

LEGEND

- Study Area Intersection
- Traffic Capacity Analysis Study Area
- County Boundary
- Municipality Boundary
- I-5719 Improvement Section
- Interstate
- US Route
- NC Route
- Local Road

NOT TO SCALE

PREPARED FOR
 North Carolina Department
 of Transportation

PREPARED BY
 HNTB North Carolina, P.C.
 101 S. Tryon St Suite 3610
 Charlotte, NC 28280

COUNTY	Gaston	STIP PROJECT NO.	I-5719
DIVISION	12	WBS NO.	50135.1.FS1
PROJECT DESCRIPTION			
I-85 Widening from US 321 to NC 273			

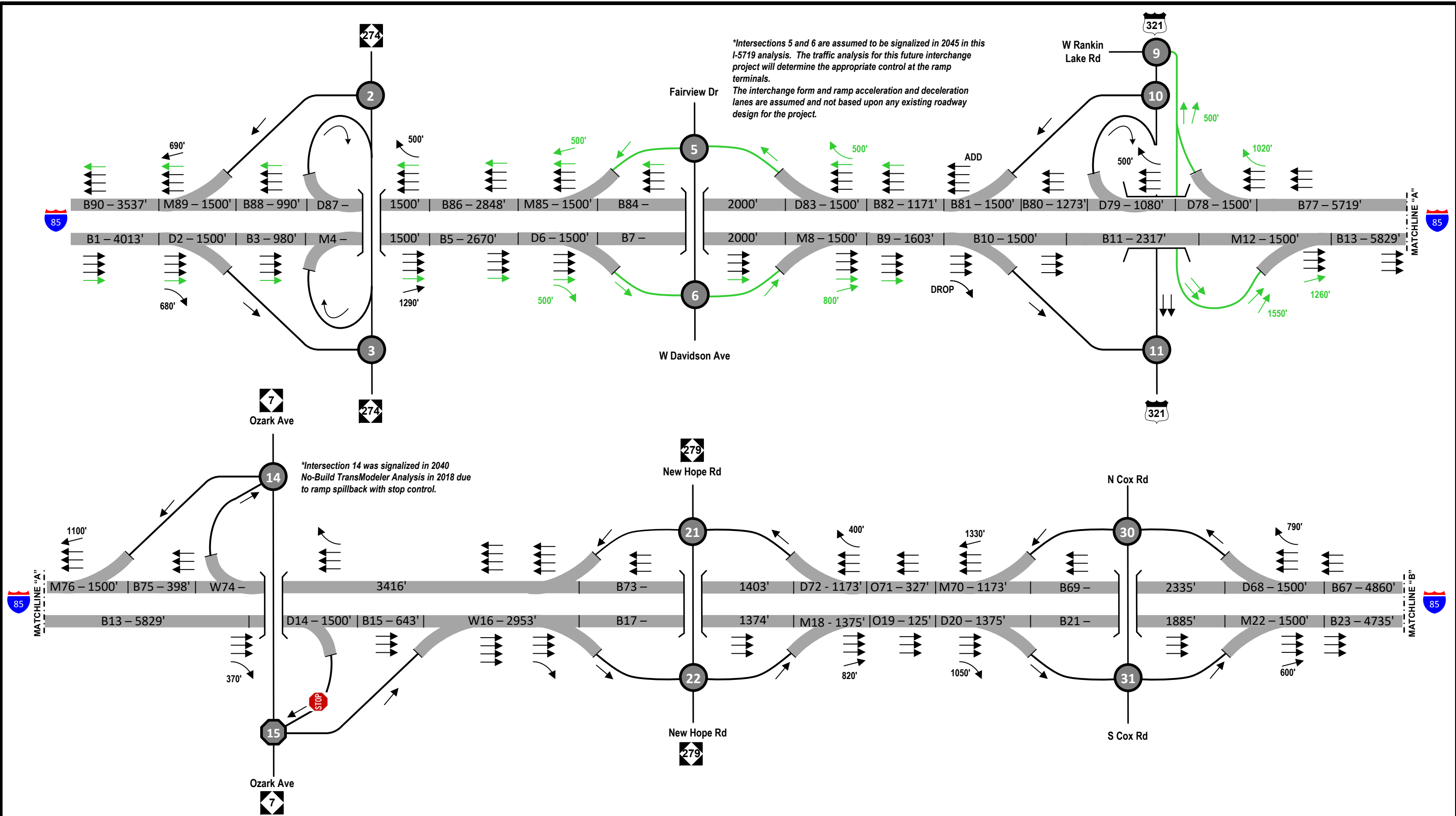
**TRAFFIC CAPACITY ANALYSIS
STUDY AREA**

DATE
October 2021

FIGURE 1

*Intersections 5 and 6 are assumed to be signalized in 2045 in this I-5719 analysis. The traffic analysis for this future interchange project will determine the appropriate control at the ramp terminals. The interchange form and ramp acceleration and deceleration lanes are assumed and not based upon any existing roadway design for the project.

*Intersection 14 was signalized in 2040 No-Build TransModeler Analysis in 2018 due to ramp spillback with stop control.



LEGEND

- Signalized Intersection ID
- Unsignalized Intersection ID
- XXX - XXXX' Freeway Segment ID - Segment Length (ft)
- Roadway
- Existing Laneage
- Laneage added by Future Projects
- XXX' Acceleration/Deceleration Lane Length

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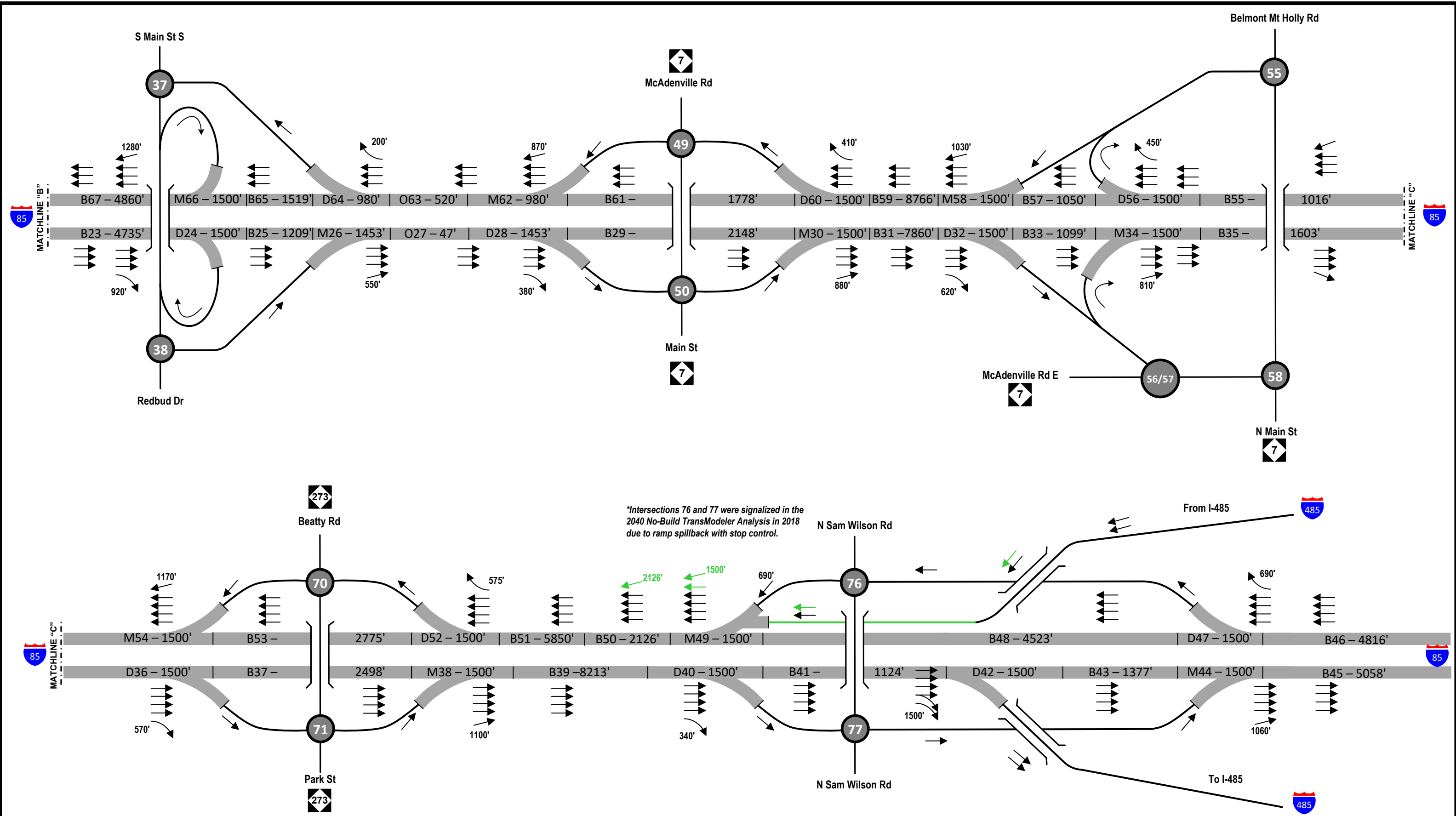
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2045 NO-BUILD FREEWAY LANEAGE, FREEVAL SEGMENT ID & LENGTH

