NEEL-SCHAFFER

MRB South GBR: LA 1 to LA 30 Connector

S.P. No. H.013284

Route: New Route

Ascension, East Baton Rouge, Iberville, and West Baton Rouge Parishes

FINAL
2042 BUILD ALTERNATIVES MESOSCOPIC MODEL DEVELOPMENT REPORT

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Prepared for:

Louisiana Department of Transportation and Development
Traffic Engineering

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Table of Contents

Chapter 4 – 2042 Build Mesoscopic Model Development 2
4.1 Introduction 2
4.2 Network Development 3
4.2.1 Build Model Bridge Alternatives 3
4.2.2 Network Geometry and Intersection Traffic Control 5
4.3 Demand Estimation 6
4.4 DTA Setup 8
4.5 Build Model results 8
4.5.1 Model Convergence 9
4.5.2 Modeled Traffic 9
4.5.3 Travel Times 14
4.6 Build Model Results Summary 20

List of Tables

Table 4.1: Network Element Count – Build Models 3
Table 4.2: Control Type Count 5
Table 4.3: Bridge Crossing Volume Comparison – AM Peak Hour 11
Table 4.4: Bridge Crossing Volume Comparison – PM Peak Hour 12
Table 4.5: Network VHD and VHT Comparison 13
Table 4.6: Average Peak Hour Travel Time Comparison – Eastbound AM Peak Hour 16
Table 4.7: Average Peak Hour Travel Time Comparison – Westbound AM Peak Hour 17
Table 4.8: Average Peak Hour Travel Time Comparison – Eastbound PM Peak Hour 18
Table 4.9: Average Peak Hour Travel Time Comparison – Westbound PM Peak Hour 19

List of Figures

Figure 4.1 –Proposed Bridge Alternatives 4
Figure 4.2 – Toll Restrictions 8
Figure 4.3 – Build Model Convergence Charts 9
Figure 4.4 – Travel Time Corridor Locations 14

DRAFT

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Chapter 4 – 2042 Build Mesoscopic Model Development

4.1 Introduction

After developing of the 2042 No Build mesoscopic model for the *MRB South GBR: LA 1 to LA 30 Connector* project, the Bridge Alternative specific mesoscopic models were developed for each of the 20 proposed Bridge Alternatives in *Dynameq* using information from the project specific Travel Demand Model (TDM) developed using the Baton Rouge MPO's MOVE2042 plan TDM in *TransCAD* software. All proposed Bridge Alternatives are located between the I-10 Mississippi River Bridge and the LA 70 Sunshine Bridge, and each route connects LA 1 on the west bank of the Mississippi River and LA 30 on the east bank of the Mississippi River. Also, the Bridge Alternative specific TDMs included highway improvement projects in the Baton Rouge MPO's MOVE2042 Metropolitan Transportation Plan (MTP), which are summarized in *3.1 Introduction*.

In the Round 1 Screening, a total of 32 proposed Bridge Alternatives were considered. After the completion of the Round 1 Screening, a total of 20 proposed Bridge Alternatives were retained. This Chapter documents the analysis of these 20 proposed Bridge Alternatives. The original 32 Bridge Alternatives that were considered in Round 1 and the 20 Bridge Alternatives that were retained after the Round 1 Screening are shown in ***Appendix F***. For each Bridge Alternative route, a "*Letter-Number-Roman Numeral*" designation was given. Each part of the designation is described below, and more information on each part of the designation can be found in ***Appendix F***:

- "Letter" = Where the route connects at LA 1 (e.g., A, B, C…)
- "Number" = Where the route crosses the Mississippi River (e.g., 1,2,3…)
- "Roman Numeral" = Where the route connects at LA 30 (e.g., I, II, III…)

For the retained 20 Bridge Alternatives, two scenarios were considered for each Build Bridge Crossing Model, which are summarized below:

- **Toll Scenario** – The new Bridge Crossing will be tolled.
- **Non-Toll Scenario** – The new Bridge Crossing will not be tolled.

In addition, similar to the 2042 No Build mesoscopic model development, 2042 Build sub-area origin-destination (O-D) matrices representing demand within the expanded mesoscopic model study area was created for each Bridge Alternative since the *TransCAD* model includes links outside of the expanded mesoscopic model area. For the 2042 Build model development, two types of O-D matrices were created for each Bridge Alternative, one that represented non-Toll trips and one that represented Toll trips. In the Toll Scenario, the proposed Bridge Alternative route is restricted to those Toll trips, while there are no restrictions for trips that could use the proposed Bridge Alternative route in the Non-Toll Scenario.

Table 4.1 quantifies the links, connectors, nodes, and centroids represented in the no build model and the build mesoscopic models.

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Table 4.1: Network Element Count – Build Models

Alternative		Links	Connectors	Nodes	Intersections	Centroids
2019 Base		14,795	4,336	4,974	2,503	1,070
2042 No Build		15,728	4,384	5,444	2,588	1,071
Route 01	A-1-I	15,748	4,384	5,454	2,590	1,071
Route 02	A-1-II	15,746	4,384	5,453	2,590	1,071
Route 03	B-2-I	15,750	4,384	5,455	2,590	1,071
Route 04	B-2-II	15,748	4,384	5,454	2,590	1,071
Route 05	C-3-I	15,756	4,384	5,456	2,590	1,071
Route 06	C-3-II	15,754	4,384	5,455	2,590	1,071
Route 07	C-4-I	15,764	4,384	5,460	2,590	1,071
Route 08	C-5-II	15,766	4,384	5,461	2,590	1,071
Route 09	C-6-III	15,768	4,384	5,463	2,590	1,071
Route 14	E-11-IV	15,759	4,384	5,459	2,590	1,071
Route 15	F-12-IV	15,760	4,384	5,459	2,590	1,071
Route 16	F-13-IV	15,758	4,384	5,458	2,590	1,071
Route 17	F-14-V	15,758	4,384	5,458	2,590	1,071
Route 22	H-19-VII	15,762	4,384	5,460	2,590	1,071
Route 23	I-20-VII	15,762	4,384	5,460	2,590	1,071
Route 24	J-21-VII	15,763	4,384	5,460	2,590	1,071
Route 25	K-22-VII	15,760	4,384	5,459	2,590	1,071
Route 26	K-23-VII	15,756	4,384	5,457	2,590	1,071
Route 30	M-25-IX	15,754	4,384	5,456	2,590	1,071
Route 32	N-28-X	15,753	4,384	5,455	2,590	1,071

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4.2 Network Development

The Build network development efforts included adding the proposed Bridge Alternatives to the 2042 No Build Mesoscopic Model to create a 2042 Build Mesoscopic Model for each Bridge Alternative. The following elements were included in the Build network development.

4.2.1 Build Model Bridge Crossings
4.2.2 Network Geometry and Intersection Traffic Control

4.2.1 Build Model Bridge Alternatives

The general locations of the proposed Bridge Alternatives that are to be added to the 2042 No Build Mesoscopic Model to create the Bridge Alternative specific 2042 Build Mesoscopic Model are shown in **Figure 4.1**. All proposed Bridge Alternatives are located between the I-10 Mississippi River Bridge and the LA 70 Sunshine Bridge, and each proposed Bridge Alternative connects LA 1 on the west bank of the Mississippi River and LA 30 on the east bank of the Mississippi River. Of the 20 proposed Bridge crossings, nine (9) connect West Baton Rouge Parish and East Baton Rouge Parish, nine (9) connect the West Bank and East Bank of Iberville Parish, and two (2) connect the West Bank and East Bank of Ascension Parish. More information on the proposed Bridge Alternatives can be found in ***Appendix F***.

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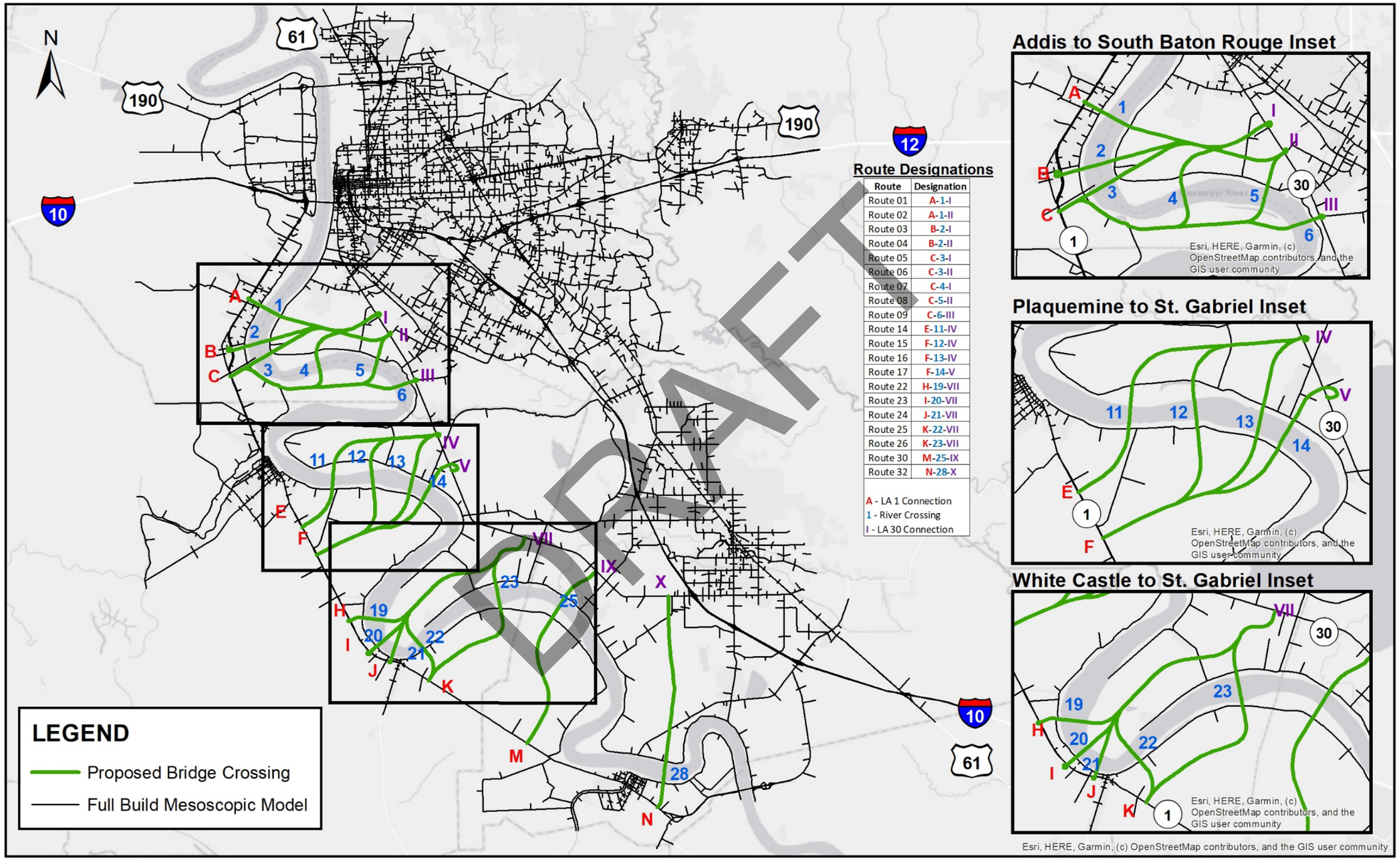
Figure 4.1 –Proposed Bridge Alternatives



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4.2.2 Network Geometry and Intersection Traffic Control

The network's geometric and intersection elements for each 2042 Build Mesoscopic Model was developed by updating the 2042 No Build Mesoscopic Model with each model specific Bridge Crossing that was shown in *4.2.1 Build Model Bridge Crossings*. The network geometry development for each Build Mesoscopic Model used the same process as the Base Mesoscopic Model and No Build Mesoscopic Model development developed in *2.2 Network Development* and *3.2.2 Network Geometry and Intersection Traffic Control*, respectively.

The Bridge Crossings were added to the 2042 No Build Mesoscopic Model to create a Bridge Crossing specific 2042 Build Mesoscopic Model by creating new links and nodes. The *TransCAD* network Link Attributes were used to code the 2042 Build Mesoscopic Link Attributes. Additionally, the intersection geometries were ensured to be free of any errors or warnings during the network editing process.

Also, there were new nodes that were created during the Build network development, and these nodes' control types were coded into the network. The *Dynameq* control types coded into the network are summarized in *2.2.2. Intersection Traffic Control*. The quantity of intersection control types found in each Build network compared to the Base and No Build networks are summarized in **Table 4.2**.

Table 4.2: Control Type Count

Alternative		Control Type						
		Signalized	Unsignalized					
			Total	TWSC	AWSC	Roundabout	Merge	None
2019 Base		560	4,414	1,841	67	5	20	2,471
2042 No Build		565	4,879	1,860	64	22	24	2,856
Route 01	A-1-I	567	4,889	1,858	64	22	24	2,866
Route 02	A-1-II	567	4,888	1,858	64	22	24	2,865
Route 03	B-2-I	566	4,890	1,859	64	22	24	2,867
Route 04	B-2-II	566	4,889	1,859	64	22	24	2,866
Route 05	C-3-I	567	4,891	1,858	64	22	24	2,868
Route 06	C-3-II	567	4,890	1,858	64	22	24	2,867
Route 07	C-4-I	567	4,895	1,858	64	22	24	2,872
Route 08	C-5-II	567	4,896	1,858	64	22	24	2,873
Route 09	C-6-III	567	4,898	1,858	64	22	24	2,875
Route 14	E-11-IV	567	4,894	1,857	64	22	24	2,871
Route 15	F-12-IV	567	4,894	1,858	64	22	24	2,871
Route 16	F-13-IV	567	4,893	1,858	64	22	24	2,870
Route 17	F-14-V	567	4,893	1,858	64	22	24	2,870
Route 22	H-19-VII	567	4,895	1,858	64	22	24	2,872
Route 23	I-20-VII	567	4,895	1,858	64	22	24	2,872
Route 24	J-21-VII	567	4,895	1,858	64	22	24	2,872
Route 25	K-22-VII	567	4,894	1,858	64	22	24	2,871
Route 26	K-23-VII	567	4,892	1,858	64	22	24	2,869
Route 30	M-25-IX	567	4,891	1,858	64	22	24	2,868
Route 32	N-28-X	567	4,890	1,858	64	22	24	2,867

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4.3 Demand Estimation

Unique Build sub-area Origin-Destination (O-D) matrices were developed for each Bridge Alternative Model using the process summarized below. As described in *2.4 Demand Estimation* and *3.3 Demand Estimation*, an O-D matrix, also known as a trip table, contains traffic flows between areas known as Traffic Analysis Zones (TAZs), providing trips between these TAZs across the study area.

For each Bridge Alternative Model, four matrices were developed, which are listed below:

- **Car Non-Toll:** The car trips that will not use the new Bridge in the Toll Scenario; these trips could use the new Bridge in the Non-Toll Scenario.
- **Truck Non-Toll:** The truck trips that will not use the new Bridge in the Toll Scenario; these trips could use the new Bridge in the Non-Toll Scenario.
- **Car Toll:** The car trips that could use the new Bridge in both Toll and Non-Toll Scenarios.
- **Truck Toll:** The truck trips that could use the new Bridge in both Toll and Non-Toll Scenarios.

Step 1: Develop Initial *TransCAD* Build Matrices

The initial 3-hour 2042 Build AM and PM Car Non-Toll, Truck Non-Toll, Car Toll, and Truck Toll matrices were developed using *TransCAD's* sub-area analysis tool and the final 2042 Build TDM developed as part of the *MRB South GBR: LA 1 to LA 30 Connector Project*.

Step 2: Calculate Trip Adjustment Factors

The trip matrices developed in *Step 1* were adjusted due to the adjustments made to either the Base Origin and Destination Trips at Major External Stations or to links where large discrepancies between the model volumes and traffic counts were observed during the base model calibration process, as detailed in *2.6.3 Demand Issues*. The O-D Non-Toll Trip Adjustment Factor equation is shown below:

$$Build\ NonTollTrip\ Adjustment\ Factor_{i,j} = \frac{(Final\ Mesoscopic\ Model\ Base\ Matrix\ Trips)_{i,j}}{(Initial\ TDM\ Base\ Matrix\ Trips)_{i,j}}$$

Where:
i = Origin TAZ
j = Destination TAZ

For the 2042 Build AM and PM Car Toll and Truck Toll matrices, a Trip Adjustment Factor value of *one (1.00)* was applied to the Toll matrices since there are no Toll trips in the Existing or No Build matrices. The Trip Adjustment Factors, by O-D pair, were the same for all Bridge Alternatives.

Step 3: Develop Build *Dynameq* Matrices

The Trip Adjustment Factors calculated in *Step 2* were applied to the initial 3-hour 2042 Build AM and PM Car Non-Toll, Truck Non-Toll, Car Toll, and Truck Toll *TransCAD* matrices developed in Step 3 to develop the 3-hour 2042 Build AM and PM Car Non-Toll, Truck Non-Toll, Car Toll, and Truck Toll *Dynameq* matrices. The following equation was used to develop the Build *Dynameq* matrices:

$$Build\ Mesoscopic\ Model\ Trips_{i,j} = Initial\ TDM\ Build\ Trips_{i,j} \times Trip\ Adjustment\ Factor_{i,j}$$

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Where:
i = Origin TAZ
j = Destination TAZ

For the Toll matrices, a trip adjustment factor of *one (1.00)* was applied to the initial Toll *TransCAD* matrix trips since there are no Toll trips in the Existing or No Build matrices.

Step 4: Calculate Trip Distribution Factors

For the 2042 Build AM and PM Car Non-Toll and Truck Non-Toll matrices, the Trip Distribution Factors calculated in *Step 5* of *3.3 Demand Estimation* were applied to the non-Toll matrices. For the 2042 Build AM and PM Car Toll and Truck Toll matrices, the distribution of the non-Toll 30-minute trips were used for each Origin TAZ to Destination TAZ path.

Step 5: Create Build 30-minute Matrices

The 3-hour matrices developed in Step 3 were subdivided into 30-minute matrices using the Trip Distribution Factors calculated in Step 3 and then converted into a vehicle per hour (vph) expression. The following equation was used to calculate the number of trips for each 30-minute interval:

$$30\ minute\ Build\ Trips_{i,j,k} = 3\ hour\ Build\ Trips_{i,j} \times 2 \times Trip\ Distribution\ Factor_{i,j,k}$$

Where:
i = Origin TAZ
j = Destination TAZ
k= 30-minute Interval

Example calculations for the O-D matrix development can be found in ***Appendix F***. The number of trips for each 30-minute matrix brought into *Dynameq* can be found in ***Appendix F***.

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4.4 DTA Setup

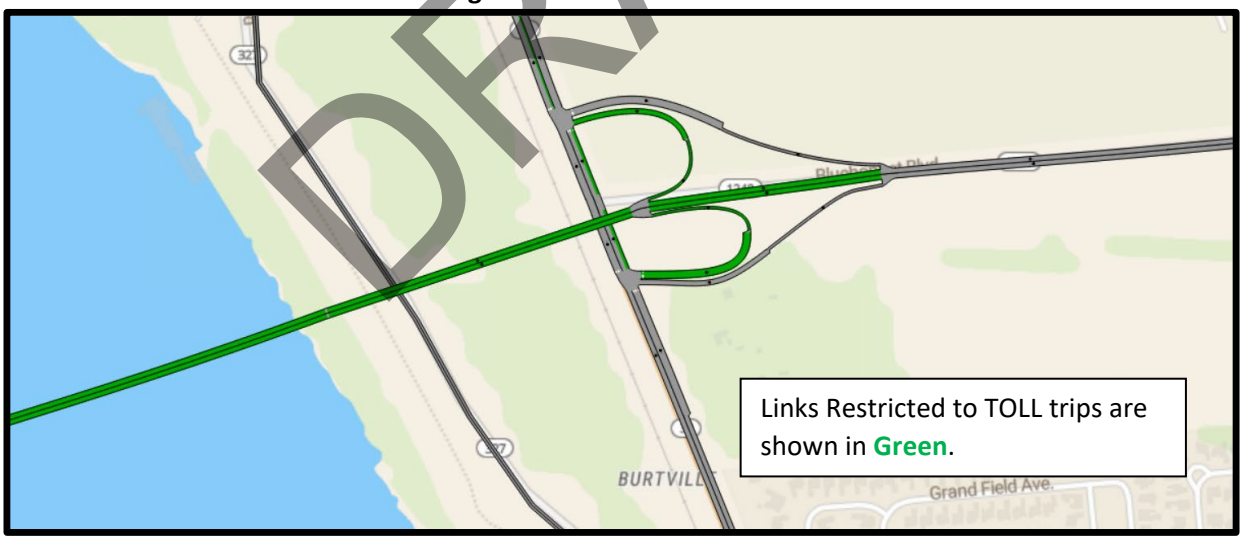
After developing the Build O-D matrices, the DTA specifications summarized in *2.5 Dynamic Traffic Assignment Setup* and *3.4 DTA Setup* were set up before running the DTA. For each Bridge Crossing Model, two (2) DTAs were created, one for each scenario listed in *4.1 Introduction*, and which are summarized below:

- **Toll Scenario**– The proposed Bridge Alternative Route is restricted to trips that would pay a toll to use the proposed Bridge Alternative Route.
- **Non-Toll Scenario** – There are no restrictions placed on trips that could use the proposed Bridge Alternative Route.

There were no changes to the DTA specifications that were used in the 2042 No Build Mesoscopic Model development. Of note, the Demand specifications used for the ***Car Class*** and ***Truck Class*** in the Base and No Build Models (Car Class and Truck Class) were used to create the ***Car Toll Class*** and ***Truck Toll Class***.

For the Toll Scenario DTA, a new Class Group was created (***TOLL***), which included the ***Car Toll Class*** and ***Truck Toll Class***. To restrict non-Toll trips from using the Bridge Crossing in the Toll scenario, the Class Permissions for each Bridge Crossing link, and the node Permissions for each movement along the Bridge Crossing were changed to the ***Toll*** Class Group. For the Non-Toll Scenario DTA, since there are no restrictions on the non-Toll trips from using the Bridge Crossing, the Class Permissions for each Bridge Crossing link and the node Permissions for each movement along the Bridge Crossing was set to the ***All*** Class Group. An example screenshot showing the links that are restricted to Toll trips is shown in **Figure 4.2**. More information on this development can be found in ***Appendix F***.

Figure 4.2 – Toll Restrictions



4.5 Build Model results

The 2042 Build Model Bridge Alternative results were compared to the 2019 Base Model and 2042 No Build Model results to document the changes between the Build Models, No Build Model, and Base Model. The results are summarized in the following sections:

- 4.5.1 Model Convergence

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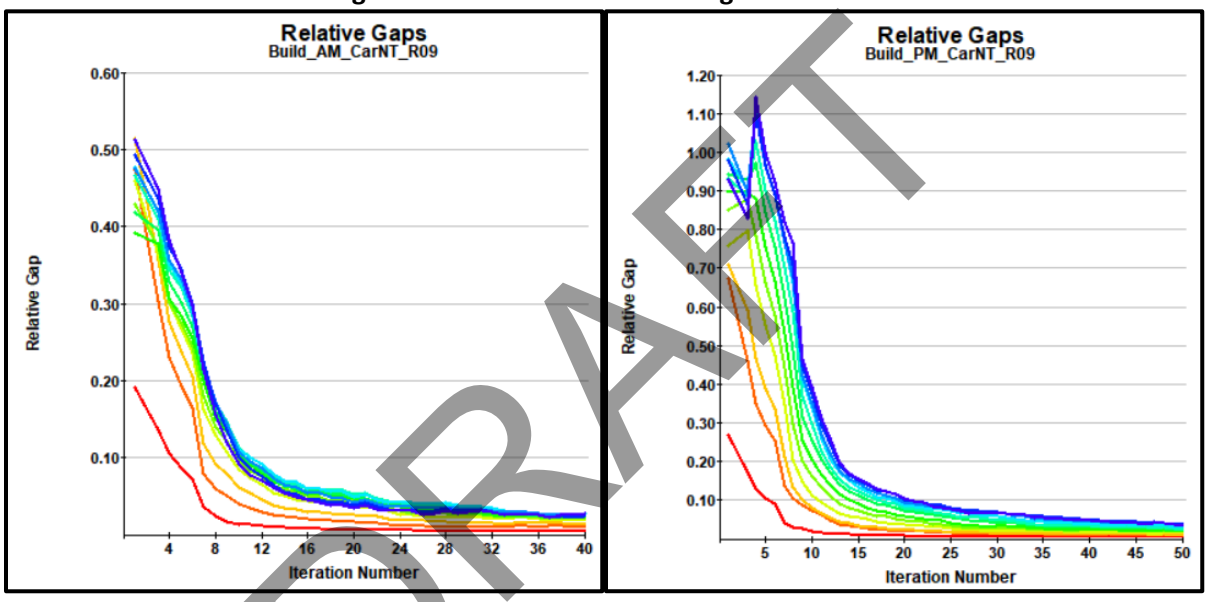
- 4.5.2 Model Volumes
- 4.5.3 Travel Times

4.5.1 Model Convergence

As documented in *2.6.1 Model Convergence* and *3.5.1 Model Convergence*, the first assessment after running the DTA was the model convergence. A properly converged DTA will have low relative gap values in the final iteration as well as stability during the final iterations. Example final charts representing relative gaps between successive iterations for the AM and PM peak period models are shown in **Figure 4.3**. More information on the Build model convergence can be found in ***Appendix F***. In general, the relative gaps for the non-Toll models are slightly lower than the Toll models since more travelers can use the proposed New Bridge under the non-Toll Scenario.

Figure 4.3 – Build Model Convergence Charts



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4.5.2 Modeled Traffic

The Build Peak Hour Model Volumes for each Bridge Crossing were compared to the No Build Peak Hour Model Volumes at the Mississippi River crossings to document the changes in traffic volume between the No Build and Build scenarios. **Table 4.3** and **Table 4.4** show the 2019 Base, 2042 No Build, and 2042 Build AM and PM Peak Hour Bridge Crossing volumes, respectively. Based on the Peak Hour volumes shown in **Table 4.3** and **Table 4.4**, the following observations were noted. More information on the Bridge volumes can be found in ***Appendix F***.

<u>Proposed New Bridge</u>

- The proposed New Bridge volumes for the Non-Toll Scenarios are higher than the corresponding Toll Scenarios because of the Toll restrictions placed on the proposed New Bridge in the Toll Scenarios. It is also observed that the Toll Scenario volumes on the three existing Bridges (US 190, I-10, and LA 70) are generally higher than the non-Toll Scenario volumes for those bridges.

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US 190 Bridge

- The Eastbound AM and Westbound PM Toll Scenario volumes are lower than the 2042 No Build volumes for the northern Bridge Alternative Routes. Similar trends were observed for the Non-Toll scenario volumes during the PM Peak Hour for both Eastbound and Westbound directions. For the more northern Bridge Alternative Routes, the decrease in trips could be attributed to some trips shifting from the US 190 Bridge to the I-10 Bridge as the I-10 Bridge trips shifted to the proposed New Bridge. However, for the more southern Bridge Alternative Routes, higher congestion was observed on I-10, which could be due to the increased number in trips networkwide because of the growth redistribution and fewer trips shifting from the existing I-10 bridge to the proposed New Bridge based on the increased distance between those bridges.
- For both Toll and Non-Toll scenarios, the Westbound AM Peak Hour volumes are higher than the 2042 No Build volumes; however, the differences in those volumes are minimal (less than ten percent).
- The Eastbound PM Toll Scenario volumes are higher than the 2042 No Build volumes, but with very similar travel speeds. These volume increases could be attributed to growth redistribution due to the Bridge location and/or route choice changes.

I-10 Bridge

- For most Bridge Alternative Routes, the Toll Scenario and Non-Toll Scenario volumes are, on average, three (3) percent higher than the 2042 No Build volumes for both AM and PM Peak Hours. This could be attributed to an increased throughput on the I-10 Bridge as delay on the surrounding network links reduced because of the changes in route choices by travelers due to the proposed New Bridge.
- While the Toll Scenario volumes are generally higher than the non-Toll Scenario volumes, due to the Toll restriction placed on the New Bridge, the differences between the Non-Toll and Toll volumes are generally minimal because of the attractiveness of the I-10 Bridge. However, the Westbound PM Toll Scenario volumes are lower than the Non-Toll Scenario volumes for the more Southern Bridge Alternative Routes. This is due to the expected increase in the number of trips networkwide for the Southern Bridge Alternative Routes due to the growth redistribution and the changes in the trip redistribution causing congestion on I-10.

LA 70 Bridge

- As expected, the Build Toll Scenario and Non-Toll Scenario volumes are lower than the 2042 No Build volumes for both AM and PM Peak Hours. This could be attributed to trips using the LA 70 Bridge having an alternative option.
- While the Toll Scenario volumes are generally higher than the non-Toll Scenario volumes, the differences between the Non-Toll Scenario and Toll Scenario volumes are generally minimal, except for the more southern Bridge Alternative Routes, where the Toll Scenario volumes are considerably higher than the Non-Toll Scenario volumes. This is due to the expected increase in the number of trips networkwide for the Southern Bridge Alternative Routes due to the growth redistribution and a more southern Bridge Alternatives being in close proximity to the LA 70 Bridge.

