College Dr IMR Appendix C

No Build Network Analysis	С-Х
MOE Comparison Table	С-Х
2040 Build Volume Estimation Methodology	С-Х
QA-QC Documentation	С-Х



Project # 10-085-2

HCS7 Freeway Merge Report

Project Information						
Analyst A	AMB		Date	7/26/2019		
Agency l	JSI		Analysis Year	2040		
Jurisdiction L	ADOTD		Time Period Analyzed	No Build A	M	
Project Description I	-10 Corrid	or Improvement Stage 1	LEA - I-10 WB On Ramp from Esse	en Ln AM		
Geometric Data						
			Freeway	Ramp		
Number of Lanes (N)			3	1		
Free-Flow Speed (FFS), mi/h			60.0	35.0		
Segment Length (L) / Acceleration L	ength (LA)), ft	1500	1020		
Terrain Type			Level	Level		
Percent Grade, %			-	-		
Segment Type / Ramp Side			Freeway	Right		
Adjustment Factors						
Driver Population			All Familiar	All Familia	ır	
Weather Type			Non-Severe Weather	Non-Seve	re Weather	
Incident Type			No Incident	-		
Final Speed Adjustment Factor (SAF	·)		1.000	1.000		
Final Capacity Adjustment Factor (C	AF)		1.000	1.000		
Demand Adjustment Factor (DAF)			1.000	1.000		
Demand and Capacity						
Demand Volume (Vi), veh/h			4732	530		
Peak Hour Factor (PHF)			0.96	0.95		
Total Trucks, %			7.00	2.00		
Single-Unit Trucks (SUT), %			-	-		
Tractor-Trailers (TT), %			-	-		
Heavy Vehicle Adjustment Factor (fr	HV)		0.935	0.980		
Flow Rate (vi), pc/h			5272	569		
Capacity (c), pc/h			6900	2000		
Volume-to-Capacity Ratio (v/c)			0.85	0.28	0.28	
Speed and Density						
Upstream Equilibrium Distance (LEQ)), ft	-	Density in Ramp Influence Area (DR), pc/mi/ln 28.2		28.2	
Distance to Upstream Ramp (Lup), ft	:	-	Speed Index (Ms)		0.418	
Downstream Equilibrium Distance (Leq), ft	-	Flow Outer Lanes (voa), pc/h/ln		2077	
Distance to Downstream Ramp (Loo	wn), ft	-	On-Ramp Influence Area Speed	(Sr), mi/h	52.5	
Prop. Freeway Vehicles in Lane 1 an	d 2 (Рғм)	0.606	Outer Lanes Freeway Speed (So), mi/h	54.3	
Flow in Lanes 1 and 2 (v12), pc/h		3195	Ramp Junction Speed (S), mi/h		53.1	
Flow Entering Ramp-Infl. Area (VR12)	, pc/h	3764	Average Density (D), pc/mi/ln		36.7	
Level of Service (LOS)		D				
	1			-		

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HCS7 Freeway Merge Report

Project Information					
Analyst A	MB		Date	7/26/2019	
Agency	JSI		Analysis Year	2040	
Jurisdiction L	ADOTD		Time Period Analyzed	No Build Pl	M
Project Description I-	-10 Corrid	or Improvement Stage 1	EA - I-10 WB On Ramp from Esse	n Ln PM	
Geometric Data					
			Freeway	Ramp	
Number of Lanes (N)			3	1	
Free-Flow Speed (FFS), mi/h			60.0	35.0	
Segment Length (L) / Acceleration L	ength (L _A)	, ft	1500	1020	
Terrain Type			Level	Level	
Percent Grade, %			-	-	
Segment Type / Ramp Side			Freeway	Right	
Adjustment Factors					
Driver Population			All Familiar	All Familia	ır
Weather Type			Non-Severe Weather	Non-Seve	re Weather
Incident Type			No Incident	-	
Final Speed Adjustment Factor (SAF))		1.000	1.000	
Final Capacity Adjustment Factor (C	AF)		1.000	1.000	
Demand Adjustment Factor (DAF)			1.000	1.000	
Demand and Capacity					
Demand Volume (Vi), veh/h			4240	744	
Peak Hour Factor (PHF)			0.87	0.91	
Total Trucks, %			6.00	3.00	
Single-Unit Trucks (SUT), %			-	-	
Tractor-Trailers (TT), %			-	-	
Heavy Vehicle Adjustment Factor (f	iv)		0.943	0.971	
Flow Rate (vi), pc/h			5168	842	
Capacity (c), pc/h			6900	2000	
Volume-to-Capacity Ratio (v/c)			0.87	0.42	
Speed and Density					
Upstream Equilibrium Distance (LEQ)	, ft	-	Density in Ramp Influence Area	(Dr), pc/mi/ln	29.8
Distance to Upstream Ramp (Lup), ft		-	Speed Index (Ms)		0.457
Downstream Equilibrium Distance (L	_EQ), ft	-	Flow Outer Lanes (voa), pc/h/ln		2036
Distance to Downstream Ramp (Loo	wn), ft	-	On-Ramp Influence Area Speed	(SR), mi/h	51.8
Prop. Freeway Vehicles in Lane 1 and	d 2 (Рғм)	0.606	Outer Lanes Freeway Speed (So)	, mi/h	54.5
Flow in Lanes 1 and 2 (v12), pc/h		3132	Ramp Junction Speed (S), mi/h		52.7
Flow Entering Ramp-Infl. Area (vr12),	pc/h	3974	Average Density (D), pc/mi/ln		38.0
Level of Service (LOS)		D			
	1	1		-	

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Project Information

Project Information			
Analyst	АМВ	Date	7/25/19
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improvemer	nt Stage 1 EA - I-10 WB btw Essen on ramp a	and ramp to I-12 EB AM
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	55.5
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	5262	Heavy Vehicle Adjustment Factor (fHV)	0.935
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	1954
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2255
Single-Unit Trucks (SUT), %	-	Adjusted Cpacity (cadj), pc/h/ln	2255
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	54.8
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	35.7
Total Ramp Density Adjustment	4.5	Level of Service (LOS)	E
Adjusted Free-Flow Speed (FFSadj), mi/h	55.5		

I-10 WB btw Essen on ramp and ramp to I-12 EB AM.xuf

Project Information

Project Information			
Analyst	АМВ	Date	7/25/19
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improveme	nt Stage 1 EA - I-10 WB btw Essen on ramp a	ind ramp to I-12 EB PM
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	55.5
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	4984	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.87	Flow Rate (Vp), pc/h/ln	2025
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2255
Single-Unit Trucks (SUT), %	-	Adjusted Cpacity (cadj), pc/h/ln	2255
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.90
Passenger Car Equivalent (ET)	2.000		
Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.1
Right-Side Lateral Clearance Adj. (fRLC)	0.0	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	55.5		

HCS[™] Freeways Version 7.5 I-10 WB btw Essen on ramp and ramp to I-12 EB PM.xuf

Project Information

Project Information			
Analyst	AMB	Date	7/25/19
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improveme	nt Stage 1 EA - I-10 WB btw ramp to I-12 EB	and merge with I-12 WB AI
Geometric Data			
Number of Lanes, In	2	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	4745	Heavy Vehicle Adjustment Factor (fHV)	0.935
Peak Hour Factor	0.96	Flow Rate (Vp), pc/h/ln	2643
Total Trucks, %	7.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Cpacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.17
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		

I-10 WB btw ramp to I-12 EB and merge with I-12 WB AM.xuf

Project Information

Project Information			
Analyst	AMB	Date	7/25/19
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improveme	nt Stage 1 EA - I-10 WB btw ramp to I-12 EB	and merge with I-12 WB PM
Geometric Data			
Number of Lanes, In	2	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	4332	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.87	Flow Rate (Vp), pc/h/ln	2640
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2250
Single-Unit Trucks (SUT), %	-	Adjusted Cpacity (cadj), pc/h/ln	2250
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	1.17
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		

I-10 WB btw ramp to I-12 EB and merge with I-12 WB PM.xuf

Project Information

Project Information			
Analyst	AMB	Date	7/25/19
Agency	US - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improveme	nt Stage 1 EA - I-12 WB btw ramp to I-10 EB	and merge with I-10 WB AN
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	2.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	54.2
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	3537	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.95	Flow Rate (Vp), pc/h/ln	1316
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2242
Single-Unit Trucks (SUT), %	-	Adjusted Cpacity (cadj), pc/h/ln	2242
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.59
Passenger Car Equivalent (ET)	2.000		
Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.2
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	24.3
Total Ramp Density Adjustment	5.8	Level of Service (LOS)	С
Adjusted Free-Flow Speed (FFSadj), mi/h	54.2		1

I-12 WB btw ramp to I-10 EB and merge with I-10 WB AM.xuf

Project Information

Project Information			
Analyst	АМВ	Date	7/25/19
Agency	USI - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improveme	nt Stage 1 EA - I-12 WB btw ramp to I-10 EB	and merge with I-10 WB PM
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	2.00
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	54.2
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			2
Demand Volume veh/h	2663	Heavy Vehicle Adjustment Factor (fHV)	0.901
Peak Hour Factor	0.92	Flow Rate (Vp), pc/h/ln	1071
Total Trucks, %	11.00	Capacity (c), pc/h/ln	2242
Single-Unit Trucks (SUT), %	-	Adjusted Cpacity (cadj), pc/h/ln	2242
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.48
Passenger Car Equivalent (ET)	2.000		
Speed and Density			
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	54.2
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	19.8
Total Ramp Density Adjustment	5.8	Level of Service (LOS)	С
Adjusted Free-Flow Speed (FFSadj), mi/h	54.2		

I-12 WB btw ramp to I-10 EB and merge with I-10 WB PM.xuf

Project Information

Project information			
Analyst	AMB	Date	4/4/2018
Agency	US - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build AM
Project Description	I-10 Corridor Improveme College Dr	nt Stage 1 EA - I-10 WB between merge with	I-12 WB and off ramp to
Geometric Data			
Number of Lanes, In	5	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	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.8
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	8282	Heavy Vehicle Adjustment Factor (fHV)	0.943
Peak Hour Factor	0.98	Flow Rate (Vp), pc/h/ln	1792
Total Trucks, %	6.00	Capacity (c), pc/h/ln	2238
Single-Unit Trucks (SUT), %	-	Adjusted Cpacity (cadj), pc/h/ln	2238
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	53.8
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	33.3
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	53.8		
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I-10 WB btw College Dr and I-12 AM.xuf

Project Information

Project Information			
Analyst	AMB	Date	4/4/2018
Agency	US - 10-085-2	Analysis Year	2040
Jurisdiction	LADOTD	Time Period Analyzed	No Build PM
Project Description	I-10 Corridor Improveme College Dr	nt Stage 1 EA - I-10 WB between merge with	I-12 WB and off ramp to
Geometric Data			
Number of Lanes, In	5	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	2.17
Lane Width, ft	12	Free-Flow Speed (FFS), mi/h	53.8
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	6995	Heavy Vehicle Adjustment Factor (fHV)	0.926
Peak Hour Factor	0.89	Flow Rate (Vp), pc/h/ln	1698
Total Trucks, %	8.00	Capacity (c), pc/h/ln	2238
Single-Unit Trucks (SUT), %	-	Adjusted Cpacity (cadj), pc/h/ln	2238
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.76
Passenger Car Equivalent (ET)	2.000		
Speed and Density		·	·
Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	53.8
Right-Side Lateral Clearance Adj. (fRLC)	0.0	Density (D), pc/mi/ln	31.6
Total Ramp Density Adjustment	6.2	Level of Service (LOS)	D
Adjusted Free-Flow Speed (FFSadj), mi/h	53.8		
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I-10 WB btw College Dr and I-12 PM.xuf

Project Information

AMB	Date	4/4/2018
US - 10-085-2	Analysis Year	2040
LADOTD	Time Period Analyzed	No Build AM
I-10 Corridor Improvement	Stage 1 EA - I-10 WB btw College Dr on ar	nd off ramps AM
4	Terrain Type	Level
-	Percent Grade, %	-
Base	Grade Length, mi	-
60.0	Total Ramp Density (TRD), ramps/mi	2.00
12	Free-Flow Speed (FFS), mi/h	54.2
10		
All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000
No Incident	Demand Adjustment Factor (DAF)	1.000
6962	Heavy Vehicle Adjustment Factor (fHV)	0.943
0.98	Flow Rate (Vp), pc/h/ln	1883
6.00	Capacity (c), pc/h/ln	2242
-	Adjusted Cpacity (cadj), pc/h/ln	2242
-	Volume-to-Capacity Ratio (v/c)	0.84
2.000		
0.0	Average Speed (S), mi/h	54.1
0.0	Density (D), pc/mi/ln	34.8
5.8	Level of Service (LOS)	D
54.2		1
	US - 10-085-2 LADOTD I-10 Corridor Improvement 4 - Base 60.0 12 10 All Familiar Non-Severe Weather No Incident 6962 0.98 6.00 - 2.000 0.0 0.0 5.8	US - 10-085-2Analysis YearLADOTDTime Period AnalyzedI-10 Corridor Improvement Stage 1 EA - I-10 WB btw College Dr on ar4Terrain Type-Percent Grade, %BaseGrade Length, mi60.0Total Ramp Density (TRD), ramps/mi12Free-Flow Speed (FFS), mi/h10Image: Speed Key Speed (FFS), mi/h10Image: Speed Key Speed

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I-10 WB btw College Dr on and off ramps AM.xuf

Project Information

AMB	Date	4/4/2018			
US - 10-085-2	Analysis Year	2040			
LADOTD	Time Period Analyzed	No Build PM			
I-10 Corridor Improvemen	t Stage 1 EA - I-10 WB btw College Dr on a	nd off ramps			
4	Terrain Type	Level			
-	Percent Grade, %	-			
Base	Grade Length, mi	-			
60.0	Total Ramp Density (TRD), ramps/mi	2.00			
12	Free-Flow Speed (FFS), mi/h	54.2			
10					
All Familiar	Final Speed Adjustment Factor (SAF)	1.000			
Non-Severe Weather	Final Capacity Adjustment Factor (CAF)	1.000			
No Incident	Demand Adjustment Factor (DAF)	1.000			
5582	Heavy Vehicle Adjustment Factor (fHV)	0.926			
0.89	Flow Rate (Vp), pc/h/ln	1693			
8.00	Capacity (c), pc/h/ln	2242			
-	Adjusted Cpacity (cadj), pc/h/ln	2242			
-	Volume-to-Capacity Ratio (v/c)	0.76			
2.000					
0.0	Average Speed (S), mi/h	54.2			
0.0	Density (D), pc/mi/ln	31.2			
5.8	Level of Service (LOS)	D			
54.2					
	US - 10-085-2 LADOTD I-10 Corridor Improvement 4 - Base 60.0 12 10 All Familiar Non-Severe Weather No Incident 5582 0.89 8.00 - 2.000	US - 10-085-2Analysis YearLADOTDTime Period AnalyzedI-10 Corridor Improvement Stage 1 EA - I-10 WB btw College Dr on and4Terrain Type-Percent Grade, %BaseGrade Length, mi60.0Total Ramp Density (TRD), ramps/mi12Free-Flow Speed (FFS), mi/h10IntervalAll FamiliarFinal Speed Adjustment Factor (SAF)Non-Severe WeatherFinal Capacity Adjustment Factor (CAF)No IncidentDemand Adjustment Factor (DAF)5582Heavy Vehicle Adjustment Factor (fHV)0.89Flow Rate (Vp), pc/h/ln8.00Capacity (c), pc/h/ln-Adjusted Cpacity (cad), pc/h/ln-Volume-to-Capacity Ratio (v/c)2.000Density (D), pc/mi/ln5.8Level of Service (LOS)54.2Ievel of Service (LOS)			