DATE: October 2021

FIGURE 2.1



LEGEND

- Signalized Intersection ID
- Unsignalized Intersection ID
- XXX - XXXX' Freeway Segment ID - Segment Length (ft)
- Roadway
- Existing Laneage
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- XXX' Acceleration/Deceleration Lane Length

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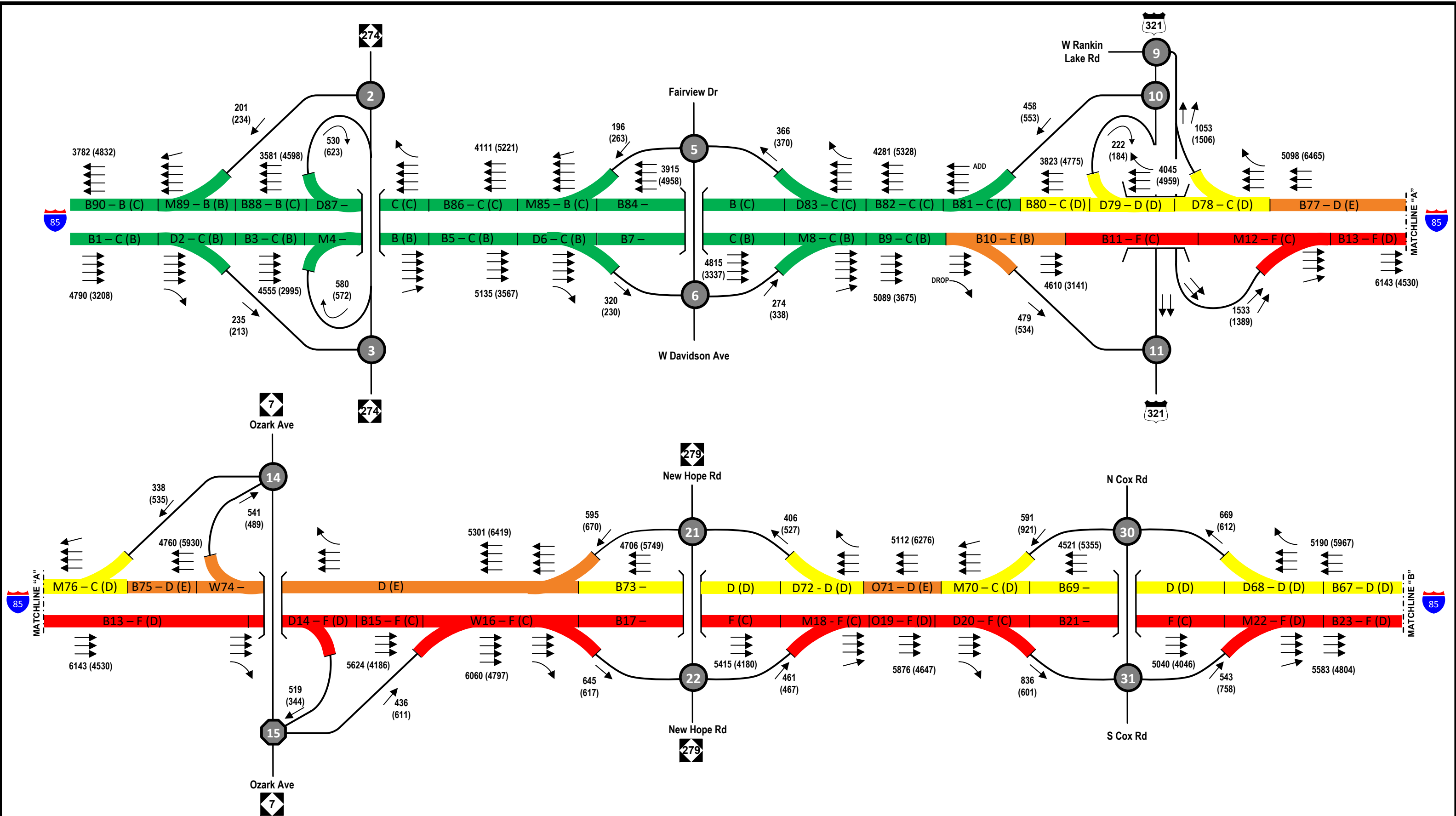
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FIGURE 2.2



LEGEND

- Roadway
- Vehicular Movement
- XXX - X(X) Freeway Segment ID - AM(PM) LOS
- ⊙ # Signalized Intersection ID
- ◇ # Unsignalized Intersection ID

Color Corresponds to Worst-Case Peak Hour Intersection Level of Service

- Green - LOS A - C
- Yellow - LOS D
- Orange - LOS E
- Red - LOS F

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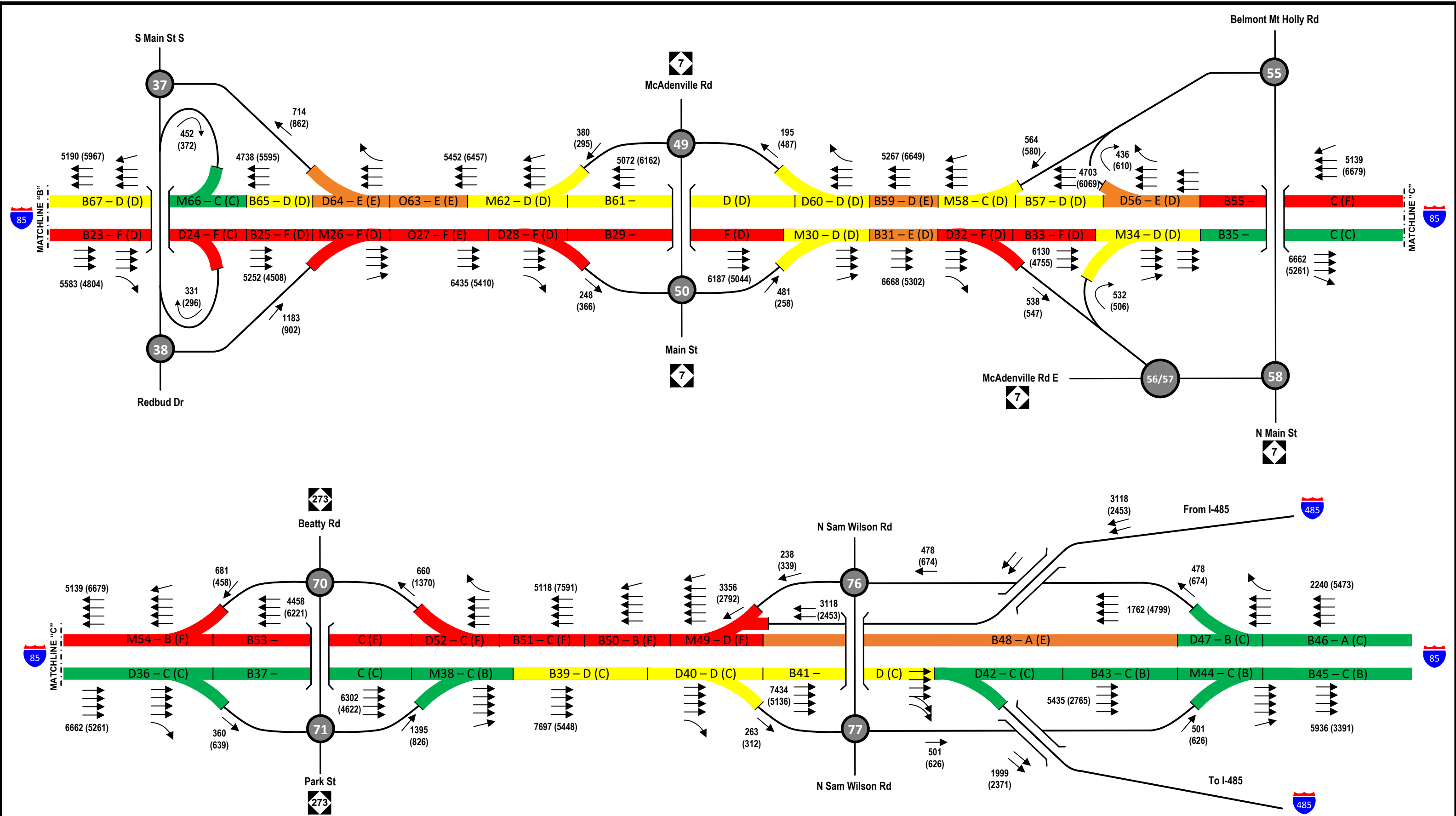
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2045 NO-BUILD FREEWAY PEAK HOUR VOLUMES, FREEVAL SEGMENT ID & LOS

