PROPEL

Smarter Transportation.
Stronger Communities.

US 41

Existing Transportation Conditions Report

October 2026

Prepared by:

HNTB

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1 Introduction

1.1 PEL Background and Study Objectives

The Indiana Department of Transportation (INDOT) is initiating ProPEL US 41, a Planning and Environment Linkages (PEL) study on U.S. 41 in Vigo County, Indiana. Analysis and planning activities will be conducted in coordination with the public, resource agencies and stakeholders, including the City of Terre Haute, Vigo County, Terre Haute Area Metropolitan Planning Organization (THAMPO), Vigo County Area Plan Commission, Terre Haute Redevelopment, Terre Haute Area Economic Development, Terre Haute Transit Utility, Terre Haute Regional Airport, Vigo County School Corporation, Indiana State University, Rose-Hulman Institute of Technology, Ivy Tech Community College – Terre Haute, health care facilities and private sector/logistics facilities. Transportation planning products from the PEL process will shape and inform subsequent project-specific environmental reviews conducted in accordance with the National Environmental Policy Act (NEPA).

ProPEL US 41 is a unique opportunity for the City of Terre Haute and Vigo County residents to share their vision for the future of U.S. 41. The primary goal of the ProPEL US 41 study is to develop multiple high-level solutions for potential improvements to U.S. 41 by examining safety, mobility and environmental factors while aligning with the economic and land use development visions of the City of Terre Haute, THAMPO, businesses and communities of interest within the study area and regional users. This will set the long-term vision for transportation infrastructure investments along the U.S. 41 corridor. Transportation infrastructure investments include a range of projects that would enhance the safety, mobility, efficiency and sustainability of the transportation system and could include road and bridge projects, transit system changes and multimodal projects such as bicycle lanes and sidewalks.

1.2 Report Purpose

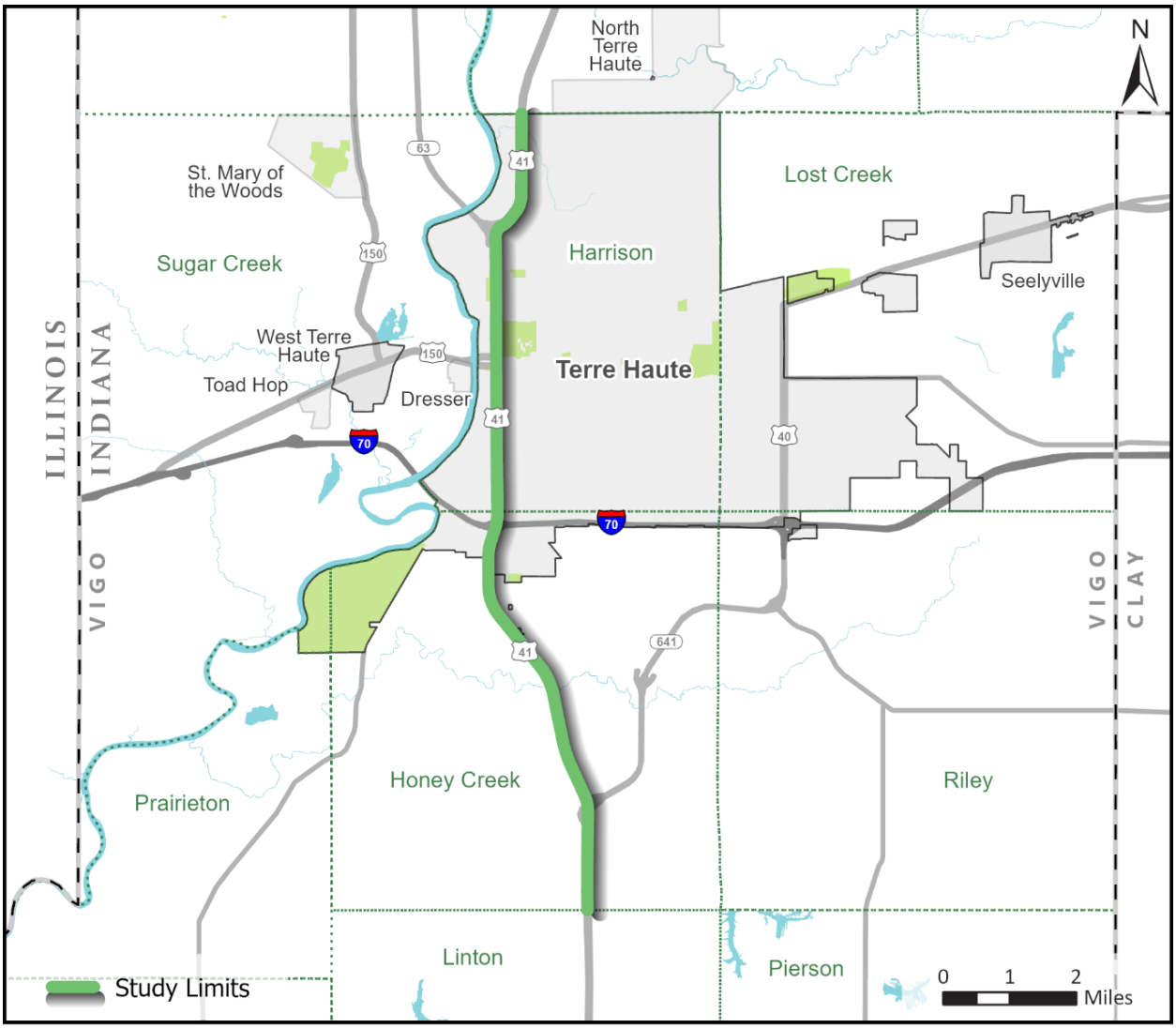
The purpose of the ProPEL US 41 Existing Transportation Conditions Report (Existing Conditions Report) is to document existing transportation conditions inside the U.S. 41 study corridor. The conditions evaluated in this report will be used, along with public input received, to develop the purpose and need for the study, inform the public and stakeholders and support the next stages of alternative screening and development.

The existing transportation conditions establish the No-Build conditions, which will be used as a baseline to develop and evaluate alternatives.

1.3 Study Area

The ProPEL US 41 study limits (also referenced throughout as the "study area") include approximately 12.5 center line miles along U.S. 41, from East Harlan Drive (1.54 miles south of S.R. 641) to East Haythorne Avenue (1.9 miles north of S.R. 63), as shown in **Figure 1**.

Figure 1: ProPEL US 41 Study Limits



1.4 Study Locations

Based on the INDOT roadway functional classification, study locations were selected on U.S. 41 for cross streets with a classification of minor collector or higher, and/or where an intersection is currently signalized. Intersections with crossroads of a lower functional classification are not expected to influence the outcome of this PEL study and were not included as study locations

unless otherwise noted. These intersections may be examined as part of subsequent NEPA studies that follow this PEL study.

A total of 34 study intersections were identified along U.S. 41. The intersection of North 1st Street and Maple Avenue was included as a study intersection because this intersection facilitates the southbound S.R. 63 to northbound U.S. 41 movement. Additionally, six intersections along 1st Street and 7th Street in downtown Terre Haute were included in the study because of their potential to be impacted by build alternatives developed in later phases of this PEL study. The resulting 41 study intersections are listed in **Table 1** and depicted in **Figure 2.**

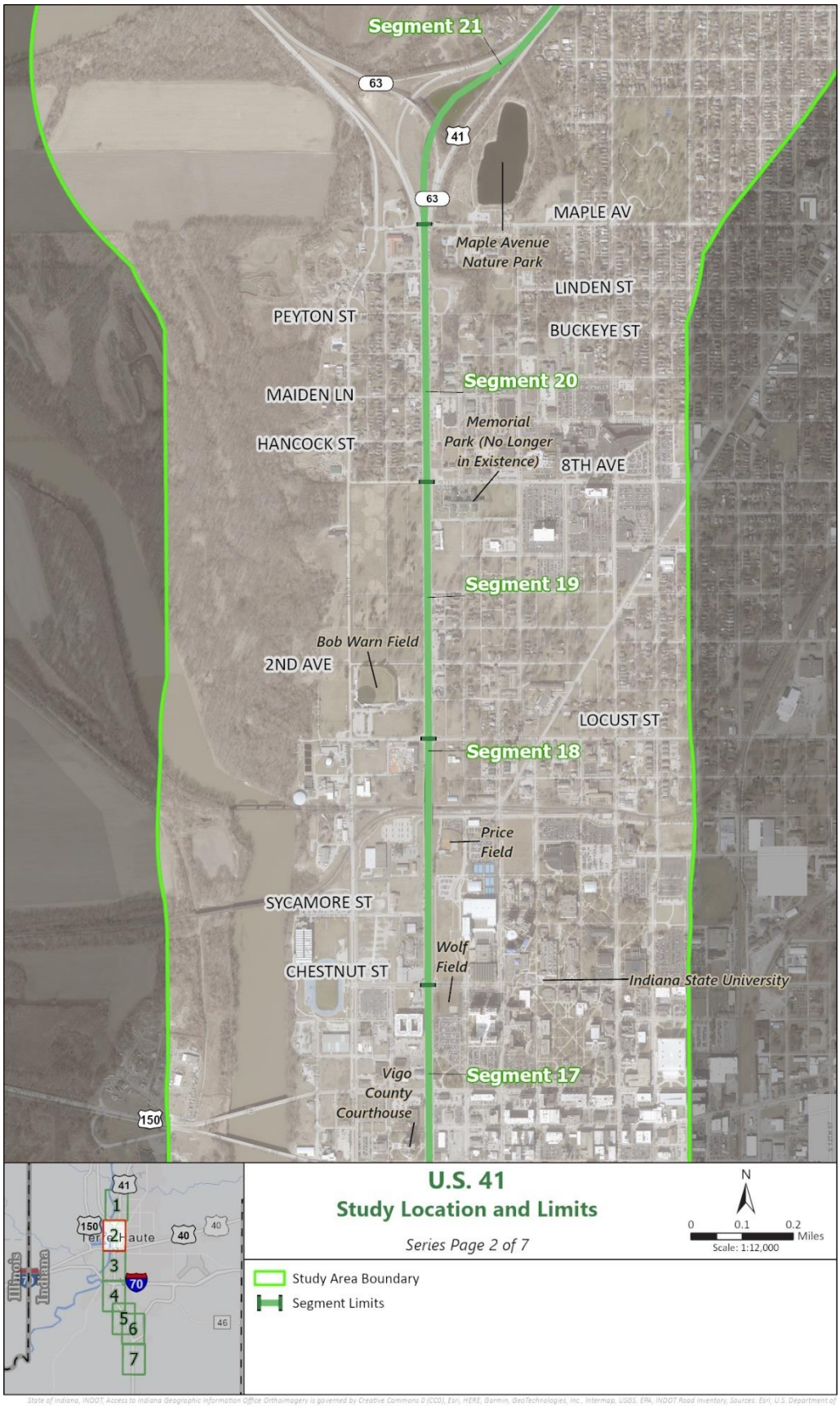
Appendix A contains maps depicting the functional classification of the local roadway network in the study area.

Table 1: U.S. 41 Study Locations

#	Intersection	#	Intersection
1	U.S. 41 and E. Harlan Dr.	22	U.S. 41 and Farrington St.
2	U.S. 41 and E. Dallas Dr.	23	U.S. 41 and Poplar St.
3	U.S. 41 and S.R. 641	24	U.S. 41 and Walnut St.
4	U.S. 41 and Jessica Dr.	25	U.S. 41 and Ohio St.
5	U.S. 41 and E. Woodsmall Dr.	26	U.S. 41 and Wabash Ave.
6	U.S. 41 and S. Carlisle St.	27	U.S. 41 and Cherry St.
7	U.S. 41 and 56th Dr.	28	U.S. 41 and Chestnut St.
8	U.S. 41 and Old Royse Rd.	29	U.S. 41 and Locust St.
9	U.S. 41 and S. 7th St.	30	U.S. 41 and 8th Ave.
10	U.S. 41 and Raymond Dr.	31	U.S. 41 and Maple Ave.
11	U.S. 41 and E. Springhill Dr.	32	N. 1st St. and Maple Ave.
12	U.S. 41 and Mayfair Dr.	33	U.S. 41 and S.R. 63
13	U.S. 41 and McCallister Dr.	34	U.S. 41 and Ft. Harrison Rd.
14	U.S. 41 and W. Johnson Dr.	35	U.S. 41 and E. Haythorne Ave.
15	U.S. 41 and E. Davis Dr.	36	S. 1st St. and Ohio St. / U.S. 150
16	U.S. 41 and I-70 Eastbound	37	S. 1st St. and Cherry St. / U.S. 150
17	U.S. 41 and I-70 Westbound	38	S. 7th St. and Poplar St.
18	U.S. 41 and E. Margaret Ave.	39	S. 7th St. and Ohio St.
19	U.S. 41 and E. Voorhees St.	40	S. 7th St. and Wabash Ave.
20	U.S. 41 and Hulman Dr.	41	S. 7th St. and Cherry St.
21	U.S. 41 and Washington Ave.		

Figure 2: U.S. 41 Study Intersections





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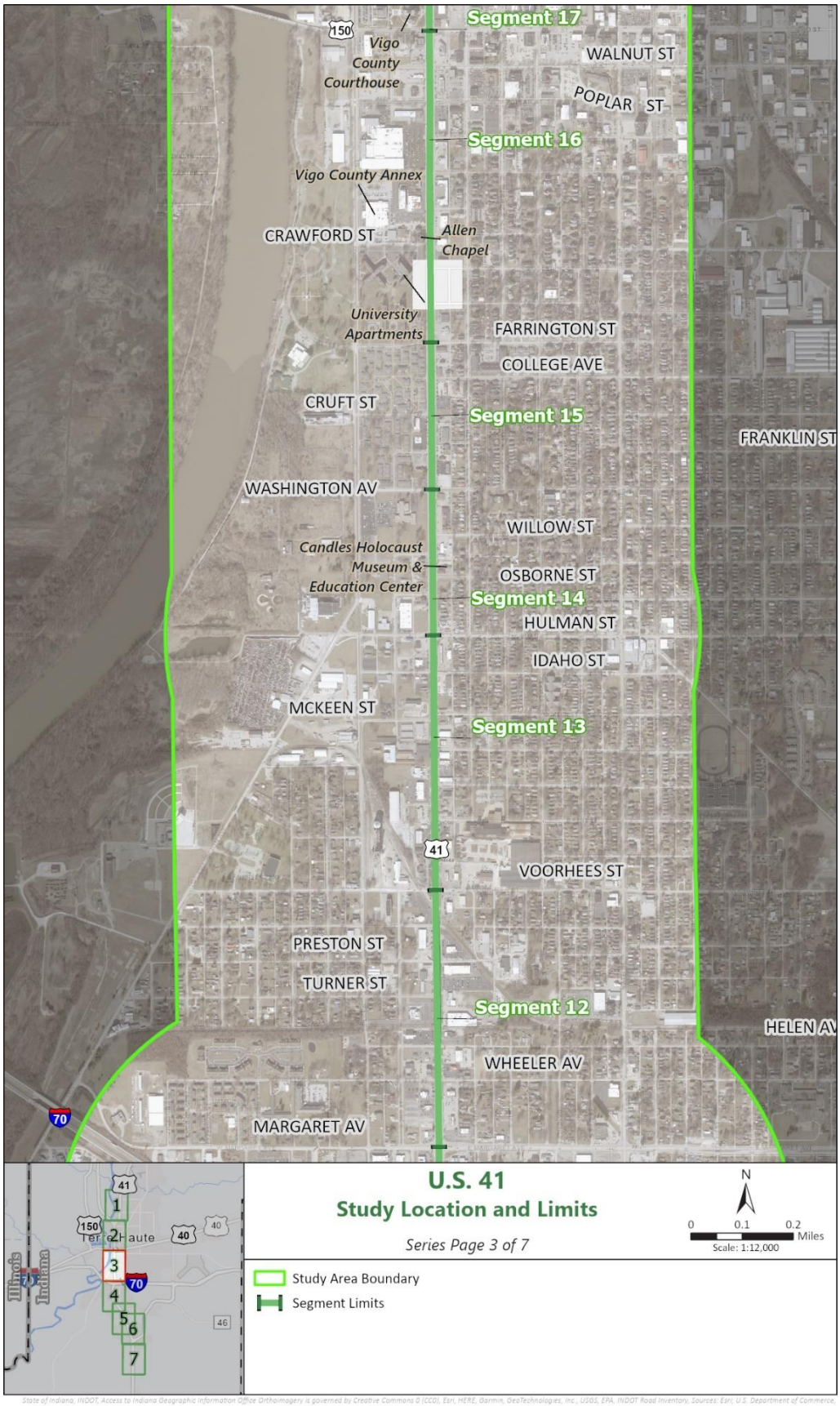

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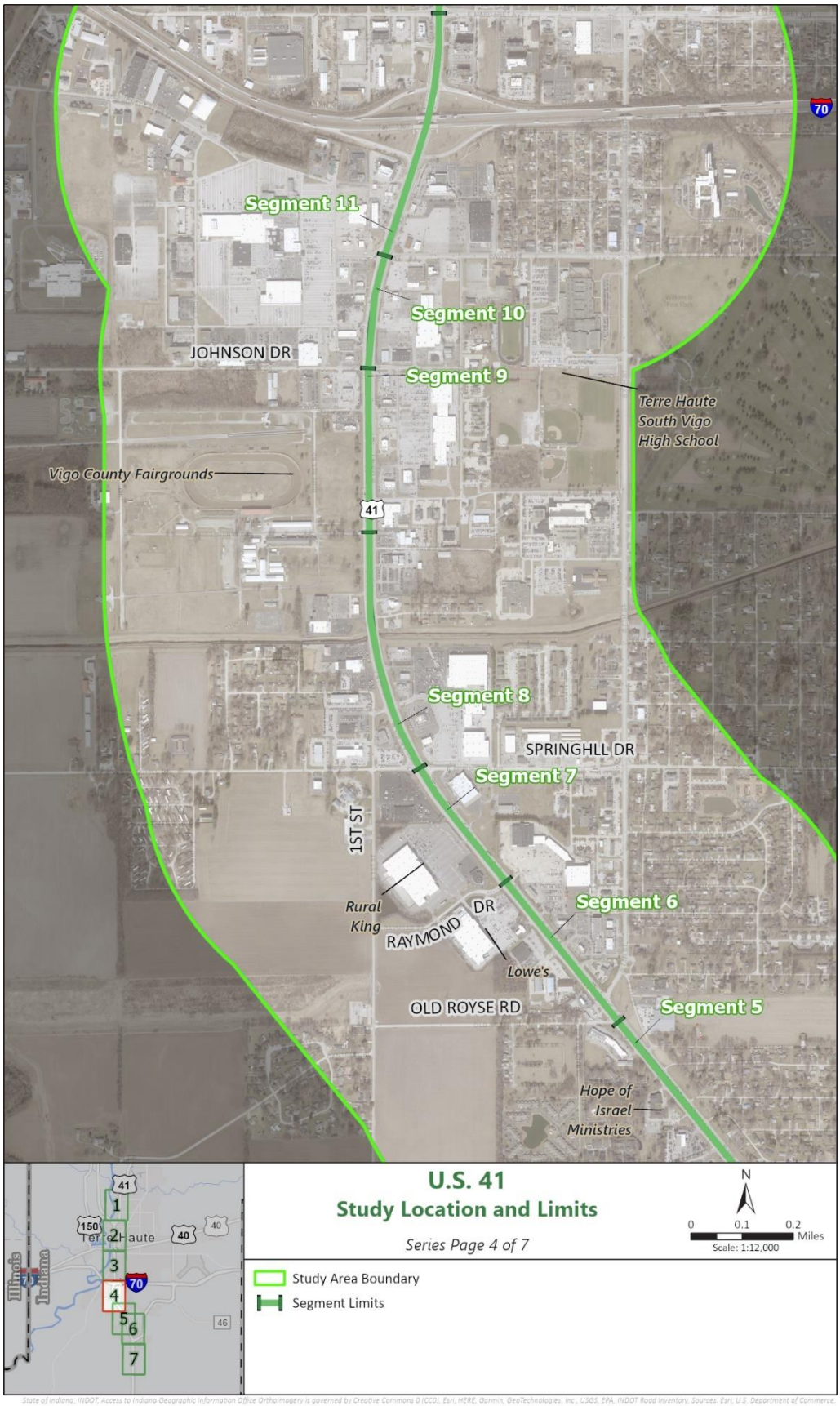

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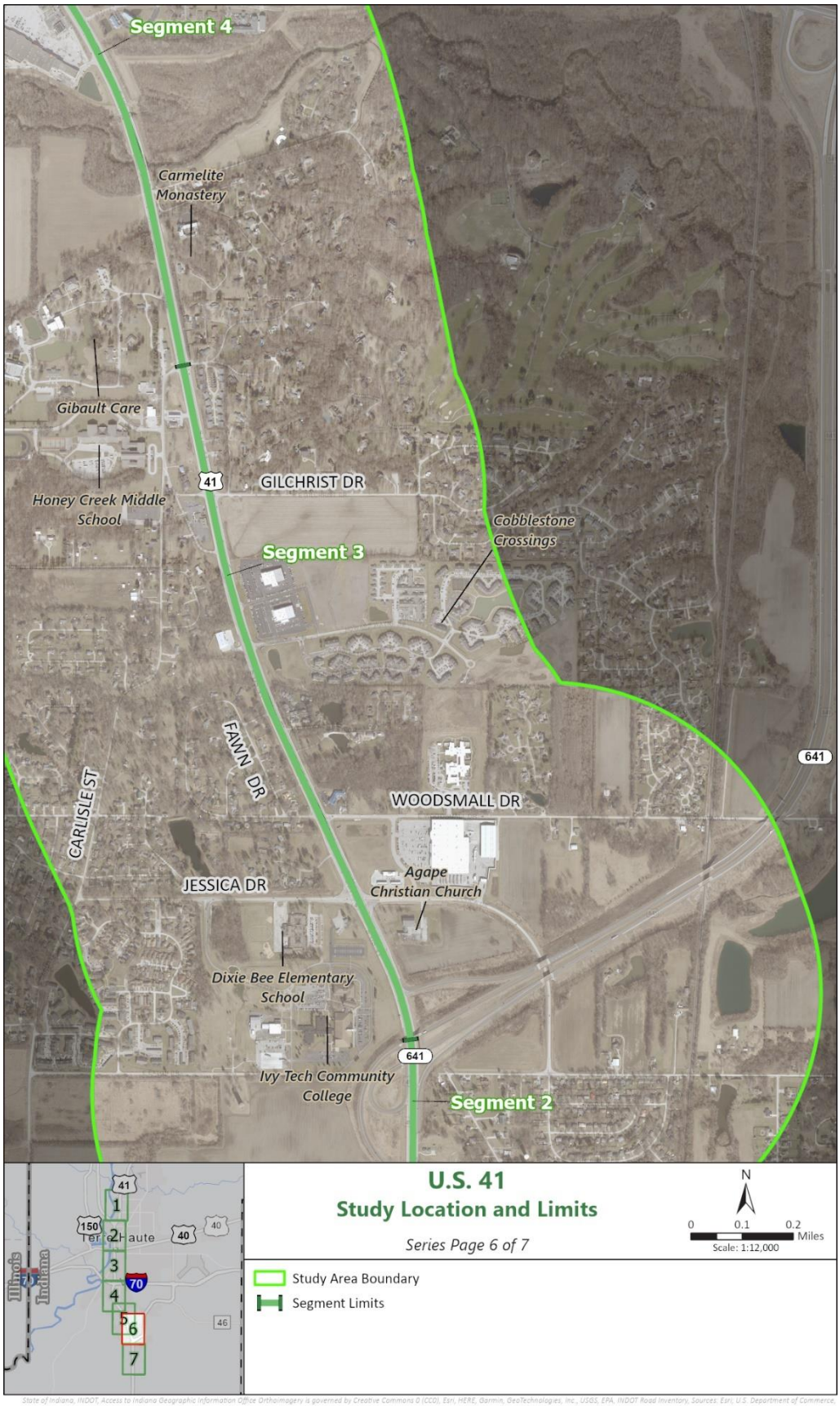

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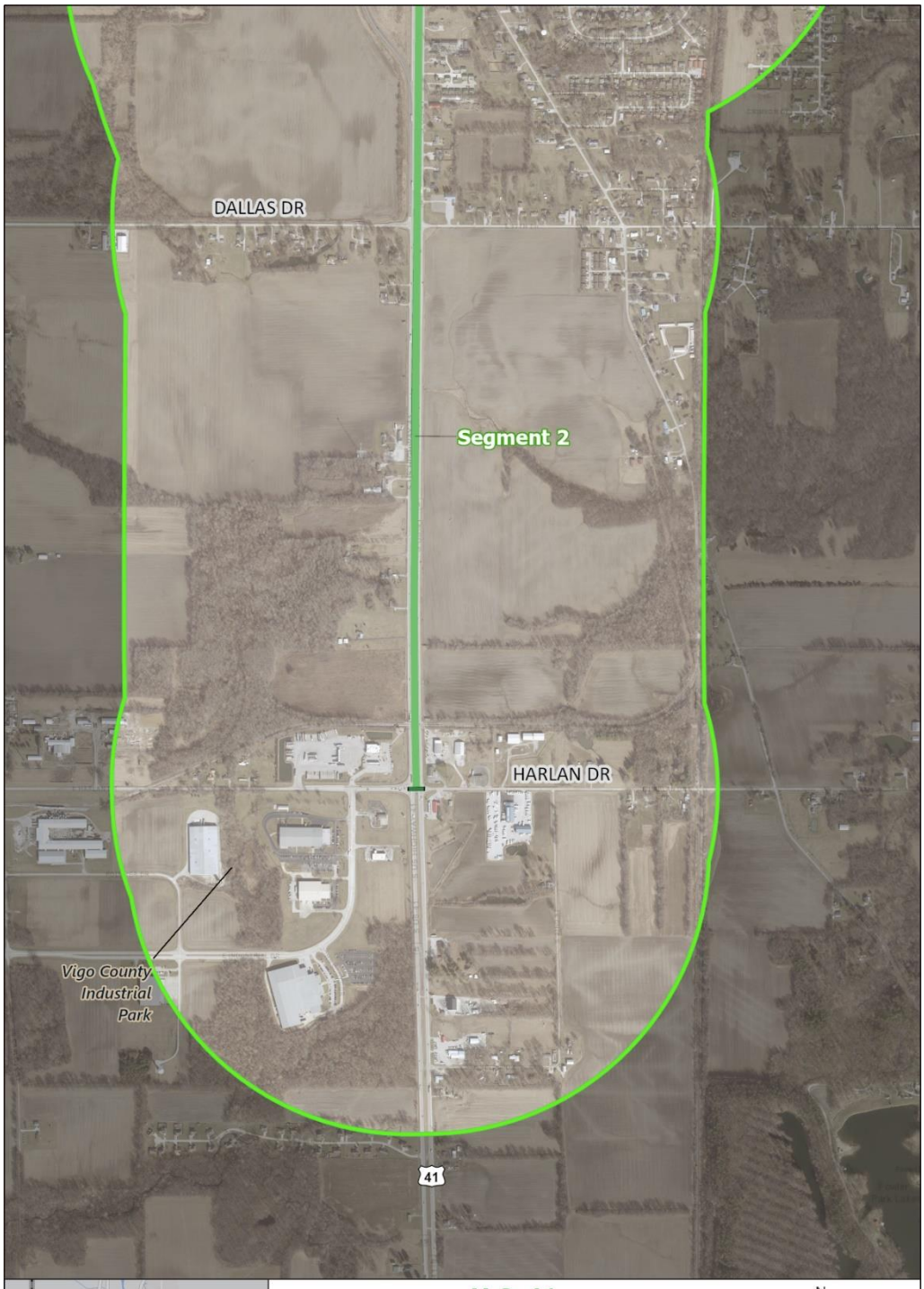



U.S. 41
Study Location and Limits

Series Page 7 of 7

N

0 0.1 0.2 Miles

Scale: 1:12,000

Study Area Boundary

Segment Limits

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1.5 Scope of Work

The existing transportation conditions summarized in this report include:

- Review of existing infrastructure and geometric conditions and access controls on U.S. 41 using the following data sources:
    - Geographic Information Systems (GIS) data
    - Aerial imagery
    - Field observations (notes, photos and videos)
    - Online websites and data sources
    - Information obtained from state, regional and/or local representatives
- Infrastructure and corridor access assessment
    - Conduct an inventory of existing driveways to document number and type of driveways
    - Assess existing driveways and intersections versus current INDOT guidelines for access management and driveway permitting
    - Document access points that are critical to EMS, school buses and transit
    - Document the presence and condition of existing bicycle and pedestrian facilities
    - Document presence of pedestrian curb ramps using aerial imagery
- Safety analysis for a five-year period using crash data from January 1, 2020, through December 31, 2024
    - Identification of crash patterns and trends
    - Statistical analysis using INDOT's RoadHAT software
- Traffic data collection using:
    - INDOT Traffic Count Database System (TCDS)
    - Recent turning movement counts (provided by INDOT)
    - Traffic growth rate(s) estimated from a travel demand model developed specifically for this study and based on the THAMPO model
- Operational analysis of existing (2025) and future (2050) No-Build traffic conditions using:
    - Synchro 12 for signalized and two-way stop-controlled (TWSC) intersections
    - Highway Capacity Software for merge and diverge areas of interchanges

2 Infrastructure

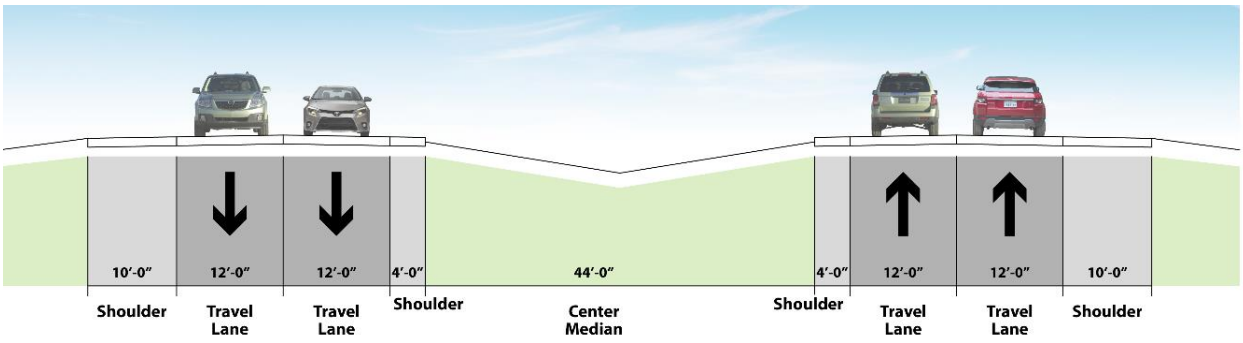
This chapter documents infrastructure conditions inside the U.S. 41 study area, identifying roadway characteristics, critical infrastructure networks and resource areas that impact corridor access and mobility.

2.1 U.S. 41 Description and Typical Sections

Haythorne Avenue to State Road (S.R.) 63

In this segment, U.S. 41 is a four-lane facility with a rural cross section and a posted speed limit of 55 mph. Four 12-foot travel lanes, 10-foot outside shoulders and 4-foot inside shoulders are provided in this portion of U.S. 41. Dedicated left- and right-turn lanes are provided along U.S. 41 at a signalized intersection location at Fort Harrison Road. Right-of-way along U.S. 41 for this section varies between 99 and 120 feet. The typical section for this segment of U.S. 41 is provided in **Figure 3**.

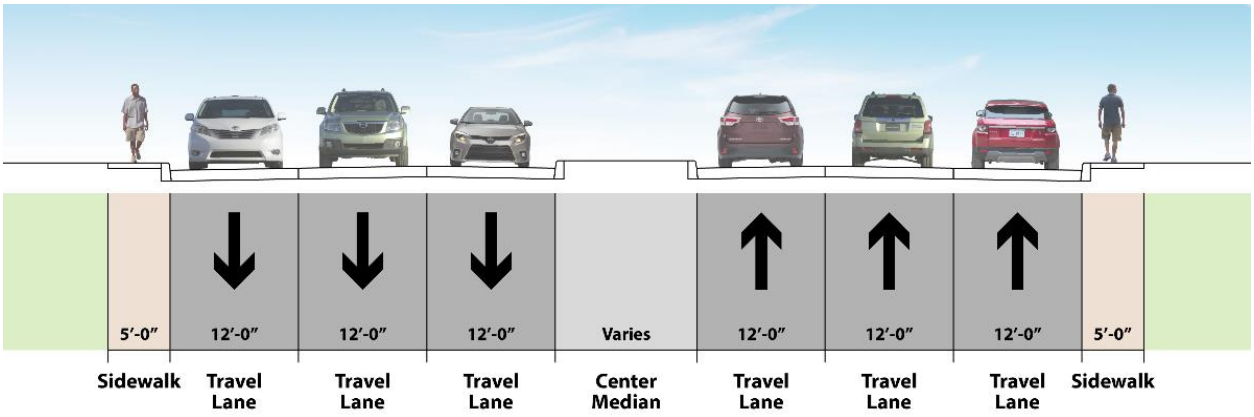
Figure 3: U.S. 41 – Haythorne Avenue to S.R. 63



S.R. 63 to Hulman Drive, U.S. 41

In this segment, U.S. 41 is a six-lane facility with a center median and an urban cross section. Six 12-foot travel lanes are provided for this segment with a posted speed limit of 40 mph from S.R. 63 to 1st Avenue and 30 mph between 1st Avenue and Hulman Drive. Two 5-foot sidewalks are provided at both travel directions of U.S. 41. A center median varies in width with center median openings located at various segment locations reviewed in **Chapter 4.** Right-of-way along U.S. 41 for this section varies between 87 and 117 feet. The typical section for this segment of U.S. 41 is depicted in **Figure 4**.