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I-10 WB btw College Dr on and off ramps PM.xuf

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Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	ሻሻ	1	<u></u>	1	۳.	- ††	
Volume (veh/h)	581	739	1111	247	241	1117	
Number	7	14	6	16	5	2	
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	1863	1863	1863	1881	1863	1845	
Adj Flow Rate, veh/h	625	0	1195	0	259	1201	
Adj No. of Lanes	2	1	2	1	1	2	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	2	2	2	1	2	3	
Cap, veh/h	708	326	1483	670	293	1976	
Arrive On Green	0.21	0.00	0.42	0.00	0.10	0.56	
Sat Flow, veh/h	3442	1583	3632	1599	1774	3597	
Grp Volume(v), veh/h	625	0	1195	0	259	1201	
Grp Sat Flow(s),veh/h/ln	1721	1583	1770	1599	1774	1752	
Q Serve(g_s), s	21.1	0.0	35.5	0.0	9.5	27.3	
Cycle Q Clear(g_c), s	21.1	0.0	35.5	0.0	9.5	27.3	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	708	326	1483	670	293	1976	
V/C Ratio(X)	0.88	0.00	0.81	0.00	0.89	0.61	
Avail Cap(c_a), veh/h	846	389	1483	670	480	2322	
HCM Platoon Ratio	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	
Uniform Delay (d), s/veh	46.2	0.0	30.6	0.0	25.0	17.4	
Incr Delay (d2), s/veh	9.8	0.0	4.8	0.0	6.5	0.5	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/In 🧹	16.5	0.0	25.2	0.0	8.8	19.3	
LnGrp Delay(d),s/veh	56.0	0.0	35.3	0.0	31.5	17.8	
LnGrp LOS	E		D		С	В	
Approach Vol, veh/h	625		1195			1460	
Approach Delay, s/veh	56.0		35.3			20.3	
Approach LOS	E		D			С	
Timer	1	2	3	4	5	6	7 8
Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		73.1		30.2	17.4	55.8	
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5	
Max Green Setting (Gmax), s		79.5		29.5	24.5	49.5	
Max Q Clear Time (g_c+l1), s		29.3		23.1	11.5	37.5	
Green Ext Time (p_c), s		38.3		1.6	0.3	11.1	
Intersection Summary							
HCM 2010 Ctrl Delay			32.6				
HCM 2010 LOS			С				

	-	1	1	Ť	
Phase Number	2	4	5	6	
Movement	SBTL	WBL	SBL	NBT	
Lead/Lag			Lead	Lag	
Lead-Lag Optimize			Yes	Yes	
Recall Mode	Min	None	None	C-Max	
Maximum Split (s)	85	35	30	55	
Maximum Split (%)	70.8%	29.2%	25.0%	45.8%	
Minimum Split (s)	15.5	10.5	15.5	15.5	
Yellow Time (s)	4.5	4.5	4.5	4.5	
All-Red Time (s)	1	1	1	1	
Minimum Initial (s)	10	5	3	10	
Vehicle Extension (s)	4	3.4	2	4	
Minimum Gap (s)	2	3.4	2	2	
Time Before Reduce (s)	20	0	0	20	
Time To Reduce (s)	2	0	0	2	
Walk Time (s)					
Flash Dont Walk (s)					
Dual Entry	No	No	No	No	
Inhibit Max	Yes	Yes	Yes	Yes	
Start Time (s)	35.5	0.5	35.5	65.5	
End Time (s)	0.5	35.5	65.5	0.5	
Yield/Force Off (s)	115	30	60	115	
Yield/Force Off 170(s)	115	30	60	115	
Local Start Time (s)	40.5	5.5	40.5	70.5	
Local Yield (s)	0	35	65	0	
Local Yield 170(s)	0	35	65	0	V
Intersection Summary					
Cycle Length			120		
Control Type	Actu	ated-Coo	rdinated		
Natural Cycle			70		

Splits and Phases: 7: College Dr & I-10



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Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations	ሻሻ	1	<u></u>	1	٦	- † †	
Volume (veh/h)	628	785	1253	169	215	1388	
Number	7	14	6	16	5	2	<u></u>
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	1863	1863	1881	1900	1900	1863	
Adj Flow Rate, veh/h	690	0	1377	0	236	1525	
Adj No. of Lanes	2	1	2	1	1	2	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	
Percent Heavy Veh, %	2	2	1	0	0	2	
Cap, veh/h	677	311	1933	874	279	2297	
Arrive On Green	0.20	0.00	0.54	0.00	0.07	0.65	
Sat Flow, veh/h	3442	1583	3668	1615	1810	3632	
Grp Volume(v), veh/h	690	0	1377	0	236	1525	
Grp Sat Flow(s),veh/h/ln	1721	1583	1787	1615	1810	1770	
Q Serve(g_s), s	29.5	0.0	43.2	0.0	8.4	39.9	
Cycle Q Clear(g_c), s	29.5	0.0	43.2	0.0	8.4	39.9	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	677	311	1933	874	279	2297	
V/C Ratio(X)	1.02	0.00	0.71	0.00	0.85	0.66	
Avail Cap(c_a), veh/h	677	311	1933	874	469	2584	
HCM Platoon Ratio	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	
Uniform Delay (d), s/veh	60.3	0.0	25.7	0.0	27.0	16.2	
Incr Delay (d2), s/veh	39.6	0.0	2.3	0.0	3.0	0.7	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(95%),veh/ln 🍃	31.9	0.0	29.5	0.0	9.6	26.7	
LnGrp Delay(d),s/veh	99.8	0.0	28.0	0.0	29.9	16.9	
LnGrp LOS	F		С		С	В	
Approach Vol, veh/h	690		1377			1761	
Approach Delay, s/veh	99.8		28.0			18.6	
Approach LOS	F		С			В	
Timer	1	2	3	4	5	6	7 8
Assigned Phs		2		4	5	6	
Phs Duration (G+Y+Rc), s		102.9		35.0	16.2	86.6	
Change Period (Y+Rc), s		5.5		5.5	5.5	5.5	
Max Green Setting (Gmax), s		109.5		29.5	26.5	77.5	
Max Q Clear Time (g_c+l1), s		41.9		31.5	10.4	45.2	
Green Ext Time (p_c), s		55.5		0.0	0.3	30.1	
Intersection Summary							
HCM 2010 Ctrl Delay			36.6				
HCM 2010 LOS			D				

	4	4	1	1		
Phase Number	2	4	5	6		
Movement	SBTL	WBL	SBL	NBT		
Lead/Lag			Lead	Lag		
Lead-Lag Optimize			Yes	Yes		
Recall Mode	Min	None	None	C-Max		
Maximum Split (s)	115	35	32	83		
Maximum Split (%)	76.7%	23.3%	21.3%	55.3%		
Minimum Split (s)	15.5	10.5	9.5	15.5		
Yellow Time (s)	4.5	4.5	4.5	4.5		
All-Red Time (s)	1	1	1	1		
Minimum Initial (s)	10	5	3	10		
Vehicle Extension (s)	4	3.4	2	4		
Minimum Gap (s)	2	3.4	2	2		
Time Before Reduce (s)	20	0	0	20		
Time To Reduce (s)	2	0	0	2		
Walk Time (s)						
Flash Dont Walk (s)						
Dual Entry	No	No	No	No		
Inhibit Max	Yes	Yes	Yes	Yes		
Start Time (s)	82.5	47.5	82.5	114.5		
End Time (s)	47.5	82.5	114.5	47.5		
Yield/Force Off (s)	42	77	109	42		
Yield/Force Off 170(s)	42	77	109	42		
Local Start Time (s)	40.5	5.5	40.5	72.5		
Local Yield (s)	0	35	67	0		
Local Yield 170(s)	0	35	67	0		
Intersection Summary						
Cycle Length			150			
Control Type	Actu	ated-Coo	rdinated			
Natural Curala			70			
Natural Cycle						

Splits and Phases: 7: College Dr & I-10



Intersection Analysis Comparison Existing and No Build Conditions

	AM							PM						
	Existing				No Buil	d		Existin	g	No Build				
Location	Delay (sec)	V/C Ratio	95 th % Queues (ft)	Delay (sec)V/C Ratio95th % Queues (ft)		Delay V/C (sec) Ratio				V/C Ratio	95 th % Queues (ft)			
College Dr at I-10 WB Ramps	31.7			32.6			33.7			36.6				
I-10 ramp Westbound	55.3	0.87	385	56.0	0.88	413	83.2	0.95	548	99.8	1.02	798		
College Dr Northbound	34.1	0.76	583	35.3	0.81	630	28.1	0.68	690	28.0	0.71	738		
College Dr Southbound	19.5	0.81	450	20.3	0.89	483	18.6	0.77	630	18.6	0.85	668		

Freeway and Merge Analysis Comparison

Existing and No Build Conditions

	A	M	PM			
Location	Existing	No Build	Existing	No Build		
Location	Density (pc/mi/ln)	Density (pc/mi/ln)	Density (pc/mi/ln)	Density (pc/mi/ln)		
I-10 WB On Ramp from Essen Ln Merge	27.6	36.7	28.7	38.0		
I-10 WB between On Ramp from Essen Ln and Off Ramp to I-12 EB	27.4	35.7	28.6	37.4		
I-10 WB between Off Ramp to I-12 EB and merge with I-12 WB	37.5		37.5			
I-12 WB between Off Ramp to I-10 EB and merge with I-10 WB	22.5	24.3	18.3	19.8		
I-10 WB between merge with I-12 WB and off ramp to College Dr	27.8	33.3	26.0	31.6		
I-10 WB between College Dr on and off ramps	28.3	34.8	24.9	31.2		

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

College Drive 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 include directional ramps from I-10 and from I-12 to College Drive and two options for the tie in of the directional ramp to College Drive:

- Option 1 includes a single lane exit ramp to Trust Drive, a new designated right turn only lane at the signalized intersection of College Drive at the I-10 WB ramp and the removal of the WB right turn slip lane.
- Option 2 includes a right turn slip lane for vehicles exiting at College Drive destined for Corporate Boulevard and a new designated right turn only lane at the signalized intersection of College Drive at the I-10 WB ramp.

Separate IMRs are being prepared for proposed modifications to the Acadian Throughway /Perkins Road interchanges and Washington/Dalrymple interchanges.

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. The model volume output is not intended to be used as absolute, especially at the micro level such as peak periods at intersections. 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.

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 Drive Directional Ramps from I-10 and I-12
 - o Perkins Ramp Removal
 - Washington Street/Dalrymple Drive 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 in **Appendix C**.

The intersection flow diagrams were reviewed for the AM and PM peak periods. The intersection flow diagrams are presented in **Appendix C**. The ADTs were also reviewed and are presented in **Appendix C**. The 2040 No Build volumes presented in **Figure 2.5** were multiplied by the percent change calculated from the TransCAD models to estimate traffic volumes that exist in both the No Build and Build conditions on I-10 and at the ramp terminal. 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 results are presented in **Table C-1**.

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.

Table (C-1
TransCAD Data	Comparison

				AM						PN	ADT					
No Build Build Node Node	Location	Approach	Movement	No Build	Build	% Change	No Build VPH*	Proposed Build Volumes	No Build	Build	% Change	No Build VPH*	Proposed Build Volumes	No Build	Build	% Change
5025	I-10 WB	I-10 WB	Mainline between Essen On and Off Ramp	11580	11325	98%	4745	4650	10786	10507	97%	4332	4202	57836	56652	98%
5722	I-12 WB	I-12 WB	Mainline between Essen On and Off Ramp	10855	10919	101%	3537	3572	8142	8178	100%	2663	2663	51772	51923	100%
		I-10 WB off Ramp	Westbound Left	2494	1727	69%	581	401	2118	1405	66%	628	415	21545	12658	59%
		1-10 WB on Ramp	Westbound Right	2766	1470	53%	739	392	2553	1296	51%	785	400	21345	12050	5770
6347	I-10 WB Off Ramp @	College Dr NB	Northbound Thru	3489	4068	117%	1111	1300	4157	4741	114%	1253	1428	19200	22305	116%
0347	College Dr	College DI ND	Northbound Right	158	259	164%	247	405	445	521	117%	169	198	19200	22303	11070
		Callaga Dr SD	Southbound Left	417	643	154%	241	371	722	1086	150%	215	323	24836	26482	107%
		College Dr SB	Southbound Thru	4306	4261	99%	1117	1106	5453	5550	102%	1388	1416	24836	20482	10770
6406	I-10 WB Off Ramp to I-12 EB (using I-12 EB)	I-10 WB Off Ramp to I-12 EB	Off Ramp	6770	7277	107%	517	553	11183	12096	108%	652	704	53845	55799	104%
5025	I-10 WB On Ramp from Essen Ln	I-10 WB On Ramp from Essen Ln	On Ramp	1383	1493	108%	530	572	3366	2611	78%	744	580	9234	8995	97%

* Presented in Figure 2.5

Directional Ramp tie in to College Drive Volumes

Options 1 and 2 for the I-10 WB ramp terminal at College Drive was not included in the CRPC model. Traffic volumes for the two (2) options were estimated based on the number of vehicles which would access Corporate Boulevard from the College Drive I-10 WB off ramp using a traffic count provided by LADOTD. The count documented the number of right turns from the I-10 WB off ramp going straight to College Drive NB and the number making a right onto Corporate Boulevard. It was assumed that the percentage of vehicles which would use the Trust Drive ramp in Option 1 and the right turn slip lane in Option 2 were the same. The count is presented in **Appendix C** and the AM and PM percentages were 35% and 34%, respectively.

