PROPEL INDY

Smarter Transportation. Stronger Communities.

Existing Transportation Conditions Report

Version 2.0

12/20/2024

INDIANA DEPARTMENT OF TRANSPORTATION INDOT

NextLevel ROADS

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1 Introduction

The Indiana Department of Transportation (INDOT) has begun ProPEL Indy, a Planning and Environment Linkages (PEL) study of I-65 and I-70 within I-465 in Indianapolis, Indiana. Analysis and planning activities will be conducted in coordination with resource agencies, stakeholders, and the public. Transportation planning documents from the PEL study will shape and inform subsequent project-specific environmental reviews conducted in accordance with the National Environmental Policy Act (NEPA).

ProPEL Indy is a unique opportunity for Indianapolis residents to envision the future of the urban interstate system. The goal of ProPEL Indy is to identify transportation needs and community goals along I-65 and I-70 inside I-465. This process will inform the next 20 years of investment as INDOT identifies ways to modernize these interstates and improve the region's overall mobility, equity, economic opportunity, and quality of life. ProPEL Indy will develop a set of alternatives to be considered that meet transportation needs and community goals. This will guide the long-term vision for investment in the interstates.

1.1 Report Purpose

The purpose of the *ProPEL Indy Study Existing Transportation Conditions Report (Existing Conditions Report)* is to document existing transportation conditions in the study corridors. In a subsequent step, these conditions will then be used along with public input, to develop the purpose and need for the study. The report will be used to inform the public and stakeholders and will support the development and screening of alternatives. The existing transportation conditions also establishes the No-Build conditions, which will be used as a baseline to which alternatives will be compared.

1.2 Methodology

Development of the *Existing Conditions Report* consisted of collecting existing roadway data within the study area, focusing on the following areas:

- Assessment of existing infrastructure and current plans for improvement (Section 2).
- Community resources serviced by the existing infrastructure (Section3).
- Safety analysis of historic crash data (Section 4).
- Forecasting of future traffic volumes (Section 5).
- Operational analysis of existing (2023) conditions (Section 6).
- Operational analysis of future (2050) No-Build conditions (Section 7).
- A comparison of public input to safety and operational analyses (Section 8).

Information for this study was collected through on-line database searches, imagery analysis, and from INDOT to identify social, economic, and physical infrastructure constraints within the study area. These sources include:

- Asset data for pavement and bridges provided by INDOT.
- Crash data from the Automated Reporting Exchange System (ARIES) provided by INDOT.
- Traffic counts provided by INDOT.
- Google maps (http://maps.google.com).
- Desktop geographic information analysis (GIS).
- Limited field reconnaissance of the study area.
- Limited coordination with local planning agencies.

The GIS data utilized was derived from various agencies affiliated with the State of Indiana, the Indiana Geographic Information Office (IGIO), the City of Indianapolis & Marion County, and the US Department of Homeland Security HIFLD Geoplatform, each of which collect data from a myriad of sources.

1.3 Study Area

The ProPEL Indy study area include approximately 11 miles of I-65, 14 miles of I-70, and 1 mile where I-65 and I-70 overlap. The study area is broken into four "spokes" as described below and depicted in **Figure 1**. A study area of 0.5 mile from the corridor centerline in all directions was utilized to capture physical infrastructure and other resource constraints.

65 Spoke – From the I-465/I-65 interchange on the northwest side to the 21st Street interchange.

65/70 Downtown Spoke – I-65 from the 21st Street interchange south to Alabama Street (west end of North Split project), I-65/I-70 from Washington Street (south end of INDOT's North Split project) south to the South Split interchange, and I-70 from just west of West Street interchange east to the South Split interchange.

70 West (W) Spoke – From the I-465/I-70 interchange on the west side to just west of the West Street interchange.

70 East (E) Spoke – From just west of the Keystone Avenue/Rural Street interchange (east end of North Split project) to the I-465/I-70 interchange on the east side.

The study limits extend slightly beyond I-465 and the I-65/I-70 South Split interchange to consider the potential influence of those system interchanges. Two active, federally funded projects, I-65/I-70 North Split and I-65 Safety and Efficiency, are largely excluded from the study limits. ProPEL Indy's study area does overlap with the I-65 Safety and Efficiency project on the southeast side of Indianapolis. The overlap with I-65 Safety and Efficiency Project extends from north of Fletcher Ave on I-65/I-70 to the

South Split interchange ending south of Morris Street along I-65. The remainder of the I-65 Safety and Efficiency project area, which extends south on I-65 to I-465, is excluded from the study limits.

Figure 1. ProPEL Indy Study Area

1.4 Roadway Characteristics

Roadway characteristics and feature inventory were collected for the study area. A roadway's unique characteristics impact traffic operations and design. Characteristics include lane miles, interchange densities, and grade separated and local road crossings. The baseline data collected may be used in the alternatives development stages of this study to help assess how conditions may be improved.

1.4.1 Interstate Miles

Table 1 depicts center line miles, lane miles, and elevated structure miles evaluated by spoke for the study corridor. Centerline miles are used to measure the total length of any given roadway segment while lane miles are used to measure the total length and lane count of a given roadway segment calculated by multiplying the centerline miles by the number of lanes (excluding roadway shoulders).

Table 1: Mileage Within Study Area

Location	Spoke				Totals
	65	70W	70E	65/70 Downtown	
Center Miles	8.86	6.91	5.58	4.25	**25.6**
Lane Miles	56.72	41.46	43.29	29.32	**170.79**

1.4.2 Interchanges

There are a total of 20 interchanges within the study area. Six of these are system interchanges, which provide connections between two or more interstates. The remaining 14 are service interchanges, which provide connections between the interstates and lower classifications of roads. **Table 2** depicts the number of interchanges in each spoke of the study corridor.

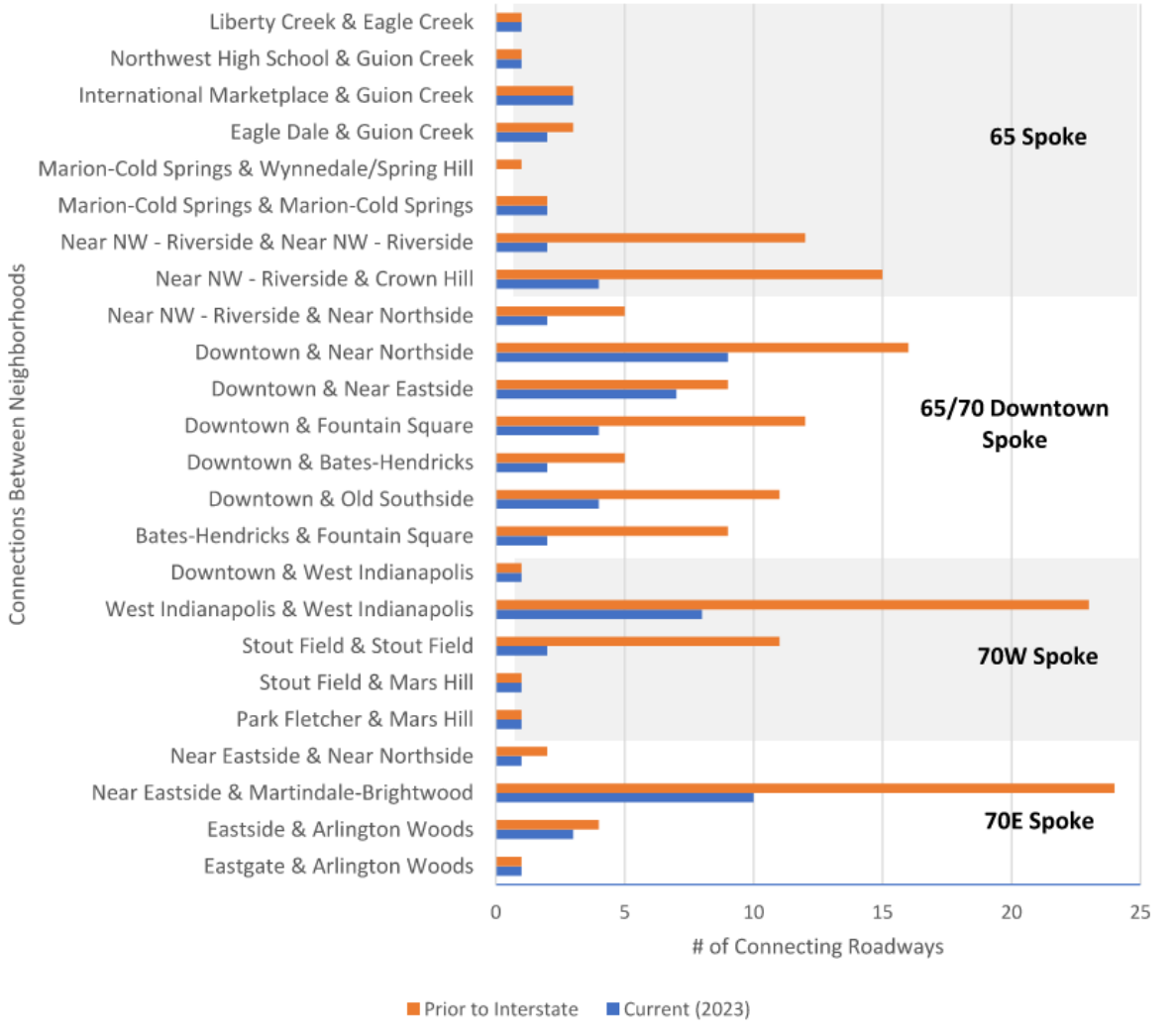
Table 2: Interstate Interchanges

Location	Spoke				Total
	65	70W	70E	65/70 Downtown	
# of Interchanges	5	4	4	7	**20**

1.4.3 Neighborhood Connections Across I-65 & I-70

Construction of I-65 and I-70 in the study area resulted in the severing of multiple roadways that connected adjacent neighborhoods. The number of connections prior to interstate construction has been determined from historical maps and aerial images. These figures are compared to the current (2023) number of neighborhood connections in **Figure 2**. This information is provided to help understand the impact interstate construction had on neighborhood connections. This data is not intended to suggest that all pre-interstate connections should be restored, but instead to illustrate which neighborhoods were most impacted. As this study advances, this data will be used to evaluate where additional or improved connections should be considered based on community input and qualitative assessments of each spoke.

Figure 2: Neighborhood Connections across I-65 & I-70



2 Infrastructure

The purpose of Section 2 is to identify existing physical infrastructure networks, resources, and constraints within the study area. The analysis of existing infrastructure conditions identifies locations along the corridor that are either deficient or not within current design criteria or policy standards. Additionally, a review of existing roadway, multi-modal facilities, utilities, and public resources identified within study area limits is provided to inform baseline conditions.

Figures 3 through **Figure 6** depict the study area boundaries, the study area along the interstates, study intersections that influence or are influenced by the interstates, and current land use within the study area boundaries.

Figure 3: Study Intersections, 65 Spoke

Figure 3: Study Intersections, 65 Spoke (cont.)

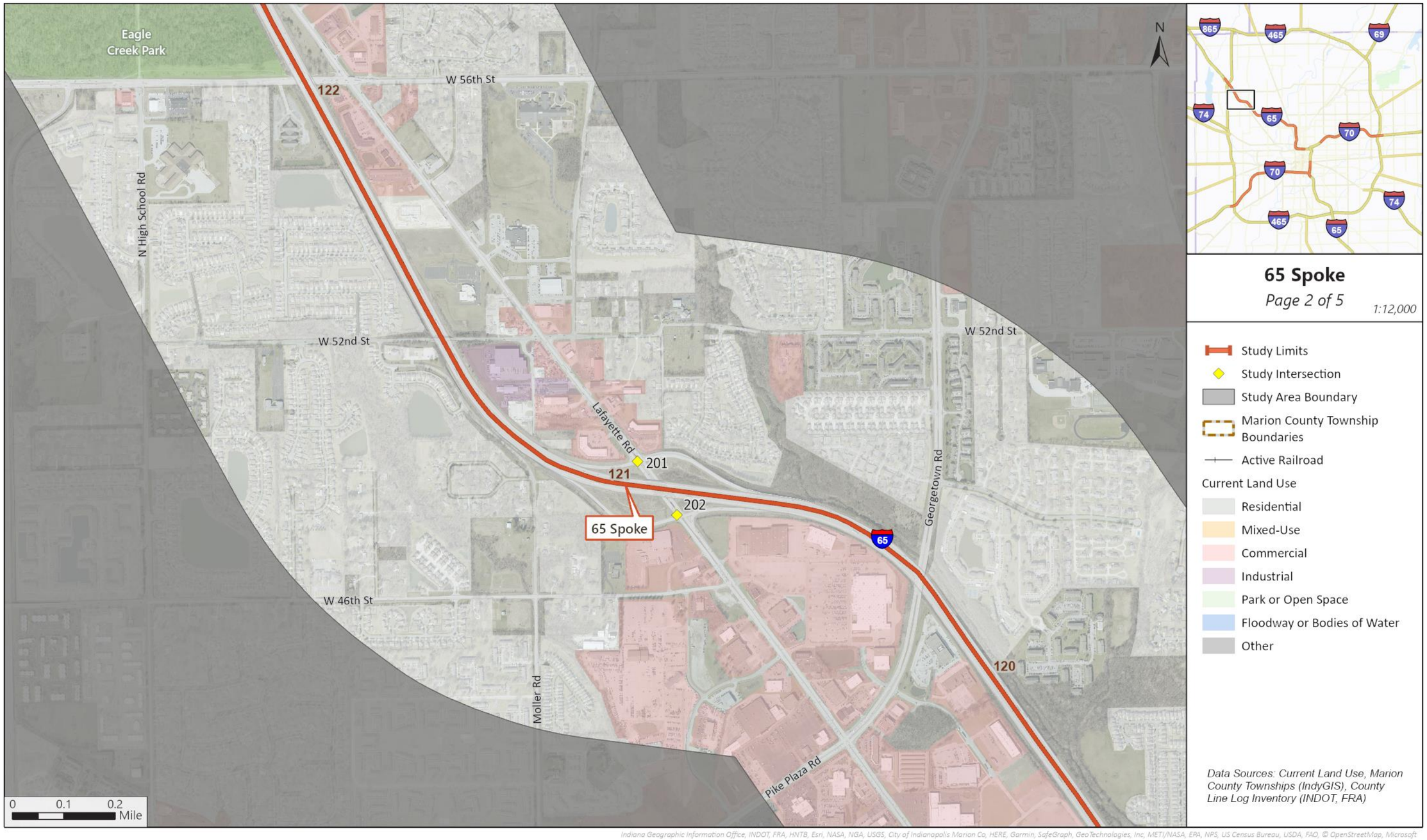


Figure 3: Study Intersections, 65 Spoke (cont.)

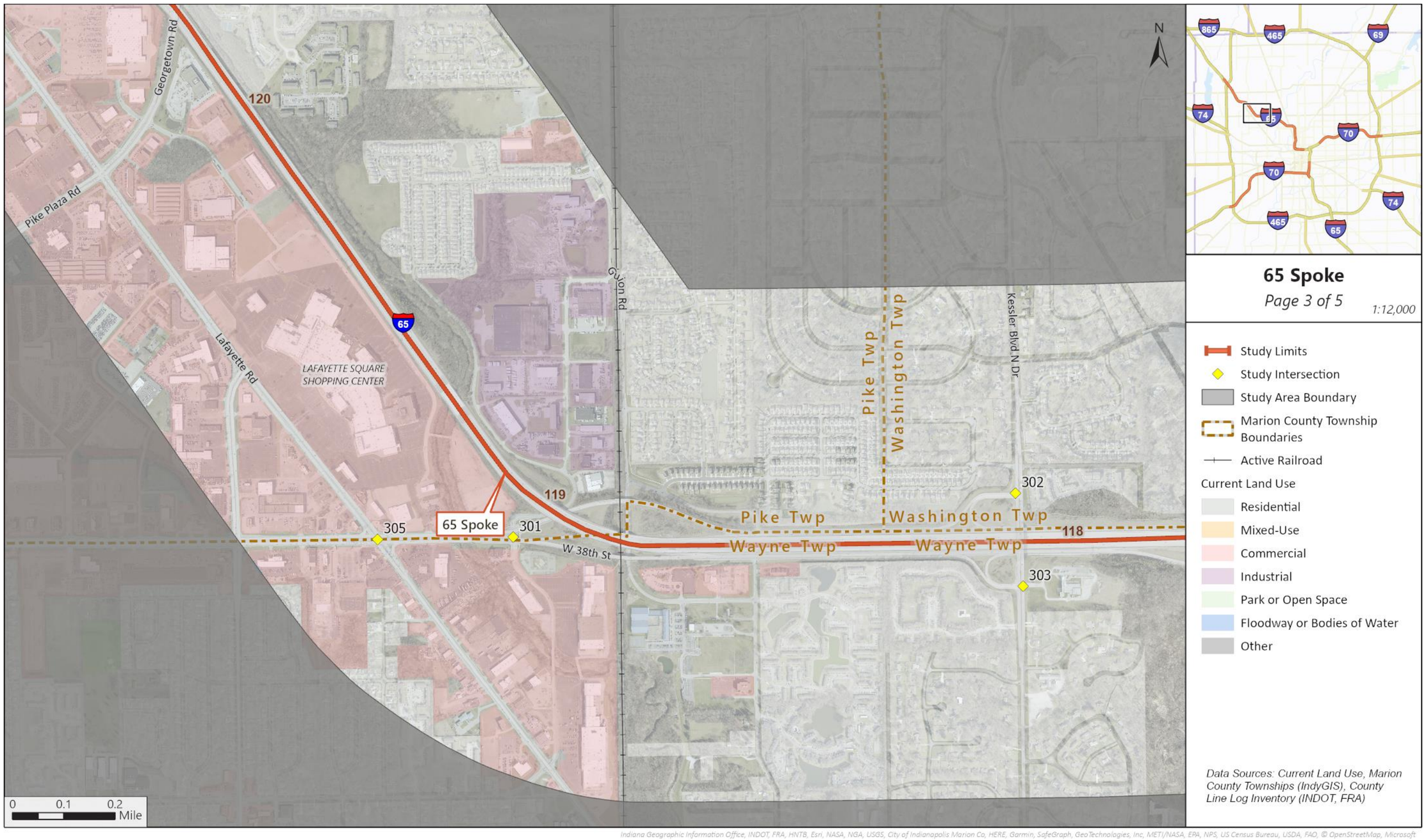


Figure 3: Study Intersections, 65 Spoke (cont.)

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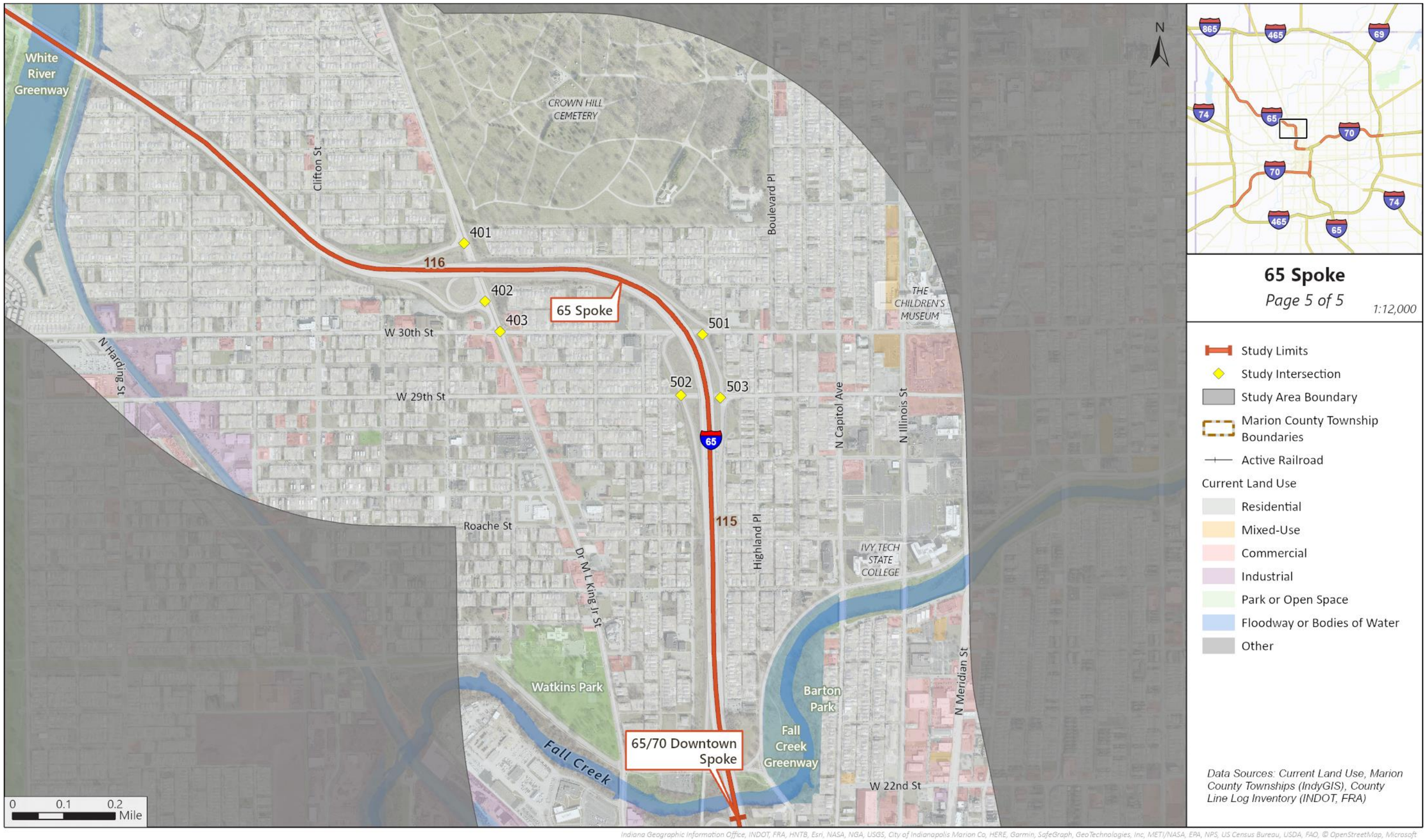


Figure 4: Study Intersections, 65/70 Downtown Spoke

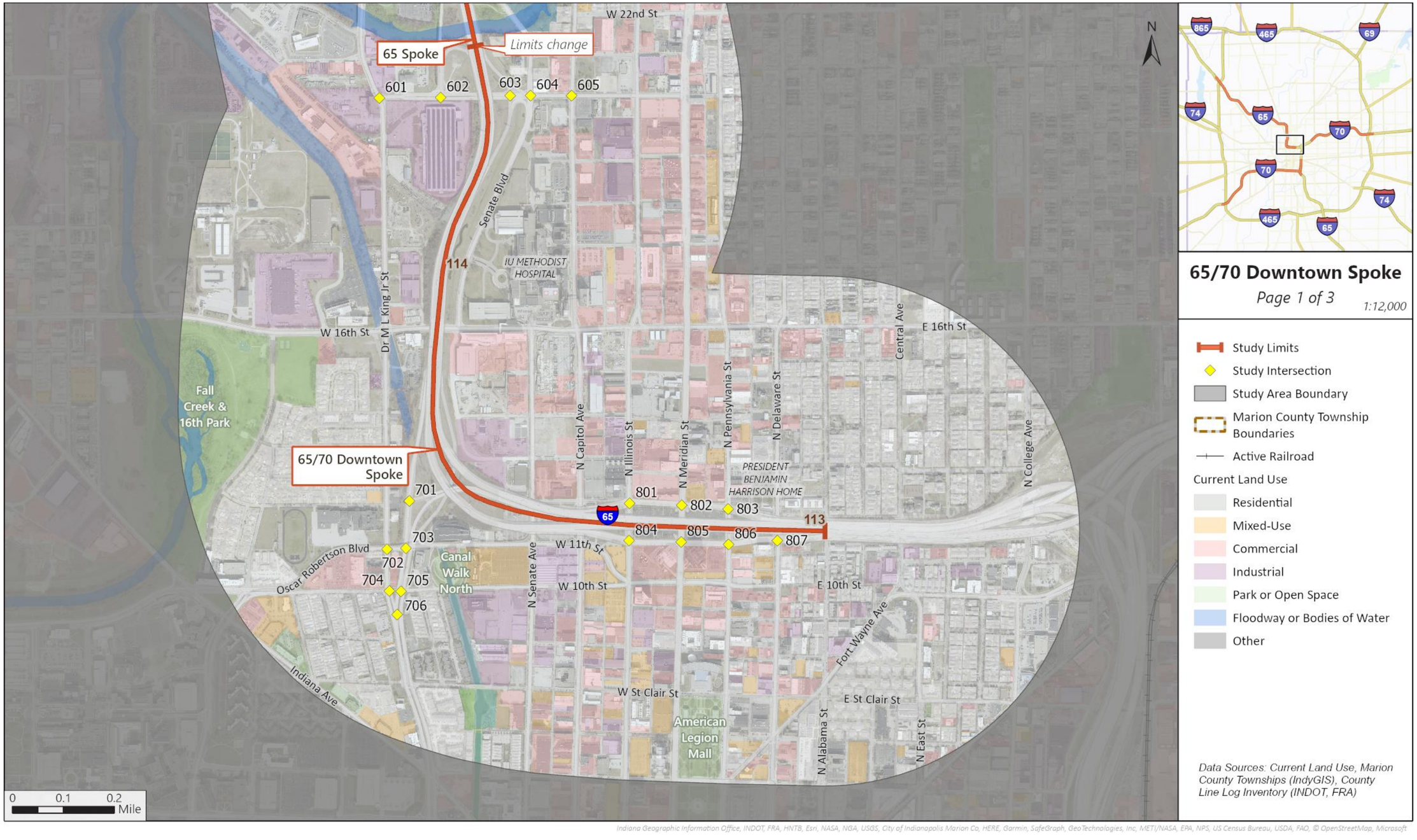


Figure 4: Study Intersections, 65/70 Downtown Spoke, (cont.)

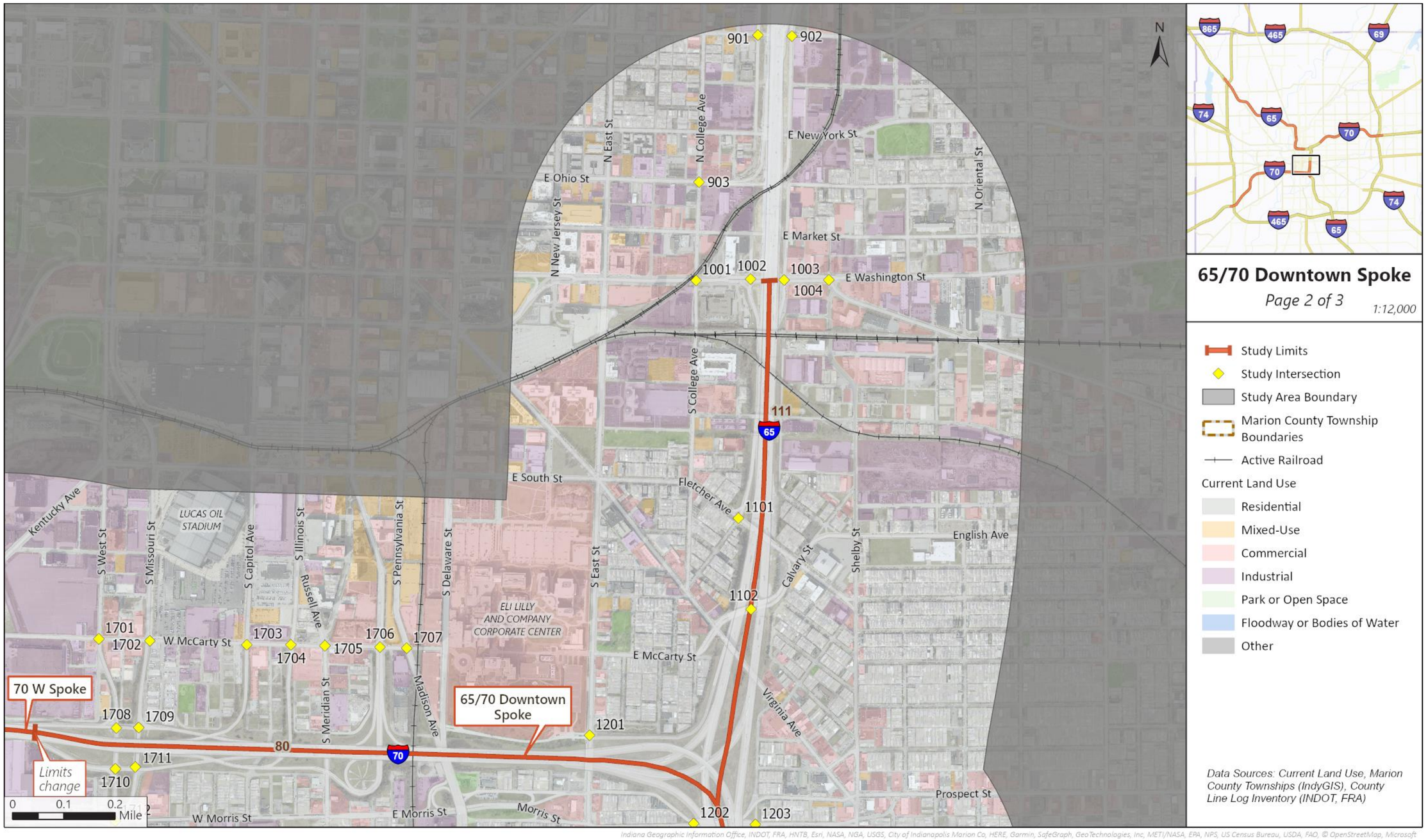


Figure 4: Study Intersections, 65/70 Downtown Spoke, (cont.)

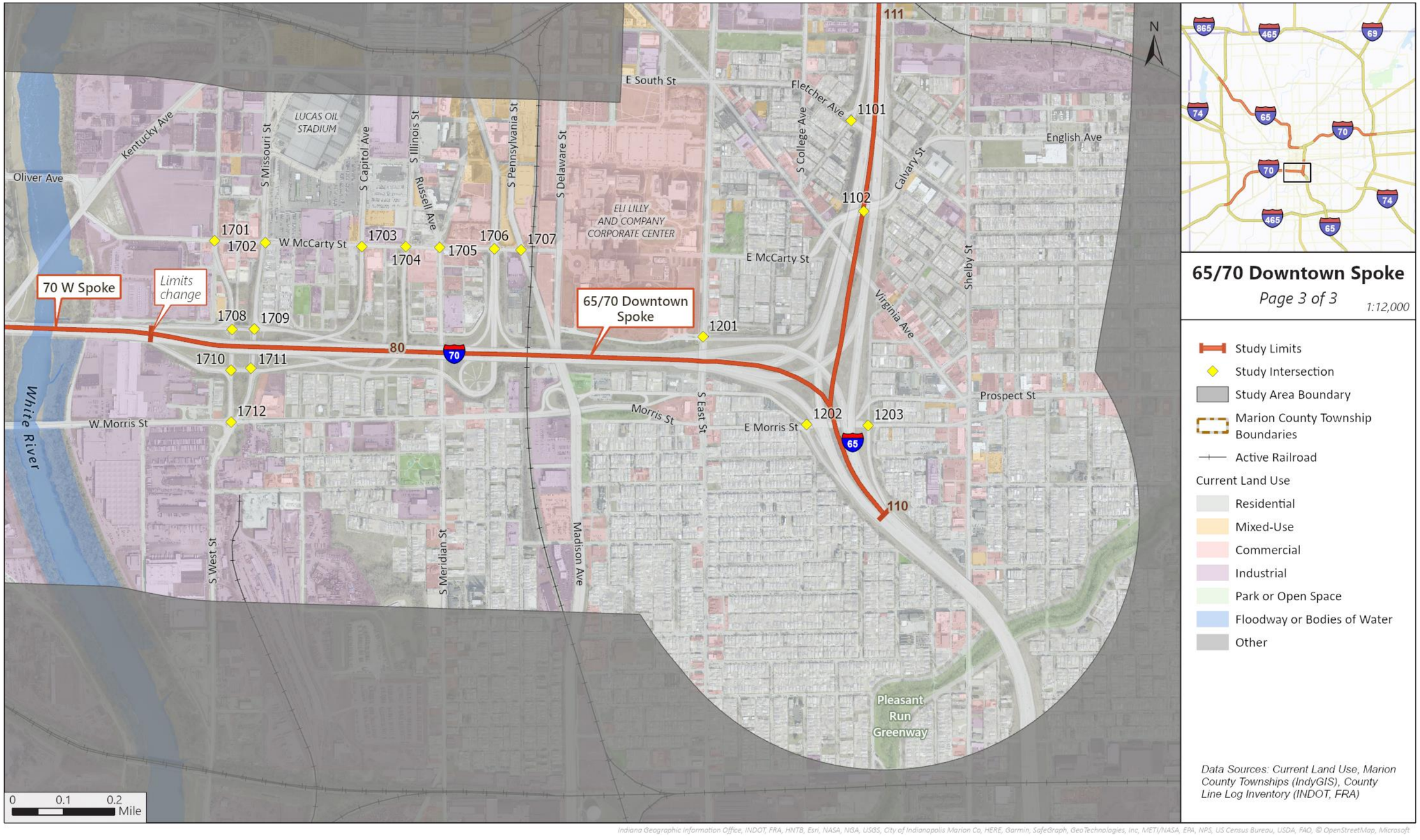


Figure 5: Study Intersections, 70W Spoke

Figure 5: Study Intersections, 70W Spoke (cont.)

Figure 5: Study Intersections, 70W Spoke (cont.)

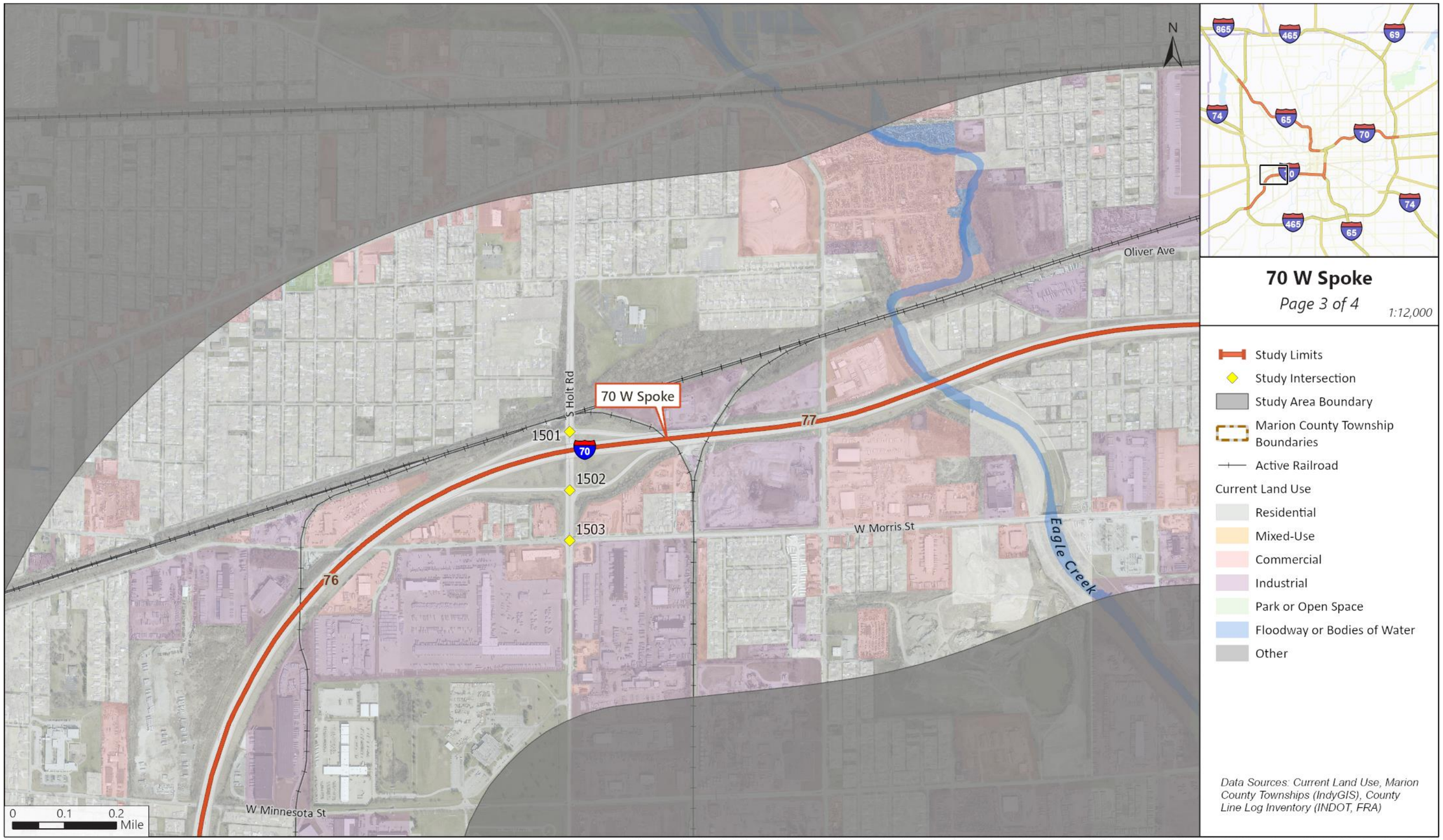


Figure 5: Study Intersections, 70W Spoke (cont.)

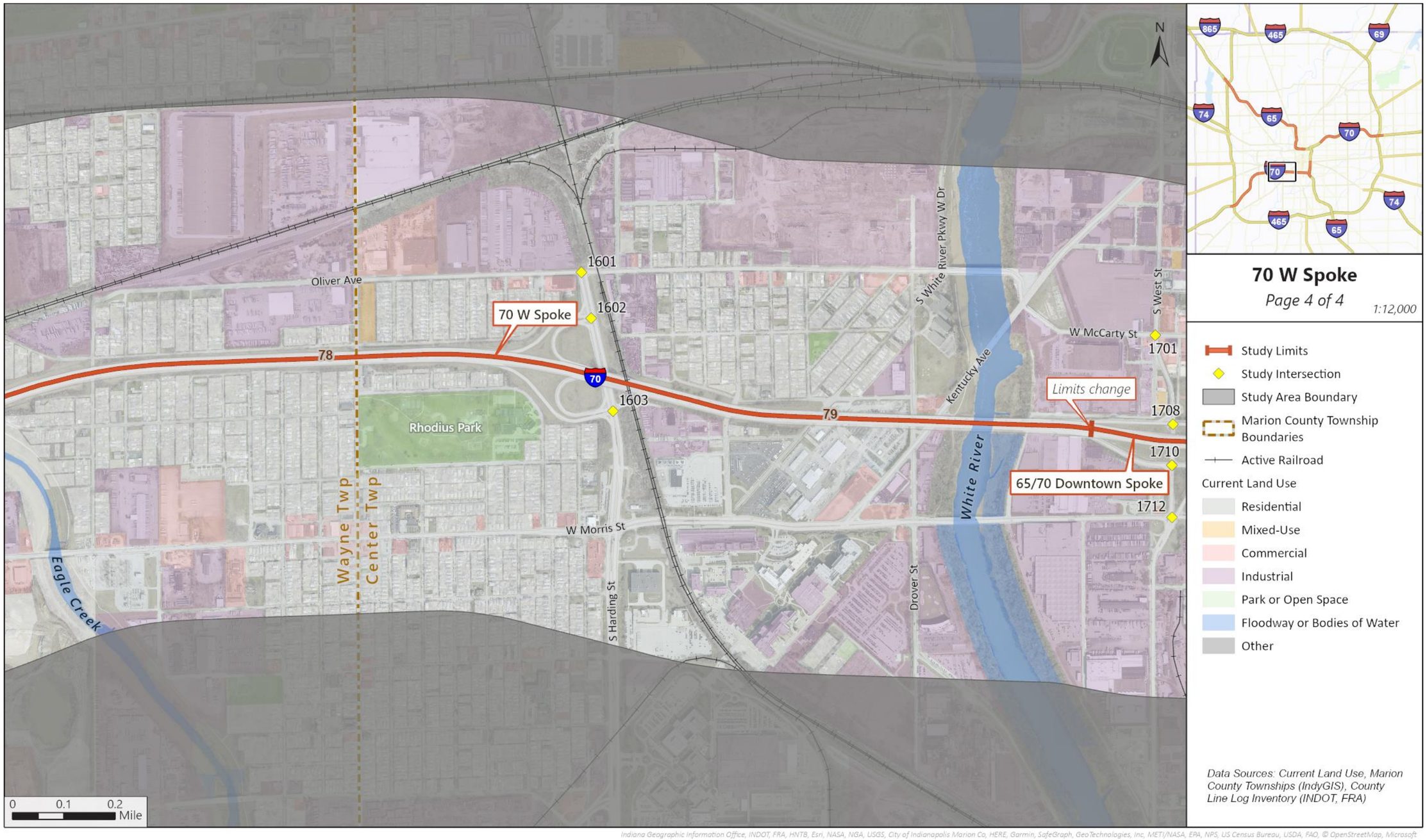


Figure 6: Study Intersections, 70E Spoke

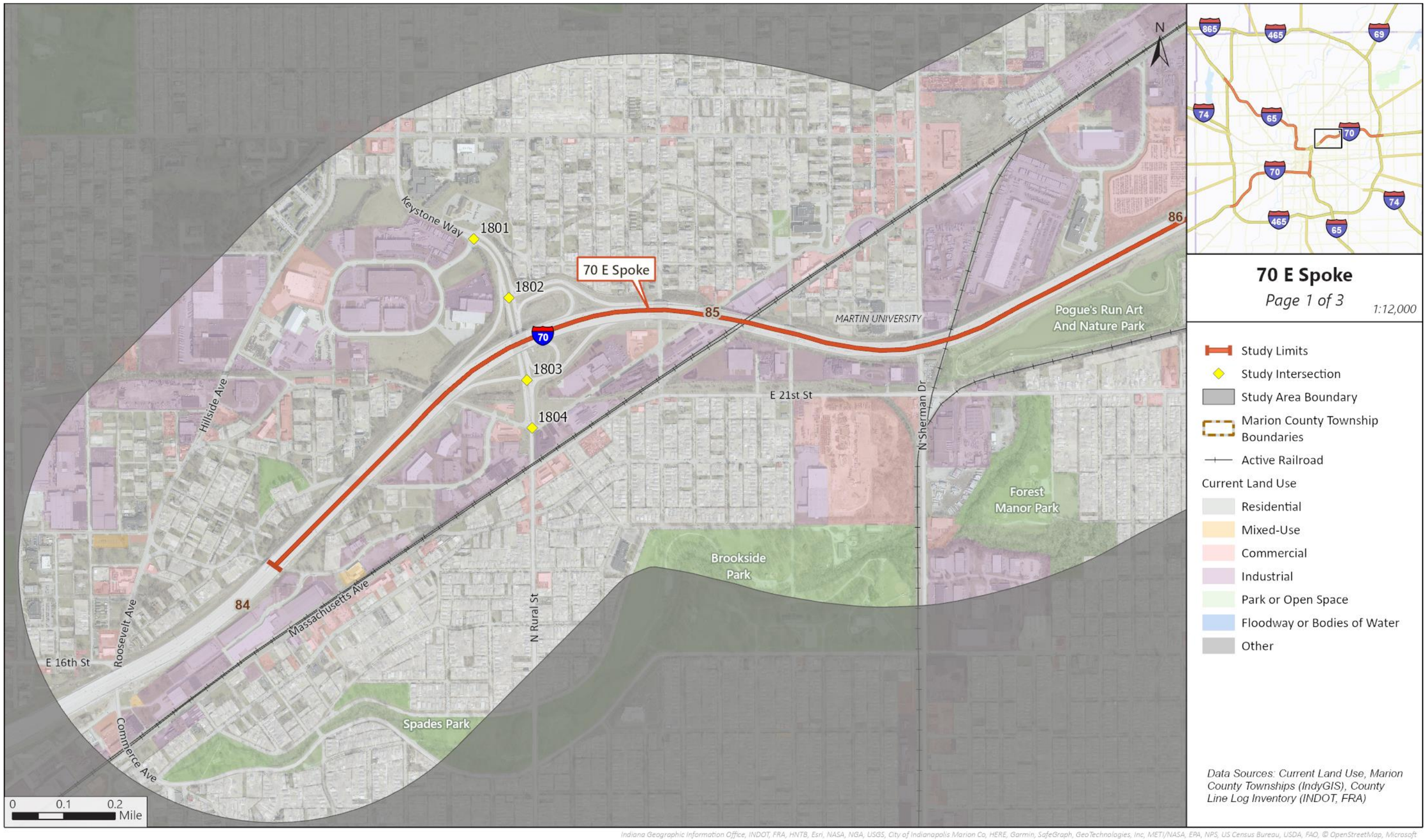


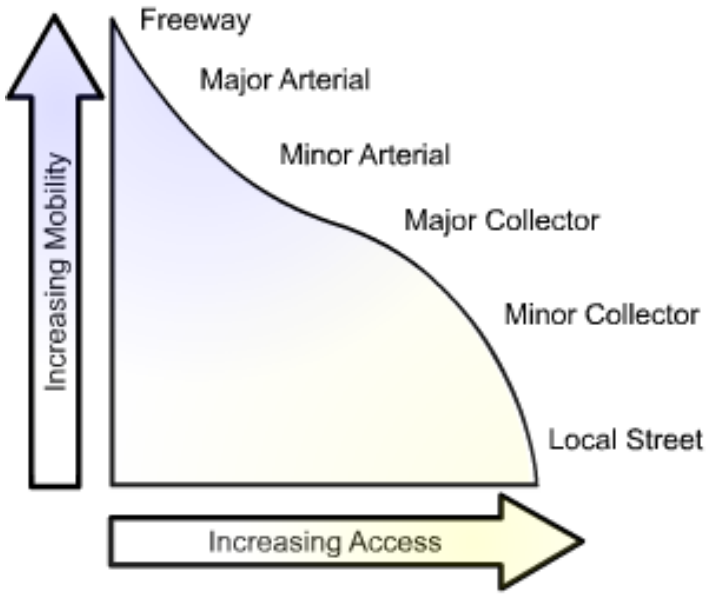
Figure 6: Study Intersections, 70E Spoke (cont.)

Figure 6: Study Intersections, 70E Spoke (cont.)

2.1 Roadway Classification

The functional classification of a roadway defines the level of mobility along the roadway and the amount of access to adjacent lands. The level of mobility and the amount of access are inversely proportional, with increases in mobility leading to decreases in access, as shown in **Figure 7**.

Figure 7. Mobility and Access Based on Functional Classification



Source: https://ops.fhwa.dot.gov/access_mgmt/what_is_accsmgmt.htm

I-65 and I-70 are classified as Interstate roadways. These freeway facilities provide limited access, a high degree of mobility, and are intended to serve long distance trips. Both roadways are part of the National Highway System (NHS) and the National Truck Network (NTN) and therefore have a national significance.

I-65 and I-70 are also classified as Preferred Freight Corridors (PFCs), which are described as highway segments that carry at least 8,500 trucks per day by the FHWA. Due to heavy truck flows, PFC's experience more freight-related issues than other roads regarding safety, mobility, reliability, system preservation, and economic and environmental impacts.

The crossroads that intersect with I-65 and I-70 within the study area have varying classifications of roadways, as shown in **Appendix A**. These functional classifications are described as follows:

Interstates are the highest classification of roadways and are intended for long distance travel. All access points are limited to select grade separated locations. These roadways are officially designated by the Secretary of Transportation.

Principal Arterial - Other Freeway or Expressway are roadways intended to maximize mobility with access points limited to on- and off-ramp locations or a very limited number of at-grade intersections.

Principal Arterial – Other are arterials that provide a high degree of mobility and may provide access to abutting land uses. Intersections with roadways of equal or lower functional classification are typically at-grade.

Minor Arterials augment higher-level arterials by providing intra-community connections and providing mobility within a community. Minor arterials typically accommodate trips of moderate length with lower traffic volumes.

Major Collectors gather traffic from Local Roads and funnel this traffic onto the arterial network. Major collectors typically have high speeds and numerous signalized intersections.

Minor Collectors are facilities similar to major collectors but are used for shorter trips, support lower design speeds, and are characterized by fewer signalized intersections and higher connecting driveway densities than major collectors.

Local Roads: Accommodate trips short in duration and provide access to abutting land uses.

2.2 Typical Section

2.2.1 65 Spoke

I-65 within the 65 Spoke is primarily a six-lane urban highway with paved shoulders and directions of travel separated by a concrete barrier wall. A collector-distributor lanes system parallels I-65 in each direction at the I-65/38th Street/Kessler Boulevard Drive interchange. A similar collector-distributor system parallels I-70 between the I-70/ Shadeland Avenue and I-70/ I-465 interchanges. Typical sections of these roadways are provided in **Figure 8** and **Figure 9**.

2.2.2 70W Spoke

I-70 within the 70W spoke is primarily an six-lane urban highway with paved shoulders and directions of travel separated by a median barrier wall as provided in **Figure 8**.

2.2.3 70E Spoke

I-70 within the 70E spoke is primarily an eight-lane urban highway with paved shoulders and directions of travel separated by a median barrier wall as shown in **Figure 9**. A collector-distributor lanes system parallels I-70 between the I-70/ Shadeland Avenue and I-70/ I-465 interchanges, which resembles the typical section provided in **Figure 10**.

2.2.465/70 Downtown Spoke

The section of I-65/I-70 between the I-65/I-70 South Junction and Washington Street is depressed, with four lanes provided in the northbound direction and three lanes plus a collector-distributor (C-D) system in the southbound direction. The lanes on the C-D system merge with the mainline before reaching Fletcher Avenue. The typical section for this segment of I-65/70 is provided in **Figure 11**.

I-65 in the northern portion of the 65/70 Downtown Spoke also has two distinct typical sections. I-65 is elevated on structure from the I-65/I-70 N Junction (North Split) to West Street. This structure provides three lanes per direction, as illustrated in **Figure 12**. North of West Street, I-65 is a 6-lane urban highway with one auxiliary lane in each direction. This portion of I-65 is elevated on fill, as shown in **Figure 13**.

I-70 in the southern portion of the 65/70 Downtown Spoke is a six-lane urban highway from West Street to the I-65/I-70 S Junction (South Split). This portion of I-70 was elevated on fill as illustrated in **Figure 14**.

Figure 8. Typical Section of I-65 and I-70 in 65 & 70W Spokes

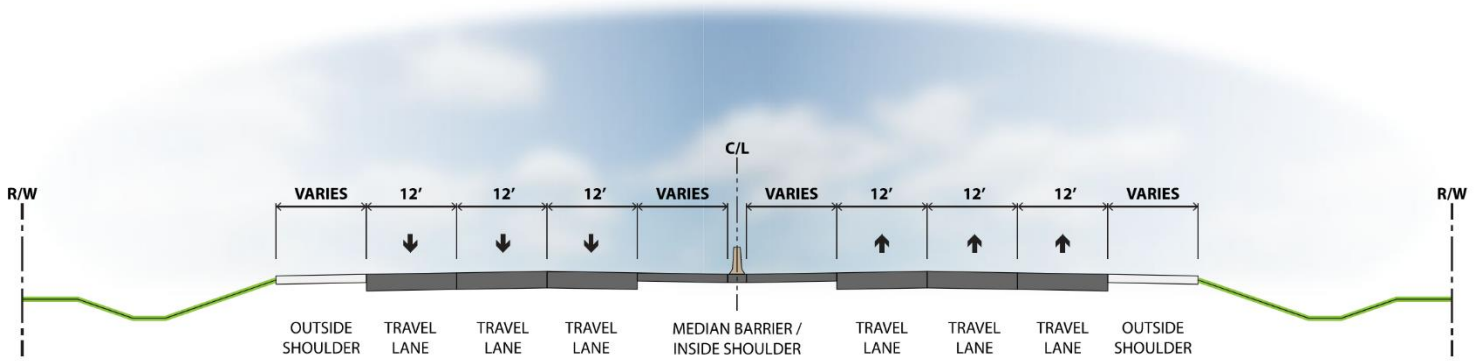


Figure 9. Typical Section of Collector-Distributor Roadways in 65 & 70E Spokes

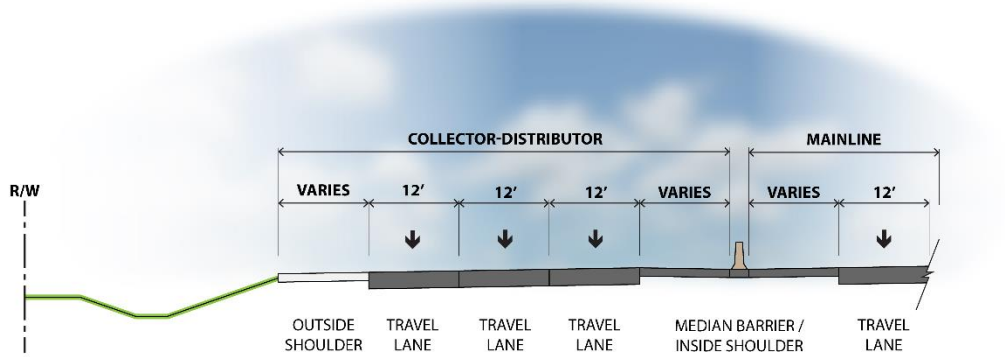


Figure 10. Typical Section of I-70 in 70E Spoke

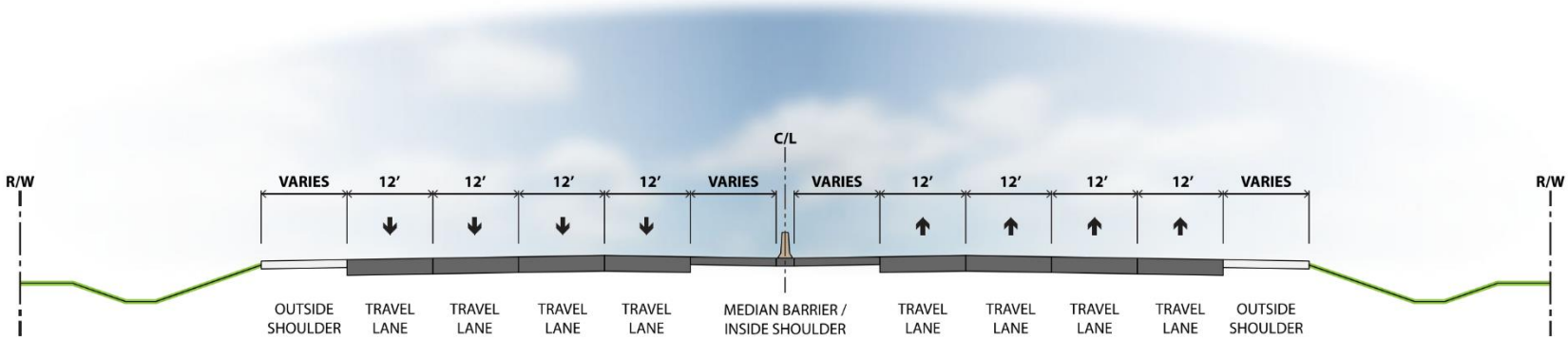


Figure 11. Typical Section of I-65/70 from South Split to Washington St in Downtown Spoke

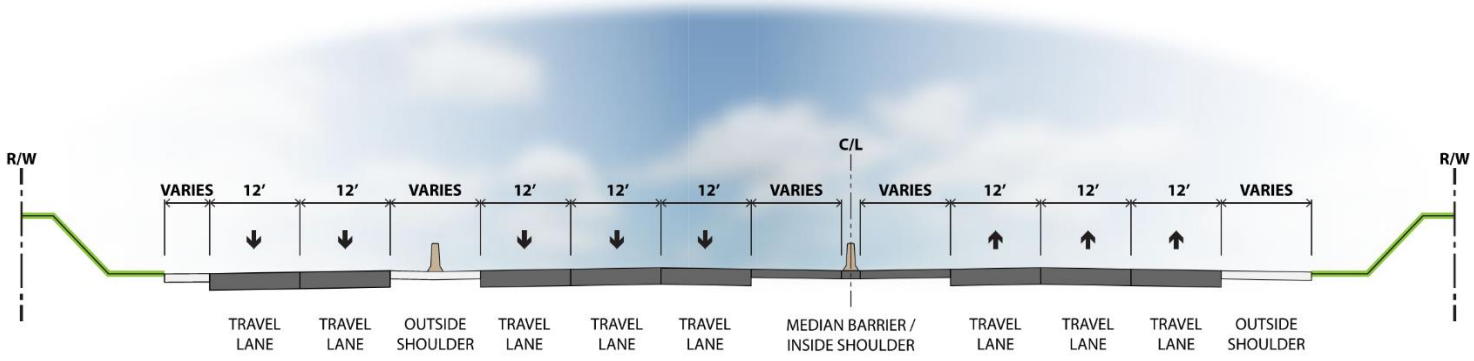


Figure 12. Typical Section of I-65 from North Split to West St in Downtown Spoke

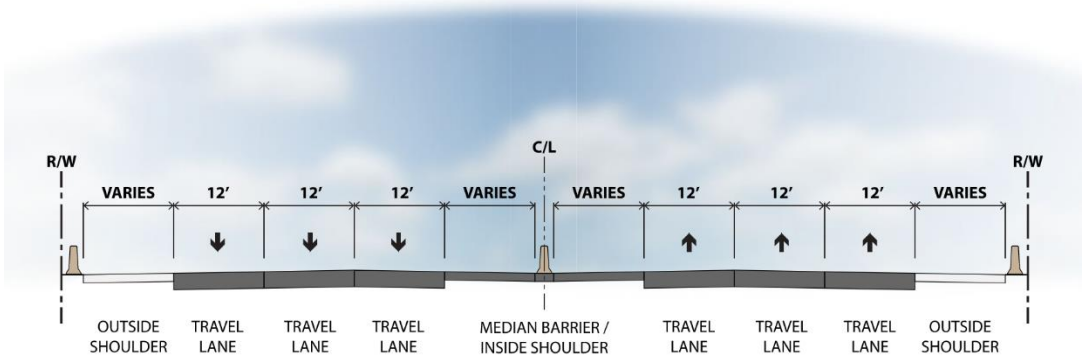


Figure 13. Typical Section of I-65 from West St to Fall Creek in 65/70 Downtown Spoke

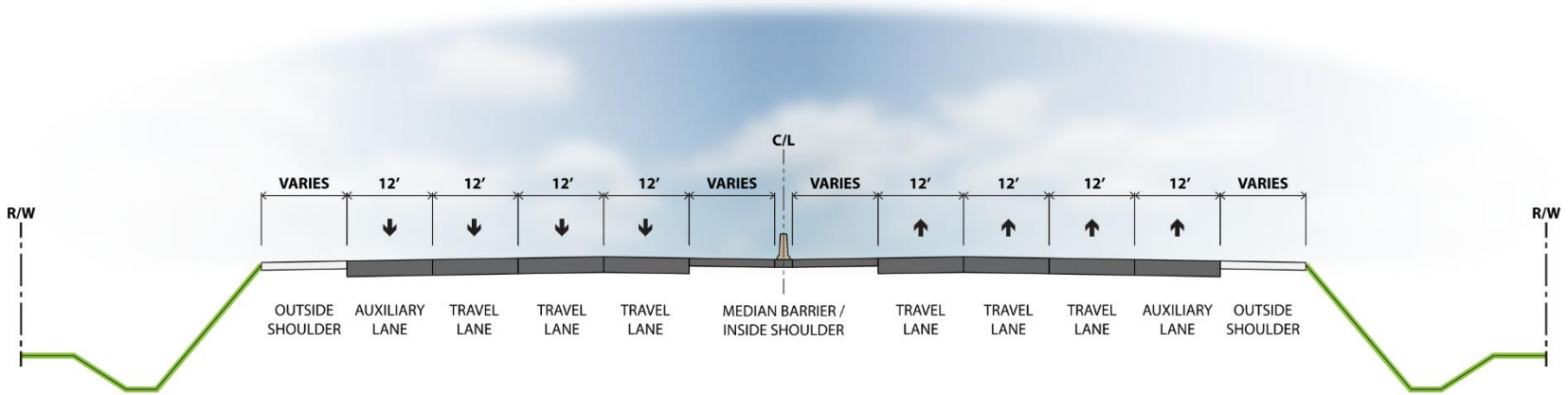
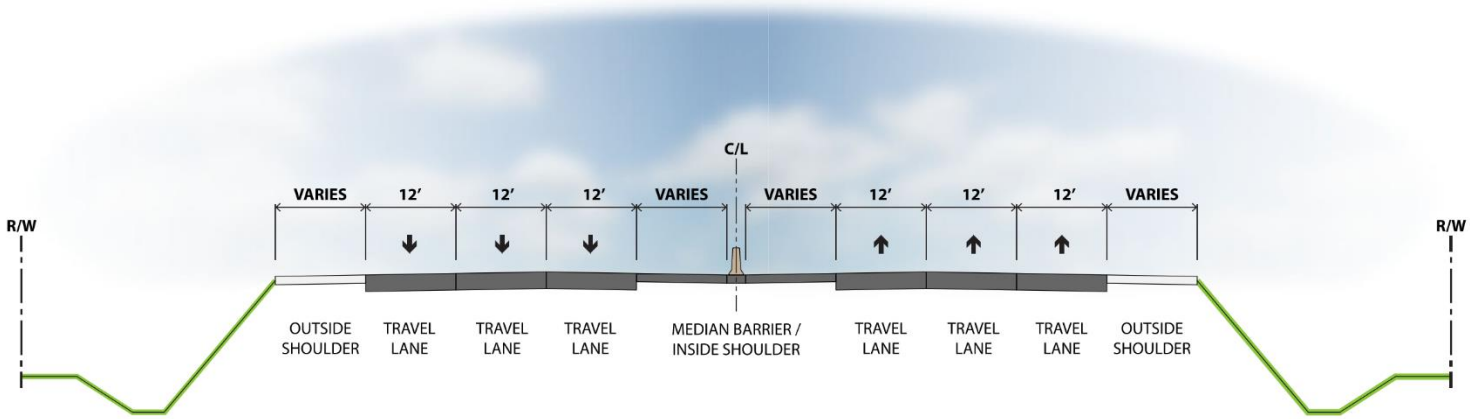


Figure 14. Typical Section of I-70 from West St to South Split in 65/70 Downtown Spoke



2.3 Right-of-Way

The width of the limited access right-of-way along I-65 and I-70 was approximated from aerial imagery. These approximate right of way widths will be used in the alternative development process to determine where additional right-of-way is necessary to accommodate improvements. **Table 3** summarizes approximate limited access right-of-way widths along I-65 and I-70.