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Table 4.3: Bridge Crossing Volume Comparison – AM Peak Hour

Alternative		AM Peak Hour Bridge Crossing Volume															
		US 190				I-10				LA 70				New Bridge			
		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
		TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL
2019 Base		1,066		866		3,833		2,960		1,025		891					
2042 No Build		1,484		1,082		4,665		3,583		1,921		1,500					
Route 01	A-1-I	1,377	1,274	1,148	1,139	4,778	4,738	3,748	3,619	1,827	1,795	1,504	1,444	541	834	359	530
Route 02	A-1-II	1,391	1,257	1,133	1,118	4,867	4,761	3,732	3,593	1,819	1,805	1,506	1,462	673	1,002	409	616
Route 03	B-2-I	1,386	1,241	1,117	1,124	4,898	4,754	3,714	3,544	1,866	1,817	1,481	1,426	681	1,039	460	643
Route 04	B-2-II	1,419	1,212	1,140	1,135	4,804	4,786	3,774	3,606	1,848	1,793	1,438	1,444	687	1,055	451	647
Route 05	C-3-I	1,380	1,223	1,107	1,107	4,822	4,720	3,742	3,593	1,861	1,786	1,478	1,490	716	1,156	566	759
Route 06	C-3-II	1,389	1,237	1,131	1,130	4,817	4,746	3,744	3,604	1,855	1,772	1,471	1,455	763	1,162	587	786
Route 07	C-4-I	1,391	1,258	1,096	1,098	4,795	4,759	3,804	3,647	1,876	1,812	1,464	1,475	660	980	440	598
Route 08	C-5-II	1,373	1,277	1,120	1,103	4,828	4,790	3,741	3,647	1,874	1,798	1,508	1,453	679	978	528	698
Route 09	C-6-III	1,360	1,230	1,107	1,106	4,912	4,788	3,814	3,626	1,854	1,789	1,504	1,472	828	1,130	588	795
Route 14	E-11-IV	1,440	1,334	1,122	1,119	4,779	4,714	3,848	3,643	1,927	1,777	1,525	1,469	904	1,304	785	1,120
Route 15	F-12-IV	1,429	1,304	1,105	1,106	4,785	4,834	3,882	3,696	1,953	1,794	1,575	1,499	799	1,169	731	1,062
Route 16	F-13-IV	1,483	1,324	1,112	1,116	4,825	4,826	3,875	3,660	1,908	1,738	1,530	1,431	911	1,309	768	1,125
Route 17	F-14-V	1,424	1,304	1,069	1,089	4,825	4,794	3,913	3,688	1,908	1,753	1,527	1,511	845	1,214	688	1,017
Route 22	H-19-VII	1,449	1,381	1,126	1,114	4,858	4,854	3,955	3,861	1,850	1,651	1,515	1,513	839	1,190	616	820
Route 23	I-20-VII	1,510	1,395	1,121	1,105	4,802	4,792	3,923	3,807	1,874	1,687	1,521	1,508	835	1,178	583	834
Route 24	J-21-VII	1,517	1,414	1,118	1,112	4,755	4,819	4,009	3,852	1,857	1,643	1,532	1,520	882	1,248	626	897
Route 25	K-22-VII	1,593	1,543	1,139	1,127	4,806	4,769	3,967	3,794	1,864	1,599	1,572	1,571	848	1,292	568	845
Route 26	K-23-VII	1,506	1,431	1,115	1,107	4,791	4,769	3,967	3,796	1,825	1,540	1,600	1,563	902	1,344	644	940
Route 30	M-25-IX	1,554	1,390	1,181	1,138	4,718	4,768	4,080	3,885	2,080	1,786	1,411	1,251	916	1,377	664	1,498
Route 32	N-28-X	1,667	1,643	1,154	1,101	4,659	4,711	4,020	3,928	2,131	1,713	1,461	1,231	1,129	1,589	747	1,596

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Table 4.4: Bridge Crossing Volume Comparison – PM Peak Hour

Alternative		PM Peak Hour Bridge Crossing Volume															
		US 190				I-10				LA 70				New Bridge			
		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound		Eastbound		Westbound	
		TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL
2019 Base		2,104		1,295		2,364		5,040		1,152		919					
2042 No Build		2,544		2,029		2,814		5,257		1,747		1,774					
Route 01	A-1-I	2,723	2,219	1,938	1,682	2,868	2,884	5,464	5,356	1,630	1,496	1,697	1,644	583	1,205	660	1,311
Route 02	A-1-II	2,721	2,143	1,984	1,703	2,877	2,925	5,322	5,301	1,662	1,535	1,665	1,606	599	1,174	710	1,351
Route 03	B-2-I	2,672	2,112	1,934	1,737	2,893	2,910	5,419	5,453	1,598	1,560	1,728	1,674	726	1,251	830	1,251
Route 04	B-2-II	2,737	2,287	1,980	1,784	2,854	2,890	5,420	5,488	1,624	1,538	1,730	1,637	707	1,266	789	1,210
Route 05	C-3-I	2,661	2,215	1,945	1,684	2,900	2,946	5,450	5,432	1,665	1,530	1,646	1,631	844	1,384	851	1,335
Route 06	C-3-II	2,633	2,250	1,943	1,685	2,870	2,857	5,471	5,511	1,700	1,566	1,658	1,600	840	1,337	908	1,396
Route 07	C-4-I	2,573	2,305	2,010	1,780	2,882	2,870	5,379	5,477	1,692	1,522	1,702	1,688	786	1,252	757	1,178
Route 08	C-5-II	2,789	2,298	1,954	1,754	2,794	2,892	5,431	5,452	1,668	1,491	1,717	1,621	781	1,320	858	1,240
Route 09	C-6-III	2,745	2,362	1,949	1,770	2,840	2,884	5,476	5,456	1,711	1,549	1,680	1,632	883	1,371	936	1,355
Route 14	E-11-IV	2,642	2,327	2,075	1,796	2,890	2,871	5,346	5,473	1,621	1,509	1,669	1,602	1,053	1,547	962	1,403
Route 15	F-12-IV	2,672	2,362	2,023	1,832	2,865	2,845	5,261	5,458	1,627	1,442	1,759	1,644	1,021	1,485	934	1,300
Route 16	F-13-IV	2,598	2,359	2,049	1,853	2,897	2,876	5,291	5,513	1,681	1,569	1,707	1,589	1,171	1,597	1,014	1,416
Route 17	F-14-V	2,714	2,474	2,059	1,769	2,894	2,900	5,295	5,465	1,623	1,534	1,758	1,672	1,019	1,507	994	1,447
Route 22	H-19-VII	2,800	2,627	2,169	1,904	2,873	2,898	5,063	5,389	1,603	1,513	1,691	1,557	903	1,115	868	1,205
Route 23	I-20-VII	2,745	2,641	2,148	2,009	2,898	2,867	5,191	5,495	1,641	1,548	1,711	1,570	918	1,246	928	1,265
Route 24	J-21-VII	2,795	2,545	2,195	1,944	2,862	2,870	5,082	5,435	1,607	1,474	1,666	1,518	955	1,369	969	1,363
Route 25	K-22-VII	2,783	2,707	2,356	1,980	2,868	2,898	5,001	5,340	1,676	1,594	1,661	1,492	971	1,298	832	1,286
Route 26	K-23-VII	2,629	2,668	2,184	1,985	2,863	2,844	5,060	5,280	1,687	1,590	1,632	1,450	1,018	1,411	929	1,335
Route 30	M-25-IX	2,570	2,796	2,319	2,136	2,879	2,886	5,123	5,213	1,720	1,525	1,787	1,647	1,099	1,369	952	1,386
Route 32	N-28-X	3,013	3,017	2,503	2,457	2,853	2,698	4,874	4,961	1,721	1,626	1,934	1,863	1,201	1,517	937	1,131

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Due to the sensitivity of the route choice making behavior of the travelers under oversaturated conditions during the AM and PM Peak Periods, the effectiveness of the proposed Bridge Alternatives was also compared using the systemwide vehicle hours of delay (VHD) and vehicle hours traveled (VHT). The No Build and Build VHD and VHT comparison is shown in **Table 4.5**. In general, the Non-Toll Scenario VHD and VHT are less than the corresponding Toll Scenario VHD and VHT. For most of the northern alignments (From Route 01 to Route 17), the Build VHD and VHT are less than the No Build scenario. It is observed that the southern alignments (Route 22 to Route 32) resulted in higher VHD and VHT than the No Build scenario due to the increased trip distances as well as the higher number of trips resulted from the anticipated growth in the areas where the Bridge could be located. More information on the VHD and VHT can be found in ***Appendix F***.

Table 4.5: Network VHD and VHT Comparison

Alternative		AM Peak Period				PM Peak Period			
		VHD		VHT		VHD		VHT	
		TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL
2019 Base		11,750		78,583		19,944		103,850	
2042 No Build		36,832		128,556		62,877		177,479	
Route 01	A-1-I	34,796	29,802	126,137	125,746	58,205	56,164	172,522	169,936
Route 02	A-1-II	34,954	34,491	126,608	125,811	59,285	57,687	173,930	171,730
Route 03	B-2-I	35,158	35,584	127,028	127,160	57,456	57,795	171,984	171,587
Route 04	B-2-II	35,220	34,562	127,096	126,267	58,310	57,473	172,819	171,562
Route 05	C-3-I	35,075	33,992	127,039	125,701	59,843	58,792	174,231	173,105
Route 06	C-3-II	35,303	35,229	127,086	126,538	58,293	57,797	172,784	171,850
Route 07	C-4-I	34,369	34,318	126,206	125,999	59,042	57,400	173,574	171,586
Route 08	C-5-II	34,747	34,144	126,805	125,735	58,118	57,749	172,699	171,895
Route 09	C-6-III	34,901	34,618	126,611	126,125	58,450	57,672	173,229	172,128
Route 14	E-11-IV	35,932	35,151	128,453	127,453	60,472	57,731	175,504	172,452
Route 15	F-12-IV	35,422	35,422	128,262	128,262	59,437	57,757	174,591	172,553
Route 16	F-13-IV	36,082	34,463	128,801	127,157	58,603	58,031	173,924	172,635
Route 17	F-14-V	35,794	34,584	128,344	126,979	59,737	58,842	174,907	173,715
Route 22	H-19-VII	35,869	35,475	129,005	128,396	63,330	63,292	178,677	178,343
Route 23	I-20-VII	35,690	35,518	129,046	128,405	64,375	62,958	179,963	178,189
Route 24	J-21-VII	36,419	35,150	129,509	128,396	64,322	63,702	179,938	178,848
Route 25	K-22-VII	35,989	35,101	129,618	128,500	64,723	62,244	180,447	178,152
Route 26	K-23-VII	35,293	35,656	128,989	129,069	64,716	63,028	180,466	178,800
Route 30	M-25-IX	39,932	37,406	133,932	131,384	65,586	63,976	181,304	180,034
Route 32	N-28-X	40,596	37,759	135,763	132,505	66,887	66,486	183,850	183,038

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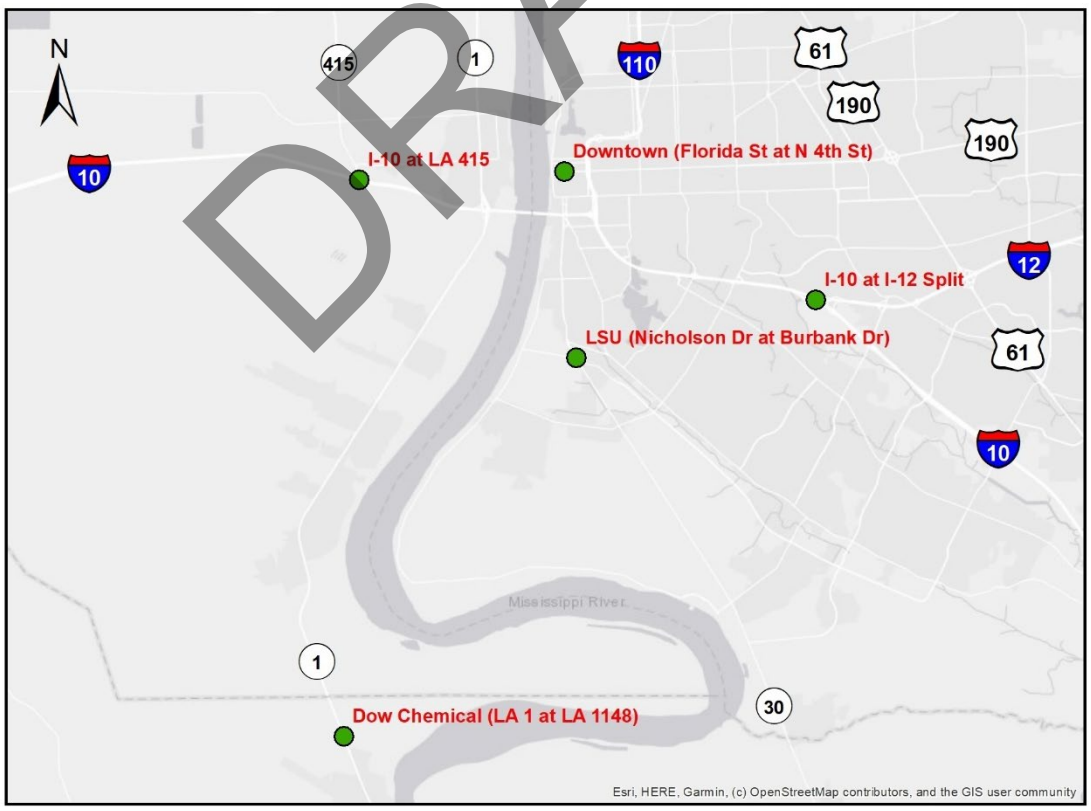
4.5.3 Travel Times

For this travel time comparison, travel time corridors that cross the Mississippi River on I-10 are listed below. The Existing, No Build, and Build Peak Hour AM travel time comparisons for the Eastbound and Westbound corridors are shown in **Table 4.6** and **Table 4.7**, respectively, and the PM travel time comparisons are shown in **Table 4.8** and **Table 4.9**, respectively. The starting and ending points of the travel time corridors are shown in **Figure 4.4**.

- Eastbound
  - I-10 at LA 415 to I-10/I-12 Split
  - I-10 at LA 415 to Downtown Baton Rouge
  - I-10 at LA 415 to LSU
  - Dow Chemical to I-10/I-12 Split
  - Dow Chemical to Downtown Baton Rouge
  - Dow Chemical to LSU
- Westbound
  - I-10/I-12 Split to I-10 at LA 415
  - Downtown Baton Rouge to I-10 at LA 415
  - LSU to I-10 at LA 415
  - I-10/I-12 Split to Dow Chemical
  - Downtown Baton Rouge to Dow Chemical
  - LSU to Dow Chemical

Figure 4.4 – Travel Time Corridor Locations



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In general, the travel times are projected to improve for most of the corridors listed above for each Bridge Alternative for both Toll and non-Toll scenarios. Also, the non-Toll corridor travel time is generally lower than the Toll corridor travel time for each Build Alternative. Additionally, the difference in travel time between the scenarios is minimal in the AM Peak Hour; however, the differences in travel time between the scenarios are greater in the PM Peak Hour. More information on the travel time comparison can be found in ***Appendix F***.

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Table 4.6: Average Peak Hour Travel Time Comparison – Eastbound AM Peak Hour

Scenario		Eastbound AM Peak Hour Travel Times (Minutes)											
		I-10 at LA 415 to I-10/I-12 Split		I-10 at LA 415 to Downtown Baton Rouge[1]		I-10 at LA 415 to LSU[2]		Dow Chemical[3] to I-10/I-12 Split		Dow Chemical[3] to Downtown Baton Rouge[1]		Dow Chemical[3] to LSU[2]	
		TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL
2019 Base		10.0		8.9		8.9		23.4		22.5		22.5	
2042 No Build		12.1		9.9		12.1		23.4		21.3		23.5	
Route 01	A-1-I	11.2	10.9	9.7	9.0	10.0	10.0	22.7	22.2	21.3	20.4	21.6	21.4
Route 02	A-1-II	11.1	10.4	9.5	9.0	10.7	9.8	22.5	21.9	21.0	20.5	22.2	21.3
Route 03	B-2-I	11.3	10.7	9.4	9.2	11.6	9.9	22.4	21.6	20.6	20.2	22.8	20.9
Route 04	B-2-II	11.7	10.7	9.4	9.1	11.5	10.1	22.8	21.5	20.6	20.0	22.7	21.1
Route 05	C-3-I	12.2	10.8	9.8	9.0	11.3	10.1	23.3	21.6	21.1	19.9	22.6	21.0
Route 06	C-3-II	11.1	10.4	9.4	9.2	10.5	10.2	22.4	21.3	20.7	20.3	21.8	21.3
Route 07	C-4-I	10.5	10.9	9.0	9.0	10.1	9.7	23.4	21.9	21.2	20.1	22.1	20.8
Route 08	C-5-II	11.4	10.8	9.5	9.1	10.2	10.3	22.6	21.8	21.3	20.2	21.1	21.5
Route 09	C-6-III	10.7	10.5	9.4	8.9	10.2	10.0	21.9	21.4	20.8	19.9	21.6	21.1
Route 14	E-11-IV	11.5	11.1	9.9	9.3	10.8	11.3	22.8	22.0	21.3	20.3	22.3	22.3
Route 15	F-12-IV	11.6	10.8	9.9	9.0	11.1	10.8	22.8	21.8	21.2	20.1	22.4	21.9
Route 16	F-13-IV	11.5	11.2	10.1	9.3	11.4	10.2	22.6	22.0	21.3	20.2	22.7	21.2
Route 17	F-14-V	11.8	11.1	9.3	9.3	10.3	9.9	22.9	22.0	20.5	20.3	21.6	20.9
Route 22	H-19-VII	11.9	10.8	10.2	9.1	10.3	11.2	23.1	21.8	21.5	20.2	21.6	22.3
Route 23	I-20-VII	11.7	11.0	10.1	9.2	14.6	11.6	22.9	22.0	21.5	20.4	26.0	22.8
Route 24	J-21-VII	11.9	11.1	10.1	9.7	11.2	10.9	23.2	22.2	21.6	20.9	22.6	22.1
Route 25	K-22-VII	12.0	11.5	10.4	9.8	11.4	11.0	23.4	22.7	21.9	21.1	22.9	22.4
Route 26	K-23-VII	11.7	12.0	9.9	9.7	11.9	11.0	23.1	23.1	21.3	20.8	23.3	22.2
Route 30	M-25-IX	11.7	11.6	9.9	9.7	12.1	10.6	23.0	22.8	21.3	21.0	23.5	21.9
Route 32	N-28-X	12.7	12.1	11.0	10.5	14.0	14.0	24.7	23.8	23.1	22.3	26.2	25.8

NOTE 1: Downtown Baton Rouge is the intersection of Florida Street at North 4th Street.
NOTE 2: LSU is the intersection of LA 30 (Nicholson Drive) at LA 42 (Burbank Drive)
NOTE 3: Dow Chemical is the intersection of LA 1 at LA 1148.

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Table 4.7: Average Peak Hour Travel Time Comparison – Westbound AM Peak Hour

Scenario		Westbound AM Peak Hour Travel Times (Minutes)											
		I-10/I-12 Split to I-10 at LA 415		Downtown Baton Rouge[1] to I-10 at LA 415		LSU[2] to I-10 at LA 415		I-10/I-12 Split to Dow Chemical[3]		Downtown Baton Rouge[1] to Dow Chemical		LSU[2] to Dow Chemical[3]	
		TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL
2019 Base		9.0		5.6		9.7		19.9		16.5		20.6	
2042 No Build		8.8		5.6		10.5		20.3		17.1		22.0	
Route 01	A-1-I	9.2	9.1	5.7	5.7	10.5	10.1	20.7	20.7	17.6	17.6	22.4	22.0
Route 02	A-1-II	9.1	9.1	5.6	5.6	10.1	10.2	20.8	20.7	17.6	17.6	22.1	22.1
Route 03	B-2-I	9.1	9.1	5.6	5.6	10.4	10.1	20.6	20.4	17.4	17.4	22.2	21.9
Route 04	B-2-II	9.2	9.1	5.7	5.7	10.2	10.2	20.7	20.5	17.6	17.5	22.1	22.0
Route 05	C-3-I	9.1	9.1	5.7	5.7	10.3	10.1	20.9	20.8	17.8	17.7	22.4	22.1
Route 06	C-3-II	9.1	9.1	5.7	5.7	10.2	10.2	20.9	20.7	17.8	17.7	22.3	22.2
Route 07	C-4-I	8.8	9.1	5.7	5.6	10.3	10.1	21.1	20.9	18.0	17.8	22.5	22.2
Route 08	C-5-II	8.8	9.1	5.7	5.7	10.3	10.1	21.1	20.9	18.0	17.8	22.5	22.2
Route 09	C-6-III	9.1	9.1	5.7	5.7	10.2	10.1	21.0	20.9	18.0	17.8	22.4	22.3
Route 14	E-11-IV	9.2	9.1	5.7	5.6	10.8	10.5	20.3	20.1	17.2	16.9	22.3	21.8
Route 15	F-12-IV	9.2	9.1	5.7	5.7	10.7	10.3	20.4	20.2	17.2	17.1	22.3	21.7
Route 16	F-13-IV	9.1	9.1	5.7	5.7	10.3	10.5	20.3	20.1	17.2	17.0	21.8	21.8
Route 17	F-14-V	9.2	9.1	5.7	5.7	10.5	10.5	20.4	20.1	17.3	17.1	22.1	21.9
Route 22	H-19-VII	9.3	9.1	5.8	5.7	10.7	10.5	20.5	20.3	17.4	17.2	22.3	21.9
Route 23	I-20-VII	9.2	9.1	5.7	5.6	10.5	10.7	20.5	20.3	17.4	17.1	22.1	22.2
Route 24	J-21-VII	9.2	9.1	5.8	5.7	10.8	10.8	20.5	20.2	17.4	17.2	22.4	22.2
Route 25	K-22-VII	9.3	9.2	5.9	5.8	10.7	10.4	20.7	20.4	17.6	17.3	22.4	22.0
Route 26	K-23-VII	9.2	9.1	5.8	5.6	10.6	10.5	20.5	20.2	17.4	17.1	22.3	21.9
Route 30	M-25-IX	9.5	9.2	6.4	5.7	11.8	10.6	21.3	20.4	18.1	17.2	23.5	22.1
Route 32	N-28-X	9.8	9.2	6.2	5.6	12.0	11.2	21.2	20.5	18.0	17.2	23.8	22.9

NOTE 1: Downtown Baton Rouge is the intersection of Florida Street at North 4th Street.
NOTE 2: LSU is the intersection of LA 30 (Nicholson Drive) at LA 42 (Burbank Drive)
NOTE 3: Dow Chemical is the intersection of LA 1 at LA 1148.

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Table 4.8: Average Peak Hour Travel Time Comparison – Eastbound PM Peak Hour

Scenario		Eastbound PM Peak Hour Travel Times (Minutes)											
		I-10 at LA 415 to I-10/I-12 Split		I-10 at LA 415 to Downtown Baton Rouge[1]		I-10 at LA 415 to LSU[2]		Dow Chemical[3] to I-10/I-12 Split		Dow Chemical[3] to Downtown Baton Rouge[1]		Dow Chemical[3] to LSU[2]	
		TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL
2019 Base		22.4		16.7		16.9		38.9		33.1		33.3	
2042 No Build		19.1		16.1		15.9		42.8		39.4		39.1	
Route 01	A-1-I	18.8	18.3	15.0	15.9	17.2	14.7	38.8	32.6	34.8	30.2	37.1	29.0
Route 02	A-1-II	19.1	17.4	15.1	14.5	15.3	13.7	37.8	32.1	33.5	29.2	33.6	28.4
Route 03	B-2-I	18.4	17.8	16.0	15.1	17.2	14.6	32.7	32.6	30.4	30.0	31.6	29.4
Route 04	B-2-II	20.3	17.0	17.7	14.7	18.7	13.7	34.8	33.4	32.1	31.1	33.2	30.1
Route 05	C-3-I	17.7	18.0	14.0	15.3	16.1	14.9	37.4	34.1	33.9	31.3	35.9	30.9
Route 06	C-3-II	19.4	20.0	15.7	17.2	16.2	16.7	38.3	29.8	34.5	27.0	35.7	26.5
Route 07	C-4-I	17.0	17.2	14.8	14.9	14.3	13.9	39.2	34.4	36.2	32.2	35.8	31.2
Route 08	C-5-II	19.6	17.7	15.8	15.3	18.9	14.7	37.3	36.2	33.1	33.7	36.0	33.1
Route 09	C-6-III	19.6	17.0	15.6	14.2	16.1	14.7	36.8	34.7	32.6	31.9	33.1	32.4
Route 14	E-11-IV	18.9	18.4	15.5	14.6	21.0	17.9	36.7	31.5	33.5	27.8	39.0	31.0
Route 15	F-12-IV	21.3	18.9	18.5	15.7	18.7	16.7	34.1	32.4	31.2	29.2	31.5	30.2
Route 16	F-13-IV	17.9	18.2	15.1	15.4	18.5	15.9	33.7	35.4	30.9	32.6	34.3	33.1
Route 17	F-14-V	18.4	17.7	15.4	13.9	16.8	14.5	32.2	36.2	29.1	32.4	30.5	33.0
Route 22	H-19-VII	18.9	19.3	15.8	15.6	17.3	18.0	34.8	35.0	31.7	31.2	33.0	33.7
Route 23	I-20-VII	19.8	19.4	16.0	16.1	17.4	16.8	40.7	34.6	37.2	31.3	38.9	31.9
Route 24	J-21-VII	18.5	20.5	15.5	16.6	17.0	18.5	35.6	36.6	32.7	32.5	34.1	34.4
Route 25	K-22-VII	20.0	19.4	17.9	16.3	21.6	22.3	37.9	33.6	35.4	30.5	39.3	36.5
Route 26	K-23-VII	18.6	19.1	14.8	15.3	19.0	19.1	44.2	35.2	39.9	31.5	45.1	35.1
Route 30	M-25-IX	20.8	20.5	17.1	17.6	17.1	20.1	44.0	34.1	40.4	31.2	39.6	33.7
Route 32	N-28-X	21.9	19.7	18.7	15.9	18.4	16.9	39.7	43.2	36.5	39.2	36.3	41.0

NOTE 1: Downtown Baton Rouge is the intersection of Florida Street at North 4th Street.
NOTE 2: LSU is the intersection of LA 30 (Nicholson Drive) at LA 42 (Burbank Drive)
NOTE 3: Dow Chemical is the intersection of LA 1 at LA 1148.

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Table 4.9: Average Peak Hour Travel Time Comparison – Westbound PM Peak Hour

Scenario		Westbound PM Peak Hour Travel Times (Minutes)											
		I-10/I-12 Split to I-10 at LA 415		Downtown Baton Rouge[1] to I-10 at LA 415		LSU[2] to I-10 at LA 415		I-10/I-12 Split to Dow Chemical[3]		Downtown Baton Rouge[1] to Dow Chemical		LSU[2] to Dow Chemical[3]	
		TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL	TOLL	NON-TOLL
2019 Base		11.3		8.6		11.9		22.5		19.8		23.1	
2042 No Build		15.8		14.4		21.8		27.8		26.2		33.7	
Route 01	A-1-I	13.6	11.0	11.5	9.9	17.9	12.4	26.0	23.2	24.0	22.3	30.5	24.8
Route 02	A-1-II	14.8	10.9	12.2	10.4	17.6	12.2	26.8	22.9	24.5	22.6	29.8	24.4
Route 03	B-2-I	14.1	11.1	12.9	10.2	16.2	13.2	26.0	23.0	25.0	22.2	28.4	25.3
Route 04	B-2-II	14.7	11.3	12.1	10.3	18.2	13.1	26.7	23.1	24.4	22.3	30.4	25.2
Route 05	C-3-I	13.7	10.9	11.3	11.8	16.3	13.4	25.8	22.7	23.6	23.8	28.6	25.4
Route 06	C-3-II	13.5	11.1	12.0	10.0	21.7	12.9	25.7	23.1	24.4	22.1	34.0	25.0
Route 07	C-4-I	14.6	11.6	12.3	10.7	16.7	13.9	27.3	23.6	24.7	22.8	29.0	26.1
Route 08	C-5-II	13.8	11.7	12.3	10.7	15.1	14.2	26.3	23.7	24.7	22.9	27.4	26.4
Route 09	C-6-III	13.3	11.7	12.4	11.1	16.3	13.4	25.4	23.9	24.7	23.5	28.6	25.8
Route 14	E-11-IV	15.9	12.1	12.6	12.4	15.9	14.3	27.5	23.5	24.4	24.0	27.8	25.9
Route 15	F-12-IV	17.6	13.1	13.2	12.1	16.6	17.0	29.2	24.5	25.0	23.7	28.4	28.6
Route 16	F-13-IV	16.4	12.3	14.2	11.0	16.4	13.6	27.9	23.7	25.9	22.6	28.2	25.3
Route 17	F-14-V	16.8	12.4	12.8	11.1	20.8	15.1	28.4	23.9	24.5	22.8	32.5	26.8
Route 22	H-19-VII	20.2	14.4	14.4	13.3	19.3	18.1	31.8	26.0	26.3	25.0	31.1	29.8
Route 23	I-20-VII	19.6	13.4	13.5	12.1	19.7	17.6	31.3	24.9	25.4	23.8	31.5	29.3
Route 24	J-21-VII	20.4	14.0	12.7	11.6	20.2	18.9	32.2	25.5	24.6	23.3	32.2	30.6
Route 25	K-22-VII	19.8	15.2	13.8	12.8	22.4	20.6	31.4	26.8	25.7	24.6	34.3	32.4
Route 26	K-23-VII	21.8	14.5	15.7	12.1	17.9	19.8	33.6	26.1	27.6	23.8	29.8	31.5
Route 30	M-25-IX	18.5	17.7	13.5	14.4	35.5	20.6	30.6	29.3	25.5	26.3	47.4	32.5
Route 32	N-28-X	22.0	22.4	14.1	14.9	28.6	25.9	34.0	34.2	26.2	26.9	40.6	37.9

NOTE 1: Downtown Baton Rouge is the intersection of Florida Street at North 4th Street.
NOTE 2: LSU is the intersection of LA 30 (Nicholson Drive) at LA 42 (Burbank Drive)
NOTE 3: Dow Chemical is the intersection of LA 1 at LA 1148.

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4.6 Build Model Results Summary

For each Build Alternative Route model, the No Build AM and PM models were updated to include the proposed Bridge route, and Bridge Alternative specific O-D demand matrices were developed to account for the projected 2042 Build traffic. Each Bridge Alternative Route model contained two scenarios, a Toll scenario that restricted the New Bridge to trips that would pay a Toll, and a Non-Toll scenario that had no restrictions on trips that would use the New Bridge. The AM and PM Non-Toll and Toll models show good convergence and low relative gaps at the last iteration. However, the relative gaps for both Non-Toll and Toll models shown a slightly increased values as the bridge location moved south. This increase in relative gap values can be attributed to the increase in the number of overall trips for the southern Bridge Alternatives.

The Build model results were presented in terms of projected traffic volumes for the three existing Mississippi River bridges (US 190, I-10, and LA 70) as well as the New Bridge and the projected changes in the corridor travel times between the No Build and Build alternatives. Those results are summarized below.

AM

The New Bridge volumes for the Non-Toll Scenario are higher than for the Toll Scenario; this is due to the Toll restriction placed on the New Bridge in the Toll Scenario. Also, the Toll Scenario volumes are generally higher than the non-Toll volumes for each of the three existing Bridges.

In general, the US 190 Eastbound Toll Scenario and Non-Toll Scenario volumes, the LA 70 Eastbound Toll Scenario and Non-Toll Scenario volumes, and the LA 70 Westbound Non-Toll Scenario volumes are lower than the 2042 No Build volumes, while the US 190 Westbound Toll Scenario and Non-Toll Scenario volumes, the I-10 Eastbound and Westbound Toll Scenario and Non-Toll Scenario volumes, and the LA 70 Westbound Toll Scenario volumes are higher than the 2042 No Build volumes.

The Toll and Non-Toll Scenario corridor travel times are generally lower than the 2042 No Build corridor travel times, and the Toll Scenario corridor travel times are generally higher than the non-Toll corridor travel times.

PM

Like the AM Models, the New Bridge volumes for the Non-Toll Scenario are higher than for the Toll Scenario; this is due to the TOLL restriction placed on the New Bridge in the Toll Scenario. Also, the Toll Scenario volumes are generally higher than the non-Toll volumes for each of the three existing Bridges.

In general, the US 190 Eastbound Non-Toll Scenario volumes, US 190 Westbound Toll Scenario and Non-Toll Scenario volumes, the LA 70 Eastbound Toll Scenario and Non-Toll Scenario volumes, and the LA 70 Westbound Toll Scenario and Non-Toll Scenario volumes are lower than the 2042 No Build volumes, while the US 190 Eastbound Toll Scenario volumes and the I-10 Eastbound and Westbound Toll Scenario and Non-Toll Scenario volumes are higher than the 2042 No Build volumes.

The Toll and Non-Toll Scenario corridor travel times are generally lower than the 2042 No Build corridor travel times, and the Toll Scenario corridor travel times are generally higher than the non-Toll Scenario corridor travel times.

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Appendix F

Build Model Development

I. Bridge Crossings in the Round 1 Screening
II. Bridge Crossings
III. 2042 Build Origin-Destination (O-D) Matrix Development
IV. Matrix Trip Summary
V. Toll Class Permissions
VI. Build Convergence
VII. Bridge Volumes
VIII. VHD and VHT Calculations
IX. Travel Time Comparison
X. QA/QC Checklist

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Appendix F

I. Bridge Crossings in the Round 1 Screening

In the Round 1 Screening, a total of 32 proposed Bridge Alternatives were considered. After the completion of the Round 1 Screening, a total of 20 proposed Bridge Alternatives were retained. The Round 1 screening considered highly sensitive resources, which included known Section 4(f) properties and protected species critical habitats; incorporated travel demand model information, which included the MRB Travel Demand (ADT and VHT), I-10 Congestion Relief (VHT), and LA 1 Congestion Relief (VHT); and considered technical bridge considerations, including the span length.

