Southern Arterial Preliminary Engineering and Operations Review (PEOR) Traffic Analysis

Brown County, Wisconsin

Updated May 11, 2018

SRF Consulting Group, Inc.
Engineers
Planners
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1 Introduction

Brown County, Wisconsin, in conjunction with the Wisconsin Department of Transportation (WisDOT) and the Federal Highway Administration (FHWA), is studying the feasibility and benefits of providing a new arterial street system in the southern portion of the Green Bay metropolitan area. This new arterial street system would consist of improving several existing corridors as well as creating a new "Southern Arterial" that would provide a new Fox River bridge crossing and the potential for access to the Interstate Highway 41 (I-41) freeway corridor. The Environmental Impact Statement (EIS) for this project is under development and will evaluate feasible alternatives. Brown County will follow a tiered environmental assessment process for this project. Some of the alternatives being evaluated include a full-service interchange of the "Southern Arterial" with I-41. For this alternative to occur, an Interstate Access Justification Report (IAJR) is required to determine that a new access point along I-41 will not be detrimental to freeway operations and to identify potential issues and mitigation strategies that would be needed for each alternative. The IAJR will be completed under the Tier 2 studies. A Preliminary Engineering and Operations Review (PEOR) is required under the Tier 1 studies. This report contains the results of the traffic analysis required as part of the PEOR. A separate technical memorandum contains the conceptual interchange layouts for the PEOR.

The purpose of this Southern Arterial PEOR is to evaluate four Southern Arterial Build alternatives and determine their service impacts on the adjacent roadway network and on freeway operations. The study investigates existing-year (Year 2012) and Year 2045 No Build and Build conditions along I-41 and several interchanges in the study area to assess the traffic operational impacts of each alternative. **Figure 1.1** illustrates the location of the Southern Arterial PEOR study area.



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Project Study Area

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin

Figure 1.1

2 Background

Study Area

The modeling limits for this analysis were developed to understand traffic impacts one interchange upstream and downstream from the impacted area and to evaluate traffic operations along the arterials one intersection adjacent to the interchange ramps. The modeling limits for this project are as follows:

- I-41 from south of the County S interchange to north of the County G and WIS 32 (Ashland Avenue) interchanges
- County S from Mid Valley Road to French Road (including the I-41 interchange ramps)
- County F from Packerland Avenue to Lawrence Drive (including the I-41 interchange ramps)
- County G from Spirit Way to Lawrence Drive (including the I-41 interchange ramps)

Roadway Characteristics

Interstate Highway 41 (I-41) is generally a north-south freeway traversing the study area. I-41 serves as a vital freeway link in the State of Wisconsin highway system as it connects the Milwaukee metropolitan area to the Fox Valley and Green Bay metropolitan areas. Within the study area, I-41 transitions from a four-lane, rural cross-section freeway to a six-lane, urban cross-section freeway. This transition takes place at Quarry Park Drive, just south of the County F interchange, with the urban cross-section beginning north of Quarry Park Drive. I-41 has a posted speed limit of 70 miles per hour within the study area.

Brown County Trunk Highway "F" (County F), also known as Scheuring Road, varies between two- and four-lanes. Scheuring Road is an east-west roadway that has a full-service interchange with I-41. West of I-41, County F is functionally classified as a collector roadway; east of I-41, County F is classified as a minor arterial. A single-lane roundabout is provided at the intersection of County F with Mid Valley Drive, while multiple-lane roundabouts are provided at the intersection of County F with the I-41 interchange ramps and Lawrence Drive. At its intersection with Packerland Drive, the County F roadway designation shifts from Scheuring Road (east approach) to Williams Grant Drive (south approach). All movements from County F at the Packerland Drive intersection operate under stop-sign control. County F has a posted speed limit of 45 miles per hour.

Brown County Trunk Highway "G" (County G), also known as Main Avenue, is generally a four-lane, east-west roadway that has a full-service interchange with I-41. West of I-41, County G is functionally classified as a minor arterial; east of I-41, County G is classified as a principal arterial. Multiple-lane roundabouts are provided at the intersections of County G with the I-41 interchange ramps. Exclusive turn lanes and traffic signal control are provided at the intersection of County G with Lawrence Drive. No exclusive turning lanes are provided at the unsignalized intersection of County G with Spirit Way. County G has a posted speed limit of 35 miles per hour west of I-41 and a posted speed limit of 25 miles per hour east of I-41.

Brown County Trunk Highway "S" (County S), also known as Freedom Road, is a two-lane, east-west roadway that has a full-service interchange with I-41. County S comprises the west approach with I-41 and terminates at I-41; the east approach is known as Lawrence Drive. County S is functionally

classified as a collector roadway. Exclusive turn lanes are provided on County S at the unsignalized intersections with Mid Valley Drive, the I-41 interchange ramps, and French Road. County S has a posted speed limit of 55 miles per hour west of Mid Valley Drive and a posted speed limit of 45 miles per hour east of Mid Valley Drive.

Ashland Avenue is a four-lane, north-south principal arterial that has a partial interchange with I-41. Access to Ashland Avenue from I-41 is provided via a free-flow northbound exit ramp and a free-flow southbound entrance ramp. The Ashland Avenue interchange serves as a spur ramp for access to and from Wisconsin State Trunk Highway 32 (WIS 32). While "WIS 32" is not designated on guide signs for the Ashland Avenue interchange, Ashland Avenue and WIS 32 run concurrently after the I-41 interchange ramps via a roundabout intersection with WIS 32 / 8th Street. Ashland Avenue has a posted speed limit of 45 miles per hour.

Lawrence Drive is a north-south roadway that parallels I-41 along its east side. From its southern terminus at County S to Fortune Avenue, Lawrence Drive provides a two-lane cross-section; north of Fortune Avenue to its northern terminus at County G, the roadway widens to provide a four-lane cross-section. At its signalized intersection with County G, the north approach of the intersection is an access drive to a McDonalds restaurant. Lawrence Drive is functionally classified as a collector roadway from County S to Southbridge Road (where the new Southern Arterial would cross Lawrence Drive) and as a minor arterial from Southbridge Road to County G. Lawrence Drive has a posted speed limit of 45 miles per hour east of I-41 (at County S), and a posted speed limit of 35 miles per hour at the County F and County G intersections.

3 Methodology

The following steps were completed to provide a comprehensive traffic operations assessment within the study area:

1. Data Collection – A site review of the study area was performed to ascertain existing roadway and operational characteristics. Intersection turning movement counts and roadway coverage counts were collected by Brown County staff and used to evaluate existing-year conditions.

2. Southern Arterial Alternatives – Alternatives for the proposed Southern Arterial roadway system, as provided by Brown County were reviewed to understand their potential impacts to the existing roadway network. The alternatives were then added to the NE Regional Brown County travel demand model (TDM) to obtain future-year (Year 2045) traffic data for further detailed traffic operations analysis.

3. Traffic Operations Analysis – Coverage count and intersection turning movement count data was analyzed for existing-year conditions, and used to calibrate and validate the Paramics software-based microsimulation traffic operation models. Year 2045 forecasted volumes for No Build and Build scenarios were analyzed to evaluate further anticipated impacts of the Southern Arterial alternatives on the study area roadway network. The 2045 No Build alternative provided the baseline for the comparison to each build alternative.

4. Peer Review – A detailed peer review was conducted by the WisDOT Bureau of Traffic Operations (BTO) and their Consultant on the Existing Conditions Paramics model calibration/validation, the No Build models and for each of the Build Alternative models to evaluate the Paramics modeling procedures and results. WisDOT approved the Paramics models and procedures.

5. Findings – Study findings were based on the traffic operations analysis results which summarize the operational impacts of the proposed Southern Arterial alternatives on the adjacent roadway network.

4 Data Collection

4.1 Intersection Turning Movement Counts

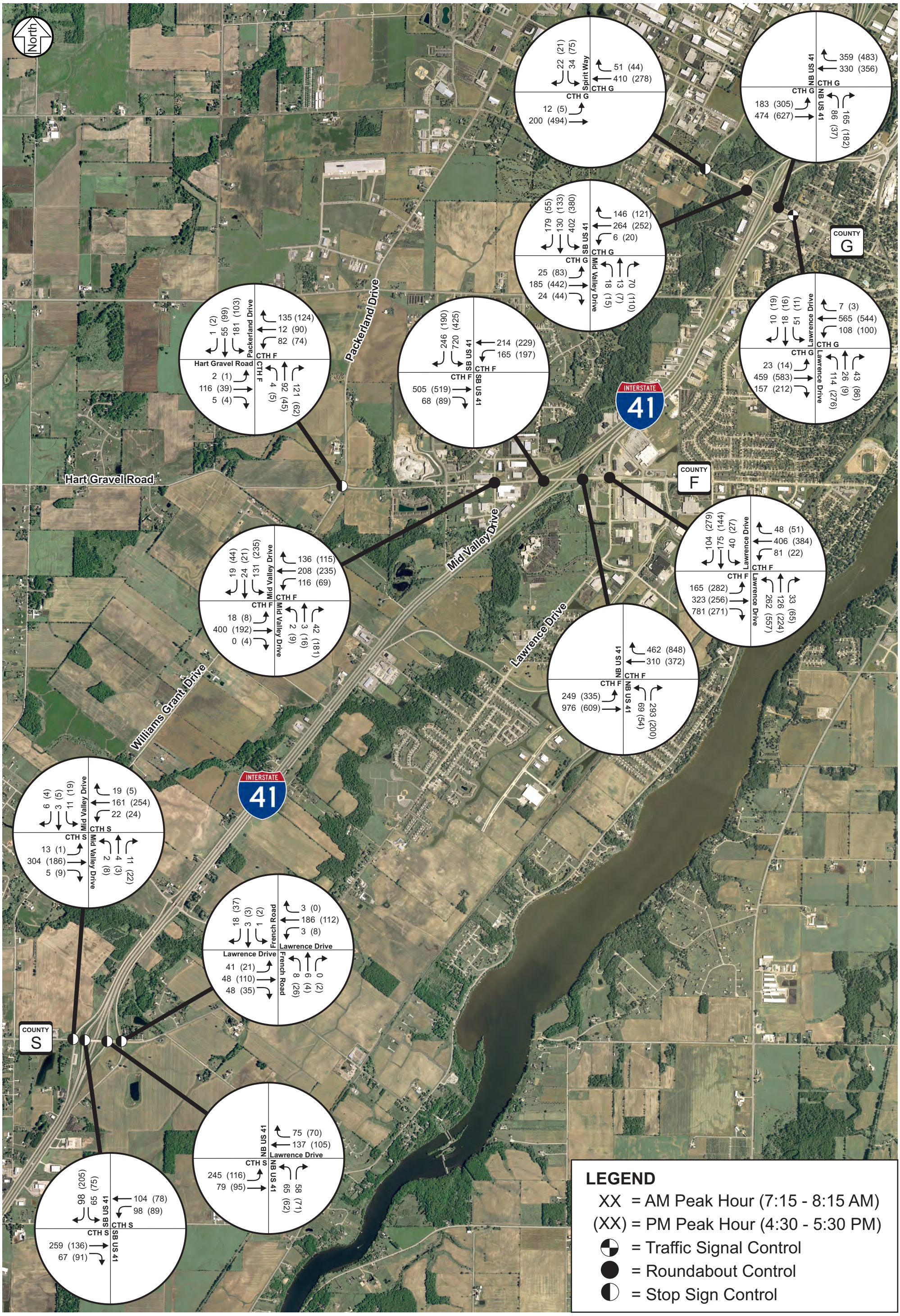
Intersection turning movement counts were collected by Brown County staff at intersections throughout the study area. These counts were used in evaluating existing conditions as well as in providing a base from which future traffic conditions could be compared. Intersection turning movement counts were performed in December 2012 and January 2013 during the traditional weekday morning (7:00 to 9:00 A.M.) and evening (4:00 to 6:00 P.M.) peak periods. The following intersections were counted as part of this study.

- County S with Mid Valley Drive
- County S with I-41 southbound interchange ramps
- County S with I-41 northbound interchange ramps
- Lawrence Drive with French Road
- County F with Packerland Drive / Hart Gravel Road
- County F with Mid Valley Drive
- County F with I-41 southbound interchange ramps
- County F with I-41 northbound interchange ramps
- County F with Lawrence Drive
- County G with Spirit Way
- County G with I-41 southbound interchange ramps
- County G with I-41 northbound interchange ramps
- County G with Lawrence Drive

From the intersection turning movement counts, the weekday morning peak hour for the study area was found to occur from 7:15 to 8:15 A.M. and the weekday evening peak hour was found to occur from 4:30 to 5:30 P.M. Due to the difference in collection dates between the freeway mainline, ramps and the intersection turning movement counts, small adjustments were made to normalize the data and create a balanced roadway network traffic assignment. The existing intersection peak hour volumes are illustrated in **Figure 4.1** while the collected data from the intersection turning movement counts can be found in **Appendix A**.

4.2 Roadway Coverage Counts

In addition to intersection turning movement counts, hourly coverage counts were also collected to better understand the traffic characteristics of roadway segments, particularly on I-41. Roadway coverage counts along the I-41 mainline were obtained from WisDOT traffic data maps for July and August 2012. Creating a balanced traffic volume roadway network is important in the creation of the origin-destination (O-D) trip tables required for use in the Paramics (Quadstone Paramics Version 6.9.3) traffic microsimulation analysis program. **Figure 4.2** illustrates the existing coverage counts.



Year 2012 Peak Hour Traffic Volumes, Intersections

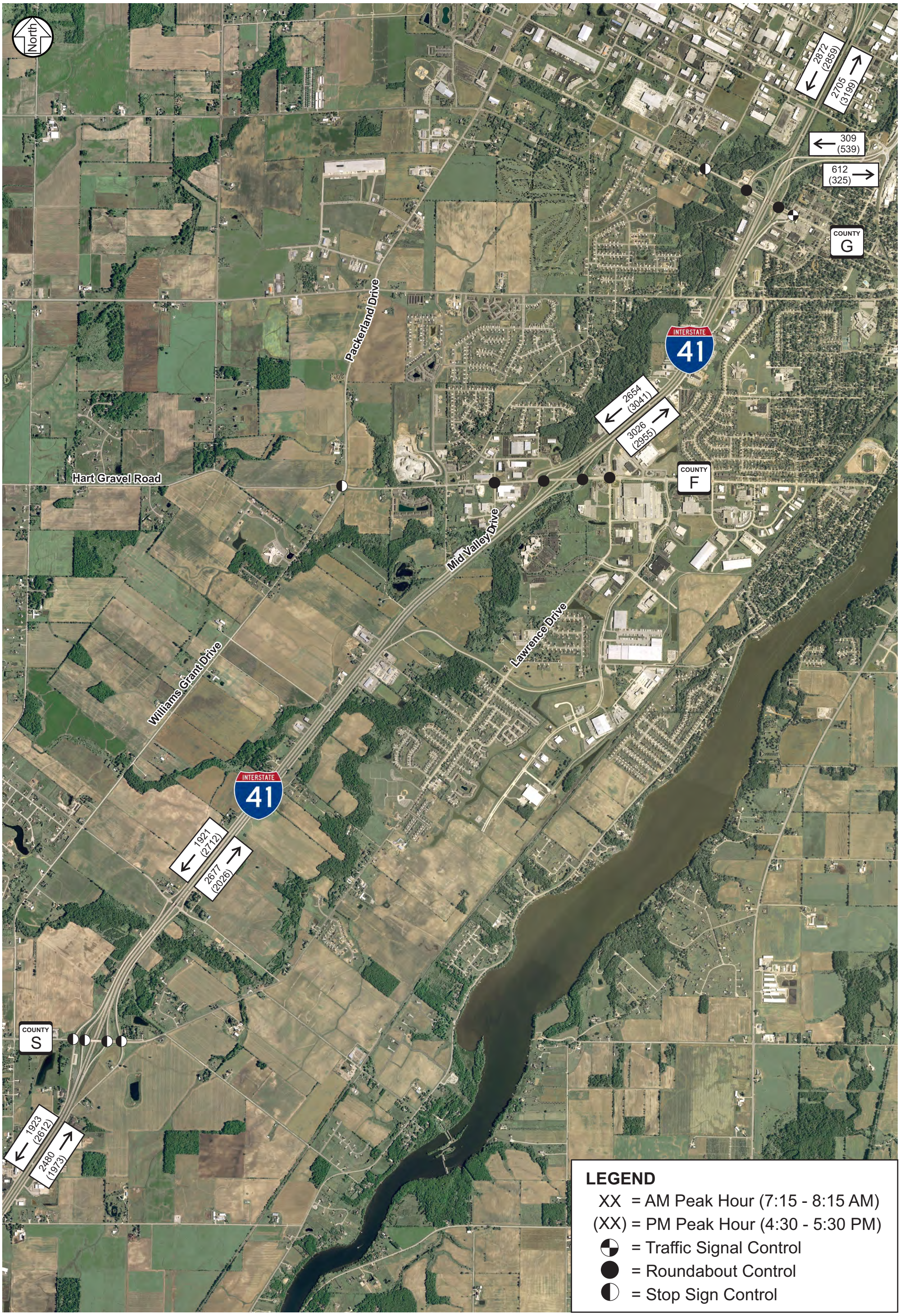
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Figure 4.1

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Year 2012 Peak Hour Traffic Volumes, Freeway Mainline

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Figure 4.2

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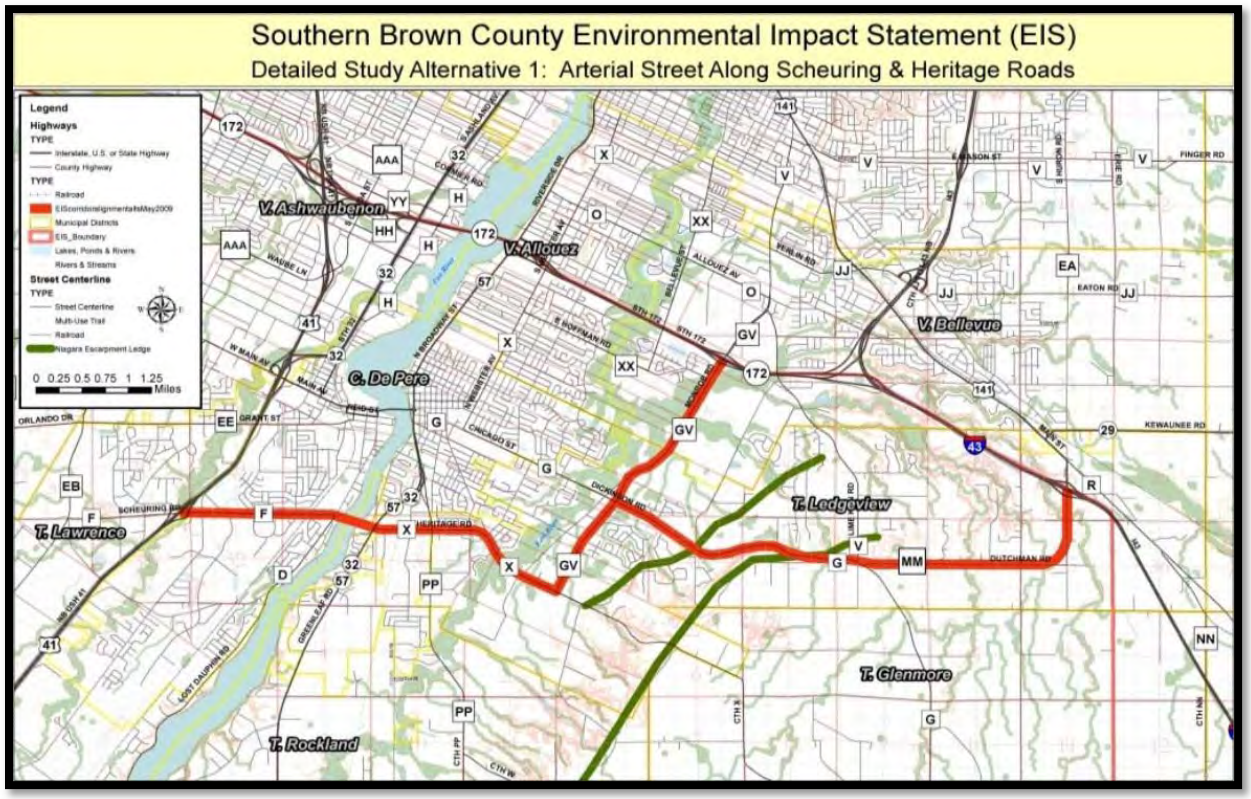
5 Southern Arterial Alternatives

The second part of the Southern Arterial PEOR Traffic Analysis report focused on reviewing the various alternative concepts for the Southern Arterial roadway system to understand their impacts to the adjacent roadway network. The 2012 report titled *"Transportation Improvements in the Southern Portion of the Green Bay Metropolitan Area, Draft Environmental Impact Statement (Project ID 4556-02-00)"* prepared by Brown County Planning Department introduced many alternatives for consideration. However, the analysis performed for that study identified four potential alternatives for further study and consideration. Each alternative is described below.

5.1 Alternative 1: Scheuring Road River Crossing

This alternative consists of extending Scheuring Road (County F) easterly, beyond its terminus at Brown County Trunk Highway "D" (also known as Lost Dauphin Road) and connects with Heritage Road at Wisconsin State Trunk Highways 32 and 57 (also known as Greenleaf Road). This easterly extension would require a new structure over the Fox River to complete the connection between Scheuring Road and Heritage Road. No new access to I-41 would be provided under this alternative. **Figure 5.1** illustrates this alternative.

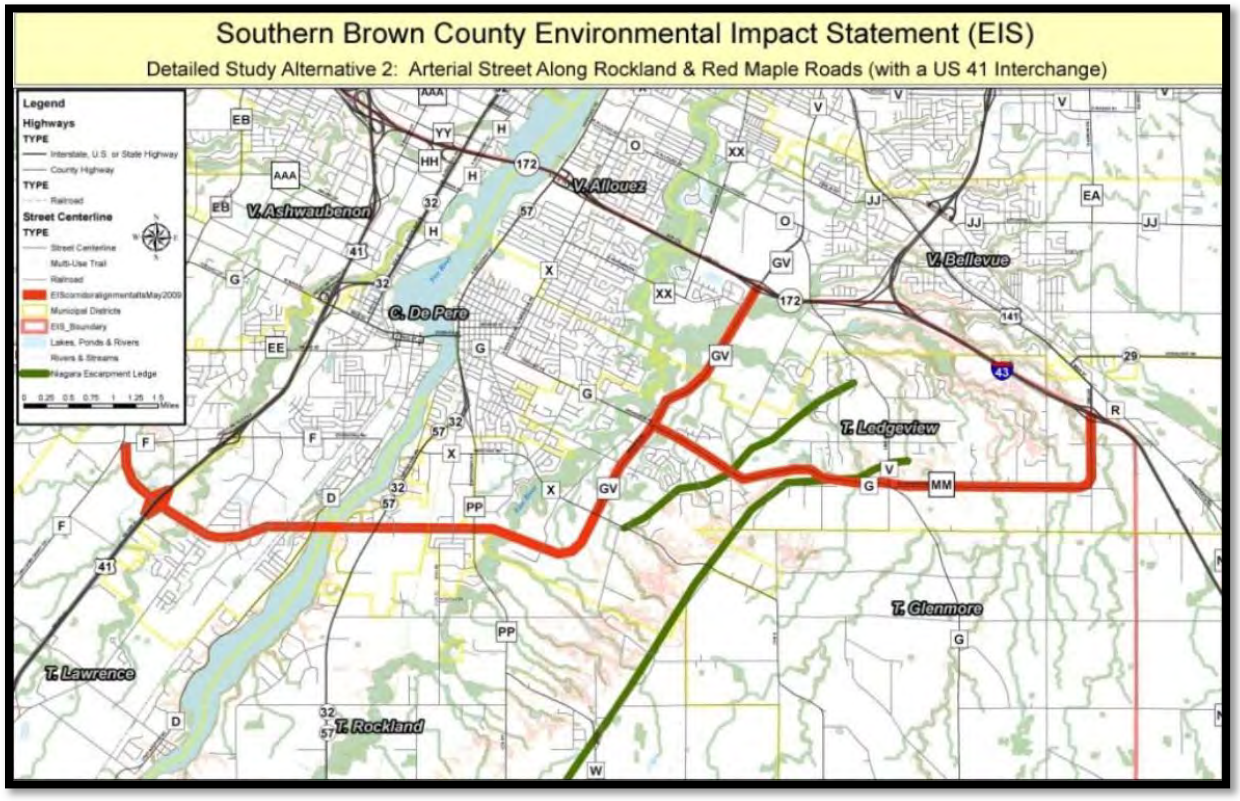
Figure 5.1: Alternative 1: Scheuring Road River Crossing



5.2 Alternative 2A: Southern Arterial with I-41 Diamond Interchange

This alternative consists of creating a new roadway (Southern Arterial) that would begin at the intersection of County F with Packerland Avenue and extend southeasterly, over I-41, and follow the Southbridge Road and Red Maple Road alignments before crossing the Fox River via a new structure. East of the Fox River the alignment will generally follow Rockland Road, including a new roadway on new alignment connecting Rockland Road directly to Monroe Road at Heritage Road. Access to and from I-41 via the proposed Southern Arterial would be provided by a new full access interchange located approximately three-quarters of a mile south of the existing Scheuring Road interchange. Access to and from Mid Valley Road is not maintained between the proposed Southern Arterial and Scheuring Road is eliminated due to a proposed new development along the potential realignment of Mid Valley Road. To accommodate the Southern Arterial at the County F / Packerland Avenue intersection, the existing south approach Williams Grant Drive would be realigned to intersect directly with the proposed Southern Arterial south of the Packerland Avenue – Scheuring Road/Hart Gravel Road intersection. **Figure 5.2** illustrates this alternative.

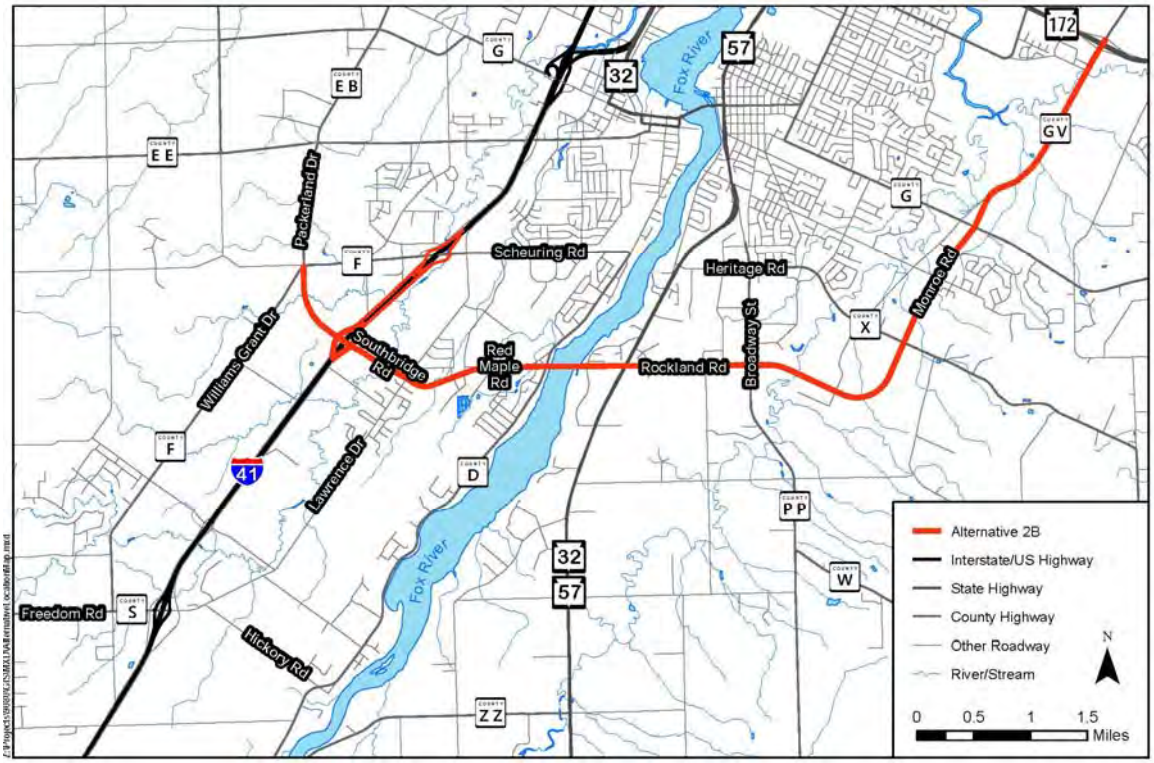
Figure 5.2: Alternative 2A: Southern Arterial Diamond Interchange with I-41



5.3 Alternative 2B: Southern Arterial with I-41 C-D Interchange

This alternative is similar to Alternative 2A, in that it creates a new roadway (Southern Arterial) that begins at the intersection of County F with Packerland Avenue and extends southeasterly, over I-41, follows the Southbridge Road and Red Maple Road alignments before crossing the Fox River via a new structure. The same new Southern Arterial alignment proposed for Alternative 2A would be constructed for this alternative. In addition, a collector-distributor (C-D) system would be constructed between the new I-41 interchange with the Southern Arterial and a reconfigured interchange at Scheuring Road and I-41. **Figure 5.3** illustrates this alternative.

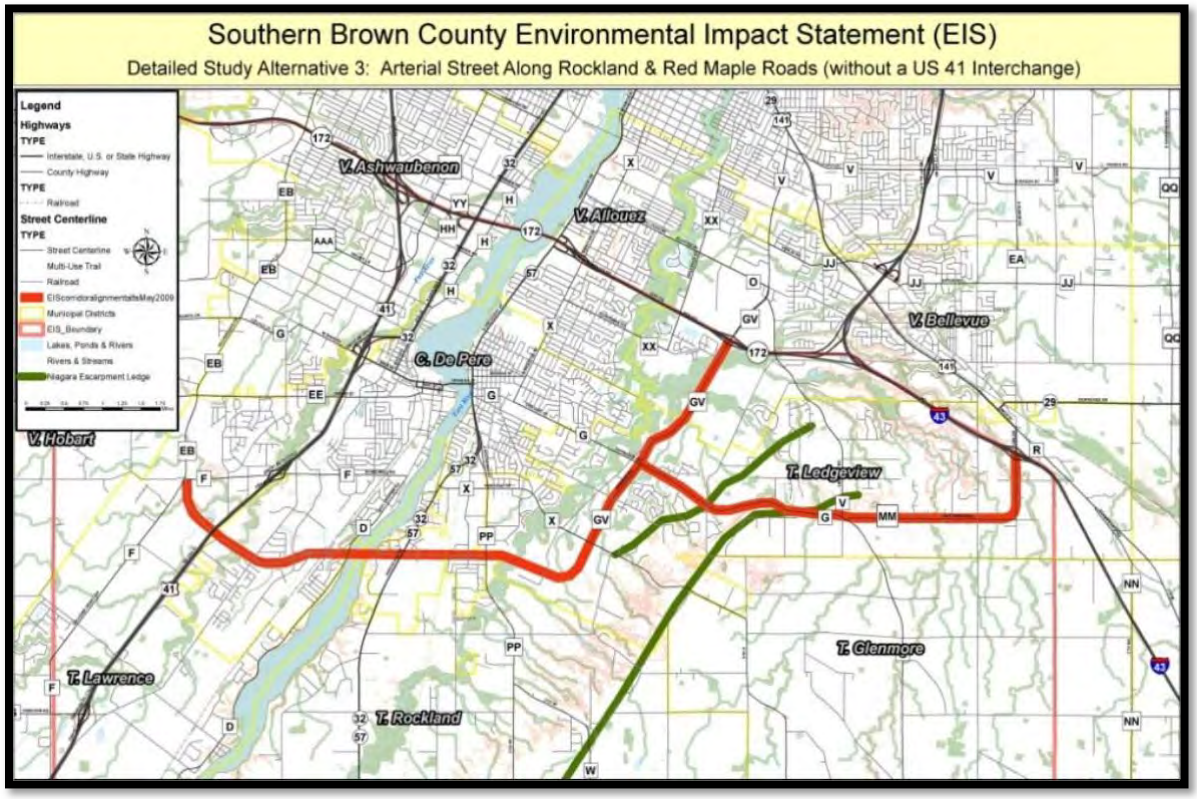
Figure 5.3: Alternative 2B: Southern Arterial C-D Road Interchange with I-41



5.4 Alternative 3: Southern Arterial with I-41 Overpass

This alternative, like Alternative 2A, will create a new roadway (Southern Arterial) that would begin at the intersection of County F with Packerland Avenue and extend southeasterly, over I-41, and follow the Southbridge Road and Red Maple Road alignments before crossing the Fox River via a new structure. Unlike Alternative 2A, access to and from I-41 would not be provided via the proposed Southern Arterial. **Figure 5.4** illustrates this alternative.

Figure 5.4: Alternative 3: Southern Arterial with I-41 Overpass



5.5 Year 2045 Traffic Forecasts

WisDOT's Northeast Region travel demand model was utilized for the development of Year 2045 traffic volumes within the study area. Year 2045 daily and intersection turning movement peak-hour forecasts for No Build and build alternatives used for this study were generated by SRF staff. The procedures and forecast results were summarized in a Technical Memorandum titled "Traffic Forecast Summary", September 30, 2016. The detailed project area forecasts are provided in **Appendix B**.

After WisDOT approval of the forecasts, Brown County staff advised the team that a new development would block the proposed re-alignment of Mid Valley Drive near the intersection of Quarry Park Drive and Mid Valley Drive. This conflict affects the forecasts prepared for Alternatives 2A (Diamond Interchange) and 2B (C-D Interchange) at the Southern Arterial interchange with I-41 because of the need to realign Mid Valley Drive south of Quarry Park Drive to the Southern Arterial (Southbridge Road).

The realigned Mid Valley Drive is no longer possible under Alternatives 2A and 2B so there will be no Mid Valley Drive connection between Scheuring Road (CTH F) and the proposed new Southern Arterial. A location map showing this discontinuity is shown in **Figure 5.5.** Mid Valley Drive can remain on its existing alignment under Alternatives 1 and 3 because there is no interchange with the Southern Arterial under these alternatives. Mid Valley Drive can be maintained south of the Southern Arterial to CTH S under all alternatives currently under consideration.

Figure 5.5: Roadway Configuration without Mid Valley Drive



The County F extension over the Fox River (Alternative 1) and the Southern Arterial corridor alternatives of a full interchange (Alternatives 2A and 2B) and a grade-separated overpass (Alternative 3) at I-41 were modeled to evaluate the impact of those alternatives. **Table 5.1** illustrates the existing and future average annual daily traffic volumes for I-41 and side-streets.

Table 5.1: Year 2045 Traffic Forecasts, Various Roadways

Roadway Segment	Existing AADT	Year 2045 AADT				
		No Build	Alternative 1	Alternative 2A	Alternative 2B	Alternative 3
I-41 Freeway Mainline						
South of County S	44,500	61,500	61,600	63,100	63,000	62,000
Between County S and County F	49,900	66,200	65,800	70,300	70,400	63,500
Between County F and County G	57,500	85,400	79,800	79,100	78,700	81,900
North of County G	59,300	90,200	90,100	87,200	88,200	90,600
Southern Arterial						
Between Lawrence and French Rd (east of I-41)	----	----	----	20,300	18,400	10,700
West of Mid Valley Drive (west of I-41)	----	----	----	15,400	14,100	6,500
Over Fox River	----	----	----	27,700	27,900	26,500
County S						
West of I-41	4,000	8,200	8,300	8,200	8,100	8,200
Scheuring Road (County F)						
West of I-41	10,900	21,600	23,000	17,500	18,500	20,500
East of I-41	19,500	26,100	29,200	21,400	21,500	25,500
East of Lawrence Drive	9,400	11,000	22,800	10,400	10,000	11,500
Over Fox River	----	----	34,100	----	----	
County G						
West of I-41	12,400	14,600	14,400	13,700	13,700	14,000
East of I-41	18,000	27,500	25,000	22,500	24,700	25,200
Ashland Avenue						
I-41 Interchange Ramps	6,400	9,700	9,400	9,800	9,500	9,400
AADT – Annual Average Daily Traffic in vehicles per day Source: Existing AADT – WisDOT Source: 2045 AADT - SRF						

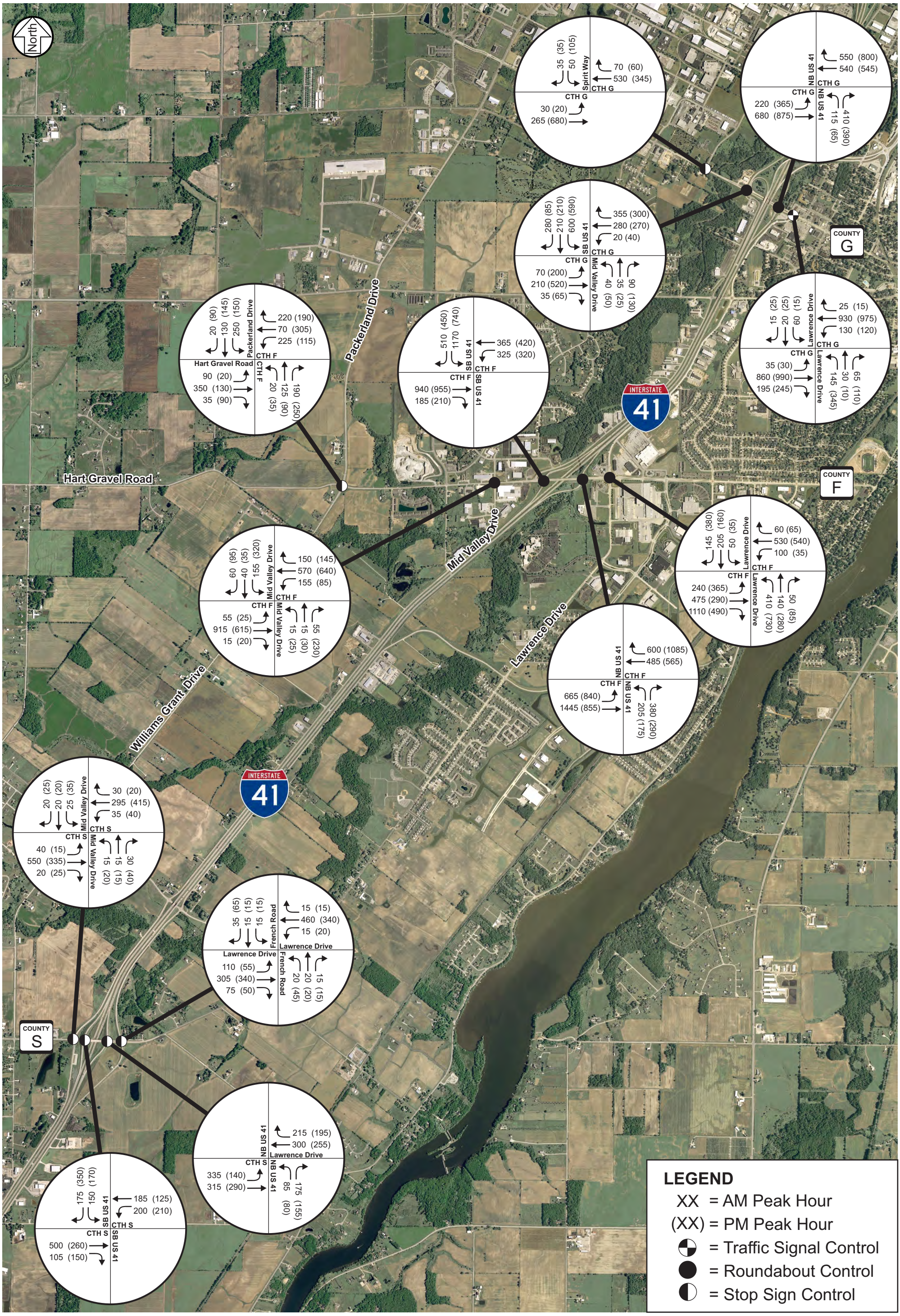
The daily traffic forecasts indicate that volumes along the I-41 freeway mainline segment south of County S will remain relatively consistent when comparing the future No Build volumes with each Build alternative. The largest volume differences between the No Build and the Build alternatives show up on I-41 between Scheuring Road and County G (3,500 to 6,700 vpd). The largest differences are under Alternatives 2A (6,300 vpd) and 2B (6,700 vpd), the Southern Arterial alternatives with an I-41 interchange. The smallest difference is under Alternative 3, the Southern Arterial with no I-41 interchange (3,500 vpd).

The largest differences in arterial daily volumes are:

- Southern Arterial (Lawrence Drive to French Road), between Alternative 3 (no I-41 interchange) and Alternatives 2A and 2B (with I-41 interchange) increases by approximately 8,500 vpd (11,000 versus 19,500 vpd).
- Scheuring Road, east of Lawrence Road between Alternative 1 and the other alternatives including the No Build decreases by approximately 12,000 vpd (23,000 versus 11,000 vpd).
- New Fox River bridge, between Alternative 1 and the other alternatives decreases by approximately 7,000 vpd (34,000 versus 27,000 vpd).

In addition to daily traffic forecasts, SRF developed year 2045 weekday morning and evening peak-hour intersection turning movement forecasts for each alternative. As with the existing peak hour volumes, the forecasted peak hour volumes were adjusted to create a balanced traffic network for development of the origin-destination (O-D) trip tables to be used in the Paramics microsimulation network. The following figures illustrate the future-year traffic volumes:

- **Figure 5.6**: Year 2045, No Build Intersection Turning Movement Volumes
- **Figure 5.7**: Year 2045, No Build Freeway Mainline Volumes
- **Figure 5.8**: Year 2045, Alternative 1 Intersection Turning Movement Volumes
- **Figure 5.9**: Year 2045, Alternative 1 Freeway Mainline Volumes
- **Figure 5.10**: Year 2045, Alternative 2A Intersection Turning Movement Volumes
- **Figure 5.11**: Year 2045, Alternative 2A Freeway Mainline Volumes
- **Figure 5.12**: Year 2045, Alternative 2B Intersection Turning Movement Volumes
- **Figure 5.13**: Year 2045, Alternative 2B Freeway Mainline Volumes
- **Figure 5.14**: Year 2045, Alternative 3 Intersection Turning Movement Volumes
- **Figure 5.15**: Year 2045, Alternative 3 Freeway Mainline Volumes



Year 2045 (No-Build), Peak Hour Traffic Volumes, Intersections

Figure 5.6

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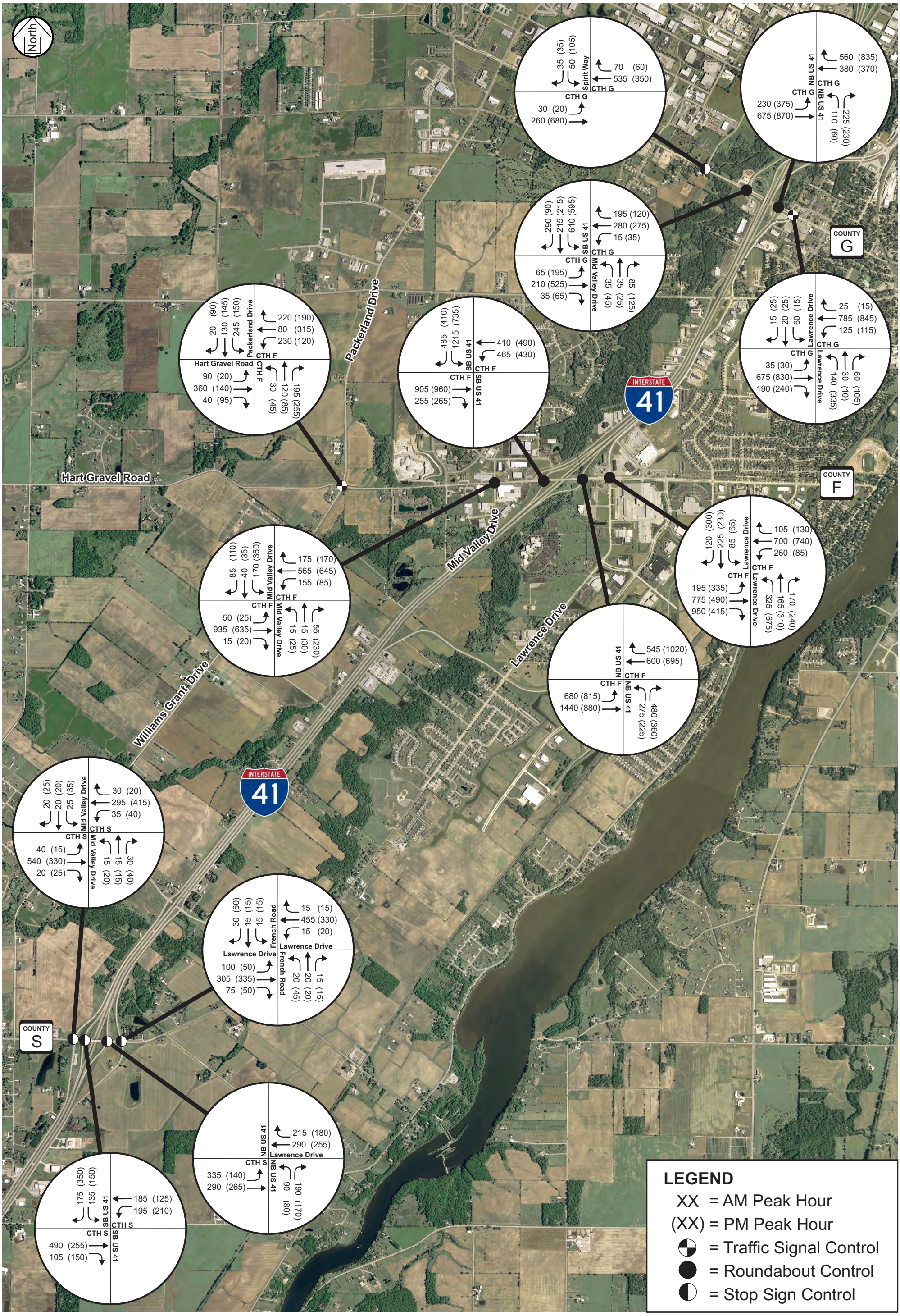
Year 2045 (No-Build), Peak Hour Traffic Volumes, Freeway Mainline

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Figure 5.7

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Year 2045 Build (Alternative 1) Peak Hour Traffic Volumes, Intersections

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Figure 5.8

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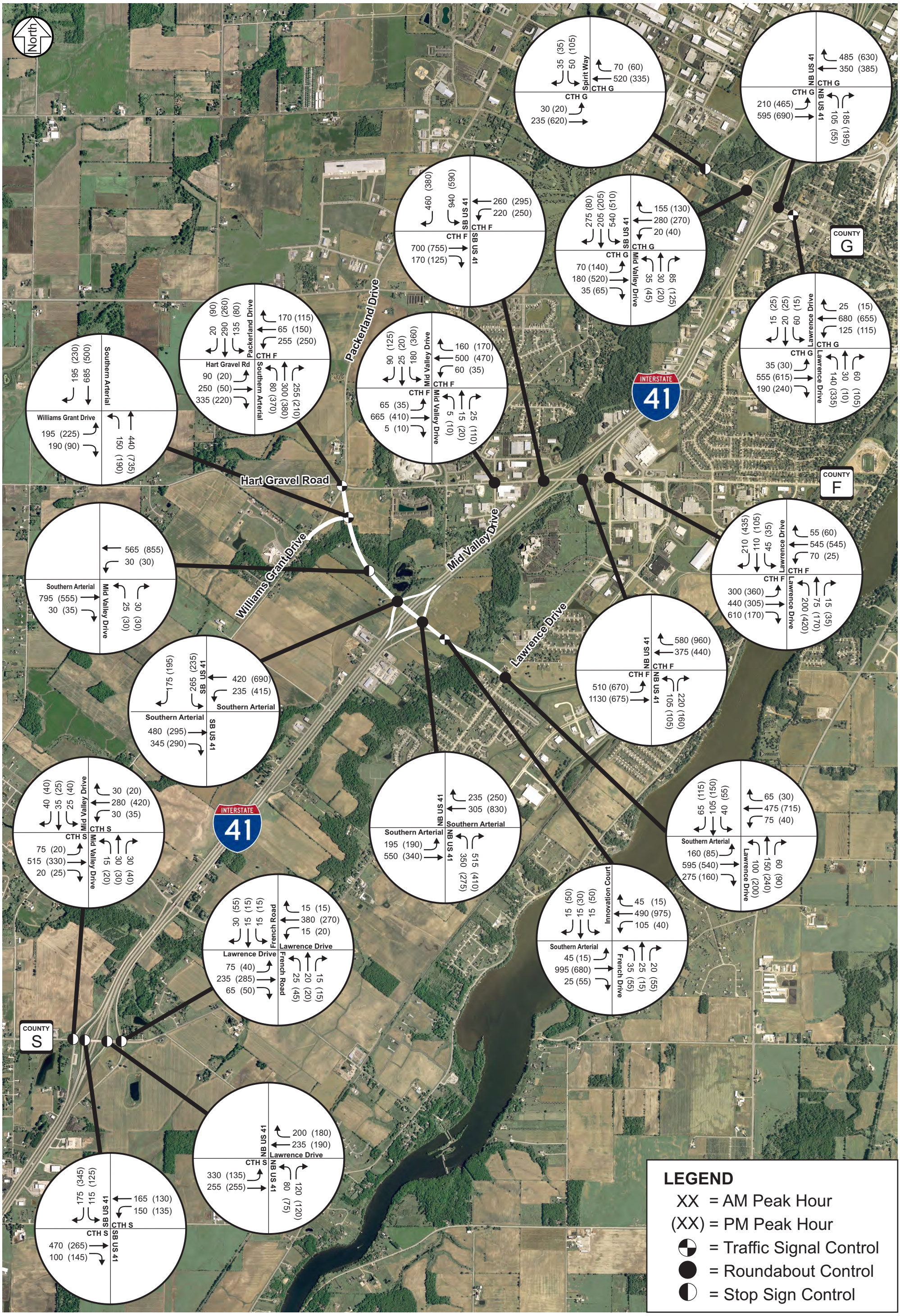
Year 2045 Build (Alternative 1) Peak Hour Traffic Volumes, Freeway Mainline

Figure 5.9

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Year 2045 Build (Alternative 2A) Peak Hour Traffic Volumes, Intersections

Figure 5.10

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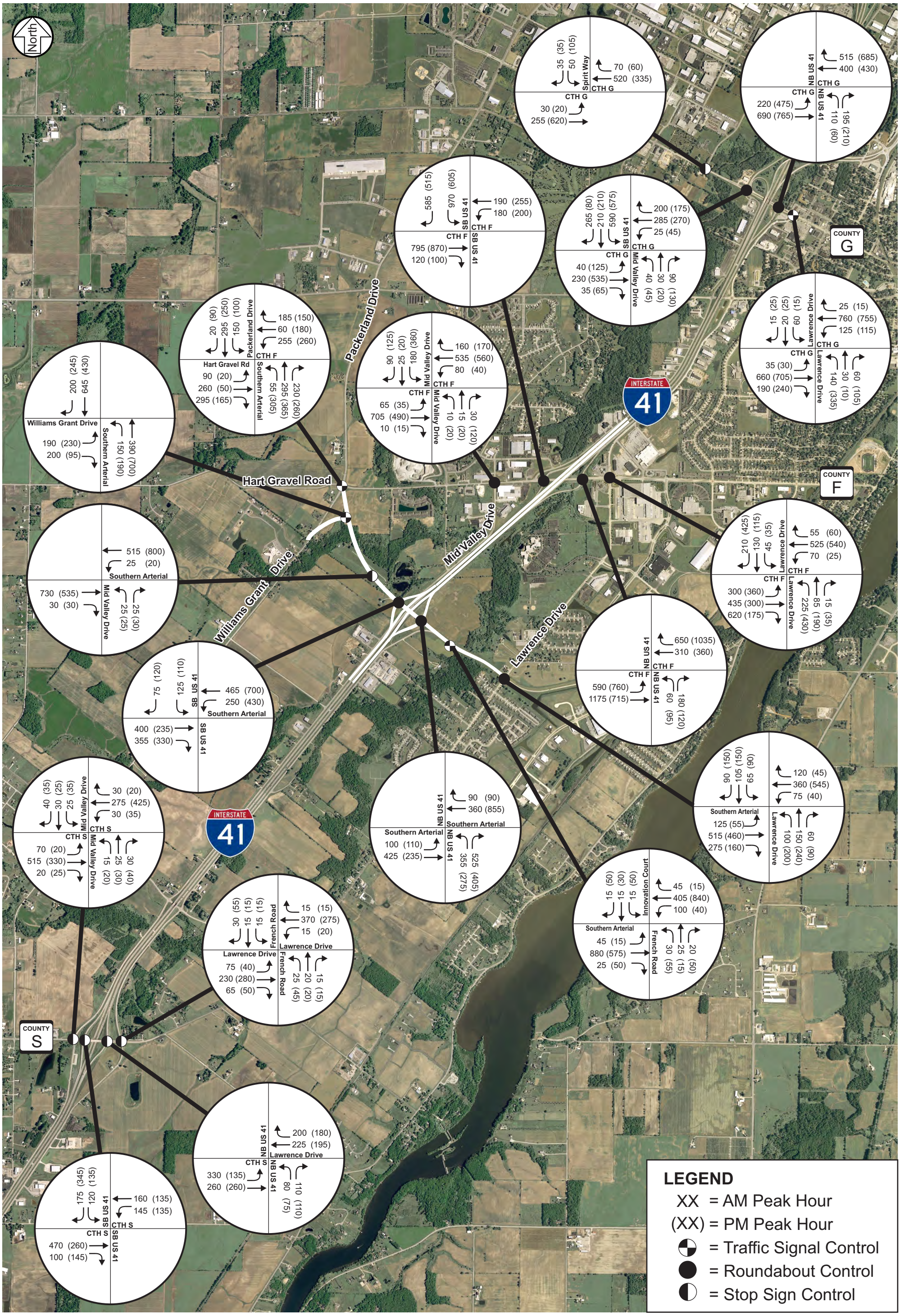
SRF Consulting Group, Inc.

Year 2045 Build (Alternative 2A) Peak Hour Traffic Volumes, Freeway Mainline

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin

Figure 5.11

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Year 2045 Build (Alternative 2B) Peak Hour Traffic Volumes, Intersections

Southern Arterial PEOR Traffic Analysis

Brown County, Wisconsin

Figure 5.12

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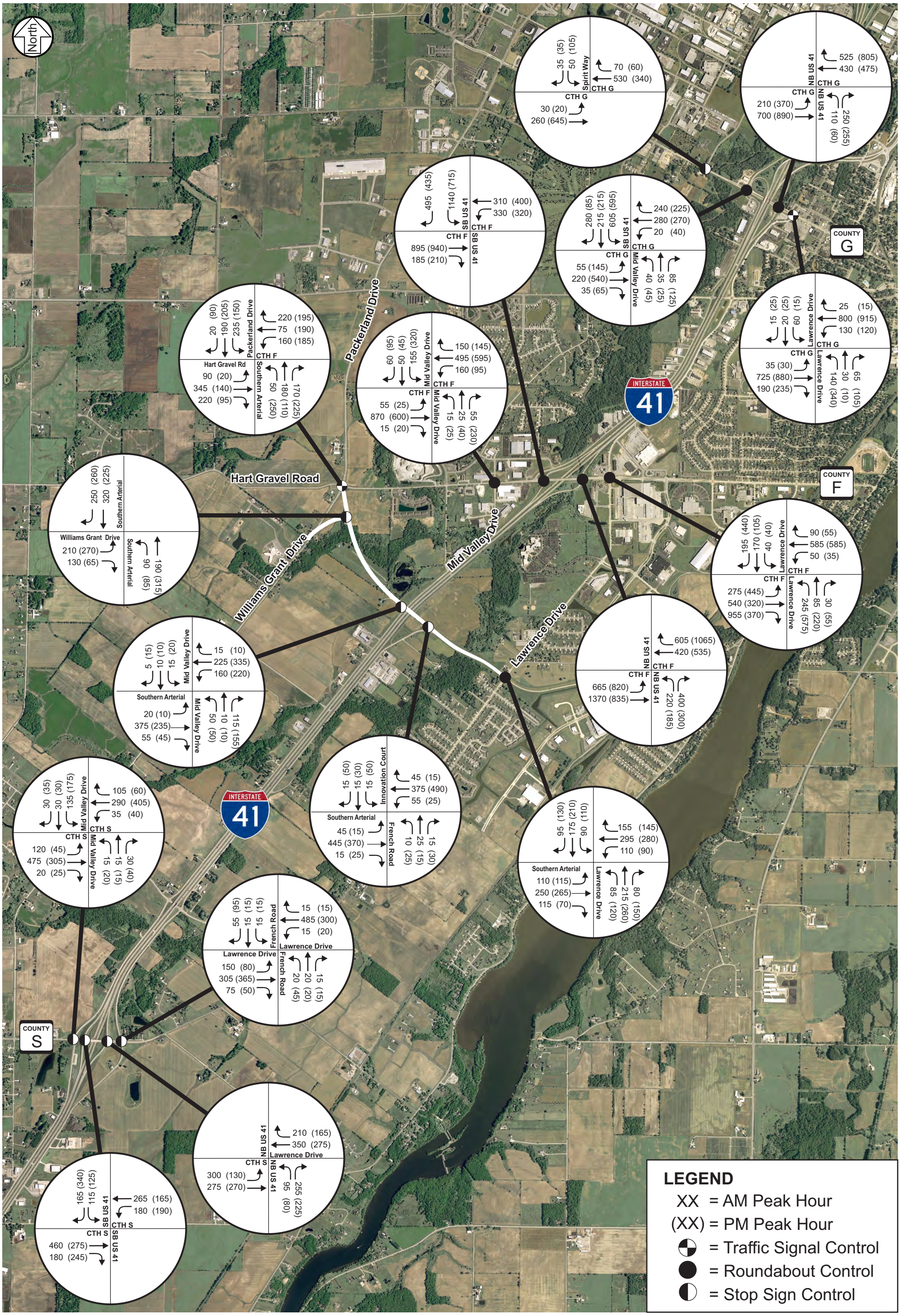
Year 2045 Build (Alternative 2B) Peak Hour Traffic Volumes, Freeway Mainline

Figure 5.13

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin

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Year 2045 Build (Alternative 3) Peak Hour Traffic Volumes, Intersections

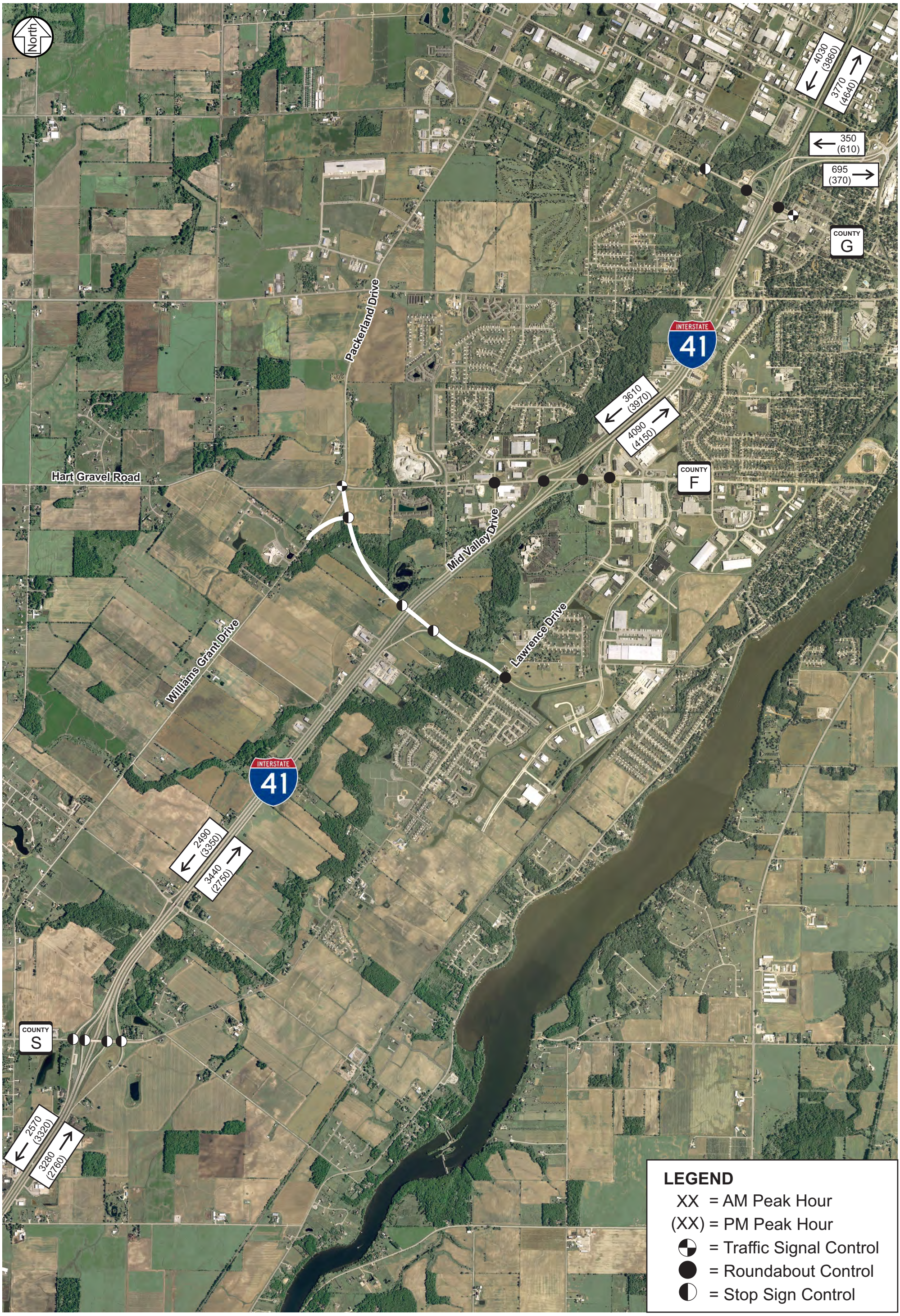
Southern Arterial PEOR Traffic Analysis

Brown County, Wisconsin

Figure 5.14

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Year 2045 Build (Alternative 3) Peak Hour Traffic Volumes, Freeway Mainline

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin

Figure 5.15

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6 Traffic Operations Analysis

An operations analysis was conducted for the weekday morning and evening peak hours for existing-year (Year 2012) and future-year (Year 2045) conditions to determine how traffic operates on the local and regional system within the project area. This analysis was completed using the microsimulation software package, Paramics, per WisDOT and FHWA guidance. Paramics was used to quantitatively and visually evaluate traffic operations along freeway mainline, ramp junctions, and intersections within the study. Measures of effectiveness were extracted from the Paramics models to perform a capacity analysis for each alternative. Capacity analysis results identify a Level of Service (LOS), which indicates how well an intersection or freeway segment operates or is expected to operate in 2045. For intersections and roundabouts, LOS results are based on average delay per vehicle. For freeway segments, LOS results are based on density, measured in vehicles per mile per lane. Intersections, roundabouts, and freeway segments are given a ranking of LOS A through LOS F, with LOS A indicating the best traffic operations and LOS F indicating locations where demand exceeds capacity. Operations along the Wisconsin State Trunk Highway (STH) backbone system desires a target of LOS D or better (WisDOT Facilities Development Manual (FDM) Section 11.5.3.2.1) while intersections and roundabouts require a target of mid-LOS E or better for non-NHS routes (FDM Section 11.5.3.2.2).

Paramics differs from traditional analysis software packages by utilizing origin-destination (O-D) zones to generate vehicle-trip patterns for analysis purposes. Existing-year O-D matrices for the weekday morning and evening peak analysis periods were based on a balanced traffic volume assignment. The Paramics models for these periods were calibrated and validated by comparing model conditions to actual field conditions. The base model calibration was evaluated using FHWA and WisDOT standards for microsimulation network development.

A peer review was conducted for the existing conditions calibration and modeling analysis by an independent consultant and the WisDOT Bureau of Traffic Operations (BTO). The existing year analysis is contained in the memorandum titled, Existing-Year Microsimulation Calibration Report, dated October 7, 2016. In addition, a peer review was conducted for the future No Build and Build alternatives. All analysis scenarios were approved by the independent consultant and the BTO.

6.1 Existing Conditions

Intersection turning movement counts and coverage counts collected for this study were analyzed for existing-year (Year 2012) conditions. The existing geometric conditions are summarized in **Table C-1** for the intersection geometrics and **Figure C-1** for the mainline and ramp geometry. The roadway geometry tables and figures are provided in **Appendix C**. The results from the Paramics software package for the intersection operations analysis are illustrated in **Tables 6.1 and 6.2**. The LOS identified in **Tables 6.1 and 6.2** are by intersection approach and the delay is in seconds of delay for the entire approach. The results from Paramics software package for the freeway mainline and ramp junctions are illustrated in **Tables 6.3** and **6.4**.

Table 6.1: Existing Conditions, AM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	A	6.9	A	2.8	A	6.0	A	0.0
County S / I-41 SB	OWSC	A	3.7	A	1.5	N/A	N/A	A	0.4
County S / I-41 NB	OWSC	N/A	N/A	A	0.9	A	3.2	A	3.5
County S / French	TWSC	A	3.9	A	0.0	A	6.1	A	3.3
County F / Packerland	AWSC	A	9.2	A	5.3	A	6.1	B	11.2
County F / Mid Valley	RAB	A	3.4	A	1.7	A	7.9	A	4.4
County F / I-41 SB	RAB	B	11.7	A	3.1	N/A	N/A	E	37.9
County F / I-41 NB	RAB	N/A	N/A	A	2.8	F	91.3	A	5.9
County F / Lawrence	RAB	B	11.3	A	4.2	A	6.8	A	4.1
County G / Spirit	OWSC	B	11.9	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	1.7	A	1.0	A	8.6	A	4.4
County G / I-41 NB	RAB	N/A	N/A	A	2.5	A	5.0	A	1.7
County G / Lawrence	Signal	C	28.3	A	6.4	C	26.1	B	18.7

Table 6.2: Existing Conditions, PM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	A	5.8	A	3.8	A	3.8	A	0.0
County S / I-41 SB	OWSC	A	3.5	A	1.8	N/A	N/A	A	1.1
County S / I-41 NB	OWSC	N/A	N/A	A	1.8	A	2.0	A	1.6
County S / French	TWSC	A	3.6	A	0.1	A	5.3	A	2.2
County F / Packerland	AWSC	A	5.3	A	3.9	A	3.7	A	9.3
County F / Mid Valley	RAB	A	5.0	A	1.7	A	5.4	A	4.8
County F / I-41 SB	RAB	B	10.2	A	3.4	N/A	N/A	C	17.9
County F / I-41 NB	RAB	N/A	N/A	A	5.8	F	53.3	A	3.7
County F / Lawrence	RAB	C	24.4	E	49.0	F	122.7	A	3.6
County G / Spirit	OWSC	B	10.0	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	1.8	A	1.0	F	56.3	A	5.0
County G / I-41 NB	RAB	N/A	N/A	A	6.0	F	58.0	A	2.5
County G / Lawrence	Signal	C	21.6	A	6.4	E	62.0	B	16.6

Table 6.3: Existing Conditions, Peak Hour Freeway Mainline Operations

Freeway Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
South of County S	C	19.5	B	15.9
County S - County F (2-ln)	C	20.7	B	16.3
County S - County F (3-ln)	B	16.6	B	12.0
County F - County G	B	13.0	B	13.4
North of County G	A	10.8	B	12.6
I-41 Southbound				
North of County G	B	11.6	B	12.0
County G - County F	B	11.2	B	13.0
County F - County S (3-ln)	A	10.6	B	16.4
County F - County S (2-ln)	B	15.8	C	22.5
South of County S	B	16.0	C	21.8

Table 6.4: Existing Conditions, Peak Hour Freeway Merge / Diverge Operations

Freeway Ramp Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
County S Exit Ramp	C	21.0	B	12.0
County S Entrance Ramp	C	22.7	B	13.0
County F Exit Ramp	B	15.6	B	16.4
County F Entrance Ramp	B	12.5	C	22.5
County G Exit Ramp	B	12.3	C	21.8
County G Entrance Ramp	B	11.2	A	0.0
I-41 Southbound				
County G Exit Ramp	C	21.0	B	16.9
County G Entrance Ramp	C	22.7	B	16.5
County F Exit Ramp	B	15.6	B	11.3
County F Entrance Ramp	B	12.5	B	12.1
County S Exit Ramp	B	12.3	B	11.7
County S Entrance Ramp	B	11.2	B	13.4

The results of the intersection analysis shown in **Tables 6.1 and 6.2** indicate that all intersections are currently operating at an acceptable LOS C or better, during the peak periods except for the following intersections:

- County F (Scheuring Road) and I-41 Southbound Ramp: AM peak hour
- County F (Scheuring Road) and I-41 Northbound Ramp: AM and PM peak hours
- County F (Scheuring Road) and Lawrence Drive: PM peak hour
- County G and I-41 Southbound Ramp: PM peak hour
- County G and I-41 Northbound Ramp: PM peak hour

The results of the existing-year freeway mainline analysis shown in **Table 6.3** indicate that freeway mainline operations currently operate at LOS C or better during peak period conditions, denoting acceptable traffic operations.

The results of the existing-year freeway ramp junction analysis shown in **Table 6.4** indicate that freeway ramp operations currently operate at LOS C or better during peak period conditions, denoting acceptable traffic operations.

6.2 Year 2045, No Build Conditions

Year 2045 traffic forecasts for I-41 and the adjacent roadway network were coded into the existing roadway model network for analysis of the future-year, No Build conditions. This analysis was performed similarly to existing-year conditions to understand how the current transportation network would accommodate future-year traffic volumes.

Analyzing the Year 2045 traffic volumes with the current transportation network geometry resulted in significant operational deficiencies that would not allow the Paramics microsimulation model to fully load the anticipated peak-hour volumes into the network. This was due to the existing intersection geometrics not accommodating future-year traffic volumes, creating bottlenecks that extended beyond the limits of the Paramics model. These bottlenecks occurred at the following intersections:

- County F and I-41 southbound ramps. Year 2045 weekday morning peak hour forecasts include 1170 southbound-to-eastbound, left-turning movement from the southbound exit ramp. Currently, this movement is accommodated via two left-turn lanes entering a roundabout. Increases in traffic on the intersection westbound approach reduces the number of gaps available for this movement to occur, increasing delays on the southbound exit ramp approach. Subsequently, these southbound queues backup I-41 southbound freeway traffic beyond between the County F and County G interchanges.
- County F and I-41 northbound ramps. The significant volume on the eastbound approach to the roundabout results in insufficient gaps for traffic from the northbound exit ramp to enter the roundabout intersection. Queues along the I-41 northbound exit ramp eventually reach the I-41 northbound freeway mainline, resulting in operational issues along northbound I-41 between County S and County F.
- County F and Lawrence Drive (weekday morning and evening peak hours). During the weekday morning and evening peak hours of traffic, significant traffic growth anticipated at this intersection creates operational deficiencies on the southbound, westbound, and northbound approaches. The existing roundabout geometry cannot accommodate traffic wishing to enter the roundabout, increasing delays on approaches to this intersection. This bottleneck does not allow the total traffic demand to enter the Paramics model network.

The bottleneck locations have far reaching impacts on the remainder of the model network. This includes northbound I-41 between the County S and County F interchanges, southbound I-41 between the County G and County G interchanges, and some of the intersections along County G and County S.

The No Build geometric conditions are summarized in **Table C-2** for the intersection geometrics and **Figure C-2** for the mainline and ramp geometry. **Tables 6.5, 6.6, 6.7 and 6.8** illustrate the Year 2045 No Build operations at the intersections, freeway mainline and ramp junctions.

Table 6.5: Year 2045, No Build AM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	B	12.4	A	2.8	A	9.5	A	0.3
County S / I-41 SB	OWSC	E	40.8	B	10.5	N/A	N/A	A	3.7
County S / I-41 NB	OWSC	N/A	N/A	F	145.3	A	7.3	F	299.8
County S / French	TWSC	B	12.5	F	237.5	F	236.3	A	5.6
County F / Packerland	AWSC	F	979.1	B	12.9	F	661.4	F	7712.3
County F / Mid Valley	RAB	F	176.6	F	61.5	F	302.5	F	462.0
County F / I-41 SB	RAB	F	428.4	B	10.8	N/A	N/A	F	176.0
County F / I-41 NB	RAB	N/A	N/A	B	12.2	F	993.6	B	10.0
County F / Lawrence	RAB	F	150.1	F	63.7	C	17.8	A	4.2
County G / Spirit	OWSC	E	36.6	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	8.5	A	6.6	F	159.0	E	39.8
County G / I-41 NB	RAB	N/A	N/A	A	7.4	F	1072.4	B	14.0
County G / Lawrence	Signal	C	22.2	A	7.6	C	31.2	D	53.4

Table 6.6: Year 2045, No Build PM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	F	156.6	A	4.5	A	6.6	F	370.5
County S / I-41 SB	OWSC	F	1851.6	A	7.9	N/A	N/A	F	506.8
County S / I-41 NB	OWSC	N/A	N/A	F	382.0	A	3.5	F	976.8
County S / French	TWSC	F	736.0	F	425.6	F	855.4	A	5.3
County F / Packerland	AWSC	F	619.9	C	21.5	F	820.6	F	4738.3
County F / Mid Valley	RAB	F	617.4	F	57.2	F	1190.7	F	390.9
County F / I-41 SB	RAB	F	156.9	A	6.2	N/A	N/A	F	134.5
County F / I-41 NB	RAB	N/A	N/A	C	15.0	F	3286.7	A	9.8
County F / Lawrence	RAB	F	59.8	F	438.9	F	406.5	A	5.4
County G / Spirit	OWSC	E	39.1	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	3.6	A	4.7	F	159.4	B	14.6
County G / I-41 NB	RAB	N/A	N/A	B	13.6	F	358.1	A	9.7
County G / Lawrence	Signal	C	24.1	A	7.3	F	275.8	D	47.6

Table 6.7: Year 2045, No Build Peak Hour Freeway Mainline Operations

Freeway Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
South of County S	E	37.3	F	157.2
County S - County F (2-ln)	F	76.5	F	63.6
County S - County F (3-ln)	F	63.5	F	93.5
County F - County G	B	12.6	A	7.9
North of County G	A	10.8	A	10.0
I-41 Southbound				
North of County G	C	20.3	B	15.0
County G - County F	F	92.5	C	20.7
County F - County S (3-ln)	B	11.1	D	27.4
County F - County S (2-ln)	B	16.7	E	35.9
South of County S	B	15.8	C	23.2

Table 6.8: Year 2045, No Build Peak Hour Freeway Merge / Diverge Operations

Freeway Ramp Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
County S Exit Ramp	F	48.7	F	172.7
County S Entrance Ramp	F	77.7	F	125.5
County F Exit Ramp	F	100.5	F	122.2
County F Entrance Ramp	B	12.6	A	7.5
County G Exit Ramp	B	13.0	A	8.6
County G Entrance Ramp	B	12.1	B	10.9
I-41 Southbound				
County G Exit Ramp	B	19.1	B	15.0
County G Entrance Ramp	F	93.5	B	15.2
County F Exit Ramp	A	9.1	B	15.7
County F Entrance Ramp	B	11.1	C	27.4
County S Exit Ramp	B	18.0	F	49.3
County S Entrance Ramp	B	19.0	C	21.7

AM Peak Hour Intersection Operations: Weekday morning peak hour traffic volumes along County F are projected to increase significantly for Year 2045 conditions. This traffic increase leads to gridlock conditions at the County F intersections with Packerland Drive, Mid Valley Road, the I-41 southbound ramp, the I-41 northbound ramp, and Lawrence Drive. Queues along the I-41 northbound exit ramp eventually reach the I-41 northbound freeway mainline, resulting in operational issues along northbound I-41 between County S and County F. In addition, County F traffic flow becomes congested at the I-41 southbound exit ramp as increased traffic volumes from the exit ramp, particularly for the southbound left-turn movement, reduce the number of gaps that County F eastbound traffic can use to enter the roundabout. This, in turn, creates long queues on County F west of the I-41 southbound ramp intersection to Mid Valley Road and Packerland Drive. Poor operations at Packerland Drive is a result of several items including congestion at the I-41 interchange, lack of intersection capacity and the existing all-way-stop-controls (AWSC). Congestion along the I-41 southbound exit ramp also affects the southbound I-41 freeway segment between County F and County G.

The County G corridor also shows operational deficiencies at the Lawrence Drive signalized intersection. The increased traffic volumes and the lack of an exclusive eastbound left-turn lane (left turn traffic blocks the left-through lane thus reducing intersection capacity) causes delays and queues along Lawrence Drive and County G west of Lawrence Drive; this, in turn, spills back to the I-41 interchange ramp termini causing delays and queues at these two ramp intersections.

The operational issues at the County S intersections are a result of the congestions at the County F intersections and backups along the northbound exit ramp and northbound I-41 mainline.

PM Peak Hour Intersection Operations: Weekday afternoon peak hour traffic volumes along County F are projected to increase significantly for Year 2045 conditions. This traffic increase leads to gridlock conditions at the County F intersections with Packerland Drive, Mid Valley Road, the I-41 southbound ramp, the I-41 northbound ramp, and Lawrence Drive. Queues along the I-41 northbound exit ramp eventually reach the I-41 northbound freeway mainline, resulting in operational issues along northbound I-41 between County S and County F, including the intersections along County S.

The County G corridor also shows operational deficiencies at the Lawrence Drive signalized intersection. The increased traffic volumes and the lack of an exclusive eastbound left-turn lane (left turn traffic blocks the left-through lane thus reducing intersection capacity) causes delays and queues along Lawrence Drive and County G west of Lawrence Drive; this, in turn, spills back to the I-41 interchange ramp termini causing delays and queues at these two ramp intersections.

I-41 Mainline and Ramp Operations: Operational issues (LOS E/F) along I-41 northbound between the County S interchange and the County F northbound exit ramp result from the gridlock operations along County F during the 2045 AM and PM peak hours. Slowdowns along southbound I-41 between County G and County F is also a result of the gridlock conditions at the County F intersections. The I-41 southbound freeway mainline also shows slowdowns during the 2045 PM peak hour at the median lane drop south of the County F interchange. This is due to two conditions that are occurring in this area: 1) motorists are unable to merge out of the dropping lane until its physical end. These

vehicles perform a low-speed lane merge, which causes queues and slower speeds on the remaining travel lanes. 2) Motorists from the I-41 southbound entrance ramp at CTH F have difficulty merging smoothly onto the freeway mainline because of the multiple conflicts in the southbound I-41 mainline segment immediately south of the County F interchange: 1) ramp merge and 2) median lane drop.

6.3 Year 2045, Build (Alternative 1) Conditions

Alternative 1 assumes an east extension of the County F (Scheuring Road) corridor over the Fox River and connecting to Heritage Road. Year 2045 freeway and intersection forecasts for this alternative were used to update the Paramics O-D trip tables to evaluate this alternative.

Proposed Intersection Improvements - Alternative 1

Intersection improvements are recommended at several of the intersections in the study area because the intersections don't operate at acceptable levels of service as seen under the No Build Alternative. The proposed geometric improvements are summarized in **Table C-3** for the intersection geometrics and **Figure C-3** for the mainline and ramp geometry in **Appendix C**. The following geometric improvements were made to County F intersections to accommodate forecasted traffic volumes along the corridor. Full and partial right-turn bypass lanes are identified at several of the roundabout intersections. A full right-turn bypass lane does not enter the circulatory roadway and a lane is added at the exit. A partial right-turn lane does not enter the circulatory roadway but must yield to the roundabout exit lanes.

- County F and Packerland Drive
  - Operate under new signal controls
  - Construct the north, east and west approaches to provide an exclusive left-turn and shared through/right-turn lane.
  - County F (Scheuring Road) will transition from two- to four travel lanes between Packerland Drive and Mid Valley Road.
- County F and Mid Valley Road
  - Increase the number of entry lanes on the east and west approaches (County F) from one to two lanes (two shared through lanes)
  - Increase the number of entry lanes on the north and south approaches (Mid Valley Road) from one to two lanes (shared left-through and exclusive right)
- County F and I-41 southbound interchange ramps
  - Increase the number of entry lanes on the west approach (County F) from two to four lanes (three through lanes and one partial right-turn bypass lane)
  - Increase the number of entry lanes on the east approach (County F) from one to two lanes (one shared left-through lane and one through lane)
  - Increase the number of entry lanes on the north approach (I-41 exit ramp) from three to four lanes (three left-turn lanes and one partial right-turn bypass lane)
- County F at the I-41 overpass
  - Increase the number eastbound travel lanes from two to three
  - Increase the number of westbound travel lanes from one to two
- County F and I-41 northbound interchange ramps
  - Increase the number of entry lanes on the west approach (County F) from two to three lanes (exclusive left, shared left-through, through)
  - Increase the number of entry lanes on the east approach (County F) from two to three lanes (two through lanes and one full right-turn bypass lane)

  - Increase the number of entry lanes on the south approach (I-41 northbound exit ramp) from two to three lanes (two left-turn lanes and one partial right-turn bypass lane)
  - Increase the number of exit lanes for the I-41 northbound entrance ramp from two to three (two lanes leaving the circulatory lanes, one lane via westbound partial right-turn bypass lane).
- County F between I-41 northbound and Lawrence Drive
  - Increase the number of westbound travel lanes from two to three
- County F and Lawrence Drive
  - Increase the number of entry lanes on the west approach (County F) from two to three lanes (one shared left-through lane, one through lane, and one full right- turn bypass lane)
  - Increase the number of entry lanes on the south approach (Lawrence Drive) from two to four lanes (two left-turn lanes, one through lane, and one partial right-turn bypass lane)
  - Update the southbound right-turn movement from a partial bypass lane to a full bypass lane

Traffic Operation Results - Alternative 1

It should be noted that the above-mentioned improvements along County F are realistic improvements that do not introduce geometrics that are not feasible to the area or are not implemented in the State of Wisconsin (e.g. four circulatory lanes in a roundabout). This is stated because the following discussion identifies that bottlenecks occur under the year 2045 Alternative 1 transportation network resulting in unacceptable traffic operations. **Tables 6.9, 6.10, 6.11 and 6.12** illustrate the Year 2045 Alternative 1 operations at the intersections, freeway mainline and ramp junctions.

The bottlenecks occurred at the following locations:

- County F and I-41 southbound ramps. Weekday morning peak hour traffic volumes along County F are projected to increase significantly for Year 2045 conditions. This traffic increase leads to significant delays and queues in the microsimulation network, starting at the County F west approach to the I-41 southbound interchange ramps. Specifically, the three left-turn lanes provided to accommodate the future AM peak hour left-turning traffic from the I-41 southbound exit ramp (approximately 1,200 vehicles) do not provide adequate gaps in the circulatory lanes for the County F west approach traffic to adequately enter the roundabout. Because of this, queues along the County F approach extend west to the Mid Valley Drive and Packerland Avenue intersections during the year 2045 AM peak hour. In addition, the high amount of left-turns at the I-41 southbound exit ramp creates delays and queues that extend back along the ramp to the I-41 southbound freeway mainline.
- County F and I-41 northbound ramps. The significant volume on the eastbound approach to the roundabout results in insufficient gaps for traffic from the northbound exit ramp to enter the roundabout intersection. Queues along the I-41 northbound exit ramp eventually reach the I-41 northbound freeway mainline, resulting in operational issues along northbound I-41 between County S and County F. Table 6.11 shows LOS F for I-41 northbound in the three-

lane section during the future PM peak hour. This poor LOS is related to the County F intersection bottleneck. Similarly, the I-41 northbound exit ramp diverge to County F is expected to operate at LOS F during the future AM and PM peak hours. In addition, the large amount of eastbound traffic at the I-41 northbound roundabout creates inadequate gaps for the large westbound traffic volume arriving from the County F intersection with Lawrence Drive. This condition creates queues on westbound County F that spills back to the Lawrence Drive intersection.

- County F and Lawrence Drive (weekday morning and evening peak hours). Even with the proposed roundabout improvements, the intersection cannot accommodate traffic wishing to enter the roundabout, increasing delays on several approaches to this intersection. During the weekday morning and evening peak hours of traffic, significant traffic growth anticipated at this intersection creates operational deficiencies on the southbound, westbound, and northbound approaches. This bottleneck does not allow the total traffic demand to enter the Paramics model network.
- County G and Lawrence: Lawrence south approach = LOS F (PM). The County G corridor exhibits operational deficiencies at the Lawrence Drive signalized intersection. This results in increased queues along Lawrence Drive and County G, west of Lawrence Drive. A new exclusive eastbound left turn was included in the analysis for this intersection. Regardless, poor operations at this intersection spill back to the I-41 interchange ramp termini causing delays and queues at the two ramp intersections.

Table 6.9: Year 2045, Alternative 1 AM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	B	12.0	A	3.1	B	10.4	A	0.0
County S / I-41 SB	OWSC	C	24.3	A	8.2	N/A	N/A	A	1.2
County S / I-41 NB	OWSC	N/A	N/A	A	1.0	A	6.9	B	13.5
County S / French	TWSC	B	14.0	A	0.0	C	16.4	A	5.2
County F / Packerland	Signal	F	383.9	B	12.1	F	225.5	F	1845.6
County F / Mid Valley	RAB	F	162.0	A	7.7	F	325.4	F	412.6
County F / I-41 SB	RAB	F	168.4	A	2.6	N/A	N/A	F	463.4
County F / I-41 NB	RAB	N/A	N/A	B	14.1	F	598.4	A	4.6
County F / Lawrence	RAB	F	374.1	F	215.5	C	23.8	B	14.2
County G / Spirit	OWSC	D	25.4	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	3.5	A	1.7	E	49.0	C	15.1
County G / I-41 NB	RAB	N/A	N/A	A	4.6	F	76.4	A	5.3
County G / Lawrence	Signal	C	29.8	A	7.1	C	26.7	C	25.9

Table 6.10: Year 2045, Alternative 1 PM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	A	9.8	A	4.5	A	6.3	A	0.0
County S / I-41 SB	OWSC	C	15.0	A	7.6	N/A	N/A	A	1.6
County S / I-41 NB	OWSC	N/A	N/A	A	1.4	A	3.5	A	3.2
County S / French	TWSC	B	11.4	A	0.1	B	11.1	A	3.8
County F / Packerland	Signal	B	13.8	A	9.2	A	9.6	B	15.9
County F / Mid Valley	RAB	D	32.1	A	0.8	A	7.5	D	28.0
County F / I-41 SB	RAB	B	13.5	A	2.0	N/A	N/A	F	53.6
County F / I-41 NB	RAB	N/A	N/A	D	29.1	F	932.2	A	3.1
County F / Lawrence	RAB	F	59.4	F	878.8	F	493.4	C	22.1
County G / Spirit	OWSC	D	25.3	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	3.2	A	2.4	F	158.0	B	12.6
County G / I-41 NB	RAB	N/A	N/A	B	10.8	F	170.9	A	4.0
County G / Lawrence	Signal	C	24.5	A	7.4	F	91.6	B	15.3

Table 6.11: Year 2045, Alternative 1 Peak Hour Freeway Mainline Operations

Freeway Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
South of County S	C	24.2	C	19.9
County S - County F (2-ln)	E	38.8	D	28.6
County S - County F (3-ln)	E	35.3	F	51.2
County F - County G	B	14.3	B	15.7
North of County G	B	12.4	B	16.5
I-41 Southbound				
North of County G	B	13.5	B	15.2
County G - County F	C	21.7	C	18.2
County F - County S (3-ln)	B	12.1	D	28.4
County F - County S (2-ln)	C	18.4	D	28.5
South of County S	C	18.6	C	24.7

Table 6.12: Year 2045, Alternative 1 Peak Hour Freeway Merge / Diverge Operations

Freeway Ramp Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
County S Exit Ramp	C	26.9	C	21.4
County S Entrance Ramp	D	32.9	C	22.3
County F Exit Ramp	F	48.1	F	80.2
County F Entrance Ramp	B	13.2	B	14.0
County G Exit Ramp	B	14.0	B	14.1
County G Entrance Ramp	B	12.9	B	18.2
I-41 Southbound				
County G Exit Ramp	B	15.2	B	15.2
County G Entrance Ramp	B	13.1	B	15.2
County F Exit Ramp	B	14.1	B	15.7
County F Entrance Ramp	B	13.2	D	28.4
County S Exit Ramp	C	21.3	E	36.8
County S Entrance Ramp	C	23.4	D	31.8

The results of the freeway and intersection operations analysis under Alternative 1 indicate that the Year 2045 peak-hour traffic volumes cannot be sufficiently accommodated. Operational deficiencies along the County F corridor will remain, which spill back onto the I-41 northbound mainline, particularly during the weekday morning peak period. Roadway improvements along County F necessary to create acceptable traffic operations for Alternative 1 peak-hour conditions are not feasible.

6.4 Year 2045, Build (Alternative 2A) Conditions

Alternative 2A includes a new full-access diamond interchange along I-41 to service the proposed Southern Arterial. The Southern Arterial corridor will begin at the Hart Gravel Road and Packerland Drive intersection and travel southeast, crossing I-41 at Southbridge Road, approximately 1.5 miles south of the County F bridge over I-41. The distance between the northerly Southern Arterial interchange ramps and the southerly County F ramps is approximately three-quarters of a mile. The Paramics network was coded to reflect the northbound I-41 freeway conversion from four to six lanes at the existing location which is approximately ¾ miles south of the Scheuring Road overpass. A continuous auxiliary lane would be construct between the I-41 northbound entrance ramp from the Southern Arterial to the I-41 northbound exit ramp to Scheuring Road. The transition from three to two southbound lanes will occur within the middle of the Southern Arterial interchange to avoid overlapping conflicts with the weaving maneuvers and the lane drop in the same freeway segment between the I-41 southbound entrance ramp from Scheuring Road and the I-41 southbound exit ramp to the Southern Arterial. A continuous auxiliary lane will be constructed between the I-41 southbound entrance ramp from Scheuring Road to the I-41 southbound exit ramp to the Southern Arterial. The I-41 southbound segment between County F and the Southern Arterial is expected to operate at LOS B/A under 2045 traffic volumes. Concerns were expressed about the drop of the median lane in the middle of the Southern Arterial interchange because of potential visibility issues associated the overpass and curvature of the I-41 mainline. It was suggested to extend the median lane south of the Southern Arterial interchange and drop it beyond the influence of the southbound entrance ramp from the Southern Arterial and along the tangent section of I-41. This will be addressed in the Tier 2 studies and the Interstate Access Justification Report (IAJR). Year 2045 freeway and intersection forecasts for this alternative were used to update the Paramics O-D trip tables to evaluate this alternative.

Proposed Intersection Improvements - Alternative 2A

Intersection improvements are recommended at several of the intersections in the study area because the intersections don't operate at acceptable levels of service as seen under the No Build Alternative. The propose geometric improvements are summarized in **Table C-4** for the intersection geometrics and **Figure C-4** for the mainline and ramp geometry. Both items are included in **Appendix C**. The following geometric improvements were made to County F intersections to accommodate forecasted traffic volumes along the corridor. Full and partial right-turn bypass lanes are identified at several of the roundabout intersections. For definition purposes, a "full right-turn bypass lane" does not enter the circulatory roadway and a lane is added at the exit. A "partial right-turn bypass lane" does not enter the circulatory roadway but must yield to the roundabout exit lanes.

- County F and Packerland Drive
    - Update intersection control from all-way stop-control to traffic signals
    - Each approach would consist of an exclusive left-turn lane, a through lane, and an exclusive right-turn lane
- County F and Mid Valley Road
    - Increase the number of entry lanes on the east and west approaches (County F) from one to two lanes (two shared through lanes)

  - Increase the number of entry lanes on the north and south approaches (Mid Valley Road) from one to two lanes (shared left-through and exclusive right)

- County F and I-41 southbound interchange ramps
  - Increase the number of entry lanes on the west approach (County F) from two to four lanes (three through lanes and one partial right-turn bypass lane)
  - Increase the number of entry lanes on the east approach (County F) from one to two lanes (one shared left-through lane and one through lane)
- County F at the I-41 overpass
  - Increase the number eastbound travel lanes from two to three
  - Increase the number of westbound travel lanes from one to two
- County F and I-41 northbound interchange ramps
  - Increase the number of entry lanes on the west approach (County F) from two to three lanes (exclusive left, two through lanes)
  - Increase the number of entry lanes on the east approach (County F) from two to three lanes (two through lanes and one full right-turn bypass lane)
  - Increase the number of entry lanes on the south approach (I-41 northbound exit ramp) from two to three lanes (two left-turn lanes and one partial right-turn bypass lane)
- County F between I-41 northbound and Lawrence Drive
  - Increase the number of westbound travel lanes from two to three
- County F and Lawrence Drive
  - Increase the number of entry lanes on the west approach (County F) from two to three lanes (one shared left-through lane, one through lane, and one full right- turn bypass lane)
  - Update the southbound right-turn movement from a partial bypass lane to a full bypass lane

The following geometric improvements were made to the proposed Southern Arterial corridor intersections to accommodate forecasted traffic volumes along the corridor:

- Southern Arterial and I-41 southbound
  - The intersection would be under a two-lane roundabout intersection control
  - The west approach would have two entry lanes
  - The east approach would have two entry lanes
  - The north approach would have two entry lanes and a partial right-turn bypass lane
  - The south approach would have one exit lane
- Southern Arterial and I-41 northbound
  - The intersection would operate under two-lane roundabout intersection control

  - The west approach would have two entry lanes
  - The east approach would have two entry lanes and a partial right-turn bypass lane
  - The north approach would have one exit lane
  - The south approach would have two entry lanes and a partial right-turn bypass lane
- Southern Arterial and Mid Valley Road
  - Traffic signal control was added to the intersection
- Southern Arterial and Innovation Way
  - Traffic signal control was added to the intersection

The above-mentioned improvements along County F and the proposed Southern Arterial are realistic improvements that do not introduce geometrics that are not feasible to the area or are not implemented in the State of Wisconsin (e.g. four circulatory lanes in a roundabout).

Traffic Operation Results - Alternative 2A

Tables 6.13, 6.14, 6.15 and 6.16 illustrate the Year 2045 Alternative 2A operations at the intersections, freeway mainline and ramp junctions. Weekday morning and afternoon peak hour operations indicate that all intersections, for the most part, operate adequately during this time period. The following summarizes areas of interest in the microsimulation model:

- I-41 Northbound Ramp Intersection at County F: several microsimulation runs showed longer delays and queues along the east approach of County F at I-41 Northbound, the east approach of County F at Lawrence Drive, and the I-41 Northbound exit ramp south approach at County F. In particular, one microsimulation run simulated a queue along County F westbound that extended back to the Lawrence Drive roundabout. This was caused by a single truck waiting to enter the circulatory lane of the I-41 northbound roundabout. Once the truck exited the entry lane, the queue created dissipated quickly – within a few minutes – and never reached that distance again during simulation. This is the reason for the poor intersection LOS shown in Tables 6.13 and 6.14 for the County F intersections with I-41 Northbound and Lawrence. Both of these intersections were analyzed in Sidra and the intersections are expected to operate at LOS C or better under 2045 traffic volumes. A comparison analysis is provided in the report section titled Supplemental Sidra Analysis. The comparison analysis also includes the County F intersection with I-41 Southbound and the Sidra results also show that the intersection is expected to operate at LOS C or better under future 2045 traffic.
- I-41 Northbound Ramp Intersection at County G: several microsimulation runs showed eastbound delays along County G at Lawrence Drive, located approximately 420 feet east of the I-41 northbound roundabout, extending into the I-41 Northbound roundabout and delaying vehicles from the northbound exit ramp to enter the roundabout. While longer delays on the exit ramp were observed, vehicles were eventually able to enter the roundabout and clear any queues that were created. In addition, queues created by this condition did not interfere with I-41 northbound freeway mainline operations. These delays were also related to trucks trying to enter the roundabout. This intersection and the I-41 Southbound Ramp intersection at County G (south approach = LOS F) are additional candidates for the supplemental Sidra analysis. See report section titled Supplemental Sidra Analysis.

- I-41 Northbound Ramp Intersection at the Southern Arterial: The south intersection approach expected to operate at LOS F. This problem is related to an isolated truck that is unable to enter the roundabout. This intersection is another candidate for the supplemental Sidra analysis.
- I-41 Northbound Mainline (County S-Southern Arterial): LOS E (AM) – This is related to the four-lane I-41 cross-section.
- I-41 Southbound Entrance Ramp Merge at County S: LOS E (PM) – This is related to the four-lane I-41 cross-section.

Table 6.13: Year 2045, Alternative 2A AM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	C	15.8	A	3.4	A	9.7	A	0.0
County S / I-41 SB	OWSC	C	17.3	A	3.0	N/A	N/A	A	1.0
County S / I-41 NB	OWSC	N/A	N/A	A	1.2	A	5.7	A	6.1
County S / French	TWSC	A	9.5	A	0.0	B	12.5	A	3.6
County F / Packerland	Signal	B	19.5	A	9.8	B	17.2	D	48.0
County F / Mid Valley	RAB	C	18.2	A	1.3	A	7.6	B	11.5
County F / I-41 SB	RAB	A	7.8	A	1.9	N/A	N/A	F	66.2
County F / I-41 NB	RAB	N/A	N/A	A	7.5	F	248.7	A	2.3
County F / Lawrence	RAB	D	25.9	B	12.3	D	27.0	A	6.3
County G / Spirit	OWSC	C	17.8	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	2.7	A	1.4	D	28.8	C	20.9
County G / I-41 NB	RAB	N/A	N/A	A	3.3	C	18.0	A	2.0
County G / Lawrence	Signal	C	23.6	A	7.9	C	28.1	B	17.4
SA / Williams-Grant	Signal	B	10.2	N/A	N/A	A	7.8	C	20.2
SA / Mid Valley	OWSC	N/A	N/A	A	0.0	B	11.2	A	0.0
SA / I-41 SB	RAB	B	11.9	A	3.5	N/A	N/A	D	29.5
SA / I-41 NB	RAB	N/A	N/A	A	8.4	F	50.3	A	2.2
SA / Innovation	Signal	C	31.8	B	13.3	C	27.5	B	12.8
SA / Lawrence	RAB	A	2.0	A	5.8	B	10.6	B	12.3

Table 6.14: Year 2045, Alternative 2A PM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	B	10.8	A	3.7	A	8.7	A	0.0
County S / I-41 SB	OWSC	D	25.3	A	4.1	N/A	N/A	A	1.4
County S / I-41 NB	OWSC	N/A	N/A	A	1.4	A	2.9	A	1.7
County S / French	TWSC	A	6.7	A	0.2	A	9.8	A	1.3
County F / Packerland	Signal	B	18.3	B	17.7	B	13.7	A	9.6
County F / Mid Valley	RAB	C	17.9	A	0.9	A	6.0	B	10.9
County F / I-41 SB	RAB	A	7.2	A	2.0	N/A	N/A	B	12.9
County F / I-41 NB	RAB	N/A	N/A	E	47.3	F	73.2	A	3.6
County F / Lawrence	RAB	D	26.1	E	39.6	F	81.9	A	4.7
County G / Spirit	OWSC	C	21.6	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	2.7	A	1.8	F	87.5	D	29.5
County G / I-41 NB	RAB	N/A	N/A	C	24.6	F	170.1	A	4.0
County G / Lawrence	Signal	B	14.0	B	15.2	D	40.4	D	40.5
SA / Williams-Grant	Signal	C	30.3	N/A	N/A	A	8.7	C	21.1
SA / Mid Valley	OWSC	N/A	N/A	A	0.0	A	7.4	A	0.0
SA / I-41 SB	RAB	D	27.8	A	5.7	N/A	N/A	C	19.7
SA / I-41 NB	RAB	N/A	N/A	B	13.2	C	18.7	A	1.3
SA / Innovation	Signal	C	23.7	B	16.6	B	18.9	B	11.4
SA / Lawrence	RAB	A	7.6	A	7.9	B	14.6	B	10.1

Table 6.15: Year 2045, Alternative 2A Peak Hour Freeway Mainline Operations

Freeway Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
South of County S	D	26.1	C	22.8
County S - Southern Arterial	E	35.1	D	27.0
Southern Arterial - County F	B	11.6	A	10.3
County F - County G	B	17.2	C	19.4
North of County G	B	13.3	C	18.1
I-41 Southbound				
North of County G	B	14.7	B	13.6
County G - County F	B	14.6	B	16.4
County F - Southern Arterial	A	9.5	B	12.4
Southern Arterial - County S	C	21.3	D	29.2
South of County S	C	22.5	D	28.4

Table 6.16: Year 2045, Alternative 2A Peak Hour Freeway Merge / Diverge Operations

Freeway Ramp Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
County S Exit Ramp	D	29.0	C	24.7
County S Entrance Ramp	D	35.0	C	25.9
Southern Arterial Exit Ramp	C	27.5	C	20.9
Southern Arterial Entrance Ramp	B	17.2	B	14.3
County F Exit Ramp	B	11.6	B	10.4
County F Entrance Ramp	B	15.4	B	16.4
County G Exit Ramp	B	15.7	B	15.8
County G Entrance Ramp	B	14.1	B	19.2
I-41 Southbound				
County G Exit Ramp	B	14.7	B	13.6
County G Entrance Ramp	B	12.7	B	14.1
County F Exit Ramp	B	13.8	B	15.0
County F Entrance Ramp	A	9.5	B	12.4
Southern Arterial Exit Ramp	B	19.4	B	12.9
Southern Arterial Entrance Ramp	C	20.1	D	29.0
County S Exit Ramp	C	21.0	D	29.7
County S Entrance Ramp	C	23.5	E	35.6

Some isolated freeway segments and intersections in the Alternative 2A Paramics model were identified as having poor operations. The freeway locations are related to the four-lane freeway segments. This is an indicator that the I-41 six-lane freeway may be warranted in the future however this need is not related to the addition of the Southern Arterial interchange with I-41.

The poor intersection performance is related to the County F and County G roundabout intersections where truck entry issues were observed in the model. In these cases, WisDOT has suggested that the micro-simulation analysis results be cross-checked with simpler tools such as Sidra. An analysis of these intersections using Sidra show that acceptable operations are possible. See report section titled Supplemental Sidra Analysis.

With the intersection and roadway modifications the County F and County G corridors are expected to function at satisfactory levels of service during the peak traffic periods. This is a significant operational improvement when compared to the improved conditions of the No Build and Alternative 1 scenarios, where modifications for those alternatives could not accommodate the anticipated traffic load on those networks under both analysis methodologies (Paramics and Sidra).

6.5 Year 2045, Build (Alternative 2B) Conditions

Alternative 2B includes a collector-distributor (C-D) road providing access to the Southern Arterial and County F interchanges. The C-D road alignment is parallel to I-41 and would have one exit ramp and one entrance ramp upstream and downstream of the two interchanges

Proposed Intersection Improvements - Alternative 2B

Intersection improvements are recommended at several of the intersections in the study area. The propose geometric improvements are summarized in **Table C-5** for the intersection geometrics and **Figure C-5** for the mainline and ramp geometry. Both items are included in **Appendix C**. The following geometric improvements were made to County F intersections to accommodate forecasted traffic volumes along the corridor.

- County F and Packerland Drive
  - Update intersection control from all-way stop-control to traffic signals
  - All approaches would consist of an exclusive left-turn lane, a through lane, and an exclusive right-turn lane
- County F and Mid Valley Road
  - Increase the number of entry lanes on the east and west approaches (County F) from one to two lanes (two shared through lanes)
  - Increase the number of entry lanes on the north and south approaches (Mid Valley Road) from one to two lanes (shared left-through and exclusive right)
- County F and I-41 southbound interchange ramps
  - Increase the number of entry lanes on the west approach (County F) from two to four lanes (three through lanes and one partial right-turn bypass lane)
  - Increase the number of entry lanes on the east approach (County F) from one to two lanes (one shared left-through lane and one through lane)
- County F at the I-41 overpass
  - Increase the number eastbound travel lanes from two to three
  - Increase the number of westbound travel lanes from one to two
- County F and I-41 northbound interchange ramps
  - Increase the number of entry lanes on the west approach (County F) from two to three lanes (exclusive left, two through lanes)
  - Increase the number of entry lanes on the east approach (County F) from two to three lanes (two through lanes and one full right-turn bypass lane)
  - Increase the number of entry lanes on the south approach (I-41 northbound exit ramp) from two to three lanes (two left-turn lanes and one partial right-turn bypass lane)
- County F between I-41 northbound and Lawrence Drive
  - Increase the number of westbound travel lanes from two to three
- County F and Lawrence Drive

  - Increase the number of entry lanes on the west approach (County F) from two to three lanes (one shared left-through lane, one through lane, and one full right- turn bypass lane)
  - Update the southbound right-turn movement from a partial bypass lane to a full bypass lane

The following geometric improvements were made to the proposed Southern Arterial corridor intersections to accommodate forecasted traffic volumes along the corridor:

- Southern Arterial and I-41 southbound
  - The intersection would be under a two-lane roundabout intersection control
  - The west approach would have two entry lanes
  - The east approach would have two entry lanes
  - The north approach would have dual left-turn lanes and a partial right-turn bypass lane
  - The south approach would have one exit lane
- Southern Arterial and I-41 northbound
  - The intersection would operate under two-lane roundabout intersection control
  - The west approach would have two entry lanes
  - The east approach would have two entry lanes and a partial right-turn bypass lane
  - The north approach would have one exit lane
  - The south approach would have two entry lanes and a partial right-turn bypass lane
- Southern Arterial and Mid Valley Road
  - Traffic signal control was added to the intersection
- Southern Arterial and Innovation Way
  - Traffic signal control was added to the intersection

The above-mentioned improvements along County F are realistic improvements that do not introduce geometrics that are not feasible to the area or are not implemented in the State of Wisconsin (e.g. four circulatory lanes in a roundabout).

Traffic Operation Results - Alternative 2B

Tables 6.17, 6.18, 6.19 and 6.20 illustrate the Year 2045 Alternative 2B operations at the intersections, freeway mainline and ramp junctions. Weekday morning and afternoon peak hour operations indicate that all intersections, for the most part, operate adequately during this time period. The following summarizes two areas of interest in the microsimulation model:

- I-41 Northbound Ramp Intersection at County F: Longer delays and queues are were reported through the Paramics analysis along the south approach; however, these queues, on average, do not reach the northbound C-D road. Several microsimulation runs showed longer delays and queues along the east approach of County F at I-41 Northbound, the east approach of County F at Lawrence Drive, and the I-41 Northbound exit ramp south approach at County F. In particular, one microsimulation run simulated a queue along County F westbound that extended back to the Lawrence Drive roundabout. This was caused by a single truck waiting

to enter the circulatory lane of the I-41 northbound roundabout. Once the truck exited the entry lane, the queue created dissipated quickly – within a few minutes – and never reached that distance again during simulation. This is the reason for the poor intersection LOS shown in **Tables 6.17 and 6.18** for the County F intersections with I-41 Northbound and Lawrence. Both intersections were analyzed in Sidra and the intersections are expected to operate at LOS C or better under 2045 traffic volumes. A comparison analysis is provided in the report section titled Supplemental Sidra Analysis. The comparison analysis also includes the County F intersection with I-41 Southbound and the Sidra results also show that this intersection is expected to operate at LOS C or better under future 2045 traffic.

- I-41 Northbound Ramp Intersection at County G: several microsimulation runs showed eastbound delays along County G at Lawrence Drive, located approximately 420 feet east of the I-41 northbound roundabout, extending into the I-41 Northbound roundabout and delaying vehicles from the northbound exit ramp to enter the roundabout. While longer delays on the exit ramp were observed, vehicles were eventually able to enter the roundabout and clear any queues that were created. Queues created by this condition did not interfere with I-41 northbound freeway mainline operations. These delays were also related to trucks trying to enter the roundabout. This intersection and the I-41 Southbound Ramp intersection at County G (south approach = LOS F) are additional candidates for the supplemental Sidra analysis. See report section titled Supplemental Sidra Analysis.
- I-41 Northbound Ramp Intersection at the Southern Arterial: The south intersection approach expected to operate at LOS F. This problem is related to an isolated truck that is unable to enter the roundabout. This intersection is another candidate for the supplemental Sidra analysis.
- I-41 Northbound Mainline (County S-Southern Arterial): LOS E (AM) – This is related to the four-lane I-41 cross-section.
- I-41 Southbound Entrance Ramp from County S: LOS E (PM) – This is related to the four-lane I-41 cross-section.

Table 6.17: Year 2045, Alternative 2B AM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	B	14.6	A	3.4	B	10.0	A	0.2
County S / I-41 SB	OWSC	C	21.2	A	3.5	N/A	N/A	A	1.0
County S / I-41 NB	OWSC	N/A	N/A	A	1.2	A	6.2	A	6.6
County S / French	TWSC	B	10.6	A	0.0	B	10.2	A	3.4
County F / Packerland	Signal	B	19.2	A	9.9	B	17.5	D	45.3
County F / Mid Valley	RAB	B	12.9	A	1.3	A	6.9	B	12.2
County F / I-41 SB	RAB	A	8.1	A	1.9	N/A	N/A	F	91.1
County F / I-41 NB	RAB	N/A	N/A	B	14.1	F	221.5	A	2.7
County F / Lawrence	RAB	C	20.6	B	13.2	D	26.1	A	6.6
County G / Spirit	OWSC	C	21.5	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	2.8	A	1.5	D	32.2	D	25.3
County G / I-41 NB	RAB	N/A	N/A	A	5.4	D	28.8	A	3.8
County G / Lawrence	Signal	B	14.7	B	14.7	B	17.1	A	0.0
SA / Williams-Grant	Signal	B	10.4	N/A	N/A	A	7.5	C	20.2
SA / Mid Valley	OWSC	N/A	N/A	A	0.0	B	10.5	A	0.0
SA / I-41 SB	RAB	B	10.5	A	3.9	N/A	N/A	D	33.3
SA / I-41 NB	RAB	N/A	N/A	A	8.0	F	58.6	A	2.0
SA / Innovation	Signal	C	31.2	B	13.2	C	27.2	B	13.3
SA / Lawrence	RAB	A	5.9	A	5.1	B	10.8	B	11.8

Table 6.18: Year 2045, Alternative 2B PM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	A	9.9	A	4.2	B	10.1	A	0.0
County S / I-41 SB	OWSC	D	26.8	A	4.8	N/A	N/A	A	1.4
County S / I-41 NB	OWSC	N/A	N/A	A	1.6	A	1.9	A	1.6
County S / French	TWSC	A	7.6	A	0.5	A	9.3	A	1.7
County F / Packerland	Signal	B	16.0	B	15.7	B	11.8	B	10.3
County F / Mid Valley	RAB	F	62.9	A	1.1	A	6.8	B	12.1
County F / I-41 SB	RAB	A	5.8	A	1.9	N/A	N/A	B	11.4
County F / I-41 NB	RAB	N/A	N/A	E	38.3	F	203.6	A	4.6
County F / Lawrence	RAB	E	46.4	F	93.0	F	110.7	A	5.1
County G / Spirit	OWSC	D	25.6	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	2.8	A	1.7	F	112.7	C	16.2
County G / I-41 NB	RAB	N/A	N/A	D	25.8	F	408.5	A	4.7
County G / Lawrence	Signal	B	14.3	B	15.7	F	119.6	A	0.0
SA / Williams-Grant	Signal	C	28.7	N/A	N/A	A	9.7	C	21.2
SA / Mid Valley	OWSC	N/A	N/A	A	0.0	A	7.1	A	0.0
SA / I-41 SB	RAB	D	30.1	A	5.0	N/A	N/A	C	20.7
SA / I-41 NB	RAB	N/A	N/A	E	38.2	B	13.8	A	1.5
SA / Innovation	Signal	C	22.3	B	11.9	C	21.6	B	12.1
SA / Lawrence	RAB	B	10.4	A	9.2	D	27.1	C	16.6

Table 6.19: Year 2045, Alternative 2B Peak Hour Freeway Mainline Operations

Freeway Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
South of County S	D	26.0	C	23.0
County S - Southern Arterial	D	33.7	D	26.1
Southern Arterial - County F (2ln)	C	20.2	B	15.8
Southern Arterial - County F (3ln)	B	13.2	A	10.2
County F - County G	B	15.9	B	17.0
North of County G	B	14.0	B	17.2
I-41 Southbound				
North of County G	B	16.3	B	15.2
County G - County F	C	20.1	C	22.5
County F - Southern Arterial (3ln)	A	8.9	B	13.7
County F - Southern Arterial (2ln)	B	14.1	C	22.9
Southern Arterial - County S	C	22.9	D	31.9
South of County S	C	23.3	D	29.8

Table 6.20: Year 2045, Alternative 2B Peak Hour Freeway Merge / Diverge Operations

Freeway Ramp Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
County S Exit Ramp	D	28.5	C	25.3
County S Entrance Ramp	D	35.0	C	25.9
C-D Road Exit Ramp	B	19.0	B	15.6
Southern Arterial Exit Ramp	C	20.3	B	18.3
Southern Arterial Entrance Ramp	A	8.1	A	8.1
County F Exit Ramp	B	10.9	A	8.6
County F Entrance Ramp	B	12.3	B	18.7
C-D Road Entrance Ramp	B	12.7	B	13.5
County G Exit Ramp	B	15.7	B	15.8
County G Entrance Ramp	B	14.8	B	18.2
I-41 Southbound				
County G Exit Ramp	B	16.3	B	15.2
County G Entrance Ramp	B	13.9	B	15.4
C-D Road Exit Ramp	B	18.5	B	19.4
County F Exit Ramp	B	14.9	B	10.5
County F Entrance Ramp	B	10.6	A	9.7
Southern Arterial Exit Ramp	B	11.1	B	10.3
Southern Arterial Entrance Ramp	B	17.4	B	18.5
C-D Road Entrance Ramp	C	21.9	D	31.8
County S Exit Ramp	C	24.2	D	33.1
County S Entrance Ramp	C	25.7	E	38.7

Some isolated freeway segments and intersections in the Alternative 2B Paramics model were identified as having poor operations. The freeway locations are related to the four-lane freeway segments. This is an indicator that the I-41 six-lane freeway may be warranted in the future however this need is not related to the addition of the Southern Arterial interchange with I-41. The poor intersection performance is related to the County F and County G roundabout intersections where some truck entry issues were observed in the model. In these cases, WisDOT has suggested that the micro-simulation analysis be cross-checked with simpler tools such as Sidra. An analysis of these intersections using Sidra shows that acceptable operations is possible.

With the intersection and roadway modifications, the County F and County G corridors are expected to function at satisfactory levels of service during the peak traffic periods. This is a significant

operational improvement when compared to the improved conditions of the No Build and Alternative 1 scenarios, where modifications for those alternatives could not accommodate the anticipated traffic load on those networks under both analysis methodologies (Paramics and Sidra).

The implementation of a C-D road system along I-41, while shown to operate sufficiently in the Paramics microsimulation model, would likely require widening several overpass/underpass structures – including the County F overpass – to accommodate the northbound and southbound C-D roads. When compared to Alternative 2A (Southern Arterial interchange, no C-D road system), adequate traffic operations are realized for both alternatives with Alternative 2A having fewer design/construction impacts to the existing transportation system. Therefore, while forecasted traffic volumes for Alternative 2B can be accommodated with improvements listed in this document, the amount and significance of updates to the existing transportation system may not be cost-effective to implement.

6.6 Year 2045, Build (Alternative 3) Conditions

Alternative 3, similar to Alternatives 2A and 2B, assumes the inclusion of the proposed Southern Arterial on the roadway network. However, a grade-separated overpass at I-41 and no access to and from the freeway will be provided along the Southern Arterial.

The Year 2045 freeway and intersection forecasts for this alternative and were used to update the Paramics O-D trip tables to evaluate this alternative.

Proposed Intersection Improvements - Alternative 3

Intersection improvements are recommended at several of the intersections in the study area. The propose geometric improvements are summarized in **Table C-6** for the intersection geometrics and **Figure C-6** for the mainline and ramp geometry. Both items are provided in **Appendix C**. The following geometric improvements were made to County F intersections to accommodate forecasted traffic volumes along the corridor.

- County F and Packerland Drive
    - Update intersection control from all-way stop-control to traffic signals
    - The north, east, and west approaches would consist of an exclusive left-turn lane and a shared through/right-turn lane
    - The south approach would consist of an exclusive left-turn lane, a through lane, and an exclusive right-turn lane
- County F and Mid Valley Road
    - Increase the number of entry lanes on the east and west approaches (County F) from one to two lanes (two shared through lanes)
    - Increase the number of entry lanes on the north and south approaches (Mid Valley Road) from one to two lanes (shared left-through and exclusive right)
- County F and I-41 southbound interchange ramps
    - Increase the number of entry lanes on the west approach (County F) from two to four lanes (three through lanes and one partial right-turn bypass lane)
    - Increase the number of entry lanes on the east approach (County F) from one to two lanes (one shared left-through lane and one through lane)
    - Increase the number of entry lanes on the north approach (I-41 exit ramp) from three to four lanes (three left-turn lanes and one partial right-turn bypass lane)
- County F at the I-41 overpass
    - Increase the number eastbound travel lanes from two to three
    - Increase the number of westbound travel lanes from one to two
- County F and I-41 northbound interchange ramps
    - Increase the number of entry lanes on the west approach (County F) from two to three lanes (exclusive left, shared left-through, through)

  - Increase the number of entry lanes on the east approach (County F) from two to three lanes (two through lanes and one full right-turn bypass lane)
  - Increase the number of entry lanes on the south approach (I-41 northbound exit ramp) from two to three lanes (two left-turn lanes and one partial right-turn bypass lane)
  - Increase the number of exit lanes for the I-41 northbound entrance ramp from two to three (two lanes leaving the circulatory lanes, one lane via westbound bypass lane).
  - Increase the I-41 northbound entrance ramp from a merge of two lanes to one lane to a merge from three lanes to two lanes.
    - For Alternative 1 of this intersection, the westbound-to-northbound right-turn was modeled as a partial bypass lane instead of a full bypass lane (as modeled for Alternative 3). This improvement was made due to visual observations of the microsimulation model in which right-turning vehicles could not efficiently merge into the I-41 northbound entrance ramp.
    - The three-lane entrance ramp would run for approximately 700 feet before merging to two lanes. The two lanes would then merge with the I-41 northbound travel lanes, creating a five-lane cross-section. This cross-section would run for approximately 1,200 feet before the outside lane would merge, creating a four-lane freeway section (three freeway mainline lanes and a continuous auxiliary lane).

- County F between I-41 northbound and Lawrence Drive
  - Increase the number of westbound travel lanes from two to three
- County F and Lawrence Drive
  - Increase the number of entry lanes on the west approach (County F) from two to three lanes (one shared left-through lane, one through lane, and one full right- turn bypass lane)
  - Increase the number of entry lanes on the south approach (Lawrence Drive) from two to four lanes (two left-turn lanes, one through lane, and one partial right- turn bypass lane)
  - Update the southbound right-turn movement from a partial bypass lane to a full bypass lane

It should be noted that the above-mentioned improvements along County F are realistic improvements that do not introduce geometrics that are not feasible to the area or are not implemented in the State of Wisconsin (e.g. four circulatory lanes in a roundabout).

Traffic Operation Results - Alternative 3

Tables 6.21, 6.22, 6.23 and 6.24 illustrate the Year 2045 Alternative 3 operations at the intersections, freeway mainline and ramp junctions.

- County F and I-41 southbound ramps. Weekday morning peak hour traffic volumes along County F are projected to increase significantly for Year 2045 conditions. This traffic increase leads to significant delays and queues in the microsimulation network, starting at the County

F west approach to the I-41 southbound interchange ramps. Specifically, the three left-turn lanes provided to accommodate the future AM peak hour left-turning traffic from the I-41 southbound exit ramp (approximately 1,140 vehicles) do not provide adequate gaps in the circulatory lanes for the County F west approach traffic to adequately enter the roundabout. Because of this, queues along the County F approach extend west to the Mid Valley Road intersection during the year 2045 AM peak hour.

- County F and I-41 northbound ramps. The significant volume on the eastbound approach to the roundabout results in insufficient gaps for traffic from the northbound exit ramp to enter the roundabout intersection. Queues along the I-41 northbound exit ramp eventually reach the I-41 northbound freeway mainline, resulting in operational issues at the northbound I-41 exit ramp to County F during the 2045 AM peak hour (LOS E). In addition, the large amount of eastbound traffic at the I-41 northbound roundabout creates inadequate gaps for the large westbound traffic volume arriving from the County F intersection with Lawrence Drive. This condition creates queues on westbound County F that spills back to the Lawrence Drive intersection.
- County F and Lawrence Drive (weekday evening peak hours). During the weekday afternoon peak hour, increased traffic volumes along all approaches, particularly the east (County F) and south (Lawrence Drive) approaches create delays and queues due to the amount of approaching and circulatory lanes at these locations within the roundabout.
- County F Southbound I-41 Entrance Ramp Merge = LOS E (PM): This relates to the conflict between merging vehicles from the ramp and the median lane drop.
- County F Northbound I-41 Exit Ramp diverge = LOS F (AM): This is related to the spill-back occurring at the County F intersection with the I-41 Northbound Ramps on the exit ramp.
- County S Southbound Entrance Ramp = LOS E (PM). This is related to the four-lane I-41 cross-section.
- County G and Lawrence: Lawrence south approach = LOS F (PM). The County G corridor exhibits operational deficiencies at the Lawrence Drive signalized intersection. This results in increased queues along Lawrence Drive and County G, west of Lawrence Drive. A new exclusive eastbound left turn was included in the analysis for this intersection. Regardless, poor operations at this intersection spill back to the I-41 interchange ramp termini causing delays and queues at the two ramp intersections.

Table 6.21: Year 2045, Alternative 3 AM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	C	23.7	A	2.6	B	13.3	A	1.2
County S / I-41 SB	OWSC	D	31.4	A	5.0	N/A	N/A	A	1.8
County S / I-41 NB	OWSC	N/A	N/A	A	1.1	A	5.7	B	14.7
County S / French	TWSC	B	11.8	A	0.1	C	17.8	A	7.2
County F / Packerland	Signal	B	18.4	B	14.9	B	11.6	F	196.3
County F / Mid Valley	RAB	C	18.1	A	0.9	C	21.3	F	70.4
County F / I-41 SB	RAB	B	14.0	A	2.1	N/A	N/A	F	253.1
County F / I-41 NB	RAB	N/A	N/A	A	8.5	F	1047.9	A	3.2
County F / Lawrence	RAB	E	38.8	E	36.9	C	16.4	A	8.2
County G / Spirit	OWSC	C	22.7	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	3.0	A	1.4	D	27.6	B	13.3
County G / I-41 NB	RAB	N/A	N/A	A	5.8	D	26.3	A	2.4
County G / Lawrence	Signal	C	27.3	A	7.0	C	26.9	B	19.5
SA / Williams-Grant	OWSC	A	0.0	N/A	N/A	A	2.9	A	9.9
SA / Mid Valley	TWSC	C	18.8	A	2.6	A	6.0	A	0.0
SA / Innovation	TWSC	A	8.7	A	0.1	B	11.6	A	0.0
SA / Lawrence	RAB	B	10.8	C	15.3	B	11.1	A	6.9

Table 6.22: Year 2045, Alternative 3 PM Peak Hour Intersection Operations

Intersection	I/S Type	North Approach		East Approach		South Approach		West Approach	
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
County S / Mid Valley	TWSC	C	19.9	A	5.5	B	10.7	A	0.3
County S / I-41 SB	OWSC	C	23.2	A	9.1	N/A	N/A	A	2.2
County S / I-41 NB	OWSC	N/A	N/A	A	1.8	A	2.9	A	2.2
County S / French	TWSC	A	8.2	A	0.2	C	16.8	A	3.3
County F / Packerland	Signal	B	16.1	B	14.5	B	12.0	C	24.8
County F / Mid Valley	RAB	E	49.0	A	0.9	A	6.9	C	19.2
County F / I-41 SB	RAB	B	14.0	A	2.2	N/A	N/A	D	25.8
County F / I-41 NB	RAB	N/A	N/A	E	40.8	F	453.1	A	2.5
County F / Lawrence	RAB	D	25.2	F	898.7	F	236.1	A	7.1
County G / Spirit	OWSC	D	31.7	A	0.0	N/A	N/A	A	0.0
County G / I-41 SB	RAB	A	3.4	A	2.0	F	133.2	B	14.8
County G / I-41 NB	RAB	N/A	N/A	B	14.8	F	300.9	A	4.7
County G / Lawrence	Signal	C	21.0	A	7.8	F	265.5	C	20.2
SA / Williams-Grant	OWSC	A	0.0	N/A	N/A	A	1.4	B	12.7
SA / Mid Valley	TWSC	C	21.3	A	1.9	A	6.3	A	0.0
SA / Innovation	TWSC	A	7.8	A	0.0	A	8.9	A	0.0
SA / Lawrence	RAB	D	34.5	B	10.7	D	31.1	A	7.2

Table 6.23: Year 2045, Alternative 3 Peak Hour Freeway Mainline Operations

Freeway Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
South of County S	C	25.4	C	20.1
County S - County F (2-ln)	D	34.8	C	22.1
County S - County F (3-ln)	D	34.2	B	15.1
County F - County G	B	14.6	B	15.5
North of County G	B	12.4	B	16.7
I-41 Southbound				
North of County G	B	15.2	B	15.0
County G - County F	B	15.8	C	19.3
County F - County S (3-ln)	B	13.2	E	37.1
County F - County S (2-ln)	C	19.6	D	26.0
South of County S	C	20.7	D	26.7

Table 6.24: Year 2045, Alternative 3 Peak Hour Freeway Merge / Diverge Operations

Freeway Ramp Segment	Weekday AM		Weekday PM	
	LOS	Density (pcphpl)	LOS	Density (pcphpl)
I-41 Northbound				
County S Exit Ramp	C	26.8	C	22.0
County S Entrance Ramp	D	33.3	C	22.0
County F Exit Ramp	F	46.1	B	14.3
County F Entrance Ramp	B	14.1	B	15.0
County G Exit Ramp	B	14.0	B	14.7
County G Entrance Ramp	B	13.5	B	17.7
I-41 Southbound				
County G Exit Ramp	B	15.2	B	15.0
County G Entrance Ramp	B	13.1	B	15.1
County F Exit Ramp	B	14.1	B	15.1
County F Entrance Ramp	B	13.2	E	37.1
County S Exit Ramp	C	21.3	C	27.4
County S Entrance Ramp	C	23.4	E	35.2

Some isolated freeway segments and intersections in the Alternative 3 Paramics model were identified as having poor operations. The poor intersection performance is related to the County F and County G roundabout intersections where some truck entry issues were observed in the model. In these cases, WisDOT has suggested that the micro-simulation analysis be cross-checked with simpler tools such as Sidra. An analysis of these intersections using Sidra shows that acceptable operations is possible.

The results of the freeway and intersection traffic operations analysis indicate that Alternative 3, similar to Alternative 1, will experience operational deficiencies along the County F corridor due to the increased traffic load along County F. It should be noted, though, that because the Southern Arterial does not have access to I-41 via interchange, motorists would have to utilize the County F corridor and interchanges for travel between the two roadways. This resulted in an increase of peak-hour traffic along County F for Alternative 3 when compared to Alternatives 2A and 2B.

6.7 Supplemental Sidra Analysis

Several roundabout intersections in the operations analysis showed poor levels of service under each of the Build alternatives. In some cases, the bottleneck was caused by an occasional truck that was unable to find an acceptable gap to enter the roundabout. This is based on the use of the microsimulations model, Paramics. WisDOT has cautioned users of microsimulation models that the crosschecking of microsimulation outputs with simpler tools (Sidra) may be necessary when making critical project decisions. In these cases, a Sidra analysis was conducted at these intersections under each of the Build Alternatives. The Sidra analysis worksheets are provided in **Appendix D**.

Alternatives 2A and 2B are the most promising Build alternatives under evaluation. However, there are isolated roundabout intersections that are expected to operate poorly based on the Paramics modeling methodologies. See Tables 6-13, 6-14, 6.17 and 6.18. These intersections include:

1. County F and Mid Valley Drive
2. County F and I-41 Southbound Ramps
3. County F and I-41 Northbound Ramps
4. County F and Lawrence Drive
5. County G and I-41 Southbound Ramps
6. County G and I-41 Northbound Ramps
7. Southern Arterial and I-41 Northbound Ramps

Each of these intersections were analyzed with Sidra. The Sidra results for each of the Alternatives (1, 2A, 2B, and 3) are provided in Tables 6.25 through 6.30.

Table 6.25: Year 2045 Sidra Analysis – County F and Mid Valley Drive

County F / Mid Valley		Alternative 1		Alternative 3		Alternative 2A		Alternative 2B	
		AM	PM	AM	PM	AM	PM	AM	PM
North Approach									
	LOS	A	C	A	B	A	B	A	B
	Delay (s)	8.7	16.5	8.7	13.9	7.6	10.5	7.6	12.3
	95% Q (ft)	30	120	25	95	35	80	25	95
East Approach									
	LOS	A	A	A	A	A	A	A	A
	Delay (s)	7.4	7.6	6.9	7.3	6.4	6.1	6.7	6.7
	95% Q (ft)	50	55	40	50	35	35	40	40
South Approach									
	LOS	A	B	A	B	A	A	A	A
	Delay (s)	8.6	14	8.2	12.5	6.5	7.6	6.8	8.4
	95% Q (ft)	10	55	10	50	5	15	5	15
West Approach									
	LOS	B	B	B	A	A	A	A	A
	Delay (s)	12.7	10.7	11.7	9.9	8.1	7.4	8.7	8.3
	95% Q (ft)	130	65	110	55	45	25	50	35

Table 6.26: Year 2045 Sidra Analysis – County F and I-41 Southbound Ramps

County F / I-41 SB		Alternative 1		Alternative 3		Alternative 2A		Alternative 2B	
		AM	PM	AM	PM	AM	PM	AM	PM
North Approach									
	LOS	C	B	B	B	B	A	B	A
	Delay (s)	19.8	13.5	12.7	10.9	12.2	9.4	11.5	10.0
	95% Q (ft)	135	95	105	95	120	50	110	115
East Approach									
	LOS	A	A	A	A	A	A	A	A
	Delay (s)	6.6	7.0	5.4	5.9	4.7	5.0	4.2	4.6
	95% Q (ft)	0	0	0	0	0	0	0	0
South Approach									
	LOS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Delay (s)								
	95% Q (ft)								
West Approach									
	LOS	F	C	E	C	C	B	D	C
	Delay (s)	74.4	26.8	41.9	20	20.4	14.8	26.8	17.5
	95% Q (ft)	315	125	155	100	100	90	140	120

Table 6.27: Year 2045 Sidra Analysis – County F and I-41 Northbound Ramps

County F / I-41 NB		Alternative 1		Alternative 3		Alternative 2A		Alternative 2B	
		AM	PM	AM	PM	AM	PM	AM	PM
North Approach									
	LOS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Delay (s)								
	95% Q (ft)								
East Approach									
	LOS	C	D	B	C	A	A	A	B
	Delay (s)	16.9	28.2	11.3	16.2	7.8	9.3	7.5	10.4
	95% Q (ft)	75	130	35	65	20	20	20	30
South Approach									
	LOS	F	C	F	C	C	B	B	A
	Delay (s)	142	21.5	70.0	15.7	15.3	10.7	14.4	9.7
	95% Q (ft)	1255	110	470	70	50	40	40	15
West Approach									
	LOS	B	B	C	A	A	A	A	A
	Delay (s)	10.5	10.2	18.6	9.8	7.9	7.9	8.4	9.2
	95% Q (ft)	0	0	0	0	0	0	0	0

Table 6.28: Year 2045 Sidra Analysis – County F and Lawrence Drive

County F / Lawrence		Alternative 1		Alternative 3		Alternative 2A		Alternative 2B	
		AM	PM	AM	PM	AM	PM	AM	PM
North Approach									
	LOS	D	F	B	B	A	B	A	B
	Delay (s)	33.7	50.9	11.2	13.8	8.8	10.7	9.4	11.1
	95% Q (ft)	120	160	35	30	20	25	25	25
East Approach									
	LOS	C	F	B	E	B	C	B	C
	Delay (s)	20.6	111.7	10.8	36	10.8	19.6	11	20.5
	95% Q (ft)	165	645	55	130	60	90	60	90
South Approach									
	LOS	B	C	A	B	A	B	A	B
	Delay (s)	11.2	16.7	7.9	12.5	8.3	12.9	8.7	13.4
	95% Q (ft)	30	100	15	65	20	65	20	75
West Approach									
	LOS	C	B	A	A	A	A	A	A
	Delay (s)	18.2	10.9	8.7	8.7	7.7	7.2	7.9	7.3
	95% Q (ft)	165	90	50	55	40	40	45	40

Table 6.29: Year 2045 Sidra Analysis – County G and I-41 Southbound Ramps

County G / I-41 SB		Alternative 1		Alternative 3		Alternative 2A		Alternative 2B	
		AM	PM	AM	PM	AM	PM	AM	PM
North Approach									
	LOS	A	A	A	A	A	A	A	A
	Delay (s)	8.8	9.5	8.8	9.5	8.2	8.5	8.8	9.3
	95% Q (ft)	60	70	65	70	45	50	60	65
East Approach									
	LOS	A	A	A	A	A	A	A	A
	Delay (s)	5.4	5.9	5.6	6.3	5.2	5.6	5.4	5.8
	95% Q (ft)	20	20	25	25	20	20	20	25
South Approach									
	LOS	A	B	A	B	A	B	A	B
	Delay (s)	7.3	11.7	7.4	11.7	6.6	10.3	7.3	11.4
	95% Q (ft)	10	25	10	25	10	20	10	25
West Approach									
	LOS	A	B	A	B	A	B	A	B
	Delay (s)	8.0	14.0	8.1	14.4	7.2	12.2	8.1	13.9
	95% Q (ft)	15	70	15	75	15	60	15	70

Table 6.30: Year 2045 Sidra Analysis – County G and I-41 Northbound Ramps

County G / I-41 NB		Alternative 1		Alternative 3		Alternative 2A		Alternative 2B	
		AM	PM	AM	PM	AM	PM	AM	PM
North Approach									
	LOS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Delay (s)								
	95% Q (ft)								
East Approach									
	LOS	A	A	A	A	A	A	A	A
	Delay (s)	2.4	2.1	2.8	2.9	2.4	2.9	2.7	3.1
	95% Q (ft)	20	20	20	25	15	20	20	25
South Approach									
	LOS	A	B	A	B	A	A	A	B
	Delay (s)	9.0	12.1	9.6	13.3	7.6	9.1	8.6	10.3
	95% Q (ft)	30	45	40	55	20	25	25	35
West Approach									
	LOS	A	A	A	A	A	A	A	A
	Delay (s)	6.7	9.3	6.7	9.4	6.2	8.6	6.7	9.2
	95% Q (ft)	0	0	0	0	0	0	0	0

Table 6.30: Year 2045 Sidra Analysis – Southern Arterial and I-41 Northbound Ramps

SA / I-41 NB		Alternative 1		Alternative 3		Alternative 2A		Alternative 2B	
		AM	PM	AM	PM	AM	PM	AM	PM
North Approach									
	LOS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Delay (s)								
	95% Q (ft)								
East Approach									
	LOS	N/A	N/A	N/A	N/A	A	B	A	B
	Delay (s)					6.2	10.7	6.0	10.4
	95% Q (ft)					20	95	20	90
South Approach									
	LOS	N/A	N/A	N/A	N/A	B	A	B	A
	Delay (s)					14.1	8.5	11.5	7.3
	95% Q (ft)					170	70	155	50
West Approach									
	LOS	N/A	N/A	N/A	N/A	A	A	A	A
	Delay (s)					5.9	5.0	4.9	8.2
	95% Q (ft)					0	0	0	0

Alternative 1

The following intersections are expected to operate at poor levels of service using Sidra:

1. County F and I-41 Southbound Ramps: west approach = LOS F
2. County F and I-41 Northbound Ramps: south approach = LOS F
3. County F and Lawrence Drive: north and east approaches = LOS F

Alternatives 2A

The Sidra results show that each of the intersections are expected to operate at LOS C or better under Alternative 2A.

Alternative 2B

The Sidra results show that each of the intersections are expected to operate at LOS C or better under Alternative 2A.

Alternative 3

The intersection of County F and I-41 Northbound Ramps is expected to operate at poor levels of service using Sidra: south approach = LOS F

The results of the Sidra analysis suggest that these intersections will operate at acceptable levels of service under Alternatives 2A and 2B. Operational problems still remain under Alternatives 1 and 3.

7 Summary and Conclusions

Brown County is developing an environmental impact statement (EIS) to investigate improvements to their arterial roadway network. A primary focus of this investigation involves the creation of a proposed "Southern Arterial" that will provide another bridge crossing of the Fox River south of DePere. SRF evaluated the traffic operation implications of the Southern Arterial on the adjacent roadway network. This evaluation included analysis of the I-41 corridor, arterial cross-streets, and the proposed Southern Arterial. Various access strategies between I-41 and the Southern Arterial were investigated to determine the impact level of the Southern Arterial on I-41. The following summarizes the results of this analysis:

1. Existing-year (Year 2012) traffic operations of the I-41 freeway corridor indicate that the current freeway characteristics are operating sufficiently during the weekday morning and evening peak periods of traffic.
2. Future-year (Year 2045) No Build traffic operations of the I-41 freeway corridor indicate that traffic operations at several intersections along County F will operate poorly, which will lead to queues extending onto the freeway mainline.
    a. Intersections along County F that are anticipated to operate poorly are as follows:
        i. County F and Mid Valley Drive
        ii. County F and I-41 Southbound Ramps
        iii. County F and I-41 Northbound Ramps
        iv. County F and Lawrence Drive
3. Some of the unimproved (four-lane) I-41 freeway segments, those segments south of the County F interchange, will experience operational deficiencies during future-year peak periods due to the anticipated traffic growth along I-41 without capacity expansion.
4. Analysis of Alternative 1 indicates that the provision of a Scheuring Road (County F) crossing of the Fox River will attract additional traffic to the corridor, particularly roadway segments east of I-41. This, in turn, will decrease levels of service along County F.
    a. When analyzed with the existing transportation network, traffic operations along County F operated poorly, which created queues that extended onto the I-41 southbound freeway mainline.
    b. When reasonable modifications were made to intersections along County F, the roadway network continued to operate poorly along County F and the I-41 southbound freeway mainline.
5. Analysis of Alternative 2A indicates that the provision of a new, Southern Arterial roadway with a new Fox River bridge crossing will divert traffic from the cross-street arterials, particularly County F, to use the new roadway. This, in turn, will improve operations along County F.
    a. When analyzed with the existing transportation network, traffic operations at County F and Lawrence Drive operated poorly (Paramics); however, this is due to downstream capacity constraints at the County F and I-41 northbound ramps intersection. A supplemental analysis was conducted using Sidra for the County F intersections with

Mid Valley Drive, I-41 Southbound Ramps, I-41 Northbound Ramps and Lawrence Drive. All four intersections were shown to operate at LOS C or better using Sidra.

b. The I-41 freeway mainline, ramp junction segments, and cross-street intersections were able to function with satisfactory results when intersection improvement were made to the County F corridor at, and in the vicinity of, the County F and I-41 northbound ramps intersection.

6. Analysis of Alternative 2B indicates that the provision of a new, Southern Arterial roadway with a new Fox River bridge crossing will divert traffic from the cross-street arterials, particularly County F, to use the new roadway. This, in turn, will improve operations along County F.

    a. When analyzed with the existing transportation network, traffic operations at County F and Lawrence Drive operated poorly; however, this is due to downstream capacity constraints at the County F and I-41 northbound ramps intersection.

    b. The I-41 freeway mainline, ramp junction segments, and cross-street intersections were able to function with satisfactory results when intersection improvements were made to the County F corridor at, and in the vicinity of, the County F and I-41 northbound ramps intersection.

    c. Analysis of a collector-distributor (C-D) road system was performed due to the short distance between the County F and Southern Arterial roadway alignments. The results indicated that the C-D roadway system will operate acceptably. This northbound C-D road includes a two-lane C-D road from this ramp to I-41 northbound; however, this may impact the current location of Lawrence Drive north of the County F interchange.

7. Analysis of Alternative 3 indicates that, similar to Alternative 1, the County F corridor will not be able to accommodate future-year traffic volumes.

    a. When analyzed with the existing transportation network, traffic operations along County F operated poorly, which created queues that extended onto the I-41 southbound freeway mainline.

    b. When reasonable modifications were made to intersections along County F, the roadway network continued to operate poorly along County F and the I-41 southbound freeway mainline. However, the supplemental Sidra analysis did show improvements over the Paramics analysis. The County F and I-41 Northbound Ramps intersection with County F is anticipated to operate poorly under 2045 PM peak hour traffic volumes

Alternatives 2A (I-41 Diamond Interchange) and 2B (I-41 C-D Interchange) which include the Southern Arterial on a new alignment are feasible alternatives and are proposed to be carried forward for additional detailed studies in the environmental analysis. Both alternatives are expected to operate at acceptable levels of service. The primary discriminator is that Alternative 2B will cost more due to the reconstruction of the I-41 interchange with Scheuring Road (County F).