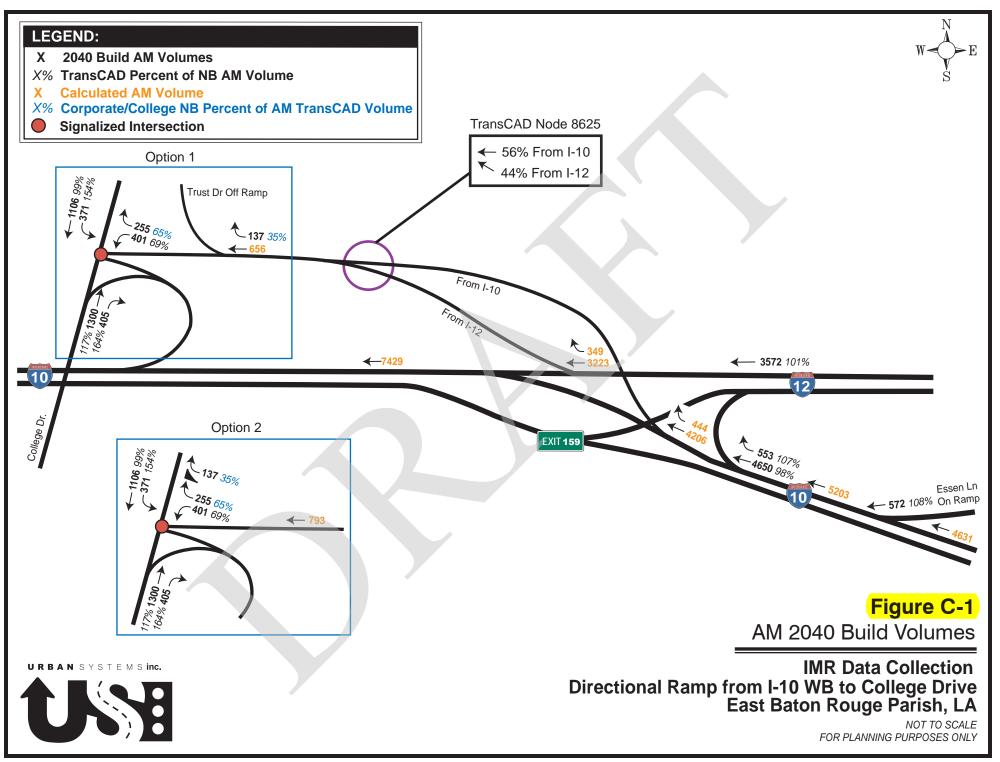
Build Volumes

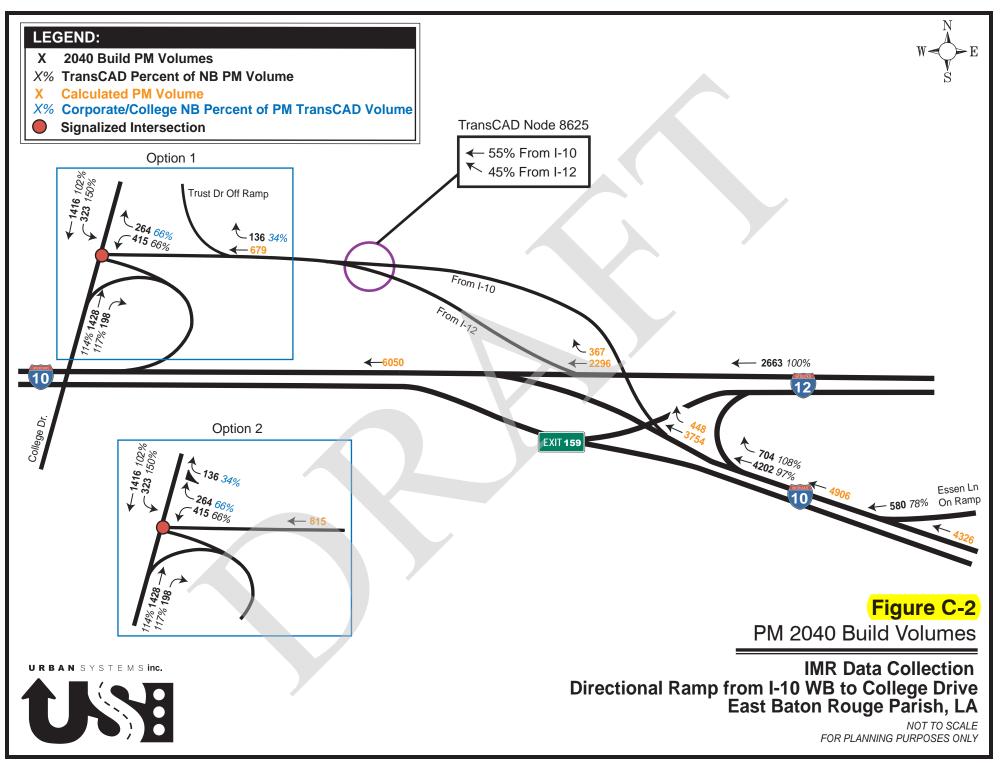
Volumes exiting from I-10 WB and I-12 WB to the College Drive Off Ramp were calculated based on a percent breakdown from the 2037 Build TransCAD Node 8625 output. The percent breakdown is presented on **Figures C-1** and **C-2** and on TransCAD output sheets in **Appendix C**.

Volumes using the Trust Drive connection in Option 1 to access Corporate Boulevard were calculated based on the percentage from the count provided by LADOTD and the TransCAD adjusted volumes. The percentages are shown in blue on **Figures C-1** and **C-2**.

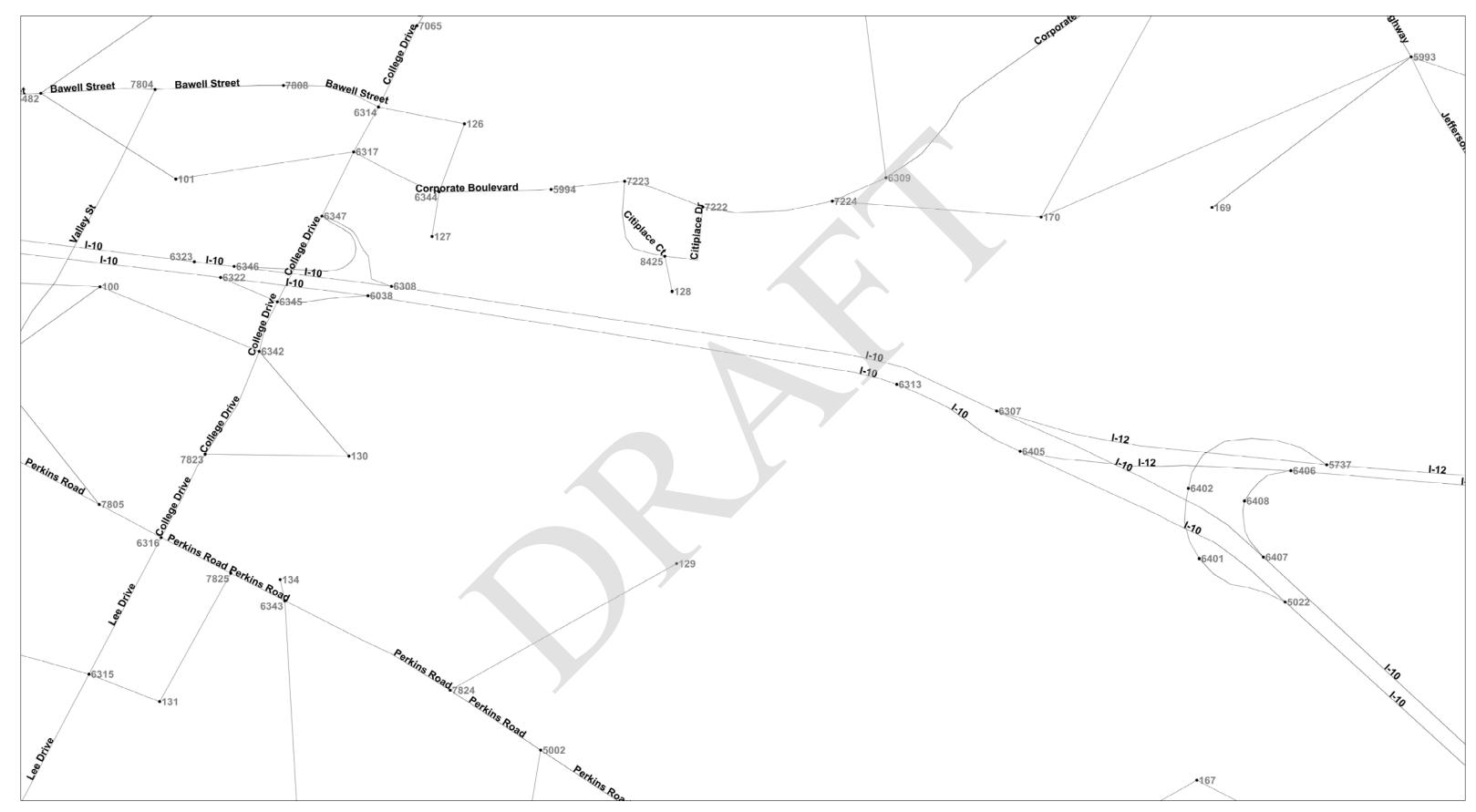
Volumes using the right turn slip lane in Option 2 to access Corporate Boulevard were calculated based on the percentage from the count provided by LADOTD and the TransCAD adjusted volumes. The percentages are shown in blue on **Figures C-1** and **C-2**.

The remaining movements were calculated from the upstream/downstream locations and are shown in orange on the volume figures. The resulting Build volumes are presented in black on **Figure C-1** for the AM and **Figure C-2** for the PM.

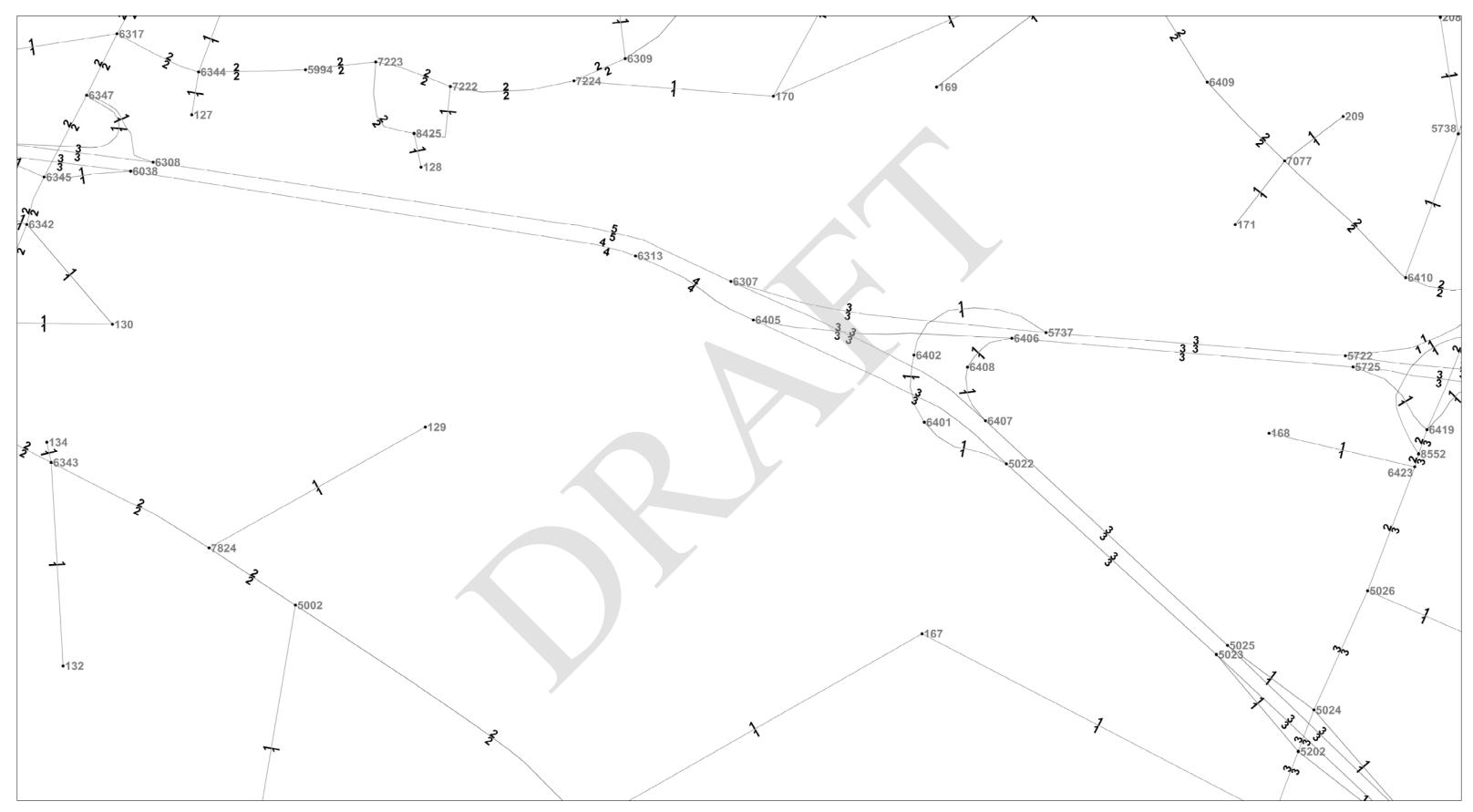




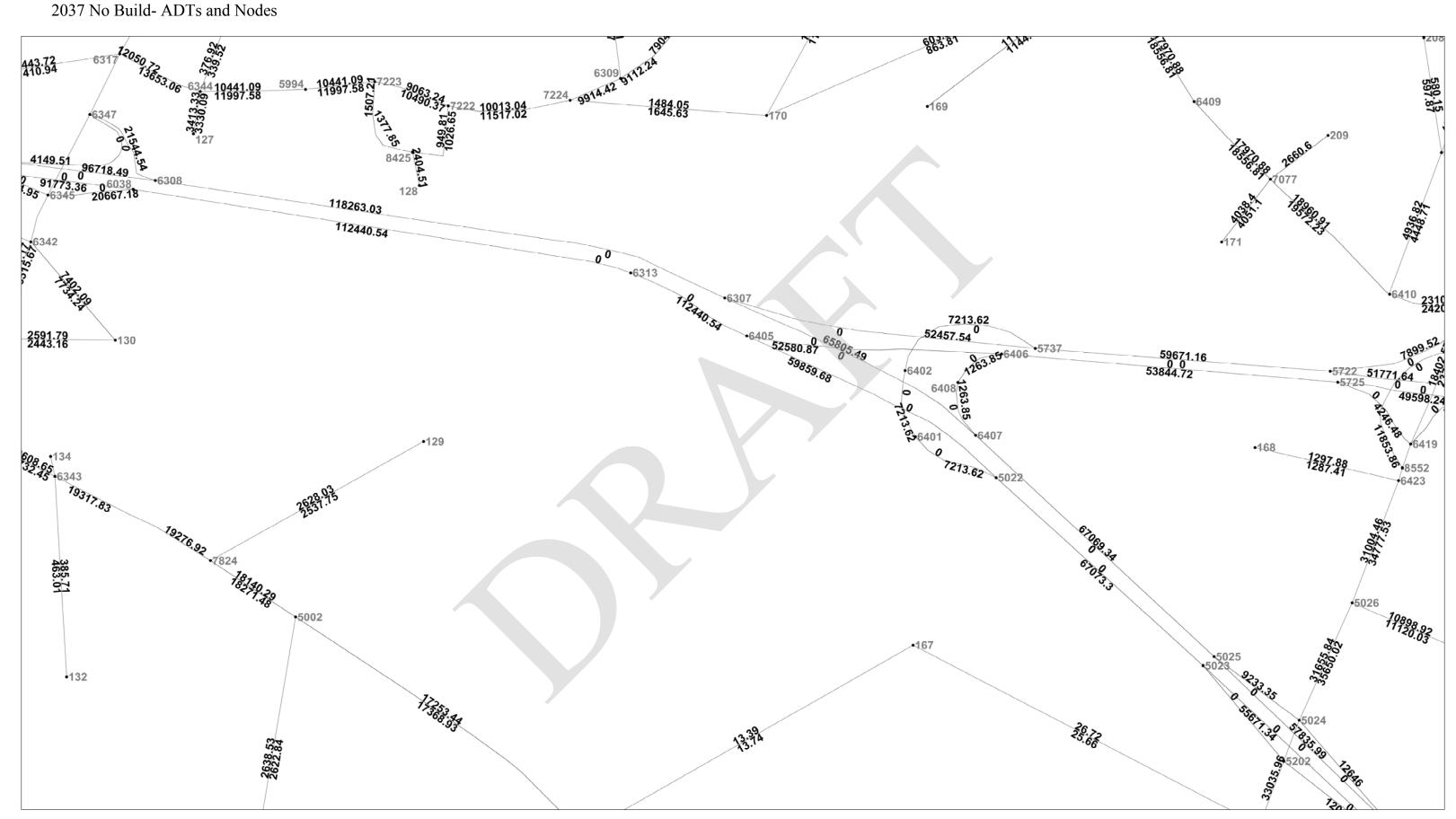
College Drive IMR 2037 No Build- Names and Nodes