A table showing the original 32 routes as well as the results of the Round 1 screening are provided on the subsequent pages. The results include the Round 1 Corridor Alternative Screening Table and the locations of the 32 proposed Bridge Alternatives that were considered in the Round 1 screening. More information on the Round 1 screening can be found on the project website at the following link:

https://www.mrbsouth.com/_files/ugd/0c090a_8e6647e2aefe46b2bb28cc489bfdeaf4.pdf

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Bridge Route	
Route 01	A-1-I
Route 02	A-1-II
Route 03	B-2-I
Route 04	B-2-II
Route 05	C-3-I
Route 06	C-3-II
Route 07	C-4-I
Route 08	C-5-II
Route 09	C-6-III
Route 10	C-7-IV
Route 11	C-8-IV
Route 12	C-9-IV
Route 13	D-10-IV
Route 14	E-11-IV
Route 15	F-12-IV
Route 16	F-13-IV
Route 17	F-14-V
Route 18	F-15-VI
Route 19	F-16-VII
Route 20	F-17-VII
Route 21	G-18-VII
Route 22	H-19-VII
Route 23	I-20-VII
Route 24	J-21-VII
Route 25	K-22-VII
Route 26	K-23-VII
Route 27	K-24-VIII
Route 28	L-27-X
Route 29	M-24-VIII
Route 30	M-25-IX
Route 31	M-26-X
Route 32	N-28-X

KEY

Bridge Route carried to Round 2 screening

Bridge Route eliminated in Round 1 screening

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MRB SOUTH GBR: LA 1 TO LA 30 CONNECTOR (SPN H.013284)
ROUND 1 CORRIDOR ALTERNATIVE SCREENING TABLE

ALTERNATIVE	BRIDGE CONSTRAINTS	MRB TRAVEL DEMAND		I-10 CONGESTION RELIEF	LA 1 CONGESTION RELIEF	KNOWN SECTION 4(f) RESOURCE	PROTECTED SPECIES CRITICAL HABITAT
		ADT	VHT	VHT	VHT		
A-1-I	M	M	M	H	L	No	No
A-1-II[FS-1]	M	M	M	M	L	No	No
B-2-I	A	M	M	H	M	No	No
B-2-II	A	M	M	H	M	No	No
C-3-I	A	H	M	H	M	No	No
C-3-II[FS-2]	A	H	H	H	M	No	No
C-4-I	A	M	H	H	H	No	No
C-5-II	A	H	H	H	H	No	No
C-6-III	A	H	H	H	H	No	No
~~C-7-IV~~	~~A~~	~~L~~	~~H~~	~~M~~	~~M~~	~~No~~	~~No~~
~~C-8-IV~~	~~A~~	~~L~~	~~H~~	~~M~~	~~M~~	~~No~~	~~No~~
~~C-9-IV[FS-4]~~	~~M~~	~~L~~	~~H~~	~~M~~	~~M~~	~~No~~	~~No~~
~~D-10-IV[FS-5]~~	~~A~~	~~H~~	~~M~~	~~M~~	~~H~~	~~Yes~~	~~No~~
E-11-IV	A	H	M	M	H	No	No
F-12-IV[FS-3]	A	M	M	M	H	No	No
F-13-IV[FS-3]	A	H	H	M	H	No	No
F-14-V	A	M	M	M	H	No	No
~~F-15-VI~~	~~A~~	~~L~~	~~M~~	~~M~~	~~M~~	~~No~~	~~No~~
~~F-16-VII~~	~~A~~	~~L~~	~~M~~	~~M~~	~~M~~	~~No~~	~~No~~
~~F-17-VII~~	~~A~~	~~L~~	~~L~~	~~L~~	~~M~~	~~No~~	~~No~~
~~G-18-VII~~	~~A~~	~~L~~	~~M~~	~~L~~	~~M~~	~~No~~	~~No~~
H-19-VII	M	M	L	M	L	No	No
I-20-VII	A	M	L	M	M	No	No
J-21-VII	A	M	L	M	M	No	No
K-22-VII	A	M	L	M	M	No	No
K-23-VII	A	M	L	M	M	No	No
~~K-24-VIII~~	~~A~~	~~M~~	~~L~~	~~L~~	~~L~~	~~Yes~~	~~No~~
~~L-27-X~~	~~A~~	~~L~~	~~L~~	~~L~~	~~L~~	~~No~~	~~No~~
~~M-24-VIII~~	~~A~~	~~M~~	~~M~~	~~L~~	~~L~~	~~Yes~~	~~No~~
M-25-IX	A	M	M	L	L	No	No
~~M-26-X~~	~~A~~	~~M~~	~~M~~	~~L~~	~~L~~	~~Yes~~	~~No~~
N-28-X	A	H	M	L	M	No	No

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TABLE NOTES:

FS-0 Represents one of the five corridors from the Feasibility Study

Highlights: Green = most benefit, Yellow = moderate benefit, Red = least benefit

Pink cross-hatched alternatives were screened out due to low ADT.

Blue cross-hatched alternatives were screened out due to potential Section 4(f) resource impact.

Bridge Constraints

M = Marginal - main span length slightly exceeds approximate reasonable length of 2,000 ft

A = Acceptable - span lengths are reasonable with no impacts to the levee system

MRB Travel Demand (all MRB, I-10, LA 1, and LA 30 are Year 2042 traffic):

Average Daily Traffic (ADT)
Low (L) = 24,200-29,900
Moderate (M) = 30,000-35,400
High (H) = >35,500

Vehicle Hours of Travel (VHT) ("-"is a reduction):
L = <-0.90%
M = -0.91% to -1.19%
H = -1.20% to -1.74%

I-10 Congestion Relief ("-"is a reduction): VHT
L = -1.52% to -3.39%
M = -3.40% to -4.99%
H = >-5.00%

LA 1 Congestion Relief ("-" is a reduction): VHT
L = -4.60% to -7.89%
M = -7.90% to -12.04 %
H = >-12.05%

Known Section 4(f) Properties and Protected Species Critical Habitat

No = No Impact Known
Yes = Potentially Impacted

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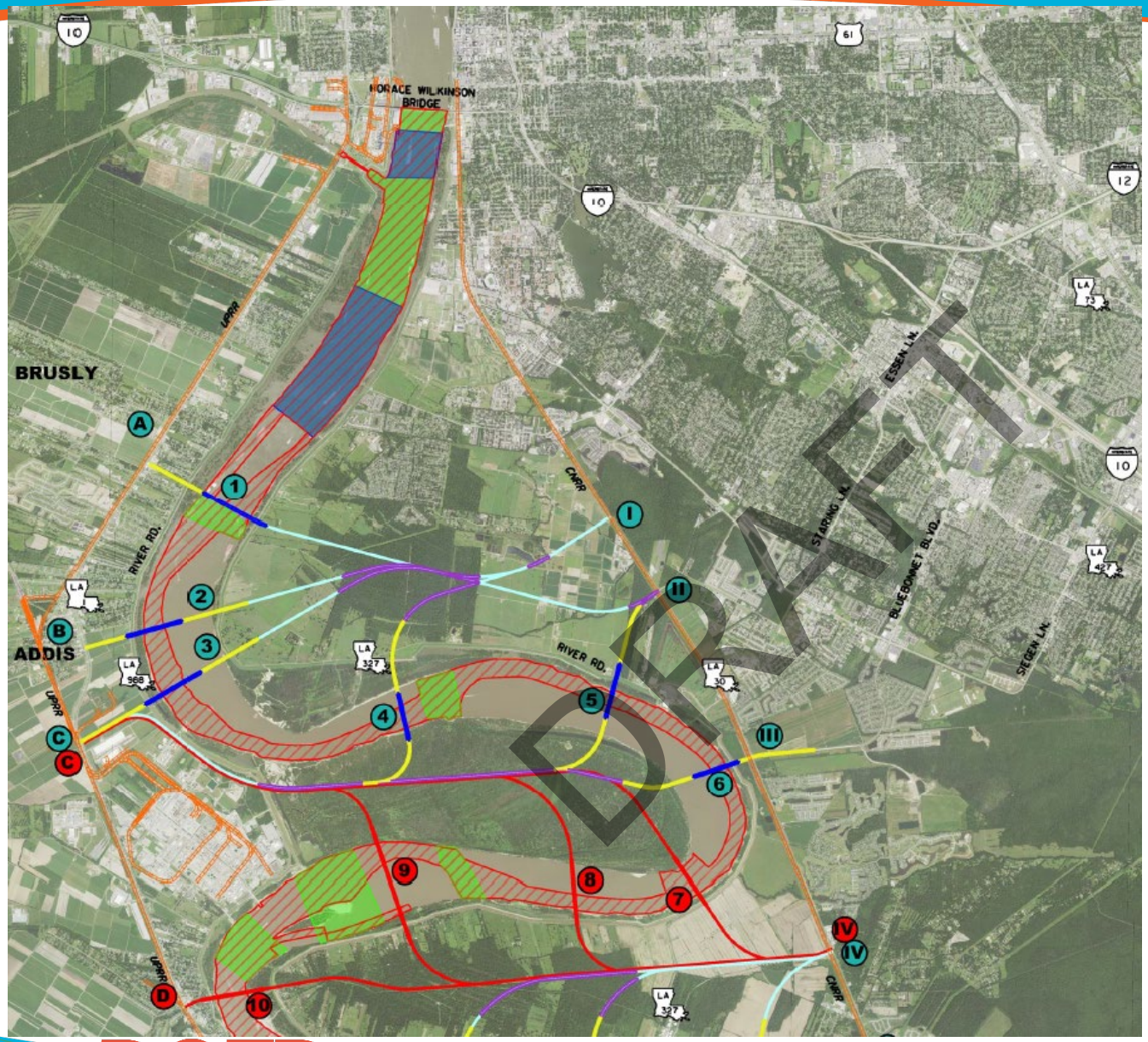

ALTERNATIVE
A-1-I ★
A-1-II ★
B-2-I
B-2-II
C-3-I
C-3-II
C-4-I
C-5-II
C-6-III
C-7-IV
C-8-IV
C-9-IV
D-10-IV

LEGEND

- RAILROAD TRACK
- BRIDGE CROSSING ALIGNMENT
- BRIDGE CROSSING ALIGNMENT ELIMINATED IN ROUND I SCREENING
- CABLE SUPPORTED MAIN SPAN
- HIGH LEVEL APPROACH SPAN
- LOW LEVEL STRUCTURE OVER WETLANDS
- NO BRIDGE PIER ZONE
- NO BRIDGE ZONE (SPAN LENGTH EXCEEDED)
- NO BRIDGE ZONE (ANCHORAGES)

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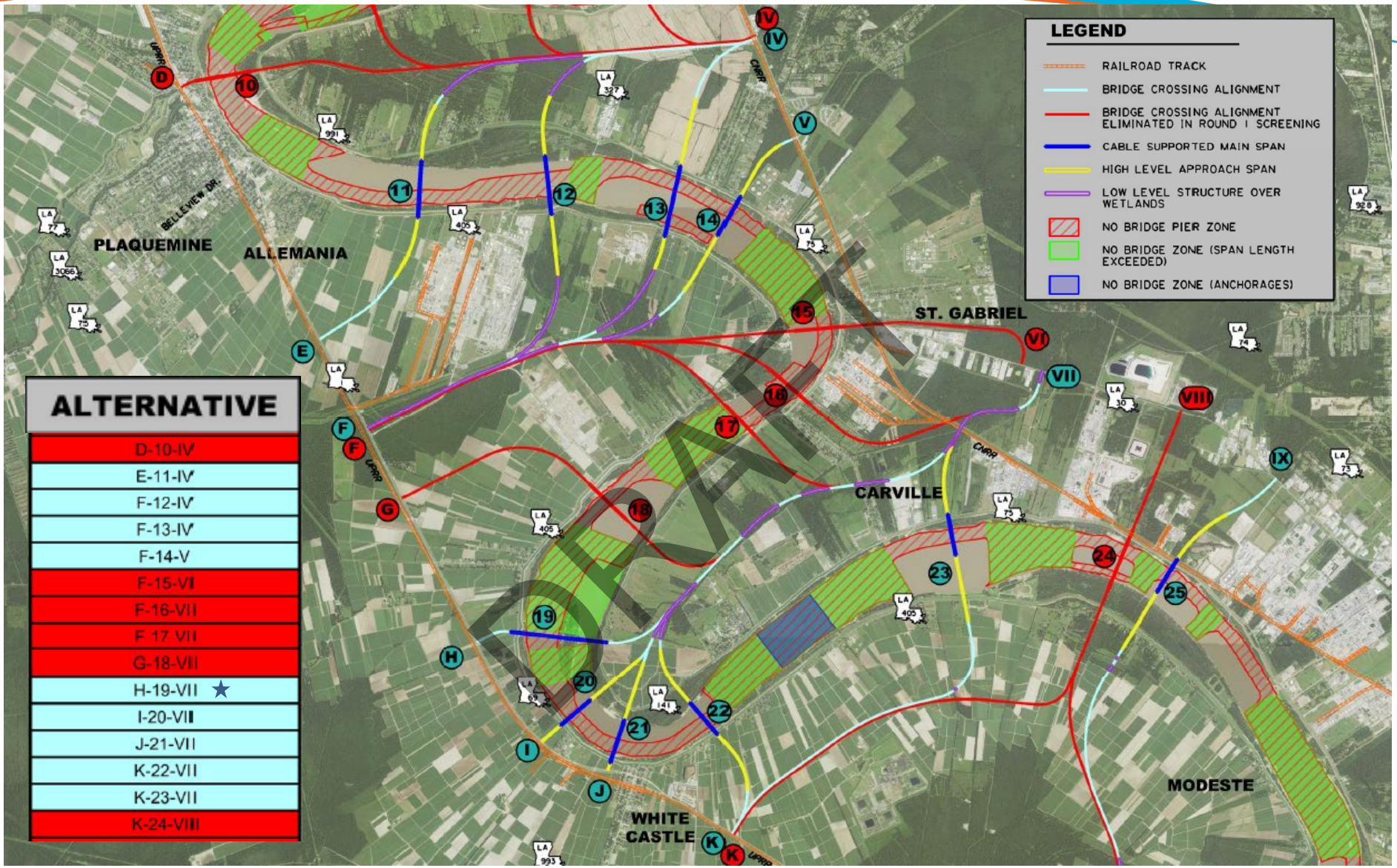

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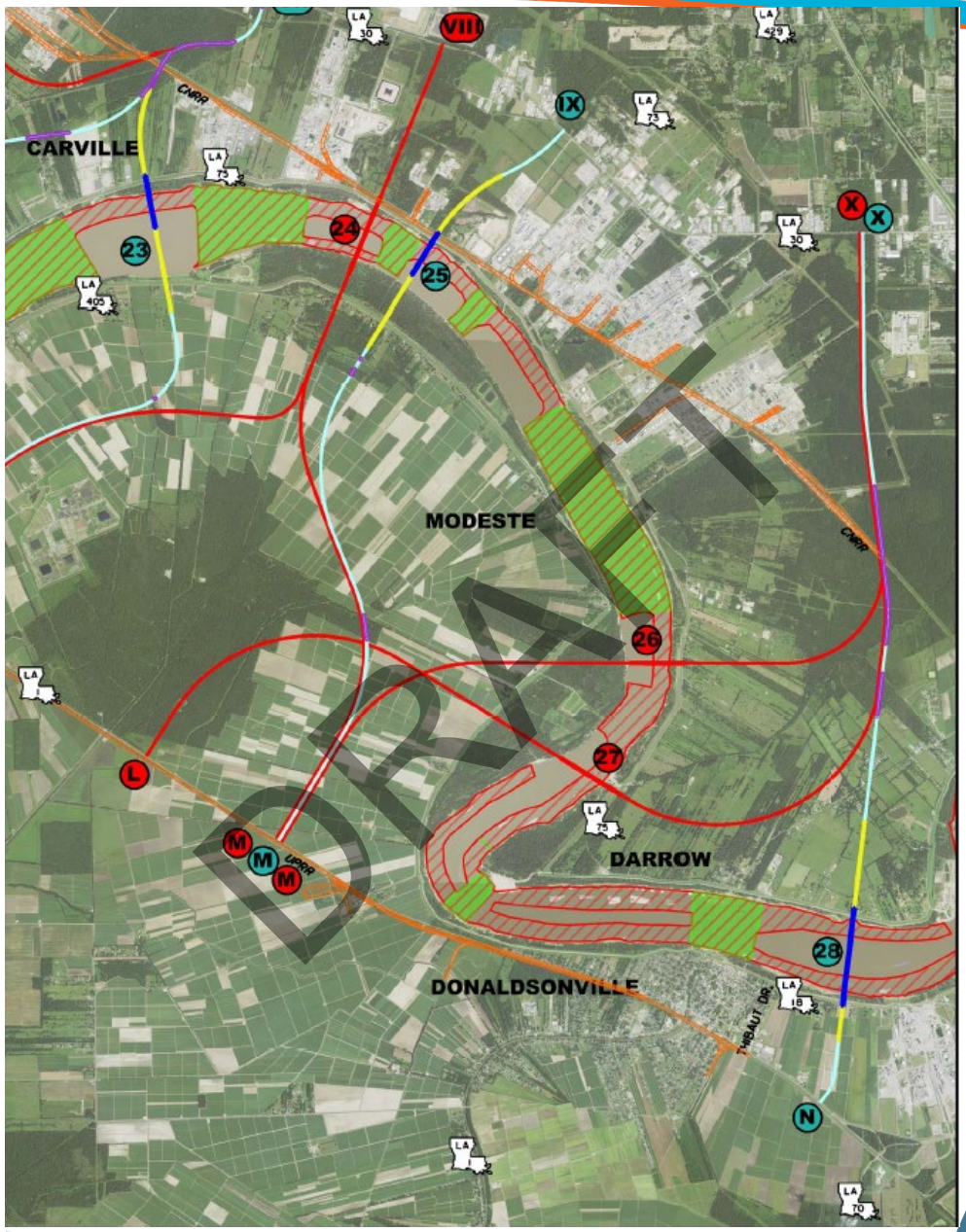

ALTERNATIVE
L-27-X
M-24-VIII
M-25-IX
M-26-X
N-28-X

LEGEND

- RAILROAD TRACK
- BRIDGE CROSSING ALIGNMENT
- BRIDGE CROSSING ALIGNMENT ELIMINATED IN ROUND I SCREENING
- CABLE SUPPORTED MAIN SPAN
- HIGH LEVEL APPROACH SPAN
- LOW LEVEL STRUCTURE OVER WETLANDS
- NO BRIDGE PIER ZONE
- NO BRIDGE ZONE (SPAN LENGTH EXCEEDED)
- NO BRIDGE ZONE (ANCHORAGES)

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Appendix F

II. Bridge Crossings

After the completion of the Round 1 Screening, a total of 20 proposed Bridge Routes were considered in the 2042 Build Mesoscopic Model development. Each proposed Bridge crossing was added to the 2042 No Build Mesoscopic Model to create a Bridge crossing specific 2042 Build Mesoscopic Model. All proposed Bridge Routes are located between the I-10 Mississippi River Bridge and the LA 70 Sunshine Bridge, and each proposed route connects LA 1 on the west bank of the Mississippi River and LA 30 on the east bank of the Mississippi River. For each Bridge Alternative route, a "*Letter-Number-Roman Numeral*" designation was given. Each part of the designation is described below, and a table showing each part of the designation is shown on the next page:

- "Letter" = Where the route connects at LA 1 (e.g., A, B, C…)
- "Number" = Where the route crosses the Mississippi River (e.g., 1,2,3…)
- "Roman Numeral" = Where the route connects at LA 30 (e.g., I, II, III…)

Of the 20 proposed Bridge Routes, nine (9) connect West Baton Rouge Parish and East Baton Rouge Parish, nine (9) connect the West Bank and East Bank of Iberville Parish, and two (2) connect the West Bank and East Bank of Ascension Parish. The following maps show the Bridge Routes:

- **Northern:** The nine (9) routes that connect West Baton Rouge Parish and East Baton Rouge Parish
- **Middle:** The nine (9) routes that connect the West Bank and East Bank of Iberville Parish
- **Southern:** The two (2) routes that connect the West Bank and East Bank of Ascension Parish

In addition to the maps and tables summarizing the Bridge Routes information, a table quantifying the links, connectors, nodes, and centroids represented in each Bridge Route 2042 Build mesoscopic model is shown.

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LA 1 Connection	
Letter	**Description**
A	LA 1 between St Francis St and LA 989-1 (Lukeville Ln)
B	LA 1 approximately 0.1 miles south of LA 990 (Addis Ln)
C	LA 1 approximately 0.12 miles south of Sid Richardson Rd
E	LA 1 between LA 992-3 (St Louis Rd) and Evergreen Rd
F	LA 1 approximately 0.43 miles south of Evergreen Rd
H	LA 1 between Augusta Rd and Aloysia Rd
I	LA 1 between Aloysia Rd and LA 993 (Richland Rd)
J	LA 1 between LA 993 (Richland Rd) and LA 69
K	LA 1 between Cora Rd and Laurel Ridge Rd
M	LA 1 approximately 1.08 miles west of LA 405
N	LA 3089 between Thibaut Rd and LA 70

River Crossing	
Number	**Description**
1	Approximately River Mile 224.3
2	Approximately River Mile 222.9
3	Approximately River Mile 222.2
4	Approximately River Mile 219.5
5	Approximately River Mile 217.1
6	Approximately River Mile 215.9
11	Approximately River Mile 206.0
12	Approximately River Mile 204.4
13	Approximately River Mile 202.8
14	Approximately River Mile 202.1
19	Approximately River Mile 195.1
20	Approximately River Mile 194.0
21	Approximately River Mile 193.4
22	Approximately River Mile 192.3
23	Approximately River Mile 188.5
25	Approximately River Mile 185.8
28	Approximately River Mile 174.1

LA 30 Connection	
Roman Numeral	**Description**
I	LA 30 (Nicholson Dr) between Ben Hur Rd and GSRI Ave
II	LA 30 (Nicholson Dr) approximately 0.1 miles north of GSRI Ave
III	LA 30 (Nicholson Dr) at the intersection with Bluebonnet Blvd
IV	LA 30 between East Baton Rouge/Iberville Parish Line and Bayou Paul Ln
V	LA 30 between Bayou Paul Ln and LA 74
VII	LA 30 between LA 74 and LA 3115
IX	LA 30 approximately 0.52 miles west of LA 73
X	LA 30 approximately 0.22 miles west of LA 3251 (Ashland Rd)

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Bridge Route		Length (miles)	West Bank Limit	East Bank Limit
Route 01	A-1-I	6.26	LA 1 between St Francis St and LA 989-1 (Lukeville Ln)	LA 30 (Nicholson Dr) between Ben Hur Rd and GSRI Ave
Route 02	A-1-II	6.59	LA 1 between St Francis St and LA 989-1 (Lukeville Ln)	LA 30 (Nicholson Dr) approximately 0.1 miles north of GSRI Ave
Route 03	B-2-I	6.94	LA 1 approximately 0.1 miles south of LA 990 (Addis Ln)	LA 30 (Nicholson Dr) between Ben Hur Rd and GSRI Ave
Route 04	B-2-II	7.28	LA 1 approximately 0.1 miles south of LA 990 (Addis Ln)	LA 30 (Nicholson Dr) approximately 0.1 miles north of GSRI Ave
Route 05	C-3-I	7.28	LA 1 approximately 0.12 miles south of Sid Richardson Rd	LA 30 (Nicholson Dr) between Ben Hur Rd and GSRI Ave
Route 06	C-3-II	7.64	LA 1 approximately 0.12 miles south of Sid Richardson Rd	LA 30 (Nicholson Dr) approximately 0.1 miles north of GSRI Ave
Route 07	C-4-I	8.93	LA 1 approximately 0.12 miles south of Sid Richardson Rd	LA 30 (Nicholson Dr) between Ben Hur Rd and GSRI Ave
Route 08	C-5-II	8.59	LA 1 approximately 0.12 miles south of Sid Richardson Rd	LA 30 (Nicholson Dr) approximately 0.1 miles north of GSRI Ave
Route 09	C-6-III	8.37	LA 1 approximately 0.12 miles south of Sid Richardson Rd	LA 30 (Nicholson Dr) at the intersection with Bluebonnet Blvd
Route 14	E-11-IV	8.13	LA 1 between LA 992-3 (St Louis Rd) and Evergreen Rd	LA 30 between East Baton Rouge/Iberville Parish Line and Bayou Paul Ln
Route 15	F-12-IV	8.76	LA 1 approximately 0.43 miles south of Evergreen Rd	LA 30 between East Baton Rouge/Iberville Parish Line and Bayou Paul Ln
Route 16	F-13-IV	7.95	LA 1 approximately 0.43 miles south of Evergreen Rd	LA 30 between East Baton Rouge/Iberville Parish Line and Bayou Paul Ln
Route 17	F-14-V	7.35	LA 1 approximately 0.43 miles south of Evergreen Rd	LA 30 between Bayou Paul Ln and LA 74
Route 22	H-19-VII	8.70	LA 1 between Augusta Rd and Aloysia Rd	LA 30 between LA 74 and LA 3115
Route 23	I-20-VII	8.50	LA 1 between Aloysia Rd and LA 993 (Richland Rd)	LA 30 between LA 74 and LA 3115
Route 24	J-21-VII	8.20	LA 1 between LA 993 (Richland Rd) and LA 69	LA 30 between LA 74 and LA 3115
Route 25	K-22-VII	9.04	LA 1 between Cora Rd and Laurel Ridge Rd	LA 30 between LA 74 and LA 3115
Route 26	K-23-VII	8.15	LA 1 between Cora Rd and Laurel Ridge Rd	LA 30 between LA 74 and LA 3115
Route 30	M-25-IX	8.15	LA 1 approximately 1.08 miles west of LA 405	LA 30 approximately 0.52 miles west of LA 73
Route 32	N-28-X	8.58	LA 3089 between Thibaut Rd and LA 70	LA 30 approximately 0.22 miles west of LA 3251 (Ashland Rd)

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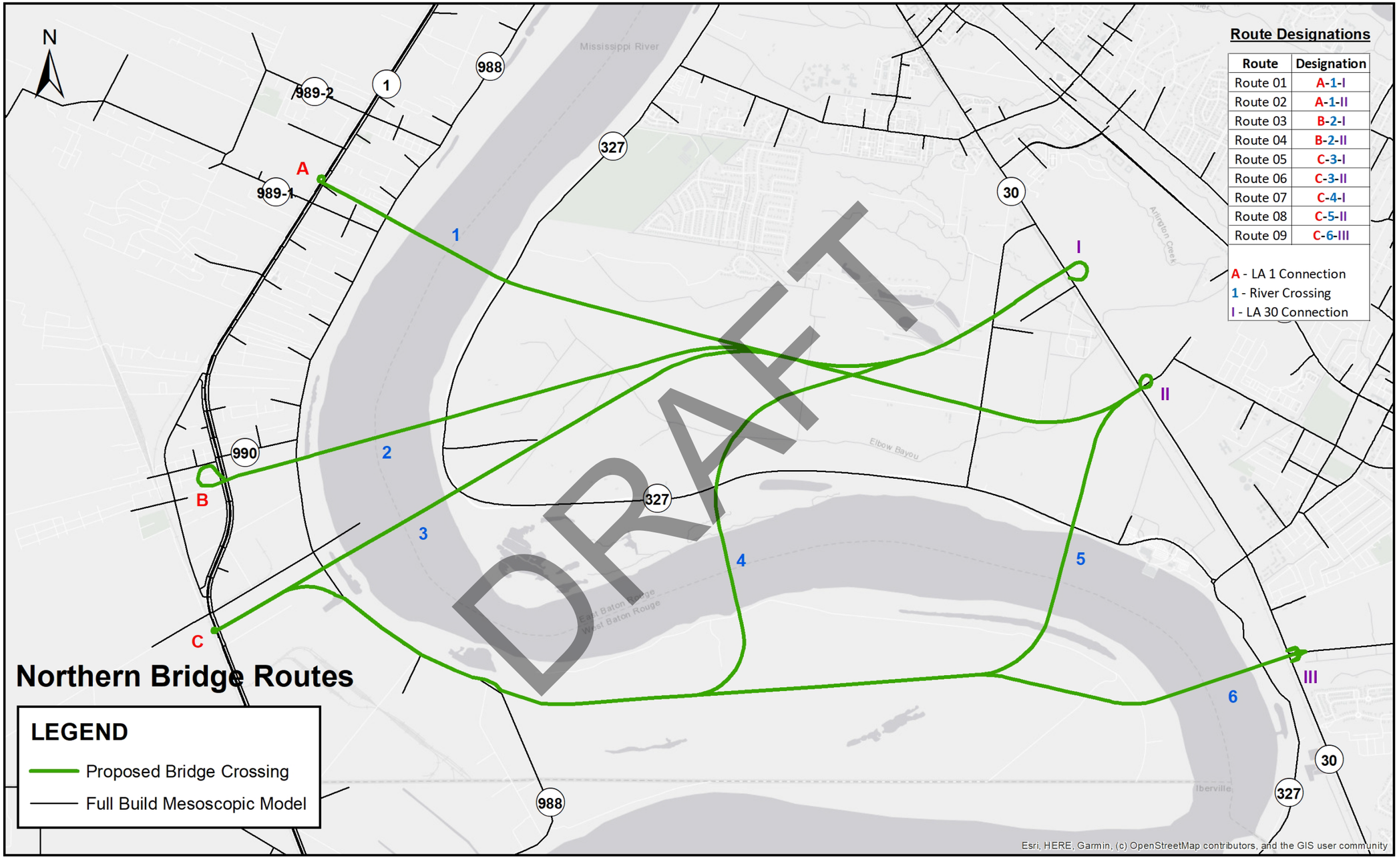
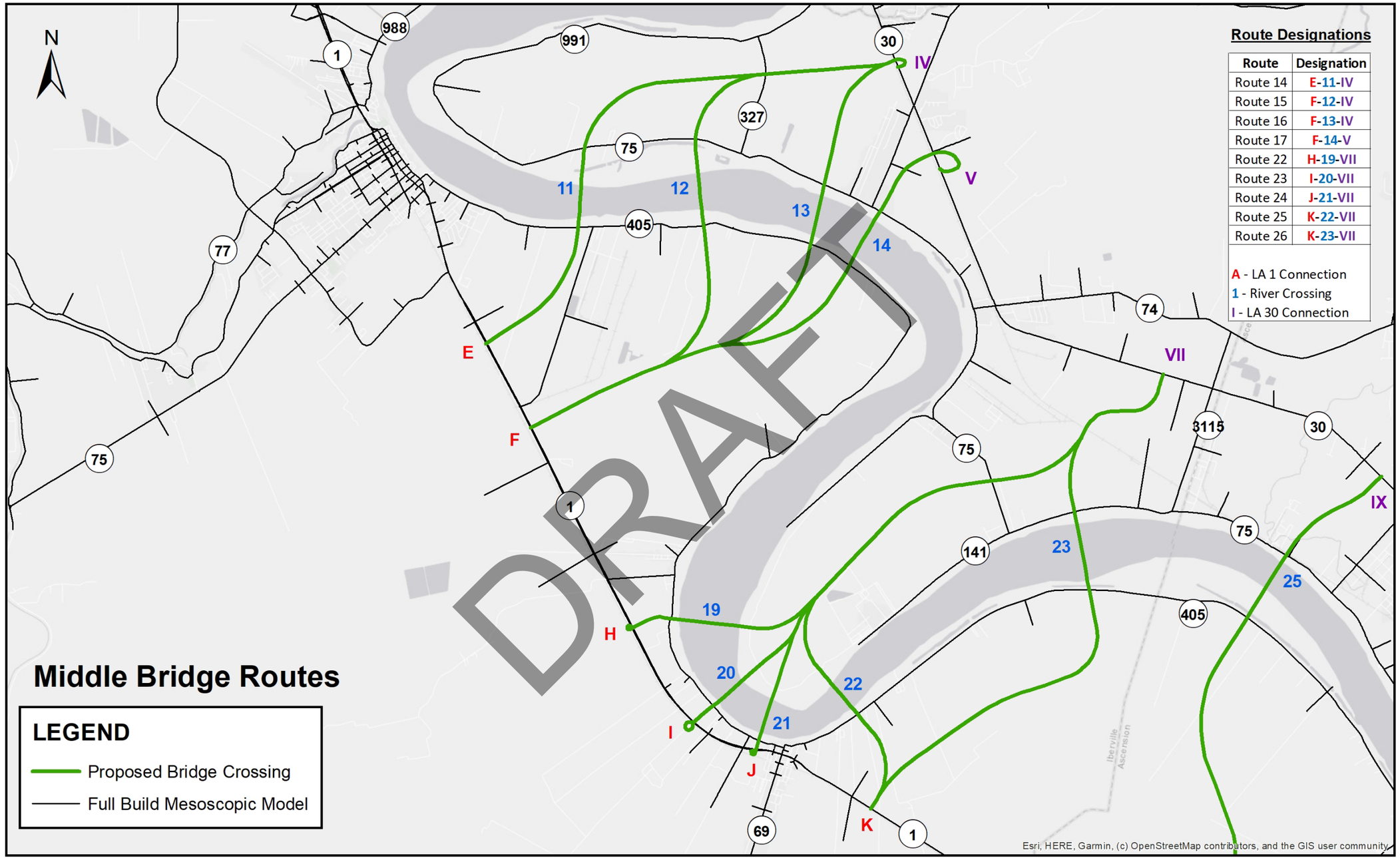

N
Mississippi River
Route Designations
Route | Designation
Route 01 | A-1-I
Route 02 | A-1-II
Route 03 | B-2-I
Route 04 | B-2-II
Route 05 | C-3-I
Route 06 | C-3-II
Route 07 | C-4-I
Route 08 | C-5-II
Route 09 | C-6-III
A - LA 1 Connection
1 - River Crossing
I - LA 30 Connection
DRAFT
Northern Bridge Routes
LEGEND
Proposed Bridge Crossing
Full Build Mesoscopic Model
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community


