64.5	70.2
1545	767	0	505	196	6	26	3	0	8	20	2	0	0	1	64.9	70.9
1600	817	1	556	204	7	16	3	1	3	23	2	0	0	1	64	69.6
1615	897	1	626	197	8	22	7	0	6	28	1	0	0	1	59.4	66.9
1630	927	1	663	207	4	22	0	0	3	24	3	0	0	0	54.6	59.1
1645	865	0	592	216	5	23	2	0	3	21	2	0	0	1	63.4	68.9
1700	898	4	663	179	5	22	1	0	5	16	2	1	0	0	60.2	69.3
1715	887	2	675	160	3	27	3	1	3	12	1	0	0	0	63.6	70
1730	832	2	604	190	0	21	1	0	4	10	0	0	0	0	64.8	71.1
1745	709	1	503	160	2	20	1	0	5	16	1	0	0	0	65.2	71.1
1800	645	2	467	146	2	14	1	0	7	6	0	0	0	0	66.3	71.8
1815	679	1	500	143	3	18	0	0	3	10	0	0	0	1	66.1	72
1830	539	0	414	107	0	8	0	0	2	8	0	0	0	0	67.8	74
1845	580	0	428	120	1	14	3	0	1	12	1	0	0	0	66.3	72.5
1900	569	2	412	123	1	15	5	0	1	8	0	0	2	0	66.8	72.9
1915	513	1	383	99	0	11	2	0	2	13	2	0	0	0	66.9	73.4
1930	479	1	368	90	2	9	0	0	2	6	1	0	0	0	67.5	73.8
1945	457	1	343	85	1	13	1	0	1	10	2	0	0	0	67.6	73.1
2000	431	0	334	70	1	12	1	0	4	9	0	0	0	0	68.6	74.3
2015	452	0	325	98	4	11	1	0	2	9	1	0	0	1	68.2	74.3
2030	428	1	323	75	1	16	1	0	2	9	0	0	0	0	68.4	74.5
2045	365	0	274	76	0	1	3	0	2	7	0	2	0	0	68.1	74
2100	352	0	278	55	0	6	0	0	1	9	1	2	0	0	69.7	75.4
2115	364	0	296	46	1	7	0	0	0	11	0	3	0	0	67.2	72.9
2130	322	1	245	57	0	8	1	0	2	6	0	1	1	0	67.9	73.4
2145	266	0	213	40	0	3	0	0	1	7	0	2	0	0	68.4	74.7
2200	241	0	189	32	0	7	0	0	1	9	0	2	1	0	68.4	74.9
2215	270	0	219	33	1	4	0	0	0	8	0	1	4	0	68.6	74.5
2230	184	0	149	21	0	4	1	0	0	6	0	0	3	0	68.6	74
2245	198	0	152	29	0	5	1	0	0	9	1	1	0	0	67.7	73.8
2300	159	0	120	28	1	2	1	0	1	4	0	2	0	0	69.5	75.2
2315	152	0	119	20	0	2	2	0	1	7	0	1	0	0	69.6	74.7
2330	142	0	112	21	0	1	1	0	0	5	0	0	2	0	69	74.5
2345	103	0	71	20	1	1	0	0	1	6	0	1	2	0	68.6	74.5
36747	62	25220	8239	232	1135	185	10	325	1233	86	1	4	15	58.9	69.8	
44889	69	31137	9960	276	1337	205	10	362	1396	100	11	9	17	59.9	70.5	
50429	76	34575	11383	318	1529	252	12	413	1691	106	21	36	17	60.9	71.1	

Tuesday, Time	October Total	17, Cls	2017													Mean	Vpp
		Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls		
0	83	1	2	3	4	5	6	7	8	9	10	11	12	13	13	85	75.2
15	98	0	69	7	1	1	0	0	1	3	1	0	0	0	0	68.5	75.2
30	70	1	74	15	1	2	1	0	0	2	0	1	1	0	70.4	79	
45	55	0	47	7	0	0	0	0	2	12	0	1	1	0	67.2	72.9	
100	69	0	39	6	0	0	0	0	2	6	0	1	1	0	68.2	73.1	
115	52	0	48	9	2	2	0	0	2	6	0	0	0	0	66.6	73.4	
130	62	0	37	5	0	3	0	0	1	3	1	0	2	0	68.1	74.9	
145	53	0	40	8	2	4	1	0	0	7	0	0	0	0	67.7	73.6	
200	48	1	33	10	0	0	1	0	3	3	0	1	1	0	68.3	74.9	
215	32	1	28	5	2	1	0	0	2	9	0	0	0	0	67.2	77.4	
230	66	0	20	5	1	1	1	0	1	2	1	0	0	0	60.9	64.4	
245	64	0	40	12	3	1	0	0	3	5	1	1	0	0	61.6	66.7	
300	58	0	37	9	2	4	0	0	0	3	7	0	1	0	70	75.2	
315	61	0	28	14	0	1	0	0	2	13	0	0	0	0	68.4	74.3	
330	75	0	30	12	1	2	1	0	2	11	0	1	1	0	69.4	74.9	
345	102	0	38	18	0	5	1	0	1	11	1	0	0	0	71.4	78.1	
400	137	1	50	25	4	10	1	0	1	10	0	0	0	0	71.5	77.8	
415	193	0	67	43	0	8	0	0	3	15	1	0	0	0	70.5	77	
430	223	0	97	64	3	7	0	0	1	18	2	0	0	1	71.9	77.6	
445	298	0	131	61	4	7	0	0	1	18	0	1	0	0	73.2	79.9	
500	366	1	162	104	3	9	2	0	2	13	0	1	1	0	73.9	80.5	
515	464	0	206	121	2	10	0	0	2	22	1	0	1	1	72.9	78.5	
530	494	1	238	185	0	19	2	0	3	15	0	0	0	1	71.7	77.6	
545	549	0	282	160	2	18	5	0	4	22	1	0	0	0	71.5	77.4	
600	591	0	330	166	5	21	1	0	3	22	1	0	0	0	69.7	75.6	
615	739	2	325	202	4	25	6	0	9	15	1	0	1	1	69.1	74.7	
630	938	1	450	212	5	34	2	0	2	30	1	0	1	1	65.7	71.8	
645	982	0	632	234	9	32	5	0	7	16	3	0	0	0	61.6	67.8	
700	825	0	766	177	1	15	3	0	2	18	0	0	0	0	50.9	57.3	
715	952	1	603	172	3	24	0	1	6	12	2	0	1	0	46	55.3	
730	788	4	711	181	2	21	8	1	5	19	3	0	0	0	51.8	56.4	
745	716	6	580	143	5	24	6	0	5	20	0	1	0	0	36.7	48.5	
800	685	2	522	138	6	24	6	0	4	10	0	0	0	0	32.2	48.1	
			507	128	6	17	6	0	2	15	1	0	0	1	26.5	36.7	

815	619	8	443	118	4	19	8	0	4	13	1	0	1	0	25.5	38.9
830	693	5	475	146	11	24	12	0	9	10	1	0	0	0	28.8	36.5
845	681	5	466	143	2	22	5	0	7	28	3	0	0	0	30.7	40.9
900	751	2	495	173	5	23	7	0	7	38	1	0	0	0	41.4	52.3
915	720	2	472	167	11	26	2	0	11	28	1	0	0	0	61.6	70
930	647	1	418	144	6	25	1	1	5	43	1	0	1	1	64.8	71.8
945	695	0	451	160	8	27	5	0	8	35	1	0	0	0	64.7	71.4
1000	661	2	422	166	6	16	2	0	8	36	3	0	0	0	66	72
1015	703	0	440	176	3	27	6	0	13	37	1	0	0	0	65.8	71.6
1030	623	0	379	165	5	27	7	1	10	27	2	0	0	0	65.4	71.6
1045	660	1	430	158	3	27	1	0	7	32	0	0	0	1	65.9	71.6
1100	711	1	441	192	7	24	2	0	10	32	2	0	0	0	64.9	70.9
1115	717	1	489	148	10	22	7	1	10	27	0	0	1	1	63.2	69.8
1130	776	1	505	183	5	21	1	0	13	40	6	0	0	1	61.3	69.3
1145	776	0	516	177	3	33	4	0	6	35	1	0	1	0	63.8	70.5
1200	682	1	437	150	7	30	4	0	13	37	2	0	1	0	65.7	72
1215	699	3	443	163	3	27	3	0	17	38	2	0	0	0	65.8	71.4
1230	714	1	454	181	5	31	2	0	1	35	4	0	0	0	62.3	69.1
1245	734	1	477	148	6	34	4	0	13	47	4	0	0	0	65.1	70.5
1300	708	1	478	164	4	17	2	0	9	30	3	0	0	0	65.8	71.4
1315	738	1	496	161	5	24	3	0	10	38	0	0	0	0	65.2	71.1
1330	764	0	517	163	3	28	5	0	10	35	2	0	0	1	63.5	70.2
1345	737	0	479	182	4	21	4	0	10	36	0	0	0	1	65.9	72
1400	732	1	481	180	6	20	1	0	10	32	1	0	0	0	65.4	71.8
1415	761	1	518	165	5	24	0	1	14	30	2	0	0	1	63.2	69.8
1430	813	0	547	184	6	24	5	0	6	36	3	0	0	2	60.5	67.1
1445	797	2	564	165	2	26	5	0	8	23	2	0	0	0	64.9	71.1
1500	787	0	542	169	2	26	8	0	8	30	1	0	0	1	62.8	69.8
1515	888	3	603	210	7	22	5	0	8	25	4	0	0	1	63.3	69.1
1530	791	2	521	201	2	32	4	0	7	20	2	0	0	0	65.1	71.1
1545	839	6	563	209	5	23	3	0	4	24	1	0	0	1	63.6	70.2
1600	830	1	571	200	10	17	4	0	7	19	1	0	0	0	64.8	71.4
1615	935	2	649	221	6	22	5	0	11	17	1	0	1	0	62.6	68.7
1630	807	2	558	193	6	21	1	0	3	22	1	0	0	0	61.3	70.5
1645	775	0	545	183	3	22	0	0	6	14	2	0	0	0	52.5	70.2
1700	853	0	610	184	5	23	1	0	7	22	1	0	0	0	63.2	69.3
1715	784	1	593	153	3	22	1	0	4	6	1	0	0	0	64.9	71.4
1730	741	1	544	159	1	19	0	0	3	13	1	0	0	0	63.8	70.2
1745	784	1	570	168	2	22	1	0	7	13	0	0	0	0	63.8	70
1800	717	1	517	154	2	13	3	0	7	18	1	0	0	1	66.2	72
1815	648	0	473	131	3	18	3	0	7	11	2	0	0	0	66.3	72.7
1830	580	0	436	105	2	22	0	0	5	8	2	0	0	0	65.2	71.8
1845	607	1	470	97	2	17	0	0	5	15	0	0	0	0	65.3	71.4
1900	604	0	426	138	2	15	3	0	3	17	0	0	0	0	66.2	71.6
1915	529	1	423	84	2	7	0	0	4	7	0	0	1	0	66.4	71.6
1930	500	0	377	103	2	9	2	0	1	5	1	0	0	0	67.7	72.9
1945	442	0	322	104	3	5	1	0	1	6	0	0	0	0	67.2	73.6
2000	454	1	350	76	4	8	0	0	2	13	0	0	0	0	67.7	73.1
2015	494	1	381	86	1	8	1	0	2	14	0	0	0	0	67.7	73.4
2030	392	0	307	68	1	6	2	0	0	8	0	0	0	0	68.3	73.6
2045	414	0	321	75	1	4	2	0	0	8	0	3	0	0	68.1	74.5
2100	321	1	229	71	2	8	0	0	1	6	0	2	1	0	68.7	74.3
2115	354	1	279	58	0	6	0	0	1	9	0	0	0	0	68.3	74
2130	322	1	258	44	2	7	1	0	2	5	0	0	2	0	68.6	74.7
2145	312	1	247	43	1	5	2	0	1	10	1	1	0	0	69.1	74.7
2200	275	0	218	36	0	6	0	0	2	9	0	2	2	0	68	74
2215	272	1	208	41	0	5	3	0	1	9	0	2	2	0	68.1	74
2230	197	2	149	32	0	2	0	0	1	7	0	2	2	0	67.9	74.9
2245	181	1	144	25	1	4	0	0	1	3	0	1	1	0	69.1	74.9
2300	172	1	133	20	1	5	0	0	0	9	0	1	2	0	69.9	77
2315	178	1	142	20	1	5	0	0	0	8	0	0	1	0	69.2	76.3
2330	120	0	88	23	1	2	0	0	0	4	1	0	0	1	70.3	76.1
2345	120	0	88	20	1	3	0	0	2	5	0	1	0	0	68.5	76.5
35645	76	24421	7921	228	1120	173	6	370	1232	76	1	7	14	58.7	70	
44032	85	30514	9697	268	1314	203	6	408	1418	83	7	13	16	59.9	70.5	
45549	92	31685	9914	273	1346	206	6	415	1472	84	16	23	17	60.2	70.7	
49319	98	33855	10984	311	1482	223	6	460	1727	95	25	33	20	61	71.6	

Site # 11

Traffic Bins
 Services, Inc.
 WB MERGER INTO I-10 WB

time:
 classes:
 range:

Legend:

- 0 [Time]
- 1 [Total]
- 2 [Cls]
- 3 [Mean]
- 4 [Vpp]

Monday, Time	October Total	23, Cls	2017												Mean	Vpp
		Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls	Cls		
1	2	3	4	5	6	7	8	9	10	11	12	13	85			
0	109	0	74	8	0	1	1	0	1	16	1	2	2	3	64.1	69.6
15	83	0	53	8	0	1	1	0	2	15	2	0	0	1	62.3	67.6
30	84	0	62	3	0	0	1	0	1	13	3	0	0	1	62.7	65.8
45	60	0	42	7	0	2	1	0	1	6	0	0	1	0	61.4	66.2
100	62	1	38	12	0	1	1	0	1	3	2	0	1	2	61	66.4
115	47	0	32	4	0	2	3	0	0	3	1	0	0	2	60.6	69.3
130	77	0	53	5	0	1	1	0	3	12	0	0	0	2	56.2	62.2
145	91	1	57	11	1	2	0	0	1	15	1	0	0	2	65.9	71.4
200	73	0	38	13	0	0	1	0	1	15	1	1	1	2	65.9	69.1
215	67	0	39	6	2	0	1	0	1	14	0	2	0	2	64.7	70.7
230	81	0	40	19	0	1	1	0	1	11	2	2	0	4	67.2	74
245	79	0	43	12	0	1	3	0	1	14	3	0	1	1	65.7	70.7
300	95	0	37	11	1	2	4	0	1	28	7	1	1	2	65.3	71.4
315	82	0	44	20	1	4	1	0	0	8	2	0	0	2	68.5	75.2
330	119	1	68	29	1	5	2	1	1	7	1	0	0	3	68.5	75.4
345	151	2	78	33	2	2	5	0	0	18	1	0	0	10	70	77.2
400	177	1	101	45	3	2	1	1	1	15	5	0	1	1	71	77.4
415	259	0	142	85	4	4	5	2	1	10	2	1	0	3	72.9	81
430	323	1	176	106	1	9	5	0	3	14	1	1	1	5	73.2	79.2
445	402	1	230	127	3	11	11	1	5	5	2	0	0	6	73.4	80.1
500	424	0	228	146	4	12	8	2	4	11	2	0	0	7	72.2	78.5
515	480	1	245	177	3	16	3	9	3	10	3	0	0	10	72	77.8
530	499	2	265	165	4	16	6	2	3	16	3	0	0	17	70.2	76.7
545	562	1	310	187	2	10	11	7	7	9	2	2	0	14	69.9	76.5
600	600	0	361	161	0	16	6	8	13	16	2	0	0	17	68.9	74.7
615	707	2	419	213	5	9	5	6	7	13	7	2	0	19	67.7	73.4
630	804	0	536	194	9	22	4	10	7	7	3	0	1	11	62	67.3
645	897	0	666	168	8	14	3	9	11	9	0	0	0	9	61.4	66.9
700	851	1	622	157	1	16	5	9	11	10	6	1	0	12	63.1	69.1
715	834	0	628	158	3	13	6	8	3	6	0	0	0	9	62.9	69.1
730	748	0	567	117	1	8	5	11	7	15	6	0	1	10	62.1	68.2
745	749	0	574	122	4	11	4	6	10	8	3	1	0	6	60.7	66.4
800	816	4	652	106	1	7	6	3	9	15	1	0	1	11	52.1	62.4
815	862	8	665	116	2	20	7	5	9	15	5	0	0	10	45.4	59.7
830	829	12	604	119	7	28	8	5	6	20	6	0	2	12	46.7	62.9
845	792	14	602	104	4	20	7	5	6	12	5	0	0	13	43.2	59.7
900	659	2	443	124	5	13	5	6	9	24	8	2	0	18	63.2	71.1
915	569	0	392	108	5	15	3	6	2	24	0	0	0	14	66.8	72.5
930	549	2	350	98	2	14	10	1	4	41	3	0	0	24	67.2	72.3
945	619	3	410	105	5	15	4	4	11	29	4	0	0	29	65.7	72
1000	602	5	393	115	3	11	9	5	12	21	8	0	0	20	64.6	71.6
1015	576	3	371	109	2	14	5	4	10	32	8	0	0	18	64.3	71.4
1030	505	2	341	91	3	15	4	3	2	23	6	1	0	14	67.7	73.8
1045	556	0	359	113	4	8	2	4	10	29	3	0	0	24	66.5	72.3
1100	554	3	330	115	1	21	5	5	4	43	10	0	0	17	66.9	74
1115	614	3	408	117	4	12	4	3	8	30	8	1	0	16	67.3	74.5
1130	578	1	381	102	5	13	3	2	7	38	5	1	1	19	65.9	73.1
1145	572	0	347	119	3	23	6	7	12	26	6	1	0	22	67.3	73.6
1200	592	3	357	120	6	17	6	1	12	42	5	2	0	21	66.4	72.3
1215	563	3	350	108	5	16	1	5	6	40	10	0	2	17	66.8	72.5
1230	592	2	398	108	1	15	3	0	8	32	4	0	1	20	66.4	72.3
1245	532	0	339	113	1	12	3	4	4	40	3	0	1	12	66.9	72.7
1300	559	0	382	99	4	14	0	2	6	26	4	3	0	19	66.6	72.9
1315	569	0	363	120	4	14	2	5	3	31	2	1	0	24	66.7	72
1330	594	0	390	103	4	10	8	3	7	41	6	0	0	22	66.5	72.5
1345	561	1	373	97	1	20	4	3	7	32	8	0	1	14	65.9	71.8
1400	531	1	348	106	2	9	3	5	8	31	6	1	0	11	66.6	72.3
1415	568	1	367	101	5	9	7	4	6	36	8	0	1	23	65.3	71.8
1430	619	2	407	126	3	14	1	2	9	25	8	1	0	21	65.4	72.3
1445	602	0	390	123	2	8	2	2	5	30	6	1	0	33	66.3	72
1500	618	1	412	117	2	15	3	6	2	34	2	3	0	21	66.9	72.7

1815	545	1	408	91	0	7	0	1	4	21	4	2	0	6	67.1	74
1830	600	0	439	113	1	9	0	0	8	21	3	1	0	5	67.7	74
1845	596	0	451	96	1	10	1	1	7	20	0	0	0	9	66.9	72.7
1900	537	0	406	89	4	7	1	2	3	13	1	1	0	10	66.8	73.6
1915	534	0	386	102	0	6	1	0	2	22	3	0	2	10	67.3	74
1930	533	0	395	108	0	4	0	1	5	11	0	1	0	8	67.9	74.5
1945	461	0	348	79	0	5	1	1	4	15	0	1	0	7	68.5	74.7
2000	449	0	321	86	0	6	0	1	1	29	0	0	0	5	68.1	74.3
2015	466	1	358	84	0	3	0	0	6	11	1	0	0	2	68.6	74.7
2030	415	3	328	54	1	5	0	3	4	15	1	0	0	1	68.5	74.9
2045	385	2	280	65	1	10	0	0	4	19	1	0	0	3	67.7	73.8
2100	328	2	255	53	0	5	1	0	0	10	0	0	0	2	67.7	74.5
2115	283	0	226	48	0	2	0	0	1	3	0	1	0	2	68.2	75.2
2130	299	0	244	43	0	5	0	1	1	4	1	0	0	0	69.2	76.5
2145	321	1	239	56	1	4	1	1	2	14	0	0	1	1	69.8	76.3
2200	278	0	215	39	0	8	1	0	2	11	1	0	0	1	68.7	75.8
2215	275	2	208	37	1	10	0	1	1	11	1	1	0	2	68.1	74.7
2230	261	0	202	38	0	5	0	0	2	10	2	0	0	2	68.3	76.1
2245	211	3	161	22	0	3	0	0	4	17	0	0	0	1	67.5	74
2300	194	0	153	27	0	1	0	0	1	11	1	0	0	0	68.8	76.1
2315	225	1	176	28	0	2	0	0	1	15	0	0	0	2	68.1	74.3
2330	199	0	149	31	1	5	0	0	1	11	0	0	0	1	67.6	74.3
2345	200	2	163	20	0	3	0	0	3	9	0	0	0	0	67.8	73.4
26392	55	19133	4788	56	443	44	67	272	965	92	16	8	453	68.3	74.9	
32111	68	23455	5772	66	515	53	77	314	1153	100	22	12	504	68.3	74.9	
37231	84	27413	6520	83	610	61	80	352	1354	110	27	16	521	68.3	74.9	

DRAFT

Site #24

Southern Traffic Services, Inc.
 Class Bin Stations TO I-10 EB

Database:
 Site:
 Direct Survey File:
 Algorithm:
 Data type:

Profile:
 Filter:
 Included Speed Direct Separation:
 Name:
 Scheme:
 Units:

Column Length:
 0 [Time]
 1 [Total]
 2 [Counts]
 3 [Mean]
 4 [Vpp]

Wednesday	Day	Total	October 25, 20	17	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Mean	Vpp	85
200		36	0	25	8	0	0	1	0	0	0	2	0	0	11	0	0	0	62.3	69.3	
215		47	0	27	10	1	2	1	0	1	4	0	0	1	0	0	0	0	61.4	67.6	
230		46	0	29	14	0	1	1	0	0	1	0	0	0	0	0	0	0	62.3	67.3	
245		53	0	34	6	1	0	3	0	1	8	0	0	0	0	0	0	0	62.8	70.7	
300		33	0	23	6	0	0	1	0	0	3	0	0	0	0	0	0	0	65.7	73.4	
315		54	0	34	15	0	0	2	0	1	1	1	0	0	0	0	0	0	63.2	68.5	
330		69	0	43	13	3	0	9	0	0	1	0	0	0	0	0	0	0	64.6	73.6	
345		73	0	54	11	0	0	2	0	1	5	0	0	0	0	0	0	0	66.2	74.3	
400		97	1	45	36	0	0	5	0	2	8	0	0	0	0	0	0	0	65.2	73.8	
415		103	0	67	27	0	2	0	0	3	4	0	0	0	0	0	0	0	66.4	74	
430		172	0	98	51	0	2	3	1	7	10	0	0	0	0	0	0	0	66.3	73.1	
445		243	1	152	72	0	4	4	0	4	6	0	0	0	0	0	0	0	67.7	74.5	
500		276	0	161	95	5	7	5	0	1	2	0	0	0	0	0	0	0	67.4	74	
515		354	0	237	89	7	7	4	0	2	8	0	0	0	0	0	0	0	67.1	73.8	
530		345	1	225	95	5	9	2	0	1	7	0	0	0	0	0	0	0	66	73.4	
545		443	0	279	105	13	21	4	0	4	15	1	0	0	1	0	0	0	65.5	72.3	
600		398	0	241	113	12	12	2	1	2	15	0	0	0	0	0	0	0	64.7	71.4	
615		543	0	359	139	15	15	2	0	1	12	0	0	0	0	0	0	0	64	70.2	
630		606	0	430	128	8	15	2	3	7	11	2	0	0	0	0	0	0	63	69.6	
645		741	0	560	141	10	13	6	0	2	8	0	0	0	0	0	1	0	61.3	68	
700		778	0	595	136	6	8	10	3	5	14	1	0	0	0	0	0	0	61.5	68	
715		803	0	616	142	3	18	2	3	2	14	2	0	0	0	0	1	0	61.6	67.8	
730		517	2	412	80	1	8	7	0	1	6	0	0	0	0	0	0	0	39.7	64.6	
745		334	4	260	53	10	4	1	0	1	1	0	0	0	0	0	0	0	10.8	14.3	
800		718	0	533	141	3	9	7	2	3	19	1	0	0	0	0	0	0	32.1	44.5	
815		679	1	533	107	5	11	7	0	4	9	2	0	0	0	0	0	0	44.2	64.2	
830		548	0	400	117	2	8	4	2	1	14	0	0	0	0	0	0	0	63.1	69.3	
845		648	1	479	125	3	12	4	5	7	11	1	0	0	0	0	0	0	57.6	66.9	
900		554	0	397	113	3	10	4	3	3	18	1	0	0	2	0	0	0	61.5	68.5	
915		559	0	401	125	1	4	8	0	4	16	0	0	0	0	0	0	0	60.1	67.3	
930		587	1	422	118	1	20	5	1	1	17	1	0	0	0	0	0	0	60.6	67.3	
945		576	0	405	125	1	15	3	1	4	19	1	0	0	2	0	0	0	61.6	68.2	
1000		537	0	359	126	2	12	3	5	3	25	2	0	0	0	0	0	0	60.7	67.6	
1015		531	0	362	132	3	8	4	2	3	16	1	0	0	0	0	0	0	61.4	67.8	
1030		533	0	375	119	1	9	5	0	4	18	2	0	0	0	0	0	0	60.8	68	
1045		548	1	364	139	3	15	6	2	0	17	0	0	0	1	0	0	0	61.2	68	
1100		606	1	414	140	6	19	6	1	3	14	1	0	0	1	0	0	0	59.8	66.4	
1115		618	2	426	148	2	7	4	4	5	17	2	0	0	1	0	0	0	59.5	66.7	
1130		642	0	469	129	2	9	2	3	7	18	2	0	0	1	0	0	0	58.6	65.8	
1145		585	1	416	125	2	8	3	5	4	20	0	0	0	1	0	0	0	60.7	67.1	
1200		623	0	448	125	3	14	0	0	8	23	1	0	0	1	0	0	0	59.6	66.7	
1215		575	1	436	102	3	9	0	3	5	15	0	0	0	1	0	0	0	59.6	66.4	
1230		527	0	383	107	1	8	3	3	3	17	1	0	0	1	0	0	0	60.1	66.4	
1245		549	0	415	108	0	5	2	4	2	11	1	0	0	1	0	0	0	60.1	66.4	
1300		541	0	400	99	4	8	5	3	6	16	0	0	0	0	0	0	0	59.9	65.8	
1315		563	0	412	103	8	9	7	3	5	15	0	0	0	1	0	0	0	59.9	66.2	
1330		535	0	384	107	4	13	5	4	5	12	1	0	0	0	0	0	0	60.6	67.1	
1345		554	0	386	116	15	14	4	2	1	15	1	0	0	0	0	0	0	60.4	67.3	
1400		619	1	445	127	13	11	4	1	1	15	0	0	0	1	0	0	0	60.2	66.7	
1415		592	1	423	125	7	11	3	1	5	14	1	0	0	1	0	0	0	59.6	66	
1430		645	1	484	120	6	15	4	5	2	7	1	0	0	0	0	0	0	59.8	66.7	
1445		689	0	523	133	2	10	5	0	3	9	2	0	0	2	0	0	0	51.1	62.9	
1500		658	2	482	143	3	12	4	2	1	9	0	0	0	0	0	0	0	43.2	63.3	

1100	648	1	462	141	5	14	0	5	3	16	1	0	0	0	58.5	65.1	
1115	748	1	536	158	7	12	5	2	5	21	0	0	0	1	58.5	64.6	
1130	653	1	468	139	2	16	3	3	3	18	0	0	0	0	59.9	66.9	
1145	647	0	462	135	8	14	3	2	3	20	0	0	0	0	57.7	65.1	
1200	705	3	501	156	3	14	4	6	2	16	0	0	0	0	59.2	65.8	
1215	732	1	526	153	8	10	6	4	6	18	0	0	0	0	55.6	63.8	
1230	632	0	441	144	5	10	2	5	7	18	0	0	0	0	58.7	65.8	
1245	598	1	424	119	5	14	7	5	2	19	0	0	0	2	58.4	65.1	
1300	555	7	422	92	2	14	5	3	1	7	1	0	0	1	44.7	61.5	
1315	635	3	467	119	6	14	7	3	7	9	0	0	0	0	23.3	31.3	
1330	590	1	423	116	9	18	5	5	2	11	0	0	0	0	28.2	42.1	
1345	609	2	408	146	9	18	4	3	6	13	0	0	0	0	44.4	62.4	
1400	648	0	461	126	22	13	0	2	4	19	1	0	0	0	58.6	65.5	
1415	646	0	478	125	5	19	2	0	4	13	0	0	0	0	42.5	59.3	
1430	636	3	469	128	8	9	4	2	3	10	0	0	0	0	26.5	34.4	
1445	527	4	385	108	2	13	6	2	4	2	1	0	0	0	16.4	21	
1500	552	3	388	123	6	9	7	3	0	12	1	0	0	0	17.6	23.3	
1515	465	6	336	89	6	8	8	2	3	7	0	0	0	0	15.7	22.8	
1530	464	5	344	96	5	7	4	1	0	2	0	0	0	0	15.1	22.1	
1545	360	3	277	63	3	3	5	1	2	3	0	0	0	0	11.4	15.9	
1600	427	2	307	90	13	3	8	1	1	2	0	0	0	0	12.8	17	
1615	408	3	324	66	3	9	0	0	1	2	0	0	0	0	11.4	14.8	
1630	446	5	333	91	1	5	8	0	0	3	0	0	0	0	12.9	17.2	
1645	369	1	278	80	1	5	1	0	3	0	0	0	0	0	12.5	16.8	
1700	518	3	393	95	5	4	6	1	3	8	0	0	0	0	15.8	20.4	
1715	473	2	383	73	2	5	4	0	0	4	0	0	0	0	14.6	19.7	
1730	544	0	425	98	3	9	3	0	1	4	1	0	0	0	16.4	23.5	
1745	583	4	449	108	2	5	2	0	4	8	1	0	0	0	18	23.5	
1800	638	0	506	119	1	8	1	0	1	2	0	0	0	0	34.2	53.7	
1815	654	1	504	131	1	12	2	0	0	3	0	0	0	0	21.8	27.7	
1830	636	5	493	113	2	10	1	0	2	9	0	1	0	0	55.3	62.2	
1845	552	1	446	87	0	8	1	0	3	6	0	0	0	0	58.3	65.1	
1900	512	1	410	86	2	7	0	0	1	5	0	0	0	0	57.1	64.9	
1915	507	1	395	94	5	6	0	0	1	4	1	0	0	0	60	66.9	
1930	444	2	345	80	1	7	0	0	3	6	0	0	0	0	60.2	67.1	
1945	422	0	329	80	3	2	1	0	1	5	0	1	0	0	60.7	67.3	
2000	460	1	366	74	3	5	2	0	3	5	1	0	0	0	60	66	
2015	444	1	348	76	2	9	1	0	0	7	0	0	0	0	60.8	66.9	
2030	398	2	321	64	0	3	0	0	4	4	0	0	0	0	60.8	66.7	
2045	377	0	305	61	3	2	1	0	0	5	0	0	0	0	61.1	68.5	
2100	346	0	289	49	0	4	1	0	0	3	0	0	0	0	60.3	67.3	
2115	295	1	243	47	1	1	0	0	0	2	0	0	0	0	62.2	69.1	
2130	280	2	232	36	1	1	0	0	0	5	0	1	2	0	62	68.9	
2145	279	0	235	36	1	3	0	0	1	3	0	0	0	0	62.1	68.7	
2200	264	0	208	50	0	2	0	0	3	1	0	0	0	0	62.6	70.5	
2215	239	0	203	26	0	1	0	0	4	5	0	0	0	0	61.8	69.1	
2230	202	0	166	28	0	3	0	0	3	2	0	0	0	0	62.1	68	
2245	191	3	159	23	0	3	0	0	1	2	0	0	0	0	63.3	73.1	
2300	152	0	126	24	0	0	0	0	0	1	0	1	0	0	62.1	69.3	
2315	160	0	140	14	0	3	0	0	0	2	1	0	0	0	63.5	71.8	
2330	144	0	115	22	1	1	1	0	1	3	0	0	0	0	63.4	70.2	
2345	113	0	87	23	0	1	0	0	1	1	0	0	0	0	63.4	72	
19-Jul	28	7	91	20619	5590	231	512	189	107	140	503	16	2	0	7	41.9	64
22-Jun	35	200	103	26182	6886	291	609	216	112	168	597	21	4	2	9	45.8	65.1
00-00	39	726	110	29414	7879	325	670	261	120	206	693	28	5	3	12	47.9	66.2
* Frid	ay,	Oc	tober	27, 201	7												
Time	To	tal	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Mean	Vpp
0			1	2	3	4	5	6	7	8	9	10	11	12	13		85
15		103	0	83	17	0	0	0	0	1	2	0	0	0	0	62.1	70
30		85	1	68	12	0	1	0	0	0	3	0	0	0	0	61.1	70
45		82	0	70	8	0	2	0	0	0	2	0	0	0	0	62.5	70.2
100		82	0	56	22	1	0	0	0	1	1	1	0	0	0	60.6	67.8
115		67	0	51	12	0	1	0	0	0	3	0	0	0	0	61.8	68.2
130		70	0	50	13	0	2	1	1	0	3	0	0	0	0	63.1	70.9
145		63	0	49	7	0	0	0	1	1	5	0	0	0	0	62	68.7
19-Jul		38	0	29	8	0	0	0	0	0	1	0	0	0	0	59.4	64.9
22-Jun		0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
00-00		0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-
00-00		590	1	456	99	1	6	1	2	3	20	1	0	0	0	61.7	69.6

Site #24A

Southe rn Traf fic S ervices, Inc .
 Class Bins
 S 10TH ST OFF RAMP TO I-11 O SB OFF R AMP TO I-10 EB
 Database ts:
 Site:
 Direction:
 Survey Duration:
 File:
 Identifier:
 Algorithm:
 Data type:

Profile:
 Filter time:
 Included classes:
 Speed range:
 Direction:
 Separation:
 Name:
 Scheme :
 Units:

Column Legend :
 0 [Time]
 1 [Total]
 2 [Counts]
 3 [Mean]
 4 [Vpp]

Wednesday Time	day, Oc Total	tober Cls	25, 201 Cls	7 Cls	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Cl	Mean	Vpp
300	7	0	3	4	0	0	0	0	0	0	0	0	0	0	0	0	37.2	85
315	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	39.8	
330	7	0	6	0	0	0	0	0	0	1	0	0	0	0	0	0	38.1	
345	8	0	4	3	0	0	0	0	0	1	0	0	0	0	0	0	34.7	
400	4	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	40.1	
415	3	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	33.7	
430	3	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	31.3	
445	5	0	3	1	0	1	0	0	0	0	0	0	0	0	0	0	39.8	
500	8	0	4	3	0	1	0	0	0	0	0	0	0	0	0	0	37.9	
515	11	0	7	3	0	1	0	0	0	0	0	0	0	0	0	0	40.5	42.7
530	8	0	6	2	0	0	0	0	0	0	0	0	0	0	0	0	32.6	
545	13	0	8	5	0	0	0	0	0	0	0	0	0	0	0	0	40.8	44.7
600	20	0	14	4	0	1	0	0	0	0	1	0	0	0	0	0	37.5	41.2
615	23	0	17	6	0	0	0	0	0	0	0	0	0	0	0	0	39.8	45.2
630	18	0	14	3	0	1	0	0	0	0	0	0	0	0	0	0	37.5	41.4
645	19	0	12	5	0	1	0	0	0	1	0	0	0	0	0	0	34.8	39.4
700	26	0	22	3	0	1	0	0	0	0	0	0	0	0	0	0	35.7	42.3
715	30	0	25	4	0	1	0	0	0	0	0	0	0	0	0	0	35.6	43.2
730	33	0	30	1	0	1	0	0	0	1	0	0	0	0	0	0	34.3	39.8
745	32	0	28	3	0	1	0	0	0	0	0	0	0	0	0	0	35.4	39.8
800	56	0	44	9	2	1	0	0	0	0	0	0	0	0	0	0	34.8	39.4
815	62	0	50	11	0	1	0	0	0	0	0	0	0	0	0	0	35.6	40.7
830	57	0	45	9	1	0	2	0	0	0	0	0	0	0	0	0	35	40
845	44	1	29	9	0	2	1	0	1	1	0	0	0	0	0	0	35.2	41.2
900	50	1	31	16	0	2	0	0	0	0	0	0	0	0	0	0	36.6	42.3
915	51	0	37	10	1	1	1	0	0	1	0	0	0	0	0	0	36.1	41.4
930	41	0	27	12	0	2	0	0	0	0	0	0	0	0	0	0	35.6	40.5
945	57	1	36	16	0	0	1	0	1	2	0	0	0	0	0	0	35.5	41.4
1000	49	0	32	11	0	4	0	0	0	0	2	0	0	0	0	0	35.6	41.4
1015	50	0	37	11	0	1	0	0	0	0	1	0	0	0	0	0	36.3	41.6
1030	53	0	36	12	0	4	0	0	0	0	1	0	0	0	0	0	35	40.3
1045	52	1	35	14	0	0	0	0	0	1	1	0	0	0	0	0	35.6	40.7
1100	64	1	41	17	0	3	1	0	0	1	0	0	0	0	0	0	34.2	39.4
1115	78	0	55	16	0	1	0	0	0	6	0	0	0	0	0	0	34.6	40
1130	80	0	55	24	0	0	0	0	1	0	0	0	0	0	0	0	36.7	40.7
1145	87	0	64	19	1	0	0	0	0	2	1	0	0	0	0	0	35.6	39.6
1200	82	0	55	24	0	2	0	0	0	1	0	0	0	0	0	0	37.1	42.7
1215	65	0	54	9	0	2	0	0	0	0	0	0	0	0	0	0	35	39.4
1230	52	0	41	11	0	0	0	0	0	0	0	0	0	0	0	0	35.3	40.9
1245	78	0	60	16	0	2	0	0	0	0	0	0	0	0	0	0	37.1	41.4
1300	80	0	54	22	1	2	0	0	0	1	0	0	0	0	0	0	37.5	43.2
1315	68	0	51	14	0	1	1	0	0	1	0	0	0	0	0	0	36	39.6
1330	59	0	44	11	0	3	0	0	0	1	0	0	0	0	0	0	37.3	40.5
1345	62	0	45	13	1	2	1	0	0	0	0	0	0	0	0	0	37	41.6
1400	60	0	44	15	0	1	0	0	0	0	0	0	0	0	0	0	36.2	40
1415	67	0	51	15	0	1	0	0	0	0	0	0	0	0	0	0	36.1	40.5
1430	84	0	63	19	0	2	0	0	0	0	0	0	0	0	0	0	37.5	41.8
1445	63	0	41	19	1	0	0	0	0	0	2	0	0	0	0	0	35.7	40.7

Southern Traffic Services, Inc.

2911 Westfield Rd
Gulf Breeze, FL 32563

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PERKINS RD @ I-10 EB RAMPS
BATON ROUGE, LA

File Name : 17067-43 PERKINS RD @ I-10 EB RAMPS
Site Code : 17067
Start Date : 11/9/2017
Page No : 1

Groups Printed- Autos - Trucks - Buses

Start Time	I-10 EB RAMPS Southbound				PERKINS RD Westbound				BLANK Northbound				PERKINS RD Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
06:30	62	0	2	0	0	88	103	0	0	0	0	0	5	57	0	0	317
06:45	67	0	7	2	0	147	121	0	0	0	0	0	8	97	0	0	449
Total	129	0	9	2	0	235	224	0	0	0	0	0	13	154	0	0	766
07:00	78	0	8	1	0	147	163	0	0	0	0	0	5	119	0	0	521
07:15	72	0	7	1	0	107	159	0	0	0	0	0	15	182	0	0	543
07:30	70	0	5	1	0	118	200	0	0	0	0	0	8	147	0	0	549
07:45	79	0	8	4	0	104	181	0	0	0	0	0	17	158	0	0	551
Total	299	0	28	7	0	476	703	0	0	0	0	0	45	606	0	0	2164
08:00	50	0	4	4	0	125	154	0	0	0	0	0	17	130	0	0	484
08:15	57	0	7	2	0	137	126	0	0	0	0	0	11	125	0	0	465
Break																	
Total	107	0	11	6	0	262	280	0	0	0	0	0	28	255	0	0	949
Break																	
16:00	17	0	0	1	0	166	141	0	0	0	0	0	9	220	0	0	554
16:15	15	0	3	2	0	149	151	0	0	0	0	0	3	234	0	0	557
16:30	30	0	1	0	0	163	105	0	0	0	0	0	14	237	0	0	550
16:45	11	0	4	1	0	139	79	0	0	0	0	0	6	262	0	0	502
Total	73	0	8	4	0	617	476	0	0	0	0	0	32	953	0	0	2163
17:00	27	0	1	2	0	148	122	0	0	0	0	0	8	251	0	0	559
17:15	42	0	3	1	0	162	144	0	0	0	0	0	10	245	0	0	607
17:30	48	0	11	1	0	160	150	0	0	0	0	0	6	215	0	0	591
17:45	34	0	19	1	0	158	136	0	0	0	0	0	7	183	0	0	538
Total	151	0	34	5	0	628	552	0	0	0	0	0	31	894	0	0	2295
Grand Total	759	0	90	24	0	2218	2235	0	0	0	0	0	149	2862	0	0	8337
Apprch %	86.9	0	10.3	2.7	0	49.8	50.2	0	0	0	0	0	4.9	95.1	0	0	
Total %	9.1	0	1.1	0.3	0	26.6	26.8	0	0	0	0	0	1.8	34.3	0	0	
Autos	747	0	87	24	0	2184	2196	0	0	0	0	0	148	2836	0	0	8222
% Autos	98.4	0	96.7	100	0	98.5	98.3	0	0	0	0	0	99.3	99.1	0	0	98.6
Trucks	4	0	3	0	0	22	14	0	0	0	0	0	1	18	0	0	62
% Trucks	0.5	0	3.3	0	0	1	0.6	0	0	0	0	0	0.7	0.6	0	0	0.7
Buses	8	0	0	0	0	12	25	0	0	0	0	0	0	8	0	0	53
% Buses	1.1	0	0	0	0	0.5	1.1	0	0	0	0	0	0	0.3	0	0	0.6

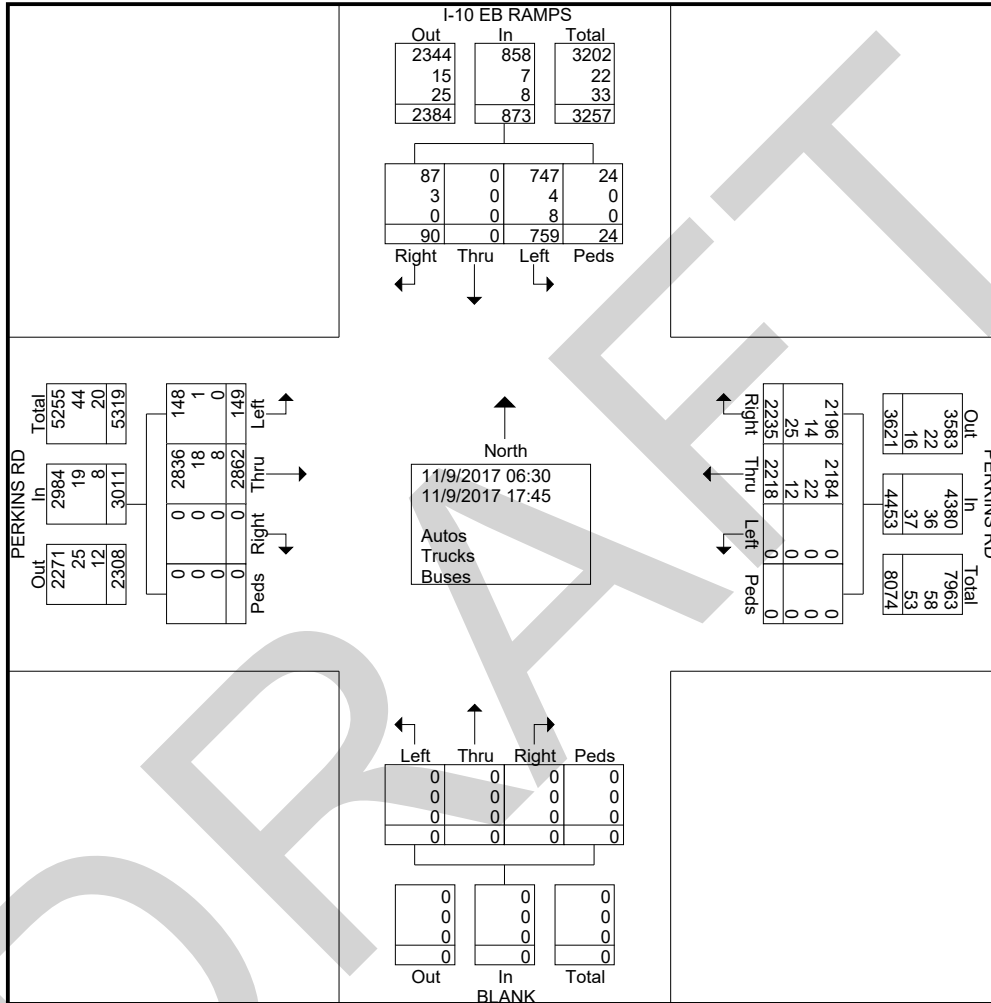
Southern Traffic Services, Inc.

2911 Westfield Rd
Gulf Breeze, FL 32563

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PERKINS RD @ I-10 EB RAMPS
BATON ROUGE, LA

File Name : 17067-43 PERKINS RD @ I-10 EB RAMPS
Site Code : 17067
Start Date : 11/9/2017
Page No : 2



Southern Traffic Services, Inc.

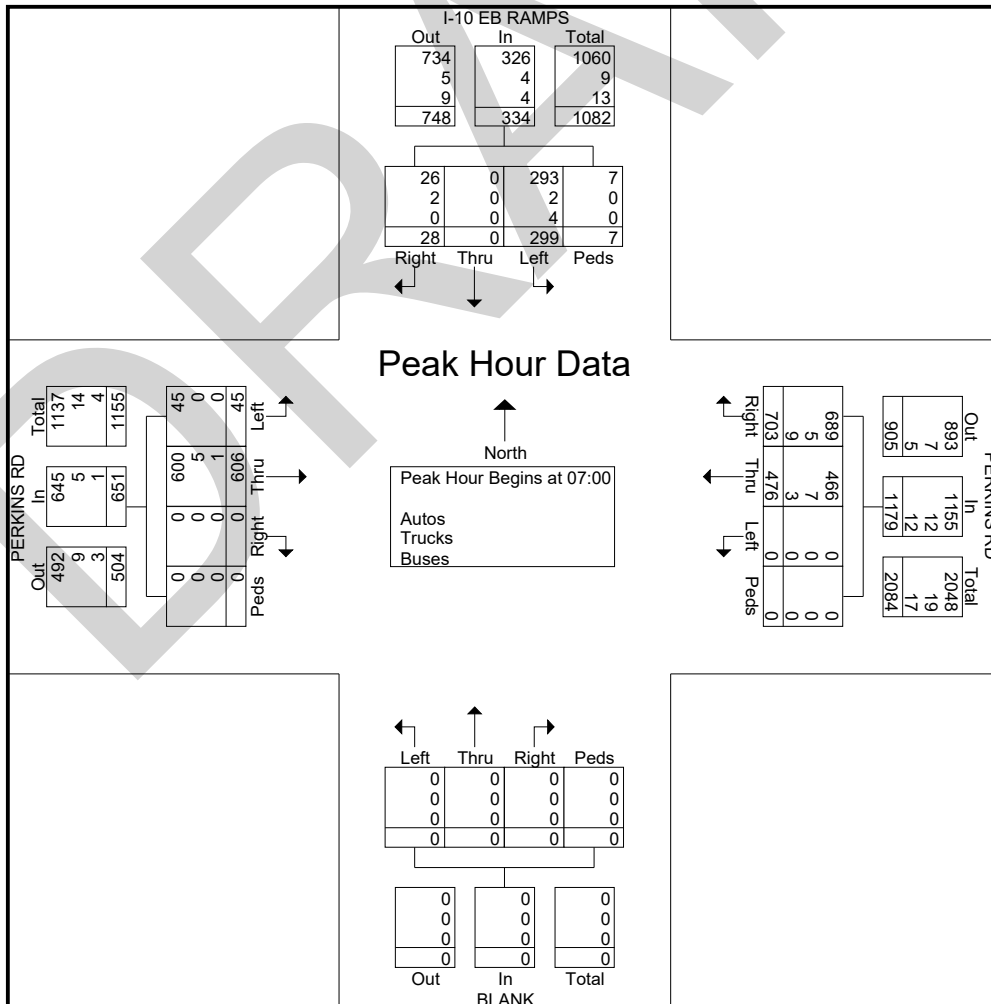
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Gulf Breeze, FL 32563

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PERKINS RD @ I-10 EB RAMP
BATON ROUGE, LA

File Name : 17067-43 PERKINS RD @ I-10 EB RAMP
Site Code : 17067
Start Date : 11/9/2017
Page No : 3

Start Time	I-10 EB RAMP Southbound					PERKINS RD Westbound					BLANK Northbound					PERKINS RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:30 to 12:30 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	78	0	8	1	87	0	147	163	0	310	0	0	0	0	0	5	119	0	0	124	521
07:15	72	0	7	1	80	0	107	159	0	266	0	0	0	0	0	15	182	0	0	197	543
07:30	70	0	5	1	76	0	118	200	0	318	0	0	0	0	0	8	147	0	0	155	549
07:45	79	0	8	4	91	0	104	181	0	285	0	0	0	0	0	17	158	0	0	175	551
Total Volume	299	0	28	7	334	0	476	703	0	1179	0	0	0	0	0	45	606	0	0	651	2164
% App. Total	89.5	0	8.4	2.1		0	40.4	59.6	0		0	0	0	0	0	6.9	93.1	0	0		
PHF	.946	.000	.875	.438	.918	.000	.810	.879	.000	.927	.000	.000	.000	.000	.000	.662	.832	.000	.000	.826	.982
Autos	293	0	26	7	326	0	466	689	0	1155	0	0	0	0	0	45	600	0	0	645	2126
% Autos	98.0	0	92.9	100	97.6	0	97.9	98.0	0	98.0	0	0	0	0	0	100	99.0	0	0	99.1	98.2
Trucks	2	0	2	0	4	0	7	5	0	12	0	0	0	0	0	0	5	0	0	5	21
% Trucks	0.7	0	7.1	0	1.2	0	1.5	0.7	0	1.0	0	0	0	0	0	0	0.8	0	0	0.8	1.0
Buses	4	0	0	0	4	0	3	9	0	12	0	0	0	0	0	0	1	0	0	1	17
% Buses	1.3	0	0	0	1.2	0	0.6	1.3	0	1.0	0	0	0	0	0	0	0.2	0	0	0.2	0.8



Southern Traffic Services, Inc.

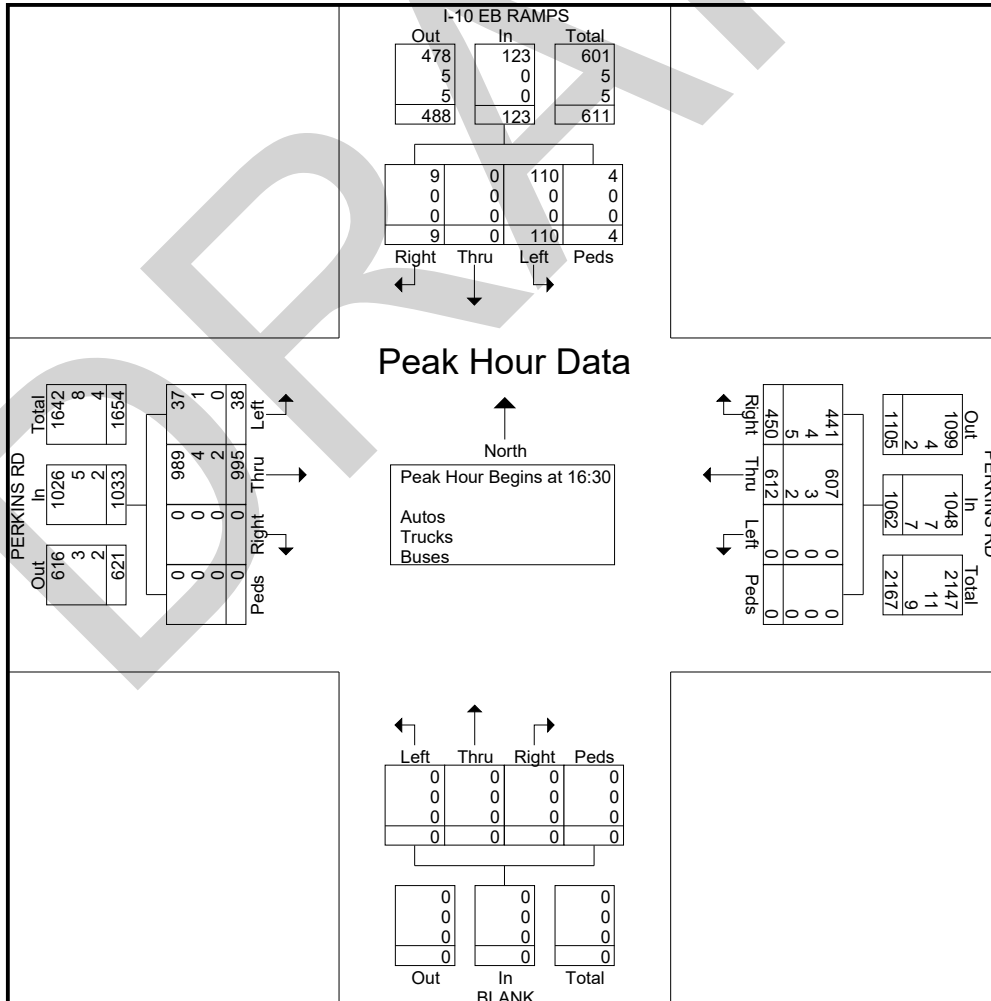
2911 Westfield Rd
Gulf Breeze, FL 32563

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PERKINS RD @ I-10 EB RAMPS
BATON ROUGE, LA

File Name : 17067-43 PERKINS RD @ I-10 EB RAMPS
Site Code : 17067
Start Date : 11/9/2017
Page No : 4

Start Time	I-10 EB RAMPS Southbound					PERKINS RD Westbound					BLANK Northbound					PERKINS RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 12:45 to 17:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	30	0	1	0	31	0	163	105	0	268	0	0	0	0	0	14	237	0	0	251	550
16:45	11	0	4	1	16	0	139	79	0	218	0	0	0	0	0	6	262	0	0	268	502
17:00	27	0	1	2	30	0	148	122	0	270	0	0	0	0	0	8	251	0	0	259	559
17:15	42	0	3	1	46	0	162	144	0	306	0	0	0	0	0	10	245	0	0	255	607
Total Volume	110	0	9	4	123	0	612	450	0	1062	0	0	0	0	0	38	995	0	0	1033	2218
% App. Total	89.4	0	7.3	3.3		0	57.6	42.4	0		0	0	0	0	0	3.7	96.3	0	0		
PHF	.655	.000	.563	.500	.668	.000	.939	.781	.000	.868	.000	.000	.000	.000	.000	.679	.949	.000	.000	.964	.914
Autos	110	0	9	4	123	0	607	441	0	1048	0	0	0	0	0	37	989	0	0	1026	2197
% Autos	100	0	100	100	100	0	99.2	98.0	0	98.7	0	0	0	0	0	97.4	99.4	0	0	99.3	99.1
Trucks	0	0	0	0	0	0	3	4	0	7	0	0	0	0	0	1	4	0	0	5	12
% Trucks	0	0	0	0	0	0	0.5	0.9	0	0.7	0	0	0	0	0	2.6	0.4	0	0	0.5	0.5
Buses	0	0	0	0	0	0	2	5	0	7	0	0	0	0	0	0	2	0	0	2	9
% Buses	0	0	0	0	0	0	0.3	1.1	0	0.7	0	0	0	0	0	0	0.2	0	0	0.2	0.4



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PERKINS RD @ ACADIAN THROUGHWAY Site Name : 17067-50 PERKINS RD @ ACADIAN THROUGHWAY
BATON ROUGE, LA Site Code : 17067

Start Date : 11/2/2017

Page No : 1

Groups Printed- Autos - Trucks - Buses

Start Time	ACADIAN THROUGHWAY Southbound				PERKINS RD Westbound				ACADIAN THROUGHWAY Northbound				PERKINS RD Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
06:30	35	101	5	0	22	127	47	0	26	73	7	0	25	76	9	0	553
06:45	48	126	9	0	26	185	78	0	51	124	19	0	46	98	22	0	832
Total	83	227	14	0	48	312	125	0	77	197	26	0	71	174	31	0	1385
07:00	61	187	2	0	26	197	79	0	79	136	15	0	40	122	13	0	957
07:15	50	177	16	0	38	227	82	0	47	128	12	0	56	135	17	0	985
07:30	70	179	11	0	42	206	43	0	47	180	52	0	54	162	11	0	1057
07:45	64	129	18	0	33	232	39	0	54	176	21	0	62	154	10	0	992
Total	245	672	47	0	139	862	243	0	227	620	100	0	212	573	51	0	3991
08:00	79	198	21	0	31	184	51	0	62	138	39	0	43	127	6	0	979
08:15	67	143	14	0	46	191	50	0	32	132	22	0	48	142	21	0	908
Break																	
Total	146	341	35	0	77	375	101	0	94	270	61	0	91	269	27	0	1887
Break																	
16:00	67	111	38	1	41	220	58	0	28	164	36	0	75	202	13	0	1054
16:15	99	100	28	1	30	218	64	0	36	194	37	0	72	188	13	0	1080
16:30	93	113	32	1	40	230	50	0	32	211	26	0	66	214	13	0	1121
16:45	94	109	36	2	30	232	53	0	34	207	34	0	76	219	9	0	1135
Total	353	433	134	5	141	900	225	0	130	776	133	0	289	823	48	0	4390
17:00	99	141	34	0	38	214	52	0	33	187	29	0	75	208	14	0	1124
17:15	92	122	40	0	38	207	44	0	46	191	38	0	70	236	18	0	1142
17:30	95	105	31	0	57	207	53	0	42	187	38	0	74	218	13	0	1120
17:45	87	133	34	0	53	209	66	0	31	195	42	0	73	205	16	0	1144
Total	373	501	139	0	186	837	215	0	152	760	147	0	292	867	61	0	4530
Grand Total	1200	2174	369	5	591	3286	909	0	680	2623	467	0	955	2706	218	0	16183
Apprch %	32	58	9.8	0.1	12.3	68.7	19	0	18	69.6	12.4	0	24.6	69.8	5.6	0	
Total %	7.4	13.4	2.3	0	3.7	20.3	5.6	0	4.2	16.2	2.9	0	5.9	16.7	1.3	0	
Autos	1176	2167	364	5	590	3237	891	0	668	2603	466	0	951	2685	215	0	16018
% Autos	98	99.7	98.6	100	99.8	98.5	98	0	98.2	99.2	99.8	0	99.6	99.2	98.6	0	99
Trucks	4	4	4	0	1	25	3	0	3	9	0	0	3	10	3	0	69
% Trucks	0.3	0.2	1.1	0	0.2	0.8	0.3	0	0.4	0.3	0	0	0.3	0.4	1.4	0	0.4
Buses	20	3	1	0	0	24	15	0	9	11	1	0	1	11	0	0	96
% Buses	1.7	0.1	0.3	0	0	0.7	1.7	0	1.3	0.4	0.2	0	0.1	0.4	0	0	0.6

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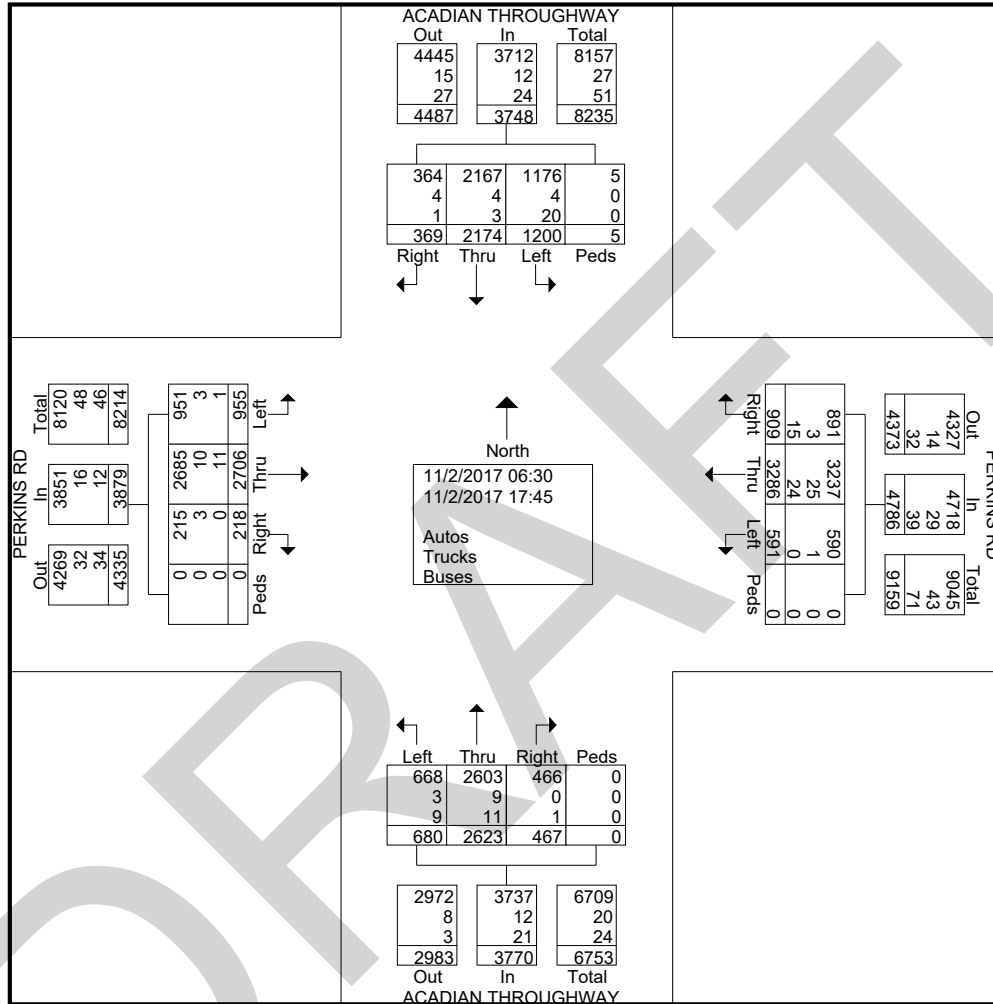
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PERKINS RD @ ACADIAN THROUGHWAY Site Name : 17067-50 PERKINS RD @ ACADIAN THROUGHWAY
BATON ROUGE, LA Site Code : 17067

Start Date : 11/2/2017

Page No : 2



Southern Traffic Services, Inc.

2911 Westfield Rd
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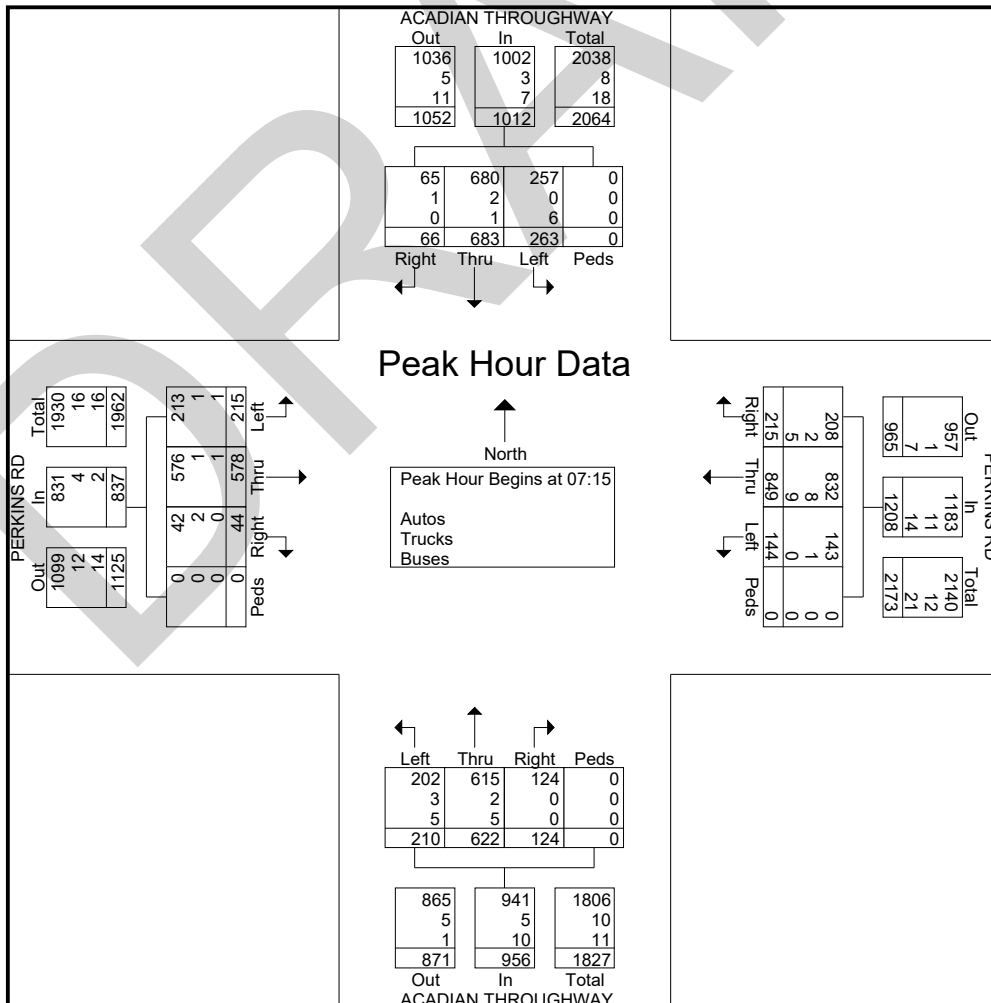
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PERKINS RD @ ACADIAN THROUGHWAY Site Name : 17067-50 PERKINS RD @ ACADIAN THROUGHWAY
BATON ROUGE, LA Site Code : 17067

Start Date : 11/2/2017

Page No : 3

Start Time	ACADIAN THROUGHWAY Southbound					PERKINS RD Westbound					ACADIAN THROUGHWAY Northbound					PERKINS RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:30 to 12:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	50	177	16	0	243	38	227	82	0	347	47	128	12	0	187	56	135	17	0	208	985
07:30	70	179	11	0	260	42	206	43	0	291	47	180	52	0	279	54	162	11	0	227	1057
07:45	64	129	18	0	211	33	232	39	0	304	54	176	21	0	251	62	154	10	0	226	992
08:00	79	198	21	0	298	31	184	51	0	266	62	138	39	0	239	43	127	6	0	176	979
Total Volume	263	683	66	0	1012	144	849	215	0	1208	210	622	124	0	956	215	578	44	0	837	4013
% App. Total	26	67.5	6.5	0		11.9	70.3	17.8	0		22	65.1	13	0		25.7	69.1	5.3	0		
PHF	.832	.862	.786	.000	.849	.857	.915	.655	.000	.870	.847	.864	.596	.000	.857	.867	.892	.647	.000	.922	.949
Autos	257	680	65	0	1002	143	832	208	0	1183	202	615	124	0	941	213	576	42	0	831	3957
% Autos	97.7	99.6	98.5	0	99.0	99.3	98.0	96.7	0	97.9	96.2	98.9	100	0	98.4	99.1	99.7	95.5	0	99.3	98.6
Trucks	0	2	1	0	3	1	8	2	0	11	3	2	0	0	5	1	1	2	0	4	23
% Trucks	0	0.3	1.5	0	0.3	0.7	0.9	0.9	0	0.9	1.4	0.3	0	0	0.5	0.5	0.2	4.5	0	0.5	0.6
Buses	6	1	0	0	7	0	9	5	0	14	5	5	0	0	10	1	1	0	0	2	33
% Buses	2.3	0.1	0	0	0.7	0	1.1	2.3	0	1.2	2.4	0.8	0	0	1.0	0.5	0.2	0	0	0.2	0.8



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PERKINS RD @ ACADIAN THROUGHWAY Site Name : 17067-50 PERKINS RD @ ACADIAN THROUGHWAY
 BATON ROUGE, LA Site Code : 17067
 Start Date : 11/2/2017
 Page No : 4

Start Time	ACADIAN THROUGHWAY Southbound					PERKINS RD Westbound					ACADIAN THROUGHWAY Northbound					PERKINS RD Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 12:30 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	99	141	34	0	274	38	214	52	0	304	33	187	29	0	249	75	208	14	0	297	1124
17:15	92	122	40	0	254	38	207	44	0	289	46	191	38	0	275	70	236	18	0	324	1142
17:30	95	105	31	0	231	57	207	53	0	317	42	187	38	0	267	74	218	13	0	305	1120
17:45	87	133	34	0	254	53	209	66	0	328	31	195	42	0	268	73	205	16	0	294	1144
Total Volume	373	501	139	0	1013	186	837	215	0	1238	152	760	147	0	1059	292	867	61	0	1220	4530
% App. Total	36.8	49.5	13.7	0		15	67.6	17.4	0		14.4	71.8	13.9	0		23.9	71.1	5	0		
PHF	.942	.888	.869	.000	.924	.816	.978	.814	.000	.944	.826	.974	.875	.000	.963	.973	.918	.847	.000	.941	.990
Autos	370	500	139	0	1009	186	830	213	0	1229	150	754	147	0	1051	292	865	61	0	1218	4507
% Autos	99.2	99.8	100	0	99.6	100	99.2	99.1	0	99.3	98.7	99.2	100	0	99.2	100	99.8	100	0	99.8	99.5
Trucks	0	1	0	0	1	0	4	0	0	4	0	4	0	0	4	0	1	0	0	0	1
% Trucks	0	0.2	0	0	0.1	0	0.5	0	0	0.3	0	0.5	0	0	0.4	0	0.1	0	0	0.1	0.2
Buses	3	0	0	0	3	0	3	2	0	5	2	2	0	0	4	0	1	0	0	1	13
% Buses	0.8	0	0	0	0.3	0	0.4	0.9	0	0.4	1.3	0.3	0	0	0.4	0	0.1	0	0	0.1	0.3

Southern Traffic Services, Inc.

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ACADIAN THROUGHWAY @ ACADIAN CENTRE 17067-51 ACADIAN THROUGHWAY @ ACADIAN CENTRE
BATON ROUGE, LA

Site Code : 17067

Start Date : 11/2/2017

Page No : 1

Groups Printed- Autos - Trucks - Buses

Start Time	ACADIAN THROUGHWAY Southbound				ACADIAN CENTRE Westbound				ACADIAN THROUGHWAY Northbound				ACADIAN CENTRE Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
06:30	1	129	0	0	1	0	6	0	0	132	0	0	0	0	0	0	269
06:45	7	212	0	0	0	0	3	0	0	265	0	0	0	0	0	0	487
Total	8	341	0	0	1	0	9	0	0	397	0	0	0	0	0	0	756
07:00	10	269	0	0	2	0	11	0	0	235	2	0	0	0	0	0	529
07:15	41	282	1	0	1	0	51	0	0	287	3	0	0	0	0	0	666
07:30	29	258	1	0	0	0	29	0	0	266	2	0	0	1	0	1	587
07:45	8	245	1	0	0	0	8	0	0	303	0	0	2	0	0	0	567
Total	88	1054	3	0	3	0	99	0	0	1091	7	0	2	1	0	1	2349
08:00	16	315	1	0	3	1	19	0	0	232	2	0	0	0	0	0	589
08:15	4	248	1	0	0	0	7	0	1	237	4	0	3	0	0	4	509
Break																	
Total	20	563	2	0	3	1	26	0	1	469	6	0	3	0	0	4	1098
Break																	
16:00	12	213	8	0	1	2	14	0	0	315	4	0	8	0	5	0	582
16:15	9	256	7	0	2	0	18	0	2	340	4	0	1	0	1	0	640
16:30	9	258	8	0	1	2	17	0	0	339	4	0	3	0	0	0	641
16:45	14	255	12	0	3	2	17	0	7	341	8	0	1	0	4	0	664
Total	44	982	35	0	7	6	66	0	9	1335	20	0	13	0	10	0	2527
17:00	14	292	9	0	4	0	14	0	3	323	7	0	3	0	2	1	672
17:15	15	297	10	0	5	2	15	0	3	307	3	0	2	1	2	0	662
17:30	9	272	9	0	1	4	13	0	1	320	10	0	6	0	1	0	646
17:45	13	267	12	0	3	1	18	0	0	356	6	0	6	0	1	0	683
Total	51	1128	40	0	13	7	60	0	7	1306	26	0	17	1	6	1	2663
Grand Total	211	4068	80	0	27	14	260	0	17	4598	59	0	35	2	16	6	9393
Apprch %	4.8	93.3	1.8	0	9	4.7	86.4	0	0.4	98.4	1.3	0	59.3	3.4	27.1	10.2	
Total %	2.2	43.3	0.9	0	0.3	0.1	2.8	0	0.2	49	0.6	0	0.4	0	0.2	0.1	
Autos	211	4031	79	0	27	13	259	0	17	4554	58	0	32	2	16	6	9305
% Autos	100	99.1	98.8	0	100	92.9	99.6	0	100	99	98.3	0	91.4	100	100	100	99.1
Trucks	0	13	1	0	0	1	0	0	0	16	1	0	3	0	0	0	35
% Trucks	0	0.3	1.2	0	0	7.1	0	0	0	0.3	1.7	0	8.6	0	0	0	0.4
Buses	0	24	0	0	0	0	1	0	0	28	0	0	0	0	0	0	53
% Buses	0	0.6	0	0	0	0	0.4	0	0	0.6	0	0	0	0	0	0	0.6

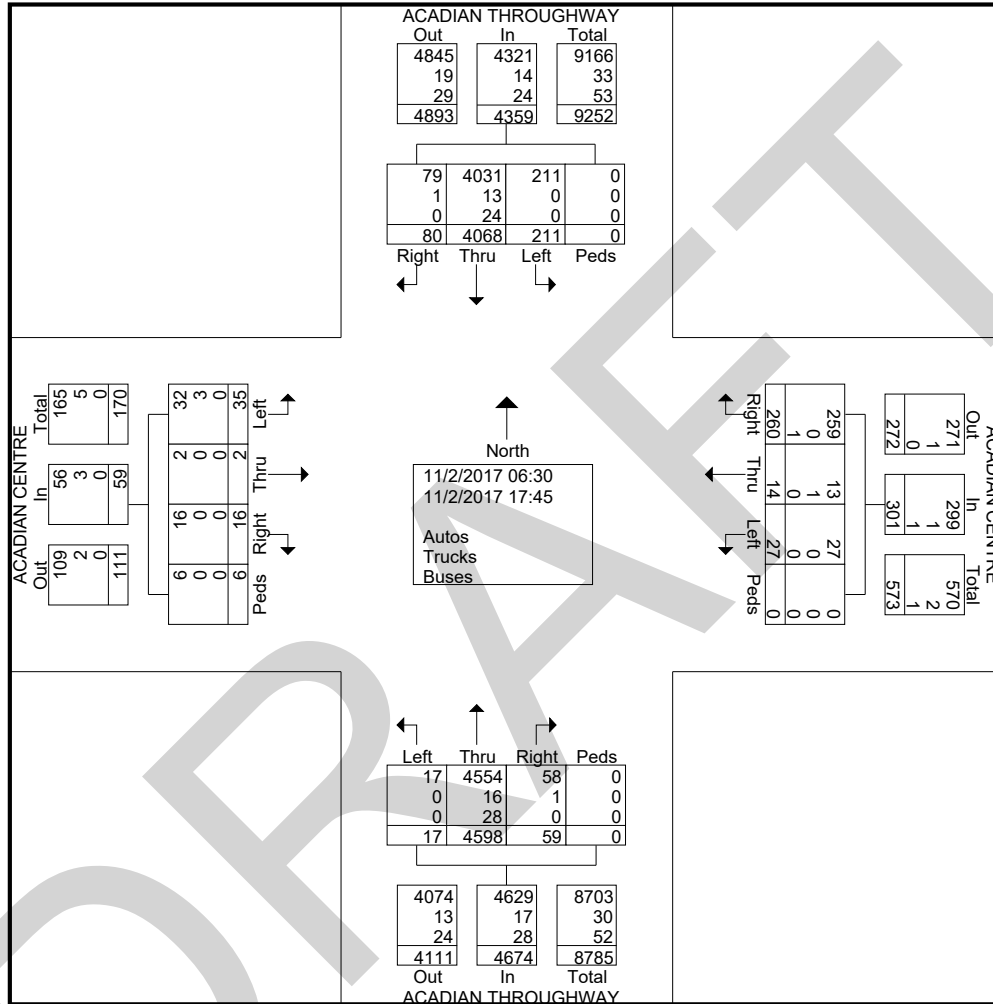
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ACADIAN THROUGHWAY @ ACADIAN CENTRE 17067-51 ACADIAN THROUGHWAY @ ACADIAN CENTRE
BATON ROUGE, LA

Site Code : 17067
Start Date : 11/2/2017
Page No : 2



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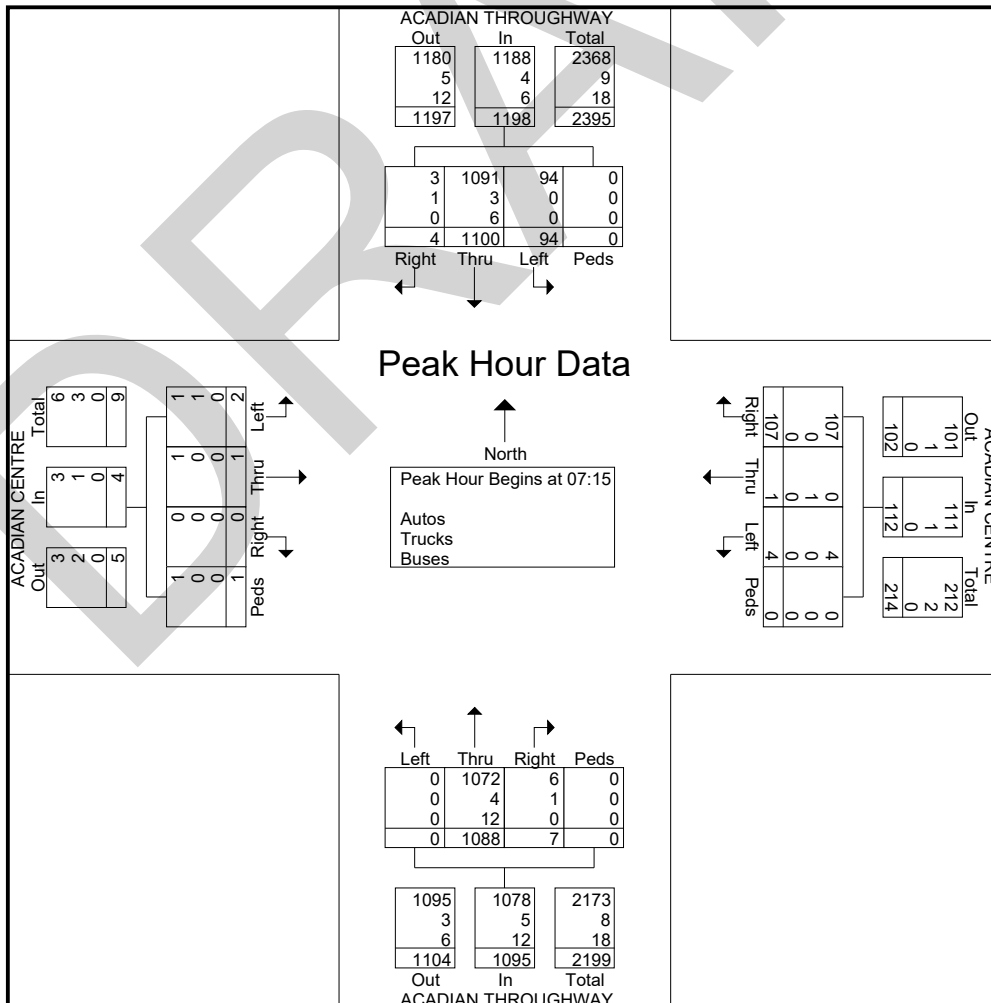
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ACADIAN THROUGHWAY @ ACADIAN CENTRE 17067-51 ACADIAN THROUGHWAY @ ACADIAN CENTRE
BATON ROUGE, LA

Site Code : 17067
Start Date : 11/2/2017
Page No : 3

Start Time	ACADIAN THROUGHWAY Southbound					ACADIAN CENTRE Westbound					ACADIAN THROUGHWAY Northbound					ACADIAN CENTRE Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:30 to 12:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	41	282	1	0	324	1	0	51	0	52	0	287	3	0	290	0	0	0	0	0	666
07:30	29	258	1	0	288	0	0	29	0	29	0	266	2	0	268	0	1	0	1	2	587
07:45	8	245	1	0	254	0	0	8	0	8	0	303	0	0	303	2	0	0	0	2	567
08:00	16	315	1	0	332	3	1	19	0	23	0	232	2	0	234	0	0	0	0	0	589
Total Volume	94	1100	4	0	1198	4	1	107	0	112	0	1088	7	0	1095	2	1	0	1	4	2409
% App. Total	7.8	91.8	0.3	0		3.6	0.9	95.5	0		0	99.4	0.6	0		50	25	0	25		
PHF	.573	.873	1.00	.000	.902	.333	.250	.525	.000	.538	.000	.898	.583	.000	.903	.250	.250	.000	.250	.500	.904
Autos	94	1091	3	0	1188	4	0	107	0	111	0	1072	6	0	1078	1	1	0	1	3	2380
% Autos	100	99.2	75.0	0	99.2	100	0	100	0	99.1	0	98.5	85.7	0	98.4	50.0	100	0	100	75.0	98.8
Trucks	0	3	1	0	4	0	1	0	0	1	0	4	1	0	5	1	0	0	0	1	11
% Trucks	0	0.3	25.0	0	0.3	0	100	0	0	0.9	0	0.4	14.3	0	0.5	50.0	0	0	0	25.0	0.5
Buses	0	6	0	0	6	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	18
% Buses	0	0.5	0	0	0.5	0	0	0	0	0	0	1.1	0	0	1.1	0	0	0	0	0	0.7



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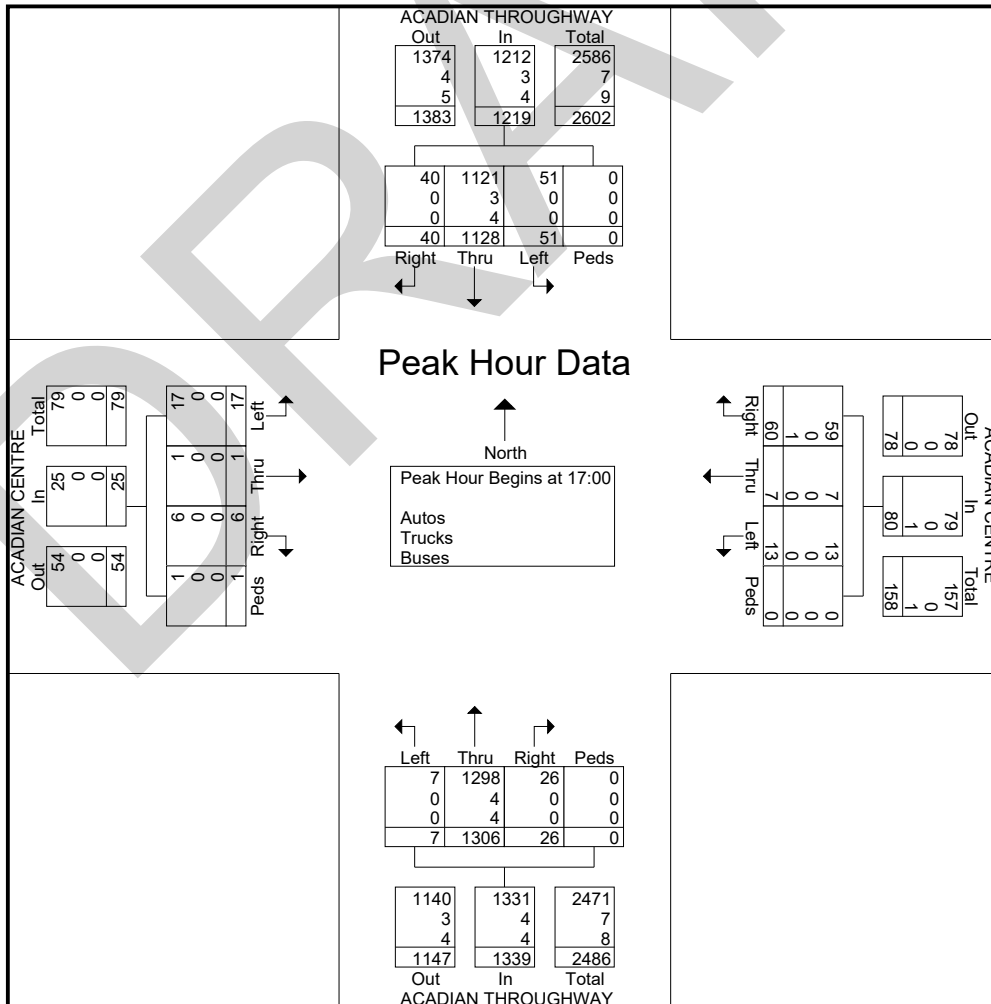
ACADIAN THROUGHWAY @ ACADIAN CENTRE 17067-51 ACADIAN THROUGHWAY @ ACADIAN CENTRE
BATON ROUGE, LA

Site Code : 17067

Start Date : 11/2/2017

Page No : 4

Start Time	ACADIAN THROUGHWAY Southbound					ACADIAN CENTRE Westbound					ACADIAN THROUGHWAY Northbound					ACADIAN CENTRE Eastbound					Int. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total		
Peak Hour Analysis From 12:30 to 17:45 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 17:00																						
17:00	14	292	9	0	315	4	0	14	0	18	3	323	7	0	333	3	0	2	1	6	672	
17:15	15	297	10	0	322	5	2	15	0	22	3	307	3	0	313	2	1	2	0	5	662	
17:30	9	272	9	0	290	1	4	13	0	18	1	320	10	0	331	6	0	1	0	7	646	
17:45	13	267	12	0	292	3	1	18	0	22	0	356	6	0	362	6	0	1	0	7	683	
Total Volume	51	1128	40	0	1219	13	7	60	0	80	7	1306	26	0	1339	17	1	6	1	25	2663	
% App. Total	4.2	92.5	3.3	0		16.2	8.8	75	0		0.5	97.5	1.9	0		68	4	24	4			
PHF	.850	.949	.833	.000	.946	.650	.438	.833	.000	.909	.583	.917	.650	.000	.925	.708	.250	.750	.250	.893	.975	
Autos	51	1121	40	0	1212	13	7	59	0	79	7	1298	26	0	1331	17	1	6	1	25	2647	
% Autos	100	99.4	100	0	99.4	100	100	98.3	0	98.8	100	99.4	100	0	99.4	100	100	100	100	100	99.4	
Trucks	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	7
% Trucks	0	0.3	0	0	0.2	0	0	0	0	0	0	0.3	0	0	0.3	0	0	0	0	0	0.3	
Buses	0	4	0	0	4	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	9	
% Buses	0	0.4	0	0	0.3	0	0	1.7	0	1.3	0	0.3	0	0	0.3	0	0	0	0	0	0.3	



Southern Traffic Services, Inc.

2911 Westfield Rd
Gulf Breeze, FL 32563

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ACADIAN THROUGHWAY @ I-10 EB RAMPs : 17067-52 ACADIAN THROUGHWAY @ I-10 EB RAMPs
BATON ROUGE, LA

Site Code : 17067
Start Date : 11/2/2017
Page No : 1

Groups Printed- Autos - Trucks - Buses

Start Time	ACADIAN THROUGHWAY Southbound				I-10 EB ON RAMP Westbound				ACADIAN THROUGHWAY Northbound				I-10 EB OFF RAMP Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
06:30	66	119	0	0	0	0	0	0	0	85	74	0	13	0	15	0	372
06:45	116	185	0	0	0	0	0	0	0	154	96	0	13	0	31	0	595
Total	182	304	0	0	0	0	0	0	0	239	170	0	26	0	46	0	967
07:00	131	256	0	0	0	0	0	0	0	146	120	0	19	0	21	0	693
07:15	137	316	0	0	0	0	0	0	0	130	196	0	20	0	11	0	810
07:30	131	270	0	0	0	0	0	0	0	96	207	0	11	0	16	0	731
07:45	133	231	0	0	0	0	0	0	0	117	177	0	12	1	29	0	700
Total	532	1073	0	0	0	0	0	0	0	489	700	0	62	1	77	0	2934
08:00	134	296	0	0	0	0	0	0	0	116	148	0	14	1	31	0	740
08:15	132	227	0	0	0	0	0	0	0	100	131	0	17	0	22	1	630
Break																	
Total	266	523	0	0	0	0	0	0	0	216	279	0	31	1	53	1	1370
Break																	
16:00	153	220	0	0	0	0	0	0	0	135	200	0	5	0	14	0	727
16:15	139	269	0	0	0	0	0	0	0	149	217	0	7	0	11	0	792
16:30	140	257	0	0	0	0	0	0	0	127	236	0	4	0	16	0	780
16:45	146	269	0	0	0	0	0	0	0	139	215	0	7	0	16	0	792
Total	578	1015	0	0	0	0	0	0	0	550	868	0	23	0	57	0	3091
17:00	149	293	0	0	0	0	0	0	0	132	196	0	6	0	16	0	792
17:15	151	311	0	0	0	0	0	0	0	131	198	0	6	0	21	0	818
17:30	145	272	0	0	0	0	0	0	0	155	184	0	11	1	21	0	789
17:45	131	255	0	0	0	0	0	0	0	141	241	0	7	1	24	0	800
Total	576	1131	0	0	0	0	0	0	0	559	819	0	30	2	82	0	3199
Grand Total	2134	4046	0	0	0	0	0	0	0	2053	2836	0	172	4	315	1	11561
Apprch %	34.5	65.5	0	0	0	0	0	0	0	42	58	0	35	0.8	64	0.2	
Total %	18.5	35	0	0	0	0	0	0	0	17.8	24.5	0	1.5	0	2.7	0	
Autos	2111	4007	0	0	0	0	0	0	0	2014	2820	0	165	4	313	1	11435
% Autos	98.9	99	0	0	0	0	0	0	0	98.1	99.4	0	95.9	100	99.4	100	98.9
Trucks	10	14	0	0	0	0	0	0	0	11	15	0	5	0	1	0	56
% Trucks	0.5	0.3	0	0	0	0	0	0	0	0.5	0.5	0	2.9	0	0.3	0	0.5
Buses	13	25	0	0	0	0	0	0	0	28	1	0	2	0	1	0	70
% Buses	0.6	0.6	0	0	0	0	0	0	0	1.4	0	0	1.2	0	0.3	0	0.6

Southern Traffic Services, Inc.

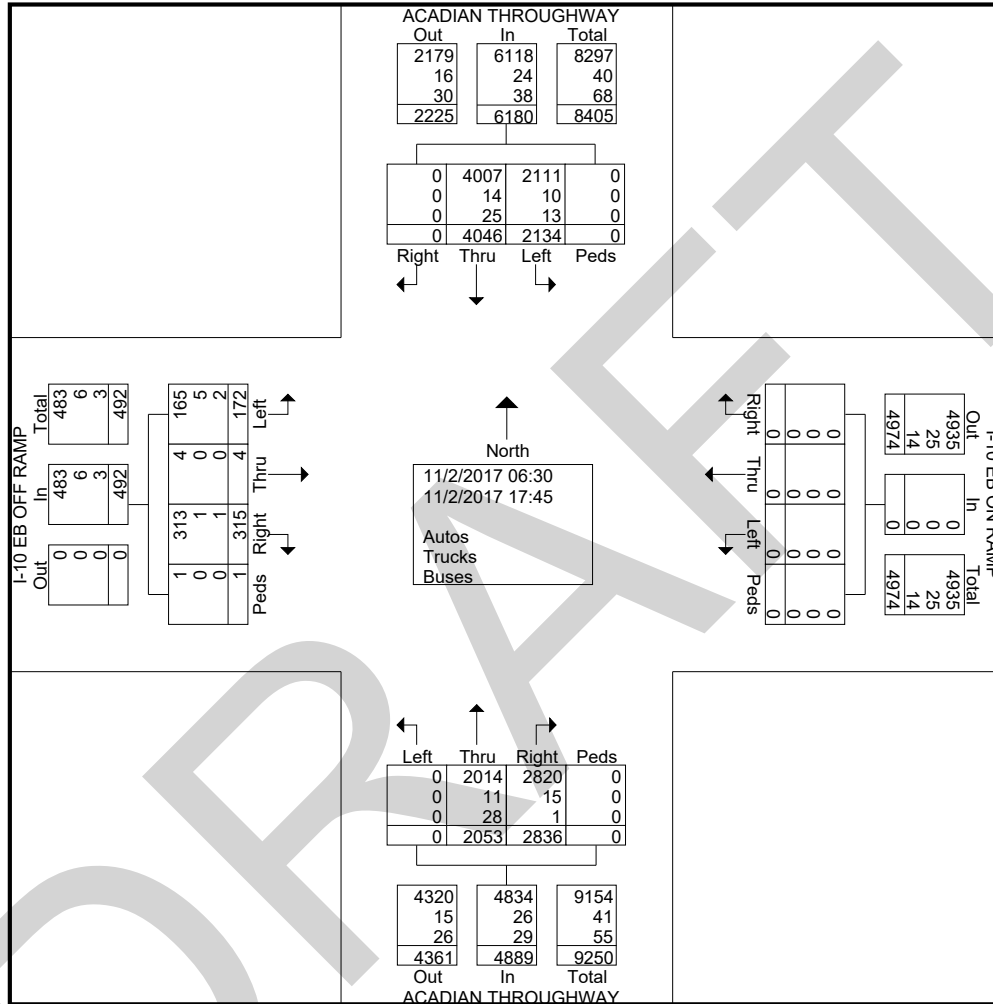
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Gulf Breeze, FL 32563

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ACADIAN THROUGHWAY @ I-10 EB RAMPs : 17067-52 ACADIAN THROUGHWAY @ I-10 EB RAMPs
BATON ROUGE, LA Site Code : 17067

Start Date : 11/2/2017

Page No : 2



Southern Traffic Services, Inc.

2911 Westfield Rd
Gulf Breeze, FL 32563

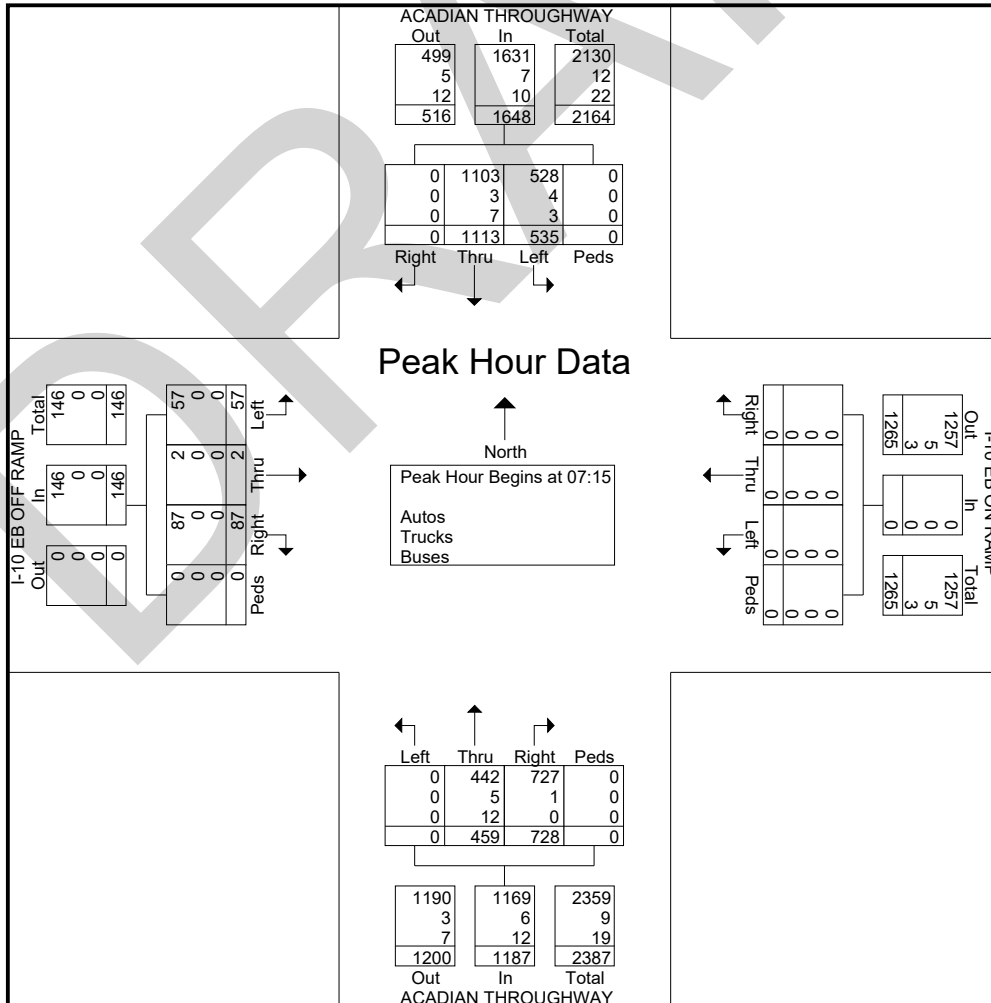
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ACADIAN THROUGHWAY @ I-10 EB RAMP Name : 17067-52 ACADIAN THROUGHWAY @ I-10 EB RAMP
BATON ROUGE, LA Site Code : 17067

Start Date : 11/2/2017

Page No : 3

Start Time	ACADIAN THROUGHWAY Southbound					I-10 EB ON RAMP Westbound					ACADIAN THROUGHWAY Northbound					I-10 EB OFF RAMP Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:30 to 12:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	137	316	0	0	453	0	0	0	0	0	0	130	196	0	326	20	0	11	0	31	810
07:30	131	270	0	0	401	0	0	0	0	0	0	96	207	0	303	11	0	16	0	27	731
07:45	133	231	0	0	364	0	0	0	0	0	0	117	177	0	294	12	1	29	0	42	700
08:00	134	296	0	0	430	0	0	0	0	0	0	116	148	0	264	14	1	31	0	46	740
Total Volume	535	1113	0	0	1648	0	0	0	0	0	0	459	728	0	1187	57	2	87	0	146	2981
% App. Total	32.5	67.5	0	0		0	0	0	0			38.7	61.3	0		39	1.4	59.6	0		
PHF	.976	.881	.000	.000	.909	.000	.000	.000	.000	.000	.000	.883	.879	.000	.910	.713	.500	.702	.000	.793	.920
Autos	528	1103	0	0	1631	0	0	0	0	0	0	442	727	0	1169	57	2	87	0	146	2946
% Autos	98.7	99.1	0	0	99.0	0	0	0	0	0	0	96.3	99.9	0	98.5	100	100	100	0	100	98.8
Trucks	4	3	0	0	7	0	0	0	0	0	0	5	1	0	6	0	0	0	0	0	13
% Trucks	0.7	0.3	0	0	0.4	0	0	0	0	0	0	1.1	0.1	0	0.5	0	0	0	0	0	0.4
Buses	3	7	0	0	10	0	0	0	0	0	0	12	0	0	12	0	0	0	0	0	22
% Buses	0.6	0.6	0	0	0.6	0	0	0	0	0	0	2.6	0	0	1.0	0	0	0	0	0	0.7



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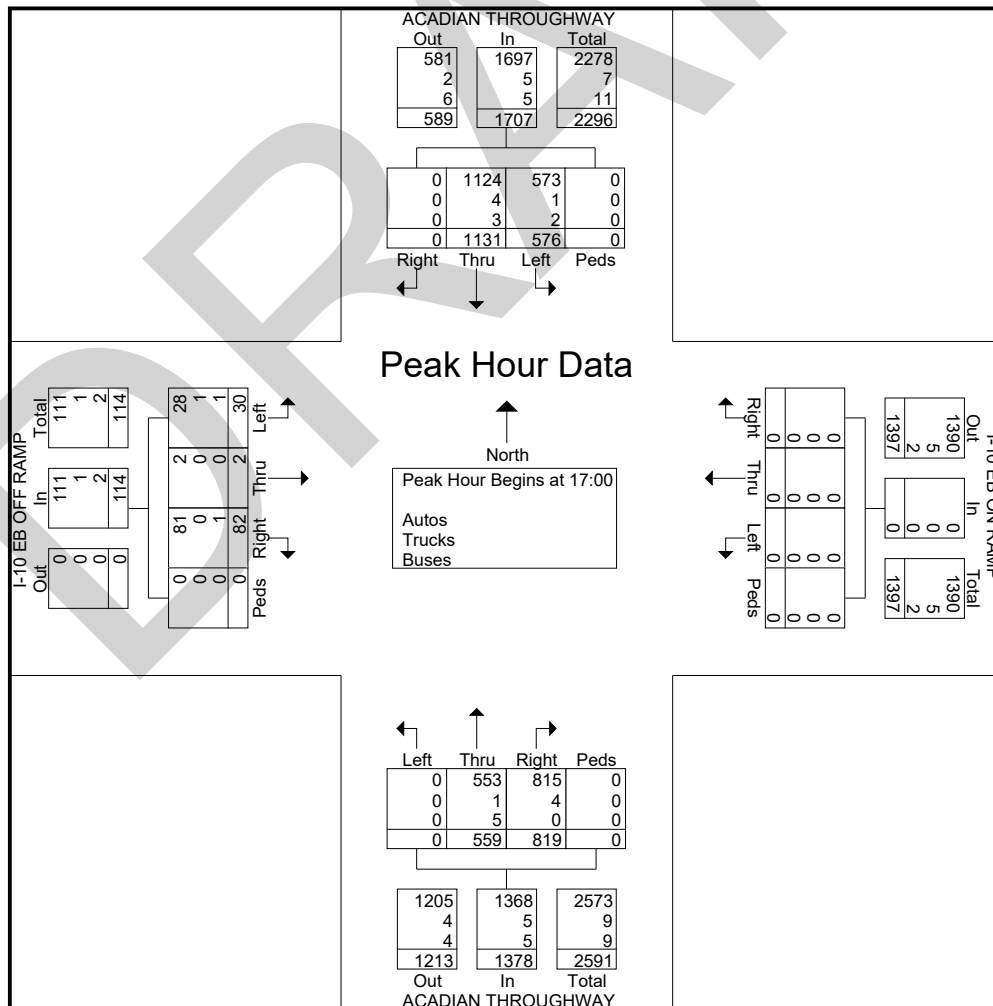
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ACADIAN THROUGHWAY @ I-10 EB RAMPs : 17067-52 ACADIAN THROUGHWAY @ I-10 EB RAMPs
BATON ROUGE, LA Site Code : 17067

Start Date : 11/2/2017

Page No : 4

Start Time	ACADIAN THROUGHWAY Southbound					I-10 EB ON RAMP Westbound					ACADIAN THROUGHWAY Northbound					I-10 EB OFF RAMP Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 12:30 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	149	293	0	0	442	0	0	0	0	0	0	132	196	0	328	6	0	16	0	22	792
17:15	151	311	0	0	462	0	0	0	0	0	0	131	198	0	329	6	0	21	0	27	818
17:30	145	272	0	0	417	0	0	0	0	0	0	155	184	0	339	11	1	21	0	33	789
17:45	131	255	0	0	386	0	0	0	0	0	0	141	241	0	382	7	1	24	0	32	800
Total Volume	576	1131	0	0	1707	0	0	0	0	0	0	559	819	0	1378	30	2	82	0	114	3199
% App. Total	33.7	66.3	0	0		0	0	0	0	0	0	40.6	59.4	0		26.3	1.8	71.9	0		
PHF	.954	.909	.000	.000	.924	.000	.000	.000	.000	.000	.000	.902	.850	.000	.902	.682	.500	.854	.000	.864	.978
Autos	573	1124	0	0	1697	0	0	0	0	0	0	553	815	0	1368	28	2	81	0	111	3176
% Autos	99.5	99.4	0	0	99.4	0	0	0	0	0	0	98.9	99.5	0	99.3	93.3	100	98.8	0	97.4	99.3
Trucks	1	4	0	0	5	0	0	0	0	0	0	1	4	0	5	1	0	0	0	0	1
% Trucks	0.2	0.4	0	0	0.3	0	0	0	0	0	0	0.2	0.5	0	0.4	3.3	0	0	0	0.9	0.3
Buses	2	3	0	0	5	0	0	0	0	0	0	5	0	0	5	1	0	1	0	2	12
% Buses	0.3	0.3	0	0	0.3	0	0	0	0	0	0	0.9	0	0	0.4	3.3	0	1.2	0	1.8	0.4



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ACADIAN THROUGHWAY @ I-10 WB RAMPs : 17067-53 ACADIAN THROUGHWAY @ I-10 WB RAMPs
BATON ROUGE, LA

Site Code : 17067
Start Date : 11/2/2017
Page No : 1

Groups Printed- Autos - Trucks - Buses

Start Time	ACADIAN THROUGHWAY Southbound				I-10 WB ON RAMP Westbound				ACADIAN THROUGHWAY Northbound				I-10 WB OFF RAMP Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
06:30	0	121	19	0	72	0	207	0	9	88	0	0	0	0	0	0	516
06:45	0	194	26	0	114	0	269	0	9	158	0	0	0	0	0	0	770
Total	0	315	45	0	186	0	476	0	18	246	0	0	0	0	0	0	1286
07:00	0	249	20	0	138	0	237	0	10	155	0	0	0	0	0	0	809
07:15	0	294	23	0	167	4	153	0	10	139	0	0	0	0	0	0	790
07:30	0	244	22	0	152	1	117	0	9	97	0	0	0	0	0	0	642
07:45	0	236	35	0	140	3	137	0	11	119	0	0	0	0	0	0	681
Total	0	1023	100	0	597	8	644	0	40	510	0	0	0	0	0	0	2922
08:00	0	240	38	0	182	1	147	0	8	118	0	0	0	0	0	0	734
08:15	0	216	38	0	135	1	95	0	11	111	0	0	0	0	0	0	607
Break																	
Total	0	456	76	0	317	2	242	0	19	229	0	0	0	0	0	0	1341
Break																	
16:00	0	265	35	0	95	3	151	0	15	118	0	1	0	0	0	0	683
16:15	0	290	24	0	117	1	168	0	17	122	0	2	0	0	0	0	741
16:30	0	276	45	0	115	0	182	0	12	125	0	4	0	0	0	0	759
16:45	0	291	25	0	122	6	165	0	20	121	0	5	0	0	0	0	755
Total	0	1122	129	0	449	10	666	0	64	486	0	12	0	0	0	0	2938
17:00	0	295	37	0	151	2	175	0	14	125	0	0	0	0	0	0	799
17:15	0	312	31	0	140	2	191	0	12	123	0	0	0	0	0	0	811
17:30	0	303	19	0	119	11	141	0	10	150	0	1	0	0	0	0	754
17:45	0	243	14	0	140	6	146	0	18	128	0	3	0	0	0	0	698
Total	0	1153	101	0	550	21	653	0	54	526	0	4	0	0	0	0	3062
Grand Total	0	4069	451	0	2099	41	2681	0	195	1997	0	16	0	0	0	0	11549
Apprch %	0	90	10	0	43.5	0.9	55.6	0	8.8	90.4	0	0.7	0	0	0	0	
Total %	0	35.2	3.9	0	18.2	0.4	23.2	0	1.7	17.3	0	0.1	0	0	0	0	
Autos	0	4018	433	0	2091	39	2647	0	189	1957	0	16	0	0	0	0	11390
% Autos	0	98.7	96	0	99.6	95.1	98.7	0	96.9	98	0	100	0	0	0	0	98.6
Trucks	0	15	2	0	7	2	14	0	3	13	0	0	0	0	0	0	56
% Trucks	0	0.4	0.4	0	0.3	4.9	0.5	0	1.5	0.7	0	0	0	0	0	0	0.5
Buses	0	36	16	0	1	0	20	0	3	27	0	0	0	0	0	0	103
% Buses	0	0.9	3.5	0	0	0	0.7	0	1.5	1.4	0	0	0	0	0	0	0.9

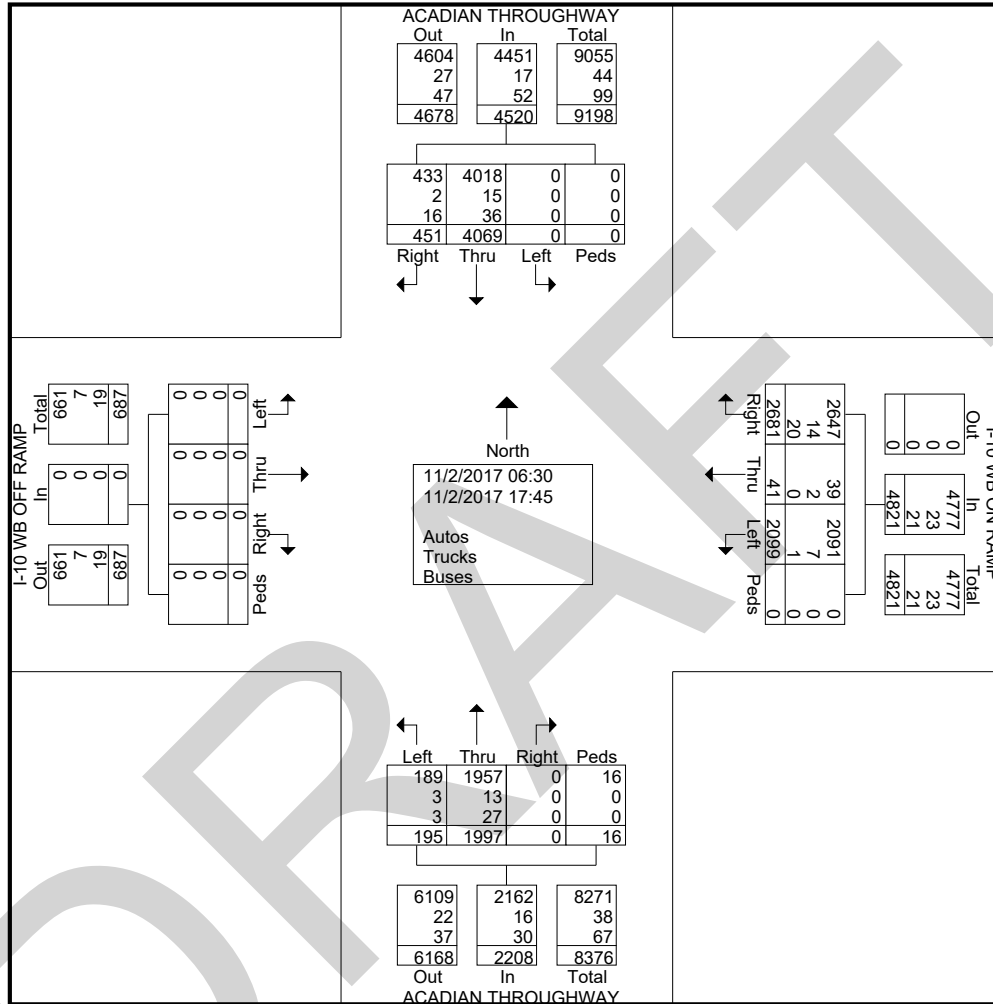
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ACADIAN THROUGHWAY @ I-10 WB RAMP : 17067-53 ACADIAN THROUGHWAY @ I-10 WB RAMP
BATON ROUGE, LA

Site Code : 17067
Start Date : 11/2/2017
Page No : 2



Southern Traffic Services, Inc.

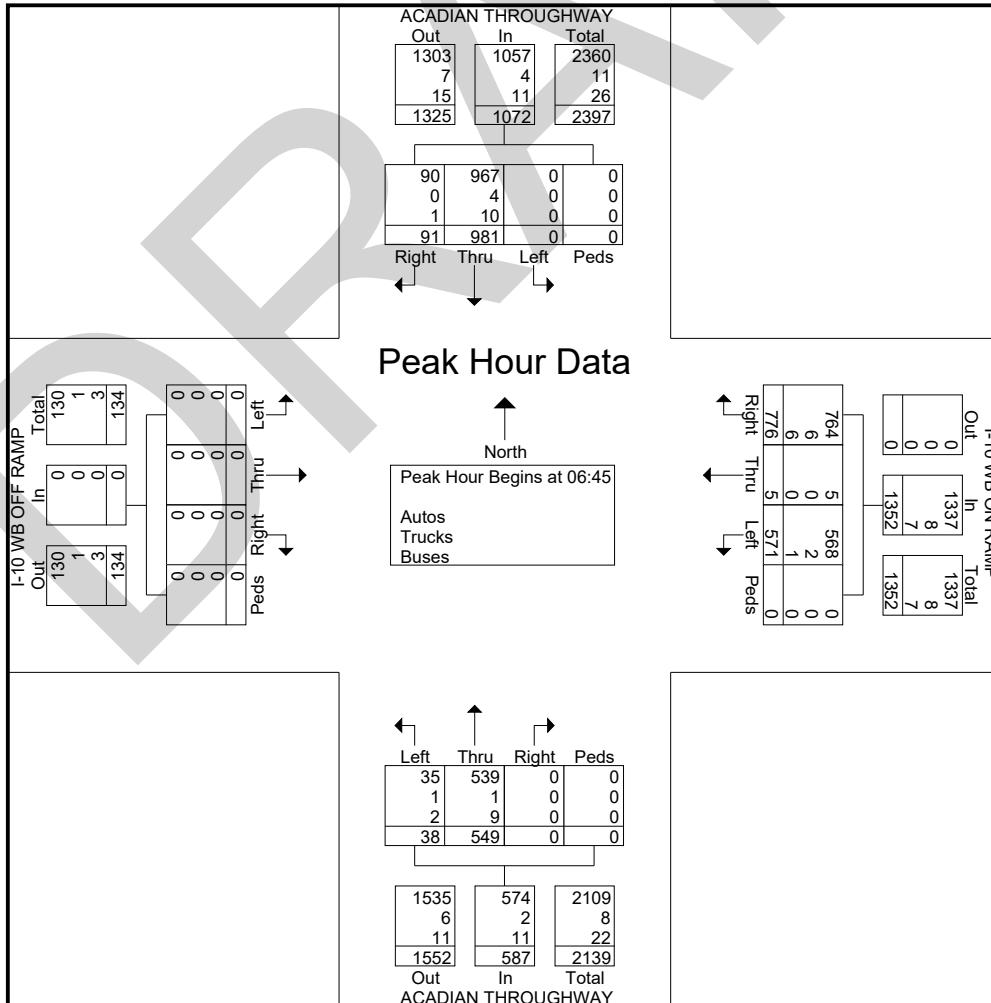
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ACADIAN THROUGHWAY @ I-10 WB RAMP : 17067-53 ACADIAN THROUGHWAY @ I-10 WB RAMP
BATON ROUGE, LA

Site Code : 17067
Start Date : 11/2/2017
Page No : 3

Start Time	ACADIAN THROUGHWAY Southbound					I-10 WB ON RAMP Westbound					ACADIAN THROUGHWAY Northbound					I-10 WB OFF RAMP Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:30 to 12:15 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 06:45																					
06:45	0	194	26	0	220	114	0	269	0	383	9	158	0	0	167	0	0	0	0	0	770
07:00	0	249	20	0	269	138	0	237	0	375	10	155	0	0	165	0	0	0	0	0	809
07:15	0	294	23	0	317	167	4	153	0	324	10	139	0	0	149	0	0	0	0	0	790
07:30	0	244	22	0	266	152	1	117	0	270	9	97	0	0	106	0	0	0	0	0	642
Total Volume	0	981	91	0	1072	571	5	776	0	1352	38	549	0	0	587	0	0	0	0	0	3011
% App. Total	0	91.5	8.5	0		42.2	0.4	57.4	0		6.5	93.5	0	0		0	0	0	0		
PHF	.000	.834	.875	.000	.845	.855	.313	.721	.000	.883	.950	.869	.000	.000	.879	.000	.000	.000	.000	.000	.930
Autos	0	967	90	0	1057	568	5	764	0	1337	35	539	0	0	574	0	0	0	0	0	2968
% Autos	0	98.6	98.9	0	98.6	99.5	100	98.5	0	98.9	92.1	98.2	0	0	97.8	0	0	0	0	0	98.6
Trucks	0	4	0	0	4	2	0	6	0	8	1	1	0	0	2	0	0	0	0	0	14
% Trucks	0	0.4	0	0	0.4	0.4	0	0.8	0	0.6	2.6	0.2	0	0	0.3	0	0	0	0	0	0.5
Buses	0	10	1	0	11	1	0	6	0	7	2	9	0	0	11	0	0	0	0	0	29
% Buses	0	1.0	1.1	0	1.0	0.2	0	0.8	0	0.5	5.3	1.6	0	0	1.9	0	0	0	0	0	1.0



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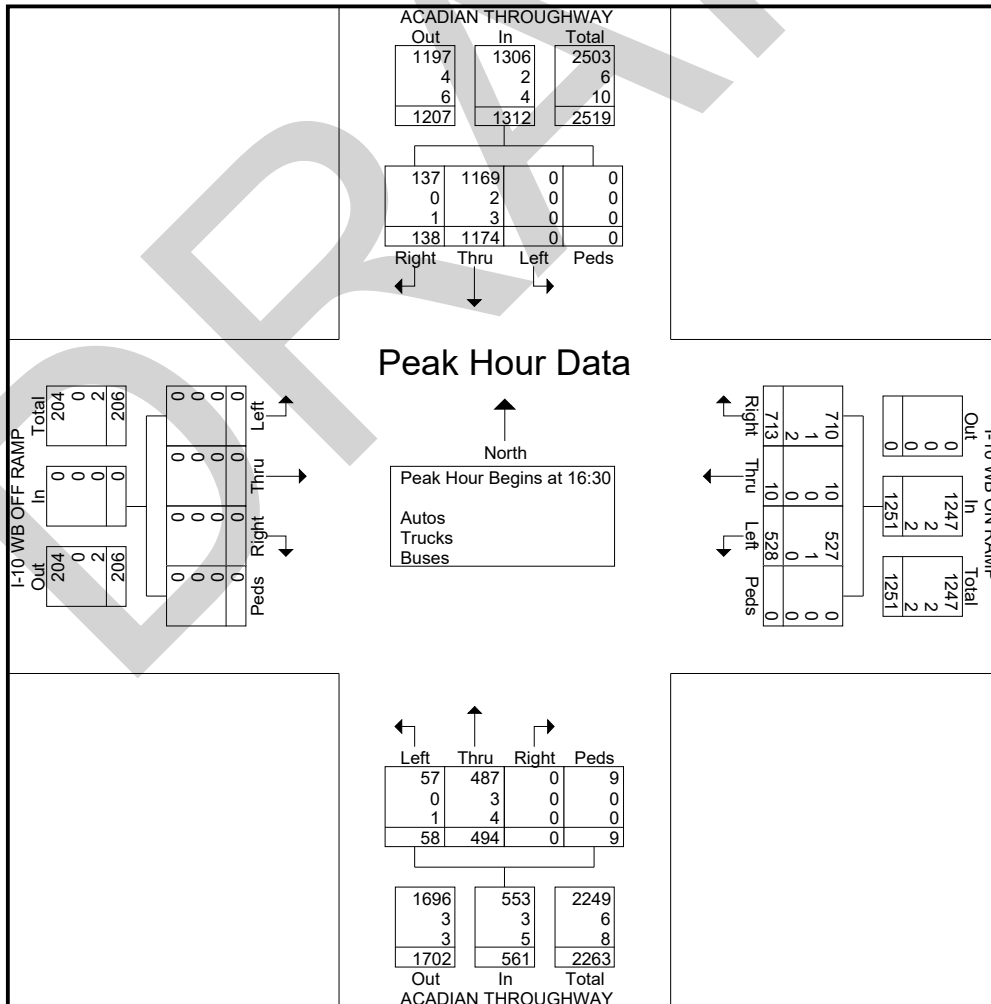
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BATON ROUGE, LA

Site Code : 17067
Start Date : 11/2/2017
Page No : 4

Start Time	ACADIAN THROUGHWAY Southbound					I-10 WB ON RAMP Westbound					ACADIAN THROUGHWAY Northbound					I-10 WB OFF RAMP Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 12:30 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	276	45	0	321	115	0	182	0	297	12	125	0	4	141	0	0	0	0	0	759
16:45	0	291	25	0	316	122	6	165	0	293	20	121	0	5	146	0	0	0	0	0	755
17:00	0	295	37	0	332	151	2	175	0	328	14	125	0	0	139	0	0	0	0	0	799
17:15	0	312	31	0	343	140	2	191	0	333	12	123	0	0	135	0	0	0	0	0	811
Total Volume	0	1174	138	0	1312	528	10	713	0	1251	58	494	0	9	561	0	0	0	0	0	3124
% App. Total	0	89.5	10.5	0		42.2	0.8	57	0		10.3	88.1	0	1.6		0	0	0	0		
PHF	.000	.941	.767	.000	.956	.874	.417	.933	.000	.939	.725	.988	.000	.450	.961	.000	.000	.000	.000	.000	.963
Autos	0	1169	137	0	1306	527	10	710	0	1247	57	487	0	9	553	0	0	0	0	0	3106
% Autos	0	99.6	99.3	0	99.5	99.8	100	99.6	0	99.7	98.3	98.6	0	100	98.6	0	0	0	0	0	99.4
Trucks	0	2	0	0	2	1	0	1	0	2	0	3	0	0	3	0	0	0	0	0	7
% Trucks	0	0.2	0	0	0.2	0.2	0	0.1	0	0.2	0	0.6	0	0	0.5	0	0	0	0	0	0.2
Buses	0	3	1	0	4	0	0	2	0	2	1	4	0	0	5	0	0	0	0	0	11
% Buses	0	0.3	0.7	0	0.3	0	0	0.3	0	0.2	1.7	0.8	0	0	0.9	0	0	0	0	0	0.4



I-10 East Bound Off Ramp @ College Dr

LADOTD Head Quarters HQ Projects

Site Code: I-10 EB @ College Dr
Station ID:
Latitude: 30° 25.3844 North
Longitude: 91° 8.5253 West
I-10 East Bound @ College Dr

Start Time	29-Apr-19		Tue		Wed		Thu		Fri		Sat		Sun		Average Da	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	*	*	*	207	34	198	32	*	*	*	*	*	33	202
12:15	*	*	*	*	*	195	25	184	15	*	*	*	*	*	20	190
12:30	*	*	*	*	*	197	21	166	19	*	*	*	*	*	20	182
12:45	*	*	*	*	*	195	18	164	20	*	*	*	*	*	19	180
01:00	*	*	*	*	*	188	16	151	21	*	*	*	*	*	18	170
01:15	*	*	*	*	*	156	21	136	19	*	*	*	*	*	20	146
01:30	*	*	*	*	*	165	18	171	20	*	*	*	*	*	19	168
01:45	*	*	*	*	*	131	5	143	12	*	*	*	*	*	8	137
02:00	*	*	*	*	*	139	11	158	15	*	*	*	*	*	13	148
02:15	*	*	*	*	*	130	19	142	5	*	*	*	*	*	12	136
02:30	*	*	*	*	*	133	8	122	17	*	*	*	*	*	12	128
02:45	*	*	*	*	*	144	9	126	18	*	*	*	*	*	14	135
03:00	*	*	*	*	*	125	9	113	7	*	*	*	*	*	8	119
03:15	*	*	*	*	*	104	10	105	11	*	*	*	*	*	10	104
03:30	*	*	*	*	*	125	12	92	9	*	*	*	*	*	10	108
03:45	*	*	*	*	*	92	15	114	11	*	*	*	*	*	13	103
04:00	*	*	*	*	*	131	21	95	17	*	*	*	*	*	19	113
04:15	*	*	*	*	*	109	13	101	12	*	*	*	*	*	12	105
04:30	*	*	*	*	*	128	13	123	19	*	*	*	*	*	16	126
04:45	*	*	*	*	*	97	22	94	30	*	*	*	*	*	26	96
05:00	*	*	*	*	*	135	25	121	26	*	*	*	*	*	26	128
05:15	*	*	*	*	*	139	29	119	26	*	*	*	*	*	28	129
05:30	*	*	*	*	*	153	42	160	28	*	*	*	*	*	35	156
05:45	*	*	*	*	*	155	62	177	59	*	*	*	*	*	60	166
06:00	*	*	*	*	*	161	61	167	59	*	*	*	*	*	60	164
06:15	*	*	*	*	*	162	78	181	84	*	*	*	*	*	81	172
06:30	*	*	*	*	*	176	127	146	107	*	*	*	*	*	117	161
06:45	*	*	*	*	*	163	128	147	159	*	*	*	*	*	144	155
07:00	*	*	*	*	*	160	140	151	154	*	*	*	*	*	147	156
07:15	*	*	*	*	*	138	147	146	168	*	*	*	*	*	158	142
07:30	*	*	*	*	*	163	173	147	190	*	*	*	*	*	182	155
07:45	*	*	*	*	30	141	181	145	220	*	*	*	*	*	144	143
08:00	*	*	*	*	169	137	181	130	170	*	*	*	*	*	173	134
08:15	*	*	*	*	184	123	171	146	196	*	*	*	*	*	184	134
08:30	*	*	*	*	174	98	160	121	177	*	*	*	*	*	170	110
08:45	*	*	*	*	146	105	154	121	176	*	*	*	*	*	159	113
09:00	*	*	*	*	148	107	158	111	*	*	*	*	*	*	153	109
09:15	*	*	*	*	170	112	172	92	*	*	*	*	*	*	171	102
09:30	*	*	*	*	120	98	158	113	*	*	*	*	*	*	139	106
09:45	*	*	*	*	152	88	130	93	*	*	*	*	*	*	141	90
10:00	*	*	*	*	147	69	157	73	*	*	*	*	*	*	152	71
10:15	*	*	*	*	158	71	144	56	*	*	*	*	*	*	151	64
10:30	*	*	*	*	166	54	129	60	*	*	*	*	*	*	148	57
10:45	*	*	*	*	179	72	159	64	*	*	*	*	*	*	169	68
11:00	*	*	*	*	163	54	168	53	*	*	*	*	*	*	166	54
11:15	*	*	*	*	210	38	206	53	*	*	*	*	*	*	208	46
11:30	*	*	*	*	195	32	169	36	*	*	*	*	*	*	182	34
11:45	*	*	*	*	208	42	186	30	*	*	*	*	*	*	197	36
Total	0	0	0	0	2719	6037	4115	5857	2328	0	0	0	0	0	4167	5951
Day Total	0	0	0	0		8756		9972		2328		0		0	10118	
% Splits	0.0%	0.0%	0.0%	0.0%	31.1%	68.9%	41.3%	58.7%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	41.2%	58.8%
Peak	-	-	-	-	11:00	12:00	11:00	12:00	07:30	-	-	-	-	-	11:00	12:00
Vol.	-	-	-	-	776	794	729	712	776	-	-	-	-	-	753	754
P.H.F.					0.924	0.959	0.885	0.899	0.882						0.905	0.933

ADT ADT 10,115 AADT 10,115

Southern Traffic Services, Inc.