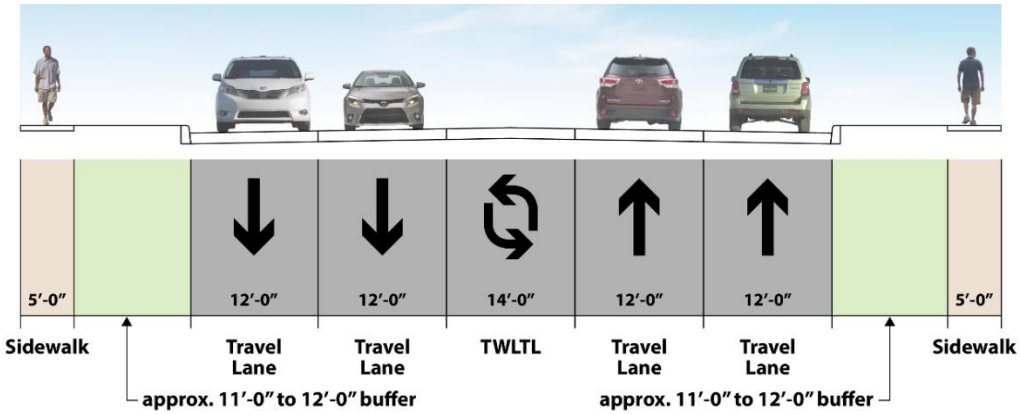
Figure 4: U.S. 41 – S.R. 63 to Hulman Drive



Hulman Drive to Greenwood Street

In this segment, U.S. 41 is a four-lane facility with an urban cross section and a posted speed limit of 30 mph. Four 12-foot travel lanes are provided with a 14-foot center median supporting two-way left-turn movements. Two 5-foot sidewalks are located at northbound and southbound travel directions of U.S. 41. An approximate 11- to 12-foot landscape buffer exists between the curb and sidewalk in both directions of the segment. Right-of-way along U.S. 41 for this section varies between 87 and 98 feet. The typical section for this segment of U.S. 41 is depicted in **Figure 5.**

Figure 5: U.S. 41 – Hulman Drive to Greenwood Street

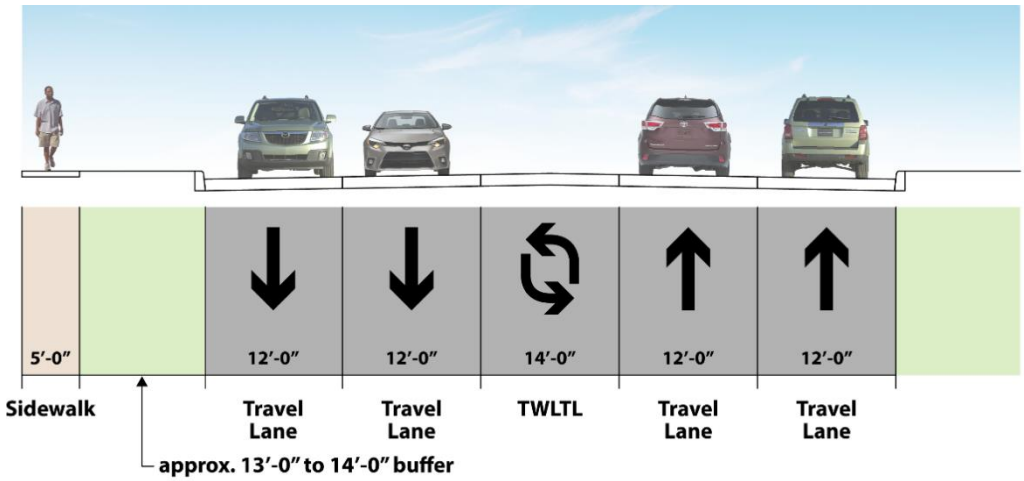


Greenwood Street to Turner Street

In this segment, U.S. 41 is a four-lane facility with an urban cross section and a posted speed limit of 40 mph. Four 12-foot travel lanes are provided with a 14-foot center median supporting two-way left-turn movements. One 5-foot sidewalk is provided for the southbound travel direction with an approximate 13- to 14-foot landscape buffer between the curb and sidewalk. A 14-foot center median lane supports two-way left-turn movements. Right-of-way along U.S. 41 for this

section varies between 81 and 98 feet. The typical section for this segment of U.S. 41 is depicted in **Figure 6**

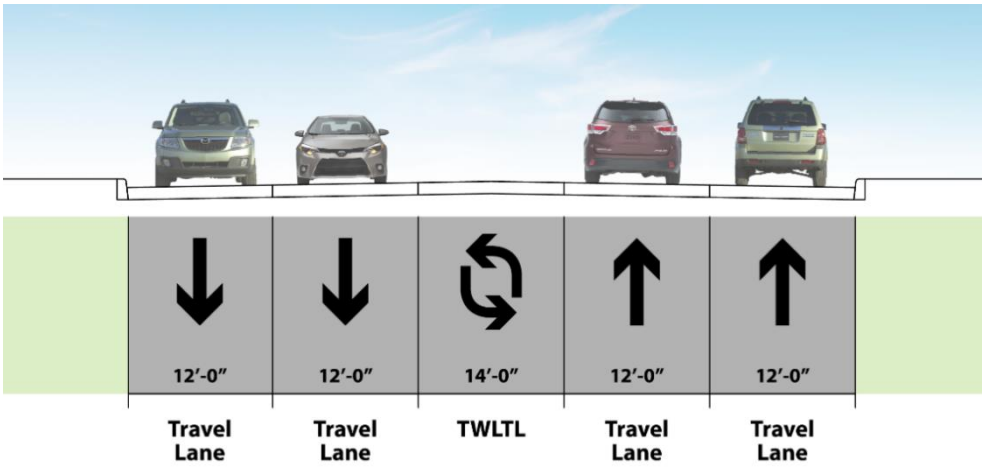
Figure 6: U.S. 41 – Greenwood Street to Turner Street



Turner Street to Wheeler Avenue

In this segment, U.S. 41 is a four-lane facility with an urban cross section and a posted speed limit of 40 mph. Four 12-foot travel lanes are provided with a 14-foot center median lane supporting two-way left-turn movements. Sidewalks are not provided at this section of U.S. 41. Right-of-way along U.S. 41 for this section varies between 87 and 98 feet. The typical section for this segment of U.S. 41 is depicted in **Figure 7**.

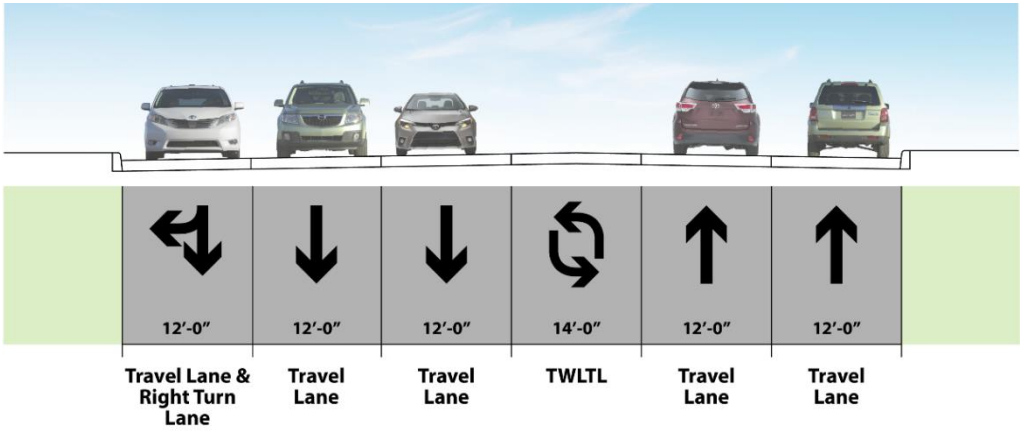
Figure 7: U.S. 41 – Turner Street to Wheeler Avenue



Wheeler Avenue to 115 feet south of Wheeler Avenue

In this segment, U.S. 41 is a five-lane facility with an urban cross section and a posted speed of 40 mph. Five 12-foot travel lanes are provided with a 14-foot center median lane supporting two-way left-turn movements. A continuous southbound right-turn lane is located at this portion of U.S. 41. Sidewalks are not provided at this section of U.S. 41. Right-of-way along U.S. 41 for this section varies between 87 and 98 feet. The typical section for this segment of U.S. 41 is depicted in **Figure 8.**

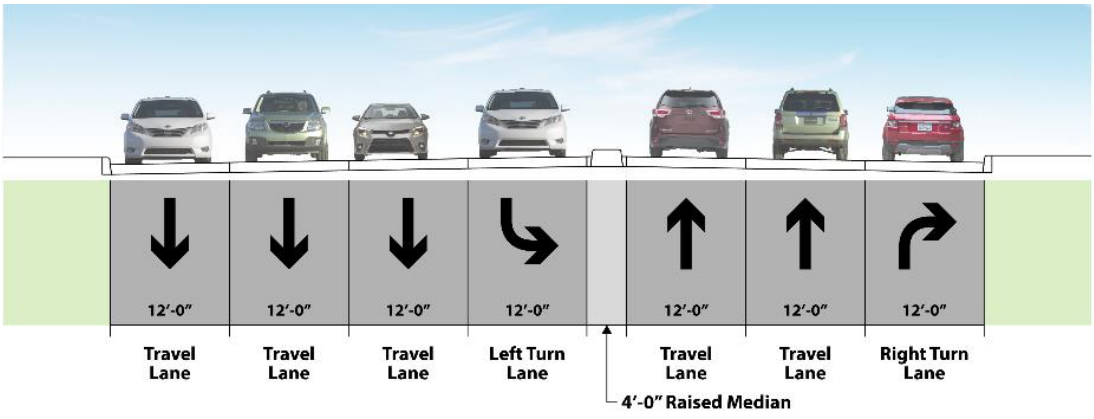
Figure 8: U.S. 41 – Wheeler Avenue to 115 feet south of Wheeler Avenue



115 feet south of Wheeler Avenue to Margaret Avenue

In this segment, U.S. 41 is a five-lane facility with an urban cross section and a raised median and a posted speed limit of 40 mph. Five 12-foot travel lanes are provided for this section of U.S. 41. Two 12-foot turn lanes are provided for right- and left-turn movements. Sidewalks are not provided for this section of U.S. 41. Right-of-way along U.S. 41 for this section varies between 87 and 98 feet. The typical section for this segment of U.S. 41 is depicted in **Figure 9**.

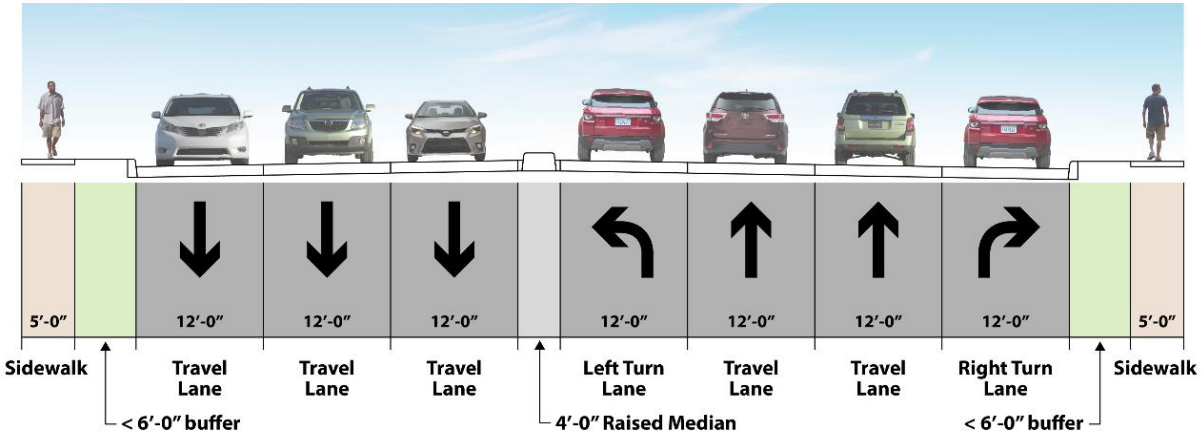
Figure 9: U.S. 41 – 115 feet south of Wheeler Avenue to Margaret Avenue



Margaret Avenue and 335 feet south of Margaret Avenue

In this segment, U.S. 41 is a five-lane facility with a raised median and a posted speed limit of 40 mph. Five 12-foot travel lanes are provided for this portion of U.S. 41. Two 12-foot turn lanes for right- and left-turn movements are provided for northbound travel directions and there are 5-foot sidewalks in both travel directions. A 6-foot landscape buffer is located between the curb and sidewalk. Right-of-way along U.S. 41 for this section varies between 87 and 110 feet. The typical section for this segment of U.S. 41 is depicted in **Figure 10.**

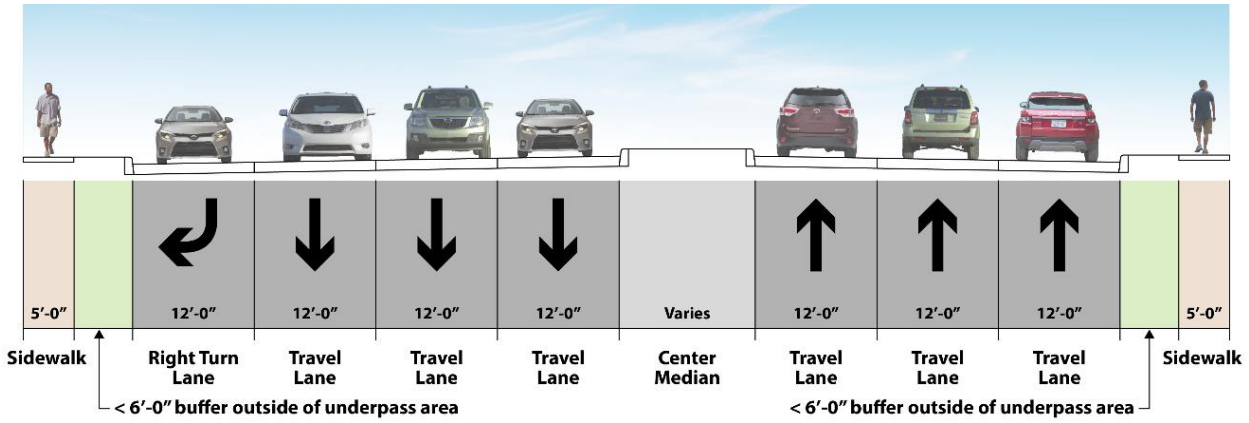
Figure 10: U.S. 41 – Margaret Avenue to 335 feet south of Margaret Avenue



335 feet south of Margaret Avenue to I-70/U.S. 40

In this segment, U.S 41 is a six-lane facility with a center median and a posted speed limit of 40 mph. Six 12-foot travel lanes are provided. A southbound right-turn lane occurs at this section, and there are two 5-foot sidewalks in both travel directions. A 6-foot landscape buffer exists between the curb and sidewalk outside the I-70 underpass location. Right-of-way along U.S. 41 for this section varies between 127 and 130 feet. The typical section for this segment of U.S. 41 is depicted in **Figure 11**.

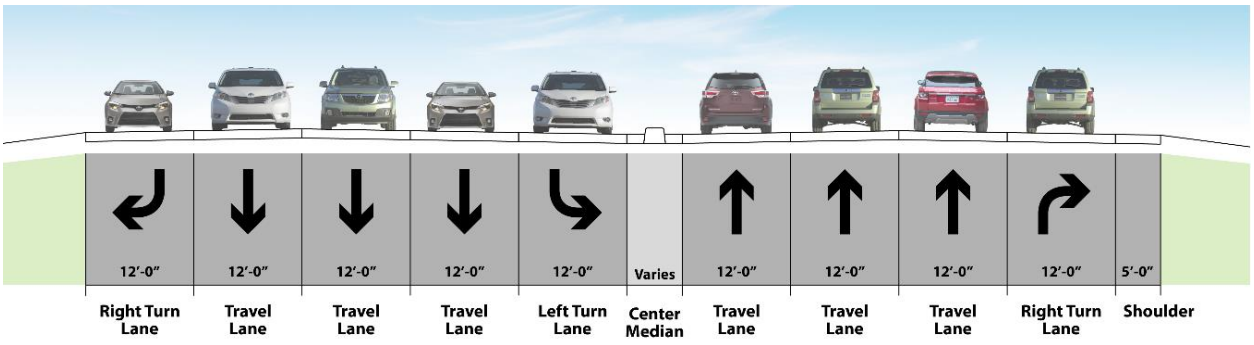
Figure 11: U.S. 41 – 335 feet south of Margaret Avenue to I-70/U.S. 40



I-70 to Dixie Bee Road

In this segment, U.S. 41 is a six-lane rural facility with a raised median and a posted speed limit of 40 mph. Six 12-foot travel lanes are provided for this section of U.S. 41 with a 5-foot outside shoulder. Left-turn lanes are provided at intersections, and right-turn lanes are nearly continuous for this segment. Sidewalks are provided at limited locations for this section of U.S. 41. Right-of-way along U.S. 41 varies between 118 and 130 feet. Typical sections for these segments of U.S. 41 are depicted in **Figure 12.**

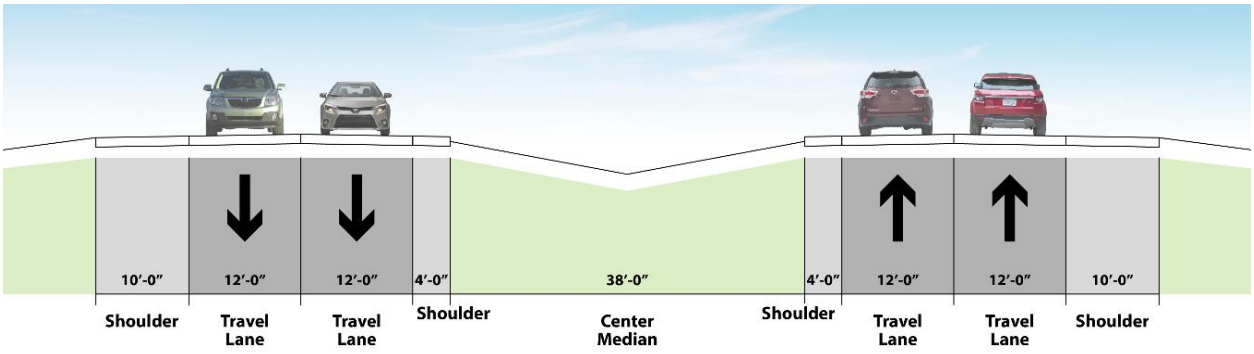
Figure 12: U.S. 41 – I-70 to Dixie Bee Road



Dixie Bee Road to Harlan Drive

In this segment, U.S. 41 is a four-lane facility with a rural cross section, and a 50-mph posted speed limit. Four 12-foot lanes, 10-foot outside shoulders and 4-foot inside shoulders are provided in this portion of U.S. 41 with turn lanes provided at intersections. A center grass median is located at this section. Sidewalks are not provided for this section of U.S. 41. Right-of-way along U.S. 41 varies between 99 and 126 feet. Typical sections for these segments of U.S. 41 are depicted in **Figure 13.**

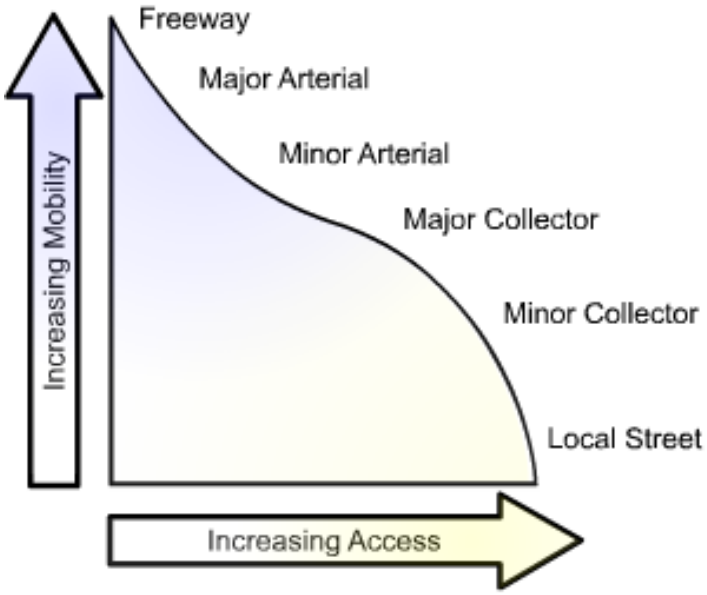
Figure 13: U.S. 41 – Dixie Bee Road to Harlan Drive



2.2 Functional Classification

The functional classification of a roadway defines the level of mobility along the roadway and the amount of access provided to adjacent land uses. 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 14.**

Figure 14: Access and Mobility Based on Functional Roadway Classification



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

Within the study area, U.S. 41 is classified as a 'Principal Arterial – Other' and is part of the National Highway System (NHS). Principal Arterials provide a high level of mobility service, accommodating high travel speeds that support greater long-distance trip connections between major population centers.

Within the study area, U.S. 41 functions within both rural and urban contexts. As a rural arterial, U.S. 41 provides connections between major urban areas and should provide a level of service suitable for statewide travel. As an urban arterial, within the Federal Highway Administration (FHWA) Urban Area Boundary (UAB), the corridor serves major centers of activity inside the urbanized area and the City of Terre Haute.

Crossroad facilities that intersect with U.S. 41 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, high-speed travel with uninterrupted traffic flow. Access is fully controlled and limited to grade-separated interchanges. These roadways are officially designated by the Secretary of Transportation.

Principal Arterial – Other Freeway or Expressway are major roadways intended to provide high mobility over long distances. Access is typically limited to interchanges or a small number of at-grade intersections, depending on the facility type. These roads serve regional and intercity travel and connect major activity centers.

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 connections between communities and linking major land uses. They support moderate-length trips and typically have lower traffic volumes and speeds than principal arterials.

Major Collectors gather traffic from local roads and funnel this traffic onto the arterial network. These roads often have higher speeds and may include signalized intersections. They provide access to residential neighborhoods, schools and small commercial areas.

Minor Collectors are similar to major collectors but serve shorter trips and support lower design speeds. They typically have fewer signalized intersections and more frequent driveway access, making them more suitable for local circulation.

Local Roads are intended primarily for short-distance travel and direct access to adjacent properties. They make up the majority of road mileage and serve residential, commercial and industrial areas.

2.3 Context Classification

2.3.1 INDOT Context Classification

Context classification defines the land use surrounding a roadway to understand who is using the roadway and the needs of these users. This information should then be used to inform design decisions and to improve quality of life.

As of this study, INDOT is in the process of developing context classifications and incorporating these classifications into the design process. **Table 2** summarizes the context classifications INDOT is currently considering.

Table 2: INDOT Context Classification

Classification	Broad Characteristics
Built-Up	Highest density downtown area, central business district and/or courthouse square with medium- to high-rise structures, minimal to no building setbacks and the highest level of bike, pedestrian and transit network access.
Intermediate	Moderate- to high-density built area with a mix of commercial, residential and institutional uses characterized by low- to medium-rise structures, smaller building setback areas (distance from roadway) and greater multimodal access.
Suburban	Low- to medium-density built area with a mix of commercial and residential uses characterized by low-rise structures; typically, with greater building setback areas (distance from roadway) to accommodate off-street parking and landscape buffers; varying levels of multimodal access.
Rural Town	Low to medium density-built area surrounding undeveloped, agricultural or natural areas with limited multimodal access.
Rural	All other areas

2.3.2 Context Zones

Context classification criteria, identified in

Table 2**,** was applied to the U.S. 41 study corridor to identify context zones that will be used in future stages of this study to aid in identifying needs and guiding alternatives development. The context zones are described in **Table 3** and shown graphically in **Figure 15**.

Figure 15: U.S. 41 Context Zone Classification Overview

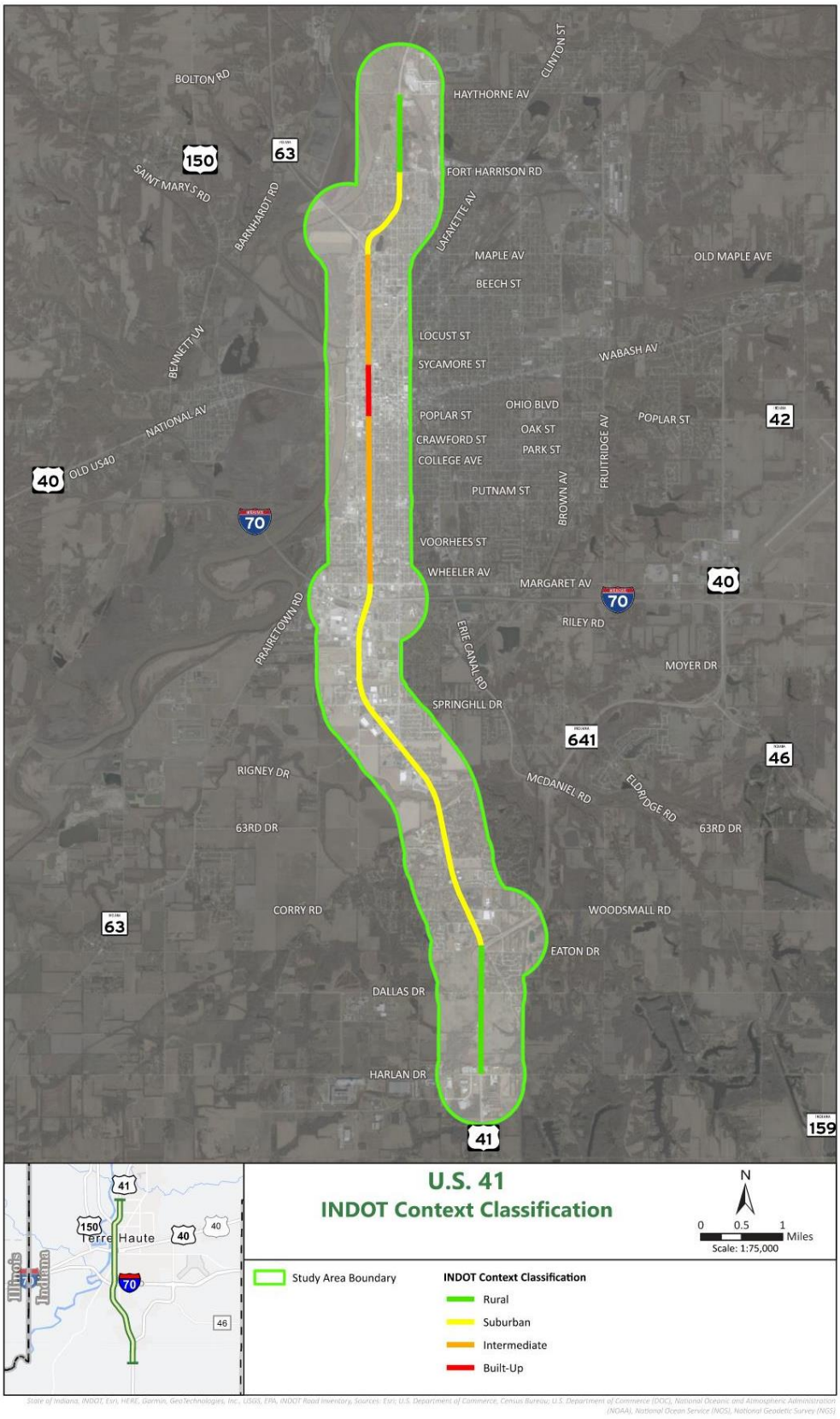


Table 3: U.S. 41 Context Zone Classification

Limits	Context Classification	Rationale
Haythorne Ave. to Fort Harrison Rd.	Rural	Entails natural resource and recreational areas with limited residential neighborhoods and commercial uses next to the corridor.
Fort Harrison Rd. to Maple Ave.	Suburban	Characterized by greater low to medium density neighborhoods surrounding the U.S. 41 corridor.
Maple Ave. to Sycamore St.	Intermediate	Supports a greater mix of residential neighborhood and commercial density. The segment includes the presence of a connected neighborhood street grid facilitating multimodal access east and west of U.S. 41 and south of Fort Harrison Road.
Sycamore St. to Poplar St.	Built-Up	Supports the highest density of use on the U.S. 41 corridor with access to Downtown Terre Haute, notable institutional uses (e.g., Indiana State University, Vigo County Courthouse) and numerous local businesses.
Poplar St. to Margaret Ave.	Intermediate	Supports a mix of commercial and residential uses at moderate densities. The presence of a connected street grid, particularly east of U.S. 41, enables greater multimodal access. The at-grade railroad crossing south of Voorhees presents a physical barrier where the land use pattern shifts.
Margaret Ave. to S.R. 641	Suburban	Characterized by greater low to medium density neighborhoods, strip malls, big box retail outlets, fast food restaurants, industrial parks and gas stations with plentiful off-street parking lots creating greater setback areas between low-rise buildings and the roadway. Land use and access is also shaped by the location of the I-70 interchange with access for statewide mobility.
S.R. 641 to East Harlan Dr.	Rural	Entails agricultural, natural resource and recreational areas with limited residential and commercial uses next to the corridor.

2.4 Level 1 Design Criteria

The FHWA has established 13 design criteria, which are those highway design elements deemed to be most critical for safety and serviceability. INDOT has adopted these criteria and supplemented them with additional elements, collectively referred to as Level One Design Criteria.

The geometry of U.S. 41 was evaluated to identify areas where the existing roadway and existing bridges do not satisfy Level One Design Criteria. This assessment was based on original construction plans as well as subsequent maintenance and reconstruction plans. The geometric

deficiencies identified in the following subsections represent locations where existing geometry is substandard relative to current Level One Design Criteria.

2.4.1 Horizontal Alignment

The radius of each existing horizontal curve, the superelevation rate of the curve and associated design speed of the curve were compared to the posted speed limits to identify deficiencies. Based on this evaluation, none of the horizontal curves listed in **Table 4** were found to be deficient relative to current standards.

Table 4: Existing Horizontal Curves

Location	Approximate Radius (ft.)	Super Elevation Rate (%)	Design Speed (mph)	Posted Speed (mph)	Finding
Florida Ave.	2,513	8%	70	55	Not Deficient
S.R. 63 Interchange	2,594	8.33%	70	55	Not Deficient
Crossing Blvd.	5,557	4%	50	50	Not Deficient
S.R. 641 Interchange	2,989	5%	55	50	Not Deficient

2.4.2 Lane Width and Cross Slope

The travel lanes of U.S. 41 are 12 feet wide throughout the study area. This exceeds the lane width criteria listed in the Indiana Design Manual for new construction of an arterial, which are listed in **Table 5**.

Table 5: Minimum Required Lane Widths

Rural	Suburban	Intermediate	Built-Up
12 ft	12 ft	11 ft (min)	10 ft (min)

Construction documents for the existing facility indicate the cross slope of all travel lanes meets the current design criteria. No field measurements of cross slope were collected to verify the in-field conditions match the construction documents.

2.4.3 Maximum Grades

Criteria for new construction listed in the IDM allows for maximum grades of up to 4% for rural arterials and maximum grades between 5.5% and 8% for urban areas, dependent on design

speed. A grade steeper than the maximum may be used only where necessary; a design exception must be obtained. No grade issues were found in the study area.

2.4.4 Stopping Sight Distance

Stopping sight distance is the length of roadway ahead that is visible to a driver. The available sight distance should be sufficiently long enough to allow a vehicle traveling at or near design speed to stop before reaching a stationary object. Vertical curves, which include crest and sag, impact sight distance and may restrict a motorist's line of sight. The U.S. 41 bridge over CSX Rail provides sufficient sight distance for both directions of travel.

2.4.5 Shoulder Width

Shoulder width requirements for primary arterials vary based on corridor context and are depicted in **Table 6**. Wider shoulders are not necessarily an indication of a superior facility, as narrow shoulders may be implemented for various reasons, including but not limited to speed management. No substandard shoulder widths occur within the study area.

Table 6: Minimum Shoulder Widths

	Suburban	Intermediate	Built-Up
Right shoulder	10 ft width (min. 1 ft)	8 ft width (min. 1 ft)	6 ft width (min. 1 ft)
Left shoulder	3 ft width (min. 1 ft)	3 ft width (min. 1 ft)	3 ft width (min. 1 ft)

2.4.6 Vertical Clearances

The bridges over US 41 were also assessed to determine if each meets or exceeds the 14-foot minimum vertical clearance requirement for existing bridges. This assessment was conducted using INDOT's Bridge Clearance GIS Tool and included the SR 641 bridges over US 41, the I-70 bridges over US 41, and the SR 63 bridges over US 41. Each of these bridges provides more than 14 feet of vertical clearance over US 41 and therefore all meet this criterion. The bridge carrying U.S. 41 over CSX Rail requires 23 feet of vertical clearance over the railroad. This bridge provides adequate vertical clearance above the CSX railroad.

There are four vertical curves on this portion of the corridor: Two sags and two crests. The two sag curves have respective grades of -0.09%, 1.07% and 1.07% and 4.41%. These curves are on southbound U.S. 41 approaching Hulman Drive. Both curves satisfy the grade change criteria (K-value). The two crest curves are the approaches to the bridge over the CSX Railroad tracks north of Sycamore Street. Each curve has a respective grade of 4.41%, -0.27% and 5%, -6%. Both curves meet design criteria.

2.4.7 Bridge Clear Roadway Width

Five bridges carry U.S. 41 over waterways or railroads. Resource areas were found to have sufficient clear roadway width. Details are provided in **Table 7**.