DATE: October 2021

FIGURE 3.1

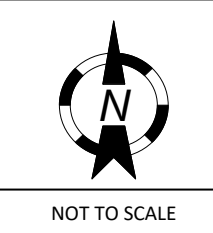


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- Roadway
- Vehicular Movement
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- ⊙ # Signalized Intersection ID
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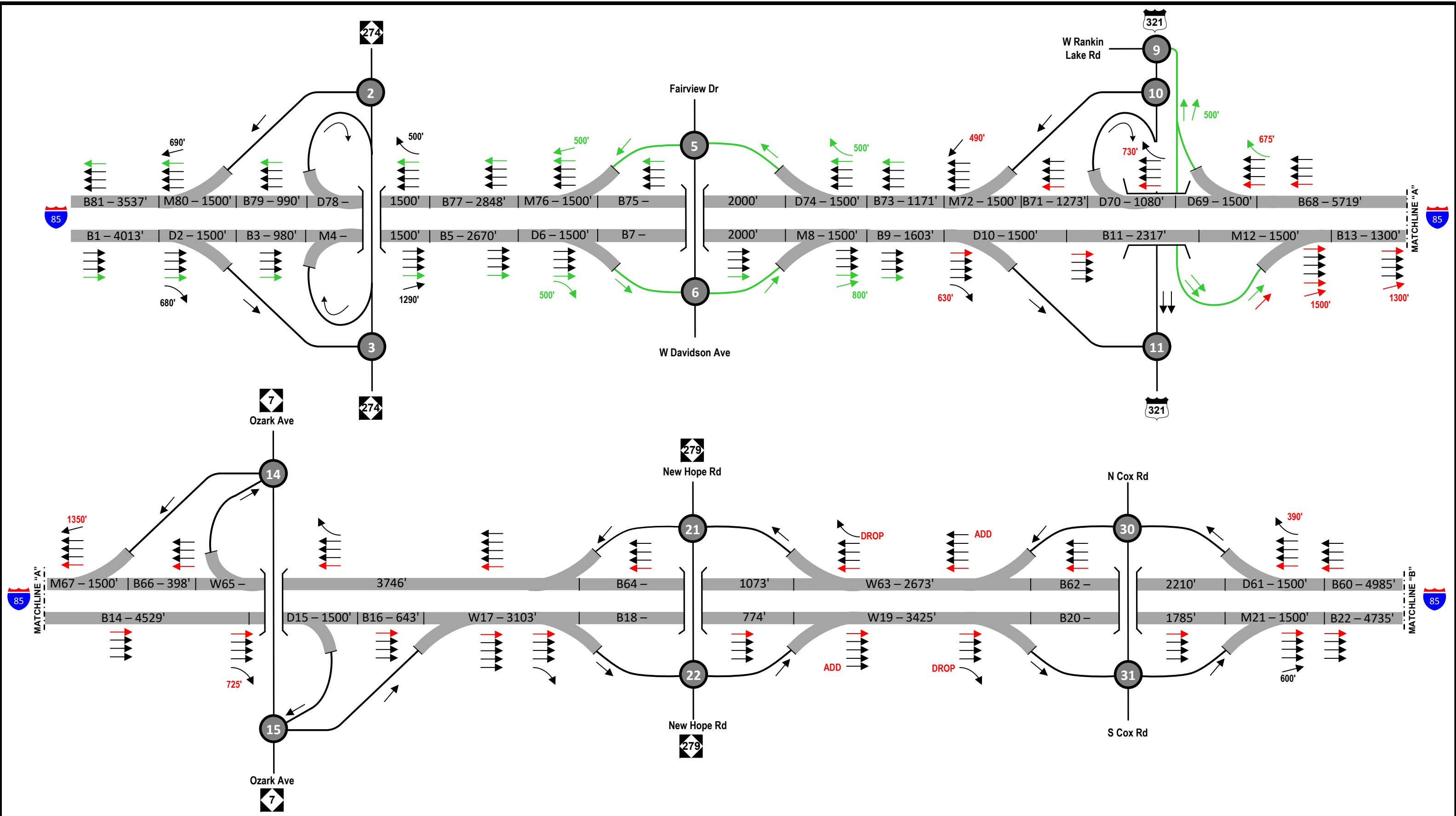


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2045 NO-BUILD FREEWAY PEAK HOUR VOLUMES, FREEVAL SEGMENT ID & LOS

DATE: October 2021

FIGURE 3.2



LEGEND

- Signalized Intersection ID
- Roundabout ID
- Unsignalized Intersection ID
- Roadway
- Existing Laneage
- I-5719 Proposed Laneage
- Laneage added by Future Projects
- XXX'** Acceleration/Deceleration Lane Length
- XXX - XXXX'** Freeway Segment ID - Segment Length

NOT TO SCALE

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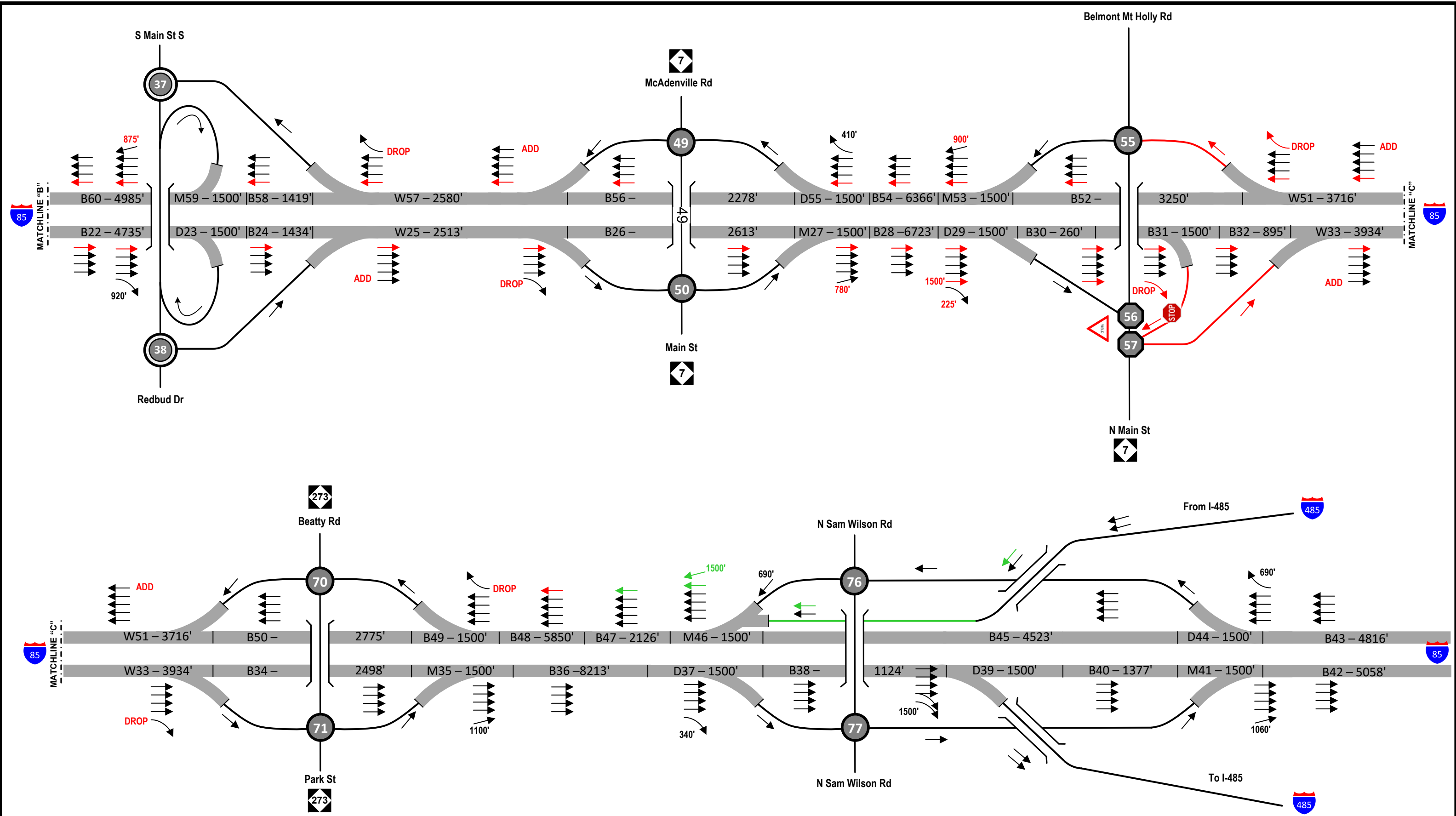
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2045 BUILD FREEWAY LANEAGE, FREEVAL SEGMENT ID & LENGTH