Table 3. Approximate Right-of-Way Widths

Spoke	From	To	Approx ROW Width (ft.)
65	I-465	W. 56th St	240
65	W 56th St	W 52nd St	220
65	W 52nd St	Lafayette Rd	245
65	Lafayette Rd	38th St	200
65	38th St	Kessler Blvd	380
65	Kessler Blvd	White River	200
65	White River	W 30th St / W 29th St	250
65	W 30th St / W 29th St	W 21st St	240
65/70 Downtown	W 21st	West St	290
65/70 Downtown	West St	North Split	250
65/70 Downtown	South Split	Pleasant Run Creek	300
70W	I-465	Sam Jones Expy	255
70W	Sam Jones Expy	Holt Rd	360
70W	Holt Rd.	Eagle Creek	295
70W	Eagle Creek	Harding St	200
70W	Harding St	White River	265
65/70 Downtown	White River	South Split	215
65/70 Downtown	South Split	Washington St	350
70E	North Split	N Rural St	280
70E	N Rural St	Emerson Ave	225
70E	Emerson Ave	Shadeland Ave	305

Right-of-way widths at interchanges vary widely and are excluded from this table. **Table 3** also does not include limited access right of way widths along the cross streets that provide access to I-65 and I-70. Limited access right of way along these streets is necessary to protect the function of the interchange. The limits of limited access right of way along the cross streets should be further investigated if improvements are necessary along these streets.

2.4 Posted Speed

The posted speed or speed limit varies throughout the study area. Posted speeds are listed in **Table 4**. The posted speed on an urban interstate, such as I-65 and I-70 within the study area, is limited to 55 mph (maximum) per Indiana Code Section 9-21-5-6.

Table 4. Posted Speeds

Spoke	Segment	Posted Speed (mph)
65	I-465 to 21st St	55
70W	I-465 to Holt Rd	55
70W	Holt Rd to White River	50
70E	North Split to Emerson Ave	50
70E	Emerson Ave to I-465	55
65/70 Downtown	Downtown	50

2.5 Level 1 Design Criteria

The FHWA established 13 controlling design criteria, which were those highway design elements judged to be the most critical indicators of a highway's safety and its overall serviceability. INDOT adopted the FHWA criteria and included additional elements. INDOT refers to these elements collectively as Level One criteria.

The existing geometry of 65, 70W, 70E, and 65/70 Downtown Spokes was analyzed to determine where features of the roadway and bridges do not meet Level One design criteria. The characteristics of each spoke were developed from the original construction plans and subsequent maintenance and reconstruction plans. Geometric conditions identified in the following subsections were identified as items where existing geometry is substandard to current Level One design criteria.

2.5.1 Horizontal Alignment

The Indiana Design Manual states that urban interstates should utilize design speeds ranging from 50 to 70 mph. Design speeds lower than 50 mph for system-to-system interchange ramps, are allowable and must be based on the design speed of the adjacent freeway.

An investigation of all existing horizontal alignments along the study spokes finds that they meet the current design criteria for 70 mph (min. radius 1,650 feet) except for the locations listed in **Table 5**. Based on the criteria stated above, none of the horizontal curves listed in **Table 5** are considered to be deficient. An 8% maximum superelevation rate was assumed where no information is available.

Table 5. Horizontal Curvature With Design Speed <70mph

Spoke	Location	Radius (ft.)	Super Elevation Rate[1] (%)	Design Speed (mph)
65	I-65 Southbound, west of I-465	1,592.20	7.66	60
65/70 Downtown	I-65 at West St	1,432.50	7.66	55
65	I-65 at 30th St	1,432.50	7.66	55
65	I-65 at Dr MLK Jr St	1,432.50	8.00	60
65/70 Downtown	I-70 Eastbound to I-65 Northbound at the I-65/I-70 S Jct[2]	881.47	8.00	50
65/70 Downtown	I-65 Southbound to I-70 Westbound at the I-65/I-70 S Jct[2]	720.00	8.00	45
65/70 Downtown	I-70 Eastbound to I-65 Southbound at the I-65/I-70 S Jct[2]	818.51	8.00	50
65/70 Downtown	I-65 Southbound to I-65 Southbound at the I-65/I-70 S Jct[2]	1,909.86	4.20	40
65/70 Downtown	I-65 Northbound to I-70 Westbound at the I-65/I-70 S Jct[2]	763.94	8.00	50

Notes:
1. Per existing plans
2. System to System Ramp

2.5.2 Horizontal Stopping Sight Distance

There are five locations where horizontal stopping sight distance does not meet required design criteria. These are listed in **Table 6.**

Table 6: Horizontal Stopping Sight Distance (HSSD) Deficiencies

Spoke	Location	Shoulder Width (ft)	Required HSSD[1]	Required Shoulder Width (ft.)
65/70 Downtown	N of 16th St/S of 21st St	8.0	570	11.59
65/70 Downtown	At 21st St Interchange	8.0	570	21.99
65	N of 30th St	8.0	570	21.99
65	W of MLK Jr St	8.0	570	21.99
65	At EB 38th St Bridge	8.0	570	11.59

Notes:

1. For 60 mph Design Speed

2.5.3 Shoulder Width

Interstates with three or more lanes per direction are required to provide 10 feet (minimum) inside and outside shoulders. The following is a list of locations where the inside shoulder does not meet a required minimum width of 10 feet:

- I-65 from the eastbound 38th Street bridge over I-65 to east of Alabama Street (4.73 miles)
- I-70 from the Holt Road interchange to the I-65 S Junction (4.1 miles)

2.5.4 Bridge Clear Roadway Widths

The bridges listed below do not meet design criteria for bridge clear roadway widths due to substandard inside shoulder widths.

- I-65 bridge over Lafayette Street, N Capitol Avenue, N Illinois Street, N Meridian Street, N Pennsylvania Street and N Delaware Street
- I-70 bridge over River Avenue, Drover St, Kentucky Avenue, White River, White River Parkway E Drive, and S West Street, S Missouri Street
- I-70 bridge over S Capitol Avenue
- I-70 bridge over S Illinois Street

- I-70 Bridge over S Meridian Street
- I-70 bridge over Madison Avenue

2.5.5 Superelevation Transition Lengths

Superelevation is the rotation of the pavement on the approach to and through a horizontal curve. The rate of transition into and out of superelevation is important to avoid creation of potential safety issues. The superelevation transition lengths and rates could not be obtained for all the horizontal curves in the study area due to a lack of information in the existing plans. However, current design standards for these transition lengths exceed the required lengths at the time of construction for the segments listed below. If the proposed alternatives for these two segments include widening and resurfacing of existing pavements, further investigation and full pavement survey will be required to correct these transition lengths to meet current design standards.

- I-65 between Dr. MLK Jr Street and N Capitol Avenue
- I-70 between Holt Road and the I-65 S Jct

2.5.6 Bridge Railing Test Level

Current design criteria require all interstate bridges to have a type TL-5 barrier between opposing directions of travel. A TL-5 barrier is a concrete median barrier that can redirect vehicles and is designed to maximize stability in passenger vehicles by limiting wheel climb and roll.

The only TL-5 barrier used by INDOT is the concrete barrier, shape F, truck height. The bridges listed below currently do not have type TL-5 barriers.

- I-70 bridges over Warman Avenue
- I-65 bridge spanning from east of West Street to east of Alabama Street
- I-65 bridge over 16th Street

2.6 Geometric Deficiencies

2.6.1 Weaving Segments

Weaving segments are locations where two traffic flows in the same direction must cross so motorists can reach their desired end points. This forced changing of lanes can negatively affect the operating speed of traffic and may increase the likelihood for crashes.

The design criteria require a minimum ramp spacing of 2,000 feet between system and service interchanges and a minimum of 1,600 feet between service interchanges. Per **Table 7**, several of the existing weaving segments do not satisfy the distance criteria. Operational and safety impacts of these deficiencies are evaluated in **Section 4**5.5 and **Section 6** of this document. The one location with sub-standard acceleration/deceleration lengths falls within one of these weaving areas, and as such sub-standard acceleration/deceleration lengths are not depicted as a separate deficiency.

Table 7: Weaving Segments

Spoke	Location	Actual Weaving Distance (ft)	Required Weaving Distance (ft)	Number of Lane Changes Required
65	I-65 Southbound from Kessler Blvd to 38th St (Collector-Distributor C-D Lanes)	1,800	1,600	2
65	I-65 Northbound and Southbound from 29th St to 21st St	990 (SB) 2,500 (NB)	1,600	1 (SB) 1 (NB)
65/70 Downtown	I-70 Eastbound from Madison Ave to I-65 S Jct	1,900	2,000	2
65/70 Downtown	I-70 Westbound from Madison Ave to West St	300	1,600	1
65/70 Downtown	I-70 Westbound from I-65 S Jct to Madison Ave	900	2,000	2
65/70 Downtown	I-70 Eastbound from I-65 S Jct to Washington St	2,300	2,000	3
65/70 Downtown	I-70 Southbound from Southbound C-D to I-65 S Jct	1,900	2,000	2
70E	I-70 Eastbound from I-65 N Jct to Rural St / Keystone Ave	5,200	2,000	1
70E	I-70 Westbound from Rural St / Keystone Ave to I-65 N Jct	5,200	2,000	3
70E	I-70 Eastbound from Shadeland Ave to I-70 Eastbound (C-D Lanes)	1,500	1,000	2

2.6.2 Left Side Entrance & Exit Ramps

Left side entrance and exit ramps are undesirable from an operational and safety perspective. Three such ramps exist in the study area. They are listed as follows:

- I-65 northbound entrance ramp from Calvary Street (Exit 110)
- I-65 northbound exit ramp to West Street (Exit 114)
- I-65 southbound entrance ramp from West Street (Exit 114).

2.6.3 Route Continuity

Route continuity is the concept in which changing lanes is not necessary to continue on the through route. A lack of route continuity results in additional lane changes, additional signing and can result in underutilization of the lane(s) that drop. There are two locations in which route continuity is not provided within the study area. These are described as follows:

I-65 northbound west of the North Split: The rightmost lane of the two-lane ramp carrying I-65 through the interchange terminates or drops immediately west of the interchange. This effectively results in northbound I-65 having one continuous lane through downtown Indianapolis.

I-65 southbound south of the North Split: The leftmost lane of the two-lane ramp carrying I-65 through the interchange terminates or drops immediately south of the interchange. This effectively results in southbound I-65 having one continuous lane through downtown Indianapolis.

I-70 east of the North Split: The leftmost lane of the two-lane ramp carrying the I-65 southbound to I-70 eastbound movement through the interchange drops immediately east of the interchange.

Figure 15. Geometric Deficiencies, 65 Spoke

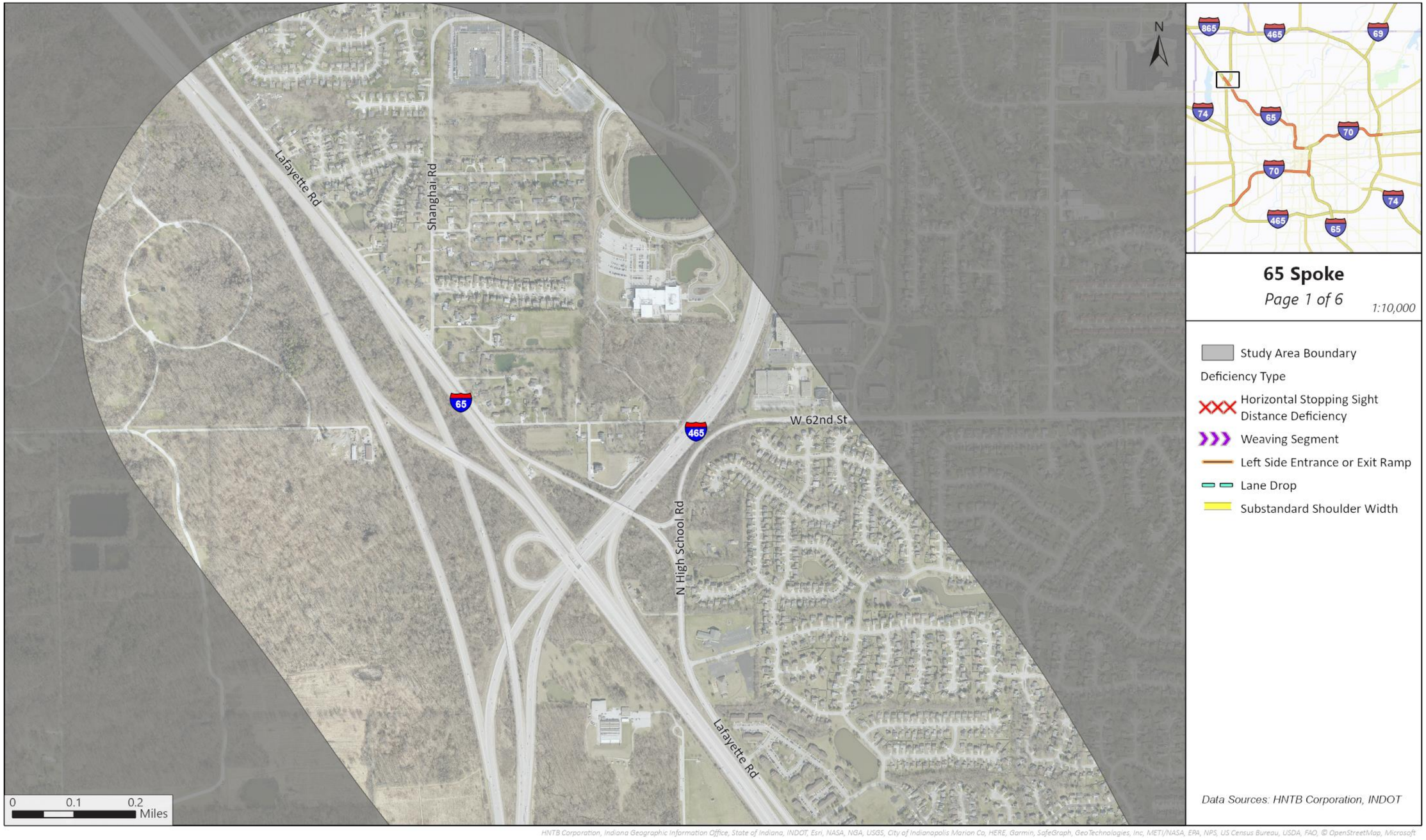


Figure 15. Geometric Deficiencies, 65 Spoke (cont.)

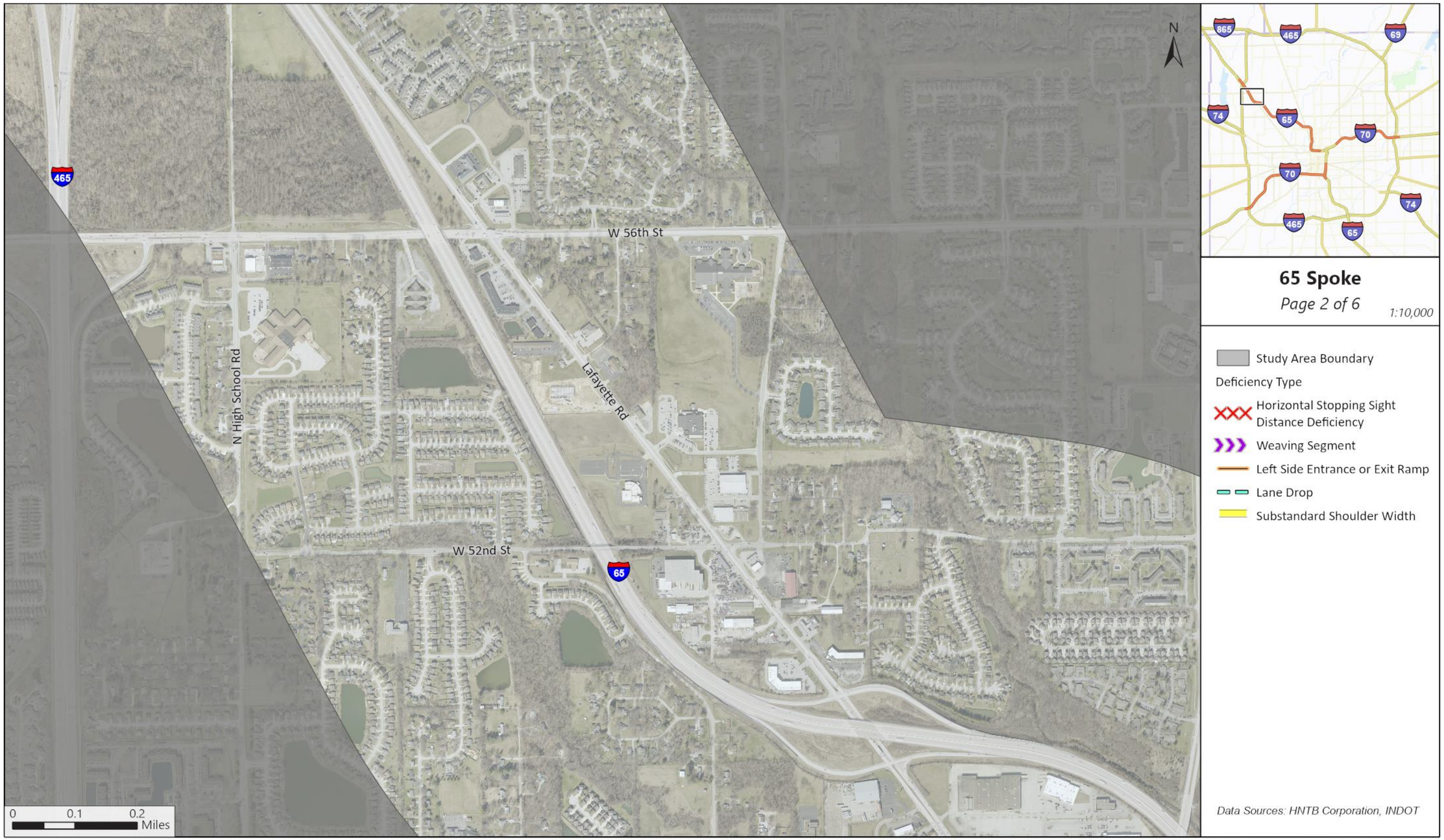


Figure 15. Geometric Deficiencies, 65 Spoke (cont.)

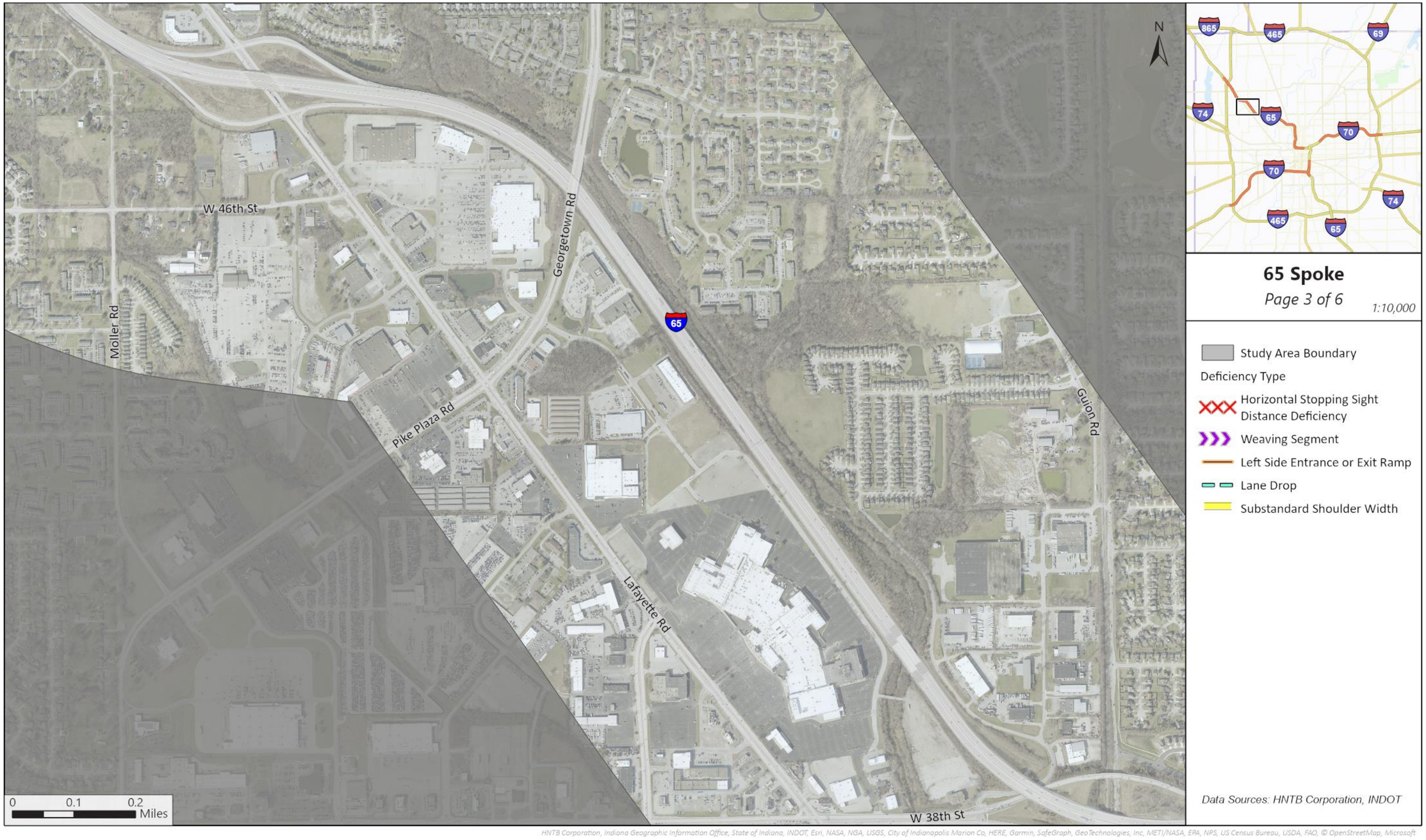


Figure 15. Geometric Deficiencies, 65 Spoke (cont.)

Figure 15. Geometric Deficiencies, 65 Spoke (cont.)

Figure 15. Geometric Deficiencies, 65 Spoke (cont.)

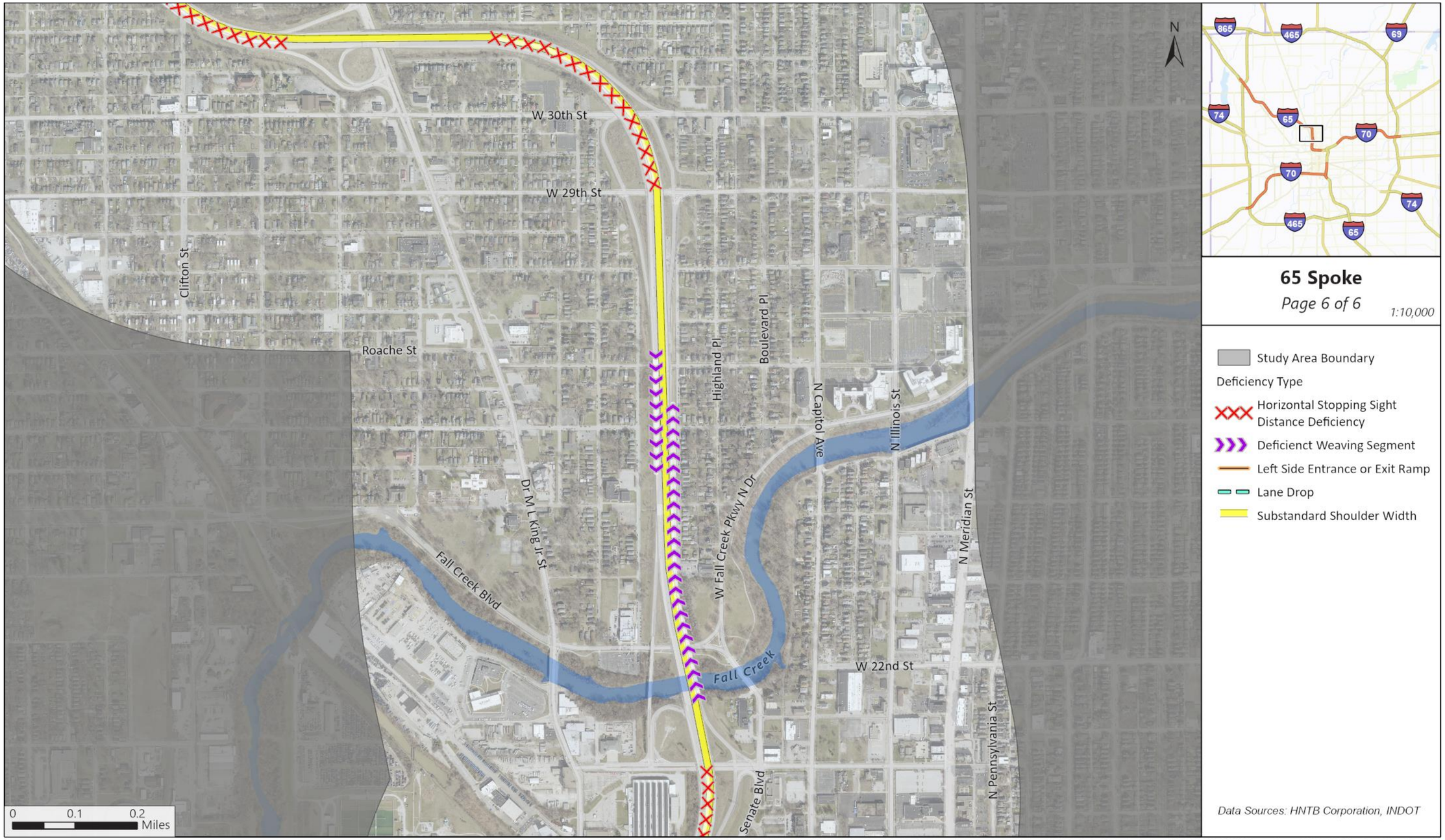


Figure 16. Geometric Deficiencies, 65/70 Downtown Spoke

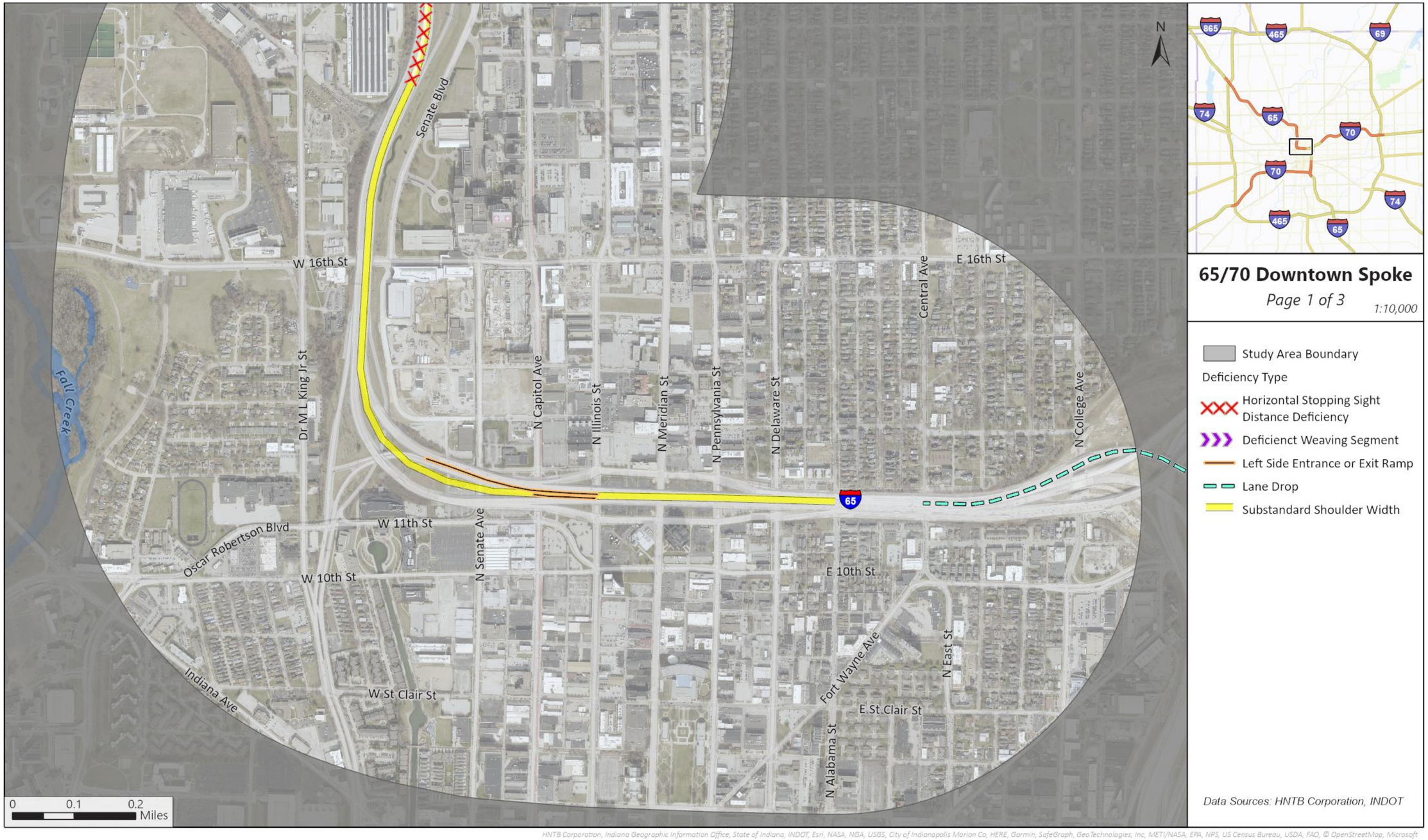


Figure 16. Geometric Deficiencies, 65/70 Downtown Spoke (cont.)

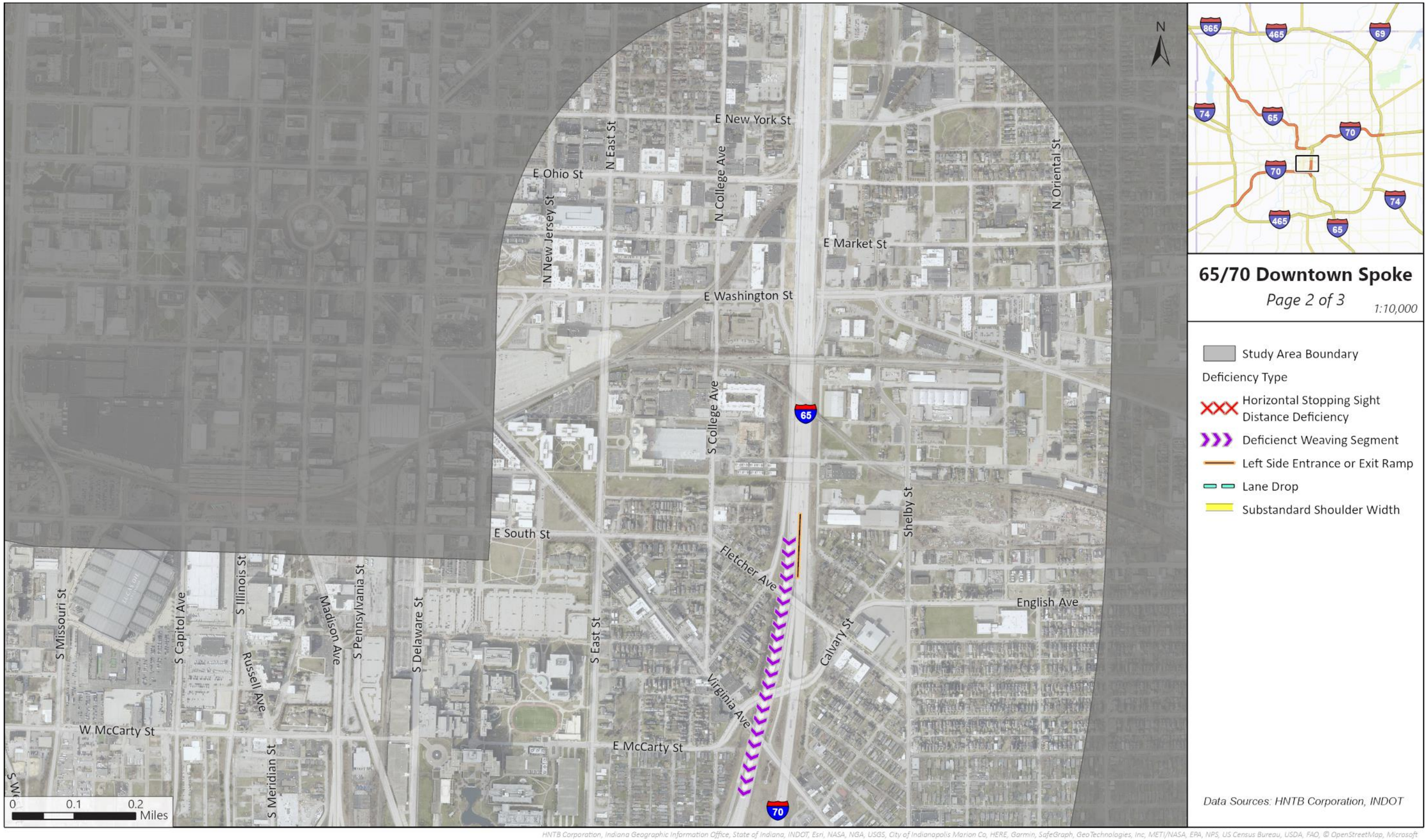


Figure 16. Geometric Deficiencies, 65/70 Downtown Spoke (cont.)

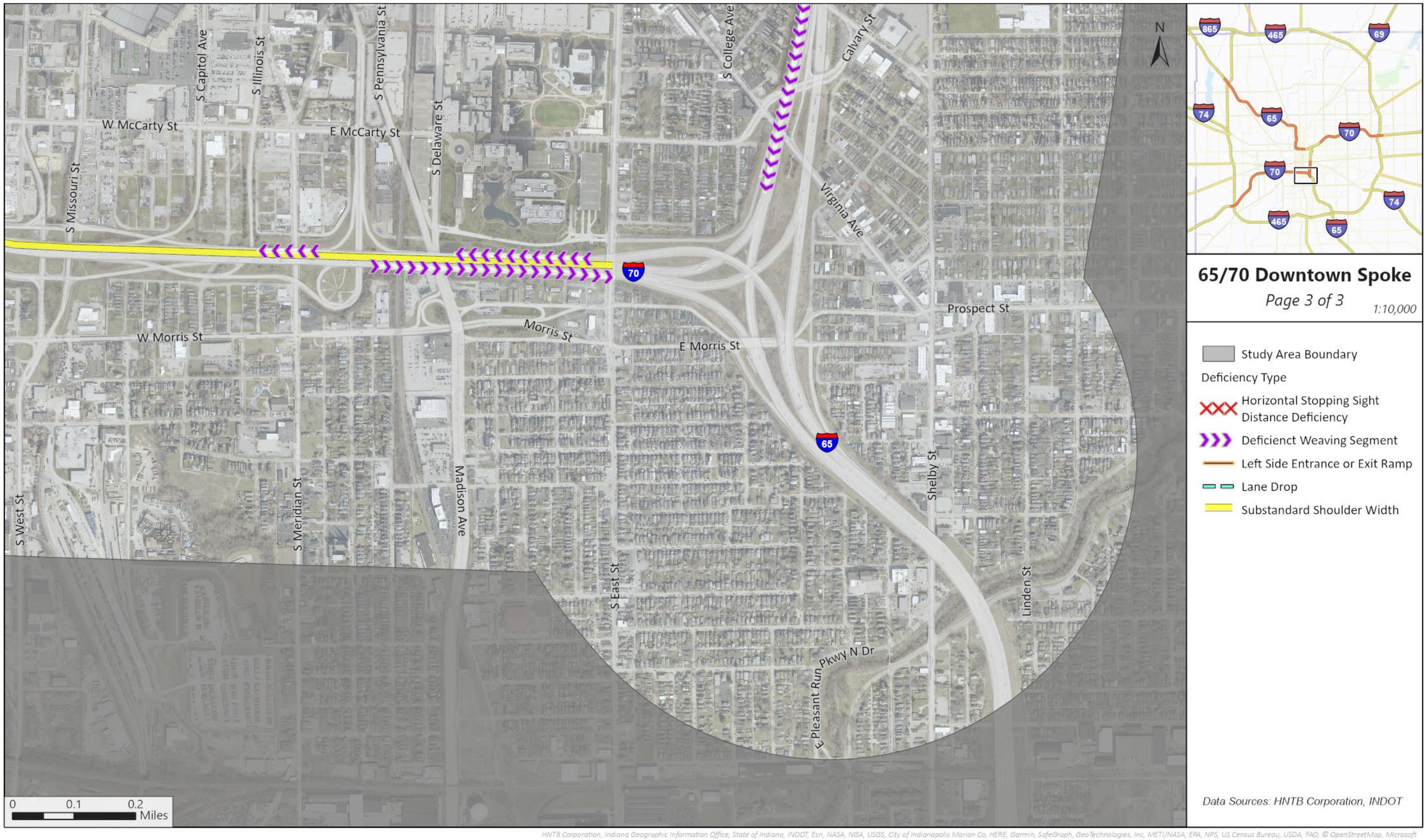


Figure 17. Geometric Deficiencies, 70W Spoke

Figure 17. Geometric Deficiencies, 70W Spoke (cont.)

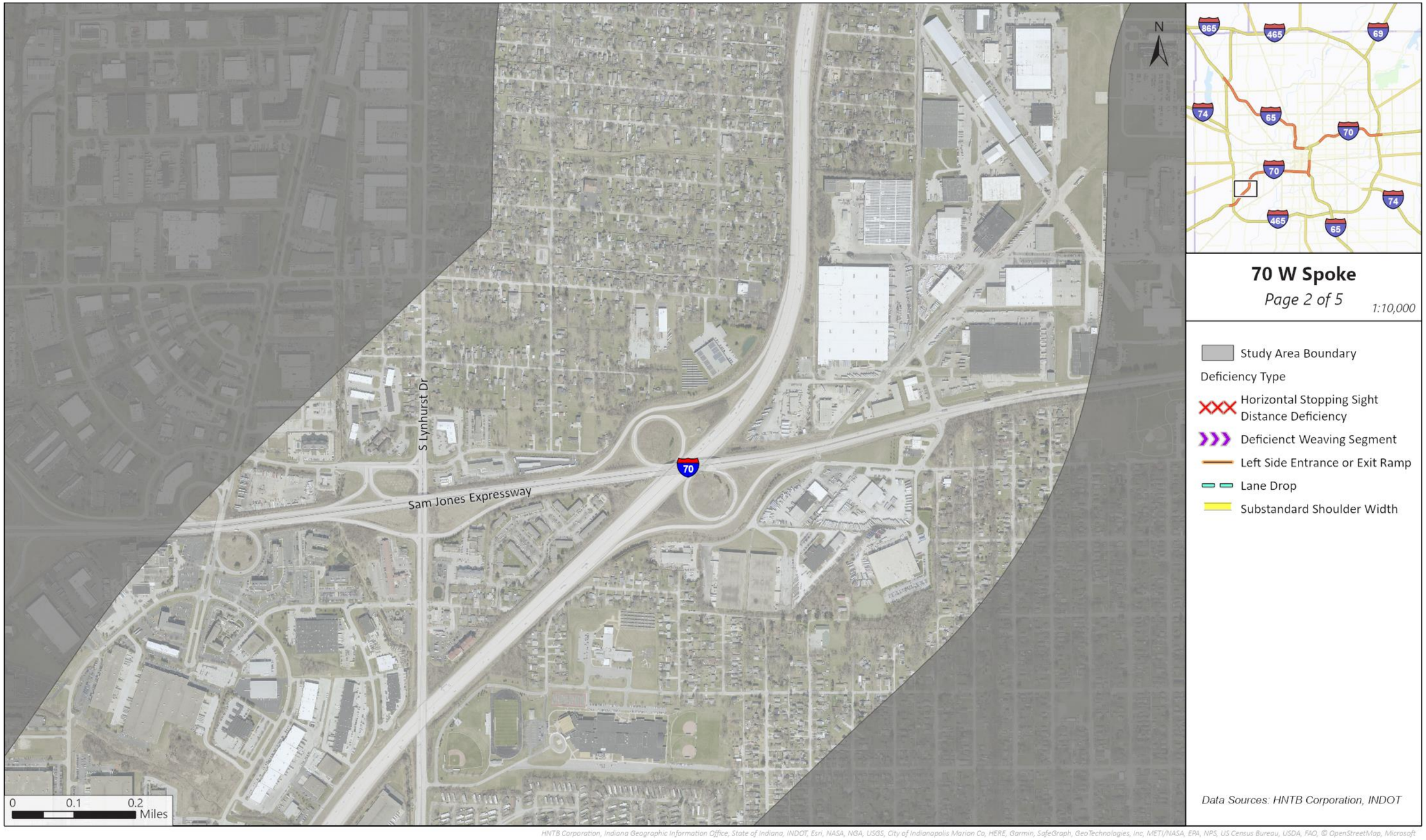


Figure 17. Geometric Deficiencies, 70W Spoke (cont.)

Figure 17. Geometric Deficiencies, 70W Spoke (cont.)

Figure 17. Geometric Deficiencies, 70W Spoke (cont.)

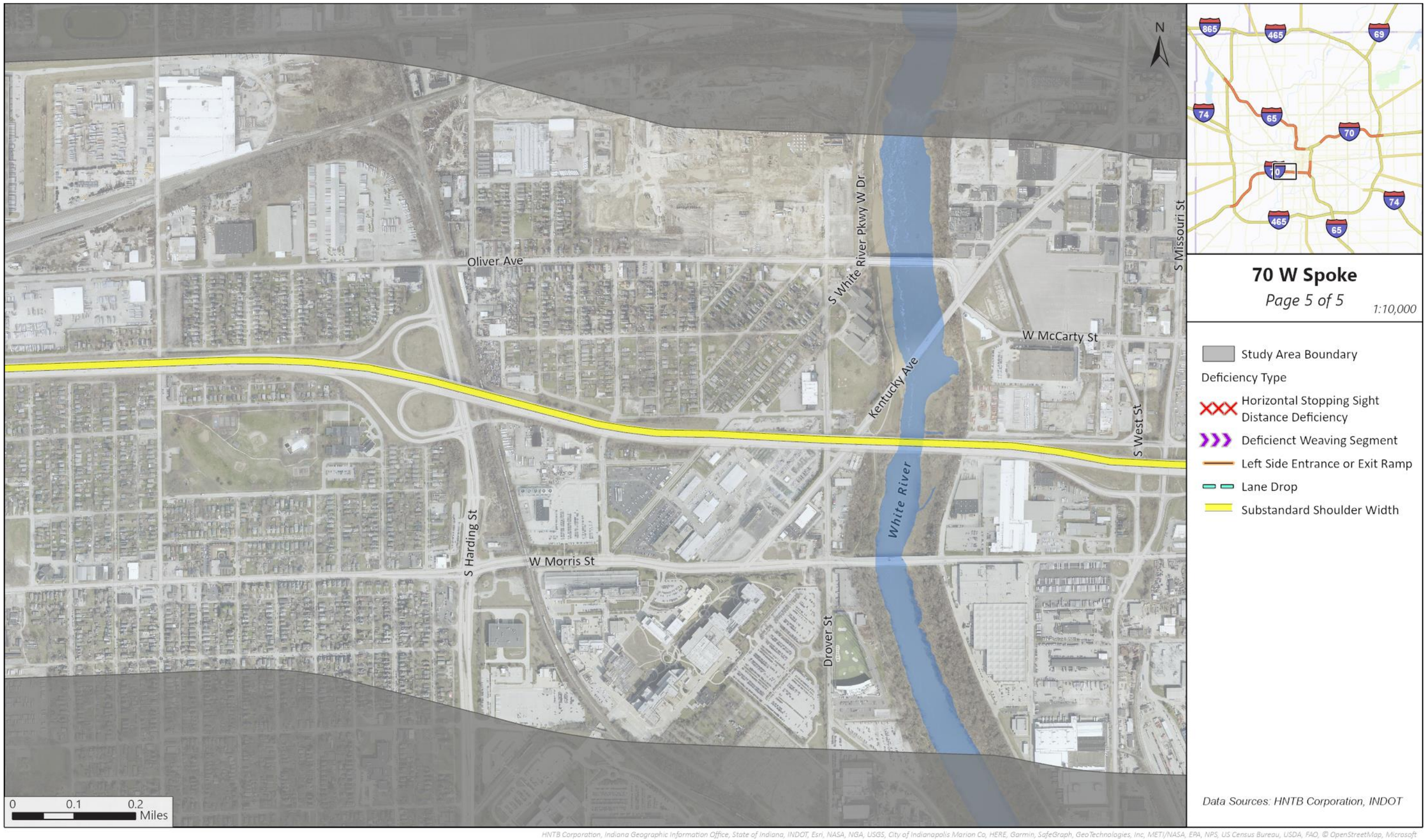


Figure 18. Geometric Deficiencies, 70E Spoke

Figure 18. Geometric Deficiencies, 70E Spoke (cont.)

Figure 18. Geometric Deficiencies, 70E Spoke (cont.)

Figure 18. Geometric Deficiencies, 70E Spoke (cont.)

2.7 Railroads, & Utilities & Sewers

Railroads, and major utilities and major sewers are facilities that may affect development of alternatives in later stages of the ProPEL Indy study.

2.7.1 Railroads

There are 14 grade-separated crossings of interstates and railroads within the study area. The locations of these crossings are depicted in **Appendix B.** Rail companies operating within the study area include CSX, Indiana Railroad, Indiana Southern Railroad, and Louisville and Indiana Railroad.

Additionally, there are three railroad corridors that are abandoned within the study area. Two of these abandoned railroad corridors are now associated with the Central Canal Towpath, and the other crosses underneath I-70 at the southwest end of the I-70 / Keystone Avenue interchange, which is a planned trail that will connect the Monon Trail and the planned Pogue's Run Greenway.

2.7.2 Utilities

Utility information was reviewed for the study corridor to determine where major utilities exist. These major utilities were determined to be electric power transmission lines (overhead wires) and underground pipelines for products such as natural gas, refined petroleum, and hydrocarbon gas liquids. Maps depicting the locations where these major utilities cross the study area are provided in **Appendix C**.

2.7.3 Major Storm and Sanitary Sewers

Major storm and sanitary sewers were reviewed for the study corridor to determine where major sewers exist within the project limits. Sewer pipes of diameters greater than or equal to 48" were considered major sewers. Culvert pipe crossings are not included. This information is available via Map Indy. **Table 8** The following table lists the minimum number of major sewers located within each segment. These sewers are depicted in **Appendix C**.

Table 8: Major Storm and Sanitary Sewers

Spoke	Number of Major Storm Sewers	Number of Major Sanitary Sewers
I-65	1	2
I-70 West	7	6
I-65/I-70 Downtown	4	5
I-70 East	1	0

Major storm sewers are listed as follows:

- A storm sewer with maximum diameter of 90" parallels I-65/70 and I-70 within the 65/70 Downtown Spoke. This sewer begins near Maryland Street and runs south along the west side of I-65/70 to I-70, then follows along the south side of I-70 to the White River.
- An existing storm sewer consisting of double 96" x 46" elliptical pipes runs along I-65 within the 65/70 Downtown Spoke and extends from approximately College Avenue to Dr. Martin Luther King Jr. Street.
- A 48-inch existing storm sewer system runs along I-70 within the 70E Spoke that extends from approximately Rural Street to Roosevelt Avenue.
- An existing storm sewer system with maximum pipe diameter of 66 inches parallels I-65 from approximately Dr. Martin Luther King Jr. Street to between 27th and 28th Streets.

2.8 Pedestrian and Bike Facilities

The Indianapolis Department of Public Works (DPW) maintains all thoroughfares within Marion County, which include vehicular travel lanes, sidewalks, pedestrian crosswalks, and all other special corridors identified, e.g., belt-line railroad and greenways referenced in the *Indianapolis / Marion County Thoroughfare Plan (Indy Moves)*[1]. Private roads, unplatted streets, and access drives are excluded from DPW's jurisdiction.

The interchanges and grade separated crossings within the study area were examined to identify locations where pedestrian and bike facilities are provided. This information will be used to incorporate such facilities into alternatives developed in later stages of this study. All pedestrian and bicycle facilities are depicted in **Appendix D**.

2.8.1 Sidewalks

Sidewalks consist of the walkway and any curb ramps or blended transitions designed as part of the street infrastructure constructed to enable pedestrian movement. Sidewalks are not intended for bicycle usage. Sidewalks and/or trails are located at 55 of 76 (72%) existing grade-separated crossings in the study area. **Table 9** depicts grade separated crossings where no existing sidewalks or trails are located within INDOT right-of-way.

[1] https://citybase-cms-prod.s3.amazonaws.com/a1de512e70c548ad9e463348f7a4876b.pdf

Table 9: Grade Separated Crossings Without Pedestrian Facilities

Spoke	Cross Street	Street Classification
65	52nd St	Minor Collector
65	Lafayette Rd	Principal Arterial – Other
65	38th St	Principal Arterial – Other
65	Guion Rd	Major Collector
65	N White River Pkwy W Dr	Minor Collector
65	N White River Pkwy E Dr	Local
65/70 Downtown	E Ohio St	Minor Arterial
65/70 Downtown	S West St / S Missouri St	Principal Arterial – Other
70W	White River Pkwy E Dr	Local
70W	Drover St	Major Collector
70W	S Harding St	Principal Arterial – Other
70W	S Warman Ave	Minor Arterial
70W	Holt Rd	Principal Arterial - Other
70W	W Morris St	Minor Arterial
70W	W Minnesota St	Major Collector
70W	Sam Jones Expressway	Principal Arterial – Other Freeway
70E	Keystone Wy /N Rural St	Principal Arterial – Other
70E	Massachusetts Ave	Major Collector
70E	Emerson Ave	Principal Arterial – Other
70E	N Ritter Ave	Major Collector
70E	N Shadeland Ave	Principal Arterial – Other

Multiple grade separated crossings exist where sidewalk is provided within the INDOT right-of-way, but no connecting sidewalks are provided within the City's right of way. These locations are not listed in this report as it is assumed the City will complete the sidewalk network in these areas over time.

2.8.2 Bike Facilities

Any facility that is designated for bicycle use is considered a bike facility. Bike network classifications adopted in the *Thoroughfare Plan* include protected lane, standard lane, sharrow, side path, and trails. Protected lane, standard lane, and sharrow facilities operate in the mixed traffic right-of-way while side

paths and trails are separated non-motorized corridors. Designated bike facilities exist at only 13 of 76 (17%) grade-separated crossings within the study area, which are listed in **Table 10**.

Table 10: Grade Separated Crossings With Bike Facilities

Study Spoke	Cross Street	Street Classification	Bike Facility
65	56th St.	Principal Arterial	Trail
65	Lafayette Rd.	Principal Arterial	Bike Lanes
65	Georgetown Rd.	Minor Arterial	Path
65	30th St.	Minor Arterial	Shared Lane
65	29th St.	Minor Arterial	Shared Lane
65	21st St.	Minor Arterial	Trail
65	N. Illinois St.	Minor Arterial	Cycle Track
65	N. Pennsylvania St.	Minor Arterial	Bike Lanes
65	Alabama St.	Minor Arterial	Sharrow
65/70 Downtown	E. Michigan St.	Minor Arterial	Bike Lanes
65/70 Downtown	E. New York St.	Principal Arterial	Bike Lanes
65/70 Downtown	Virginia Ave.	Major Collector	Trail
65/70 Downtown	S. East St.	Principal Arterial	Bike Lanes

2.9 Planned Improvements

2.9.1 Statewide Transportation Improvement Program

The Statewide Transportation Improvement Program (STIP) is a planning document that lists all projects to be funded with federal funds as well as all state funded projects that are regionally significant. This document covers all such projects that are funded within five years. The current STIP document covers fiscal years 2024-2028. The previous STIP document (2022-2026) was also evaluated.

The importance of the STIP in the ProPEL Indy study is that of defining the future existing roadway network. Projects listed in the STIP are expected to be completed within five years; and therefore, will become existing conditions of the future conditions analysis of this PEL study.

All projects included in the 2024-2028 STIP that fall within the study area are depicted in **Appendix E**. This includes projects under construction (I-65/I-70 North Split) or currently in NEPA (I-65 Safety and Efficiency).

2.9.2 Indiana Multi-Modal Freight and Mobility Plan

The *Indiana Multimodal Freight and Mobility Plan*[2] *(May 2023)* addresses statewide freight issues and needs, identifying goals for carbon reduction, freight corridors, and prioritized projects. This Plan identifies several network improvements located within the limits of the ProPEL Indy study that are intended to reduce congestion and/or improve safety for freight movement. These are listed as follows:

- **I-70 from Harding Street to East Street** – Added travel lanes; interchange modification at West Street/Missouri Street, Madison Avenue
- I**-70 from Holt Road to Harding Street** – Added travel lanes, interchange modification at Holt Road
- **I-65 & I-70/Washington Interchange** – Interchange modification
- **I-65 from 25th Street to 38th Street** – Added travel lanes; interchange modification at 29th and 30th Street.

[2] https://www.in.gov/indot/files/Indiana-Multimodal-Freight-and-Mobility-Plan_Report.pdf

2.10 Inventory of Assets

Data regarding the pavement, bridges, and large culverts within the study area was obtained from INDOT and evaluated to identify locations where rehabilitations or replacements of such assets are likely needed prior to the ProPEL Indy horizon year of 2050. This information will be combined with the geometric deficiencies, the operational analysis results, and the safety analysis results to prioritize improvement recommendations developed as part of this PEL Study.

Asset data is provided in detail in **Appendix F** and is summarized below.

2.10.1 Pavement

The corridors are divided into multiple pavement keys or segments of roadway where pavement types and rehabilitation schedules are consistent. Asset data for each pavement key was obtained from INDOT and evaluated to determine pavement types and expected years for both rehabilitation and replacement of pavement. This information is summarized in **Figure 19**, with greater detail provided in **Appendix F**. Based on this information, the sections of pavement with major work expected prior to 2030 are as follows:

- I-65 from Dr Martin Luther King Jr Street to West Street (PK 30233);
- I-65/70 from Fletcher Avenue to Washington Street (PK 30231);
- I-70 from I-465 W Jct to Belmont Avenue (PK 30247);
- I-70 from Belmont Avenue to Missouri Street (PK 30248); and,
- I-70 from Missouri Street to the South Split (PK 30409).

Other sections of pavement within the study area are not expected to require replacement until sometime near or beyond the horizon year of this study.

Figure 19. Expected Major Pavement Work

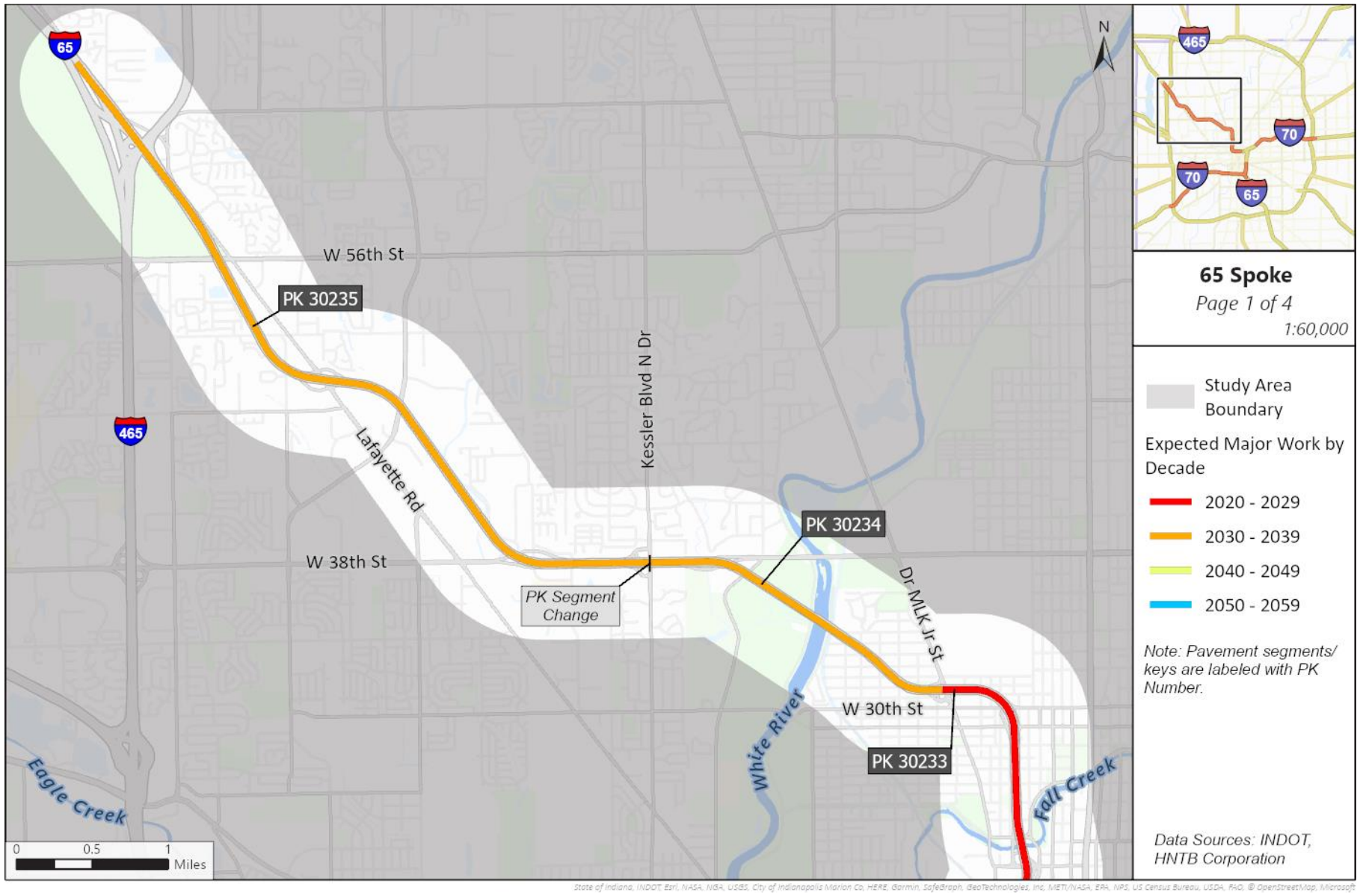


Figure 19. Expected Major Pavement Work (cont.)