Table 7: Bridge Clear Width

Bridge	Clear Roadway Width
U.S. 41 over CSX and Spruce St.	Full curb to curb width
U.S. 41 over Dry Honey Creek	Full approach width
U.S. 41 over Honey Creek	Full approach width
U.S. 41 over Lost Creek	Full approach width
U.S. 41 over Thompson Ditch	Full approach width

2.4.8 Bridge Structural Capacity

The structural capacity of bridges was assessed by comparing the criteria used in the original design of the bridge to the current criteria. The bridges over Thompson Ditch and Lost Creek may not meet current design loading criteria as is. Future maintenance activities such as bridge deck overlays may exceed the structural capacity of the bridges. A detailed analysis of these bridges should be performed with any future maintenance activities.

2.4.9 Bridge Rail Test Level

Current design criteria require that all major arterial roads have a type TL-3 barrier on all bridges. None of the existing bridges in the study area provide this type of barrier.

2.4.10 Accessibility Criteria for Physically Challenged Individuals

All facilities within the right-of-way should meet current ADA standards for accessibility. Sidewalks and transition curb ramps are present from S.R. 63 to Hulman Drive for urban segments of U.S. 41 with a sidewalk cross-width of 5 feet. No sidewalk infrastructure exists for roadway segments of U.S. 41 north of S.R. 63 and south of East Davis Road. Approximately 158 curb ramp locations were inventoried providing accommodation to pedestrians and vulnerable road users utilizing the U.S. 41 corridor.

Audible pedestrian push buttons are provided at all signalized intersections where crosswalks are provided. The functionality of these push buttons was not assessed by this study. In some study locations, sidewalks are obstructed by utilities, resulting in insufficient sidewalk width for all

users. U.S. 41 and Farrington Street (**Figure 16**) provides an example of one location where sidewalk width is obstructed.

Figure 16: U.S. 41 and Farrington Street – Fire Hydrant Blocking Access



2.5 Railroad Crossings

There are five railroad crossings within the study area, three of which are at-grade crossings. Information on each of these crossings was obtained from the Federal Rail Administration (FRA) and is summarized in **Table 8**. **Appendix B** depicts the railroad crossing locations referenced in this table.

The number of recorded crashes at each of these crossings is low, providing no indication of a safety concern. No crash records are available for the crossing south of Voorhees Street, where the frequency of crossings is the highest among the at-grade crossings in the study area.

Table 8: U.S. 41 – Railroad Crossing Information per FRA

Crossing ID	Location	Owner	Crossing Type	Crossing Equipment	Daily Trains (Day / Night / Switching)	Maximum Train Speed (mph)	Recorded Crashes*
372894R	North of Haythorne Ave.	Indiana Railroad	Grade separated	N/A	1 / 0 / 0	25	0
540230R	South of Locust St.	CSXT	Grade separated	N/A	10 / 16 / 5	25	0
542310R	South of Voorhees St.	CSXT	At-grade	Overhead lights	9 / 11 / 8	10	No Data Available
373605R	North of Helen Ave.	Indiana Railroad	At-grade	Overhead lights Gates	0 / 0 / 1	10	1
342296V	North of Harlan Dr.	CSXT	At-grade	Overhead lights	0 / 0 / 2	10	3

Crash records obtained from the FRA Rail Network Website (https://experience.arcgis.com/experience/b6c12fd0a4774f38a303e3d034775854/#data_s=id%3AdataSource_1-195ba26502a-layer-5%3A60285)

Crossing 542310R provides a rail connection to a nearby grain elevator. Per conversations with grain elevator representatives, this grain elevator receives up to 20 trains per year with each train having an estimated length of 90-112 cars and an unquantified number of trains with lengths of 30 cars. There is no schedule for these trains. Based on the speed and length of cars, a typical train event is expected to cause several minutes of delay for motorists on US 41.

Crossing 373605R provides a connection to an abandoned industrial site that ceased operations in 2014 based on aerial imagery. For this reason, the number of train events projected by the FRA are believed to be exaggerated but could not be verified.

Crossing 342296V serves multiple industrial and agricultural sites located along Harlan Drive and an agricultural facility located on Litesse Drive. Despite outreach to representatives of these sites, the frequency, length and schedule of trains associated with these sites has not yet been determined.

2.6 Bridges

INDOT expects to construct overlays on seven of the eight bridges before the horizon year of this study. The locations of these structures and approximate time frame for this work are depicted in **Table 9**. The bridge that carries U.S. 41 over Thompson Ditch is expected to be replaced in the 2055-2060 timeframe.

Table 9: U.S. 41 –Forecasted Bridge Work

NBI No.	Asset Type	Location	Forecasted Year for Major Work	Scope of Work for Asset
015000	Bridge	Lost Creek	2026	Bridge Replacement
014975	Bridge	Tippecanoe St./ CSX RR	2030	Bridge Replacement
014970	Bridge	Thompsons Ditch	2030	Bridge Replacement
014950	Bridge	Honey Creek Overflow	2030	Bridge Replacement
014960	Bridge	Honey Creek Overflow	2030	Bridge Replacement
014940	Bridge	Honey Creek	2030	Bridge Replacement
014930	Bridge	Honey Creek	2030	Bridge Replacement

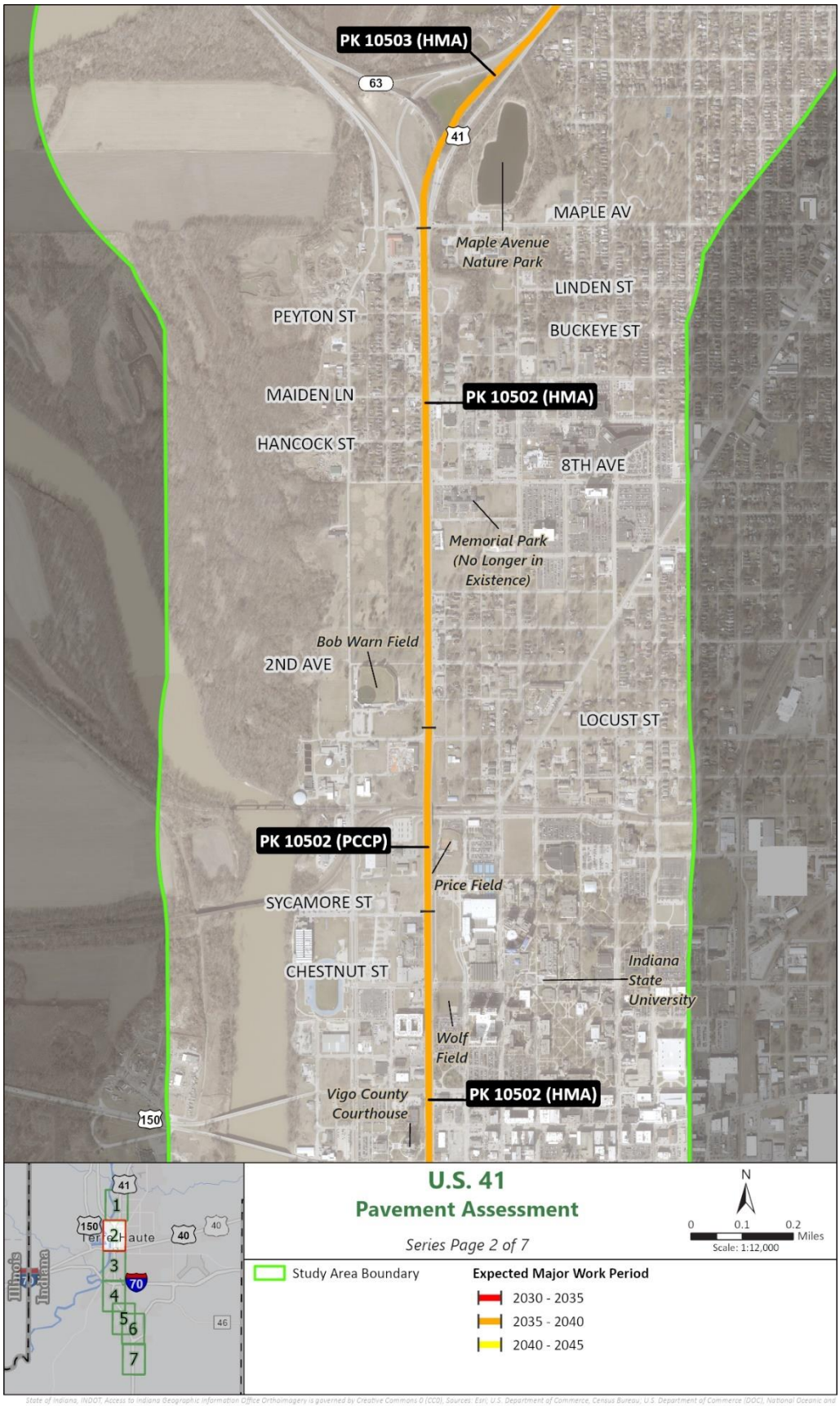
2.7 Pavement Conditions

INDOT defines pavement keys as segments of roadway where pavement types and rehabilitation schedules are consistent. The U.S. 41 study corridor is divided into five pavement keys, as depicted in **Figure 17**. Hot Mix Asphalt (HMA) pavement is the prevailing pavement type, with Portland Cement Concrete (PCC) pavement being used in only a 0.4-mile segment near Locust Street.

Asset data for each pavement key was obtained from INDOT and used to estimate a time frame for the next major pavement rehabilitation or pavement replacement project. These time frames are also depicted in **Figure 17**. Additional details on pavement conditions are provided in **Appendix C.**

Figure 17: U.S. 41 Forecasted Pavement Work





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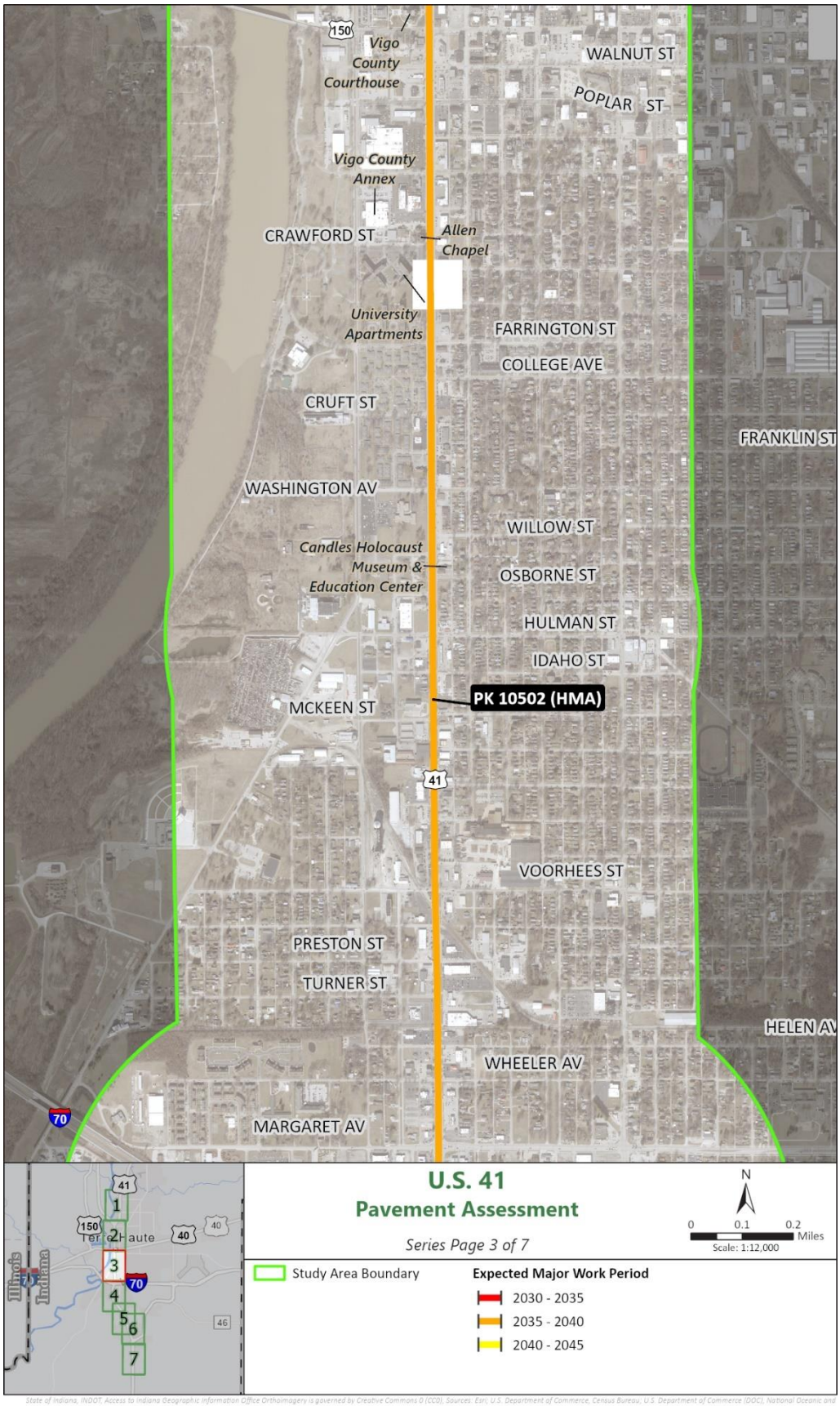

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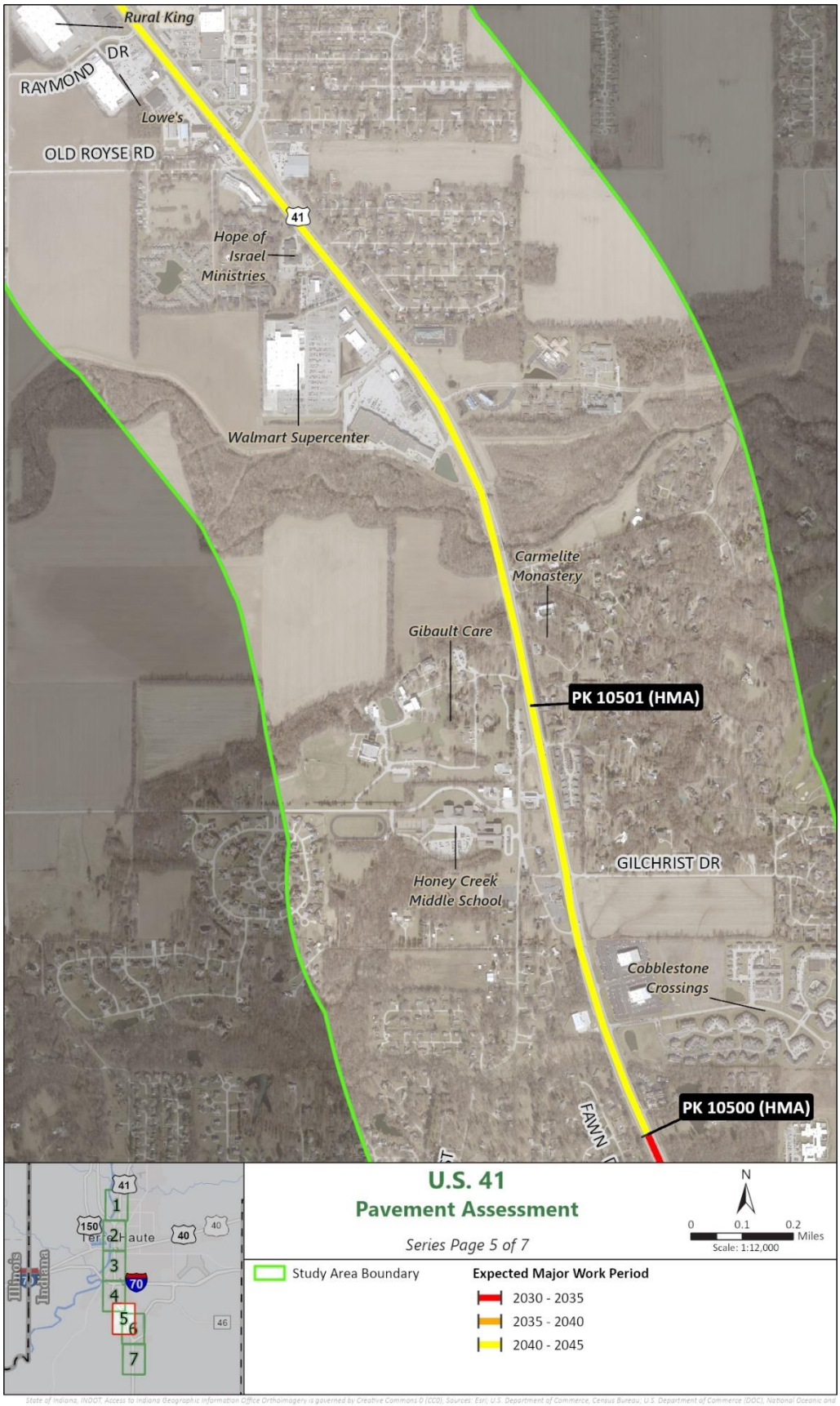

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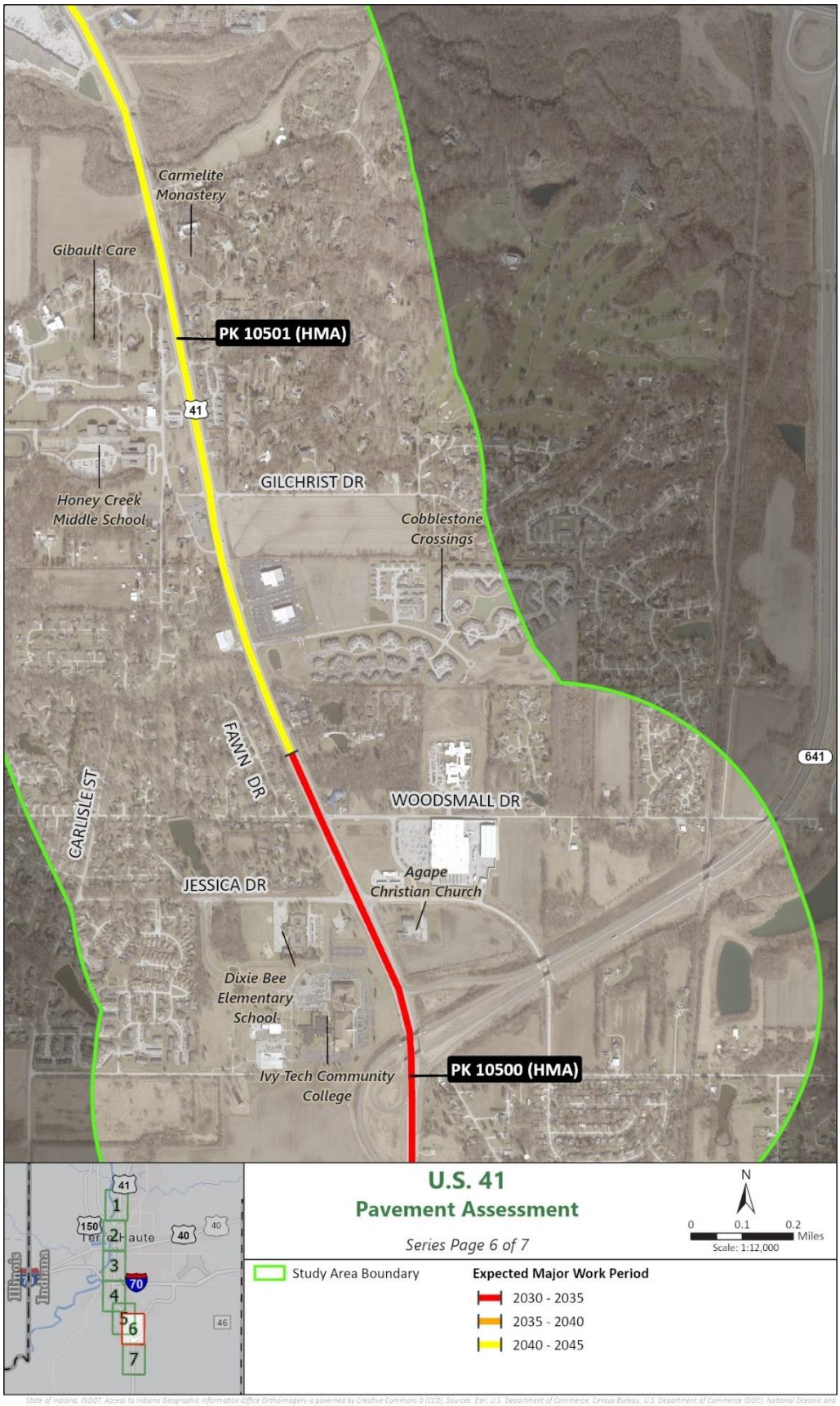

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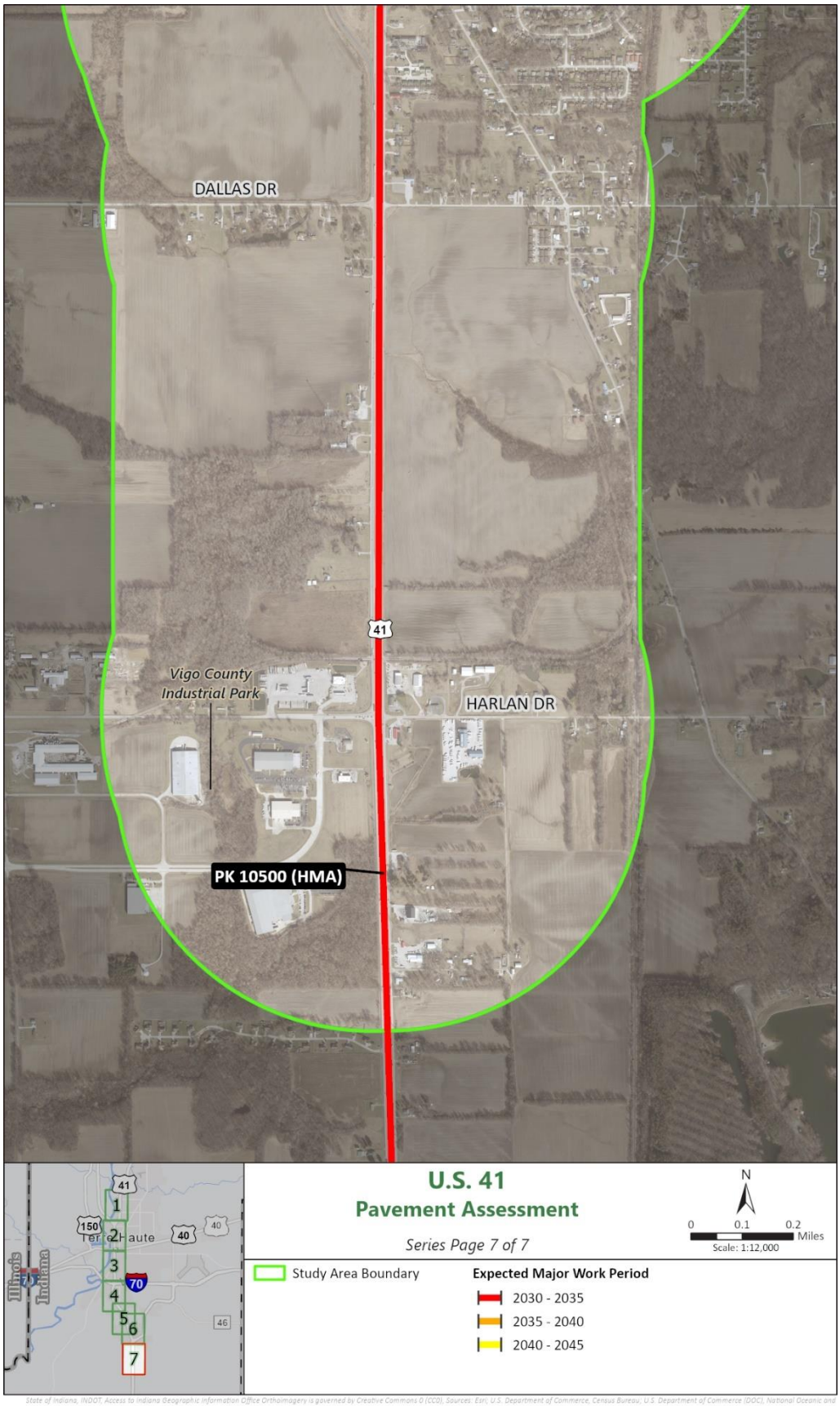

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2.8 Major Utilities

Major utilities such as pipelines and electric transmission lines crossing U.S. 41 are identified in **Table 10**. Alternatives developed in later stages of this study will seek to minimize impacts to said utilities. Impacts to other utilities (i.e., electric distribution lines, water, sewer, etc.) will be avoided when possible.

Table 10: U.S. 41 – Major Utility Crossing Locations

Utility Type	Category	U.S. 41 Crossing (approximate)
Pipeline	Natural Gas	North of Fort Harrison Rd.
Pipeline	Oil Gas	South of Fort Harrison Rd.
Pipeline	Oil Gas	North of Florida Ave.
Pipeline	Oil Gas	8th Ave.
Pipeline	Oil Gas	Grant St.
Pipeline	Natural Gas	North of Gilchrist Dr.
Pipeline	Oil Gas	641 to Gilchrist Dr.
Electric	Electric Transmission Line	Old Royse Rd.
Pipeline	Oil Gas	56th Dr.
Pipeline	Oil Gas	Honey Creek

Appendix D provides location details for the major utilities investigated.

2.9 Pedestrian, Bicycle and Transit Facilities

The presence of pedestrian, bicycle and transit infrastructure within the study area was reviewed and documented to establish baseline conditions for multimodal corridor use. This assessment considered safety, access and connectivity for all transportation users.

2.9.1 Sidewalks, Curb Ramps and Multimodal Access

Sidewalk infrastructure consists of the walkway and any curb ramps or blended transitions designed as part of the street infrastructure to facilitate pedestrian movement. Within the study area, sidewalks and curb ramps are present from S.R. 63 to Hulman Drive for urban segments of U.S. 41 (most notably where U.S. 41 becomes 3rd Street locally) on both sides of the road.

Sidewalks are also present on the east side only and at noncontiguous locations from Margaret Avenue to East Davis Drive. In total, 4.2 centerline miles of sidewalk are provided in the study area, as shown in **Table 11.**

Table 11: U.S. 41 Pedestrian Facility Coverage by Context Zone

Segment	Context	Centerline Miles	Centerline Miles of Sidewalk	Sidewalk Coverage
Haythorne Ave. to Fort Harrison Rd.	Rural	1.0	0.0	0%
Fort Harrison Rd. to Maple Ave.	Suburban	1.1	0.0	0%
Maple Ave. to Sycamore St.	Intermediate	1.4	1.4	100%
Sycamore St. to Poplar St.	Built-Up	0.6	0.6	100%
Poplar St. to Margaret Ave.	Intermediate	2.0	1.8	90%
Margaret Ave. to S.R. 641	Suburban	4.9	0.4	8%
S.R. 641 to East Harlan Dr.	Rural	1.5	0.0	0%
Totals		**12.5**	**4.2**	**34%**

Appendix E depicts sidewalk and curb ramps along with additional Vulnerable Road User ("VRU") infrastructure, including transit stop boarding locations and shared trail corridor-adjacent locations. No sidewalk infrastructure exists for segments of U.S. 41 north of S.R. 63 and south of East Davis Drive. Approximately 158 curb ramp locations were inventoried providing accommodation to pedestrians and VRUs utilizing the U.S. 41 corridor.

2.9.2 Bicycle Facilities and Trails

Bicycle facilities and trails that accommodate nonmotorized mobility were reviewed inside the study area. This review included both dedicated bicycle facilities and shared-use trails to document existing conditions for bicyclists.

2.9.2.1 Bicycle Facilities

No shared or protected bicycle facilities exist within the U.S. 41 right-of-way and no bicycle lanes were identified inside the public right-of-way adjacent to the corridor.

2.9.2.2 Paved Paths and Trails

Within 0.5 mile of the study corridor, 12 existing or planned trails were identified. Of the 12 trails identified within 0.5 mile of the study corridor, three are located on or immediately adjacent to the study corridor. These are:

- **4th Street Trail** – A concrete walking trail/sidewalk located one block east of U.S. 41 between the Sycamore Bike Trail and Hulman Drive.

- **Sycamore Bike Trail** – An asphalt multimodal trail that passes under U.S. 41 at Tippecanoe Street.
- **Maple Avenue Nature Park Trail** – Located within Maple Avenue Nature Park, situated in the northeast corner of the U.S. 41 and Maple Avenue intersection.

No bike lanes or shared-use trails are currently provided along U.S. 41 within the study area.

2.9.3 Transit

The Terre Haute Transit Utility provides public transit bus service inside the study limits, with eight service routes providing access adjacent to the study corridor. While no transit stops are located on U.S. 41, there are stops at adjacent land uses within a 0.5-mile radius, as shown in **Figure 18.**

2.9.3.1 Transit Propensity Index

The Transit Propensity Index (TPI) evaluates how zonal socioeconomic characteristics may influence transit demand, considering factors such as race, gender, income and auto ownership. In general, a higher TPI indicates a higher likelihood of using transit for trip making.[1] For the U.S. 41 PEL study, TPI was developed for the U.S. 41 study corridor and Terre Haute urban/suburban area, using the latest census data at block level.

In common planning practice, major transit trip destinations, including job centers and major amenities (e.g., hospitals and colleges), can be overlayed with the zonal TPI as well as the existing transit facilities data to assess the connectivity and accessibility of transit service in the region and identify potential gaps.

Although no transit stops are located directly on U.S. 41, transit stops are heavily concentrated within the urbanized area of Terre Haute, particularly near the U.S. 41 study corridor. The highest density of transit stops aligns closely with areas of high transit propensity, as indicated by the darker blue shaded zones depicted in **Figure 18.**

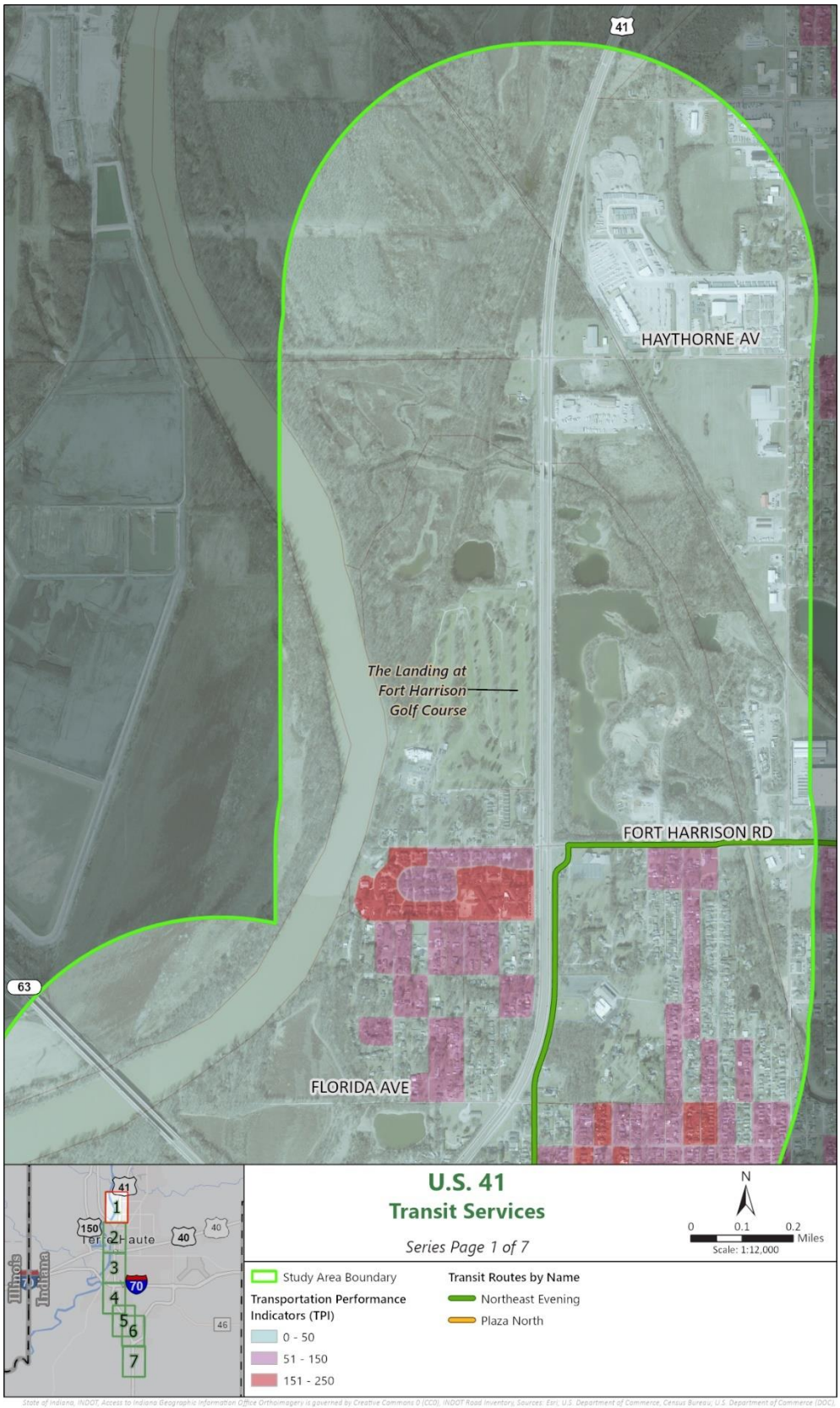
The U.S. 41 corridor runs through areas of moderate to high transit propensity, suggesting that enhancing multimodal connectivity along this corridor could effectively meet the needs of current and potential public transportation riders. Key destinations such as colleges, hospitals and job centers are generally well-served by existing transit facilities along the U.S. 41 corridor, except for an observed gap on the U.S. 41 corridor south of 56th Drive (Walmart Supercenter). Job centers are clustered along and near the U.S. 41 study corridor, particularly in the southern portion near I-70, where transit coverage is strong. However, some outlying job centers on the edges of the

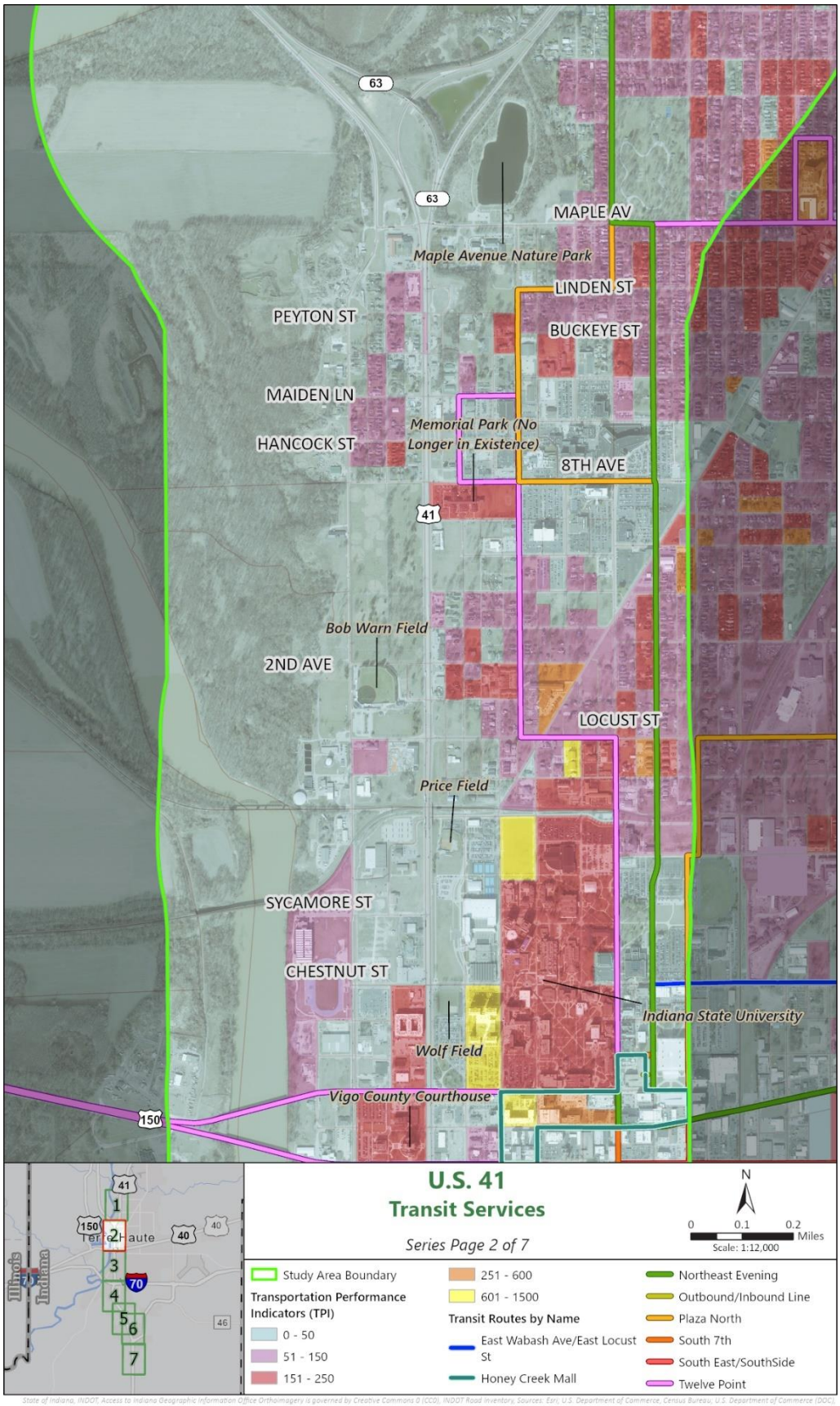
[1] Center for Urban Transportation Research-University of South Florida. CUTR is a key contributor to Transit Propensity Index research producing a commonly used TPI GIS-based data layer. TPI typically analyzes demographic factors (e.g., income, car ownership, age) to determine areas where transit is most likely to be used.

study area fall outside the transit network, indicating opportunities for service expansion or other multimodal solutions.