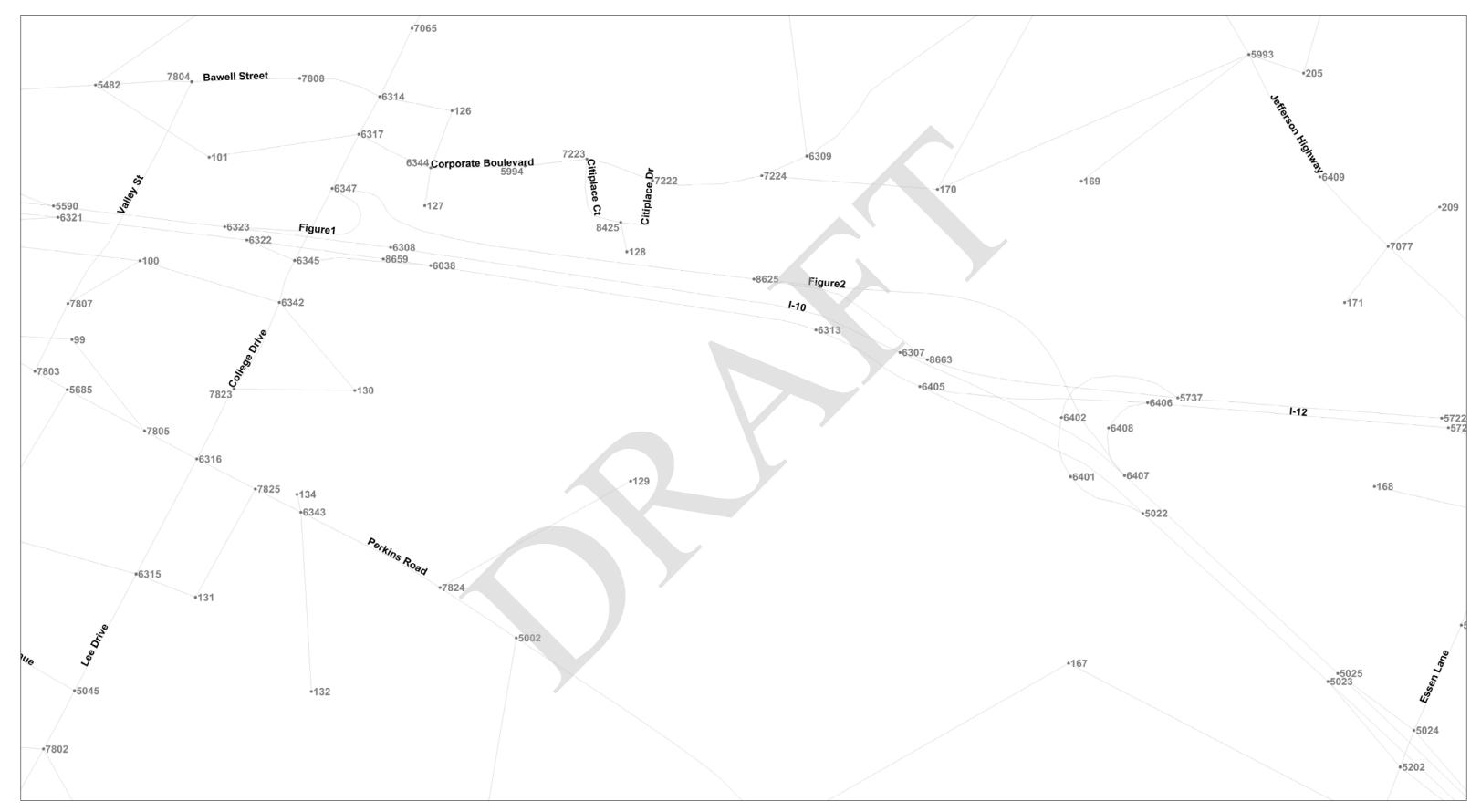
College Drive IMR 2037 No Build- Lanes and Nodes



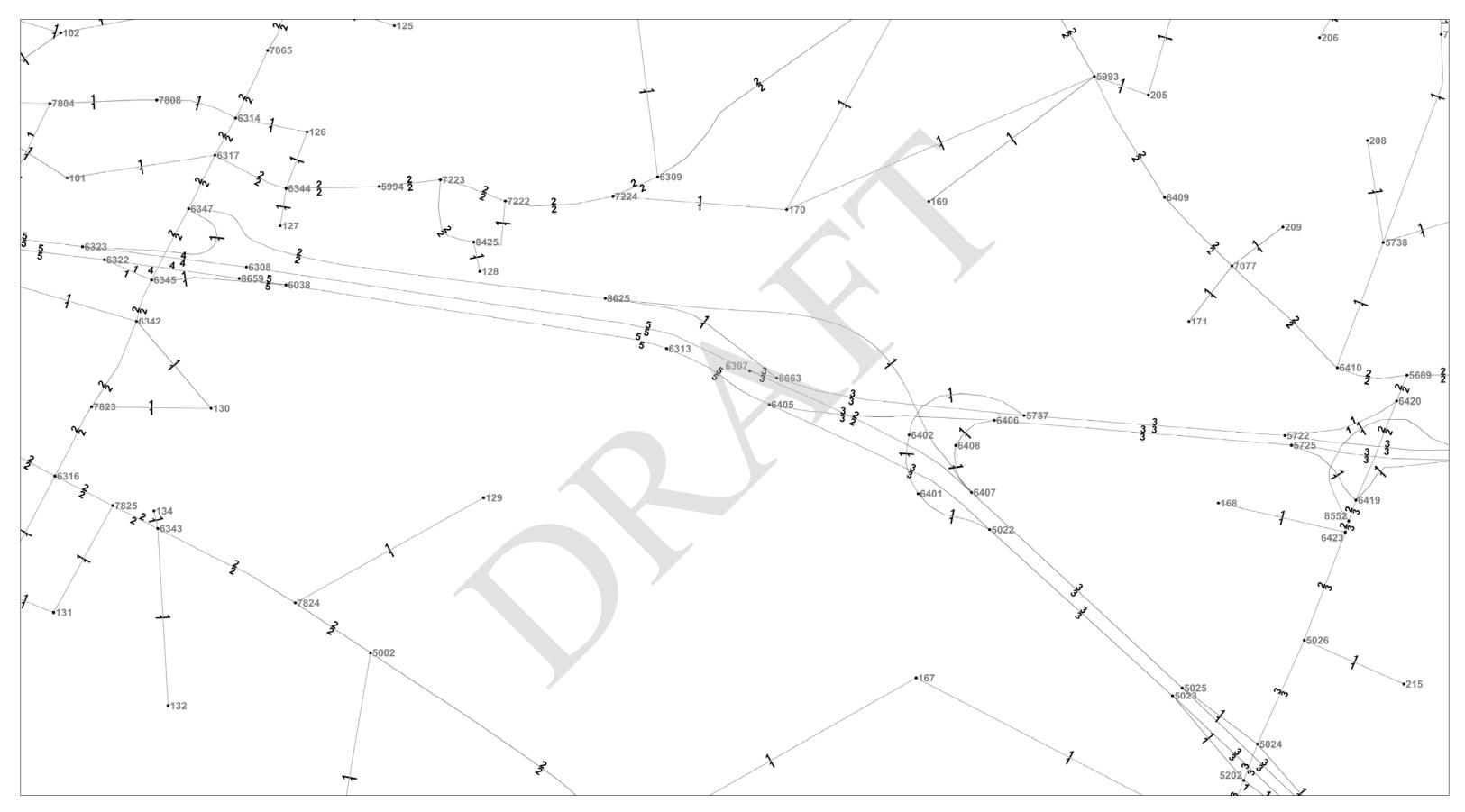
College Drive IMR 2037 No Build- ADTs and Nodes



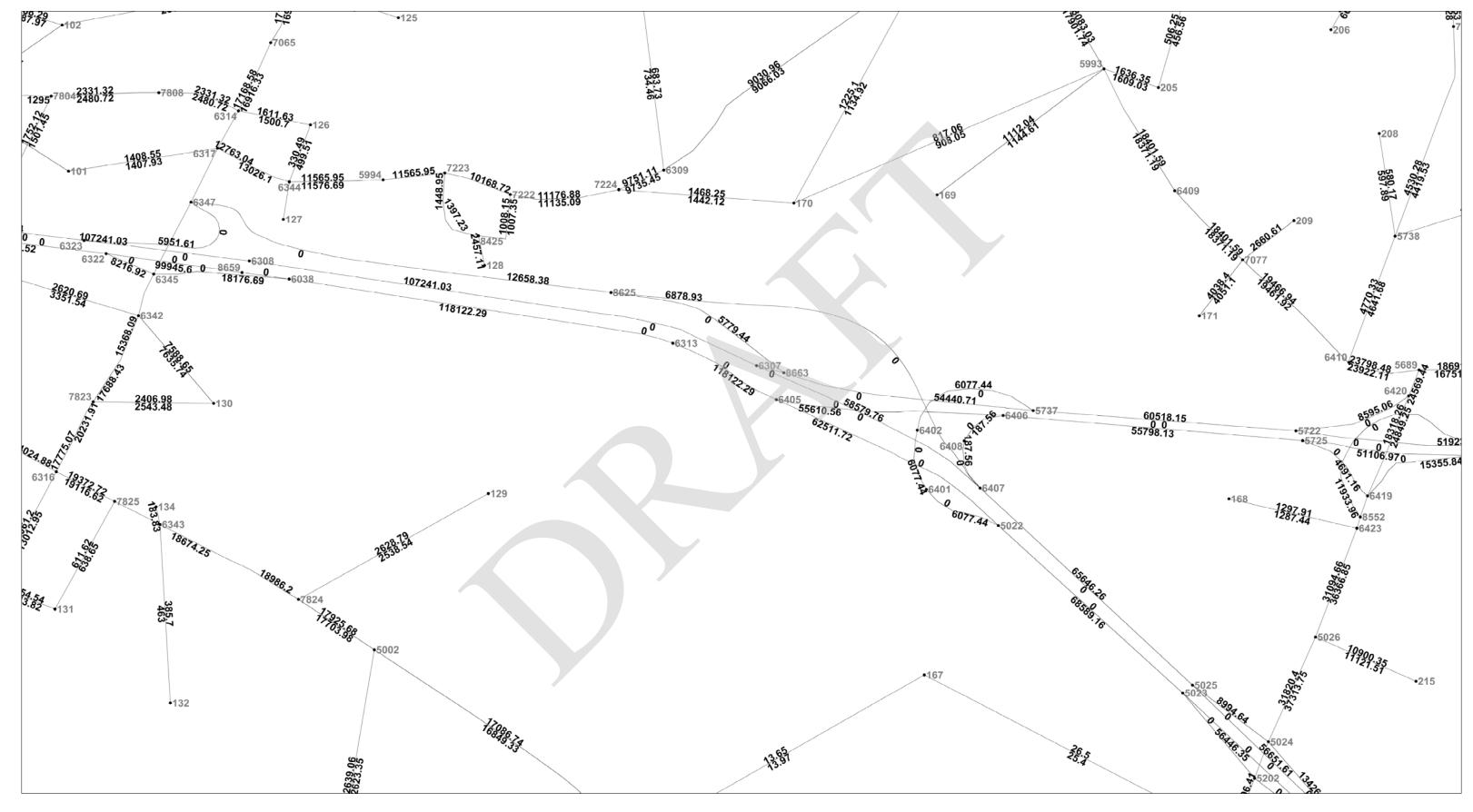
College Drive IMR 2037 Build- Names and Nodes