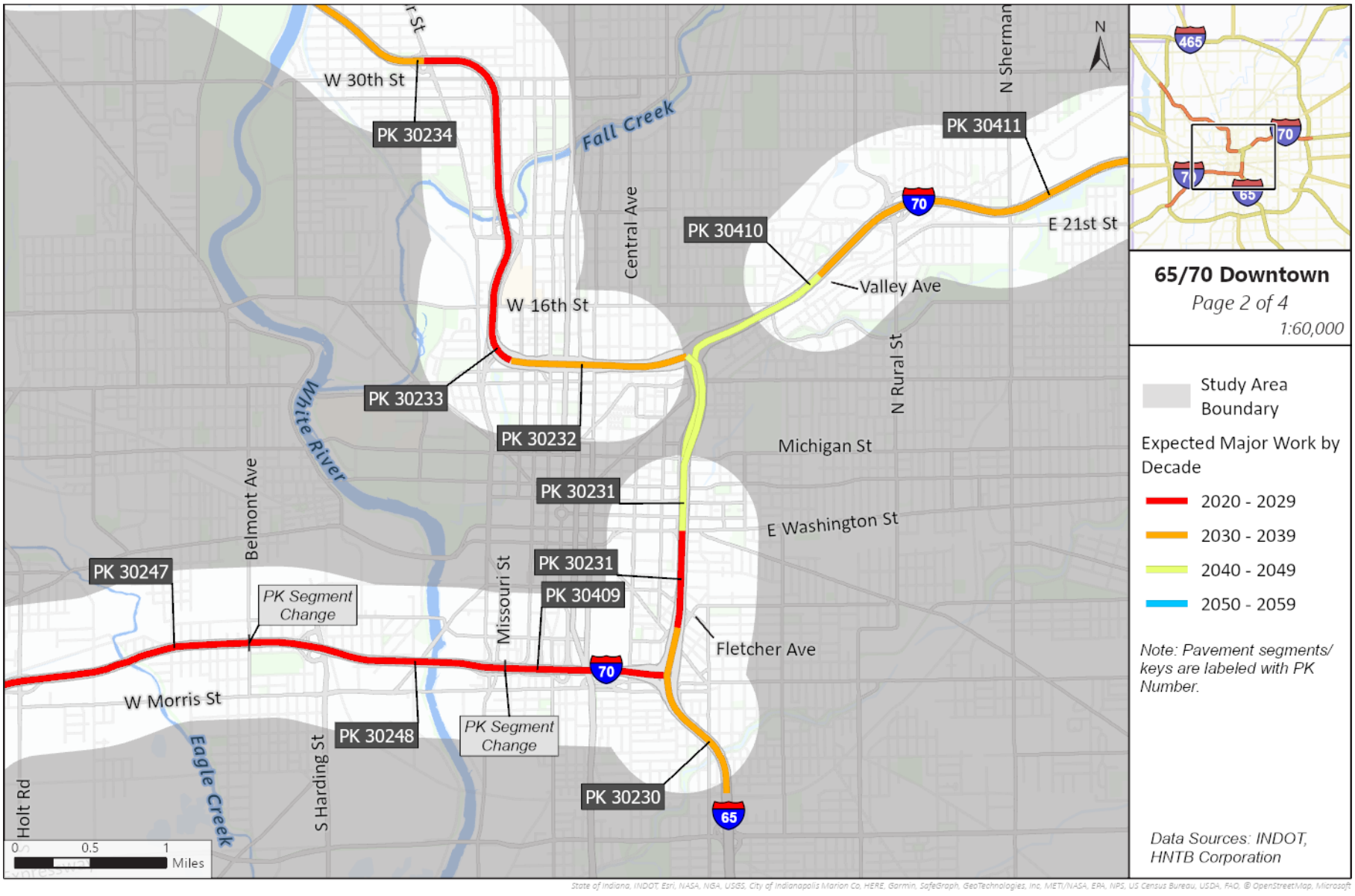


Figure 19. Expected Major Pavement Work (cont.)

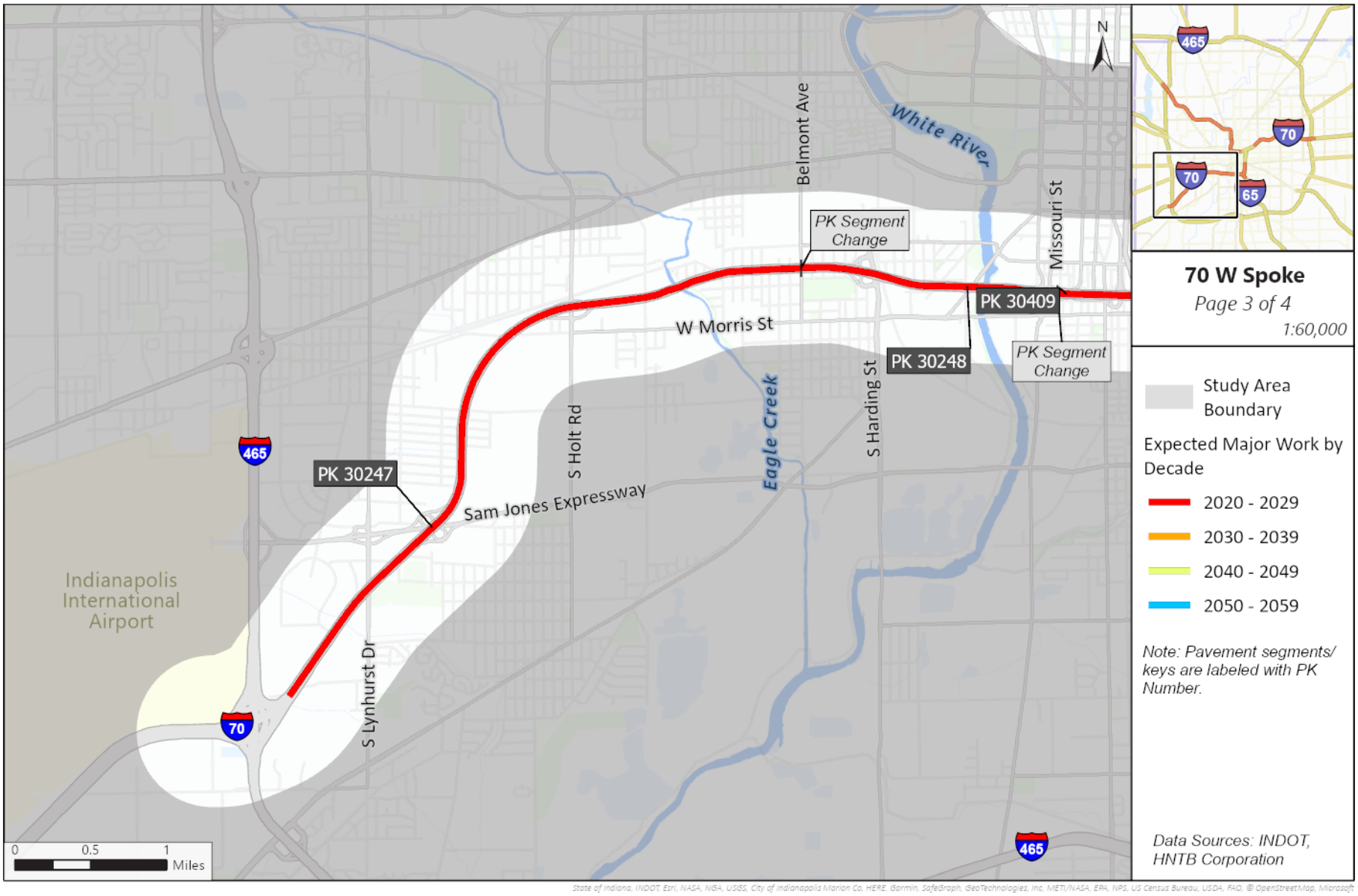
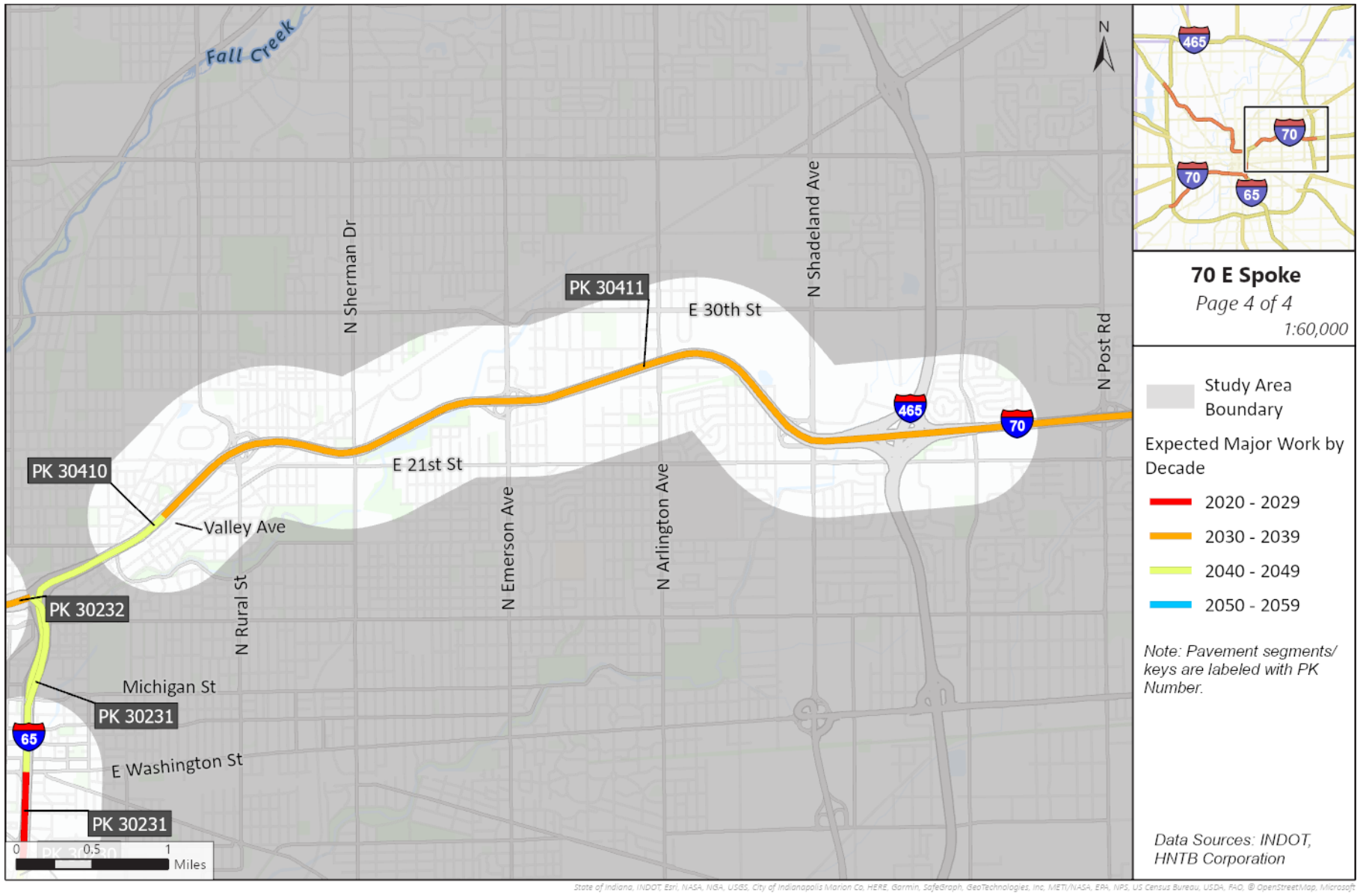


Figure 19. Expected Major Pavement Work (cont.)



2.10.2 Bridges

Condition ratings for each of the 123 bridges within the study area were obtained from INDOT. Bridge condition is determined by the lowest ranking of a bridge element (i.e., deck, superstructure, substructure, or channel), with rankings defined in **Table 11**. Based on the lowest rated bridge element, none of the bridges are rated in poor condition, while 53 are rated in Fair condition. Condition ratings for each spoke of this study are summarized in **Table 12**. **Appendix F** provides complete results of the conditions ratings analysis.

Table 11: Bridge Condition Assessment Ratings

Condition Rating	Condition Assessment
≥ 7	= Good Condition
5 or 6	= Fair Condition
≤ 4	= Poor Condition

Table 12: Bridge Conditions

Spoke	# of Bridges	Condition Rating		
		Good	Fair	Poor
65	31	21	10	0
70W	26	15	11	0
65/70 Downtown	30	5	25	0
70 E	36	29	7	0
Totals	**123**	**70**	**53**	**0**

The INDOT Greenfield District Asset Team, who is responsible for maintaining these bridges, provided insight regarding the next major planned work activity for each bridge and the approximate timing of said activities. This information is summarized in **Table 13**, which lists the number of bridges per spoke with planned major bridge work in each decade. It should be noted the horizon year of this study is 2050 and all planned major bridge work occurring on or after 2050 is not considered in this study. **Figure 20**, **Figure 21**, **Figure 22** and **Figure 23** depict the decade in which major work is expected to occur on each bridge within the study area.

Table 13: Planned Major Bridge Work by Decade

Spoke	# of Bridges	Decade of Work			
		2020 - 2029	2030 - 2039	2040 - 2049	2050 or Beyond
I-65	31	0	19	10	2
I-70 W	26	1	14	3	7
Downtown	30	4	21	5	1
I-70 E	36	0	27	4	5
Totals	**123**	**5**	**81**	**22**	**15**

The five bridges are expected to have major work prior to 2030 are listed as follows:

- Bridge 036660, I-65 over Senate Avenue, Capital, Illinois, Meridian, Pennsylvania, Delaware and, Streets.
- Bridge 036340, Virginia Avenue and I-65/70
- Bridge 036320, I-65 over Morris Street
- Bridge 042110, I-70 over CSX Wye Tracks
- Bridge 042190, I-70 over Kentucky Avenue and the White River

2.10.3 Large Culverts

Large culverts are defined as structures with an opening span between 4 feet and 20 feet that transport water under a roadway. These structures are noteworthy in this study as substantial costs are associated with replacement of such structures and construction can have major impacts on traffic flow.

There are 40 large culverts within the study area, of which 13 are rated in fair condition and 1 large culvert is rated poor. There are also 11 culvert channels, which are the channels carrying water to and from a culvert, which are rated as fair.

Minor structures, those with spans less than 4 feet, are not discussed in this study, as rehabilitation or replacement of minor structures have much lower costs and lower impacts on traffic flow.

Figure 20. Expected Major Bridge Work, 65 Spoke

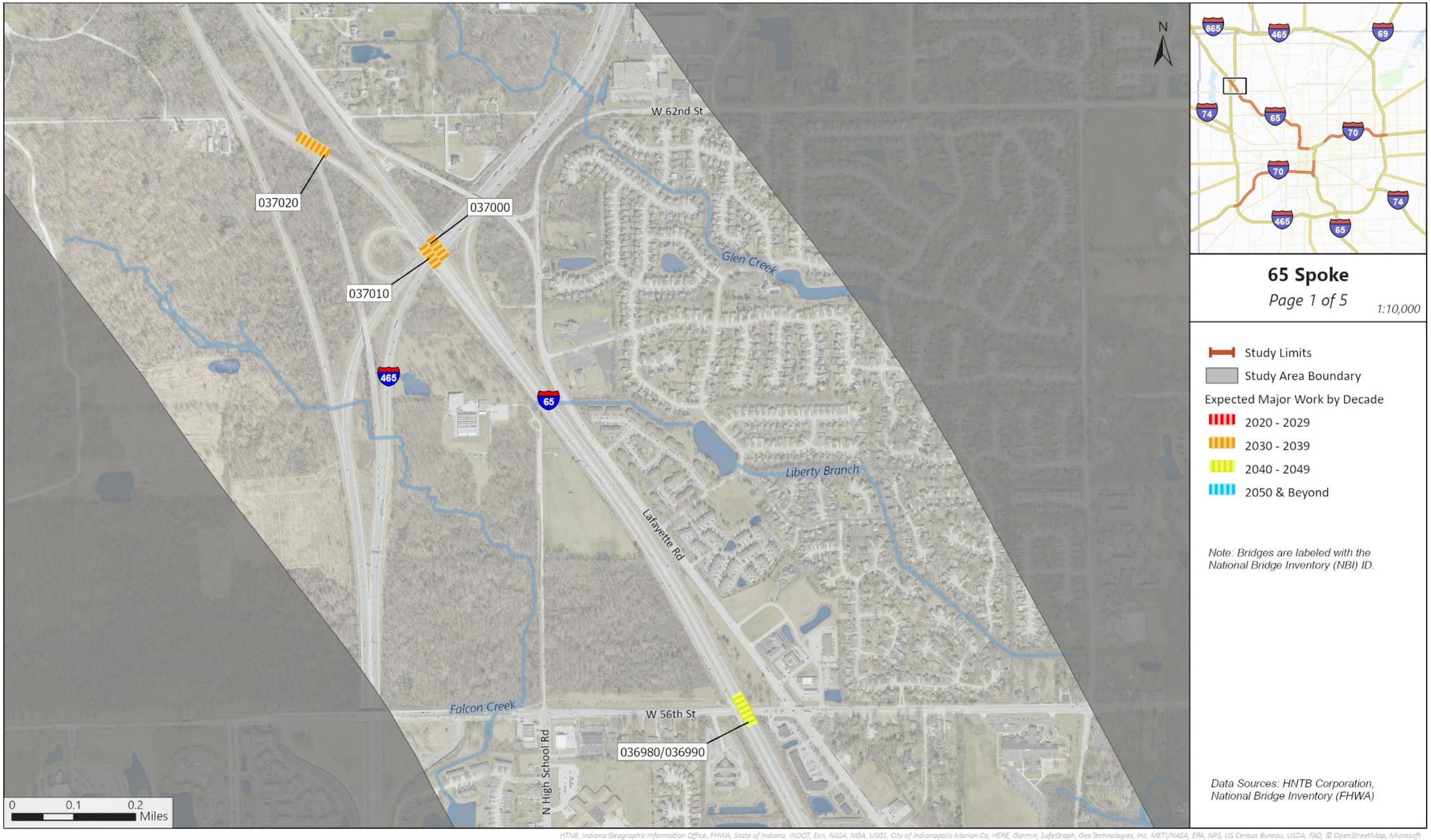


Figure 20. Expected Major Bridge Work, 65 Spoke (cont.)

Figure 20. Expected Major Bridge Work, 65 Spoke (cont.)

Figure 20. Expected Major Bridge Work, 65 Spoke (cont.)

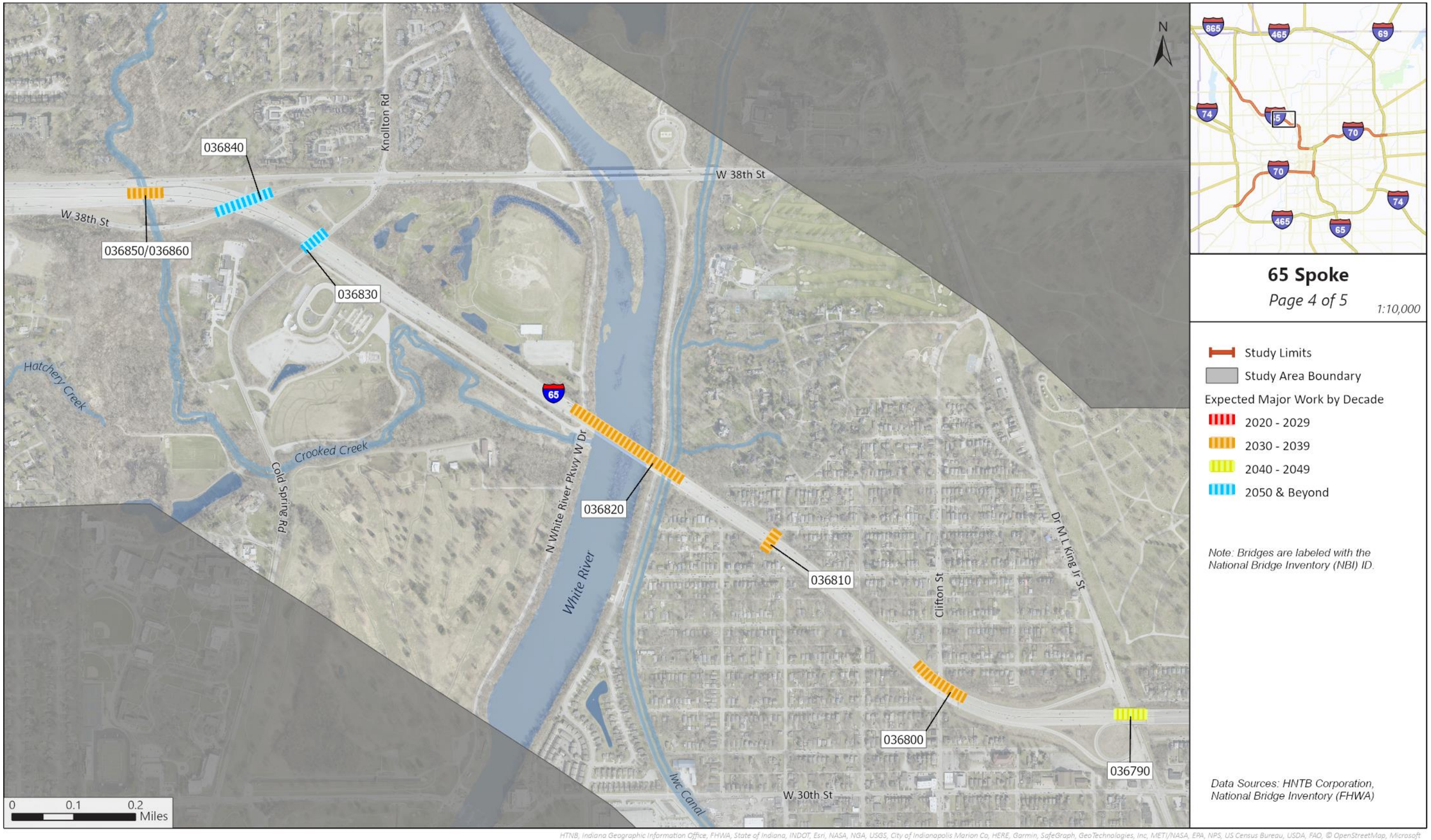


Figure 20. Expected Major Bridge Work, 65 Spoke (cont.)

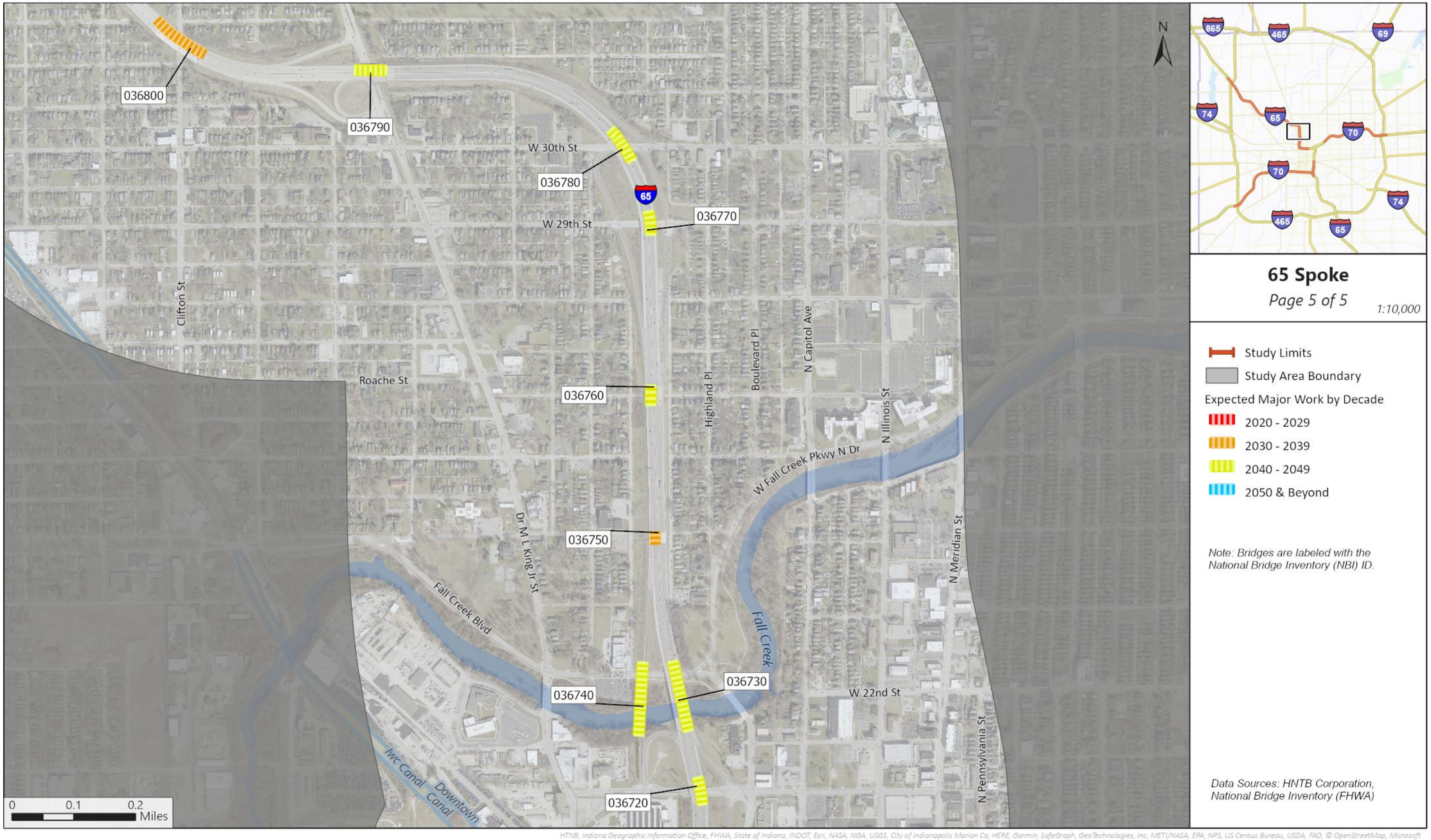


Figure 21. Expected Major Bridge Work, 65/70 Downtown Spoke

Figure 21. Expected Major Bridge Work, 65/70 Downtown Spoke (cont.)

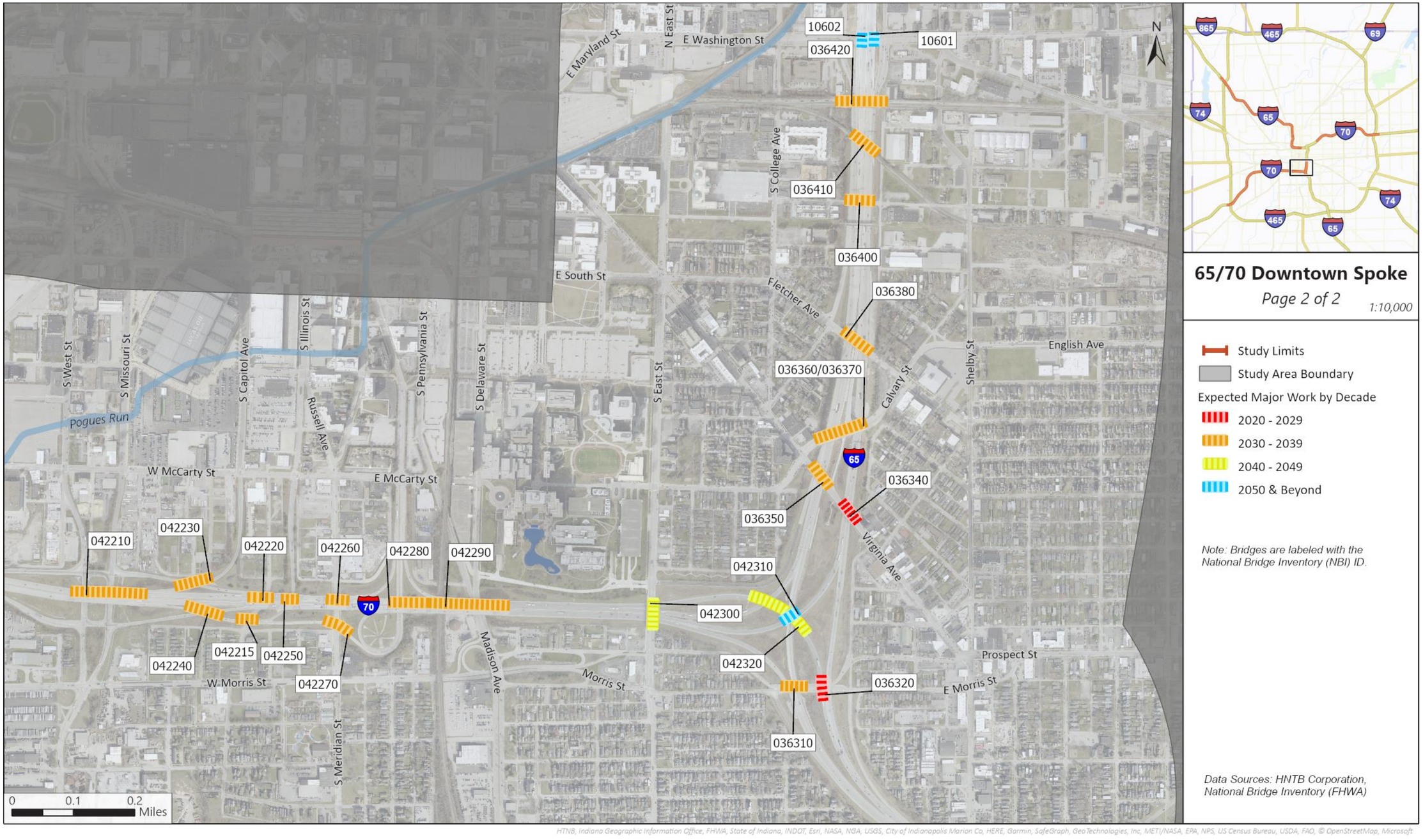


Figure 22. Planned Major Bridge Work, 70W Spoke

Figure 22. Planned Major Bridge Work, 70W Spoke (cont.)

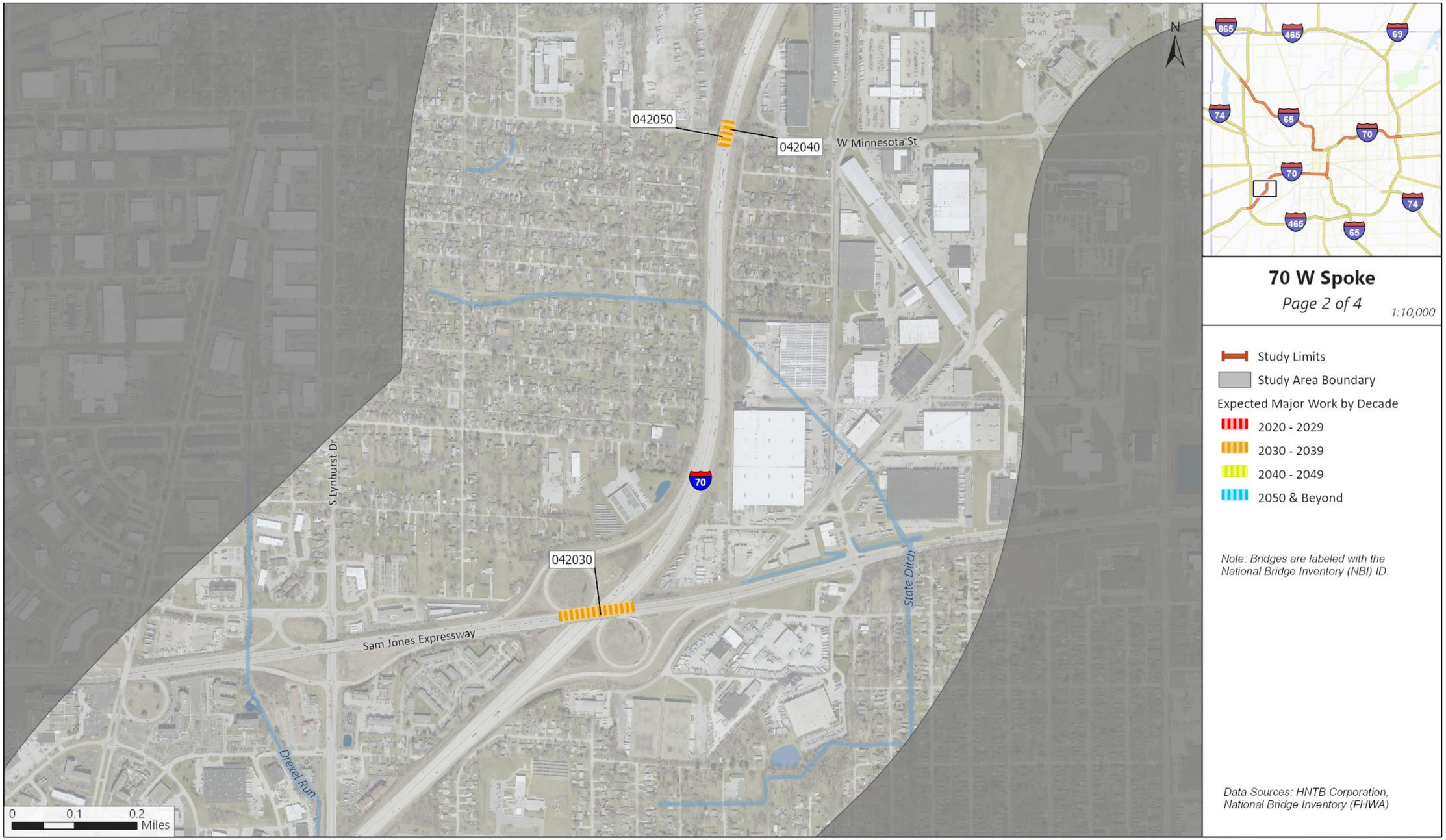
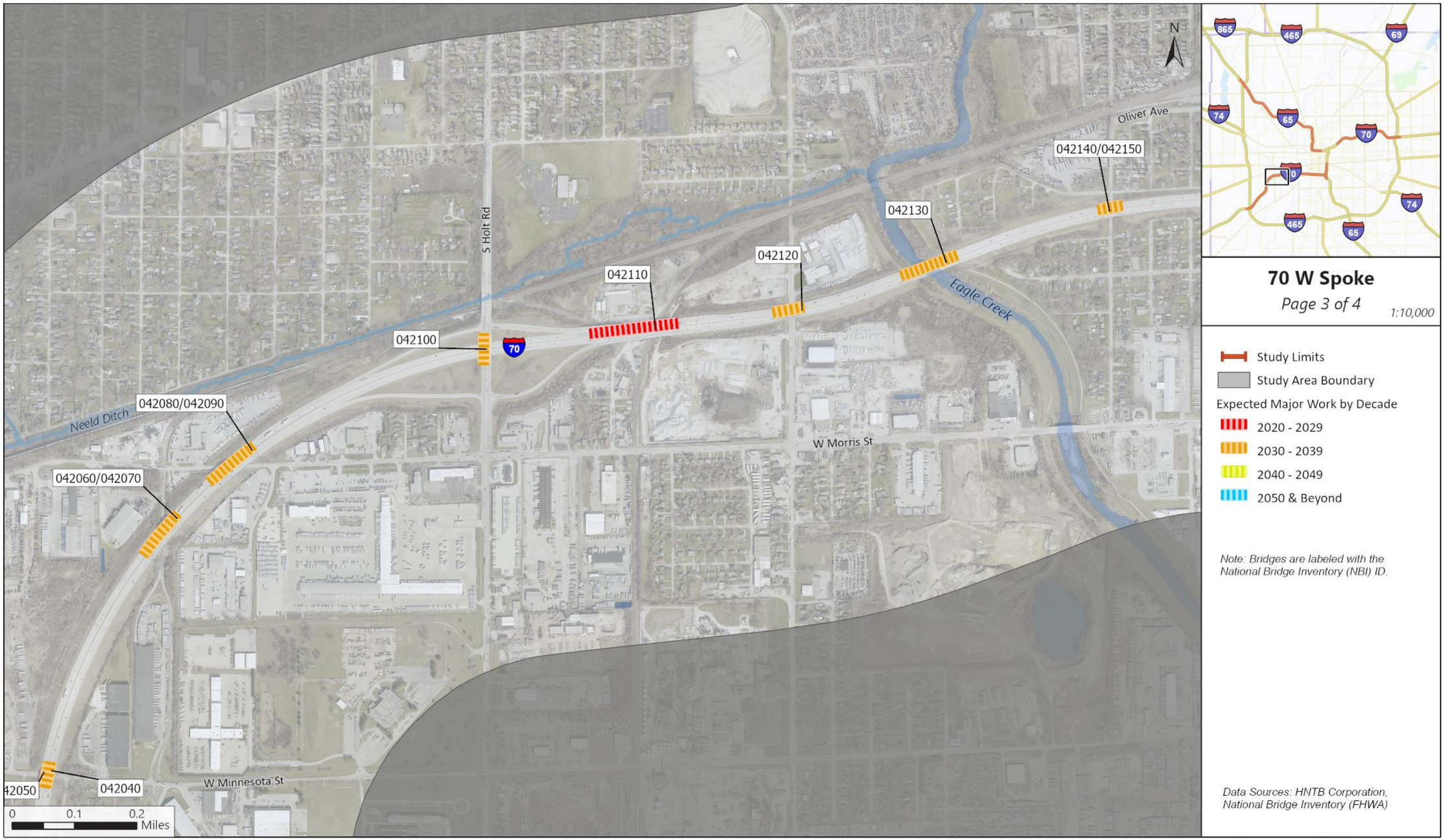


Figure 22. Planned Major Bridge Work, 70W Spoke (cont.)



HTNB, Indiana Geographic Information Office, FHWA, State of Indiana, INDOT, Esri, NASA, NGA, USGS, City of Indianapolis Marion Co, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, EPA, NPS, US Census Bureau, USDA, FAO, © OpenStreetMap, Microsoft

Figure 22. Planned Major Bridge Work, 70W Spoke (cont.)

Figure 23. Expected Major Bridge Work, 70E Spoke

Figure 23. Expected Major Bridge Work, 70E Spoke (cont.)

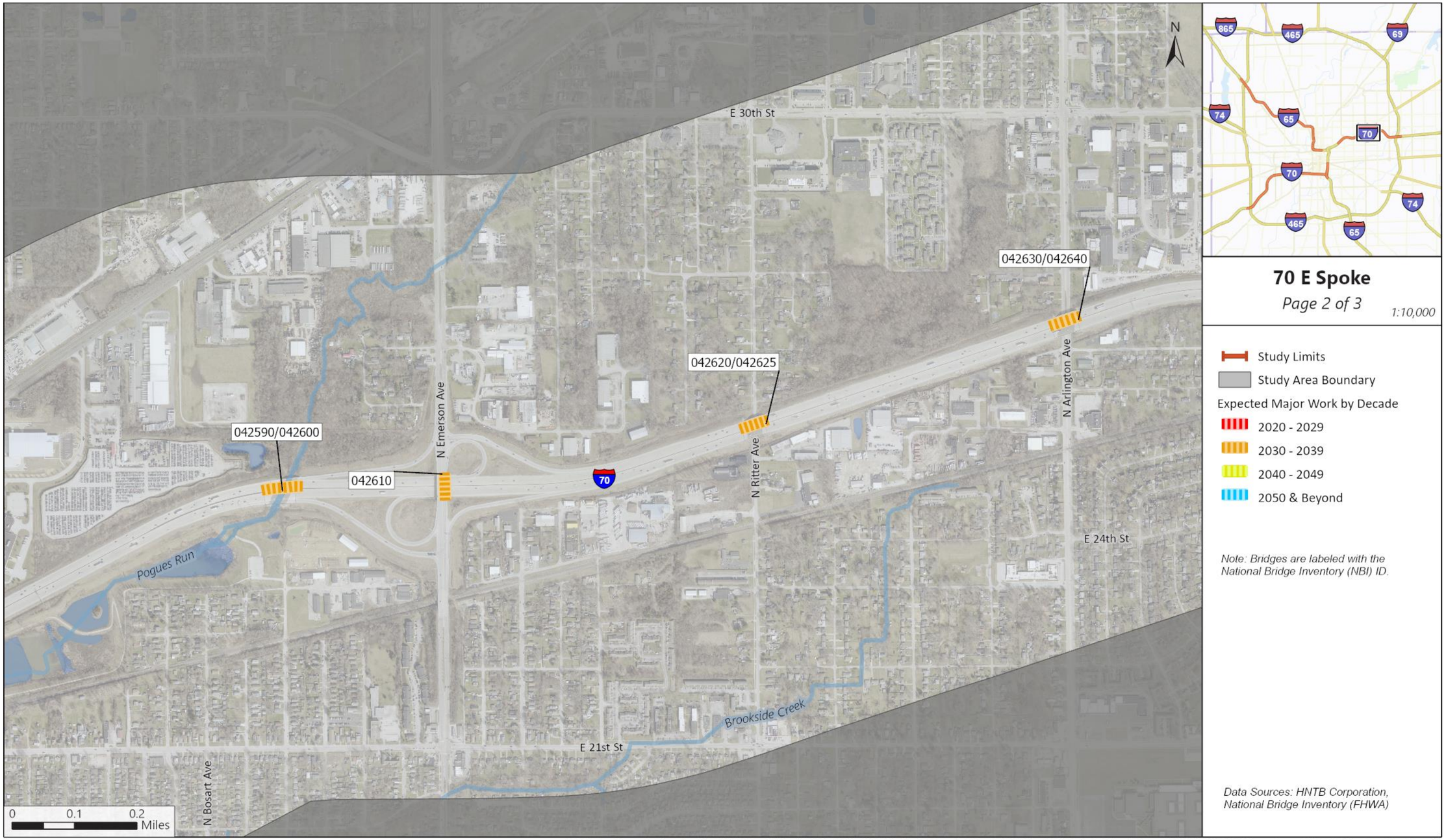


Figure 23. Expected Major Bridge Work, 70E Spoke (cont.)

3 Community Resources

3.1 Transit Routes

The Indianapolis Public Transportation Corporation, branded as IndyGo, is the region's public transit service provider operating Bus Rapid Transit (BRT), fixed-route buses, micro transit, and paratransit services within the study area and across Marion County. Service routes within the City/County utilize public right-of-way. Approximately 25 service routes are located within a 0.2-mile buffer of each spoke. These routes are depicted in **Appendix G**.

Currently no IndyGo bus routes operate on I-65 or I-70 within the study area. IndyGo has publicly acknowledged a plan to route the Blue Line BRT along I-70, between Holt Road and the Indianapolis International Airport. The Blue Line will use Washington Street to cross under I-65/70within the 65/70 Downtown Spoke. IndyGo BRT Red and Purple Lines both use Capitol Avenue to cross under I-65. The Red Line also uses Virginia Avenue to cross over I-65/70 within the 65/70 Downtown Spoke and Shelby Street to cross under I-65 outside of the study area.

3.2 Intermodal Facilities

Facilities that provide intermodal transportation service linkages are reviewed in the following subsections. While INDOT does not own, operate, or maintain such facilities, coordination between asset managers throughout the study will be crucial.

3.2.1.1 Indianapolis International Airport

The Indianapolis International Airport (IND) is the largest airport in the state of Indiana by passenger enplanements and is located immediately outside the study area limits (west of the I-465/I-70 W Jct) accessible from I-70 (Exit 69).

FedEx Express operates a national hub on the airport property under a land-lease through the year 2053.

3.2.1.2 Julia M. Carson Transit Center

The Julia M. Carson Transit Center, located at 201 E. Washington Street in downtown, is the region's centralized transit hub connecting IndyGo service routes across Marion County.

3.2.1.3 Greyhound

Greyhound intercity passenger bus service operates in Indianapolis. The Greyhound bus station is in downtown Indianapolis at 350 S. Illinois Street, with direct access to I-65 and I-70.

3.2.1.4 Amtrak

Amtrak intercity passenger rail operates tri-weekly service in downtown Indianapolis at the Train Station Building located at 350 S. Illinois Street, a shared transit facility with Greyhound. The Cardinal route, with service between New York and Chicago, offers connections in Indianapolis operating Mondays, Thursdays, and Saturdays.

Four daily round trips from Indianapolis to Cincinnati and Indianapolis to Louisville are proposed in Amtrak's Connect US Corridor Vision[3], a 15-year service expansion plan.

3.3 Police, Fire, and EMS Facilities

The entities listed below serve the study area and will be coordinated with, as needed, throughout the ProPEL Indy study. The locations of these facilities are provided in **Appendix H**.

3.3.1 Police

Indianapolis Metropolitan Police Department (IMPD) operates five stations within the study area. The IMPD Northwest District headquarters is located west of the 65 Spoke along Office Plaza Boulevard, and a coordinating district station is located adjacent to I-65 along Industrial Boulevard accessed by Guion Road and 38th Street. The IMPD Southeast District headquarters is located along Shelby Street in Fountain Square, southeast of the South Split, and has quick access to I-65 along Prospect Street and East Morris Street.

Additionally, just outside of the study area, the primary IMPD Headquarters is located west of the I-65/70 Downtown Spoke, operating out of the Indianapolis City-County Building. Likewise, an Indiana State Police (ISP) post shares location with the INDOT Traffic Management Center, south of I-70, just outside of the eastern end of the 70E Spoke study area limits.

3.3.2 Fire & Emergency Medical Services

The Indianapolis Fire Department (IFD) and Indianapolis Emergency Medical Services (IEMS) operates 10 fire and/or emergency medical services facilities within the study area, including the IFD downtown headquarters at the 10th Street and East Street intersection in downtown Indianapolis. As described, IFD and IEMS are combined at three of these locations with the IEMS headquarters located within the study area.

The majority of the study area is located within the jurisdictional limits of the IFD; however, portions of the 65 Spoke and 70W Spoke are under Township jurisdiction. There are two fire stations located within these Township limits, including Pike Township Fire Department & Medic Station 64 and Wayne Township Fire Department Station 81. Additionally, there are two fire response services that serve independent areas. The Eli Lilly campus and Indianapolis International Airport have their own

[3] https://media.amtrak.com/amtrak-connects-us/

jurisdictional authority to provide their own fire protection services. The IAA Fire Department operates out of the airport and the Eli Lilly Fire Rescue operates out of and protects the company's technology center located south of the 70W Spoke.

Five of the fire stations (IFD Stations 3, 5, 14, and 19 plus the Wayne Township Station 81) are either located directly adjacent to an interstate or have nearby access to the interstates depicted in Appendix H.

3.4 School Districts & Higher Education Facilities

3.4.1 Primary and Secondary Education

The study area spans multiple school districts providing K-12 educational services, including the Metropolitan School Districts (MSDs) of Pike Township, Warren Township, Wayne Township, and Decatur Township, as well as the Indianapolis Public School (IPS) District, which encompasses most of the study area. Additionally, there are privately- or charter-operated schools within the study area.

Within the study area, there are 43 education facilities, which include public schools, private and charter schools, colleges, or universities, as well as education administrative offices. There are 13 educational facilities located adjacent to the study area, some of which have quick access to one of the interstates. IPS transportation utilizes study spoke roadways for school busing services. The *ProPEL Indy Environmental Constraints Report* details the location of each facility. **Appendix H** depicts the location of primary and secondary education facilities.

3.4.2 Higher Education

The main campus of Indiana University (IU) Indianapolis (formerly IUPUI) will retain 85 percent of the current IUPUI student enrollment, at over 23,000 students after dissolution of the partnership between Indiana University and Purdue University is completed July 2024.

IU Indianapolis is located on the west side of downtown Indianapolis with interstate access to the campus available from multiple I-65 and I-70 interchanges, including I-70 exit 114 (West Street/Dr Martin Luther King Jr Street) and I-65 exit 79A (Missouri Street/West Street). The campus provides 13 parking garages and over 50 surface lots for student commuters, residents, faculty/staff, and campus visitors. Purdue University in Indianapolis will occupy a 28-acre campus site on the northside of the current IUPUI campus. A campus master plan will be completed in Summer 2024 with building program details.

Marian University, a private Catholic university located four miles northwest of downtown Indianapolis in the Near Northwest Area, maintains an enrollment of approximately 3,700 students. The university is accessible by I-65 via exit 119 (38th Street), with campus access on Cold Spring Road and 30th Street.

Martin University is a small private college located in the Martindale-Brightwood neighborhood of Indianapolis. As the only Predominantly Black Institution (PBI) in the state of Indiana, Martin University maintains a total enrollment of 231 undergraduate and graduate students. The college is accessible by I-70 via exit 85 (Rural Street/Keystone Way). Butler University and Ivy Tech Community College are accessible by I-65 via exit 119 (38th Street) for Butler University and exit 117 (Dr MLK Jr Street) for Ivy Tech Community College.

The location of all educational facilities are depicted in **Appendix H**.

3.5 Hospitals

There is one hospital within the study area. The IU Methodist Hospital is adjacent to the northwest portion of the 65/70 Downtown Spoke. The IU Health medical campus, located in downtown Indianapolis, combines the operations of IU Health Methodist and University hospitals. Sited on 44-acres bounded by I-65 to the west, Capitol Avenue to the east, and 16th and 12th Streets to the north and south, operations between the two acute-care hospitals will be fully consolidated by 2027 at the opening of a new healthcare facility.

IU Health is a Level 1 Adult Trauma Center, one of three in the Indianapolis metropolitan region. The IU Health campus is accessible from I-65 at exit 114.

A sixteen-story tower, between 12th and 16th Streets and between Capitol Avenue and I-65, will deliver 864-patient beds combining the operations of both IU Health Methodist and University hospitals. The building that now houses the University Hospital on the IUPUI campus will become the property of IU Indianapolis.

Additional medical facilities located within the study limit buffer include Sidney & Lois Eskenazi Hospital, Riley Children's Hospital, Roudebush VA Medical Center, and Kindred Hospital Indianapolis, all of which are accessible from I-65 at exit 114. Community Hospital East, outside the study limit buffer, is accessible from I-70 east at exit 87 (N. Emerson Ave.)

3.6 Places of Interest

Places of interest are destinations within the study area that generate significant activity from residents, employees, and visitors. The following paragraphs describe some of the major places of interest.

3.6.1 Downtown Indianapolis

Downtown Indianapolis contains the City of Indianapolis original one square mile plat, Mile Square, and is the governmental, economic, and cultural center of the state of Indiana drawing numerous employees, state workers, residents, and visitors to the city center.

Government Center

The state capitol of Indiana is in downtown Indianapolis. The Indiana Statehouse, the Indiana Government Centers, the City-County Building, the Birch Bayh Federal Building, the US District Court – Southern Indiana, the Social Security Administration, US Customs & Immigration Field Office, and other governmental and judiciary functions – are located downtown with direct access to I-65 and I-70 interstates at 14 entrance ramps and 12 exits.

Employment

Numerous small, mid, and large-sized firms, including several Fortune 500 companies, are in downtown Indianapolis with the downtown office submarket containing approximately 11.3 million square feet of commercial office space.

Stadium and Convention Facilities

Stadiums and arenas located downtown hosting major and minor league professional sports teams include Lucas Oil (Indianapolis Colts), Gainbridge Fieldhouse (Indiana Pacers), and Victory Field (Indianapolis Indians). Indy Eleven, a member of the United Soccer League, is scheduled to open a new soccer stadium constructed on a 20-acre site in the southwest quadrant of downtown by Summer 2025.

The Indiana Convention Center contains approximately 1.3 million square feet of meeting and exhibition space hosting numerous trade shows and professional conventions throughout the calendar year.

Cultural Arts and Entertainment

Performing arts venues and theatres located downtown include the Hilbert Circle Theatre, Indiana Repertory Theatre, Old National Centre, and the TCU Amphitheater located at White River State Park.

A variety of cultural museums, monuments, parks, and civic spaces are contained downtown. The Soldiers and Sailors Monument at Monument Circle, American Legion Mall, the Indiana War Memorial & Museum, Military Park, the Indiana State Museum, White River State Park, the Madam Walker Legacy Center, and the Indianapolis Canal Walk are all accessible by the Inner Loop interstate system, which consists of I-65 & I-70 around the north, east and south sides of downtown Indianapolis.

Additional regional attractions located within the study area beyond the downtown Inner Loop include the Benjamin Harrison Presidential Site, the Indianapolis Zoo, the Indianapolis Children's Museum, Newfields, the International Marketplace, and numerous other cultural and recreational attractions with the Indianapolis Zoo and Indianapolis Children's each drawing an attendance of over 1 million visitors annually.

Notable regional parks near the study spokes include Eagle Creek Park, Virginia B. Fairbanks Art & Nature Park, Riverside Park, Brookside Park, and Pogue's Run Art and Nature Park.

3.6.2 Future Developments

Notable site development projects to be delivered within the study area include:

- IU Health Complex, an 864-bed hospital with occupancy by 2027.
- Elanco Corporate Headquarters, at the former GM Stamping Plant site, with occupancy by 2025.
- Eleven Park, a stadium and mixed-use development project including office, retail, and residential uses; early building program phases anticipated for opening by 2025.
- Purdue University in Indianapolis, a 28-acre campus site in the northwest quadrant of downtown Indianapolis. A campus master plan will be completed in Summer 2024 with building program details.
- Bottleworks Phase II, a mixed-use development project including office and retail with occupancy by 2025.
- Indiana Convention Center expansion to add 143,500 square feet of convention center and a new 800-room hotel

4 Safety

To obtain a better understanding of existing safety issues, an analysis of crash data was conducted for the study intersections and interstate segments identified in **Section 2**. Historical crash information was obtained for the time period from January 1, 2018 to December 31, 2022.

Analysis of the historic crash data was performed in three steps. In the first step, analysis of the crashes was performed using the RoadHAT crash analysis software. This software compares the crash history of a roadway segment or intersection to comparable locations within Indiana. The software outputs two indices: the Index of Crash Frequency (ICF) and the Index of Crash Cost (ICC). The ICF value indicates how much the reported number of crashes deviates from what is expected. The ICC value indicates how much the crash severity deviates from what is expected. The ICF and ICC values indicate standard deviations from the expected value. Values greater than zero indicate crash frequency or severity greater than expected, while values less than zero indicate crash frequency or severity less than expected. The second step in the analysis was to identify crash trends or patterns that could help explain the crash statistics. The third step was to evaluate fatal and incapacitating injury crashes for locations where ICF or ICC values were found to be greater than greater than 1.0.

The crash analysis was performed for the entire study area and is summarized by spoke in the remainder of this chapter. RoadHAT outputs, crash density heat maps and detailed breakdowns of each intersection and segment are provided in **Appendix I.**

4.1 65 Spoke

2,480 crashes occurred within the limits of the 65 Spoke. These crashes occurred either on the interstates or at the study intersections within the study area. These crashes were analyzed to determine crash characteristics along the corridor. A summary of the crashes within the 65 Spoke is provided in **Table 14**.

Table 14. Summary of Crash Types and Severities, 65 Spoke

CRASH TYPE	SEVERITY			TOTAL	PERCENTAGE
	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY (PDO)		
Rear End	46	59	672	777	31%
Same Direction Sideswipe	19	28	526	573	23%
Ran Off Road	46	45	337	428	17%
Right Angle	29	34	120	183	7%
Other/Unknown	15	15	131	161	6%
Left Turn	14	18	71	103	4%
Collision With Object in Road	3	2	69	74	3%
Right Turn	1	2	20	23	1%
Backing	0	1	50	51	2%
Head On	5	7	26	38	2%
Non-Collision	4	1	16	21	1%
Left/Right Turn	3	3	15	21	1%
Bike/Ped	3	2	0	5	0%
Opposite Direction Sideswipe	0	0	10	10	0%
Collision with Animal	0	0	12	12	0%
TOTAL	**188**	**217**	**2,075**	**2,480**	**100%**

The RoadHAT results for the 65 Spoke are depicted in **Figure 24**. Three intersections and seven interstate segments produced an ICF and/or ICC value greater than or equal to 1.0, as highlighted in **Table 15** and **Table 16**. **Figure 25** and **Figure 26** summarize the crash types for the study intersections and interstate segments, respectively. A detailed review of the crash data at these intersections and interstate segments was conducted and is summarized in the remainder of this section. A detailed analysis of the locations with ICF and/or ICC values above 1.0 are provided in **Appendix I**.

Figure 24. Crash Analysis Summary, 65 Spoke

Figure 24. Crash Analysis Summary, 65 Spoke (cont.)

Figure 24. Crash Analysis Summary, 65 Spoke (cont.)

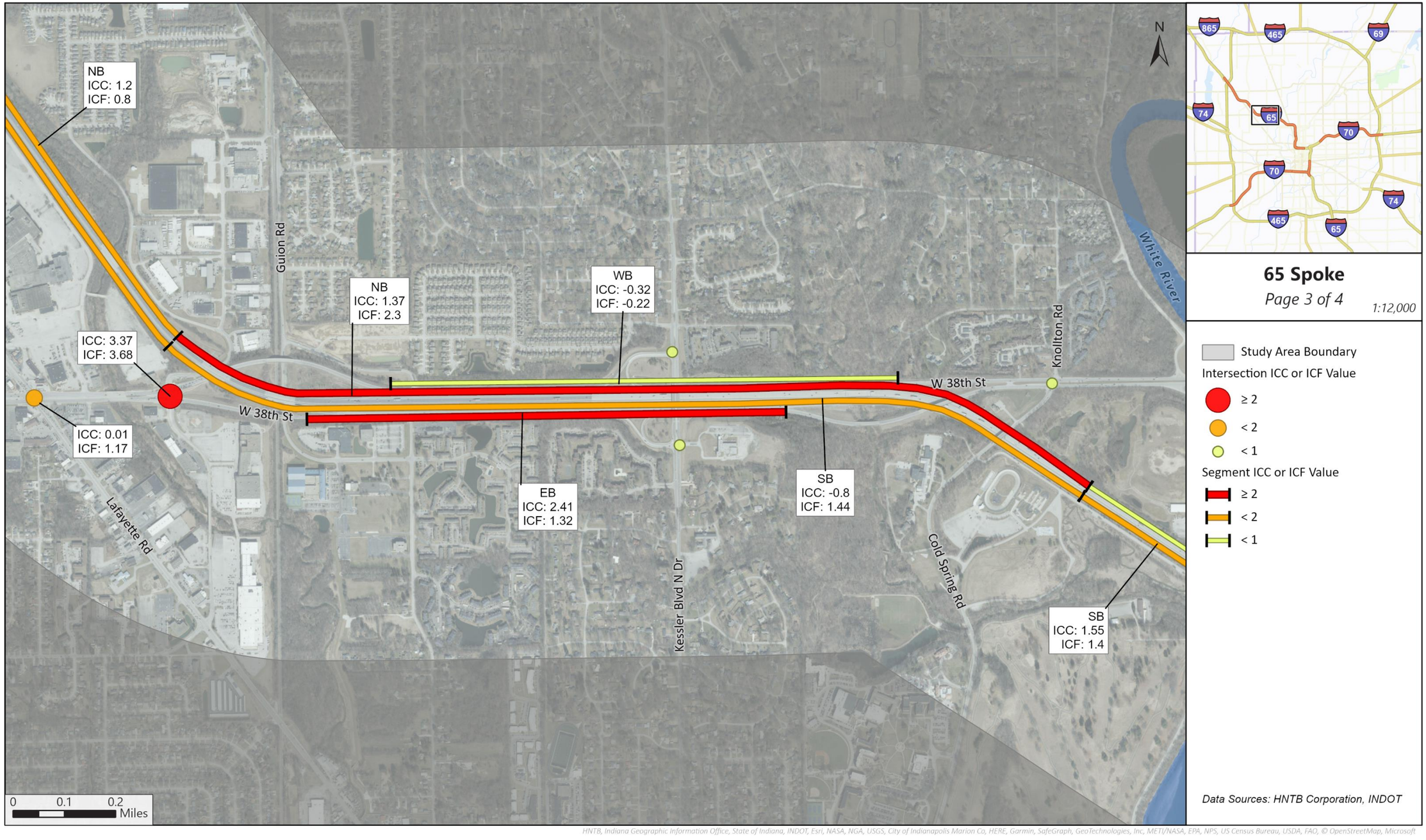


Figure 24. Crash Analysis Summary, 65 Spoke (cont.)