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FIGURE 4.1



LEGEND

- Signalized Intersection ID
- Roundabout ID
- Unsignalized Intersection ID
- Roadway
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- XXX'** Acceleration/Deceleration Lane Length
- XXX - XXXX'** Freeway Segment ID - Segment Length

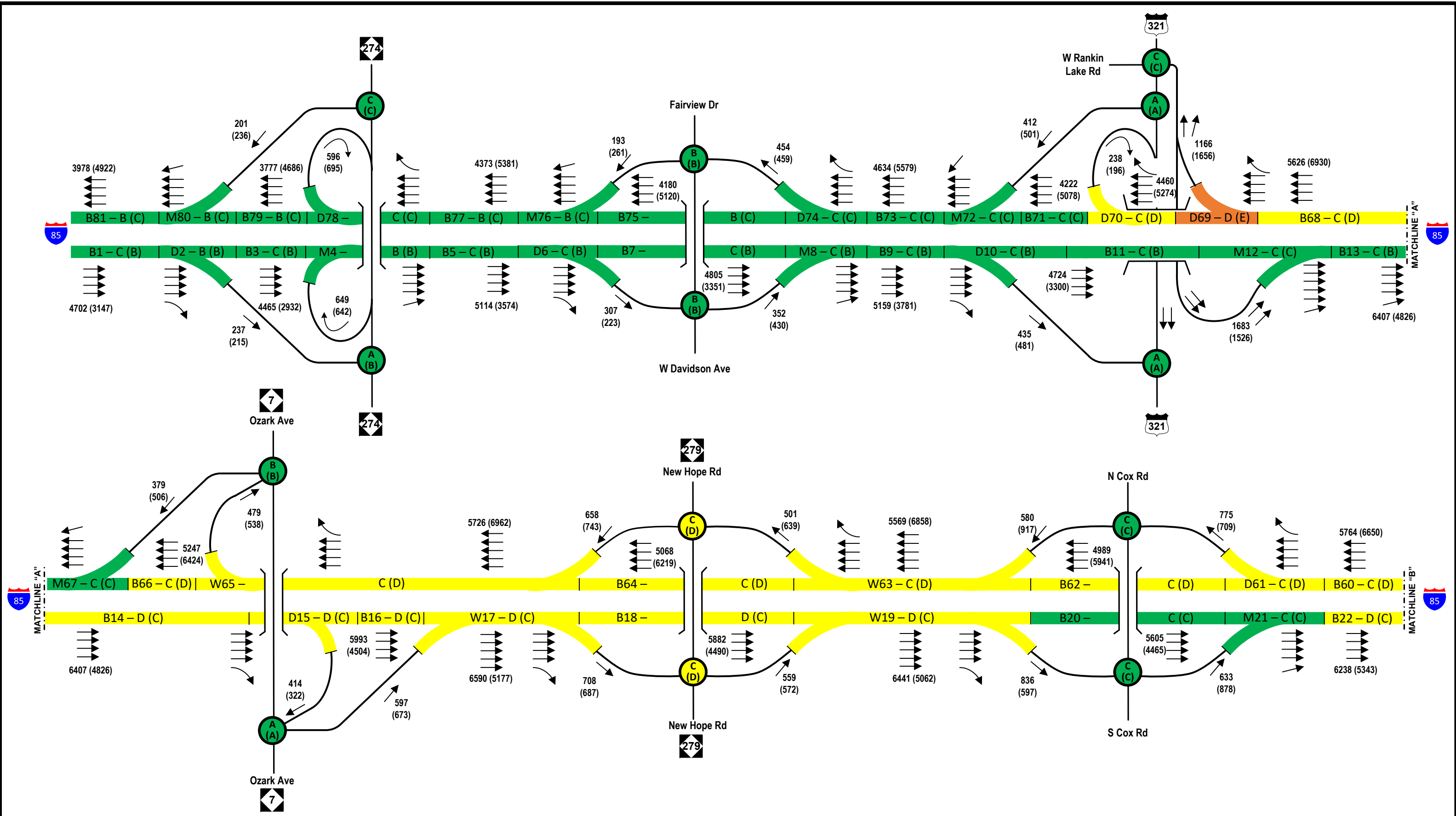
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2045 BUILD FREEWAY LANEAGE, FREEVAL SEGMENT ID & LENGTH	
DATE	October 2021
FIGURE 4.2	



LEGEND

— Roadway

→ Vehicular Movement

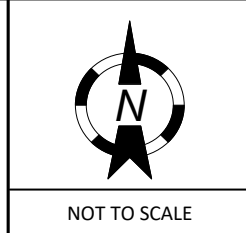
XXX - X(X) Freeway Segment ID - AM (PM) LOS

(X) AM (PM) Peak Hour Signalized Intersection LOS

(X) AM (PM) Peak Hour Roundabout LOS


Color Corresponds to Worst-Case Peak Hour Intersection Level of Service

- Green - LOS A - C
- Yellow - LOS D
- Orange - LOS E
- Red - LOS F



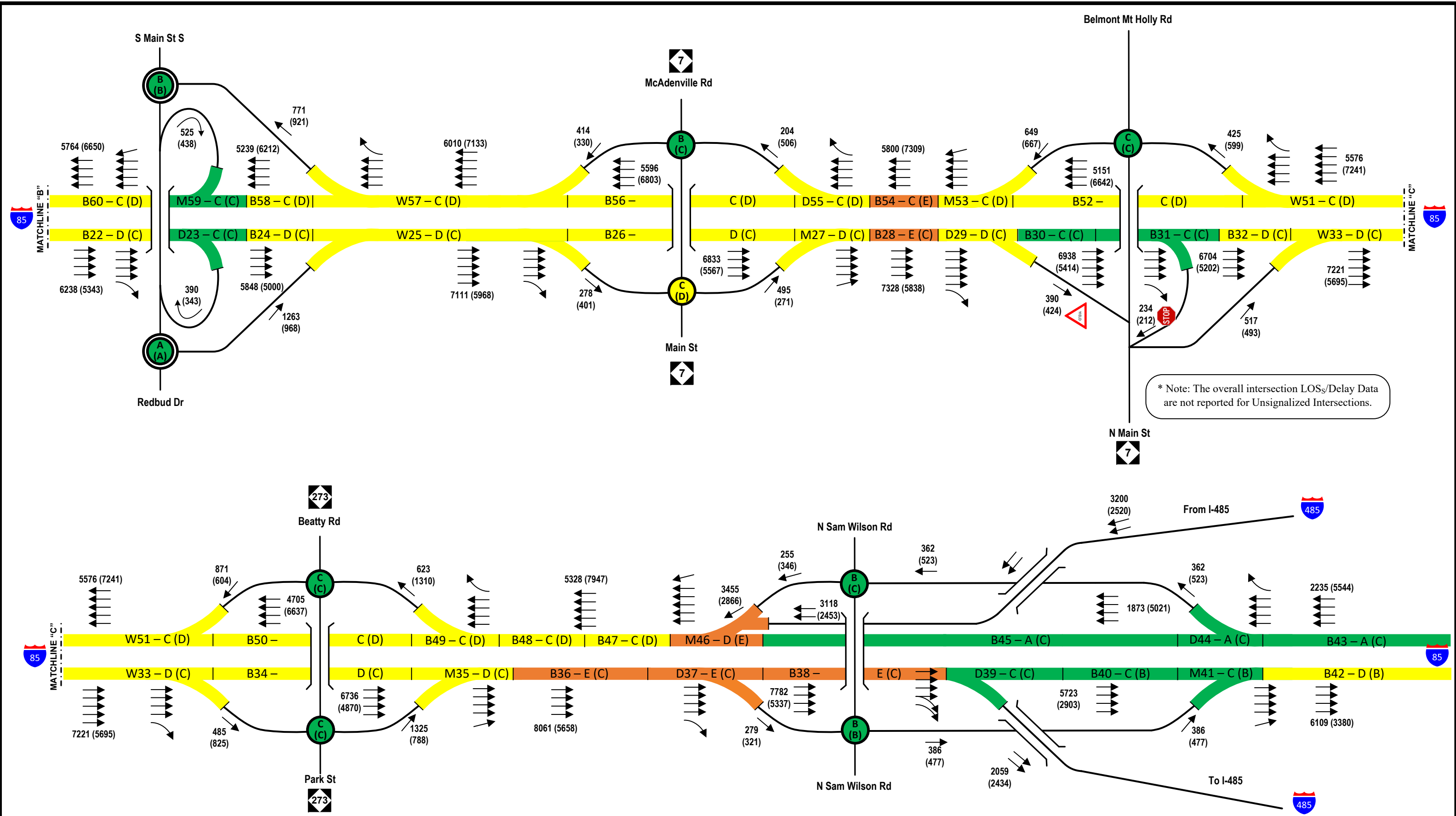
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2045 BUILD FREEWAY PEAK HOUR VOLUMES, FREEVAL SEGMENT ID & LOS	
DATE	October 2021
FIGURE 5.1	