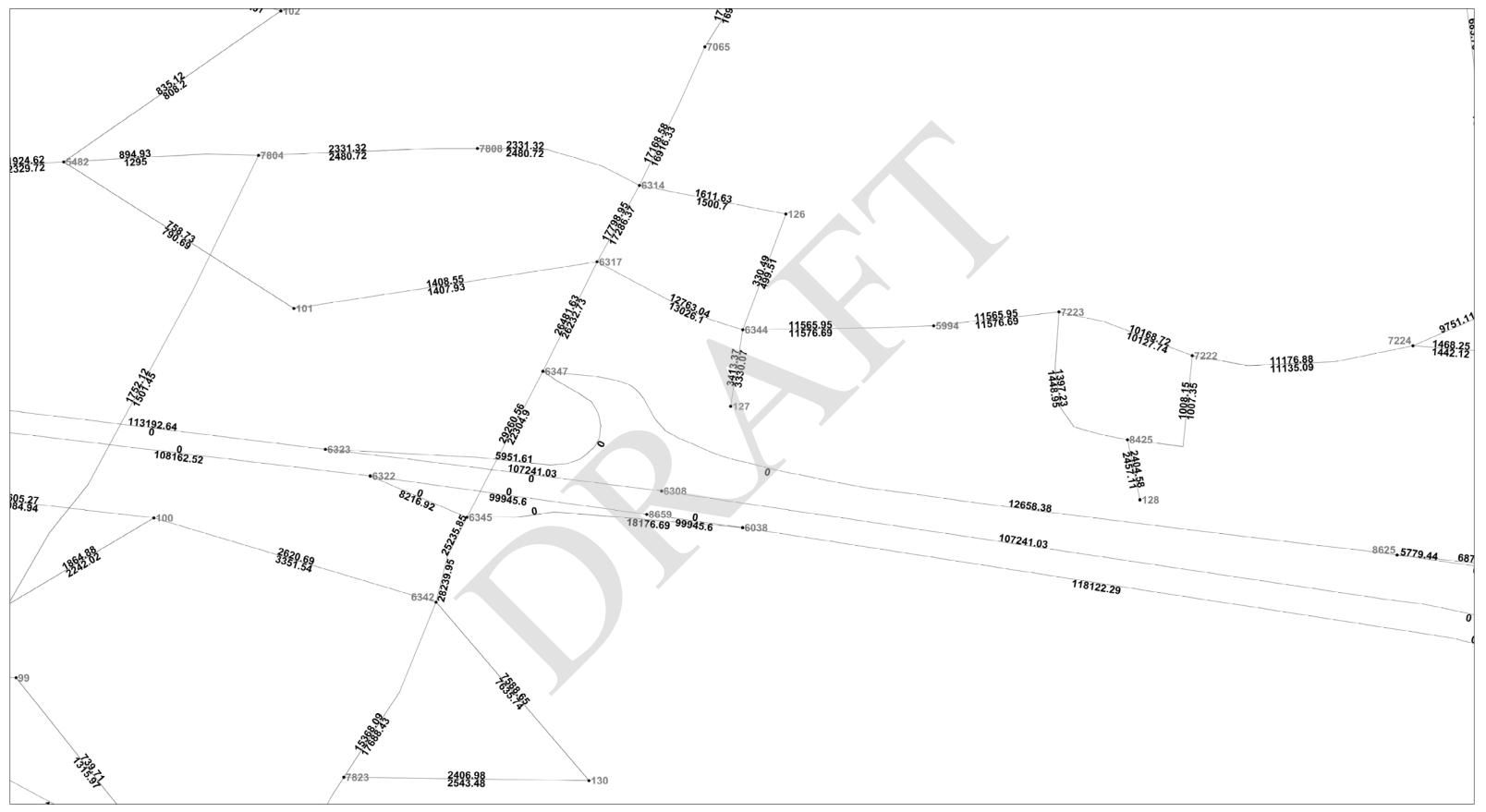
College Drive IMR 2037 Build- Lanes and Nodes

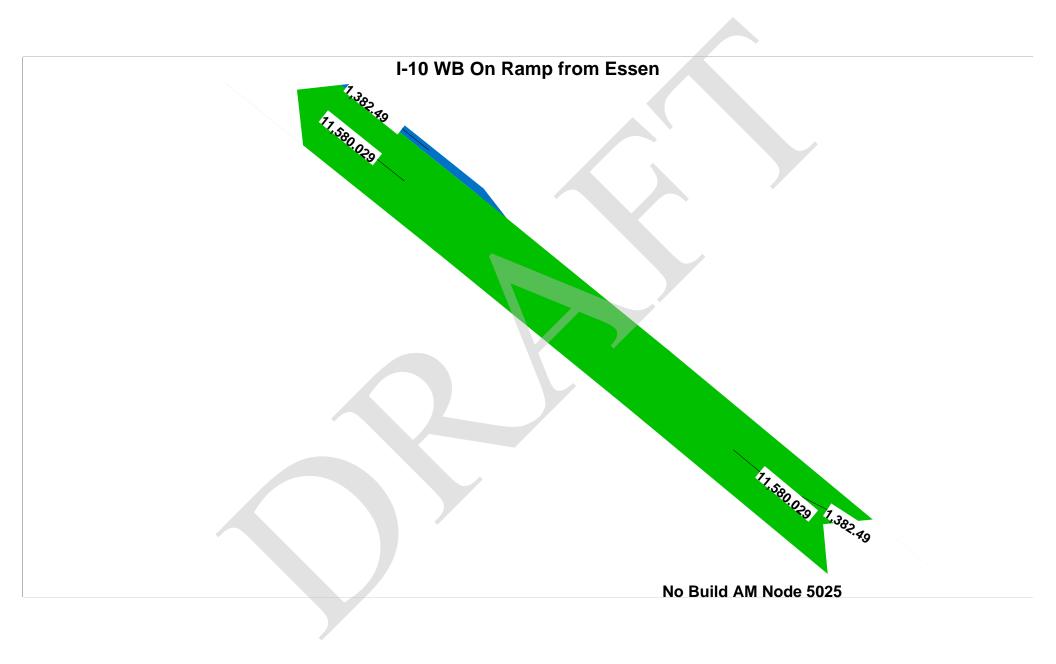


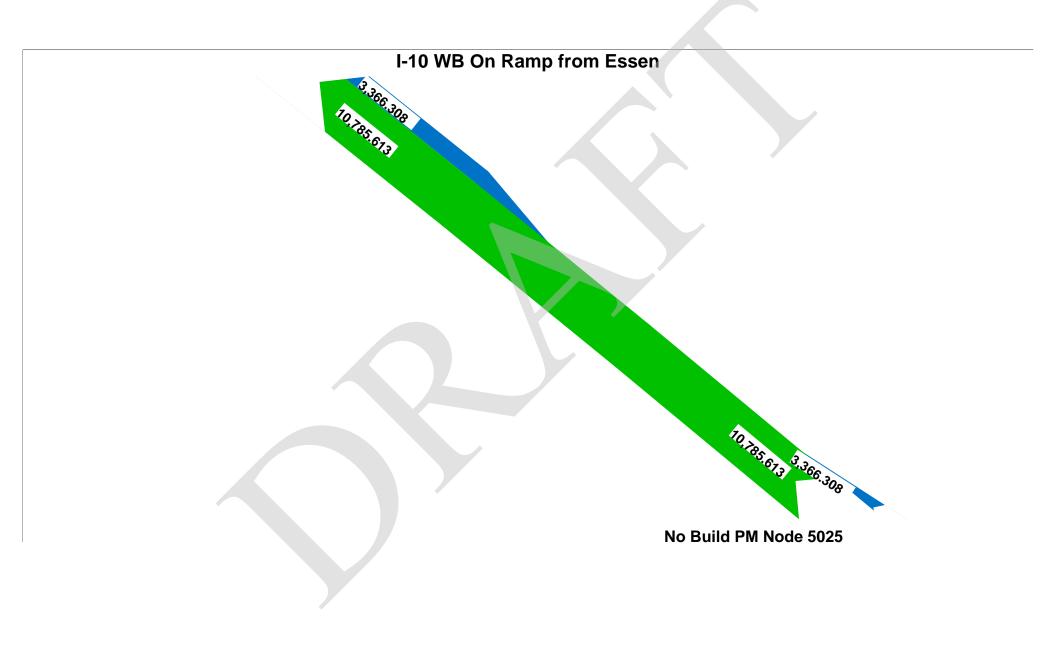
College Drive IMR 2037 Build- ADTs and Nodes

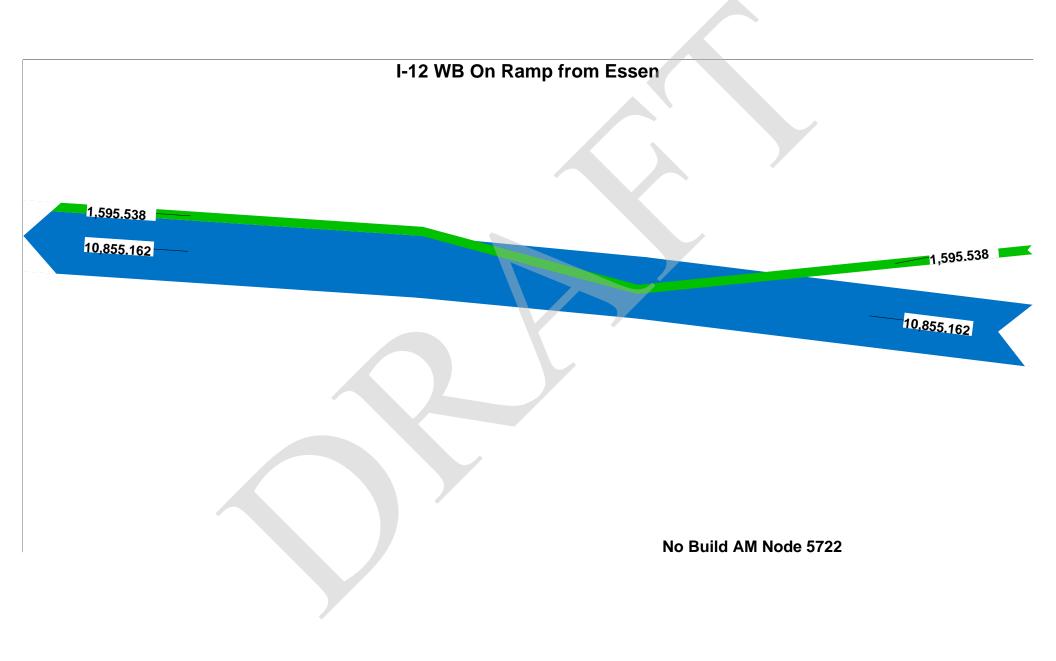


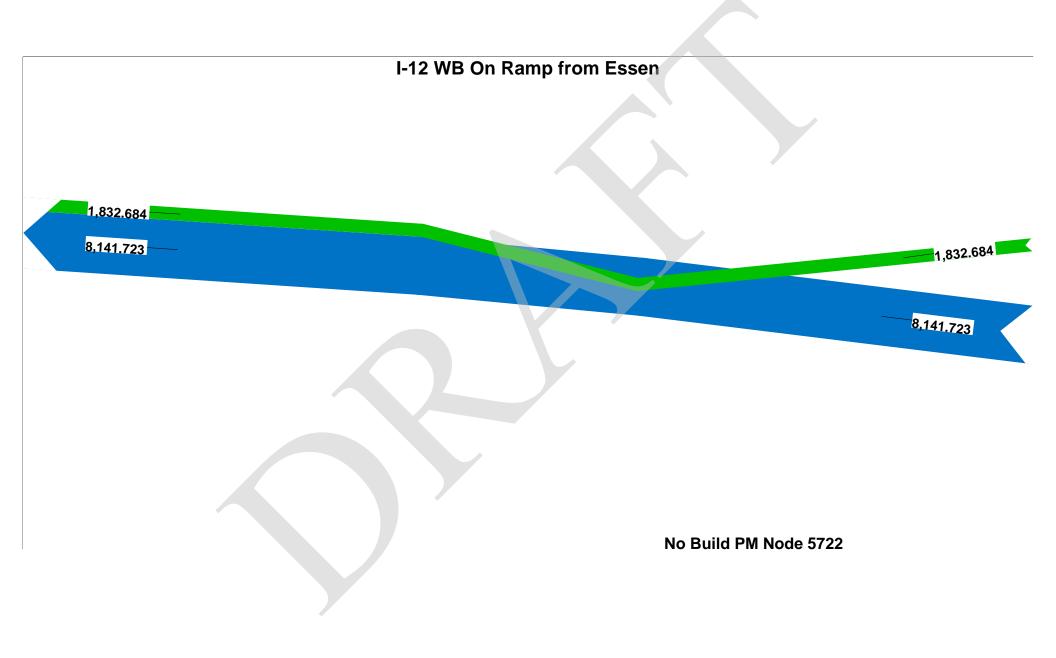
College Drive IMR 2037 Build- ADTs and Nodes