APPENDIX A

Existing Peak Hour Traffic Count Data

Intersection: Mid-Valley @ CTH S
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	Mid-Valley Northbound				Mid-Valley Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	2	0	3	0	0	0	3	75	2	0	1	23	3	0	112	482
7:15 AM	0	0	1	0	0	1	1	0	4	87	0	0	4	25	3	0	126	470
7:30 AM	1	2	6	0	5	0	4	0	1	74	1	0	4	25	3	0	126	437
7:45 AM	1	2	2	0	3	2	1	0	5	56	2	0	5	35	4	0	118	388
8:00 AM	2	0	7	0	2	0	0	0	1	54	2	0	5	24	3	0	100	343
8:15 AM	0	1	3	0	3	2	0	0	5	42	3	0	7	27	0	0	93	243
8:30 AM	2	0	6	0	3	1	0	0	1	38	0	0	3	22	1	0	77	150
8:45 AM	1	0	1	0	1	1	5	0	2	38	2	0	3	19	0	0	73	73
Peak Hour	2	4	11	0	11	3	6	0	13	292	5	0	14	108	13	0		

Intersection: Mid-Valley @ CTH S
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	Mid-Valley Northbound				Mid-Valley Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	1	2	4	0	3	0	1	0	0	33	4	0	8	22	0	0	78	343
3:15 PM	3	2	4	0	0	0	2	0	2	35	1	0	5	28	0	0	82	365
3:30 PM	1	1	4	0	2	0	1	0	0	47	0	0	4	34	1	0	95	398
3:45 PM	1	0	9	0	0	0	3	0	0	31	1	0	5	38	0	0	88	408
4:00 PM	0	0	4	0	5	1	1	0	0	40	4	0	4	38	3	0	100	437
4:15 PM	3	1	3	0	4	1	3	0	0	53	1	0	2	43	1	0	115	468
4:30 PM	1	0	9	0	4	2	4	0	0	37	0	0	4	43	1	0	105	484
4:45 PM	2	0	1	0	4	0	3	0	1	51	4	0	5	45	1	0	117	488
5:00 PM	2	2	9	0	7	2	4	0	0	51	4	0	5	44	1	0	131	453
5:15 PM	2	0	18	0	6	0	1	0	0	47	2	0	4	51	0	0	131	322
5:30 PM	3	1	2	0	4	0	1	0	2	43	2	0	4	45	2	0	109	191
5:45 PM	0	1	3	0	1	0	3	0	0	30	2	0	1	40	1	0	82	82
Peak Hour	9	3	30	0	21	2	9	0	3	192	12	0	18	185	4	0		

Intersection: Mid-Valley @ CTH S
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	Mid-Valley Northbound				Mid-Valley Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	28
7:15 AM	0	0	0	0	0	0	0	0	1	5	0	0	0	0	1	0	7	36
7:30 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	1	0	0	6	40
7:45 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	7	0	0	12	51
8:00 AM	0	0	0	0	2	0	0	0	1	4	0	0	0	4	0	0	11	54
8:15 AM	0	0	0	0	0	0	0	0	1	6	0	0	1	3	0	0	11	
8:30 AM	1	0	0	0	1	0	0	0	1	6	0	0	0	8	0	0	17	
8:45 AM	0	0	0	0	1	0	1	0	0	11	0	0	0	2	0	0	15	

Intersection: Mid-Valley @ CTH S
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	Mid-Valley Northbound				Mid-Valley Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	0	0	0	1	0	0	0	0	7	2	0	0	1	0	0	11	26
3:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	25
3:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	6	30
3:45 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	1	0	0	6	29
4:00 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	5	1	0	10	34
4:15 PM	0	0	0	0	1	0	0	0	0	3	0	0	0	4	0	0	8	29
4:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5	38
4:45 PM	0	0	0	0	0	0	0	0	0	4	2	0	0	5	0	0	11	39
5:00 PM	0	0	0	0	0	0	0	0	0	1	1	0	1	2	0	0	5	31
5:15 PM	1	0	9	0	1	0	0	0	0	3	2	0	0	1	0	0	17	
5:30 PM	0	0	0	0	2	0	0	0	0	2	0	0	0	2	0	0	6	
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3	

Intersection: US-41 Southbound Ramps @ CTH S
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	US-41 Northbound				US-41 Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	11	0	16	0	0	38	11	0	23	27	0	0	126	615
7:15 AM	0	0	0	0	19	0	15	0	0	68	17	0	32	30	0	0	181	611
7:30 AM	0	0	0	0	8	0	22	0	0	62	19	0	28	22	0	0	161	528
7:45 AM	0	0	0	0	15	0	27	0	0	44	20	0	16	25	0	0	147	466
8:00 AM	0	0	0	0	8	0	17	0	0	47	16	0	19	15	0	0	122	394
8:15 AM	0	0	0	0	3	0	16	0	0	32	16	0	11	20	0	0	98	272
8:30 AM	0	0	0	0	13	1	14	0	0	33	16	0	7	15	0	0	99	174
8:45 AM	0	0	0	0	8	0	13	0	0	28	11	0	9	6	0	0	75	75
Peak Hour	0	0	0	0	53	0	80	0	0	212	67	0	99	104	0	0		

Intersection: US-41 Southbound Ramps @ CTH S
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	US-41 Northbound				US-41 Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	0	0	0	11	0	27	0	0	32	9	0	2	8	0	0	89	454
3:15 PM	0	0	0	0	15	0	31	0	0	29	8	0	7	14	0	0	104	519
3:30 PM	0	0	0	0	14	1	31	0	0	30	19	0	16	20	0	0	131	564
3:45 PM	0	0	0	0	18	0	39	0	0	25	14	0	10	24	0	0	130	572
4:00 PM	0	0	0	0	20	0	47	0	0	27	19	0	18	23	0	0	154	621
4:15 PM	0	0	0	0	16	0	44	0	0	27	24	0	20	18	0	0	149	637
4:30 PM	0	0	0	0	12	0	38	0	0	30	17	0	17	25	0	0	139	651
4:45 PM	0	0	0	0	22	0	51	0	0	35	26	0	32	13	0	0	179	657
5:00 PM	0	0	0	0	16	0	47	0	0	40	25	0	20	22	0	0	170	573
5:15 PM	0	0	0	0	11	0	43	0	0	40	23	0	25	21	0	0	163	403
5:30 PM	0	0	0	0	14	0	42	0	0	30	18	0	19	22	0	0	145	240
5:45 PM	0	0	0	0	8	0	24	0	0	20	13	0	14	16	0	0	95	95
Peak Hour	0	0	0	0	63	0	183	0	0	145	92	0	96	78	0	0		

Intersection: US-41 Southbound Ramps @ CTH S
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	US-41 Northbound				US-41 Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3	30
7:15 AM	0	0	0	0	1	0	1	0	0	4	1	0	0	0	0	0	7	38
7:30 AM	0	0	0	0	0	0	1	0	0	5	0	0	2	0	0	0	8	41
7:45 AM	0	0	0	0	0	0	0	0	0	3	2	0	0	7	0	0	12	51
8:00 AM	0	0	0	0	1	0	4	0	0	0	6	0	0	0	0	0	11	54
8:15 AM	0	0	0	0	0	0	2	0	0	6	0	0	1	1	0	0	10	
8:30 AM	0	0	0	0	0	1	2	0	0	2	5	0	1	7	0	0	18	
8:45 AM	0	0	0	0	0	0	2	0	0	10	2	0	1	0	0	0	15	

Intersection: US-41 Southbound Ramps @ CTH S
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	US-41 Northbound				US-41 Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	0	0	0	0	0	0	0	0	7	1	0	0	1	0	0	9	29
3:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	4	32
3:30 PM	0	0	0	0	2	0	3	0	0	2	1	0	0	0	0	0	8	37
3:45 PM	0	0	0	0	2	0	1	0	0	3	2	0	0	0	0	0	8	37
4:00 PM	0	0	0	0	1	0	5	0	0	2	2	0	0	2	0	0	12	42
4:15 PM	0	0	0	0	0	0	4	0	0	0	4	0	0	1	0	0	9	35
4:30 PM	0	0	0	0	1	0	1	0	0	2	0	0	2	2	0	0	8	33
4:45 PM	0	0	0	0	1	0	5	0	0	2	1	0	3	1	0	0	13	33
5:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	3	0	0	5	24
5:15 PM	0	0	0	0	0	0	2	0	0	1	2	0	2	0	0	0	7	
5:30 PM	0	0	0	0	2	0	1	0	0	0	4	0	0	1	0	0	8	
5:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0	0	4	

Intersection: US-41 Northbound Ramps @ CTH S
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	US-41 Northbound				US-41 Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	9	0	8	0	0	0	0	0	41	21	0	0	0	17	16	0	112	583
7:15 AM	20	0	11	0	0	0	0	0	65	19	0	0	0	28	19	0	162	565
7:30 AM	13	0	18	0	0	0	0	0	57	20	0	0	0	38	17	0	163	479
7:45 AM	17	0	16	0	0	0	0	0	54	19	0	0	0	25	15	0	146	382
8:00 AM	8	0	13	0	0	0	0	0	28	12	0	0	0	25	8	0	94	301
8:15 AM	3	0	9	0	0	0	0	0	33	8	0	0	0	13	10	0	76	207
8:30 AM	8	0	9	0	0	0	0	0	22	8	0	0	0	13	6	0	66	131
8:45 AM	7	0	6	0	0	0	0	0	21	10	0	0	0	8	13	0	65	65
Peak Hour	59	0	53	0	0	0	0	0	217	79	0	0	0	108	67	0		

Intersection: US-41 Northbound Ramps @ CTH S
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	US-41 Northbound				US-41 Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	7	1	8	0	0	0	0	0	19	11	0	0	0	21	4	0	71	363
3:15 PM	5	0	10	0	0	0	0	0	17	23	0	0	0	15	9	0	79	395
3:30 PM	7	0	8	0	0	0	0	0	28	21	0	0	0	26	7	0	97	434
3:45 PM	19	0	18	0	0	0	0	0	25	18	0	0	0	30	6	0	116	456
4:00 PM	14	0	10	0	0	0	0	0	24	17	0	0	0	23	15	0	103	465
4:15 PM	8	0	18	0	0	0	0	0	29	28	0	0	0	14	21	0	118	495
4:30 PM	16	0	15	0	0	0	0	0	25	23	0	0	0	25	15	0	119	508
4:45 PM	13	0	13	0	0	0	0	0	24	22	0	0	0	35	18	0	125	494
5:00 PM	20	1	19	0	0	0	0	0	35	22	0	0	0	22	14	0	133	465
5:15 PM	16	0	19	0	0	0	0	0	33	21	0	0	0	36	6	0	131	332
5:30 PM	10	0	24	0	0	0	0	0	22	22	0	0	0	18	9	0	105	201
5:45 PM	14	0	8	0	0	0	0	0	26	28	0	0	0	15	5	0	96	96
Peak Hour	65	1	66	0	0	0	0	0	117	88	0	0	0	118	53	0		

Intersection: US-41 Northbound Ramps @ CTH S
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	US-41 Northbound				US-41 Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	1	0	0	0	0	0	2	2	0	0	0	1	0	0	6	38
7:15 AM	0	0	1	0	0	0	0	0	4	2	0	0	0	0	0	0	7	37
7:30 AM	1	0	2	0	0	0	0	0	4	3	0	0	0	2	2	0	14	41
7:45 AM	1	0	0	0	0	0	0	0	7	1	0	0	0	2	0	0	11	35
8:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	2	1	0	5	30
8:15 AM	0	0	2	0	0	0	0	0	5	2	0	0	0	1	1	0	11	
8:30 AM	1	0	1	0	0	0	0	0	4	0	0	0	0	1	1	0	8	
8:45 AM	2	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	6	

Intersection: US-41 Northbound Ramps @ CTH S
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	US-41 Northbound				US-41 Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	3	0	2	0	0	0	0	0	3	1	0	0	0	2	0	0	11	22
3:15 PM	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	3	17
3:30 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	4	0	0	6	19
3:45 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2	19
4:00 PM	2	0	0	0	0	0	0	0	2	0	0	0	0	1	1	0	6	21
4:15 PM	1	0	2	0	0	0	0	0	0	1	0	0	0	1	0	0	5	18
4:30 PM	0	0	1	0	0	0	0	0	1	2	0	0	0	2	0	0	6	18
4:45 PM	1	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	4	13
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	3	11
5:15 PM	0	0	1	0	0	0	0	0	2	0	0	0	0	0	2	0	5	
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
5:45 PM	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	

Intersection: French @ CTH S
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	French Northbound				French Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	1	0	0	0	0	3	0	6	6	9	0	2	36	0	0	63	307
7:15 AM	0	4	0	0	0	0	4	0	7	5	11	0	0	49	0	0	80	309
7:30 AM	3	1	0	0	1	1	4	0	10	16	8	0	0	44	1	0	89	268
7:45 AM	4	0	0	0	0	2	4	0	8	10	9	0	1	35	2	0	75	216
8:00 AM	6	1	2	0	0	0	5	0	7	13	5	0	1	24	1	0	65	180
8:15 AM	5	1	0	0	0	0	4	0	6	7	2	0	0	14	0	0	39	115
8:30 AM	1	0	0	0	0	0	3	0	5	10	2	0	0	16	0	0	37	76
8:45 AM	4	1	0	0	0	0	2	0	3	6	5	0	2	15	1	0	39	39
Peak Hour	13	6	2	0	1	3	17	0	32	44	33	0	2	152	4	0		

Intersection: French @ CTH S
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	French Northbound				French Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	4	1	1	0	0	1	4	0	2	12	4	0	2	18	0	0	49	251
3:15 PM	5	2	0	0	0	0	1	0	7	18	6	0	1	18	0	0	58	271
3:30 PM	4	0	0	0	1	1	11	0	1	20	7	0	0	17	0	0	62	300
3:45 PM	5	1	1	0	1	1	9	0	4	25	7	0	5	23	0	0	82	325
4:00 PM	7	1	0	0	0	1	8	0	3	18	3	0	2	26	0	0	69	337
4:15 PM	14	0	1	0	0	1	5	0	7	30	7	0	2	20	0	0	87	349
4:30 PM	6	2	0	0	1	0	8	0	3	29	6	0	3	29	0	0	87	349
4:45 PM	7	1	2	0	1	0	12	0	0	32	2	0	0	36	1	0	94	339
5:00 PM	9	1	0	0	1	0	7	0	4	26	6	0	1	24	2	0	81	307
5:15 PM	3	2	0	0	0	1	9	0	4	32	4	0	2	29	1	0	87	226
5:30 PM	7	2	0	0	0	1	3	0	4	30	9	0	1	20	0	0	77	139
5:45 PM	3	1	1	0	1	2	2	0	2	22	11	0	3	14	0	0	62	62
Peak Hour	25	6	2	0	3	1	36	0	11	119	18	0	6	118	4	0		

Intersection: French @ CTH S
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	French Northbound				French Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3	18
7:15 AM	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3	20
7:30 AM	2	0	0	0	0	1	3	0	2	2	0	0	0	0	0	0	10	22
7:45 AM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	15
8:00 AM	3	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	5	17
8:15 AM	1	0	0	0	0	0	1	0	2	0	1	0	0	0	0	0	5	
8:30 AM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	3	
8:45 AM	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	4	

Intersection: French @ CTH S
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	French Northbound				French Southbound				CTH S Eastbound				CTH S Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	0	0	0	0	0	2	0	1	2	0	0	0	0	0	0	5	14
3:15 PM	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	11
3:30 PM	0	0	0	0	1	0	2	0	0	0	1	0	0	2	0	0	6	14
3:45 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	13
4:00 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2	13
4:15 PM	1	0	0	0	0	0	1	0	3	0	0	0	0	0	0	0	5	13
4:30 PM	0	0	0	0	0	0	2	0	1	0	2	0	0	0	0	0	5	11
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	8
5:00 PM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7
5:15 PM	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	3	
5:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Intersection: Packerland @ Scheuring
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	Packerland Northbound				Packerland Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	2	16	20	0	15	7	0	0	2	21	0	0	5	2	15	0	105	490
7:15 AM	0	34	18	0	17	19	0	0	0	14	0	0	12	1	23	0	138	533
7:30 AM	0	27	12	0	31	21	0	0	0	19	2	0	21	3	22	0	158	537
7:45 AM	2	15	4	0	21	8	1	0	0	6	3	0	9	2	18	0	89	439
8:00 AM	0	19	28	0	18	20	0	0	0	13	4	0	30	1	15	0	148	422
8:15 AM	1	29	34	0	8	16	1	0	0	7	3	0	23	3	17	0	142	274
8:30 AM	1	8	15	0	6	4	0	0	1	6	2	0	9	0	8	0	60	132
8:45 AM	1	14	8	0	10	9	0	0	0	8	1	0	4	5	12	0	72	72
Peak Hour	3	90	78	0	78	65	2	0	0	45	12	0	83	9	72	0		

Intersection: Packerland @ Scheuring
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	Packerland Northbound				Packerland Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	1	4	8	0	12	21	0	0	0	1	3	0	32	15	13	0	110	477
3:15 PM	4	30	25	0	10	21	1	0	1	3	7	0	28	11	10	0	151	477
3:30 PM	5	9	24	0	20	14	1	0	0	5	3	0	13	10	16	0	120	451
3:45 PM	1	12	13	0	12	17	0	0	0	6	1	0	12	7	15	0	96	447
4:00 PM	1	9	7	0	11	22	1	0	0	4	0	0	11	19	25	0	110	477
4:15 PM	1	14	12	0	15	29	1	0	1	4	1	0	5	15	27	0	125	501
4:30 PM	0	10	12	0	22	20	0	0	0	11	0	0	11	14	16	0	116	484
4:45 PM	4	7	17	0	24	27	1	0	0	9	3	0	13	5	16	0	126	469
5:00 PM	0	14	11	0	24	23	0	0	0	9	0	0	16	20	17	0	134	451
5:15 PM	1	7	9	0	22	21	1	0	0	8	2	0	18	10	9	0	108	317
5:30 PM	3	11	5	0	13	21	0	0	0	6	0	0	16	11	15	0	101	209
5:45 PM	3	8	10	0	22	23	0	0	0	2	2	0	28	5	5	0	108	108
Peak Hour	5	45	52	0	85	99	2	0	1	33	4	0	45	54	76	0		

Intersection: Packerland @ Scheuring
Start Date: Dec 4th, 2012
Start Time:
Weather:
Notes: TRUCKS ONLY

	Packerland Northbound				Packerland Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	3	18
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	38
7:30 AM	0	0	0	0	1	4	0	0	0	0	0	0	1	1	1	0	8	53
7:45 AM	0	1	1	0	1	0	0	0	0	0	1	0	0	0	1	0	5	48
8:00 AM	0	5	3	0	3	3	0	0	0	1	4	0	4	0	0	0	23	48
8:15 AM	0	7	1	0	2	3	1	0	0	2	0	0	0	0	1	0	17	
8:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	3	
8:45 AM	0	0	1	0	2	1	0	0	0	0	0	0	1	0	0	0	5	

Intersection: Packerland @ Scheuring
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	Packerland Northbound				Packerland Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	0	1	0	4	1	0	0	0	0	0	0	1	0	0	0	7	32
3:15 PM	0	0	0	0	1	3	0	0	0	0	2	0	4	0	0	0	10	25
3:30 PM	4	5	2	0	2	0	0	0	0	0	0	0	0	0	1	0	14	17
3:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	5
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	7
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
5:45 PM	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	4	

Intersection: Mid Valley @ Scheuring
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	Mid Valley Northbound				Mid Valley Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	1	1	9	0	26	6	2	0	4	81	0	0	13	39	9	0	191	869
7:15 AM	0	3	8	0	31	8	5	0	8	108	0	0	15	49	18	0	253	864
7:30 AM	1	4	8	0	31	8	9	0	3	119	0	0	17	48	26	0	274	792
7:45 AM	0	5	5	0	10	2	3	0	3	59	0	0	13	28	23	0	151	643
8:00 AM	0	2	6	0	13	0	4	0	3	78	0	0	7	47	26	0	186	623
8:15 AM	2	2	7	0	14	2	6	0	3	74	0	0	8	44	19	0	181	437
8:30 AM	0	1	4	0	14	0	1	0	1	50	1	0	6	31	16	0	125	256
8:45 AM	0	1	9	0	18	1	3	0	1	35	1	0	8	29	25	0	131	131
Peak Hour	2	13	30	0	98	24	19	0	18	367	0	0	58	164	76	0		

Intersection: Mid Valley @ Scheuring
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	Mid Valley Northbound				Mid Valley Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	2	6	0	77	2	17	0	3	75	1	0	9	45	10	0	247	871
3:15 PM	0	0	15	0	31	5	5	0	1	50	1	0	16	56	23	0	203	825
3:30 PM	0	5	25	0	47	1	10	0	0	45	4	0	9	54	18	0	218	844
3:45 PM	1	1	24	0	15	6	7	0	1	43	2	0	18	52	33	0	203	900
4:00 PM	2	3	15	0	34	6	16	0	2	35	1	0	13	51	23	0	201	898
4:15 PM	1	6	12	0	35	4	7	0	2	64	1	0	15	56	19	0	222	892
4:30 PM	6	3	18	0	49	11	19	0	3	40	1	0	26	67	31	0	274	820
4:45 PM	2	5	31	0	15	4	9	0	1	30	2	0	13	55	34	0	201	688
5:00 PM	0	2	15	0	28	2	9	0	2	34	0	0	12	65	26	0	195	619
5:15 PM	1	1	4	0	22	2	6	0	0	44	1	0	10	41	18	0	150	424
5:30 PM	0	0	6	0	25	3	3	0	0	34	1	0	14	43	13	0	142	274
5:45 PM	1	0	18	0	18	2	2	0	2	42	1	0	4	32	10	0	132	132
Peak Hour	10	13	69	0	133	27	49	0	8	182	5	0	72	226	106	0		

Intersection: PDQ @ Scheuring
Start Date: Dec 11th, 2012
Start Time:
Weather:
Notes: TRUCKS ONLY

	PDQ Northbound				PDQ Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	1	0	3	1	0	0	0	3	0	0	0	5	1	0	14	92
7:15 AM	0	1	1	0	4	1	0	0	0	12	0	0	1	3	1	0	24	113
7:30 AM	0	0	0	0	1	1	1	0	0	20	0	0	0	6	2	0	31	137
7:45 AM	0	0	0	0	1	0	0	0	0	12	0	0	0	9	1	0	23	138
8:00 AM	0	0	1	0	1	0	0	0	0	20	0	0	1	11	1	0	35	141
8:15 AM	1	0	3	0	2	1	0	0	0	19	0	0	0	19	3	0	48	
8:30 AM	0	0	2	0	0	0	0	0	0	14	0	0	0	15	1	0	32	
8:45 AM	0	0	0	0	1	0	0	0	0	11	0	0	1	13	0	0	26	

Intersection: PDQ @ Scheuring
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	PDQ Northbound				PDQ Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	9	1	0	23	94
3:15 PM	0	0	2	0	0	0	0	0	0	11	0	0	1	14	2	0	30	82
3:30 PM	0	0	1	0	1	0	0	0	0	9	1	0	0	13	1	0	26	57
3:45 PM	0	0	1	0	0	0	0	0	0	10	0	0	0	2	2	0	15	39
4:00 PM	0	1	0	0	0	0	1	0	0	9	0	0	0	0	0	0	11	27
4:15 PM	0	1	1	0	1	0	0	0	0	1	0	0	0	1	0	0	5	17
4:30 PM	1	0	1	0	2	0	2	0	0	1	0	0	0	1	0	0	8	14
4:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	3	12
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	16
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2	
5:30 PM	0	0	1	0	1	1	0	0	0	1	0	0	0	2	0	0	6	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	7	

Intersection: US-41 Southbound Ramps @ Scheuring
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	US-41 Northbound				US-41 Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	126	0	44	0	0	113	16	0	35	47	0	0	381	1838
7:15 AM	0	0	0	0	162	0	57	0	0	146	31	0	48	70	0	0	514	1746
7:30 AM	0	0	0	0	204	0	68	0	0	105	11	0	54	41	0	0	483	1538
7:45 AM	0	0	0	0	198	0	67	0	0	100	10	0	29	56	0	0	460	1271
8:00 AM	0	0	0	0	114	0	38	0	0	81	9	0	17	30	0	0	289	993
8:15 AM	0	0	0	0	104	0	33	0	0	97	12	0	20	40	0	0	306	704
8:30 AM	0	0	0	0	79	0	23	0	0	60	4	0	20	30	0	0	216	398
8:45 AM	0	0	0	0	74	0	24	0	0	41	9	0	14	20	0	0	182	182
Peak Hour	0	0	0	0	690	0	236	0	0	464	68	0	166	214	0	0		

Intersection: US-41 Southbound Ramps @ Scheuring
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	US-41 Northbound				US-41 Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	0	0	0	96	0	18	0	0	142	16	0	49	68	0	0	389	1485
3:15 PM	0	0	0	0	92	0	37	0	0	78	14	0	45	59	0	0	325	1430
3:30 PM	0	0	0	0	99	0	33	0	0	131	26	0	60	51	0	0	400	1504
3:45 PM	0	0	0	0	103	0	56	0	0	85	13	0	46	68	0	0	371	1539
4:00 PM	0	0	0	0	58	0	18	0	0	158	35	0	29	36	0	0	334	1563
4:15 PM	0	0	0	0	110	0	49	0	0	105	15	0	55	65	0	0	399	1564
4:30 PM	0	0	0	0	104	0	45	0	0	153	20	0	53	60	0	0	435	1448
4:45 PM	0	0	0	0	101	0	48	0	0	100	17	0	55	74	0	0	395	1257
5:00 PM	0	0	0	0	86	0	38	0	0	73	14	0	59	65	0	0	335	1087
5:15 PM	0	0	0	0	68	0	47	0	0	77	11	0	38	42	0	0	283	752
5:30 PM	0	0	0	0	60	0	22	0	0	78	10	0	32	42	0	0	244	469
5:45 PM	0	0	0	0	53	0	29	0	0	58	11	0	32	42	0	0	225	225
Peak Hour	0	0	0	0	401	0	180	0	0	431	66	0	222	264	0	0		

Intersection: US-41 Southbound Ramps @ Scheuring
Start Date: Dec 4th, 2012
Start Time:
Weather:
Notes: TRUCKS ONLY

	US-41 Northbound				US-41 Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	11	0	2	0	0	22	0	0	3	3	0	0	41	203
7:15 AM	0	0	0	0	12	0	9	0	0	31	4	0	8	5	0	0	69	208
7:30 AM	0	0	0	0	2	0	17	0	0	16	0	0	6	4	0	0	45	179
7:45 AM	0	0	0	0	6	0	15	0	0	20	2	0	2	3	0	0	48	161
8:00 AM	0	0	0	0	10	0	14	0	0	19	1	0	1	1	0	0	46	145
8:15 AM	0	0	0	0	14	0	4	0	0	18	1	0	2	1	0	0	40	
8:30 AM	0	0	0	0	18	0	1	0	0	5	0	0	2	1	0	0	27	
8:45 AM	0	0	0	0	18	0	3	0	0	3	2	0	2	4	0	0	32	

Intersection: US-41 Southbound Ramps @ Scheuring
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	US-41 Northbound				US-41 Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	0	0	0	8	0	1	0	0	3	0	0	2	3	0	0	17	58
3:15 PM	0	0	0	0	6	0	1	0	0	2	1	0	2	3	0	0	15	49
3:30 PM	0	0	0	0	9	0	0	0	0	1	2	0	1	1	0	0	14	46
3:45 PM	0	0	0	0	6	0	1	0	0	1	0	0	2	2	0	0	12	47
4:00 PM	0	0	0	0	4	0	1	0	0	3	0	0	0	0	0	0	8	50
4:15 PM	0	0	0	0	5	0	1	0	0	0	0	0	6	0	0	0	12	51
4:30 PM	0	0	0	0	10	0	1	0	0	2	0	0	2	0	0	0	15	49
4:45 PM	0	0	0	0	6	0	2	0	0	1	1	0	4	1	0	0	15	44
5:00 PM	0	0	0	0	6	0	1	0	0	0	1	0	1	0	0	0	9	39
5:15 PM	0	0	0	0	2	0	7	0	0	0	0	0	1	0	0	0	10	
5:30 PM	0	0	0	0	7	0	0	0	0	0	1	0	2	0	0	0	10	
5:45 PM	0	0	0	0	4	0	0	0	0	1	1	0	3	1	0	0	10	

Intersection: US-41 Northbound Ramps @ Scheuring
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	US-41 Northbound				US-41 Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	5	0	42	0	0	0	0	0	43	169	0	0	0	66	109	0	434	1781
7:15 AM	12	0	51	0	0	0	0	0	25	197	0	0	0	101	86	0	472	1763
7:30 AM	9	0	44	0	0	0	0	0	22	145	0	0	0	108	78	0	406	1614
7:45 AM	13	0	28	0	0	0	0	0	52	208	0	0	0	83	85	0	469	1519
8:00 AM	20	0	59	0	0	0	0	0	34	147	0	0	0	74	82	0	416	1329
8:15 AM	13	0	44	0	0	0	0	0	24	118	0	0	0	54	70	0	323	913
8:30 AM	14	0	52	0	0	0	0	0	18	97	0	0	0	48	82	0	311	590
8:45 AM	8	0	35	0	0	0	0	0	29	98	0	0	0	40	69	0	279	279
Peak Hour	39	0	165	0	0	0	0	0	142	719	0	0	0	358	358	0		

Intersection: US-41 Northbound Ramps @ Scheuring
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	US-41 Northbound				US-41 Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	7	0	24	0	0	0	0	0	54	75	0	0	0	64	117	0	341	1507
3:15 PM	9	0	35	0	0	0	0	0	33	78	0	0	0	74	91	0	320	1854
3:30 PM	8	0	34	0	0	0	0	0	76	99	0	0	0	94	126	0	437	2098
3:45 PM	13	0	37	0	0	0	0	0	48	105	0	0	0	76	130	0	409	2346
4:00 PM	17	0	63	0	0	0	0	0	90	138	0	0	0	114	266	0	688	2477
4:15 PM	11	0	50	0	0	0	0	0	59	148	0	0	0	118	178	0	564	2275
4:30 PM	15	0	58	0	0	0	0	0	96	175	0	0	0	116	225	0	685	2058
4:45 PM	19	0	63	0	0	0	0	0	61	143	0	0	0	114	140	0	540	1722
5:00 PM	18	0	67	0	0	0	0	0	43	133	0	0	0	96	129	0	486	1487
5:15 PM	6	0	37	0	0	0	0	0	25	106	0	0	0	76	97	0	347	1001
5:30 PM	6	0	27	0	0	0	0	0	33	103	0	0	0	77	103	0	349	654
5:45 PM	9	0	34	0	0	0	0	0	26	109	0	0	0	55	72	0	305	305
Peak Hour	62	0	234	0	0	0	0	0	306	604	0	0	0	462	809	0		

Intersection: US-41 @ Scheuring
Start Date: Dec 4th, 2012
Start Time:
Weather:
Notes: TRUCKS ONLY

	US-41 Northbound				US-41 Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
Counter #	28	27	26	25	20	19	18	17	32	31	30	29	24	23	22	21		
7:00 AM	1	0	1	0	0	0	0	0	3	10	0	0	0	1	5	0	21	88
7:15 AM	1	0	1	0	0	0	0	0	0	8	0	0	0	3	10	0	23	106
7:30 AM	0	0	3	0	0	0	0	0	2	13	0	0	0	10	2	0	30	121
7:45 AM	0	0	3	0	0	0	0	0	2	6	0	0	0	3	0	0	14	117
8:00 AM	1	0	8	0	0	0	0	0	2	14	0	0	0	4	10	0	39	131
8:15 AM	2	0	1	0	0	0	0	0	3	13	0	0	0	6	13	0	38	
8:30 AM	5	0	2	0	0	0	0	0	0	5	0	0	0	4	10	0	26	
8:45 AM	1	0	4	0	0	0	0	0	1	3	0	0	0	10	9	0	28	

Intersection: US-41 Northbound Ramps @ Scheuring
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	US-41 Northbound				US-41 Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	0	2	0	0	0	0	0	8	5	0	0	0	7	4	0	26	129
3:15 PM	0	0	2	0	0	0	0	0	9	10	0	0	0	6	7	0	34	131
3:30 PM	1	0	5	0	0	0	0	0	11	10	0	0	0	4	4	0	35	119
3:45 PM	2	0	3	0	0	0	0	0	12	12	0	0	0	1	4	0	34	93
4:00 PM	1	0	5	0	0	0	0	0	8	6	0	0	0	2	6	0	28	74
4:15 PM	2	0	2	0	0	0	0	0	5	6	0	0	0	2	5	0	22	60
4:30 PM	1	0	2	0	0	0	0	0	0	1	0	0	0	3	2	0	9	56
4:45 PM	1	0	1	0	0	0	0	0	1	4	0	0	0	4	4	0	15	55
5:00 PM	0	0	4	0	0	0	0	0	0	1	0	0	0	2	7	0	14	51
5:15 PM	0	0	2	0	0	0	0	0	0	5	0	0	0	1	10	0	18	
5:30 PM	1	0	1	0	0	0	0	0	0	4	0	0	0	1	1	0	8	
5:45 PM	0	0	0	0	0	0	0	0	1	3	0	0	0	2	5	0	11	

Intersection: Lawrence @ Scheuring
Start Date: Jan 8th, 2013
Start Time:
Weather:
Notes:

	Lawrence Northbound				Lawrence Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	64	41	7	0	11	27	18	0	36	48	134	0	17	97	14	0	514	2224
7:15 AM	49	35	11	0	9	50	26	0	29	68	164	0	12	122	21	0	596	2150
7:30 AM	81	30	9	0	10	40	27	0	33	72	124	0	24	79	7	0	536	1938
7:45 AM	53	20	6	0	10	58	27	0	31	65	189	0	28	85	6	0	578	1725
8:00 AM	47	14	12	0	5	28	25	0	36	66	125	0	11	65	6	0	440	1409
8:15 AM	49	13	7	0	10	33	17	0	29	48	82	0	17	69	10	0	384	969
8:30 AM	34	22	8	0	6	24	26	0	34	42	54	0	4	58	11	0	323	585
8:45 AM	28	16	2	0	6	18	24	0	29	34	55	0	11	34	5	0	262	262
Peak Hour	247	126	33	0	40	175	98	0	129	253	611	0	81	383	48	0		

Intersection: Lawrence @ Scheuring
Start Date:
Start Time:
Weather:
Notes:

	Lawrence Northbound				Lawrence Southbound				Scheuring Eastbound				Scheuring Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	58	34	19	0	11	33	47	0	53	50	32	0	4	117	18	0	476	1768
3:15 PM	57	29	16	0	6	25	40	0	39	46	36	0	6	69	9	0	378	1838
3:30 PM	39	37	17	0	7	27	54	0	36	47	42	0	3	109	17	0	435	1964
3:45 PM	64	36	19	0	5	40	57	0	41	55	72	0	9	65	16	0	479	2179
4:00 PM	131	54	28	0	5	33	64	0	59	48	20	0	3	89	12	0	546	2309
4:15 PM	125	36	14	0	5	41	46	0	66	31	38	0	7	86	9	0	504	2381
4:30 PM	188	61	21	0	5	36	62	0	51	58	63	0	2	95	8	0	650	2376
4:45 PM	102	63	13	0	8	39	76	0	50	74	69	0	8	94	13	0	609	2275
5:00 PM	117	64	17	0	9	28	81	0	73	54	60	0	5	89	21	0	618	2096
5:15 PM	81	58	15	0	4	34	66	0	58	75	40	0	5	55	8	0	499	1478
5:30 PM	81	60	20	0	4	31	61	0	48	83	54	0	8	84	15	0	549	979
5:45 PM	63	35	24	0	13	27	61	0	42	56	31	0	8	63	7	0	430	430
Peak Hour	532	224	65	0	27	144	265	0	240	217	230	0	22	364	51	0		

Intersection: Main @ Lawrence
Start Date: Dec 6th, 2012
Start Time:
Weather:
Notes: ALL VEHICLES

	Lawrence Northbound				Lawrence Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	26	6	11	0	11	5	3	0	3	116	9	0	16	90	0	0	296	1417
7:15 AM	16	6	10	0	9	5	3	0	3	85	41	0	27	140	2	0	347	1424
7:30 AM	39	7	9	0	17	5	2	0	11	112	49	0	38	180	4	0	473	1404
7:45 AM	19	7	13	0	14	3	1	0	3	88	39	0	27	86	1	0	301	1265
8:00 AM	10	11	5	0	18	8	2	0	5	89	31	0	20	102	2	0	303	1174
8:15 AM	30	5	10	0	13	7	3	0	7	87	24	0	25	115	1	0	327	871
8:30 AM	30	4	12	0	13	10	5	0	5	85	16	0	27	124	3	0	334	544
8:45 AM	16	1	10	0	6	5	2	0	4	52	24	0	15	74	1	0	210	210
Peak Hour	84	31	37	0	58	21	8	0	22	374	160	0	112	508	9	0		

Intersection: Main @ Lawrence
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	Lawrence Northbound				Lawrence Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	44	1	19	0	3	4	5	0	6	105	34	0	21	119	0	0	361	1522
3:15 PM	33	1	18	0	5	4	7	0	1	100	39	0	30	117	0	0	355	1603
3:30 PM	49	0	19	0	2	5	5	0	4	119	39	0	17	130	1	0	390	1681
3:45 PM	43	5	18	0	5	7	7	0	2	120	44	0	17	147	1	0	416	1709
4:00 PM	59	2	20	0	4	2	5	0	1	143	45	0	20	139	2	0	442	1703
4:15 PM	50	3	26	0	2	3	5	0	3	127	45	0	31	137	1	0	433	1698
4:30 PM	65	4	20	0	4	4	1	0	2	124	47	0	22	124	1	0	418	1691
4:45 PM	65	1	20	0	2	3	6	0	5	132	38	0	23	115	0	0	410	1664
5:00 PM	66	1	20	0	3	6	5	0	2	139	60	0	24	110	1	0	437	1575
5:15 PM	50	3	30	0	5	3	4	0	5	128	45	0	20	131	2	0	426	1138
5:30 PM	37	4	29	0	0	8	6	0	5	101	42	0	19	139	1	0	391	712
5:45 PM	34	5	16	0	5	4	9	0	4	91	25	0	28	99	1	0	321	321
Peak Hour	217	14	84	0	15	16	18	0	8	514	181	0	90	547	5	0		

Intersection: Main @ Lawrence
Start Date: Dec 6th, 2012
Start Time:
Weather:
Notes: TRUCKS ONLY

	Lawrence Northbound				Lawrence Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	0	0	0	0	0	1	3	0	1	1	0	0	6	36
7:15 AM	1	0	0	0	0	0	0	0	0	3	2	0	1	2	0	0	9	35
7:30 AM	2	0	0	0	0	0	0	0	0	1	3	0	0	2	0	0	8	39
7:45 AM	3	0	3	0	0	0	0	0	0	1	1	0	1	4	0	0	13	49
8:00 AM	0	0	0	0	0	0	0	0	0	1	2	0	2	0	0	0	5	42
8:15 AM	5	0	1	0	0	0	0	0	0	0	3	0	1	3	0	0	13	
8:30 AM	5	0	1	0	0	0	0	0	0	5	1	0	3	3	0	0	18	
8:45 AM	0	0	1	0	0	0	0	0	0	2	2	0	0	1	0	0	6	

Intersection: Main @ Lawrence
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	Lawrence Northbound				Lawrence Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	2	0	0	0	0	0	0	0	0	6	2	0	0	4	0	0	14	63
3:15 PM	1	0	1	0	0	0	0	0	0	2	5	0	1	6	0	0	16	58
3:30 PM	2	0	0	0	0	0	0	0	0	4	4	0	0	6	0	0	16	55
3:45 PM	1	0	1	0	0	0	0	0	0	4	5	0	0	6	0	0	17	49
4:00 PM	1	0	0	0	0	0	0	0	0	6	0	0	0	2	0	0	9	39
4:15 PM	1	0	1	0	0	0	0	0	0	8	1	0	1	1	0	0	13	35
4:30 PM	4	0	0	0	0	0	0	0	0	4	0	0	0	2	0	0	10	28
4:45 PM	0	0	0	0	0	0	0	0	0	2	2	0	1	2	0	0	7	22
5:00 PM	2	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	5	19
5:15 PM	0	0	0	0	0	0	0	0	0	1	3	0	0	2	0	0	6	
5:30 PM	1	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	4	
5:45 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	4	

Intersection: Main @ Spirit
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	Spirit Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	10	0	3	0	1	44	0	0	0	79	17	0	154	809
7:15 AM	0	0	0	0	7	0	4	0	3	68	0	0	0	92	13	0	187	820
7:30 AM	0	0	0	0	7	0	6	0	3	59	0	0	0	127	11	0	213	784
7:45 AM	0	0	0	0	10	0	9	0	5	60	0	0	0	156	15	0	255	690
8:00 AM	0	0	0	0	12	0	5	0	6	36	0	0	0	98	8	0	165	586
8:15 AM	0	0	0	0	8	0	0	0	3	50	0	0	0	71	19	0	151	421
8:30 AM	0	0	0	0	6	0	4	0	1	39	0	0	0	58	11	0	119	270
8:45 AM	0	0	0	0	11	0	3	0	4	50	0	0	0	72	11	0	151	151
Peak Hour	0	0	0	0	36	0	24	0	17	223	0	0	0	473	47	0		

Intersection: Main @ Spirit
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	Spirit Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	0	0	0	9	0	5	0	2	84	0	0	0	74	10	0	184	725
3:15 PM	0	0	0	0	19	0	3	0	2	68	0	0	0	48	13	0	153	764
3:30 PM	0	0	0	0	16	0	3	0	2	100	0	0	0	61	10	0	192	808
3:45 PM	0	0	0	0	21	0	1	0	1	95	0	0	0	70	8	0	196	849
4:00 PM	0	0	0	0	11	0	5	0	1	134	0	0	0	62	10	0	223	861
4:15 PM	0	0	0	0	28	0	4	0	1	82	0	0	0	66	16	0	197	881
4:30 PM	0	0	0	0	16	0	5	0	3	147	0	0	0	54	8	0	233	901
4:45 PM	0	0	0	0	13	0	5	0	1	108	0	0	0	71	10	0	208	848
5:00 PM	0	0	0	0	16	0	7	0	0	142	0	0	0	70	8	0	243	784
5:15 PM	0	0	0	0	16	0	6	0	2	115	0	0	0	71	7	0	217	541
5:30 PM	0	0	0	0	11	0	4	0	4	76	0	0	0	76	9	0	180	324
5:45 PM	0	0	0	0	9	0	0	0	2	68	0	0	0	55	10	0	144	144
Peak Hour	0	0	0	0	61	0	23	0	6	512	0	0	0	266	33	0		

Intersection: Main @ Spirit
Start Date: Dec 6th, 2012
Start Time:
Weather:
Notes: TRUCKS ONLY

					Spirit Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	0	0	0	2	0	1	0	0	6	0	0	0	6	2	0	17	78
7:15 AM	0	0	0	0	3	0	0	0	0	5	0	0	0	2	0	0	10	83
7:30 AM	0	0	0	0	2	0	4	0	0	2	0	0	0	7	2	0	17	94
7:45 AM	0	0	0	0	4	0	4	0	1	10	0	0	0	13	2	0	34	92
8:00 AM	0	0	0	0	5	0	3	0	0	4	0	0	0	7	3	0	22	72
8:15 AM	0	0	0	0	2	0	0	0	2	9	0	0	0	4	4	0	21	
8:30 AM	0	0	0	0	0	0	2	0	0	6	0	0	0	5	2	0	15	
8:45 AM	0	0	0	0	3	0	0	0	0	8	0	0	0	2	1	0	14	

Intersection: Main @ Spirit
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

					Spirit Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	0	0	0	0	2	0	1	0	1	2	0	0	0	6	3	0	15	62
3:15 PM	0	0	0	0	5	0	0	0	0	2	0	0	0	5	6	0	18	59
3:30 PM	0	0	0	0	4	0	0	0	2	5	0	0	0	3	3	0	17	53
3:45 PM	0	0	0	0	1	0	0	0	0	5	0	0	0	5	1	0	12	51
4:00 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0	0	12	55
4:15 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	5	5	0	12	58
4:30 PM	0	0	0	0	2	0	0	0	0	3	0	0	0	5	5	0	15	59
4:45 PM	0	0	0	0	1	0	0	0	1	4	0	0	0	7	3	0	16	50
5:00 PM	0	0	0	0	1	0	2	0	0	4	0	0	0	4	4	0	15	43
5:15 PM	0	0	0	0	3	0	0	0	0	3	0	0	0	4	3	0	13	
5:30 PM	0	0	0	0	2	0	0	0	0	2	0	0	0	0	2	0	6	
5:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	3	4	0	9	

Intersection: US-41 Southbound Ramps/Mid-Valley @ Main
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	Mid-Valley Drive Northbound				US-41 Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	3	3	12	0	91	21	24	0	10	48	4	0	2	48	38	0	304	1162
7:15 AM	3	1	13	0	76	25	29	0	3	36	7	0	0	46	49	0	288	1121
7:30 AM	6	3	17	0	63	25	37	0	6	40	7	0	1	42	21	0	268	1081
7:45 AM	6	4	28	0	78	29	47	0	2	30	6	0	3	54	15	0	302	1033
8:00 AM	2	0	28	0	59	32	34	0	0	30	7	0	4	49	18	0	263	955
8:15 AM	5	2	30	0	55	16	32	0	4	26	12	0	2	41	23	0	248	692
8:30 AM	2	2	16	0	63	10	21	0	5	33	5	0	6	36	21	0	220	444
8:45 AM	3	1	16	0	38	29	19	0	2	49	6	0	4	38	19	0	224	224
Peak Hour	18	11	70	0	308	100	137	0	21	154	24	0	6	190	123	0		

Intersection: US-41 Southbound Ramps/Mid-Valley @ Main
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	Mid-Valley Drive Northbound				US-41 Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	4	4	7	0	78	18	17	0	8	72	11	0	9	36	9	0	273	1093
3:15 PM	6	4	25	0	69	17	10	0	7	46	14	0	4	28	10	0	240	1116
3:30 PM	7	1	33	0	90	16	8	0	11	80	14	0	1	15	17	0	293	1071
3:45 PM	10	4	29	0	67	22	13	0	6	71	18	0	4	19	24	0	287	1053
4:00 PM	2	0	34	0	69	19	11	0	21	92	9	0	6	18	15	0	296	1050
4:15 PM	2	2	13	0	36	13	12	0	10	51	11	0	7	13	25	0	195	1065
4:30 PM	5	0	28	0	66	24	8	0	6	99	12	0	4	15	8	0	275	1164
4:45 PM	3	1	33	0	82	34	12	0	8	72	10	0	5	17	7	0	284	1155
5:00 PM	5	0	36	0	88	24	8	0	11	92	11	0	4	21	11	0	311	1142
5:15 PM	1	2	31	0	84	36	7	0	8	73	13	0	2	24	13	0	294	831
5:30 PM	4	2	18	0	72	18	17	0	6	59	14	0	3	37	16	0	266	537
5:45 PM	2	3	10	0	76	35	16	0	7	50	6	0	4	38	24	0	271	271
Peak Hour	14	3	128	0	320	118	35	0	33	336	46	0	15	77	39	0		

Intersection: US-41 Southbound Ramps/Mid-Valley @ Main
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	Mid-Valley Drive Northbound				US-41 Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	0	1	0	0	1	1	3	0	0	2	0	0	0	2	4	0	14	67
7:15 AM	1	0	1	0	5	3	1	0	2	3	0	0	0	0	2	0	18	64
7:30 AM	3	1	2	0	2	3	2	0	2	1	2	0	0	2	0	0	20	75
7:45 AM	0	2	1	0	1	0	3	0	1	4	0	0	1	0	2	0	15	77
8:00 AM	0	0	0	0	0	1	1	0	0	6	1	0	1	1	0	0	11	82
8:15 AM	3	1	1	0	3	0	6	0	3	5	3	0	0	2	2	0	29	
8:30 AM	1	1	2	0	4	0	2	0	1	5	1	0	1	3	1	0	22	
8:45 AM	0	0	3	0	2	5	2	0	0	2	2	0	1	1	2	0	20	

Intersection: US-41 Southbound Ramps/Mid-Valley @ Main
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	Mid-Valley Drive Northbound				US-41 Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	1	1	1	0	1	1	3	0	2	3	2	0	2	3	1	0	21	74
3:15 PM	1	0	2	0	3	1	0	0	0	2	1	0	1	5	1	0	17	76
3:30 PM	3	0	5	0	2	1	2	0	0	3	1	0	1	1	1	0	20	69
3:45 PM	1	1	2	0	2	1	4	0	0	2	1	0	0	1	1	0	16	55
4:00 PM	2	0	2	0	2	0	3	0	3	5	2	0	0	4	0	0	23	59
4:15 PM	0	1	1	0	0	1	0	0	4	1	0	0	2	0	0	0	10	48
4:30 PM	1	0	1	0	1	0	0	0	0	0	0	0	1	1	1	0	6	49
4:45 PM	1	0	1	0	2	5	0	0	3	3	1	0	2	1	1	0	20	54
5:00 PM	2	0	2	0	1	1	0	0	0	1	1	0	0	2	2	0	12	44
5:15 PM	0	0	1	0	3	3	0	0	0	1	1	0	0	1	1	0	11	
5:30 PM	0	2	1	0	1	2	1	0	0	0	0	0	0	4	0	0	11	
5:45 PM	0	0	0	0	1	1	0	0	3	1	1	0	0	3	0	0	10	

Intersection: US-41 Northbound Ramps @ Main
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	US-41 Northbound				US-41 Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	11	0	28	0	0	0	0	0	36	87	0	0	0	74	72	0	308	1464
7:15 AM	19	0	50	0	0	0	0	0	43	116	0	0	0	67	83	0	378	1440
7:30 AM	24	0	40	0	0	0	0	0	41	119	0	0	0	91	74	0	389	1367
7:45 AM	32	0	48	0	0	0	0	0	32	125	0	0	0	83	69	0	389	1261
8:00 AM	12	0	34	0	0	0	0	0	33	71	0	0	0	67	67	0	284	1168
8:15 AM	19	0	32	0	0	0	0	0	33	80	0	0	0	65	76	0	305	884
8:30 AM	10	0	27	0	0	0	0	0	31	76	0	0	0	60	79	0	283	579
8:45 AM	20	1	27	0	0	0	0	0	21	100	0	0	0	53	74	0	296	296
Peak Hour	86	0	166	0	0	0	0	0	152	447	0	0	0	315	298	0		

Intersection: US-41 Northbound Ramps @ Main
Start Date:
Start Time:
Weather:
Notes: ALL VEHICLES

	US-41 Northbound				US-41 Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	7	0	24	0	0	0	0	0	45	122	0	0	0	58	91	0	347	1525
3:15 PM	12	0	25	0	0	0	0	0	33	120	0	0	0	67	80	0	337	1588
3:30 PM	17	0	35	0	0	0	0	0	78	105	0	0	0	78	113	0	426	1685
3:45 PM	10	0	23	0	0	0	0	0	47	135	0	0	0	81	119	0	415	1764
4:00 PM	15	0	31	0	0	0	0	0	62	139	0	0	0	71	92	0	410	1794
4:15 PM	7	0	41	0	0	0	0	0	54	136	0	0	0	76	120	0	434	1904
4:30 PM	11	0	36	0	0	0	0	0	98	167	0	0	0	78	115	0	505	1906
4:45 PM	10	0	45	0	0	0	0	0	57	159	0	0	0	73	101	0	445	1804
5:00 PM	7	0	52	0	0	0	0	0	83	165	0	0	0	86	127	0	520	1697
5:15 PM	5	0	45	0	0	0	0	0	48	164	0	0	0	64	110	0	436	1177
5:30 PM	10	0	52	0	0	0	0	0	45	115	0	0	0	55	126	0	403	741
5:45 PM	9	0	34	0	0	0	0	0	42	109	0	0	0	57	87	0	338	338
Peak Hour	33	0	178	0	0	0	0	0	286	655	0	0	0	301	453	0		

Intersection: US-41 Northbound Ramps @ Main
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	US-41 Northbound				US-41 Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
7:00 AM	1	0	1	0	0	0	0	0	2	2	0	0	0	2	2	0	10	60
7:15 AM	4	0	0	0	0	0	0	0	2	10	0	0	0	2	3	0	21	69
7:30 AM	1	0	2	0	0	0	0	0	5	2	0	0	0	0	2	0	12	71
7:45 AM	3	0	3	0	0	0	0	0	0	3	0	0	0	3	5	0	17	83
8:00 AM	2	0	3	0	0	0	0	0	1	4	0	0	0	3	6	0	19	88
8:15 AM	4	0	3	0	0	0	0	0	5	6	0	0	0	3	2	0	23	
8:30 AM	1	0	0	0	0	0	0	0	8	5	0	0	0	4	6	0	24	
8:45 AM	4	0	1	0	0	0	0	0	4	6	0	0	0	5	2	0	22	

Intersection: US-41 Northbound Ramps @ Main
Start Date:
Start Time:
Weather:
Notes: TRUCKS ONLY

	US-41 Northbound				US-41 Southbound				Main Eastbound				Main Westbound				15-min Total Vehicles	60-min Total Vehicles
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
3:00 PM	3	0	2	0	0	0	0	0	3	2	0	0	0	3	3	0	16	80
3:15 PM	4	0	1	0	0	0	0	0	3	4	0	0	0	2	2	0	16	72
3:30 PM	8	0	3	0	0	0	0	0	5	5	0	0	0	0	4	0	25	66
3:45 PM	3	0	2	0	0	0	0	0	3	1	0	0	0	7	7	0	23	57
4:00 PM	3	0	1	0	0	0	0	0	1	3	0	0	0	0	0	0	8	54
4:15 PM	1	0	1	0	0	0	0	0	2	5	0	0	0	1	0	0	10	56
4:30 PM	2	0	0	0	0	0	0	0	2	11	0	0	0	1	0	0	16	55
4:45 PM	3	0	1	0	0	0	0	0	4	5	0	0	0	4	3	0	20	46
5:00 PM	2	0	1	0	0	0	0	0	2	1	0	0	0	2	2	0	10	36
5:15 PM	2	0	0	0	0	0	0	0	3	1	0	0	0	0	3	0	9	
5:30 PM	1	0	1	0	0	0	0	0	1	0	0	0	0	2	2	0	7	
5:45 PM	4	0	1	0	0	0	0	0	2	1	0	0	0	2	0	0	10	

APPENDIX B

Traffic Forecasts

Traffic Forecast Summary Report, Sep 30, 2016
Brown County Southern Bridge Project (Forecast Update), Feb 13, 2018

SRF Consulting Group, Inc. | Engineers Planners Designers

Traffic Forecast Summary

SRF No. 9080

To: Chris Chritton, Urban & Regional Planner
Natasha Gwidt, Planning Project Manager
WisDOT

From: George Schulz, Project Manager
Jacob Asplund, Senior Engineer

Date: September 30, 2016

Subject: Traffic Forecast Summary
Brown County Southern Arterial Project

Introduction

The Wisconsin Department of Transportation NE Region (WisDOT) requested SRF Consulting Group, Inc. (SRF) to prepare traffic forecasts for the Interstate 41 (I-41) & Southern Arterial Bridge study area. SRF coordinated with Chris Chritton of the WisDOT Forecasting Unit to obtain the necessary Northeast Region Travel Demand Model (model) files, WisDOT Forecasting spreadsheet tools and documentation relating to previous forecasts.

Alternatives Analysis

Five scenarios were considered for the new Brown County Southern Arterial and will be studied further as part of the Environmental Impact Statement (EIS). Each of the build alternatives terminates at the CTH GV intersection with CTH X (Heritage Road), except for the No Build alternative.

- No Build – No capacity improvements to major highways or arterial roadways in the project area.
- Alternative 1 – A new Fox River bridge on County Highway (CTH) F (Scheuring Road), with capacity expansions to 4-lane arterials for CTH F between American Boulevard and the Fox River and CTH X (Heritage Road) between the Fox River and CTH GV (Monroe Road).
- Alternative 2A – A new 4-lane Southern Arterial alignment (including a new Fox River bridge) generally following Southbridge Road, Red Maple Road, and Rockland Road, including a new roadway on new alignment connecting Rockland Road directly to Monroe Road at Heritage Road. The western terminus would extend northwest and connect directly into Packerland Drive at Hart Gravel Road. A new diamond interchange on I-41 providing access to the new Southern Arterial would be built.

- Alternative 2B – The same new 4-lane Southern Arterial alignment proposed for Alternative 2A would be constructed. A collector-distributor system would be constructed between the new interchange for the Southern Arterial and a reconfigured interchange at CTH F and I-41.
- Alternative 3 – The same new 4-lane Southern Arterial alignment proposed for Alternatives 2A and 2B would be constructed. No access ramps for the Southern Arterial at I-41 would be included in this alternative.

Two types of traffic forecasts were developed for the project area: annual average daily traffic (AADT) and peak hour. All forecast locations are referenced on **Figures 1 and 2 in Appendix A**, which show an overview of the project area and each arterial corridor, respectively. **Figure 1** shows all of the count locations in the study area. WisDOT counts are identified by the WisDOT's count station number. In addition, **Figure 1** identifies all of the locations of the intersection turning movement counts, and the TRADAS traffic count sites. The interchange and arterial areas were enlarged in **Figure 2** to include the TRADAS traffic count site numbers. The intersection counts are identified in **Figure 2** with a one/two digit number that ultimately corresponds to the final peak hour forecasts contained in **Appendix F**. **Figures 3 through 6 in Appendix A** show the alignments for Alternatives 1, 2A, 2B and 3.

Existing Conditions

Daily Traffic

The WisDOT AADT counts used in the forecasting process were generally the most recent observed count for each location as of November 2015. Base year balancing was done for daily I-41 mainline and ramp locations before the future forecasts were developed.

Design Hour Traffic

Intersection turning movement counts were collected by Brown County in December 2012 and January 2013. The balanced base year (2012) turning movement traffic assignment developed for the Southern Arterial Interstate Access Justification Report Traffic Analysis (July 2014) was used as the starting point for developing peak hour turning movement forecasts for this report (See **Figures 4.1 and 4.2 in Appendix E**).

The 30th highest volume hour (K30) is typically used for peak hour freeway forecasts because of the amount of data that is available from continuous count stations. The following discussion on the selection of the design hourly volume was completed in 2016 and portrays the standard process that should be followed to determine the DHV. At this time, the entire years' worth of data was available for 2012. This was not the case when the project started in late 2012. The true K30 volume for I-41 couldn't be determined with accuracy at the time the project started due to missing data at the end of 2012. In addition, traffic volume balancing along the I-41 mainline will also affect the final peak hour volumes.

Typically K30 is chosen as the Design Hourly Volume (DHV) based on guidance in WisDOT's Facility Development Manual (FDM), AASHTO's A Policy on Geometric Design of Highways and Street and the Federal Highway Administration (FHWA). The K30 time period for northbound I-41 corresponds to a morning commuter peak hour and for southbound I-41 it corresponds to an evening commuter peak hour.

Hourly traffic data from WisDOT's Automatic Traffic Recorder (ATR) 05-0001, Continuous Count station was used to confirm the selection of K30 as the Design Hourly Volume (DHV) for Brown County's project. ATR 05-0001 is located on I-41 south of the CTH S interchange. The top 100 volumes for the year 2012 were plotted in a graph, by direction to determine the DHV for the I-41 corridor (see **Figure B1**, I-41 Northbound and Southbound graphs in **Appendix B**). The graphs support the selection of K30 as the DHV. Typically, the outliers (the volumes along the steep part of the slope) are not chosen as the DHV. The volume that occurs on a frequent basis (along the flatter part of the curve) is chosen as the DHV. The DHV is typically found at the break point in the curve. The 30th highest volume of the year is located near this break point therefore, is the appropriate choice as the DHV.

The following three step process was used to select the DHV for the Brown County Project:

1. Obtain the entire year of hourly data from the nearest ATR station. ATR 5-0001 data was used to determine the K30 volumes because it is the closest continuous count station to the study corridor. The 2012 data corresponds to the year that other count data was collected. Brown County conducted the intersection turning movement counts in 2012-13. Graph the top 100 hourly volumes of the year to determine if K30 is appropriate to use as the DHV. If correct, select the 30th highest volume, by direction from the **Tables B1** and **Table B2** from **Appendix B**. These tables identify date, day of week and hour of day for each of the top 100 hourly volumes of 2012. The tables also shows the corresponding non-peak direction traffic volume. K30 SB = 2,560 vph (rounded to the nearest ten); K30 NB = 2620 vph. See K30 volumes highlighted in orange.

   The volumes highlighted in green are associated with Packer events. In general, these are the volumes that populate the steep part of the curve in the graphs.

2. Identify the time period when K30 typically occurs, by direction. **Tables B1a** and **B2a** located in the top right corner of **Tables B1** and **B2** identify when the top 100 volumes of the year occurred. The left column in that table identifies the hour of the day when the top 100 volumes occurred. The "p" in that column represents those time periods associated with Packer events. For NB I-41, 61% of the top 100 volumes occurred on a weekday at 7-8AM. For SB I-41, 75% occurred on a weekday at 4-5PM. Therefore, K30 represents the typical commuter peak hours (those volumes that occur on a frequent basis).

3. Lastly, identify the traffic volume in the non-peak direction. An average was taken of the 10 non-peak volumes closest to K30 that correspond to the peak time period identified in step 2 to avoid an anomaly. Note that the average doesn't necessarily include the 5 volumes above and below K30 in the non-peak direction because some of those volumes correspond to other time periods (Packer events) and many times those volumes are very low.

In summary, K30 for I-41, based on the ATR 05-0001 data, south of CTH S is:

- K30 NB (7-8AM) - 2,620 vph; non-peak direction SB = 1,970 vph
- K30 SB (4-5PM) = 2,560 vph; non-peak direction NB = 2,230 vph

Existing Year 2012 Volume Balancing Methodology

I-41 Freeway Mainline Volumes

Several Year 2012 data sources were available along the I-41 freeway mainline corridor for use in determining appropriate mainline volumes for analysis purposes (see **Appendix C**):

- A WisDOT-maintained ATR station located south of the County S interchange (ATR 05-0001) provided hourly volumes on a monthly basis for months January through October of Year 2012
- WisDOT Coverage counts (48-hour) of I-41
  - Between the County S and County F interchanges – August 2012
  - Between the County F and County G interchanges – June 2012
  - North of County G interchange – August 2012

The Southern Arterial traffic operations analysis study was started in November 2012. As stated above, the hourly traffic volumes for the entire year 2012 were not available for ATR 05-0001 at the time this study began. Therefore, an accurate determination of Year 2012 K30 design volumes along I-41 could not be performed. With the limited amount of continuous Year 2012 I-41 freeway mainline traffic data available at the time of the study, a representation of existing I-41 traffic conditions was determined. The following table illustrates Year 2012 average day-of-week traffic volumes along I-41 at ATR 05-0001.

YEAR 2012 AVERAGE DAY-OF-WEEK TRAFFIC VOLUMES, I-41 (ATR 05-0001)

	2012 Monthly Traffic (2 way total)		
	Mon-Thurs	Mon-Fri	7-day Ave
January	40,567	41,468	38,255
February	42,650	43,517	40,139
March	43,900	44,555	40,850
April	44,543	45,369	41,424
May	44,623	45,790	42,367
June	47,425	48,394	44,562
July	46,413	47,414	43,908
August	49,742	50,855	46,520
September	46,086	47,459	44,096
October	46,142	47,423	43,579

Traffic volumes are shown in vehicles per day

In lieu of the missing traffic volumes for the entire year, data from the above table indicates that the month of August experiences the highest amount of daily weekday and daily traffic, thus most likely represents a value near K30. This information, coupled with freeway mainline coverage count data along I-41 collected in summer 2012 and the majority of interchange ramp coverage count data also collected in summer 2012 (see next section), it was determined that the I-41 freeway network would be modeled for existing conditions analysis using similar month-of-year traffic data. This method reduces the amount of month-of-year variances that have to be considered when using freeway and interchange ramp links of different collection time periods (this condition is typical when analyzing long multiple freeway and interchange ramp links). The vast majority of existing freeway mainline and interchange ramp traffic volumes utilized for this study were taken from the same month-of-year and same-year (July/August 2012), providing a volume dataset that minimizes this condition. Ultimately, the difference between the true K30 volume and the volumes derived through this process ranges between 50 and 140 vph or approximately a 2-5% difference (NB: K30 = 2620 versus 2480 vph and SB K30 = 2560 versus 2610 vph).

Vehicle classification data from the above-mentioned ATR was obtained to determine truck percentages along the I-41 freeway mainline. July 2012 and August 2012 hourly vehicle classification data for the weekdays Tuesday through Thursday was gathered and averaged for each month as well as a combination of both months. From this data, I-41 northbound and southbound peak-hour truck percentages were derived. A summary listing the I-41 truck percentages is provided in **Table C1** in **Appendix C**.

I-41 Interchange Ramp Volumes

Interchange ramp volumes were obtained from two sources:

- WisDOT coverage counts primarily collected in July and August 2012
  - Two ramps were collected in December 2012 and one in July 2011
- Intersection turning movement counts collected by Brown County in December 2012 and January 2013 (outside of the Christmas / New Year's holiday weeks)

When comparing the two above-listed datasets (see the existing conditions traffic volumes **Table D1** in **Appendix D**), the WisDOT-ramp counts are higher than the Brown County counts including the same ramps. This is due to the time-of-year the counts were taken (primarily July/Aug versus Dec/Jan). As stated in the freeway mainline discussion, I-41 traffic volumes were at its highest in August 2012; therefore, to analyze a conservative estimate of traffic along the I-41 interchange ramps, the WisDOT-ramp counts were used for traffic volume balancing purposes (i.e., the turning movement counts were increased to match more closely with the summer month ramp coverage counts). By using the WisDOT-collected ramp data, discrepancies between this data set and the Brown County-collected intersection turning movement counts occur. To mitigate this condition, the traffic proportions observed in the Brown County-collected counts would be used and applied

to the difference in traffic volumes (WisDOT counts versus Brown County counts) to provide a balanced interchange ramp volume data set.

Intersection Turning Movement Counts

As discussed above, the interchange ramp coverage counts were used as a "benchmark" for interchange ramp analysis and the Brown County-collected intersection turning movement counts were adjusted, based on the observed turning movement proportions, to produce a balanced volume set. Worksheets in **Appendix D** show the County S, County F, and County G corridors and the volume balance processes for each. The volume balancing methodologies used for the County F corridor as the proposed Southern Arterial are illustrate below.

When comparing volume imbalances between study intersections along County F, several key points were observed:

1. A very large imbalance is shown between Mid Valley Drive and the I-41 SB ramps.
2. A very large imbalance is shown between the I-41 SB and I-41 NB ramps.
3. Both WisDOT-collected ramp volumes are larger than the Brown County turning movement counts.

From aerial imagery, County F has significant light industrial building complexes on the north and south sides of the road between Mid Valley Drive and I-41. These complexes have access to County F between these intersections, which is the likely reason for the significant imbalances between Mid Valley Drive and I-41. To account for these uses and imbalances, an assumed amount of traffic was assigned to the buildings and would use Mid Valley Drive for travel to and from these complexes.

Between the I-41 ramps, a conservative estimate of traffic volumes along County F was assumed; therefore, traffic volumes were balanced eastward due to the very large amount of traffic observed at the I-41 SB ramps intersection. This balancing procedure included both the I-41 NB ramps and the Lawrence Avenue intersections. Since a significant amount of traffic was being carried downstream, particularly to Lawrence Drive, a small amount of traffic was sent to the I-41 northbound entrance ramp to distribute the traffic load being balanced. While this action did increase the northbound entrance ramp beyond the WisDOT coverage count volumes, the magnitude of vehicles added was relatively small (65 vehicles during the weekday morning peak hour and 25 vehicles during the weekday evening peak hour).

Daily Forecast Methodology

The travel demand for the base year (2010) and all five scenarios (year 2045) were modeled using the most current version of the Northeast Region Travel Demand Model (model) as of November 2015. Because Alternative 2A is the most expansive and well-connected option, a full model run was completed for that alternative. All other alternatives (No Build, Alternative 1, Alternative 2B and Alternative 3) were analyzed using assignment only model runs based on the travel patterns

generated for Alternative 2A. This process ensured that the modeled differences could all be attributed to differences in the transportation network between alternatives.

Model Review

Based on a thorough review of the model network in the project area, several coding issues were identified and corrected. The base year (2010) roadway configuration (i.e number of lanes, connectivity, facility type and adjacent land use) was reviewed for consistency with year 2010 aerial photography available through Google Earth. A missing segment of southbound Lawrence Drive south of Southbridge Road was added to the network. This update was significant enough to warrant revising the draft forecasts prepared by WisDOT Forecasting for each alternative.

Year 2045 Daily Forecasts

Unbalanced daily forecasts for each alternative were developed by applying the methodologies from the WisDOT Forecasting report spreadsheet (version 4). The spreadsheet tool includes the AADT count histories, model average weekday traffic (AWDT) results, and TAFIS or manual regression analysis and National Cooperative Highway Research Program (NCHRP) forecasting methodologies used to prepare AADT forecasts. Historic AADT counts were reviewed and some of the counts were identified as outliers. The outlier traffic counts were replaced with data from previous years, as appropriate.

One of six methodologies was applied to prepare AADT forecasts at each count site. Five of these methodologies are presented in the WisDOT Transportation Planning Manual (Chapter 9, Section 10), and the sixth involved a slight modification in one of the recommended methods. The "Scenario Difference Method" ensures that modeled differences between alternatives are preserved through the daily volume balancing process. WisDOT provides no daily volume balancing guidance in the Transportation Planning Manual. The six daily forecast methodologies are:

1. NCHRP Difference Method
   The forecast AADT was calculated by adding the difference between the future year model result and the base year model result to the observed AADT count.
2. NCHRP Ratio Method
   The forecast AADT was calculated by multiplying the observed AADT count by the ratio of the future year model result to the base year model result.
3. NCHRP Average Method
   The forecast AADT was calculated as the average of methods 1 and 2.
4. TAFIS/Model Average
   The forecast AADT was calculated as the average of one of methods 1 through 3 and a separate future year forecast developed through regression analysis (generally from the WisDOT TAFIS system).

5. Minimum growth rate
   In areas where the model projects very slow of negative growth, WisDOT Forecasting recommends applying a minimum growth rate of 0.5 percent per year.
6. Scenario Difference Method
   This method is similar to method 1, but was developed to preserve modeled differences between an alternative and the No Build forecast. This method calculates the forecast AADT by adding the difference between the future year model result for the build alternative and the future year model result for the No Build alternative to the No Build forecast developed using one of the earlier methods.

Daily forecasted traffic along the I-41 mainline and ramps was balanced using a methodology developed by the Wisconsin Traffic Operations and Safety Laboratory[1] (TOPS Lab). The TOPS Lab method uses an iterative spreadsheet optimization method to develop balanced one-way flows based on observed mainline and ramp traffic counts. Because the data is based on a full year of observations, the ATR site at the south end of the project area was used as an anchor point in the balancing process. The other freeway segments and ramps were balanced to minimize the total GEH (a measure of the magnitude of the adjustment at each site) while keeping the GEH at any particular location within acceptable tolerance.

CUBE Matrix Estimator was used to balance daily traffic flows along arterials within the project area for the No Build alternative. The unbalanced daily forecasts and model traffic patterns were used as inputs to the balancing process. This process adjusted travel patterns to improve the fit between forecasted traffic volumes and modeled travel patterns throughout the study area. The balanced No Build volumes were then adjusted to apply minimum growth rates where applicable, to maintain modeled differences between scenarios and to eliminate inconsistencies introduced through rounding.

The forecasts for each of the four build alternatives were developed in such a way as to maintain modeled differences between each alternative and the No Build. AADT forecasts for locations already included in WisDOT's traffic count system (TRADAS) and for new location facilities included in each build alternative are provided in **Table 1 in Appendix A**. Additional details about forecasting methodologies at each site for each scenario are shown in **Table 2 in Appendix A**.

Bridge Crossing Forecasts

Expected traffic levels at the three existing river crossings in the study area (STH 172, Claude Allouez Bridge [STH 32], and Wrightstown [STH 96]) along with the proposed new crossings at Scheuring Road and the Southern Bridge was analyzed to determine the anticipated amount of daily

[1] Shaw, John W. and Noyce, David A. (2014). "Automated Optimal Balancing of Traffic Volume Data for Large Access-Controlled Highway Networks and Freeway-to-Freeway Interchanges", Transportation Research Board 93rd Annual Meeting Paper 14-3565

traffic attracted to the new river crossing. Daily forecasts for each Fox River crossing under each alternative were developed using the same daily volume forecasting methodology as described in the previous section. The observed and forecasted AADTs are provided in **Table 3 in Appendix A**, with additional details about forecasting methodologies listed in **Table 4 in Appendix A**.

An 11,300 vpd increase in daily volume on Claude Allouez Bridge (Wis 32) from 31,400 to 42,700 vpd is expected under the 2045 No Build Alternative. The analysis for Alternative 1 indicates that about 27,000 vpd (about 4,000 fewer than the most recent observed counts) would use the Claude Allouez Bridge in 2045. In 2045, the other three alternatives (Alternatives 2A, 2B and 3) would draw most of the increased demand for river crossings away from the Claude Allouez Bridge, allowing it to operate at traffic volumes (31,200 to 31,900 vpd) similar to those currently observed.

The new bridge crossings for the four build alternatives would have minimal impacts on traffic levels at STH 172 and STH 96. Expected year 2045 daily traffic on STH 172 in Green Bay ranged between 92,000 and 92,800 for the build alternatives. Forecasted traffic on STH 96 in Wrightstown would be expected to be slightly over 16,000 vpd under any build alternative. Any build alternative would be expected to reduce the traffic on STH 172 by 3,000 to 4,000 vpd and on STH 96 by about 2,000 vpd as compared to the No Build Alternative.

CTH S Fox River Crossing

A CTH S Fox River crossing was evaluated and eliminated as part of the earlier EIS studies. Updated forecasts were recently requested by a state legislator. The CTH S river crossing forecasts are provided in this memorandum and compared to the remaining EIS alternatives. The daily AADT forecasts and methodologies for the project area and the other Fox River bridges are presented in **Tables 1 through 4 in Appendix A**.

The CTH S Fox River crossing would provide a short east-west arterial connection between I-41 and STH 32 using a combination of existing routes and new location facilities. The west end of the CTH S river crossing would match the existing two-lane CTH S at Mid Valley Drive near the existing I-41/CTH S interchange. East of Mid Valley Drive, a new four lane route would proceed east along Lawrence Drive, then follow the Hickory Road alignment southeast to a new Fox River crossing. East of the river, the route would link up with CTH ZZ west of Tetzlaff Road and follow that alignment until the intersection of STH 32 and CTH ZZ. The new four lane arterial would terminate at STH 32. **Figure 7 in Appendix A** shows the alignment for the CTH S Fox River crossing.

The arterial connection was analyzed as a four-lane arterial under two different free-flow speed assumptions: 47 mph (the same speed applied for the Southern Arterial segments in Alternatives 2A, 2B and 3) and 55 mph (to reflect the more rural character of adjacent land use). No capacity expansion on STH 32 or CTH X (Heritage Road) and no new location facilities east of STH 32 along Eiler Road or Rockland Road were included under the CTH S Fox River crossing.

The effect on traffic levels at each bridge crossing was analyzed for this alternative. A new crossing at this location would draw substantially fewer trips (11,500 to 13,700 vpd) to the new river crossing than any of the four primary EIS alternatives (26,500 to 34,100 vpd) under consideration. It would also attract fewer trips away from the Claude Allouez Bridge. The results of the CTH S river crossing are also included in **Tables 3 and 4 in Appendix A**.

Peak Hour Forecast Methodology

Figure 4.2 in **Appendix E** shows the balanced existing year mainline peak hour volumes from the Southern Arterial Interstate Access Justification Report (IAJR) Traffic Analysis, July 2014. The WisDOT Forecasting peak hour adjustment factoring process (WisDOT Transportation Planning Manual, Chapter 9, Section 40.3.b) was applied to all I-41 mainline segments contained in **Figure 4.2** to determine the peak hour mainline forecasts under each scenario. The I-41 ramp volumes were then adjusted to maintain consistency with the mainline dampening results and produce a balanced freeway system for each scenario.

The balanced base year turning movement counts from the Southern Arterial IAJR Traffic Analysis study were used as the observed peak hour turning movements. **FIGURE 4.1** [from the Southern Arterial Interstate Access Justification Report (IAJR) Traffic Analysis, July 2014, provided in **Appendix E**] shows the balanced base condition (year 2012/2013) turning movements at each intersection. Turning movement forecasts were produced for four arterial corridors in the area near I-41 interchanges: CTH G (Main Avenue), CTH F (Scheuring Road), CTH S (Freedom Road), and the new Brown County southern arterial under consideration. Unbalanced turning movement forecasts for each intersection were developed using WisDOT Forecasting's turning movement count forecast spreadsheet (version 4).

The turning movement count forecasting process takes two inputs:

- Observed peak hour turning movement counts (from **Figure 4.1 in Appendix E)**
- Annual growth rates for each leg of the intersection.
    - Peak hour traffic on arterials is assumed to increase at the same rate as the daily traffic.
    - Annual growth rates for all intersection approaches that are WisDOT daily count locations were prepared as part of the daily forecasting process.
    - For locations where no existing daily counts were available, WisDOT's Forecasting 24-hour expansion spreadsheet (version 2) was used to estimate year 2012 daily volumes based on the turning movement data collected by Brown County. Then WisDOT's Forecasting report spreadsheet was used to produce daily forecasts and annual growth rates using the extrapolated year 2012 daily volume and model results.
- Synthetic base condition approach volumes, turning movement percentages and annual growth rates were applied at each new intersection along the Southern Arterial. The synthetic base data

was developed using a combination of future year model results, observed percentages at similar intersections within the project area and engineering judgement.

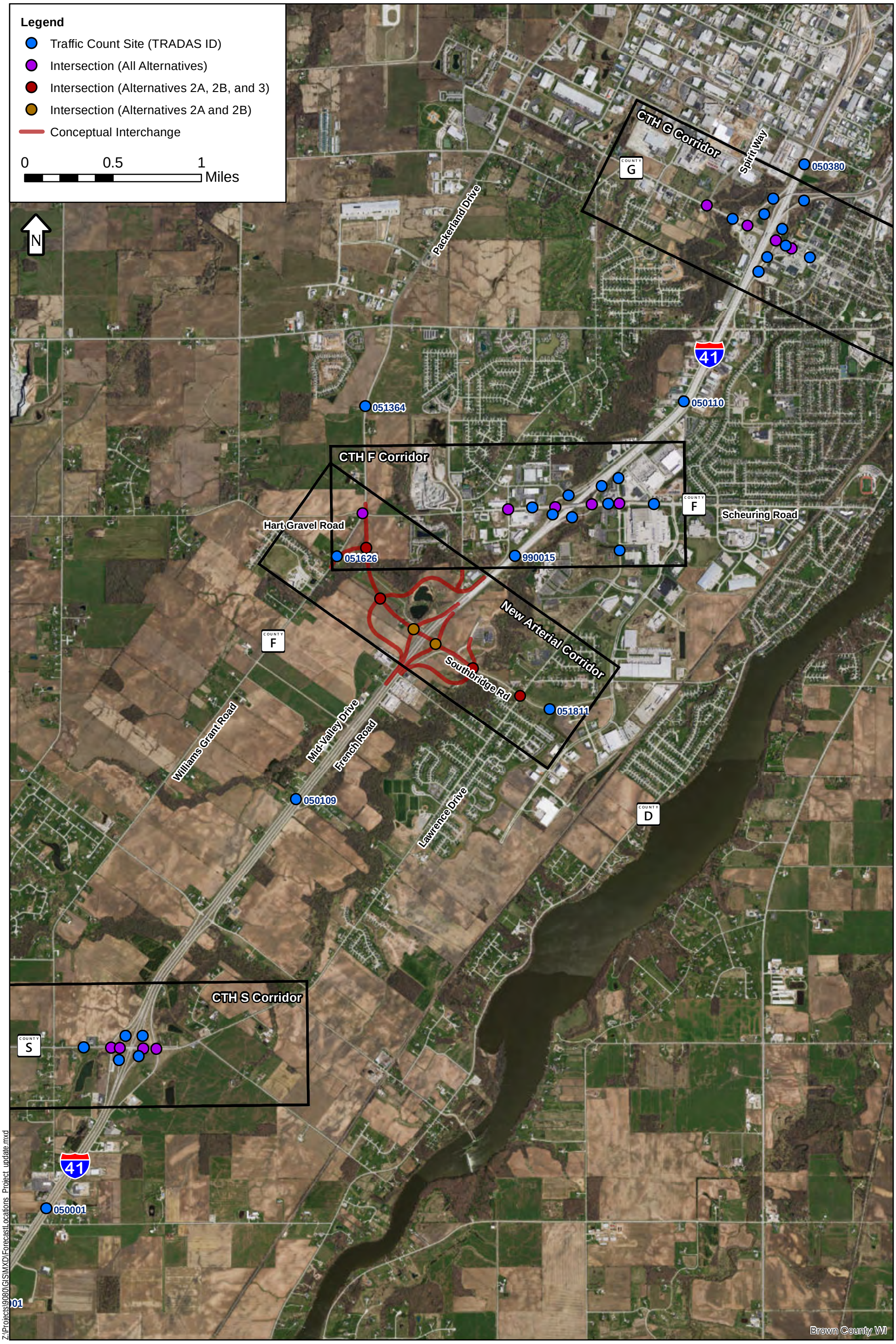
The unbalanced turning movement forecasts produced using the WisDOT spreadsheet process at each intersection were manually adjusted to ensure:

- Peak hour ramp volumes are consistent between the mainline I-41 balancing process and the intersection forecasts.
- Peak hour intersection approach volumes are consistent with daily volumes for each scenario.
- Changes in directional distribution at each intersection approach are reasonable.

Most of the intersections analyzed were along arterial corridors with few or no access points between intersections. In generating the turning movement forecasts, it was assumed that all traffic entering or exiting an intersection from the east or west balanced with entering or exiting traffic volume at the next adjacent intersection. The only exception was the intersection of CTH F and Packerland Drive, where there are several intersections and driveway access points between Packerland and the CTH F and Mid-Valley Drive intersection. A drop in traffic of 20 percent was assumed between traffic entering or exiting the east leg of the CTH F and Packerland intersection and exiting or entering the west leg of the CTH F and Mid-Valley Drive intersection. This is less than the current drop (27-37%) in peak hour volume between the two CTH F intersections due to the projected increase in development west of Packerland along Hart Gravel Road.

See **Appendix F** for the peak hour forecast for the No Build Alternative (**Figures NB**), Alternative 1 (**Figures 1**), Alternative 2A (**Figures 2A**), Alternative 2B (**Figures 2B**), and Alternative 3 (**Figures 3**). Each alternative is preceded with a summary of the design values for the I-41 mainline, south of CTH S, including the existing and future daily forecast, K30 percentage (2-way), directional distribution and truck percentage in the design hour. The first page in **Appendix F** provides a legend to clarify the layout of the turning movement diagrams. Intersection locations identified in **Figures 1 and 2 in Appendix A** are referenced in the peak hour forecasts contained in **Appendix F**. The intersection number in the turning movement diagrams are shown near the upper left hand corner.

Appendix A



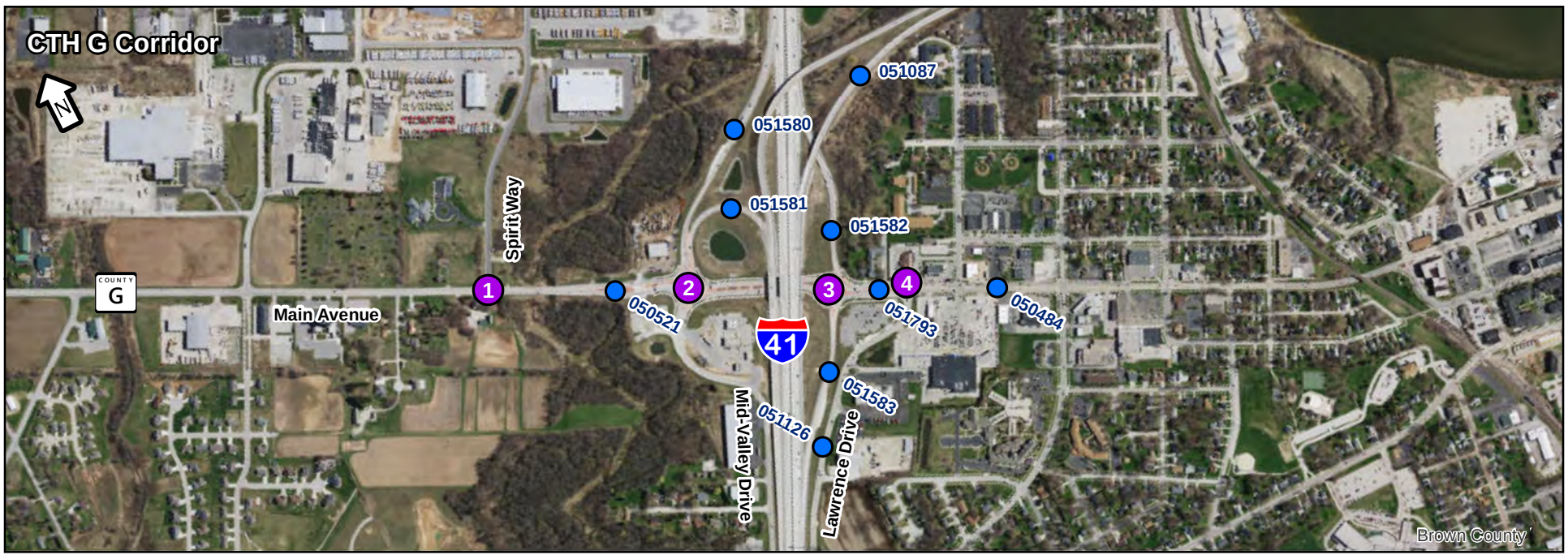
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SRF Consulting Group, Inc.

Traffic Forecast Locations

Brown County Southern Arterial Project
WisDOT NE Region

Figure 1









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Traffic Count Site (TRADAS ID)
Intersection (All Alternatives)
Intersection (Alternatives 2A, 2B, and 3)
Intersection (Alternatives 2A and 2B)
Conceptual Interchange

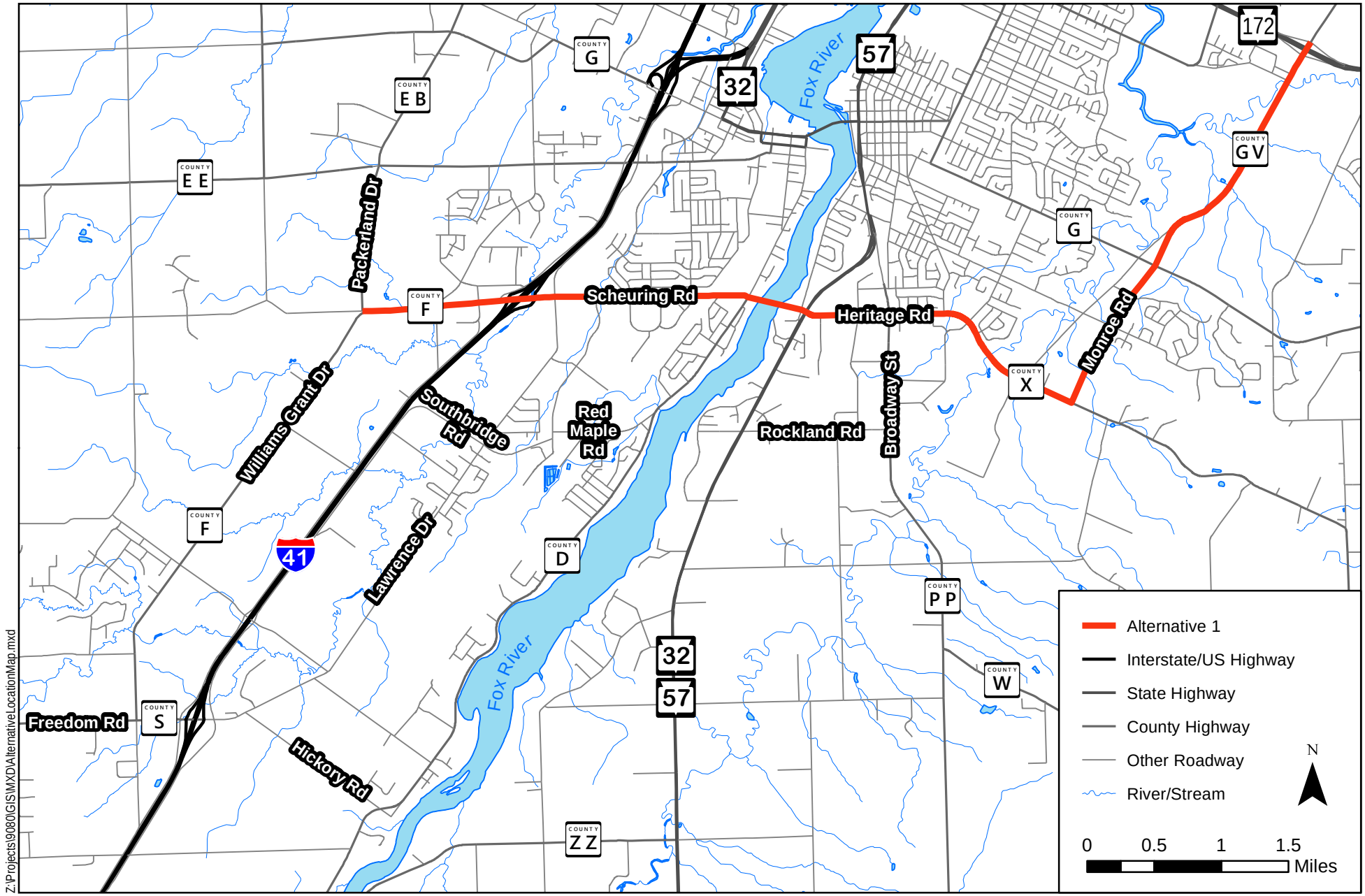
0 0.1 0.2 0.3 0.4 0.5 Miles

SRF Consulting Group, Inc.

Traffic Forecast Locations (Intersection Detail)

Brown County Southern Arterial Project
WisDOT NE Region

Figure 2

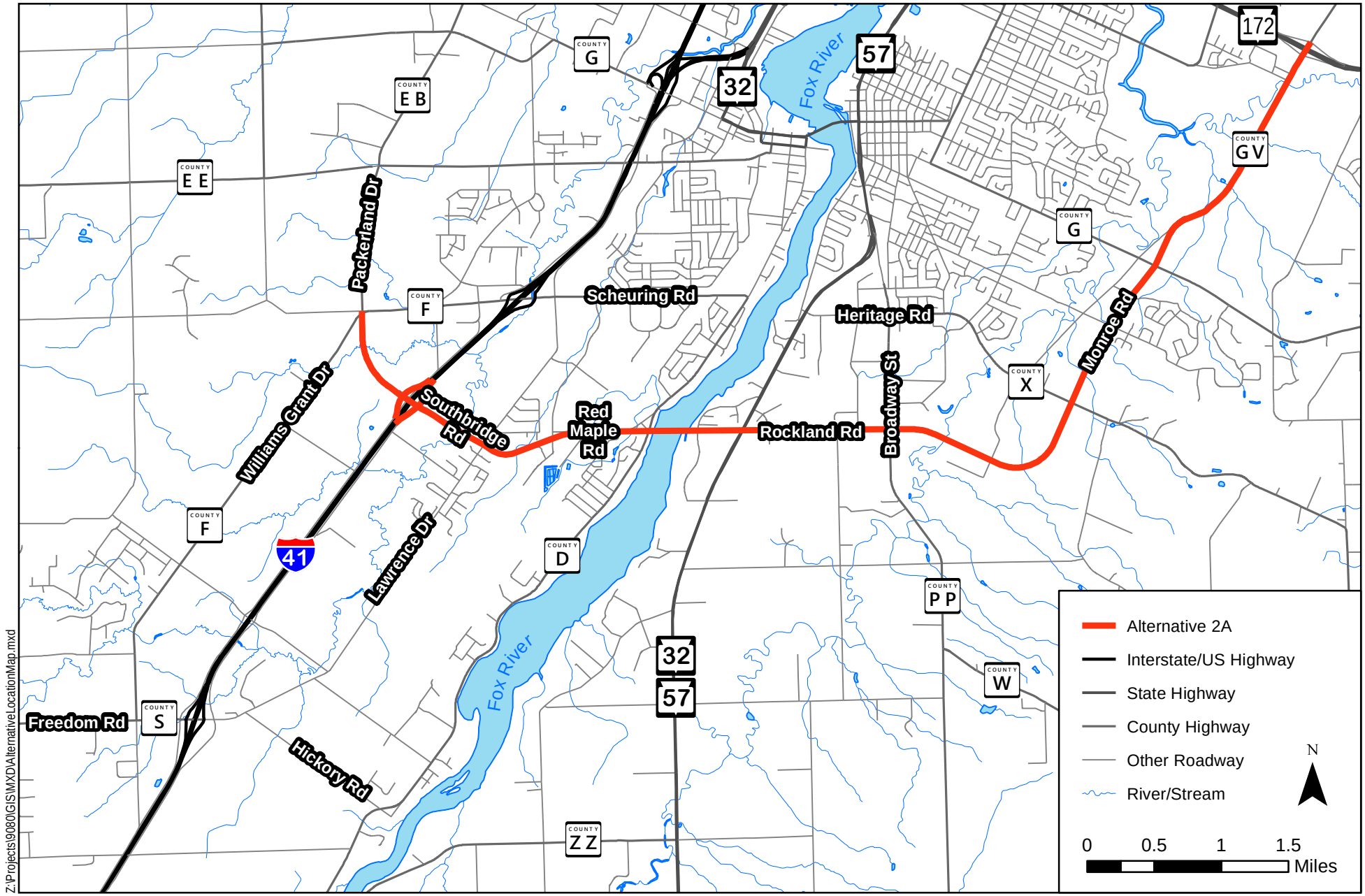


Alternative 1 Location Map

Brown County Southern Arterial Project

WisDOT NE Region

Figure 3



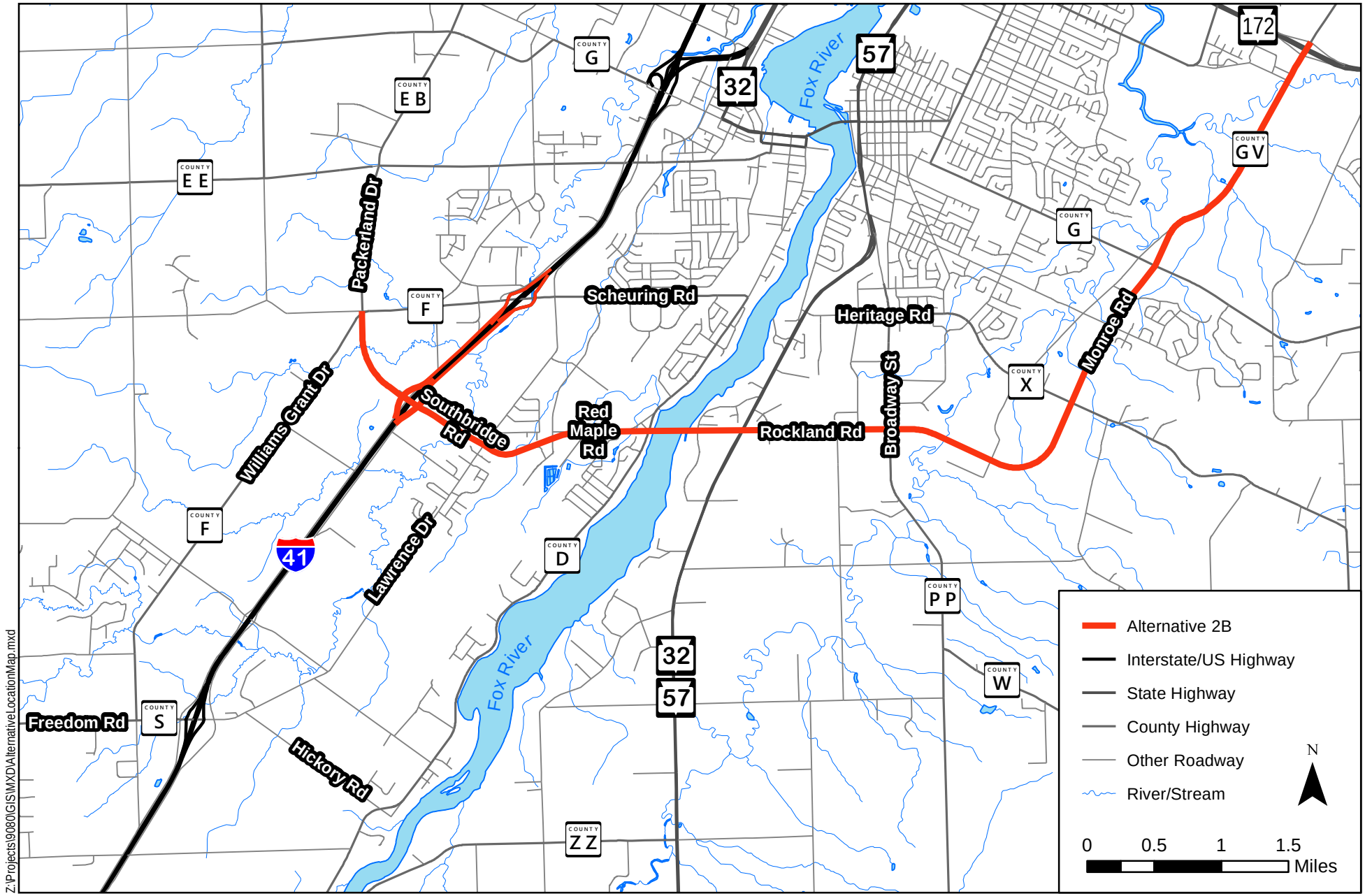
SRF Consulting Group, Inc.

Alternative 2A Location Map

Brown County Southern Arterial Project

WisDOT NE Region

Figure 4



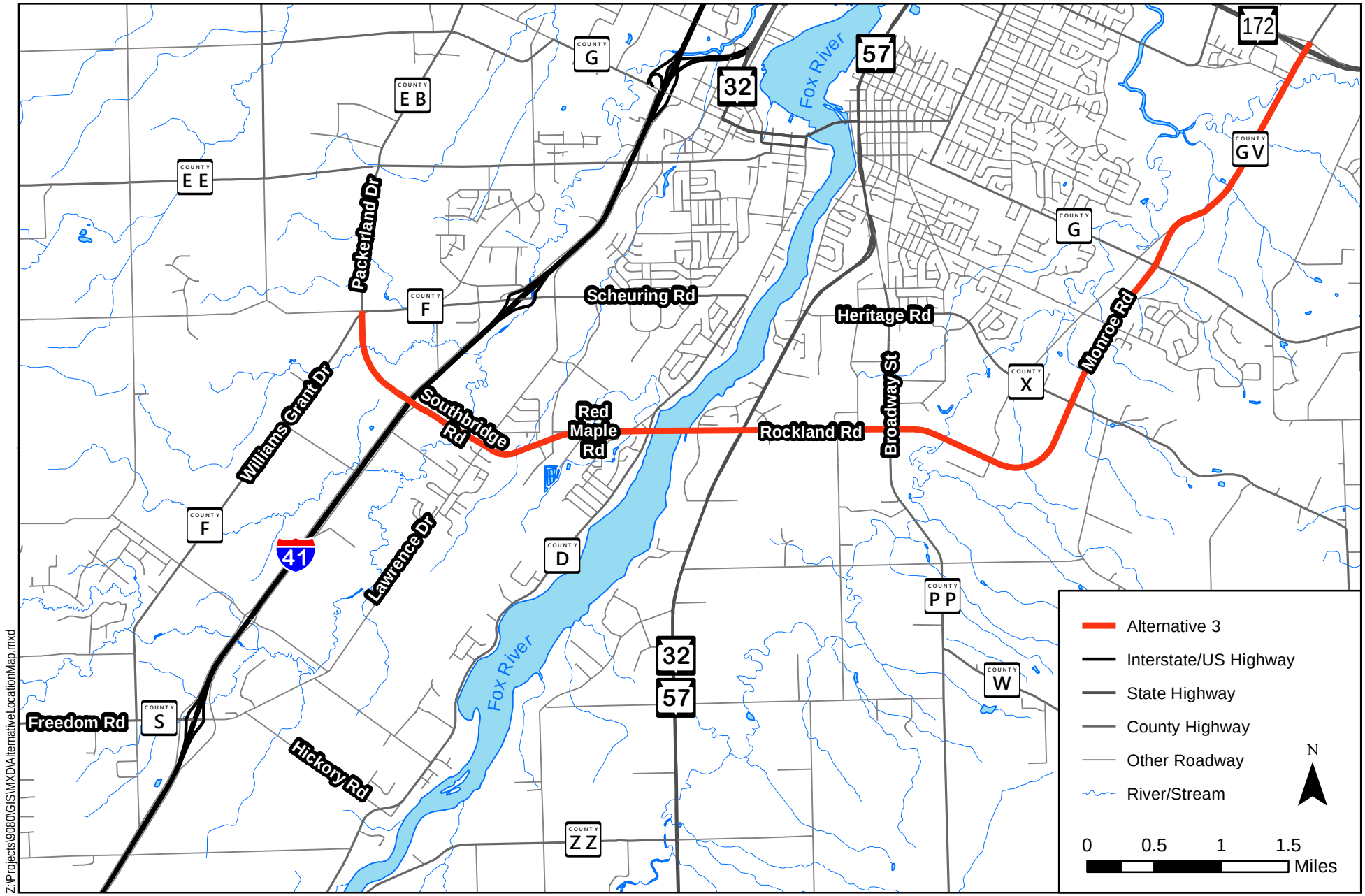
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Alternative 2B Location Map

Brown County Southern Arterial Project

WisDOT NE Region

Figure 5

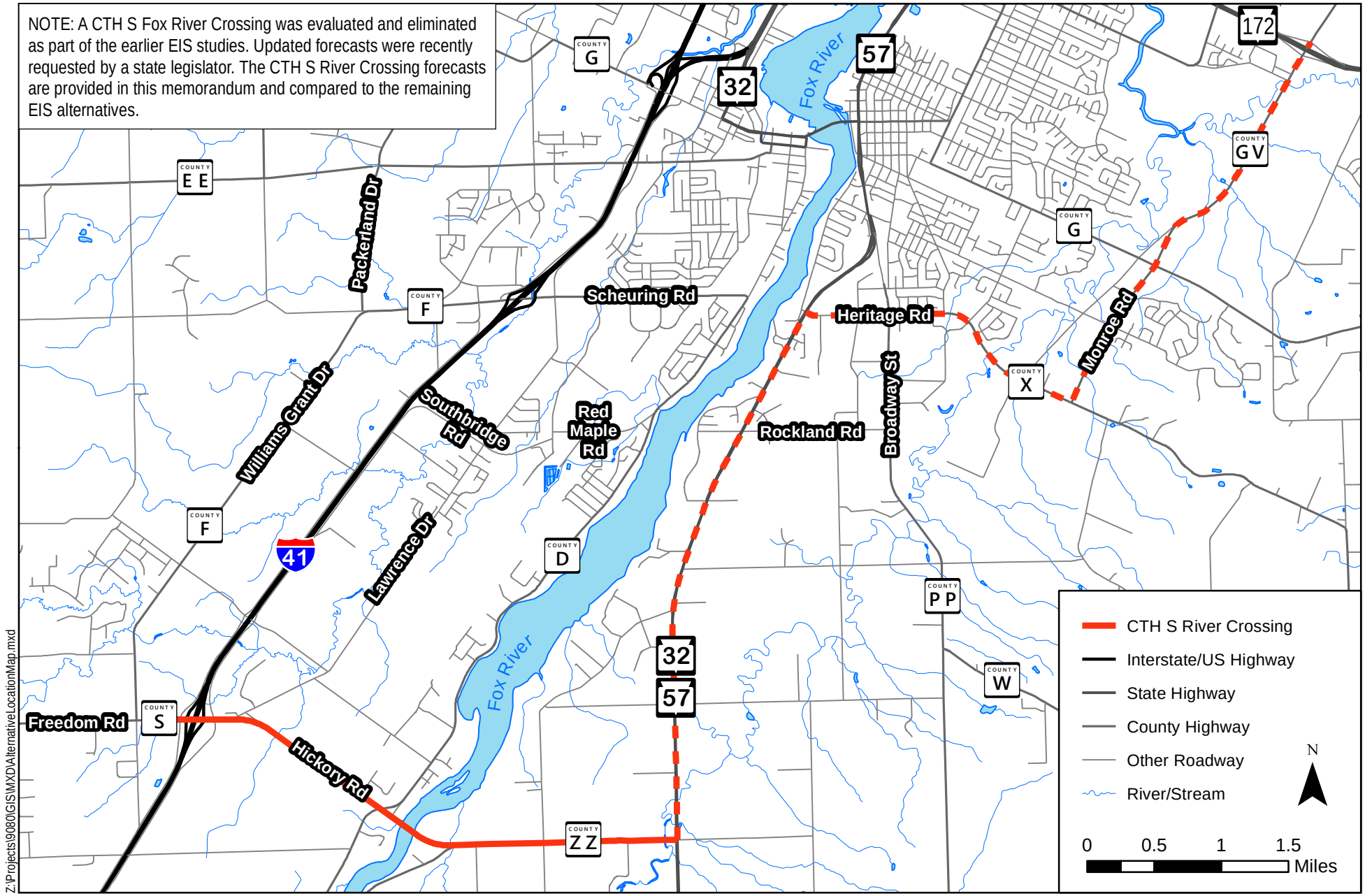


Alternative 3 Location Map

Brown County Southern Arterial Project

WisDOT NE Region

Figure 6



CTH S River Crossing Analysis Location Map

Brown County Southern Arterial Project

WisDOT NE Region

Figure 7

Table 1. Daily Traffic Forecasts

Facility	Site ID	Location Description	Year	Count	No Build	Alt 1	Alt 2A	Alt 2B	Alt 3	CTH S Fox River Crossing* (Standard Speed)
I-41	050380	I-41 between Oneida St and CTH G (Main Ave)	2012	59,286	90,200	90,100	87,200	88,200	90,600	91,000
	050110	I-41 between CTH G (Main Ave) and CTH F (Scheuring Rd)	2014	57,466	85,400	79,800	79,100	78,700	81,900	84,800
	050109	I-41 between CTH F (Scheuring Rd) and CTH S (Freedom Rd)	2015	49,904	66,200	65,800	68,600	68,700	63,500	66,100
	050001	I-41 south of CTH S (Freedom Rd)	2014	44,500	61,500	61,600	63,100	63,000	62,000	61,600
CTH G (Main Ave)	050521	CTH G (Main Ave) between Spirit Way and Mid Valley Dr	2015	12,435	14,600	14,400	13,700	13,700	14,000	14,500
	051793	CTH G (Main Ave) between Lawrence Dr and I-41	2015	18,013	27,500	25,000	22,500	24,700	25,200	22,500
	050484	CTH G (Main Ave) between 9th and 10th Streets	2015	16,790	22,600	21,000	18,400	20,600	20,800	21,400
	051126	Lawrence Dr between CTH G (Main Ave) and Grant St	2015	6,805	8,000	7,700	7,800	7,800	7,800	7,900
	051582	Ramp from CTH G To I-41 NB	2015	9,895	13,000	13,600	12,300	12,800	12,900	12,900
	051580	Ramp from I-41 SB To CTH G	2015	10,064	12,700	13,300	11,800	12,900	13,000	12,300
	051581	Ramp from CTH G To I-41 SB	2015	3,419	5,400	3,500	3,000	3,300	3,800	4,500
	051583	Ramp from I-41 NB To CTH G	2015	4,248	5,800	3,700	3,200	3,400	4,000	4,800
	051087	Business 41 Spur from I-41 to STH 32	2015	6,377	9,700	9,400	9,800	9,500	9,400	9,600
CTH F (Scheuring Road)	051364	CTH EB South of CTH EE	2009	2,325	4,500	4,300	6,100	6,300	5,700	4,500
	051626	CTH F (Williams Grant Dr) south of CTH F (Scheuring Rd)	2003	2,000	6,100	6,200	6,100	6,300	5,700	6,100
	051259	CTH F (Scheuring Rd) west of I-41	2012	10,876	21,600	23,000	17,800	18,300	20,500	22,400
	051405	CTH F (Scheuring Rd) between Lawrence Dr and I-41	2015	19,480	26,100	29,200	21,400	21,500	25,500	26,100
	051348	CTH F (Scheuring Rd) between Lawrence Dr and American Blvd	2012	9,365	11,000	22,800	10,400	10,000	11,500	11,400
	N/A	New CTH F Fox River Bridge	N/A	N/A	N/A	34,100	N/A	N/A	N/A	N/A
	051124	Lawrence Dr north of CTH F (Scheuring Rd)	2012	10,264	12,100	14,300	11,400	11,600	12,300	11,000
	051125	Lawrence Dr south of CTH F (Scheuring Rd)	2015	9,365	11,800	12,900	5,400	6,400	9,000	12,800
	051599	Ramp from CTH F (Scheuring Rd) to I-41 NB	2012	9,396	15,400	14,900	13,300	14,600	15,500	15,300
	051598	Ramp from I-41 SB to CTH F (Scheuring Rd)	2015	9,676	15,600	15,000	12,700	13,900	15,100	15,500
	051600	Ramp from CTH F (Scheuring Rd) to I-41 SB	2015	3,305	6,100	8,100	3,500	1,900	6,200	6,300
	051601	Ramp from I-41 NB to CTH F (Scheuring Rd)	2015	3,191	5,700	7,800	2,500	1,900	6,000	5,900
Southern Arterial	N/A	New Southern Arterial Fox River Bridge	N/A	N/A	N/A	N/A	27,700	27,800	26,500	N/A
	051811	Southbridge Rd between Lawrence Dr and American Blvd	2009	1,290	1,600	2,400	17,600	15,800	12,700	1,500
	N/A	New Southern Arterial between Lawrence and French Rd	N/A	N/A	N/A	N/A	20,300	18,400	10,700	N/A
	N/A	New Southern Arterial west of Mid Valley Dr	N/A	N/A	N/A	N/A	14,800	13,100	6,500	N/A
	N/A	New Ramp from Southern Arterial To I-41 NB	N/A	N/A	N/A	N/A	4,200	1,800	N/A	N/A
	N/A	New Ramp from I-41 SB To Southern Arterial	N/A	N/A	N/A	N/A	4,600	2,100	N/A	N/A
	N/A	New Ramp from Southern Arterial To I-41 SB	N/A	N/A	N/A	N/A	9,200	9,400	N/A	N/A
	N/A	New Ramp from I-41 NB To Southern Arterial	N/A	N/A	N/A	N/A	9,100	9,200	N/A	N/A
CTH S (Freedom Road)	050257	CTH S (Freedom Rd) east of CTH F (Williams Grant Dr)	2009	3,964	8,200	8,300	8,200	8,100	8,200	9,200
	051752	Ramp from CTH S To I-41 NB	2012	3,019	5,400	5,200	5,100	5,100	4,800	6,500
	051753	Ramp from I-41 SB To CTH S	2015	2,831	5,100	5,000	4,900	5,000	4,700	6,700
	051754	Ramp from CTH S To I-41 SB	2012	2,978	3,100	3,100	2,400	2,400	4,300	4,700
	051755	Ramp from I-41 NB To CTH S	2015	1,126	2,700	2,900	2,100	2,000	3,700	4,000

*A CTH S Fox River Crossing was evaluated and eliminated as part of the earlier EIS studies. Updated forecasts were recently requested by a state legislator. The CTH S River Crossing forecasts are provided in this memorandum and compared to the remaining EIS alternatives.

Table 2. Daily Traffic Forecast Preparation Notes

Site ID	Location Description	No Build	Alt 1	Alt 2A	Alt 2B	Alt 3	CTH S Fox River Crossing* (Standard Speed)
050380	I-41 between Oneida St and CTH G (Main Ave)	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
050110	I-41 between CTH G (Main Ave) and CTH F (Scheuring Rd)	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
050109	I-41 between CTH F (Scheuring Rd) and CTH S (Freedom Rd)	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
050001	I-41 south of CTH S (Freedom Rd)	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
050521	CTH G (Main Ave) between Spirit Way and Mid Valley Dr	Average Method	Average Method	Average Method	Average Method	Average Method	Average Method
051793	CTH G (Main Ave) between Lawrence Dr and I-41	Average Method	Average Method	Average Method	Average Method	Average Method	Average Method
050484	CTH G (Main Ave) between 9th and 10th Streets	Average Method	Average Method	Average Method	Average Method	Average Method	Average Method
051126	Lawrence Dr between CTH G (Main Ave) and Grant St	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051582	Ramp from CTH G To I-41 NB	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051580	Ramp from I-41 SB To CTH G	Average Method (INVALID override)	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051581	Ramp from CTH G To I-41 SB	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051583	Ramp from I-41 NB To CTH G	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051087	Business 41 Spur from I-41 to STH 32	Minimum growth rate	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051364	CTH EB South of CTH EE	Difference Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051626	CTH F (Williams Grant Dr) south of CTH F (Scheuring Rd)	Difference Method	Difference Method	Difference Method	Difference Method	Difference Method	Difference Method
051259	CTH F (Scheuring Rd) west of I-41	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average
051405	CTH F (Scheuring Rd) between Lawrence Dr and I-41	Average Method	Average Method	Average Method	Average Method	Average Method	Scenario Difference
051348	CTH F (Scheuring Rd) between Lawrence Dr and American Blvd	Average Method	Average Method	Average Method	Average Method	Average Method	Average Method
N/A	New CTH F Fox River Bridge	Not included	Difference Method	Not included	Not included	Not included	Not included
051124	Lawrence Dr north of CTH F (Scheuring Rd)	Difference Method	Difference Method	Difference Method	Difference Method	Difference Method	Difference Method
051125	Lawrence Dr south of CTH F (Scheuring Rd)	Average Method	Average Method	Average Method	Average Method	Average Method	Average Method
051599	Ramp from CTH F (Scheuring Rd) to I-41 NB	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051598	Ramp from I-41 SB to CTH F (Scheuring Rd)	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051600	Ramp from CTH F (Scheuring Rd) to I-41 SB	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051601	Ramp from I-41 NB to CTH F (Scheuring Rd)	Average Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
N/A	New Southern Arterial Fox River Bridge	Not included	Not included	Difference Method	Difference Method	Difference Method	Not included
051811	Southbridge Rd between Lawrence Dr and American Blvd	Difference Method	Difference Method	Difference Method	Difference Method	Difference Method	Difference Method
N/A	New Southern Arterial between Lawrence and French Rd	Not included	Not included	Difference Method	Difference Method	Difference Method	Not included
N/A	New Southern Arterial west of Mid Valley Dr	Not included	Not included	Difference Method	Difference Method	Difference Method	Not included
N/A	New Ramp from Southern Arterial To I-41 NB	Not included	Not included	Difference Method	Difference Method	Not included	Not included
N/A	New Ramp from I-41 SB To Southern Arterial	Not included	Not included	Difference Method	Difference Method	Not included	Not included
N/A	New Ramp from Southern Arterial To I-41 SB	Not included	Not included	Difference Method	Difference Method	Not included	Not included
N/A	New Ramp from I-41 NB To Southern Arterial	Not included	Not included	Difference Method	Difference Method	Not included	Not included
050257	CTH S (Freedom Rd) east of CTH F (Williams Grant Dr)	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	Scenario Difference
051752	Ramp from CTH S To I-41 NB	Average Method (INVALID override)	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051753	Ramp from I-41 SB To CTH S	Average Method (INVALID override)	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051754	Ramp from CTH S To I-41 SB	Difference Method	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference
051755	Ramp from I-41 NB To CTH S	Ratio Method (INVALID override)	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference	Scenario Difference

*A CTH S Fox River Crossing was evaluated and eliminated as part of the earlier EIS studies. Updated forecasts were recently requested by a state legislator. The CTH S River Crossing forecasts are provided in this memorandum and compared to the remaining EIS alternatives.

Table 3. Fox River Crossing Daily Traffic Forecasts

Site ID	Location Description	Year	Count	Year 2045 Forecast						
				No Build	Alt 1	Alt 2A	Alt 2B	Alt 3	CTH S Fox River Crossing*	
									Standard Speed	Higher Speed
050387	STH 172 at Fox River Bridge [Green Bay]	2015	78,100	96,000	92,000	92,800	92,700	92,800	95,400	95,000
050470	STH 32 (Main St) at Fox River Bridge [De Pere]	2015	31,400	42,700	27,000	31,200	31,200	31,900	39,600	38,800
050333	STH 96 (High St) at Fox River Bridge [Wrightstown]	2012	9,200	18,300	16,400	16,200	16,200	16,200	15,100	14,800
N/A	CTH F at New Fox River Bridge	N/A	N/A	N/A	34,100	N/A	N/A	N/A	N/A	N/A
N/A	Southern Arterial at New Fox River Bridge	N/A	N/A	N/A	N/A	27,700	27,900	26,500	N/A	N/A
N/A	CTH S Option at New Fox River Bridge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11,500	13,700
	Total Fox River Crossing Traffic from STH 172 to STH 96		118,700	157,000	169,500	167,900	168,000	167,400	161,600	162,300

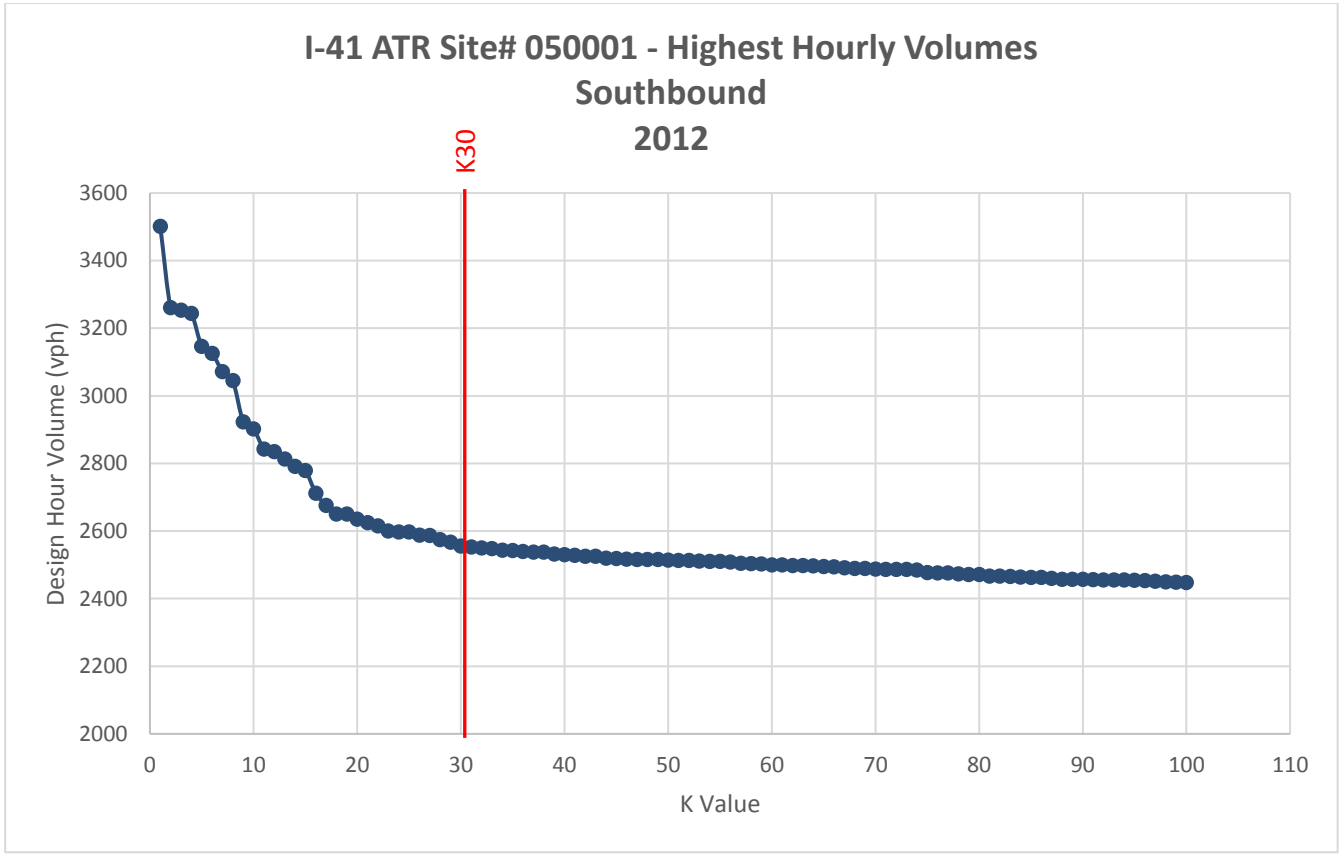
Table 4. Fox River Crossing Daily Traffic Forecast Preparation Notes

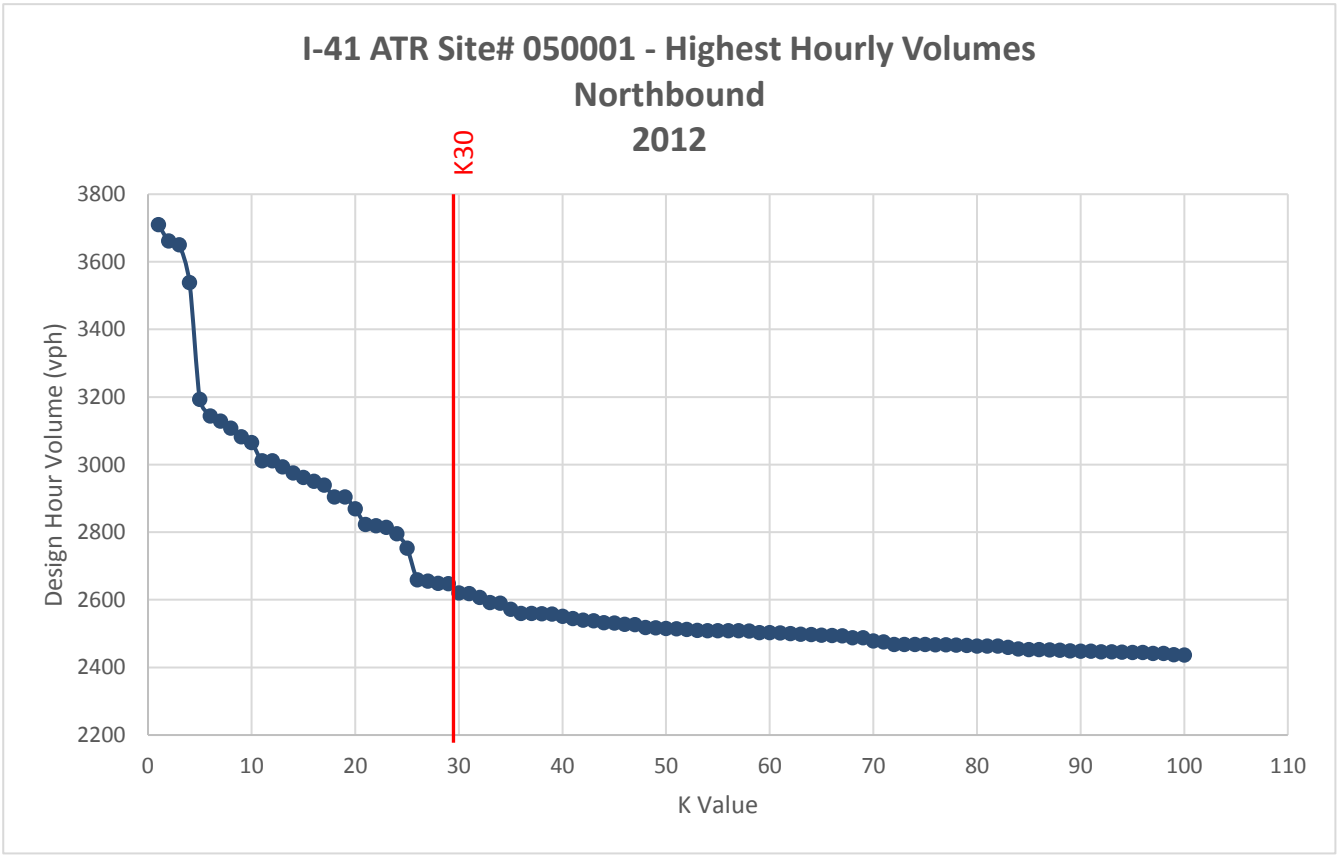
Site ID	Location Description	No Build	Alt 1	Alt 2A	Alt 2B	Alt 3	CTH S Fox River Crossing*	
							Standard Speed	Higher Speed
050387	STH 172 at Fox River Bridge [Green Bay]	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average
050470	STH 32 (Main St) at Fox River Bridge [De Pere]	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average
050333	STH 96 (High St) at Fox River Bridge [Wrightstown]	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average	TAFIS/Model Average
N/A	CTH F at New Fox River Bridge	Not included	Difference Method	Not included	Not included	Not included	Not included	Not included
N/A	Southern Arterial at New Fox River Bridge	Not included	Not included	Difference Method	Difference Method	Difference Method	Not included	Not included
N/A	CTH S Option at New Fox River Bridge	Not included	Not included	Not included	Not included	Not included	Difference Method	Difference Method

*A CTH S Fox River Crossing was evaluated and eliminated as part of the earlier EIS studies. Updated forecasts were recently requested by a state legislator. The CTH S River Crossing forecasts are provided in this memorandum and compared to the remaining EIS alternatives.

Appendix B

Figure B1
Graphs of Top 100 Hourly Volumes





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Table B1
I-41 ATR Site #050001 (1.5 MI NE OF OUTAGAMIE COUNTY LINE)
Top 100 Highest Hourly Volumes - Southbound

Date	Weekday	*Hour	SB negdir	NB posdir	Two-Way	SB Rank
2012-09-30	**SUN**	**19p**	**3501**	**716**	**4217**	**1**
2012-09-13	THU	23p	3261	252	3513	2
2012-09-09	SUN	19p	3253	654	3907	3
2012-01-15	SUN	19p	3244	642	3886	4
2012-08-16	THU	22p	3146	446	3592	5
2012-08-30	THU	21p	3126	560	3686	6
2012-09-30	SUN	20p	3072	570	3642	7
2012-12-02	SUN	15p	3045	816	3861	8
2012-11-04	SUN	16p	2923	949	3872	9
2012-01-01	SUN	16p	2902	607	3509	10
2012-12-23	SUN	16p	2843	953	3796	11
2012-10-28	SUN	16p	2835	835	3670	12
2012-11-04	SUN	17p	2813	931	3744	13
2012-08-03	FRI	22p	2791	620	3411	14
2012-11-04	SUN	15p	2779	857	3636	15
2012-08-16	THU	23p	2712	287	2999	16
2012-09-09	SUN	20p	2676	518	3194	17
2012-08-01	WED	16	2650	1977	4627	18
2012-12-09	SUN	23p	2650	120	2770	19
2012-12-02	SUN	16p	2635	862	3497	20
2012-10-28	SUN	15p	2625	839	3464	21
2012-01-01	SUN	17p	2615	595	3210	22
2012-08-27	MON	16	2600	1930	4530	23
2012-09-07	FRI	16	2597	2320	4917	24
2012-12-23	SUN	15p	2597	820	3417	25
2012-09-14	FRI	16	2588	2361	4949	26
2012-09-21	FRI	16	2587	2314	4901	27
2012-06-14	THU	17	2575	2082	4657	28
2012-06-01	FRI	16	2567	2182	4749	29
2012-07-20	**FRI**	**16**	**2556**	**2319**	**4875**	**30**
2012-08-28	TUE	16	2553	2072	4625	31
2012-06-14	THU	16	2550	2041	4591	32
2012-11-09	FRI	16	2548	2247	4795	33
2012-06-27	WED	16	2543	2065	4608	34
2012-08-17	FRI	16	2542	2333	4875	35
2012-05-17	THU	16	2540	2068	4608	36
2012-08-22	WED	16	2538	2061	4599	37
2012-08-07	TUE	16	2538	1997	4535	38
2012-08-14	TUE	16	2532	2011	4543	39
2012-05-04	FRI	16	2530	2252	4782	40
2012-07-12	THU	16	2528	1972	4500	41
2012-10-19	FRI	16	2525	2475	5000	42
2012-05-16	WED	16	2525	1976	4501	43
2012-07-13	FRI	16	2520	2185	4705	44
2012-02-14	TUE	16	2519	1987	4506	45
2012-08-15	WED	16	2517	2156	4673	46
2012-01-27	FRI	16	2516	2279	4795	47
2012-08-08	WED	16	2516	2130	4646	48
2012-02-23	THU	16	2516	2055	4571	49
2012-06-13	**WED**	**16**	**2514**	**2096**	**4610**	**50**
2012-03-08	THU	16	2513	2068	4581	51
2012-09-12	WED	16	2513	1912	4425	52
2012-06-22	FRI	16	2511	2228	4739	53
2012-09-06	THU	16	2510	2080	4590	54
2012-06-07	THU	16	2510	2046	4556	55
2012-05-18	FRI	16	2508	2190	4698	56
2012-04-27	FRI	16	2505	2260	4765	57
2012-09-11	TUE	16	2504	1928	4432	58
2012-10-11	THU	16	2503	2346	4849	59
2012-02-17	FRI	16	2500	2259	4759	60
2012-10-18	THU	16	2500	2177	4677	61
2012-10-12	FRI	16	2498	2393	4891	62
2012-08-23	THU	16	2498	2181	4679	63
2012-05-31	THU	16	2497	2075	4572	64
2012-11-02	FRI	16	2495	2368	4863	65
2012-01-06	FRI	16	2494	2117	4611	66
2012-05-09	WED	16	2491	1906	4397	67
2012-05-10	THU	16	2489	2089	4578	68
2012-07-10	TUE	16	2489	1973	4462	69
2012-09-28	FRI	16	2488	2202	4690	70
2012-09-20	THU	16	2487	2182	4669	71
2012-09-18	TUE	16	2487	2034	4521	72
2012-08-21	TUE	16	2487	1973	4460	73
2012-02-03	FRI	16	2485	2222	4707	74
2012-03-06	TUE	16	2477	1964	4441	75
2012-01-26	THU	16	2476	2024	4500	76
2012-01-15	SUN	20p	2476	383	2859	77
2012-06-28	THU	16	2473	2026	4499	78
2012-08-24	FRI	16	2471	2243	4714	79
2012-01-19	THU	16	2471	2020	4491	80
2012-06-21	THU	16	2467	2009	4476	81
2012-02-09	THU	16	2467	1933	4400	82
2012-02-22	WED	16	2466	1930	4396	83
2012-04-20	FRI	16	2464	2232	4696	84
2012-03-09	FRI	16	2463	2361	4824	85
2012-01-18	WED	16	2463	1839	4302	86
2012-11-20	TUE	16	2460	2038	4498	87
2012-08-10	FRI	16	2457	2344	4801	88
2012-07-18	WED	17	2457	1962	4419	89
2012-06-19	TUE	16	2457	1913	4370	90
2012-06-29	FRI	16	2456	2173	4629	91
2012-05-23	WED	16	2455	1970	4425	92
2012-06-05	TUE	16	2455	1923	4378	93
2012-09-24	MON	16	2455	1891	4346	94
2012-04-13	FRI	16	2454	2182	4636	95
2012-07-25	WED	16	2453	2174	4627	96
2012-03-07	WED	16	2452	2064	4516	97
2012-12-14	FRI	16	2450	2292	4742	98
2012-07-19	THU	16	2449	2062	4511	99
2012-03-01	**THU**	**16**	**2448**	**2048**	**4496**	**100**

Table B1a
Time of Day and Week when the Top 100 volumes Occurred

*Count of Hour Row Labels	SUN	MON	TUE	WED	THU	FRI	Grand Total
15p	4						4
16		2	12	14	20	27	75
16p	5						5
17				1	1		2
17p	2						2
19p	3						3
20p	3						3
21p					1		1
22p					1	1	2
23p	1				2		3
Grand Total	**18**	**2**	**12**	**15**	**25**	**28**	**100**

Highest occurrence in top 100: Weekday at 4-5PM at: 75%

Legend

	Packer Event
p	Denotes Packer Event Hour
	K30

K30: **2560** vph (round to nearest 10)

Opposing Average: **2230** vph (round to nearest 10)

Average of 10 opposing volumes closest to peak direction K30

Use only 4-5PM volumes for the opposing direction

Table B2
I-41 ATR Site #050001 (1.5 MI NE OF OUTAGAMIE COUNTY LINE)
Top 100 Highest Hourly Volumes - Northbound

Date	Weekday	*Hour	SB negdir	NB posdir	Two-Way	NB Rank
2012-12-23	**SUN**	**9p**	**721**	**3710**	**4431**	**1**
2012-10-28	SUN	9p	692	3662	4354	2
2012-12-02	SUN	9p	597	3650	4247	3
2012-11-04	SUN	9p	731	3539	4270	4
2012-08-30	THU	16p	2251	3193	5444	5
2012-01-15	SUN	11p	849	3144	3993	6
2012-09-13	THU	16p	2401	3129	5530	7
2012-09-30	SUN	12p	1252	3108	4360	8
2012-08-03	FRI	16p	2324	3082	5406	9
2012-09-30	SUN	11p	1227	3065	4292	10
2012-08-03	FRI	17p	2022	3011	5033	11
2012-09-13	THU	15p	1678	3011	4689	12
2012-08-16	THU	17p	2009	2993	5002	13
2012-08-16	THU	15p	1907	2975	4882	14
2012-08-30	THU	17p	1893	2962	4855	15
2012-08-30	THU	15p	1923	2951	4874	16
2012-08-16	THU	16p	2392	2939	5331	17
2012-01-15	SUN	12p	841	2904	3745	18
2012-01-01	SUN	9p	456	2904	3360	19
2012-09-09	SUN	11p	1157	2869	4026	20
2012-09-09	SUN	12p	1161	2823	3984	21
2012-07-24	TUE	7p	2000	2819	4819	22
2012-10-28	SUN	10p	930	2814	3744	23
2012-12-23	SUN	10p	874	2795	3669	24
2012-11-04	SUN	10p	1077	2753	3830	25
2012-08-03	FRI	15p	1933	2659	4592	26
2012-01-01	SUN	10p	672	2655	3327	27
2012-12-09	SUN	16p	588	2649	3237	28
2012-10-03	WED	7	1951	2648	4599	29
2012-11-01	**THU**	**7**	**1940**	**2620**	**4560**	**30**
2012-12-09	SUN	15p	658	2618	3276	31
2012-09-13	THU	17p	1884	2607	4491	32
2012-10-02	TUE	7	1952	2592	4544	33
2012-05-01	TUE	7	1908	2590	4498	34
2012-09-12	WED	7	2020	2572	4592	35
2012-10-01	MON	7	2134	2560	4694	36
2012-09-25	TUE	7	1932	2560	4492	37
2012-10-16	TUE	7	1968	2559	4527	38
2012-10-10	WED	7	1877	2558	4435	39
2012-09-13	THU	14p	1492	2551	4043	40
2012-08-30	THU	14p	1636	2545	4181	41
2012-10-09	TUE	7	1940	2540	4480	42
2012-10-04	THU	7	1932	2538	4470	43
2012-10-29	MON	7	1958	2532	4490	44
2012-09-18	TUE	7	1985	2531	4516	45
2012-11-05	MON	7	2163	2528	4691	46
2012-08-16	THU	18p	1198	2527	3725	47
2012-05-15	TUE	7	1942	2518	4460	48
2012-09-06	THU	7	1979	2517	4496	49
2012-08-29	WED	7	1968	2515	4483	50
2012-11-14	WED	7	1980	2514	4494	51
2012-09-20	THU	7	1994	2512	4506	52
2012-09-11	TUE	7	1972	2510	4482	53
2012-09-19	WED	7	1976	2509	4485	54
2012-05-29	TUE	7	1922	2509	4431	55
2012-08-01	WED	7	1802	2509	4311	56
2012-12-02	SUN	10p	821	2509	3330	57
2012-09-13	THU	7p	1897	2508	4405	58
2012-10-30	TUE	7	1909	2503	4412	59
2012-11-04	SUN	8p	464	2503	2967	60
2012-10-18	THU	7	1955	2502	4457	61
2012-08-03	FRI	14p	1800	2500	4300	62
2012-11-13	TUE	7	1929	2498	4427	63
2012-09-05	WED	7	1953	2497	4450	64
2012-10-22	MON	7	1963	2495	4458	65
2012-10-23	TUE	7	1941	2494	4435	66
2012-11-07	WED	7	1976	2493	4469	67
2012-04-24	TUE	7	1980	2488	4468	68
2012-04-17	TUE	7	1978	2488	4466	69
2012-02-07	TUE	7	1824	2478	4302	70
2012-10-19	FRI	16	2525	2475	5000	71
2012-05-14	MON	7	2003	2468	4471	72
2012-09-26	WED	7	2002	2468	4470	73
2012-03-27	TUE	7	1983	2468	4451	74
2012-08-28	TUE	7	1930	2468	4398	75
2012-11-27	TUE	7	1973	2467	4440	76
2012-08-30	THU	7p	1944	2467	4411	77
2012-03-06	TUE	7	1857	2466	4323	78
2012-11-08	THU	7	1930	2465	4395	79
2012-10-17	WED	7	1921	2463	4384	80
2012-10-31	WED	7	1861	2463	4324	81
2012-02-09	THU	7	1771	2463	4234	82
2012-04-25	WED	7	2008	2459	4467	83
2012-09-10	MON	7	2111	2455	4566	84
2012-09-24	MON	7	1991	2453	4444	85
2012-02-02	THU	7	1849	2453	4302	86
2012-05-08	TUE	7	1975	2452	4427	87
2012-04-10	TUE	7	1926	2451	4377	88
2012-08-22	WED	7	1881	2449	4330	89
2012-07-26	THU	7	2044	2448	4492	90
2012-10-25	THU	7	1868	2448	4316	91
2012-04-16	MON	7	1934	2446	4380	92
2012-12-04	TUE	7	1900	2446	4346	93
2012-11-15	THU	7	1933	2445	4378	94
2012-10-11	THU	7	2007	2444	4451	95
2012-04-04	WED	7	1941	2444	4385	96
2012-04-03	TUE	7	1960	2441	4401	97
2012-05-10	THU	7	1908	2441	4349	98
2012-02-27	MON	7	1794	2438	4232	99
2012-11-26	**MON**	**7**	**1961**	**2437**	**4398**	**100**

Table B2a
Time of Day and Week when the Top 100 volumes Occurred

*Count of Hour Row Labels	SUN	MON	TUE	WED	THU	FRI	Grand Total
10p	5						5
11p	3						3
12p	3						3
14p					2	1	3
15p	1				3	1	5
16						1	1
16p	1				3	1	5
17p					3	1	4
18p					1		1
7		10	23	15	13		61
7p			1		2		3
8p	1						1
9p	5						5
Grand Total	**19**	**10**	**24**	**15**	**27**	**5**	**100**

Highest occurrence in top 100: Weekday at 7-8AM at: 61%

Legend

	Packer Event
p	Denotes Packer Event Hour
	K30

K30: **2620** vph (round to nearest 10)
Opposing Average: **1970** vph (round to nearest 10)
Average of 10 opposing volumes closest to peak direction K30
Use only 7-8AM volumes for the opposing direction

Appendix C

TABLE C1

FREEWAY MAINLINE TRUCK PERCENTAGE

US 41, NORTHBOUND AND SOUTHBOUND

Jul-12	ROAD	HOUR	CYCLE	PASSENGER	SU_TRUCK	MU_TRUCK	TOTL VEH	TOTL TRK	TRK %
AM Peak	negdir	7	25	1548	45	110	1728	155	9.0%
	posdir	7	27	1934	41	99	2102	140	6.7%
PM Peak	negdir	16	33	2064	39	97	2233	136	6.1%
	posdir	16	17	1751	41	88	1897	129	6.8%

Aug-12	ROAD	HOUR	CYCLE	PASSENGER	SU_TRUCK	MU_TRUCK	TOTL VEH	TOTL TRK	TRK %
AM Peak	negdir	7	31	1677	52	118	1878	170	9.1%
	posdir	7	19	2199	46	116	2381	162	6.8%
PM Peak	negdir	16	35	2286	44	110	2475	154	6.2%
	posdir	16	19	2036	45	91	2192	137	6.2%

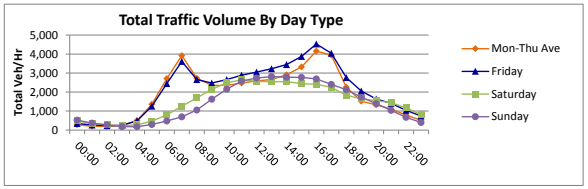
Average	ROAD	HOUR	CYCLE	PASSENGER	SU_TRUCK	MU_TRUCK	TOTL VEH	TOTL TRK	TRK %
AM Peak	negdir	7	28	1613	49	114	1803	163	9.0%
	posdir	7	23	2067	44	107	2241	151	6.7%
PM Peak	negdir	16	34	2175	41	104	2354	145	6.2%
	posdir	16	18	1893	43	90	2044	133	6.5%

Wisconsin Department of Transportation

Monthly Average Hourly Volume by Day of Week

Jul 2012

Continuous Count



Location	**USH 41 - 1.5 MI NE OF OUTAGAMIE COUNTY LINE - DE PERE**	Segment ID	6581
Site #	050001	Seasonal Factor Group	2
Region	NE	Daily Factor Group	2
County	BROWN	Axle Factor Group	5
Funct. Class	U Principal Arterial - Other	Growth Factor Group	1

Hour	Sundays			Mondays			Tuesdays			Wednesdays			Thursdays			Fridays			Saturdays		
	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*
00:00-00:59	251	267	*518*	112	130	*242*	122	130	*252*	147	165	*312*	150	158	*308*	187	165	*352*	246	240	*485*
01:00-01:59	199	163	*362*	79	82	*161*	93	106	*199*	98	117	*215*	92	114	*205*	147	122	*269*	189	161	*350*
02:00-02:59	145	132	*277*	80	96	*176*	93	109	*202*	92	107	*199*	94	103	*197*	114	122	*236*	128	138	*266*
03:00-03:59	81	99	*180*	114	129	*243*	128	110	*238*	111	108	*220*	111	119	*230*	131	122	*253*	107	120	*227*
04:00-04:59	76	101	*177*	268	276	*544*	286	244	*530*	224	215	*439*	268	244	*512*	262	224	*485*	134	143	*277*
05:00-05:59	149	151	*299*	731	750	*1,481*	737	708	*1,444*	586	581	*1,167*	682	671	*1,352*	650	606	*1,256*	225	244	*469*
06:00-06:59	229	249	*478*	1,512	1,421	*2,933*	1,532	1,372	*2,904*	1,207	1,094	*2,301*	1,422	1,286	*2,707*	1,302	1,144	*2,445*	377	425	*802*
07:00-07:59	313	384	*697*	2,296	1,855	*4,151*	2,383	1,857	*4,240*	1,796	1,554	*3,350*	2,145	1,785	*3,930*	2,001	1,614	*3,615*	622	637	*1,259*
08:00-08:59	500	560	*1,060*	1,496	1,278	*2,774*	1,660	1,265	*2,925*	1,276	1,171	*2,447*	1,485	1,298	*2,783*	1,396	1,261	*2,658*	837	863	*1,700*
09:00-09:59	800	824	*1,625*	1,228	1,139	*2,367*	1,260	1,135	*2,395*	1,158	1,029	*2,188*	1,295	1,181	*2,476*	1,298	1,180	*2,478*	1,152	990	*2,142*
10:00-10:59	1,018	1,137	*2,154*	1,205	1,178	*2,383*	1,170	1,133	*2,303*	1,157	1,063	*2,220*	1,233	1,267	*2,500*	1,368	1,295	*2,663*	1,311	1,176	*2,487*
11:00-11:59	1,161	1,416	*2,577*	1,199	1,278	*2,476*	1,193	1,306	*2,499*	1,177	1,090	*2,266*	1,308	1,354	*2,662*	1,487	1,397	*2,883*	1,408	1,242	*2,650*
12:00-12:59	1,237	1,497	*2,734*	1,235	1,313	*2,548*	1,242	1,389	*2,631*	1,203	1,187	*2,390*	1,357	1,437	*2,794*	1,513	1,543	*3,056*	1,338	1,224	*2,561*
13:00-13:59	1,293	1,521	*2,814*	1,254	1,360	*2,614*	1,285	1,437	*2,722*	1,249	1,172	*2,421*	1,377	1,499	*2,876*	1,649	1,583	*3,232*	1,330	1,213	*2,543*
14:00-14:59	1,224	1,559	*2,783*	1,384	1,530	*2,913*	1,433	1,549	*2,982*	1,342	1,333	*2,675*	1,473	1,591	*3,065*	1,741	1,705	*3,446*	1,296	1,259	*2,555*
15:00-15:59	1,218	1,558	*2,776*	1,537	1,774	*3,310*	1,575	1,835	*3,410*	1,430	1,625	*3,055*	1,628	1,893	*3,520*	1,879	1,999	*3,877*	1,219	1,221	*2,440*
16:00-16:59	1,179	1,513	*2,692*	1,892	2,306	*4,198*	1,986	2,350	*4,335*	1,762	2,007	*3,769*	1,959	2,355	*4,314*	2,170	2,358	*4,529*	1,185	1,227	*2,412*
17:00-17:59	1,064	1,343	*2,407*	1,852	2,191	*4,043*	1,864	2,200	*4,064*	1,652	1,965	*3,616*	1,909	2,147	*4,056*	2,003	2,040	*4,044*	1,135	1,111	*2,246*
18:00-18:59	945	1,180	*2,125*	1,045	1,088	*2,134*	1,207	1,156	*2,362*	1,058	1,061	*2,118*	1,223	1,182	*2,405*	1,507	1,254	*2,760*	888	947	*1,835*
19:00-19:59	792	940	*1,732*	673	704	*1,377*	784	766	*1,550*	754	754	*1,508*	883	776	*1,658*	1,209	846	*2,055*	765	877	*1,641*
20:00-20:59	655	731	*1,386*	598	580	*1,178*	667	645	*1,312*	689	665	*1,354*	789	676	*1,466*	948	691	*1,638*	730	821	*1,551*
21:00-21:59	473	568	*1,041*	509	512	*1,021*	567	553	*1,120*	567	562	*1,129*	634	548	*1,181*	793	616	*1,408*	697	745	*1,442*
22:00-22:59	323	347	*670*	331	332	*663*	438	372	*810*	367	422	*789*	467	402	*869*	527	512	*1,039*	567	602	*1,169*
23:00-23:59	190	210	*399*	195	208	*403*	268	226	*494*	259	361	*619*	324	245	*570*	399	346	*745*	415	400	*815*
Daily Total	**15,516**	**18,450**	***33,966***	**22,823**	**23,509**	***46,332***	**23,972**	**23,950**	***47,922***	**21,359**	**21,406**	***42,765***	**24,306**	**24,328**	***48,633***	**26,679**	**24,741**	***51,420***	**18,299**	**18,022**	***36,321***
AM Peak	**800**	**824**	***1,625***	**2,296**	**1,855**	***4,151***	**2,383**	**1,857**	***4,240***	**1,796**	**1,554**	***3,350***	**2,145**	**1,785**	***3,930***	**2,001**	**1,614**	***3,615***	**1,152**	**990**	***2,142***
Hour	09:00	09:00	*09:00*	07:00	07:00	*07:00*	07:00	07:00	*07:00*	07:00	07:00	*07:00*	07:00	07:00	*07:00*	07:00	07:00	*07:00*	09:00	09:00	*09:00*
MD Peak	**1,293**	**1,559**	***2,814***	**1,384**	**1,530**	***2,913***	**1,433**	**1,549**	***2,982***	**1,342**	**1,333**	***2,675***	**1,473**	**1,591**	***3,065***	**1,741**	**1,705**	***3,446***	**1,408**	**1,259**	***2,650***
Hour	13:00	14:00	*13:00*	14:00	14:00	*14:00*	14:00	14:00	*14:00*	14:00	14:00	*14:00*	14:00	14:00	*14:00*	14:00	14:00	*14:00*	11:00	14:00	*11:00*
PM Peak	**1,218**	**1,558**	***2,776***	**1,892**	**2,306**	***4,198***	**1,986**	**2,350**	***4,335***	**1,762**	**2,007**	***3,769***	**1,959**	**2,355**	***4,314***	**2,170**	**2,358**	***4,529***	**1,219**	**1,227**	***2,440***
Hour	15:00	15:00	*15:00*	16:00	16:00	*16:00*	16:00	16:00	*16:00*	16:00	16:00	*16:00*	16:00	16:00	*16:00*	16:00	16:00	*16:00*	15:00	16:00	*15:00*
Daily Peak	**1,293**	**1,559**	***2,814***	**2,296**	**2,306**	***4,198***	**2,383**	**2,350**	***4,335***	**1,796**	**2,007**	***3,769***	**2,145**	**2,355**	***4,314***	**2,170**	**2,358**	***4,529***	**1,408**	**1,259**	***2,650***
Hour	13:00	14:00	*13:00*	07:00	16:00	*16:00*	07:00	16:00	*16:00*	07:00	16:00	*16:00*	07:00	16:00	*16:00*	16:00	16:00	*16:00*	11:00	14:00	*11:00*
% of Total	8.3%	8.5%	*8.3%*	10.1%	9.8%	*9.1%*	9.9%	9.8%	*9.0%*	8.4%	9.4%	*8.8%*	8.8%	9.7%	*8.9%*	8.1%	9.5%	*8.8%*	7.7%	7.0%	*7.3%*
Daily Ave	**647**	**769**	***1,415***	**951**	**980**	***1,931***	**999**	**998**	***1,997***	**890**	**892**	***1,782***	**1,013**	**1,014**	***2,026***	**1,112**	**1,031**	***2,142***	**762**	**751**	***1,513***

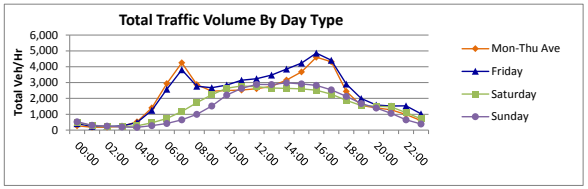
Hour	Mon-Thurs Average			Mon-Fri Average			7 Day Average		
	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*
00:00-00:59	133	145	*278*	144	149	*293*	174	179	*353*
01:00-01:59	90	105	*195*	102	108	*210*	128	124	*252*
02:00-02:59	90	104	*194*	94	108	*202*	106	115	*222*
03:00-03:59	116	117	*233*	119	118	*237*	112	115	*227*
04:00-04:59	261	245	*506*	262	241	*502*	217	207	*424*
05:00-05:59	684	677	*1,361*	677	663	*1,340*	537	530	*1,067*
06:00-06:59	1,418	1,293	*2,711*	1,395	1,263	*2,658*	1,083	999	*2,081*
07:00-07:59	2,155	1,763	*3,918*	2,124	1,733	*3,857*	1,651	1,384	*3,034*
08:00-08:59	1,479	1,253	*2,732*	1,463	1,255	*2,717*	1,236	1,099	*2,335*
09:00-09:59	1,235	1,121	*2,356*	1,248	1,133	*2,381*	1,170	1,068	*2,239*
10:00-10:59	1,191	1,160	*2,352*	1,227	1,187	*2,414*	1,209	1,178	*2,387*
11:00-11:59	1,219	1,257	*2,476*	1,272	1,285	*2,557*	1,276	1,297	*2,573*
12:00-12:59	1,259	1,332	*2,591*	1,310	1,374	*2,684*	1,304	1,370	*2,673*
13:00-13:59	1,291	1,367	*2,658*	1,363	1,410	*2,773*	1,348	1,398	*2,746*
14:00-14:59	1,408	1,501	*2,909*	1,474	1,542	*3,016*	1,413	1,504	*2,917*
15:00-15:59	1,542	1,781	*3,324*	1,610	1,825	*3,434*	1,498	1,700	*3,198*
16:00-16:59	1,900	2,254	*4,154*	1,954	2,275	*4,229*	1,733	2,016	*3,750*
17:00-17:59	1,819	2,125	*3,945*	1,856	2,108	*3,964*	1,640	1,857	*3,496*
18:00-18:59	1,133	1,122	*2,255*	1,208	1,148	*2,356*	1,125	1,124	*2,248*
19:00-19:59	773	750	*1,523*	860	769	*1,629*	837	809	*1,646*
20:00-20:59	686	642	*1,327*	738	651	*1,390*	725	687	*1,412*
21:00-21:59	569	544	*1,113*	614	558	*1,172*	606	586	*1,192*
22:00-22:59	401	382	*783*	426	408	*834*	431	427	*858*
23:00-23:59	261	260	*521*	289	277	*566*	293	285	*578*
Daily Total	**23,115**	**23,298**	***46,413***	**23,827**	**23,587**	***47,414***	**21,850**	**22,058**	**43,908**
AM Peak	**2,155**	**1,763**	***3,918***	**2,124**	**1,733**	***3,857***	**1,651**	**1,384**	***3,034***
Hour	07:00	07:00	*07:00*	07:00	07:00	*07:00*	07:00	07:00	*07:00*
MD Peak	**1,408**	**1,501**	***2,909***	**1,474**	**1,542**	***3,016***	**1,413**	**1,504**	***2,917***
Hour	14:00	14:00	*14:00*	14:00	14:00	*14:00*	14:00	14:00	*14:00*
PM Peak	**1,900**	**2,254**	***4,154***	**1,954**	**2,275**	***4,229***	**1,733**	**2,016**	***3,750***
Hour	16:00	16:00	*16:00*	16:00	16:00	*16:00*	16:00	16:00	*16:00*
Daily Peak	**2,155**	**2,254**	***4,154***	**2,124**	**2,275**	***4,229***	**1,733**	**2,016**	***3,750***
Hour	07:00	16:00	*16:00*	07:00	16:00	*16:00*	16:00	16:00	*16:00*
% of Total	9.3%	9.7%	*9.0%*	8.9%	9.6%	*8.9%*	7.9%	9.1%	*8.5%*
Daily Ave	**963**	**971**	***1,934***	**993**	**983**	***1,976***	**910**	**919**	***1,830***

Wisconsin Department of Transportation

Monthly Average Hourly Volume by Day of Week

Aug 2012

Continuous Count



Location	**USH 41 - 1.5 MI NE OF OUTAGAMIE COUNTY LINE - DE PERE**	Segment ID	6581
Site #	050001	Seasonal Factor Group	2
Region	NE	Daily Factor Group	2
County	BROWN	Axle Factor Group	5
Funct. Class	U Principal Arterial - Other	Growth Factor Group	1

Hour	Sundays			Mondays			Tuesdays			Wednesdays			Thursdays			Fridays			Saturdays		
	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*
00:00-00:59	257	264	*521*	108	120	*229*	132	134	*265*	139	150	*288*	137	157	*293*	166	240	*407*	196	291	*487*
01:00-01:59	136	171	*306*	69	82	*151*	91	102	*193*	89	103	*192*	89	103	*192*	112	128	*240*	116	163	*279*
02:00-02:59	110	135	*246*	77	97	*174*	88	106	*194*	90	96	*185*	92	106	*198*	106	123	*229*	98	137	*236*
03:00-03:59	85	111	*196*	117	135	*252*	122	113	*235*	117	110	*227*	132	118	*250*	123	137	*261*	95	122	*217*
04:00-04:59	70	106	*176*	281	262	*543*	268	244	*511*	274	238	*512*	260	251	*511*	245	231	*476*	135	134	*269*
05:00-05:59	137	144	*280*	716	735	*1,451*	714	710	*1,423*	706	688	*1,394*	693	667	*1,360*	651	592	*1,243*	246	217	*462*
06:00-06:59	216	205	*421*	1,533	1,442	*2,975*	1,579	1,430	*3,009*	1,537	1,402	*2,939*	1,498	1,327	*2,825*	1,379	1,204	*2,583*	373	361	*734*
07:00-07:59	305	339	*644*	2,327	1,888	*4,216*	2,391	1,911	*4,302*	2,408	1,887	*4,295*	2,361	1,847	*4,208*	2,131	1,677	*3,808*	572	601	*1,172*
08:00-08:59	487	513	*1,000*	1,529	1,290	*2,819*	1,569	1,322	*2,891*	1,556	1,346	*2,902*	1,568	1,331	*2,899*	1,471	1,296	*2,768*	870	863	*1,732*
09:00-09:59	728	789	*1,517*	1,300	1,121	*2,421*	1,349	1,094	*2,443*	1,307	1,157	*2,464*	1,323	1,160	*2,483*	1,393	1,282	*2,676*	1,162	1,076	*2,238*
10:00-10:59	1,032	1,177	*2,209*	1,325	1,190	*2,515*	1,329	1,150	*2,479*	1,282	1,181	*2,462*	1,331	1,213	*2,544*	1,486	1,362	*2,848*	1,392	1,253	*2,645*
11:00-11:59	1,143	1,492	*2,634*	1,234	1,240	*2,474*	1,234	1,203	*2,437*	1,262	1,243	*2,505*	1,391	1,294	*2,685*	1,645	1,504	*3,149*	1,439	1,347	*2,786*
12:00-12:59	1,235	1,656	*2,891*	1,251	1,339	*2,590*	1,258	1,271	*2,528*	1,245	1,288	*2,534*	1,417	1,368	*2,785*	1,744	1,494	*3,238*	1,434	1,306	*2,740*
13:00-13:59	1,244	1,635	*2,879*	1,239	1,385	*2,623*	1,290	1,418	*2,707*	1,326	1,383	*2,709*	1,555	1,457	*3,013*	1,795	1,678	*3,474*	1,376	1,277	*2,653*
14:00-14:59	1,262	1,721	*2,983*	1,367	1,615	*2,982*	1,436	1,645	*3,081*	1,448	1,573	*3,022*	1,928	1,607	*3,535*	2,004	1,847	*3,852*	1,361	1,271	*2,632*
15:00-15:59	1,260	1,662	*2,922*	1,574	1,859	*3,433*	1,635	1,897	*3,532*	1,631	1,918	*3,548*	2,244	1,920	*4,164*	2,203	2,030	*4,234*	1,285	1,313	*2,598*
16:00-16:59	1,251	1,576	*2,827*	1,932	2,455	*4,386*	2,013	2,528	*4,541*	2,064	2,529	*4,592*	2,506	2,386	*4,892*	2,459	2,401	*4,860*	1,251	1,271	*2,521*
17:00-17:59	1,130	1,411	*2,541*	1,920	2,224	*4,144*	1,962	2,291	*4,252*	1,970	2,299	*4,269*	2,482	2,123	*4,604*	2,341	2,067	*4,409*	1,130	1,140	*2,269*
18:00-18:59	979	1,148	*2,126*	1,099	1,171	*2,270*	1,184	1,219	*2,403*	1,164	1,237	*2,400*	1,511	1,201	*2,712*	1,611	1,293	*2,904*	934	943	*1,876*
19:00-19:59	769	905	*1,674*	732	777	*1,509*	733	783	*1,516*	787	777	*1,564*	831	785	*1,617*	1,144	848	*1,992*	770	782	*1,551*
20:00-20:59	649	742	*1,391*	573	646	*1,219*	674	682	*1,356*	712	727	*1,439*	739	879	*1,618*	890	688	*1,579*	734	781	*1,515*
21:00-21:59	474	581	*1,055*	471	530	*1,002*	527	543	*1,071*	592	594	*1,186*	566	1,302	*1,868*	762	762	*1,525*	657	810	*1,466*
22:00-22:59	293	353	*645*	306	323	*629*	364	439	*803*	397	370	*766*	449	1,290	*1,740*	589	940	*1,529*	539	565	*1,104*
23:00-23:59	180	206	*386*	203	232	*435*	225	217	*442*	229	234	*462*	292	771	*1,064*	349	677	*1,026*	335	381	*716*
Daily Total	**15,431**	**19,038**	***34,469***	**23,281**	**24,157**	***47,438***	**24,163**	**24,448**	***48,612***	**24,330**	**24,527**	***48,857***	**27,396**	**26,663**	***54,060***	**28,801**	**26,506**	***55,307***	**18,495**	**18,401**	***36,895***
AM Peak	**728**	**789**	***1,517***	**2,327**	**1,888**	***4,216***	**2,391**	**1,911**	***4,302***	**2,408**	**1,887**	***4,295***	**2,361**	**1,847**	***4,208***	**2,131**	**1,677**	***3,808***	**1,162**	**1,076**	***2,238***
Hour	09:00	09:00	*09:00*	07:00	07:00	*07:00*	07:00	07:00	*07:00*	07:00	07:00	*07:00*	07:00	07:00	*07:00*	07:00	07:00	*07:00*	09:00	09:00	*09:00*
MD Peak	**1,262**	**1,721**	***2,983***	**1,367**	**1,615**	***2,982***	**1,436**	**1,645**	***3,081***	**1,448**	**1,573**	***3,022***	**1,928**	**1,607**	***3,535***	**2,004**	**1,847**	***3,852***	**1,439**	**1,347**	***2,786***
Hour	14:00	14:00	*14:00*	14:00	14:00	*14:00*	14:00	14:00	*14:00*	14:00	14:00	*14:00*	14:00	14:00	*14:00*	14:00	14:00	*14:00*	11:00	11:00	*11:00*
PM Peak	**1,260**	**1,662**	***2,922***	**1,932**	**2,455**	***4,386***	**2,013**	**2,528**	***4,541***	**2,064**	**2,529**	***4,592***	**2,506**	**2,386**	***4,892***	**2,459**	**2,401**	***4,860***	**1,285**	**1,313**	***2,598***
Hour	15:00	15:00	*15:00*	16:00	16:00	*16:00*	16:00	16:00	*16:00*	16:00	16:00	*16:00*	16:00	16:00	*16:00*	16:00	16:00	*16:00*	15:00	15:00	*15:00*
Daily Peak	**1,262**	**1,721**	***2,983***	**2,327**	**2,455**	***4,386***	**2,391**	**2,528**	***4,541***	**2,408**	**2,529**	***4,592***	**2,506**	**2,386**	***4,892***	**2,459**	**2,401**	***4,860***	**1,439**	**1,347**	***2,786***
Hour	14:00	14:00	*14:00*	07:00	16:00	*16:00*	07:00	16:00	*16:00*	07:00	16:00	*16:00*	16:00	16:00	*16:00*	16:00	16:00	*16:00*	11:00	11:00	*11:00*
% of Total	8.2%	9.0%	*8.7%*	10.0%	10.2%	*9.2%*	9.9%	10.3%	*9.3%*	9.9%	10.3%	*9.4%*	9.1%	8.9%	*9.0%*	8.5%	9.1%	*8.8%*	7.8%	7.3%	*7.6%*
Daily Ave	**643**	**793**	***1,436***	**970**	**1,007**	***1,977***	**1,007**	**1,019**	***2,025***	**1,014**	**1,022**	***2,036***	**1,142**	**1,111**	***2,252***	**1,200**	**1,104**	***2,304***	**771**	**767**	***1,537***