2911 Westfield Rd
Gulf Breeze, FL 32563

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COLLEGE DR @ I-10 WB RAMPS

BATON ROUGE, LA

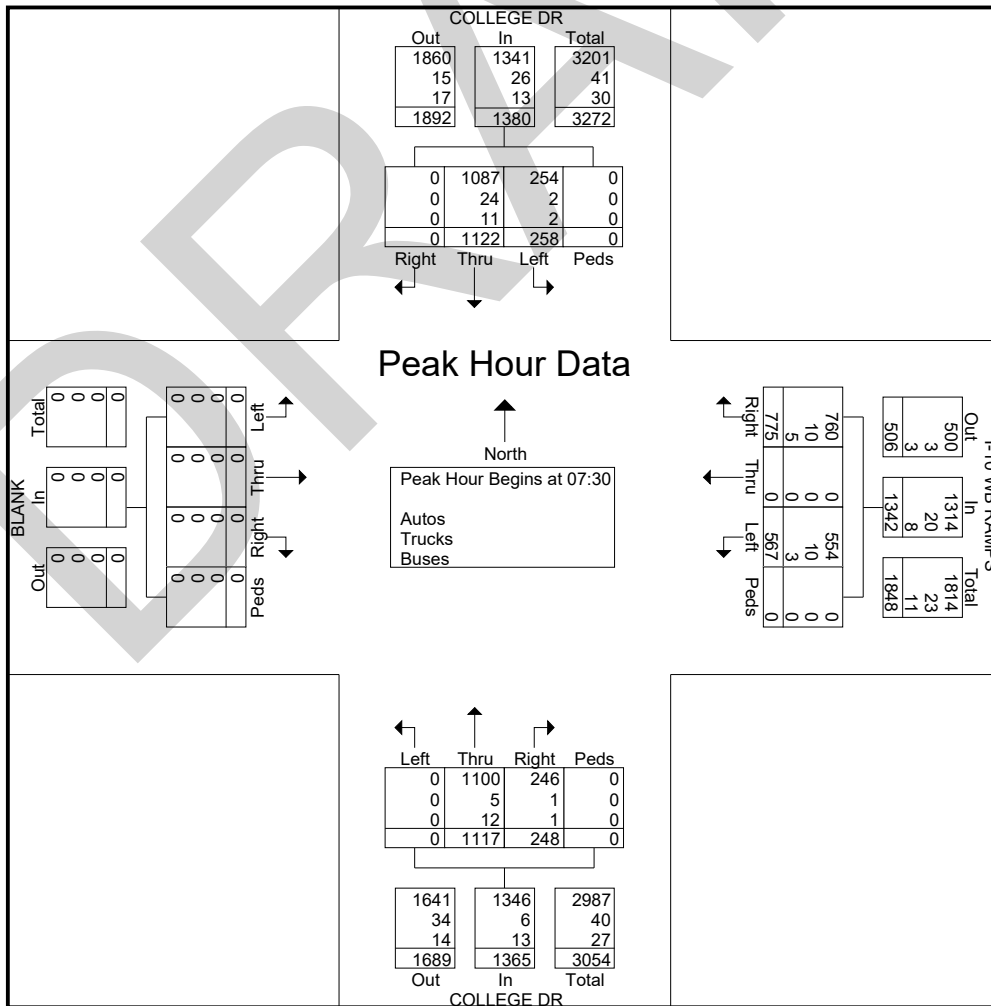
File Name : 17067-59 COLLEGE DR @ I-10 WB RAMPS

Site Code : 17067

Start Date : 11/9/2017

Page No : 3

Start Time	COLLEGE DR Southbound					I-10 WB RAMPS Westbound					COLLEGE DR Northbound					BLANK Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:00 to 12:00 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	63	288	0	0	351	123	0	180	0	303	0	240	57	0	297	0	0	0	0	0	951
07:45	40	262	0	0	302	143	0	189	0	332	0	310	67	0	377	0	0	0	0	0	1011
08:00	97	265	0	0	362	134	0	203	0	337	0	271	60	0	331	0	0	0	0	0	1030
08:15	58	307	0	0	365	167	0	203	0	370	0	296	64	0	360	0	0	0	0	0	1095
Total Volume	258	1122	0	0	1380	567	0	775	0	1342	0	1117	248	0	1365	0	0	0	0	0	4087
% App. Total	18.7	81.3	0	0	42.3	0	57.7	0	0	81.8	18.2	0	0	0	0	0	0	0	0	0	0
PHF	.665	.914	.000	.000	.945	.849	.000	.954	.000	.907	.000	.901	.925	.000	.905	.000	.000	.000	.000	.000	.933
Autos	254	1087										1100									
% Autos	98.4	96.9	0	0	97.2	97.7	0	98.1	0	97.9	0	98.5	99.2	0	98.6	0	0	0	0	0	97.9
Trucks	2	24	0	0	26	10	0	10	0	20	0	5	1	0	6	0	0	0	0	0	52
% Trucks	0.8	2.1	0	0	1.9	1.8	0	1.3	0	1.5	0	0.4	0.4	0	0.4	0	0	0	0	0	1.3
Buses	2	11	0	0	13	3	0	5	0	8	0	12	1	0	13	0	0	0	0	0	34
% Buses	0.8	1.0	0	0	0.9	0.5	0	0.6	0	0.6	0	1.1	0.4	0	1.0	0	0	0	0	0	0.8



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COLLEGE DR @ I-10 WB RAMPS

BATON ROUGE, LA

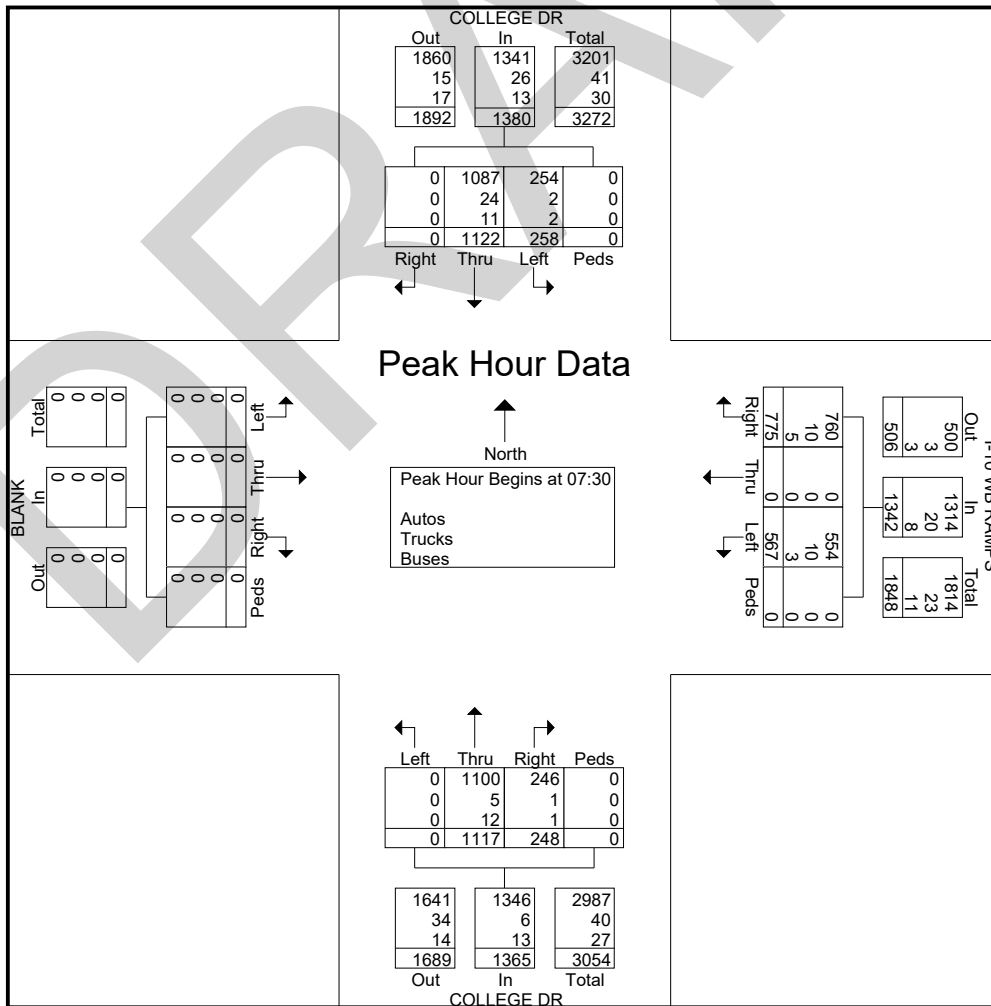
File Name : 17067-59 COLLEGE DR @ I-10 WB RAMPS

Site Code : 17067

Start Date : 11/9/2017

Page No : 3

Start Time	COLLEGE DR Southbound					I-10 WB RAMPS Westbound					COLLEGE DR Northbound					BLANK Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 06:00 to 12:00 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	63	288	0	0	351	123	0	180	0	303	0	240	57	0	297	0	0	0	0	0	951
07:45	40	262	0	0	302	143	0	189	0	332	0	310	67	0	377	0	0	0	0	0	1011
08:00	97	265	0	0	362	134	0	203	0	337	0	271	60	0	331	0	0	0	0	0	1030
08:15	58	307	0	0	365	167	0	203	0	370	0	296	64	0	360	0	0	0	0	0	1095
Total Volume	258	1122	0	0	1380	567	0	775	0	1342	0	1117	248	0	1365	0	0	0	0	0	4087
% App. Total	18.7	81.3	0	0		42.3	0	57.7	0		0	81.8	18.2	0		0	0	0	0	0	
PHF	.665	.914	.000	.000	.945	.849	.000	.954	.000	.907	.000	.901	.925	.000	.905	.000	.000	.000	.000	.000	.933
Autos	254	1087										1100									
% Autos	98.4	96.9	0	0	97.2	97.7	0	98.1	0	97.9	0	98.5	99.2	0	98.6	0	0	0	0	0	97.9
Trucks	2	24	0	0	26	10	0	10	0	20	0	5	1	0	6	0	0	0	0	0	52
% Trucks	0.8	2.1	0	0	1.9	1.8	0	1.3	0	1.5	0	0.4	0.4	0	0.4	0	0	0	0	0	1.3
Buses	2	11	0	0	13	3	0	5	0	8	0	12	1	0	13	0	0	0	0	0	34
% Buses	0.8	1.0	0	0	0.9	0.5	0	0.6	0	0.6	0	1.1	0.4	0	1.0	0	0	0	0	0	0.8



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COLLEGE DR @ I-10 WB RAMPS

BATON ROUGE, LA

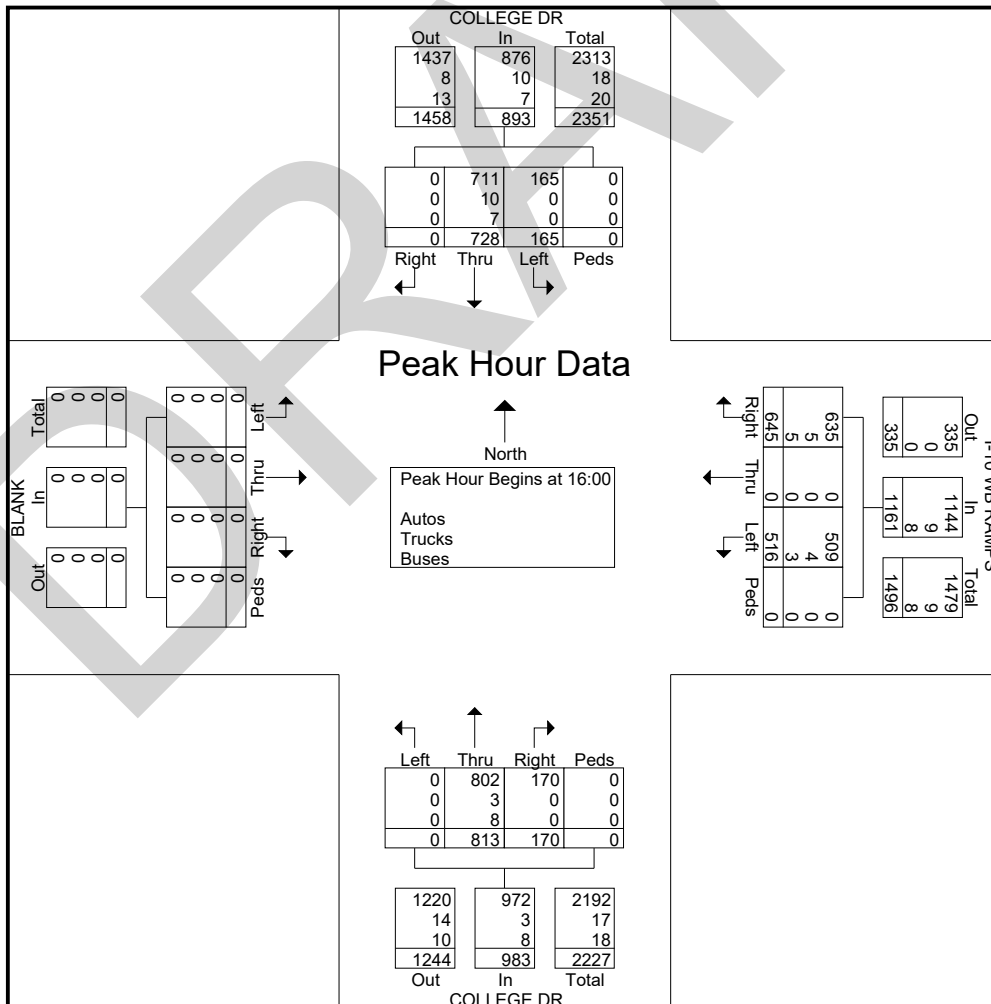
File Name : 17067-59 COLLEGE DR @ I-10 WB RAMPS

Site Code : 17067

Start Date : 11/9/2017

Page No : 4

Start Time	COLLEGE DR Southbound					I-10 WB RAMPS Westbound					COLLEGE DR Northbound					BLANK Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 12:15 to 16:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	53	164	0	0	217	148	0	189	0	337	0	183	42	0	225	0	0	0	0	0	779
16:15	37	170	0	0	207	109	0	173	0	282	0	145	32	0	177	0	0	0	0	0	666
16:30	34	193	0	0	227	127	0	146	0	273	0	209	49	0	258	0	0	0	0	0	758
16:45	41	201	0	0	242	132	0	137	0	269	0	276	47	0	323	0	0	0	0	0	834
Total Volume	165	728	0	0	893	516	0	645	0	1161	0	813	170	0	983	0	0	0	0	0	3037
% App. Total	18.5	81.5	0	0	44.4	0	55.6	0	0	82.7	17.3	0	0	0	0	0	0	0	0	0	0
PHF	.778	.905	.000	.000	.923	.872	.000	.853	.000	.861	.000	.736	.867	.000	.761	.000	.000	.000	.000	.000	.910
Autos	165	711	0	0	876	509	0	635	0	1144	0	802	170	0	972	0	0	0	0	0	2992
% Autos	100	97.7	0	0	98.1	98.6	0	98.4	0	98.5	0	98.6	100	0	98.9	0	0	0	0	0	98.5
Trucks	0	10	0	0	10	4	0	5	0	9	0	3	0	0	3	0	0	0	0	0	22
% Trucks	0	1.4	0	0	1.1	0.8	0	0.8	0	0.8	0	0.4	0	0	0.3	0	0	0	0	0	0.7
Buses	0	7	0	0	7	3	0	5	0	8	0	8	0	0	8	0	0	0	0	0	23
% Buses	0	1.0	0	0	0.8	0.6	0	0.8	0	0.7	0	1.0	0	0	0.8	0	0	0	0	0	0.8

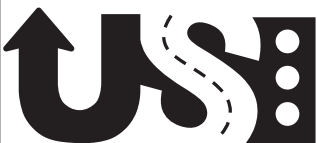


DCR APPENDIX C

Peak Volume Data

DRAFT

URBAN SYSTEMS inc.



I-10 Improvements (LA 415 to Essen Lane)
S.P. H.004100
Arcadis Data Collection

Site #9 - I-10 EB (btwn Acadian-College)
7 Day Count #9

Site9	EB	10/11/2017	700	1484
Site9	EB	10/11/2017	715	1496
Site9	EB	10/11/2017	730	1608
Site9	EB	10/11/2017	745	1560
		AM Peak Hour		6148
Site9	EB	10/11/2017	1645	1487
Site9	EB	10/11/2017	1700	1553
Site9	EB	10/11/2017	1715	1522
Site9	EB	10/11/2017	1730	1419
		PM Peak Hour		5981

DRAFT

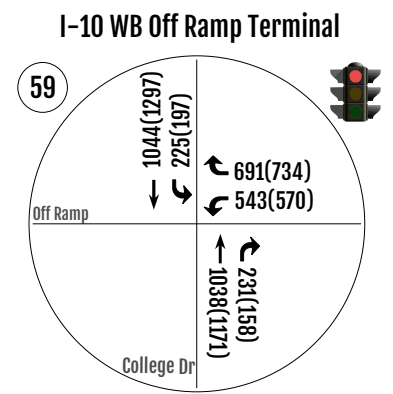
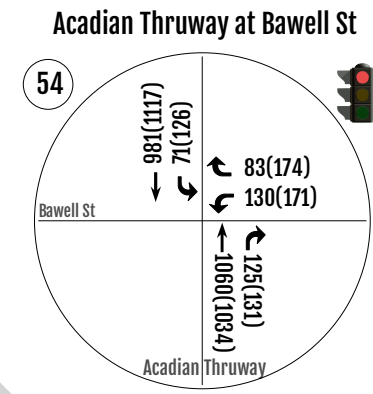
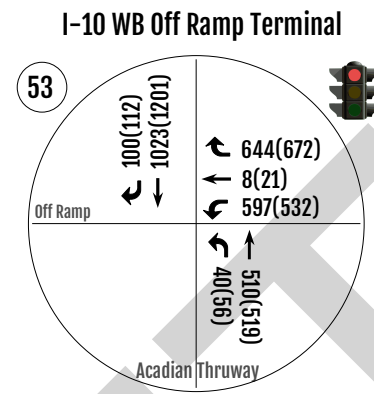
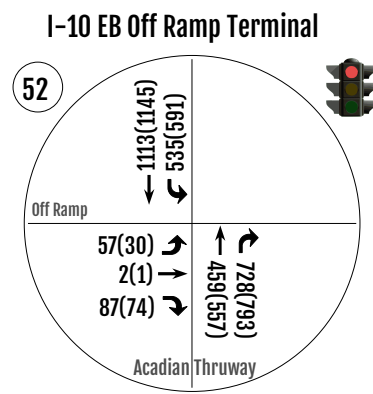
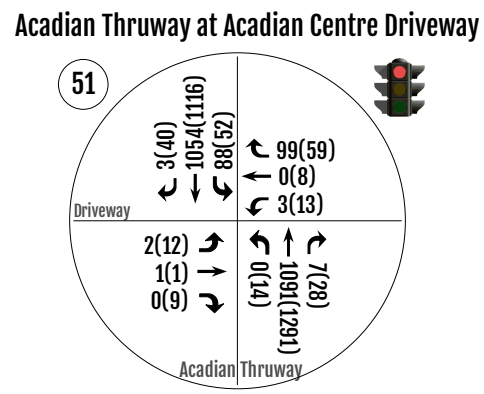
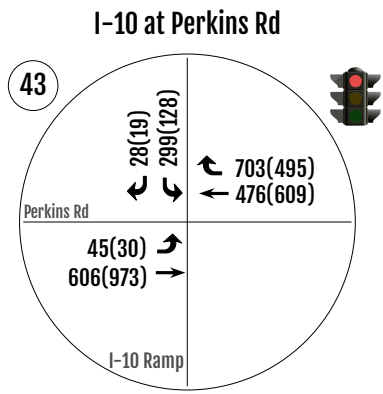
I-10 Improvements (LA 415 to Essen Lane)
S.P. H.004100
Arcadis Data Collection

Site #9 - I-10 WB (btwn Acadian-College)
7 Day Count #9

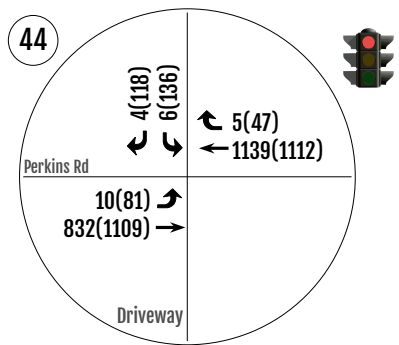
Site9	WB	10/11/2017	700	1593
Site9	WB	10/11/2017	715	1549
Site9	WB	10/11/2017	730	1687
Site9	WB	10/11/2017	745	1534
			AM Peak Hour	6363
Site9	WB	10/11/2017	1645	1435
Site9	WB	10/11/2017	1700	1461
Site9	WB	10/11/2017	1715	1438
Site9	WB	10/11/2017	1730	1471
			PM Peak Hour	5805

DRAFT

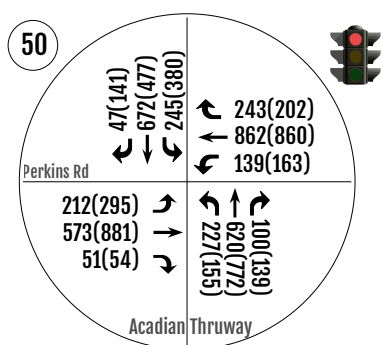
Turning Movement Counts - Raw Data



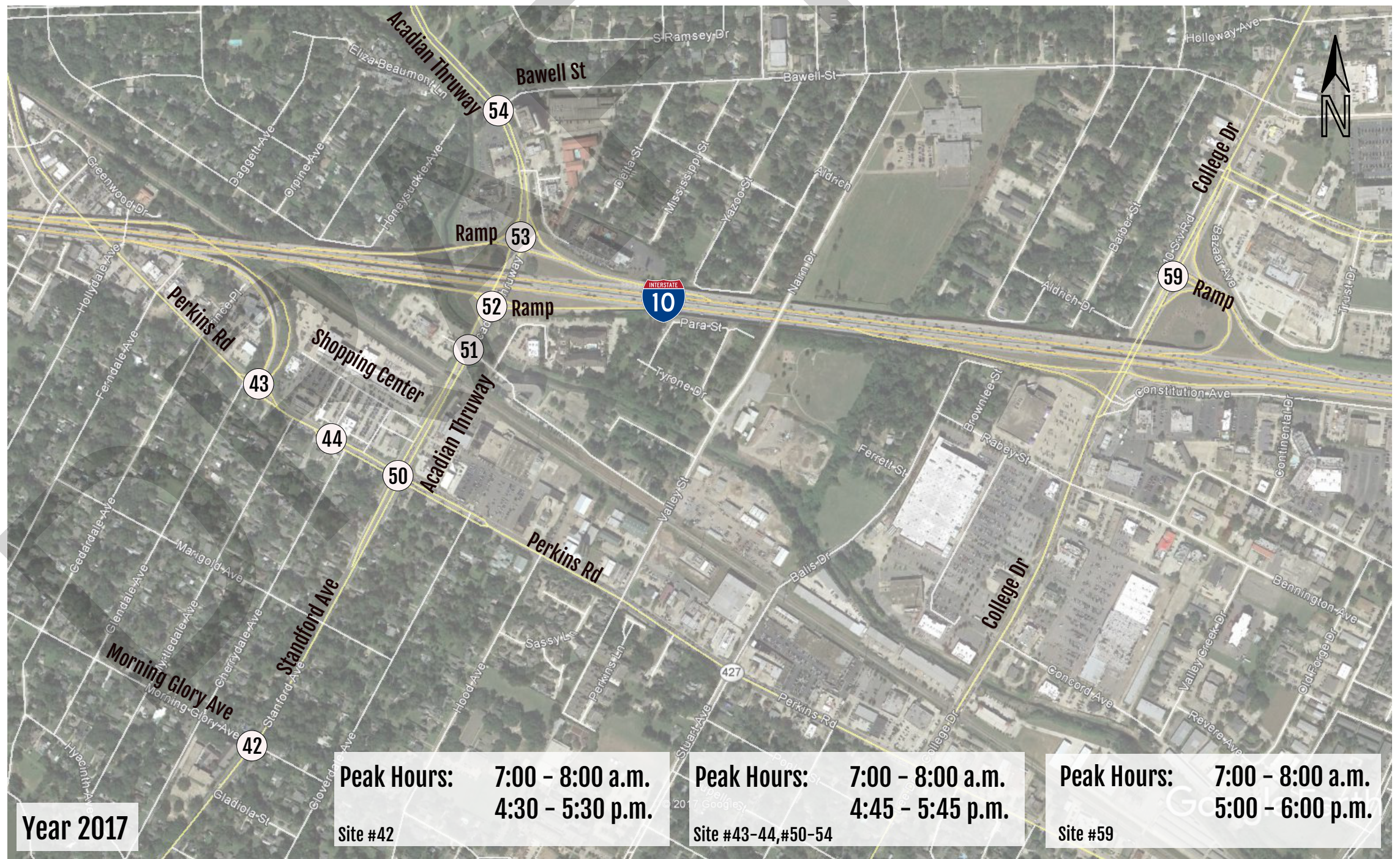
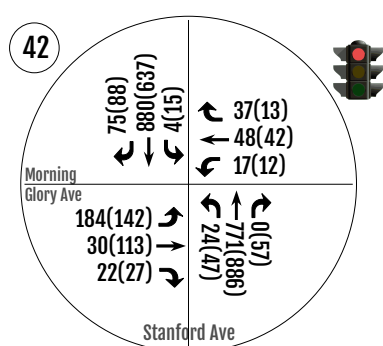
Perkins Rd at Shopping Center Driveway



Perkins Rd at Acadian Thruway



Stanford Ave at Morning Glory Ave



- XX(X) AM(PM)
- Signalized Intersection
- Stop Controlled Intersection

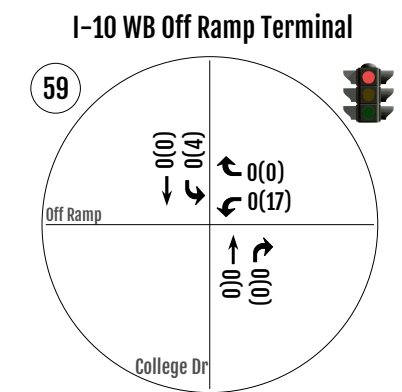
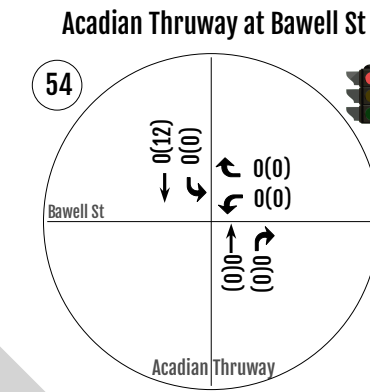
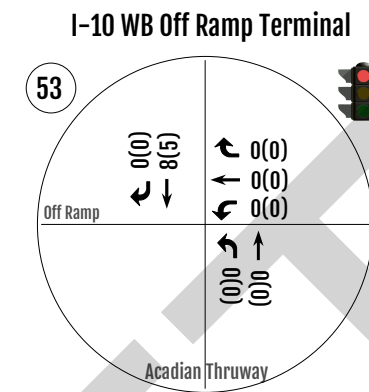
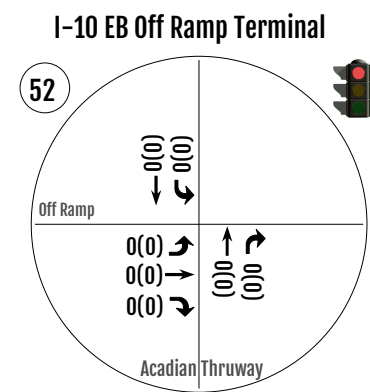
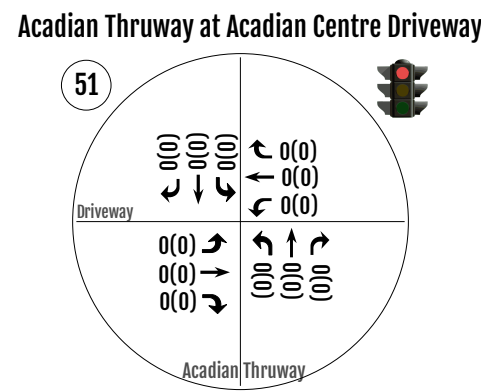
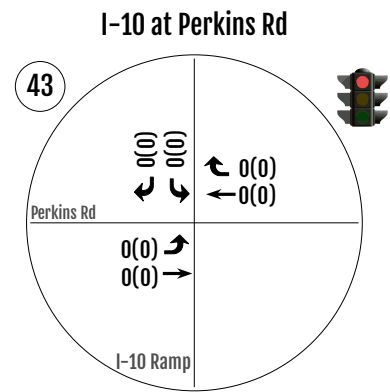
Year 2017

Peak Hours: 7:00 - 8:00 a.m.
4:30 - 5:30 p.m.
Site #42

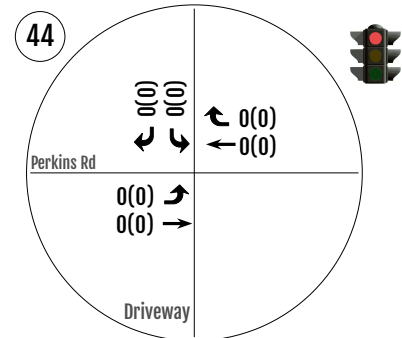
Peak Hours: 7:00 - 8:00 a.m.
4:45 - 5:45 p.m.
Site #43-44, #50-54

Peak Hours: 7:00 - 8:00 a.m.
5:00 - 6:00 p.m.
Site #59

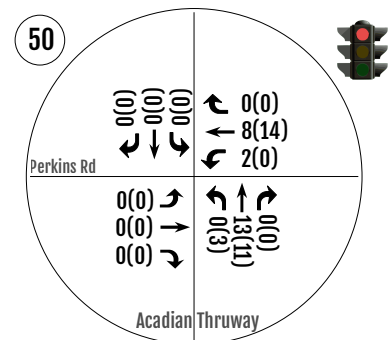
Turning Movement Counts - Unserved Demand



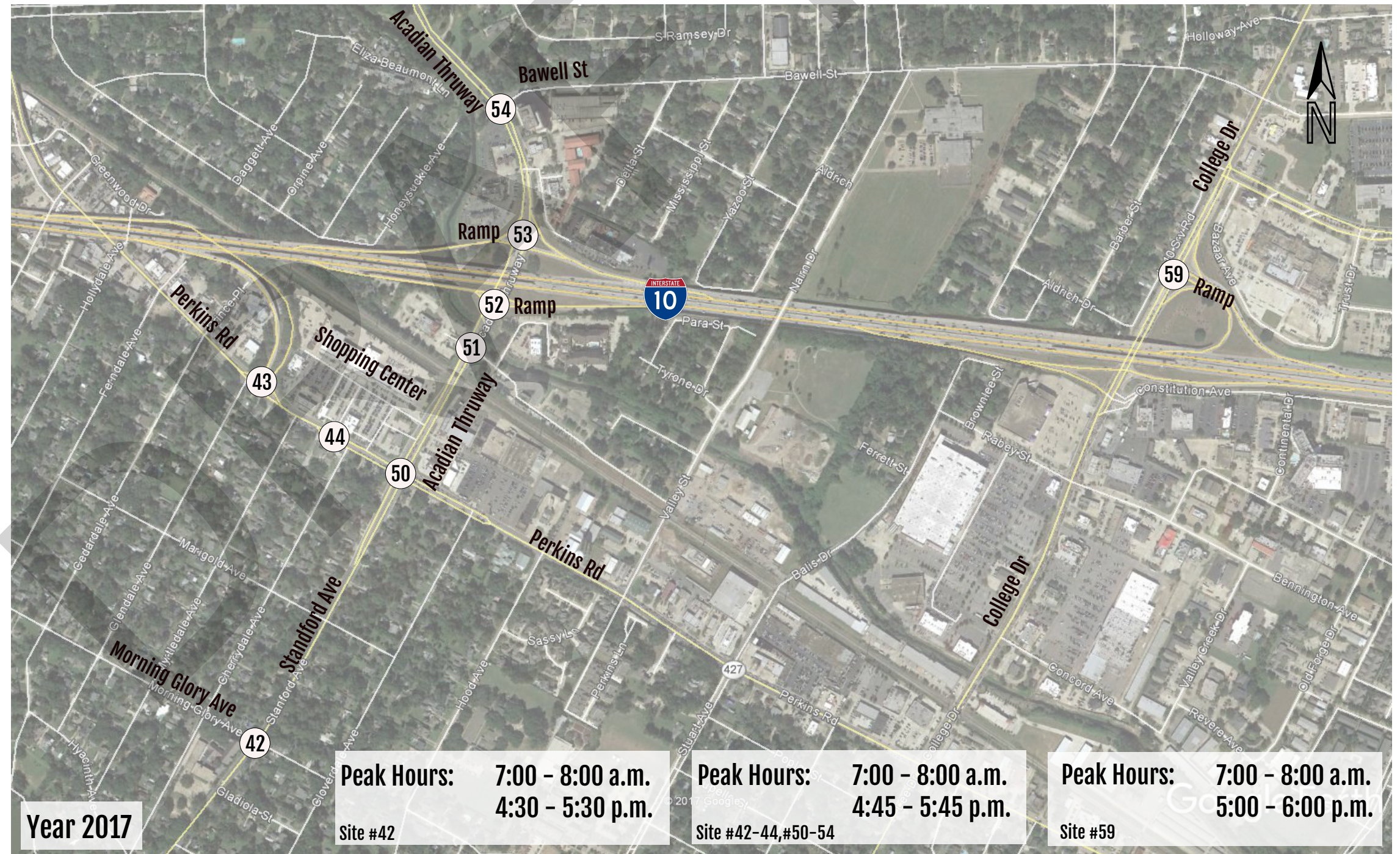
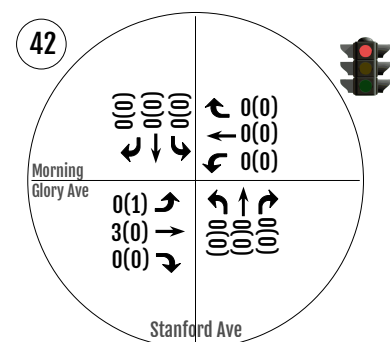
Perkins Rd at Shopping Center Driveway



Perkins Rd at Acadian Thruway



Stanford Ave at Morning Glory Ave



Peak Hours: 7:00 - 8:00 a.m.
4:30 - 5:30 p.m.
Site #42

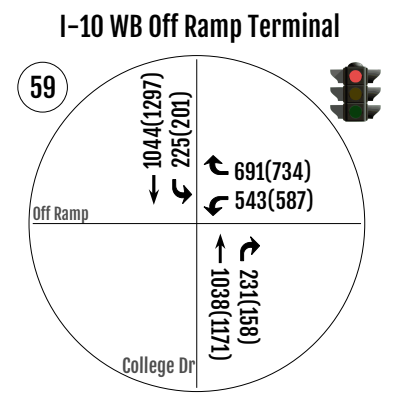
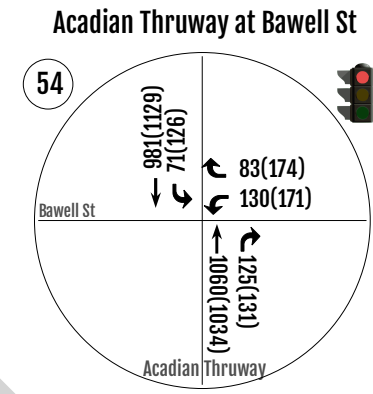
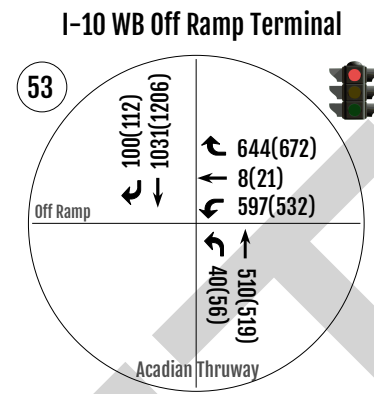
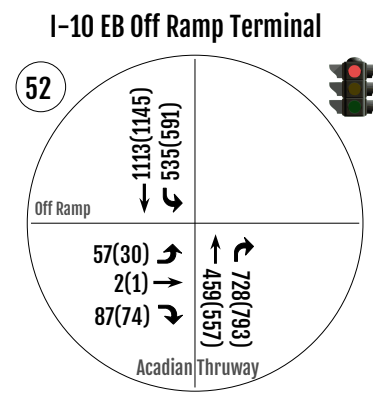
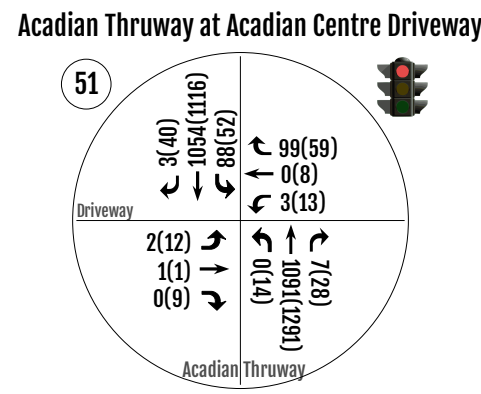
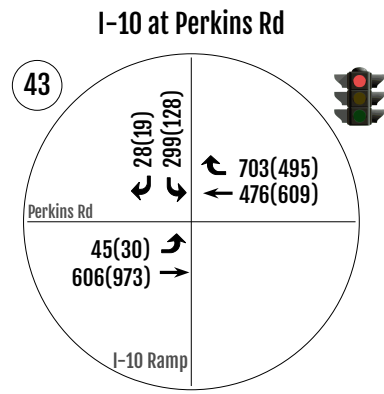
Peak Hours: 7:00 - 8:00 a.m.
4:45 - 5:45 p.m.
Site #42-44, #50-54

Peak Hours: 7:00 - 8:00 a.m.
5:00 - 6:00 p.m.
Site #59

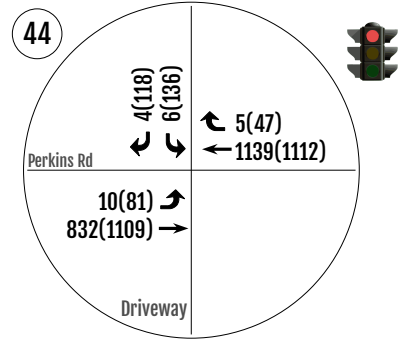
Year 2017

- XX(XX) AM(PM)
- Signalized Intersection
- Stop Controlled Intersection

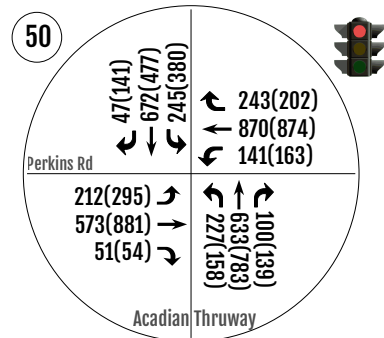
Turning Movement Counts - Total Demand



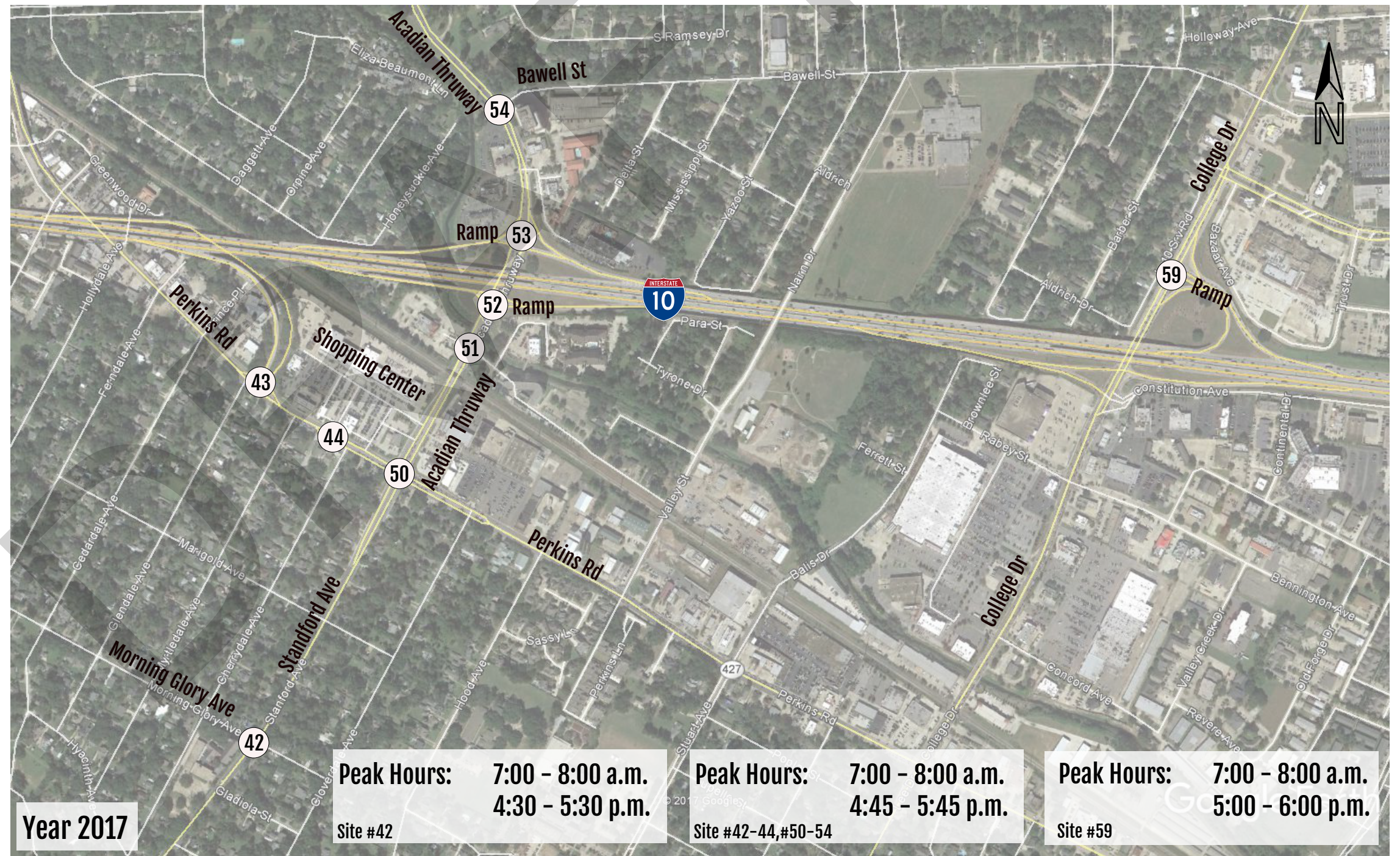
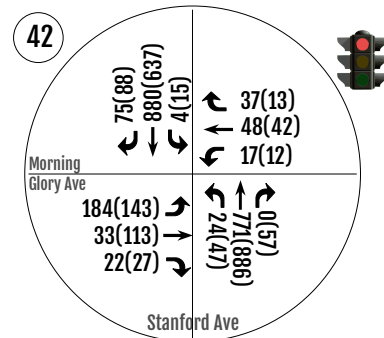
Perkins Rd at Shopping Center Driveway



Perkins Rd at Acadian Thruway



Stanford Ave at Morning Glory Ave



XX(X) AM(PM)



Signalized Intersection



Stop Controlled Intersection

Peak Hours: 7:00 - 8:00 a.m.
4:30 - 5:30 p.m.
Site #42

Peak Hours: 7:00 - 8:00 a.m.
4:45 - 5:45 p.m.
Site #42-44, #50-54

Peak Hours: 7:00 - 8:00 a.m.
5:00 - 6:00 p.m.
Site #59

Year 2017

Intersection	Source	Date	Approach	Movement	Heavy Vehicle %	
					Base Conditions	
					AM	PM
I-10 EB	7-day and 48-hour counts #24, #24A, & #26	10/25/17 and 10/11/17 (see detail)	Eastbound	Thru	13.0%	11.0%
I-10 WB	7-day counts counts #10 & #11	10/24/17 and 10/11/17 (see detail)	Westbound	Thru	6.0%	8.0%
I-10 EB at Perkins Rd	TMC #43, Page 3 AM, Page 4 PM	11/9/2017	Southbound	Left	2.0%	0.0%
				Thru	0.0%	0.0%
				Right	7.1%	0.0%
			Eastbound	Left	0.0%	2.6%
				Thru	1.0%	0.6%
				Right	2.1%	0.8%
Westbound	Thru	2.1%	0.8%			
	Right	2.0%	2.0%			
	Left	3.8%	1.3%			
Acadian at Perkins	TMC #50, Page 3 AM, Page 4 PM	11/2/2017	Northbound	Thru	1.1%	0.8%
				Right	0.0%	0.0%
				Left	2.3%	0.8%
			Southbound	Thru	0.4%	0.2%
				Right	1.5%	0.0%
				Left	1.0%	0.0%
			Eastbound	Thru	0.4%	0.2%
				Right	4.5%	0.0%
				Left	0.7%	0.0%
			Westbound	Thru	2.0%	0.9%
				Right	3.2%	0.9%
				Left	0.0%	0.0%
Acadian at Acadian Centre	TMC #51, Page 3 AM, Page 4 PM	11/2/2017	Northbound	Thru	1.5%	0.6%
				Right	14.3%	0.0%
				Left	0.0%	0.0%
			Southbound	Thru	0.8%	0.7%
				Right	25.0%	0.0%
				Left	50.0%	0.0%
			Eastbound	Thru	0.0%	0.0%
				Right	0.0%	0.0%
				Left	0.0%	0.0%
			Westbound	Thru	100.0%	0.0%
				Right	0.0%	1.7%
				Left	3.7%	1.1%
I-10 EB at Acadian	TMC #52, Page 3 AM, Page 4 PM	11/2/2017	Northbound	Thru	3.7%	1.1%
				Right	0.1%	0.5%
			Southbound	Left	1.3%	0.5%
				Thru	0.9%	0.7%
			Eastbound	Left	0.0%	6.6%
				Thru	0.0%	0.0%
I-10 WB at Acadian	TMC #53, Page 3 AM, Page 4 PM	11/2/2017	Northbound	Right	0.0%	1.2%
				Left	7.9%	1.7%
			Southbound	Thru	1.8%	1.4%
				Thru	1.4%	0.5%
			Westbound	Right	1.1%	0.7%
				Left	0.6%	0.2%
I-10 EB at College Off Ramp	* Data not available, default values used					
	I-10 WB at College On Ramp	TMC #59, Page 3 AM, Page 4 PM	11/9/2017	Westbound On Ramp	Southbound Left	1.6%
Northbound Right				0.8%	0.0%	

AM PEAK						
I-10 /I-110 Calculation (for I-10 EB)						
AM (7:00am - 8:00am)	Source		Total	1-3 volume	4-13 volume	
I-110 SB to I-10 EB	#24	10/25/2017	2432	2300	132	
on-ramp to I-110 SB to I-10 EB	#24A	10/25/2017	121	116	5	
I-10 EB to I-10 EB	#26	10/11/2017	1858	1425	433	
Sum			4411	3841	570	
					HV %	13%

AM PEAK						
I-10/ I-12 Calculation (for I-10 WB)						
AM (7:00 to 8:00 am)	Source	Date	Total	1-3 volume	4-13 volume	
I-12 to I-10	#11	10/24/2017	3275	3079	196	
I-10 to I-10	#10	10/11/2017	3622	3373	249	
Sum			6897	6452	445	
					HV %	6%

PM PEAK						
I-10 /I-110 Calculation (for I-10 EB)						
PM (4:45pm - 5:45pm)	Source	Date	Total	1-3 volume	4-13 volume	
I-110 SB to I-10 EB	#24	10/25/2017	2001	1938	63	
on-ramp to I-110 SB to I-10 EB	#24A	10/25/2017	396	383	13	
I-10 EB to I-10 EB	#26	10/11/2017	1526	1156	370	
Sum			3923	3477	446	
					HV %	11%

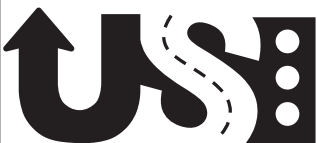
PM PEAK						
I-10/ I-12 Calculation (for I-10 WB)						
PM (4:45pm to 5:45pm)	Source	Date	Total	1-3 volume	4-13 volume	
I-12 to I-10	#11	10/24/2017	2578	2294	284	
I-10 to I-10	#10	10/11/2017	3506	3305	201	
Sum			6084	5599	485	
					HV %	8%

DCR APPENDIX D

TransCAD Data

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URBAN SYSTEMS inc.

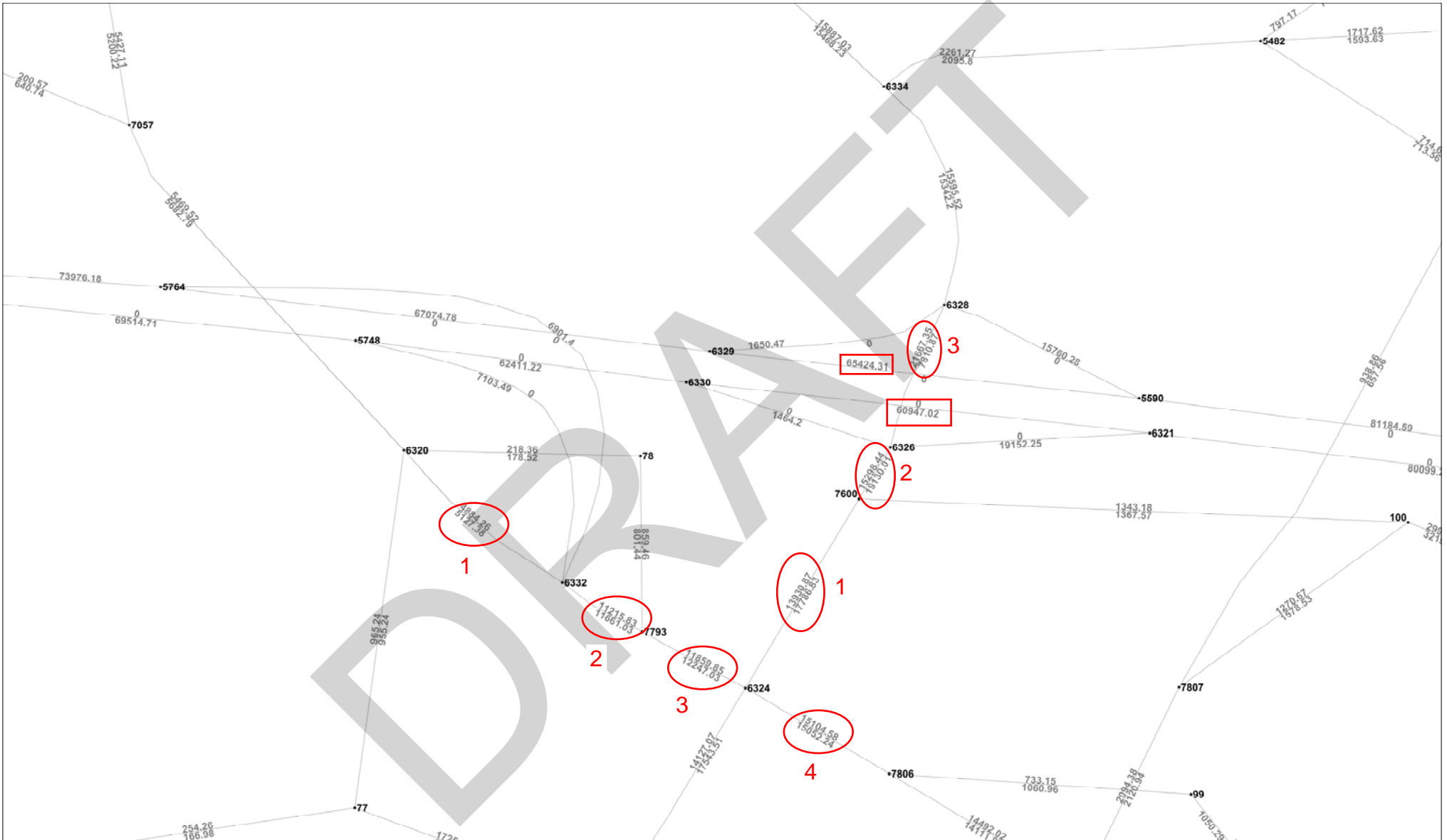


Growth Rate Calculations - Acadian at Perkins

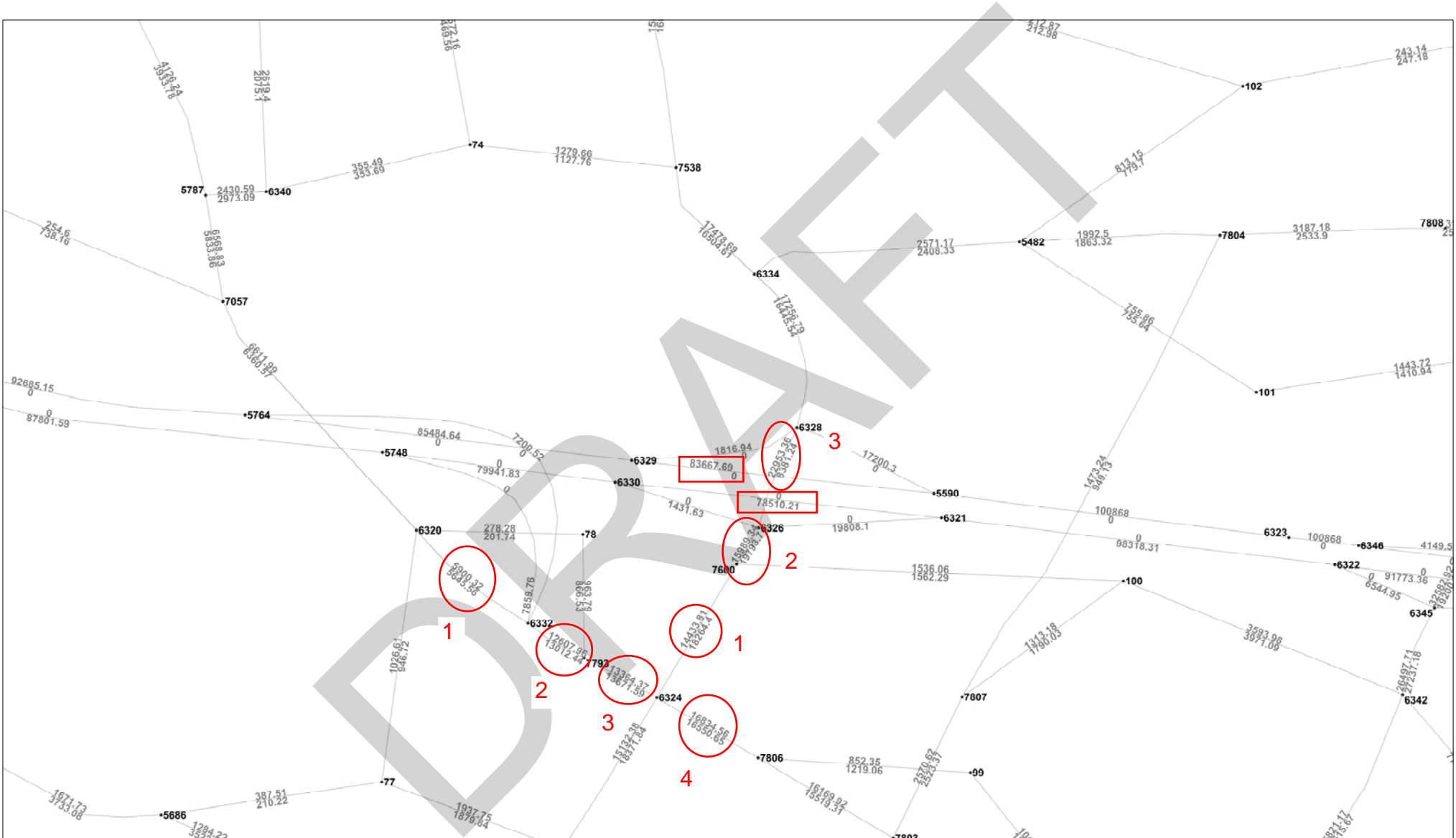
Location	Site	2010 TransCAD Data		2037 TransCAD Data		Percent Growth Rate per Year	Growth Factor over 23 years	Average Growth Factor Over 23 Years	
		Per Direction	Total	Per Direction	Total				
I-10 Mainline		EB	60947.02	126371.33	83667.69	162177.90	0.93%	1.24	1.24
		WB	65424.31		78510.21				
Perkins Road	1	EB	5127.38	10011.64	5645.56	11545.88	0.53%	1.13	1.11
		WB	4884.26		5900.32				
	2	EB	11661.03	22876.86	13012.44	25620.40	0.42%	1.10	
		WB	11215.83		12607.96				
	3	EB	12247.03	24106.88	13671.59	27035.96	0.43%	1.10	
		WB	11859.85		13364.37				
	4	EB	15052.24	30156.82	16550.65	33385.21	0.38%	1.09	
		WB	15104.58		16834.56				
Acadian Thruway	1	NB	17786.83	31717.70	18264.40	32698.21	0.11%	1.03	1.04
		SB	13930.87		14433.81				
	2	NB	19130.01	34428.45	19793.70	35783.04	0.14%	1.03	
		SB	15298.44		15989.34				
	3	NB	7810.87	29478.22	8381.24	31334.60	0.23%	1.03	
		SB	21667.35		22953.36				
College Drive		NB	26499.00	49489.00	28848.00	53684.00	0.30%	1.07	
		SB	22990.00		24836.00				

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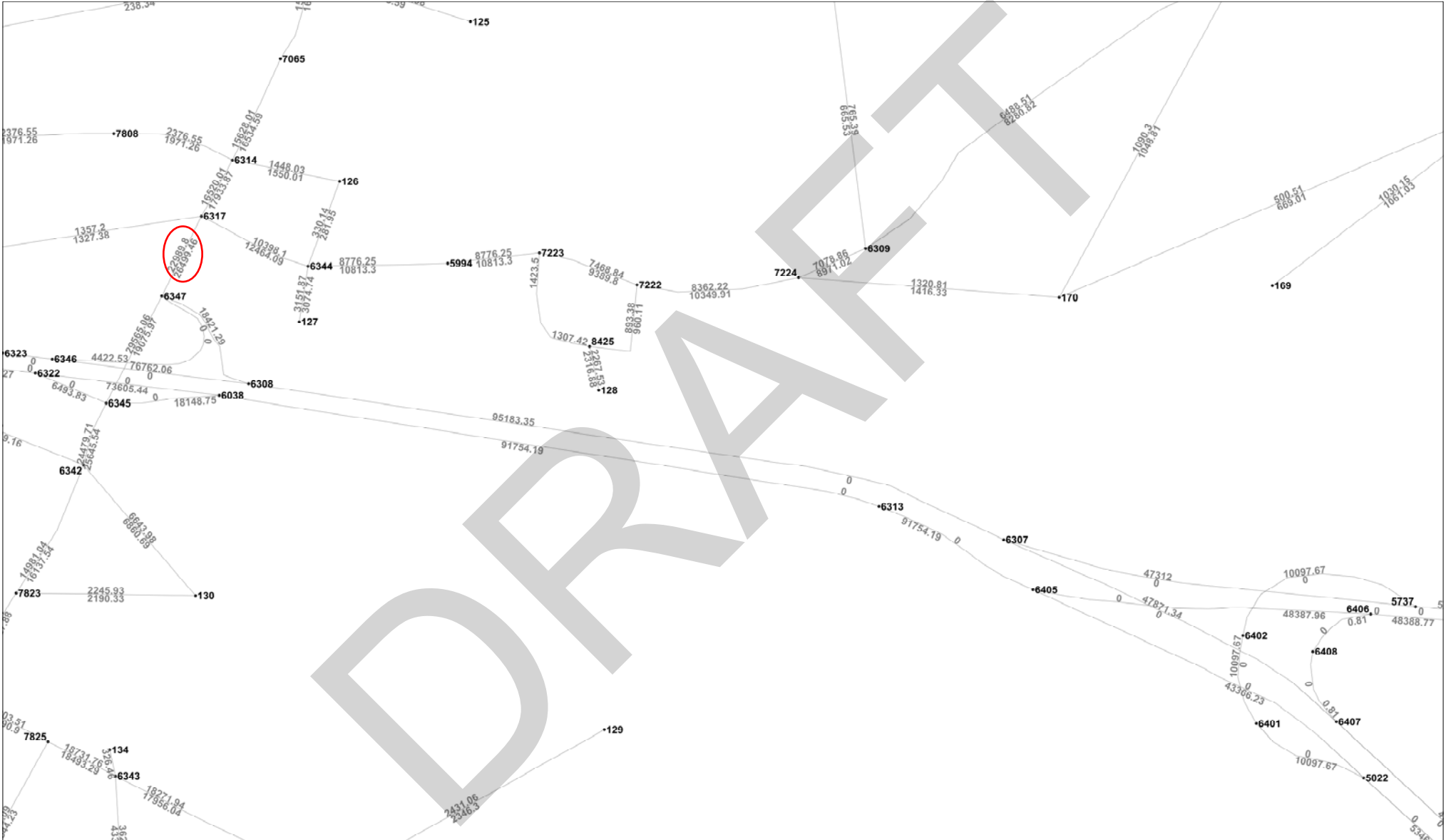
Acadian/Perkins IMR
2010- Nodes and ADTs



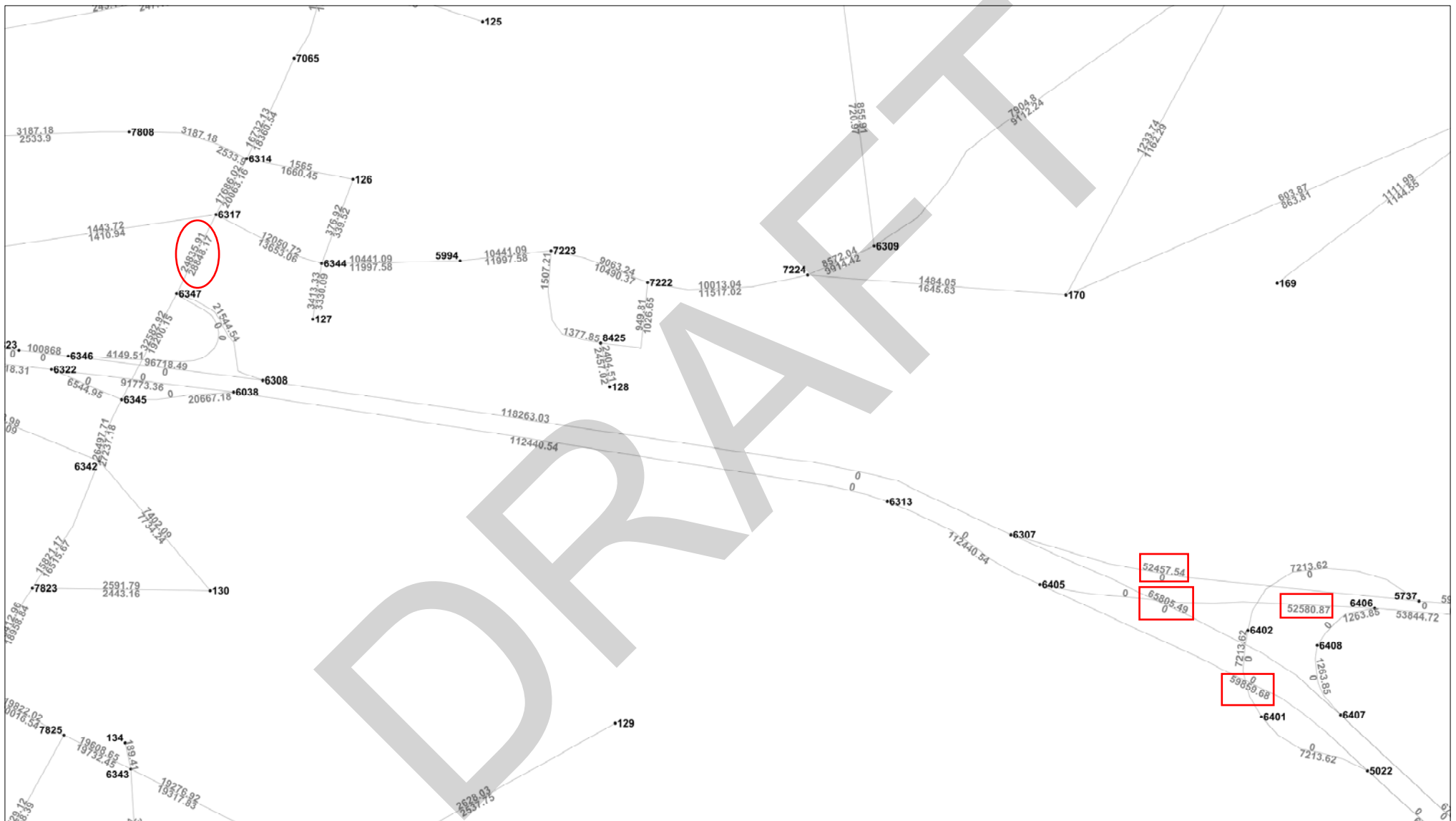
Acadian/Perkins IMR
2037 No Build- Nodes and ADTs



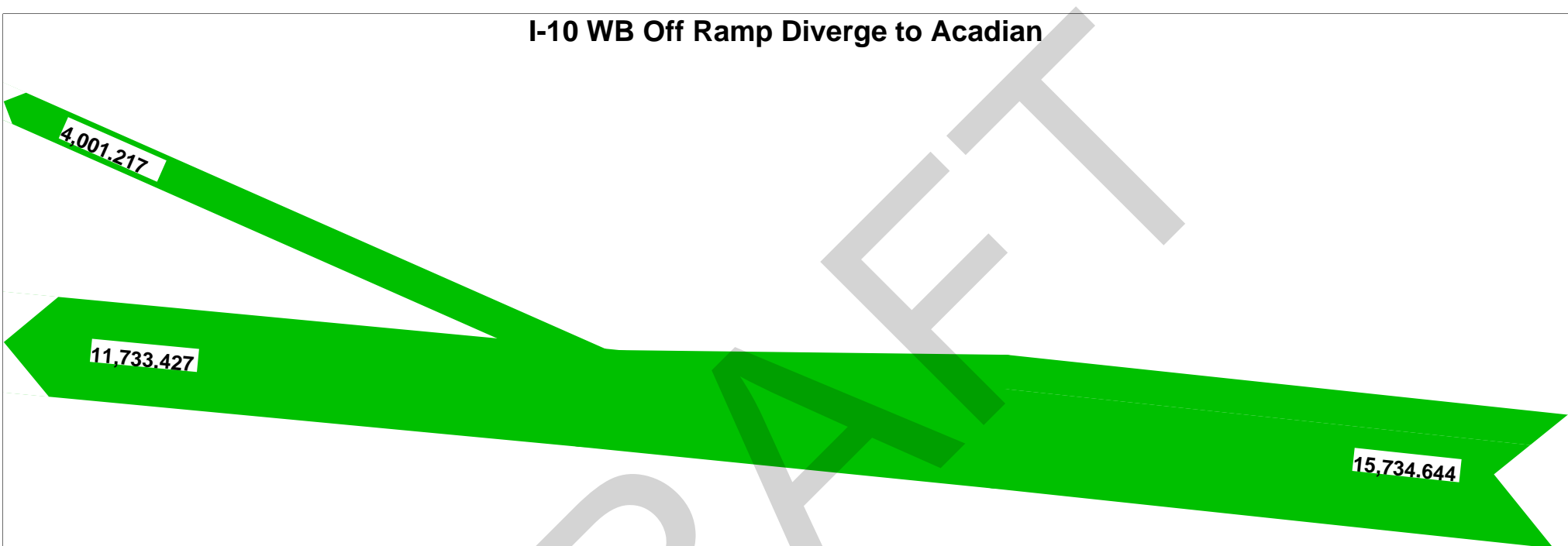
College Drive IMR
2010- Nodes and ADTs



College Drive IMR
2037- Nodes and ADTs

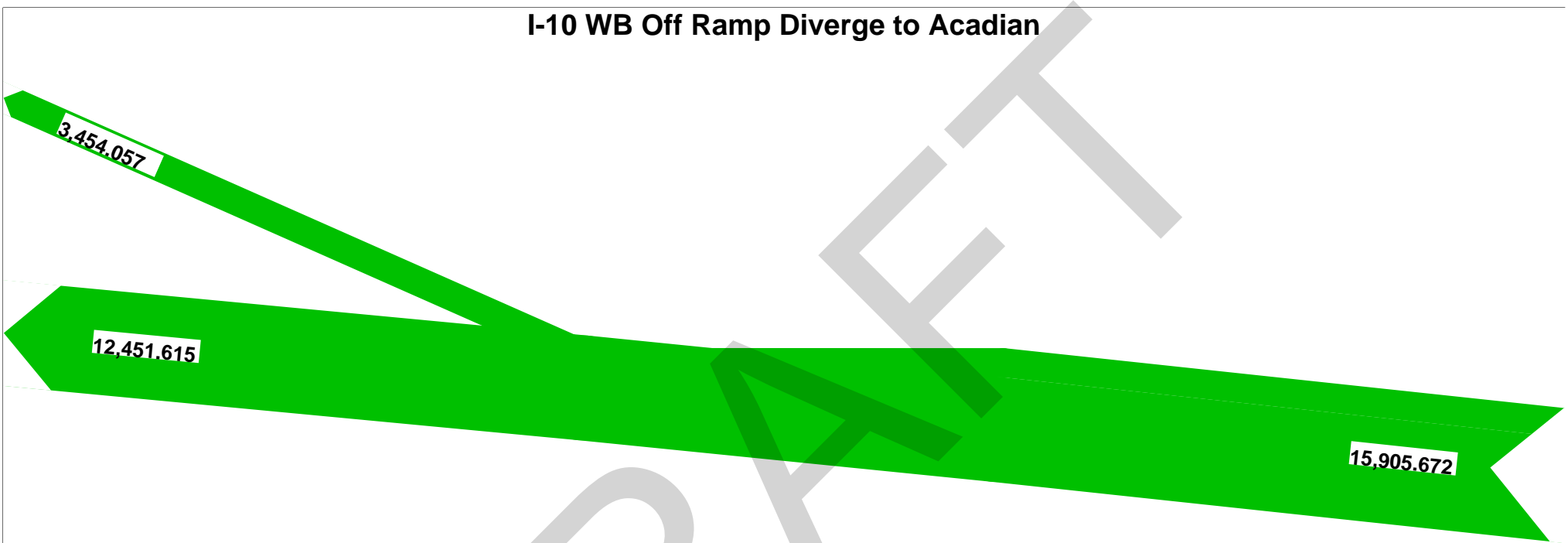


I-10 WB Off Ramp Diverge to Acadian



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I-10 WB Off Ramp Diverge to Acadian



Node 5590 2010 PM

I-10 EB Off Ramp Diverge to Perkins



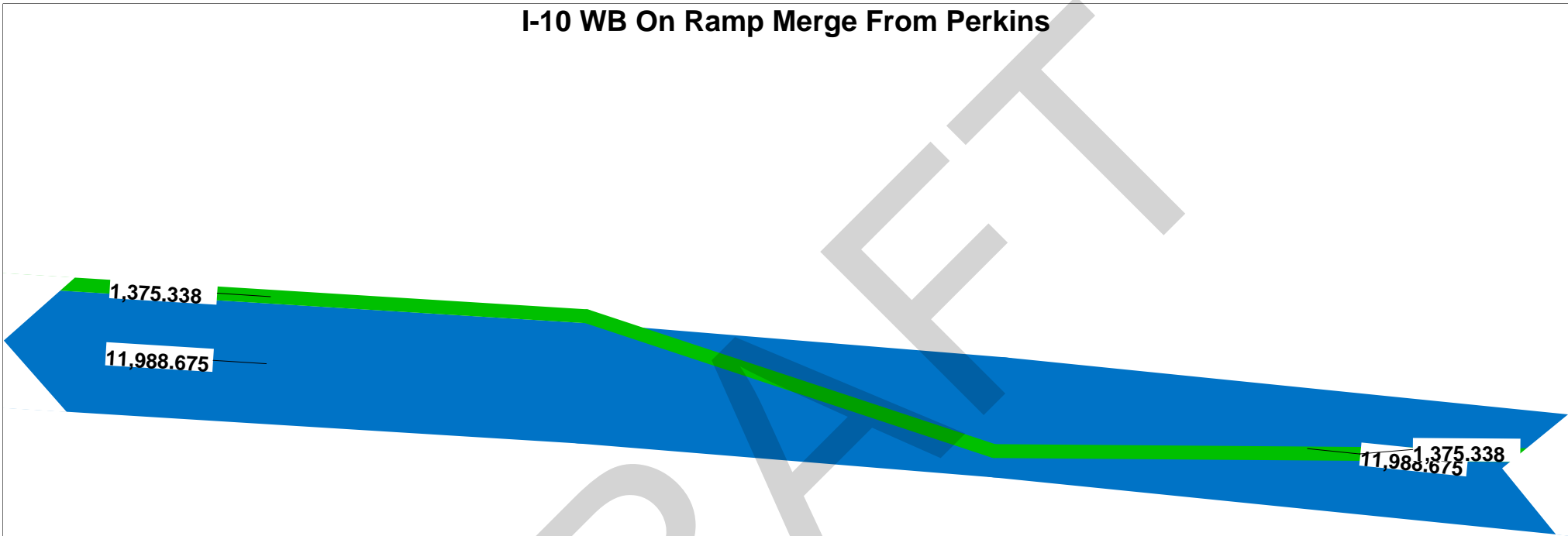
Node 5748 2010 AM

I-10 EB Off Ramp Diverge to Perkins



Node 5748 2010 PM

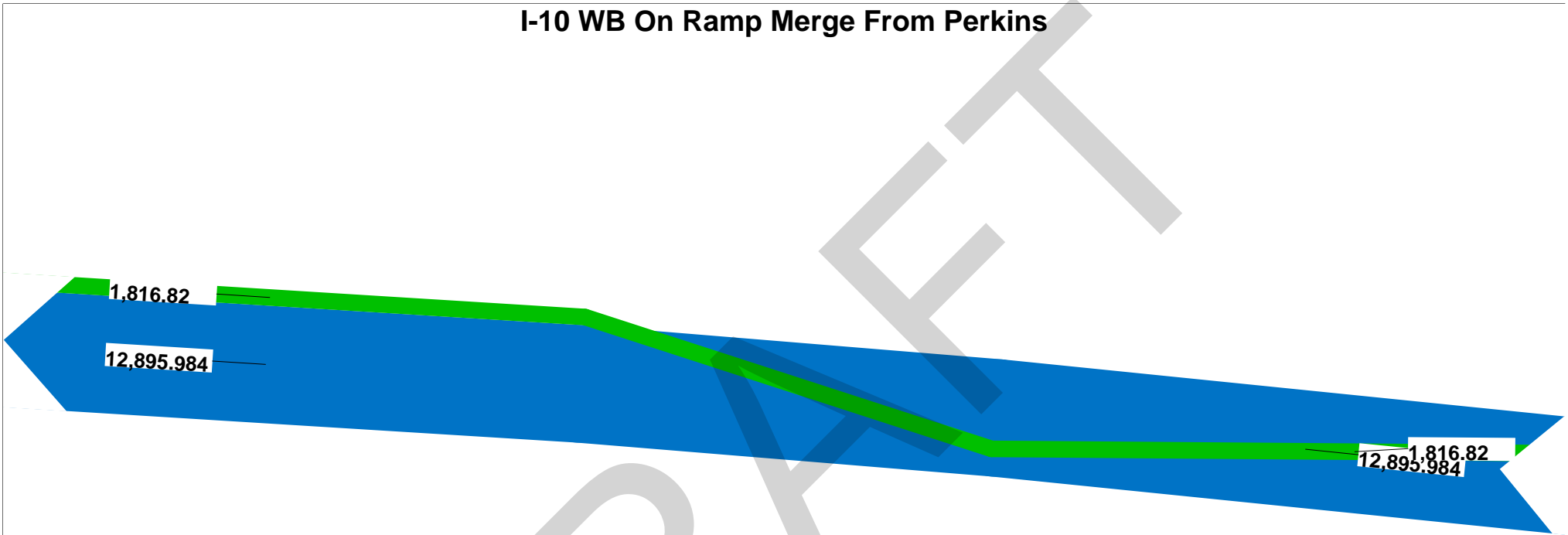
I-10 WB On Ramp Merge From Perkins



DRY
EFF

Node 5764 2010 AM

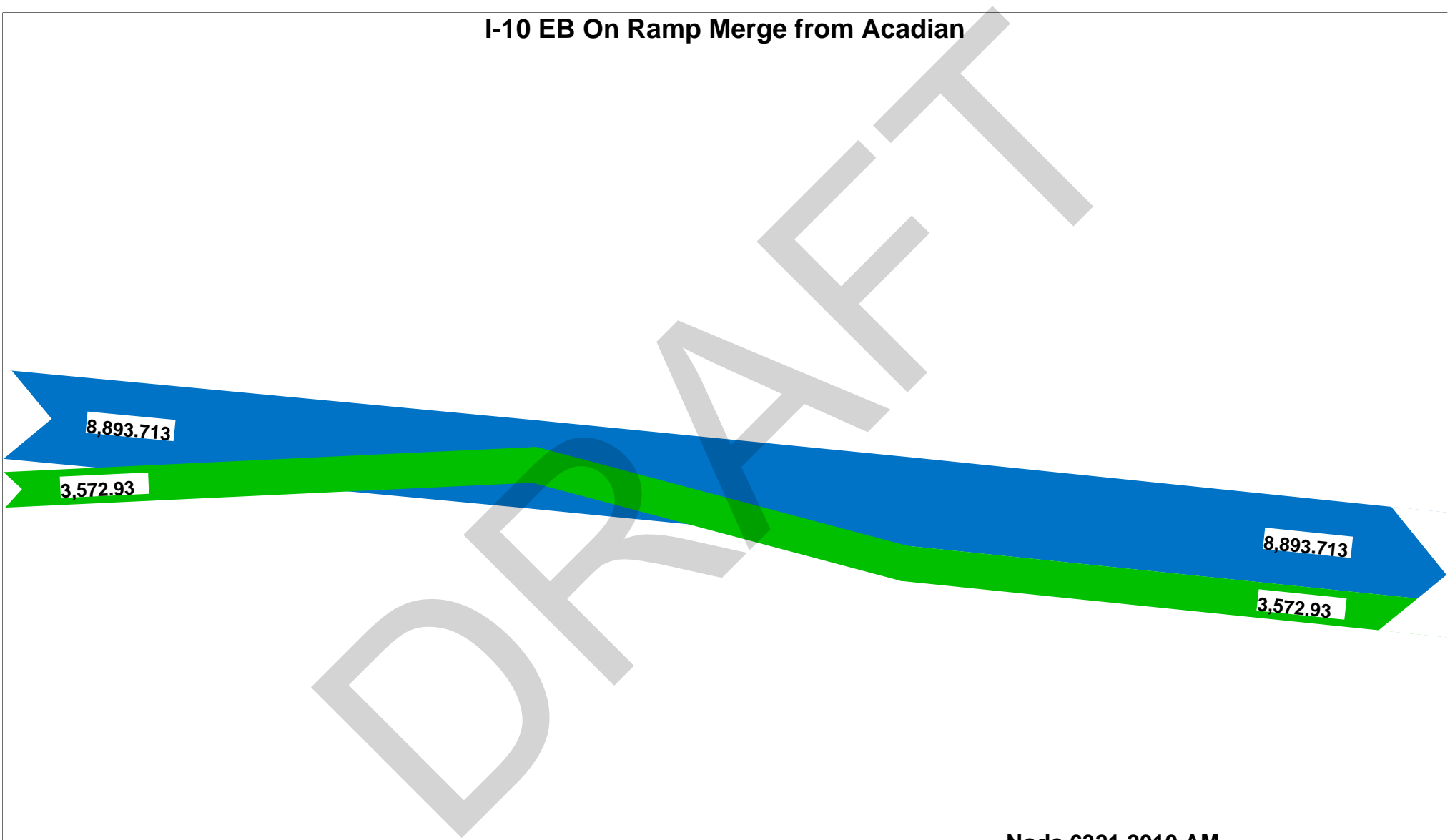
I-10 WB On Ramp Merge From Perkins



DRY
EFF

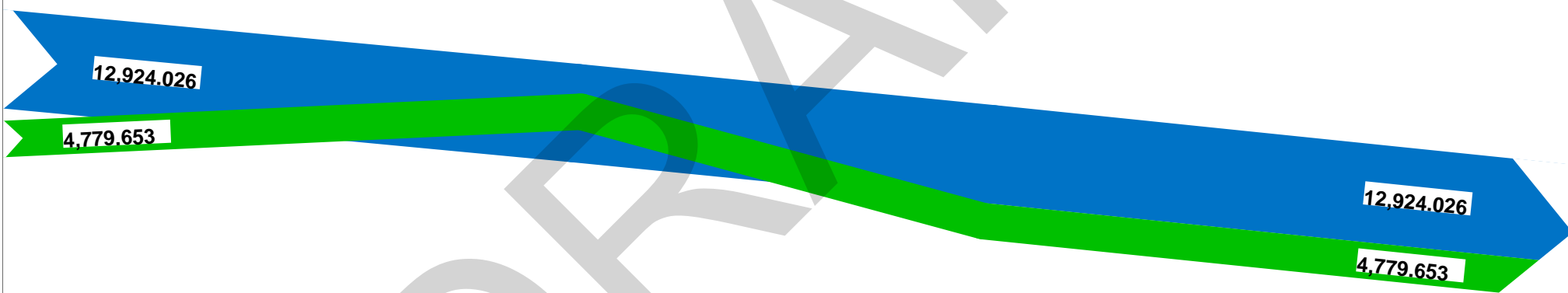
Node 5764 2010 PM

I-10 EB On Ramp Merge from Acadian



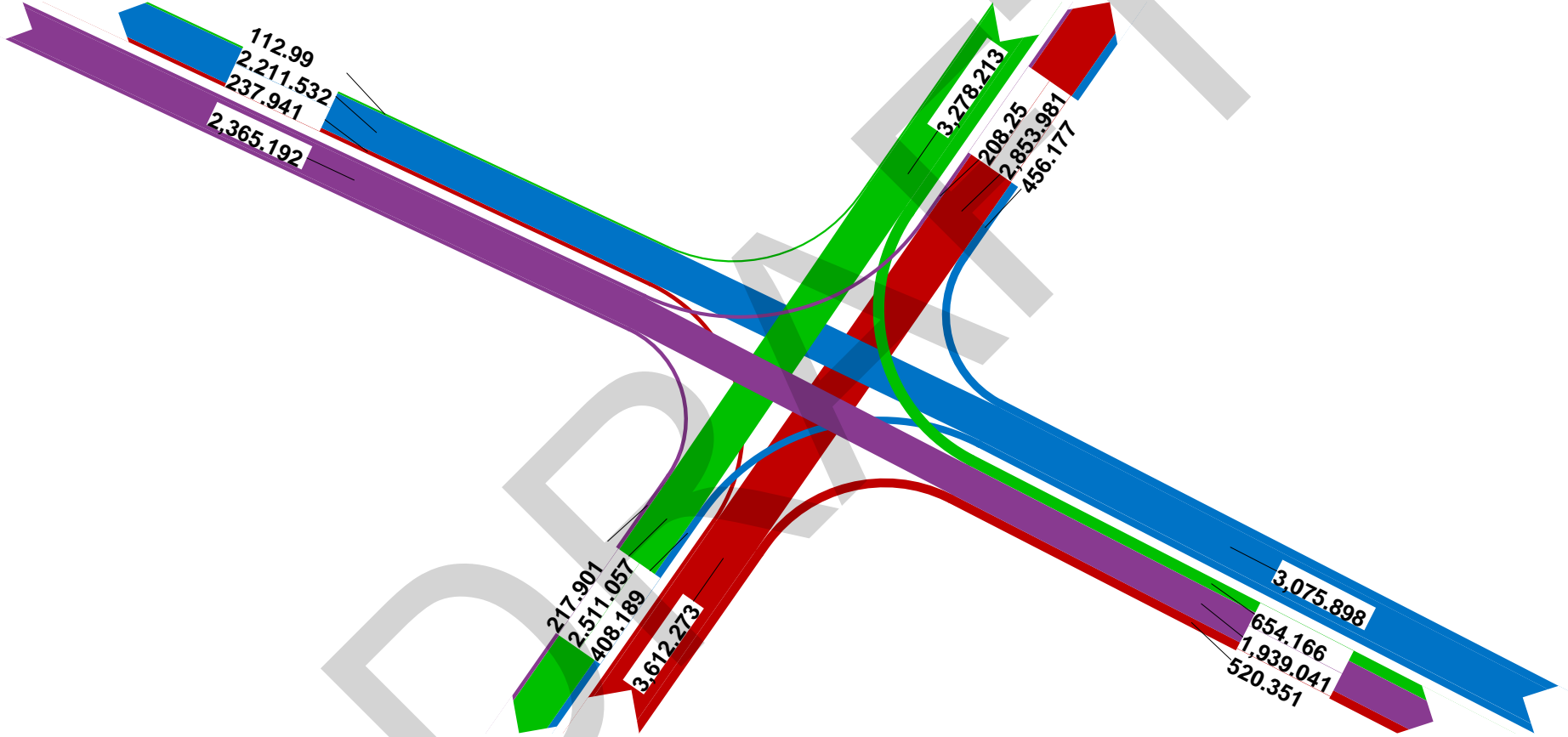
Node 6321 2010 AM

I-10 EB On Ramp Merge from Acadian



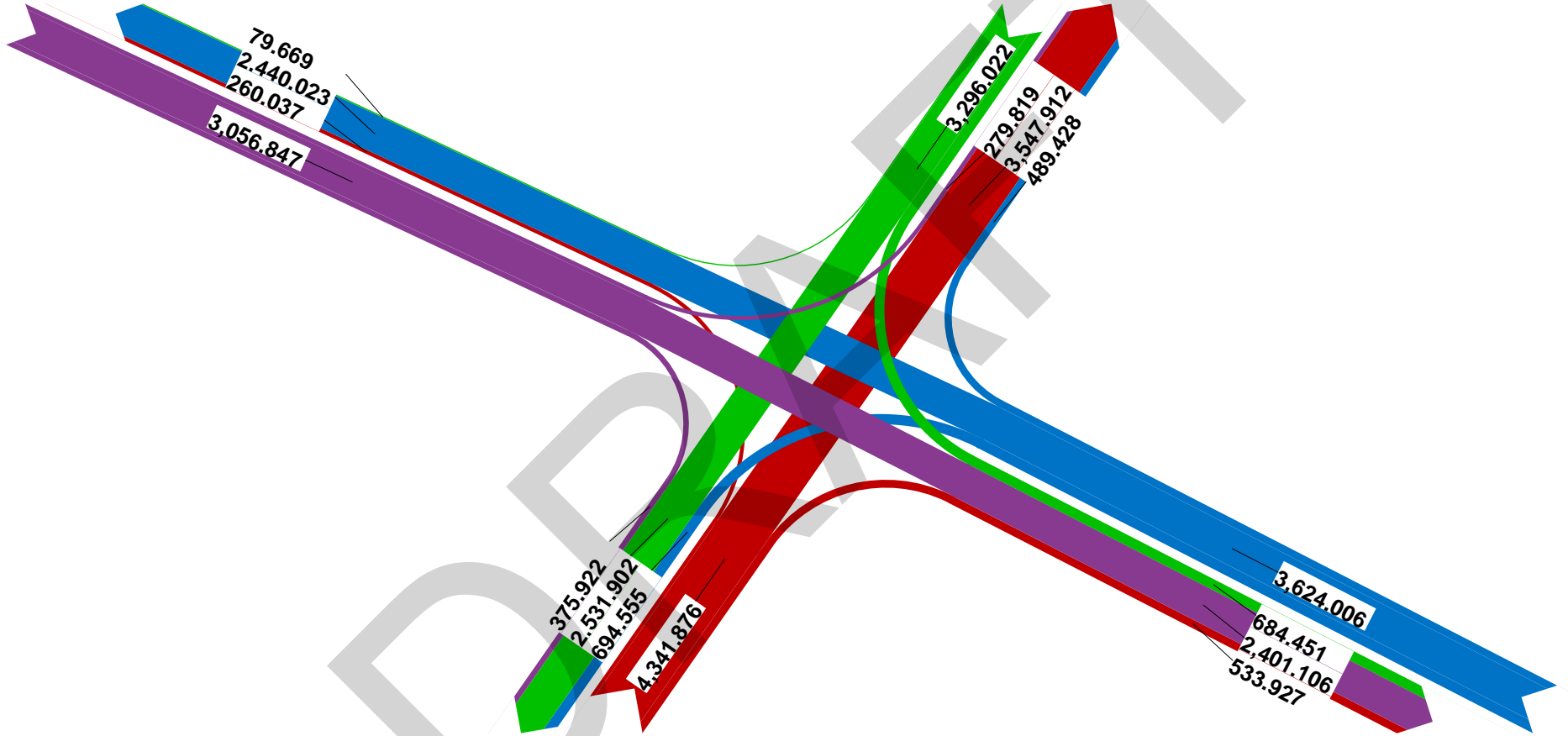
Node 6321 2010 PM

Acadian at Perkins



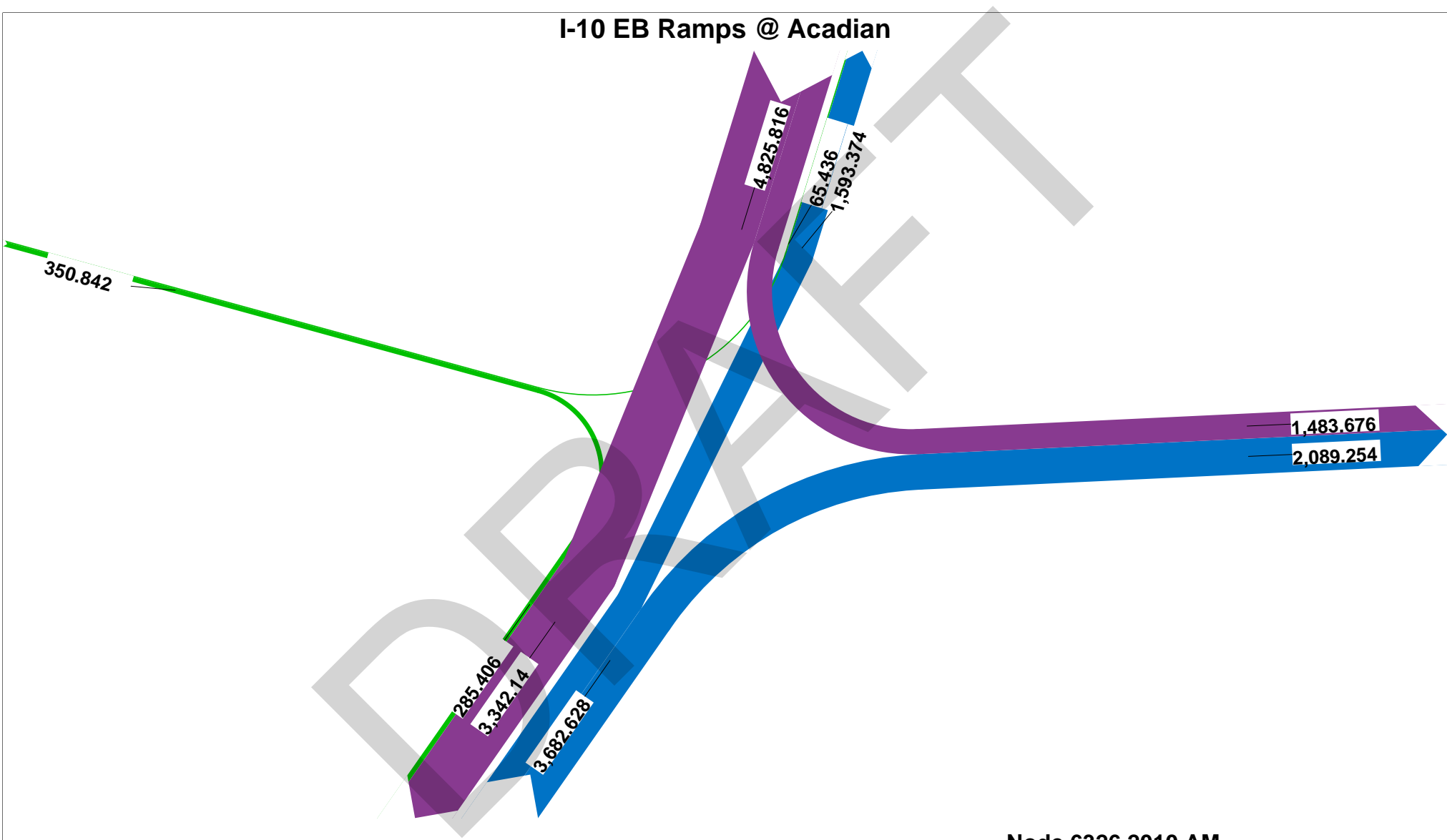
Node 6324 2010 AM

Acadian at Perkins



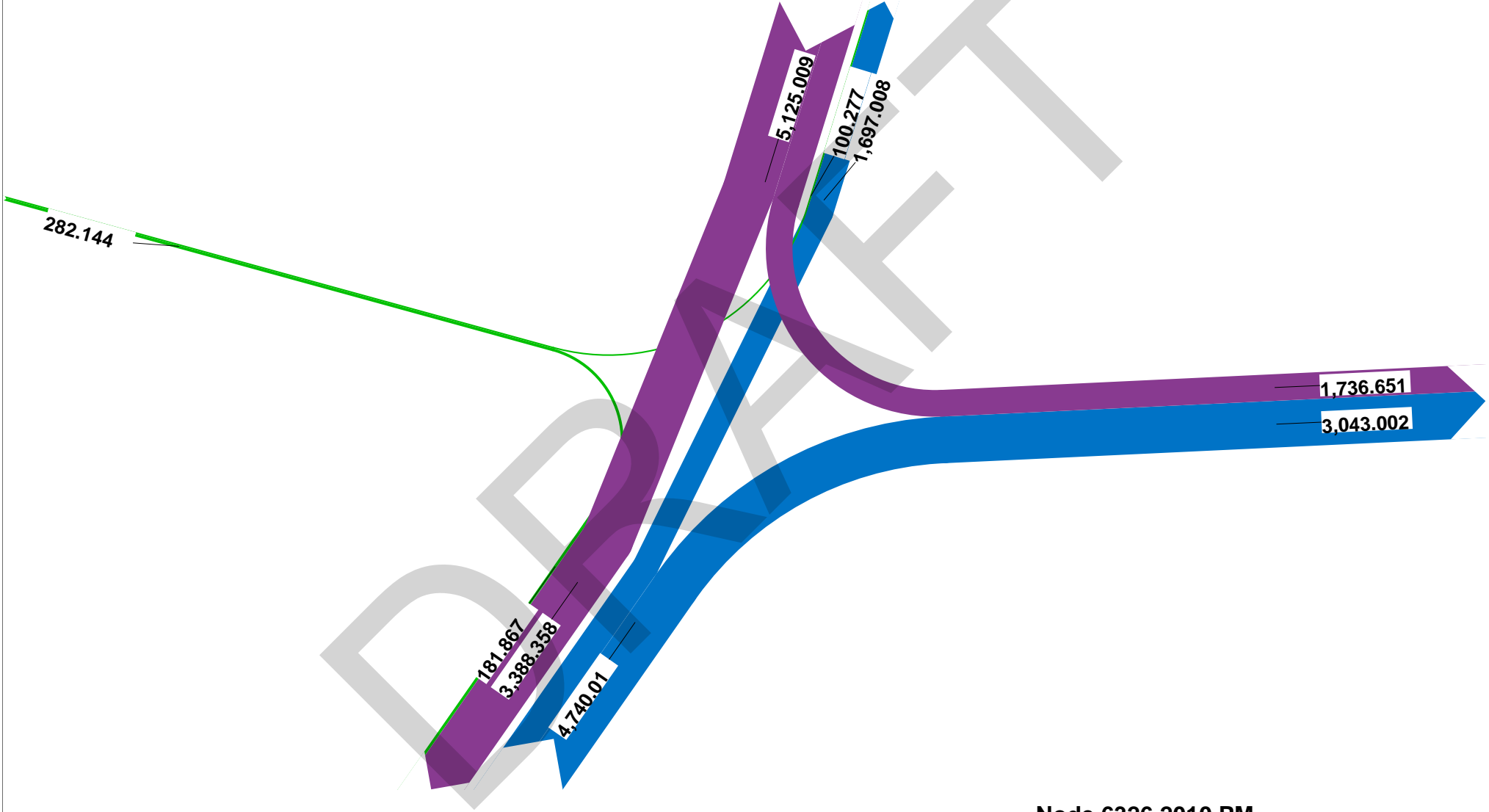
Node 6324 2010 PM

I-10 EB Ramps @ Acadian



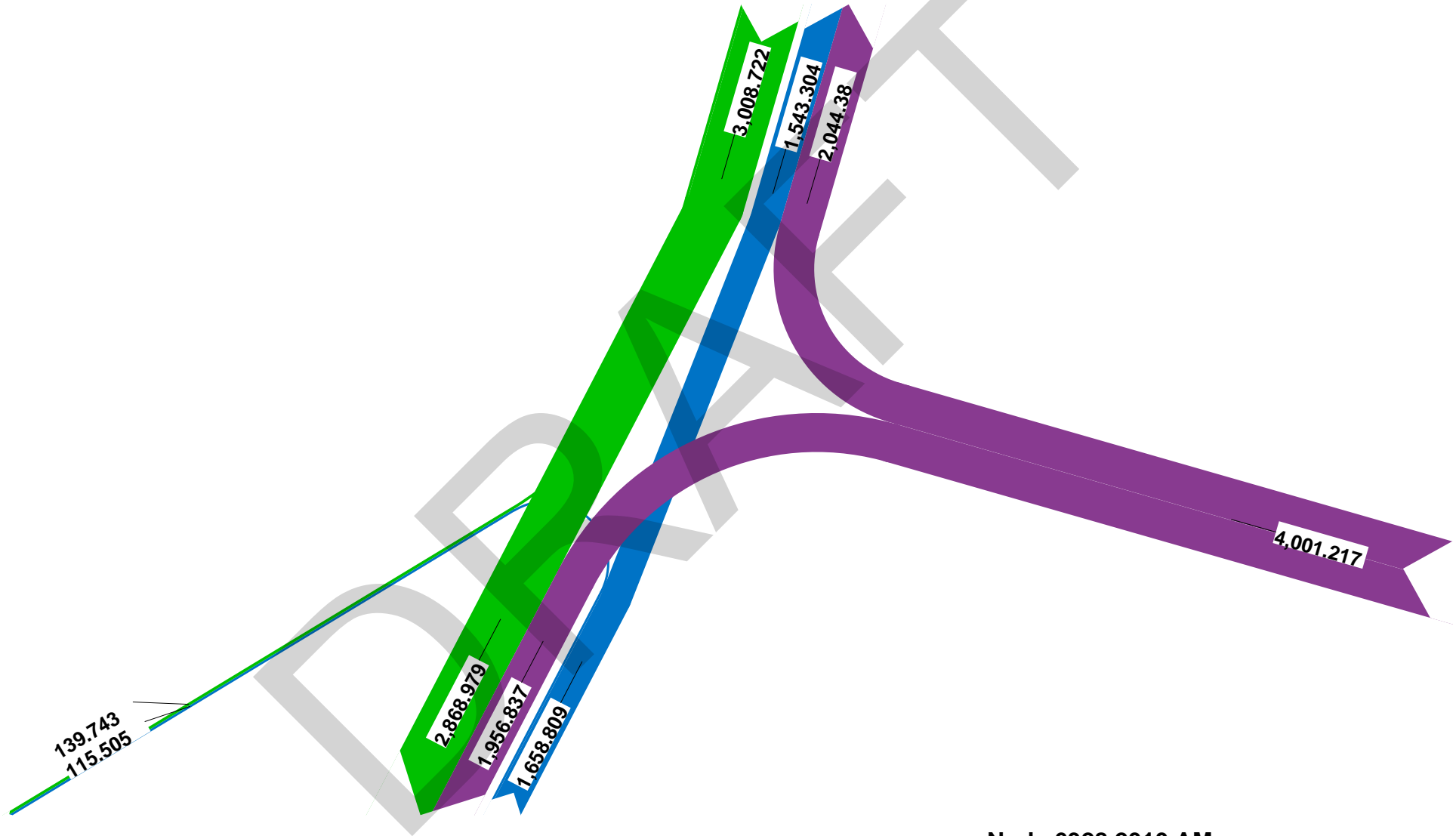
Node 6326 2010 AM

I-10 EB Ramps @ Acadian



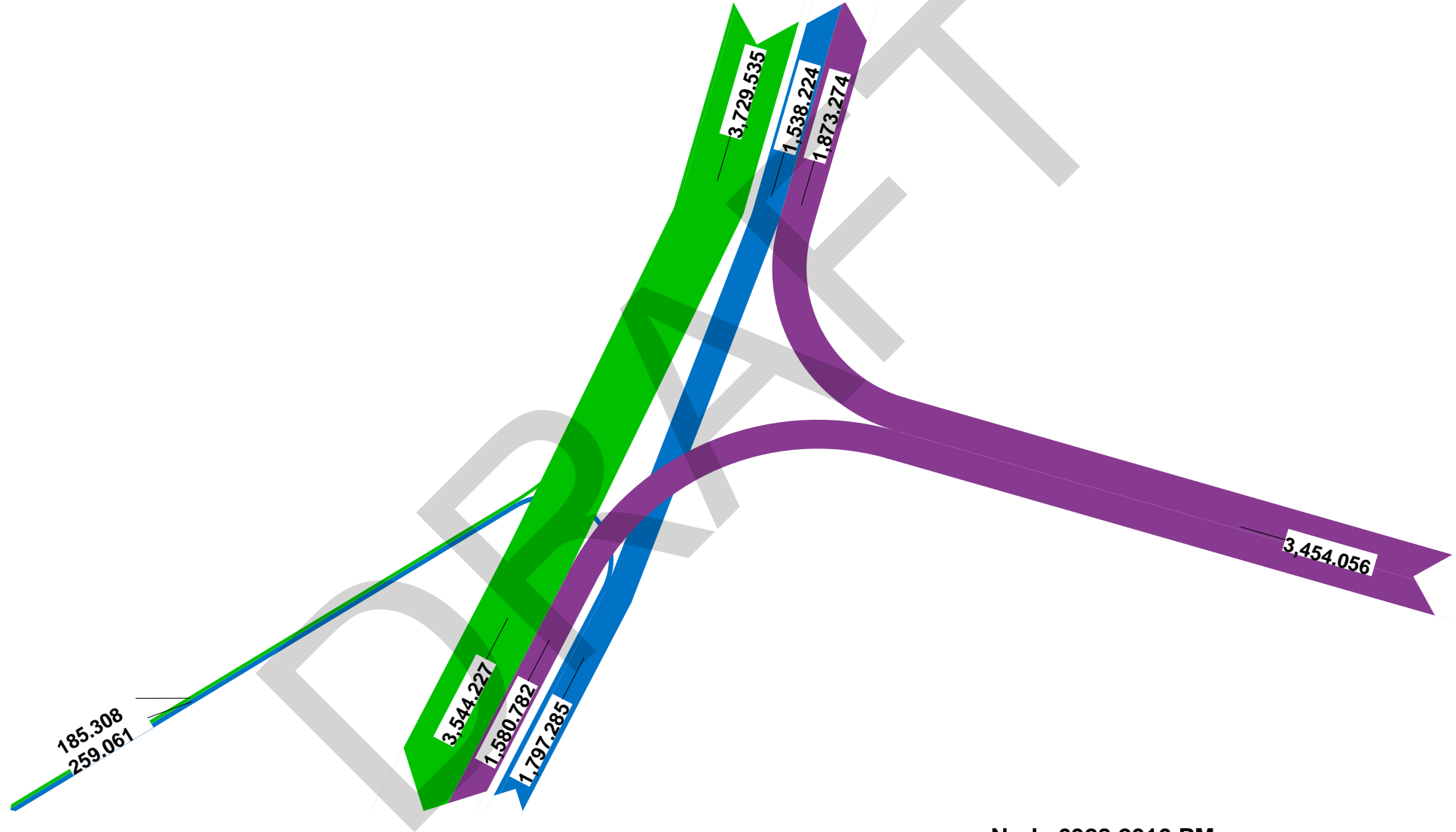
Node 6326 2010 PM

I-10 WB Off Ramp @ Acadian



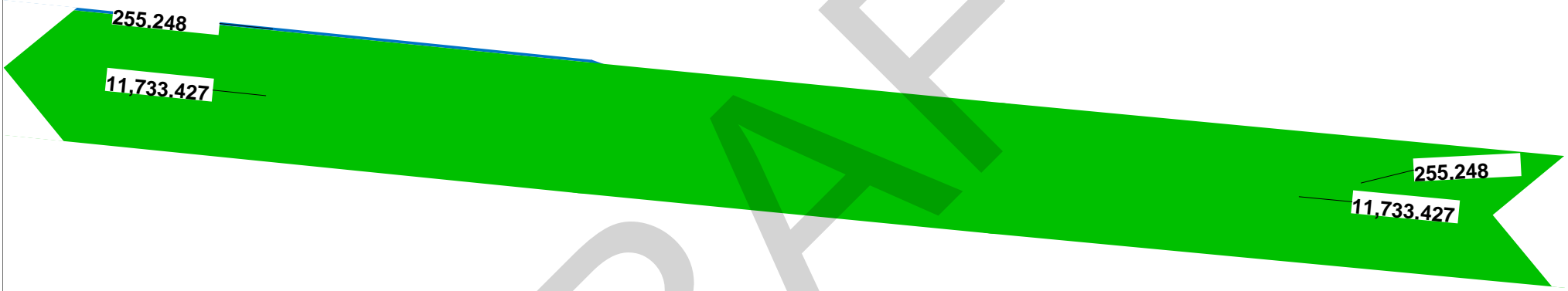
Node 6328 2010 AM

I-10 WB Off Ramp @ Acadian



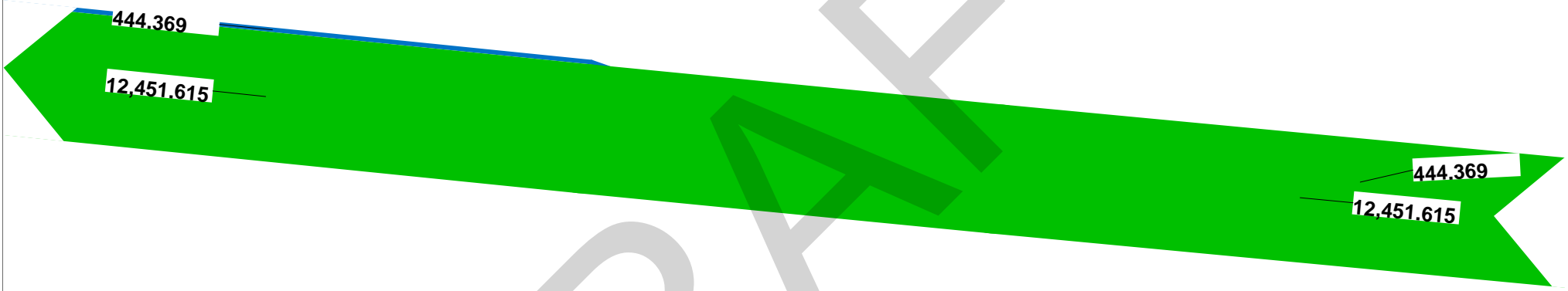
Node 6328 2010 PM

I-10 WB On Ramp Merge from Acadian



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I-10 WB On Ramp Merge from Acadian