N
988
1
991
30
IV
327
75
11
12
13
14
V
405
77
E
74
VII
F
75
75
3115
30
1
IX
141
23
75
25
19
405
H
20
22
I
21
J
69
K
1
Iberville
Ascension
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Route Designations
Route | Designation
Route 14 | E-11-IV
Route 15 | F-12-IV
Route 16 | F-13-IV
Route 17 | F-14-V
Route 22 | H-19-VII
Route 23 | I-20-VII
Route 24 | J-21-VII
Route 25 | K-22-VII
Route 26 | K-23-VII
A - LA 1 Connection
1 - River Crossing
I - LA 30 Connection
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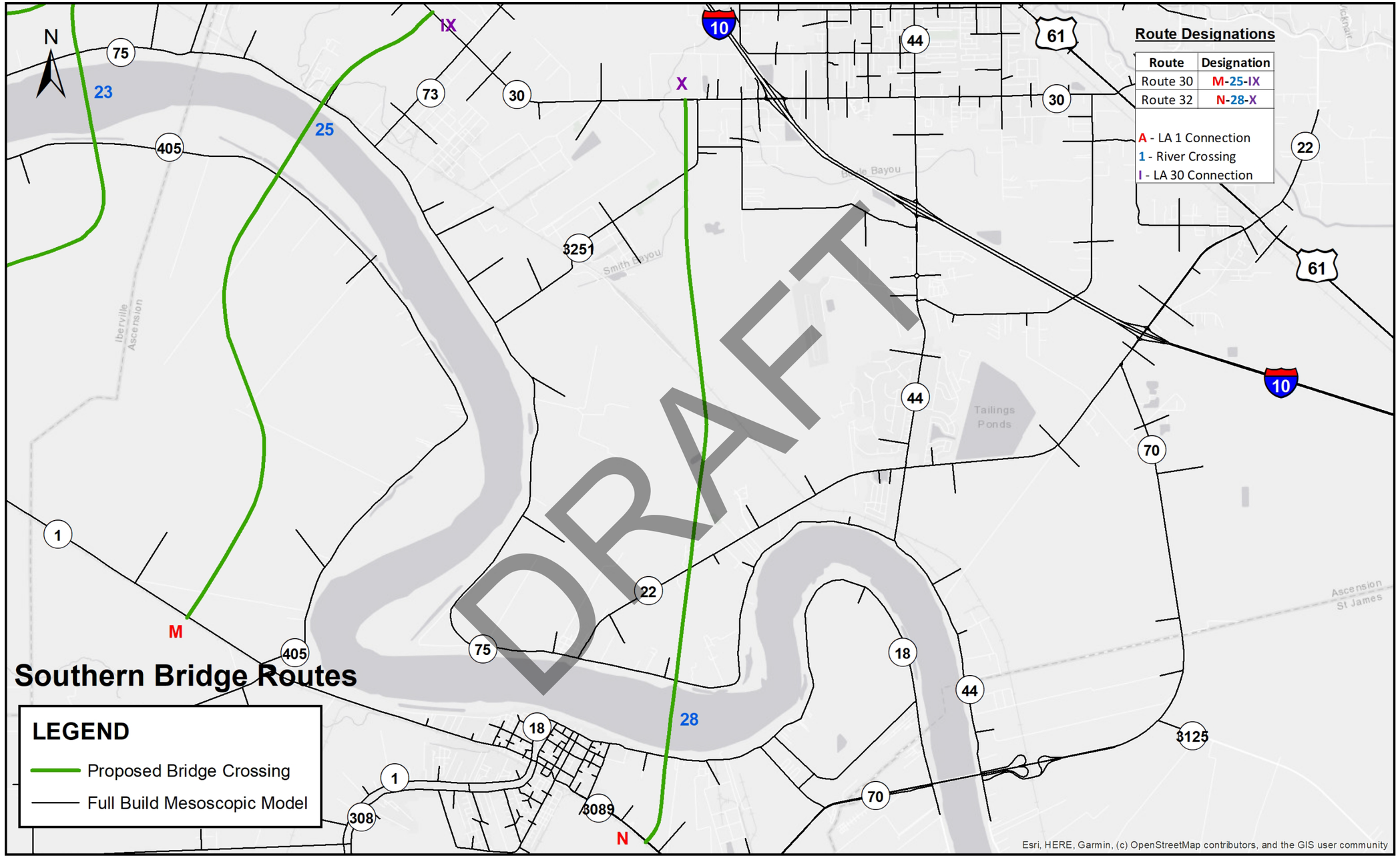
Middle Bridge Routes
LEGEND
Proposed Bridge Crossing
Full Build Mesoscopic Model


N
Route Designations
Route | Designation
Route 30 | M-25-IX
Route 32 | N-28-X
A - LA 1 Connection
1 - River Crossing
I - LA 30 Connection
DRAFT
Southern Bridge Routes
LEGEND
Proposed Bridge Crossing
Full Build Mesoscopic Model
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Model		Links		Connectors		Nodes		Intersections		Centroids	
		Count	Change	Count	Change	Count	Change	Count	Change	Count	Change
No Build		15,728		4,384		5,444		2,588		1,071	
Route 01	A-1-I	15,748	+ 20	4,384	0	5,454	+ 10	2,590	+ 2	1,071	0
Route 02	A-1-II	15,746	+ 18	4,384	0	5,453	+ 9	2,590	+ 2	1,071	0
Route 03	B-2-I	15,750	+ 22	4,384	0	5,455	+ 11	2,590	+ 2	1,071	0
Route 04	B-2-II	15,748	+ 20	4,384	0	5,454	+ 10	2,590	+ 2	1,071	0
Route 05	C-3-I	15,756	+ 28	4,384	0	5,456	+ 12	2,590	+ 2	1,071	0
Route 06	C-3-II	15,754	+ 26	4,384	0	5,455	+ 11	2,590	+ 2	1,071	0
Route 07	C-4-I	15,764	+ 36	4,384	0	5,460	+ 16	2,590	+ 2	1,071	0
Route 08	C-5-II	15,766	+ 38	4,384	0	5,461	+ 17	2,590	+ 2	1,071	0
Route 09	C-6-III	15,768	+ 40	4,384	0	5,463	+ 19	2,590	+ 2	1,071	0
Route 14	E-11-IV	15,759	+ 31	4,384	0	5,459	+ 15	2,590	+ 2	1,071	0
Route 15	F-12-IV	15,760	+ 32	4,384	0	5,459	+ 15	2,590	+ 2	1,071	0
Route 16	F-13-IV	15,758	+ 30	4,384	0	5,458	+ 14	2,590	+ 2	1,071	0
Route 17	F-14-V	15,758	+ 30	4,384	0	5,458	+ 14	2,590	+ 2	1,071	0
Route 22	H-19-VII	15,762	+ 34	4,384	0	5,460	+ 16	2,590	+ 2	1,071	0
Route 23	I-20-VII	15,762	+ 34	4,384	0	5,460	+ 16	2,590	+ 2	1,071	0
Route 24	J-21-VII	15,763	+ 35	4,384	0	5,460	+ 16	2,590	+ 2	1,071	0
Route 25	K-22-VII	15,760	+ 32	4,384	0	5,459	+ 15	2,590	+ 2	1,071	0
Route 26	K-23-VII	15,756	+ 28	4,384	0	5,457	+ 13	2,590	+ 2	1,071	0
Route 30	M-25-IX	15,754	+ 26	4,384	0	5,456	+ 12	2,590	+ 2	1,071	0
Route 32	N-28-X	15,753	+ 25	4,384	0	5,455	+ 11	2,590	+ 2	1,071	0

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Appendix F

III. 2042 Build Origin-Destination (O-D) Matrix Development

Example calculations for the O-D matrix development using the process summarized in *4.3 Demand Estimation* are provided in this section.

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Step 1: Develop Initial *TransCAD* Build Matrices

Because this step involves developing the initial 3-hour 2042 Build AM and PM Car Non-Toll, Truck Non-Toll, Car Toll, and Truck Toll Matrices using *TransCAD's* sub-area analysis tool and the final 2042 Build Baton Rouge TDM developed as part of the *MRB South GBR: LA 1 to LA 30 Connector Project,* no calculations are shown for this Step.

Step 2: Calculate Trip Adjustment Factors

For the 2042 Build AM and PM Car Non-Toll and Truck Non-Toll matrices, the Trip Adjustment Factors calculated for the 2042 No Build AM and PM Car and Truck matrices were applied to the Non-Toll *TransCAD* matrices. The screenshots showing the number of trips in the 3-hour Final Base Peak Period *Dynamic* matrix and the initial 3-hour Base Peak Period *TransCAD* matrix, which are used to calculate the Trip Adjustment Factor, are shown in *II. 2042 No Build Origin-Destination (O-D) Matrix Development* of ***Appendix E***. The Trip Adjustment Factor for the Non-Toll matrices is calculated using the equation below:

$$Build\ NonToll\ Trip\ Adjustment\ Factor_{2,1} = \frac{(Final\ Mesoscopic\ Model\ Base\ Matrix\ Trips)_{2,1}}{(Initial\ TDM\ Base\ Matrix\ Trips)_{2,1}}$$

$$NonToll\ Trip\ Adjustment\ Factor_{2,1} = \frac{51.00}{50.72} = \mathbf{1.00567}$$

Where:
2 = Origin TAZ
1 = Destination TAZ

Since there are no Toll trips in the Base and No Build matrices, a Trip Adjustment Factor of *one (1.00)* was applied to the 2042 Build AM and PM Car Toll and Truck Toll *TransCAD* matrices to develop the 2042 Build AM and PM Car Toll and Truck Toll *Dynameq* matrices.

Step 3: Develop Build *Dynameq* Matrices

Non-Toll

	1	2	3	4	5
1	0.00	43.52	2.83	18.03	2.77
2	66.22	0.00	2.99	20.35	5.46
3	5.21	2.21	0.00	11.66	1.22
4	18.57	8.64	5.71	0.00	5.74
5	5.10	4.47	1.33	9.15	0.00

	1	2	3	4	5
1	0.00	41.93	3.37	18.11	0.00
2	66.59	0.00	4.40	20.23	4.87
3	4.62	0.00	0.00	8.77	2.80
4	17.33	8.95	4.08	0.00	4.87
5	9.59	6.15	0.00	4.14	0.00

The screenshots above show the initial 3-hour 2042 Build *TransCAD* Non-Toll matrix trips (left) and the adjusted 2042 Build Non-Toll *Dynameq* matrix trips (right). For example, the 3-hour 2042 Build Non-Toll adjusted number of trips from **TAZ 2** to **TAZ 1** is calculated using the equation below:

$$Build\ NonToll\ Mesoscopic\ Model\ Trips_{2,1} = Initial\ Build\ NonToll\ TDM\ Build\ Trips_{2,1} \times Build\ NonToll\ Trip\ Adjustment\ Factor_{2,1}$$

$$Build\ NonToll\ Mesoscopic\ Model\ Trips_{2,1} = 66.22 \times 1.00567 = \mathbf{66.59}$$

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Where:
2 = Origin TAZ
1 = Destination TAZ

Toll

	1945	1946	1947	1948	1949
7277	1.62	0.64	2.49	0.53	0.24
7456	0.36	0.13	0.73	0.08	0.03
7639	0.57	0.18	0.97	0.14	0.04
7860	0.02	0.01	0.06	0.00	0.00
8045	0.00	0.00	0.00	0.00	0.00

	1945	1946	1947	1948	1949
7277	1.62	0.64	2.49	0.53	0.24
7456	0.36	0.13	0.73	0.08	0.03
7639	0.57	0.18	0.97	0.14	0.04
7860	0.02	0.01	0.06	0.00	0.00
8045	0.00	0.00	0.00	0.00	0.00

The screenshots above show the initial 3-hour 2042 Build *TransCAD* Toll matrix trips (left) and the adjusted 2042 Build Toll *Dynameq* matrix trips (right). For the Toll matrices, a trip adjustment factor of *1.00* was used since there are no Toll trips in the Existing or No Build matrices. For example, the 3-hour 2042 Build Toll adjusted number of trips from **TAZ 7277** to **TAZ 1945** is calculated using the equation below:

$$Build\ Toll\ Mesoscopic\ Model\ Trips_{7277,1945} = Initial\ Build\ Toll\ TDM\ Build\ Trips_{7277,1945} \times Build\ Toll\ Trip\ Adjustment\ Factor_{7277,1945}$$

$$Build\ NonToll\ Mesoscopic\ Model\ Trips_{7277,1945} = 1.62 \times 1.00 = \mathbf{1.62}$$

Where:
7277 = Origin TAZ
1945 = Destination TAZ

Step 4: Calculate Trip Distribution Factors

Non-Toll

For the 2042 Build AM and PM Car Non-Toll and Truck Non-Toll matrices, the Trip Distribution Factors calculated for the 2042 No Build AM and PM Car and Truck matrices were applied to the non-Toll *Dynameq* matrices. The screenshots showing the Final Base 30-minute trips (in vph) and the Final Base 3-hour matrix trips (in vehicles), which are used to calculate the Trip Distribution Factor, are shown in *II. 2042 No Build Origin-Destination (O-D) Matrix Development* of ***Appendix E***. The Trip Distribution Factor for the Non-Toll matrices is calculated using the equation below:

$$Build\ NonToll\ Trip\ Distribution\ Factor_{2,1,1} = \frac{(30\ minute\ Base\ Matrix\ Trips)_{2,1,1}}{2 \times (3\ hour\ Base\ Matrix\ Trips)_{2,1}}$$

$$Build\ NonToll\ Trip\ Distribution\ Factor_{2,1,1} = \frac{16}{2 \times 51} = \frac{16}{102} = \mathbf{0.1569}$$

Where:
2= Origin TAZ
1 = Destination TAZ
1 = First 30-minute Interval

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Toll

For the 2042 Build AM and PM Car Toll and Truck Toll matrices, the distribution of the non-Toll 30-minute trips were used from **TAZ 7277** to **TAZ 1945** using the equation below:

$$Build\ Toll\ Trip\ Distribution\ Factor_{7277,1945,1} = \frac{(30\ minute\ Build\ NonToll\ Matrix\ Trips)_{7277,1945,1}}{\sum_{i=1}^{6}(30\ minute\ Build\ NonToll\ Matrix\ Trips)_{7277,1945}}$$

$$Build\ Toll\ Trip\ Distribution\ Factor_{7277,1945,1} = \frac{154{,}206}{945{,}831} = \mathbf{0.1630}$$

Where:
7277= Origin TAZ
1945 = Destination TAZ
1 = First 30-minute Interval

Step 5: Create Build 30-minute Matrices

Non-Toll

	1	2	3	4	5
1	0.00	41.93	3.37	18.11	0.00
2	66.59	0.00	4.40	20.23	4.87
3	4.62	0.00	0.00	8.77	2.80
4	17.33	8.95	4.08	0.00	4.87
5	9.59	6.15	0.00	4.14	0.00

	1	2	3	4	5
1	0.00	13.42	3.37	5.17	0.00
2	20.89	0.00	0.00	6.74	3.24
3	4.62	0.00	0.00	0.00	0.00
4	7.43	1.99	0.00	0.00	0.00
5	3.84	6.15	0.00	0.00	0.00

The screenshots above show the 3-hour 2042 Build Non-Toll adjusted trips (in vehicles) (left) and the 2042 Build Non-Toll number of trips for the first 30-minute interval (in vph) (right). For example, the 2042 Build Non-Toll number of trips from **TAZ 2** to **TAZ 1** for the first 30-minute interval is calculated using the equation below:

$$30\ minute\ Build\ NonToll\ Trips_{2,1,1} = 3\ hour\ Build\ NonToll\ Trips_{2,1} \times 2 \times Build\ NonToll\ Trip\ Distribution\ Factor_{2,1,1}$$

$$30\ minute\ Build\ NonToll\ Trips_{2,1,1} = 66.59 \times 2 \times 0.1569 = \mathbf{20.89}$$

Where:
2= Origin TAZ
1 = Destination TAZ
1 = First 30-minute Interval

Toll

	1945	1946	1947	1948	1949
7277	1.62	0.64	2.49	0.53	0.24
7456	0.36	0.13	0.73	0.08	0.03
7639	0.57	0.18	0.97	0.14	0.04
7860	0.02	0.01	0.06	0.00	0.00
8045	0.00	0.00	0.00	0.00	0.00

	1945	1946	1947	1948	1949
7277	0.53	0.21	0.81	0.17	0.08
7456	0.12	0.04	0.24	0.03	0.01
7639	0.18	0.06	0.32	0.05	0.01
7860	0.01	0.00	0.02	0.00	0.00
8045	0.00	0.00	0.00	0.00	0.00

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The screenshots above show the 3-hour 2042 Build Toll adjusted trips (in vehicles) (left) and the 2042 Build Toll number of trips for the first 30-minute interval (in vph) (right). For example, the 2042 Build Toll number of trips from **TAZ 7277** to **TAZ 1945** for the first 30-minute interval is calculated using the equation below:

$$30\ minute\ Build\ Toll\ Trips_{7277,1945,1} = 3\ hour\ Build\ Toll\ Trips_{7277,1945} \times 2 \times Build\ Toll\ Trip\ Distribution\ Factor_{7277,1945,1}$$

$$30\ minute\ Build\ Toll\ Trips_{7277,1945,1} = 1.62 \times 2 \times 0.1630 = \mathbf{0.53}$$

Where:
7277= Origin TAZ
1945 = Destination TAZ
1 = First 30-minute Interval

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Appendix F

IV. Matrix Trip Summary

The AM and PM Peak Period Auto Non-Toll, Truck Non-Toll, Auto Toll, and Truck Toll class trips for each of the 20 Bridge Routes, as well as the 2019 Base and 2042 No Build trips, are shown in the subsequent two tables. In the first table, these trips for each 30-minute interval are shown, and the second table shows the total number of trips by class.

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Matrix	Scenario		AM Peak Period						PM Peak Period						Subtotal AM Trips	Subtotal PM Trips
			6:15 AM - 6:45 AM	6:45 AM - 7:15 AM	7:15 AM - 7:45 AM	7:45 AM - 8:15 AM	8:15 AM - 8:45 AM	8:45 AM - 9:15 AM	3:00 PM - 3:30 PM	3:30 PM - 4:00 PM	4:00 PM - 4:30 PM	4:30 PM - 5:00 PM	5:00 PM - 5:30 PM	5:30 PM - 6:00 PM		
Auto Non-Toll	2019 Base		56,242	62,352	64,451	61,257	56,444	52,087	70,881	74,015	75,450	77,143	76,366	70,297	352,833	444,152
	2042 No Build		78,021	85,100	87,517	81,863	74,627	69,136	96,040	100,368	102,202	106,516	104,941	95,933	476,264	606,000
	Route 01	A-1-I	77,251	84,663	87,137	81,501	74,433	68,916	95,260	99,627	101,344	105,536	104,052	95,169	473,901	600,988
	Route 02	A-1-II	77,338	84,775	87,249	81,602	74,512	69,025	95,403	99,802	101,532	105,740	104,237	95,380	474,501	602,094
	Route 03	B-2-I	77,337	84,723	87,168	81,498	74,477	68,933	95,297	99,698	101,406	105,611	104,114	95,262	474,136	601,388
	Route 04	B-2-II	77,329	84,717	87,174	81,516	74,482	68,937	95,248	99,686	101,421	105,599	104,123	95,225	474,155	601,302
	Route 05	C-3-I	77,213	84,622	87,099	81,423	74,406	68,840	95,166	99,575	101,281	105,492	103,993	95,114	473,603	600,621
	Route 06	C-3-II	77,261	84,647	87,129	81,465	74,432	68,875	95,163	99,539	101,248	105,449	103,957	95,134	473,809	600,490
	Route 07	C-4-I	77,245	84,672	87,099	81,468	74,425	68,879	95,254	99,611	101,322	105,549	104,053	95,166	473,788	600,955
	Route 08	C-5-II	77,219	84,654	87,096	81,437	74,406	68,872	95,191	99,552	101,265	105,474	104,005	95,134	473,684	600,621
	Route 09	C-6-III	77,103	84,446	86,949	81,366	74,305	68,748	94,998	99,395	101,083	105,283	103,830	94,939	472,917	599,528
	Route 14	E-11-IV	77,124	84,493	86,910	81,330	74,308	68,791	95,072	99,446	101,209	105,330	103,920	95,178	472,956	600,155
	Route 15	F-12-IV	77,191	84,563	86,985	81,399	74,362	68,852	95,077	99,473	101,260	105,319	103,975	95,222	473,352	600,326
	Route 16	F-13-IV	77,113	84,517	86,895	81,302	74,321	68,772	95,057	99,453	101,207	105,298	103,925	95,139	472,920	600,079
	Route 17	F-14-V	77,144	84,497	86,880	81,350	74,346	68,803	95,150	99,518	101,282	105,413	103,988	95,233	473,020	600,584
	Route 22	H-19-VII	77,465	84,565	86,942	81,417	74,263	68,723	95,024	99,880	101,441	105,874	104,387	95,174	473,375	601,780
	Route 23	I-20-VII	77,480	84,619	86,949	81,394	74,241	68,747	95,010	99,852	101,480	105,871	104,359	95,130	473,430	601,702
	Route 24	J-21-VII	77,459	84,573	86,897	81,339	74,227	68,723	94,937	99,803	101,433	105,854	104,338	95,154	473,218	601,519
	Route 25	K-22-VII	77,614	84,742	87,049	81,455	74,348	68,795	95,103	99,945	101,581	106,015	104,508	95,290	474,003	602,442
	Route 26	K-23-VII	77,579	84,685	86,989	81,398	74,294	68,776	94,993	99,849	101,498	105,946	104,396	95,193	473,721	601,875
	Route 30	M-25-IX	77,597	84,819	86,917	81,268	74,197	68,750	95,203	99,629	101,342	105,790	104,119	95,238	473,548	601,321
	Route 32	N-28-X	77,689	84,794	86,875	81,243	74,137	68,738	95,088	99,600	101,388	105,712	104,074	95,208	473,476	601,070

Matrix	Scenario		AM Peak Period						PM Peak Period						Subtotal AM Trips	Subtotal PM Trips
			6:15 AM - 6:45 AM	6:45 AM - 7:15 AM	7:15 AM - 7:45 AM	7:45 AM - 8:15 AM	8:15 AM - 8:45 AM	8:45 AM - 9:15 AM	3:00 PM - 3:30 PM	3:30 PM - 4:00 PM	4:00 PM - 4:30 PM	4:30 PM - 5:00 PM	5:00 PM - 5:30 PM	5:30 PM - 6:00 PM		
Truck Non-Toll	2019 Base		1,342	1,328	1,433	1,615	1,670	1,612	1,737	1,530	1,422	1,310	1,293	1,261	9,000	8,553
	2042 No Build		1,801	1,787	1,967	2,122	2,241	2,273	2,250	1,954	1,770	1,629	1,623	1,628	12,191	10,854
	Route 01	A-1-I	1,516	1,518	1,677	1,834	1,893	1,911	2,000	1,691	1,533	1,411	1,403	1,429	10,349	9,467
	Route 02	A-1-II	1,518	1,513	1,678	1,839	1,946	1,917	1,999	1,687	1,534	1,422	1,408	1,427	10,411	9,477
	Route 03	B-2-I	1,519	1,522	1,678	1,828	1,896	1,899	2,001	1,694	1,528	1,411	1,403	1,427	10,342	9,464
	Route 04	B-2-II	1,524	1,516	1,679	1,834	1,894	1,902	1,995	1,690	1,531	1,419	1,402	1,423	10,349	9,460
	Route 05	C-3-I	1,521	1,505	1,678	1,832	1,899	1,904	2,000	1,696	1,535	1,424	1,405	1,425	10,339	9,485
	Route 06	C-3-II	1,520	1,519	1,676	1,832	1,900	1,897	1,993	1,691	1,530	1,413	1,404	1,422	10,344	9,453
	Route 07	C-4-I	1,519	1,515	1,674	1,830	1,899	1,898	1,999	1,692	1,529	1,413	1,404	1,427	10,335	9,464
	Route 08	C-5-II	1,523	1,517	1,672	1,839	1,901	1,896	1,997	1,690	1,531	1,412	1,411	1,432	10,348	9,473
	Route 09	C-6-III	1,520	1,511	1,676	1,835	1,892	1,896	1,993	1,684	1,531	1,406	1,401	1,424	10,330	9,439
	Route 14	E-11-IV	1,484	1,480	1,664	1,805	1,869	1,904	1,891	1,638	1,513	1,405	1,377	1,380	10,206	9,204
	Route 15	F-12-IV	1,491	1,473	1,666	1,799	1,867	1,886	1,884	1,650	1,507	1,397	1,373	1,365	10,182	9,176
	Route 16	F-13-IV	1,481	1,475	1,668	1,804	1,878	1,891	1,890	1,636	1,510	1,397	1,384	1,381	10,197	9,198
	Route 17	F-14-V	1,483	1,483	1,664	1,819	1,870	1,887	1,881	1,632	1,511	1,397	1,379	1,368	10,206	9,168
	Route 22	H-19-VII	1,540	1,492	1,692	1,897	1,919	1,914	1,914	1,625	1,609	1,401	1,364	1,375	10,454	9,288
	Route 23	I-20-VII	1,574	1,561	1,718	1,918	1,957	1,966	2,013	1,700	1,628	1,416	1,412	1,440	10,694	9,609
	Route 24	J-21-VII	1,573	1,565	1,716	1,915	1,957	1,961	2,019	1,699	1,632	1,419	1,401	1,437	10,687	9,607
	Route 25	K-22-VII	1,573	1,555	1,719	1,918	1,960	1,964	2,017	1,704	1,611	1,417	1,405	1,430	10,689	9,584
	Route 26	K-23-VII	1,572	1,572	1,720	1,912	1,957	1,965	2,017	1,695	1,620	1,420	1,397	1,435	10,698	9,584
	Route 30	M-25-IX	1,524	1,529	1,686	1,844	1,909	1,939	2,013	1,676	1,519	1,397	1,410	1,415	10,431	9,430
	Route 32	N-28-X	1,528	1,516	1,687	1,840	1,920	1,967	2,013	1,680	1,523	1,405	1,394	1,406	10,458	9,421

Matrix	Scenario		AM Peak Period						PM Peak Period						Subtotal AM Trips	Subtotal PM Trips
			6:15 AM - 6:45 AM	6:45 AM - 7:15 AM	7:15 AM - 7:45 AM	7:45 AM - 8:15 AM	8:15 AM - 8:45 AM	8:45 AM - 9:15 AM	3:00 PM - 3:30 PM	3:30 PM - 4:00 PM	4:00 PM - 4:30 PM	4:30 PM - 5:00 PM	5:00 PM - 5:30 PM	5:30 PM - 6:00 PM		
Auto Toll	2019 Base															
	2042 No Build															
	Route 01	A-1-I	552	606	624	584	533	493	660	690	703	732	721	659	3,392	4,165
	Route 02	A-1-II	558	612	629	589	538	498	661	692	704	733	723	661	3,424	4,174
	Route 03	B-2-I	645	707	727	680	621	575	753	788	801	834	823	753	3,955	4,752
	Route 04	B-2-II	634	694	714	668	610	565	740	774	788	820	809	740	3,885	4,671
	Route 05	C-3-I	732	802	826	772	706	653	852	891	906	944	931	851	4,491	5,375
	Route 06	C-3-II	715	784	807	754	689	638	832	871	886	922	909	832	4,387	5,252
	Route 07	C-4-I	668	733	754	705	644	596	768	803	817	851	839	768	4,100	4,846
	Route 08	C-5-II	705	773	796	744	680	629	811	848	862	898	886	810	4,327	5,115
	Route 09	C-6-III	799	876	901	844	770	713	909	951	967	1,007	993	908	4,903	5,735
	Route 14	E-11-IV	1,050	1,150	1,183	1,107	1,012	937	1,144	1,197	1,218	1,268	1,251	1,146	6,439	7,224
	Route 15	F-12-IV	1,030	1,129	1,161	1,086	993	919	1,119	1,171	1,192	1,240	1,224	1,121	6,318	7,067
	Route 16	F-13-IV	1,077	1,180	1,213	1,135	1,038	960	1,179	1,234	1,256	1,306	1,289	1,180	6,603	7,444
	Route 17	F-14-V	1,040	1,139	1,171	1,097	1,002	928	1,130	1,182	1,202	1,251	1,235	1,131	6,377	7,131
	Route 22	H-19-VII	1,104	1,205	1,239	1,161	1,059	980	1,166	1,226	1,245	1,299	1,281	1,168	6,748	7,385
	Route 23	I-20-VII	1,125	1,229	1,262	1,182	1,078	998	1,189	1,250	1,270	1,325	1,306	1,191	6,874	7,531
	Route 24	J-21-VII	1,189	1,298	1,334	1,249	1,140	1,055	1,264	1,329	1,351	1,410	1,390	1,267	7,265	8,011
	Route 25	K-22-VII	1,132	1,236	1,270	1,188	1,084	1,003	1,200	1,261	1,282	1,338	1,319	1,202	6,913	7,602
	Route 26	K-23-VII	1,155	1,261	1,296	1,212	1,107	1,024	1,257	1,321	1,343	1,401	1,381	1,259	7,055	7,962
	Route 30	M-25-IX	1,259	1,377	1,411	1,319	1,204	1,116	1,364	1,428	1,452	1,516	1,492	1,365	7,686	8,617
	Route 32	N-28-X	1,486	1,622	1,662	1,554	1,419	1,315	1,624	1,701	1,731	1,805	1,777	1,626	9,058	10,264

Matrix	Scenario		AM Peak Period						PM Peak Period						Subtotal AM Trips	Subtotal PM Trips
			6:15 AM - 6:45 AM	6:45 AM - 7:15 AM	7:15 AM - 7:45 AM	7:45 AM - 8:15 AM	8:15 AM - 8:45 AM	8:45 AM - 9:15 AM	3:00 PM - 3:30 PM	3:30 PM - 4:00 PM	4:00 PM - 4:30 PM	4:30 PM - 5:00 PM	5:00 PM - 5:30 PM	5:30 PM - 6:00 PM		
Truck Toll	2019 Base															
	2042 No Build															
	Route 01	A-1-I	4	4	4	5	5	5	7	6	5	5	5	5	27	33
	Route 02	A-1-II	4	4	5	5	5	5	7	6	6	5	5	5	28	34
	Route 03	B-2-I	6	6	6	7	7	7	10	9	8	7	7	7	39	48
	Route 04	B-2-II	6	6	6	7	7	7	10	8	8	7	7	7	39	47
	Route 05	C-3-I	7	7	8	9	9	9	13	11	10	9	9	9	49	61
	Route 06	C-3-II	7	7	8	9	9	9	12	11	10	9	9	9	49	60
	Route 07	C-4-I	7	7	7	8	8	8	11	9	9	8	8	8	45	53
	Route 08	C-5-II	7	7	8	9	9	9	12	10	9	9	9	9	49	58
	Route 09	C-6-III	9	9	10	10	11	11	15	12	11	10	10	11	60	69
	Route 14	E-11-IV	14	14	16	18	18	18	24	21	19	18	17	17	98	116
	Route 15	F-12-IV	15	15	16	18	18	19	24	21	19	18	18	17	101	117
	Route 16	F-13-IV	16	16	18	19	20	20	26	22	21	19	19	19	109	126
	Route 17	F-14-V	15	15	16	18	18	18	24	21	19	18	18	17	100	117
	Route 22	H-19-VII	14	14	16	18	18	18	23	20	19	17	16	17	98	112
	Route 23	I-20-VII	15	15	17	19	19	19	25	21	20	18	17	18	104	119
	Route 24	J-21-VII	17	17	18	21	21	21	28	23	23	20	19	20	115	133
	Route 25	K-22-VII	17	17	18	20	21	21	28	23	22	20	19	20	114	132
	Route 26	K-23-VII	18	18	20	22	22	22	30	26	24	21	21	22	122	144
	Route 30	M-25-IX	22	22	24	27	28	28	37	31	28	26	26	26	151	174
	Route 32	N-28-X	32	32	35	39	40	41	54	45	41	38	38	38	219	254

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Alternative		AM Peak Period							PM Peak Period						
		Number of Trips by Class				Number of Auto Trips	Number of Truck Trips	Number of Total Trips	Number of Trips by Class				Number of Auto Trips	Number of Truck Trips	Number of Total Trips
		Auto Non-Toll	Truck Non-Toll	Auto Toll	Truck Toll				Auto Non-Toll	Truck Non-Toll	Auto Toll	Truck Toll			
2019 Base		352,833	9,000			352,833	9,000	361,833	444,152	8,553			444,152	8,553	452,705
2042 No Build		476,264	12,191			476,264	12,191	488,455	606,000	10,854			606,000	10,854	616,854
Route 01	A-1-I	473,901	10,349	3,392	27	477,293	10,376	487,669	600,988	9,467	4,165	33	605,153	9,500	614,653
Route 02	A-1-II	474,501	10,411	3,424	28	477,925	10,439	488,364	602,094	9,477	4,174	34	606,268	9,511	615,779
Route 03	B-2-I	474,136	10,342	3,955	39	478,091	10,381	488,472	601,388	9,464	4,752	48	606,140	9,512	615,652
Route 04	B-2-II	474,155	10,349	3,885	39	478,040	10,388	488,428	601,302	9,460	4,671	47	605,973	9,507	615,480
Route 05	C-3-I	473,603	10,339	4,491	49	478,094	10,388	488,482	600,621	9,485	5,375	61	605,996	9,546	615,542
Route 06	C-3-II	473,809	10,344	4,387	49	478,196	10,393	488,589	600,490	9,453	5,252	60	605,742	9,513	615,255
Route 07	C-4-I	473,788	10,335	4,100	45	477,888	10,380	488,268	600,955	9,464	4,846	53	605,801	9,517	615,318
Route 08	C-5-II	473,684	10,348	4,327	49	478,011	10,397	488,408	600,621	9,473	5,115	58	605,736	9,531	615,267
Route 09	C-6-III	472,917	10,330	4,903	60	477,820	10,390	488,210	599,528	9,439	5,735	69	605,263	9,508	614,771
Route 14	E-11-IV	472,956	10,206	6,439	98	479,395	10,304	489,699	600,155	9,204	7,224	116	607,379	9,320	616,699
Route 15	F-12-IV	473,352	10,182	6,318	101	479,670	10,283	489,953	600,326	9,176	7,067	117	607,393	9,293	616,686
Route 16	F-13-IV	472,920	10,197	6,603	109	479,523	10,306	489,829	600,079	9,198	7,444	126	607,523	9,324	616,847
Route 17	F-14-V	473,020	10,206	6,377	100	479,397	10,306	489,703	600,584	9,168	7,131	117	607,715	9,285	617,000
Route 22	H-19-VII	473,375	10,454	6,748	98	480,123	10,552	490,675	601,780	9,288	7,385	112	609,165	9,400	618,565
Route 23	I-20-VII	473,430	10,694	6,874	104	480,304	10,798	491,102	601,702	9,609	7,531	119	609,233	9,728	618,961
Route 24	J-21-VII	473,218	10,687	7,265	115	480,483	10,802	491,285	601,519	9,607	8,011	133	609,530	9,740	619,270
Route 25	K-22-VII	474,003	10,689	6,913	114	480,916	10,803	491,719	602,442	9,584	7,602	132	610,044	9,716	619,760
Route 26	K-23-VII	473,721	10,698	7,055	122	480,776	10,820	491,596	601,875	9,584	7,962	144	609,837	9,728	619,565
Route 30	M-25-IX	473,548	10,431	7,686	151	481,234	10,582	491,816	601,321	9,430	8,617	174	609,938	9,604	619,542
Route 32	N-28-X	473,476	10,458	9,058	219	482,534	10,677	493,211	601,070	9,421	10,264	254	611,334	9,675	621,009

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Appendix F

V. Toll Class Permissions

For the Build Toll Scenario, a new Class Group was created (Toll), which included the ***Car Toll Class*** and ***Truck Toll Class***. This Class Group was used to restrict non-Toll trips from using the Bridge Crossing in the Toll Scenario. Example screenshots showing the links where the Class Group restrictions were applied, as well as Class Permission setups for the Bridge Links and Bridge Nodes, are shown on the next page. These examples shown are for Bridge Route 09 (C-6-III). The Toll Class Group for all screenshots is shown in **Green**.