Hour	Mon-Thurs Average			Mon-Fri Average			7 Day Average		
	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*	Pos Dir	Neg Dir	*Total*
00:00-00:59	129	140	*269*	136	160	*296*	162	194	*356*
01:00-01:59	85	97	*182*	90	104	*194*	100	122	*222*
02:00-02:59	87	101	*188*	91	106	*196*	94	114	*209*
03:00-03:59	122	119	*241*	122	123	*245*	113	121	*234*
04:00-04:59	271	249	*519*	266	245	*511*	219	209	*428*
05:00-05:59	707	700	*1,407*	696	678	*1,374*	552	536	*1,088*
06:00-06:59	1,537	1,400	*2,937*	1,505	1,361	*2,866*	1,159	1,053	*2,212*
07:00-07:59	2,372	1,883	*4,255*	2,324	1,842	*4,166*	1,785	1,450	*3,235*
08:00-08:59	1,555	1,322	*2,877*	1,539	1,317	*2,855*	1,293	1,137	*2,430*
09:00-09:59	1,320	1,133	*2,453*	1,335	1,163	*2,497*	1,223	1,097	*2,320*
10:00-10:59	1,317	1,183	*2,500*	1,351	1,219	*2,570*	1,311	1,218	*2,529*
11:00-11:59	1,280	1,245	*2,525*	1,353	1,297	*2,650*	1,335	1,332	*2,667*
12:00-12:59	1,293	1,316	*2,609*	1,383	1,352	*2,735*	1,369	1,389	*2,758*
13:00-13:59	1,352	1,411	*2,763*	1,441	1,464	*2,905*	1,403	1,462	*2,865*
14:00-14:59	1,545	1,610	*3,155*	1,637	1,658	*3,294*	1,544	1,611	*3,155*
15:00-15:59	1,771	1,899	*3,669*	1,857	1,925	*3,782*	1,690	1,800	*3,490*
16:00-16:59	2,129	2,474	*4,603*	2,195	2,459	*4,654*	1,925	2,163	*4,088*
17:00-17:59	2,083	2,234	*4,317*	2,135	2,201	*4,336*	1,848	1,936	*3,784*
18:00-18:59	1,239	1,207	*2,446*	1,314	1,224	*2,538*	1,212	1,173	*2,385*
19:00-19:59	771	781	*1,551*	845	794	*1,639*	824	808	*1,632*
20:00-20:59	674	733	*1,408*	718	724	*1,442*	710	735	*1,445*
21:00-21:59	539	742	*1,281*	584	746	*1,330*	578	732	*1,310*
22:00-22:59	379	605	*984*	421	672	*1,093*	419	611	*1,031*
23:00-23:59	237	363	*601*	260	426	*686*	259	388	*647*
Daily Total	**24,792**	**24,949**	***49,742***	**25,594**	**25,260**	***50,855***	**23,128**	**23,392**	**46,520**
AM Peak	**2,372**	**1,883**	***4,255***	**2,324**	**1,842**	***4,166***	**1,785**	**1,450**	***3,235***
Hour	07:00	07:00	*07:00*	07:00	07:00	*07:00*	07:00	07:00	*07:00*
MD Peak	**1,545**	**1,610**	***3,155***	**1,637**	**1,658**	***3,294***	**1,544**	**1,611**	***3,155***
Hour	14:00	14:00	*14:00*	14:00	14:00	*14:00*	14:00	14:00	*14:00*
PM Peak	**2,129**	**2,474**	***4,603***	**2,195**	**2,459**	***4,654***	**1,925**	**2,163**	***4,088***
Hour	16:00	16:00	*16:00*	16:00	16:00	*16:00*	16:00	16:00	*16:00*
Daily Peak	**2,372**	**2,474**	***4,603***	**2,324**	**2,459**	***4,654***	**1,925**	**2,163**	***4,088***
Hour	07:00	16:00	*16:00*	07:00	16:00	*16:00*	16:00	16:00	*16:00*
% of Total	9.6%	9.9%	*9.3%*	9.1%	9.7%	*9.2%*	8.3%	9.2%	*8.8%*
Daily Ave	**1,033**	**1,040**	***2,073***	**1,066**	**1,053**	***2,119***	**964**	**975**	***1,938***

Wisconsin Department of Transportation

Daily Volume from 08/27/2012 through 08/29/2012

Site Names: 050109, 2255, NE
County: Brown
Funct. Class: U Principal Arterial - Other Freeways
Location: USH 41 BTWN CTH F & CTH S INTERCHANGES HPMS

Seasonal Factor Group: 2
Daily Factor Group: 2
Axle Factor Group: 5
Growth Factor Group: 1

	Sun 08/26/2012			Mon 08/27/2012			Tue 08/28/2012			Wed 08/29/2012			Thu 08/30/2012			Fri 08/31/2012			Sat 09/01/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							247	122	125	313	168	145									
01:00							205	97	108	205	117	88									
02:00							205	114	91	181	96	85									
03:00							230	105	125	231	110	121									
04:00							587	276	311	579	242	337									
05:00							1,547	695	852	1,504	698	806									
06:00							3,276	1,452	1,824	3,222	1,475	1,747									
07:00							4,556	1,907	2,649	4,653	1,946	2,707									
08:00							3,035	1,360	1,675	3,110	1,379	1,731									
09:00							2,642	1,198	1,444	2,568	1,184	1,384									
10:00				2,703	1,290	1,413	2,678	1,231	1,447												
11:00				2,682	1,332	1,350	2,548	1,268	1,280												
12:00				2,694	1,360	1,334	2,630	1,333	1,297												
13:00				2,787	1,488	1,299	2,917	1,515	1,402												
14:00				3,124	1,633	1,491	3,211	1,724	1,487												
15:00				3,681	2,003	1,678	3,749	1,966	1,783												
16:00				4,733	2,740	1,993	4,795	2,677	2,118												
17:00				4,356	2,327	2,029	4,434	2,243	2,191												
18:00				2,263	1,197	1,066	2,556	1,257	1,299												
19:00				1,610	811	799	1,731	893	838												
20:00				1,276	672	604	1,452	747	705												
21:00				946	451	495	1,119	569	550												
22:00				632	305	327	1,010	660	350												
23:00				416	213	203	475	251	224												
Volume				33,903	17,822	16,081	51,835	25,660	26,175	13,998	6,231	7,767									
AM Peak Vol							4,556	1,907	2,649												
AM Peak Fct							1.00	1.00	1.00												
AM Peak Hr							7:00	7:00	7:00												
PM Peak Vol				4,733	2,740	2,029	4,795	2,677	2,191												
PM Peak Fct				1.00	1.00	1.00	1.00	1.00	1.00												
PM Peak Hr				16:00	16:00	17:00	16:00	16:00	17:00												
Seasonal Fct				0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943									
Daily Fct				0.966	0.966	0.966	0.955	0.955	0.955	0.929	0.929	0.929									
Axle Fct				0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500									
Pulse Fct				2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000									

Collected by: WIDOT
Created 02/28/2013 9:10:35AM

ROAD AADT 46,038 **NEG AADT** 22,920 **POS AADT** 23,119

Wisconsin Department of Transportation

Daily Volume from 06/26/2012 through 06/28/2012

Site Names: 050110, 1682, NE
County: Brown
Funct. Class: U Principal Arterial - Other Freeways
Location: USH 41 NORTH OF CTH F - DE PERE #2

Seasonal Factor Group: 2
Daily Factor Group: 2
Axle Factor Group: 5
Growth Factor Group: 1

	Sun 06/24/2012			Mon 06/25/2012			Tue 06/26/2012			Wed 06/27/2012			Thu 06/28/2012			Fri 06/29/2012			Sat 06/30/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00										548	243	305	627	289	338						
01:00										374	189	185	361	168	193						
02:00										242	115	127	248	106	142						
03:00										240	142	98	274	147	127						
04:00										278	125	153	285	126	159						
05:00										686	380	306	728	396	332						
06:00										1,895	1,077	818	1,897	1,070	827						
07:00										3,646	1,966	1,680	3,498	1,883	1,615						
08:00										4,973	2,372	2,601	5,067	2,487	2,580						
09:00										3,453	1,591	1,862	3,379	1,498	1,881						
10:00										2,817	1,306	1,511	2,916	1,353	1,563						
11:00										2,856	1,356	1,500	2,832	1,348	1,484						
12:00							2,496	1,446	1,050	2,998	1,402	1,596	3,105	1,530	1,575						
13:00							3,042	1,423	1,619	3,127	1,511	1,616									
14:00							3,282	1,681	1,601	3,343	1,678	1,665									
15:00							3,613	1,764	1,849	3,649	1,794	1,855									
16:00							4,314	2,075	2,239	4,224	2,054	2,170									
17:00							5,454	2,638	2,816	5,558	2,679	2,879									
18:00							5,004	2,482	2,522	5,060	2,453	2,607									
19:00							2,862	1,367	1,495	2,875	1,381	1,494									
20:00							1,980	948	1,032	2,006	1,013	993									
21:00							1,672	781	891	1,875	928	947									
22:00							1,358	694	664	1,489	726	763									
23:00							982	460	522	1,089	488	601									
Volume							36,059	17,759	18,300	59,301	28,969	30,332	22,112	10,871	11,241						
AM Peak Vol										4,973	2,372	2,601	5,067	2,487	2,580						
AM Peak Fct										1.00	1.00	1.00	1.00	1.00	1.00						
AM Peak Hr										8:00	8:00	8:00	8:00	8:00	8:00						
PM Peak Vol							5,454	2,638	2,816	5,558	2,679	2,879									
PM Peak Fct							1.00	1.00	1.00	1.00	1.00	1.00									
PM Peak Hr							17:00	17:00	17:00	17:00	17:00	17:00									
Seasonal Fct							0.940	0.940	0.940	0.940	0.940	0.940	0.940	0.940	0.940						
Daily Fct							0.955	0.955	0.955	0.943	0.943	0.943	0.912	0.912	0.912						
Axle Fct							0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500						
Pulse Fct							2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000						

Collected by: WIDOT
Created 02/28/2013 9:10:38AM

ROAD AADT **52,017** **NEG AADT** **25,484** **POS AADT** **26,533**

Wisconsin Department of Transportation

Daily Volume from 08/28/2012 through 08/30/2012

Site Names: 050380, 2237, NE
County: Brown
Funct. Class: U Principal Arterial - Other Freeways
Location: USH 41 BTWN CTH G & ONEIDA DEPERE - HPMS

Seasonal Factor Group: 2
Daily Factor Group: 2
Axle Factor Group: 5
Growth Factor Group: 1

	Sun 08/26/2012			Mon 08/27/2012			Tue 08/28/2012			Wed 08/29/2012			Thu 08/30/2012			Fri 08/31/2012			Sat 09/01/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00										408	168	240	430	203	227						
01:00										266	140	126	251	116	135						
02:00										235	115	120	259	124	135						
03:00										264	123	141	322	157	165						
04:00										722	441	281	736	460	276						
05:00										2,012	1,282	730	2,031	1,280	751						
06:00										4,019	2,372	1,647	3,922	2,293	1,629						
07:00										5,763	2,970	2,793	5,598	2,927	2,671						
08:00										3,914	1,941	1,973	4,023	1,898	2,125						
09:00							3,325	1,555	1,770	3,228	1,473	1,755									
10:00							3,444	1,603	1,841	3,376	1,611	1,765									
11:00							3,402	1,676	1,726	3,418	1,591	1,827									
12:00							3,514	1,731	1,783	3,486	1,783	1,703									
13:00							3,839	2,021	1,818	3,859	2,003	1,856									
14:00							4,291	2,141	2,150	4,301	2,077	2,224									
15:00							4,933	2,303	2,630	5,105	2,402	2,703									
16:00							6,215	2,863	3,352	6,067	2,712	3,355									
17:00							5,563	2,430	3,133	5,515	2,603	2,912									
18:00							3,404	1,513	1,891	3,430	1,589	1,841									
19:00							2,407	1,178	1,229	2,440	1,194	1,246									
20:00							2,002	1,015	987	2,096	1,078	1,018									
21:00							1,498	779	719	1,494	742	752									
22:00							1,224	723	501	984	435	549									
23:00							618	281	337	609	273	336									
Volume							49,679	23,812	25,867	67,011	33,118	33,893	13,549	7,560	5,989						
AM Peak Vol										5,763	2,970	2,793									
AM Peak Fct										1.00	1.00	1.00									
AM Peak Hr										7:00	7:00	7:00									
PM Peak Vol							6,215	2,863	3,352	6,067	2,712	3,355									
PM Peak Fct							1.00	1.00	1.00	1.00	1.00	1.00									
PM Peak Hr							16:00	16:00	16:00	16:00	16:00	16:00									
Seasonal Fct							0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943	0.943						
Daily Fct							0.955	0.955	0.955	0.929	0.929	0.929	0.913	0.913	0.913						
Axle Fct							0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500						
Pulse Fct							2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000						

Collected by: WIDOT
Created 02/28/2013 9:10:46AM

ROAD AADT 59,286 **NEG AADT** 29,300 **POS AADT** 29,986

Wisconsin Department of Transportation

Daily Volume from 07/11/2011 through 07/13/2011

Site Names: 051580, 60998, NE
County: Brown
Funct. Class:
Location: RAMP FROM USH 41 SB TO CTH G

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 07/10/2011			Mon 07/11/2011			Tue 07/12/2011			Wed 07/13/2011			Thu 07/14/2011			Fri 07/15/2011			Sat 07/16/2011		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							64			63											
01:00							48			54											
02:00							61			67											
03:00							67			54											
04:00							278			259											
05:00							666			679											
06:00							1,249			1,202											
07:00							1,428			1,387											
08:00							920			964											
09:00							711			744											
10:00							713			698											
11:00							748			738											
12:00							882			825											
13:00							819			952											
14:00							836			835											
15:00				909			943														
16:00				1,051			1,053														
17:00				1,010			1,060														
18:00				778			756														
19:00				575			597														
20:00				486			499														
21:00				382			442														
22:00				229			267														
23:00				117			127														
Volume				5,537			15,234			9,521											
AM Peak Vol							1,428			1,387											
AM Peak Fct							1.00			1.00											
AM Peak Hr							7:00			7:00											
PM Peak Vol							1,060														
PM Peak Fct							1.00														
PM Peak Hr							17:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:10:59AM

ROAD AADT **15,147** **NEG AADT** **0** **POS AADT** **0**

Wisconsin Department of Transportation

Daily Volume from 07/30/2012 through 08/01/2012

Site Names: 051580, 60998, NE
County: Brown
Funct. Class:
Location: RAMP FROM USH 41 SB TO CTH G

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 07/29/2012			Mon 07/30/2012			Tue 07/31/2012			Wed 08/01/2012			Thu 08/02/2012			Fri 08/03/2012			Sat 08/04/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							42			38											
01:00							24			22											
02:00							32			30											
03:00							37			39											
04:00							104			109											
05:00							277			258											
06:00							583			554											
07:00							712			709											
08:00							489			523											
09:00				462			438			424											
10:00				400			440														
11:00				455			466														
12:00				484			510														
13:00				443			533														
14:00				446			481														
15:00				473			579														
16:00				558			577														
17:00				549			623														
18:00				377			430														
19:00				300			296														
20:00				220			286														
21:00				190			212														
22:00				101			106														
23:00				61			54														
Volume				5,519			8,331			2,282											
AM Peak Vol							712														
AM Peak Fct							1.00														
AM Peak Hr							7:00														
PM Peak Vol				558			623														
PM Peak Fct				1.00			1.00														
PM Peak Hr				16:00			17:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:11:02AM

ROAD AADT 8,057 **NEG AADT** 0 **POS AADT** 0

Wisconsin Department of Transportation

Daily Volume from 12/03/2012 through 12/05/2012

Site Names: 051581, 62366, NE
County: Brown
Funct. Class:
Location: RAMP FROM CTH G TO USH 41 SB

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 12/02/2012			Mon 12/03/2012			Tue 12/04/2012			Wed 12/05/2012			Thu 12/06/2012			Fri 12/07/2012			Sat 12/08/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							17			11											
01:00							7			13											
02:00							4			11											
03:00							32			19											
04:00							26			32											
05:00							60			75											
06:00							142			159											
07:00							185			182											
08:00							133			128											
09:00							99			111											
10:00							113			120											
11:00							99			134											
12:00							127			141											
13:00							102			124											
14:00							156			151											
15:00				138			157														
16:00				191			230														
17:00				153			190														
18:00				86			97														
19:00				51			47														
20:00				52			57														
21:00				27			60														
22:00				25			28														
23:00				9			19														
Volume				732			2,187			1,260											
AM Peak Vol							185			182											
AM Peak Fct							1.00			1.00											
AM Peak Hr							7:00			7:00											
PM Peak Vol							230														
PM Peak Fct							1.00														
PM Peak Hr							16:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:11:08AM

ROAD AADT 2,165 **NEG AADT** 0 **POS AADT** 0

Wisconsin Department of Transportation

Daily Volume from 07/30/2012 through 08/01/2012

Site Names: 051582, , NE
County: Brown
Funct. Class:
Location: RAMP FROM CTH G TO USH 41 NB

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 07/29/2012			Mon 07/30/2012			Tue 07/31/2012			Wed 08/01/2012			Thu 08/02/2012			Fri 08/03/2012			Sat 08/04/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							54			71											
01:00							36			36											
02:00							21			28											
03:00							37			40											
04:00							85			92											
05:00							183			180											
06:00							386			380											
07:00							529			554											
08:00							532			497											
09:00				458			442			442											
10:00				477			449														
11:00				495			519														
12:00				539			622														
13:00				468			539														
14:00				539			608														
15:00				688			595														
16:00				843			733														
17:00				757			767														
18:00				461			516														
19:00				321			360														
20:00				198			339														
21:00				176			207														
22:00				132			148														
23:00				67			88														
Volume				6,619			8,795			1,878											
AM Peak Vol							532														
AM Peak Fct							1.00														
AM Peak Hr							8:00														
PM Peak Vol				843			767														
PM Peak Fct				1.00			1.00														
PM Peak Hr				16:00			17:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:11:13AM

ROAD AADT 8,643 **NEG AADT** 0 **POS AADT** 0

Wisconsin Department of Transportation

Daily Volume from 07/30/2012 through 08/01/2012

Site Names: 051583, 60867, NE
County: Brown
Funct. Class:
Location: RAMP FROM USH 41 NB TO CTH G

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 07/29/2012			Mon 07/30/2012			Tue 07/31/2012			Wed 08/01/2012			Thu 08/02/2012			Fri 08/03/2012			Sat 08/04/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							16			20											
01:00							12			8											
02:00							11			14											
03:00							13			12											
04:00							41			46											
05:00							84			97											
06:00							169			168											
07:00							247			254											
08:00							183			192											
09:00							169			177											
10:00							158			163											
11:00				172			164														
12:00				155			185														
13:00				134			163														
14:00				166			152														
15:00				162			189														
16:00				188			249														
17:00				215			210														
18:00				128			119														
19:00				92			90														
20:00				56			76														
21:00				42			70														
22:00				39			44														
23:00				16			29														
Volume				1,565			2,843			988											
AM Peak Vol							247														
AM Peak Fct							1.00														
AM Peak Hr							7:00														
PM Peak Vol				215			249														
PM Peak Fct				1.00			1.00														
PM Peak Hr				17:00			16:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:11:18AM

ROAD AADT 2,780 **NEG AADT** 0 **POS AADT** 0

Wisconsin Department of Transportation

Daily Volume from 07/30/2012 through 08/01/2012

Site Names: 051598, 60996, NE
County: Brown
Funct. Class:
Location: RAMP FROM USH 41 SB TO CTH F

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 07/29/2012			Mon 07/30/2012			Tue 07/31/2012			Wed 08/01/2012			Thu 08/02/2012			Fri 08/03/2012			Sat 08/04/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							45			40											
01:00							40			46											
02:00							24			28											
03:00							25			49											
04:00							169			164											
05:00							390			415											
06:00							806			761											
07:00							967			964											
08:00							587			505											
09:00				357			418			464											
10:00				410			446														
11:00				502			511														
12:00				454			543														
13:00				483			549														
14:00				523			557														
15:00				516			562														
16:00				633			596														
17:00				635			596														
18:00				398			387														
19:00				280			277														
20:00				226			248														
21:00				196			202														
22:00				117			129														
23:00				43			73														
Volume				5,773			9,147			2,972											
AM Peak Vol							967														
AM Peak Fct							1.00														
AM Peak Hr							7:00														
PM Peak Vol				635			596														
PM Peak Fct				1.00			1.00														
PM Peak Hr				17:00			16:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:11:25AM

ROAD AADT 8,972 **NEG AADT** 0 **POS AADT** 0

Wisconsin Department of Transportation

Daily Volume from 07/30/2012 through 08/01/2012

Site Names: 051599, 60866, NE
County: Brown
Funct. Class:
Location: RAMP FROM CTH F TO USH 41 NB

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 07/29/2012			Mon 07/30/2012			Tue 07/31/2012			Wed 08/01/2012			Thu 08/02/2012			Fri 08/03/2012			Sat 08/04/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							54			55											
01:00							35			30											
02:00							37			34											
03:00							39			53											
04:00							95			57											
05:00							182			189											
06:00							404			393											
07:00							648			641											
08:00							463			484											
09:00							477			484											
10:00							480			511											
11:00				517			533														
12:00				506			578														
13:00				484			490														
14:00				635			664														
15:00				895			924														
16:00				1,149			1,169														
17:00				823			880														
18:00				415			473														
19:00				276			299														
20:00				202			199														
21:00				137			146														
22:00				156			162														
23:00				115			120														
Volume				6,310			9,551			2,420											
AM Peak Vol							648														
AM Peak Fct							1.00														
AM Peak Hr							7:00														
PM Peak Vol				1,149			1,169														
PM Peak Fct				1.00			1.00														
PM Peak Hr				16:00			16:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:11:30AM

ROAD AADT 9,396 **NEG AADT** 0 **POS AADT** 0

Wisconsin Department of Transportation

Daily Volume from 12/03/2012 through 12/05/2012

Site Names: 051600, 60994, NE
County: Brown
Funct. Class:
Location: RAMP FROM CTH F TO USH 41 SB

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 12/02/2012			Mon 12/03/2012			Tue 12/04/2012			Wed 12/05/2012			Thu 12/06/2012			Fri 12/07/2012			Sat 12/08/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							8			10											
01:00							11			17											
02:00							7			11											
03:00							11			20											
04:00							36			17											
05:00							59			64											
06:00							136			141											
07:00							237			229											
08:00							139			159											
09:00							143			121											
10:00							142			147											
11:00							136			125											
12:00							146			142											
13:00							151			139											
14:00							182			161											
15:00				204			242														
16:00				266			305														
17:00				199			264														
18:00				109			125														
19:00				75			90														
20:00				44			69														
21:00				41			58														
22:00				21			27														
23:00				23			20														
Volume				982			2,744			1,342											
AM Peak Vol							237			229											
AM Peak Fct							1.00			1.00											
AM Peak Hr							7:00			7:00											
PM Peak Vol							305														
PM Peak Fct							1.00														
PM Peak Hr							16:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:11:35AM

ROAD AADT 2,615 **NEG AADT** 0 **POS AADT** 0

Wisconsin Department of Transportation

Daily Volume from 07/30/2012 through 08/01/2012

Site Names: 051601, 60864, NE
County: Brown
Funct. Class:
Location: RAMP FROM USH 41 NB TO CTH F

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 07/29/2012			Mon 07/30/2012			Tue 07/31/2012			Wed 08/01/2012			Thu 08/02/2012			Fri 08/03/2012			Sat 08/04/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							13			17											
01:00							11			14											
02:00							15			15											
03:00							20			12											
04:00							55			48											
05:00							73			82											
06:00							197			199											
07:00							363			361											
08:00							217			263											
09:00							144			201											
10:00				197			190			169											
11:00				202			192														
12:00				185			178														
13:00				183			202														
14:00				173			229														
15:00				189			242														
16:00				235			272														
17:00				309			322														
18:00				167			176														
19:00				79			78														
20:00				73			84														
21:00				75			73														
22:00				36			65														
23:00				25			18														
Volume				2,128			3,429			1,212											
AM Peak Vol							363														
AM Peak Fct							1.00														
AM Peak Hr							7:00														
PM Peak Vol				309			322														
PM Peak Fct				1.00			1.00														
PM Peak Hr				17:00			17:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:11:40AM

ROAD AADT 3,376 **NEG AADT** 0 **POS AADT** 0

Wisconsin Department of Transportation

Daily Volume from 07/30/2012 through 08/01/2012

Site Names: 051752, 60863, NE
County: Brown
Funct. Class: Not Available
Location: RAMP FROM CTH S TO USH 41 NB

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 07/29/2012			Mon 07/30/2012			Tue 07/31/2012			Wed 08/01/2012			Thu 08/02/2012			Fri 08/03/2012			Sat 08/04/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							4			8											
01:00							2			24											
02:00							8			4											
03:00							16			11											
04:00							44			44											
05:00							149			142											
06:00							266			217											
07:00							306			333											
08:00							209			231											
09:00							157			205											
10:00				216			161			178											
11:00				208			197														
12:00				192			184														
13:00				180			207														
14:00				140			177														
15:00				169			188														
16:00				157			215														
17:00				161			206														
18:00				118			119														
19:00				74			94														
20:00				58			93														
21:00				39			41														
22:00				19			27														
23:00				8			17														
Volume				1,739			3,087			1,219											
AM Peak Vol							306														
AM Peak Fct							1.00														
AM Peak Hr							7:00														
PM Peak Vol				192			215														
PM Peak Fct				1.00			1.00														
PM Peak Hr				12:00			16:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:11:45AM

ROAD AADT 3,019 **NEG AADT** 0 **POS AADT** 0

Wisconsin Department of Transportation

Daily Volume from 07/30/2012 through 08/01/2012

Site Names: 051753, 60993, NE
County: Brown
Funct. Class: Not Available
Location: RAMP FROM USH 41 SB TO CTH S

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 07/29/2012			Mon 07/30/2012			Tue 07/31/2012			Wed 08/01/2012			Thu 08/02/2012			Fri 08/03/2012			Sat 08/04/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							14			8											
01:00							5			10											
02:00							9			10											
03:00							7			11											
04:00							18			12											
05:00							59			64											
06:00							139			118											
07:00							156			170											
08:00							136			131											
09:00				131			173			154											
10:00				182			179														
11:00				224			169														
12:00				189			180														
13:00				180			154														
14:00				182			192														
15:00				195			221														
16:00				269			290														
17:00				241			259														
18:00				122			151														
19:00				89			112														
20:00				59			96														
21:00				47			61														
22:00				32			31														
23:00				10			16														
Volume				2,152			2,827			534											
AM Peak Vol							179														
AM Peak Fct							1.00														
AM Peak Hr							10:00														
PM Peak Vol				269			290														
PM Peak Fct				1.00			1.00														
PM Peak Hr				16:00			16:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:11:50AM

ROAD AADT **2,757** **NEG AADT** **0** **POS AADT** **0**

Wisconsin Department of Transportation

Daily Volume from 07/30/2012 through 08/01/2012

Site Names: 051754, 60991, NE
County: Brown
Funct. Class: Not Available
Location: RAMP FROM CTH S TO USH 41 SB

Seasonal Factor Group: NA
Daily Factor Group: NA
Axle Factor Group: NA
Growth Factor Group: NA

	Sun 07/29/2012			Mon 07/30/2012			Tue 07/31/2012			Wed 08/01/2012			Thu 08/02/2012			Fri 08/03/2012			Sat 08/04/2012		
	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS	ROAD	NEG	POS
00:00							8			6											
01:00							6			6											
02:00							5			5											
03:00							5			3											
04:00							11			17											
05:00							44			42											
06:00							137			117											
07:00							173			156											
08:00							100			105											
09:00							73			63											
10:00				53			53														
11:00				81			64														
12:00				82			72														
13:00				73			89														
14:00				101			101														
15:00				111			133														
16:00				168			192														
17:00				137			161														
18:00				67			64														
19:00				35			35														
20:00				30			30														
21:00				18			15														
22:00				17			19														
23:00				9			12														
Volume				982			1,602			457											
AM Peak Vol							173														
AM Peak Fct							1.00														
AM Peak Hr							7:00														
PM Peak Vol				168			192														
PM Peak Fct				1.00			1.00														
PM Peak Hr				16:00			16:00														
Seasonal Fct				1.000			1.000			1.000											
Daily Fct				1.000			1.000			1.000											
Axle Fct				0.500			0.500			0.500											
Pulse Fct				2.000			2.000			2.000											

Collected by: WIDOT
Created 02/28/2013 9:11:54AM

ROAD AADT 1,552 **NEG AADT** 0 **POS AADT** 0

Appendix D

TABLE D1

EXISTING CONDITIONS TRAFFIC VOLUMES

SOUTHERN ARTERIAL TRAFFIC ANALYSIS

BROWN COUNTY, WISCONSIN

Location	Raw Data Counts				Balanced Volumes	
	AM Peak Hour		PM Peak Hour			
	July/Aug 2012	Dec/Jan 12/13	July/Aug 2012	Dec/Jan 12/13	AM Peak	PM Peak
NB US 41 Mainline	2264		2015		2480	1973
CTH S Off	123	112	134	123	123	133
NB US 41 Mainline					2357	1840
CTH S On	320	284	186	181	320	186
NB US 41 Mainline	2678		2026		2677	2026
CTH F Off	362	204	254	264	362	254
NB US 41 Mainline					2315	1772
CTH F On	645	500	1159	1092	**711**	**1183**
NB US 41 Mainline					3026	2955
CTH G Off	251	252	219	209	251	219
NB US 41 Mainline					2775	2736
WIS 32 Off	612		325		612	325
NB US 41 Mainline					2163	2411
CTH G On	542	450	788	755	542	788
NB US 41 Mainline	2732		3354		2705	3199
SB US 41 Mainline	2949				2872	2859
CTH G Off	**711**	545	**568**	407	711	568
SB US 41 Mainline					2161	2291
WIS 32 On	309		539		309	539
CTH G On	**184**	155	**211**	89	184	211
SB US 41 Mainline					2654	3041
CTH F Off	966	926	615	543	966	615
SB US 41 Mainline					1688	2426
CTH F On	**233**	234	**286**	266	233	286
SB US 41 Mainline	1927		2709		1921	2712
CTH S Off	163	133	280	246	163	280
SB US 41 Mainline					1758	2432
CTH S On	165	166	180	181	165	180
SB US 41 Mainline	1823		2364		1923	2612

NOTES

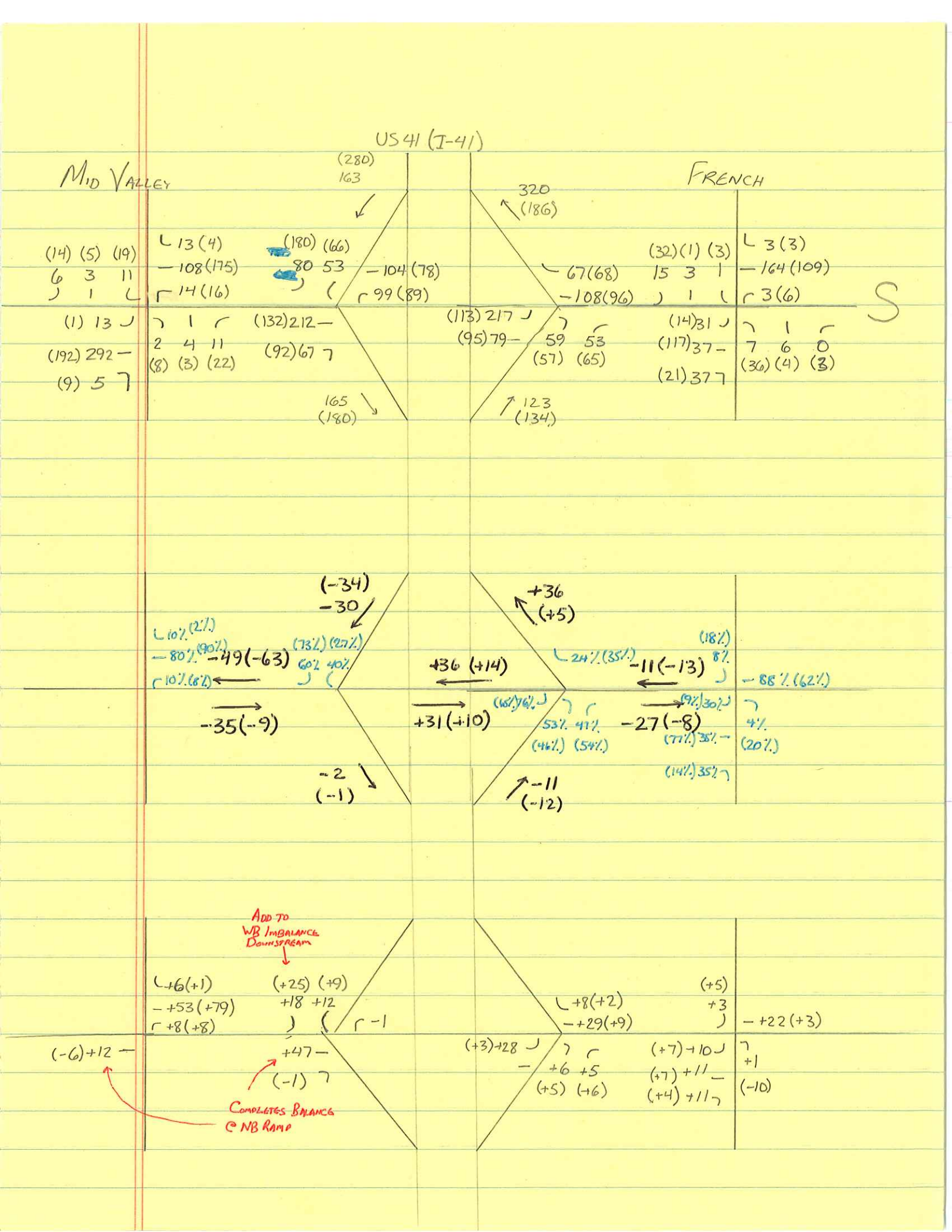
WisDOT coverage counts conducted in July/August 2012

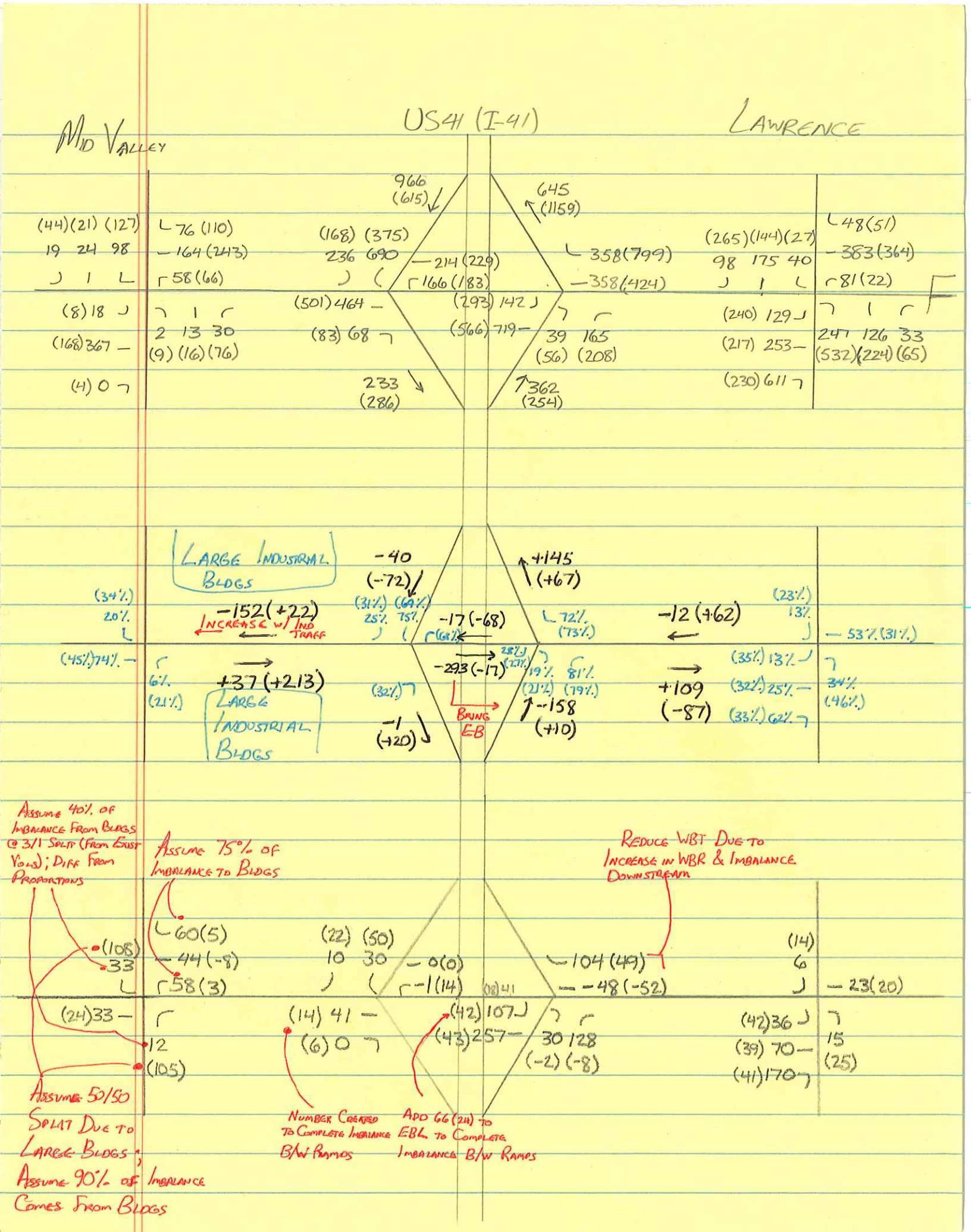
US 41 SB CTH G and CTH F On ramp volumes (brown and bolded) conducted in December 2012

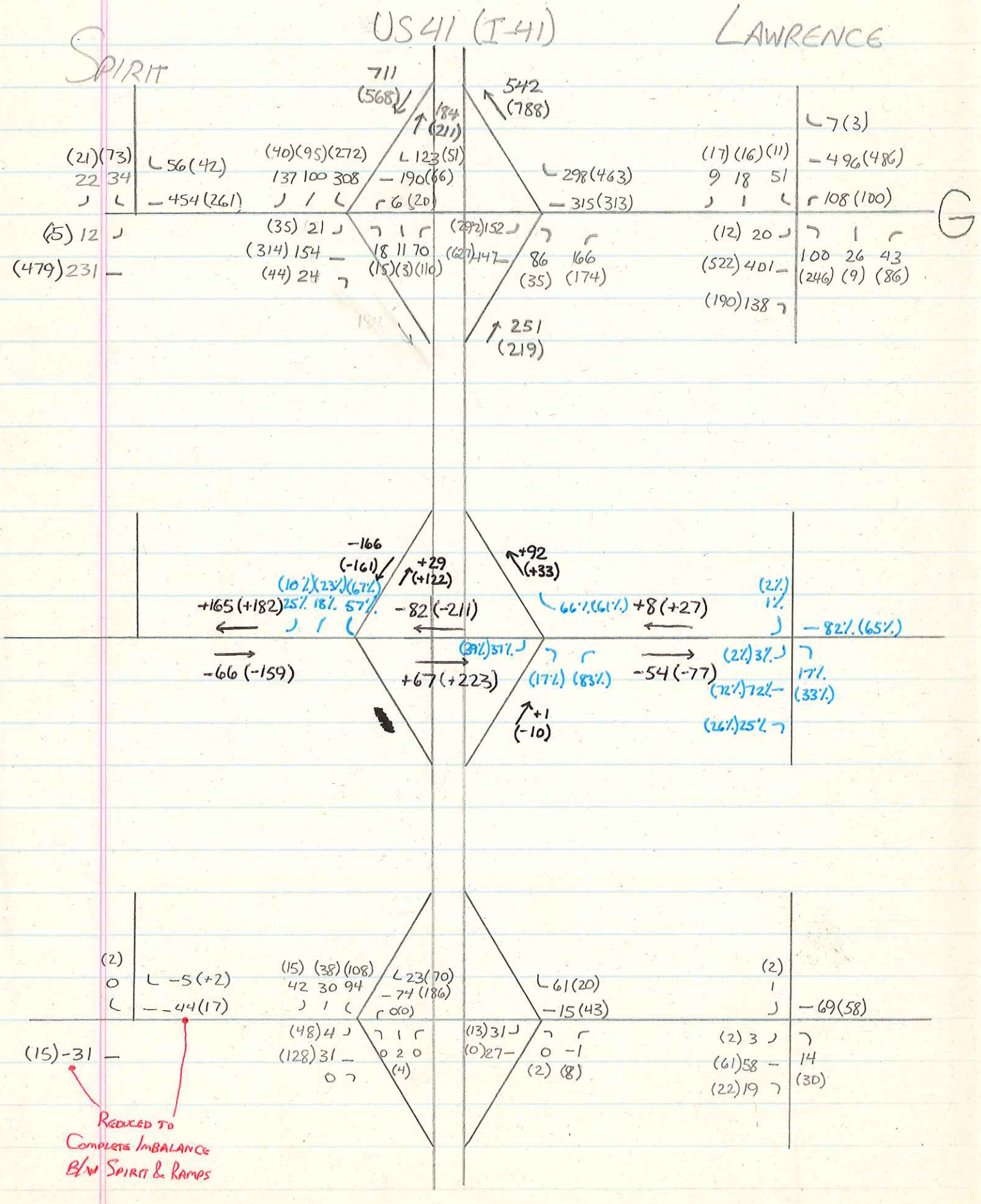
US 41 SB CTH G Off ramp volumes (bolded) conducted in July 2011

Brown County turning movement counts conducted in December 2012 / January 2013

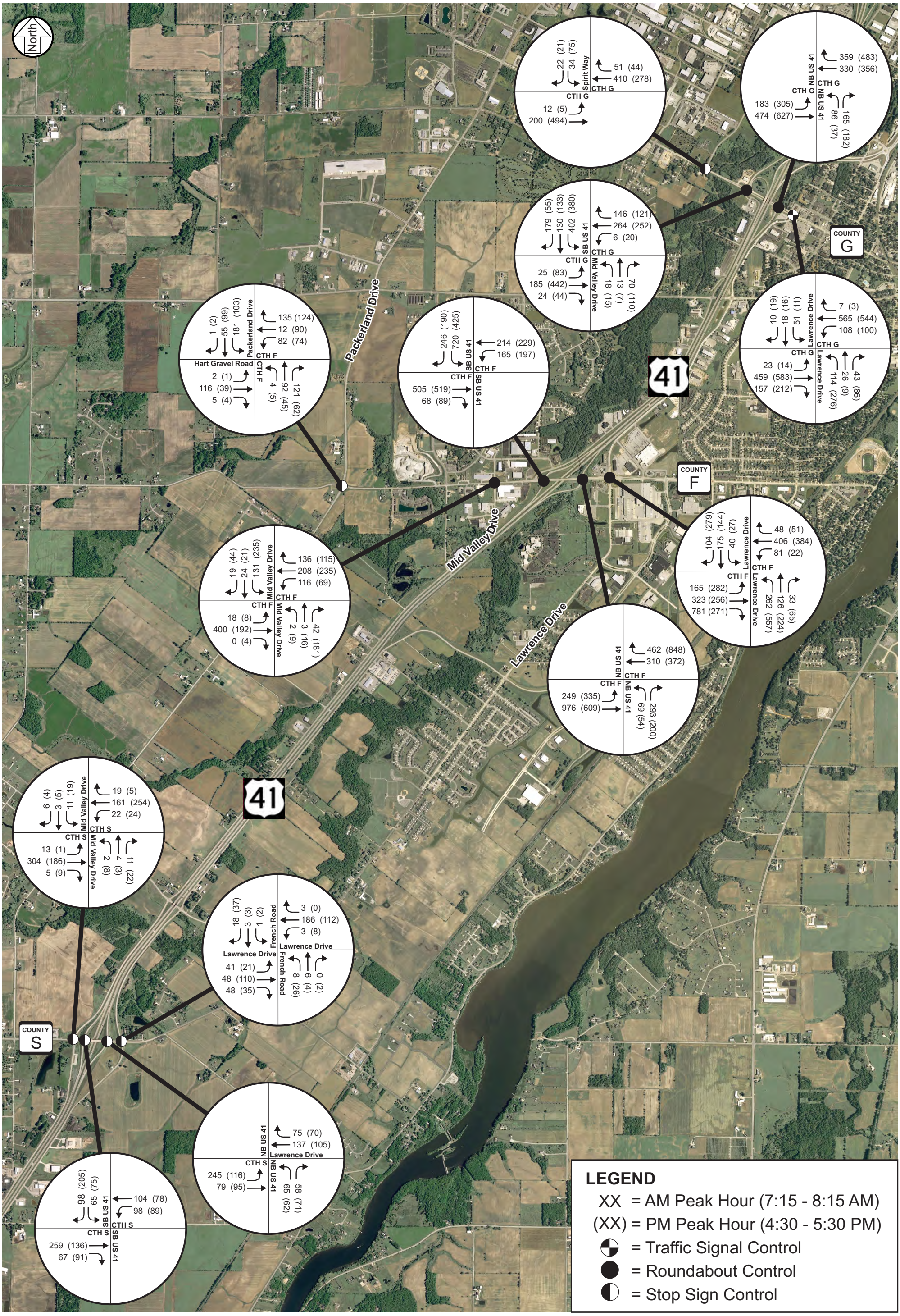
CTH F On Ramp volumes (bolded numbers) were adjusted for volume balancing purposes


US 41 (I-41)
MID VALLEY
FRENCH
S
(280) 163
320 (186)
165 (180)
123 (134)
(14) (5) (19) 6 3 11
13 (4)
108 (175)
14 (16)
(180) (66) 80 53
104 (78)
99 (89)
67 (68)
108 (96)
(32) (1) (3) 15 3 1
3 (3)
164 (109)
3 (6)
(1) 13
(192) 292
(9) 5
2 4 11
(8) (3) (22)
(132) 212
(92) 67
(113) 217
(95) 79
59 53
(57) (65)
(14) 31
(117) 37
(21) 37
7 6 0
(36) (4) (3)
(-34) -30
+36 (+5)
10% (2%)
80% (90%)
-49 (-63)
10% (8%)
(73%) (27%)
60% 40%
+36 (+14)
24% (35%)
-11 (-13)
(18%) 8%
88% (62%)
-35 (-9)
+31 (+10)
(68%) 6%
53% 47%
(46%) (54%)
-27 (-8)
(9%) 30%
(77%) 35%
(14%) 35%
4% (20%)
-2 (-1)
-11 (-12)
ADD TO WB IMBALANCE DOWNSTREAM
6 (+1)
+53 (+79)
+8 (+8)
(+25) (+9) +18 +12
-1
+8 (+2)
+29 (+9)
(+5) +3
+22 (+3)
(-6) +12
+47
(-1)
(+3) +28
+6 +5
(+5) (+6)
(+7) +10
(+7) +11
(+4) +11
+1
(-10)
COMPLETES BALANCE @ NB RAMP


Mid Valley
US41 (I-41)
Lawrence
966 (615)
645 (1159)
(44) (21) (127)
19 24 98
76 (110)
164 (243)
58 (66)
(168) (375)
236 690
214 (229)
166 (183)
358 (799)
358 (424)
(265) (144) (27)
98 175 40
48 (51)
383 (364)
81 (22)
(8) 18
2 13 30
(9) (16) (76)
(168) 367
(4) 0
(501) 464
(83) 68
(293) 142
(566) 719
39 165
(56) (208)
233 (286)
362 (254)
(240) 129
(217) 253
(230) 611
247 126 33
(532) (224) (65)
Large Industrial Blogs
-40 (-72)
+145 (+67)
(34%) 20%
-152 (+22)
Increase w/ Ind Traff
(31%) (69%)
25% 75%
-17 (-68)
(68%)
72% (73%)
-12 (+62)
(23%) 13%
53% (31%)
(45%) 74%
6% (21%)
+37 (+213)
Large Industrial Blogs
(32%)
-1 (+20)
-293 (-17)
Bring EB
25% (27%)
19% (21%)
81% (79%)
-158 (+10)
+109 (-87)
(35%) 13%
(32%) 25%
(33%) 62%
34% (46%)
Assume 40% of Imbalance from Blogs @ 3/1 Split (From Exist Vols); Diff from Proportions
Assume 75% of Imbalance to Blogs
Reduce WBT Due to Increase in WBR & Imbalance Downstream
(108)
33
60 (5)
44 (-8)
58 (3)
(22) (50)
10 30
0 (0)
-1 (14)
(18) 41
104 (49)
-48 (-52)
(14)
6
23 (20)
(24) 33
12
(105)
(14) 41
(6) 0
(42) 107
(43) 257
30 128
(-2) (-8)
(42) 36
(39) 70
(41) 170
15
(25)
Assume 50/50 Split Due to Large Blogs; Assume 90% of Imbalance Comes From Blogs
Number Created to Complete Imbalance B/W Ramps
Add 66 (214) to EBL to Complete Imbalance B/W Ramps


US 41 (I-41)
SPIRIT
LAWRENCE
711 (568)
542 (788)
184 (211)
251 (219)
-166 (-161)
+29 (+122)
+92 (+33)
+165 (+182)
-82 (-211)
+8 (+27)
-66 (-159)
+67 (+223)
-54 (-77)
+1 (-10)
-82% (65%)
-44 (17)
-31
REDUCED TO COMPLETE IMBALANCE B/W SPIRIT & RAMPS
G

Appendix E



Year 2012 Peak Hour Traffic Volumes, Intersections

Southern Arterial IAJR Traffic Analysis
Brown County, Wisconsin

Figure 4.1

SRF Consulting Group, Inc.

00127944
June 2013



SRF Consulting Group, Inc.

Year 2012 Peak Hour Traffic Volumes, Freeway Mainline

Southern Arterial IAJR Traffic Analysis
Brown County, Wisconsin

Figure 4.2

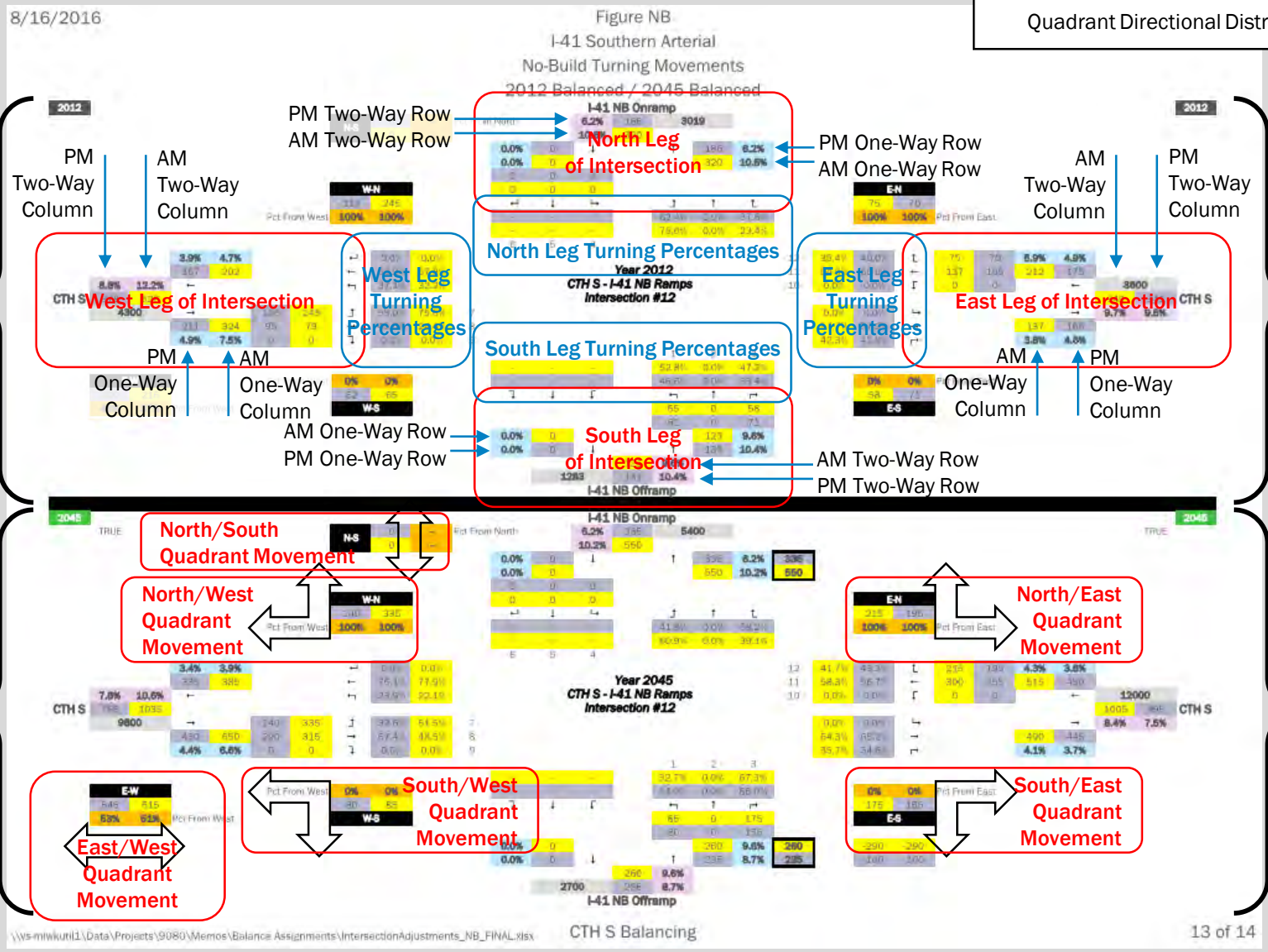
00127944
June 2013

Appendix F

Turning Movement Forecast Key

LEGEND

- Approach AADT
- Two-Way Peak Hour Percentage (K%)
- One-Way Peak Hour Percentage
- AM Peak Hour Data
- PM Peak Hour Data
- Quadrant Directional Distribution



Balanced Year 2012 Turning Movements

Balanced Year 2045 Turning Movement Forecast

Balanced Year 2012 Turning Movements

Balanced Year 2045 Turning Movement Forecast

	I-41 at ATR 05-0001, South of CTH S, Brown County **No Build Alternative**			
2012 AADT 2045 AADT	42,200 61,500			
Design Values	AM Peak Hour		PM Peak Hour	
Year 2012				
K30 (DHV)	10.4%		10.9%	
D(DHV)	56% Peak Direction: Northbound		57% Peak Direction: Southbound	
Year 2045				
K30 (DHV)	9.4%		9.8%	
D(DHV)	56% Peak Direction: Northbound		55% Peak Direction: Southbound	
	Northbound	Southbound	Northbound	Southbound
T(DHV)	6.7%	9.0%	6.5%	6.2%

Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

		2012 Base Year Peak Hour				2045 No Build (Mainline / Ramps)			
Site ID	Road Name	AM SB	AM NB	PM SB	PM NB	AM SB	AM NB	PM SB	PM NB
05-0380	**I-41 BTWN CTH G & ONEIDA DEPERE - HPMS**	2,872	2,705	2,859	3,199	4,010	3,760	3,850	4,630
05-1583	RAMP FROM I-41 NB TO CTH G		251		219		525		455
05-1581	RAMP FROM CTH G TO I-41 SB	184		211		460		525	
05-1087	BUS USH X41 SPUR FROM I-41 TO STH 32 DEPERE	309	612	539	325	360	715	630	380
05-1580	RAMP FROM I-41 SB TO CTH G	711		568		1,090		885	
05-1582	RAMP FROM CTH G TO I-41 NB		542		788		770		1,165
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0110	**I-41 NORTH OF CTH F - DE PERE #2**	2,654	3,026	3,041	2,955	3,740	4,230	4,120	4,300
05-1601	RAMP FROM I-41 NB TO CTH F		362		254		585		465
05-1600	RAMP FROM CTH F TO I-41 SB	233		286		510		530	
05-1598	RAMP FROM I-41 SB TO CTH F	966		615		1,680		1,190	
05-1599	RAMP FROM CTH F TO I-41 NB		711		1,183		1,265		1,925
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
99-0015	**New I-41 BFS North of SAB**	1,921	2,677	2,712	2,026	2,570	3,550	3,460	2,840
99-0004	SAB Ramp from I-41 NB		0		0		0		0
99-0003	SAB Ramp to I-41 SB	0		0		0		0	
99-0002	SAB Ramp from I-41 SB	0		0		0		0	
99-0001	SAB Ramp to I-41 NB		0		0		0		0
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0109	**I-41 NORTH OF CTH S INTERCHANGE HPMS**	1,921	2,677	2,712	2,026	2,570	3,550	3,460	2,840
05-1755	RAMP FROM I-41 NB TO CTH S		123		133		260		235
05-1754	RAMP FROM CTH S TO I-41 SB	165		180		305		360	
05-1753	RAMP FROM I-41 SB TO CTH S	163		280		325		520	
05-1752	RAMP FROM CTH S TO I-41 NB		320		186		550		335
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0001	**I-41 - 1.5 MI NE OF OUTAGAMIE COUNTY LINE - DE PERE**	1,923	2,480	2,612	1,973	2,550	3,260	3,300	2,740

Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

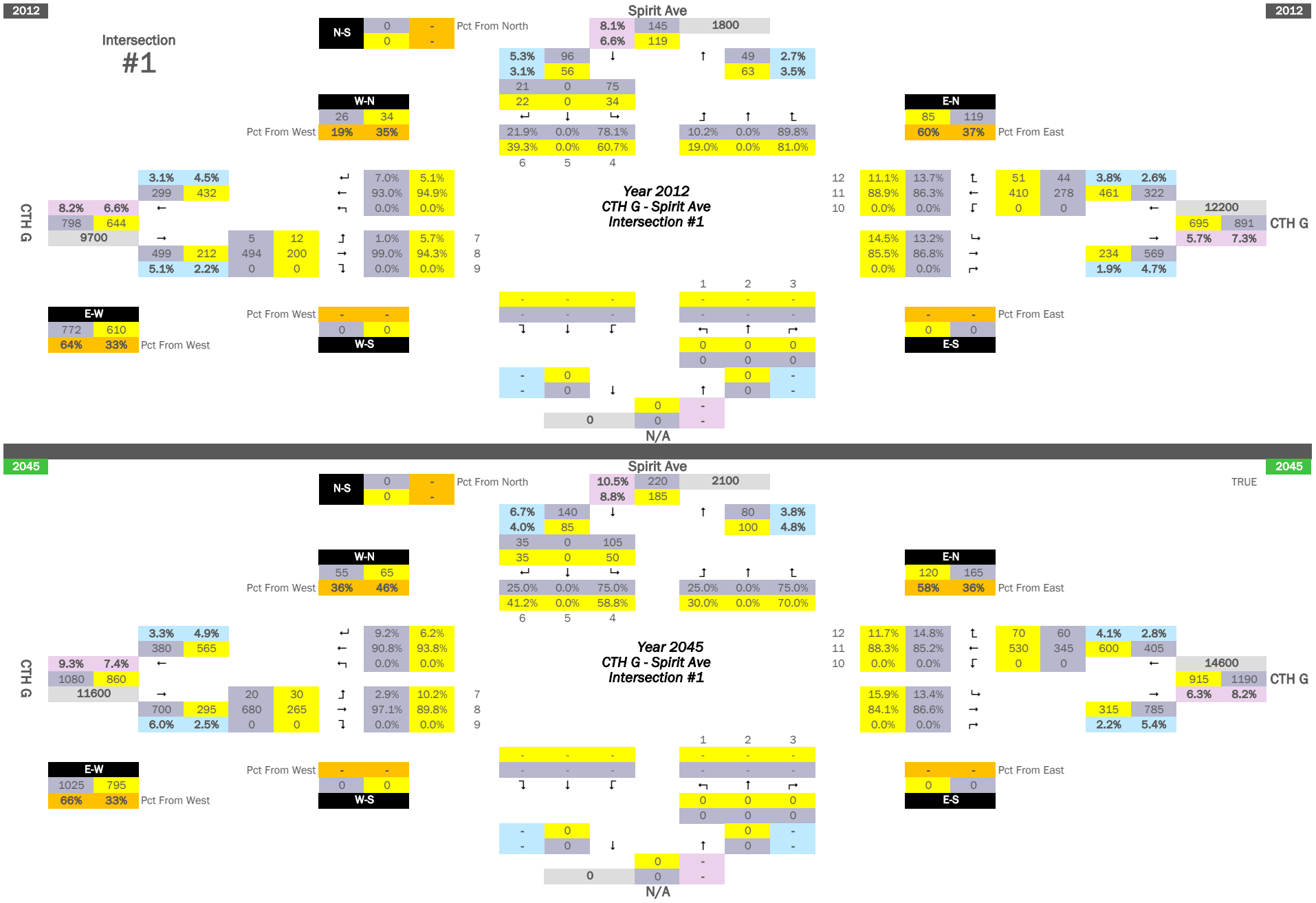


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

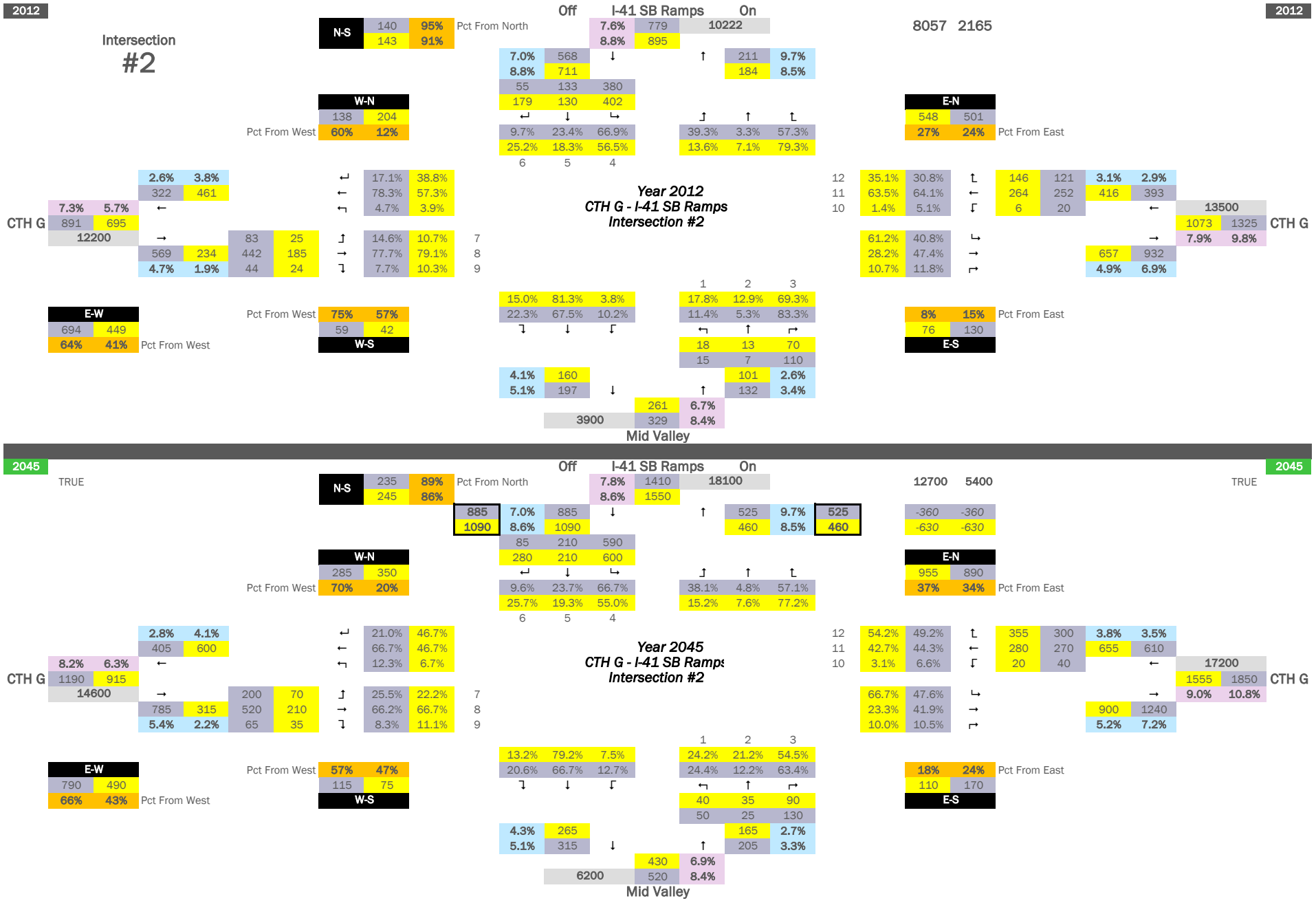


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

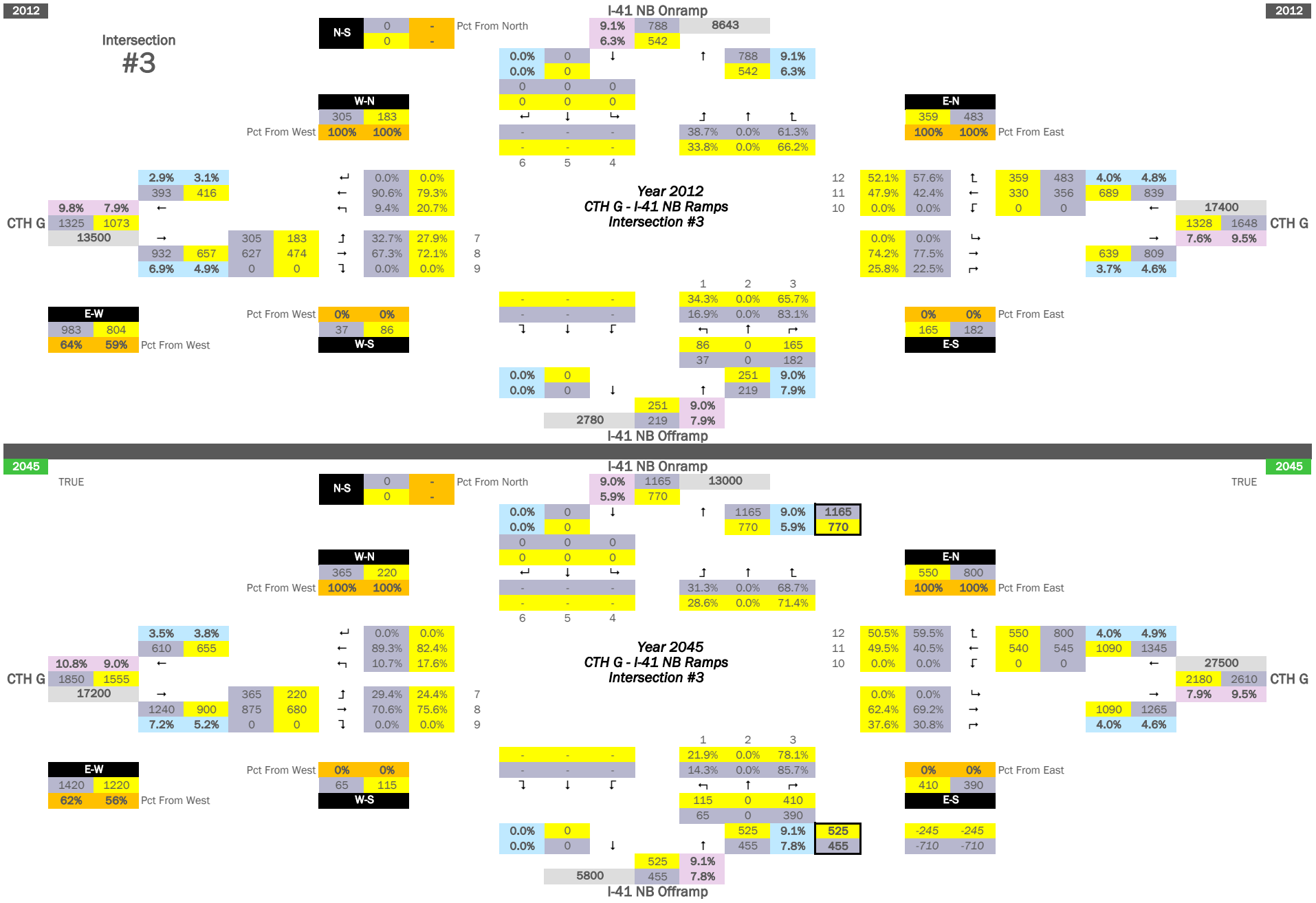


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

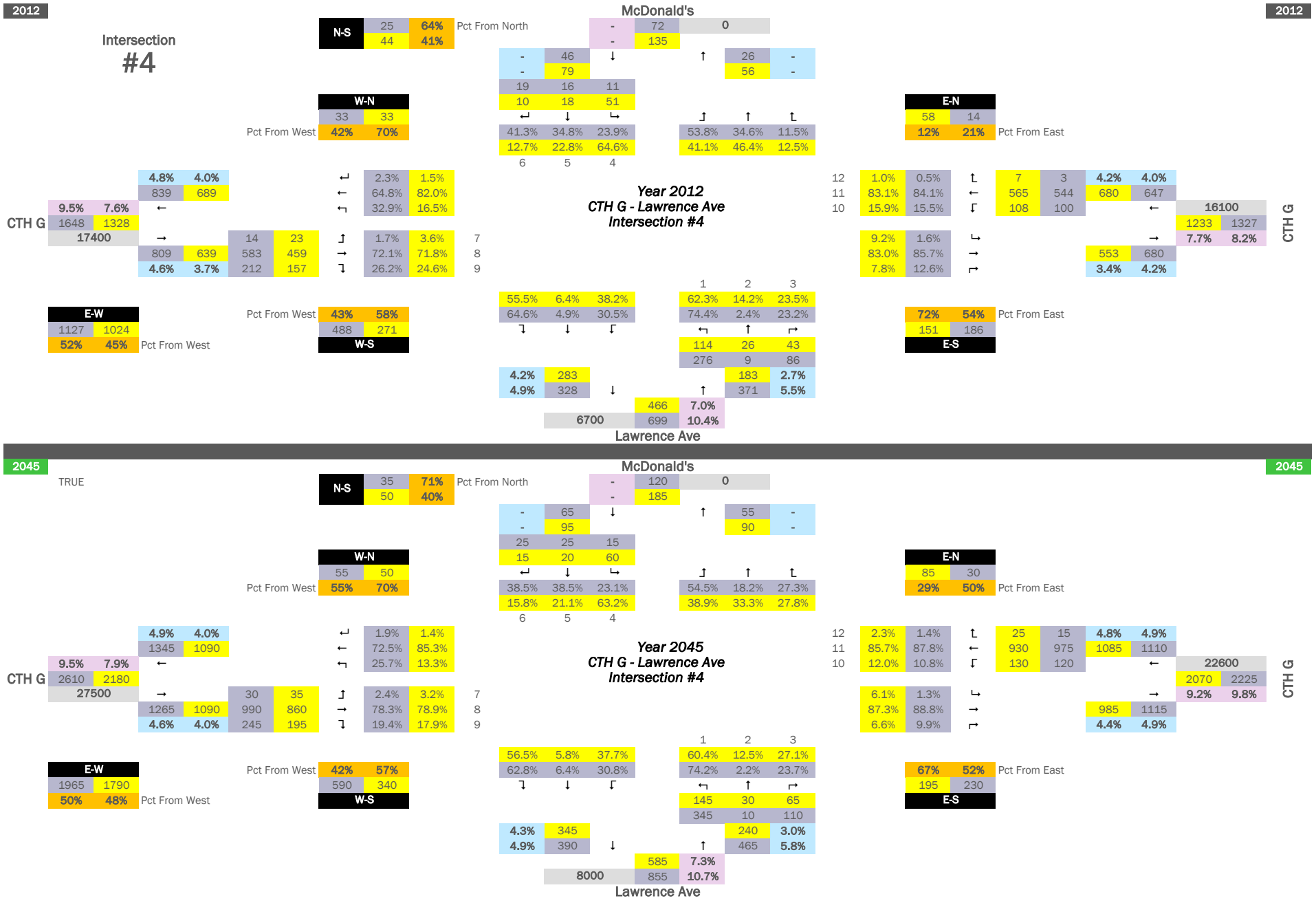


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

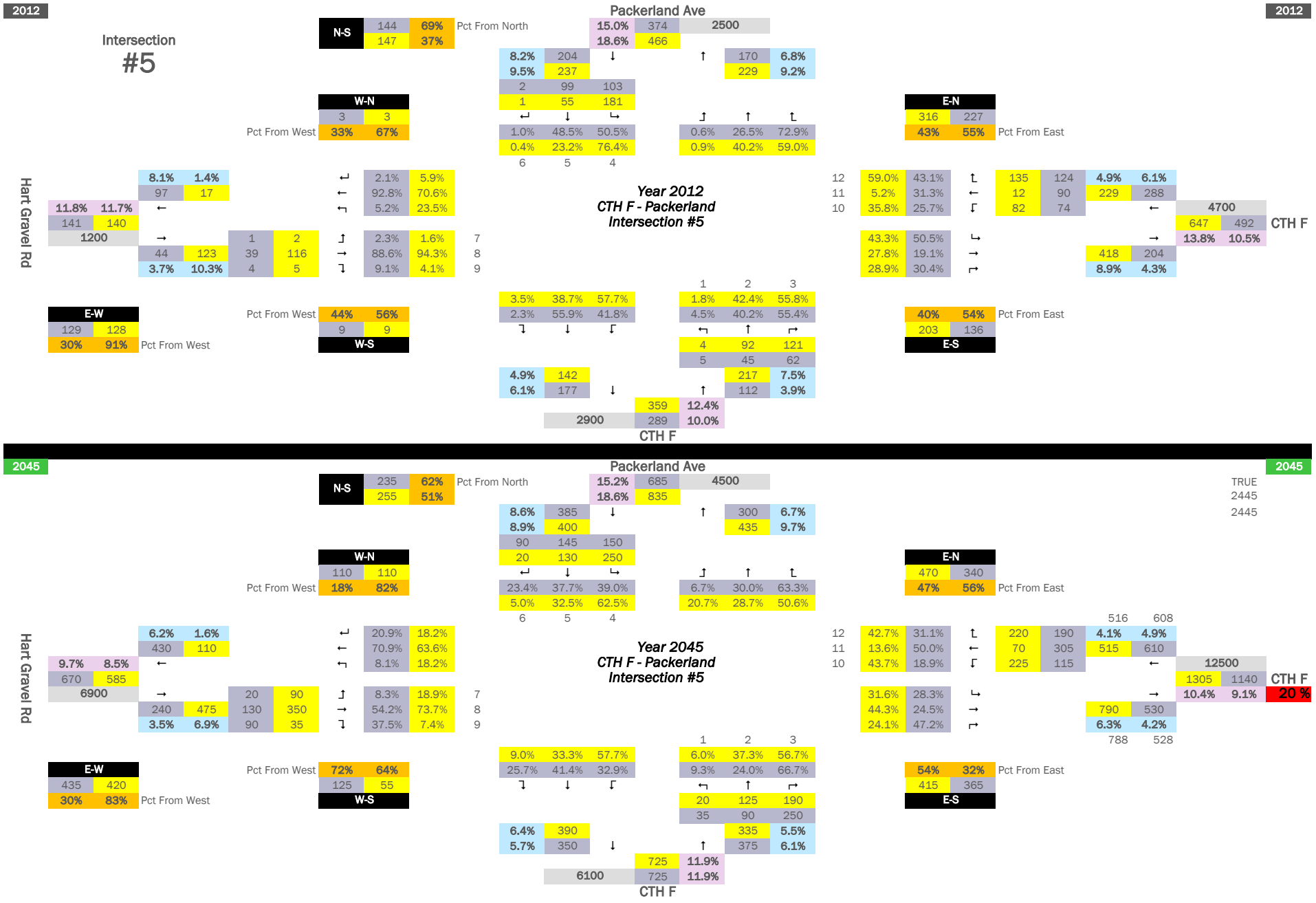


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

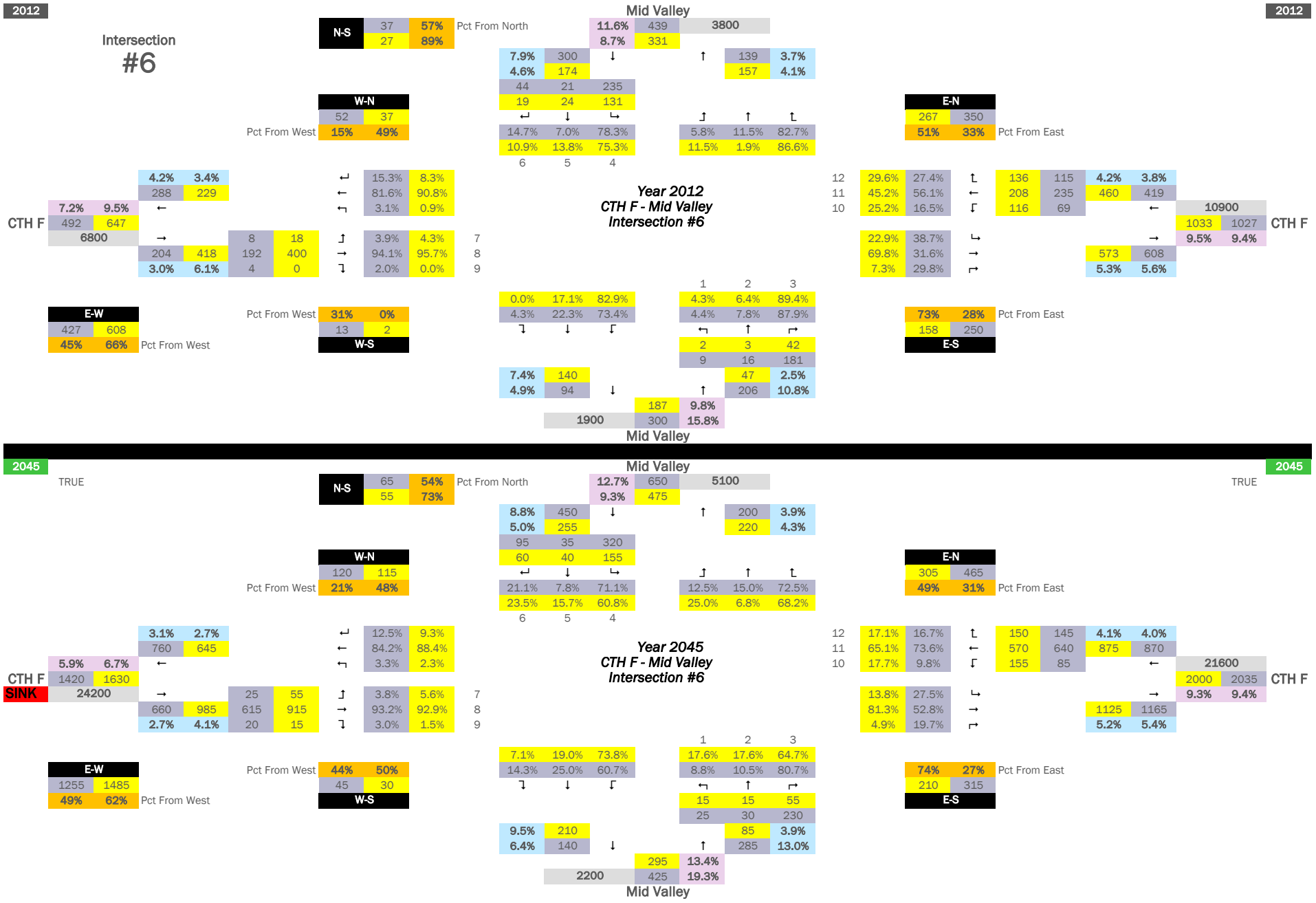


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

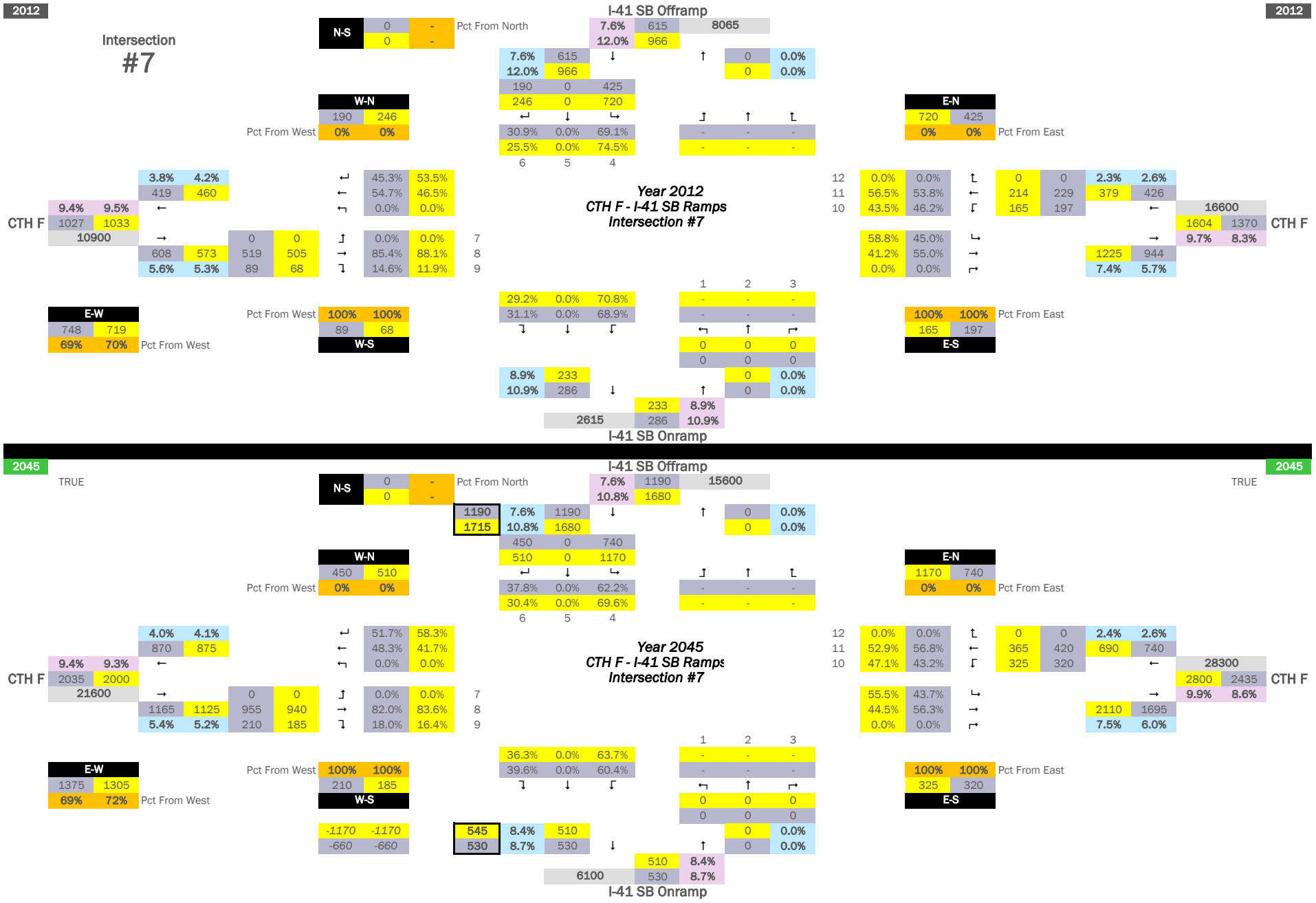


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

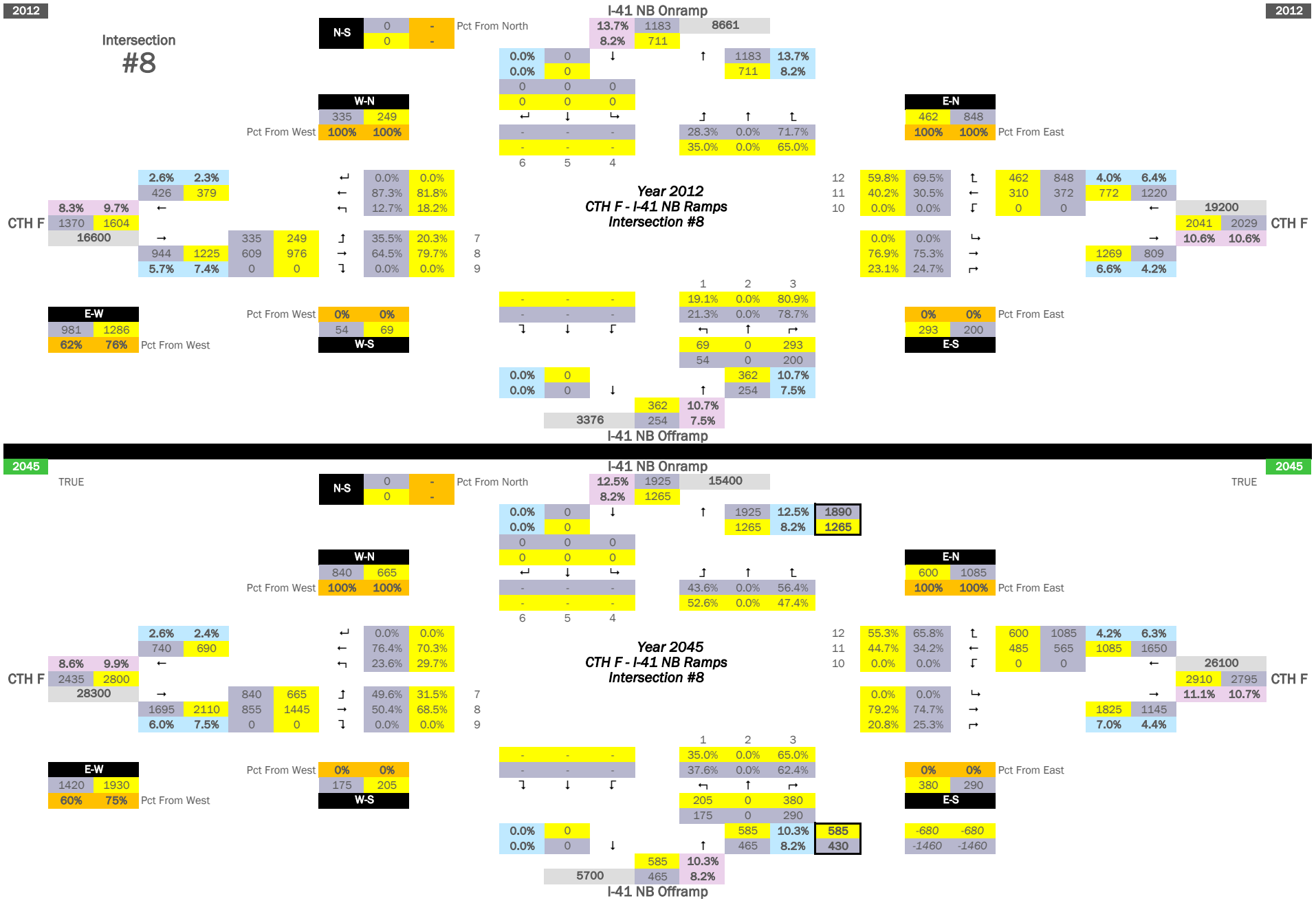


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

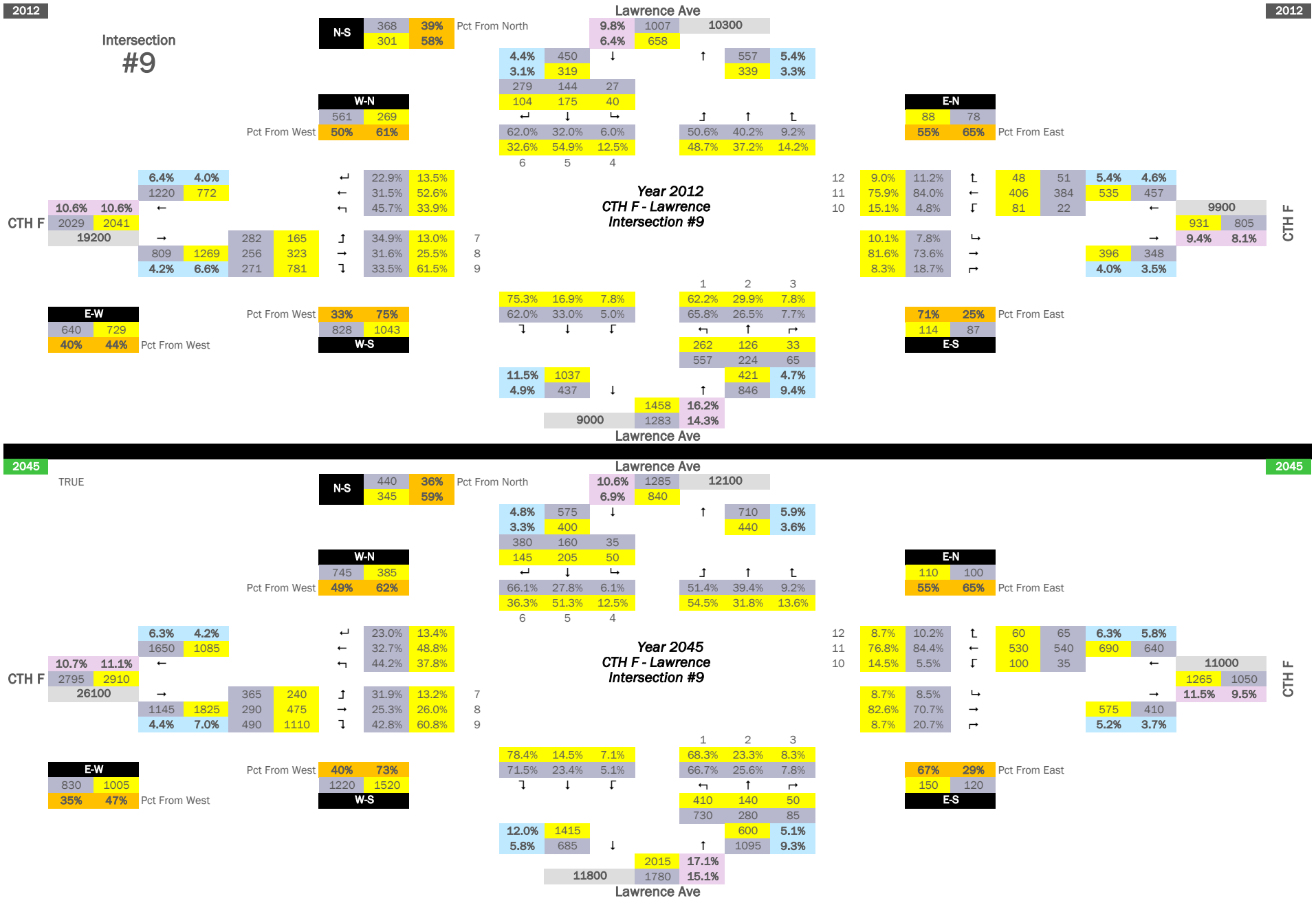


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

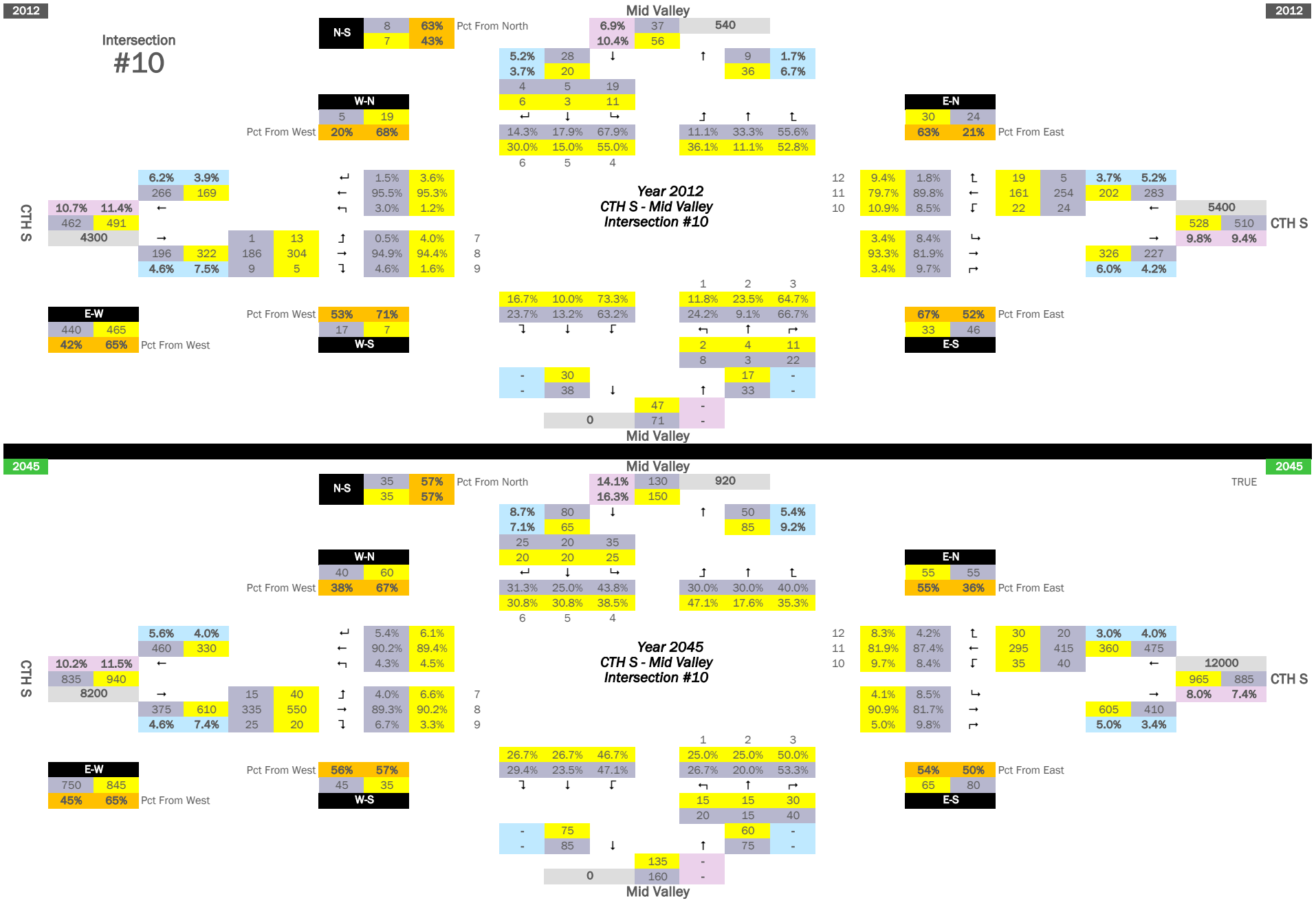


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

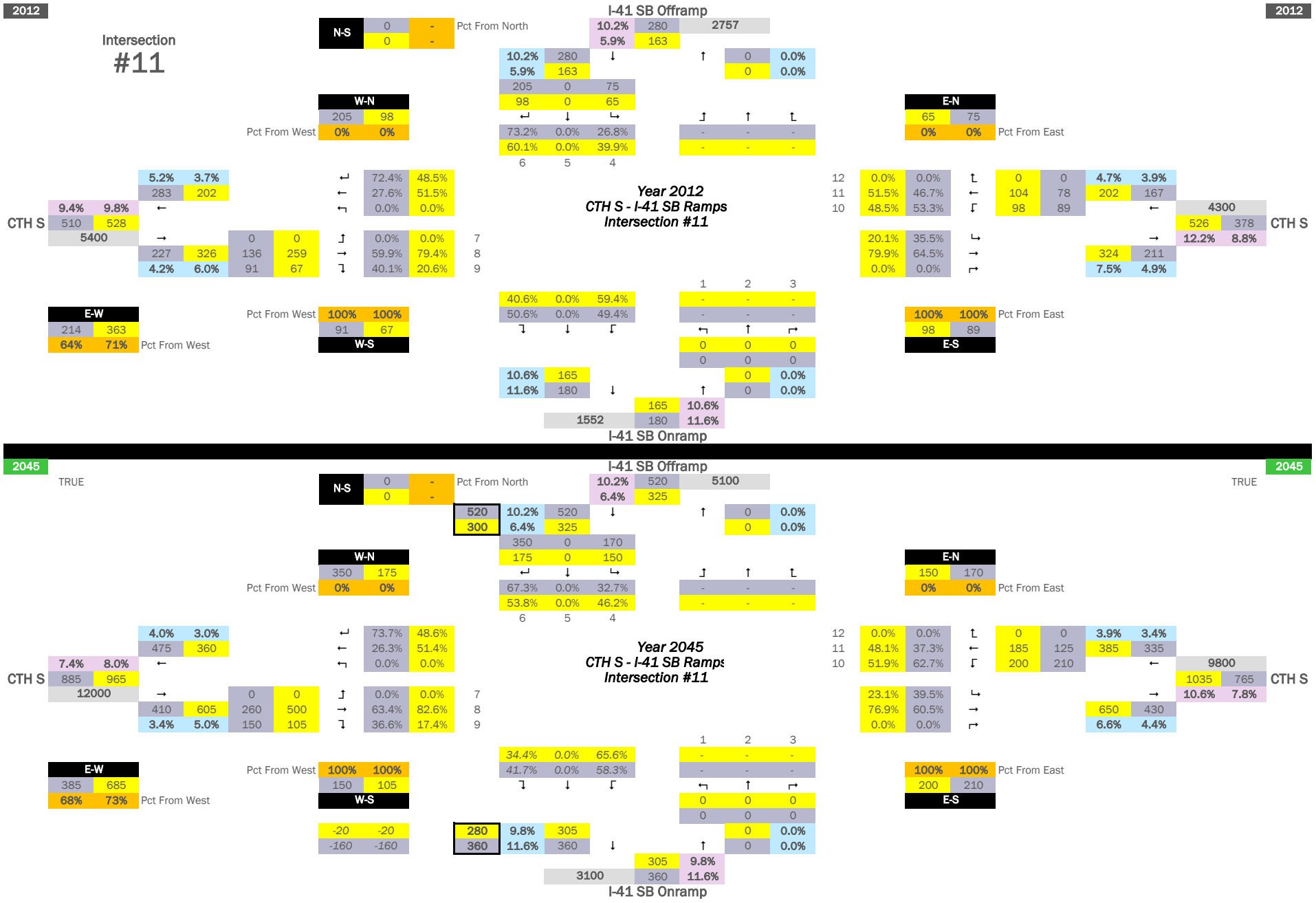


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements

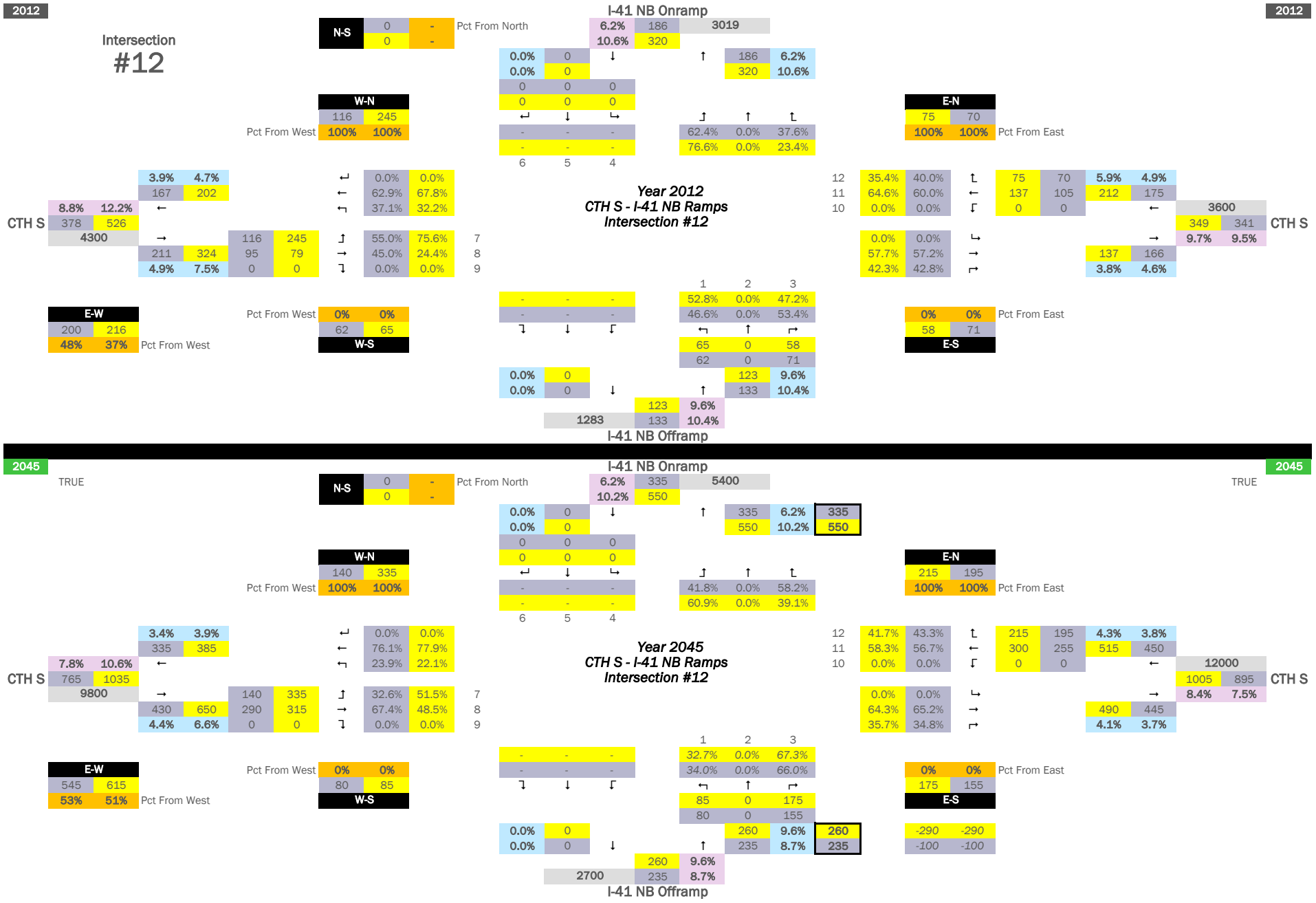
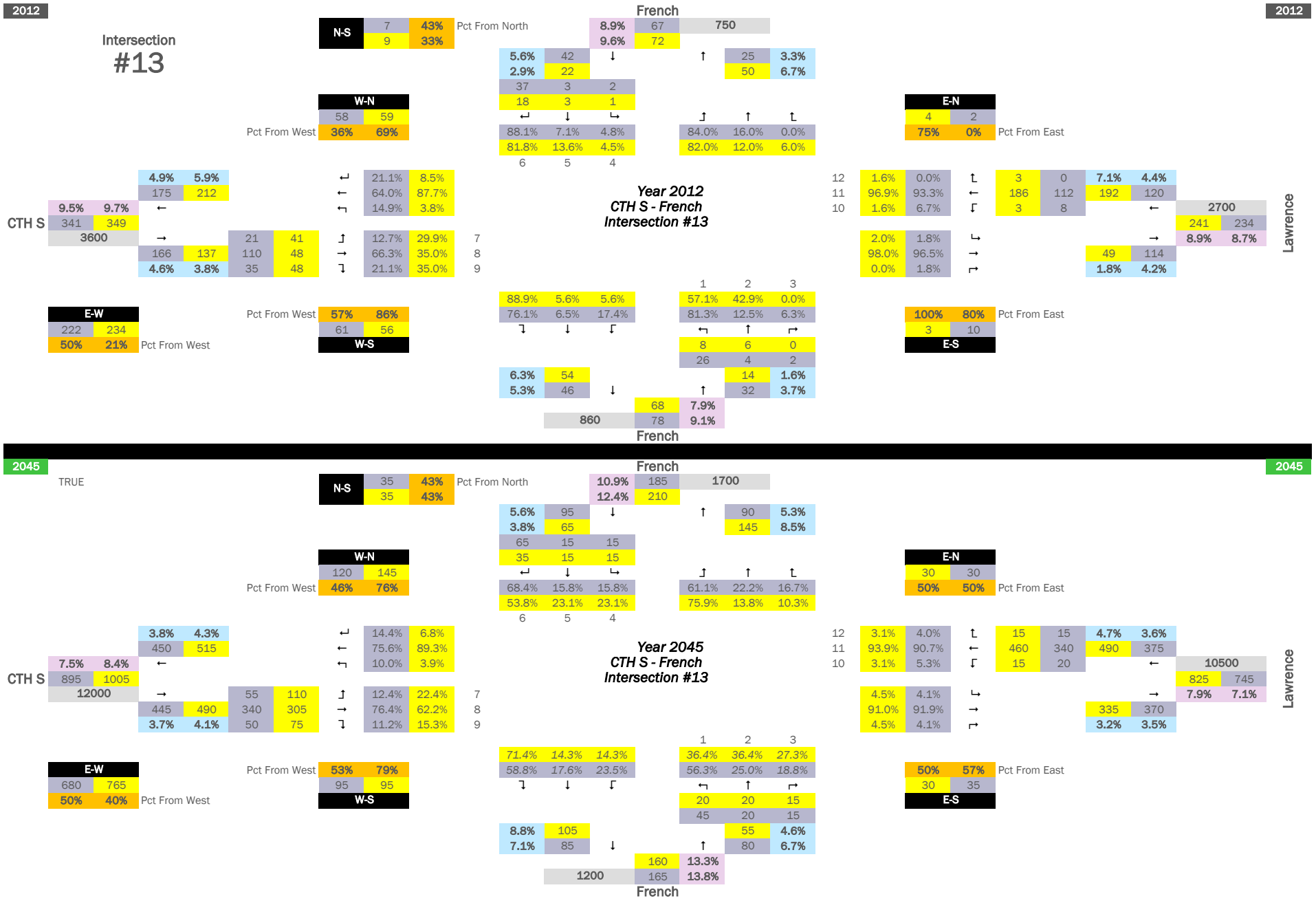


Figure NB
I-41 Southern Arterial
No Build Alternative Turning Movements



	I-41 at ATR 05-0001, South of CTH S, Brown County **Alternative 1**			
2012 AADT 2045 AADT	42,200 61,600			
Design Values	AM Peak Hour		PM Peak Hour	
Year 2012				
K30 (DHV)	10.4%		10.9%	
D(DHV)	56% Peak Direction: Northbound		57% Peak Direction: Southbound	
Year 2045				
K30 (DHV)	9.4%		9.8%	
D(DHV)	56% Peak Direction: Northbound		55% Peak Direction: Southbound	
	Northbound	Southbound	Northbound	Southbound
T(DHV)	6.7%	9.0%	6.5%	6.2%

Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

Site ID	Road Name	2012 Base Year Peak Hour				2045 Alt 1B (Mainline / Ramps)			
		AM SB	AM NB	PM SB	PM NB	AM SB	AM NB	PM SB	PM NB
05-0380	**I-41 BTWN CTH G & ONEIDA DEPERE - HPMS**	2,872	2,705	2,859	3,199	4,010	3,760	3,840	4,620
05-1583	RAMP FROM I-41 NB TO CTH G		251		219		335		290
05-1581	RAMP FROM CTH G TO I-41 SB	184		211		295		340	
05-1087	BUS USH X41 SPUR FROM I-41 TO STH 32 DEPERE	309	612	539	325	350	695	610	370
05-1580	RAMP FROM I-41 SB TO CTH G	711		568		1,115		900	
05-1582	RAMP FROM CTH G TO I-41 NB		542		788		790		1,210
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0110	**I-41 NORTH OF CTH F - DE PERE #2**	2,654	3,026	3,041	2,955	3,540	4,000	3,890	4,070
05-1601	RAMP FROM I-41 NB TO CTH F		362		254		755		585
05-1600	RAMP FROM CTH F TO I-41 SB	233		286		720		695	
05-1598	RAMP FROM I-41 SB TO CTH F	966		615		1,700		1,145	
05-1599	RAMP FROM CTH F TO I-41 NB		711		1,183		1,225		1,835
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
99-0015	**New I-41 BFS North of SAB**	1,921	2,677	2,712	2,026	2,560	3,530	3,440	2,820
99-0004	SAB Ramp from I-41 NB		0		0		0		0
99-0003	SAB Ramp to I-41 SB	0		0		0		0	
99-0002	SAB Ramp from I-41 SB	0		0		0		0	
99-0001	SAB Ramp to I-41 NB		0		0		0		0
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0109	**I-41 NORTH OF CTH S INTERCHANGE HPMS**	1,921	2,677	2,712	2,026	2,560	3,530	3,440	2,820
05-1755	RAMP FROM I-41 NB TO CTH S		123		133		280		250
05-1754	RAMP FROM CTH S TO I-41 SB	165		180		300		360	
05-1753	RAMP FROM I-41 SB TO CTH S	163		280		310		500	
05-1752	RAMP FROM CTH S TO I-41 NB		320		186		550		320
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0001	**I-41 - 1.5 MI NE OF OUTAGAMIE COUNTY LINE - DE PERE**	1,923	2,480	2,612	1,973	2,550	3,260	3,300	2,750

Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

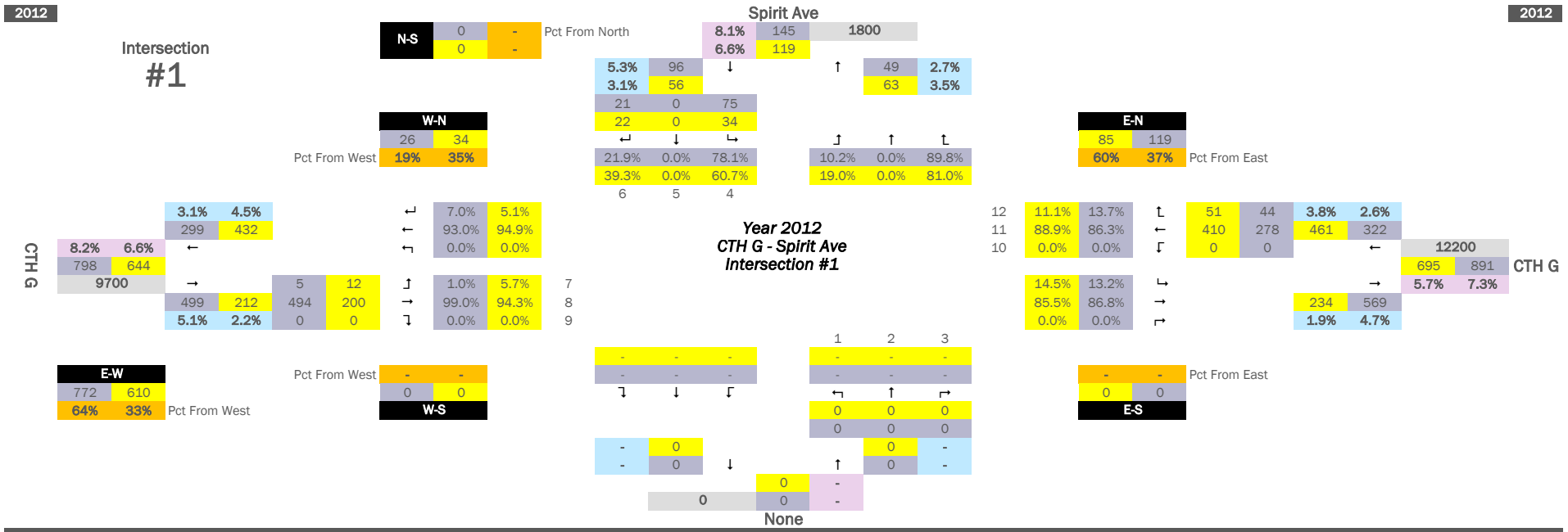


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

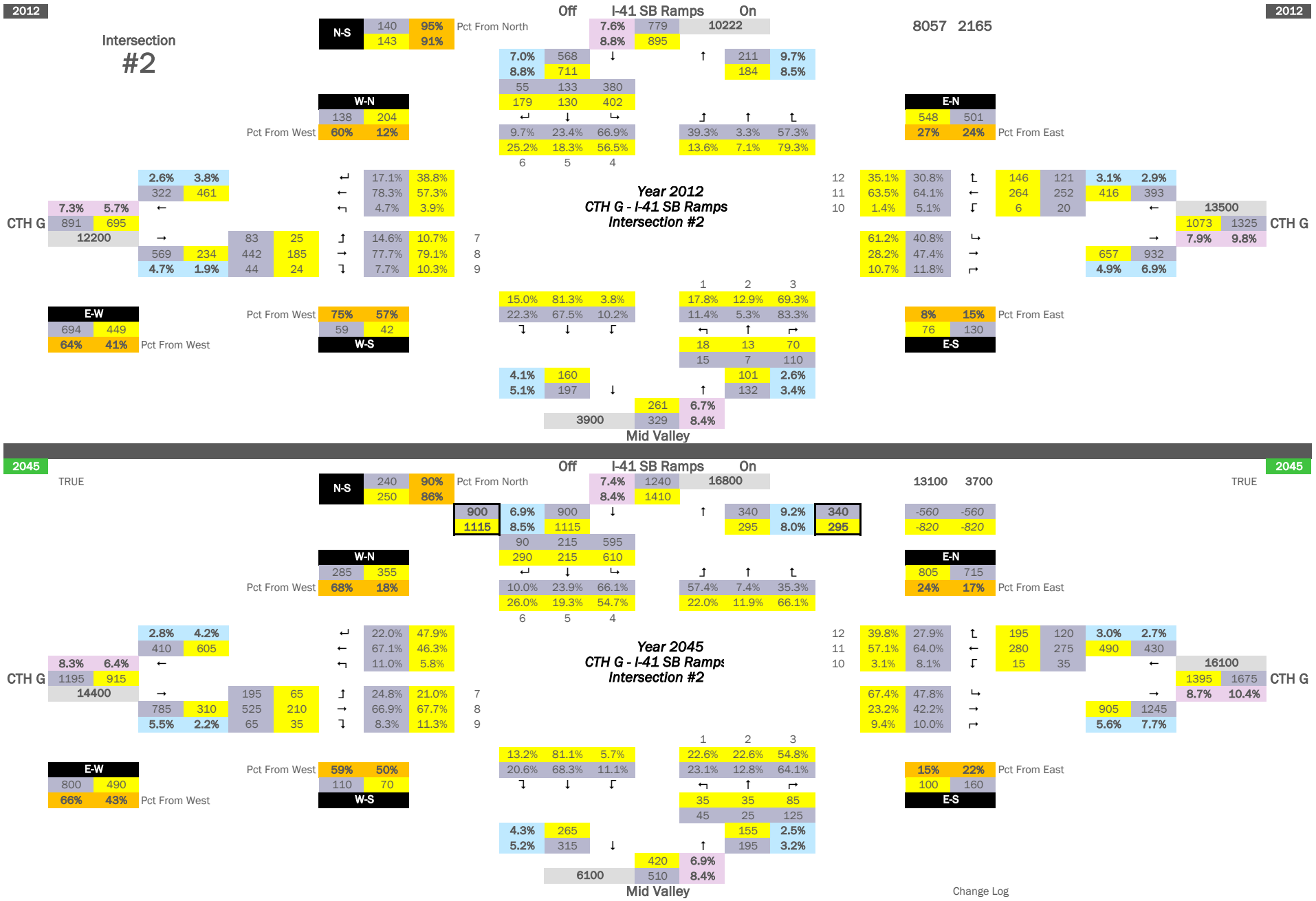


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

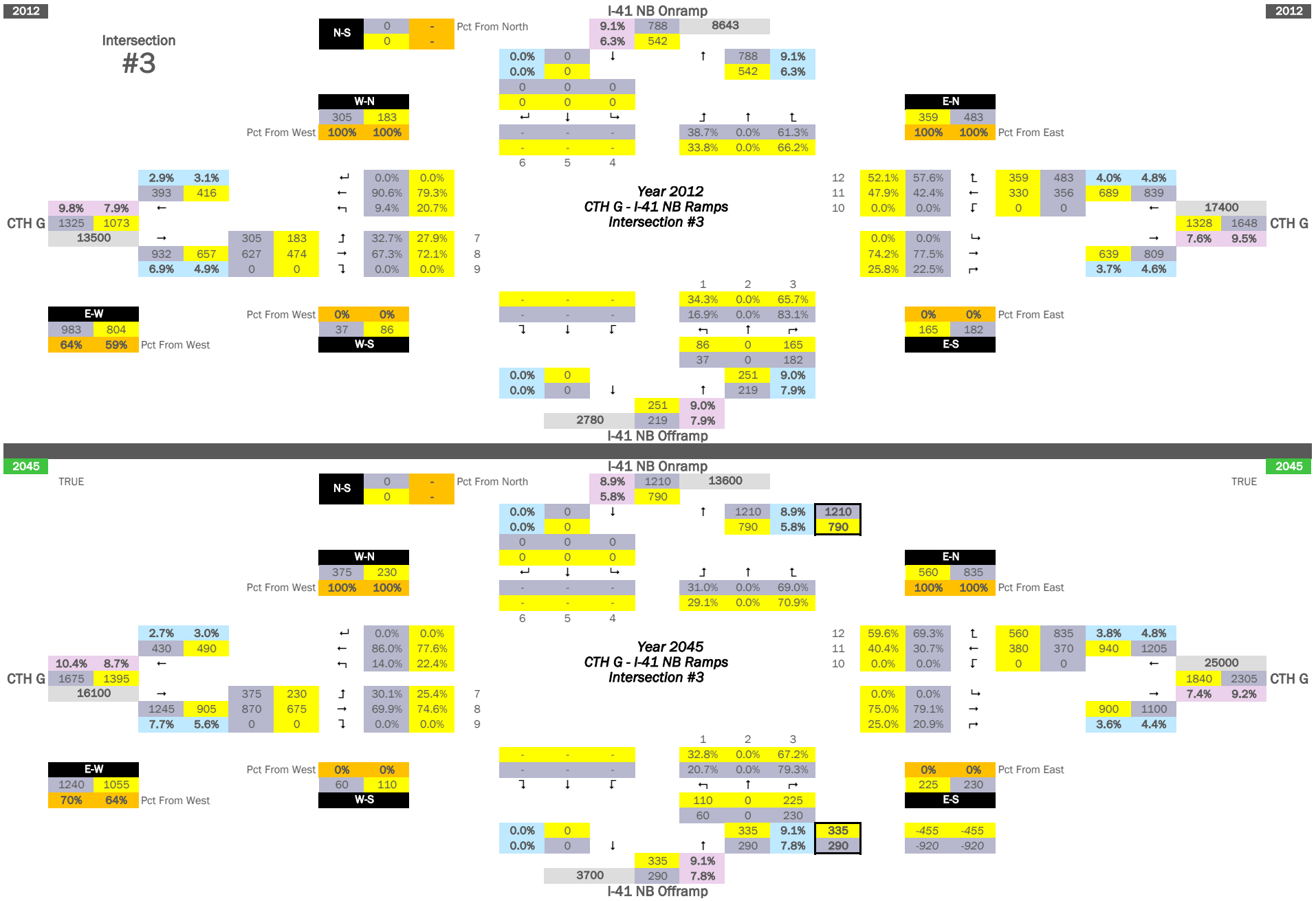


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

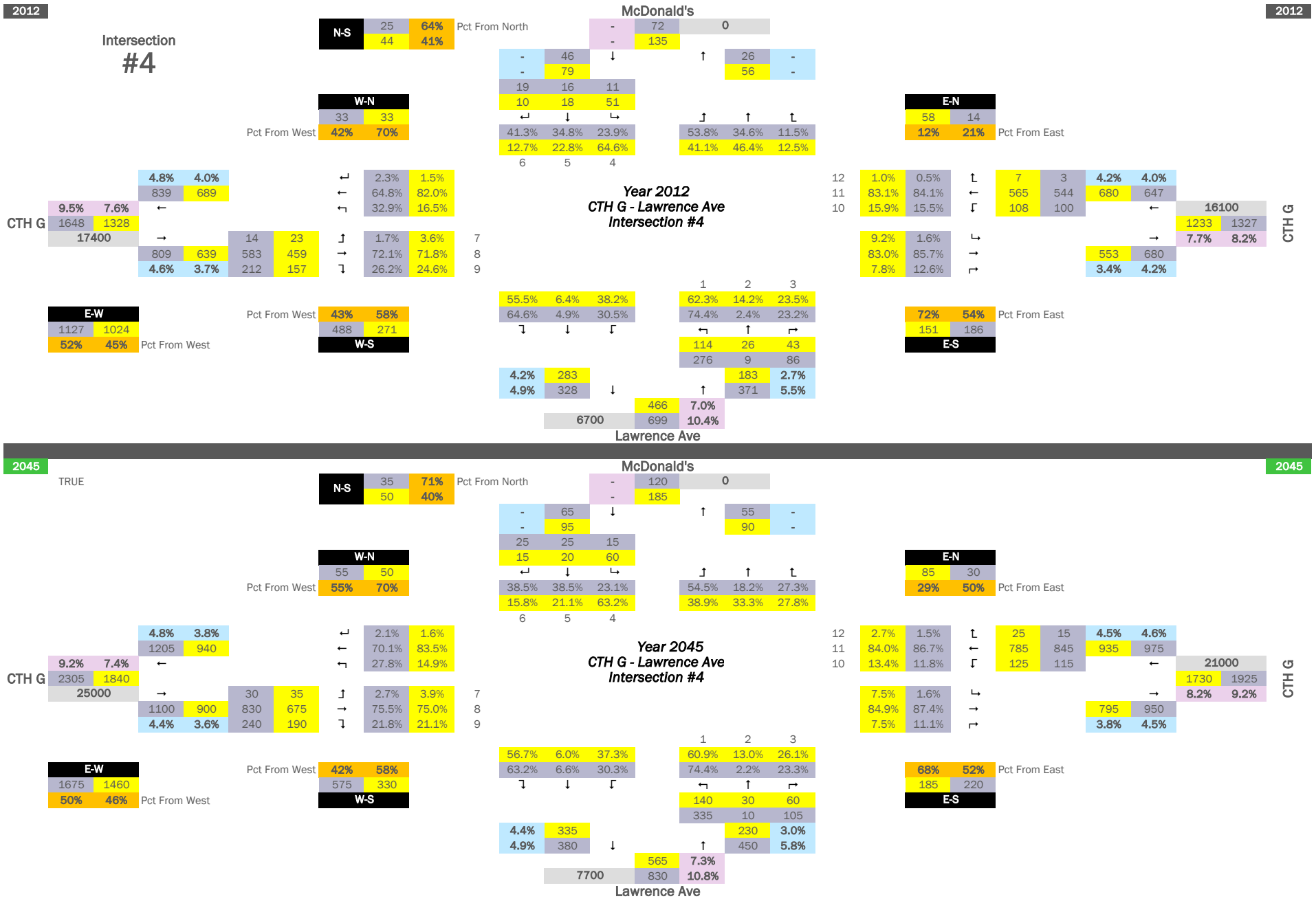


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

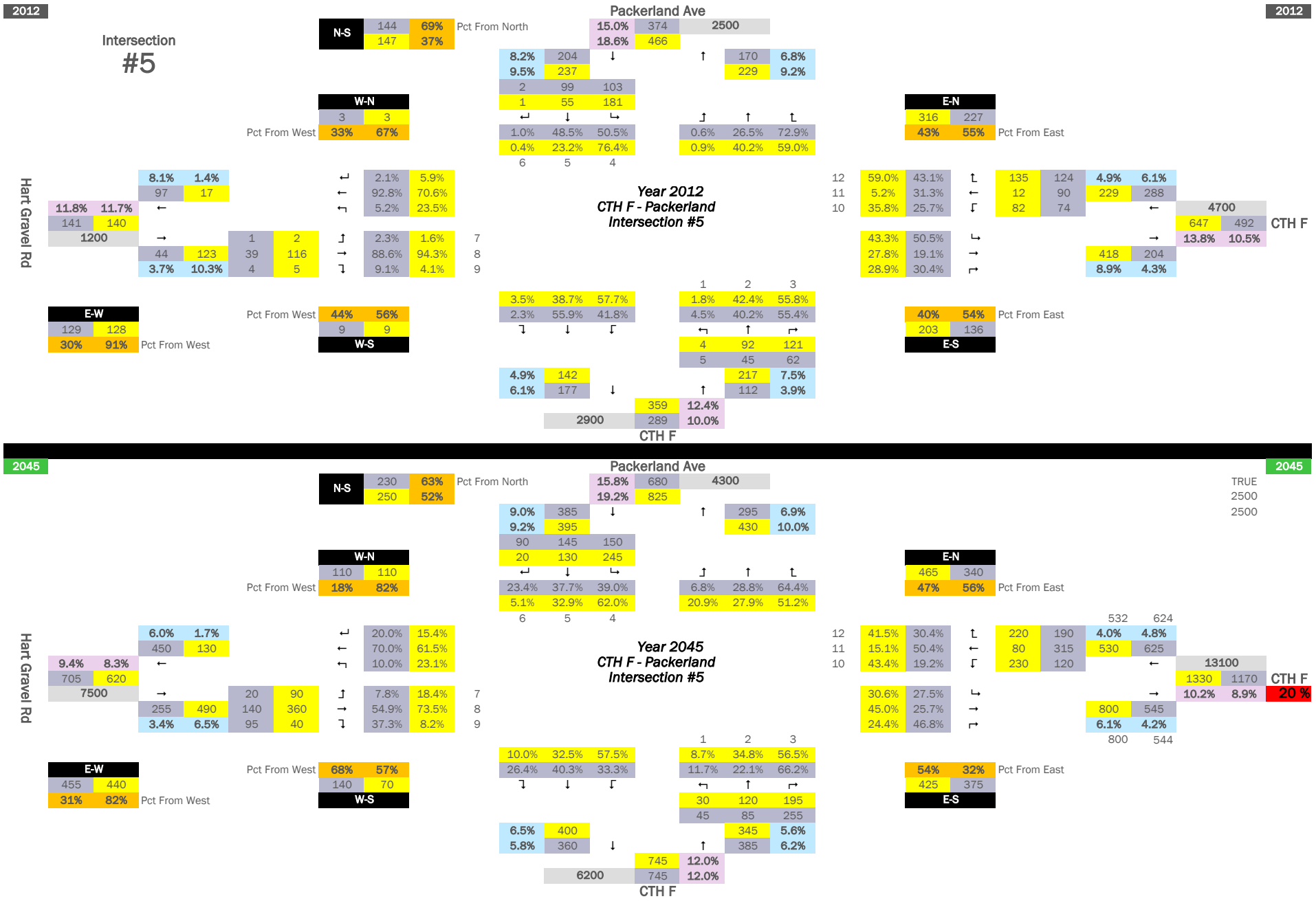


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

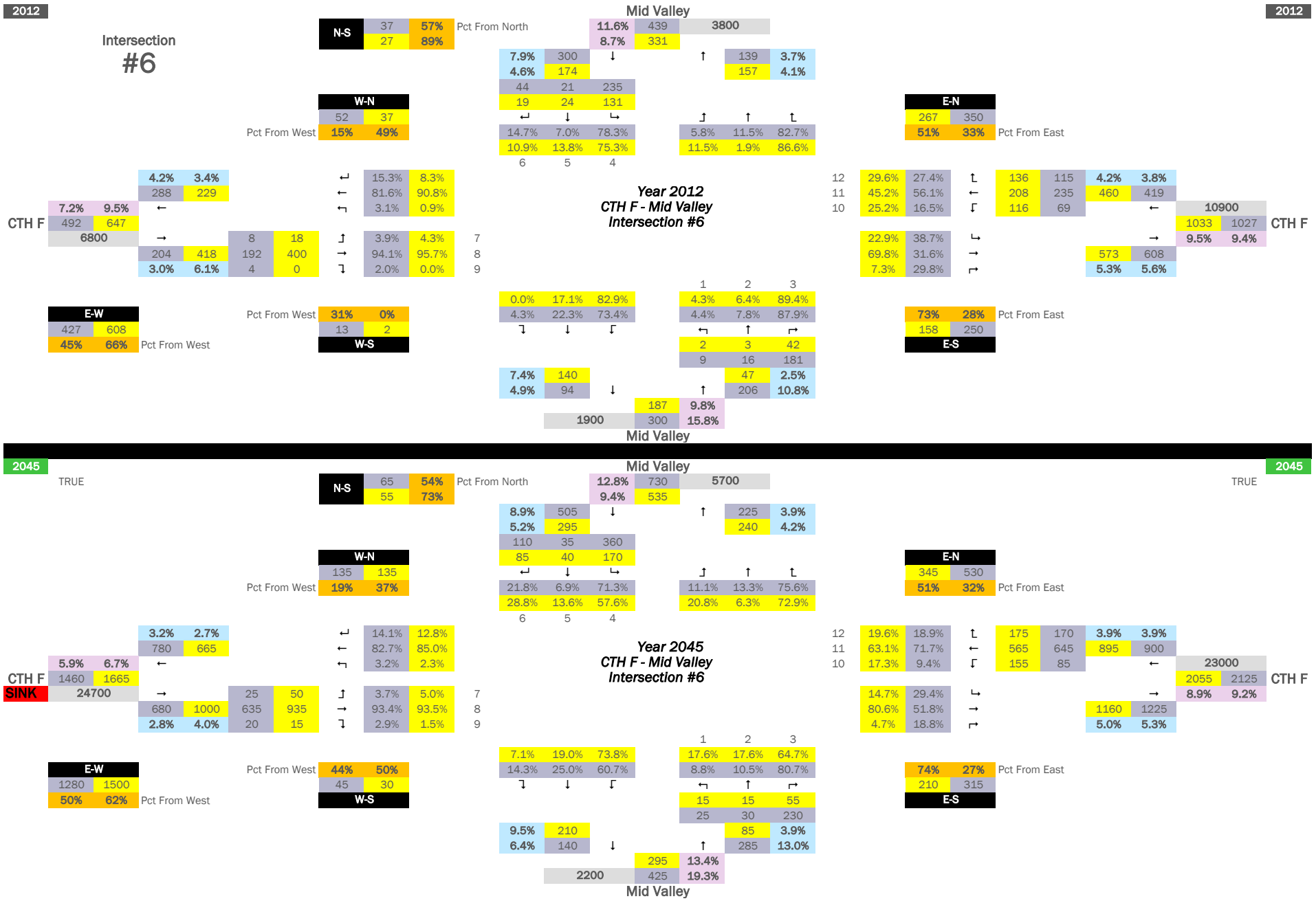


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

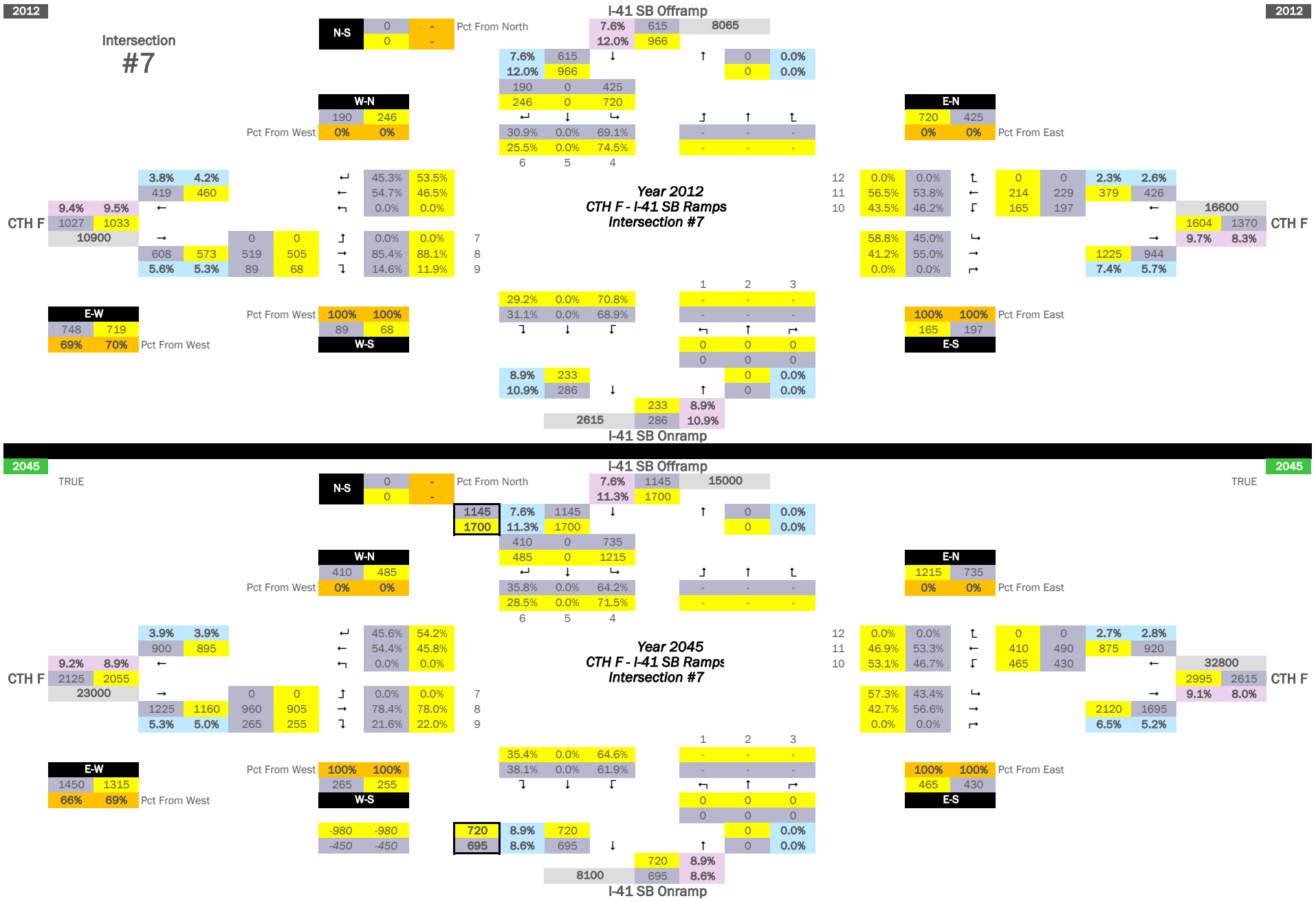


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

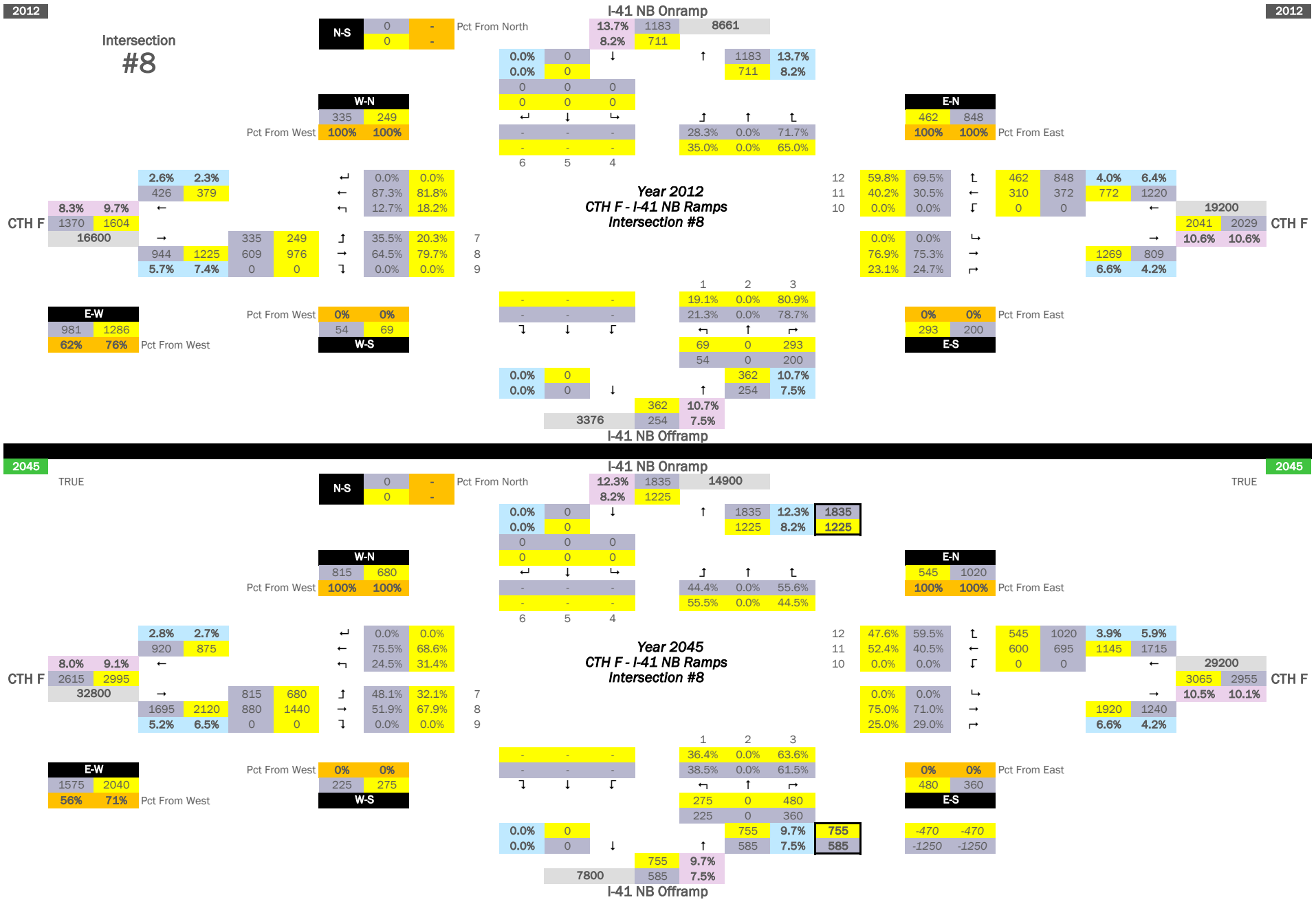


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

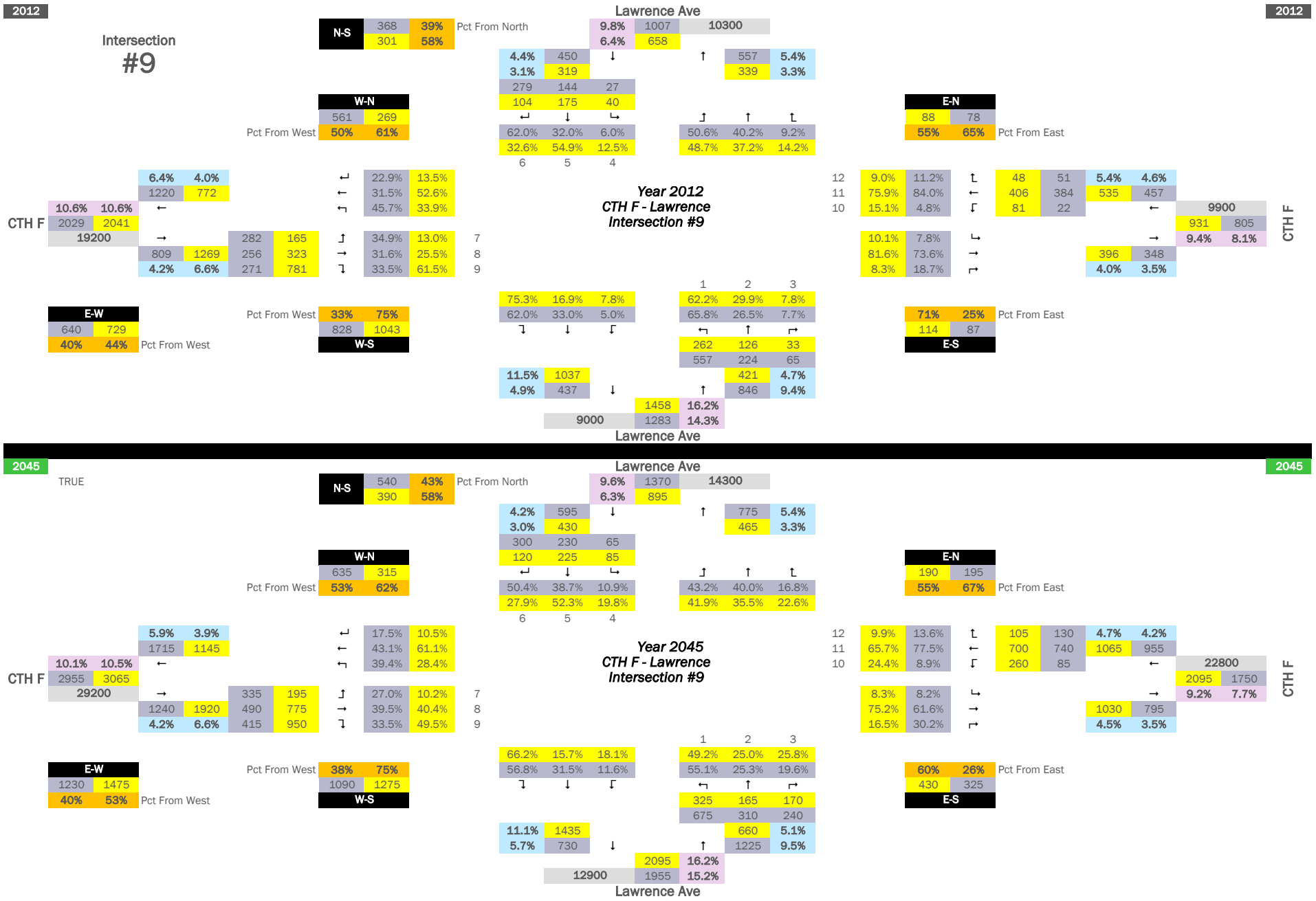


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

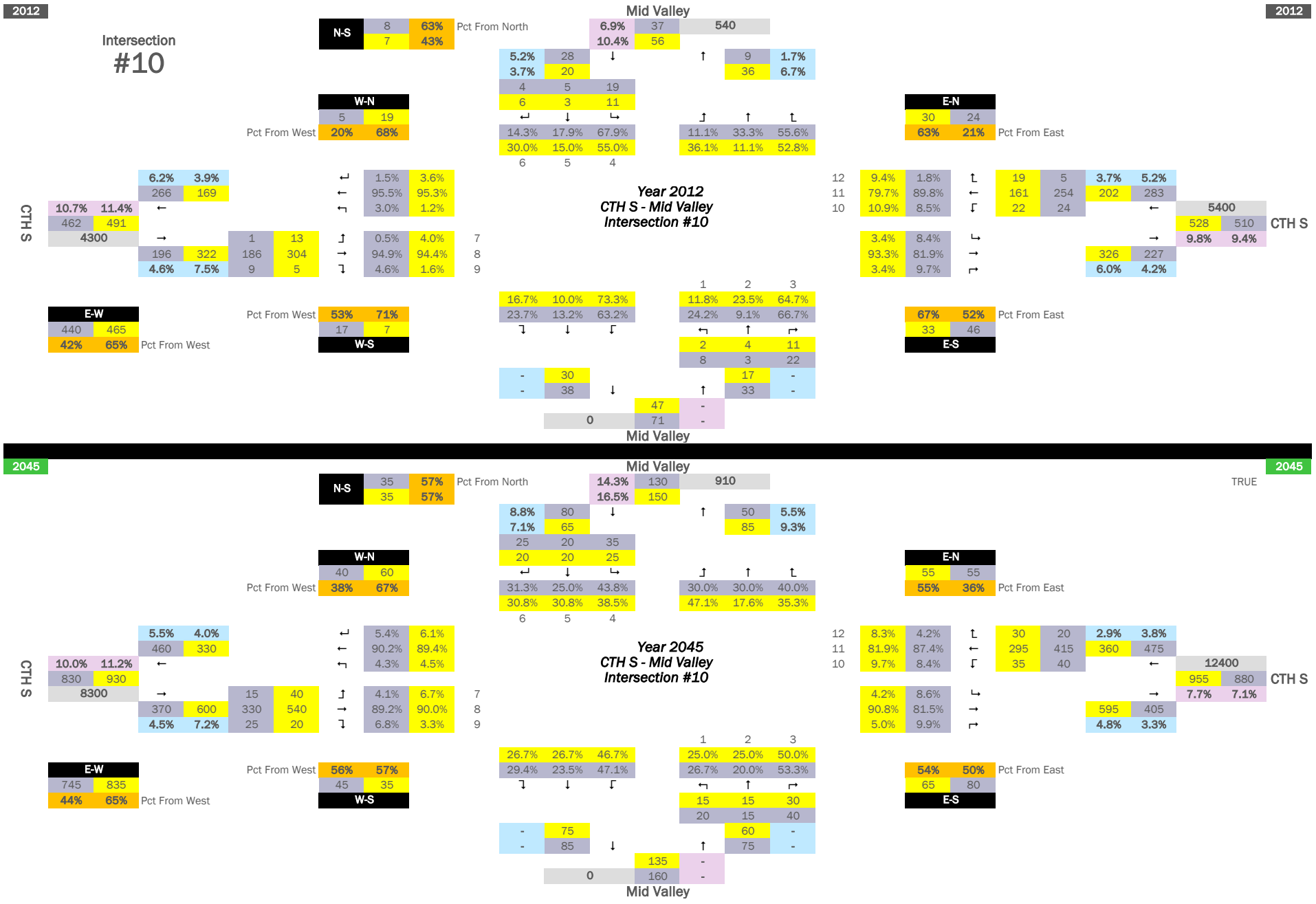


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

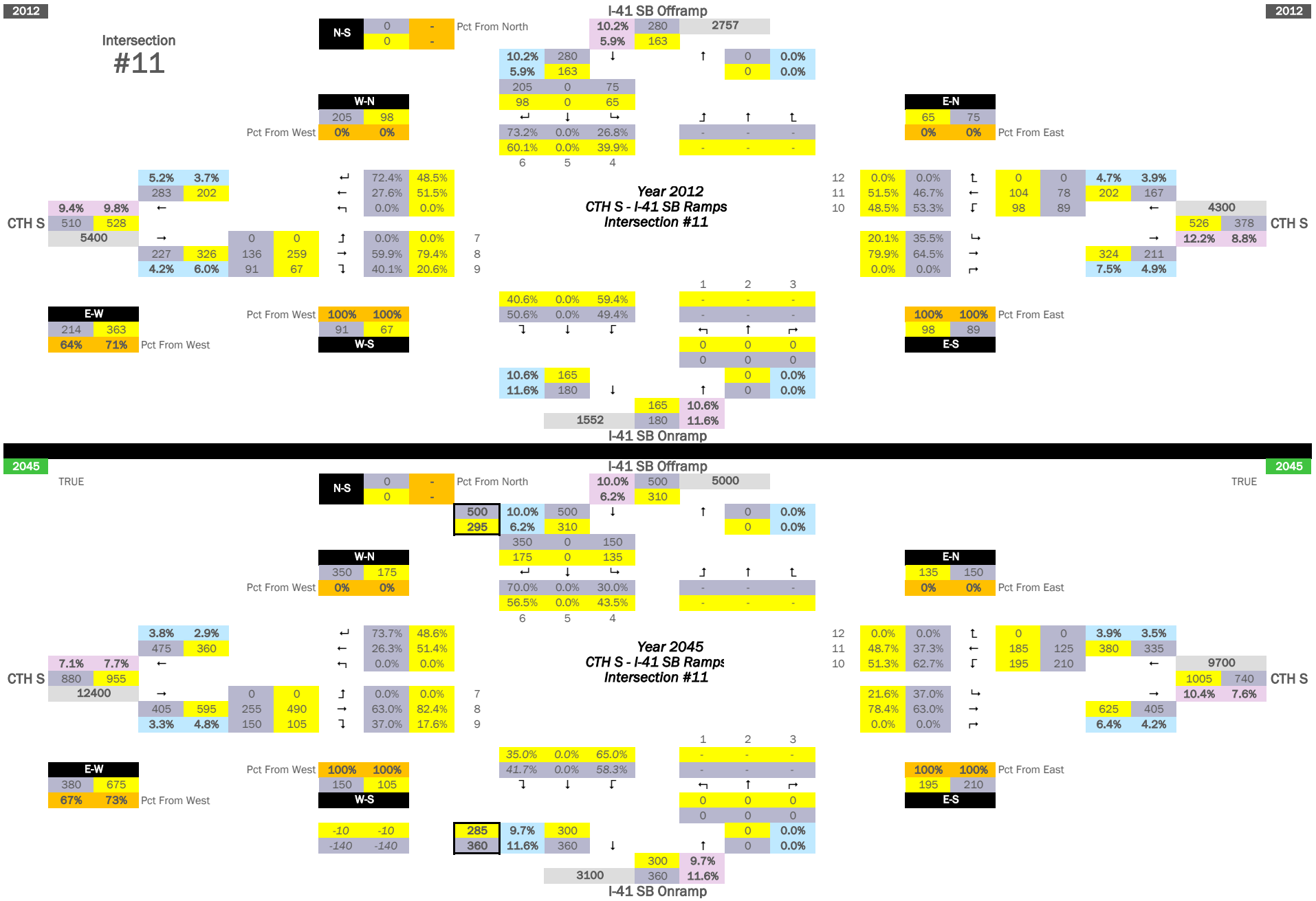


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements

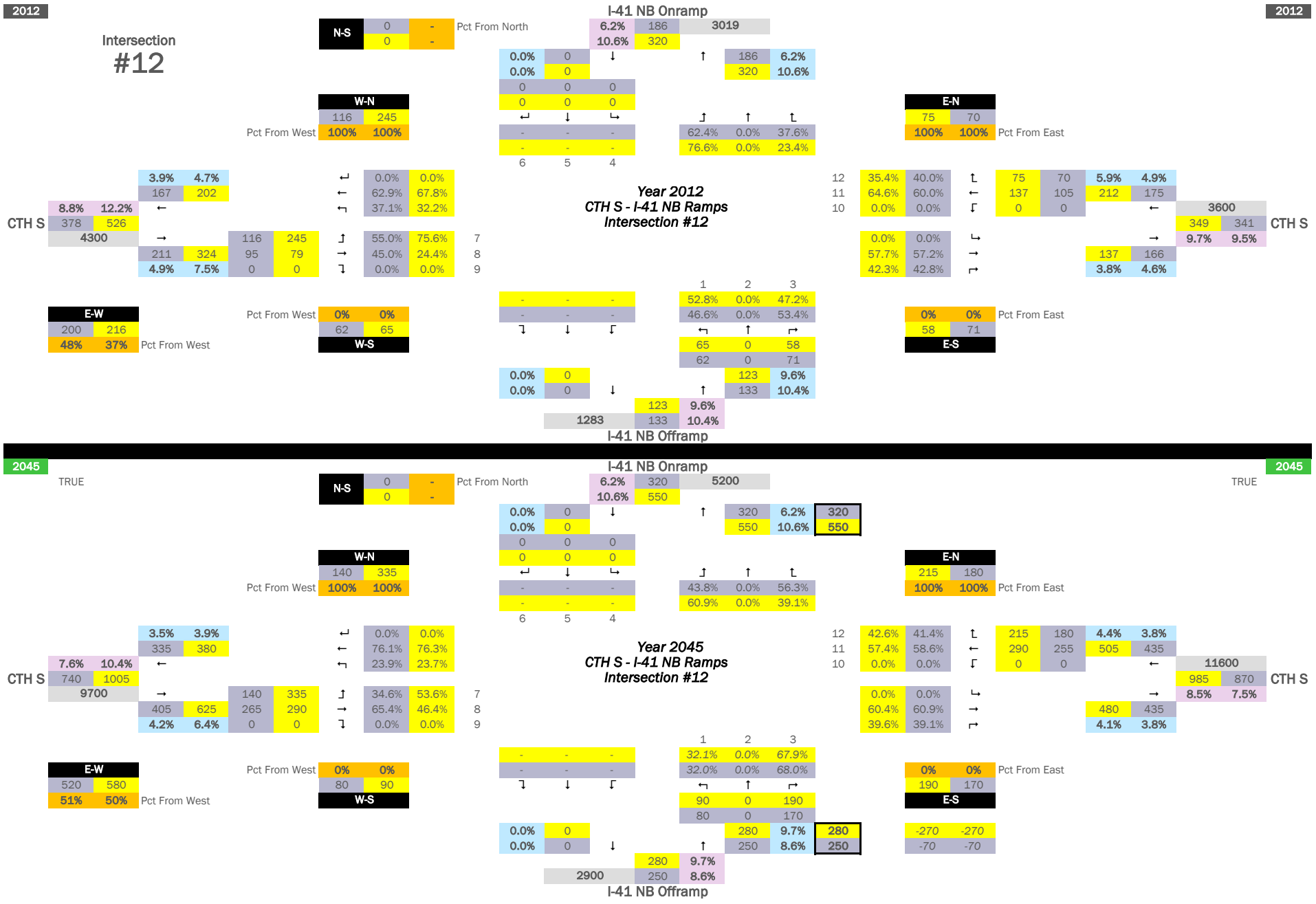
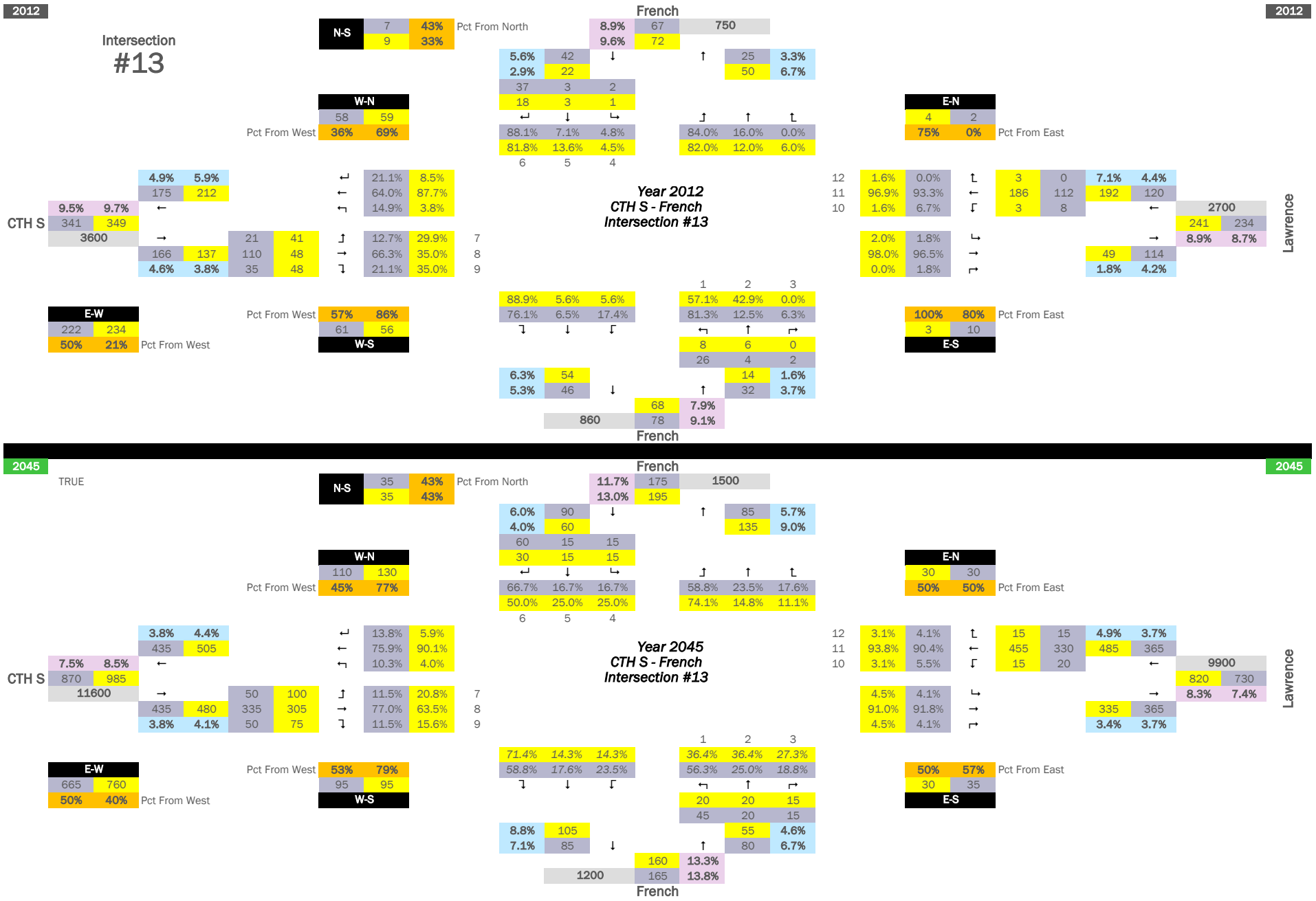