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Node 6329 2010 PM

I-10 EB Off Ramp Diverge to Acadian



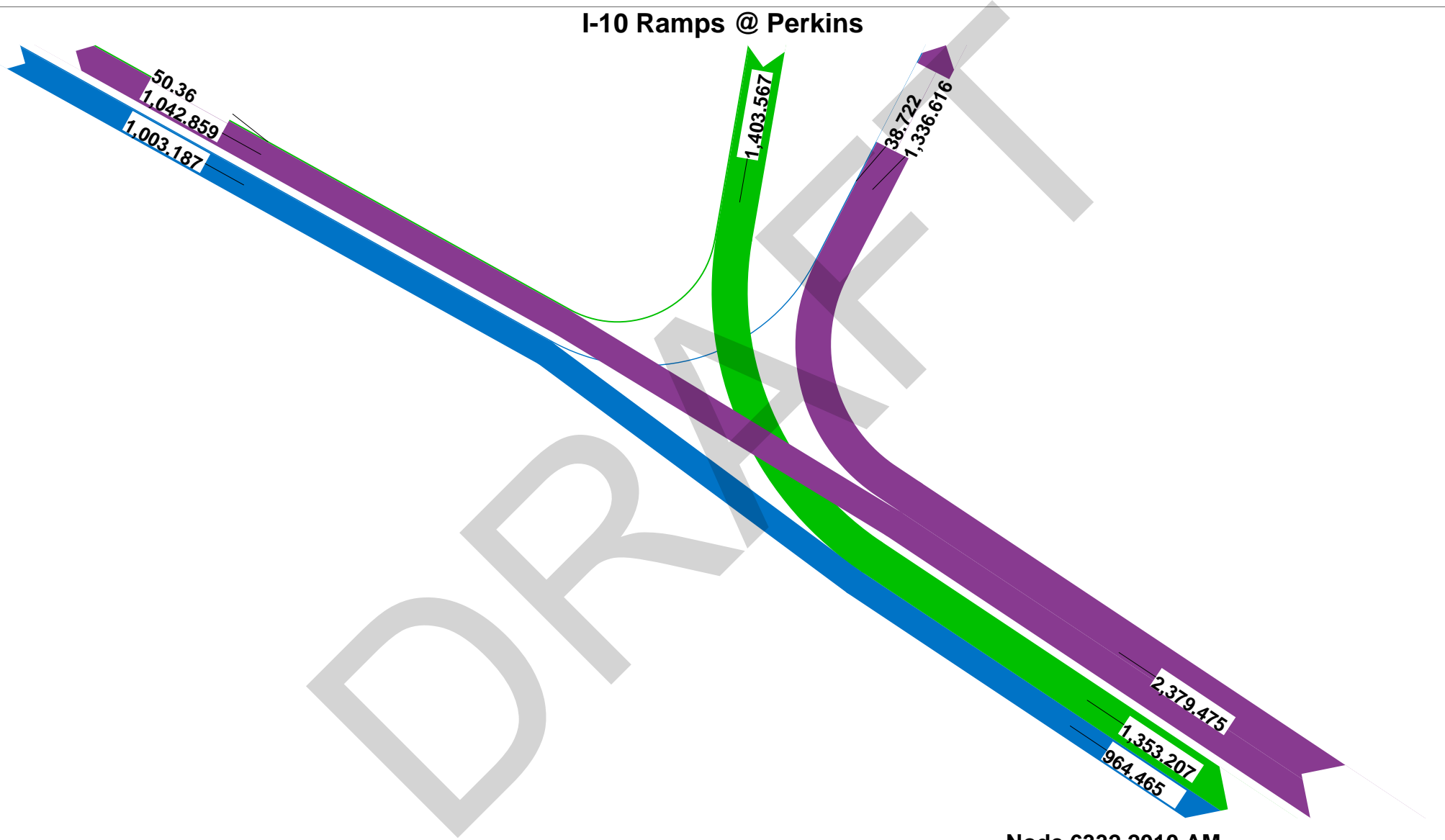
Node 6330 2010 AM

I-10 EB Off Ramp Diverge to Acadian



Node 6330 2010 PM

I-10 Ramps @ Perkins



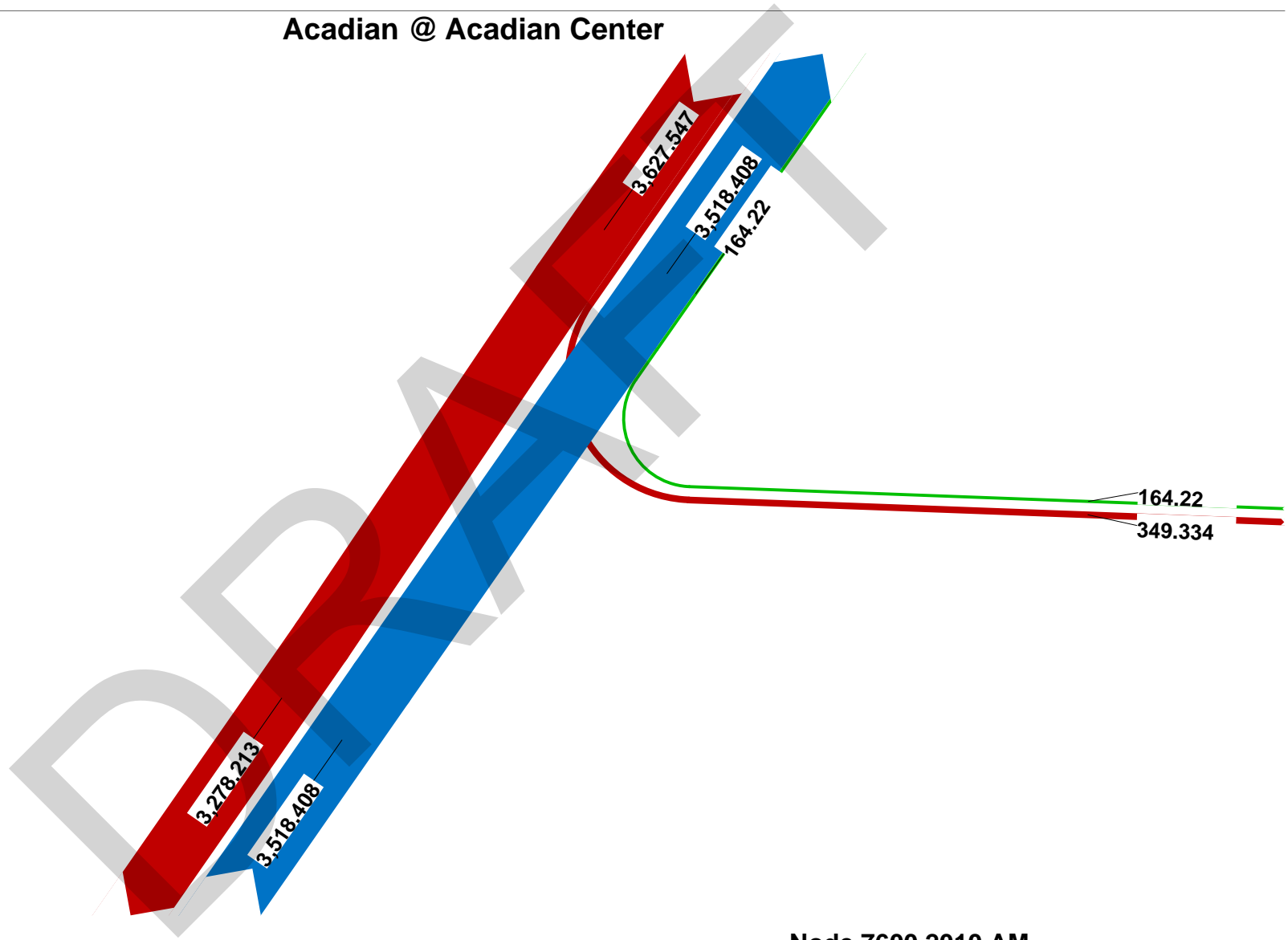
Node 6332 2010 AM

I-10 Ramps @ Perkins



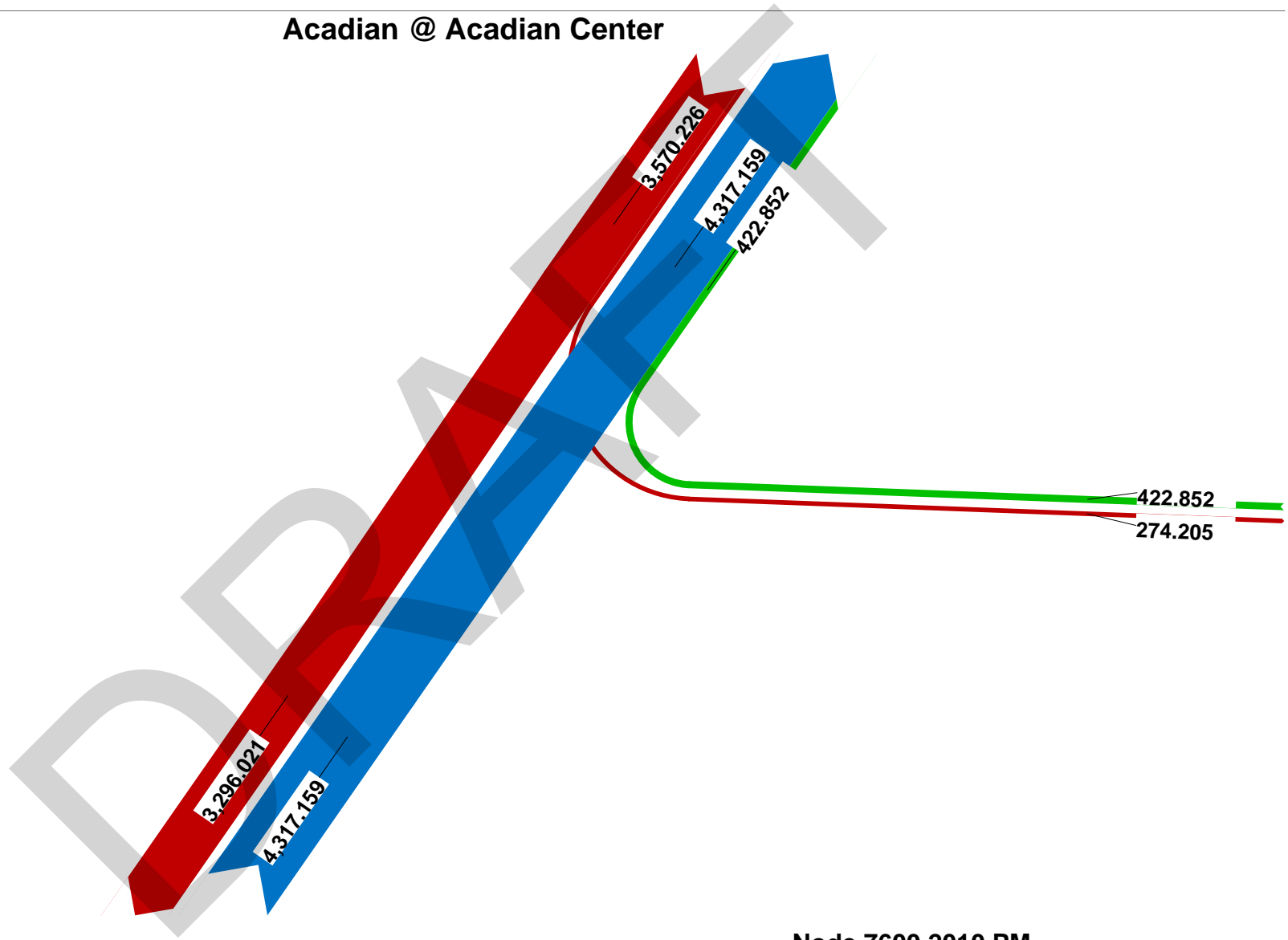
Node 6332 2010 PM

Acadian @ Acadian Center



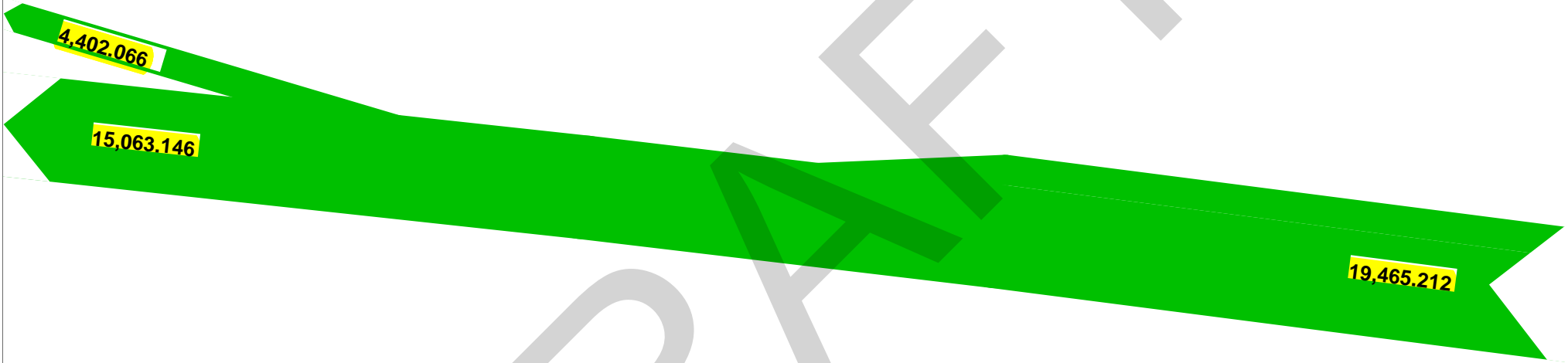
Node 7600 2010 AM

Acadian @ Acadian Center



Node 7600 2010 PM

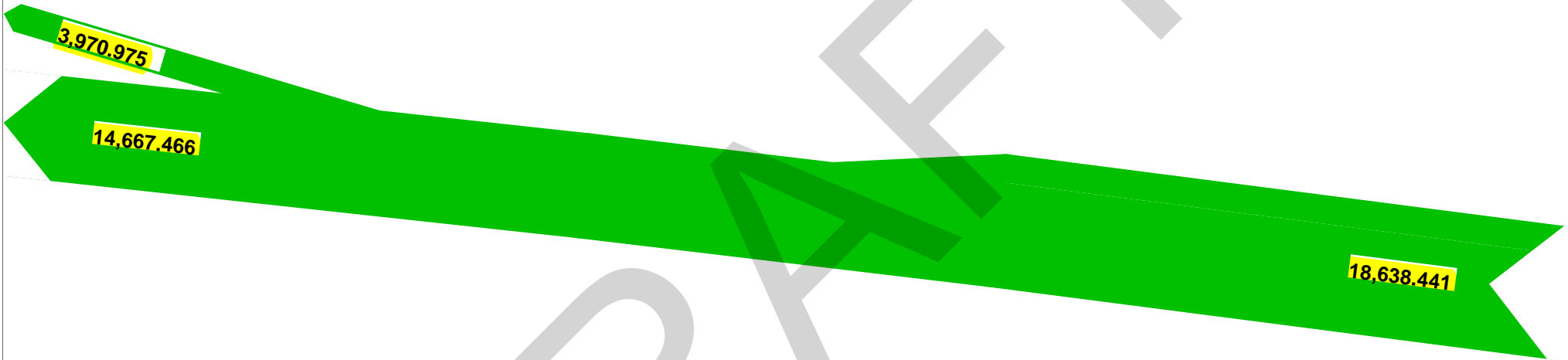
I-10 WB Off Ramp Diverge to College Dr



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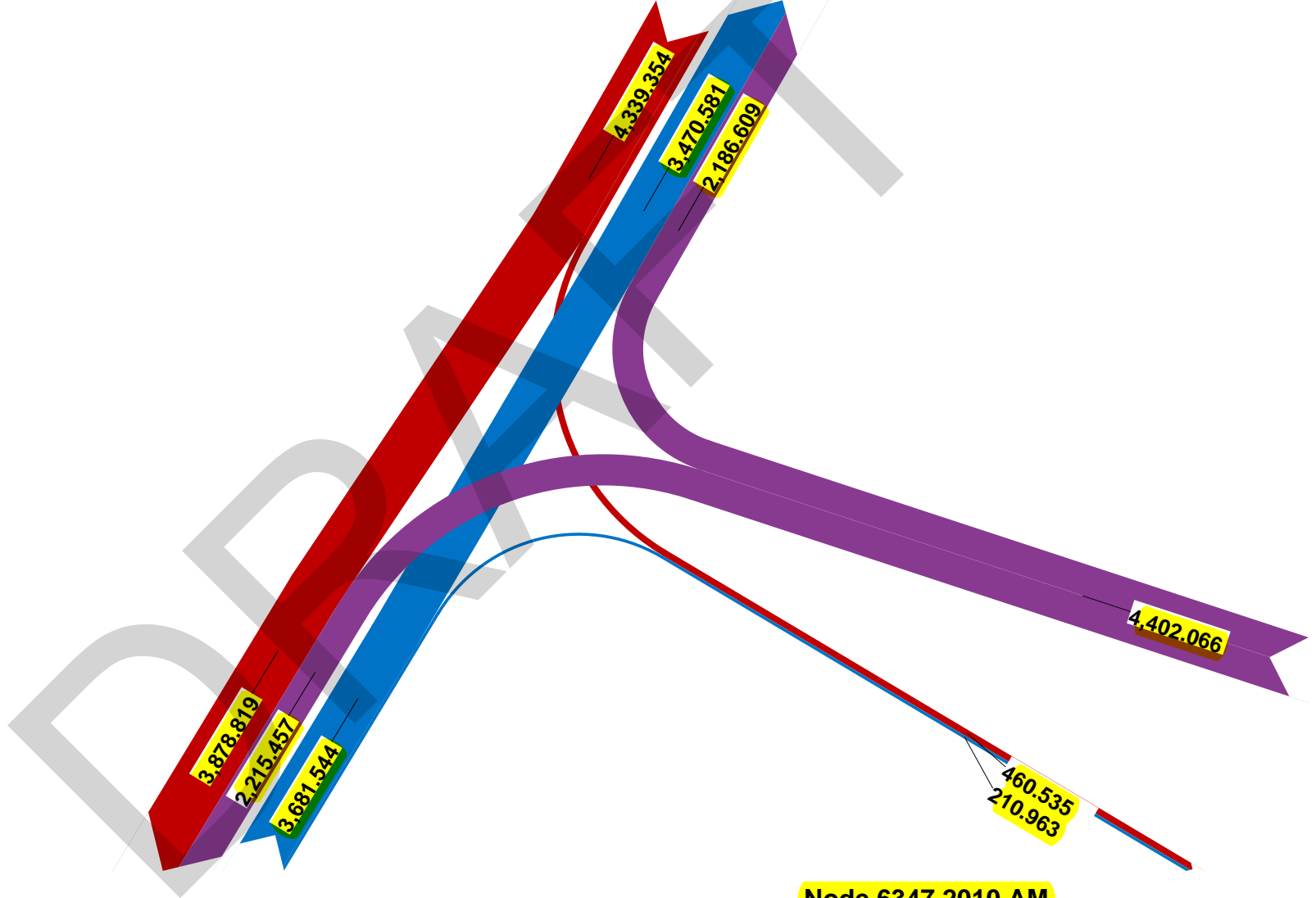
Node 6308 2010 AM

I-10 WB Off Ramp Diverge to College Dr



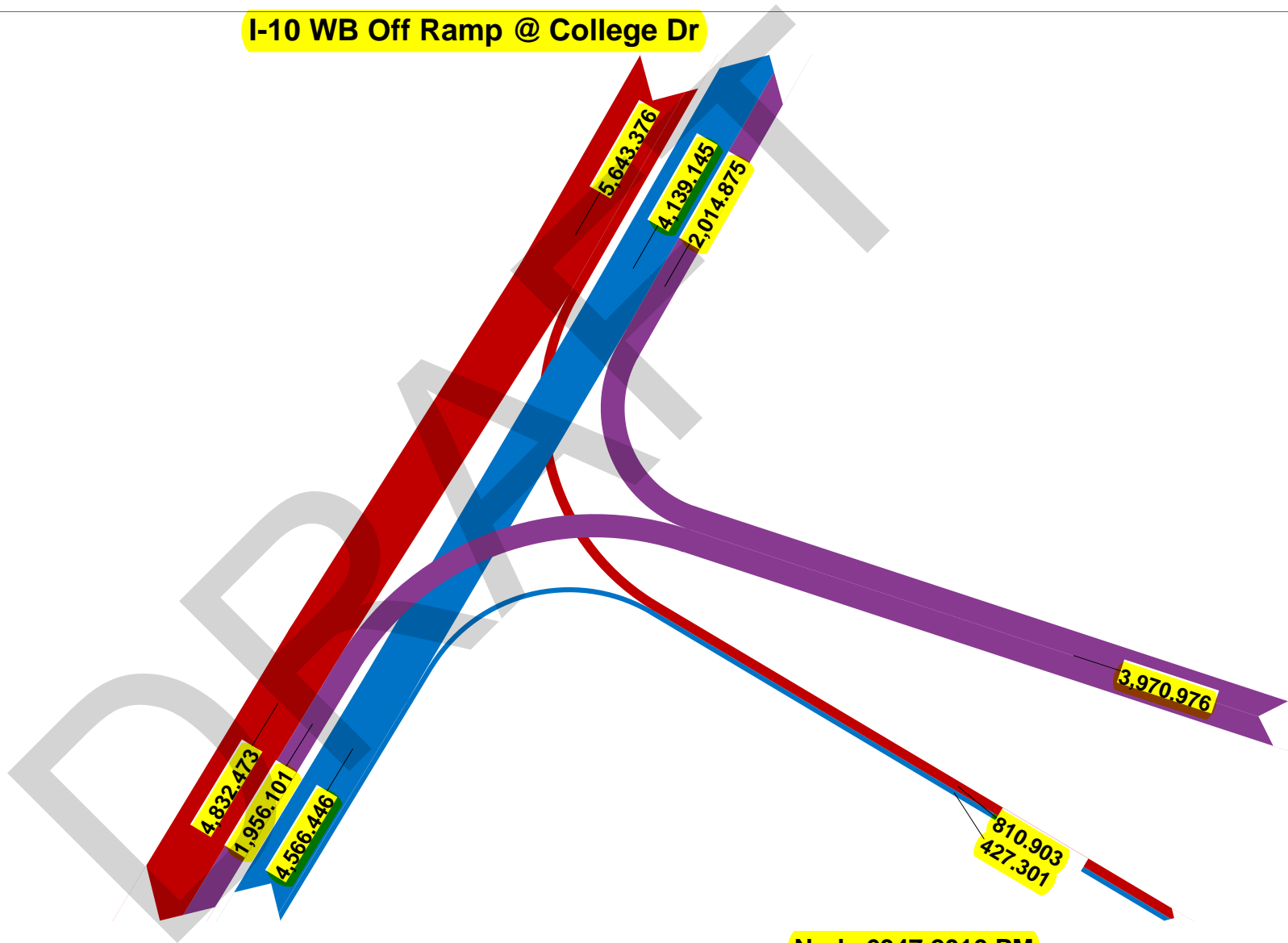
Node 6308 2010 PM

I-10 WB Off Ramp @ College Dr



Node 6347 2010 AM

I-10 WB Off Ramp @ College Dr



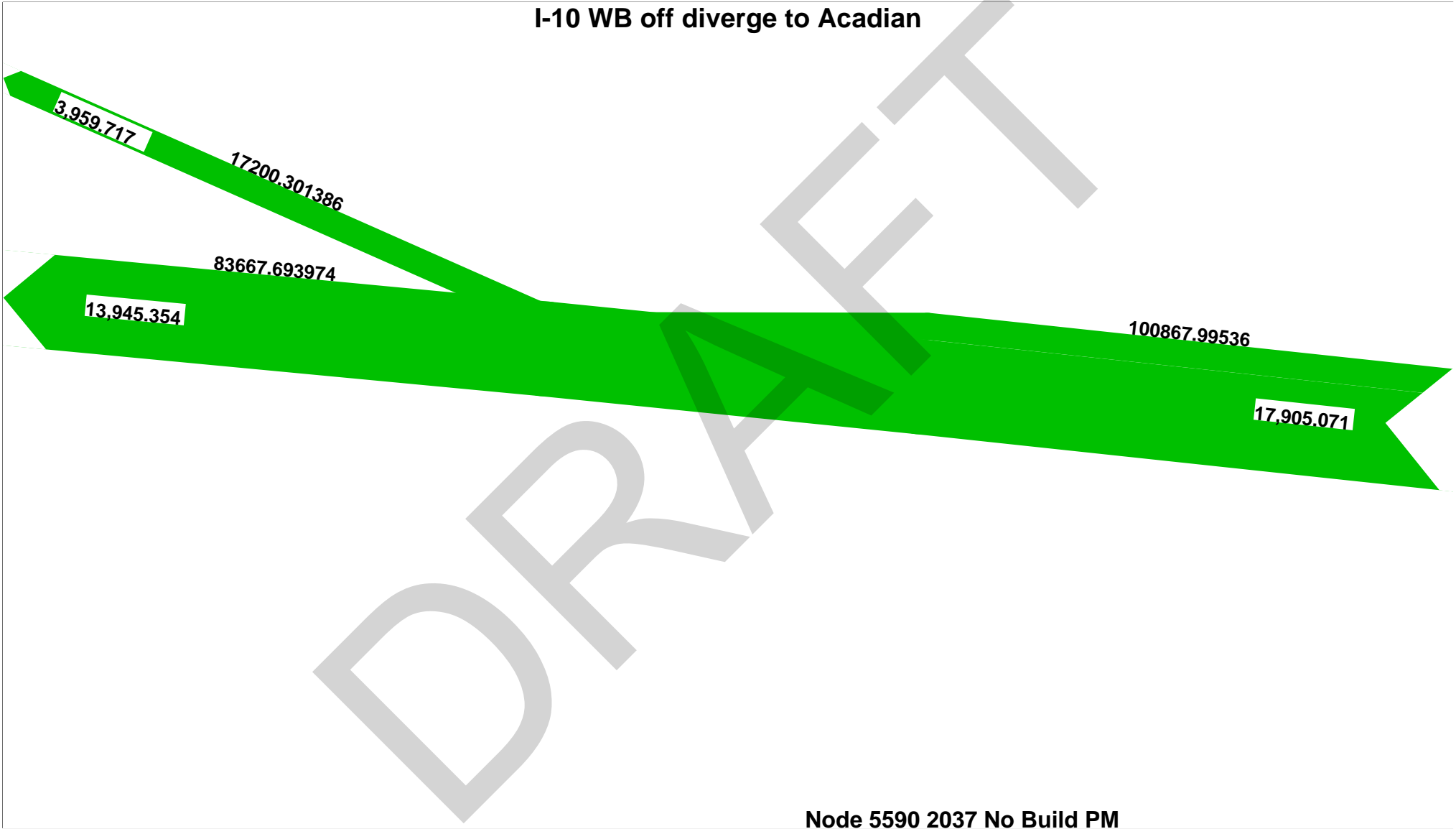
Node 6347 2010 PM

I-10 WB off diverge to Acadian

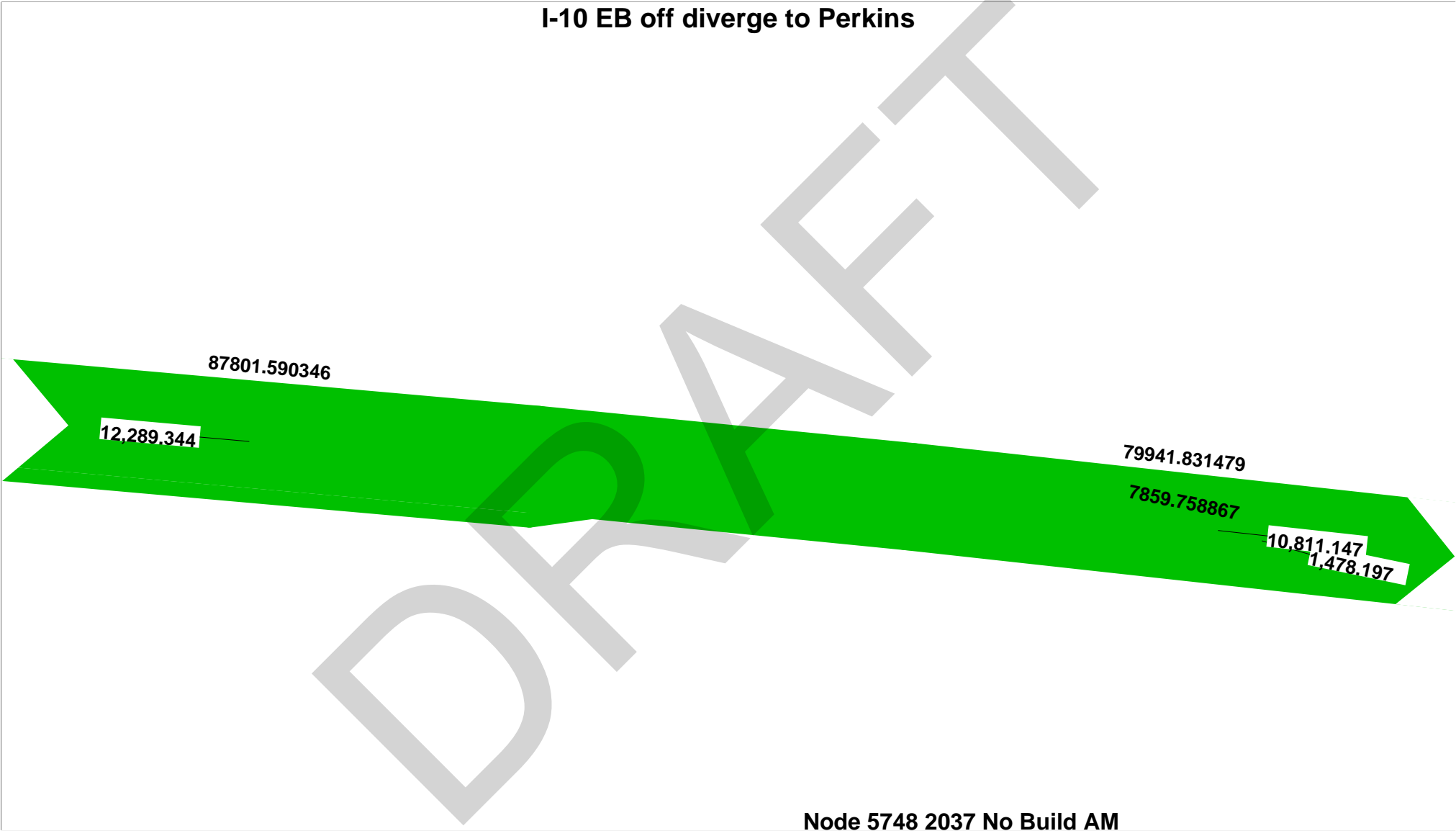


Node 5590 2037 No Build AM

I-10 WB off diverge to Acadian

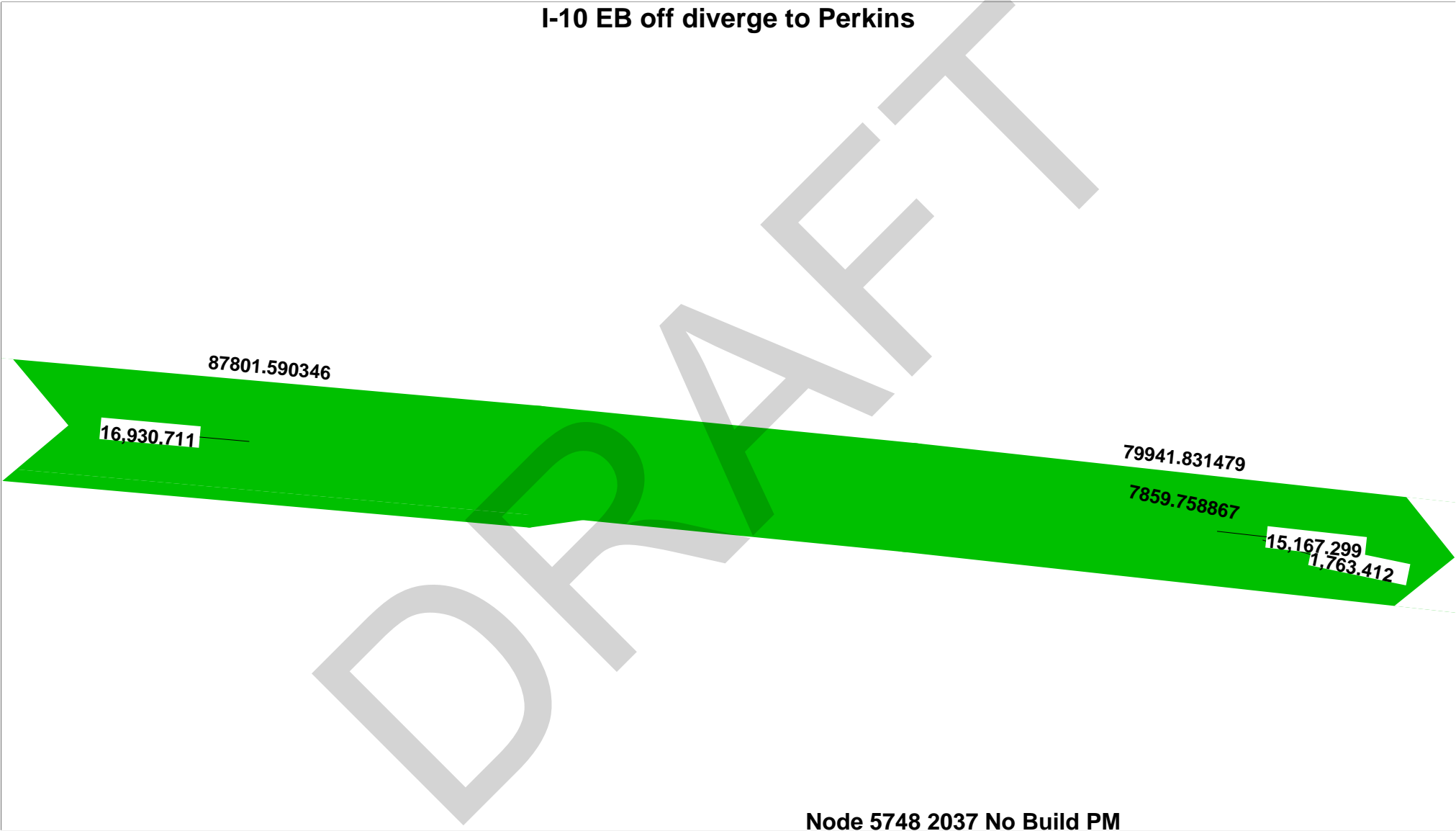


I-10 EB off diverge to Perkins



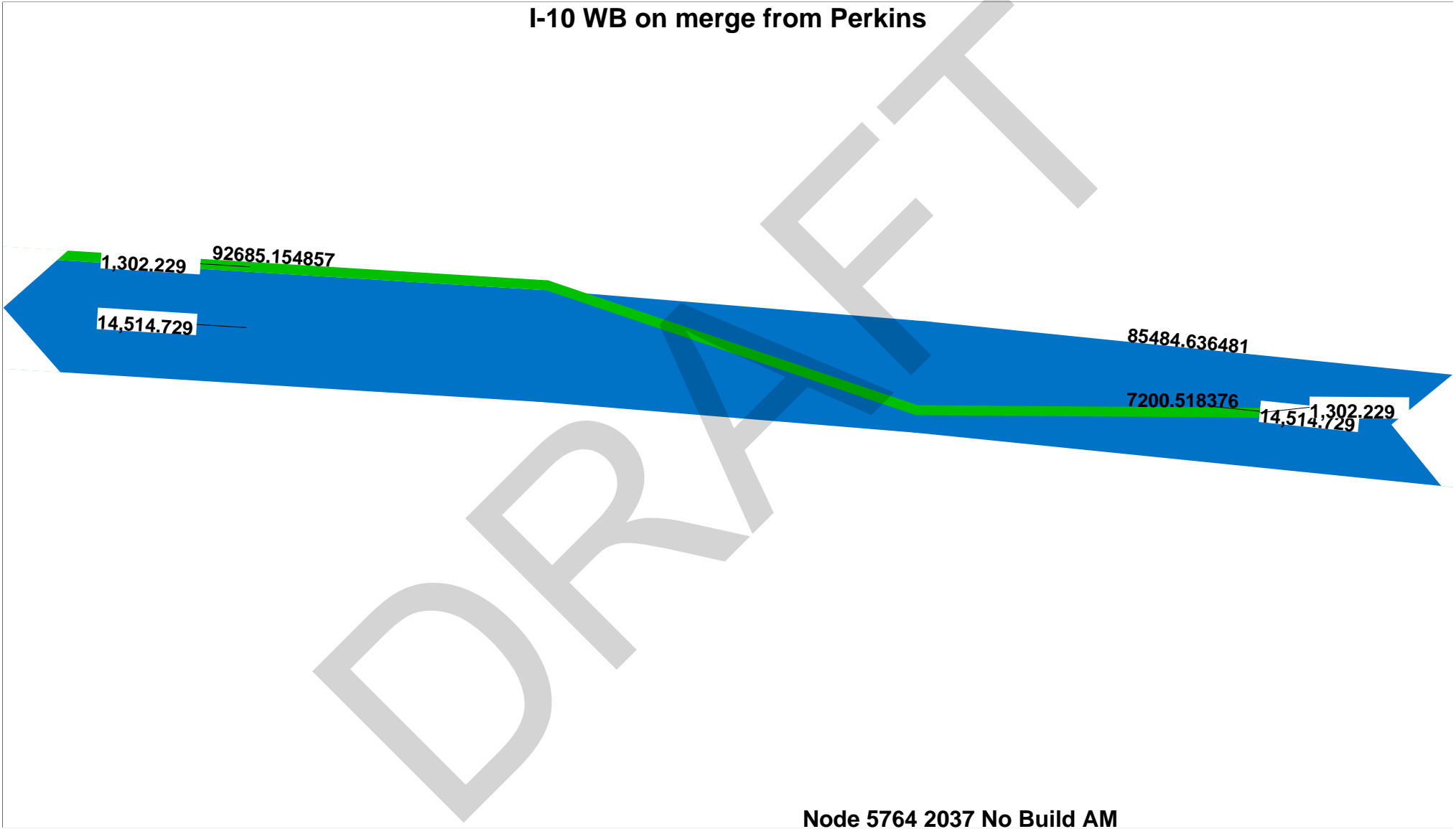
Node 5748 2037 No Build AM

I-10 EB off diverge to Perkins



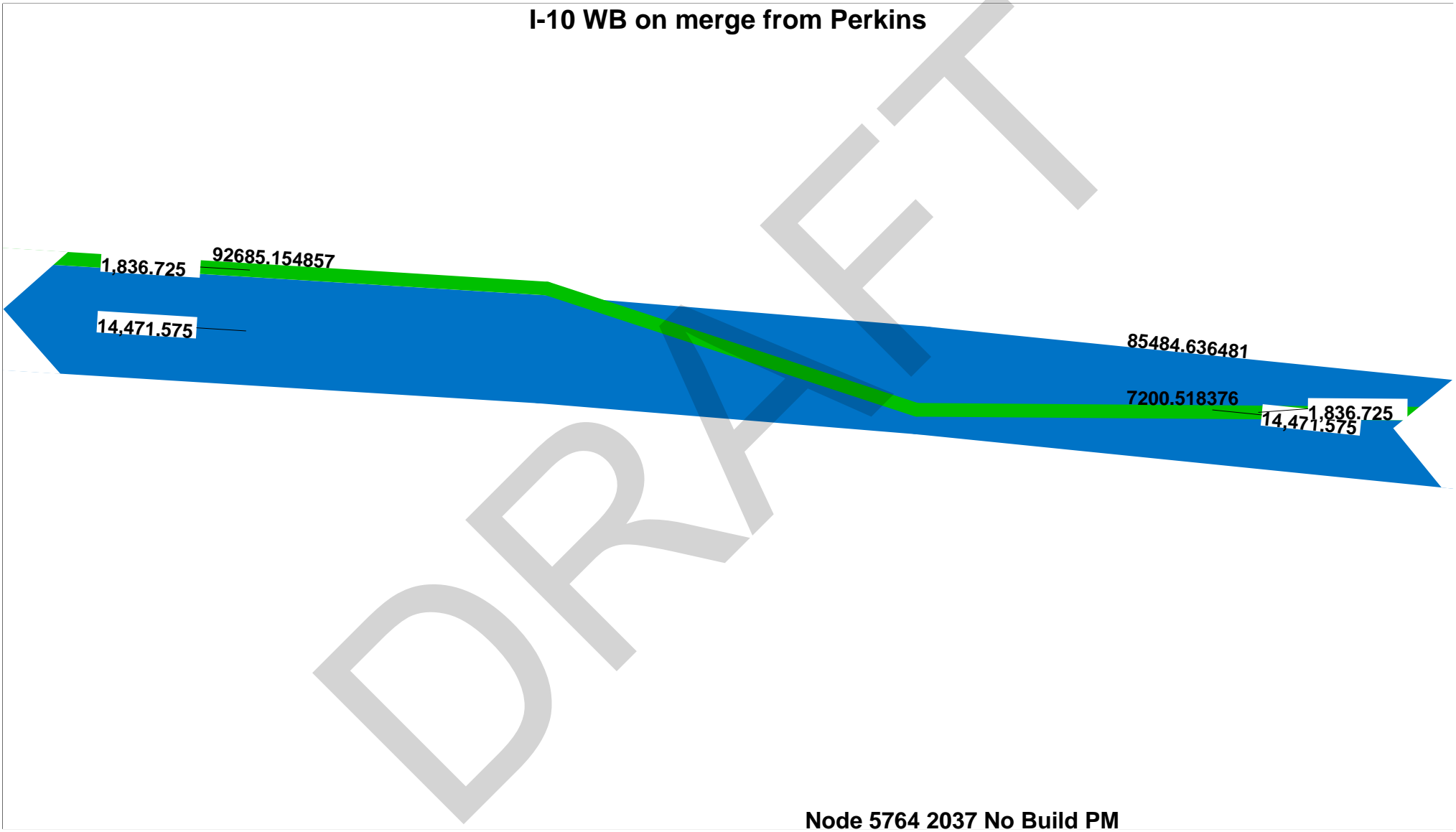
Node 5748 2037 No Build PM

I-10 WB on merge from Perkins



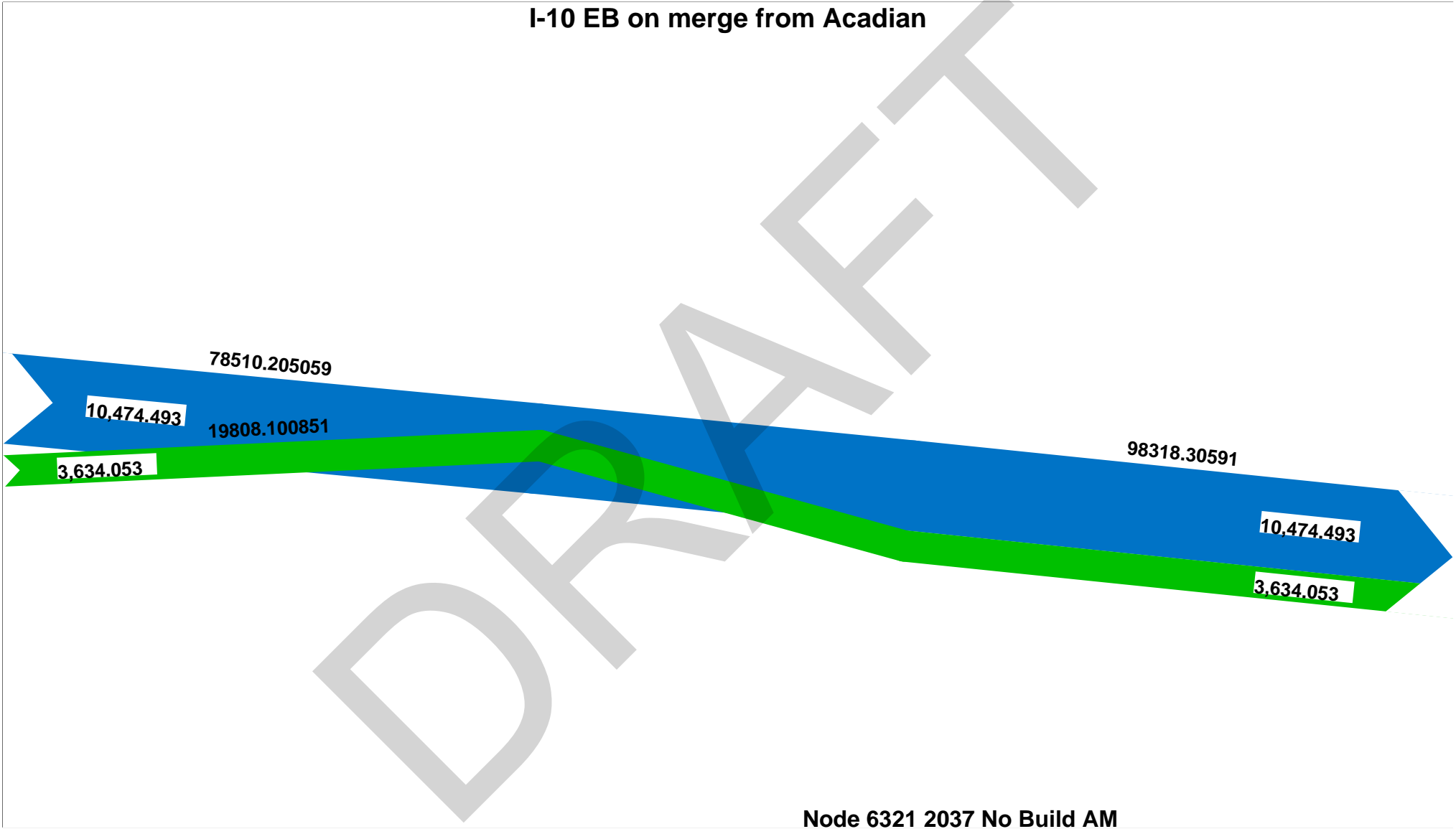
Node 5764 2037 No Build AM

I-10 WB on merge from Perkins



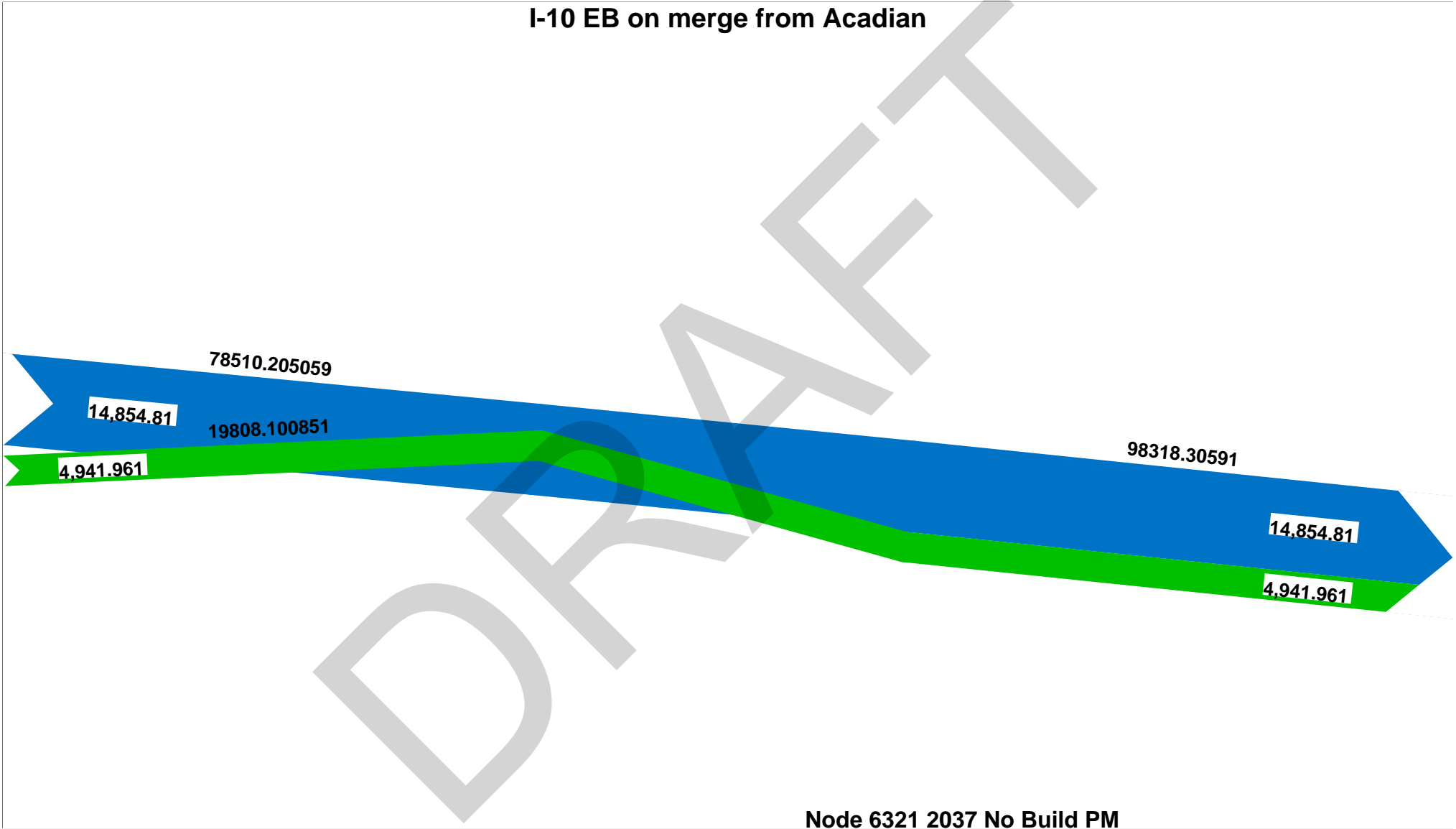
Node 5764 2037 No Build PM

I-10 EB on merge from Acadian



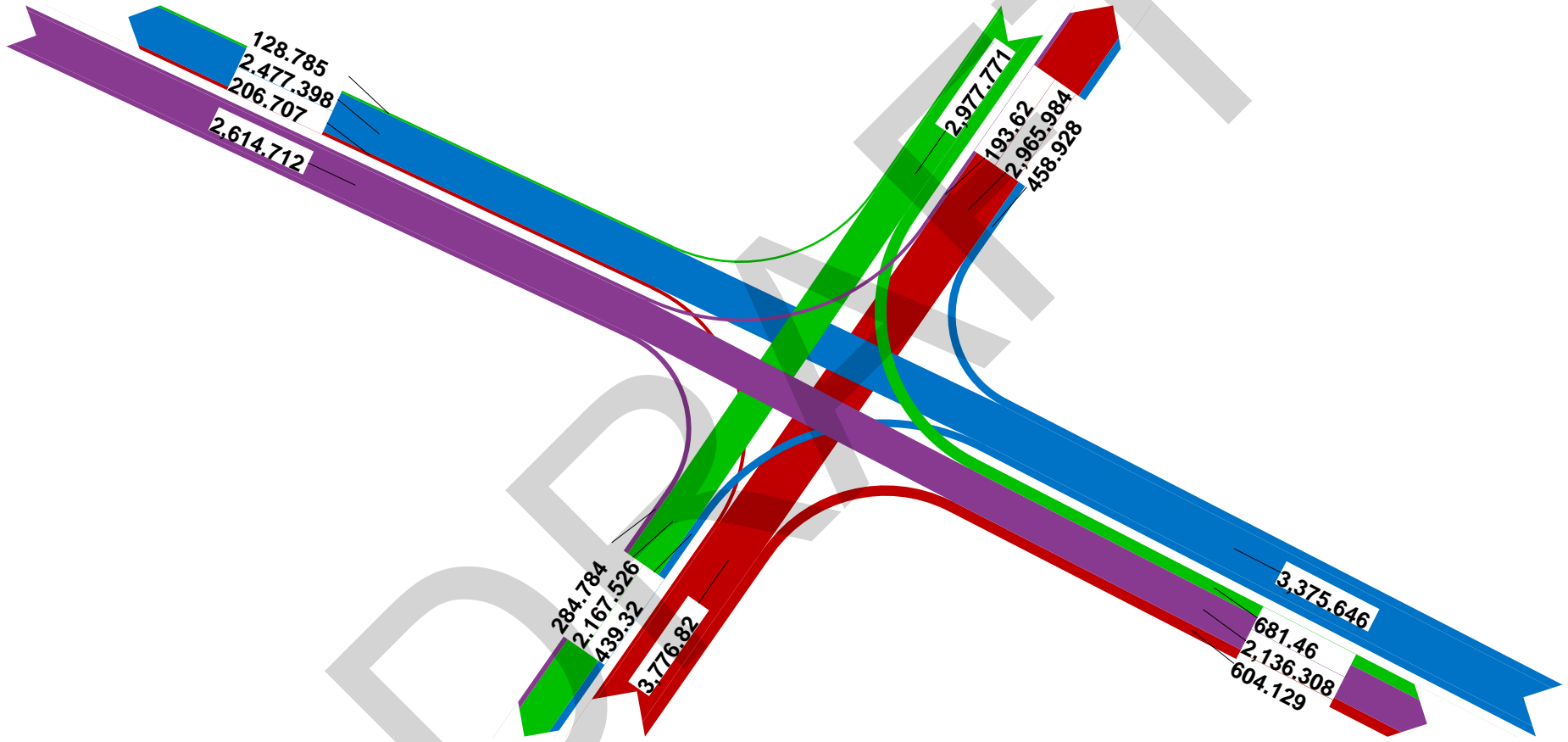
Node 6321 2037 No Build AM

I-10 EB on merge from Acadian



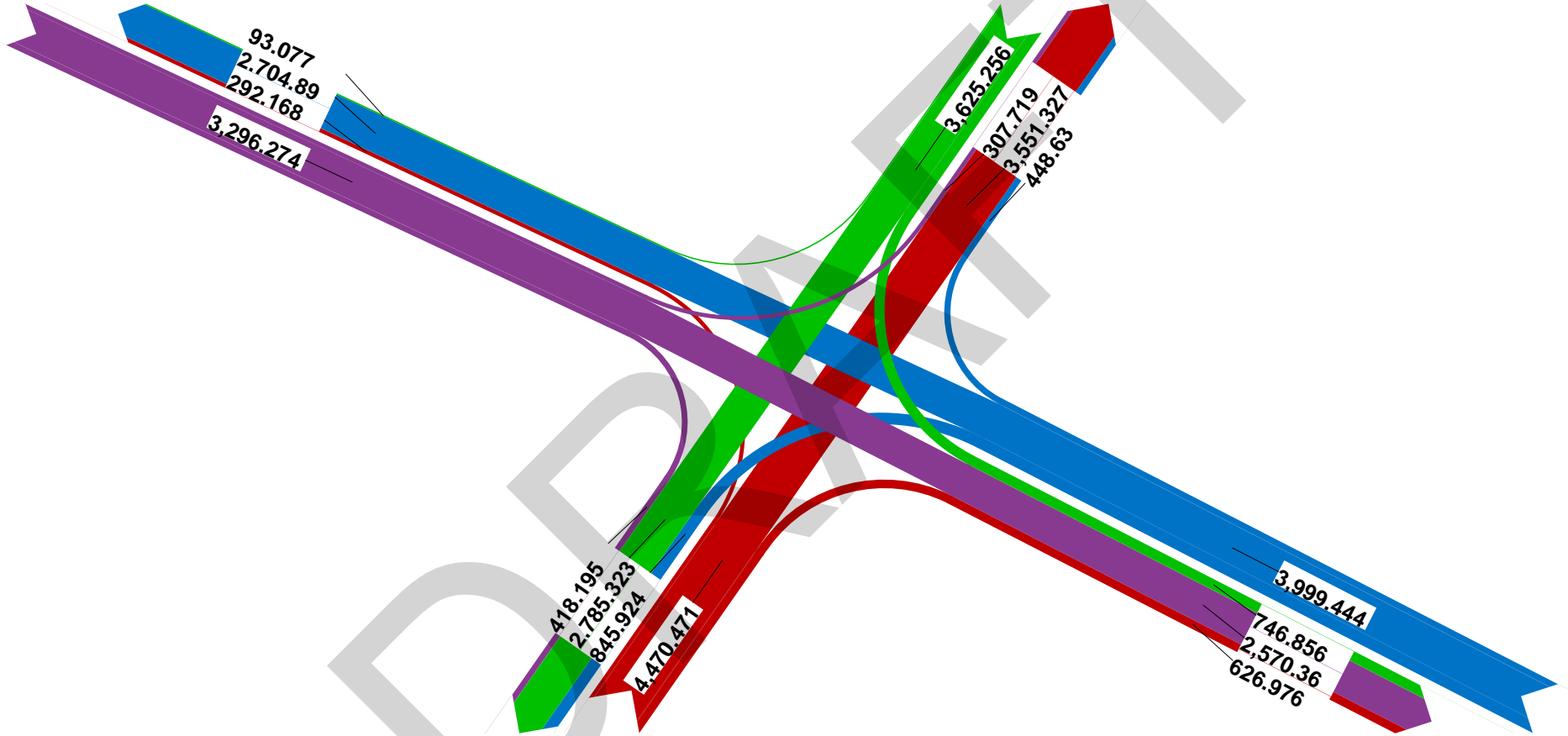
Node 6321 2037 No Build PM

Acadian at Perkins



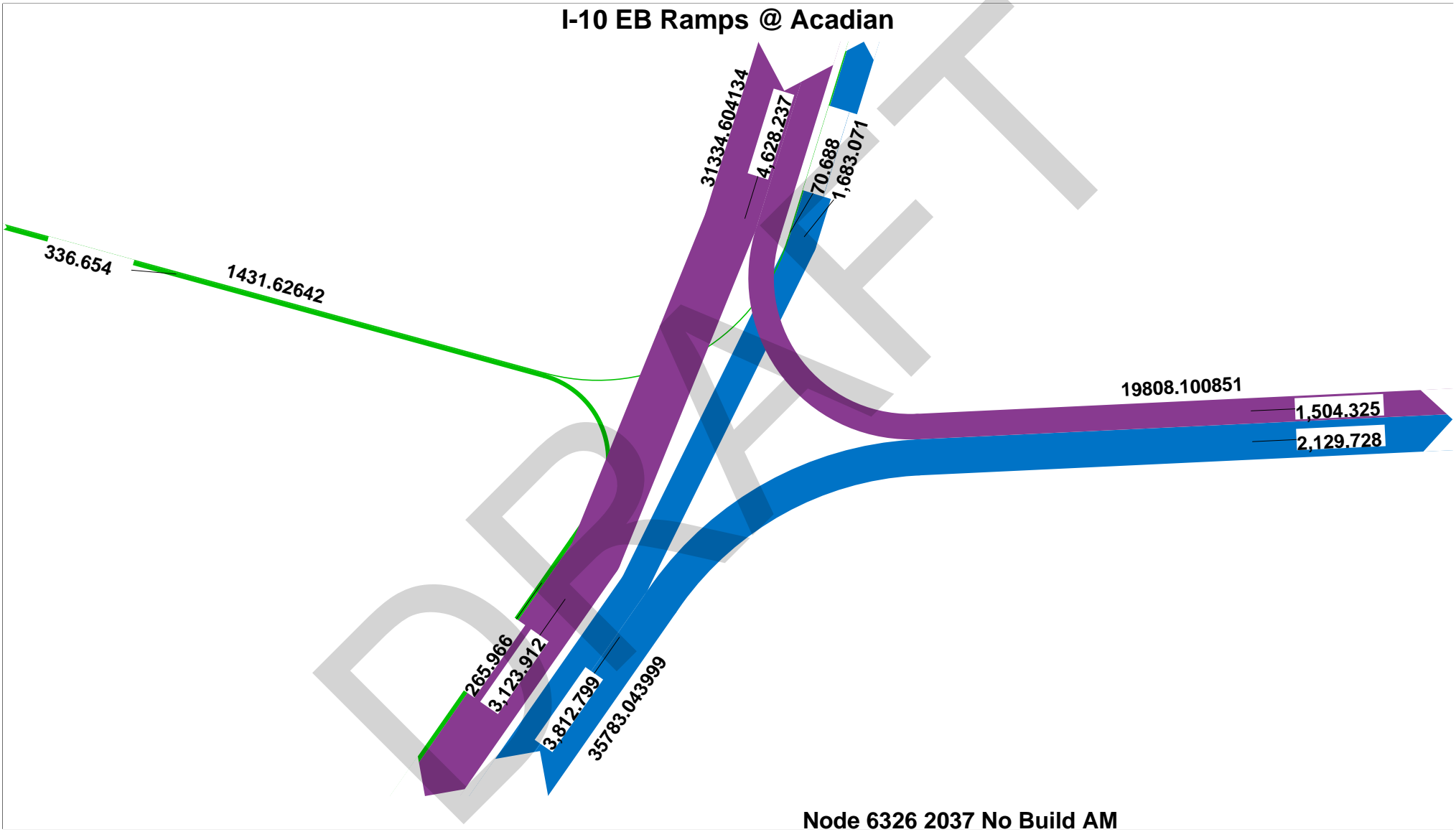
Node 6324 2037 AM

Acadian at Perkins



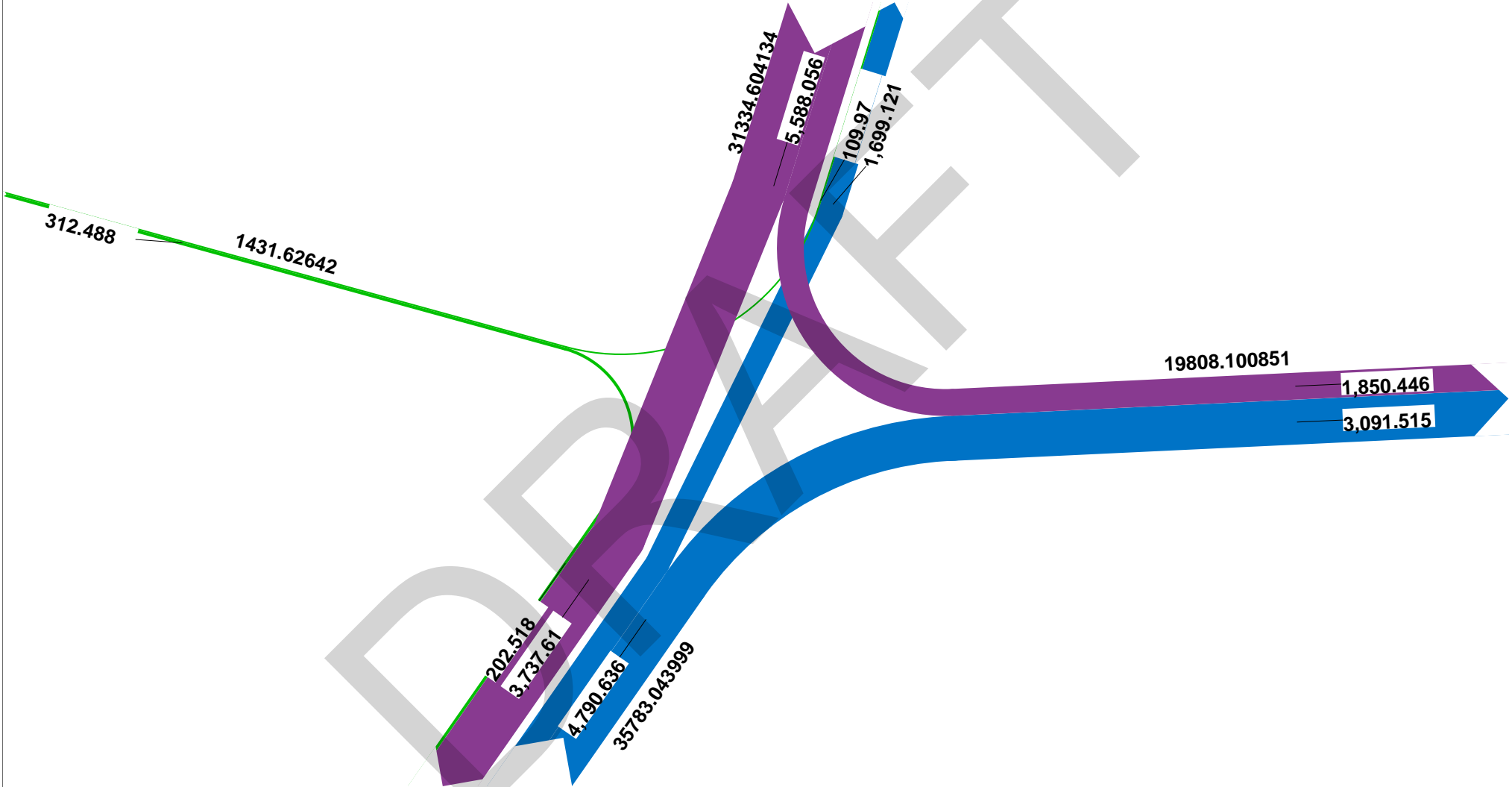
Node 6324 2037 PM

I-10 EB Ramps @ Acadian



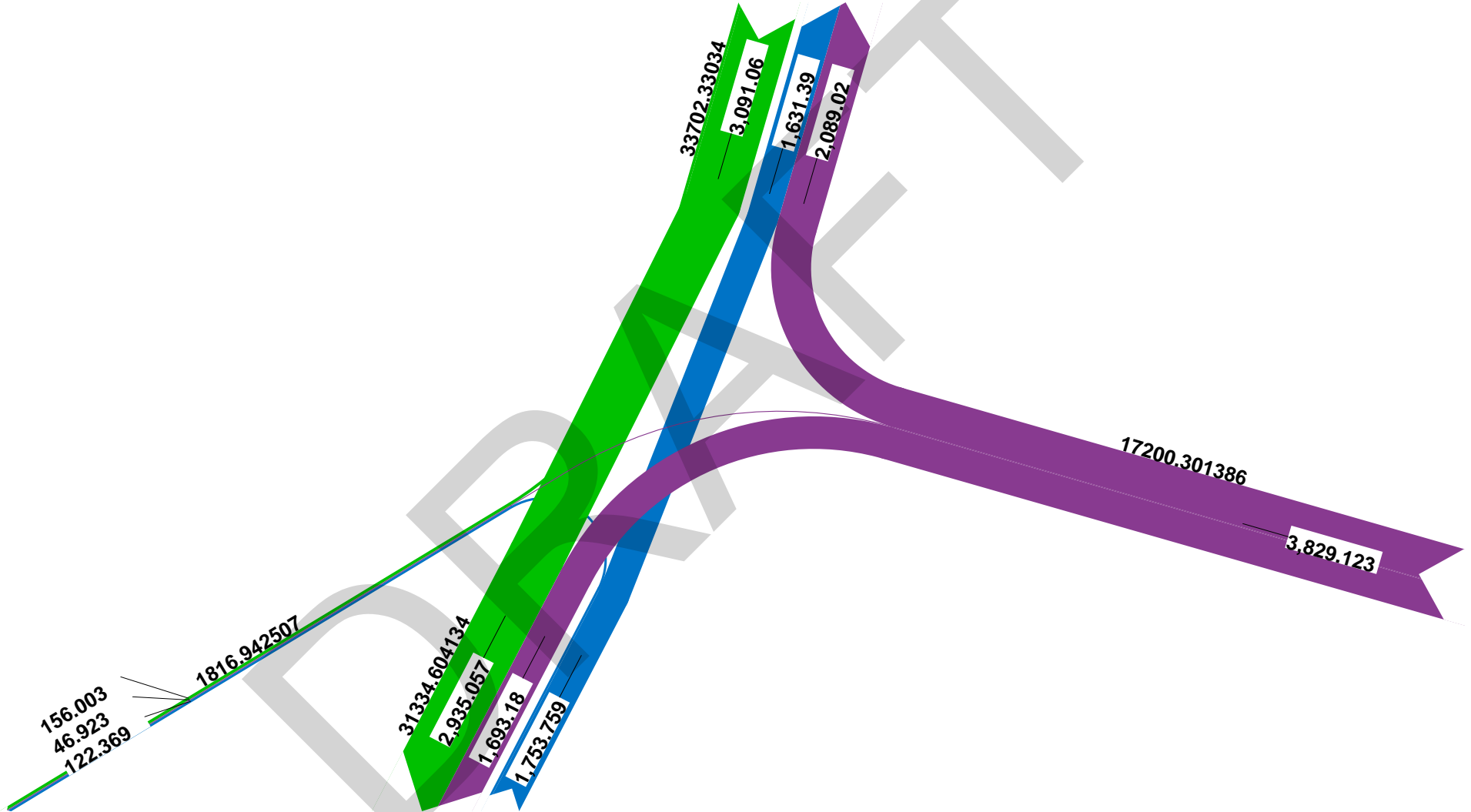
Node 6326 2037 No Build AM

I-10 EB Ramps @ Acadian



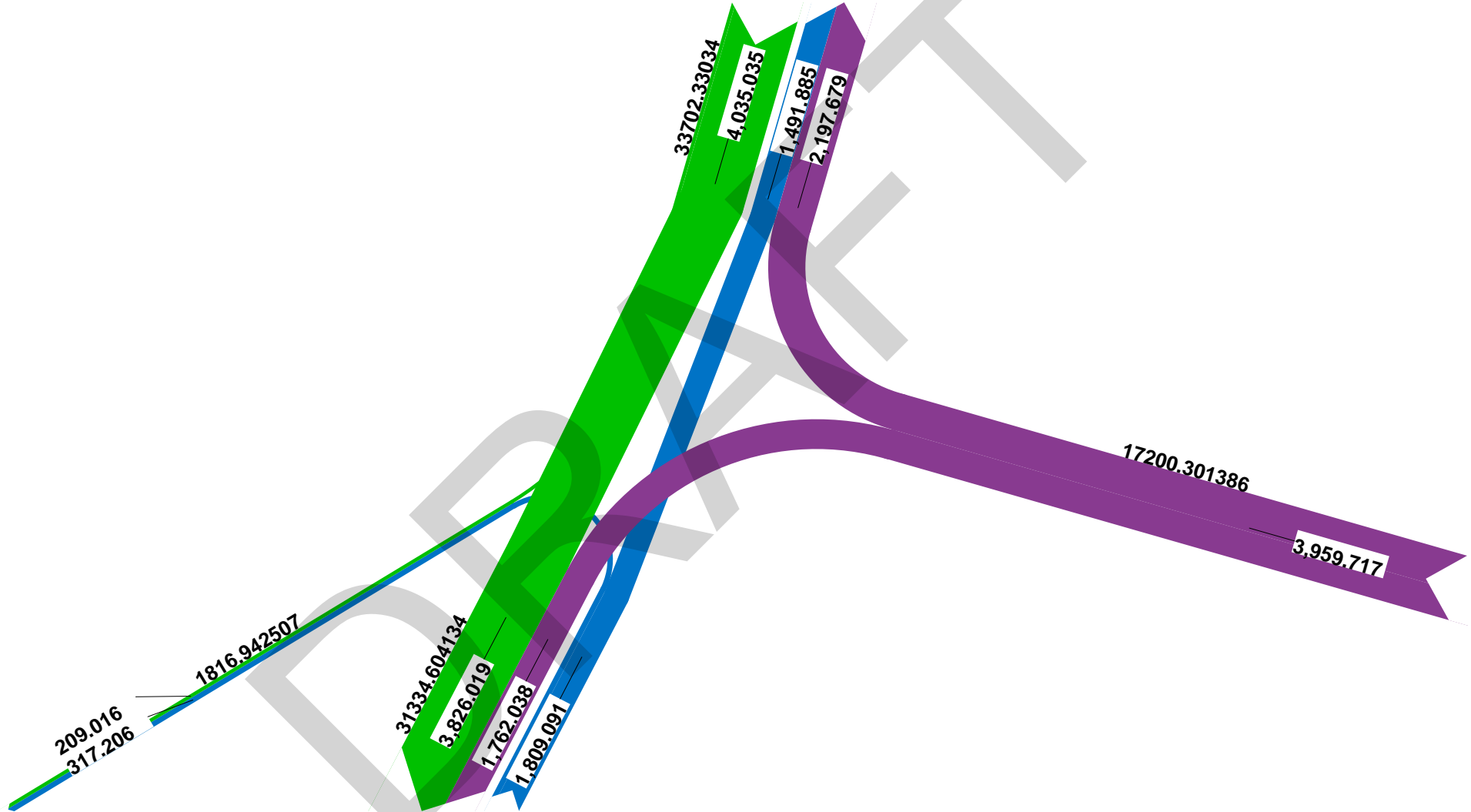
Node 6326 2037 No Build PM

I-10 WB Ramps @ Acadian



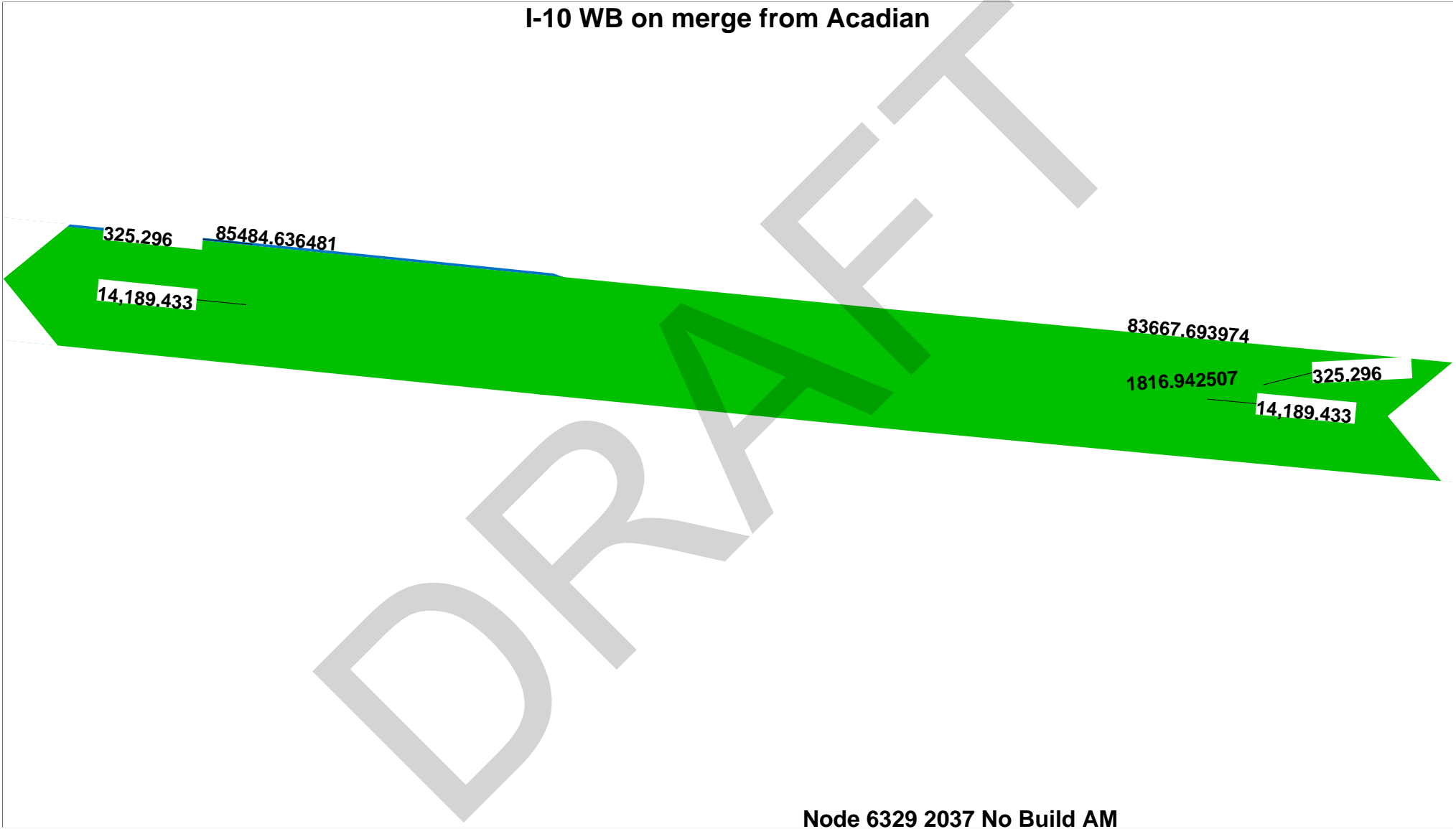
Node 6328 2037 No Build AM

I-10 WB Ramps @ Acadian



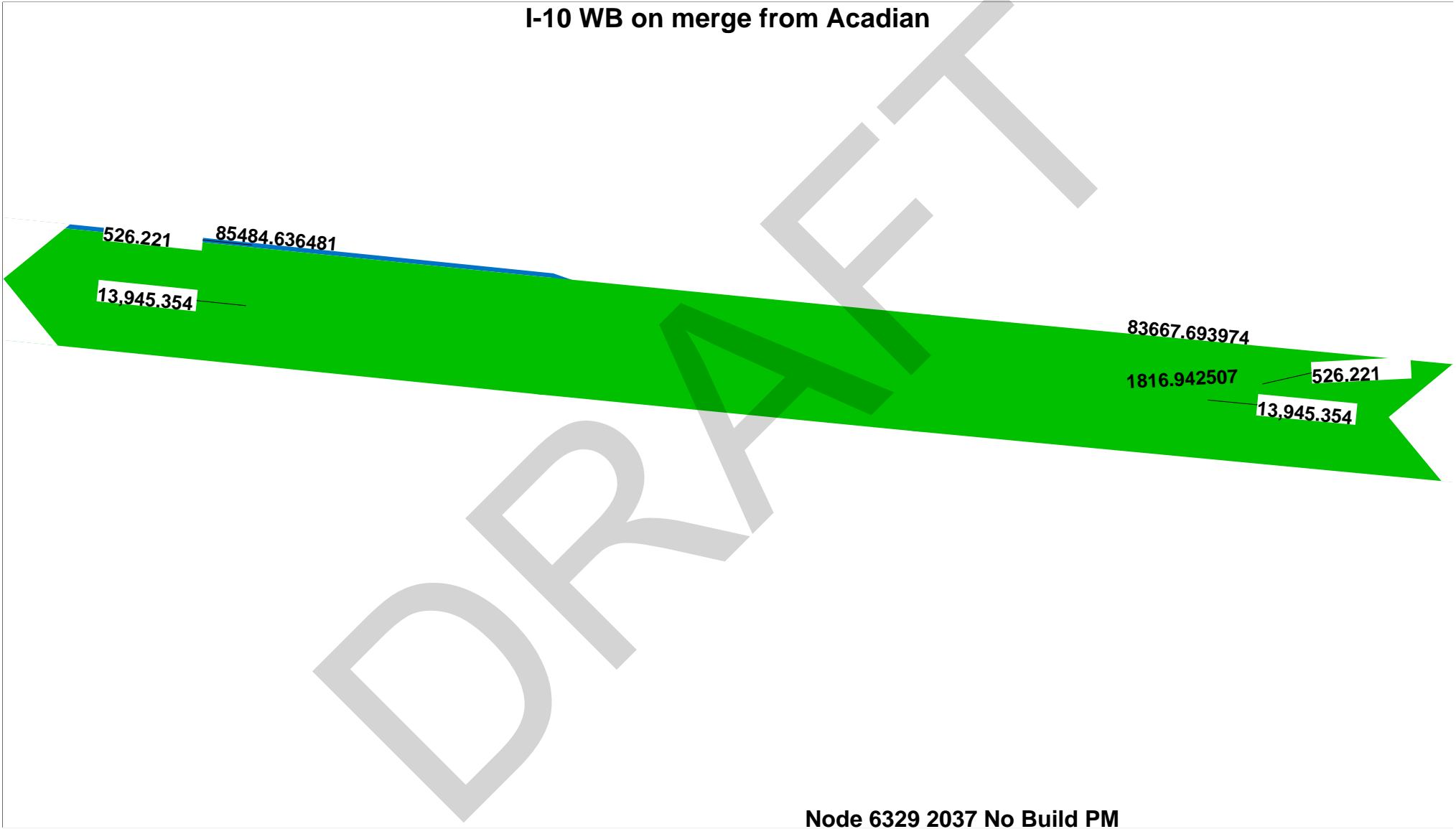
Node 6328 2037 No Build PM

I-10 WB on merge from Acadian



Node 6329 2037 No Build AM

I-10 WB on merge from Acadian



I-10 EB off diverge to Acadian



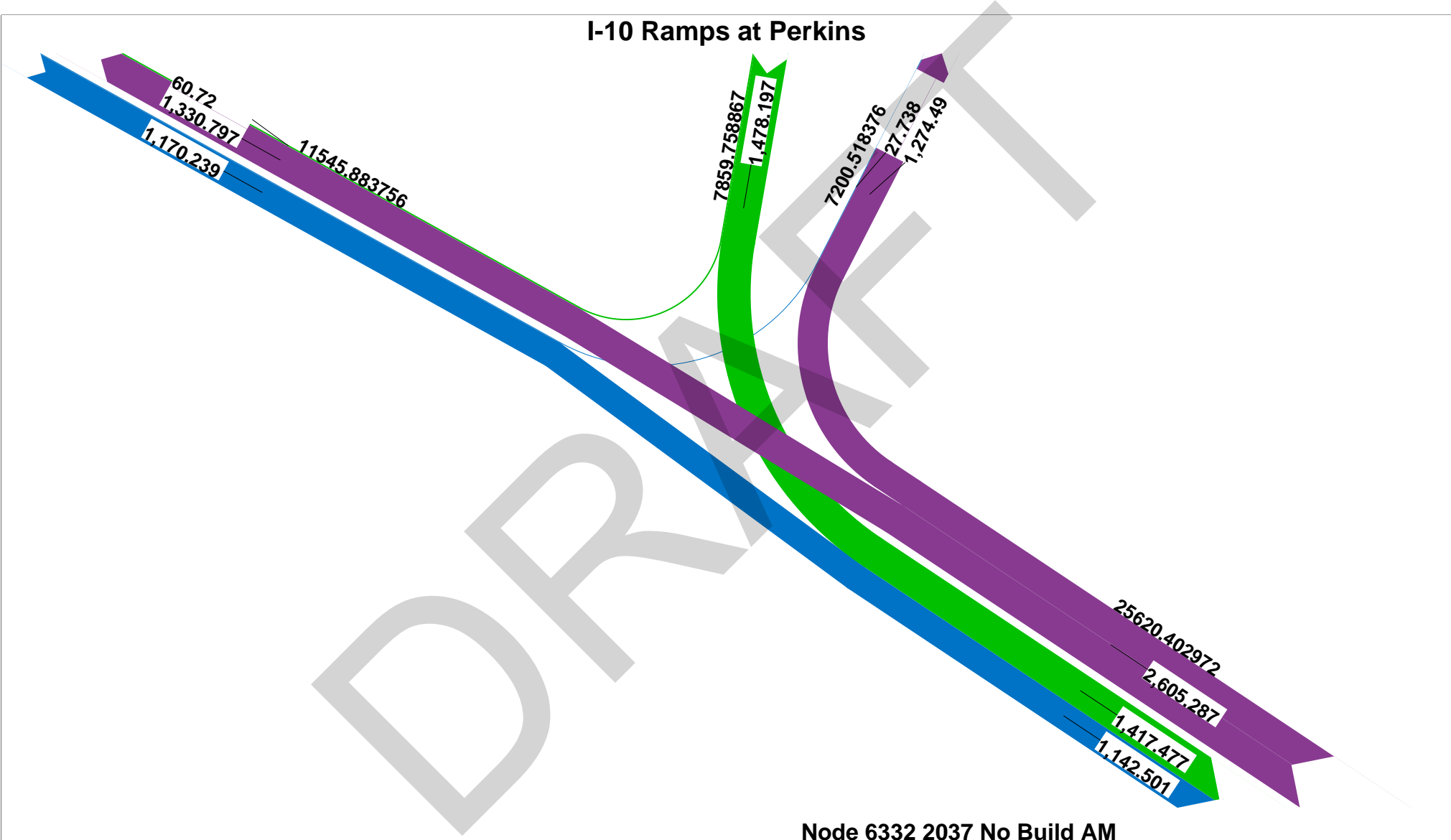
Node 6330 2037 No Build AM

I-10 EB off diverge to Acadian



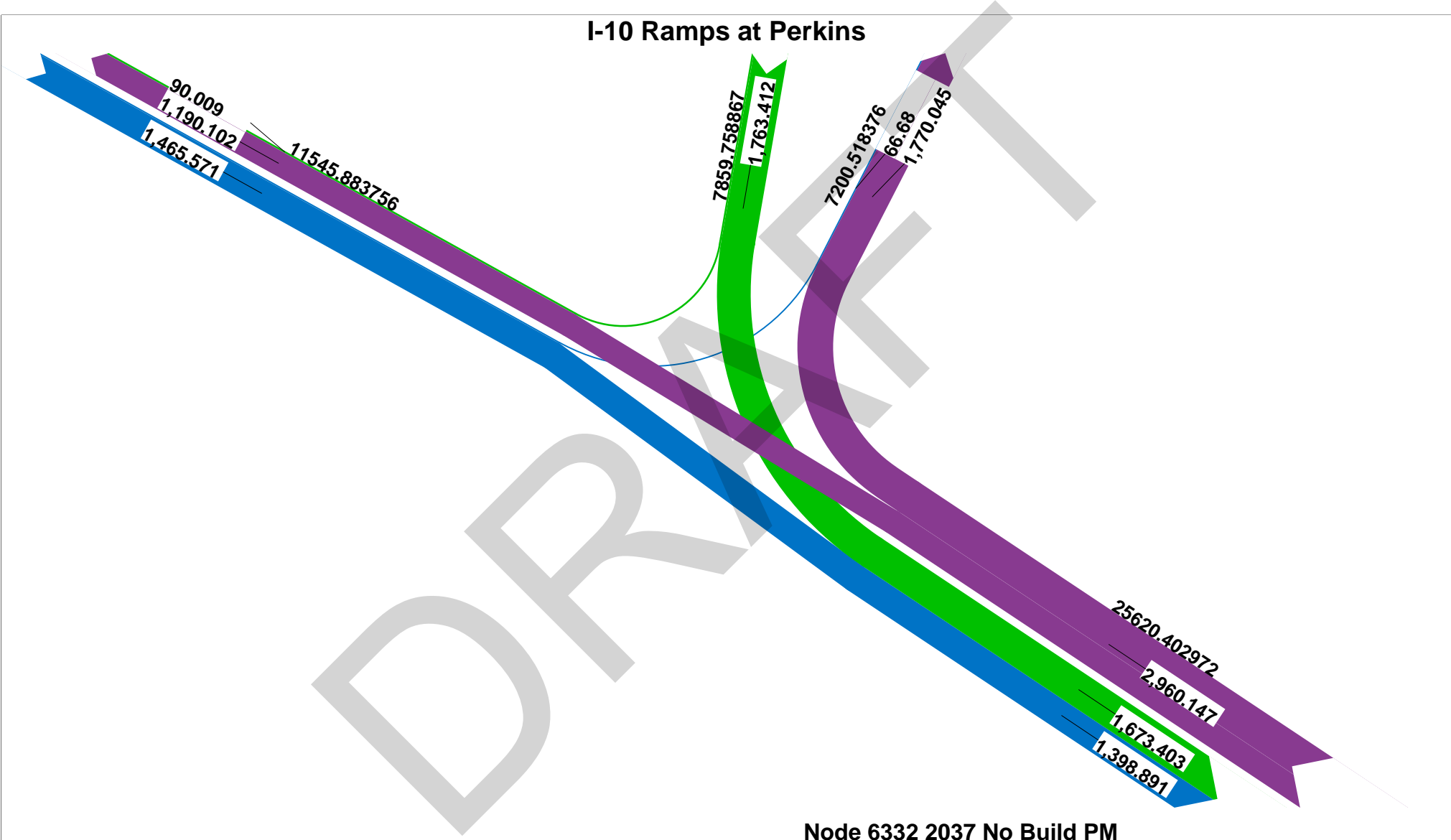
Node 6330 2037 No Build PM

I-10 Ramps at Perkins



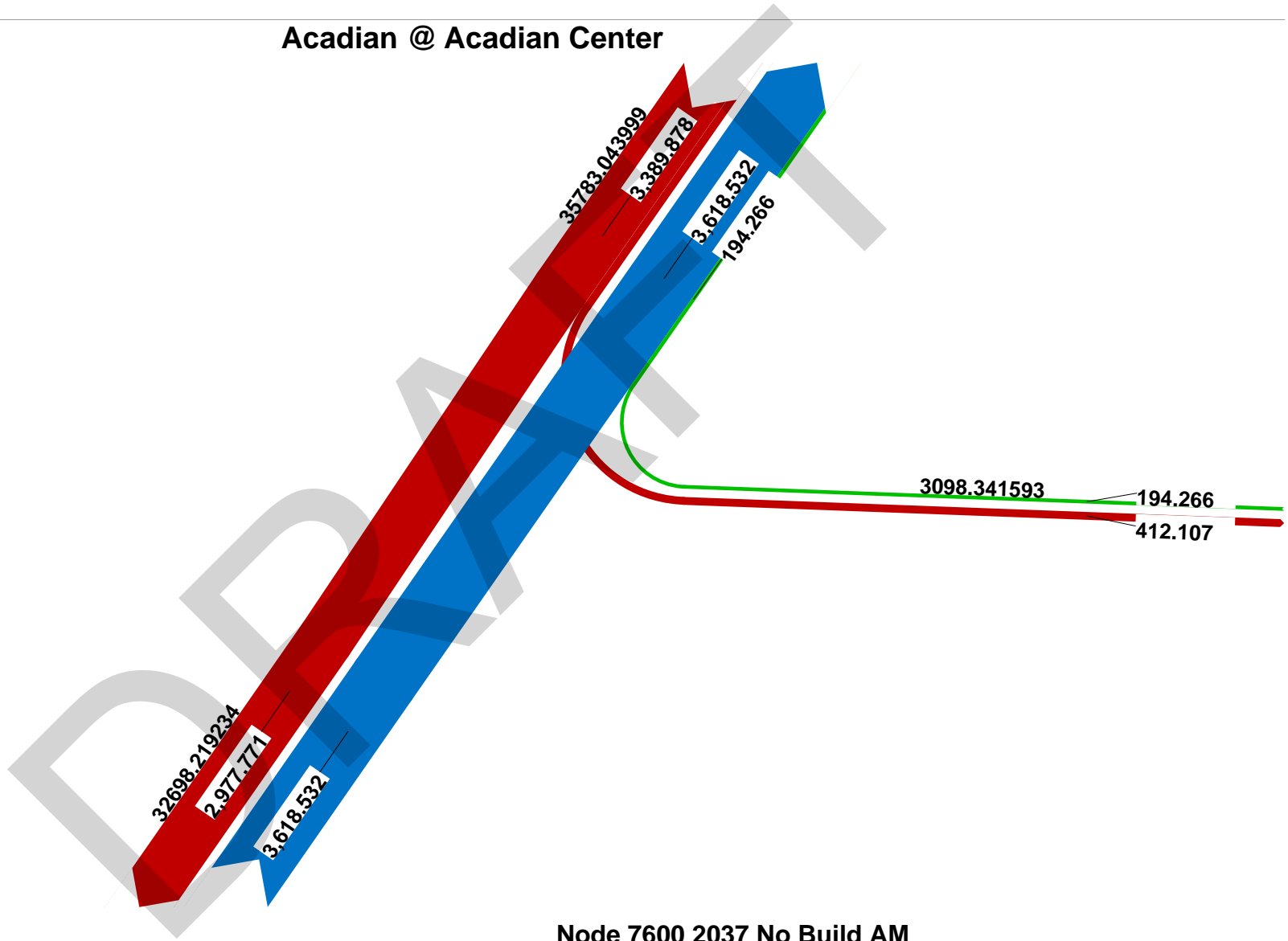
Node 6332 2037 No Build AM

I-10 Ramps at Perkins



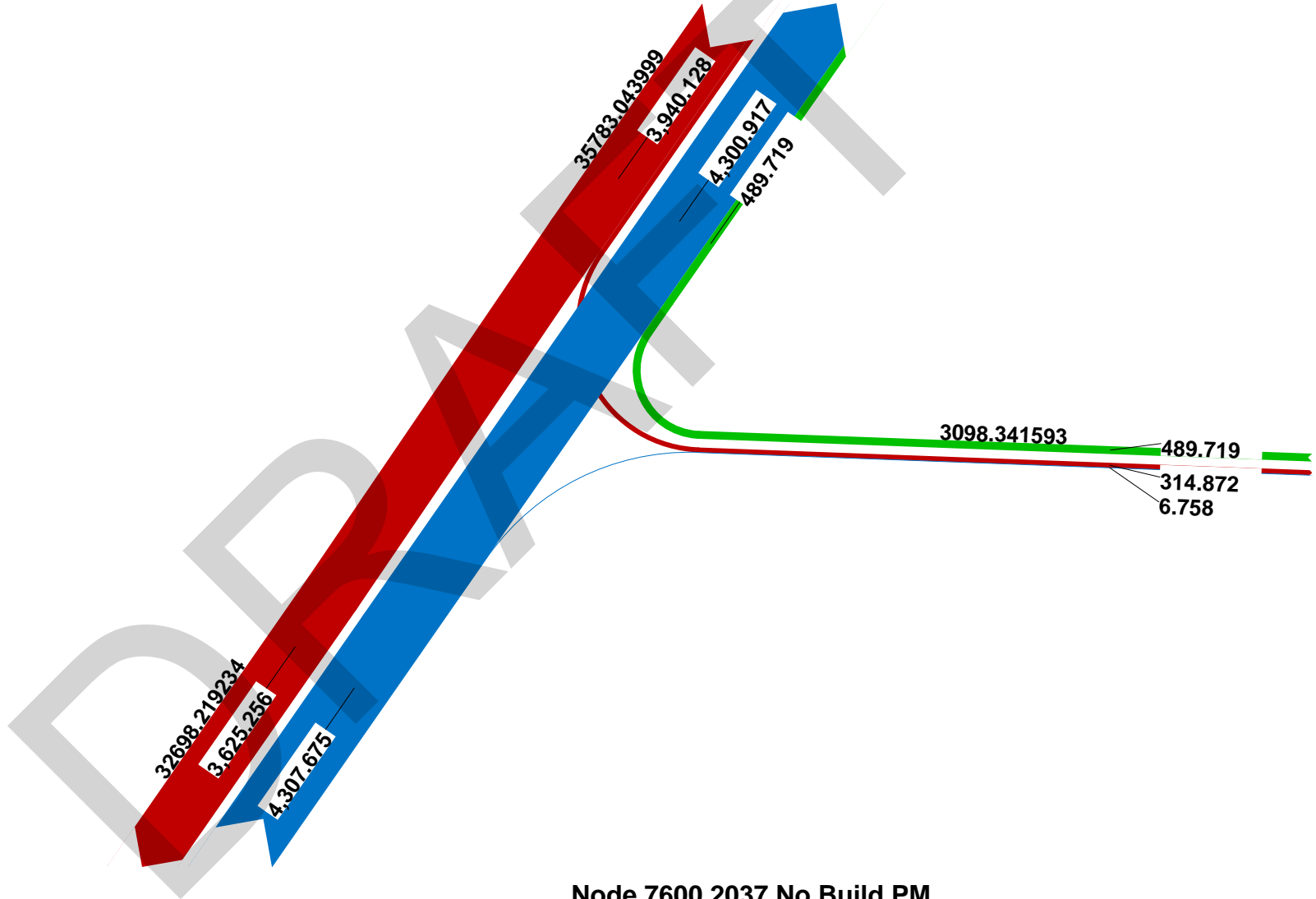
Node 6332 2037 No Build PM

Acadian @ Acadian Center



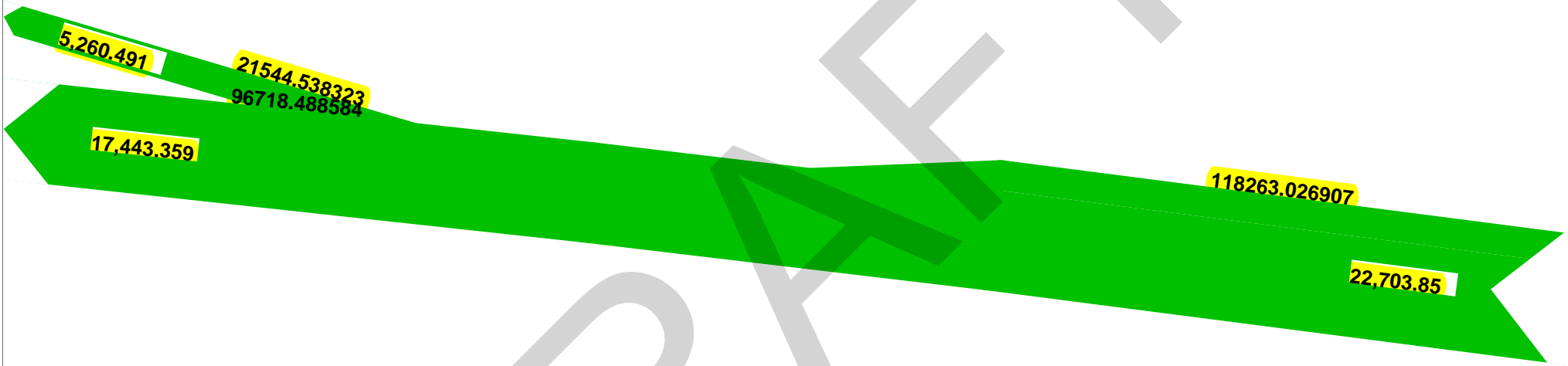
Node 7600 2037 No Build AM

Acadian @ Acadian Center



Node 7600 2037 No Build PM

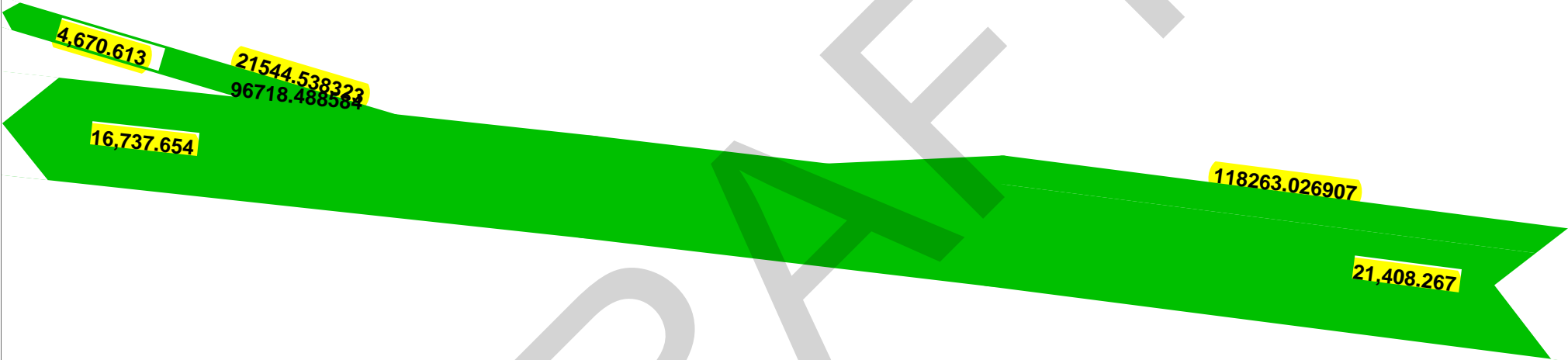
I-10 WB off diverge to College



DRAFT

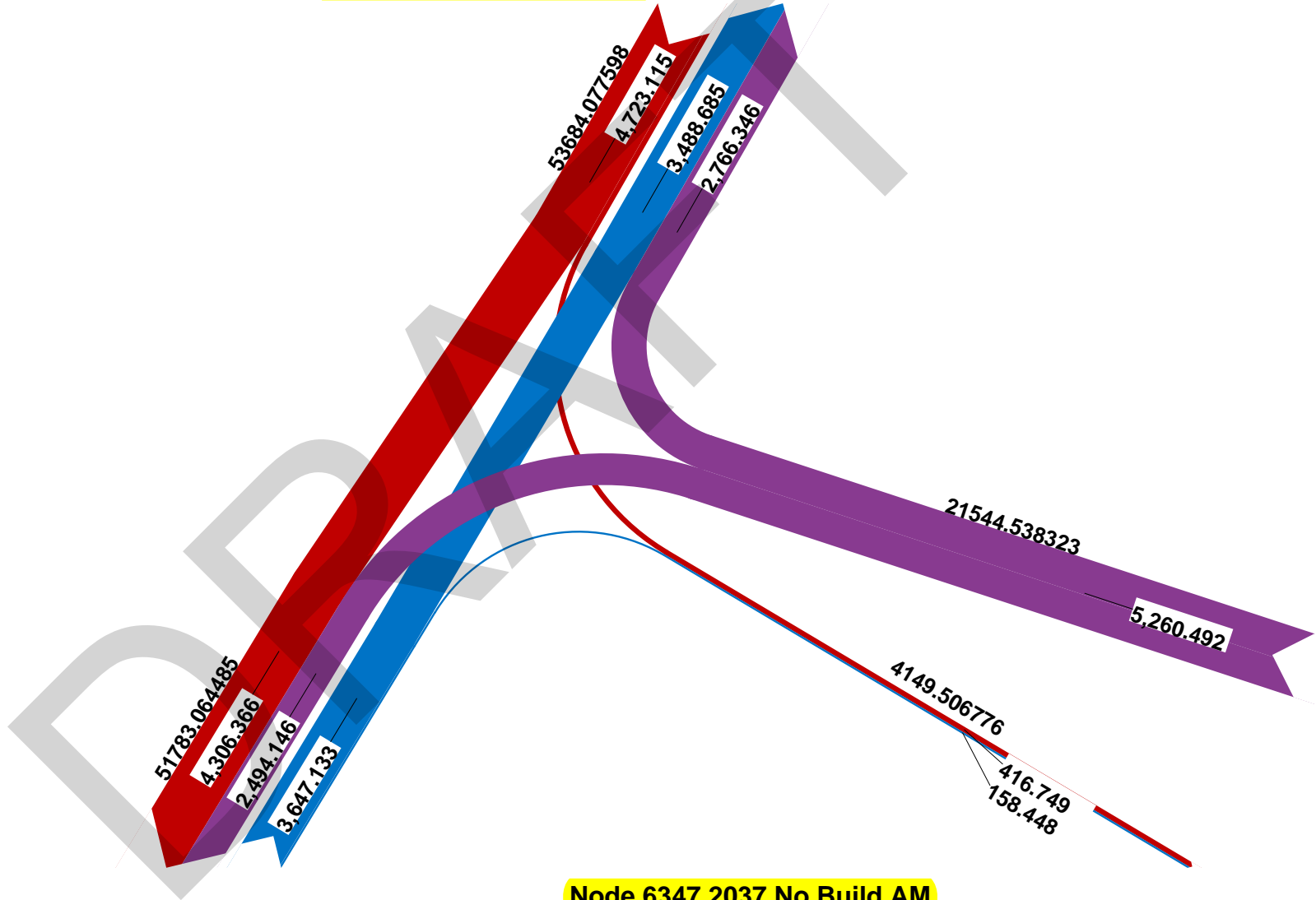
Node 6308 2037 No Build AM

I-10 WB off diverge to College



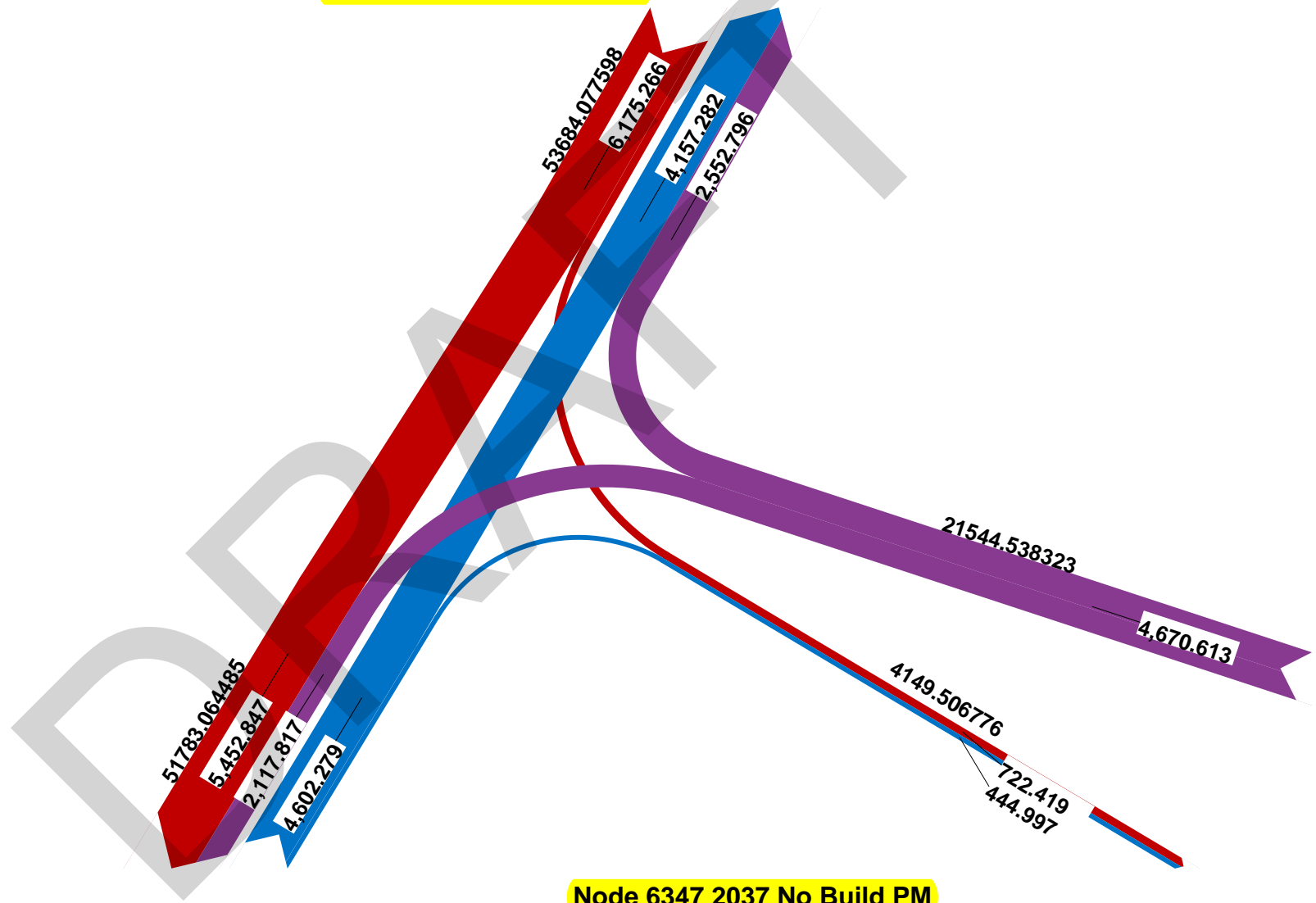
Node 6308 2037 No Build PM

I-10 WB Off @ College



Node 6347 2037 No Build AM

I-10 WB Off @ College



Node 6347 2037 No Build PM

DCR APPENDIX E

Mainline Safety Triage

DRAFT

URBAN SYSTEMS inc.



1. Network Screening

Project Name:	H. 98 65 32
Route:	I- 1010
AADT:	153500
Period:	2013 to 2015

Highway Class:	Urban 6-Lane Interstate
Control Section:	450-10
Logmile From:	2.01
Logmile To:	3.00

Number-Rate Method

Crash Rate Formula
$Crash\ Rate = \frac{Crashes}{Yrs * Length * AADT * 365} * 10^6$
Crashes: observed crashes
Yrs: number of analysis years
Length: segment length
AADT: annual average daily traffic

MVM: Million Vehicle Miles

Crashes:	453	
Years:	3	years
Length:	0.99	miles
AADT:	153500	vehicles per day

Crash Rate:	2.71	Crashes per MVM
LA Average:	1.66	Crashes per MVM
Times LA Avg:	1.6	

1. Network Screening

Project Name:	H. 98 65 32
Route:	I- 1010
AADT:	153500
Period:	2013 to 2015

Highway Class:	Urban 6-Lane Interstate
Control Section:	450-10
Logmile From:	3.00
Logmile To:	3.25

Number-Rate Method

Crash Rate Formula	
$Crash\ Rate = \frac{Crashes}{Yrs * Length * AADT * 365} * 10^6$	
Crashes:	observed crashes
Yrs:	number of analysis years
Length:	segment length
AADT:	annual average daily traffic

MVM: Million Vehicle Miles

Crashes:	42	
Years:	3	years
Length:	0.25	miles
AADT:	153500	vehicles per day

Crash Rate:	1.00	Crashes per MVM
LA Average:	1.66	Crashes per MVM
Times LA Avg:	0.6	

DCR APPENDIX F

Intersection Safety Triage

DRAFT

URBAN SYSTEMS inc.



1. Network Screening

Project Name:	0
Intersection ID:	17I-10@GLENDALE
AAADT:	0

Highway Class:	Urban Interstate Exit
Control Device:	Signalized
Period:	2013 to 2015

Number-Rate Method

Intersection Crash Rate Formula
$Crash\ Rate = \frac{Crashes}{Yrs * EAADT * 365} * 10^6$
Crashes: observed crashes during the Period
Yrs: Period duration
EAADT: entering annual average daily traffic

MEV: Million Entering Vehicles

Crashes:	6	
Years:	3	years
EAADT:	0	vehicles/day

Crash Rate:		crashes/MEV
LA Average:	2.33	crashes/MEV
Times LA Avg:	N/A	

1. Network Screening

Project Name:	0
Intersection ID:	17LA427@PERKINS
AAADT:	0

Highway Class:	Urban 4-lane Divided
Control Device:	Signalized
Period:	2013 to 2015

Number-Rate Method

Intersection Crash Rate Formula
$Crash\ Rate = \frac{Crashes}{Yrs * EAADT * 365} * 10^6$
Crashes: observed crashes during the Period
Yrs: Period duration
EAADT: entering annual average daily traffic

MEV: Million Entering Vehicles

Crashes:	57	
Years:	3	years
EAADT:	0	vehicles/day

Crash Rate:		crashes/MEV
LA Average:	1.71	crashes/MEV
Times LA Avg:	N/A	

1. Network Screening

Project Name:	0
Intersection ID:	17LA427@I-10
AAADT:	0

Highway Class:	Urban 4-lane Divided
Control Device:	Signalized
Period:	2013 to 2015

Number-Rate Method

Intersection Crash Rate Formula
$Crash\ Rate = \frac{Crashes}{Yrs * EAADT * 365} * 10^6$
Crashes: observed crashes during the Period
Yrs: Period duration
EAADT: entering annual average daily traffic

MEV: Million Entering Vehicles

Crashes:	7	
Years:	3	years
EAADT:	0	vehicles/day

Crash Rate:		crashes/MEV
LA Average:	1.71	crashes/MEV
Times LA Avg:	N/A	

1. Network Screening

Project Name:	0
Intersection ID:	17LA427@I-10
AAADT:	0

Highway Class:	Urban 4-lane Divided
Control Device:	Signalized
Period:	2013 to 2015

Number-Rate Method

Intersection Crash Rate Formula
$Crash\ Rate = \frac{Crashes}{Yrs * EAADT * 365} * 10^6$
Crashes: observed crashes during the Period
Yrs: Period duration
EAADT: entering annual average daily traffic

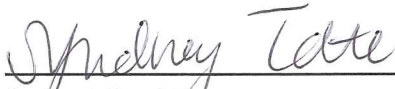
MEV: Million Entering Vehicles

Crashes:	236	
Years:	3	years
EAADT:	0	vehicles/day

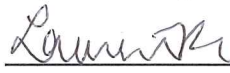
Crash Rate:		crashes/MEV
LA Average:	1.71	crashes/MEV
Times LA Avg:	N/A	

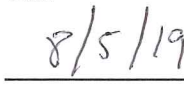
Data Collections Report and Appendix A QAQC

Task	Chapter/Appendix	Done by and Date	Checked by and Date
Archive Ch 1 pdf and word with submittal date	Ch 1 and DCR Appendix	SJT 5/28/19	LTP 6/4/19
Delete pdf pages and data in tables that will be updated	Ch 1 and DCR Appendix	SJT 5/28/19	LTP 6/4/19
Add College Dr Data to DCR App B and C - EB and WB EB in U:\Projects\ENGPROJ\2010Proj\10-085-2 EA\Overall Project\From DOTD\all 48-hour counts (DOTD) WB get from College Dr IMR	Ch 1 and DCR Appendix	SJT 5/30/19	LTP 6/4/19
Update Figure 2 to include the College Dr WB on-ramp and EB off ramp, identify data source	Ch 1 and DCR Appendix	SJT 5/28/19	LTP 6/4/19
Update Table 1 to include HV's for College WB on ramp only. No data provided for EB off. Get the WB data from the College DCR. Put the data in DCR App C	Ch 1 and DCR Appendix	SJT 5/30/2019	LTP 6/4/19
Update Growth rate to include College EB - get this from TransCad and College Dr WB - from College Dr IMR.	Ch 1 and DCR Appendix	SJT 5/30/2019	LTP 6/4/19
Update DCR App D to include Transcad sheets and calculations for College Dr EB and WB	Ch 1 and DCR Appendix	SJT 5/30/2019	LTP 6/17/19
Copy Updated HV table from Ch 1 to Update DCR Appendix	Ch 1 and DCR Appendix	SJT 5/30/2019	LTP 6/17/19
Update Existing Conflict points to add mainline - separate and summarize mainline vs intersections and add College Dr	Ch 1 and DCR Appendix	SJT 6/17/19	LTP 6/18/19
create a pdf	Ch 1 and DCR Appendix	SJT 8/5/19	LTP 8/5/19
check the print copy	Ch 1 and DCR Appendix	SJT 8/5/19	LTP 8/5/19
Update QAQC	Ch 1 and DCR Appendix	SJT 8/5/19	LTP 8/5/19


Sydney J. Tate, P.E.


Date


Lauren Picou, P.E., PTOE


Date

ACADIAN / PERKINS IMR

CHAPTER 2 APP B

Existing Conditions Analysis

DRAFT

URBAN SYSTEMS inc.