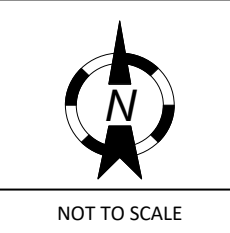
* Note: The overall intersection LOS_s/Delay Data are not reported for Unsignalized Intersections.

LEGEND

- Roadway
- Vehicular Movement
- XXX - X(X) Freeway Segment ID - AM (PM) LOS
- (X) AM (PM) Peak Hour Signalized Intersection LOS
- (X) AM (PM) Peak Hour Roundabout LOS

Color Corresponds to Worst-Case Peak Hour Intersection Level of Service *

- Green - LOS A - C
- Yellow - LOS D
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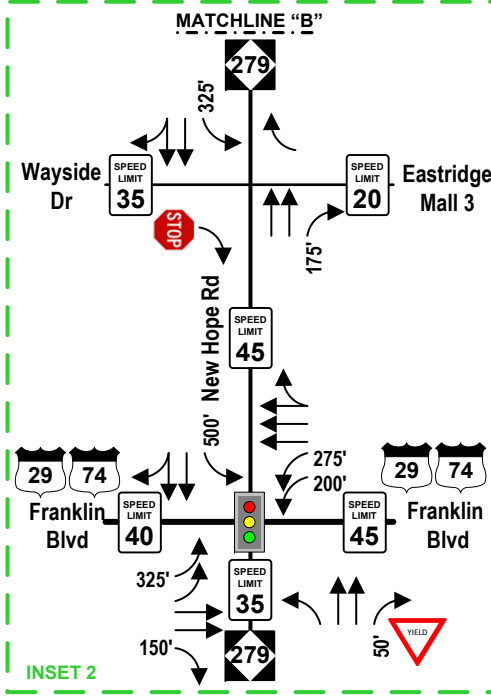
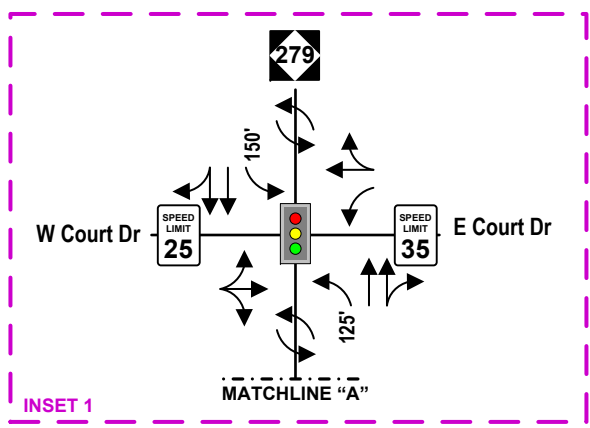
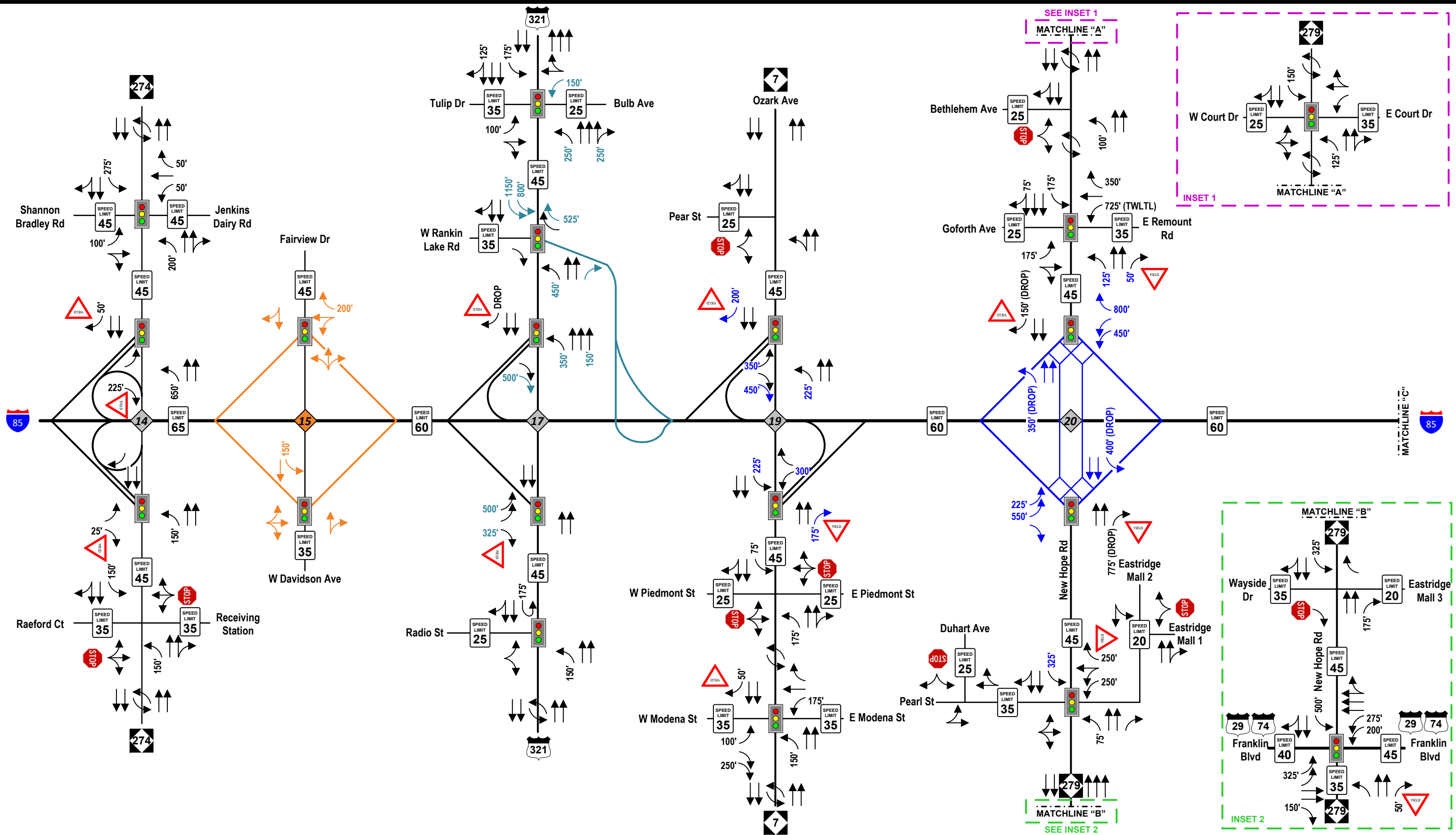
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2045 BUILD FREEWAY PEAK HOUR VOLUMES, FREEVAL SEGMENT ID & LOS	
DATE	October 2021
FIGURE 5.2	



LEGEND

- Existing Laneage
- I-5719 Proposed Laneage
- STIP Project I-5000 Improvements
- MTP Project HPR9 Improvements