Figure 1
I-41 Southern Arterial
Alternative 1 Turning Movements



	I-41 at ATR 05-0001, South of CTH S, Brown County **Alternative 2A**			
2012 AADT	42,200			
2045 AADT	63,100			
Design Values	AM Peak Hour		PM Peak Hour	
Year 2012				
K30 (DHV)	10.4%		10.9%	
D(DHV)	56% Peak Direction: Northbound		57% Peak Direction: Southbound	
Year 2045				
K30 (DHV)	9.4%		9.8%	
D(DHV)	56% Peak Direction: Northbound		55% Peak Direction: Southbound	
	Northbound	Southbound	Northbound	Southbound
T(DHV)	6.7%	9.0%	6.5%	6.2%

Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

Site ID	Road Name	2012 Base Year Peak Hour				2045 Alt 2A (Mainline / Ramps)			
		AM SB	AM NB	PM SB	PM NB	AM SB	AM NB	PM SB	PM NB
05-0380	**I-41 BTWN CTH G & ONEIDA DEPERE - HPMS**	2,872	2,705	2,859	3,199	3,910	3,660	3,740	4,500
05-1583	RAMP FROM I-41 NB TO CTH G		251		219		290		250
05-1581	RAMP FROM CTH G TO I-41 SB	184		211		255		290	
05-1087	BUS USH X41 SPUR FROM I-41 TO STH 32 DEPERE	309	612	539	325	365	725	635	385
05-1580	RAMP FROM I-41 SB TO CTH G	711		568		1,020		795	
05-1582	RAMP FROM CTH G TO I-41 NB		542		788		695		1,095
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0110	**I-41 NORTH OF CTH F - DE PERE #2**	2,654	3,026	3,041	2,955	3,510	3,980	3,870	4,040
05-1601	RAMP FROM I-41 NB TO CTH F		362		254		260		190
05-1600	RAMP FROM CTH F TO I-41 SB	233		286		310		310	
05-1598	RAMP FROM I-41 SB TO CTH F	966		615		1,400		970	
05-1599	RAMP FROM CTH F TO I-41 NB		711		1,183		1,090		1,630
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
99-0015	**New I-41 BFS North of SAB**	1,921	2,677	2,712	2,026	2,420	3,150	3,210	2,600
99-0004	SAB Ramp from I-41 NB		0		0		895		735
99-0003	SAB Ramp to I-41 SB	0		0		630		750	
99-0002	SAB Ramp from I-41 SB	0		0		410		410	
99-0001	SAB Ramp to I-41 NB		0		0		395		415
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0109	**I-41 NORTH OF CTH S INTERCHANGE HPMS**	1,921	2,677	2,712	2,026	2,640	3,650	3,550	2,920
05-1755	RAMP FROM I-41 NB TO CTH S		123		133		200		195
05-1754	RAMP FROM CTH S TO I-41 SB	165		180		250		280	
05-1753	RAMP FROM I-41 SB TO CTH S	163		280		290		470	
05-1752	RAMP FROM CTH S TO I-41 NB		320		186		530		315
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0001	**I-41 - 1.5 MI NE OF OUTAGAMIE COUNTY LINE - DE PERE**	1,923	2,480	2,612	1,973	2,600	3,320	3,360	2,800

Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

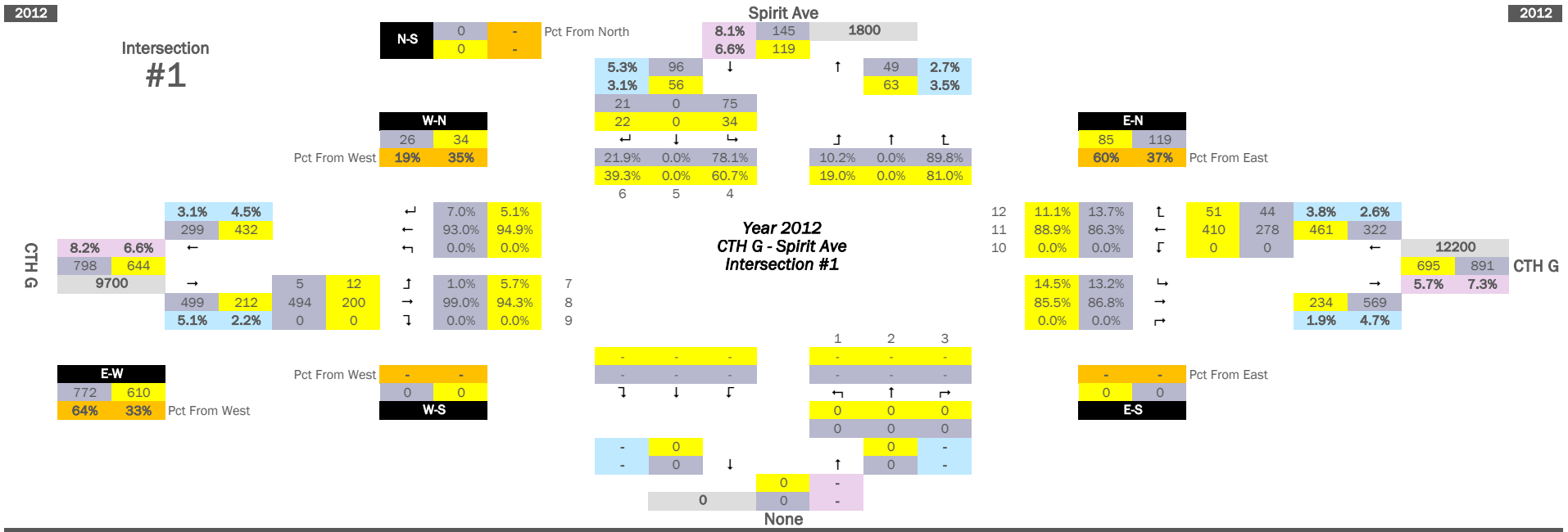


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

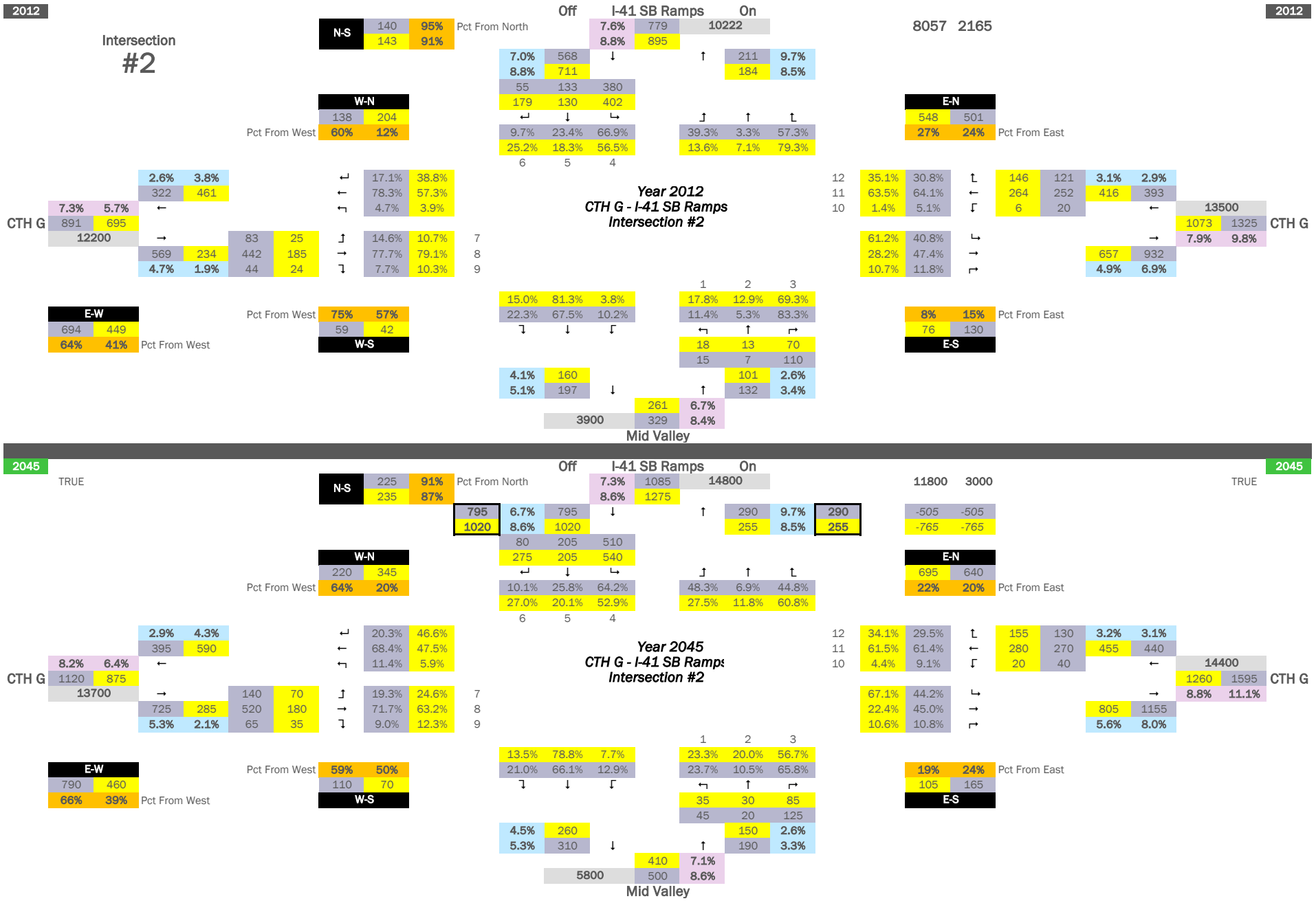


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

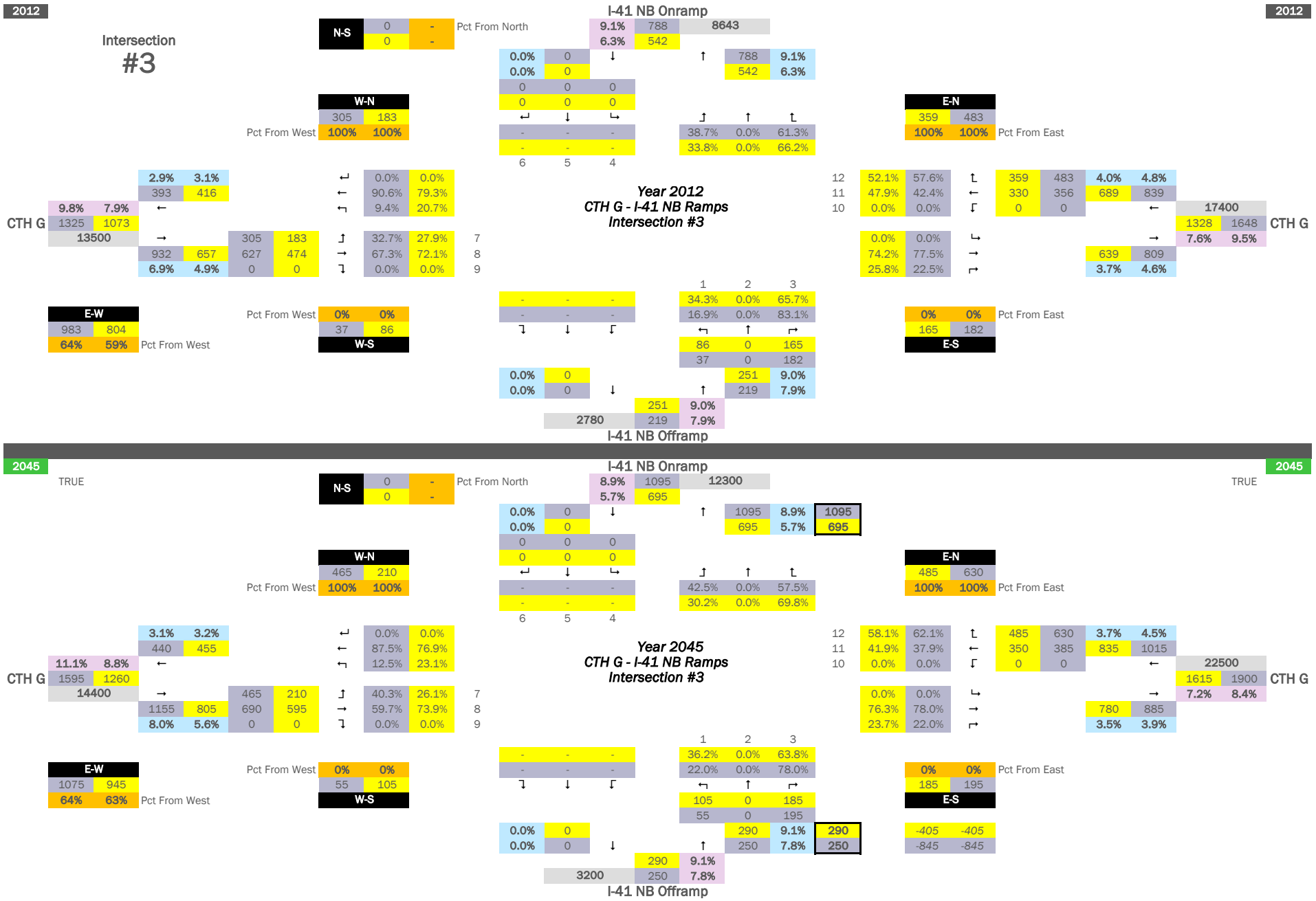


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

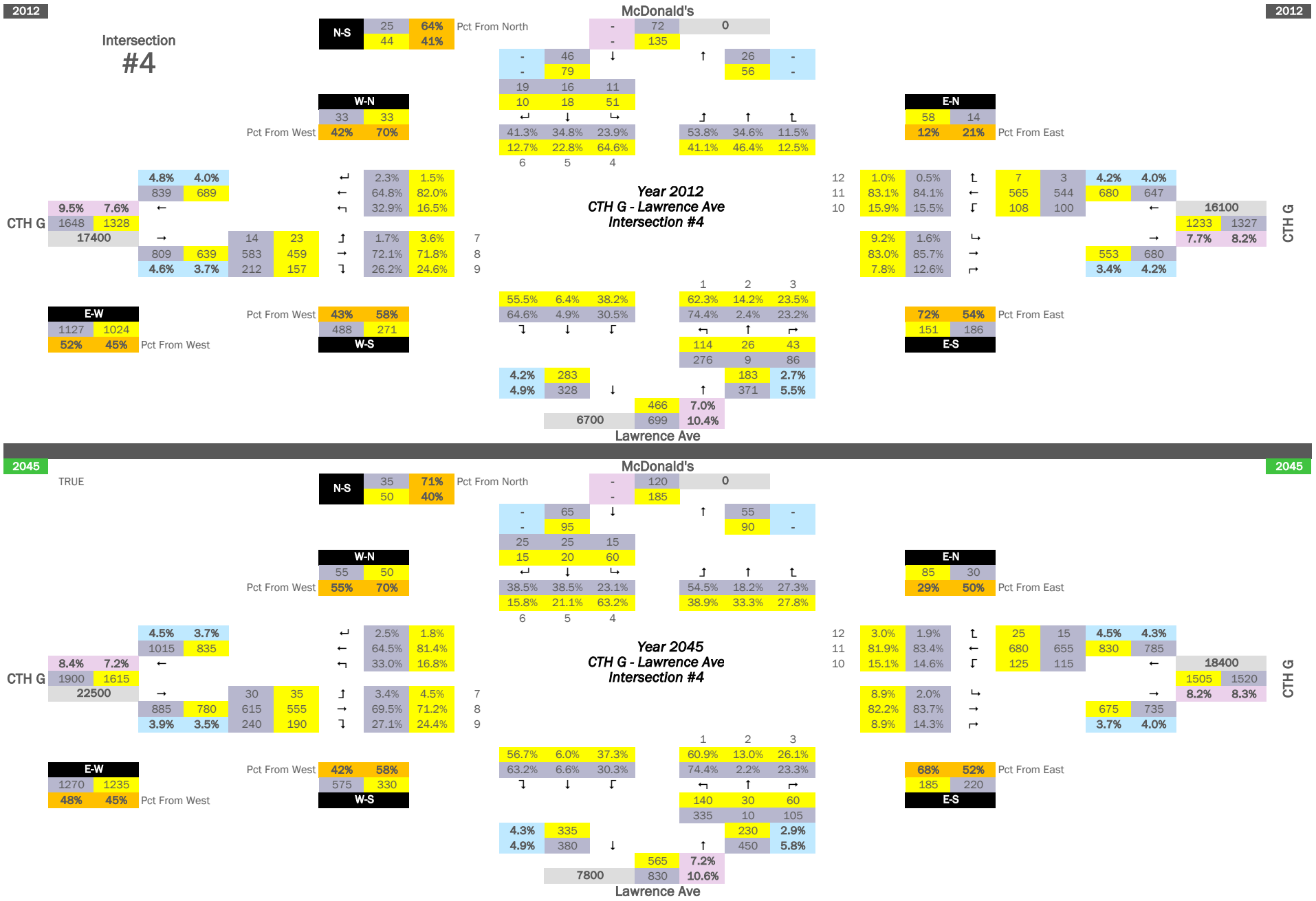


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

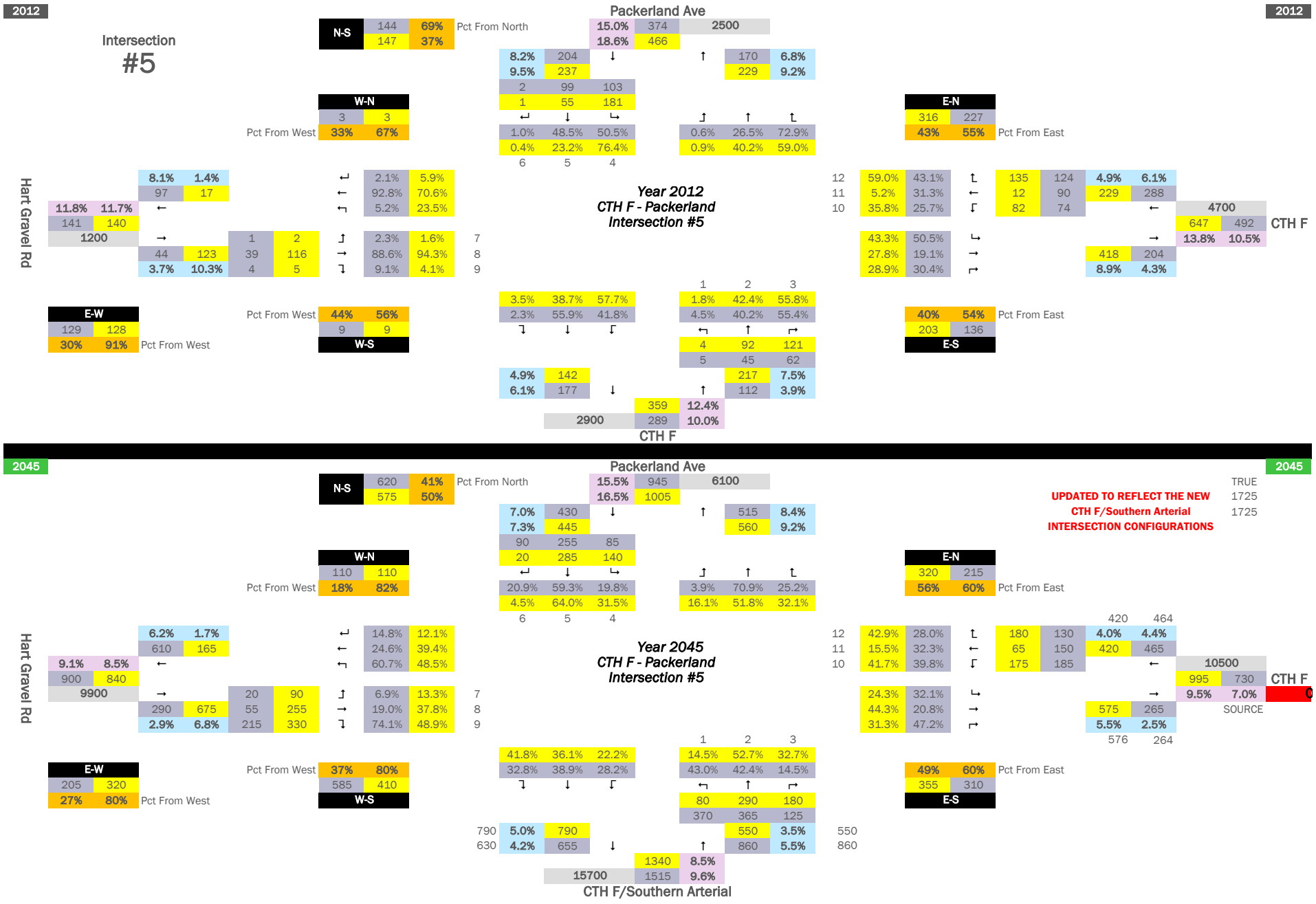


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

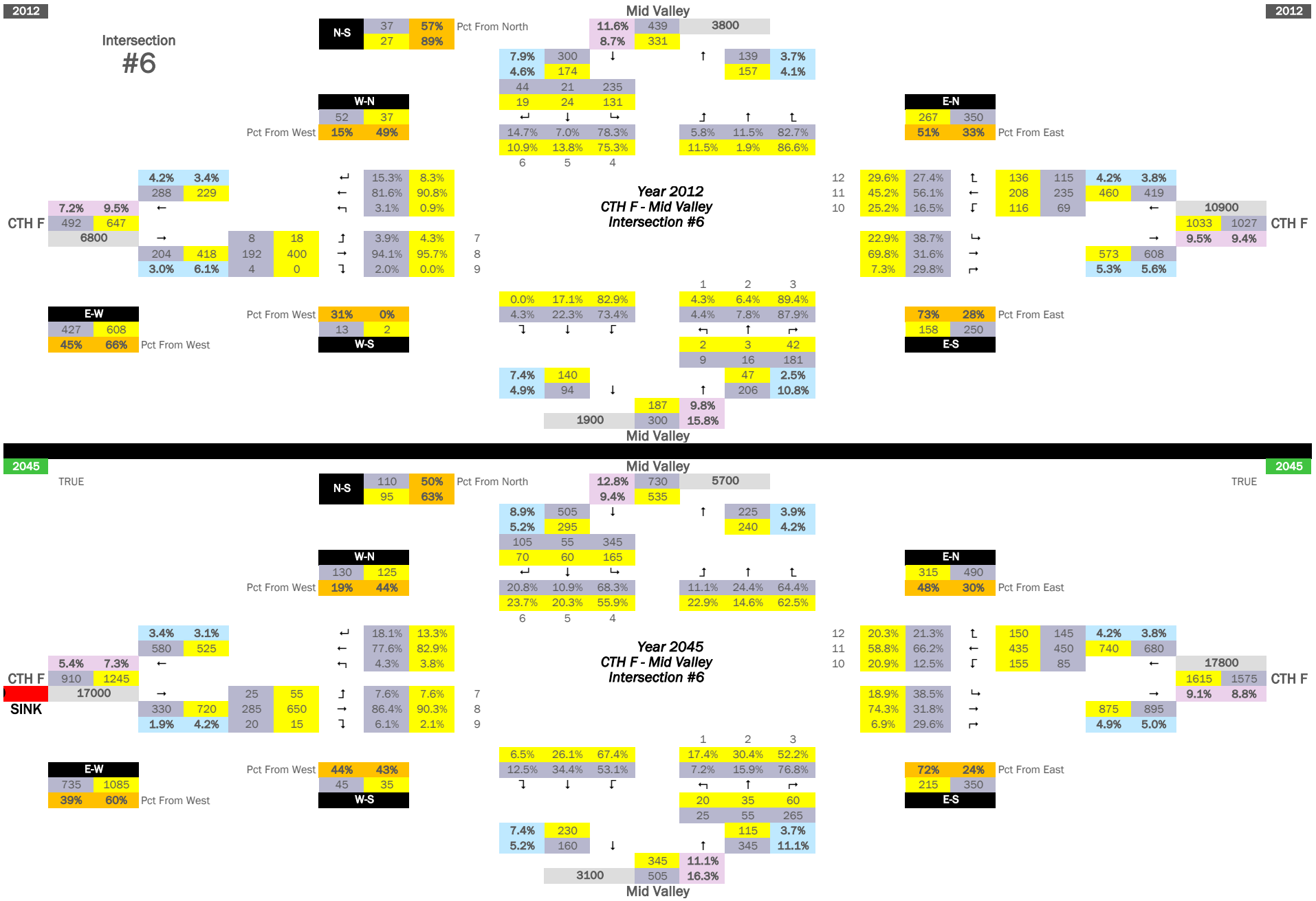


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

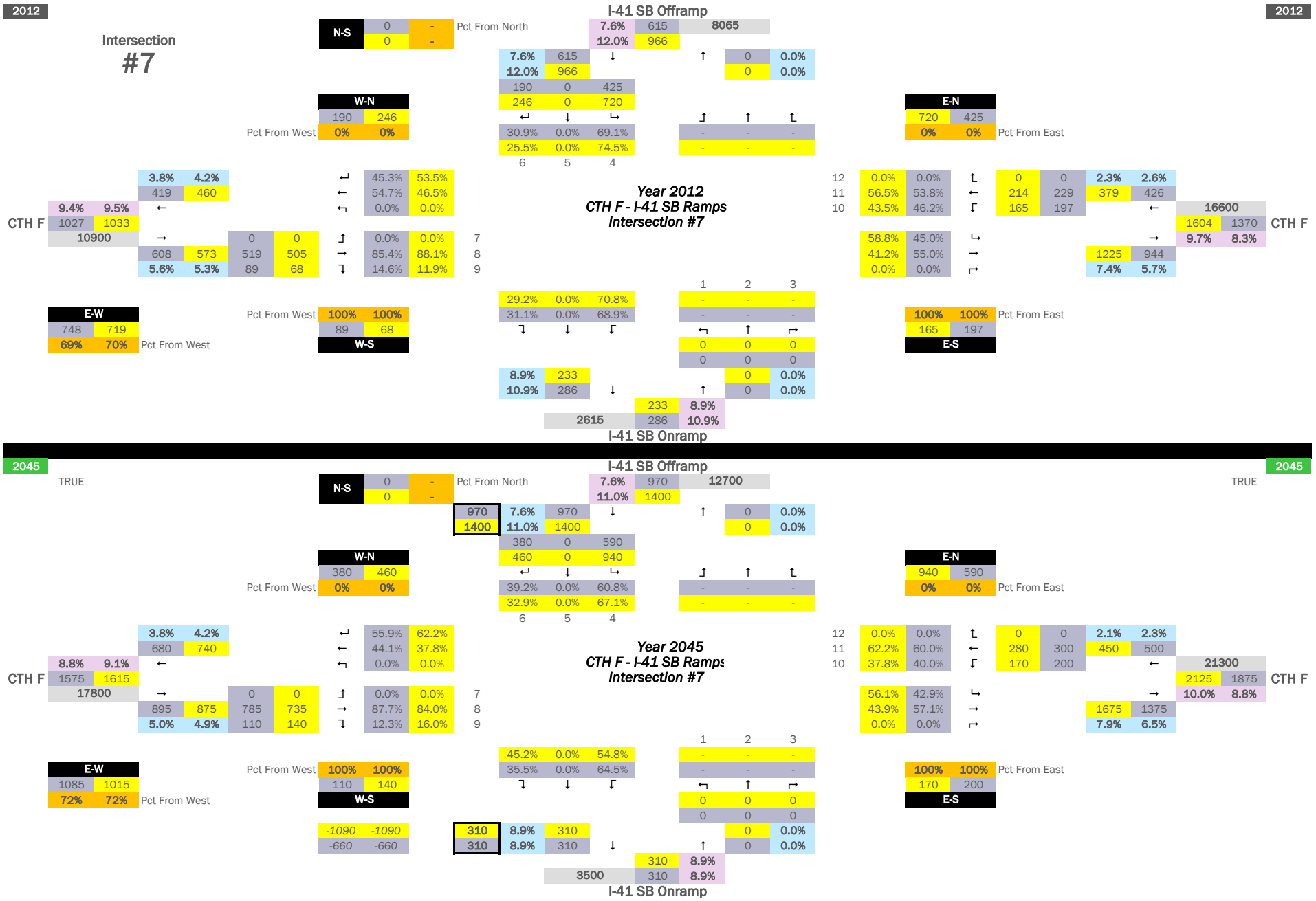


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

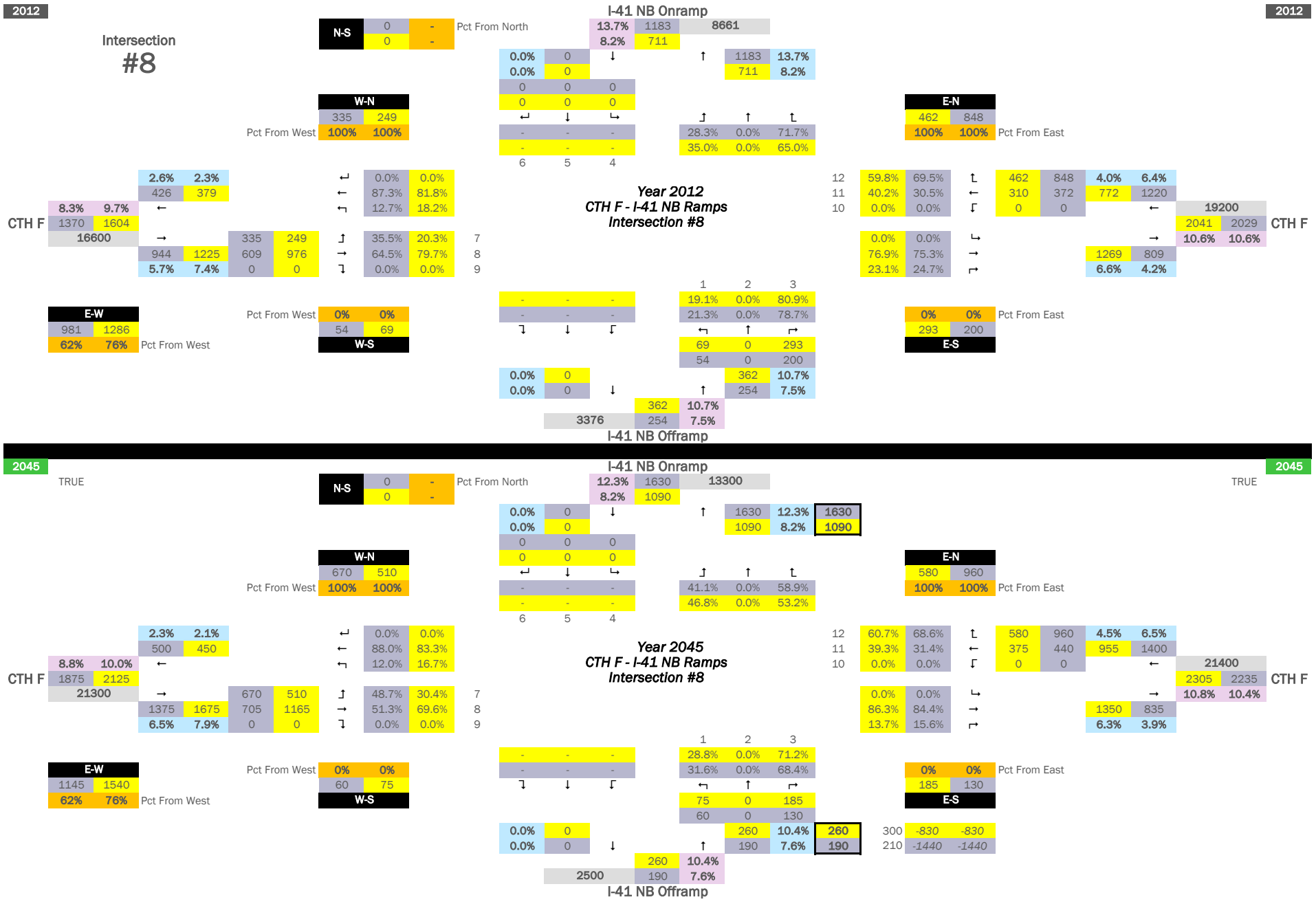


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

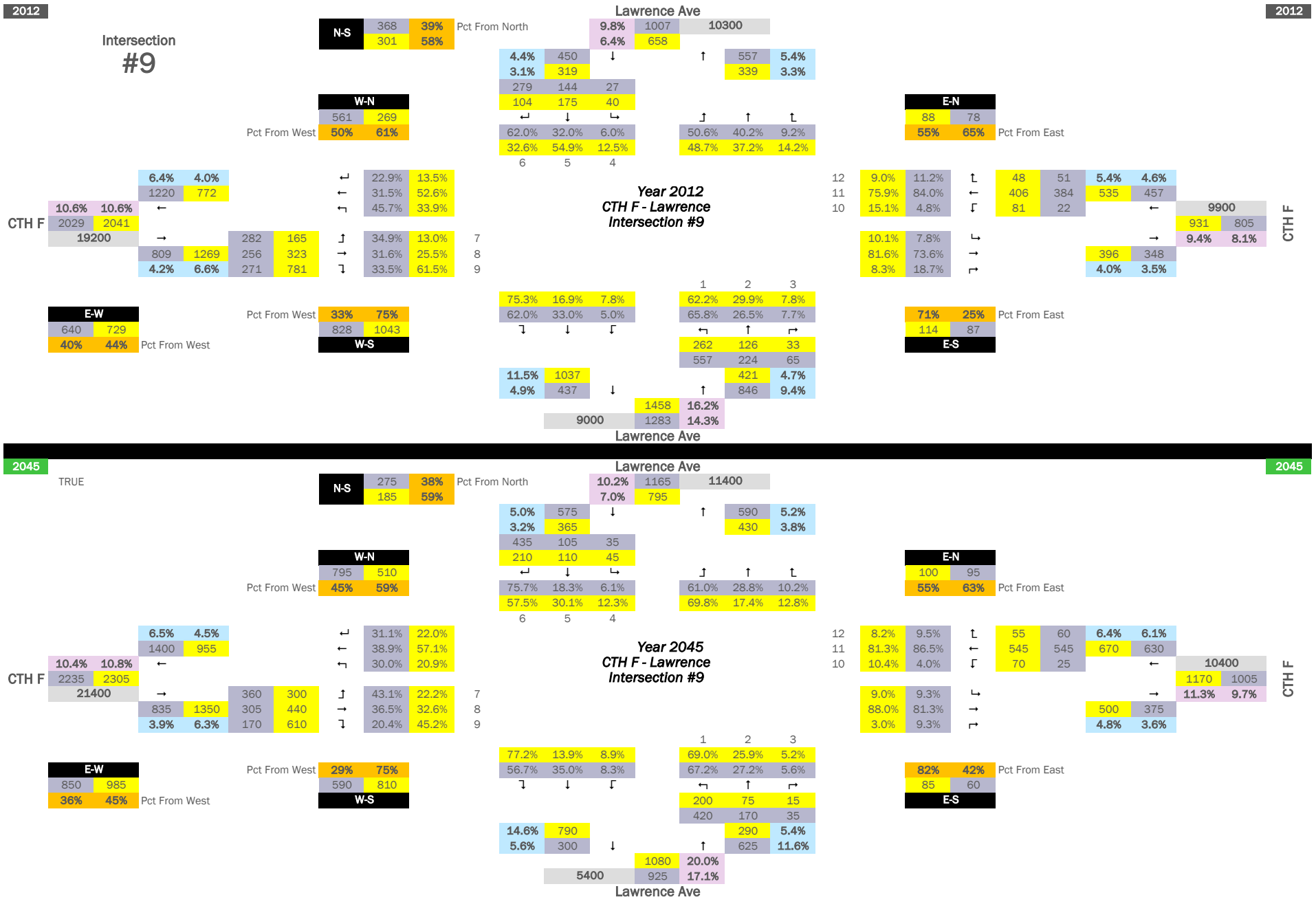


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

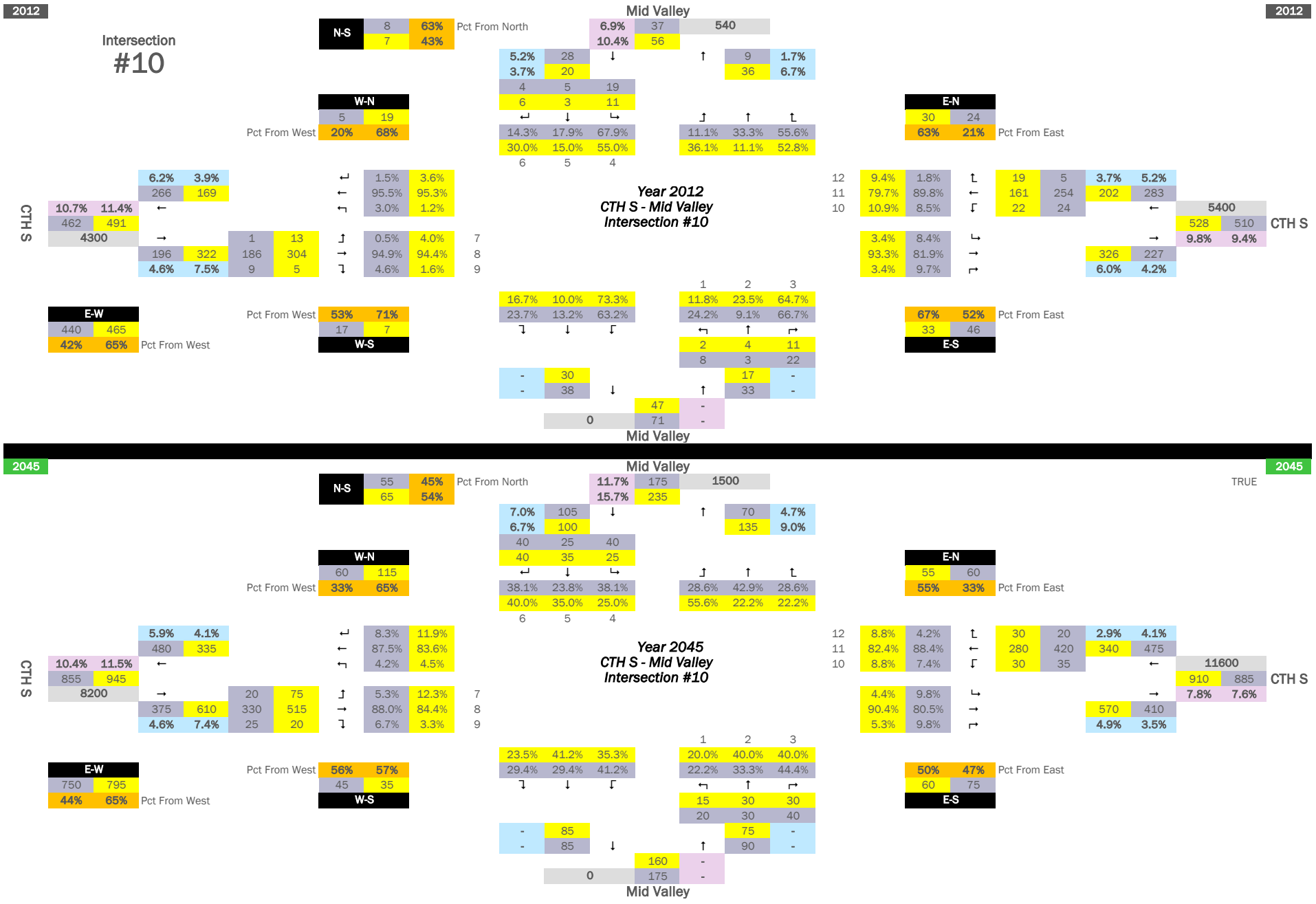


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

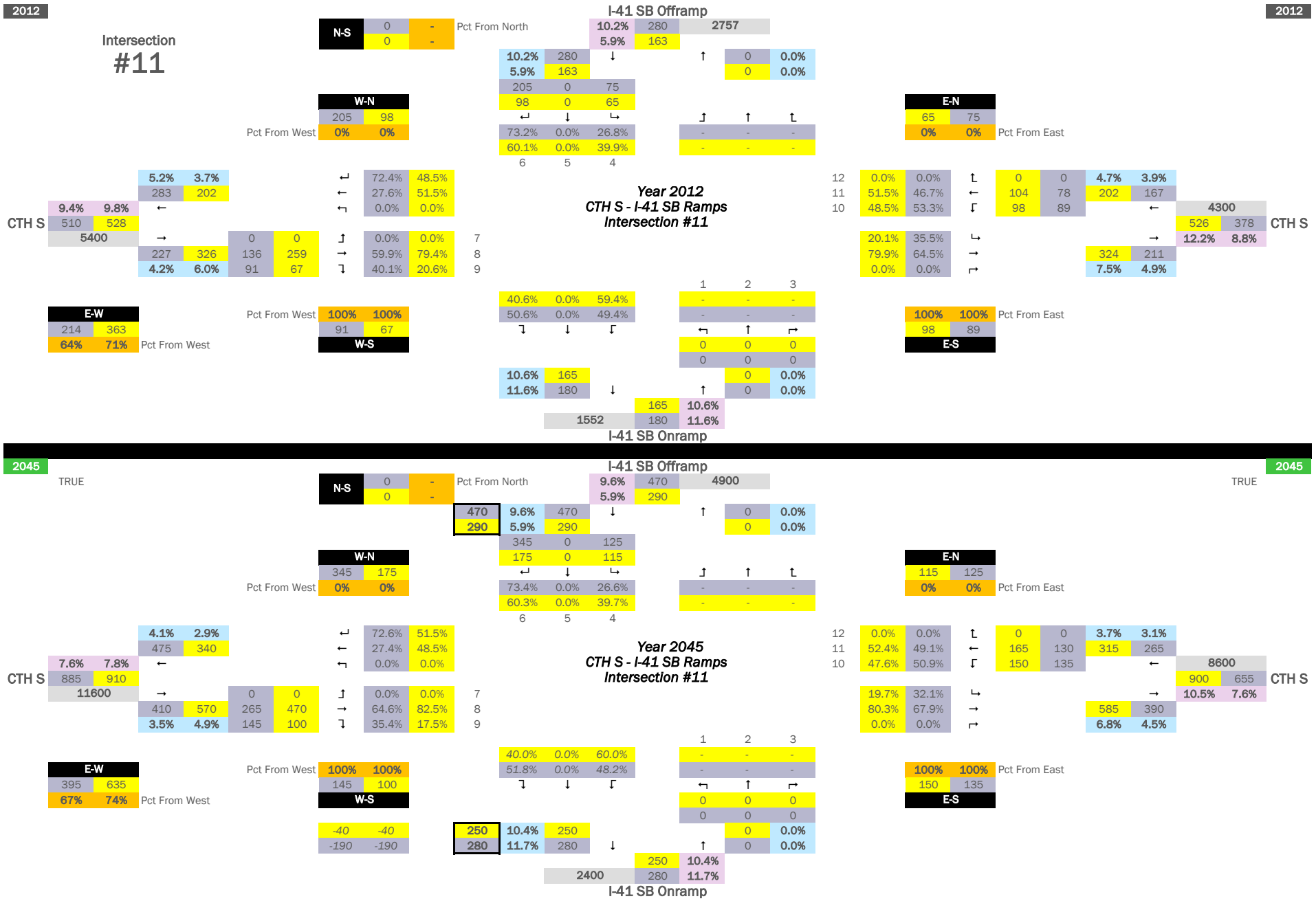


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

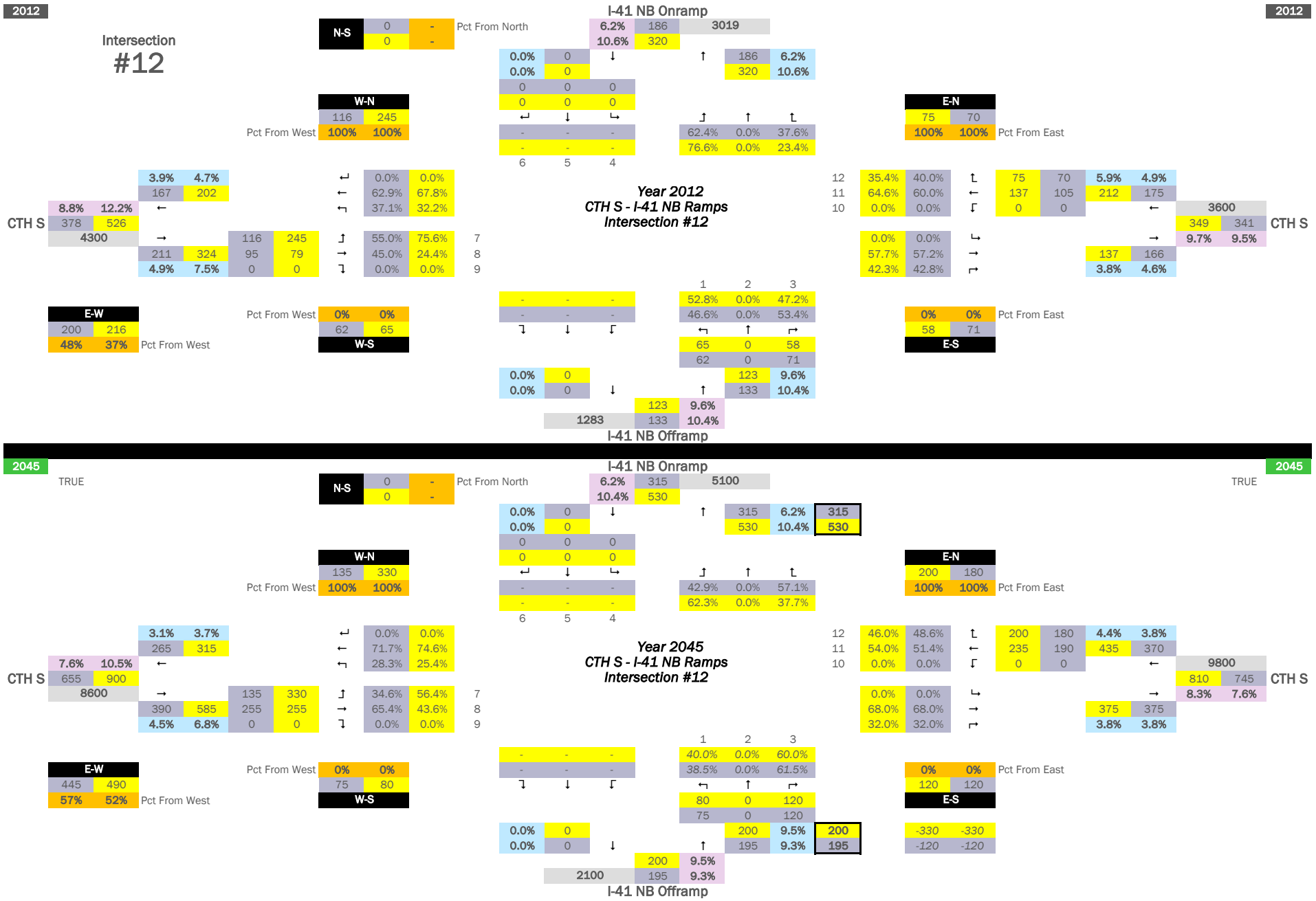


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

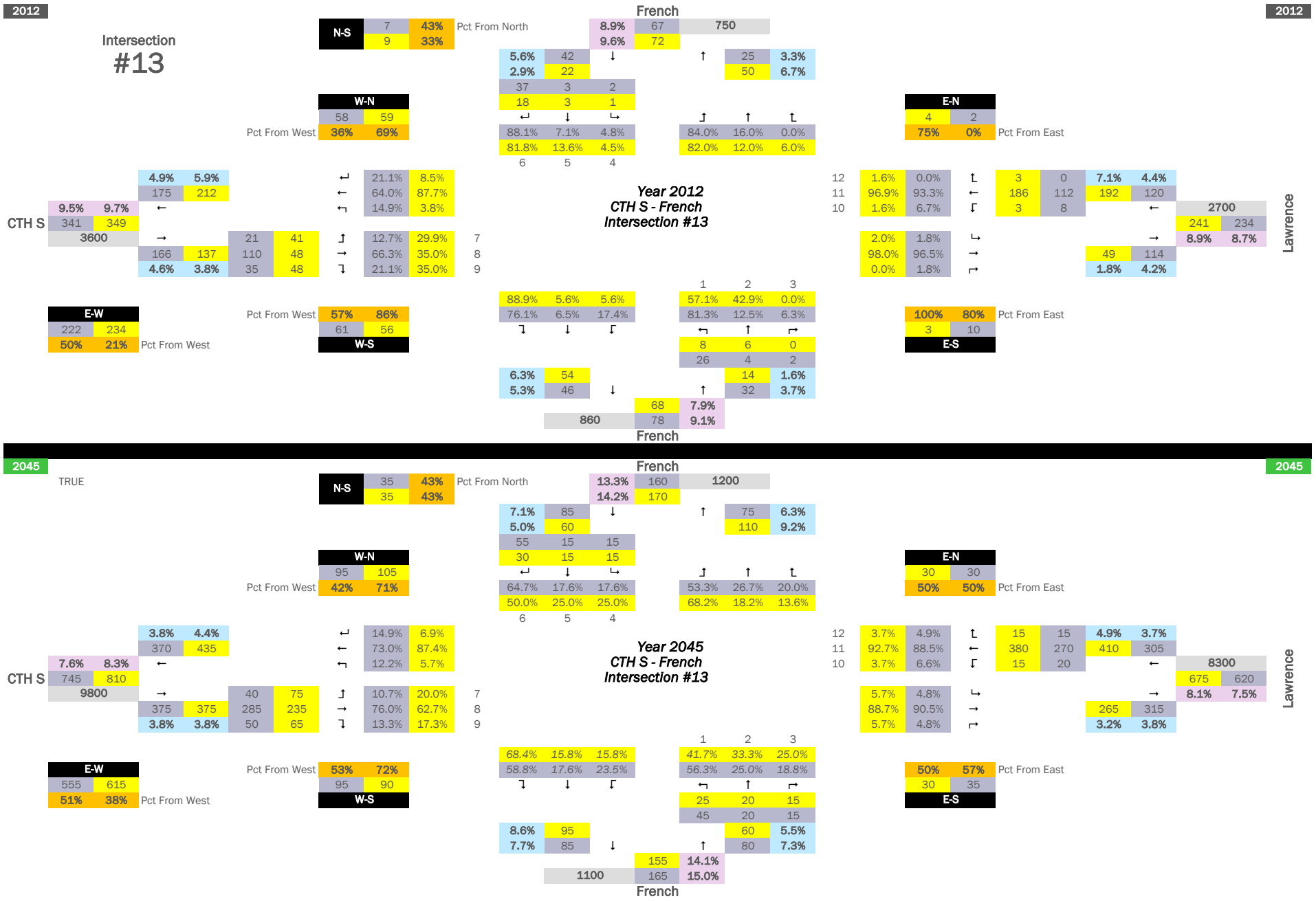


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

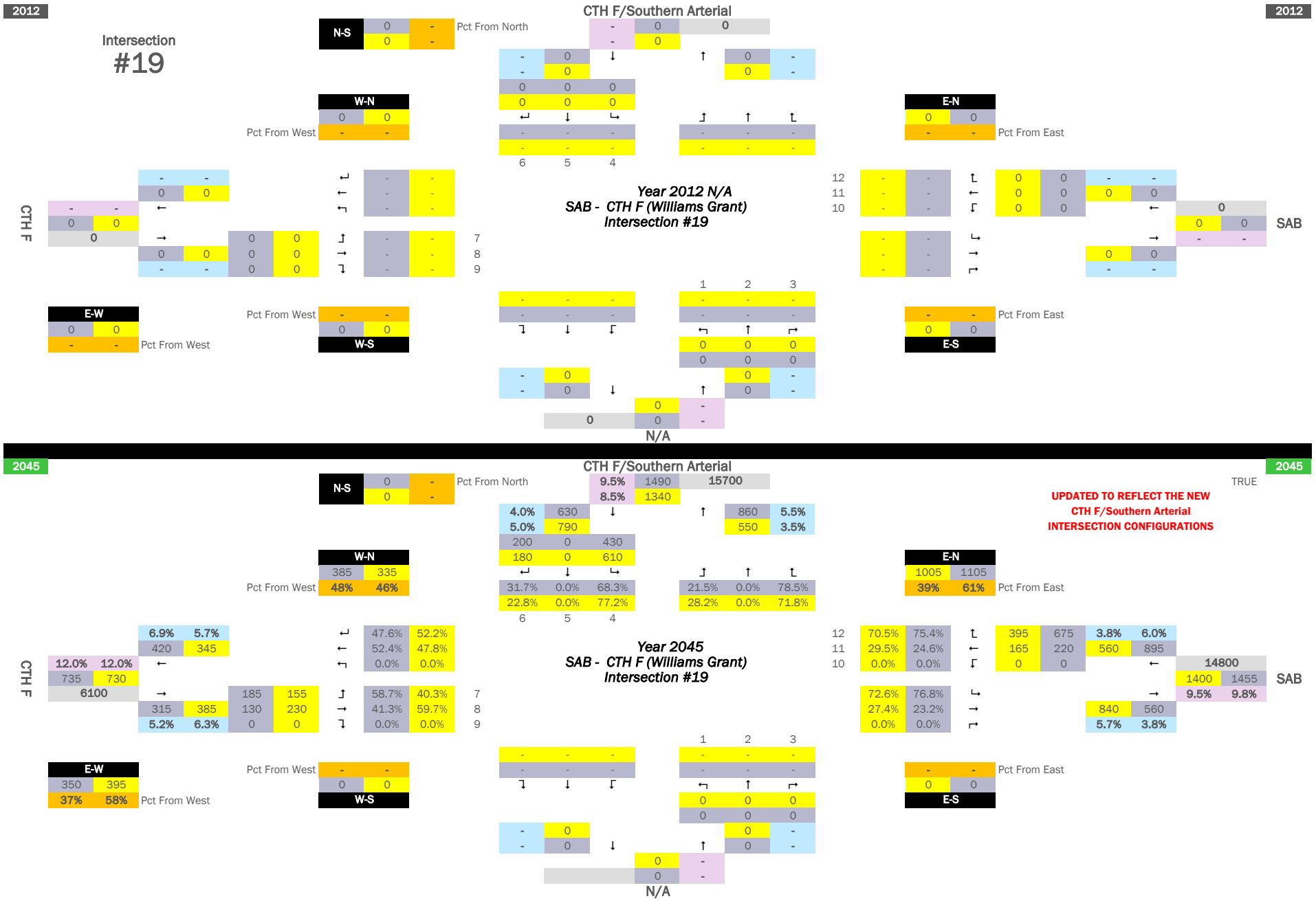


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

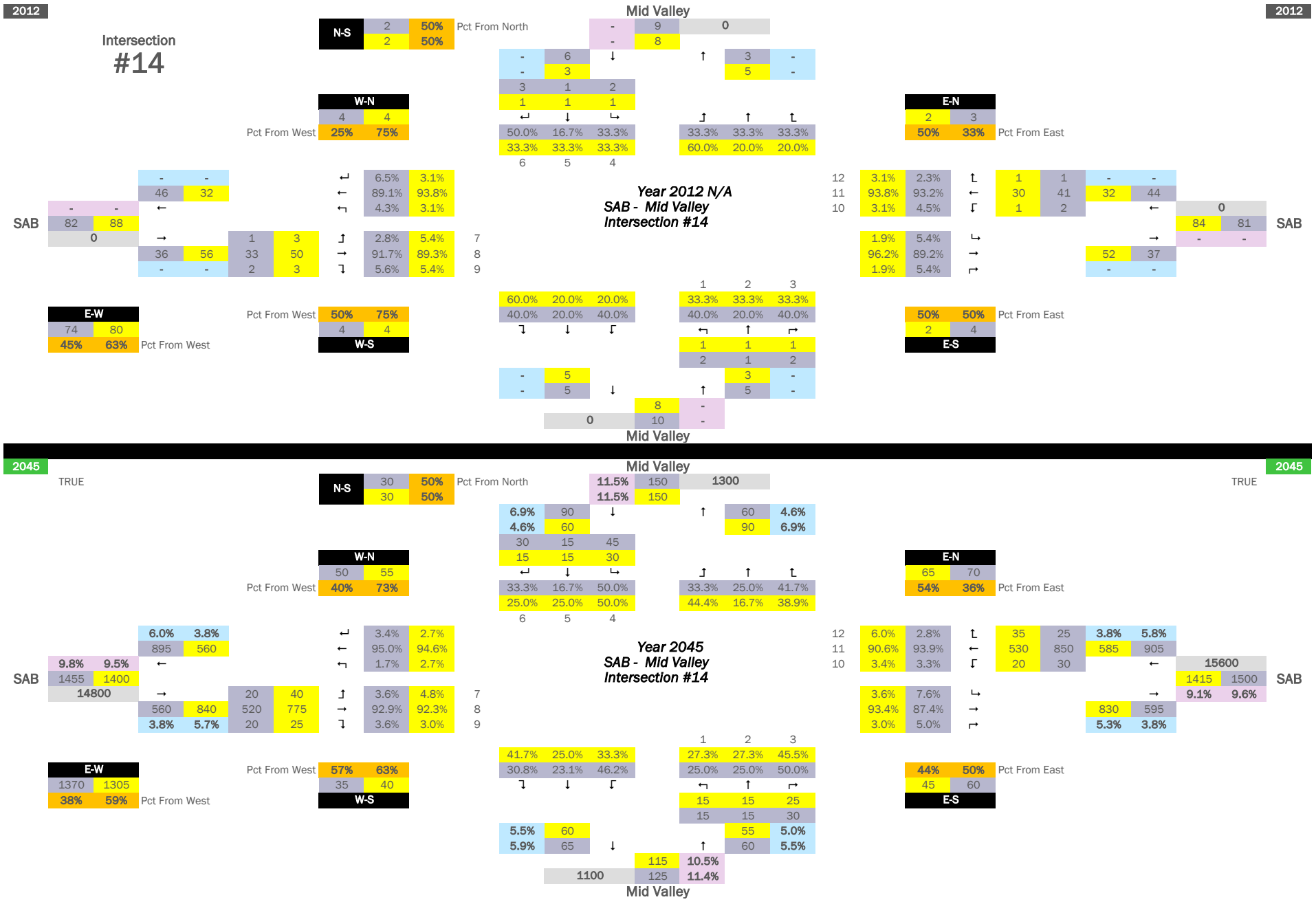


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

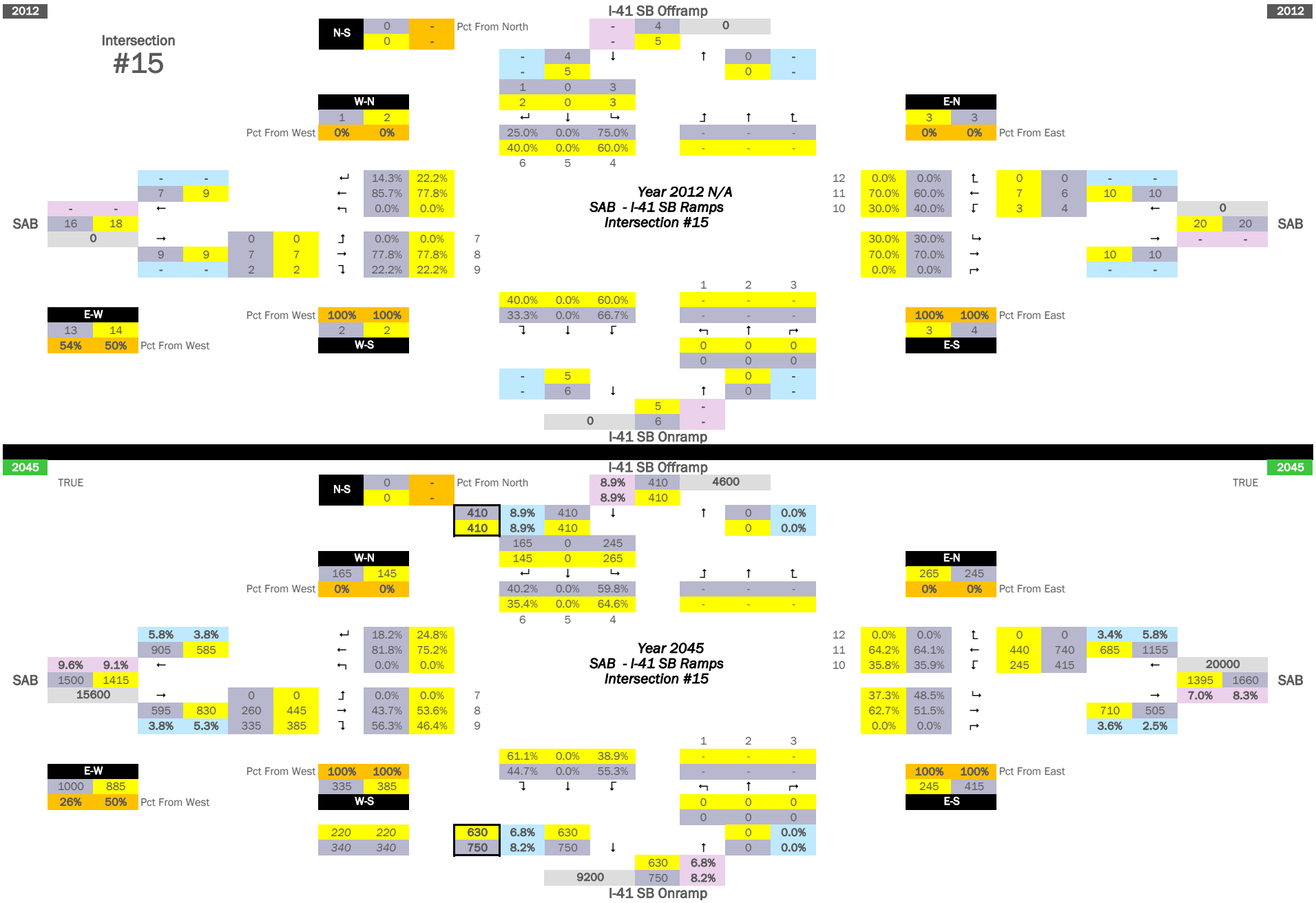


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

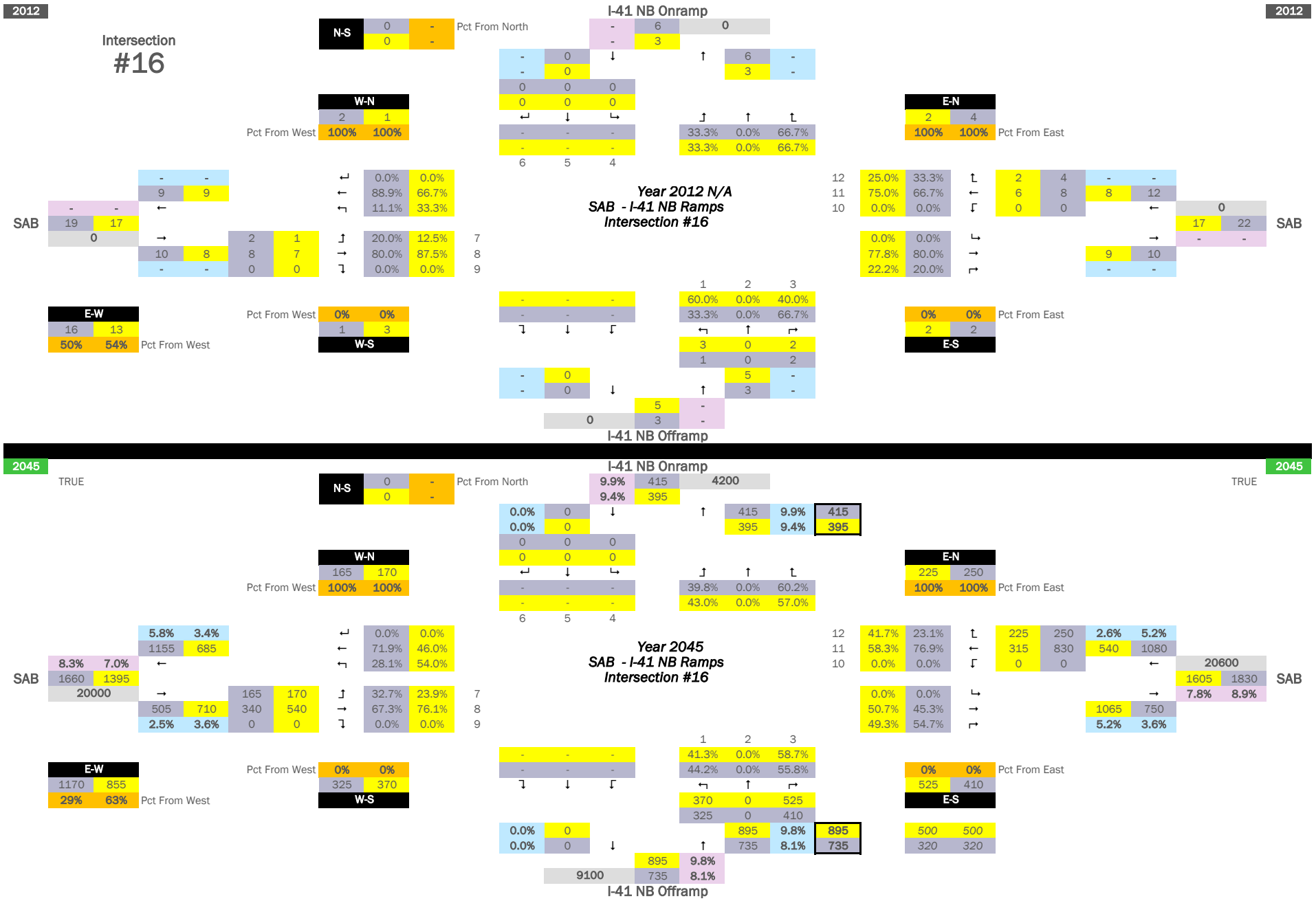


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

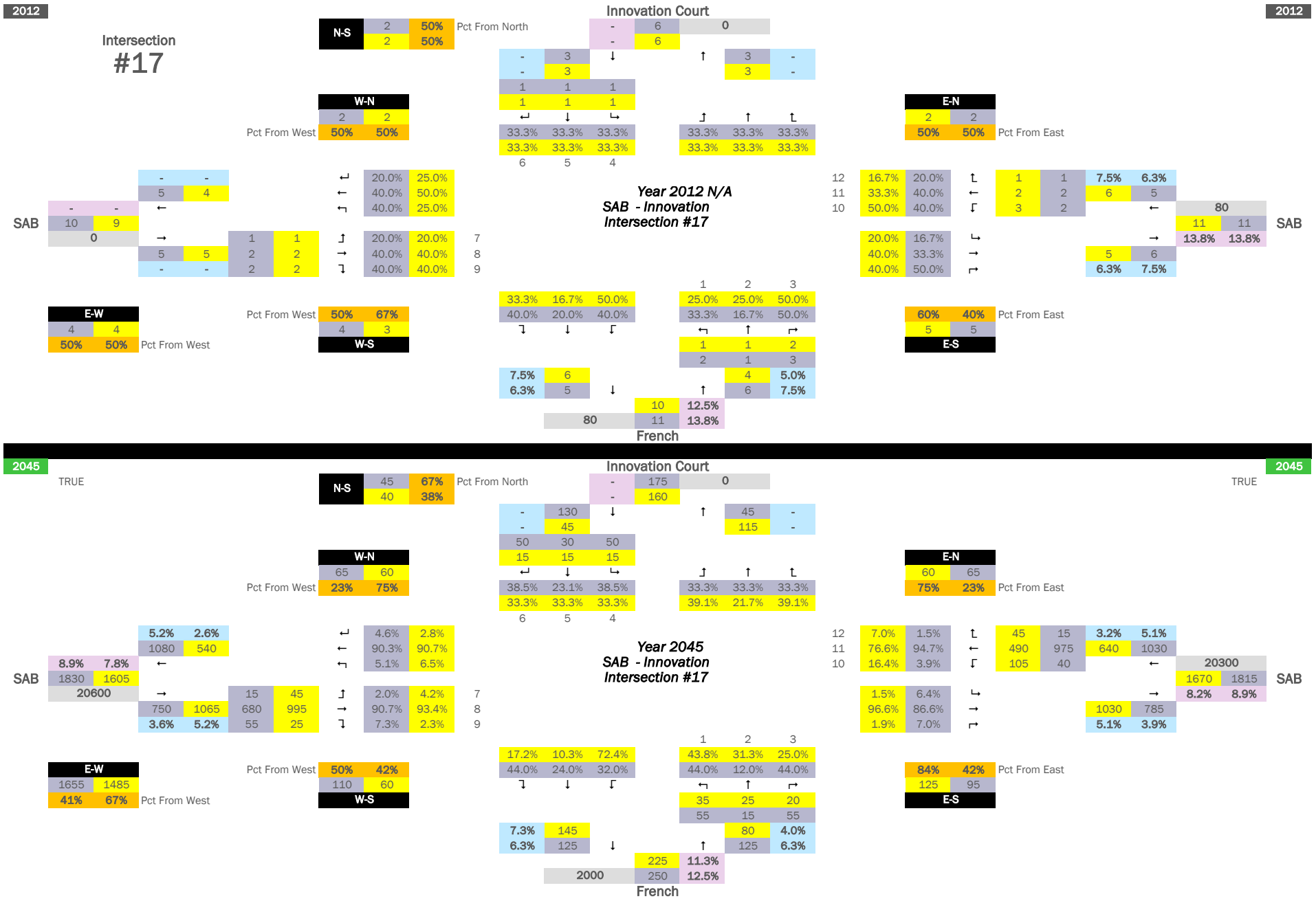
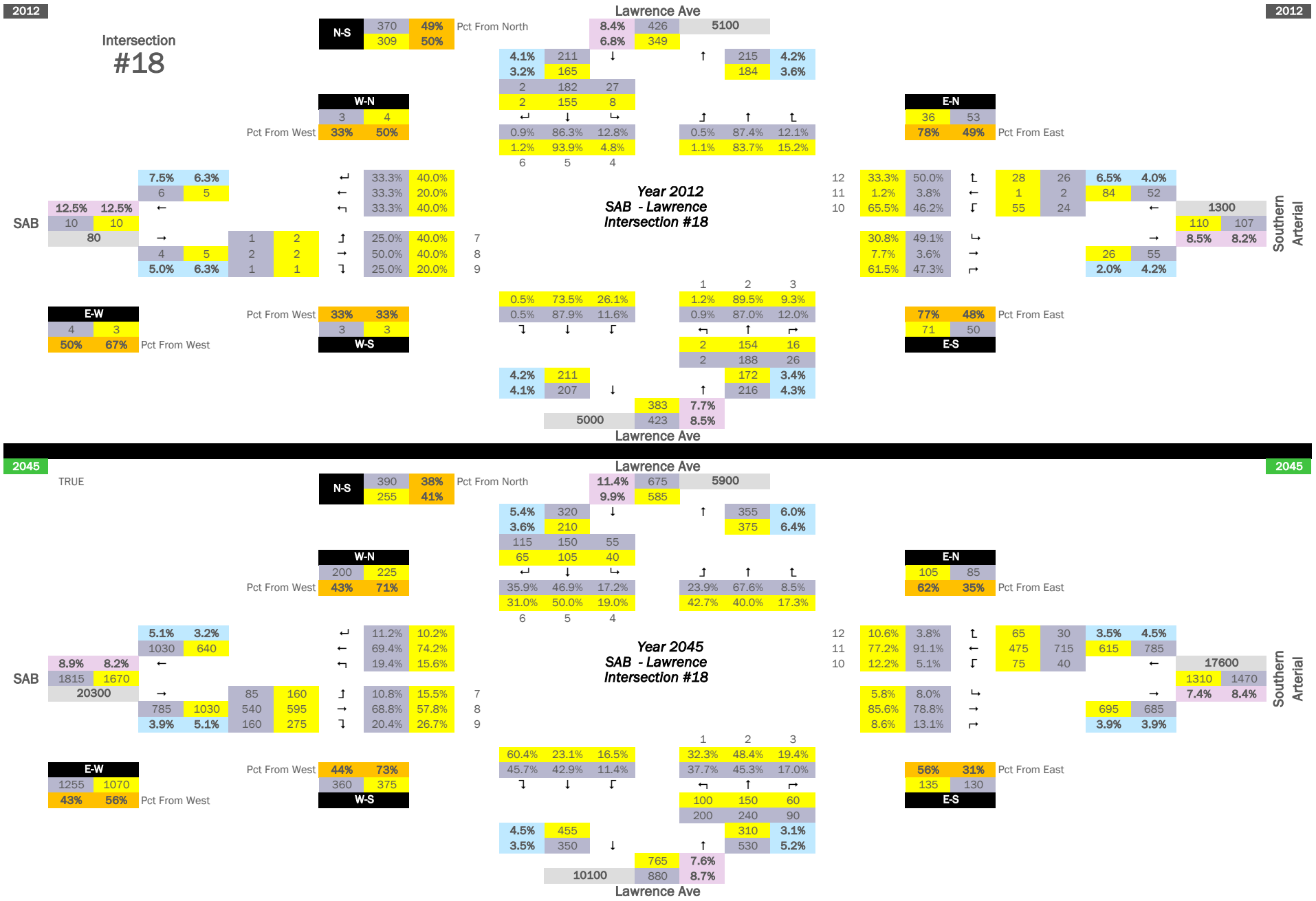


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements



	I-41 at ATR 05-0001, South of CTH S, Brown County **Alternative 2B**			
2012 AADT	42,200			
2045 AADT	63,000			
Design Values	AM Peak Hour		PM Peak Hour	
Year 2012				
K30 (DHV)	10.4%		10.9%	
D(DHV)	56% Peak Direction: Northbound		57% Peak Direction: Southbound	
Year 2045				
K30 (DHV)	9.4%		9.8%	
D(DHV)	56% Peak Direction: Northbound		55% Peak Direction: Southbound	
	Northbound	Southbound	Northbound	Southbound
T(DHV)	6.7%	9.0%	6.5%	6.2%

Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

Site ID	Road Name	2012 Base Year Peak Hour				2045 Alt 2B (Mainline / Ramps)			
		AM SB	AM NB	PM SB	PM NB	AM SB	AM NB	PM SB	PM NB
05-0380	**I-41 BTWN CTH G & ONEIDA DEPERE - HPMS**	2,872	2,705	2,859	3,199	3,940	3,690	3,780	4,540
05-1583	RAMP FROM I-41 NB TO CTH G		251		219		305		270
05-1581	RAMP FROM CTH G TO I-41 SB	184		211		270		320	
05-1087	BUS USH X41 SPUR FROM I-41 TO STH 32 DEPERE	309	612	539	325	355	700	615	370
05-1580	RAMP FROM I-41 SB TO CTH G	711		568		1,065		865	
05-1582	RAMP FROM CTH G TO I-41 NB		542		788		735		1,160
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0110	**I-41 NORTH OF CTH F - DE PERE #2**	2,654	3,026	3,041	2,955	3,500	3,960	3,850	4,020
05-1601	RAMP FROM I-41 NB TO CTH F		362		254		190		145
05-1600	RAMP FROM CTH F TO I-41 SB	233		286		235		230	
05-1598	RAMP FROM I-41 SB TO CTH F	966		615		1,555		1,120	
05-1599	RAMP FROM CTH F TO I-41 NB		711		1,183		1,240		1,795
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
99-0015	**New I-41 BFS North of SAB**	1,921	2,677	2,712	2,026	2,180	2,910	2,960	2,370
99-0004	SAB Ramp from I-41 NB		0		0		910		730
99-0003	SAB Ramp to I-41 SB	0		0		660		785	
99-0002	SAB Ramp from I-41 SB	0		0		190		185	
99-0001	SAB Ramp to I-41 NB		0		0		170		180
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0109	**I-41 NORTH OF CTH S INTERCHANGE HPMS**	1,921	2,677	2,712	2,026	2,650	3,650	3,560	2,920
05-1755	RAMP FROM I-41 NB TO CTH S		123		133		190		185
05-1754	RAMP FROM CTH S TO I-41 SB	165		180		245		280	
05-1753	RAMP FROM I-41 SB TO CTH S	163		280		295		480	
05-1752	RAMP FROM CTH S TO I-41 NB		320		186		530		315
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0001	**I-41 - 1.5 MI NE OF OUTAGAMIE COUNTY LINE - DE PERE**	1,923	2,480	2,612	1,973	2,600	3,310	3,360	2,790

Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

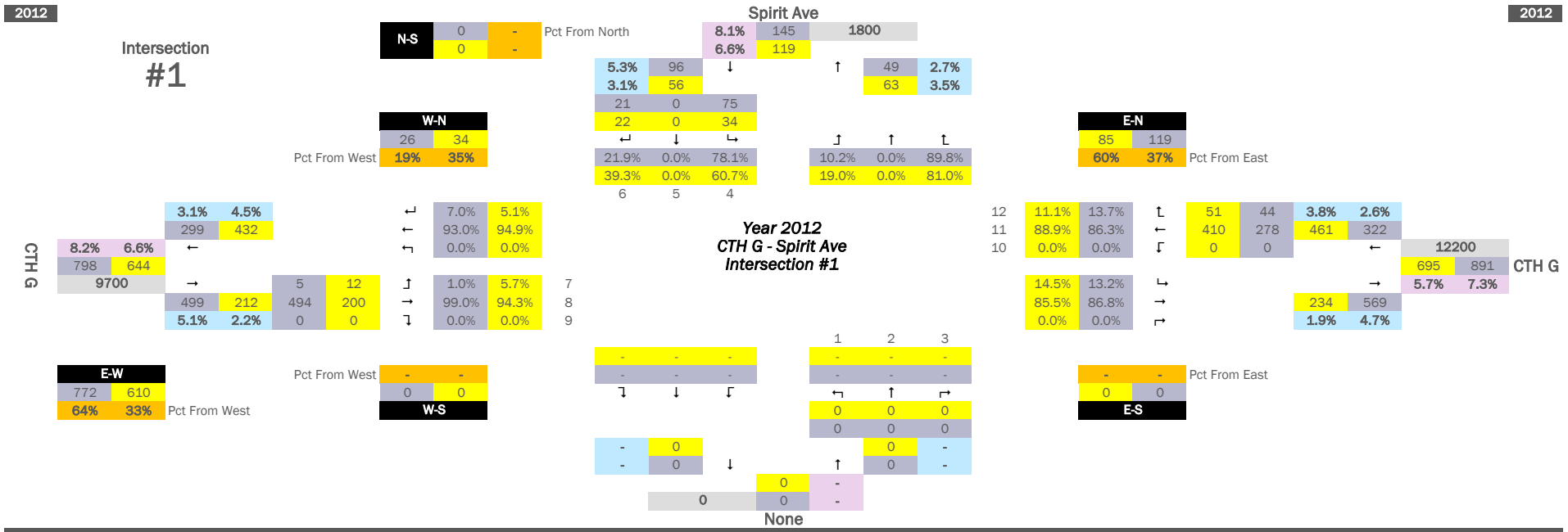


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

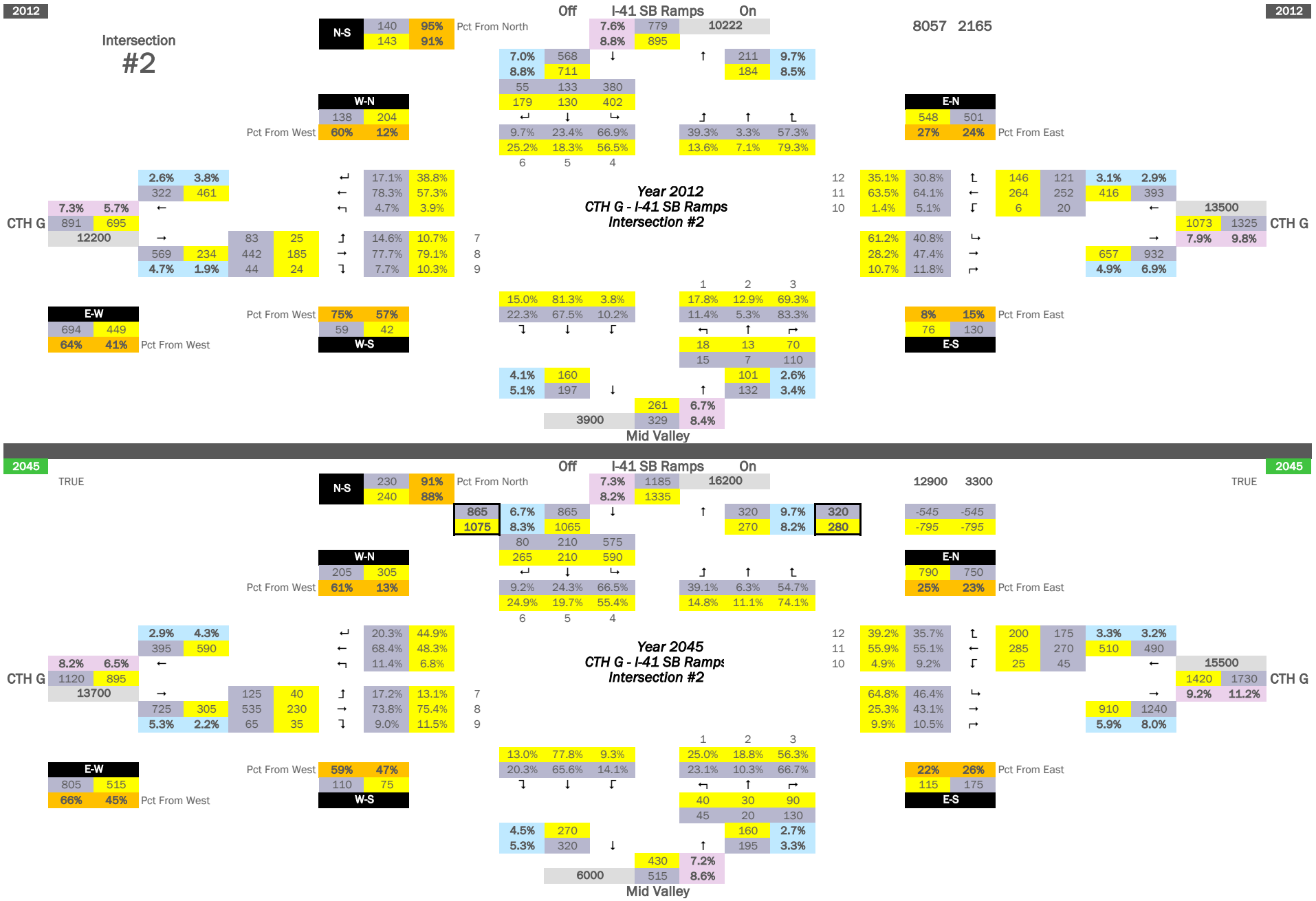


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

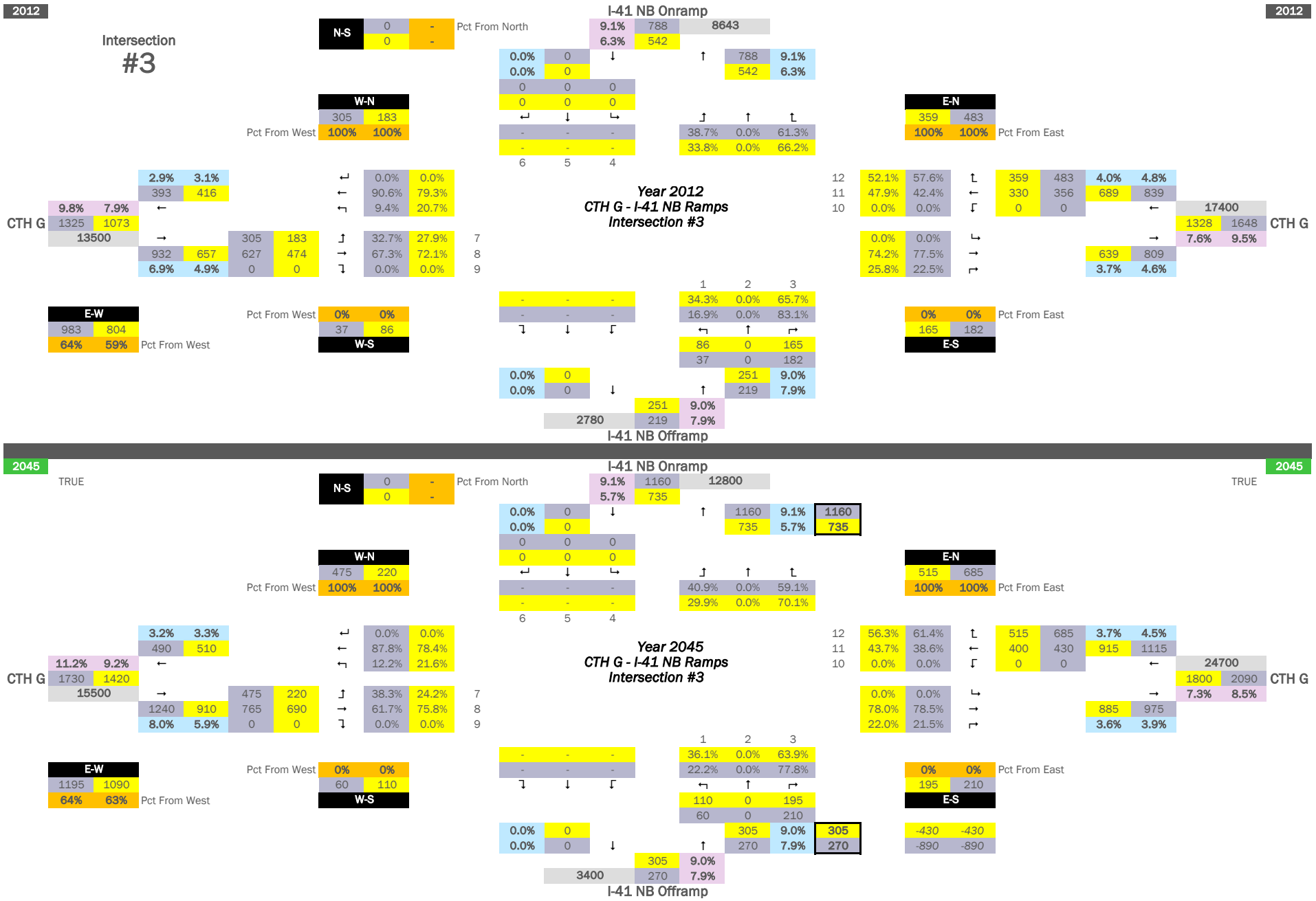


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

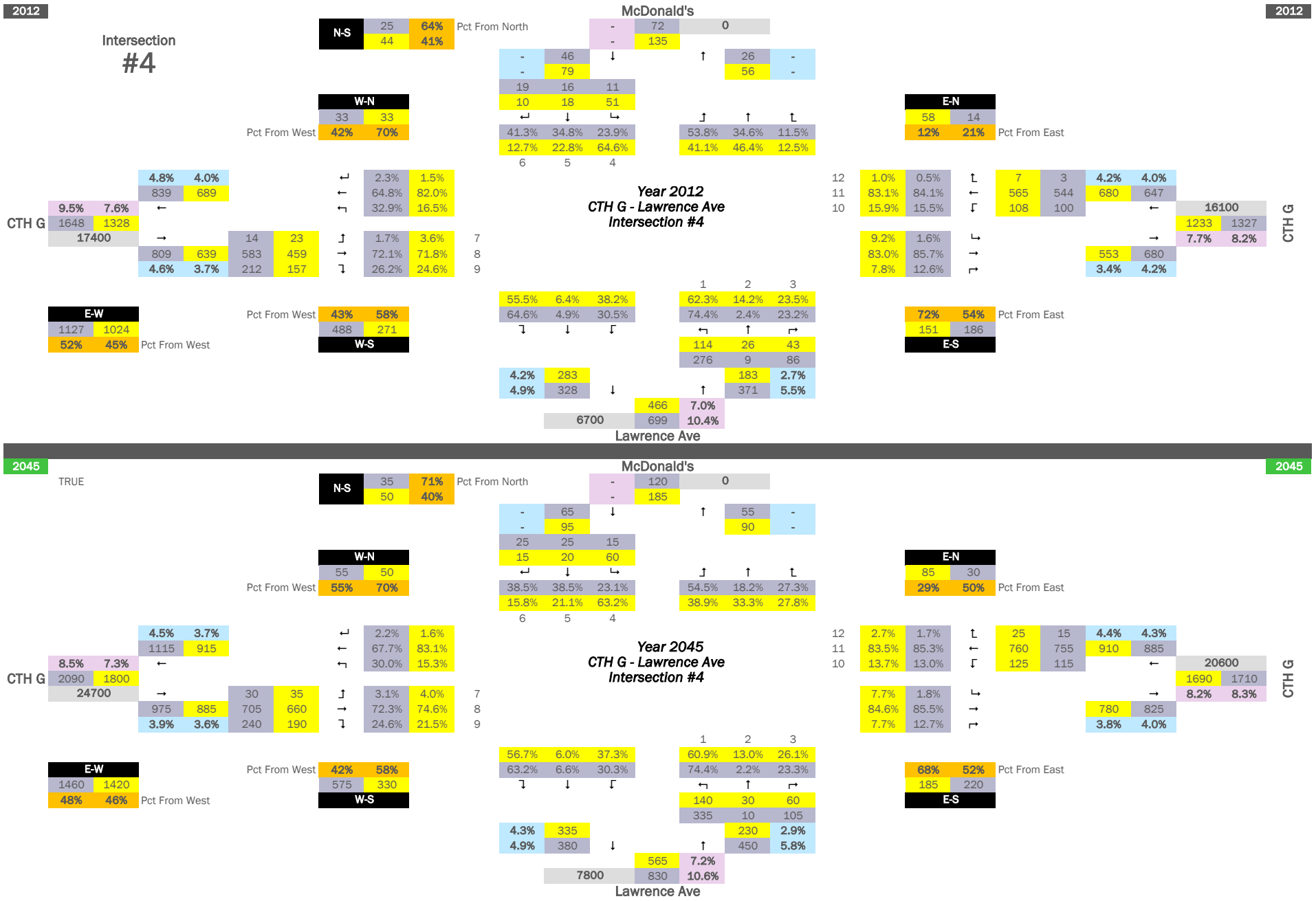


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

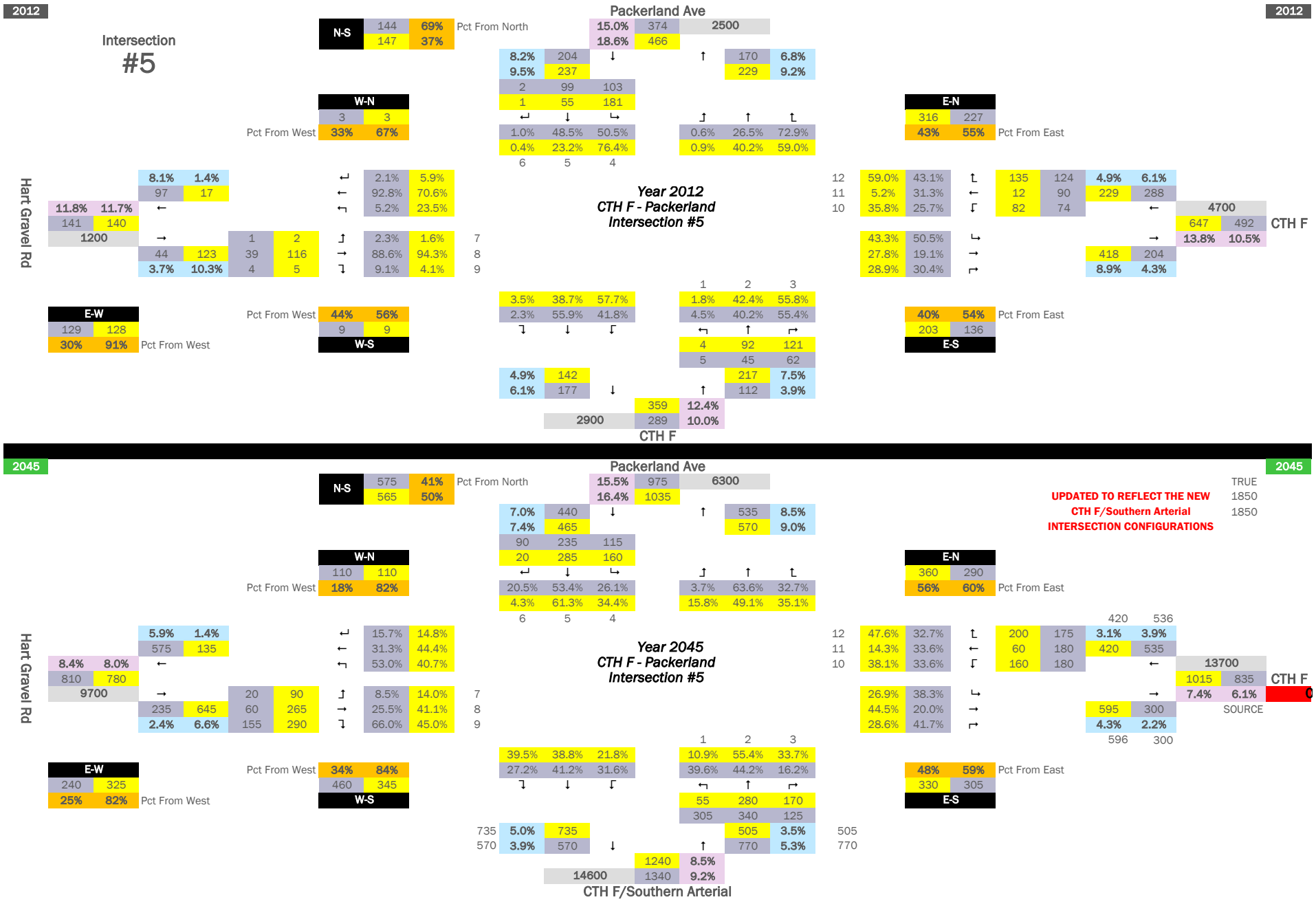


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

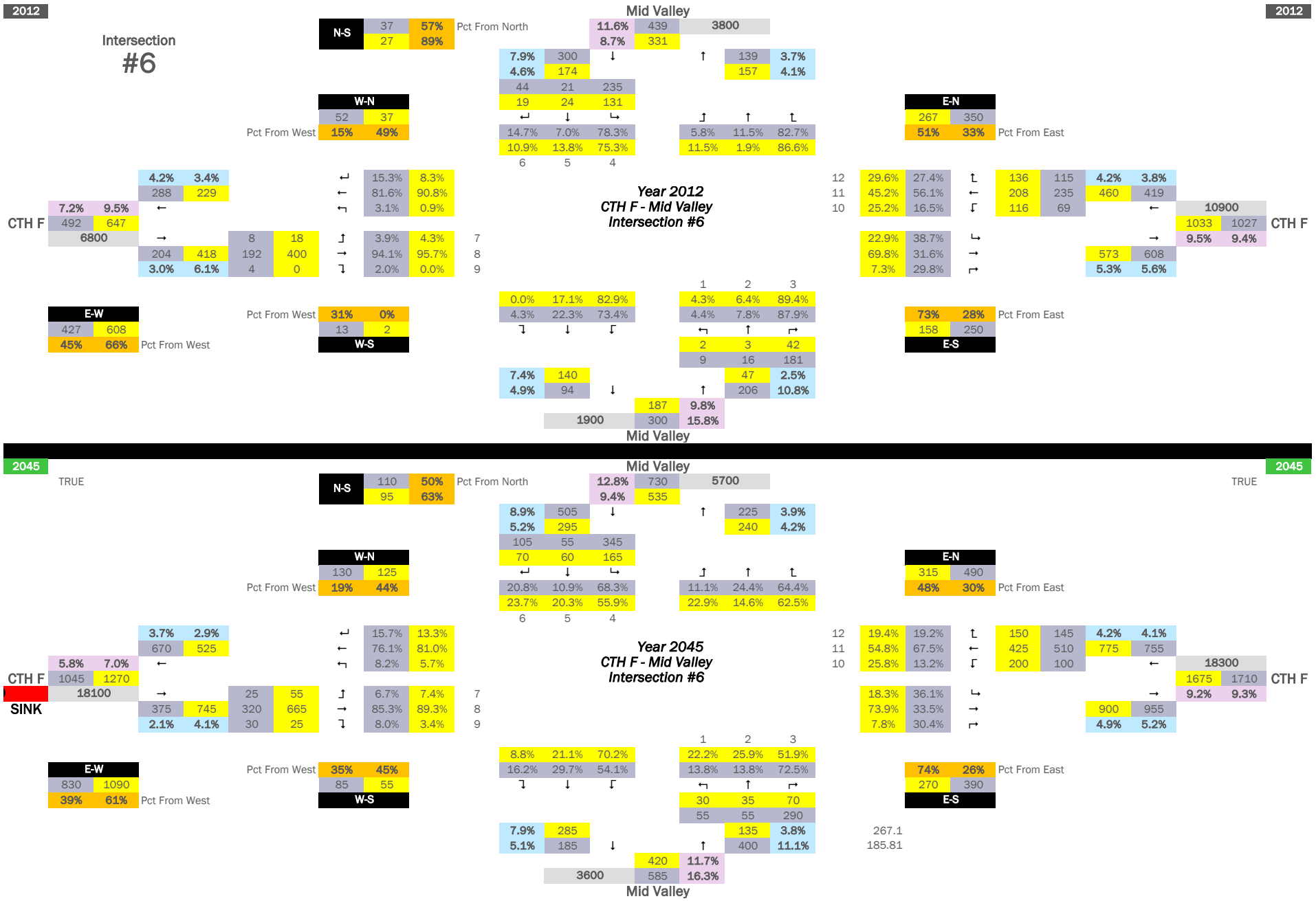


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

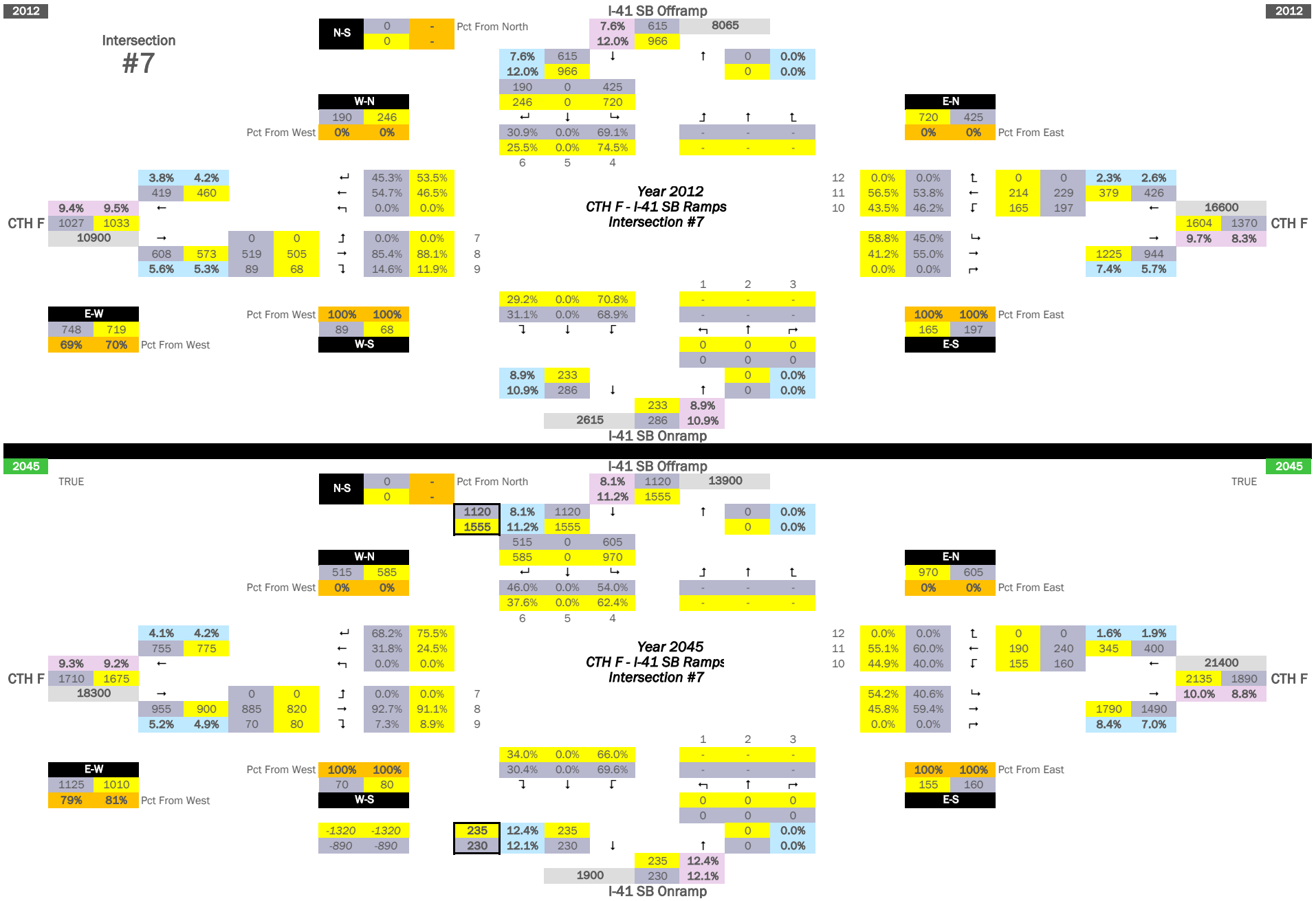


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

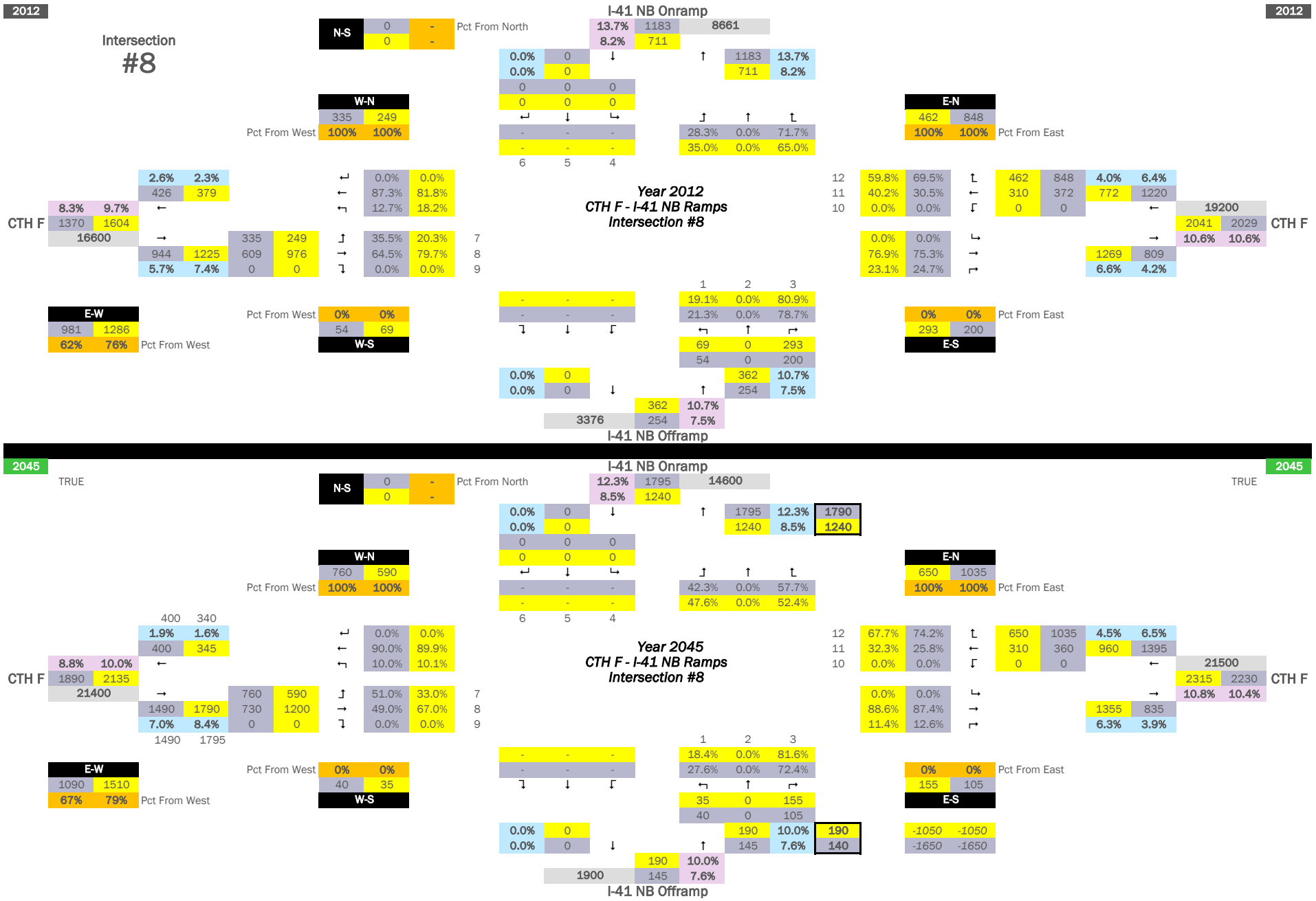


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

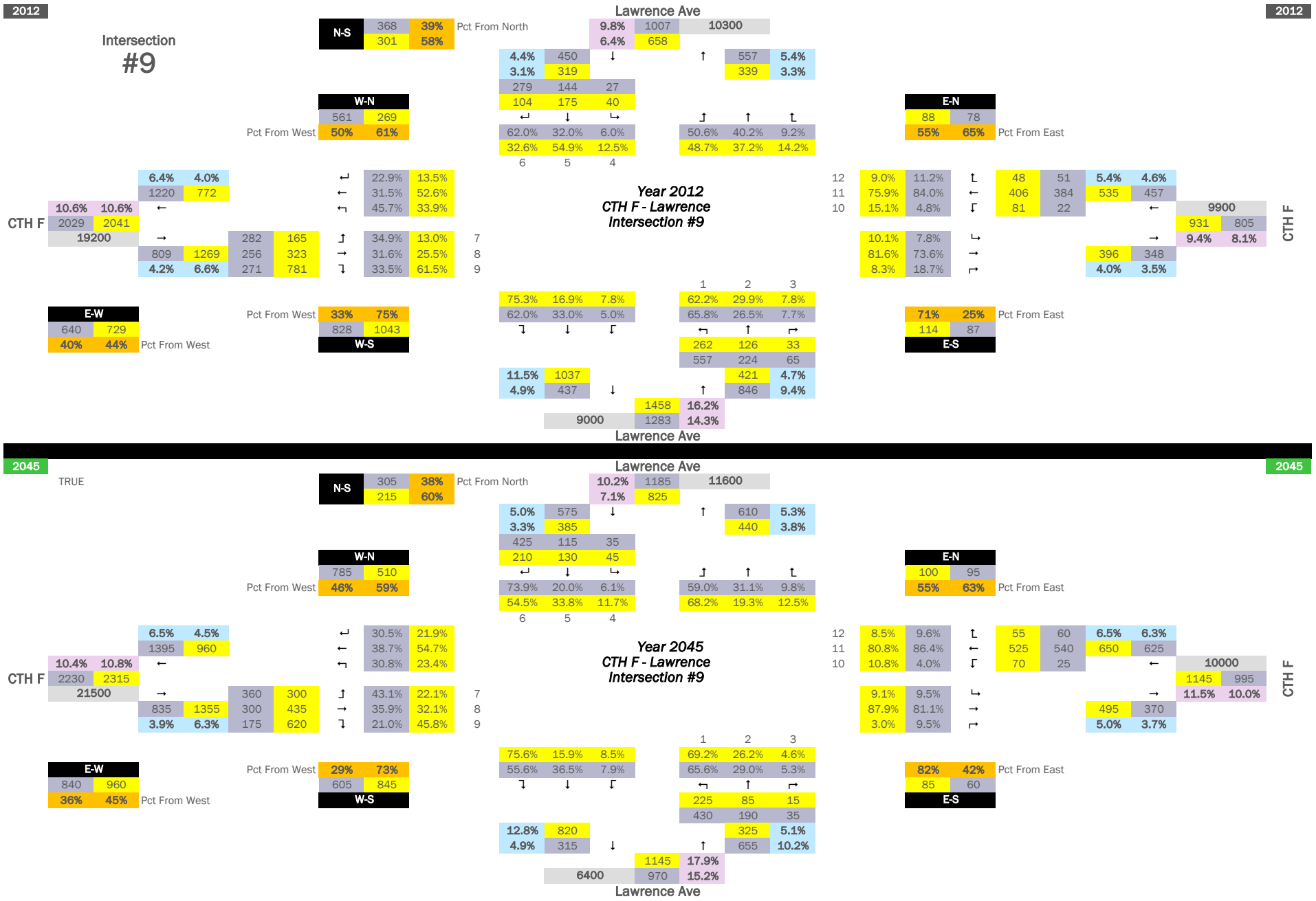


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

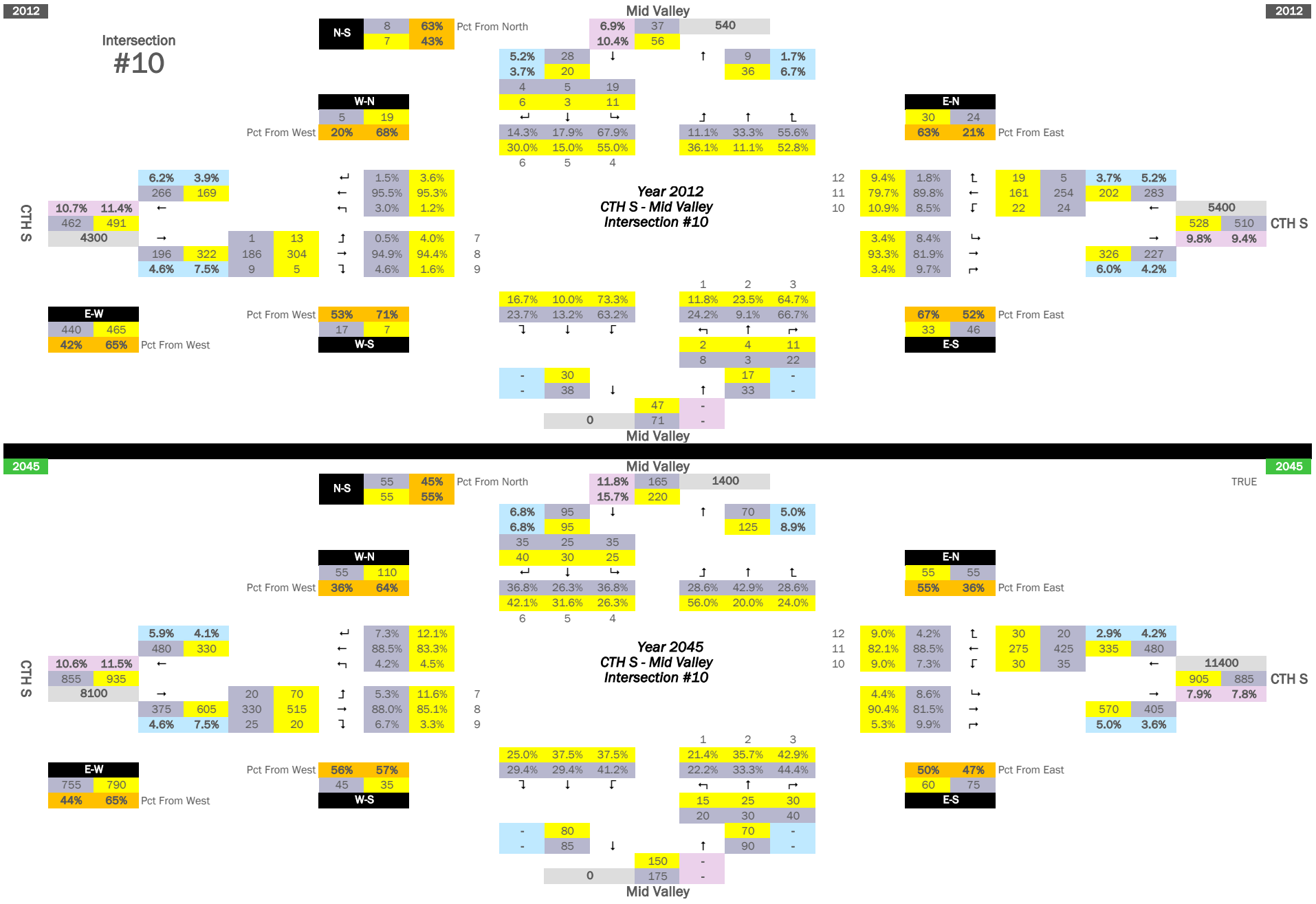


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

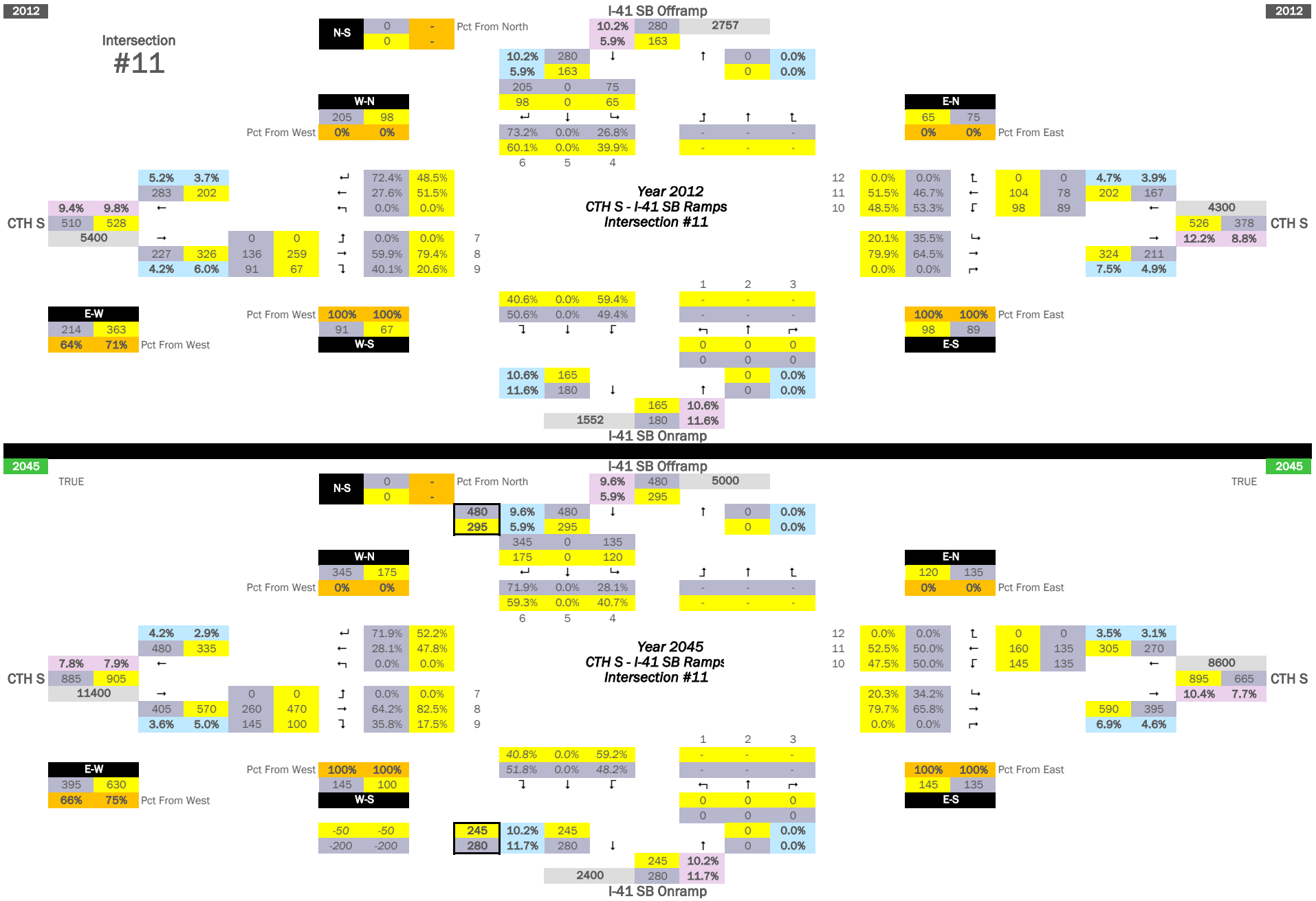


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

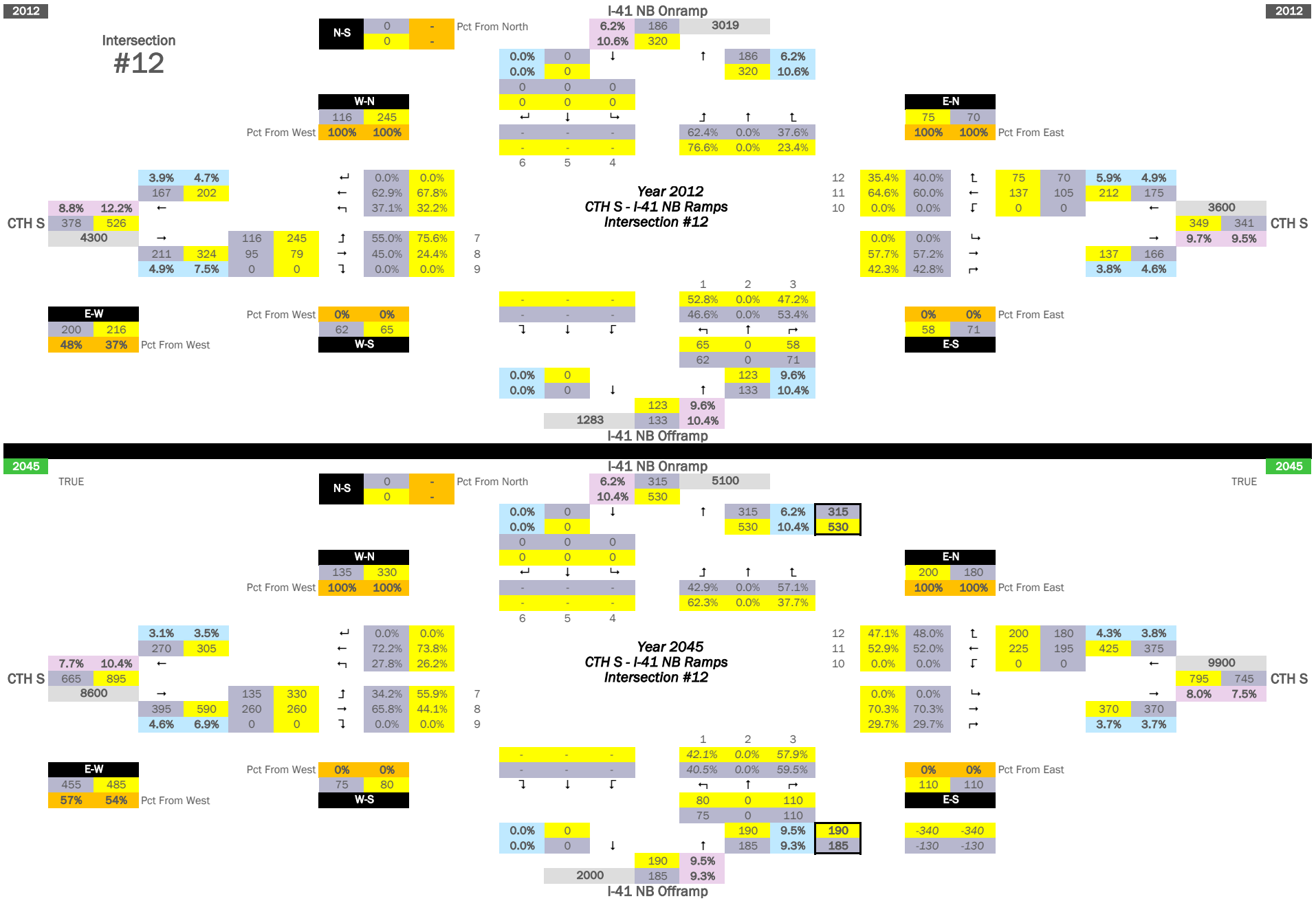


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

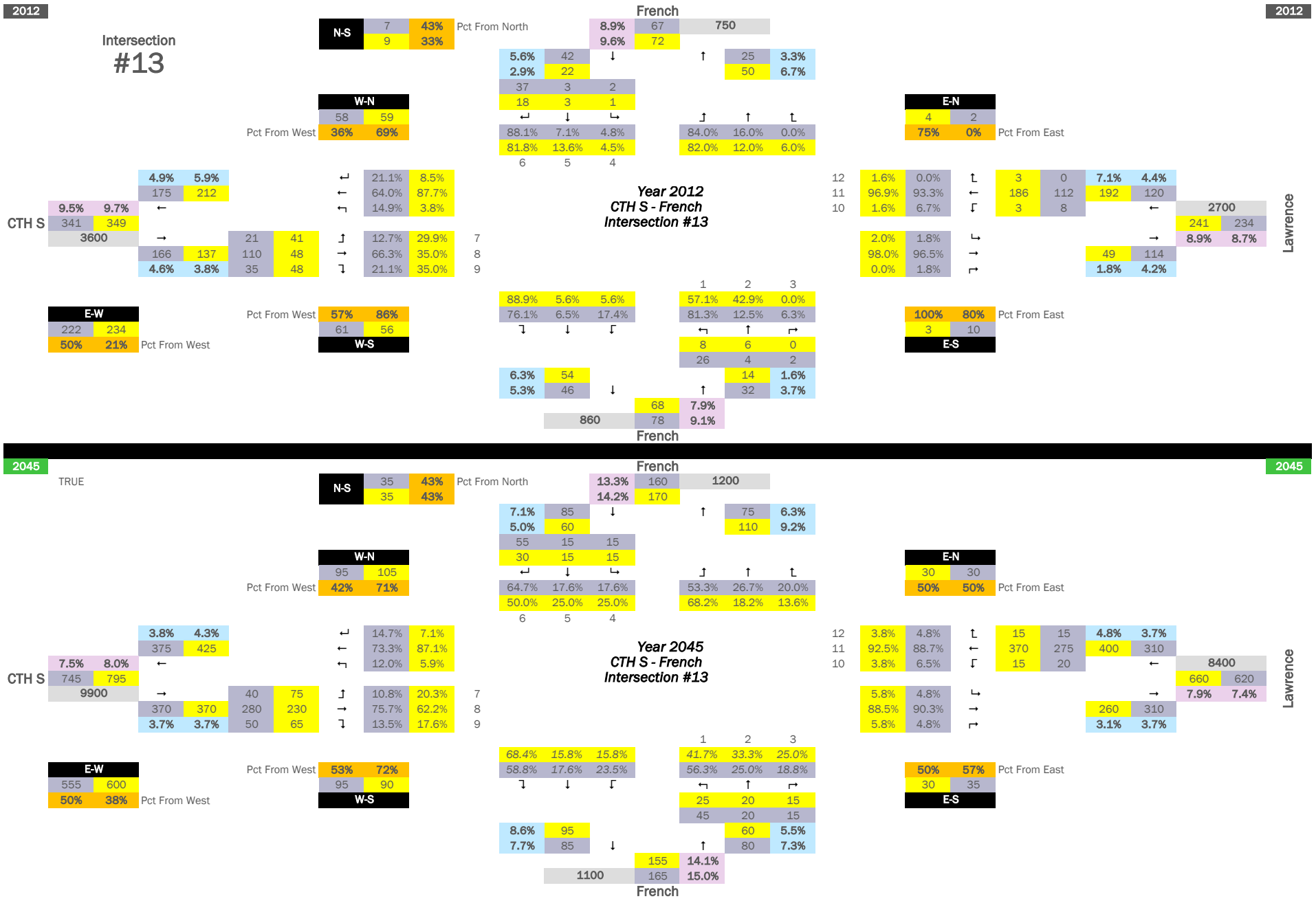


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

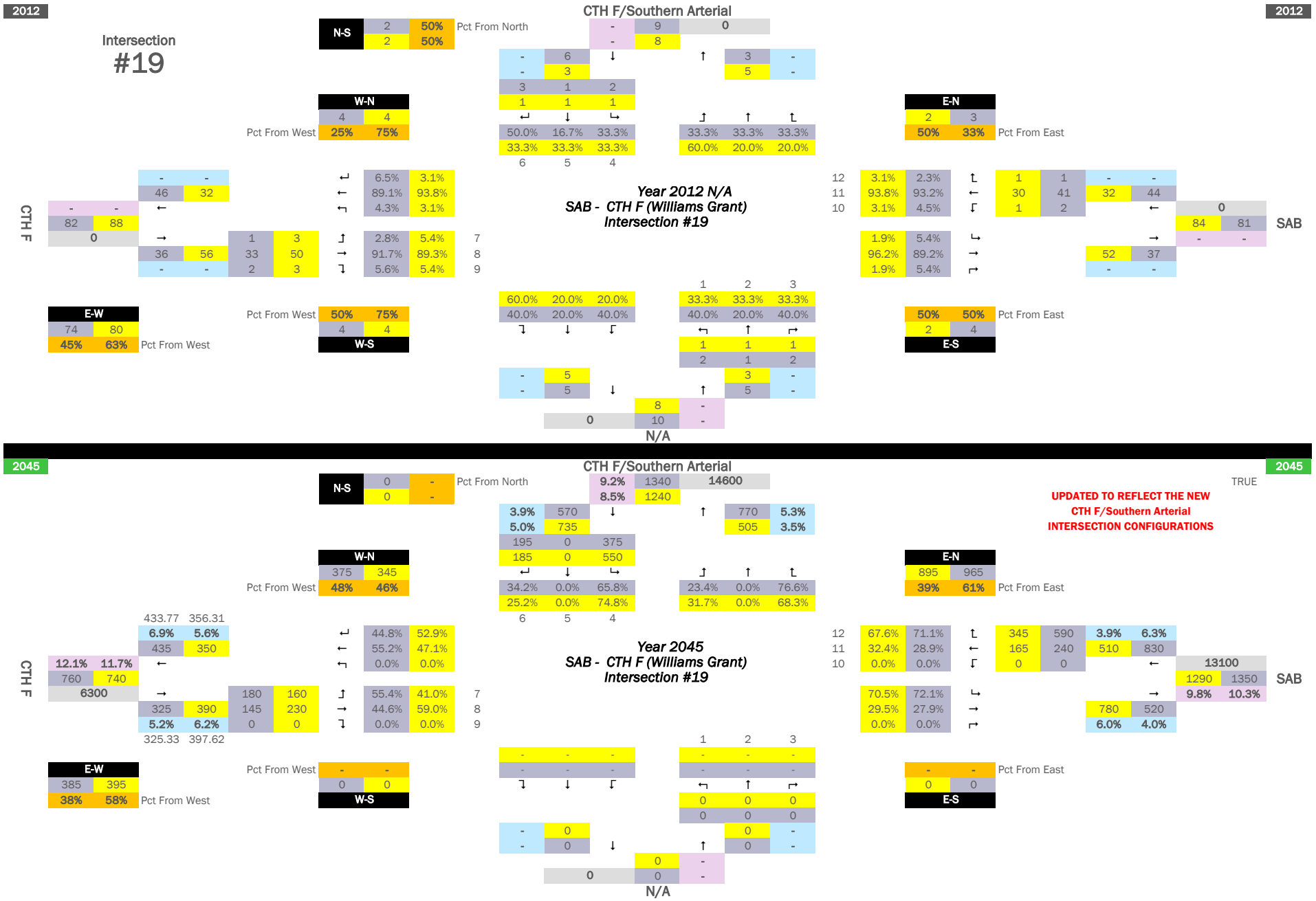


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

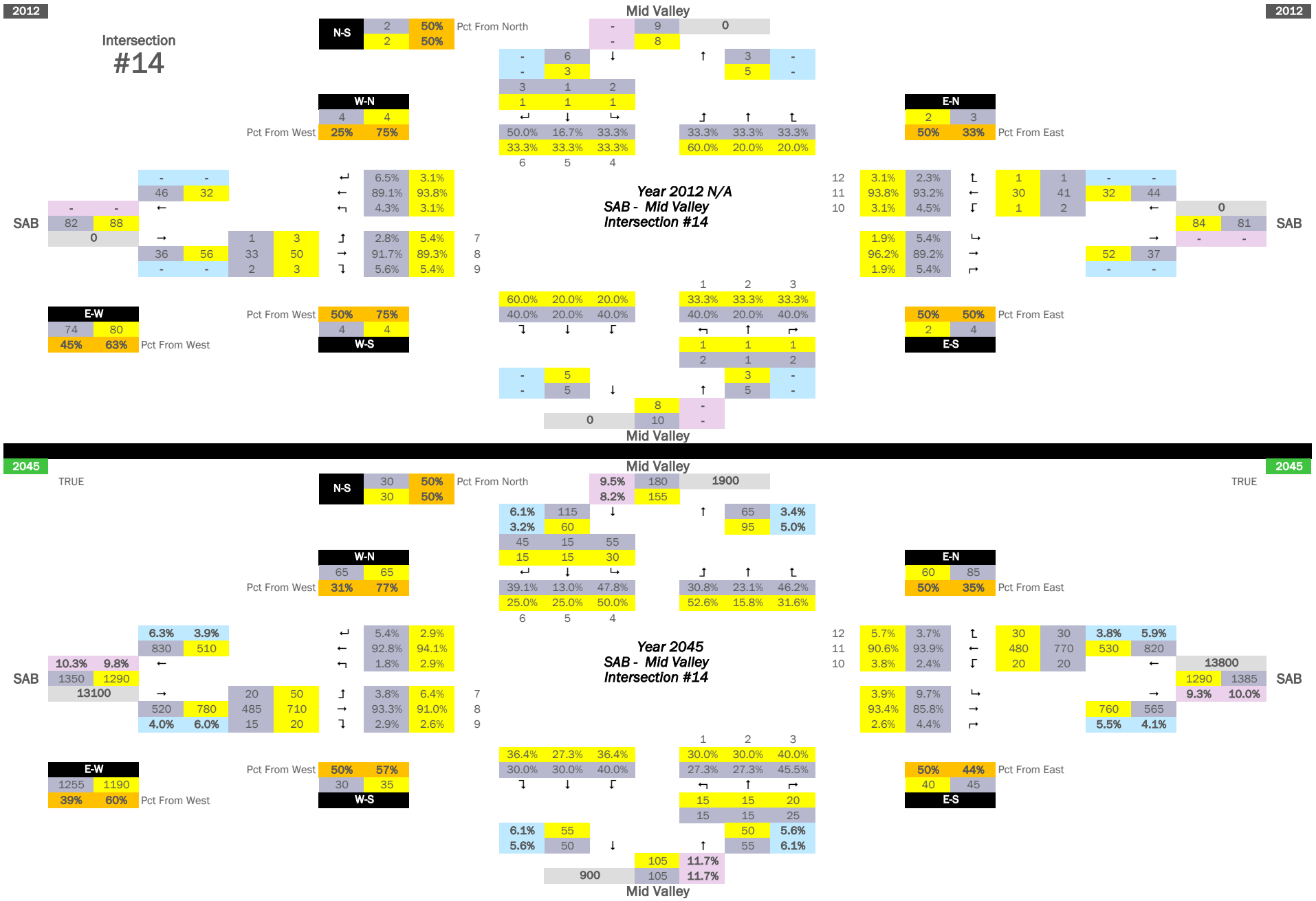


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

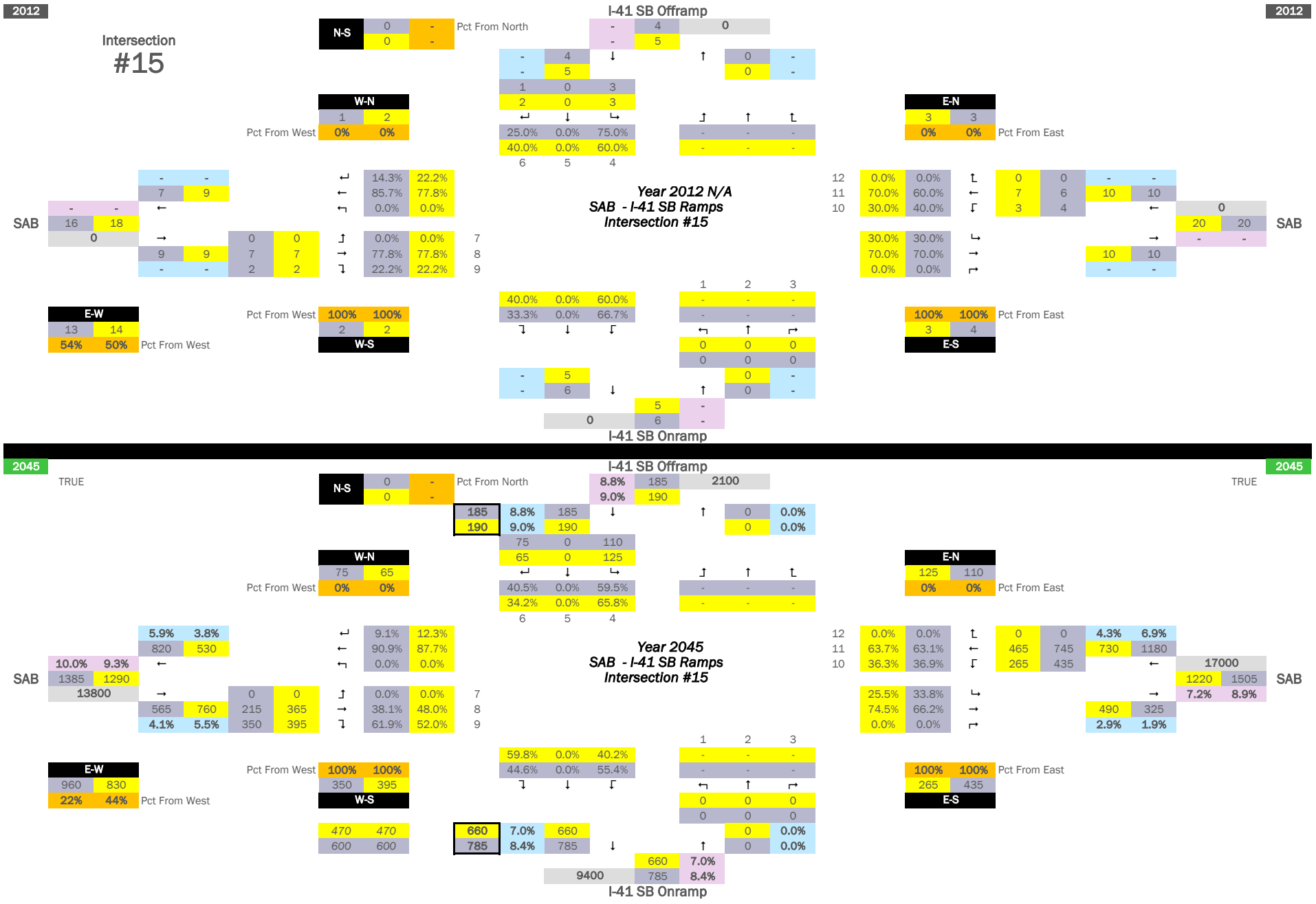


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I-41 Southern Arterial
Alternative 2B Turning Movements

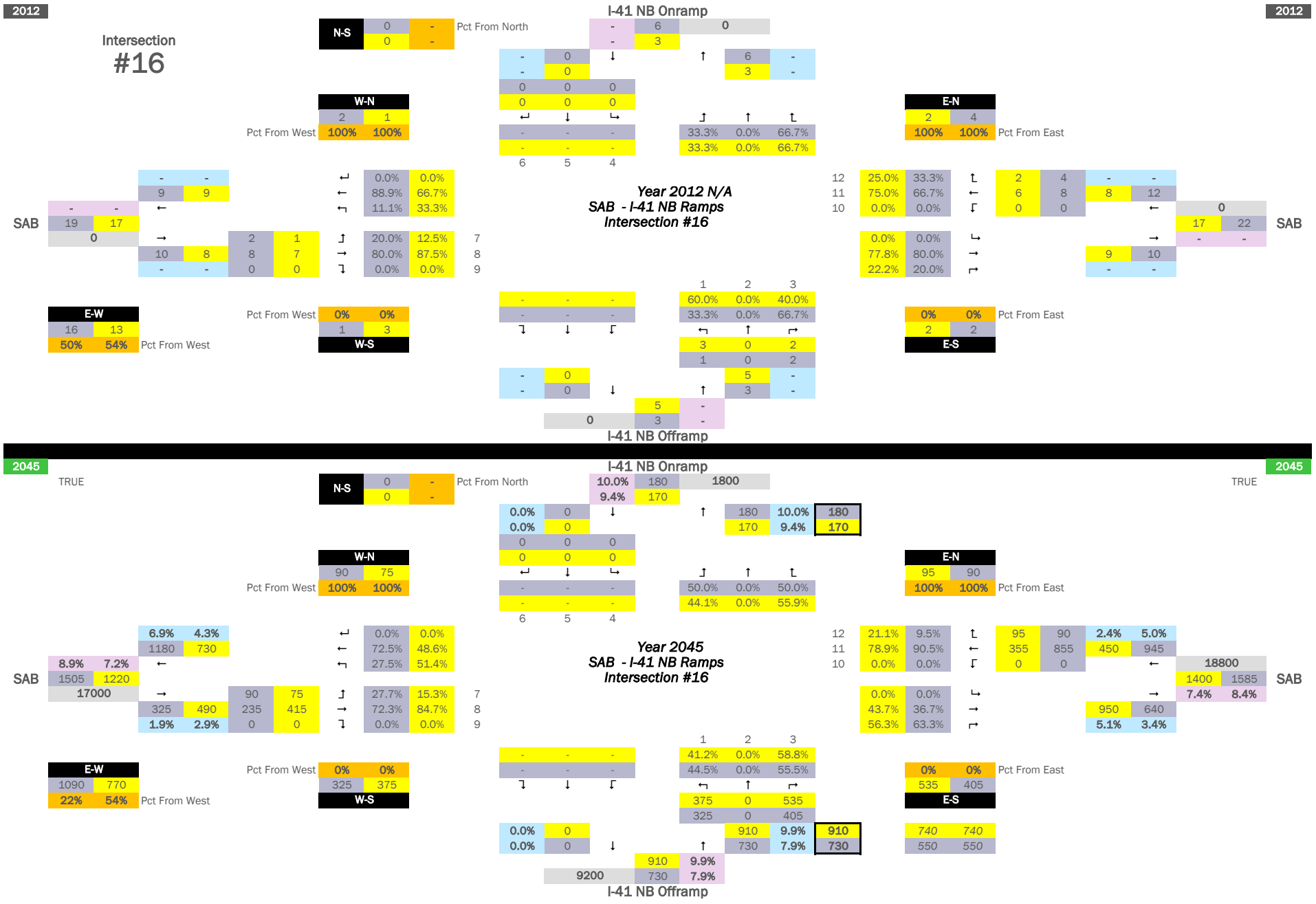


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

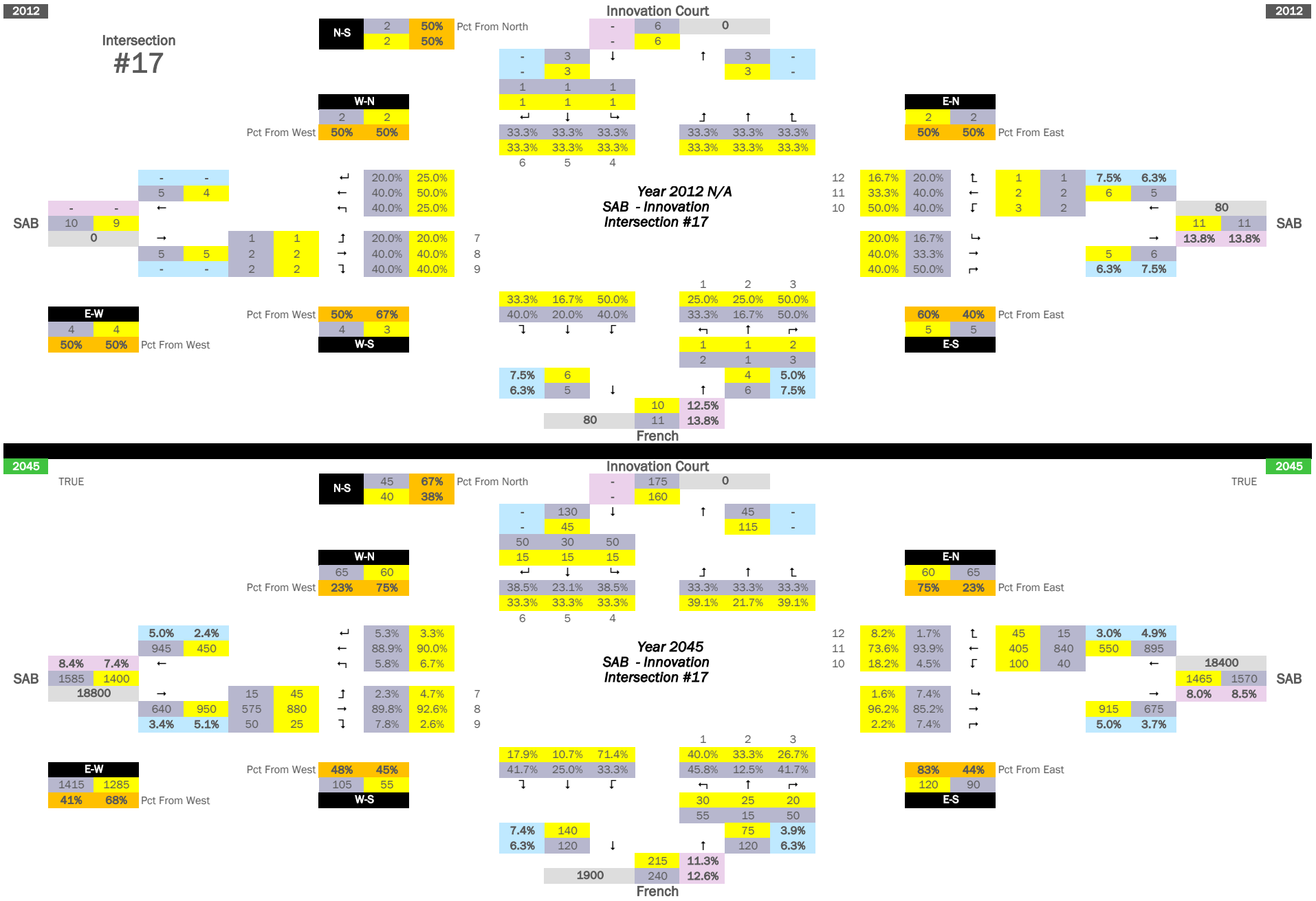
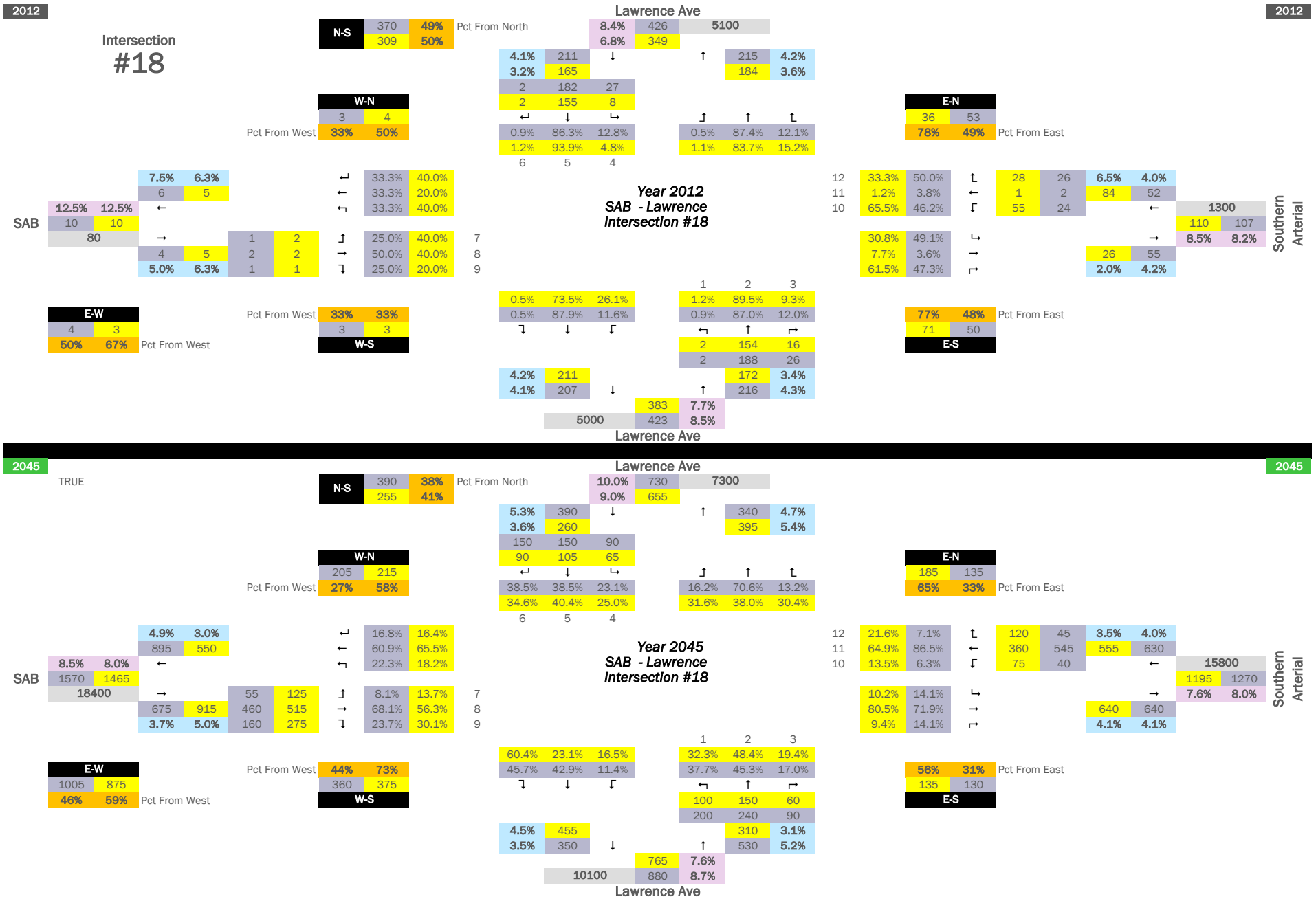