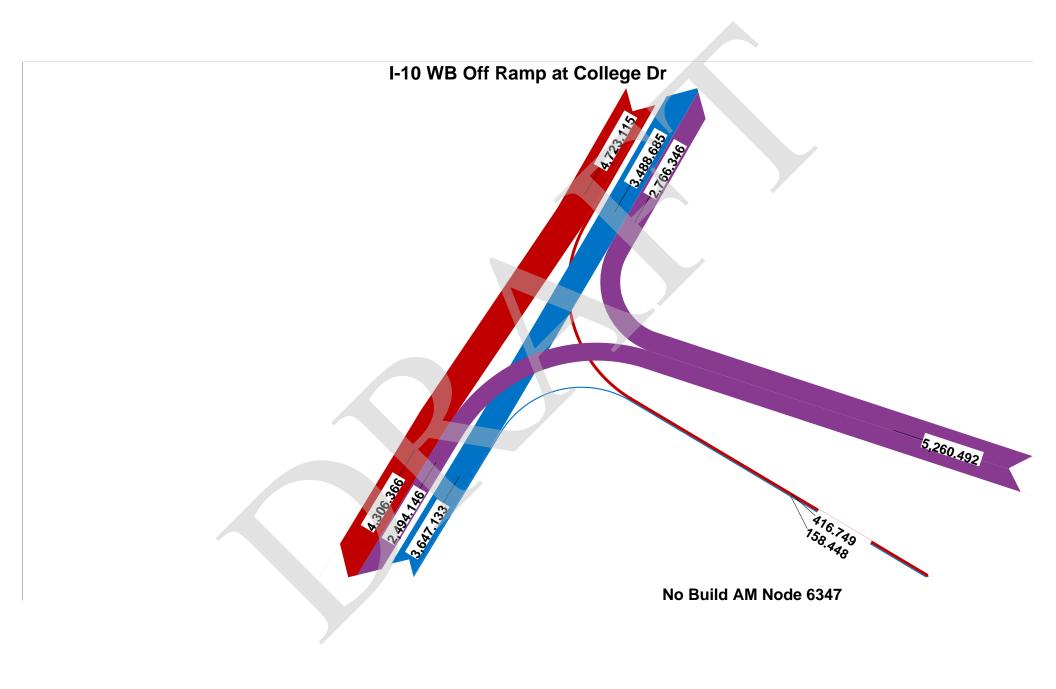


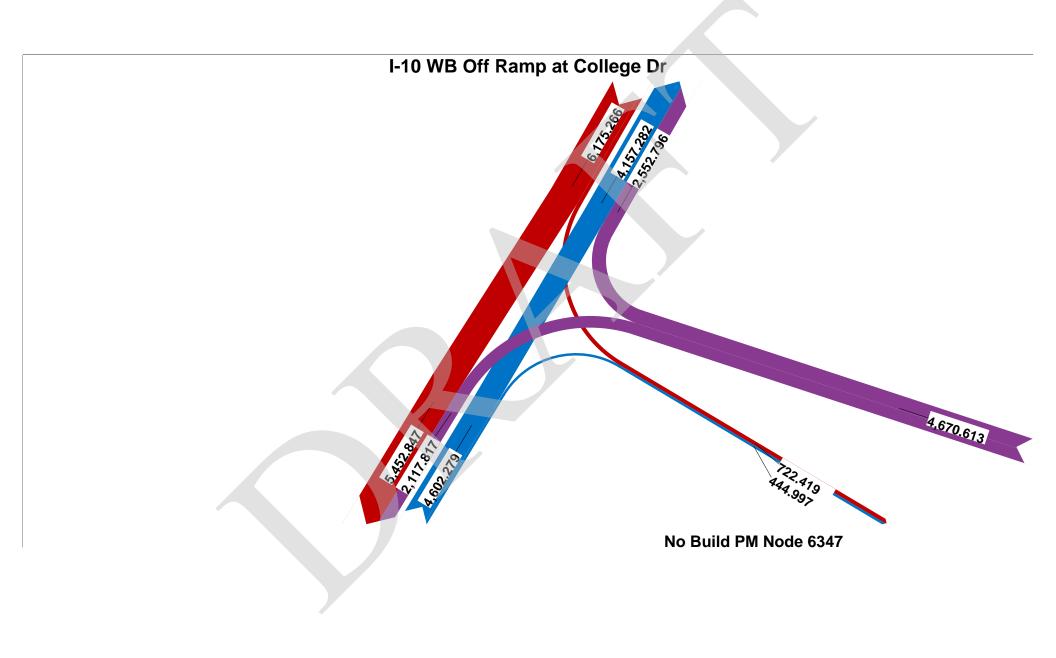


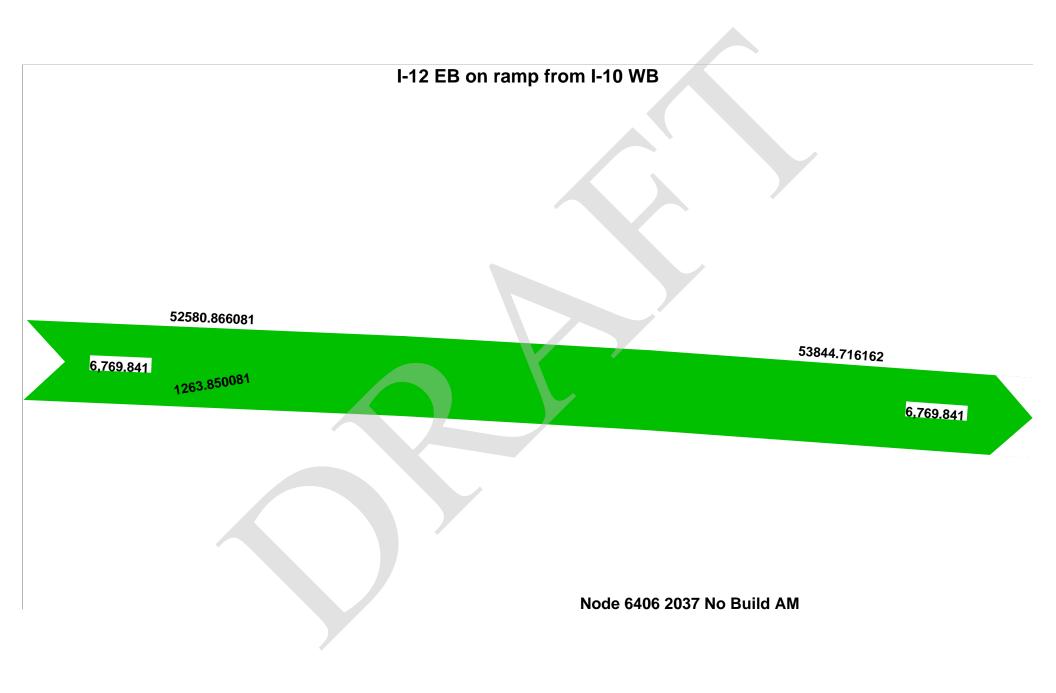


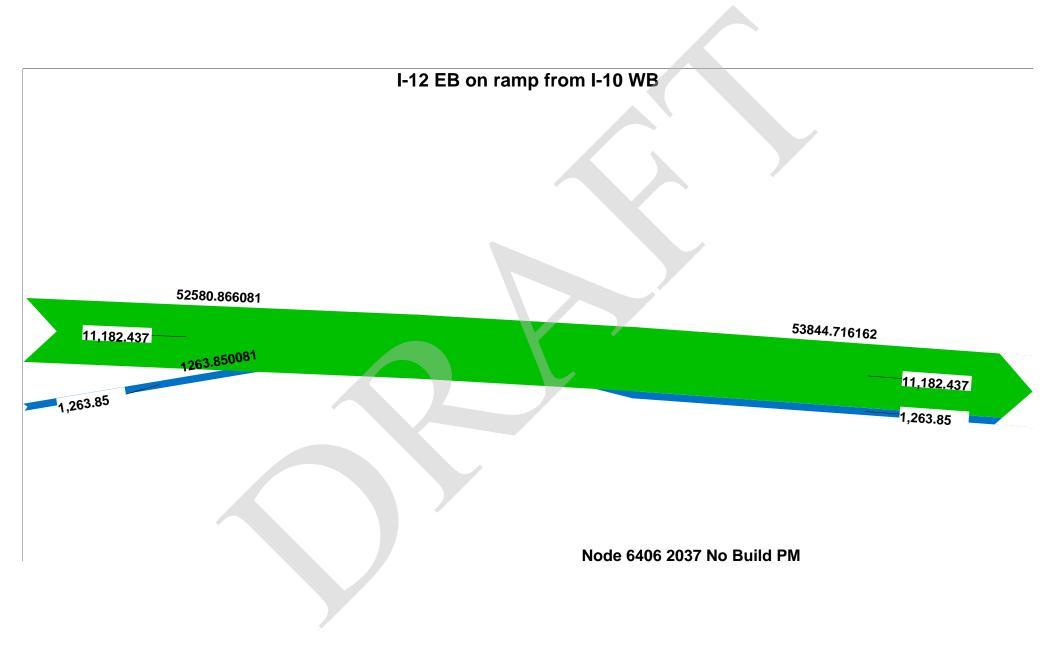


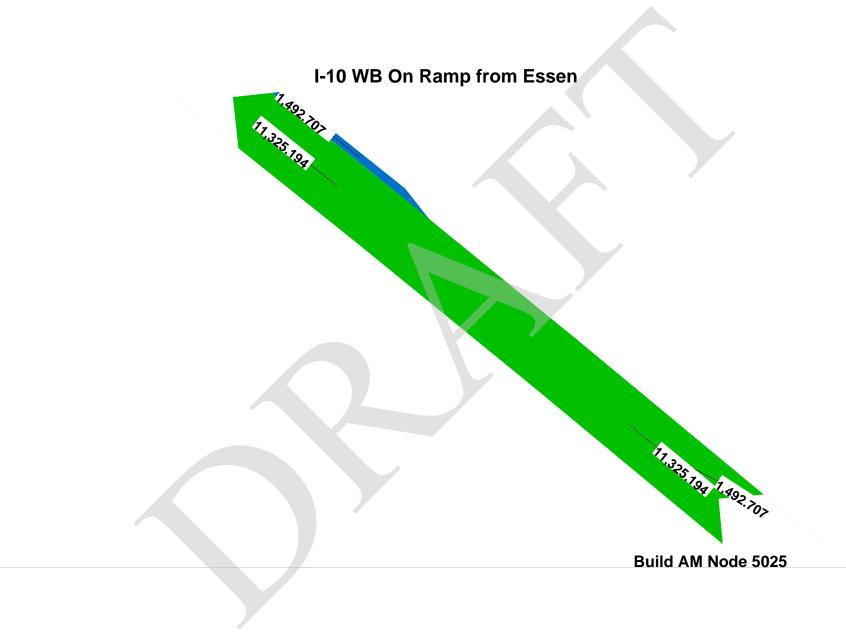


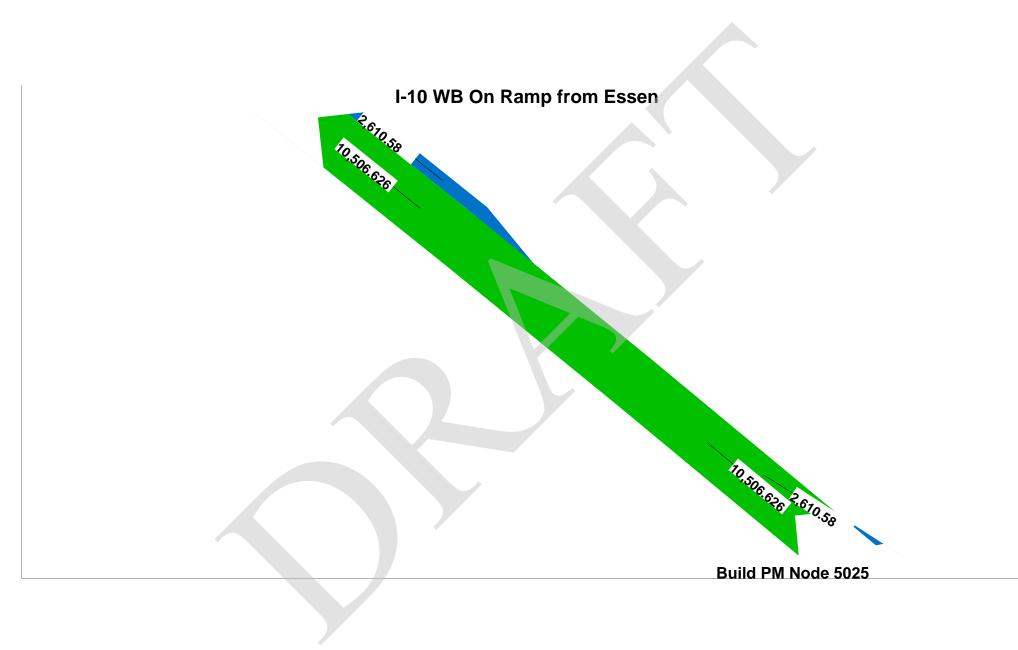


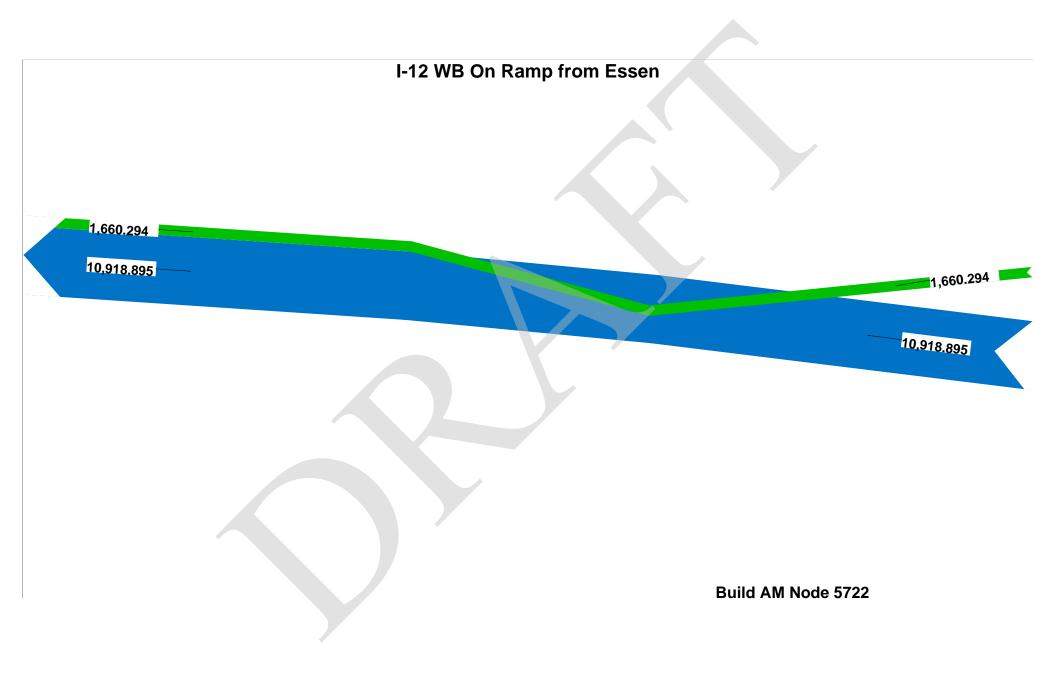


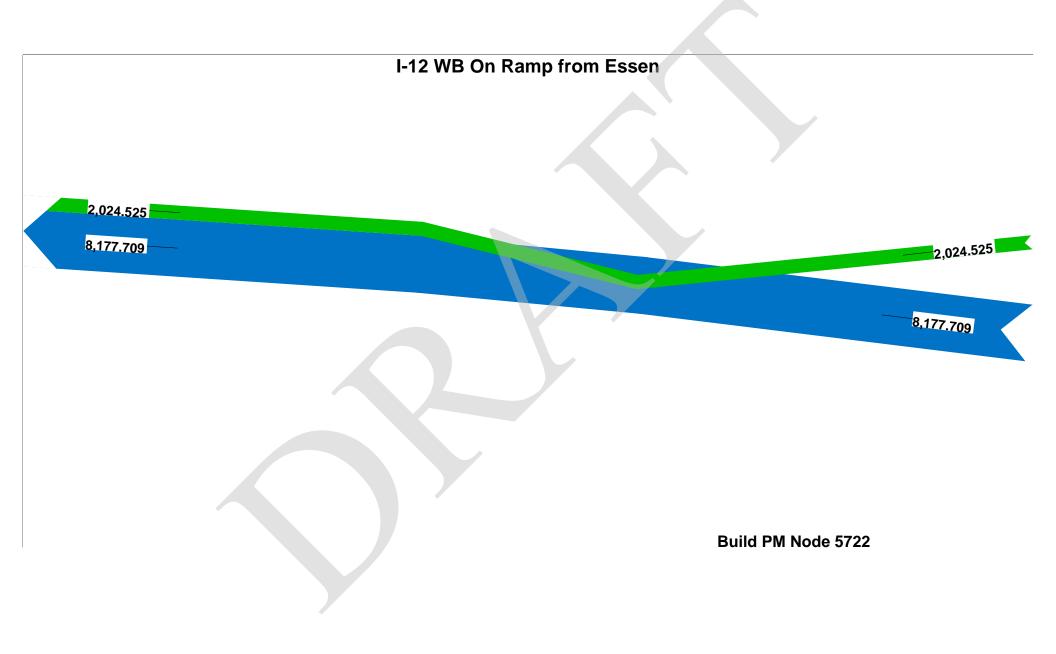


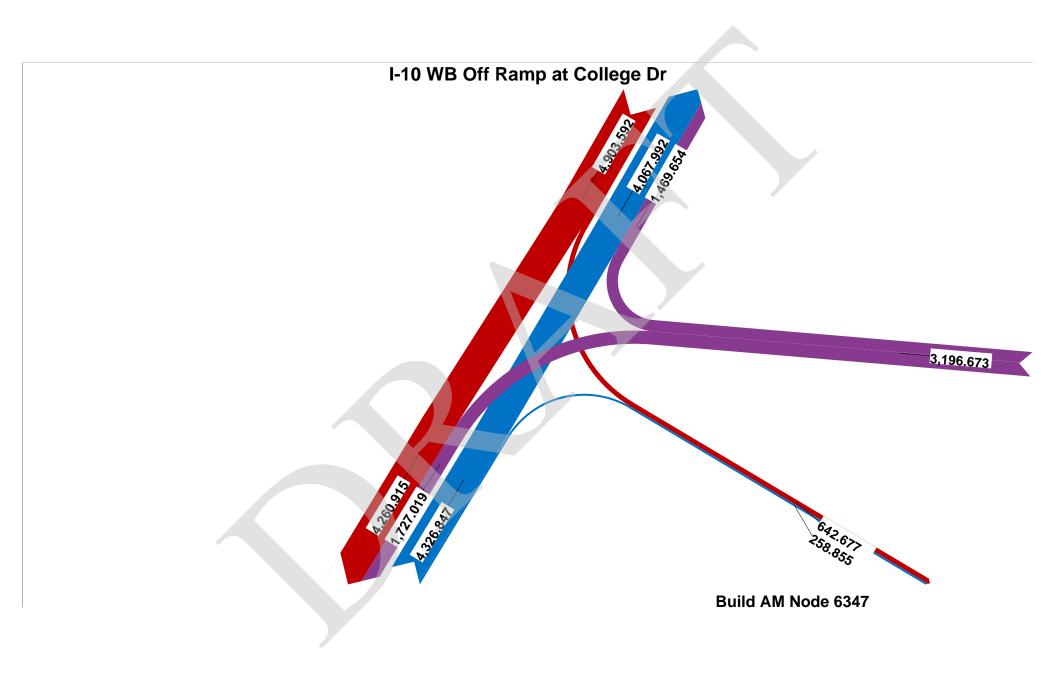