TWLTL = Two-Way Left Turn Lane

XXX' Storage Bay Length

Roadway

Existing Posted Speed 30

Interchange Exit

Traffic Control

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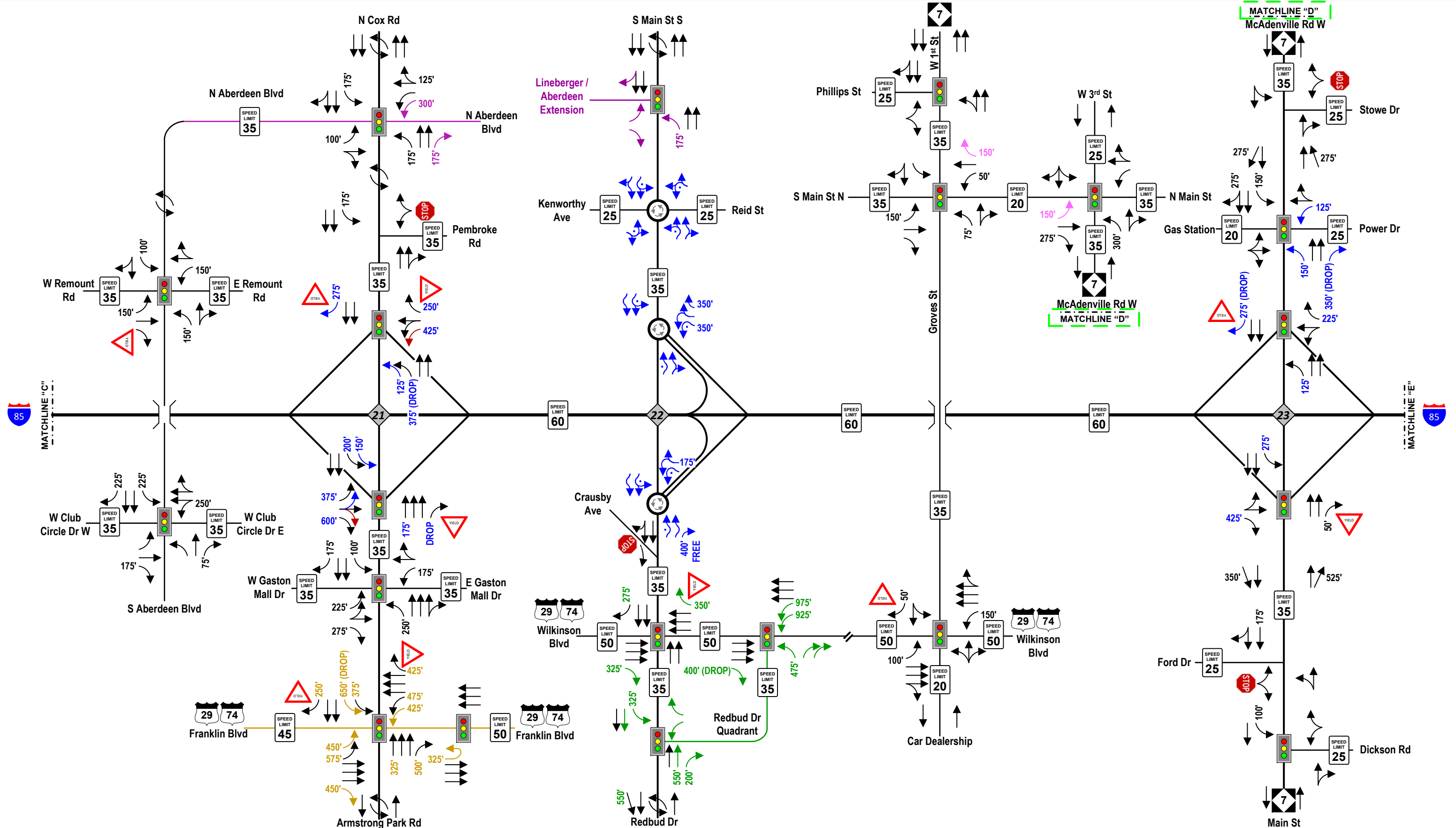
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**2045 BUILD (PROPOSED)
INTERSECTION LANEAGE -
TRANSMODLER**

DATE
October 2021

FIGURE 6.1

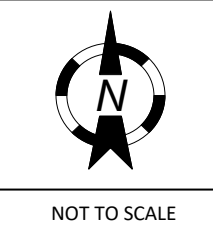


LEGEND

- Existing Laneage
- I-5719 Proposed Laneage
- STIP Project I-5713 Improvements
- STIP Project U-6141 Improvements
- Other Project Improvements
- MTP Project HPD23 Improvements
- STIP Project U-6044 Improvements

TWLT = Two-Way Left Turn Lane
 XXX' Storage Bay Length
 Roadway

Existing Posted Speed
 Interchange Exit
 Traffic Control



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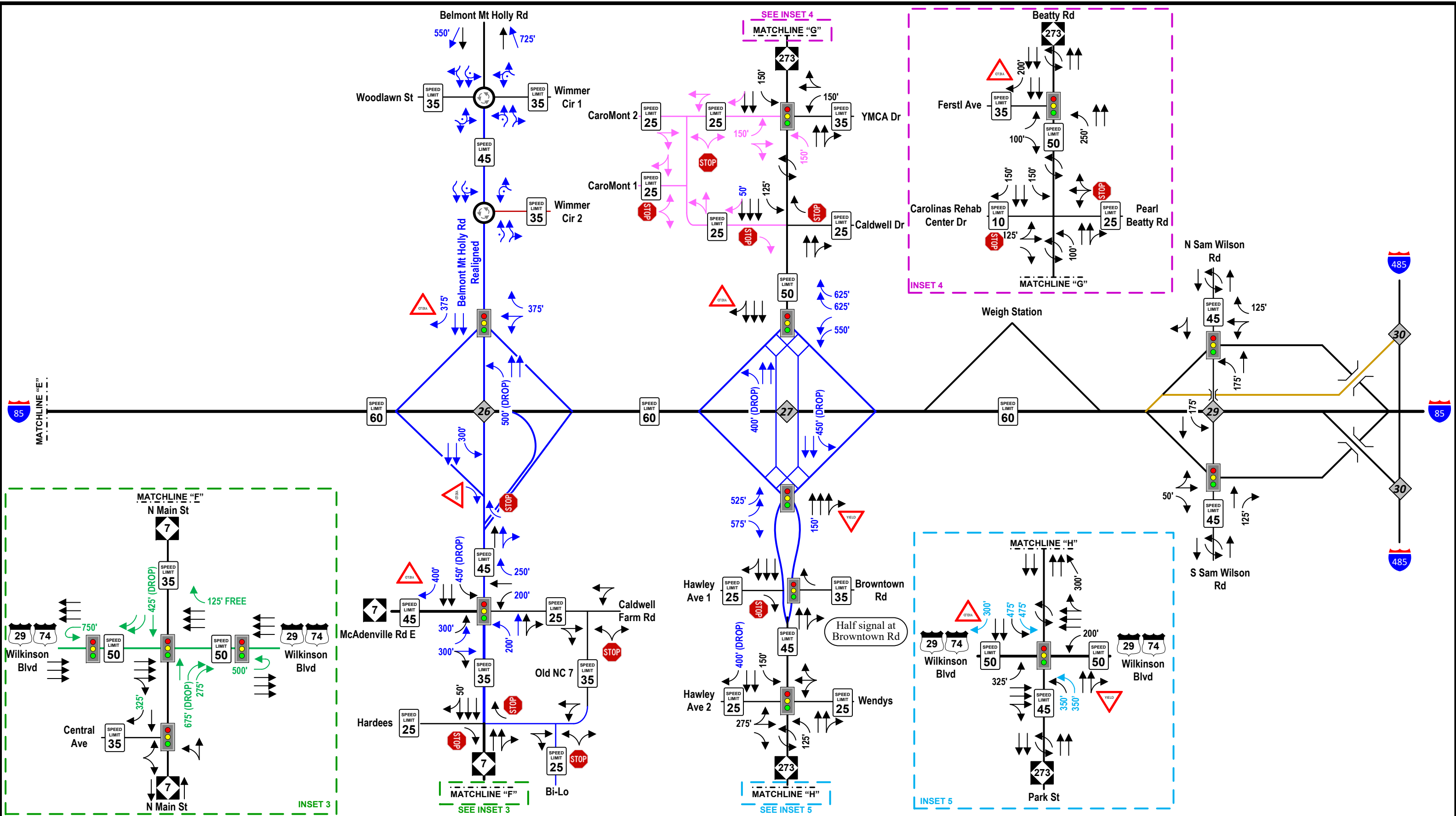