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements



	I-41 at ATR 05-0001, South of CTH S, Brown County **Alternative 3**			
2012 AADT	42,200			
2045 AADT	62,000			
Design Values	AM Peak Hour		PM Peak Hour	
Year 2012				
K30 (DHV)	10.4%		10.9%	
D(DHV)	56% Peak Direction: Northbound		57% Peak Direction: Southbound	
Year 2045				
K30 (DHV)	9.4%		9.8%	
D(DHV)	56% Peak Direction: Northbound		55% Peak Direction: Southbound	
	Northbound	Southbound	Northbound	Southbound
T(DHV)	6.7%	9.0%	6.5%	6.2%

Figure 3
I-41 Southern Arterial
Alternative 3 Turning Movements

Site ID	Road Name	2012 Base Year Peak Hour				2045 Alt 3 (Mainline / Ramps)			
		AM SB	AM NB	PM SB	PM NB	AM SB	AM NB	PM SB	PM NB
05-0380	**I-41 BTWN CTH G & ONEIDA DEPERE - HPMS**	2,872	2,705	2,859	3,199	4,030	3,770	3,860	4,640
05-1583	RAMP FROM I-41 NB TO CTH G		251		219		360		315
05-1581	RAMP FROM CTH G TO I-41 SB	184		211		330		395	
05-1087	BUS USH X41 SPUR FROM I-41 TO STH 32 DEPERE	309	612	539	325	350	695	610	370
05-1580	RAMP FROM I-41 SB TO CTH G	711		568		1,100		895	
05-1582	RAMP FROM CTH G TO I-41 NB		542		788		735		1,175
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0110	**I-41 NORTH OF CTH F - DE PERE #2**	2,654	3,026	3,041	2,955	3,610	4,090	3,970	4,150
05-1601	RAMP FROM I-41 NB TO CTH F		362		254		620		485
05-1600	RAMP FROM CTH F TO I-41 SB	233		286		515		530	
05-1598	RAMP FROM I-41 SB TO CTH F	966		615		1,635		1,150	
05-1599	RAMP FROM CTH F TO I-41 NB		711		1,183		1,270		1,885
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
99-0015	**New I-41 BFS North of SAB**	1,921	2,677	2,712	2,026	2,490	3,440	3,350	2,750
99-0004	SAB Ramp from I-41 NB		0		0		0		0
99-0003	SAB Ramp to I-41 SB	0		0		0		0	
99-0002	SAB Ramp from I-41 SB	0		0		0		0	
99-0001	SAB Ramp to I-41 NB		0		0		0		0
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0109	**I-41 NORTH OF CTH S INTERCHANGE HPMS**	1,921	2,677	2,712	2,026	2,490	3,440	3,350	2,750
05-1755	RAMP FROM I-41 NB TO CTH S		123		133		350		305
05-1754	RAMP FROM CTH S TO I-41 SB	165		180		360		435	
05-1753	RAMP FROM I-41 SB TO CTH S	163		280		280		465	
05-1752	RAMP FROM CTH S TO I-41 NB		320		186		510		295
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0001	**I-41 - 1.5 MI NE OF OUTAGAMIE COUNTY LINE - DE PERE**	1,923	2,480	2,612	1,973	2,570	3,280	3,320	2,760

Figure 3
I-41 Southern Arterial
Alternative 3 Turning Movements

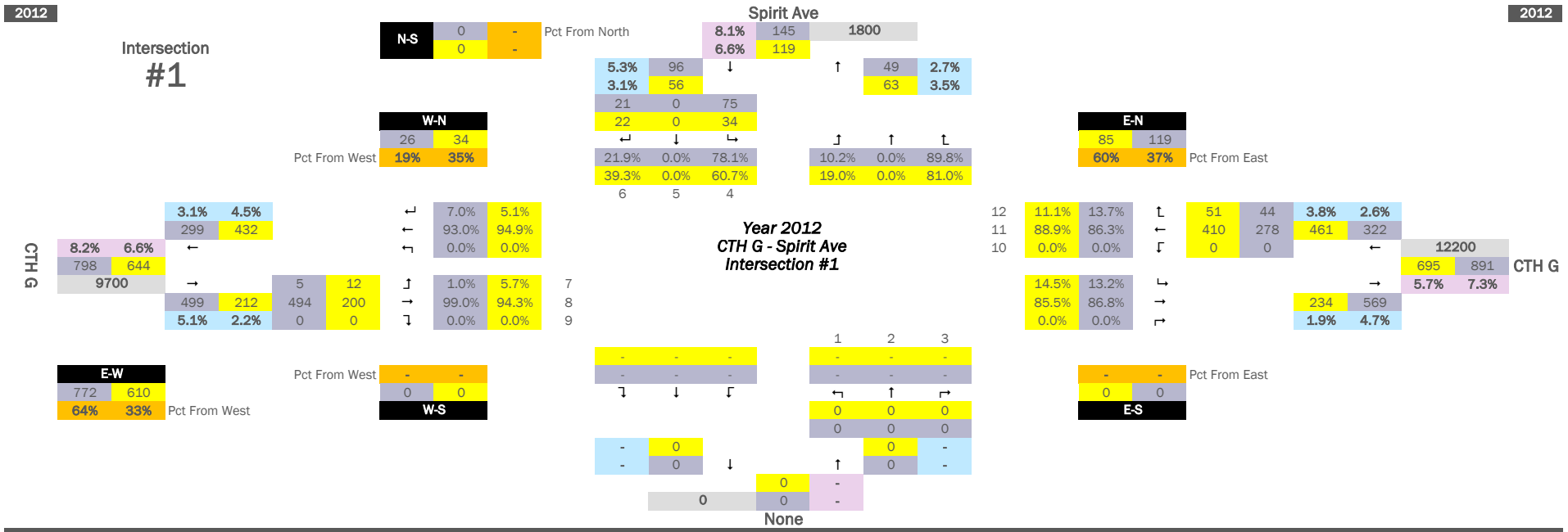


Figure 3
I-41 Southern Arterial
Alternative 3 Turning Movements

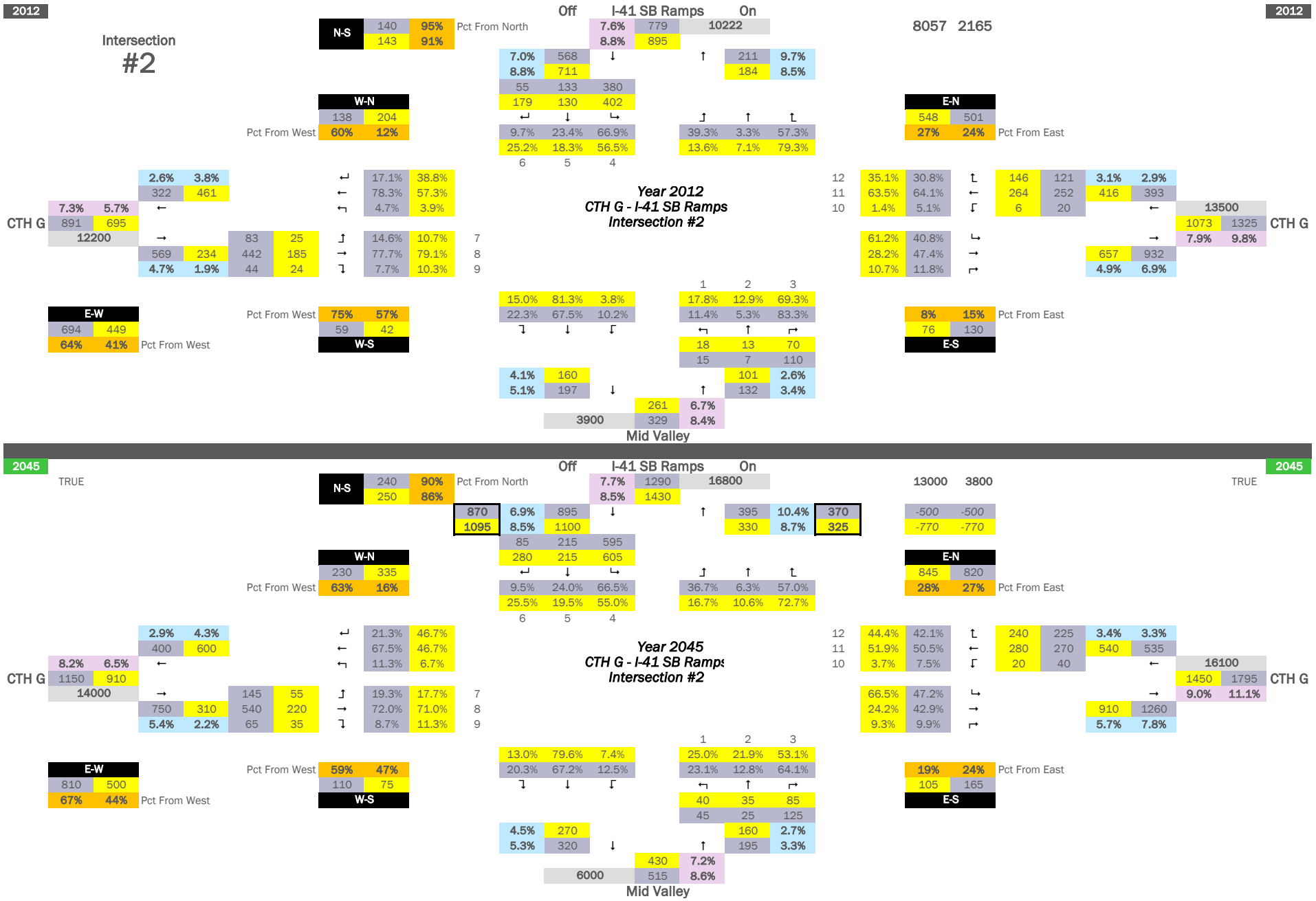


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Alternative 3 Turning Movements

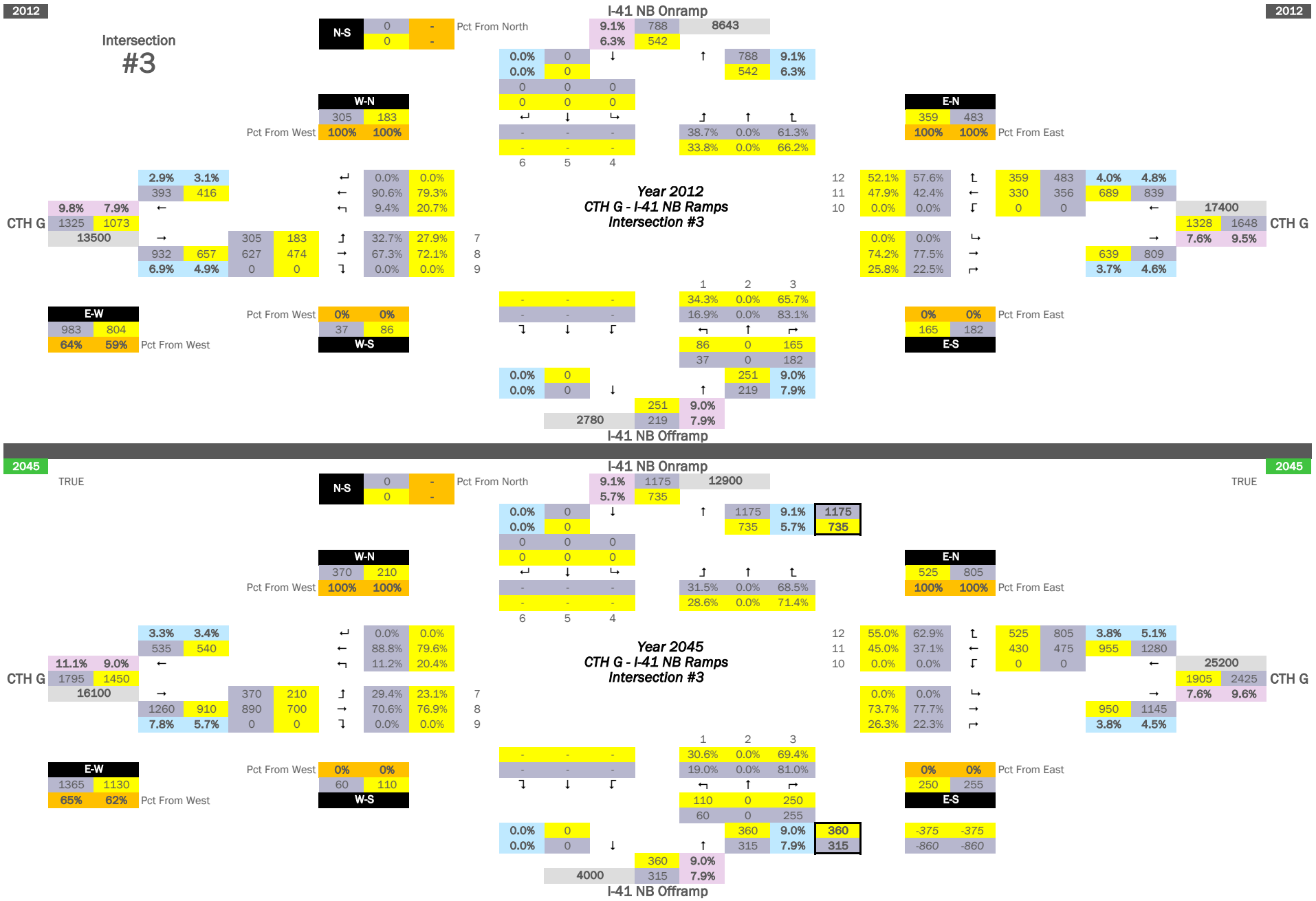


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Alternative 3 Turning Movements

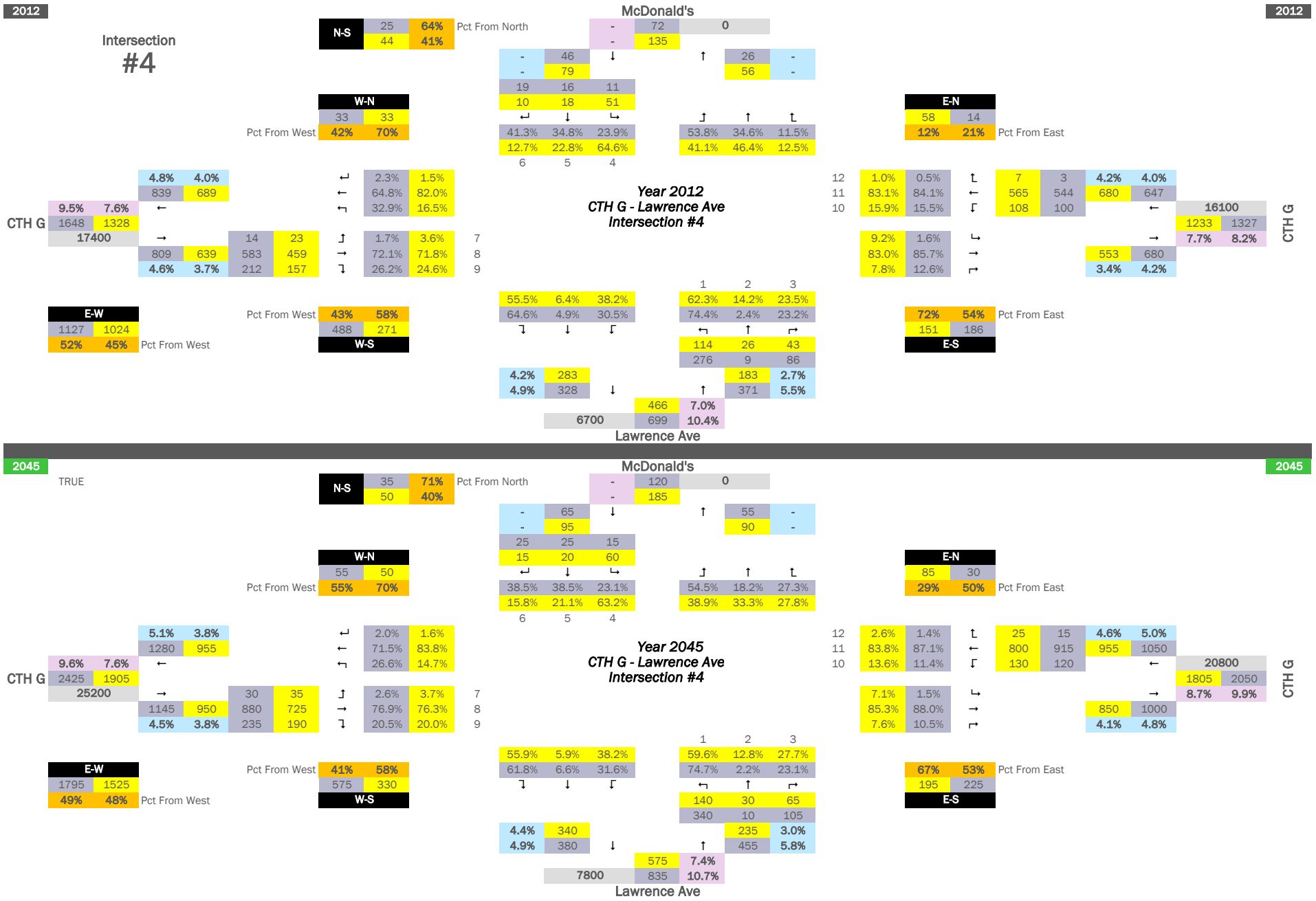


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Alternative 3 Turning Movements

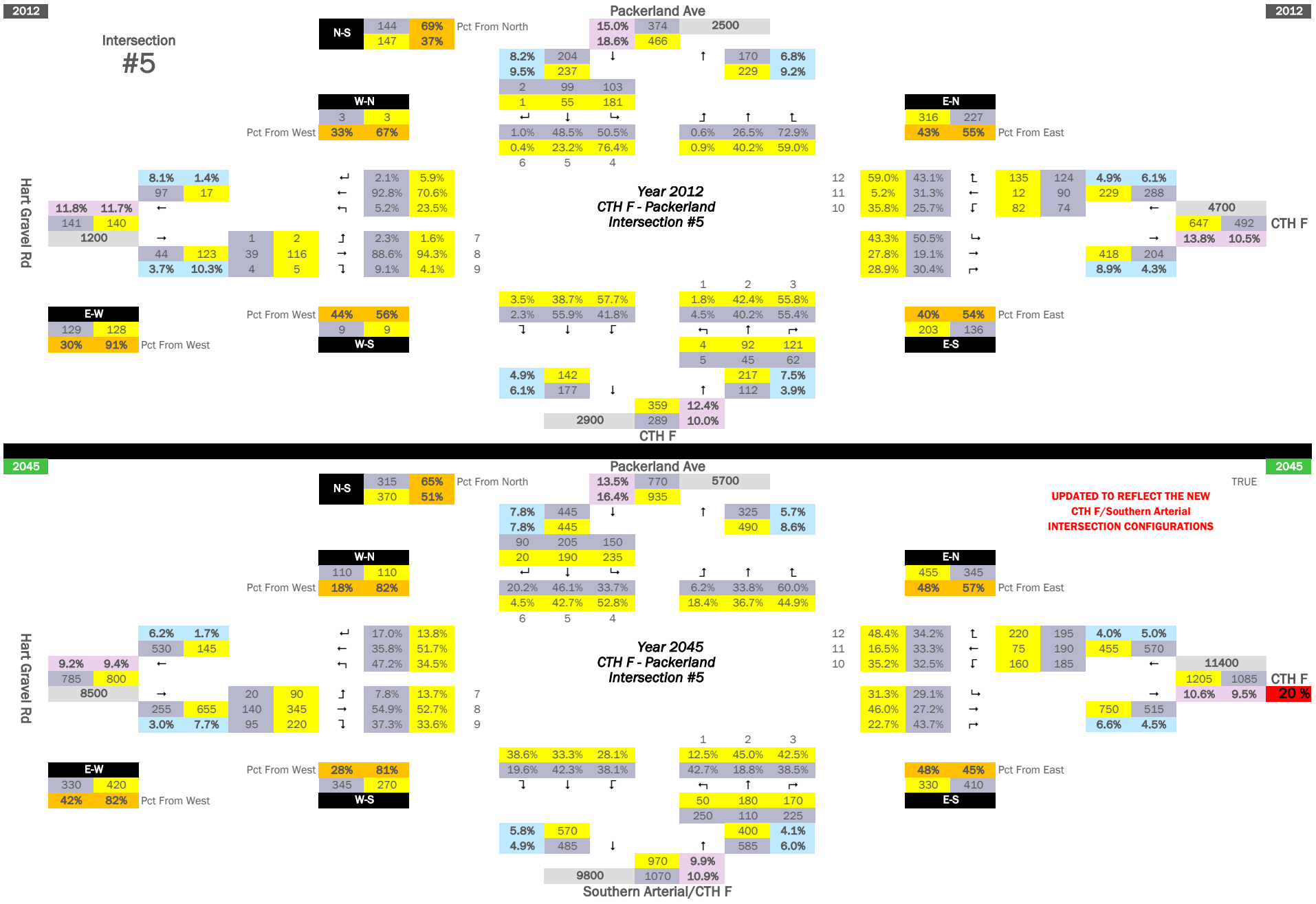


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Alternative 3 Turning Movements

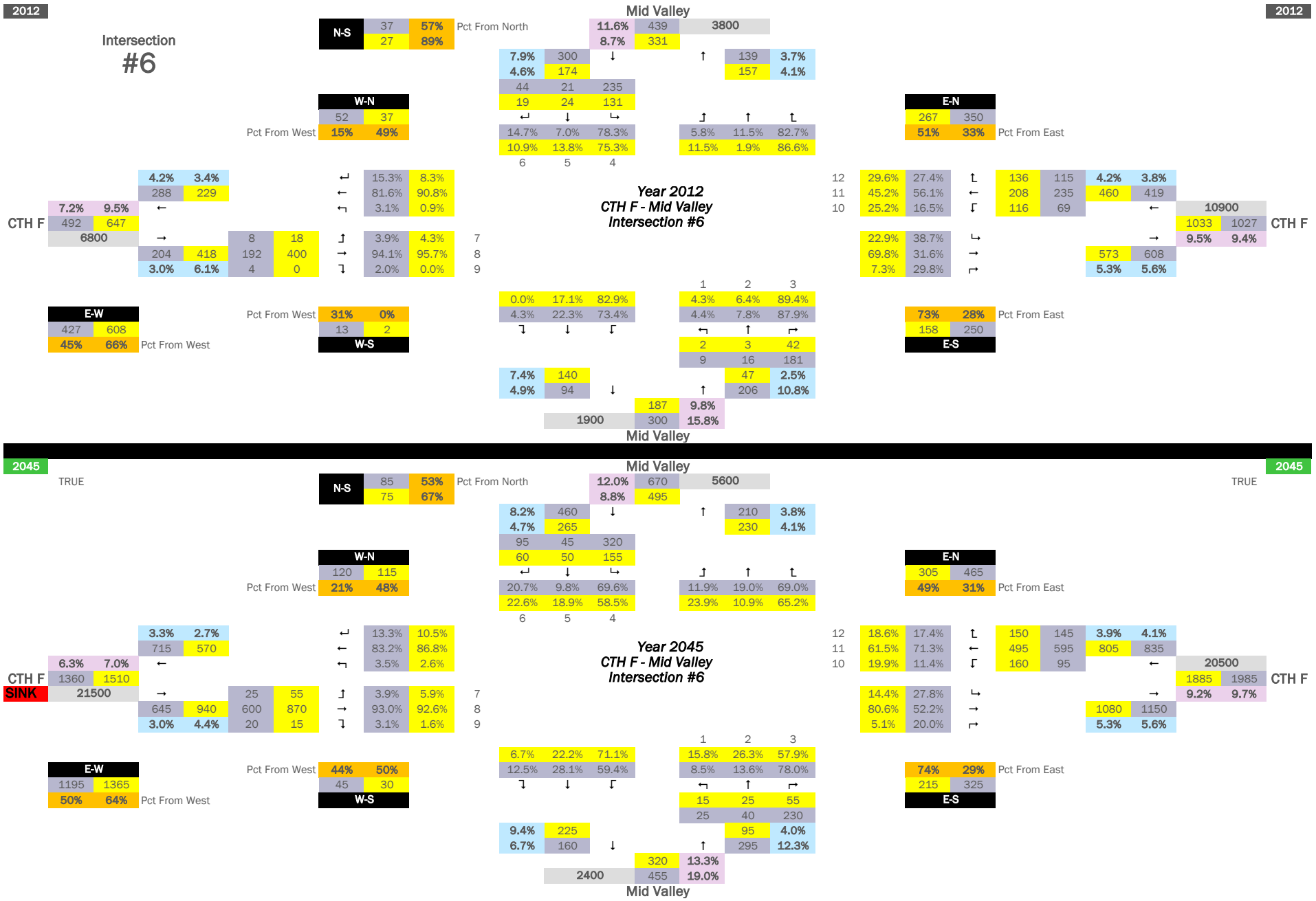


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Alternative 3 Turning Movements

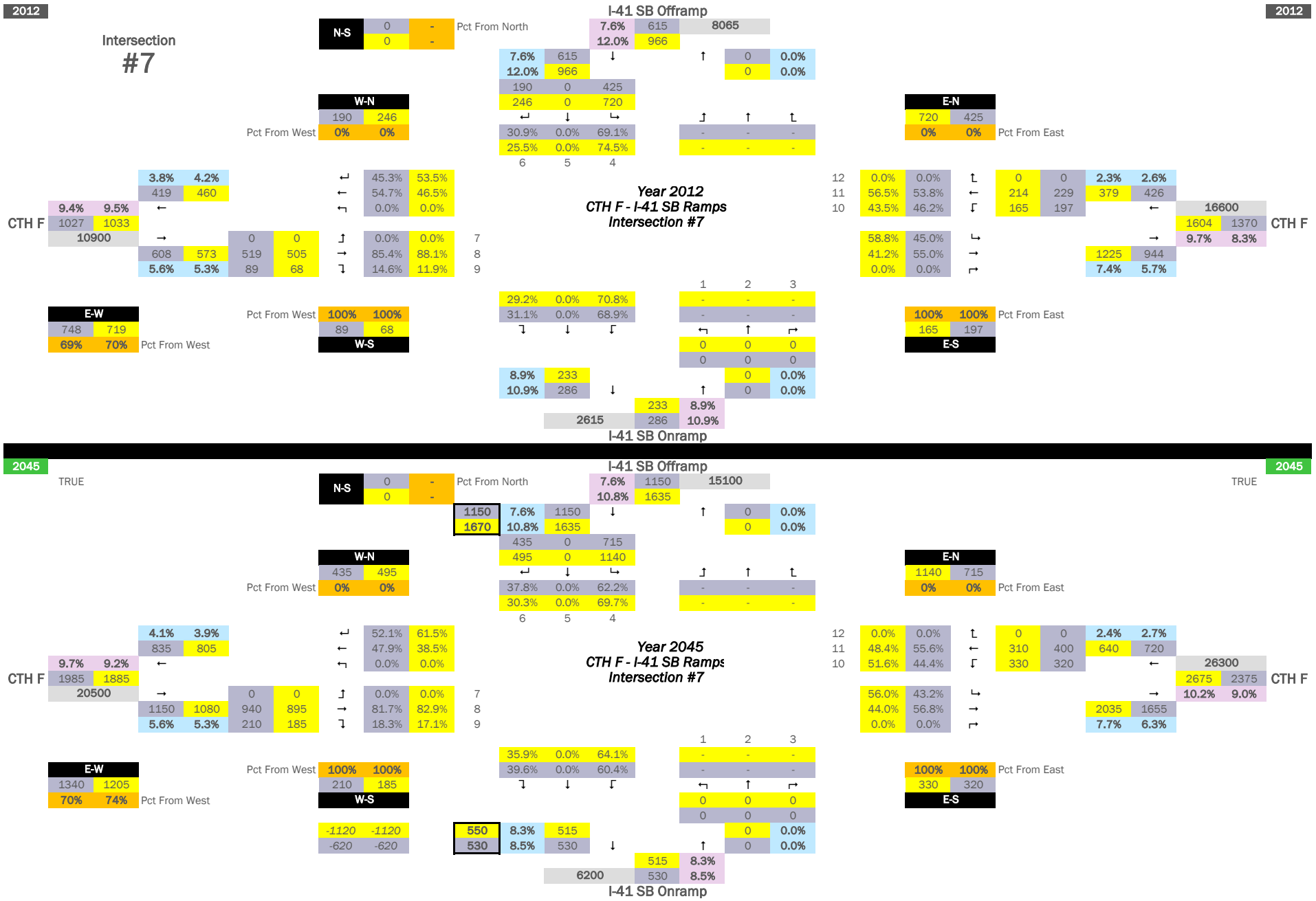


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I-41 Southern Arterial
Alternative 3 Turning Movements

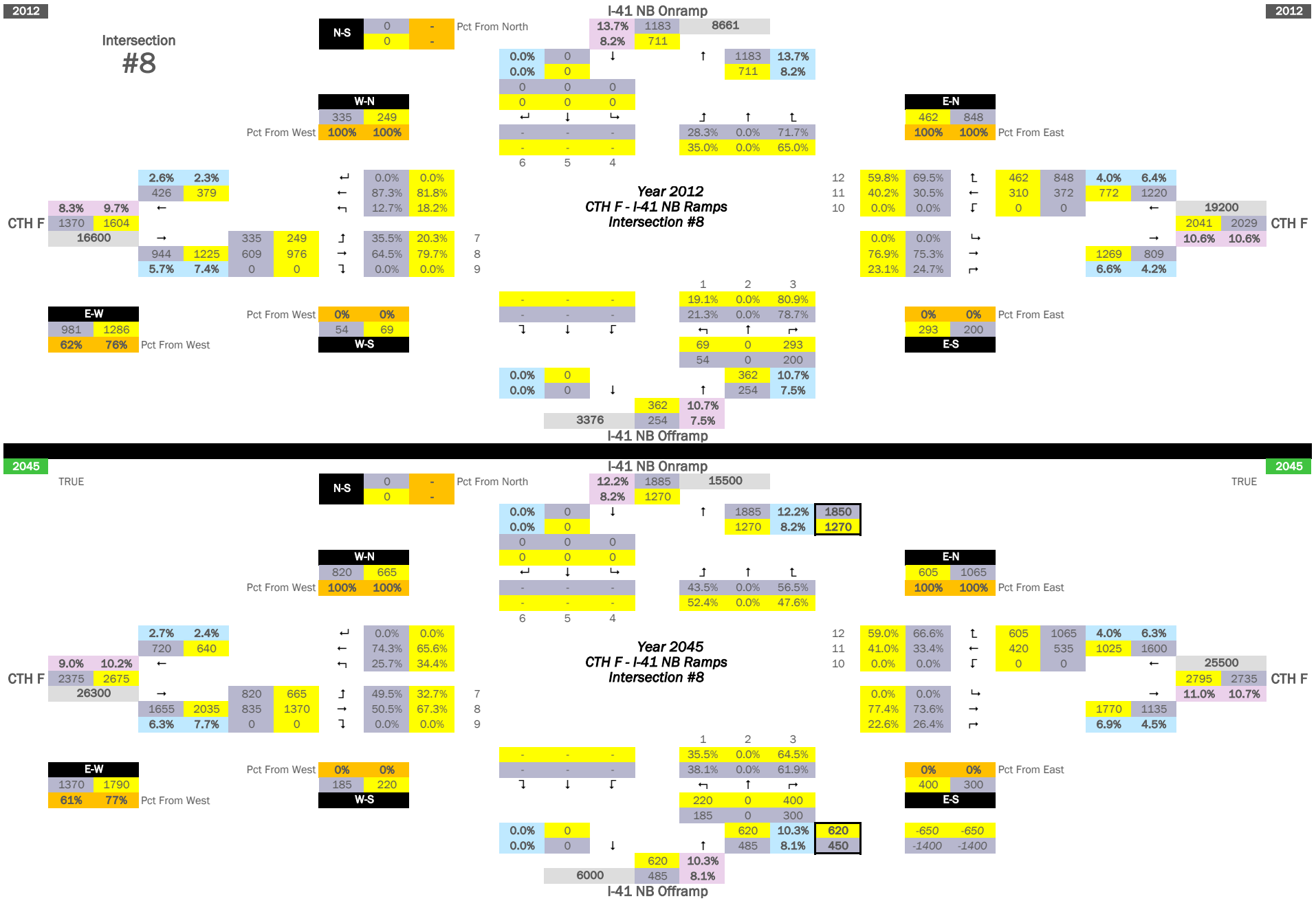


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Alternative 3 Turning Movements

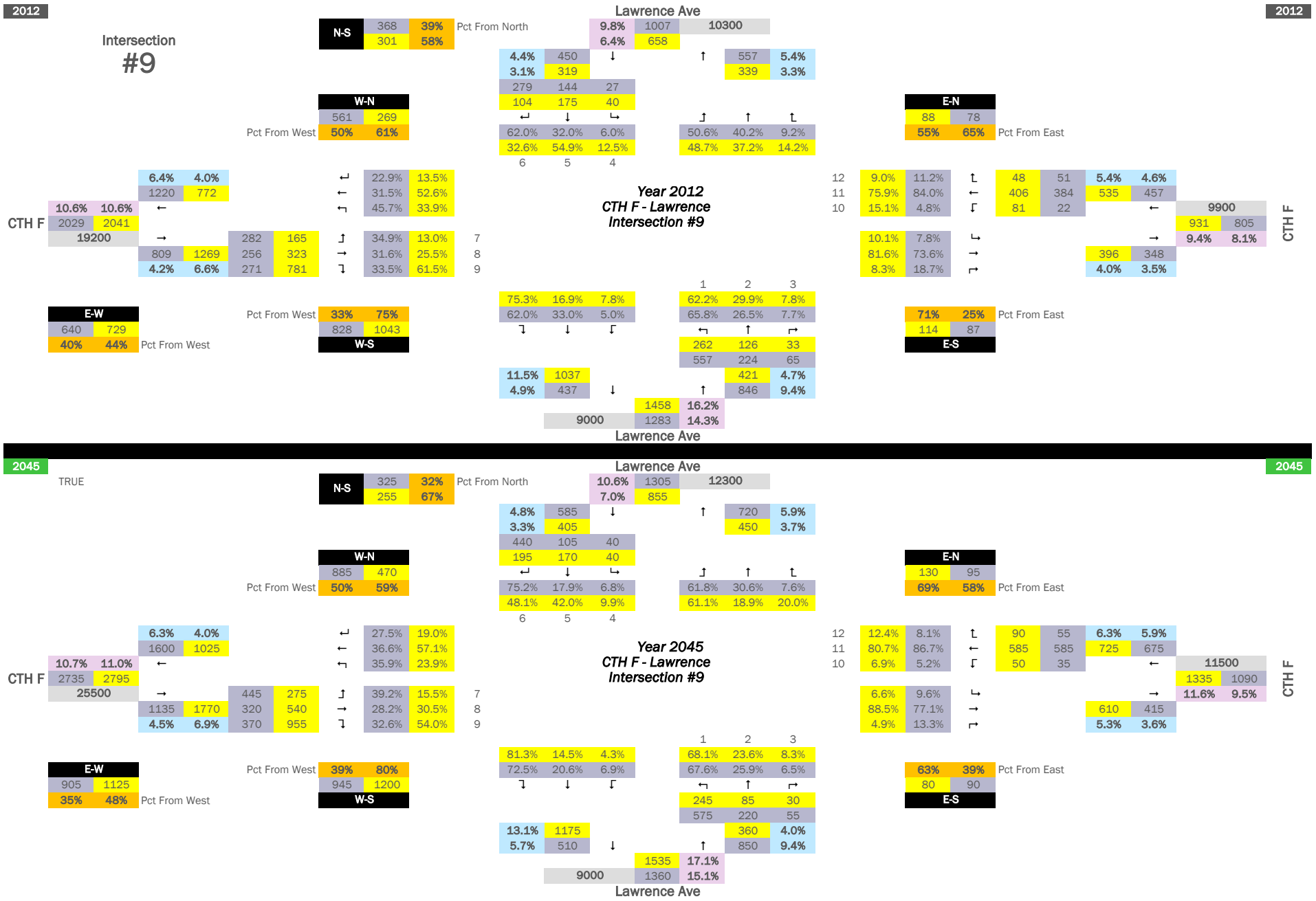


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I-41 Southern Arterial
Alternative 3 Turning Movements

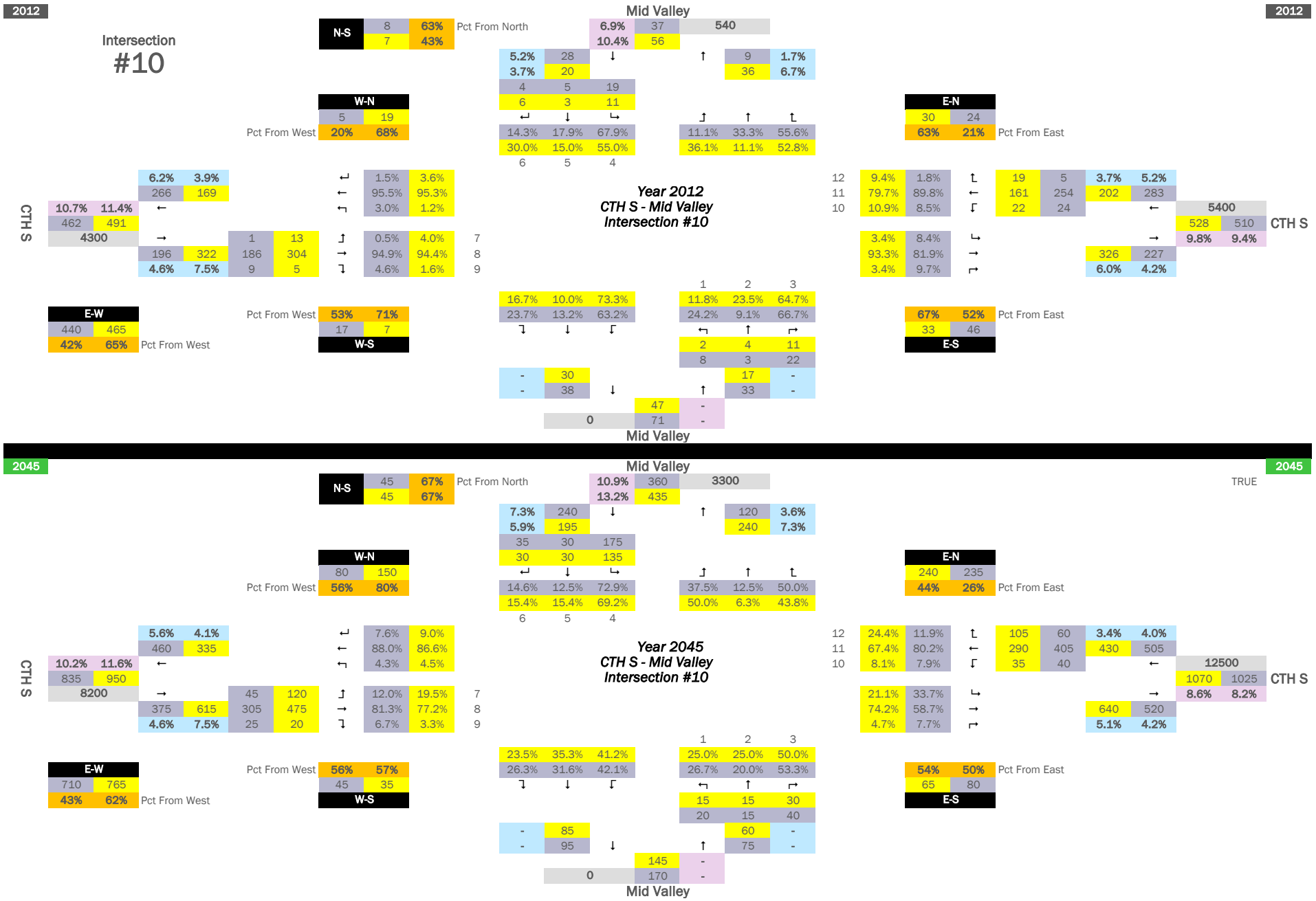


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I-41 Southern Arterial
Alternative 3 Turning Movements

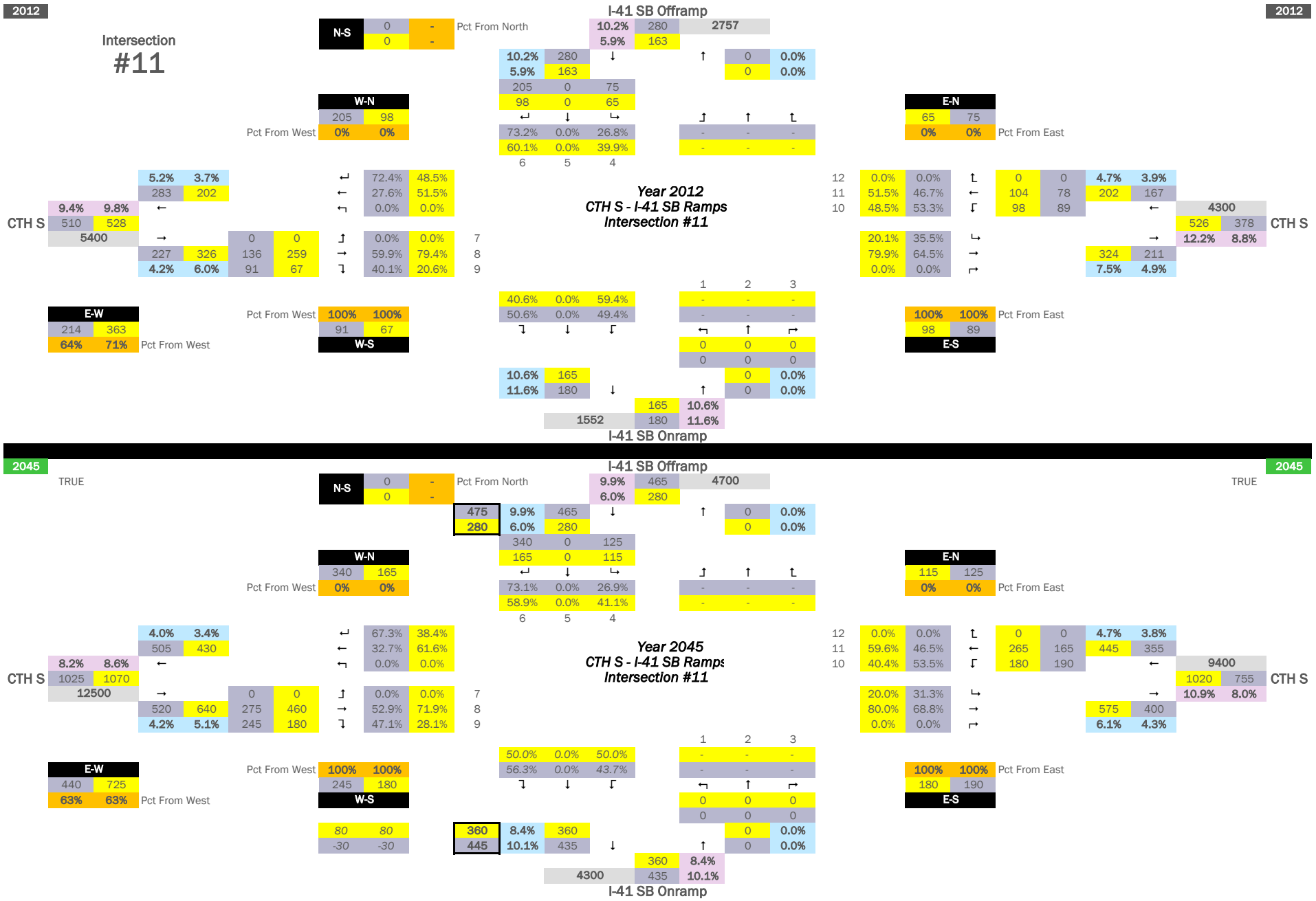


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I-41 Southern Arterial
Alternative 3 Turning Movements

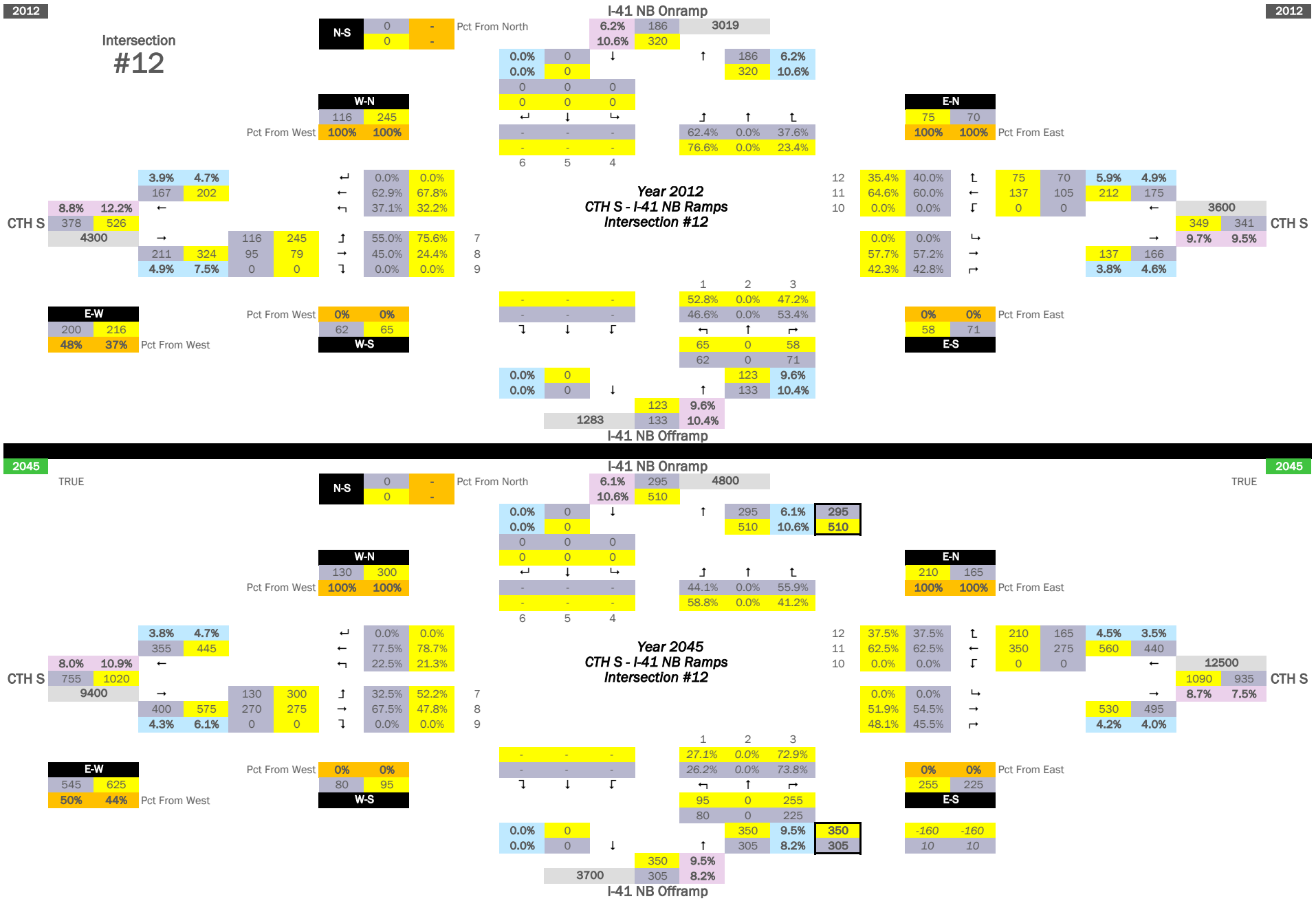


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I-41 Southern Arterial
Alternative 3 Turning Movements

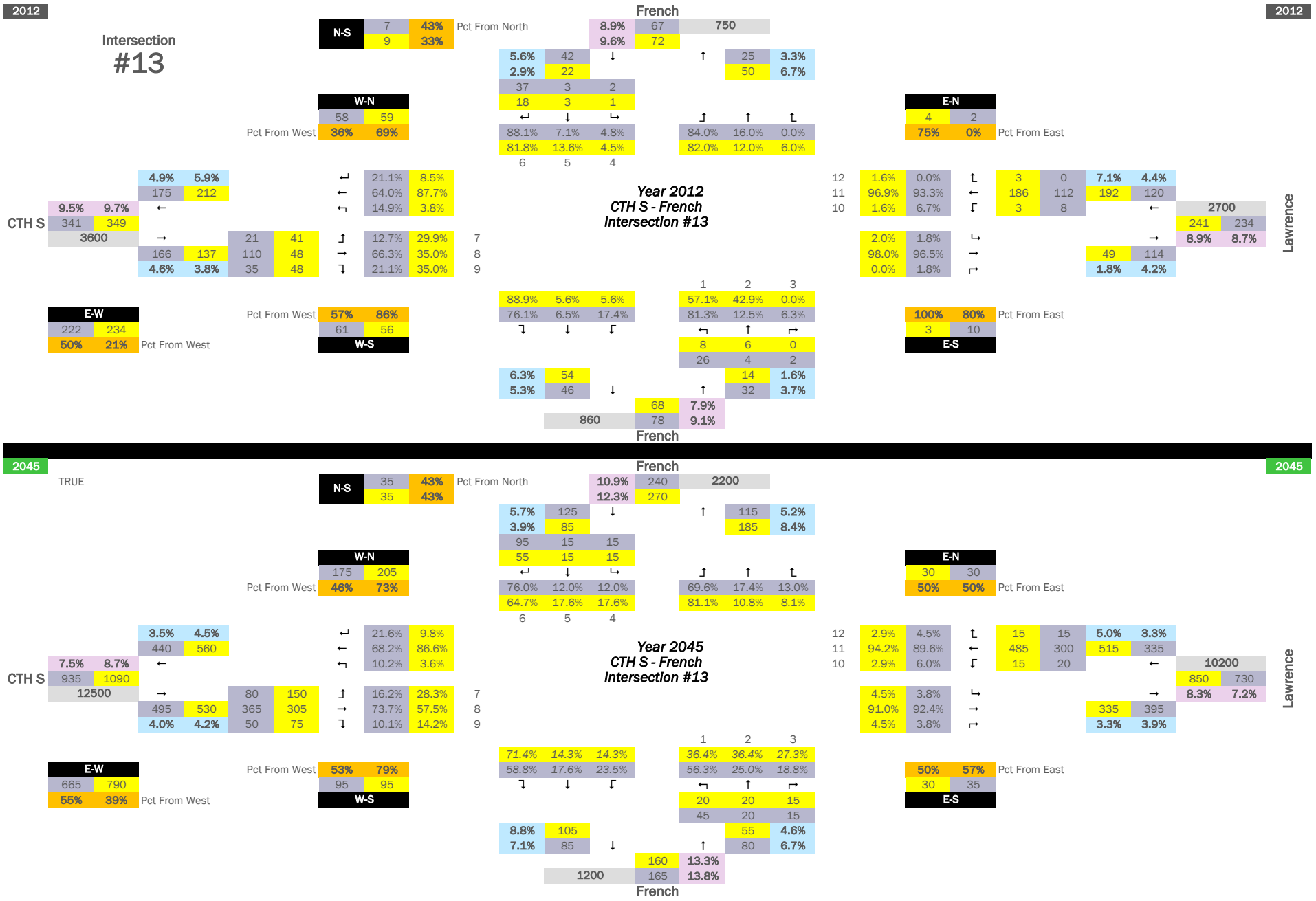


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I-41 Southern Arterial
Alternative 3 Turning Movements

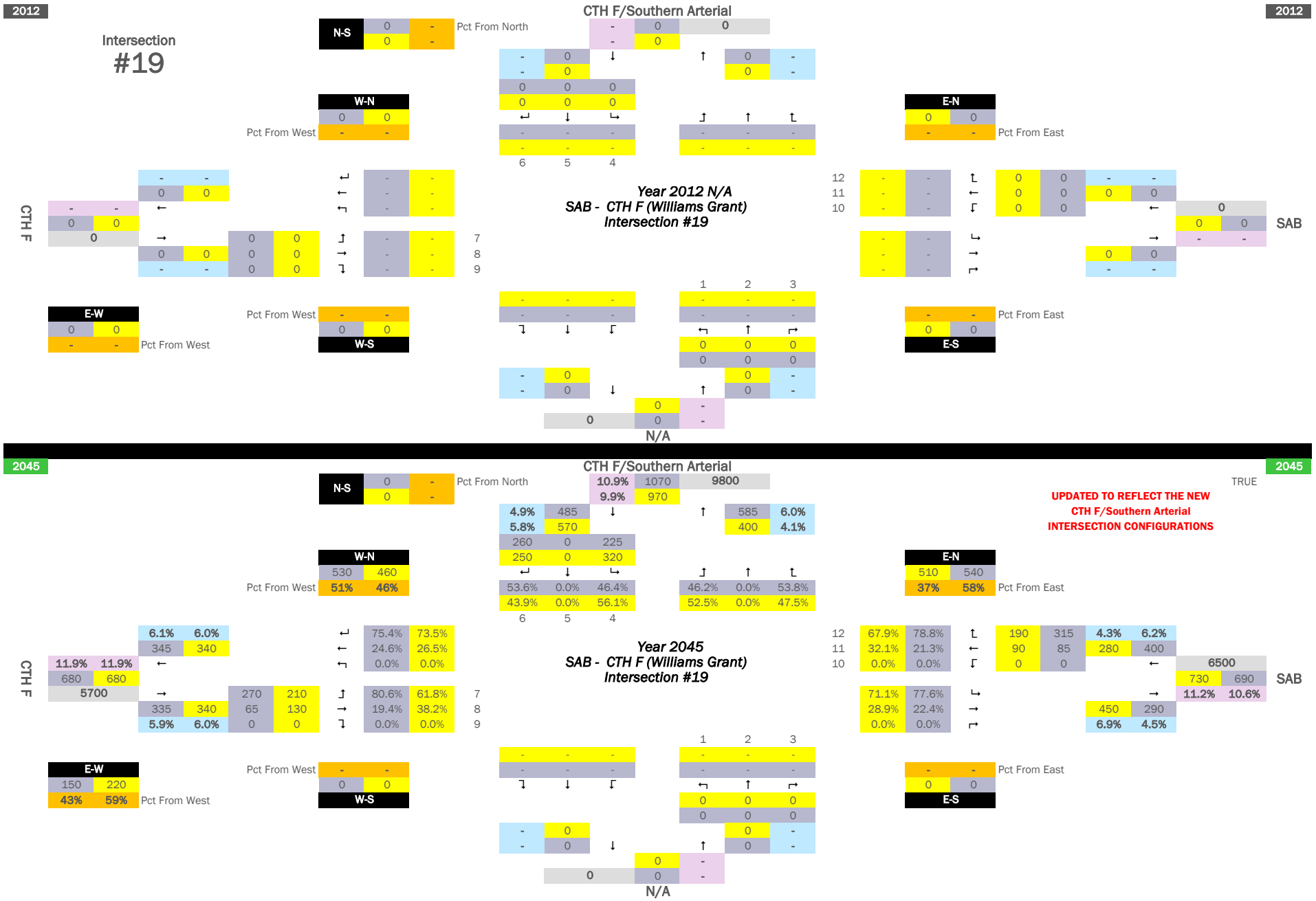


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I-41 Southern Arterial
Alternative 3 Turning Movements

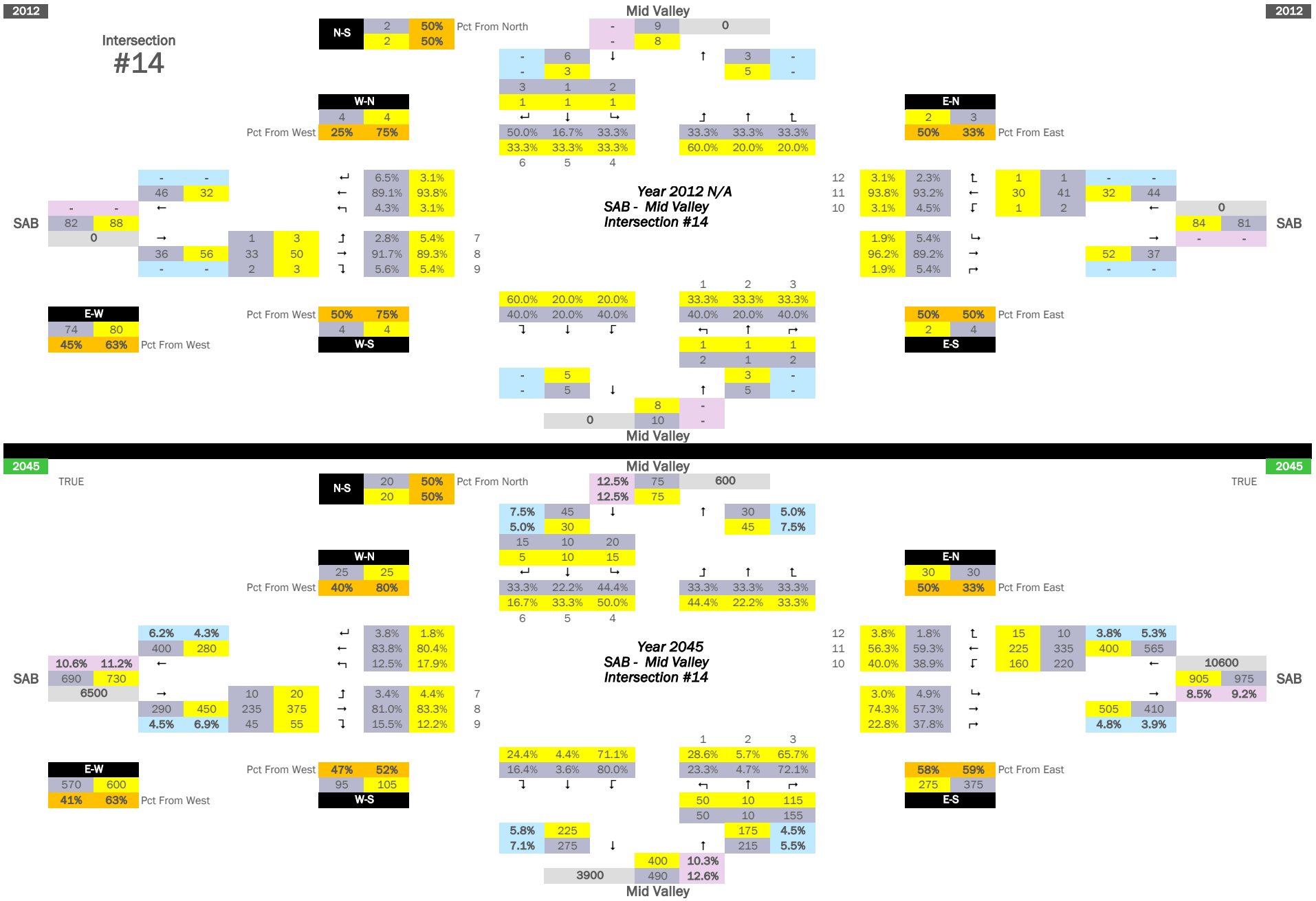


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Alternative 3 Turning Movements

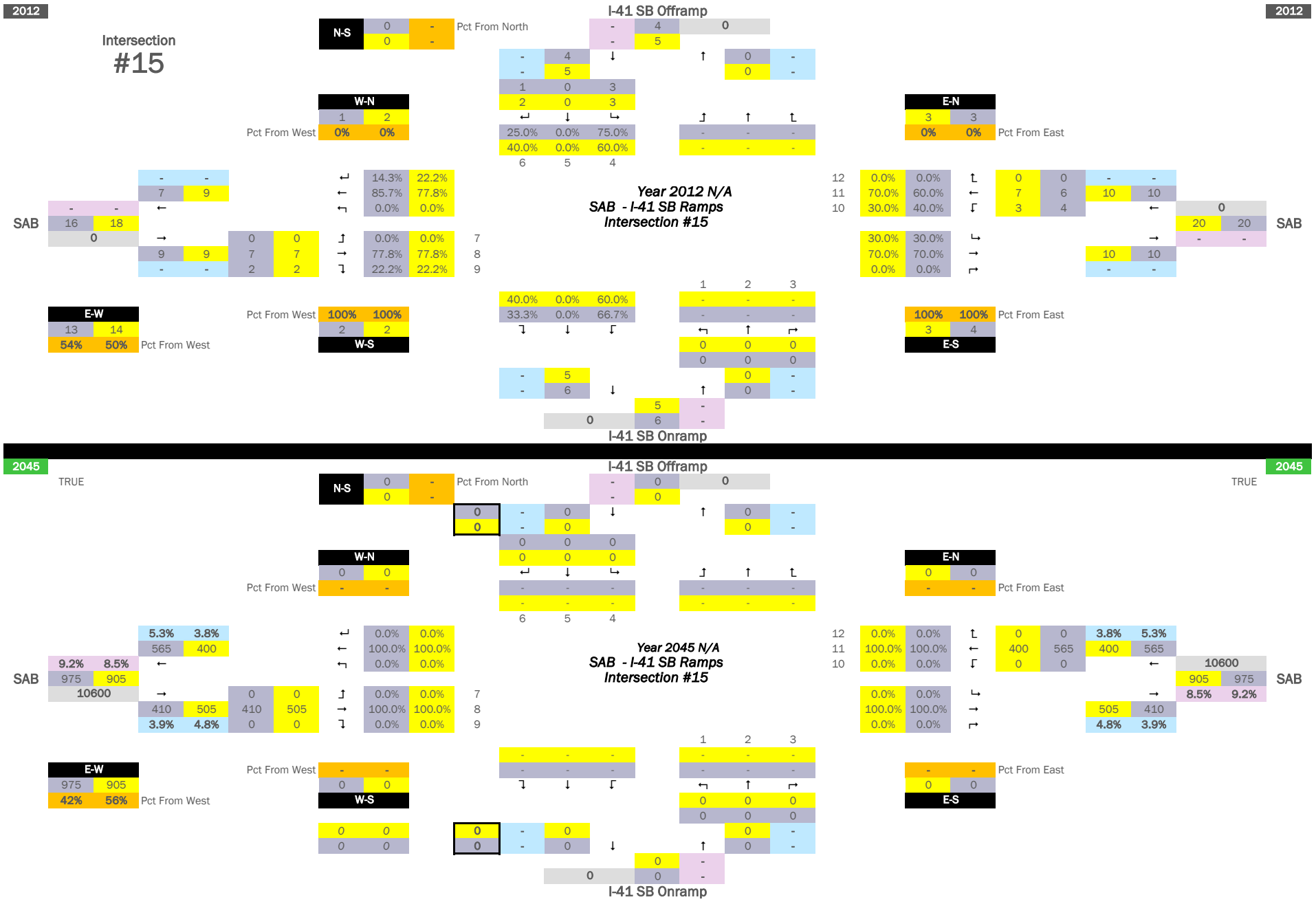


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Alternative 3 Turning Movements

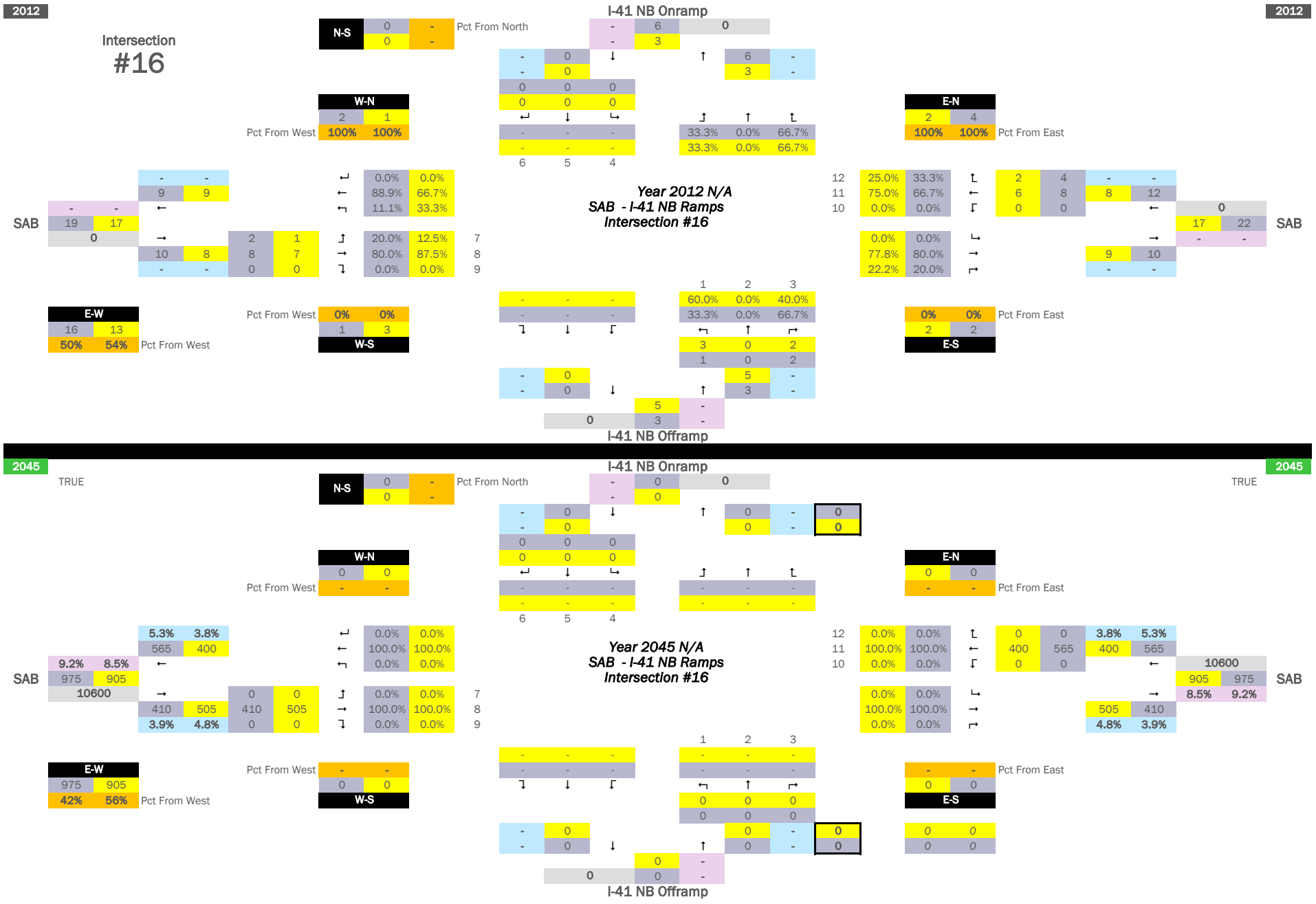


Figure 3
I-41 Southern Arterial
Alternative 3 Turning Movements

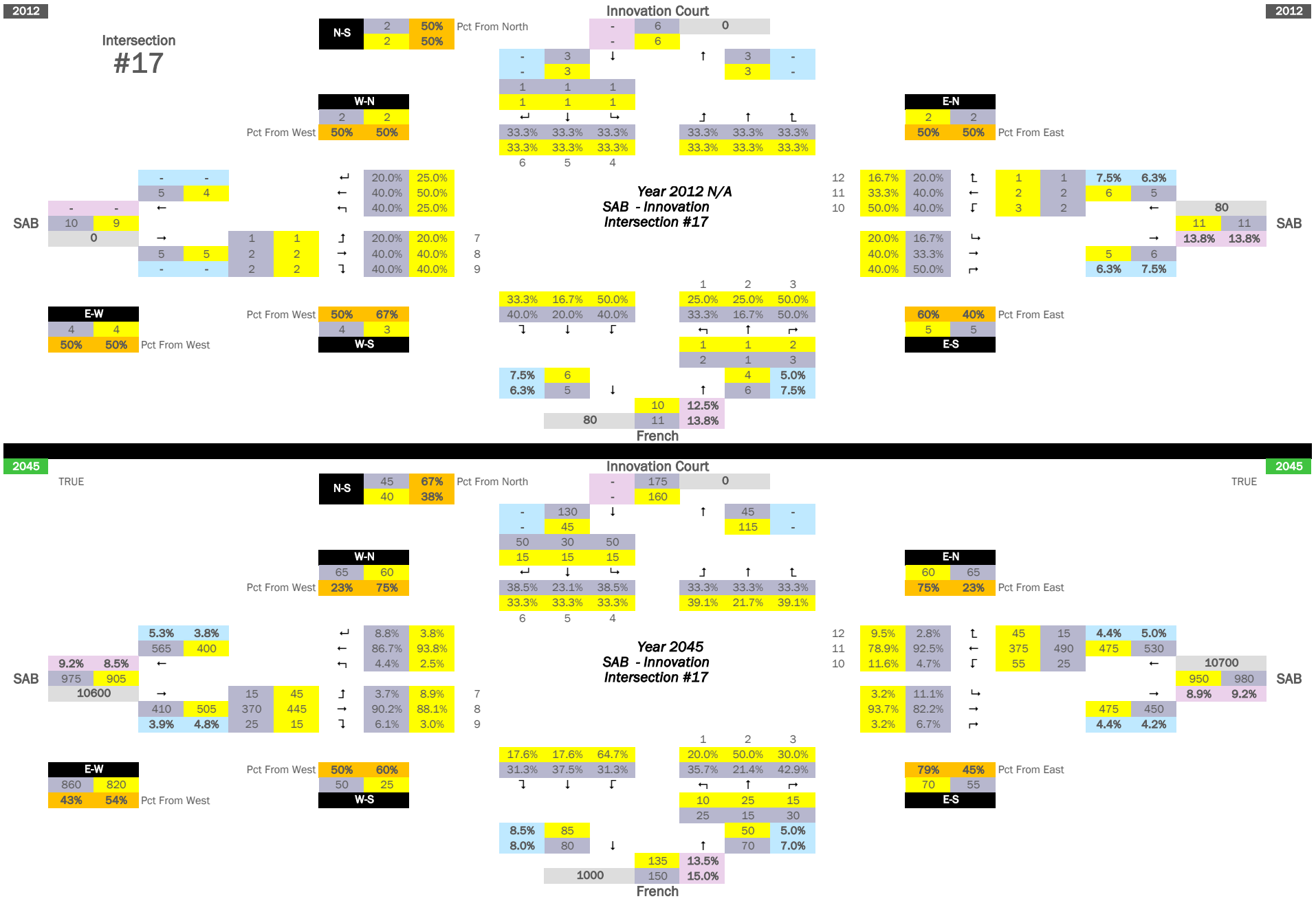
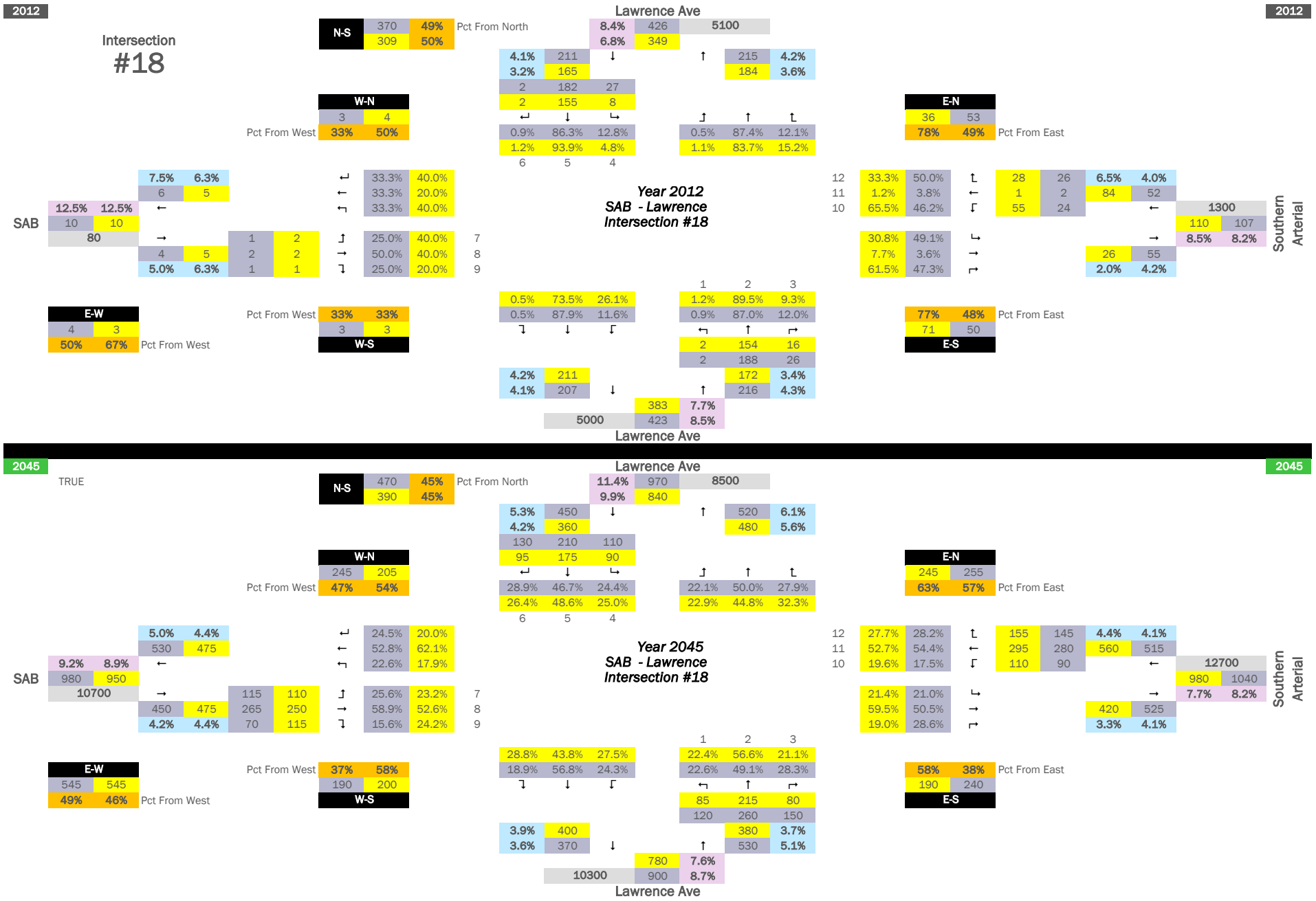


Figure 3
I-41 Southern Arterial
Alternative 3 Turning Movements



Memorandum

SRF 7944.

To: Chris Chritton, Traffic Forecasting, DTIM
Bryan Lipke, Planning Project Manager, NE Region

From: George Schulz, Project Manager

Date: Updated February 13, 2018

Subject: Brown County Southern Bridge Project

Introduction/Background

SRF Consulting Group, Inc. (SRF) coordinated with the WisDOT Forecasting Unit to prepare the original traffic forecasts for the Interstate 41 (I-41) and Southern Bridge study area. The peak hour forecasts are summarized in the September 30, 2016 technical memorandum titled *Traffic Forecast Summary, Brown County Southern Arterial Project*. The peak hour forecasts provided in that document were reviewed and approved by the WisDOT. Since then, Brown County staff have advised us that a new development would block the proposed re-alignment of Mid Valley Drive near the intersection of Quarry Park Drive and Mid Valley Drive. This conflict will affect the forecasts prepared for Alternatives 2A (Diamond Interchange) and 2B (C-D Interchange) at the Southern Arterial interchange with I-41 because of the need to realign Mid Valley Drive south of Quarry Park Drive to the Southbridge Road (Southern Arterial). The realigned Mid Valley Drive is no longer possible under Alternatives 2A and 2B therefore, there will be no Mid Valley Drive connection between Scheuring Road (CTH F) and the proposed new Southern Arterial. A location map showing this discontinuity is shown in **Figure A.1, in Appendix A**. Mid Valley Drive can remain on the existing alignment under Alternatives 1 and 3 because there is no interchange with the Southern Arterial under these alternatives. Mid Valley Drive can be maintained south of the Southern Arterial to CTH S under all alternatives currently under consideration.

Methodology

The original forecasts were prepared using the Northeast Region Travel Demand Model (model). The same model was used to update the forecasts without Mid Valley Drive. The traffic volume differences between the models with and without Mid Valley Drive were compared to determine the primary changes in the forecasts. Without Mid Valley Drive, the primary diversion routes included the new Southern Arterial and I-41 between Scheuring Road and the Southern Arterial. Traffic is expected to increase along the following roadway segments:

1. CTH F, west of Mid Valley Drive to Packerland Drive
2. Southern Arterial, south of Scheuring Road to Mid Valley Drive

3. CTH F southbound entrance ramp to I-41
4. I-41 northbound exit ramp to CTH F
5. I-41 southbound exit ramp to Southern Arterial
6. Southern Arterial northbound entrance ramp to I-41

The locations where traffic volumes are expected to decrease are:

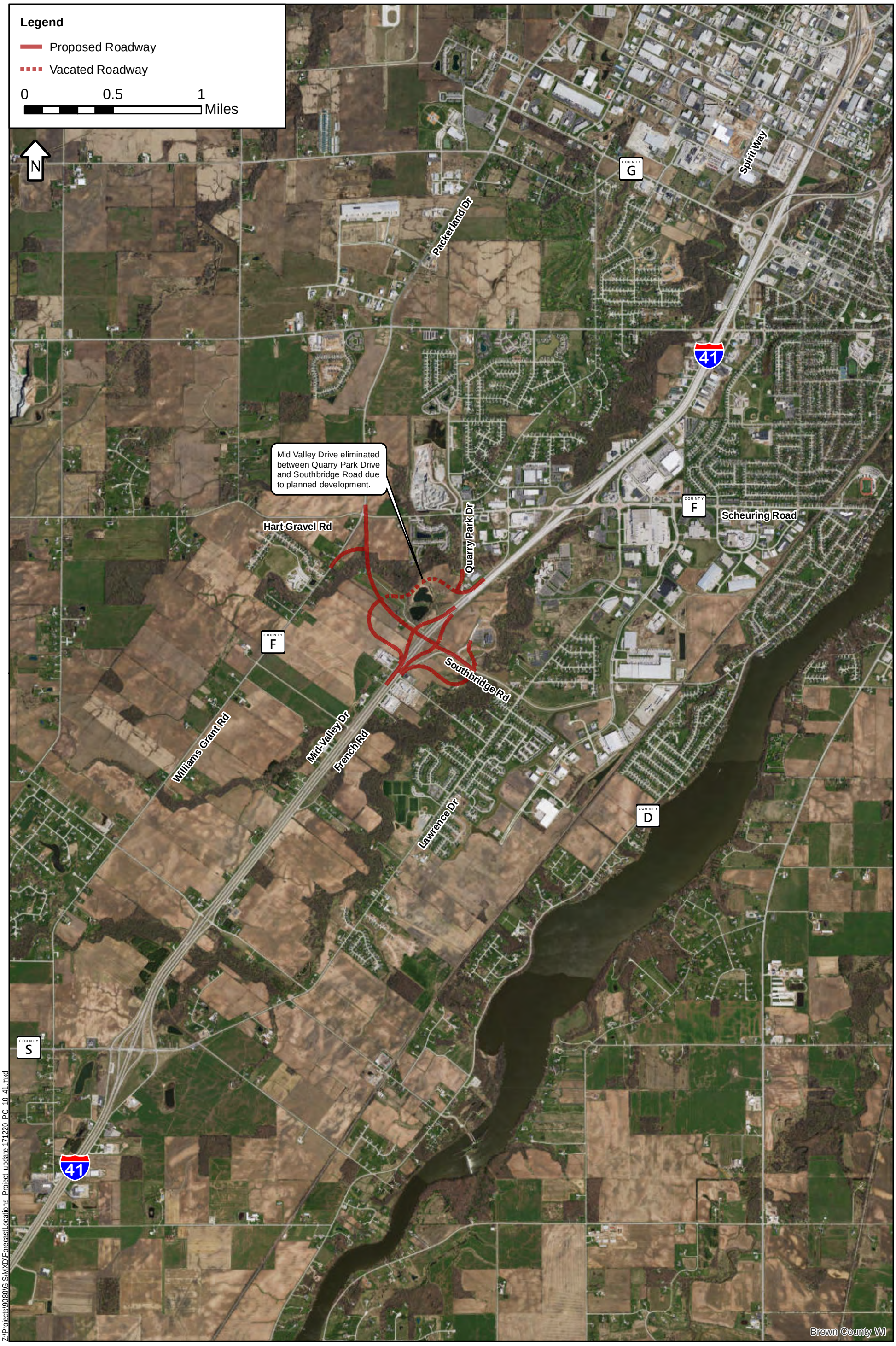
1. Mid Valley Drive, south of CTH F to Southern Arterial
2. Southern Arterial southbound entrance ramp to I-41
3. I-41 northbound exit ramp to Southern Arterial

There were other locations that experienced slight changes (< 200 vpd) in daily volume. These changes were regarded as insignificant and not considered in the updates to the peak hour traffic forecasts. The updated peak hour forecasts for the Alternative 2A and 2B scenarios without Mid Valley Drive are provided in **Appendix B** in the same format as shown in the 2016 technical memorandum for ease of comparison. A legend or Turning Movement Forecast Key is provided at the beginning of **Appendix B** to assist in the interpretation of the forecasts for each of the intersections. The key information is that the Average Annual Daily Traffic (AADT) is shown in grey and the AM and PM peak hour volumes are shown in yellow and purple, respectively. The peak hour forecasts are shown for the Scheuring Road, and the Southern Arterial corridors along with I-41 in **Appendix B**. The same corridors under the original 2016 forecasts are provided in **Appendix C** for ease of comparison. The forecasts for the CTH G and CTH S corridors were not updated because of the insignificant changes in daily volume.

The most significant changes in daily traffic volumes are shown on Scheuring Road west of Mid Valley Drive. The increase in daily volume ranges from 1600 to 2700 vpd. Likewise, the volume on the new Southern Arterial, without Mid Valley Drive is also expected to increase. The increase in daily volume ranges from 200 to 2500 vpd west of Mid Valley Drive. The higher increases are between the Williams Grant Drive and Scheuring Road intersections.

On a peak hour basis, the greatest increase on the same roadway segments identified above ranged from 60-265 vph with the greater increases expected under Alternative 2B. Along a mainline segment, an increase in 100-300 vph is not normally considered as significant. This peak hour volume increase was investigated further by reviewing the intersection turning movement volumes for the intersection of Scheuring Road and Packerland Avenue/Southern Arterial which includes both of the roadway segments highlight above. The intersection movements primarily affected by these increases are the westbound Scheuring Road left turn and the Southern Arterial northbound right turn. The expected volume increases for these two movements range from 60 to 135 vph. These peak hour volume increases will most likely affect the proposed intersection geometry for the westbound left turn more than the northbound right turn.

Appendix A
Location Map



Z:\Projects\9080\GIS\MXD\ForecastLocations_Project_update 171220_PC_10_41.mxd

Consulting Group, Inc.

Traffic Forecast Locations

Brown County Southern Arterial Project
WisDOT NE Region

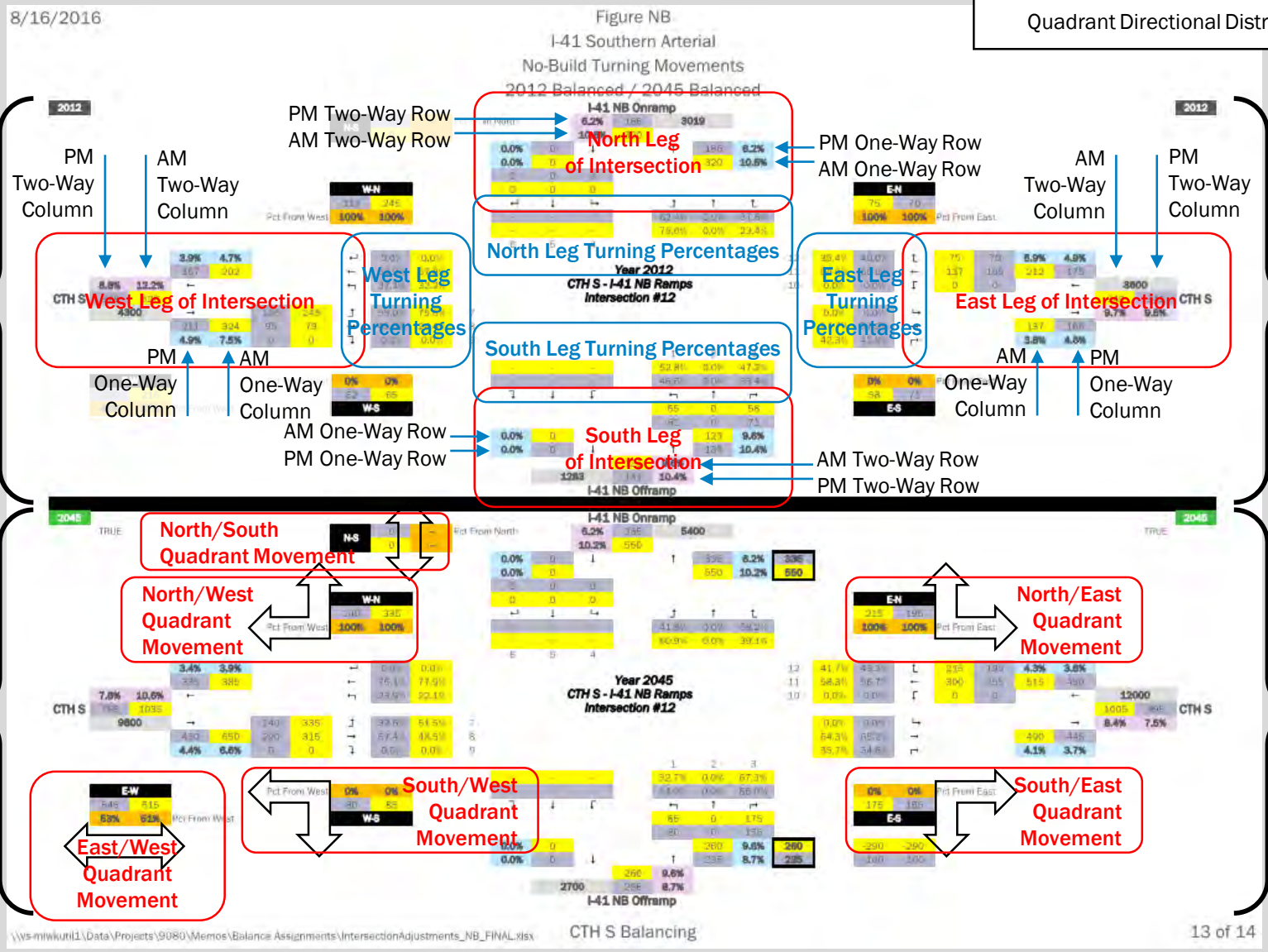
Figure A.1

Appendix B
Peak Hour Forecasts
Without Mid Valley Drive

Turning Movement Forecast Key

LEGEND

- Approach AADT
- Two-Way Peak Hour Percentage (K%)
- One-Way Peak Hour Percentage
- AM Peak Hour Data
- PM Peak Hour Data
- Quadrant Directional Distribution



Balanced Year 2012 Turning Movements

Balanced Year 2045 Turning Movement Forecast

Balanced Year 2012 Turning Movements

Balanced Year 2045 Turning Movement Forecast

Alternative 2A Without Mid Valley Drive

Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

		2012 Base Year Peak Hour				2045 Alt 2A (Mainline / Ramps)			
Site ID	Road Name	AM SB	AM NB	PM SB	PM NB	AM SB	AM NB	PM SB	PM NB
05-0380	**I-41 BTWN CTH G & ONEIDA DEPERE - HPMS**	2,872	2,705	2,859	3,199	3,910	3,660	3,740	4,500
05-1583	RAMP FROM I-41 NB TO CTH G		251		219		290		250
05-1581	RAMP FROM CTH G TO I-41 SB	184		211		255		290	
05-1087	BUS USH X41 SPUR FROM I-41 TO STH 32 DEPERE	309	612	539	325	365	725	635	385
05-1580	RAMP FROM I-41 SB TO CTH G	711		568		1,020		795	
05-1582	RAMP FROM CTH G TO I-41 NB		542		788		695		1,095
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0110	**I-41 NORTH OF CTH F - DE PERE #2**	2,654	3,026	3,041	2,955	3,510	3,980	3,870	4,040
05-1601	RAMP FROM I-41 NB TO CTH F		362		254		325		265
05-1600	RAMP FROM CTH F TO I-41 SB	233		286		390		375	
05-1598	RAMP FROM I-41 SB TO CTH F	966		615		1,400		970	
05-1599	RAMP FROM CTH F TO I-41 NB		711		1,183		1,090		1,630
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
99-0015	**New I-41 BFS North of SAB**	1,921	2,677	2,712	2,026	2,500	3,215	3,275	2,675
99-0004	SAB Ramp from I-41 NB		0		0		865		685
99-0003	SAB Ramp to I-41 SB	0		0		580		705	
99-0002	SAB Ramp from I-41 SB	0		0		440		430	
99-0001	SAB Ramp to I-41 NB		0		0		430		440
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0109	**I-41 NORTH OF CTH S INTERCHANGE HPMS**	1,921	2,677	2,712	2,026	2,640	3,650	3,550	2,920
05-1755	RAMP FROM I-41 NB TO CTH S		123		133		200		195
05-1754	RAMP FROM CTH S TO I-41 SB	165		180		250		280	
05-1753	RAMP FROM I-41 SB TO CTH S	163		280		290		470	
05-1752	RAMP FROM CTH S TO I-41 NB		320		186		530		315
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0001	**I-41 - 1.5 MI NE OF OUTAGAMIE COUNTY LINE - DE PERE**	1,923	2,480	2,612	1,973	2,600	3,320	3,360	2,800

Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

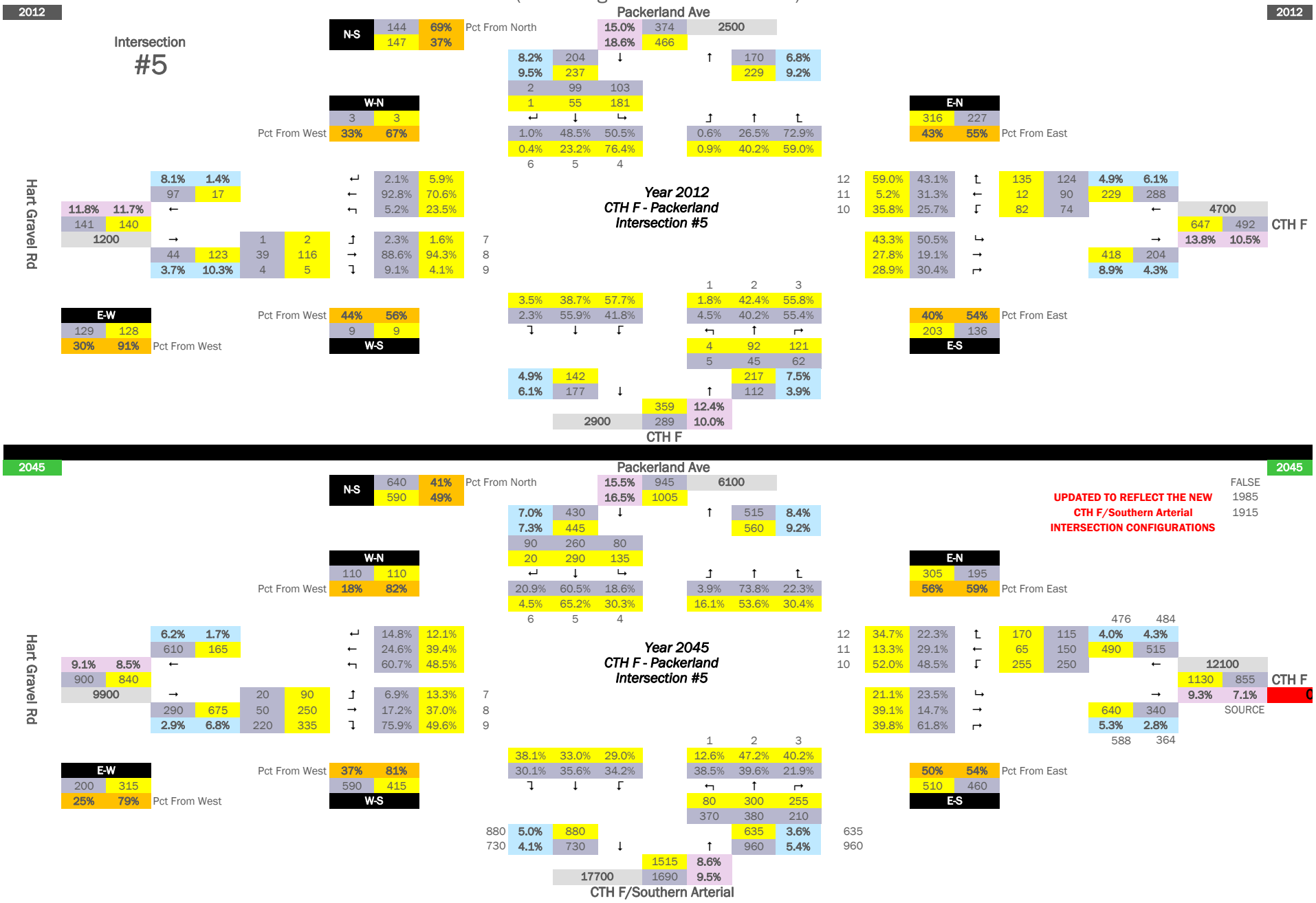


Figure 2A
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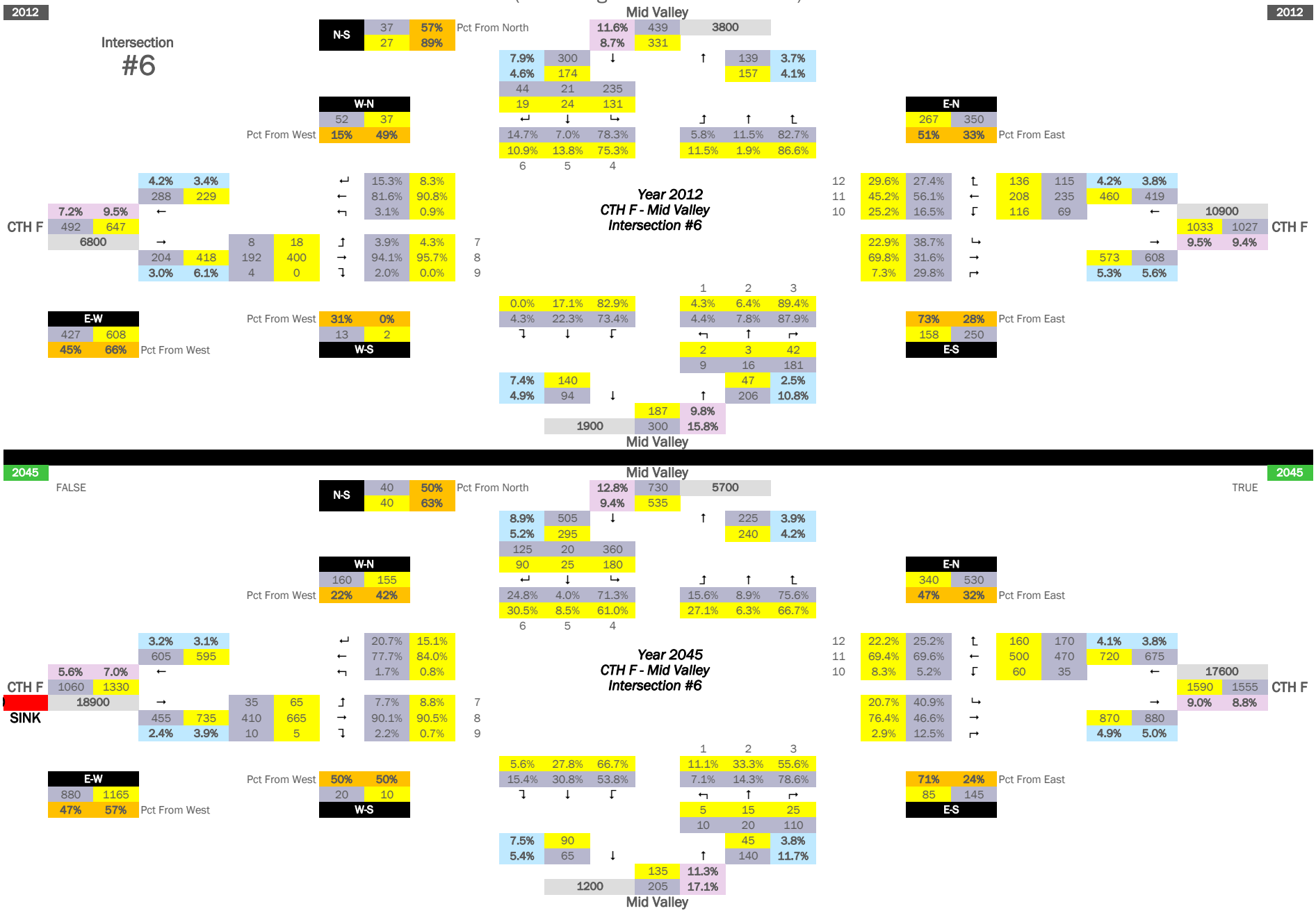


Figure 2A
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Alternative 2A Turning Movements Without Mid Valley Drive
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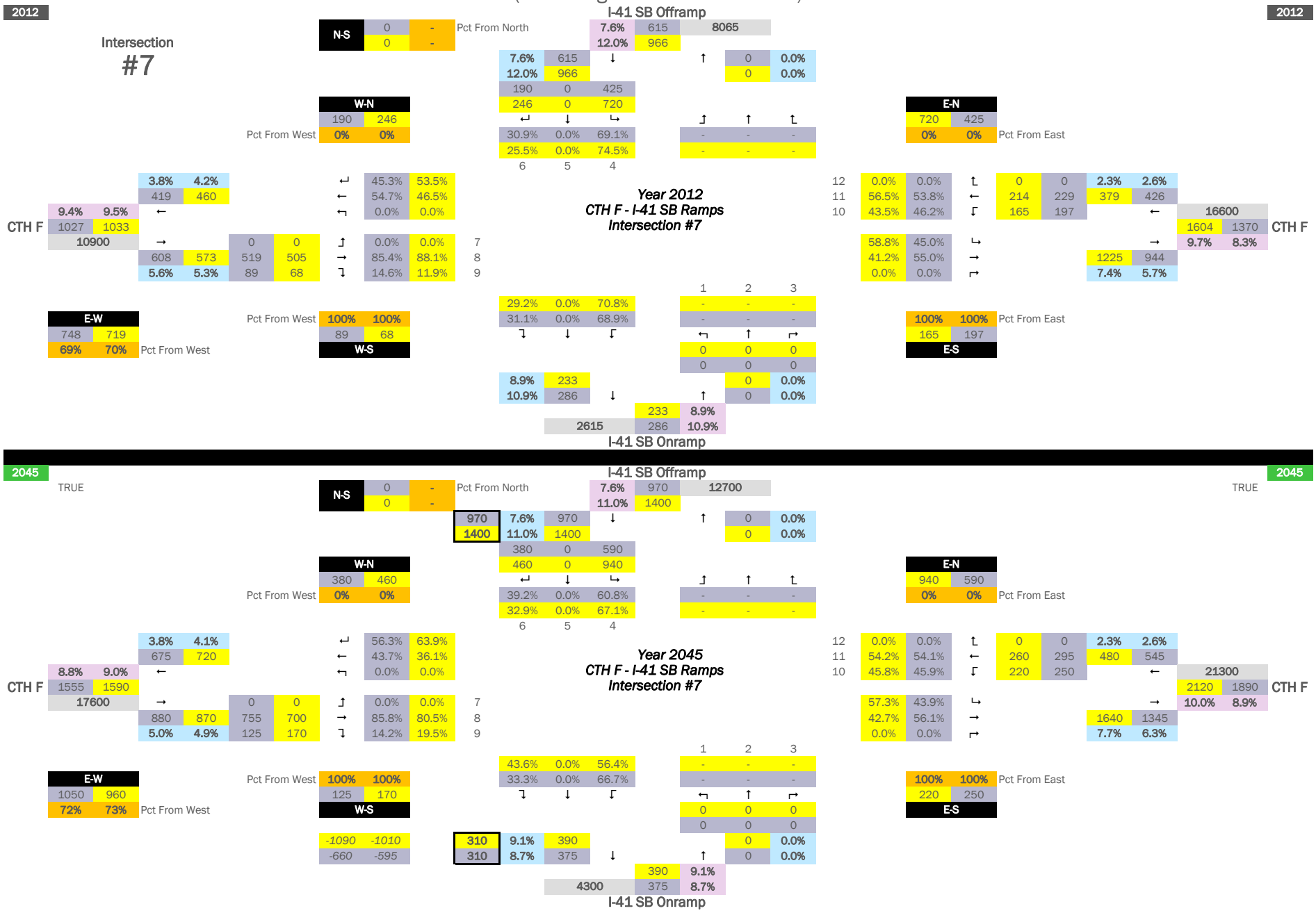


Figure 2A
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(Scheuring Rd - Southern Arterial)

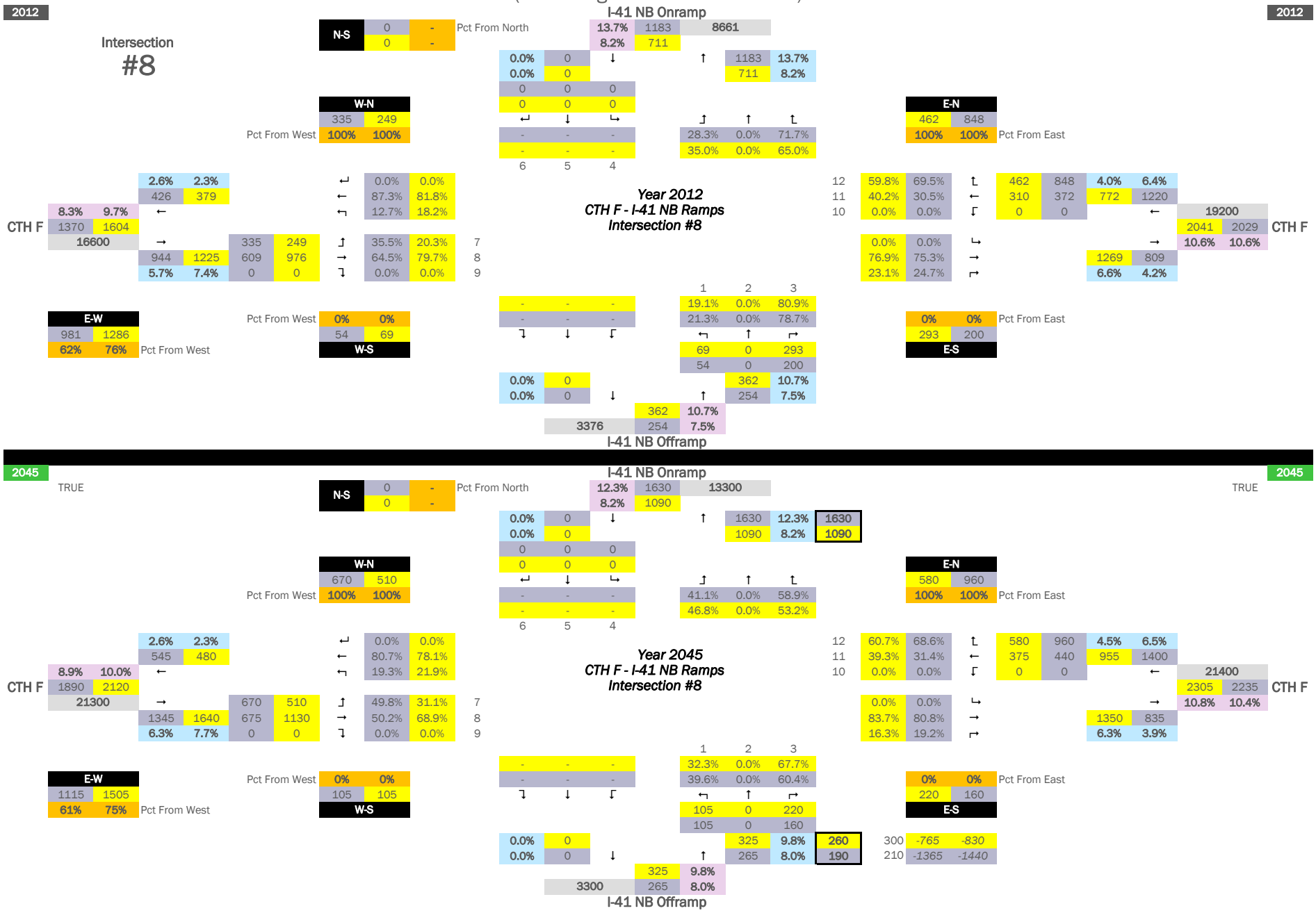


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Alternative 2A Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

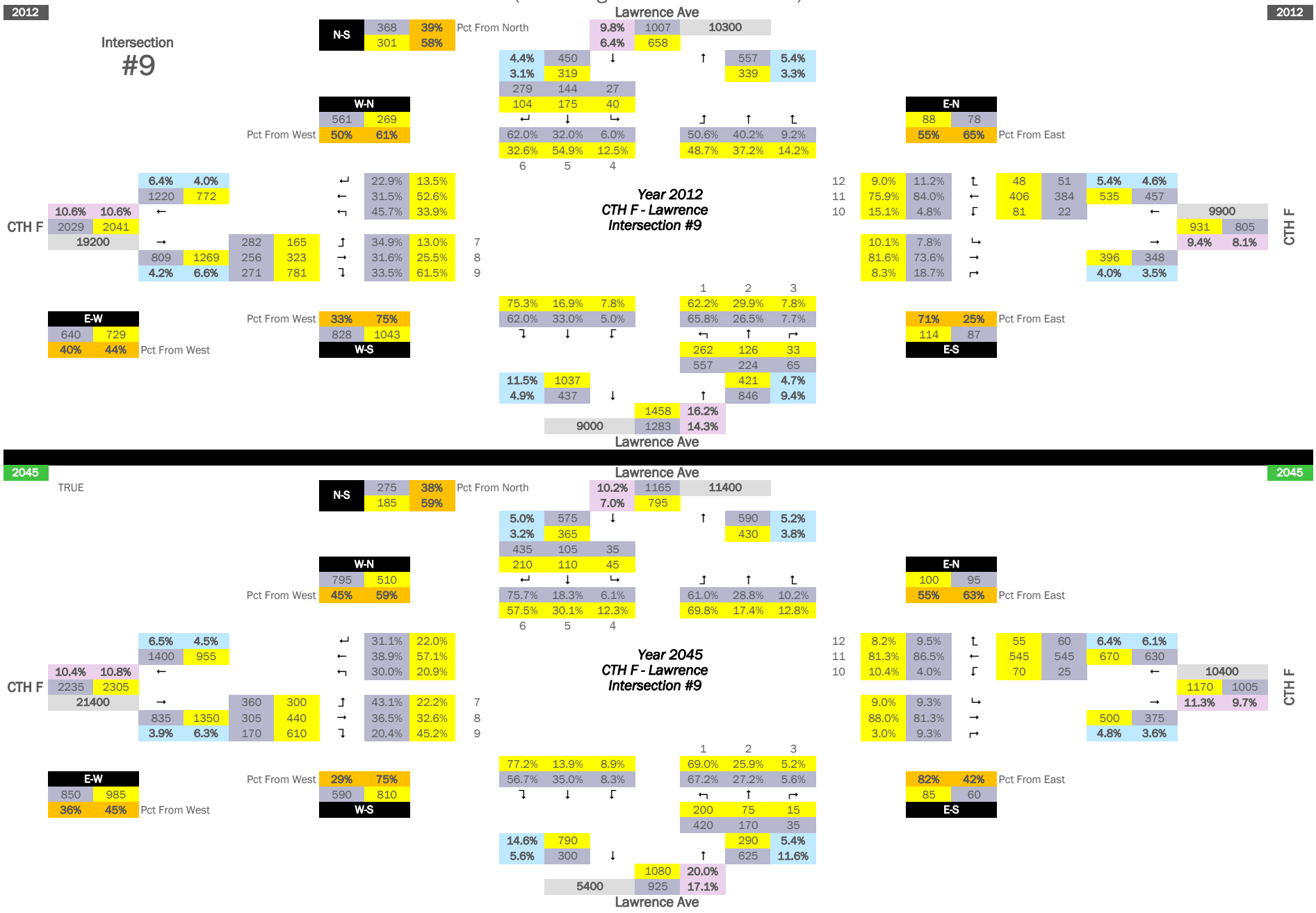


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

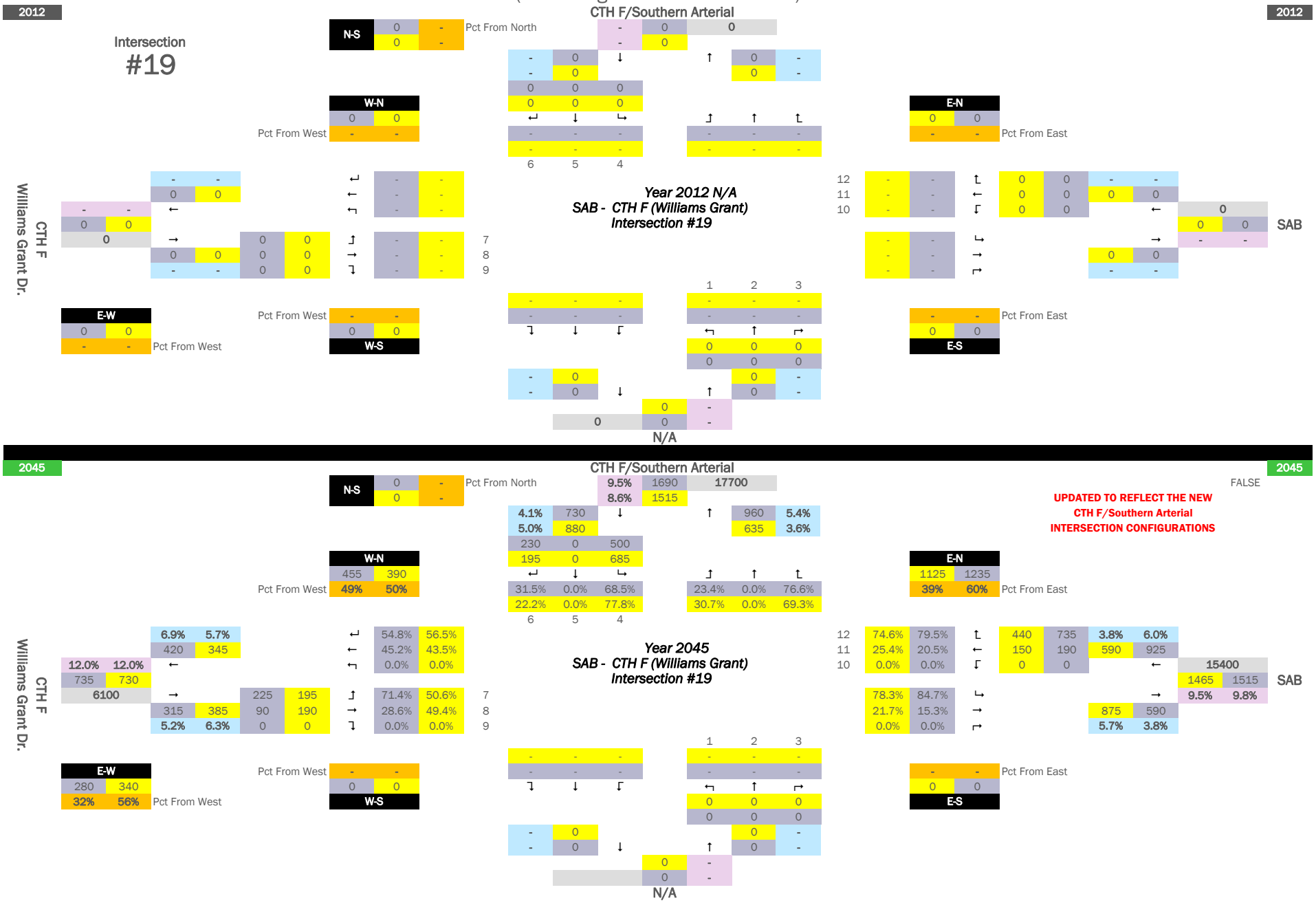


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

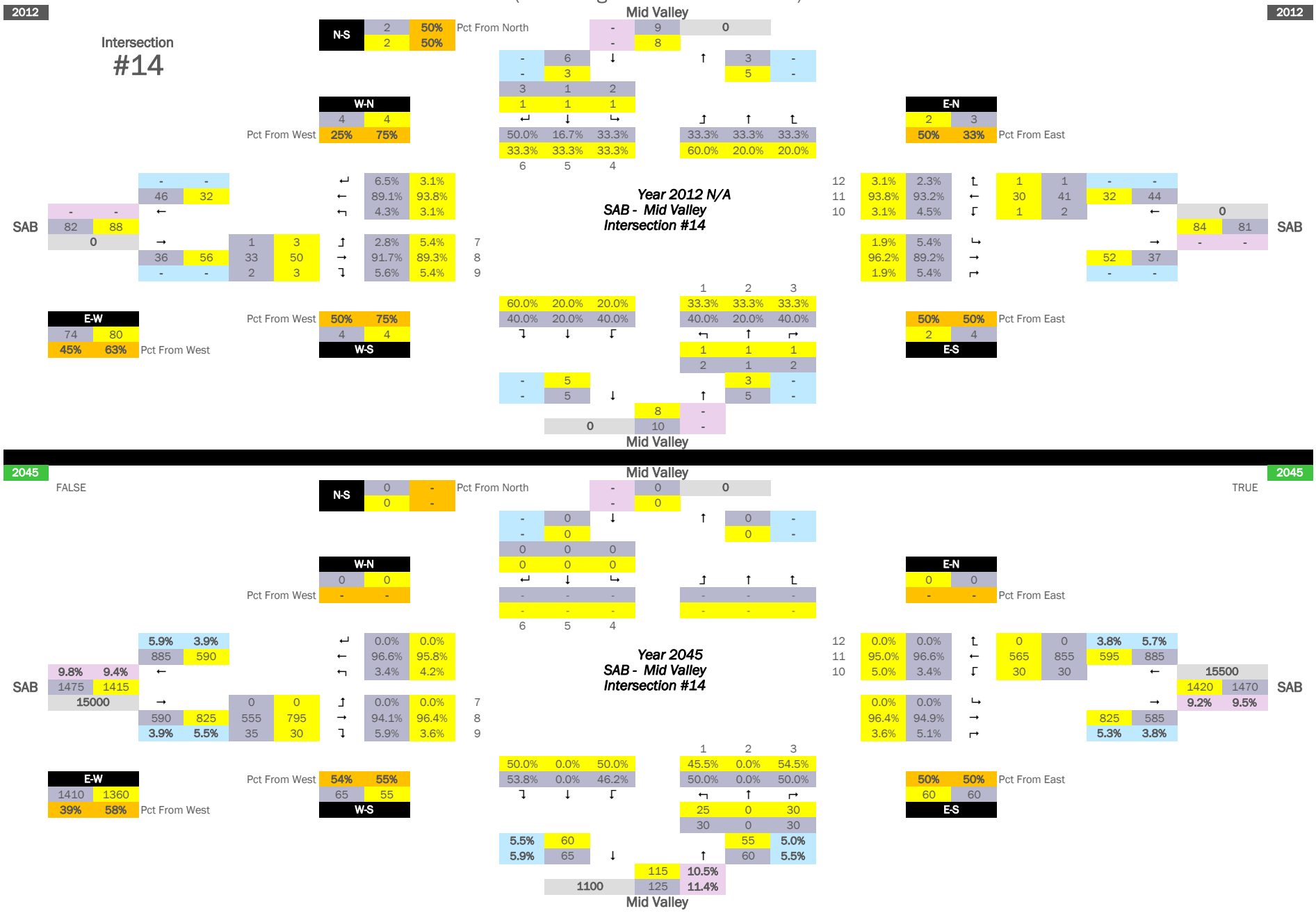


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

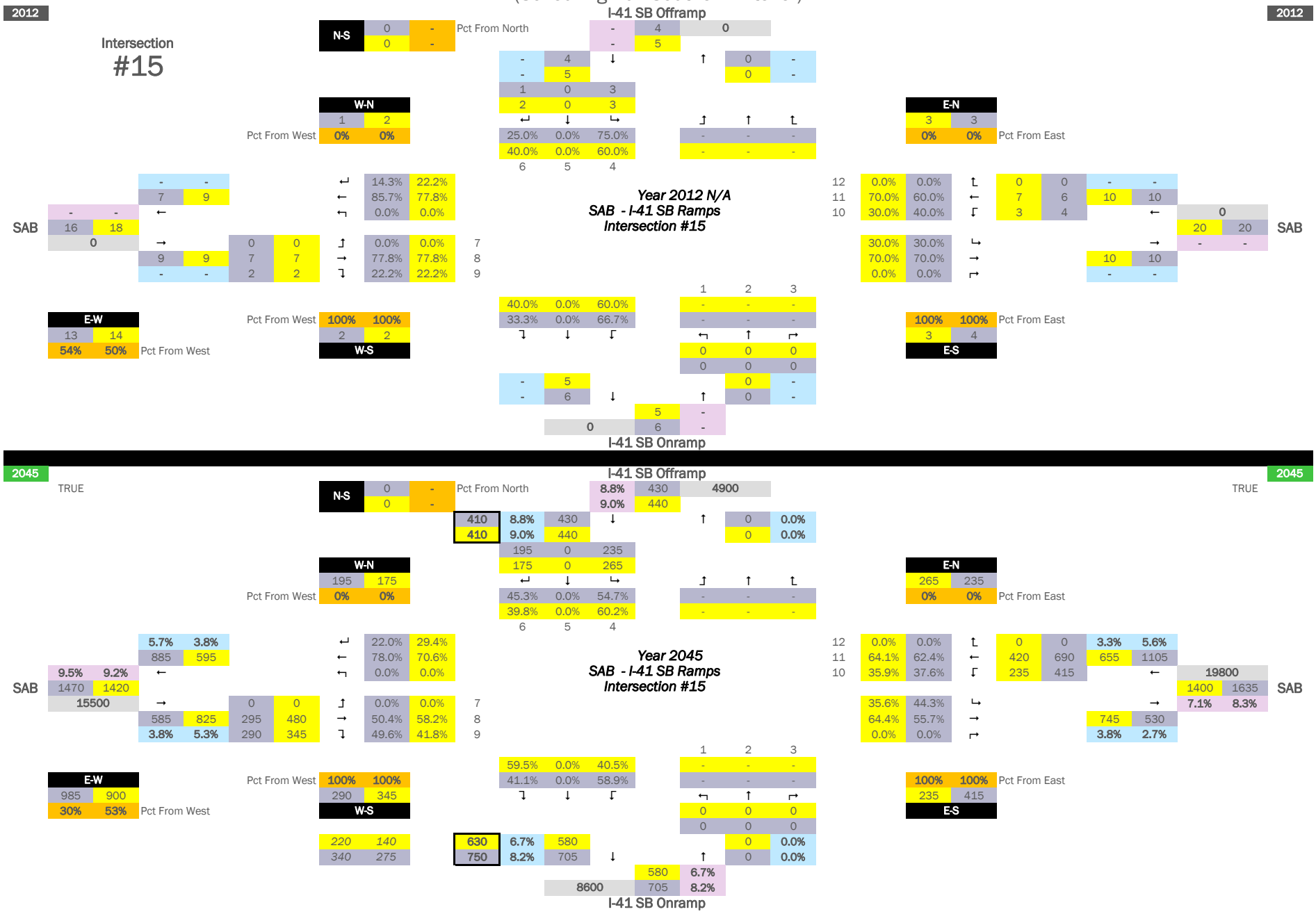


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements Without Mid Valley Drive
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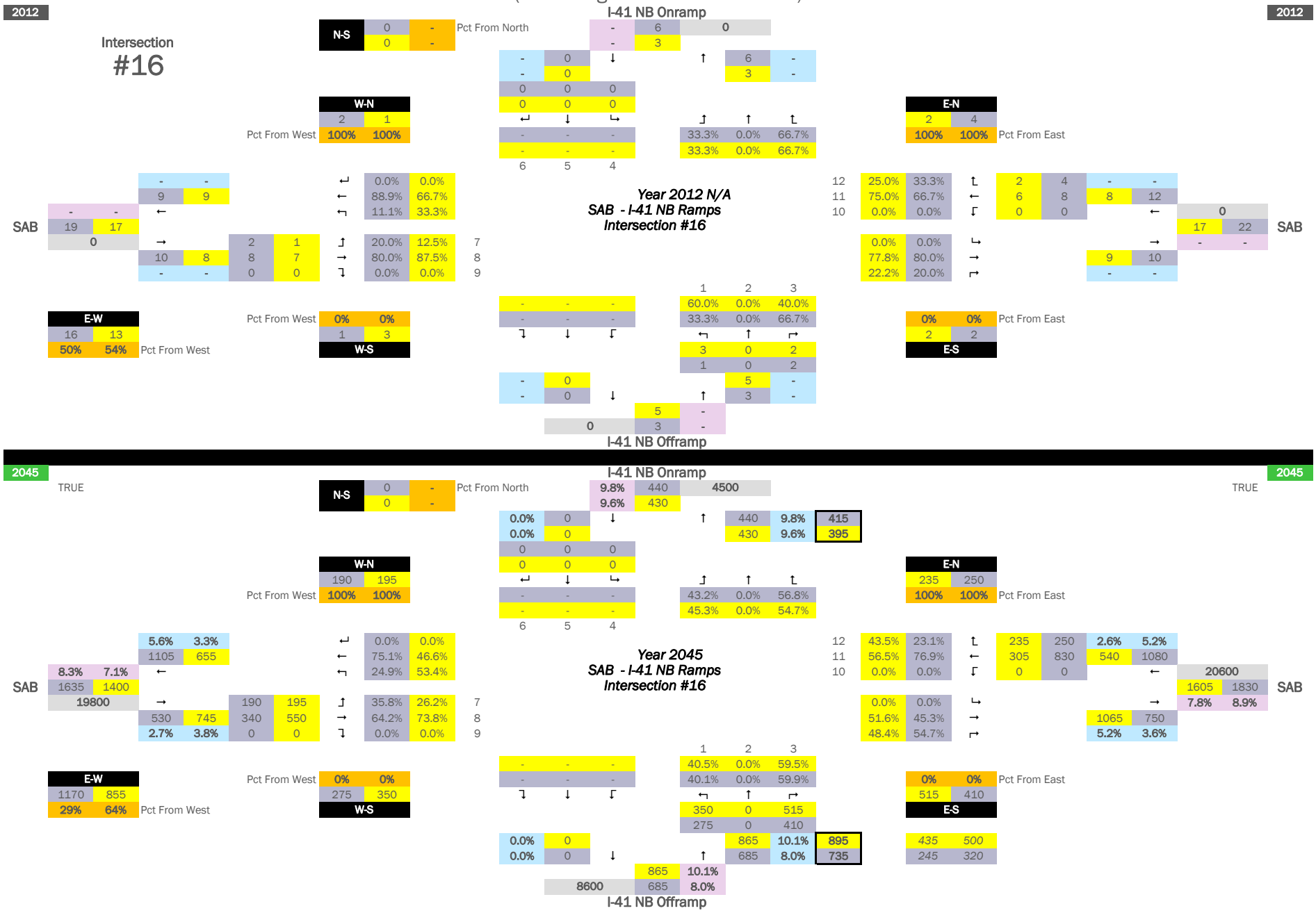


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

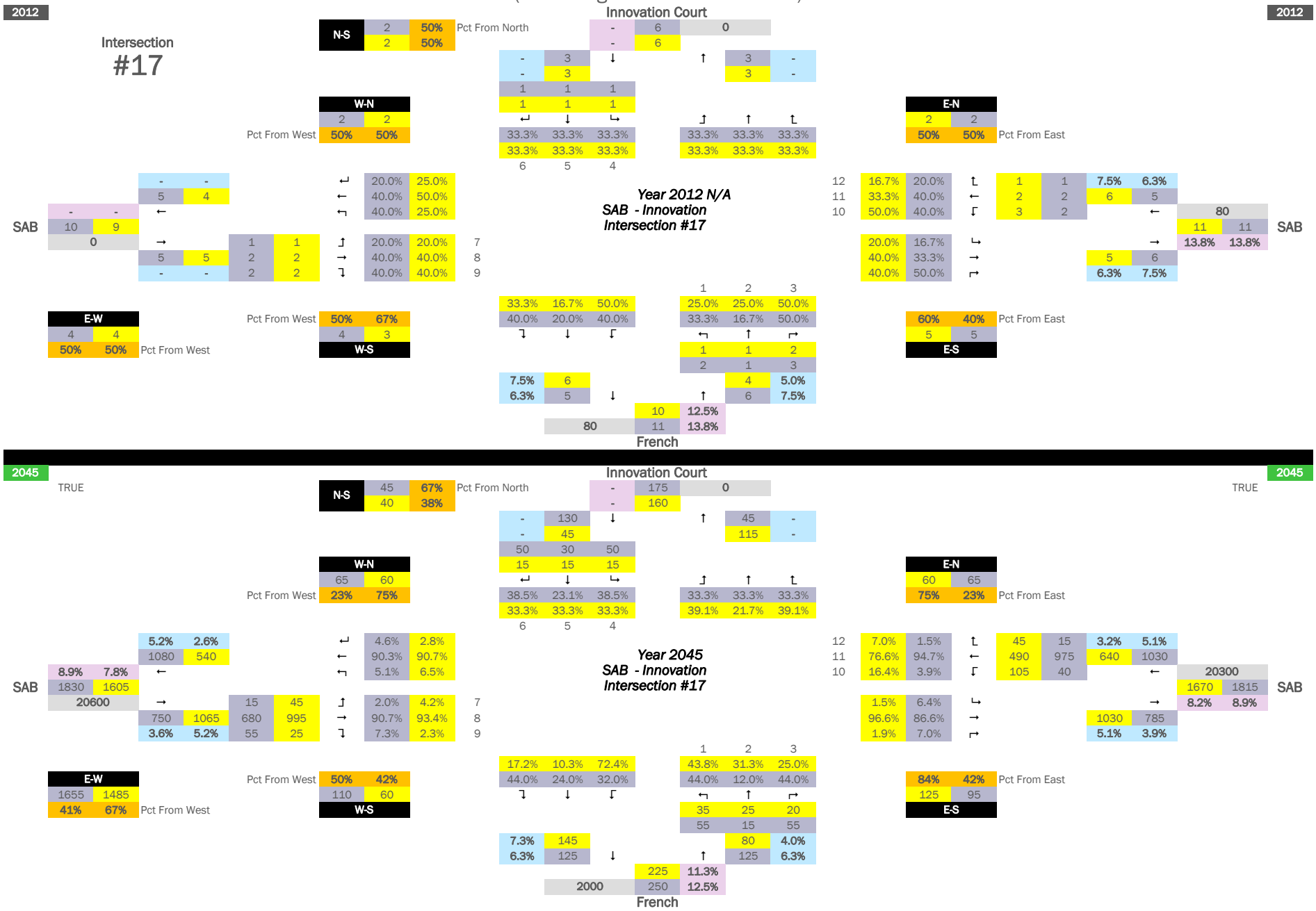
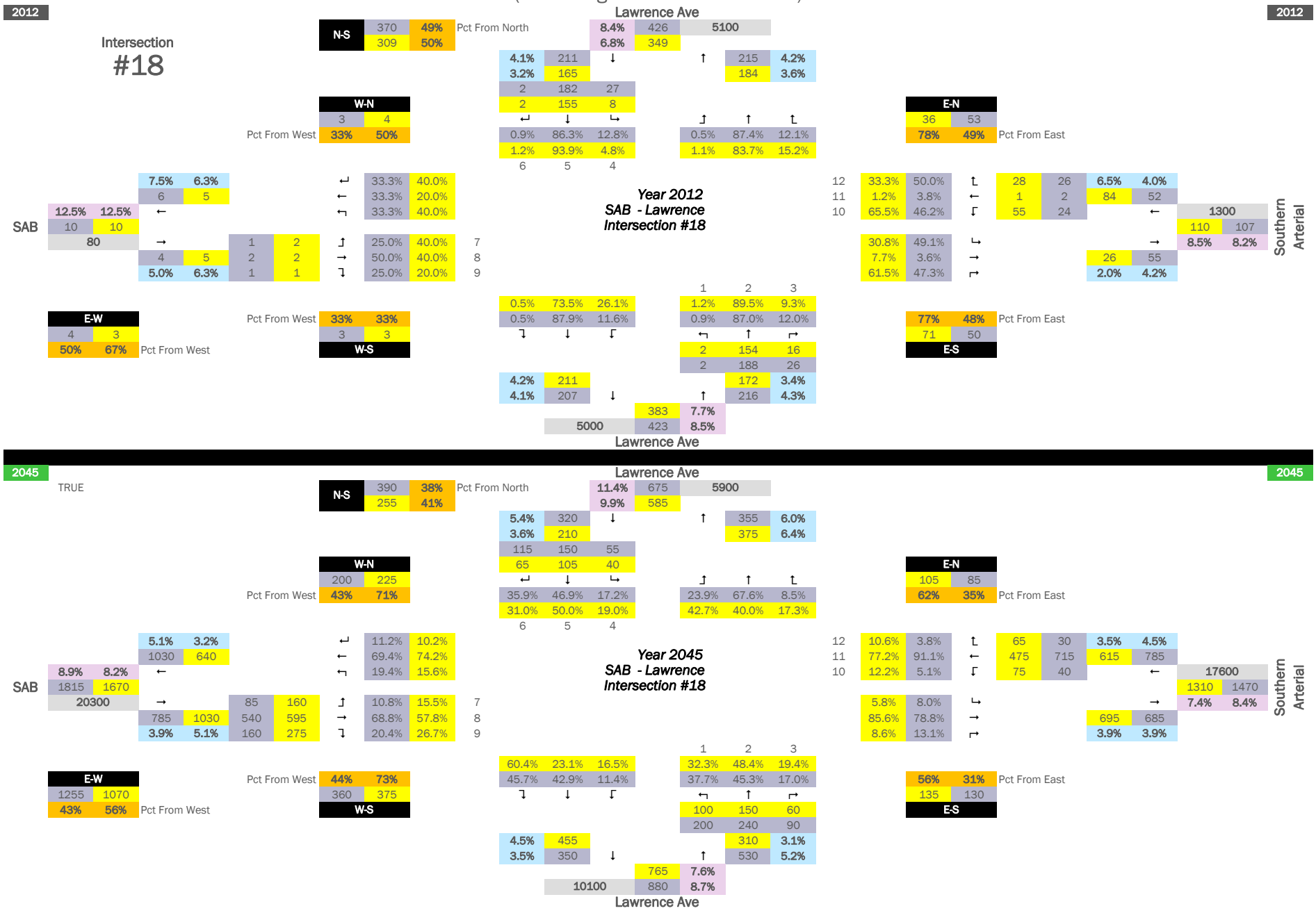


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)



Alternative 2B Without Mid Valley Drive

Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

		2012 Base Year Peak Hour				2045 Alt 2B (Mainline / Ramps)			
Site ID	Road Name	AM SB	AM NB	PM SB	PM NB	AM SB	AM NB	PM SB	PM NB
05-0380	**I-41 BTWN CTH G & ONEIDA DEPERE - HPMS**	2,872	2,705	2,859	3,199	3,940	3,690	3,780	4,540
05-1583	RAMP FROM I-41 NB TO CTH G		251		219		305		270
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05-1580	RAMP FROM I-41 SB TO CTH G	711		568		1,065		865	
05-1582	RAMP FROM CTH G TO I-41 NB		542		788		735		1,160
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0110	**I-41 NORTH OF CTH F - DE PERE #2**	2,654	3,026	3,041	2,955	3,500	3,960	3,850	4,020
05-1601	RAMP FROM I-41 NB TO CTH F		362		254		240		215
05-1600	RAMP FROM CTH F TO I-41 SB	233		286		300		300	
05-1598	RAMP FROM I-41 SB TO CTH F	966		615		1,555		1,120	
05-1599	RAMP FROM CTH F TO I-41 NB		711		1,183		1,240		1,795
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
99-0015	**New I-41 BFS North of SAB**	1,921	2,677	2,712	2,026	2,245	2,960	3,030	2,440
99-0004	SAB Ramp from I-41 NB		0		0		880		680
99-0003	SAB Ramp to I-41 SB	0		0		605		760	
99-0002	SAB Ramp from I-41 SB	0		0		200		230	
99-0001	SAB Ramp to I-41 NB		0		0		190		200
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0109	**I-41 NORTH OF CTH S INTERCHANGE HPMS**	1,921	2,677	2,712	2,026	2,650	3,650	3,560	2,920
05-1755	RAMP FROM I-41 NB TO CTH S		123		133		190		185
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05-1753	RAMP FROM I-41 SB TO CTH S	163		280		295		480	
05-1752	RAMP FROM CTH S TO I-41 NB		320		186		530		315
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0001	**I-41 - 1.5 MI NE OF OUTAGAMIE COUNTY LINE - DE PERE**	1,923	2,480	2,612	1,973	2,600	3,310	3,360	2,790

Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

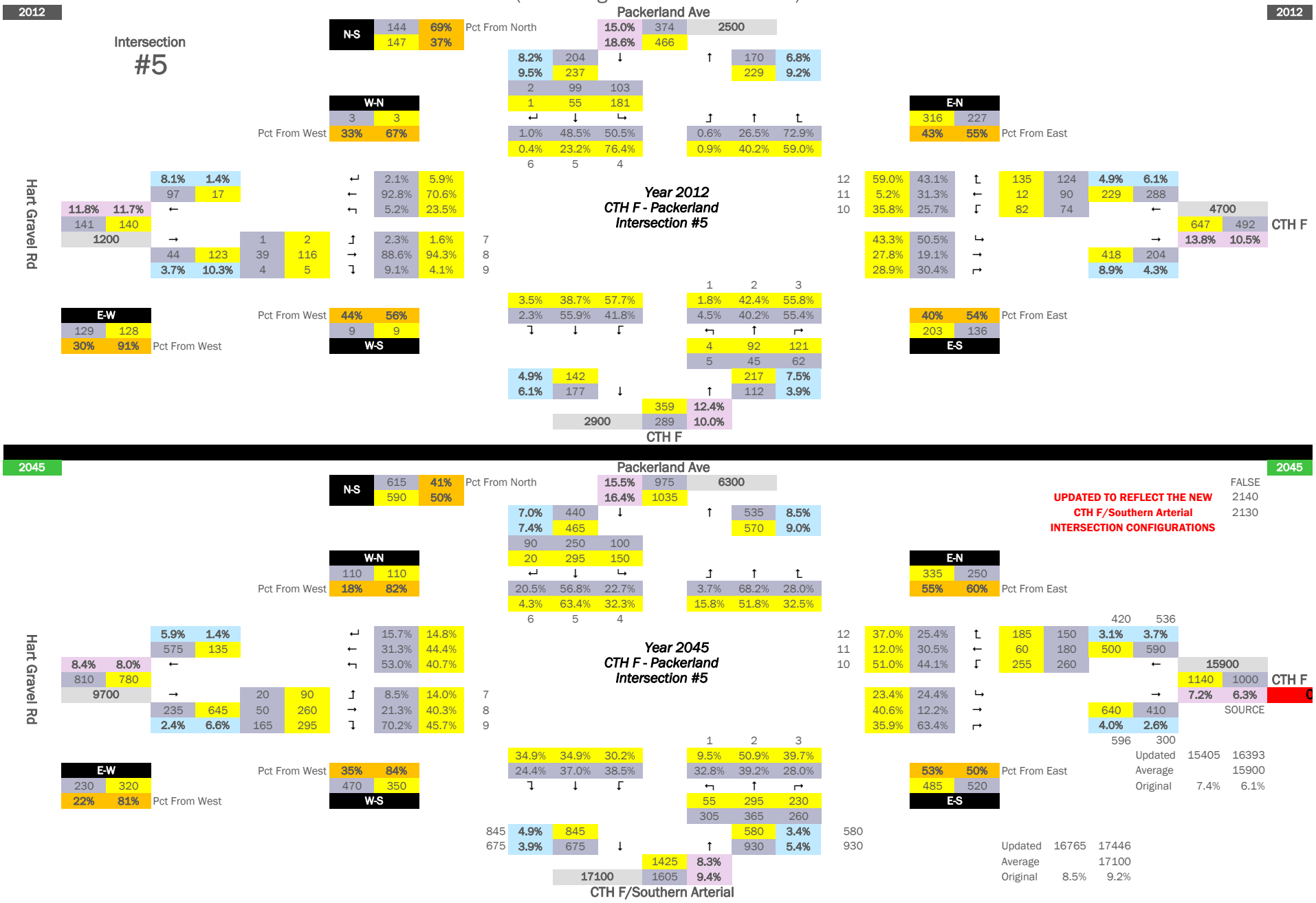


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

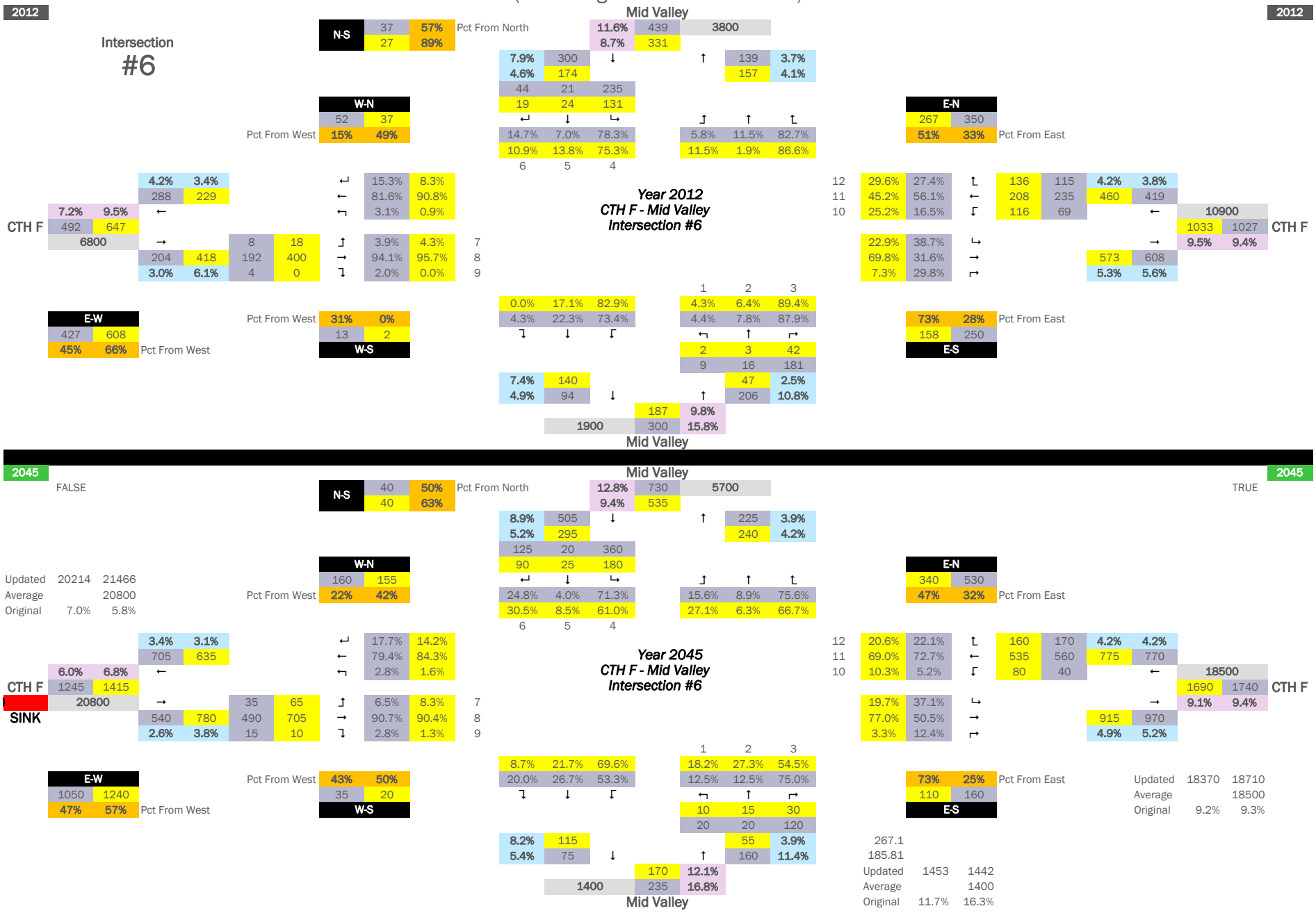


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

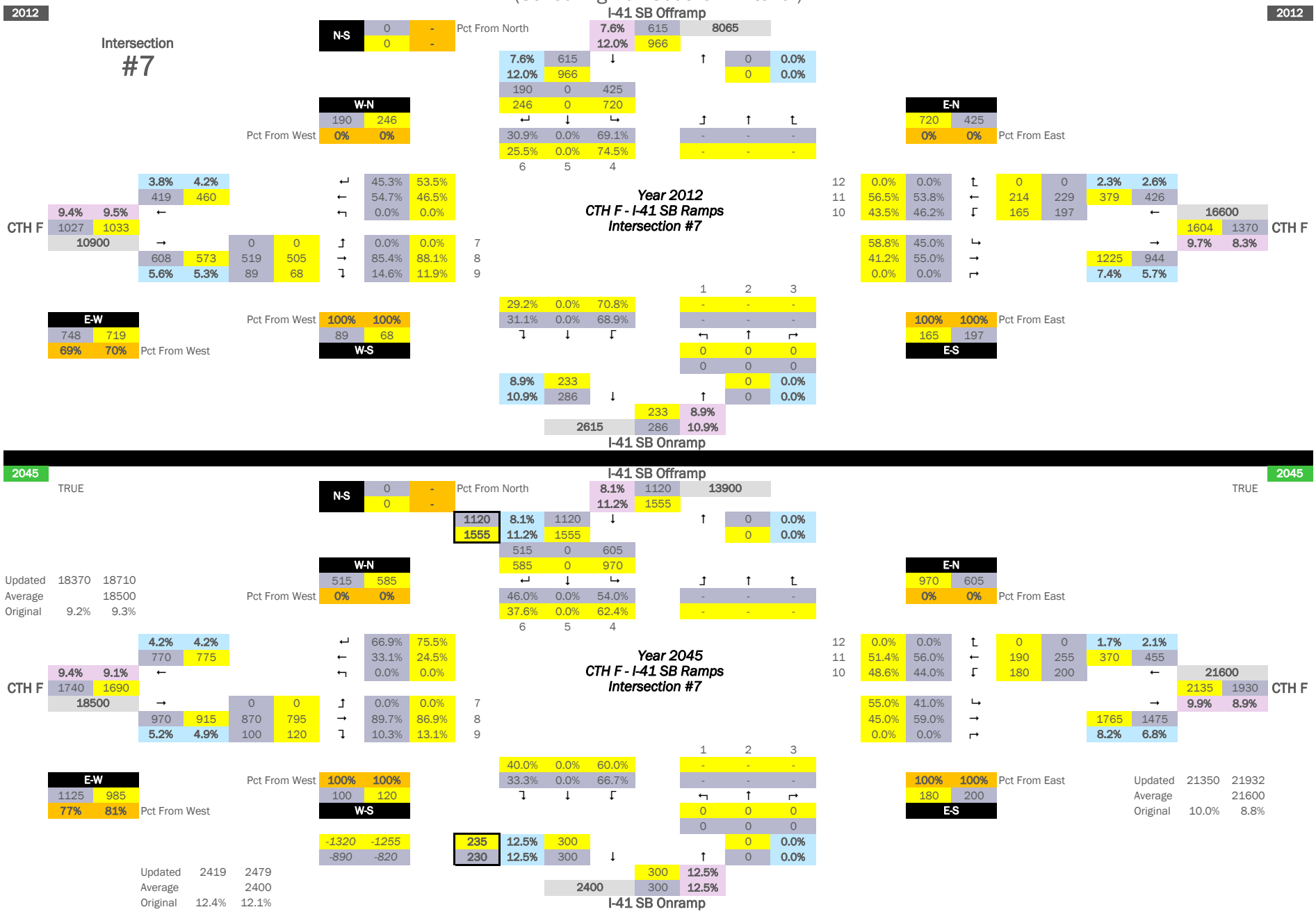


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

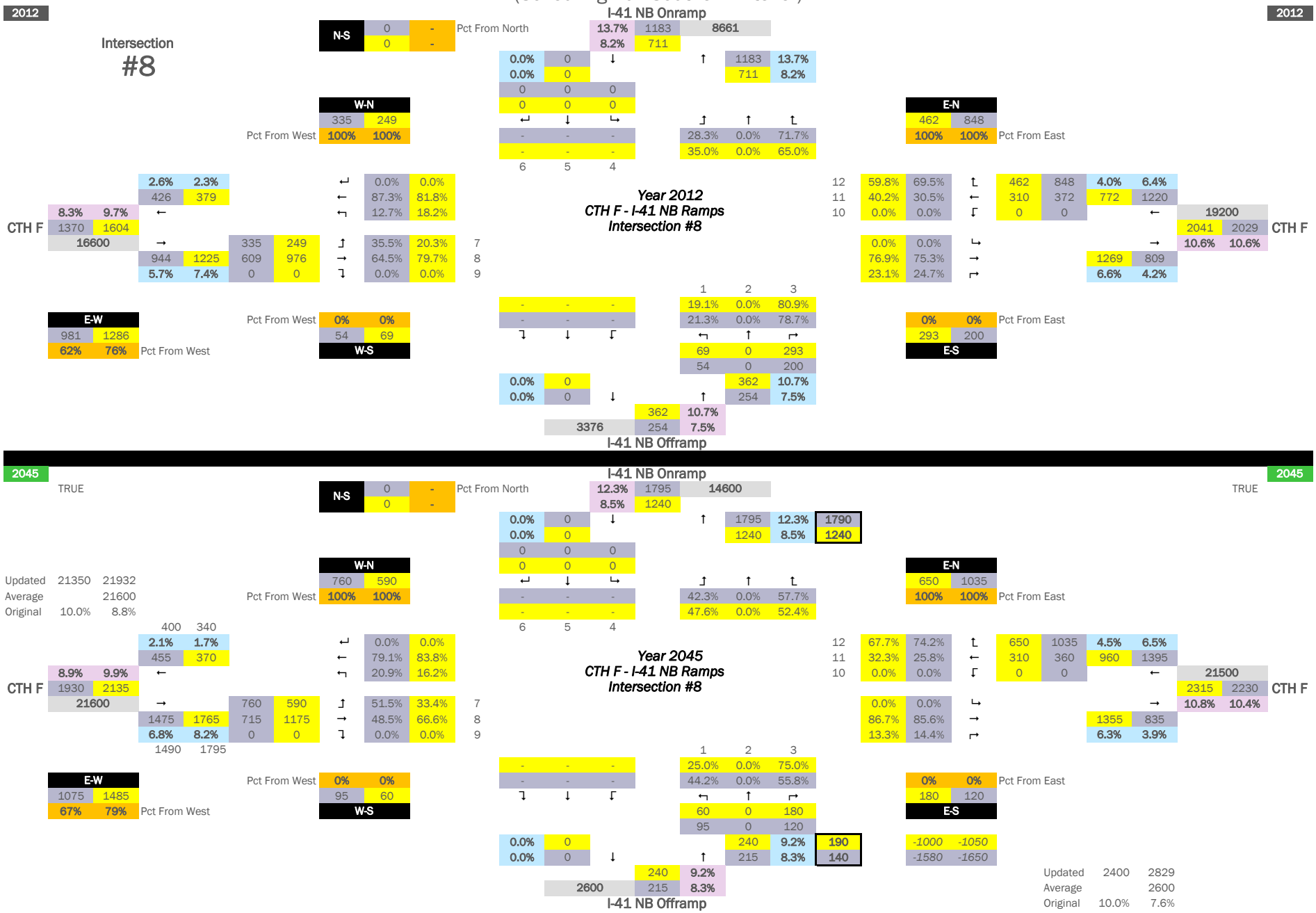


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

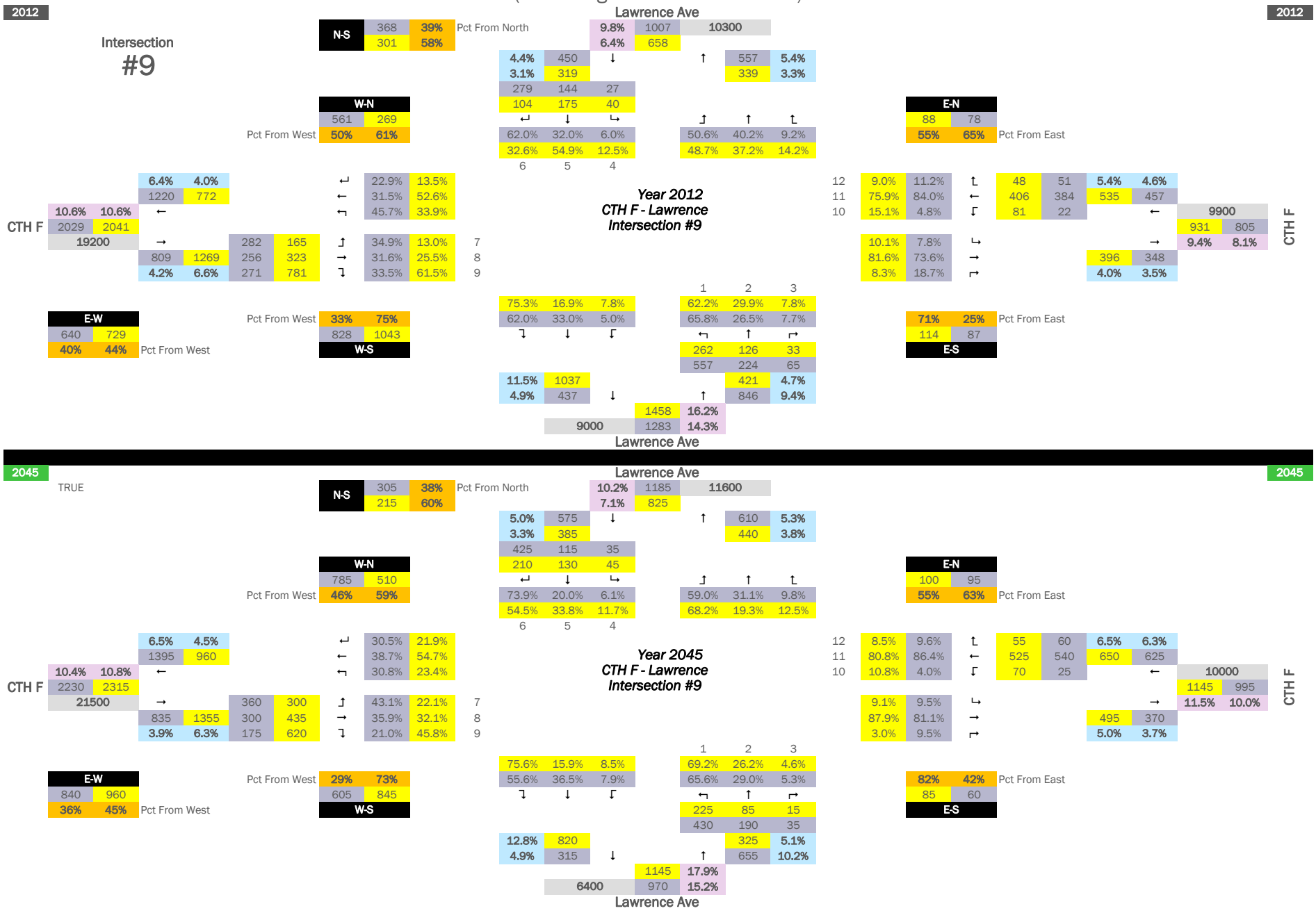
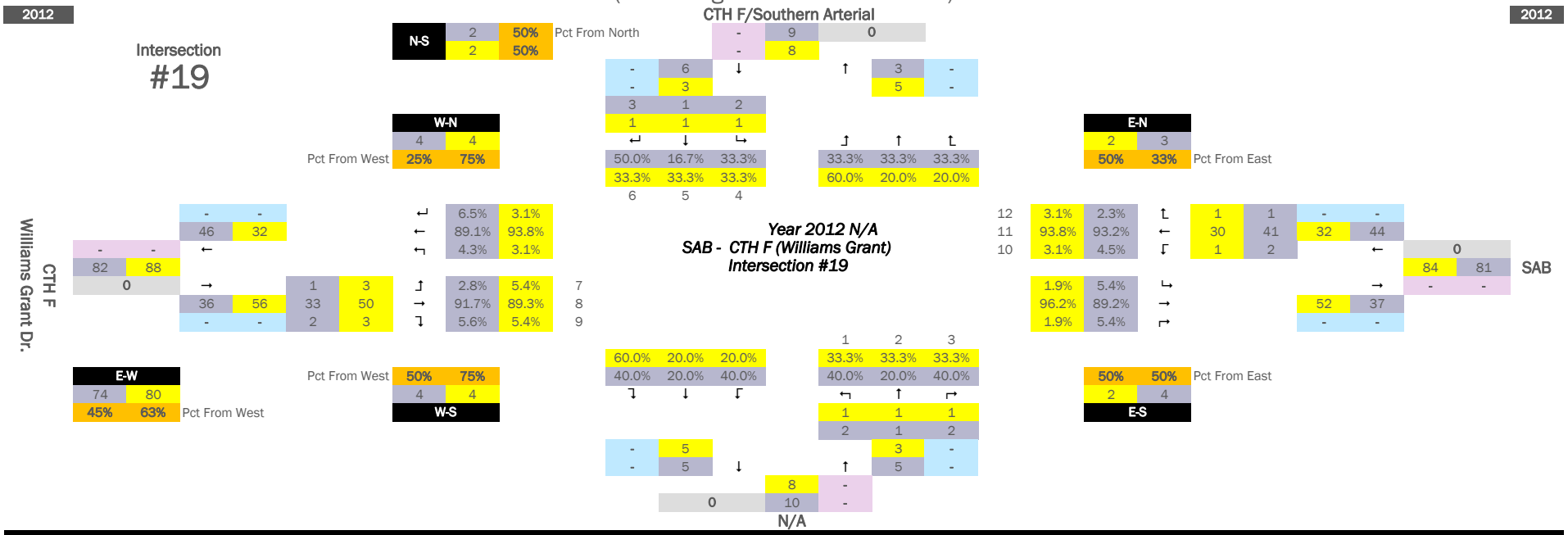