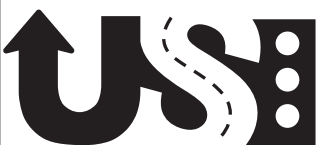


Table 2-1
Capacity Analysis
Existing Conditions- Intersection Analysis

Location	AM			PM		
	Delay (sec)	V/C Ratio	95 th % Queues (ft)*	Delay (sec)	V/C Ratio	95 th % Queues (ft)*
Acadian Thruway at I-10 Westbound Ramps	21.3			20.3		
<i>Acadian Thruway Northbound</i>	11.5	0.74	138	11.9	0.78	123
<i>Acadian Thruway Southbound</i>	14.3	0.54	370	14.2	0.59	418
<i>I-10 Off Ramp Westbound</i>	42.0	0.82	350	42.4	0.81	313
Acadian Thruway at I-10 Eastbound Ramps	16.7			15.1		
<i>Acadian Thruway Northbound</i>	50.1	0.82	300	38.9	0.67	303
<i>Acadian Thruway Southbound</i>	5.7	0.54	368	6.6	0.60	418
<i>I-10 Off Ramp Eastbound</i>	61.8	0.73	95	65.8	0.64	50
Acadian Thruway at Acadian Centre	8.5			8.4		
<i>Acadian Thruway Northbound</i>	8.4	0.50	320	8.7	0.54	373
<i>Acadian Thruway Southbound</i>	5.1	0.42	253	4.7	0.42	240
<i>Richland Plantation Eastbound</i>	84.4	0.41	5	51.8	0.29	18
<i>Acadian Centre Westbound</i>	46.0	0.59	140	47.7	0.51	78
Acadian Thruway at Perkins Road	44.0			53.2		
<i>Stanford Avenue Northbound</i>	44.2	0.90	375	65.0	0.89	598
<i>Acadian Thruway Southbound</i>	47.9	0.80	425	62.5	0.90	348
<i>Perkins Road Eastbound</i>	42.3	0.80	363	47.4	0.85	575
<i>Perkins Road Westbound</i>	42.0	0.81	530	42.0	0.77	550

* Queues reported in vehicle, converted to feet by a factor of 25 ft/veh

Table 2-1 (continued)
Capacity Analysis
Existing Conditions- Intersection Analysis

Location	AM			PM		
	Delay (sec)	V/C Ratio	95 th % Queues (ft)*	Delay (sec)	V/C Ratio	95 th % Queues (ft)
Perkins Road at I-10 Ramps	18.0			9.5		
<i>I-10 Eastbound off ramp Southbound</i>	54.5	0.91	398	55.2	0.66	213
<i>Perkins Road Eastbound</i>	6.1	0.24	158	4.2	0.38	233
<i>Perkins Road Westbound</i>	11.5	0.41	318	8.7	0.49	390

* Queues reported in vehicle, converted to feet by a factor of 25 ft/veh

Table 2-2
Capacity Analysis
Existing Conditions- Merge and Diverge Analysis

Location	AM	PM
	Density (pc/ln/mi)	Density (pc/ln/mi)
<i>I-10 Eastbound Freeway west of Perkins Road</i>	39.8	34.0
<i>I-10 Eastbound Diverge at Perkins Road</i>	39.0	34.4
<i>I-10 Eastbound Freeway between Perkins Road and Acadian Thruway</i>	37.4	34.1
<i>I-10 Eastbound Diverge at Acadian Thruway</i>	36.3	33.2
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #1</i>	38.5	38.5
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #2</i>	--	--
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #3</i>	42.6	41.3
<i>I-10 Westbound Merge at College Drive</i>	33.3	28.9
<i>I-10 Westbound Freeway between Acadian Thruway and College Drive</i>	32.6	28.8
<i>I-10 Westbound Merge at Acadian Thruway</i>	37.8	32.6
<i>I-10 Westbound Merge at Perkins Road</i>	44.9	37.3
<i>I-10 Westbound Freeway west of Perkins Road</i>	--	35.3

-- When v/c is greater than 1 the HCS software does not report density

HCS Freeway Merge/Diverge analysis - Existing Conditions	
INPUT	
Project Properties	
Analyst	Initials of person doing analysis
Agency	USI- 10-085-2
Analysis Year	2017
Project Description	I-10 Corridor Improvement Stage 1 EA - "analysis location"
Jurisdiction	LADOTD
Time Period	"Scenario AM"
Date	"Date of analysis"
Geometric Data	
Number of lanes	3
Freeway FFS	Posted speed
Freeway Length	default
Freeway Terrain Type	level
Freeway Grade	default
Freeway Grade Length	default
Highway or C-D Roadway	unchecked
Managed Lane	unchecked
Ramp Lanes	1
Ramp FFS	Posted advisory speed of ramp for diverge and default for merge (unless posted)
Ramp side	Right
Ramp Terrain Type	Level
Ramp Grade	default
Ramp Grade length	default
Total Ramp Density	Calculated using Google Earth
Right Side Clearance	Measured in Google Earth
Length of First Accel Lane	From previous analysis or measured in Google Earth
Length of Second Accel Lane	default
Demand Data	
Freeway Demand	I-10 mainline volume (DC Figure 2)
Freeway Peak Hour Factor	Calculated mainline PHF
Freeway Total Trucks	HV % from DCR reports Table 1.
Freeway Tractor-Trailers	default
Freeway Single Unit Trucks	default
Merge/Diverge Demand	On/Off ramp volume (DC Figure 2)
Ramp Peak Hour Factor	Calculated ramp PHF
Ramp Total Trucks	HV % from DCR reports (weighted average)
Ramp Single Unit Trucks	default
Ramp Tractor-Trailers	default
Adjustment Factors	
Freeway Driver Population	default
Freeway Weather Type	default
Freeway Speed Adjustment Factor	default
Freeway Capacity Adjustment Factor	default
Freeway Demand Adjustment Factor	default
Incident Type	default
Ramp Driver Population	default
Ramp Weather Type	default
Ramp Speed Adjustment Factor	default
Ramp Capacity Adjustment Factor	default
Ramp Demand Adjustment Factor	default
Adjacent Ramps	
Upstream Ramp	merge/diverge
Distance to Upstream Ramp	From previous analysis or measured in Google Earth
Upstream Ramp Terrain	default
Upstream Ramp Demand	On/Off ramp volume (DC Figure 2 - may not be the same DC report)
Upstream Ramp PHF	Calculated ramp PHF
Upstream Ramp Trucks	HV % from DCR reports (weighted average)
Downstream Ramp	merge/diverge
Distance to Downstream Ramp	From previous analysis or measured in Google Earth
Downstream Ramp Terrain	default
Downstream Ramp Demand	On/Off ramp volume (DC Figure 2 - may not be the same DC report)
Downstream Ramp PHF	Calculated mainline PHF
Downstream Ramp Trucks	HV % from DCR reports (weighted average)

Acadian/Perkins Existing PHF
Mainline and Ramps for HCS Merge/Diverge/**Freeway** Analysis

PHF = $V_t / (V_{peak} 15 * 4)$

AM

I-10 EB mainline	
Acadian/Perkins Data Collection Report	
Count Source	#9
Day	Tuesday 10/11/17
15 Min Volumes - I-10 Mainline	
7:00	1484
7:15	1496
7:30	1608
7:45	1560
PHF	0.96

I-10 WB mainline	
Acadian/Perkins Data Collection Report	
Count Source	#9
Day	Tuesday 10/11/17
15 Min Volumes - I-10 Mainline	
7:00	1593
7:15	1549
7:30	1687
7:45	1534
PHF	0.94

I-10 EB off ramp at Perkins	
Acadian/Perkins Data Collection Report	
Count Source	#43
Day	Thursday 11/09/17
PHF	0.92

I-10 WB on ramp at Perkins	
Acadian/Perkins Data Collection Report	
Count Source	#43
Day	Thursday 11/09/17
15 Min Volumes - Ramps	
7:00	168
7:15	174
7:30	208
7:45	198
PHF	0.90

PM

I-10 EB mainline	
Acadian/Perkins Data Collection Report	
Count Source	#9
Day	Tuesday 10/11/17
15 Min Volumes - I-10 Mainline	
16:45	1487
17:00	1553
17:15	1522
17:30	1419
PHF	0.96

I-10 WB mainline	
Acadian/Perkins Data Collection Report	
Count Source	#9
Day	Tuesday 10/11/17
15 Min Volumes - I-10 Mainline	
16:45	1435
17:00	1461
17:15	1438
17:30	1471
PHF	0.99

I-10 EB off ramp at Perkins	
Acadian/Perkins Data Collection Report	
Count Source	#43
Day	Thursday 11/09/17
PHF	0.67

I-10 WB on ramp at Perkins	
Acadian/Perkins Data Collection Report	
Count Source	#43
Day	Thursday 11/09/17
15 Min Volumes - Ramps	
16:30	119
16:45	85
17:00	130
17:15	154
PHF	0.79

AM

I-10 EB off ramp at Dalrymple	
Washington/Dalrymple Data Collection Report	
Count Source	#39
Day	Wednesday 10/25/17
PHF	0.81

I-10 EB off ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#52
Day	Thursday 11/02/2017
PHF	0.79

I-10 EB on ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#52
Day	Thursday 11/02/2017
15 Min Volumes - Ramps	
7:15	333
7:30	338
7:45	310
8:00	282
PHF	0.93

I-10 WB off ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#53
Day	Thursday 11/02/2017
PHF	0.88

PM

I-10 EB off ramp at Dalrymple	
Washington/Dalrymple Data Collection Report	
Count Source	#39
Day	Wednesday 10/25/17
PHF	0.85

I-10 EB off ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#52
Day	Thursday 11/02/2017
PHF	0.86

I-10 EB on ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#52
Day	Thursday 11/02/2017
15 Min Volumes - Ramps	
17:00	345
17:15	349
17:30	329
17:45	372
PHF	0.94

I-10 WB off ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#53
Day	Thursday 11/02/2017
PHF	0.94

DRAFT

AM

I-10 WB on ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#53
Day	Thursday 11/02/2017
15 Min Volumes - Ramps	
6:45	35
7:00	30
7:15	33
7:30	31
PHF	0.92

I-10 WB off ramp at Dalrymple	
Washington/Dalrymple Data Collection Report	
Count Source	#38
Day	Wednesday 10/25/2017
15 Min Volumes - Ramps	
PHF	0.76

I-10 WB on ramp at College	
College Data Collection Report	
Count Source	#59
Day	Thursday 11/09/17
15 Min Volumes - Ramps	
7:30	120
7:45	107
8:00	157
8:15	122
PHF	0.81

I-10 EB off ramp at College	
Acadian/Perkins Data Collection Report	
Count Source	24 hr counts
Day	Thursday 5/02/19
15 Min Volumes - Ramps	
7:00	140
7:15	147
7:30	173
7:45	181
PHF	0.89

PM

I-10 WB on ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#53
Day	Thursday 11/02/2017
15 Min Volumes - Ramps	
16:30	57
16:45	45
17:00	51
17:15	43
PHF	0.86

I-10 WB off ramp at Dalrymple	
Washington/Dalrymple Data Collection Report	
Count Source	#38
Day	Wednesday 10/25/2017
15 Min Volumes - Ramps	
PHF	0.83

I-10 WB on ramp at College	
College Data Collection Report	
Count Source	#59
Day	Thursday 11/09/17
15 Min Volumes - Ramps	
16:00	95
16:15	69
16:30	83
16:45	88
PHF	0.88

I-10 EB off ramp at College	
Acadian/Perkins Data Collection Report	
Count Source	24 hr counts
Day	Thursday 5/02/19
15 Min Volumes - Ramps	
16:45	94
17:00	121
17:15	119
17:30	160
PHF	0.77

Acadian/Perkins Existing PHF
Intersection Totals for Synchro Analysis

$$PHF = Vt / (V_{peak} 15 * 4)$$

AM

I-10 EB off ramp at Perkins	
Acadian/Perkins Data Collection Report	
Count Source	#43
Day	Thursday 11/09/17
PHF	0.98

Acadian at Perkins	
Acadian/Perkins Data Collection Report	
Count Source	#50
Day	Thursday 11/02/17
PHF	0.95

Acadian at Acadian Centre	
Acadian/Perkins Data Collection Report	
Count Source	#51
Day	Thursday 11/02/17
PHF	0.90

I-10 EB off ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#52
Day	Thursday 11/02/2017
PHF	0.92

I-10 WB off ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#53
Day	Thursday 11/02/2017
PHF	0.93

PM

I-10 EB off ramp at Perkins	
Acadian/Perkins Data Collection Report	
Count Source	#43
Day	Thursday 11/09/17
PHF	0.91

Acadian at Perkins	
Acadian/Perkins Data Collection Report	
Count Source	#50
Day	Thursday 11/02/17
PHF	0.99

Acadian at Acadian Centre	
Acadian/Perkins Data Collection Report	
Count Source	#51
Day	Thursday 11/02/17
PHF	0.98

I-10 EB off ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#52
Day	Thursday 11/02/2017
PHF	0.98

I-10 WB off ramp at Acadian	
Acadian/Perkins Data Collection Report	
Count Source	#53
Day	Thursday 11/02/2017
PHF	0.96

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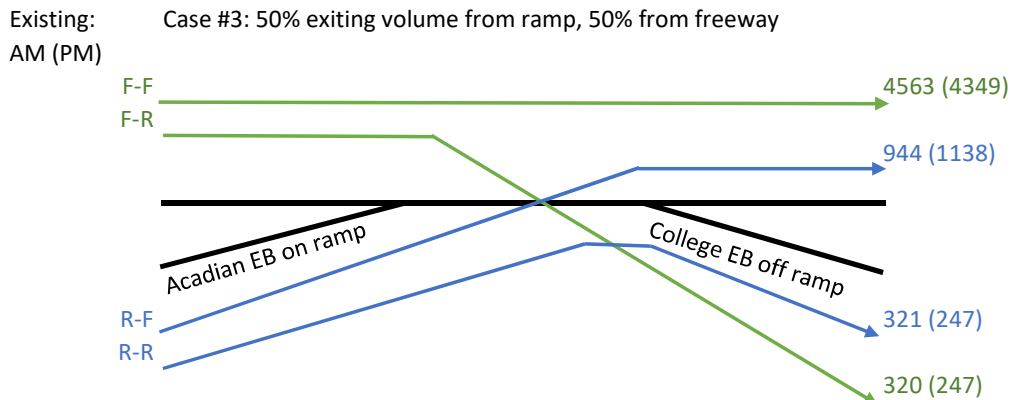
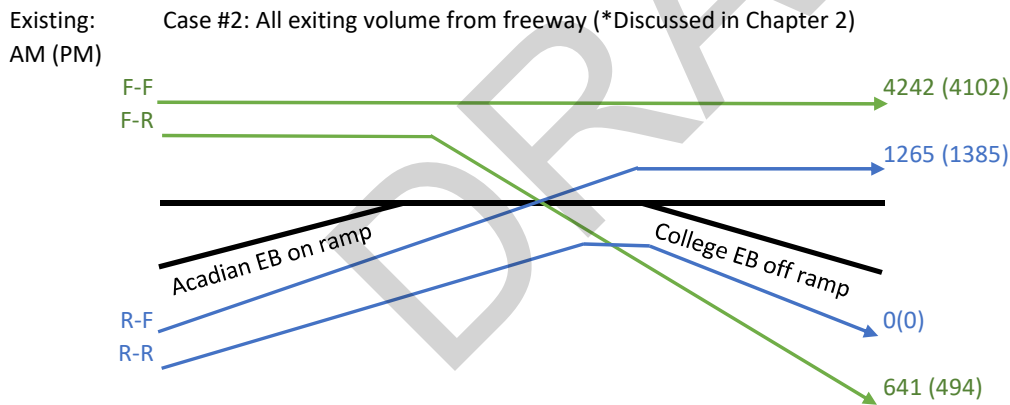
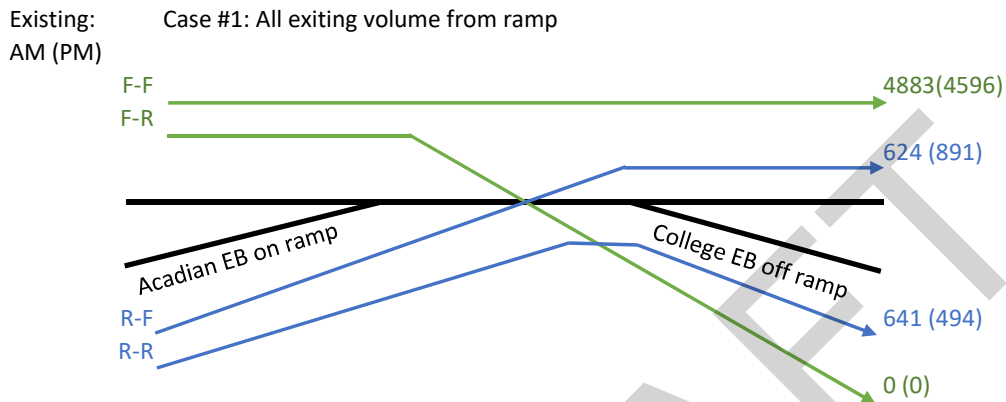
Summary of Input Sources for Merge/Diverge Freeway Analysis
Heavy Vehicles

Data Source	Intersection	Approach	Movement	AM Volumes from Turning Movement Counts						PM Volumes from Turning Movement Counts						
				# cars	# trucks	# buses	Total Trucks and Buses	Total Vehicles	% Heavy Vehicles per approach	# cars	# trucks	# buses	Total Trucks and Buses	Total Vehicles	% Heavy Vehicles per approach	
Acadian / Perkins Data Collection Report Table 1	I-10 EB	Eastbound	Thru							13.0%						11.0%
	I-10 WB	Westbound	Thru							6.0%						8.0%
Acadian / Perkins Data Collection Report TMC #43	I-10 EB at Perkins Rd	Eastbound Off Ramp	SB Left	293	2	4	8	327	2.4%	110	0	0	0	119	0.0%	
			SB Right	26	2	0				9	0	0				
		Westbound On Ramp	EB Left	45	0	0	14	748	1.9%	37	1	0	10	488	2.0%	
			WB Right	689	5	9				441	4	5				
Acadian / Perkins Data Collection Report TMC #52	I-10 EB at Acadian	Eastbound On Ramp	SB Left	528	4	3	8	1263	0.6%	573	1	2	7	1395	0.5%	
			NB Right	727	1	0				815	4	0				
		Eastbound Off Ramp	Left	57	0	0	0	146	0.0%	28	1	1	3	114	2.6%	
			Thru	2	0	0				2	0	0				
			Right	87	0	0				81	0	1				
Acadian / Perkins Data Collection Report TMC #53	I-10 WB at Acadian	Westbound On Ramp	NB Left	35	1	2	4	129	3.1%	57	0	1	2	196	1.0%	
			SB Right	90	0	1				137	0	1				
		Westbound Off Ramp	Left	568	2	1	15	1352	1.1%	527	1	0	4	1251	0.3%	
			Thru	5	0	0				10	0	0				
			Right	764	6	6				710	1	2				
Washington / Dalrymple Data Collection Report TMC #39	I-10 EB at Dalrymple	Eastbound Off Ramp	Left	25	0	1	5	174	2.9%	11	0	0	0	71	0.0%	
			Right	144	4	0				60	0	0				
Washington / Dalrymple Data Collection Report TMC #38	I-10 WB at Dalrymple	Westbound Off Ramp	Left	45	1	0	2	435	0.5%	48	1	0	1	275	0.4%	
			Thru	1	0	0				5	0	0				
			Right	387	1	0				221	0	0				
College Data Collection Report TMC #59	I-10 WB at College	Westbound On Ramp	NB Right	246	1	1	6	506	1.2%	170	0	0	0	335	0.0%	
			SB Left	254	2	2				165	0	0				

I-10 EB Existing Weave Sensitivity Volumes

I-10 eastbound between Acadian and College is a weave. As there was insufficient data to determine weave maneuvers (freeway to freeway, freeway to ramp, ramp to freeway, and ramp to ramp), a volume sensitivity weave analysis was conducted. The following three (3) volume scenarios were considered:

- Case 1: 100% of vehicles exiting at College originate from Acadian
- Case 2: 100% of vehicles exiting at College originate from I-10 eastbound
- Case 3: 50% of vehicles exiting at College originate from Acadian and I-10 eastbound



TRAFFIC SIGNAL INVENTORY

TSI NO. **S-159**

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 1a OF 4

INTERSECTION: PERKINS AT I-10

CITY: BATON ROUGE

PARISH: EAST BATON ROUGE

INSTALLATION DATE:

09/16/75

TYPE SIGNAL: Volume Density, Interconnected

LAST REVISION DATE:

04/25/17

PHASES	$\Phi 2 + \Phi 6$			$\Phi 4$			$\Phi 2 + \Phi 5$									FL			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		16	17	18
SIGNAL FACES	1	G	Y	R															R
	2	G	Y	R															R
	3	G	Y	R					G	G	G								R
	4	G	Y	R					G	G	G								R
	5	/G	/Y	R					←G/G	←Y/G	/G								R
	6				G	Y	R												R
	7				G	Y	R												R
	8																		
	9																		
	10																		
	11																		
	12																		
	13																		
	14																		
	15																		
	16																		

Emergency
HOURS OF FLASHING OPERATION

TIME	SEC	53.6	4.4	1.0	45.6	4.4	1.0	4.6	4.4	1.0									Offset =
FO	SEC	0.0			51.0			61.0											83
YP	SEC																		sec
SPLIT	SEC	59			51			10											

PATTERN 1 CYCLE LENGTH = 120 TIMES OF OPERATION = M-F 0600-1000

TIME	SEC	53.6	4.4	1.0	35.6	4.4	1.0	4.6	4.4	1.0									Offset =
FO	SEC	0.0			41.0			51.0											24
YP	SEC																		sec
SPLIT	SEC	59			41			10											

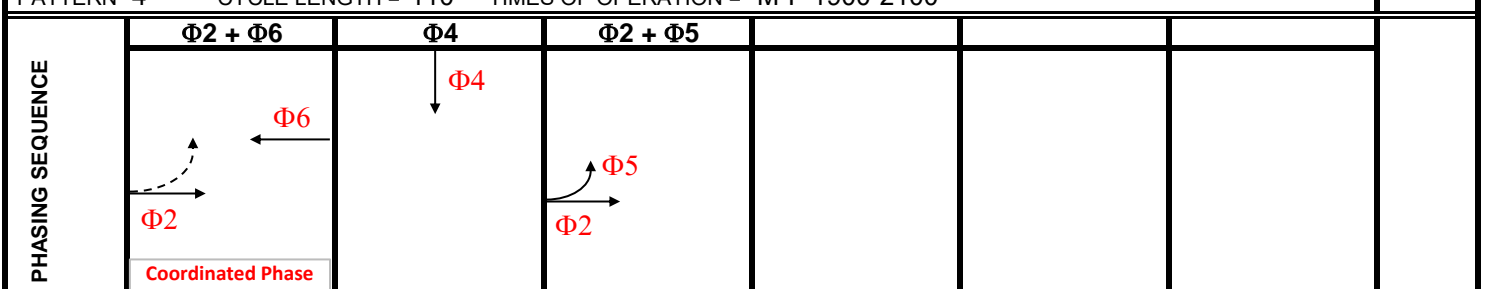
PATTERN 2 CYCLE LENGTH = 110 TIMES OF OPERATION = M-Th 1000-1400; Fri 1000-1300; Sat 0800-2000; Sun 0900-2000

TIME	SEC	32.6	4.4	1.0	20.6	4.4	1.0	5.6	4.4	1.0									Offset =
FO	SEC	0.0			26.0			37.0											2
YP	SEC																		sec
SPLIT	SEC	38			26			11											

PATTERN 3 CYCLE LENGTH = 75 TIMES OF OPERATION = M-Th 1400-1900; Fri 1300-1900

TIME	SEC	63.6	4.4	1.0	25.6	4.4	1.0	4.6	4.4	1.0									Offset =
FO	SEC	0.0			31.0			41.0											25
YP	SEC																		sec
SPLIT	SEC	69			31			10											

PATTERN 4 CYCLE LENGTH = 110 TIMES OF OPERATION = M-F 1900-2100



SIGNAL WARRANTS: MAINTAINED BY: DPW CONTROLLER MANUF: NAZTEC SYSTEM #:

MASTER/ SLAVE: MASTER AT TSI #: COORDINATED WITH TSI #S:

TRAFFIC SIGNAL INVENTORY

TSI NO. S-159

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 1b OF 4

SUPPLEMENTAL PHASING & TIMING

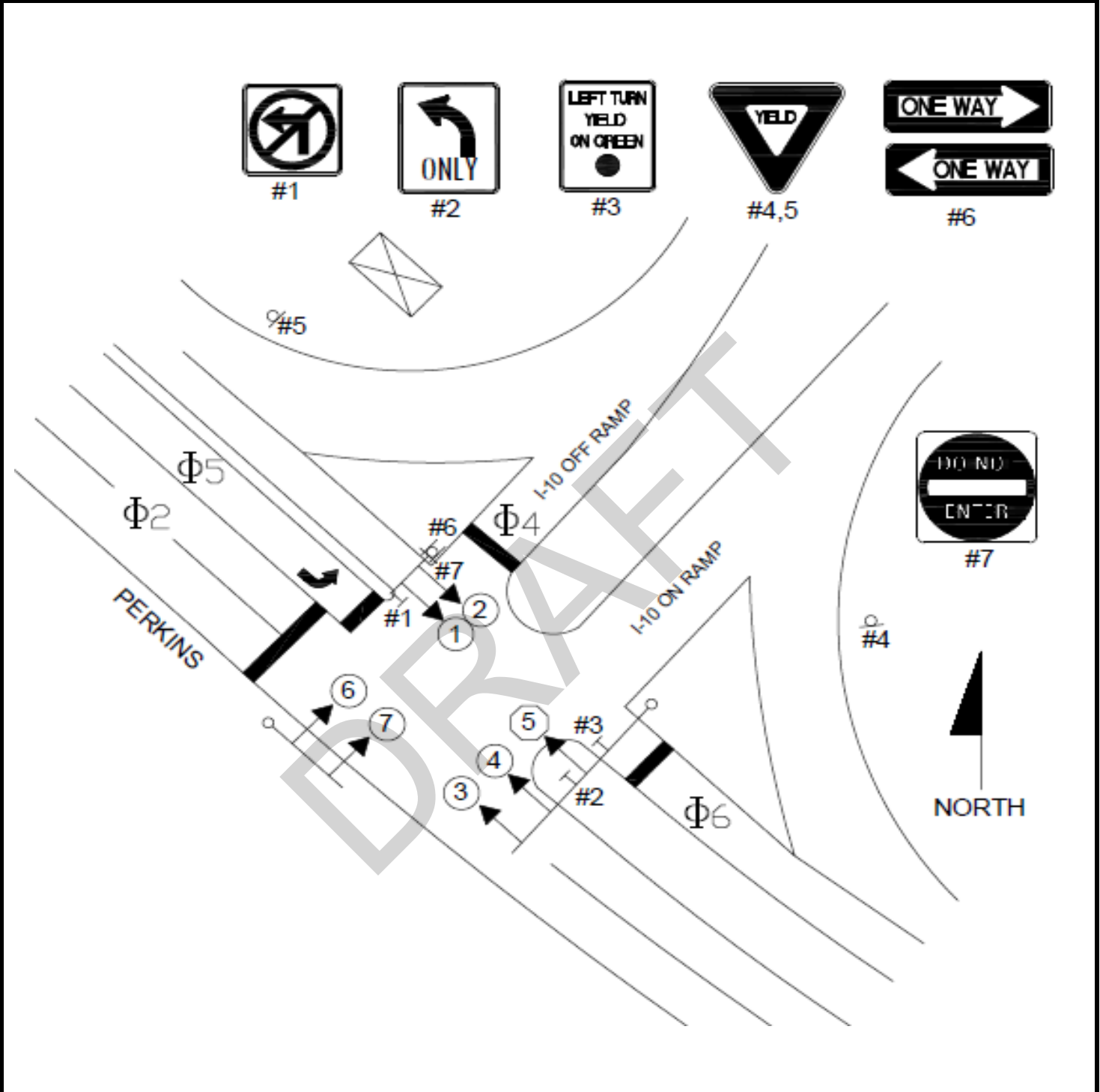
PHASES		Φ2 + Φ6			Φ4			Φ2 + Φ5									FL				
INTERVALS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
SIGNAL FACES	1	G	Y	R																R	
	2	G	Y	R																R	
	3	G	Y	R					G	G	G									R	
	4	G	Y	R					G	G	G									R	
	5	/G	/Y	R					←G/G	←Y/G	/G										R
	6				G	Y	R														R
	7				G	Y	R														R
	8																				
	9																				
	10																				
	11																				
	12																				
	13																				
	14																				
	15																				
	16																				
TIME	SEC	58.6	4.4	1.0	19.6	4.4	1.0	5.6	4.4	1.0										Offset =	
FO	SEC	0.0			25.0			36.0													11
YP	SEC																				sec
SPLIT	SEC	64			25			11													
PATTERN		5	CYCLE LENGTH =			100	TIMES OF OPERATION =			M-F 0000-0600, 2100-0000; Sat 0000-0800, 2000-0000; Sun 0000-0900, 2000-0000											
TIME	SEC																				Offset =
FO	SEC																				sec
YP	SEC																				
SPLIT	SEC																				
PATTERN			CYCLE LENGTH =				TIMES OF OPERATION =														
TIME	SEC																				Offset =
FO	SEC																				sec
YP	SEC																				
SPLIT	SEC																				
PATTERN			CYCLE LENGTH =				TIMES OF OPERATION =														
TIME	SEC																				Offset =
FO	SEC																				sec
YP	SEC																				
SPLIT	SEC																				
PATTERN			CYCLE LENGTH =				TIMES OF OPERATION =														
PHASING	Φ2 + Φ6		Φ4		Φ2 + Φ5																
<div style="border: 1px solid black; display: inline-block; padding: 2px;">Coordinated Phase</div>																					

TRAFFIC SIGNAL INVENTORY

TSI NO. S-159

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 2 OF 4



SIGNAL FACES	1-4,6,7						5			
TOTALS	6						1			
<small> R= RED Y= YELLOW G= GREEN GA= GREEN ARROW YA= YELLOW ARROW DK= DARK 8" = 8" DIA. LENS 12" = 12" DIA. LENS WA= WALK DW= DONT WALK FDW= FLASHING DONT WALK </small>	(R)	(R)	(R)	(R)	(R)	(R)	(R)			PED
	(Y)	(YA)	(YA)	(Y)	(Y)	(Y) (YA)	(YA) (Y)			W
	(G)	(GA)	(GA)	(GA) (G)	(G) (GA)	(G) (GA)	(GA) (G)			DW

TRAFFIC SIGNAL INVENTORY

TSI NO. S-159

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 3 OF 4

Phase Timing Parameters

Phase Designation		1	2	3	4	5	6	7	8
Movement Description			→		↓	↗	←		
PARAMETER	RANGE								
MIN GREEN (MIN Grn)	0-255		20		15	3	20		
GAP EXTENSION	0-25.5		5.0		2.5	2.5	5.0		
MAX GREEN I (MAX I)	0-255		50		30	10	50		
MAX GREEN II (MAX II)	0-255		50		30	10	50		
YELLOW CLEARANCE (YEL)	0-25.5		4.4		4.4	4.4	4.4		
RED CLEARANCE (RED)	0-25.5		1.0		1.0	1.0	1.0		
WALK (WALK)	0-255								
PED CLEARANCE (P CLR)	0-255								
ADDED INITIAL GREEN	0-25.5		1.2				1.2		
MAX INITIAL GREEN	0-255		20				20		
TIME BEFORE REDUCTION	0-255		10				10		
TIME TO REDUCE	0-255		20				20		
MIN GAP	0-25.5		2.5				2.5		
DYNAMIC MAX LIMIT	0-255								
MAX STEP	0-25.5								
RECALL	CODES		MIN				MIN		
LOOP # - DELAY (in sec.)	0-25.5								
LOOP # - EXTEND (in sec.)	0-25.5								

RECALL FUNCTIONS

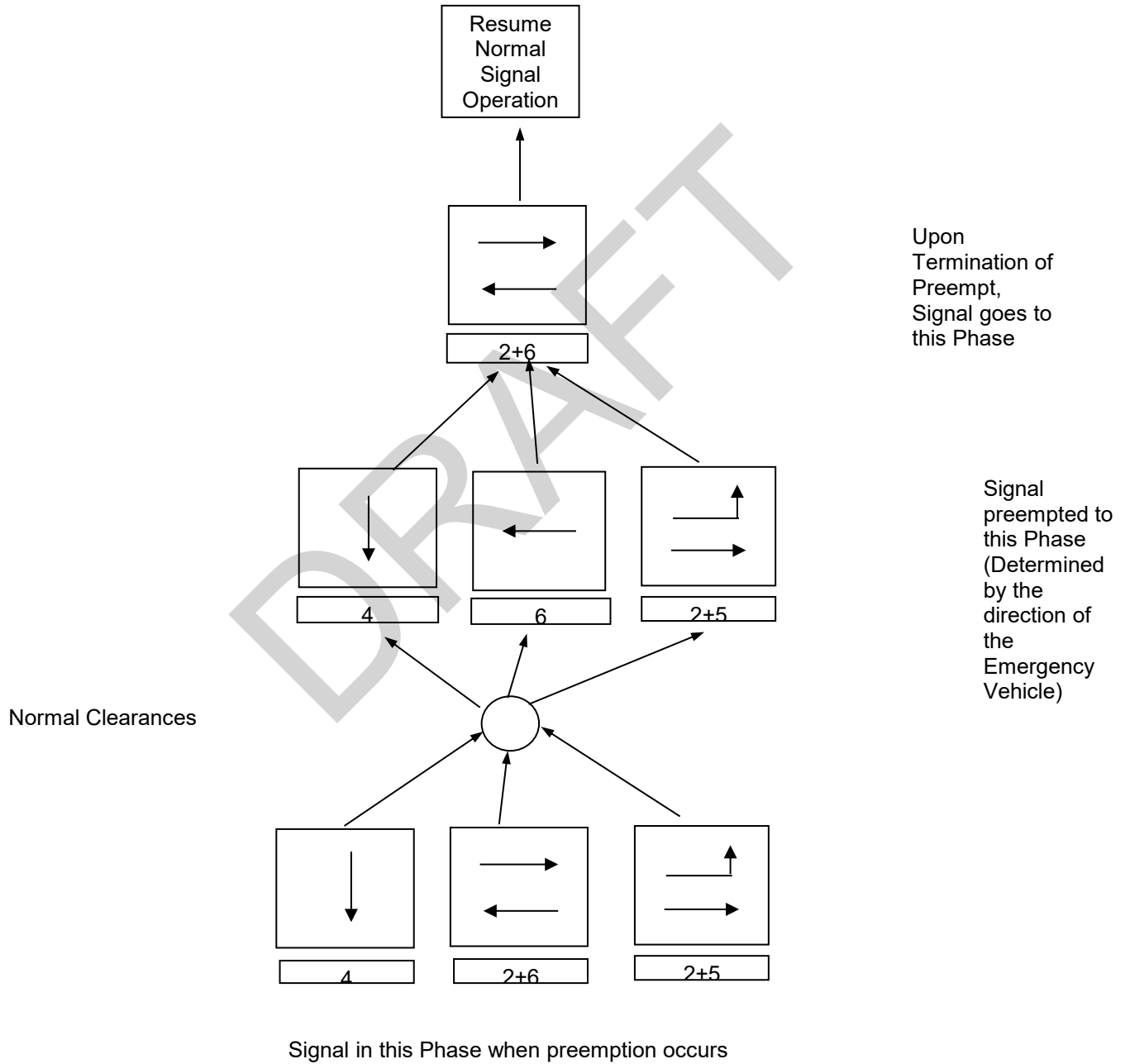
MON	MEMORY ON
MOF	MEMORY OFF
MIN	MINIMUM
MAX	MAXIMUM
PMN	PEDESTRIAN AND MINIMUM
PMX	PEDESTRIAN AND MAXIMUM

Note 1: Runs Max 2 During Coordination

Note 2:

Note 3:

Emergency Preemption Sequence



TRAFFIC SIGNAL INVENTORY

TSI NO. **S-078**

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 1a OF 4

INTERSECTION: PERKINS AT ACADIAN

CITY: BATON ROUGE

PARISH: EAST BATON ROUGE

INSTALLATION DATE:

10/05/76

TYPE SIGNAL: VOLUME DENSITY/ INTERCONNECTED

LAST REVISION DATE:

10/24/13

PHASES INTERVALS	Φ2 + Φ6			Φ3 + Φ7			Φ4 + Φ8			Φ1 + Φ5									FL
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
1										←G	←Y	R							R
2										←G	←Y	R							R
3	G	Y	R																R
4	G	Y	R																R
5	G/	Y/	R	R/G→	R/Y→	R													R
6										←G	←Y	R							R
7										←G	←Y	R							R
8	G	Y	R																R
9	G	Y	R																R
10				←G	←Y	R													R
11				←G	←Y	R													R
12							G	Y	R										R
13							G	Y	R										R
14							G/	Y/	R	R/G→	R/Y→	R							R
15				←G	←Y	R													R
16							G	Y	R										R
17							G	Y	R										R
18							G/	Y/	R	R/G→	R/Y→	R							R
19,26							W>FDW	FDW	DW										
20,21	W>FDW	FDW	DW																
22,23							W>FDW	FDW	DW										
24,25	W>FDW	FDW	DW																

TIME	SEC	35.5	4.5	1.0	19.4	4.6	1.0	31.4	4.6	1.0	11.5	4.5	1.0							Offset =		
FO	SEC	0.0			24.9			61.9			79.0										68	
YP	SEC																				sec	
SPLIT	SEC	41			25			37			17											

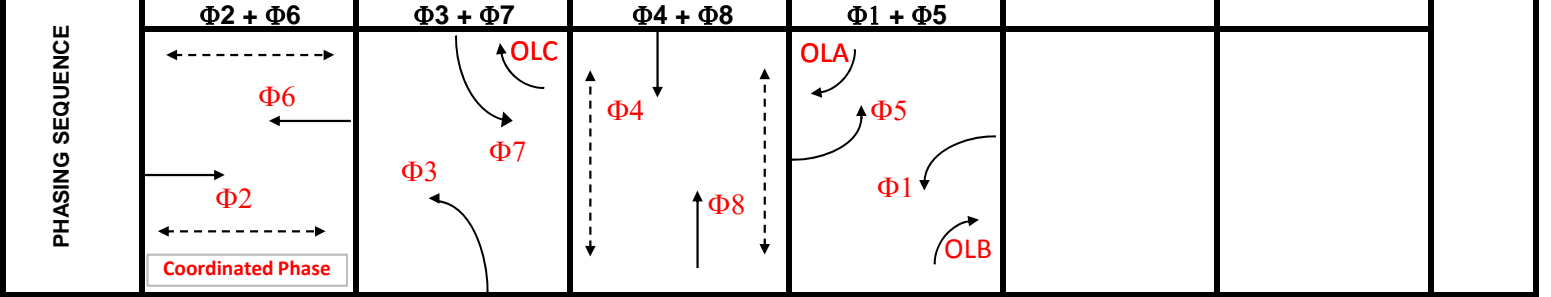
PATTERN 1 CYCLE LENGTH = 120 TIMES OF OPERATION = M-F 0600-1000

TIME	SEC	35.5	4.5	1.0	12.4	4.6	1.0	29.4	4.6	1.0	10.5	4.5	1.0							Offset =		
FO	SEC	0.0			17.9			52.9			69.0										0	
YP	SEC																				sec	
SPLIT	SEC	41			18			35			16											

M-Th 1000-1400; Fri 1000-1300; Sat 0800-2000; Sun 0900-2000

TIME	SEC	49.5	4.5	1.0	19.4	4.6	1.0	39.4	4.6	1.0	19.5	4.5	1.0							Offset =		
FO	SEC	0.0			24.9			69.9			95.0										0	
YP	SEC																				sec	
SPLIT	SEC	55			25			45			25											

PATTERN 3 CYCLE LENGTH = 150 TIMES OF OPERATION = M-Th 1400-1900; Fri 1300-1900



SIGNAL WARRANTS: _____ MAINTAINED BY: DPW CONTROLLER MANUF: NAZTEC SYSTEM #: _____
 MASTER/ SLAVE: _____ MASTER AT TSI #: _____ COORDINATED WITH TSI #'S: _____

TRAFFIC SIGNAL INVENTORY

TSI NO. S-078

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 1b OF 4

SUPPLEMENTAL PHASING & TIMING

PHASES	Φ2 + Φ6			Φ3 + Φ7			Φ4 + Φ8			Φ1 + Φ5								FL		
INTERVALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
SIGNAL FACES	1									←G	←Y	R							R	
	2									←G	←Y	R							R	
	3	G	Y	R																R
	4	G	Y	R																R
	5	G/	Y/	R	R/G→	R/Y→	R													R
	6										←G	←Y	R							R
	7										←G	←Y	R							R
	8	G	Y	R																R
	9	G	Y	R																R
	10				←G	←Y	R													R
	11				←G	←Y	R													R
	12							G	Y	R										R
	13							G	Y	R										R
	14							G/	Y/	R	R/G→	R/Y→	R							R
	15				←G	←Y	R													R
	16							G	Y	R										R
	17							G	Y	R										R
	18							G/	Y/	R	R/G→	R/Y→	R							R
	19,26							W>FDW	FDW	DW										
	20,21	W>FDW	FDW	DW																
	22,23							W>FDW	FDW	DW										
	24,25	W>FDW	FDW	DW																
	TIME SEC	31.5	4.5	1.0	12.4	4.6	1.0	31.4	4.6	1.0	12.5	4.5	1.0							Offset =
	FO SEC	0.0			17.9			54.9			73.0									0
	YP SEC																			sec
SPLIT SEC	37			18			37			18										
PATTERN	4			CYCLE LENGTH = 110			TIMES OF OPERATION =			M-F 1900-2100										
TIME SEC	31.5	4.5	1.0	7.4	4.6	1.0	31.4	4.6	1.0	7.5	4.5	1.0							Offset =	
FO SEC	0.0			12.9			49.9			63.0									0	
YP SEC																			sec	
SPLIT SEC	37			13			37			13										
PATTERN	5			CYCLE LENGTH = 100			TIMES OF OPERATION =			M-F 0000-0600, 2100-0000; Sat 0000-0800, 2000-0000; Sun 0000-0900, 2000-0000										
TIME SEC																			Offset =	
FO SEC																				
YP SEC																			sec	
SPLIT SEC																				
PATTERN				CYCLE LENGTH =			TIMES OF OPERATION =													
PHASING	Φ2 + Φ6			Φ3 + Φ7			Φ4 + Φ8			Φ1 + Φ5										

TRAFFIC SIGNAL INVENTORY

TSI NO. S-078

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 2 OF 4



#1,3,7,9
11,13,17



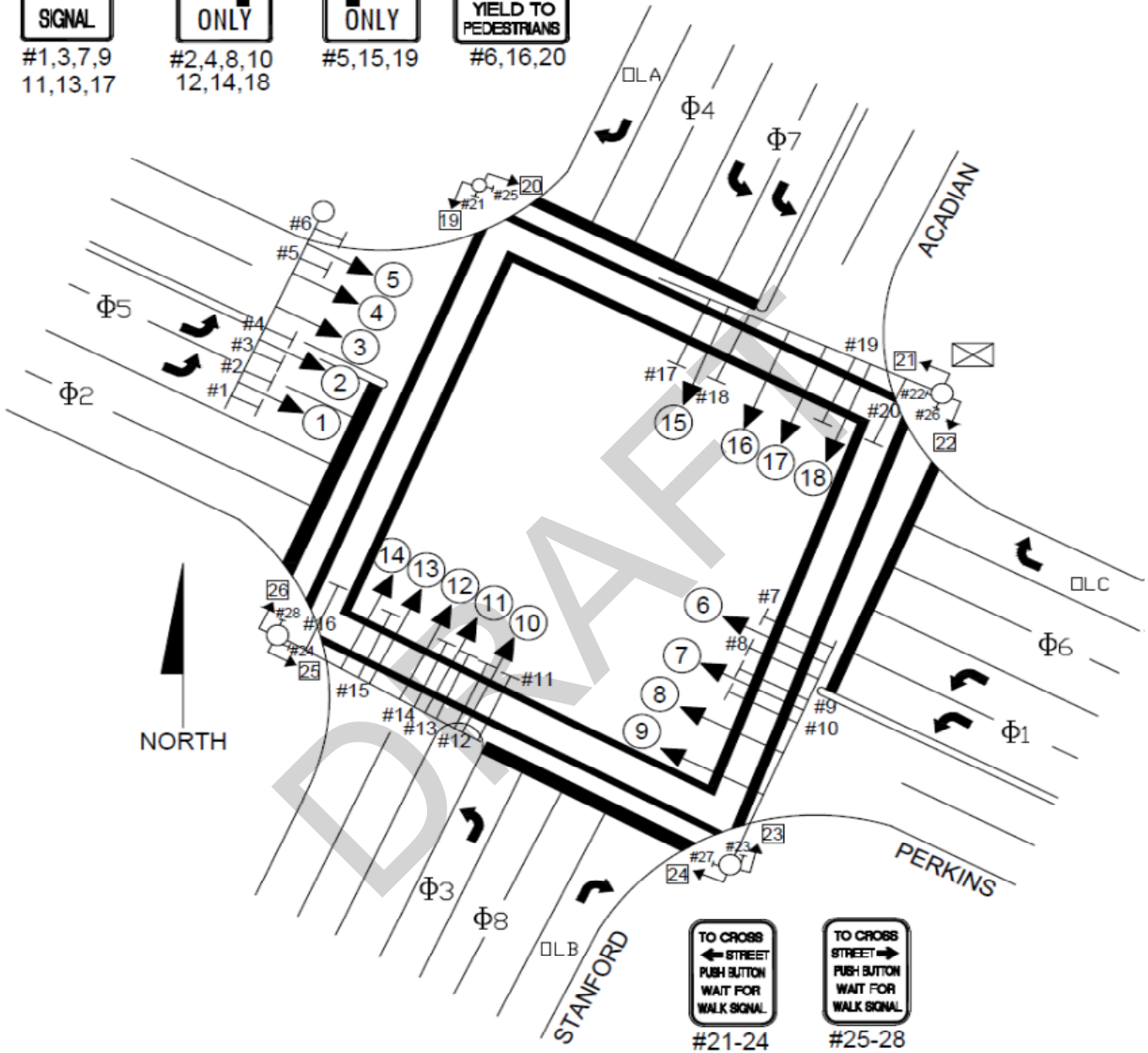
#2,4,8,10
12,14,18



#5,15,19



#6,16,20



#21-24



#25-28

	3,4,8,9, 12,13,16, 17		1,2,6,7, 10,11,15		5,14,18				19-26
SIGNAL FACES									
TOTALS	8		7		3				8
R= RED Y= YELLOW G= GREEN GA= GREEN ARROW YA= YELLOW ARROW DK= DARK 8"= 8" DIA. LENS 12"= 12" DIA. LENS WA= WALK DW= DONT WALK FDW= FLASHING DONT WALK	(R) (Y) (G)	(R) (YA) (GA)	(R) (YA) (GA)	(R) (Y) (G) (GA)	(R) (Y) (YA) (G) (GA)	(R) (YA) (Y) (GA) (G)			PED (W) (DW)









TRAFFIC SIGNAL INVENTORY

TSI NO. S-078

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 3 OF 4

Phase Timing Parameters

Phase Designation		1	2	3	4	5	6	7	8
Movement Description									
PARAMETER	RANGE								
MIN GREEN (MIN Grn)	0-255	5	12	5	12	5	12	5	12
GAP EXTENSION	0-25.5	2.5	3.9	2.5	3.9	2.5	3.9	2.5	3.9
MAX GREEN I (MAX I)	0-255	30	50	30	50	30	50	30	50
MAX GREEN II (MAX II)	0-255	50	90	50	90	50	90	50	90
YELLOW CLEARANCE (YEL)	0-25.5	4.5	4.5	4.6	4.6	4.5	4.5	4.6	4.6
RED CLEARANCE (RED)	0-25.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
WALK (WALK)	0-255		4		4		4		4
PED CLEARANCE (P CLR)	0-255		27		27		27		27
ADDED INITIAL GREEN	0-25.5		1.2		1.2		1.2		
MAX INITIAL GREEN	0-255								
TIME BEFORE REDUCTION	0-255		15		15		15		
TIME TO REDUCE	0-255		20		20		20		
MIN GAP	0-25.5		2.5		2.5		2.5		
DYNAMIC MAX LIMIT	0-255								
MAX STEP	0-25.5								
RECALL	CODES		MIN				MIN		
LOOP # - DELAY (in sec.)	0-25.5								
LOOP # - EXTEND (in sec.)	0-25.5								

RECALL FUNCTIONS

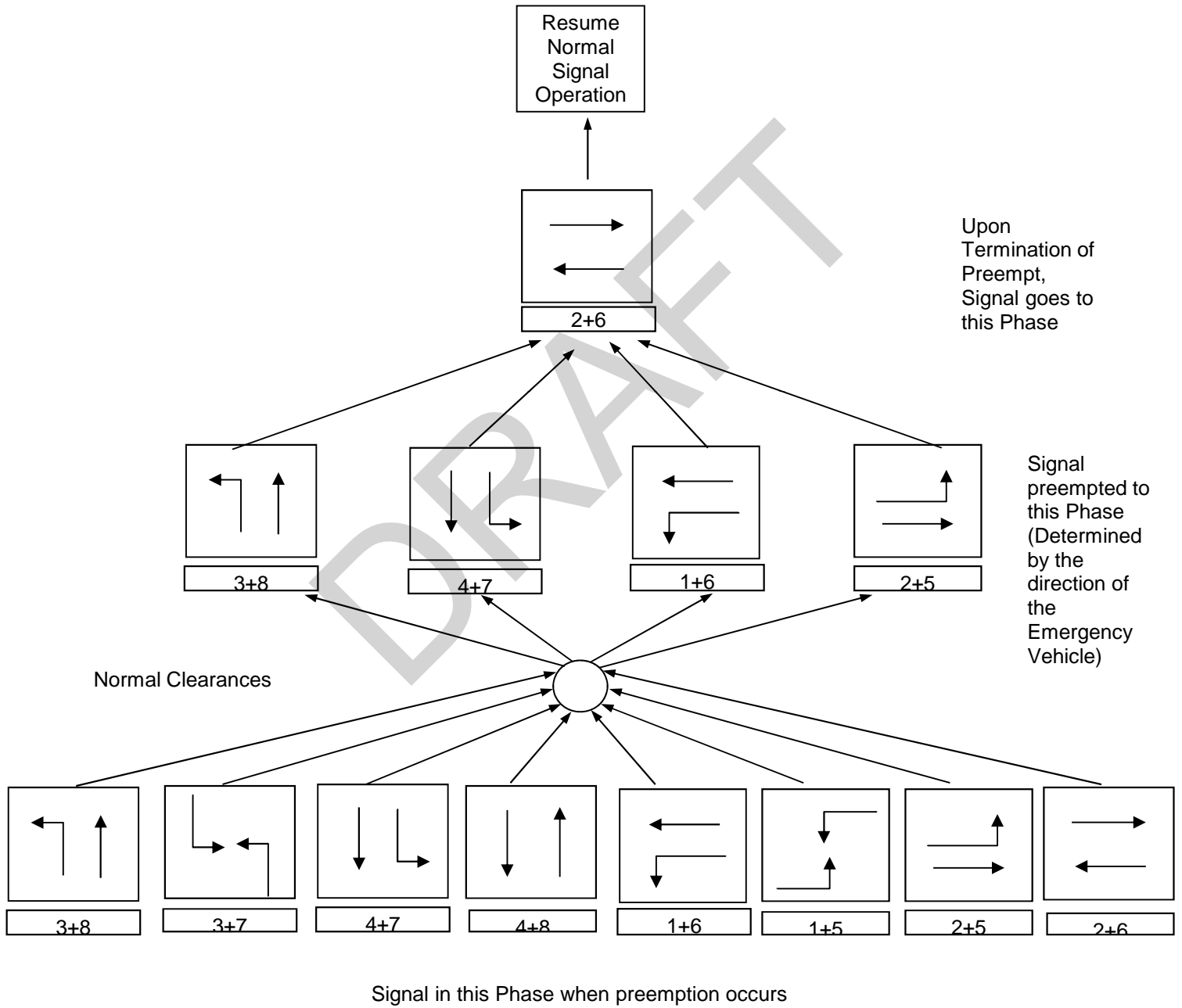
MON	MEMORY ON
MOF	MEMORY OFF
MIN	MINIMUM
MAX	MAXIMUM
PMN	PEDESTRIAN AND MINIMUM
PMX	PEDESTRIAN AND MAXIMUM

Note 1: Runs Max 2 During Coordination

Note 2: OLA = Φ 5; OLB = Φ 1; OLC = Φ 7; OLD = Φ 3

Note 3: Peds Clear thru Yellow on phases 2,4,6,8.

Emergency Preemption Sequence



TRAFFIC SIGNAL INVENTORY

TSI NO. **S-308**

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 1 OF 4

INTERSECTION: Acadian at Richland Plantation-Acadian Center

CITY: BATON ROUGE

PARISH: EAST BATON ROUGE

INSTALLATION DATE: 01/24/95

TYPE SIGNAL: Volume Density Interconnected

LAST REVISION DATE: 07/20/14

PHASES	Φ2 + Φ6			Φ4			Φ8			Φ2 + Φ5						FL			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		16	17	18
SIGNAL FACES	1	G	Y	R															R
	2	G	Y	R															R
	3	G/	Y/	R	R/G→	R/Y→	R												R
	4	G	Y	R							G	G	G						R
	5	G	Y	R							G	G	G						R
	6	/G	/Y	R							←G/G	←Y/G	/G						R
	7							G	Y	R									R
	8							←G/G	Y	R									R
	9				←G/G	Y	R												R
	10				G/	Y/	R				R/G→	R/Y→	R						R
	11																		
	12																		
	13																		
	14																		
	15																		
	16																		

HOURS OF FLASHING OPERATION

TIME	SEC	47.0	4.0	1.0	9.0	4.0	1.0	15.0	4.0	1.0	9.0	4.0	1.0						Offset =
FO	SEC	0.0			14.0			34.0			48.0								6
YP	SEC																		sec
SPLIT	SEC	52			14			20			14								

PATTERN 1 CYCLE LENGTH = 100 TIMES OF OPERATION = Sa-Su: 24 Hrs

TIME	SEC	53.0	4.0	1.0	10.0	4.0	1.0	10.0	4.0	1.0	7.0	4.0	1.0						Offset =
FO	SEC	0.0			15.0			30.0			42.0								75
YP	SEC																		sec
SPLIT	SEC	58			15			15			12								

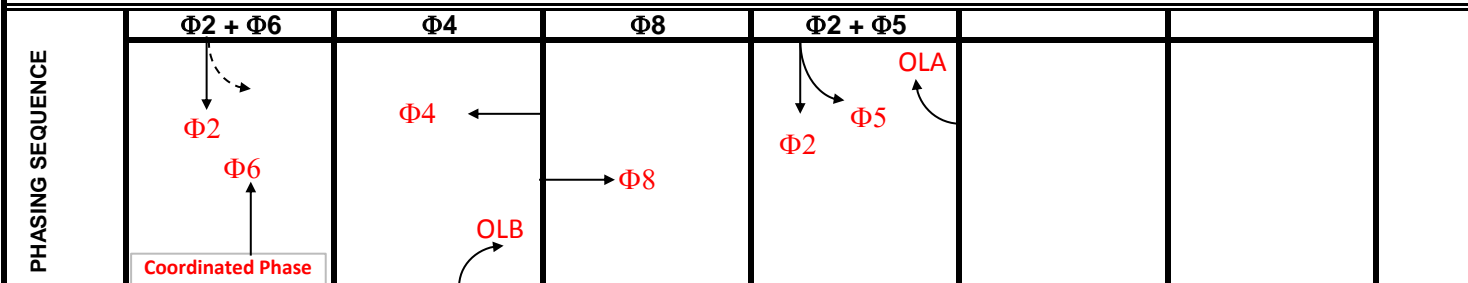
PATTERN 3 CYCLE LENGTH = 100 TIMES OF OPERATION = M-F: 0000-0630, 1000-1430, 2030-0000

TIME	SEC	53.0	4.0	1.0	9.0	4.0	1.0	9.0	4.0	1.0	9.0	4.0	1.0						Offset =
FO	SEC	0.0			14.0			28.0			42.0								44
YP	SEC																		sec
SPLIT	SEC	58			14			14			14								

PATTERN 4 CYCLE LENGTH = 100 TIMES OF OPERATION = M-F 0630-1000

TIME	SEC	57.0	4.0	1.0	7.0	4.0	1.0	9.0	4.0	1.0	7.0	4.0	1.0						Offset =
FO	SEC	0.0			12.0			26.0			38.0								0
YP	SEC																		sec
SPLIT	SEC	62			12			14			12								

PATTERN 5 CYCLE LENGTH = 100 TIMES OF OPERATION = M-F 1430-2030



SIGNAL WARRANTS: MAINTAINED BY: DPW CONTROLLER MANUF: NAZTEC SYSTEM #:

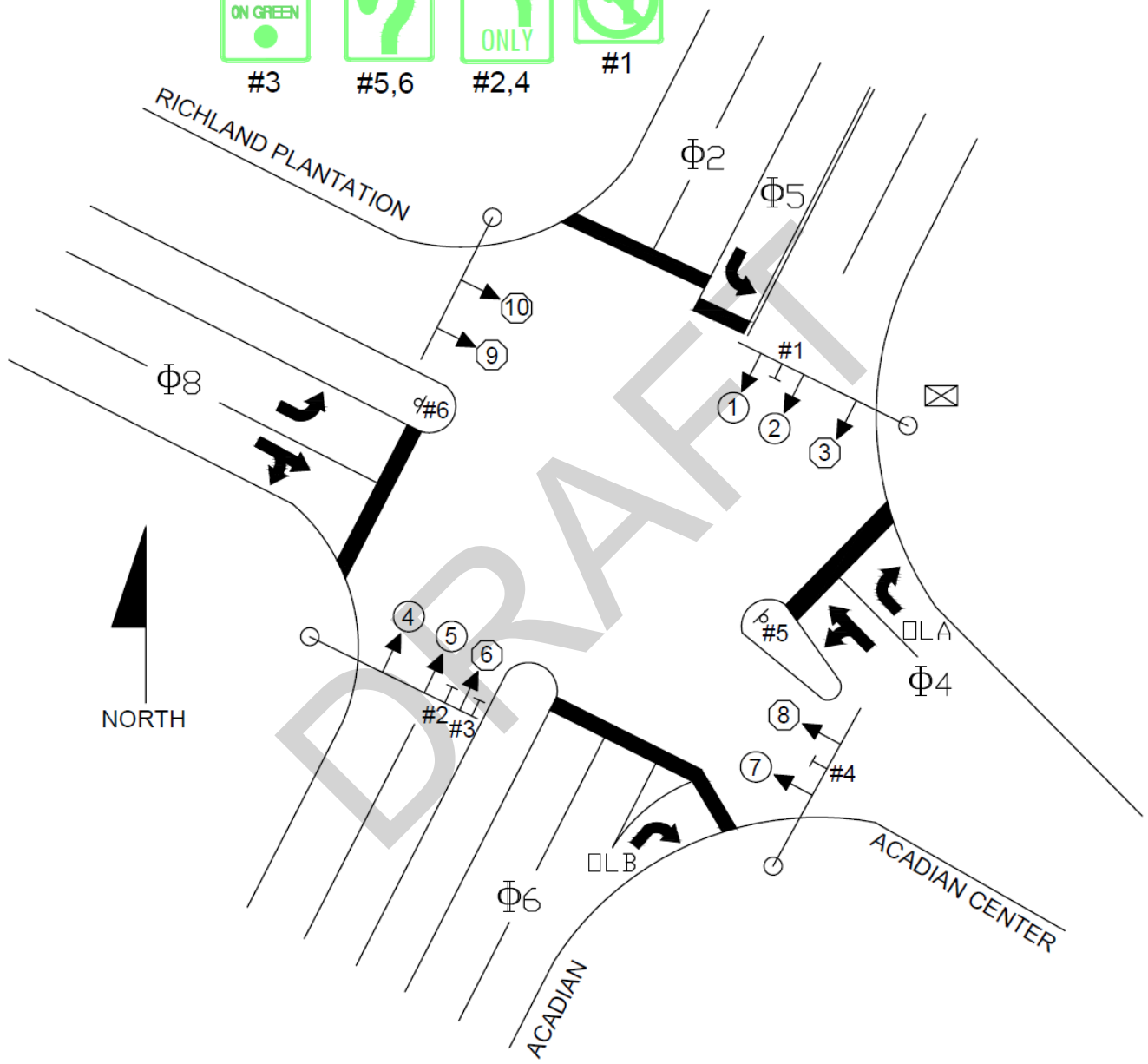
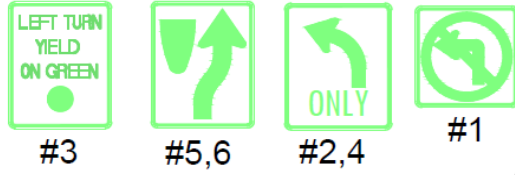
MASTER/ SLAVE: MASTER AT TSI #: COORDINATED WITH TSI #S:

TRAFFIC SIGNAL INVENTORY

TSI NO. S-308

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 2 OF 4



SIGNAL FACES	1,2,4,5,7			8,9		3,10	6			
TOTALS	5			2		2	1			
R= RED Y= YELLOW G= GREEN GA= GREEN ARROW YA= YELLOW ARROW DK= DARK 8"= 8" DIA. LENS 12"= 12" DIA. LENS WA= WALK DW= DONT WALK FDW= FLASHING DONT WALK	(R) (Y) (G)	(R) (YA) (GA)	(R) (YA) (GA)	(R) (Y) (G) (G)	(R) (Y) (G) (GA)	(R) (YA) (Y) (G) (GA)	(R) (YA) (Y) (G) (GA)			PED (W) (DW)

TRAFFIC SIGNAL INVENTORY

TSI NO. S-308

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 3 OF 4

Phase Timing Parameters

Phase Designation		1	2	3	4	5	6	7	8
Movement Description			↓		←	↙	↑		→
PARAMETER	RANGE								
MIN GREEN (MIN Grn)	0-255		15		5	3	10		5
GAP EXTENSION	0-25.5		6.0		3.0	3.0	6.0		3.0
MAX GREEN I (MAX I)	0-255		60		20	15	60		20
MAX GREEN II (MAX II)	0-255		120		20	15	120		20
YELLOW CLEARANCE (YEL)	0-25.5		4.0		4.0	4.0	4.0		4.0
RED CLEARANCE (RED)	0-25.5		1.0		1.0	1.0	1.0		1.0
WALK (WALK)	0-255								
PED CLEARANCE (P CLR)	0-255								
ADDED INITIAL GREEN	0-25.5		1.2				1.2		
MAX INITIAL GREEN	0-255		20				20		
TIME BEFORE REDUCTION	0-255		10				10		
TIME TO REDUCE	0-255		20				20		
MIN GAP	0-25.5		3.0				3.0		
DYNAMIC MAX LIMIT	0-255								
MAX STEP	0-25.5								
RECALL	CODES		MIN				MIN		
LOOP # - DELAY (in sec.)	0-25.5								
LOOP # - EXTEND (in sec.)	0-25.5								

RECALL FUNCTIONS

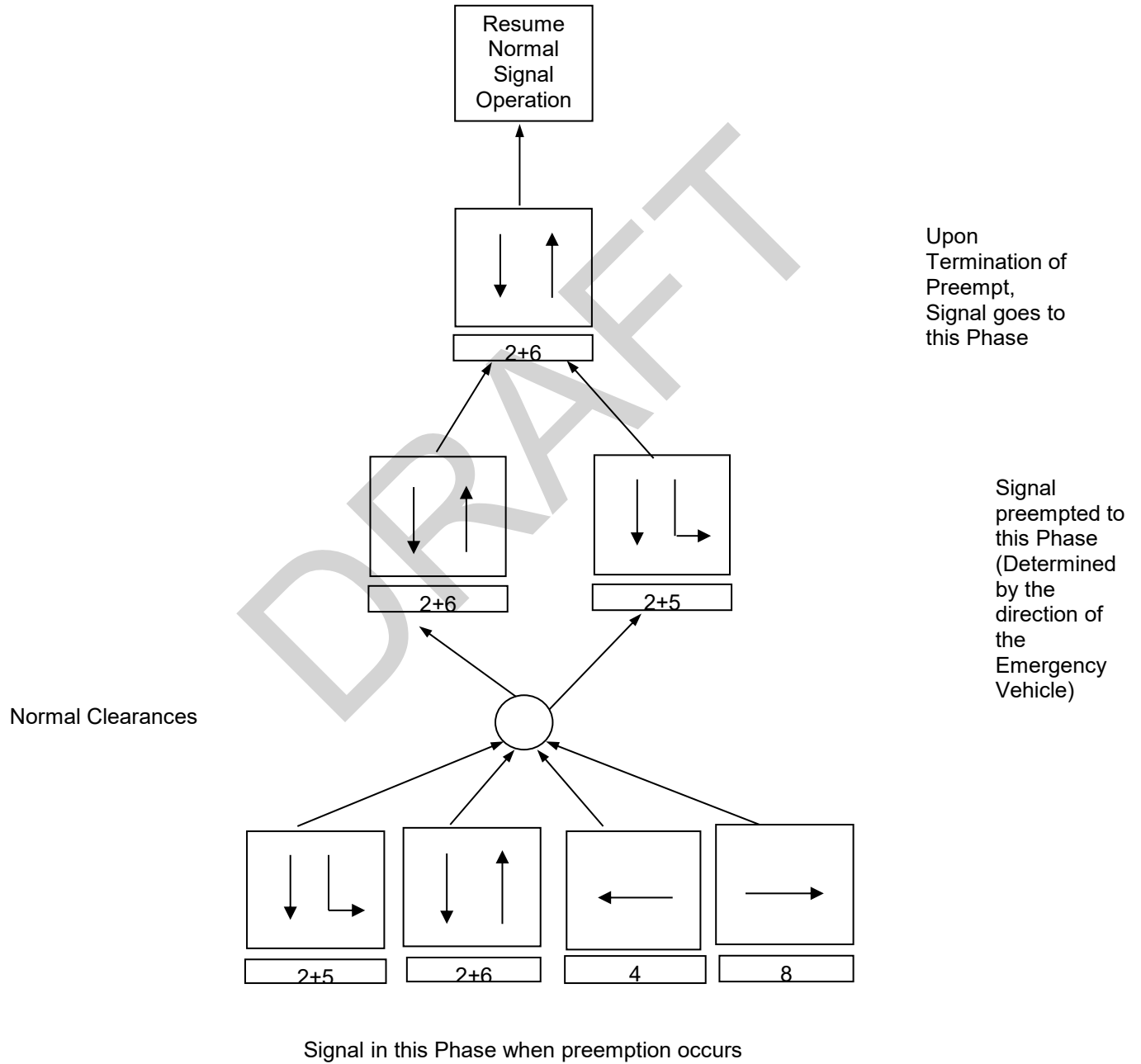
MON	MEMORY ON
MOF	MEMORY OFF
MIN	MINIMUM
MAX	MAXIMUM
PMN	PEDESTRIAN AND MINIMUM
PMX	PEDESTRIAN AND MAXIMUM

Note 1: Runs Max II during coordination

Note 2: OLA = Φ5; OLB = Φ4

Note 3:

Emergency Preemption Sequence



TRAFFIC SIGNAL INVENTORY

TSI NO. S-027

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 1a OF 4

INTERSECTION: Acadian Thruway at I10

CITY: BATON ROUGE **PARISH:** EAST BATON ROUGE

INSTALLATION DATE: 07/25/95

TYPE SIGNAL: Volume Density Interconnected

LAST REVISION DATE: 04/25/17

WB Ramp - Ring 1										EB Ramp - Ring 2								FL		
PHASES	Φ2 + OLA			Φ4			Φ1 + OLA			Φ5 + OLB			Φ8			Φ6 + OLB				
INTERVALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
SIGNAL FACES	1	G	Y	R																R
	2	G	Y	R																R
	3																G	Y	R	R
	4																G	Y	R	R
	5										G	Y	R				G	G	G	R
	6										G	Y	R				G	G	G	R
	7	G	Y	R				G	G	G										R
	8	G	Y	R				G	G	G										R
	9	←G	←Y	←R																R
	10										←G	←Y	←R							R
	11				←G/G	Y	R													R
	12				←G/G	Y	R													R
	13				G	Y	R							G	Y	R				R
	14													G	Y	R				R
	15													G	Y	R				R
	16													G	Y	R				R
TIME SEC	44.3	4.7	1.0	29.3	4.7	1.0	9.0	5.0	1.0	14.3	4.7	1.0	29.3	4.7	1.0	39.0	5.0	1.0	Offset =	
FO SEC	0.0			35.0			49.7			0.0			35.0			79.7			57	
YP SEC																			sec	
SPLIT SEC	50			35			15			20			35			45				
PATTERN	1 CYCLE LENGTH = 100 TIMES OF OPERATION = Sa-Su: 24 Hrs																			
TIME SEC	34.3	4.7	1.0	29.3	4.7	1.0	19.0	5.0	1.0	22.3	4.7	1.0	39.3	4.7	1.0	21.0	5.0	1.0	Offset =	
FO SEC	0.0			35.0			59.7			0.0			45.0			71.7			80	
YP SEC																			sec	
SPLIT SEC	40			35			25			28			45			27				
PATTERN	3 CYCLE LENGTH = 100 TIMES OF OPERATION = M-F: 0000-0630, 1000-1430, 2030-0000																			
TIME SEC	46.3	4.7	1.0	29.3	4.7	1.0	7.0	5.0	1.0	34.3	4.7	1.0	29.3	4.7	1.0	19.0	5.0	1.0	Offset =	
FO SEC	0.0			35.0			47.7			0.0			35.0			59.7			42	
YP SEC																			sec	
SPLIT SEC	52			35			13			40			35			25				
PATTERN	4 CYCLE LENGTH = 100 TIMES OF OPERATION = M-F: 0630-1000																			
TIME SEC	59.3	4.7	1.0	16.3	4.7	1.0	7.0	5.0	1.0	41.3	4.7	1.0	14.3	4.7	1.0	27.0	5.0	1.0	Offset =	
FO SEC	0.0			22.0			34.7			0.0			20.0			52.7			0	
YP SEC																			sec	
SPLIT SEC	65			22			13			47			20			33				
PATTERN	5 CYCLE LENGTH = 100 TIMES OF OPERATION = M-F: 1430-1545																			
PHASING SEQUENCE	Φ2 + OLA			Φ4			Φ1 + OLA			Φ5 + OLB			Φ8			Φ6 + OLB				
	↓ Φ2	↑ OLA		← Φ4			← Φ1	↑ OLA		↓ OLB	↘ Φ5	→ Φ8	↓ OLB	↑ Φ6						
	Coordinated Phase									Coordinated Phase										

SIGNAL WARRANTS: MAINTAINED BY: DPW CONTROLLER MANUF: NAZTEC SYSTEM #: _____
 MASTER/ SLAVE: MASTER AT TSI #: _____ COORDINATED WITH TSI #S: _____

TRAFFIC SIGNAL INVENTORY

TSI NO. S-027

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 1b OF 4

SUPPLEMENTAL PHASING & TIMING

		WB Ramp - Ring 1									EB Ramp - Ring 2									FL	
PHASES		Φ2 + OLA			Φ4			Φ1 + OLA			Φ5 + OLB			Φ8			Φ6 + OLB				
INTERVALS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
SIGNAL FACES	↑	1	G	Y	R																R
		2	G	Y	R																R
		3																G	Y	R	R
		4																G	Y	R	R
		5										G	Y	R				G	G	G	R
		6										G	Y	R				G	G	G	R
		7	G	Y	R				G	G	G										R
		8	G	Y	R				G	G	G										R
		9	←G	←Y	←R																R
		10										←G	←Y	←R							R
		11				←G/G	Y	R													R
		12				←G/G	Y	R													R
		13				G	Y	R													R
		14													G	Y	R				R
		15													G	Y	R				R
		16													G	Y	R				R
	TIME	SEC	47.3	4.7	1.0	28.3	4.7	1.0	7.0	5.0	1.0	36.3	4.7	1.0	12.3	4.7	1.0	34.0	5.0	1.0	Offset =
	FO	SEC	0.0			34.0			46.7			0.0			18.0			57.7			0
	YP	SEC																			sec
	SPLIT	SEC	53			34			13			42			18			40			
	PATTERN		6 CYCLE LENGTH = 100 TIMES OF OPERATION =									M-F: 1545-2030									
	TIME	SEC																			Offset =
	FO	SEC																			sec
	YP	SEC																			
	SPLIT	SEC																			
	PATTERN		CYCLE LENGTH =									TIMES OF OPERATION =									
	TIME	SEC																			Offset =
	FO	SEC																			sec
	YP	SEC																			
	SPLIT	SEC																			
	PATTERN		CYCLE LENGTH =									TIMES OF OPERATION =									
	TIME	SEC																			Offset =
	FO	SEC																			sec
	YP	SEC																			
	SPLIT	SEC																			
	PATTERN		CYCLE LENGTH =									TIMES OF OPERATION =									
PHASING SEQUENCE			Φ2 + OLA			Φ4			Φ1 + OLA			Φ5 + OLB			Φ8			Φ6 + OLB			
			↓ Φ2		↑ OLA			← Φ4		← Φ1	↑ OLA	↓ OLB	↘ Φ5		→ Φ8		↓ OLB		↑ Φ6		
			Coordinated Phase									Coordinated Phase									
			SIGNAL WARRANTS: MAINTAINED BY: DPW CONTROLLER MANUF: NAZTEC SYSTEM #:																		
			MASTER/ SLAVE: MASTER AT TSI #: COORDINATED WITH TSI #'S:																		

TRAFFIC SIGNAL INVENTORY

TSI NO. S-027

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 2a OF 4



#2



#8



#1



#9,10



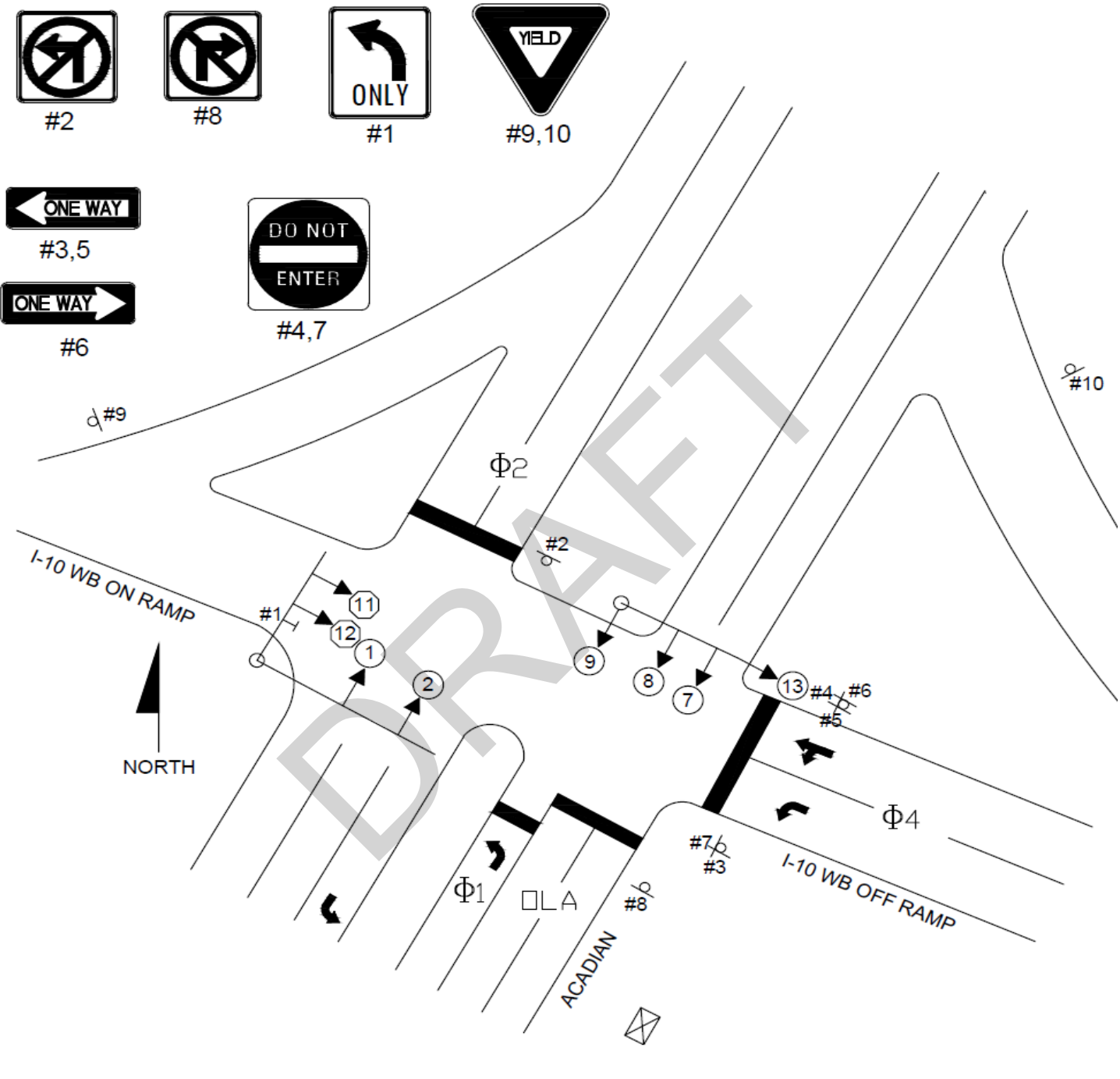
#3,5



#4,7



#6



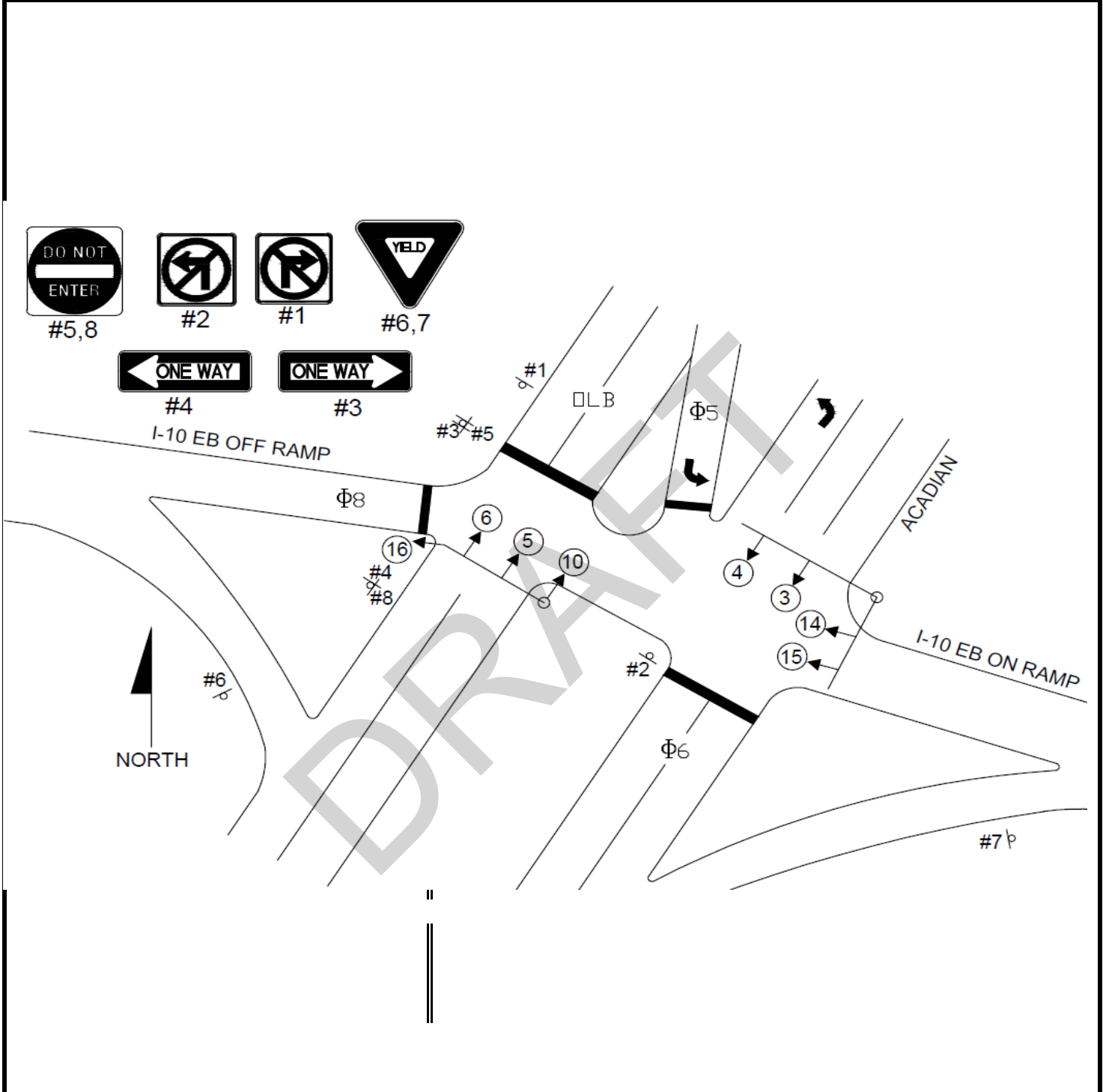
SIGNAL FACES	1,2,7,8,13		9	11,12						
TOTALS	5		1	2						
R= RED Y= YELLOW G= GREEN GA= GREEN ARROW YA= YELLOW ARROW DK= DARK 8"= 8" DIA. LENS 12"= 12" DIA. LENS WA= WALK DW= DONT WALK FDW= FLASHING DONT WALK	(R)	(R)	(R)	(R)	(R)	(R)	(R)			PED
	(Y)	(YA)	(YA)	(Y)	(Y)	(Y) (YA)	(YA) (Y)			(W)
	(G)	(GA)	(GA)	(GA) (G)	(G) (GA)	(G) (GA)	(GA) (G)			(DW)

TRAFFIC SIGNAL INVENTORY

TSI NO. S-027

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 2b OF 4



SIGNAL FACES	3-6,14-16		10						
TOTALS	7		1						
R= RED Y= YELLOW G= GREEN GA= GREEN ARROW YA= YELLOW ARROW DK= DARK 8"= 8" DIA. LENS 12"= 12" DIA. LENS WA= WALK DW= DONT WALK FDW= FLASHING DONT WALK	(R) (Y) (G)	(R) (YA) (GA)	(R) (YA) (GA)	(R) (Y) (G) (GA)	(R) (Y) (YA) (G) (GA)	(R) (YA) (Y) (GA) (G)	(R) (YA) (Y) (GA) (G)	PED W DW	

TRAFFIC SIGNAL INVENTORY

TSI NO. S-027

DEPARTMENT OF PUBLIC WORKS/ TRAFFIC ENGINEERING DIVISION

SHEET: 3 OF 4

Phase Timing Parameters

Phase Designation		1	2	3	4	5	6	7	8
Movement Description		↙	↓		←	↘	↑		→
PARAMETER	RANGE								
MIN GREEN (MIN Grn)	0-255	5	15		5	5	15		5
GAP EXTENSION	0-25.5	4.0	6.0		4.0	4.0	6.0		4.0
MAX GREEN I (MAX I)	0-255	15	60		30	15	60		30
MAX GREEN II (MAX II)	0-255	15	120		40	100	120		40
YELLOW CLEARANCE (YEL)	0-25.5	4.7	4.7		5.0	4.7	4.7		5.0
RED CLEARANCE (RED)	0-25.5	1.0	1.0		1.0	1.0	1.0		1.0
WALK (WALK)	0-255								
PED CLEARANCE (P CLR)	0-255								
ADDED INITIAL GREEN	0-25.5		1.3				1.3		
MAX INITIAL GREEN	0-255		20				10		
TIME BEFORE REDUCTION	0-255		10				10		
TIME TO REDUCE	0-255		20				20		
MIN GAP	0-25.5		4.0				4.0		
DYNAMIC MAX LIMIT	0-255								
MAX STEP	0-25.5								
RECALL	CODES		MIN				MIN		
LOOP # - DELAY (in sec.)	0-25.5								
LOOP # - EXTEND (in sec.)	0-25.5								

RECALL FUNCTIONS

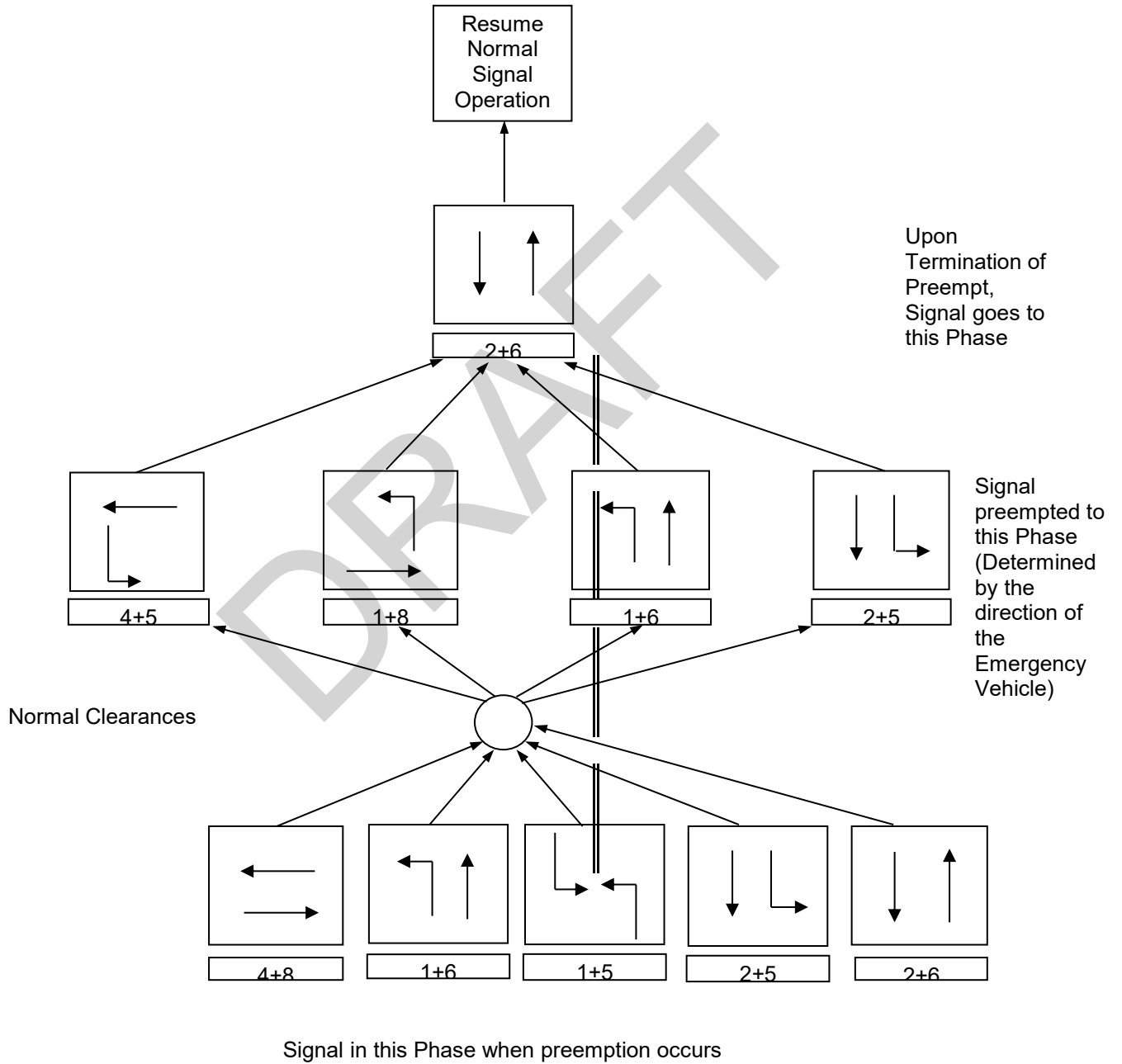
MON	MEMORY ON
MOF	MEMORY OFF
MIN	MINIMUM
MAX	MAXIMUM
PMN	PEDESTRIAN AND MINIMUM
PMX	PEDESTRIAN AND MAXIMUM

Note 1: Runs Max II during coordination

Note 2:

Note 3: OLA= Φ 1+ Φ 2; OLB= Φ 5+ Φ 6





















Emergency Preemption Sequence



HCM 2010 Signalized Intersection Summary
2017 Existing AM

I-10 WB at Acadian

6/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	597	8	644	40	510	0	0	1031	100
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				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
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1881	1882	1863	1759	1863	0	0	1881	1881
Adj Flow Rate, veh/h				648	0	0	43	548	0	0	1109	0
Adj No. of Lanes				2	0	1	1	2	0	0	2	1
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				1	0	2	8	2	0	0	1	1
Cap, veh/h				786	0	347	58	2349	0	0	2044	914
Arrive On Green				0.22	0.00	0.00	0.03	0.66	0.00	0.00	0.57	0.00
Sat Flow, veh/h				3583	0	1583	1675	3632	0	0	3668	1599
Grp Volume(v), veh/h				648	0	0	43	548	0	0	1109	0
Grp Sat Flow(s),veh/h/ln				1792	0	1583	1675	1770	0	0	1787	1599
Q Serve(g_s), s				17.2	0.0	0.0	2.5	6.2	0.0	0.0	19.3	0.0
Cycle Q Clear(g_c), s				17.2	0.0	0.0	2.5	6.2	0.0	0.0	19.3	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				786	0	347	58	2349	0	0	2044	914
V/C Ratio(X)				0.82	0.00	0.00	0.74	0.23	0.00	0.00	0.54	0.00
Avail Cap(c_a), veh/h				1039	0	459	122	2349	0	0	2044	914
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				37.2	0.0	0.0	47.8	6.7	0.0	0.0	13.3	0.0
Incr Delay (d2), s/veh				4.9	0.0	0.0	22.3	0.2	0.0	0.0	1.0	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
%ile BackOfQ(95%),veh/ln				14.0	0.0	0.0	2.8	5.5	0.0	0.0	14.8	0.0
LnGrp Delay(d),s/veh				42.0	0.0	0.0	70.1	6.9	0.0	0.0	14.3	0.0
LnGrp LOS				D			E	A			B	
Approach Vol, veh/h					648			591			1109	
Approach Delay, s/veh					42.0			11.5			14.3	
Approach LOS					D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.2	62.9		27.9		72.1						
Change Period (Y+Rc), s	5.7	5.7		6.0		5.7						
Max Green Setting (Gmax), s	7.3	46.3		29.0		59.3						
Max Q Clear Time (g_c+I1), s	4.5	21.3		19.2		8.2						
Green Ext Time (p_c), s	0.0	21.5		2.7		38.9						
Intersection Summary												
HCM 2010 Ctrl Delay				21.3								
HCM 2010 LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↑↑	↑↑	↖
Volume (vph)	597	8	644	40	510	1031	100
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		4		1	6	2	
Permitted Phases	4		4				2
Detector Phase	4	4	4	1	6	2	2
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	15.0	15.0	15.0
Minimum Split (s)	11.0	11.0	11.0	10.7	21.7	21.7	21.7
Total Split (s)	35.0	35.0	35.0	13.0	65.0	52.0	52.0
Total Split (%)	35.0%	35.0%	35.0%	13.0%	65.0%	52.0%	52.0%
Yellow Time (s)	5.0	5.0	5.0	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	5.7	5.7	5.7	5.7
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?				Yes			
Recall Mode	None	None	None	None	Min	C-Min	C-Min

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 42 (42%), Referenced to phase 2:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated





















Splits and Phases: 22: Acadian Thruway & I-10 WB off ramp



HCM 2010 Signalized Intersection Summary
2017 Existing PM

I-10 WB at Acadian

6/25/2019

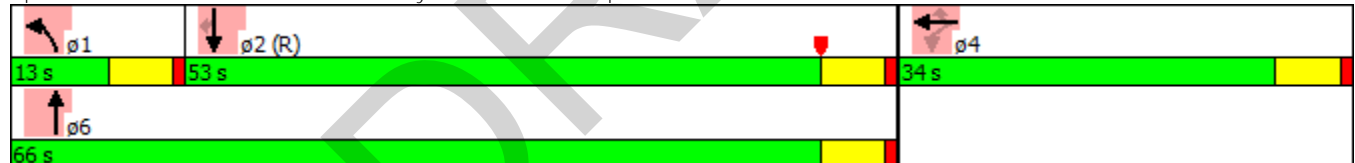
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	532	21	672	56	519	0	0	1206	112
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1863	1881	0	0	1900	1881
Adj Flow Rate, veh/h				570	0	0	58	541	0	0	1256	0
Adj No. of Lanes				2	0	1	1	2	0	0	2	1
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				0	0	0	2	1	0	0	0	1
Cap, veh/h				707	0	316	75	2458	0	0	2124	941
Arrive On Green				0.20	0.00	0.00	0.04	0.69	0.00	0.00	0.59	0.00
Sat Flow, veh/h				3619	0	1615	1774	3668	0	0	3705	1599
Grp Volume(v), veh/h				570	0	0	58	541	0	0	1256	0
Grp Sat Flow(s),veh/h/ln				1810	0	1615	1774	1787	0	0	1805	1599
Q Serve(g_s), s				15.0	0.0	0.0	3.2	5.6	0.0	0.0	22.0	0.0
Cycle Q Clear(g_c), s				15.0	0.0	0.0	3.2	5.6	0.0	0.0	22.0	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				707	0	316	75	2458	0	0	2124	941
V/C Ratio(X)				0.81	0.00	0.00	0.78	0.22	0.00	0.00	0.59	0.00
Avail Cap(c_a), veh/h				1013	0	452	130	2458	0	0	2124	941
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				38.4	0.0	0.0	47.4	5.7	0.0	0.0	13.0	0.0
Incr Delay (d2), s/veh				4.0	0.0	0.0	21.3	0.1	0.0	0.0	1.2	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
%ile BackOfQ(95%),veh/ln				12.5	0.0	0.0	3.7	4.9	0.0	0.0	16.7	0.0
LnGrp Delay(d),s/veh				42.4	0.0	0.0	68.7	5.8	0.0	0.0	14.2	0.0
LnGrp LOS				D			E	A			B	
Approach Vol, veh/h					570			599			1256	
Approach Delay, s/veh					42.4			11.9			14.2	
Approach LOS					D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.9	64.6		25.5		74.5						
Change Period (Y+Rc), s	5.7	5.7		6.0		5.7						
Max Green Setting (Gmax), s	7.3	47.3		28.0		60.3						
Max Q Clear Time (g_c+I1), s	5.2	24.0		17.0		7.6						
Green Ext Time (p_c), s	0.0	20.2		2.5		39.6						
Intersection Summary												
HCM 2010 Ctrl Delay				20.3								
HCM 2010 LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↑↑	↑↑	↖
Volume (vph)	532	21	672	56	519	1206	112
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		4		1	6	2	
Permitted Phases	4		4				2
Detector Phase	4	4	4	1	6	2	2
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	15.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	21.0	21.0
Total Split (s)	34.0	34.0	34.0	13.0	66.0	53.0	53.0
Total Split (%)	34.0%	34.0%	34.0%	13.0%	66.0%	53.0%	53.0%
Yellow Time (s)	5.0	5.0	5.0	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	5.7	5.7	5.7	5.7
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	C-Min	C-Min

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated



















Splits and Phases: 22: Acadian Thruway & I-10 WB off ramp



HCM 2010 Signalized Intersection Summary
2017 Existing AM

I-10 EB at Acadian

6/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	57	2	87	0	0	0	0	459	728	535	1113	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	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
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1827	1900	1881	1881	0
Adj Flow Rate, veh/h	62	2	0				0	499	0	582	1210	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0				0	4	0	1	1	0
Cap, veh/h	85	3	79				0	610	284	1078	2982	0
Arrive On Green	0.05	0.05	0.00				0.00	0.18	0.00	0.60	0.83	0.00
Sat Flow, veh/h	1756	57	1615				0	3563	1615	1792	3668	0
Grp Volume(v), veh/h	64	0	0				0	499	0	582	1210	0
Grp Sat Flow(s),veh/h/ln	1812	0	1615				0	1736	1615	1792	1787	0
Q Serve(g_s), s	3.5	0.0	0.0				0.0	13.8	0.0	19.2	8.5	0.0
Cycle Q Clear(g_c), s	3.5	0.0	0.0				0.0	13.8	0.0	19.2	8.5	0.0
Prop In Lane	0.97		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	88	0	79				0	610	284	1078	2982	0
V/C Ratio(X)	0.73	0.00	0.00				0.00	0.82	0.00	0.54	0.41	0.00
Avail Cap(c_a), veh/h	526	0	468				0	670	312	1078	2982	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.9	0.0	0.0				0.0	39.7	0.0	11.8	2.1	0.0
Incr Delay (d2), s/veh	14.9	0.0	0.0				0.0	10.4	0.0	0.7	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
%ile BackOfQ(95%),veh/ln	3.8	0.0	0.0				0.0	12.0	0.0	14.7	7.6	0.0
LnGrp Delay(d),s/veh	61.8	0.0	0.0				0.0	50.1	0.0	12.5	2.5	0.0
LnGrp LOS	E							D		B	A	
Approach Vol, veh/h		64						499			1792	
Approach Delay, s/veh		61.8						50.1			5.7	
Approach LOS		E						D			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		89.1			65.9	23.3		10.9				
Change Period (Y+Rc), s		5.7			5.7	5.7		6.0				
Max Green Setting (Gmax), s		59.3			34.3	19.3		29.0				
Max Q Clear Time (g_c+I1), s		10.5			21.2	15.8		5.5				
Green Ext Time (p_c), s		34.2			11.5	1.7		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			16.7									
HCM 2010 LOS			B									



Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↕	↗	↖	↕
Volume (vph)	2	87	459	728	535	1113
Turn Type	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6		
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	22.0	22.0	21.7	21.7	10.7	21.7
Total Split (s)	35.0	35.0	25.0	25.0	40.0	65.0
Total Split (%)	35.0%	35.0%	25.0%	25.0%	40.0%	65.0%
Yellow Time (s)	5.0	5.0	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.7	5.7	5.7	5.7
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	Min	Min	None	C-Min

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 42 (42%), Referenced to phase 2:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated



















Splits and Phases: 17: Acadian Thruway & I-10 EB off ramp



HCM 2010 Signalized Intersection Summary
2017 Existing PM

I-10 EB at Acadian

6/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	30	1	74	0	0	0	0	557	793	591	1145	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	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
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1779	1881				0	1881	1900	1900	1881	0
Adj Flow Rate, veh/h	31	1	0				0	568	0	603	1168	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	0	1				0	1	0	0	1	0
Cap, veh/h	48	2	47				0	846	382	1013	3051	0
Arrive On Green	0.03	0.03	0.00				0.00	0.24	0.00	0.56	0.85	0.00
Sat Flow, veh/h	1644	53	1599				0	3668	1615	1810	3668	0
Grp Volume(v), veh/h	32	0	0				0	568	0	603	1168	0
Grp Sat Flow(s),veh/h/ln	1697	0	1599				0	1787	1615	1810	1787	0
Q Serve(g_s), s	1.9	0.0	0.0				0.0	14.4	0.0	22.0	7.1	0.0
Cycle Q Clear(g_c), s	1.9	0.0	0.0				0.0	14.4	0.0	22.0	7.1	0.0
Prop In Lane	0.97		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	50	0	47				0	846	382	1013	3051	0
V/C Ratio(X)	0.64	0.00	0.00				0.00	0.67	0.00	0.60	0.38	0.00
Avail Cap(c_a), veh/h	204	0	192				0	1226	554	1013	3051	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.0	0.0	0.0				0.0	34.6	0.0	14.5	1.6	0.0
Incr Delay (d2), s/veh	17.8	0.0	0.0				0.0	4.2	0.0	1.1	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
%ile BackOfQ(95%),veh/ln	2.0	0.0	0.0				0.0	12.1	0.0	16.7	6.4	0.0
LnGrp Delay(d),s/veh	65.8	0.0	0.0				0.0	38.9	0.0	15.7	2.0	0.0
LnGrp LOS	E							D		B	A	
Approach Vol, veh/h		32						568			1771	
Approach Delay, s/veh		65.8						38.9			6.6	
Approach LOS		E						D			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		91.1			61.7	29.4		8.9				
Change Period (Y+Rc), s		5.7			5.7	5.7		6.0				
Max Green Setting (Gmax), s		76.3			36.3	34.3		12.0				
Max Q Clear Time (g_c+I1), s		9.1			24.0	16.4		3.9				
Green Ext Time (p_c), s		26.1			9.4	7.2		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			15.1									
HCM 2010 LOS			B									

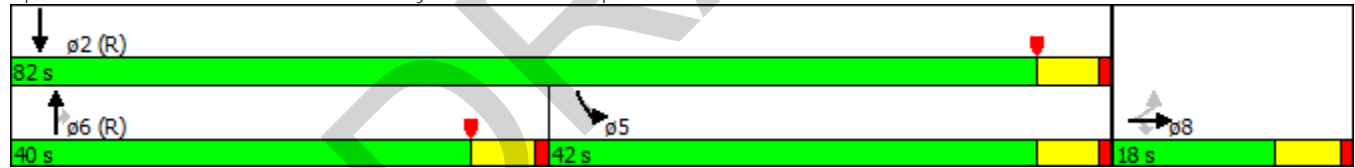


Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↑↑	↖	↗	↑↑
Volume (vph)	1	74	557	793	591	1145
Turn Type	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6		
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	15.0	15.0	5.0	5.0
Minimum Split (s)	11.0	11.0	21.0	21.0	11.0	11.0
Total Split (s)	18.0	18.0	40.0	40.0	42.0	82.0
Total Split (%)	18.0%	18.0%	40.0%	40.0%	42.0%	82.0%
Yellow Time (s)	5.0	5.0	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.7	5.7	5.7	5.7
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	C-Min	C-Min	None	C-Max

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated






















Splits and Phases: 17: Acadian Thruway & I-10 EB off ramp



HCM 2010 Signalized Intersection Summary
2017 Existing AM

Acadian at Acadian Centre

6/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	1	0	3	0	99	0	1091	7	88	1054	3
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1267	1900	1900	1900	1900	1900	1900	1863	1667	1900	1880	1900
Adj Flow Rate, veh/h	2	1	0	3	0	110	0	1212	8	98	1171	3
Adj No. of Lanes	1	1	0	0	1	1	0	2	1	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	50	0	0	100	100	0	2	2	14	0	1	1
Cap, veh/h	5	8	0	147	0	185	0	2411	1079	372	2796	7
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.08	0.00	0.68	0.68	0.03	0.76	0.76
Sat Flow, veh/h	1206	1900	0	1809	0	1615	0	3632	1416	1810	3655	9
Grp Volume(v), veh/h	2	1	0	3	0	110	0	1212	8	98	572	602
Grp Sat Flow(s),veh/h/ln	1206	1900	0	1810	0	1615	0	1770	1416	1810	1786	1878
Q Serve(g_s), s	0.2	0.1	0.0	0.2	0.0	6.5	0.0	16.6	0.1	1.5	11.1	11.1
Cycle Q Clear(g_c), s	0.2	0.1	0.0	0.2	0.0	6.5	0.0	16.6	0.1	1.5	11.1	11.1
Prop In Lane	1.00		0.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	5	8	0	147	0	185	0	2411	1079	372	1366	1437
V/C Ratio(X)	0.41	0.13	0.00	0.02	0.00	0.59	0.00	0.50	0.01	0.26	0.42	0.42
Avail Cap(c_a), veh/h	109	171	0	163	0	200	0	2411	1079	474	1366	1437
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)	1.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	49.6	0.0	42.3	0.0	42.0	0.0	7.7	2.8	5.9	4.1	4.1
Incr Delay (d2), s/veh	48.3	7.6	0.0	0.1	0.0	4.1	0.0	0.8	0.0	0.4	0.9	0.9
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	0.2	0.1	0.0	0.1	0.0	5.6	0.0	12.8	0.1	1.4	9.7	10.1
LnGrp Delay(d),s/veh	98.0	57.2	0.0	42.3	0.0	46.1	0.0	8.5	2.9	6.3	5.0	5.0
LnGrp LOS	F	E		D		D		A	A	A	A	A
Approach Vol, veh/h		3			113			1220			1272	
Approach Delay, s/veh		84.4			46.0			8.4			5.1	
Approach LOS		F			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		81.5		13.1	8.4	73.1		5.4				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		67.0		9.0	9.0	53.0		9.0				
Max Q Clear Time (g_c+I1), s		13.1		8.5	3.5	18.6		2.2				
Green Ext Time (p_c), s		50.4		0.0	0.1	32.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			8.5									
HCM 2010 LOS			A									



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↖	↗	↕	↗	↘	↕
Volume (vph)	2	1	0	99	1091	7	88	1054
Turn Type	Split	NA	NA	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	8	8	4	5	6	4	5	2
Permitted Phases				4		6	2	
Detector Phase	8	8	4	5	6	4	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	3.0	10.0	5.0	3.0	15.0
Minimum Split (s)	10.0	10.0	10.0	8.0	21.0	10.0	8.0	21.0
Total Split (s)	14.0	14.0	14.0	14.0	58.0	14.0	14.0	72.0
Total Split (%)	14.0%	14.0%	14.0%	14.0%	58.0%	14.0%	14.0%	72.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag				Lead	Lag		Lead	
Lead-Lag Optimize?				Yes	Yes		Yes	
Recall Mode	None	None	None	None	C-Min	None	None	C-Min

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 44 (44%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated






















Splits and Phases: 10: Acadian Thruway & Steakhouse Dwy/Acadian Centre



HCM 2010 Signalized Intersection Summary
2017 Existing PM

Acadian at Acadian Centre

6/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	1	9	13	8	59	14	1291	28	52	1116	40
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1863	1900	1881	1900	1900	1882	1900
Adj Flow Rate, veh/h	12	1	9	13	8	60	14	1317	29	53	1139	41
Adj No. of Lanes	1	1	0	0	1	1	0	2	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	2	1	1	0	0	1	1
Cap, veh/h	41	4	34	58	36	117	46	2429	1217	328	2733	98
Arrive On Green	0.02	0.02	0.02	0.05	0.05	0.05	0.70	0.70	0.70	0.02	0.78	0.78
Sat Flow, veh/h	1810	164	1476	1141	702	1583	14	3454	1614	1810	3520	127
Grp Volume(v), veh/h	12	0	10	21	0	60	708	623	29	53	578	602
Grp Sat Flow(s),veh/h/ln	1810	0	1640	1843	0	1583	1841	1626	1614	1810	1788	1859
Q Serve(g_s), s	0.7	0.0	0.6	1.1	0.0	3.6	0.0	18.4	0.5	0.8	10.7	10.7
Cycle Q Clear(g_c), s	0.7	0.0	0.6	1.1	0.0	3.6	17.9	18.4	0.5	0.8	10.7	10.7
Prop In Lane	1.00		0.90	0.62		1.00	0.02		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	41	0	37	94	0	117	1332	1144	1217	328	1388	1444
V/C Ratio(X)	0.29	0.00	0.27	0.22	0.00	0.51	0.53	0.54	0.02	0.16	0.42	0.42
Avail Cap(c_a), veh/h	163	0	148	129	0	147	1332	1144	1217	413	1388	1444
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)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	0.0	48.0	45.6	0.0	44.6	7.1	7.1	3.1	5.7	3.7	3.7
Incr Delay (d2), s/veh	3.8	0.0	3.7	1.2	0.0	3.4	1.5	1.9	0.0	0.2	0.9	0.9
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	0.7	0.0	0.6	1.1	0.0	3.1	14.9	13.6	0.5	0.7	9.3	9.6
LnGrp Delay(d),s/veh	51.9	0.0	51.8	46.8	0.0	48.0	8.6	9.0	3.1	5.9	4.6	4.6
LnGrp LOS	D		D	D		D	A	A	A	A	A	A
Approach Vol, veh/h		22			81			1360			1233	
Approach Delay, s/veh		51.8			47.7			8.7			4.7	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		82.6		10.1	7.3	75.3		7.3				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		69.0		7.0	7.0	57.0		9.0				
Max Q Clear Time (g_c+I1), s		12.7		5.6	2.8	20.4		2.7				
Green Ext Time (p_c), s		53.3		0.0	0.0	35.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			8.4									
HCM 2010 LOS			A									

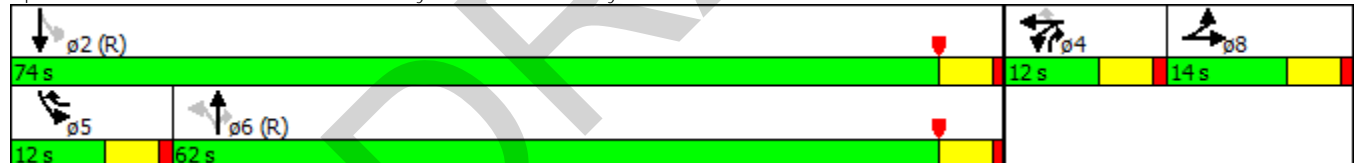


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	12	1	8	59	14	1291	28	52	1116
Turn Type	Split	NA	NA	pm+ov	Perm	NA	pm+ov	pm+pt	NA
Protected Phases	8	8	4	5		6	4	5	2
Permitted Phases				4	6		6	2	
Detector Phase	8	8	4	5	6	6	4	5	2
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	3.0	10.0	10.0	5.0	3.0	15.0
Minimum Split (s)	10.0	10.0	10.0	8.0	21.0	21.0	10.0	8.0	21.0
Total Split (s)	14.0	14.0	12.0	12.0	62.0	62.0	12.0	12.0	74.0
Total Split (%)	14.0%	14.0%	12.0%	12.0%	62.0%	62.0%	12.0%	12.0%	74.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0
Lead/Lag				Lead	Lag	Lag		Lead	
Lead-Lag Optimize?				Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	C-Min	C-Min	None	None	C-Min

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
























Splits and Phases: 10: Acadian Thruway & Steakhouse Dwy/Acadian Centre



HCM 2010 Signalized Intersection Summary
2017 Existing AM

Acadian at Perkins

6/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	212	573	51	141	870	243	227	633	100	245	672	47
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1881	1892	1900	1881	1863	1845	1827	1881	1900	1863	1900	1863
Adj Flow Rate, veh/h	223	603	54	148	916	256	239	666	105	258	707	49
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	0	1	2	3	4	1	0	2	0	2
Cap, veh/h	280	1142	102	205	1135	649	265	1145	613	322	945	541
Arrive On Green	0.08	0.34	0.34	0.06	0.32	0.32	0.15	0.32	0.32	0.09	0.26	0.26
Sat Flow, veh/h	3476	3338	298	3476	3539	1568	1740	3574	1615	3442	3610	1580
Grp Volume(v), veh/h	223	324	333	148	916	256	239	666	105	258	707	49
Grp Sat Flow(s),veh/h/ln	1738	1798	1839	1738	1770	1568	1740	1787	1615	1721	1805	1580
Q Serve(g_s), s	7.6	17.4	17.4	5.0	28.5	13.7	16.2	18.7	5.2	8.8	21.6	2.5
Cycle Q Clear(g_c), s	7.6	17.4	17.4	5.0	28.5	13.7	16.2	18.7	5.2	8.8	21.6	2.5
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	615	629	205	1135	649	265	1145	613	322	945	541
V/C Ratio(X)	0.80	0.53	0.53	0.72	0.81	0.39	0.90	0.58	0.17	0.80	0.75	0.09
Avail Cap(c_a), veh/h	333	615	629	333	1135	649	281	1145	613	556	945	541
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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.2	31.7	31.7	55.5	37.4	24.6	50.0	34.1	24.7	53.3	40.7	26.8
Incr Delay (d2), s/veh	10.1	3.2	3.2	3.5	6.2	1.8	28.5	0.9	0.2	3.5	5.4	0.3
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	7.2	14.2	14.5	4.5	21.2	10.3	15.0	14.4	4.2	7.8	17.0	2.1
LnGrp Delay(d),s/veh	64.3	34.9	34.9	59.0	43.6	26.4	78.5	35.0	24.9	56.8	46.1	27.1
LnGrp LOS	E	C	C	E	D	C	E	C	C	E	D	C
Approach Vol, veh/h		880			1320			1010			1014	
Approach Delay, s/veh		42.3			42.0			44.2			47.9	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.6	46.5	23.9	37.0	15.2	44.0	16.8	44.0				
Change Period (Y+Rc), s	5.5	5.5	5.6	5.6	5.5	5.5	5.6	5.6				
Max Green Setting (Gmax), s	11.5	35.5	19.4	31.4	11.5	35.5	19.4	31.4				
Max Q Clear Time (g_c+I1), s	7.0	19.4	18.2	23.6	9.6	30.5	10.8	20.7				
Green Ext Time (p_c), s	0.1	12.0	0.1	5.9	0.1	4.3	0.4	7.7				
Intersection Summary												
HCM 2010 Ctrl Delay			44.0									
HCM 2010 LOS			D									
Notes												
User approved changes to right turn type.												

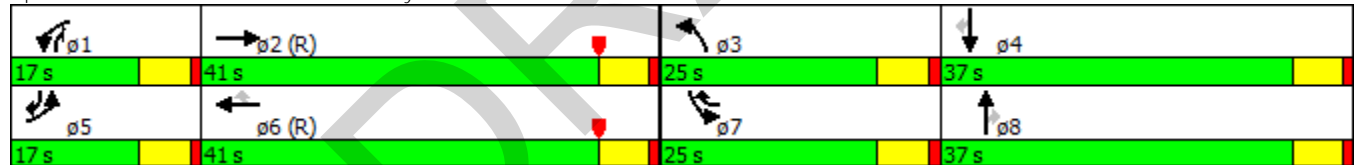


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	212	573	141	870	243	227	633	100	245	672	47
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	7	3	8	1	7	4	5
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6 7	3	8	8 1	7	4	4 5
Switch Phase											
Minimum Initial (s)	5.0	12.0	5.0	12.0	5.0	5.0	12.0	5.0	5.0	12.0	5.0
Minimum Split (s)	10.5	17.5	10.5	17.5	10.6	10.6	17.6	10.5	10.6	17.6	10.5
Total Split (s)	17.0	41.0	17.0	41.0	25.0	25.0	37.0	17.0	25.0	37.0	17.0
Total Split (%)	14.2%	34.2%	14.2%	34.2%	20.8%	20.8%	30.8%	14.2%	20.8%	30.8%	14.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.6	4.6	4.6	4.5	4.6	4.6	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.6	5.6	5.6	5.5	5.6	5.6	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	Max	None

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 68 (57%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
























Splits and Phases: 9: Acadian Thruway & Perkins Road



HCM 2010 Signalized Intersection Summary
2017 Existing PM

Acadian at Perkins

6/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	295	881	54	163	874	202	158	783	139	380	477	41
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1881	1881	1881	1881	1900	1881	1900	1900
Adj Flow Rate, veh/h	298	890	55	165	883	204	160	791	140	384	482	41
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	2	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	1	1	1	1	0	1	0	0
Cap, veh/h	349	1443	89	215	1358	804	183	892	502	428	978	597
Arrive On Green	0.10	0.42	0.42	0.06	0.38	0.38	0.10	0.25	0.25	0.12	0.27	0.27
Sat Flow, veh/h	3510	3454	213	3510	3574	1599	1792	3574	1615	3476	3610	1611
Grp Volume(v), veh/h	298	465	480	165	883	204	160	791	140	384	482	41
Grp Sat Flow(s),veh/h/ln	1755	1805	1862	1755	1787	1599	1792	1787	1615	1738	1805	1611
Q Serve(g_s), s	12.5	30.3	30.3	6.9	30.5	10.9	13.2	32.0	9.8	16.3	16.9	2.5
Cycle Q Clear(g_c), s	12.5	30.3	30.3	6.9	30.5	10.9	13.2	32.0	9.8	16.3	16.9	2.5
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	349	754	778	215	1358	804	183	892	502	428	978	597
V/C Ratio(X)	0.85	0.62	0.62	0.77	0.65	0.25	0.88	0.89	0.28	0.90	0.49	0.07
Avail Cap(c_a), veh/h	456	754	778	456	1358	804	232	939	523	450	978	597
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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	34.2	34.2	69.3	38.3	21.2	66.4	54.2	39.0	64.8	46.0	30.5
Incr Delay (d2), s/veh	10.9	3.8	3.6	4.2	2.4	0.8	23.5	10.2	0.4	19.5	1.8	0.2
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	10.8	22.4	23.0	6.3	22.0	8.6	12.3	23.9	7.9	13.9	13.5	2.0
LnGrp Delay(d),s/veh	77.4	38.0	37.9	73.6	40.7	22.0	89.9	64.4	39.4	84.3	47.8	30.8
LnGrp LOS	E	D	D	E	D	C	F	E	D	F	D	C
Approach Vol, veh/h		1243			1252			1091			907	
Approach Delay, s/veh		47.4			42.0			65.0			62.5	
Approach LOS		D			D			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.7	68.2	20.9	46.2	20.4	62.5	24.1	43.1				
Change Period (Y+Rc), s	5.5	5.5	5.6	5.6	5.5	5.5	5.6	5.6				
Max Green Setting (Gmax), s	19.5	49.5	19.4	39.4	19.5	49.5	19.4	39.4				
Max Q Clear Time (g_c+1), s	8.9	32.3	15.2	18.9	14.5	32.5	18.3	34.0				
Green Ext Time (p_c), s	0.3	13.6	0.1	11.8	0.4	13.5	0.1	3.5				
Intersection Summary												
HCM 2010 Ctrl Delay			53.2									
HCM 2010 LOS			D									
Notes												
User approved changes to right turn type.												

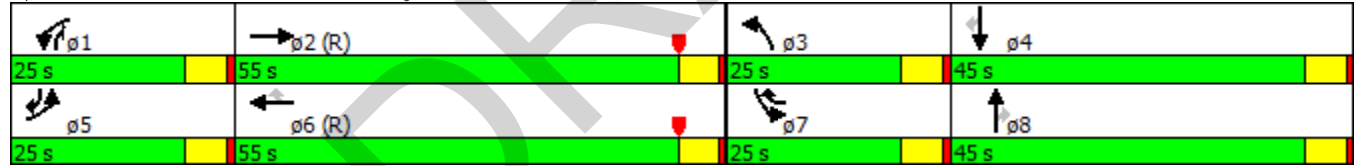


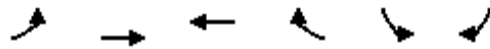
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕	↖↗	↕	↖	↖	↕	↖	↖↗	↕	↖
Volume (vph)	295	881	163	874	202	158	783	139	380	477	41
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	7	3	8	1	7	4	5
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	7	3	8	1	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	12.0	5.0	12.0	5.0	5.0	12.0	5.0	5.0	12.0	5.0
Minimum Split (s)	10.5	18.0	10.5	18.0	10.6	10.6	18.0	10.5	10.6	18.0	10.5
Total Split (s)	25.0	55.0	25.0	55.0	25.0	25.0	45.0	25.0	25.0	45.0	25.0
Total Split (%)	16.7%	36.7%	16.7%	36.7%	16.7%	16.7%	30.0%	16.7%	16.7%	30.0%	16.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.6	4.6	4.6	4.5	4.6	4.6	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.6	5.6	5.6	5.5	5.6	5.6	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	Max	None

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 60 (40%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 9: Acadian Thruway & Perkins Road





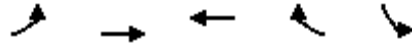
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↶	↷	↶	↷
Volume (veh/h)	45	606	476	703	299	28
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1863	1863	1855	1900
Adj Flow Rate, veh/h	46	618	486	0	305	0
Adj No. of Lanes	1	2	1	1	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	1	2	2	0	0
Cap, veh/h	593	2569	1194	1015	337	0
Arrive On Green	0.03	0.72	0.64	0.00	0.19	0.00
Sat Flow, veh/h	1810	3668	1863	1583	1761	0
Grp Volume(v), veh/h	46	618	486	0	306	0
Grp Sat Flow(s),veh/h/ln	1810	1787	1863	1583	1767	0
Q Serve(g_s), s	1.0	7.1	15.2	0.0	20.3	0.0
Cycle Q Clear(g_c), s	1.0	7.1	15.2	0.0	20.3	0.0
Prop In Lane	1.00			1.00	1.00	0.00
Lane Grp Cap(c), veh/h	593	2569	1194	1015	338	0
V/C Ratio(X)	0.08	0.24	0.41	0.00	0.91	0.00
Avail Cap(c_a), veh/h	610	2569	1194	1015	663	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	7.2	5.7	10.5	0.0	47.5	0.0
Incr Delay (d2), s/veh	0.0	0.2	1.0	0.0	7.0	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	0.9	6.3	12.7	0.0	15.9	0.0
LnGrp Delay(d),s/veh	7.2	6.0	11.5	0.0	54.5	0.0
LnGrp LOS	A	A	B		D	
Approach Vol, veh/h		664	486		306	
Approach Delay, s/veh		6.1	11.5		54.5	
Approach LOS		A	B		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		91.6		28.4	9.3	82.3		
Change Period (Y+Rc), s		5.4		5.4	5.4	5.4		
Max Green Setting (Gmax), s		64.6		45.0	5.0	54.2		
Max Q Clear Time (g_c+I1), s		9.1		22.3	3.0	17.2		
Green Ext Time (p_c), s		20.0		0.6	0.0	17.1		

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

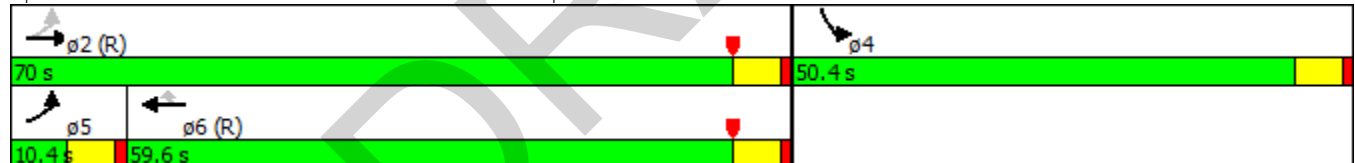


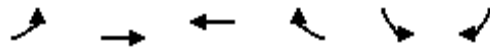
Lane Group	EBL	EBT	WBT	WBR	SBL
Lane Configurations	↖	↗↗	↗	↖	↖↖
Volume (vph)	45	606	476	703	299
Turn Type	pm+pt	NA	NA	Perm	Prot
Protected Phases	5	2	6		4
Permitted Phases	2			6	
Detector Phase	5	2	6	6	4
Switch Phase					
Minimum Initial (s)	5.0	20.0	20.0	20.0	15.0
Minimum Split (s)	10.4	25.4	25.4	25.4	20.4
Total Split (s)	10.4	70.0	59.6	59.6	50.4
Total Split (%)	8.6%	58.1%	49.5%	49.5%	41.9%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	5.4	5.4
Lead/Lag	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	C-Min	None

Intersection Summary

Cycle Length: 120.4
 Actuated Cycle Length: 120.4
 Offset: 83 (69%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Perkins Road & I-10 EB off ramp





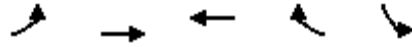
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↶	↷	↶	↷
Volume (veh/h)	30	973	609	495	128	19
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1881	1881	1863	1900	1900
Adj Flow Rate, veh/h	33	1069	669	0	141	0
Adj No. of Lanes	1	2	1	1	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	1	1	2	0	0
Cap, veh/h	538	2840	1362	1146	214	0
Arrive On Green	0.03	0.79	0.72	0.00	0.12	0.00
Sat Flow, veh/h	1757	3668	1881	1583	1797	0
Grp Volume(v), veh/h	33	1069	669	0	142	0
Grp Sat Flow(s),veh/h/ln	1757	1787	1881	1583	1810	0
Q Serve(g_s), s	0.6	11.0	19.0	0.0	9.4	0.0
Cycle Q Clear(g_c), s	0.6	11.0	19.0	0.0	9.4	0.0
Prop In Lane	1.00			1.00	0.99	0.00
Lane Grp Cap(c), veh/h	538	2840	1362	1146	216	0
V/C Ratio(X)	0.06	0.38	0.49	0.00	0.66	0.00
Avail Cap(c_a), veh/h	771	2840	1362	1146	377	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	5.3	3.8	7.4	0.0	52.6	0.0
Incr Delay (d2), s/veh	0.0	0.4	1.3	0.0	2.5	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	0.5	9.3	15.6	0.0	8.5	0.0
LnGrp Delay(d),s/veh	5.3	4.1	8.7	0.0	55.2	0.0
LnGrp LOS	A	A	A		E	
Approach Vol, veh/h		1102	669		142	
Approach Delay, s/veh		4.2	8.7		55.2	
Approach LOS		A	A		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		104.7		20.3	8.8	95.9		
Change Period (Y+Rc), s		5.4		5.4	5.4	5.4		
Max Green Setting (Gmax), s		88.6		26.0	20.0	63.2		
Max Q Clear Time (g_c+I1), s		13.0		11.4	2.6	21.0		
Green Ext Time (p_c), s		45.8		0.2	0.0	31.0		

Intersection Summary	
HCM 2010 Ctrl Delay	9.5
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL
Lane Configurations	↖	↕	↕	↗	↘
Volume (vph)	30	973	609	495	128
Turn Type	pm+pt	NA	NA	Perm	Prot
Protected Phases	5	2	6		4
Permitted Phases	2			6	
Detector Phase	5	2	6	6	4
Switch Phase					
Minimum Initial (s)	5.0	20.0	20.0	20.0	15.0
Minimum Split (s)	25.4	25.4	25.4	25.4	20.4
Total Split (s)	25.4	94.0	68.6	68.6	31.4
Total Split (%)	20.3%	75.0%	54.7%	54.7%	25.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	5.4	5.4
Lead/Lag	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	C-Min	None

Intersection Summary

Cycle Length: 125.4
 Actuated Cycle Length: 125.4
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Perkins Road & I-10 EB off ramp



HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/4/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB west of Perkins off ramp		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5356	Heavy Vehicle Adjustment Factor (fHV)	0.885
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	2101
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.93
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	52.8
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	39.8
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/4/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB west of Perkins off ramp		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4848	Heavy Vehicle Adjustment Factor (fhv)	0.901
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	1868
Total Trucks, %	11.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.83
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.9
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	34.0
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Freeway Diverge Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA- I-10 EB Diverge at Perkins Rd		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Deceleration Length (L _D), ft	1500	150
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V _i), veh/h	5356	327
Peak Hour Factor (PHF)	0.96	0.92
Total Trucks, %	13.00	2.40
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	0.977
Flow Rate (v _i), pc/h	6304	364
Capacity (c), pc/h	6900	1900
Volume-to-Capacity Ratio (v/c)	0.91	0.19

Speed and Density

Upstream Equilibrium Distance (L _{EQ}), ft	-	Density in Ramp Influence Area (D _R), pc/mi/ln	36.0
Distance to Upstream Ramp (L _{UP}), ft	4700	Speed Index (D _S)	0.526
Downstream Equilibrium Distance (L _{EQ}), ft	227.1	Flow Outer Lanes (v _{OA}), pc/h/ln	2459
Distance to Downstream Ramp (L _{DOWN}), ft	850	Off-Ramp Influence Area Speed (S _R), mi/h	50.5
Prop. Freeway Vehicles in Lane 1 and 2 (P _{FD})	0.586	Outer Lanes Freeway Speed (S _O), mi/h	60.1
Flow in Lanes 1 and 2 (v ₁₂), pc/h	3845	Ramp Junction Speed (S), mi/h	53.9
Flow Entering Ramp-Infl. Area (v _{R12}), pc/h	-	Average Density (D), pc/mi/ln	39.0
Level of Service (LOS)	E		

HCS7 Freeway Diverge Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA- I-10 EB Diverge at Perkins Rd		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Deceleration Length (L _D), ft	1500	150
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V _i), veh/h	4848	147
Peak Hour Factor (PHF)	0.96	0.67
Total Trucks, %	11.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	1.000
Flow Rate (v _i), pc/h	5605	219
Capacity (c), pc/h	6900	1900
Volume-to-Capacity Ratio (v/c)	0.81	0.12

Speed and Density

Upstream Equilibrium Distance (L _{EQ}), ft	-	Density in Ramp Influence Area (D _R), pc/mi/ln	33.0
Distance to Upstream Ramp (L _{UP}), ft	4700	Speed Index (D _S)	0.513
Downstream Equilibrium Distance (L _{EQ}), ft	140.8	Flow Outer Lanes (v _{OA}), pc/h/ln	2101
Distance to Downstream Ramp (L _{DOWN}), ft	850	Off-Ramp Influence Area Speed (S _R), mi/h	50.8
Prop. Freeway Vehicles in Lane 1 and 2 (P _{FD})	0.610	Outer Lanes Freeway Speed (S _O), mi/h	61.5
Flow in Lanes 1 and 2 (v ₁₂), pc/h	3504	Ramp Junction Speed (S), mi/h	54.3
Flow Entering Ramp-Infl. Area (v _{R12}), pc/h	-	Average Density (D), pc/mi/ln	34.4
Level of Service (LOS)	D		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB between Perkins and Acadian		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.1
Right-Side Lateral Clearance, ft	0		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5029	Heavy Vehicle Adjustment Factor (fhv)	0.885
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	1973
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2231
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2231
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.88
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	52.8
Right-Side Lateral Clearance Adj. (fRLC)	2.4	Density (D), pc/mi/ln	37.4
Total Ramp Density Adjustment	4.5	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	53.1		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB between Perkins and Acadian		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.1
Right-Side Lateral Clearance, ft	0		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	4701	Heavy Vehicle Adjustment Factor (fhv)	0.901
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	1812
Total Trucks, %	11.00	Capacity (c), pc/h/ln	2231
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2231
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.81
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.1
Right-Side Lateral Clearance Adj. (fRLC)	2.4	Density (D), pc/mi/ln	34.1
Total Ramp Density Adjustment	4.5	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	53.1		

HCS7 Freeway Diverge Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA- I-10 EB Diverge at Acadian Thruway		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Deceleration Length (L _D), ft	1500	110
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V _i), veh/h	5029	146
Peak Hour Factor (PHF)	0.96	0.79
Total Trucks, %	13.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	1.000
Flow Rate (v _i), pc/h	5919	185
Capacity (c), pc/h	6900	1900
Volume-to-Capacity Ratio (v/c)	0.86	0.10

Speed and Density

Upstream Equilibrium Distance (L _{EQ}), ft	-	Density in Ramp Influence Area (D _R), pc/mi/ln	34.6
Distance to Upstream Ramp (L _{UP}), ft	850	Speed Index (D _S)	0.510
Downstream Equilibrium Distance (L _{EQ}), ft	-	Flow Outer Lanes (v _{OA}), pc/h/ln	2271
Distance to Downstream Ramp (L _{DOWN}), ft	1930	Off-Ramp Influence Area Speed (S _R), mi/h	50.8
Prop. Freeway Vehicles in Lane 1 and 2 (P _{FD})	0.604	Outer Lanes Freeway Speed (S _O), mi/h	60.9
Flow in Lanes 1 and 2 (v ₁₂), pc/h	3648	Ramp Junction Speed (S), mi/h	54.3
Flow Entering Ramp-Infl. Area (v _{R12}), pc/h	-	Average Density (D), pc/mi/ln	36.3
Level of Service (LOS)	D		

HCS7 Freeway Diverge Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA- I-10 EB Diverge at Acadian Thruway		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Deceleration Length (L _D), ft	1500	110
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V _i), veh/h	4701	105
Peak Hour Factor (PHF)	0.96	0.86
Total Trucks, %	11.00	2.60
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.975
Flow Rate (v _i), pc/h	5435	125
Capacity (c), pc/h	6900	1900
Volume-to-Capacity Ratio (v/c)	0.79	0.07

Speed and Density

Upstream Equilibrium Distance (L _{EQ}), ft	-	Density in Ramp Influence Area (D _R), pc/mi/ln	32.6
Distance to Upstream Ramp (L _{UP}), ft	850	Speed Index (D _S)	0.504
Downstream Equilibrium Distance (L _{EQ}), ft	-	Flow Outer Lanes (v _{OA}), pc/h/ln	2028
Distance to Downstream Ramp (L _{DOWN}), ft	1930	Off-Ramp Influence Area Speed (S _R), mi/h	50.9
Prop. Freeway Vehicles in Lane 1 and 2 (P _{FD})	0.618	Outer Lanes Freeway Speed (S _O), mi/h	61.8
Flow in Lanes 1 and 2 (v ₁₂), pc/h	3407	Ramp Junction Speed (S), mi/h	54.5
Flow Entering Ramp-Infl. Area (v _{R12}), pc/h	-	Average Density (D), pc/mi/ln	33.2
Level of Service (LOS)	D		

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #1		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	4883	624	641	0
Peak Hour Factor (PHF)	0.96	0.93	0.89	0.96
Total Trucks, %	13.00	0.60	2.00	13.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	0.994	0.980	0.885
Flow Rate (v _i), pc/h	5747	675	735	0
Weaving Flow Rate (v _w), pc/h	675	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	6482	Density-Based Capacity (c _{IDL}), pc/h/ln		2097
Total Flow Rate (v), pc/h	7157	Demand Flow-Based Capacity (c _W), pc/h		25532
Volume Ratio (VR)	0.094	Weaving Segment Capacity (c _W), veh/h		7423
Minimum Lane Change Rate (LC _{MIN}), lc/h	675	Adjusted Weaving Area Capacity, pc/h		8201
Maximum Weaving Length (L _{MAX}), ft	3481	Volume-to-Capacity Ratio (v/c)		0.87

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	896	Average Weaving Speed (S _w), mi/h	45.9
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	1014	Average Non-Weaving Speed (S _{NW}), mi/h	46.6
Weaving Lane Change Rate (LC _w), lc/h	990	Average Speed (S), mi/h	46.5
Total Lane Change Rate (LC _{AI}), lc/h	2004	Density (D), pc/mi/ln	38.5
Weaving Intensity Factor (W)	0.454	Level of Service (LOS)	E

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #1		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	4596	891	494	0
Peak Hour Factor (PHF)	0.96	0.94	0.77	0.96
Total Trucks, %	11.00	0.50	2.00	11.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.995	0.980	0.901
Flow Rate (v _i), pc/h	5314	953	655	0
Weaving Flow Rate (v _w), pc/h	953	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	5969	Density-Based Capacity (c _{IDL}), pc/h/ln		2064
Total Flow Rate (v), pc/h	6922	Demand Flow-Based Capacity (c _w), pc/h		17391
Volume Ratio (VR)	0.138	Weaving Segment Capacity (c _w), veh/h		7439
Minimum Lane Change Rate (LC _{MIN}), lc/h	953	Adjusted Weaving Area Capacity, pc/h		8075
Maximum Weaving Length (L _{MAX}), ft	3912	Volume-to-Capacity Ratio (v/c)		0.86

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	825	Average Weaving Speed (S _w), mi/h	45.3
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	908	Average Non-Weaving Speed (S _{NW}), mi/h	44.8
Weaving Lane Change Rate (LC _w), lc/h	1268	Average Speed (S), mi/h	44.9
Total Lane Change Rate (LC _{AI}), lc/h	2176	Density (D), pc/mi/ln	38.5
Weaving Intensity Factor (W)	0.484	Level of Service (LOS)	E

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #2		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	4242	1265	0	641
Peak Hour Factor (PHF)	0.96	0.93	0.89	0.96
Total Trucks, %	13.00	0.60	2.00	13.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	0.994	0.980	0.885
Flow Rate (v _i), pc/h	4993	1368	0	754
Weaving Flow Rate (v _w), pc/h	2122	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	4993	Density-Based Capacity (c _{NWL}), pc/h/ln		1938
Total Flow Rate (v), pc/h	7115	Demand Flow-Based Capacity (c _w), pc/h		8054
Volume Ratio (VR)	0.298	Weaving Segment Capacity (c _w), veh/h		6861
Minimum Lane Change Rate (LC _{MIN}), lc/h	2122	Adjusted Weaving Area Capacity, pc/h		7572
Maximum Weaving Length (L _{MAX}), ft	5562	Volume-to-Capacity Ratio (v/c)		0.94

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #2		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	4102	1385	0	494
Peak Hour Factor (PHF)	0.96	0.94	0.77	0.96
Total Trucks, %	11.00	0.50	2.00	11.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.995	0.980	0.901
Flow Rate (v _i), pc/h	4742	1481	0	571
Weaving Flow Rate (v _w), pc/h	2052	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	4742	Density-Based Capacity (c _{DWL}), pc/h/ln		1935
Total Flow Rate (v), pc/h	6794	Demand Flow-Based Capacity (c _{DW}), pc/h		7947
Volume Ratio (VR)	0.302	Weaving Segment Capacity (c _w), veh/h		6974
Minimum Lane Change Rate (LC _{MIN}), lc/h	2052	Adjusted Weaving Area Capacity, pc/h		7568
Maximum Weaving Length (L _{MAX}), ft	5605	Volume-to-Capacity Ratio (v/c)		0.90

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #3		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	4563	944	321	320
Peak Hour Factor (PHF)	0.96	0.93	0.89	0.96
Total Trucks, %	13.00	0.60	2.00	13.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	0.994	0.980	0.885
Flow Rate (v _i), pc/h	5371	1021	368	377
Weaving Flow Rate (v _w), pc/h	1398		Freeway Max Capacity (c _{IFL}), pc/h/ln	2300
Non-Weaving Flow Rate (v _{NW}), pc/h	5739		Density-Based Capacity (c _{IDL}), pc/h/ln	2019
Total Flow Rate (v), pc/h	7137		Demand Flow-Based Capacity (c _{IM}), pc/h	12245
Volume Ratio (VR)	0.196		Weaving Segment Capacity (c _w), veh/h	7147
Minimum Lane Change Rate (LC _{MIN}), lc/h	1398		Adjusted Weaving Area Capacity, pc/h	7893
Maximum Weaving Length (L _{MAX}), ft	4495		Volume-to-Capacity Ratio (v/c)	0.90

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	794	Average Weaving Speed (S _w), mi/h	44.0
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	861	Average Non-Weaving Speed (S _{NW}), mi/h	41.4
Weaving Lane Change Rate (LC _w), lc/h	1713	Average Speed (S), mi/h	41.9
Total Lane Change Rate (LC _{AI}), lc/h	2574	Density (D), pc/mi/ln	42.6
Weaving Intensity Factor (W)	0.553	Level of Service (LOS)	E

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #3		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	4349	1138	247	247
Peak Hour Factor (PHF)	0.96	0.94	0.77	0.96
Total Trucks, %	11.00	0.50	2.00	11.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.995	0.980	0.901
Flow Rate (v _i), pc/h	5028	1217	327	286
Weaving Flow Rate (v _w), pc/h	1503	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	5355	Density-Based Capacity (c _{IDL}), pc/h/ln		2001
Total Flow Rate (v), pc/h	6858	Demand Flow-Based Capacity (c _w), pc/h		10959
Volume Ratio (VR)	0.219	Weaving Segment Capacity (c _w), veh/h		7212
Minimum Lane Change Rate (LC _{MIN}), lc/h	1503	Adjusted Weaving Area Capacity, pc/h		7827
Maximum Weaving Length (L _{MAX}), ft	4731	Volume-to-Capacity Ratio (v/c)		0.88

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	740	Average Weaving Speed (S _w), mi/h	43.9
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	782	Average Non-Weaving Speed (S _{NW}), mi/h	40.9
Weaving Lane Change Rate (LC _w), lc/h	1818	Average Speed (S), mi/h	41.5
Total Lane Change Rate (LC _{AI}), lc/h	2600	Density (D), pc/mi/ln	41.3
Weaving Intensity Factor (W)	0.557	Level of Service (LOS)	E

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/12/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at College		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	4	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	1200
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	5907	456
Peak Hour Factor (PHF)	0.94	0.81
Total Trucks, %	6.00	1.20
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.943	0.988
Flow Rate (v_i), pc/h	6664	570
Capacity (c), pc/h	9200	2000
Volume-to-Capacity Ratio (v/c)	0.79	0.29

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	23.0
Distance to Upstream Ramp (L_{UP}), ft	1000	Speed Index (M_s)	0.336
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	1999
Distance to Downstream Ramp (L_{DOWN}), ft	2650	On-Ramp Influence Area Speed (S_R), mi/h	54.0
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.147	Outer Lanes Freeway Speed (S_o), mi/h	54.6
Flow in Lanes 1 and 2 (v_{12}), pc/h	2666	Ramp Junction Speed (S), mi/h	54.3
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	3236	Average Density (D), pc/mi/ln	33.3
Level of Service (LOS)	C		

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/12/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at College		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	4	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	1200
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	5446	359
Peak Hour Factor (PHF)	0.99	0.88
Total Trucks, %	8.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.926	1.000
Flow Rate (v_i), pc/h	5941	408
Capacity (c), pc/h	9200	2000
Volume-to-Capacity Ratio (v/c)	0.69	0.20

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	19.6
Distance to Upstream Ramp (L_{UP}), ft	1000	Speed Index (M_s)	0.300
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	1783
Distance to Downstream Ramp (L_{DOWN}), ft	2650	On-Ramp Influence Area Speed (S_R), mi/h	54.6
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.167	Outer Lanes Freeway Speed (S_o), mi/h	55.4
Flow in Lanes 1 and 2 (v_{12}), pc/h	2376	Ramp Junction Speed (S), mi/h	55.0
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	2784	Average Density (D), pc/mi/ln	28.9
Level of Service (LOS)	B		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/12/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB between College and Acadian		

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6363	Heavy Vehicle Adjustment Factor (fhv)	0.943
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	1794
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.80
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	55.0
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	32.6
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/12/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB between College and Acadian		

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5805	Heavy Vehicle Adjustment Factor (fhv)	0.926
Peak Hour Factor	0.99	Flow Rate (Vp), pc/h/ln	1583
Total Trucks, %	8.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.70
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	55.0
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	28.8
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/12/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at Acadian		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	232
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	5114	148
Peak Hour Factor (PHF)	0.94	0.92
Total Trucks, %	6.00	3.10
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.943	0.970
Flow Rate (v_i), pc/h	5769	166
Capacity (c), pc/h	6900	2000
Volume-to-Capacity Ratio (v/c)	0.86	0.08

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	801.3	Density in Ramp Influence Area (D_R), pc/mi/ln	31.6
Distance to Upstream Ramp (L_{UP}), ft	2400	Speed Index (M_s)	0.439
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	2400
Distance to Downstream Ramp (L_{DOWN}), ft	1482	On-Ramp Influence Area Speed (S_R), mi/h	52.1
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.584	Outer Lanes Freeway Speed (S_o), mi/h	52.9
Flow in Lanes 1 and 2 (v_{12}), pc/h	3369	Ramp Junction Speed (S), mi/h	52.4
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	3535	Average Density (D), pc/mi/ln	37.8
Level of Service (LOS)	D		

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/12/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at Acadian		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	232
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	4580	189
Peak Hour Factor (PHF)	0.99	0.86
Total Trucks, %	8.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.926	0.990
Flow Rate (v_i), pc/h	4996	222
Capacity (c), pc/h	6900	2000
Volume-to-Capacity Ratio (v/c)	0.76	0.11

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	647.9	Density in Ramp Influence Area (D_R), pc/mi/ln	28.5
Distance to Upstream Ramp (L_{UP}), ft	2400	Speed Index (M_s)	0.395
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	2078
Distance to Downstream Ramp (L_{DOWN}), ft	1482	On-Ramp Influence Area Speed (S_R), mi/h	52.9
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.584	Outer Lanes Freeway Speed (S_o), mi/h	54.3
Flow in Lanes 1 and 2 (v_{12}), pc/h	2918	Ramp Junction Speed (S), mi/h	53.4
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	3140	Average Density (D), pc/mi/ln	32.6
Level of Service (LOS)	D		

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/12/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at Perkins		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	441
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	5262	748
Peak Hour Factor (PHF)	0.94	0.90
Total Trucks, %	6.00	1.90
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.943	0.981
Flow Rate (v_i), pc/h	5936	847
Capacity (c), pc/h	6900	2000
Volume-to-Capacity Ratio (v/c)	0.98	0.42

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	36.5
Distance to Upstream Ramp (L_{UP}), ft	1440	Speed Index (M_s)	0.599
Downstream Equilibrium Distance (L_{EQ}), ft	3668.9	Flow Outer Lanes (v_{OA}), pc/h/ln	2410
Distance to Downstream Ramp (L_{DOWN}), ft	3373	On-Ramp Influence Area Speed (S_R), mi/h	49.2
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.594	Outer Lanes Freeway Speed (S_o), mi/h	52.8
Flow in Lanes 1 and 2 (v_{12}), pc/h	3526	Ramp Junction Speed (S), mi/h	50.4
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	4373	Average Density (D), pc/mi/ln	44.9
Level of Service (LOS)	E		

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/12/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at Perkins		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	441
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	4769	525
Peak Hour Factor (PHF)	0.99	0.79
Total Trucks, %	8.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.926	0.980
Flow Rate (v_i), pc/h	5202	678
Capacity (c), pc/h	6900	2000
Volume-to-Capacity Ratio (v/c)	0.85	0.34

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	31.7
Distance to Upstream Ramp (L_{UP}), ft	1440	Speed Index (M_s)	0.455
Downstream Equilibrium Distance (L_{EQ}), ft	2121.7	Flow Outer Lanes (v_{OA}), pc/h/ln	2133
Distance to Downstream Ramp (L_{DOWN}), ft	3373	On-Ramp Influence Area Speed (S_R), mi/h	51.8
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.590	Outer Lanes Freeway Speed (S_o), mi/h	54.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	3069	Ramp Junction Speed (S), mi/h	52.6
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	3747	Average Density (D), pc/mi/ln	37.3
Level of Service (LOS)	D		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/12/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB west of Perkins on ramp		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6010	Heavy Vehicle Adjustment Factor (fhv)	0.943
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	2260
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.00
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/12/2019
Agency	USI - 10-085-2	Analysis Year	2017
Jurisdiction	LADOTD	Time Period Analyzed	Existing PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB west of Perkins on ramp		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	5294	Heavy Vehicle Adjustment Factor (fhv)	0.926
Peak Hour Factor	0.99	Flow Rate (Vp), pc/h/ln	1925
Total Trucks, %	8.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.86
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.6
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	35.3
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

Quality Assurance/Quality Control Form

I-10 Corridor Improvement Stage 1 Environmental Assessment

S.P. No. H.004100

Baton Rouge, Louisiana

Document: **Acadian / Perkins – Existing Network Analysis**

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Prepared for:



Appendix B QAQC

Task	Chapter/Appendix	Done by and Date	Checked by and Date
Archive Appendix B pdf with "submittal" and the submittal date in the title U:\Projects\ENGPROJ\2010Proj\10-085-2 EA\Acadian Perkins IMR\PDF Acadian\App B Existing Network Analysis\old	App B	SJT 6/3/2019	LTP 6/4/19
Delete pdf pages and data in tables that will be updated	App B	SJT 6/3/2019	LTP 6/4/19
Re-pdf reports in Existing AM and PM Synchro using HCM 10 report	App B	SJT 6/12/19	LTP 6/25/19
Replace new HCM 10 Synchro reports in Appendix	App B	SJT 6/12/19	LTP 6/25/20
Table 2.1 Existing MOE's updated to match HCM 10 reports -	App B	SJT 6/25/19	LTP 6/25/19
Update input parameters Table for Merge/Diverge/Freeway and add College DR and freeway segments	App B	SJT 6/3/2019	LTP 6/17/19
Update Summary of inputs for Merge/Diverge and add College and freeway	App B	SJT 6/3/2019	LTP 6/4/19
Prepare weave sensitivity volumes	App B	SJT 6/4/19	LTP 6/5/19
Prepare weave sensitivity figures	App B	LTP 6/5/19	SJT 6/24/19
Update appendix with weave sensitivity figures	App B	SJT 6/24/19	LTP 6/25/19
Update peak hour factors for any new freeway sections and College ramps	App B	SJT 6/3/2019	LTP 6/4/19
Update Existing Merge/Diverge/Freeway Analyses - see next tab for analyses	App B	SJT 6/4 - 6/12/2019	LTP 6/18/19
Update Appendix with new Merge/Diverge/Freeway analyses pdf's	App B	SJT 6/12/19	LTP 6/18/19
Table 2.2 Merge/Diverge Updated to match revised Analyses - COPY FROM CH 2 PUT BACK INTO APPENDIX	App B	SJT 6/24/2019	LTP 6/25/19
take #'s off appendix pages	App B	SJT 6/24/2019	LTP 6/25/19
create a pdf and print	App B	SJT 8/5/19	LTP 8/5/19
check the print copy	App B	SJT 8/5/19	LTP 8/5/19
Update QAQC	App B	SJT 8/5/19	LTP 8/5/19
Put analysis files in a Zip folder for electronic submittal	App B	SJT 8/6/19	LTP 8/6/19

Sydney Tate

Sydney J. Tate, P.E.