In an interrogatory with transit agency representatives, it was reported that bus routes are impacted by ISU and Ivy Tech campus demand, which is a significant portion of the ridership influencing transit planning and operations e.g., routes and bus stop locations. The campuses pay Terre Haute Transit for stop locations directly serving the campus. While ridership has increased, funding and driver shortages remain a challenge for future service expansion. Currently there is no long-range transit plan with growth contingent upon campus mobility planning.

Figure 18: U.S. 41 Transit Services





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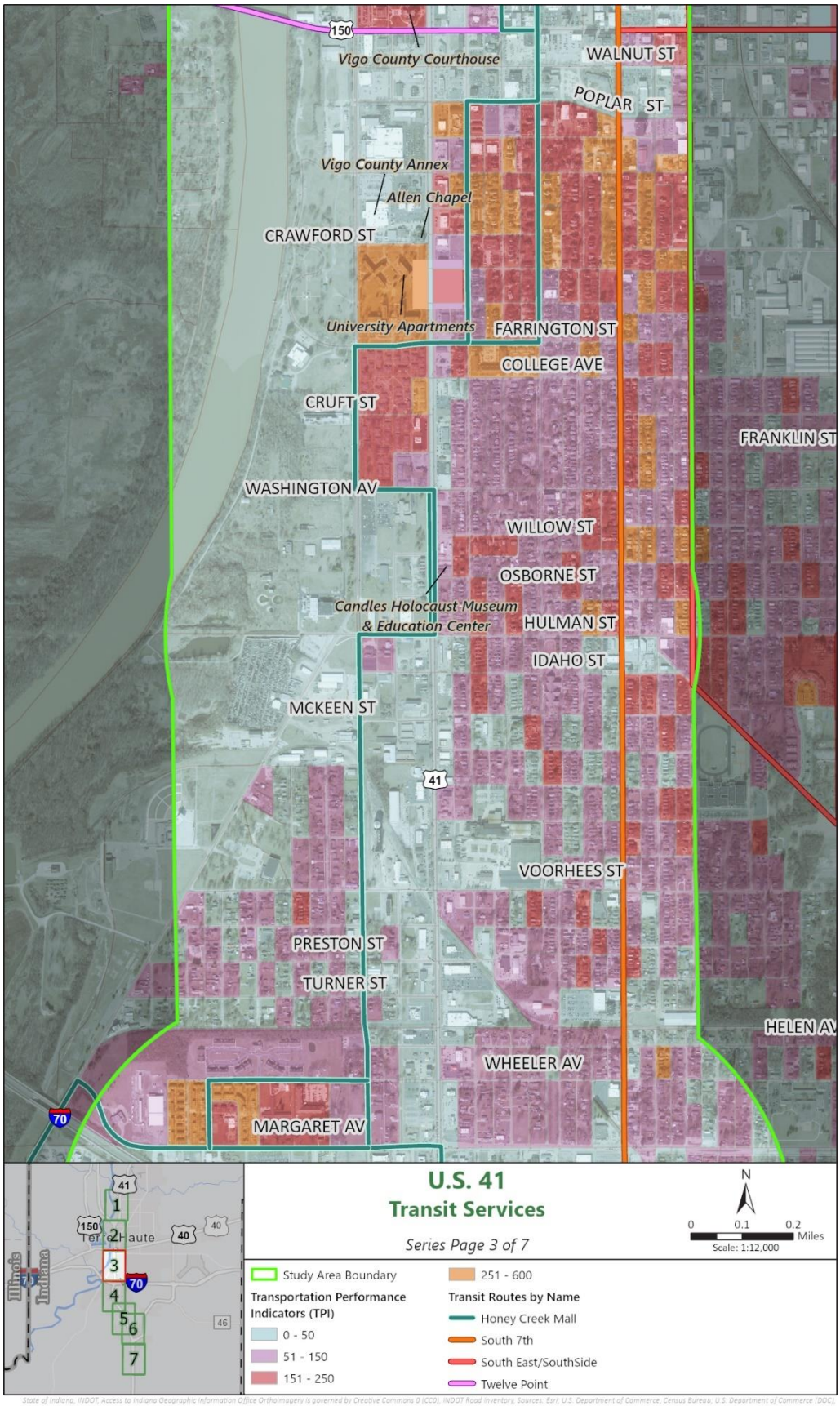

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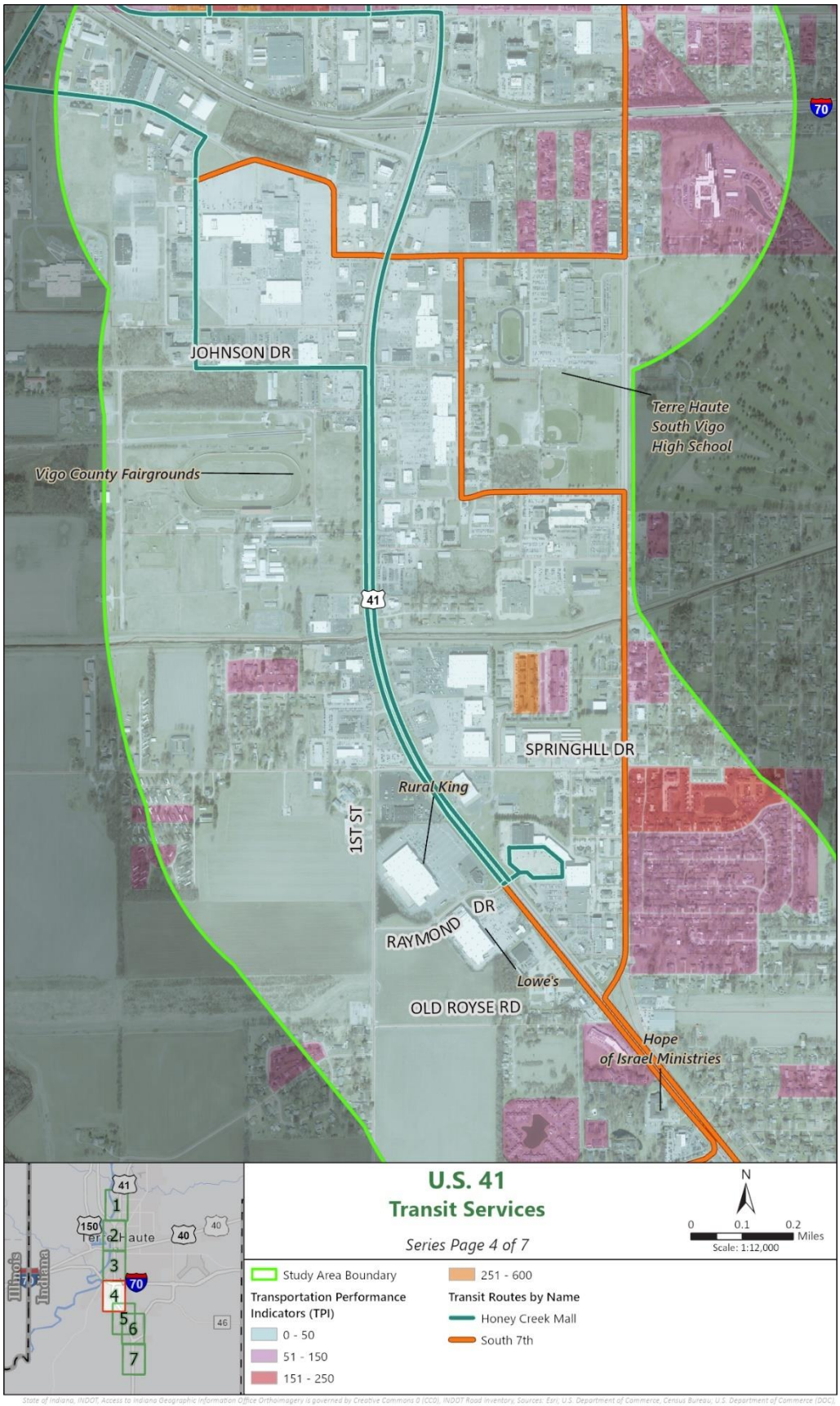

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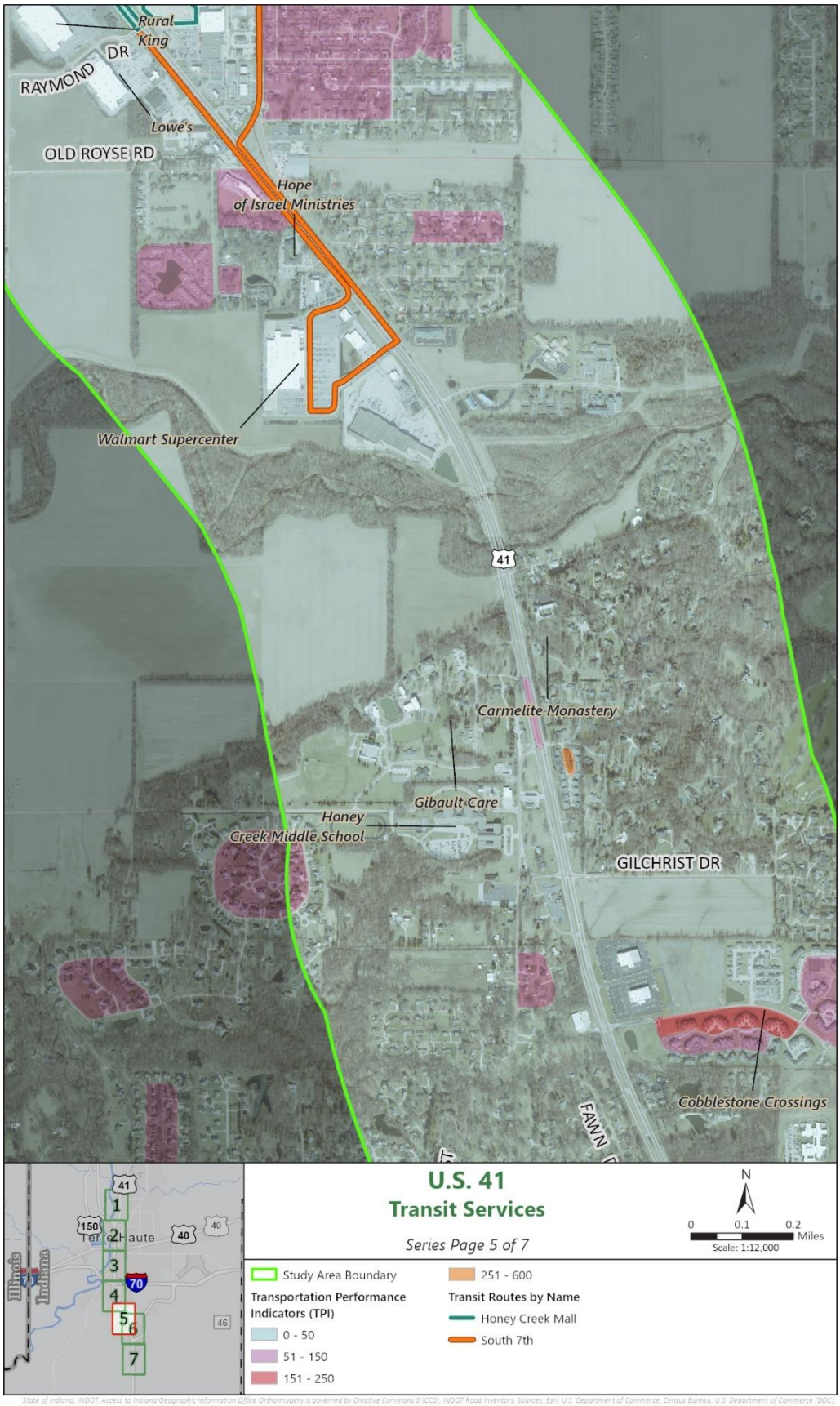

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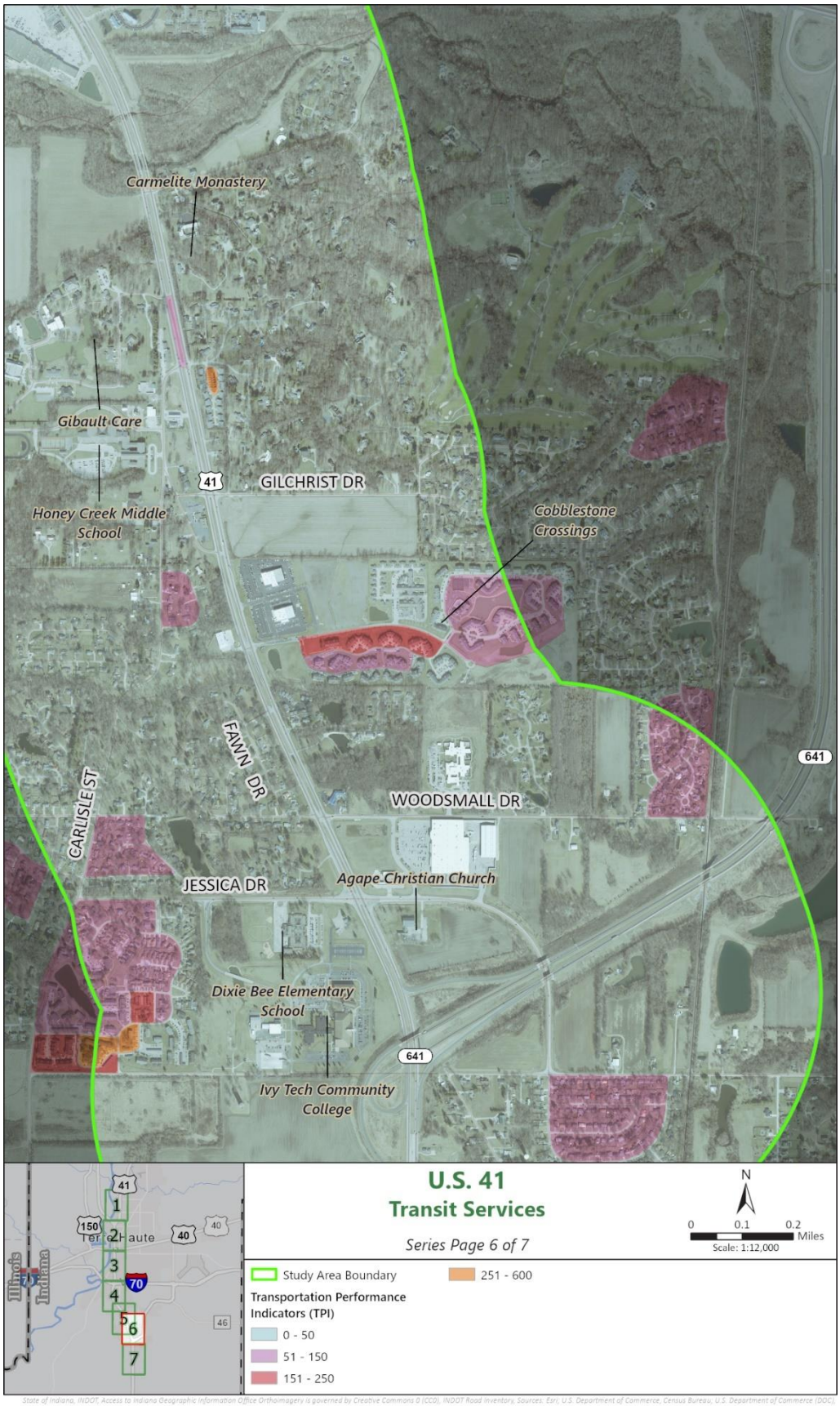

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3 Corridor Access

This chapter reviews INDOT access management guidelines and documents existing access management conditions for U.S. 41. This review includes the identification of median openings and driveways providing access to abutting land uses within the study area as well as a documentation of educational facilities, hospitals and emergency management services that use the U.S. 41 corridor.

3.1 Guidelines and Classification

The U.S. 41 corridor through Vigo County is classified by the INDOT Access Management Guide as a Principal Arterial – Other on the National Highway System (NHS). As a functional classification, Principal Arterials provide connections to major metropolitan areas within the state and to neighboring states and provide accessibility to cities and regions around the state.

U.S. 41 functions as both a rural and urban arterial within the defined study limits. As a rural arterial, U.S. 41 provides connections between major urban areas such as Evansville and Chicago while providing a level of service suitable for statewide travel. As an urban arterial, the corridor serves major centers of activity within urbanized portions of Vigo County.

According to the INDOT Access Management Guide and the INDOT Driveway Permit Manual, the following guidelines apply to a Tier 1: Statewide Mobility Corridor Principal Arterial – Other:

- For signalized intersections: a minimum spacing of 0.5 mile (only at intersections with public streets and major commercial drives).
- For unsignalized intersections: a minimum spacing of
    - 670 feet for a posted speed of 55 mph;
    - 570 feet for a posted speed of 50 mph;
    - 395 feet for a posted speed of 40 mph; and,
    - 185 feet for a posted speed of 30 mph.
- For Driveways
    - A minimum separation of:
        - 495 feet for a posted speed of 55 mph;
        - 425 feet for a posted speed of 50 mph;
        - 305 feet for a posted speed of 40 mph; and,
        - 200 feet for a posted speed of 30 mph.
    - Only major commercial driveways may provide full access to U.S. 41.
    - All other driveways should be restricted to right-in/right-out (RIRO) turning movements.
    - Driveways are not permitted within the functional area of intersection limits of an auxiliary lane plus 100 feet.

- Left-turn access from U.S. 41 is allowed but requires review and approval by INDOT.
- Parcels should have only one driveway unless the parcel frontage exceeds 400 feet in length.
- Median openings may be provided only when all the following conditions are met:
    - The median opening is greater than 400 feet (800 feet is desirable) from an existing median opening.
    - The median opening will improve safety.
    - Sufficient room is maintained for standard turning lanes and recovery tapers.
    - The median opening will function properly.
- A mainline left-turn lane is required at a driveway when one or more of the following conditions exist:
    - On divided highways where median width is equal or greater than 24 feet.
    - Where a new approach is constructed as the fourth leg of a three-legged intersection.
    - Where capacity analysis determines a left turn is necessary to meet level of service (LOS) criteria.
    - Where crash data, existing traffic operations, sight distance and/or engineering judgment indicate a significant conflict related to left-turning vehicles.

Additionally, guidance for the use of two-way left turn lanes is provided in Section 46-5 of the Indiana Design Manual (IDM). This guidance states that TWLTLs should not be used on 6-lane facilities or where the Average Annual Daily Traffic (AADT) volume exceeds 25,000. This indicates TWLTLs should not be used in the portion of US 41 between SR 641 and SR 63.

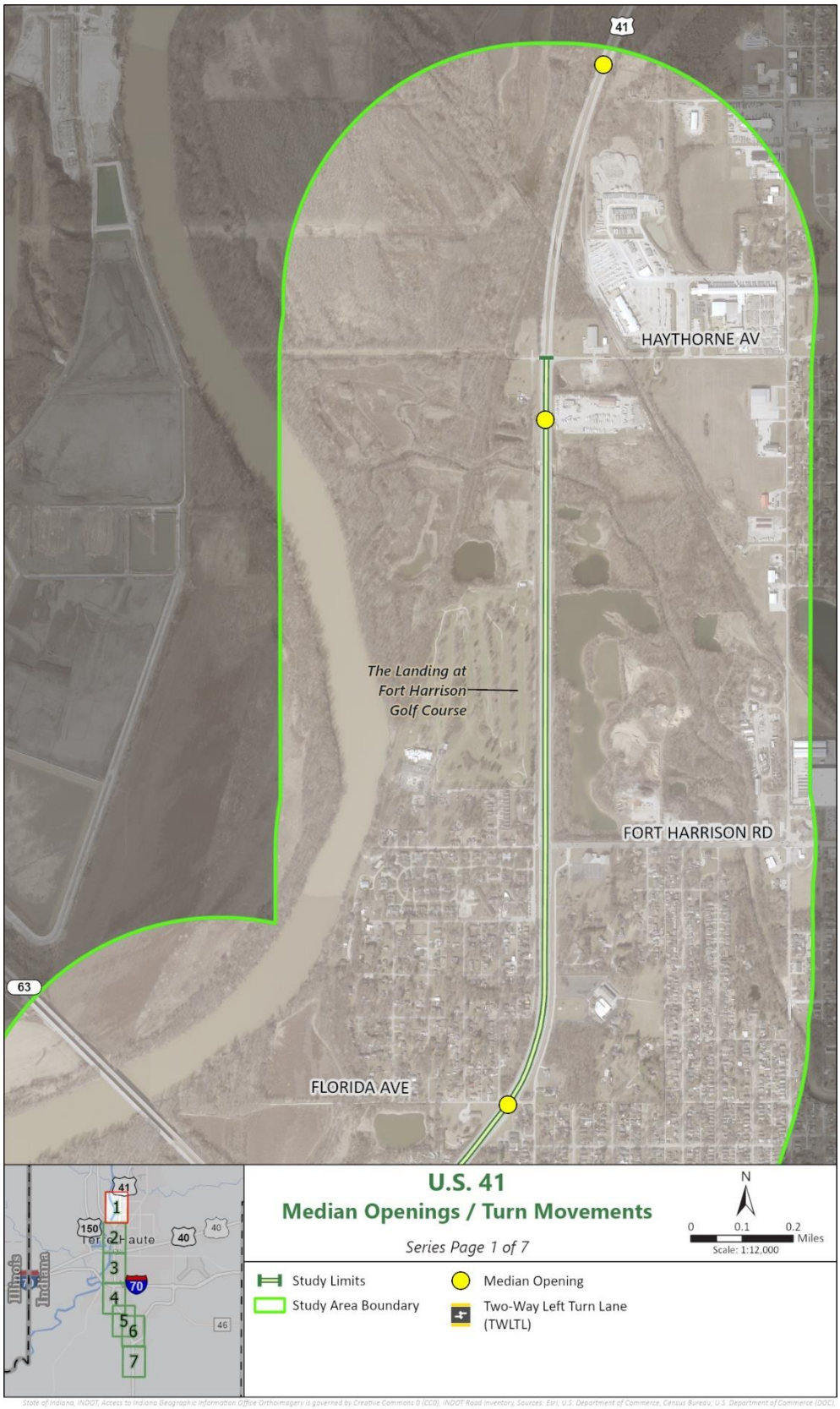
3.2 Corridor Access Review

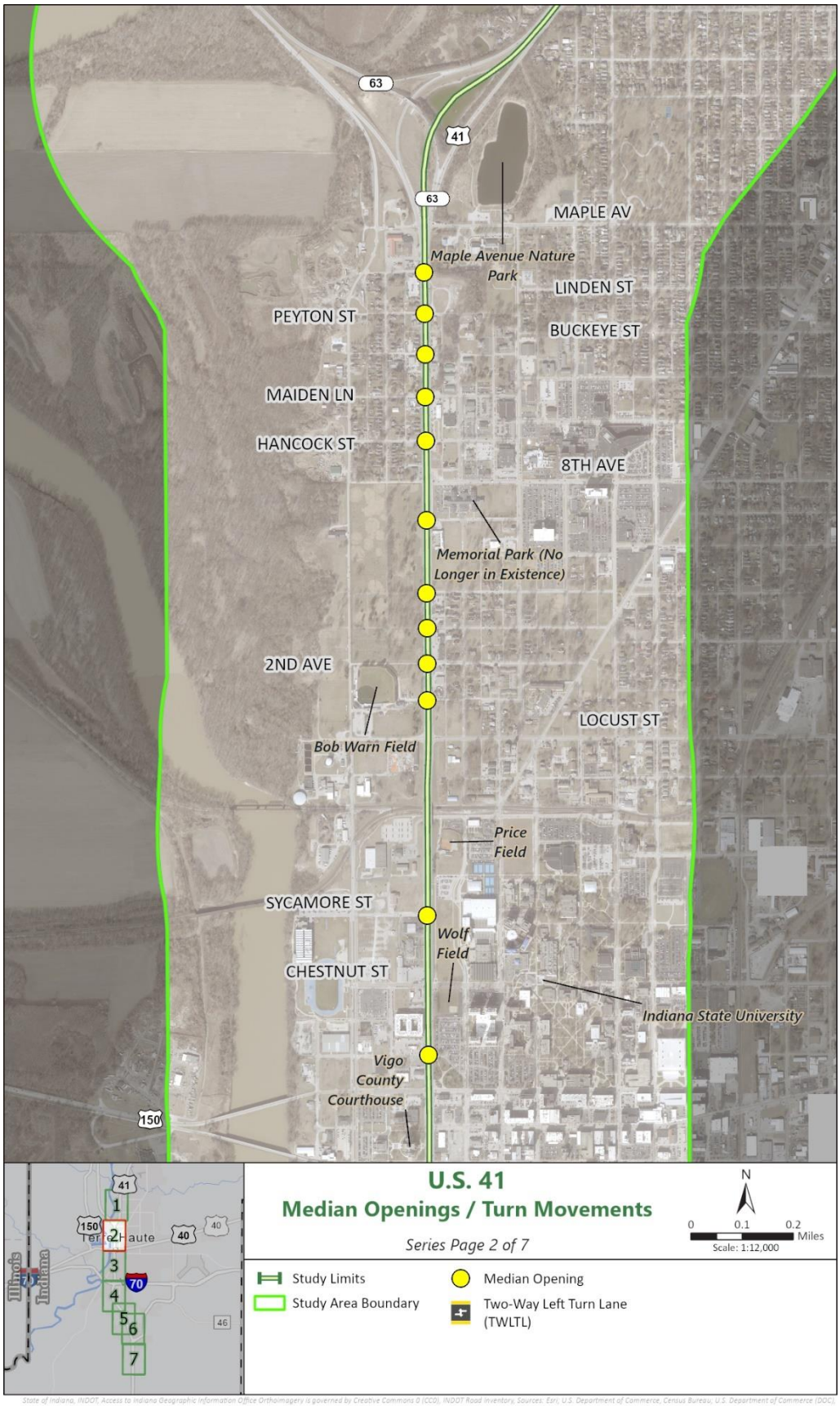
An access review was performed to document center median openings, two-way left-turn lanes (TWLTL) and access driveways as existing conditions within U.S. 41 study area.