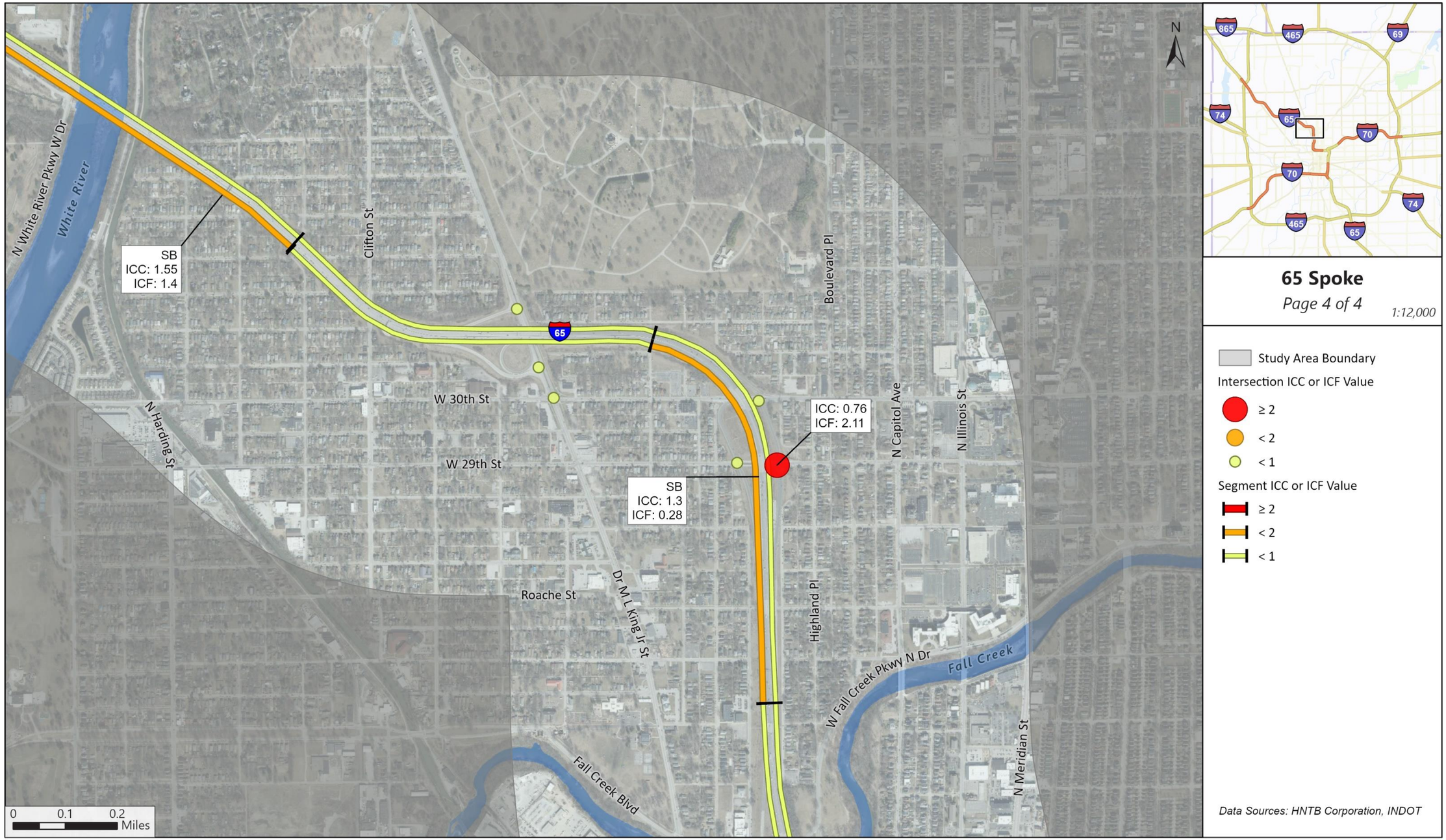
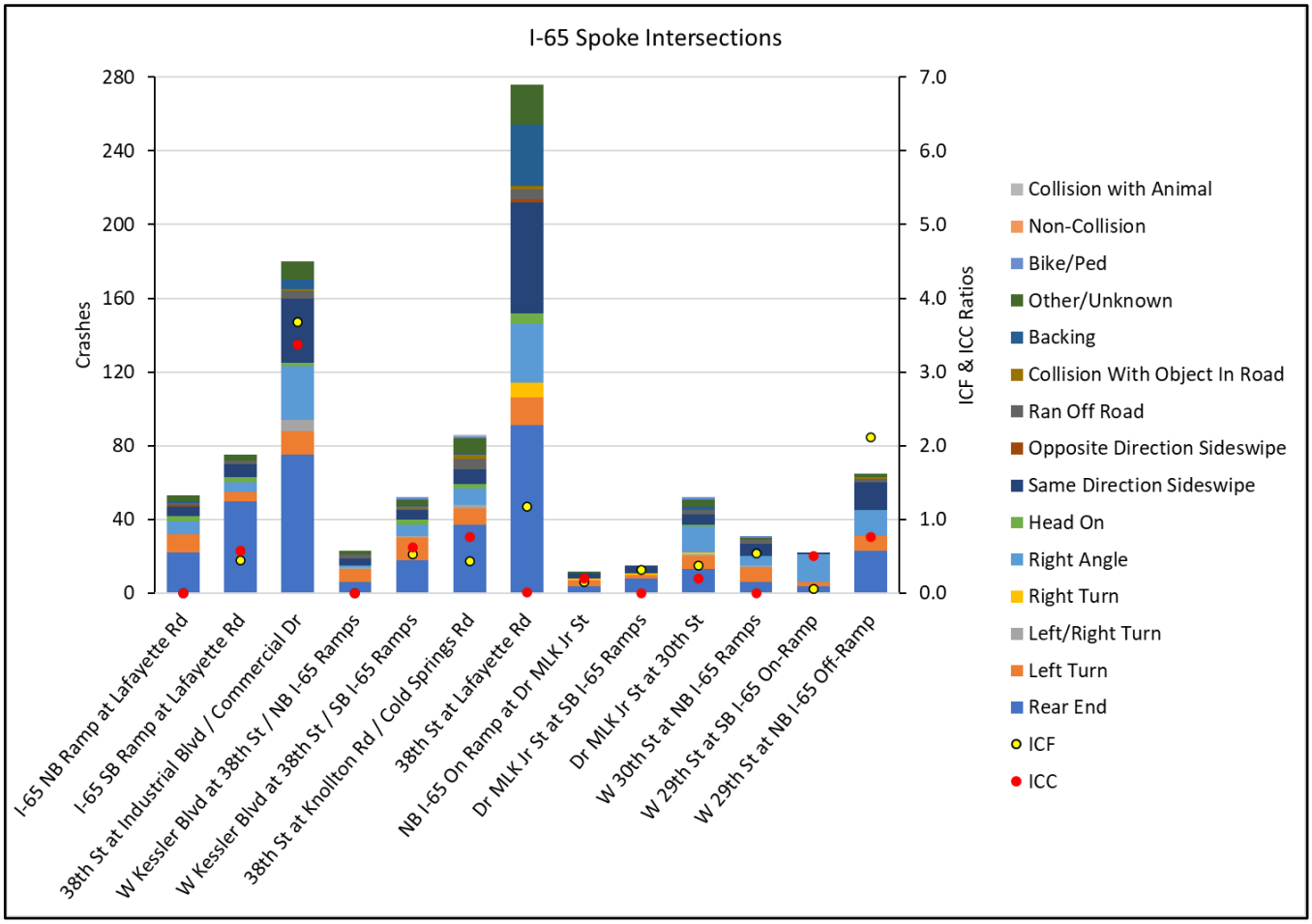


Table 15. Intersection Analysis Summary, 65 Spoke

LOCATION	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY	ICF	ICC
I-65 NB Ramp at Lafayette Rd	3	9	41	-0.06	-0.15
I-65 SB Ramp at Lafayette Rd	7	5	63	0.45	0.58
38th St at Industrial Blvd / Commercial Dr	18	18	144	3.68	3.37
W Kessler Blvd at 38th St / NB I-65 Ramps	3	3	17	-0.56	-0.10
W Kessler Blvd at 38th St / SB I-65 Ramps	4	7	41	0.53	0.62
38th St at Knollton Rd / Cold Springs Rd	8	11	67	0.43	0.77
38th St at Lafayette Rd	7	18	251	1.17	0.01
NB I-65 On Ramp at Dr MLK Jr St	1	2	9	0.15	0.20
Dr MLK Jr St at SB I-65 Ramps	0	1	14	0.32	-0.55
Dr MLK Jr St at 30th St	3	8	41	0.38	0.20
W 30th St at NB I-65 Ramps	1	4	26	0.54	-0.06
W 29th St at SB I-65 On-Ramp	3	3	16	0.06	0.51
W 29th St at NB I-65 Off-Ramp	3	4	58	2.11	0.76
TOTAL	**61**	**93**	**788**	**-**	**-**

Figure 25. Intersection Crash Types, 65 Spoke

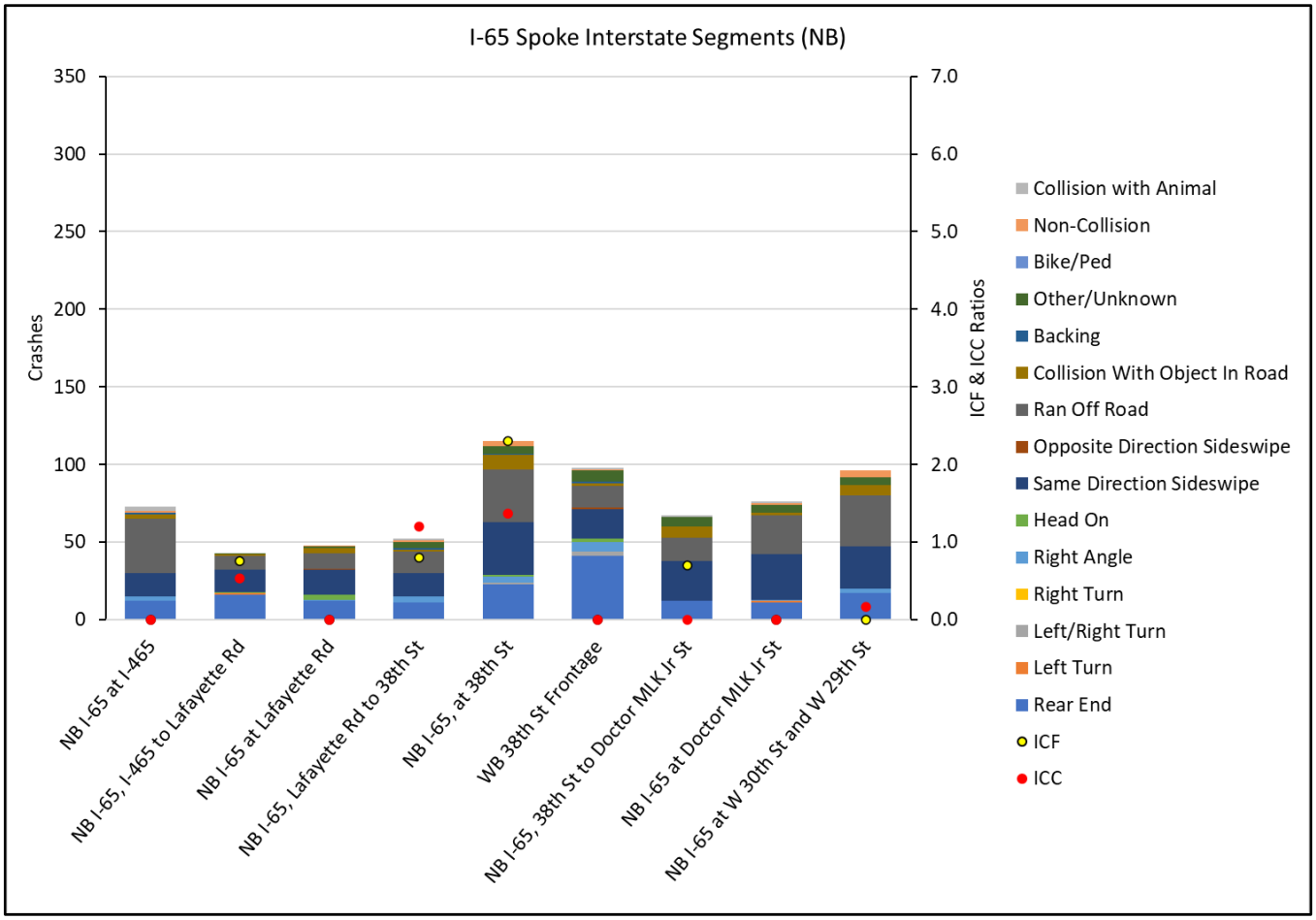


Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

Table 16. Interstate Segment Analysis Summary, 65 Spoke

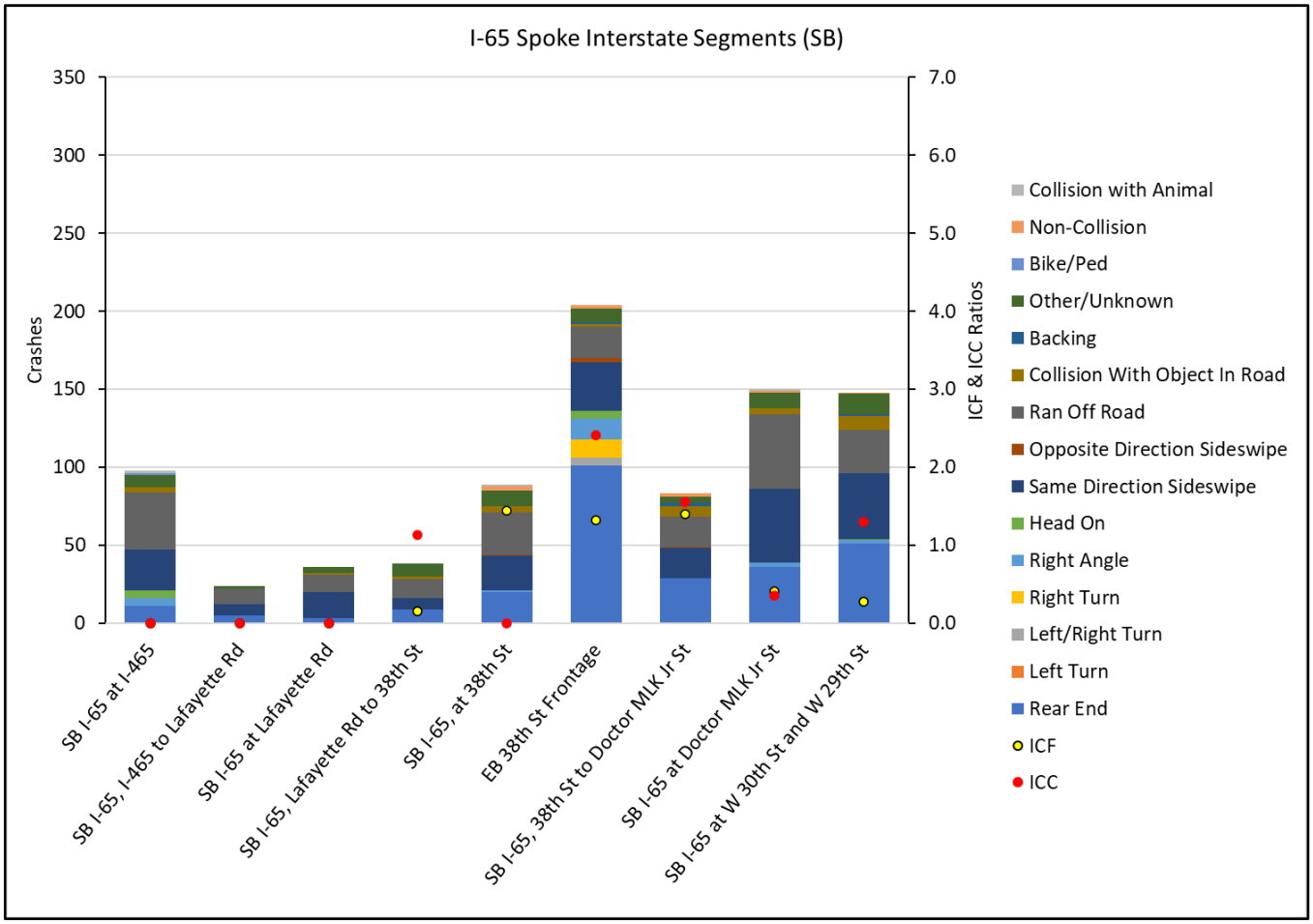
LOCATION	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY	ICF	ICC
NB I-65 at I-465	8	7	58	-0.93	-0.76
NB I-65, I-465 to Lafayette Rd	4	1	38	0.76	0.53
NB I-65 at Lafayette Rd	9	3	36	-0.91	-0.10
NB I-65, Lafayette Rd to 38th St	7	5	40	0.80	1.20
NB I-65, at 38th St	11	9	95	2.30	1.37
WB 38th St Frontage	5	7	86	-0.22	-0.32
NB I-65, 38th St to Doctor MLK Jr St	0	7	60	0.70	-1.35
NB I-65 at Doctor MLK Jr St	5	4	67	-0.48	-0.61
NB I-65 at W 30th St and W 29th St	9	7	80	-0.27	0.17
SB I-65 at I-465	9	7	82	-0.76	-0.58
SB I-65, I-465 to Lafayette Rd	2	1	21	-0.26	-0.39
SB I-65 at Lafayette Rd	2	3	31	-1.03	-1.51
SB I-65, Lafayette Rd to 38th St	7	6	25	0.15	1.13
SB I-65, at 38th St	2	8	79	1.44	-0.80
EB 38th St Frontage	15	18	171	1.32	2.41
SB I-65, 38th St to Doctor MLK Jr St	9	6	68	1.40	1.55
SB I-65 at Doctor MLK Jr St	8	10	132	0.41	0.35
SB I-65 at W 30th St and W 29th St	15	15	118	0.28	1.30
TOTAL	**127**	**124**	**1,287**	**-**	**-**

Figure 26. Interstate Segment Crash Types, 65 Spoke



Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

Figure 26. Interstate Segment Crash Types, 65 Spoke (cont.)



Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

4.2 65/70 Downtown Spoke

4,985 crashes occurred within the 65/70 Downtown Spoke. These crashes were analyzed to determine crash characteristics along the corridor. A summary of the crashes within the 65/70 Downtown Spoke is provided in **Table 17**.

Table 17. Summary of Crash Types and Severities, 65/70 Downtown Spoke

CRASH TYPE	SEVERITY			TOTAL	PERCENTAGE
	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY (PDO)		
Rear End	67	135	1528	1730	35%
Same Direction Sideswipe	39	42	1296	1377	28%
Ran Off Road	65	46	278	389	8%
Right Angle	62	122	457	641	13%
Other/Unknown	18	28	184	230	5%
Left Turn	13	22	204	239	5%
Collision With Object in Road	3	3	66	72	1%
Right Turn	2	3	119	124	2%
Backing	0	2	42	44	1%
Head On	5	6	25	36	1%
Non-Collision	3	1	28	32	1%
Left/Right Turn	0	1	34	35	1%
Bike/Ped	8	12	6	26	1%
Opposite Direction Sideswipe	0	1	9	10	0%
TOTAL	**285**	**424**	**4,276**	**4,985**	**100%**

The RoadHAT results for the 65/70 Downtown Spoke are depicted in **Figure 27**. Fifteen intersections and thirteen interstate segments produced an ICF and/or ICC value greater than or equal to 1.0, as highlighted in **Table 18** and **Table 19. Figure 28** summarizes the crash types for the study intersections and **Figure 29** summarizes the crash types for the study interstate segments. A detailed review of the crash data at these intersections and interstate segments was conducted and is summarized in the remainder of this section. A detailed analysis of the locations with ICF and/or ICC values above 1.0 are provided in **Appendix I**.The crash data for the intersections of 10th Street, Dr MLK Jr Street, West Street & 11th Street were combined into two intersections for analysis purposes. This was necessary as the proximity of the intersections resulted in inaccuracies in the locations of the crashes.

Figure 27. Crash Analysis Summary, 65/70 Downtown Spoke

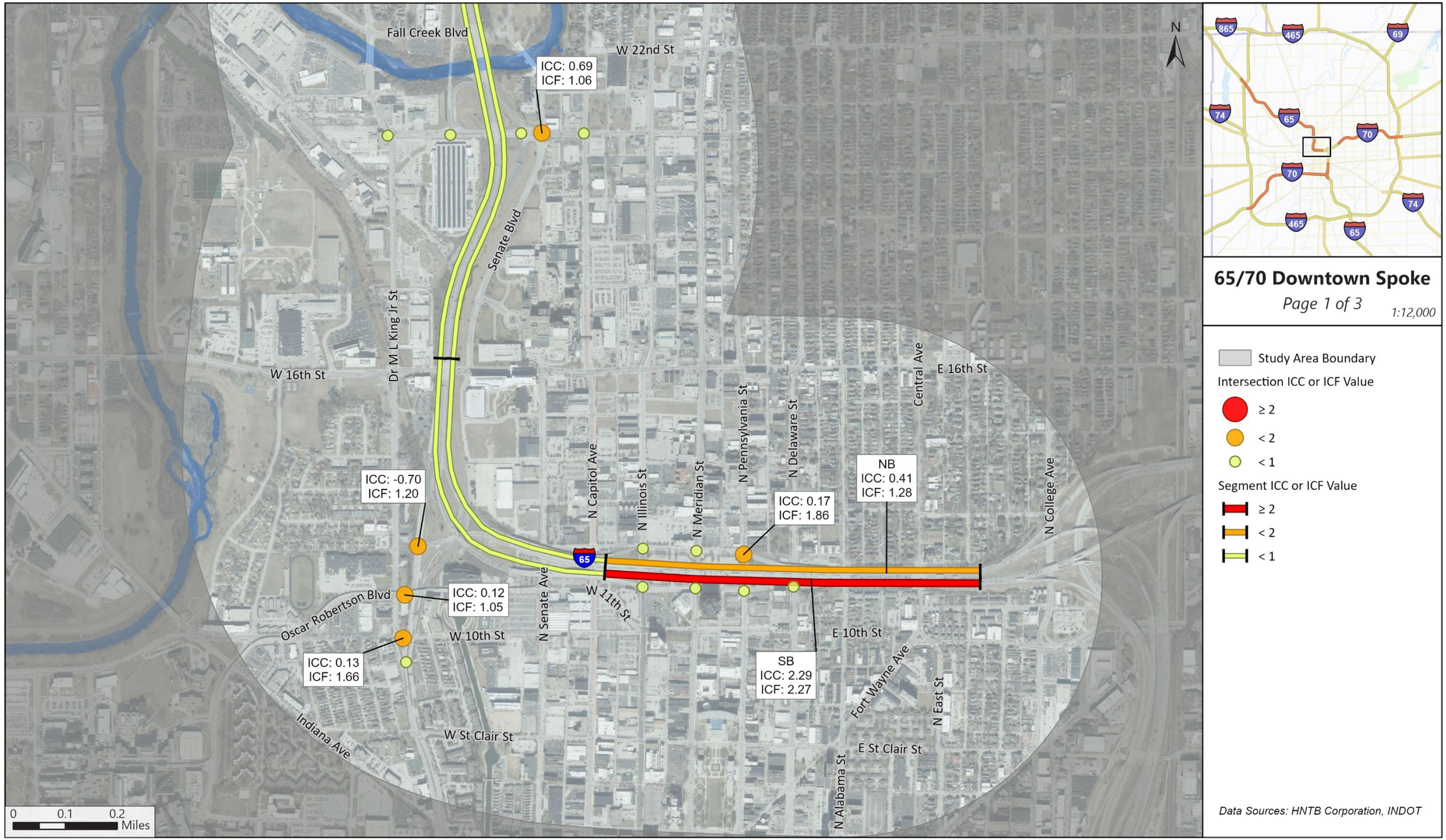


Figure 27. Crash Analysis Summary, 65/70 Downtown Spoke (cont.)

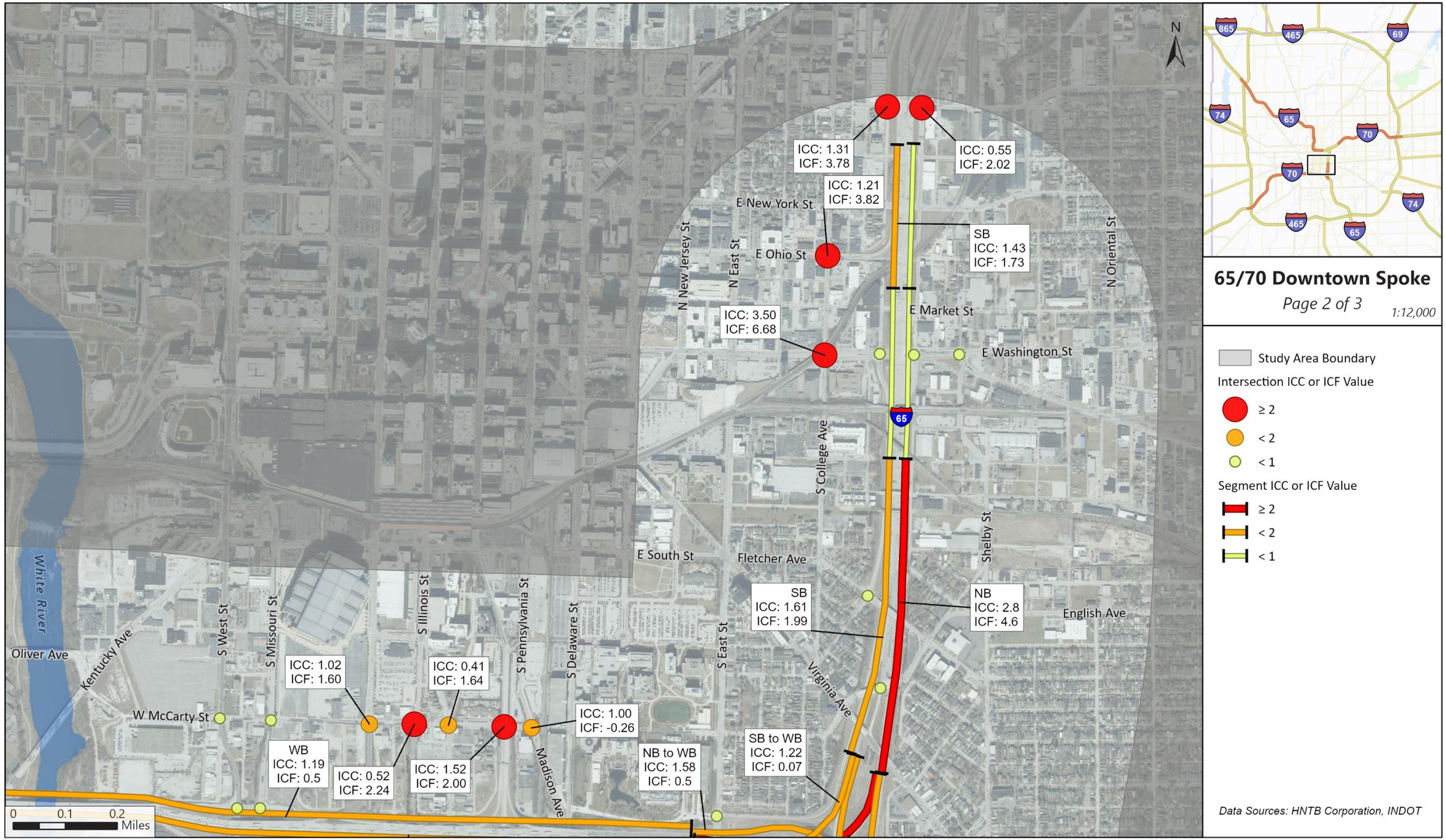


Figure 27. Crash Analysis Summary, 65/70 Downtown Spoke (cont.)

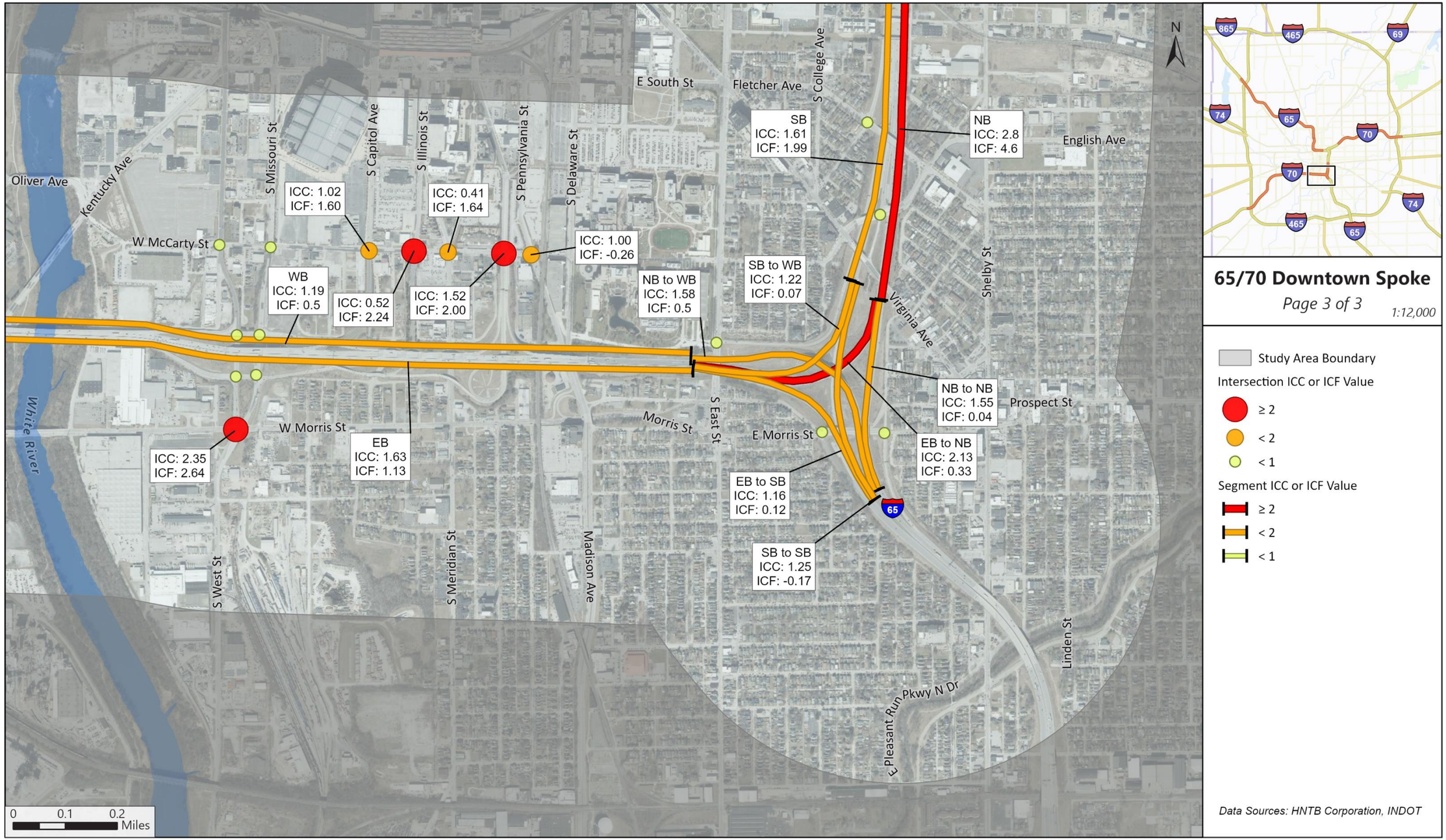
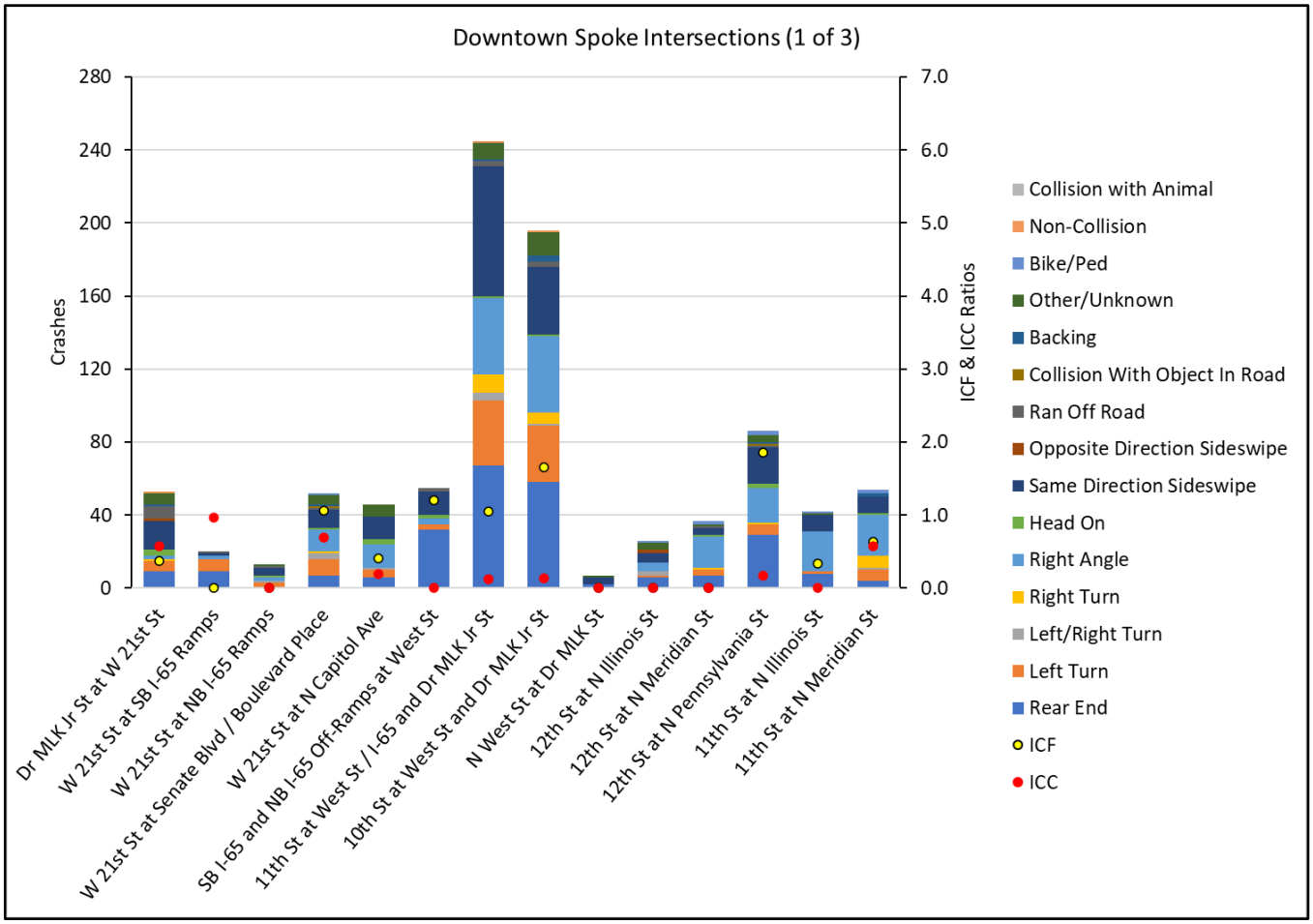


Table 18. Intersection Analysis Summary, 65/70 Downtown Spoke

LOCATION	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY	ICF	ICC
Dr MLK Jr St at W 21st St	5	4	44	0.37	0.58
W 21st St at SB I-65 Ramps	5	1	14	-0.15	0.97
W 21st St at NB I-65 Ramps	2	1	10	-0.51	-0.20
W 21st St at Senate Blvd / Boulevard Place	3	8	41	1.06	0.69
W 21st St at N Capitol Ave	3	5	38	0.41	0.20
SB I-65 and NB I-65 Off-Ramps at West St	0	2	53	1.20	-0.70
11th St at West Street / I-65 & Oscar Robertson Blvd at Dr MLK Jr St	8	17	220	1.05	0.12
10th at Dr MLK Jr St and N West St	5	9	182	1.66	0.13
N West St at Dr MLK St	0	0	7	-1.28	-1.58
12th St at N Illinois St	1	3	22	-0.47	-0.74
12th St at N Meridian St	3	4	30	-0.69	-0.74
12th St at N Pennsylvania St	1	10	75	1.86	0.17
11th St at N Illinois St	1	10	31	0.34	-0.10
11th St at N Meridian St	4	6	44	0.64	0.57
11th St at N Pennsylvania St	1	8	54	0.99	-0.13
11th St at N Delaware St	1	4	23	-0.59	-0.86
E Michigan St at Davidson St	3	5	68	3.78	1.31
E Michigan St at Pine St	2	5	52	2.02	0.55
E Ohio St at N College Ave	0	11	43	3.82	1.21
E Washington St at N College Ave	10	26	198	6.68	3.50
E Washington St at SB I-65 & I-70 On-Ramp	3	13	95	0.26	-0.39
E Washington St at NB I-65 & I-70 Off-Ramp	4	7	117	0.66	-0.26
E Washington St at Southeastern Ave	3	7	52	-0.43	-0.68
Fletcher Ave at SB I-65 & I-70 Off-Ramp	0	1	11	-0.29	-0.89
Calvary St at NB I-65 & I-70 On-Ramp	0	1	5	-0.71	-0.80
S East St at Commons Dr	0	2	4	-1.04	-1.12
Prospect St / E Morris St at I-65 SB On Ramp	0	0	3	-0.71	-0.73
E Morris St at I-65 NB Off-Ramp / Leonard St	1	0	7	-0.19	-0.06
W McCarty St at S West St	2	0	21	-0.22	-0.31
W McCarty St at S Missouri St	2	7	29	0.70	0.38

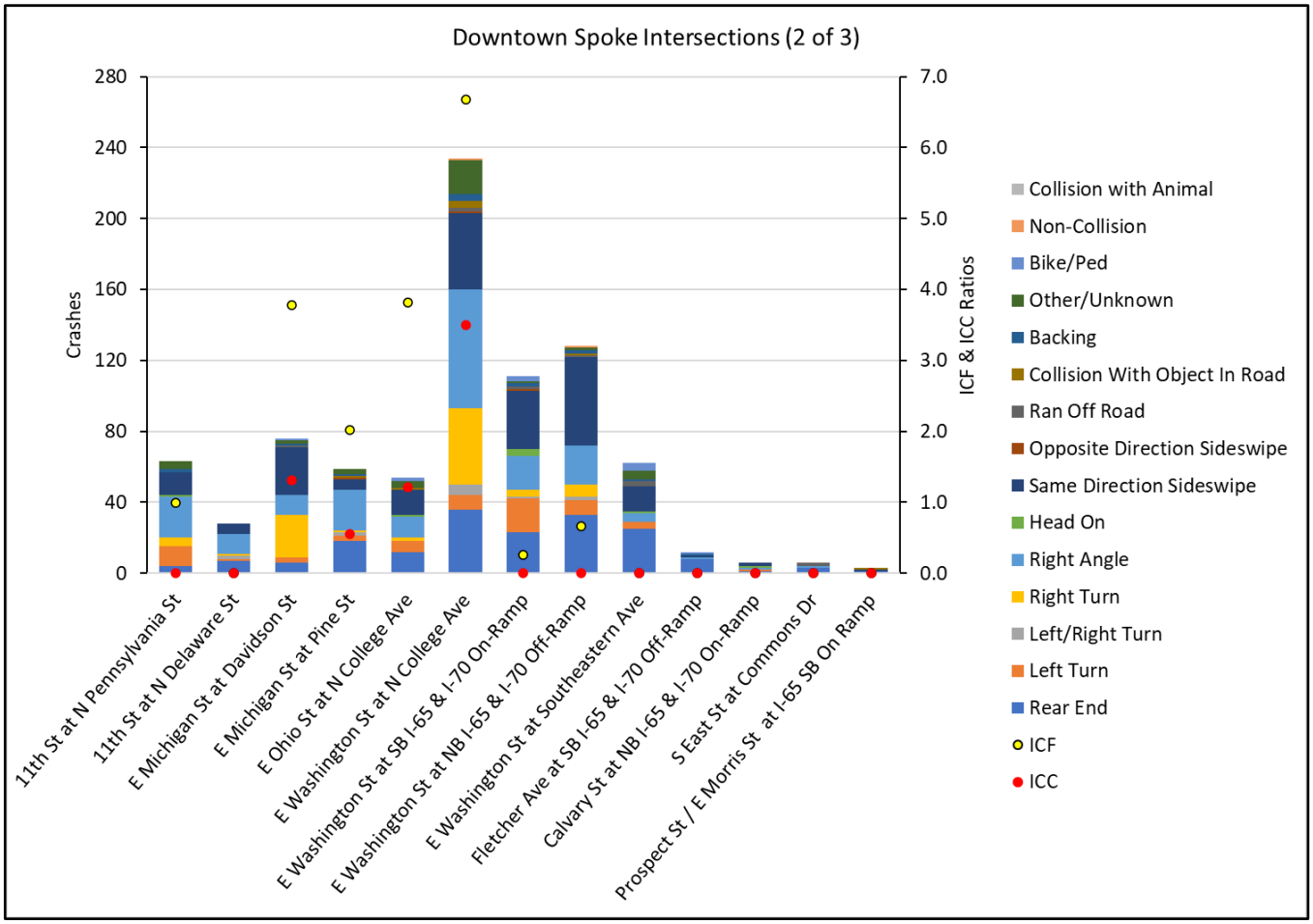
LOCATION	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY	ICF	ICC
W McCarty St at S Capitol Ave / WB I-70 On-Ramp	2	3	14	1.60	1.02
W McCarty St at Illinois St / EB I-70 Off-Ramp	0	7	20	2.24	0.52
W McCarty St at S Meridian St / Russell Ave	1	5	28	1.64	0.41
W McCarty St at I-70 Ramps / Madison Ave	7	9	77	2.00	1.52
W McCarty St at Pennsylvania St	4	3	6	-0.26	1.00
WB I-70 Ramps at S West St	5	4	34	0.46	0.77
WB I-70 Ramps at S Missouri St	3	1	28	-0.24	-0.21
EB I-70 Ramps at S West St	4	2	24	-0.09	0.32
EB I-70 Ramps at S Missouri St	1	4	17	-0.31	-0.46
W Morris St at S West St / S Missouri St	11	12	98	2.64	2.35
TOTAL	**111**	**227**	**1,939**	-	-

Figure 28. Intersection Crash Types, 65/70 Downtown Spoke



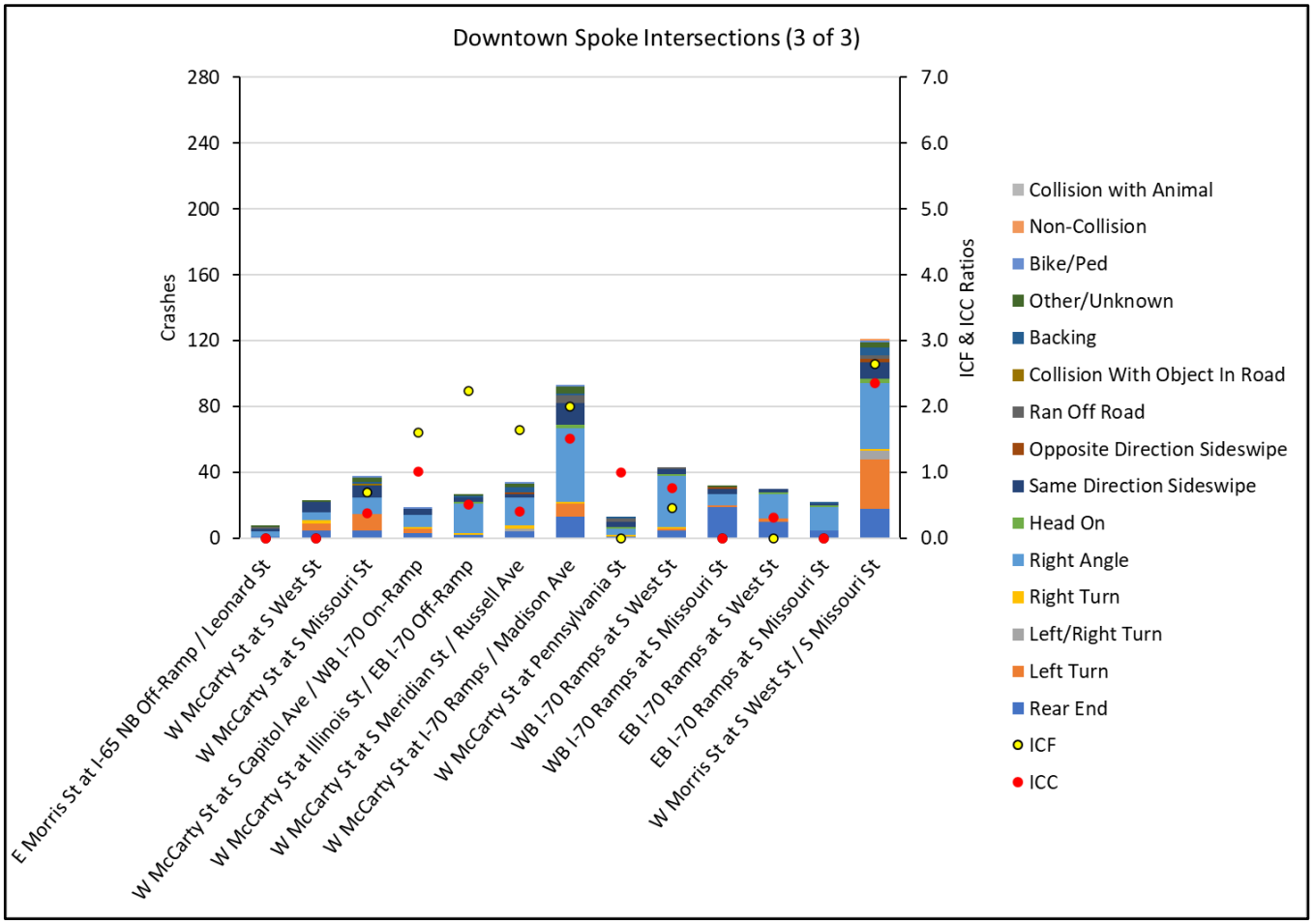
Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

Figure 28. Intersection Crash Types, 65/70 Downtown Spoke (cont.)



Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

Figure 28. Intersection Crash Types, 65/70 Downtown Spoke (cont.)

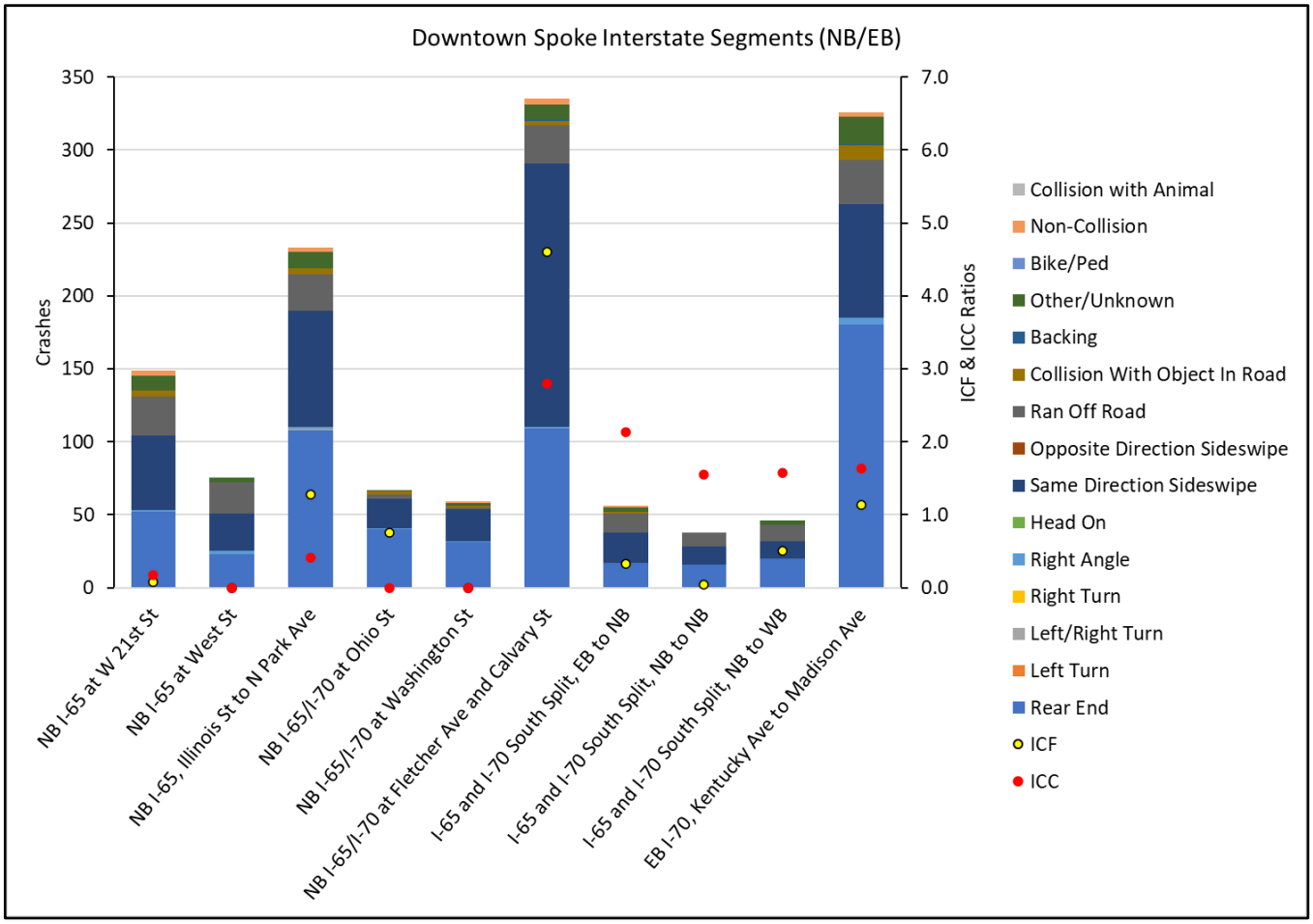


Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

Table 19. Interstate Segment Analysis Summary, 65/70 Downtown Spoke

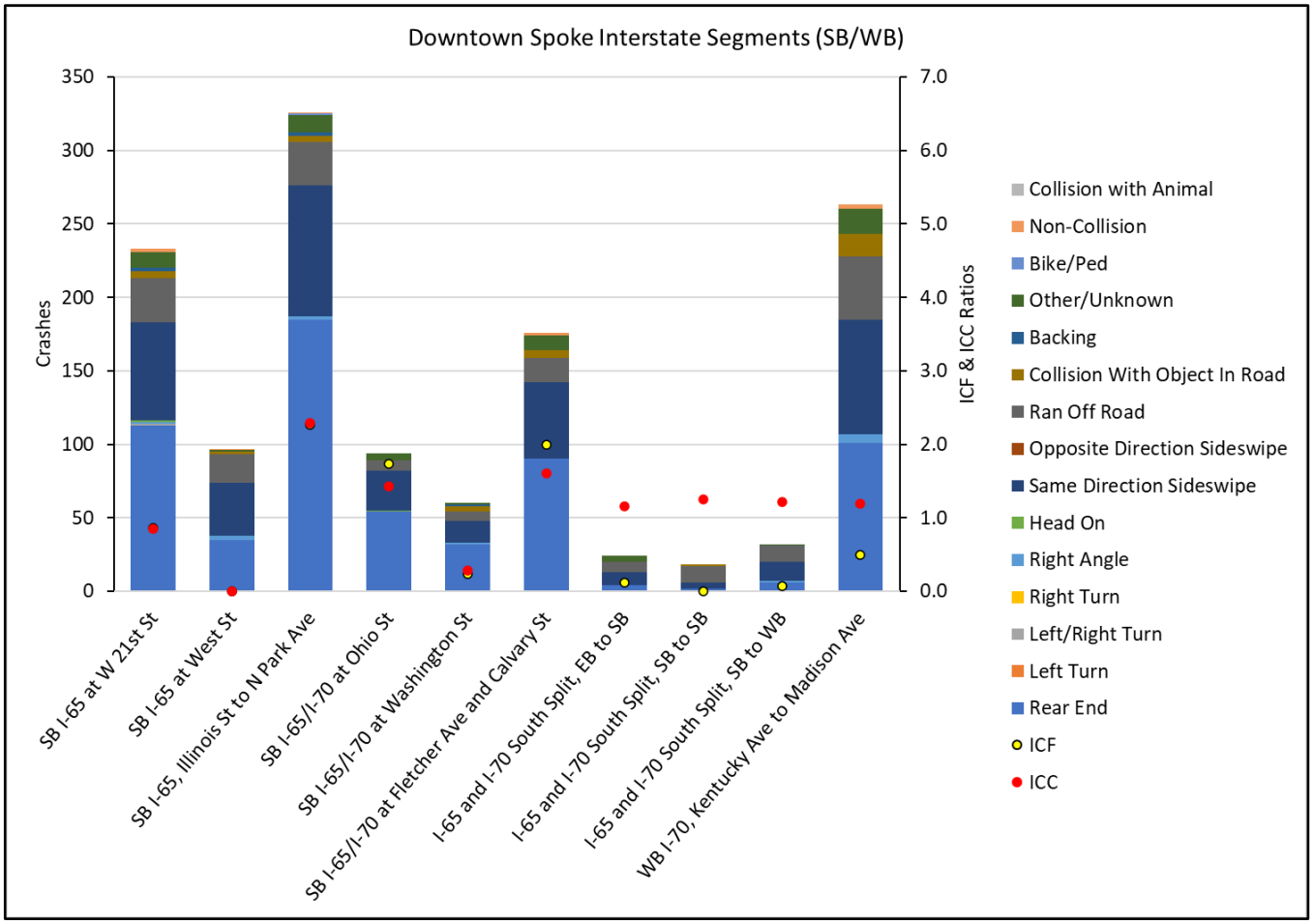
LOCATION	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY	ICF	ICC
NB I-65 at W 21st St	9	15	125	0.08	0.17
NB I-65 at West St	8	4	64	-0.63	-0.54
NB I-65, Illinois St to N Park Ave	6	24	203	1.28	0.41
NB I-65/I-70 at Ohio St	3	2	62	0.76	-0.32
NB I-65/I-70 at Washington St	4	3	52	-0.03	-0.04
NB I-65/I-70 at Fletcher Ave and Calvary St	17	18	300	4.60	2.80
I-65 and I-70 South Split, EB to NB	7	6	43	0.33	2.13
I-65 and I-70 South Split, NB to NB	6	3	29	0.04	1.55
I-65 and I-70 South Split, NB to WB	4	1	41	0.50	1.58
EB I-70, Kentucky Ave to Madison Ave	20	17	289	1.13	1.63
SB I-65 at W 21st St	12	20	201	0.86	0.85
SB I-65 at West St	3	13	81	-0.43	-1.04
SB I-65, Illinois St to N Park Ave	19	22	285	2.27	2.29
SB I-65/I-70 at Ohio St	8	3	83	1.73	1.43
SB I-65/I-70 at Washington St	5	3	52	0.23	0.28
SB I-65/I-70 at Fletcher Ave and Calvary St	13	12	151	1.99	1.61
I-65 and I-70 South Split, EB to SB	2	5	17	0.12	1.16
I-65 and I-70 South Split, SB to SB	5	1	12	-0.17	1.25
I-65 and I-70 South Split, SB to WB	4	2	26	0.07	1.22
WB I-70, Kentucky Ave to Madison Ave	19	23	221	0.50	1.19
TOTAL	**174**	**197**	**2,337**	**-**	**-**

Figure 29. Interstate Segment Crash Types, 65/70 Downtown Spoke



Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

Figure 29. Interstate Segment Crash Types, 65/70 Downtown Spoke (cont.)



Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

4.3 70W Spoke

1,087 crashes occurred at the study intersections and segments within the 70W Spoke. These crashes were analyzed to determine crash characteristics along the corridor. A summary of the crashes within the 70W Spoke is provided in **Table 20**.

Table 20. Summary of Crash Types and Severities, 70W Spoke

CRASH TYPE	SEVERITY			TOTAL	PERCENTAGE
	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY (PDO)		
Rear End	26	24	296	346	32%
Same Direction Sideswipe	15	11	251	277	25%
Ran Off Road	34	20	145	199	18%
Right Angle	7	7	46	60	6%
Other/Unknown	3	7	48	58	5%
Left Turn	4	7	32	43	4%
Collision With Object in Road	1	0	35	36	3%
Right Turn	0	0	6	6	1%
Backing	0	0	16	16	1%
Head On	5	2	9	16	1%
Non-Collision	1	1	8	10	1%
Left/Right Turn	0	0	3	3	0%
Bike/Ped	6	0	0	6	1%
Opposite Direction Sideswipe	1	0	4	5	0%
Collision with Animal	0	0	6	6	1%
TOTAL	**103**	**79**	**905**	**1,087**	**100%**

The RoadHAT results for the 70W Spoke are depicted in **Figure 30**. Two intersections produced an ICF and/or ICC value greater than or equal to 1.0, as indicated in **Table 21** and **Figure 31.** Two interstate segments produced an ICF and/or ICC value greater than or equal to 1.0, as indicated in **Table 22** and **Figure 32**. A detailed review of the crash data at these intersections and interstate segments was conducted and is summarized in the remainder of this section. A detailed analysis of the locations with ICF and/or ICC values above 1.0 are provided in **Appendix I**.

Figure 30. Crash Analysis Summary, 70W Spoke

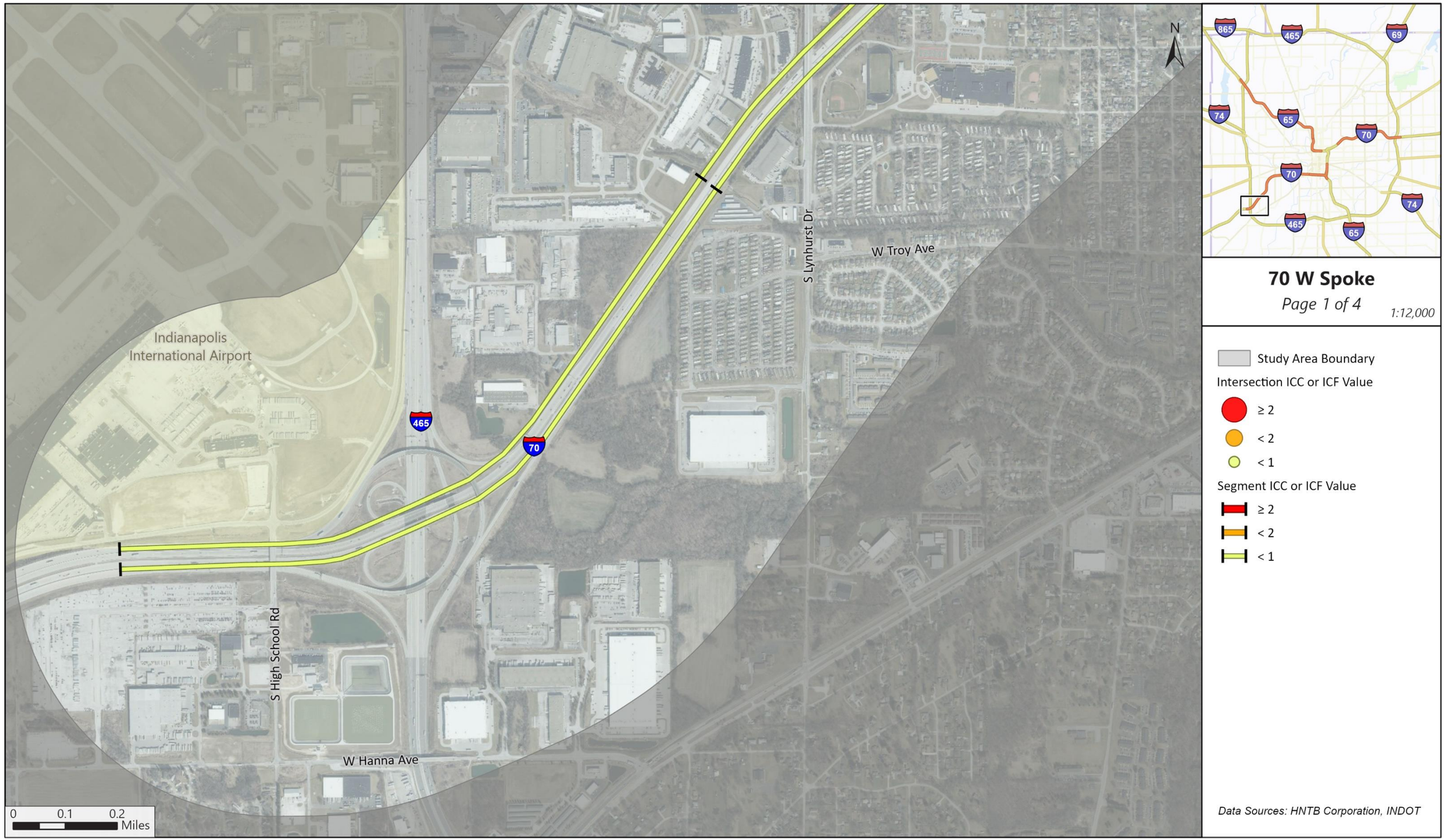


Figure 30. Crash Analysis Summary, 70W Spoke (cont.)