8/6/19

Date

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8/6/19

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DRAFT

ACADIAN / PERKINS IMR

Appendix C

Analysis Input Parameters.....

No Build Network Analysis.....

MOE Comparison Table.....

2040 Build Volume Estimation Methodology.....

QA-QC Documentation.....



HCS Freeway Merge/Diverge analysis No Build Conditions

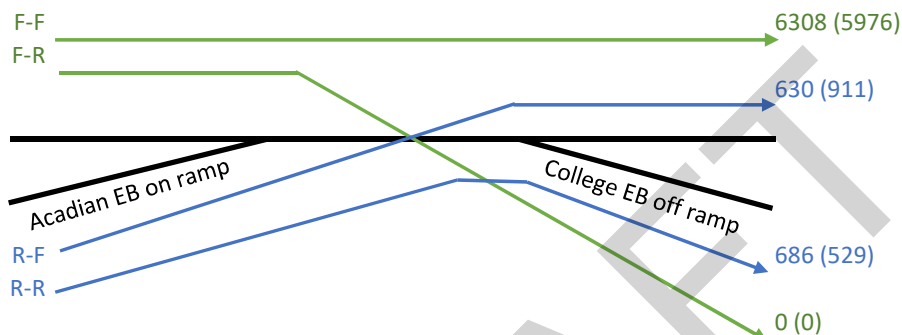
INPUT	
Project Properties	
Analyst	Initials of person doing analysis
Agency	USI- 10-085-2
Analysis Year	2017
Project Description	I-10 Corridor Improvement Stage 1 EA - "analysis location"
Jurisdiction	LADOTD
Time Period	"Scenario AM"
Date	"Date of analysis"
Geometric Data	
Number of lanes	3
Freeway FFS	Posted speed
Freeway Length	default
Freeway Terrain Type	level
Freeway Grade	default
Freeway Grade Length	default
Highway or C-D Roadway	unchecked
Managed Lane	unchecked
Ramp Lanes	1
Ramp FFS	Posted advisory speed of ramp for diverge and default for merge (unless posted)
Ramp side	Right
Ramp Terrain Type	Level
Ramp Grade	default
Ramp Grade length	default
Total Ramp Density	Calculated using Google Earth
Right Side Clearance	Measured in Google Earth
Length of First Accel Lane	From previous analysis or measured in Google Earth
Length of Second Accel Lane	default
Demand Data	
Freeway Demand	I-10 mainline volume (DC Figure 2)
Freeway Peak Hour Factor	Calculated mainline PHF
Freeway Total Trucks	HV % from DCR reports Table 1.
Freeway Tractor-Trailers	default
Freeway Single Unit Trucks	default
Merge/Diverge Demand	On/Off ramp volume (DC Figure 2)
Ramp Peak Hour Factor	Calculated ramp PHF
Ramp Total Trucks	HV % from DCR reports (weighted average)
Ramp Single Unit Trucks	default
Ramp Tractor-Trailers	default
Adjustment Factors	
Freeway Driver Population	default
Freeway Weather Type	default
Freeway Speed Adjustment Factor	default
Freeway Capacity Adjustment Factor	default
Freeway Demand Adjustment Factor	default
Incident Type	default
Ramp Driver Population	default
Ramp Weather Type	default
Ramp Speed Adjustment Factor	default
Ramp Capacity Adjustment Factor	default
Ramp Demand Adjustment Factor	default
Adjacent Ramps	
Upstream Ramp	merge/diverge
Distance to Upstream Ramp	From previous analysis or measured in Google Earth
Upstream Ramp Terrain	default
Upstream Ramp Demand	On/Off ramp volume (DC Figure 2 - may not be the same DC report)
Upstream Ramp PHF	Calculated ramp PHF
Upstream Ramp Trucks	HV % from DCR reports (weighted average)
Downstream Ramp	merge/diverge
Distance to Downstream Ramp	From previous analysis or measured in Google Earth
Downstream Ramp Terrain	default
Downstream Ramp Demand	On/Off ramp volume (DC Figure 2 - may not be the same DC report)
Downstream Ramp PHF	Calculated mainline PHF
Downstream Ramp Trucks	HV % from DCR reports (weighted average)

I-10 EB No Build Weave Sensitivity Volumes

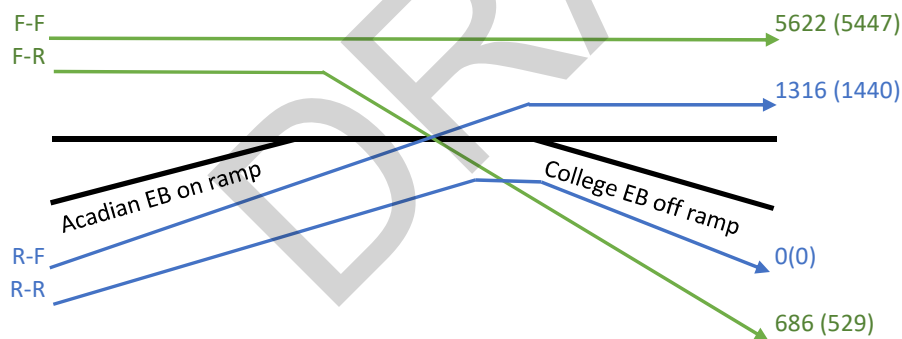
I-10 eastbound between Acadian and College is a weave. As there was insufficient data to determine weave maneuvers (freeway to freeway, freeway to ramp, ramp to freeway, and ramp to ramp), a volume sensitivity weave analysis was conducted. The following three (3) volume scenarios were considered:

- Case 1: 100% of vehicles exiting at College originate from Acadian
- Case 2: 100% of vehicles exiting at College originate from I-10 eastbound
- Case 3: 50% of vehicles exiting at College originate from Acadian and I-10 eastbound

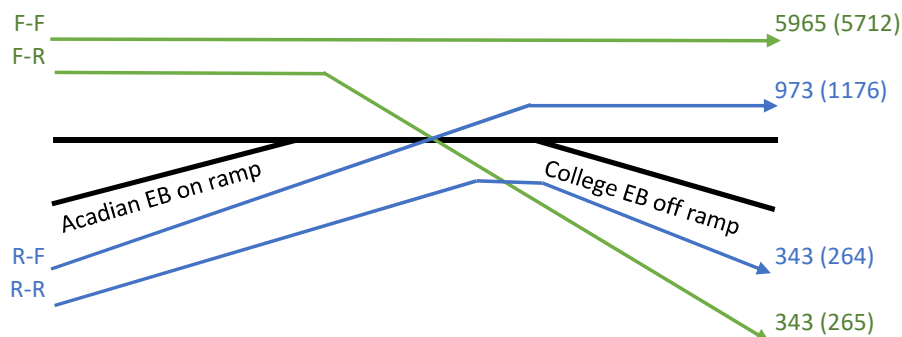
No Build: Case #1: All exiting volume from ramp
AM (PM)



No Build: Case #2: All exiting volume from freeway (*Discussed in Chapter 2)
AM (PM)



No Build: Case #3: 50% exiting volume from ramp, 50% from freeway
AM (PM)



HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB west of Perkins off ramp		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6823	Heavy Vehicle Adjustment Factor (fHV)	0.885
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	2677
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.19
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/4/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB west of Perkins off ramp		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6248	Heavy Vehicle Adjustment Factor (fhv)	0.901
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	2408
Total Trucks, %	11.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.07
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Freeway Diverge Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA- I-10 EB Diverge at Perkins Rd		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Deceleration Length (L _D), ft	1500	150
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V _i), veh/h	6823	363
Peak Hour Factor (PHF)	0.96	0.92
Total Trucks, %	13.00	2.40
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	0.977
Flow Rate (v _i), pc/h	8031	404
Capacity (c), pc/h	6900	1900
Volume-to-Capacity Ratio (v/c)	1.16	0.21

Speed and Density

Upstream Equilibrium Distance (L _{EQ}), ft	-	Density in Ramp Influence Area (D _R), pc/mi/ln	48.7
Distance to Upstream Ramp (L _{UP}), ft	4700	Speed Index (D _S)	-
Downstream Equilibrium Distance (L _{EQ}), ft	258.6	Flow Outer Lanes (v _{OA}), pc/h/ln	2700
Distance to Downstream Ramp (L _{DOWN}), ft	850	Off-Ramp Influence Area Speed (S _R), mi/h	50.5
Prop. Freeway Vehicles in Lane 1 and 2 (P _{FD})	0.541	Outer Lanes Freeway Speed (S _O), mi/h	59.2
Flow in Lanes 1 and 2 (v ₁₂), pc/h	5331	Ramp Junction Speed (S), mi/h	-
Flow Entering Ramp-Infl. Area (v _{R12}), pc/h	-	Average Density (D), pc/mi/ln	-
Level of Service (LOS)	F		

HCS7 Freeway Diverge Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA- I-10 EB Diverge at Perkins Rd		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Deceleration Length (L _D), ft	1500	150
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V _i), veh/h	6248	163
Peak Hour Factor (PHF)	0.96	0.67
Total Trucks, %	11.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	1.000
Flow Rate (v _i), pc/h	7223	243
Capacity (c), pc/h	6900	1900
Volume-to-Capacity Ratio (v/c)	1.05	0.13

Speed and Density

Upstream Equilibrium Distance (L _{EQ}), ft	-	Density in Ramp Influence Area (D _R), pc/mi/ln	41.8
Distance to Upstream Ramp (L _{UP}), ft	4700	Speed Index (D _S)	-
Downstream Equilibrium Distance (L _{EQ}), ft	156.8	Flow Outer Lanes (v _{OA}), pc/h/ln	2700
Distance to Downstream Ramp (L _{DOWN}), ft	850	Off-Ramp Influence Area Speed (S _R), mi/h	50.7
Prop. Freeway Vehicles in Lane 1 and 2 (P _{FD})	0.568	Outer Lanes Freeway Speed (S _O), mi/h	59.2
Flow in Lanes 1 and 2 (v ₁₂), pc/h	4523	Ramp Junction Speed (S), mi/h	-
Flow Entering Ramp-Infl. Area (v _{R12}), pc/h	-	Average Density (D), pc/mi/ln	-
Level of Service (LOS)	F		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB between Perkins and Acadian		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.1
Right-Side Lateral Clearance, ft	0		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6460	Heavy Vehicle Adjustment Factor (fhv)	0.885
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	2535
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2231
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2231
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.14
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (fRLC)	2.4	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.5	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFSadj), mi/h	53.1		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB between Perkins and Acadian		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.1
Right-Side Lateral Clearance, ft	0		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6085	Heavy Vehicle Adjustment Factor (fhv)	0.901
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	2345
Total Trucks, %	11.00	Capacity (c), pc/h/ln	2231
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2231
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.05
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (fRLC)	2.4	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.5	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFSadj), mi/h	53.1		

HCS7 Freeway Diverge Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA- I-10 EB Diverge at Acadian Thruway		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Deceleration Length (L _D), ft	1500	110
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V _i), veh/h	6460	152
Peak Hour Factor (PHF)	0.96	0.79
Total Trucks, %	13.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	1.000
Flow Rate (v _i), pc/h	7604	192
Capacity (c), pc/h	6900	1900
Volume-to-Capacity Ratio (v/c)	1.10	0.10

Speed and Density

Upstream Equilibrium Distance (L _{EQ}), ft	-	Density in Ramp Influence Area (D _R), pc/mi/ln	45.4
Distance to Upstream Ramp (L _{UP}), ft	850	Speed Index (D _S)	-
Downstream Equilibrium Distance (L _{EQ}), ft	-	Flow Outer Lanes (v _{OA}), pc/h/ln	2700
Distance to Downstream Ramp (L _{DOWN}), ft	1930	Off-Ramp Influence Area Speed (S _R), mi/h	50.8
Prop. Freeway Vehicles in Lane 1 and 2 (P _{FD})	0.561	Outer Lanes Freeway Speed (S _O), mi/h	59.2
Flow in Lanes 1 and 2 (v ₁₂), pc/h	4904	Ramp Junction Speed (S), mi/h	-
Flow Entering Ramp-Infl. Area (v _{R12}), pc/h	-	Average Density (D), pc/mi/ln	-
Level of Service (LOS)	F		

HCS7 Freeway Diverge Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA- I-10 EB Diverge at Acadian Thruway		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Deceleration Length (L _D), ft	1500	110
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V _i), veh/h	6085	109
Peak Hour Factor (PHF)	0.96	0.86
Total Trucks, %	11.00	2.60
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.975
Flow Rate (v _i), pc/h	7035	130
Capacity (c), pc/h	6900	1900
Volume-to-Capacity Ratio (v/c)	1.02	0.07

Speed and Density

Upstream Equilibrium Distance (L _{EQ}), ft	-	Density in Ramp Influence Area (D _R), pc/mi/ln	40.5
Distance to Upstream Ramp (L _{UP}), ft	850	Speed Index (D _S)	-
Downstream Equilibrium Distance (L _{EQ}), ft	-	Flow Outer Lanes (v _{OA}), pc/h/ln	2700
Distance to Downstream Ramp (L _{DOWN}), ft	1930	Off-Ramp Influence Area Speed (S _R), mi/h	50.9
Prop. Freeway Vehicles in Lane 1 and 2 (P _{FD})	0.578	Outer Lanes Freeway Speed (S _O), mi/h	59.2
Flow in Lanes 1 and 2 (v ₁₂), pc/h	4335	Ramp Junction Speed (S), mi/h	-
Flow Entering Ramp-Infl. Area (v _{R12}), pc/h	-	Average Density (D), pc/mi/ln	-
Level of Service (LOS)	F		

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #1		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	6308	630	686	0
Peak Hour Factor (PHF)	0.96	0.93	0.89	0.96
Total Trucks, %	13.00	0.60	2.00	13.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	0.994	0.980	0.885
Flow Rate (v _i), pc/h	7425	682	787	0
Weaving Flow Rate (v _w), pc/h	682	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	8212	Density-Based Capacity (c _{DWL}), pc/h/ln		2110
Total Flow Rate (v), pc/h	8894	Demand Flow-Based Capacity (c _{DW}), pc/h		31169
Volume Ratio (VR)	0.077	Weaving Segment Capacity (c _w), veh/h		7469
Minimum Lane Change Rate (LC _{MIN}), lc/h	0	Adjusted Weaving Area Capacity, pc/h		8284
Maximum Weaving Length (L _{MAX}), ft	3318	Volume-to-Capacity Ratio (v/c)		1.07

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #1		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	5976	911	529	0
Peak Hour Factor (PHF)	0.96	0.94	0.77	0.96
Total Trucks, %	11.00	0.50	2.00	11.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.995	0.980	0.901
Flow Rate (v _i), pc/h	6909	974	701	0
Weaving Flow Rate (v _w), pc/h	974	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	7610	Density-Based Capacity (c _{NWL}), pc/h/ln		2083
Total Flow Rate (v), pc/h	8584	Demand Flow-Based Capacity (c _w), pc/h		21239
Volume Ratio (VR)	0.113	Weaving Segment Capacity (c _w), veh/h		7507
Minimum Lane Change Rate (LC _{MIN}), lc/h	974	Adjusted Weaving Area Capacity, pc/h		8176
Maximum Weaving Length (L _{MAX}), ft	3666	Volume-to-Capacity Ratio (v/c)		1.05

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/5/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #2		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	5622	1316	0	686
Peak Hour Factor (PHF)	0.96	0.93	0.89	0.96
Total Trucks, %	13.00	0.60	2.00	13.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	0.994	0.980	0.885
Flow Rate (v _i), pc/h	6617	1424	0	807
Weaving Flow Rate (v _w), pc/h	2231	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	6617	Density-Based Capacity (c _{DWL}), pc/h/ln		1975
Total Flow Rate (v), pc/h	8848	Demand Flow-Based Capacity (c _{DW}), pc/h		9524
Volume Ratio (VR)	0.252	Weaving Segment Capacity (c _w), veh/h		6992
Minimum Lane Change Rate (LC _{MIN}), lc/h	0	Adjusted Weaving Area Capacity, pc/h		7747
Maximum Weaving Length (L _{MAX}), ft	5075	Volume-to-Capacity Ratio (v/c)		1.14

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #2		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	5447	1440	0	529
Peak Hour Factor (PHF)	0.96	0.94	0.77	0.96
Total Trucks, %	11.00	0.50	2.00	11.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.995	0.980	0.901
Flow Rate (v _i), pc/h	6297	1540	0	612
Weaving Flow Rate (v _w), pc/h	2152	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	6297	Density-Based Capacity (c _{NWL}), pc/h/ln		1973
Total Flow Rate (v), pc/h	8449	Demand Flow-Based Capacity (c _w), pc/h		9412
Volume Ratio (VR)	0.255	Weaving Segment Capacity (c _w), veh/h		7111
Minimum Lane Change Rate (LC _{MIN}), lc/h	0	Adjusted Weaving Area Capacity, pc/h		7745
Maximum Weaving Length (L _{MAX}), ft	5106	Volume-to-Capacity Ratio (v/c)		1.09

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #3		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	5965	973	343	343
Peak Hour Factor (PHF)	0.96	0.93	0.89	0.96
Total Trucks, %	13.00	0.60	2.00	13.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	0.994	0.980	0.885
Flow Rate (v _i), pc/h	7021	1053	393	404
Weaving Flow Rate (v _w), pc/h	1457	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	7414	Density-Based Capacity (c _{NWL}), pc/h/ln		2044
Total Flow Rate (v), pc/h	8871	Demand Flow-Based Capacity (c _w), pc/h		14634
Volume Ratio (VR)	0.164	Weaving Segment Capacity (c _w), veh/h		7236
Minimum Lane Change Rate (LC _{MIN}), lc/h	0	Adjusted Weaving Area Capacity, pc/h		8021
Maximum Weaving Length (L _{MAX}), ft	4171	Volume-to-Capacity Ratio (v/c)		1.11

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #3		

Geometric Data

Number of Lanes (N), ln	4	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	5712	1176	264	265
Peak Hour Factor (PHF)	0.96	0.94	0.77	0.96
Total Trucks, %	11.00	0.50	2.00	11.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.995	0.980	0.901
Flow Rate (v _i), pc/h	6604	1257	350	306
Weaving Flow Rate (v _w), pc/h	1563	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	6954	Density-Based Capacity (c _{DWL}), pc/h/ln		2029
Total Flow Rate (v), pc/h	8517	Demand Flow-Based Capacity (c _{DW}), pc/h		13043
Volume Ratio (VR)	0.184	Weaving Segment Capacity (c _w), veh/h		7313
Minimum Lane Change Rate (LC _{MIN}), lc/h	0	Adjusted Weaving Area Capacity, pc/h		7965
Maximum Weaving Length (L _{MAX}), ft	4373	Volume-to-Capacity Ratio (v/c)		1.07

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at College		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	4	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	1200
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	7402	488
Peak Hour Factor (PHF)	0.94	0.81
Total Trucks, %	6.00	1.20
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.943	0.988
Flow Rate (v_i), pc/h	8350	610
Capacity (c), pc/h	9200	2000
Volume-to-Capacity Ratio (v/c)	0.97	0.31

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	28.6
Distance to Upstream Ramp (L_{UP}), ft	1000	Speed Index (M_s)	0.440
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	2505
Distance to Downstream Ramp (L_{DOWN}), ft	2650	On-Ramp Influence Area Speed (S_R), mi/h	52.1
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.142	Outer Lanes Freeway Speed (S_o), mi/h	52.2
Flow in Lanes 1 and 2 (v_{12}), pc/h	3340	Ramp Junction Speed (S), mi/h	52.2
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	3950	Average Density (D), pc/mi/ln	42.9
Level of Service (LOS)	D		

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at College		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	4	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	1200
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	6814	384
Peak Hour Factor (PHF)	0.99	0.88
Total Trucks, %	8.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.926	1.000
Flow Rate (v_i), pc/h	7433	436
Capacity (c), pc/h	9200	2000
Volume-to-Capacity Ratio (v/c)	0.86	0.22

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	24.4
Distance to Upstream Ramp (L_{UP}), ft	1000	Speed Index (M_s)	0.355
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	2230
Distance to Downstream Ramp (L_{DOWN}), ft	2650	On-Ramp Influence Area Speed (S_R), mi/h	53.6
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.163	Outer Lanes Freeway Speed (S_o), mi/h	53.8
Flow in Lanes 1 and 2 (v_{12}), pc/h	2973	Ramp Junction Speed (S), mi/h	53.7
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	3409	Average Density (D), pc/mi/ln	36.6
Level of Service (LOS)	C		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB between College and Acadian		

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7890	Heavy Vehicle Adjustment Factor (fhv)	0.943
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	2225
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.99
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.5
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	44.1
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB between College and Acadian		

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7198	Heavy Vehicle Adjustment Factor (fhv)	0.926
Peak Hour Factor	0.99	Flow Rate (Vp), pc/h/ln	1963
Total Trucks, %	8.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.87
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.3
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	36.2
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at Acadian		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	232
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	6591	154
Peak Hour Factor (PHF)	0.94	0.92
Total Trucks, %	6.00	3.10
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.943	0.970
Flow Rate (v_i), pc/h	7436	173
Capacity (c), pc/h	6900	2000
Volume-to-Capacity Ratio (v/c)	1.10	0.09

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	1159.5	Density in Ramp Influence Area (D_R), pc/mi/ln	42.3
Distance to Upstream Ramp (L_{UP}), ft	2400	Speed Index (M_s)	-
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	2700
Distance to Downstream Ramp (L_{DOWN}), ft	1482	On-Ramp Influence Area Speed (S_R), mi/h	45.0
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.584	Outer Lanes Freeway Speed (S_o), mi/h	51.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	4736	Ramp Junction Speed (S), mi/h	-
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	4909	Average Density (D), pc/mi/ln	-
Level of Service (LOS)	F		

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at Acadian		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	232
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	5924	197
Peak Hour Factor (PHF)	0.99	0.86
Total Trucks, %	8.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.926	0.990
Flow Rate (v_i), pc/h	6462	231
Capacity (c), pc/h	6900	2000
Volume-to-Capacity Ratio (v/c)	0.97	0.12

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	963.5	Density in Ramp Influence Area (D_R), pc/mi/ln	35.2
Distance to Upstream Ramp (L_{UP}), ft	2400	Speed Index (M_s)	0.519
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	2688
Distance to Downstream Ramp (L_{DOWN}), ft	1482	On-Ramp Influence Area Speed (S_R), mi/h	50.7
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.584	Outer Lanes Freeway Speed (S_o), mi/h	51.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	3774	Ramp Junction Speed (S), mi/h	50.9
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	4005	Average Density (D), pc/mi/ln	43.8
Level of Service (LOS)	E		

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at Perkins		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	441
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	6745	830
Peak Hour Factor (PHF)	0.94	0.90
Total Trucks, %	6.00	1.90
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.943	0.981
Flow Rate (v_i), pc/h	7609	940
Capacity (c), pc/h	6900	2000
Volume-to-Capacity Ratio (v/c)	1.24	0.47

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	48.0
Distance to Upstream Ramp (L_{UP}), ft	1440	Speed Index (M_s)	-
Downstream Equilibrium Distance (L_{EQ}), ft	3778.5	Flow Outer Lanes (v_{OA}), pc/h/ln	2700
Distance to Downstream Ramp (L_{DOWN}), ft	3373	On-Ramp Influence Area Speed (S_R), mi/h	30.4
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.595	Outer Lanes Freeway Speed (S_o), mi/h	51.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	4909	Ramp Junction Speed (S), mi/h	-
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	5849	Average Density (D), pc/mi/ln	-
Level of Service (LOS)	F		

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at Perkins		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	3	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	441
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	6121	583
Peak Hour Factor (PHF)	0.99	0.79
Total Trucks, %	8.00	2.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.926	0.980
Flow Rate (v_i), pc/h	6677	753
Capacity (c), pc/h	6900	2000
Volume-to-Capacity Ratio (v/c)	1.08	0.38

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	39.3
Distance to Upstream Ramp (L_{UP}), ft	1440	Speed Index (M_s)	-
Downstream Equilibrium Distance (L_{EQ}), ft	2183.4	Flow Outer Lanes (v_{OA}), pc/h/ln	2700
Distance to Downstream Ramp (L_{DOWN}), ft	3373	On-Ramp Influence Area Speed (S_R), mi/h	46.8
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.590	Outer Lanes Freeway Speed (S_o), mi/h	51.1
Flow in Lanes 1 and 2 (v_{12}), pc/h	3977	Ramp Junction Speed (S), mi/h	-
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	4730	Average Density (D), pc/mi/ln	-
Level of Service (LOS)	F		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB west of Perkins on ramp		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7575	Heavy Vehicle Adjustment Factor (fhv)	0.943
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	2849
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.27
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/13/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB west of Perkins on ramp		

Geometric Data

Number of Lanes, In	3	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	6704	Heavy Vehicle Adjustment Factor (fhv)	0.926
Peak Hour Factor	0.99	Flow Rate (Vp), pc/h/ln	2438
Total Trucks, %	8.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.08
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	621	8	670	42	530	0	0	1072	104
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				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
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1881	1882	1863	1759	1863	0	0	1881	1881
Adj Flow Rate, veh/h				674	0	0	45	570	0	0	1153	0
Adj No. of Lanes				2	0	1	1	2	0	0	2	1
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				1	0	2	8	2	0	0	1	1
Cap, veh/h				811	0	358	60	2324	0	0	2016	902
Arrive On Green				0.23	0.00	0.00	0.04	0.66	0.00	0.00	0.56	0.00
Sat Flow, veh/h				3583	0	1583	1675	3632	0	0	3668	1599
Grp Volume(v), veh/h				674	0	0	45	570	0	0	1153	0
Grp Sat Flow(s),veh/h/ln				1792	0	1583	1675	1770	0	0	1787	1599
Q Serve(g_s), s				17.9	0.0	0.0	2.7	6.6	0.0	0.0	20.8	0.0
Cycle Q Clear(g_c), s				17.9	0.0	0.0	2.7	6.6	0.0	0.0	20.8	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				811	0	358	60	2324	0	0	2016	902
V/C Ratio(X)				0.83	0.00	0.00	0.75	0.25	0.00	0.00	0.57	0.00
Avail Cap(c_a), veh/h				1039	0	459	122	2324	0	0	2016	902
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				36.9	0.0	0.0	47.8	7.0	0.0	0.0	14.0	0.0
Incr Delay (d2), s/veh				5.3	0.0	0.0	23.3	0.1	0.0	0.0	1.2	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
%ile BackOfQ(95%),veh/ln				14.5	0.0	0.0	2.9	5.7	0.0	0.0	15.7	0.0
LnGrp Delay(d),s/veh				42.1	0.0	0.0	71.1	7.1	0.0	0.0	15.2	0.0
LnGrp LOS				D			E	A			B	
Approach Vol, veh/h					674			615			1153	
Approach Delay, s/veh					42.1			11.8			15.2	
Approach LOS					D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	9.3	62.1		28.6		71.4						
Change Period (Y+Rc), s	5.7	5.7		6.0		5.7						
Max Green Setting (Gmax), s	7.3	46.3		29.0		59.3						
Max Q Clear Time (g_c+I1), s	4.7	22.8		19.9		8.6						
Green Ext Time (p_c), s	0.0	19.7		2.7		36.5						
Intersection Summary												
HCM 2010 Ctrl Delay				21.8								
HCM 2010 LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												



Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↑↑	↑↑	↖
Volume (vph)	621	8	670	42	530	1072	104
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		4		1	6	2	
Permitted Phases	4		4				2
Detector Phase	4	4	4	1	6	2	2
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	15.0
Minimum Split (s)	11.0	11.0	11.0	10.7	10.7	21.7	21.7
Total Split (s)	35.0	35.0	35.0	13.0	65.0	52.0	52.0
Total Split (%)	35.0%	35.0%	35.0%	13.0%	65.0%	52.0%	52.0%
Yellow Time (s)	5.0	5.0	5.0	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	5.7	5.7	5.7	5.7
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	C-Min	C-Min

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 42 (42%), Referenced to phase 2:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 22: Acadian Thruway & I-10 WB off ramp



HCM 2010 Signalized Intersection Summary
2040 No Build PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	553	22	699	58	540	0	0	1254	116
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				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
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1863	1881	0	0	1900	1881
Adj Flow Rate, veh/h				592	0	0	60	562	0	0	1306	0
Adj No. of Lanes				2	0	1	1	2	0	0	2	1
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				0	0	0	2	1	0	0	0	1
Cap, veh/h				729	0	325	77	2436	0	0	2097	929
Arrive On Green				0.20	0.00	0.00	0.04	0.68	0.00	0.00	0.58	0.00
Sat Flow, veh/h				3619	0	1615	1774	3668	0	0	3705	1599
Grp Volume(v), veh/h				592	0	0	60	562	0	0	1306	0
Grp Sat Flow(s),veh/h/ln				1810	0	1615	1774	1787	0	0	1805	1599
Q Serve(g_s), s				15.6	0.0	0.0	3.3	5.9	0.0	0.0	23.8	0.0
Cycle Q Clear(g_c), s				15.6	0.0	0.0	3.3	5.9	0.0	0.0	23.8	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				729	0	325	77	2436	0	0	2097	929
V/C Ratio(X)				0.81	0.00	0.00	0.78	0.23	0.00	0.00	0.62	0.00
Avail Cap(c_a), veh/h				1013	0	452	130	2436	0	0	2097	929
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				38.1	0.0	0.0	47.3	6.0	0.0	0.0	13.8	0.0
Incr Delay (d2), s/veh				4.3	0.0	0.0	20.6	0.1	0.0	0.0	1.4	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
%ile BackOfQ(95%),veh/ln				13.0	0.0	0.0	3.8	5.2	0.0	0.0	17.9	0.0
LnGrp Delay(d),s/veh				42.4	0.0	0.0	68.0	6.1	0.0	0.0	15.2	0.0
LnGrp LOS				D			E	A			B	
Approach Vol, veh/h					592			622			1306	
Approach Delay, s/veh					42.4			12.1			15.2	
Approach LOS					D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	10.1	63.8		26.1		73.9						
Change Period (Y+Rc), s	5.7	5.7		6.0		5.7						
Max Green Setting (Gmax), s	7.3	47.3		28.0		60.3						
Max Q Clear Time (g_c+I1), s	5.3	25.8		17.6		7.9						
Green Ext Time (p_c), s	0.0	19.1		2.5		40.8						
Intersection Summary												
HCM 2010 Ctrl Delay				20.8								
HCM 2010 LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												





















Lane Group	WBL	WBT	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↑↑	↑↑	↖
Volume (vph)	553	22	699	58	540	1254	116
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		4		1	6	2	
Permitted Phases	4		4				2
Detector Phase	4	4	4	1	6	2	2
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	15.0	15.0
Minimum Split (s)	11.0	11.0	11.0	11.0	11.0	21.0	21.0
Total Split (s)	34.0	34.0	34.0	13.0	66.0	53.0	53.0
Total Split (%)	34.0%	34.0%	34.0%	13.0%	66.0%	53.0%	53.0%
Yellow Time (s)	5.0	5.0	5.0	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	5.7	5.7	5.7	5.7
Lead/Lag				Lead		Lag	Lag
Lead-Lag Optimize?							
Recall Mode	None	None	None	None	None	C-Min	C-Min

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 22: Acadian Thruway & I-10 WB off ramp



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	59	2	90	0	0	0	0	477	757	556	1158	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	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
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1827	1900	1881	1881	0
Adj Flow Rate, veh/h	64	2	0				0	518	0	604	1259	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0				0	4	0	1	1	0
Cap, veh/h	88	3	81				0	623	290	1069	2977	0
Arrive On Green	0.05	0.05	0.00				0.00	0.18	0.00	0.60	0.83	0.00
Sat Flow, veh/h	1757	55	1615				0	3563	1615	1792	3668	0
Grp Volume(v), veh/h	66	0	0				0	518	0	604	1259	0
Grp Sat Flow(s),veh/h/ln	1812	0	1615				0	1736	1615	1792	1787	0
Q Serve(g_s), s	3.6	0.0	0.0				0.0	14.4	0.0	20.5	9.1	0.0
Cycle Q Clear(g_c), s	3.6	0.0	0.0				0.0	14.4	0.0	20.5	9.1	0.0
Prop In Lane	0.97		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	91	0	81				0	623	290	1069	2977	0
V/C Ratio(X)	0.73	0.00	0.00				0.00	0.83	0.00	0.57	0.42	0.00
Avail Cap(c_a), veh/h	526	0	468				0	670	312	1069	2977	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.8	0.0	0.0				0.0	39.6	0.0	12.3	2.2	0.0
Incr Delay (d2), s/veh	14.4	0.0	0.0				0.0	12.3	0.0	0.9	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
%ile BackOfQ(95%),veh/ln	3.9	0.0	0.0				0.0	12.6	0.0	15.6	8.1	0.0
LnGrp Delay(d),s/veh	61.2	0.0	0.0				0.0	51.9	0.0	13.2	2.6	0.0
LnGrp LOS	E							D		B	A	
Approach Vol, veh/h		66						518			1863	
Approach Delay, s/veh		61.2						51.9			6.0	
Approach LOS		E						D			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		89.0			65.3	23.6		11.0				
Change Period (Y+Rc), s		5.7			5.7	5.7		6.0				
Max Green Setting (Gmax), s		59.3			34.3	19.3		29.0				
Max Q Clear Time (g_c+I1), s		11.1			22.5	16.4		5.6				
Green Ext Time (p_c), s		25.2			9.4	1.5		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			17.2									
HCM 2010 LOS			B									





















Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations	↕	↗	↕↕	↗	↖	↕↕
Volume (vph)	2	90	477	757	556	1158
Turn Type	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6		
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	15.0	15.0	5.0	5.0
Minimum Split (s)	22.0	22.0	21.7	21.7	10.7	10.7
Total Split (s)	35.0	35.0	25.0	25.0	40.0	65.0
Total Split (%)	35.0%	35.0%	25.0%	25.0%	40.0%	65.0%
Yellow Time (s)	5.0	5.0	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.7	5.7	5.7	5.7
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	C-Min	C-Min	None	C-Max

Intersection Summary
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 42 (42%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated

Splits and Phases: 17: Acadian Thruway & I-10 EB off ramp



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	31	1	77	0	0	0	0	579	825	615	1191	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	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
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1779	1881				0	1881	1900	1900	1881	0
Adj Flow Rate, veh/h	32	1	0				0	591	0	628	1215	0
Adj No. of Lanes	0	1	1				0	2	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	0	1				0	1	0	0	1	0
Cap, veh/h	49	2	48				0	871	394	999	3049	0
Arrive On Green	0.03	0.03	0.00				0.00	0.24	0.00	0.55	0.85	0.00
Sat Flow, veh/h	1646	51	1599				0	3668	1615	1810	3668	0
Grp Volume(v), veh/h	33	0	0				0	591	0	628	1215	0
Grp Sat Flow(s),veh/h/ln	1697	0	1599				0	1787	1615	1810	1787	0
Q Serve(g_s), s	1.9	0.0	0.0				0.0	15.0	0.0	23.8	7.6	0.0
Cycle Q Clear(g_c), s	1.9	0.0	0.0				0.0	15.0	0.0	23.8	7.6	0.0
Prop In Lane	0.97		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	51	0	48				0	871	394	999	3049	0
V/C Ratio(X)	0.65	0.00	0.00				0.00	0.68	0.00	0.63	0.40	0.00
Avail Cap(c_a), veh/h	204	0	192				0	1226	554	999	3049	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.0	0.0	0.0				0.0	34.3	0.0	15.3	1.6	0.0
Incr Delay (d2), s/veh	18.0	0.0	0.0				0.0	4.2	0.0	1.5	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
%ile BackOfQ(95%),veh/ln	2.1	0.0	0.0				0.0	12.5	0.0	18.0	6.7	0.0
LnGrp Delay(d),s/veh	66.0	0.0	0.0				0.0	38.5	0.0	16.8	2.0	0.0
LnGrp LOS	E							D		B	A	
Approach Vol, veh/h		33						591			1843	
Approach Delay, s/veh		66.0						38.5			7.1	
Approach LOS		E						D			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		91.0			60.9	30.1		9.0				
Change Period (Y+Rc), s		5.7			5.7	5.7		6.0				
Max Green Setting (Gmax), s		76.3			36.3	34.3		12.0				
Max Q Clear Time (g_c+I1), s		9.6			25.8	17.0		3.9				
Green Ext Time (p_c), s		28.1			8.4	7.4		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			15.4									
HCM 2010 LOS			B									

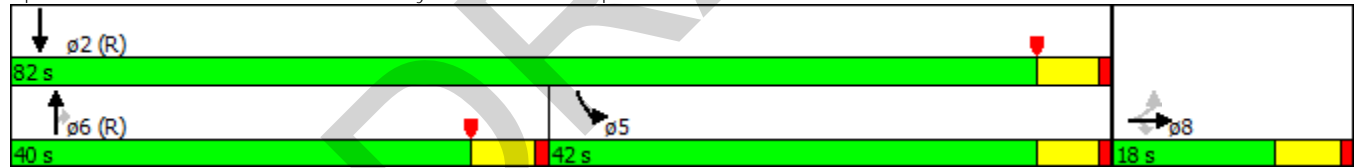























Lane Group	EBT	EBR	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↕	↗	↖	↕
Volume (vph)	1	77	579	825	615	1191
Turn Type	NA	Perm	NA	Perm	Prot	NA
Protected Phases	8		6		5	2
Permitted Phases		8		6		
Detector Phase	8	8	6	6	5	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	15.0	15.0	5.0	5.0
Minimum Split (s)	11.0	11.0	21.0	21.0	11.0	11.0
Total Split (s)	18.0	18.0	40.0	40.0	42.0	82.0
Total Split (%)	18.0%	18.0%	40.0%	40.0%	42.0%	82.0%
Yellow Time (s)	5.0	5.0	4.7	4.7	4.7	4.7
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.7	5.7	5.7	5.7
Lead/Lag			Lead	Lead	Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	C-Min	C-Min	None	C-Max

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated

Splits and Phases: 17: Acadian Thruway & I-10 EB off ramp



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	1	0	3	0	103	0	1135	7	92	1096	3
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1267	1900	1900	1900	1900	1900	1900	1863	1667	1900	1880	1900
Adj Flow Rate, veh/h	2	1	0	3	0	114	0	1261	8	102	1218	3
Adj No. of Lanes	1	1	0	0	1	1	0	2	1	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	50	0	0	100	100	0	2	2	14	0	1	1
Cap, veh/h	5	8	0	151	0	191	0	2398	1078	356	2787	7
Arrive On Green	0.00	0.00	0.00	0.08	0.00	0.08	0.00	0.68	0.68	0.03	0.76	0.76
Sat Flow, veh/h	1206	1900	0	1809	0	1615	0	3632	1416	1810	3656	9
Grp Volume(v), veh/h	2	1	0	3	0	114	0	1261	8	102	595	626
Grp Sat Flow(s),veh/h/ln	1206	1900	0	1810	0	1615	0	1770	1416	1810	1786	1878
Q Serve(g_s), s	0.2	0.1	0.0	0.2	0.0	6.7	0.0	17.8	0.1	1.6	11.9	11.9
Cycle Q Clear(g_c), s	0.2	0.1	0.0	0.2	0.0	6.7	0.0	17.8	0.1	1.6	11.9	11.9
Prop In Lane	1.00		0.00	1.00		1.00	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	5	8	0	151	0	191	0	2398	1078	356	1362	1432
V/C Ratio(X)	0.41	0.13	0.00	0.02	0.00	0.60	0.00	0.53	0.01	0.29	0.44	0.44
Avail Cap(c_a), veh/h	109	171	0	163	0	201	0	2398	1078	456	1362	1432
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)	1.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	49.6	0.0	42.1	0.0	41.8	0.0	8.1	2.9	6.4	4.2	4.2
Incr Delay (d2), s/veh	48.3	7.6	0.0	0.1	0.0	4.3	0.0	0.8	0.0	0.4	1.0	1.0
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	0.2	0.1	0.0	0.1	0.0	5.8	0.0	13.7	0.1	1.5	10.2	10.6
LnGrp Delay(d),s/veh	98.0	57.2	0.0	42.1	0.0	46.2	0.0	8.9	2.9	6.8	5.3	5.2
LnGrp LOS	F	E		D		D		A	A	A	A	A
Approach Vol, veh/h		3			117			1269			1323	
Approach Delay, s/veh		84.4			46.1			8.9			5.4	
Approach LOS		F			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		81.2		13.4	8.5	72.8		5.4				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		67.0		9.0	9.0	53.0		9.0				
Max Q Clear Time (g_c+I1), s		13.9		8.7	3.6	19.8		2.2				
Green Ext Time (p_c), s		50.3		0.0	0.1	32.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				8.8								
HCM 2010 LOS				A								

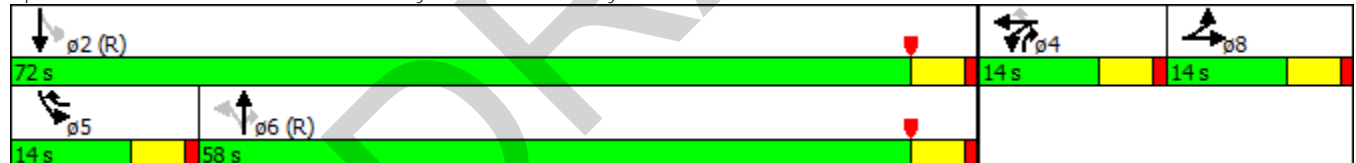























Lane Group	EBL	EBT	WBT	WBR	NBT	NBR	SBL	SBT
Lane Configurations								
Volume (vph)	2	1	0	103	1135	7	92	1096
Turn Type	Split	NA	NA	pm+ov	NA	pm+ov	pm+pt	NA
Protected Phases	8	8	4	5	6	4	5	2
Permitted Phases				4		6	2	
Detector Phase	8	8	4	5	6	4	5	2
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	3.0	10.0	5.0	3.0	15.0
Minimum Split (s)	10.0	10.0	10.0	8.0	21.0	10.0	8.0	21.0
Total Split (s)	14.0	14.0	14.0	14.0	58.0	14.0	14.0	72.0
Total Split (%)	14.0%	14.0%	14.0%	14.0%	58.0%	14.0%	14.0%	72.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag				Lead	Lag		Lead	
Lead-Lag Optimize?				Yes	Yes		Yes	
Recall Mode	None	None	None	None	C-Min	None	None	C-Min

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 44 (44%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 10: Acadian Thruway & Steakhouse Dwy/Acadian Centre



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	1	9	14	8	61	15	1343	29	54	1161	42
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1863	1900	1881	1900	1900	1882	1900
Adj Flow Rate, veh/h	12	1	9	14	8	62	15	1370	30	55	1185	43
Adj No. of Lanes	1	1	0	0	1	1	0	2	1	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	2	1	1	0	0	1	1
Cap, veh/h	41	4	34	61	35	120	47	2418	1216	311	2727	99
Arrive On Green	0.02	0.02	0.02	0.05	0.05	0.05	0.70	0.70	0.70	0.02	0.77	0.77
Sat Flow, veh/h	1810	164	1476	1172	670	1583	15	3448	1614	1810	3519	128
Grp Volume(v), veh/h	12	0	10	22	0	62	736	649	30	55	602	626
Grp Sat Flow(s),veh/h/ln	1810	0	1640	1841	0	1583	1836	1626	1614	1810	1788	1859
Q Serve(g_s), s	0.7	0.0	0.6	1.1	0.0	3.8	0.0	19.8	0.5	0.8	11.4	11.4
Cycle Q Clear(g_c), s	0.7	0.0	0.6	1.1	0.0	3.8	19.2	19.8	0.5	0.8	11.4	11.4
Prop In Lane	1.00		0.90	0.64		1.00	0.02		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	41	0	37	96	0	120	1324	1141	1216	311	1385	1441
V/C Ratio(X)	0.29	0.00	0.27	0.23	0.00	0.52	0.56	0.57	0.02	0.18	0.43	0.43
Avail Cap(c_a), veh/h	163	0	148	129	0	148	1324	1141	1216	396	1385	1441
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)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	0.0	48.0	45.5	0.0	44.4	7.3	7.4	3.1	6.1	3.8	3.8
Incr Delay (d2), s/veh	3.8	0.0	3.7	1.2	0.0	3.4	1.7	2.1	0.0	0.3	1.0	1.0
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	0.7	0.0	0.6	1.1	0.0	3.2	15.7	14.5	0.5	0.7	9.9	10.2
LnGrp Delay(d),s/veh	51.9	0.0	51.8	46.6	0.0	47.9	9.0	9.5	3.1	6.4	4.8	4.8
LnGrp LOS	D		D	D		D	A	A	A	A	A	A
Approach Vol, veh/h		22			84			1415			1283	
Approach Delay, s/veh		51.8			47.5			9.1			4.9	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		82.5		10.2	7.3	75.1		7.3				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		69.0		7.0	7.0	57.0		9.0				
Max Q Clear Time (g_c+I1), s		13.4		5.8	2.8	21.8		2.7				
Green Ext Time (p_c), s		53.3		0.0	0.0	34.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			8.6									
HCM 2010 LOS			A									

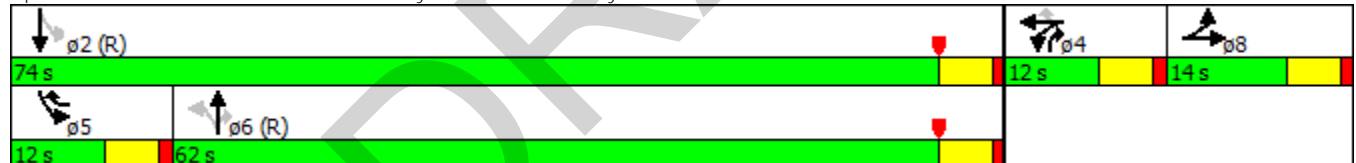


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	12	1	8	61	15	1343	29	54	1161
Turn Type	Split	NA	NA	pm+ov	Perm	NA	pm+ov	pm+pt	NA
Protected Phases	8	8	4	5		6	4	5	2
Permitted Phases				4	6		6	2	
Detector Phase	8	8	4	5	6	6	4	5	2
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	3.0	10.0	10.0	5.0	3.0	15.0
Minimum Split (s)	10.0	10.0	10.0	8.0	21.0	21.0	10.0	8.0	21.0
Total Split (s)	14.0	14.0	12.0	12.0	62.0	62.0	12.0	12.0	74.0
Total Split (%)	14.0%	14.0%	12.0%	12.0%	62.0%	62.0%	12.0%	12.0%	74.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0
Lead/Lag				Lead	Lag	Lag		Lead	
Lead-Lag Optimize?				Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	C-Min	C-Min	None	None	C-Min
























Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 10: Acadian Thruway & Steakhouse Dwy/Acadian Centre



HCM 2010 Signalized Intersection Summary
2040 No Build AM

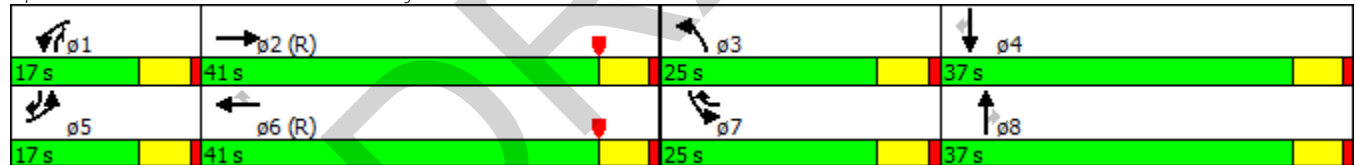
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	235	636	57	157	966	270	236	658	104	255	699	49
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking 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
Adj Sat Flow, veh/h/ln	1881	1892	1900	1881	1863	1845	1827	1881	1900	1863	1900	1863
Adj Flow Rate, veh/h	247	669	60	165	1017	284	248	693	109	268	736	52
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	2	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	0	1	2	3	4	1	0	2	0	2
Cap, veh/h	303	1109	99	223	1094	636	273	1152	624	332	945	551
Arrive On Green	0.09	0.33	0.33	0.06	0.31	0.31	0.16	0.32	0.32	0.10	0.26	0.26
Sat Flow, veh/h	3476	3337	299	3476	3539	1568	1740	3574	1615	3442	3610	1580
Grp Volume(v), veh/h	247	360	369	165	1017	284	248	693	109	268	736	52
Grp Sat Flow(s),veh/h/ln	1738	1798	1839	1738	1770	1568	1740	1787	1615	1721	1805	1580
Q Serve(g_s), s	8.4	20.1	20.1	5.6	33.4	15.8	16.8	19.6	5.3	9.2	22.7	2.7
Cycle Q Clear(g_c), s	8.4	20.1	20.1	5.6	33.4	15.8	16.8	19.6	5.3	9.2	22.7	2.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	303	597	611	223	1094	636	273	1152	624	332	945	551
V/C Ratio(X)	0.82	0.60	0.60	0.74	0.93	0.45	0.91	0.60	0.17	0.81	0.78	0.09
Avail Cap(c_a), veh/h	333	597	611	333	1094	636	281	1152	624	556	945	551
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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	33.5	33.5	55.2	40.2	25.9	49.7	34.2	24.2	53.1	41.1	26.3
Incr Delay (d2), s/veh	12.9	4.5	4.4	3.6	14.8	2.3	30.1	1.0	0.2	3.5	6.3	0.3
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	8.1	16.1	16.4	5.0	25.7	11.6	15.6	14.9	4.3	8.0	17.9	2.2
LnGrp Delay(d),s/veh	66.7	37.9	37.9	58.7	55.0	28.1	79.8	35.2	24.4	56.6	47.4	26.7
LnGrp LOS	E	D	D	E	D	C	E	D	C	E	D	C
Approach Vol, veh/h		976			1466			1050			1056	
Approach Delay, s/veh		45.2			50.2			44.6			48.7	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.2	45.4	24.4	37.0	16.0	42.6	17.2	44.3				
Change Period (Y+Rc), s	5.5	5.5	5.6	5.6	5.5	5.5	5.6	5.6				
Max Green Setting (Gmax), s	11.5	35.5	19.4	31.4	11.5	35.5	19.4	31.4				
Max Q Clear Time (g_c+I1), s	7.6	22.1	18.8	24.7	10.4	35.4	11.2	21.6				
Green Ext Time (p_c), s	0.1	11.0	0.0	5.3	0.1	0.1	0.4	7.3				
Intersection Summary												
HCM 2010 Ctrl Delay			47.5									
HCM 2010 LOS			D									
Notes												
User approved changes to right turn type.												



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕	↖↗	↕	↖	↖	↕	↖	↖↗	↕	↖
Volume (vph)	235	636	157	966	270	236	658	104	255	699	49
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	7	3	8	1	7	4	5
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6 7	3	8	8 1	7	4	4 5
Switch Phase											
Minimum Initial (s)	5.0	12.0	5.0	12.0	5.0	5.0	12.0	5.0	5.0	12.0	5.0
Minimum Split (s)	10.5	17.5	10.5	17.5	10.6	10.6	17.6	10.5	10.6	17.6	10.5
Total Split (s)	17.0	41.0	17.0	41.0	25.0	25.0	37.0	17.0	25.0	37.0	17.0
Total Split (%)	14.2%	34.2%	14.2%	34.2%	20.8%	20.8%	30.8%	14.2%	20.8%	30.8%	14.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.6	4.6	4.6	4.5	4.6	4.6	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.6	5.6	5.6	5.5	5.6	5.6	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	Max	None

Intersection Summary
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 68 (57%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 9: Acadian Thruway & Perkins Road



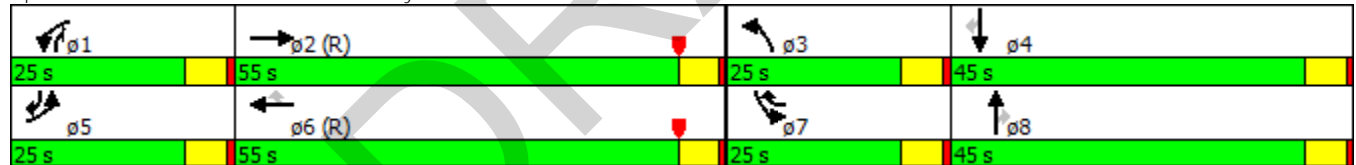
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	327	978	60	181	970	224	164	814	145	395	496	43
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking 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
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1881	1881	1881	1881	1900	1881	1900	1900
Adj Flow Rate, veh/h	330	988	61	183	980	226	166	822	146	399	501	43
Adj No. of Lanes	2	2	0	2	2	1	1	2	1	2	2	1
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	1	1	1	1	0	1	0	0
Cap, veh/h	379	1405	87	234	1306	787	189	900	514	441	987	615
Arrive On Green	0.11	0.41	0.41	0.07	0.37	0.37	0.11	0.25	0.25	0.13	0.27	0.27
Sat Flow, veh/h	3510	3454	213	3510	3574	1599	1792	3574	1615	3476	3610	1611
Grp Volume(v), veh/h	330	516	533	183	980	226	166	822	146	399	501	43
Grp Sat Flow(s),veh/h/ln	1755	1805	1862	1755	1787	1599	1792	1787	1615	1738	1805	1611
Q Serve(g_s), s	13.9	35.7	35.7	7.7	36.0	12.5	13.7	33.5	10.2	17.0	17.6	2.5
Cycle Q Clear(g_c), s	13.9	35.7	35.7	7.7	36.0	12.5	13.7	33.5	10.2	17.0	17.6	2.5
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	379	734	757	234	1306	787	189	900	514	441	987	615
V/C Ratio(X)	0.87	0.70	0.70	0.78	0.75	0.29	0.88	0.91	0.28	0.90	0.51	0.07
Avail Cap(c_a), veh/h	456	734	757	456	1306	787	232	939	532	450	987	615
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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.9	37.0	37.0	68.9	41.6	22.5	66.2	54.5	38.3	64.6	46.0	29.5
Incr Delay (d2), s/veh	13.8	5.6	5.4	4.3	4.0	0.9	25.1	13.1	0.4	21.0	1.9	0.2
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	11.9	26.1	26.7	7.0	25.5	9.7	12.8	25.2	8.1	14.5	13.9	2.1
LnGrp Delay(d),s/veh	79.6	42.6	42.4	73.2	45.6	23.4	91.2	67.6	38.7	85.6	47.8	29.7
LnGrp LOS	E	D	D	E	D	C	F	E	D	F	D	C
Approach Vol, veh/h		1379			1389			1134			943	
Approach Delay, s/veh		51.4			45.7			67.3			63.0	
Approach LOS		D			D			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.5	66.5	21.4	46.6	21.7	60.3	24.6	43.4				
Change Period (Y+Rc), s	5.5	5.5	5.6	5.6	5.5	5.5	5.6	5.6				
Max Green Setting (Gmax), s	19.5	49.5	19.4	39.4	19.5	49.5	19.4	39.4				
Max Q Clear Time (g_c+I1), s	9.7	37.7	15.7	19.6	15.9	38.0	19.0	35.5				
Green Ext Time (p_c), s	0.3	10.4	0.1	12.0	0.3	10.2	0.1	2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			55.7									
HCM 2010 LOS			E									
Notes												
User approved changes to right turn type.												

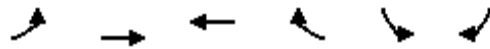


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕	↖↗	↕	↖	↖	↕	↖	↖↗	↕	↖
Volume (vph)	327	978	181	970	224	164	814	145	395	496	43
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	7	3	8	1	7	4	5
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	7	3	8	1	7	4	5
Switch Phase											
Minimum Initial (s)	5.0	12.0	5.0	12.0	5.0	5.0	12.0	5.0	5.0	12.0	5.0
Minimum Split (s)	10.5	18.0	10.5	18.0	10.6	10.6	18.0	10.5	10.6	18.0	10.5
Total Split (s)	25.0	55.0	25.0	55.0	25.0	25.0	45.0	25.0	25.0	45.0	25.0
Total Split (%)	16.7%	36.7%	16.7%	36.7%	16.7%	16.7%	30.0%	16.7%	16.7%	30.0%	16.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.6	4.6	4.6	4.5	4.6	4.6	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.6	5.6	5.6	5.5	5.6	5.6	5.5
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	Max	None

Intersection Summary
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 60 (40%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 9: Acadian Thruway & Perkins Road





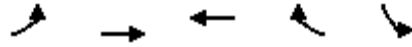
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↶	↷	↶	↷
Volume (veh/h)	50	673	528	780	332	31
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1881	1863	1863	1855	1900
Adj Flow Rate, veh/h	51	687	539	0	339	0
Adj No. of Lanes	1	2	1	1	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	1	2	2	0	0
Cap, veh/h	531	2500	1155	982	371	0
Arrive On Green	0.03	0.70	0.62	0.00	0.21	0.00
Sat Flow, veh/h	1810	3668	1863	1583	1762	0
Grp Volume(v), veh/h	51	687	539	0	340	0
Grp Sat Flow(s),veh/h/ln	1810	1787	1863	1583	1767	0
Q Serve(g_s), s	1.1	8.6	18.6	0.0	22.6	0.0
Cycle Q Clear(g_c), s	1.1	8.6	18.6	0.0	22.6	0.0
Prop In Lane	1.00			1.00	1.00	0.00
Lane Grp Cap(c), veh/h	531	2500	1155	982	372	0
V/C Ratio(X)	0.10	0.27	0.47	0.00	0.91	0.00
Avail Cap(c_a), veh/h	544	2500	1155	982	692	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	8.6	6.7	12.2	0.0	46.3	0.0
Incr Delay (d2), s/veh	0.1	0.3	1.4	0.0	6.9	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	1.0	7.7	15.0	0.0	17.4	0.0
LnGrp Delay(d),s/veh	8.6	7.0	13.5	0.0	53.2	0.0
LnGrp LOS	A	A	B		D	
Approach Vol, veh/h		738	539		340	
Approach Delay, s/veh		7.1	13.5		53.2	
Approach LOS		A	B		D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		89.3		30.7	9.5	79.8		
Change Period (Y+Rc), s		5.4		5.4	5.4	5.4		
Max Green Setting (Gmax), s		62.6		47.0	5.0	52.2		
Max Q Clear Time (g_c+I1), s		10.6		24.6	3.1	20.6		
Green Ext Time (p_c), s		22.8		0.7	0.0	17.8		

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

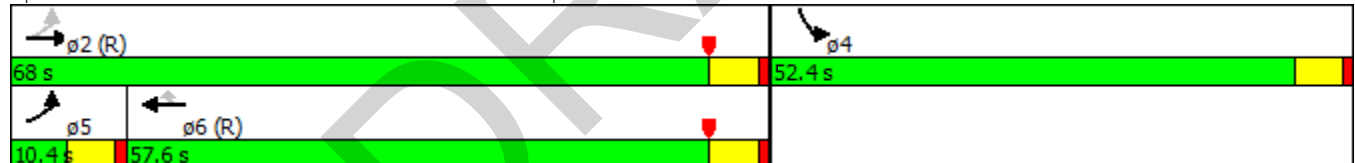


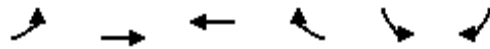
Lane Group	EBL	EBT	WBT	WBR	SBL
Lane Configurations	↖	↗↗	↗	↖	↖↖
Volume (vph)	50	673	528	780	332
Turn Type	pm+pt	NA	NA	Perm	Prot
Protected Phases	5	2	6		4
Permitted Phases	2			6	
Detector Phase	5	2	6	6	4
Switch Phase					
Minimum Initial (s)	5.0	20.0	20.0	20.0	15.0
Minimum Split (s)	10.4	25.4	25.4	25.4	20.4
Total Split (s)	10.4	68.0	57.6	57.6	52.4
Total Split (%)	8.6%	56.5%	47.8%	47.8%	43.5%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	5.4	5.4
Lead/Lag	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	C-Min	None

Intersection Summary

Cycle Length: 120.4
 Actuated Cycle Length: 120.4
 Offset: 83 (69%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Perkins Road & I-10 EB off ramp





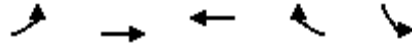
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↶	↷	↶	↷
Volume (veh/h)	33	1080	676	549	142	21
Number	5	2	6	16	7	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1881	1881	1863	1900	1900
Adj Flow Rate, veh/h	36	1187	743	0	156	0
Adj No. of Lanes	1	2	1	1	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	1	1	2	0	0
Cap, veh/h	490	2838	1359	1144	215	0
Arrive On Green	0.03	0.79	0.72	0.00	0.12	0.00
Sat Flow, veh/h	1757	3668	1881	1583	1799	0
Grp Volume(v), veh/h	36	1187	743	0	157	0
Grp Sat Flow(s),veh/h/ln	1757	1787	1881	1583	1810	0
Q Serve(g_s), s	0.6	12.8	22.7	0.0	10.5	0.0
Cycle Q Clear(g_c), s	0.6	12.8	22.7	0.0	10.5	0.0
Prop In Lane	1.00			1.00	0.99	0.00
Lane Grp Cap(c), veh/h	490	2838	1359	1144	216	0
V/C Ratio(X)	0.07	0.42	0.55	0.00	0.73	0.00
Avail Cap(c_a), veh/h	721	2838	1359	1144	376	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	6.0	4.0	8.0	0.0	53.1	0.0
Incr Delay (d2), s/veh	0.0	0.5	1.6	0.0	3.4	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	0.5	10.6	17.9	0.0	9.3	0.0
LnGrp Delay(d),s/veh	6.1	4.4	9.5	0.0	56.5	0.0
LnGrp LOS	A	A	A		E	
Approach Vol, veh/h		1223	743		157	
Approach Delay, s/veh		4.5	9.5		56.5	
Approach LOS		A	A		E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		104.7		20.3	9.0	95.7		
Change Period (Y+Rc), s		5.4		5.4	5.4	5.4		
Max Green Setting (Gmax), s		88.6		26.0	20.0	63.2		
Max Q Clear Time (g_c+I1), s		14.8		12.5	2.6	24.7		
Green Ext Time (p_c), s		52.1		0.2	0.0	31.6		

Intersection Summary	
HCM 2010 Ctrl Delay	10.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBT	WBR	SBL
Lane Configurations	↖	↗↗	↗	↖	↖↖
Volume (vph)	33	1080	676	549	142
Turn Type	pm+pt	NA	NA	Perm	Prot
Protected Phases	5	2	6		4
Permitted Phases	2			6	
Detector Phase	5	2	6	6	4
Switch Phase					
Minimum Initial (s)	5.0	20.0	20.0	20.0	15.0
Minimum Split (s)	25.4	25.4	25.4	25.4	20.4
Total Split (s)	25.4	94.0	68.6	68.6	31.4
Total Split (%)	20.3%	75.0%	54.7%	54.7%	25.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.4	5.4	5.4	5.4	5.4
Lead/Lag	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes		Yes	Yes	
Recall Mode	None	C-Min	C-Min	C-Min	None

Intersection Summary

Cycle Length: 125.4
 Actuated Cycle Length: 125.4
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 4: Perkins Road & I-10 EB off ramp



**Intersection Comparison
Existing and No Build Conditions**

Location	AM						PM					
	Existing			No Build			Existing			No Build		
	Delay (sec)	V/C Ratio	95th % Queues (ft)*	Delay (sec)	V/C Ratio	95th % Queues (ft)*	Delay (sec)	V/C Ratio	95th % Queues (ft)*	Delay (sec)	V/C Ratio	95th % Queues (ft)*
Acadian Thruway at I-10 Westbound Ramps	21.3			21.8			20.3			20.8		
<i>Acadian Thruway Northbound</i>	11.5	0.74	138	11.8	0.75	143	11.9	0.78	123	12.1	0.78	130
<i>Acadian Thruway Southbound</i>	14.3	0.54	370	15.2	0.57	393	14.2	0.59	418	15.2	0.62	448
<i>I-10 Off Ramp Westbound</i>	42.0	0.82	350	42.1	0.83	363	42.4	0.81	313	42.4	0.81	325
Acadian Thruway at I-10 Eastbound Ramps	16.7			17.2			15.1			15.4		
<i>Acadian Thruway Northbound</i>	50.1	0.82	300	51.9	0.83	315	38.9	0.67	303	38.5	0.68	313
<i>Acadian Thruway Southbound</i>	5.7	0.54	368	6.0	0.57	390	6.6	0.60	418	7.1	0.63	450
<i>I-10 Off Ramp Eastbound</i>	61.8	0.73	95	61.2	0.73	98	65.8	0.64	50	66.0	0.65	53
Acadian Thruway at Acadian Centre	8.5			8.8			8.4			8.6		
<i>Acadian Thruway Northbound</i>	8.4	0.50	320	8.9	0.53	343	8.7	0.54	373	9.1	0.57	393
<i>Acadian Thruway Southbound</i>	5.1	0.42	253	5.4	0.44	265	4.7	0.42	240	4.9	0.43	255
<i>Richland Plantation Eastbound</i>	84.4	0.41	5	84.4	0.41	5	51.8	0.29	18	51.8	0.29	18
<i>Acadian Centre Westbound</i>	46.0	0.59	140	46.1	0.60	145	47.7	0.51	78	47.5	0.52	80

* Queues reported in vehicle, converted to feet by a factor of 25 ft/veh

**Intersection Comparison
Existing and No Build Conditions**

Location	AM						PM					
	Existing			No Build			Existing			No Build		
	Delay (sec)	V/C Ratio	95th % Queues (ft)*	Delay (sec)	V/C Ratio	95th % Queues (ft)*	Delay (sec)	V/C Ratio	95th % Queues (ft)*	Delay (sec)	V/C Ratio	95th % Queues (ft)*
Acadian Thruway at Perkins Road	44.0			47.5			53.2			55.7		
<i>Stanford Avenue Northbound</i>	44.2	0.90	375	44.6	0.91	390	65.0	0.89	598	67.3	0.91	630
<i>Acadian Thruway Southbound</i>	47.9	0.80	425	48.7	0.81	448	62.5	0.90	348	63.0	0.90	363
<i>Perkins Road Eastbound</i>	42.3	0.80	363	45.2	0.82	410	47.4	0.85	575	51.4	0.87	668
<i>Perkins Road Westbound</i>	42.0	0.81	530	50.2	0.93	643	42.0	0.77	550	45.7	0.78	638
Perkins Rd at I-10 Ramps	18.0			18.9			9.5			10.1		
<i>I-10 Eastbound off ramp Southbound</i>	54.5	0.91	398	53.2	0.91	435	55.2	0.66	213	56.5	0.73	233
<i>Perkins Road Eastbound</i>	6.1	0.24	158	7.1	0.27	193	4.2	0.38	233	4.5	0.42	265
<i>Perkins Road Westbound</i>	11.5	0.41	318	13.5	0.47	375	8.7	0.49	390	9.5	0.55	448

* Queues reported in vehicle, converted to feet by a factor of 25 ft/veh

**Freeway/Merge/Diverge Segments Comparison
Existing and No Build Conditions**

Location	AM		PM	
	Existing Density (pc/ln/mi)	No Build Density (pc/ln/mi)	Existing Density (pc/ln/mi)	No Build Density (pc/ln/mi)
<i>I-10 Eastbound Freeway west of Perkins Road</i>	39.8	--	34.0	--
<i>I-10 Eastbound Diverge at Perkins Road</i>	39.0	--	34.4	--
<i>I-10 Eastbound Freeway between Perkins Road and Acadian Thruway</i>	37.4	--	34.1	--
<i>I-10 Eastbound Diverge at Acadian Thruway</i>	36.3	--	33.2	--
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #1</i>	38.5	--	38.5	--
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #2</i>	--	--	--	--
<i>I-10 Eastbound Weave between Acadian Thruway and College Drive – Case #3</i>	42.6	--	41.3	--
<i>I-10 Westbound Merge at College Drive</i>	33.3	42.9	28.9	36.6
<i>I-10 Westbound Freeway between Acadian Thruway and College Drive</i>	32.6	44.1	28.8	36.2
<i>I-10 Westbound Merge at Acadian Thruway</i>	37.8	--	32.6	43.8
<i>I-10 Westbound Merge at Perkins Road</i>	44.9	--	37.3	--
<i>I-10 Westbound Freeway west of Perkins Road</i>	--	--	35.3	--

-- When v/c is greater than 1 the HCS software does not report density

Acadian Perkins 2040 Build Volume Estimation Methodology

2040 Build Traffic Volumes

Volumes for the design year were developed for use in Build conditions analysis to compare to the No Build analysis results. The objective is to assess the operational impact of the proposed interchange modifications with an additional lane on I-10. The proposed modifications for the Acadian/Perkins interchanges are the removal of the I-10 WB on-ramp from Perkins and the I-10 EB off-ramp to Perkins. Separate IMRs are being prepared for proposed modifications to the Washington/Dalrymple interchanges and a directional ramp to College Drive from I-10 and I-12.

TransCAD Data

TransCAD volume output from the Capitol Region Planning Commission's (CRPC) regional transportation models was reviewed to assist with estimating projected Build volumes. Model output is a useful tool as it predicts changes to traffic patterns with proposed interchange modifications and also takes into account other projects that are included in the financially constrained long-range transportation plan. The model volume output is not intended to be used as absolute, especially at the micro level such as peak periods at intersections.

Models were provided for the following scenarios:

- 2037 No Build condition with the existing configuration
- 2037 Build conditions with the following proposed improvements:
 - An additional lane on I-10
 - College Dr Directional Ramps from I-10 and I-12
 - Perkins Ramp Removal
 - Washington St/Dalrymple Dr combined interchange.

The model output was reviewed to confirm the links and number of lanes matched the existing and proposed conditions within the study area. These are presented on pages Appendix C XX- C XX and C XX- C XX.

The intersection flow diagrams were reviewed for the AM and PM peak periods. The intersection flow diagrams are presented on pages Appendix C XX - C XX. The ADTs were also reviewed and are presented on pages Appendix C XX and C XX - C XX. The percent change between the TransCAD No Build and TransCAD Build output was calculated for the AM peak period, PM peak period, and ADTs. The No Build volumes from Figure 2.5 for I-10, the Acadian ramp terminal intersections, and Acadian at Perkins were multiplied by the percent change calculated from the TransCAD models to develop the proposed Build volumes.

The results are presented in Table C-1.

Table C.1 - TransCAD Data

Location	TransCAD Node	Approach		Movement		AM					PM					ADT (Approach Total)								
						No Build (with Perkins)		Build (all projects)		% of No Build	2040 No Build Volume	2040 Build Volume (Calculated from TransCAD %)	No Build (with Perkins)		Build (all projects)		% of No Build	2040 No Build Volume	2040 Build Volume (Calculated from TransCAD %)	No Build (with Perkins)	Build (all projects)	% of No Build		
I-10 EB merge east of Acadian	6321	I-10	Eastbound	Mainline	Interstate	10474	14109	12414	16072	114%	7624	8691	14855	19797	18001	22519	114%	7416	8454	98318	108163	110%		
				On Ramp		3634		3658					4942	4518										
I-10 WB diverge east of Acadian	5590	I-10	Westbound	Mainline	Interstate	18019		20873		116%	7890	9152	17905		20821		116%	7918	9185	100868	113193	112%		
				Off Ramp																				
Acadian at Perkins	6324	Stanford	NB	Left		207	258	125%	236	295	292	225	77%	164	126									
				Thru		2966	2779	94%	658	619	3551	3167	89%	814	724									
				Right		604	663	110%	104	114	627	675	108%	145	157									
		Acadian	SB	Left		681	1615	237%	255	604	747	1848	247%	395	976									
				Thru		2168	2072	96%	699	671	2785	2748	99%	496	491									
				Right		129	149	116%	49	57	93	105	112%	43	48									
		Perkins	EB	Left		194	190	98%	235	230	308	290	94%	327	307									
				Thru		2136	972	45%	636	286	2570	1038	40%	978	391									
				Right		285	220	77%	57	44	418	306	73%	60	44									
				Left		439	566	129%	157	203	846	866	102%	181	185									
	WB	Thru		2477	1170	47%	966	454	2705	1152	43%	970	417											
		Right		459	1166	254%	270	686	449	1354	302%	224	676											
I-10 EB at Acadian	6326	Acadian	NB	Thru		1683	2380	141%	477	673	1699	2842	167%	579	967									
				Right		2130	1949	92%	757	696	3092	2491	81%	825	668									
				Left		1504	1709	114%	556	634	1850	2027	110%	615	677									
		I-10 EB Off-ramp	EB	Thru		3124	3163	101%	1158	1170	3738	3575	96%	1191	1143									
				Left		71	79	112%	59	66	110	123	112%	31	35									
				Thru		0	0	100%	2	2	0	0	100%	1	1									
		Right		266	1229	462%	90	416	203	1538	759%	77	584											
I-10 WB at Acadian	6328	Acadian	NB	Left		122	963	787%	42	331	317	1365	430%	58	249									
				Thru		1631	1496	92%	530	488	1492	1600	107%	540	578									
				Right		2935	3008	102%	1072	1093	3826	3657	96%	1254	1204									
		I-10 WB Off-ramp	WB	Left		156	137	88%	104	92	209	157	75%	116	87									
				Thru		1693	1864	110%	621	683	1762	1945	110%	553	608									
				Right		47	0	0%	8	8	0	0	100%	22	22									
		Right		2089	2285	109%	670	730	2198	2153	98%	699	685											
I-10 WB On Ramp at College Dr	6347	College Dr NB	NB	Right	158	259	164%	247	488	405	776	445	521	117%	169	384	198	520	19200	22305	116%			
			SB	Left	417	643	154%	241	371	722	1086	722	1086	150%	215	384	323	520	24836	26482	107%			
I-10 EB diverge at College Dr	6322	I-10	Eastbound	Off Ramp		1436	1767	123%	686	844	1559	1956	125%	529	661			6545	8217	126%				

The resulting Build volumes are presented in black on Figure C-1 for the AM, and Figure C-2 for the PM with the corresponding percent change from the No Build volumes.

The TransCAD build model results indicated zero volume for the through movements at the Acadian eastbound and westbound off ramps. To represent the possibility of motorists still making these movements, the 2040 No Build volumes were used as the 2040 Build Volumes. The TransCAD model did not include a node for the Acadian at Acadian Centre intersection. The 2040 No Build volumes were also used for turning movements and side street movements at this intersection. These are presented in green on Figure C-1 for the AM and Figure C-2 for the PM.

The remaining movements were calculated from the upstream/downstream locations and are shown in orange on the volume figures. The northbound and southbound through movements at Acadian Centre were calculated from the Acadian at I-10 eastbound off ramp intersection.

LEGEND:

- X 2040 Build AM Volumes
- X% Percent of NB AM Volume
- X Same As 2040 No Build
- X Calculated AM Volume
- Signalized Intersection

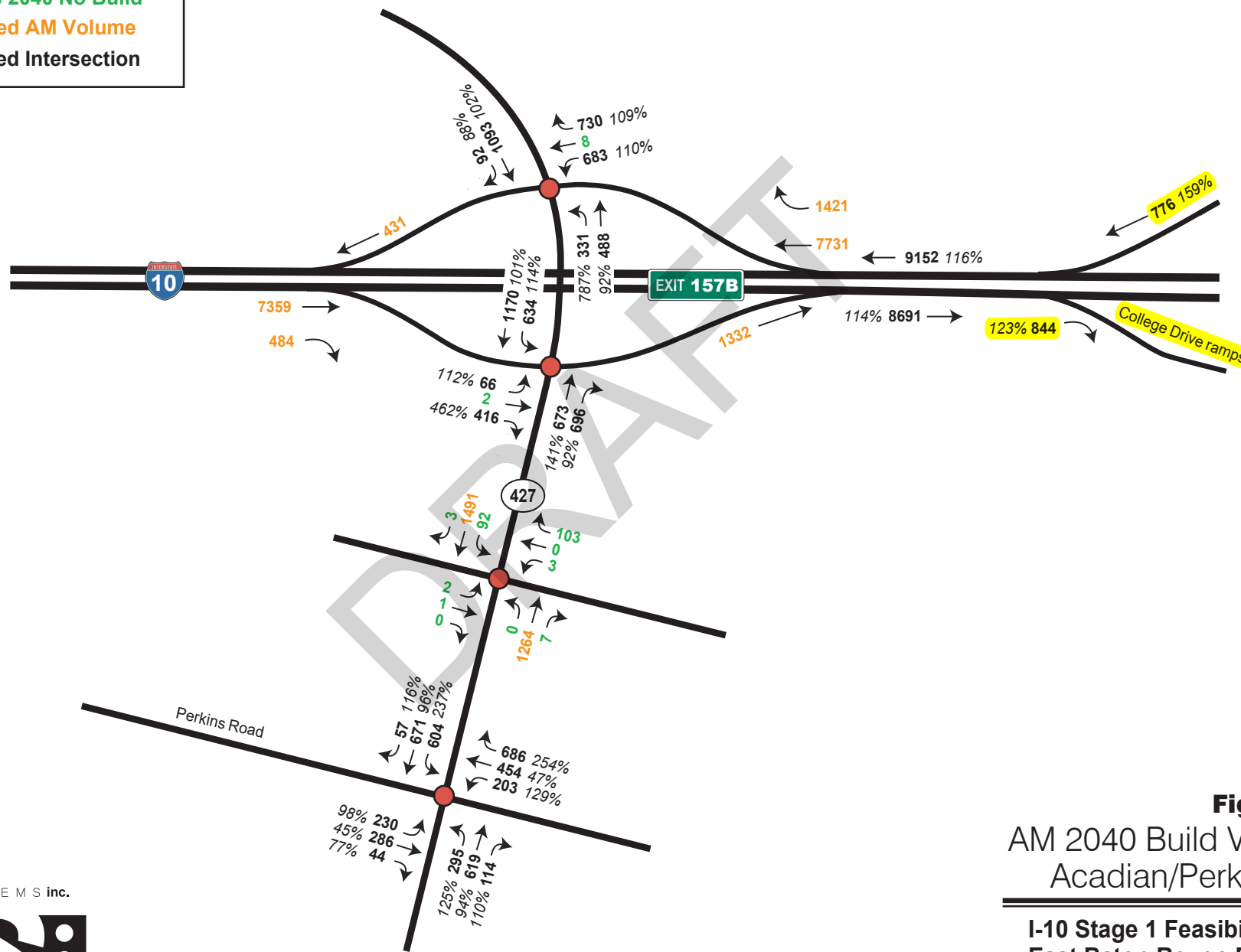


Figure C-1
 AM 2040 Build Volumes
 Acadian/Perkins IMR

I-10 Stage 1 Feasibility Study
East Baton Rouge Parish, LA

NOT TO SCALE
 FOR PLANNING PURPOSES ONLY



LEGEND:

- X 2040 Build PM Volumes
- X% Percent of NB PM Volume
- X Same As 2040 No Build
- X Calculated PM Volume
- Signalized Intersection

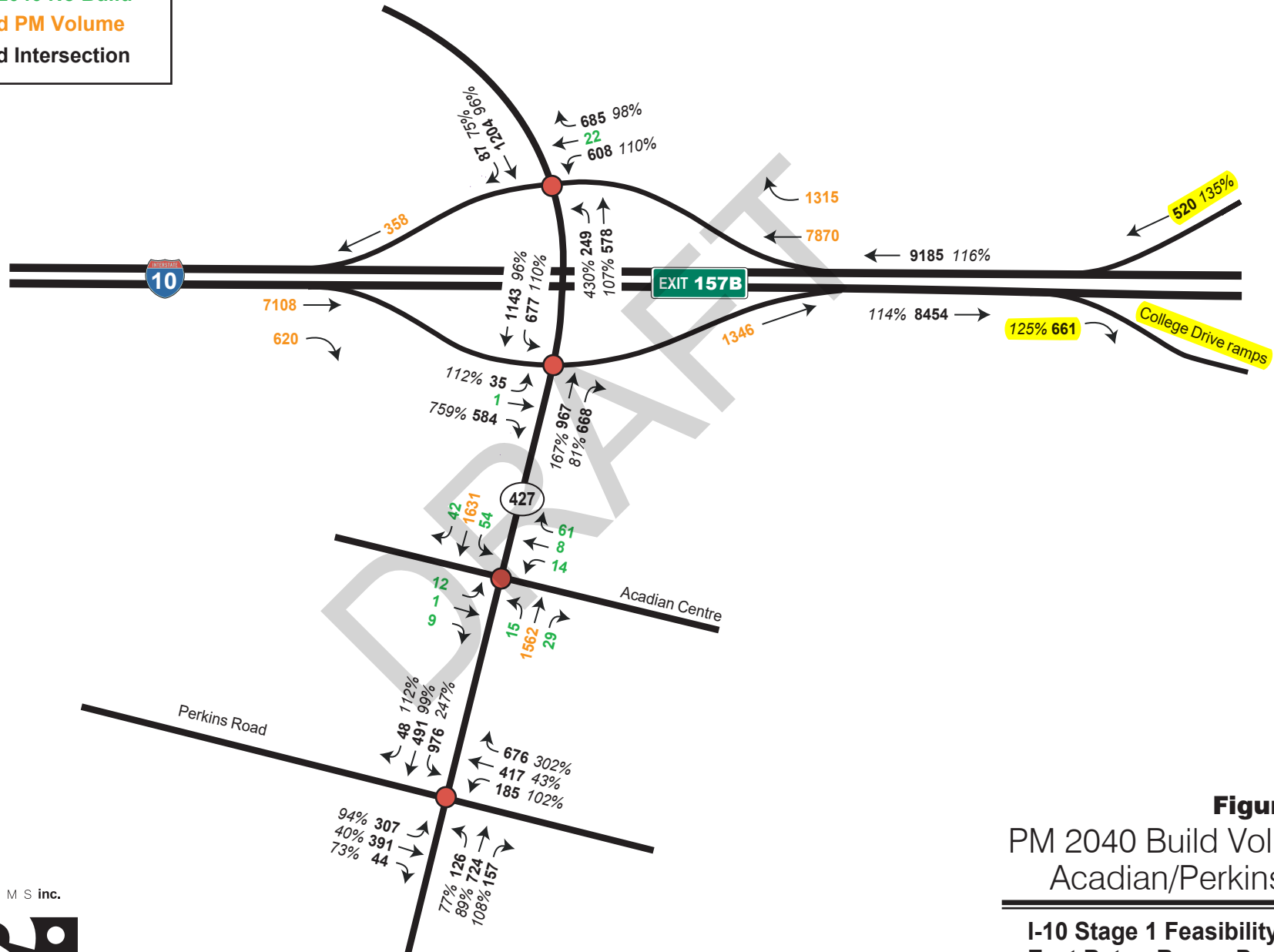


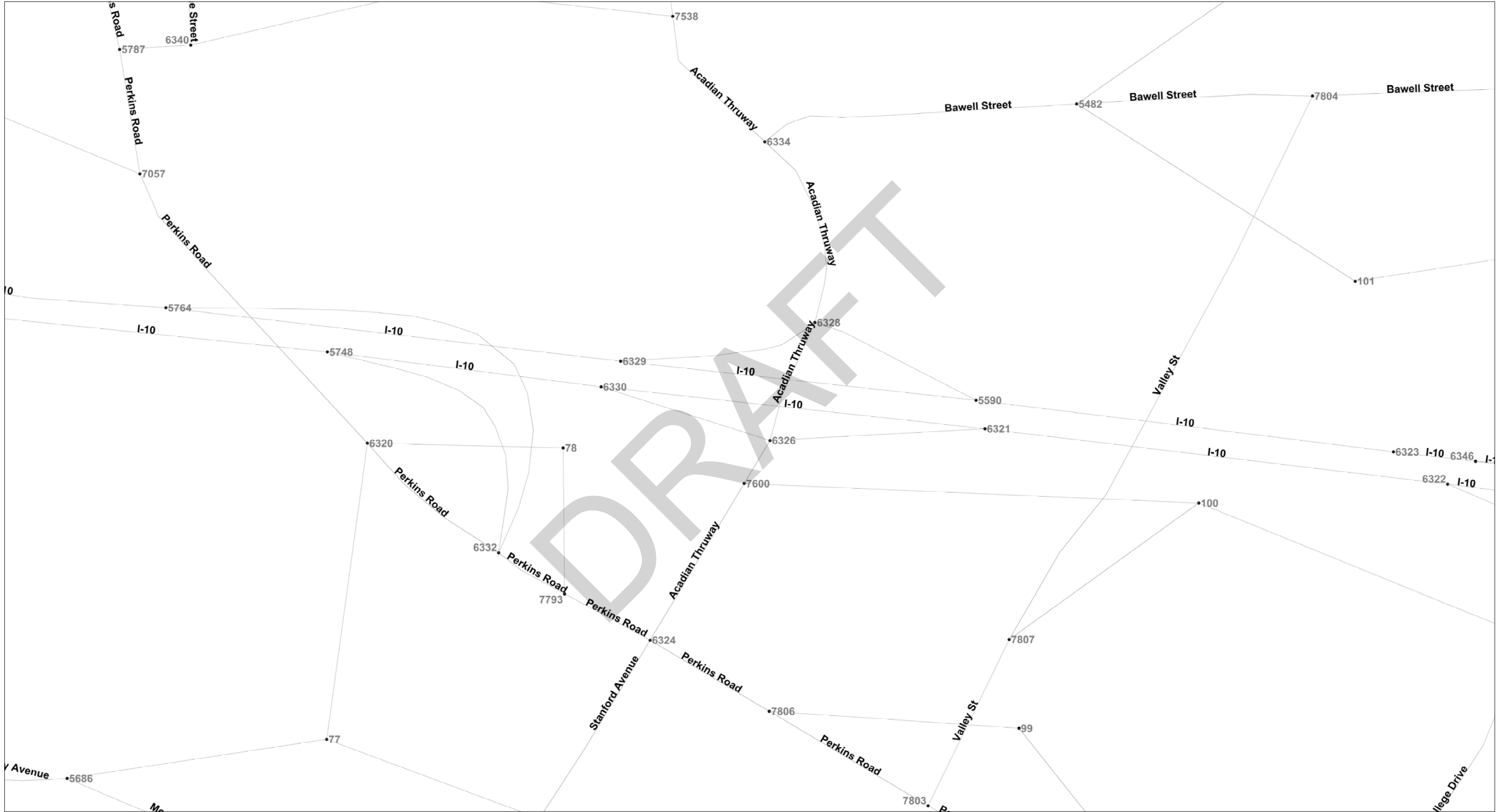
Figure C-2
PM 2040 Build Volumes
Acadian/Perkins IMR

I-10 Stage 1 Feasibility Study
East Baton Rouge Parish, LA

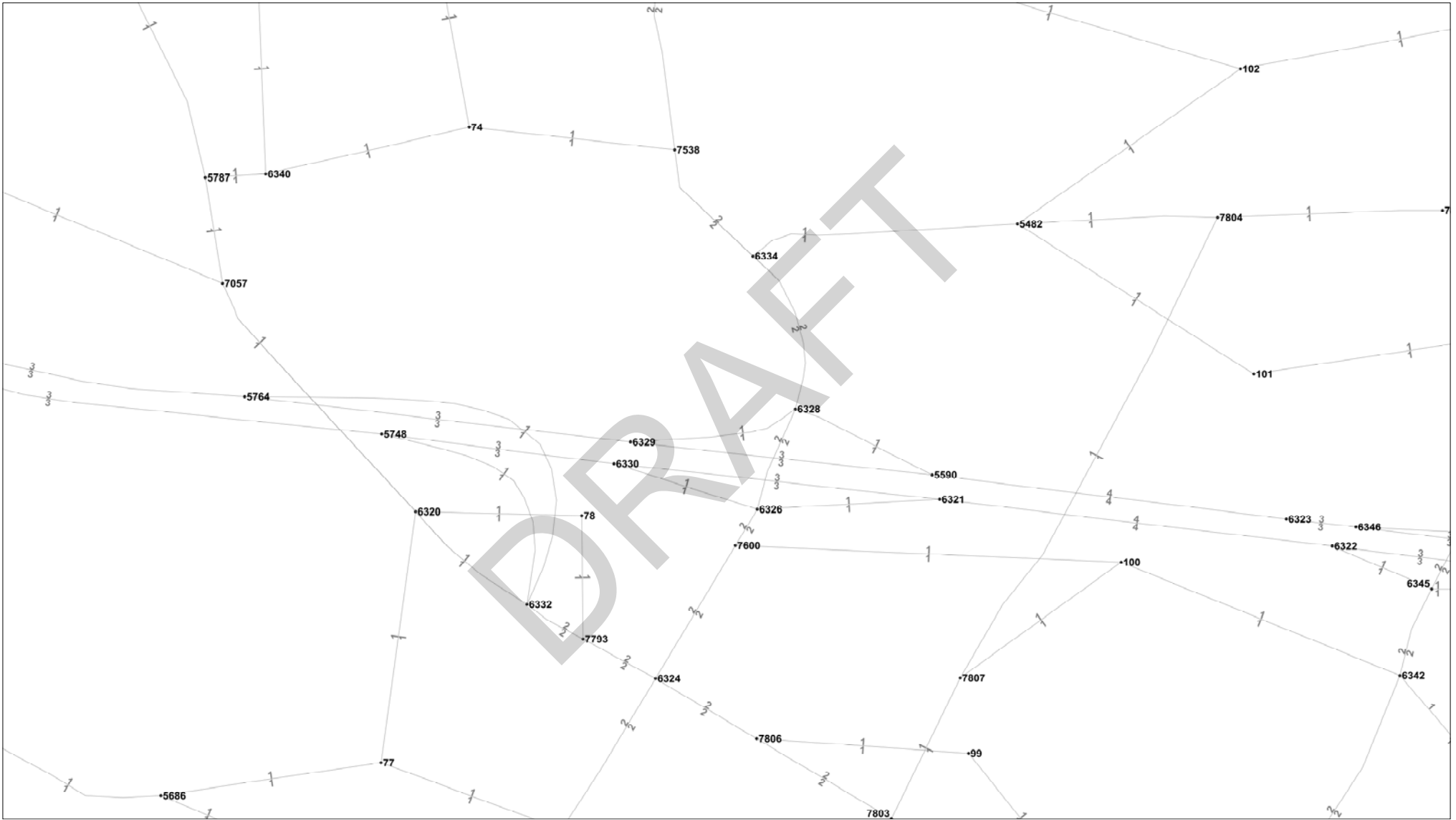
NOT TO SCALE
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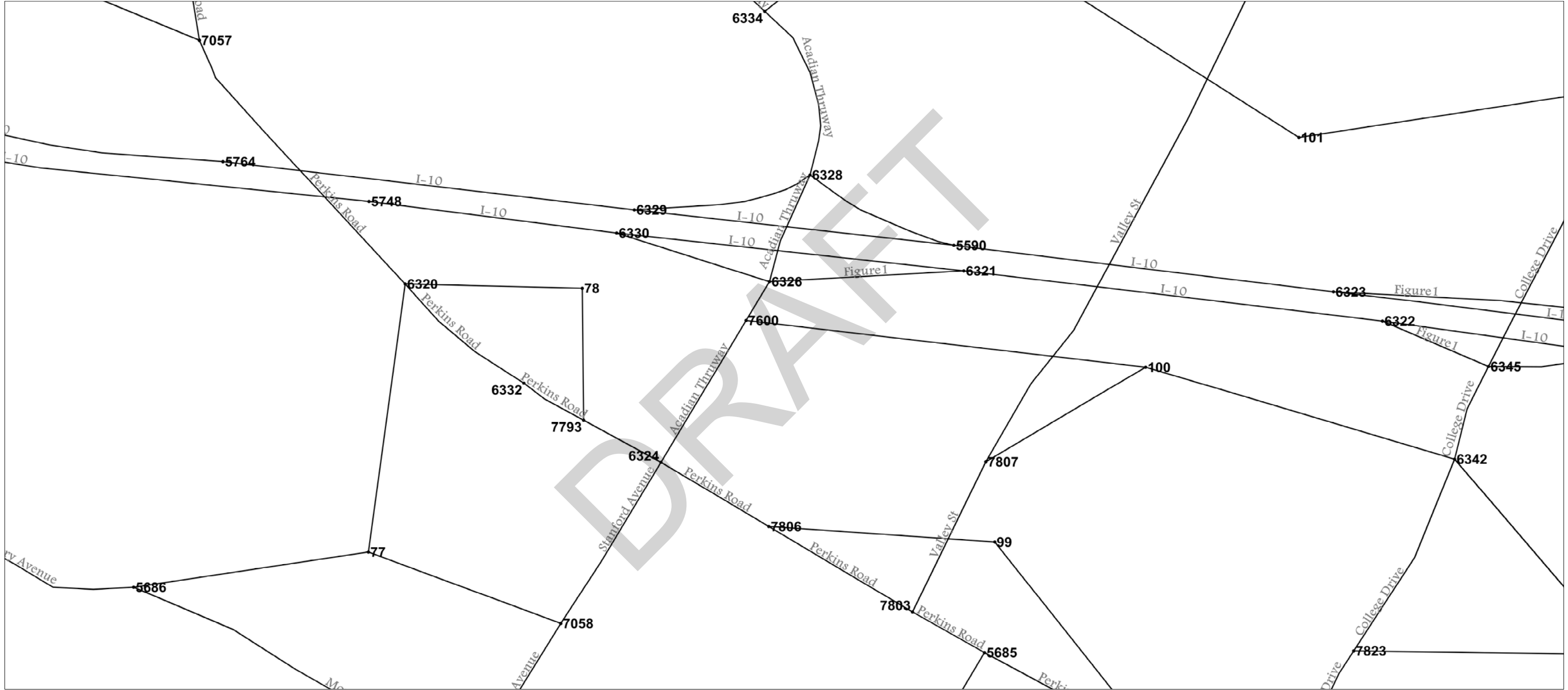
URBAN SYSTEMS inc.