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)



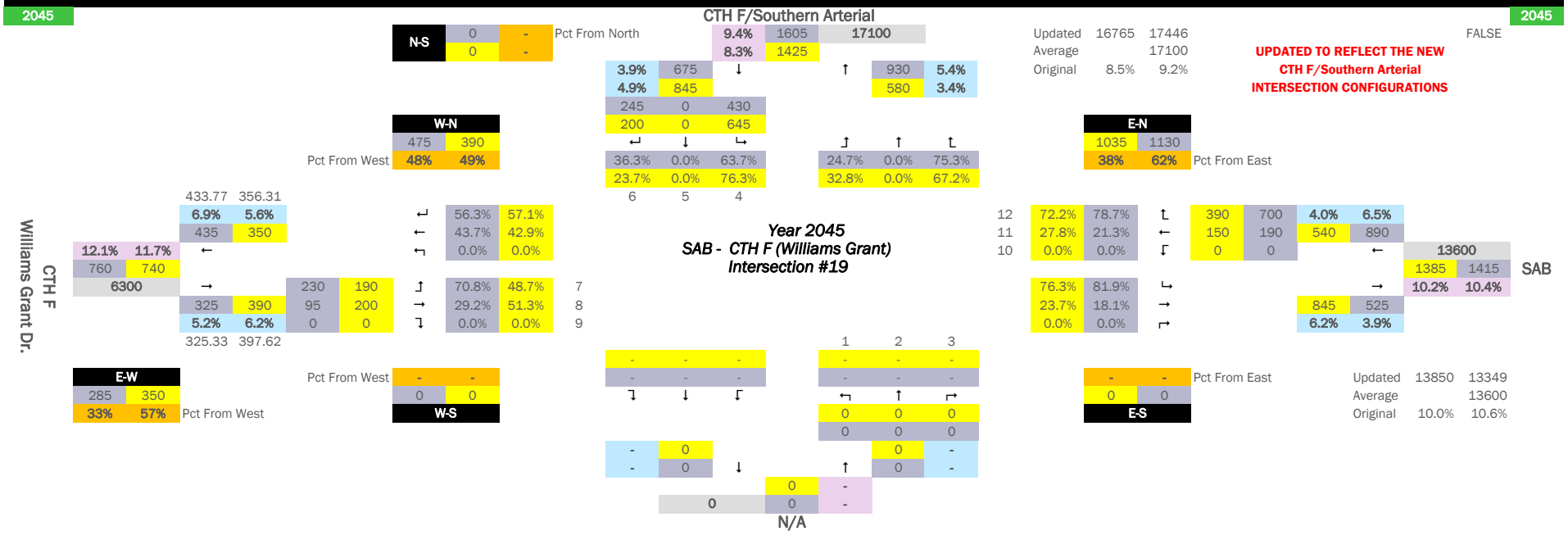


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

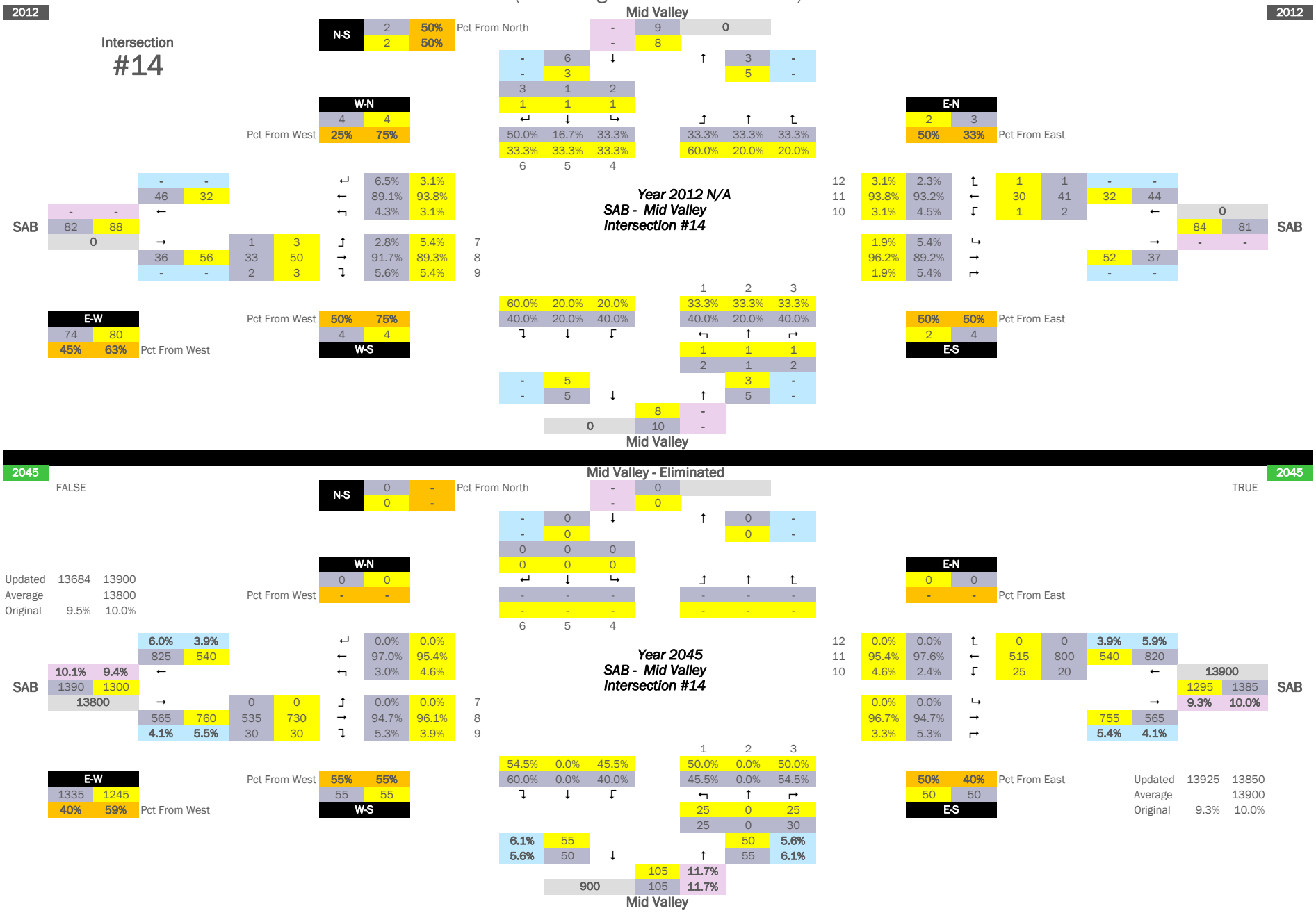


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

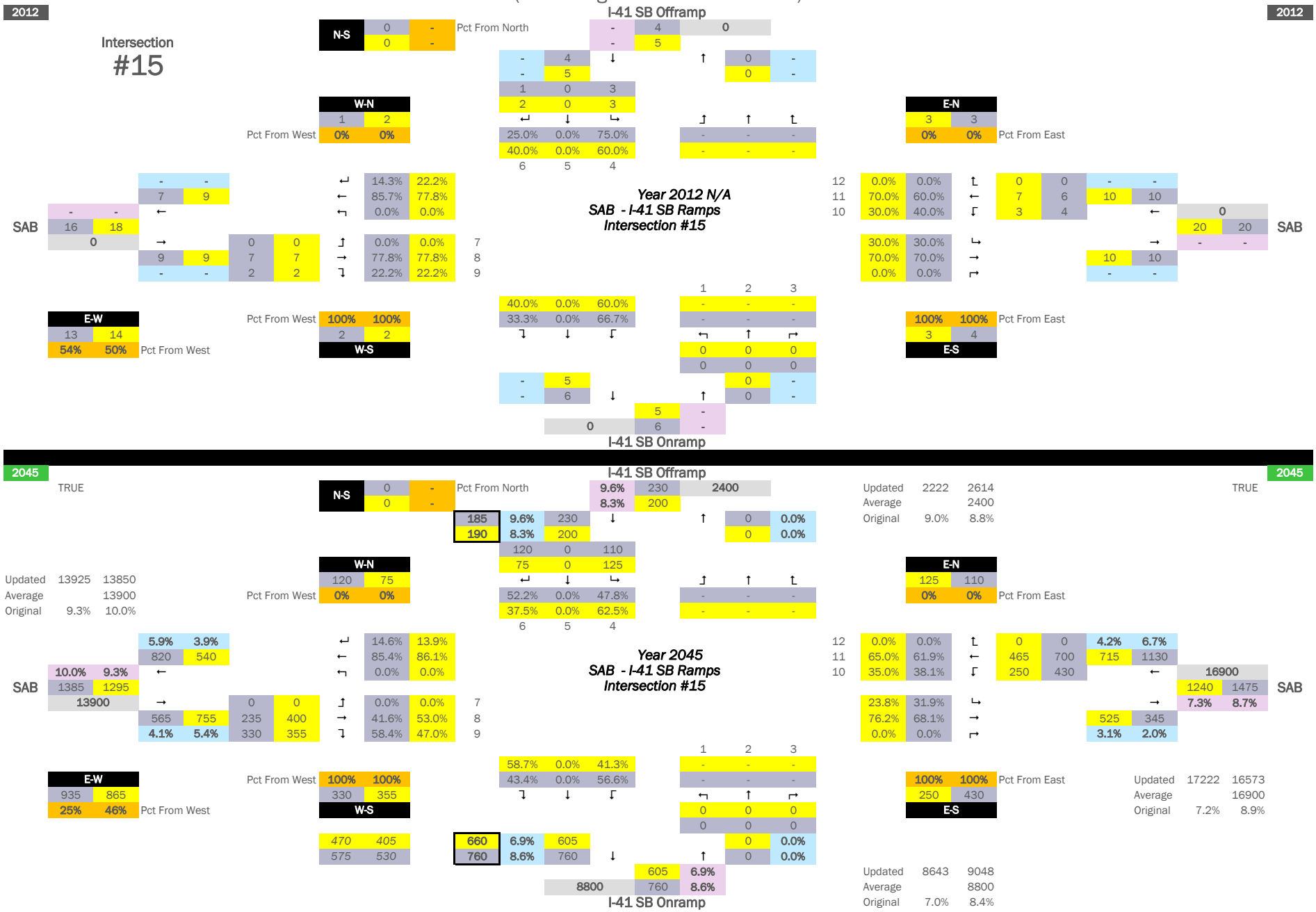


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Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

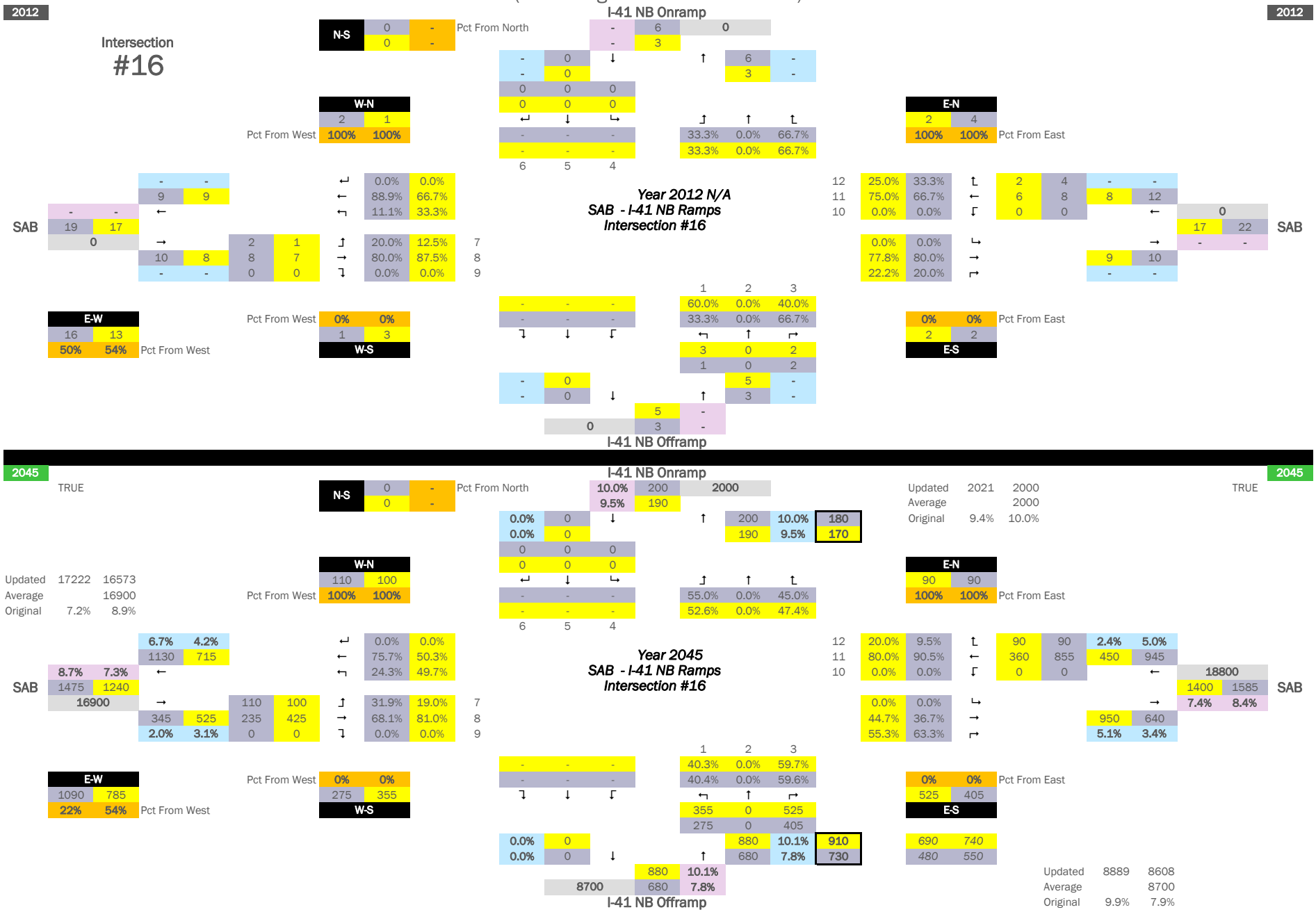


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Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)

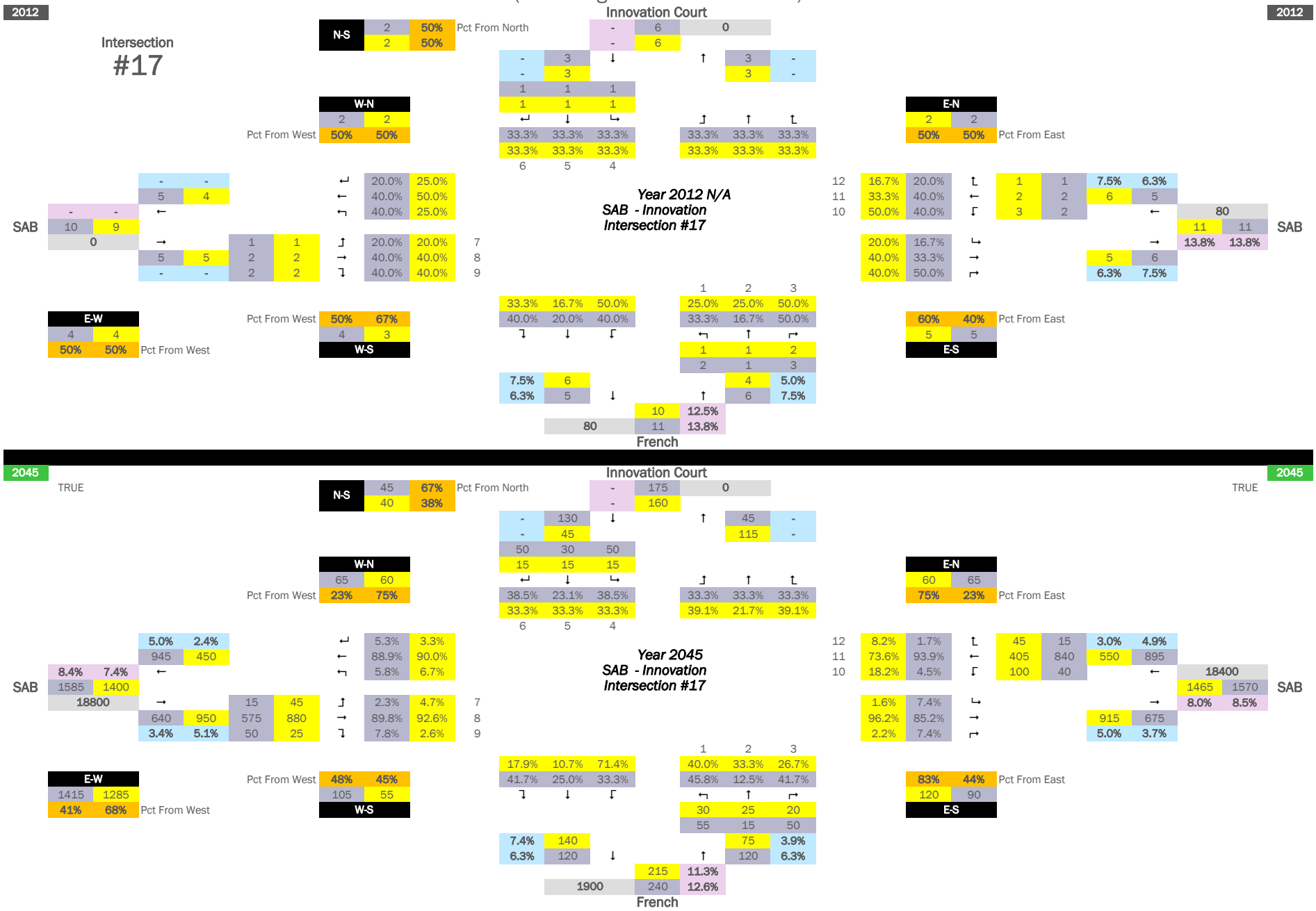
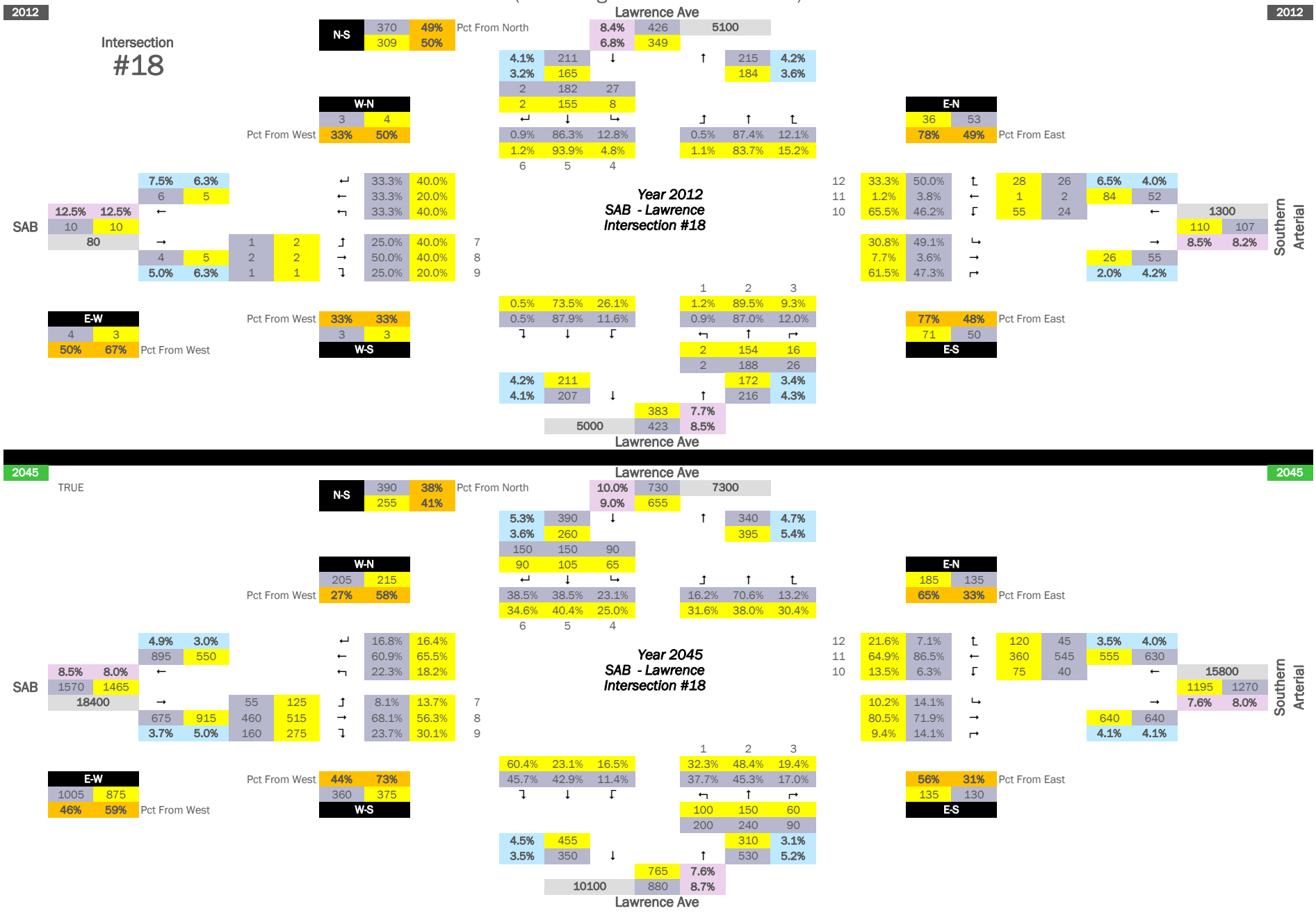


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements Without Mid Valley Drive
(Scheuring Rd - Southern Arterial)



Appendix C

Peak Hour Forecasts

With Mid Valley Drive

(excerpt from the September 2016 Traffic Forecast Summary, Brown County Southern Arterial Project Technical Memorandum)

Alternative 2A With Mid Valley Drive

Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

Site ID	Road Name	2012 Base Year Peak Hour				2045 Alt 2A (Mainline / Ramps)			
		AM SB	AM NB	PM SB	PM NB	AM SB	AM NB	PM SB	PM NB
05-0380	**I-41 BTWN CTH G & ONEIDA DEPERE - HPMS**	2,872	2,705	2,859	3,199	3,910	3,660	3,740	4,500
05-1583	RAMP FROM I-41 NB TO CTH G		251		219		290		250
05-1581	RAMP FROM CTH G TO I-41 SB	184		211		255		290	
05-1087	BUS USH X41 SPUR FROM I-41 TO STH 32 DEPERE	309	612	539	325	365	725	635	385
05-1580	RAMP FROM I-41 SB TO CTH G	711		568		1,020		795	
05-1582	RAMP FROM CTH G TO I-41 NB		542		788		695		1,095
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0110	**I-41 NORTH OF CTH F - DE PERE #2**	2,654	3,026	3,041	2,955	3,510	3,980	3,870	4,040
05-1601	RAMP FROM I-41 NB TO CTH F		362		254		260		190
05-1600	RAMP FROM CTH F TO I-41 SB	233		286		310		310	
05-1598	RAMP FROM I-41 SB TO CTH F	966		615		1,400		970	
05-1599	RAMP FROM CTH F TO I-41 NB		711		1,183		1,090		1,630
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
99-0015	**New I-41 BFS North of SAB**	1,921	2,677	2,712	2,026	2,420	3,150	3,210	2,600
99-0004	SAB Ramp from I-41 NB		0		0		895		735
99-0003	SAB Ramp to I-41 SB	0		0		630		750	
99-0002	SAB Ramp from I-41 SB	0		0		410		410	
99-0001	SAB Ramp to I-41 NB		0		0		395		415
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0109	**I-41 NORTH OF CTH S INTERCHANGE HPMS**	1,921	2,677	2,712	2,026	2,640	3,650	3,550	2,920
05-1755	RAMP FROM I-41 NB TO CTH S		123		133		200		195
05-1754	RAMP FROM CTH S TO I-41 SB	165		180		250		280	
05-1753	RAMP FROM I-41 SB TO CTH S	163		280		290		470	
05-1752	RAMP FROM CTH S TO I-41 NB		320		186		530		315
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0001	**I-41 - 1.5 MI NE OF OUTAGAMIE COUNTY LINE - DE PERE**	1,923	2,480	2,612	1,973	2,600	3,320	3,360	2,800

Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

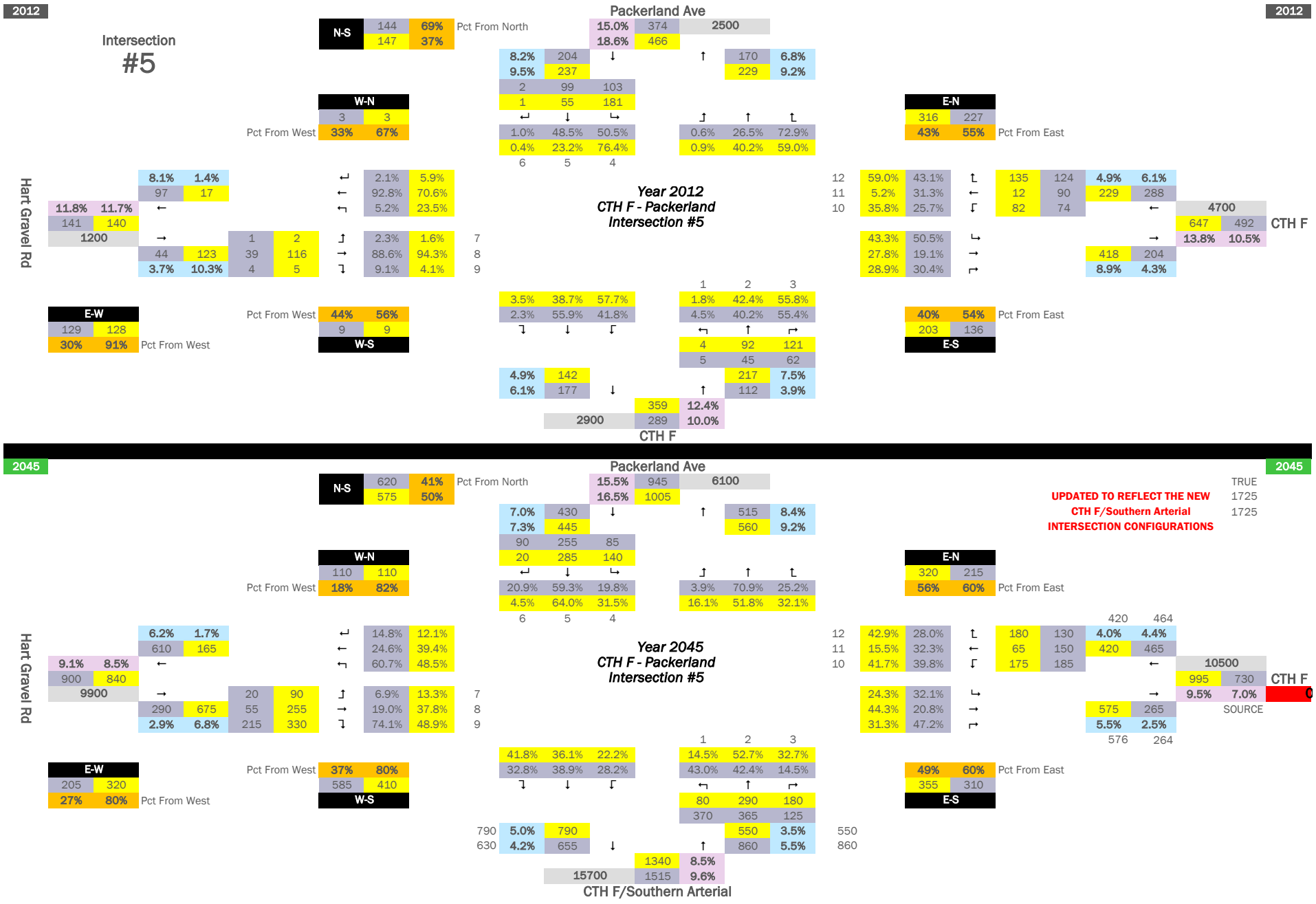


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

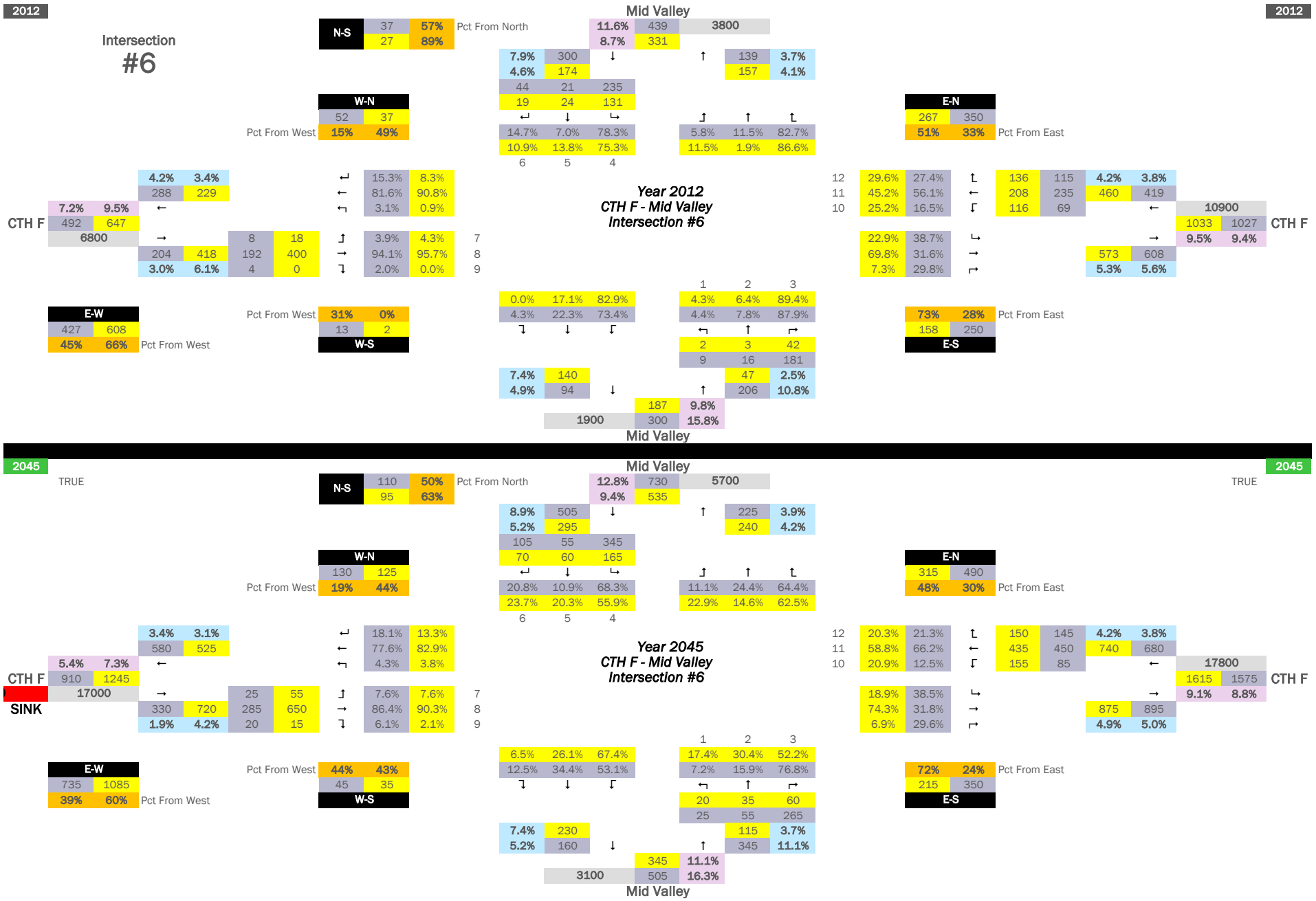


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

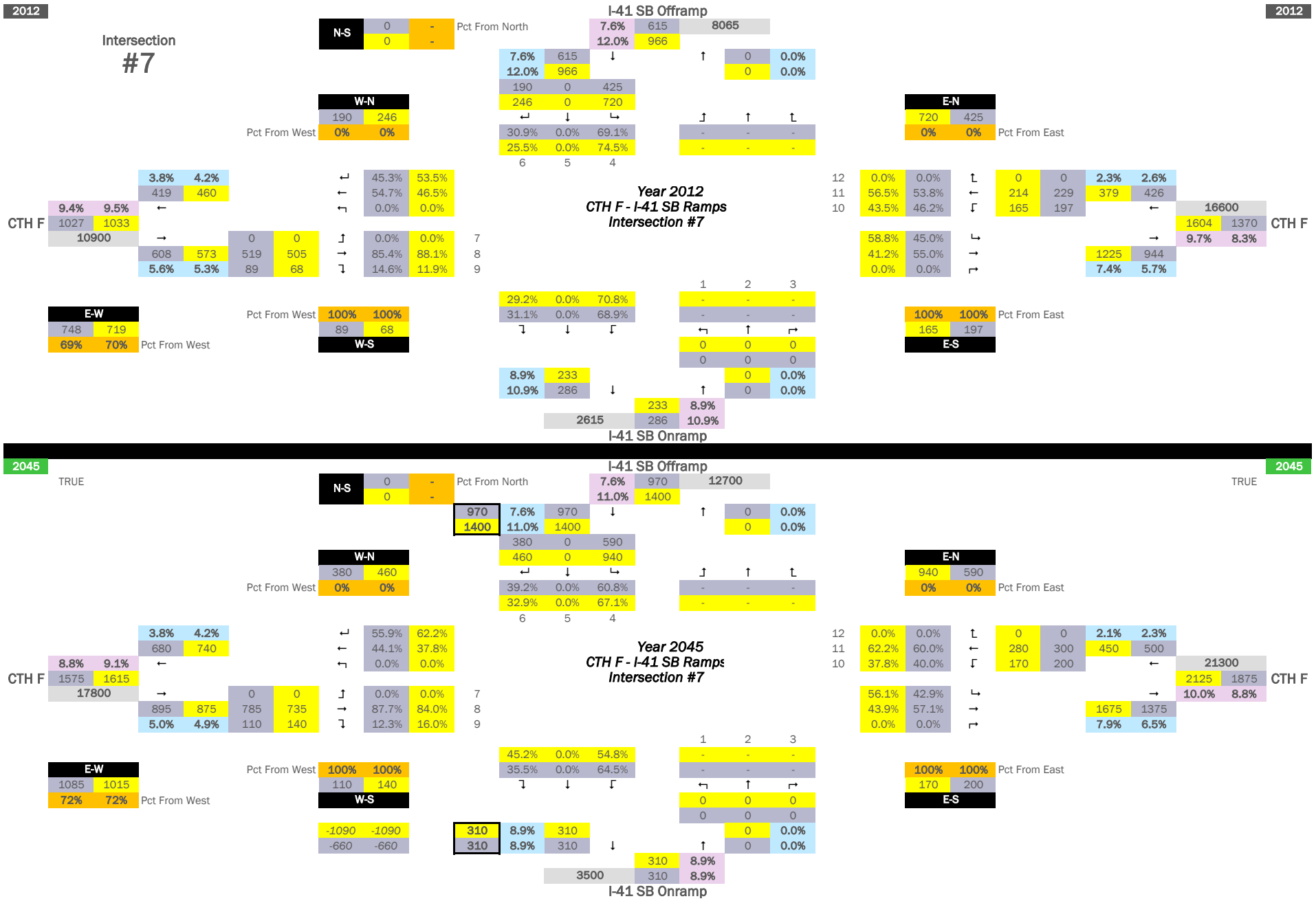


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

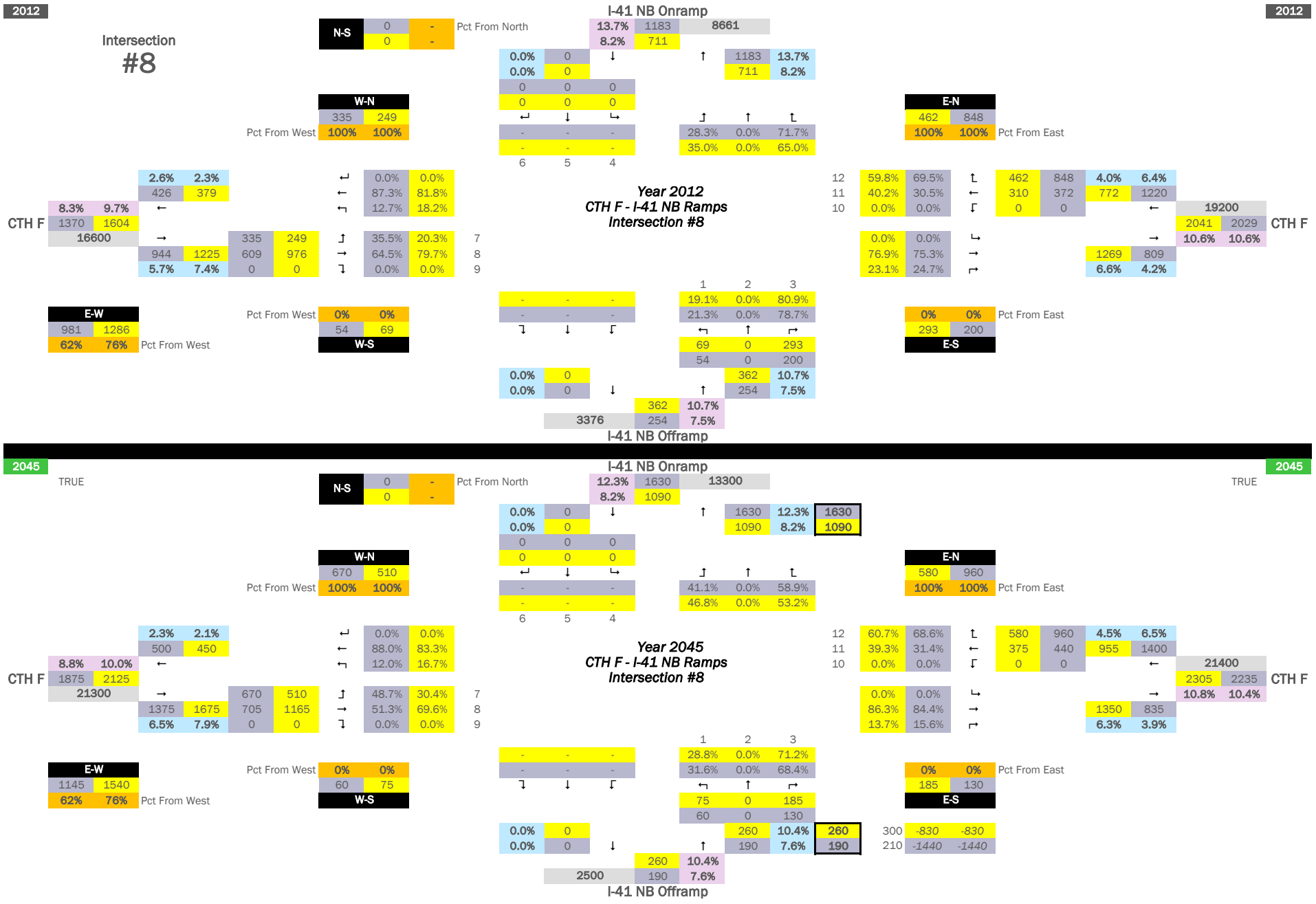


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

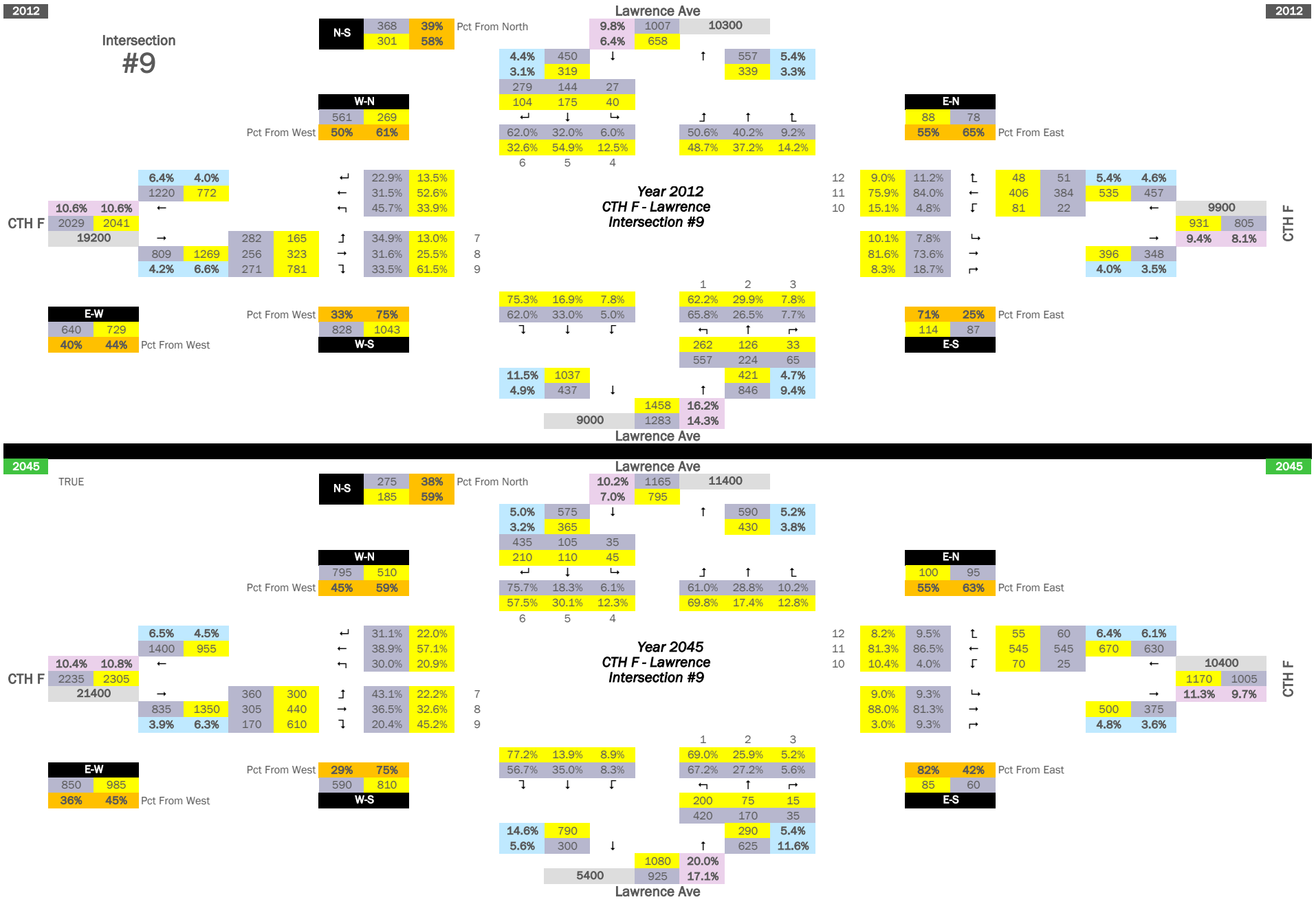


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

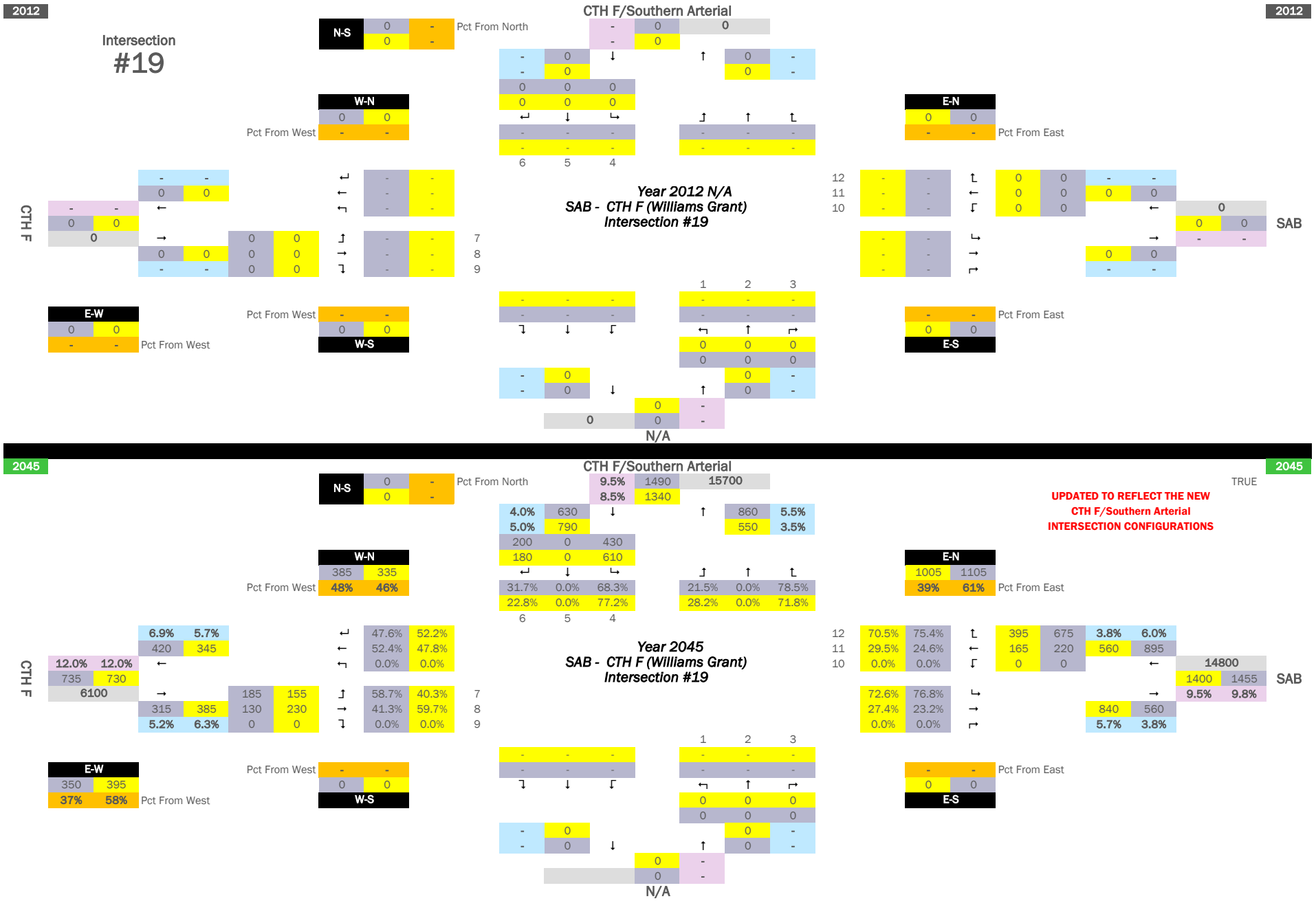


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

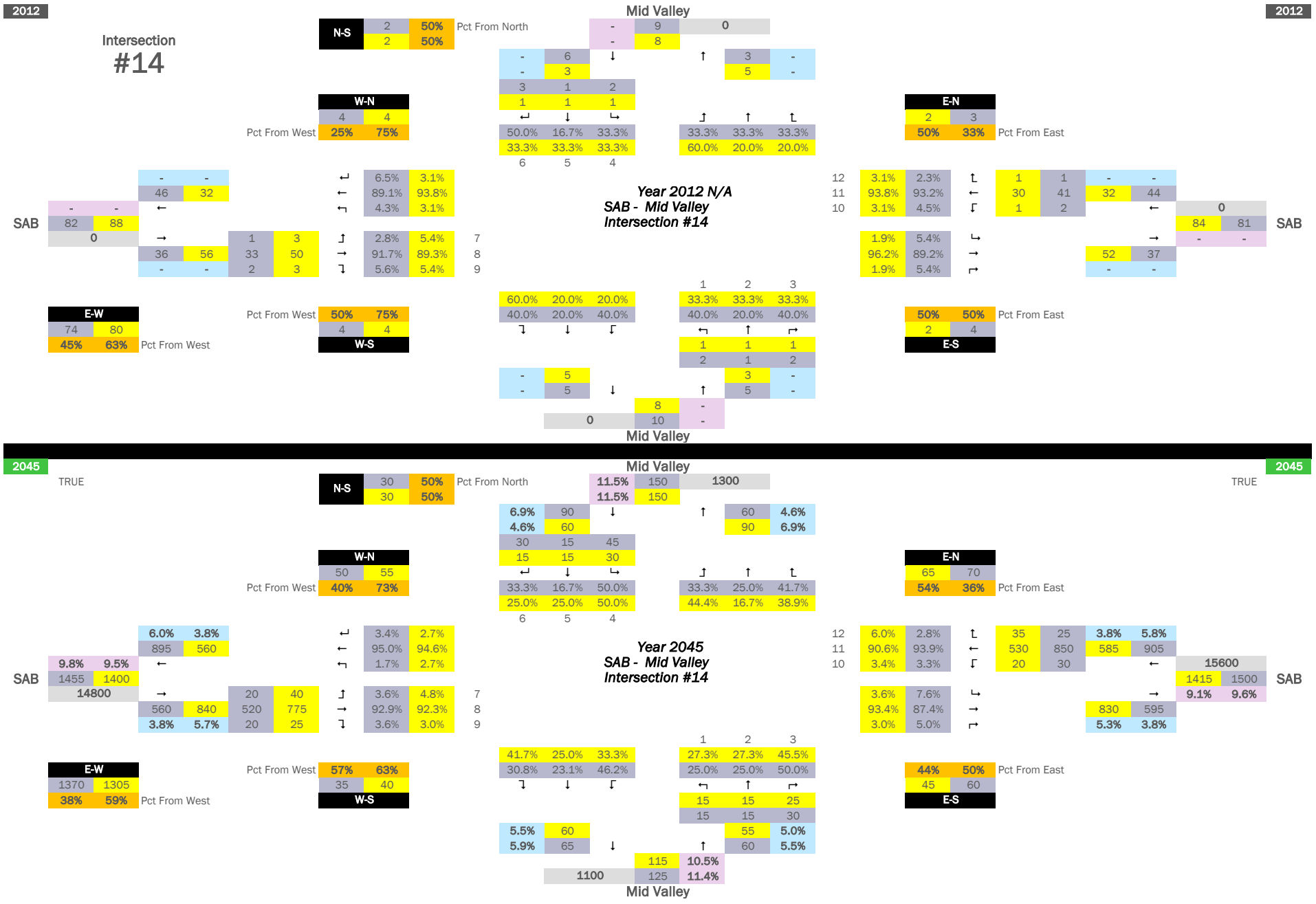


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

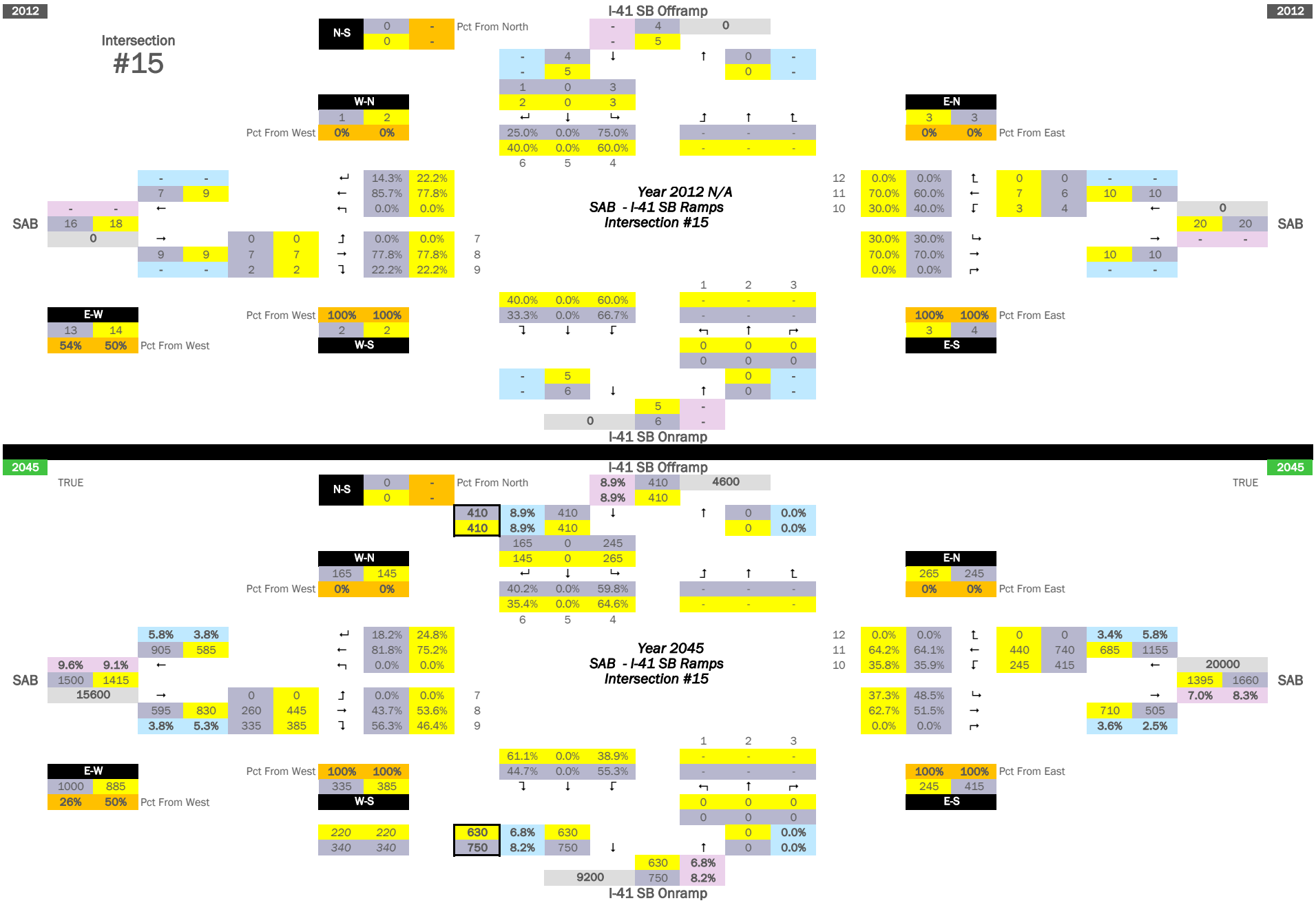


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

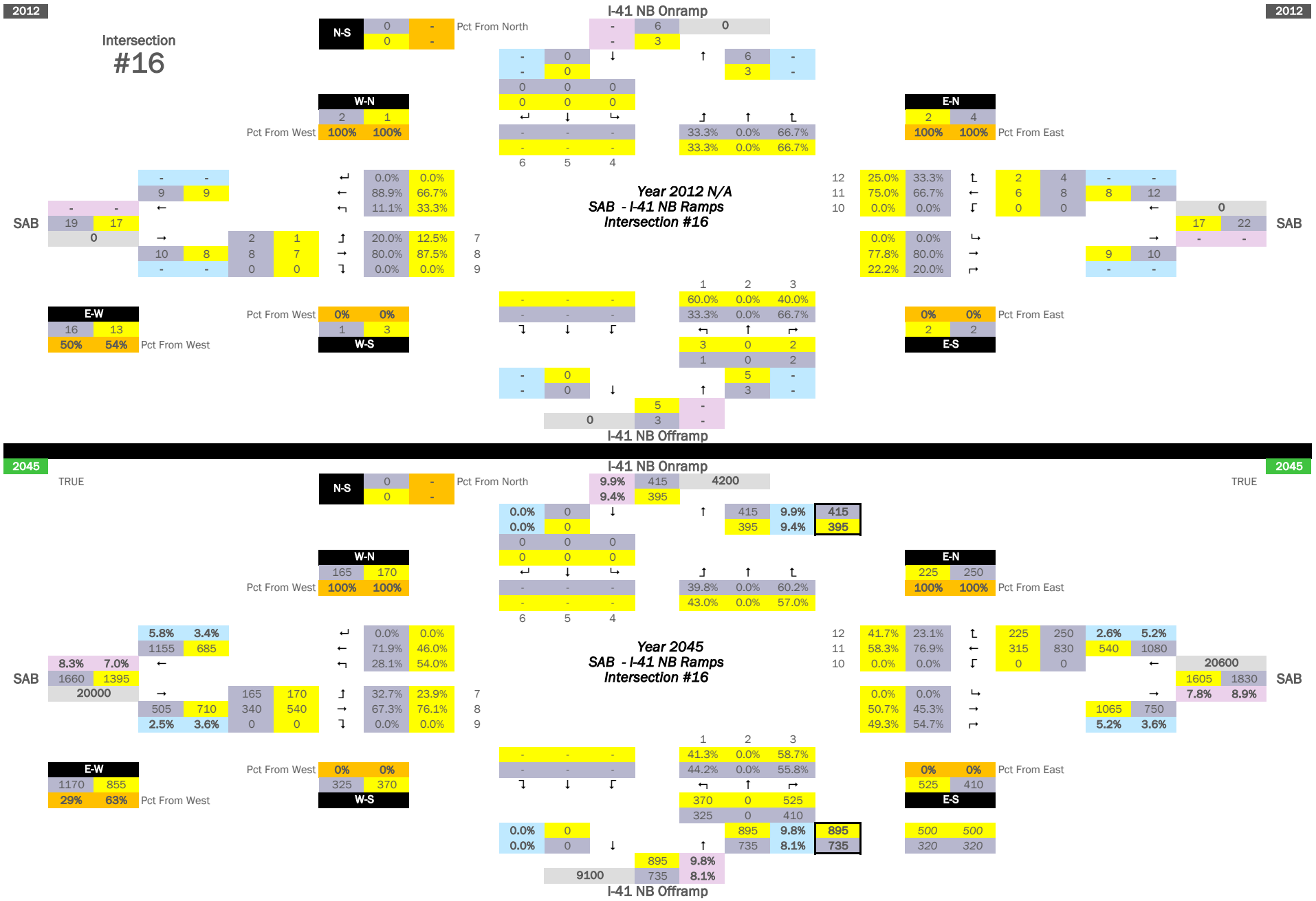


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements

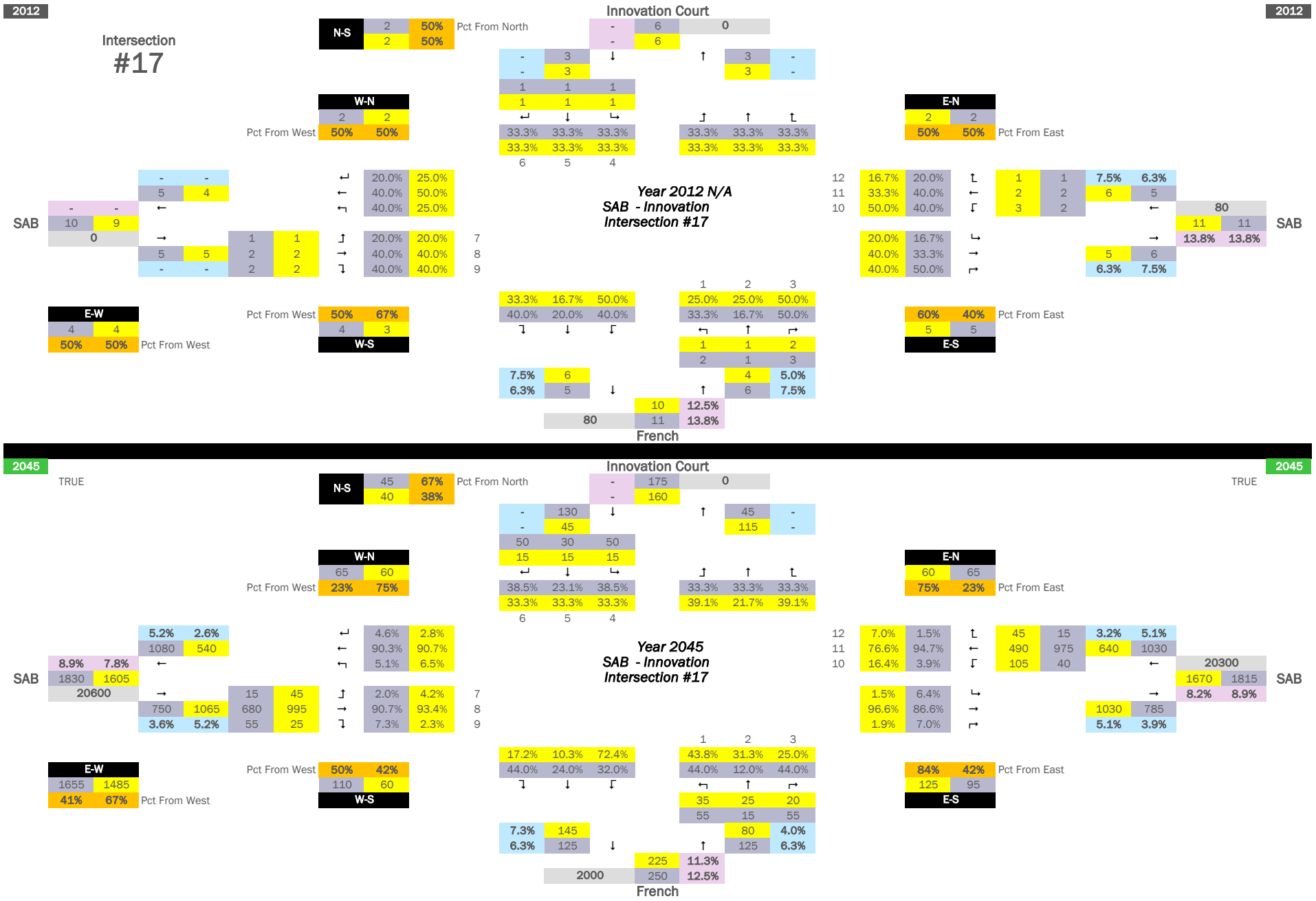
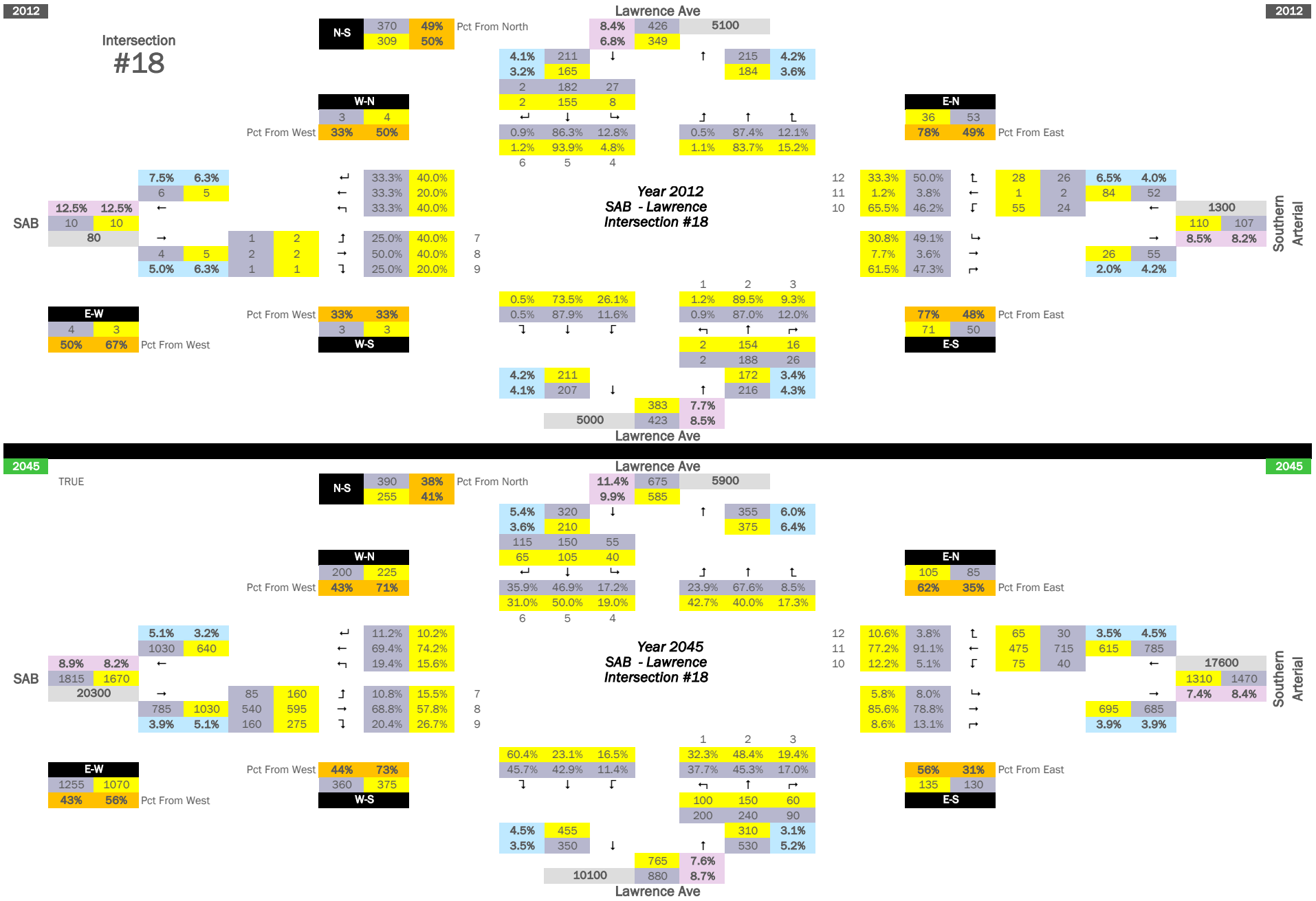


Figure 2A
I-41 Southern Arterial
Alternative 2A Turning Movements



Alternative 2B With Mid Valley Drive

Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

Site ID	Road Name	2012 Base Year Peak Hour				2045 Alt 2B (Mainline / Ramps)			
		AM SB	AM NB	PM SB	PM NB	AM SB	AM NB	PM SB	PM NB
05-0380	**I-41 BTWN CTH G & ONEIDA DEPERE - HPMS**	2,872	2,705	2,859	3,199	3,940	3,690	3,780	4,540
05-1583	RAMP FROM I-41 NB TO CTH G		251		219		305		270
05-1581	RAMP FROM CTH G TO I-41 SB	184		211		270		320	
05-1087	BUS USH X41 SPUR FROM I-41 TO STH 32 DEPERE	309	612	539	325	355	700	615	370
05-1580	RAMP FROM I-41 SB TO CTH G	711		568		1,065		865	
05-1582	RAMP FROM CTH G TO I-41 NB		542		788		735		1,160
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0110	**I-41 NORTH OF CTH F - DE PERE #2**	2,654	3,026	3,041	2,955	3,500	3,960	3,850	4,020
05-1601	RAMP FROM I-41 NB TO CTH F		362		254		190		145
05-1600	RAMP FROM CTH F TO I-41 SB	233		286		235		230	
05-1598	RAMP FROM I-41 SB TO CTH F	966		615		1,555		1,120	
05-1599	RAMP FROM CTH F TO I-41 NB		711		1,183		1,240		1,795
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
99-0015	**New I-41 BFS North of SAB**	1,921	2,677	2,712	2,026	2,180	2,910	2,960	2,370
99-0004	SAB Ramp from I-41 NB		0		0		910		730
99-0003	SAB Ramp to I-41 SB	0		0		660		785	
99-0002	SAB Ramp from I-41 SB	0		0		190		185	
99-0001	SAB Ramp to I-41 NB		0		0		170		180
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0109	**I-41 NORTH OF CTH S INTERCHANGE HPMS**	1,921	2,677	2,712	2,026	2,650	3,650	3,560	2,920
05-1755	RAMP FROM I-41 NB TO CTH S		123		133		190		185
05-1754	RAMP FROM CTH S TO I-41 SB	165		180		245		280	
05-1753	RAMP FROM I-41 SB TO CTH S	163		280		295		480	
05-1752	RAMP FROM CTH S TO I-41 NB		320		186		530		315
	Ramp Balance Checking	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
05-0001	**I-41 - 1.5 MI NE OF OUTAGAMIE COUNTY LINE - DE PERE**	1,923	2,480	2,612	1,973	2,600	3,310	3,360	2,790

Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

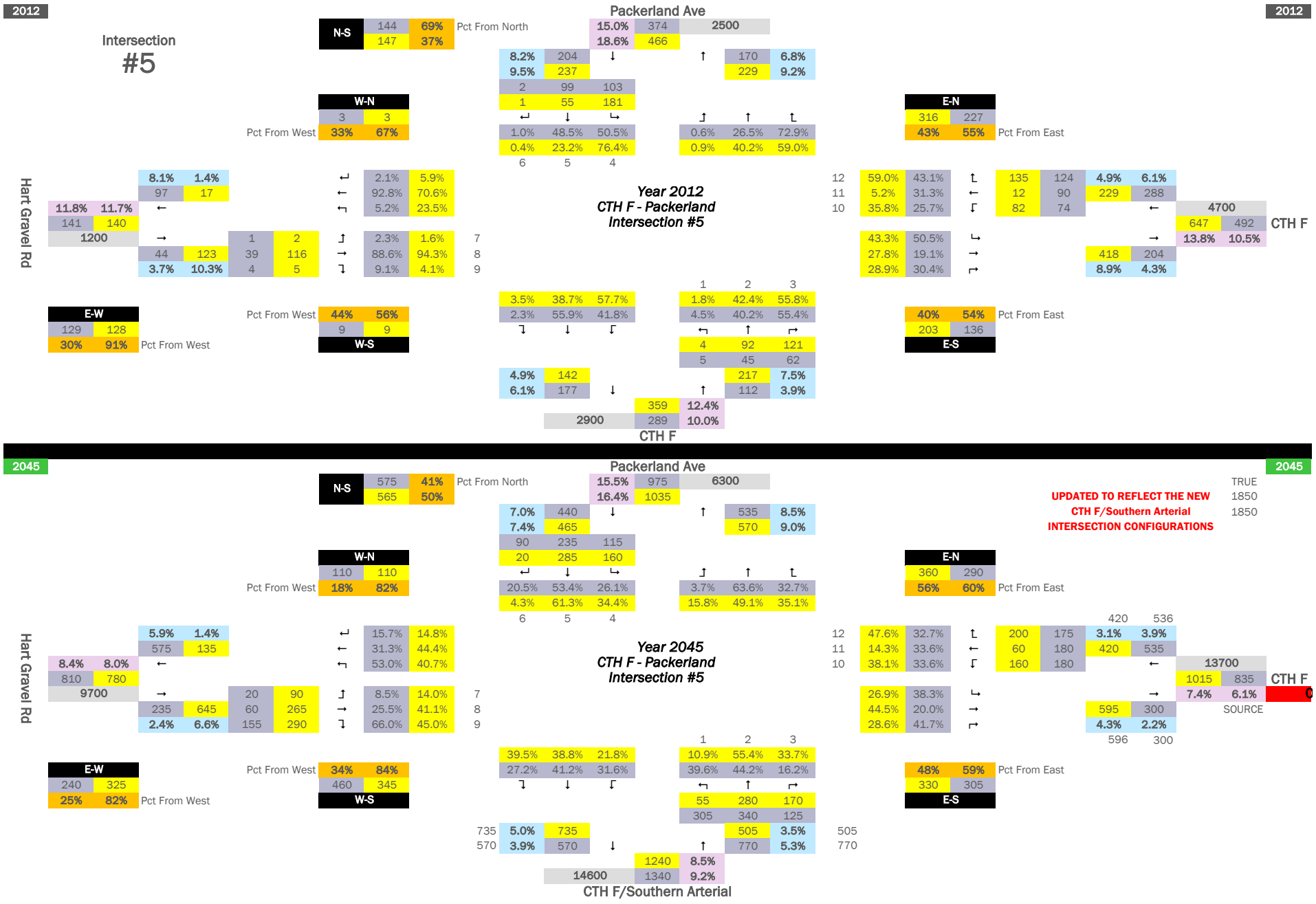


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

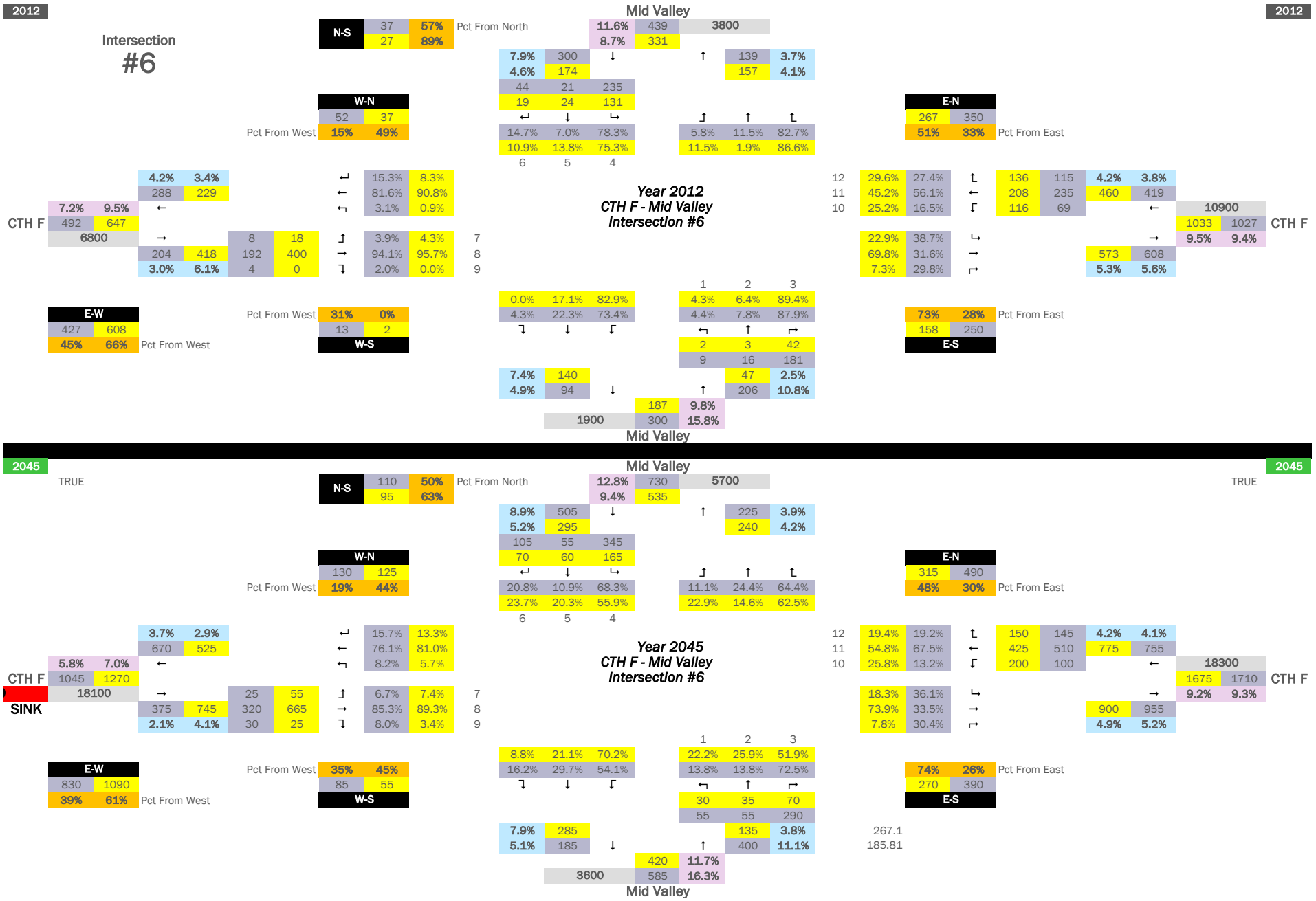


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

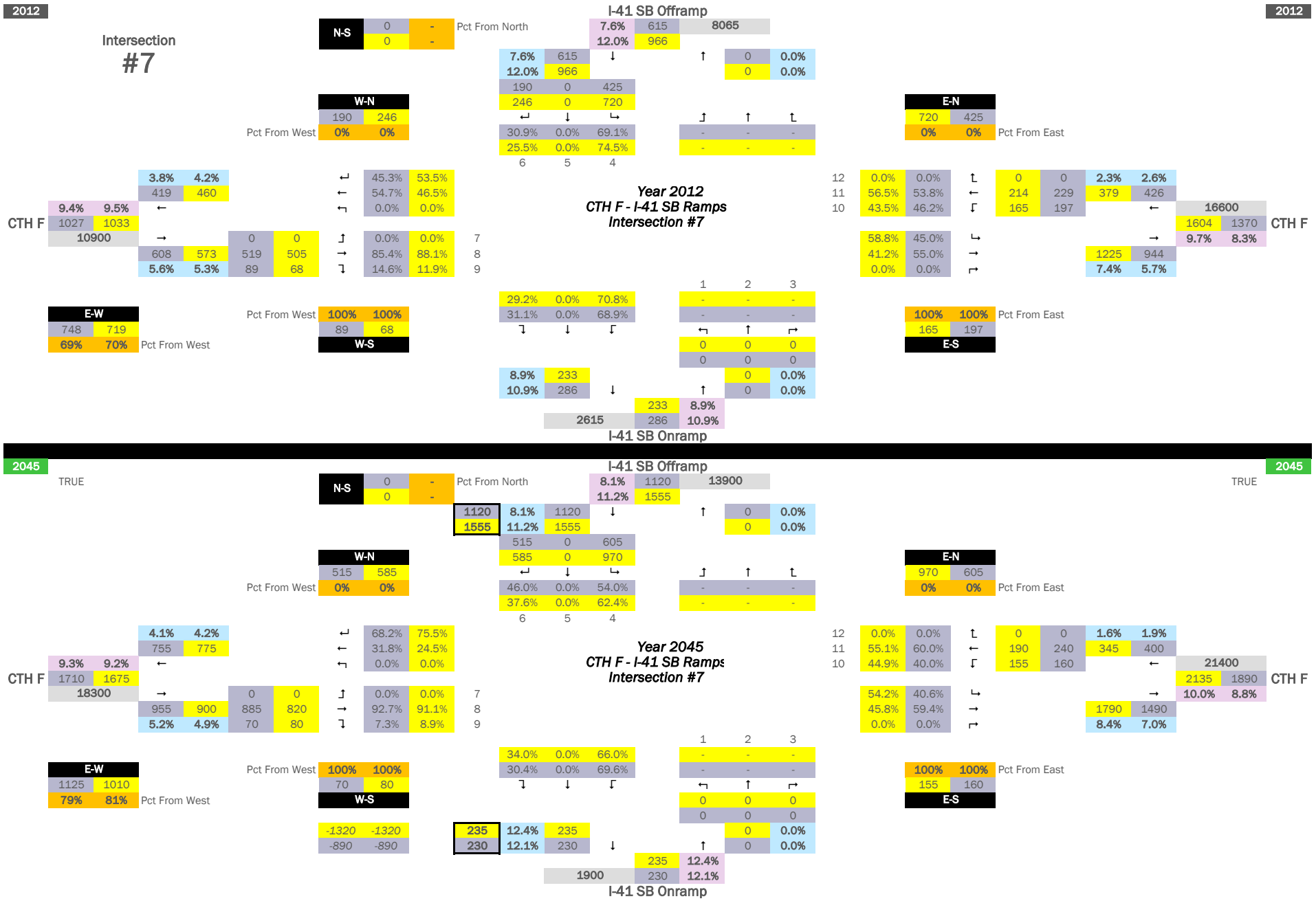


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

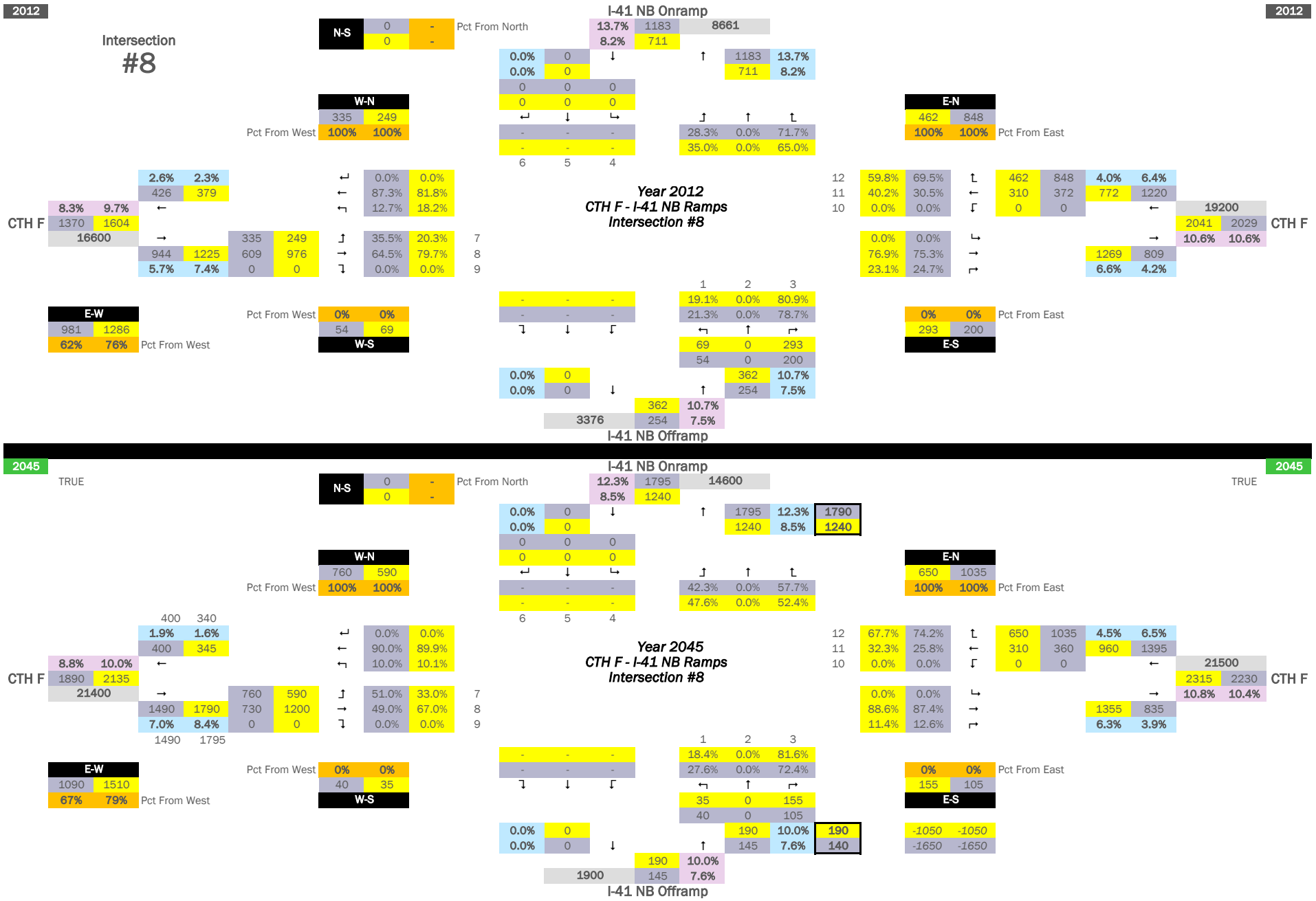


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

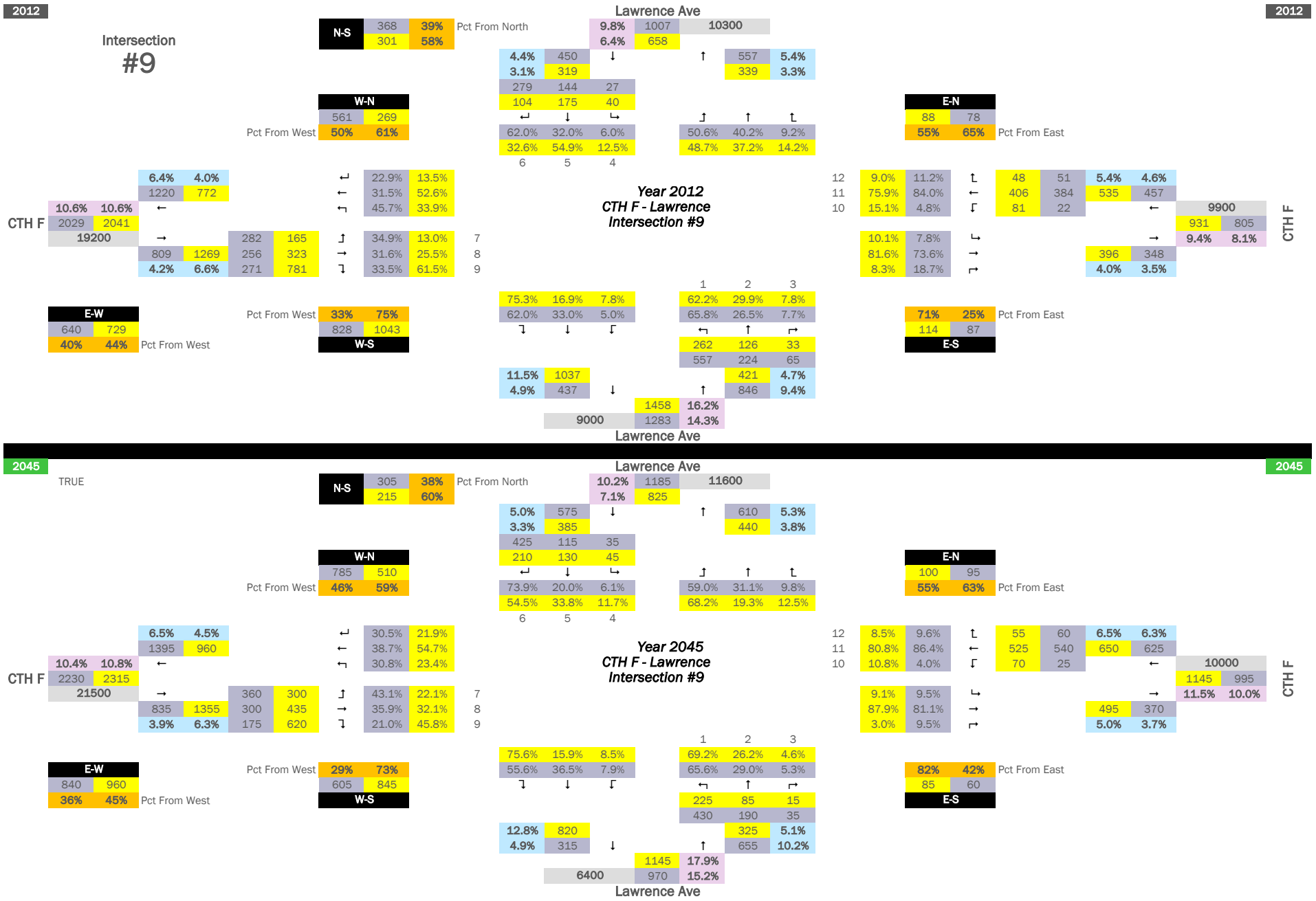
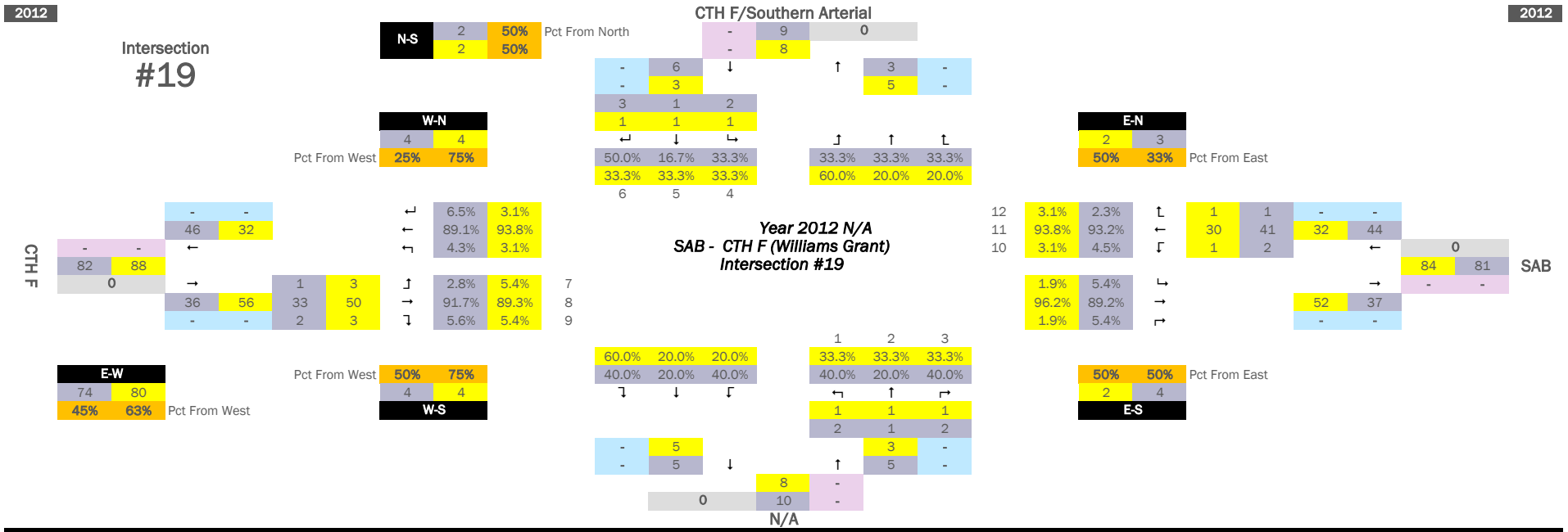


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements



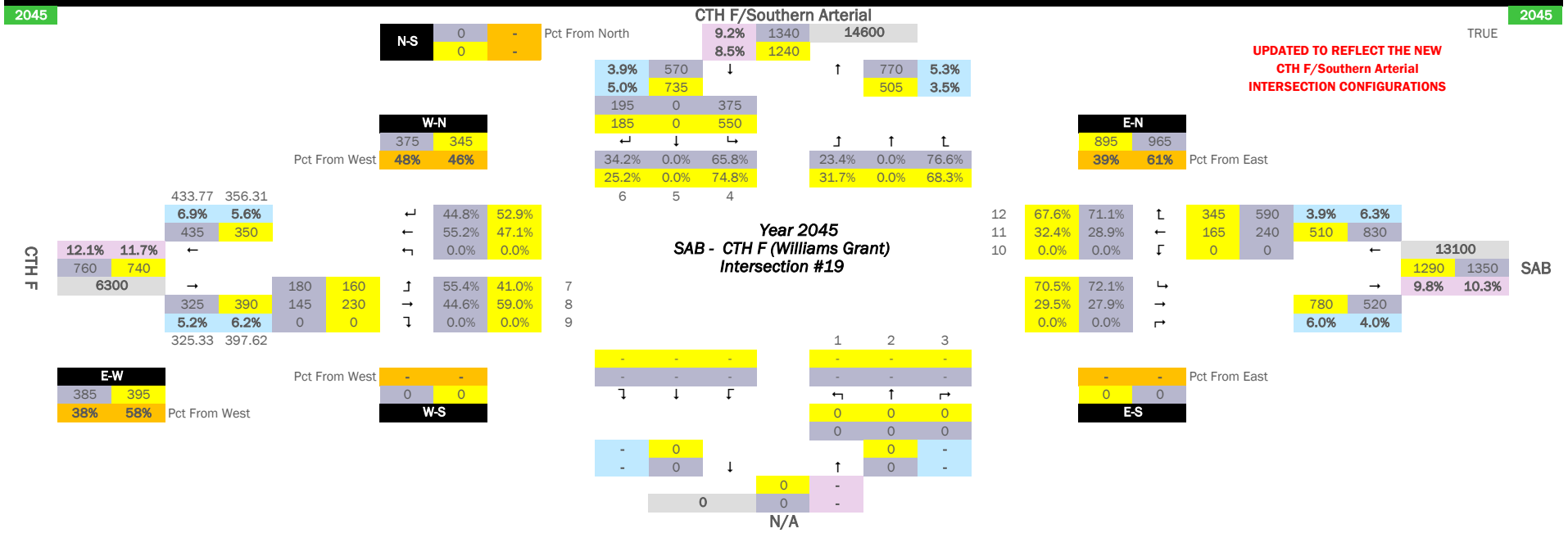


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

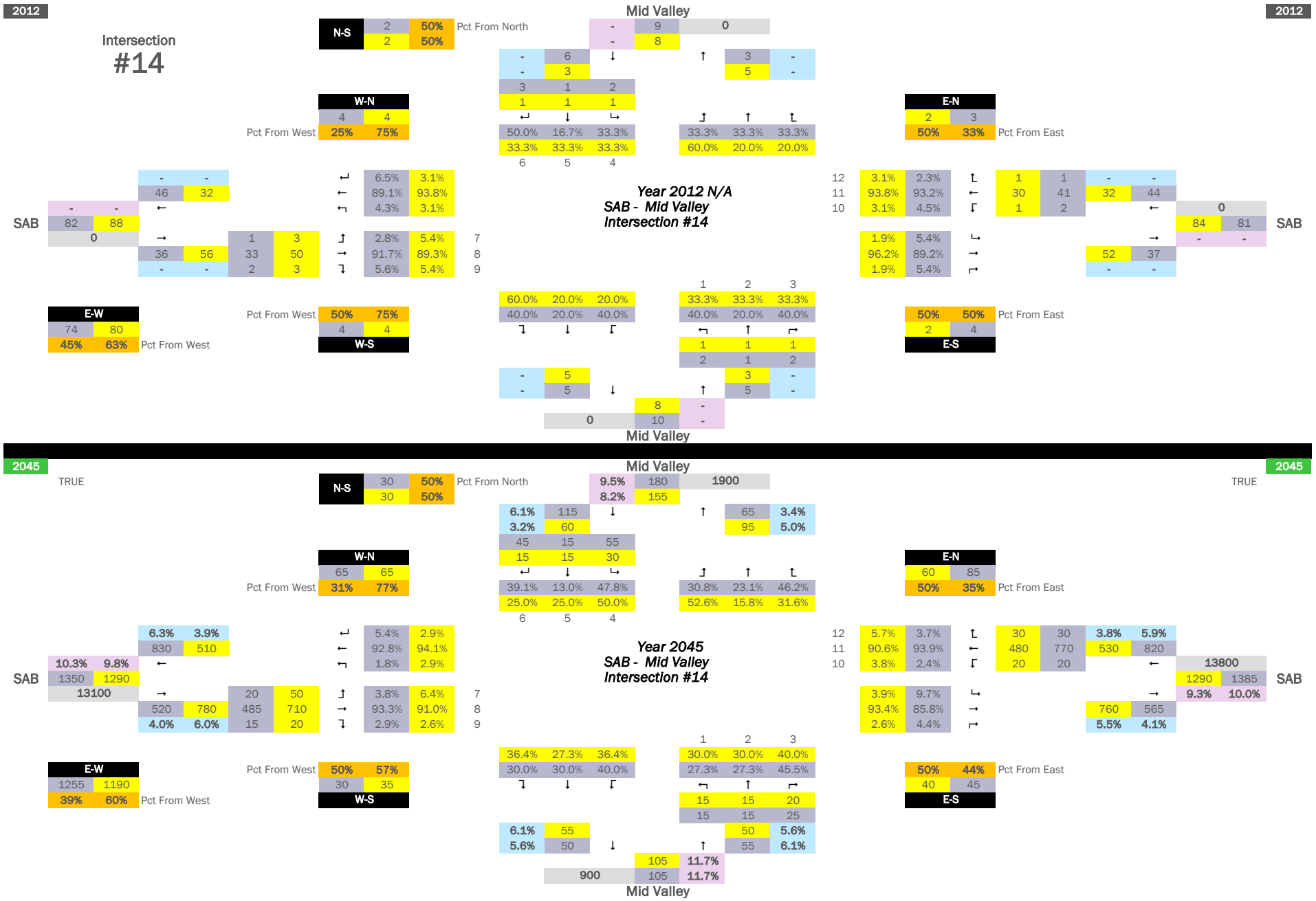


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

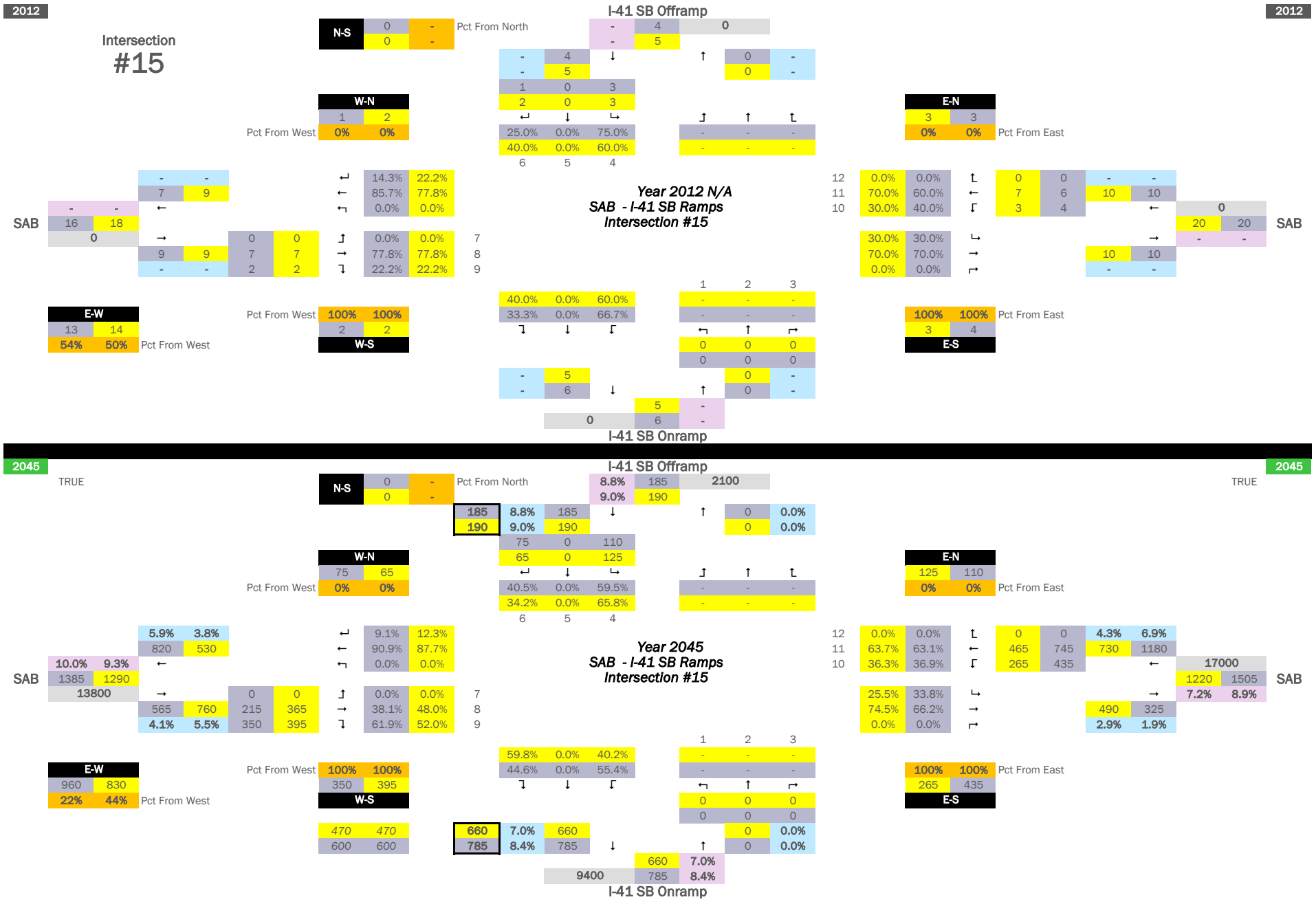


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

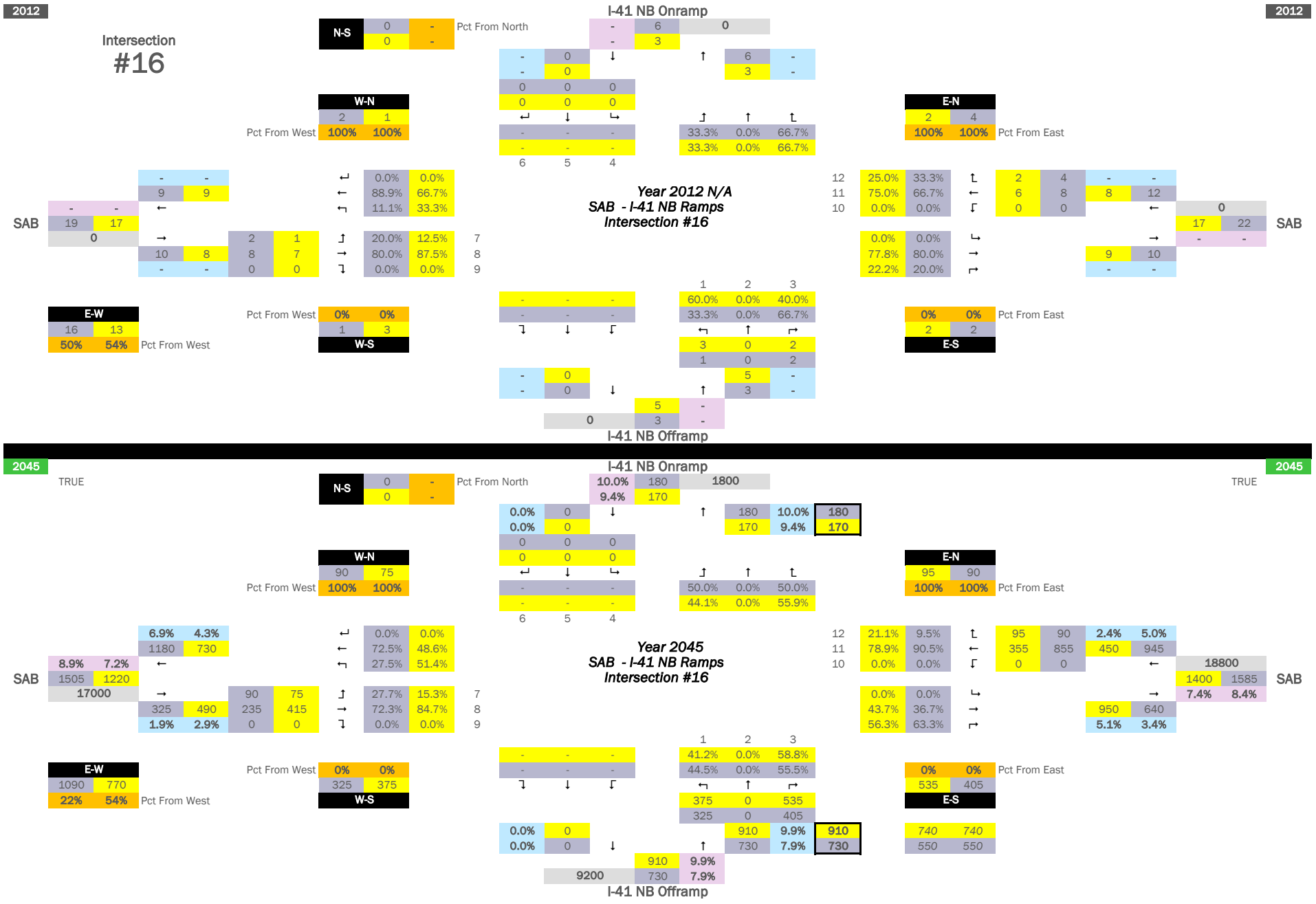


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements

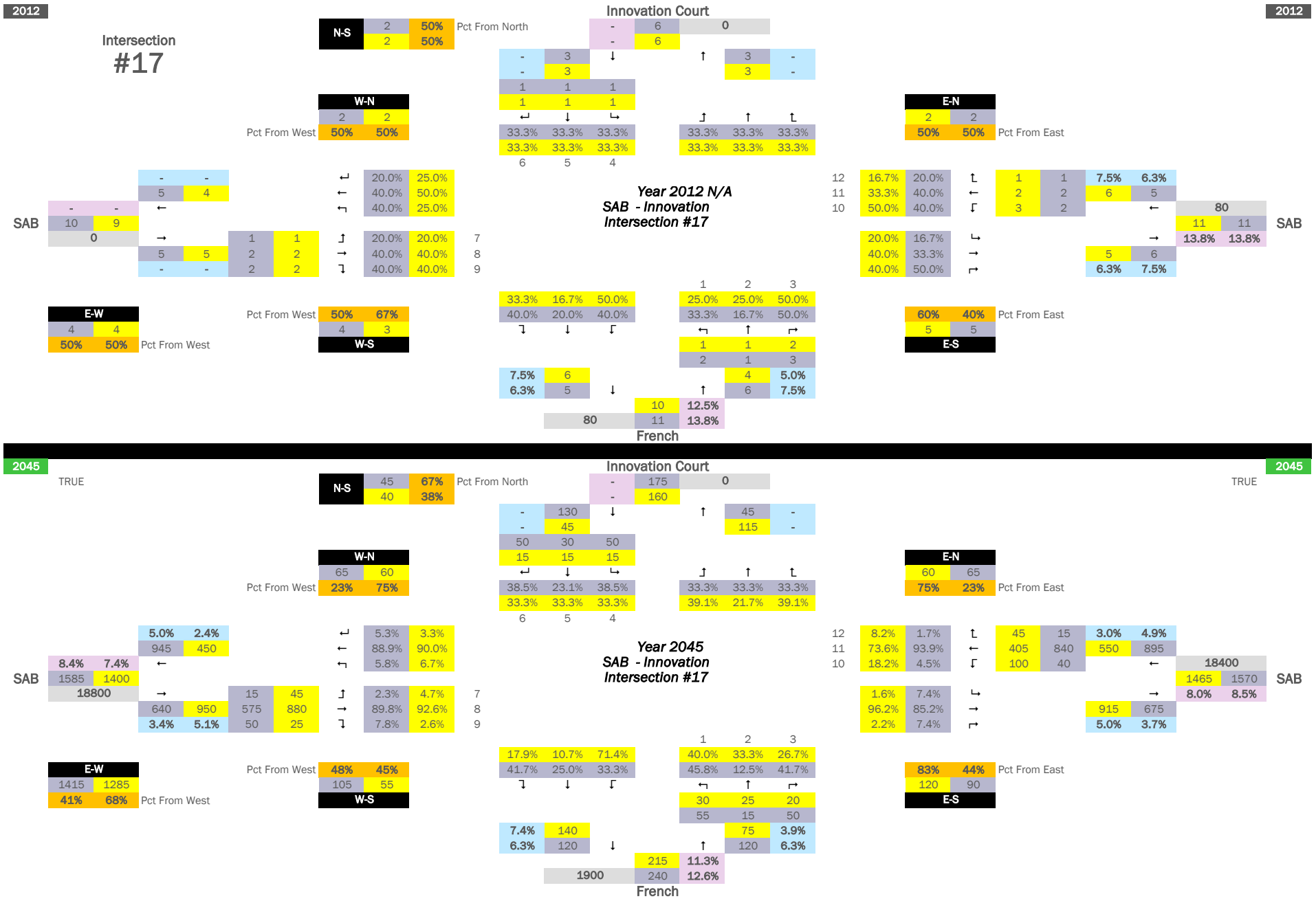
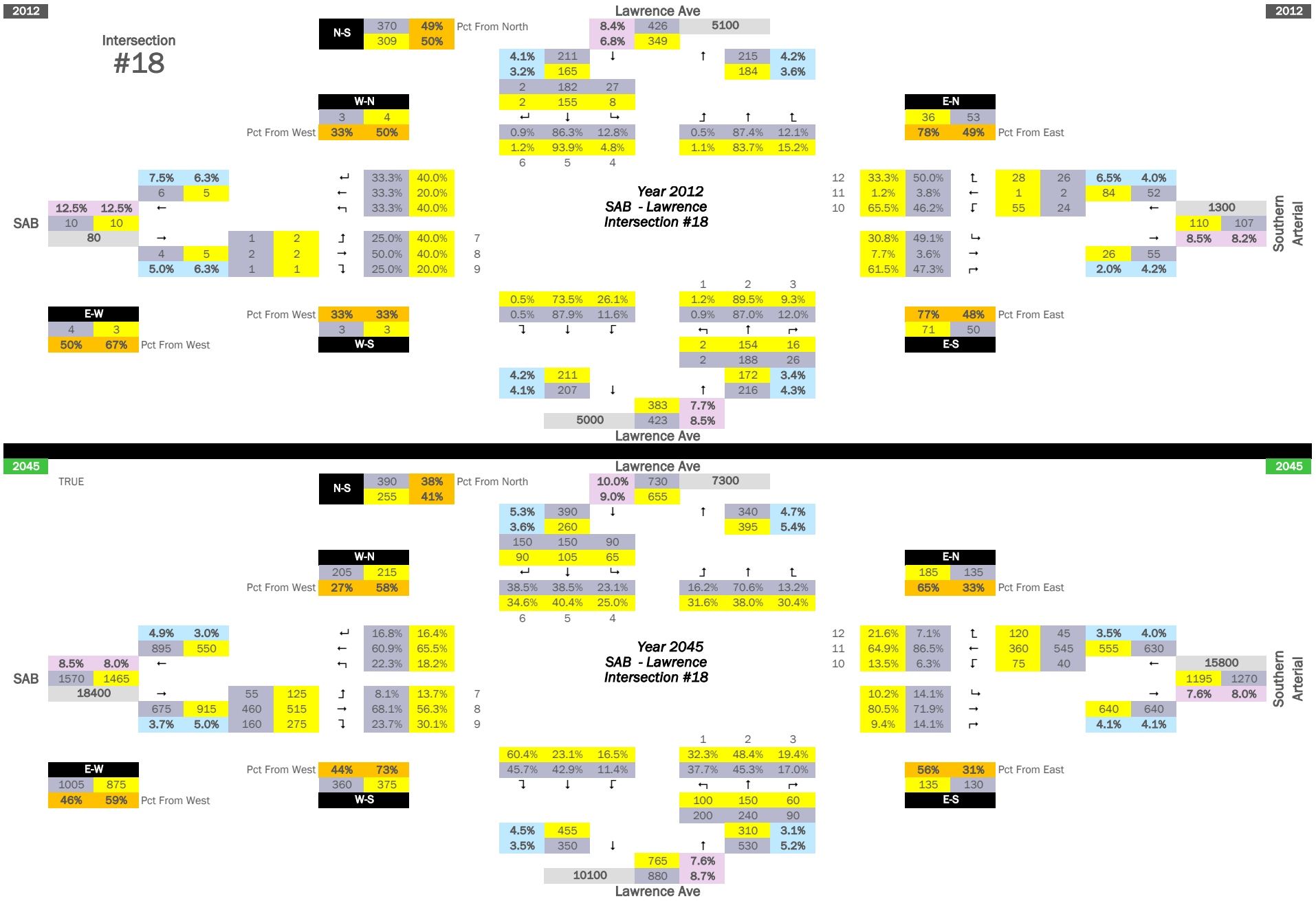


Figure 2B
I-41 Southern Arterial
Alternative 2B Turning Movements



APPENDIX C

Existing and Future Geometric Conditions

Table C-1 Existing Intersection Geometry

Intersection Location	North Approach	East Approach	South Approach	West Approach
County S - Mid Valley Drive [1]	1-T/L/R lane	1-T/L lane 1-R lane	1-T/L/R lane	1-T lane 1-R lane
County S - I-41 SB Ramps [1]	1-T/L lane 1-R lane	1-T lane 1-L lane	1-ramp lane	1-T lane 1-R lane
County S - I-41 NB Ramps [1]	1-ramp lane	1-T lane 1-R lane	1-T/L lane 1-R lane	1-T lane 1-L lane
County S - French Road [1]	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane
Southbridge Rd – Innovation Ct [1]	1-T/L/R lane	1-T/L lane 1-R lane	1-T/L/R lane	1-T/L/R lane
Southbridge Rd – Lawrence Dr.[1]	1-L lane 1-T lane 1-R lane	1-T/L/R lane	1-L lane 1-T/R lane	1-T/L/R lane
County F - Packerland Ave [1]	1-T/L lane 1-R lane	1-T/L lane 1-R lane	1-T/L lane 1-R lane	1-T/L/R lane
County F - Mid Valley Drive [3]	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane
County F - I-41 SB Ramps [3]	2-L lanes 1-partial R lane	1-T/L lane	1-ramp lane	1-T lane 1-T/R lane
County F - I-41 NB Ramps [3]	2-ramp lanes	1-T lane 1-full R lane	1-L lane 1-partial R lane	1-T/L lane 1-T lane
County F - Lawrence Drive [3]	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane	1-L lane 1-T/L/R lane	1-T/L lane 1-T lane 1-full R lane
County G - Spirit Way [1]	1-L/R lane	1-T lane 1-T/R lane	N/A	1-T/L lane 1-T lane
County G - I-41 SB Ramps [3]	1-L lane 1-T/L lane 1-partial R lane	1-T/L lane 1-T-R lane	1-T/L lane 1-partial R lane	1-L lane 1-T lane 1-T/R lane
County G - I-41 NB Ramps [3]	2-ramp lanes	2-T lanes 1-full R lane	1-L lane 1-partial R lane	1-T/L lane 1-T lane
County G - Lawrence Drive [2]	1-T/L lane 1-R lane	1-L lane 1-T lane 1-T/R lane	1-L lane 1-T/R lane	1-T/L lane 1-T lane 1-R lane

1 Unsignalized intersection

2 Signalized intersection

3 Roundabout control intersection

Abbreviations: T-through lane; L-left turn lane; R-right turn lane; full – full right turn bypass lane; partial – partial right turn bypass lane; NB-northbound; SB-southbound

Table C-2 No Build Intersection Geometry

Intersection Location	North Approach	East Approach	South Approach	West Approach
County S - Mid Valley Drive [1]	1-T/L/R lane	1-T/L lane 1-R lane	1-T/L/R lane	1-T lane 1-R lane
County S - I-41 SB Ramps [1]	1-T/L lane 1-R lane	1-T lane 1-L lane	1-ramp lane	1-T lane 1-R lane
County S - I-41 NB Ramps [1]	1-ramp lane	1-T lane 1-R lane	1-T/L lane 1-R lane	1-T lane 1-L lane
County S - French Road [1]	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane
Southbridge Rd – Innovation Ct [1]	1-T/L/R lane	1-T/L lane 1-R lane	1-T/L/R lane	1-T/L/R lane
Southbridge Rd – Lawrence Dr.[1]	1-L lane 1-T lane 1-R lane	1-T/L/R lane	1-L lane 1-T/R lane	1-T/L/R lane
County F - Packerland Ave [1]	1-T/L lane 1-R lane	1-T/L lane 1-R lane	1-T/L lane 1-R lane	1-T/L/R lane
County F - Mid Valley Drive [3]	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane
County F - I-41 SB Ramps [3]	2-L lanes 1-partial R lane	1-T/L lane	1-ramp lane	1-T lane 1-T/R lane
County F - I-41 NB Ramps [3]	2-ramp lanes	1-T lane 1-full R lane	1-L lane 1-partial R lane	1-T/L lane 1-T lane
County F - Lawrence Drive [3]	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane	1-L lane 1-T/L/R lane	1-T/L lane 1-T lane 1-full R lane
County G - Spirit Way [1]	1-L/R lane	1-T lane 1-T/R lane	N/A	1-T/L lane 1-T lane
County G - I-41 SB Ramps [3]	1-L lane 1-T/L lane 1-partial R lane	1-T/L lane 1-T-R lane	1-T/L lane 1-partial R lane	1-L lane 1-T lane 1-T/R lane
County G - I-41 NB Ramps [3]	2-ramp lanes	2-T lanes 1-full R lane	1-L lane 1-partial R lane	1-T/L lane 1-T lane
County G - Lawrence Drive [2]	1-T/L lane 1-R lane	1-L lane 1-T lane 1-T/R lane	1-L lane 1-T/R lane	1-T/L lane 1-T lane 1-R lane

1 Unsignalized intersection

2 Signalized intersection

3 Roundabout control intersection

Abbreviations: T-through lane; L-left turn lane; R-right turn lane; full – full right turn bypass lane; partial – partial right turn bypass lane; NB-northbound; SB-southbound

Table C-3 Alternative 1 Intersection Geometry

Intersection Location	North Approach	East Approach	South Approach	West Approach
County S - Mid Valley Drive [1]	1-T/L/R lane	1-T/L lane 1-R lane	1-T/L/R lane	1-T lane 1-R lane
County S - I-41 SB Ramps [1]	1-T/L lane 1-R lane	1-T lane 1-L lane	1-ramp lane	1-T lane 1-R lane
County S - I-41 NB Ramps [1]	1-ramp lane	1-T lane 1-R lane	1-T/L lane 1-R lane	1-T lane 1-L lane
County S - French Road [1]	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane
Southbridge Rd – Innovation Ct [1]	1-T/L/R lane	1-T/L lane 1-R lane	1-T/L/R lane	1-T/L/R lane
Southbridge Rd – Lawrence Dr.[1]	1-L lane 1-T lane 1-R lane	1-T/L/R lane	1-L lane 1-T/R lane	1-T/L/R lane
County F - Packerland Ave [2]	1-L lane 1-T/R lane	1-L lane 1-T/R lane	1-T/L lane 1-R lane	1-L lane 1-T/R lane
County F - Mid Valley Drive [3]	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane
County F - I-41 SB Ramps [3]	3-L lanes 1-partial R lane	1-T/L lane 1-T lane	1-ramp lane	3-T lanes 1-partial R lane
County F - I-41 NB Ramps [3]	3-ramp lanes	2-T lanes 1-full R lane	2-L lanes 1-partial R lane	1-L lane 1-T/L lane 1-T lane
County F - Lawrence Drive [3]	1-T/L lane 1-full R lane	1-T/L lane 1-T lane 1-R lane	2-L lanes 1-T lane 1-partial R lane	1-T/L lane 1-T lane 1-full R lane
County G - Spirit Way [1]	1-L/R lane	1-T lane 1-T/R lane	N/A	1-T/L lane 1-T lane
County G - I-41 SB Ramps [3]	1-L lane 1-T/L lane 1-partial R lane	1-T/L lane 1-T-R lane	1-T/L lane 1-partial R lane	1-L lane 1-T lane 1-T/R lane
County G - I-41 NB Ramps [3]	2-ramp lanes	2-T lanes 1-full R lane	1-L lane 1-partial R lane	1-T/L lane 1-T lane
County G - Lawrence Drive [2]	1-T/L lane 1-R lane	1-L lane 1-T lane 1-T/R lane	1-L lane 1-T/R lane	1-L lane 2-T lane 1-R lane

1 Unsignalized intersection

2 Signalized intersection

3 Roundabout control intersection

Abbreviations: T-through lane; L-left turn lane; R-right turn lane; full – full right turn bypass lane; partial – partial right turn bypass lane; NB-northbound; SB-southbound

Table C-4 Alternative 2A Intersection Geometry

Intersection Location	North Approach	East Approach	South Approach	West Approach
County S - Mid Valley Drive [1]	1-T/L/R lane	1-T/L lane 1-R lane	1-T/L/R lane	1-T lane 1-R lane
County S - I-41 SB Ramps [1]	1-T/L lane 1-R lane	1-T lane 1-L lane	1-ramp lane	1-T lane 1-R lane
County S - I-41 NB Ramps [1]	1-ramp lane	1-T lane 1-R lane	1-T/L lane 1-R lane	1-T lane 1-L lane
County S - French Road [1]	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane
Southern Arterial – Williams Grant[2]	2-T lanes 1-R lane	N/A	2-T lanes 1-L lane	1-L lane 1-R lane
Southern Arterial – Mid Valley Dr.[1]	N/A	1-L lane 2-T lanes	1-L lane 1-R lane	2-T lanes 1-R lane
Southern Arterial - I-41 SB Ramps[3]	2-L lanes 1-partial R lane	1-T/L lane 1-T lane	1-ramp lane	1-T-lane 1-T/R lane
Southern Arterial - I-41 NB Ramps[3]	1-ramp lane	2-T lanes 1-partial R lane	2-L lanes 1-partial R lane	1-T/L lane 1-T lane
Southern Arterial – Innovation Ct [2]	1-L lane 1-T/R lane	1-L lane 1-T lane 1-T/R lanes	1-L lane 1-T/R lane	1-L lane 1-T lane 1-T/R lanes
Southern Arterial – Lawrence Dr.[3]	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane	1-L lane 1-T/R lane	1-T/L lane 1-T/R lane
County F - Packerland Ave [2]	1-L lane 1-T lane 1-R lane	1-L lane 1-T lane 1-R lane	1-L lane 1-T lane 1-R lane	1-L lane 1-T lane 1-R lane
County F - Mid Valley Drive [3]	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane
County F - I-41 SB Ramps [3]	2-L lanes 1-partial R lane	1-T/L lane 1-T lane	1-ramp lane	3-T lanes 1-partial R lane
County F - I-41 NB Ramps [3]	2-ramp lanes	2-T lanes 1-full R lane	2-L lanes 1-partial R lane	1-L lane 2-T lanes
County F - Lawrence Drive [3]	1-T/L lane 1-full R lane	1-T/L lane 1-T/R lane	1-L lane 1-T/L/R lane	1-T/L lane 1-T lane 1-full R lane
County G - Spirit Way [1]	1-L/R lane	1-T lane 1-T/R lane	N/A	1-T/L lane 1-T lane
County G - I-41 SB Ramps [3]	1-L lane 1-T/L lane 1-partial R lane	1-T/L lane 1-T-R lane	1-T/L lane 1-partial R lane	1-L lane 1-T lane 1-T/R lane
County G - I-41 NB Ramps [3]	2-ramp lanes	2-T lanes 1-full R lane	1-L lane 1-partial R lane	1-T/L lane 1-T lane
County G - Lawrence Drive [2]	1-T/L lane 1-R lane	1-L lane 1-T lane 1-T/R lane	1-L lane 1-T/R lane	1-L lane 2-T lane 1-R lane

1 Unsignalized intersection

2 Signalized intersection

3 Roundabout control intersection

Abbreviations: T-through lane; L-left turn lane; R-right turn lane; full – full right turn bypass lane; partial – partial right turn bypass lane; NB-northbound; SB-southbound

Table C-5 Alternative 2B Intersection Geometry

Intersection Location	North Approach	East Approach	South Approach	West Approach
County S - Mid Valley Drive [1]	1-T/L/R lane	1-T/L lane 1-R lane	1-T/L/R lane	1-T lane 1-R lane
County S - I-41 SB Ramps [1]	1-T/L lane 1-R lane	1-T lane 1-L lane	1-ramp lane	1-T lane 1-R lane
County S - I-41 NB Ramps [1]	1-ramp lane	1-T lane 1-R lane	1-T/L lane 1-R lane	1-T lane 1-L lane
County S - French Road [1]	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane
Southern Arterial – Williams Grant[2]	2-T lanes 1-R lane	N/A	2-T lanes 1-L lane	1-L lane 1-R lane
Southern Arterial – Mid Valley Dr.[1]	N/A	1-L lane 2-T lanes	1-L lane 1-R lane	2-T lanes 1-R lane
Southern Arterial - I-41 SB Ramps[3]	2-L lanes 1-partial R lane	1-T/L lane 1-T lane	1-ramp lane	1-T-lane 1-T/R lane
Southern Arterial - I-41 NB Ramps[3]	1-ramp lane	2-T lanes 1-partial R lane	2-L lanes 1-partial R lane	1-T/L lane 1-T lane
Southern Arterial – Innovation Ct [2]	1-L lane 1-T/R lane	1-L lane 1-T lane 1-T/R lanes	1-L lane 1-T/R lane	1-L lane 1-T lane 1-T/R lanes
Southern Arterial – Lawrence Dr.[3]	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane	1-L lane 1-T/R lane	1-T/L lane 1-T/R lane
County F - Packerland Drive [2]	1-L lane 1-T lane 1-R lane	1-L lane 1-T lane 1-R lane	1-L lane 1-T lane 1-R lane	1-L lane 1-T lane 1-R lane
County F - Mid Valley Drive [3]	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane
County F - I-41 SB Ramps [3]	2-L lanes 1-partial R lane	1-T/L lane 1-T lane	1-ramp lane	3-T lanes 1-partial R lane
County F - I-41 NB Ramps [3]	2-ramp lanes	2-T lanes 1-full R lane	2-L lanes 1-partial R lane	1-L lane 2-T lanes
County F - Lawrence Drive [3]	1-T/L lane 1-full R lane	1-T/L lane 1-T/R lane	1-L lane 1-T/L/R lane	1-T/L lane 1-T lane 1-full R lane
County G - Spirit Way [1]	1-L/R lane	1-T lane 1-T/R lane	N/A	1-T/L lane 1-T lane
County G - I-41 SB Ramps [3]	1-L lane 1-T/L lane 1-partial R lane	1-T/L lane 1-T-R lane	1-T/L lane 1-partial R lane	1-L lane 1-T lane 1-T/R lane
County G - I-41 NB Ramps [3]	2-ramp lanes	2-T lanes 1-full R bypass	1-L lane 1-partial R lane	1-T/L lane 1-T lane
County G - Lawrence Drive [2]	1-T/L lane 1-R lane	1-L lane 1-T lane 1-T/R lane	1-L lane 1-T/R lane	1-L lane 2-T lane 1-R lane

1 Unsignalized intersection

2 Signalized intersection

3 Roundabout control intersection

Abbreviations: T-through lane; L-left turn lane; R-right turn lane; full – full right turn bypass lane; partial – partial right turn bypass lane; NB-northbound; SB-southbound

Table C-6 Alternative 3 Intersection Geometry

Intersection Location	North Approach	East Approach	South Approach	West Approach
County S - Mid Valley Drive [1]	1-T/L/R lane	1-T/L lane 1-R lane	1-T/L/R lane	1-T lane 1-R lane
County S - I-41 SB Ramps [1]	1-T/L lane 1-R lane	1-T lane 1-L lane	1-ramp lane	1-T lane 1-R lane
County S - I-41 NB Ramps [1]	1-ramp lane	1-T lane 1-R lane	1-T/L lane 1-R lane	1-T lane 1-L lane
County S - French Road [1]	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane	1-T/L/R lane
Southern Arterial – Williams Grant[1]	2-T lanes 1-R lane	N/A	2-T lanes 1-L lane	1-L lane 1-R lane
Southern Arterial – Mid Valley Dr.[1]	1-T/L/R lane	1-L lane 1-T lane 1-T/R lane	1-T/L/R lane	1-L lane 1-T lane 1-T/R lane
Southern Arterial – Innovation Ct [1]	1-T/L/R lane	1-L lane 1-T lane 1-T/R lanes	1-T/L/R lane	1-L lane 1-T lane 1-T/R lanes
Southern Arterial – Lawrence Dr.[3]	1-T/L/R lane	1-T/L lane 1-T/R lane	1-L lane 1-T/R lane	1-T/L lane 1-T/R lane
County F - Packerland Ave [2]	1-L lane 1-T lane 1-R lane	1-L lane 1-T lane 1-R lane	1-L lane 1-T lane 1-R lane	1-L lane 1-T lane 1-R lane
County F - Mid Valley Drive [3]	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane	1-T/L lane 1-partial R lane	1-T/L lane 1-T/R lane
County F - I-41 SB Ramps [3]	3-L lanes 1-partial R lane	1-T/L lane 1-T lane	1-ramp lane	3-T lanes 1-partial R lane
County F - I-41 NB Ramps [3]	3-ramp lanes	2-T lanes 1-full R lane	2-L lanes 1-partial R lane	1-L lane 1-T/L lane 1-T lane
County F - Lawrence Drive [3]	1-T/L lane 1-full R lane	1-T/L lane 1-T lane 1-full R lane	2-L lane 1-T lane 1-partial R lane	1-T/L lane 1-T lane 1-full R lane
County G - Spirit Way [1]	1-L/R lane	1-T lane 1-T/R lane	N/A	1-T/L lane 1-T lane
County G - I-41 SB Ramps [3]	1-L lane 1-T/L lane 1-partial R lane	1-T/L lane 1-T-R lane	1-T/L lane 1-partial R lane	1-L lane 1-T lane 1-T/R lane
County G - I-41 NB Ramps [3]	2-ramp lanes	2-T lanes 1-full R lane	1-L lane 1-partial R lane	1-T/L lane 1-T lane
County G - Lawrence Drive [2]	1-T/L lane 1-R lane	1-L lane 1-T lane 1-T/R lane	1-L lane 1-T/R lane	1-L lane 2-T lane 1-R lane

1 Unsignalized intersection

2 Signalized intersection

3 Roundabout control intersection

Abbreviations: T-through lane; L-left turn lane; R-right turn lane; full – full right turn bypass lane; partial – partial right turn bypass lane; NB-northbound; SB-southbound

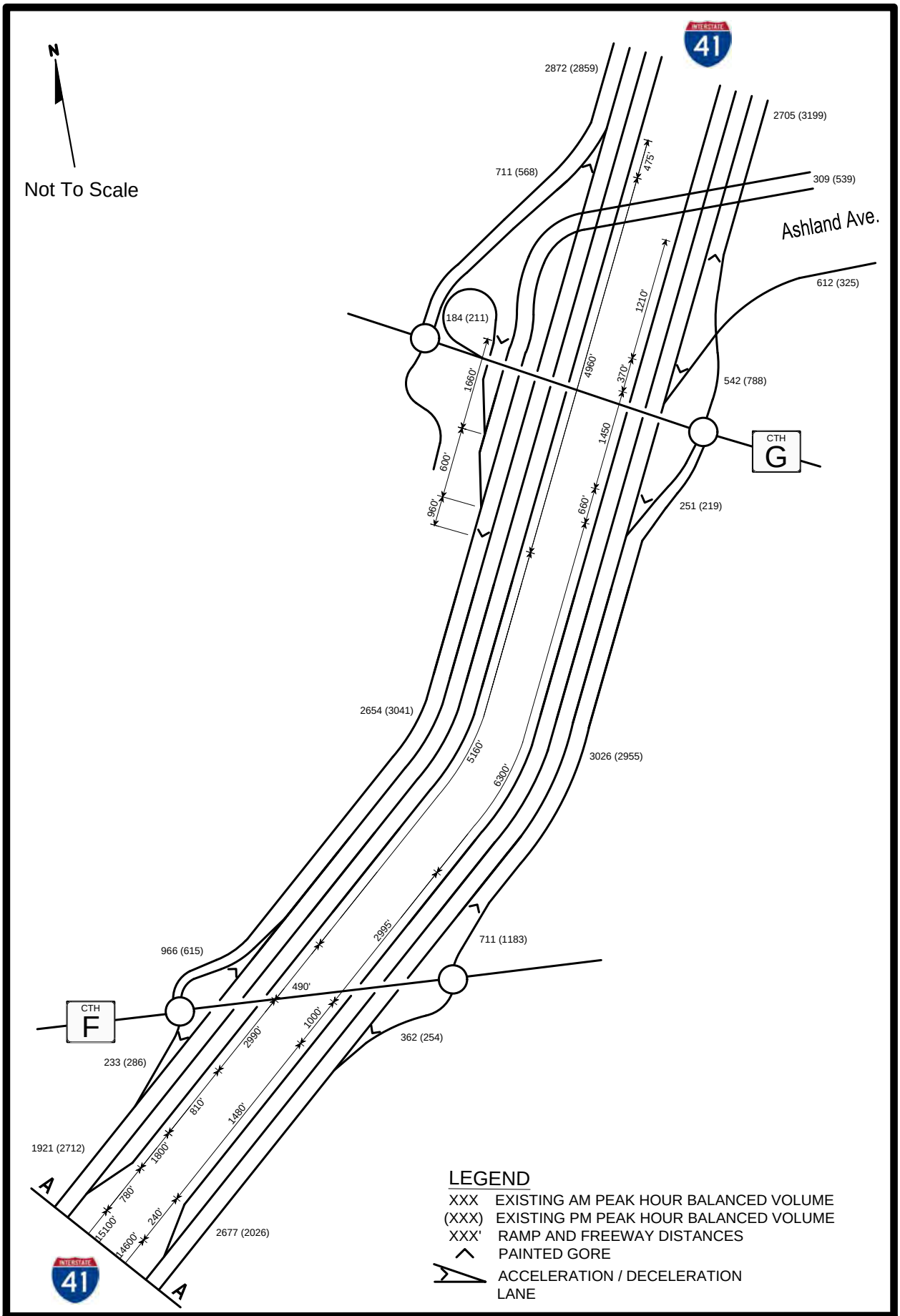


Figure C-1

1 of 2

Year 2012 Existing Conditions

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin

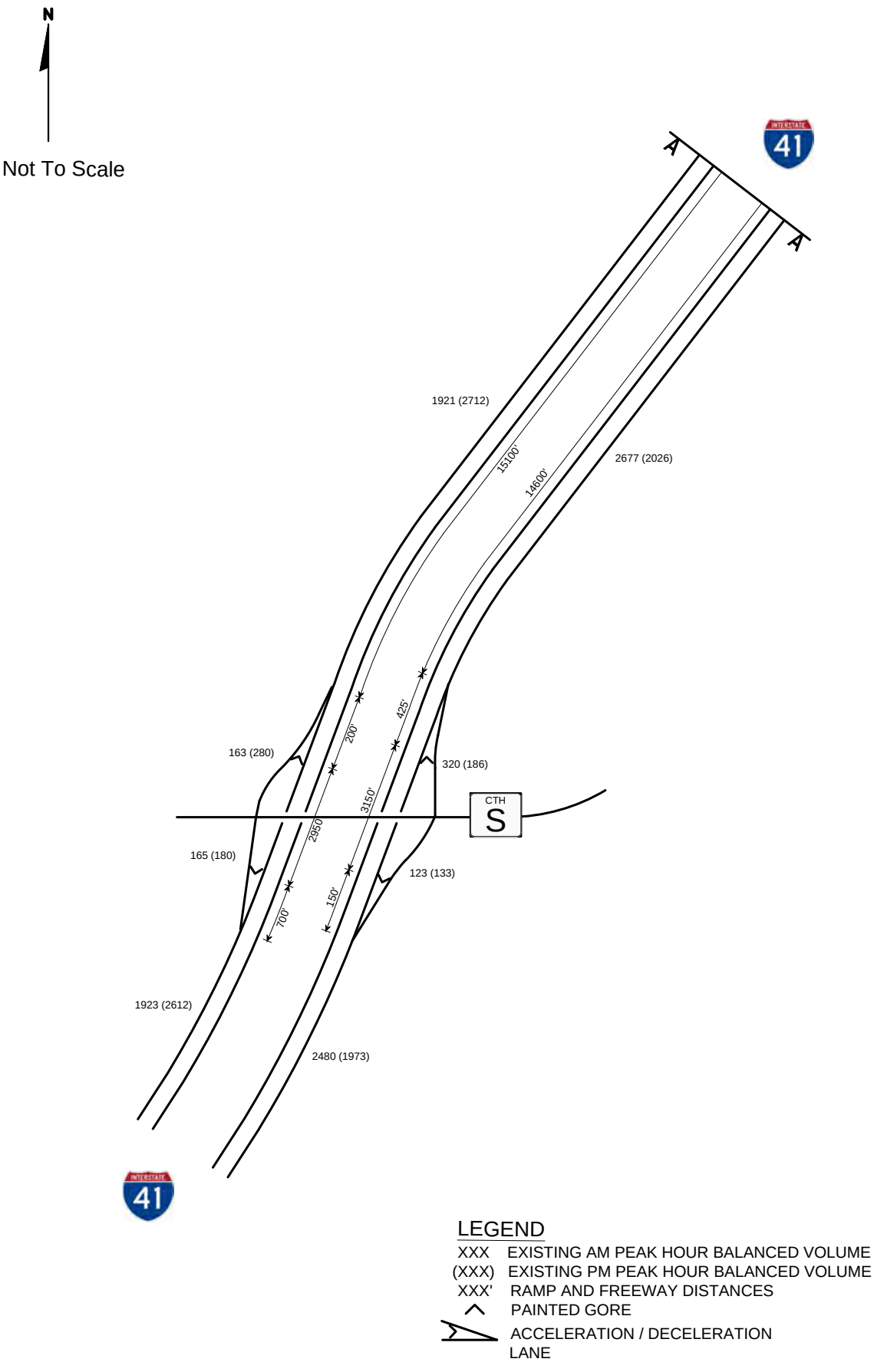


Figure C-1

2 of 2

Year 2012 Existing Conditions

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin

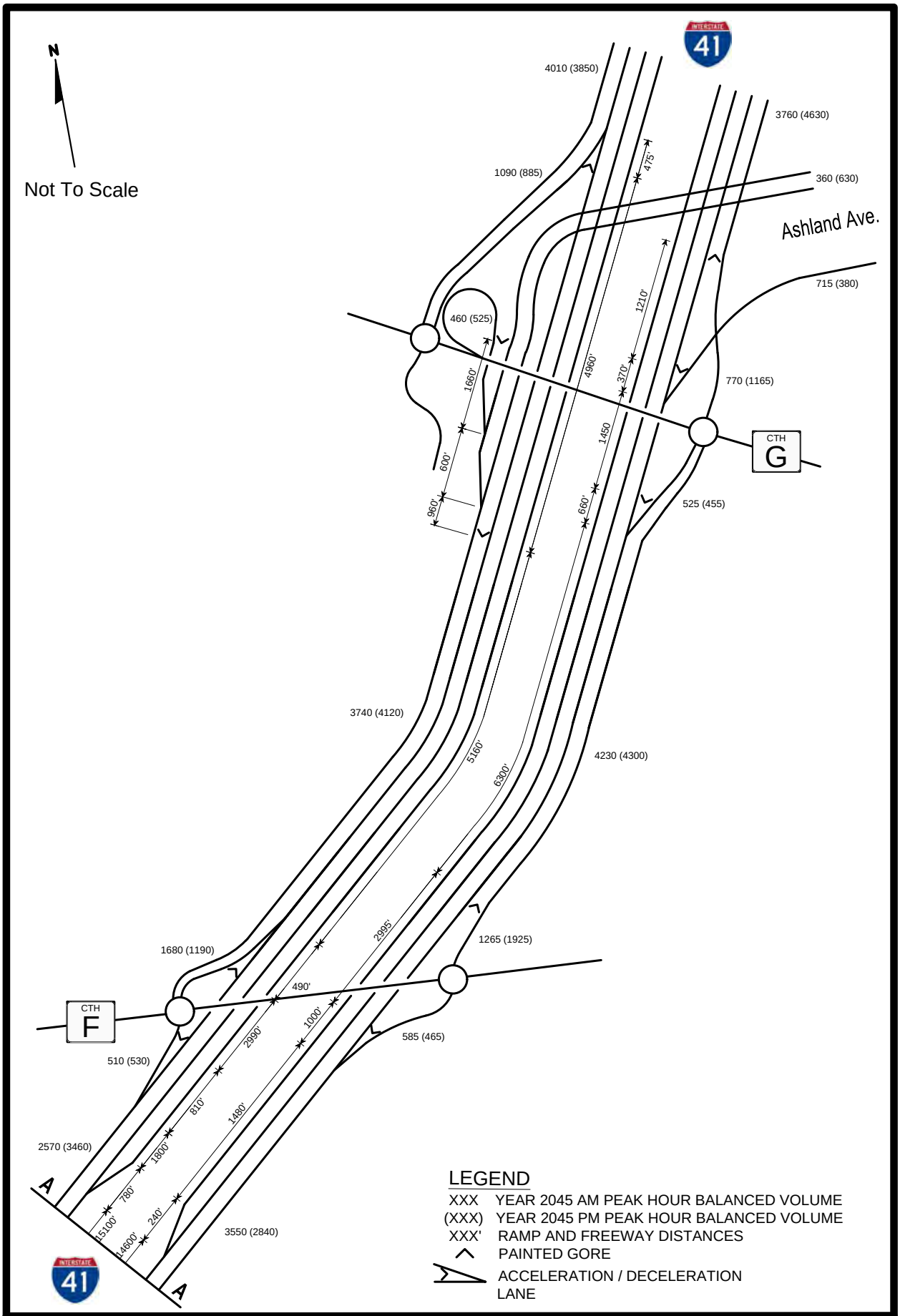
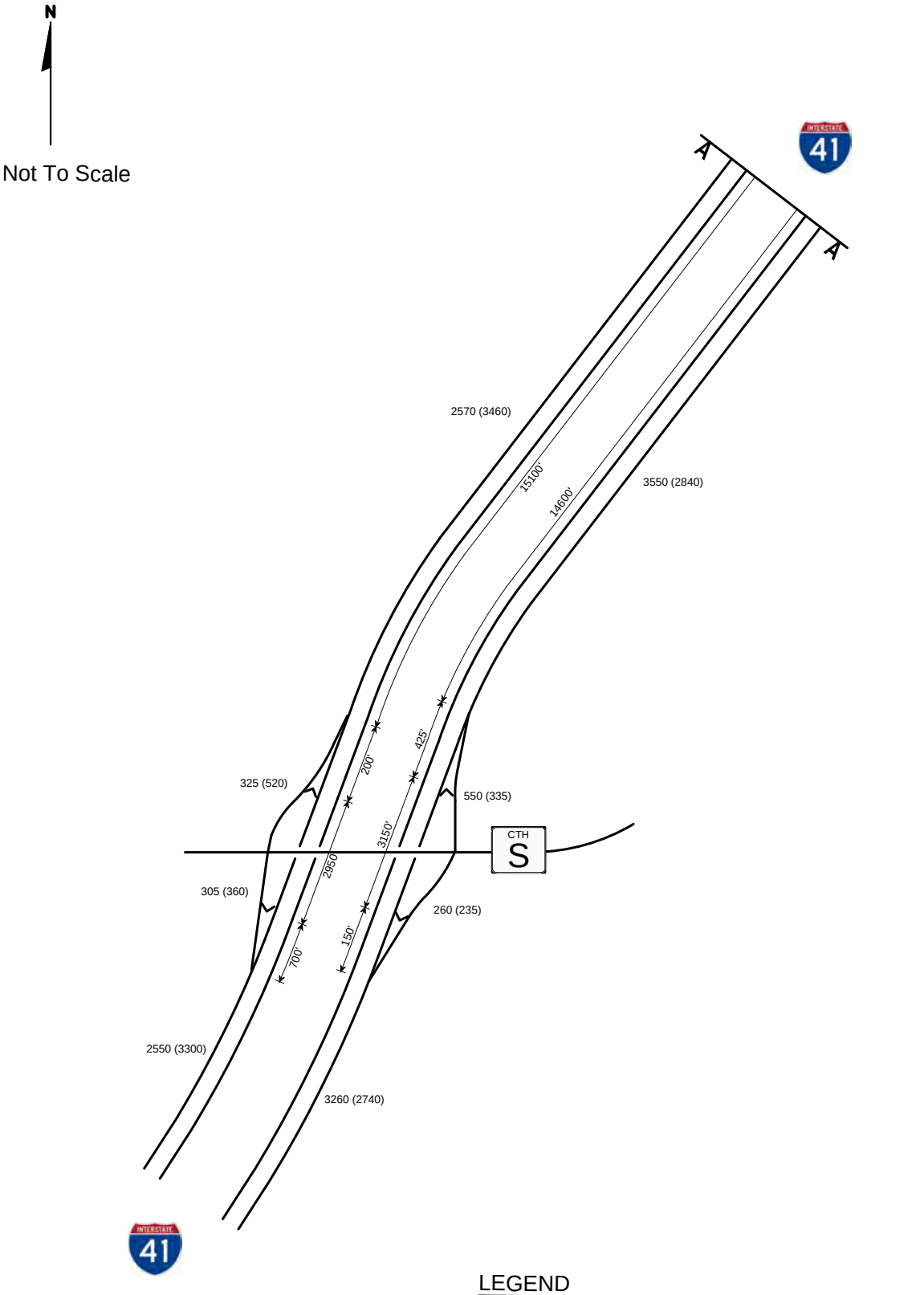


Figure C-2

1 of 2

Year 2045 (No-Build)

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin



LEGEND

XXX YEAR 2045 AM PEAK HOUR BALANCED VOLUME

(XXX) YEAR 2045 PM PEAK HOUR BALANCED VOLUME

XXX' RAMP AND FREEWAY DISTANCES

PAINTED GORE

ACCELERATION / DECELERATION LANE

Figure C-2

2 of 2

Year 2045 (No-Build)