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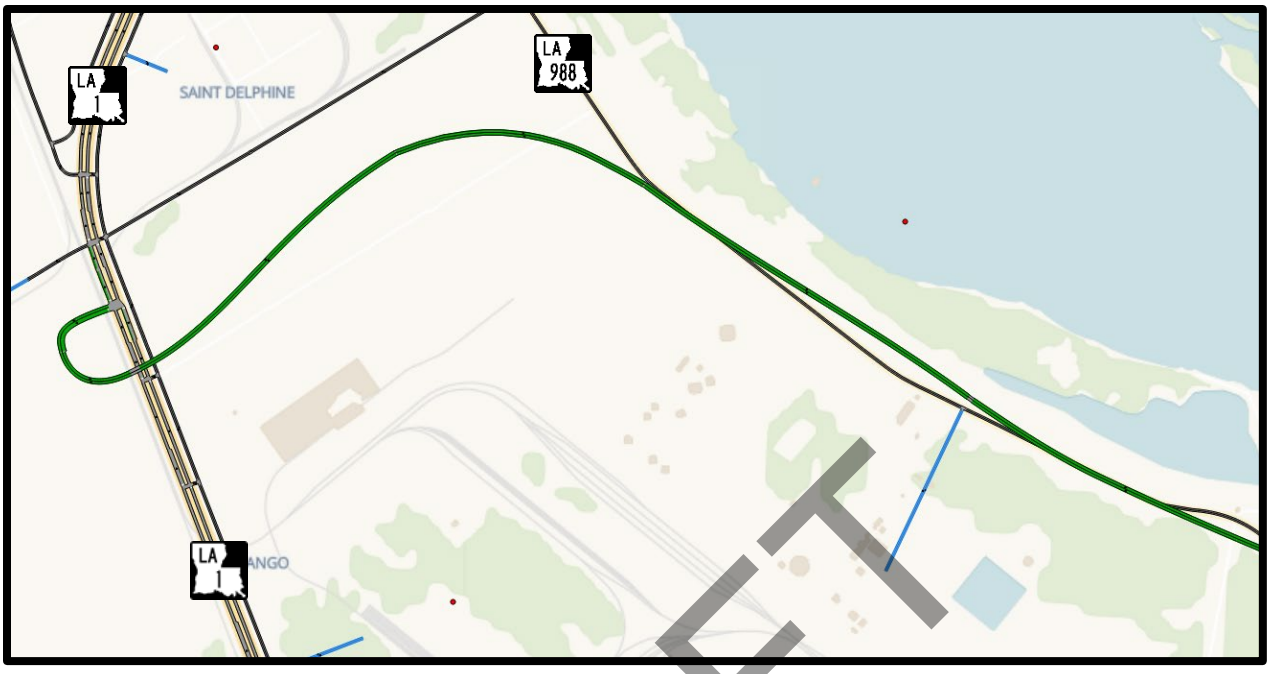
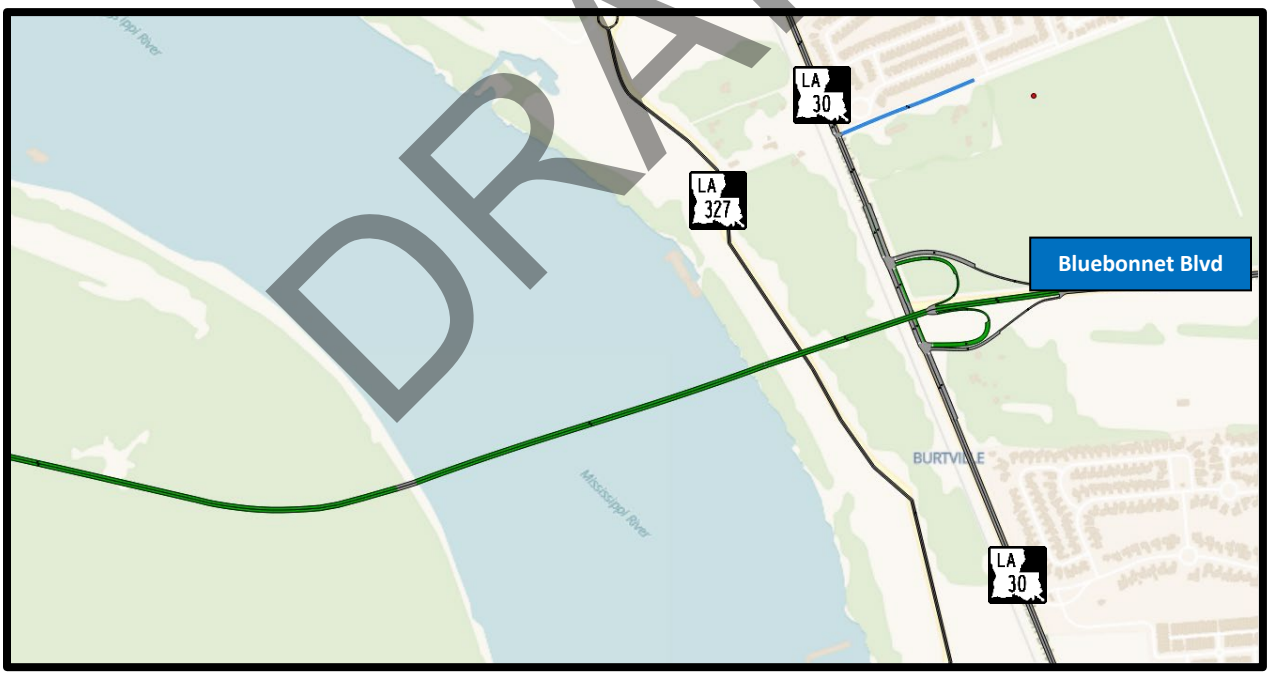
Class Group Restrictions at the West Connection



Class Group Restrictions at the East Connection



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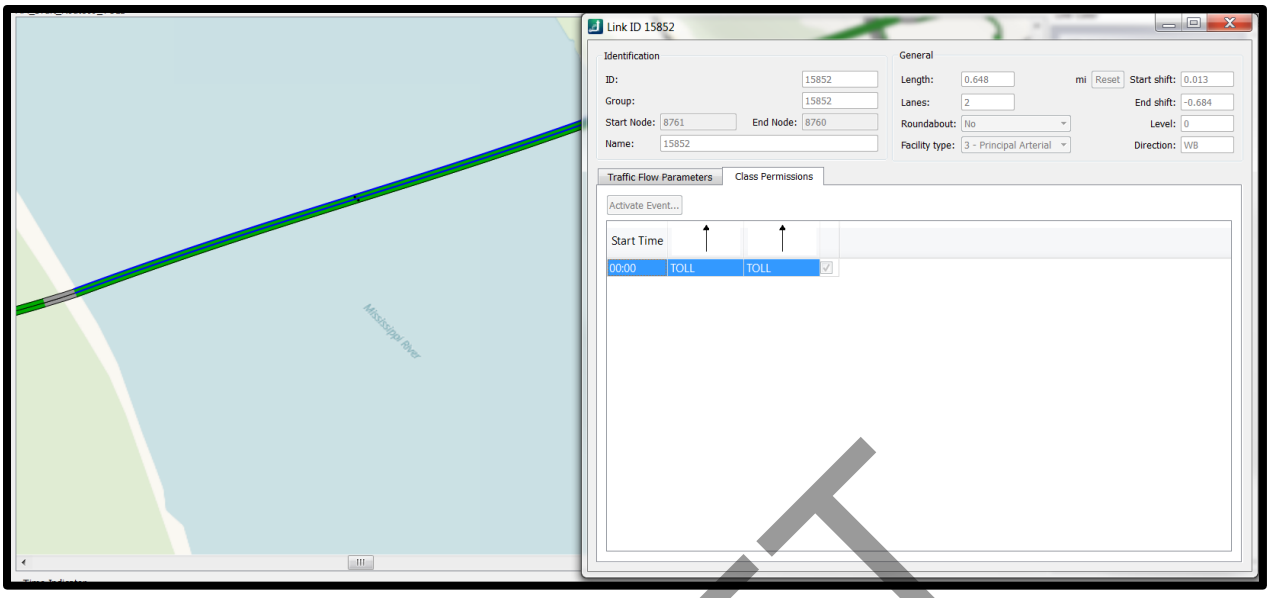
Class Group Setup for Links



Class Group Setup for Nodes

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Appendix F

VI. Build Convergence

The maximum number of iterations used in the AM and PM Build models were not changed from the No Build models (40 for the AM models and 50 for the PM models). A table showing the relative gaps for each Build Model, along with the comparison in the convergence plots, are shown on the next page.

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Alternative		AM		PM	
		Non-Toll	Toll	Non-Toll	Toll
2019 Base		0.6%		1.3%	
2042 No Build		1.1%		2.1%	
Route 01	A-1-I	2.0%	2.2%	2.4%	2.5%
Route 02	A-1-II	2.1%	2.0%	2.6%	2.6%
Route 03	B-2-I	2.3%	2.0%	2.4%	2.4%
Route 04	B-2-II	1.8%	2.3%	2.4%	2.2%
Route 05	C-3-I	2.0%	1.9%	2.4%	2.5%
Route 06	C-3-II	2.1%	1.9%	2.4%	2.3%
Route 07	C-4-I	2.1%	2.0%	2.4%	2.5%
Route 08	C-5-II	1.9%	1.9%	2.4%	2.3%
Route 09	C-6-III	2.2%	2.1%	2.5%	2.4%
Route 14	E-11-IV	2.1%	2.1%	2.4%	2.3%
Route 15	F-12-IV	2.0%	2.2%	2.5%	2.3%
Route 16	F-13-IV	1.9%	1.9%	2.3%	2.3%
Route 17	F-14-V	2.0%	2.0%	2.4%	2.1%
Route 22	H-19-VII	2.0%	1.9%	2.7%	2.5%
Route 23	I-20-VII	2.1%	2.0%	2.4%	2.4%
Route 24	J-21-VII	2.0%	1.8%	2.7%	2.5%
Route 25	K-22-VII	1.9%	2.0%	2.7%	2.7%
Route 26	K-23-VII	2.1%	2.1%	2.6%	2.5%
Route 30	M-25-IX	2.1%	2.2%	2.4%	2.8%
Route 32	N-28-X	2.3%	2.3%	2.6%	2.4%

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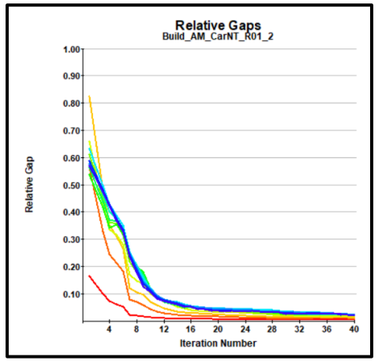
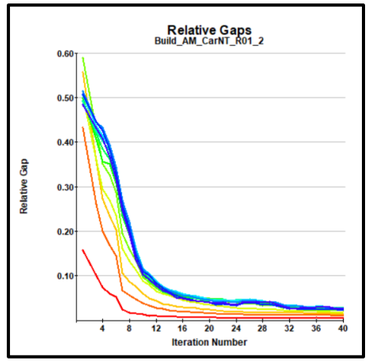
ROUTE 01 (A-1-I)

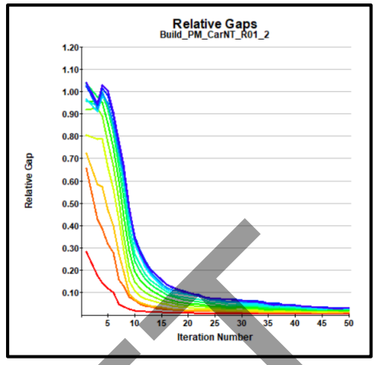
AM Non-Toll



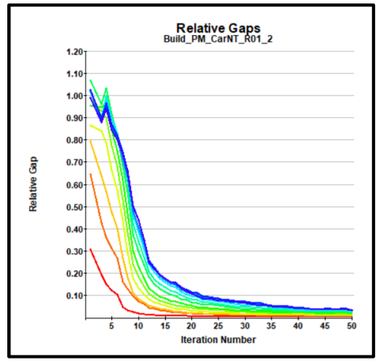
AM Toll



PM Non-Toll

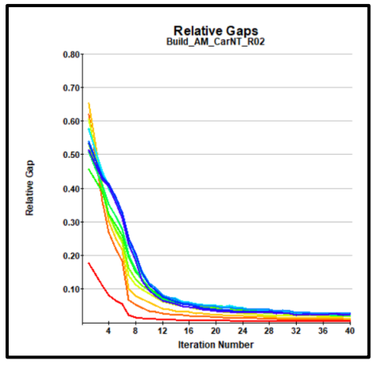


PM Toll

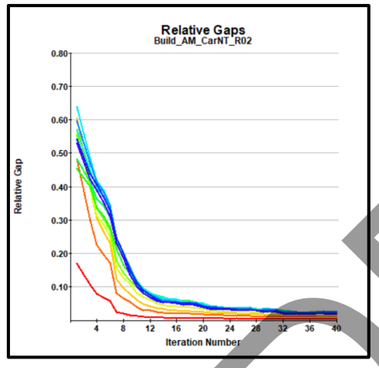


ROUTE 02 (A-1-II)

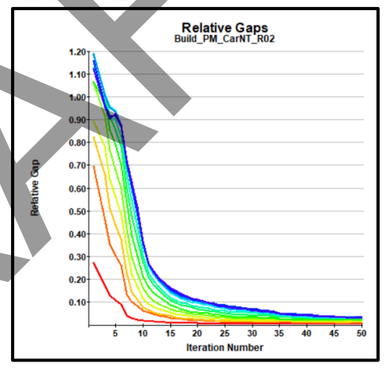
AM Non-Toll



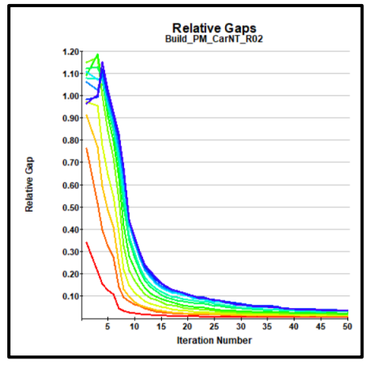
AM Toll



PM Non-Toll

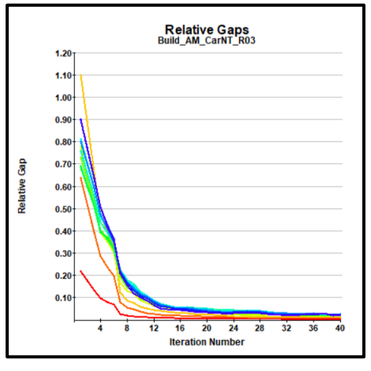


PM Toll

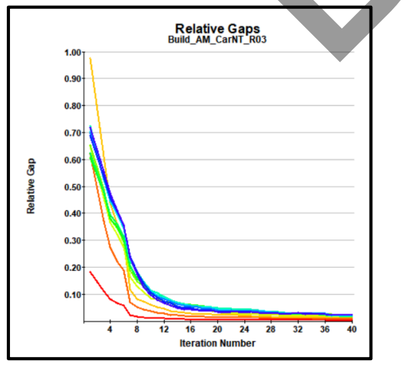


ROUTE 03 (B-2-I)

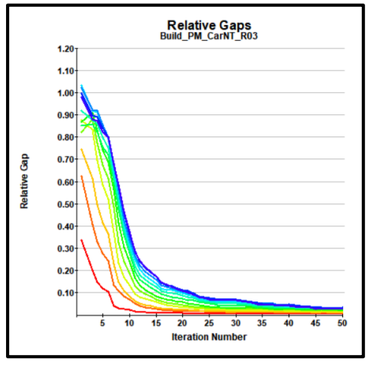
AM Non-Toll



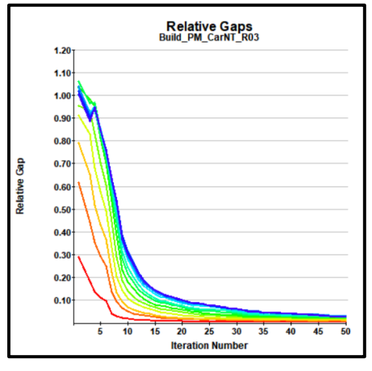
AM Toll



PM Non-Toll



PM Toll



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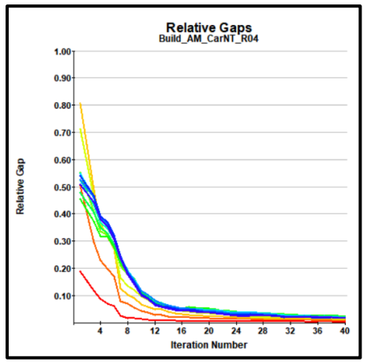
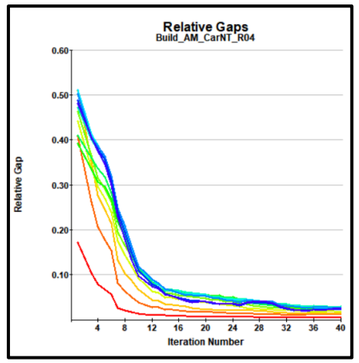
ROUTE 04 (B-2-II)

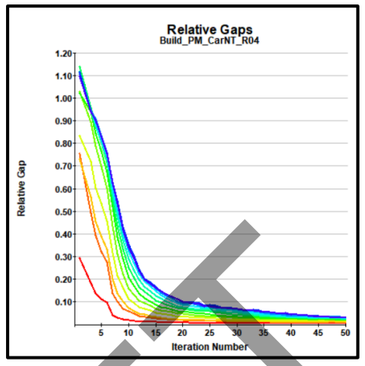
AM Non-Toll



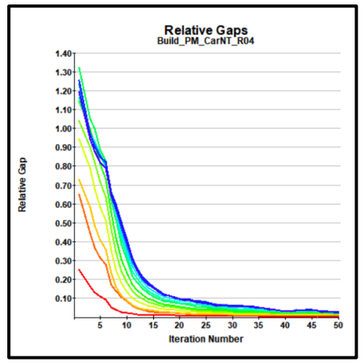
AM Toll



PM Non-Toll

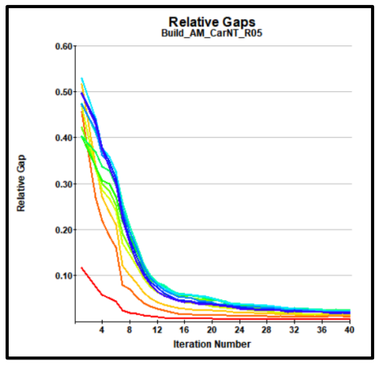


PM Toll

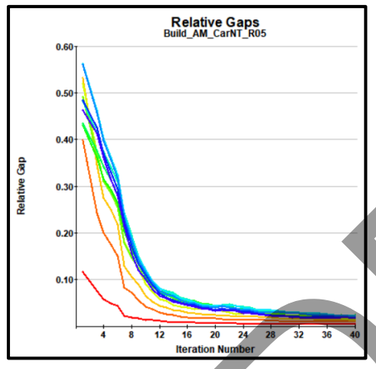


ROUTE 05 (C-3-I)

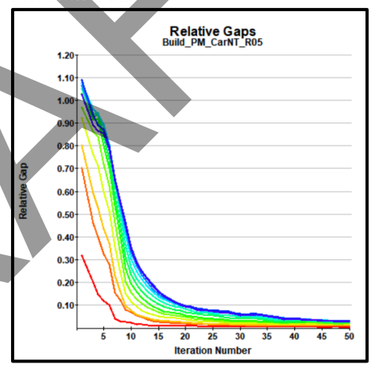
AM Non-Toll



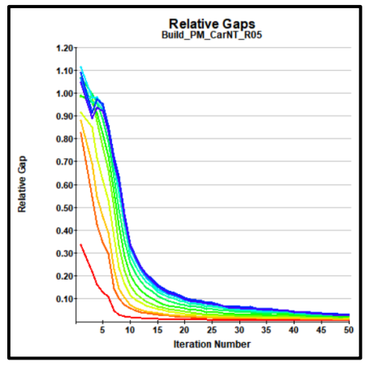
AM Toll



PM Non-Toll

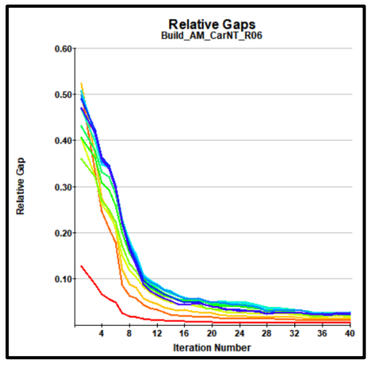


PM Toll

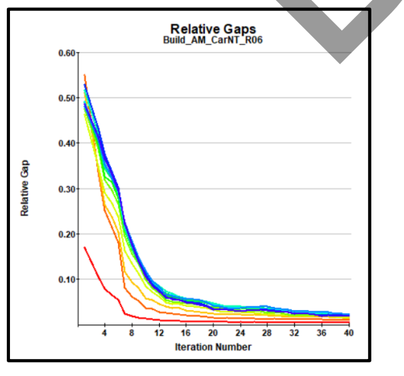


ROUTE 06 (C-3-II)

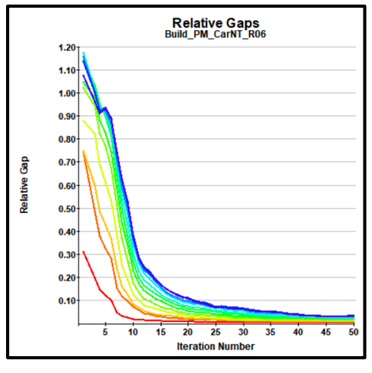
AM Non-Toll



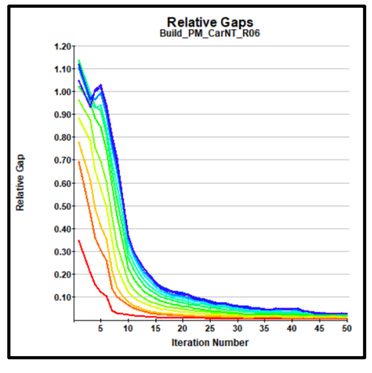
AM Toll



PM Non-Toll



PM Toll



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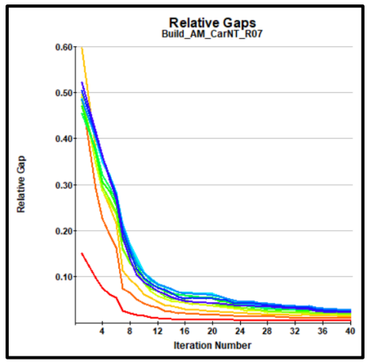
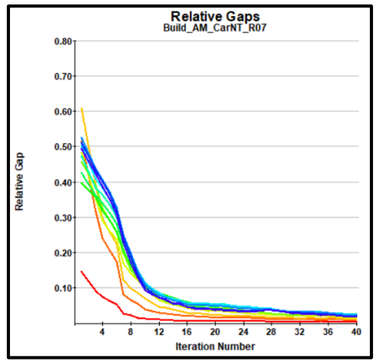
ROUTE 07 (C-4-I)

AM Non-Toll



AM Toll



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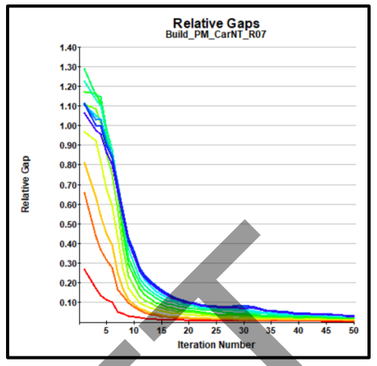
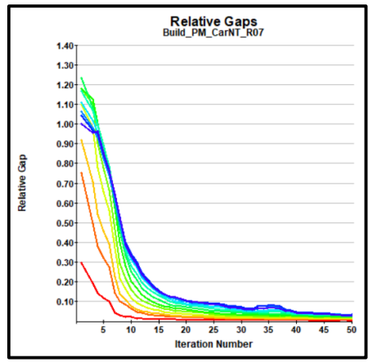
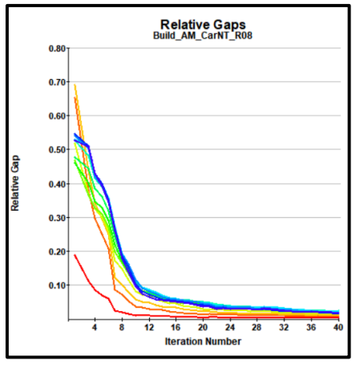


PM Toll

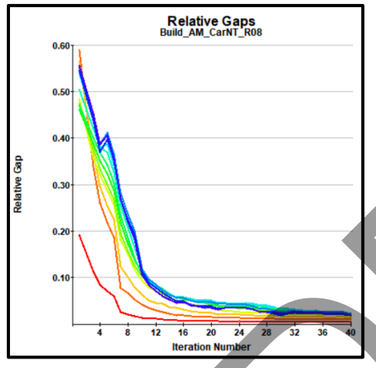


ROUTE 08 (C-5-II)

AM Non-Toll



AM Toll



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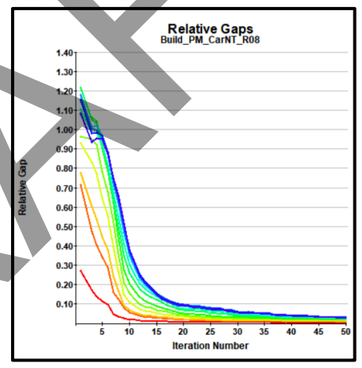
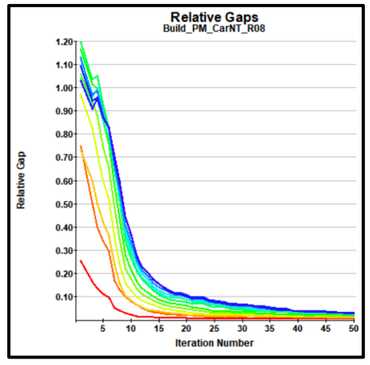
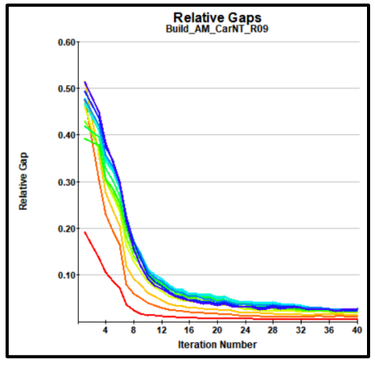


PM Toll

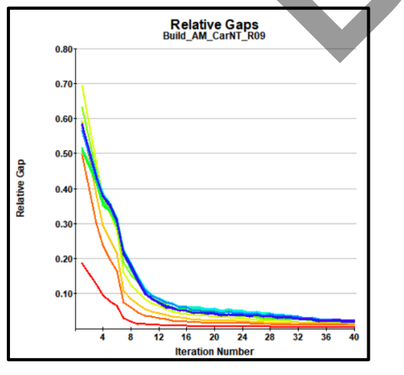


ROUTE 09 (C-6-III)

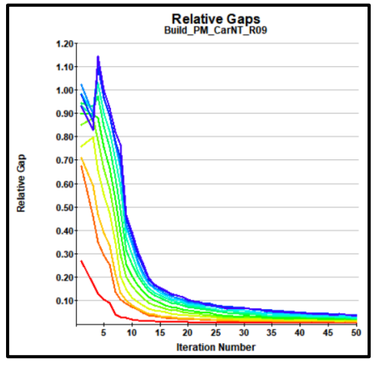
AM Non-Toll



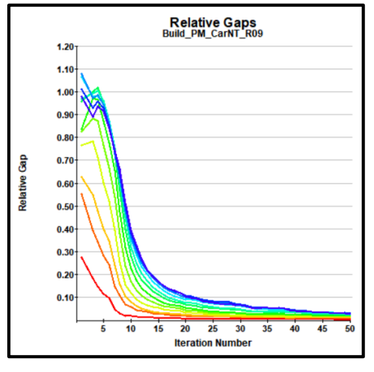
AM Toll



PM Non-Toll



PM Toll



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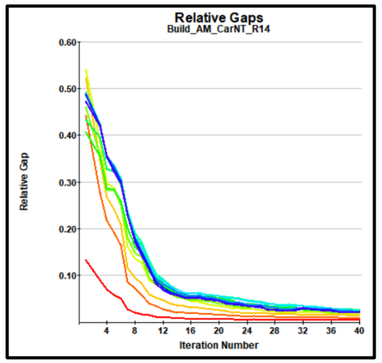
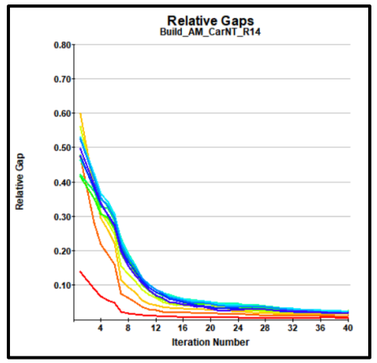
ROUTE 14 (E-11-IV)