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**2045 BUILD (PROPOSED)
 INTERSECTION LANEAGE -
 TRANSMODELER**

DATE
 October 2021

FIGURE 6.2



LEGEND

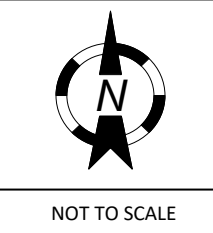
- Existing Laneage
- I-5719 Proposed Laneage
- STIP Project U-5800 Improvements
- STIP Project U-5959 Improvements
- STIP Project U-6016 Improvements
- WBS 47859 Project Improvements
- Other Project Improvements

TWLTL = Two-Way Left Turn Lane

XXX' Storage Bay Length

Roadway

Existing Posted Speed
 Interchange Exit
 Traffic Control



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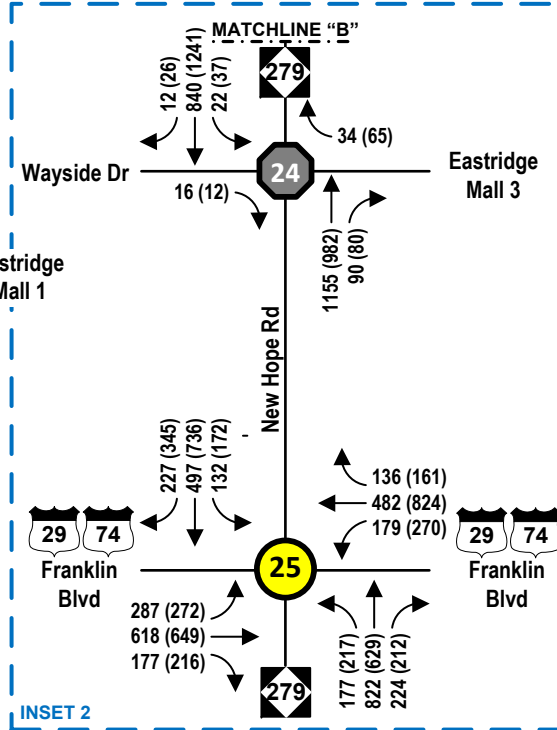
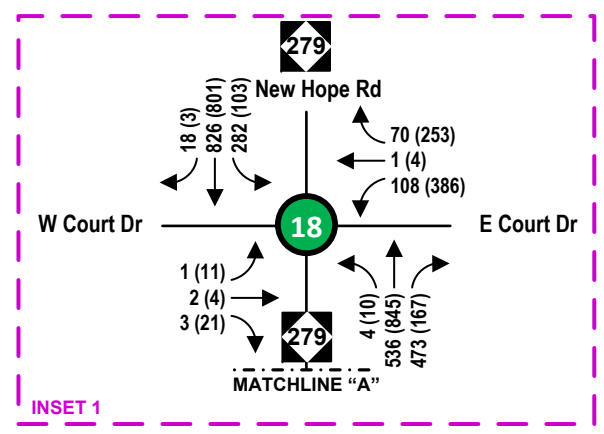
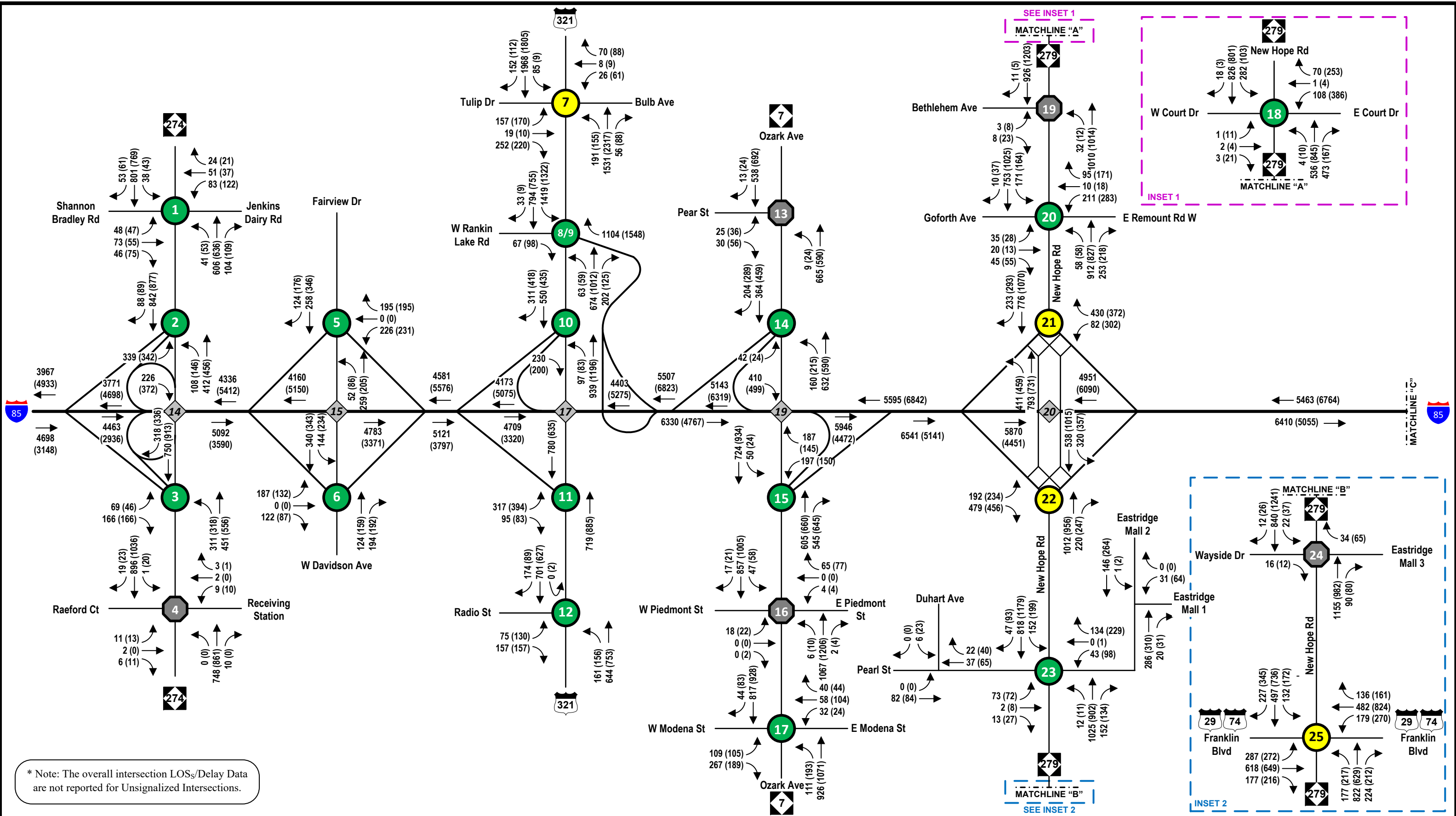
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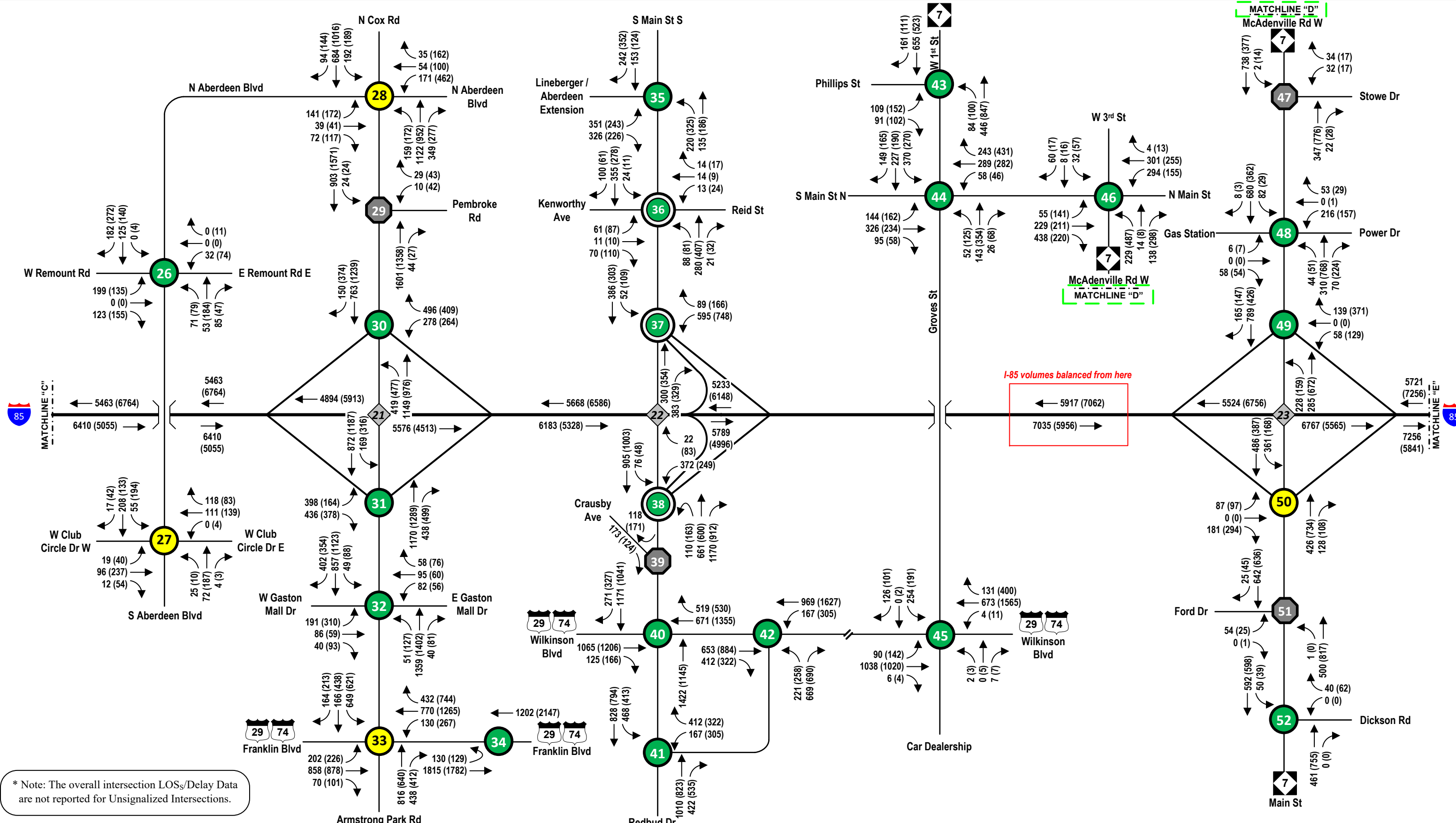
**2045 BUILD (PROPOSED)
INTERSECTION LANEAGE -
TRANSMODELER**