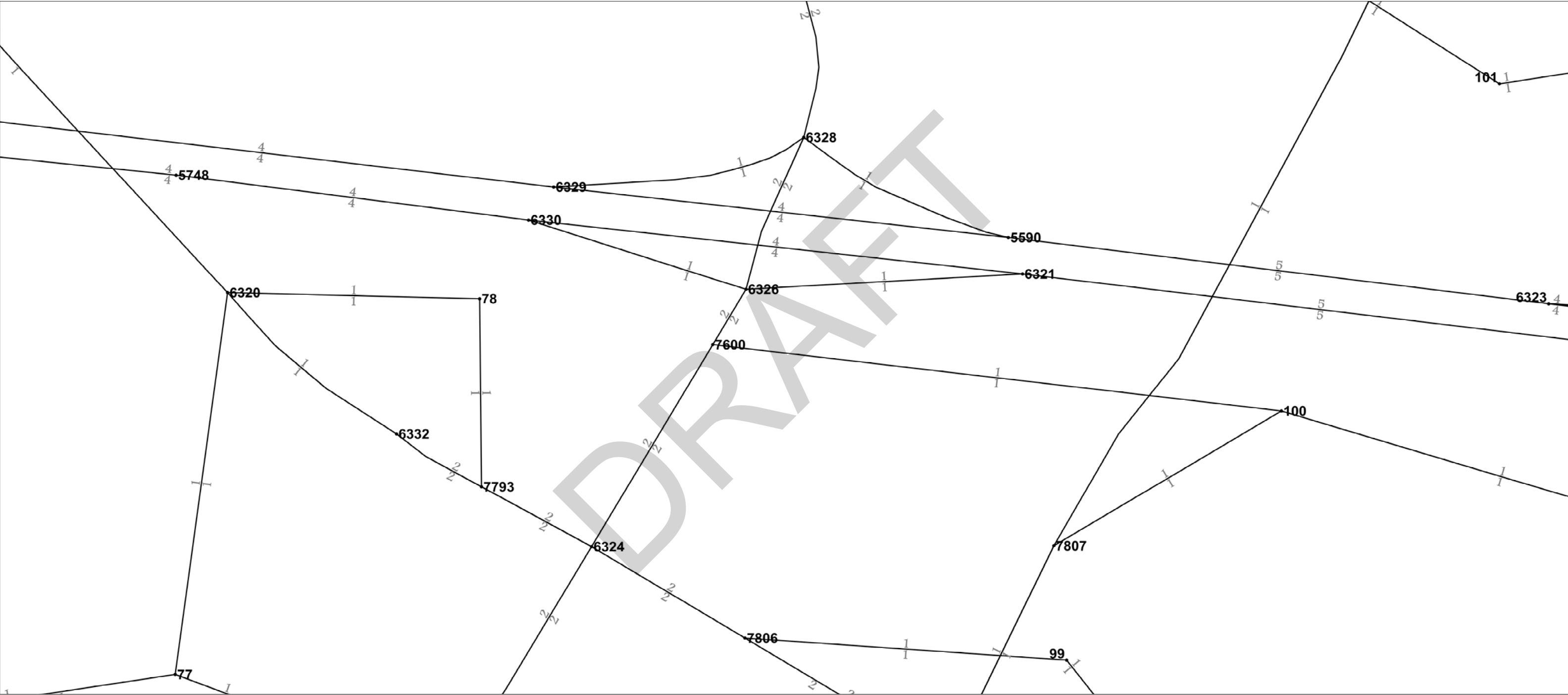


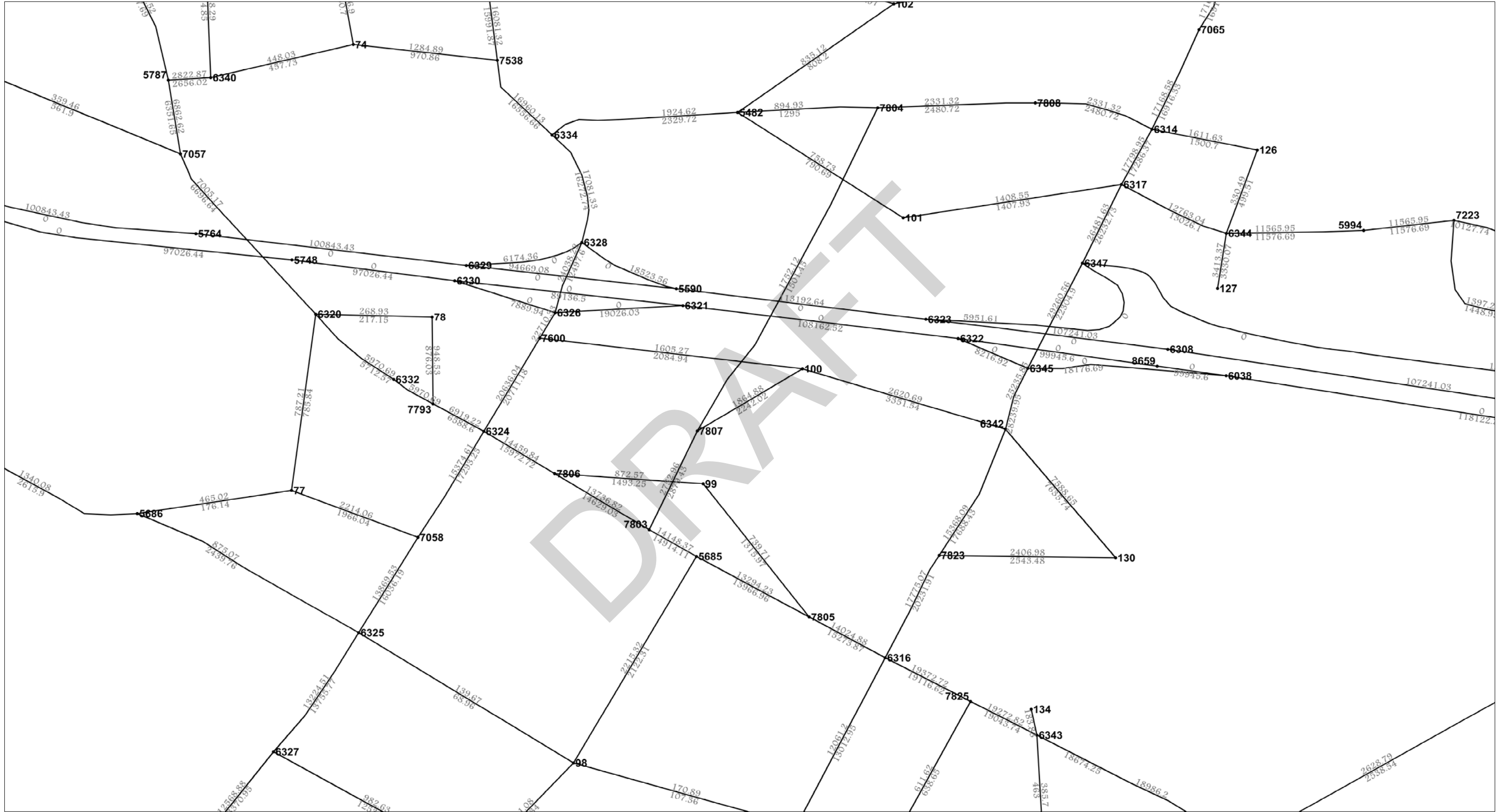


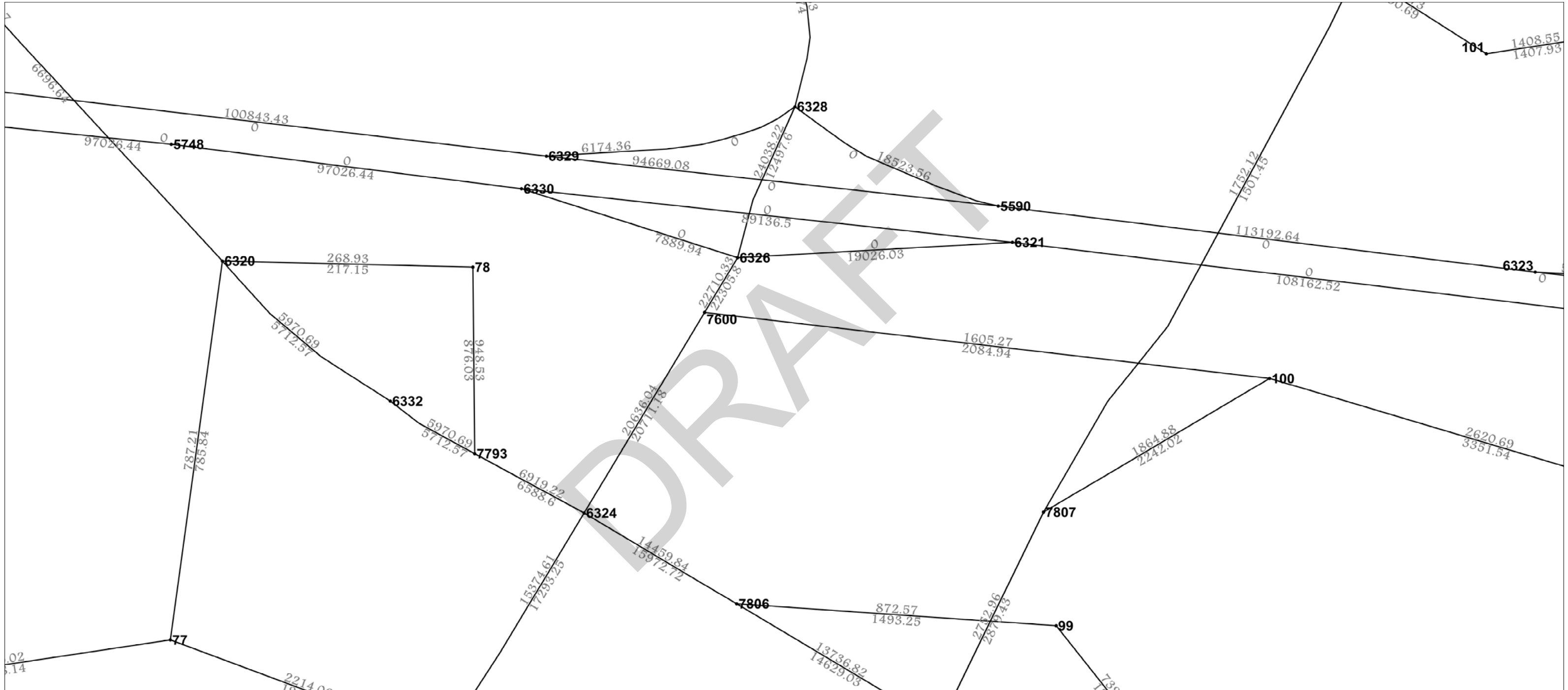
Acadian/Perkins IMR
2037 No Build - Nodes and Lanes



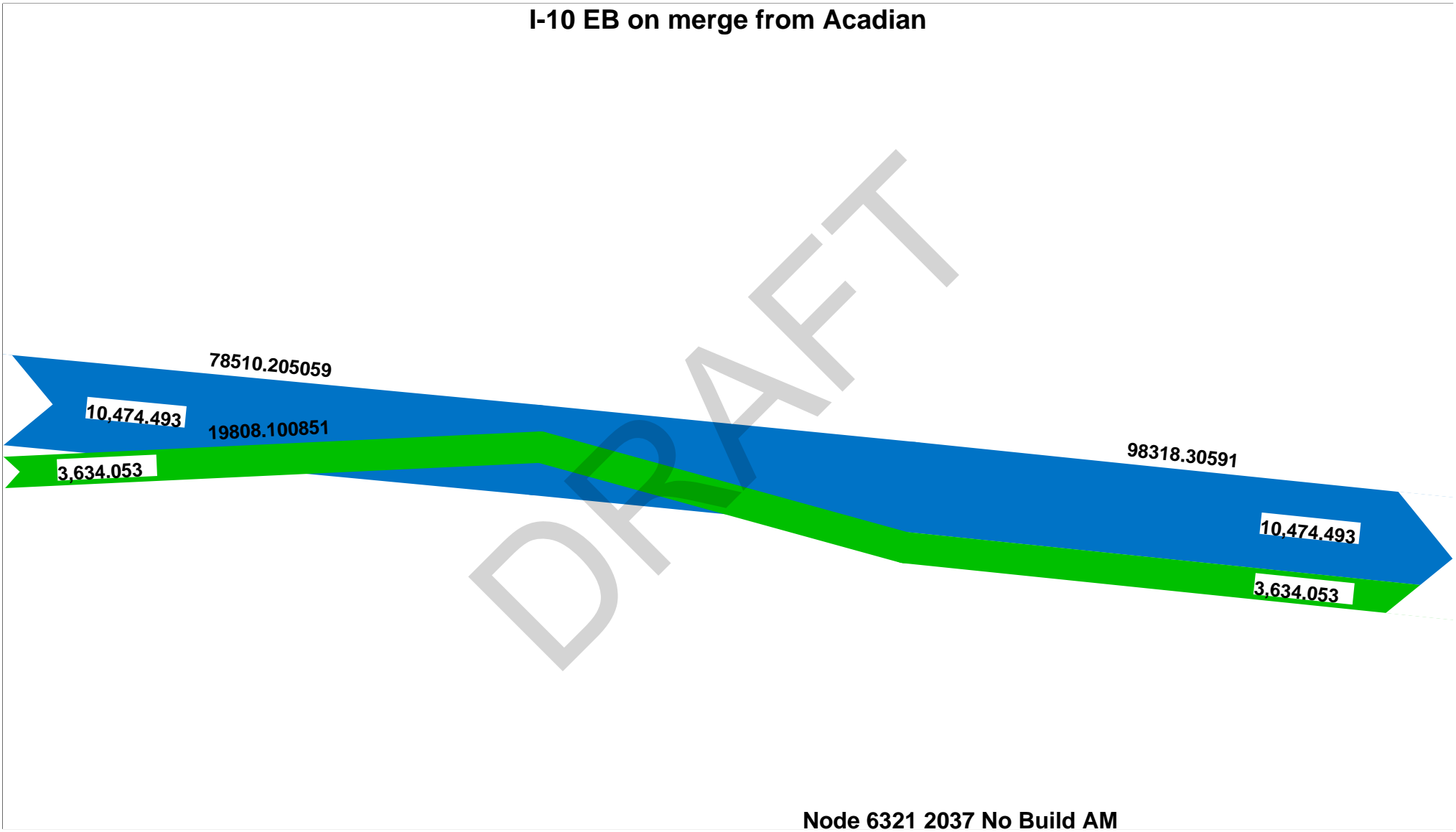




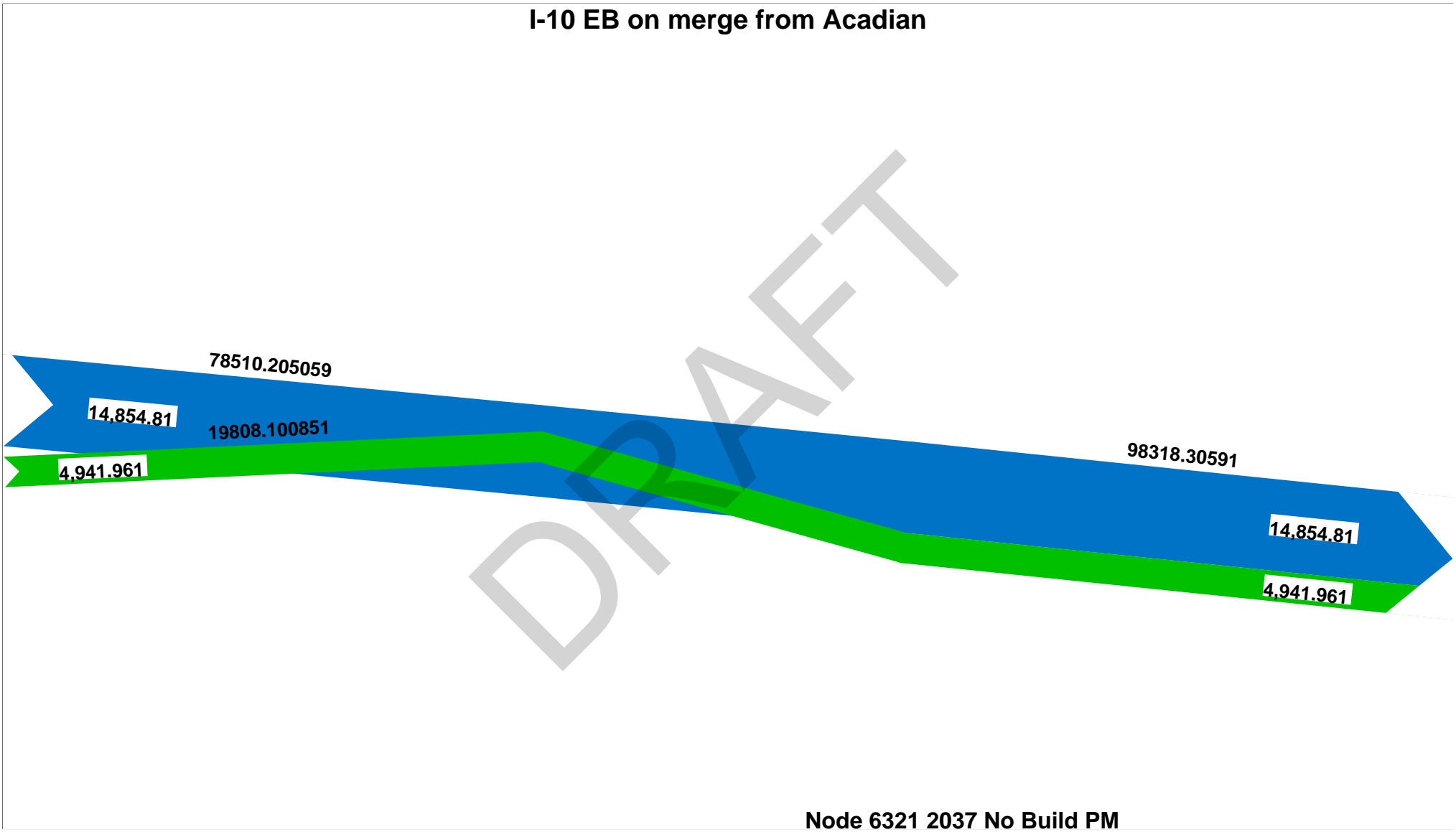




I-10 EB on merge from Acadian

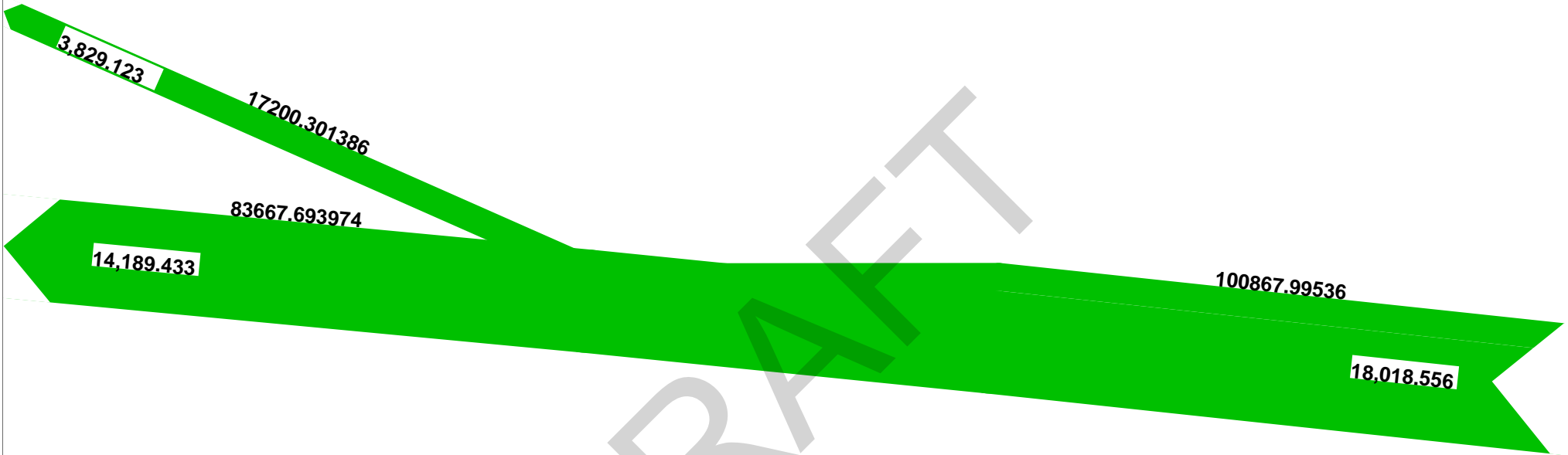


I-10 EB on merge from Acadian



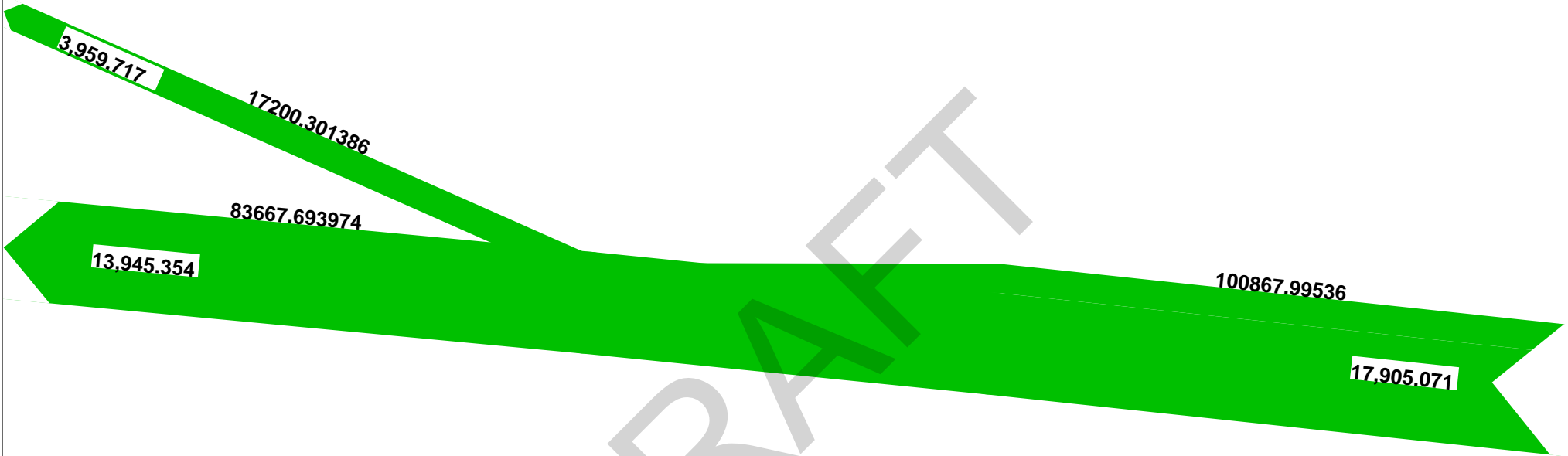
Node 6321 2037 No Build PM

I-10 WB off diverge to Acadian



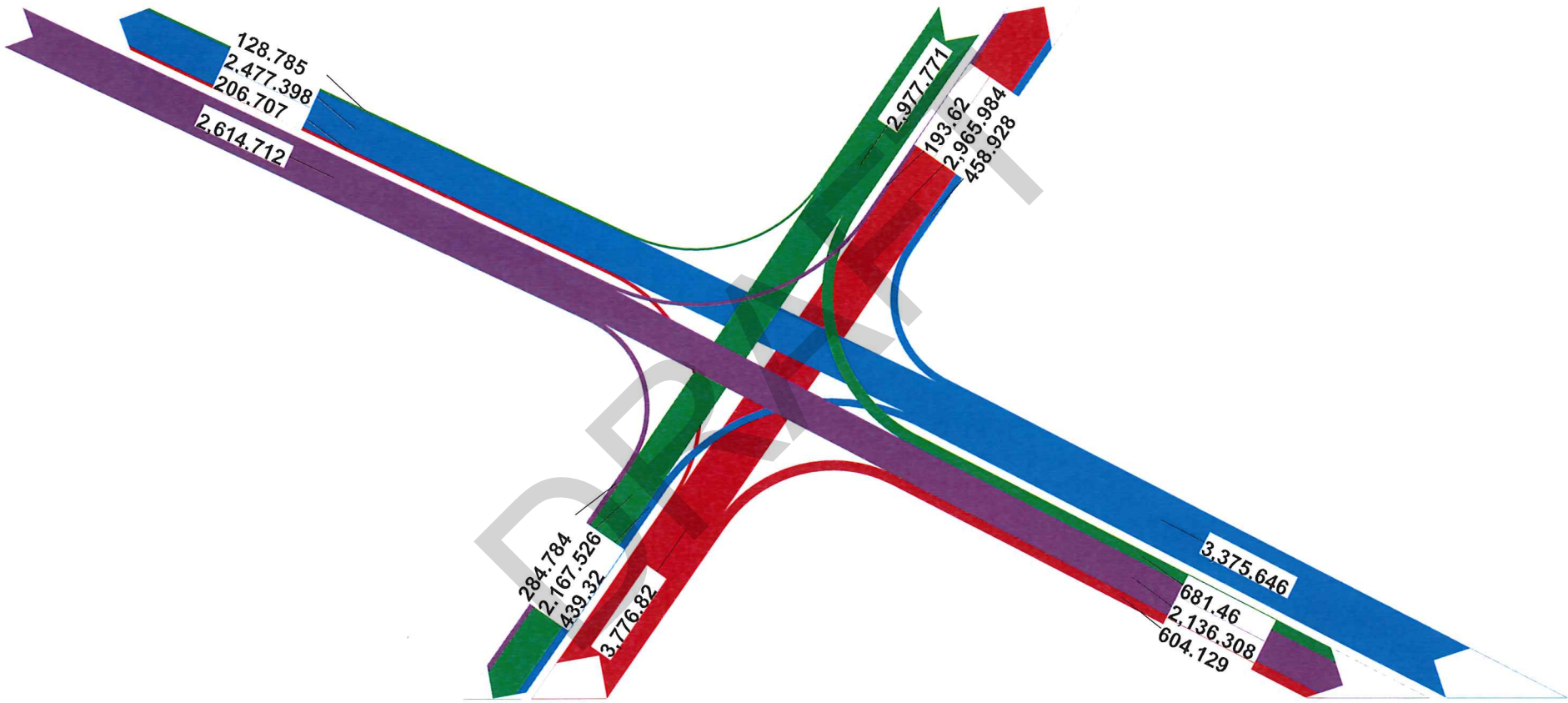
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I-10 WB off diverge to Acadian



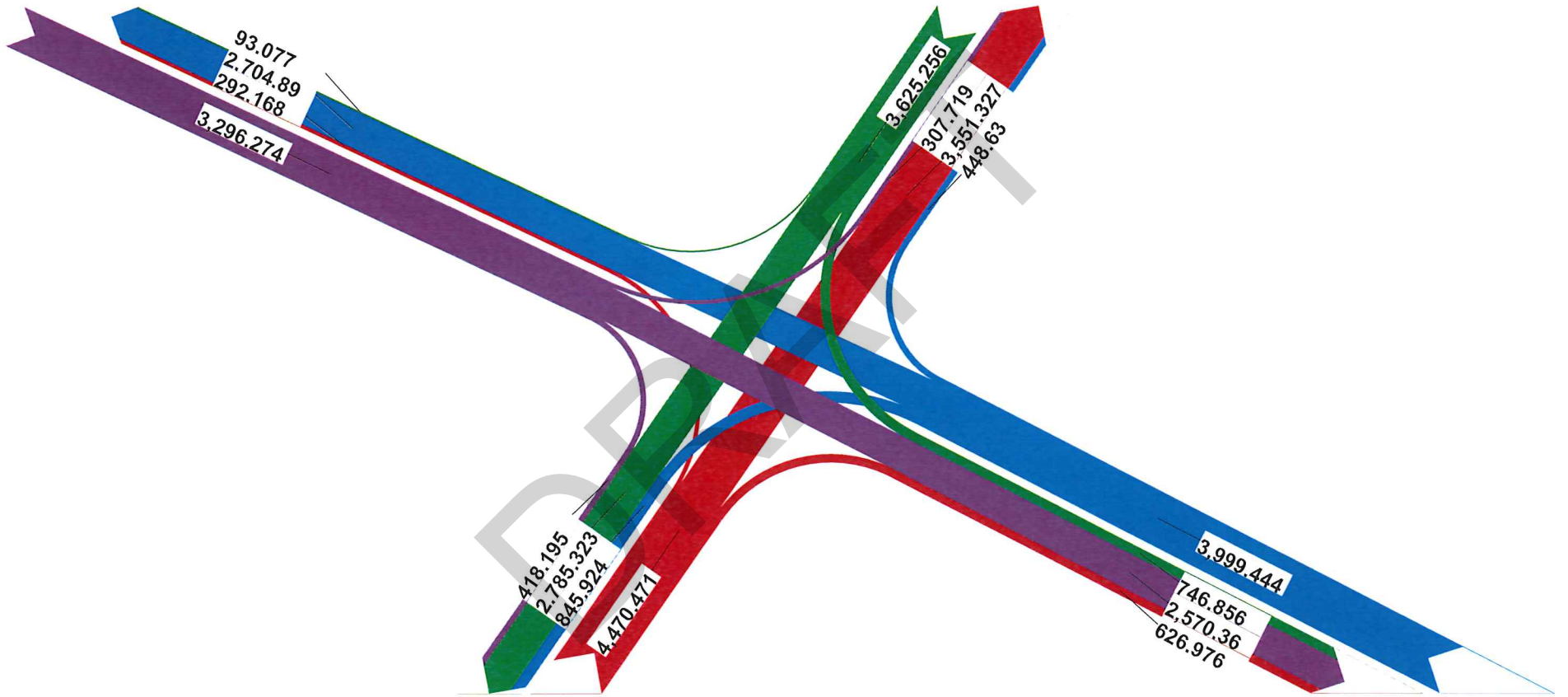
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Acadian at Perkins



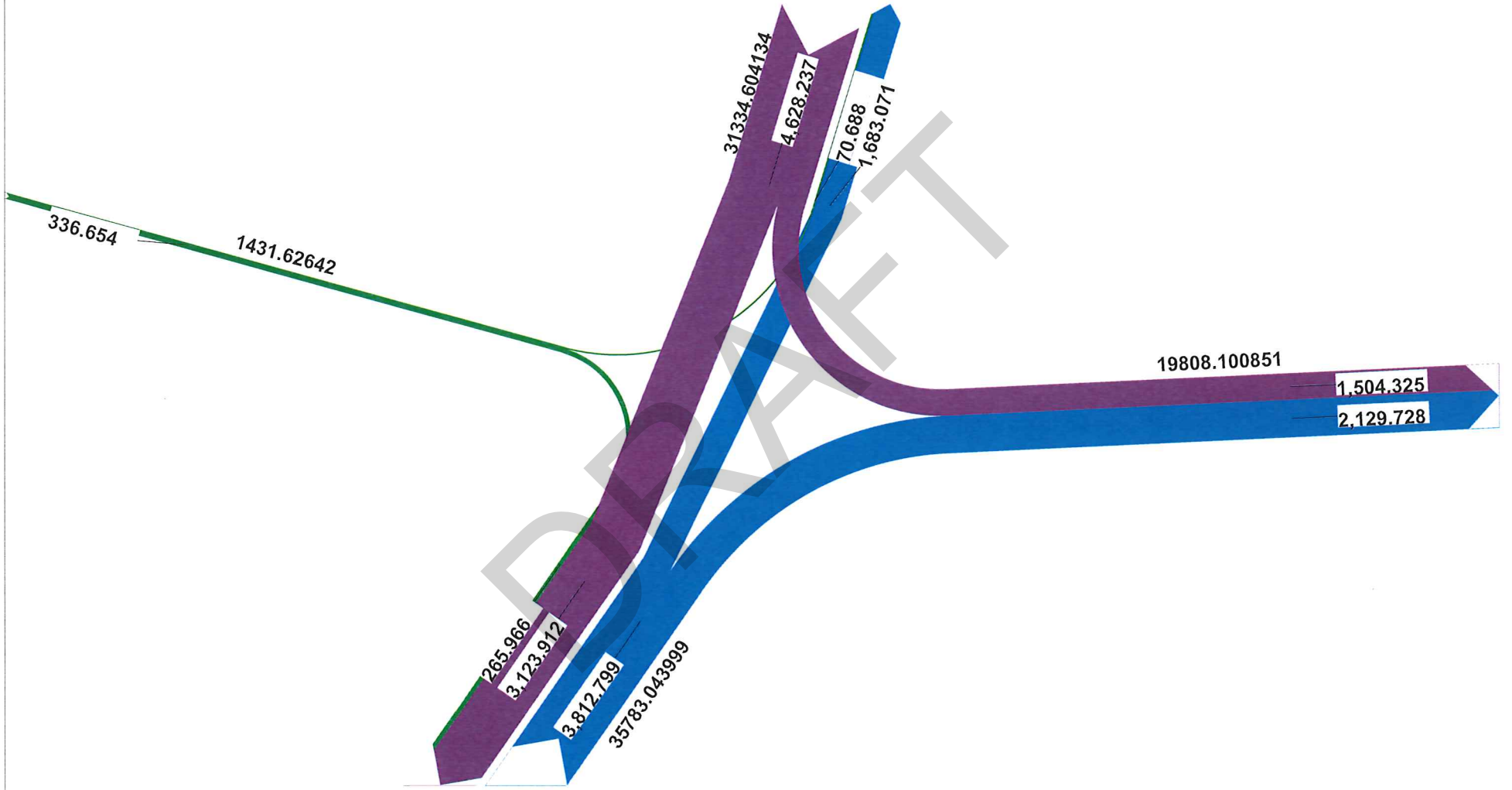
Node 6324 2037 AM
No Build

Acadian at Perkins



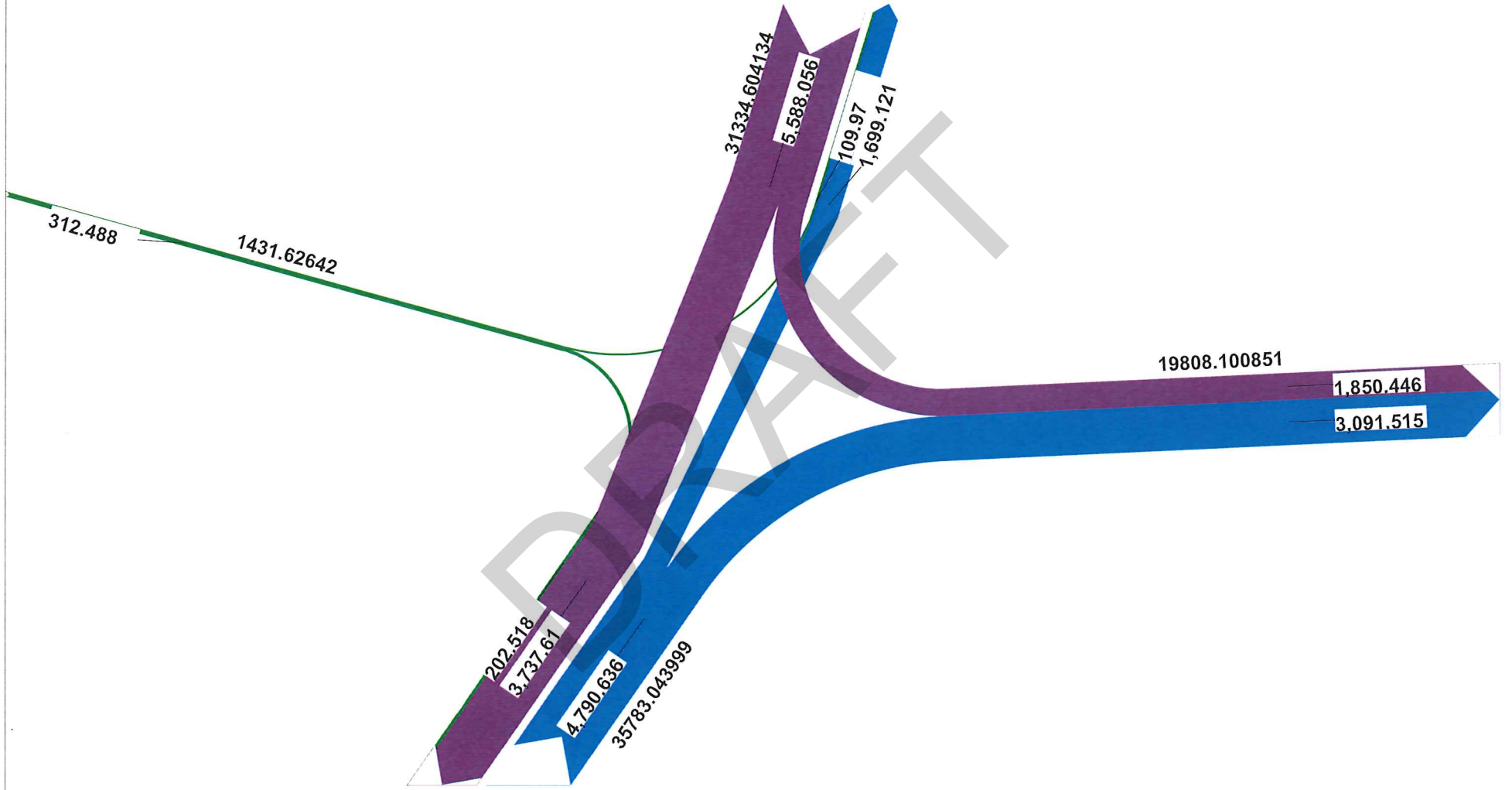
Node 6324 2037 PM
No Build

I-10 EB Ramps @ Acadian



Node 6326 2037 No Build AM

I-10 EB Ramps @ Acadian



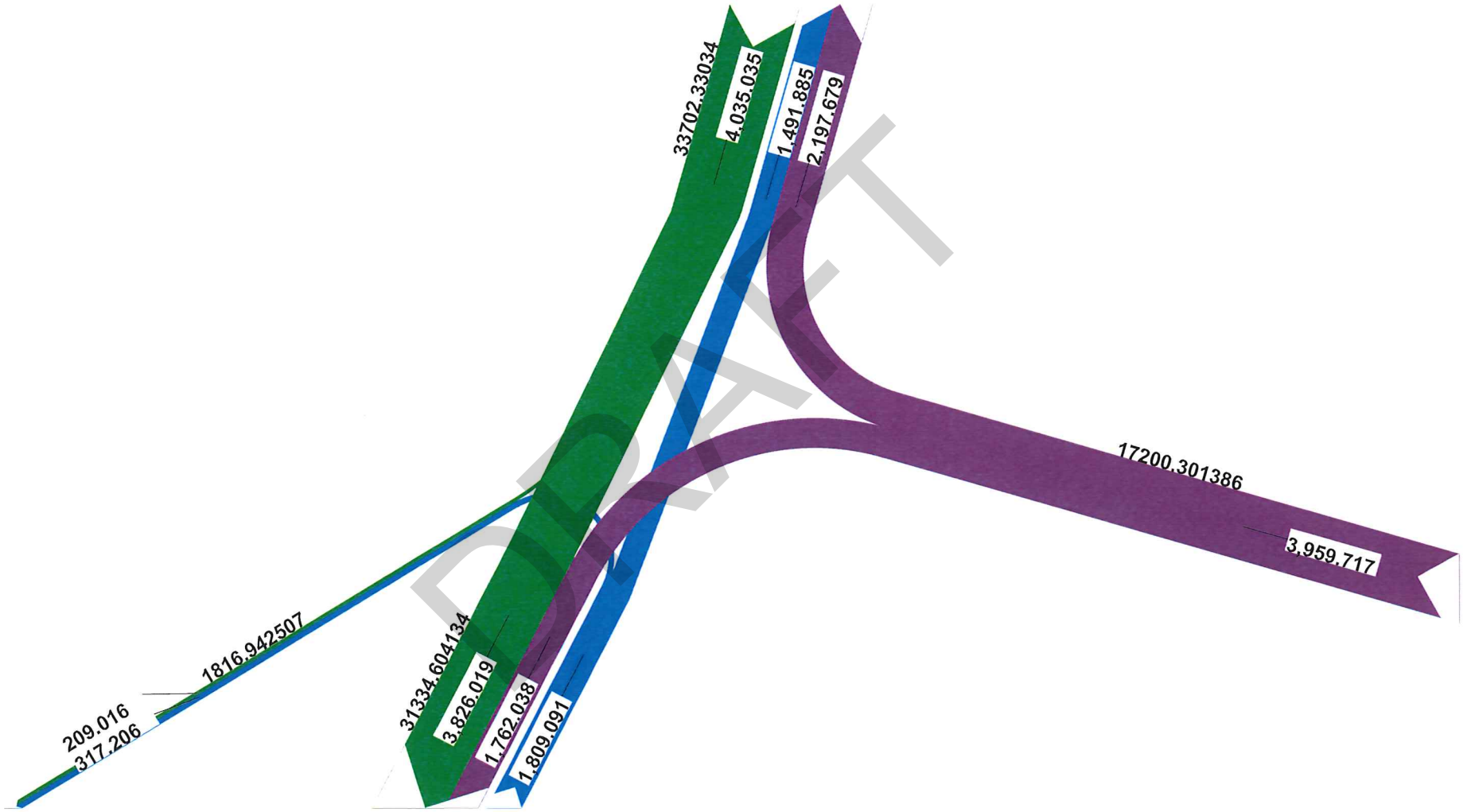
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I-10 WB Ramps @ Acadian



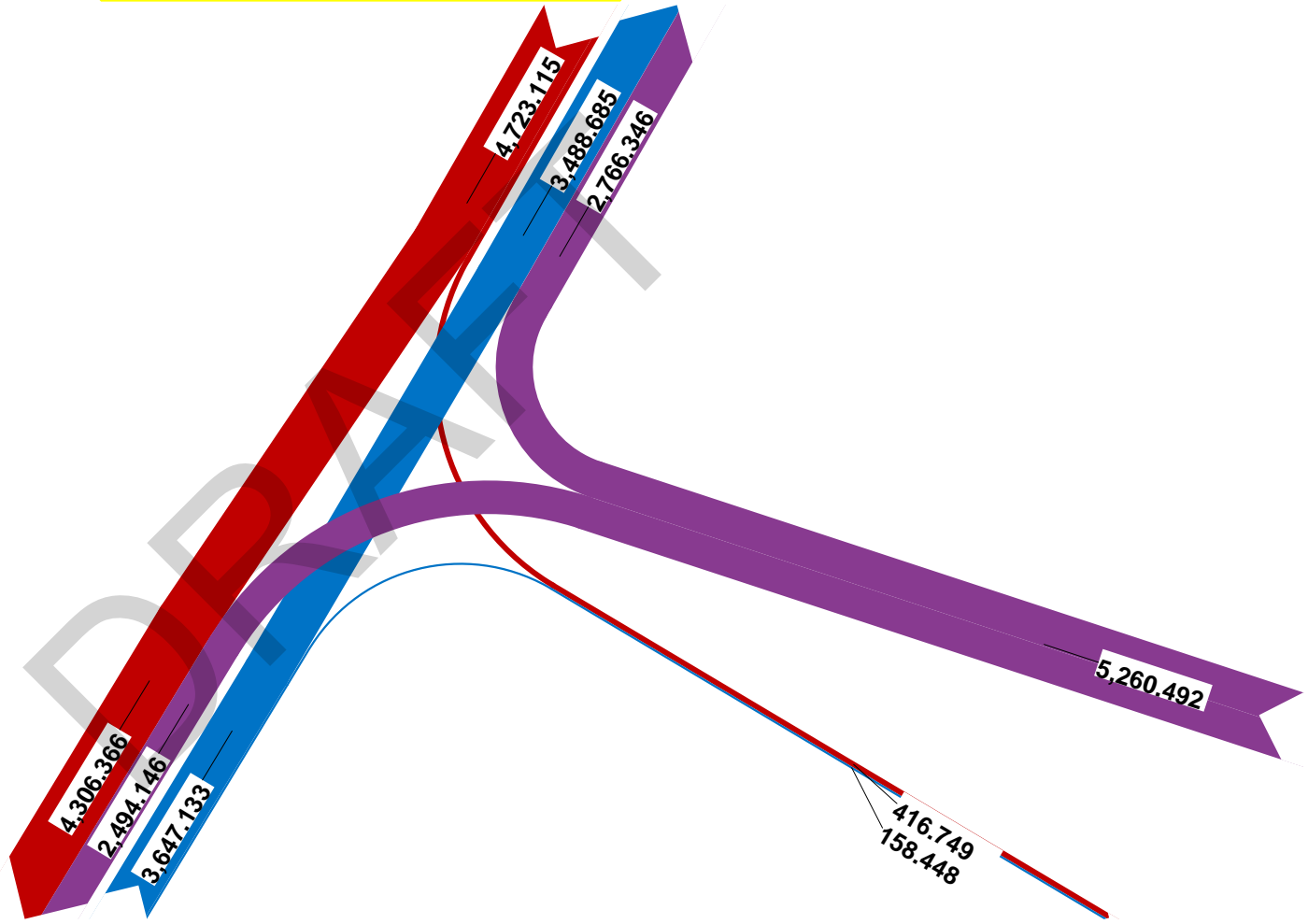
Node 6328 2037 No Build AM

I-10 WB Ramps @ Acadian



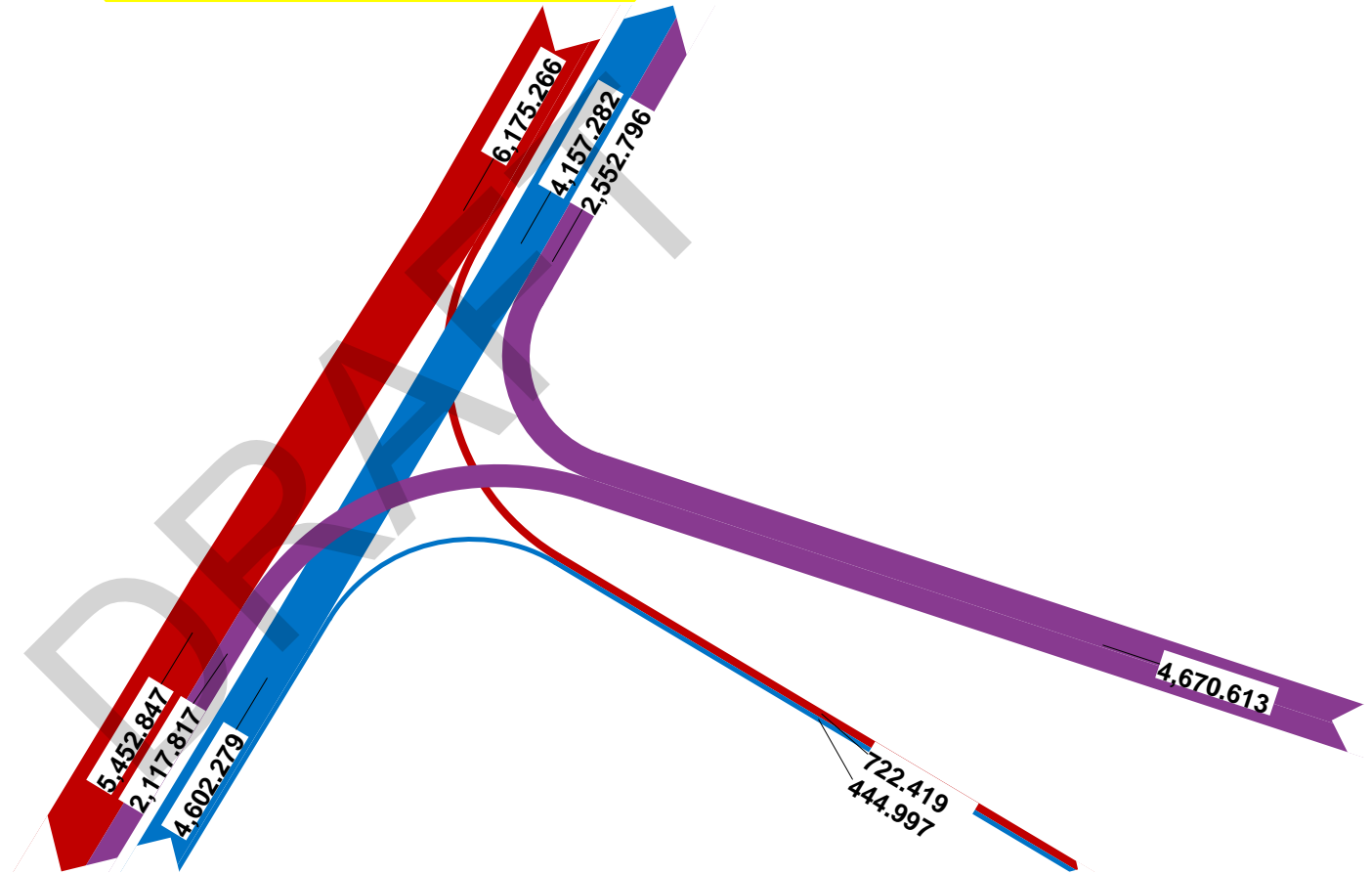
Node 6328 2037 No Build PM

I-10 WB Off Ramp at College Dr



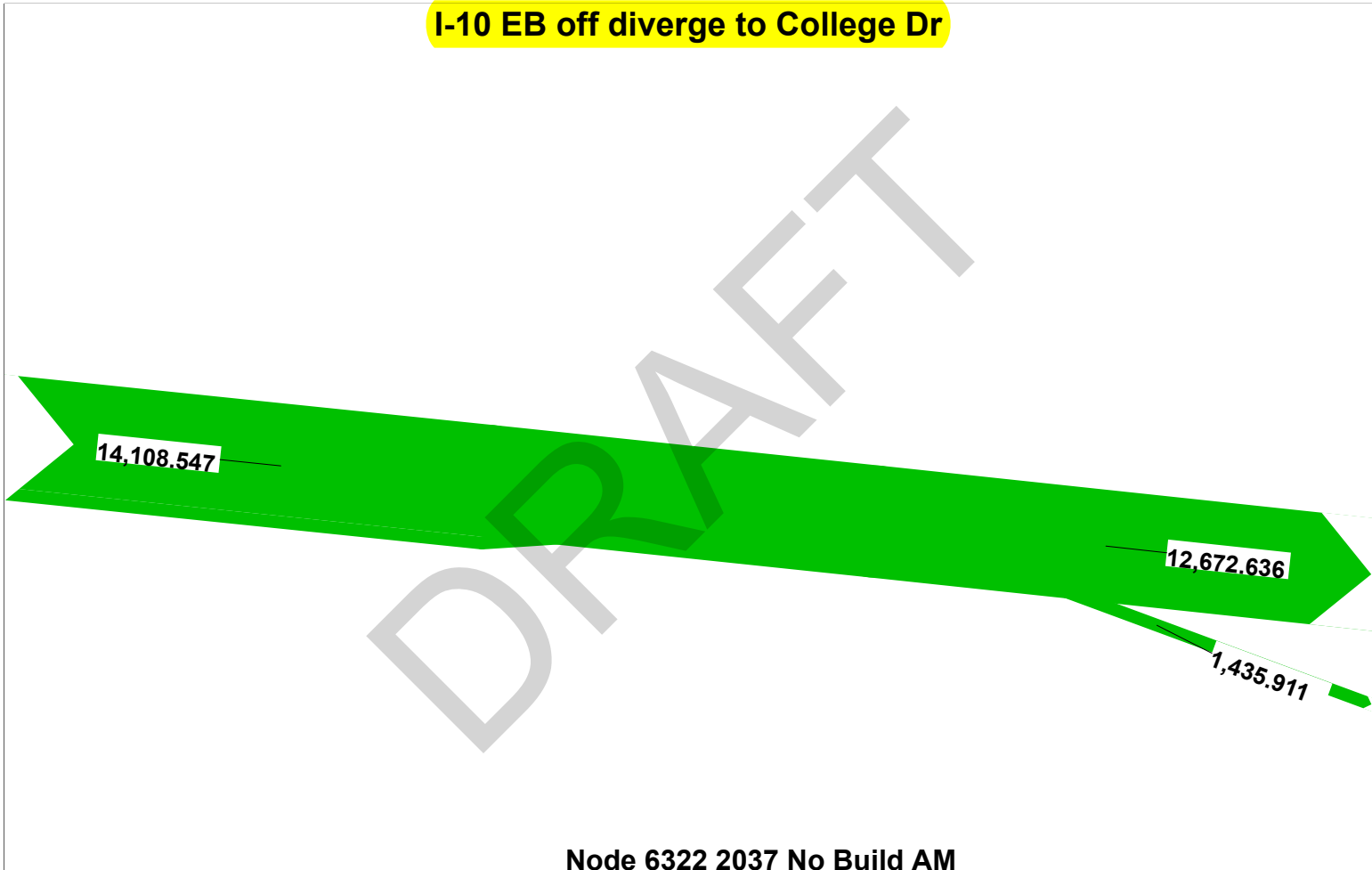
No Build AM Node 6347

I-10 WB Off Ramp at College Dr



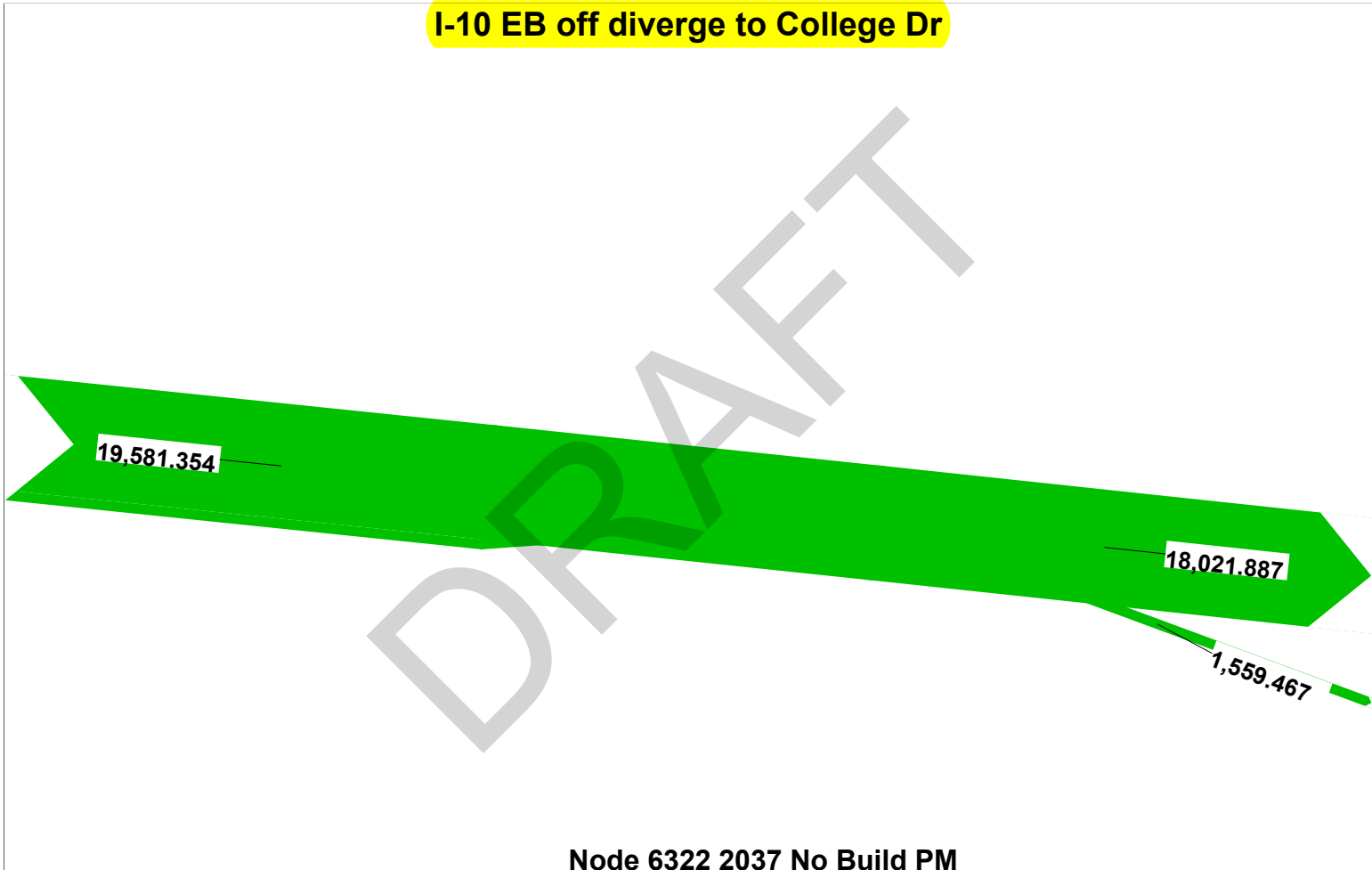
No Build PM Node 6347

I-10 EB off diverge to College Dr



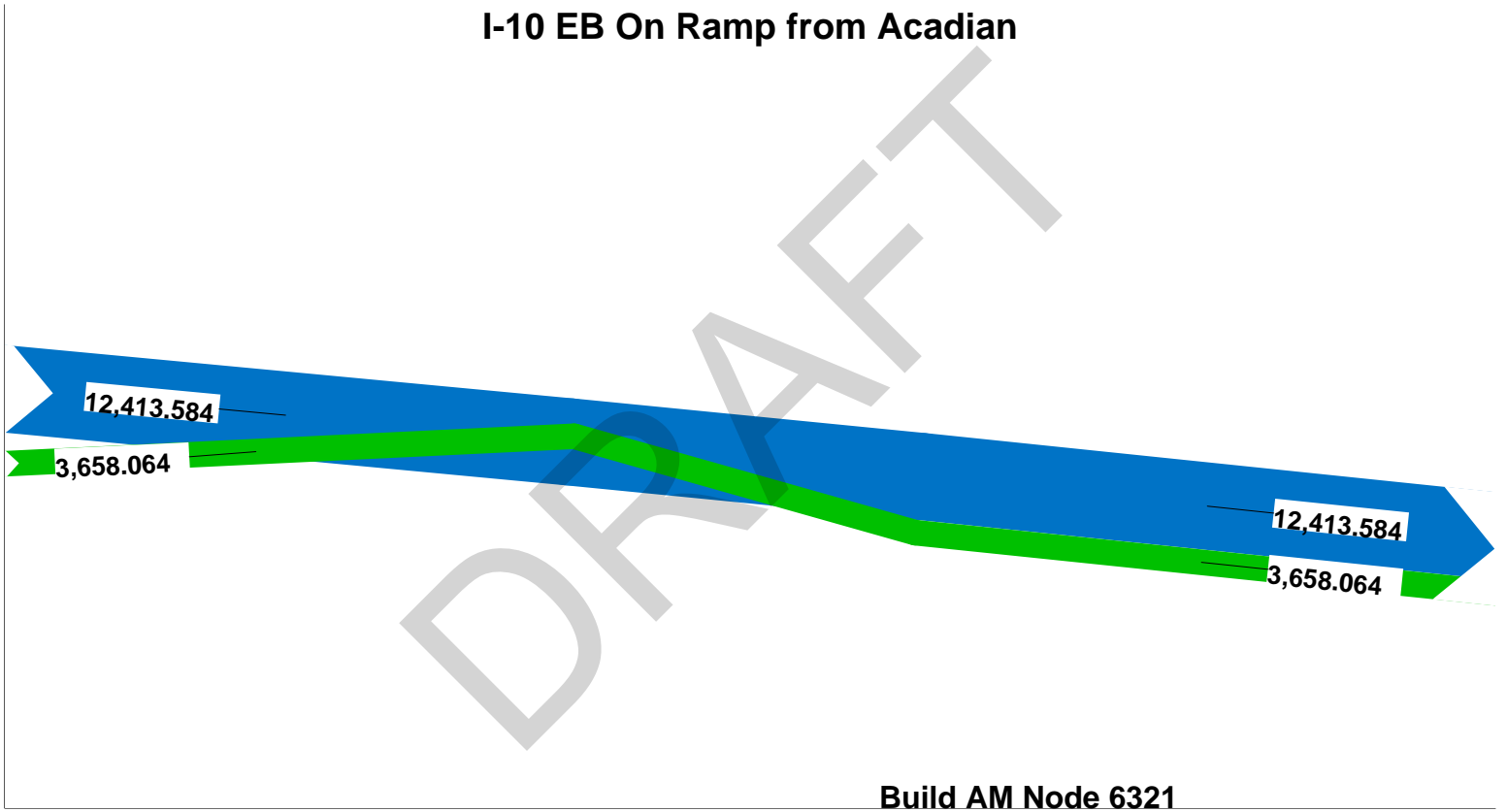
Node 6322 2037 No Build AM

I-10 EB off diverge to College Dr



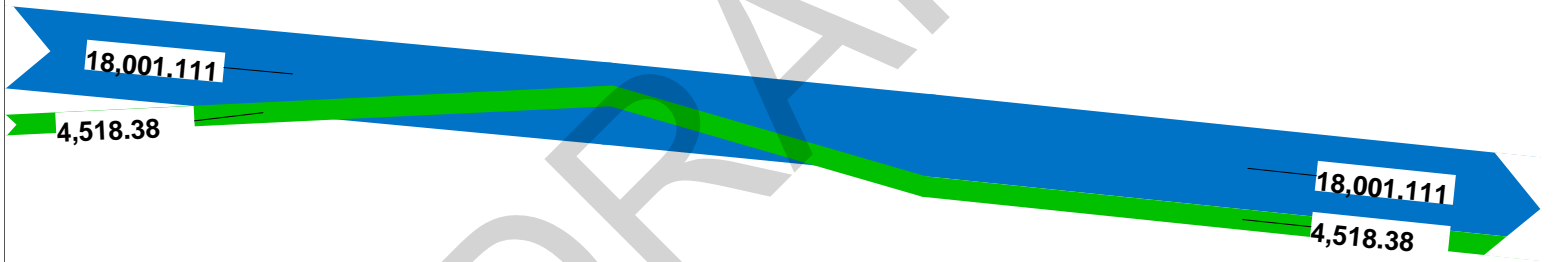
Node 6322 2037 No Build PM

I-10 EB On Ramp from Acadian



Build AM Node 6321

I-10 EB On Ramp from Acadian



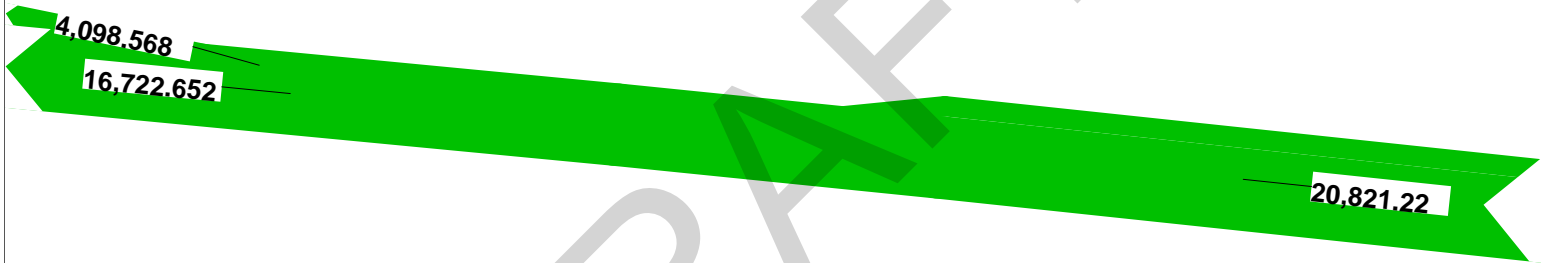
Build PM Node 6321

I-10 WB Off Ramp to Acadian



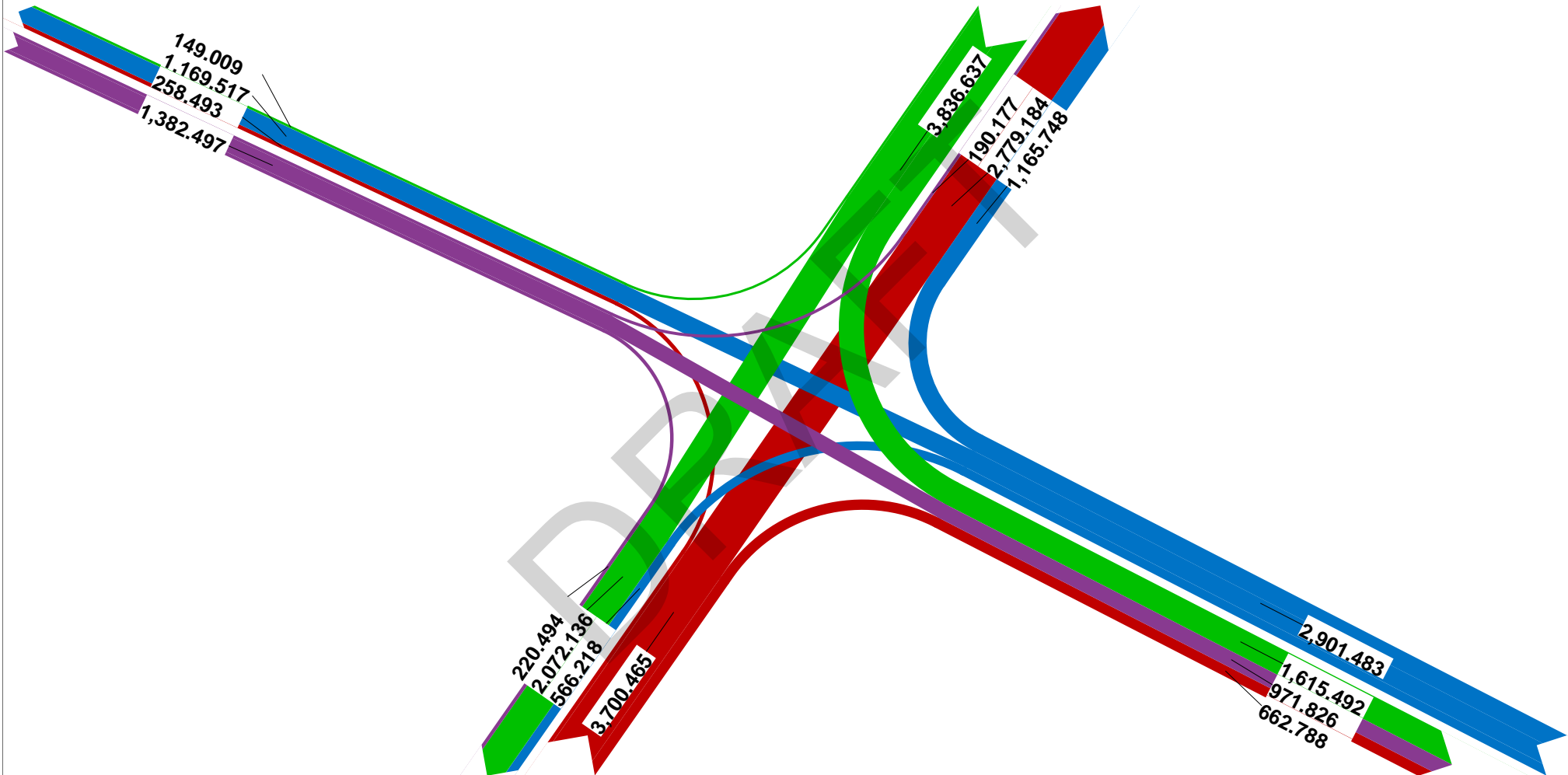
Build AM Node 5590

I-10 WB Off Ramp to Acadian



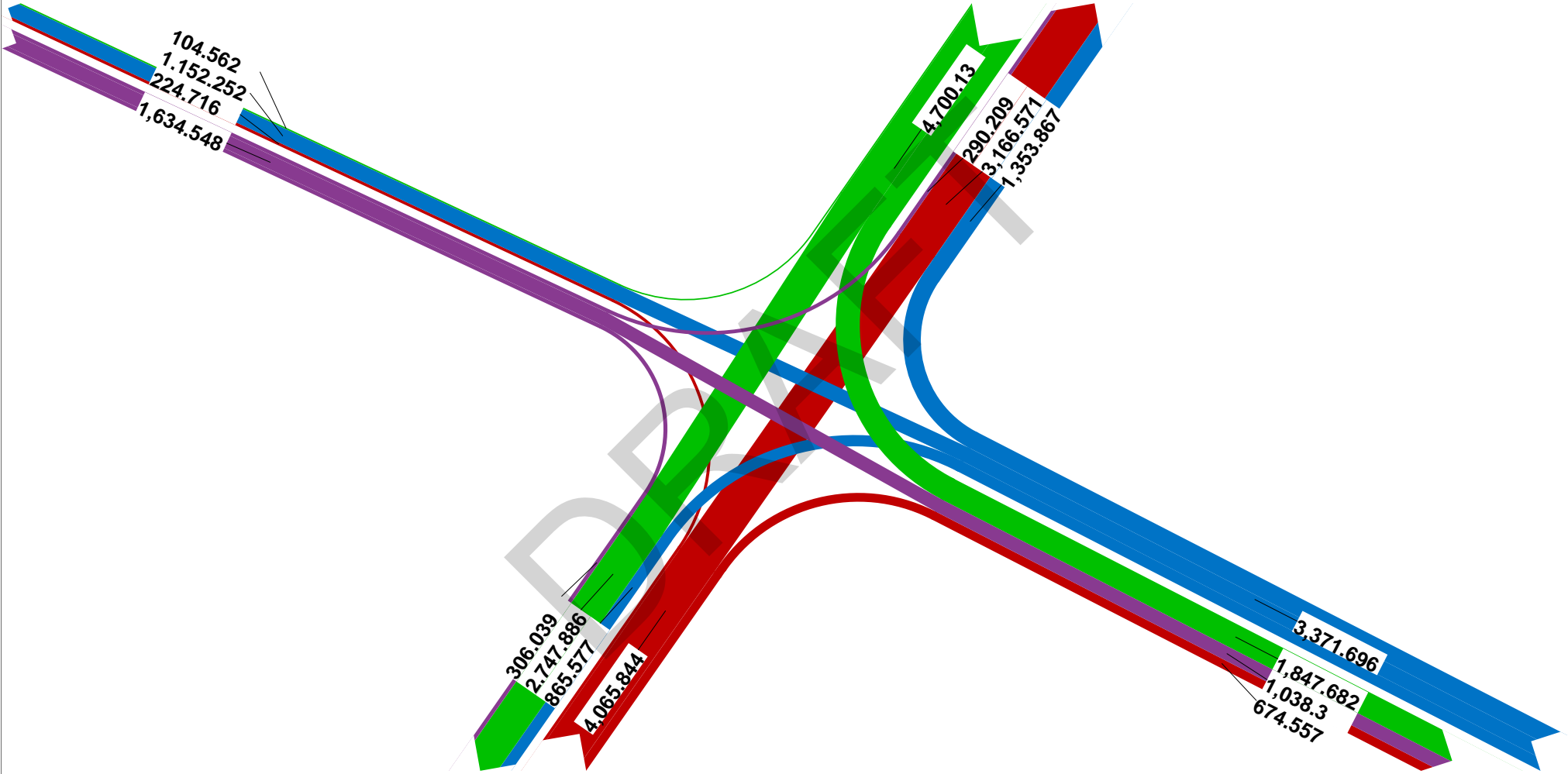
Build PM Node 5590

Acadian at Perkins



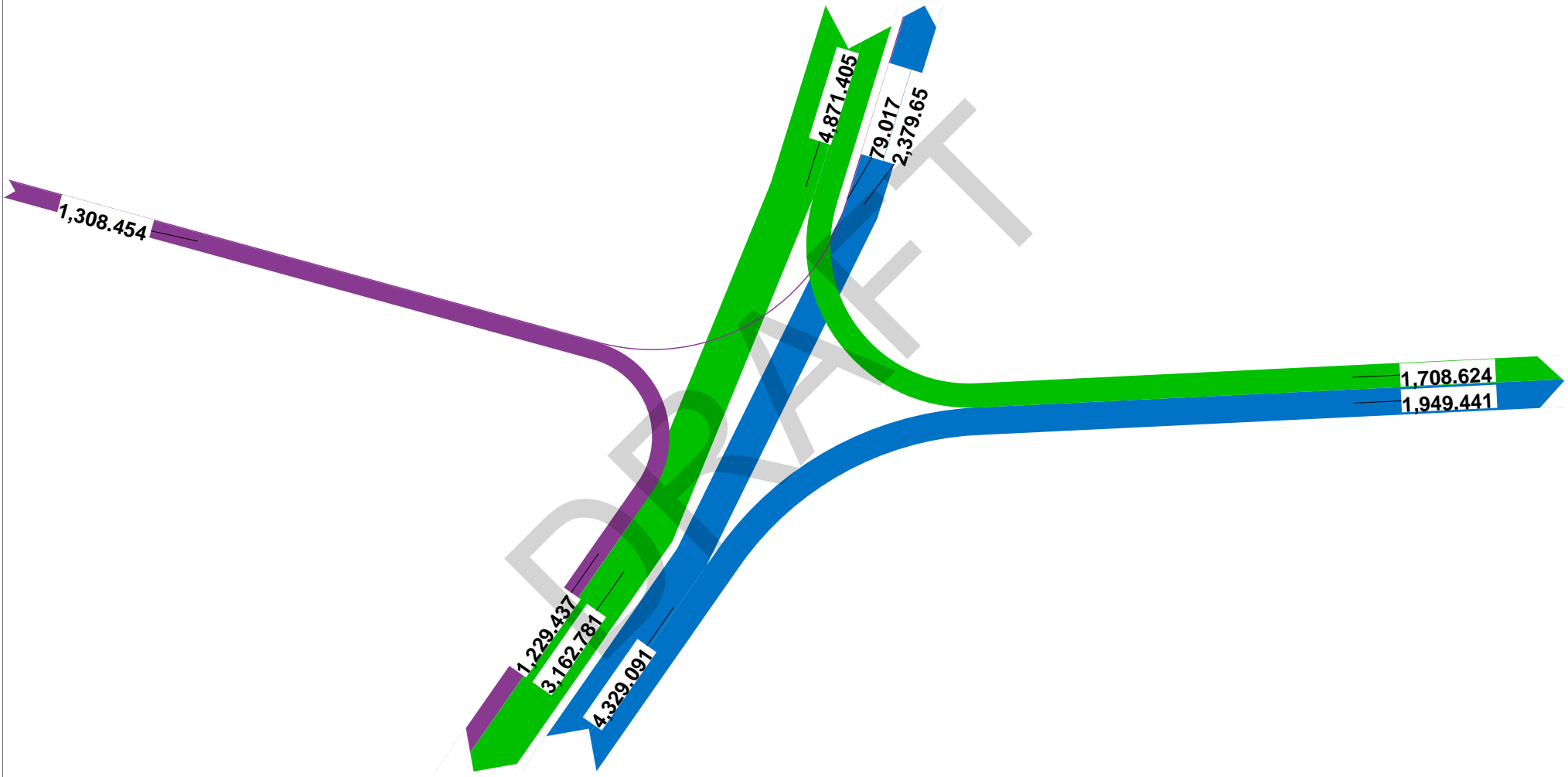
Build AM Node 6324

Acadian at Perkins



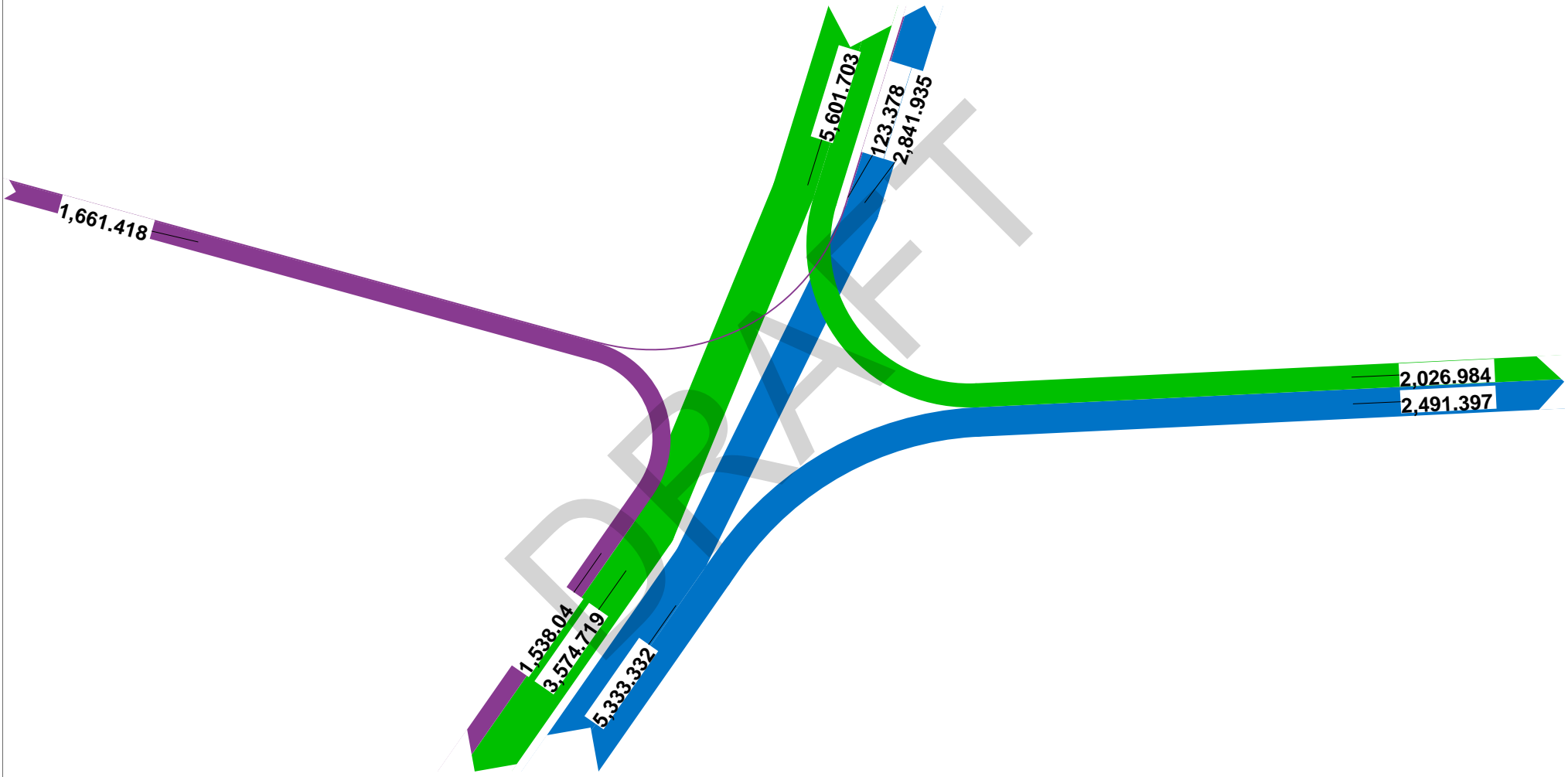
Build PM Node 6324

I-10 EB Off Ramp at Acadian



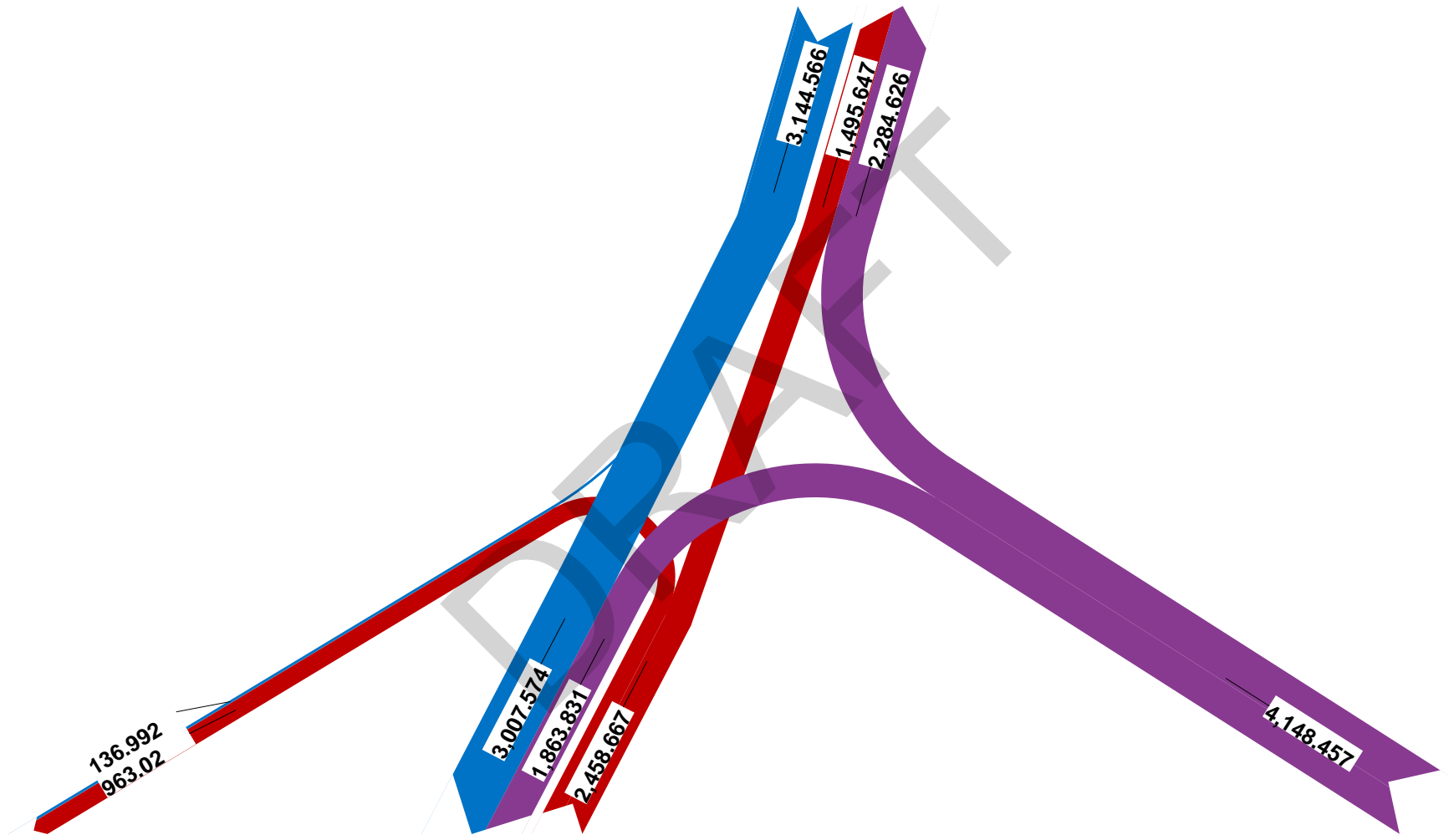
Build AM Node 6326

I-10 EB Off Ramp at Acadian



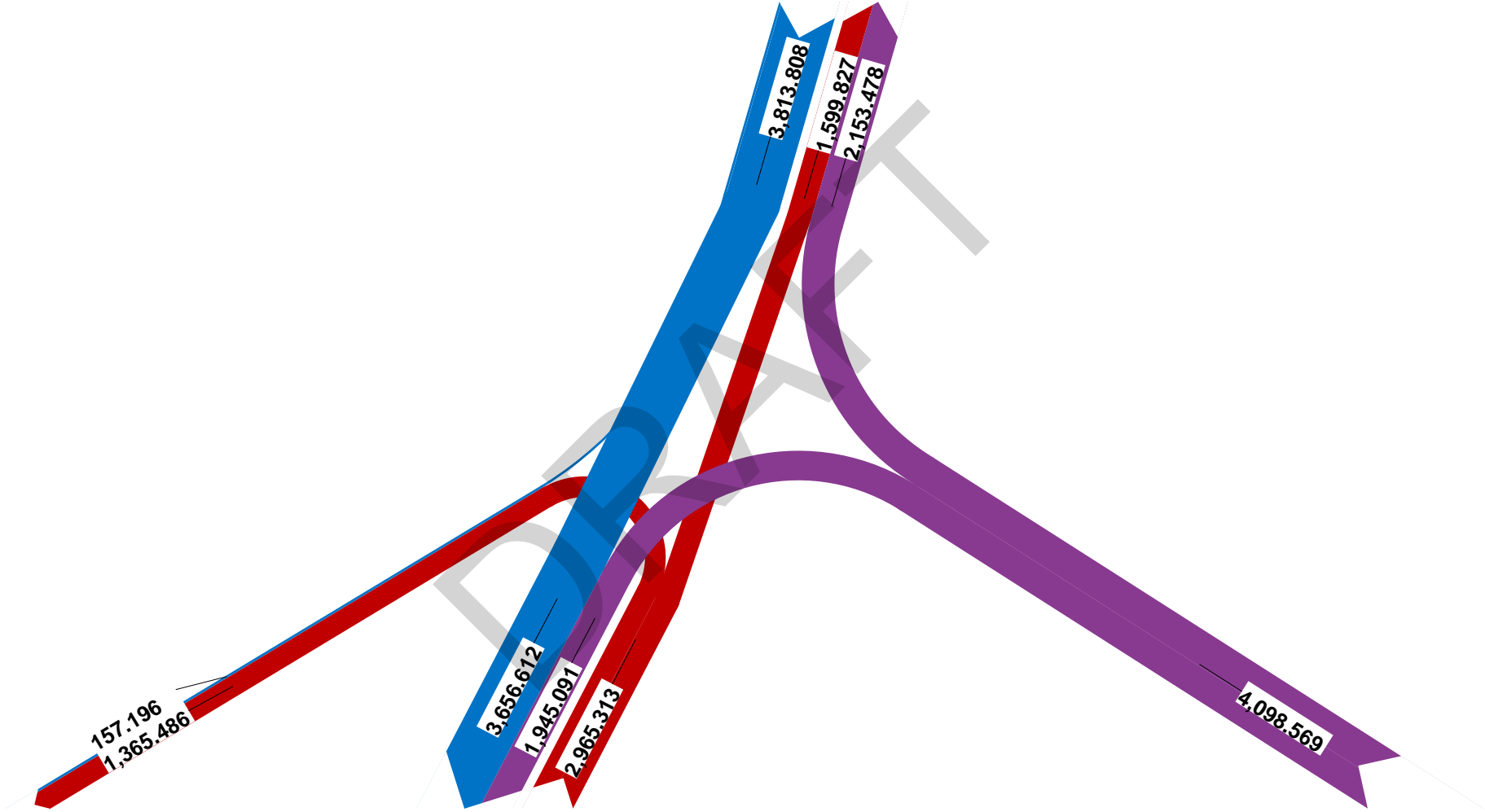
Build PM Node 6326

I-10 WB Off Ramp at Acadian



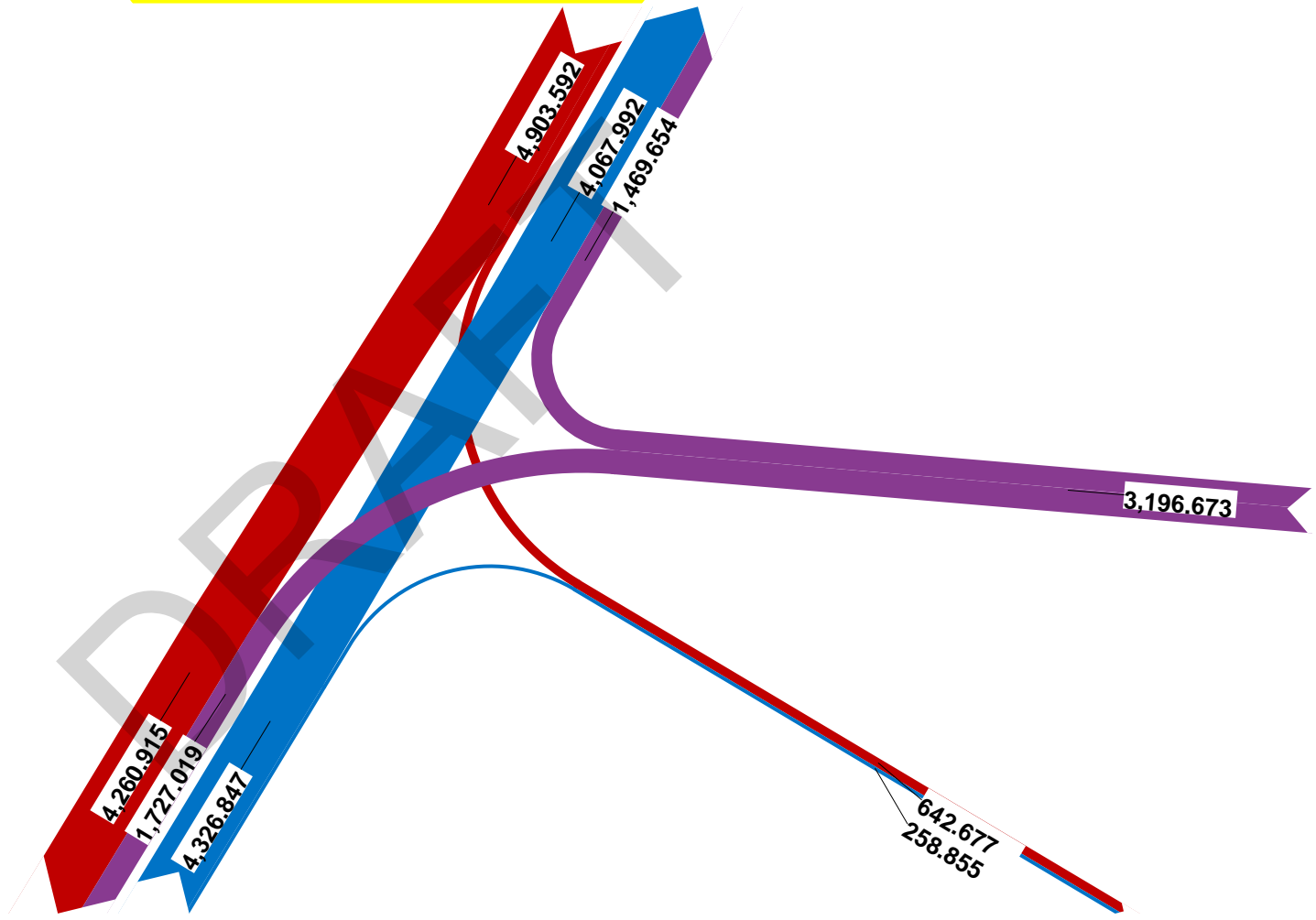
Build AM Node 6328

I-10 WB Off Ramp at Acadian



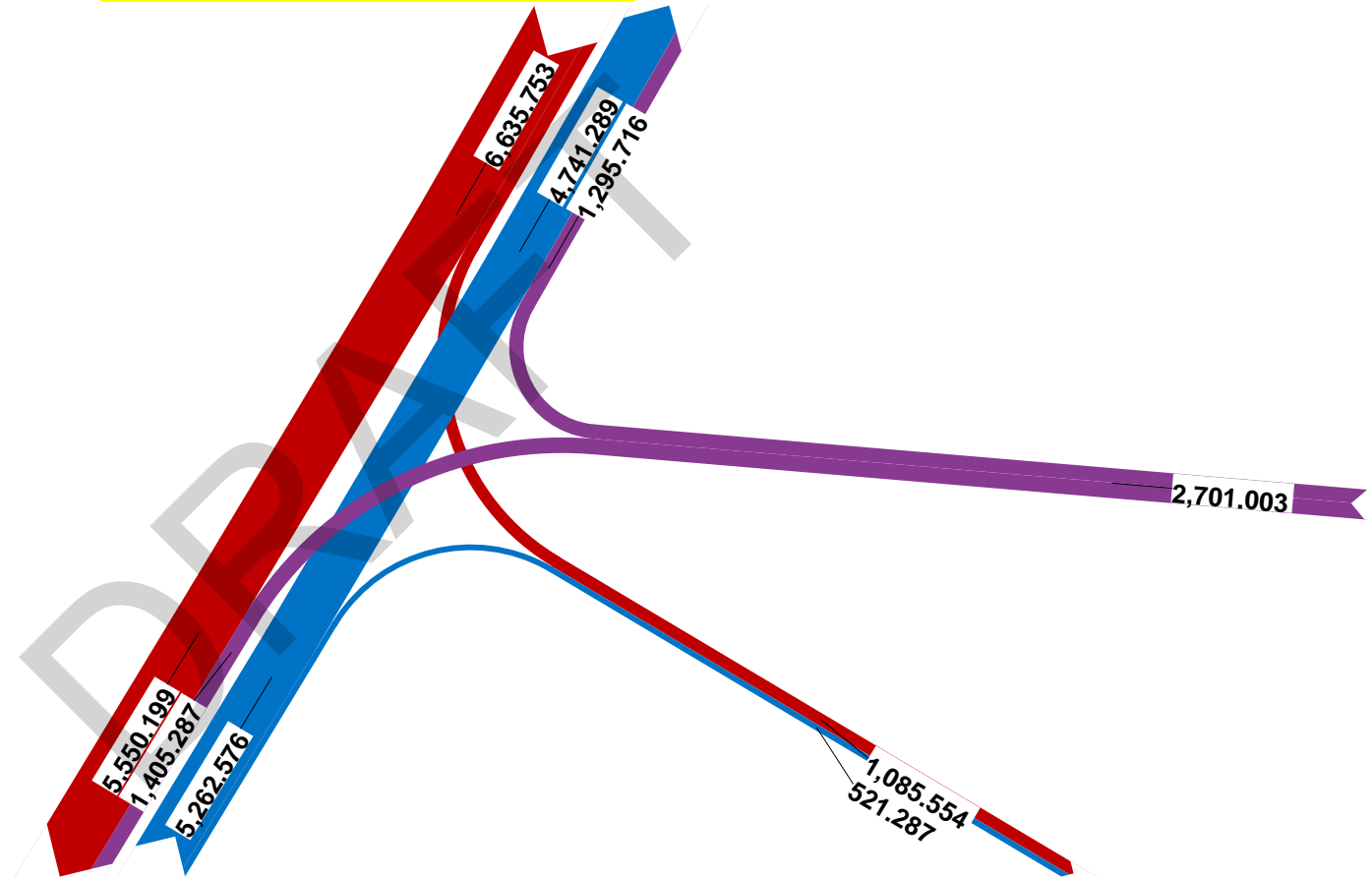
Build PM Node 6328

I-10 WB Off Ramp at College Dr



Build AM Node 6347

I-10 WB Off Ramp at College Dr



Build PM Node 6347

I-10 EB off diverge to College Dr



Node 6322 2037 Build AM

I-10 EB off diverge to College Dr



Node 6322 2037 Build PM

Quality Assurance/Quality Control Form

I-10 Corridor Improvement Stage 1 Environmental Assessment

S.P. No. H.004100

Baton Rouge, Louisiana

Document: *Acadian / Perkins IMR Chapter 2 and Appendix C*

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Date

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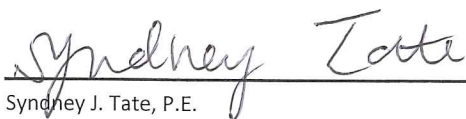



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Chapter 2 and Appendix C QAQC


Task	Chapter/Appendix	Done by and Date	Checked by and Date
Archive Appendix C pdf with "submittal" and the submittal date in the title U:\Projects\ENGPROJ\2010Proj\10-085-2 EA\Acadian Perkins IMR\PDF Acadian\Ch 2 App C Submittal_old	App C	SJT 6/13/19	LTP 6/18/19
Delete pdf pages and data in tables that will be updated	App C	SJT 6/13/19	LTP 6/18/19
Update input parameters Table for Merge/Diverge/Freeway if needed	App C	SJT 6/13/19	LTP 6/18/19
Update No Build Merge/Diverge/Freeway analyses - see next tab	App C	SJT 6/13/19	LTP 6/18/19
Update Appendix with new Merge/Diverge/Freeway analyses pdf's	App C	SJT 6/14/19	LTP 6/18/19
Weave sensitivity volumes	App C	SJT 6/12/19	LTP 6/25/19
Weave sensitivity figures	App C	LTP 6/17/19	SJT 6/24/2019
Update appendix with weave sensitivity figures	App C	SJT 6/24/19	LTP 6/25/19
Re-pdf reports in No Build AM and PM Synchro using HCM 10 report	App C	SJT 6/14/19	LTP 6/25/19
Replace new HCM 10 Synchro report pdf's in Appendix	App C	SJT 6/14/19	LTP 6/25/20
Copy Table from Ch 2 for Intersection Comparison Table Update	App C	SJT 6/25/19	LTP 6/25/19
Copy Table from Ch 2 Merge/Diverge Comparison Table Update	App C	SJT 6/24/2019	LTP 6/25/19
Update the Build Volume Estimation methodology	App C	SJT 6/18/2019	LTP 6/19/19
Update Table C-1 to include College EB off ramp/ WB on ramp	App C	SJT 6/18/2019	LTP 6/19/19
Update Figure C-1 and C-2	App C	SJT 6/19/2019	LTP 6/19/19
Make sure all needed TransCad sheets are included	App C	SJT 6/19/2019	LTP 6/19/19
create a pdf	App C	SJT 8/5/19	LTP 8/6/19
check the print copy	App C	SJT 8/5/19	LTP 8/6/19
Update QAQC	App C	SJT 8/5/19	LTP 8/5/19
Put analysis files in a zip folder for electronic submittal	App C	SJT 8/6/19	LTP 8/6/19

Archive Ch 2 pdf and word with "submittal" and the submittal date in the title pdf U:\Projects\ENGPROJ\2010Proj\10-085-2 EA\Acadian Perkins IMR\PDF Acadian\Ch 2 App C Submittal_old word U:\Projects\ENGPROJ\2010Proj\10-085-2 EA\Acadian Perkins IMR\MS Office Docs\IMR Chapters_old	Ch 2	SJT 6/13/19	
Delete data out of tables that will be updated	Ch 2	SJT 6/13/19	LTP 6/14/19
Update Figure 2.5 No Build volumes to include College Dr.	Ch 2	SJT 6/13/19	LTP 6/18/19
Update Tables 2.3 and 2.5	Ch 2	SJT 6/14/19	LTP 6/19/19
Update Table 2.4 and 2.6 with HCM 10 report MOE's for Existing and No Build	Ch 2	SJT 6/25/19	LTP 6/25/19
Delete footnote about 95th queue on Tables 2.4 and 2.6	Ch 2	SJT 6/14/19	LTP 6/25/19
Read Ch 2 to make sure nothing else should be updated	Ch 2	SJT 7/25/19	LTP 8/2/19
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Sydney J. Tate, P.E.


Date


Lauren Picou, P.E., PTOE

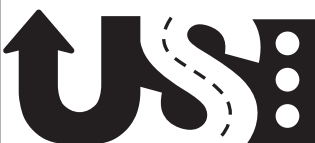

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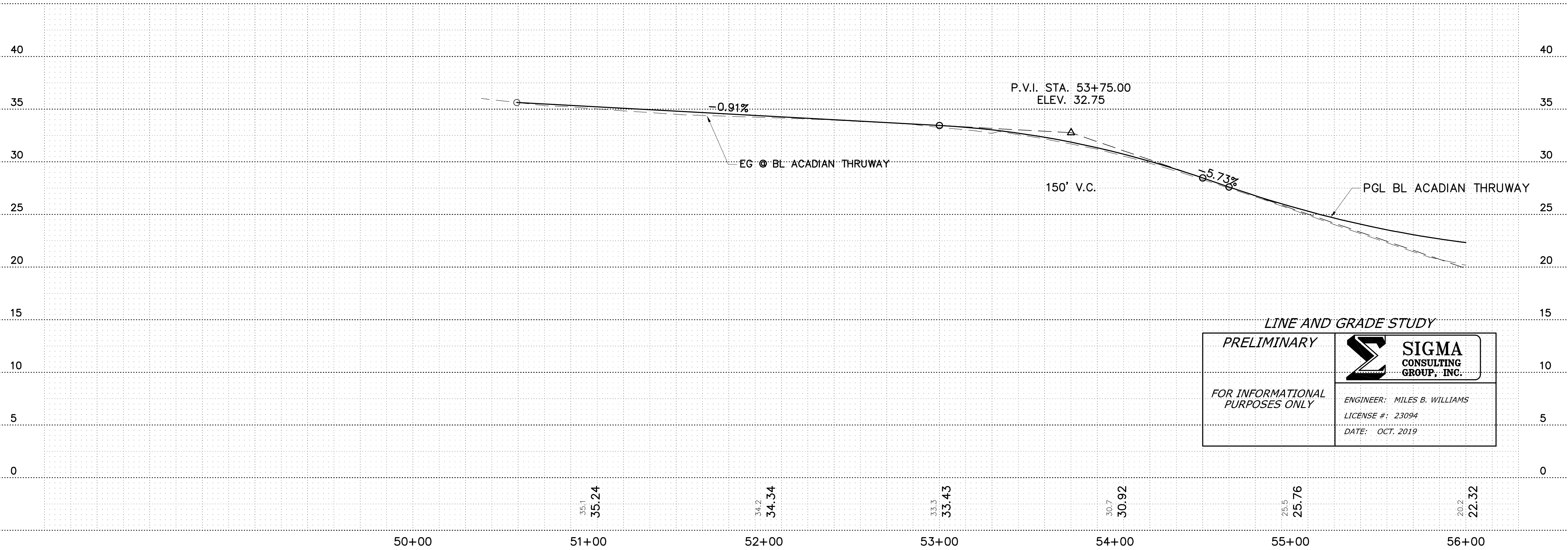
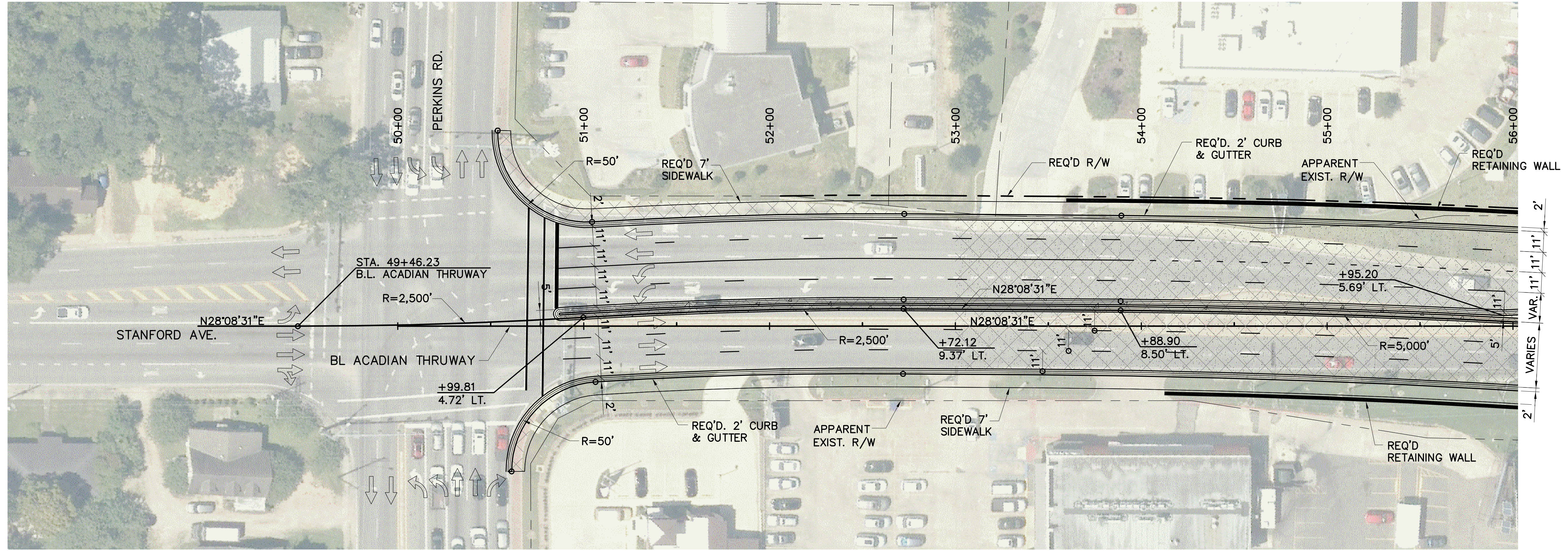
ACADIAN / PERKINS IMR

Appendix D

Critical Geometry and Striping Layout.....	DX
Design Criteria and Exceptions.....	DX-DX
Build Analysis Input Parameters and Reports.....	DX-DXX
Build Conflict Points.....	DXX-DXX
QA-QC Documentation.....	DXX

URBAN SYSTEMS inc.





LINE AND GRADE STUDY

PRELIMINARY

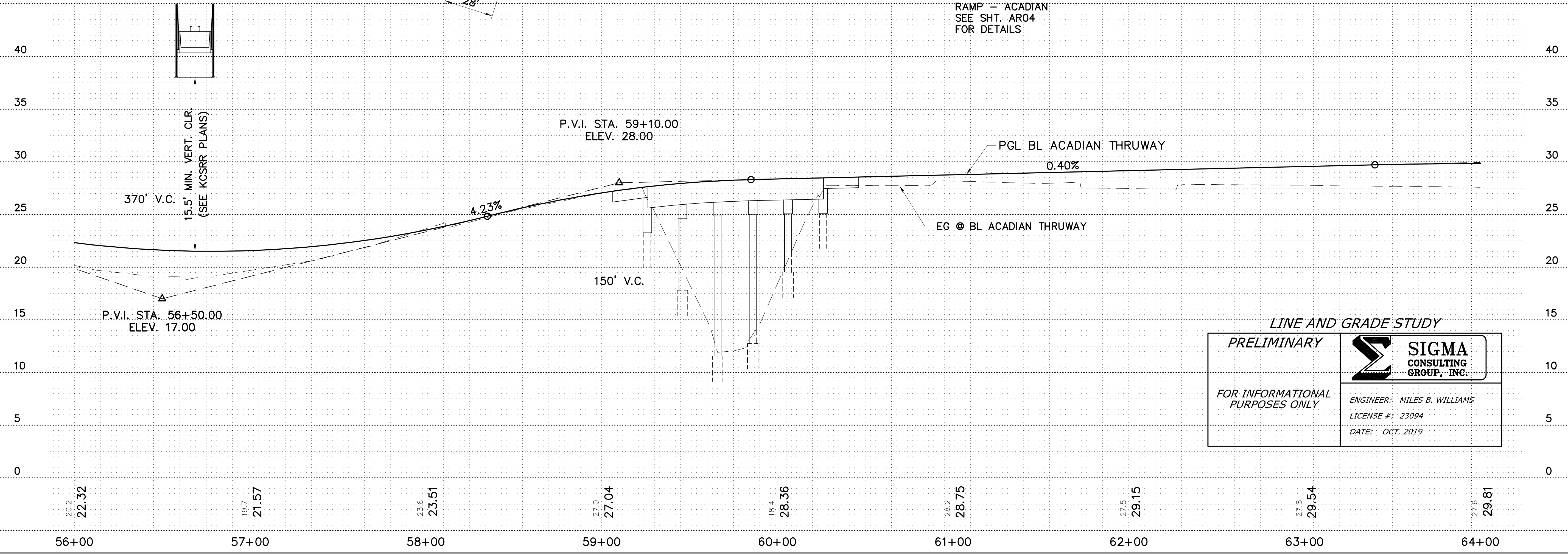
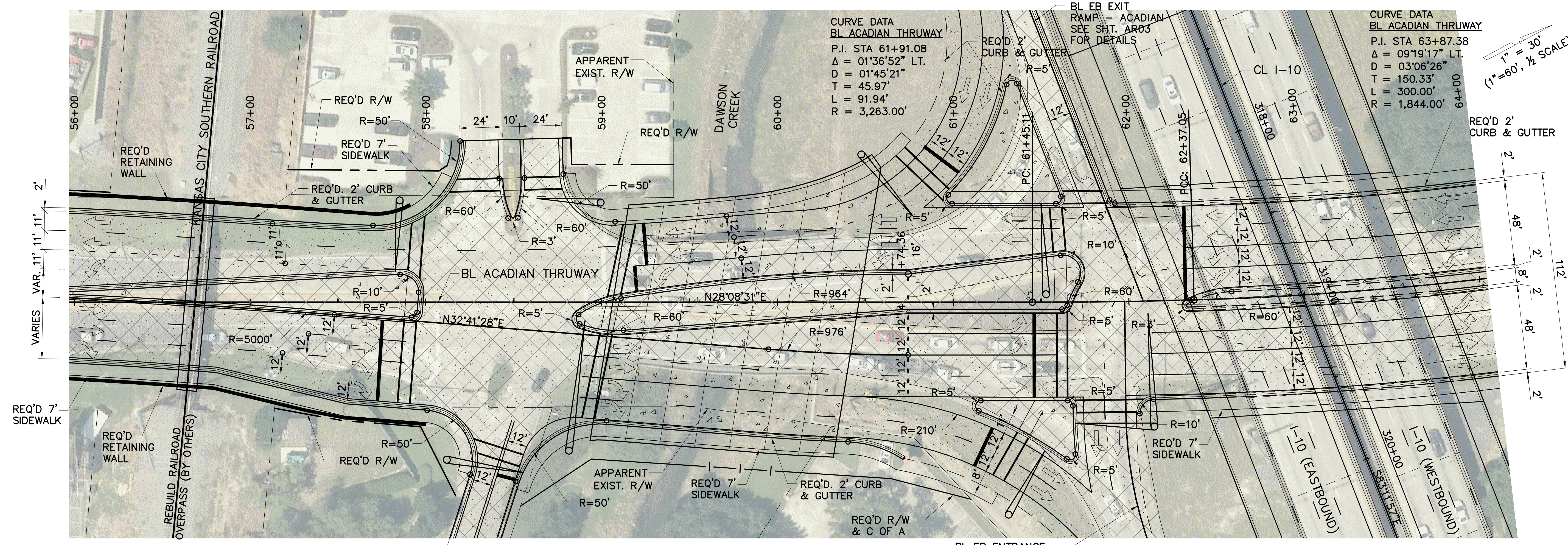
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SIGMA CONSULTING GROUP, INC.

ENGINEER: MILES B. WILLIAMS
LICENSE #: 23094
DATE: OCT. 2019

SHEET NUMBER	ATO1	PARISH	EAST BATON ROUGE	CONTROL SECTION	450-10
DESIGNED	WILLIAMS	CHECKED	AMEEDEE	SERIES NUMBER	1 OF 3
NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY		
			PLAN AND PROFILE ACADIAN THRUWAY		
I-10: LA 415 TO ESSEN ON I-10 AND I-12					

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LINE AND GRADE STUDY

PRELIMINARY

FOR INFORMATIONAL PURPOSES ONLY

SIGMA CONSULTING GROUP, INC.

ENGINEER: MILES B. WILLIAMS
LICENSE #: 23094
DATE: OCT. 2019

SHEET NUMBER	AT02		
DESIGNED	WILLIAMS	PARISH	EAST BATON ROUGE
CHECKED	AMEEDEE	CONTROL SECTION	450-10
DETAILED		STATE PROJECT	H.004100
CHECKED		SERIES NUMBER	2 OF 3
BY		REVISION OR CHANGE ORDER DESCRIPTION	
NO.		DATE	

PLAN AND PROFILE
ACADIAN THRUWAY

I-10: LA 415 TO ESSEN ON I-10 AND I-12

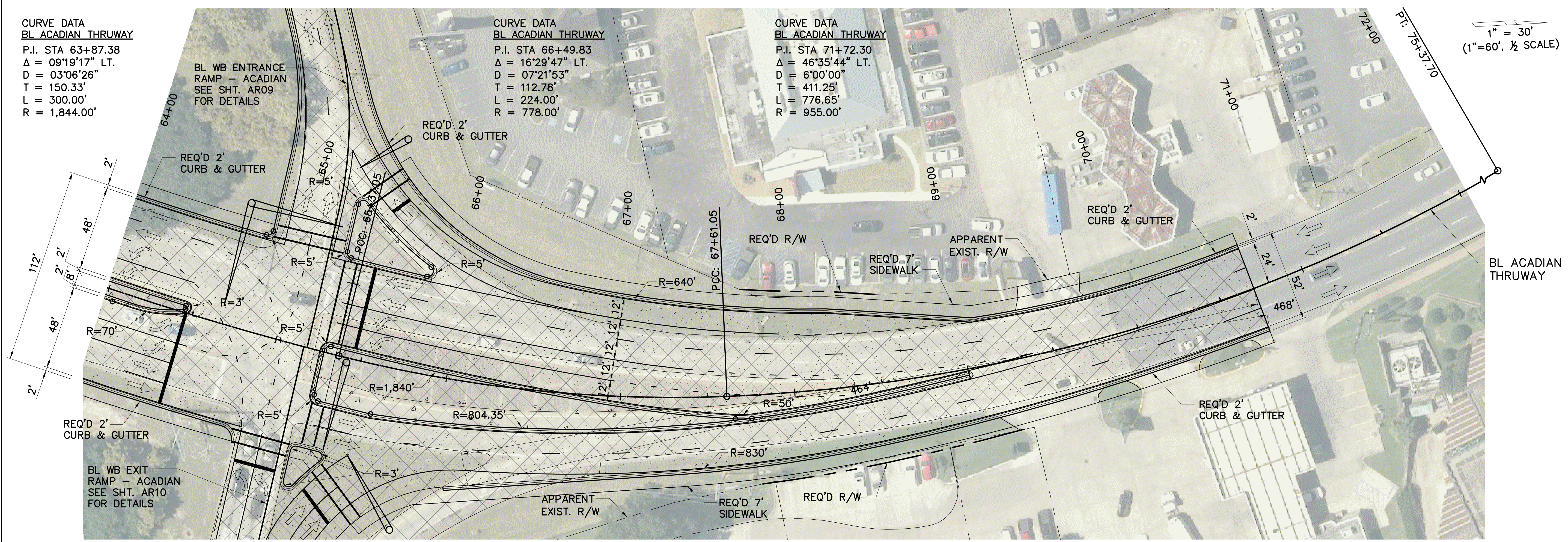
OCT. 2019

**CURVE DATA
BL ACADIAN THRUWAY**
 P.I. STA 63+87.38
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 $D = 03^{\circ}06'26''$
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 $L = 300.00'$
 $R = 1,844.00'$

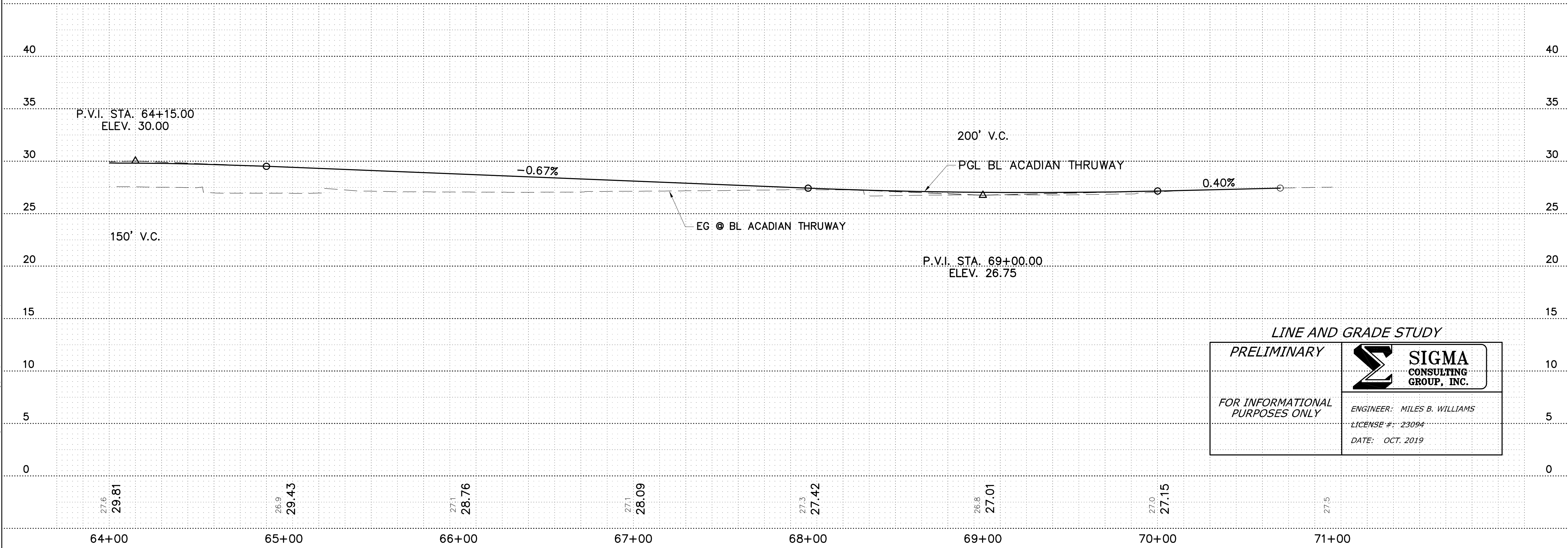
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 $L = 224.00'$
 $R = 778.00'$

**CURVE DATA
BL ACADIAN THRUWAY**
 P.I. STA 71+72.30
 $\Delta = 46^{\circ}35'44''$ LT.
 $D = 6^{\circ}00'00''$
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 $R = 955.00'$

1" = 30'
 (1" = 60', 1/2 SCALE)



LINE & GRADE STUDY - DRAFT

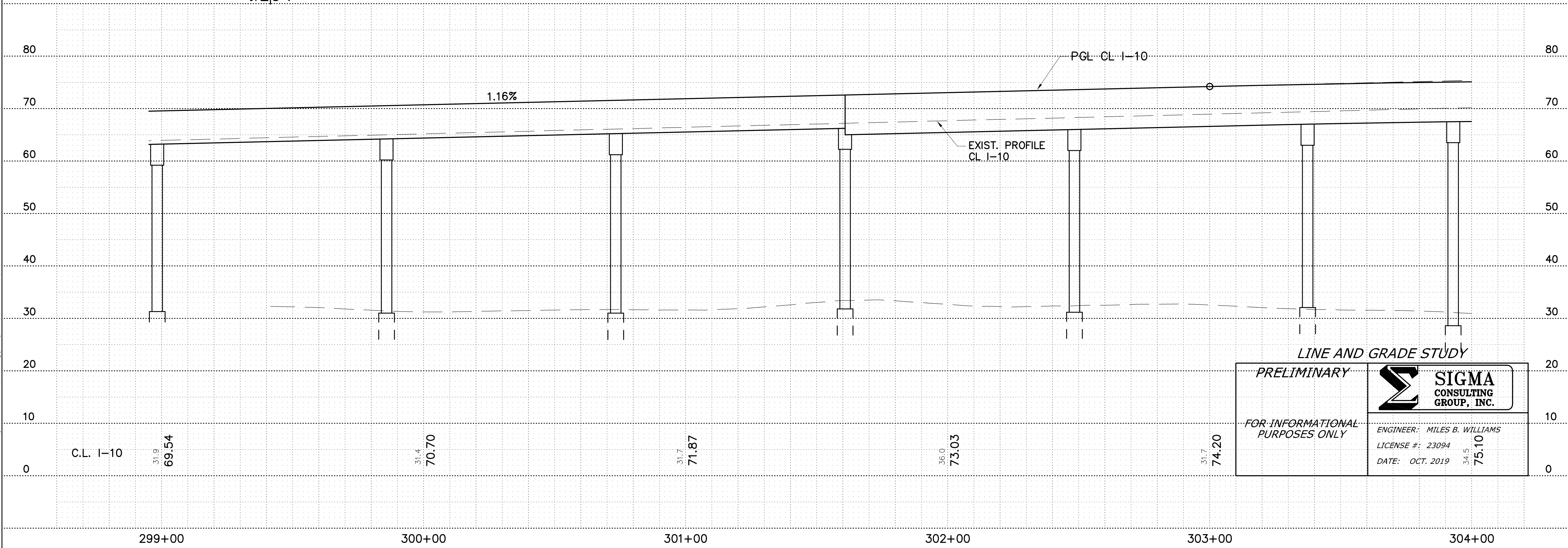
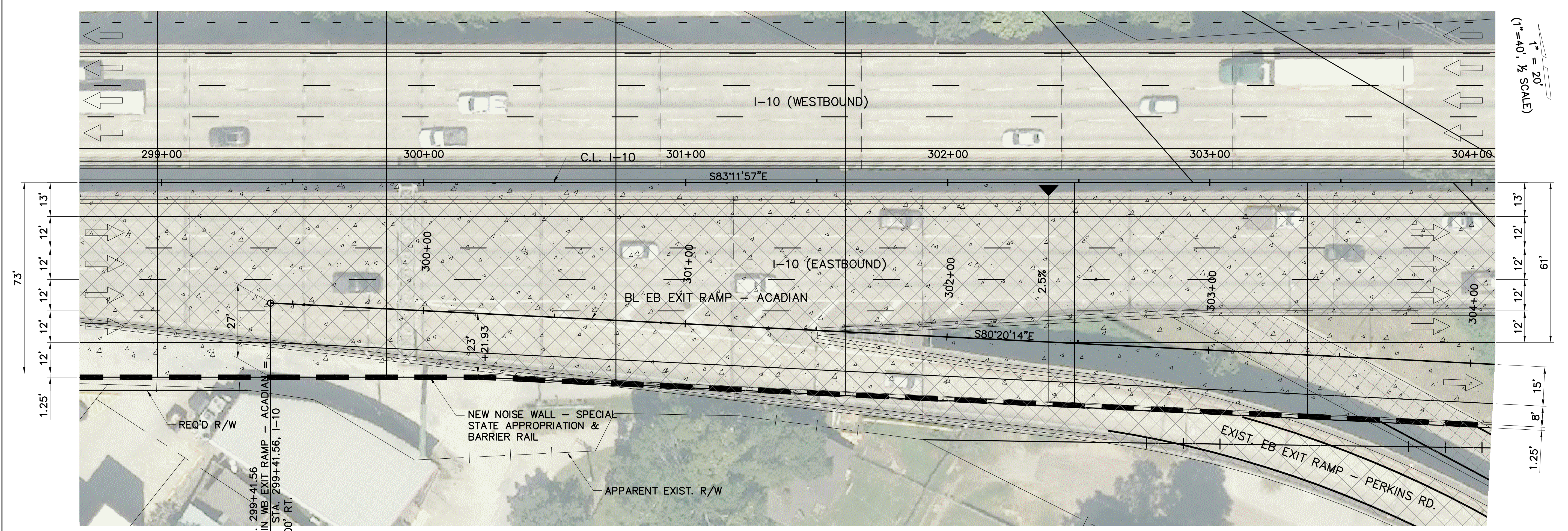


LINE AND GRADE STUDY
PRELIMINARY
 FOR INFORMATIONAL PURPOSES ONLY

SIGMA CONSULTING GROUP, INC.
 ENGINEER: MILES B. WILLIAMS
 LICENSE #: 23094
 DATE: OCT. 2019

SHEET NUMBER	AT03
DESIGNED	WILLIAMS
CHECKED	AMEEDE
DATE	
NO.	
REVISION OR CHANGE ORDER DESCRIPTION	
BY	
PARISH	EAST BATON ROUGE
CONTROL SECTION	450-10
STATE PROJECT	H.004100
SERIES NUMBER	3 OF 3
PLAN AND PROFILE ACADIAN THRUWAY	
1-10: LA 415 TO ESSEN ON I-10 AND I-12	
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SIGMA CONSULTING GROUP, INC.	

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LINE AND GRADE STUDY

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 ENGINEER: MILES B. WILLIAMS
 LICENSE #: 23094
 DATE: OCT. 2019

SHEET NUMBER	ARO1	PARISH	EAST BATON ROUGE	CONTROL SECTION	450-10
DESIGNED	WILLIAMS	STATE	H.004100	SERIES NUMBER	I OF 4
CHECKED	AMEEDEE	PROJECT		REVISION OR CHANGE ORDER DESCRIPTION	BY
NO.	DATE				

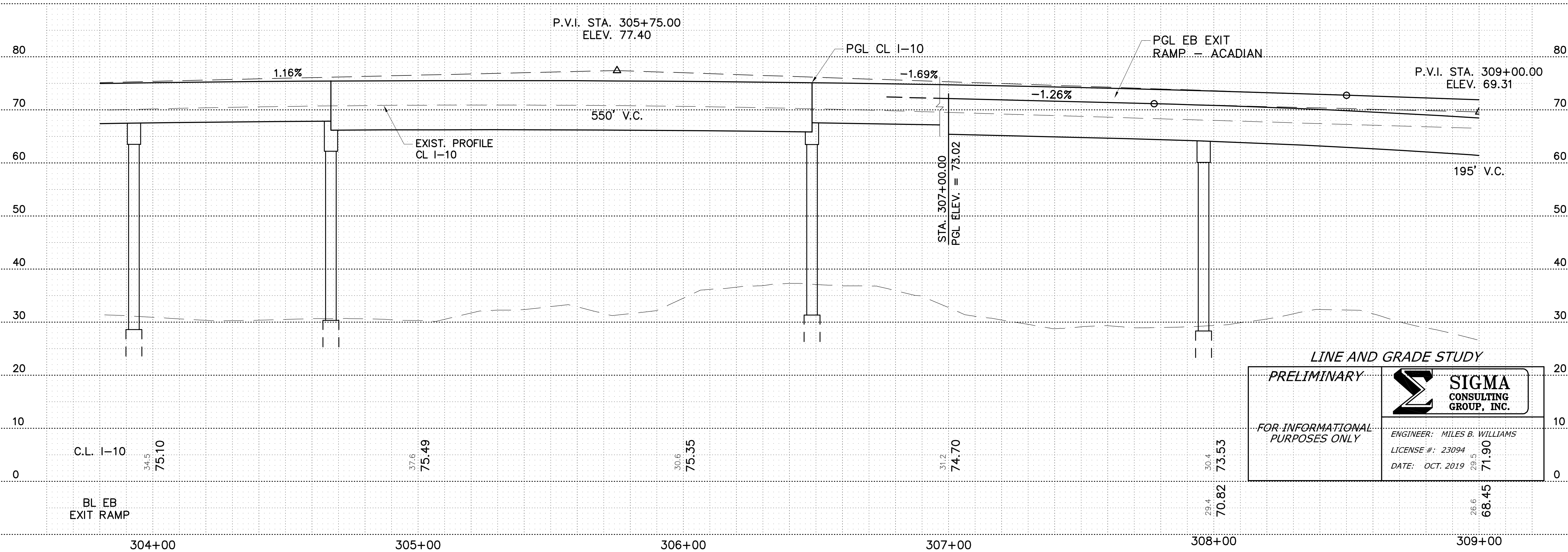
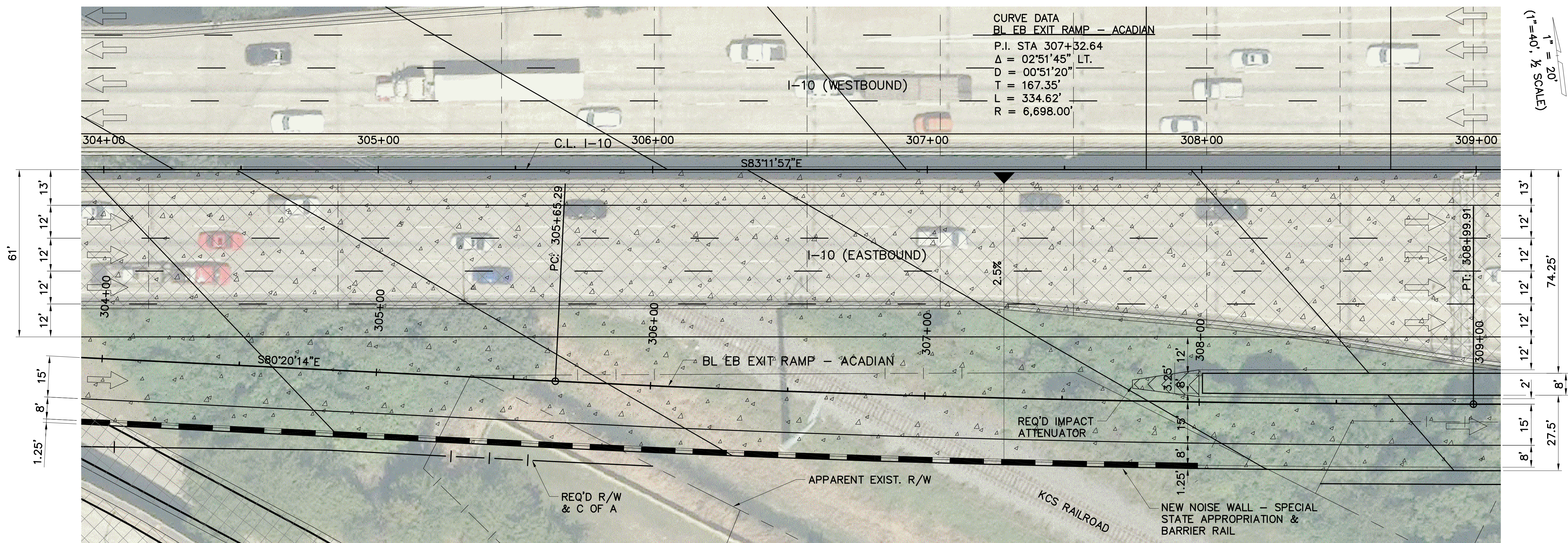
PLAN AND PROFILE
 EB EXIT RAMP - ACADIAN
 I-10: LA 415 TO ESSEN ON I-10 AND I-12

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LINE & GRADE STUDY - DRAFT

OCT. 2019

F:\020201\010131719\01Line And Grade Study\Acadian EB Ramps\PP.dwg [AR02] Oct. 01, 2019 - 2:20pm



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SIGMA CONSULTING GROUP, INC.

ENGINEER: MILES B. WILLIAMS
 LICENSE #: 23094
 DATE: OCT. 2019

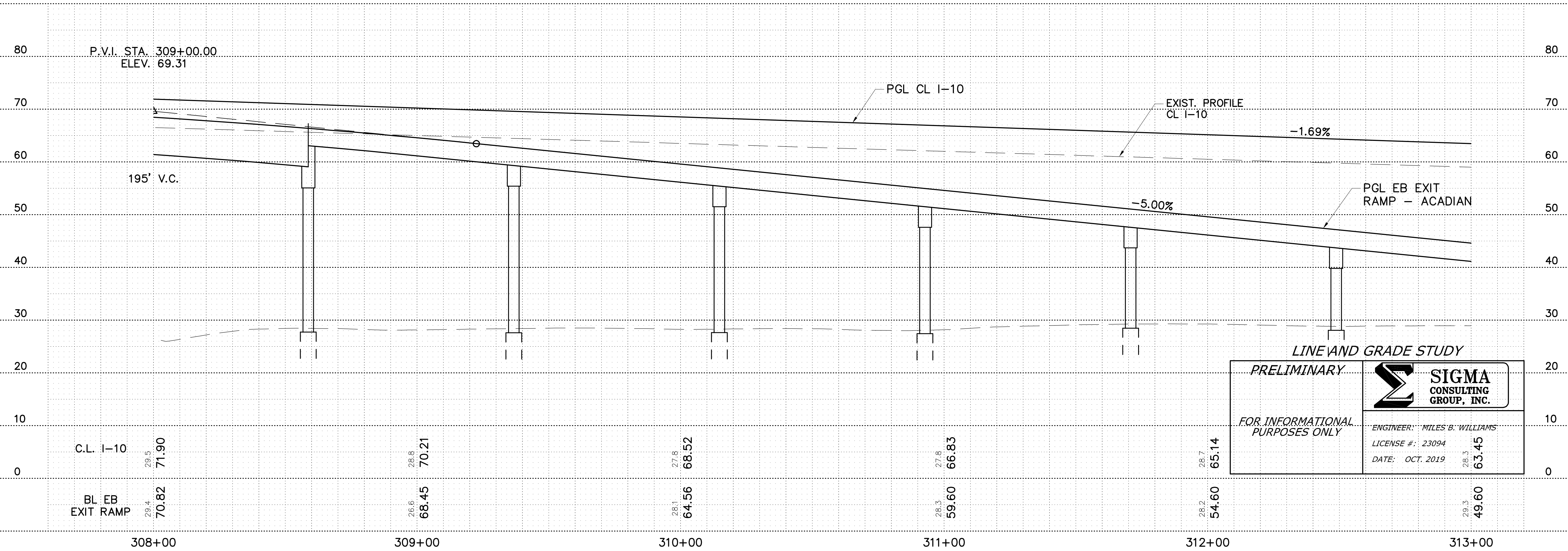
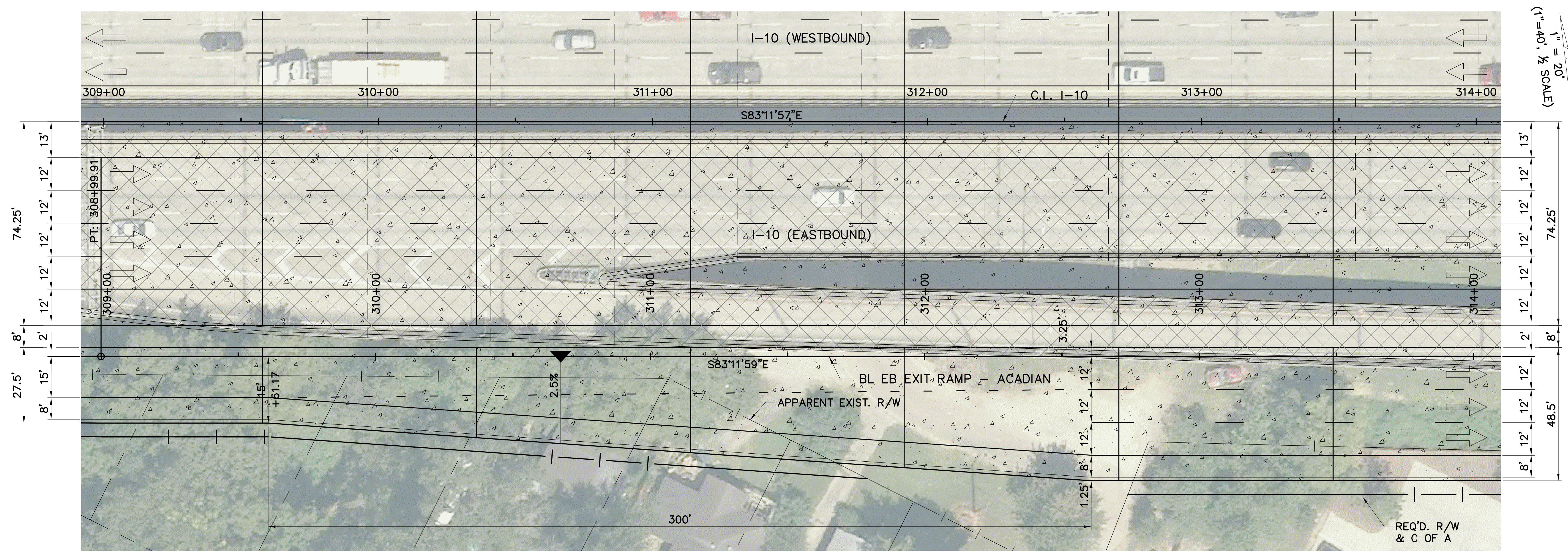
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DESIGNED	WILLIAMS	450-10	H.004100	2 OF 4	
CHECKED	AMEEDEE				
REVISION OR CHANGE ORDER DESCRIPTION	NO.	DATE	BY		

PLAN AND PROFILE
EB EXIT RAMP - ACADIAN

I-10: LA 415 TO ESSEN ON I-10 AND I-12

LINE & GRADE STUDY - DRAFT

OCT. 2019



LINE AND GRADE STUDY

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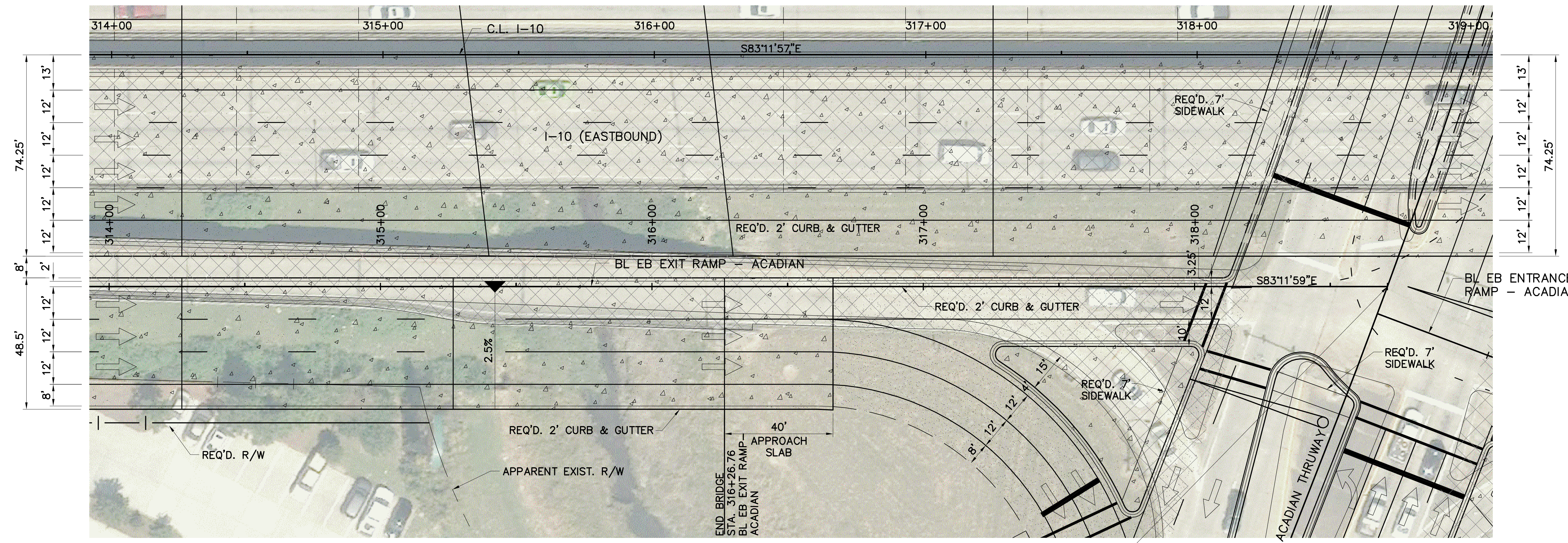
ENGINEER: MILES B. WILLIAMS
LICENSE #: 23094
DATE: OCT. 2019

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DESIGNED	WILLIAMS	STATE	H.004100	SERIES	3 OF 4
CHECKED	AMEEDEE	PROJECT		CHECKED	
NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION	BY		

PLAN AND PROFILE
EB EXIT RAMP - ACADIAN
I-10: LA 415 TO ESSEN ON I-10 AND I-12

DOTD
LOUISIANA
DEPARTMENT OF TRANSPORTATION AND INFRASTRUCTURE

SIGMA
CONSULTING
GROUP, INC.