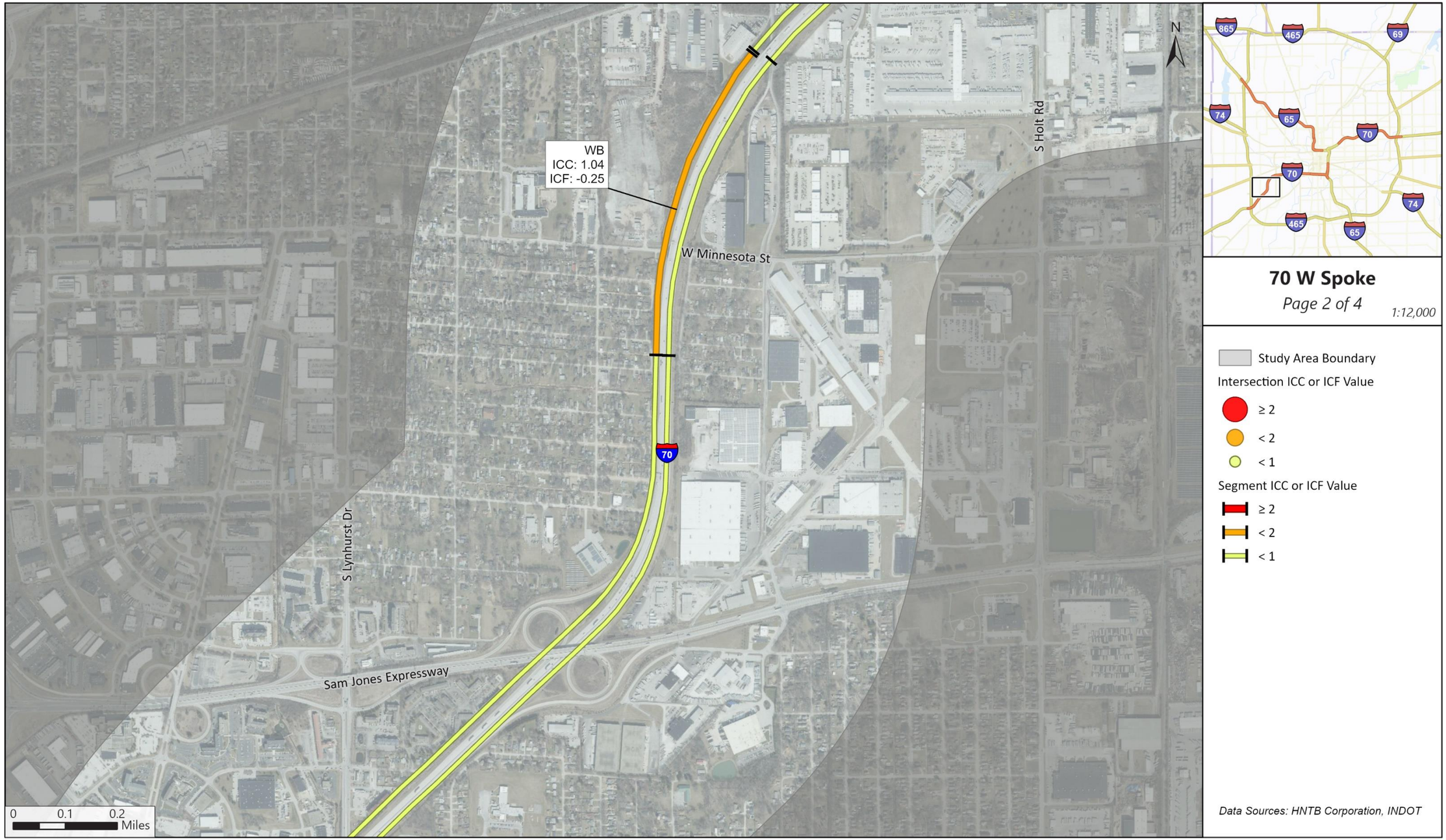


Figure 30. Crash Analysis Summary, 70W Spoke (cont.)

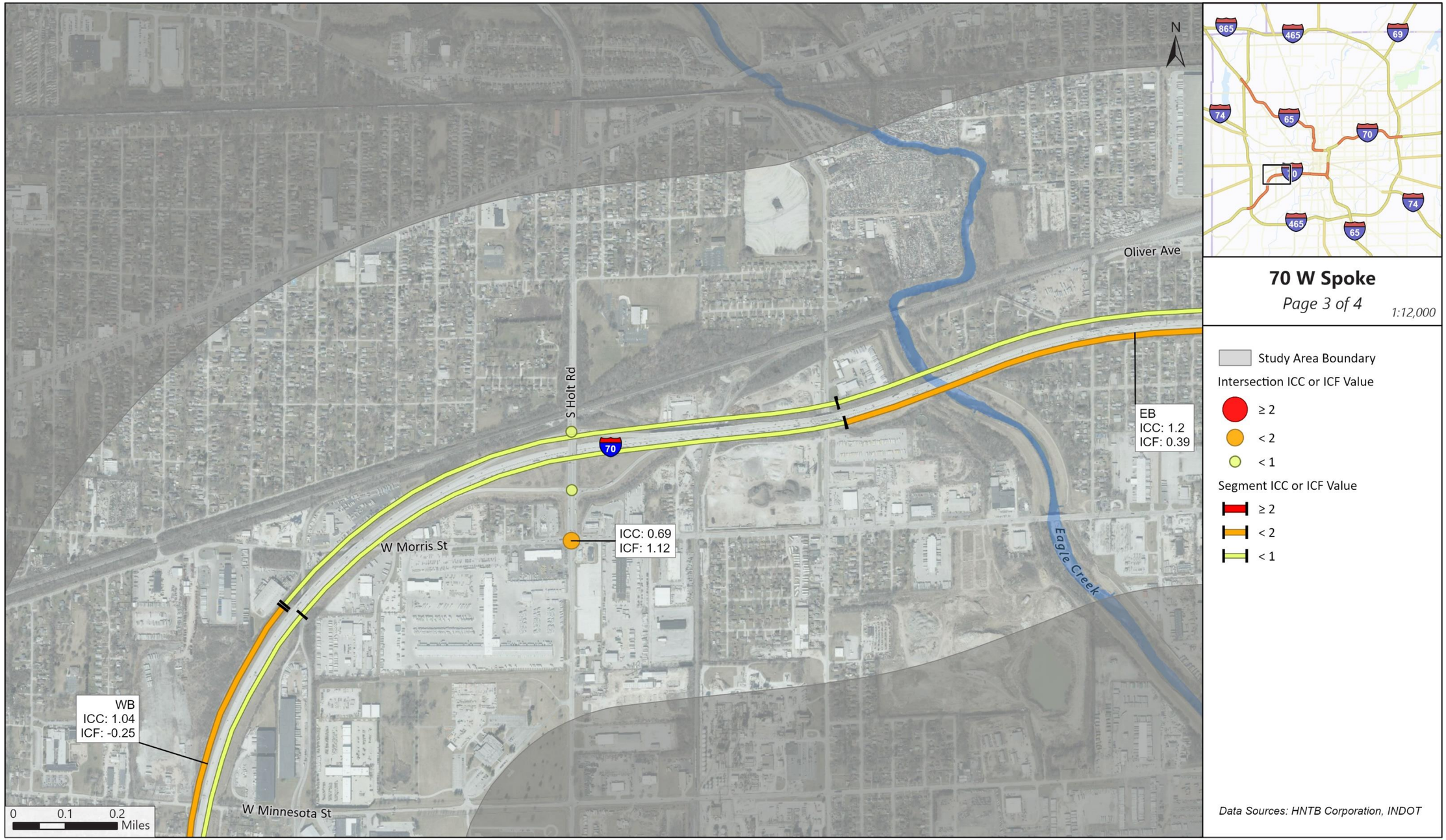
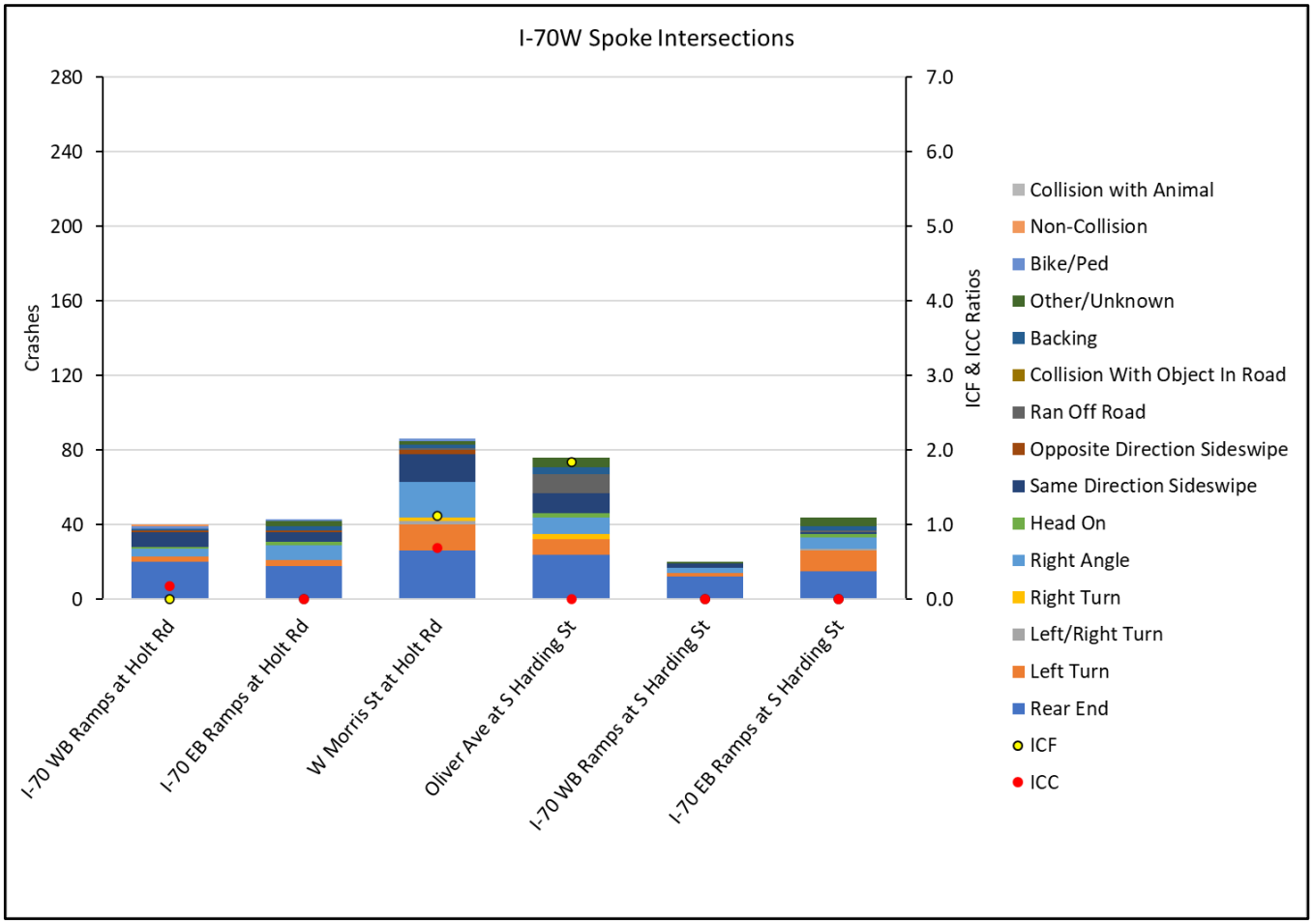


Figure 30. Crash Analysis Summary, 70W Spoke (cont.)

Table 21. Intersection Analysis Summary, 70W Spoke

LOCATION	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY	ICF	ICC
I-70 WB Ramps at Holt Rd	6	3	31	-0.39	0.18
I-70 EB Ramps at Holt Rd	1	3	39	-0.34	-0.93
W Morris St at Holt Rd	5	9	72	1.12	0.69
Oliver Ave at S Harding St	0	9	67	1.84	-0.09
I-70 WB Ramps at S Harding St	3	1	16	-0.69	-0.26
I-70 EB Ramps at S Harding St	3	4	37	-0.32	-0.42
TOTAL	**18**	**29**	**262**	**-**	**-**

Figure 31. Intersection Crash Types, 70W Spoke

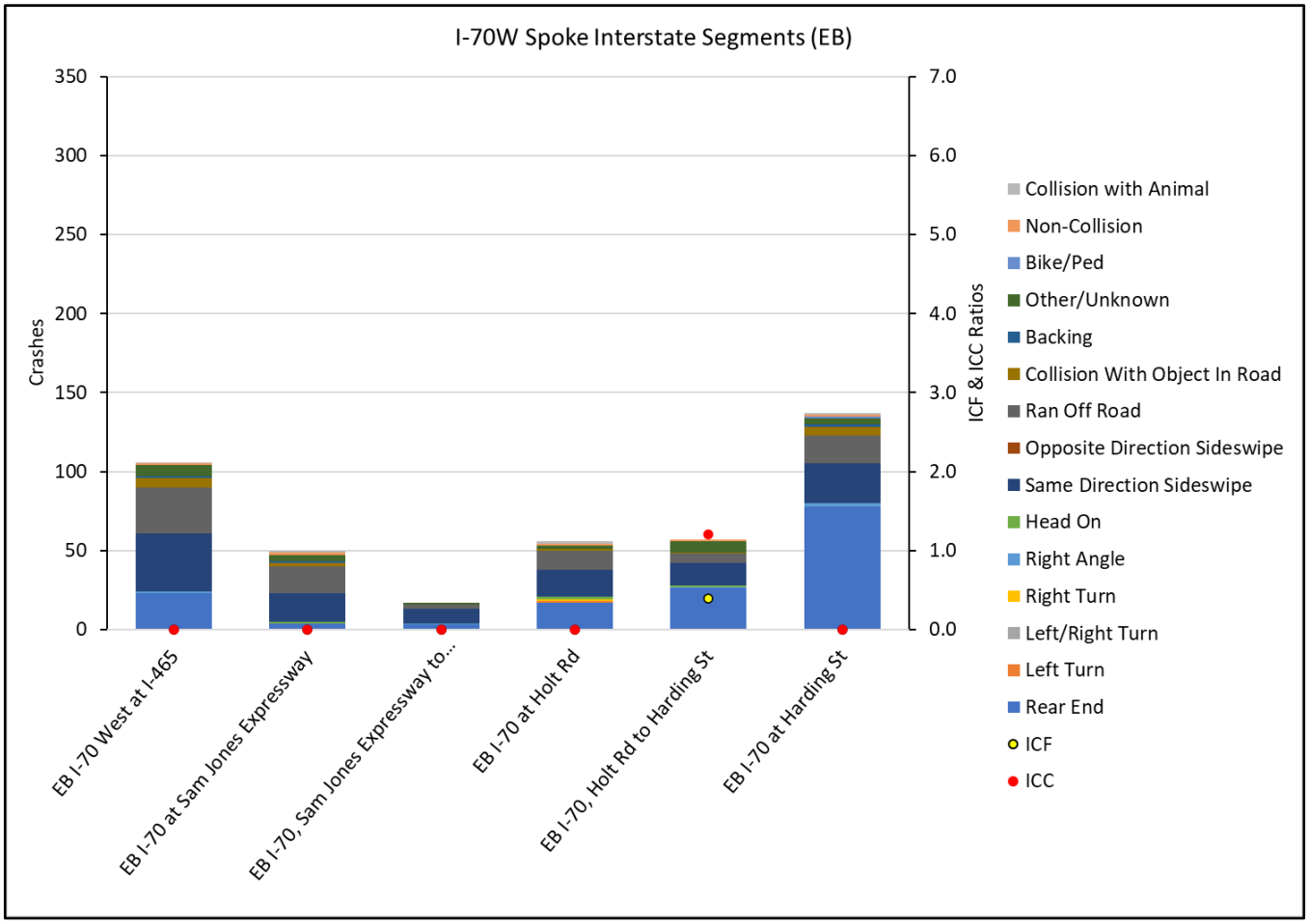


Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

Table 22. Interstate Segment Analysis Summary, 70W Spoke

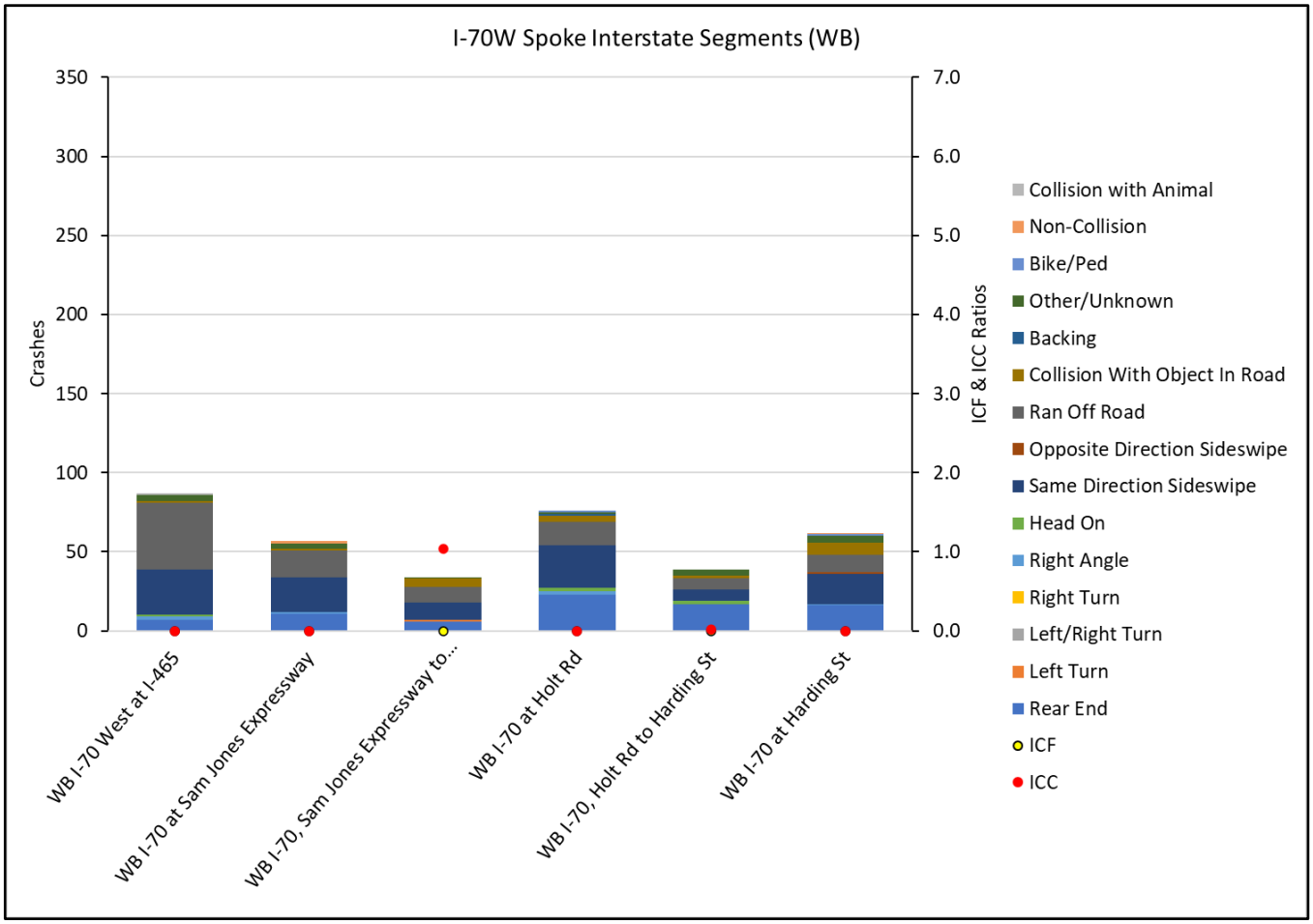
LOCATION	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY	ICF	ICC
EB I-70 West at I-465	10	5	91	-0.69	-0.47
EB I-70 at Sam Jones Expressway	6	2	42	-1.01	-1.02
EB I-70, Sam Jones Expressway to Holt Rd	3	1	13	-0.91	-0.30
EB I-70 at Holt Rd	4	2	50	-0.90	-1.21
EB I-70, Holt Rd to Harding St	9	3	45	0.39	1.20
EB I-70 at Harding St	9	7	121	-0.09	-0.03
WB I-70 West at I-465	7	8	72	-0.78	-0.76
WB I-70 at Sam Jones Expressway	12	3	42	-0.95	-0.11
WB I-70, Sam Jones Expressway to Holt Rd	7	2	25	-0.25	1.04
WB I-70 at Holt Rd	9	5	62	-0.70	-0.30
WB I-70, Holt Rd to Harding St	5	3	31	-0.32	0.02
WB I-70 at Harding St	4	9	49	-0.83	-1.05
TOTAL	**85**	**50**	**643**	**-**	**-**

Figure 32. Interstate Segment Crash Types, 70W Spoke



Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

Figure 32. Interstate Segment Crash Types, 70W Spoke (cont.)



Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

4.4 70E Spoke

The 2,651 crashes that occurred in the 70E Spoke during the 5-year study period are summarized in **Table 23**.

Table 23. Summary of Crash Types and Severities, 70E Spoke

CRASH TYPE	SEVERITY			TOTAL	PERCENTAGE
	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY (PDO)		
Rear End	46	75	729	850	32%
Same Direction Sideswipe	33	29	668	730	28%
Ran Off Road	68	53	345	466	18%
Right Angle	9	29	102	140	5%
Other/Unknown	19	15	134	168	6%
Left Turn	4	2	43	49	2%
Collision With Object in Road	2	2	107	111	4%
Right Turn	0	0	8	8	0%
Backing	0	0	32	32	1%
Head On	6	0	12	18	1%
Non-Collision	3	3	27	33	1%
Left/Right Turn	1	2	21	24	1%
Bike/Ped	7	3	3	13	0%
Opposite Direction Sideswipe	1	1	6	8	0%
Collision with Animal	0	0	1	1	0%
TOTAL	**199**	**214**	**2,238**	**2,651**	**100%**

The RoadHAT results for the 70E Spoke are depicted in **Figure 33**. Two intersections produced an ICF and/or ICC value greater than or equal to 1.0, as indicated in **Table 24** and **Figure 34. Table 25.** and **Figure 35** summarize the crash types for the interstate segments. A detailed review of the crash data at these intersections and interstate segments was conducted and is summarized in the remainder of this section. A detailed analysis of the locations with ICF and/or ICC values above 1.0 are provided in **Appendix I**.

Figure 33. Crash Analysis Summary, 70E Spoke

Figure 33. Crash Analysis Summary, 70E Spoke (cont.)

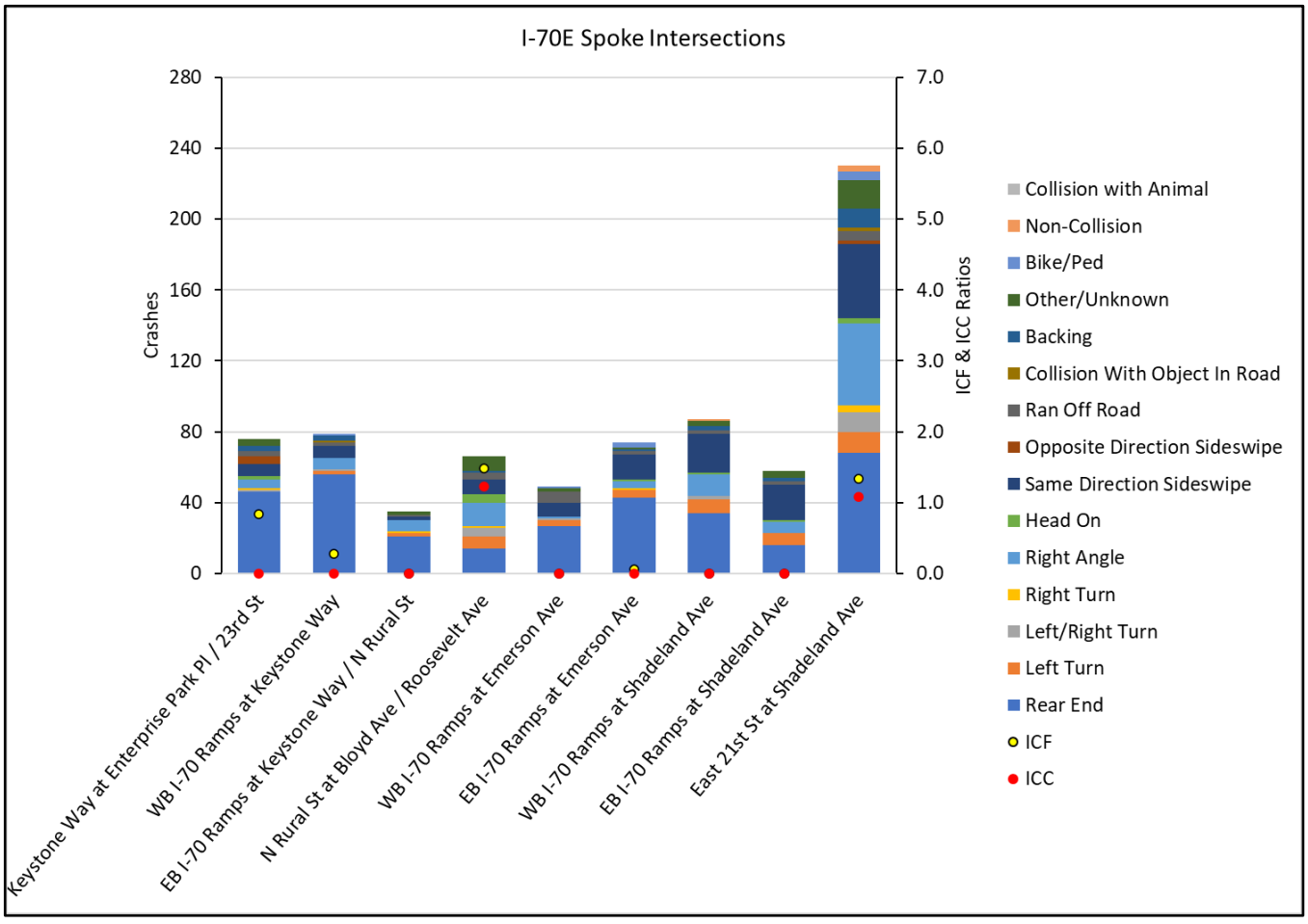
HNTB, Indiana Geographic Information Office, State of Indiana, INDOT, Esri, NASA, NGA, USGS, City of Indianapolis Marion Co, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, EPA, NPS, US Census Bureau, USDA, FAO, © OpenStreetMap, Microsoft

Figure 33. Crash Analysis Summary, 70E Spoke (cont.)

Table 24. Intersection Analysis Summary, 70E Spoke

LOCATION	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY	ICF	ICC
Keystone Way at Enterprise Park Pl / 23rd St	2	9	65	0.84	-0.06
WB I-70 Ramps at Keystone Way	3	7	69	0.28	-0.26
EB I-70 Ramps at Keystone Way / N Rural St	3	2	30	-0.53	-0.54
N Rural St at Bloyd Ave / Roosevelt Ave	6	5	55	1.48	1.23
WB I-70 Ramps at Emerson Ave	5	3	41	-0.25	0.00
EB I-70 Ramps at Emerson Ave	5	4	65	0.06	-0.07
WB I-70 Ramps at Shadeland Ave	3	10	74	-0.21	-0.64
EB I-70 Ramps at Shadeland Ave	3	2	53	-0.55	-0.88
East 21st St at Shadeland Ave	14	19	197	1.34	1.08
TOTAL	**44**	**61**	**649**	**-**	**-**

Figure 34. Intersection Crash Types, 70E Spoke

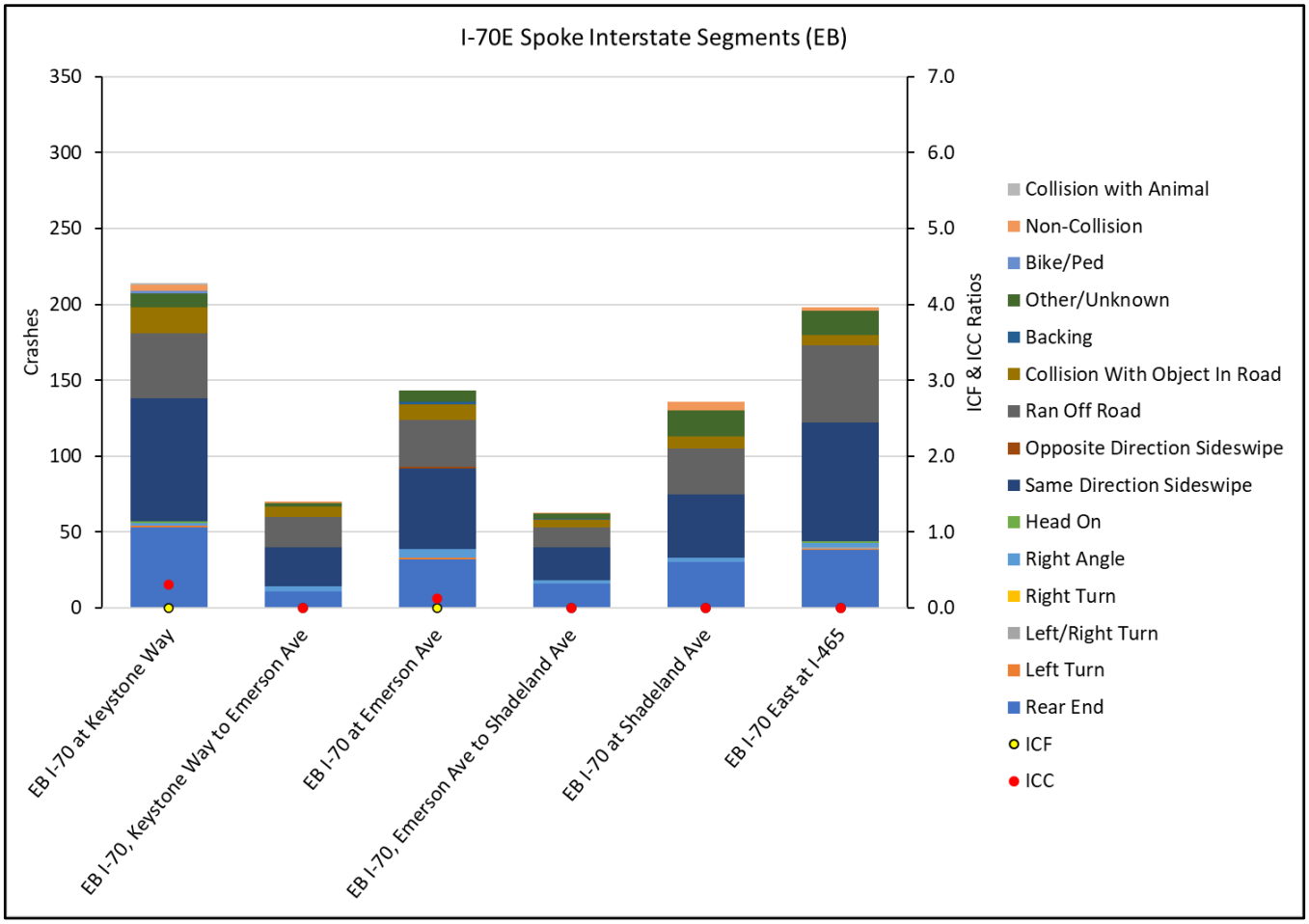


Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

Table 25. Interstate Segment Analysis Summary, 70E Spoke

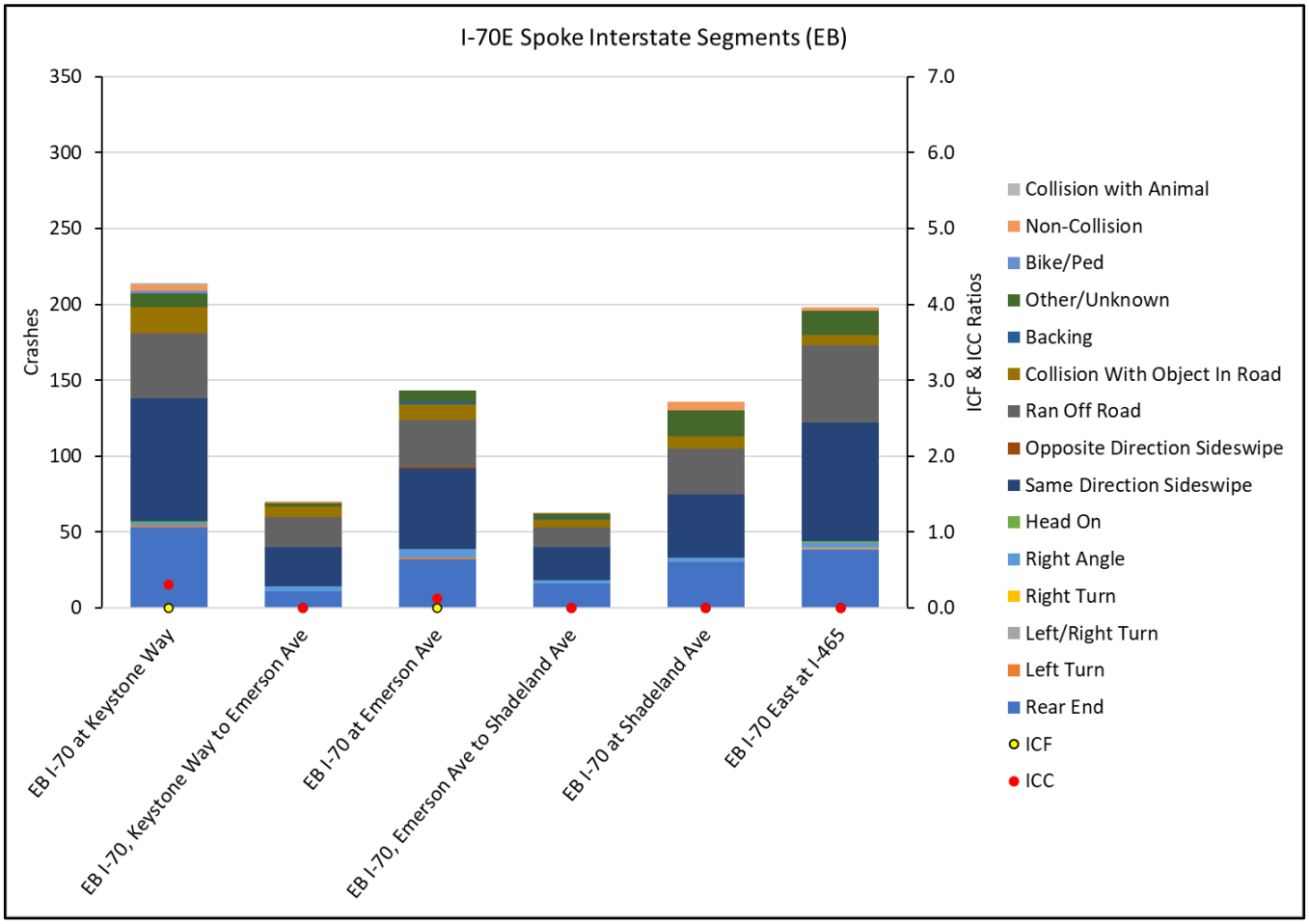
LOCATION	FATAL AND INCAPACITATING INJURY	NON-INCAPACITATING INJURY	PROPERTY DAMAGE ONLY	ICF	ICC
EB I-70 at Keystone Way	18	14	182	-0.03	0.31
EB I-70, Keystone Way to Emerson Ave	7	7	56	-0.35	-0.30
EB I-70 at Emerson Ave	17	10	116	-0.45	0.12
EB I-70, Emerson Ave to Shadeland Ave	6	9	48	-0.18	-0.08
EB I-70 at Shadeland Ave	11	11	114	-0.23	-0.06
EB I-70 East at I-465	14	16	168	-0.48	-0.57
WB I-70 at Keystone Way	18	20	295	0.75	0.61
WB I-70, Keystone Way to Emerson Ave	6	7	75	-0.04	-0.47
WB I-70 at Emerson Ave	16	19	172	-0.02	0.29
WB I-70, Emerson Ave to Shadeland Ave	8	6	82	0.63	0.43
WB I-70 at Shadeland Ave	14	11	123	-0.05	0.51
WB I-70 East at I-465	20	23	158	-0.42	0.11
TOTAL	**155**	**153**	**1,589**	**-**	**-**

Figure 35. Interstate Segment Crash Types, 70E Spoke



Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

Figure 35. Interstate Segment Crash Types, 70E Spoke (cont.)



Note: Any ICC and ICF values less than zero are shown as zero. Actual values can be found the associated table.

5 Traffic Volumes

5.1 Traffic Counts

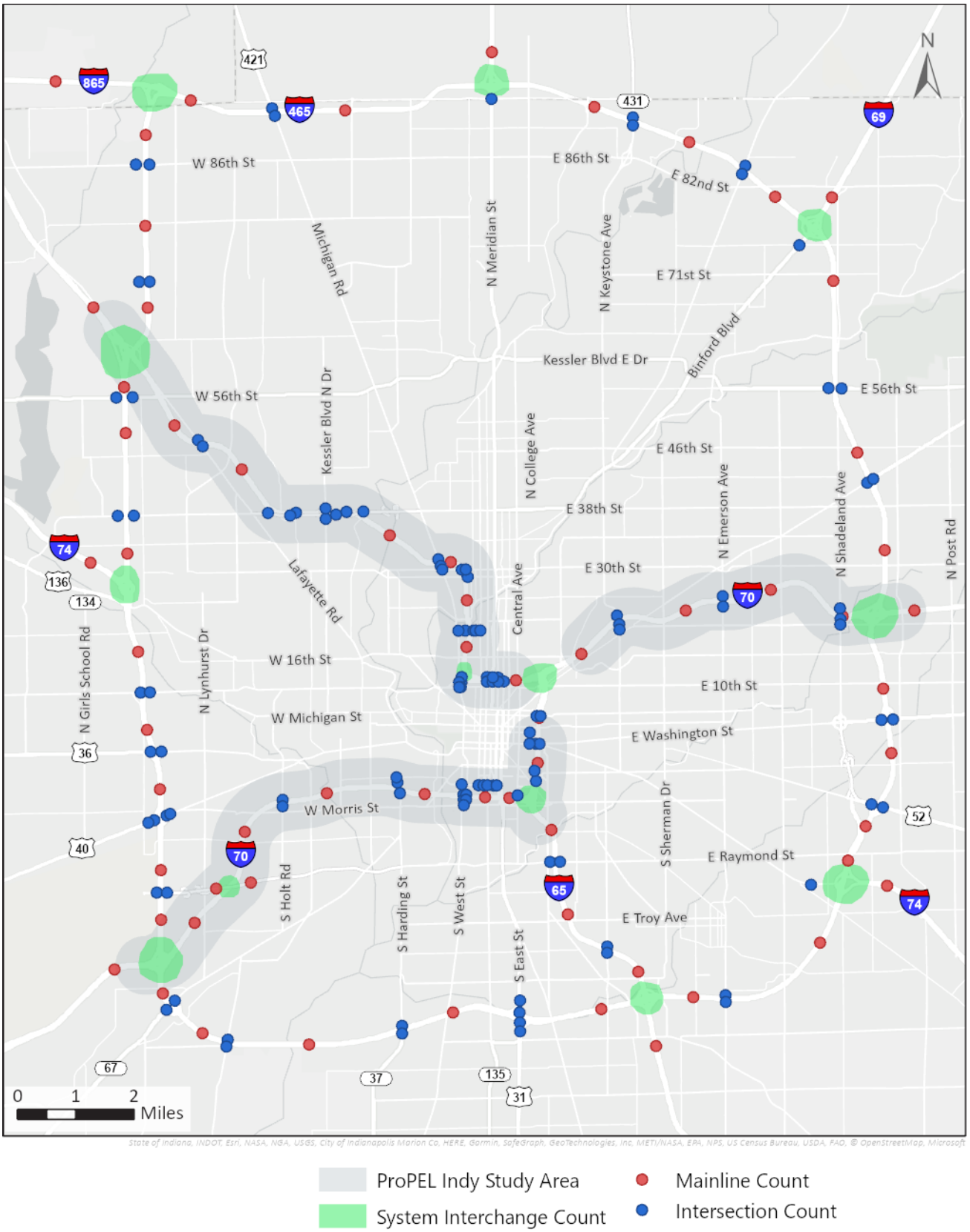
Traffic counts were collected for this study in the Spring of 2023 at various locations around Indianapolis as depicted in **Figure 36**. These counts were used for performing capacity analysis of the existing conditions, for development of travel demand models for the study area, and for estimating horizon year traffic volumes for use in assessment of the future no-build conditions of this study. These counts consisted of the following:

- 24-hour turning movement counts at all ramp terminal intersections
    - Along I-65 and I-70 inside of I-465
    - Along I-465
- 24-hour interstate mainline counts between each interchange
    - Along I-65 and I-70 inside of I-465
    - Along I-465
- 24-hour counts on all ramps of the following system interchanges
    - I-65 & I-70 S Jct
    - I-65 & I-70 N Jct
    - I-65 & I-465 N Jct
    - I-70 & I-465 W Jct
    - I-70 & I-465 E Jct

Traffic counts were collected, to the greatest extent possible, around construction projects that were active in the Spring of 2023. These projects included the following:

- I-69 & I-465 N Jct (Clear Path) – Traffic counts were collected during construction as this multi-year construction project was well underway in the Spring of 2023 and because little to no diversion of traffic from this work zone was expected to have occurred.
- I-69 & I-465 S Jct (I-69 Finish Line) – Traffic counts were collected prior to, between, and after directional closures of I-465 that occurred between Kentucky Avenue and I-65.
- I-65 & I-70 N Jct (North Split) – At locations where construction activities were believed to influence traffic volumes, counts were collected after all movements of this interchange were opened to traffic. At locations where traffic volumes were not impacted by construction, namely ramp terminal intersections along both I-65 and I-70 in proximity to I-465, counts were collected prior to the North Split being entirely open to traffic.

Figure 36: Traffic Count Locations



5.2 Existing (2023) Traffic Volumes

All traffic counts were adjusted using INDOT Adjustment Factors[4], which allow traffic counts collected on different dates to be adjusted to represent peak season volumes. Peak hour volumes were obtained from the adjusted counts for use in the existing conditions peak hour capacity analysis that is discussed in a later chapter of this report.

Traffic counts along the interstates and ramps were balanced for purposes of traffic analysis. The resulting volumes sets are provided in **Table 26**: Peak Hour Volumes and the **Appendix J**. Peak hour truck percentages are provided in **Table 27**.

Table 26: Peak Hour Volumes

Spoke	From	To	2023 Volumes			
			SB or WB		NB or EB	
			AM Peak	PM Peak	AM Peak	PM Peak
I-65	I-465 N Jct	Lafayette Rd	3,100	2,900	2,800	3,300
	Lafayette Rd	38th St	3,800	3,200	2,800	4,000
	38th St	MLK	4,700	3,700	3,400	5,100
	MLK	29th & 30th St	5,200	3,900	3,300	4,900
	29th & 30th St	21st St	5,800	4,300	4,000	5,900
	21st St	West St	5,700	4,300	5,000	5,900
Downtown	West St	Illinois St	3,900	3,700	4,300	4,400
	Illinois St	Delaware St	3,800	4,000	5,500	4,300
	Delaware St	North Split	4,100	5,100	5,700	4,400
	North Split	Washington St	5,600	6,100	5,100	5,100
	Washington St	South Split	4,800	5,600	6,400	6,200
	South Split	Madison Ave	5,900	4,200	4,000	5,200
	Madison Ave	West St	5,400	4,600	3,900	4,200
I-70 W	I-465 W Jct	Sam Jones Expy	2,600	3,700	3,200	2,300
	Sam Jones Expy	Holt Rd	3,600	4,900	4,200	2,600
	Holt Rd	Harding St	4,400	5,400	4,800	3,300
	Harding St	West St	4,800	5,300	4,700	3,700
I-70 E	North Split	Keystone Ave	8,400	5,700	5,300	8,200
	Keystone Ave	Emerson Ave	8,200	5,200	4,600	8,000
	Emerson Ave	Shadeland Ave	7,600	5,200	4,300	7,700
	Shadeland Ave	I-465 E Jct	3,600	2,200	1,700	3,200

[4] https://www.in.gov/indot/files/INDOT_Factors_2022.pdf

Table 27: Truck Percentages

Spoke	From	To	Truck Percentage (AM / PM)	
			Southbound or Westbound	Northbound or Eastbound
I-65	I-465 N Jct	Lafayette Rd	11% / 14%	12% / 8%
	Lafayette Rd	38th St	9% / 12%	12% / 7%
	38th St	MLK	9% / 12%	12% / 6%
	MLK	29th & 30th St	8% / 12%	12% / 6%
	29th & 30th St	21st St	7% / 11%	10% / 5%
	21st St	West St	8% / 11%	9% / 6%
Downtown	West St	Illinois St	11% / 12%	10% / 8%
	Illinois St	Delaware St	12% / 13%	8% / 9%
	Delaware St	North Split	12% / 10%	8% / 9%
	North Split	Washington St	10% / 12%	14% / 12%
	Washington St	South Split	11% / 13%	12% / 11%
	South Split	Madison Ave	9% / 15%	15% / 8%
	Madison Ave	West St	10% / 14%	15% / 10%
I-70 W	I-465 W Jct	Sam Jones Expy	19% / 12%	11% / 17%
	Sam Jones Expy	Holt Rd	15% / 11%	9% / 14%
	Holt Rd	Harding St	13% / 11%	10% / 12%
	Harding St	West St	11% / 12%	12% / 11%
I-70 E	North Split	Keystone Ave	7% / 14%	13% / 8%
	Keystone Ave	Emerson Ave	7% / 14%	13% / 7%
	Emerson Ave	Shadeland Ave	7% / 14%	13% / 7%
	Shadeland Ave	I-465 E Jct	10% / 13%	18% / 11%

5.3 Travel Demand Modeling

Travel demand models were developed for purposes of estimating horizon year (2050) traffic volumes. These travel demand models are based on the Indianapolis Metropolitan Planning Organization's (IMPO) travel demand model, which encompasses a nine-county region centered about Marion County and has a planning horizon year of 2050. The IMPO's base model, representing 2020 conditions, was last updated by the IMPO in January 2021.

The IMPO's 2020 base model was enhanced to reflect 2023 conditions for use in this PEL study. The enhancements are described below.

- Recent Traffic Counts - The 2020 base model was calibrated to the 2023 traffic counts collected for this PEL study.
- Speed and Capacity Adjustments - For locations where traffic counts were collected during active work zones, the travel demand model was adjusted to reflect the posted speed limits and capacities of these work zones. These adjustments were made to improve calibration to existing conditions. Speed and capacity reductions associated with work zones were eliminated after the calibration process.
- Traffic Analysis Zone (TAZ) Refinement – Over 300 TAZs were added to the model to better represent land use in proximity to the study area. Household and employment data contained in TAZs provided by the IMPO was disaggregated, where necessary, and reassigned to new TAZs.
- Network Refinement – The roadway network in proximity to the study area was expanded to represent the existing conditions more closely.
- Recently Completed Projects – Numerous projects were completed between 2020 and 2023 that have major impacts on capacity of the roadway network. These projects were added to the model to better represent the 2023 existing conditions.
- IUPUI Adjustments – Many of the traffic counts were collected while Indiana University-Purdue University Indianapolis (IUPUI) was not in session. Adjustments were made to account for IUPUI being out of session during the data collection period.

The 2023 base model was calibrated to the 2023 counts using an Origin-Destination Matrix Estimation (ODME) process. The calibration was approved by INDOT in September 2023. The horizon year model was then developed from the calibrated base model, by implementing the enhancements listed below. The horizon year model was approved by INDOT in late November 2023.

- Imminent developments - Coordination with the IMPO and other agencies to identify developments that are imminent and of size large enough to influence traffic volumes and/or travel patterns. This coordination resulted in identification of multiple imminent developments which were added to the travel demand model. Several of these developments are listed in Section 3.6.3 of this report.

- Network Refinement – All network enhancements made for the 2023 base model were carried forward to the horizon year model.
- Recently Completed Projects – All major capacity improvements incorporated into the 2023 based model were carried forward to the horizon year model.
- Committed Projects – All INDOT committed projects within the nine-county region not included in the 2020 base model provided by the IMPO were added to the horizon year model.
- O-D Pivoting – O-D Pivoting procedures were implemented to allow the horizon year model to better predict changes from a known base. These procedures follow guidelines in National Cooperative Highway Research Program (NCHRP) Reports 255 & 765.

5.4 Horizon Year (2050) Traffic Volumes

Average annual growth rates were calculated from AM and PM peak period outputs of the base and horizon year travel demand models. These growth rates, listed in **Table 28**, were applied to 2023 traffic counts to develop peak hour volumes for use in the capacity analysis to be described in a later chapter of this report. The resulting interstate traffic volumes for each spoke are provided in **Table 29**. Peak hour volumes for intersections are provided in **Appendix J**. Truck percentages for future year analysis were based on the existing percentages.

Table 28: Average Annual Growth Rates

Spoke	Average Annual Growth Rates			
	Interstate		Arterial	
	AM	PM	AM	PM
I-65	1.5%	1.3%	1.5%	1.6%
Downtown	1.0%	1.0%	2.1%	1.9%
I-70 W	1.9%	1.7%	2.6%	2.1%
I-70 E	1.2%	1.1%	0.8%	1.1%

Table 29: Peak Hour Volumes

Spoke	From	To	Peak Hour Volumes (2023 / 2050)			
			Southbound or Westbound		Northbound or Westbound	
			AM Peak	PM Peak	AM Peak	PM Peak
65	I-465 N Jct	Lafayette Rd	3,100 / 4,000	2,900 / 3,600	3,000 / 3,100	3,400 / 4,300
	Lafayette Rd	38th St	3,800 / 5,100	3,200 / 4,100	3,000 / 3,200	4,100 / 5,300
	38th St	MLK	4,700 / 6,300	3,700 / 4,800	3,600 / 4,000	5,200 / 6,800
	MLK	29th & 30th St	5,200 / 7,000	3,900 / 5,200	3,500 / 3,900	5,000 / 6,600
	29th & 30th St	21st St	5,800 / 7,800	4,300 / 5,700	4,200 / 4,800	6,100 / 8,100
65/70 Downtown	21st St	West St	5,700 / 7,600	4,300 / 5,800	5,200 / 6,400	6,000 / 8,000
	West St	Illinois St	3,900 / 4,900	3,700 / 4,700	4,500 / 5,400	4,500 / 5,800
	Illinois St	North Split	3,800 / 4,700	4,000 / 5,200	5,700 / 7,300	4,400 / 5,600
	North Split	Washington St	5,600 / 7,100	6,100 / 7,900	5,100 / 6,200	5,100 / 6,400
	Washington St	South Split	4,800 / 5,900	5,600 / 7,200	6,400 / 8,300	6,200 / 8,000
	South Split	Madison Ave	5,900 / 7,500	4,200 / 5,300	4,000 / 6,300	5,200 / 7,800
	Madison Ave	West St	5,400 / 6,700	4,600 / 5,900	3,900 / 6,200	4,200 / 6,400
70W	I-465 W Jct	Sam Jones Pkwy	2,600 / 2,100	3,700 / 4,500	3,200 / 4,900	2,300 / 3,300
	Sam Jones Pkwy	Holt Rd	3,600 / 3,800	4,900 / 6,300	4,200 / 6,600	2,600 / 3,800
	Holt Rd	Harding St	4,400 / 5,100	5,400 / 7,200	4,800 / 7,500	3,300 / 4,900
	Harding St	West St	4,800 / 5,700	5,300 / 7,000	4,700 / 7,300	3,700 / 5,500
070E	North Split	Keystone Rd	8,400 / 10,200	5,700 / 7,400	5,300 / 7,000	8,200 / 10,600
	Keystone Rd	Emerson Ave	8,200 / 9,900	5,200 / 6,700	4,600 / 6,100	8,000 / 10,400
	Emerson Ave	Shadeland Ave	7,600 / 9,300	5,200 / 6,800	4,300 / 5,800	7,700 / 9,900
	Shadeland Ave	I-465 E Jct	3,600 / 4,300	2,200 / 2,400	1,700 / 2,100	3,200 / 4,200

5.5 Travel Patterns

The travel demand modeling described in **Section 5.4** utilized current travel patterns of the Indianapolis metropolitan area. These travel patterns are documented in origin-destination (O-D) trip tables, developed by the Indianapolis Metropolitan Planning Organization (IMPO), that establish where trips begin (origins) and end (destinations). These O-D trip tables are a major input to the travel demand model developed by the IMPO and are major inputs to the ProPEL Indy travel demand model, which is based on the IMPO's model.

The origin-destination trip tables represent estimates of vehicle trips from and to different regions in the IMPO planning area. The travel model estimates and validates these trip tables using both travel surveys, that collect the travel behavior of households in the region, and privately available GPS and phone app data sources that track trip movements. These trip tables are calibrated and adjusted so that when the travel model estimates street traffic volumes, they match collected traffic counts.

Both the IMPO and the ProPEL Indy travel demand models separate a typical day into 5 distinct time periods, with one time period each representing AM and PM peak periods. Separate O-D trip tables are provided for each of these time periods. O-D trip tables of the AM and PM peak periods were utilized to develop the traffic patterns described in this report, as design of roadways is typically dictated by peak period traffic volumes.

The O-D trip tables were evaluated to provide a better understanding of travel patterns in the study area. These patterns are described below and depicted in **Figure 37** and **Figure 38**.

5.5.1 Travel Pattern #1

Percentage of trips passing through Downtown Indianapolis on I-65 and I-70 that begin and end outside of I-465:

- 10% of all vehicle trips
- 36% of heavy vehicle and commercial truck trips

Public input to date has suggested that traffic passing through Indianapolis, specifically truck traffic, should be routed along I-465 to reduce congestion on I-65 and I-70. Reducing the total volume of traffic on I-65 and I-70 inside of I-465 by 10% would not reduce I-65 or I-70 traffic volumes enough to noticeably reduce congestion on these interstates.

As reported in **Table 27**, truck traffic represents 15% or less of the total traffic volume on I-65 or I-70 through downtown Indianapolis. Routing 36% of the truck traffic along I-465 would result in a reduction of approximately 5.4% of total traffic being removed from I-65 and I-70 through downtown Indianapolis. This provides less of a benefit than rerouting all through traffic.

Additionally, impacts to I-465 that would result from re-routing through trips may be detrimental to operating conditions along I-465. Determination of these impacts is beyond the scope of this study.

5.5.2 Travel Pattern #2

Percentage of trips passing through Downtown Indianapolis on I-65 and I-70 that begin and end inside of I-465:

- 44% of all vehicle trips
- 49% of heavy vehicle and commercial truck trips

Nearly half of all trips passing through downtown Indianapolis on I-65 and I-70 begin and end inside of I-465. This statistic suggests that high volumes of local trips use I-65 and/or I-70 to travel inside of I-465, as these interstates provide for shorter travel times than if local routes were used.

Routing these trips on local routes could yield a major congestion relief benefit for both I-65 and I-70 within Downtown Indianapolis. Significant improvements to the local roadway network, potentially including additional travel lanes and/or new roadways, would be required to attract these trips away from I-65 and I-70.

5.5.3 Travel Pattern #3

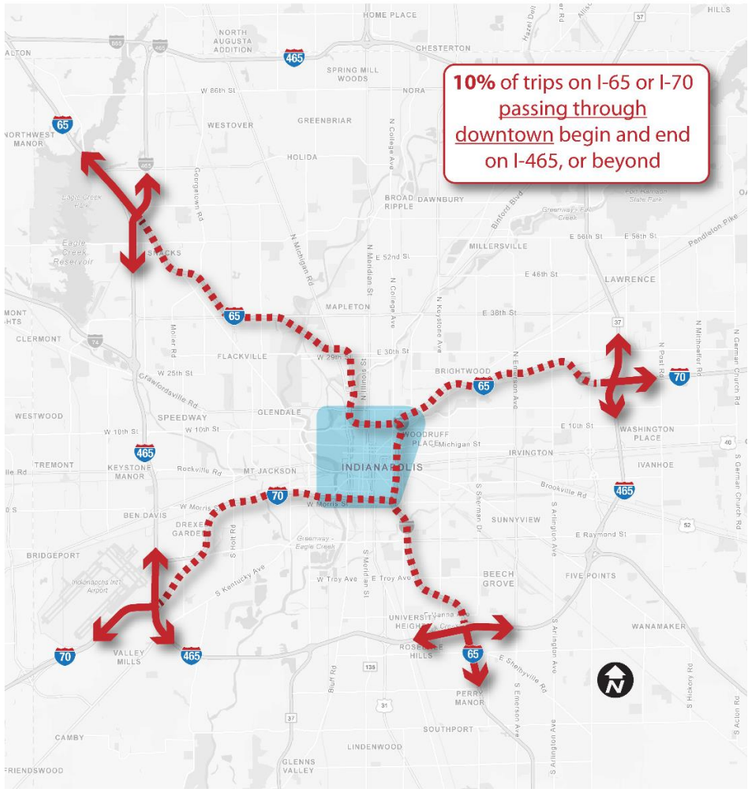
Percentage of trips on I-65 and I-70 that begin or end in Downtown Indianapolis:

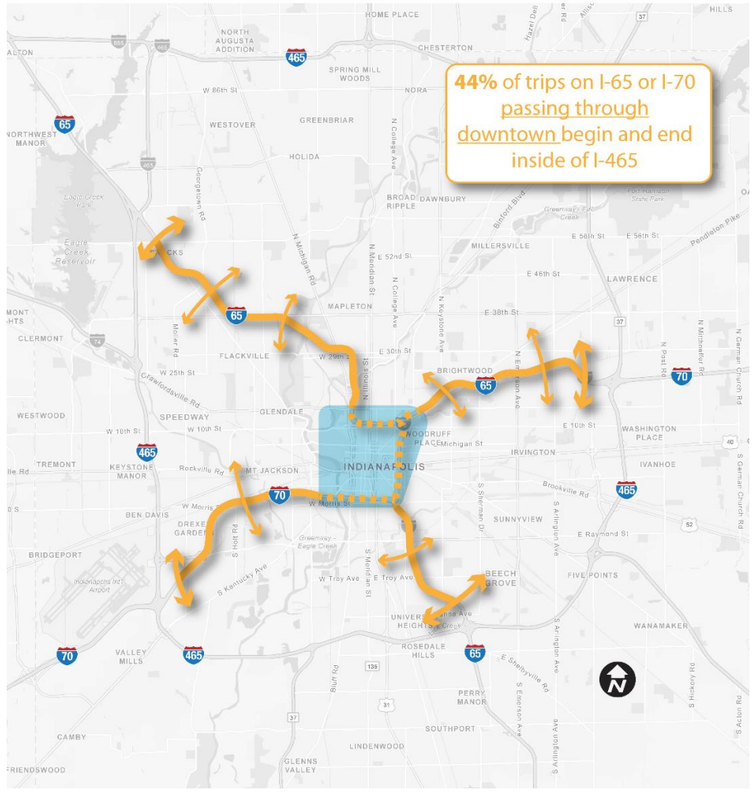
- 46% of all vehicle trips
- 15% of heavy vehicle and commercial truck trips

Downtown Indianapolis attracts and/or generates nearly half of all trips on I-65 or I-70 within the study area. This suggests that improvements to I-65 or I-70 within Downtown will benefit a much larger population than just those who live downtown.

The 15% of truck trips that begin or end in Downtown Indianapolis provide goods to the businesses within Downtown Indianapolis. A large majority of these trips utilize interstate routes to reach Indianapolis. As such, the practicality of shifting these trips to local routes is low.