Southern Arterial PEOR Traffic Analysis

Brown County, Wisconsin

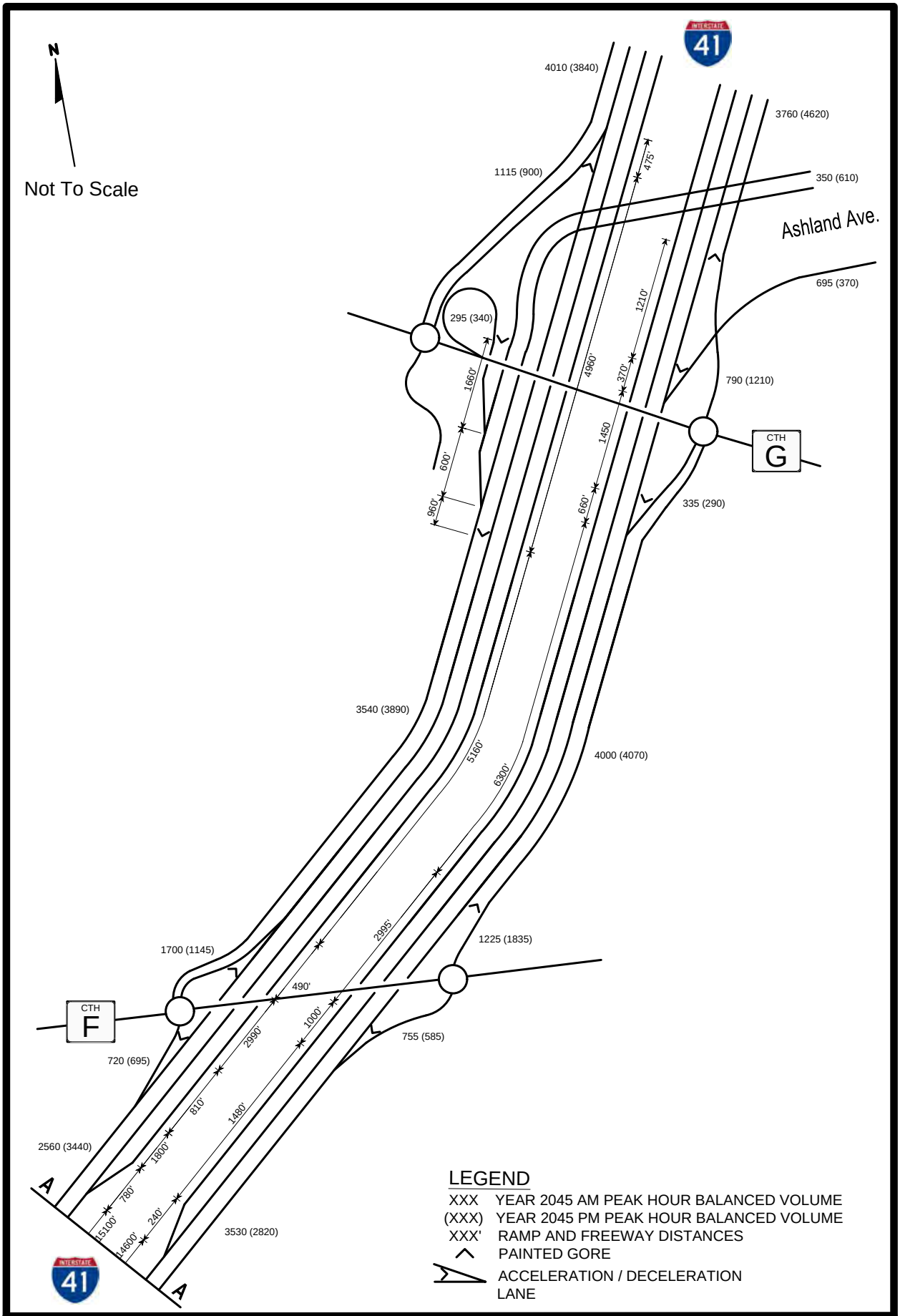
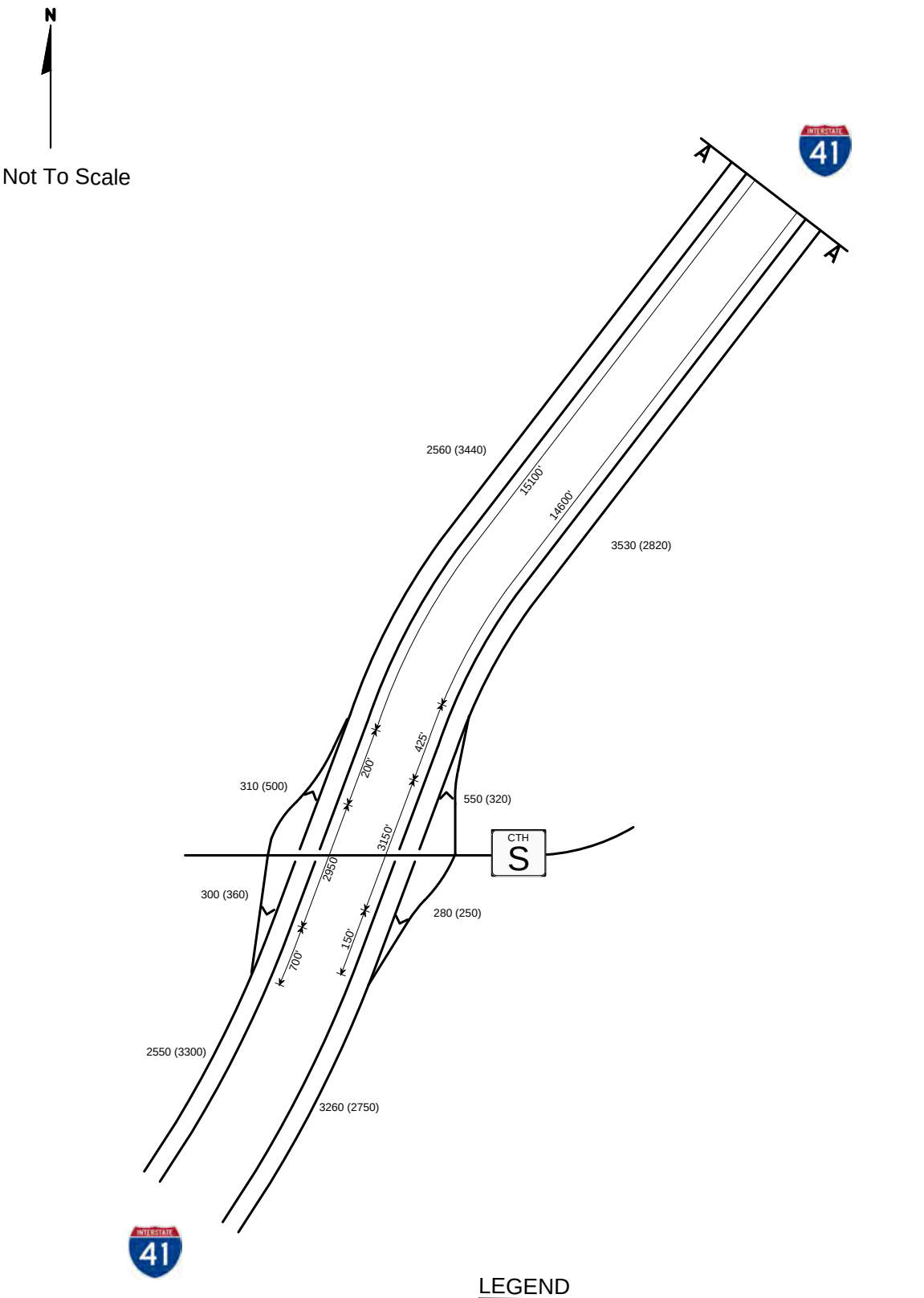


Figure C-3

1 of 2

Year 2045 Build (Alternative 1)

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin



LEGEND

XXX YEAR 2045 AM PEAK HOUR BALANCED VOLUME
(XXX) YEAR 2045 PM PEAK HOUR BALANCED VOLUME
XXX' RAMP AND FREEWAY DISTANCES
PAINTED GORE
ACCELERATION / DECELERATION LANE

Figure C-3
2 of 2

Year 2045 Build (Alternative 1)

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin

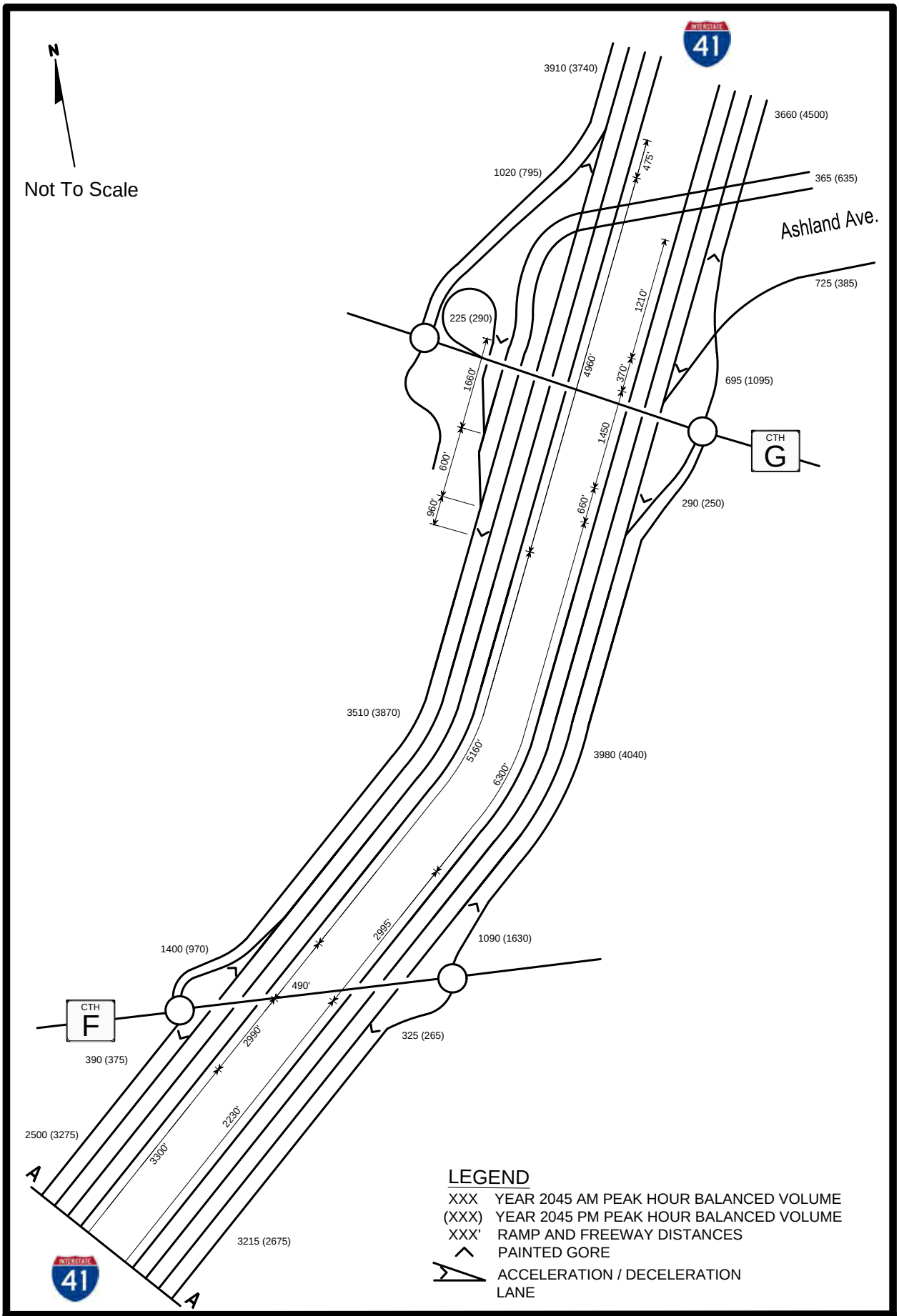
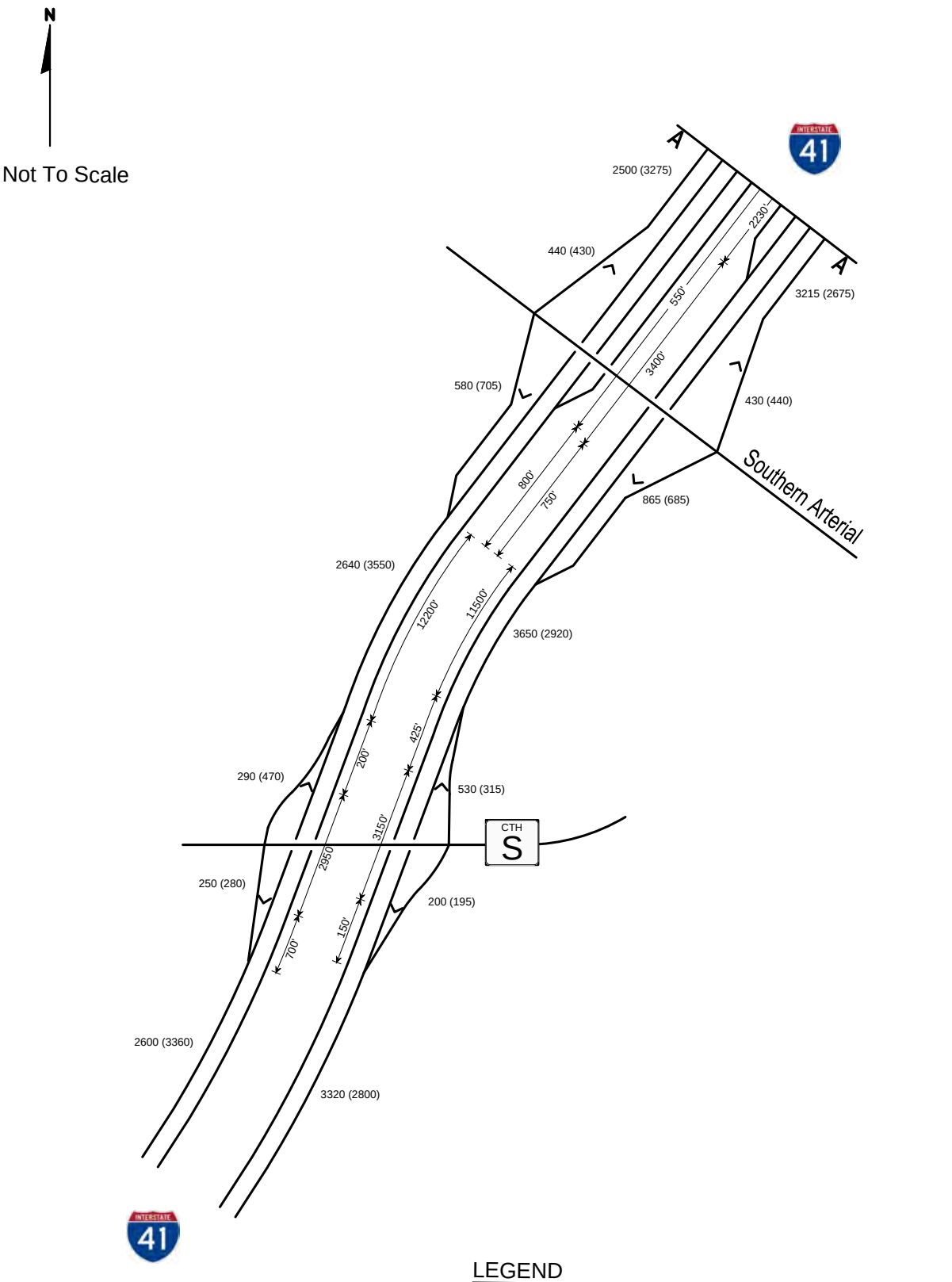


Figure C-4

1 of 2

Year 2045 Build (Alternative 2A)

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin



LEGEND

XXX YEAR 2045 AM PEAK HOUR BALANCED VOLUME

(XXX) YEAR 2045 PM PEAK HOUR BALANCED VOLUME

XXX' RAMP AND FREEWAY DISTANCES

PAINTED GORE

ACCELERATION / DECELERATION LANE

Figure C-4

2 of 2

Year 2045 Build (Alternative 2A)

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin

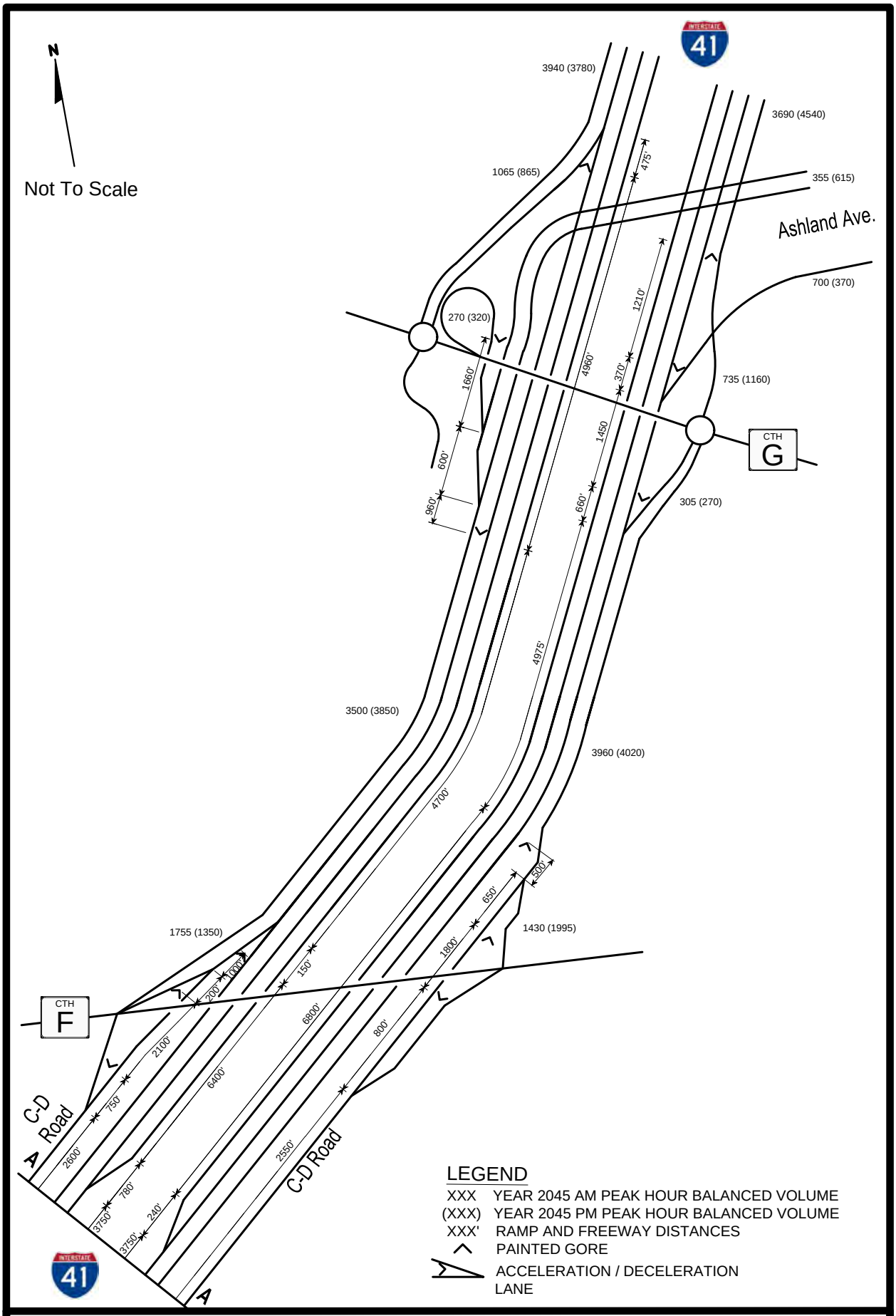
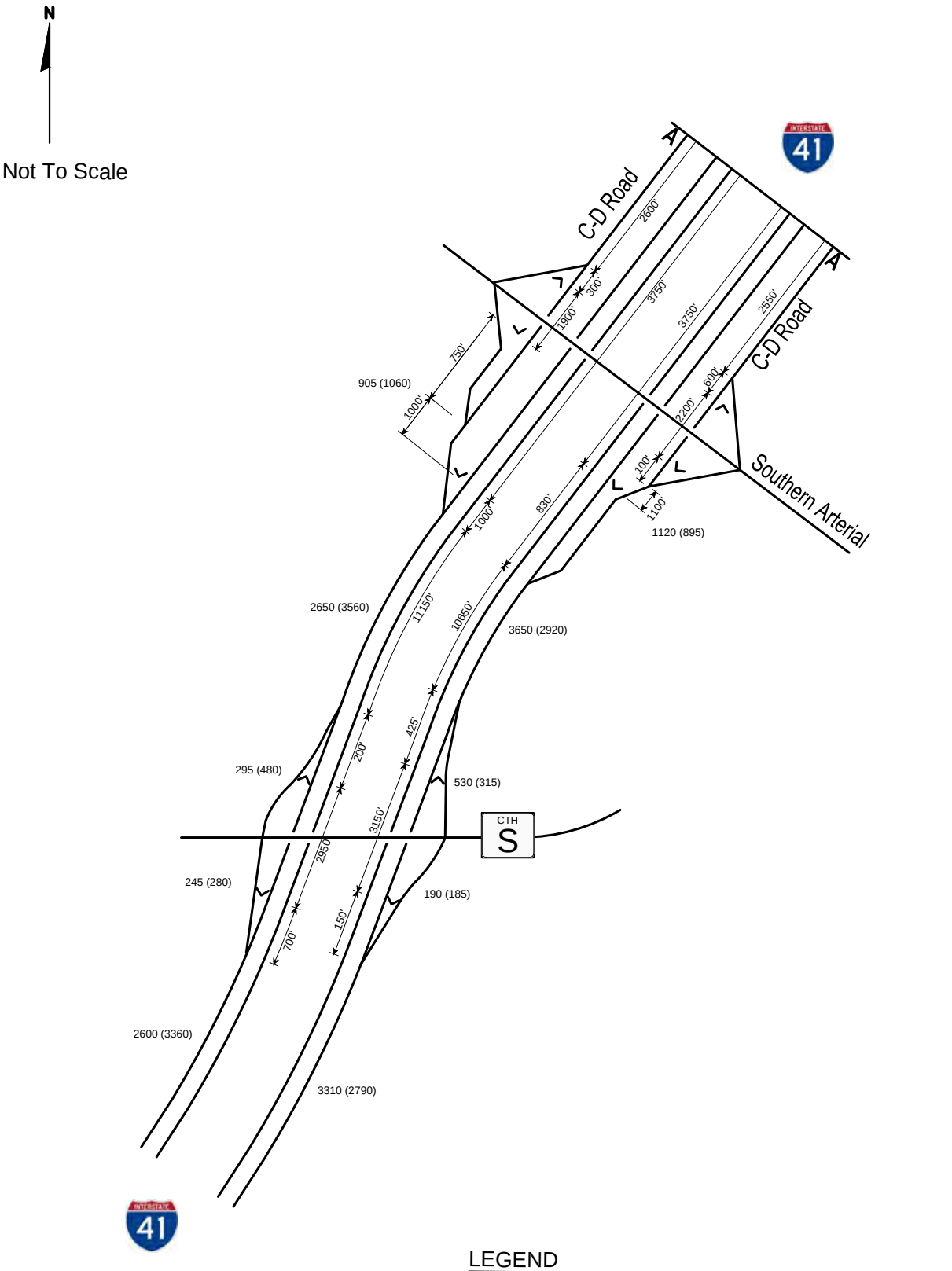


Figure C-5

1 of 2

Year 2045 Build (Alternative 2B)

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin



LEGEND

XXX YEAR 2045 AM PEAK HOUR BALANCED VOLUME

(XXX) YEAR 2045 PM PEAK HOUR BALANCED VOLUME

XXX' RAMP AND FREEWAY DISTANCES

PAINTED GORE

ACCELERATION / DECELERATION LANE

Figure C-5

2 of 2

Year 2045 Build (Alternative 2B)

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin

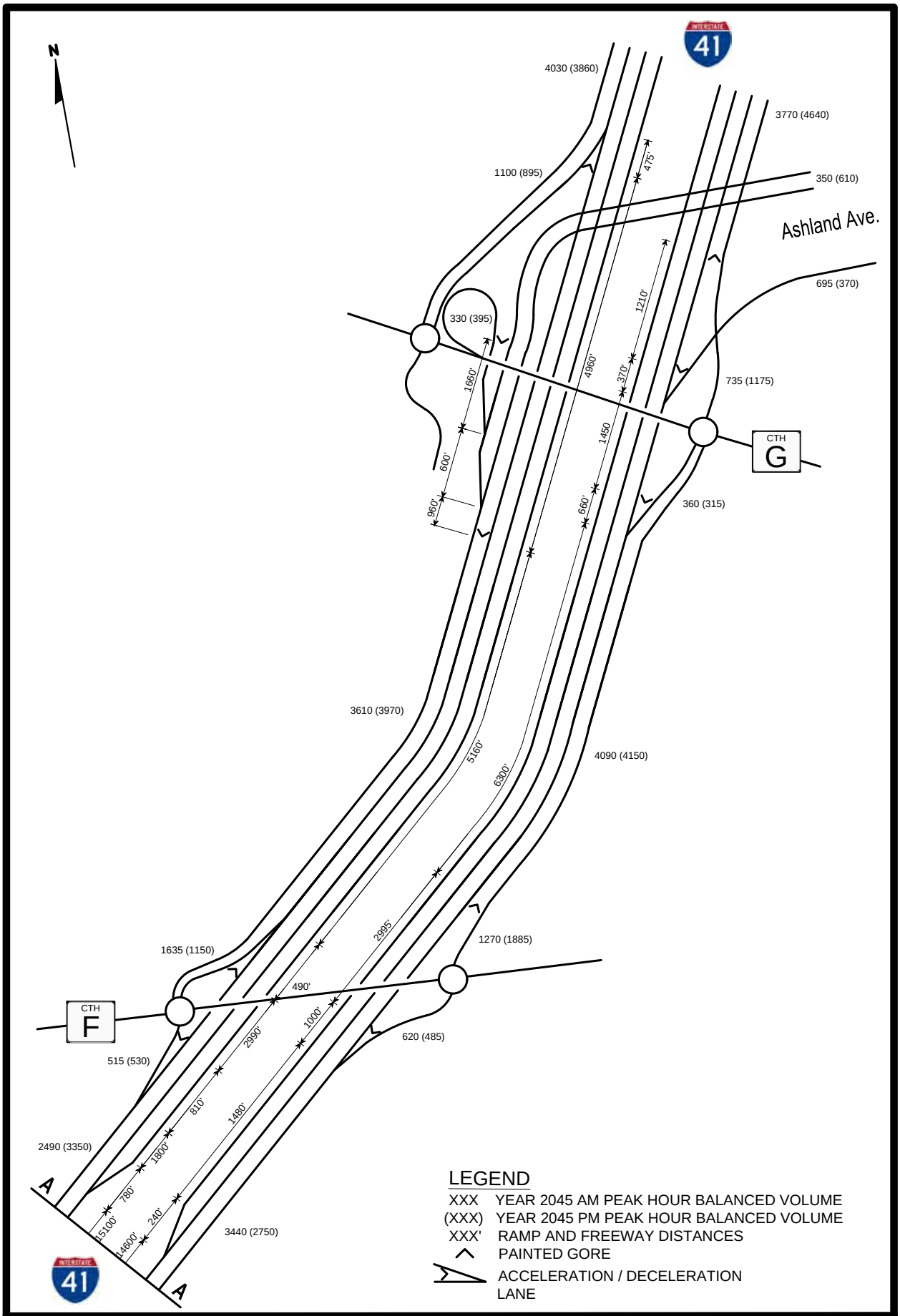
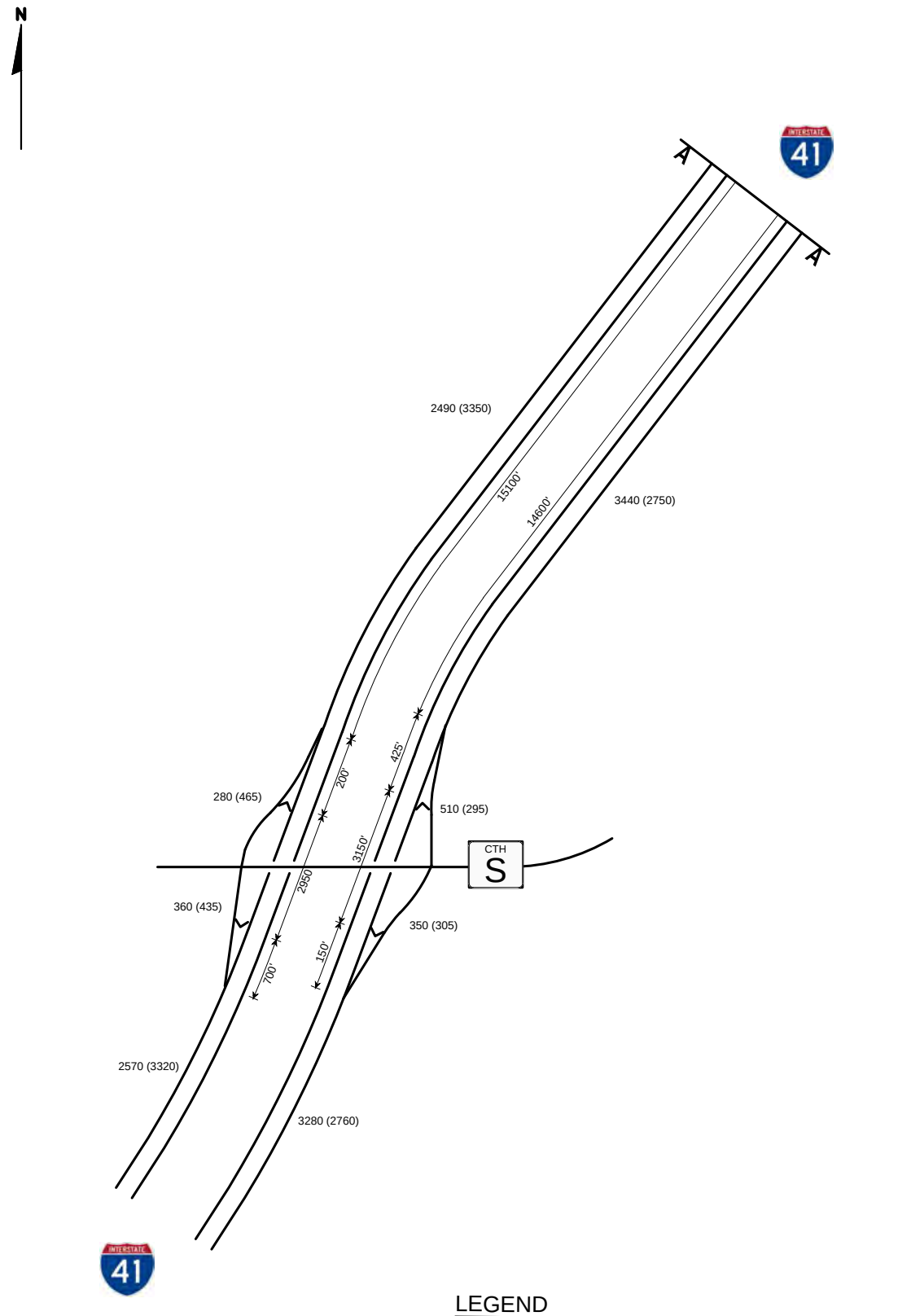


Figure C-6

1 of 2

Year 2045 Build (Alternative 3)

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin



LEGEND

XXX	YEAR 2045 AM PEAK HOUR BALANCED VOLUME
(XXX)	YEAR 2045 PM PEAK HOUR BALANCED VOLUME
XXX'	RAMP AND FREEWAY DISTANCES
^	PAINTED GORE
	ACCELERATION / DECELERATION LANE

Figure C-6

2 of 2

Year 2045 Build (Alternative 3)

Southern Arterial PEOR Traffic Analysis
Brown County, Wisconsin

APPENDIX D

Sidra Analysis Worksheets

County F and Mid Valley Drive (F_MV)

County F and I-41 Southbound Ramps (F_I-41 NB)

County F and I-41 Northbound Ramps (F_I-41 NB)

County F and Lawrence Drive

County G and I-41 Southbound Ramps (G_I-41 SB)

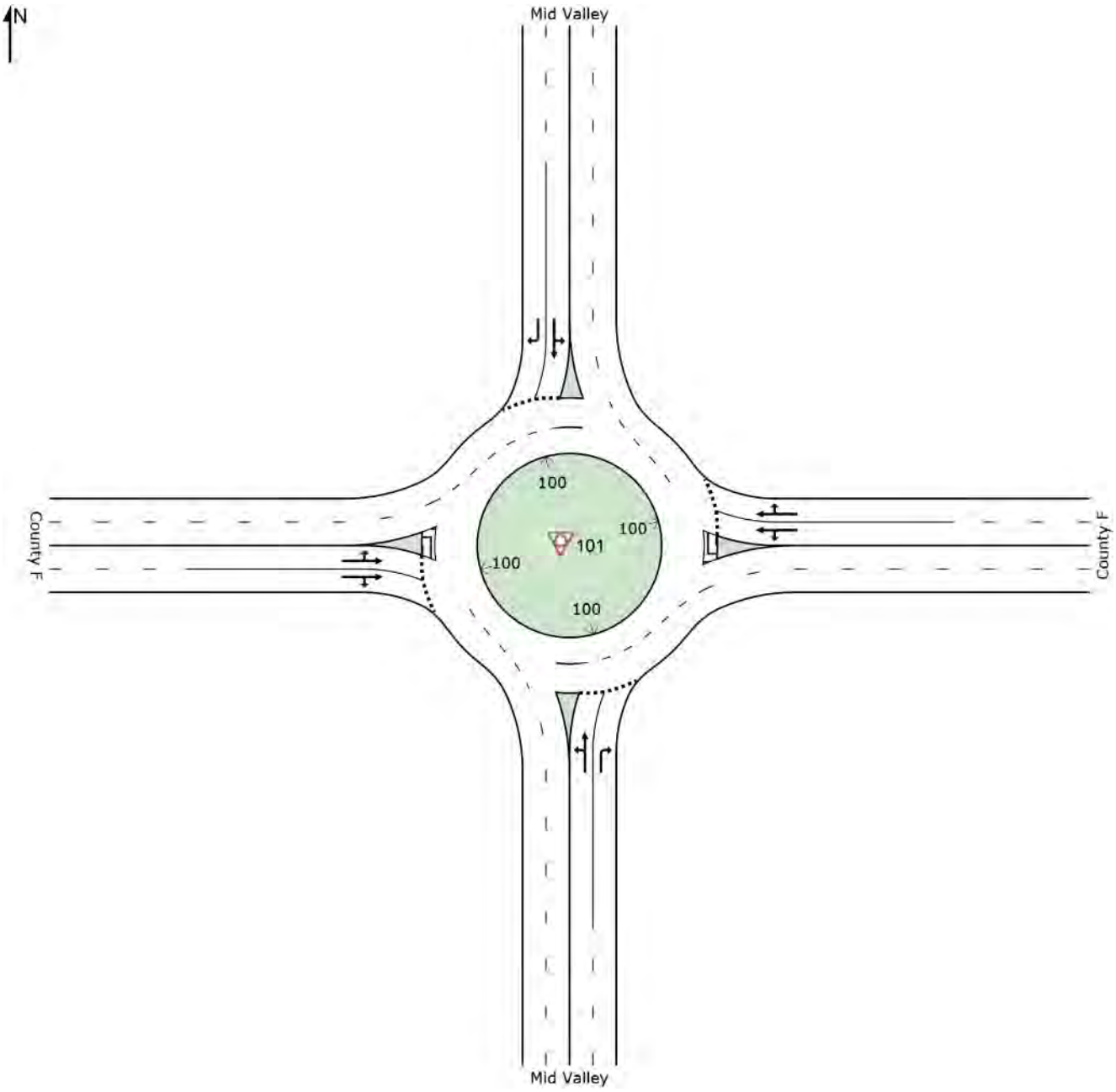
County G and I-41 Northbound Ramps (G_I-41 NB)

Southern Arterial and I-41 Northbound Ramps (SA_I-41 NB)

SITE LAYOUT

Site: 101 [Alt 1 AM F_MV]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 AM F_MV]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	16	3.0	0.066	8.2	LOS A	0.2	4.6	0.62	0.62	32.4
8	T1	16	3.0	0.066	8.2	LOS A	0.2	4.6	0.62	0.62	32.3
18	R2	60	3.0	0.122	9.0	LOS A	0.3	8.6	0.64	0.64	32.1
Approach		92	3.0	0.122	8.7	LOS A	0.3	8.6	0.63	0.63	32.2
East: County F											
1	L2	168	3.0	0.418	7.4	LOS A	1.9	49.8	0.25	0.13	33.2
6	T1	614	3.0	0.418	7.4	LOS A	1.9	49.8	0.25	0.13	33.5
16	R2	190	3.0	0.418	7.4	LOS A	1.9	49.8	0.25	0.13	32.9
Approach		973	3.0	0.418	7.4	LOS A	1.9	49.8	0.25	0.13	33.3
North: Mid Valley											
7	L2	185	3.0	0.331	9.4	LOS A	1.2	30.4	0.57	0.60	31.2
4	T1	43	3.0	0.331	9.4	LOS A	1.2	30.4	0.57	0.60	31.1
14	R2	71	3.0	0.103	6.3	LOS A	0.3	7.4	0.49	0.49	33.3
Approach		299	3.0	0.331	8.7	LOS A	1.2	30.4	0.55	0.58	31.6
West: County F											
5	L2	54	3.0	0.598	12.7	LOS B	5.2	132.1	0.62	0.77	31.4
2	T1	1016	3.0	0.598	12.7	LOS B	5.2	132.1	0.62	0.77	31.4
12	R2	16	3.0	0.598	12.7	LOS B	5.2	132.1	0.62	0.77	30.6
Approach		1087	3.0	0.598	12.7	LOS B	5.2	132.1	0.62	0.77	31.4
All Vehicles		2451	3.0	0.598	9.9	LOS A	5.2	132.1	0.46	0.49	32.2

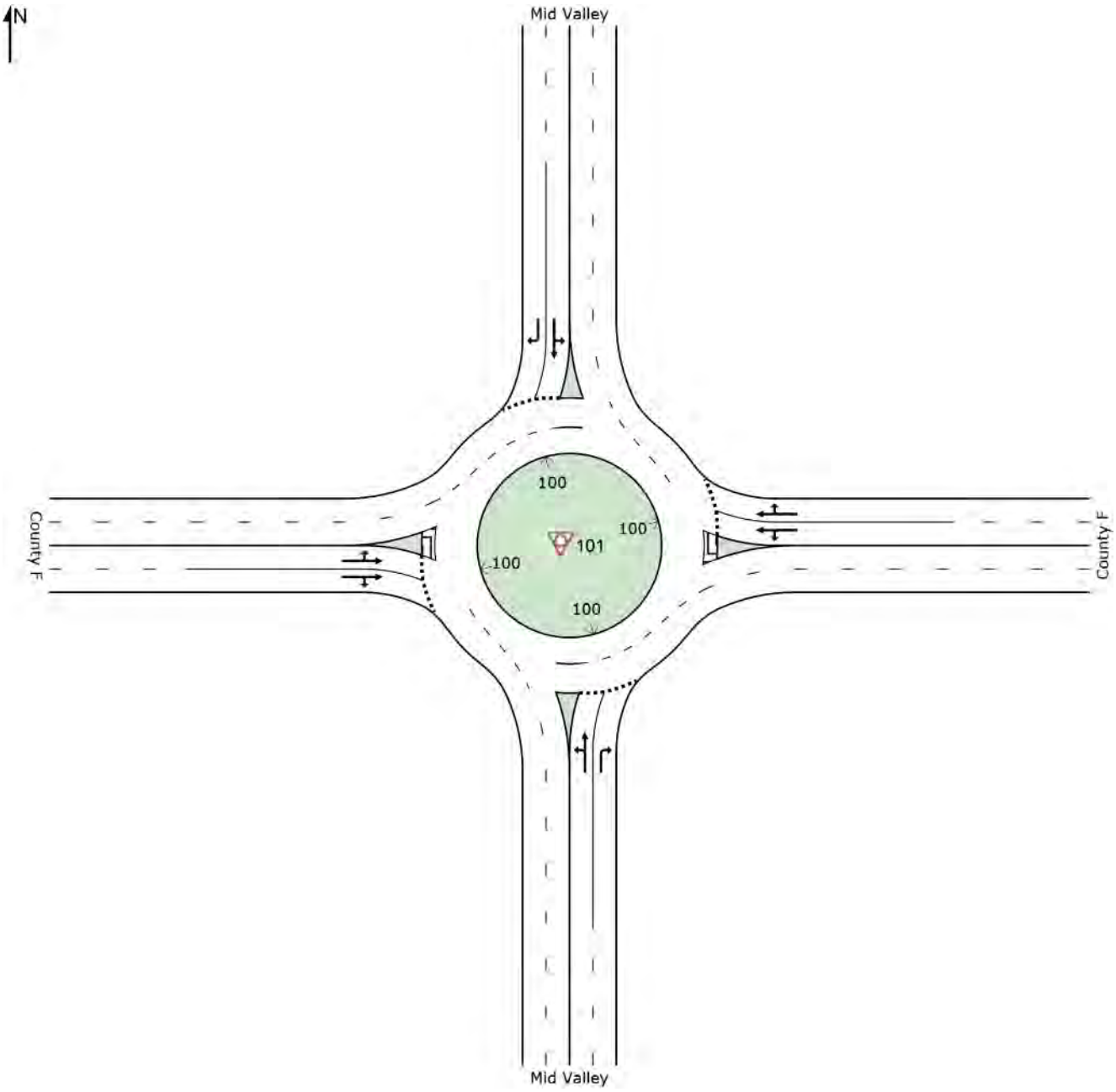
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 1 PM F_MV]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 PM F_MV]

New Site
Roundabout

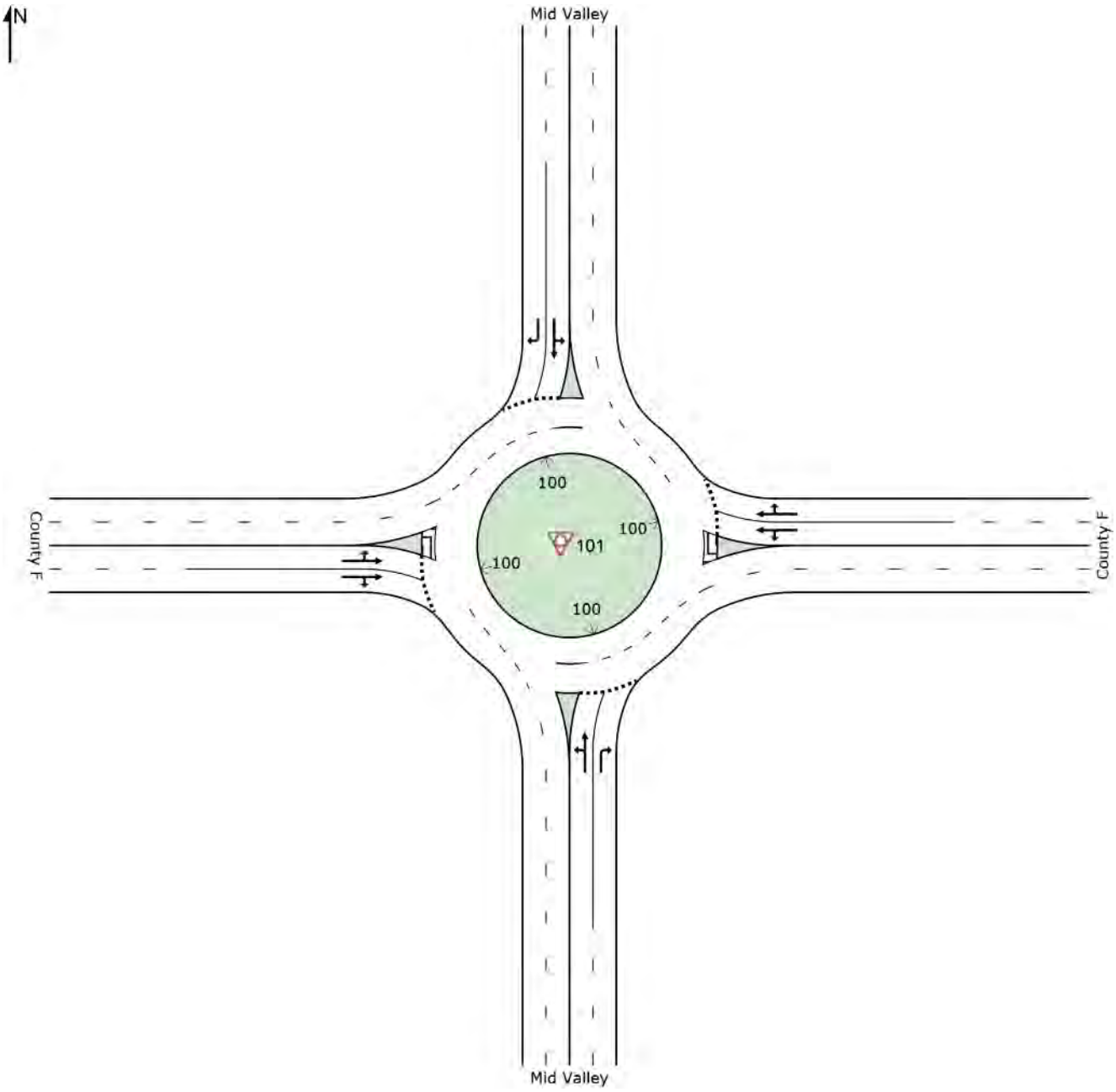
Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	28	3.0	0.116	8.2	LOS A	0.3	8.2	0.60	0.60	32.5
8	T1	34	3.0	0.116	8.2	LOS A	0.3	8.2	0.60	0.60	32.4
18	R2	258	3.0	0.485	15.4	LOS C	2.1	53.3	0.72	0.84	29.3
Approach		320	3.0	0.485	14.0	LOS B	2.1	53.3	0.70	0.79	29.9
East: County F											
1	L2	96	3.0	0.435	7.6	LOS A	2.1	53.2	0.26	0.14	33.5
6	T1	725	3.0	0.435	7.6	LOS A	2.1	53.2	0.26	0.14	33.6
16	R2	191	3.0	0.435	7.6	LOS A	2.1	53.2	0.26	0.14	32.8
Approach		1011	3.0	0.435	7.6	LOS A	2.1	53.2	0.26	0.14	33.4
North: Mid Valley											
7	L2	404	3.0	0.668	19.0	LOS C	4.7	119.8	0.73	0.97	27.5
4	T1	39	3.0	0.668	19.0	LOS C	4.7	119.8	0.73	0.97	27.4
14	R2	124	3.0	0.186	7.6	LOS A	0.5	14.1	0.53	0.53	32.7
Approach		567	3.0	0.668	16.5	LOS C	4.7	119.8	0.69	0.87	28.4
West: County F											
5	L2	28	3.0	0.471	10.7	LOS B	2.6	66.2	0.59	0.68	32.3
2	T1	713	3.0	0.471	10.7	LOS B	2.6	66.2	0.59	0.68	32.3
12	R2	22	3.0	0.471	10.7	LOS B	2.6	66.2	0.59	0.68	31.5
Approach		764	3.0	0.471	10.7	LOS B	2.6	66.2	0.59	0.68	32.3
All Vehicles		2663	3.0	0.668	11.2	LOS B	4.7	119.8	0.50	0.53	31.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [Alt 2A AM F_MV]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2A AM F_MV]

New Site
Roundabout

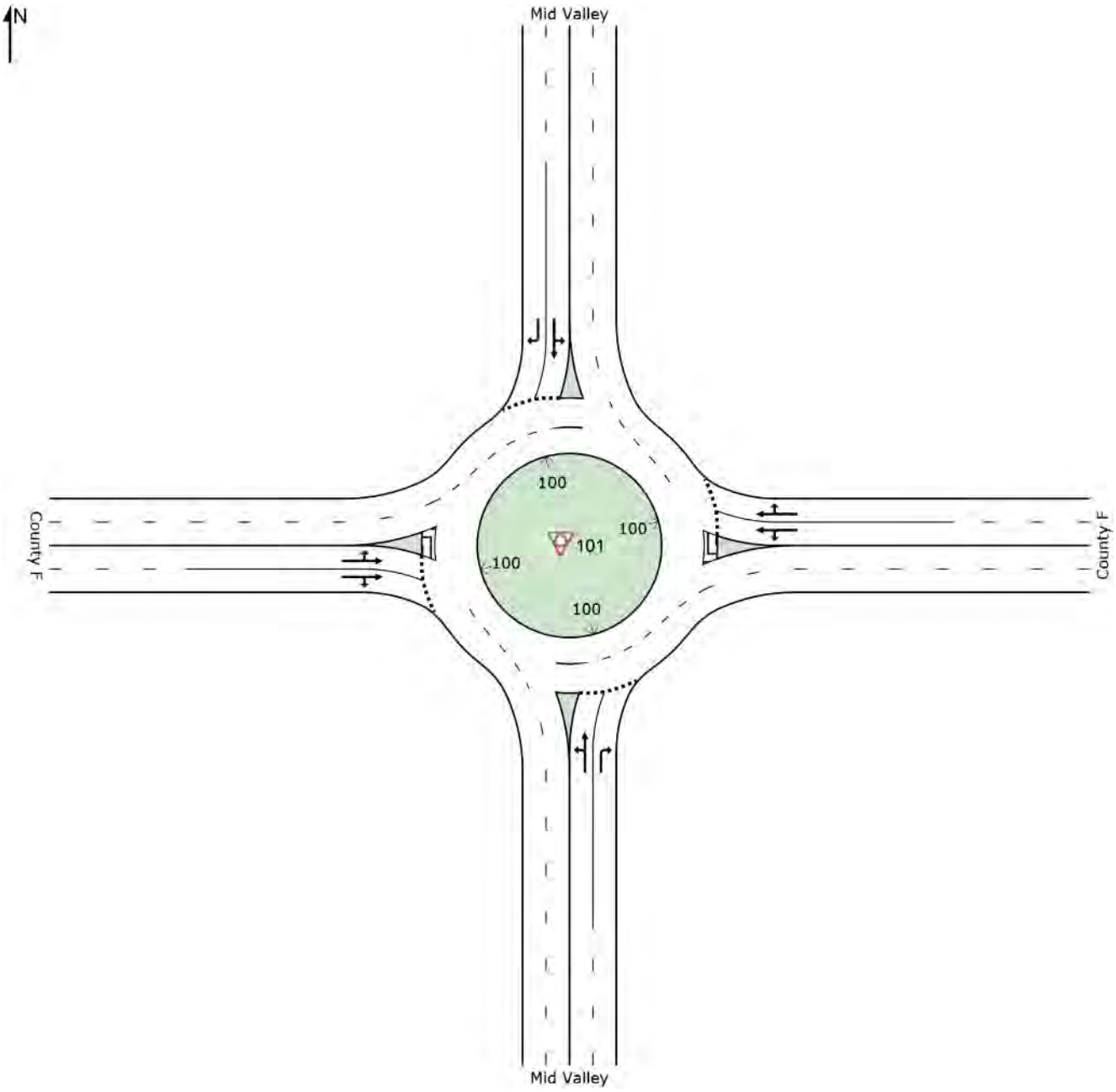
Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	5	3.0	0.036	6.4	LOS A	0.1	2.5	0.53	0.52	33.9
8	T1	16	3.0	0.036	6.4	LOS A	0.1	2.5	0.53	0.52	33.8
18	R2	27	3.0	0.045	6.5	LOS A	0.1	3.2	0.53	0.53	33.2
Approach		49	3.0	0.045	6.5	LOS A	0.1	3.2	0.53	0.53	33.5
East: County F											
1	L2	65	3.0	0.337	6.4	LOS A	1.4	36.0	0.23	0.12	34.2
6	T1	609	3.0	0.337	6.4	LOS A	1.4	36.0	0.23	0.12	34.3
16	R2	109	3.0	0.337	6.4	LOS A	1.4	36.0	0.23	0.12	33.4
Approach		783	3.0	0.337	6.4	LOS A	1.4	36.0	0.23	0.12	34.2
North: Mid Valley											
7	L2	196	3.0	0.296	8.3	LOS A	1.0	24.6	0.53	0.53	31.5
4	T1	27	3.0	0.296	8.3	LOS A	1.0	24.6	0.53	0.53	31.4
14	R2	98	3.0	0.130	6.1	LOS A	0.4	9.7	0.47	0.47	33.4
Approach		321	3.0	0.296	7.6	LOS A	1.0	24.6	0.51	0.51	32.0
West: County F											
5	L2	71	3.0	0.403	8.1	LOS A	1.7	43.2	0.44	0.37	33.3
2	T1	723	3.0	0.403	8.1	LOS A	1.7	43.2	0.44	0.37	33.5
12	R2	5	3.0	0.403	8.1	LOS A	1.7	43.2	0.44	0.37	32.6
Approach		799	3.0	0.403	8.1	LOS A	1.7	43.2	0.44	0.37	33.4
All Vehicles		1951	3.0	0.403	7.3	LOS A	1.7	43.2	0.37	0.30	33.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [Alt 2A PM F_MV]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2A PM F_MV]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	11	3.0	0.053	6.2	LOS A	0.1	3.7	0.50	0.50	33.8
8	T1	22	3.0	0.053	6.2	LOS A	0.1	3.7	0.50	0.50	33.7
18	R2	124	3.0	0.194	8.0	LOS A	0.6	14.6	0.54	0.54	32.5
Approach		157	3.0	0.194	7.6	LOS A	0.6	14.6	0.54	0.54	32.8
East: County F											
1	L2	39	3.0	0.322	6.1	LOS A	1.3	33.9	0.20	0.10	34.5
6	T1	528	3.0	0.322	6.1	LOS A	1.3	33.9	0.20	0.10	34.5
16	R2	191	3.0	0.322	6.1	LOS A	1.3	33.9	0.20	0.10	33.5
Approach		758	3.0	0.322	6.1	LOS A	1.3	33.9	0.20	0.10	34.2
North: Mid Valley											
7	L2	404	3.0	0.526	11.9	LOS B	3.2	81.4	0.60	0.74	29.9
4	T1	22	3.0	0.526	11.9	LOS B	3.2	81.4	0.60	0.74	29.8
14	R2	140	3.0	0.173	6.2	LOS A	0.5	13.4	0.45	0.44	33.4
Approach		567	3.0	0.526	10.5	LOS B	3.2	81.4	0.57	0.66	30.7
West: County F											
5	L2	39	3.0	0.297	7.4	LOS A	1.1	27.3	0.48	0.46	33.7
2	T1	461	3.0	0.297	7.4	LOS A	1.1	27.3	0.48	0.46	33.8
12	R2	11	3.0	0.297	7.4	LOS A	1.1	27.3	0.48	0.46	32.9
Approach		511	3.0	0.297	7.4	LOS A	1.1	27.3	0.48	0.46	33.8
All Vehicles		1994	3.0	0.526	7.8	LOS A	3.2	81.4	0.40	0.39	32.9

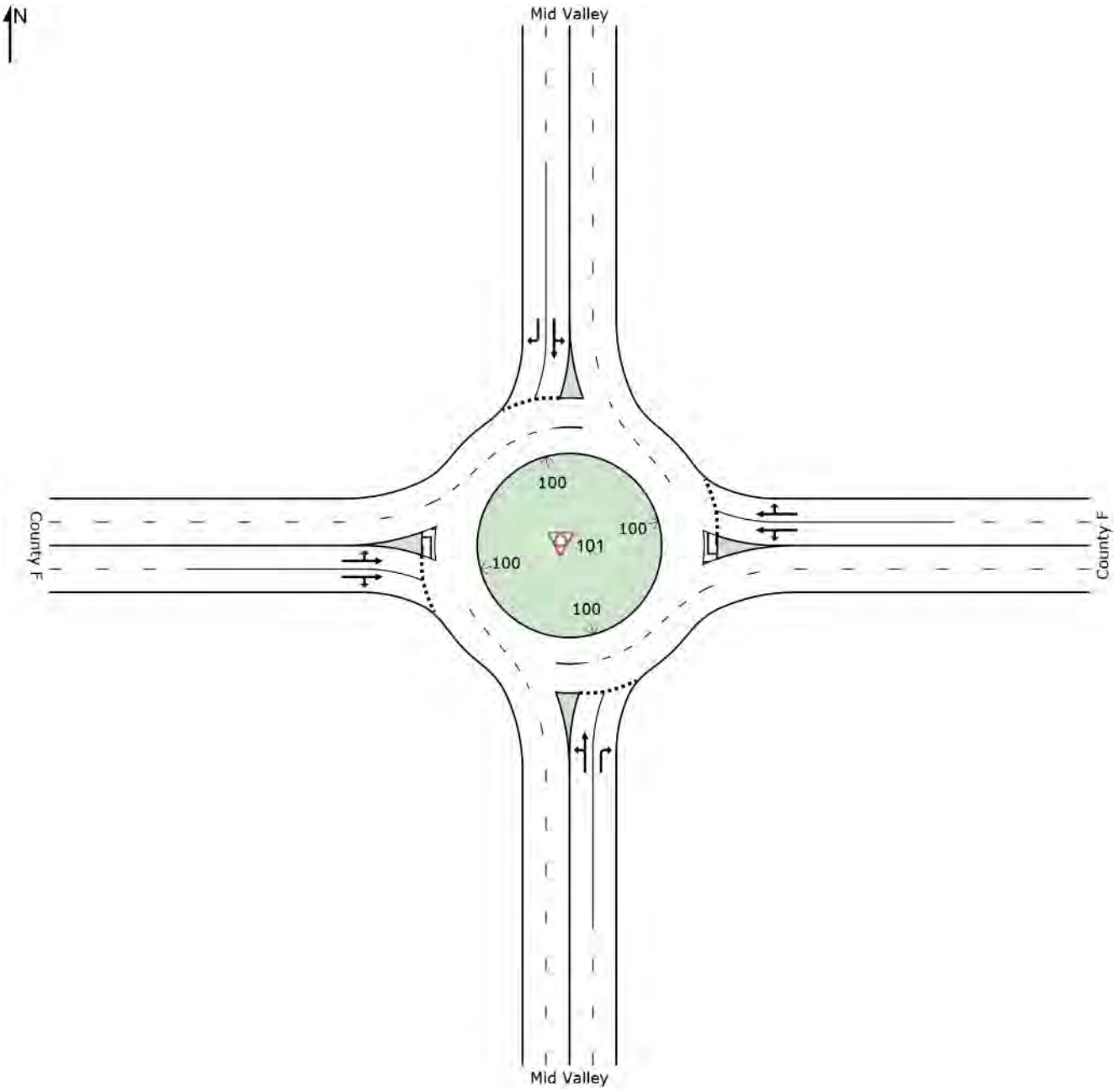
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LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2B AM F_MV]

New Site
Roundabout



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MOVEMENT SUMMARY

Site: 101 [Alt 2B AM F_MV]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	11	3.0	0.047	6.8	LOS A	0.1	3.3	0.55	0.55	33.4
8	T1	16	3.0	0.047	6.8	LOS A	0.1	3.3	0.55	0.55	33.3
18	R2	33	3.0	0.056	6.9	LOS A	0.2	3.9	0.55	0.55	33.1
Approach		60	3.0	0.056	6.8	LOS A	0.2	3.9	0.55	0.55	33.2
East: County F											
1	L2	87	3.0	0.365	6.7	LOS A	1.6	40.2	0.25	0.14	33.9
6	T1	582	3.0	0.365	6.7	LOS A	1.6	40.2	0.25	0.14	34.0
16	R2	174	3.0	0.365	6.7	LOS A	1.6	40.2	0.25	0.14	33.2
Approach		842	3.0	0.365	6.7	LOS A	1.6	40.2	0.25	0.14	33.8
North: Mid Valley											
7	L2	196	3.0	0.296	8.3	LOS A	1.0	24.6	0.53	0.53	31.5
4	T1	27	3.0	0.296	8.3	LOS A	1.0	24.6	0.53	0.53	31.4
14	R2	98	3.0	0.130	6.1	LOS A	0.4	9.7	0.47	0.47	33.4
Approach		321	3.0	0.296	7.6	LOS A	1.0	24.6	0.51	0.51	32.0
West: County F											
5	L2	71	3.0	0.435	8.7	LOS A	1.9	47.9	0.47	0.40	33.0
2	T1	766	3.0	0.435	8.7	LOS A	1.9	47.9	0.47	0.40	33.2
12	R2	11	3.0	0.435	8.7	LOS A	1.9	47.9	0.47	0.40	32.4
Approach		848	3.0	0.435	8.7	LOS A	1.9	47.9	0.47	0.40	33.2
All Vehicles		2071	3.0	0.435	7.7	LOS A	1.9	47.9	0.39	0.32	33.2

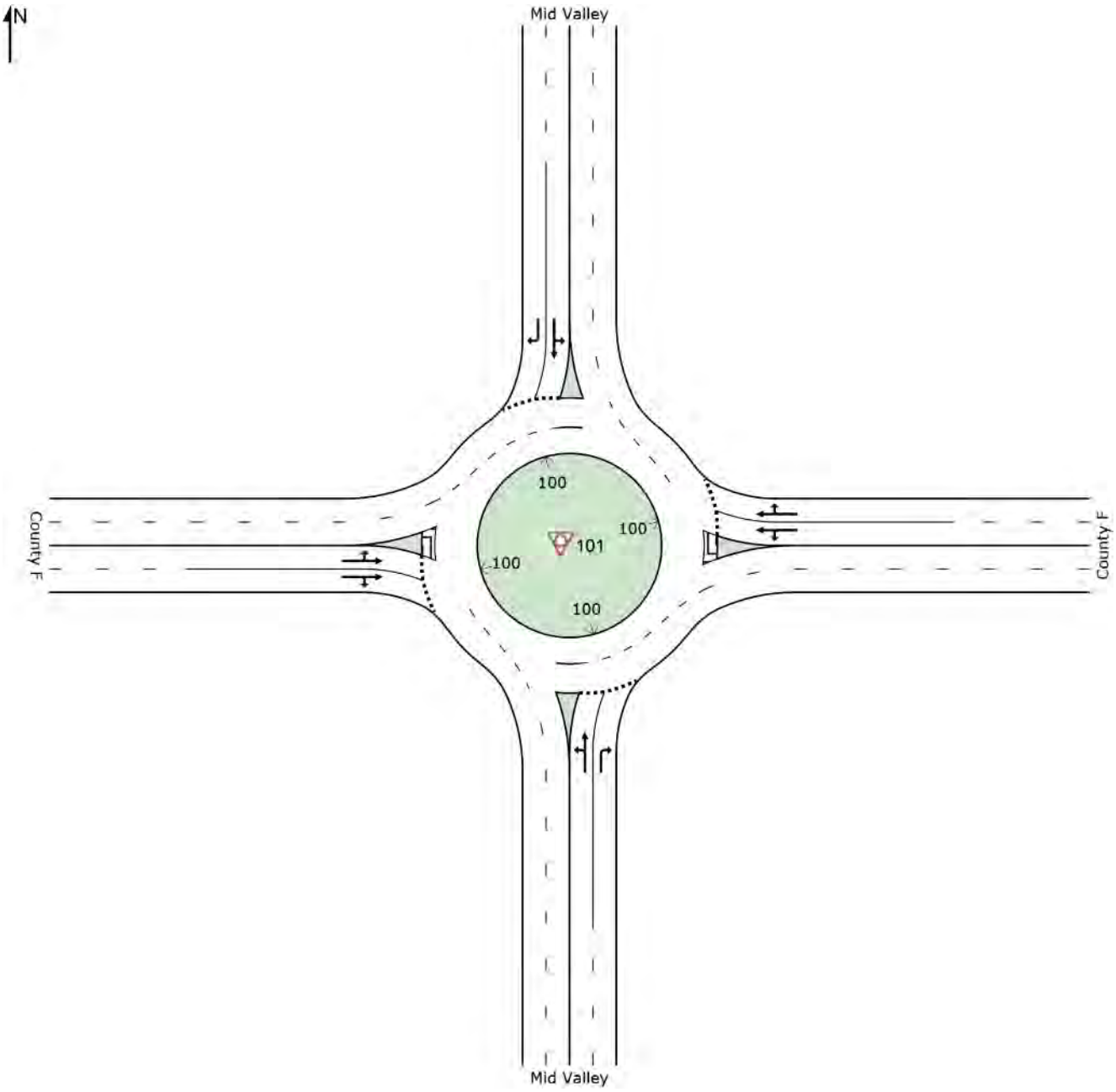
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LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2B PM F_MV]

New Site
Roundabout



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MOVEMENT SUMMARY

Site: 101 [Alt 2B PM F_MV]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	22	3.0	0.075	6.9	LOS A	0.2	5.3	0.54	0.54	33.0
8	T1	22	3.0	0.075	6.9	LOS A	0.2	5.3	0.54	0.54	32.9
18	R2	135	3.0	0.226	8.9	LOS A	0.7	17.2	0.58	0.58	32.1
Approach		180	3.0	0.226	8.4	LOS A	0.7	17.2	0.57	0.57	32.3
East: County F											
1	L2	45	3.0	0.371	6.7	LOS A	1.6	41.4	0.23	0.12	34.2
6	T1	629	3.0	0.371	6.7	LOS A	1.6	41.4	0.23	0.12	34.2
16	R2	191	3.0	0.371	6.7	LOS A	1.6	41.4	0.23	0.12	33.2
Approach		865	3.0	0.371	6.7	LOS A	1.6	41.4	0.23	0.12	33.9
North: Mid Valley											
7	L2	404	3.0	0.574	14.0	LOS B	3.6	92.7	0.66	0.83	29.1
4	T1	22	3.0	0.574	14.0	LOS B	3.6	92.7	0.66	0.83	29.0
14	R2	140	3.0	0.189	6.9	LOS A	0.6	14.6	0.49	0.49	33.0
Approach		567	3.0	0.574	12.3	LOS B	3.6	92.7	0.62	0.74	29.9
West: County F											
5	L2	39	3.0	0.355	8.3	LOS A	1.3	34.1	0.51	0.50	33.3
2	T1	551	3.0	0.355	8.3	LOS A	1.3	34.1	0.51	0.50	33.4
12	R2	17	3.0	0.355	8.3	LOS A	1.3	34.1	0.51	0.50	32.5
Approach		607	3.0	0.355	8.3	LOS A	1.3	34.1	0.51	0.50	33.4
All Vehicles		2219	3.0	0.574	8.7	LOS A	3.6	92.7	0.43	0.42	32.5

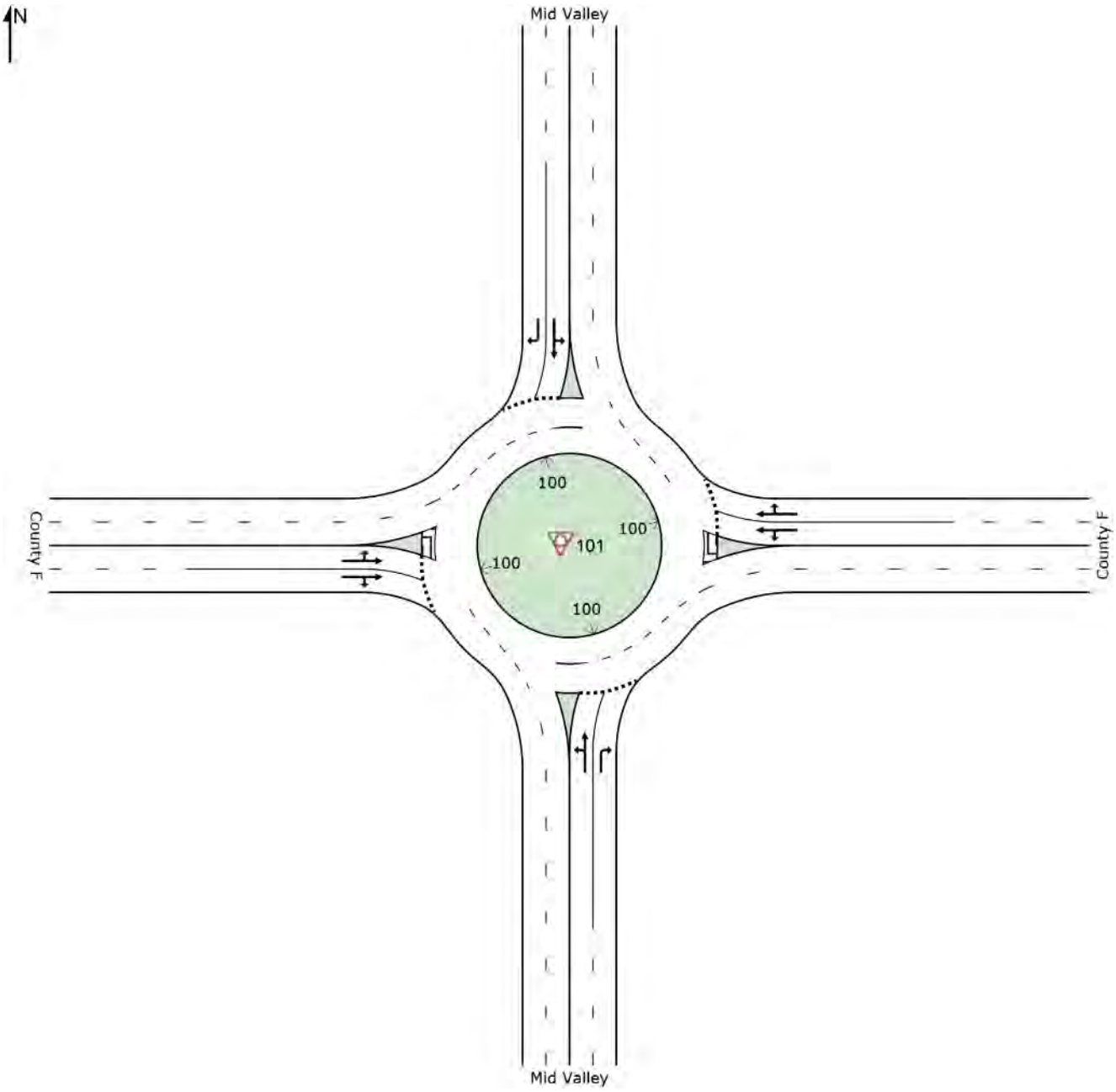
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 3 AM F_MV]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 AM F_MV]

New Site
Roundabout

Movement Performance - Vehicles

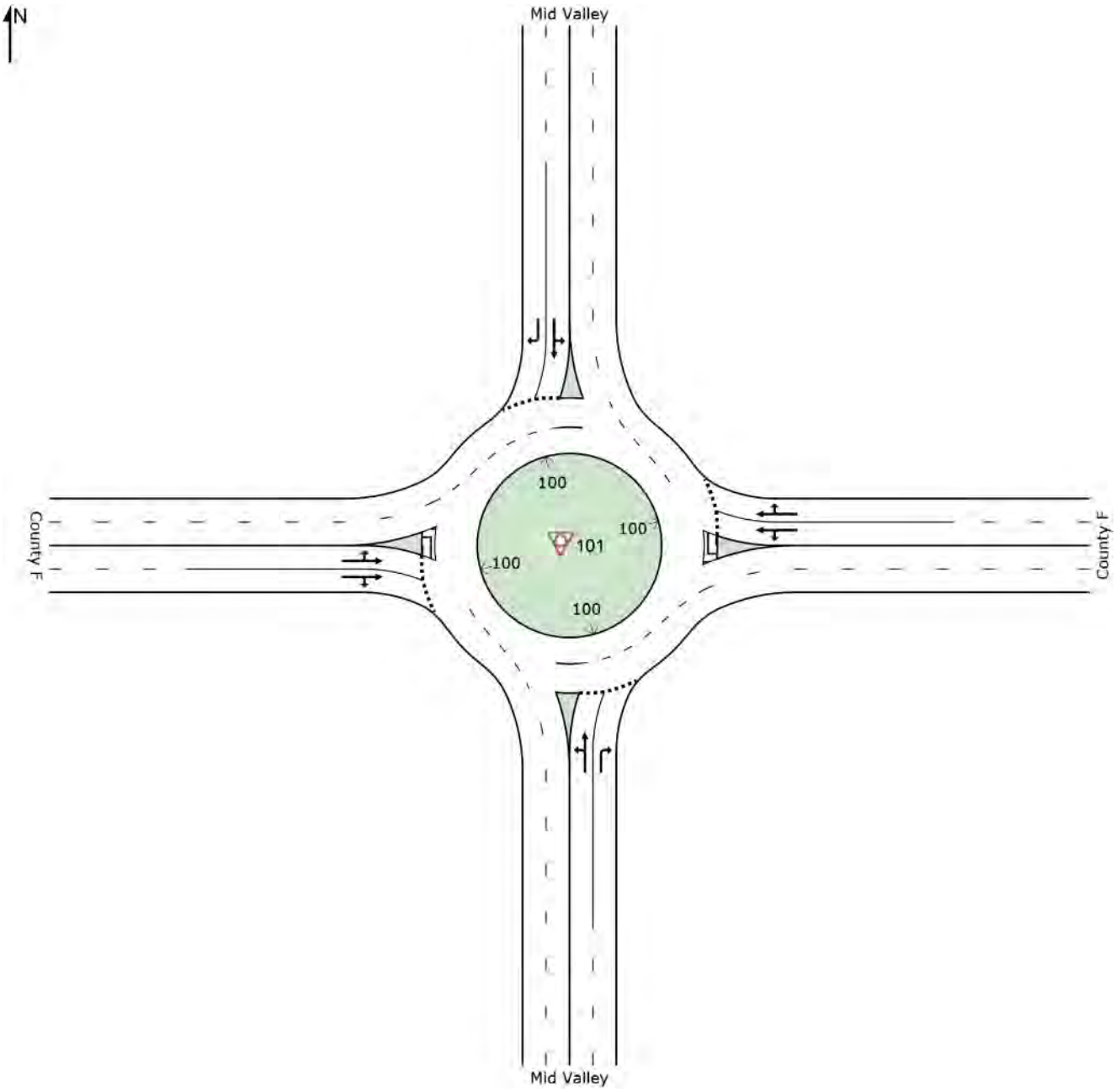
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	16	3.0	0.083	7.9	LOS A	0.2	5.8	0.60	0.60	32.9
8	T1	27	3.0	0.083	7.9	LOS A	0.2	5.8	0.60	0.60	32.8
18	R2	60	3.0	0.115	8.4	LOS A	0.3	8.1	0.61	0.61	32.3
Approach		103	3.0	0.115	8.2	LOS A	0.3	8.1	0.61	0.61	32.5
East: County F											
1	L2	174	3.0	0.381	6.9	LOS A	1.7	42.8	0.26	0.15	33.3
6	T1	538	3.0	0.381	6.9	LOS A	1.7	42.8	0.26	0.15	33.7
16	R2	163	3.0	0.381	6.9	LOS A	1.7	42.8	0.26	0.15	33.1
Approach		875	3.0	0.381	6.9	LOS A	1.7	42.8	0.26	0.15	33.5
North: Mid Valley											
7	L2	168	3.0	0.307	8.7	LOS A	1.0	26.4	0.54	0.55	31.6
4	T1	54	3.0	0.307	8.7	LOS A	1.0	26.4	0.54	0.55	31.5
14	R2	65	3.0	0.090	5.9	LOS A	0.3	6.5	0.47	0.46	33.5
Approach		288	3.0	0.307	8.0	LOS A	1.0	26.4	0.53	0.53	32.0
West: County F											
5	L2	60	3.0	0.562	11.7	LOS B	4.3	110.2	0.59	0.71	31.8
2	T1	946	3.0	0.562	11.7	LOS B	4.3	110.2	0.59	0.71	31.8
12	R2	16	3.0	0.562	11.7	LOS B	4.3	110.2	0.59	0.71	31.0
Approach		1022	3.0	0.562	11.7	LOS B	4.3	110.2	0.59	0.71	31.8
All Vehicles		2288	3.0	0.562	9.3	LOS A	4.3	110.2	0.46	0.47	32.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [Alt 3 PM F_MV]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 PM F_MV]

New Site
Roundabout

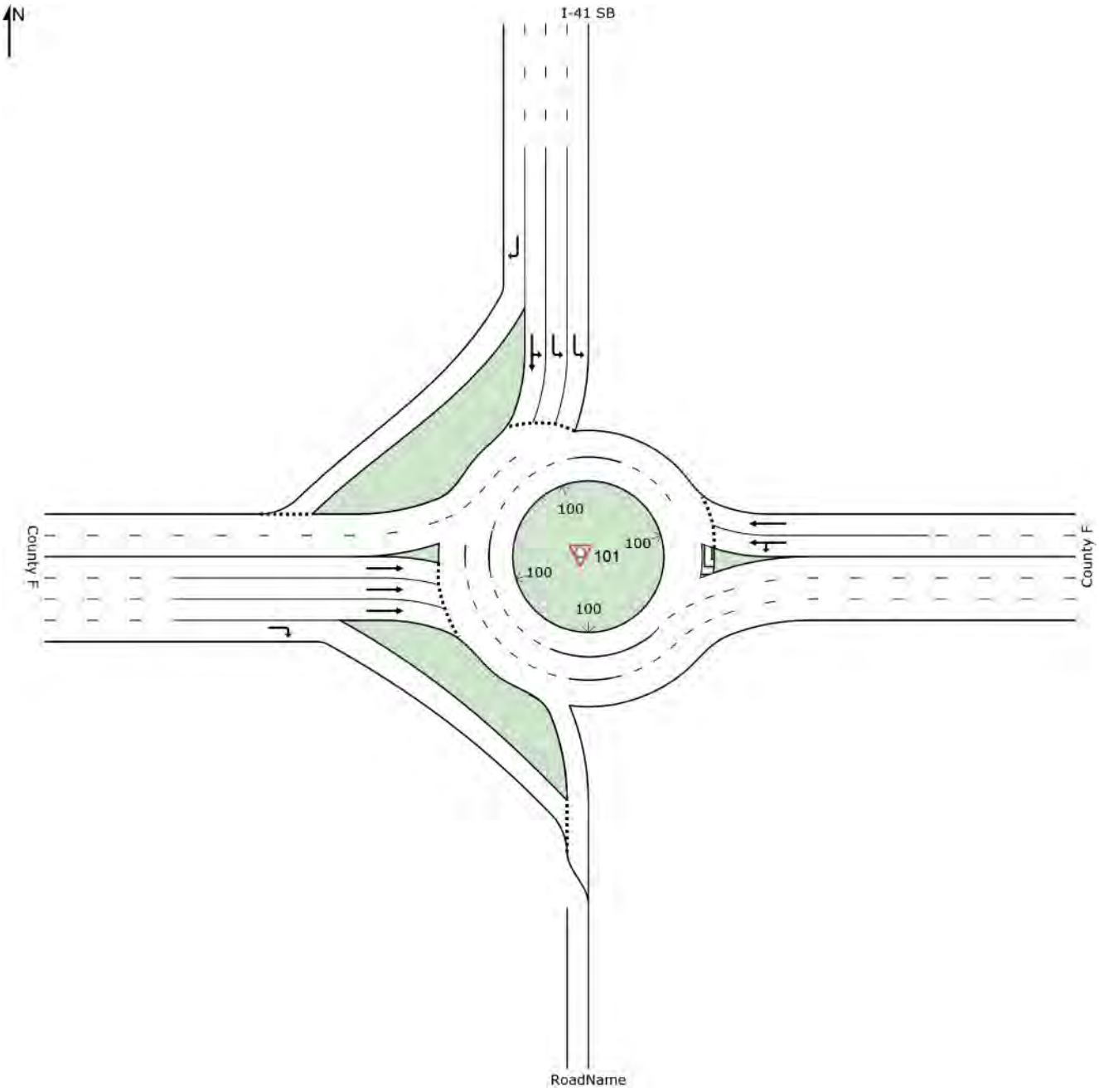
Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	28	3.0	0.129	7.9	LOS A	0.4	9.3	0.58	0.58	32.8
8	T1	45	3.0	0.129	7.9	LOS A	0.4	9.3	0.58	0.58	32.7
18	R2	258	3.0	0.456	13.8	LOS B	1.9	49.3	0.68	0.79	30.0
Approach		331	3.0	0.456	12.5	LOS B	1.9	49.3	0.66	0.74	30.6
East: County F											
1	L2	107	3.0	0.407	7.3	LOS A	1.9	47.5	0.27	0.15	33.5
6	T1	669	3.0	0.407	7.3	LOS A	1.9	47.5	0.27	0.15	33.7
16	R2	163	3.0	0.407	7.3	LOS A	1.9	47.5	0.27	0.15	33.0
Approach		938	3.0	0.407	7.3	LOS A	1.9	47.5	0.27	0.15	33.6
North: Mid Valley											
7	L2	360	3.0	0.597	15.7	LOS C	3.7	94.5	0.69	0.87	28.6
4	T1	51	3.0	0.597	15.7	LOS C	3.7	94.5	0.69	0.87	28.6
14	R2	107	3.0	0.155	7.0	LOS A	0.5	11.6	0.51	0.51	33.0
Approach		517	3.0	0.597	13.9	LOS B	3.7	94.5	0.65	0.80	29.4
West: County F											
5	L2	28	3.0	0.439	9.9	LOS A	2.2	56.6	0.57	0.63	32.7
2	T1	674	3.0	0.439	9.9	LOS A	2.2	56.6	0.57	0.63	32.7
12	R2	22	3.0	0.439	9.9	LOS A	2.2	56.6	0.57	0.63	31.8
Approach		725	3.0	0.439	9.9	LOS A	2.2	56.6	0.57	0.63	32.7
All Vehicles		2511	3.0	0.597	10.1	LOS B	3.7	94.5	0.48	0.50	32.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [Alt 1 AM - County F and I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 AM - County F and I-41 SB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: County F											
1	L2	505	3.0	0.405	6.9	LOS A	0.0	0.0	0.00	0.00	35.1
6	T1	446	3.0	0.357	6.3	LOS A	0.0	0.0	0.00	0.00	38.2
Approach		951	3.0	0.405	6.6	LOS A	0.0	0.0	0.00	0.00	36.5
North: I-41 SB											
7	L2	1321	3.0	0.716	22.8	LOS C	5.2	133.2	0.77	1.05	26.2
4	T1	1	3.0	0.716	22.8	LOS C	5.2	133.2	0.77	1.05	26.1
14	R2	527	3.0	0.588	12.5	LOS B	4.6	118.5	0.60	0.77	30.4
Approach		1849	3.0	0.716	19.8	LOS C	5.2	133.2	0.72	0.97	27.2
West: County F											
2	T1	984	3.0	1.022	93.2	LOS F	12.4	317.6	1.00	1.92	14.9
12	R2	277	3.0	0.324	7.8	LOS A	1.1	28.5	0.48	0.48	32.5
Approach		1261	3.0	1.022	74.4	LOS F	12.4	317.6	0.89	1.61	16.9
All Vehicles		4061	3.0	1.022	33.7	LOS D	12.4	317.6	0.60	0.94	24.1

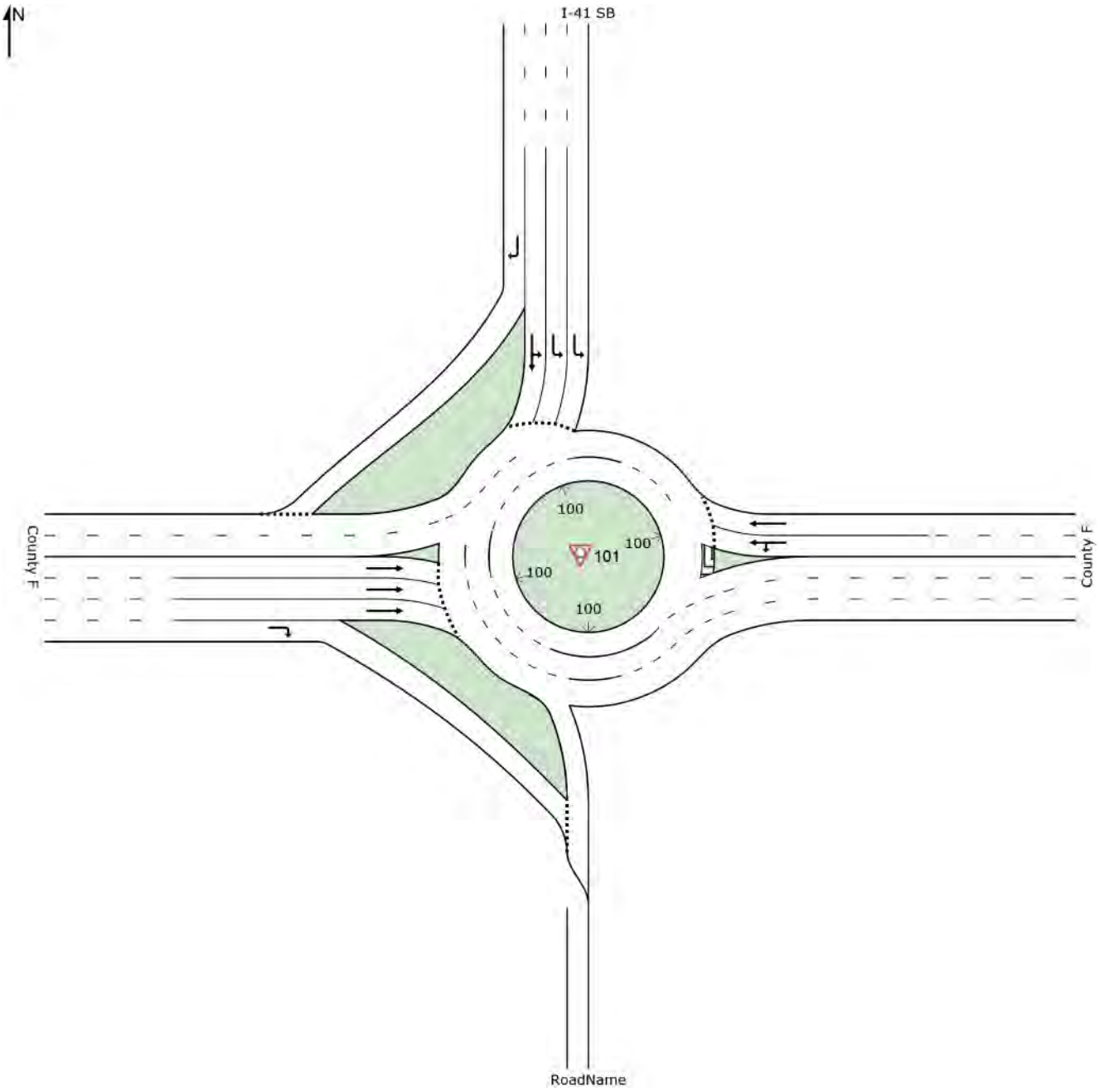
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LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 1 PM - County F and I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 PM - County F and I-41 SB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: County F											
1	L2	483	3.0	0.414	7.0	LOS A	0.0	0.0	0.00	0.00	35.3
6	T1	551	3.0	0.414	7.0	LOS A	0.0	0.0	0.00	0.00	38.0
Approach		1034	3.0	0.414	7.0	LOS A	0.0	0.0	0.00	0.00	36.7
North: I-41 SB											
7	L2	826	3.0	0.476	14.1	LOS B	2.1	53.8	0.68	0.80	29.0
4	T1	1	3.0	0.476	14.1	LOS B	2.1	53.8	0.68	0.80	28.9
14	R2	461	3.0	0.556	12.4	LOS B	3.7	94.7	0.61	0.76	30.4
Approach		1288	3.0	0.556	13.5	LOS B	3.7	94.7	0.66	0.79	29.5
West: County F											
2	T1	1079	3.0	0.763	32.1	LOS D	4.9	126.1	0.86	1.18	24.9
12	R2	298	3.0	0.342	8.0	LOS A	1.2	30.7	0.48	0.47	32.4
Approach		1376	3.0	0.763	26.8	LOS D	4.9	126.1	0.78	1.03	26.2
All Vehicles		3698	3.0	0.763	16.6	LOS C	4.9	126.1	0.52	0.66	29.7

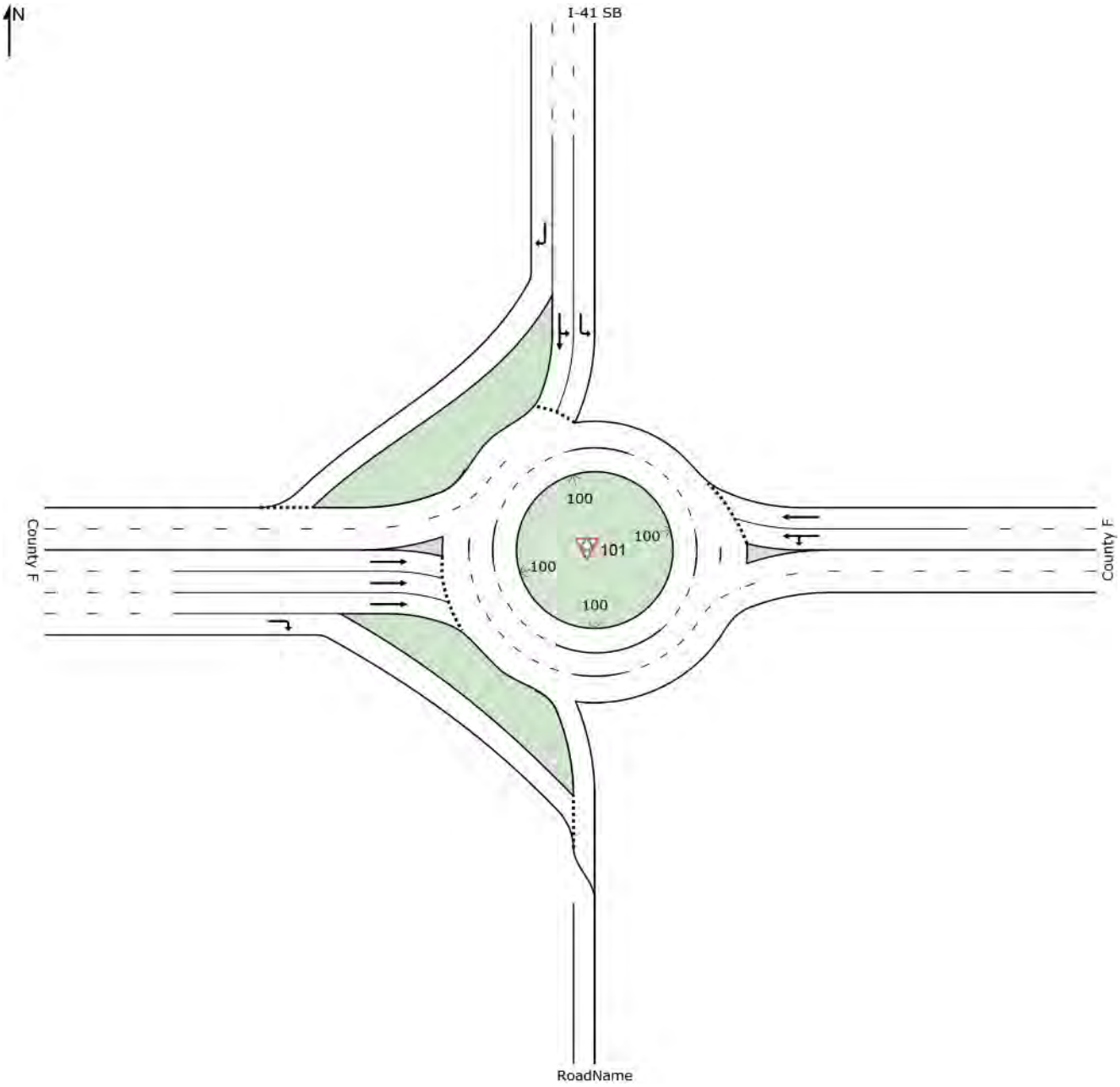
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
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LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [County F - I-41 SB AM Alt 2A]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [County F - I-41 SB AM Alt 2A]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: County F											
1	L2	239	3.0	0.209	4.7	LOS A	0.0	0.0	0.00	0.00	35.3
6	T1	283	3.0	0.209	4.7	LOS A	0.0	0.0	0.00	0.00	38.0
Approach		522	3.0	0.209	4.7	LOS A	0.0	0.0	0.00	0.00	36.7
North: I-41 SB											
7	L2	1022	3.0	0.604	13.5	LOS B	4.7	119.9	0.64	0.82	29.2
4	T1	1	3.0	0.604	13.5	LOS B	4.7	119.9	0.64	0.82	29.1
14	R2	500	3.0	0.494	9.5	LOS A	2.5	64.2	0.46	0.41	31.9
Approach		1523	3.0	0.604	12.2	LOS B	4.7	119.9	0.58	0.69	30.0
West: County F											
2	T1	761	3.0	0.694	24.1	LOS C	4.0	101.6	0.81	1.03	27.2
12	R2	185	3.0	0.177	5.1	LOS A	0.6	14.3	0.30	0.22	33.8
Approach		946	3.0	0.694	20.4	LOS C	4.0	101.6	0.71	0.87	28.3
All Vehicles		2990	3.0	0.694	13.5	LOS B	4.7	119.9	0.52	0.62	30.4

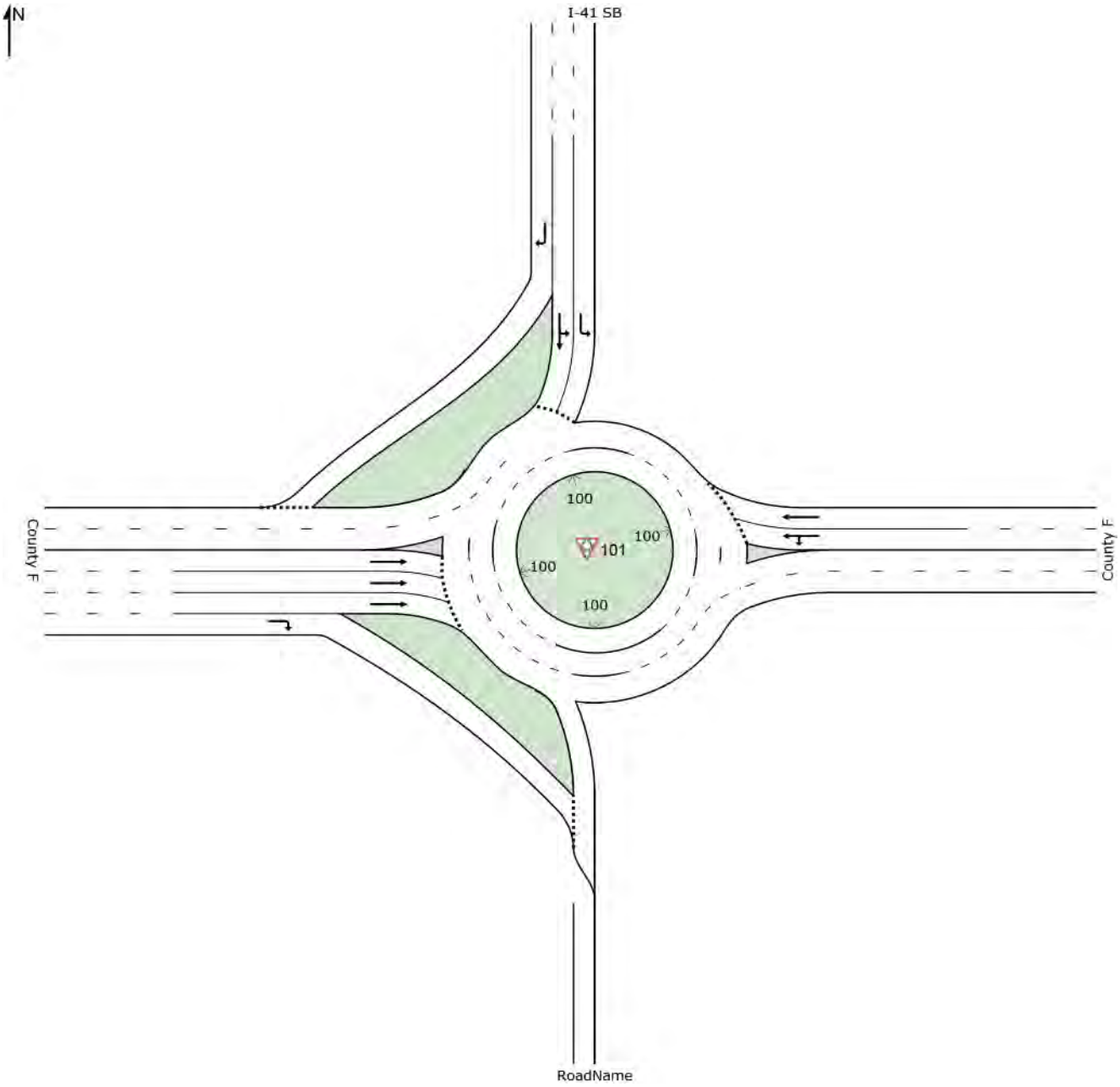
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [County F - I-41 SB PM Alt 2A]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [County F - I-41 SB PM Alt 2A]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: County F											
1	L2	281	3.0	0.245	5.0	LOS A	0.0	0.0	0.00	0.00	35.3
6	T1	331	3.0	0.245	5.0	LOS A	0.0	0.0	0.00	0.00	38.0
Approach		612	3.0	0.245	5.0	LOS A	0.0	0.0	0.00	0.00	36.7
North: I-41 SB											
7	L2	663	3.0	0.419	9.9	LOS A	1.9	48.7	0.56	0.63	30.6
4	T1	1	3.0	0.419	9.9	LOS A	1.9	48.7	0.56	0.63	30.5
14	R2	427	3.0	0.438	8.7	LOS A	1.8	47.0	0.46	0.41	32.2
Approach		1091	3.0	0.438	9.4	LOS A	1.9	48.7	0.52	0.54	31.2
West: County F											
2	T1	848	3.0	0.611	16.5	LOS C	3.6	91.2	0.70	0.87	30.0
12	R2	140	3.0	0.139	4.8	LOS A	0.4	10.8	0.31	0.23	34.0
Approach		989	3.0	0.611	14.8	LOS B	3.6	91.2	0.64	0.78	30.5
All Vehicles		2692	3.0	0.611	10.4	LOS B	3.6	91.2	0.45	0.50	32.0

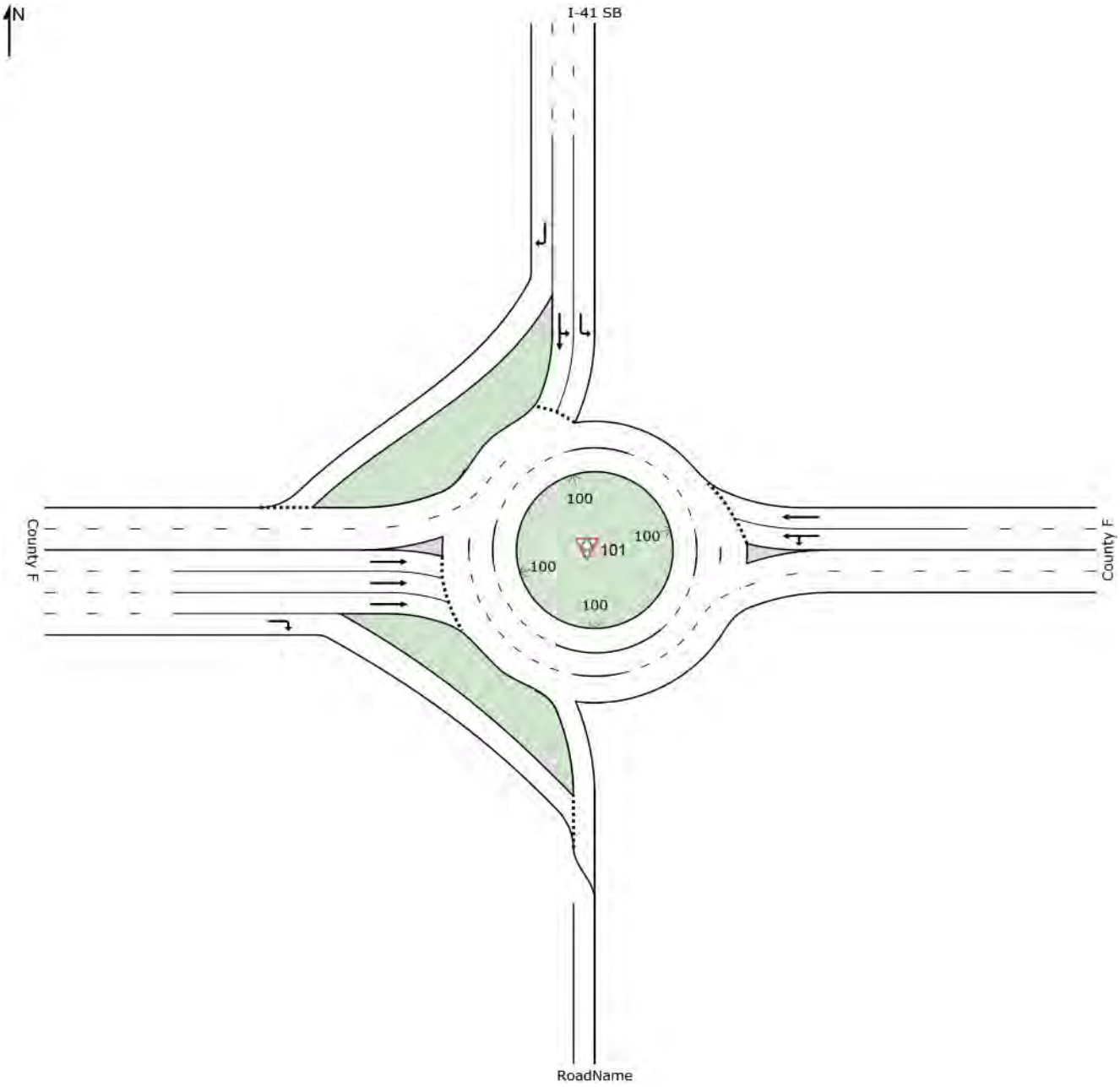
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [County F - I-41 SB AM Alt 2B]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [County F - I-41 SB AM Alt 2B]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: County F											
1	L2	196	3.0	0.161	4.2	LOS A	0.0	0.0	0.00	0.00	35.2
6	T1	207	3.0	0.161	4.2	LOS A	0.0	0.0	0.00	0.00	38.1
Approach		402	3.0	0.161	4.2	LOS A	0.0	0.0	0.00	0.00	36.6
North: I-41 SB											
7	L2	1054	3.0	0.570	11.8	LOS B	4.4	111.4	0.57	0.70	29.8
4	T1	1	3.0	0.570	11.8	LOS B	4.4	111.4	0.57	0.70	29.8
14	R2	636	3.0	0.594	11.1	LOS B	4.1	106.0	0.47	0.40	31.1
Approach		1691	3.0	0.594	11.5	LOS B	4.4	111.4	0.53	0.59	30.3
West: County F											
2	T1	864	3.0	0.781	30.2	LOS D	5.5	139.9	0.84	1.15	25.4
12	R2	130	3.0	0.121	4.4	LOS A	0.4	9.3	0.26	0.16	34.2
Approach		995	3.0	0.781	26.8	LOS D	5.5	139.9	0.76	1.02	26.3
All Vehicles		3088	3.0	0.781	15.5	LOS C	5.5	139.9	0.54	0.65	29.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

Site: 101 [County F - I-41 SB PM Alt 2B]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: County F											
1	L2	225	3.0	0.205	4.6	LOS A	0.0	0.0	0.00	0.00	35.4
6	T1	287	3.0	0.205	4.6	LOS A	0.0	0.0	0.00	0.00	37.9
Approach		511	3.0	0.205	4.6	LOS A	0.0	0.0	0.00	0.00	36.8
North: I-41 SB											
7	L2	680	3.0	0.399	9.0	LOS A	1.7	43.6	0.52	0.56	30.9
4	T1	1	3.0	0.399	9.0	LOS A	1.7	43.6	0.52	0.56	30.9
14	R2	579	3.0	0.574	11.1	LOS B	4.5	114.7	0.51	0.55	31.1
Approach		1260	3.0	0.574	10.0	LOS A	4.5	114.7	0.51	0.55	31.0
West: County F											
2	T1	978	3.0	0.684	19.0	LOS C	4.8	122.0	0.72	0.94	29.0
12	R2	112	3.0	0.106	4.3	LOS A	0.3	8.1	0.27	0.18	34.2
Approach		1090	3.0	0.684	17.5	LOS C	4.8	122.0	0.67	0.87	29.5
All Vehicles		2861	3.0	0.684	11.9	LOS B	4.8	122.0	0.48	0.57	31.3

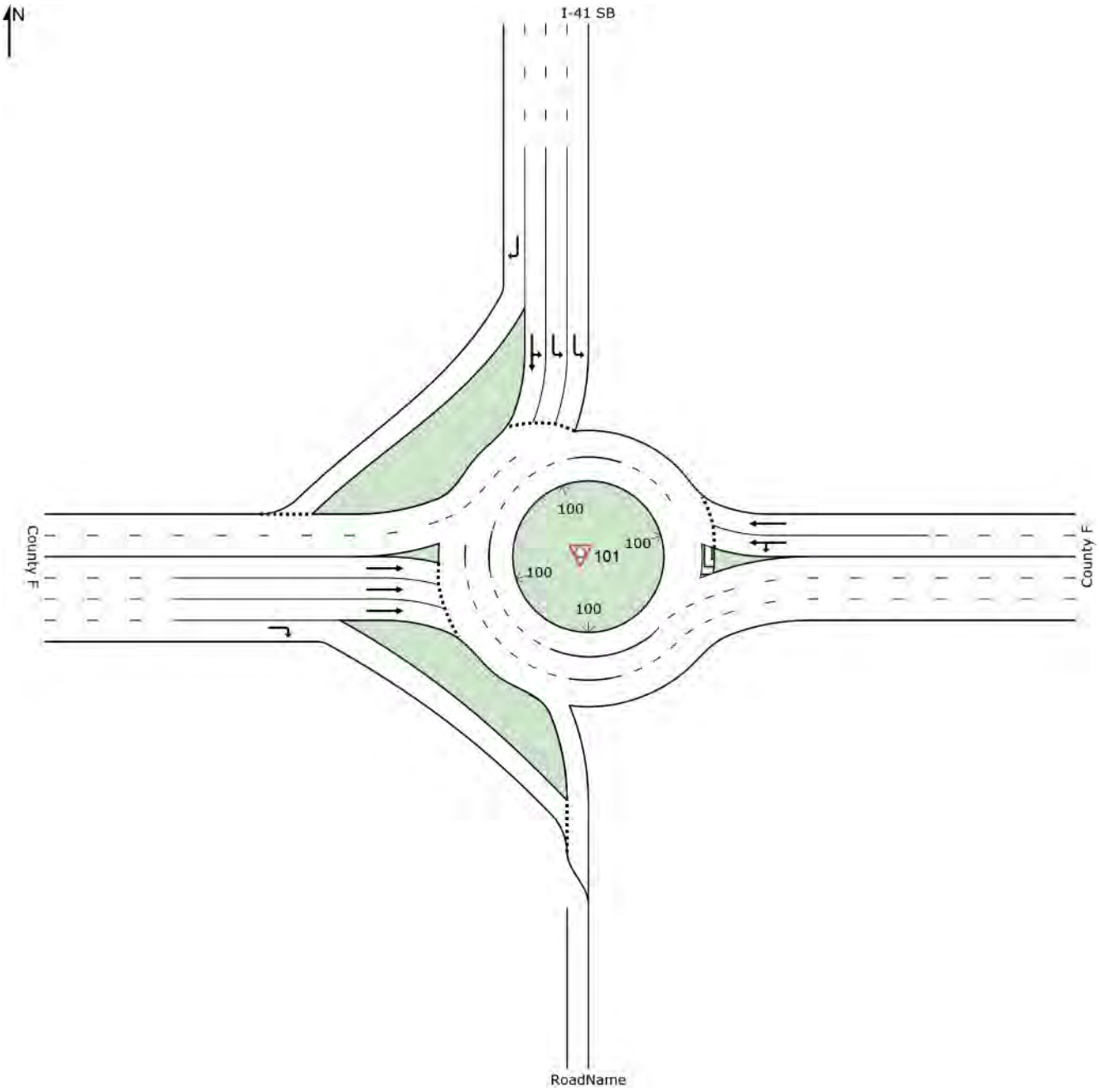
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Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 3 AM - County F and I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 AM - County F and I-41 SB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: County F											
1	L2	359	3.0	0.287	5.5	LOS A	0.0	0.0	0.00	0.00	35.1
6	T1	337	3.0	0.270	5.3	LOS A	0.0	0.0	0.00	0.00	38.2
Approach		696	3.0	0.287	5.4	LOS A	0.0	0.0	0.00	0.00	36.5
North: I-41 SB											
7	L2	1239	3.0	0.555	13.5	LOS B	3.4	86.0	0.65	0.80	29.2
4	T1	1	3.0	0.555	13.5	LOS B	3.4	86.0	0.65	0.80	29.1
14	R2	538	3.0	0.554	11.0	LOS B	4.1	103.7	0.53	0.59	31.0
Approach		1778	3.0	0.555	12.7	LOS B	4.1	103.7	0.61	0.74	29.7
West: County F											
2	T1	973	3.0	0.853	49.4	LOS E	6.0	152.7	0.93	1.37	20.9
12	R2	201	3.0	0.210	5.8	LOS A	0.7	17.2	0.38	0.32	33.4
Approach		1174	3.0	0.853	41.9	LOS E	6.0	152.7	0.84	1.19	22.3
All Vehicles		3648	3.0	0.853	20.7	LOS C	6.0	152.7	0.57	0.74	27.8

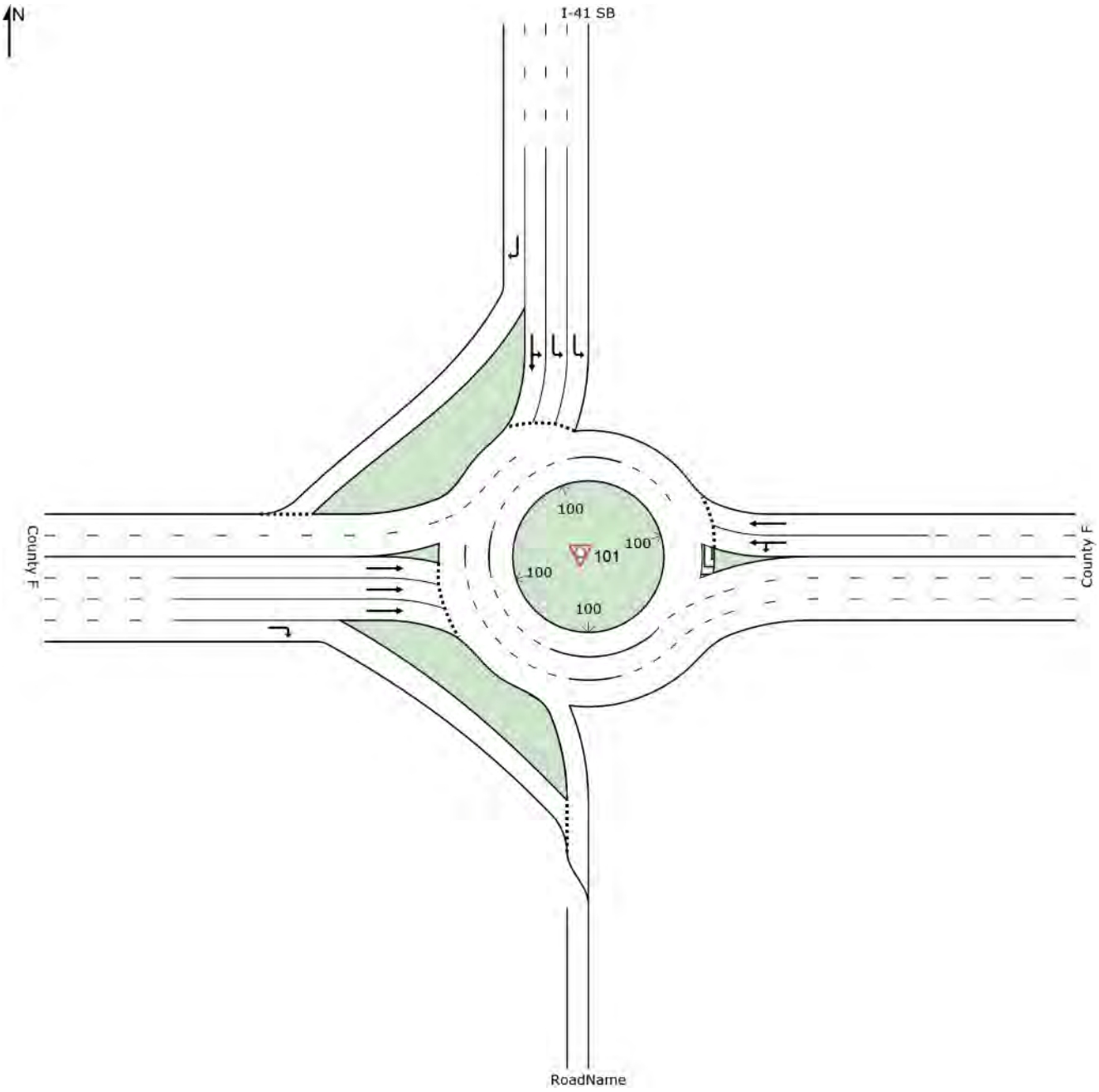
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Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 3 PM - County F and I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 PM - County F and I-41 SB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
East: County F											
1	L2	360	3.0	0.324	5.9	LOS A	0.0	0.0	0.00	0.00	35.4
6	T1	449	3.0	0.324	5.9	LOS A	0.0	0.0	0.00	0.00	37.9
Approach		809	3.0	0.324	5.9	LOS A	0.0	0.0	0.00	0.00	36.7
North: I-41 SB											
7	L2	803	3.0	0.392	10.6	LOS B	1.6	40.9	0.59	0.66	30.3
4	T1	1	3.0	0.392	10.6	LOS B	1.6	40.9	0.59	0.66	30.2
14	R2	489	3.0	0.547	11.5	LOS B	3.8	96.6	0.57	0.71	30.8
Approach		1293	3.0	0.547	10.9	LOS B	3.8	96.6	0.59	0.68	30.5
West: County F											
2	T1	1056	3.0	0.670	23.0	LOS C	3.9	98.9	0.80	1.03	27.6
12	R2	236	3.0	0.247	6.2	LOS A	0.8	20.9	0.39	0.34	33.2
Approach		1292	3.0	0.670	20.0	LOS C	3.9	98.9	0.72	0.90	28.5
All Vehicles		3394	3.0	0.670	13.2	LOS B	3.9	98.9	0.50	0.60	30.9

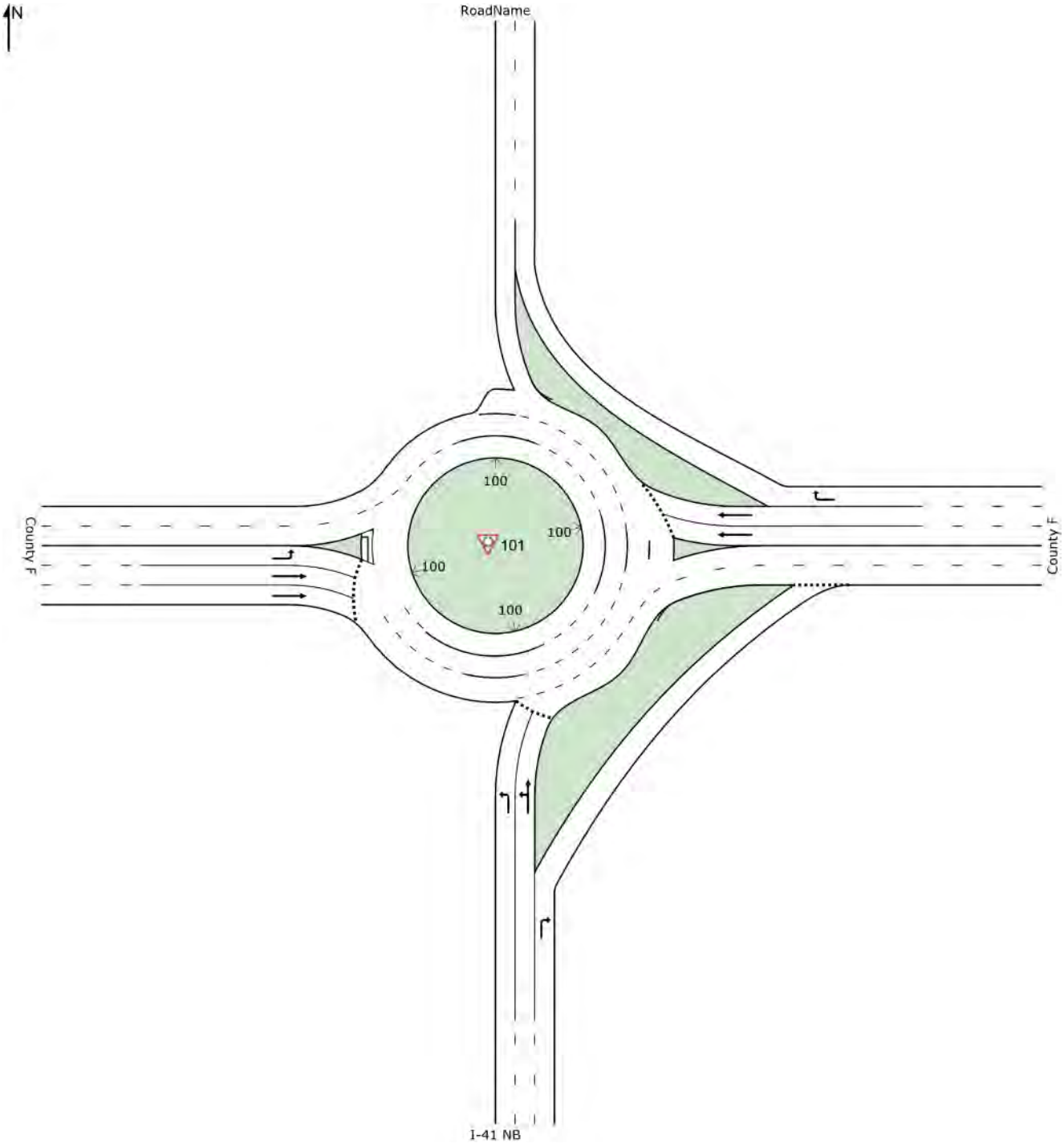
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 1 AM County F and I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 AM County F and I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	299	3.0	0.667	46.4	LOS E	2.5	63.9	0.93	1.12	20.7
8	T1	1	3.0	0.667	46.4	LOS E	2.5	63.9	0.93	1.12	20.7
18	R2	522	3.0	1.338	196.9	LOS F	49.1	1256.9	1.00	3.71	8.6
Approach		822	3.0	1.338	142.0	LOS F	49.1	1256.9	0.97	2.77	11.1
East: County F											
6	T1	652	3.0	0.566	16.9	LOS C	2.9	73.8	0.72	0.88	29.8
16	R2	592	3.0	0.364	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1245	3.0	0.566	8.9	LOS A	2.9	73.8	0.38	0.46	32.8
West: County F											
5	L2	739	3.0	0.592	9.9	LOS A	0.0	0.0	0.00	0.00	35.1
2	T1	1565	3.0	0.627	10.7	LOS B	0.0	0.0	0.00	0.00	38.2
Approach		2304	3.0	0.627	10.5	LOS B	0.0	0.0	0.00	0.00	37.1
All Vehicles		4371	3.0	1.338	34.7	LOS D	49.1	1256.9	0.29	0.65	25.2

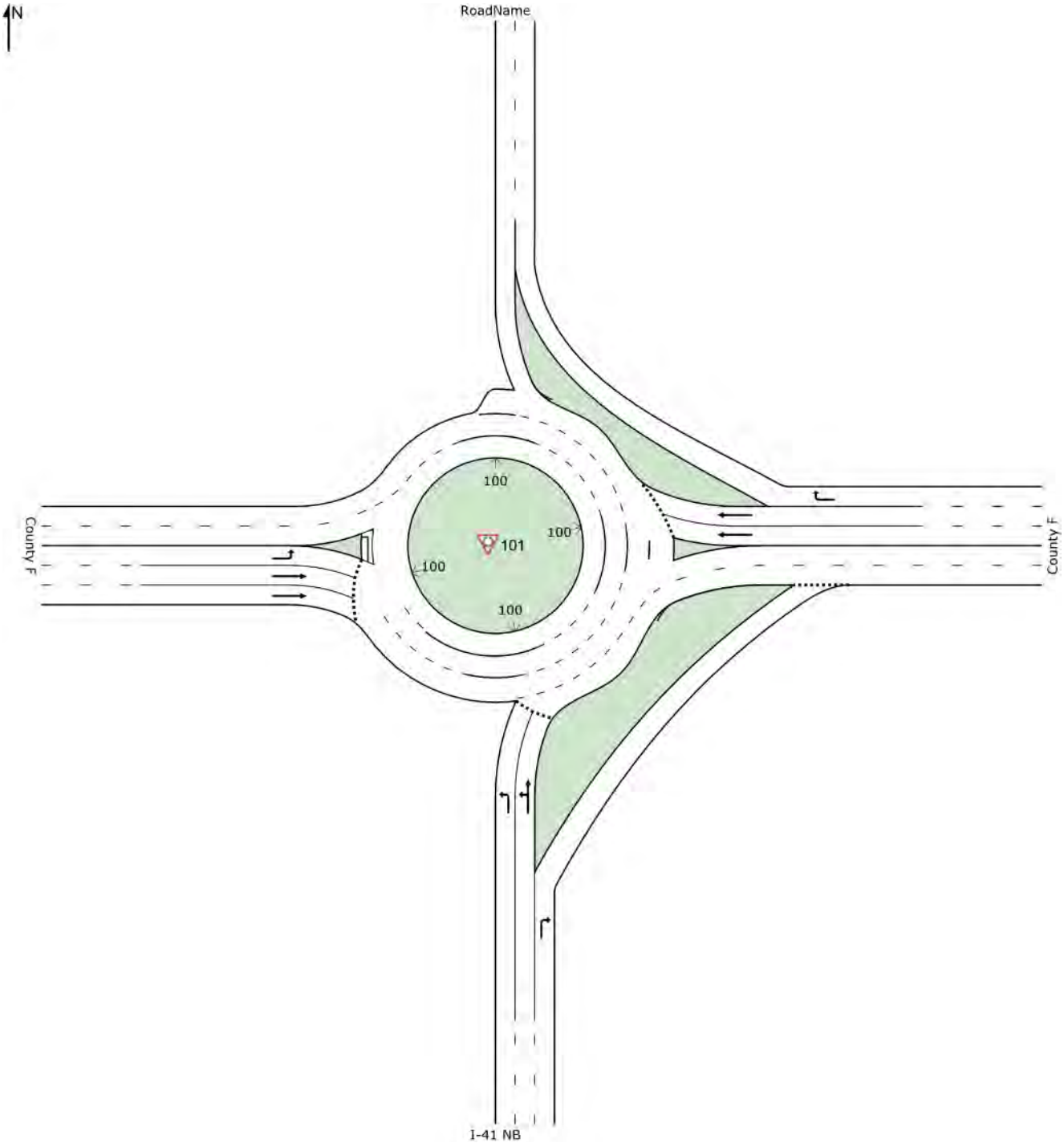
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 1 PM County F and I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 PM County F and I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	253	3.0	0.419	22.3	LOS C	1.4	34.9	0.84	0.93	26.3
8	T1	1	3.0	0.419	22.3	LOS C	1.4	34.9	0.84	0.93	26.3
18	R2	404	3.0	0.676	21.0	LOS C	4.4	112.0	0.76	1.00	27.3
Approach		658	3.0	0.676	21.5	LOS C	4.4	112.0	0.79	0.97	26.9
East: County F											
6	T1	781	3.0	0.746	28.2	LOS D	5.0	129.0	0.83	1.14	26.0
16	R2	1146	3.0	0.705	0.0	LOS A	0.0	0.0	0.00	0.00	36.9
Approach		1927	3.0	0.746	11.6	LOS B	5.0	129.0	0.34	0.46	31.5
West: County F											
5	L2	916	3.0	0.733	14.0	LOS B	0.0	0.0	0.00	0.00	35.1
2	T1	989	3.0	0.396	6.7	LOS A	0.0	0.0	0.00	0.00	38.2
Approach		1904	3.0	0.733	10.2	LOS B	0.0	0.0	0.00	0.00	36.6
All Vehicles		4490	3.0	0.746	12.4	LOS B	5.0	129.0	0.26	0.34	32.6

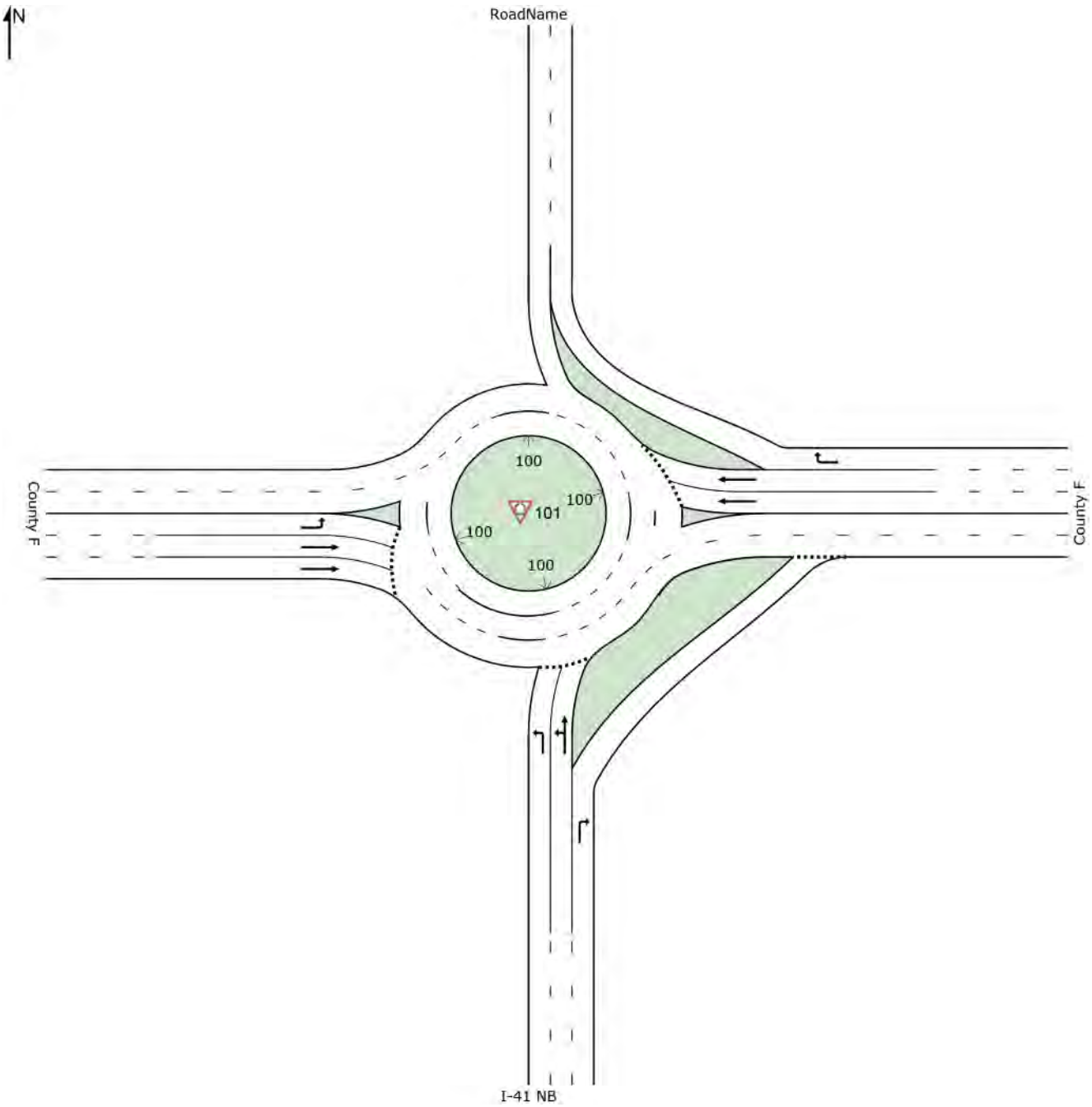
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [County F - I-41 NB AM Alt 2A]

New Site
Roundabout



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MOVEMENT SUMMARY

Site: 101 [County F - I-41 NB AM Alt 2A]

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	114	3.0	0.174	14.0	LOS B	0.5	11.9	0.77	0.77	29.0
8	T1	1	3.0	0.174	14.0	LOS B	0.5	11.9	0.77	0.77	29.0
18	R2	239	3.0	0.477	16.0	LOS C	2.0	50.4	0.74	0.85	29.2
Approach		354	3.0	0.477	15.3	LOS C	2.0	50.4	0.75	0.82	29.1
East: County F											
6	T1	408	3.0	0.269	7.8	LOS A	0.9	21.9	0.51	0.51	33.8
16	R2	630	3.0	0.388	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1038	3.0	0.388	3.1	LOS A	0.9	21.9	0.20	0.20	35.7
West: County F											
5	L2	554	3.0	0.444	7.4	LOS A	0.0	0.0	0.00	0.00	35.1
2	T1	1228	3.0	0.492	8.1	LOS A	0.0	0.0	0.00	0.00	38.2
Approach		1783	3.0	0.492	7.9	LOS A	0.0	0.0	0.00	0.00	37.2
All Vehicles		3175	3.0	0.492	7.1	LOS A	2.0	50.4	0.15	0.16	35.6

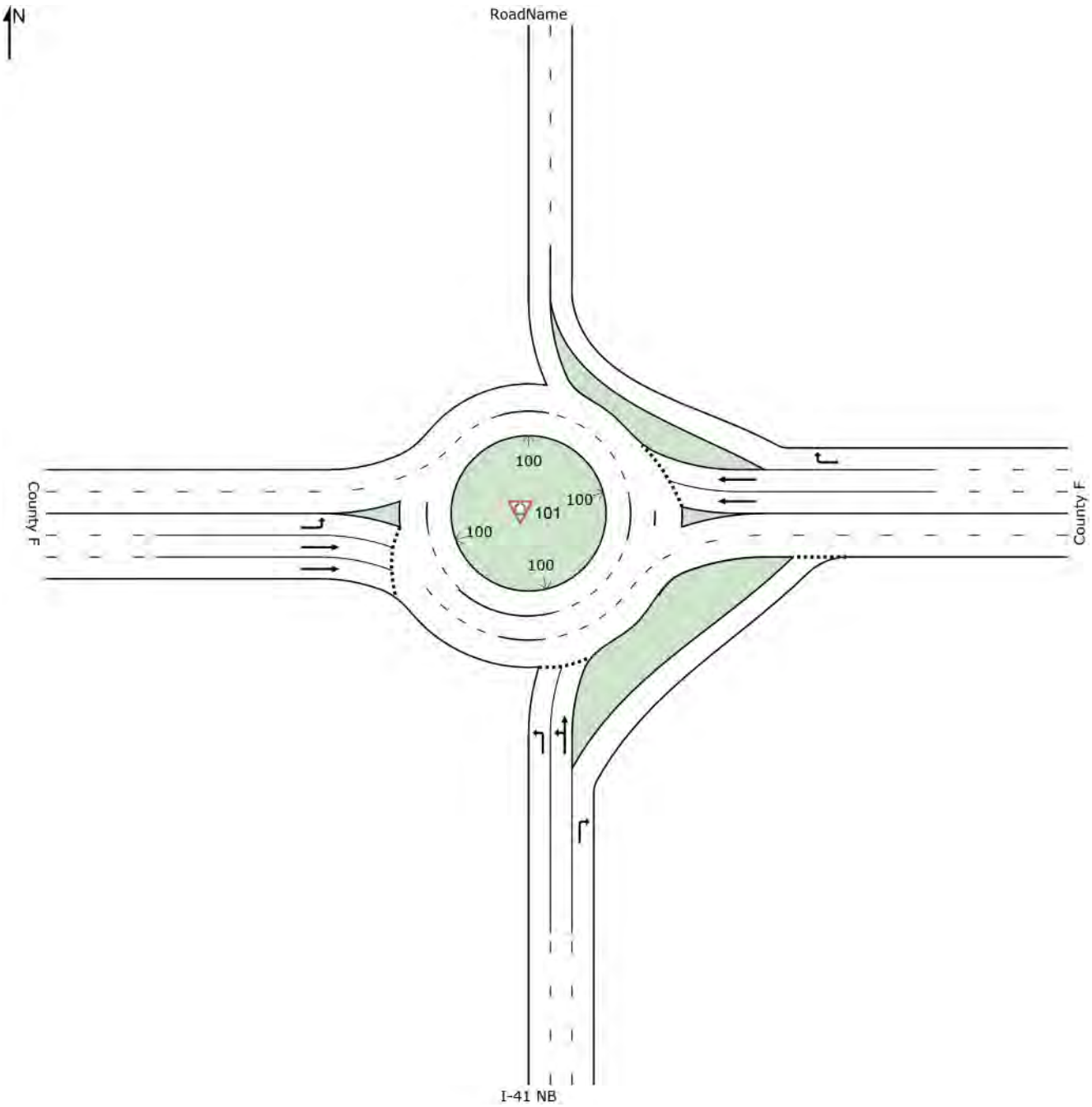
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [County F - I-41 NB PM Alt 2A]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [County F - I-41 NB PM Alt 2A]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	118	3.0	0.147	11.1	LOS B	0.4	10.2	0.71	0.71	30.1
8	T1	1	3.0	0.147	11.1	LOS B	0.4	10.2	0.71	0.71	30.0
18	R2	180	3.0	0.253	8.0	LOS A	0.8	20.2	0.53	0.53	32.5
Approach		299	3.0	0.253	9.3	LOS A	0.8	20.2	0.60	0.60	31.5
East: County F											
6	T1	494	3.0	0.379	10.7	LOS B	1.5	37.9	0.60	0.66	32.4
16	R2	1079	3.0	0.663	0.0	LOS A	0.0	0.0	0.00	0.00	36.9
Approach		1573	3.0	0.663	3.5	LOS A	1.5	37.9	0.19	0.21	35.4
West: County F											
5	L2	753	3.0	0.603	10.2	LOS B	0.0	0.0	0.00	0.00	35.1
2	T1	758	3.0	0.304	5.7	LOS A	0.0	0.0	0.00	0.00	38.2
Approach		1511	3.0	0.603	7.9	LOS A	0.0	0.0	0.00	0.00	36.6
All Vehicles		3383	3.0	0.663	5.9	LOS A	1.5	37.9	0.14	0.15	35.5

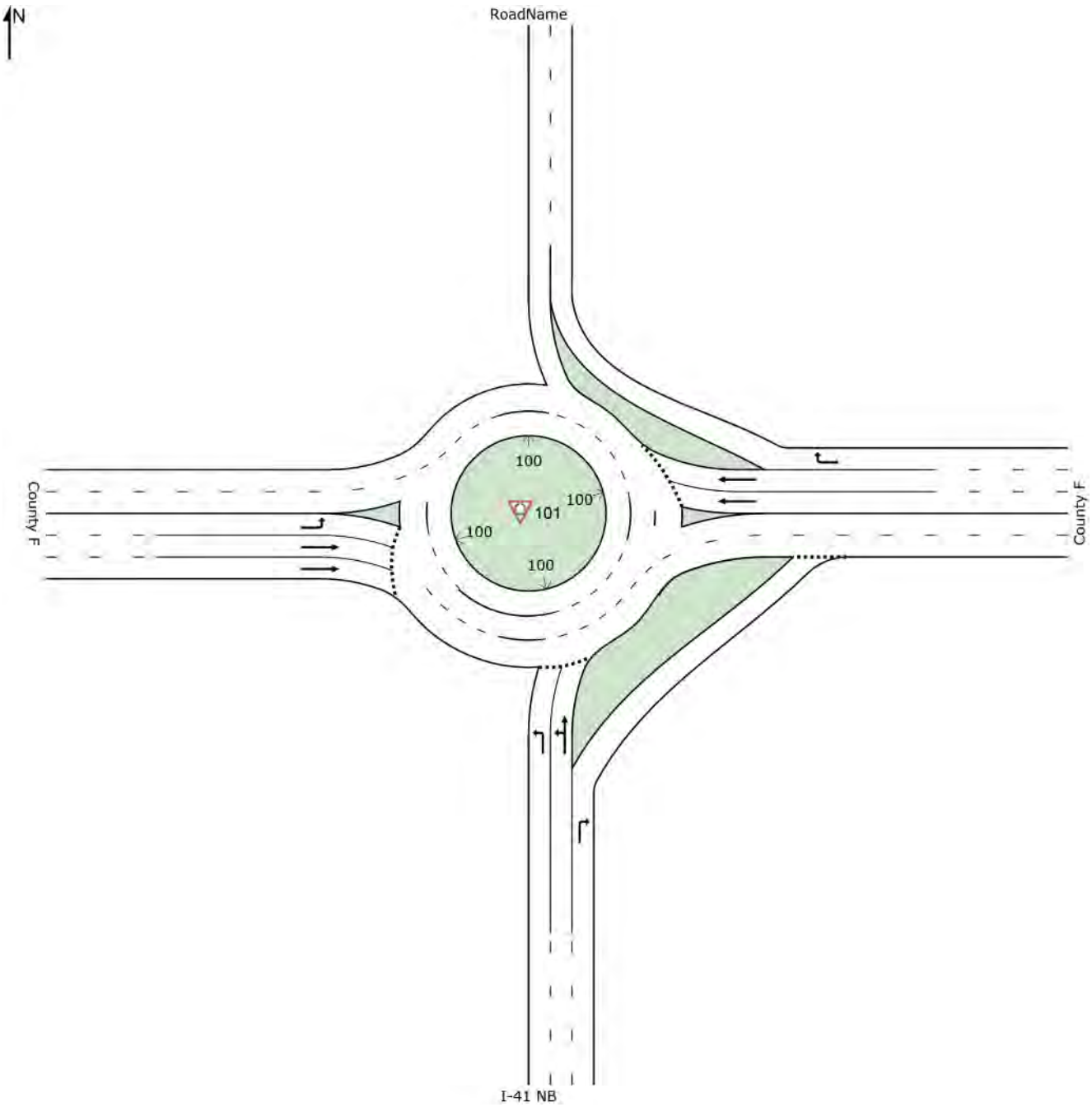
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [County F - I-41 NB AM Alt 2B]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [County F - I-41 NB AM Alt 2B]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	65	3.0	0.111	14.0	LOS B	0.3	7.4	0.78	0.78	29.0
8	T1	1	3.0	0.111	14.0	LOS B	0.3	7.4	0.78	0.78	29.0
18	R2	196	3.0	0.405	14.5	LOS B	1.5	38.3	0.72	0.81	29.7
Approach		262	3.0	0.405	14.4	LOS B	1.5	38.3	0.74	0.80	29.6
East: County F											
6	T1	337	3.0	0.228	7.5	LOS A	0.7	18.1	0.51	0.51	34.0
16	R2	707	3.0	0.435	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1043	3.0	0.435	2.5	LOS A	0.7	18.1	0.16	0.16	36.0
West: County F											
5	L2	641	3.0	0.514	8.5	LOS A	0.0	0.0	0.00	0.00	35.1
2	T1	1277	3.0	0.511	8.4	LOS A	0.0	0.0	0.00	0.00	38.2
Approach		1918	3.0	0.514	8.4	LOS A	0.0	0.0	0.00	0.00	37.1
All Vehicles		3224	3.0	0.514	7.0	LOS A	1.5	38.3	0.11	0.12	36.0

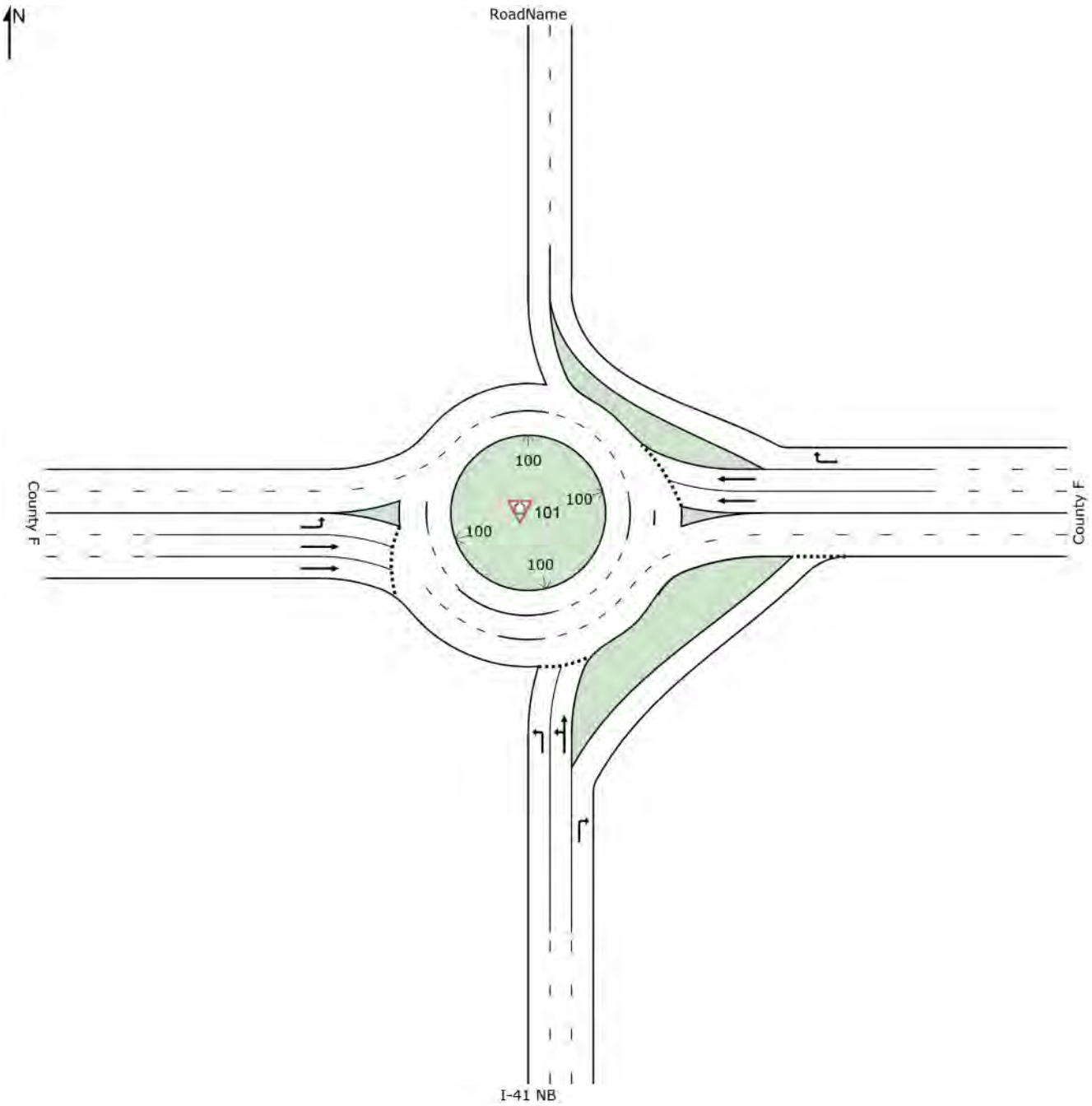
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [County F - I-41 NB PM Alt 2B]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [County F - I-41 NB PM Alt 2B]

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	107	3.0	0.148	12.3	LOS B	0.4	10.2	0.74	0.74	29.6
8	T1	1	3.0	0.148	12.3	LOS B	0.4	10.2	0.74	0.74	29.6
18	R2	135	3.0	0.196	7.5	LOS A	0.6	15.0	0.52	0.52	32.8
Approach		243	3.0	0.196	9.7	LOS A	0.6	15.0	0.62	0.62	31.3
East: County F											
6	T1	404	3.0	0.331	10.4	LOS B	1.2	29.9	0.61	0.65	32.5
16	R2	1163	3.0	0.715	0.0	LOS A	0.0	0.0	0.00	0.00	36.9
Approach		1567	3.0	0.715	2.9	LOS A	1.2	29.9	0.16	0.17	35.6
West: County F											
5	L2	854	3.0	0.684	12.3	LOS B	0.0	0.0	0.00	0.00	35.1
2	T1	803	3.0	0.322	5.9	LOS A	0.0	0.0	0.00	0.00	38.2
Approach		1657	3.0	0.684	9.2	LOS A	0.0	0.0	0.00	0.00	36.5
All Vehicles		3467	3.0	0.715	6.3	LOS A	1.2	29.9	0.11	0.12	35.7

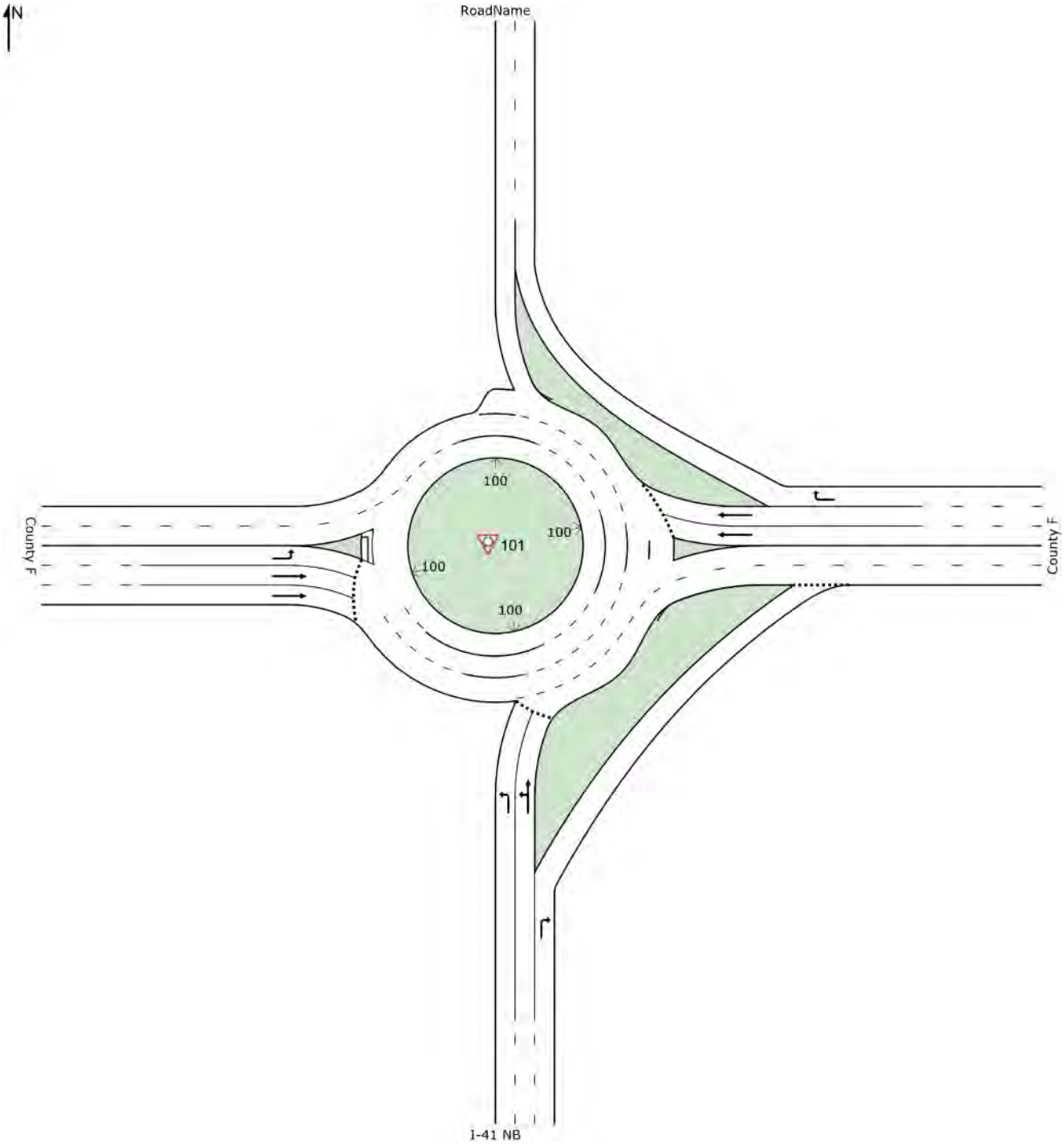
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 3 AM County F and I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 AM County F and I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	239	3.0	0.498	31.4	LOS D	1.6	41.6	0.89	1.01	23.9
8	T1	1	3.0	0.498	31.4	LOS D	1.6	41.6	0.89	1.01	23.8
18	R2	435	3.0	1.054	91.3	LOS F	18.3	469.0	1.00	2.22	14.7
Approach		675	3.0	1.054	70.0	LOS F	18.3	469.0	0.96	1.79	17.1
East: County F											
6	T1	457	3.0	0.374	11.3	LOS B	1.4	36.4	0.62	0.69	32.2
16	R2	658	3.0	0.404	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1114	3.0	0.404	4.7	LOS A	1.4	36.4	0.25	0.28	34.9
West: County F											
5	L2	723	3.0	0.579	9.7	LOS A	0.0	0.0	0.00	0.00	35.1
2	T1	1489	3.0	0.596	10.0	LOS B	0.0	0.0	0.00	0.00	38.2
Approach		2212	3.0	0.596	9.9	LOS A	0.0	0.0	0.00	0.00	37.1
All Vehicles		4001	3.0	1.054	18.6	LOS C	18.3	469.0	0.23	0.38	30.6

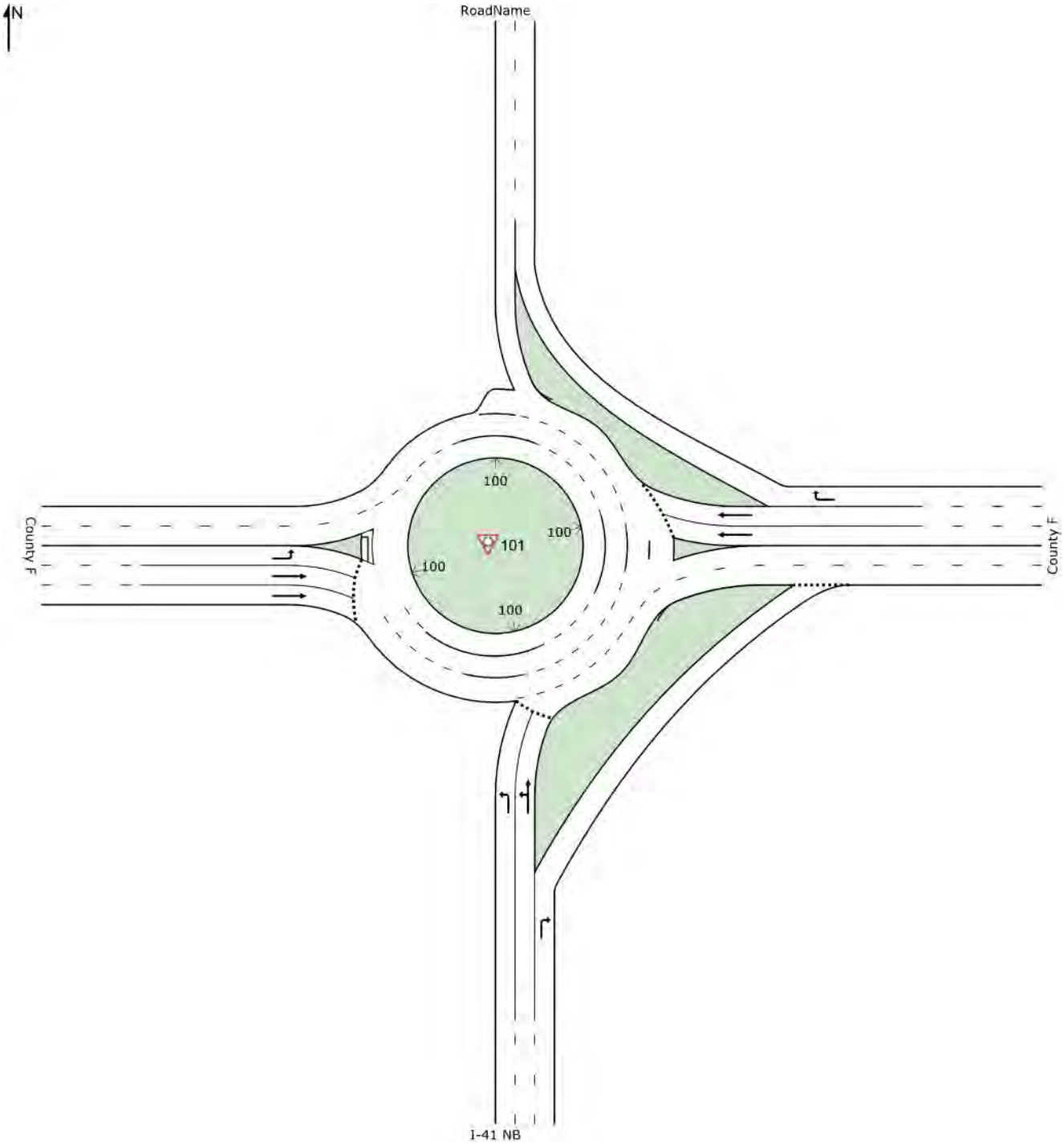
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Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 3 PM County F and I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 PM County F and I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	208	3.0	0.319	17.6	LOS C	1.0	24.7	0.80	0.86	27.8
8	T1	1	3.0	0.319	17.6	LOS C	1.0	24.7	0.80	0.86	27.7
18	R2	337	3.0	0.530	14.5	LOS B	2.7	69.3	0.67	0.81	29.7
Approach		546	3.0	0.530	15.7	LOS C	2.7	69.3	0.72	0.83	28.9
East: County F											
6	T1	582	3.0	0.528	16.2	LOS C	2.5	63.0	0.72	0.86	30.1
16	R2	1158	3.0	0.712	0.0	LOS A	0.0	0.0	0.00	0.00	36.9
Approach		1739	3.0	0.712	5.6	LOS A	2.5	63.0	0.24	0.29	34.3
West: County F											
5	L2	891	3.0	0.714	13.3	LOS B	0.0	0.0	0.00	0.00	35.1
2	T1	908	3.0	0.363	6.3	LOS A	0.0	0.0	0.00	0.00	38.2
Approach		1799	3.0	0.714	9.8	LOS A	0.0	0.0	0.00	0.00	36.6
All Vehicles		4084	3.0	0.714	8.7	LOS A	2.7	69.3	0.20	0.23	34.4