3.2.1 Median Openings

The study corridor has 55 median openings at driveways or local streets. 40% of these median openings violate the minimum spacing requirements stated in Section 3.1. Additionally, there are three segments where a TWLTL allows for full access to and from US 41 along the entire length of the segment. Safety concerns involving right angle and left turn crashes have been documented at these three TWLTL segments, which are located between Margaret Ave and Voorhees St. Additional details are provided in **Figure 19.**

Figure 19: U.S. 41 Median Openings





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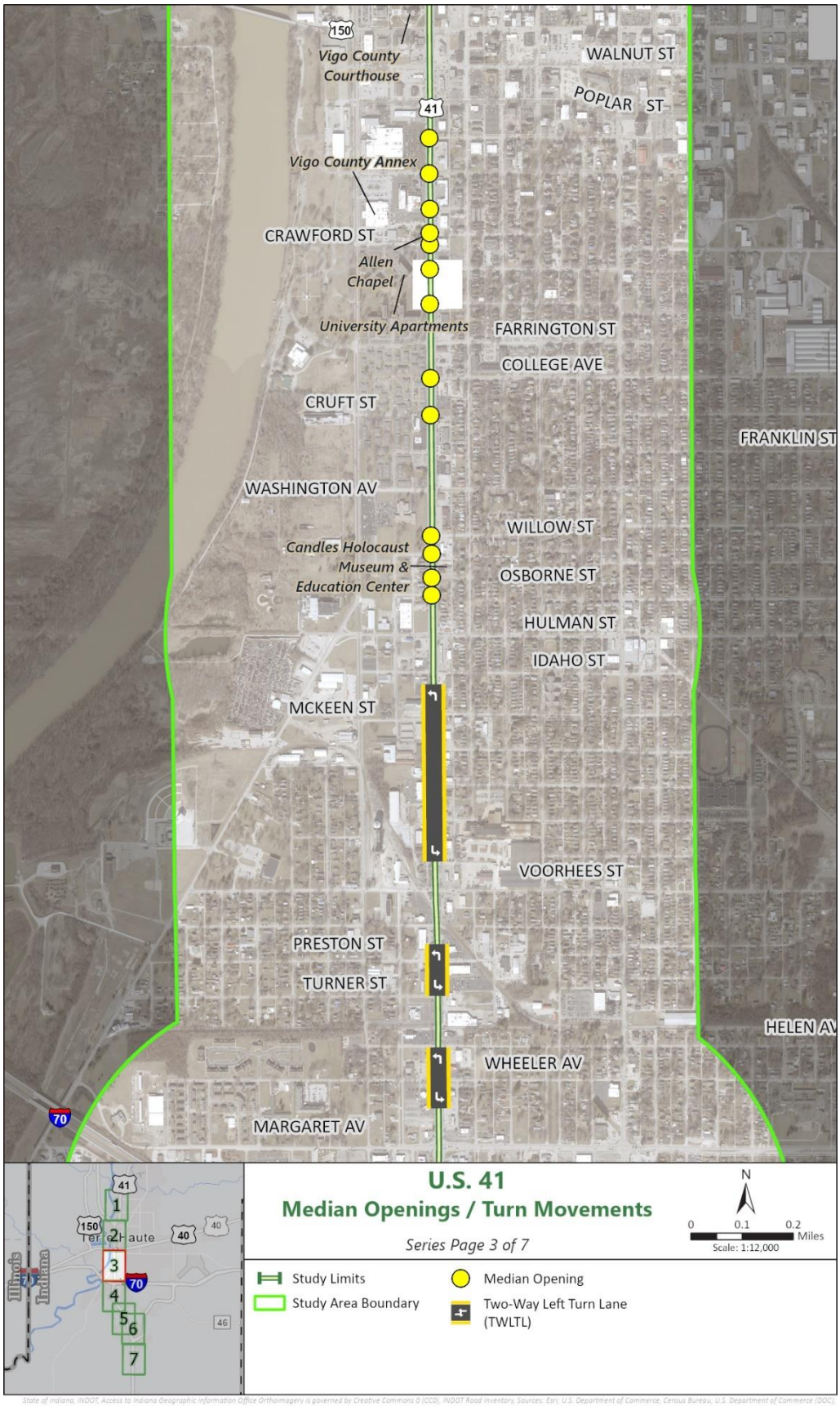

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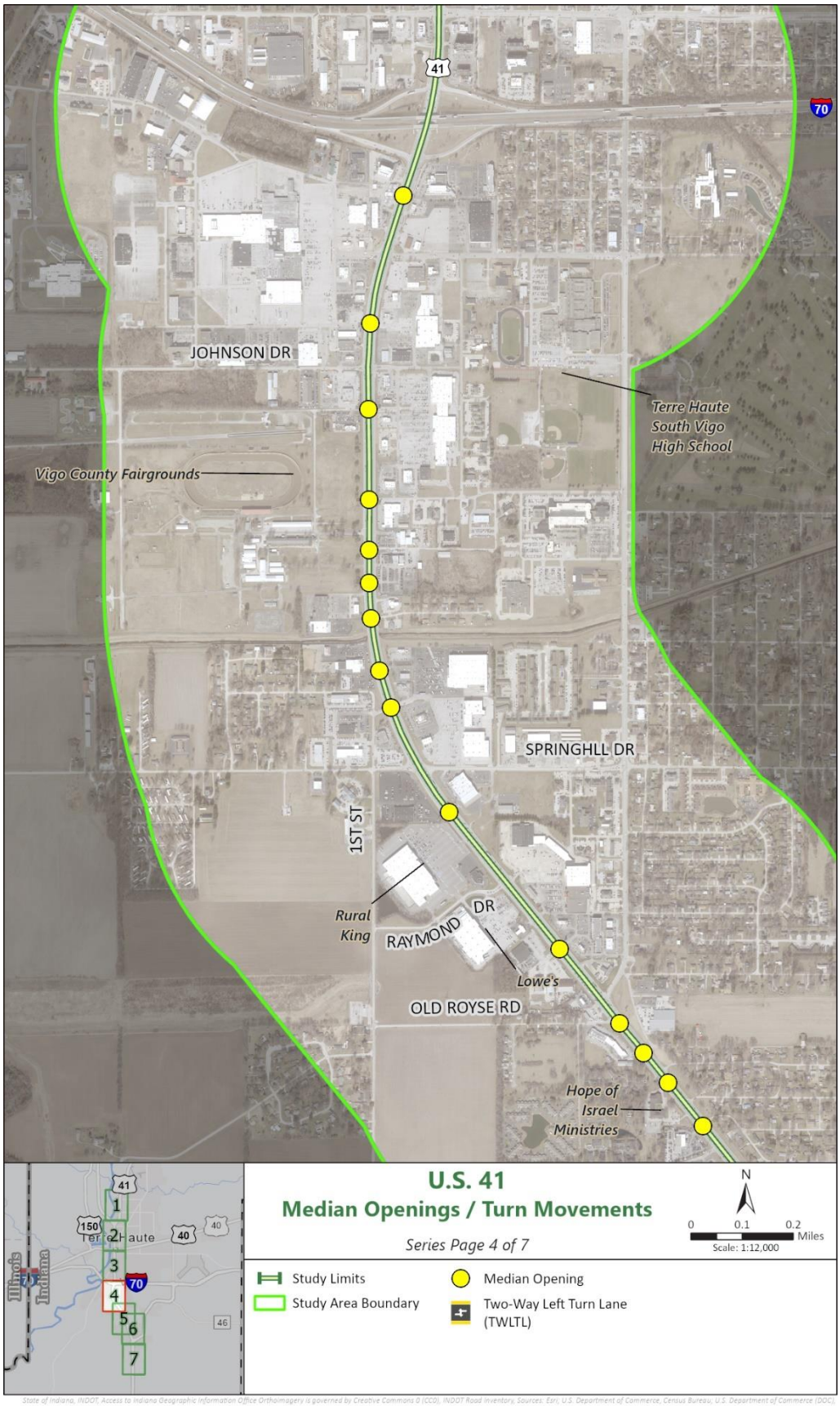

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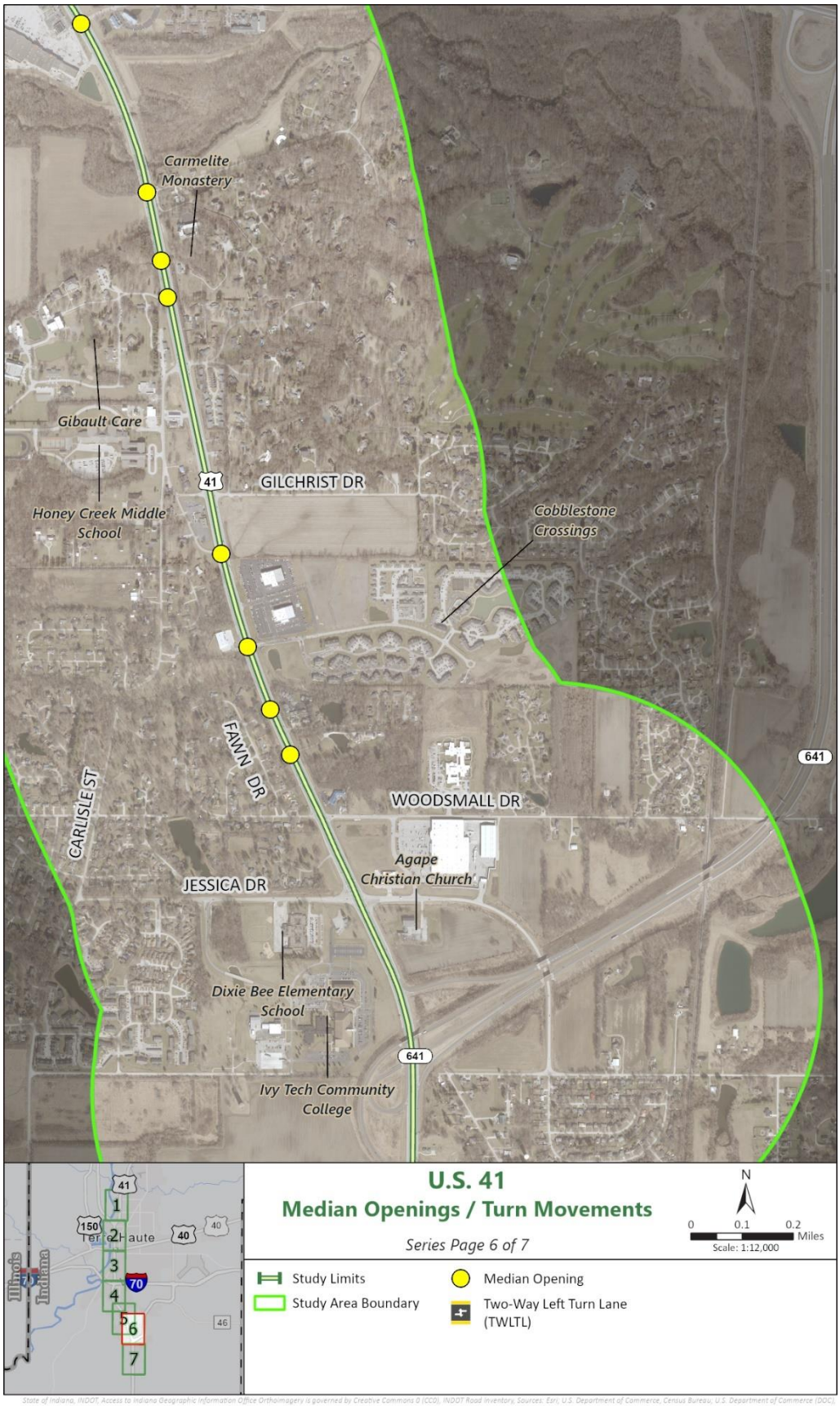

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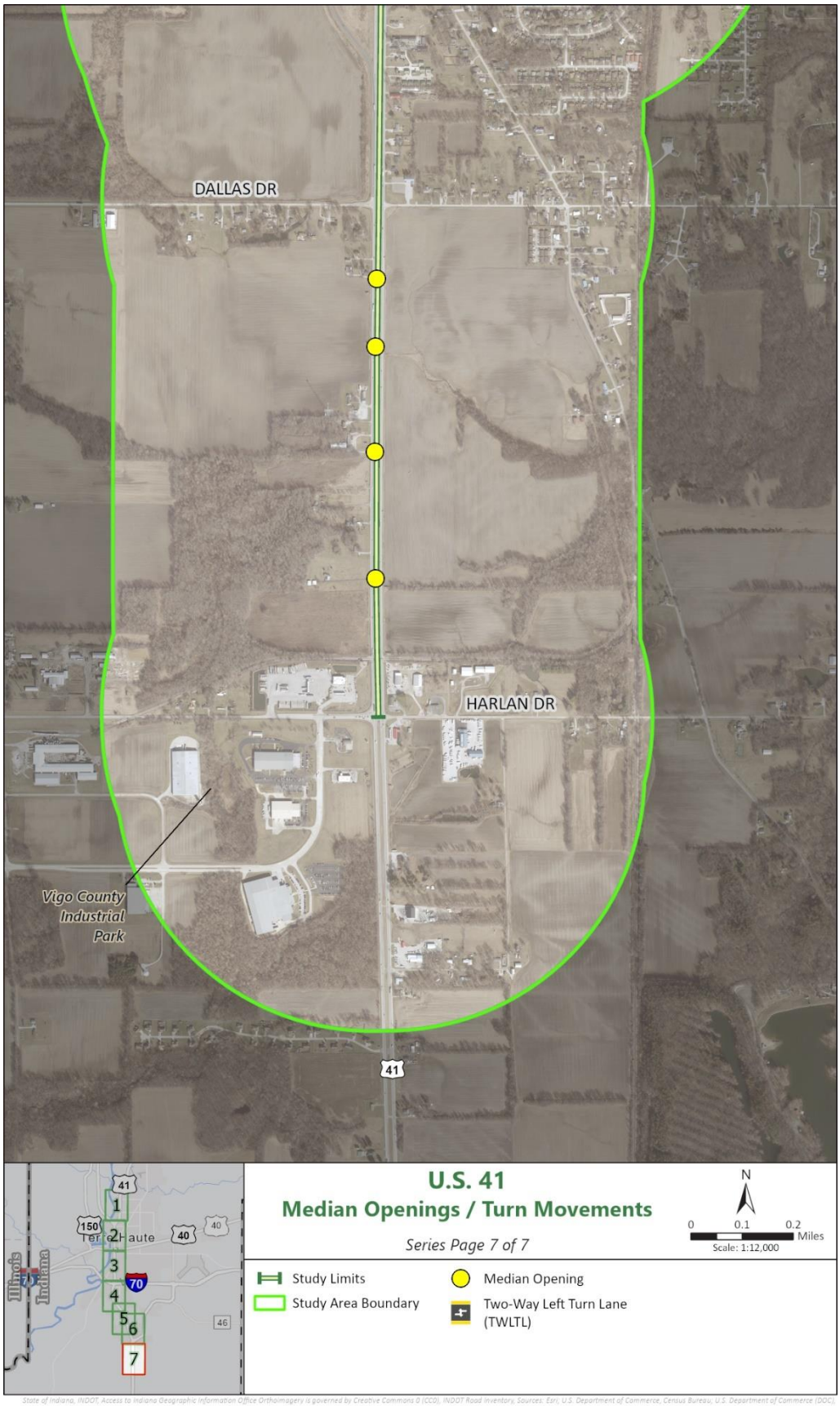

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3.2.2 Driveways

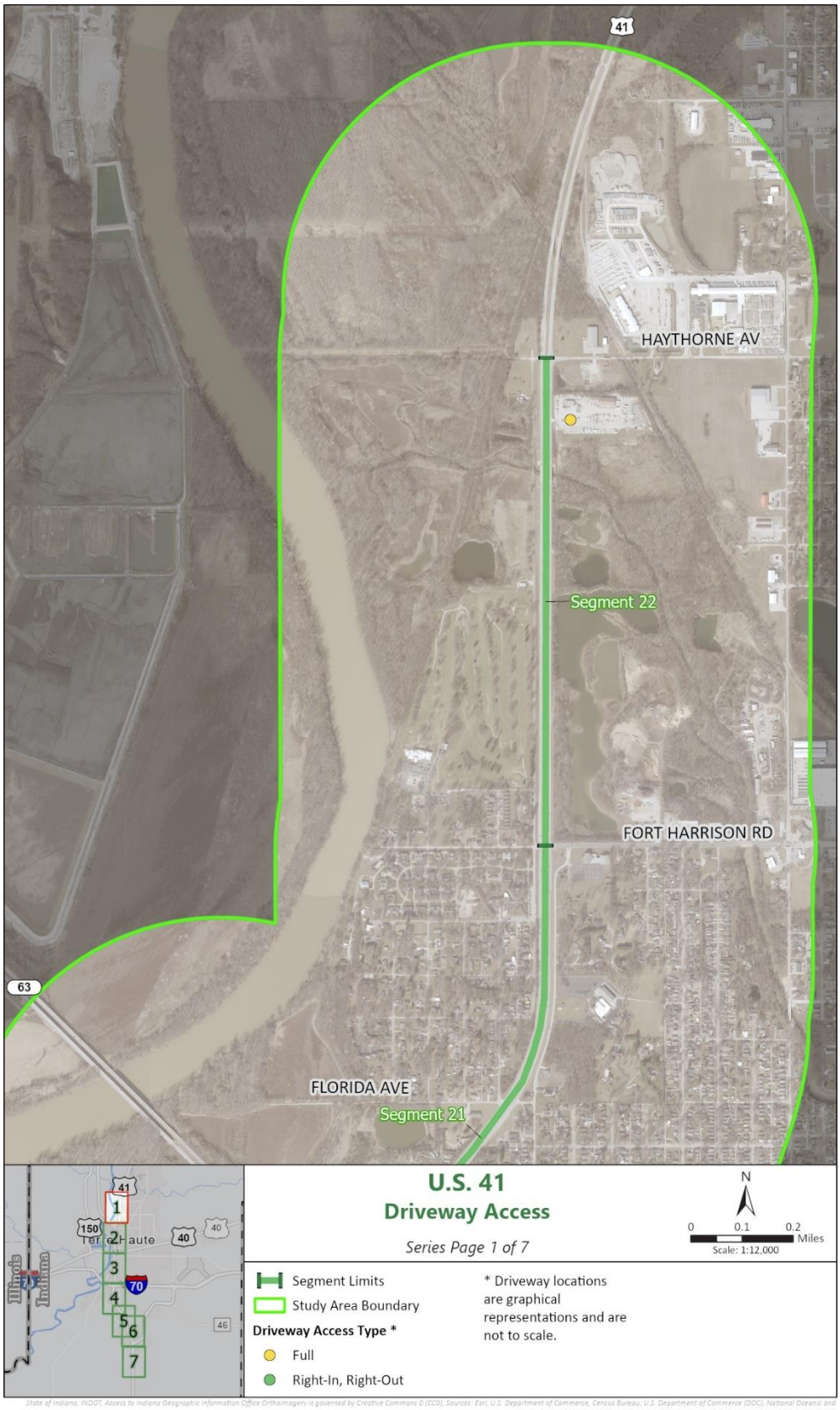
The study corridor has 226 driveways as identified in **Figure 20**. As shown in **Table 12**, 85% are commercial driveways, which speaks to the built context for much of the U.S. 41 corridor. Twelve percent of driveways provide residential access, with 3% providing field access.

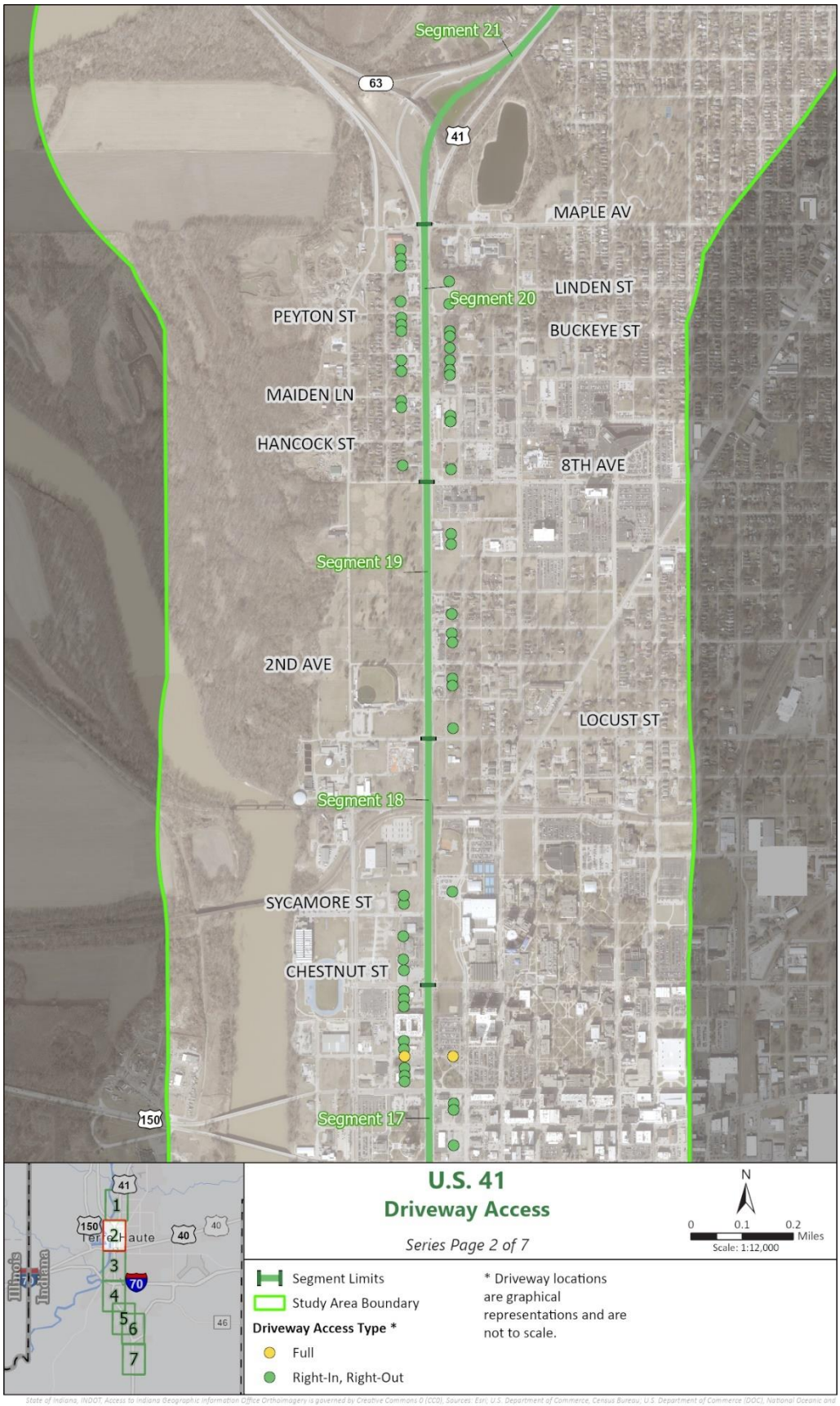
Access management principles have largely been implemented across the corridor, with 68% of driveways providing RIRO turning movements at U.S. 41. Approximately 31% of driveways provide full access turning movements onto U.S. 41. One percent of total driveways are classified as closed.

Table 12: U.S. 41 Driveway Inventory

Total		
226 Driveways		
Breakdown by Driveway Type		
Commercial	**Residential**	**Field Access**
191	28	7
Breakdown by Level of Access		
Right-in/Right-out (RIRO)	**Full (All Movements Allowed)**	
154	70	

Figure 20: Inventory of U.S. 41 Driveways





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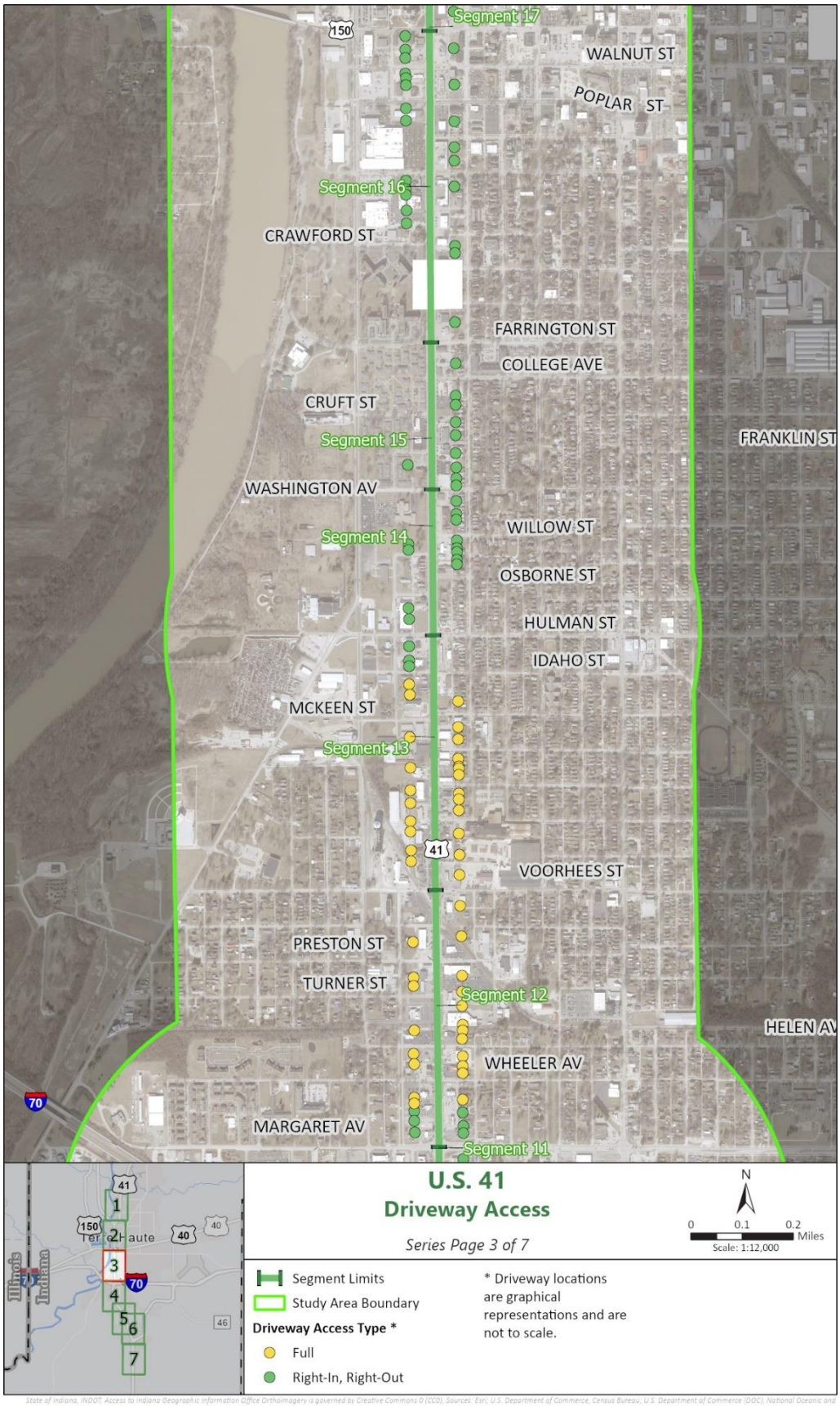

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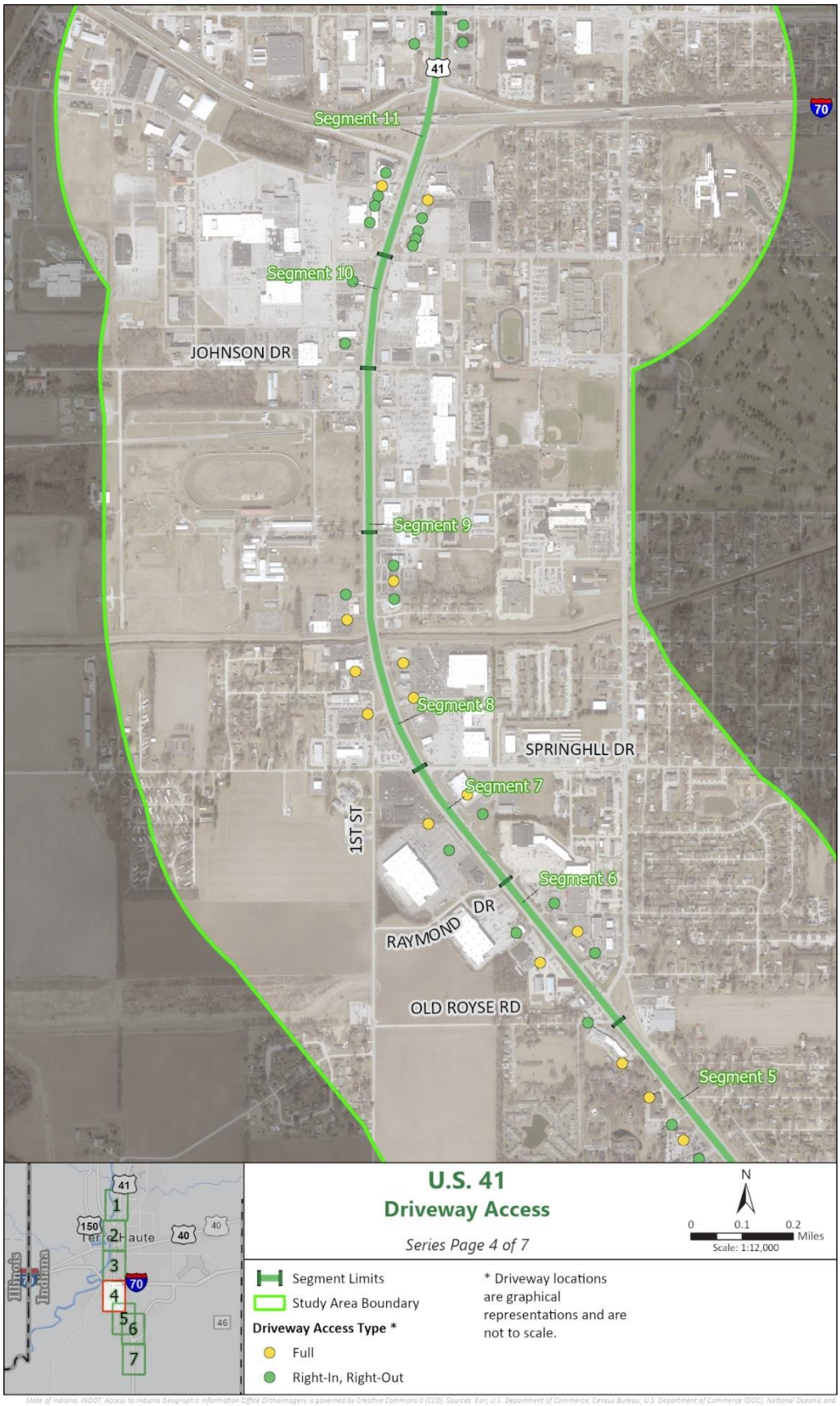

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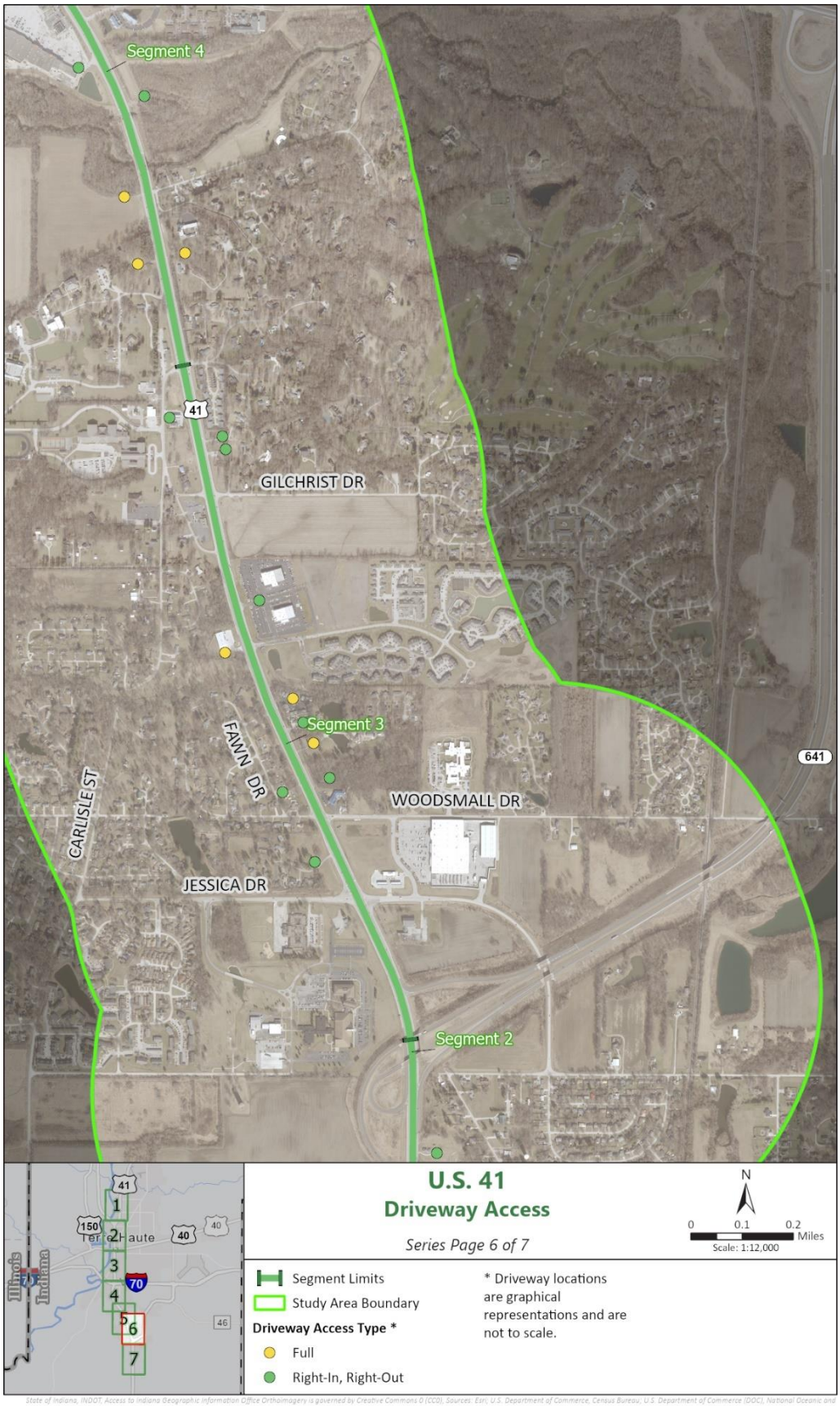

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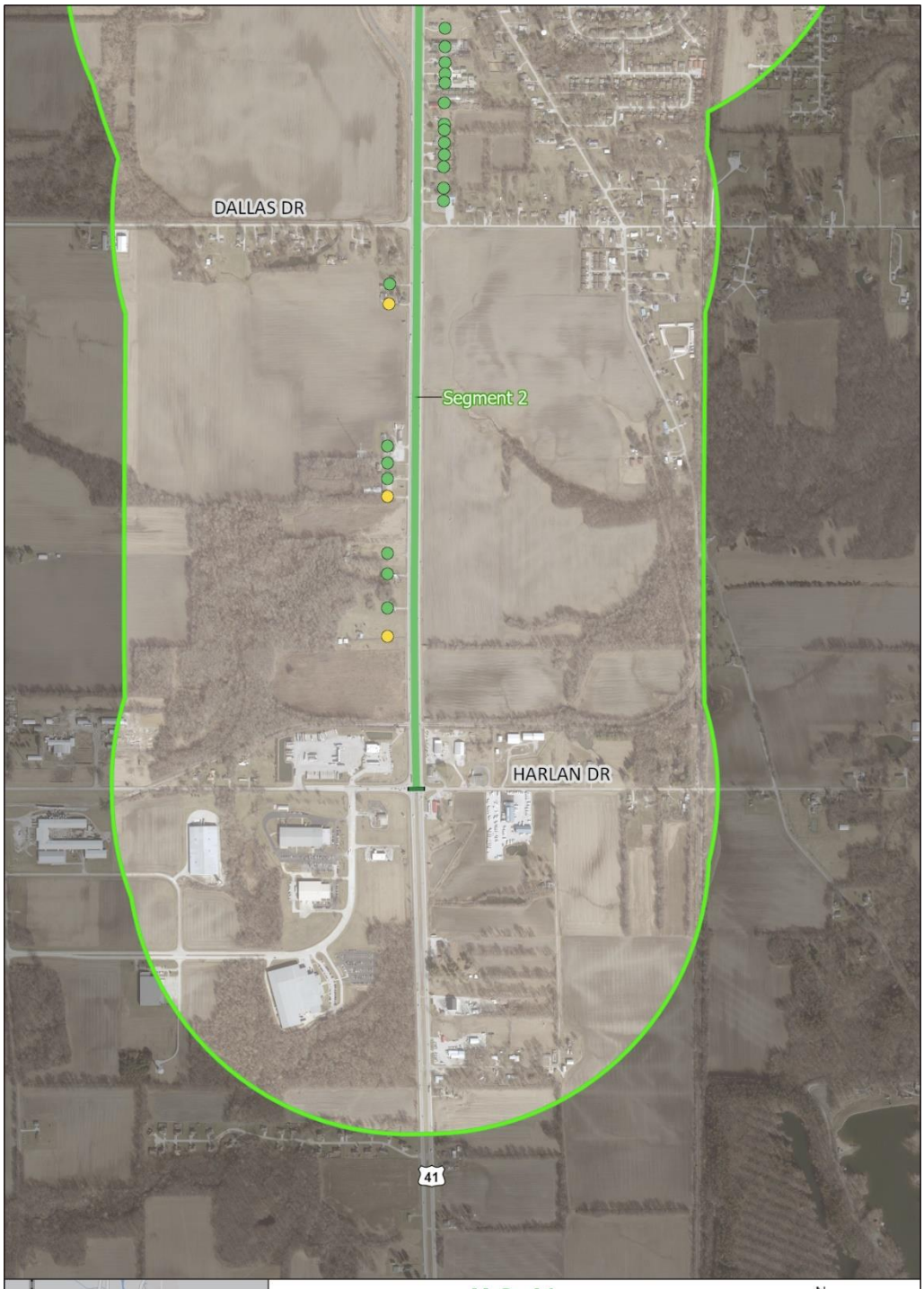



U.S. 41
Driveway Access

Series Page 7 of 7

N

0 0.1 0.2 Miles

Scale: 1:12,000

Segment Limits

Study Area Boundary

Driveway Access Type *

Full

Right-In, Right-Out

* Driveway locations are graphical representations and are not to scale.