Figure 37: Travel Patterns of All Vehicles





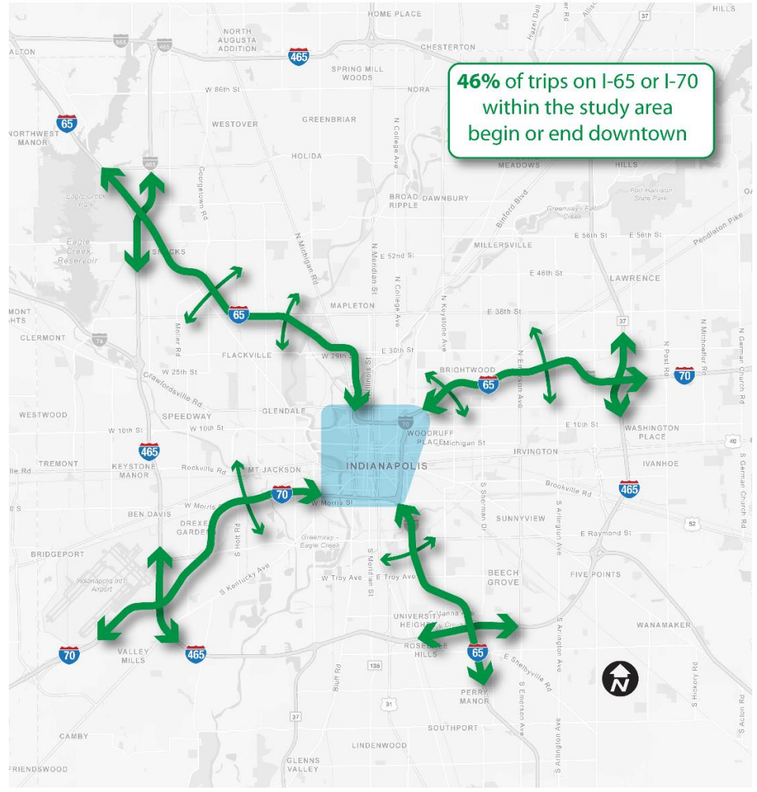
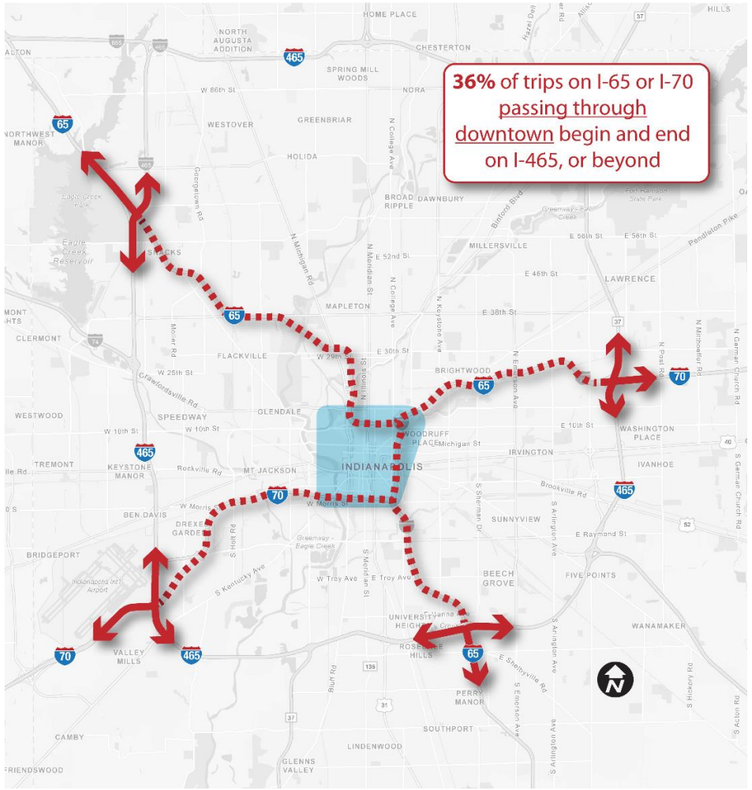
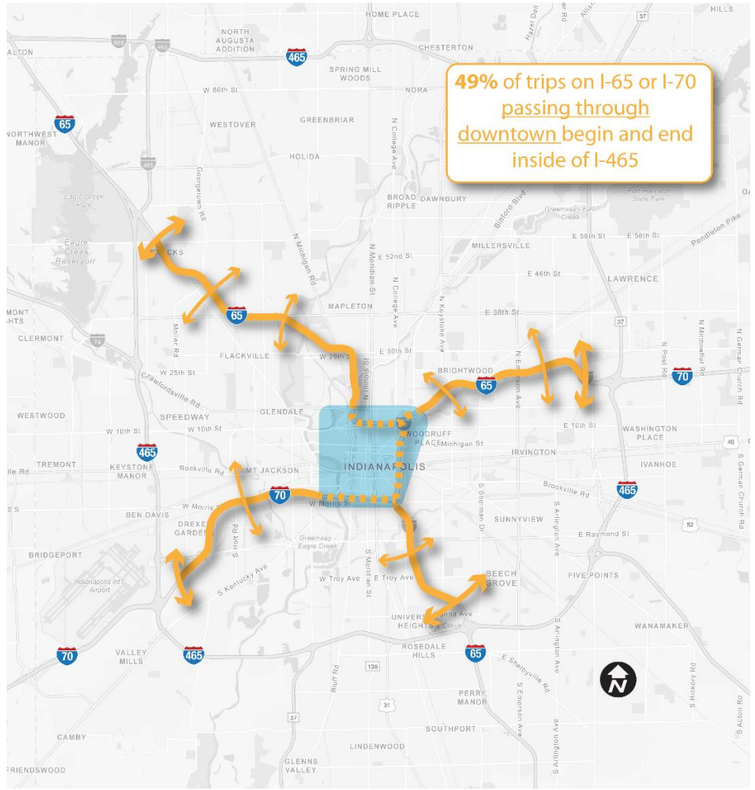
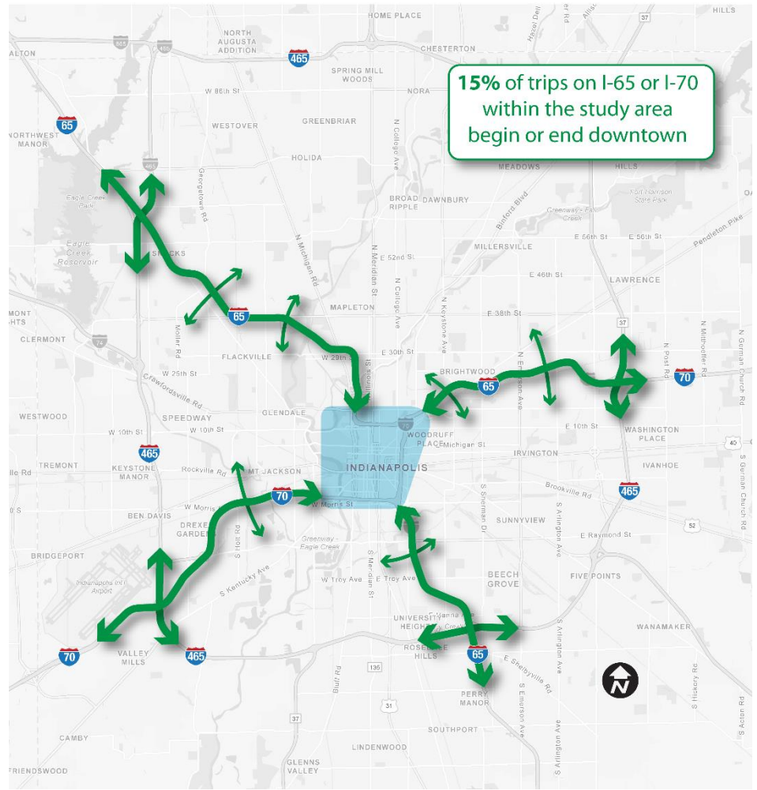


Figure 38: Travel Patterns of Trucks







6 Existing Operating Conditions

6.1 Operational Standards

According to the Highway Capacity Manual[5] (HCM), there are six levels of service (LOS) by which operational performance may be described. These levels of service range between LOS "A" which indicates a relatively free-flowing condition and LOS "F" which indicates operational breakdown. **Table 30** shows the LOS and associated operational measure for each type of analysis.

Table 30: Level of Service (LOS) Operational Measures

LOS	Analysis Type					
	Intersection (Delay in Seconds per Vehicle)			Interstate (Density in Vehicles per Mile per Lane)		
	Signalized	Two-way Stop	Roundabout	Basic Segment	Merge / Diverge	Weaving
A	<= 10.0	<= 10.0	<= 10.0	<= 11.0	<= 10.0	<= 10.0
B	<= 20.0	<= 15.0	<= 20.0	<= 18.0	<= 20.0	<= 20.0
C	<= 35.0	<= 25.0	<= 35.0	<= 26.0	<= 28.0	<= 28.0
D	<= 55.0	<= 35.0	<= 55.0	<= 35.0	<= 35.0	<= 35.0
E	<= 80.0	<= 50.0	<= 80.0	<= 45.0	> 35.0	<= 43.0
F	> 80.0	> 50.0	> 80.0	> 45.0 or Demand exceeds capacity	Demand exceeds capacity	> 43.0 or Demand exceeds capacity

To determine which study locations are operationally deficient, the operational analysis results were compared to the minimum acceptable LOS standards listed in Section 40-6.02(01) of the 2013 INDOT Design Manual, which are summarized in **Table 31.**

[5] https://www.trb.org/Main/Blurbs/175169.aspx

Table 31: Minimum Acceptable Level of Service (LOS)

Facility Type	Minimum Acceptable LOS
Interstate (basic freeway segments, merge/diverge areas & weaving segments)	LOS D
Signalized Intersections	LOS D (overall intersection) LOS E (each approach)
Unsignalized Intersections	LOS D (each approach)

6.2 Analysis Tools

All operational analyses of this study were conducted according to guidelines found in INDOT's Intersection Traffic Analysis Procedures. Operational analyses were conducted using two software tools:

- **Synchro 11 software** was used for all signalized and stop-controlled intersection analysis. All results were reported using Highway Capacity Manual (HCM) methodology.
- **Highway Capacity Software (HCS7)** was used for analysis of all basic freeway segments, merge and diverge areas, and weaving segments.

The outputs from these software packages are provided in **Appendix K**.

6.3 Interstate Operations

Interstate operations and deficiencies within each spoke for the existing (2023) conditions are described below. In addition to analysis results from HCS7, speed data provided by INDOT was reviewed for each Spoke to find areas where congestion is occurring under existing conditions. Due to limitations of the HCS7 software, there are locations where the HCS7 analysis results do not reflect these actual field conditions. For these locations, the differences have been noted to ensure both existing congestion (from the speed data) and potential problem locations (from the HCS7 analysis) are taken into account in later stages of this study.

6.3.1 65 Spoke

Interstate operations for the 65 Spoke are depicted in **Figure 39** and **Figure 40** for the AM and PM peak hours, respectively. In general, segments that do not meet the LOS D standard are:

- AM Peak Hour: I-65 southbound, between Dr MLK Jr Street and the West Street off-ramp (overlaps with the Downtown Spoke). These conditions are accurate representations of the AM peak hour as confirmed by INDOT provided speed data of the corridor that is depicted in **Figure 41**, which shows AM peak hour congestion from Kessler Blvd to 21St Street on typical weekdays.

- PM Peak Hour: I-65 northbound, between the 21st Street on-ramp and the 29th Street off-ramp. This does not accurately reflect existing conditions depicted in **Figure 41**, which show no northbound congestion north of 21st Street and also depicts southbound congestion in the PM peak hour from roughly Dr MLK Jr Drive to 21st Street.

6.3.2 65/70 Downtown Spoke

Interstate operations for the 65/70 Downtown Spoke are depicted **Figure 42** and **Figure 43** for the AM and PM peak hours, respectively. In general, segments that do not meet the LOS D standard are:

- AM Peak Hour:
  - I-65 southbound, between Dr MLK Jr Street and the West St off-ramp (overlaps with the 65 Spoke)
  - I-65 northbound, between the North Split and the West Street off-ramp
  - I-70 westbound, between the South Split and the Madison Avenue off-ramp
  - I-65 northbound, south of the South Split
  - I-65 northbound, Washington Street off-ramp
  - I-65 southbound, East Street off-ramp
- PM Peak Hour:
  - I-65 northbound, between West Street on-ramp and 21st Street off-ramp
  - I-70 eastbound, between Missouri Street on-ramp and the South Split

The INDOT provided speed data for I-65 & I-70, depicted in **Figure 44** and **Figure 45**, confirm the areas of congestion listed above are accurate. The speed data also indicates the following areas of congestion:

- PM peak hour congestion is present along I-65 southbound between 21St Street and Washington Street.
- PM peak hour congestion is present along I-70 eastbound from west of West Street to north of the South Split.

6.3.3 70W Spoke

Interstate operations for the 70W Spoke are depicted **Figure 46** and **Figure 47** for the AM and PM peak hours, respectively. The only segment that does not meet the LOS D standard is:

- PM Peak Hour: I-70 westbound, between the Harding Street on-ramp and the Holt Road off-ramp

INDOT provided speed data, depicted in **Figure 48**, indicates PM congestion in the eastbound direction from Holt Road to east of Harding Street, which suggests the failing capacity shown in **Figure 47** (LOS F, east of Missouri Street) extends further to the west than the analysis shows. This speed data confirms

that congestion occurs in the westbound direction of the PM peak hour between Harding Street and Holt Road, although this congestion appears to be brief (<1 hour) in duration.

6.3.4 70E Spoke

Interstate operations for the 70E Spoke are depicted **Figure 49** and **Figure 50** for the AM and PM peak hours, respectively. In general, segments that do not meet the LOS D standard are:

- AM Peak Hour:
  - I-70 westbound, between the Shadeland Avenue on-ramp and the Emerson Avenue off-ramp
  - I-70 westbound, between the Emerson Avenue on-ramp and the northbound Rural Street on-ramp
- PM Peak Hour:
  - I-70 eastbound, from east of Rural Street to west of Emerson Avenue
  - I-70 eastbound collector-distributor roadway at Shadeland Avenue

Speed data provided by INDOT, depicted in **Figure 51**, confirms the areas of congestion listed above except for that along the collector-distributor roadway at Shadeland Avenue. No speed data is available for this collector-distributor roadway.

Figure 39: 2023 AM Interstate Operating Conditions, 65 Spoke

Figure 40: 2023 PM Interstate Operating Conditions, 65 Spoke

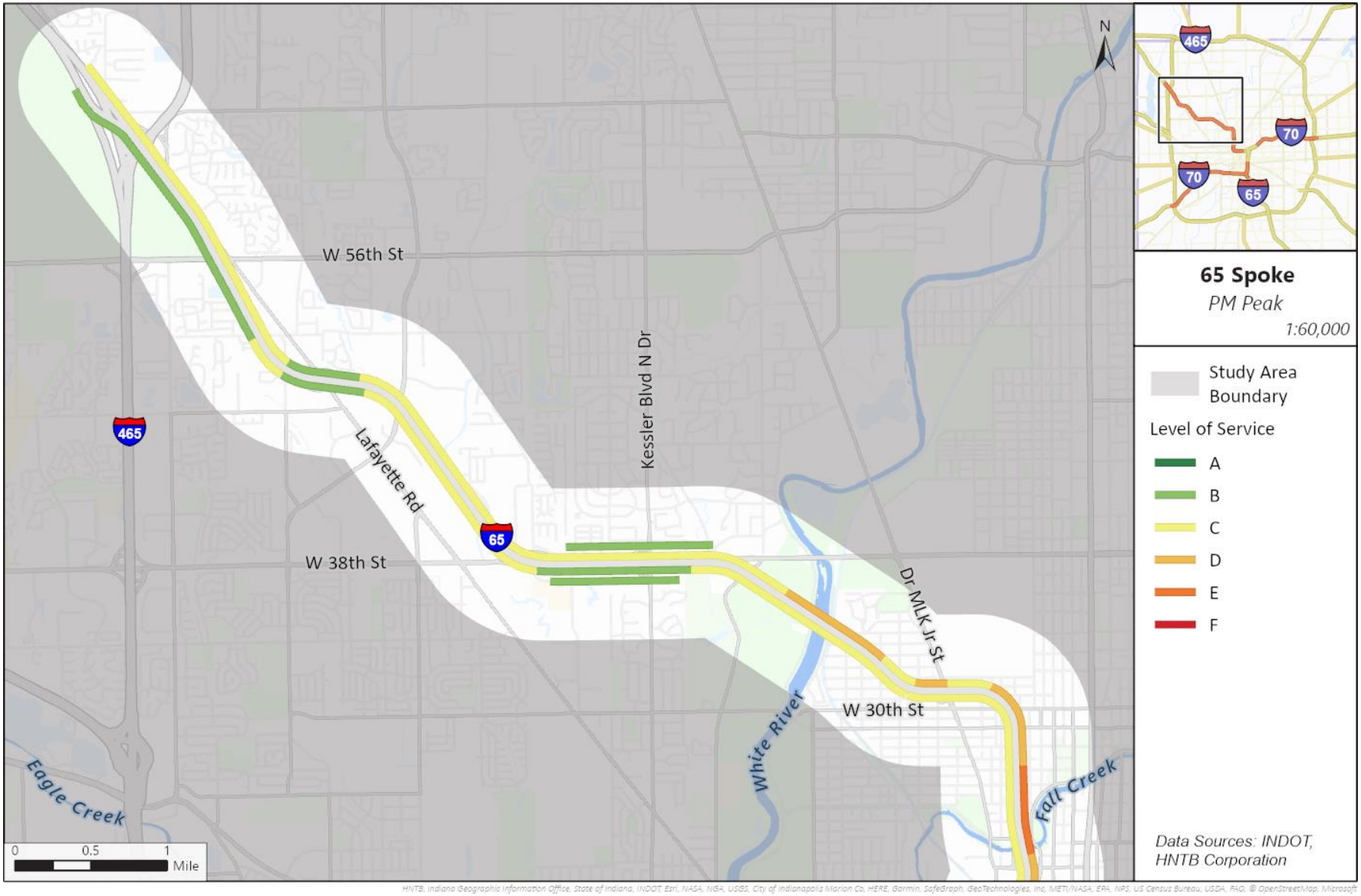


Figure 41: 2023 Speed Data Along I-65, 65 Spoke

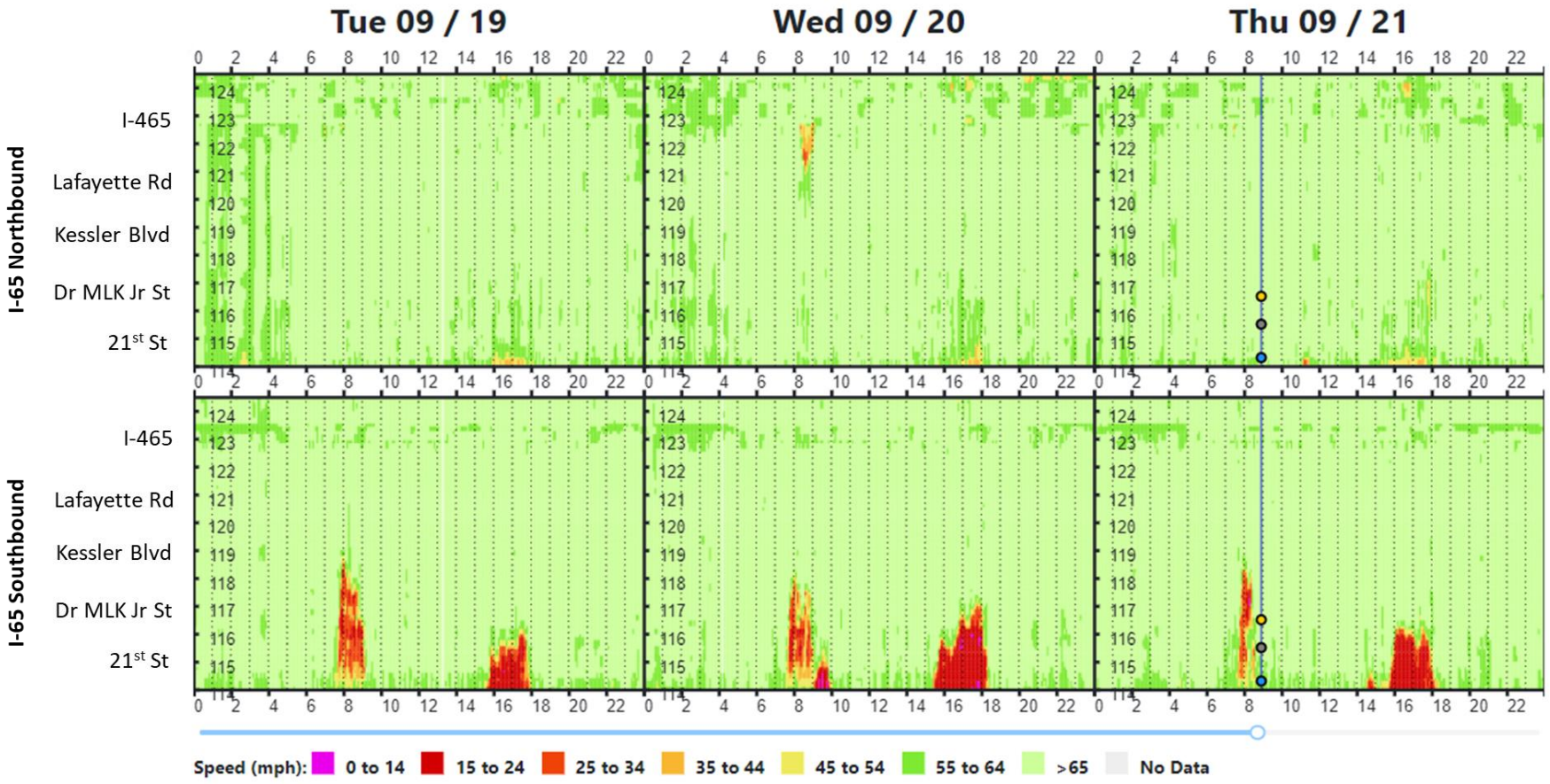


Figure 42: 2023 AM Interstate Operating Conditions, 65/70 Downtown Spoke

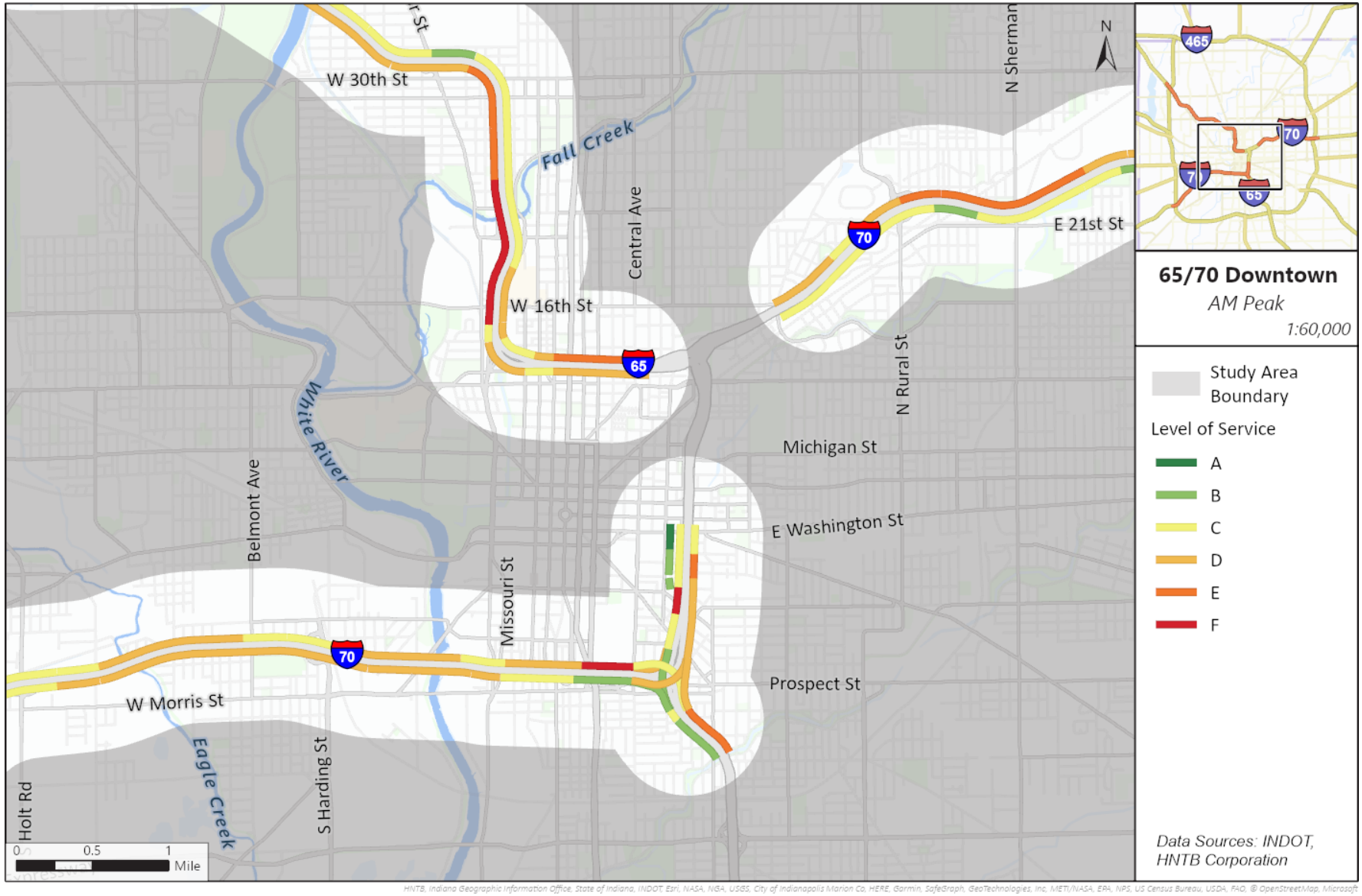


Figure 43: 2023 PM Interstate Operating Conditions, 65/70 Downtown Spoke

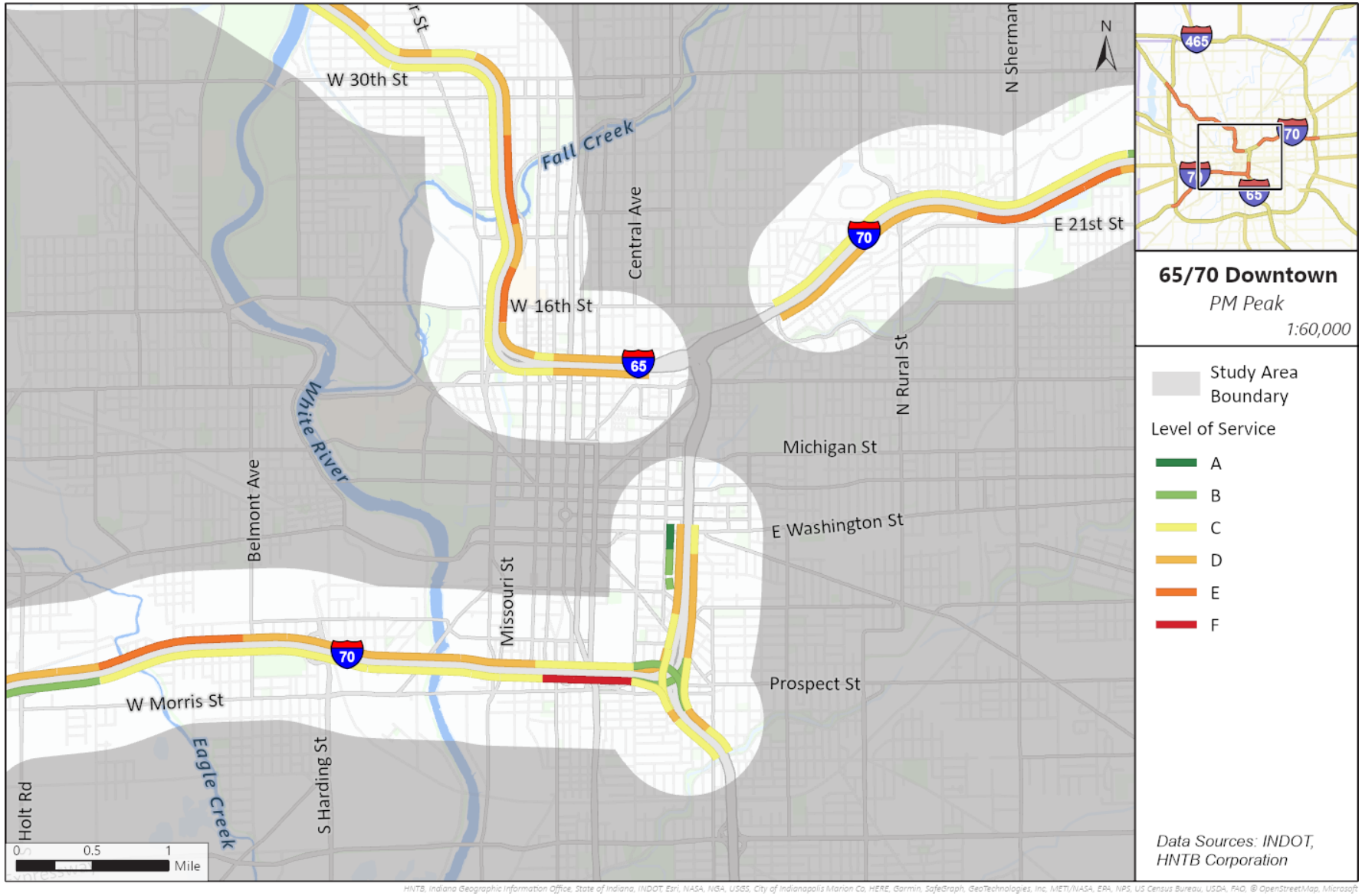


Figure 44: 2023 Speed Data Along I-65, 65/70 Downtown Spoke

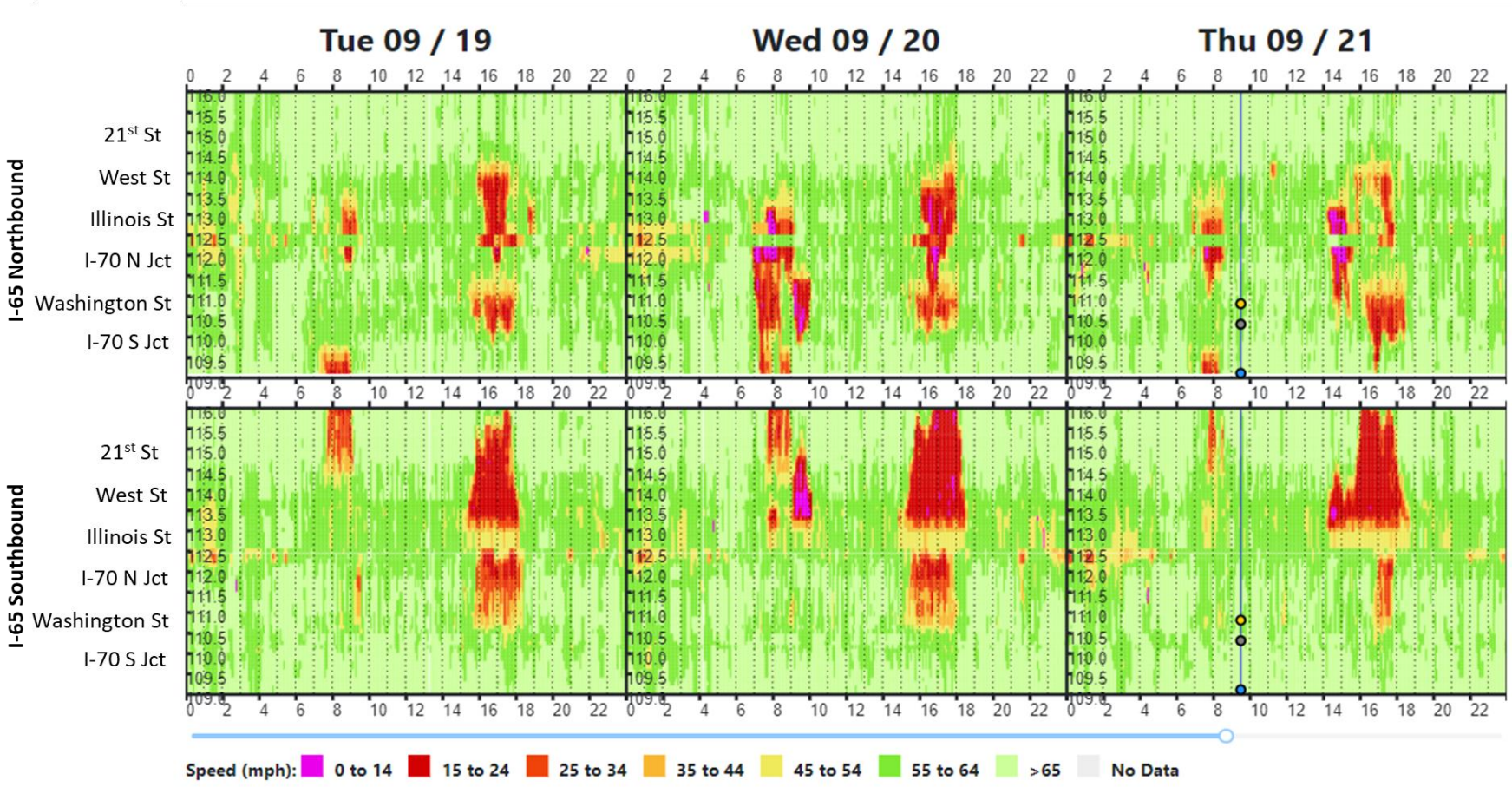


Figure 45: 2023 Speed Data Along I-70, 65/70 Downtown Spoke

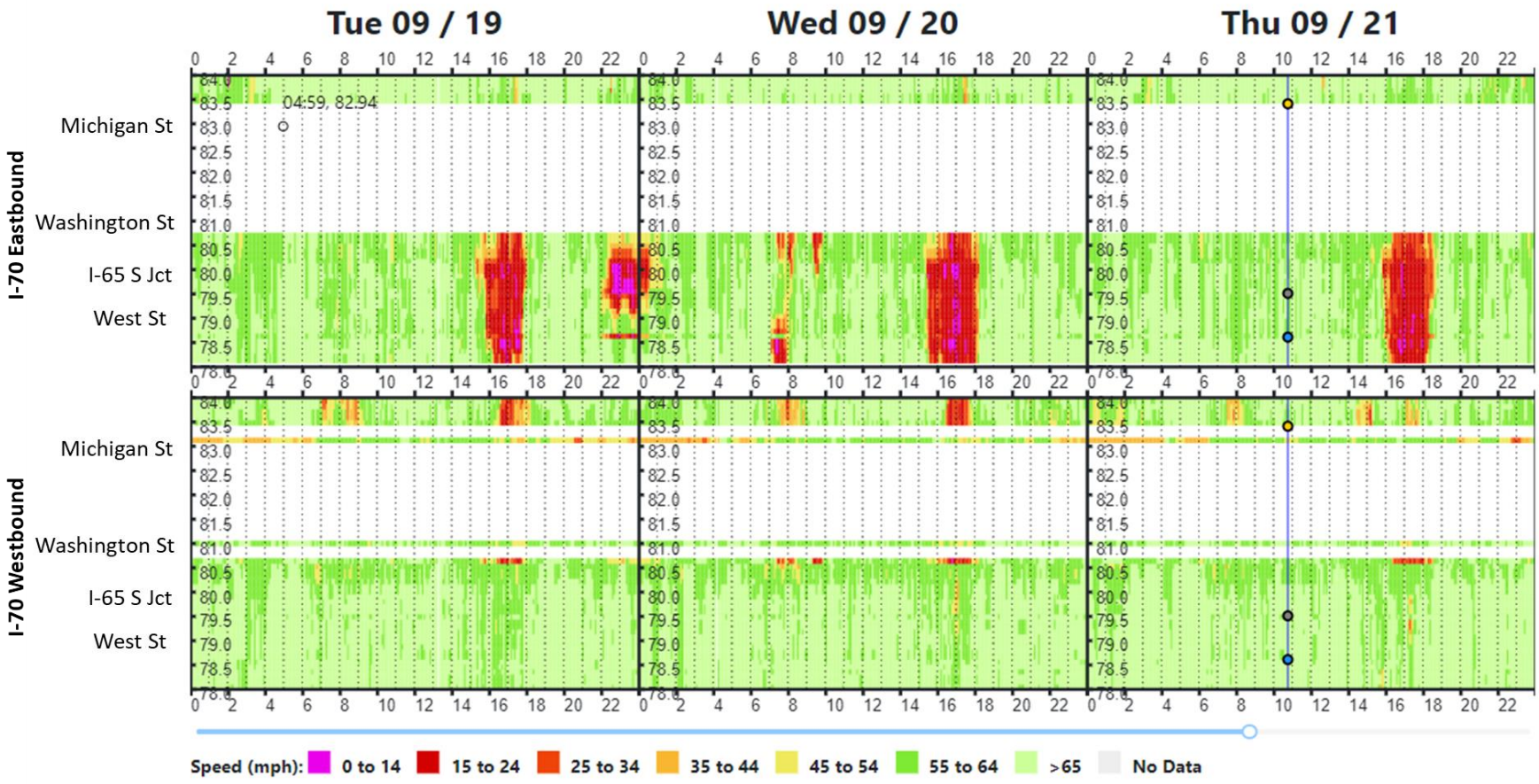


Figure 46: 2023 AM Interstate Operating Conditions, 70W Spoke

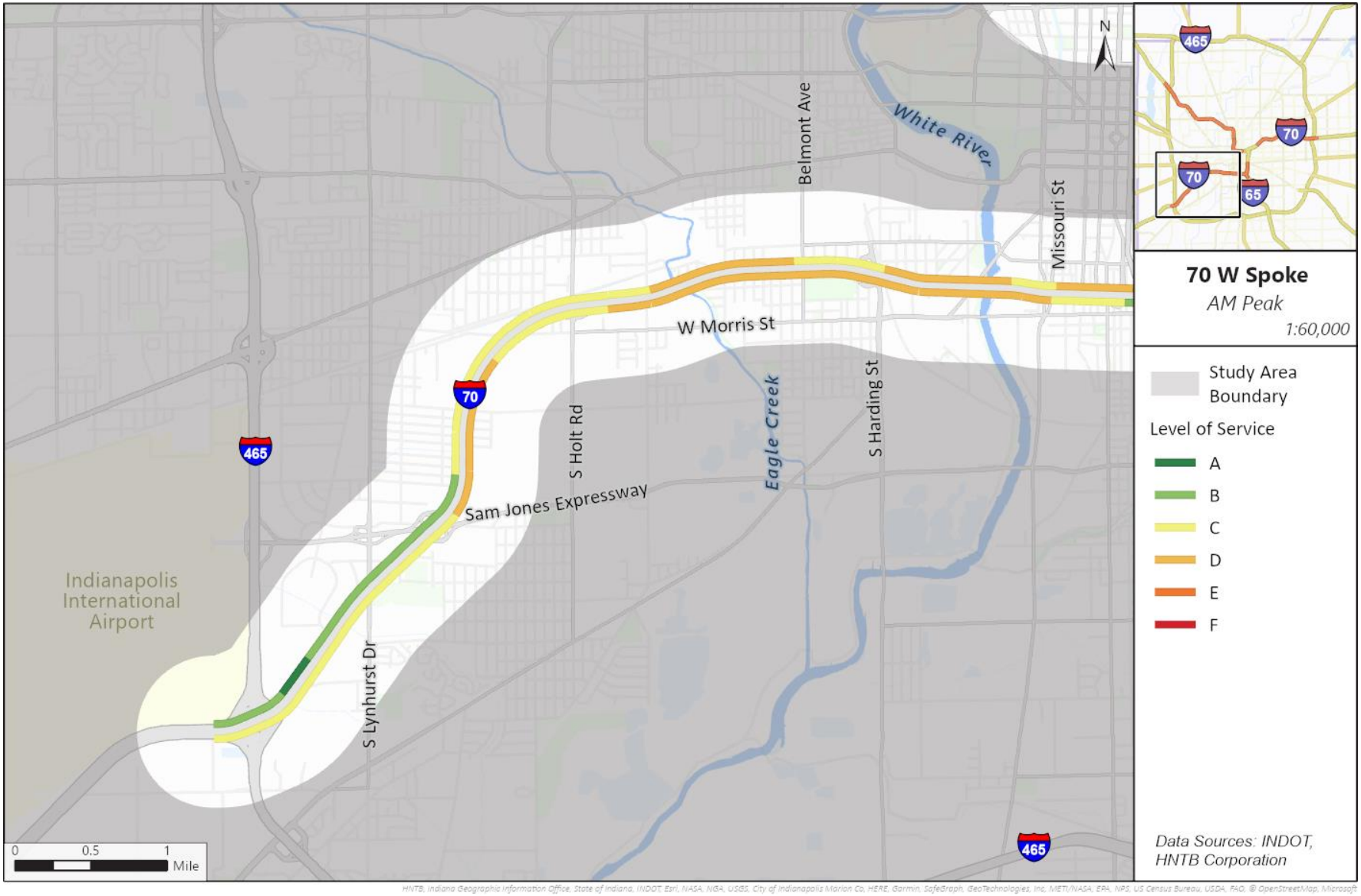


Figure 47: 2023 PM Interstate Operating Conditions, 70W Spoke

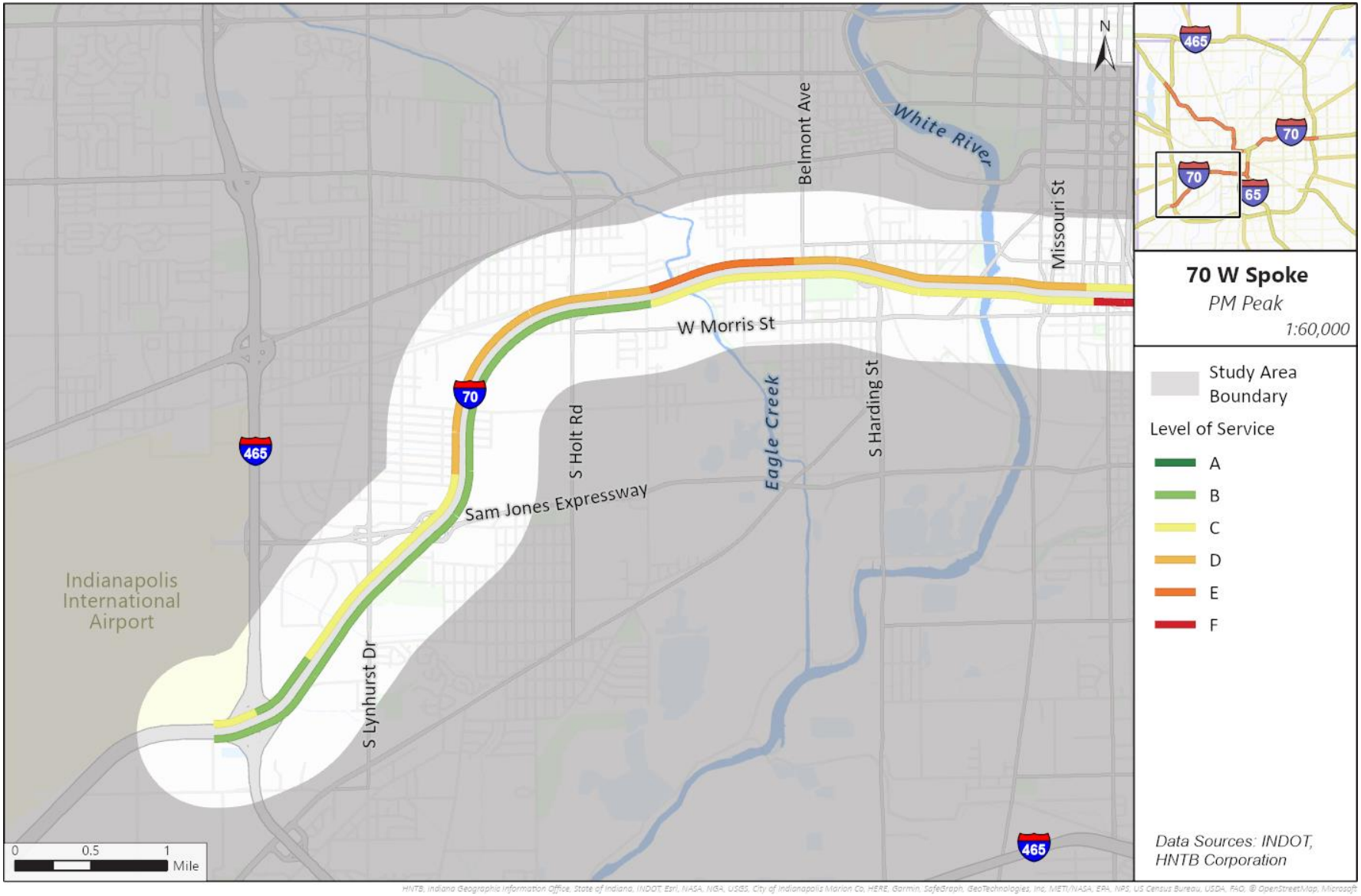


Figure 48: 2023 Speed Data along I-70, 70W Spoke

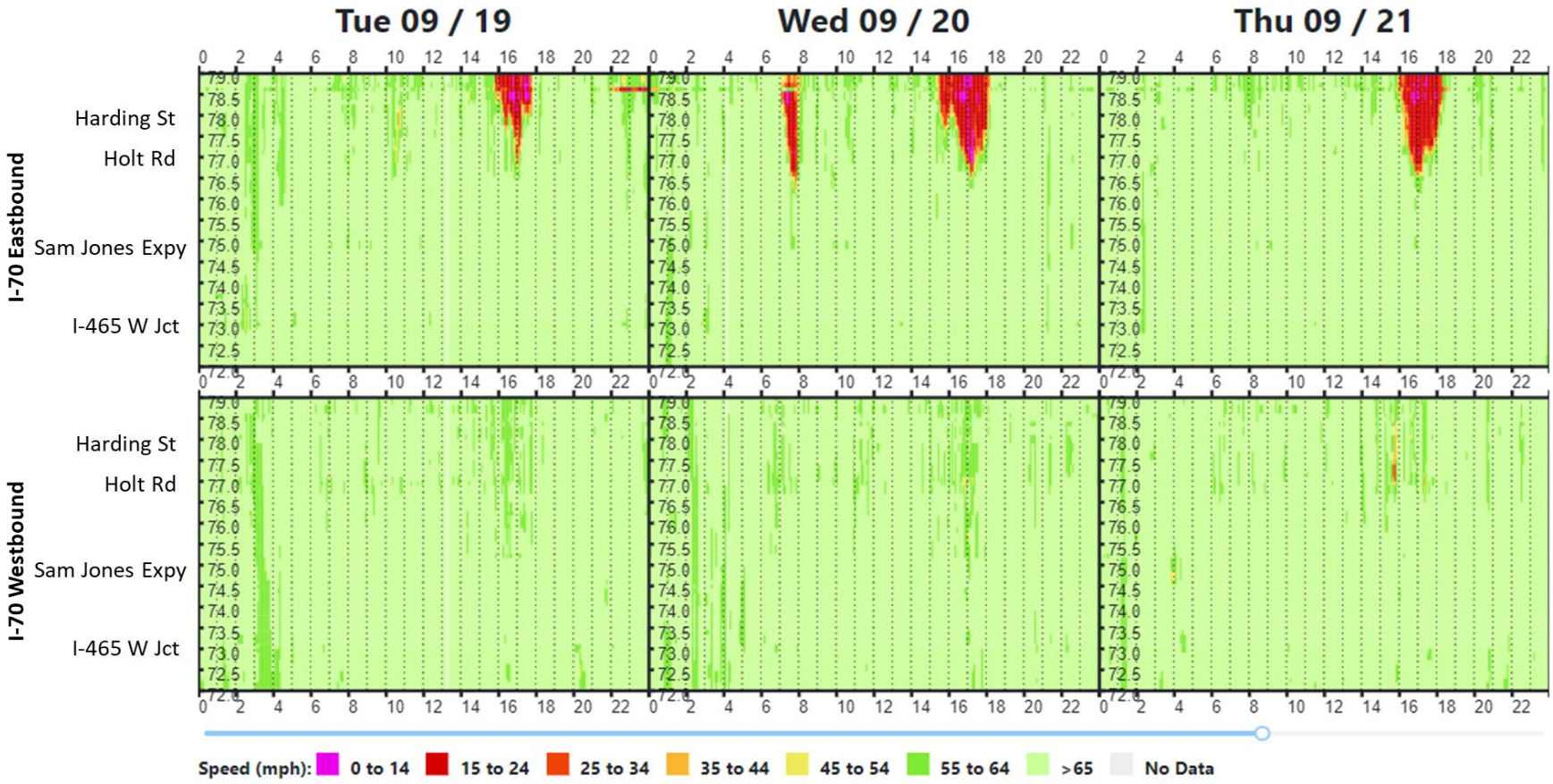


Figure 49: 2023 AM Interstate Operating Conditions, 70E Spoke

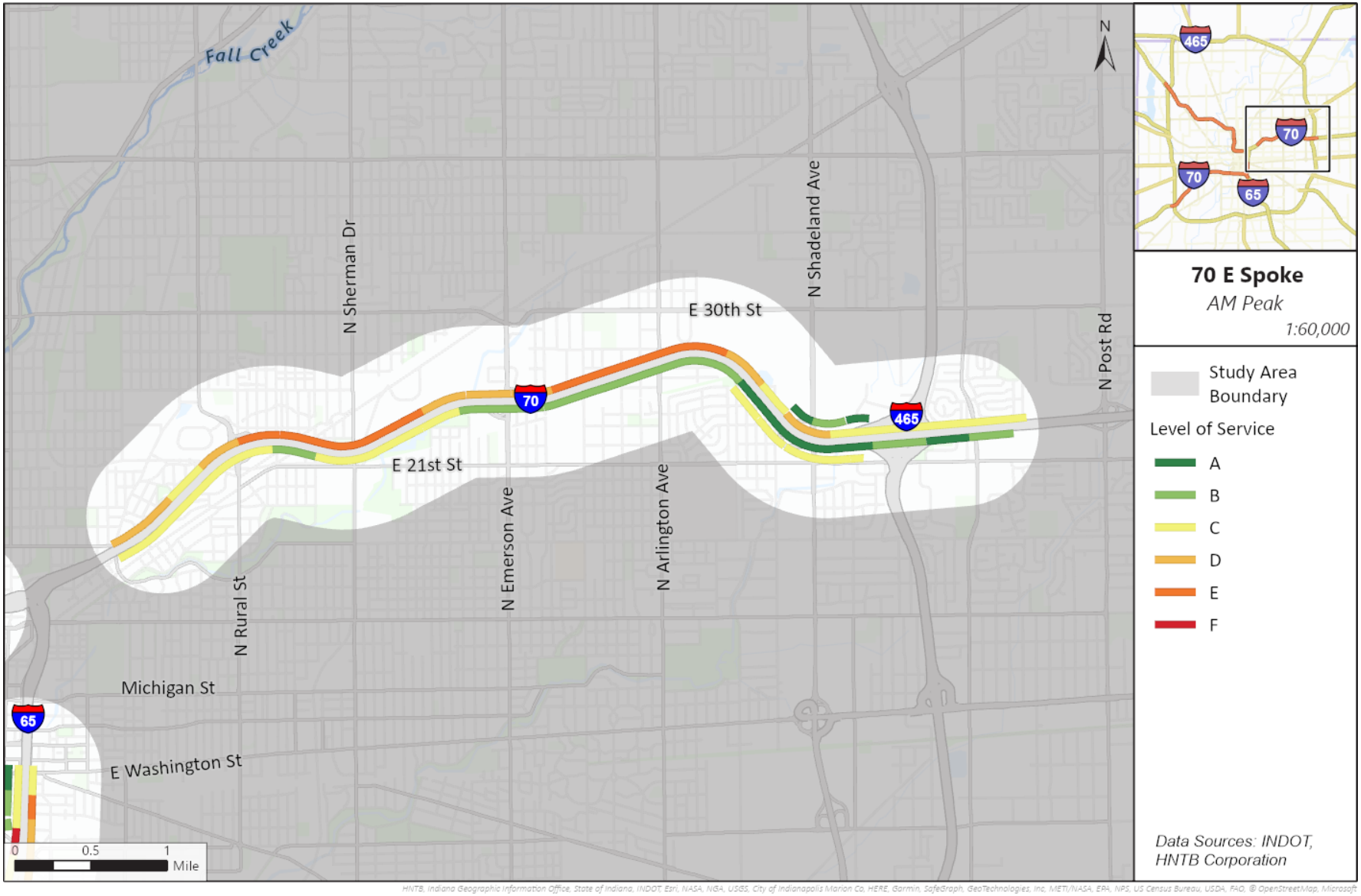


Figure 50: 2023 PM Interstate Operating Conditions, 70E Spoke

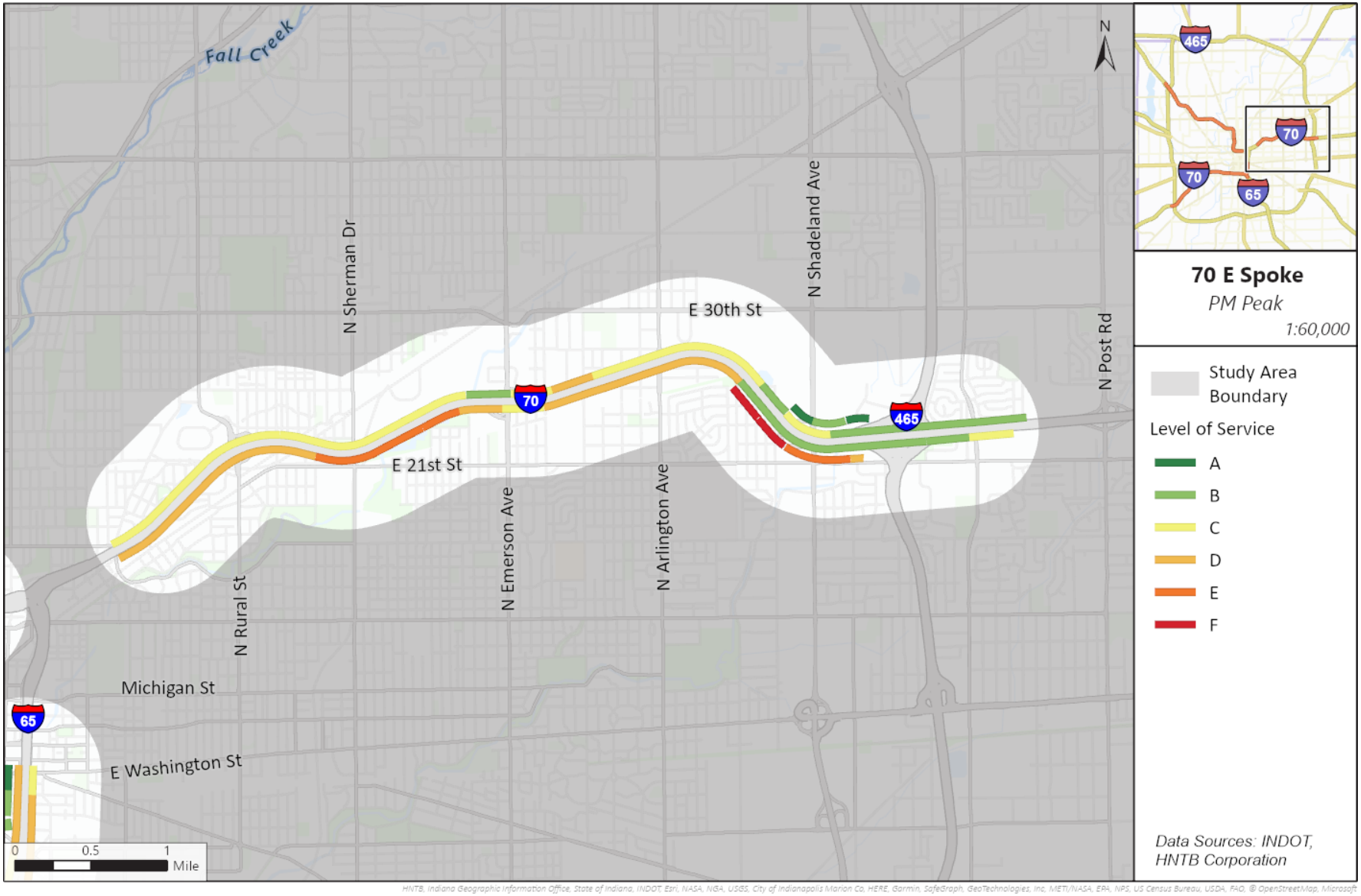
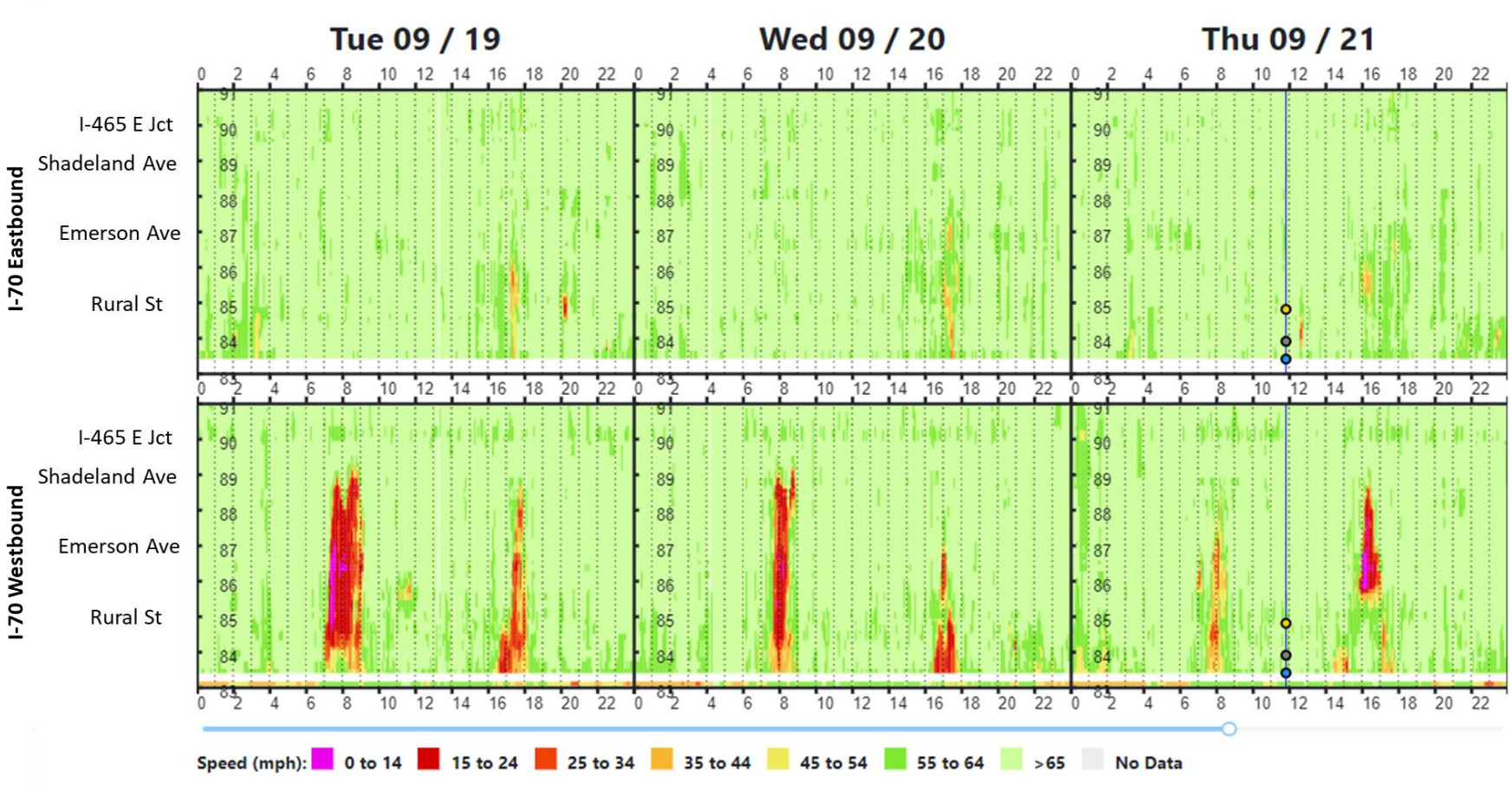


Figure 51: 2023 Speed Data along I-70, 70E Spoke



6.4 Intersection Operations

Operations of all intersections influencing or influenced by the interstates within the study area are described below. Signal timing data used in the operational analysis was provided by INDOT and the Indianapolis Department of Public Works (DPW).