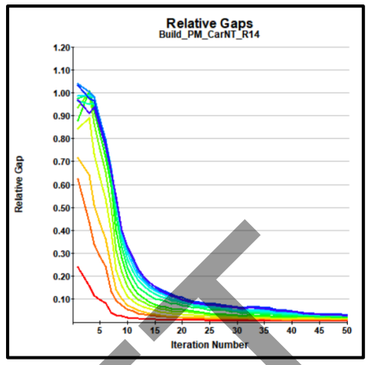
AM Non-Toll



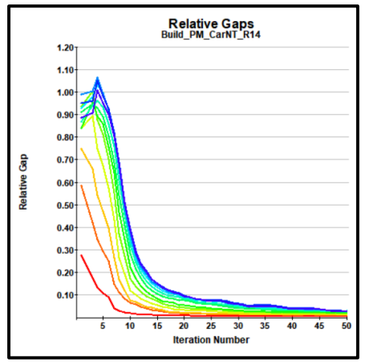
AM Toll



PM Non-Toll

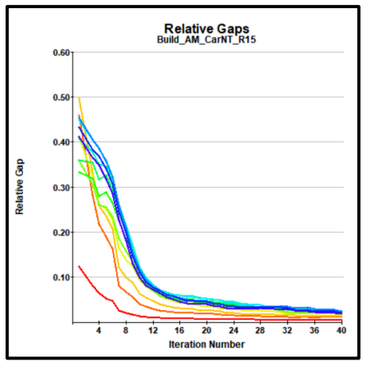


PM Toll

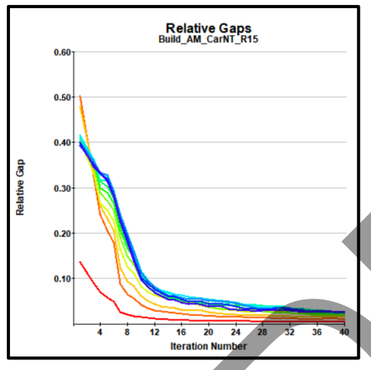


ROUTE 15 (F-12-IV)

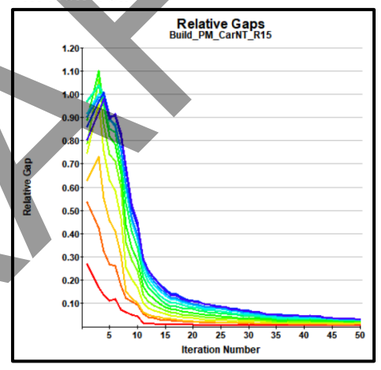
AM Non-Toll



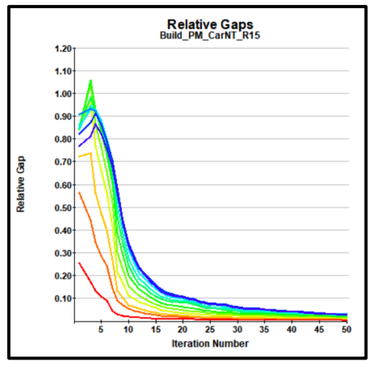
AM Toll



PM Non-Toll

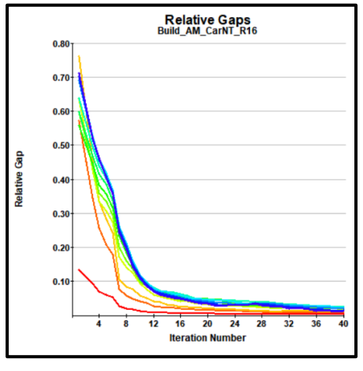


PM Toll

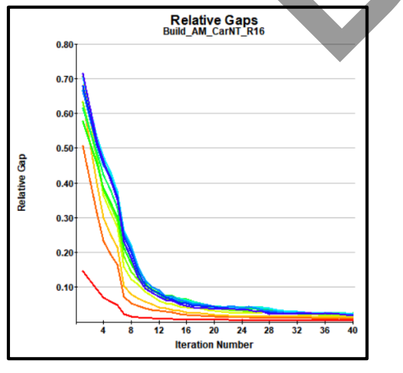


ROUTE 16 (F-13-IV)

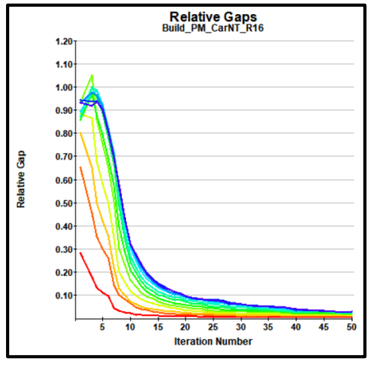
AM Non-Toll



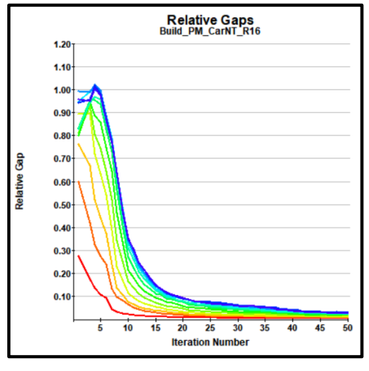
AM Toll



PM Non-Toll



PM Toll



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ROUTE 17 (F-14-V)

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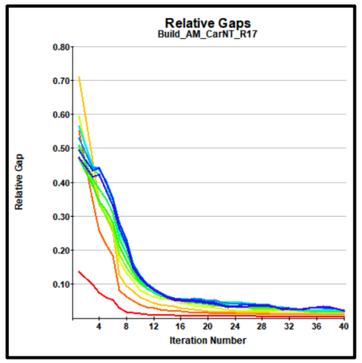
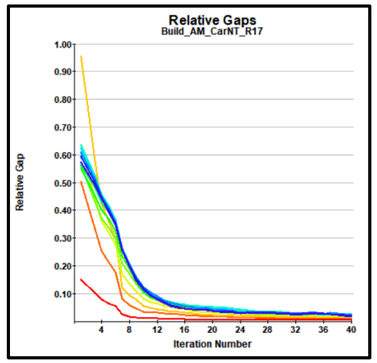
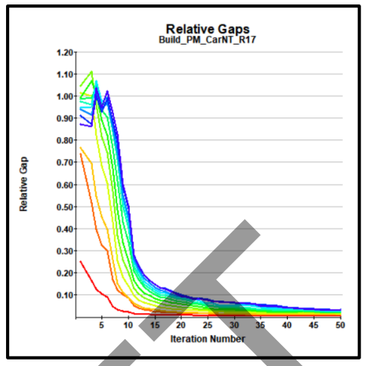


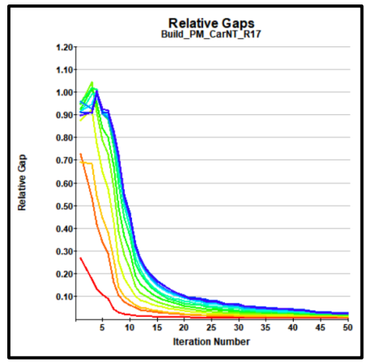
AM Toll



PM Non-Toll

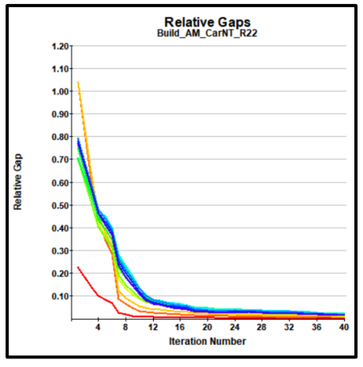


PM Toll

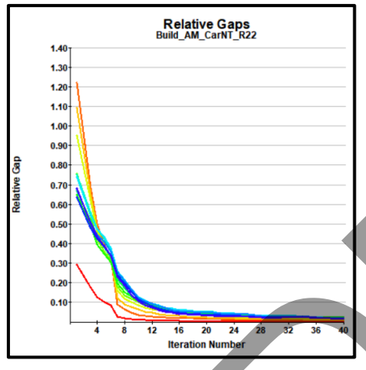


ROUTE 22 (H-19-VII)

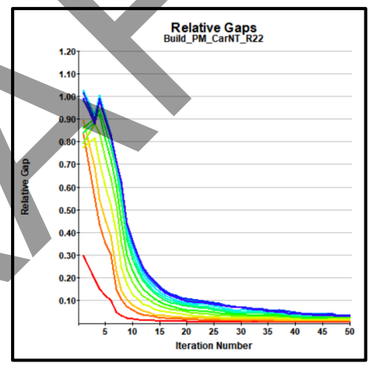
AM Non-Toll



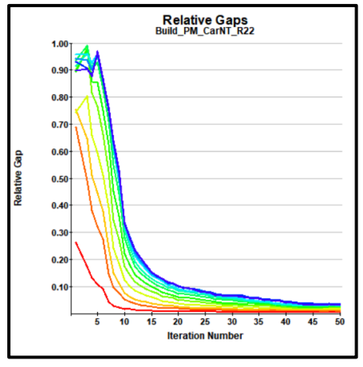
AM Toll



PM Non-Toll

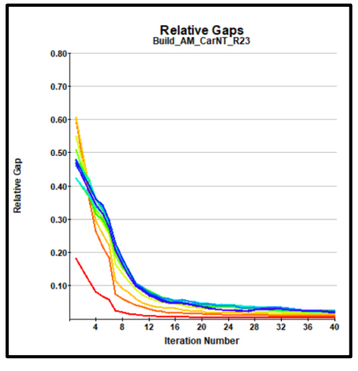


PM Toll

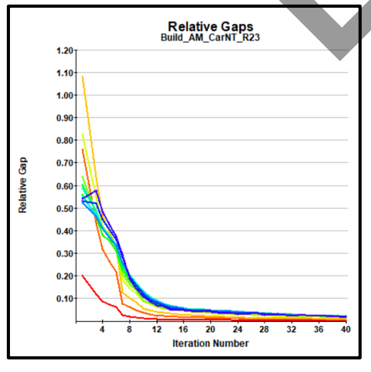


ROUTE 23 (I-20-VII)

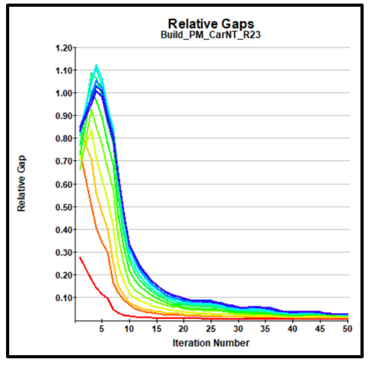
AM Non-Toll



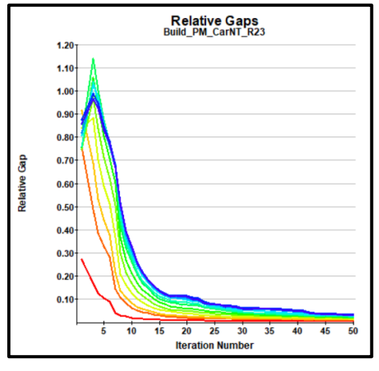
AM Toll



PM Non-Toll



PM Toll



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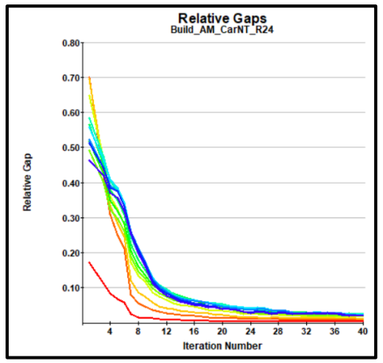
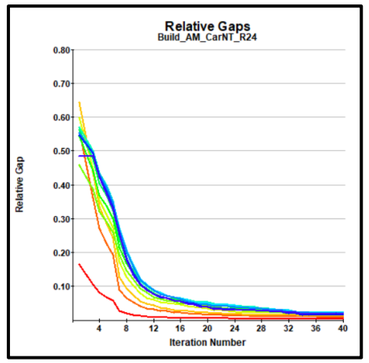
ROUTE 24 (J-21-VII)

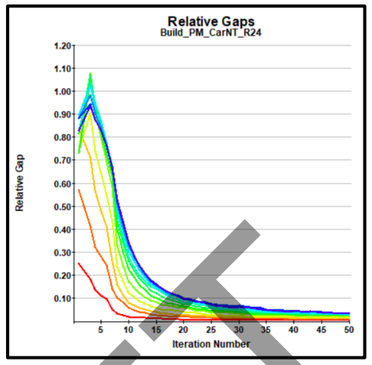
AM Non-Toll



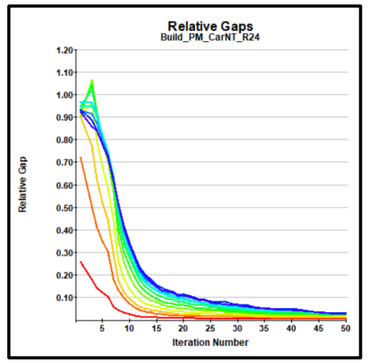
AM Toll



PM Non-Toll

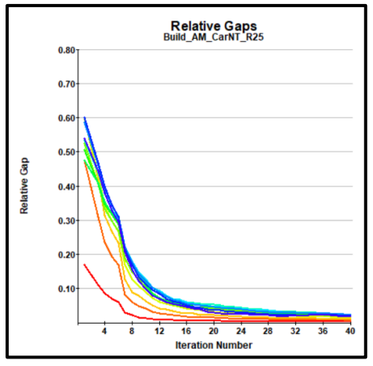


PM Toll

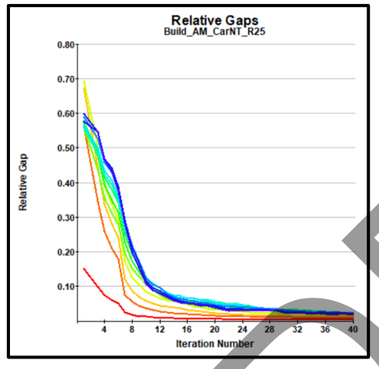


ROUTE 25 (K-22-VII)

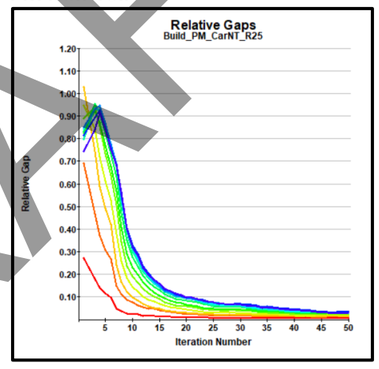
AM Non-Toll



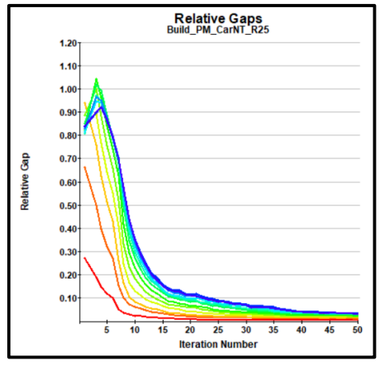
AM Toll



PM Non-Toll

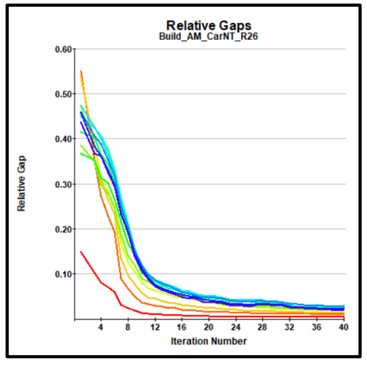


PM Toll

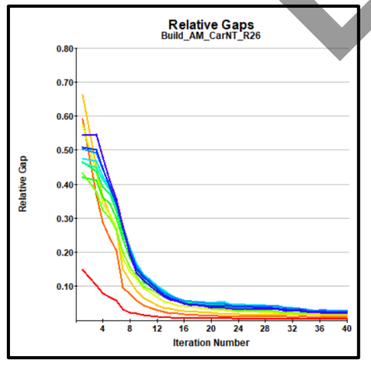


ROUTE 26 (K-23-VII)

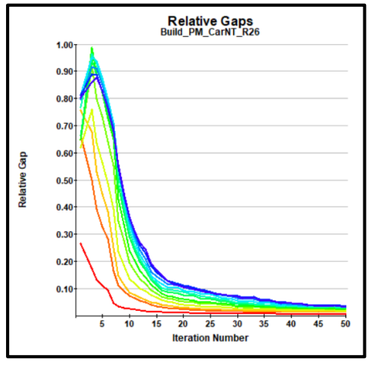
AM Non-Toll



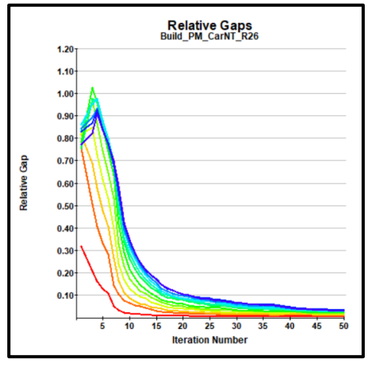
AM Toll



PM Non-Toll



PM Toll



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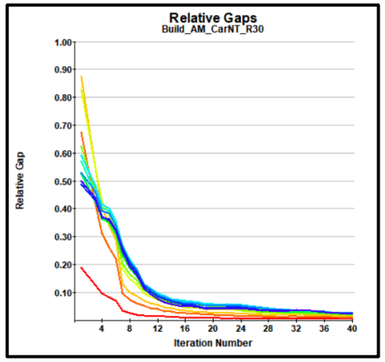
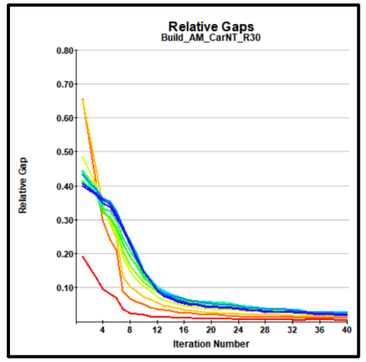
ROUTE 30 (M-25-IX)

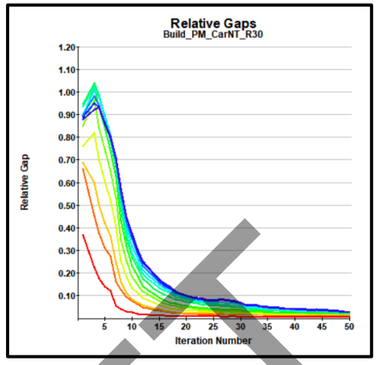
AM Non-Toll



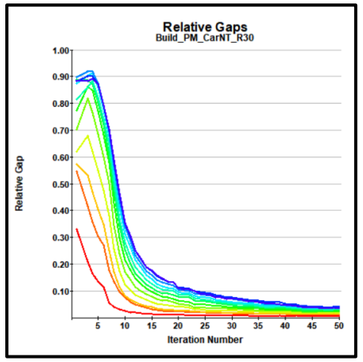
AM Toll



PM Non-Toll

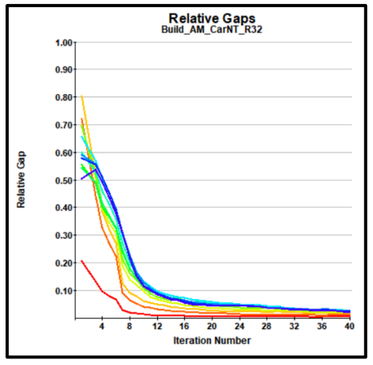


PM Toll

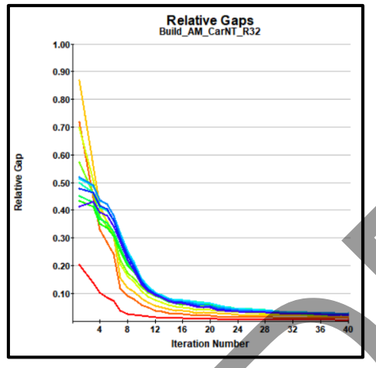


ROUTE 32 (N-28-X)

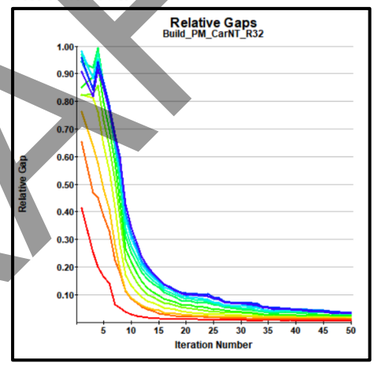
AM Non-Toll



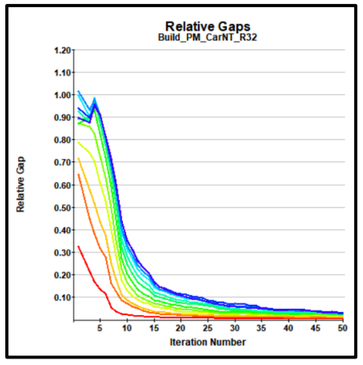
AM Toll



PM Non-Toll



PM Toll



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Appendix F

VII. Bridge Volumes

The Toll and Non-Toll AM and PM Peak Hour Bridge Volumes are shown in the subsequent tables. The tables show the volume change and percent change from the No Build to each of the 20 Bridge Route Alternatives for the US 190, I-10, and LA 70 Bridges. Additionally, the New Bridge Peak Hour Volumes are shown.

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Route	Alternative		AM Peak Hour						PM Peak Hour					
			Eastbound			Westbound			Eastbound			Westbound		
			Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build
US 190	Base		1,066			866			2,104			1,295		
	No Build		1,484			1,082			2,544			2,029		
	Route 01	A-1-I	1,377	-107	-7.2%	1,148	66	6.1%	2,723	179	7.0%	1,938	-91	-4.5%
	Route 02	A-1-II	1,391	-93	-6.3%	1,133	51	4.7%	2,721	177	7.0%	1,984	-45	-2.2%
	Route 03	B-2-I	1,386	-98	-6.6%	1,117	35	3.2%	2,672	128	5.0%	1,934	-95	-4.7%
	Route 04	B-2-II	1,419	-65	-4.4%	1,140	58	5.4%	2,737	193	7.6%	1,980	-49	-2.4%
	Route 05	C-3-I	1,380	-104	-7.0%	1,107	25	2.3%	2,661	117	4.6%	1,945	-84	-4.1%
	Route 06	C-3-II	1,389	-95	-6.4%	1,131	49	4.5%	2,633	89	3.5%	1,943	-86	-4.2%
	Route 07	C-4-I	1,391	-93	-6.3%	1,096	14	1.3%	2,573	29	1.1%	2,010	-19	-0.9%
	Route 08	C-5-II	1,373	-111	-7.5%	1,120	38	3.5%	2,789	245	9.6%	1,954	-75	-3.7%
	Route 09	C-6-III	1,360	-124	-8.4%	1,107	25	2.3%	2,745	201	7.9%	1,949	-80	-3.9%
	Route 14	E-11-IV	1,440	-44	-3.0%	1,122	40	3.7%	2,642	98	3.9%	2,075	46	2.3%
	Route 15	F-12-IV	1,429	-55	-3.7%	1,105	23	2.1%	2,672	128	5.0%	2,023	-6	-0.3%
	Route 16	F-13-IV	1,483	-1	-0.1%	1,112	30	2.8%	2,598	54	2.1%	2,049	20	1.0%
	Route 17	F-14-V	1,424	-60	-4.0%	1,069	-13	-1.2%	2,714	170	6.7%	2,059	30	1.5%
	Route 22	H-19-VII	1,449	-35	-2.4%	1,126	44	4.1%	2,800	256	10.1%	2,169	140	6.9%
	Route 23	I-20-VII	1,510	26	1.8%	1,121	39	3.6%	2,745	201	7.9%	2,148	119	5.9%
	Route 24	J-21-VII	1,517	33	2.2%	1,118	36	3.3%	2,795	251	9.9%	2,195	166	8.2%
	Route 25	K-22-VII	1,593	109	7.3%	1,139	57	5.3%	2,783	239	9.4%	2,356	327	16.1%
	Route 26	K-23-VII	1,506	22	1.5%	1,115	33	3.0%	2,629	85	3.3%	2,184	155	7.6%
	Route 30	M-25-IX	1,554	70	4.7%	1,181	99	9.1%	2,570	26	1.0%	2,319	290	14.3%
	Route 32	N-28-X	1,667	183	12.3%	1,154	72	6.7%	3,013	469	18.4%	2,503	474	23.4%

Route	Alternative		AM Peak Hour						PM Peak Hour					
			Eastbound			Westbound			Eastbound			Westbound		
			Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build
I-10	Base		3,833			2,960			2,364			5,040		
	No Build		4,665			3,583			2,814			5,257		
	Route 01	A-1-I	4,778	113	2.4%	3,748	165	4.6%	2,868	54	1.9%	5,464	207	3.9%
	Route 02	A-1-II	4,867	202	4.3%	3,732	149	4.2%	2,877	63	2.2%	5,322	65	1.2%
	Route 03	B-2-I	4,898	233	5.0%	3,714	131	3.7%	2,893	79	2.8%	5,419	162	3.1%
	Route 04	B-2-II	4,804	139	3.0%	3,774	191	5.3%	2,854	40	1.4%	5,420	163	3.1%
	Route 05	C-3-I	4,822	157	3.4%	3,742	159	4.4%	2,900	86	3.1%	5,450	193	3.7%
	Route 06	C-3-II	4,817	152	3.3%	3,744	161	4.5%	2,870	56	2.0%	5,471	214	4.1%
	Route 07	C-4-I	4,795	130	2.8%	3,804	221	6.2%	2,882	68	2.4%	5,379	122	2.3%
	Route 08	C-5-II	4,828	163	3.5%	3,741	158	4.4%	2,794	-20	-0.7%	5,431	174	3.3%
	Route 09	C-6-III	4,912	247	5.3%	3,814	231	6.4%	2,840	26	0.9%	5,476	219	4.2%
	Route 14	E-11-IV	4,779	114	2.4%	3,848	265	7.4%	2,890	76	2.7%	5,346	89	1.7%
	Route 15	F-12-IV	4,785	120	2.6%	3,882	299	8.3%	2,865	51	1.8%	5,261	4	0.1%
	Route 16	F-13-IV	4,825	160	3.4%	3,875	292	8.1%	2,897	83	2.9%	5,291	34	0.6%
	Route 17	F-14-V	4,825	160	3.4%	3,913	330	9.2%	2,894	80	2.8%	5,295	38	0.7%
	Route 22	H-19-VII	4,858	193	4.1%	3,955	372	10.4%	2,873	59	2.1%	5,063	-194	-3.7%
	Route 23	I-20-VII	4,802	137	2.9%	3,923	340	9.5%	2,898	84	3.0%	5,191	-66	-1.3%
	Route 24	J-21-VII	4,755	90	1.9%	4,009	426	11.9%	2,862	48	1.7%	5,082	-175	-3.3%
	Route 25	K-22-VII	4,806	141	3.0%	3,967	384	10.7%	2,868	54	1.9%	5,001	-256	-4.9%
	Route 26	K-23-VII	4,791	126	2.7%	3,967	384	10.7%	2,863	49	1.7%	5,060	-197	-3.7%
	Route 30	M-25-IX	4,718	53	1.1%	4,080	497	13.9%	2,879	65	2.3%	5,123	-134	-2.5%
	Route 32	N-28-X	4,659	-6	-0.1%	4,020	437	12.2%	2,853	39	1.4%	4,874	-383	-7.3%

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Route	Alternative		AM Peak Hour						PM Peak Hour					
			Eastbound			Westbound			Eastbound			Westbound		
			Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build
LA 70	Base		1,025			891			1,152			919		
	No Build		1,921			1,500			1,747			1,774		
	Route 01	A-1-I	1,827	-94	-4.9%	1,504	4	0.3%	1,630	-117	-6.7%	1,697	-77	-4.3%
	Route 02	A-1-II	1,819	-102	-5.3%	1,506	6	0.4%	1,662	-85	-4.9%	1,665	-109	-6.1%
	Route 03	B-2-I	1,866	-55	-2.9%	1,481	-19	-1.3%	1,598	-149	-8.5%	1,728	-46	-2.6%
	Route 04	B-2-II	1,848	-73	-3.8%	1,438	-62	-4.1%	1,624	-123	-7.0%	1,730	-44	-2.5%
	Route 05	C-3-I	1,861	-60	-3.1%	1,478	-22	-1.5%	1,665	-82	-4.7%	1,646	-128	-7.2%
	Route 06	C-3-II	1,855	-66	-3.4%	1,471	-29	-1.9%	1,700	-47	-2.7%	1,658	-116	-6.5%
	Route 07	C-4-I	1,876	-45	-2.3%	1,464	-36	-2.4%	1,692	-55	-3.1%	1,702	-72	-4.1%
	Route 08	C-5-II	1,874	-47	-2.4%	1,508	8	0.5%	1,668	-79	-4.5%	1,717	-57	-3.2%
	Route 09	C-6-III	1,854	-67	-3.5%	1,504	4	0.3%	1,711	-36	-2.1%	1,680	-94	-5.3%
	Route 14	E-11-IV	1,927	6	0.3%	1,525	25	1.7%	1,621	-126	-7.2%	1,669	-105	-5.9%
	Route 15	F-12-IV	1,953	32	1.7%	1,575	75	5.0%	1,627	-120	-6.9%	1,759	-15	-0.8%
	Route 16	F-13-IV	1,908	-13	-0.7%	1,530	30	2.0%	1,681	-66	-3.8%	1,707	-67	-3.8%
	Route 17	F-14-V	1,908	-13	-0.7%	1,527	27	1.8%	1,623	-124	-7.1%	1,758	-16	-0.9%
	Route 22	H-19-VII	1,850	-71	-3.7%	1,515	15	1.0%	1,603	-144	-8.2%	1,691	-83	-4.7%
	Route 23	I-20-VII	1,874	-47	-2.4%	1,521	21	1.4%	1,641	-106	-6.1%	1,711	-63	-3.6%
	Route 24	J-21-VII	1,857	-64	-3.3%	1,532	32	2.1%	1,607	-140	-8.0%	1,666	-108	-6.1%
	Route 25	K-22-VII	1,864	-57	-3.0%	1,572	72	4.8%	1,676	-71	-4.1%	1,661	-113	-6.4%
	Route 26	K-23-VII	1,825	-96	-5.0%	1,600	100	6.7%	1,687	-60	-3.4%	1,632	-142	-8.0%
	Route 30	M-25-IX	2,080	159	8.3%	1,411	-89	-5.9%	1,720	-27	-1.5%	1,787	13	0.7%
	Route 32	N-28-X	2,131	210	10.9%	1,461	-39	-2.6%	1,721	-26	-1.5%	1,934	160	9.0%

Route	Alternative		AM Peak Hour						PM Peak Hour					
			Eastbound			Westbound			Eastbound			Westbound		
			Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build
New Bridge	Base													
	No Build													
	Route 01	A-1-I	541			359			583			660		
	Route 02	A-1-II	673			409			599			710		
	Route 03	B-2-I	681			460			726			830		
	Route 04	B-2-II	687			451			707			789		
	Route 05	C-3-I	716			566			844			851		
	Route 06	C-3-II	763			587			840			908		
	Route 07	C-4-I	660			440			786			757		
	Route 08	C-5-II	679			528			781			858		
	Route 09	C-6-III	828			588			883			936		
	Route 14	E-11-IV	904			785			1,053			962		
	Route 15	F-12-IV	799			731			1,021			934		
	Route 16	F-13-IV	911			768			1,171			1,014		
	Route 17	F-14-V	845			688			1,019			994		
	Route 22	H-19-VII	839			616			903			868		
	Route 23	I-20-VII	835			583			918			928		
	Route 24	J-21-VII	882			626			955			969		
	Route 25	K-22-VII	848			568			971			832		
	Route 26	K-23-VII	902			644			1,018			929		
	Route 30	M-25-IX	916			664			1,099			952		
	Route 32	N-28-X	1,129			747			1,201			937		

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Route	Scenario		AM Peak Hour						PM Peak Hour					
			Eastbound			Westbound			Eastbound			Westbound		
			Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build
All Bridge Crossings	Base		5,924			4,717			5,620			7,254		
	No Build		8,070			6,165			7,105			9,060		
	Route 01	A-1-I	8,523	453	5.6%	6,759	594	9.6%	7,804	699	9.8%	9,759	699	7.7%
	Route 02	A-1-II	8,750	680	8.4%	6,780	615	10.0%	7,859	754	10.6%	9,681	621	6.9%
	Route 03	B-2-I	8,831	761	9.4%	6,772	607	9.8%	7,889	784	11.0%	9,911	851	9.4%
	Route 04	B-2-II	8,758	688	8.5%	6,803	638	10.3%	7,922	817	11.5%	9,919	859	9.5%
	Route 05	C-3-I	8,779	709	8.8%	6,893	728	11.8%	8,070	965	13.6%	9,892	832	9.2%
	Route 06	C-3-II	8,824	754	9.3%	6,933	768	12.5%	8,043	938	13.2%	9,980	920	10.2%
	Route 07	C-4-I	8,722	652	8.1%	6,804	639	10.4%	7,933	828	11.7%	9,848	788	8.7%
	Route 08	C-5-II	8,754	684	8.5%	6,897	732	11.9%	8,032	927	13.0%	9,960	900	9.9%
	Route 09	C-6-III	8,954	884	11.0%	7,013	848	13.8%	8,179	1,074	15.1%	10,041	981	10.8%
	Route 14	E-11-IV	9,050	980	12.1%	7,280	1,115	18.1%	8,206	1,101	15.5%	10,052	992	10.9%
	Route 15	F-12-IV	8,966	896	11.1%	7,293	1,128	18.3%	8,185	1,080	15.2%	9,977	917	10.1%
	Route 16	F-13-IV	9,127	1,057	13.1%	7,285	1,120	18.2%	8,347	1,242	17.5%	10,061	1,001	11.0%
	Route 17	F-14-V	9,002	932	11.5%	7,197	1,032	16.7%	8,250	1,145	16.1%	10,106	1,046	11.5%
	Route 22	H-19-VII	8,996	926	11.5%	7,212	1,047	17.0%	8,179	1,074	15.1%	9,791	731	8.1%
	Route 23	I-20-VII	9,021	951	11.8%	7,148	983	15.9%	8,202	1,097	15.4%	9,978	918	10.1%
	Route 24	J-21-VII	9,011	941	11.7%	7,285	1,120	18.2%	8,219	1,114	15.7%	9,912	852	9.4%
	Route 25	K-22-VII	9,111	1,041	12.9%	7,246	1,081	17.5%	8,298	1,193	16.8%	9,850	790	8.7%
	Route 26	K-23-VII	9,024	954	11.8%	7,326	1,161	18.8%	8,197	1,092	15.4%	9,805	745	8.2%
	Route 30	M-25-IX	9,268	1,198	14.8%	7,336	1,171	19.0%	8,268	1,163	16.4%	10,181	1,121	12.4%
	Route 32	N-28-X	9,586	1,516	18.8%	7,382	1,217	19.7%	8,788	1,683	23.7%	10,248	1,188	13.1%