DATE
October 2021

FIGURE 6.3



LEGEND → Vehicular Movement — Roadway # Interchange Exit # Signalized Intersection ID # Roundabout ID # Unsignalized Intersection ID #### (####) AM (PM) Peak Hour Traffic Volumes	Color Corresponds to Worst-Case Peak Hour Intersection Level of Service * - LOS A - C - LOS D - LOS E - LOS F	 NOT TO SCALE	PREPARED FOR North Carolina Department of Transportation	COUNTY Gaston DIVISION 12	STIP PROJECT NO. I-5719 WBS NO. 50135.1.FS1	2045 BUILD TRANSMODELER PEAK HOUR TRAFFIC VOLUMES AND LOS DATE October 2021
			PREPARED BY HNTB North Carolina, P.C. 101 S. Tryon St Suite 3610 Charlotte, NC 28280	PROJECT DESCRIPTION I-85 Widening from US 321 to NC 273		



* Note: The overall intersection LOSs/Delay Data are not reported for Unsignalized Intersections.

LEGEND

- Vehicular Movement
- Roadway
- ## Interchange Exit
- # Signalized Intersection ID
- # Roundabout ID
- # Unsignalized Intersection ID

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- Green - LOS A - C
- Yellow - LOS D
- Orange - LOS E
- Red - LOS F

(####) AM (PM) Peak Hour Traffic Volumes

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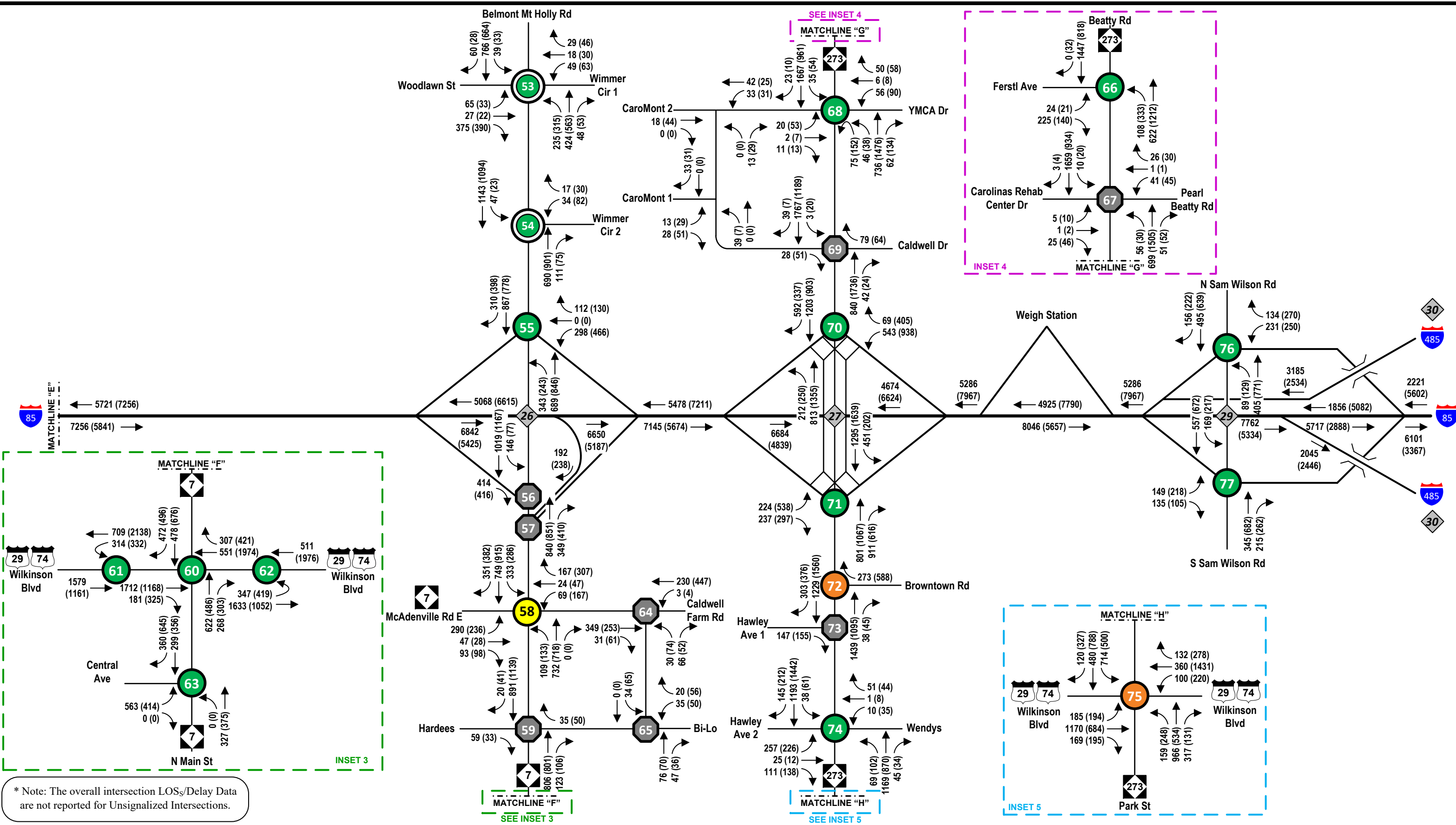
NOT TO SCALE

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**2045 BUILD TRANSMODELER
PEAK HOUR
TRAFFIC VOLUMES AND LOS**

DATE: October 2021

FIGURE 7.2



* Note: The overall intersection LOS/Delay Data are not reported for Unsignalized Intersections.

LEGEND

- Vehicular Movement
- Roadway
- ◆◆ Interchange Exit
- ⦿ Signalized Intersection ID
- ⦿ Roundabout ID
- ⦿ Unsignalized Intersection ID

(####) AM (PM) Peak Hour Traffic Volumes

Color Corresponds to Worst-Case Peak Hour Intersection Level of Service *

- Green - LOS A - C
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2045 BUILD TRANSMODELER PEAK HOUR TRAFFIC VOLUMES AND LOS

DATE: October 2021

FIGURE 7.3