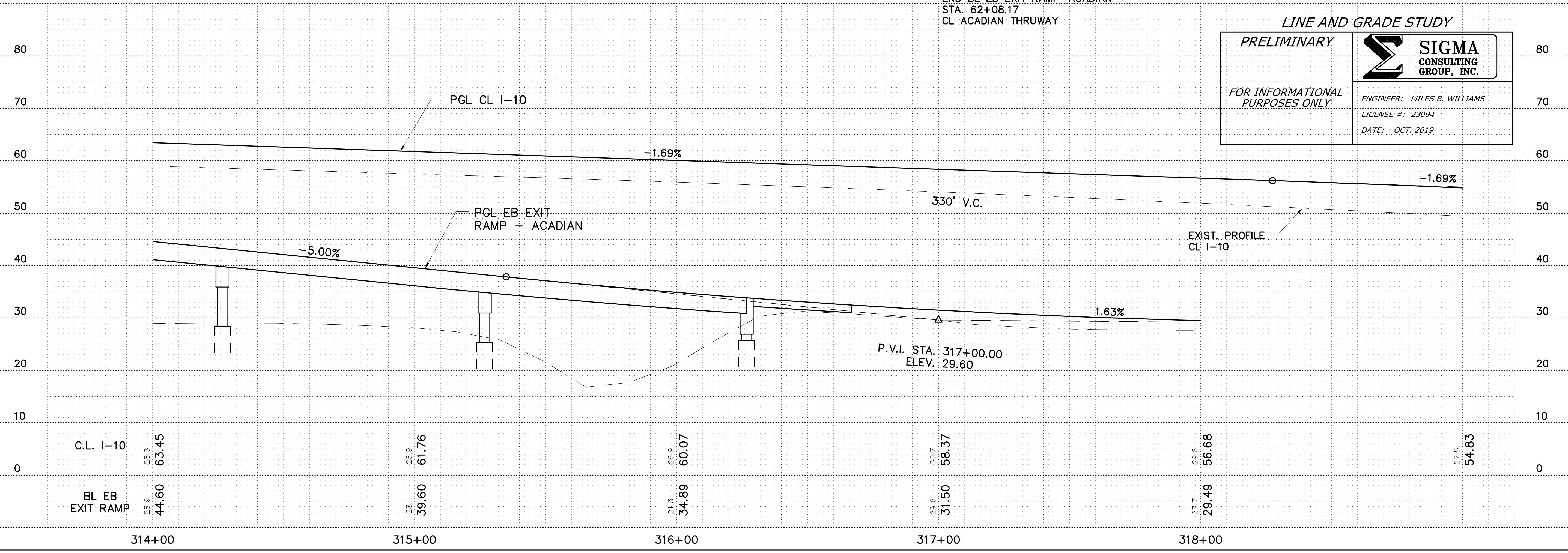


STA. 318+71.06
 END BL EB EXIT RAMP-ACADIAN=
 STA. 62+08.17
 CL ACADIAN THRUWAY

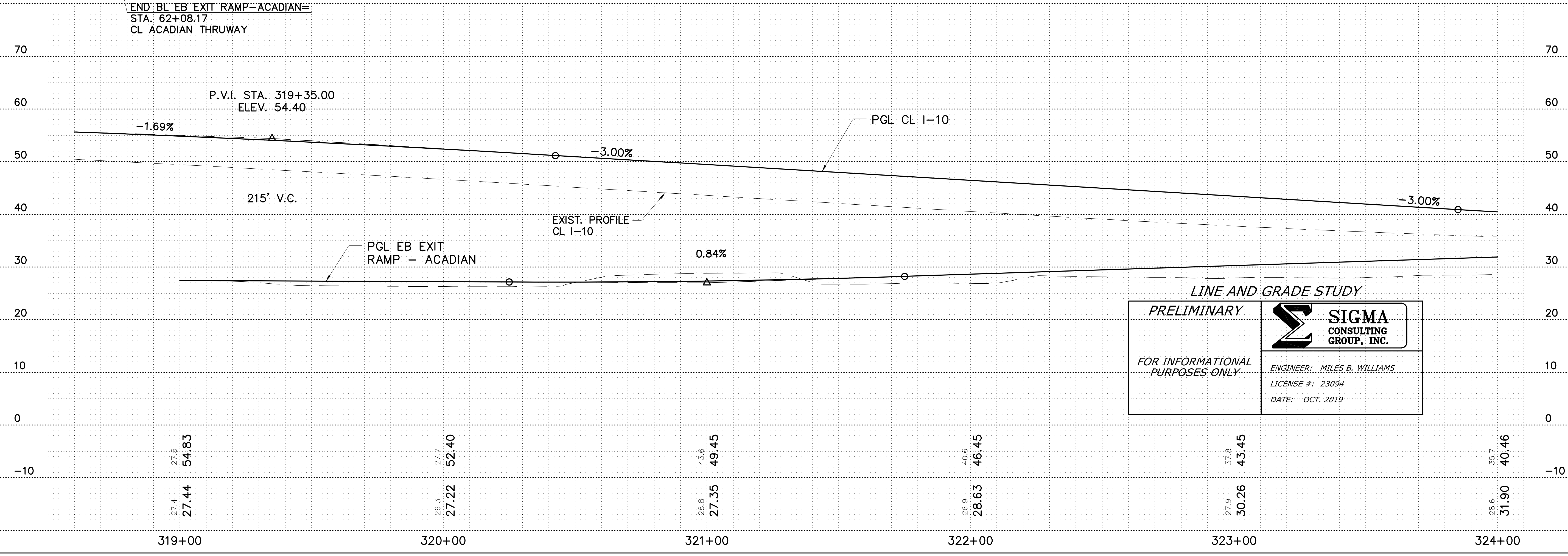
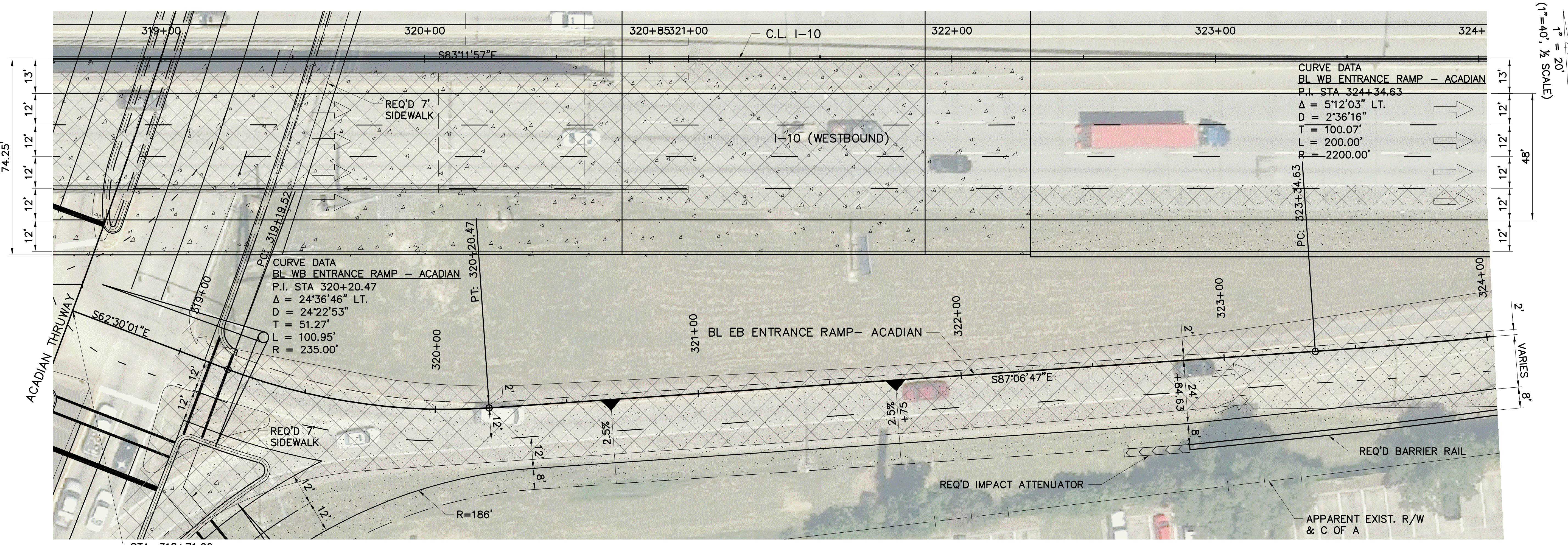
LINE AND GRADE STUDY

PRELIMINARY
 FOR INFORMATIONAL PURPOSES ONLY

ENGINEER: MILES B. WILLIAMS
 LICENSE #: 23094
 DATE: OCT. 2019



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DESIGNED	WILLIAMS
CHECKED	AMEEDE
DATE	
NO.	
PARISH	EAST BATON ROUGE
CONTROL SECTION	450-10
STATE PROJECT	H.004100
REVISION OR CHANGE ORDER DESCRIPTION	
BY	
SERIES NUMBER	4 OF 4
PLAN AND PROFILE	EB EXIT RAMP - ACADIAN
I-10: LA 415 TO ESSEN ON I-10 AND I-12	

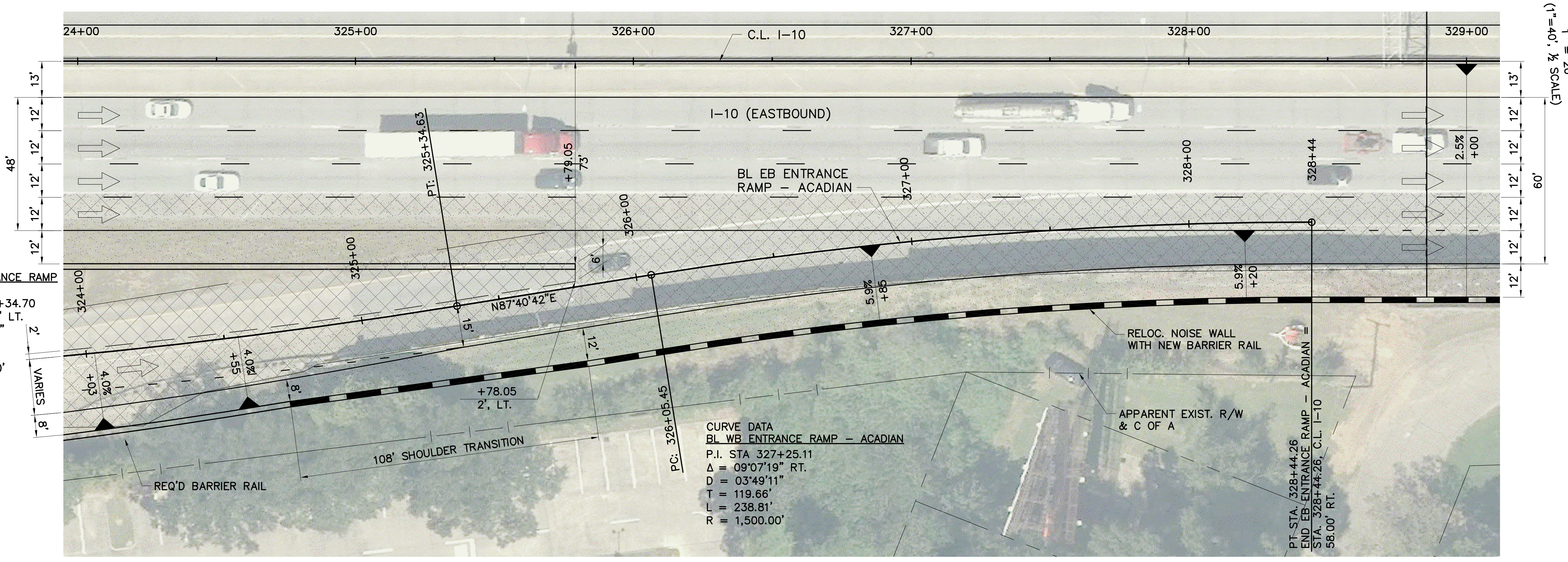


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DESIGNED	WILLIAMS
CHECKED	AMEEDE
DATE	
NO.	
REVISION OR CHANGE ORDER DESCRIPTION	
BY	
PARISH	EAST BATON ROUGE
CONTROL SECTION	450-10
STATE PROJECT	H.004100
SERIES NUMBER	1 OF 2
PLAN AND PROFILE	EB ENTRANCE RAMP - ACADIAN
I-10: LA 415 TO ESSEN ON I-10 AND I-12	

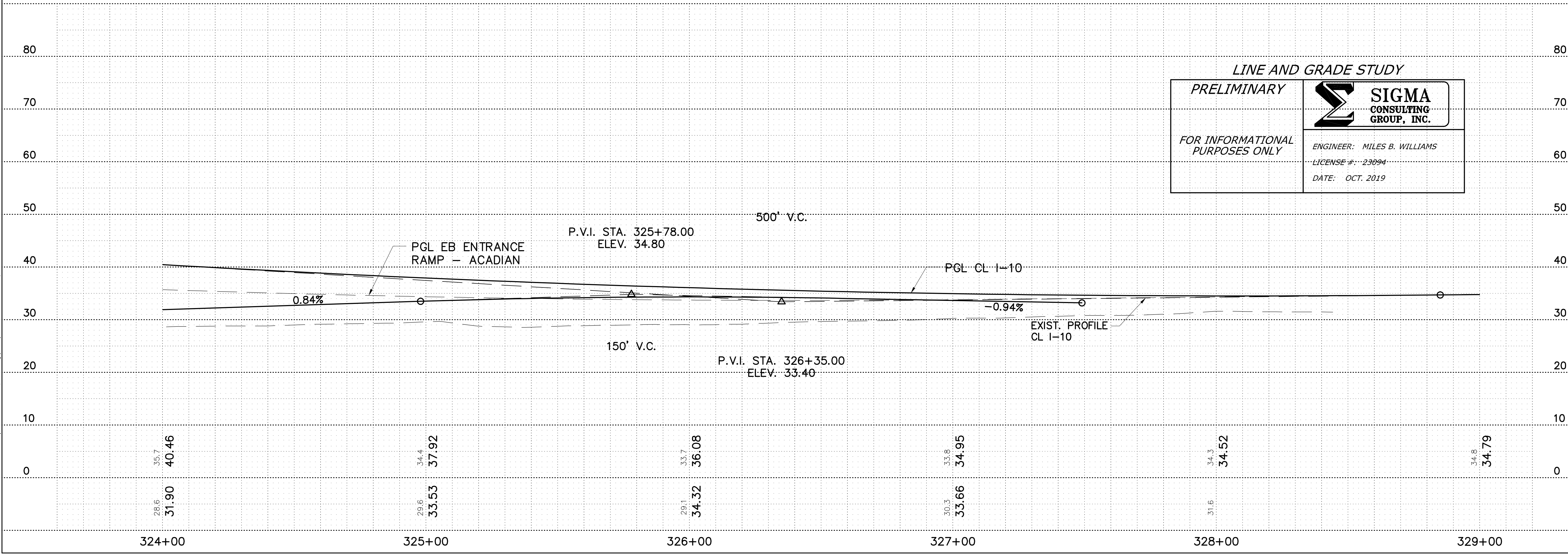
CURVE DATA
BL WB ENTRANCE RAMP
ACADIAN
 P.I. STA 324+34.70
 $\Delta = 05^{\circ}12'31''$ LT.
 $D = 02^{\circ}36'16''$
 $T = 100.07'$
 $L = 200.00'$
 $R = 2,200.00'$

CURVE DATA
BL WB ENTRANCE RAMP - ACADIAN
 P.I. STA 327+25.11
 $\Delta = 09^{\circ}07'19''$ RT.
 $D = 03^{\circ}49'11''$
 $T = 119.66'$
 $L = 238.81'$
 $R = 1,500.00'$

PT STA. 328+44.26
 END EB ENTRANCE RAMP - ACADIAN =
 STA. 328+44.26, C.L. I-10
 58.00' RT.



SHEET NUMBER	AR06
DESIGNED	WILLIAMS
CHECKED	AMEEDEE
DATE	
NO.	
REVISION OR CHANGE ORDER DESCRIPTION	
BY	
PARISH	EAST BATON ROUGE
CONTROL SECTION	450-10
STATE PROJECT	H.004100
SERIES NUMBER	2 OF 2



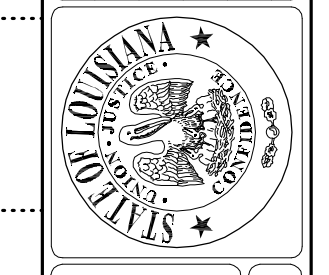
LINE AND GRADE STUDY

PRELIMINARY

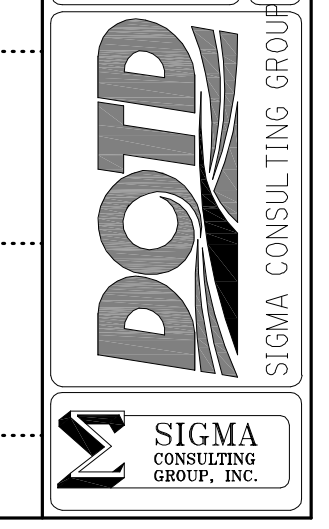
SIGMA CONSULTING GROUP, INC.

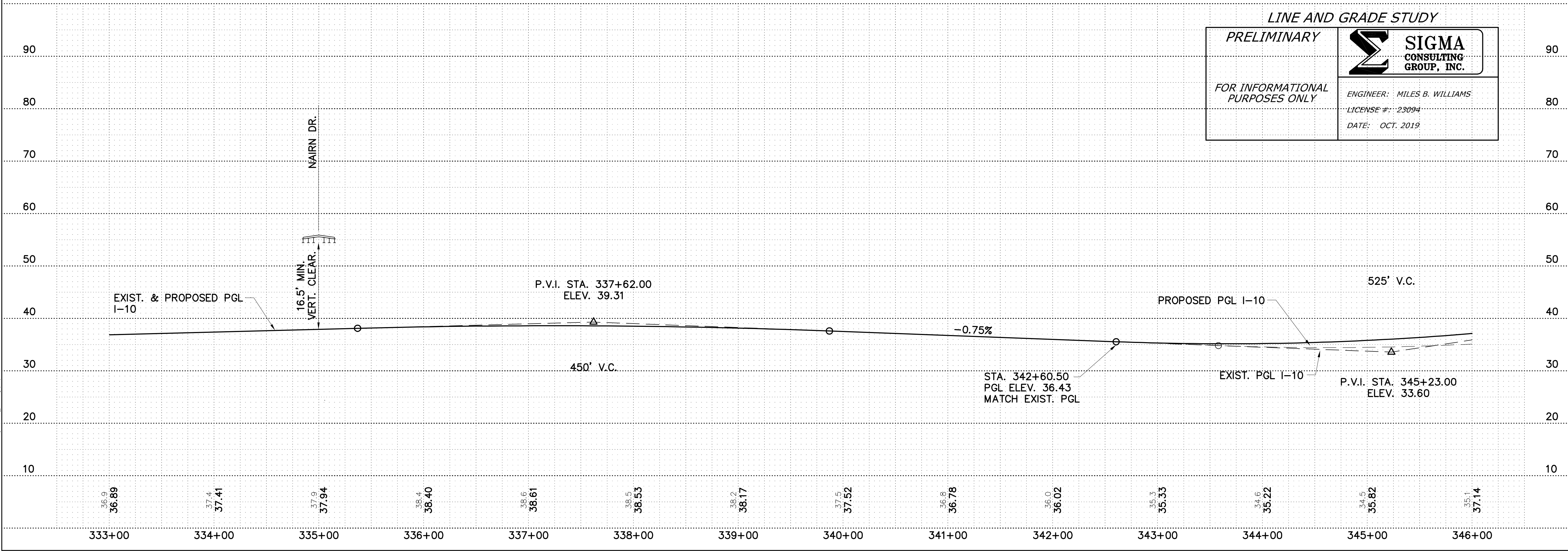
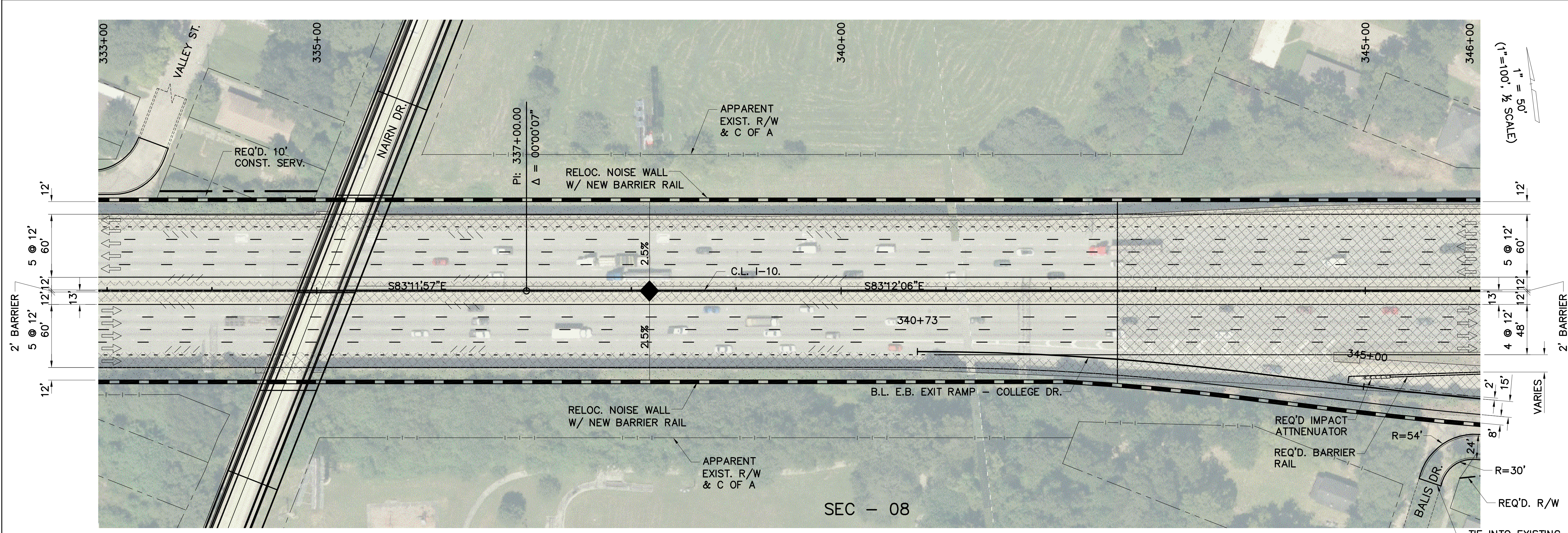
ENGINEER: MILES B. WILLIAMS
 LICENSE #: 23094
 DATE: OCT. 2019

FOR INFORMATIONAL PURPOSES ONLY



PLAN AND PROFILE
EB ENTRANCE RAMP - ACADIAN
 I-10: LA 415 TO ESSEN ON I-10 AND I-12





LINE AND GRADE STUDY

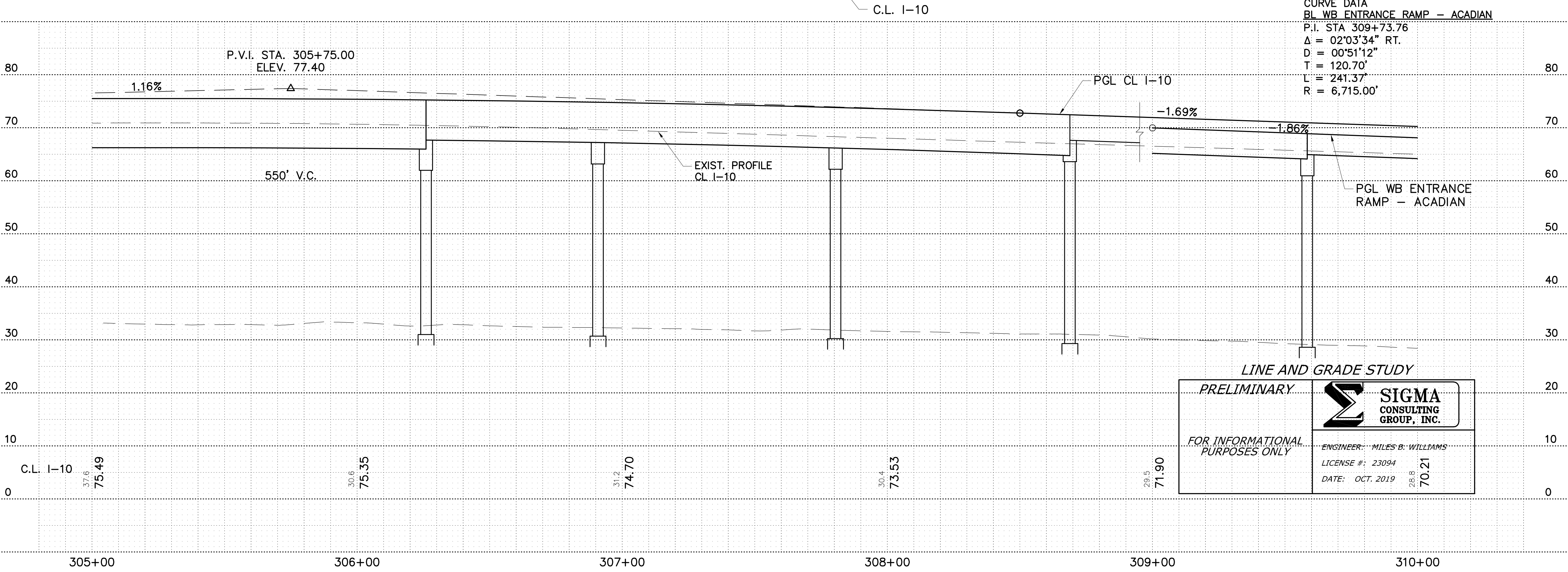
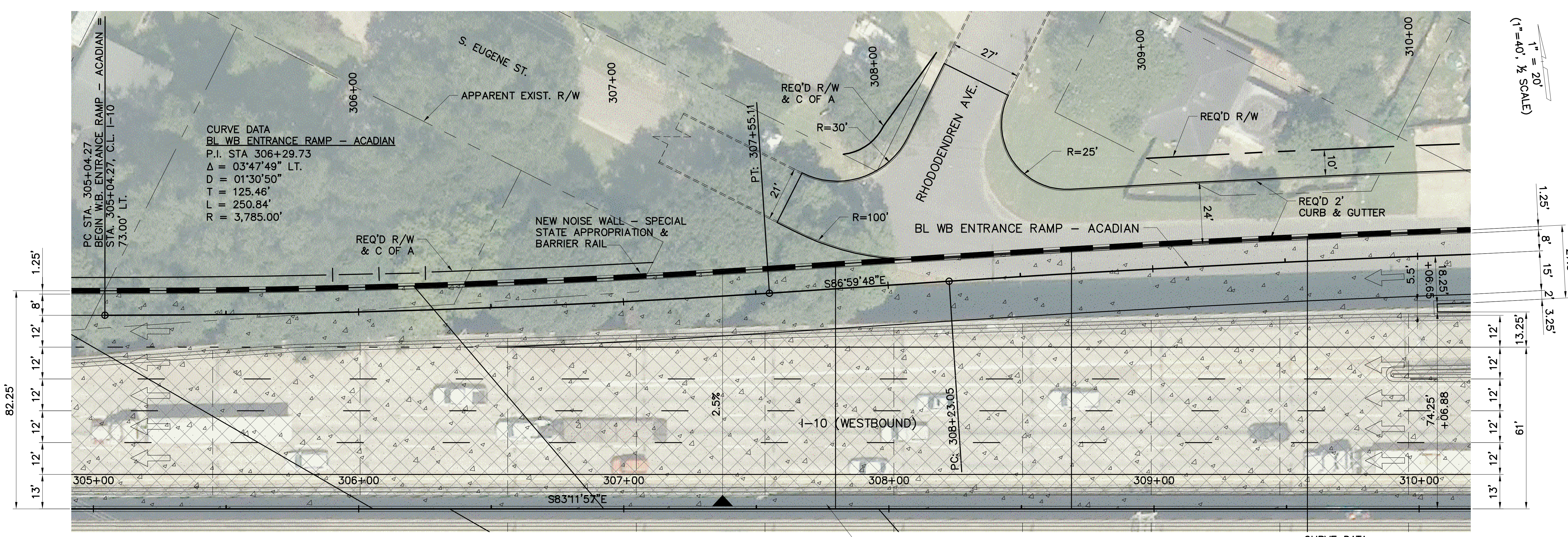
PRELIMINARY

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SIGMA CONSULTING GROUP, INC.

ENGINEER: MILES B. WILLIAMS
 LICENSE #: 23094
 DATE: OCT. 2019

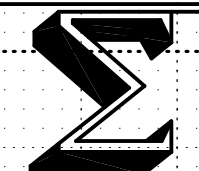
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DESIGNED	WILLIAMS	CHECKED	YARBROUGH	SERIES NUMBER	26 OF 32	BY	
NO.	DATE	REVISION OR CHANGE ORDER DESCRIPTION					
PLAN AND PROFILE							
I-10: LA 415 TO ESSEN ON I-10 AND I-12							



LINE AND GRADE STUDY


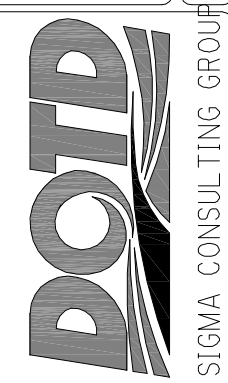

PRELIMINARY

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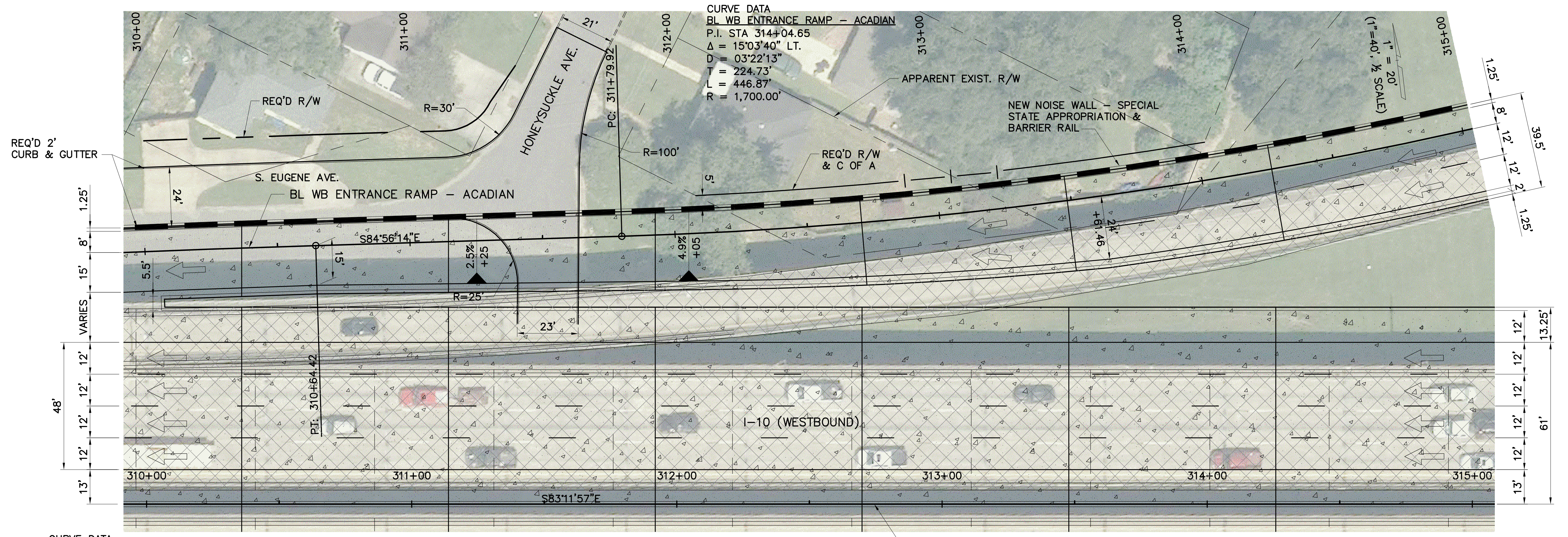


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GROUP, INC.

ENGINEER: MILES B. WILLIAMS
LICENSE #: 23094
DATE: OCT. 2019

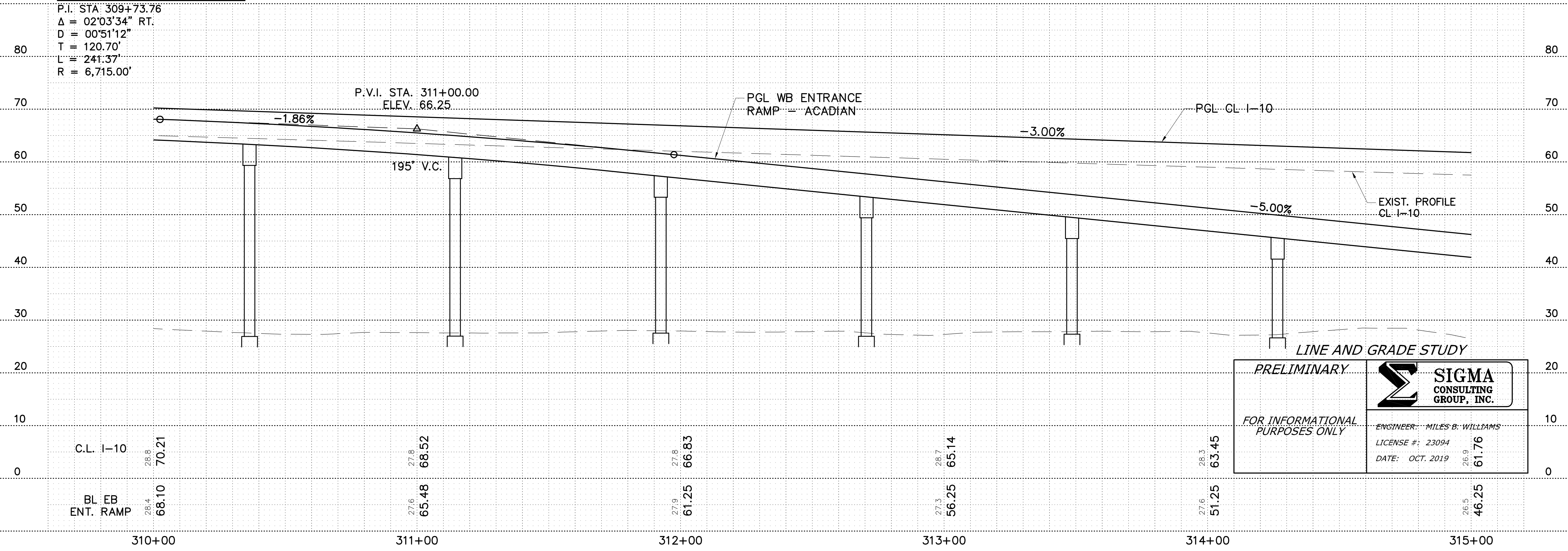
SHEET NUMBER	AR07	PARISH	WILLIAMS	CONTROL SECTION	EAST BATON ROUGE
DESIGNED	CHECKED	Detailed	CHECKED	SERIES NUMBER	PROJECT
				1 OF 3	H.004100
REVISION OR CHANGE ORDER DESCRIPTION					
BY					
NO.					
DATE					
					
PLAN AND PROFILE WB ENTRANCE RAMP - ACADIAN I-10: LA 415 TO ESSEN ON I-10 AND I-12					
					
					

LINE & GRADE STUDY - DRAFT



CURVE DATA
 BL WB ENTRANCE RAMP - ACADIAN
 P.I. STA 314+04.65
 $\Delta = 15^{\circ}03'40''$ LT.
 $D = 03^{\circ}22'13''$
 $T = 224.73'$
 $L = 446.87'$
 $R = 1,700.00'$

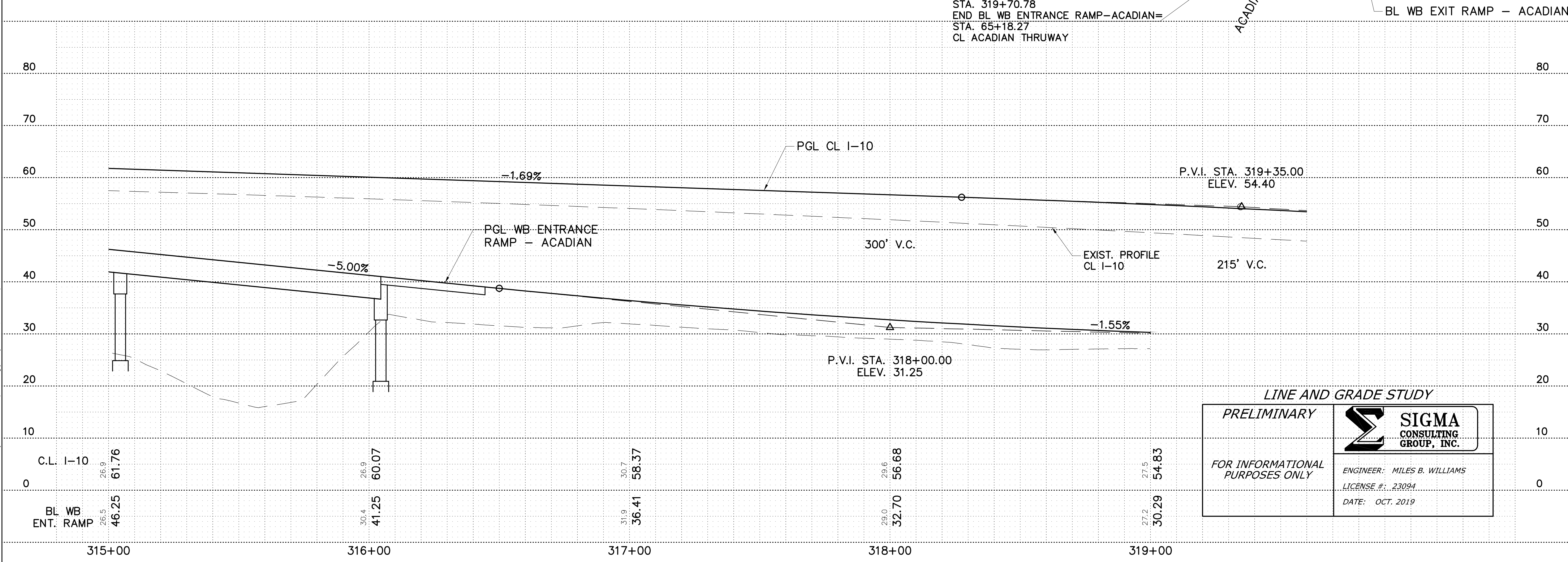
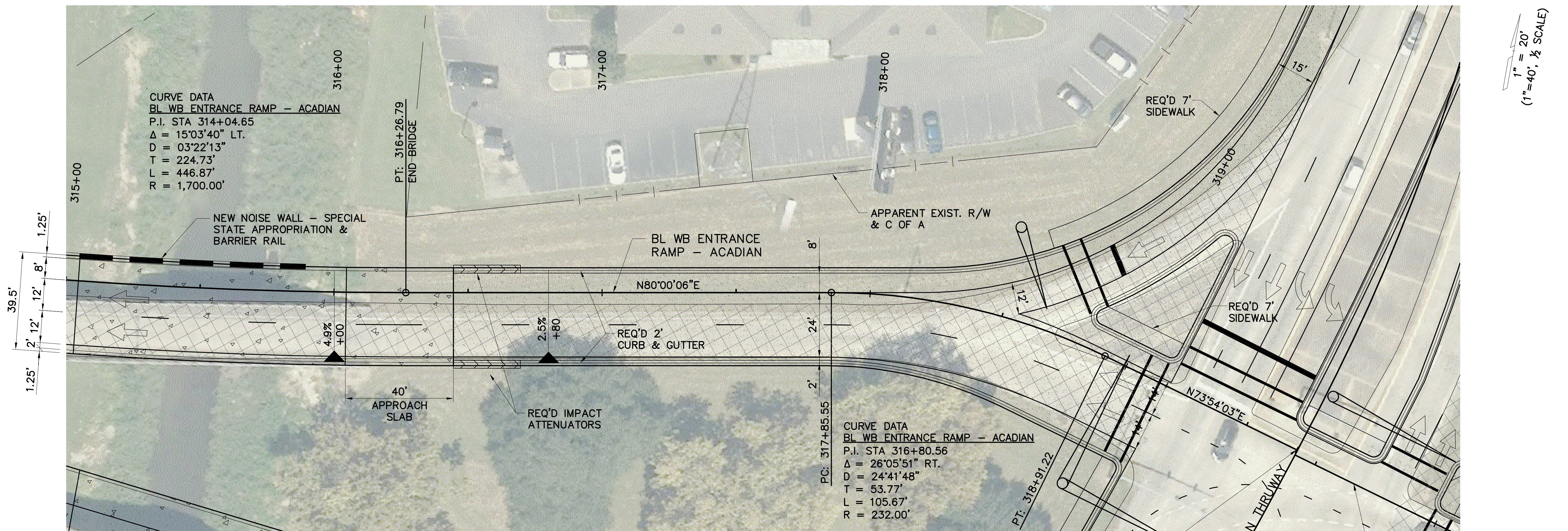
CURVE DATA
 BL WB ENTRANCE RAMP - ACADIAN
 P.I. STA 309+73.76
 $\Delta = 02^{\circ}03'34''$ RT.
 $D = 00^{\circ}51'12''$
 $T = 120.70'$
 $L = 241.37'$
 $R = 6,715.00'$



LINE AND GRADE STUDY
 PRELIMINARY
 FOR INFORMATIONAL PURPOSES ONLY

SIGMA CONSULTING GROUP, INC. ENGINEER: MILES B. WILLIAMS LICENSE #: 23094 DATE: OCT. 2019	28.3	63.45
	27.6	51.25
	26.5	46.25

SHEET NUMBER	AR08
DESIGNED	WILLIAMS
CHECKED	AMEEDE
DATE	
NO.	
REVISION OR CHANGE ORDER DESCRIPTION	
BY	
PARISH	EAST BATON ROUGE
CONTROL SECTION	450-10
STATE PROJECT	H.004100
SERIES NUMBER	2 OF 3
PLAN AND PROFILE WB ENTRANCE RAMP - ACADIAN I-10: LA 415 TO ESSEN ON I-10 AND I-12	
DOTD SIGMA CONSULTING GROUP, INC.	



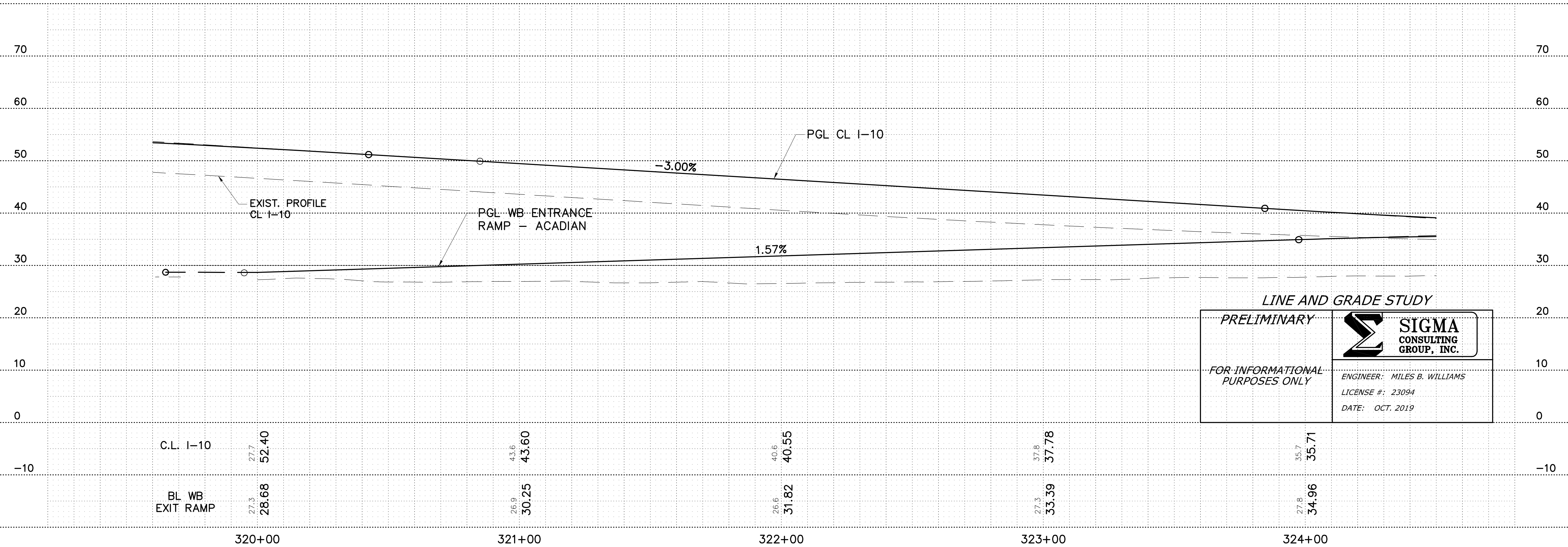
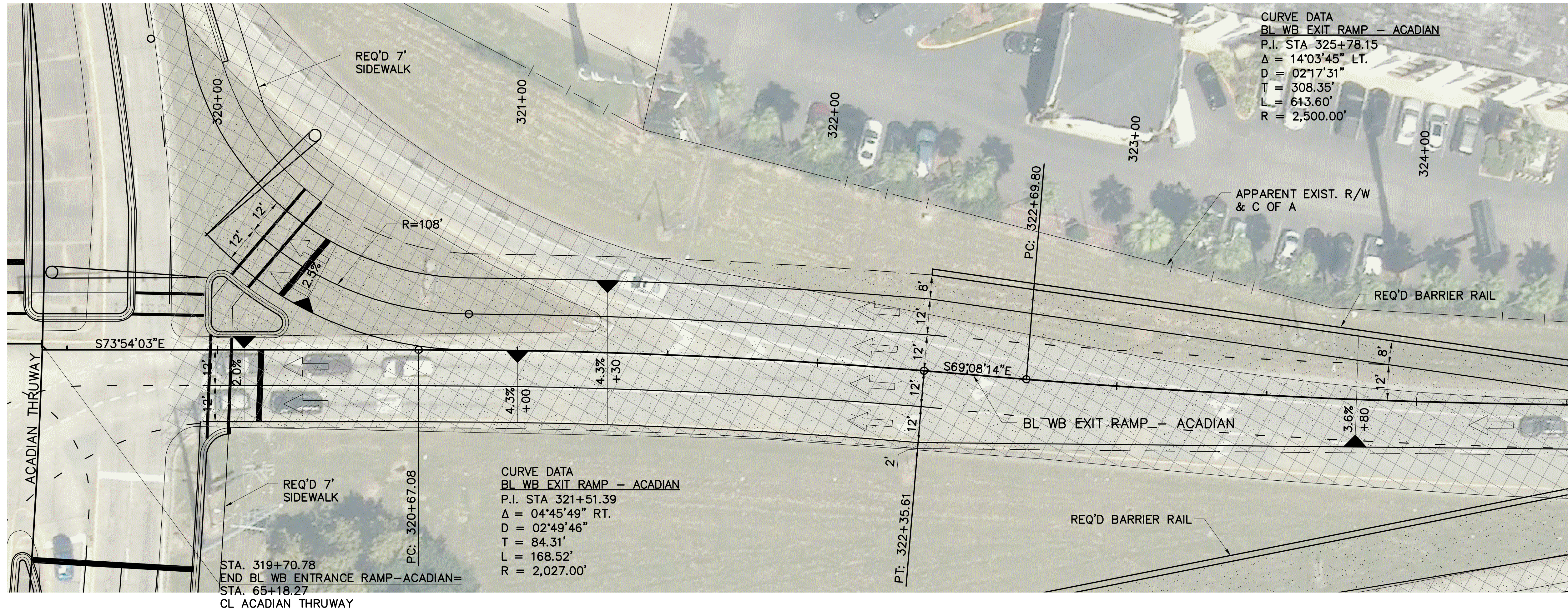
1" = 20'
(1" = 40', 1/2 SCALE)

SHEET NUMBER	AR09
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CHECKED	AMEEDE
PARISH	EAST BATON ROUGE
CONTROL SECTION	450-10
STATE PROJECT	H.004100
Detailed	AMEEDE
Checked	AMEEDE
Series Number	3 OF 3
Revision or Change Order Description	
No.	
Date	
By	

PLAN AND PROFILE
WB ENTRANCE RAMP - ACADIAN
I-10: LA 415 TO ESSEN ON I-10 AND I-12

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SIGMA CONSULTING GROUP

SIGMA CONSULTING GROUP, INC.



LINE AND GRADE STUDY

PRELIMINARY

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SIGMA CONSULTING GROUP, INC.
 ENGINEER: MILES B. WILLIAMS
 LICENSE #: 23094
 DATE: OCT. 2019

SHEET NUMBER	AR 10	PARISH	EAST BATON ROUGE	CONTROL SECTION	450-10
DESIGNED	WILLIAMS	STATE PROJECT	H.004100	DESIGNED	WILLIAMS
CHECKED	AMEEDEE	REVISION OR CHANGE ORDER DESCRIPTION		CHECKED	AMEEDEE
DATE		NO.		DATE	
BY		NO.		DATE	

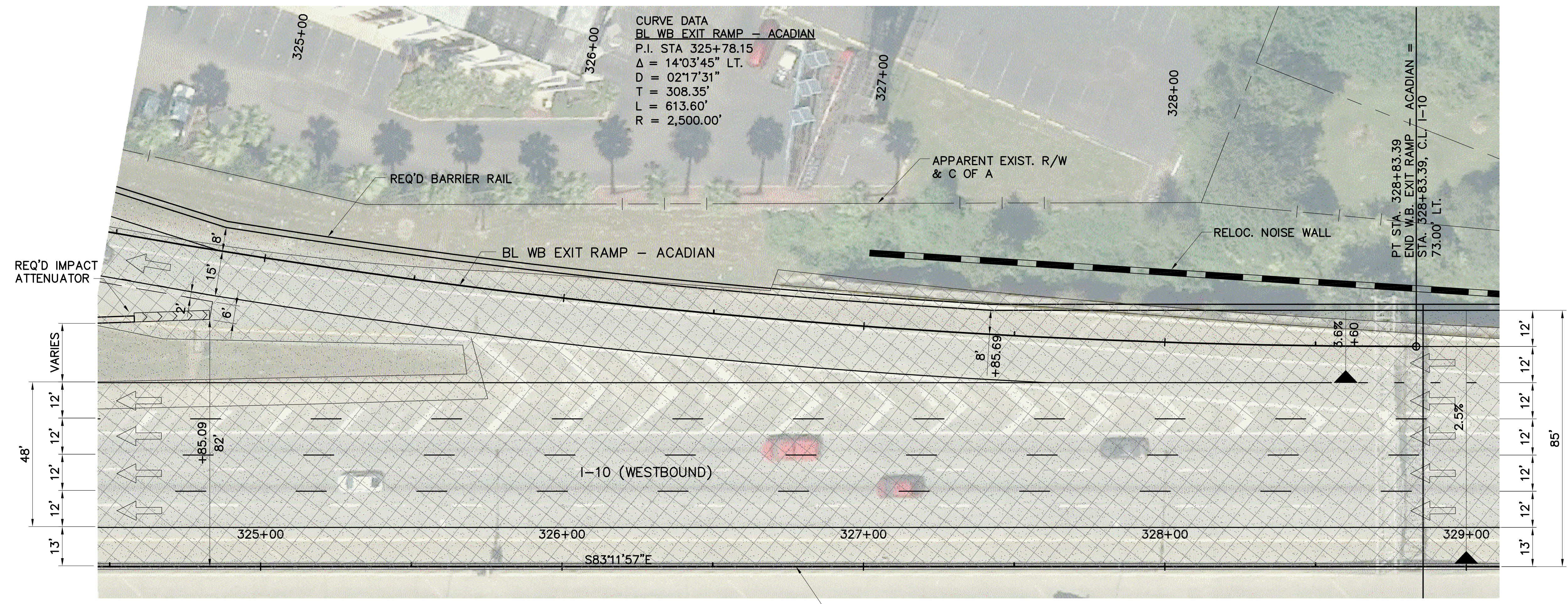
PLAN AND PROFILE
 WB EXIT RAMP - ACADIAN
 I-10: LA 415 TO ESSEN ON I-10 AND I-12

SIGMA CONSULTING GROUP, INC.

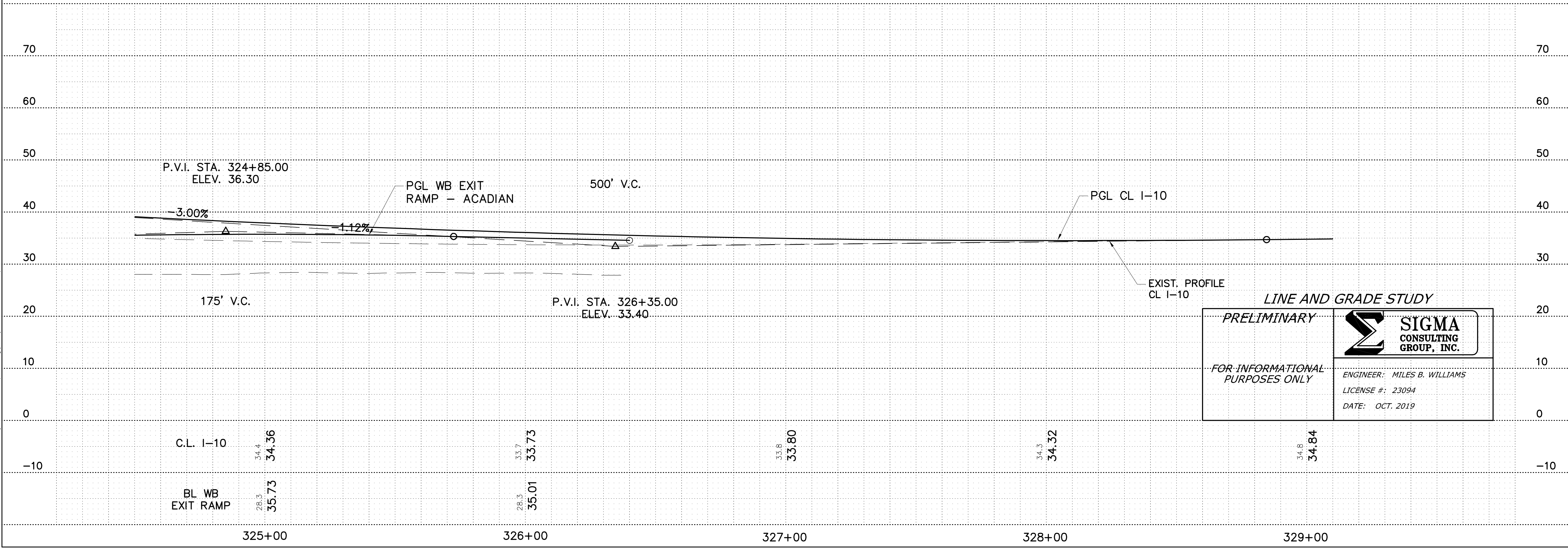
OCT. 2019

LINE & GRADE STUDY - DRAFT

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(1" = 40', 1/8" SCALE)



LINE AND GRADE STUDY

PRELIMINARY

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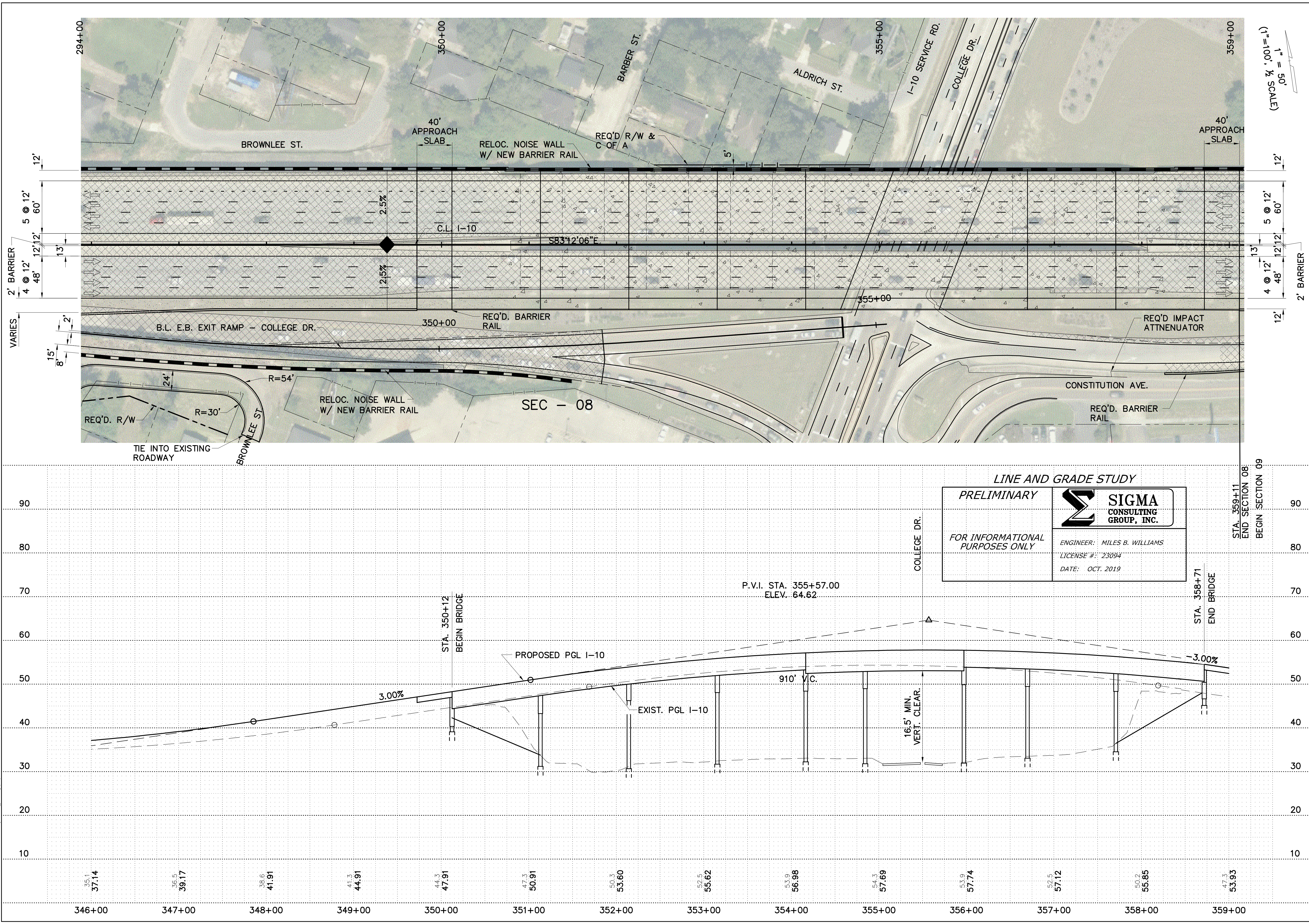
ENGINEER: MILES B. WILLIAMS
 LICENSE #: 23094
 DATE: OCT. 2019

SHEET NUMBER	ARI I
DESIGNED	WILLIAMS
CHECKED	AMEEDE
REVISION OR CHANGE ORDER DESCRIPTION	BY
NO.	DATE
PARISH	EAST BATON ROUGE
CONTROL SECTION	450-10
STATE PROJECT	H.004100
SERIES NUMBER	2 OF 2
PLAN AND PROFILE	WB EXIT RAMP - ACADIAN
I-10: LA 415 TO ESSEN ON I-10 AND I-12	

LINE & GRADE STUDY - DRAFT

OCT. 2019

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LINE AND GRADE STUDY

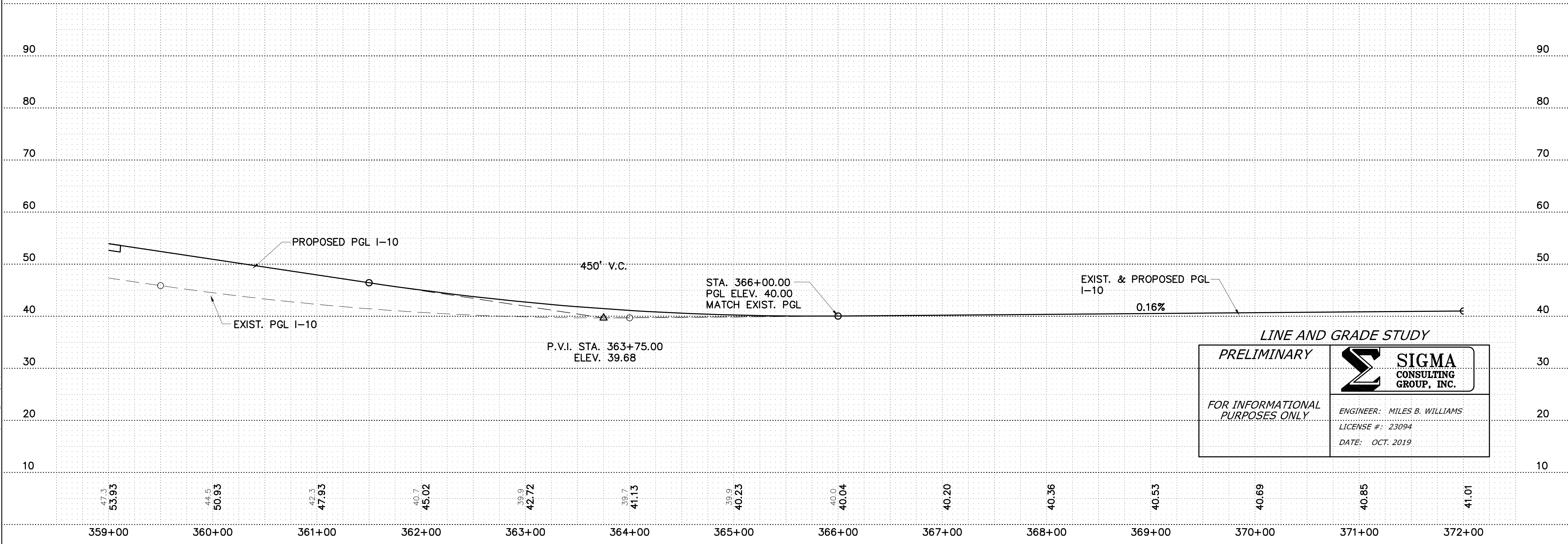
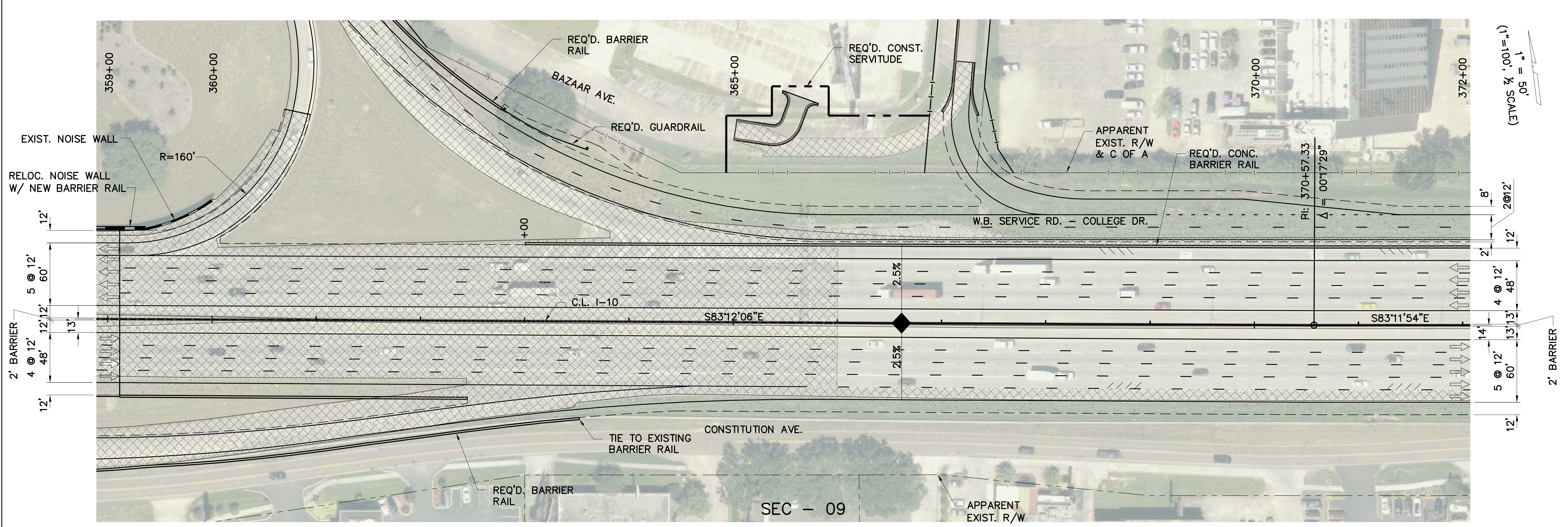
PRELIMINARY

FOR INFORMATIONAL PURPOSES ONLY

SIGMA CONSULTING GROUP, INC.

ENGINEER: MILES B. WILLIAMS
 LICENSE #: 23094
 DATE: OCT. 2019

SHEET NUMBER	ML28	PARISH	EAST BATON ROUGE	PROJECT	H.004100
CONTROL SECTION	450-10	DESIGNED	WILLIAMS	SERIES NUMBER	27 OF 38
CHECKED	YARBROUGH	DETAILED	YARBROUGH	CHECKED	
NO.	DATE	NO.	DATE	NO.	DATE
REVISION OR CHANGE ORDER DESCRIPTION					
BY					
PLAN AND PROFILE					
I-10: LA 415 TO ESSEN ON I-10 AND I-12					



LINE AND GRADE STUDY

PRELIMINARY

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SIGMA CONSULTING GROUP, INC.

ENGINEER: MILES B. WILLIAMS
 LICENSE #: 23094
 DATE: OCT. 2019

SIGMA CONSULTING GROUP, INC.

PLANNING AND PROFILE

1-10: LA 415 TO ESSEN ON I-10 AND I-12

DOTD

SHEET NUMBER	ML29
DESIGNED	WILLIAMS
CHECKED	YARBROUGH
DATE	
NO.	
PARISH	EAST BATON ROUGE
CONTROL SECTION	450-10
STATE PROJECT	H.004100
DESIGNED / CHECKED	28 OF 38
DATE	
NO.	
REVISION OR CHANGE ORDER DESCRIPTION	
BY	

2. PROJECT DESIGN CONSIDERATIONS

2.1 Project Design Guidelines

The design guidance, criteria and standards contained herein for the Interstate 10 Corridor Improvements, LA 415 to Essen Lane, generally conform to the following:

- LA DOTD “Roadway Design Procedures and Details”
- LA DOTD “Bridge Design and Evaluation Manual”
- LA DOTD “Minimum Design Guidelines” (dated March 6, 2017)
- American Association of State Highway and Transportation Officials’ (AASHTO) publication “A Policy on Geometric Design of Highways and Streets”, 7th Edition dated 2018 (Green Book)
- AASHTO publication “LRFD Bridge Design Specifications” (7th Edition, 2014 with 2015 and 2016 Interim Revisions)
- LA DOTD Engineering Directives and Standards (EDSMs).

The Corridor specific “Minimum Design Guidelines” and criteria generated were used as a basis to develop line and grade alternatives for Interstate 10 and the associated interchange and surface street improvements through the project corridor. It is important that these design guidelines and criteria are developed early on in project development to provide a coherent and reliable reference and that they are reviewed and updated throughout the roadway and bridge design process.

Geometric Criteria

The project corridor includes both rural (West Baton Rouge Parish) and urban (East Baton Rouge Parish) settings. There are various roadway classifications (types) identified through the limits of the study. These include:

Rural Freeway	I-10 – LA 415 to Mississippi River Bridge West Approach
Urban Freeway	I-10 – Mississippi River Bridge West Approach to Essen Lane
Ramps – Diagonal	Majority of Interchange ramp mods./additions, Service Roads
Ramps – Loop	Dalrymple Drive & College Drive Loop Ramps
Urban Arterial	Acadian Thruway, Washington Street, Perkins Road, etc.
Urban Local	E. Harrison Street, Nairn Drive, S. Eugene Street, etc

Using the LA DOTD “Minimum Design Guidelines” (dated March 6, 2017) supplemented by the other referenced manuals and standards, the following “Design Report” worksheets were generated for each of the roadway classifications (types) identified. There are two “Design Report” worksheets for the Urban Freeway classification. One applies to the I-10 Mississippi River Bridge Approaches and the other applies to I-10 from the I-10/I-110 Interchange to Essen Lane.

Roadway Features:

Design Feature	Preferred	Acceptable	Proposed Value	Design Waiver Required	Design Exception Required	Remarks or Explanation for Proposed Value
Design Speed (mph)		70 - 80	70			
Lane Width (ft)	NA	12	12			
Shoulder Width (ft)						
Inside	12	10	12			
Outside	12	10	12			
Shoulder Type						
Inside	Paved	Paved	Paved			
Outside	Paved	Paved	Paved			
Lateral Offset (ft)			12			
Clear Zone (ft)		30-34	34			
Cross Slope (%)		2.5%	2.5%			
Longitudinal Grade	NA	3% MAX	3% MAX			
Slopes (ft/ft)						
Fore Slope	6:1	4:1	6:1			
Back Slope	4:1	3:1	4:1			
Median Width (ft)	NA	64 w/o	64			CABLE BARRIER PROVIDED

Stopping Sight Distance: Vertical and horizontal distances must be met.

Do plans meet Stopping Sight Distance requirements?	Design Exception Required	Remarks or Explanation for Proposed Value
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	SSD=730, K crest = 247, K sag = 181

Complete Streets: Accommodations for bikes and pedestrians must be considered. See Design Guidelines for accommodation requirements.

Do plans meet Complete Streets accommodations?	Design Exception Required	Remarks or Explanation for Proposed Value
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	

Horizontal Curves Radius/Superelevation:

Max Super-elevation rate (%) e _{max}	Design Speed (mph)	Required Minimum Radius (ft)			Minimum radius and appropriate superelevation are being used for all curves?	Design Exception Required	Remarks or Explanation for Proposed Value
		Normal Crown	Reverse Crown	Full Super			
8	70	14500	8495	1810	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	

Bridge Features:						
<i>Design Feature</i>	<i>Preferred</i>	<i>Acceptable</i>	<i>Proposed Value</i>	<i>Design Waiver Required</i>	<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
Bridge Width (ft)						
Curb				<input type="checkbox"/>	<input type="checkbox"/>	
Shoulder				<input type="checkbox"/>	<input type="checkbox"/>	N/A
Structural Capacity:						
Do all structures meet requirements for Structural Capacity?					<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
<input type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	N/A
Vertical Clearance:						
Are minimum required roadway clearances met for all structure types?					<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
<input type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	N/A
Additional Comments:						

Roadway Features:						
Design Feature	Preferred	Acceptable	Proposed Value	Design Waiver Required	Design Exception Required	Remarks or Explanation for Proposed Value
Design Speed (mph)		60 - 70	60			
Lane Width (ft)	NA	12	12			
Shoulder Width (ft)						
Inside	12	10	2.75		✓	INSIDE SHOULDERS TO MATCH WIDTH ON MAIN TRUSS. MEDIAN BARRIER TO BE UPGRADED.
Outside	12	10	12			12' OUTSIDE SHOULDERS TO BE PROVIDED WHERE ATTAINABLE
Shoulder Type						
Inside	Paved	Paved	Paved			
Outside	Paved	Paved	Paved			
Lateral Offset (ft)	NA	NA	NA			LIMIT OF REGION ON STRUCTURE WITH BARRIER RAIL @ EDGE OF SHOULDER
Clear Zone (ft)		NA	NA			LIMIT OF REGION ON STRUCTURE WITH BARRIER RAIL @ EDGE OF SHOULDER
Cross Slope (%)		2.5%	1.5 / 2.5%		✓	2.5% ON ALL NEW CONSTRUCTION - MATCH EXISTING 1.5% ON STRUCTURE WIDENING
Longitudinal Grade	NA	3% MAX	3.8% MAX		✓	3.8% IS EXISTING MAXIMUM GRADE
Slopes (ft/ft)						
Fore Slope	NA	NA	NA			
Back Slope	NA	NA	NA			
Median Width (ft)	NA	NA	8			LIMIT OF REGION ON STRUCTURE WITH NEW MEDIAN BARRIER RAIL PROVIDED

Stopping Sight Distance: Vertical and horizontal distances must be met.		
Do plans meet Stopping Sight Distance requirements?	Design Exception Required	Remarks or Explanation for Proposed Value
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	

Complete Streets: Accommodations for bikes and pedestrians must be considered. See Design Guidelines for accommodation requirements.		
Do plans meet Complete Streets accommodations?	Design Exception Required	Remarks or Explanation for Proposed Value
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	N/A

Horizontal Curves Radius/Superelevation:							
Max Super-elevation rate (%) <i>e_{max}</i>	Design Speed (mph)	Required Minimum Radius (ft)			Minimum radius and appropriate superelevation are being used for all curves?	Design Exception Required	Remarks or Explanation for Proposed Value
		Normal Crown	Reverse Crown	Full Super			
8	60	11500	6678	1200	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/>	SSD=570', Kcrest = 151, Ksag = 136. ACCEPTABLE GUIDELINES PROVIDED ON ALL NEW CONSTRUCTION - MATCH EXISTING ON STRUCTURE WIDENING
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	

Bridge Features:						
Design Feature	Preferred	Acceptable	Proposed Value	Design Waiver Required	Design Exception Required	Remarks or Explanation for Proposed Value
Bridge Width (ft)						
Curb				<input type="checkbox"/>	<input type="checkbox"/>	
Shoulder	TL + SW	TL + SW	TL + SW	<input type="checkbox"/>	<input checked="" type="checkbox"/>	SAME DESIGN EXCEPTION FOR INSIDE SHOULDER WIDTH
Structural Capacity:						
Do all structures meet requirements for Structural Capacity?					Design Exception Required	Remarks or Explanation for Proposed Value
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	
Vertical Clearance:						
Are minimum required roadway clearances met for all structure types?					Design Exception Required	Remarks or Explanation for Proposed Value
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					<input checked="" type="checkbox"/>	REQUIRED MINIMUM CLEARANCE (16.5' OVER ROADWAYS & 23' OVER RAILROADS) PROVIDED WHERE ATTAINABLE. SEE VERTICAL CLEARANCE MEMO FOR ADDITIONAL DETAILS
Additional Comments:						
APPLIES TO THE I-10 MISSISSIPPI RIVER BRIDGE APPROACHES						

Roadway Features:						
Design Feature	Preferred	Acceptable	Proposed Value	Design Waiver Required	Design Exception Required	Remarks or Explanation for Proposed Value
Design Speed (mph)		60 - 70	60			
Lane Width (ft)	NA	12	12			
Shoulder Width (ft)						
Inside	12	10	10 / 12	✓		10' INSIDE SHOULDER MAY BE REQUIRED ON SOME ELEVATED SEGMENTS TO ADDRESS CONSTRUCTABILITY CONSTRAINTS. ALL OTHER INSIDE SHOULDERS WILL BE 12'.
Outside	12	10	12			
Shoulder Type						
Inside	Paved	Paved	Paved			
Outside	Paved	Paved	Paved			
Lateral Offset (ft)	12	12	12			
Clear Zone (ft)		30 - 32	32			ALL AREAS WITH CLEAR ZONE LESS THAN 32' WILL BE PROTECTED BY BARRIER RAIL OR GUARDRAIL
Cross Slope (%)		2.5%	1.5 / 2.5%		✓	2.5% ON ALL NEW CONSTRUCTION & ROADWAY WIDENING - MATCH EXISTING 1.5% ON STRUCTURE WIDENING
Longitudinal Grade	NA	3% MAX	3% MAX			
Slopes (ft/ft)						
Fore Slope	6:1	4:1	6:1			
Back Slope	4:1	3:1	4:1			
Median Width (ft)	NA	64 W/O	64 W/O			ALL AREAS WITH MEDIAN WIDTH LESS THAN 64' WILL BE PROTECTED BY BARRIER RAIL

Stopping Sight Distance: Vertical and horizontal distances must be met.		
Do plans meet Stopping Sight Distance requirements?	Design Exception Required	Remarks or Explanation for Proposed Value
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	

Complete Streets: Accommodations for bikes and pedestrians must be considered. See Design Guidelines for accommodation requirements.		
Do plans meet Complete Streets accommodations?	Design Exception Required	Remarks or Explanation for Proposed Value
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	N/A

Horizontal Curves Radius/Superelevation:							
Max Super-elevation rate (%) e _{max}	Design Speed (mph)	Required Minimum Radius (ft)			Minimum radius and appropriate superelevation are being used for all curves?	Design Exception Required	Remarks or Explanation for Proposed Value
		Normal Crown	Reverse Crown	Full Super			
8	60	11500	6678	1200	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/>	SSD=570', Kcrest = 151, Ksag = 136. ACCEPTABLE GUIDELINES PROVIDED ON ALL NEW CONSTRUCTION & ROADWAY WIDENING - MATCH EXISTING ON STRUCTURE WIDENING
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	

Bridge Features:						
Design Feature	Preferred	Acceptable	Proposed Value	Design Waiver Required	Design Exception Required	Remarks or Explanation for Proposed Value
Bridge Width (ft)						
Curb				<input type="checkbox"/>	<input type="checkbox"/>	
Shoulder	TL + SW	TL + SW	TL + SW	<input type="checkbox"/>	<input type="checkbox"/>	
Structural Capacity:						
Do all structures meet requirements for Structural Capacity?					Design Exception Required	Remarks or Explanation for Proposed Value
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	
Vertical Clearance:						
Are minimum required roadway clearances met for all structure types?					Design Exception Required	Remarks or Explanation for Proposed Value
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					<input checked="" type="checkbox"/>	REQUIRED MINIMUM CLEARANCE (16.5' OVER ROADWAYS & 23' OVER RAILROADS) PROVIDED WHERE ATTAINABLE. SEE VERTICAL CLEARANCE MEMO FOR ADDITIONAL DETAILS
Additional Comments:						
APPLIES TO INTERSTATE 10 FROM THE I-10/I-110 INTERCHANGE TO ESSEN LANE						

Roadway Features:						
Design Feature	Preferred	Acceptable	Proposed Value	Design Waiver Required	Design Exception Required	Remarks or Explanation for Proposed Value
Design Speed (mph)		30 - 50	45			
Lane Width (ft)	NA	12 / 15	15			15' SINGLE LANE/24' DUAL LANE - USE CASE "C" FROM AASHTO.
Shoulder Width (ft)						
Inside	NA	2 - 4	2			SEE AASHTO
Outside	NA	8 - 10	8			SEE AASHTO
Shoulder Type						
Inside	Paved	Paved	Paved			
Outside	Paved	Paved	Paved			
Lateral Offset (ft)	10 Rt.	6 Rt. / 4 Lt.	10 Rt.			
Clear Zone (ft)		NA	NA			
Cross Slope (%)		2.5%	1.5%/2.5%		✓	2.5% ON ALL NEW RAMPS - MATCH EXISTING 1.5% ON RAMP WIDENING
Longitudinal Grade	NA	5% Max	5% Max			
Slopes (ft/ft)						
Fore Slope	NA	4:1	4:1			
Back Slope	NA	3:1	3:1			
Median Width (ft)	NA	NA	NA			

Stopping Sight Distance: Vertical and horizontal distances must be met.		
Do plans meet Stopping Sight Distance requirements?	Design Exception Required	Remarks or Explanation for Proposed Value
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	SSD=360', K crest = 61, K sag = 79

Complete Streets: Accommodations for bikes and pedestrians must be considered. See Design Guidelines for accommodation requirements.		
Do plans meet Complete Streets accommodations?	Design Exception Required	Remarks or Explanation for Proposed Value
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	N/A

Horizontal Curves Radius/Superelevation:							
Max Super-elevation rate (%) <i>e_{max}</i>	Design Speed (mph)	Required Minimum Radius (ft)			Minimum radius and appropriate superelevation are being used for all curves?	Design Exception Required	Remarks or Explanation for Proposed Value
		Normal Crown	Reverse Crown	Full Super			
8	45	6710	4930	587	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/>	FULL RECONSTRUCTION MEETS GUIDELINES. SOME LOCATIONS OF WIDENING OF EXIST. MAY REQUIRE DESIGN EXCEPTIONS.
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	

Bridge Features:						
<i>Design Feature</i>	<i>Preferred</i>	<i>Acceptable</i>	<i>Proposed Value</i>	<i>Design Waiver Required</i>	<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
Bridge Width (ft)						
Curb			23	<input type="checkbox"/>	<input type="checkbox"/>	TRAVEL LANES + 8'
Shoulder			25	<input type="checkbox"/>	<input type="checkbox"/>	TRAVEL LANES + SHOULDER WIDTH
Structural Capacity:						
Do all structures meet requirements for Structural Capacity?					<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	
Vertical Clearance:						
Are minimum required roadway clearances met for all structure types?					<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	
Additional Comments:						
APPLIES TO ALL RAMPS EXCLUDING THE DALRYMPLE DRIVE WB EXIT LOOP RAMP AND THE COLLEGE DRIVE WB ENTRANCE LOOP RAMP WHERE ELEVATED RAMPS TIE INTO EXISTING, THE CROSS SLOPE/SUPERELEVATION VALUES AND/OR SHOULDER WIDTH VALUES MAY REQUIRE DESIGN EXCEPTIONS.						

Roadway Features:						
Design Feature	Preferred	Acceptable	Proposed Value	Design Waiver Required	Design Exception Required	Remarks or Explanation for Proposed Value
Design Speed (mph)		30 - 50	30			
Lane Width (ft)	NA	16	16			USE CASE "C" FROM AASHTO.
Shoulder Width (ft)						
Inside	NA	2 - 4	2			SEE AASHTO
Outside	NA	8 - 10	8			SEE AASHTO
Shoulder Type						
Inside	Paved	Paved	Paved			
Outside	Paved	Paved	Paved			
Lateral Offset (ft)	10 Rt.	6 Rt. / 4 Lt.	10 Rt.			
Clear Zone (ft)		NA	NA			
Cross Slope (%)		2.5%	2.5%			
Longitudinal Grade	NA	5% MAX	5% MAX			
Slopes (ft/ft)						
Fore Slope	NA	4:1	4:1			
Back Slope	NA	3:1	3:1			
Median Width (ft)	NA	NA	NA			

Stopping Sight Distance: Vertical and horizontal distances must be met.		
Do plans meet Stopping Sight Distance requirements?	Design Exception Required	Remarks or Explanation for Proposed Value
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	SSD=200', K crest = 19 K sag = 37

Complete Streets: Accommodations for bikes and pedestrians must be considered. See Design Guidelines for accommodation requirements.		
Do plans meet Complete Streets accommodations?	Design Exception Required	Remarks or Explanation for Proposed Value
<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	N/A

Horizontal Curves Radius/Superelevation:							
Max Super-elevation rate (%) <i>e_{max}</i>	Design Speed (mph)	Required Minimum Radius (ft)			Minimum radius and appropriate superelevation are being used for all curves?	Design Exception Required	Remarks or Explanation for Proposed Value
		Normal Crown	Reverse Crown	Full Super			
8	30	3240	2370	214	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/>	MINIMUMS PROVIDED FOR DALRYMPLE LOOP RAMP - DESIGN EXCEPTION REQUIRED FOR COLLEGE LOOP RAMP
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	

Bridge Features:						
<i>Design Feature</i>	<i>Preferred</i>	<i>Acceptable</i>	<i>Proposed Value</i>	<i>Design Waiver Required</i>	<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
Bridge Width (ft)						
Curb			23	<input type="checkbox"/>	<input type="checkbox"/>	TRAVEL LANES + 8'
Shoulder			25	<input type="checkbox"/>	<input type="checkbox"/>	TRAVEL LANES + SHOULDER WIDTH
Structural Capacity:						
Do all structures meet requirements for Structural Capacity?					<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	
Vertical Clearance:						
Are minimum required roadway clearances met for all structure types?					<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	
Additional Comments:						
APPLIES TO DALRYMPLE WB EXIT LOOP RAMP AND COLLEGE WB ENTRANCE LOOP RAMP						

Roadway Features:						
Design Feature	Preferred	Acceptable	Proposed Value	Design Waiver Required	Design Exception Required	Remarks or Explanation for Proposed Value
Design Speed (mph)		30 - 60	35			
Lane Width (ft)	12	11	12			
Shoulder Width (ft)						
Inside	1 (curb)	1 (curb)	1 (curb)			
Outside	4 (curb)	1 (curb)	1 (curb)	✓		
Shoulder Type						
Inside	Paved	Paved	Paved			
Outside	Paved	Paved	Paved			
Lateral Offset (ft)	4	1.5 (3@ I/D)	1.5 (3@ I/D)	✓		PROVIDE 4' WHERE ATTAINABLE
Clear Zone (ft)		NA	NA			
Cross Slope (%)		2.5%	2.5%			
Longitudinal Grade	NA	5% MAX	5% MAX		✓	5.8% GRADE REQUIRED @ ACADIAN/KCSRR UNDERPASS
Slopes (ft/ft)						
Fore Slope	NA	4:1	4:1			
Back Slope	NA	3:1	3:1			
Median Width (ft)	NA	NA	NA			

Stopping Sight Distance: Vertical and horizontal distances must be met.

Do plans meet Stopping Sight Distance requirements?	Design Exception Required	Remarks or Explanation for Proposed Value
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	

Complete Streets: Accommodations for bikes and pedestrians must be considered. See Design Guidelines for accommodation requirements.

Do plans meet Complete Streets accommodations?	Design Exception Required	Remarks or Explanation for Proposed Value
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/>	ACCOMMODATE COMPLETE STREETS WHERE ATTAINABLE

Horizontal Curves Radius/Superelevation:

Max Super-elevation rate (%) e _{max}	Design Speed (mph)	Required Minimum Radius (ft)			Minimum radius and appropriate superelevation are being used for all curves?	Design Exception Required	Remarks or Explanation for Proposed Value
		Normal Crown	Reverse Crown	Full Super			
4	35	527	399	371	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	SSD=250, Kcrest = 29, Ksag = 49
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	

Bridge Features:						
<i>Design Feature</i>	<i>Preferred</i>	<i>Acceptable</i>	<i>Proposed Value</i>	<i>Design Waiver Required</i>	<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
Bridge Width (ft)						
Curb	TL + 8	TL + SW	TL + SW	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Shoulder				<input type="checkbox"/>	<input type="checkbox"/>	
Structural Capacity:						
Do all structures meet requirements for Structural Capacity?					<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	
Vertical Clearance:						
Are minimum required roadway clearances met for all structure types?					<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	
Additional Comments:						

Roadway Features:						
Design Feature	Preferred	Acceptable	Proposed Value	Design Waiver Required	Design Exception Required	Remarks or Explanation for Proposed Value
Design Speed (mph)		20 - 30	30			
Lane Width (ft)	11	10	11/12			
Shoulder Width (ft)						
Inside	NA	NA	NA			
Outside	4 (curb)	1 (curb)	1 & 4 (curb)	↘		PROVIDE 4' WHERE ATTAINABLE
Shoulder Type						
Inside	NA	NA	NA			
Outside	Paved	Paved	Paved			
Lateral Offset (ft)	4	1.5 (3@I/D)	1.5 & 4	↘		PROVIDE 4' WHERE ATTAINABLE
Clear Zone (ft)		NA	NA			
Cross Slope (%)		2.5%	2.5%			
Longitudinal Grade	NA	5% MAX	5%/6% MAX		↘	6% GRADE PROPOSED FOR SOUTH APPROACH OF NAIRN DR OVERPASS TO MATCH EXISTING. ALL OTHERS TO BE 5% MAX
Slopes (ft/ft)						
Fore Slope	NA	4:1	4:1			
Back Slope	NA	3:1	3:1			
Median Width (ft)	NA	NA	NA			

Stopping Sight Distance: Vertical and horizontal distances must be met.		
Do plans meet Stopping Sight Distance requirements?	Design Exception Required	Remarks or Explanation for Proposed Value
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	SSD=200', K crest = 19, K sag = 37

Complete Streets: Accommodations for bikes and pedestrians must be considered. See Design Guidelines for accommodation requirements.		
Do plans meet Complete Streets accommodations?	Design Exception Required	Remarks or Explanation for Proposed Value
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/>	COMPLETE STREETS WILL BE ACCOMODATED WHERE ATTAINABLE

Horizontal Curves Radius/Superelevation:							
Max Super-elevation rate (%) e _{max}	Design Speed (mph)	Required Minimum Radius (ft)			Minimum radius and appropriate superelevation are being used for all curves?	Design Exception Required	Remarks or Explanation for Proposed Value
		Normal Crown	Reverse Crown	Full Super			
4	30	343	267	250	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	
					<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	

Bridge Features:						
<i>Design Feature</i>	<i>Preferred</i>	<i>Acceptable</i>	<i>Proposed Value</i>	<i>Design Waiver Required</i>	<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
Bridge Width (ft)						
Curb	TL + 8	TL + SW	32	<input type="checkbox"/>	<input type="checkbox"/>	NAIRN BRIDGE PROPOSED WIDTH MEETS PREFERRED
Shoulder				<input type="checkbox"/>	<input type="checkbox"/>	
Structural Capacity:						
Do all structures meet requirements for Structural Capacity?					<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	
Vertical Clearance:						
Are minimum required roadway clearances met for all structure types?					<i>Design Exception Required</i>	<i>Remarks or Explanation for Proposed Value</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					<input type="checkbox"/>	
Additional Comments:						
Applies to Nairn Drive and other local roads that are relocated.						

Right of Way and Construction Servitude Criteria

During the development of the line and grade for the I-10 Corridor Improvements every attempt was made to minimize right of way acquisitions through the corridor. Where acquisition is necessary the guidelines used for the width of proposed Right of Way or Construction Servitude was developed in consultation with LA DOTD based on the existing and proposed roadway/bridge types and location of proposed noise barriers and retaining walls. The description of each roadway/bridge section along with the designation of acquisition width is below.

At-Grade Roadways:

With Noise Barriers – Right-of-way will be set 1'-6" from the back of the noise barrier. A construction servitude will be set 10'-0" from the back of the noise barrier.

Without Noise Barriers – Right-of-way will be 10'-0" from the edge of the proposed roadway shoulder. This excludes areas which are tight, such as Braddock Street, where the existing edge of pavement was used as the marker for the 10'-0" construction servitude.

Elevated Structures:

With or Without Noise Barriers – Right-of-way will be 5'-0" from the fascia of the elevated structure. There will be no construction servitude shown along structures.

Bridge Criteria

Per BDEM 6.1, the minimum requirements for Bridge Widening projects shall include the following:

1. All deficiencies in the existing structure were identified and documented. This was documented under a separate document "Final Bridge Condition Assessment Report."
2. The existing structure shall be rehabilitated to improve the overall condition of the bridge to extend its service life and/or improve its bridge load rating as appropriate.
3. The new or widened portions of the structure shall be designed in accordance with the latest *AASHTO LRFD Bridge Design Specifications* and LADOTD Bridge Design Manuals including Bridge Design Technical Memoranda.
4. Existing bridge components, such as exterior girders, bent caps, columns, piles etc., that are subject to new loadings from the widening sections shall be evaluated based on the current specifications to determine their adequacy. Bridge components with insufficient capacity shall be replaced or rehabilitated as appropriate.

Design Loads: Any new bridge components shall be designed for a future wearing surface equal to 25 psf and a stay-in-place form weight of 10 psf. Live load for all limit states shall be both the HL-93 and the Louisiana design vehicle LADV-11 applied in accordance with LRFD code.

Earthquake, EQ: [AASHTO *LRFD Bridge Design Specifications 3.10*]: The seismic performance zone is 1b with an acceleration coefficient equal to 0.078, and a site class E(F). The structure has an operational classification of “Essential Bridges”. All connections designed to resist 25% of the vertical reaction due to tributary dead loads. No earthquake loads are assumed during construction.

Vehicular Collision force, CT: [AASHTO *LRFD Bridge Design Specifications 3.6.5*]: All bents and piers located within a distance of 30.0 ft to the edge of any roadway (or 25 ft from railroad tracks) shall be investigated for collision. Collision shall be addressed by either redirecting the load through the use of pier protection or designing the structural member to absorb the lateral impact load. All existing columns that are not designed for lateral impact forces shall be protected in accordance with *AASHTO LRFD Bridge Design Specifications*.

Bridge Barrier: All new bridge barrier railings shall have a 36” tall single-slope traffic railing meeting TL-4 test level. Existing bridge railings that do not meet NCHRP 350 or MASH TL-4 shall be replaced.

2.2 Segments of Independent Utility

For major corridor improvement programs or projects it is important to break down the overall proposed improvement program into manageable project increments or Segments of Independent Utility (SIU). Segments of Independent Utility, within a large corridor improvement, each provide beneficial use by interconnecting existing infrastructure, providing upgraded capacity and/or providing increased safety based on its own merits. In addition, segmenting the I-10 Corridor Improvements into reasonable potential independent projects (SIU's) allows for the development of more robust staging and construction packaging scenarios, programmatic scheduling and corridor financial planning.

Following are recommended Segments of Independent Utility for the I-10 Corridor Improvements delineated from west to east through the corridor (See Figure 2-1 at the end of this section for a layout of the SIU's):

I-10: LA 415 to LA 1 – SIU-01

(LA 415 to Base of Westside Approach of MRB)

This segment consists of three laning the at-grade roadways of I-10 in each direction from the LA 415 Interchange east to the beginning of the west approaches to the Mississippi River Bridge (MRB). Lane balance can be maintained by adding/dropping the third lane in each direction at the LA 415 east side ramps and the LA 1 west side ramps.

I-10: Mississippi River Bridge Westside Approach – SIU-02

(Base of Westside Approach of MRB to Main Cantilever Truss)

This segment consists of proposed shoulder widening improvements, acceleration/deceleration lane extensions at the LA 1 ramps, and the continuation of a third westbound lane past the LA 1 WB exit ramp. This segment provides some capacity

improvement by the addition of the third I-10 westbound lane and the improvement of the movements at the ramps. It also provides a reasonable safety improvement by adding outside shoulders to I-10 where practical.

I-10: Mississippi River Bridge Eastside Approach – SIU-03
(Main Cantilever Truss to I-10 EB/I-110 NB Diverge)

This segment consists of proposed shoulder widening improvements, deceleration lane improvements at the Highland/Nicholson exit ramp and an acceleration lane extension at the St. Ferdinand/St. Louis entrance ramp. This segment provides only limited capacity improvement with the extension of the acceleration/deceleration ramps. It also provides a reasonable safety improvement by adding outside shoulders to I-10 where practical.

Note: The work required for **SIU-02** and **SIU-03** is similar in nature and magnitude and it would be reasonable to consider combining these two sections into one major construction project.

I-10 Eastbound Ramp – SIU-04
(I-10 EB/I-110 NB Diverge to I-10 EB/I-110 SB Merge)

This segment consists of proposed shoulder widening improvements and increase of the superelevation to increase design speed. This segment provides very limited capacity improvement by widening shoulders and increasing operating speed. It also provides a reasonable safety improvement by adding full width shoulders where practical.

I-10: Washington/Dalrymple Interchange Area – SIU-05
(I-10/I-110 Interchange to Dalrymple)

This segment consists of the four laning of I-10 in each direction from the I-10/I-110 Interchange to Dalrymple Drive. Also included are interchange modifications with the relocation of the Washington Street and Dalrymple Drive Eastbound Exit to a consolidated exit prior to the I-10/I-110 Eastbound merge. The westbound exit to Dalrymple Drive will be incorporated with a weaving set of ramps to provide for traffic to continue to Washington Street and Louise Street. In addition, an at-grade turnaround will be incorporated prior to Washington Street with the westbound entrance provide an eastbound entrance to I-10 for traffic from Dalrymple.

This segment provides limited mainline independent utility by providing a fourth lane in each direction for approximately 4,500 feet. The at-grade/interchange improvements will provide enhanced access through the Louise Street/Washington Street/Dalrymple Drive area by eliminating the lane drop at the Washington Street Eastbound Exit and by providing I-10 Eastbound access from the Dalrymple/LSU area.

I-10: City Park Lake Bridge and Roadways – SIU-06
(Dalrymple to Elissalde)

This segment consists of the four laning of I-10 in each direction from Dalrymple Drive to the beginning of the Perkins/KCSRR/Acadian Overpass Bridge. The major components are the improvements to the City Park Lake Bridge and the at-grade roadways to the east for approximately 2,000 feet.

This segment provides additional mainline independent utility by providing a fourth lane in each direction for approximately 2,900 feet. This segment in conjunction with **SIU-5 Washington/Dalrymple Interchange Area** will provide four lanes in each direction for approximately 7,400 feet.

I-10: Perkins Road/KCSRR/Acadian Thruway Overpass Bridge – SIU-07
(Elissalde to Acadian Thruway)

This segment consists of four laning the I-10 bridge in each direction from just east of Elissalde Street to the east side of Acadian Thruway. The Perkins Road Westbound Entrance Ramp and Eastbound Exit Ramp will be removed. The Acadian Thruway Interchange will be improved to address traffic demand.

This segment provides additional mainline independent utility by providing a fourth lane in each direction for approximately 3,500 feet. This segment in conjunction with **SIU-5 Washington/Dalrymple Interchange Area** and **SIU-6 City Park Lake Bridge and Roadways** will provide four lanes in each direction for approximately 10,900 feet. This segment also provides enhanced safety and at grade capacity improvements with the elimination of the Perkins Road Partial Interchange and improvements to the Acadian Thruway Interchange.

- *Acadian Thruway Interchange At-Grade Improvements – SIU-07(A)*
The at-grade improvements for the interchange may be considered a separate project or combined in **SIU-07**. These improvements must be completed to accommodate the additional traffic from the closure of the Perkins Road Partial Interchange
- *Perkins Road Area At-Grade Improvements – SIU-07(B)*
Potential Enhancements Project – may be considered a separate project or combined in **SIU-07**.

I-10: Acadian Thruway to College Drive– SIU-08

This segment consists of four laning the I-10 in each direction from just east of Acadian Thruway to just east of College Drive. Minor adjustments to the ramps on the east side of the Acadian Thruway Interchange and the west side of the College Drive Interchange are included in this segment. In addition, the Nairn Drive Overpass will be replaced in this segment.

This segment provides additional mainline independent utility by providing a fourth lane in each direction for approximately 3,400 feet. This segment in conjunction with **SIU-05 Washington/Dalrymple Interchange Area**, **SIU-06 City Park Lake Bridge and Roadways** and **SIU-07 Perkins Road/KCSRR/Acadian Thruway Overpass Bridge** will provide four lanes in each direction through the corridor from the I-10/I-110 Interchange to the I-10/I-12 Split.

- *Nairn Drive Overpass over I-10 - SIU-08(A)*: This new bridge can be separated out of **SIU-08** as a standalone project. This bridge must be replaced/extended prior to or in conjunction with the completion of **SIU-08**.

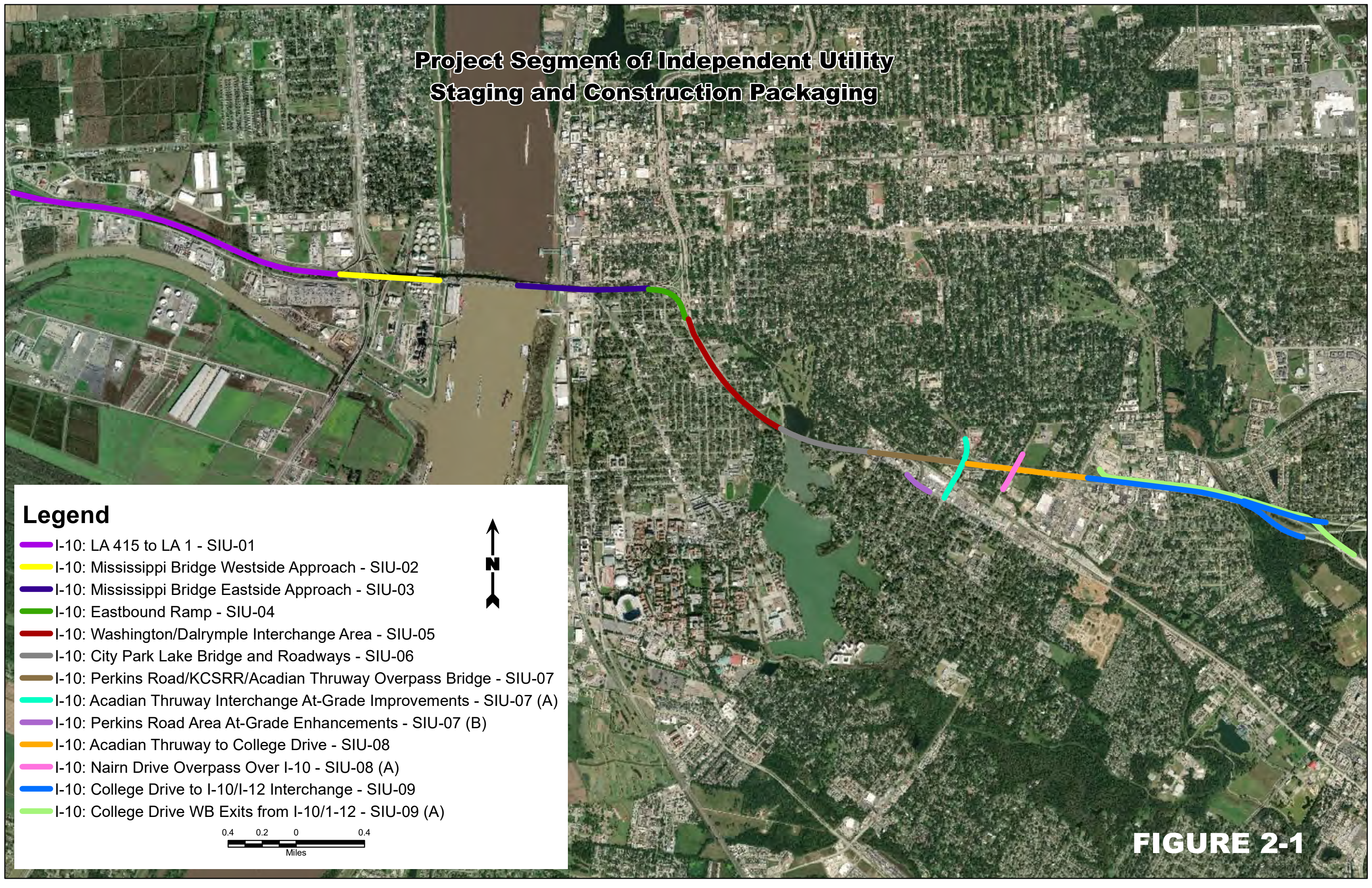
I-10: College Drive to I-10/I-12 Interchange– SIU-09

This segment consists of five laning I-10 Eastbound to the I-10/I-12 Split. It also includes providing dedicated westbound exit ramps from I-10 and I-12 to a service road to access College Drive.

This segment provides independent utility by providing eastbound lane balance at the I-10/I-12 split.

- *College Drive Westbound Exits from I-10/I-12 - SIU-09(A)*: The improvements to provide dedicated westbound exit ramps from I-10 and I-12 to a service road to access College Drive can be separated out of **SIU-09** as a standalone project. As stated above, this improvement provides a safety/capacity improvement for the westbound College Drive exit by eliminating the multilane weave required from I-10 westbound to the existing College Drive exit.

Project Segment of Independent Utility Staging and Construction Packaging



Legend

- I-10: LA 415 to LA 1 - SIU-01
- I-10: Mississippi Bridge Westside Approach - SIU-02
- I-10: Mississippi Bridge Eastside Approach - SIU-03
- I-10: Eastbound Ramp - SIU-04
- I-10: Washington/Dalrymple Interchange Area - SIU-05
- I-10: City Park Lake Bridge and Roadways - SIU-06
- I-10: Perkins Road/KCSRR/Acadian Thruway Overpass Bridge - SIU-07
- I-10: Acadian Thruway Interchange At-Grade Improvements - SIU-07 (A)
- I-10: Perkins Road Area At-Grade Enhancements - SIU-07 (B)
- I-10: Acadian Thruway to College Drive - SIU-08
- I-10: Nairn Drive Overpass Over I-10 - SIU-08 (A)
- I-10: College Drive to I-10/I-12 Interchange - SIU-09
- I-10: College Drive WB Exits from I-10/I-12 - SIU-09 (A)

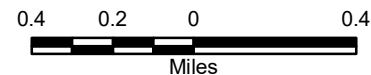


FIGURE 2-1

2.3 Design Waivers and Exceptions

A substantial portion of The I-10 Corridor Improvements Project involves complex and congested transportation facilities in close proximity to intensely urbanized areas. The design guidelines and criteria described in Section 2.1 above set the framework for which all of the proposed alternative improvements were developed. However, because of the complexity of the facility and the proximity to established residential and commercial areas there are areas or components of the proposed improvements that could not be reasonably designed to meet some of the appropriate design values described in the Design Reports for that type of facility. Therefore several potential design waivers and design exceptions have been identified based on the proposed line and grade design.

There are various reasons that these design waivers and exceptions are necessary. These include:

- Substantial adverse impact to the surrounding neighborhoods
- Substantial increase in project cost for some component of the project
- Difficulty maintaining traffic flow during the construction or reconstruction of that component of the project

A design waiver must be granted by the LA DOTD Supervising Engineer for any design value utilized which is designated as “acceptable” when a “preferred” value for that particular element is also provided. No design waiver is needed for elements which are designated as “acceptable” and where a “preferred” value is not provided. A design exception must be granted by the LA DOTD Chief Engineer for any design value chosen which does not meet the “acceptable” value for the specific criteria.

The designated design waivers and exceptions described below will not create an unsafe condition or compromise the capacity of the upgraded facility.

Potential design waivers and design exceptions for the corridor delineated by Segment of Independent Utility (SIU) and roadway classification include:

- *I-10: LA 415 to LA 1 – SIU-01*
 - Rural Freeway
 - No design waivers or exceptions anticipated in SIU-01
- *I-10: Mississippi Bridge Westside Approach – SIU-02 & I-10: Mississippi Bridge Eastside Approach – SIU-03*
 - Urban Freeway
 - The existing cross slopes of the mainline bridge and approaches are 1.5%. The minimum guideline is 2.5%. Widening of the mainline bridge approaches can be accomplished with a break in cross slope to 2.5%. However, a design exception will be required for the existing portions to remain at 1.5% and if the widening is accomplished with a 1.5% cross slope.

- The maximum existing vertical grade is 3.8%. The guideline calls for a maximum vertical grade of 3.0%. This will require a design exception.
- Existing inside shoulders are 2' in width. The guideline calls for inside shoulders of 12' in width. No work is proposed for the main cantilever truss and therefore full width inside shoulders cannot be developed on the approaches. This will require a design exception.
- Ramps – Diagonal
 - Ramps at LA 1 Interchange, Exit Ramp at Nicholson Drive and Entrance Ramp at St. Ferdinand: Where ramps are being widened and/or tie into existing, the cross slopes/superelevation values and shoulder width values may require design exceptions.
 - EB Entrance Ramp – LA 1: The horizontal curve proposed at the beginning of the ramp has a radius of 430'. This value exceeds the minimum guideline of 587'. This will require a design exception.
 - WB Entrance Ramp – St. Ferdinand: The horizontal curve proposed (widen existing) along a majority of the ramp has a radius of 327'. This value exceeds the minimum guideline of 587'. This will require a design exception.
- *I-10 Eastbound Ramp – SIU-04*
 - Urban Freeway
 - The existing cross slopes and superelevation rates do not meet the minimum guidelines. Design exceptions will be required where the structure is proposed to be widened at the existing cross slopes/superelevation rates.
 - The horizontal curve proposed along a majority of the segment has a radius of 832'. This value exceeds the minimum guideline of 1200'. This will require a design exception. Also the minimum stopping sight distance for a 60 mph design speed is not provided. The horizontal curve and shoulder offset will comply with a design speed of 50 mph.
- *I-10: Washington/Dalrymple Interchange Area – SIU-05*
 - Urban Freeway
 - The existing cross slopes and superelevation rates do not meet the minimum guidelines. Design exceptions will be required where the structure is proposed to be widened at the existing cross slopes/superelevation rates.
 - The required minimum vertical clearance of 16.5' cannot be feasibly provided at Terrace Street (14.6' provided) and Louise Street (14.7' provided). These will require design exceptions.
 - 10' inside shoulders may be required on some portions of the elevated viaduct to address constructability constraints. This does

- not meet the preferred minimum width of 12'. However it does meet the acceptable minimum width of 10'. This will require a design waiver.
- Ramps – Diagonal
 - WB Entrance Ramp – Washington Street: Minimum required full superelevation rates of 6.7%+/- for the reverse curves at the tie in to I-10 cannot be achieved. The superelevation rates provided are 5.0%+/- . This will require a design exception.
 - Urban Arterial – Washington St., etc.
 - The proposed outside shoulder width with curb is 1' (2' curb and gutter section). This meets the acceptable guideline but does not meet the preferred guideline of 4'. A design waiver will be required for this.
 - Some components of the complete streets accommodations cannot be feasibly met. This will require a design exception.
 - *I-10: City Park Lake Bridge and Roadways – SIU-06*
 - Urban Freeway
 - The required minimum vertical clearance of 16.5' cannot be feasibly provided at East Lakeshore Drive (13.4' provided). This will require a design exception.
 - 10' inside shoulders may be required on the City Park Lake Bridge to address constructability constraints. This will require a design waiver.
 - *I-10: Perkins Road/KCSRR/Acadian Thruway Overpass Bridge – SIU-07*
 - Urban Freeway
 - Required minimum vertical clearance of 16.5' cannot be feasibly provided at Christian Street (13.0' provided). This will require a design exception.
 - 10' inside shoulders may be required on some portions of the elevated viaduct to address constructability constraints. This will require a design waiver.
 - *Acadian Thruway Interchange At-Grade Improvements – SIU-07(A)*
 - Urban Arterial
 - The proposed outside shoulder width with curb is 1' (2' curb and gutter section). This meets the acceptable guideline but does not meet the preferred guideline of 4'. A design waiver will be required for this.
 - The required minimum vertical clearance of 16.5' cannot be feasibly provided under the Kansas City Southern Railroad Overpass (15.5' provided). This will require a design exception.

- The maximum existing vertical grade under the KCSRR is 5.8%. This is greater than the maximum allowed in the guidelines of 5.0%. This will require a design exception.
- Some components of the complete streets accommodations cannot be feasibly met. This will require a design exception.
- *I-10: Acadian Thruway to College Drive*– **SIU-08**
 - Urban Freeway
 - 10' inside shoulders may be required on some portions of the College Drive overpass to address constructability constraints. This will require a design waiver.
 - Ramps – Loop
 - WB Entrance Ramp @ College Drive: The horizontal curve proposed (match existing) at the tie in to I-10 has a radius of 160'. This value exceeds the minimum guideline of 212'. This will require a design exception.
- *Nairn Drive Overpass over I-10* - **SIU-08(A)**
 - Urban Arterial
 - The proposed grade for the south approach to the overpass is 6.0%. This exceeds the minimum guideline of 5.0%. This will require a design exception.
- *I-10: College Drive to I-10/I-12 Interchange*– **SIU-09** - Urban Freeway &
- *College Drive Westbound Exits from I-10/I-12* – **SIU-09A** – Ramps Diagonal
 - No design exceptions or waivers are anticipated for these segments.