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Route	Alternative		AM Peak Hour						PM Peak Hour					
			Eastbound			Westbound			Eastbound			Westbound		
			Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build
US 190	Base		1,066			866			2,104			1,295		
	No Build		1,484			1,082			2,544			2,029		
	Route 01	A-1-I	1,274	-210	-14.2%	1,139	57	5.3%	2,219	-325	-12.8%	1,682	-347	-17.1%
	Route 02	A-1-II	1,257	-227	-15.3%	1,118	36	3.3%	2,143	-401	-15.8%	1,703	-326	-16.1%
	Route 03	B-2-I	1,241	-243	-16.4%	1,124	42	3.9%	2,112	-432	-17.0%	1,737	-292	-14.4%
	Route 04	B-2-II	1,212	-272	-18.3%	1,135	53	4.9%	2,287	-257	-10.1%	1,784	-245	-12.1%
	Route 05	C-3-I	1,223	-261	-17.6%	1,107	25	2.3%	2,215	-329	-12.9%	1,684	-345	-17.0%
	Route 06	C-3-II	1,237	-247	-16.6%	1,130	48	4.4%	2,250	-294	-11.6%	1,685	-344	-17.0%
	Route 07	C-4-I	1,258	-226	-15.2%	1,098	16	1.5%	2,305	-239	-9.4%	1,780	-249	-12.3%
	Route 08	C-5-II	1,277	-207	-13.9%	1,103	21	1.9%	2,298	-246	-9.7%	1,754	-275	-13.6%
	Route 09	C-6-III	1,230	-254	-17.1%	1,106	24	2.2%	2,362	-182	-7.2%	1,770	-259	-12.8%
	Route 14	E-11-IV	1,334	-150	-10.1%	1,119	37	3.4%	2,327	-217	-8.5%	1,796	-233	-11.5%
	Route 15	F-12-IV	1,304	-180	-12.1%	1,106	24	2.2%	2,362	-182	-7.2%	1,832	-197	-9.7%
	Route 16	F-13-IV	1,324	-160	-10.8%	1,116	34	3.1%	2,359	-185	-7.3%	1,853	-176	-8.7%
	Route 17	F-14-V	1,304	-180	-12.1%	1,089	7	0.6%	2,474	-70	-2.8%	1,769	-260	-12.8%
	Route 22	H-19-VII	1,381	-103	-6.9%	1,114	32	3.0%	2,627	83	3.3%	1,904	-125	-6.2%
	Route 23	I-20-VII	1,395	-89	-6.0%	1,105	23	2.1%	2,641	97	3.8%	2,009	-20	-1.0%
	Route 24	J-21-VII	1,414	-70	-4.7%	1,112	30	2.8%	2,545	1	0.0%	1,944	-85	-4.2%
	Route 25	K-22-VII	1,543	59	4.0%	1,127	45	4.2%	2,707	163	6.4%	1,980	-49	-2.4%
	Route 26	K-23-VII	1,431	-53	-3.6%	1,107	25	2.3%	2,668	124	4.9%	1,985	-44	-2.2%
	Route 30	M-25-IX	1,390	-94	-6.3%	1,138	56	5.2%	2,796	252	9.9%	2,136	107	5.3%
	Route 32	N-28-X	1,643	159	10.7%	1,101	19	1.8%	3,017	473	18.6%	2,457	428	21.1%

Route	Alternative		AM Peak Hour						PM Peak Hour					
			Eastbound			Westbound			Eastbound			Westbound		
			Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build
I-10	Base		3,833			2,960			2,364			5,040		
	No Build		4,665			3,583			2,814			5,257		
	Route 01	A-1-I	4,738	73	1.6%	3,619	36	1.0%	2,884	70	2.5%	5,356	99	1.9%
	Route 02	A-1-II	4,761	96	2.1%	3,593	10	0.3%	2,925	111	3.9%	5,301	44	0.8%
	Route 03	B-2-I	4,754	89	1.9%	3,544	-39	-1.1%	2,910	96	3.4%	5,453	196	3.7%
	Route 04	B-2-II	4,786	121	2.6%	3,606	23	0.6%	2,890	76	2.7%	5,488	231	4.4%
	Route 05	C-3-I	4,720	55	1.2%	3,593	10	0.3%	2,946	132	4.7%	5,432	175	3.3%
	Route 06	C-3-II	4,746	81	1.7%	3,604	21	0.6%	2,857	43	1.5%	5,511	254	4.8%
	Route 07	C-4-I	4,759	94	2.0%	3,647	64	1.8%	2,870	56	2.0%	5,477	220	4.2%
	Route 08	C-5-II	4,790	125	2.7%	3,647	64	1.8%	2,892	78	2.8%	5,452	195	3.7%
	Route 09	C-6-III	4,788	123	2.6%	3,626	43	1.2%	2,884	70	2.5%	5,456	199	3.8%
	Route 14	E-11-IV	4,714	49	1.1%	3,643	60	1.7%	2,871	57	2.0%	5,473	216	4.1%
	Route 15	F-12-IV	4,834	169	3.6%	3,696	113	3.2%	2,845	31	1.1%	5,458	201	3.8%
	Route 16	F-13-IV	4,826	161	3.5%	3,660	77	2.1%	2,876	62	2.2%	5,513	256	4.9%
	Route 17	F-14-V	4,794	129	2.8%	3,688	105	2.9%	2,900	86	3.1%	5,465	208	4.0%
	Route 22	H-19-VII	4,854	189	4.1%	3,861	278	7.8%	2,898	84	3.0%	5,389	132	2.5%
	Route 23	I-20-VII	4,792	127	2.7%	3,807	224	6.3%	2,867	53	1.9%	5,495	238	4.5%
	Route 24	J-21-VII	4,819	154	3.3%	3,852	269	7.5%	2,870	56	2.0%	5,435	178	3.4%
	Route 25	K-22-VII	4,769	104	2.2%	3,794	211	5.9%	2,898	84	3.0%	5,340	83	1.6%
	Route 26	K-23-VII	4,769	104	2.2%	3,796	213	5.9%	2,844	30	1.1%	5,280	23	0.4%
	Route 30	M-25-IX	4,768	103	2.2%	3,885	302	8.4%	2,886	72	2.6%	5,213	-44	-0.8%
	Route 32	N-28-X	4,711	46	1.0%	3,928	345	9.6%	2,698	-116	-4.1%	4,961	-296	-5.6%

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Route	Alternative		AM Peak Hour						PM Peak Hour					
			Eastbound			Westbound			Eastbound			Westbound		
			Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build
LA 70	Base		1,025			891			1,152			919		
	No Build		1,921			1,500			1,747			1,774		
	Route 01	A-1-I	1,795	-126	-6.6%	1,444	-56	-3.7%	1,496	-251	-14.4%	1,644	-130	-7.3%
	Route 02	A-1-II	1,805	-116	-6.0%	1,462	-38	-2.5%	1,535	-212	-12.1%	1,606	-168	-9.5%
	Route 03	B-2-I	1,817	-104	-5.4%	1,426	-74	-4.9%	1,560	-187	-10.7%	1,674	-100	-5.6%
	Route 04	B-2-II	1,793	-128	-6.7%	1,444	-56	-3.7%	1,538	-209	-12.0%	1,637	-137	-7.7%
	Route 05	C-3-I	1,786	-135	-7.0%	1,490	-10	-0.7%	1,530	-217	-12.4%	1,631	-143	-8.1%
	Route 06	C-3-II	1,772	-149	-7.8%	1,455	-45	-3.0%	1,566	-181	-10.4%	1,600	-174	-9.8%
	Route 07	C-4-I	1,812	-109	-5.7%	1,475	-25	-1.7%	1,522	-225	-12.9%	1,688	-86	-4.8%
	Route 08	C-5-II	1,798	-123	-6.4%	1,453	-47	-3.1%	1,491	-256	-14.7%	1,621	-153	-8.6%
	Route 09	C-6-III	1,789	-132	-6.9%	1,472	-28	-1.9%	1,549	-198	-11.3%	1,632	-142	-8.0%
	Route 14	E-11-IV	1,777	-144	-7.5%	1,469	-31	-2.1%	1,509	-238	-13.6%	1,602	-172	-9.7%
	Route 15	F-12-IV	1,794	-127	-6.6%	1,499	-1	-0.1%	1,442	-305	-17.5%	1,644	-130	-7.3%
	Route 16	F-13-IV	1,738	-183	-9.5%	1,431	-69	-4.6%	1,569	-178	-10.2%	1,589	-185	-10.4%
	Route 17	F-14-V	1,753	-168	-8.7%	1,511	11	0.7%	1,534	-213	-12.2%	1,672	-102	-5.7%
	Route 22	H-19-VII	1,651	-270	-14.1%	1,513	13	0.9%	1,513	-234	-13.4%	1,557	-217	-12.2%
	Route 23	I-20-VII	1,687	-234	-12.2%	1,508	8	0.5%	1,548	-199	-11.4%	1,570	-204	-11.5%
	Route 24	J-21-VII	1,643	-278	-14.5%	1,520	20	1.3%	1,474	-273	-15.6%	1,518	-256	-14.4%
	Route 25	K-22-VII	1,599	-322	-16.8%	1,571	71	4.7%	1,594	-153	-8.8%	1,492	-282	-15.9%
	Route 26	K-23-VII	1,540	-381	-19.8%	1,563	63	4.2%	1,590	-157	-9.0%	1,450	-324	-18.3%
	Route 30	M-25-IX	1,786	-135	-7.0%	1,251	-249	-16.6%	1,525	-222	-12.7%	1,647	-127	-7.2%
	Route 32	N-28-X	1,713	-208	-10.8%	1,231	-269	-17.9%	1,626	-121	-6.9%	1,863	89	5.0%

Route	Alternative		AM Peak Hour						PM Peak Hour					
			Eastbound			Westbound			Eastbound			Westbound		
			Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build
New Bridge	Base													
	No Build													
	Route 01	A-1-I	834			530			1,205			1,311		
	Route 02	A-1-II	1,002			616			1,174			1,351		
	Route 03	B-2-I	1,039			643			1,251			1,251		
	Route 04	B-2-II	1,055			647			1,266			1,210		
	Route 05	C-3-I	1,156			759			1,384			1,335		
	Route 06	C-3-II	1,162			786			1,337			1,396		
	Route 07	C-4-I	980			598			1,252			1,178		
	Route 08	C-5-II	978			698			1,320			1,240		
	Route 09	C-6-III	1,130			795			1,371			1,355		
	Route 14	E-11-IV	1,304			1,120			1,547			1,403		
	Route 15	F-12-IV	1,169			1,062			1,485			1,300		
	Route 16	F-13-IV	1,309			1,125			1,597			1,416		
	Route 17	F-14-V	1,214			1,017			1,507			1,447		
	Route 22	H-19-VII	1,190			820			1,115			1,205		
	Route 23	I-20-VII	1,178			834			1,246			1,265		
	Route 24	J-21-VII	1,248			897			1,369			1,363		
	Route 25	K-22-VII	1,292			845			1,298			1,286		
	Route 26	K-23-VII	1,344			940			1,411			1,335		
	Route 30	M-25-IX	1,377			1,498			1,369			1,386		
	Route 32	N-28-X	1,589			1,596			1,517			1,131		

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Route	Scenario		AM Peak Hour						PM Peak Hour					
			Eastbound			Westbound			Eastbound			Westbound		
			Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build	Peak Hour Volume	Change from No Build	Percent Change from No Build
All Bridge Crossings	Base		5,924			4,717			5,620			7,254		
	No Build		8,070			6,165			7,105			9,060		
	Route 01	A-1-I	8,641	571	7.1%	6,732	567	9.2%	7,804	699	9.8%	9,993	933	10.3%
	Route 02	A-1-II	8,825	755	9.4%	6,789	624	10.1%	7,777	672	9.5%	9,961	901	9.9%
	Route 03	B-2-I	8,851	781	9.7%	6,737	572	9.3%	7,833	728	10.2%	10,115	1,055	11.6%
	Route 04	B-2-II	8,846	776	9.6%	6,832	667	10.8%	7,981	876	12.3%	10,119	1,059	11.7%
	Route 05	C-3-I	8,885	815	10.1%	6,949	784	12.7%	8,075	970	13.7%	10,082	1,022	11.3%
	Route 06	C-3-II	8,917	847	10.5%	6,975	810	13.1%	8,010	905	12.7%	10,192	1,132	12.5%
	Route 07	C-4-I	8,809	739	9.2%	6,818	653	10.6%	7,949	844	11.9%	10,123	1,063	11.7%
	Route 08	C-5-II	8,843	773	9.6%	6,901	736	11.9%	8,001	896	12.6%	10,067	1,007	11.1%
	Route 09	C-6-III	8,937	867	10.7%	6,999	834	13.5%	8,166	1,061	14.9%	10,213	1,153	12.7%
	Route 14	E-11-IV	9,129	1,059	13.1%	7,351	1,186	19.2%	8,254	1,149	16.2%	10,274	1,214	13.4%
	Route 15	F-12-IV	9,101	1,031	12.8%	7,363	1,198	19.4%	8,134	1,029	14.5%	10,234	1,174	13.0%
	Route 16	F-13-IV	9,197	1,127	14.0%	7,332	1,167	18.9%	8,401	1,296	18.2%	10,371	1,311	14.5%
	Route 17	F-14-V	9,065	995	12.3%	7,305	1,140	18.5%	8,415	1,310	18.4%	10,353	1,293	14.3%
	Route 22	H-19-VII	9,076	1,006	12.5%	7,308	1,143	18.5%	8,153	1,048	14.8%	10,055	995	11.0%
	Route 23	I-20-VII	9,052	982	12.2%	7,254	1,089	17.7%	8,302	1,197	16.8%	10,339	1,279	14.1%
	Route 24	J-21-VII	9,124	1,054	13.1%	7,381	1,216	19.7%	8,258	1,153	16.2%	10,260	1,200	13.2%
	Route 25	K-22-VII	9,203	1,133	14.0%	7,337	1,172	19.0%	8,497	1,392	19.6%	10,098	1,038	11.5%
	Route 26	K-23-VII	9,084	1,014	12.6%	7,406	1,241	20.1%	8,513	1,408	19.8%	10,050	990	10.9%
	Route 30	M-25-IX	9,321	1,251	15.5%	7,772	1,607	26.1%	8,576	1,471	20.7%	10,382	1,322	14.6%
	Route 32	N-28-X	9,656	1,586	19.7%	7,856	1,691	27.4%	8,858	1,753	24.7%	10,412	1,352	14.9%

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Appendix F

VIII. VHD and VHT Calculations

The Toll and Non-Toll AM and PM Peak Period VHD and VHT values are shown in the subsequent tables. The tables show the VHD and VHT change, as well as the percent change, from the No Build to each of the 20 Bridge Route Alternatives.

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TOLL SCENARIO				
Alternative		**TOTAL**	**CHANGE FROM NO BUILD**	**PERCENT CHANGE**
Base	[redacted]	11,750		
No Build		36,832		
Route 01	A-1-I	34,796	-2,036	-5.5%
Route 02	A-1-II	34,954	-1,878	-5.1%
Route 03	B-2-I	35,158	-1,674	-4.5%
Route 04	B-2-II	35,220	-1,612	-4.4%
Route 05	C-3-I	35,075	-1,757	-4.8%
Route 06	C-3-II	35,303	-1,529	-4.2%
Route 07	C-4-I	34,369	-2,463	-6.7%
Route 08	C-5-II	34,747	-2,085	-5.7%
Route 09	C-6-III	34,901	-1,932	-5.2%
Route 14	E-11-IV	35,932	-900	-2.4%
Route 15	F-12-IV	35,422	-1,410	-3.8%
Route 16	F-13-IV	36,082	-750	-2.0%
Route 17	F-14-V	35,794	-1,038	-2.8%
Route 22	H-19-VII	35,869	-963	-2.6%
Route 23	I-20-VII	35,690	-1,142	-3.1%
Route 24	J-21-VII	36,419	-413	-1.1%
Route 25	K-22-VII	35,989	-844	-2.3%
Route 26	K-23-VII	35,293	-1,539	-4.2%
Route 30	M-25-IX	39,932	3,100	8.4%
Route 32	N-28-X	40,596	3,764	10.2%

NON-TOLL SCENARIO				
Alternative		**TOTAL**	**CHANGE FROM NO BUILD**	**PERCENT CHANGE**
Base	[redacted]	11,750		
No Build		36,832		
Route 01	A-1-I	29,802	-7,030	-19.1%
Route 02	A-1-II	34,491	-2,341	-6.4%
Route 03	B-2-I	35,584	-1,249	-3.4%
Route 04	B-2-II	34,562	-2,270	-6.2%
Route 05	C-3-I	33,992	-2,841	-7.7%
Route 06	C-3-II	35,229	-1,603	-4.4%
Route 07	C-4-I	34,318	-2,515	-6.8%
Route 08	C-5-II	34,144	-2,688	-7.3%
Route 09	C-6-III	34,618	-2,214	-6.0%
Route 14	E-11-IV	35,151	-1,682	-4.6%
Route 15	F-12-IV	35,422	-1,410	-3.8%
Route 16	F-13-IV	34,463	-2,369	-6.4%
Route 17	F-14-V	34,584	-2,248	-6.1%
Route 22	H-19-VII	35,475	-1,357	-3.7%
Route 23	I-20-VII	35,518	-1,315	-3.6%
Route 24	J-21-VII	35,150	-1,682	-4.6%
Route 25	K-22-VII	35,101	-1,731	-4.7%
Route 26	K-23-VII	35,656	-1,176	-3.2%
Route 30	M-25-IX	37,406	574	1.6%
Route 32	N-28-X	37,759	927	2.5%

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TOLL SCENARIO				
Alternative		TOTAL	CHANGE FROM NO BUILD	PERCENT CHANGE
Base	[redacted]	78,583		
No Build		128,556		
Route 01	A-1-I	126,137	-2,419	-1.9%
Route 02	A-1-II	126,608	-1,948	-1.5%
Route 03	B-2-I	127,028	-1,528	-1.2%
Route 04	B-2-II	127,096	-1,460	-1.1%
Route 05	C-3-I	127,039	-1,517	-1.2%
Route 06	C-3-II	127,086	-1,470	-1.1%
Route 07	C-4-I	126,206	-2,350	-1.8%
Route 08	C-5-II	126,805	-1,751	-1.4%
Route 09	C-6-III	126,611	-1,945	-1.5%
Route 14	E-11-IV	128,453	-103	-0.1%
Route 15	F-12-IV	128,262	-294	-0.2%
Route 16	F-13-IV	128,801	245	0.2%
Route 17	F-14-V	128,344	-212	-0.2%
Route 22	H-19-VII	129,005	449	0.3%
Route 23	I-20-VII	129,046	490	0.4%
Route 24	J-21-VII	129,509	953	0.7%
Route 25	K-22-VII	129,618	1,062	0.8%
Route 26	K-23-VII	128,989	433	0.3%
Route 30	M-25-IX	133,932	5,376	4.2%
Route 32	N-28-X	135,763	7,207	5.6%

NON-TOLL SCENARIO				
Alternative		TOTAL	CHANGE FROM NO BUILD	PERCENT CHANGE
Base	[redacted]	78,583		
No Build		128,556		
Route 01	A-1-I	125,746	-2,810	-2.2%
Route 02	A-1-II	125,811	-2,745	-2.1%
Route 03	B-2-I	127,160	-1,397	-1.1%
Route 04	B-2-II	126,267	-2,289	-1.8%
Route 05	C-3-I	125,701	-2,855	-2.2%
Route 06	C-3-II	126,538	-2,018	-1.6%
Route 07	C-4-I	125,999	-2,557	-2.0%
Route 08	C-5-II	125,735	-2,822	-2.2%
Route 09	C-6-III	126,125	-2,432	-1.9%
Route 14	E-11-IV	127,453	-1,103	-0.9%
Route 15	F-12-IV	128,262	-294	-0.2%
Route 16	F-13-IV	127,157	-1,399	-1.1%
Route 17	F-14-V	126,979	-1,577	-1.2%
Route 22	H-19-VII	128,396	-160	-0.1%
Route 23	I-20-VII	128,405	-151	-0.1%
Route 24	J-21-VII	128,396	-160	-0.1%
Route 25	K-22-VII	128,500	-56	0.0%
Route 26	K-23-VII	129,069	513	0.4%
Route 30	M-25-IX	131,384	2,828	2.2%
Route 32	N-28-X	132,505	3,949	3.1%

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TOLL SCENARIO				
Alternative		**TOTAL**	**CHANGE FROM NO BUILD**	**PERCENT CHANGE**
Base	[redacted]	19,944		
No Build		62,877		
Route 01	A-1-I	58,205	-4,672	-7.4%
Route 02	A-1-II	59,285	-3,592	-5.7%
Route 03	B-2-I	57,456	-5,421	-8.6%
Route 04	B-2-II	58,310	-4,567	-7.3%
Route 05	C-3-I	59,843	-3,034	-4.8%
Route 06	C-3-II	58,293	-4,584	-7.3%
Route 07	C-4-I	59,042	-3,835	-6.1%
Route 08	C-5-II	58,118	-4,759	-7.6%
Route 09	C-6-III	58,450	-4,427	-7.0%
Route 14	E-11-IV	60,472	-2,405	-3.8%
Route 15	F-12-IV	59,437	-3,440	-5.5%
Route 16	F-13-IV	58,603	-4,274	-6.8%
Route 17	F-14-V	59,737	-3,140	-5.0%
Route 22	H-19-VII	63,330	453	0.7%
Route 23	I-20-VII	64,375	1,498	2.4%
Route 24	J-21-VII	64,322	1,445	2.3%
Route 25	K-22-VII	64,723	1,846	2.9%
Route 26	K-23-VII	64,716	1,839	2.9%
Route 30	M-25-IX	65,586	2,709	4.3%
Route 32	N-28-X	66,887	4,010	6.4%

NON-TOLL SCENARIO				
Alternative		**TOTAL**	**CHANGE FROM NO BUILD**	**PERCENT CHANGE**
Base	[redacted]	19,944		
No Build		62,877		
Route 01	A-1-I	56,164	-6,713	-10.7%
Route 02	A-1-II	57,687	-5,190	-8.3%
Route 03	B-2-I	57,795	-5,082	-8.1%
Route 04	B-2-II	57,473	-5,404	-8.6%
Route 05	C-3-I	58,792	-4,085	-6.5%
Route 06	C-3-II	57,797	-5,080	-8.1%
Route 07	C-4-I	57,400	-5,477	-8.7%
Route 08	C-5-II	57,749	-5,128	-8.2%
Route 09	C-6-III	57,672	-5,205	-8.3%
Route 14	E-11-IV	57,731	-5,146	-8.2%
Route 15	F-12-IV	57,757	-5,120	-8.1%
Route 16	F-13-IV	58,031	-4,846	-7.7%
Route 17	F-14-V	58,842	-4,035	-6.4%
Route 22	H-19-VII	63,292	415	0.7%
Route 23	I-20-VII	62,958	81	0.1%
Route 24	J-21-VII	63,702	825	1.3%
Route 25	K-22-VII	62,244	-633	-1.0%
Route 26	K-23-VII	63,028	151	0.2%
Route 30	M-25-IX	63,976	1,099	1.7%
Route 32	N-28-X	66,486	3,610	5.7%

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TOLL SCENARIO				
Alternative		**TOTAL**	**CHANGE FROM NO BUILD**	**PERCENT CHANGE**
Base	[redacted]	103,850		
No Build		177,479		
Route 01	A-1-I	172,522	-4,957	-2.8%
Route 02	A-1-II	173,930	-3,549	-2.0%
Route 03	B-2-I	171,984	-5,495	-3.1%
Route 04	B-2-II	172,819	-4,660	-2.6%
Route 05	C-3-I	174,231	-3,248	-1.8%
Route 06	C-3-II	172,784	-4,695	-2.6%
Route 07	C-4-I	173,574	-3,905	-2.2%
Route 08	C-5-II	172,699	-4,780	-2.7%
Route 09	C-6-III	173,229	-4,250	-2.4%
Route 14	E-11-IV	175,504	-1,975	-1.1%
Route 15	F-12-IV	174,591	-2,888	-1.6%
Route 16	F-13-IV	173,924	-3,555	-2.0%
Route 17	F-14-V	174,907	-2,572	-1.4%
Route 22	H-19-VII	178,677	1,198	0.7%
Route 23	I-20-VII	179,963	2,484	1.4%
Route 24	J-21-VII	179,938	2,459	1.4%
Route 25	K-22-VII	180,447	2,968	1.7%
Route 26	K-23-VII	180,466	2,987	1.7%
Route 30	M-25-IX	181,304	3,825	2.2%
Route 32	N-28-X	183,850	6,371	3.6%

NON-TOLL SCENARIO				
Alternative		**TOTAL**	**CHANGE FROM NO BUILD**	**PERCENT CHANGE**
Base	[redacted]	103,850		
No Build		177,479		
Route 01	A-1-I	169,936	-7,543	-4.3%
Route 02	A-1-II	171,730	-5,749	-3.2%
Route 03	B-2-I	171,587	-5,892	-3.3%
Route 04	B-2-II	171,562	-5,917	-3.3%
Route 05	C-3-I	173,105	-4,374	-2.5%
Route 06	C-3-II	171,850	-5,629	-3.2%
Route 07	C-4-I	171,586	-5,893	-3.3%
Route 08	C-5-II	171,895	-5,584	-3.1%
Route 09	C-6-III	172,128	-5,351	-3.0%
Route 14	E-11-IV	172,452	-5,027	-2.8%
Route 15	F-12-IV	172,553	-4,925	-2.8%
Route 16	F-13-IV	172,635	-4,844	-2.7%
Route 17	F-14-V	173,715	-3,764	-2.1%
Route 22	H-19-VII	178,343	865	0.5%
Route 23	I-20-VII	178,189	710	0.4%
Route 24	J-21-VII	178,848	1,369	0.8%
Route 25	K-22-VII	178,152	673	0.4%
Route 26	K-23-VII	178,800	1,321	0.7%
Route 30	M-25-IX	180,034	2,556	1.4%
Route 32	N-28-X	183,038	5,559	3.1%

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Appendix F

IX. Travel Time Comparison

The following tables show the travel time comparison calculations. The comparisons include the difference in travel time, as well as the percent difference, between the No Build and Build scenarios.

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Alternative		AM Peak Hour (Eastbound)																	
		I-10 at LA 415 to I-10/I-12 Split			I-10 at LA 415 to Downtown			I-10 at LA 415 to LSU			Dow Chemical to I-10/I-12 Split			Dow Chemical to Downtown			Dow Chemical to LSU		
		Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference
Base		10.0			8.9			8.9			23.4			22.5			22.5		
No Build		12.1			9.9			12.1			23.4			21.3			23.5		
Route 01	A-1-I	11.2	-0.9	-8%	9.7	-0.3	-3%	10.0	-2.0	-17%	22.7	-0.7	-3%	21.3	0.0	0%	21.6	-1.8	-8%
Route 02	A-1-II	11.1	-1.0	-8%	9.5	-0.4	-4%	10.7	-1.4	-11%	22.5	-0.9	-4%	21.0	-0.3	-1%	22.2	-1.2	-5%
Route 03	B-2-I	11.3	-0.8	-7%	9.4	-0.6	-6%	11.6	-0.4	-4%	22.4	-1.0	-4%	20.6	-0.7	-3%	22.8	-0.6	-3%
Route 04	B-2-II	11.7	-0.4	-3%	9.4	-0.5	-5%	11.5	-0.6	-5%	22.8	-0.6	-2%	20.6	-0.7	-3%	22.7	-0.8	-3%
Route 05	C-3-I	12.2	0.0	0%	9.8	-0.1	-1%	11.3	-0.7	-6%	23.3	-0.1	0%	21.1	-0.2	-1%	22.6	-0.9	-4%
Route 06	C-3-II	11.1	-1.0	-8%	9.4	-0.6	-6%	10.5	-1.6	-13%	22.4	-1.1	-5%	20.7	-0.6	-3%	21.8	-1.6	-7%
Route 07	C-4-I	10.5	-1.6	-13%	9.0	-0.9	-9%	10.1	-2.0	-16%	23.4	-0.1	0%	21.2	-0.2	-1%	22.1	-1.3	-6%
Route 08	C-5-II	11.4	-0.8	-6%	9.5	-0.5	-5%	10.2	-1.8	-15%	22.6	-0.8	-3%	21.3	0.0	0%	21.1	-2.3	-10%
Route 09	C-6-III	10.7	-1.4	-12%	9.4	-0.5	-5%	10.2	-1.8	-15%	21.9	-1.5	-6%	20.8	-0.6	-3%	21.6	-1.9	-8%
Route 14	E-11-IV	11.5	-0.6	-5%	9.9	0.0	0%	10.8	-1.2	-10%	22.8	-0.6	-2%	21.3	0.0	0%	22.3	-1.2	-5%
Route 15	F-12-IV	11.6	-0.5	-4%	9.9	0.0	0%	11.1	-0.9	-8%	22.8	-0.7	-3%	21.2	-0.2	-1%	22.4	-1.1	-5%
Route 16	F-13-IV	11.5	-0.7	-5%	10.1	0.1	1%	11.4	-0.7	-5%	22.6	-0.8	-3%	21.3	0.0	0%	22.7	-0.8	-3%
Route 17	F-14-V	11.8	-0.4	-3%	9.3	-0.6	-6%	10.3	-1.7	-14%	22.9	-0.5	-2%	20.5	-0.8	-4%	21.6	-1.9	-8%
Route 22	H-19-VII	11.9	-0.2	-1%	10.2	0.2	2%	10.3	-1.8	-15%	23.1	-0.3	-1%	21.5	0.1	1%	21.6	-1.9	-8%
Route 23	I-20-VII	11.7	-0.5	-4%	10.1	0.2	2%	14.6	2.5	21%	22.9	-0.5	-2%	21.5	0.2	1%	26.0	2.5	11%
Route 24	J-21-VII	11.9	-0.2	-2%	10.1	0.2	2%	11.2	-0.9	-7%	23.2	-0.2	-1%	21.6	0.2	1%	22.6	-0.8	-4%
Route 25	K-22-VII	12.0	-0.1	-1%	10.4	0.5	5%	11.4	-0.6	-5%	23.4	0.0	0%	21.9	0.6	3%	22.9	-0.5	-2%
Route 26	K-23-VII	11.7	-0.4	-3%	9.9	-0.1	-1%	11.9	-0.1	-1%	23.1	-0.4	-2%	21.3	0.0	0%	23.3	-0.1	0%
Route 30	M-25-IX	11.7	-0.4	-4%	9.9	0.0	0%	12.1	0.0	0%	23.0	-0.4	-2%	21.3	0.0	0%	23.5	0.0	0%
Route 32	N-28-X	12.7	0.5	4%	11.0	1.0	10%	14.0	2.0	16%	24.7	1.3	6%	23.1	1.8	8%	26.2	2.7	12%