6.4.1 65 Spoke

Operating conditions of all intersections within the 65 Spoke are summarized in **Table 32**. Only one intersection was found to operate at unacceptable levels in 2023. The deficiencies of this intersection are described below.

38th St at Knollton Rd / Cold Springs Rd – The intersection is a 4-legged signalized intersection. Based on the detailed analysis results, the eastbound through/right, westbound left, and the northbound right movements are all at, or over, capacity. Based on a review of the intersection geometry and queue analysis results, the westbound left and northbound right turn lanes may be substandard in length with the 95th percentile queue lengths expected to exceed storage capacity during both the AM and PM peak hours under existing conditions.

Table 32: Existing (2023) Intersection Operations for 65 Spoke

Intersection	Approach	Existing Year (2023)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Lafayette Rd at I-65 NB Ramp (Signalized)	Westbound	D	43.8	D	46.1
	Northbound	A	3.5	A	4.8
	Southbound	A	6.3	A	8.8
	Overall	**A**	**9.1**	**B**	**16.8**
Lafayette Rd at I-65 SB Ramp (Signalized)	Eastbound	D	52.7	D	52.9
	Northbound	A	8.2	A	7.6
	Southbound	A	4.2	A	4.1
	Overall	**A**	**7.4**	**A**	**9.5**
38th St at Industrial Blvd / Commercial Dr (Signalized)	Eastbound	A	1.2	C	27.8
	Westbound	C	33.6	C	32.7
	Northbound	D	50.6	D	53.0
	Southbound	D	51.8	E	57.9
	Overall	**B**	**18.1**	**C**	**31.5**
W Kessler Blvd at 38th St / NB I-65 Ramps (Signalized)	Eastbound	B	19.4	B	19.4
	Northbound	A	4.3	A	7.7
	Southbound	A	8.9	B	13.5
	Overall	**A**	**8.0**	**B**	**12.1**

Intersection	Approach	Existing Year (2023)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
W Kessler Blvd at 38th St / SB I-65 Ramps (Signalized)	Eastbound	B	15.8	B	19.4
	Westbound	B	14.2	B	13.0
	Northbound	A	6.5	B	11.7
	Southbound	A	8.5	B	14.3
	Overall	**A**	**8.6**	**B**	**13.9**
38th St at Knollton Rd / Cold Springs Rd (Signalized)	Eastbound	C	33.4	D	51.7
	Westbound	C	20.9	D	41.7
	Northbound	D	49.7	**F**	**91.1**
	Southbound	C	30.4	C	29.2
	Overall	**C**	**29.8**	**D**	**53.5**
38th St at Lafayette Rd (Signalized)	Eastbound	D	38.2	D	50.2
	Westbound	B	15.5	A	9.5
	Northbound	D	53.7	E	56.9
	Southbound	D	43.2	E	56.0
	Overall	**C**	**32.9**	**D**	**37.4**
Dr MLK Jr St at NB I-65 Ramps (Unsignalized)	Northbound Left	C	19.5	C	22.8
Dr MLK Jr St at SB I-65 Ramps (Unsignalized)	Eastbound Left	C	15.2	C	24.2
	Eastbound Right	B	13.8	B	14.7
Dr MLK Jr St at 30th St (Signalized)	Westbound	C	27.1	C	31.1
	Northbound	A	4.6	B	19.2
	Southbound	A	5.2	B	19.8
	Overall	**B**	**11.1**	**C**	**24.5**
W 30th St at NB I-65 Ramps (Signalized)	Westbound	A	6.0	A	5.5
	Northbound	D	48.4	C	34.2
	Overall	**B**	**19.5**	**B**	**17.9**
W 29th St at NB I-65 Ramps (Signalized)	Eastbound	C	28.9	C	27.8
	Southbound	A	4.7	A	4.4
	Overall	**B**	**12.6**	**B**	**17.3**
W 29th St at SB I-65 Ramps (Signalized)	Eastbound	A	5.6	A	7.6
	Northbound	C	25.0	C	23.9
	Overall	**B**	**19.1**	**B**	**19.8**

6.4.2 65/70 Downtown Spoke

Operating conditions of all intersections within the 65/70 Downtown Spoke are summarized in **Table 33**. Only one intersection in the 65/70 Downtown Spoke was found to operate at unacceptable conditions in 2023. This intersection and its deficiencies are described as follows:

W 21st St at NB I-65 ramps – The intersection is a 4-legged unsignalized intersection with stop control on the northbound off-ramp approach and free-flow movement on W 21st Street. During the PM peak hours, the northbound left-turn movement operates at LOS F. Examination of traffic count videos show eastbound queues from the adjacent signalized intersection at Senate Boulevard appear to increase overall delay at the I-65 off-ramp. These queues decreased overall sight distance for left-turning vehicles and occasionally blocked the off-ramp turning movements.

Table 33: Existing (2023) Intersection Operations, 65/70 Downtown Spoke

Intersection	Approach	Existing Year (2023)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Dr MLK Jr St at W 21st St (Signalized)	Westbound	D	35.7	C	33.9
	Northbound	A	8.7	A	8.3
	Southbound	A	5.7	A	4.6
	Overall	**B**	**12.1**	**A**	**9.6**
W 21st St at SB I-65 ramps (Signalized)	Eastbound	A	9.1	A	9.7
	Westbound	B	14.6	B	15.6
	Southbound	D	41.5	D	41.7
	Overall	**C**	**24.2**	**C**	**23.5**
W 21st St at NB I-65 ramps (Unsignalized)	Eastbound Left	A	8.3	A	8.3
	Northbound Thru/Left	D	31.6	**F**	**52.4**
	Northbound Right	B	12.6	B	12.2
W 21st St at Senate Blvd / Boulevard Place (Signalized)	Eastbound	A	6.5	B	11.9
	Westbound	A	0.4	A	0.6
	Northbound	D	35.3	C	29.1
	Southbound	C	31.3	C	24.2
	Overall	**B**	**13.4**	**B**	**15.2**
W 21st St at N Capitol Ave (Signalized)	Eastbound	D	38.7	D	39.0
	Westbound	C	32.2	C	26.1
	Southbound	A	8.0	B	10.0
	Overall	**B**	**18.7**	**C**	**25.5**

Intersection	Approach	Existing Year (2023)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
SB I-65 Off-ramp at NB I-65 Off-ramp (to 11th St) (Signalized)	Westbound	D	35.3	D	36.6
	Southbound	C	30.5	B	14.3
	Overall	**C**	**32.8**	**C**	**27.2**
11th St / Oscar Robertson Blvd at Dr MLK Jr St (Signalized)	Westbound	D	41.4	D	46.5
	Northbound	B	17.3	B	10.0
	Southbound	C	20.0	B	10.8
	Overall	**C**	**34.3**	**C**	**28.4**
11th St at West Street / I-65 (Signalized)	Westbound	D	40.0	D	40.8
	Northbound	A	0.2	A	1.3
	Southbound	A	9.4	A	5.9
	Overall	**A**	**8.1**	**A**	**5.4**
10th St at Dr MLK Jr St (Signalized)	Eastbound	D	44.0	C	32.5
	Northbound	D	40.9	D	39.0
	Southbound	D	49.0	D	47.9
	Overall	D	44.9	D	36.1
10th St at N West St (Signalized)	Eastbound	D	43.1	C	32.4
	Northbound	A	3.9	D	42.0
	Southbound	A	4.8	A	9.9
	Overall	**B**	**13.9**	**C**	**29.4**
N West St at Dr MLK St (Signalized)	Northbound Left	D	51.9	D	47.5
	Southbound	A	7.1	B	11.4
	Overall	**B**	**10.9**	**B**	**19.0**
12th St at N Illinois St (Signalized)	Westbound	B	19.9	C	34.9
	Northbound	A	4.6	A	7.7
	Overall	**A**	**7.7**	**B**	**13.0**
12th St at N Meridian St (Signalized)	Westbound	D	37.2	D	37.1
	Northbound	A	0.9	A	2.1
	Southbound	A	6.5	A	9.1
	Overall	**B**	**10.3**	**A**	**7.6**
12th St at N Pennsylvania St (Signalized)	Westbound	C	33.0	C	32.7
	Southbound	A	6.9	A	5.3
	Overall	**B**	**10.9**	**A**	**9.1**

Intersection	Approach	Existing Year (2023)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
11th St at N Illinois St (Signalized)	Eastbound	C	26.4	D	38.5
	Northbound	B	12.6	A	5.2
	Overall	**C**	**20.2**	**A**	**9.9**
11th St at N Meridian St (Signalized)	Eastbound	C	34.2	D	36.5
	Northbound	A	9.3	B	11.4
	Southbound	A	1.0	A	1.6
	Overall	**B**	**18.9**	**B**	**16.4**
11th St at N Pennsylvania St (Signalized)	Eastbound	D	37.1	D	39.5
	Southbound	B	14.8	B	15.1
	Overall	**C**	**21.5**	**C**	**25.3**
11th St at N Delaware St (Signalized)	Eastbound	D	37.1	D	38.3
	Northbound	A	4.2	A	7.9
	Overall	**B**	**12.7**	**B**	**16.2**
E Michigan St at Davidson St (Signalized)	Westbound	C	24.4	C	23.4
	Southbound	B	11.2	A	6.5
	Overall	**B**	**16.2**	**B**	**14.2**
E Michigan St at Pine St (Signalized)	Westbound	D	37.1	C	33.7
	Northbound	A	3.8	A	6.8
	Overall	**C**	**23.4**	**B**	**15.4**
E Ohio St at N College Ave (Signalized)	Eastbound	A	6.8	B	12.6
	Westbound	B	10.2	A	8.7
	Northbound	C	32.2	C	32.9
	Overall	**B**	**18.6**	**C**	**21.1**
E Washington St at N College Ave (Signalized)	Eastbound	B	17.0	A	7.9
	Westbound	B	17.7	A	0.6
	Northbound	D	38.8	D	35.3
	Overall	**C**	**20.5**	**B**	**11.3**
E Washington St at SB I-65 & I-70 On-ramp / N Davidson St (Signalized)	Eastbound	A	0.2	A	9.4
	Westbound	B	10.6	B	14.4
	Overall	**A**	**8.3**	**B**	**12.0**

Intersection	Approach	Existing Year (2023)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
E Washington St at NB I-65 & I-70 Off-ramp / Pine St (Signalized)	Eastbound	B	15.6	C	20.1
	Westbound	A	8.6	A	8.4
	Northbound	C	32.6	C	32.2
	Overall	**B**	**17.3**	**B**	**19.1**
E Washington St at Southeastern Ave (Signalized)	Eastbound	A	0.5	A	0.7
	Westbound	A	9.5	A	6.0
	Northbound	D	35.1	D	38.1
	Overall	**B**	**12.0**	**A**	**8.1**
Fletcher Ave at SB I-65 & I-70 Off-ramp / Pine St (Signalized)	Eastbound	D	37.4	D	40.3
	Westbound	D	42.1	D	40.2
	Northbound	D	45.3	A	0.0
	Southbound	D	38.3	D	39.6
	Overall	**D**	**39.6**	**D**	**40.0**
Calvary St at NB I-65 & I-70 On-ramp (Unsignalized)	Eastbound Left	A	8.3	A	9.1
East St at SB I-65 & I-70 Off-ramp (Signalized)	Westbound	D	35.3	D	38.5
	Northbound	A	7.3	A	4.0
	Southbound	A	6.9	A	4.6
	Overall	**B**	**19.5**	**B**	**10.6**
Morris St at SB I-65 On-ramp (Unsignalized)	Westbound Left	A	8.0	A	8.9
Morris St at NB I-65 Off-ramp (Signalized)	Eastbound	C	29.3	C	27.2
	Northbound	A	4.4	A	6.0
	Overall	**B**	**15.7**	**C**	**21.4**
S West St at W McCarty St (Signalized)	Eastbound	D	46.3	D	44.6
	Westbound	D	47.8	D	47.9
	Southbound	A	2.8	A	6.3
	Overall	**B**	**11.9**	**B**	**10.7**
W McCarty St at S Missouri St (Signalized)	Eastbound	D	44.7	D	44.5
	Westbound	D	52.4	D	49.6
	Northbound	C	22.6	B	11.3
	Overall	**C**	**25.4**	**C**	**22.2**

Intersection	Approach	Existing Year (2023)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
W McCarty St at S Capitol Ave / WB I-70 On-ramp (Signalized)	Eastbound	A	3.2	A	6.8
	Westbound	A	3.2	A	6.8
	Southbound	C	27.4	C	23.1
	Overall	**B**	**13.8**	**B**	**19.7**
W McCarty St at Illinois St / EB I-70 Off-ramp (Signalized)	Eastbound	A	3.5	A	3.8
	Westbound	A	3.4	A	3.5
	Northbound	C	29.3	C	26.5
	Overall	**B**	**17.2**	**A**	**6.3**
W McCarty St at S Meridian St / Russell Ave (Signalized)	Eastbound	D	38.2	D	35.3
	Westbound	C	34.6	C	33.9
	Northbound	A	3.6	A	5.2
	Southbound	A	3.5	A	5.1
	Overall	**C**	**23.6**	**C**	**27.5**
W McCarty St at I-70 ramps / Madison Ave (Signalized)	Eastbound	D	44.0	D	44.6
	Westbound	D	41.9	D	37.7
	Northbound	A	7.9	B	13.0
	Southbound	B	11.3	C	21.7
	Overall	**B**	**18.2**	**C**	**28.2**
W McCarty St at Pennsylvania St (Signalized)	Eastbound	D	41.3	D	38.7
	Westbound	C	31.5	D	36.7
	Southbound	A	6.3	A	6.4
	Overall	**C**	**26.4**	**B**	**17.4**
WB I-70 ramps at S West St (Signalized)	Westbound	A	5.8	B	19.8
	Southbound	C	24.3	C	34.9
	Overall	**B**	**14.4**	**C**	**32.3**
WB I-70 ramps at S Missouri St (Signalized)	Westbound	B	13.7	A	5.0
	Northbound	B	15.7	B	19.9
	Overall	**B**	**14.9**	**B**	**16.0**
EB I-70 ramps at S West St (Signalized)	Eastbound	A	7.1	B	13.3
	Southbound	C	22.7	B	19.3
	Overall	**B**	**17.3**	**B**	**19.1**

Intersection	Approach	Existing Year (2023)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
EB I-70 ramps at S Missouri St (Signalized)	Eastbound	B	15.9	B	18.5
	Northbound	B	16.3	C	21.2
	Overall	**B**	**16.2**	**B**	**19.4**
S West St at W Morris St (Signalized)	Eastbound	D	38.4	D	37.9
	Westbound	D	41.2	D	45.4
	Northbound	C	27.6	C	28.3
	Southbound	D	48.5	C	30.0
	Overall	**D**	**36.9**	**C**	**34.5**

6.4.3 70W Spoke

Operating conditions of all intersections within the 70W Spoke are summarized in **Table 34**. All intersections in this spoke operate acceptably in 2023.

Table 34: Existing (2023) Intersection Operations, 70W Spoke

Intersection	Approach	Existing Year (2023)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
I-70 WB Ramps at Holt Rd (Signalized)	Westbound	C	28.9	C	30.8
	Northbound	C	31.3	C	30.1
	Southbound	C	26.1	C	27.5
	Overall	**C**	**28.5**	**C**	**29.4**
I-70 EB Ramps at Holt Rd (Signalized)	Eastbound	D	44.4	D	39.0
	Northbound	C	27.8	C	27.0
	Southbound	C	34.8	C	33.6
	Overall	**D**	**35.1**	**C**	**32.8**
W Morris St at Holt Rd (Signalized)	Eastbound	C	34.1	D	37.6
	Westbound	D	54.0	D	39.1
	Northbound	B	17.5	B	17.2
	Southbound	B	16.8	B	18.0
	Overall	**C**	**33.8**	**C**	**30.7**
Oliver Ave at S Harding St (Signalized)	Eastbound	B	10.0	A	4.7
	Westbound	A	5.7	A	6.1
	Northbound	D	46.6	C	30.6
	Overall	**C**	**30.1**	**B**	**15.1**
I-70 WB Ramps at S Harding St (Signalized)	Eastbound	D	38.2	D	44.2
	Northbound	B	14.7	C	33.4
	Southbound	B	12.1	B	12.3
	Overall	**B**	**17.6**	**C**	**26.8**
I-70 EB Ramps at S Harding St (Signalized)	Eastbound	D	36.7	D	44.8
	Westbound	D	35.3	A	0.0
	Northbound	B	18.5	B	17.3
	Southbound	A	7.1	B	18.6
	Overall	**B**	**16.8**	**B**	**19.7**

6.4.4 70E Spoke

Operating conditions of all intersections within the 70E Spoke are summarized in **Table 35**. All intersections in this spoke operate acceptably in 2023.

Table 35: Existing (2023) Intersection Operations, 70E Spoke

Intersection	Approach	Existing Year (2023)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Keystone Way at Enterprise Park Pl / 23rd St (Signalized)	Eastbound	D	36.0	D	36.5
	Westbound	D	36.6	D	37.4
	Northbound	A	9.7	A	7.9
	Southbound	B	10.7	A	8.6
	Overall	**B**	**10.5**	**A**	**8.9**
WB I-70 ramps at Keystone Way (Signalized)	Westbound	D	41.1	D	42.4
	Northbound	A	9.4	A	6.3
	Southbound	A	6.4	A	5.6
	Overall	**B**	**13.7**	**B**	**11.1**
EB I-70 ramps at Keystone Way / N Rural St (Unsignalized)	Eastbound Right	C	21.1	C	16.0
	Southbound Left	A	9.9	B	12.0
N Rural St at Bloyd Ave / Roosevelt Ave (Signalized)	Eastbound	C	31.5	C	26.5
	Westbound	C	27.6	B	15.8
	Northbound	A	4.1	B	13.6
	Southbound	A	4.4	B	13.4
	Overall	**A**	**6.8**	**B**	**16.0**
WB I-70 ramps at Emerson Ave (Signalized)	Eastbound	D	45.9	D	40.7
	Westbound	A	0.2	C	21.5
	Southbound	A	3.1	A	6.5
	Overall	**A**	**7.6**	**B**	**20.0**
EB I-70 ramps at Emerson Ave (Signalized)	Eastbound	D	39.2	D	39.5
	Northbound	B	10.2	A	9.4
	Southbound	A	0.2	C	22.8
	Overall	**B**	**15.1**	**C**	**21.9**

Intersection	Approach	Existing Year (2023)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
WB I-70 ramps at Shadeland Ave / Western Select Dr (Signalized)	Eastbound	D	52.4	D	37.0
	Westbound	D	37.7	D	36.7
	Northbound	B	12.9	B	10.6
	Southbound	C	22.6	C	20.2
	Overall	**C**	**20.2**	**B**	**18.1**
EB I-70 ramps at Shadeland Ave (Signalized)	Eastbound	D	36.5	D	41.9
	Northbound	A	4.6	B	10.1
	Southbound	A	0.2	A	0.3
	Overall	**A**	**7.1**	**A**	**8.5**
East 21st St at Shadeland Ave (Signalized)	Eastbound	D	53.3	E	58.1
	Westbound	D	37.3	D	50.8
	Northbound	C	29.9	C	32.6
	Southbound	C	22.7	B	17.6
	Overall	**C**	**31.5**	**C**	**33.6**

7 Future No-Build Operating Conditions

7.1 Operational Standards & Analysis Tools

The Level of Service measures and operating requirements listed in **Chapter 6** are applicable to the future No-Build scenario.

Similar to the existing conditions analysis, Synchro 11 software and Highway Capacity Software (HCS7) were used to evaluate the future No-Build conditions. The outputs from these software packages are provided in **Appendix L**.

7.2 Committed Improvements to the Existing Network

INDOT has several committed improvements to the Indianapolis interstate system that will be completed prior to the horizon year of 2050 regardless of the outcome of this study. These improvements, which are listed below, will add capacity to the interstate network and are accounted for in the analysis of future No-Build conditions.

- I-65 / I-465 N Junction (Des No. 2002581): The ramp from northbound I-65 to northbound I-465 will be widened from one lane to two.
- I-65 / I-465 S Junction: The interchange improvements will address the two existing left side entrance ramps to I-465.
- I-65 from the I-65/I-465 S Junction to Washington Street (Des No. 1802797): Add added travel lane will be added to both directions of I-65. This improvement is known as the I-65 Safety and Efficiency project.
- I-465 Southeast: A travel lane will be added to both directions of I-465 between I-70 (Exit 44) and I-65 (Exit 54).
- I-465 Northwest (Des 1600854): Added travel lanes to both directions of I-465 from south of I-865 to US 31 and interchange improvements at I-465 & I-865.
- I-69 / I465 S Jct: I-69 from County Line Road to I-465.
- I-465 Southwest: Added travel lanes to both directions of I-465 from I-70 to I-65.
- I-69 / I-465 N Jct: Interchange modification.

7.3 Interstate Operations

Interstate operations and deficiencies within each spoke for the future 2050 No-Build scenario are described below.

7.3.1 65 Spoke

Interstate operations for the 65 Spoke are depicted in **Figure 52** and **Figure 53** for the AM and PM peak hours, respectively. In general, segments that do not meet the LOS D standard are:

- AM Peak Hour:
    - I-65 southbound, from the Lafayette Road on-ramp to north of 38th Street
    - I-65 southbound, between the 38th Street on-ramp and the North Split (overlaps with the 65/70 Downtown Spoke)
- PM Peak Hour:
    - I-65 southbound, at 38th Street on-ramp
    - I-65 southbound, between Dr MLK Jr Street and the North Split (overlaps with the 65/70 Downtown Spoke)
    - Westbound 38th Street collector-distributor roadway, between northbound I-65 off-ramp and Kessler Blvd off-ramp
    - I-65 northbound, between the North Split and the 38th Street off-ramp (overlaps with the 65/70 Downtown Spoke)

7.3.2 65/70 Downtown Spoke

Interstate operations for the 65/70 Downtown Spoke are depicted **Figure 54** and **Figure 55** for the AM and PM peak hours, respectively. In general, segments that do not meet the LOS D standard are:

- AM Peak Hour:
    - I-65 southbound, between the 38th Street on-ramp and the North Split (overlaps with the 65 Spoke)
    - I-65 northbound, between the North Split and the West Street off-ramp
    - I-65 northbound, between the West Street on-ramp and the 21st St off-ramp
    - I-70 westbound, between the South Split and the Holt Road off-ramp (overlaps with the 70W Spoke)
    - I-70 eastbound, from the Sam Jones Expressway on-ramp through the South Split (overlaps with the 70W Spoke)
    - I-65 northbound, diverge segment to westbound I-70
    - I-65 southbound mainline and collector-distributor, from Washington Street through the South Split
- PM Peak Hour:
    - I-65 northbound, between the North Split and the 38th Street off-ramp (overlaps with the 65 Spoke)
    - I-65 southbound, between Dr MLK Jr Street and the North Split (overlaps with the 65/70 Downtown Spoke)

- I-70 westbound, between the South Split and the Sam Jones Expressway off-ramp (overlaps with the 70W Spoke)
- I-70 eastbound, from the Missouri Street on-ramp through the South Split
- I-65 southbound mainline and collector-distributor, from Washington Street through the South Split

7.3.3 70W Spoke

Interstate operations for the 70W Spoke are depicted **Figure 56** and **Figure 57** for the AM and PM peak hours, respectively. The only segment that does not meet the LOS D standard is:

- AM Peak Hour:
  - I-70 westbound, between the South Split and the Holt Road off-ramp (overlaps with the 65/70 Downtown Spoke)
  - I-70 westbound, at the Sam Jones Expressway off-ramp
  - I-70 eastbound, from the Sam Jones Expressway on-ramp through the South Split (overlaps with the 65/70 Downtown Spoke)
- PM Peak Hour:
  - I-70 westbound, between the South Split and the Sam Jones Expressway off-ramp (overlaps with the 65/70 Downtown Spoke)
  - I-70 eastbound, between Harding Street on-ramp and West Street off-ramp

7.3.4 70E Spoke

Interstate operations for the 70E Spoke are depicted **Figure 58** and **Figure 59** for the AM and PM peak hours, respectively. In general, segments that do not meet the LOS D standard are:

- AM Peak Hour:
  - I-70 westbound, at the I-465 off-ramp
  - I-70 westbound, between the southbound I-465 on-ramp and the North Split
  - I-70 eastbound collector-distributor roadway, between the Shadeland Avenue off-ramp and the Shadeland Avenue on-ramp
- PM Peak Hour:
  - I-70 westbound, at the Shadeland Ave on-ramp
  - I-70 eastbound, between the North Split and the off-ramp to the collector-distributor roadway at Shadeland Avenue
  - I-70 eastbound collector-distributor roadway at Shadeland Avenue

Figure 52: 2050 AM Interstate Operating Conditions, 65 Spoke

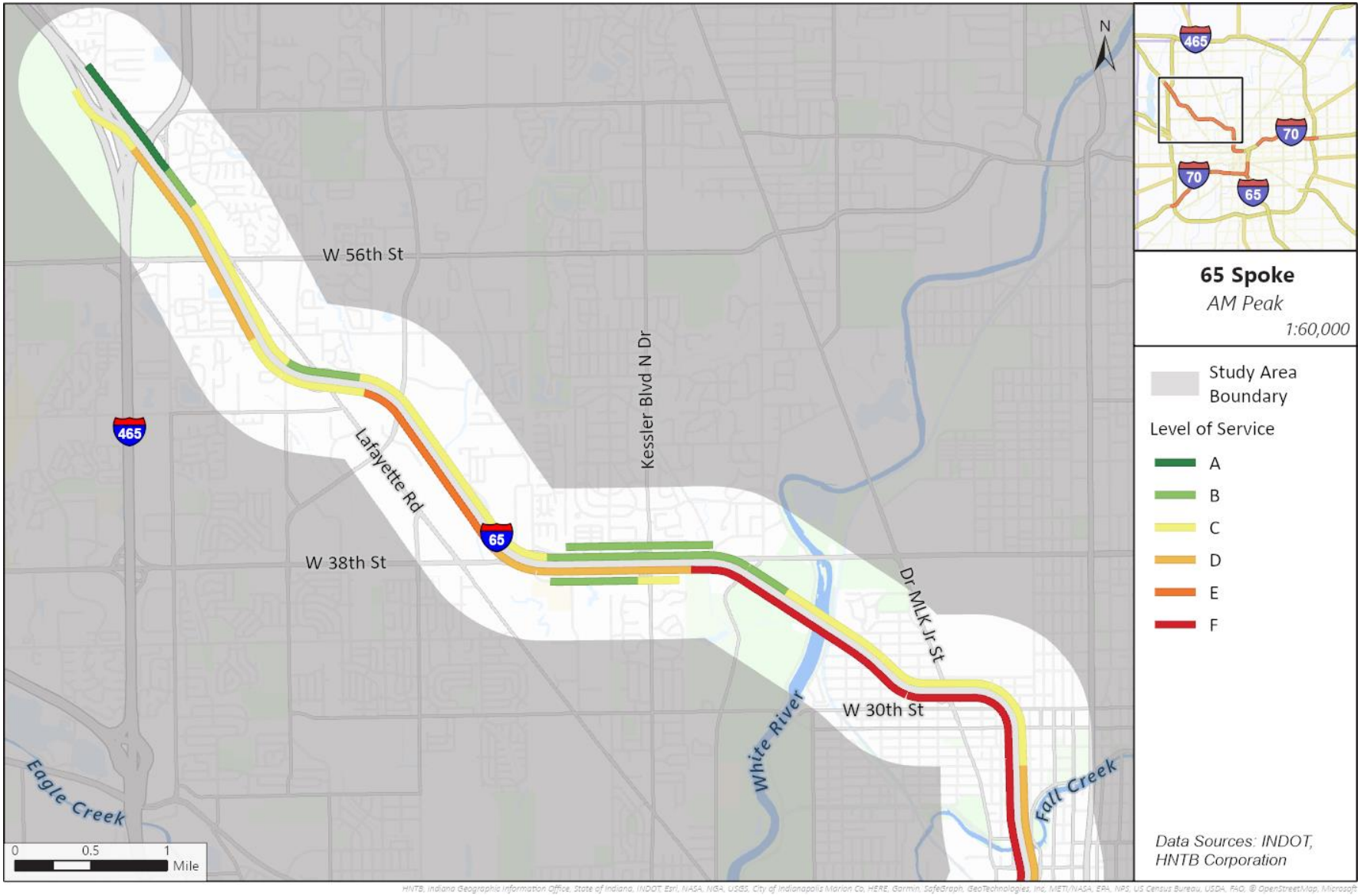


Figure 53: 2050 PM Interstate Operating Conditions, 65 Spoke

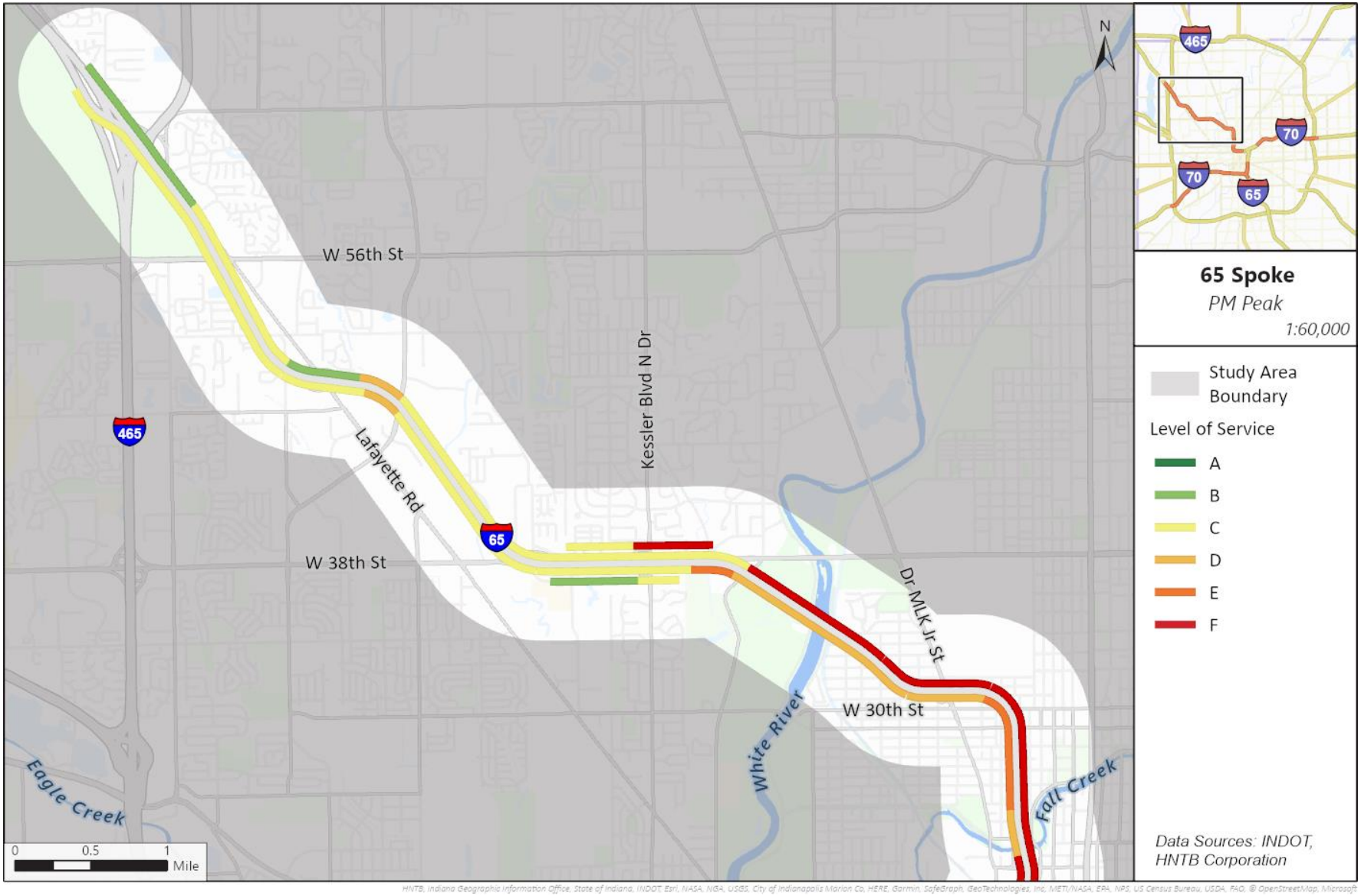


Figure 54: 2050 AM Interstate Operating Conditions, 65/70 Downtown Spoke

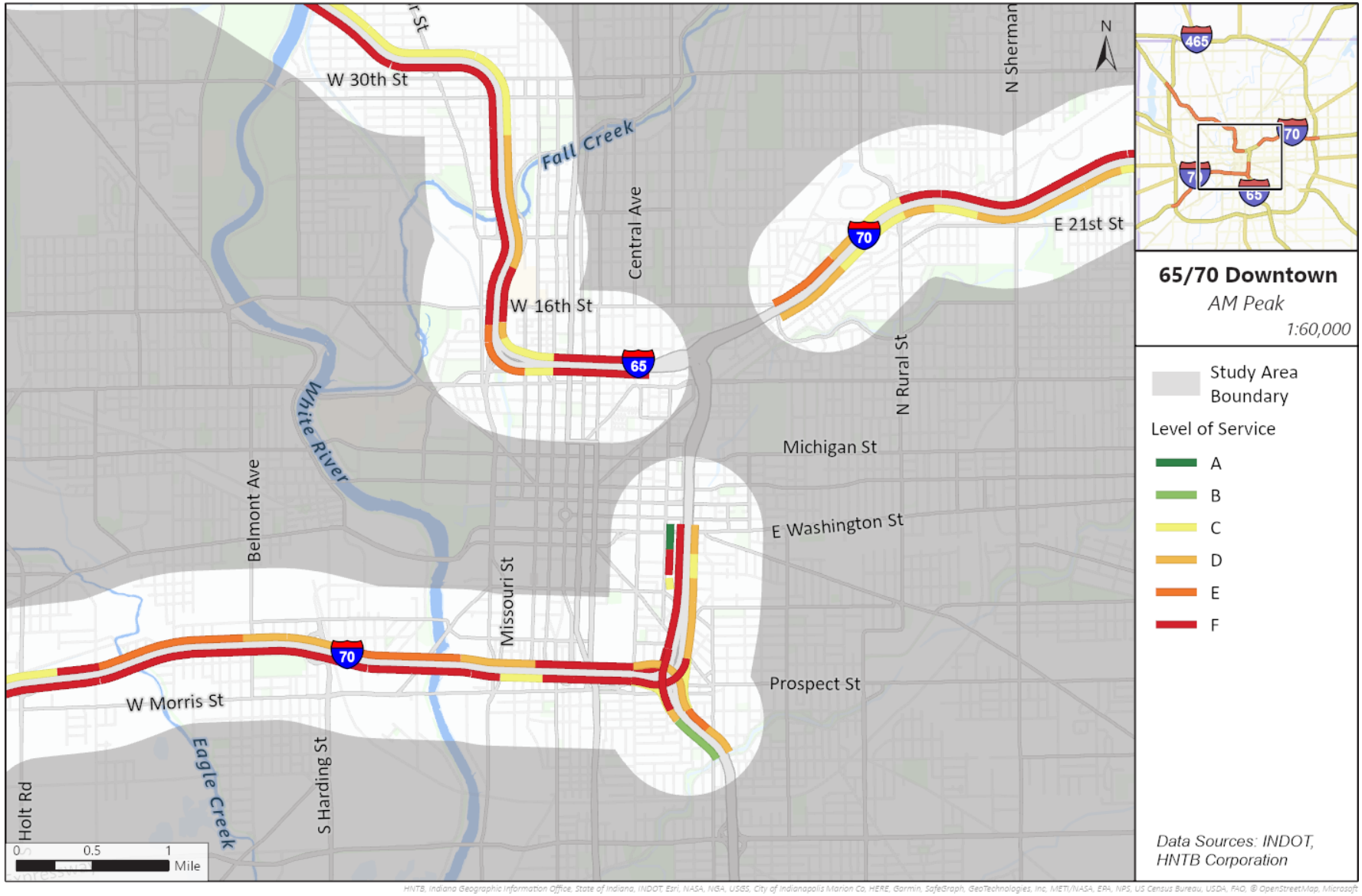


Figure 55: 2050 PM Interstate Operating Conditions, 65/70 Downtown Spoke

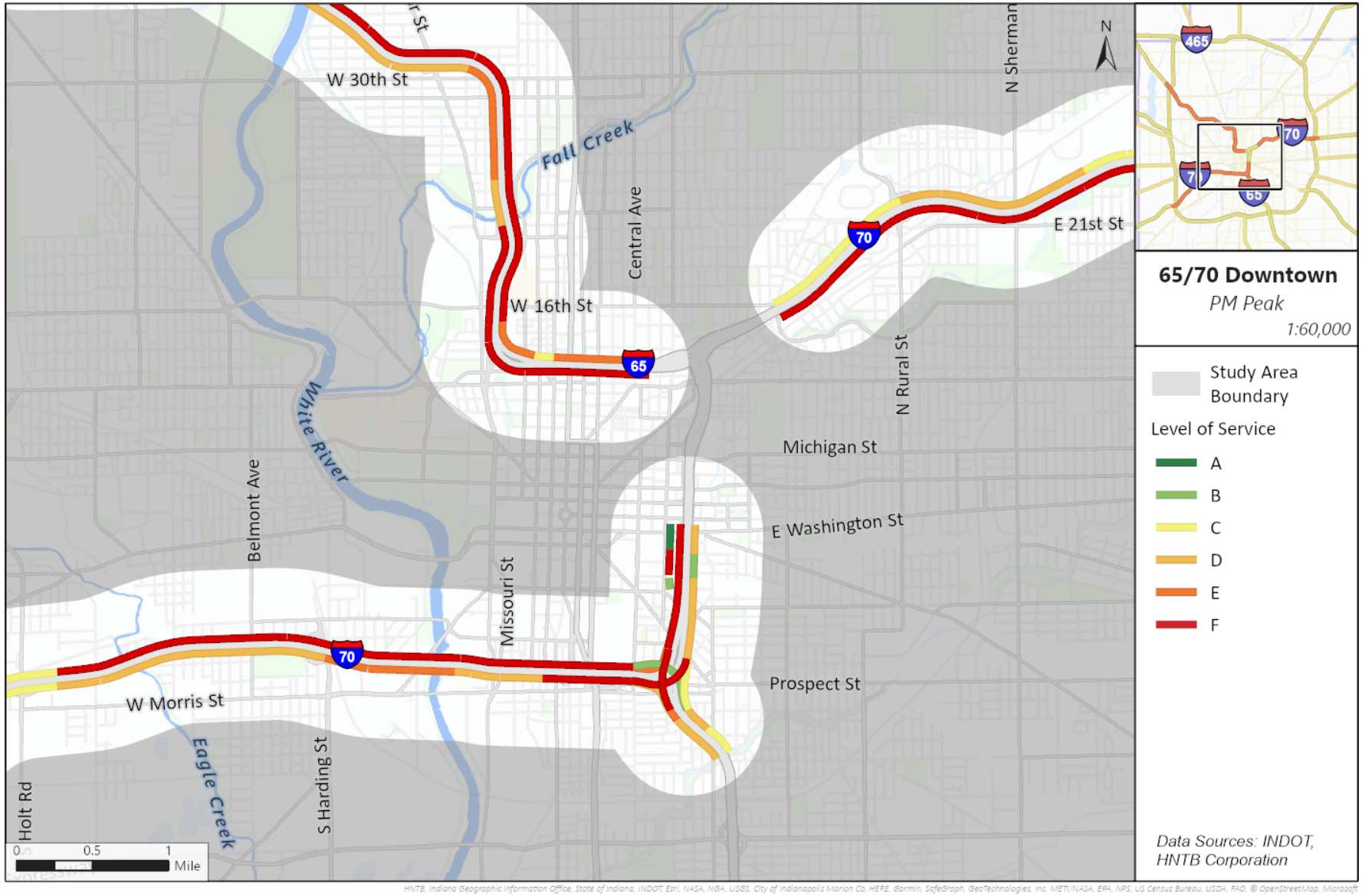


Figure 56: 2050 AM Interstate Operating Conditions, 70W Spoke

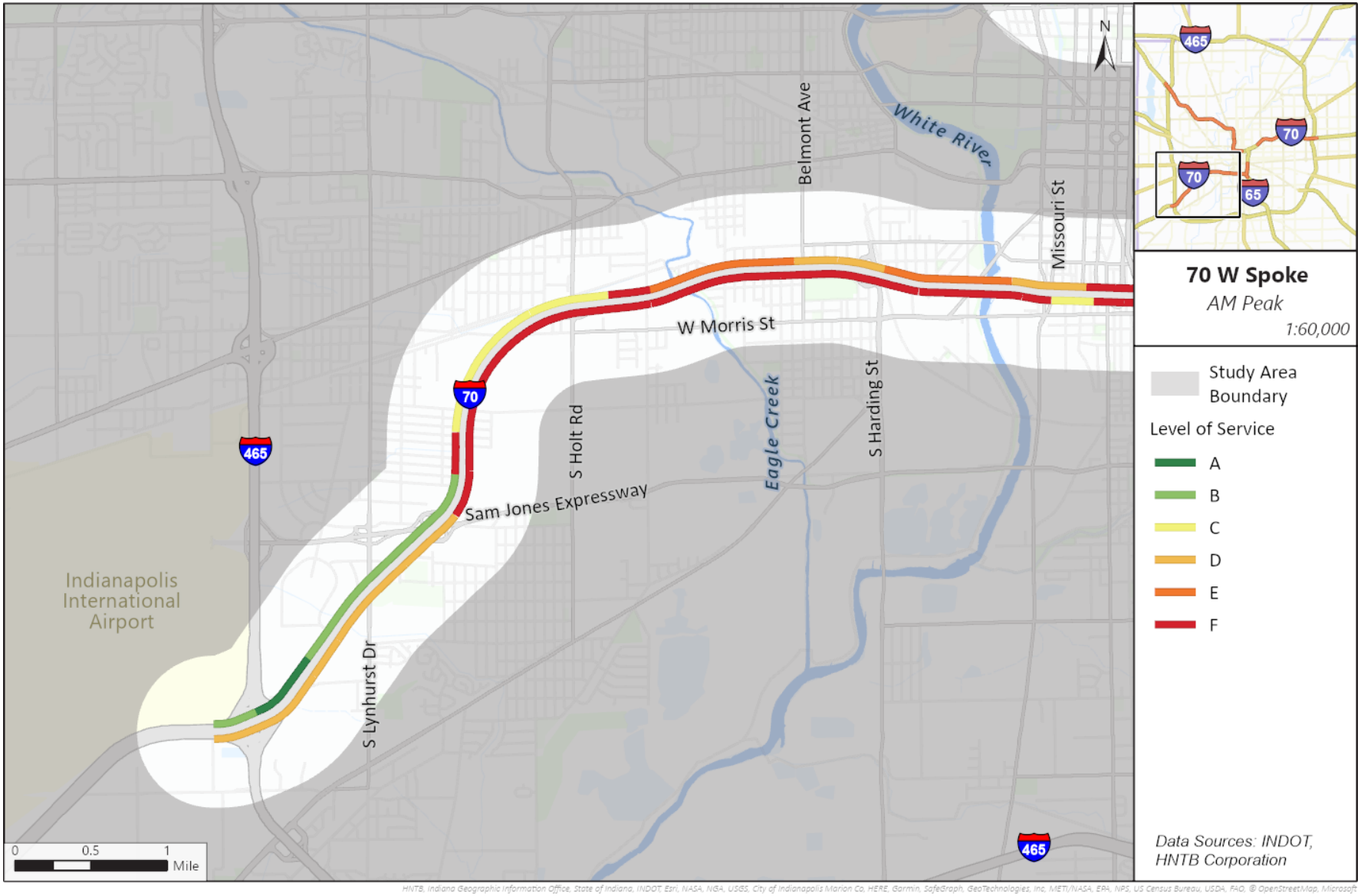


Figure 57: 2050 PM Interstate Operating Conditions, 70W Spoke

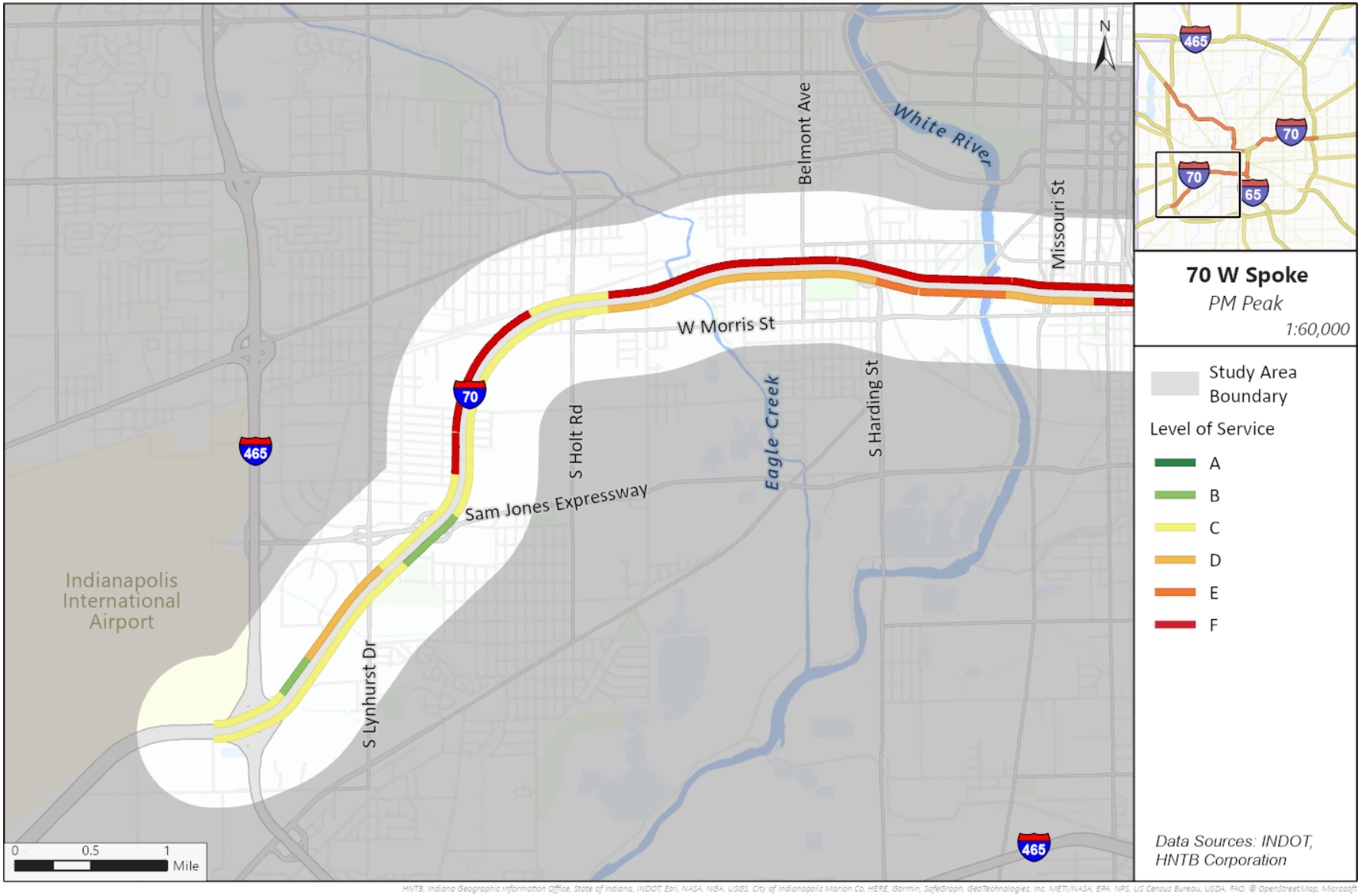


Figure 58: 2050 AM Interstate Operating Conditions, 70E Spoke

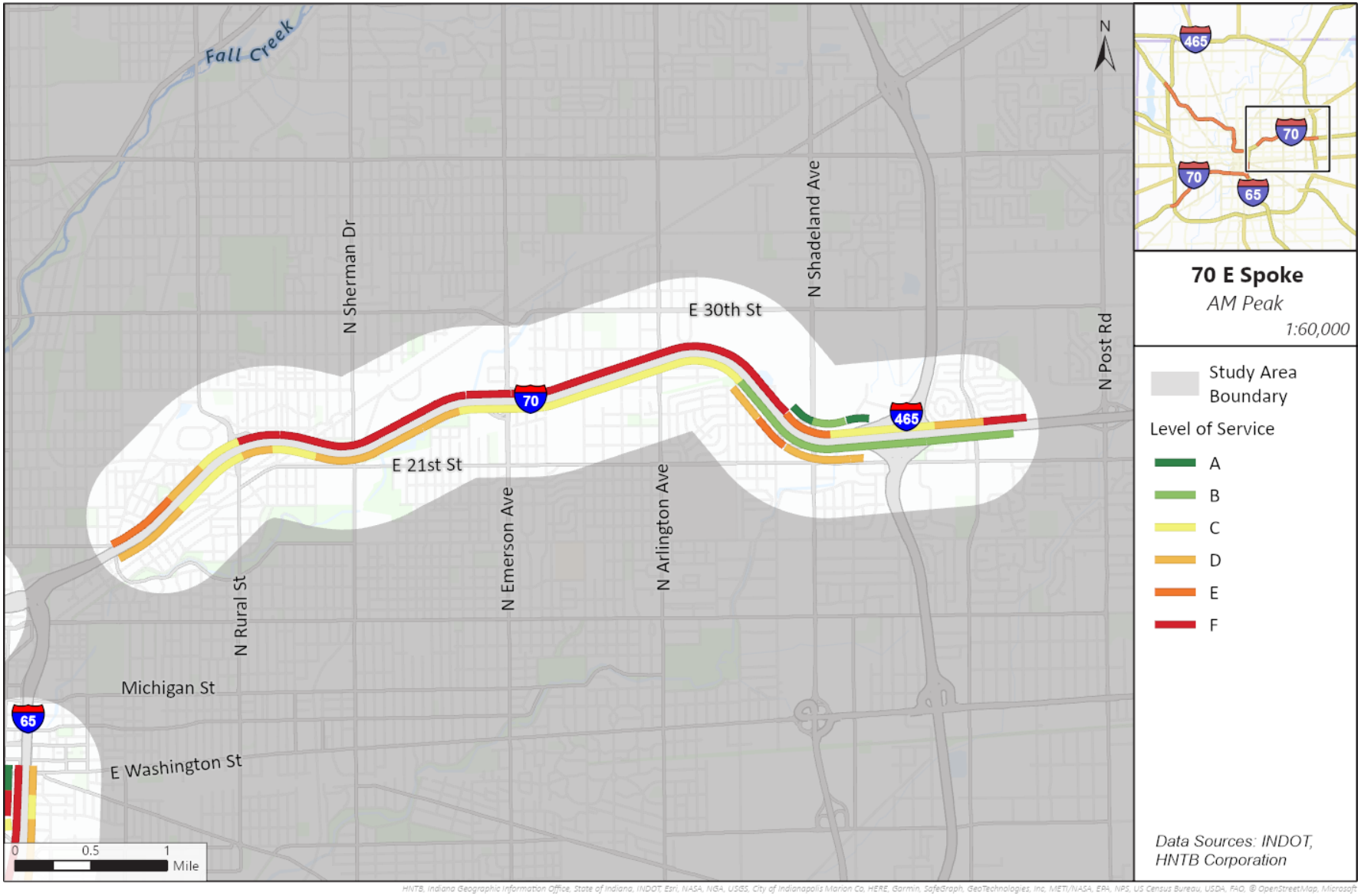
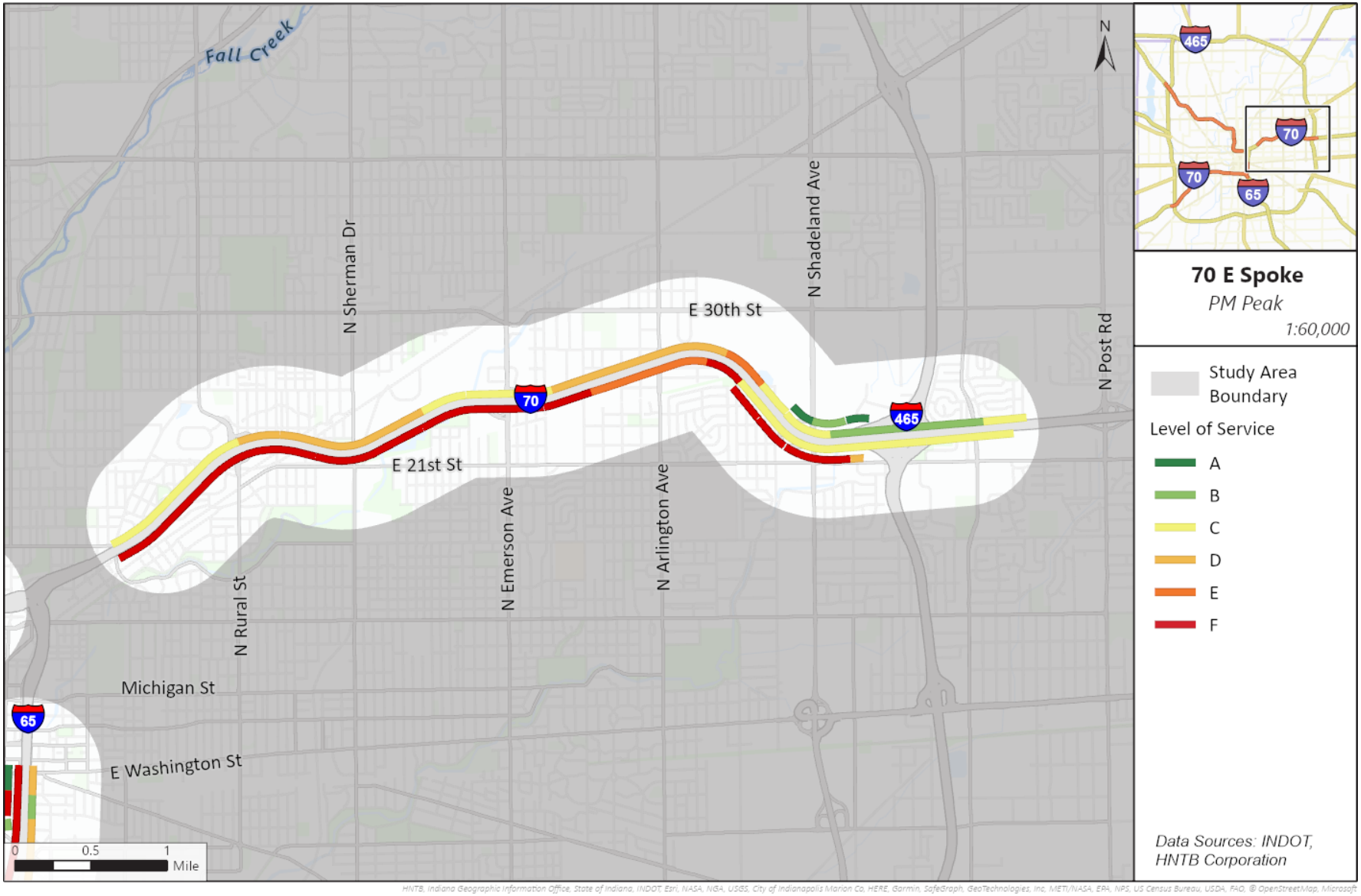


Figure 59: 2050 PM Interstate Operating Conditions, 70E Spoke



7.4 Intersection Operations

7.4.1 65 Spoke

Operating conditions of all intersections within the 65 Spoke are summarized in **Table 36**. Multiple intersections in the 65 Spoke fail to meet the LOS standards in the 2050 horizon year. These deficiencies are highlighted in the table below.

Table 36: Future No-Build (2050) Intersection Operations, 65 Spoke

Intersection	Approach	Future No Build (2050)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Lafayette Rd at I-65 NB Ramp (Signalized)	Westbound	D	44.1	D	42.7
	Northbound	B	13.5	D	41.4
	Southbound	A	9.4	C	28.6
	Overall	**B**	**14.1**	**D**	**37.4**
Lafayette Rd at I-65 SB Ramp (Signalized)	Eastbound	D	50.1	D	49.4
	Northbound	C	22.7	C	34.5
	Southbound	C	28.5	D	49.6
	Overall	**C**	**27.9**	**D**	**43.3**
38th St at Industrial Blvd / Commercial Dr (Signalized)	Eastbound	A	1.4	**F**	**100.0**
	Westbound	**E**	**56.9**	**F**	**96.6**
	Northbound	D	51.5	D	54.1
	Southbound	D	51.4	**E**	**63.6**
	Overall	**C**	**28.9**	**F**	**96.4**
W Kessler Blvd at 38th St / NB I-65 Ramps (Signalized)	Eastbound	C	23.8	D	48.8
	Northbound	A	6.4	B	12.7
	Southbound	B	11.4	C	21.2
	Overall	**B**	**10.5**	**C**	**23.2**
W Kessler Blvd at 38th St / SB I-65 Ramps (Signalized)	Eastbound	C	21.6	E	63.1
	Westbound	B	15.9	B	15.5
	Northbound	B	10.4	B	12.4
	Southbound	B	14.0	B	15.6
	Overall	**B**	**13.4**	**C**	**21.9**

Intersection	Approach	Future No Build (2050)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
38th St at Knollton Rd / Cold Springs Rd (Signalized)	Eastbound	**F**	**143.5**	**F**	**219.7**
	Westbound	D	49.0	**F**	**88.4**
	Northbound	**F**	**131.4**	**F**	**230.0**
	Southbound	D	36.5	C	32.1
	Overall	**F**	**97.7**	**F**	**168.6**
38th St at Lafayette Rd (Signalized)	Eastbound	**F**	**130.7**	**F**	**185.1**
	Westbound	C	26.1	D	40.8
	Northbound	**F**	**115.3**	**F**	**139.9**
	Southbound	D	43.6	**F**	**150.0**
	Overall	**F**	**84.3**	**F**	**120.0**
Dr MLK Jr St at NB I-65 Ramps (Unsignalized)	Northbound Left	**E**	**45.2**	**F**	**124.6**
Dr MLK Jr St at SB I-65 Ramps (Unsignalized)	Eastbound Left	C	21.2	**F**	**56.0**
	Eastbound Right	C	20.8	D	25.7
Dr MLK Jr St at 30th St (Signalized)	Eastbound	C	23.5	**F**	**86.2**
	Westbound	B	18.3	**E**	**55.6**
	Northbound	B	11.2	C	28.0
	Southbound	B	12.5	C	20.9
	Overall	**B**	**15.0**	**D**	**38.3**
W 30th St at NB I-65 Ramps (Signalized)	Eastbound	A	9.8	B	15.3
	Westbound	B	13.9	B	18.8
	Northbound	C	24.9	B	17.0
	Overall	**B**	**17.6**	**B**	**17.5**
W 29th St at NB I-65 Ramps (Signalized)	Eastbound	D	47.3	D	38.9
	Westbound	D	37.8	C	26.7
	Southbound	D	47.2	B	11.2
	Overall	**D**	**43.6**	**C**	**27.0**
W 29th St at SB I-65 Ramps (Signalized)	Eastbound	B	15.8	D	37.6
	Westbound	C	21.5	C	34.8
	Northbound	C	20.9	C	24.6
	Overall	**C**	**20.3**	**C**	**27.4**

7.4.2 65/70 Downtown Spoke

Operating conditions of all intersections within the 65/70 Downtown Spoke are summarized in **Table 37**. Multiple intersections in this spoke fail to meet the LOS standards in the 2050 horizon year. These deficiencies are highlighted in the table below.