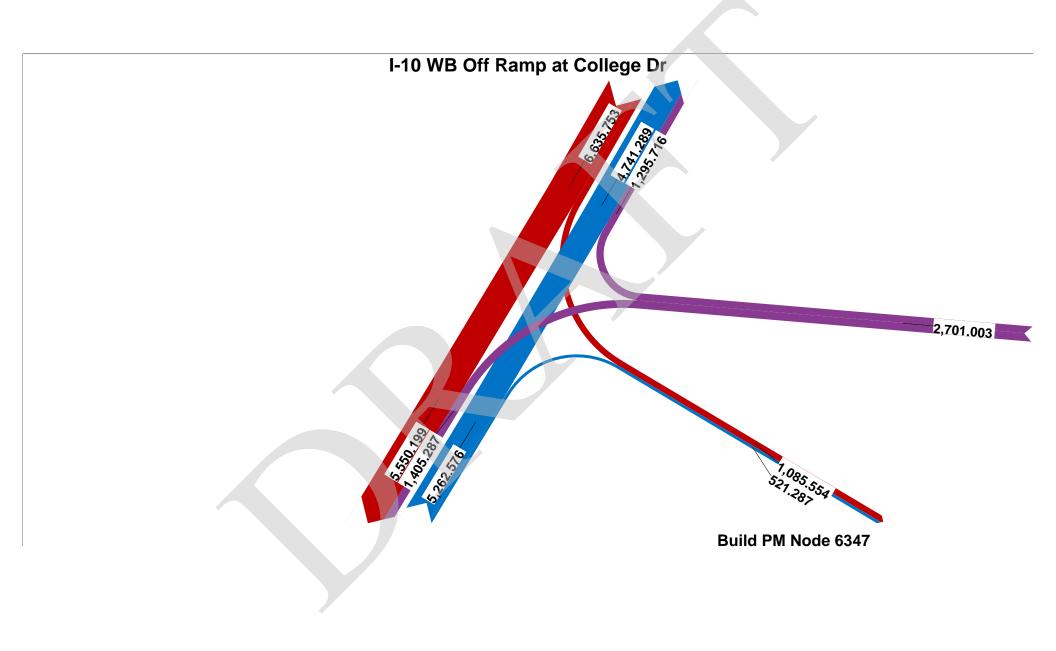


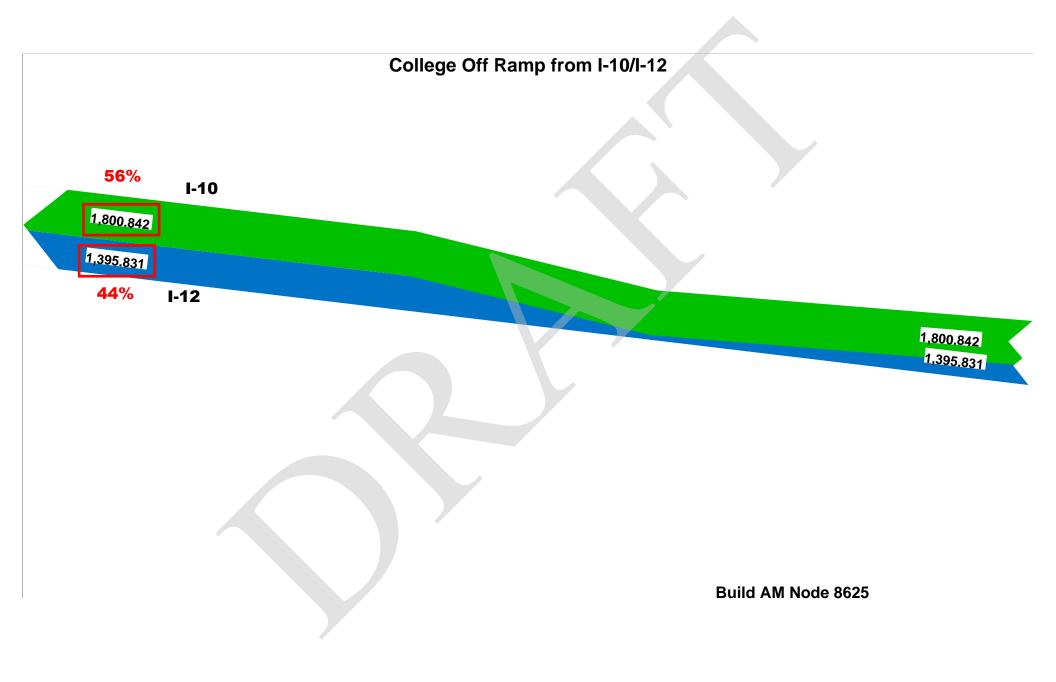


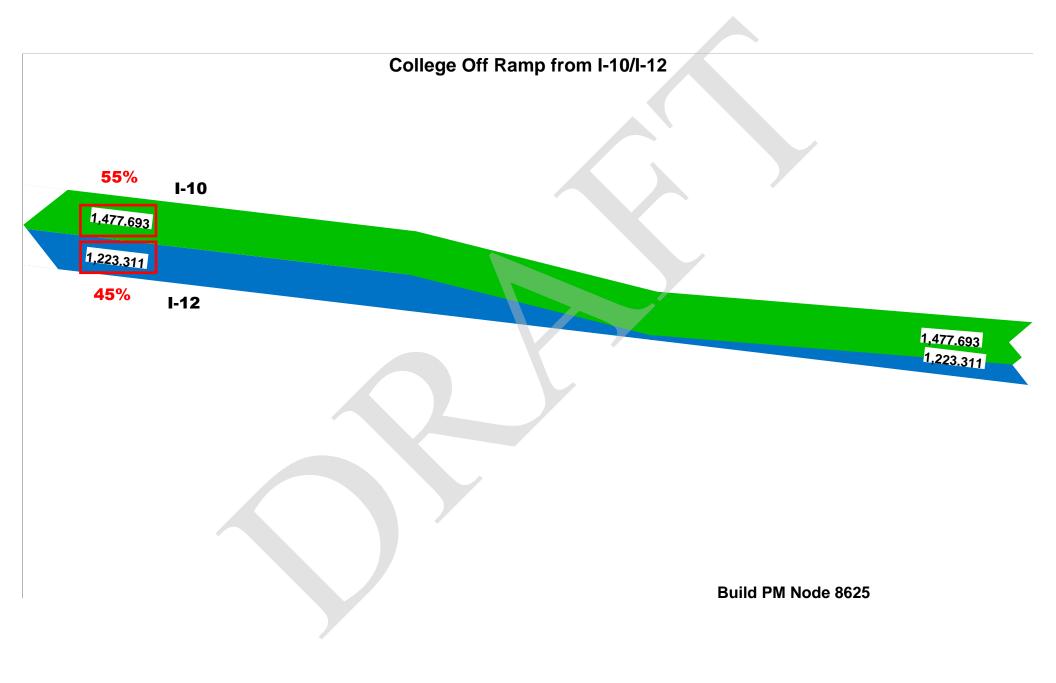


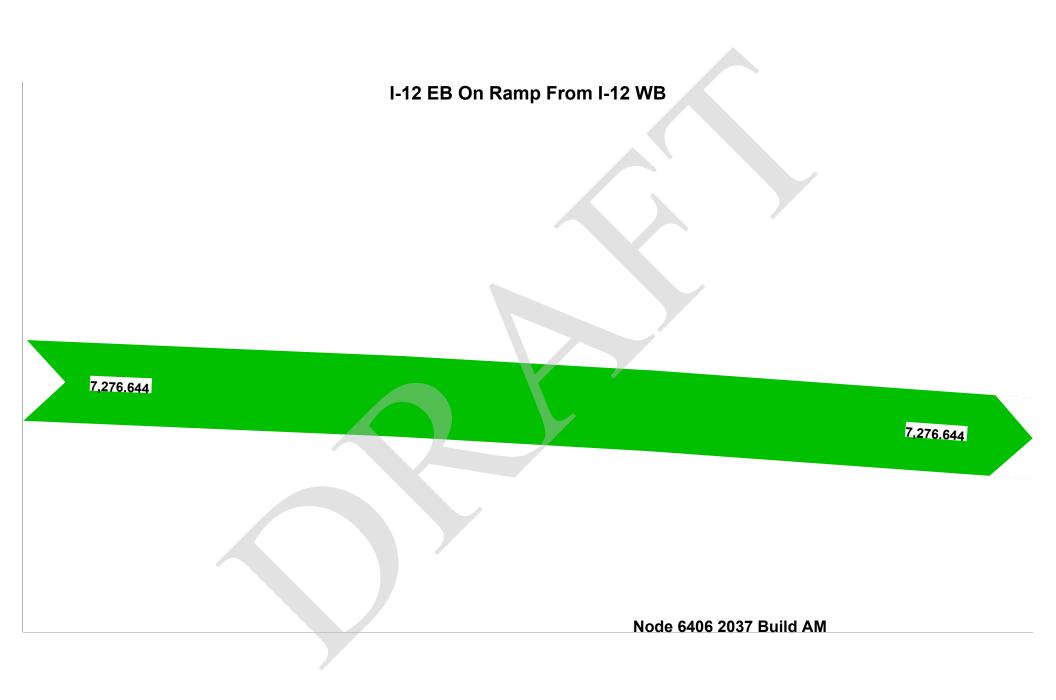


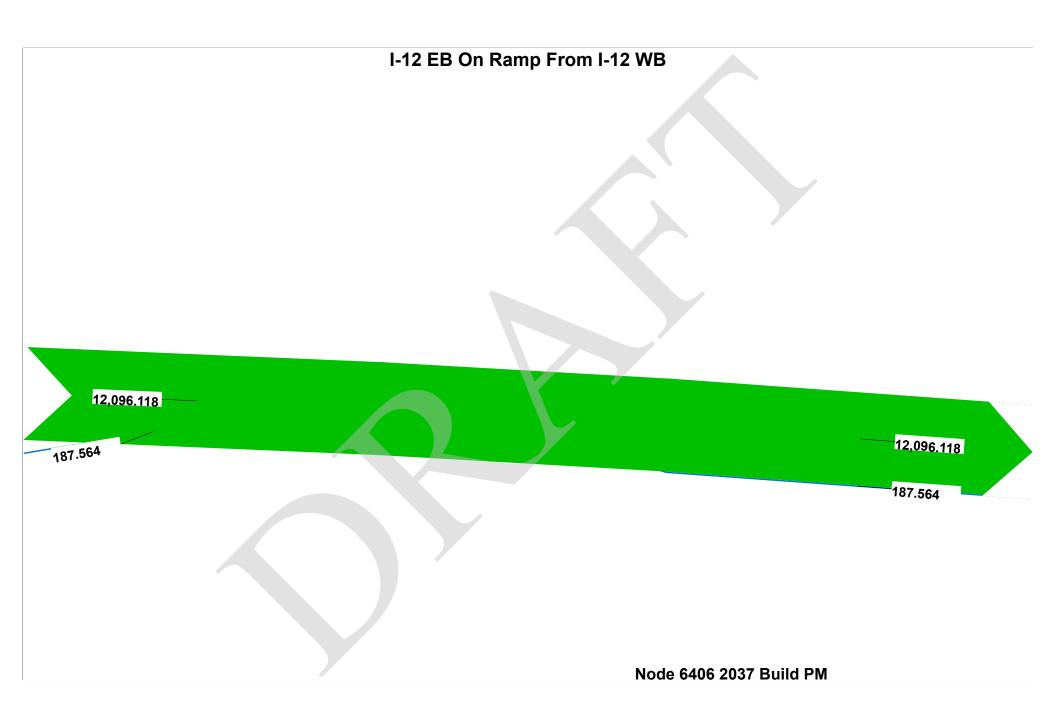










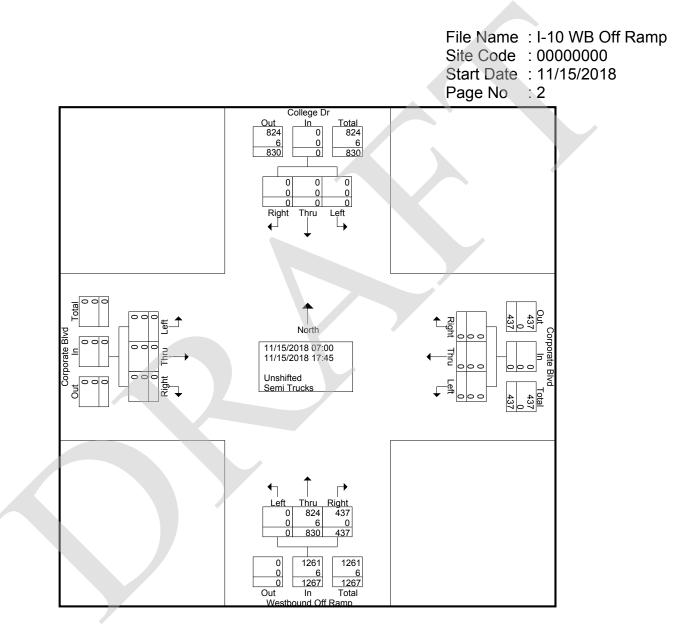


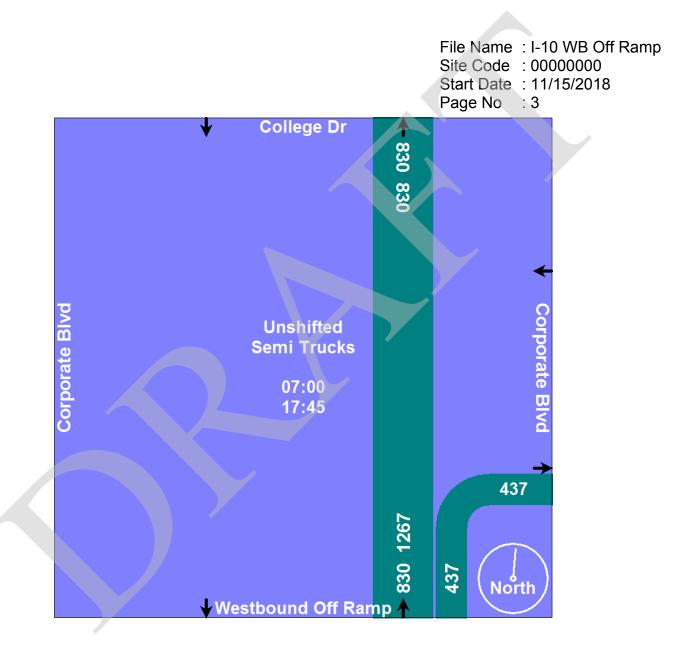
I-10 WB Off Ramp Only Captured Thrus and Rights Lat: N 30.424434 Long: W -91.138286