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Comparing the driveways to previously discussed guidelines, it was discovered that:

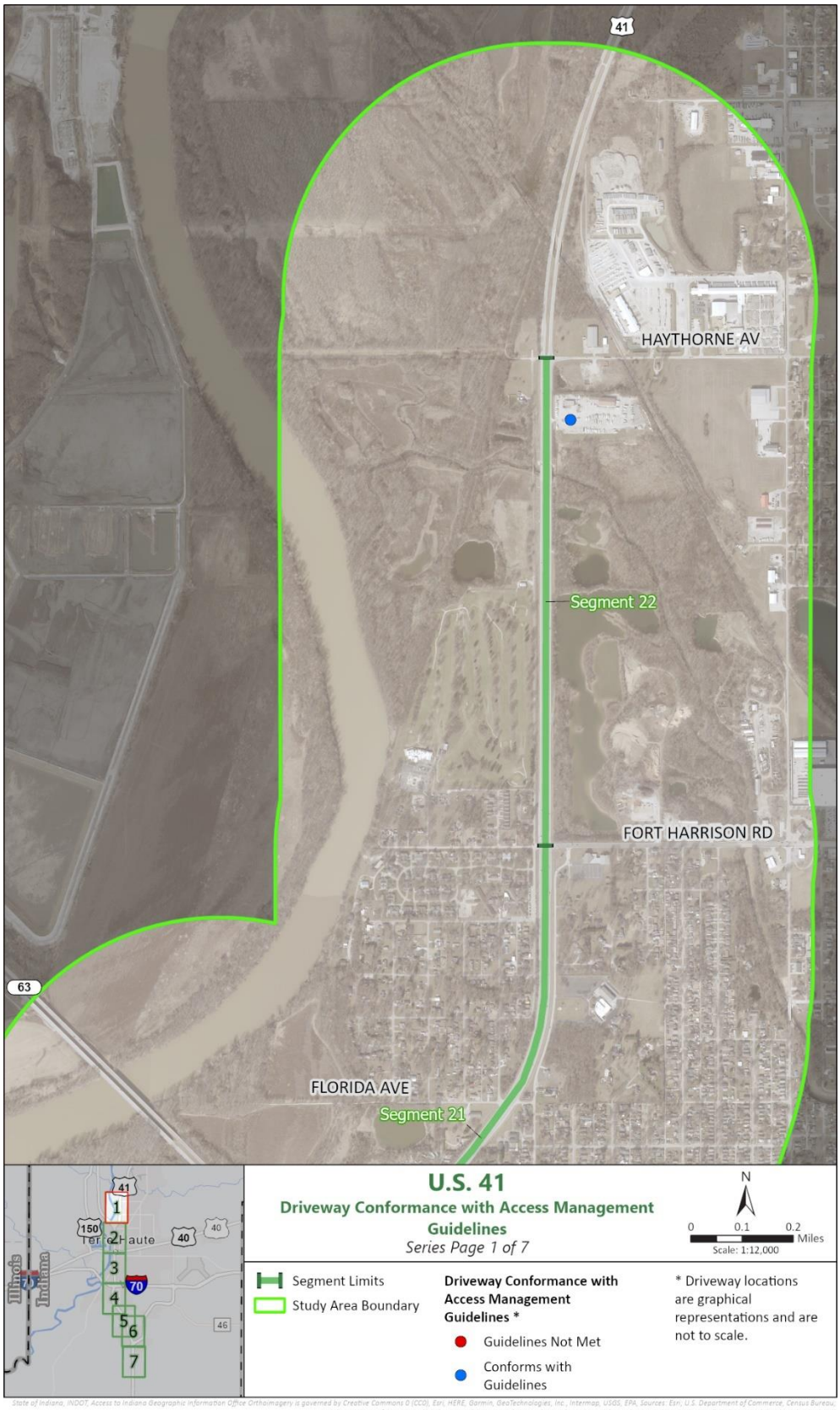
- 38 parcels do not meet the guideline of one driveway per 400 feet of property frontage.
- 28 driveways have substandard spacing.

While some driveways along the corridor do not meet multiple guidelines, 29% of all driveways do not meet at least one of the access management guidelines. These findings are shown in **Figure 21** and summarized in **Table 13**.

Table 13: Driveway Access Management Guidelines Inventory

Total	
226 Driveways	
Meet Access Management Guidelines	
Meets	**Does not Meet (One or more guideline)**
160 (71%)	66 (29%)
Guidelines Not Met (May Overlap)	
Parcels Violating # of Driveways Guideline	38
Driveways Violating Spacing Requirements	28

Figure 21: Driveway Conformance with Access Management Guidelines



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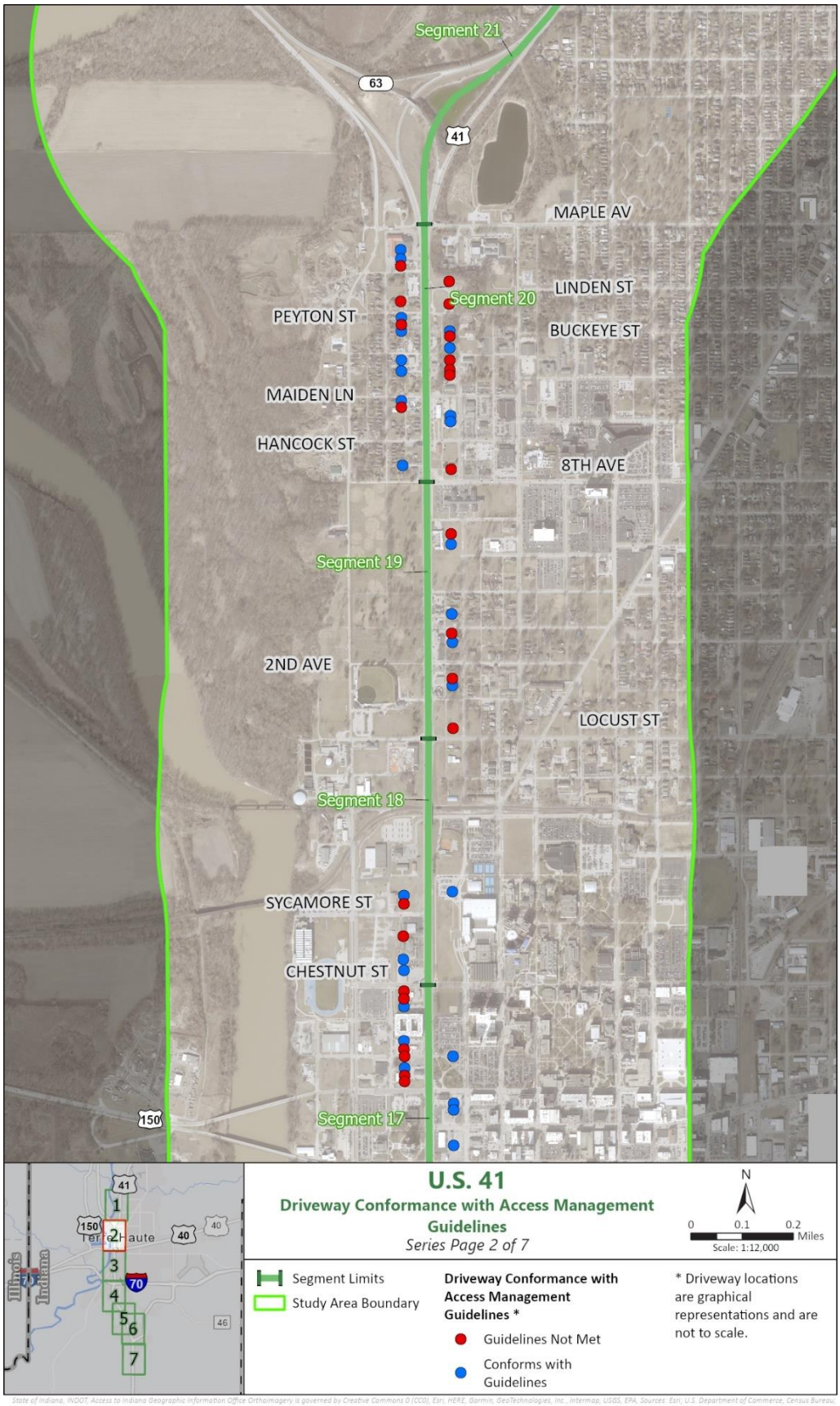

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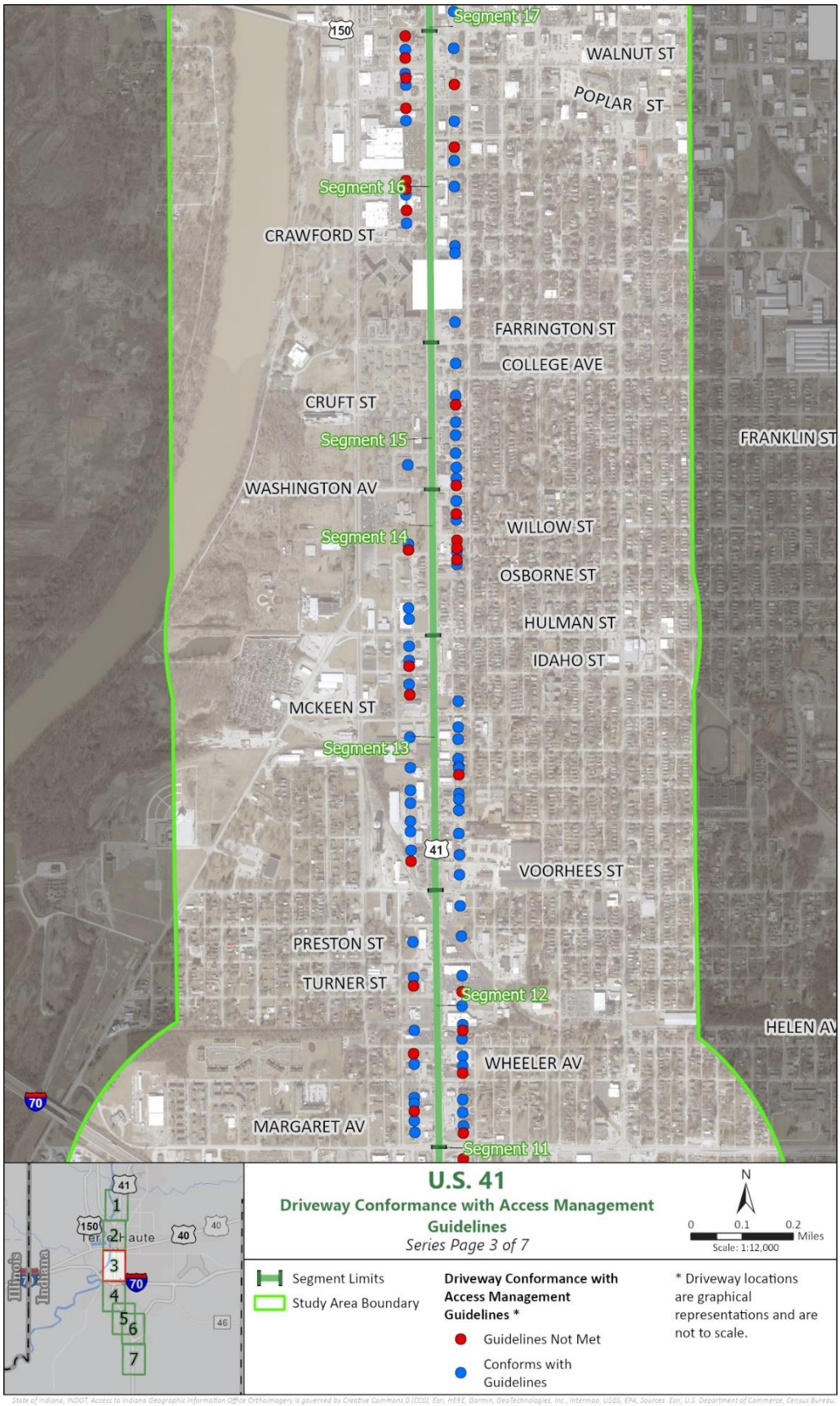

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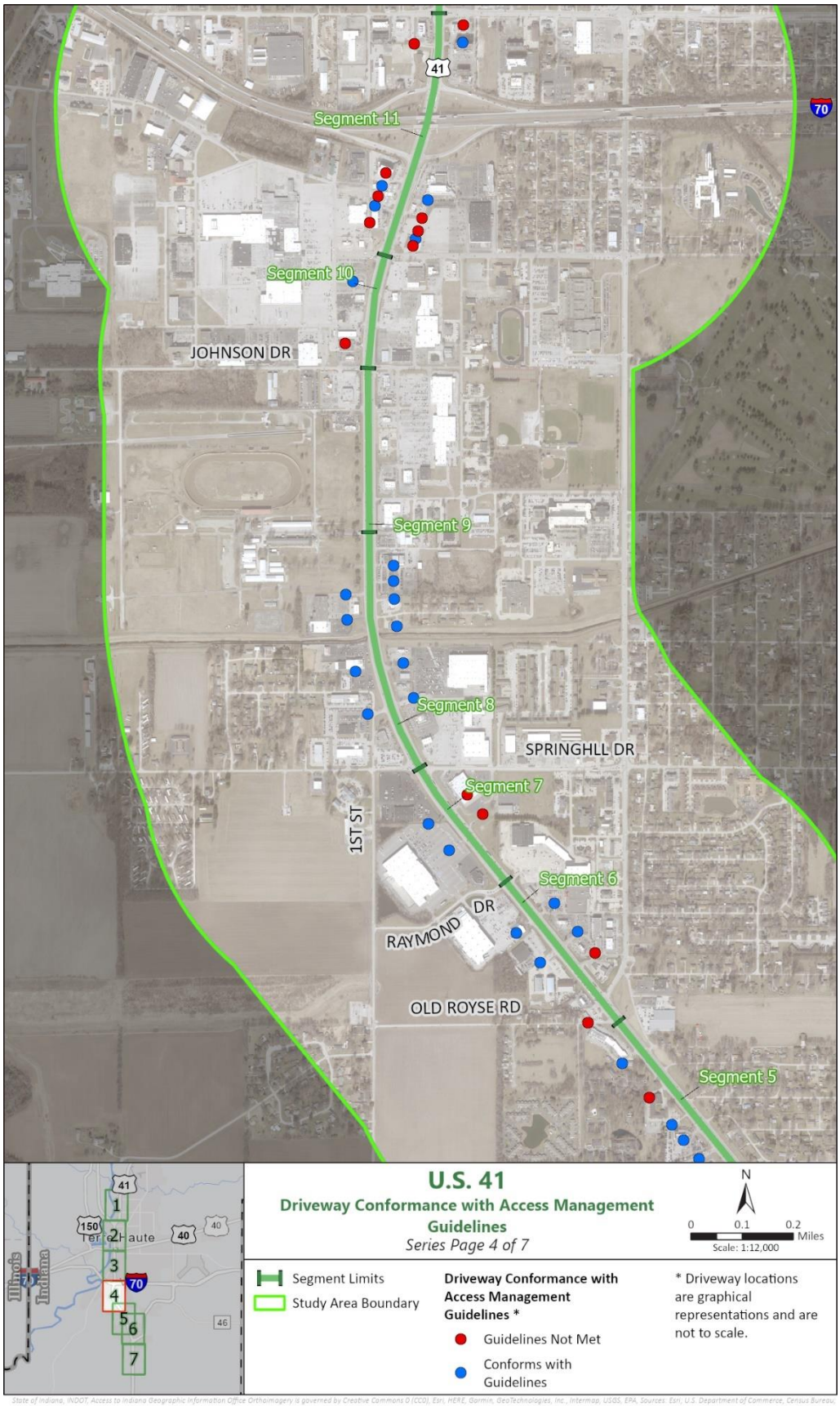

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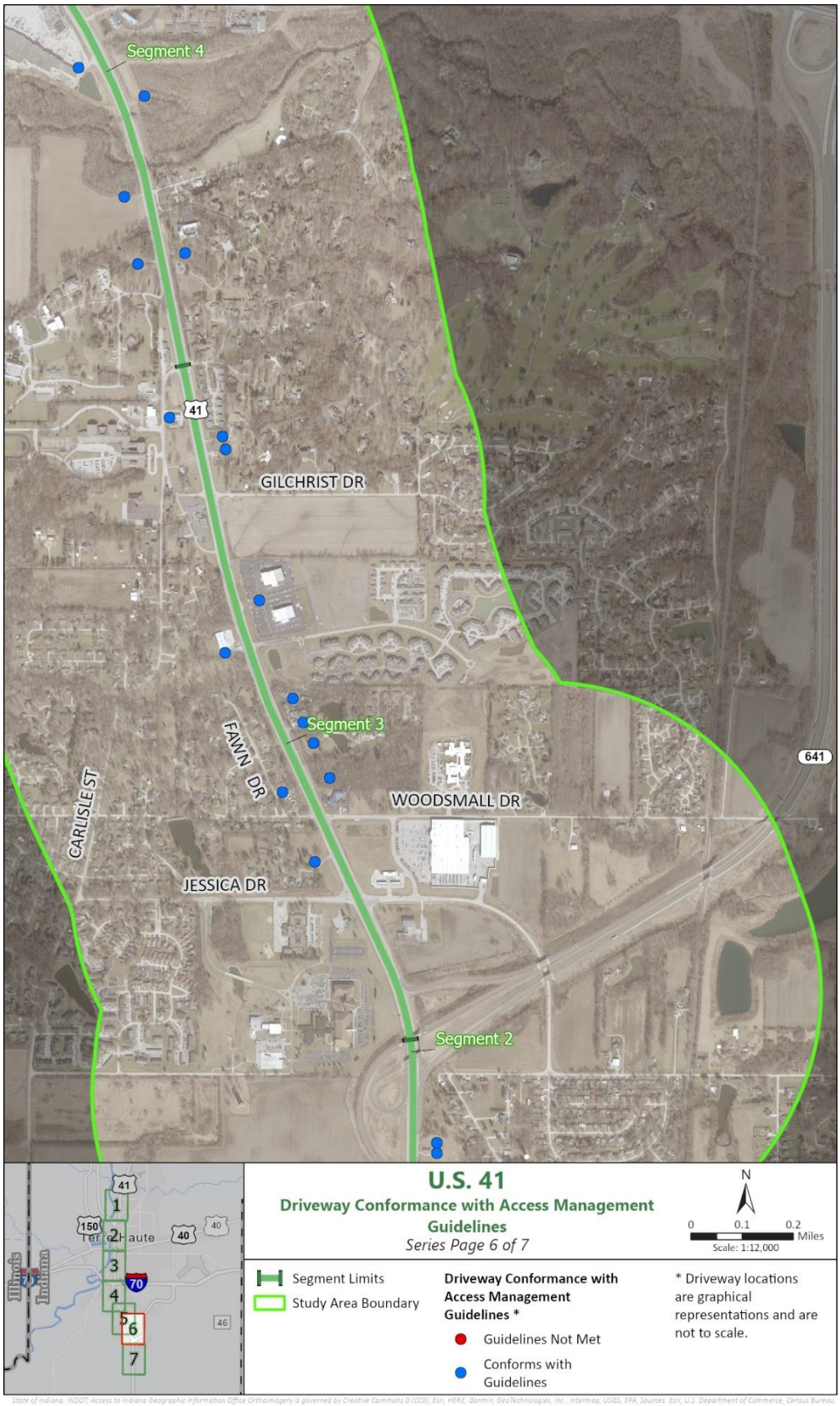

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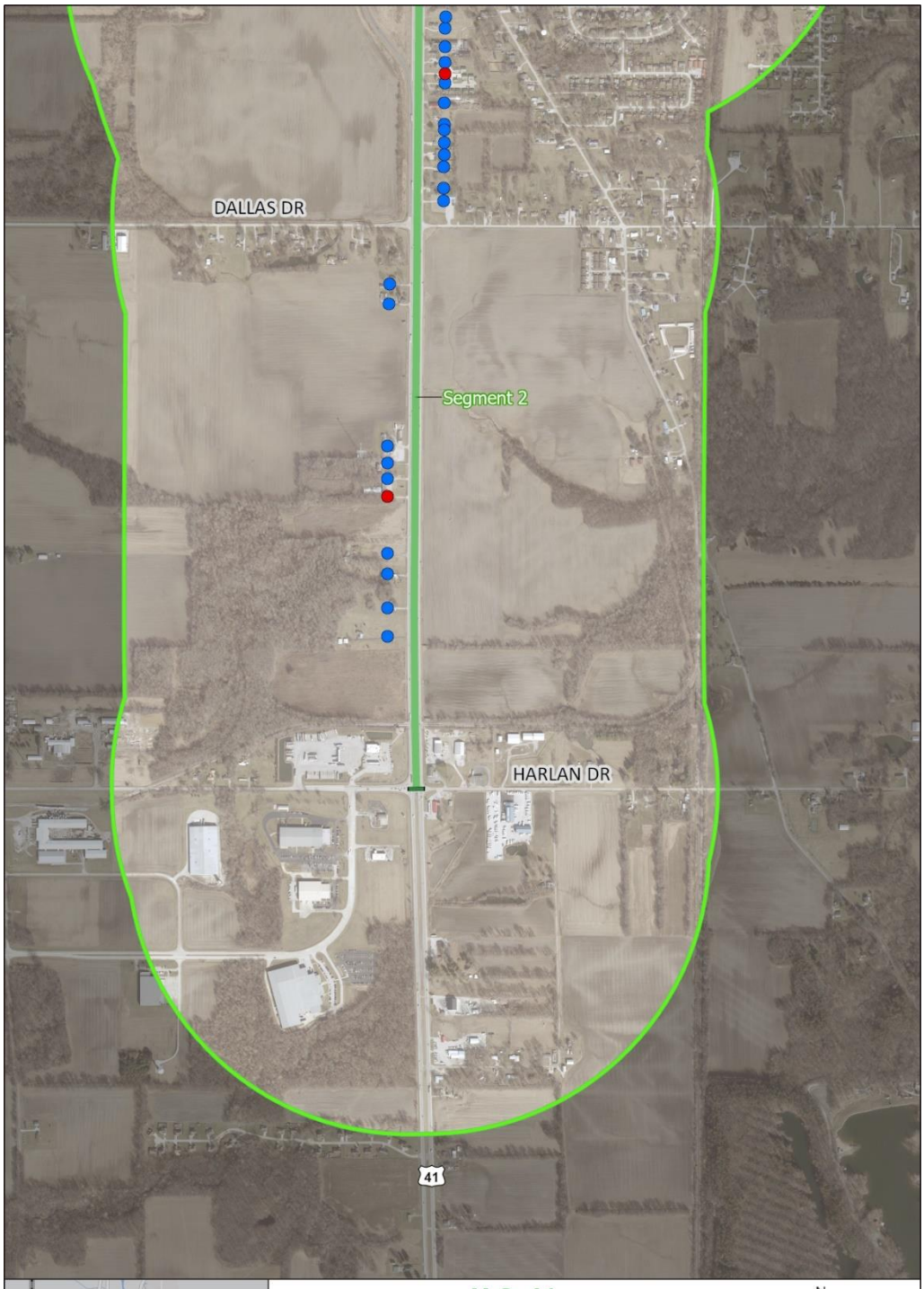



U.S. 41

Driveway Conformance with Access Management Guidelines

Series Page 7 of 7

N

0 0.1 0.2 Miles

Scale: 1:12,000

Segment Limits

Study Area Boundary

Driveway Conformance with Access Management Guidelines *

- Guidelines Not Met
- Conforms with Guidelines

* Driveway locations are graphical representations and are not to scale.

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3.3 Educational Facilities

The study area is located within the Vigo County School Corporation (VCSC) district, which provides K-12 public education services. VCSC operates 15 elementary schools, five middle schools, three traditional high schools, an alternative school and a virtual school. Two K-12 schools are located within or adjacent to the study corridor and are listed as follows:

- Dixie Bee Elementary School – located at the southwest quadrant of U.S. 41 and Jessica Drive.
- Honey Creek Middle School – located on Carlisle Street.

In addition to primary institutions, two higher educational institutions are located within the 0.5-mile study area adjacent to the study corridor and are listed as follows:

- Ivy Tech Community College – campus is situated west of U.S. 41 and north of the S.R. 641 interchange with a total full time equivalent enrollment of 2,946 students (Fall 2024).
- Indiana State University (ISU) – a four-year degree-granting public institution with an enrollment total of 7,895 students (Fall 2024). U.S. 41 borders the western edge of the ISU campus, with the southern boundary at Wabash Avenue and the northern boundary at Tippecanoe Street. Athletic and remote campus parking facilities are located to the west of U.S. 41 at Sycamore and Chestnut Streets.

Educational institutions located within the study area, or identified as regularly using the U.S. 41 corridor, will be coordinated with, as needed, throughout the ProPEL US 41 study.

3.4 Emergency Management Services (EMS)

The below entities serve the study area and will be coordinated with, as needed, throughout the ProPEL US 41 study to understand the planning context and operational service needs for all city and county emergency management providers using the U.S. 41 corridor.

3.4.1 Hospitals

Five hospitals and/or major health care facilities are located within the study area, providing health care services to the region and are listed as follows:

- Terre Haute Regional Hospital, 3901 S. 7th St., is a 278-bed comprehensive medical and surgical center providing Level III trauma care and emergency room services.
- Union Hospital Inc., 1606 N. 7th St., is a 318-bed general hospital providing inpatient and outpatient services and Level III trauma care.
- Hamilton Center Inc., 620 8th Ave., is a regional behavioral health center.
- Anabranch Recovery Center, 1400 E. Crossing Blvd., is an 81-bed primary substance use disorder treatment center.

- Harsha Behavioral Center, 1980 E. Woodsmall Drive, is an 81-bed acute care psychiatric hospital.

While not directly on the corridor, U.S. 41 provides a primary access route to these facilities.

3.4.2 Police Stations

Three police stations are situated within the study area and are listed as follows:

- Indiana State Police – District 32 – located within the study area at the southeast corner of U.S. 41 at Jessica Drive.
- Vigo County Central Dispatch
- Terre Haute Police Department

3.4.3 Fire and EMS Stations

Five fire stations are within the study area; none are situated on U.S. 41. However, nearby fire stations serving the community will be coordinated with, as needed, throughout the study. Fire stations with combined fire and EMS support are listed as follows:

- Terre Haute Fire Department No. 2
- Terre Haute Fire Department No. 7
- Terre Haute Fire Department No. 9
- Vigo County Fire Department HQ
- Honey Creek Fire Station 91

Appendix F depicts the location for all referenced facilities above.

4 Safety Analysis

This chapter documents existing safety conditions for motorists, cyclists and pedestrians within the U.S. 41 study area.

4.1 Safety Methodology

Historical crash data from January 1, 2020, through December 31, 2024, in Vigo County was obtained to evaluate safety along the study corridor and some adjacent major intersections within the urban core of Terre Haute. Crashes were filtered and assigned to intersections and road segments within the study area using GIS, roadway and intersection identifiers and crash narrative information. A total of 41 study intersections and 23 roadway segments were identified to analyze with RoadHAT 4D.

RoadHAT takes location-specific inputs and evaluates if the average frequency of collisions or severity of collisions may be outside the normal expected range. This is accomplished by calculating an index of crash frequency (ICF) and index of crash severity (ICC). The index value for a specific location indicates how many standard deviations higher or lower the observed crash frequency or severity is than expected. For example, a location with an ICF or ICC value of 2.0 has an observed crash frequency or severity that is two standard deviations higher than the expected value for the given type of facility and traffic volumes.

Table 14 provides a summary of all crashes in the study area by severity along with the RoadHAT crash indices at each intersection or segment. The ICF and ICC values calculated in RoadHAT are based on the three most recent years of crash data only. Animal crashes are excluded from the RoadHAT calculations as these types of crashes are not related to geometric conditions. Locations that have an ICF or ICC value greater than 1.0 are highlighted in the table. **Figure 22** and **Figure 23** provide a breakdown of the crash types by intersections and segments, respectively. Specific observations and recommendations regarding locations with ICF or ICC at or above 1.0 are provided in **Section 4.1**. **Appendix G** provides more detailed crash information for each intersection and road segment, as well as RoadHAT software output.