Table 37: Future No-Build (2050) Intersection Operations, 65/70 Downtown Spoke

Intersection	Approach	Future No Build (2050)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Dr MLK Jr St at W 21st St (Signalized)	Westbound	D	46.0	D	36.4
	Northbound	B	14.7	B	14.5
	Southbound	B	10.3	A	9.1
	Overall	**B**	**18.2**	**B**	**14.4**
W 21st St at SB I-65 ramps (Signalized)	Eastbound	B	17.9	B	17.6
	Westbound	C	29.3	C	28.5
	Southbound	D	49.0	D	49.3
	Overall	**C**	**33.7**	**C**	**32.2**
W 21st St at NB I-65 ramps (Unsignalized)	Eastbound Left	A	9.1	A	9.2
	Northbound Thru/Left	**F**	**444.0**	**F**	**749.6**
	Northbound Right	C	23.9	C	18.4
W 21st St at Senate Blvd / Boulevard Place (Signalized)	Eastbound	B	15.3	C	22.5
	Westbound	A	2.6	A	5.8
	Northbound	C	29.2	C	34.0
	Southbound	C	23.2	B	19.2
	Overall	**B**	**16.0**	**C**	**22.3**
W 21st St at N Capitol Ave (Signalized)	Eastbound	**E**	**57.5**	**F**	**92.0**
	Westbound	C	26.7	C	25.4
	Southbound	C	23.8	B	15.2
	Overall	**C**	**33.9**	**D**	**51.5**
SB I-65 Off-ramp at NB I-65 Off-ramp (to 11th St) (Signalized)	Westbound	**F**	**230.7**	C	22.4
	Southbound	**F**	**96.1**	C	34.8
	Overall	**F**	**161.8**	**C**	**27.6**

Intersection	Approach	Future No Build (2050)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
11th St / Oscar Robertson Blvd at Dr MLK Jr St (Signalized)	Westbound	D	41.9	D	41.2
	Northbound	D	38.6	C	32.2
	Southbound	D	42.1	C	26.8
	Overall	**D**	**41.7**	**D**	**35.0**
11th St at West Street / I-65 (Signalized)	Westbound	D	40.8	D	42.2
	Northbound	A	0.4	A	3.2
	Southbound	D	38.8	A	7.8
	Overall	**C**	**29.1**	**A**	**7.3**
10th St at Dr MLK Jr St (Signalized)	Eastbound	D	54.3	C	32.3
	Northbound	C	31.6	C	30.3
	Southbound	D	36.9	D	45.1
	Overall	**D**	**46.7**	**C**	**34.1**
10th St at N West St (Signalized)	Eastbound	D	47.2	C	30.9
	Northbound	A	0.6	D	51.0
	Southbound	A	8.2	E	67.9
	Overall	**B**	**16.3**	**D**	**47.7**
N West St at Dr MLK St (Signalized)	Northbound Left	D	52.4	D	42.1
	Southbound	B	15.6	C	34.9
	Overall	**B**	**18.7**	**D**	**36.4**
12th St at N Illinois St (Signalized)	Westbound	C	20.5	C	30.5
	Northbound	A	5.3	C	33.3
	Overall	**A**	**8.3**	**C**	**32.8**
12th St at N Meridian St (Signalized)	Westbound	D	38.1	D	37.4
	Northbound	A	1.1	A	6.8
	Southbound	A	7.6	B	10.7
	Overall	**B**	**11.0**	**B**	**10.8**
12th St at N Pennsylvania St (Signalized)	Westbound	C	34.1	C	33.0
	Southbound	B	12.4	A	7.1
	Overall	**B**	**15.7**	**B**	**10.7**
11th St at N Illinois St (Signalized)	Eastbound	C	24.5	D	35.4
	Northbound	C	23.7	B	11.5
	Overall	**C**	**24.1**	**B**	**14.8**

Intersection	Approach	Future No Build (2050)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
11th St at N Meridian St (Signalized)	Eastbound	C	29.2	C	34.7
	Northbound	B	18.4	C	23.8
	Southbound	A	2.0	A	3.8
	Overall	**B**	**20.0**	**C**	**22.1**
11th St at N Pennsylvania St (Signalized)	Eastbound	D	42.5	D	37.9
	Southbound	C	26.2	C	21.1
	Overall	**C**	**32.5**	**C**	**28.7**
11th St at N Delaware St (Signalized)	Eastbound	D	38.1	D	35.5
	Northbound	A	4.6	B	18.9
	Overall	**B**	**13.2**	**C**	**23.3**
E Michigan St at Davidson St (Signalized)	Westbound	C	24.6	C	24.5
	Southbound	**F**	**108.4**	A	8.4
	Overall	**E**	**78.6**	**B**	**15.1**
E Michigan St at Pine St (Signalized)	Westbound	C	33.3	C	27.6
	Northbound	A	6.0	B	13.2
	Overall	**C**	**22.4**	**B**	**17.9**
E Ohio St at N College Ave(Signalized)	Eastbound	B	11.7	B	17.0
	Westbound	**E**	**73.4**	B	14.7
	Northbound	**E**	**68.6**	C	29.0
	Southbound	**E**	**74.0**	D	40.7
	Overall	**E**	**67.1**	**C**	**22.1**
E Washington St at N College Ave (Signalized)	Eastbound	A	9.7	**F**	**89.8**
	Westbound	B	18.9	A	8.8
	Northbound	**F**	**83.9**	**F**	**192.8**
	Southbound	C	31.2	**E**	**63.2**
	Overall	**C**	**20.8**	**E**	**78.8**
E Washington St at SB I-65 & I-70 On-ramp / N Davidson St (Signalized)	Eastbound	A	0.3	B	12.6
	Westbound	E	58.1	E	62.3
	Overall	**D**	**45.9**	**D**	**39.0**
E Washington St at NB I-65 & I-70 Off-ramp / Pine St (Signalized)	Eastbound	C	21.8	C	27.8
	Westbound	B	18.1	B	14.8
	Northbound	C	30.2	D	47.9
	Overall	**C**	**23.1**	**C**	**29.3**

Intersection	Approach	Future No Build (2050)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
E Washington St at Southeastern Ave(Signalized)	Eastbound	A	1.3	A	3.1
	Westbound	D	35.3	B	11.6
	Northbound	C	33.5	C	34.2
	Overall	**C**	**25.1**	**B**	**10.9**
Fletcher Ave at SB I-65 & I-70 Off-ramp / Pine St (Signalized)	Eastbound	D	38.2	D	41.8
	Westbound	D	48.1	D	40.8
	Northbound	D	45.3	A	0.0
	Southbound	D	39.9	D	42.7
	Overall	**D**	**42.8**	**D**	**42.0**
Calvary St at NB I-65 & I-70 On-ramp (Unsignalized)	Eastbound Left	A	9.4	B	11.8
East St at SB I-65 & I-70 Off-ramp (Signalized)	Westbound	**F**	**188.3**	**F**	**93.1**
	Northbound	B	10.1	A	5.3
	Southbound	A	8.7	A	6.6
	Overall	**F**	**92.7**	**C**	**27.0**
Morris St at SB I-65 On-ramp (Unsignalized)	Westbound Left	A	8.7	B	10.5
Morris St at NB I-65 Off-ramp (Signalized)	Eastbound	C	30.6	C	23.4
	Northbound	A	5.9	A	9.7
	Overall	**B**	**17.1**	**B**	**19.7**
S West St at W McCarty St (Signalized)	Eastbound	D	46.2	D	38.1
	Westbound	D	43.5	D	43.9
	Southbound	A	3.4	C	21.0
	Overall	**B**	**11.7**	**C**	**23.4**
W McCarty St at S Missouri St (Signalized)	Eastbound	D	43.6	D	42.5
	Westbound	D	51.1	D	49.4
	Northbound	D	36.1	B	14.3
	Overall	**D**	**37.4**	**C**	**24.5**
W McCarty St at S Capitol Ave / WB I-70 On-ramp (Signalized)	Eastbound	A	3.4	B	11.0
	Westbound	A	0.1	B	11.0
	Southbound	C	28.3	B	19.5
	Overall	**B**	**13.4**	**B**	**17.7**

Intersection	Approach	Future No Build (2050)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
W McCarty St at Illinois St / EB I-70 Off-ramp (Signalized)	Eastbound	A	0.4	A	4.4
	Westbound	A	5.1	A	3.7
	Northbound	C	26.7	C	26.9
	Overall	**B**	**15.4**	**A**	**6.7**
W McCarty St at S Meridian St / Russell Ave (Signalized)	Eastbound	C	33.7	C	28.9
	Westbound	C	27.6	D	36.0
	Northbound	A	6.4	A	9.2
	Southbound	A	6.4	A	9.1
	Overall	**C**	**21.3**	**C**	**25.4**
W McCarty St at I-70 ramps / Madison Ave (Signalized)	Eastbound	D	41.2	E	77.3
	Westbound	D	42.6	D	36.7
	Northbound	B	14.7	B	10.6
	Southbound	B	15.7	B	18.1
	Overall	**C**	**22.9**	**C**	**33.2**
W McCarty St at Pennsylvania St(Signalized)	Eastbound	C	28.0	D	36.8
	Westbound	C	23.9	D	45.4
	Southbound	B	12.6	B	13.9
	Overall	**C**	**21.8**	**C**	**24.4**
WB I-70 ramps at S West St (Signalized)	Westbound	B	16.1	C	21.4
	Southbound	C	23.4	**F**	**232.0**
	Overall	**B**	**19.5**	**F**	**195.5**
WB I-70 ramps at S Missouri St (Signalized)	Westbound	E	59.2	A	7.4
	Northbound	C	33.5	B	17.3
	Overall	**D**	**43.9**	**B**	**14.6**
EB I-70 ramps at S West St (Signalized)	Eastbound	B	11.0	B	17.1
	Southbound	C	23.0	C	20.3
	Overall	**B**	**18.9**	**C**	**20.2**
EB I-70 ramps at S Missouri St (Signalized)	Eastbound	C	20.6	E	65.3
	Northbound	B	19.1	C	22.4
	Overall	**B**	**19.6**	**D**	**49.6**

Intersection	Approach	Future No Build (2050)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
S West St at W Morris St (Signalized)	Eastbound	D	49.1	D	39.6
	Westbound	**E**	**55.2**	D	54.5
	Northbound	**F**	**96.3**	D	42.0
	Southbound	**E**	**67.4**	**E**	**64.8**
	Overall	**E**	**75.5**	**D**	**52.0**

7.4.3 70W Spoke

Operating conditions of all intersections within the 70W Spoke are summarized in **Table 38**. Four of the six intersections in this spoke fail to meet the LOS standards in the 2050 horizon year. These deficiencies are highlighted in the table below.

Table 38: Future No-Build (2050) Intersection Operations, 70W Spoke

Intersection	Approach	Future No Build (2050)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
I-70 WB Ramps at Holt Rd (Signalized)	Westbound	**F**	**174.9**	**F**	**195.7**
	Northbound	**E**	**55.2**	D	54.9
	Southbound	**F**	**297.6**	**F**	**199.9**
	Overall	**F**	**185.8**	**F**	**162.9**
I-70 EB Ramps at Holt Rd (Signalized)	Eastbound	**E**	**76.9**	D	42.0
	Northbound	C	31.5	C	30.2
	Southbound	**F**	**172.4**	**F**	**136.6**
	Overall	**F**	**129.7**	**F**	**102.3**
W Morris St at Holt Rd (Signalized)	Eastbound	D	50.1	**E**	**77.5**
	Westbound	**F**	**238.2**	**F**	**132.6**
	Northbound	C	30.6	C	24.2
	Southbound	**E**	**60.0**	C	24.8
	Overall	**F**	**112.9**	**E**	**74.8**
Oliver Ave at S Harding St (Signalized)	Eastbound	B	18.6	A	6.3
	Westbound	B	13.6	B	13.5
	Northbound	E	76.1	C	31.1
	Overall	**D**	**50.5**	**B**	**18.3**
I-70 WB Ramps at S Harding St (Signalized)	Eastbound	D	37.1	D	45.1
	Northbound	**F**	**83.5**	**F**	**88.9**
	Southbound	C	20.0	B	18.8
	Overall	**E**	**58.9**	**E**	**56.2**
I-70 EB Ramps at S Harding St (Signalized)	Eastbound	D	38.0	D	43.4
	Westbound	D	35.3	A	0.0
	Northbound	C	29.0	B	18.3
	Southbound	E	69.9	C	25.8
	Overall	**D**	**46.3**	**C**	**22.7**

7.4.4 70 E Spoke

Operating conditions of all intersections within the 70E Spoke are summarized in **Table 39**. Three of the nine intersections in this spoke fail to meet the LOS standards in the 2050 horizon year. These deficiencies are highlighted in the table below.

Table 39: Future No-Build (2050) Intersection Operations, 70E Spoke

Intersection	Approach	Future No Build (2050)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Keystone Way at Enterprise Park Pl / 23rd St (Signalized)	Eastbound	D	36.1	D	36.7
	Westbound	D	36.8	D	38.2
	Northbound	B	10.3	A	9.4
	Southbound	B	14.8	B	15.0
	Overall	**B**	**12.8**	**B**	**13.0**
WB I-70 ramps at Keystone Way (Signalized)	Westbound	D	43.7	D	41.5
	Northbound	B	14.3	A	9.7
	Southbound	A	8.2	A	7.9
	Overall	**B**	**17.4**	**B**	**13.4**
EB I-70 ramps at Keystone Way / N Rural St (Unsignalized)	Eastbound Right	**E**	**45.7**	D	28.8
	Southbound Left	B	11.2	C	18.4
N Rural St at Bloyd Ave / Roosevelt Ave (Signalized)	Eastbound	C	30.6	D	42.3
	Westbound	C	26.0	B	13.3
	Northbound	A	5.2	C	22.2
	Southbound	A	5.9	C	21.5
	Overall	**A**	**8.0**	**C**	**25.1**
WB I-70 ramps at Emerson Ave (Signalized)	Eastbound	D	44.7	D	37.6
	Westbound	A	0.3	C	27.8
	Southbound	A	3.8	A	9.7
	Overall	**A**	**7.6**	**C**	**23.4**
EB I-70 ramps at Emerson Ave (Signalized)	Eastbound	D	36.7	D	36.1
	Northbound	B	14.8	B	15.1
	Southbound	A	0.2	C	29.4
	Overall	**B**	**16.5**	**C**	**26.0**

Intersection	Approach	Future No Build (2050)			
		AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
WB I-70 ramps at Shadeland Ave / Western Select Dr (Signalized)	Eastbound	**F**	**100.3**	D	37.3
	Westbound	D	37.3	D	47.1
	Northbound	C	30.9	B	11.8
	Southbound	C	25.2	C	27.2
	Overall	**D**	**39.0**	**C**	**22.3**
EB I-70 ramps at Shadeland Ave (Signalized)	Eastbound	D	38.3	D	40.7
	Northbound	A	4.1	A	8.9
	Southbound	A	1.4	A	0.7
	Overall	**A**	**7.3**	**A**	**8.0**
East 21st St at Shadeland Ave (Signalized)	Eastbound	**F**	**80.9**	**F**	**126.7**
	Westbound	D	46.3	**E**	**78.6**
	Northbound	D	49.5	D	48.9
	Southbound	C	20.8	D	48.1
	Overall	**D**	**43.7**	**E**	**66.7**

7.5 2040 No-Build Operating Conditions

No-Build operating conditions in an interim year of 2040 were also evaluated for both interstates and intersections within the study limits. This information will be used in later stages of this study to help determine when improvements are needed to maintain acceptable operating conditions and which locations may need to be prioritized. Analysis of the 2040 No-Build operating conditions is summarized in **Appendix L**.

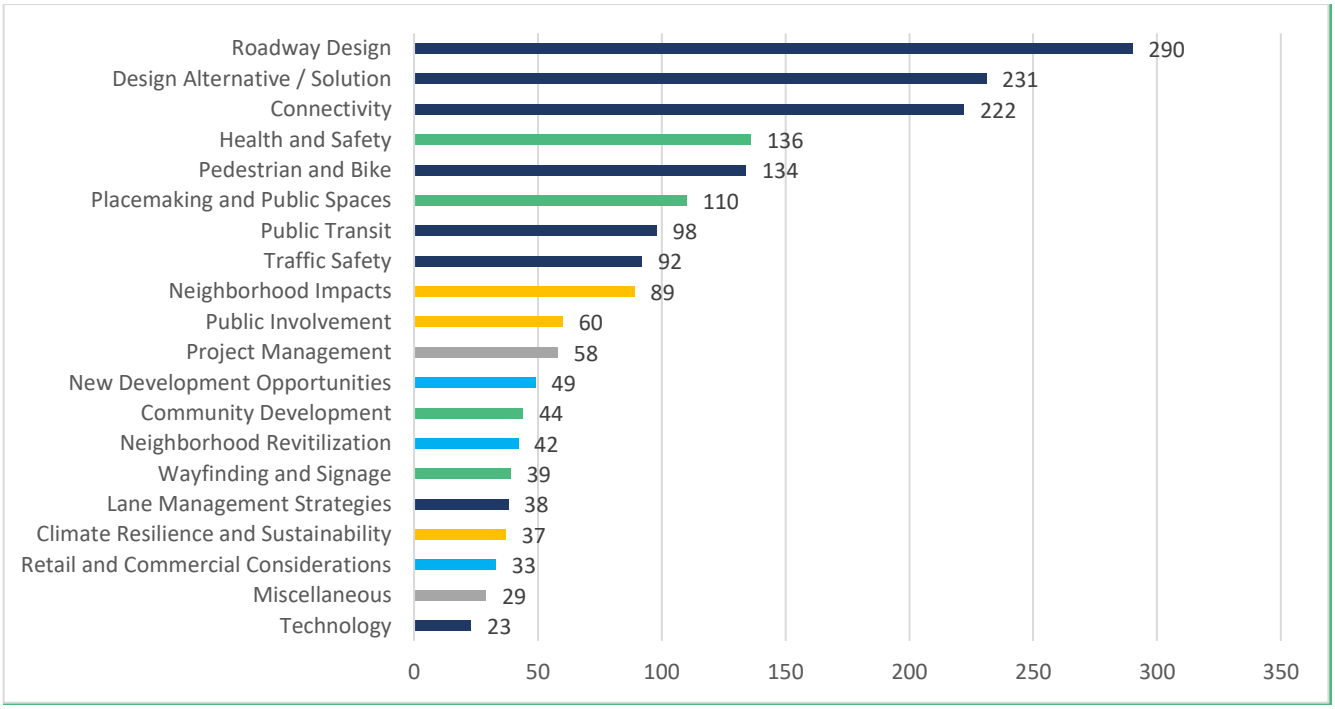
8 Public Involvement

Public engagement occurred between Summer 2023 and Winter 2024, for the initial Visioning phase of the ProPEL Indy study but is ongoing throughout the study. Outreach efforts included community conversations, study launch events, community outreach events, and stakeholder meetings.

8.1 Summary of Comments

The study team received over 1,100 comments from Community Conversations, community events, stakeholder meetings, and an online comments platform supported on the ProPEL Indy website by the end of January 2024. The comments included a variety of ideas, transportation needs, and community concerns. **Figure 60** summarizes comments organized by key themes addressed. Additional analysis is provided in the *ProPEL Indy Resource Agency, Stakeholder & Public Involvement Summary* document.

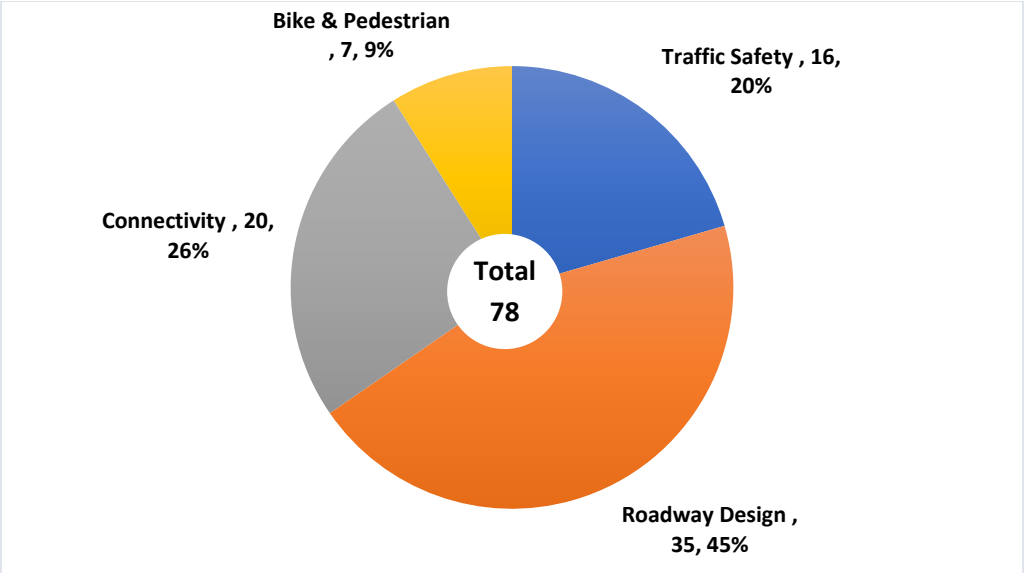
Figure 60. Public Comments by Key Themes



8.2 Location Specific Analysis

Most of the comments received were of a general nature and did not include site specific references to interstate segments, interchanges, ramp intersections, underpass/overpass crossings or interstate entry/exits etc. However, 78 comments (<10% of total comments) identified traffic safety, roadway design, connectivity, or bike and pedestrian issues at specific locations within the ProPEL Indy study area boundaries. Themes for these comments are summarized in **Figure 61**.

Figure 61. Location Specific Comments by Key Themes



The type of comment categories in this summary for mobility are:

- **Traffic Safety** – Safety comments relate to user safety throughout the study area and include crash incidents, safety concerns regarding merging movements, and unsafe travel speeds.
- **Roadway Design** – Design comments relate to the geometric conditions of roadways and interchanges and/or areas with perceived operational issues.
- **Connectivity** – Connectivity comments relate to vehicular connectivity across the interstates.
- **Bike & Pedestrian** – Comments relate to lack of or inadequate facilities for pedestrians and bicyclists at study intersections or grade-separated interstate crossings.

The following sub-sections provide a summary of the 78 location specific comments and responses.

8.2.1 Traffic Safety

Location:	**I-65 Collector – Distributor Roadways along 38th St**
Comment:	I live at 37th & Pennsylvania and drive and attempt to walk across the 38th St corridor. This street is deadly and has been since it was converted to an on ramp to I-65 in the early sixties. 38th St needs to be decoupled from I-65 and it needs to be turned back into a regular street, as part of the Indianapolis Street grid. There is ample land available to separate the interstate and the street, possibly creating a fine boulevard between the International District and Midtown Indy. I like shopping and dining in the district, but I am terrified to drive out there because the way that the roads were designed encourages dangerous driving. A revamp of this corridor could also open an important east-west pedestrian and bicyclist route. There's nothing for us now. 38th St Frontage at I-65 has way too many speeding cars, lane changing, and inadequate pedestrian routes through the corridor. I've almost hit pedestrians twice that were walking on the "on ramps" from I-65 south onto 38th St. Traffic on 38th St is too fast and aggressive. Slow down the traffic at all exits. The 38th street interchange with I-65 causes incredibly dangerous traffic patterns. Highway speeds are maintained by drivers exiting the interstate headed eastbound making the 38th street corridor a racetrack. The junctions of I-65 and 38th Street are dangerous.
Response:	Crash data for this segment indicates both crash frequency and crash severity are higher than expected for the eastbound C-D road. There are no sidewalks or bike facilities for the 38th St C-D roads. Alternatives developed and evaluated in the ProPEL Indy study are expected to improve safety in this area.

Location:	**I-65 Collector – Distributor Roadways along 38th St**
Comment:	38th and I-65 is a concern from a safety perspective. Merging into traffic here is dangerous and the condition of the pavement (potholes) is also unsafe.

Response:	Crash data for this segment indicates both crash frequency and crash severity are higher than expected for the eastbound C-D road. Rehabilitation or replacement of the pavement in this segment is anticipated to occur in the decade of 2030. Alternatives developed and evaluated in the ProPEL Indy study are expected to address safety and asset conditions in this area.

Location:	**I-65 Collector – Distributor Roadways along 38th St**
Comment:	I am providing comments on the I-65/38th Street interchanges and the highway system generally in Marion County. With respect to the 38th Street interchanges, it appears that your own statistics show that both the northbound and southbound interchanges are among the most dangerous in Marion County. I live near these interchanges and use them daily and would agree that the statistics accurately reflect the dangerous nature of those interchanges. The design of the interchange is poor, in that highway traffic, still traveling at highway speed, is forced to quickly merge with 38th Street traffic that is traveling at a much slower speed. Only a total redesign of the interchange would fully address that issue. Further, the street traffic from Kessler and Guion presents additional merging traffic that is traveling even more slowly than 38th Street Traffic. On the southbound side, I have witnessed several near misses of cars entering from the Kessler on ramp or the intersection at Guion. Similarly, on the northbound side, the 38th Street traffic is so heavy at times that exiting onto the Kessler ramp is extremely difficult. Further, traffic from Guion has no on ramp in which to get up to speed, so those cars will often pull out in front of speeding traffic to either merge onto 38th Street westbound or attempt to cross both lanes of 38th in order to get to the ramp exiting 38th Street to merge onto 65N. I believe that the Guion Street access to 38th Street westbound should be limited to an exit only, forcing drivers to access 38th Street via Industrial Blvd, which is a stoplight, and 65N via the Lafayette interchange. With respect to the eastbound section of 38th Street, vehicles will routinely pull out from Guion into traffic and move directly to the northmost lane in order to access 65S. In order to prevent this, vehicles should be forced to turn into the south lane which ultimately becomes the exit for Kessler but provides additional distance for Guion traffic to reach a safe speed to merge onto 38th Street. I have also witnessed vehicles exiting from 65S attempt to exit onto Guion. This is also extremely dangerous and has resulted in vehicles stopping in the exit lane in order to wait for traffic to clear to "safely" merge right across two lanes of 38th Street to exit onto Guion. I would recommend placing additional barriers that extend past Guion to prevent those exit attempts. Traffic

	wanting to get to Guion could be directed to exit at Kessler and travel west on 38th Street in order to exit onto the Guion access from 38th Street westbound. Or Guion traffic could exit at Lafayette and proceed south on Lafayette to 30th Street. Another dangerous element to this interchange is that traffic entering onto 38th Street EB from the Kessler interchange will often cross both lanes in order to merge onto 65S. I would recommend that Kessler traffic exiting onto 38th Street EB be limited to staying on 38th Street to avoid this type of merging. Traffic that wants to reach 65S can be directed to either take 38th Street to MLK and enter 65S at the MLK/30th Street on ramp, or continue on Kessler south to 30th Street, at which point that traffic can travel east and enter onto 65S at 29th Street. Generally, the I65/I70 split project has done little to address congested traffic downtown during busy times in the afternoon. I would recommend that more traffic from I65S be diverted onto I465 and travel around the city for non-downtown traffic. Further, road noise from urban interstates is a quality-of-life issue, and I would recommend that all paving projects within Marion County be performed using Quiet Pavement
Response:	Crash data for this segment indicates both crash frequency and crash severity are higher than expected for the eastbound C-D road. Rehabilitation or replacement of the pavement in this segment is anticipated to occur in the decade of 2030. Alternatives developed and evaluated in the ProPEL Indy study are expected to address safety and asset conditions in this area.

Location:	**10th St at Dr MLK Jr St and N West St**
Comment:	Dr MLK Jr St and West Street between 10th St and 11th Street is unsafe and congested. The exit at 10th and MLK is unsafe. Cars need to slow down.
Response:	Crash data for these intersections indicate that both crash frequency and crash severity are higher than expected. Alternatives developed and evaluated in the ProPEL Indy study are expected to improve safety in this area.

Location:	**10th St at Dr MLK Jr St and N West St**
Comment:	The entire ramp section near 10th and MLK is a disaster and needs reworked. You have like 6 roads intersecting and traffic is an absolute mess during rush hour. I can't imagine being a pedestrian or student at Crispus Attucks having to navigate that area on foot. Updates should include a total rework of this section.
Response:	The portion of I-65 through the West Street interchange and adjacent intersections will be evaluated in the alternative screening development process. Local streets including 10th and MLK are under the ownership and maintenance of the City of Indianapolis. These locations will be discussed with the City of Indianapolis in the alternatives evaluation portion of this study. Alternatives developed and evaluated in the ProPEL Indy study are expected to improve safety and operations in this area.

Location:	**I-65 N at 29th and 30th St Ramps**
Comment:	I would like for the committee to look into way to reduce speeds of traffic for the 29/30th street exits. The way they are built now, encourages drivers to speed recklessly through neighborhoods (and more importantly around the Indianapolis children's museum). Rebuilding those exits with traffic calming measures both on the ramps and on the street level is something that must happen for the safety of our neighborhoods. This must be done without additional land usage, as I-65 has already displaced several thousand people in the Crown Hill neighborhood.
Response:	Crash data associated with the intersection at 29th and 30th Streets indicate both a crash frequency and crash severity higher than expected. The conversion of these streets from 1-way to 2-way streets is expected to slow speeds along both streets. The ProPEL Indy study will evaluate alternatives for improvements to these interchanges.

Location:	**I-65 at N Illinois St**
Comment:	Frequent crashes occur at the southbound I-65 exit ramp to Illinois St (Exit 114) with the right turn movement onto Illinois Street. The Illinois St entrance ramp to I-65 northbound is dangerous due to the short lane merge area.

Response:	Crash data associated with the intersection of 11th St & N Illinois St indicates both crash frequency and crash severity are less than expected. Alternatives developed and evaluated in the ProPEL Indy study are expected to improve this merge.

Location:	**I-70 Segment between West St and I-65 S Junction**
Comment:	Remove cluttered interchanges on 70W Spoke e.g., Madison Ave, Capitol Ave, Illinois St, Meridian St and West St. Add sidewalks and bike lanes through road diets on all streets that pass over and under the interstate. Create transit signal priority at interchanges. The entrance/exit ramps for Madison, Meridian & West Street on I-70 West seem to be potential safety hazards. The short distance between the ramps leads to a lot of quick lane changes and potential for accidents. I wonder if there are alternatives for the ramps or the option to eliminate one of them. For I-70 south of downtown, please look at adjusting the grade to a more consistent level. The heavy volume of semi-trucks cannot handle the steep grade from the south split over the railroad bridge, or the up-and-down when heading east from West Street to the south split. Please plan to use the black background/ lane markings that were recently painted on the new North Split. Those black markings are desperately needed on the other concrete roads downtown to improve safety in wet conditions or with difficult visibility.
Response:	Alternatives developed and evaluated in the ProPEL Indy study are expected to improve safety and operations in this area. The potential for adding sidewalks and bike lines to Madison Ave, Capitol Ave, Illinois St, Meridian St and West St. may be explored in this study or by the City of Indianapolis who owns and maintains these streets. The grade of I-70 through the downtown segment is within acceptable limits; however, the impact of grade on trucks will be considered during the development of alternatives. Black background lane markings are now standard design elements on all INDOT projects involving concrete pavement. Such markings will be placed with the next improvement to this area.

Location:	**I-70 at Keystone Way**
Comment:	The on ramp to I-70 from Keystone Ave is unsafe. People travel at unsafe speeds there regularly.
Response:	The ramp junctions of the I-70 and Keystone Way / Rural St interchange and I-70 in both direction through this interchange have a crash frequency and crash severity at or below the expected levels.

Location:	**I-70 Segment at Shadeland Ave/I-465**
Comment:	The combined exit of I-465 and Shadeland is dangerous as people use the far-right lane for Shadeland and cut off traffic for the I-465 exit.
Response:	Crash data for this segment indicates crash frequency and crash severity are within expected levels. Weaving segments at select locations will be evaluated in the alternative development screening process.

8.2.2 Roadway Design

Location:	**I-465 Southbound Between 71st Street and I-65**
Comment:	The 71st Street overpass to I-65 SB on-ramp has condition issues.
Response:	This segment of I-465 is not included in the ProPEL Indy study area. INDOT will address the need for improvements to this portion of I-465 outside of the ProPEL Indy study.

Location:	**I-65 Collector-Distributor Roadways along 38th St**
Comment:	Please put-up sound barriers along the north side of 38th St and I-65. It is a residential area, and the road noise is too loud. The Kessler Blvd entrance ramps to I-65 allow too short of a distance to accelerate.
Response:	A noise wall will be given consideration as part of any alternative for this area that advances beyond the ProPEL Indy study. The entrance ramps of the Kessler Blvd interchange were not identified as being deficient in length. Alternatives developed and evaluated in the ProPEL Indy study for these ramps are expected to improve the existing conditions.

Location:	**Southbound I-65 from Dr MLK Jr Street Exit Ramp to West Street Exit Ramp**
Comment:	Traffic flow improvements are needed at the southbound I-65 exits to both West St (Exit 114) and Meridian St (Exit 113). A better merge movement from southbound I-65 to the Meridian exit is needed. Reconfigure Dr MLK to West St interchange. Remove signal at bottom of ramp. Construct fly over ramp for NB I-65 to connect to Dr MLK St for SB West St traffic and WB W 11th St traffic, adding a dedicated right turn lane at Dr MLK & 11th St. Keep current SB 65 ramp for SB West St and EB 10th St traffic.
Response:	The southbound segment of I-65 from Dr MLK Jr St to West St was found to operate unacceptably (LOS F) during the 2023 AM peak hour. The portion of I-65 through the West Street interchange and adjacent intersections will be evaluated in the alternative screening development process. Alternatives developed and evaluated in the ProPEL Indy study are expected to improve safety and operations in this area.

Location:	**Southbound I-65 from Dr MLK Jr Street Exit Ramp to West Street Exit Ramp**
Comment:	Southbound I-65 into the Downtown backs up everyday. There is much confusion as to which lane to be in entering the Downtown. Instruction signs should be placed North of the MLK off ramp, notifying through traffic on I-65 to Louisville/ St Louis to move to the Left lanes. Through traffic Eastbound to I-70, should be advised to keep in the Right lanes. Painted I-65 signs in the payment would be helpful. Once the traffic gets to w 22nd St, lane changes and jockeying begins. The Local off ramp signs should be moved further North of W 22nd St off ramp, to allow more time to switch lanes.
Response:	Alternatives developed and evaluated in the ProPEL Indy study are expected to improve the weaving that is described in the comment above.

Location:	**Southbound I-65 between West St and North Split**
Comment:	Please do not have lanes end unexpectedly (ex. North Split SB and NB I-65 ramps) where lanes unexpectedly end with little overhead signage or arrows on the ground. This causes at the very best - traffic backups as people are in the outside lane and

	need to merge at the last minute and at the very worst - accidents as people are unaware their lane is ending and sideswipe the vehicle to the left of them.
Response:	The rightmost lane of the two-lane ramp carrying I-65 through the interchange currently terminates or drops immediately west of the interchange. This effectively results in northbound I-65 having one continuous lane through downtown Indianapolis. Route continuity will be evaluated in the development of screening alternatives.

Location:	**Northbound I-65 from Washington St to North Split**
Comment:	What I see is the most important issue is what I call the "funnel" effect, where 3 lanes go down to 2, for example. Requiring drivers to merge dramatically reduces the number of cars that can pass through in a fixed amount of time (say 1 minute). A disappointment with the recent improvements to the spaghetti bowl downtown is heading north on I-65 north and I-70 east comes to a spot where 2 left lanes are for I-70 east and 2 right lanes are for I-65 north. Far more vehicles go onto I-70 east during rush hour and at other times as well (e.g. after sporting events or other such downtown events). And about 100-200 yards after this split we get a 3rd lane for I-70 east. But it is too late, because traffic backs up before that split and cars come to complete stops which makes the backups even worse. The solution: Add a lane for those few hundred yards so 3 lanes go to 3 lanes, thus no merging. There are several other areas where such backups routinely occur. I suggest riding in a helicopter every morning and evening rush hour for several days to see where these bottlenecks occur. That should be the number 1 focus on improvement, and it would be the least expensive and quickest to resolve.
Response:	The rightmost lane of the two-lane ramp carrying I-65 through the North Split interchange currently terminates or drops immediately west of the interchange. This effectively results in northbound I-65 having one continuous lane through downtown Indianapolis. Similarly, the leftmost lane of the two-lane ramp carrying the I-65 northbound to I-70 eastbound movement through the interchange drops immediately east of the interchange. Route continuity will be evaluated in the development of screening alternatives.

Location:	**I-65 N between Illinois St and 16th St**
Comment:	Northbound entrance ramps onto I-65 N from Illinois and I-65 southbound from West St have very short merge areas and traffic is impeded substantially and high volumes. West St functions as vehicle storage and line queuing for the southbound I-65 entrance. There is a lack of merging distance and lane capacity for I-65 southbound. Consider adding express lanes to limit the ability of drivers to cross multiple lanes when entering and exiting I-65. The area adjacent to the hospital after 2 pm becomes very congested.
Response:	Alternatives evaluated for these locations will include merge areas that satisfy current design standards. Two Left side entrance and exit ramps exist at the I-65 northbound and southbound ramp segments (Exit 114) and are undesirable from an operational and safety perspective. Various improvements to this portion of I-65 will be evaluated in the alternative screening development process.

Location:	**Southbound I-65 from West St Interchange to North Split**
Comment:	Downtown at Dr MLK/West St, you should only be able to go I65 N. If you want to go I-70 E, you should have to go thru downtown on the streets (10th street) and enter the interstate at the ramp near Delaware. There is such a slowdown on the interstates that backs up beyond Methodist and sometimes back to Dr MLK (even by 4pm which is the start of rush hour) and it is mostly due to people entering interstate on the far-left side and wanting to merge in the far-right lanes for I-70. At 4pm, it is unacceptable that traffic is backed up to Dr MLK exit 117 heading south. At 5pm, it would be more understandable. Something needs to be done about this area.
Response:	I-65 through downtown and the West Street interchange will be evaluated in the alternative screening development process. A left side entrance ramp at West Street (Exit 114) is undesirable from a safety and perspective and will be evaluated.

Location:	**Southbound I-65 from West St Interchange to North Split**
Comment:	SB65 is a common point of congestion even after the North split changes. To me, it seems like the congestion is caused by traffic merging from the on ramp from West/11th street to SB65 north of the I70/65 junction. The congestion could be

	reduced or even eliminated with a solution like the change that was made just to the east of this ramp at 11th and Delaware. There, southbound I65 traffic is directed to another on ramp further south; the same traffic from West Street could be redirected to another ramp and the westbound traffic for I70 would use the new ramp previously mentioned.
Response:	I-65 through downtown and the West Street interchange will be evaluated in the alternative screening development process. A left side entrance ramp at West Street (Exit 114) is undesirable from a safety and perspective and will be evaluated.

Location:	**I-70 at Sam Jones Expressway**
Comment:	A second lane should be added to the I-70 exit ramps to Sam Jones Expressway.
Response:	Analysis of the future no-build conditions indicates the westbound I-70 exit ramp to Sam Jones Expressway will operate at LOS F in both AM and PM peak hours of the 2050 horizon year. Alternatives developed and evaluated in the ProPEL Indy study are expected to improve operations in this area.

Location:	**I-70 at Holt Rd**
Comment:	A second lane should be added to the I-70 exit ramps to Holt Rd. The I-70 & Holt Road intersections are congested in the peak hours.
Response:	The I-70 exit ramps to Holt Road operate acceptably (LOS D or better) in the existing conditions. These ramps are expected to operate at LOS F conditions in the horizon year of 2050. Alternatives developed and evaluated in this study are expected to improve operations at this interchange.

Location:	**I-70 & Harding St Ramp**
Comment:	The Harding St ramp needs to be cleaned up.
Response:	Aesthetic treatments may be evaluated for this location in the alternative screening development process.

Location:	**I-70 from West Street to I-65 S Jct.**
Comment:	Eastbound I-70 between West St. and Meridian St. Traffic from entrance ramps seeking eastbound I-70 or northbound I-65 must cross over multiple lanes of traffic in a short distance, which causes confusion and congestion. Lower the section of I-70W between West St and Madison Ave to reconnect the community. The Old Southside Neighborhood Association strongly supports recessing and capping the south portion of I-70 to reconnect the historic street grid and restore the local community and economic center of the Southside. Especially, the South Meridian, McCarthy, and Morris Street intersections. Such a move will require a strong partnership between the state of Indiana and the City of Indianapolis. Building the recessed highway may cost more, but the benefits to the entire southside community is immeasurable. Envision a capped highway with greenspace, views of downtown, and new buildings. West St is a main access point to downtown and the southside off I-70. What can be done to improve the aesthetics of the interchange? The area needs to feel safe for those walking and biking in the area. Meridian St near Morris needs modernized roadway improvements to invite new residential development. West St. and Meridian exit ramps-especially on football Sundays-- cause long backups on both, traffic coming north on I-65 and traffic from north coming south. Both these exit ramps should be multiple lanes wide, unlike now. Additionally, the city, on these Sunday mornings need to modify the stop lights on McCarthy St.
Response:	The segment of eastbound I-70 from Madison Avenue to the South Split (I-65 S Jct) has a current spacing of 1,900 feet and does not meet the required spacing distance of 2,000 feet with two lane changes required. A recessed alternative concept will be evaluated in the alternative screening and development process. Intersection improvements may be considered in coordination with the City of Indianapolis and may be evaluated in conjunction with the evaluation of the South Split.

	Aesthetic treatments to the I-70 & West St interchange will be considered in this study. All alternatives for this location that advance from the ProPEL Indy study will include sidewalks and may include bike lanes through the interchange. Meridian St is under the ownership and maintenance of the City of Indianapolis. The Meridian St corridor will be discussed with the City of Indianapolis for potential evaluation outside of the ProPEL Indy study. The ProPEL Indy study focuses on typical weekday conditions. Special event traffic, such as traffic associated with Colt's home games, will be considered in the development of recommendations for the ProPEL Indy study; however, no traffic analysis will be performed for special events. Alternatives developed and evaluated in the ProPEL Indy study are expected to improve operations in this area.

Location:	**I-65 S Junction & Prospect St/Morris St Bridge**
Comment:	The surrounding South Split neighborhood communities want the NB I-65 and WB I-70 overpasses to go underneath the Morris/Prospect bridge, just as the southbound lanes do. We want a safer, surface street path, a host of multi-modal safety (bicycle/pedestrian) improvements combined with traffic redirection and traffic calming (potentially multi-jurisdictional), all setting the stage for broader connectivity and development over the interstate roadway. Half of Morris St is underground. Would it be possible for all the corridor to go underground? Can we do something about recessing Morris St? I would like to voice concern that any increase in lanes around Morris Street will have a negative impact on our ability to connect with Fountain Square. There are two neighborhoods that want to reconnect.
Response:	The ProPEL Indy study will evaluate alternatives for the I-65/70 S Junction (a.k.a. South Split). The potential to improve safety and efficiency of Morris Street through the interchange will be considered during this evaluation. The need to alter Morris

	St will be coordinated with the City and may be evaluated in conjunction with evaluation of the South Split. Please note the ProPEL Indy study area extends only slightly south of Morris Street.

Location:	**West St between I-70 & I-65**
Comment:	West St is a problem. It is very wide, and pedestrians must cross six lanes of traffic.
Response:	West St is under the ownership and maintenance of the City of Indianapolis. The West St corridor will be discussed with the City of Indianapolis for potential evaluation outside of the ProPEL Indy study, as West Street between I-70 and I-65 is currently not included in the ProPEL Indy study area.

Location:	**I-65/70 & Washington St**
Comment:	The connection between the Holy Cross neighborhood and downtown is not inviting, is difficult to walk, and is noisy. I am interested in investigating architectural improvements and public art, landscaping, and green spaces where possible. I-65 North to Washington seems highly desirable but difficult during peak times. Eliminate weaving [lane changing] from Washington Street to I-65 South. Vehicles turning southbound onto I-65/70 from E Washington St must make three lane changes to reach I-65 southbound.
Response:	There are currently six grade separated crossings with sidewalks between the Holy Cross neighborhood and downtown. Aesthetic treatments to grade separated crossings will be considered in the alternative screening and development process. Improvements to the weaving movements between Washington Street and the South Split are being evaluated as part of the ProPEL Indy study.

Location:	**I-65/70 & Washington St**
Comment:	Heading east on 70 to get to 65N and get off at Washington Street is very dangerous as there is a short distance to move over and with traffic at rush hour, it's very unsafe! Love the fact that 65 runs through the city making access on and off very easy and convenient.

Response:	Improvements to the weaving movements between the South Split and Washington Street exit are being evaluated as part of the ProPEL Indy study.

Location:	**I-70 W from I-65 S Jct to West St**
Comment:	I think some entrance and exit ramps could use longer lanes so that people have more time to get over. I know some of the entrance ramps on the I-70 W spoke are very short. And the exit for Illinois/Meridian (I think) is also short.
Response:	I-70 westbound from I-65 S Jct to Madison Ave and from Madison Ave to West St have weaving segments of insufficient length. Improvements to weaving movements and acceleration/deceleration lengths will be evaluated as part of the ProPEL Indy study.

Location:	**I-70 W from I-65 S Jct to West St**
Comment:	Entrance ramp from west street onto 70 westbound needs more merging space. Sometimes there's so much traffic on 70 that you must wait on side of highway before you can merge - VERY DANGEROUS.
Response:	Improvements to this interchange will be evaluated as part of the ProPEL Indy study.

Location:	**I-70 W from I-65 S Jct to Madison Ave**
Comment:	I70/65 south (between the splits) just past the East Street exit is bad, traffic going to I70 West needs to be in the right line (one lane after going thru the north split as 2 lanes. Semi-trucks are in that lane, then everyone has to move over 1 more lane to go West. Trucks have a hard time moving over in this short distance. Why not have a separate lane to exit for Madison Ave, then there would be 2 lanes going around the south split to I-70 West.
Response:	The ProPEL Indy study will evaluate alternatives for the I-65/70 S Junction (a.k.a. South Split). The potential to improve safety and efficiency through the interchange will be considered during this evaluation.

Location:	**I-65/I-70 from 38th St to South Split**
Comment:	I-65 needs significantly more lane capacity between 38th Street and downtown. I-70 also needs more capacity from the South Split to I-465. Both are prone to severe backups because they simply do not have enough throughput.

Response:	Several segments within the referenced area currently operate at an unacceptable LOS (LOS E/F) at peak hours. Alternatives developed and evaluated in the ProPEL Indy study are expected to improve operations in this area.

Location:	**I-65/I-70 Inner Loop Segments**
Comment:	Remove the highways inside the Inner Loop.
Response:	An interstate removal concept will be evaluated in the alternative screening and development process.

Location:	**I-65/I-70 Inner Loop Segments**
Comment:	Keep the semi-tractor trailers off the spokes - make them go around the 465 loop. They travel too fast through town. I do deliveries all day for a dental lab and use all of the road systems. This is only tangentially related but, "How did we shut down the 65/70 downtown splits for what seemed like multiple years and ended up with the same number of lanes of traffic and just as many traffic tie-ups as before?" If this is the level of competence, we can expect in the transportation network of the future I'm not looking forward to it.
Response:	A reroute traffic to I-465 concept will be evaluated in the screening stages of the ProPEL Indy Study.

Location:	**West Street & Wisconsin St**
Comment:	The intersection of West St and Wisconsin St has heavy truck traffic that cannot be accommodated.
Response:	This intersection will be discussed with the City of Indianapolis for potential evaluation outside of the ProPEL Indy study.

Location:	**I-65 between I-465 and I-865**
Comment:	I would like to see I-65 three lanes between two I-465 exits on the north side of Indianapolis. Having two lanes only impacts the flow of traffic during rush hour.
Response:	I-65 between I-465 and I-865 is outside of the ProPEL Indy study area.

Location:	**I-65 between I-465 and I-865**
Comment:	Increase I-65 northbound and southbound to three lanes between 465 and 865 on the northwest side. It chokes down from three lanes to two and causes a traffic backup daily.
Response:	I-65 between I-465 and I-865 is outside of the ProPEL Indy study area.

Location:	**I-70 at Keystone Way**
Comment:	Regarding Weaving Segments - if the new North Split is any indication, these guidelines are also outdated. Left lane ending when freeways merge! Rural/Keystone on ramps to 70 also need to be extended; especially when traveling westbound on 70. There isn't enough time for oncoming traffic to merge left to 65 south/70 west or the downtown exits. The Shadeland exit is the same; especially when traveling 70 eastbound. Exit and direction signs need to be placed earlier. It's quite funny when traveling westbound on 70 that the exit sign for 65 north and downtown are PAST the exits
Response:	The ramp junctions at I-70 E and Keystone Way / Rural St interchange have weaving segments present. Additional weaving segments are present at I-70 E and Shadeland Ave in both directions. Improvements to the weaving movements and the potential to improve route continuity will be evaluated as part of the ProPEL Indy study.

Location:	**Keystone Ave & I-70**
Comment:	Keystone Parkway: trees on both sides absorbs the noise and enhances quality of life.
Response:	Keystone Ave is under the ownership and maintenance of the City of Indianapolis. This comment will be shared with the City for consideration in future projects along Keystone Avenue.

Location:	**I-70 E and I-465 S**
Comment:	A separate ramp to exit I-70 E to I-465 S is needed.
Response:	This comment is assumed to apply to the I-70 & I-465 E Jct., where a C-D roadway provides access from I-70 eastbound to both directions of I-465. Weaving along this C-D roadway will be evaluated in this study to determine if improvements are necessary.

Location:	**I-65/70 southbound from 38th St to I-70 E and Shadeland Ave**
Comment:	65 southbound from 38th street into downtown backups every day in the afternoon, often without any incident causing it. The upcoming replacement of the bridges in this area would be an opportunity to address the safety and mobility concerns caused by these backups. Not sure if TSMO approaches would be an option here. Additionally, 70 westbound where it curves at Shadeland regularly backups without incident causing it.
Response:	Several segments within the referenced area currently operate at an unacceptable LOS (LOS E/F) at peak hours. Alternatives developed and evaluated in the ProPEL Indy study are expected to improve operations in this area. TSMO strategies will be considered in the screening and alternatives evaluation.

Location:	**I-70 E and Shadeland Ave**
Comment:	I70/Shadeland Ave traveling east. Vehicles get in the far-right lane when exiting to 465/Shadeland which is the slow lane, but that lane takes them to Shadeland exit. So, they have to cut over to go 465. This should be posted before you get the collector area. (Right lane exit to Shadeland Ave only. I see too many vehicles cutting over because they are in the right lane.
Response:	The C-D lanes of the I-70 and Shadeland Avenue interchange will be evaluated in the alternatives evaluation phase of this study.

Location:	**I-65 S Junction to I-70 westbound**
Comment:	I think more lanes need to be added to exit I-70 westbound at the south split. It has two lanes, but one is almost entirely an entrance ramp from Washington street until the very end and it gets so backed up. This then makes it hard for people on the entrance ramp to safely get over if they're continuing I-65 south and causes a lot of reckless driving by impatient people, both on the I-65/I-70 spoke and the entrance ramp.
Response:	The ProPEL Indy study will evaluate alternatives for the I-65/70 S Junction (a.k.a. South Split). The potential to improve safety and efficiency through the interchange will be considered during this evaluation.

Location:	**I-65/70 southbound from 21st St to North Split**
Comment:	I think there needs to be better signage going into the south split so that if you are continuing through Indy, you know which lane is best. Like the far-left lane of I-70 going into the merge should be labeled as continuing on I-70 and similar for the far-right lane of I-65 going into the merge. I know the other lanes aren't really any different, but even if you put that I-65 would be the right lanes/right exit and I-70 would be the left lanes/left exit, it would help people who don't drive it regularly to know they'll need over before they actually have to get over.
Response:	Signing for the I-65/70 eastbound was improved by the North Split interchange project completed in 2023. Input regarding improved wayfinding and signage along the corridor will be considered in the development and evaluation of potential alternatives.

Location:	**I-65/70 northbound from North Split to 21st St**
Comment:	The closure of access from I-70 westbound to Meridian St. was not good - no access to central part of near northside. ALL of the last 2 redesigns should have INCREASED capacity but instead decreased capacity or left it the same on I-70 westbound through town, creating pinch points and significant traffic backups daily - I see it from my office window looking onto I-70. NEED: 1. better access / more off ramps to northside of downtown from I-70, Need more capacity for traffic to get through city, widen westbound I-70 ramp to west street to better handle volume - can easily be 2 full lanes on the entire ramp.
Response:	I-70 westbound access to Pennsylvania St and Meridian St was closed as part of the North Split project. Closure of this access was necessary to improve safety. The need for additional interchange access will be evaluated in this study.

8.2.3 Connectivity

Connectivity comments relate to lack of connectivity between neighborhoods, local street networks, and resource areas.

Location:	**I-65 N between 30th St & 71st St**
Comment:	We need entry/exit access to key destinations such as Eagle Creek and Butler University.
Response:	Exit 121 (Lafayette Rd) and Exit 124 (71st St) provide access to Eagle Creek Park from I-65. Motorists can utilize I-65 to access local streets to Butler University including

	use of 30th St at Exit 116. The need for improvements at the I-65 & Lafayette Road interchange will be evaluated in this study.

Location:	**I-65 N at 38th St Frontage**
Comment:	Better access to Marian University is needed e.g., lighting, signage, and exit ramp.
Response:	The university is accessible by I-65 via exit 119 (38th Street), with campus access on Cold Spring Road and 30th Street. The need for improvements at this interchange will be evaluated in this study.

Location:	**10th St at N West St**
Comment:	West Street acts as a barrier with several mobility issues and is wide and difficult for pedestrians to get across. Mobility is poor in mornings and afternoons on West Street. It is just a logjam on West attempting to get on the interstate (I-65). Need something better.
Response:	The merge area for the ramp from West Street to I-65 southbound will be improved in all alternatives evaluated in this study. West Street is owned and maintained by the City of Indianapolis and is outside of the ProPEL Indy study area. These mobility concerns will be shared with the City.

Location:	**North St near I-65/70**
Comment:	The sidewalk along North Street dead-ends at the interstate ramp.
Response:	The sidewalk along the north side of North Street provides a connection to Davidson Street south of North Street.

Location:	**Pine St near I-65/70**
Comment:	Pine St from New York St to the interstate ramps have no sidewalks and the existing curbs are not maintained.
Response:	It is confirmed that no sidewalks currently existing on E Ohio/Pine Streets to E New York St. DPW maintains local streets including sidewalks, curbs, and pedestrian ramps. Coordination between agencies is ongoing throughout the study process.

Location:	**Interstate West of Downtown**
Comment:	An I-65/70 spur on the westside of downtown from I-65 to I-70 roughly parallel to West St. with an exit for downtown should be studied.
Response:	Alternative corridor concepts may be evaluated in future stages of the study.

Location:	**I-65 S Junction & Prospect St/Morris St Bridge**
Comment:	The Bates-Hendricks Neighborhood Association want the northbound I-65 and westbound I-70 overpasses to go underneath Morris / Prospect Street, just as the southbound lanes do. We want safer and friendlier multi-modal infrastructure and building infrastructure that re-links our neighborhoods that were torn apart. The improvements should better direct and calm traffic across the bridge and will likely require cooperation from state and local jurisdictions (DPW & INDOT).
Response:	The potential for improvements to the Morris Street interchange may be evaluated as part of evaluation of alternatives at the South Split interchange.

Location:	**I-65/70 from the South Split to E Washington St**
Comment:	The neighborhood of Fountain Square needs improved connectivity.
Response:	There are currently five interstate crossings between Downtown and Fountain Square. The need for improving these crossings will be evaluated in the ProPEL Indy study.

Location:	**Lynhurst Dr north of I-70**
Comment:	Sidewalks are needed at S. Lynhurst Dr to get to the bus stop.
Response:	The bridge carrying S Lynhurst Dr over I-70 provide sidewalks on both sides of the bridge. While INDOT does not build nor maintain sidewalks for local streets, coordination between agencies will be delivered during the study process.

Location:	**S Minnesota St west of I-70**
Comment:	S Minnesota St between Holt Rd to S Lynhurst Dr needs sidewalks to get to bus stop.
Response:	It is confirmed that no sidewalks currently exist on Minnesota St at I-70. This need will be shared with the City to be addressed outside of the ProPEL Indy study.

Location:	**I-70 from the White River to the South Split**
Comment:	From McCarty St there are three entrance/exit ramps onto I-70. This creates connectivity problems for people accessing neighborhoods to the north and south of the interstate. Improved access to the downtown area is needed along the south side of downtown
Response:	Four existing interstate crossings exist between Downtown and the Old Southside. Access across I-70 is provided at five locations (West St/Missouri St, Capitol Ave, Meridian St, Madison Ave, East St) in the 65/70 Downtown Spoke. The need for improvements to these crossings will be evaluated in the ProPEL Indy study.

Location:	**I-70 Access to Pennsylvania St**
Comment:	I-70 westbound access to the Pennsylvania St exit should be reopened. My commute has increased 10 to 20 minutes per day. I-70 westbound access to the Pennsylvania St exit should be opened again.
Response:	I-70 westbound access to Pennsylvania St was closed as part of the North Split project. Closure of this access was necessary to improve safety.

Location:	**Access between Downtown and I-69/Binford Blvd**
Comment:	Improved access from I-69/Binford to Downtown is needed.
Response:	Improved access downtown and the northeast may be evaluated in future steps of this study.

Location:	**I-70 from the North Split to N Rural St**
Comment:	Roosevelt Avenue / Hillside Avenue and Caroline Avenue need walkability and connectivity to the south of I-70 to access the library, parks, and community events by other means.
Response:	Ten interstate crossings currently exist between the Near Eastside and Martindale-Brightwood neighborhoods. It is confirmed that sidewalks currently exist at I-70 and Roosevelt Avenue and Valley Avenue in the comment referenced area. However, the condition of the sidewalks, lighting, and landscaping may influence pedestrian

	activity. Currently no bike facilities exist providing safe bike connections between neighborhoods north and south of I-70. The City has proposed a neighbor way along Roosevelt Avenue and a greenway along Bloyd Avenue and 21st St which create bike facility connections between neighborhoods north and south of I-70. This study will evaluate existing connections between neighborhoods separated by the interstate and will evaluate the need for additional connections.

Location:	**I-70 Interchanges with N Rural St, Emerson Ave and Post Rd**
Comment:	There are no sidewalks at the interchanges of I-70 and Rural St at Keystone Ave, I-70 at Emerson Ave, and I-70 at Post Road.
Response:	It is confirmed that no sidewalks currently exist at these interchanges. The need for and feasibility of adding sidewalks at the Rural St and Emerson Ave interchanges will be considered in future phases of this the ProPEL Indy study. INDOT will consider the need for sidewalks at the I-70 & Post Rd interchange outside of the ProPEL Indy Study.

8.2.4 Bike and Pedestrian

Location:	**Lafayette Rd near I-65**
Comment:	Lafayette Rd needs better pedestrian and bike facilities. It currently has lots of vehicles accessing the interstates and is dangerous.
Response:	There are currently bike lanes but no sidewalks or trails along Lafayette Rd in the vicinity of I-65. Improvements to the bike lane may be needed to increase use of this facility.

Location:	**Morris St between South Split and West St**
Comment:	Bike access and bike safety along Morris St is needed.
Response:	Morris St is under the ownership and maintenance of the City of Indianapolis. The need to alter Morris St will be coordinated with the City and may be evaluated in conjunction with evaluation of the South Split.

Location:	**I-70 from White River to Madison Ave**
Comment:	I-70 creates a barrier between downtown and the Old Southside that disconnects the neighborhoods. It is not easy to walk and bike across I-70. As the neighborhood redevelops on the near southside of Indianapolis it will be critical to have bicycle and pedestrian trailways running north and south into downtown. The section of road along Morris St, between Kentucky Avenue and Madison Avenue, is difficult to navigate and not safe for pedestrians and cyclists. The bike lanes on the East St bridge over I-70 as well the Cultural Trail crossing I-70 on Virginia Avenue are good examples of how to make improvements.
Response:	Sidewalks are provided along Missouri St, Capitol Ave, Meridian St and Madison Ave. Bike lanes are not present at any of these four crossings. The need for improvements at these crossings will be evaluated in the ProPEL Indy study.

Location:	**I-70 at Emerson Ave & I-70 at Ritter Ave**
Comment:	It is dangerous and not dignified to cross I-70 by foot or bike at Emerson Ave and Ritter Ave. I-70 and Ritter is dingy for pedestrians and there is no path for cyclists.
Response:	There are no sidewalks at the interchanges of I-70 at Emerson Ave and I-70 at Ritter Ave. Emerson Ave provides shoulders to accommodate bikes but lacks bike lanes. The City has proposed a multi-use/ neighbor way for the N Ritter corridor. The project schedule is unknown. The need for bike lanes and sidewalks will be evaluated in this study.

Location:	**I-70 at N Arlington Ave**
Comment:	I-70 and Ritter is dingy for pedestrians and undignified for pedestrians.
Response:	There are sidewalks at the underpass at I-70 and N Arlington Ave. Facility lighting and aesthetics will be evaluated as design elements in the screening alternatives development stages.