File Name : I-10 WB Off Ramp Site Code : 00000000 Start Date : 11/15/2018 Page No : 1

						Groups	Printe	d- Unsh	ifted - S	Semi Ti	rucks						
				Corpor	ate Blv	/d	Westbound Off Ramp										
	From North				From	n East		From I-10 WB				From West					
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00	0	0	0	0	0	0	0	0	46	89	0	135	0	0	0	0	135
07:15	0	0	0	0	0	0	0	0	54	95	0	149	0	0	0	0	149
07:30	0	0	0	0	0	0	0	0	53	106	0	159	0	0	0	0	159
07:45	0	0	0	0	0	0	0	0	49	90	0	139	0	0	0	0	139
Total	0	0	0	0	0	0	0	0	202	380	0	582	0	0	0	0	582
*** BREAK ***																	
17:00	0	0	0	0	0	0	0	0	51	111	0	162	0	0	0	0	162
17:15	0	0	0	0	0	0	0	0 0	56	135	0	191	0	0	0	0	191
17:30	0	0	0	0	0	0	0	0	63	108	0	171	0	0	0	0	171
17:45	0	0	0	0	0	0	0	0	65	96	0	161	0	0	0	0	161
Total	0	0	0	0	0	0	0	0	235	450	0	685	0	0	0	0	685
Grand Total	0	0	0	0	0	0	0	0	437	830	0	1267	0	0	0	0	1267
Apprch %	0	0	0		0	0	0		34.5	65.5	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	34.5	65.5	0	100	0	0	0	0	
Unshifted	0	0	0	0	0	0	0	0	437	824	0	1261	0	0	0	0	1261
% Unshifted	0	0	0	0	0	0	0	0	100	99.3	0	99.5	0	0	0	0	99.5
Semi Trucks	0	0	0	0	0	0	0	0	0	6	0	6	0	0	0	0	6
% Semi Trucks	0	0	0	0	0	0	0	0	0	0.7	0	0.5	0	0	0	0	0.5

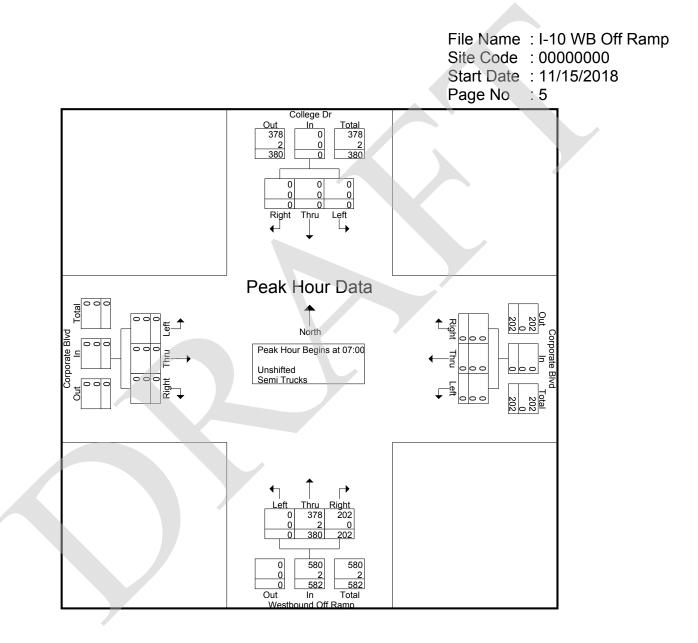


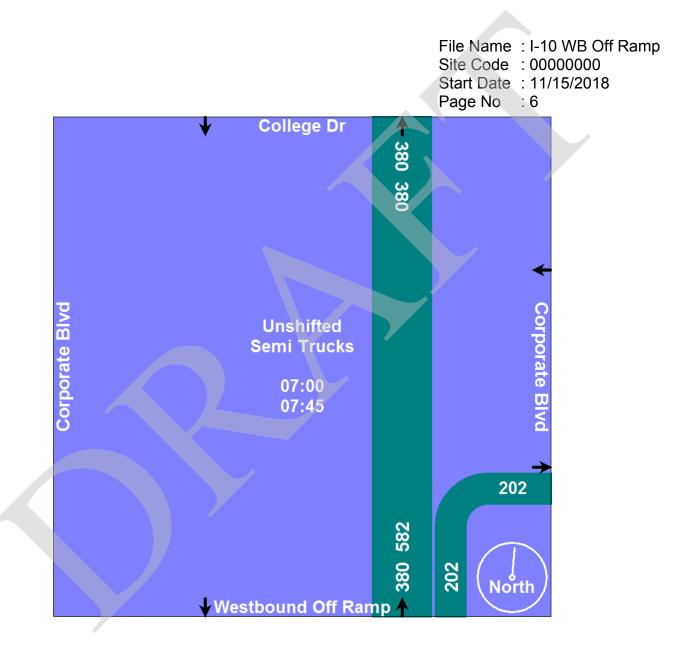




File Name : I-10 WB Off Ramp Site Code : 0000000 Start Date : 11/15/2018 Page No : 4

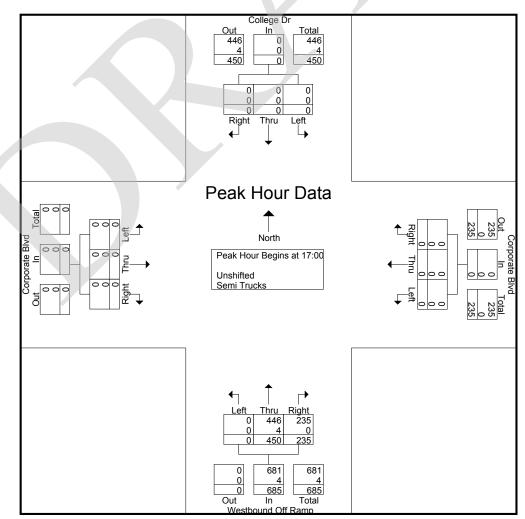
	College Dr From North				(d	Westbound Off Ramp From I-10 WB				(
Start Time	Right	Thru		App. Total	Right	Thru	East Left	App. Total	Right	Thru		App. Total	Right	Thru	West Left	App. Total	Int. Total
Peak Hour Ana	lysis Fro	om 07:0	0 to 11	45 - Pea	k 1 of 1												
Peak Hour for E	Entire In	tersection	on Begi	ns at 07:	00												
07:00	0	0	0	0	0	0	0	0	46	89	0	135	0	0	0	0	135
07:15	0	0	0	0	0	0	0	0	54	95	0	149	0	0	0	0	149
07:30	0	0	0	0	0	0	0	0	53	106	0	159	0	0	0	0	159
07:45	0	0	0	0	0	0	0	0	49	90	0	139	0	0	0	0	139
Total Volume	0	0	0	0	0	0	0	0	202	380	0	582	0	0	0	0	582
% App. Total	0	0	0		0	0	0		34.7	65.3	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.935	.896	.000	.915	.000	.000	.000	.000	.915
Unshifted	0	0	0	0	0	0	0	0	202	378	0	580	0	0	0	0	580
% Unshifted	0	0	0	0	0	0	0	0	100	99.5	0	99.7	0	0	0	0	99.7
Semi Trucks	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% Semi Trucks	0	0	0	0	0	0	0	0	0	0.5	0	0.3	0	0	0	0	0.3

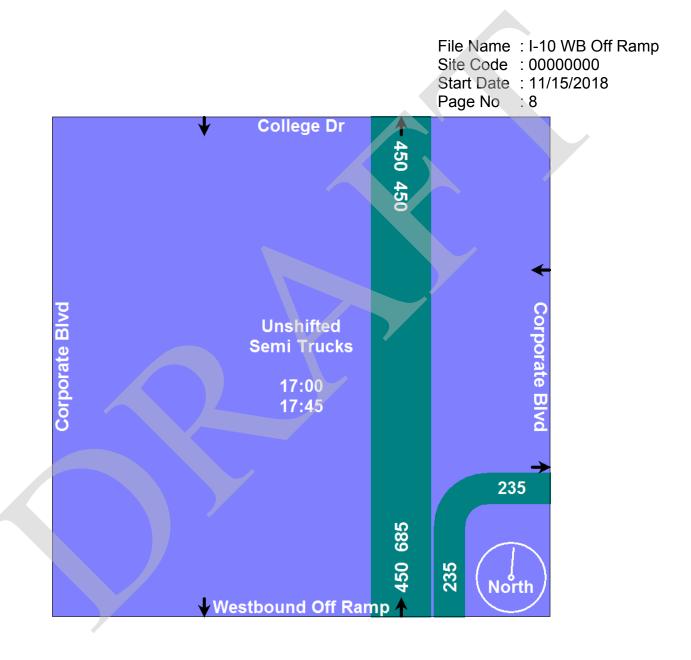




File Name : I-10 WB Off Ramp Site Code : 0000000 Start Date : 11/15/2018 Page No : 7

	College Dr				Corporate Blvd				Westbound Off Ramp				(
		From	North			From	I East			From	I-10 WE	3		From	West		
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Tota
Peak Hour Ana	lysis Fro	om 12:0	0 to 17	45 - Pea	k 1 of 1												
Peak Hour for E	Entire In	tersectio	on Begi	ns at 17:	00												
17:00	0	0	0	0	0	0	0	0	51	111	0	162	0	0	0	0	162
17:15	0	0	0	0	0	0	0	0	56	135	0	191	0	0	0	0	191
17:30	0	0	0	0	0	0	0	0	63	108	0	171	0	0	0	0	171
17:45	0	0	0	0	0	0	0	0	65	96	0	161	0	0	0	0	161
Total Volume	0	0	0	0	0	0	0	0	235	450	0	685	0	0	0	0	685
% App. Total	0	0	0		0	0	0		34.3	65.7	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.904	.833	.000	.897	.000	.000	.000	.000	.897
Unshifted	0	0	0	0	0	0	0	0	235	446	0	681	0	0	0	0	681
% Unshifted	0	0	0	0	0	0	0	0	100	99.1	0	99.4	0	0	0	0	99.4
Semi Trucks	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
% Semi Trucks	0	0	0	0	0	0	0	0	0	0.9	0	0.6	0	0	0	0	0.6





Chapter 2 and Appendicies B and C QAQC

Task	Chapter/Appendix	Done by and Date	Checked by and Date
Archive Appendix B pdf with "submittal" and the submittal date (April 2018) in the title	Арр В	AMB 6/10/19	N/A
Do new existing HCS analysis (freeways and merge)	Арр В	AMB 7/26/19	BDP 7/27/19
Update HCS results table to include new existing analysis	Арр В	AMB 7/26/19	MHM 7/29/19
Re-pdf reports in Existing AM and PM Synchro using HCM 10 report	Арр В	AMB 6/10/19	BDP 7/26/19
Replace new HCM 10 Synchro reports in Appendix	Арр В	AMB 7/27/19	BDP 7/26/19
Add new HCS Analysis files and replace old ones (bc ramp density missing)	Арр В	AMB 7/27/19	BDP 7/26/19
Table 2.1 Existing MOE's updated to match HCM 10 reports	Арр В	AMB 6/10/19	MHM 7/29/19
Add Input Parameters sheet for merge analysis	Арр В	AMB 8/1/19	BDP 8/8/19
Check Appendix to make sure nothing else should be updated	Арр В	AMB 8/2/19	BDP 8/5/19
create a pdf and print	Арр В	AMB 8/8/19	N/A
check the print copy	Арр В	AMB 8/7/19	BDP 8/8/19
Archive Appendix C pdf with "submittal" and the submittal date in the title	App C	AMB 6/10/19	N/A
Update Build Volume figures to include options 1 and 2	App C	AMB 7/9/19	BDP 7/23/19
Do no build additional analysis to address comment on ch 3 (Freeways and merge, about direct	App C	AMB 7/26/19	BDP 7/27/19
Re-pdf reports in No Build AM and PM Synchro using HCM 10 report	App C	AMB 6/10/19	BDP 7/26/19
Replace new HCM 10 Synchro report pdf's in Appendix	App C	AMB 7/27/19	BDP 7/26/19
Create Existing vs No Build Intersection Comparison Table Update	App C	AMB 7/27/19	MHM 7/29/19
Create Existing vs No Build Freeway and Merge Comparison Table Update	App C	AMB 7/27/19	MHM 7/29/19
Check Appendix to make sure nothing else should be updated	App C	AMB 8/2/19	BDP 8/5/19
create a pdf and print	App C	AMB 8/8/19	N/A
check the print copy	Арр С	AMB 8/7/19	BDP 8/8/19
Archive Ch 2 pdf and word with "submittal" and the submittal date in the title	Ch 2	AMB 6/10/19	N/A
Update Tables 2.3 and 2.5 to inclued new HCS analysis	Ch 2	AMB 7/27/19	MHM 7/29/19
Update Table 2.4 and 2.6 with HCM 10 report MOE's for Existing and No Build	Ch 2	AMB 7/27/19	MHM 7/29/19
Delete footnote about 95th queue on Tables 2.4 and 2.6	Ch 2	AMB 7/27/19	BDP 8/5/19
Read Ch 2 to make sure nothing else should be updated	Ch 2	AMB 8/1/19	BDP 8/5/19
Added statement about presenting highest movement moe	Ch 2	AMB 7/8/19	BDP 8/5/19
create a pdf and print	Ch 2	AMB 8/8/19	N/A
check the print copy	Ch 2	AMB 8/7/19	BDP 8/8/19

Matt Morgan, E.I.

<u>Alyss</u> Alyssa Bienes, E.I. 21 200

C Brandon Perilloux, P.E., PTOE, RSP

an

Nicole Stewart, P.E., PTOE (Verified)

8/8/19

Date

<u>8/8/19</u> Date

<u>8/3/19</u> Date

8 Date