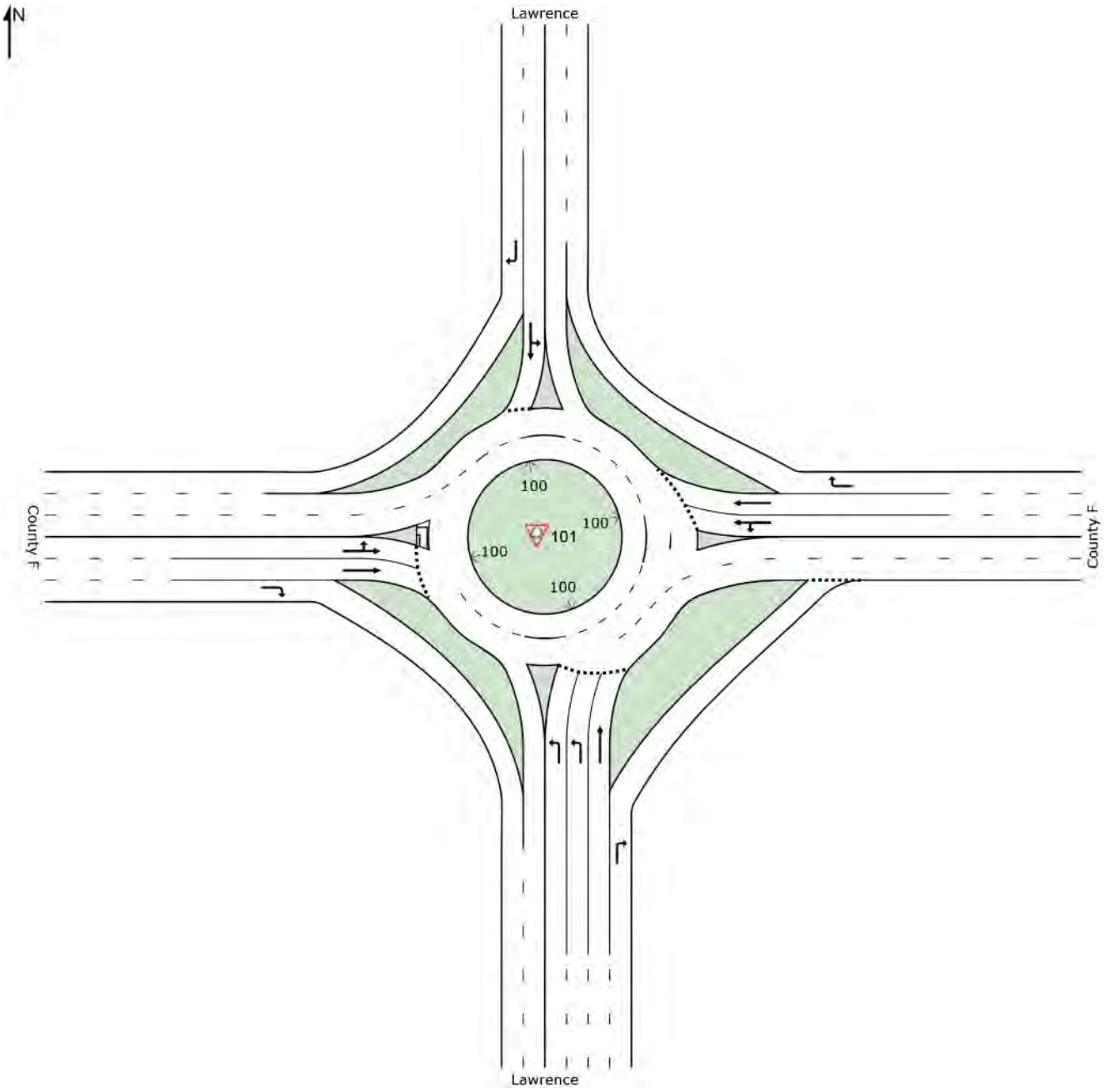
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 1 AM County F and Lawrence]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 AM County F and Lawrence]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lawrence											
3	L2	353	3.0	0.332	11.7	LOS B	1.1	29.1	0.67	0.72	29.8
8	T1	174	3.0	0.327	11.6	LOS B	1.1	28.4	0.66	0.71	32.0
18	R2	185	3.0	0.297	9.7	LOS A	1.0	25.1	0.59	0.61	31.6
Approach		712	3.0	0.332	11.2	LOS B	1.1	29.1	0.64	0.69	30.8
East: County F											
1	L2	283	3.0	0.724	20.6	LOS C	6.4	163.5	0.76	1.06	27.6
6	T1	761	3.0	0.724	20.6	LOS C	6.4	163.5	0.76	1.06	28.1
16	R2	114	3.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1158	3.0	0.724	18.5	LOS C	6.4	163.5	0.68	0.96	28.7
North: Lawrence											
7	L2	92	3.0	0.763	33.7	LOS D	4.7	120.1	0.88	1.18	24.2
4	T1	245	3.0	0.763	33.7	LOS D	4.7	120.1	0.88	1.18	24.1
14	R2	130	3.0	0.080	0.0	LOS A	0.0	0.0	0.00	0.00	37.3
Approach		467	3.0	0.763	24.3	LOS C	4.7	120.1	0.63	0.85	26.7
West: County F											
5	L2	212	3.0	0.694	18.2	LOS C	6.4	163.1	0.75	1.02	28.6
2	T1	842	3.0	0.694	18.2	LOS C	6.4	163.1	0.75	1.02	29.0
12	R2	1033	3.0	0.635	0.0	LOS A	0.0	0.0	0.00	0.00	37.0
Approach		2087	3.0	0.694	9.3	LOS A	6.4	163.1	0.38	0.52	32.4
All Vehicles		4424	3.0	0.763	13.6	LOS B	6.4	163.5	0.53	0.69	30.4

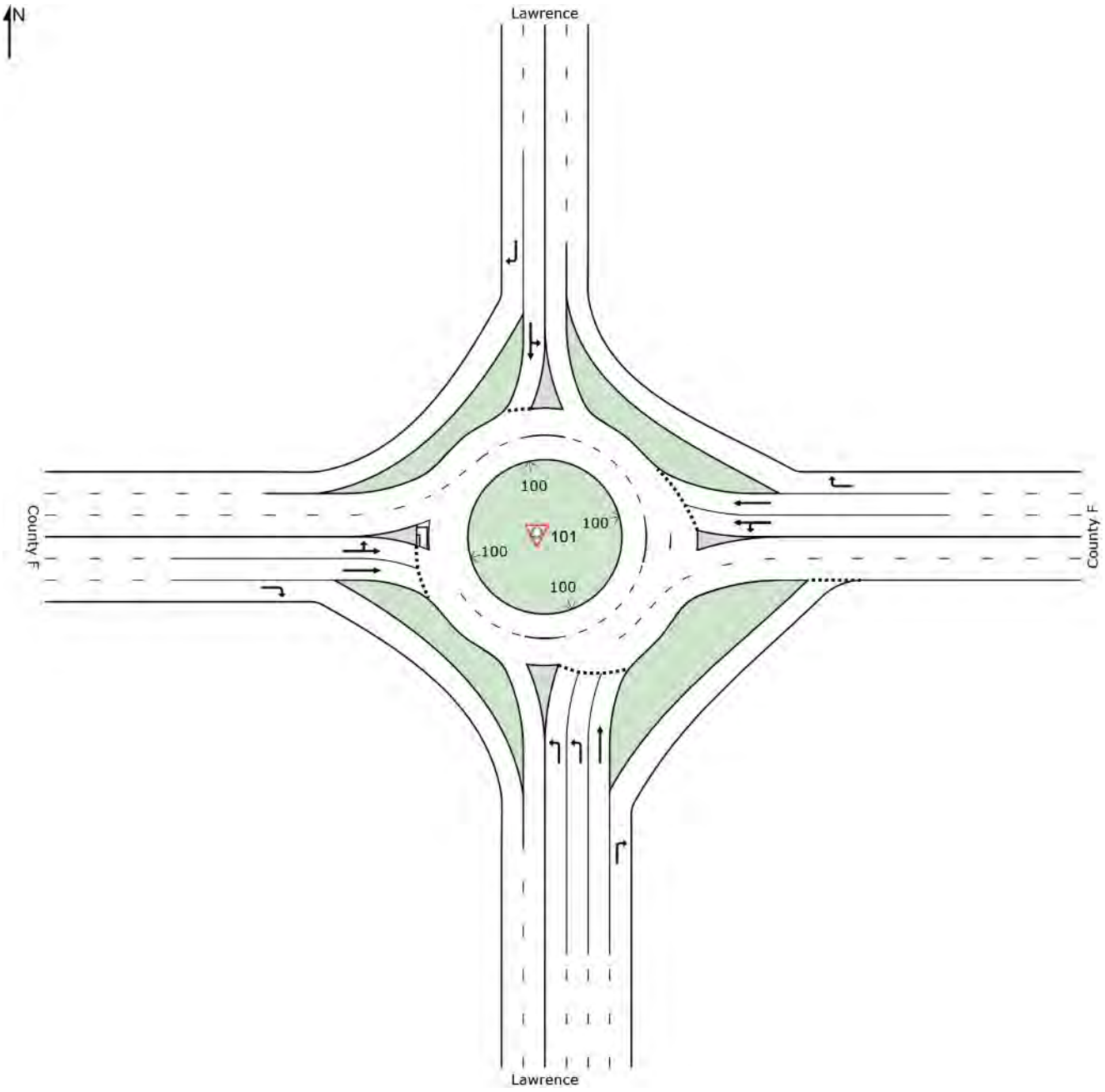
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Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 1 PM County F and Lawrence]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 PM County F and Lawrence]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lawrence											
3	L2	758	3.0	0.639	19.4	LOS C	3.8	97.5	0.74	0.95	27.2
8	T1	348	3.0	0.587	17.2	LOS C	3.2	81.1	0.72	0.89	29.7
18	R2	270	3.0	0.343	8.7	LOS A	1.3	32.3	0.53	0.55	32.1
Approach		1376	3.0	0.639	16.7	LOS C	3.8	97.5	0.70	0.86	28.6
East: County F											
1	L2	96	3.0	1.119	111.7	LOS F	25.2	644.4	1.00	2.59	13.3
6	T1	831	3.0	1.119	111.7	LOS F	25.2	644.4	1.00	2.59	13.3
16	R2	146	3.0	0.090	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1073	3.0	1.119	96.5	LOS F	25.2	644.4	0.86	2.24	14.5
North: Lawrence											
7	L2	73	3.0	0.864	50.9	LOS F	6.3	161.3	0.93	1.39	20.5
4	T1	258	3.0	0.864	50.9	LOS F	6.3	161.3	0.93	1.39	20.5
14	R2	337	3.0	0.207	0.0	LOS A	0.0	0.0	0.00	0.00	37.3
Approach		669	3.0	0.864	25.2	LOS D	6.3	161.3	0.46	0.69	26.4
West: County F											
5	L2	376	3.0	0.518	10.9	LOS B	3.4	87.2	0.57	0.66	30.6
2	T1	551	3.0	0.518	10.9	LOS B	3.4	87.2	0.57	0.66	32.0
12	R2	466	3.0	0.287	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1393	3.0	0.518	7.2	LOS A	3.4	87.2	0.38	0.44	33.1
All Vehicles		4511	3.0	1.119	34.0	LOS D	25.2	644.4	0.60	1.03	23.8

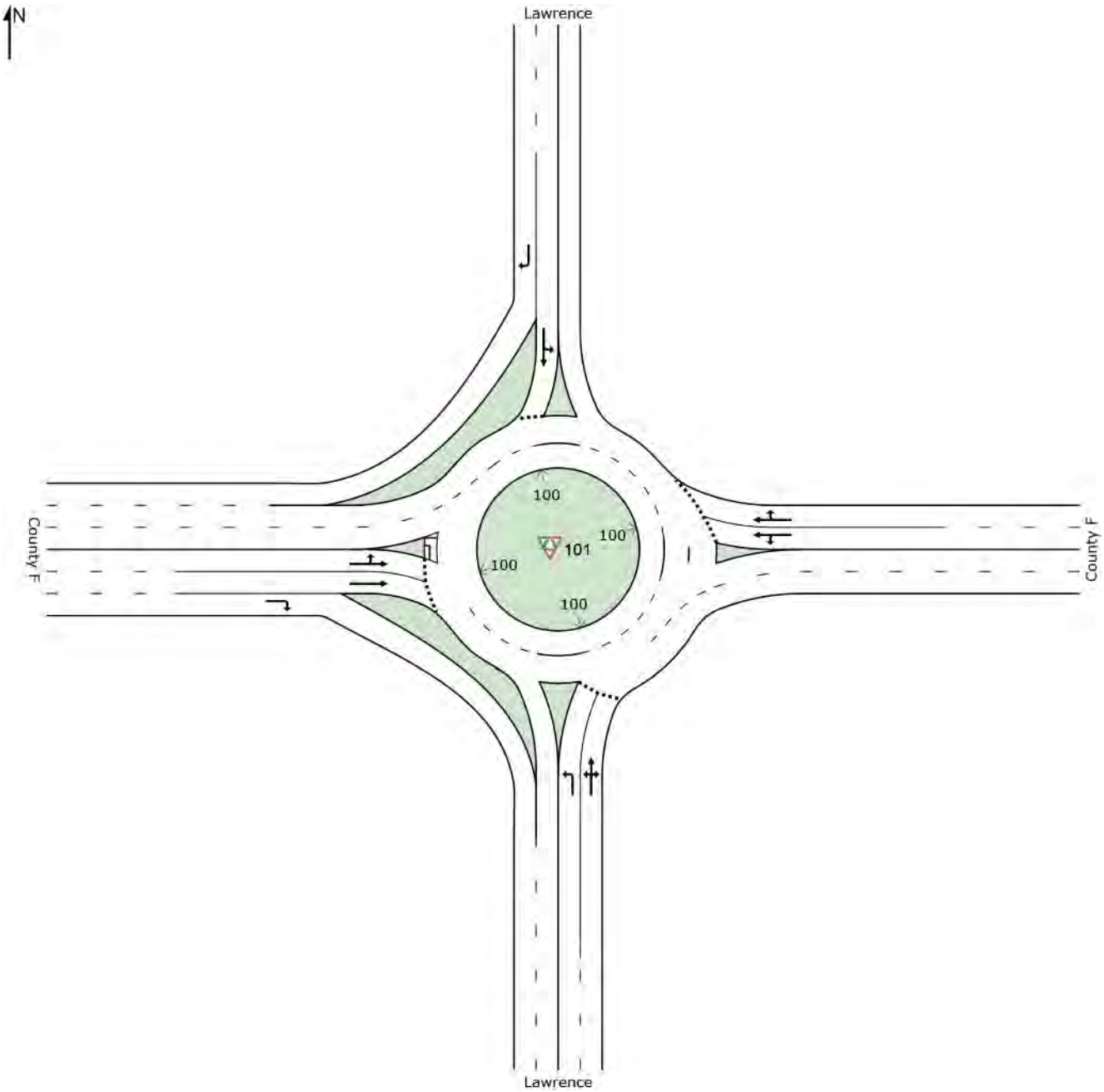
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [County F - Lawrence AM Alt 2A]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [County F - Lawrence AM Alt 2A]

New Site
Roundabout

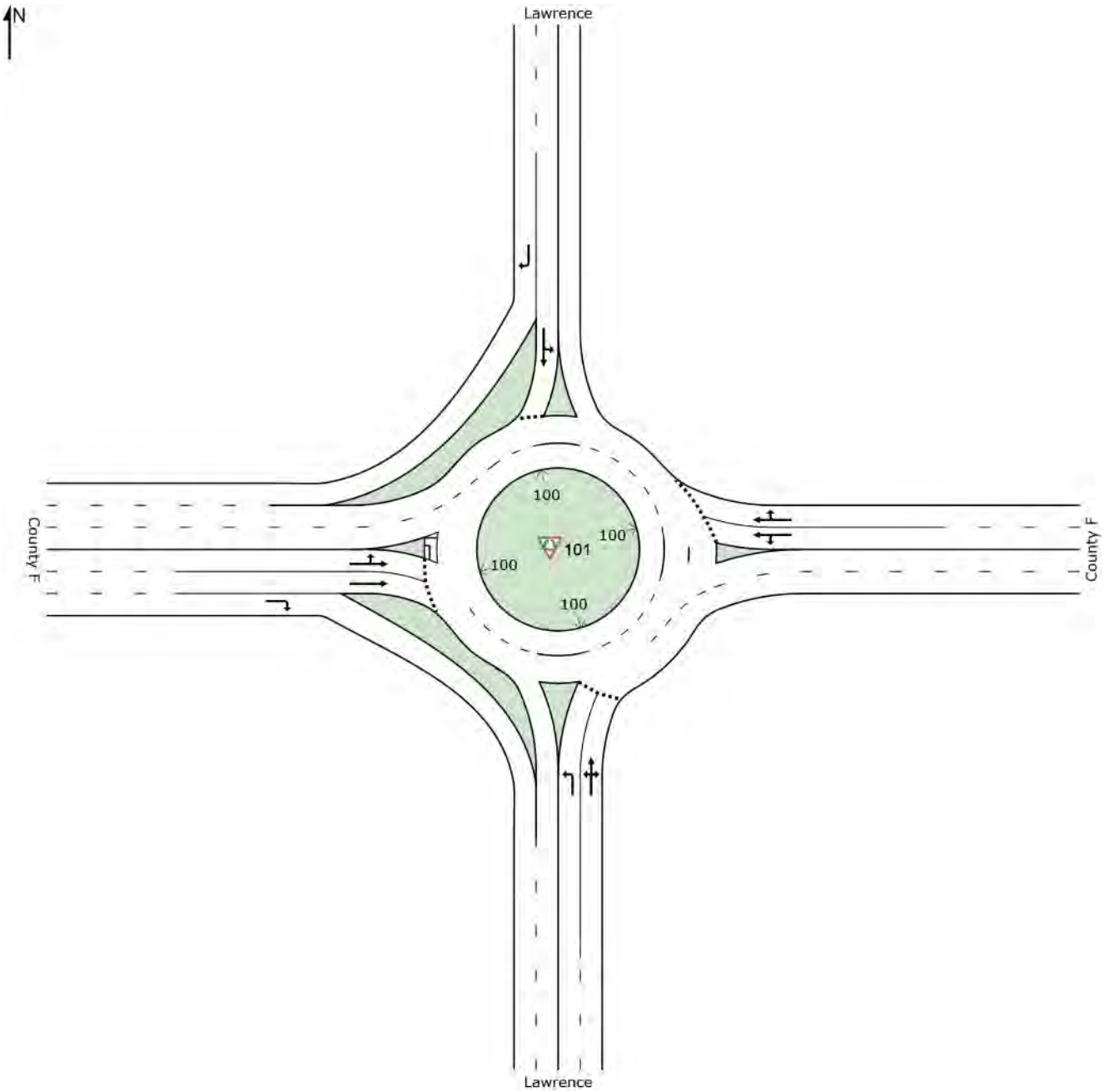
Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lawrence											
3	L2	217	3.0	0.238	8.3	LOS A	0.7	18.6	0.55	0.55	31.6
8	T1	82	3.0	0.238	8.3	LOS A	0.7	18.6	0.55	0.55	32.6
18	R2	16	3.0	0.238	8.3	LOS A	0.7	18.6	0.55	0.55	31.6
Approach		315	3.0	0.238	8.3	LOS A	0.7	18.6	0.55	0.55	31.8
East: County F											
1	L2	76	3.0	0.464	10.8	LOS B	2.4	60.2	0.58	0.68	32.0
6	T1	592	3.0	0.464	10.8	LOS B	2.4	60.2	0.58	0.68	32.1
16	R2	60	3.0	0.464	10.8	LOS B	2.4	60.2	0.58	0.68	31.4
Approach		728	3.0	0.464	10.8	LOS B	2.4	60.2	0.58	0.68	32.0
North: Lawrence											
7	L2	49	3.0	0.261	8.8	LOS A	0.8	20.5	0.56	0.56	32.7
4	T1	120	3.0	0.261	8.8	LOS A	0.8	20.5	0.56	0.56	32.6
14	R2	228	3.0	0.140	0.0	LOS A	0.0	0.0	0.00	0.00	37.3
Approach		397	3.0	0.261	3.8	LOS A	0.8	20.5	0.24	0.24	35.1
West: County F											
5	L2	326	3.0	0.392	7.7	LOS A	1.6	42.2	0.40	0.32	31.9
2	T1	478	3.0	0.392	7.7	LOS A	1.6	42.2	0.40	0.32	33.5
12	R2	663	3.0	0.408	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1467	3.0	0.408	4.3	LOS A	1.6	42.2	0.22	0.17	34.6
All Vehicles		2908	3.0	0.464	6.3	LOS A	2.4	60.2	0.35	0.35	33.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [County F - Lawrence PM Alt 2A]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [County F - Lawrence PM Alt 2A]

New Site
Roundabout

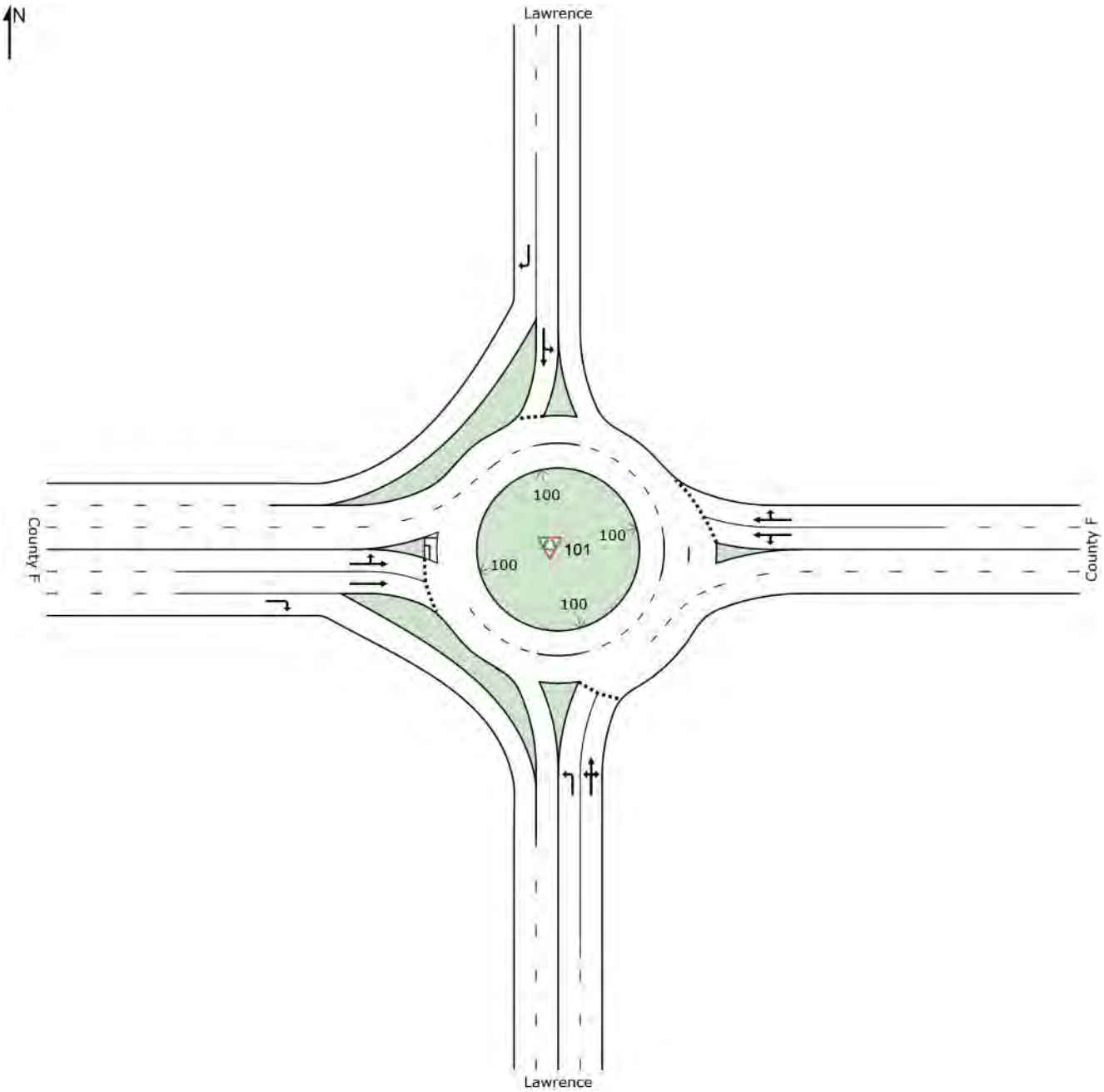
Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lawrence											
3	L2	472	3.0	0.505	12.9	LOS B	2.6	66.7	0.64	0.76	29.8
8	T1	191	3.0	0.505	12.9	LOS B	2.6	66.7	0.64	0.76	30.7
18	R2	39	3.0	0.505	12.9	LOS B	2.6	66.7	0.64	0.76	29.8
Approach		702	3.0	0.505	12.9	LOS B	2.6	66.7	0.64	0.76	30.0
East: County F											
1	L2	28	3.0	0.627	19.6	LOS C	3.5	90.0	0.76	0.96	28.7
6	T1	612	3.0	0.627	19.6	LOS C	3.5	90.0	0.76	0.96	28.7
16	R2	67	3.0	0.627	19.6	LOS C	3.5	90.0	0.76	0.96	28.0
Approach		708	3.0	0.627	19.6	LOS C	3.5	90.0	0.76	0.96	28.6
North: Lawrence											
7	L2	39	3.0	0.288	10.7	LOS B	0.9	23.7	0.64	0.67	31.9
4	T1	118	3.0	0.288	10.7	LOS B	0.9	23.7	0.64	0.67	31.8
14	R2	489	3.0	0.301	0.0	LOS A	0.0	0.0	0.00	0.00	37.3
Approach		646	3.0	0.301	2.6	LOS A	0.9	23.7	0.16	0.16	35.8
West: County F											
5	L2	404	3.0	0.376	7.2	LOS A	1.6	40.6	0.35	0.25	31.7
2	T1	343	3.0	0.318	6.5	LOS A	1.3	32.1	0.32	0.23	34.5
12	R2	191	3.0	0.117	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		938	3.0	0.376	5.5	LOS A	1.6	40.6	0.27	0.19	33.6
All Vehicles		2994	3.0	0.627	9.9	LOS A	3.5	90.0	0.45	0.50	31.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [County F - Lawrence AM Alt 2B]

New Site
Roundabout



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MOVEMENT SUMMARY

Site: 101 [County F - Lawrence AM Alt 2B]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lawrence											
3	L2	245	3.0	0.266	8.7	LOS A	0.8	21.1	0.55	0.55	31.4
8	T1	92	3.0	0.266	8.7	LOS A	0.8	21.1	0.55	0.55	32.4
18	R2	16	3.0	0.266	8.7	LOS A	0.8	21.1	0.55	0.55	31.4
Approach		353	3.0	0.266	8.7	LOS A	0.8	21.1	0.55	0.55	31.7
East: County F											
1	L2	76	3.0	0.463	11.0	LOS B	2.3	59.1	0.59	0.69	31.8
6	T1	571	3.0	0.463	11.0	LOS B	2.3	59.1	0.59	0.69	32.0
16	R2	60	3.0	0.463	11.0	LOS B	2.3	59.1	0.59	0.69	31.3
Approach		707	3.0	0.463	11.0	LOS B	2.3	59.1	0.59	0.69	31.9
North: Lawrence											
7	L2	49	3.0	0.296	9.4	LOS A	1.0	25.0	0.57	0.59	32.5
4	T1	141	3.0	0.296	9.4	LOS A	1.0	25.0	0.57	0.59	32.4
14	R2	228	3.0	0.140	0.0	LOS A	0.0	0.0	0.00	0.00	37.3
Approach		418	3.0	0.296	4.3	LOS A	1.0	25.0	0.26	0.27	34.9
West: County F											
5	L2	326	3.0	0.396	7.9	LOS A	1.7	42.5	0.42	0.34	31.8
2	T1	473	3.0	0.396	7.9	LOS A	1.7	42.5	0.42	0.34	33.4
12	R2	674	3.0	0.415	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1473	3.0	0.415	4.3	LOS A	1.7	42.5	0.23	0.18	34.6
All Vehicles		2951	3.0	0.463	6.4	LOS A	2.3	59.1	0.36	0.36	33.6

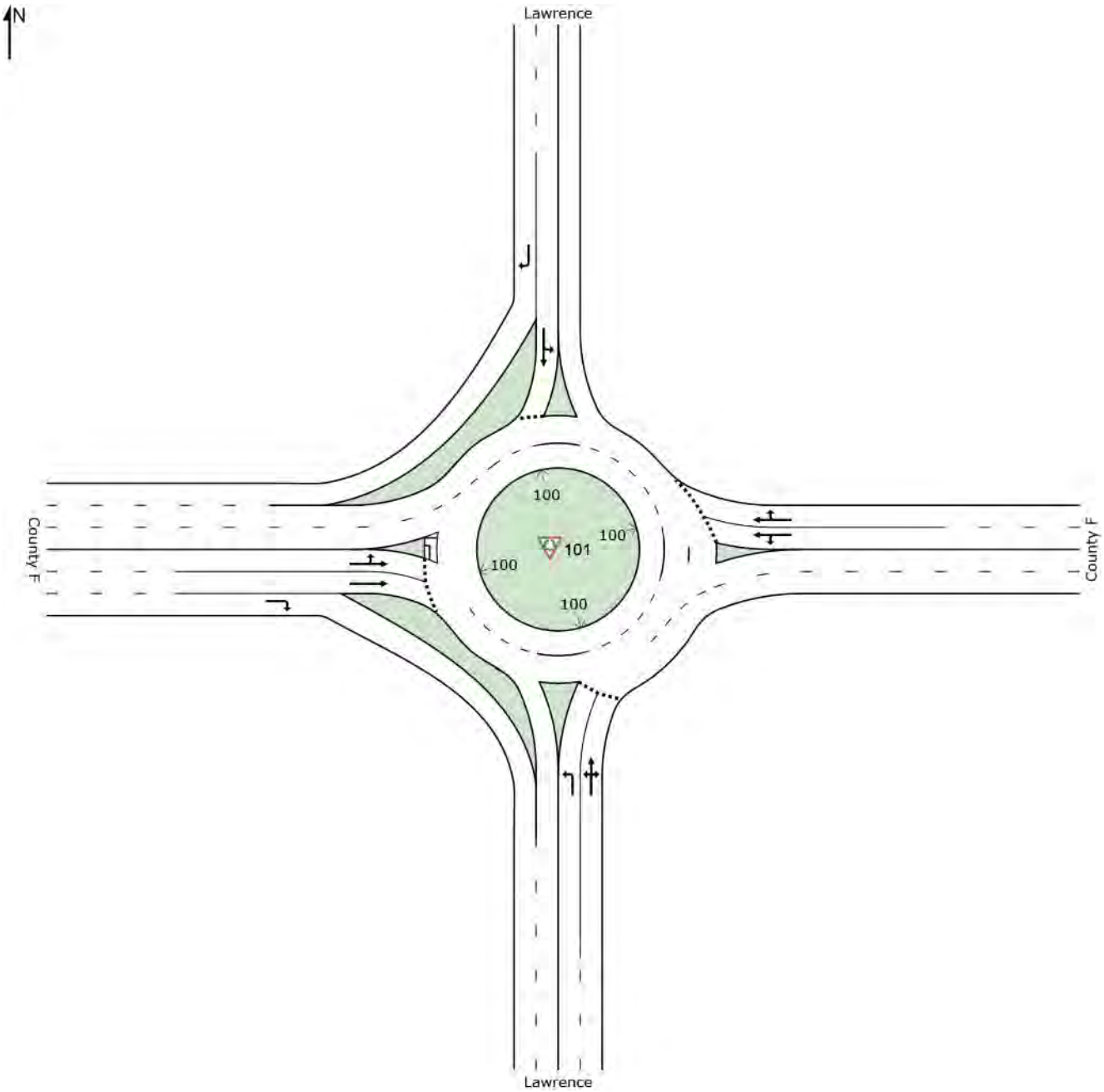
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [County F - Lawrence PM Alt 2B]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [County F - Lawrence PM Alt 2B]

New Site
Roundabout

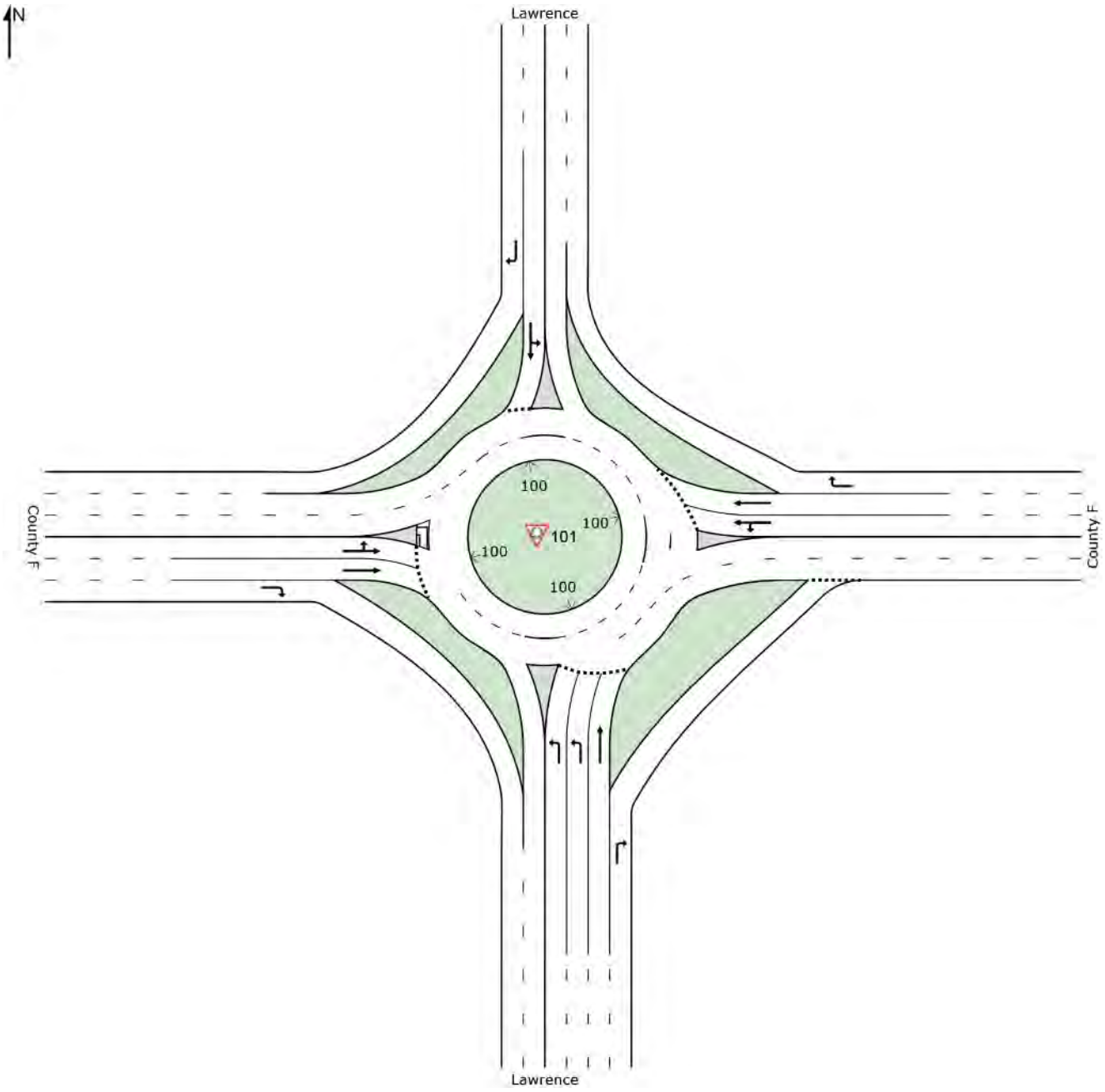
Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lawrence											
3	L2	483	3.0	0.527	13.4	LOS B	2.9	73.0	0.65	0.79	29.5
8	T1	213	3.0	0.527	13.4	LOS B	2.9	73.0	0.65	0.79	30.5
18	R2	39	3.0	0.527	13.4	LOS B	2.9	73.0	0.65	0.79	29.7
Approach		736	3.0	0.527	13.4	LOS B	2.9	73.0	0.65	0.79	29.8
East: County F											
1	L2	28	3.0	0.638	20.5	LOS C	3.6	91.7	0.77	0.98	28.4
6	T1	607	3.0	0.638	20.5	LOS C	3.6	91.7	0.77	0.98	28.4
16	R2	67	3.0	0.638	20.5	LOS C	3.6	91.7	0.77	0.98	27.7
Approach		702	3.0	0.638	20.5	LOS C	3.6	91.7	0.77	0.98	28.3
North: Lawrence											
7	L2	39	3.0	0.310	11.1	LOS B	1.0	26.4	0.65	0.69	31.8
4	T1	129	3.0	0.310	11.1	LOS B	1.0	26.4	0.65	0.69	31.7
14	R2	478	3.0	0.294	0.0	LOS A	0.0	0.0	0.00	0.00	37.3
Approach		646	3.0	0.310	2.9	LOS A	1.0	26.4	0.17	0.18	35.6
West: County F											
5	L2	404	3.0	0.379	7.3	LOS A	1.6	41.0	0.36	0.26	31.6
2	T1	337	3.0	0.316	6.5	LOS A	1.2	31.7	0.33	0.24	34.5
12	R2	197	3.0	0.121	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		938	3.0	0.379	5.5	LOS A	1.6	41.0	0.27	0.20	33.6
All Vehicles		3022	3.0	0.638	10.4	LOS B	3.6	91.7	0.46	0.52	31.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [Alt 3 AM County F and Lawrence]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 AM County F and Lawrence]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lawrence											
3	L2	266	3.0	0.213	8.4	LOS A	0.6	16.2	0.56	0.56	31.2
8	T1	92	3.0	0.148	7.5	LOS A	0.4	10.9	0.54	0.54	34.0
18	R2	33	3.0	0.042	5.0	LOS A	0.1	2.9	0.43	0.37	33.9
Approach		391	3.0	0.213	7.9	LOS A	0.6	16.2	0.54	0.54	32.0
East: County F											
1	L2	54	3.0	0.451	10.8	LOS B	2.2	56.0	0.59	0.68	32.1
6	T1	636	3.0	0.451	10.8	LOS B	2.2	56.0	0.59	0.68	32.2
16	R2	98	3.0	0.060	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		788	3.0	0.451	9.4	LOS A	2.2	56.0	0.51	0.59	32.7
North: Lawrence											
7	L2	43	3.0	0.372	11.2	LOS B	1.4	36.2	0.62	0.68	31.8
4	T1	185	3.0	0.372	11.2	LOS B	1.4	36.2	0.62	0.68	31.8
14	R2	212	3.0	0.130	0.0	LOS A	0.0	0.0	0.00	0.00	37.3
Approach		440	3.0	0.372	5.8	LOS A	1.4	36.2	0.32	0.35	34.2
West: County F											
5	L2	299	3.0	0.445	8.7	LOS A	2.0	50.1	0.46	0.38	31.8
2	T1	587	3.0	0.445	8.7	LOS A	2.0	50.1	0.46	0.38	32.9
12	R2	1038	3.0	0.638	0.0	LOS A	0.0	0.0	0.00	0.00	37.0
Approach		1924	3.0	0.638	4.1	LOS A	2.0	50.1	0.21	0.18	34.7
All Vehicles		3543	3.0	0.638	5.9	LOS A	2.2	56.0	0.33	0.33	33.9

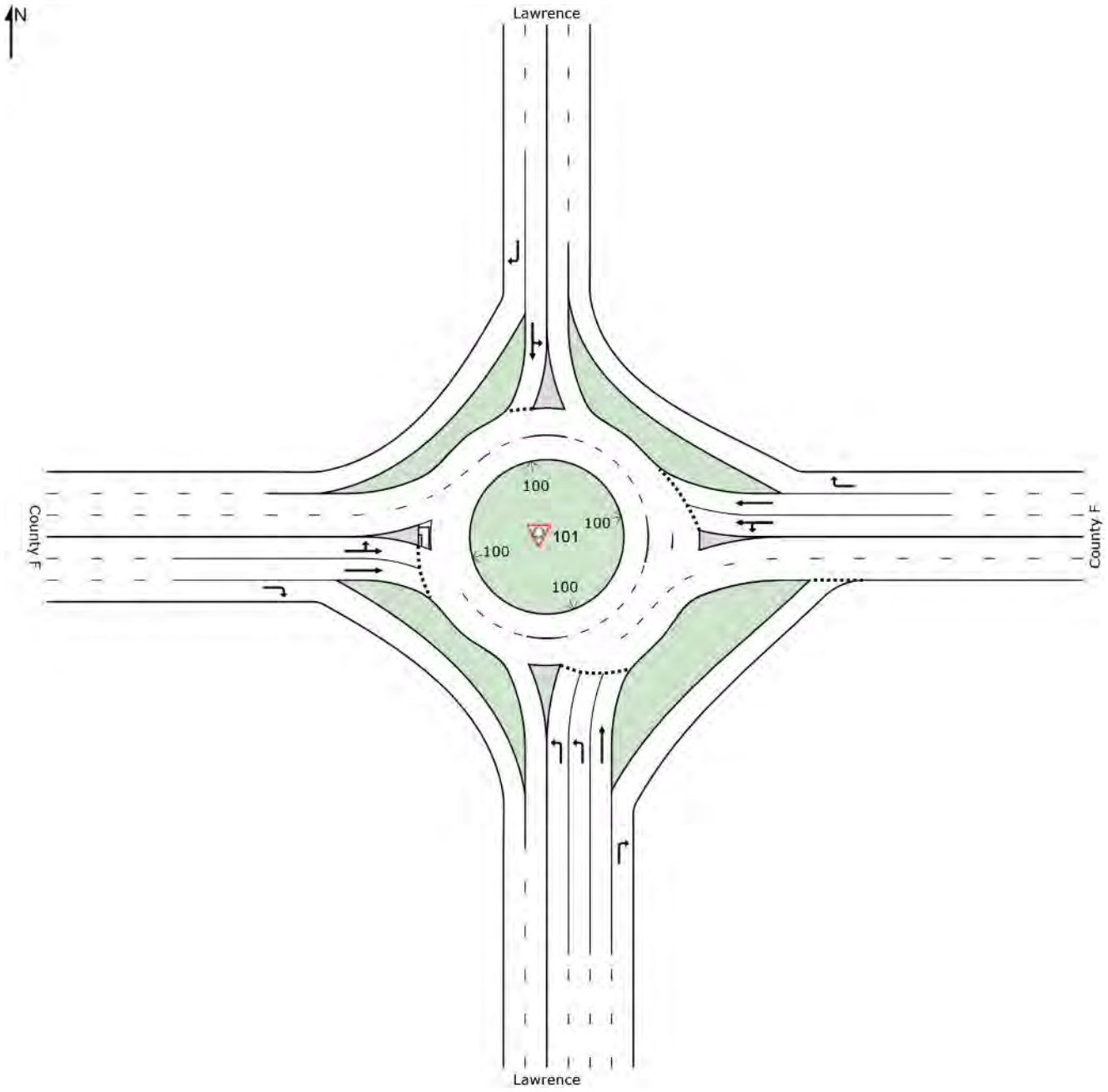
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Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 3 PM County F and Lawrence]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 PM County F and Lawrence]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Lawrence											
3	L2	646	3.0	0.507	13.8	LOS B	2.5	63.6	0.66	0.79	29.1
8	T1	247	3.0	0.388	11.1	LOS B	1.5	39.3	0.61	0.68	32.2
18	R2	62	3.0	0.067	4.5	LOS A	0.2	4.9	0.35	0.28	34.1
Approach		955	3.0	0.507	12.5	LOS B	2.5	63.6	0.62	0.73	30.1
East: County F											
1	L2	39	3.0	0.786	36.0	LOS E	5.1	131.1	0.88	1.23	23.8
6	T1	657	3.0	0.786	36.0	LOS E	5.1	131.1	0.88	1.23	23.8
16	R2	62	3.0	0.038	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		758	3.0	0.786	33.1	LOS D	5.1	131.1	0.81	1.13	24.5
North: Lawrence											
7	L2	45	3.0	0.354	13.8	LOS B	1.2	30.9	0.72	0.79	30.5
4	T1	118	3.0	0.354	13.8	LOS B	1.2	30.9	0.72	0.79	30.4
14	R2	494	3.0	0.304	0.0	LOS A	0.0	0.0	0.00	0.00	37.3
Approach		657	3.0	0.354	3.5	LOS A	1.2	30.9	0.18	0.20	35.3
West: County F											
5	L2	500	3.0	0.471	8.7	LOS A	2.2	57.0	0.41	0.30	31.0
2	T1	360	3.0	0.339	6.8	LOS A	1.4	34.8	0.35	0.25	34.3
12	R2	416	3.0	0.256	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1275	3.0	0.471	5.4	LOS A	2.2	57.0	0.26	0.19	33.7
All Vehicles		3646	3.0	0.786	12.6	LOS B	5.1	131.1	0.46	0.53	30.6

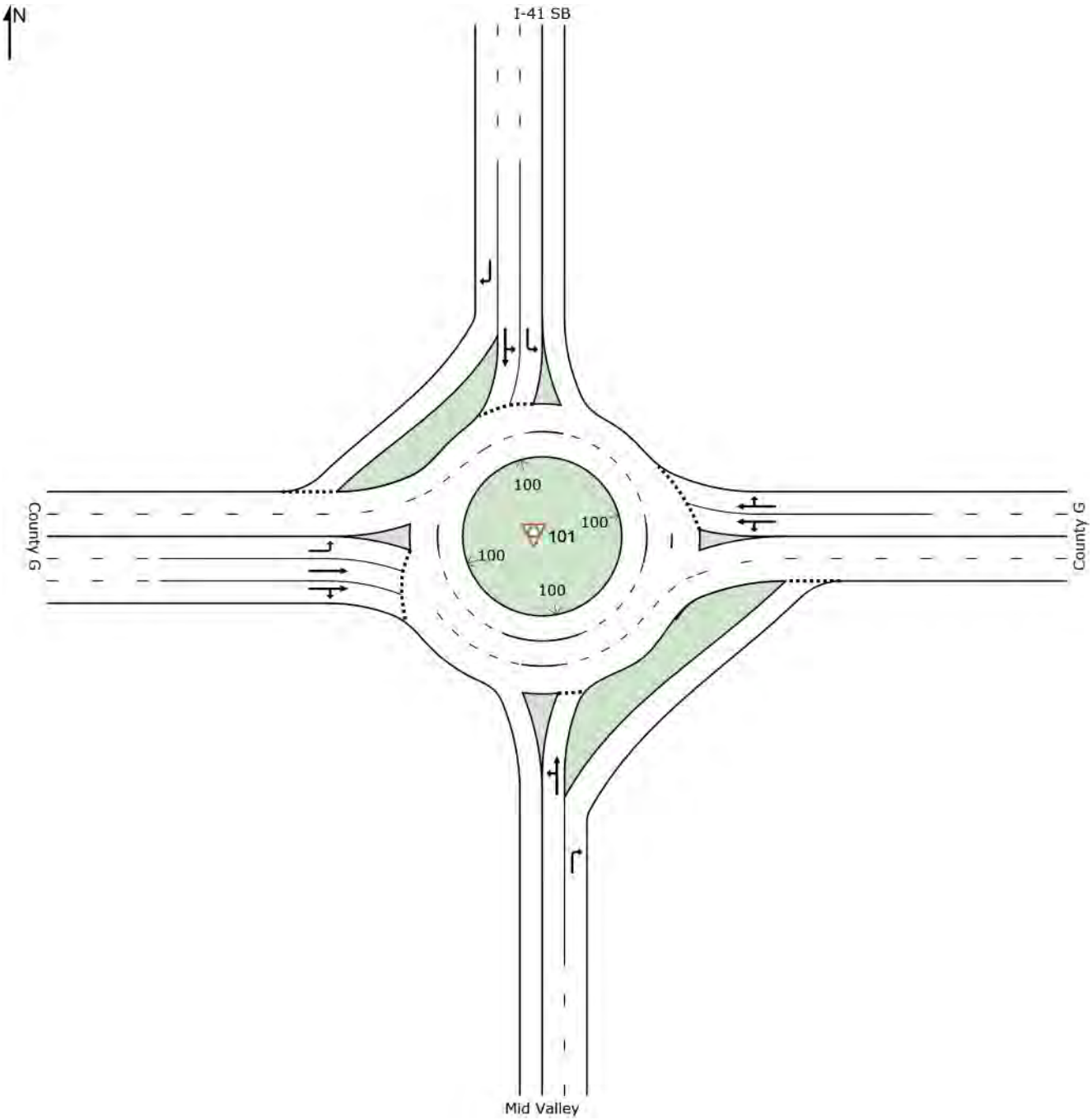
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LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 1 AM G / I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 AM G / I-41 SB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	38	3.0	0.125	7.4	LOS A	0.4	9.0	0.54	0.54	32.8
8	T1	38	3.0	0.125	7.4	LOS A	0.4	9.0	0.54	0.54	32.7
18	R2	92	3.0	0.144	7.2	LOS A	0.4	10.6	0.53	0.53	33.1
Approach		168	3.0	0.144	7.3	LOS A	0.4	10.6	0.53	0.53	32.9
East: County G											
1	L2	16	3.0	0.238	5.4	LOS A	0.8	20.7	0.25	0.15	35.0
6	T1	304	3.0	0.238	5.4	LOS A	0.8	20.7	0.25	0.15	34.9
16	R2	212	3.0	0.238	5.4	LOS A	0.8	20.7	0.25	0.15	33.8
Approach		533	3.0	0.238	5.4	LOS A	0.8	20.7	0.25	0.15	34.5
North: I-41 SB											
7	L2	663	3.0	0.469	9.4	LOS A	2.4	62.0	0.49	0.49	31.1
4	T1	234	3.0	0.469	9.4	LOS A	2.4	62.0	0.49	0.49	31.9
14	R2	315	3.0	0.326	7.1	LOS A	1.2	29.8	0.41	0.36	33.0
Approach		1212	3.0	0.469	8.8	LOS A	2.4	62.0	0.47	0.46	31.7
West: County G											
5	L2	71	3.0	0.112	7.0	LOS A	0.3	8.1	0.52	0.52	31.8
2	T1	228	3.0	0.210	8.2	LOS A	0.6	16.0	0.55	0.55	33.6
12	R2	38	3.0	0.210	8.2	LOS A	0.6	16.0	0.55	0.55	32.4
Approach		337	3.0	0.210	8.0	LOS A	0.6	16.0	0.54	0.54	33.0
All Vehicles		2250	3.0	0.469	7.8	LOS A	2.4	62.0	0.43	0.40	32.6

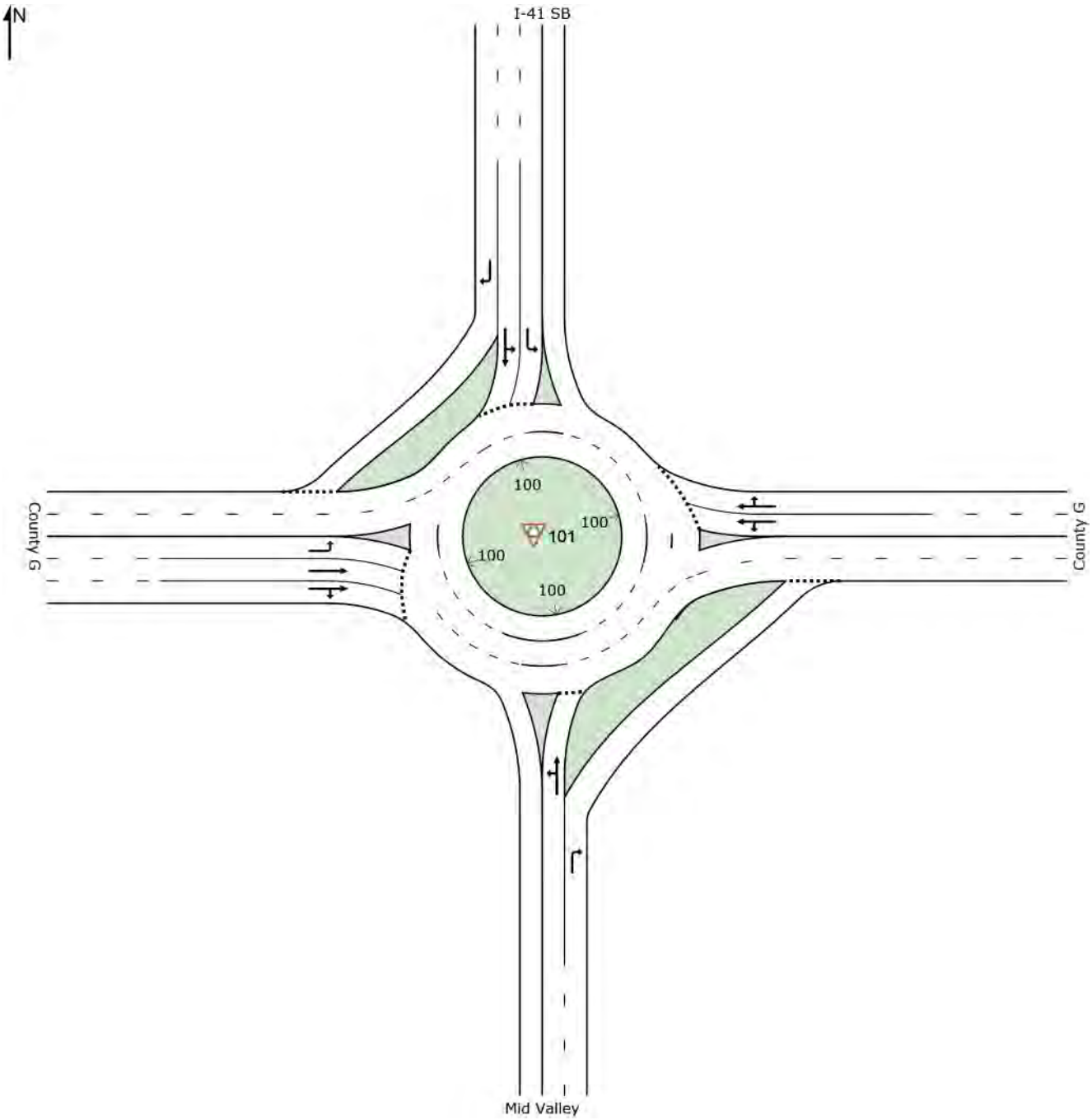
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 1 PM G / I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 PM G / I-41 SB]

New Site
Roundabout

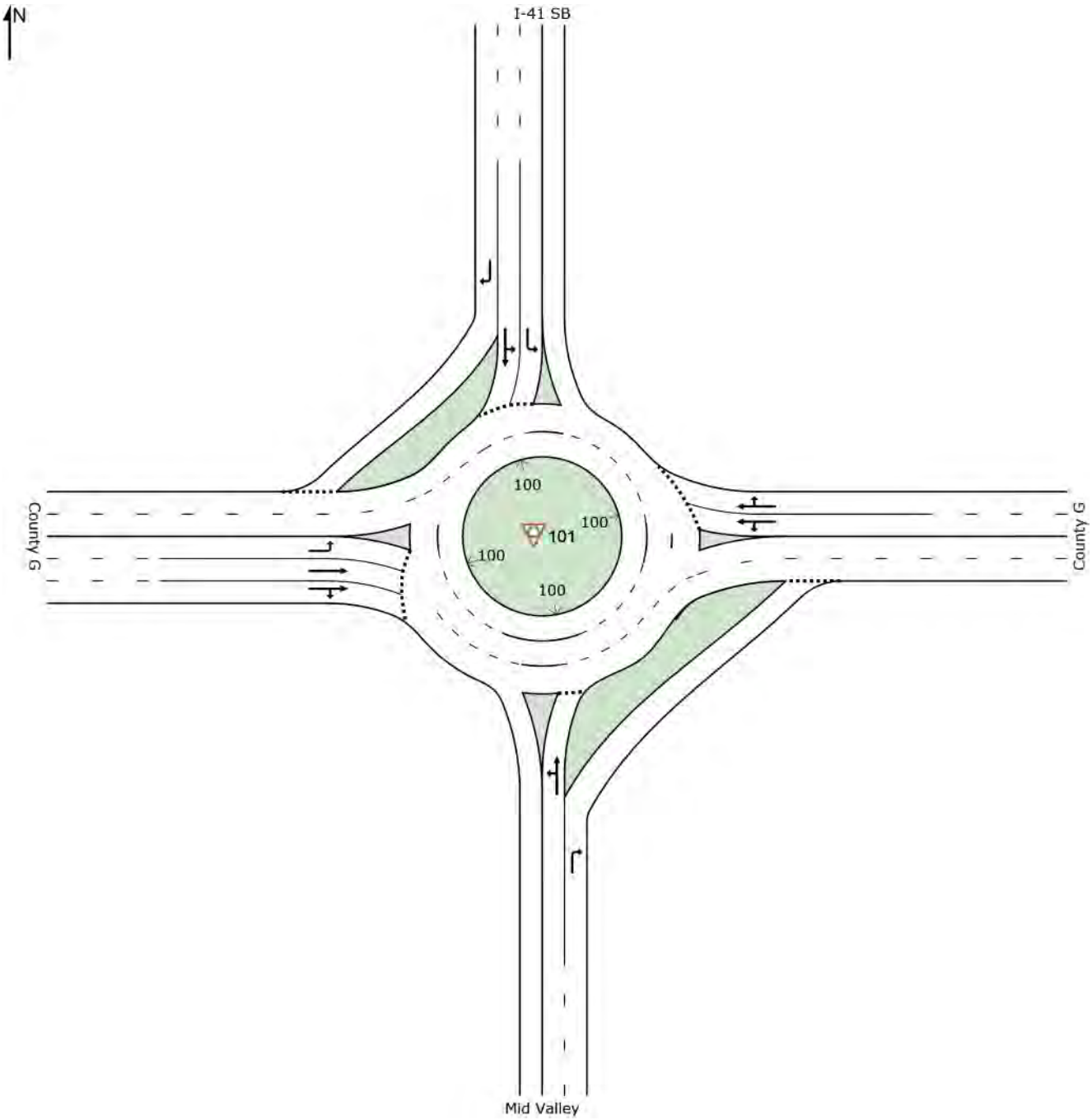
Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	51	3.0	0.189	11.6	LOS B	0.5	13.4	0.71	0.71	30.6
8	T1	28	3.0	0.189	11.6	LOS B	0.5	13.4	0.71	0.71	30.6
18	R2	140	3.0	0.287	11.7	LOS B	0.9	23.1	0.68	0.72	31.0
Approach		219	3.0	0.287	11.7	LOS B	0.9	23.1	0.69	0.71	30.9
East: County G											
1	L2	39	3.0	0.241	5.9	LOS A	0.8	20.5	0.35	0.28	34.4
6	T1	309	3.0	0.241	5.9	LOS A	0.8	20.5	0.35	0.28	34.4
16	R2	135	3.0	0.241	5.9	LOS A	0.8	20.5	0.35	0.28	33.6
Approach		483	3.0	0.241	5.9	LOS A	0.8	20.5	0.35	0.28	34.2
North: I-41 SB											
7	L2	669	3.0	0.490	10.0	LOS B	2.8	72.4	0.52	0.57	30.9
4	T1	242	3.0	0.490	10.0	LOS B	2.8	72.4	0.52	0.57	31.6
14	R2	101	3.0	0.106	4.7	LOS A	0.3	7.9	0.34	0.27	34.2
Approach		1011	3.0	0.490	9.5	LOS A	2.8	72.4	0.50	0.54	31.3
West: County G											
5	L2	219	3.0	0.356	10.8	LOS B	1.3	33.6	0.61	0.67	30.2
2	T1	590	3.0	0.538	15.1	LOS C	2.7	69.9	0.68	0.83	30.5
12	R2	73	3.0	0.538	15.1	LOS C	2.7	69.9	0.68	0.83	29.5
Approach		882	3.0	0.538	14.0	LOS B	2.7	69.9	0.66	0.79	30.3
All Vehicles		2596	3.0	0.538	10.6	LOS B	2.8	72.4	0.55	0.59	31.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SITE LAYOUT

Site: 101 [Alt 2A AM G / I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2A AM G / I-41 SB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	38	3.0	0.107	6.7	LOS A	0.3	7.8	0.51	0.51	33.0
8	T1	33	3.0	0.107	6.7	LOS A	0.3	7.8	0.51	0.51	32.9
18	R2	92	3.0	0.132	6.6	LOS A	0.4	9.8	0.50	0.50	33.4
Approach		163	3.0	0.132	6.6	LOS A	0.4	9.8	0.50	0.50	33.2
East: County G											
1	L2	22	3.0	0.221	5.2	LOS A	0.7	18.9	0.24	0.15	35.0
6	T1	304	3.0	0.221	5.2	LOS A	0.7	18.9	0.24	0.15	34.9
16	R2	168	3.0	0.221	5.2	LOS A	0.7	18.9	0.24	0.15	33.9
Approach		495	3.0	0.221	5.2	LOS A	0.7	18.9	0.24	0.15	34.6
North: I-41 SB											
7	L2	587	3.0	0.425	8.7	LOS A	1.8	45.9	0.47	0.44	31.4
4	T1	223	3.0	0.425	8.7	LOS A	1.8	45.9	0.47	0.44	32.2
14	R2	299	3.0	0.309	6.9	LOS A	1.1	27.8	0.40	0.35	33.1
Approach		1109	3.0	0.425	8.2	LOS A	1.8	45.9	0.45	0.42	32.0
West: County G											
5	L2	76	3.0	0.113	6.6	LOS A	0.3	8.2	0.50	0.50	31.9
2	T1	196	3.0	0.174	7.3	LOS A	0.5	13.1	0.52	0.52	34.0
12	R2	38	3.0	0.174	7.3	LOS A	0.5	13.1	0.52	0.52	32.8
Approach		310	3.0	0.174	7.2	LOS A	0.5	13.1	0.52	0.52	33.3
All Vehicles		2076	3.0	0.425	7.2	LOS A	1.8	45.9	0.41	0.37	32.9

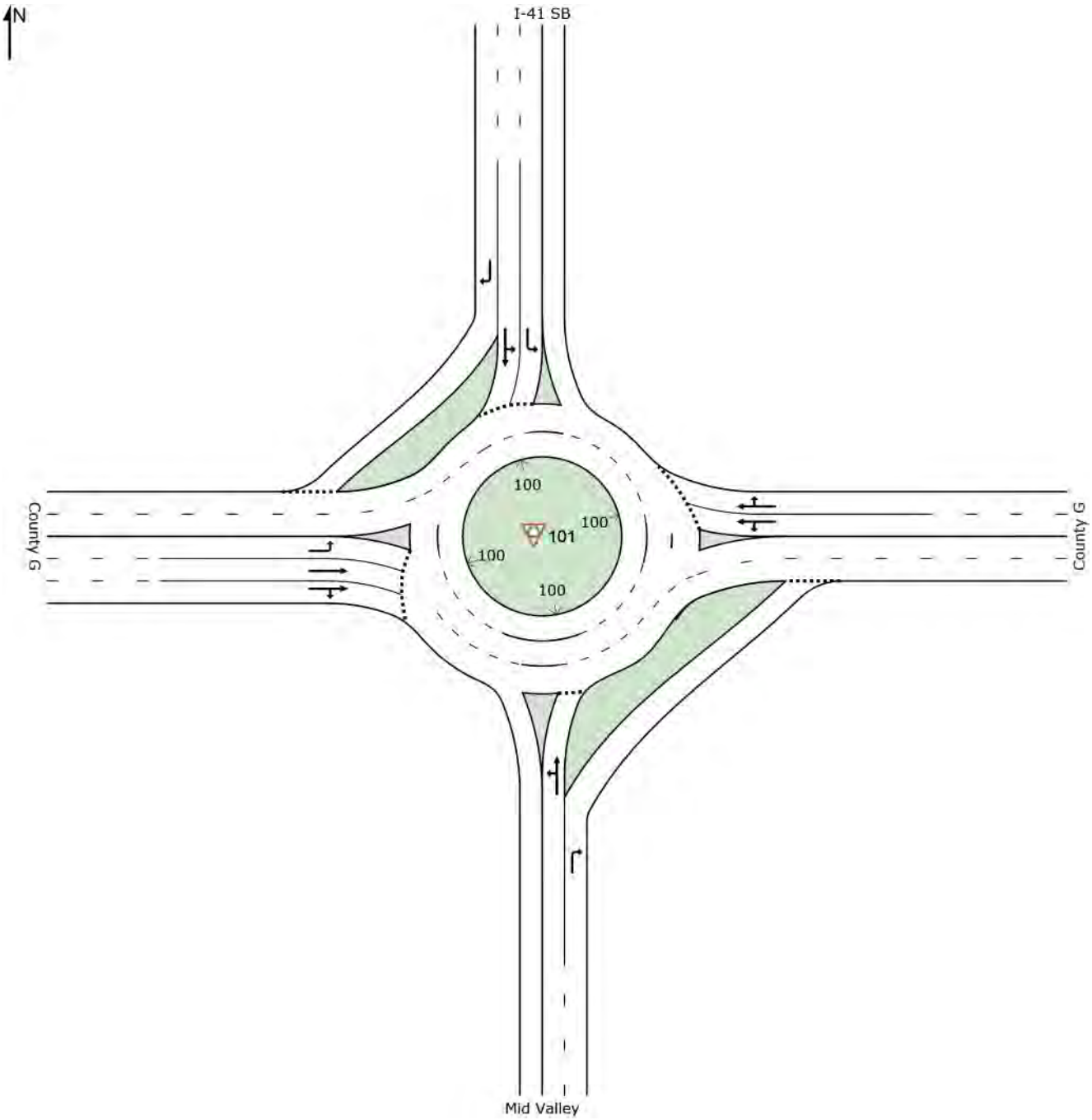
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Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2A PM G / I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2A PM G / I-41 SB]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	51	3.0	0.155	9.8	LOS A	0.4	11.1	0.66	0.66	31.3
8	T1	22	3.0	0.155	9.8	LOS A	0.4	11.1	0.66	0.66	31.2
18	R2	140	3.0	0.266	10.6	LOS B	0.8	21.0	0.65	0.67	31.5
Approach		213	3.0	0.266	10.3	LOS B	0.8	21.0	0.65	0.66	31.4
East: County G											
1	L2	45	3.0	0.235	5.6	LOS A	0.8	20.1	0.31	0.23	34.5
6	T1	303	3.0	0.235	5.6	LOS A	0.8	20.1	0.31	0.23	34.6
16	R2	146	3.0	0.235	5.6	LOS A	0.8	20.1	0.31	0.23	33.7
Approach		494	3.0	0.235	5.6	LOS A	0.8	20.1	0.31	0.23	34.3
North: I-41 SB											
7	L2	573	3.0	0.433	9.0	LOS A	2.0	50.8	0.49	0.49	31.3
4	T1	230	3.0	0.433	9.0	LOS A	2.0	50.8	0.49	0.49	32.2
14	R2	90	3.0	0.094	4.6	LOS A	0.3	7.0	0.34	0.26	34.3
Approach		893	3.0	0.433	8.5	LOS A	2.0	50.8	0.47	0.47	31.8
West: County G											
5	L2	157	3.0	0.237	8.3	LOS A	0.7	18.4	0.55	0.55	31.2
2	T1	584	3.0	0.495	13.1	LOS B	2.4	62.3	0.64	0.77	31.3
12	R2	73	3.0	0.495	13.1	LOS B	2.4	62.3	0.64	0.77	30.3
Approach		815	3.0	0.495	12.2	LOS B	2.4	62.3	0.62	0.72	31.2
All Vehicles		2416	3.0	0.495	9.3	LOS A	2.4	62.3	0.51	0.52	32.0

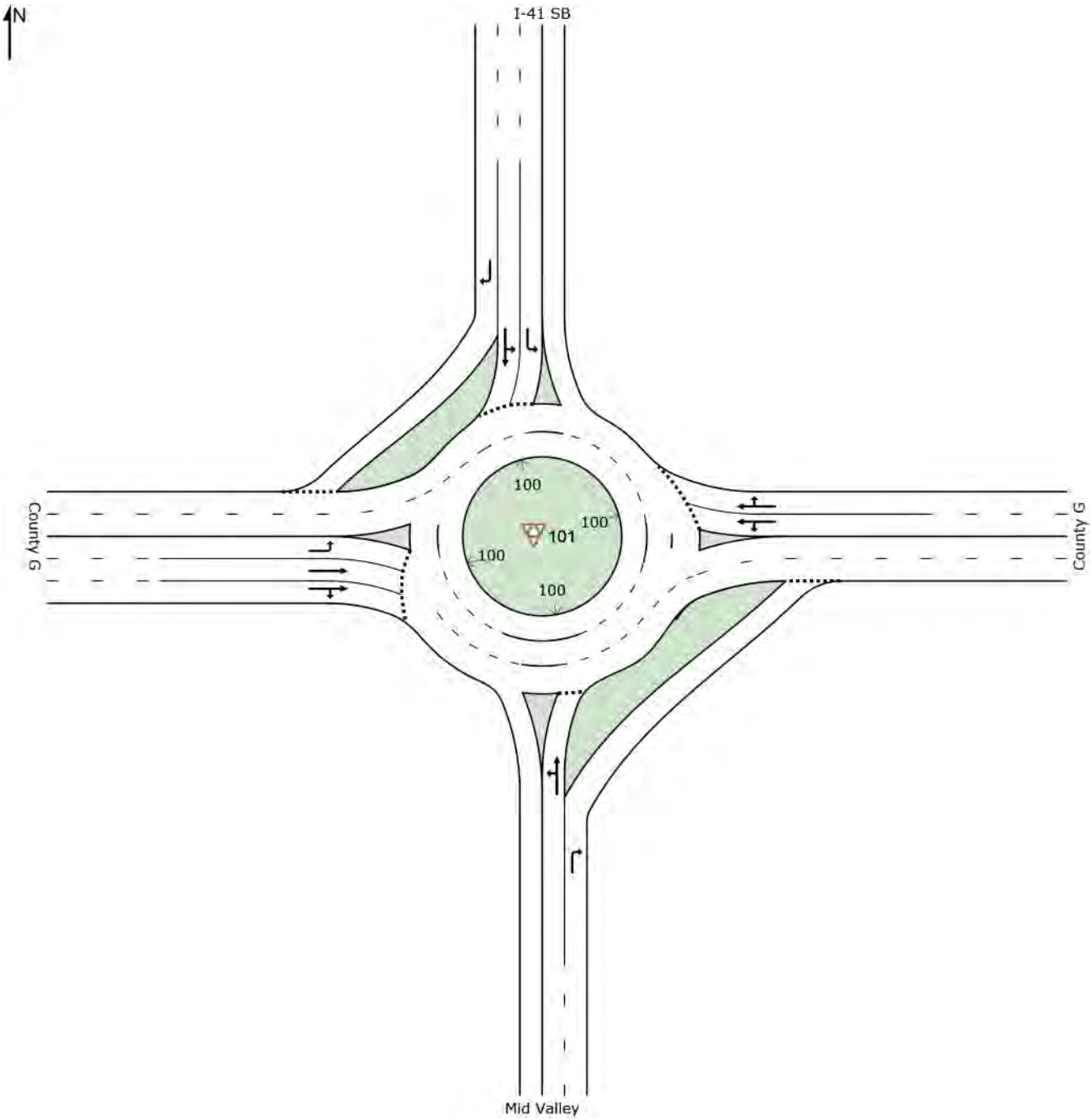
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Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2B AM G / I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2B AM G / I-41 SB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	43	3.0	0.122	7.2	LOS A	0.3	8.8	0.53	0.53	32.7
8	T1	33	3.0	0.122	7.2	LOS A	0.3	8.8	0.53	0.53	32.6
18	R2	98	3.0	0.152	7.4	LOS A	0.4	11.2	0.53	0.53	33.0
Approach		174	3.0	0.152	7.3	LOS A	0.4	11.2	0.53	0.53	32.9
East: County G											
1	L2	27	3.0	0.243	5.4	LOS A	0.8	21.3	0.22	0.13	34.9
6	T1	310	3.0	0.243	5.4	LOS A	0.8	21.3	0.22	0.13	34.8
16	R2	217	3.0	0.243	5.4	LOS A	0.8	21.3	0.22	0.13	33.8
Approach		554	3.0	0.243	5.4	LOS A	0.8	21.3	0.22	0.13	34.4
North: I-41 SB											
7	L2	641	3.0	0.462	9.4	LOS A	2.4	60.5	0.49	0.51	31.1
4	T1	228	3.0	0.462	9.4	LOS A	2.4	60.5	0.49	0.51	31.9
14	R2	288	3.0	0.300	6.8	LOS A	1.0	26.7	0.41	0.35	33.1
Approach		1158	3.0	0.462	8.8	LOS A	2.4	60.5	0.47	0.47	31.7
West: County G											
5	L2	43	3.0	0.068	6.4	LOS A	0.2	4.8	0.51	0.51	32.0
2	T1	250	3.0	0.225	8.4	LOS A	0.7	17.3	0.55	0.55	33.5
12	R2	38	3.0	0.225	8.4	LOS A	0.7	17.3	0.55	0.55	32.4
Approach		332	3.0	0.225	8.1	LOS A	0.7	17.3	0.55	0.55	33.2
All Vehicles		2217	3.0	0.462	7.7	LOS A	2.4	60.5	0.42	0.40	32.7

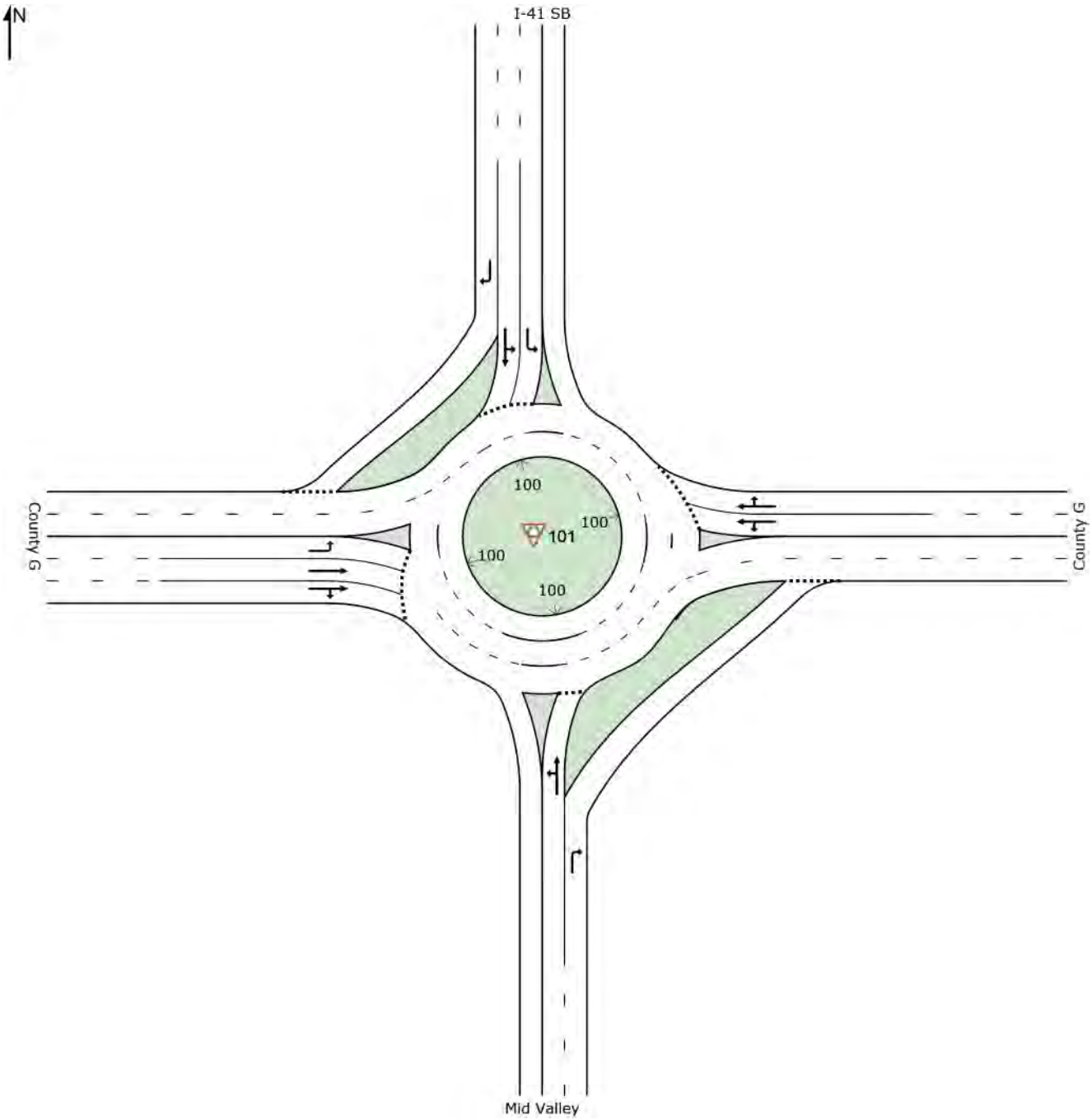
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2B PM G / I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2B PM G / I-41 SB]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	51	3.0	0.164	10.5	LOS B	0.5	11.6	0.68	0.68	31.0
8	T1	22	3.0	0.164	10.5	LOS B	0.5	11.6	0.68	0.68	30.9
18	R2	146	3.0	0.296	11.8	LOS B	0.9	24.2	0.68	0.72	31.0
Approach		219	3.0	0.296	11.4	LOS B	0.9	24.2	0.68	0.71	31.0
East: County G											
1	L2	51	3.0	0.258	5.8	LOS A	0.9	22.7	0.31	0.22	34.4
6	T1	303	3.0	0.258	5.8	LOS A	0.9	22.7	0.31	0.22	34.4
16	R2	197	3.0	0.258	5.8	LOS A	0.9	22.7	0.31	0.22	33.6
Approach		551	3.0	0.258	5.8	LOS A	0.9	22.7	0.31	0.22	34.1
North: I-41 SB											
7	L2	646	3.0	0.477	9.8	LOS A	2.6	67.1	0.51	0.56	31.0
4	T1	236	3.0	0.477	9.8	LOS A	2.6	67.1	0.51	0.56	31.7
14	R2	90	3.0	0.094	4.6	LOS A	0.3	7.0	0.34	0.26	34.3
Approach		972	3.0	0.477	9.3	LOS A	2.6	67.1	0.50	0.53	31.4
West: County G											
5	L2	140	3.0	0.225	8.6	LOS A	0.7	17.2	0.56	0.56	31.1
2	T1	601	3.0	0.540	15.0	LOS C	2.8	71.0	0.68	0.83	30.5
12	R2	73	3.0	0.540	15.0	LOS C	2.8	71.0	0.68	0.83	29.6
Approach		815	3.0	0.540	13.9	LOS B	2.8	71.0	0.66	0.78	30.5
All Vehicles		2556	3.0	0.540	10.2	LOS B	2.8	71.0	0.52	0.56	31.6

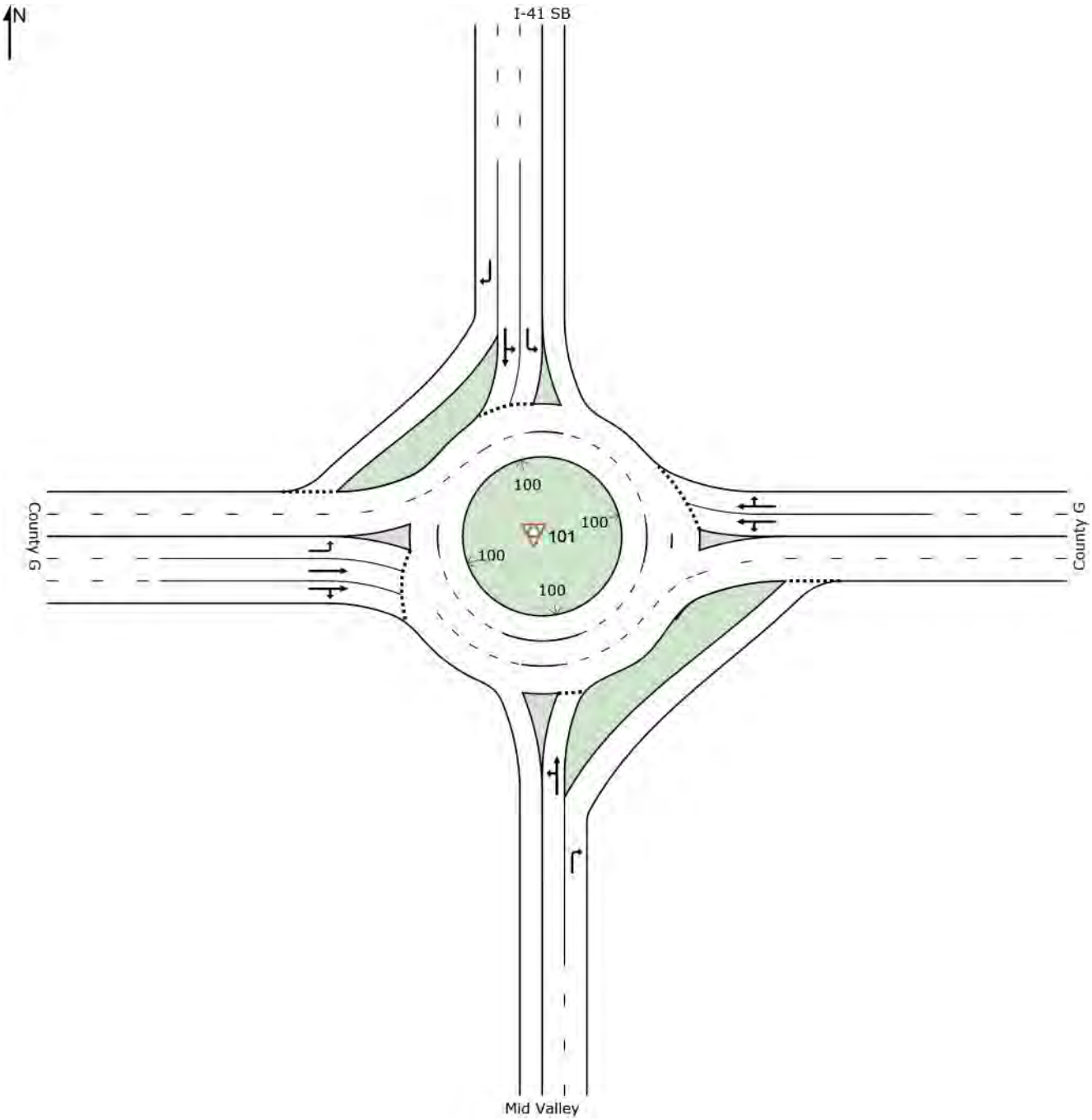
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Roundabout LOS Method: Same as Sign Control.
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Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 3 AM G / I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 AM G / I-41 SB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	43	3.0	0.133	7.4	LOS A	0.4	9.7	0.54	0.54	32.7
8	T1	38	3.0	0.133	7.4	LOS A	0.4	9.7	0.54	0.54	32.6
18	R2	92	3.0	0.144	7.3	LOS A	0.4	10.6	0.53	0.53	33.1
Approach		174	3.0	0.144	7.4	LOS A	0.4	10.6	0.54	0.54	32.9
East: County G											
1	L2	22	3.0	0.261	5.6	LOS A	0.9	23.4	0.25	0.15	34.8
6	T1	304	3.0	0.261	5.6	LOS A	0.9	23.4	0.25	0.15	34.7
16	R2	261	3.0	0.261	5.6	LOS A	0.9	23.4	0.25	0.15	33.7
Approach		587	3.0	0.261	5.6	LOS A	0.9	23.4	0.25	0.15	34.3
North: I-41 SB											
7	L2	658	3.0	0.470	9.5	LOS A	2.5	63.0	0.49	0.51	31.1
4	T1	234	3.0	0.470	9.5	LOS A	2.5	63.0	0.49	0.51	31.8
14	R2	304	3.0	0.316	7.0	LOS A	1.1	28.6	0.41	0.36	33.0
Approach		1196	3.0	0.470	8.8	LOS A	2.5	63.0	0.47	0.47	31.7
West: County G											
5	L2	60	3.0	0.094	6.7	LOS A	0.3	6.8	0.52	0.52	31.9
2	T1	239	3.0	0.219	8.4	LOS A	0.7	16.7	0.55	0.55	33.5
12	R2	38	3.0	0.219	8.4	LOS A	0.7	16.7	0.55	0.55	32.4
Approach		337	3.0	0.219	8.1	LOS A	0.7	16.7	0.55	0.55	33.1
All Vehicles		2293	3.0	0.470	7.8	LOS A	2.5	63.0	0.43	0.41	32.6

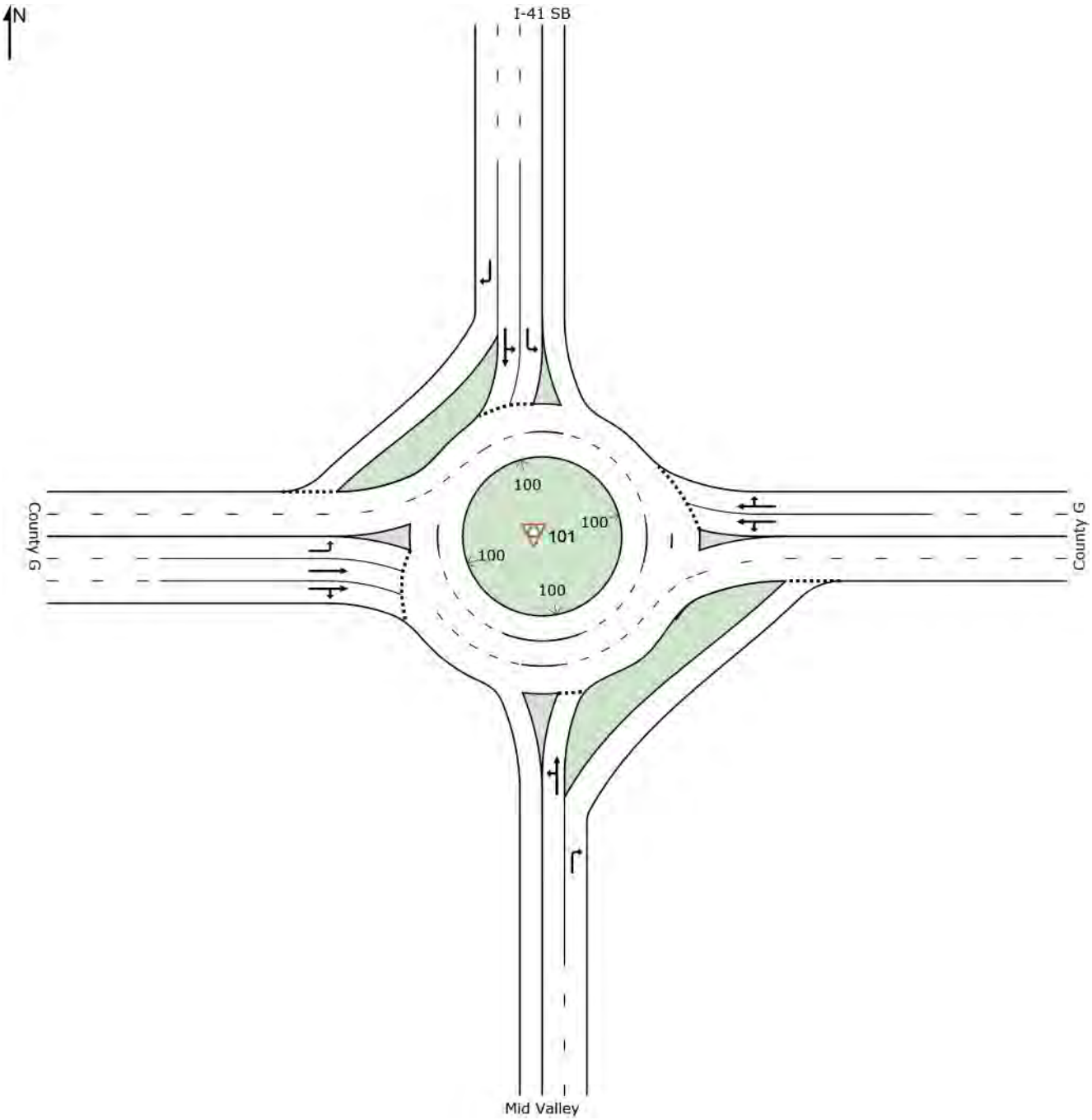
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Roundabout LOS Method: Same as Sign Control.
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LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 3 PM G / I-41 SB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 PM G / I-41 SB]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Mid Valley											
3	L2	51	3.0	0.184	11.2	LOS B	0.5	13.0	0.70	0.70	30.8
8	T1	28	3.0	0.184	11.2	LOS B	0.5	13.0	0.70	0.70	30.7
18	R2	140	3.0	0.290	11.9	LOS B	0.9	23.5	0.69	0.72	30.9
Approach		219	3.0	0.290	11.7	LOS B	0.9	23.5	0.69	0.71	30.9
East: County G											
1	L2	45	3.0	0.288	6.3	LOS A	1.0	26.0	0.34	0.25	34.3
6	T1	303	3.0	0.288	6.3	LOS A	1.0	26.0	0.34	0.25	34.2
16	R2	253	3.0	0.288	6.3	LOS A	1.0	26.0	0.34	0.25	33.4
Approach		601	3.0	0.288	6.3	LOS A	1.0	26.0	0.34	0.25	33.9
North: I-41 SB											
7	L2	669	3.0	0.490	10.0	LOS B	2.8	72.4	0.52	0.57	30.9
4	T1	242	3.0	0.490	10.0	LOS B	2.8	72.4	0.52	0.57	31.6
14	R2	96	3.0	0.100	4.7	LOS A	0.3	7.4	0.34	0.27	34.2
Approach		1006	3.0	0.490	9.5	LOS A	2.8	72.4	0.50	0.55	31.3
West: County G											
5	L2	163	3.0	0.265	9.3	LOS A	0.8	21.0	0.58	0.59	30.8
2	T1	607	3.0	0.554	15.7	LOS C	2.9	73.8	0.69	0.85	30.3
12	R2	73	3.0	0.554	15.7	LOS C	2.9	73.8	0.69	0.85	29.3
Approach		843	3.0	0.554	14.4	LOS B	2.9	73.8	0.67	0.80	30.3
All Vehicles		2669	3.0	0.554	10.5	LOS B	2.9	73.8	0.53	0.57	31.5

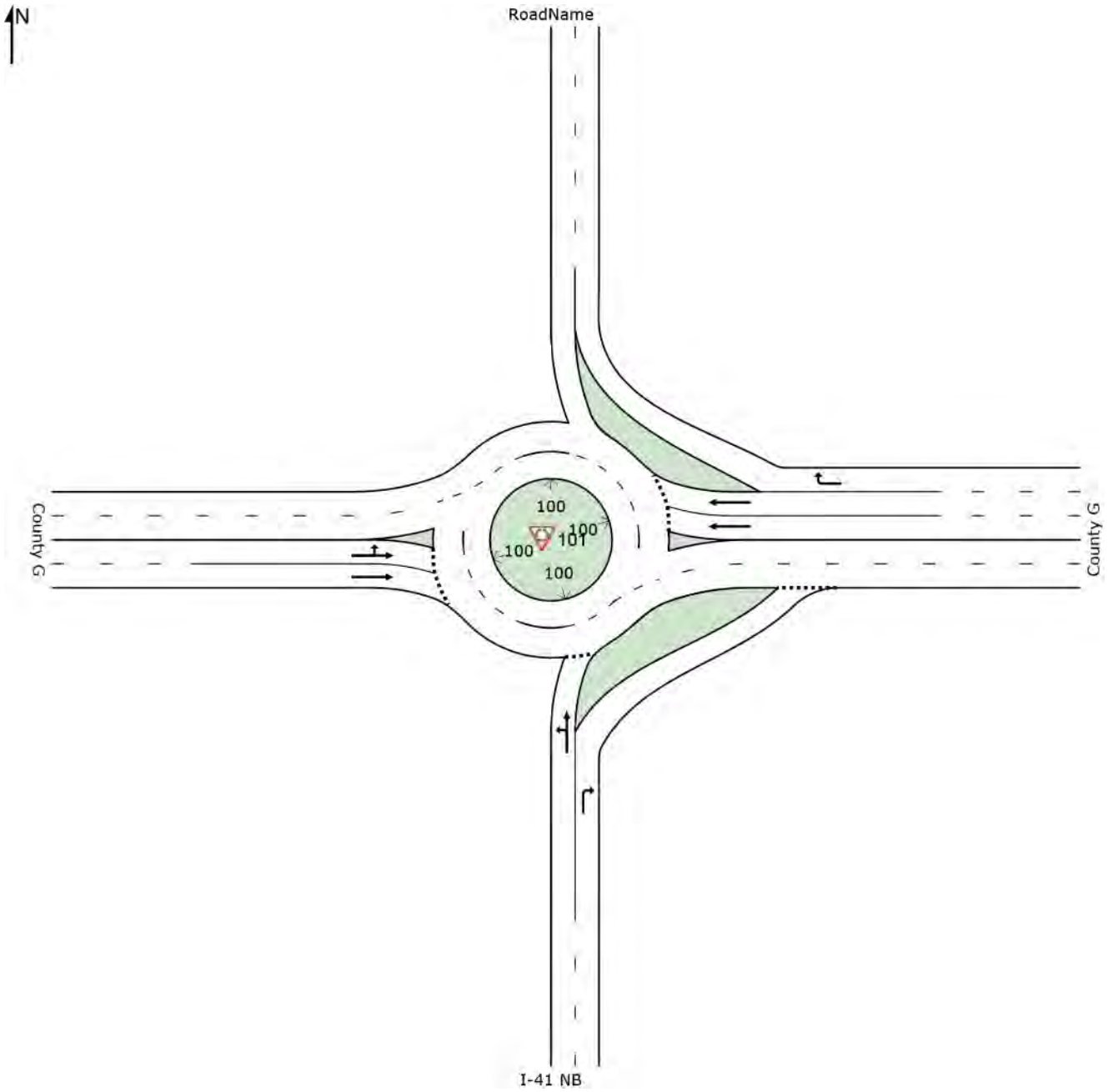
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 1 AM G_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 AM G_I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	120	3.0	0.201	8.5	LOS A	0.6	15.1	0.57	0.57	31.1
8	T1	1	3.0	0.201	8.5	LOS A	0.6	15.1	0.57	0.57	31.1
18	R2	245	3.0	0.338	9.2	LOS A	1.2	31.6	0.56	0.59	32.2
Approach		365	3.0	0.338	9.0	LOS A	1.2	31.6	0.56	0.58	31.8
East: County G											
6	T1	413	3.0	0.218	5.9	LOS A	0.7	17.9	0.38	0.33	34.8
16	R2	609	3.0	0.374	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1022	3.0	0.374	2.4	LOS A	0.7	17.9	0.16	0.13	36.1
West: County G											
5	L2	250	3.0	0.394	6.7	LOS A	0.0	0.0	0.00	0.00	36.6
2	T1	734	3.0	0.394	6.7	LOS A	0.0	0.0	0.00	0.00	37.6
Approach		984	3.0	0.394	6.7	LOS A	0.0	0.0	0.00	0.00	37.4
All Vehicles		2371	3.0	0.394	5.2	LOS A	1.2	31.6	0.15	0.15	35.9

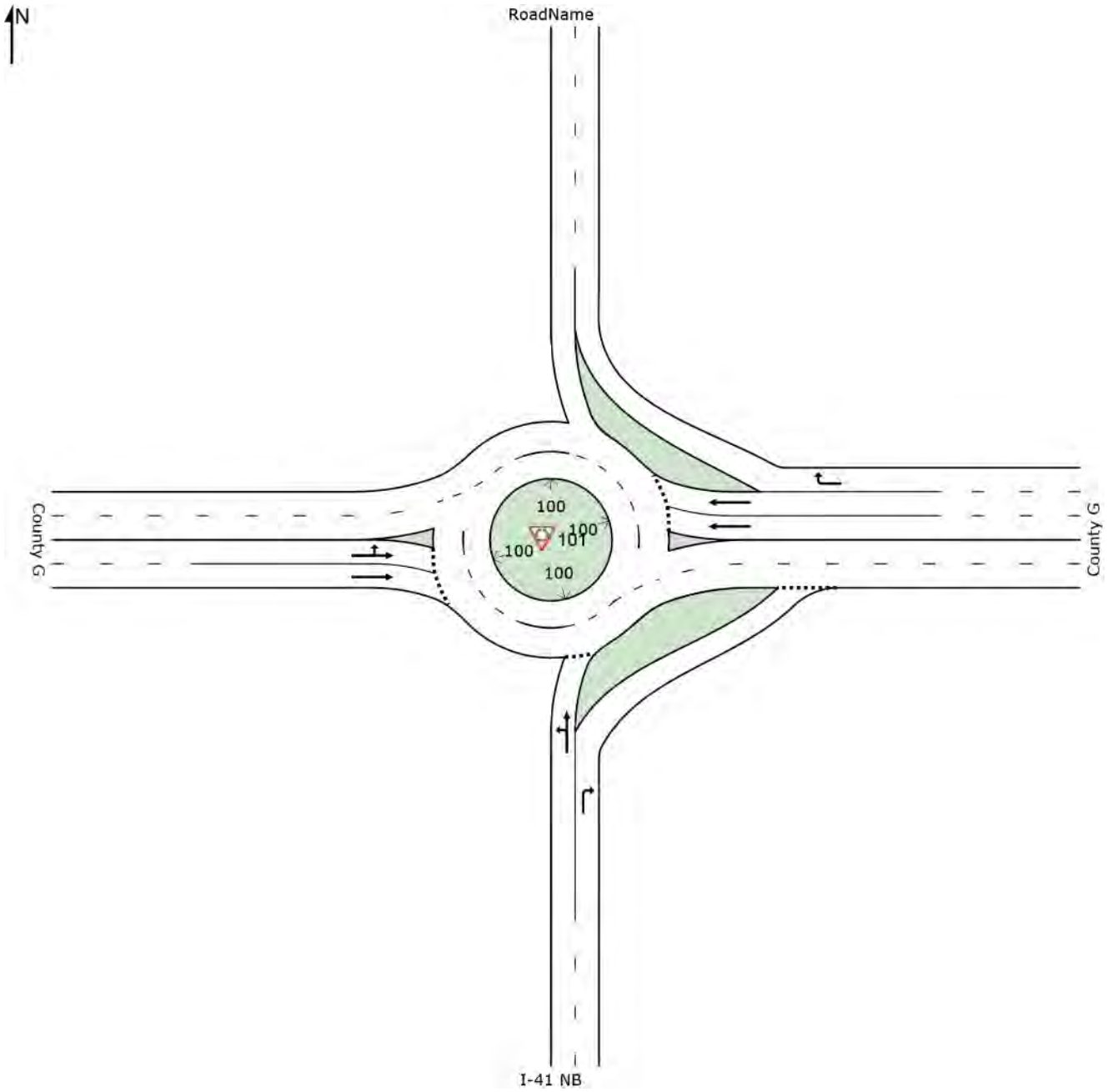
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 1 PM G_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 1 PM G_I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	67	3.0	0.155	10.4	LOS B	0.4	11.0	0.68	0.68	30.4
8	T1	1	3.0	0.155	10.4	LOS B	0.4	11.0	0.68	0.68	30.3
18	R2	258	3.0	0.428	12.5	LOS B	1.8	45.6	0.65	0.74	30.7
Approach		327	3.0	0.428	12.1	LOS B	1.8	45.6	0.65	0.73	30.6
East: County G											
6	T1	416	3.0	0.240	6.7	LOS A	0.8	19.7	0.44	0.42	34.4
16	R2	938	3.0	0.577	0.0	LOS A	0.0	0.0	0.00	0.00	37.0
Approach		1354	3.0	0.577	2.1	LOS A	0.8	19.7	0.14	0.13	36.1
West: County G											
5	L2	421	3.0	0.560	9.3	LOS A	0.0	0.0	0.00	0.00	36.3
2	T1	978	3.0	0.560	9.3	LOS A	0.0	0.0	0.00	0.00	37.6
Approach		1399	3.0	0.560	9.3	LOS A	0.0	0.0	0.00	0.00	37.2
All Vehicles		3080	3.0	0.577	6.4	LOS A	1.8	45.6	0.13	0.13	35.9

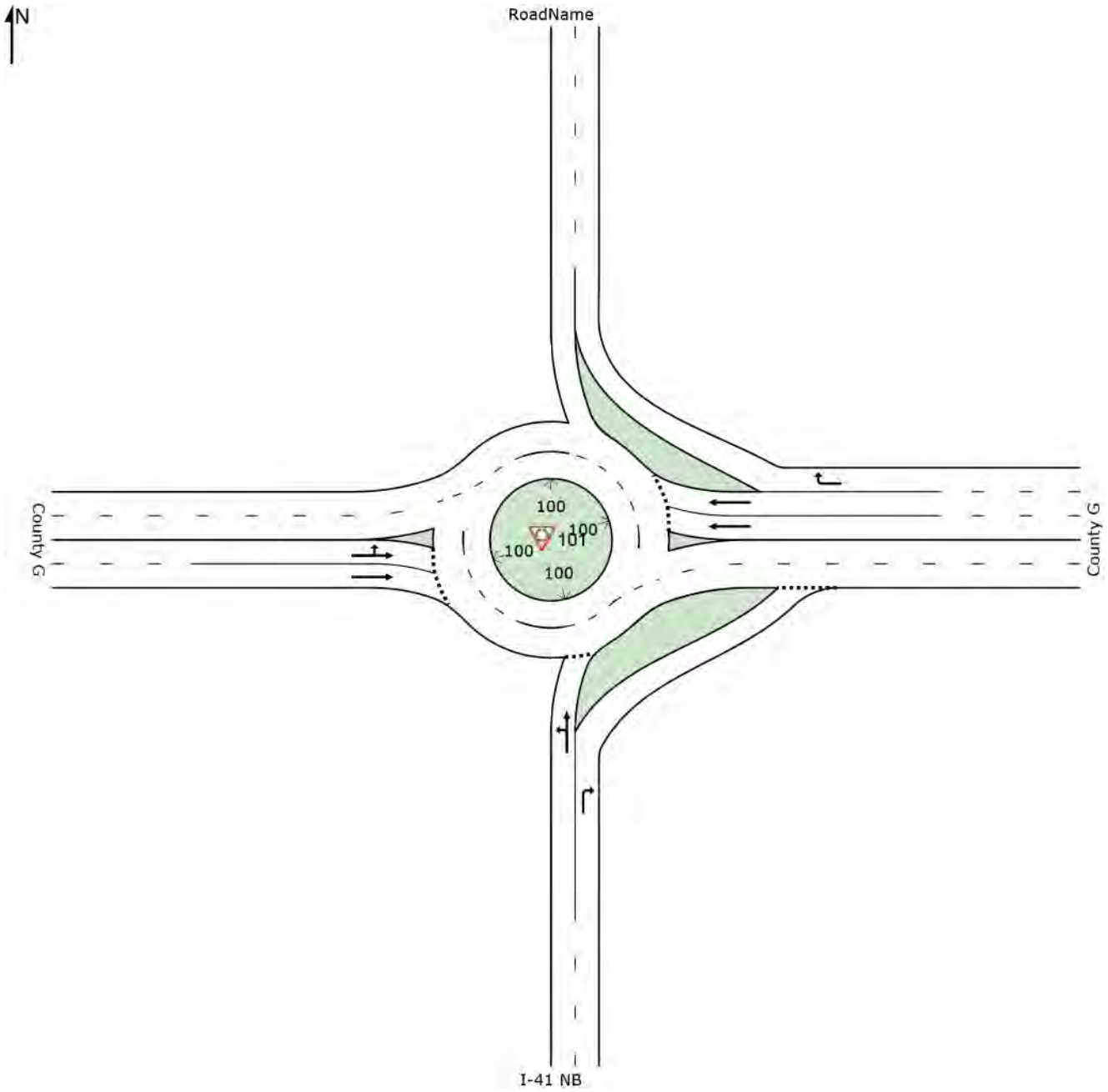
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Roundabout LOS Method: Same as Sign Control.
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LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2A AM G_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2A AM G_I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	114	3.0	0.177	7.6	LOS A	0.5	13.3	0.53	0.53	31.5
8	T1	1	3.0	0.177	7.6	LOS A	0.5	13.3	0.53	0.53	31.4
18	R2	201	3.0	0.261	7.6	LOS A	0.8	21.2	0.50	0.50	32.9
Approach		316	3.0	0.261	7.6	LOS A	0.8	21.2	0.51	0.51	32.4
East: County G											
6	T1	380	3.0	0.197	5.6	LOS A	0.6	15.9	0.36	0.30	35.0
16	R2	527	3.0	0.324	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		908	3.0	0.324	2.4	LOS A	0.6	15.9	0.15	0.13	36.1
West: County G											
5	L2	228	3.0	0.350	6.2	LOS A	0.0	0.0	0.00	0.00	36.6
2	T1	647	3.0	0.350	6.2	LOS A	0.0	0.0	0.00	0.00	37.6
Approach		875	3.0	0.350	6.2	LOS A	0.0	0.0	0.00	0.00	37.3
All Vehicles		2099	3.0	0.350	4.7	LOS A	0.8	21.2	0.14	0.13	36.0

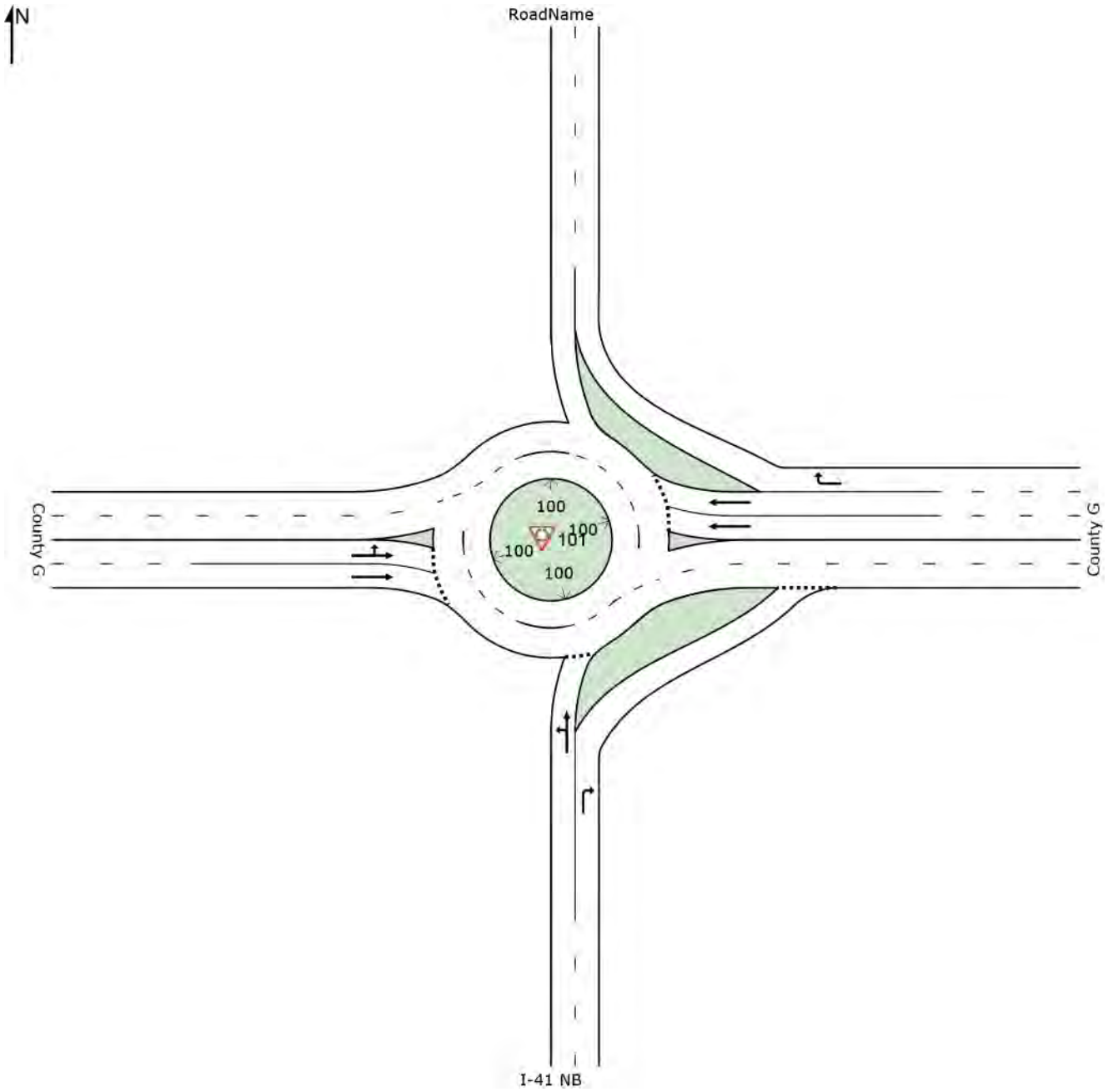
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Roundabout LOS Method: Same as Sign Control.
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Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2A PM G_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2A PM G_I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	62	3.0	0.132	9.4	LOS A	0.4	9.3	0.65	0.65	30.8
8	T1	1	3.0	0.132	9.4	LOS A	0.4	9.3	0.65	0.65	30.7
18	R2	219	3.0	0.312	9.0	LOS A	1.1	27.4	0.56	0.58	32.2
Approach		282	3.0	0.312	9.1	LOS A	1.1	27.4	0.58	0.59	31.9
East: County G											
6	T1	433	3.0	0.268	7.4	LOS A	0.9	22.2	0.49	0.49	34.0
16	R2	708	3.0	0.435	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1140	3.0	0.435	2.9	LOS A	0.9	22.2	0.18	0.18	35.8
West: County G											
5	L2	522	3.0	0.520	8.6	LOS A	0.0	0.0	0.00	0.00	35.7
2	T1	775	3.0	0.520	8.6	LOS A	0.0	0.0	0.00	0.00	37.8
Approach		1298	3.0	0.520	8.6	LOS A	0.0	0.0	0.00	0.00	36.9
All Vehicles		2720	3.0	0.520	6.2	LOS A	1.1	27.4	0.14	0.14	35.9

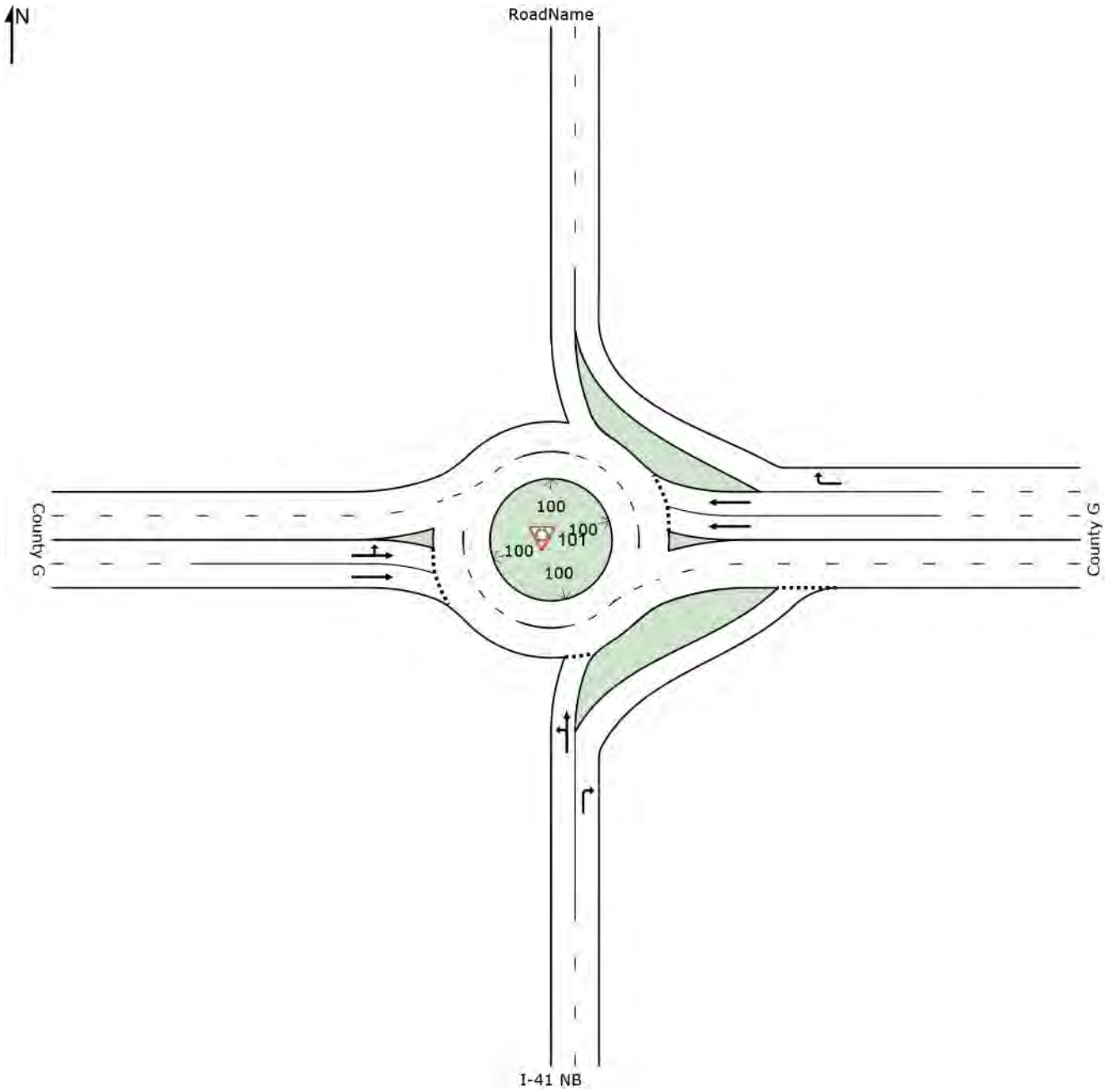
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2B AM G_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2B AM G_I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	120	3.0	0.202	8.5	LOS A	0.6	15.1	0.57	0.57	31.1
8	T1	1	3.0	0.202	8.5	LOS A	0.6	15.1	0.57	0.57	31.1
18	R2	212	3.0	0.297	8.6	LOS A	1.0	24.9	0.54	0.55	32.4
Approach		333	3.0	0.297	8.6	LOS A	1.0	24.9	0.55	0.56	31.9
East: County G											
6	T1	435	3.0	0.228	6.0	LOS A	0.7	18.9	0.38	0.33	34.7
16	R2	560	3.0	0.344	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		995	3.0	0.344	2.7	LOS A	0.7	18.9	0.17	0.14	36.0
West: County G											
5	L2	239	3.0	0.396	6.7	LOS A	0.0	0.0	0.00	0.00	36.7
2	T1	750	3.0	0.396	6.7	LOS A	0.0	0.0	0.00	0.00	37.6
Approach		989	3.0	0.396	6.7	LOS A	0.0	0.0	0.00	0.00	37.4
All Vehicles		2316	3.0	0.396	5.2	LOS A	1.0	24.9	0.15	0.14	35.9

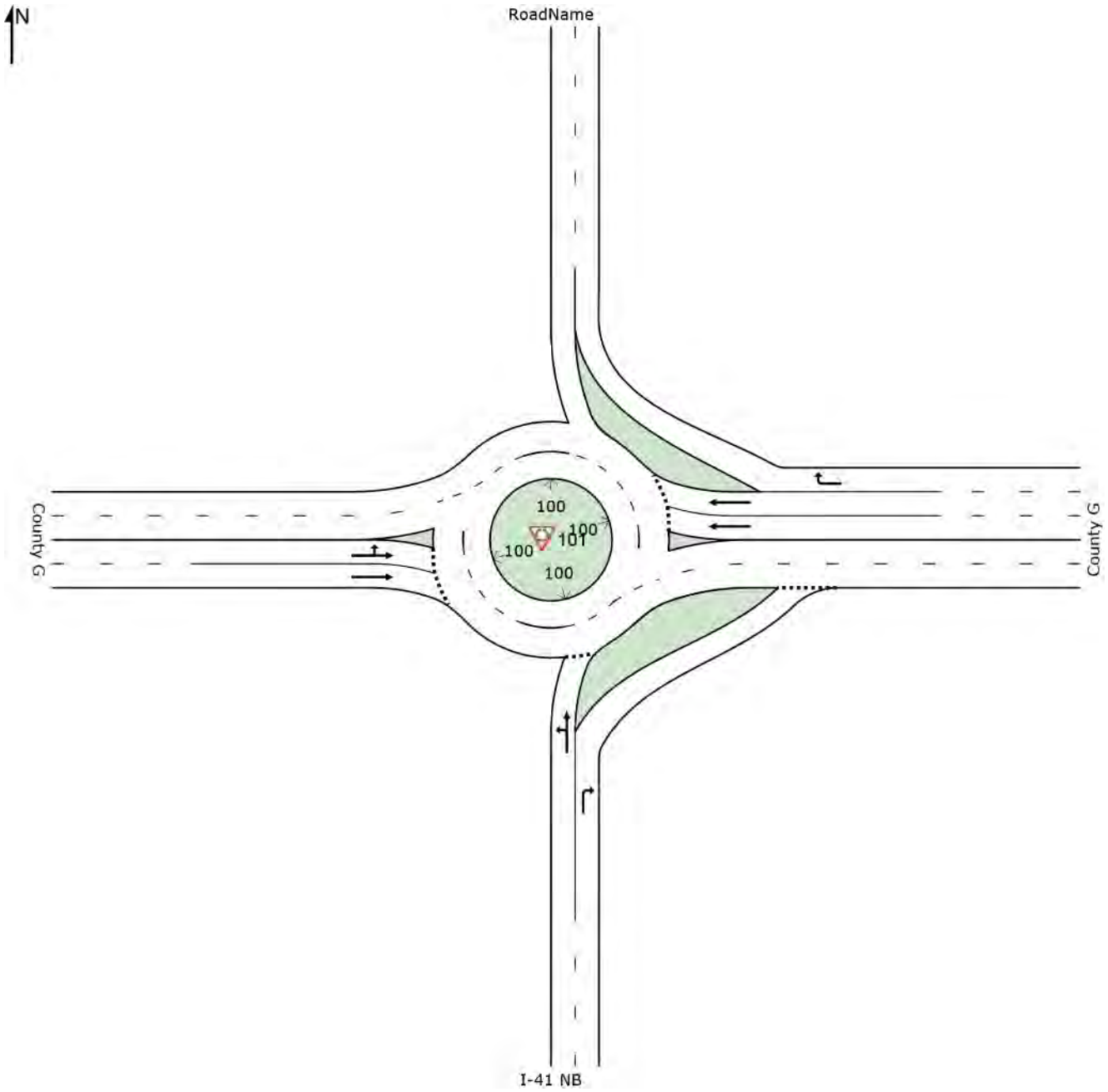
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LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
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Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2B PM G_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2B PM G_I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	67	3.0	0.155	10.4	LOS B	0.4	10.9	0.68	0.68	30.4
8	T1	1	3.0	0.155	10.4	LOS B	0.4	10.9	0.68	0.68	30.3
18	R2	236	3.0	0.358	10.3	LOS B	1.3	34.6	0.59	0.64	31.7
Approach		304	3.0	0.358	10.3	LOS B	1.3	34.6	0.61	0.65	31.4
East: County G											
6	T1	483	3.0	0.303	8.0	LOS A	1.0	25.7	0.51	0.51	33.7
16	R2	770	3.0	0.473	0.0	LOS A	0.0	0.0	0.00	0.00	37.0
Approach		1253	3.0	0.473	3.1	LOS A	1.0	25.7	0.20	0.20	35.7
West: County G											
5	L2	534	3.0	0.558	9.2	LOS A	0.0	0.0	0.00	0.00	35.8
2	T1	860	3.0	0.558	9.2	LOS A	0.0	0.0	0.00	0.00	37.7
Approach		1393	3.0	0.558	9.2	LOS A	0.0	0.0	0.00	0.00	36.9
All Vehicles		2951	3.0	0.558	6.7	LOS A	1.3	34.6	0.15	0.15	35.8

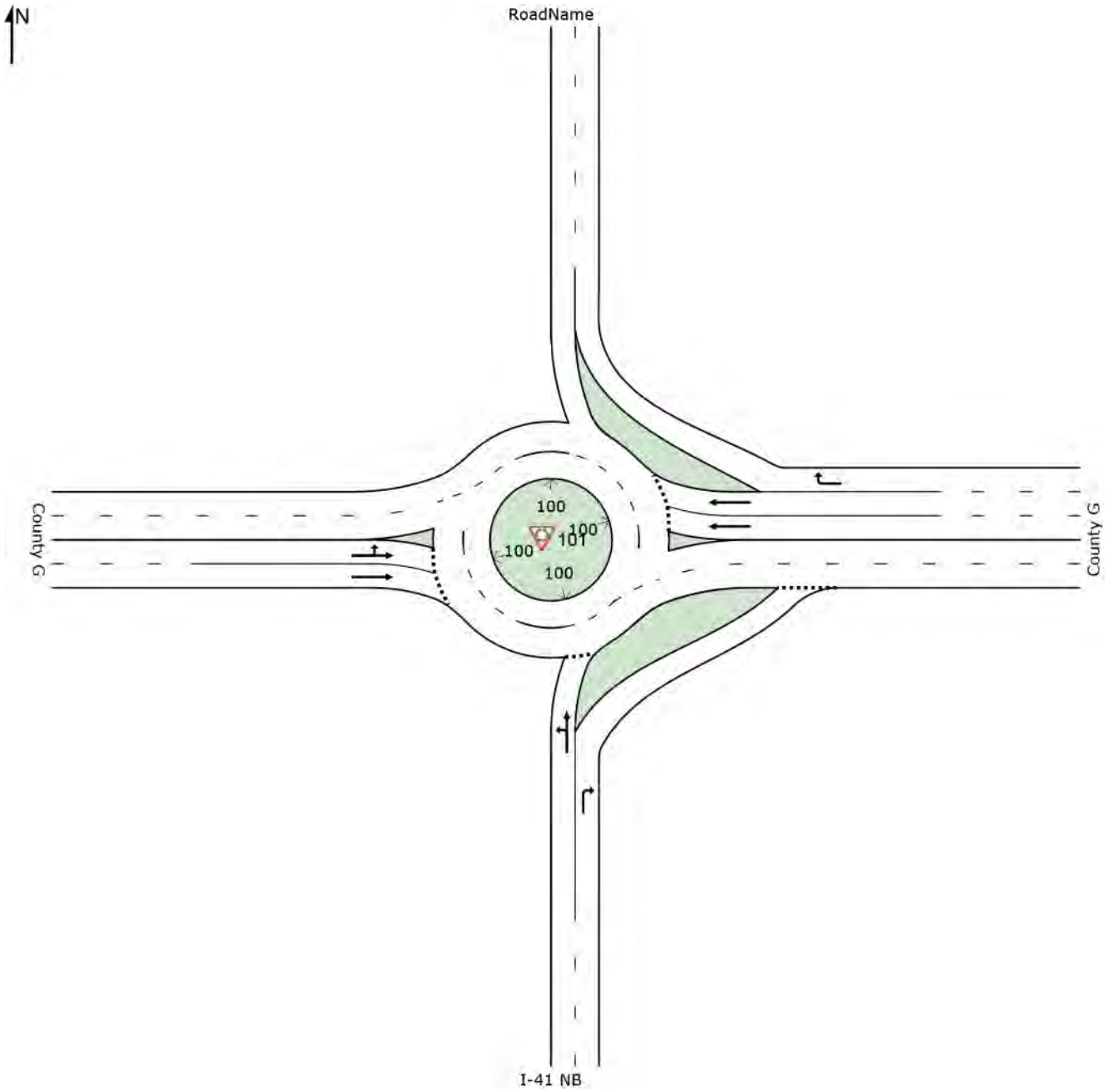
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Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 3 AM G_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 AM G_I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	120	3.0	0.202	8.5	LOS A	0.6	15.1	0.57	0.57	31.1
8	T1	1	3.0	0.202	8.5	LOS A	0.6	15.1	0.57	0.57	31.1
18	R2	272	3.0	0.383	10.1	LOS B	1.6	39.7	0.58	0.64	31.7
Approach		392	3.0	0.383	9.6	LOS A	1.6	39.7	0.58	0.62	31.5
East: County G											
6	T1	467	3.0	0.243	6.1	LOS A	0.8	20.5	0.38	0.33	34.7
16	R2	571	3.0	0.351	0.0	LOS A	0.0	0.0	0.00	0.00	37.1
Approach		1038	3.0	0.351	2.8	LOS A	0.8	20.5	0.17	0.15	35.9
West: County G											
5	L2	228	3.0	0.396	6.7	LOS A	0.0	0.0	0.00	0.00	36.8
2	T1	761	3.0	0.396	6.7	LOS A	0.0	0.0	0.00	0.00	37.7
Approach		989	3.0	0.396	6.7	LOS A	0.0	0.0	0.00	0.00	37.4
All Vehicles		2420	3.0	0.396	5.5	LOS A	1.6	39.7	0.17	0.16	35.7

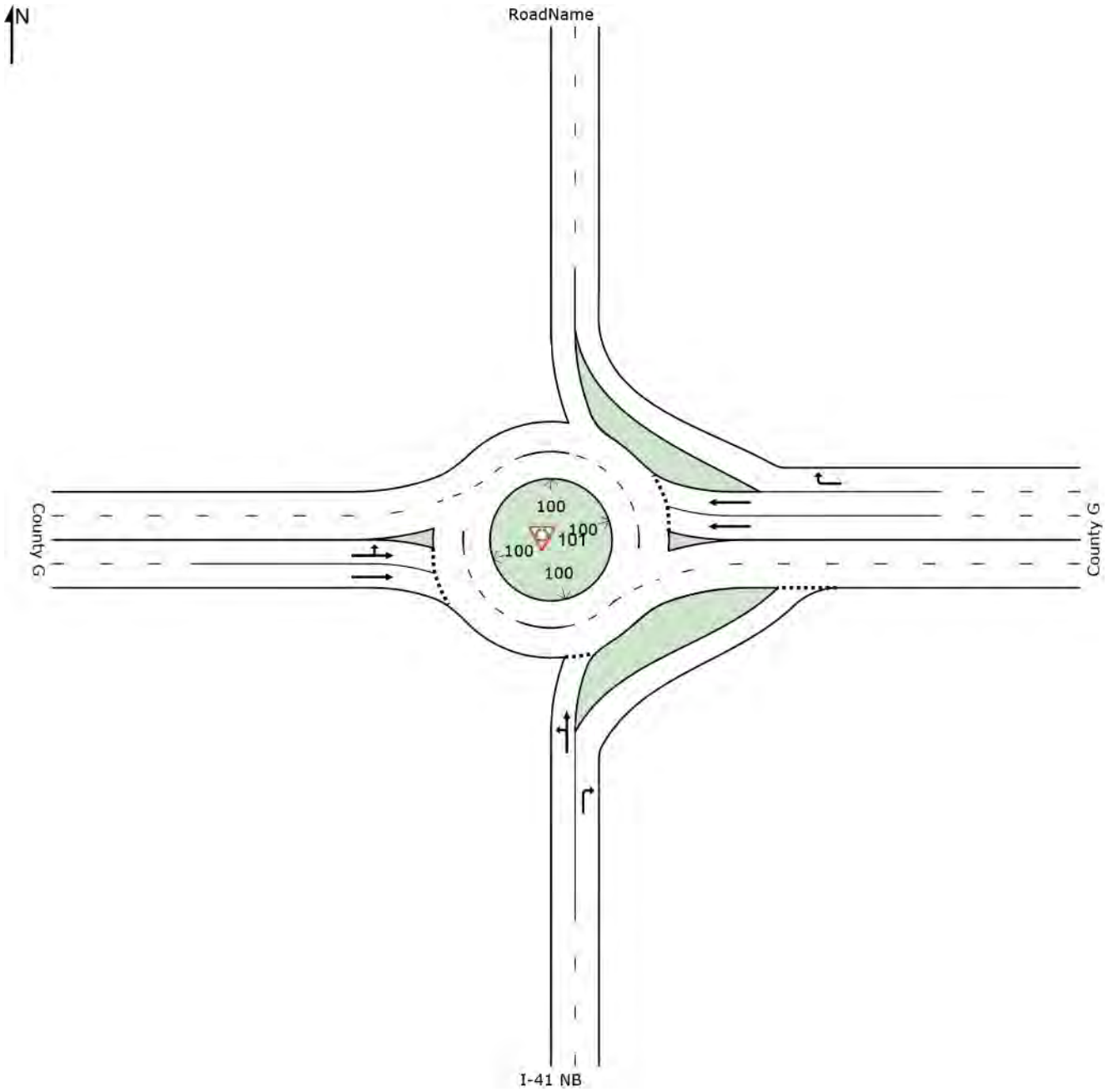
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Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 3 PM G_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 3 PM G_I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	67	3.0	0.157	10.6	LOS B	0.4	11.1	0.69	0.69	30.3
8	T1	1	3.0	0.157	10.6	LOS B	0.4	11.1	0.69	0.69	30.2
18	R2	287	3.0	0.483	14.0	LOS B	2.2	55.8	0.68	0.79	30.1
Approach		355	3.0	0.483	13.3	LOS B	2.2	55.8	0.68	0.77	30.1
East: County G											
6	T1	534	3.0	0.306	7.5	LOS A	1.0	26.7	0.47	0.45	34.0
16	R2	904	3.0	0.556	0.0	LOS A	0.0	0.0	0.00	0.00	37.0
Approach		1438	3.0	0.556	2.9	LOS A	1.0	26.7	0.17	0.17	35.8
West: County G											
5	L2	416	3.0	0.567	9.4	LOS A	0.0	0.0	0.00	0.00	36.3
2	T1	1000	3.0	0.567	9.4	LOS A	0.0	0.0	0.00	0.00	37.6
Approach		1416	3.0	0.567	9.4	LOS A	0.0	0.0	0.00	0.00	37.2
All Vehicles		3209	3.0	0.567	6.9	LOS A	2.2	55.8	0.15	0.16	35.7

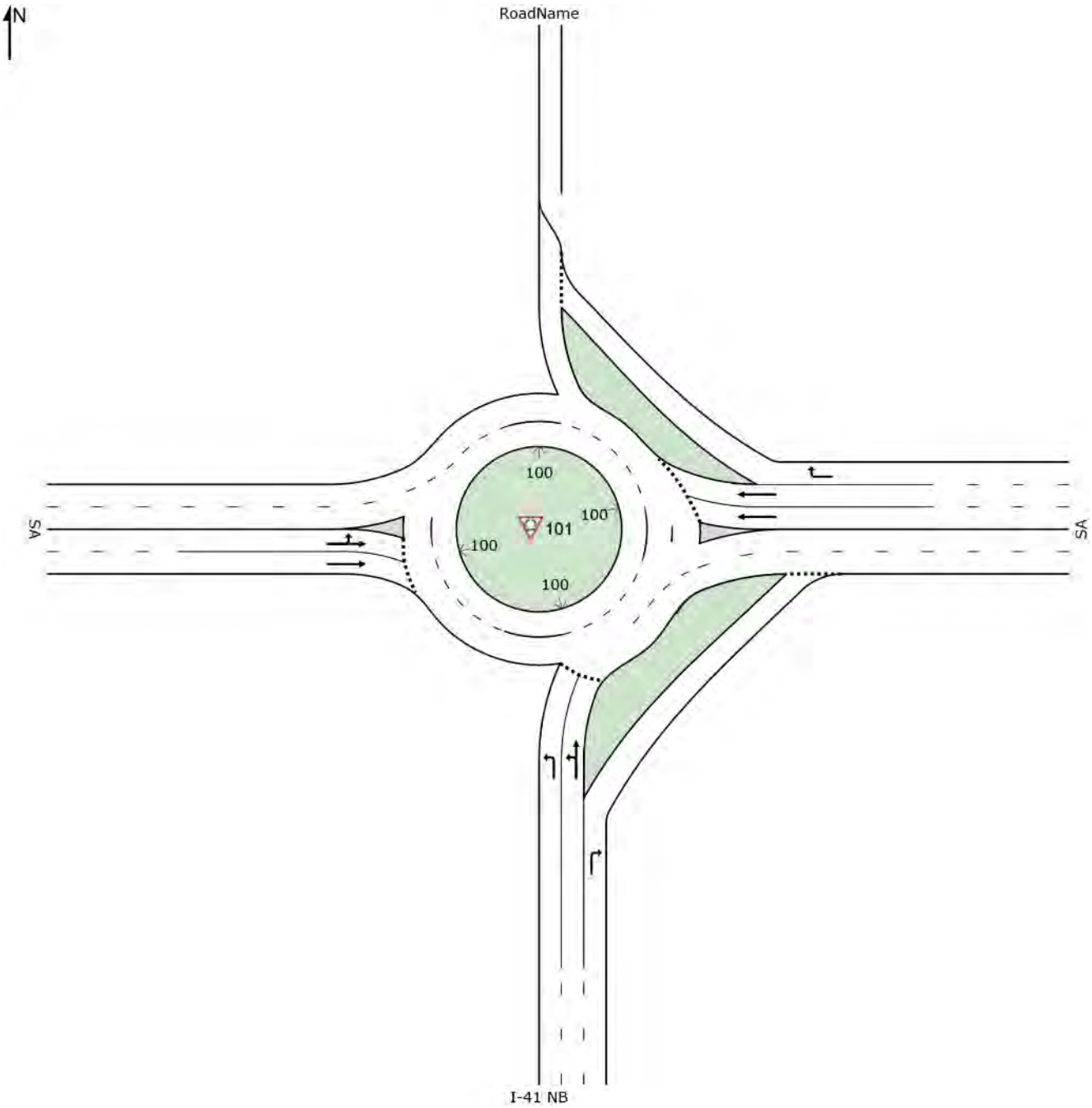
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Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2A AM SA_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2A AM SA_I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	380	3.0	0.279	8.7	LOS A	0.9	22.6	0.55	0.55	31.1
8	T1	1	3.0	0.279	8.7	LOS A	0.9	22.6	0.55	0.55	31.0
18	R2	560	3.0	0.699	17.8	LOS C	6.6	169.1	0.73	1.00	28.5
Approach		941	3.0	0.699	14.1	LOS B	6.6	169.1	0.65	0.82	29.5
East: SA											
6	T1	332	3.0	0.206	6.7	LOS A	0.6	16.3	0.47	0.47	34.4
16	R2	255	3.0	0.240	5.6	LOS A	0.8	20.7	0.30	0.21	33.7
Approach		587	3.0	0.240	6.2	LOS A	0.8	20.7	0.39	0.36	34.1
West: SA											
5	L2	212	3.0	0.324	5.9	LOS A	0.0	0.0	0.00	0.00	36.5
2	T1	598	3.0	0.324	5.9	LOS A	0.0	0.0	0.00	0.00	37.6
Approach		810	3.0	0.324	5.9	LOS A	0.0	0.0	0.00	0.00	37.3
All Vehicles		2338	3.0	0.699	9.3	LOS A	6.6	169.1	0.36	0.42	33.0

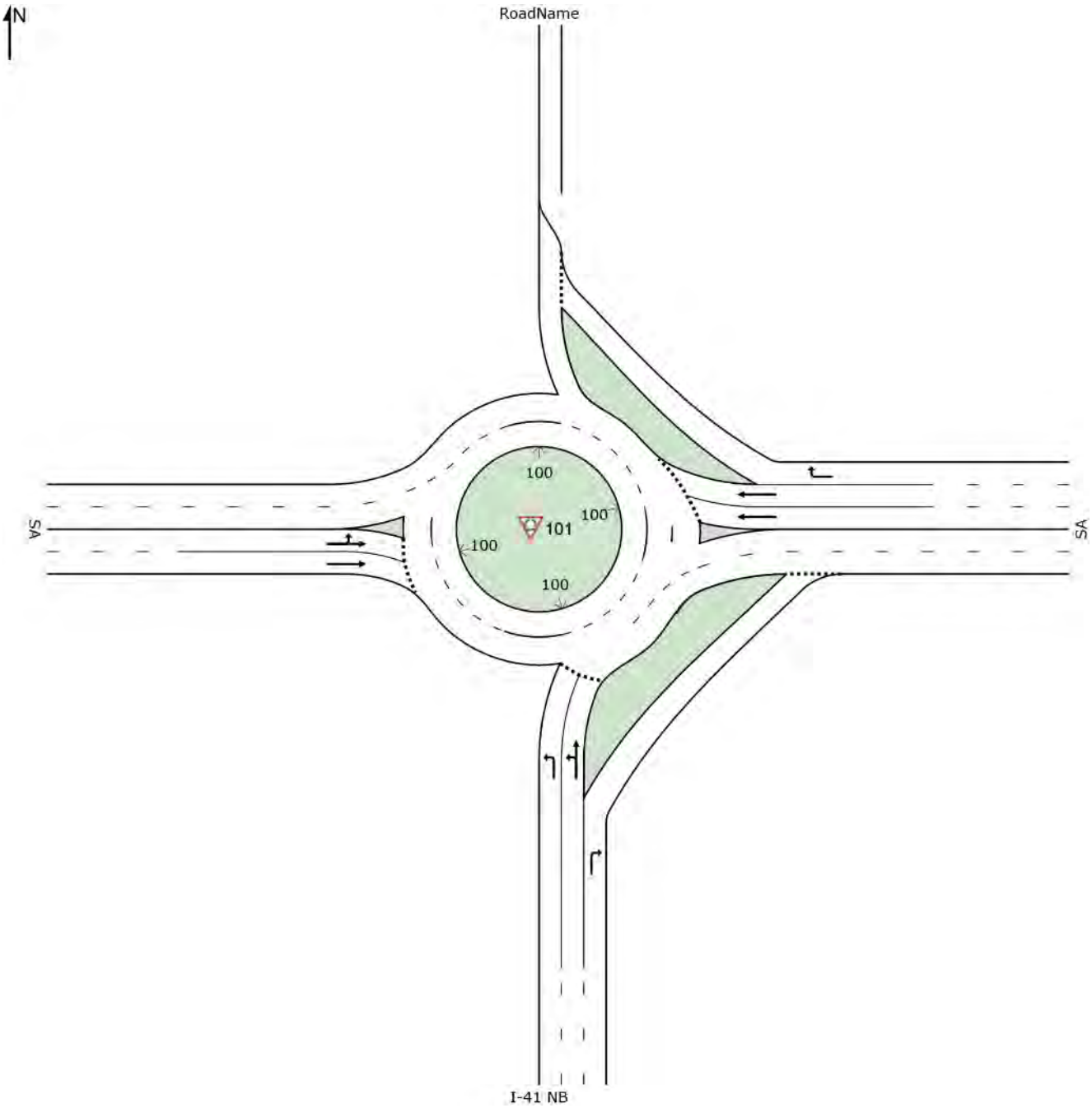
Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
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Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2A PM SA_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2A PM SA_I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	309	3.0	0.193	6.5	LOS A	0.6	15.1	0.46	0.46	32.0
8	T1	1	3.0	0.193	6.5	LOS A	0.6	15.1	0.46	0.46	31.9
18	R2	461	3.0	0.490	9.9	LOS A	2.8	72.0	0.51	0.55	31.7
Approach		771	3.0	0.490	8.5	LOS A	2.8	72.0	0.49	0.52	31.8
East: SA											
6	T1	933	3.0	0.551	12.1	LOS B	3.7	94.4	0.60	0.75	31.8
16	R2	281	3.0	0.264	5.9	LOS A	0.9	23.3	0.31	0.22	33.6
Approach		1213	3.0	0.551	10.7	LOS B	3.7	94.4	0.53	0.63	32.2
West: SA											
5	L2	213	3.0	0.238	5.0	LOS A	0.0	0.0	0.00	0.00	35.9
2	T1	382	3.0	0.238	5.0	LOS A	0.0	0.0	0.00	0.00	37.7
Approach		596	3.0	0.238	5.0	LOS A	0.0	0.0	0.00	0.00	37.0
All Vehicles		2580	3.0	0.551	8.7	LOS A	3.7	94.4	0.40	0.45	33.1

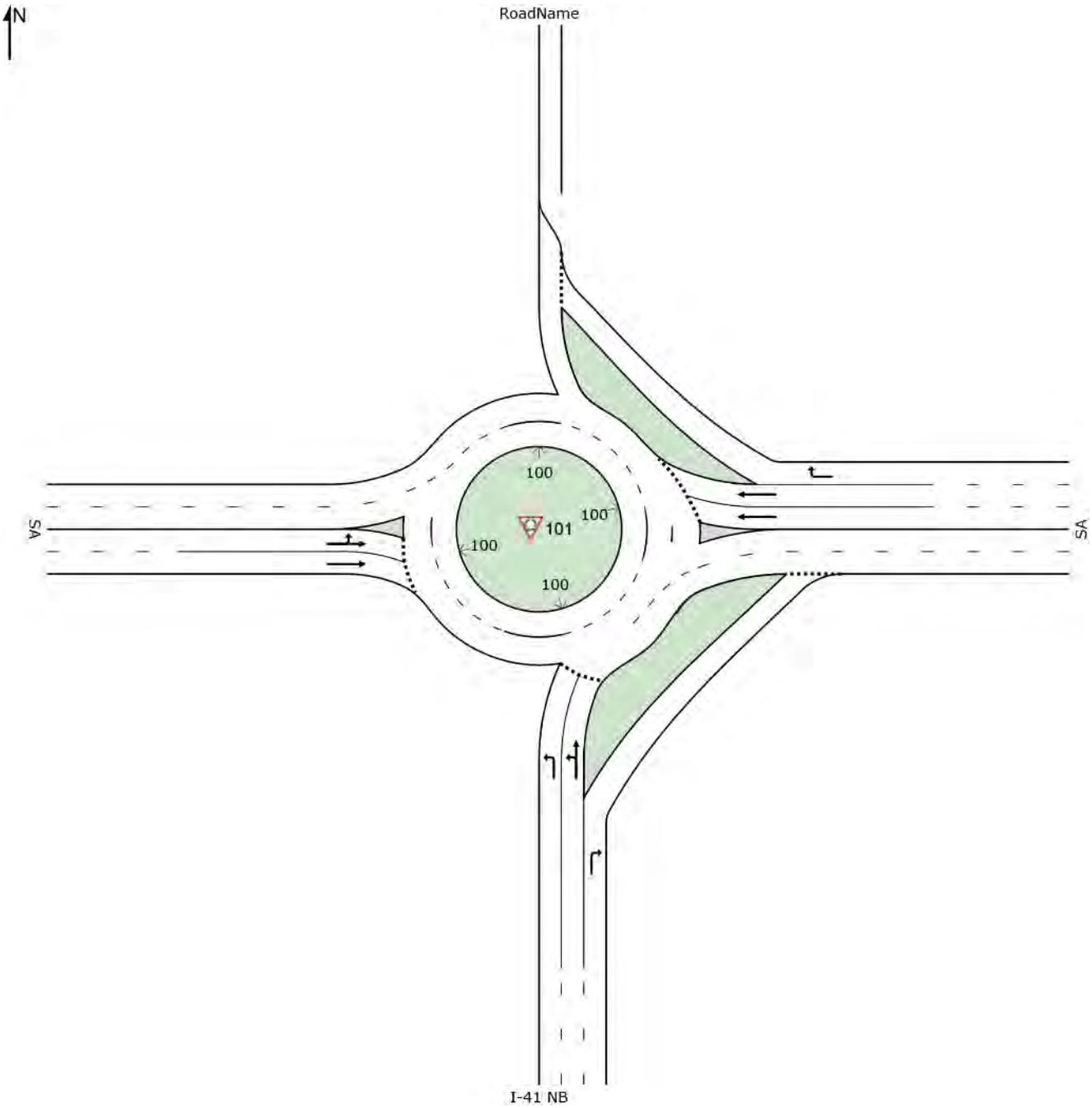
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Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2B AM SA_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

Site: 101 [Alt 2B AM SA_I-41 NB]

New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	386	3.0	0.239	7.0	LOS A	0.8	19.4	0.48	0.48	31.8
8	T1	1	3.0	0.239	7.0	LOS A	0.8	19.4	0.48	0.48	31.7
18	R2	571	3.0	0.650	14.6	LOS B	6.0	154.4	0.66	0.88	29.7
Approach		958	3.0	0.650	11.5	LOS B	6.0	154.4	0.58	0.72	30.5
East: SA											
6	T1	391	3.0	0.227	6.5	LOS A	0.7	18.4	0.44	0.42	34.5
16	R2	98	3.0	0.085	3.8	LOS A	0.2	6.3	0.18	0.09	34.7
Approach		489	3.0	0.227	6.0	LOS A	0.7	18.4	0.39	0.35	34.5
West: SA											
5	L2	109	3.0	0.233	4.9	LOS A	0.0	0.0	0.00	0.00	37.0
2	T1	473	3.0	0.233	4.9	LOS A	0.0	0.0	0.00	0.00	37.7
Approach		582	3.0	0.233	4.9	LOS A	0.0	0.0	0.00	0.00	37.6
All Vehicles		2028	3.0	0.650	8.3	LOS A	6.0	154.4	0.37	0.42	33.2

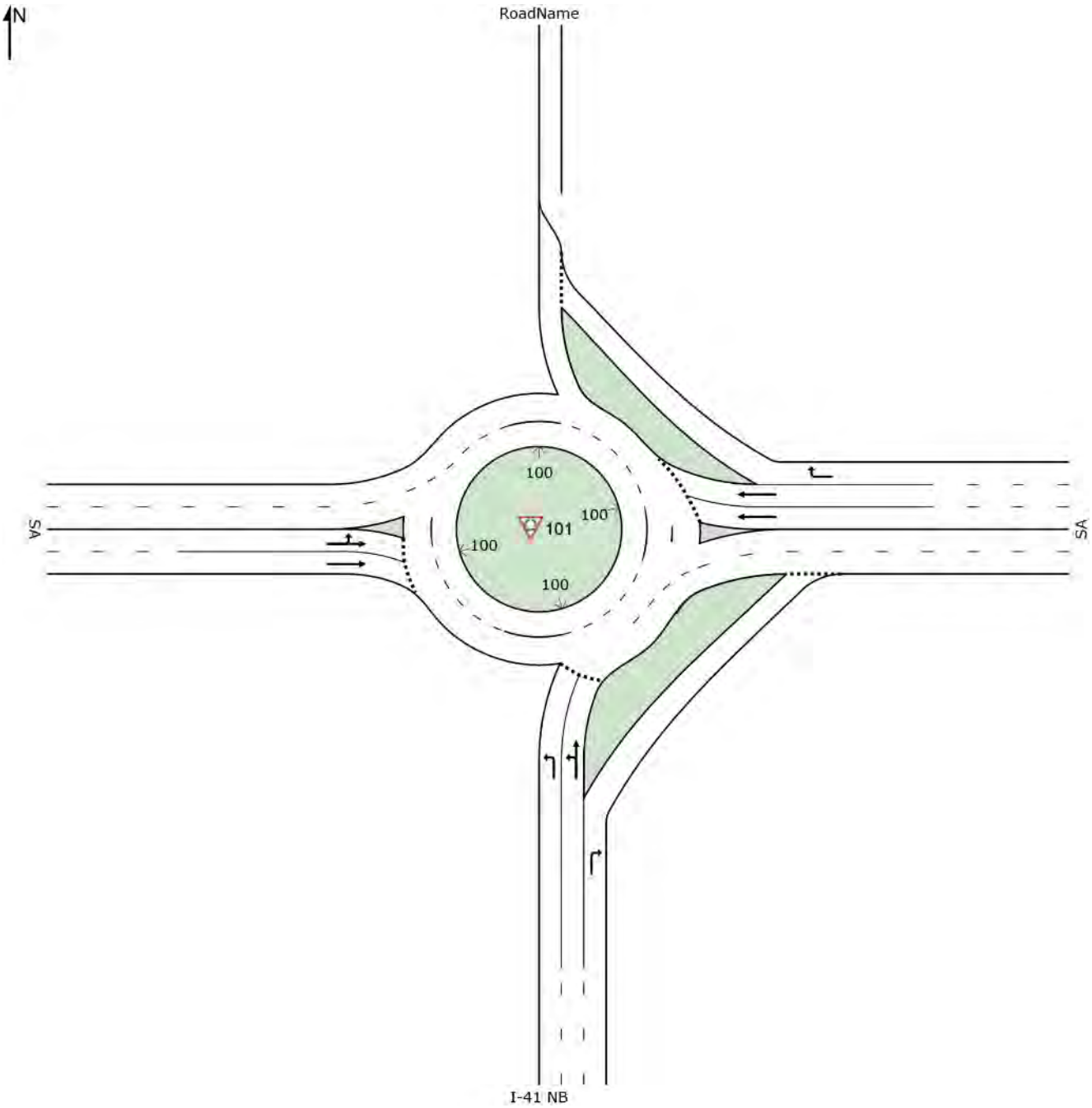
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Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

Site: 101 [Alt 2B PM SA_I-41 NB]

New Site
Roundabout



MOVEMENT SUMMARY

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New Site
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: I-41 NB											
3	L2	309	3.0	0.166	5.4	LOS A	0.5	13.0	0.38	0.32	32.5
8	T1	1	3.0	0.166	5.4	LOS A	0.5	13.0	0.38	0.32	32.4
18	R2	455	3.0	0.444	8.5	LOS A	1.9	47.4	0.42	0.34	32.3
Approach		765	3.0	0.444	7.3	LOS A	1.9	47.4	0.40	0.33	32.4
East: SA											
6	T1	961	3.0	0.531	11.1	LOS B	3.5	89.9	0.56	0.67	32.3
16	R2	101	3.0	0.089	3.9	LOS A	0.3	6.7	0.19	0.10	34.6
Approach		1062	3.0	0.531	10.4	LOS B	3.5	89.9	0.52	0.62	32.5
West: SA											
5	L2	124	3.0	0.155	4.2	LOS A	0.0	0.0	0.00	0.00	36.2
2	T1	264	3.0	0.155	4.2	LOS A	0.0	0.0	0.00	0.00	37.6
Approach		388	3.0	0.155	4.2	LOS A	0.0	0.0	0.00	0.00	37.2
All Vehicles		2215	3.0	0.531	8.2	LOS A	3.5	89.9	0.39	0.41	33.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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