Alternative		AM Peak Hour (Westbound)																	
		I-10/I-12 Split to I-10 at LA 415			Downtown to I-10 at LA 415			LSU to I-10 at LA 415			I-10/I-12 Split to Dow Chemical			Downtown to Dow Chemical			LSU to Dow Chemical		
		Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference
Base		9.0			5.6			9.7			19.9			16.5			20.6		
No Build		8.8			5.6			10.5			20.3			17.1			22.0		
Route 01	A-1-I	9.2	0.4	5%	5.7	0.1	2%	10.5	0.1	1%	20.7	0.4	2%	17.6	0.5	3%	22.4	0.5	2%
Route 02	A-1-II	9.1	0.4	4%	5.6	0.0	0%	10.1	-0.3	-3%	20.8	0.5	2%	17.6	0.5	3%	22.1	0.2	1%
Route 03	B-2-I	9.1	0.3	4%	5.6	0.0	0%	10.4	-0.1	-1%	20.6	0.3	1%	17.4	0.3	2%	22.2	0.2	1%
Route 04	B-2-II	9.2	0.4	4%	5.7	0.1	2%	10.2	-0.2	-2%	20.7	0.4	2%	17.6	0.5	3%	22.1	0.1	1%
Route 05	C-3-I	9.1	0.3	4%	5.7	0.1	1%	10.3	-0.1	-1%	20.9	0.6	3%	17.8	0.6	4%	22.4	0.5	2%
Route 06	C-3-II	9.1	0.3	4%	5.7	0.0	1%	10.2	-0.3	-3%	20.9	0.6	3%	17.8	0.7	4%	22.3	0.3	1%
Route 07	C-4-I	8.8	0.0	0%	5.7	0.1	1%	10.3	-0.2	-2%	21.1	0.8	4%	18.0	0.8	5%	22.5	0.6	3%
Route 08	C-5-II	8.8	0.0	0%	5.7	0.1	2%	10.3	-0.2	-2%	21.1	0.8	4%	18.0	0.9	5%	22.5	0.6	3%
Route 09	C-6-III	9.1	0.3	4%	5.7	0.1	2%	10.2	-0.3	-3%	21.0	0.7	3%	18.0	0.8	5%	22.4	0.4	2%
Route 14	E-11-IV	9.2	0.4	5%	5.7	0.1	2%	10.8	0.4	4%	20.3	0.0	0%	17.2	0.1	0%	22.3	0.4	2%
Route 15	F-12-IV	9.2	0.4	5%	5.7	0.0	1%	10.7	0.2	2%	20.4	0.1	1%	17.2	0.1	1%	22.3	0.3	1%
Route 16	F-13-IV	9.1	0.3	4%	5.7	0.0	1%	10.3	-0.1	-1%	20.3	0.0	0%	17.2	0.0	0%	21.8	-0.1	-1%
Route 17	F-14-V	9.2	0.4	5%	5.7	0.1	2%	10.5	0.0	0%	20.4	0.2	1%	17.3	0.2	1%	22.1	0.1	1%
Route 22	H-19-VII	9.3	0.5	6%	5.8	0.2	4%	10.7	0.3	2%	20.5	0.2	1%	17.4	0.3	2%	22.3	0.3	2%
Route 23	I-20-VII	9.2	0.4	5%	5.7	0.1	2%	10.5	0.1	1%	20.5	0.2	1%	17.4	0.2	1%	22.1	0.2	1%
Route 24	J-21-VII	9.2	0.4	5%	5.8	0.2	3%	10.8	0.3	3%	20.5	0.2	1%	17.4	0.3	2%	22.4	0.4	2%
Route 25	K-22-VII	9.3	0.6	6%	5.9	0.3	5%	10.7	0.2	2%	20.7	0.4	2%	17.6	0.4	3%	22.4	0.4	2%
Route 26	K-23-VII	9.2	0.4	5%	5.8	0.2	3%	10.6	0.2	2%	20.5	0.2	1%	17.4	0.3	2%	22.3	0.3	1%
Route 30	M-25-IX	9.5	0.8	9%	6.4	0.7	13%	11.8	1.3	13%	21.3	1.0	5%	18.1	1.0	6%	23.5	1.6	7%
Route 32	N-28-X	9.8	1.0	12%	6.2	0.6	11%	12.0	1.5	14%	21.2	1.0	5%	18.0	0.9	5%	23.8	1.8	8%

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Alternative		PM Peak Hour (Eastbound)																
		I-10 at LA 415 to I-10/I-12 Split			I-10 at LA 415 to Downtown			I-10 at LA 415 to LSU			Dow Chemical to I-10/I-12 Split			Dow Chemical to Downtown			Dow Chemical to LSU		
		Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference
Base		22.4			16.7			16.9			38.9			33.1			33.3		
No Build		19.1			16.1			15.9			42.8			39.4			39.1		
Route 01	A-1-I	18.8	-0.2	-1%	15.0	-1.2	-7%	17.2	1.3	8%	38.8	-4.0	-9%	34.8	-4.6	-12%	37.1	-2.0	-5%
Route 02	A-1-II	19.1	0.0	0%	15.1	-1.0	-6%	15.3	-0.6	-4%	37.8	-5.0	-12%	33.5	-5.9	-15%	33.6	-5.5	-14%
Route 03	B-2-I	18.4	-0.7	-4%	16.0	-0.1	-1%	17.2	1.4	9%	32.7	-10.1	-24%	30.4	-9.0	-23%	31.6	-7.6	-19%
Route 04	B-2-II	20.3	1.3	7%	17.7	1.5	9%	18.7	2.9	18%	34.8	-8.0	-19%	32.1	-7.3	-18%	33.2	-6.0	-15%
Route 05	C-3-I	17.7	-1.4	-7%	14.0	-2.1	-13%	16.1	0.2	1%	37.4	-5.4	-13%	33.9	-5.5	-14%	35.9	-3.3	-8%
Route 06	C-3-II	19.4	0.4	2%	15.7	-0.5	-3%	16.2	0.3	2%	38.3	-4.5	-11%	34.5	-4.9	-12%	35.7	-3.4	-9%
Route 07	C-4-I	17.0	-2.1	-11%	14.8	-1.3	-8%	14.3	-1.6	-10%	39.2	-3.6	-8%	36.2	-3.2	-8%	35.8	-3.3	-9%
Route 08	C-5-II	19.6	0.5	3%	15.8	-0.4	-2%	18.9	3.0	19%	37.3	-5.5	-13%	33.1	-6.3	-16%	36.0	-3.1	-8%
Route 09	C-6-III	19.6	0.6	3%	15.6	-0.5	-3%	16.1	0.2	1%	36.8	-6.0	-14%	32.6	-6.8	-17%	33.1	-6.0	-15%
Route 14	E-11-IV	18.9	-0.2	-1%	15.5	-0.6	-4%	21.0	5.1	32%	36.7	-6.1	-14%	33.5	-5.9	-15%	39.0	-0.2	0%
Route 15	F-12-IV	21.3	2.3	12%	18.5	2.3	14%	18.7	2.9	18%	34.1	-8.7	-20%	31.2	-8.2	-21%	31.5	-7.7	-20%
Route 16	F-13-IV	17.9	-1.2	-6%	15.1	-1.0	-6%	18.5	2.6	17%	33.7	-9.1	-21%	30.9	-8.5	-21%	34.3	-4.8	-12%
Route 17	F-14-V	18.4	-0.7	-4%	15.4	-0.7	-5%	16.8	0.9	6%	32.2	-10.7	-25%	29.1	-10.2	-26%	30.5	-8.6	-22%
Route 22	H-19-VII	18.9	-0.2	-1%	15.8	-0.3	-2%	17.3	1.4	9%	34.8	-8.0	-19%	31.7	-7.7	-20%	33.0	-6.1	-16%
Route 23	I-20-VII	19.8	0.8	4%	16.0	-0.1	-1%	17.4	1.5	10%	40.7	-2.1	-5%	37.2	-2.2	-5%	38.9	-0.3	-1%
Route 24	J-21-VII	18.5	-0.6	-3%	15.5	-0.6	-4%	17.0	1.1	7%	35.6	-7.2	-17%	32.7	-6.7	-17%	34.1	-5.1	-13%
Route 25	K-22-VII	20.0	0.9	5%	17.9	1.8	11%	21.6	5.7	36%	37.9	-5.0	-12%	35.4	-4.0	-10%	39.3	0.1	0%
Route 26	K-23-VII	18.6	-0.4	-2%	14.8	-1.3	-8%	19.0	3.1	20%	44.2	1.4	3%	39.9	0.5	1%	45.1	6.0	15%
Route 30	M-25-IX	20.8	1.7	9%	17.1	1.0	6%	17.1	1.2	8%	44.0	1.2	3%	40.4	1.0	3%	39.6	0.5	1%
Route 32	N-28-X	21.9	2.8	15%	18.7	2.6	16%	18.4	2.5	16%	39.7	-3.2	-7%	36.5	-2.9	-7%	36.3	-2.8	-7%

Alternative		PM Peak Hour (Westbound)																
		I-10/I-12 Split to I-10 at LA 415			Downtown to I-10 at LA 415			LSU to I-10 at LA 415			I-10/I-12 Split to Dow Chemical			Downtown to Dow Chemical			LSU to Dow Chemical		
		Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference
Base		11.3			8.6			11.9			22.5			19.8			23.1		
No Build		15.8			14.4			21.8			27.8			26.2			33.7		
Route 01	A-1-I	13.6	-2.1	-14%	11.5	-2.9	-20%	17.9	-3.9	-18%	26.0	-1.8	-6%	24.0	-2.2	-8%	30.5	-3.2	-10%
Route 02	A-1-II	14.8	-1.0	-7%	12.2	-2.2	-15%	17.6	-4.3	-20%	26.8	-1.0	-3%	24.5	-1.7	-7%	29.8	-3.8	-11%
Route 03	B-2-I	14.1	-1.7	-11%	12.9	-1.6	-11%	16.2	-5.6	-26%	26.0	-1.7	-6%	25.0	-1.2	-5%	28.4	-5.3	-16%
Route 04	B-2-II	14.7	-1.1	-7%	12.1	-2.3	-16%	18.2	-3.7	-17%	26.7	-1.0	-4%	24.4	-1.9	-7%	30.4	-3.3	-10%
Route 05	C-3-I	13.7	-2.1	-13%	11.3	-3.1	-22%	16.3	-5.5	-25%	25.8	-2.0	-7%	23.6	-2.6	-10%	28.6	-5.0	-15%
Route 06	C-3-II	13.5	-2.3	-14%	12.0	-2.4	-17%	21.7	-0.1	0%	25.7	-2.1	-8%	24.4	-1.9	-7%	34.0	0.4	1%
Route 07	C-4-I	14.6	-1.2	-7%	12.3	-2.1	-15%	16.7	-5.2	-24%	27.3	-0.5	-2%	24.7	-1.5	-6%	29.0	-4.6	-14%
Route 08	C-5-II	13.8	-2.0	-13%	12.3	-2.1	-15%	15.1	-6.7	-31%	26.3	-1.5	-5%	24.7	-1.6	-6%	27.4	-6.2	-19%
Route 09	C-6-III	13.3	-2.5	-16%	12.4	-2.0	-14%	16.3	-5.6	-25%	25.4	-2.4	-9%	24.7	-1.5	-6%	28.6	-5.1	-15%
Route 14	E-11-IV	15.9	0.1	1%	12.6	-1.8	-13%	15.9	-5.9	-27%	27.5	-0.3	-1%	24.4	-1.8	-7%	27.8	-5.9	-18%
Route 15	F-12-IV	17.6	1.8	11%	13.2	-1.2	-8%	16.6	-5.2	-24%	29.2	1.4	5%	25.0	-1.2	-5%	28.4	-5.3	-16%
Route 16	F-13-IV	16.4	0.6	4%	14.2	-0.2	-2%	16.4	-5.4	-25%	27.9	0.1	0%	25.9	-0.3	-1%	28.2	-5.5	-16%
Route 17	F-14-V	16.8	1.0	6%	12.8	-1.6	-11%	20.8	-1.0	-5%	28.4	0.6	2%	24.5	-1.7	-7%	32.5	-1.1	-3%
Route 22	H-19-VII	20.2	4.4	28%	14.4	0.0	0%	19.3	-2.5	-12%	31.8	4.0	15%	26.3	0.1	0%	31.1	-2.5	-8%
Route 23	I-20-VII	19.6	3.8	24%	13.5	-0.9	-6%	19.7	-2.1	-10%	31.3	3.5	13%	25.4	-0.8	-3%	31.5	-2.1	-6%
Route 24	J-21-VII	20.4	4.6	29%	12.7	-1.8	-12%	20.2	-1.6	-7%	32.2	4.4	16%	24.6	-1.6	-6%	32.2	-1.5	-4%
Route 25	K-22-VII	19.8	4.0	25%	13.8	-0.6	-4%	22.4	0.6	3%	31.4	3.6	13%	25.7	-0.6	-2%	34.3	0.6	2%
Route 26	K-23-VII	21.8	6.1	38%	15.7	1.3	9%	17.9	-3.9	-18%	33.6	5.8	21%	27.6	1.4	5%	29.8	-3.8	-11%
Route 30	M-25-IX	18.5	2.7	17%	13.5	-0.9	-6%	35.5	13.7	63%	30.6	2.8	10%	25.5	-0.8	-3%	47.4	13.7	41%
Route 32	N-28-X	22.0	6.3	40%	14.1	-0.3	-2%	28.6	6.8	31%	34.0	6.2	22%	26.2	0.0	0%	40.6	7.0	21%

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Alternative		AM Peak Hour (Eastbound)																	
		I-10 at LA 415 to I-10/I-12 Split			I-10 at LA 415 to Downtown			I-10 at LA 415 to LSU			Dow Chemical to I-10/I-12 Split			Dow Chemical to Downtown			Dow Chemical to LSU		
		Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference
Base		10.0			8.9			8.9			23.4			22.5			22.5		
No Build		12.1			9.9			12.1			23.4			21.3			23.5		
Route 01	A-1-I	10.9	-1.2	-10%	9.0	-0.9	-9%	10.0	-2.0	-17%	22.2	-1.2	-5%	20.4	-0.9	-4%	21.4	-2.0	-9%
Route 02	A-1-II	10.4	-1.7	-14%	9.0	-0.9	-10%	9.8	-2.3	-19%	21.9	-1.5	-7%	20.5	-0.8	-4%	21.3	-2.1	-9%
Route 03	B-2-I	10.7	-1.5	-12%	9.2	-0.8	-8%	9.9	-2.1	-18%	21.6	-1.8	-8%	20.2	-1.1	-5%	20.9	-2.5	-11%
Route 04	B-2-II	10.7	-1.5	-12%	9.1	-0.9	-9%	10.1	-1.9	-16%	21.5	-1.9	-8%	20.0	-1.3	-6%	21.1	-2.4	-10%
Route 05	C-3-I	10.8	-1.4	-11%	9.0	-1.0	-10%	10.1	-2.0	-16%	21.6	-1.8	-8%	19.9	-1.4	-7%	21.0	-2.4	-10%
Route 06	C-3-II	10.4	-1.8	-15%	9.2	-0.7	-7%	10.2	-1.9	-15%	21.3	-2.1	-9%	20.3	-1.0	-5%	21.3	-2.2	-9%
Route 07	C-4-I	10.9	-1.2	-10%	9.0	-1.0	-10%	9.7	-2.4	-20%	21.9	-1.5	-6%	20.1	-1.3	-6%	20.8	-2.7	-11%
Route 08	C-5-II	10.8	-1.4	-11%	9.1	-0.9	-9%	10.3	-1.7	-14%	21.8	-1.6	-7%	20.2	-1.1	-5%	21.5	-1.9	-8%
Route 09	C-6-III	10.5	-1.7	-14%	8.9	-1.1	-11%	10.0	-2.1	-17%	21.4	-2.0	-9%	19.9	-1.4	-7%	21.1	-2.4	-10%
Route 14	E-11-IV	11.1	-1.0	-8%	9.3	-0.6	-6%	11.3	-0.7	-6%	22.0	-1.4	-6%	20.3	-1.0	-5%	22.3	-1.1	-5%
Route 15	F-12-IV	10.8	-1.3	-11%	9.0	-0.9	-9%	10.8	-1.3	-11%	21.8	-1.6	-7%	20.1	-1.2	-6%	21.9	-1.6	-7%
Route 16	F-13-IV	11.2	-0.9	-8%	9.3	-0.7	-7%	10.2	-1.9	-15%	22.0	-1.4	-6%	20.2	-1.1	-5%	21.2	-2.3	-10%
Route 17	F-14-V	11.1	-1.0	-8%	9.3	-0.7	-7%	9.9	-2.1	-18%	22.0	-1.4	-6%	20.3	-1.1	-5%	20.9	-2.5	-11%
Route 22	H-19-VII	10.8	-1.4	-11%	9.1	-0.8	-8%	11.2	-0.9	-7%	21.8	-1.7	-7%	20.2	-1.1	-5%	22.3	-1.2	-5%
Route 23	I-20-VII	11.0	-1.1	-9%	9.2	-0.7	-7%	11.6	-0.4	-4%	22.0	-1.4	-6%	20.4	-1.0	-5%	22.8	-0.7	-3%
Route 24	J-21-VII	11.1	-1.0	-8%	9.7	-0.3	-3%	10.9	-1.2	-10%	22.2	-1.2	-5%	20.9	-0.5	-2%	22.1	-1.4	-6%
Route 25	K-22-VII	11.5	-0.7	-6%	9.8	-0.2	-2%	11.0	-1.0	-8%	22.7	-0.7	-3%	21.1	-0.2	-1%	22.4	-1.1	-5%
Route 26	K-23-VII	12.0	-0.1	-1%	9.7	-0.3	-3%	11.0	-1.0	-8%	23.1	-0.3	-1%	20.8	-0.5	-2%	22.2	-1.2	-5%
Route 30	M-25-IX	11.6	-0.5	-4%	9.7	-0.3	-3%	10.6	-1.4	-12%	22.8	-0.6	-3%	21.0	-0.4	-2%	21.9	-1.5	-7%
Route 32	N-28-X	12.1	0.0	0%	10.5	0.6	6%	14.0	2.0	17%	23.8	0.4	2%	22.3	1.0	5%	25.8	2.4	10%

Alternative		AM Peak Hour (Westbound)																	
		I-10/I-12 Split to I-10 at LA 415			Downtown to I-10 at LA 415			LSU to I-10 at LA 415			I-10/I-12 Split to Dow Chemical			Downtown to Dow Chemical			LSU to Dow Chemical		
		Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference
Base		9.0			5.6			9.7			19.9			16.5			20.6		
No Build		8.8			5.6			10.5			20.3			17.1			22.0		
Route 01	A-1-I	9.1	0.4	4%	5.7	0.1	1%	10.1	-0.3	-3%	20.7	0.4	2%	17.6	0.5	3%	22.0	0.0	0%
Route 02	A-1-II	9.1	0.4	4%	5.6	0.0	0%	10.2	-0.3	-3%	20.7	0.4	2%	17.6	0.4	2%	22.1	0.1	1%
Route 03	B-2-I	9.1	0.3	3%	5.6	0.0	1%	10.1	-0.3	-3%	20.4	0.2	1%	17.4	0.3	1%	21.9	-0.1	0%
Route 04	B-2-II	9.1	0.3	3%	5.7	0.1	2%	10.2	-0.2	-2%	20.5	0.2	1%	17.5	0.4	2%	22.0	0.1	0%
Route 05	C-3-I	9.1	0.4	4%	5.7	0.1	1%	10.1	-0.3	-3%	20.8	0.5	2%	17.7	0.5	3%	22.1	0.1	1%
Route 06	C-3-II	9.1	0.3	3%	5.7	0.1	2%	10.2	-0.2	-2%	20.7	0.4	2%	17.7	0.5	3%	22.2	0.2	1%
Route 07	C-4-I	9.1	0.4	4%	5.6	0.0	1%	10.1	-0.3	-3%	20.9	0.6	3%	17.8	0.6	4%	22.2	0.3	1%
Route 08	C-5-II	9.1	0.3	4%	5.7	0.1	2%	10.1	-0.4	-3%	20.9	0.6	3%	17.8	0.7	4%	22.2	0.2	1%
Route 09	C-6-III	9.1	0.3	3%	5.7	0.1	1%	10.1	-0.3	-3%	20.9	0.6	3%	17.8	0.7	4%	22.3	0.3	1%
Route 14	E-11-IV	9.1	0.3	4%	5.6	0.0	0%	10.5	0.0	0%	20.1	-0.2	-1%	16.9	-0.2	-1%	21.8	-0.1	-1%
Route 15	F-12-IV	9.1	0.4	4%	5.7	0.0	1%	10.3	-0.2	-2%	20.2	-0.1	0%	17.1	0.0	0%	21.7	-0.3	-1%
Route 16	F-13-IV	9.1	0.3	4%	5.7	0.0	1%	10.5	0.0	0%	20.1	-0.2	-1%	17.0	-0.1	-1%	21.8	-0.1	-1%
Route 17	F-14-V	9.1	0.3	4%	5.7	0.0	1%	10.5	0.0	0%	20.1	-0.1	-1%	17.1	-0.1	0%	21.9	-0.1	0%
Route 22	H-19-VII	9.1	0.4	4%	5.7	0.1	2%	10.5	0.0	0%	20.3	0.0	0%	17.2	0.1	1%	21.9	0.0	0%
Route 23	I-20-VII	9.1	0.4	4%	5.6	0.0	0%	10.7	0.2	2%	20.3	0.0	0%	17.1	0.0	0%	22.2	0.2	1%
Route 24	J-21-VII	9.1	0.3	4%	5.7	0.1	1%	10.8	0.3	3%	20.2	-0.1	0%	17.2	0.0	0%	22.2	0.3	1%
Route 25	K-22-VII	9.2	0.4	4%	5.8	0.2	3%	10.4	0.0	0%	20.4	0.1	0%	17.3	0.2	1%	22.0	0.0	0%
Route 26	K-23-VII	9.1	0.3	4%	5.6	0.0	1%	10.5	0.0	0%	20.2	-0.1	0%	17.1	0.0	0%	21.9	-0.1	0%
Route 30	M-25-IX	9.2	0.4	5%	5.7	0.0	1%	10.6	0.1	1%	20.4	0.1	0%	17.2	0.1	0%	22.1	0.2	1%
Route 32	N-28-X	9.2	0.5	5%	5.6	0.0	-1%	11.2	0.8	7%	20.5	0.2	1%	17.2	0.1	1%	22.9	0.9	4%

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Alternative		PM Peak Hour (Eastbound)																	
		I-10 at LA 415 to I-10/I-12 Split			I-10 at LA 415 to Downtown			I-10 at LA 415 to LSU			Dow Chemical to I-10/I-12 Split			Dow Chemical to Downtown			Dow Chemical to LSU		
		Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference
Base		22.4			16.7			16.9			38.9			33.1			33.3		
No Build		19.1			16.1			15.9			42.8			39.4			39.1		
Route 01	A-1-I	18.3	-0.8	-4%	15.9	-0.2	-1%	14.7	-1.2	-8%	32.6	-10.2	-24%	30.2	-9.2	-23%	29.0	-10.2	-26%
Route 02	A-1-II	17.4	-1.7	-9%	14.5	-1.7	-10%	13.7	-2.2	-14%	32.1	-10.7	-25%	29.2	-10.2	-26%	28.4	-10.8	-27%
Route 03	B-2-I	17.8	-1.3	-7%	15.1	-1.0	-6%	14.6	-1.3	-8%	32.6	-10.2	-24%	30.0	-9.4	-24%	29.4	-9.7	-25%
Route 04	B-2-II	17.0	-2.0	-11%	14.7	-1.4	-9%	13.7	-2.1	-14%	33.4	-9.4	-22%	31.1	-8.3	-21%	30.1	-9.1	-23%
Route 05	C-3-I	18.0	-1.1	-6%	15.3	-0.9	-5%	14.9	-1.0	-6%	34.1	-8.8	-20%	31.3	-8.1	-20%	30.9	-8.2	-21%
Route 06	C-3-II	20.0	0.9	5%	17.2	1.1	7%	16.7	0.8	5%	29.8	-13.0	-30%	27.0	-12.3	-31%	26.5	-12.7	-32%
Route 07	C-4-I	17.2	-1.9	-10%	14.9	-1.2	-7%	13.9	-2.0	-12%	34.4	-8.4	-20%	32.2	-7.2	-18%	31.2	-7.9	-20%
Route 08	C-5-II	17.7	-1.4	-7%	15.3	-0.8	-5%	14.7	-1.1	-7%	36.2	-6.6	-15%	33.7	-5.7	-15%	33.1	-6.0	-15%
Route 09	C-6-III	17.0	-2.1	-11%	14.2	-2.0	-12%	14.7	-1.1	-7%	34.7	-8.1	-19%	31.9	-7.4	-19%	32.4	-6.7	-17%
Route 14	E-11-IV	18.4	-0.7	-4%	14.6	-1.5	-9%	17.9	2.0	13%	31.5	-11.3	-26%	27.8	-11.6	-29%	31.0	-8.1	-21%
Route 15	F-12-IV	18.9	-0.1	-1%	15.7	-0.4	-3%	16.7	0.8	5%	32.4	-10.4	-24%	29.2	-10.2	-26%	30.2	-9.0	-23%
Route 16	F-13-IV	18.2	-0.9	-5%	15.4	-0.7	-4%	15.9	0.1	0%	35.4	-7.4	-17%	32.6	-6.8	-17%	33.1	-6.0	-15%
Route 17	F-14-V	17.7	-1.3	-7%	13.9	-2.2	-14%	14.5	-1.4	-9%	36.2	-6.6	-15%	32.4	-7.0	-18%	33.0	-6.2	-16%
Route 22	H-19-VII	19.3	0.2	1%	15.6	-0.6	-3%	18.0	2.1	13%	35.0	-7.8	-18%	31.2	-8.2	-21%	33.7	-5.5	-14%
Route 23	I-20-VII	19.4	0.4	2%	16.1	0.0	0%	16.8	0.9	6%	34.6	-8.2	-19%	31.3	-8.1	-21%	31.9	-7.2	-18%
Route 24	J-21-VII	20.5	1.4	8%	16.6	0.4	3%	18.5	2.6	16%	36.6	-6.2	-14%	32.5	-6.9	-17%	34.4	-4.8	-12%
Route 25	K-22-VII	19.4	0.3	2%	16.3	0.1	1%	22.3	6.4	41%	33.6	-9.2	-21%	30.5	-8.9	-23%	36.5	-2.7	-7%
Route 26	K-23-VII	19.1	0.0	0%	15.3	-0.8	-5%	19.1	3.2	20%	35.2	-7.6	-18%	31.5	-7.9	-20%	35.1	-4.0	-10%
Route 30	M-25-IX	20.5	1.4	8%	17.6	1.5	9%	20.1	4.3	27%	34.1	-8.7	-20%	31.2	-8.2	-21%	33.7	-5.5	-14%
Route 32	N-28-X	19.7	0.6	3%	15.9	-0.2	-1%	16.9	1.1	7%	43.2	0.4	1%	39.2	-0.2	0%	41.0	1.9	5%

Alternative		PM Peak Hour (Westbound)																	
		I-10/I-12 Split to I-10 at LA 415			Downtown to I-10 at LA 415			LSU to I-10 at LA 415			I-10/I-12 Split to Dow Chemical			Downtown to Dow Chemical			LSU to Dow Chemical		
		Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference	Travel Time (Minutes)	Difference	Percent Difference
Base		11.3			8.6			11.9			22.5			19.8			23.1		
No Build		15.8			14.4			21.8			27.8			26.2			33.7		
Route 01	A-1-I	11.0	-4.8	-31%	9.9	-4.6	-32%	12.4	-9.4	-43%	23.2	-4.6	-17%	22.3	-4.0	-15%	24.8	-8.8	-26%
Route 02	A-1-II	10.9	-4.9	-31%	10.4	-4.0	-28%	12.2	-9.6	-44%	22.9	-4.9	-18%	22.6	-3.6	-14%	24.4	-9.3	-27%
Route 03	B-2-I	11.1	-4.6	-29%	10.2	-4.3	-30%	13.2	-8.6	-39%	23.0	-4.8	-17%	22.2	-4.0	-15%	25.3	-8.4	-25%
Route 04	B-2-II	11.3	-4.5	-29%	10.3	-4.2	-29%	13.1	-8.7	-40%	23.1	-4.6	-17%	22.3	-3.9	-15%	25.2	-8.5	-25%
Route 05	C-3-I	10.9	-4.9	-31%	11.8	-2.7	-18%	13.4	-8.4	-39%	22.7	-5.0	-18%	23.8	-2.5	-9%	25.4	-8.2	-24%
Route 06	C-3-II	11.1	-4.6	-29%	10.0	-4.4	-31%	12.9	-8.9	-41%	23.1	-4.7	-17%	22.1	-4.1	-16%	25.0	-8.6	-26%
Route 07	C-4-I	11.6	-4.2	-26%	10.7	-3.8	-26%	13.9	-7.9	-36%	23.6	-4.2	-15%	22.8	-3.4	-13%	26.1	-7.6	-22%
Route 08	C-5-II	11.7	-4.1	-26%	10.7	-3.8	-26%	14.2	-7.7	-35%	23.7	-4.1	-15%	22.9	-3.4	-13%	26.4	-7.3	-22%
Route 09	C-6-III	11.7	-4.1	-26%	11.1	-3.3	-23%	13.4	-8.4	-39%	23.9	-3.9	-14%	23.5	-2.7	-10%	25.8	-7.9	-23%
Route 14	E-11-IV	12.1	-3.7	-23%	12.4	-2.1	-14%	14.3	-7.5	-34%	23.5	-4.3	-15%	24.0	-2.3	-9%	25.9	-7.7	-23%
Route 15	F-12-IV	13.1	-2.7	-17%	12.1	-2.4	-16%	17.0	-4.9	-22%	24.5	-3.3	-12%	23.7	-2.6	-10%	28.6	-5.1	-15%
Route 16	F-13-IV	12.3	-3.5	-22%	11.0	-3.5	-24%	13.6	-8.2	-38%	23.7	-4.1	-15%	22.6	-3.7	-14%	25.3	-8.4	-25%
Route 17	F-14-V	12.4	-3.4	-21%	11.1	-3.3	-23%	15.1	-6.7	-31%	23.9	-3.9	-14%	22.8	-3.5	-13%	26.8	-6.9	-20%
Route 22	H-19-VII	14.4	-1.4	-9%	13.3	-1.2	-8%	18.1	-3.7	-17%	26.0	-1.8	-7%	25.0	-1.2	-5%	29.8	-3.8	-11%
Route 23	I-20-VII	13.4	-2.4	-15%	12.1	-2.4	-16%	17.6	-4.2	-19%	24.9	-2.9	-10%	23.8	-2.5	-9%	29.3	-4.3	-13%
Route 24	J-21-VII	14.0	-1.8	-11%	11.6	-2.9	-20%	18.9	-2.9	-13%	25.5	-2.2	-8%	23.3	-2.9	-11%	30.6	-3.0	-9%
Route 25	K-22-VII	15.2	-0.6	-4%	12.8	-1.6	-11%	20.6	-1.2	-6%	26.8	-1.0	-4%	24.6	-1.7	-6%	32.4	-1.3	-4%
Route 26	K-23-VII	14.5	-1.2	-8%	12.1	-2.3	-16%	19.8	-2.0	-9%	26.1	-1.7	-6%	23.8	-2.4	-9%	31.5	-2.2	-7%
Route 30	M-25-IX	17.7	1.9	12%	14.4	0.0	0%	20.6	-1.2	-5%	29.3	1.6	6%	26.3	0.1	0%	32.5	-1.2	-4%
Route 32	N-28-X	22.4	6.6	42%	14.9	0.4	3%	25.9	4.1	19%	34.2	6.4	23%	26.9	0.7	3%	37.9	4.2	13%

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Appendix F

X. QA/QC Checklist

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Build Mesoscopic Model Network Development Minimum QA/QC Checklist

✓	NETWORK OBJECTS	COMMENTS
✓	Number of Lanes	
✓	Intersection Traffic Control	
✓	Functional Classification	
✓	Toll Restrictions	

	NETWORK RESULTS	COMMENTS
✓	Convergence – Relative Gaps	Good
✓	Convergence – Travel Time	Good
✓	Convergence – Waiting-Traveling	None in AM, Minimal in PM
✓	Cooling Period	Good
✓	Vehicles Waiting to Load at Centroids	Some, as expected because of increased future demand. Ideally, these localized future demand issues should be resolved during the development review process through the Traffic Impact Studies required by the local agencies and/or LADOTD.

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Engineer: Charles LeBoeuf, PE Date given to Quality Checker: 6/30/22

Quality Checker: Vijay Kunada, PE, PTOE, PTP Date check completed: 7/7/22

This correspondence and the information contained herein is prepared solely for the purpose of identifying, evaluating and planning safety improvements on public roads which may be implemented utilizing federal aid highway funds; and is therefore exempt from discovery or admission into evidence pursuant to 23 U.S.C. 409.