Table 14: Summary of 2020 – 2024 Crashes and RoadHAT Indices

Location	Fatal and Incapacitating Injury Crashes	Non-Incapacitating Injury Crashes	Property Damage Only Crashes	ICF	ICC
U.S. 41 at Haythorne Ave.	3	0	18	0.88	**1.27**
U.S. 41 at Fort Harrison Rd.	3	6	22	0.01	0.42
1st St. at Maple Ave.	0	1	3	0.03	-0.26

Location	Fatal and Incapacitating Injury Crashes	Non-Incapacitating Injury Crashes	Property Damage Only Crashes	ICF	ICC
U.S. 41 at Maple Ave.	7	3	47	0.10	0.69
U.S. 41 at 8th Ave.	4	7	31	-0.02	0.15
U.S. 41 at Locust St.	4	1	25	-0.55	-0.25
U.S. 41 at Chestnut St.	6	5	48	0.61	0.46
1st St. at U.S. 150W	3	4	22	-0.16	0.55
U.S. 41 at Cherry St.	14	5	59	0.08	0.96
7th St. at Cherry St.	0	2	12	**1.48**	-0.02
U.S. 41 at Wabash Ave.	3	4	28	-0.39	0.21
7th St. at Wabash Ave.	1	1	23	**1.19**	-0.42
1st St. at U.S. 150E	3	3	16	-0.45	-0.02
U.S. 41 at Ohio St.	11	7	72	0.32	0.55
7th St. at Ohio St.	3	4	20	0.86	0.69
U.S. 41 at Walnut St.	5	5	47	0.47	0.49
U.S. 41 at Poplar St.	11	8	51	-0.03	0.63
7th St. at Poplar St.	4	0	17	0.86	**1.30**
U.S. 41 at Farrington St.	5	4	26	-0.35	0.33
U.S. 41 at Washington Ave.	8	4	21	0.00	**1.00**
U.S. 41 at Hulman Dr.	11	11	70	0.71	0.52
U.S. 41 at Voorhees St.	9	5	64	0.15	0.57
U.S. 41 at Margaret Ave.	10	12	131	0.95	0.71
U.S. 41 at I-70 WB	5	11	56	0.18	0.34
U.S. 41 at I-70 EB	4	7	35	-0.36	-0.50
U.S. 41 at Davis Dr.	8	11	87	0.19	0.27
U.S. 41 at Johnson Dr.	6	6	60	0.17	-0.01
U.S. 41 at Fairgrounds Dr.	0	4	13	0.00	-0.63
U.S. 41 at Mayfair Dr.	4	5	23	0.18	0.23

Location	Fatal and Incapacitating Injury Crashes	Non-Incapacitating Injury Crashes	Property Damage Only Crashes	ICF	ICC
U.S. 41 at Springhill Dr.	7	6	61	0.11	0.58
U.S. 41 at Raymond Dr.	8	1	43	-0.55	0.05
U.S. 41 at 7th St.	3	6	41	-0.72	-0.76
U.S. 41 at Old Royse Rd.	8	5	19	**1.45**	**2.27**
U.S. 41 at 56th Dr.	2	5	35	-0.51	-0.80
U.S. 41 at Carlisle St.	6	2	29	-0.17	0.50
U.S. 41 at Canter Dr.	9	2	30	0.25	**1.65**
U.S. 41 at Jessica Dr.	5	1	47	0.51	0.24
U.S. 41 at S.R. 641	5	3	42	**1.17**	0.59
U.S. 41 at Dallas Dr.	1	0	6	-1.16	-0.29
U.S. 41 at Harlan Dr.	8	1	44	0.85	0.60
U.S. 41: Fort Harrison Rd. to Haythorne Ave.	0	0	3	-1.05	-0.89
U.S. 41: S.R. 63 to Fort Harrison Rd.	5	2	19	-0.40	0.49
U.S. 41: 8th Ave. to Maple Ave.	4	4	30	-0.06	0.36
U.S. 41: Locust St. to 8th Ave.	3	4	22	-0.28	-0.47
U.S. 41: Chestnut St. to Locust St.	6	2	11	-0.15	0.83
U.S. 41: Cherry St. (U.S. 150W) to Chestnut St.	1	0	8	-0.46	0.19
U.S. 41: Farrington St. to Poplar St.	17	10	43	0.57	**1.43**
U.S. 41: Washington Ave. to Farrington St.	3	1	25	-0.06	0.18
U.S. 41: Washington Ave. to Hulman Dr.	2	1	8	-0.74	-0.06
U.S. 41: Voorhees St. to Hulman Dr.	10	11	56	**1.16**	0.52
U.S. 41: Margaret Ave. to Voorhees St.	16	22	143	**3.17**	**2.07**
U.S. 41: Davis Dr. to I-70 EB	10	16	45	**4.32**	**3.21**

Location	Fatal and Incapacitating Injury Crashes	Non-Incapacitating Injury Crashes	Property Damage Only Crashes	ICF	ICC
U.S. 41: Johnson Dr. to Davis Dr.	0	1	8	-0.24	-0.59
U.S. 41: Fairgrounds Dr. to Johnson Dr.	13	7	57	**2.15**	**2.17**
U.S. 41: Mayfair Dr. to Fairgrounds Dr.	1	5	26	0.29	-0.04
U.S. 41: Raymond Dr. to Springhill St.	0	0	8	-0.65	-0.80
U.S. 41: 7th St. to Raymond Dr.	1	1	9	-0.73	-0.91
U.S. 41: 56th Dr. to Old Royse Rd.	0	1	28	-0.30	-1.00
U.S. 41: Carlisle St. to 56th Dr.	4	2	30	-0.61	-0.24
U.S. 41: Canter Dr. to Carlisle St.	6	5	29	-0.36	0.61
U.S 41: Harlan Dr. to Dallas Dr.	4	0	22	0.10	-0.24

Figure 22: Study Intersection Crashes by Type

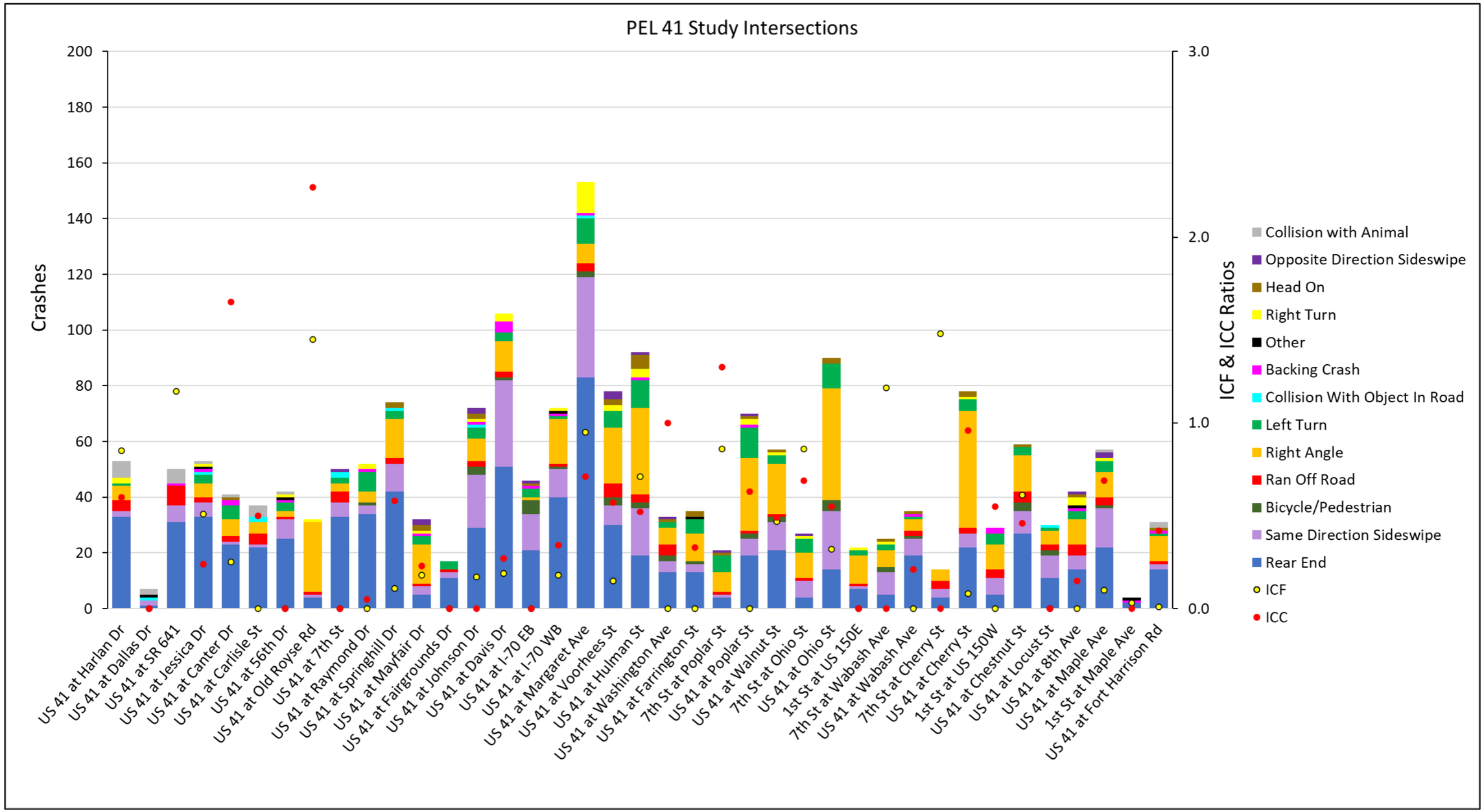
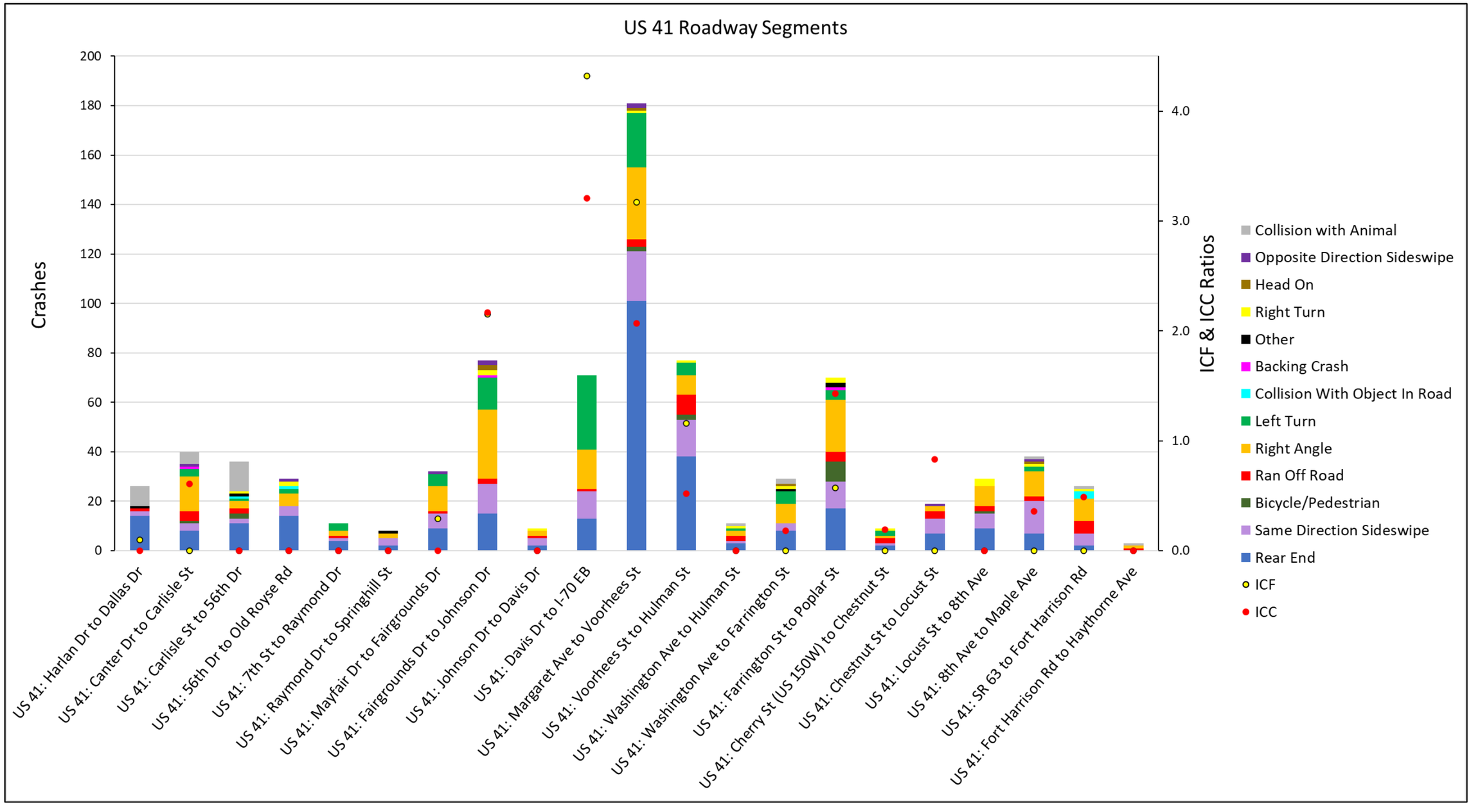


Figure 23: Study Segment Crashes by Type



4.2 High Crash Locations

The six intersections and five roadway segments with ICC or ICF indices of 1.0 or greater were reviewed in further detail. Locations with ICC or ICF indices of less than 1.0 will be considered for improvements in later stages of the study but are not reviewed in detail in this document.

U.S. 41 at Haythorne Avenue

This intersection was found to have an ICF of 0.88 and ICC of 1.27. There were 33 total collisions at this intersection, including two incapacitating injuries and one fatality. The most common type of collision was right angle (five crashes, 24%), which includes the fatal crash and one of the incapacitating collisions. The fatal crash occurred during the daytime, and from the crash narrative it is unclear if the victim had stopped before pulling westbound into the intersection when their vehicle was struck by a northbound vehicle. Of the five right-angle crashes, three occurred between a westbound vehicle and a northbound vehicle.

7th Street at Cherry Street

This intersection was found to have an ICF of 1.48 and ICC of -0.02. There were 14 total collisions, with two injuries. The injuries involved one vehicle running off the roadway while turning due to ice, and the other injury was a rear-end collision. Of the 14 total collisions, 29% (four) were right angles and 29% (four) were rear ends.

7th Street at Wabash Avenue

This intersection was found to have an ICF of 1.19 and ICC of -0.42. There were 25 total collisions, with only one injury involving a pedestrian struck while crossing Wabash Avenue. Of the 25 total collisions, 32% (eight) were same-direction sideswipes, 24% (six) were right angles and 20% (five) were rear ends.

7th Street at Poplar Street

This intersection was found to have an ICF of 0.86 and ICC of 1.30. There were 21 total collisions with four incapacitating injuries. Thirteen of the crashes (61%) were right-angle or left-turn collisions, which included three of the four injury crashes.

U.S. 41: Farrington Street to Poplar Street

This segment was found to have an ICF of 0.57 and ICC of 1.43. There are six public road intersections along this segment. There were 70 total collisions recorded, with 30% (21) right angles, 24% (17) rear ends, 16% (11) same-direction sideswipes and 11% (eight) bicycle/pedestrian collisions. More than 25% of the segment crashes occurred at Oak Street (16 right-angle collisions and two left-turn collisions).

With the large number of bicycle and pedestrian crashes that occurred on this segment, crash narratives were reviewed to determine the circumstances of each crash. For the eight bicycle/pedestrian collisions, two involved bicycles and six involved pedestrians. One of the bicycle collisions involved the cyclist being struck as they crossed U.S. 41 at Swan Street, where there is no marked or unmarked crossing, and the other collision involved a driver failing to yield to the cyclist as they crossed a private driveway along the sidewalk. Four of the six pedestrian collisions occurred at Oak Street, where pedestrians were attempting to cross U.S. 41. There is currently no marked crossing for U.S. 41 at Oak Street, however there are two motels on the east side of U.S. 41, and a convenience store on the west side that are expected to generate pedestrian traffic. The nearest marked crosswalk for pedestrians who desire to cross at this intersection is 700 feet to the north.

U.S. 41 at Washington Avenue

This intersection was found to have an ICF of 0.0 and ICC of 1.0. There were 33 total collisions recorded, of which there were eight incapacitating injuries and four non-incapacitating injuries. Thirty-nine percent (13) of the collisions were rear ends, with 18% (six) right-angle collisions. Five of the incapacitating injury crashes were right angles or left turns, and two of them involved vulnerable road users. One pedestrian was struck while jaywalking across U.S. 41, and one bicyclist was struck while crossing Washington Avenue at an adjacent alley.

U.S. 41: Voorhees Street to Hulman Drive

This segment was found to have an ICF of 1.16 and ICC of 0.52. There are five public road intersections along this segment, with a two-way left-turn lane (TWLTL) present on most of the segment. There were 77 total collisions recorded, with 49% (38) being rear ends, 19% (15) same-direction sideswipes, 10% (eight) running-off-road collisions and 10% (eight) right-angle collisions. No singular minor intersection or drive stood out when evaluating the left turn, right-angle, or ran-off-road collisions.

U.S. 41: Margaret Avenue to Voorhees Street

This segment was found to have an ICF of 3.17 and ICC of 2.07. There are five public road intersections and two railroad crossings along the segment. A two-way left-turn lane (TWLTL) is present on most of the segment. There were 181 total collisions recorded, with 56% (101) being rear ends, 16% right angles (29), 11% (20) same-direction sideswipes and 12% (22) left turns.

After evaluating the right-angle and left-turn collisions, it was found that 22 of the 45 occurred at the Wheeler Avenue intersection, while the rest occurred throughout the segment at other intersections or driveways. A collision diagram for this segment was created and is provided in **Appendix G**. Federal Railroad Administration documents were reviewed, and no documented vehicle vs. train collisions were found at either of the two railroad crossings since 1987.

U.S. 41 at Margaret Avenue

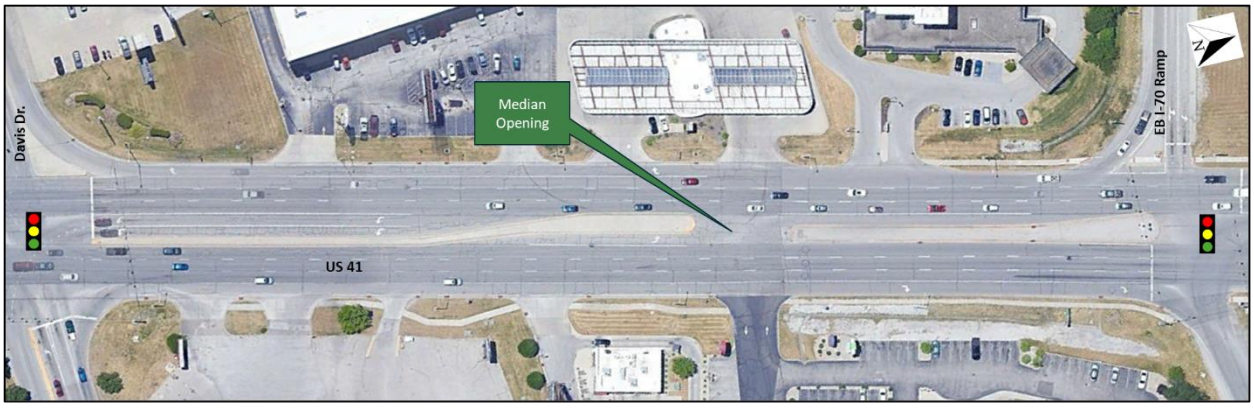
This intersection was found to have an ICF of 0.95 and ICC of 0.71. There were 153 total collisions recorded, with 54% (83) being rear ends, 24% (36) being same-direction sideswipes, 6% (nine) being left turns and 5% (seven) being right-angle collisions. A collision diagram was created for this intersection and is provided in **Appendix G**. During the development of the collision diagram, seven collisions were identified involving emergency vehicles that were not directly part of the crashes but were traveling through the intersection at the time. Additionally, two collisions occurred between emergency vehicles and other vehicles as the emergency vehicles were actively navigating the intersection.

U.S. 41: Davis Drive to I-70 EB

This segment was found to have both the highest ICF (4.32) and ICC (3.21) value of any segment or intersection in the entire safety analysis. The segment has a raised median with one full-access median opening for a gas station located on the west side of the roadway and a hotel/strip mall on the east side, pictured in **Figure 24**. This median opening does not meet access management spacing requirements. Of 71 total collisions, 42% (30) were left-turn collisions at this median opening, including 15 of the 26 injuries plus one fatal collision involving a motorcycle reported to have no headlights, turning eastbound from southbound U.S. 41. Of the 30 left-turn collisions, 11 were found to have occurred with the turning vehicle striking or being struck by a vehicle in one of the two outside lanes due to vehicles in the two inside lanes stopping to create space for the turning vehicle.

A collision diagram was created for this segment and is provided in **Appendix G**. Most (27) of the left-turn collisions occurred from southbound traffic turning left onto Critchfield Street, which is a private road providing access to hotels and other businesses. Right-angle collisions made up 23% (16) of the collisions at this segment, also occurring at the median opening.

Figure 24: Davis Drive to I-70 Eastbound



U.S. 41: Fairgrounds Drive to Johnson Drive

This segment was found to have an ICF of 2.15 and an ICC of 2.17. In the second half of 2024, INDOT relocated the traffic signal from Fairgrounds Drive to McCallister Drive / Hospital Lane. This crash analysis is based on crash data and traffic control in place prior to the traffic signal relocation. **Figure 25** shows an aerial view of the segment before the signal relocation. There were 28 (36%) right-angle collisions and 13 (17%) left-turn collisions along this segment. Twenty-seven of the left-turn and right-angle crashes occurred at Dixie Bee Road, with 14 such crashes occurring at McCallister Drive.

At the Dixie Bee Road median opening, the movement with the highest frequency of right-angle collisions was the commercial driveway on the east side of the roadway. Thirteen right-angle collisions occurred with vehicles leaving the driveway and being struck by northbound or southbound traffic. A collision diagram was created for this segment and is provided in **Appendix G**. Currently there is not enough data to evaluate the effectiveness of relocating the signal from Fairgrounds Drive to McCallister Drive.

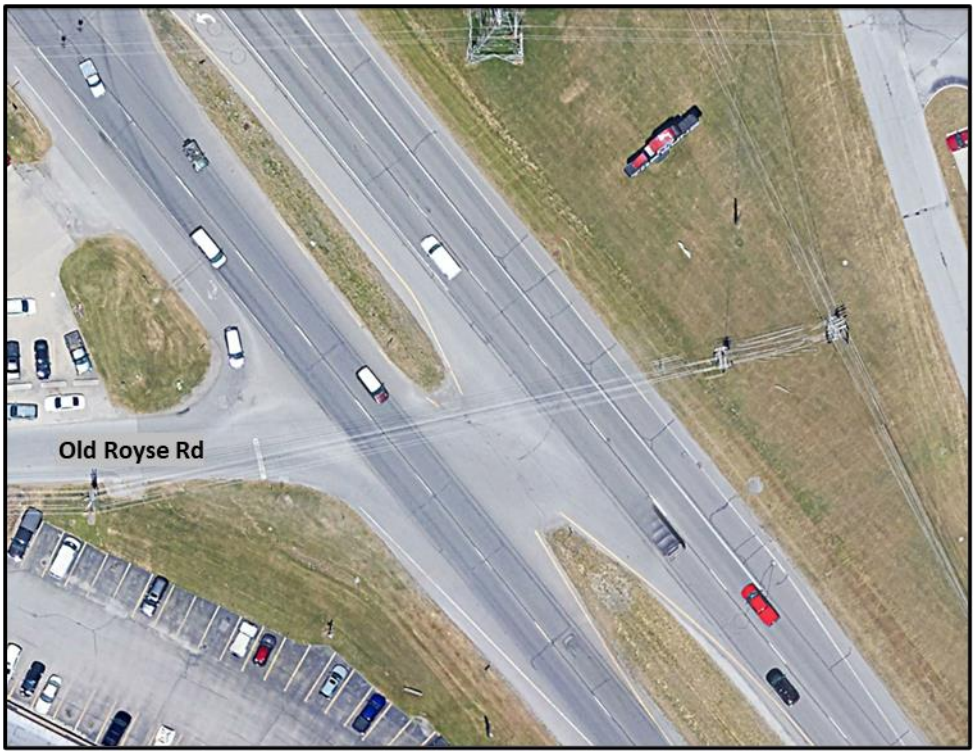
Figure 25: Fairgrounds Drive to Johnson Drive (2022 Aerial)



U.S. 41 at Old Royse Road

This unsignalized intersection has the highest ICC value (2.27) of any intersection within the study area and an ICF of 1.45. There were 32 collisions in the five-year period, with 78% (25) of the collisions being right angles and 13% (four) recorded as rear ends. Twelve of the 13 injuries were from the right-angle collisions, with one of those resulting in a fatality involving a motorcycle. All but two of these injury collisions involved a vehicle heading eastbound from Old Royse Road colliding with a southbound vehicle on U.S. 41. A collision diagram was created for this intersection and is provided in **Appendix G**. The intersection skew is significant at this location, which increases the difficulty for a driver to see oncoming traffic. An aerial view of the intersection is provided in **Figure 26.**

Figure 26: U.S. 41 and Old Royse Road



U.S. 41 at Canter Drive / Woodsmall Drive

This intersection was found to have an ICF value of 0.25 and an ICC value of 1.65. Despite the left turns and right angles representing only 27% of the total collisions, they accounted for six of the eight incapacitating injury collisions and one fatal collision involving a motorcycle. The four left-turn collisions occurred in the southbound left-turn movement toward eastbound Woodsmall Drive. The slotted left-turn lanes here have a slight positive offset, but there still appear to be sight distance issues depending on opposing direction queuing. Right-angle collisions are scattered among multiple approaches.

U.S. 41 at S.R. 641

This interchange was found to have an ICF value of 1.17 and an ICC value of 0.59. Thirty-one of the 50 recorded collisions were rear ends, and all of them occurred at the southbound S.R. 641 to northbound U.S. 41 ramp terminal intersection. This right-turn movement, shown in **Figure 27**, is yield controlled, lacks an acceleration lane and has a poor look back angle. Three of the same-direction sideswipes also occurred at this right-turn lane due to drivers failing to yield to oncoming traffic.

Figure 27: Southbound S.R. 641 to Northbound U.S. 41 Ramp Terminal Intersection



U.S. 41: Harlan Drive to Dallas Drive

This segment of U.S. 41 has below-average crash frequency (ICF 0.10) and crash severity (ICC -0.24) but has a notable crash trend associated with the at-grade railroad crossing located 600 feet north of Harlan Drive. **Figure 28** shows a screenshot from Google Streetview in July 2023 facing southbound. Eight of the 26 collisions occurring at this location were caused by drivers slowing for or stopping at the railroad crossing. One of these crashes included the following statement from the police officer on the scene: "Note: These R.R. tracks are fairly rough, and commuters often slow down before traveling over them." Two of the incidents involved school buses, which are required to make a complete stop at the active grade crossing.

The Federal Motor Carrier Safety Administration (FMCSA) is evaluating a proposed rule change that would no longer require commercial vehicles, including buses, to stop at at-grade railroad crossings where active warning devices are not in an activated state. As of the date of this report, no action has yet been taken on this proposed change.

Figure 28: CSX Grade Crossing 342296V



4.3 Vulnerable Road Users

The FHWA defines a vulnerable road user (VRU) as a non-motorist attributed as a pedestrian, bicyclist, or other type of cyclist or person on a personal conveyance device but not including motorcyclists.[2] In Indiana, horse-drawn buggies are also considered to be VRUs. VRUs have accounted for a growing share of roadway fatalities and injuries in recent years. This analysis treated VRUs as a separate crash type regardless of the manner of collisions, denoting crashes with VRUs as bicyclist/pedestrian collisions. There were 38 crashes involving pedestrians and 16 involving bicyclists. Despite comprising 2% of all the collisions analyzed, VRUs accounted for 10% of all fatal/incapacitating injury collisions. Another way to visualize the higher likelihood for VRUs to experience severe injuries is the fatal/incapacitating injury rate. That shows 65% of bicycle/pedestrian collisions resulted in fatal or incapacitating injuries, compared to just 12% of crashes across all modes.

A total of 54 vulnerable road user collisions occurred throughout the study corridor, across 23 different intersections or segments, for an average of 2.3 crashes per location. Six of these locations were found to have three or more crashes, and they were reviewed in more detail and are discussed later in this section. All but four of the collisions occurred in more urban areas of Terre Haute, along U.S. 41 from Johnson Drive to Maple Avenue, where pedestrian and cyclist

[2] https://highways.dot.gov/sites/fhwa.dot.gov/files/2022-10/VRU%20Safety%20Assessment%20Guidance%20FINAL_508.pdf

facilities are mostly present. The four other collisions occurred to the south, in a more suburban area lacking facilities such as sidewalks, bike lanes, or marked crosswalks along U.S. 41.

One of these four occurred at Raymond Drive, with a pedestrian attempting to cross U.S. 41 where there are no marked crosswalks nearby. One occurred at Crossing Boulevard, where a pedestrian attempted to run across U.S. 41 where there are no marked crosswalks nearby. This collision resulted in the death of the pedestrian and occurred in the early morning before sunrise. While it is unclear what the origin and destination of the pedestrian was, this location has apartment complexes and assisted living facilities on the east side of U.S. 41 and multiple grocery stores and commerce on the west side of U.S. 41. The presence of trip generators and attractors, in close proximity to each other, have the potential to yield trips between them. Evaluating the census tract on the east side of U.S. 41 shows that it is estimated to have 10% of households without access to a vehicle compared to 7% of households statewide without access to a vehicle[3].

The other two collisions also occurred in this census tract along U.S. 41. At Allendale Lane, a pedestrian attempted to cross U.S. 41 where there are no marked crosswalks nearby. At Gilchrist Drive and U.S. 41 many details are unclear, but a pedestrian was found deceased in the roadway. This location has no marked crosswalks, but there is a school and convenience store on the west side of U.S. 41 and housing on the east side of the roadway.

In 2023, INDOT completed a Vulnerable Road User Safety Assessment as part of the Indiana Strategic Highway Safety Plan. This report identified high risk segments and intersections, categorized into three separate tiers based on 2018-2022 statewide crash data, demographics and land use. The U.S. 41 corridor from Davis Drive to Wabash Avenue was identified as an urban high scoring Tier 2 segment. Seventy percent (38) of the pedestrian and bicyclist crashes identified in the ProPEL US 41 study were found to be along this segment, with 14 of these crashes occurring in 2023-2024 after the previous assessment was released. Four of the six locations with three or more VRU crashes occurred in this segment.

Each location with three or more VRU crashes is discussed in more detail below.

U.S. 41 at Chestnut Street

This intersection is at the main entrance to the Indiana State University (ISU) campus along U.S. 41. There were three pedestrian collisions, two of which involved injuries. Two collisions occurred with vehicles heading westbound to leave ISU, making left turns onto southbound U.S. 41 where the pedestrians were struck during the walk interval. Both of these collisions occurred around sunset, and visibility was identified as a factor. The third collision involved a vehicle heading

[3] *Market Research Project, Final Report.* June 2024. https://www.in.gov/indot/files/completePDFdocument.pdf

eastbound on Chestnut Street to make a left turn onto northbound U.S. 41, striking a pedestrian in the northern crosswalk.

U.S. 41 at Ohio Street

This intersection had two pedestrian collisions and two bicyclist collisions. Both bicycle collisions and one pedestrian collision involved VRUs heading northbound on U.S. 41, colliding with vehicles eastbound on Ohio Street. The two bicycle collisions involved vehicles making a right turn on red from Ohio Street, and the pedestrian was struck crossing outside a crosswalk by a vehicle in a travel lane. The other pedestrian collision was a southbound vehicle failing to yield to a crossing pedestrian while attempting to make a left turn onto Ohio Street.

U.S. 41: Farrington Street to Poplar Street

This segment of U.S. 41 had the highest recorded number of VRU collisions along the project corridor, involving six pedestrians and two bicyclists. Four of the pedestrian collisions occurred at the Oak Street intersection where pedestrians were attempting to cross U.S. 41. There is currently no marked crossing for U.S. 41 at Oak Street, however there are two motels on the east side of U.S. 41 and a convenience store on the west side that are expected to generate pedestrian traffic. The nearest marked crosswalk for pedestrians who desire to cross at this intersection is 700 feet to the north, which may create a condition where pedestrians will choose to jaywalk.

The fifth pedestrian collision occurred at the Crawford Street intersection while attempting to cross U.S. 41. This location also does not have a marked crosswalk for U.S. 41. The sixth pedestrian collision occurred at the Swan Street intersection, where two individuals were struck by a driver who was under the influence when they were attempting to cross U.S. 41. This location also does not have a marked crosswalk for U.S. 41.

One of the bicycle collisions involved the cyclist being struck as they crossed U.S. 41 at Swan Street, where there is no marked crossing, and the other collision involved a driver failing to yield to a cyclist as they crossed a private driveway at 601 S. 3rd Street along the sidewalk.

U.S. 41 at Voorhees Street

This intersection had two bicyclist collisions and one pedestrian. One bicyclist was in the east crosswalk heading north when they were struck by a northbound right-turning vehicle. The other bicyclist was in the south crosswalk when they were struck by a northbound vehicle. The pedestrian collision occurred in the south crosswalk, when a westbound vehicle turning left to head southbound struck the pedestrian crossing U.S. 41.

U.S. 41 at I-70 EB

This intersection had four bicycle collisions and one pedestrian collision. There are crosswalks across the interstate ramp entrance and exit lanes, but not across U.S. 41. One bicyclist was struck by a southbound vehicle while crossing U.S. 41 heading westbound. Two bicyclists were struck in separate incidents while in the west crosswalk at the eastbound channelized right turn. One bicyclist was struck in the east crosswalk by a vehicle entering the interstate ramp, and one pedestrian was struck in this crosswalk by a right-turning vehicle entering the interstate.

U.S. 41 at Johnson Drive

This intersection had three pedestrian collisions. There are no crosswalks or sidewalks, and the adjacent intersections also do not have crosswalks or sidewalks. One collision involved multiple pedestrians crossing U.S. 41, where one was struck by a westbound, left-turning vehicle heading southbound. Another collision involved a pedestrian crossing U.S. 41 and being struck by a southbound vehicle. The third collision also involved a pedestrian crossing U.S. 41 being struck by a southbound vehicle. All of these collisions occurred in the evening and there is no roadway lighting at the intersection.

4.4 Corridor Travel Speeds

Figures illustrating weekday observed 85th-percentile travel speeds for the study corridor are provided in **Figure 29** and **Figure 30**, for northbound and southbound U.S. 41, respectively. The AM and PM peak period observed 85th percentile travel speeds are also provided in **Appendix H** on an aerial imagery.

Across the U.S. 41 study corridor, 85th-percentile travel speeds are consistently higher than posted limits throughout nearly all segments and time periods. In both directions, the prevailing speeds exceed posted limits by substantial margins, with northbound traffic averaging 9 mph above posted and southbound traffic averaging 8 mph above posted on an all-day basis. Only a small fraction of segments—approximately 4 to 6 percent—operate at or below posted speed limits, indicating generally low compliance. These elevated speeds persist throughout the day, with the overnight period (10 p.m.–6 a.m.) having the highest values; northbound and southbound speeds during this period are typically 9–10 mph above the posted limits, reflecting free-flow conditions. Even during traditionally slower periods such as mid-day and the PM peak, corridor speeds remain well above posted limits, commonly by 6–8 mph, demonstrating that congestion is not sufficient to reduce the prevailing speeds to posted levels.