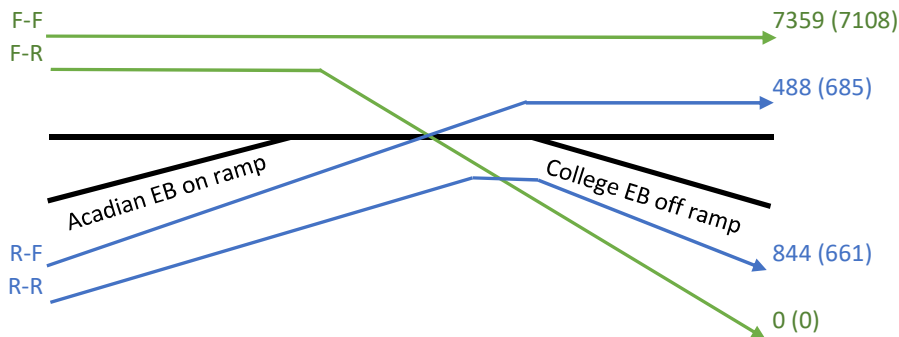
I-10 EB Build Weave Sensitivity Volumes

I-10 eastbound between Acadian and College is a weave. As there was insufficient data to determine weave maneuvers (freeway to freeway, freeway to ramp, ramp to freeway, and ramp to ramp), a volume sensitivity weave analysis was conducted. The following three (3) volume scenarios were considered:

- Case 1: 100% of vehicles exiting at College originate from Acadian
- Case 2: 100% of vehicles exiting at College originate from I-10 eastbound
- Case 3: 50% of vehicles exiting at College originate from Acadian and I-10 eastbound

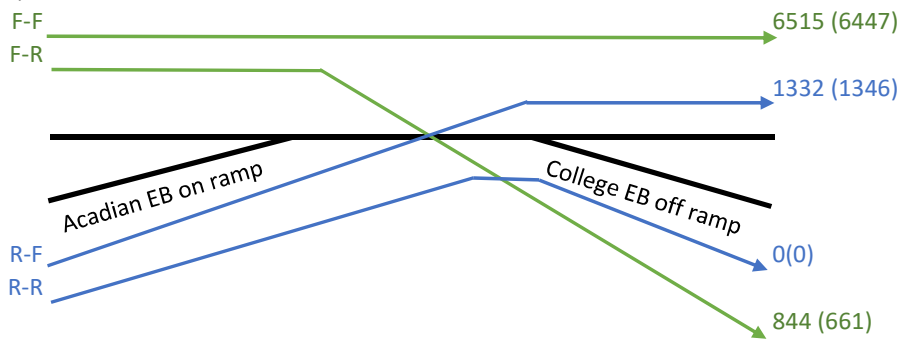
Build: Case #1: All exiting volume from ramp

AM (PM)



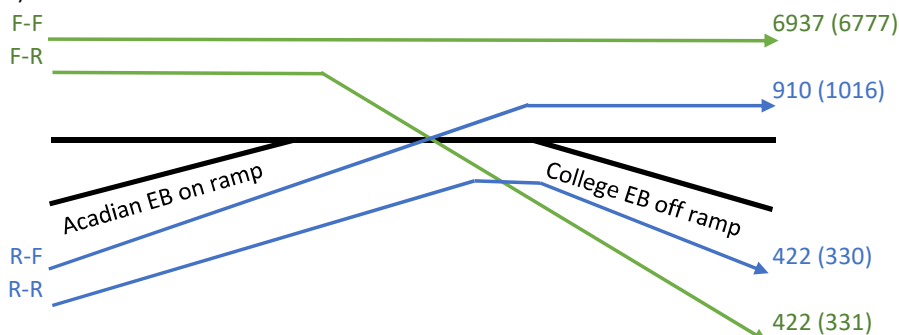
Build: Case #2: All exiting volume from freeway (*Discussed in Chapter 3)

AM (PM)



Build: Case #3: 50% exiting volume from ramp, 50% from freeway

AM (PM)



I-10 WB Build Weave Sensitivity Volumes

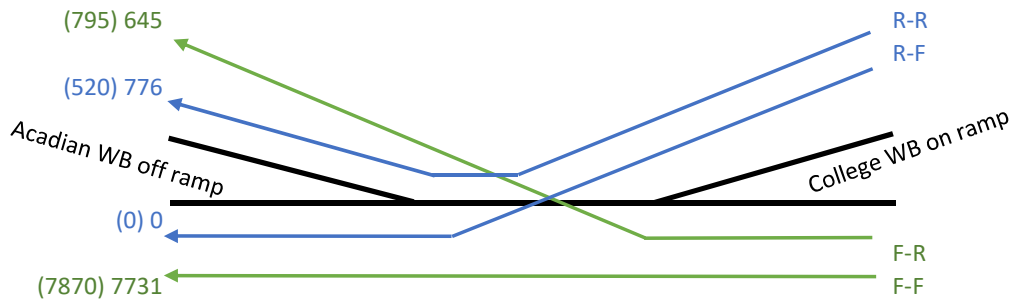
The Build condition creates a weave on I-10 westbound between College and Acadian. A weave sensitivity analysis was conducted since there was insufficient data to determine weave maneuvers (freeway to freeway, freeway to ramp, ramp to freeway, and ramp to ramp). The following three (3) volume scenarios were considered:

Case 1: 100% of vehicles entering from College exit at Acadian

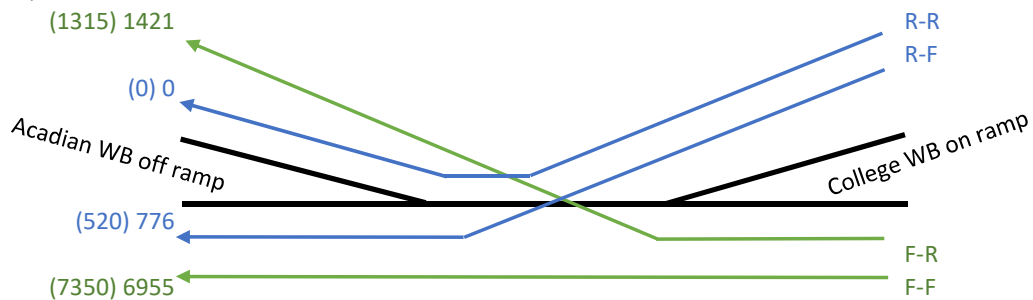
Case 2: 100% of vehicles exiting at Acadian originate from I-10 westbound

Case 3: 50% of entering from College exit at Acadian

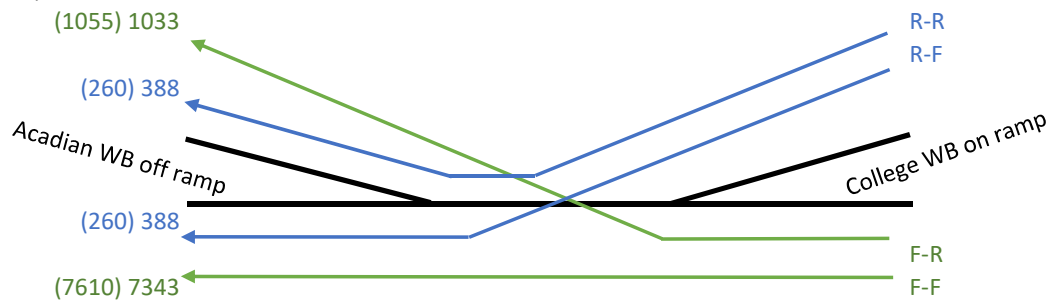
Build: Case #1: All ramp volume exits
AM (PM)



Build: Case #2: All exiting volume from freeway (*Discussed in Chapter 3)
AM (PM)



Build: Case #3: 50% ramp volume exits, 50% ramp volume goes to freeway
AM (PM)



HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/19/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB west of Acadian		

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	54.3
Right-Side Lateral Clearance, ft	0		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7843	Heavy Vehicle Adjustment Factor (fhv)	0.885
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	2308
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2243
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2243
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.03
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (fRLC)	1.2	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	4.5	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFSadj), mi/h	54.3		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	7/24/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM - Throughput Identification
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB west of Acadian		

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	54.3
Right-Side Lateral Clearance, ft	0		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7620	Heavy Vehicle Adjustment Factor (fhv)	0.885
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	2242
Total Trucks, %	13.00	Capacity (c), pc/h/ln	2243
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2243
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.00
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	49.9
Right-Side Lateral Clearance Adj. (fRLC)	1.2	Density (D), pc/mi/ln	44.9
Total Ramp Density Adjustment	4.5	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	54.3		

HCS7 Freeway Diverge Report

Project Information

Analyst	SJT	Date	6/19/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA- I-10 EB Diverge at Acadian Thruway		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	4	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Deceleration Length (L _D), ft	1500	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V _i), veh/h	7843	484
Peak Hour Factor (PHF)	0.96	0.79
Total Trucks, %	13.00	0.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	1.000
Flow Rate (v _i), pc/h	9231	613
Capacity (c), pc/h	9200	1900
Volume-to-Capacity Ratio (v/c)	1.00	0.32

Speed and Density

Upstream Equilibrium Distance (L _{EQ}), ft	-	Density in Ramp Influence Area (D _R), pc/mi/ln	33.7
Distance to Upstream Ramp (L _{UP}), ft	-	Speed Index (D _S)	-
Downstream Equilibrium Distance (L _{EQ}), ft	-	Flow Outer Lanes (v _{OA}), pc/h/ln	2431
Distance to Downstream Ramp (L _{DOWN}), ft	1930	Off-Ramp Influence Area Speed (S _R), mi/h	50.1
Prop. Freeway Vehicles in Lane 1 and 2 (P _{FD})	0.436	Outer Lanes Freeway Speed (S _O), mi/h	60.2
Flow in Lanes 1 and 2 (v ₁₂), pc/h	4370	Ramp Junction Speed (S), mi/h	-
Flow Entering Ramp-Infl. Area (v _{R12}), pc/h	-	Average Density (D), pc/mi/ln	-
Level of Service (LOS)	F		

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #1		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	7359	488	844	0
Peak Hour Factor (PHF)	0.96	0.93	0.89	0.96
Total Trucks, %	13.00	0.60	2.00	13.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	0.994	0.980	0.885
Flow Rate (v _i), pc/h	8662	528	968	0
Weaving Flow Rate (v _w), pc/h	528	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	9630	Density-Based Capacity (c _{DWL}), pc/h/ln		2128
Total Flow Rate (v), pc/h	10158	Demand Flow-Based Capacity (c _{DW}), pc/h		46154
Volume Ratio (VR)	0.052	Weaving Segment Capacity (c _w), veh/h		9416
Minimum Lane Change Rate (LC _{MIN}), lc/h	528	Adjusted Weaving Area Capacity, pc/h		10466
Maximum Weaving Length (L _{MAX}), ft	3080	Volume-to-Capacity Ratio (v/c)		0.97

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #2		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	6515	1332	0	844
Peak Hour Factor (PHF)	0.96	0.93	0.89	0.96
Total Trucks, %	13.00	0.60	2.00	13.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	0.994	0.980	0.885
Flow Rate (v _i), pc/h	7668	1441	0	993
Weaving Flow Rate (v _w), pc/h	2434	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	7668	Density-Based Capacity (c _{IDL}), pc/h/ln		1984
Total Flow Rate (v), pc/h	10102	Demand Flow-Based Capacity (c _W), pc/h		9959
Volume Ratio (VR)	0.241	Weaving Segment Capacity (c _w), veh/h		8779
Minimum Lane Change Rate (LC _{MIN}), lc/h	2434	Adjusted Weaving Area Capacity, pc/h		9748
Maximum Weaving Length (L _{MAX}), ft	4960	Volume-to-Capacity Ratio (v/c)		1.04

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #3		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	6937	910	422	422
Peak Hour Factor (PHF)	0.96	0.93	0.89	0.96
Total Trucks, %	13.00	0.60	2.00	13.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.885	0.994	0.980	0.885
Flow Rate (v _i), pc/h	8165	984	484	497
Weaving Flow Rate (v _w), pc/h	1481	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	8649	Density-Based Capacity (c _{DWL}), pc/h/ln		2058
Total Flow Rate (v), pc/h	10130	Demand Flow-Based Capacity (c _{DW}), pc/h		16438
Volume Ratio (VR)	0.146	Weaving Segment Capacity (c _w), veh/h		9107
Minimum Lane Change Rate (LC _{MIN}), lc/h	1481	Adjusted Weaving Area Capacity, pc/h		10117
Maximum Weaving Length (L _{MAX}), ft	3992	Volume-to-Capacity Ratio (v/c)		1.00

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/19/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB west of Acadian		

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.50
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	54.3
Right-Side Lateral Clearance, ft	0		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7728	Heavy Vehicle Adjustment Factor (fhv)	0.901
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	2234
Total Trucks, %	11.00	Capacity (c), pc/h/ln	2243
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2243
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.00
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Right-Side Lateral Clearance Adj. (fRLC)	1.2	Density (D), pc/mi/ln	44.7
Total Ramp Density Adjustment	4.5	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	54.3		

HCS7 Freeway Diverge Report

Project Information

Analyst	SJT	Date	6/19/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA- I-10 EB Diverge at Acadian Thruway		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	4	1
Free-Flow Speed (FFS), mi/h	60.0	30.0
Segment Length (L) / Deceleration Length (L _D), ft	1500	900
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V _i), veh/h	7728	620
Peak Hour Factor (PHF)	0.96	0.86
Total Trucks, %	11.00	2.60
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.975
Flow Rate (v _i), pc/h	8935	739
Capacity (c), pc/h	9200	1900
Volume-to-Capacity Ratio (v/c)	0.97	0.39

Speed and Density

Upstream Equilibrium Distance (L _{EQ}), ft	-	Density in Ramp Influence Area (D _R), pc/mi/ln	33.2
Distance to Upstream Ramp (L _{UP}), ft	-	Speed Index (D _S)	0.560
Downstream Equilibrium Distance (L _{EQ}), ft	-	Flow Outer Lanes (v _{OA}), pc/h/ln	2312
Distance to Downstream Ramp (L _{DOWN}), ft	1930	Off-Ramp Influence Area Speed (S _R), mi/h	49.9
Prop. Freeway Vehicles in Lane 1 and 2 (P _{FD})	0.436	Outer Lanes Freeway Speed (S _O), mi/h	60.7
Flow in Lanes 1 and 2 (v ₁₂), pc/h	4312	Ramp Junction Speed (S), mi/h	55.0
Flow Entering Ramp-Infl. Area (v _{R12}), pc/h	-	Average Density (D), pc/mi/ln	40.6
Level of Service (LOS)	D		

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #1		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	7108	685	661	0
Peak Hour Factor (PHF)	0.96	0.94	0.77	0.96
Total Trucks, %	11.00	0.50	2.00	11.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.995	0.980	0.901
Flow Rate (v _i), pc/h	8218	732	876	0
Weaving Flow Rate (v _w), pc/h	732	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	9094	Density-Based Capacity (c _{DWL}), pc/h/ln		2112
Total Flow Rate (v), pc/h	9826	Demand Flow-Based Capacity (c _{DW}), pc/h		32432
Volume Ratio (VR)	0.074	Weaving Segment Capacity (c _w), veh/h		9515
Minimum Lane Change Rate (LC _{MIN}), lc/h	732	Adjusted Weaving Area Capacity, pc/h		10398
Maximum Weaving Length (L _{MAX}), ft	3289	Volume-to-Capacity Ratio (v/c)		0.94

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #2		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	6447	1346	0	661
Peak Hour Factor (PHF)	0.96	0.94	0.77	0.96
Total Trucks, %	11.00	0.50	2.00	11.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.995	0.980	0.901
Flow Rate (v _i), pc/h	7454	1439	0	764
Weaving Flow Rate (v _w), pc/h	2203	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	7454	Density-Based Capacity (c _{IDL}), pc/h/ln		1994
Total Flow Rate (v), pc/h	9657	Demand Flow-Based Capacity (c _W), pc/h		10526
Volume Ratio (VR)	0.228	Weaving Segment Capacity (c _W), veh/h		8983
Minimum Lane Change Rate (LC _{MIN}), lc/h	2203	Adjusted Weaving Area Capacity, pc/h		9818
Maximum Weaving Length (L _{MAX}), ft	4824	Volume-to-Capacity Ratio (v/c)		0.98

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 EB Weave b/w Acadian and College - Case #3		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	828	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	0.33	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	6777	1016	330	331
Peak Hour Factor (PHF)	0.96	0.94	0.77	0.96
Total Trucks, %	11.00	0.50	2.00	11.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.901	0.995	0.980	0.901
Flow Rate (v _i), pc/h	7835	1086	437	383
Weaving Flow Rate (v _w), pc/h	1469	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	8272	Density-Based Capacity (c _{DWL}), pc/h/ln		2054
Total Flow Rate (v), pc/h	9741	Demand Flow-Based Capacity (c _{DW}), pc/h		15894
Volume Ratio (VR)	0.151	Weaving Segment Capacity (c _w), veh/h		9253
Minimum Lane Change Rate (LC _{MIN}), lc/h	1469	Adjusted Weaving Area Capacity, pc/h		10112
Maximum Weaving Length (L _{MAX}), ft	4041	Volume-to-Capacity Ratio (v/c)		0.96

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB between College and Acadian - Case #1		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	2300	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	7731	0	776	645
Peak Hour Factor (PHF)	0.94	0.81	0.81	0.94
Total Trucks, %	6.00	1.20	1.20	6.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.943	0.988	0.988	0.943
Flow Rate (v _i), pc/h	8722	0	970	728
Weaving Flow Rate (v _w), pc/h	728	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	9692	Density-Based Capacity (c _{IDL}), pc/h/ln		2227
Total Flow Rate (v), pc/h	10420	Demand Flow-Based Capacity (c _W), pc/h		34286
Volume Ratio (VR)	0.070	Weaving Segment Capacity (c _w), veh/h		10500
Minimum Lane Change Rate (LC _{MIN}), lc/h	728	Adjusted Weaving Area Capacity, pc/h		11087
Maximum Weaving Length (L _{MAX}), ft	3251	Volume-to-Capacity Ratio (v/c)		0.94

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB between College and Acadian - Case #2		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	2300	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	6955	776	0	1421
Peak Hour Factor (PHF)	0.94	0.81	0.81	0.94
Total Trucks, %	6.00	1.20	1.20	6.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.943	0.988	0.988	0.943
Flow Rate (v _i), pc/h	7846	970	0	1603
Weaving Flow Rate (v _w), pc/h	2573	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	7846	Density-Based Capacity (c _{IDL}), pc/h/ln		2092
Total Flow Rate (v), pc/h	10419	Demand Flow-Based Capacity (c _W), pc/h		9717
Volume Ratio (VR)	0.247	Weaving Segment Capacity (c _w), veh/h		9163
Minimum Lane Change Rate (LC _{MIN}), lc/h	728	Adjusted Weaving Area Capacity, pc/h		9674
Maximum Weaving Length (L _{MAX}), ft	5022	Volume-to-Capacity Ratio (v/c)		1.08

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB between College and Acadian - Case #3		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	2300	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	7343	388	388	1033
Peak Hour Factor (PHF)	0.94	0.81	0.81	0.94
Total Trucks, %	6.00	1.20	1.20	6.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.943	0.988	0.988	0.943
Flow Rate (v _i), pc/h	8284	485	485	1165
Weaving Flow Rate (v _w), pc/h	1650	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	8769	Density-Based Capacity (c _{DWL}), pc/h/ln		2161
Total Flow Rate (v), pc/h	10419	Demand Flow-Based Capacity (c _{DW}), pc/h		15190
Volume Ratio (VR)	0.158	Weaving Segment Capacity (c _w), veh/h		10189
Minimum Lane Change Rate (LC _{MIN}), lc/h	1650	Adjusted Weaving Area Capacity, pc/h		10757
Maximum Weaving Length (L _{MAX}), ft	4111	Volume-to-Capacity Ratio (v/c)		0.97

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at Acadian		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	4	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	1050
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	7731	431
Peak Hour Factor (PHF)	0.94	0.92
Total Trucks, %	6.00	3.10
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.943	0.970
Flow Rate (v_i), pc/h	8722	483
Capacity (c), pc/h	9200	2000
Volume-to-Capacity Ratio (v/c)	1.00	0.24

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	29.7
Distance to Upstream Ramp (L_{UP}), ft	2400	Speed Index (M_s)	-
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	2617
Distance to Downstream Ramp (L_{DOWN}), ft	-	On-Ramp Influence Area Speed (S_R), mi/h	51.8
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.157	Outer Lanes Freeway Speed (S_o), mi/h	51.6
Flow in Lanes 1 and 2 (v_{12}), pc/h	3489	Ramp Junction Speed (S), mi/h	-
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	3972	Average Density (D), pc/mi/ln	-
Level of Service (LOS)	F		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB west of Acadian		

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	8162	Heavy Vehicle Adjustment Factor (fhv)	0.943
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	2302
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.02
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	-
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	-
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	F
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build AM - Throughput Identification
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB west of Acadian		

Geometric Data

Number of Lanes, ln	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

Demand Volume veh/h	7975	Heavy Vehicle Adjustment Factor (fhv)	0.943
Peak Hour Factor	0.94	Flow Rate (Vp), pc/h/ln	2249
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.00
Passenger Car Equivalent (ET)	2.000		

Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.0
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	45.0
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB between College and Acadian - Case #1		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	2300	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	7870	0	520	795
Peak Hour Factor (PHF)	0.99	0.88	0.88	0.99
Total Trucks, %	8.00	0.00	0.00	8.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.926	1.000	1.000	0.926
Flow Rate (v _i), pc/h	8585	0	591	867
Weaving Flow Rate (v _w), pc/h	867	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	9176	Density-Based Capacity (c _{IDL}), pc/h/ln		2216
Total Flow Rate (v), pc/h	10043	Demand Flow-Based Capacity (c _W), pc/h		27907
Volume Ratio (VR)	0.086	Weaving Segment Capacity (c _W), veh/h		10260
Minimum Lane Change Rate (LC _{MIN}), lc/h	867	Adjusted Weaving Area Capacity, pc/h		11028
Maximum Weaving Length (L _{MAX}), ft	3404	Volume-to-Capacity Ratio (v/c)		0.91

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB between College and Acadian - Case #2		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	2300	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	7350	520	0	1315
Peak Hour Factor (PHF)	0.99	0.88	0.88	0.99
Total Trucks, %	8.00	0.00	0.00	8.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.926	1.000	1.000	0.926
Flow Rate (v _i), pc/h	8018	591	0	1434
Weaving Flow Rate (v _w), pc/h	2025	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	8018	Density-Based Capacity (c _{IDL}), pc/h/ln		2127
Total Flow Rate (v), pc/h	10043	Demand Flow-Based Capacity (c _W), pc/h		11881
Volume Ratio (VR)	0.202	Weaving Segment Capacity (c _W), veh/h		9848
Minimum Lane Change Rate (LC _{MIN}), lc/h	2025	Adjusted Weaving Area Capacity, pc/h		10585
Maximum Weaving Length (L _{MAX}), ft	4557	Volume-to-Capacity Ratio (v/c)		0.95

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Weaving Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB between College and Acadian - Case #3		

Geometric Data

Number of Lanes (N), ln	5	Segment Type	Freeway
Short Length (L _s), ft	2300	Number of Maneuver Lanes (N _{WL}), ln	2
Weaving Configuration	One-Sided	Ramp-to-Freeway Lane Changes (LC _{RF}), lc	1
Terrain Type	Level	Freeway-to-Ramp Lane Changes (LC _{FR}), lc	1
Percent Grade, %	-	Ramp-to-Ramp Lane Changes (LC _{RR}), lc	0
Interchange Density (ID), int/mi	1.67	Cross Weaving Managed Lane	No

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

	FF	RF	RR	FR
Demand Volume (V _i), veh/h	7610	260	260	1055
Peak Hour Factor (PHF)	0.99	0.88	0.88	0.99
Total Trucks, %	8.00	0.00	0.00	8.00
Heavy Vehicle Adjustment Factor (f _{HV})	0.926	1.000	1.000	0.926
Flow Rate (v _i), pc/h	8301	295	295	1151
Weaving Flow Rate (v _w), pc/h	1446	Freeway Max Capacity (c _{IFL}), pc/h/ln		2300
Non-Weaving Flow Rate (v _{NW}), pc/h	8596	Density-Based Capacity (c _{IDL}), pc/h/ln		2172
Total Flow Rate (v), pc/h	10042	Demand Flow-Based Capacity (c _W), pc/h		16667
Volume Ratio (VR)	0.144	Weaving Segment Capacity (c _w), veh/h		10056
Minimum Lane Change Rate (LC _{MIN}), lc/h	1446	Adjusted Weaving Area Capacity, pc/h		10808
Maximum Weaving Length (L _{MAX}), ft	3972	Volume-to-Capacity Ratio (v/c)		0.93

Speed and Density

Non-Weaving Vehicle Index (I _{NW})	-	Average Weaving Speed (S _w), mi/h	-
Non-Weaving Lane Change Rate (LC _{NW}), lc/h	-	Average Non-Weaving Speed (S _{NW}), mi/h	-
Weaving Lane Change Rate (LC _w), lc/h	-	Average Speed (S), mi/h	-
Total Lane Change Rate (LC _{AI}), lc/h	-	Density (D), pc/mi/ln	-
Weaving Intensity Factor (W)	-	Level of Service (LOS)	F

HCS7 Freeway Merge Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB Merge at Acadian		

Geometric Data

	Freeway	Ramp
Number of Lanes (N)	4	1
Free-Flow Speed (FFS), mi/h	60.0	35.0
Segment Length (L) / Acceleration Length (LA), ft	1500	1050
Terrain Type	Level	Level
Percent Grade, %	-	-
Segment Type / Ramp Side	Freeway	Right

Adjustment Factors

Driver Population	All Familiar	All Familiar
Weather Type	Non-Severe Weather	Non-Severe Weather
Incident Type	No Incident	-
Final Speed Adjustment Factor (SAF)	1.000	1.000
Final Capacity Adjustment Factor (CAF)	1.000	1.000
Demand Adjustment Factor (DAF)	1.000	1.000

Demand and Capacity

Demand Volume (V_i), veh/h	7870	358
Peak Hour Factor (PHF)	0.99	0.86
Total Trucks, %	8.00	1.00
Single-Unit Trucks (SUT), %	-	-
Tractor-Trailers (TT), %	-	-
Heavy Vehicle Adjustment Factor (f_{HV})	0.926	0.990
Flow Rate (v_i), pc/h	8585	420
Capacity (c), pc/h	9200	2000
Volume-to-Capacity Ratio (v/c)	0.98	0.21

Speed and Density

Upstream Equilibrium Distance (L_{EQ}), ft	-	Density in Ramp Influence Area (D_R), pc/mi/ln	28.8
Distance to Upstream Ramp (L_{UP}), ft	2400	Speed Index (M_s)	0.432
Downstream Equilibrium Distance (L_{EQ}), ft	-	Flow Outer Lanes (v_{OA}), pc/h/ln	2576
Distance to Downstream Ramp (L_{DOWN}), ft	-	On-Ramp Influence Area Speed (S_R), mi/h	52.2
Prop. Freeway Vehicles in Lane 1 and 2 (P_{FM})	0.165	Outer Lanes Freeway Speed (S_o), mi/h	51.8
Flow in Lanes 1 and 2 (v_{12}), pc/h	3434	Ramp Junction Speed (S), mi/h	52.0
Flow Entering Ramp-Infl. Area (v_{R12}), pc/h	3854	Average Density (D), pc/mi/ln	43.3
Level of Service (LOS)	D		

HCS7 Basic Freeway Report

Project Information

Analyst	SJT	Date	6/20/2019
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	Build PM
Project Description	I-10 Corridor Improvement Stage 1 EA - I-10 WB west of Acadian		

Geometric Data

Number of Lanes, In	4	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	60.0	Total Ramp Density (TRD), ramps/mi	1.67
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	55.0
Right-Side Lateral Clearance, ft	10		

Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Weather Type	Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
Incident Type	No Incident	Demand Adjustment Factor (DAF)	1.000

Demand and Capacity

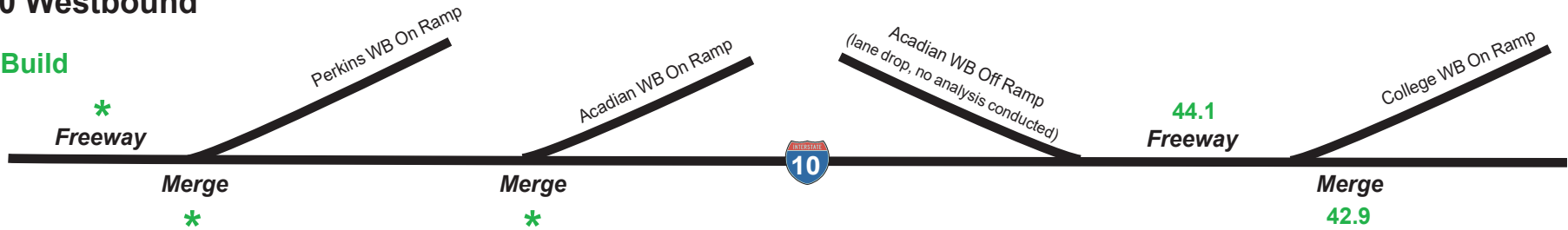
Demand Volume veh/h	8228	Heavy Vehicle Adjustment Factor (fhv)	0.926
Peak Hour Factor	0.99	Flow Rate (Vp), pc/h/ln	2244
Total Trucks, %	8.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.00
Passenger Car Equivalent (ET)	2.000		

Speed and Density

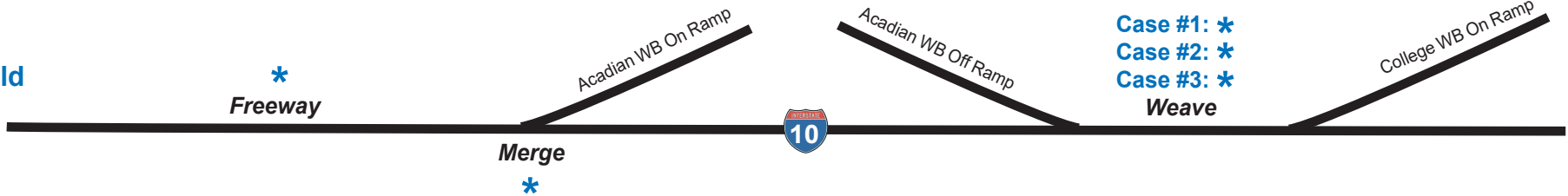
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	50.1
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	44.8
Total Ramp Density Adjustment	5.0	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	55.0		

I-10 Westbound

No Build

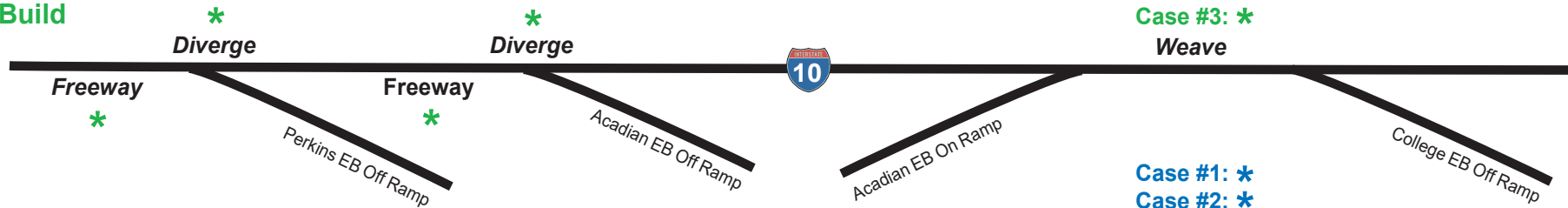


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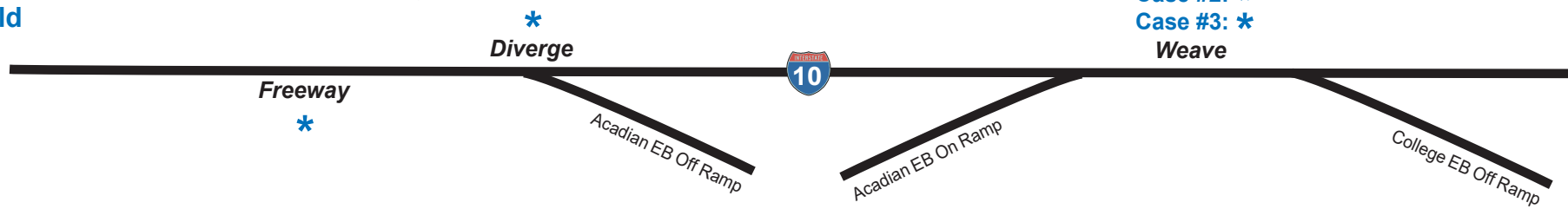


I-10 Eastbound

No Build



Build



LEGEND:

- X AM No Build Reported Density (pc/mi/ln)
- X AM Build Reported Density (pc/mi/ln)
- X Freeway Analysis Type
- * V/C ratio > 1; HCS software does not report density

I-10 AM Interstate Densities

**IMR Data Collection
Acadian/ Perkins IMR
East Baton Rouge Parish, LA**

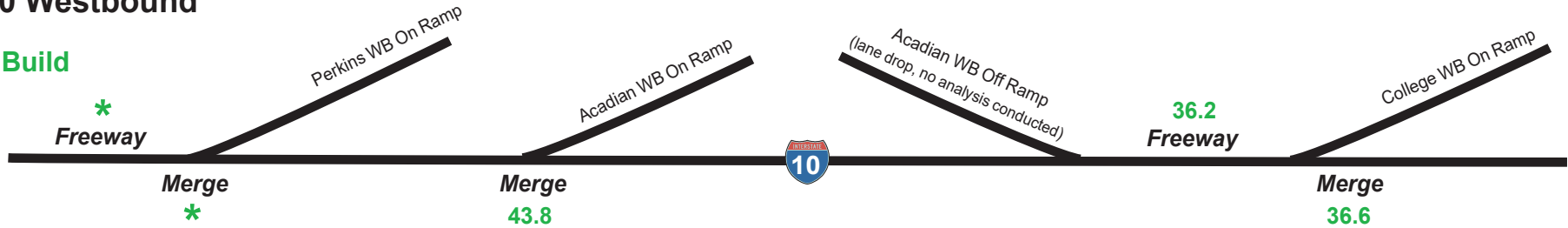
NOT TO SCALE
FOR PLANNING PURPOSES ONLY

URBAN SYSTEMS inc.

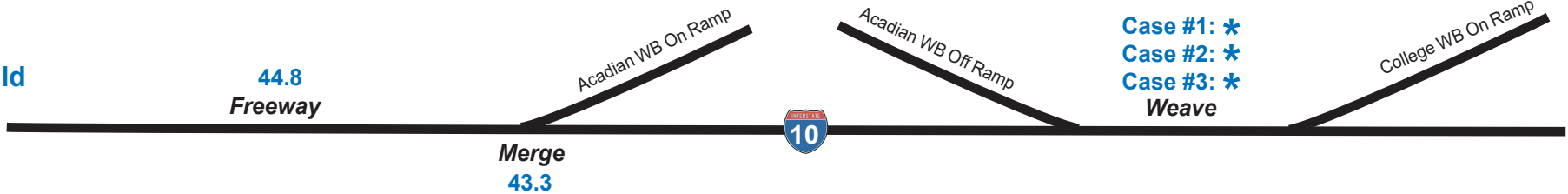


I-10 Westbound

No Build

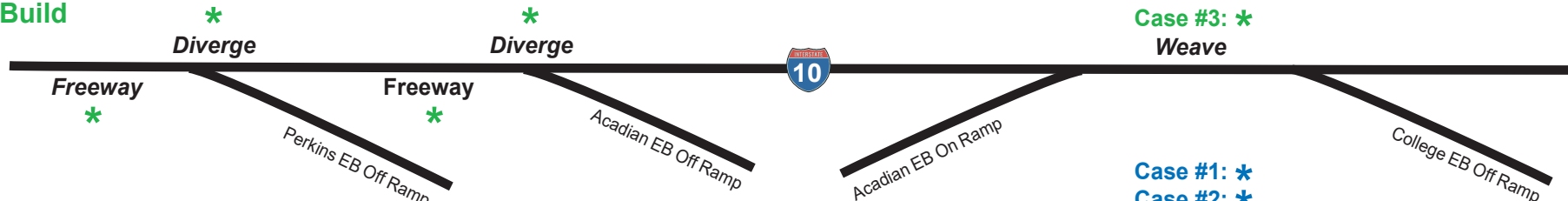


Build

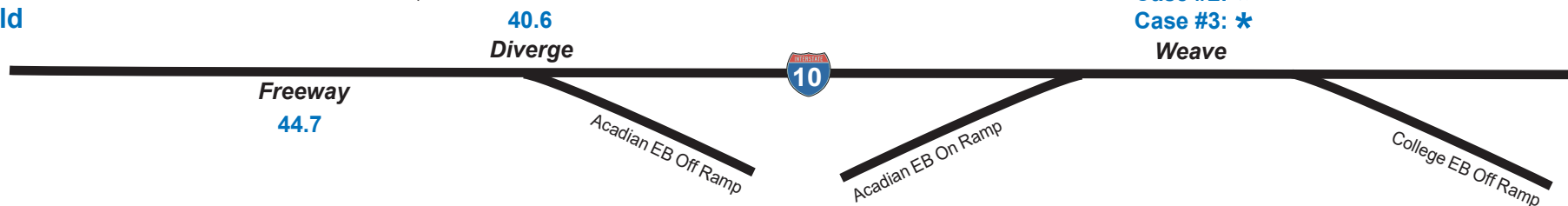


I-10 Eastbound

No Build



Build



LEGEND:

- X PM No Build Reported Density (pc/mi/ln)
- X PM Build Reported Density (pc/mi/ln)
- X Freeway Analysis Type
- * V/C ratio > 1; HCS software does not report density

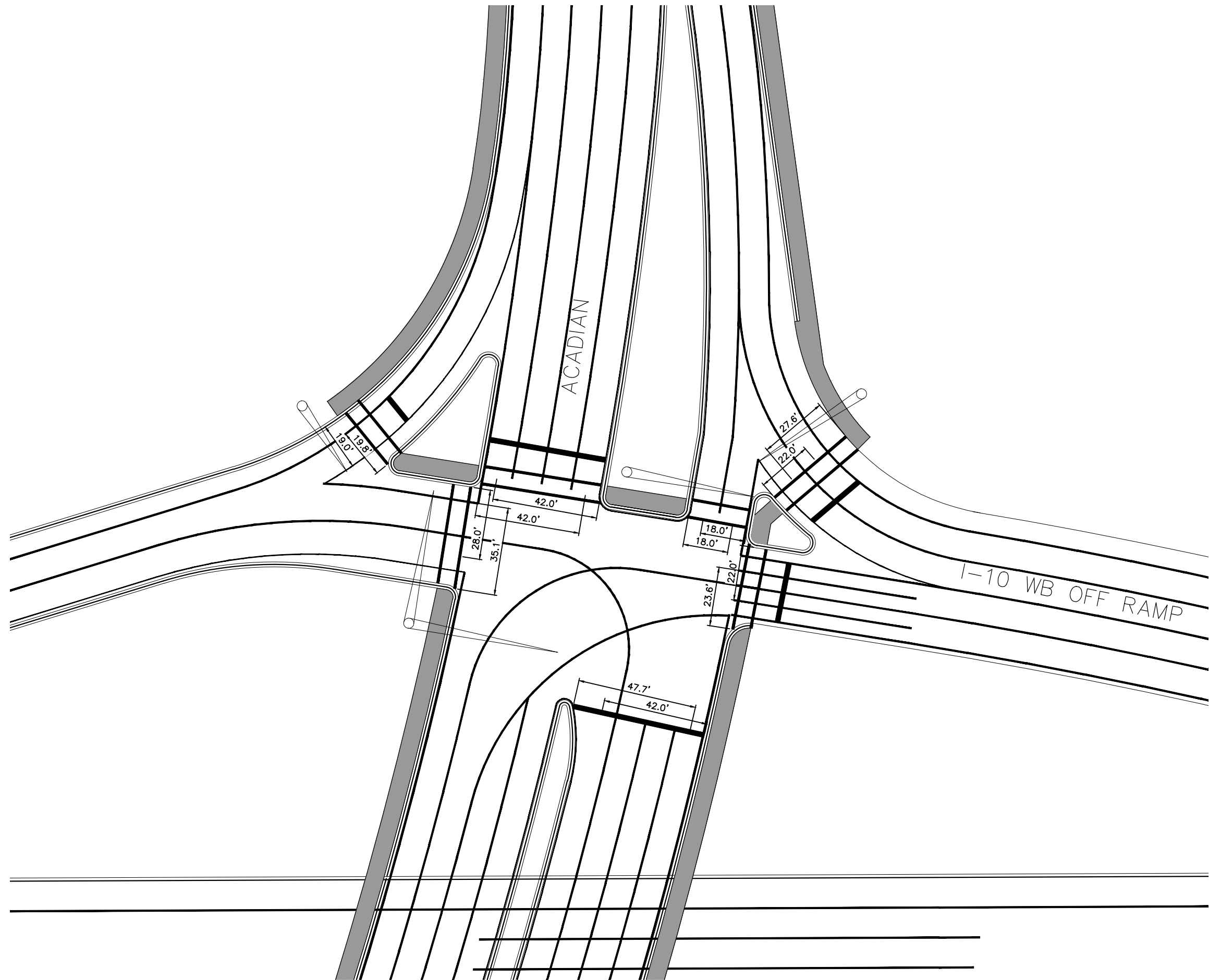
I-10 PM Interstate Densities

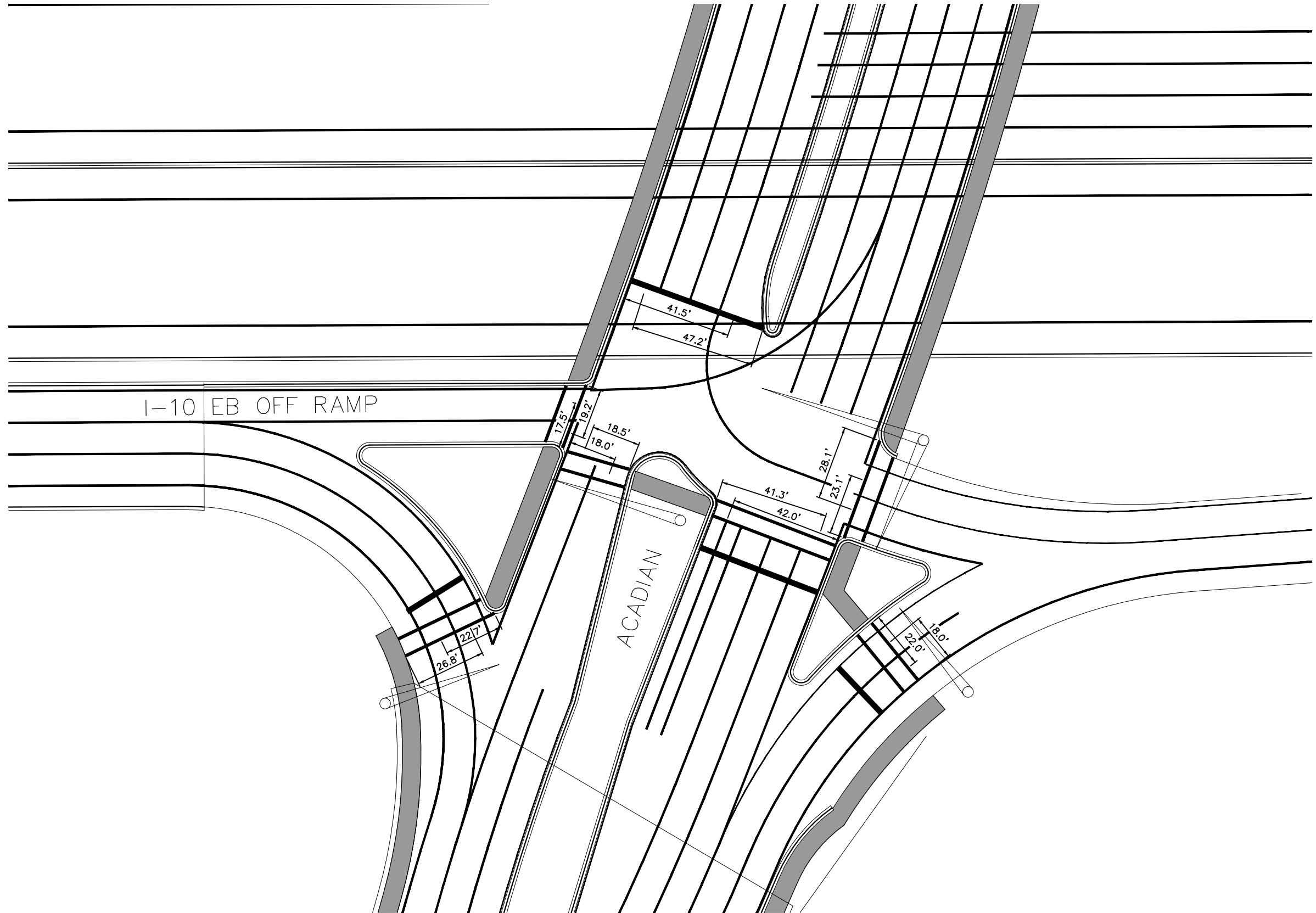
**IMR Data Collection
Acadian/ Perkins IMR
East Baton Rouge Parish, LA**

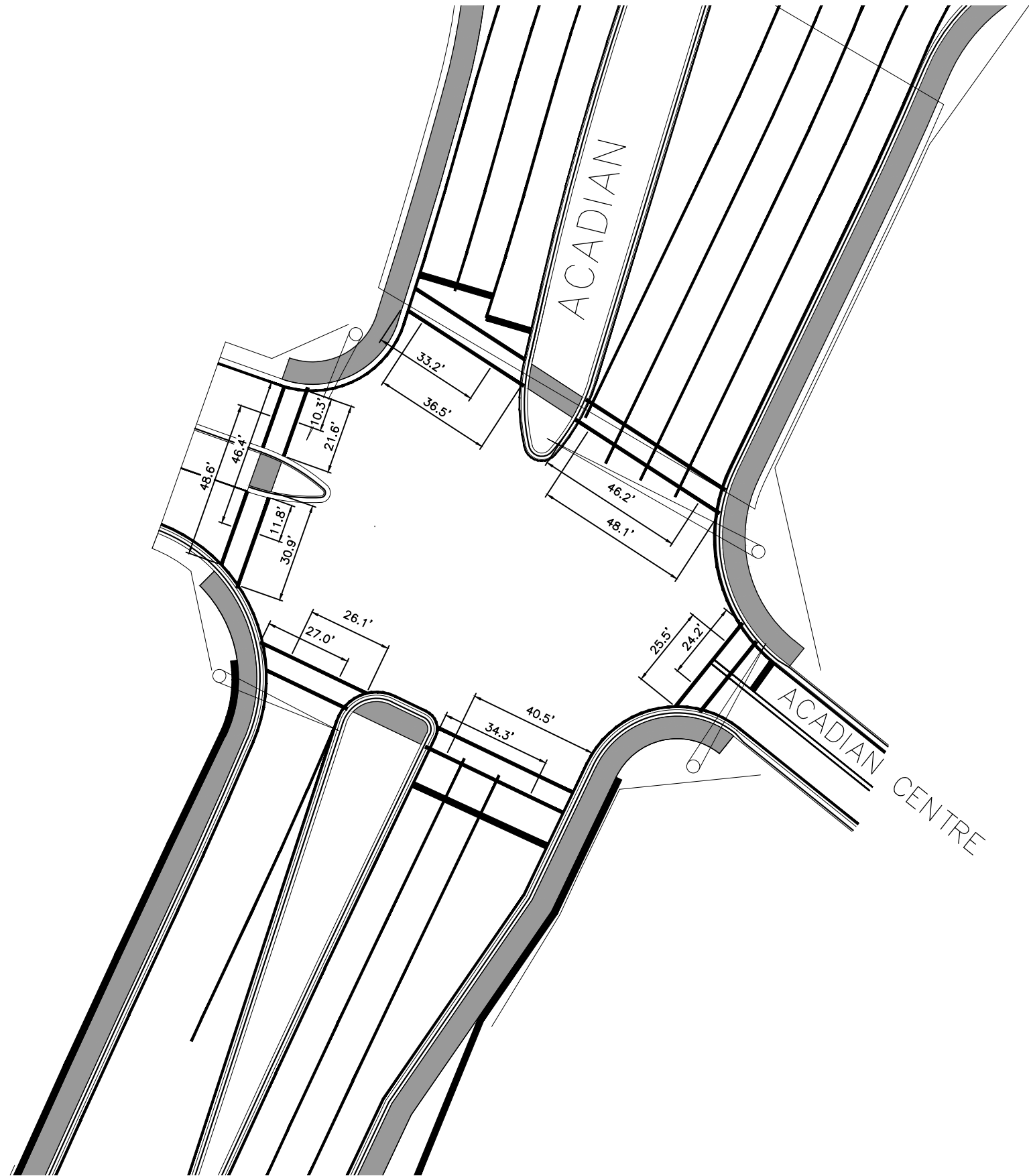
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FOR PLANNING PURPOSES ONLY

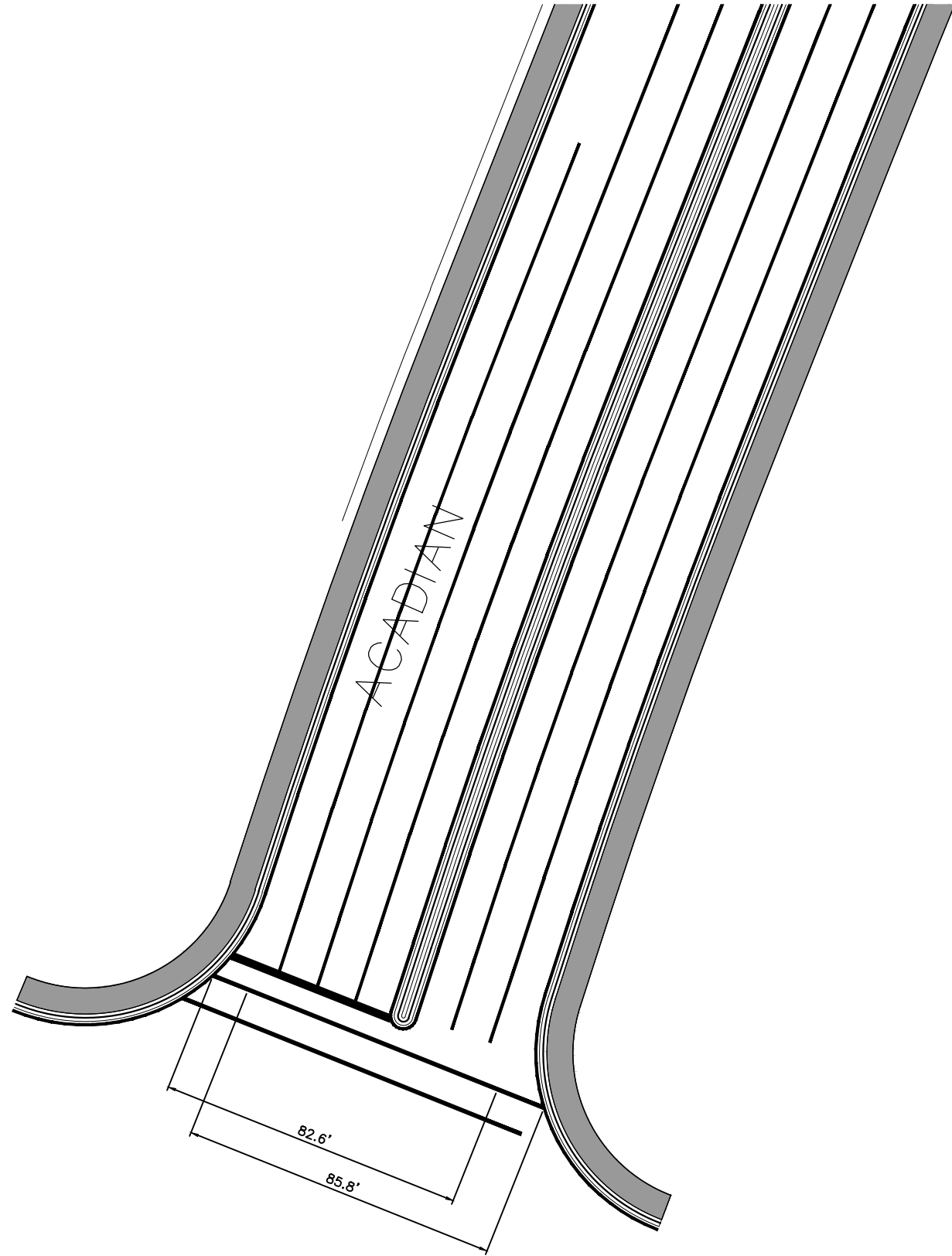
URBAN SYSTEMS inc.



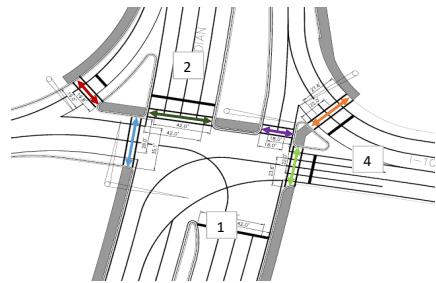








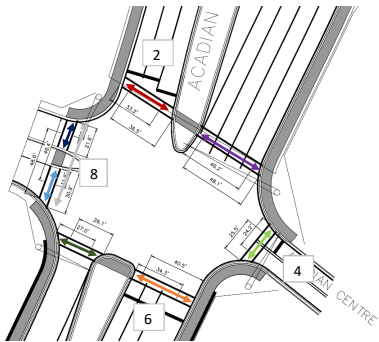
Pedestrian Timing Calculations



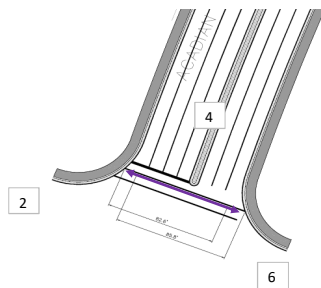
Acadian at I-10 WB							
Location	Distance (ft)	Speed (ft/sec)	Clearance (sec)	Total Required Pedestrian Time	AM Min Green + Yellow	PM Min Green + Yellow	Phase(s)
NS Crossing W Approach	35	3.5	10.0	17.0	19.7	19.7	2
NS Crossing E Approach	24	3.5	6.9	13.9	19.7	19.7	2,1
WBR Crossing Approach	28	3.5	8.0	15.0	19.7	19.7	2,1
EW Crossing N Approach 2	18	3.5	5.1	12.1	20	19	4
EW Crossing S Approach 1	42	3.5	12.0	19.0	20	19	4,1
SBR Crossing Approach	20	3.5	5.7	12.7	20	19	4,1



Acadian at I-10 EB							
Location	Distance (ft)	Speed (ft/sec)	Clearance (sec)	Total Required Pedestrian Time	AM Min Green + Yellow	PM Min Green + Yellow	Phase(s)
NS Crossing E Approach	29	3.5	8.3	15.3	19.7	19.7	6
NS Crossing W Approach	20	3.5	5.7	12.7	19.7	19.7	5,6
NBR Crossing Approach	22	3.5	6.3	13.3	20	20	5,8
EW Crossing Approach 2	42	3.5	12.0	19.0	20	20	5,8
EW Crossing S Approach 1	19	3.5	5.4	12.4	20	20	8
EBR Crossing Approach	27	3.5	7.7	14.7	19.7	19.7	5,6



Acadian at Acadian Centre							
Location	Distance (ft)	Speed (ft/sec)	Clearance (sec)	Total Required Pedestrian Time	AM Min Green + Yellow	PM Min Green + Yellow	Phase(s)
NS Crossing E Approach	26	3.5	7.4	14.4	21	21	2,6
NS Crossing W Approach 1	31	3.5	8.9	15.9	21	21	2,6
NS Crossing W Approach 2	22	3.5	6.3	13.3	21	21	2,6
NS Crossing W Approach	48.6	3.5	13.9	20.9	21	21	2,6
EW Crossing N Approach 1	48	3.5	13.7	20.7	21	21	4
EW Crossing N Approach 2	37	3.5	10.6	17.6	18	18	8
EW Crossing S Approach 1	41	3.5	11.7	18.7	21	21	4
EW Crossing S Approach 2	27	3.5	7.7	14.7	18	18	8



Acadian at Perkins							
Location	Distance (ft)	Speed (ft/sec)	Clearance (sec)	Total Required Pedestrian Time	AM Min Green + Yellow	PM Min Green + Yellow	Phase(s)
EW Crossing Approach	86	3.5	24.6	31.6	32.5	32.5	2,6




















Lane Utilization Factor Calculations			
AM			
	I-10 WB at Acadian	I-10 EB at Acadian	Acadian at Acadian Centre
Movement	Southbound Through	Northbound Through	Northbound Through
Total Approach Volume	1093	673	1264
Highest Approach (Left/Through)	634	342	696
Highest Lane Volume*	334	180	366
Utilization Factor	0.82	0.93	0.86
PM			
	I-10 WB at Acadian	I-10 EB at Acadian	Acadian at Acadian Centre
Movement	Southbound Through	Northbound Through	Northbound Through
Total Approach Volume	1204	967	1562
Highest Approach (Left/Through)	677	718	967
Highest Lane Volume*	356	378	509
Utilization Factor	0.84	0.64	0.77

*Approach Volume /(# of Lanes * Default Utilization Factor)

HCM 2010 Signalized Intersection Summary
2040 Build AM

I-10 WB at Acadian

7/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	683	8	730	331	488	0	0	1093	92
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				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
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1881	1882	1863	1759	1863	0	0	1881	1881
Adj Flow Rate, veh/h				740	0	785	356	525	0	0	1175	0
Adj No. of Lanes				2	0	2	2	2	0	0	4	1
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				1	0	2	8	2	0	0	1	1
Cap, veh/h				1154	0	1020	497	1985	0	0	2166	561
Arrive On Green				0.32	0.00	0.32	0.15	0.56	0.00	0.00	0.35	0.00
Sat Flow, veh/h				3583	0	3167	3250	3632	0	0	6509	1599
Grp Volume(v), veh/h				740	0	785	356	525	0	0	1175	0
Grp Sat Flow(s),veh/h/ln				1792	0	1583	1625	1770	0	0	1543	1599
Q Serve(g_s), s				17.6	0.0	22.3	10.4	7.6	0.0	0.0	15.3	0.0
Cycle Q Clear(g_c), s				17.6	0.0	22.3	10.4	7.6	0.0	0.0	15.3	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1154	0	1020	497	1985	0	0	2166	561
V/C Ratio(X)				0.64	0.00	0.77	0.72	0.26	0.00	0.00	0.54	0.00
Avail Cap(c_a), veh/h				1362	0	1203	618	1985	0	0	2166	561
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				29.0	0.0	30.6	40.3	11.3	0.0	0.0	26.0	0.0
Incr Delay (d2), s/veh				1.0	0.0	3.0	3.7	0.1	0.0	0.0	1.0	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
%ile BackOfQ(95%),veh/ln				13.8	0.0	15.3	8.5	6.7	0.0	0.0	10.9	0.0
LnGrp Delay(d),s/veh				30.0	0.0	33.5	43.9	11.4	0.0	0.0	27.0	0.0
LnGrp LOS				C		C	D	B			C	
Approach Vol, veh/h					1525			881			1175	
Approach Delay, s/veh					31.8			24.6			27.0	
Approach LOS					C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	21.0	40.8		38.2		61.8						
Change Period (Y+Rc), s	5.7	5.7		6.0		5.7						
Max Green Setting (Gmax), s	19.0	25.6		38.0		50.3						
Max Q Clear Time (g_c+I1), s	12.4	17.3		24.3		9.6						
Green Ext Time (p_c), s	1.0	7.6		7.9		30.1						
Intersection Summary												
HCM 2010 Ctrl Delay				28.4								
HCM 2010 LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												

Timing Report, Sorted By Phase
2040 Build AM

I-10 WB at Acadian

7/29/2019



Phase Number	1	2	4	6
Movement	NBL	SBT	WBTL	NBT
Lead/Lag	Lead	Lag		
Lead-Lag Optimize				
Recall Mode	Min	C-Min	Min	Min
Maximum Split (s)	24.7	31.3	44	56
Maximum Split (%)	24.7%	31.3%	44.0%	56.0%
Minimum Split (s)	24.7	23.7	25	24.7
Yellow Time (s)	4.7	4.7	5	4.7
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	15.3	15	15	15
Vehicle Extension (s)	4	6	4	4
Minimum Gap (s)	4	4	4	4
Time Before Reduce (s)	0	10	0	0
Time To Reduce (s)	0.1	20	0	0.1
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	12	10	12	12
Dual Entry	No	No	No	No
Inhibit Max	No	No	No	No
Start Time (s)	49.7	74.4	5.7	49.7
End Time (s)	74.4	5.7	49.7	5.7
Yield/Force Off (s)	68.7	0	43.7	0
Yield/Force Off 170(s)	68.7	90	43.7	0
Local Start Time (s)	49.7	74.4	5.7	49.7
Local Yield (s)	68.7	0	43.7	0
Local Yield 170(s)	68.7	90	43.7	0

Intersection Summary




















Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	75
Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow	

Splits and Phases: 22: Acadian Thruway & I-10 WB off ramp



HCM 2010 Signalized Intersection Summary
2040 Build PM

I-10 WB at Acadian
7/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	608	22	685	249	578	0	0	1204	87
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				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
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1900	1900	1863	1881	0	0	1900	1881
Adj Flow Rate, veh/h				649	0	714	259	602	0	0	1254	0
Adj No. of Lanes				2	0	2	2	2	0	0	4	1
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				0	0	0	2	1	0	0	0	1
Cap, veh/h				1048	0	935	516	2121	0	0	2468	618
Arrive On Green				0.29	0.00	0.29	0.15	0.59	0.00	0.00	0.39	0.00
Sat Flow, veh/h				3619	0	3230	3442	3668	0	0	6688	1599
Grp Volume(v), veh/h				649	0	714	259	602	0	0	1254	0
Grp Sat Flow(s),veh/h/ln				1810	0	1615	1721	1787	0	0	1596	1599
Q Serve(g_s), s				15.5	0.0	20.2	6.9	8.2	0.0	0.0	15.0	0.0
Cycle Q Clear(g_c), s				15.5	0.0	20.2	6.9	8.2	0.0	0.0	15.0	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1048	0	935	516	2121	0	0	2468	618
V/C Ratio(X)				0.62	0.00	0.76	0.50	0.28	0.00	0.00	0.51	0.00
Avail Cap(c_a), veh/h				1267	0	1130	664	2121	0	0	2468	618
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				30.8	0.0	32.4	39.1	9.9	0.0	0.0	23.4	0.0
Incr Delay (d2), s/veh				0.9	0.0	3.0	1.1	0.1	0.0	0.0	0.8	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
%ile BackOfQ(95%),veh/ln				12.5	0.0	14.3	6.0	7.3	0.0	0.0	11.0	0.0
LnGrp Delay(d),s/veh				31.7	0.0	35.4	40.1	10.0	0.0	0.0	24.2	0.0
LnGrp LOS				C		D	D	B			C	
Approach Vol, veh/h					1363			861			1254	
Approach Delay, s/veh					33.6			19.1			24.2	
Approach LOS					C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	20.7	44.4		34.9		65.1						
Change Period (Y+Rc), s	5.7	5.7		6.0		5.7						
Max Green Setting (Gmax), s	19.3	28.3		35.0		53.3						
Max Q Clear Time (g_c+I1), s	8.9	17.0		22.2		10.2						
Green Ext Time (p_c), s	0.9	10.3		6.8		33.7						
Intersection Summary												
HCM 2010 Ctrl Delay				26.6								
HCM 2010 LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												

Timing Report, Sorted By Phase
2040 Build PM

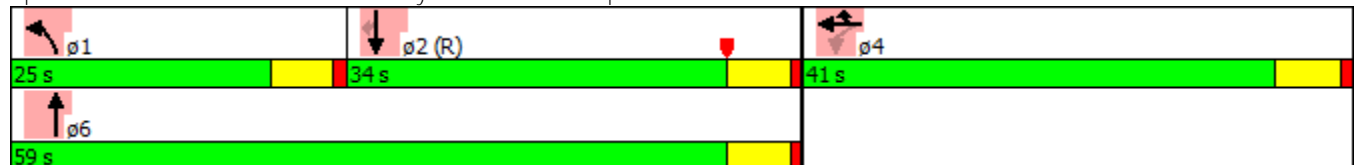


Phase Number	1	2	4	6
Movement	NBL	SBT	WBTL	NBT
Lead/Lag	Lead	Lag		
Lead-Lag Optimize				
Recall Mode	Min	C-Min	Min	Min
Maximum Split (s)	25	34	41	59
Maximum Split (%)	25.0%	34.0%	41.0%	59.0%
Minimum Split (s)	24.7	23.7	25	24.7
Yellow Time (s)	4.7	4.7	5	4.7
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	15	15	14	15
Vehicle Extension (s)	4	6	4	4
Minimum Gap (s)	4	4	4	4
Time Before Reduce (s)	0	10	0	0
Time To Reduce (s)	0	20	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	12	10	12	12
Dual Entry	No	No	No	No
Inhibit Max	No	No	No	No
Start Time (s)	46.7	71.7	5.7	46.7
End Time (s)	71.7	5.7	46.7	5.7
Yield/Force Off (s)	66	0	40.7	0
Yield/Force Off 170(s)	66	90	40.7	0
Local Start Time (s)	46.7	71.7	5.7	46.7
Local Yield (s)	66	0	40.7	0
Local Yield 170(s)	66	90	40.7	0

Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	75
Offset: 0 (0%), Referenced to phase 2:SBT, Start of Yellow	



















Splits and Phases: 22: Acadian Thruway & I-10 WB off ramp



HCM 2010 Signalized Intersection Summary
2040 Build AM

I-10 EB at Acadian

7/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	2	416	0	0	0	0	673	696	634	1170	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	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
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1827	1900	1881	1881	0
Adj Flow Rate, veh/h	72	2	452				0	732	757	689	1272	0
Adj No. of Lanes	0	1	2				0	4	2	2	2	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0				0	4	0	1	1	0
Cap, veh/h	318	9	512				0	2100	878	1171	2512	0
Arrive On Green	0.18	0.18	0.18				0.00	0.31	0.31	0.34	0.70	0.00
Sat Flow, veh/h	1763	49	2842				0	6924	2842	3476	3668	0
Grp Volume(v), veh/h	74	0	452				0	732	757	689	1272	0
Grp Sat Flow(s),veh/h/ln	1812	0	1421				0	1699	1421	1738	1787	0
Q Serve(g_s), s	3.5	0.0	15.5				0.0	8.3	25.1	16.4	16.4	0.0
Cycle Q Clear(g_c), s	3.5	0.0	15.5				0.0	8.3	25.1	16.4	16.4	0.0
Prop In Lane	0.97		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	327	0	512				0	2100	878	1171	2512	0
V/C Ratio(X)	0.23	0.00	0.88				0.00	0.35	0.86	0.59	0.51	0.00
Avail Cap(c_a), veh/h	344	0	540				0	2127	890	1171	2512	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.0	0.0	40.0				0.0	26.8	32.5	27.4	6.9	0.0
Incr Delay (d2), s/veh	0.5	0.0	15.7				0.0	0.5	10.9	0.9	0.7	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
%ile BackOfQ(95%),veh/ln	3.2	0.0	11.6				0.0	7.2	16.6	12.6	12.9	0.0
LnGrp Delay(d),s/veh	35.5	0.0	55.7				0.0	27.2	43.4	28.4	7.6	0.0
LnGrp LOS	D		E					C	D	C	A	
Approach Vol, veh/h		526						1489			1961	
Approach Delay, s/veh		52.9						35.5			14.9	
Approach LOS		D						D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		76.0			39.4	36.6		24.0				
Change Period (Y+Rc), s		5.7			5.7	5.7		6.0				
Max Green Setting (Gmax), s		69.3			32.3	31.3		19.0				
Max Q Clear Time (g_c+I1), s		18.4			18.4	27.1		17.5				
Green Ext Time (p_c), s		27.6			11.1	3.8		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			27.6									
HCM 2010 LOS			C									

Timing Report, Sorted By Phase
2040 Build AM

I-10 EB at Acadian

7/29/2019

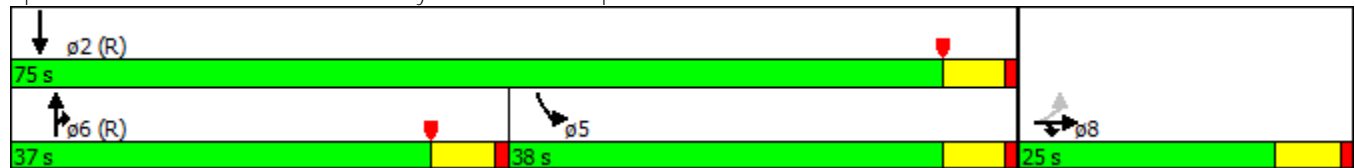


Phase Number	2	5	6	8
Movement	SBT	SBL	NBT	EBTL
Lead/Lag		Lag	Lead	
Lead-Lag Optimize				
Recall Mode	C-Max	Min	C-Min	Min
Maximum Split (s)	75	38	37	25
Maximum Split (%)	75.0%	38.0%	37.0%	25.0%
Minimum Split (s)	24.7	24.7	23.7	25
Yellow Time (s)	4.7	4.7	4.7	5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	15	15	15	15
Vehicle Extension (s)	4	4	6	4
Minimum Gap (s)	4	4	4	4
Time Before Reduce (s)	0	0	10	0
Time To Reduce (s)	0	0	20	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	12	12	8	12
Dual Entry	No	No	No	No
Inhibit Max	No	No	No	No
Start Time (s)	33.7	70.7	33.7	8.7
End Time (s)	8.7	8.7	70.7	33.7
Yield/Force Off (s)	3	3	65	27.7
Yield/Force Off 170(s)	91	3	57	27.7
Local Start Time (s)	68.7	5.7	68.7	43.7
Local Yield (s)	38	38	0	62.7
Local Yield 170(s)	26	38	92	62.7

Intersection Summary



















Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	80
Offset: 65 (65%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow	

Splits and Phases: 17: Acadian Thruway & I-10 EB off ramp



HCM 2010 Signalized Intersection Summary
2040 Build PM

I-10 EB at Acadian
7/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	1	584	0	0	0	0	967	668	677	1143	0
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	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
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1779	1881				0	1881	1900	1900	1881	0
Adj Flow Rate, veh/h	36	1	596				0	987	682	691	1166	0
Adj No. of Lanes	0	1	2				0	4	2	2	2	0
Peak Hour Factor	0.98	0.98	0.98				0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	0	1				0	1	0	0	1	0
Cap, veh/h	383	11	653				0	1352	798	1099	2327	0
Arrive On Green	0.23	0.23	0.23				0.00	0.28	0.28	0.31	0.65	0.00
Sat Flow, veh/h	1650	46	2814				0	5493	2842	3510	3668	0
Grp Volume(v), veh/h	37	0	596				0	987	682	691	1166	0
Grp Sat Flow(s),veh/h/ln	1696	0	1407				0	1204	1421	1755	1787	0
Q Serve(g_s), s	1.7	0.0	20.6				0.0	18.5	22.7	16.8	16.9	0.0
Cycle Q Clear(g_c), s	1.7	0.0	20.6				0.0	18.5	22.7	16.8	16.9	0.0
Prop In Lane	0.97		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	394	0	653				0	1352	798	1099	2327	0
V/C Ratio(X)	0.09	0.00	0.91				0.00	0.73	0.85	0.63	0.50	0.00
Avail Cap(c_a), veh/h	407	0	675				0	1363	804	1099	2327	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.1	0.0	37.4				0.0	32.5	34.0	29.4	9.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	16.9				0.0	3.5	11.3	1.3	0.8	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
%ile BackOfQ(95%),veh/ln	1.5	0.0	14.6				0.0	10.7	15.4	13.1	13.3	0.0
LnGrp Delay(d),s/veh	30.3	0.0	54.3				0.0	36.0	45.3	30.7	9.8	0.0
LnGrp LOS	C		D					D	D	C	A	
Approach Vol, veh/h		633						1669			1857	
Approach Delay, s/veh		52.9						39.8			17.6	
Approach LOS		D						D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		70.8			37.0	33.8		29.2				
Change Period (Y+Rc), s		5.7			5.7	5.7		6.0				
Max Green Setting (Gmax), s		64.3			30.3	28.3		24.0				
Max Q Clear Time (g_c+I1), s		18.9			18.8	24.7		22.6				
Green Ext Time (p_c), s		23.7			9.0	3.4		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			31.9									
HCM 2010 LOS			C									

Timing Report, Sorted By Phase
2040 Build PM

I-10 EB at Acadian

7/29/2019

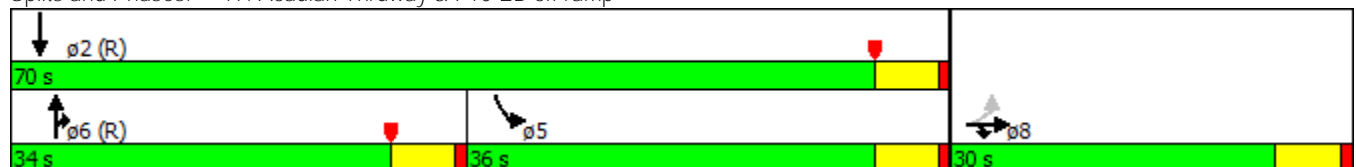


Phase Number	2	5	6	8
Movement	SBT	SBL	NBT	EBTL
Lead/Lag		Lag	Lead	
Lead-Lag Optimize				
Recall Mode	C-Max	Min	C-Min	Min
Maximum Split (s)	70	36	34	30
Maximum Split (%)	70.0%	36.0%	34.0%	30.0%
Minimum Split (s)	24.7	24.7	23.7	25
Yellow Time (s)	4.7	4.7	4.7	5
All-Red Time (s)	1	1	1	1
Minimum Initial (s)	15	15	15	15
Vehicle Extension (s)	4	4	6	4
Minimum Gap (s)	4	4	4	4
Time Before Reduce (s)	0	0	10	0
Time To Reduce (s)	0	0	20	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	12	12	9	12
Dual Entry	No	No	No	No
Inhibit Max	No	No	No	No
Start Time (s)	88.7	22.7	88.7	58.7
End Time (s)	58.7	58.7	22.7	88.7
Yield/Force Off (s)	53	53	17	82.7
Yield/Force Off 170(s)	41	53	8	82.7
Local Start Time (s)	71.7	5.7	71.7	41.7
Local Yield (s)	36	36	0	65.7
Local Yield 170(s)	24	36	91	65.7

Intersection Summary



















Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	75
Offset: 17 (17%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow	

Splits and Phases: 17: Acadian Thruway & I-10 EB off ramp



HCM 2010 Signalized Intersection Summary
2040 Build AM

Acadian at Acadian Centre
7/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	1	0	3	0	103	0	1264	7	92	1491	3
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1267	1900	1900	1900	1900	1900	1900	1862	1900	1900	1880	1900
Adj Flow Rate, veh/h	2	1	0	3	0	114	0	1404	8	102	1657	3
Adj No. of Lanes	1	1	0	0	1	0	0	4	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	50	0	0	100	100	100	2	2	2	0	1	1
Cap, veh/h	169	266	0	7	0	268	0	2933	17	270	1976	4
Arrive On Green	0.14	0.14	0.00	0.17	0.00	0.17	0.00	0.44	0.44	0.05	0.54	0.54
Sat Flow, veh/h	1206	1900	0	42	0	1578	0	6880	38	1810	3659	7
Grp Volume(v), veh/h	2	1	0	117	0	0	0	1019	393	102	809	851
Grp Sat Flow(s),veh/h/ln	1206	1900	0	1619	0	0	0	1601	1855	1810	1786	1879
Q Serve(g_s), s	0.1	0.0	0.0	6.5	0.0	0.0	0.0	15.0	15.0	2.9	38.1	38.1
Cycle Q Clear(g_c), s	0.1	0.0	0.0	6.5	0.0	0.0	0.0	15.0	15.0	2.9	38.1	38.1
Prop In Lane	1.00		0.00	0.03		0.97	0.00		0.02	1.00		0.00
Lane Grp Cap(c), veh/h	169	266	0	275	0	0	0	2128	822	270	965	1015
V/C Ratio(X)	0.01	0.00	0.00	0.42	0.00	0.00	0.00	0.48	0.48	0.38	0.84	0.84
Avail Cap(c_a), veh/h	217	342	0	340	0	0	0	2128	822	330	965	1015
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)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	37.0	0.0	37.1	0.0	0.0	0.0	19.7	19.7	14.7	19.3	19.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.8	2.0	0.9	8.7	8.3
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	0.1	0.0	0.0	5.3	0.0	0.0	0.0	11.0	12.8	2.7	28.5	29.6
LnGrp Delay(d),s/veh	37.1	37.0	0.0	38.2	0.0	0.0	0.0	20.5	21.7	15.6	28.0	27.6
LnGrp LOS	D	D		D				C	C	B	C	C
Approach Vol, veh/h		3			117			1412			1762	
Approach Delay, s/veh		37.0			38.2			20.8			27.1	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		59.0		22.0	9.7	49.3		19.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		46.0		21.0	8.0	33.0		18.0				
Max Q Clear Time (g_c+I1), s		40.1		8.5	4.9	17.0		2.1				
Green Ext Time (p_c), s		5.9		0.5	0.1	15.9		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				24.8								
HCM 2010 LOS				C								

Timing Report, Sorted By Phase
2040 Build AM

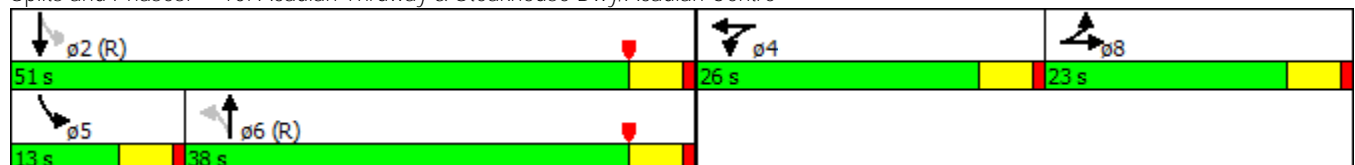


Phase Number	2	4	5	6	8
Movement	SBTL	WBTL	SBL	NBTL	EBTL
Lead/Lag			Lead	Lag	
Lead-Lag Optimize			Yes	Yes	
Recall Mode	C-Min	Min	None	C-Min	Min
Maximum Split (s)	51	26	13	38	23
Maximum Split (%)	51.0%	26.0%	13.0%	38.0%	23.0%
Minimum Split (s)	26	26	8	26	23
Yellow Time (s)	4	4	4	4	4
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	17	17	3	17	14
Vehicle Extension (s)	6	3	3	6	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	10	0	0	10	0
Time To Reduce (s)	20	0	0	20	0
Walk Time (s)	7	7		7	7
Flash Dont Walk (s)	14	14		14	11
Dual Entry	No	No	No	No	No
Inhibit Max	No	No	No	No	No
Start Time (s)	54	5	54	67	31
End Time (s)	5	31	67	5	54
Yield/Force Off (s)	0	26	62	0	49
Yield/Force Off 170(s)	86	26	62	86	49
Local Start Time (s)	54	5	54	67	31
Local Yield (s)	0	26	62	0	49
Local Yield 170(s)	86	26	62	86	49

Intersection Summary



















Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	95
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	

Splits and Phases: 10: Acadian Thruway & Steakhouse Dwy/Acadian Centre



HCM 2010 Signalized Intersection Summary
2040 Build AM Ped Revised

Acadian at Acadian Centre
7/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	1	0	3	0	103	0	1264	7	92	1491	3
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1267	1900	1900	1900	1900	1900	1900	1862	1900	1900	1880	1900
Adj Flow Rate, veh/h	2	1	0	3	0	114	0	1404	8	102	1657	3
Adj No. of Lanes	1	1	0	0	1	0	0	4	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	50	0	0	100	100	100	2	2	2	0	1	1
Cap, veh/h	5	8	0	4	0	139	0	4456	25	361	2774	5
Arrive On Green	0.00	0.00	0.00	0.09	0.00	0.09	0.00	0.67	0.67	0.03	0.76	0.76
Sat Flow, veh/h	1206	1900	0	42	0	1578	0	6880	38	1810	3659	7
Grp Volume(v), veh/h	2	1	0	117	0	0	0	1019	393	102	809	851
Grp Sat Flow(s),veh/h/ln	1206	1900	0	1619	0	0	0	1601	1855	1810	1786	1879
Q Serve(g_s), s	0.2	0.1	0.0	7.1	0.0	0.0	0.0	8.8	8.8	1.6	20.0	20.0
Cycle Q Clear(g_c), s	0.2	0.1	0.0	7.1	0.0	0.0	0.0	8.8	8.8	1.6	20.0	20.0
Prop In Lane	1.00		0.00	0.03		0.97	0.00		0.02	1.00		0.00
Lane Grp Cap(c), veh/h	5	8	0	143	0	0	0	3233	1249	361	1354	1424
V/C Ratio(X)	0.41	0.13	0.00	0.82	0.00	0.00	0.00	0.32	0.32	0.28	0.60	0.60
Avail Cap(c_a), veh/h	60	95	0	162	0	0	0	3233	1249	443	1354	1424
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)	1.00	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.7	49.6	0.0	44.8	0.0	0.0	0.0	6.8	6.8	4.7	5.4	5.4
Incr Delay (d2), s/veh	48.3	7.6	0.0	25.0	0.0	0.0	0.0	0.3	0.7	0.4	2.0	1.9
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	0.2	0.1	0.0	7.5	0.0	0.0	0.0	7.1	8.3	1.5	15.7	16.3
LnGrp Delay(d),s/veh	98.0	57.2	0.0	69.8	0.0	0.0	0.0	7.0	7.4	5.1	7.3	7.2
LnGrp LOS	F	E		E				A	A	A	A	A
Approach Vol, veh/h		3			117			1412			1762	
Approach Delay, s/veh		84.4			69.8			7.1			7.1	
Approach LOS		F			E			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		80.8		13.8	8.5	72.3		5.4				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		70.0		10.0	8.0	57.0		5.0				
Max Q Clear Time (g_c+I1), s		22.0		9.1	3.6	10.8		2.2				
Green Ext Time (p_c), s		47.3		0.1	0.1	45.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			9.4									
HCM 2010 LOS			A									

Timing Report, Sorted By Phase
2040 Build AM Ped Revised

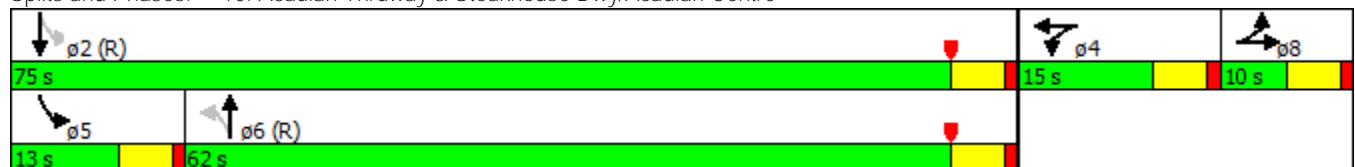


Phase Number	2	4	5	6	8
Movement	SBTL	WBTL	SBL	NBTL	EBTL
Lead/Lag			Lead	Lag	
Lead-Lag Optimize			Yes	Yes	
Recall Mode	C-Min	None	None	C-Min	None
Maximum Split (s)	75	15	13	62	10
Maximum Split (%)	75.0%	15.0%	13.0%	62.0%	10.0%
Minimum Split (s)	26	10	8	26	10
Yellow Time (s)	4	4	4	4	4
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	17	5	3	17	5
Vehicle Extension (s)	6	3	3	6	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	10	0	0	10	0
Time To Reduce (s)	20	0	0	20	0
Walk Time (s)	7			7	
Flash Dont Walk (s)	14			14	
Dual Entry	No	No	No	No	No
Inhibit Max	No	No	No	No	No
Start Time (s)	30	5	30	43	20
End Time (s)	5	20	43	5	30
Yield/Force Off (s)	0	15	38	0	25
Yield/Force Off 170(s)	86	15	38	86	25
Local Start Time (s)	30	5	30	43	20
Local Yield (s)	0	15	38	0	25
Local Yield 170(s)	86	15	38	86	25

Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	



















Splits and Phases: 10: Acadian Thruway & Steakhouse Dwy/Acadian Centre



HCM 2010 Signalized Intersection Summary
2040 Build PM

Acadian at Acadian Centre

7/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	1	9	14	8	61	15	1562	29	54	1631	42
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1872	1900	1900	1882	1900	1900	1882	1900
Adj Flow Rate, veh/h	12	1	9	14	8	62	15	1594	30	55	1664	43
Adj No. of Lanes	1	1	0	0	1	0	0	4	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	0	1	1
Cap, veh/h	253	23	207	47	27	206	45	2663	50	202	1923	50
Arrive On Green	0.14	0.14	0.14	0.17	0.17	0.17	0.46	0.46	0.46	0.03	0.54	0.54
Sat Flow, veh/h	1810	164	1476	274	157	1214	16	5760	108	1810	3561	92
Grp Volume(v), veh/h	12	0	10	84	0	0	434	734	471	55	833	874
Grp Sat Flow(s),veh/h/ln	1810	0	1640	1644	0	0	1554	1319	1693	1810	1788	1865
Q Serve(g_s), s	0.6	0.0	0.5	4.5	0.0	0.0	2.2	20.7	20.7	1.5	40.2	40.5
Cycle Q Clear(g_c), s	0.6	0.0	0.5	4.5	0.0	0.0	35.0	20.7	20.7	1.5	40.2	40.5
Prop In Lane	1.00		0.90	0.17		0.74	0.03		0.06	1.00		0.05
Lane Grp Cap(c), veh/h	253	0	230	280	0	0	756	1219	783	202	965	1007
V/C Ratio(X)	0.05	0.00	0.04	0.30	0.00	0.00	0.57	0.60	0.60	0.27	0.86	0.87
Avail Cap(c_a), veh/h	326	0	295	345	0	0	756	1219	783	207	965	1007
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)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	0.0	37.2	36.3	0.0	0.0	19.0	20.0	20.0	15.5	19.8	19.9
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.6	0.0	0.0	3.2	2.2	3.4	0.7	10.1	10.0
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	0.5	0.0	0.4	3.7	0.0	0.0	13.9	12.5	15.7	1.4	30.1	31.4
LnGrp Delay(d),s/veh	37.3	0.0	37.3	36.9	0.0	0.0	22.2	22.2	23.4	16.2	29.9	29.9
LnGrp LOS	D		D	D			C	C	C	B	C	C
Approach Vol, veh/h		22			84			1639			1762	
Approach Delay, s/veh		37.3			36.9			22.6			29.5	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		59.0		22.0	7.8	51.2		19.0				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		46.0		21.0	3.0	38.0		18.0				
Max Q Clear Time (g_c+I1), s		42.5		6.5	3.5	37.0		2.6				
Green Ext Time (p_c), s		3.5		0.3	0.0	1.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			26.5									
HCM 2010 LOS			C									

Timing Report, Sorted By Phase
2040 Build PM

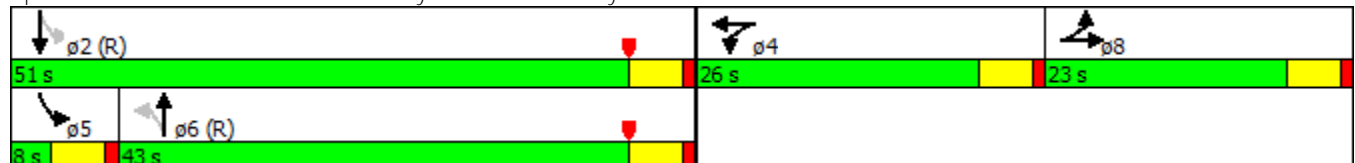


Phase Number	2	4	5	6	8
Movement	SBTL	WBTL	SBL	NBTL	EBTL
Lead/Lag			Lead	Lag	
Lead-Lag Optimize			Yes	Yes	
Recall Mode	C-Min	Min	None	C-Min	Min
Maximum Split (s)	51	26	8	43	23
Maximum Split (%)	51.0%	26.0%	8.0%	43.0%	23.0%
Minimum Split (s)	26	26	8	26	23
Yellow Time (s)	4	4	4	4	4
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	17	17	3	17	14
Vehicle Extension (s)	6	3	3	6	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	10	0	0	10	0
Time To Reduce (s)	20	0	0	20	0
Walk Time (s)	7	7		7	7
Flash Dont Walk (s)	14	14		14	11
Dual Entry	No	No	No	No	No
Inhibit Max	No	No	No	No	No
Start Time (s)	54	5	54	62	31
End Time (s)	5	31	62	5	54
Yield/Force Off (s)	0	26	57	0	49
Yield/Force Off 170(s)	86	26	57	86	49
Local Start Time (s)	54	5	54	62	31
Local Yield (s)	0	26	57	0	49
Local Yield 170(s)	86	26	57	86	49



















Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	95
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	

Splits and Phases: 10: Acadian Thruway & Steakhouse Dwy/Acadian Centre



HCM 2010 Signalized Intersection Summary
2040 Build PM Ped Revised

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	1	9	14	8	61	15	1562	29	54	1631	42
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1872	1900	1900	1882	1900	1900	1882	1900
Adj Flow Rate, veh/h	12	1	9	14	8	62	15	1594	30	55	1664	43
Adj No. of Lanes	1	1	0	0	1	0	0	4	0	1	2	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	1	1	1	0	1	1
Cap, veh/h	41	4	34	18	10	78	51	4113	77	296	2717	70
Arrive On Green	0.02	0.02	0.02	0.06	0.06	0.06	0.69	0.69	0.69	0.02	0.76	0.76
Sat Flow, veh/h	1810	164	1476	274	157	1214	20	5966	112	1810	3561	92
Grp Volume(v), veh/h	12	0	10	84	0	0	476	708	455	55	833	874
Grp Sat Flow(s),veh/h/ln	1810	0	1640	1644	0	0	1769	1319	1693	1810	1788	1865
Q Serve(g_s), s	0.7	0.0	0.6	5.0	0.0	0.0	0.0	11.4	11.4	0.8	20.7	20.9
Cycle Q Clear(g_c), s	0.7	0.0	0.6	5.0	0.0	0.0	10.5	11.4	11.4	0.8	20.7	20.9
Prop In Lane	1.00		0.90	0.17		0.74	0.03		0.07	1.00		0.05
Lane Grp Cap(c), veh/h	41	0	37	106	0	0	1256	1818	1167	296	1364	1423
V/C Ratio(X)	0.29	0.00	0.27	0.79	0.00	0.00	0.38	0.39	0.39	0.19	0.61	0.61
Avail Cap(c_a), veh/h	90	0	82	164	0	0	1256	1818	1167	308	1364	1423
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)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	0.0	48.0	46.1	0.0	0.0	6.5	6.6	6.6	4.8	5.3	5.3
Incr Delay (d2), s/veh	3.8	0.0	3.7	13.4	0.0	0.0	0.9	0.6	1.0	0.3	2.0	2.0
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	0.7	0.0	0.6	4.8	0.0	0.0	9.7	7.7	9.5	0.8	16.1	16.7
LnGrp Delay(d),s/veh	51.9	0.0	51.8	59.5	0.0	0.0	7.3	7.2	7.6	5.1	7.3	7.3
LnGrp LOS	D		D	E			A	A	A	A	A	A
Approach Vol, veh/h		22			84			1639			1762	
Approach Delay, s/veh		51.8			59.5			7.4			7.2	
Approach LOS		D			E			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		81.3		11.4	7.3	73.9		7.3				
Change Period (Y+Rc), s		5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s		70.0		10.0	3.0	62.0		5.0				
Max Q Clear Time (g_c+I1), s		22.9		7.0	2.8	13.4		2.7				
Green Ext Time (p_c), s		46.7		0.1	0.0	48.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			8.8									
HCM 2010 LOS			A									

Timing Report, Sorted By Phase
2040 Build PM Ped Revised

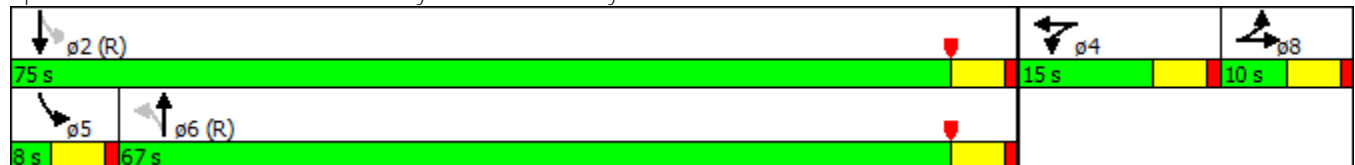


Phase Number	2	4	5	6	8
Movement	SBTL	WBTL	SBL	NBTL	EBTL
Lead/Lag			Lead	Lag	
Lead-Lag Optimize			Yes	Yes	
Recall Mode	C-Min	None	None	C-Min	None
Maximum Split (s)	75	15	8	67	10
Maximum Split (%)	75.0%	15.0%	8.0%	67.0%	10.0%
Minimum Split (s)	26	10	8	26	10
Yellow Time (s)	4	4	4	4	4
All-Red Time (s)	1	1	1	1	1
Minimum Initial (s)	17	5	3	17	5
Vehicle Extension (s)	6	3	3	6	3
Minimum Gap (s)	3	3	3	3	3
Time Before Reduce (s)	10	0	0	10	0
Time To Reduce (s)	20	0	0	20	0
Walk Time (s)	7			7	
Flash Dont Walk (s)	14			14	
Dual Entry	No	No	No	No	No
Inhibit Max	No	No	No	No	No
Start Time (s)	30	5	30	38	20
End Time (s)	5	20	38	5	30
Yield/Force Off (s)	0	15	33	0	25
Yield/Force Off 170(s)	86	15	33	86	25
Local Start Time (s)	30	5	30	38	20
Local Yield (s)	0	15	33	0	25
Local Yield 170(s)	86	15	33	86	25

Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow	

Splits and Phases: 10: Acadian Thruway & Steakhouse Dwy/Acadian Centre



HCM 2010 Signalized Intersection Summary
2040 Build AM

Acadian at Perkins
7/29/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	230	286	44	203	454	686	295	619	114	604	671	57
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1881	1887	1900	1881	1863	1845	1827	1884	1900	1863	1897	1900
Adj Flow Rate, veh/h	242	301	46	214	478	722	311	652	120	636	706	60
Adj No. of Lanes	2	2	0	2	2	1	1	3	0	2	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	0	0	1	2	3	4	1	1	2	0	0
Cap, veh/h	296	983	149	273	1089	800	337	961	175	697	768	65
Arrive On Green	0.09	0.31	0.31	0.08	0.31	0.31	0.19	0.22	0.22	0.20	0.23	0.23
Sat Flow, veh/h	3476	3124	472	3476	3539	1568	1740	4378	795	3442	3362	286
Grp Volume(v), veh/h	242	171	176	214	478	722	311	509	263	636	378	388
Grp Sat Flow(s),veh/h/ln	1738	1793	1803	1738	1770	1568	1740	1715	1744	1721	1802	1846
Q Serve(g_s), s	8.2	8.7	8.9	7.3	13.0	36.9	21.1	16.3	16.6	21.7	24.6	24.6
Cycle Q Clear(g_c), s	8.2	8.7	8.9	7.3	13.0	36.9	21.1	16.3	16.6	21.7	24.6	24.6
Prop In Lane	1.00		0.26	1.00		1.00	1.00		0.46	1.00		0.15
Lane Grp Cap(c), veh/h	296	564	567	273	1089	800	337	753	383	697	411	421
V/C Ratio(X)	0.82	0.30	0.31	0.78	0.44	0.90	0.92	0.68	0.69	0.91	0.92	0.92
Avail Cap(c_a), veh/h	304	564	567	368	1089	800	368	754	384	757	411	421
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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.0	31.2	31.2	54.3	33.2	26.7	47.5	42.9	43.0	46.8	45.2	45.2
Incr Delay (d2), s/veh	15.0	1.4	1.4	6.7	1.3	15.4	26.7	2.7	5.6	14.5	28.1	27.8
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	8.0	8.0	8.2	6.7	10.7	33.2	18.4	12.6	13.4	17.4	21.8	22.3
LnGrp Delay(d),s/veh	69.0	32.6	32.7	61.0	34.5	42.1	74.2	45.6	48.6	61.3	73.3	73.0
LnGrp LOS	E	C	C	E	C	D	E	D	D	E	E	E
Approach Vol, veh/h		589			1414			1083			1402	
Approach Delay, s/veh		47.6			42.4			54.5			67.8	
Approach LOS		D			D			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.9	43.2	28.8	33.0	15.7	42.4	29.9	31.9				
Change Period (Y+Rc), s	5.5	5.5	5.6	5.6	5.5	5.5	5.6	5.6				
Max Green Setting (Gmax), s	12.7	32.3	25.4	27.4	10.5	34.5	26.4	26.4				
Max Q Clear Time (g_c+I1), s	9.3	10.9	23.1	26.6	10.2	38.9	23.7	18.6				
Green Ext Time (p_c), s	0.2	11.9	0.2	0.7	0.0	0.0	0.6	5.9				
Intersection Summary												
HCM 2010 Ctrl Delay			53.9									
HCM 2010 LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												

Timing Report, Sorted By Phase
2040 Build AM

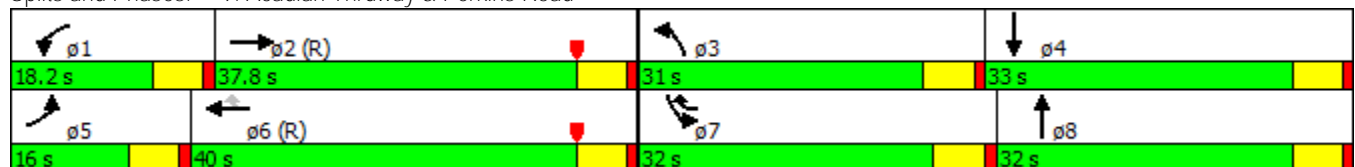


Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBT	NBL	SBT	EBL	WBT	SBL	NBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize								
Recall Mode	None	C-Min	None	Max	None	C-Min	None	None
Maximum Split (s)	18.2	37.8	31	33	16	40	32	32
Maximum Split (%)	15.2%	31.5%	25.8%	27.5%	13.3%	33.3%	26.7%	26.7%
Minimum Split (s)	10.5	33.5	10.6	17.6	10.5	33.5	10.6	17.6
Yellow Time (s)	4.5	4.5	4.6	4.6	4.5	4.5	4.6	4.6
All-Red Time (s)	1	1	1	1	1	1	1	1
Minimum Initial (s)	5	28	5	12	5	28	5	12
Vehicle Extension (s)	2.5	3.9	2.5	3.9	2.5	3.9	2.5	3.9
Minimum Gap (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.9
Time Before Reduce (s)	0	15	0	15	0	15	0	0
Time To Reduce (s)	0	20	0	20	0	20	0	0
Walk Time (s)		4		4		4		4
Flash Dont Walk (s)		28		27		28		27
Dual Entry	No	No	No	No	No	No	No	No
Inhibit Max	No	No	No	No	No	No	No	No
Start Time (s)	69.5	87.7	5.5	36.5	69.5	85.5	5.5	37.5
End Time (s)	87.7	5.5	36.5	69.5	85.5	5.5	37.5	69.5
Yield/Force Off (s)	82.2	0	30.9	63.9	80	0	31.9	63.9
Yield/Force Off 170(s)	82.2	92	30.9	36.9	80	92	31.9	36.9
Local Start Time (s)	69.5	87.7	5.5	36.5	69.5	85.5	5.5	37.5
Local Yield (s)	82.2	0	30.9	63.9	80	0	31.9	63.9
Local Yield 170(s)	82.2	92	30.9	36.9	80	92	31.9	36.9

Intersection Summary






















Cycle Length	120
Control Type	Actuated-Coordinated
Natural Cycle	90
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	

Splits and Phases: 9: Acadian Thruway & Perkins Road



HCM 2010 Signalized Intersection Summary
2040 Build PM

Acadian at Perkins
7/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	307	391	44	185	417	676	126	724	157	976	491	48
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1881	1881	1881	1885	1900	1881	1900	1900
Adj Flow Rate, veh/h	310	395	44	187	421	683	127	731	159	986	496	48
Adj No. of Lanes	2	2	0	2	2	1	1	3	0	2	2	0
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	1	1	1	1	1	1	0	0
Cap, veh/h	356	975	108	235	940	901	150	794	171	1045	1345	130
Arrive On Green	0.10	0.30	0.30	0.07	0.26	0.26	0.08	0.19	0.19	0.30	0.40	0.40
Sat Flow, veh/h	3510	3277	363	3510	3574	1599	1792	4241	913	3476	3327	321
Grp Volume(v), veh/h	310	217	222	187	421	683	127	590	300	986	268	276
Grp Sat Flow(s),veh/h/ln	1755	1805	1835	1755	1787	1599	1792	1715	1723	1738	1805	1843
Q Serve(g_s), s	13.1	14.4	14.5	7.9	14.8	39.4	10.5	25.3	25.7	41.6	15.6	15.7
Cycle Q Clear(g_c), s	13.1	14.4	14.5	7.9	14.8	39.4	10.5	25.3	25.7	41.6	15.6	15.7
Prop In Lane	1.00		0.20	1.00		1.00	1.00		0.53	1.00		0.17
Lane Grp Cap(c), veh/h	356	537	546	235	940	901	150	642	323	1045	730	745
V/C Ratio(X)	0.87	0.40	0.41	0.80	0.45	0.76	0.85	0.92	0.93	0.94	0.37	0.37
Avail Cap(c_a), veh/h	391	537	546	318	940	901	223	649	326	1121	730	745
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)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.4	42.1	42.1	69.0	46.2	25.0	67.8	59.8	60.0	51.2	31.3	31.3
Incr Delay (d2), s/veh	17.2	2.2	2.2	8.5	1.5	5.9	15.2	18.4	32.6	14.6	1.4	1.4
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	11.6	12.0	12.2	7.4	12.0	30.9	9.8	19.7	21.6	29.8	12.7	13.0
LnGrp Delay(d),s/veh	83.6	44.3	44.4	77.5	47.7	30.9	83.0	78.2	92.6	65.9	32.7	32.7
LnGrp LOS	F	D	D	E	D	C	F	E	F	E	C	C
Approach Vol, veh/h		749			1291			1017			1530	
Approach Delay, s/veh		60.6			43.1			83.1			54.1	
Approach LOS		E			D			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.5	50.1	18.1	66.2	20.7	44.9	50.7	33.7				
Change Period (Y+Rc), s	5.5	5.5	5.6	5.6	5.5	5.5	5.6	5.6				
Max Green Setting (Gmax), s	13.6	37.4	18.7	58.1	16.7	34.3	48.4	28.4				
Max Q Clear Time (g_c+I1), s	9.9	16.5	12.5	17.7	15.1	41.4	43.6	27.7				
Green Ext Time (p_c), s	0.2	11.6	0.1	16.4	0.2	0.0	1.5	0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			58.5									
HCM 2010 LOS			E									
Notes												
User approved pedestrian interval to be less than phase max green.												

Timing Report, Sorted By Phase
2040 Build PM

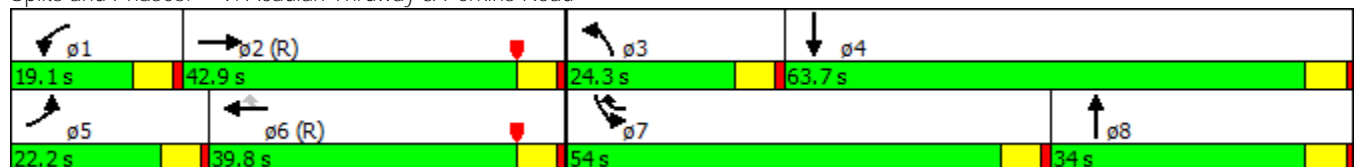


Phase Number	1	2	3	4	5	6	7	8
Movement	WBL	EBT	NBL	SBT	EBL	WBT	SBL	NBT
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize								
Recall Mode	None	C-Min	None	Max	None	C-Min	None	None
Maximum Split (s)	19.1	42.9	24.3	63.7	22.2	39.8	54	34
Maximum Split (%)	12.7%	28.6%	16.2%	42.5%	14.8%	26.5%	36.0%	22.7%
Minimum Split (s)	10.5	37.5	10.6	18	10.5	37.5	10.6	18
Yellow Time (s)	4.5	4.5	4.6	4.6	4.5	4.5	4.6	4.6
All-Red Time (s)	1	1	1	1	1	1	1	1
Minimum Initial (s)	5	28	5	12	5	28	5	12
Vehicle Extension (s)	2.5	3.9	2.5	3.9	2.5	3.9	2.5	3.9
Minimum Gap (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.9
Time Before Reduce (s)	0	15	0	15	0	15	0	0
Time To Reduce (s)	0	20	0	20	0	20	0	0
Walk Time (s)		4		4		4		4
Flash Dont Walk (s)		28		27		28		27
Dual Entry	No	No	No	No	No	No	No	No
Inhibit Max	No	No	No	No	No	No	No	No
Start Time (s)	93.5	112.6	5.5	29.8	93.5	115.7	5.5	59.5
End Time (s)	112.6	5.5	29.8	93.5	115.7	5.5	59.5	93.5
Yield/Force Off (s)	107.1	0	24.2	87.9	110.2	0	53.9	87.9
Yield/Force Off 170(s)	107.1	122	24.2	60.9	110.2	122	53.9	60.9
Local Start Time (s)	93.5	112.6	5.5	29.8	93.5	115.7	5.5	59.5
Local Yield (s)	107.1	0	24.2	87.9	110.2	0	53.9	87.9
Local Yield 170(s)	107.1	122	24.2	60.9	110.2	122	53.9	60.9

Intersection Summary

Cycle Length	150
Control Type	Actuated-Coordinated
Natural Cycle	120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow	

Splits and Phases: 9: Acadian Thruway & Perkins Road



**AM Scenario Comparison
Signalized Intersection Synchro Analysis**

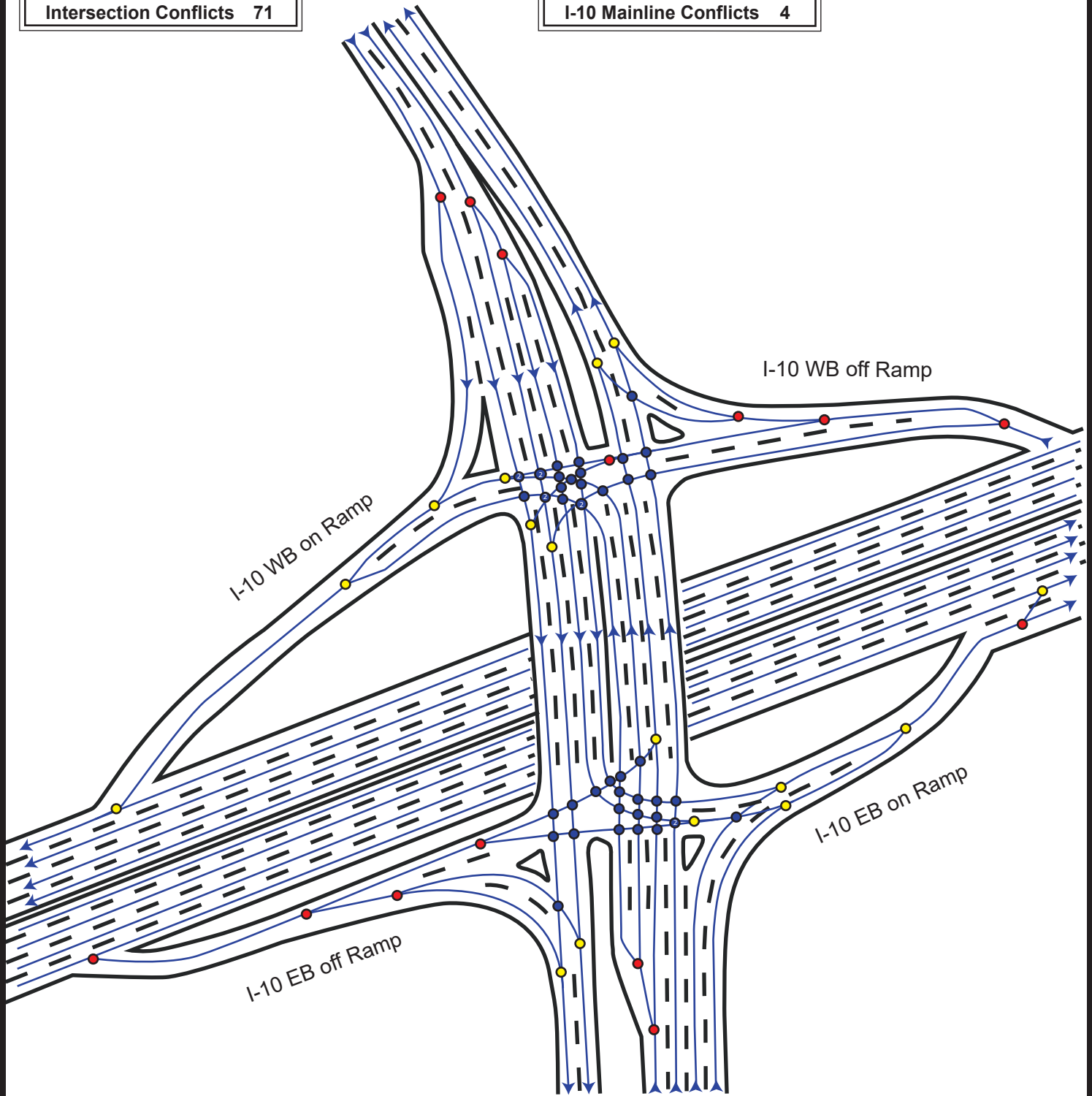
Location	AM											
	Existing			No Build			Build			Build with Concurrent Pedestrian Timing		
	Delay (sec)	V/C Ratio	95th % Queues (ft)	Delay (sec)	V/C Ratio	95th % Queues (ft)	Delay (sec)	V/C Ratio	95th % Queues (ft)	Delay (sec)	V/C Ratio	95th % Queues (ft)
Acadian Thruway at I-10 Westbound Ramps	21.3			21.8			28.4			Same results as Build		
<i>Acadian Thruway Northbound</i>	11.5	0.74	138	11.8	0.75	143	24.6	0.72	213			
<i>Acadian Thruway Southbound</i>	14.3	0.54	370	15.2	0.57	393	27.0	0.54	273			
<i>I-10 Off Ramp Westbound</i>	42.0	0.82	350	42.1	0.83	363	31.8	0.77	383			
Acadian Thruway at I-10 Eastbound Ramps	16.7			17.2			27.6					
<i>Acadian Thruway Northbound</i>	50.1	0.82	300	51.9	0.83	315	35.5	0.86	415			
<i>Acadian Thruway Southbound</i>	5.7	0.54	368	6.0	0.57	390	14.9	0.59	323			
<i>I-10 Off Ramp Eastbound</i>	61.8	0.73	95	61.2	0.73	98	52.9	0.88	290			
Acadian Thruway at Acadian Centre	8.5			8.8			9.4			24.8		
<i>Acadian Thruway Northbound</i>	8.4	0.50	320	8.9	0.53	343	7.1	0.32	208	20.8	0.48	320
<i>Acadian Thruway Southbound</i>	5.1	0.42	253	5.4	0.44	265	7.1	0.60	408	27.1	0.84	740
<i>Richland Plantation Eastbound</i>	84.4	0.41	5	84.4	0.41	5	84.4	0.41	5	37.0	0.01	3
<i>Acadian Centre Westbound</i>	46.0	0.59	140	46.1	0.60	145	69.8	0.82	188	38.2	0.42	133
Acadian Thruway at Perkins Road	44.0			47.5			53.9			Same results as Build		
<i>Stanford Avenue Northbound</i>	44.2	0.90	375	44.6	0.91	390	54.5	0.92	460			
<i>Acadian Thruway Southbound</i>	47.9	0.80	425	48.7	0.81	448	67.8	0.92	558			
<i>Perkins Road Eastbound</i>	42.3	0.80	363	45.2	0.82	410	47.6	0.82	205			
<i>Perkins Road Westbound</i>	42.0	0.81	530	50.2	0.93	643	42.4	0.90	830			
Perkins Rd at I-10 Ramps	18.0			18.9			Intersection does not exist this scenario			Intersection does not exist this scenario		
<i>I-10 Eastbound off ramp Southbound</i>	54.5	0.91	398	53.2	0.91	435						
<i>Perkins Road Eastbound</i>	6.1	0.24	158	7.1	0.27	193						
<i>Perkins Road Westbound</i>	11.5	0.41	318	13.5	0.47	375						

**PM Scenario Comparison
Signalized Intersection Synchro Analysis**

Location	PM											
	Existing			No Build			Build			Build with Concurrent Pedestrian Timing		
	Delay (sec)	V/C Ratio	95th % Queues (ft)	Delay (sec)	V/C Ratio	95th % Queues (ft)	Delay (sec)	V/C Ratio	95th % Queues (ft)	Delay (sec)	V/C Ratio	95th % Queues (ft)
Acadian Thruway at I-10 Westbound Ramps	20.3			20.8			26.6			Same results as Build		
<i>Acadian Thruway Northbound</i>	11.9	0.78	123	12.1	0.78	130	19.1	0.50	183			
<i>Acadian Thruway Southbound</i>	14.2	0.59	418	15.2	0.62	448	24.2	0.51	275			
<i>I-10 Off Ramp Westbound</i>	42.4	0.81	313	42.4	0.81	325	33.6	0.76	358			
Acadian Thruway at I-10 Eastbound Ramps	15.1			15.4			31.9					
<i>Acadian Thruway Northbound</i>	38.9	0.67	303	38.5	0.68	313	39.8	0.85	385			
<i>Acadian Thruway Southbound</i>	6.6	0.60	418	7.1	0.63	450	17.6	0.63	333			
<i>I-10 Off Ramp Eastbound</i>	65.8	0.64	50	66.0	0.65	53	52.9	0.91	365			
Acadian Thruway at Acadian Centre	8.4			8.6			8.8			26.5		
<i>Acadian Thruway Northbound</i>	8.7	0.54	373	9.1	0.57	393	7.4	0.39	243	22.6	0.60	393
<i>Acadian Thruway Southbound</i>	4.7	0.42	240	4.9	0.43	255	7.2	0.61	418	29.5	0.87	785
<i>Richland Plantation Eastbound</i>	51.8	0.29	18	51.8	0.29	18	51.8	0.29	18	37.3	0.05	13
<i>Acadian Centre Westbound</i>	47.7	0.51	78	47.5	0.52	80	59.5	0.79	120	36.9	0.30	93
Acadian Thruway at Perkins Road	53.2			55.7			58.5			Same results as Build		
<i>Stanford Avenue Northbound</i>	65.0	0.89	598	67.3	0.91	630	83.1	0.93	540			
<i>Acadian Thruway Southbound</i>	62.5	0.90	348	63.0	0.90	363	54.1	0.94	745			
<i>Perkins Road Eastbound</i>	47.4	0.85	575	51.4	0.87	668	60.6	0.87	305			
<i>Perkins Road Westbound</i>	42.0	0.77	550	45.7	0.78	638	43.1	0.80	773			
Perkins Rd at I-10 Ramps	9.5			10.1			Intersection does not exist this scenario			Intersection does not exist this scenario		
<i>I-10 Eastbound off ramp Southbound</i>	55.2	0.66	213	56.5	0.73	233						
<i>Perkins Road Eastbound</i>	4.2	0.38	233	4.5	0.42	265						
<i>Perkins Road Westbound</i>	8.7	0.49	390	9.5	0.55	448						

● Diverging Conflict	12
● Merging Conflict	14
● Crossing Conflict	45
Intersection Conflicts	71

● Diverging Conflict	2
● Merging Conflict	2
● Crossing Conflict	0
I-10 Mainline Conflicts	4



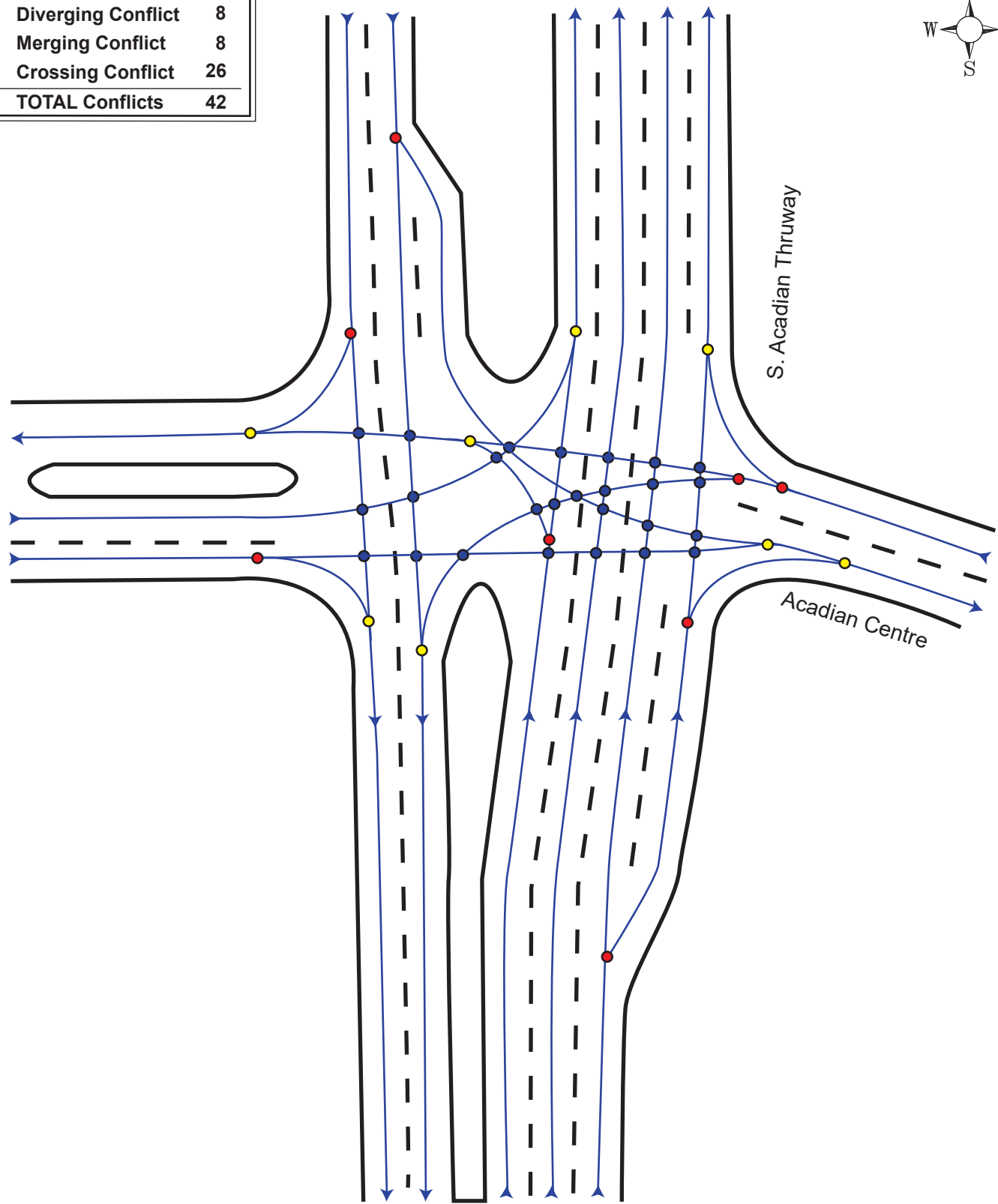
Conflict Points Proposed Conditions

**Acadian/ Perkins IMR
East Baton Rouge Parish, LA**

*NOT TO SCALE
FOR PLANNING PURPOSES ONLY*



● Diverging Conflict	8
● Merging Conflict	8
● Crossing Conflict	26
TOTAL Conflicts	42



Conflict Points Proposed Conditions

**Acadian/ Perkins IMR
East Baton Rouge Parish, LA**

NOT TO SCALE
FOR PLANNING PURPOSES ONLY



**Existing vs Build w/Improvements
Conflict Point Comparison**

Conflict Type	Existing	Build
Interstate Mainline		
Diverging Conflict	3	2
Merging Conflict	3	2
Crossing Conflict	0	0
TOTAL Mainline	6	4
Acadian at the I-10 Interchange (Intersection)		
Diverging Conflict	9	12
Merging Conflict	9	14
Crossing Conflict	18	45
Acadian at Acadian Centre (Intersection)		
Diverging Conflict	6	8
Merging Conflict	8	8
Crossing Conflict	20	26
Perkins at the I-10 Interchange* (Intersection)		
Diverging Conflict	3	0
Merging Conflict	3	0
Crossing Conflict	3	0
TOTAL Intersection	79	113

*Interchange removed in Build conditions

Quality Assurance/Quality Control Form

I-10 Corridor Improvement Stage 1 Environmental Assessment

S.P. No. H.004100

Baton Rouge, Louisiana

Document: *Acadian / Perkins – IMR Chapter 3 and Appendix D*

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3/18/19
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3.25.19
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The information contained herein, and/or any document attached to this email was prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; it may be exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409.

Chapter 3 and Appendix D QAQC (pg 1 of 2)

Task	Chapter/ Appendix	Done by and Date	Checked by and Date
Archive Appendix D pdf with "submittal" and the submittal date in the title U:\Projects\ENGPROJ\2010Proj\10-085-2 EA\Acadian Perkins IMR\PDF Acadian\Ch 3 App D\old	App D	SJT 6/20/19	LTP 6/20/19
Delete pdf pages and data in tables that will be updated	App D	LTP 6/21/19	LTP 7/30/19
Obtain Line and Grade sheets - make sure they are the current line and grade and all areas of IMR are shown	App D	SJT 7/25/19	LTP 7/30/19
Compare L&G geometry to analysis identify what needs to be updated (may be L&G and/or analyses)	App D	SJT 7/25/19	LTP 7/30/19
Update Line and Grade Study, Design Criteria and Exceptions if needed (ask if these have changed)	App D	SJT 7/29/19	LTP 7/30/19
Update Build Merge/Diverge/Freeway Analyses	App D	SJT 6/19 - 6/20/19	LTP 6/19/19
Update merge/diverge/freeway analyses as needed for the sensitivity/see where it breaks down/capacity discussion in Ch 3	App D	LTP 7/24/19	SJT 7/25/19
Weave sensitivity volumes	App D	SJT 6/19/19	LTP 6/19/19
Weave sensitivity figures	App D	SJT 6/24/19	LTP 7/30/19
Update appendix with weave sensitivity figures	App D	SJT 6/24/19	LTP 7/30/19
Update Appendix with new Merge/Diverge/Freeway analyses pdf's and MOE AM/PM Figures	App D	SJT 6/19-6/20/19	LTP 7/30/19
Update MOE's in Merge/Diverge Comparison (copy Figure with MOE's from Ch 3)	App D	N/A	LTP 7/30/19
Update crosswalk median measurements	App D	AMB 7/25/19	LTP 7/26/19
Update crosswalk timing calcs	App D	SJT 7/26/19	LTP 7/26/19
Update Build AM and PM Synchro Files with new Line and Grade geometry, peds, etc.	App D	SJT 7/26/19	LTP 7/28/19
Re-pdf reports in Build AM and PM Synchro using HCM 10 report	App D	SJT 7/26/19	LTP 7/28/19
Replace new HCM 10 Synchro report pdf's in Appendix	App D	SJT 7/29/19	LTP 7/29/19
Update MOE's in Synchro comparison Table (copy table from Ch 3)	App D	SJT 7/29/19	LTP 7/29/19
Update conflict points for mainline - separate and summarize mainline vs intersection	App D	SJT 6/18/19	LTP 6/18/19
Update conflict point table for any changes and per comment in report	App D	LTP 6/20/19	SJT 6/26/19
create a pdf and print	App D	SJT 8/6/19	LTP 8/6/19
check the print copy	App D	SJT 8/6/19	LTP 8/6/19
Update QAQC	App D	SJT 8/5/19	LTP 8/5/19
Put analysis files in zip folder for electronic submittal	App D	SJT 8/6/19	LTP 8/6/19
Incorporated comments from Providence QAQC	App D	N/A	LTP 8/5/19


Archive Ch 3 pdf and word with "submittal" and the submittal date in the title pdf U:\Projects\ENGPROJ\2010Proj\10-085-2 EA\Acadian Perkins IMR\PDF Acadian\Ch 3 App D\old word U:\Projects\ENGPROJ\2010Proj\10-085-2 EA\Acadian Perkins IMR\MS Office Docs\IMR Chapters_old	Ch 3	SJT 6/18/19	LTP 6/19/19
Delete data out of tables that will be updated (have this checked before updating. Make a list if not all deleted at once).	Ch 3	LTP 6/19/19	SJT 7/25/19
Appendix sheet # on page 3-4 (refers to Appendix C-51 C-52)	Ch 3	LTP 7/30/19	N/A
Create Merge/Diverge/Freeway Figure based on approved sketch next tab	Ch 3	SJT 7/25/19	LTP 7/30/19
Add MOE Figure to Ch 3 and renumber Figures.	Ch 3	SJT 7/25/19	LTP 7/30/19
Discuss Merge/Diverge/Freeway analysis. Prepare additional analyses/sensitivity analysis to describe:	Ch 3	LTP 7/24/19	SJT 7/25/19
--what has changed? What has improved?	Ch 3	LTP 7/24/19	SJT 7/25/19
--where is capacity exceeded? I.e., Transcad volume had xxx but the capacity is xxx	Ch 3	LTP 7/24/19	SJT 7/25/19
--where are there still issues??	Ch 3	LTP 7/24/19	SJT 7/25/19

Chapter 3 and Appendix D QAQC (pg 2 of 2)

Add verbiage " which becomes a right slip lane to I-10 EB on ramp." pg 3-1	Ch 3	LTP 6/19/19	SJT 6/26/19
Add verbiage "Also, it was noted ... interstate operations." pg 3-1	Ch 3	LTP 6/19/19	SJT 6/26/19
Add verbiage "(to allow for storage for the right slip lane for the I-10 EB on ramp)" pg 3-2	Ch 3	LTP 6/19/19	SJT 6/26/19
Make sure Build Figure matches new Line and Grade in App D	Ch 3	SJT 7/25/2019	LTP 7/30/19
Make sure the comment "Must analyze merging from 2 to 1 ..." on Figure 3-1 has been resolved	Ch 3	N/A	LTP 7/30/19
Make sure the comment "Peds and bike were not completely addressed in geometry. Please address." on pg 3-4 has been resolved	Ch 3	N/A	LTP 7/30/19
Make sure the comment "Our original comments for the geometry were not addressed." on pg 3-4 has been resolved	Ch 3	N/A	LTP 7/30/19
Revise last sentence on pg 3-4 per comment "HCS 7 uses referenced." to read "In calculations, adjacent ramps are not considered in merge and diverge analysis when there are more than three (3) freeway lanes."	Ch 3	N/A	LTP 7/30/19
Delete Table 3.1 Merge/Diverge (replaced with Figure). Renumber Tables.	Ch 3	LTP 6/19/19	SJT 7/25/19
Make sure the comment "Some of these.....two lanes to one lane." on Table 3-1 has been resolved	Ch 3	N/A	LTP 7/30/19
Make sure the comment "This is not whatbe correctly reported." on pg 3-5 has been resolved	Ch 3	N/A	LTP 7/30/19
Update Table 3.2 and 3.3 Synchro Comparison with updated MOE's...make sure this addresses both comments on the table	Ch 3	N/A	LTP 7/30/19
Delete last sentence pg 3-7	Ch 3	N/A	LTP 7/30/19
Update Table 3.4 to include mainline conflict points, separate and summarize mainline vs intersection add College	Ch 3	LTP 6/19/19	SJT 6/20/19
Add verbiage " However, the conflict points ...interchange. " pg 3-8	Ch 3	LTP 6/19/19	SJT 6/26/19
Add verbiage/delete sentence in <i>Striping and Signage layouts</i> pg 3-8	Ch 3	LTP 6/19/19	SJT 6/26/19
Revise verbiage per comment "Revisit this after reporting HCM results." pg 3-9	Ch 3	N/A	LTP 7/30/19
Delete sentence and replace with "Other interchange to queue." per comment on pg 3-9	Ch 3	N/A	LTP 7/30/19
Update verbiage in Chapter 3 to reflect new analyses	Ch 3	LTP 7/29/19	BDP 7/30/19
Revised verbiage in Chapter 3	Ch 3	ACM 7/31/19	LTP 8/1/19
create a pdf and print	Ch 3	SJT 8/6/19	LTP 8/6/19
check the print copy	Ch 3	SJT 8/6/19	LTP 8/6/19
Update QAQC	Ch 3	SJT 8/5/19	LTP 8/5/19
Comment Response letter (has been started) - add responses per meeting 5/15 and phone call with Ryan and Rina 5/21	Ch 3	LTP 8/1/19	ACM 8/1/19
Incorporated comments from Providence QAQC	Ch 3	N/A	LTP 8/5/19


 Sydney J. Tate, P.E.

8/6/19
 Date


 Lauren Picou, P.E., PTOE

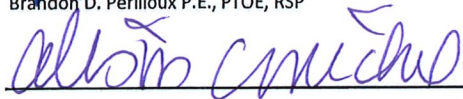
8/6/19
 Date


 Alyssa Bienes, E.I.

8/6/19
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 Brandon D. Perilloux P.E., PTOE, RSP

8/6/19
 Date


 Alison Catarella-Michel, P.E., PTOE, PTP

8.6.19
 Date