Figure 29: 85th Percentile Observed Weekday Vehicle Speeds (Northbound)

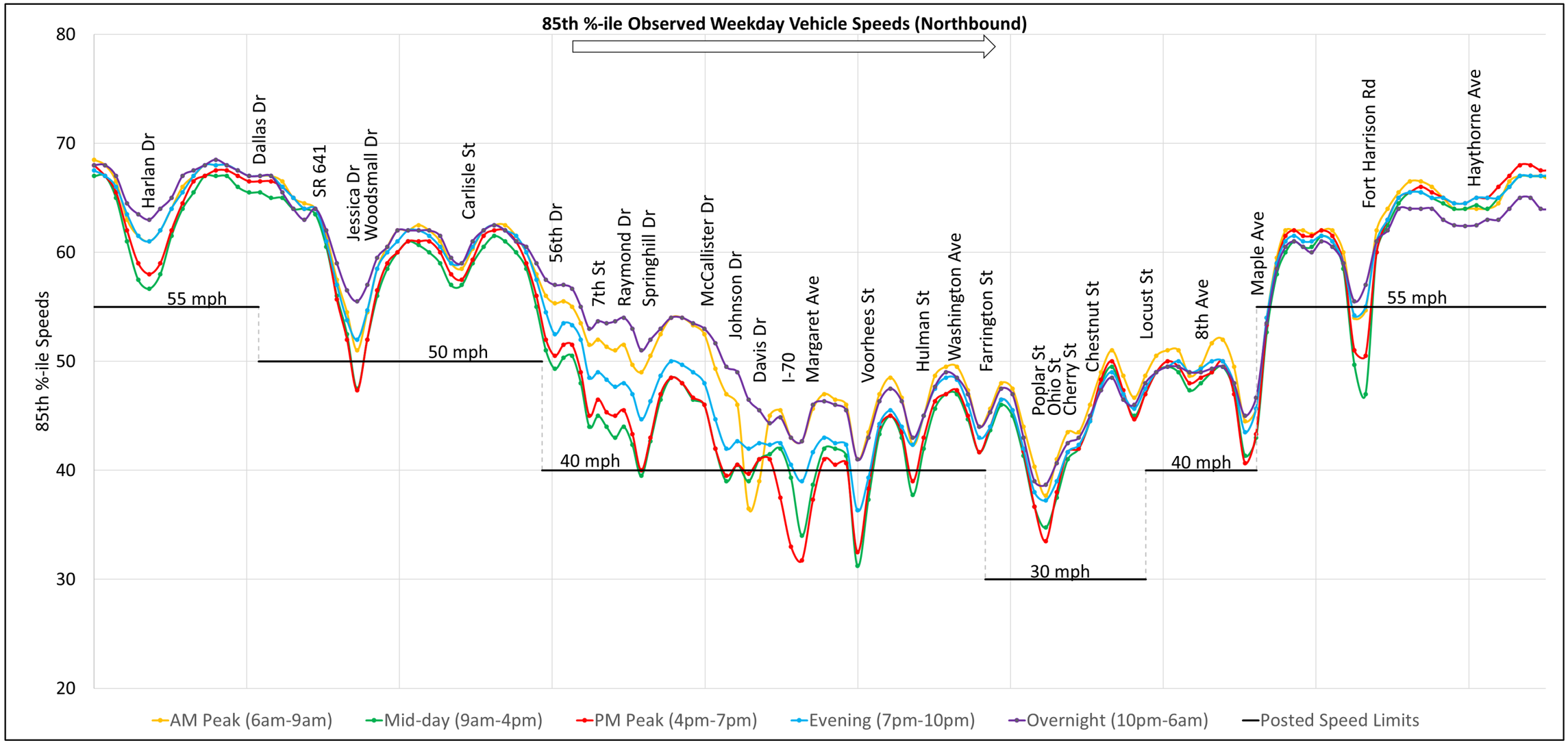
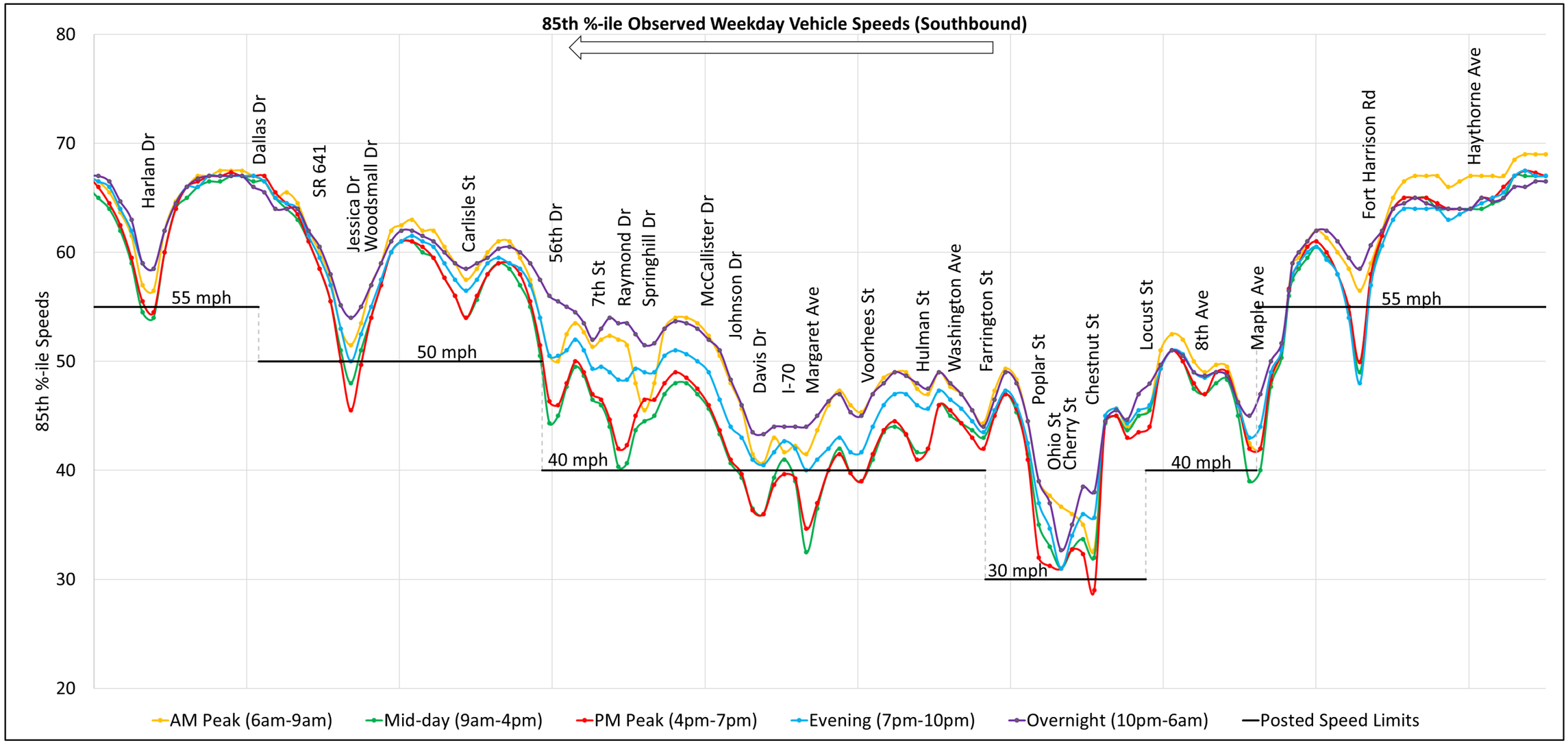


Figure 30: 85th Percentile Observed Weekday Vehicle Speeds (Southbound)



A defining feature of the corridor is the long central zone of 30–40 mph posted speeds between Crossing Boulevard (south of 56th Drive) and Maple Avenue, where the greatest over-limit operation occurs. In this lower-speed zone, northbound 85th-percentile speeds average 8 mph above posted, while southbound speeds average 7 mph above posted. This same area contains the most extreme exceedances on the corridor, which occur within the 30-mph zone. In the northbound direction, observed speeds are approximately 19 mph over the posted limit between Chestnut Street and Locust Street. In the southbound direction, observed speeds are approximately 18 mph over the posted limit between Poplar Street and Farrington Street. These results indicate that drivers generally treat this section as a higher-speed facility regardless of its lower speed limit, suggesting a mismatch between driver expectations and posted values.

Though speeds are generally high, a few isolated segments show 85th-percentile speeds falling below posted limits. While there are predictable dips at signalized intersection locations, the locations with significant drops may be indicators of an intersection in poor coordination with an upstream intersection or lengthy queues. The most notable of these locations occurs in the northbound direction at I-70, Margaret Avenue, Voorhees Street, and Fort Harrison Road, and in the southbound direction at I-70, Margaret Avenue, and Fort Harrison Road. These isolated pockets of below-posted limit speeds stand in contrast to the broader corridor pattern, where speeds remain predominantly over the posted limits regardless of the time of day.

Taken together, these observations reinforce that the U.S. 41 corridor operates at speeds considerably above the posted limits for most of the day and across most segments. The combination of roadway geometry, driver behavior, and minimal speed-reducing congestion — particularly outside peak periods — results in prevailing operating speeds that exceed posted values by significant margins. The low-posted central segment shows the most persistent and pronounced divergence, underscoring potential areas for further evaluation.

5 Mobility Analysis – Existing Conditions

This chapter documents existing mobility conditions for U.S. 41 considering segment and intersection operational conditions for all users, including drivers, pedestrians, cyclists and transit riders.

5.1 Mobility Methodology

5.1.1 Existing Traffic Volumes

Average Annual Daily Traffic (AADT) volumes and truck percentages along the U.S. 41 study corridor were obtained from the INDOT Traffic Count Database System (TCDS). The segment AADTs and daily truck percentages are provided in **Appendix I**. The AADT volumes along U.S. 41 are summarized in **Table 15**

Table 15: U.S. 41 Average Annual Daily Traffic Volumes (2025)

Count Location	Average Annual Daily Traffic (AADT) Volume	Daily Truck Percentage	Average Daily Trucks Volume
North of S.R. 63	14,500	7%	1,000
South of Locust St.	27,100	7%	2,000
North of I-70	34,200	6%	2,000
South of I-70	36,800	5%	1,900
South of S. 7th St.	32,800	5%	1,600
South of S.R. 641	22,100	11%	2,300

5.1.2 Peak Hour Turn Movements

Peak hour turning movement counts at each study intersection were collected between November 2024 and September 2025. The turning movement counts were adjusted to represent existing (2025) peak season traffic volumes. Summaries of the peak hour turning movement counts and seasonally adjusted turning movement volumes for each study intersection are provided in **Appendix J**.

5.1.3 Existing Operating Conditions

5.1.3.1 Operational Standards

Operational performance for signalized and two-way stop-controlled intersections was assessed using the Highway Capacity Manual (HCM) Level of Service (LOS) metrics. LOS ratings range from "A" (indicating traffic with minimal delay) to "F" (indicating significant congestion and operational

deficiencies). According to the Indiana Design Manual (IDM), urban signalized intersection approaches should operate at LOS E or better during peak hours, with overall intersection performance at LOS D or better. For urban unsignalized intersections, approaches should operate at LOS D or better during peak hours. Additionally, no movements should have failing operations.

5.1.3.2 Analysis Tools

The existing (2025) operating conditions of each study intersection were assessed using Synchro 12 software, which implements the methodologies outlined in the HCM. Signal timing data used in the operational analysis was provided by INDOT.

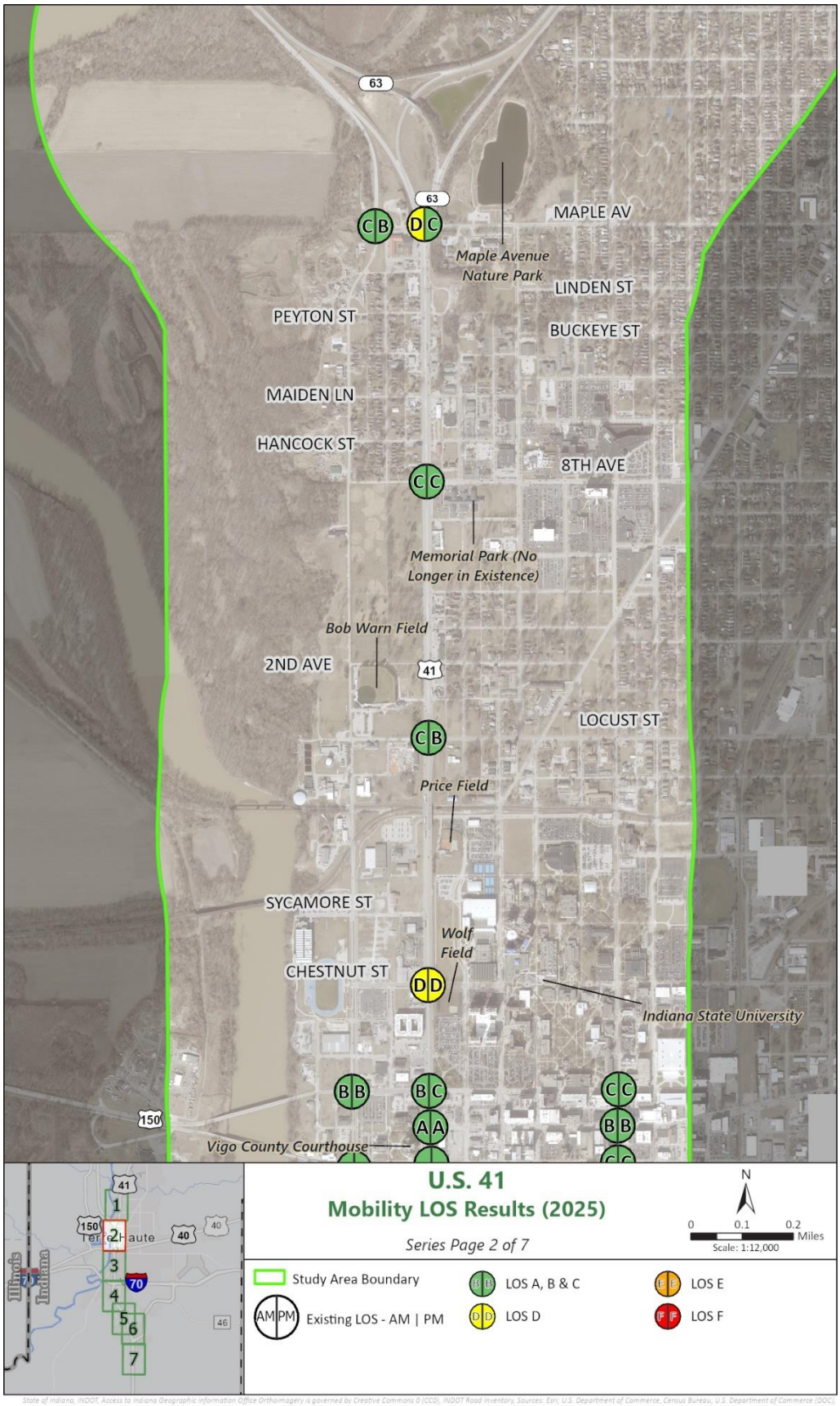
The conditions of merge areas of the U.S. 41 and S.R. 641 interchange were evaluated using the Highway Capacity Software (HCS), Release 8.4. No analysis of diverge areas of this interchange or the U.S. 41 and S.R. 63 interchange were performed as diverge area evaluations are typically reserved for high-speed, grade-separated freeway facilities, and these interchanges are located on an arterial roadway, not a freeway. One merge area exists at the U.S. 41 and S.R. 63 interchange where southbound S.R. 63 merges with southbound U.S. 41. This area was not evaluated because the downstream signalized intersection at U.S. 41 and Maple Street heavily influences this merge area, and this influence cannot be accurately assessed without use of a microsimulation model.

5.1.3.3 Intersection Operations

Under existing (2025) conditions, all study intersections operate acceptably. The results of the existing (2025) operational analysis are summarized in **Figure 31**, with the detailed analysis output sheets provided in **Appendix K**. Signal timing data used in the operational analysis was provided by INDOT.

Figure 31: Mobility LOS Results





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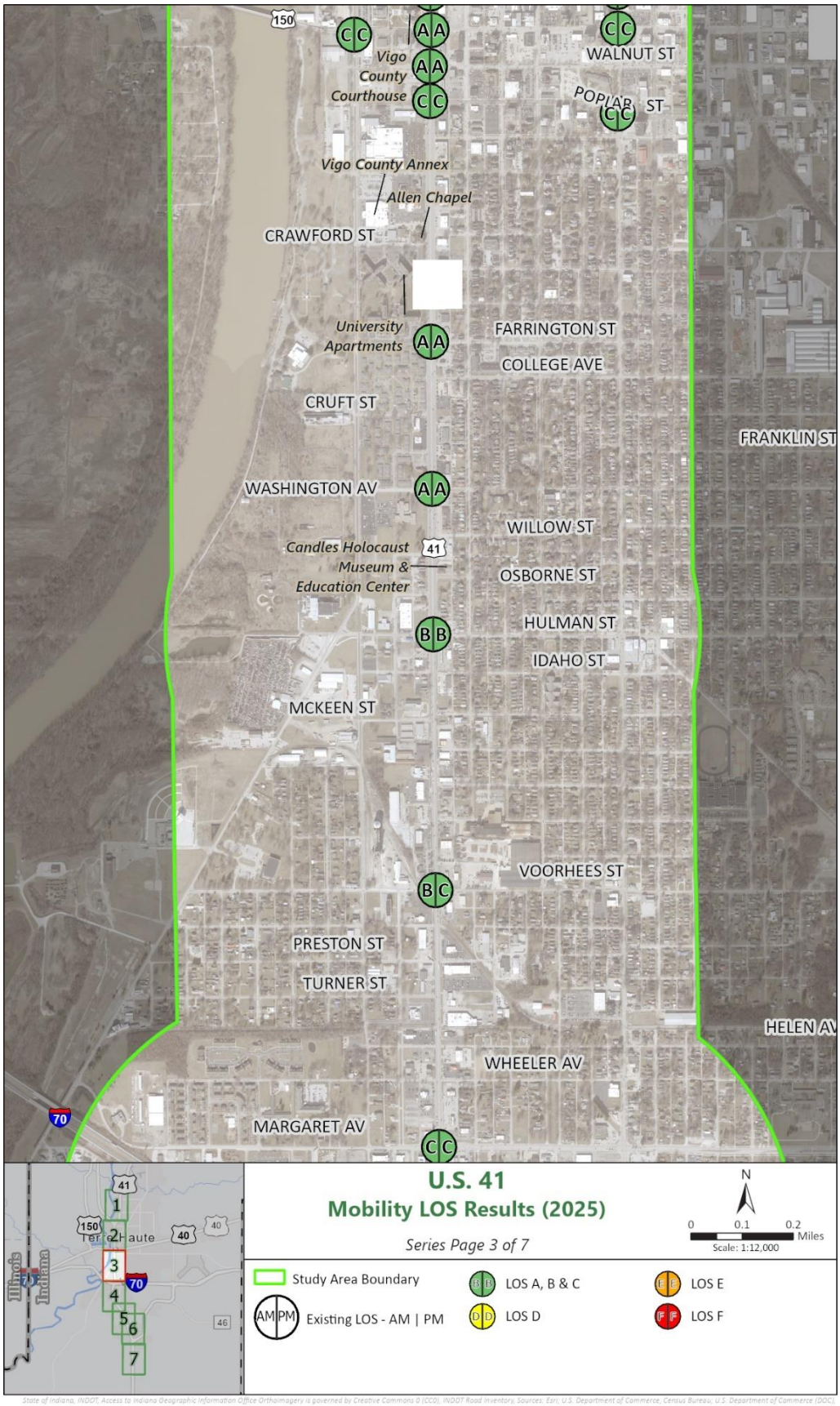

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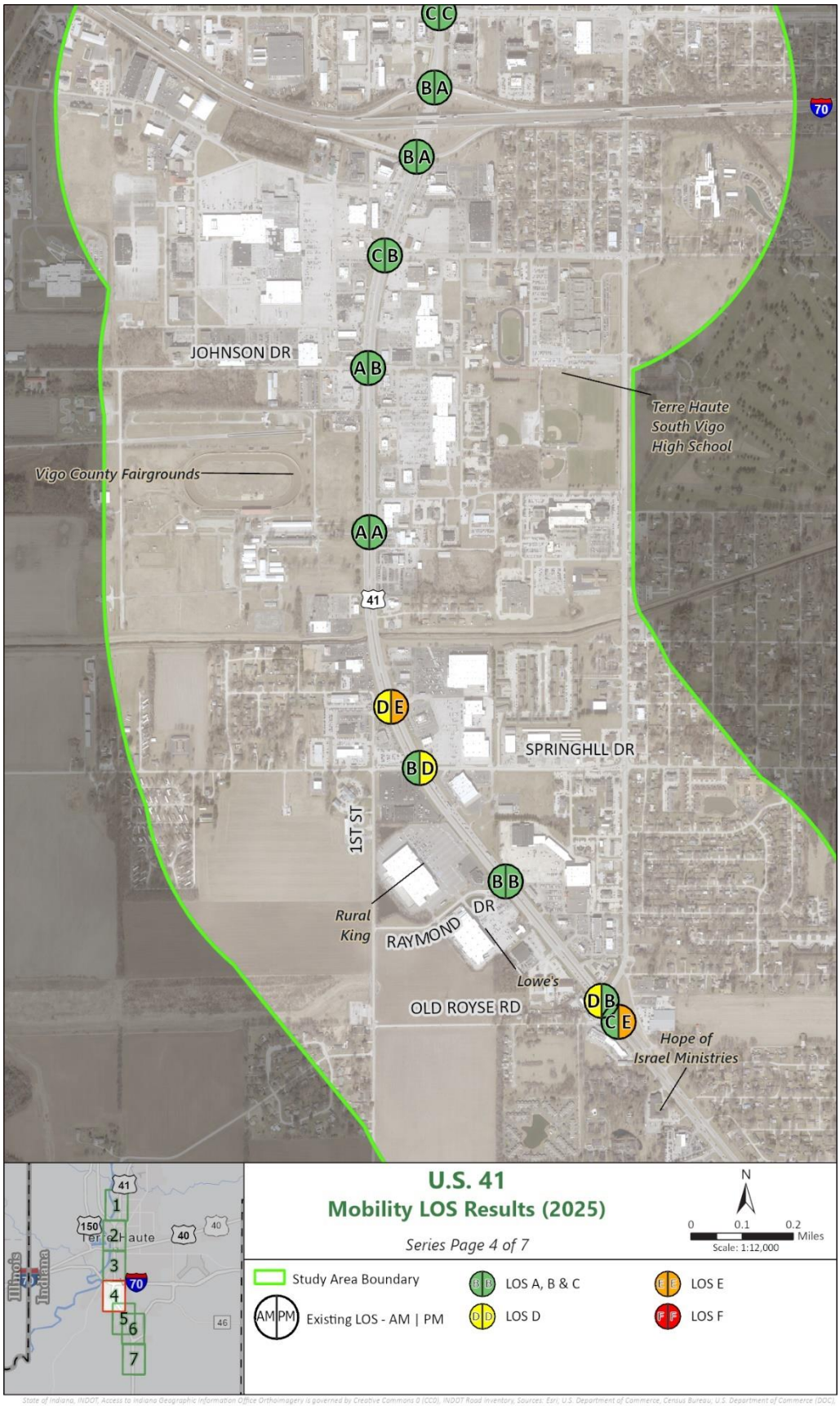
C C
B A
B A
C B
JOHNSON DR
A B
Terre Haute South Vigo High School
Vigo County Fairgrounds
A A
41
D E
SPRINGHLL DR
B D
1ST ST
B B
Rural King
RAYMOND DR
Lowe's
OLD ROYSE RD
D B C E
Hope of Israel Ministries
70
U.S. 41
Mobility LOS Results (2025)
Series Page 4 of 7
N
0 0.1 0.2 Miles
Scale: 1:12,000
Study Area Boundary
AM PM Existing LOS - AM | PM
B B LOS A, B & C
D D LOS D
E E LOS E
F F LOS F
Terre Haute
Illinois
Indiana
1
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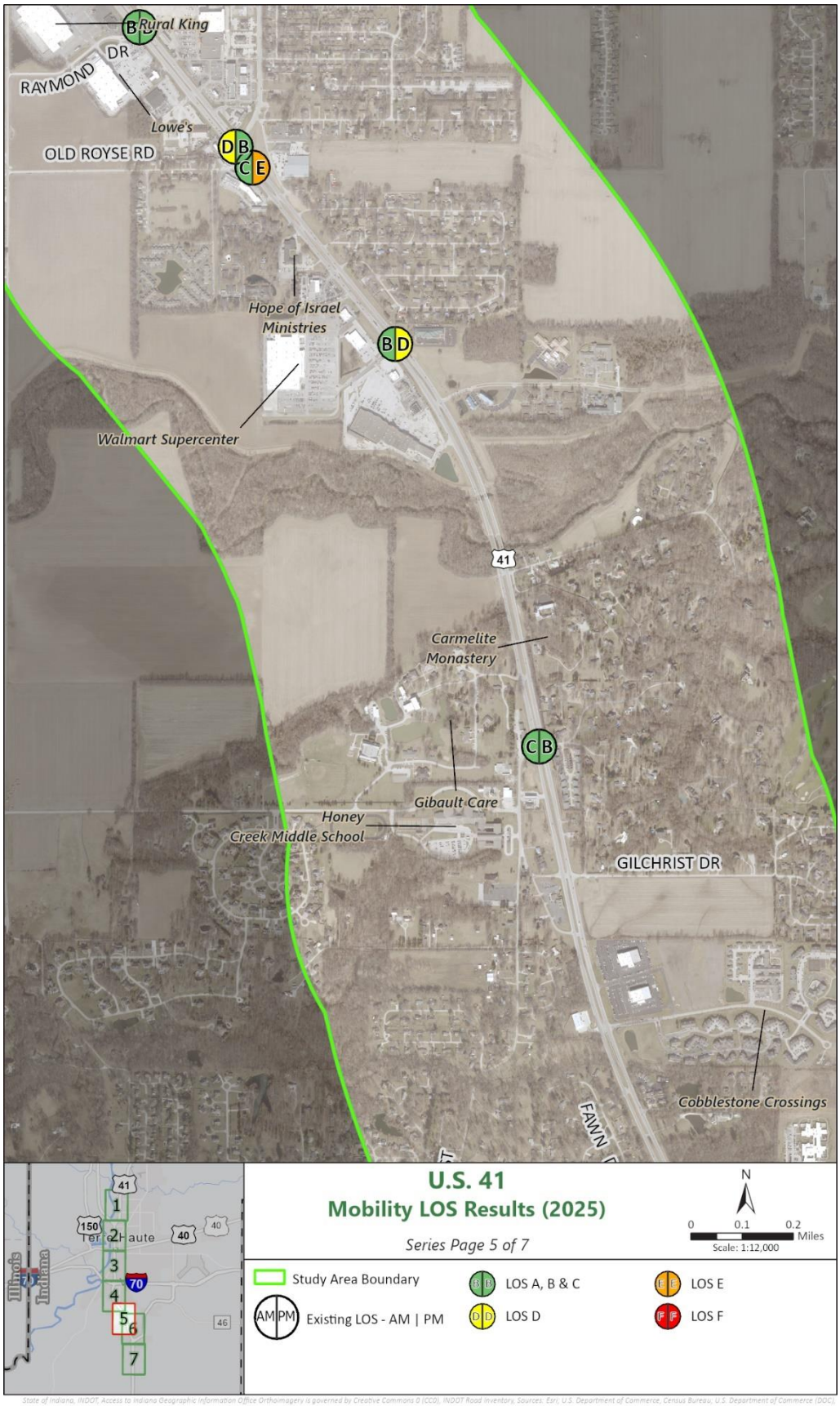

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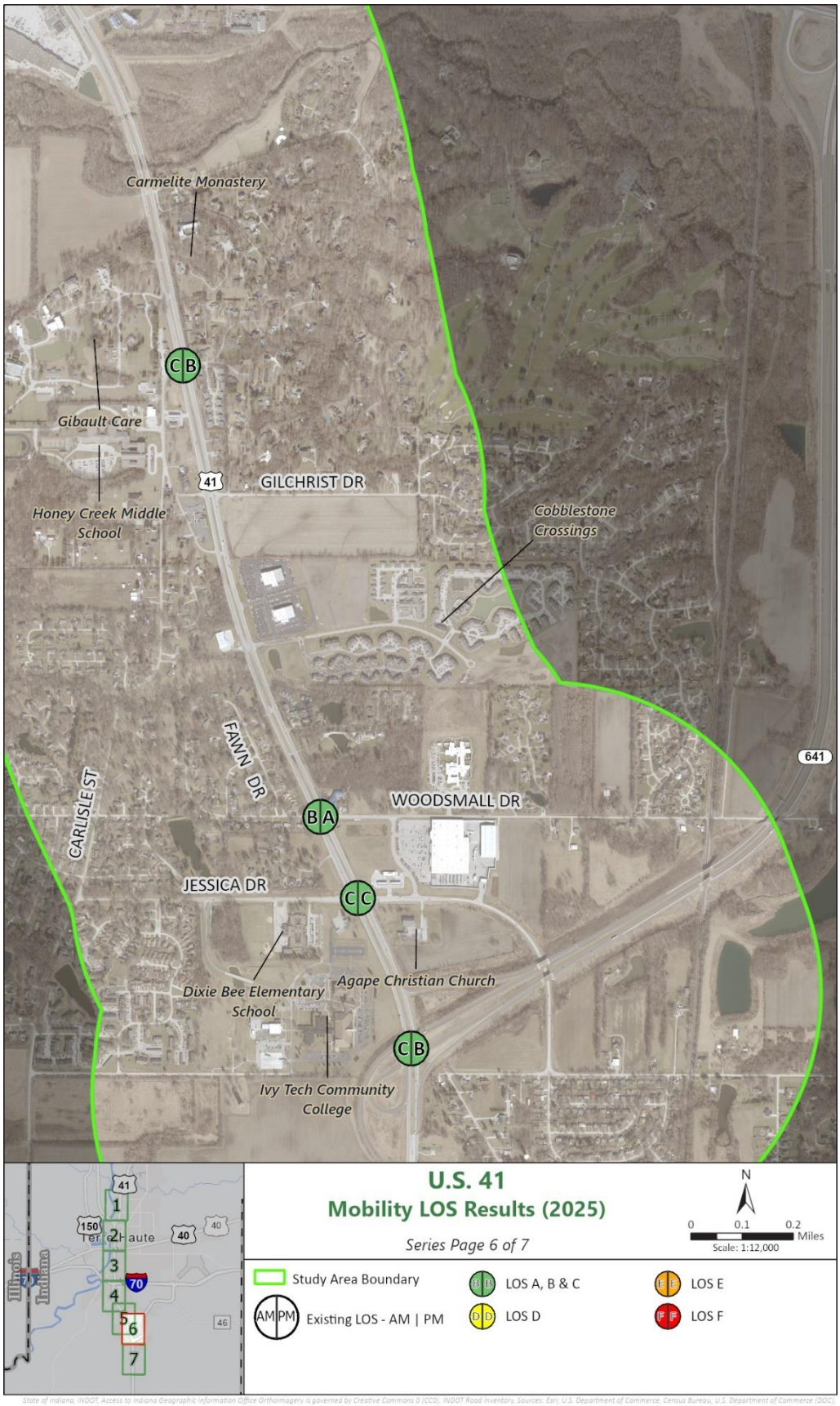

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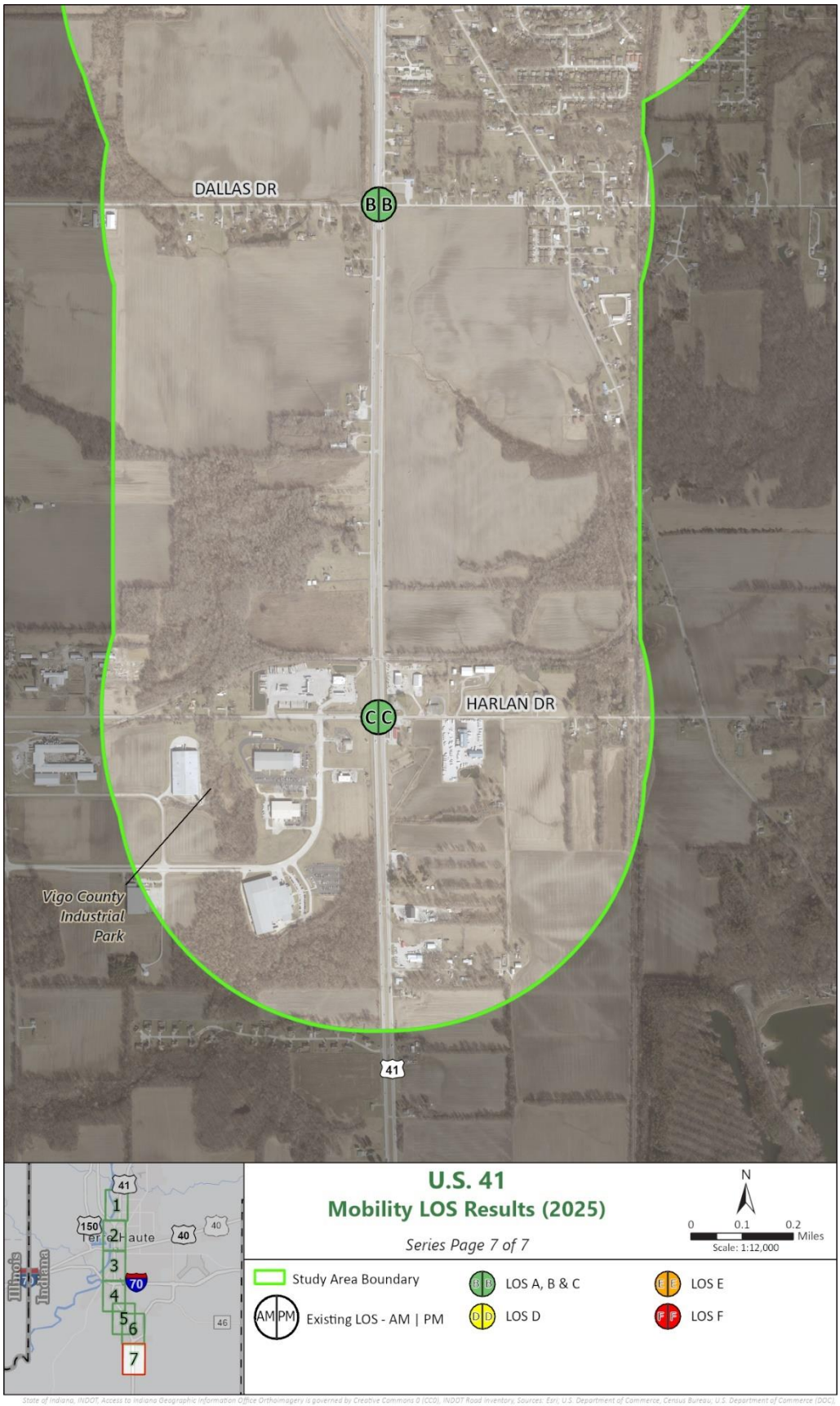


State of Indiana, INDOT, Access to Indiana Geographic Information Office Orthoimagery is governed by Creative Commons 0 (CC0), INDOT Road Inventory, Sources: Esri, U.S. Department of Commerce, Census Bureau, U.S. Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), National Geodetic Survey (NGS)

5.1.3.4 Intersection Operations with Pedestrian Crossings

The typical intersection operations during the peak hours that are presented in the previous section ignore the impact of pedestrian phases on intersection operations because pedestrian phases are currently actuated and occur only when prompted by a pedestrian. A supplemental evaluation was conducted at four U.S. 41 intersections to approximate peak-hour intersection operations with heavy pedestrian volumes. These intersections — Ohio Street, Wabash Avenue, Cherry Street and Chestnut Street — were selected due to their proximity to Indiana State University, where pedestrian volumes are largest in the study area.

Each intersection was analyzed under the assumption that a pedestrian activates the crossing of U.S. 41 during every cycle of the traffic signal. In most cases, this resulted in the side street approaches receiving more green time compared to the base scenario (no pedestrian activation), with the mainline through and left-turn movements experiencing reduced green time. Based on field review, Chestnut Street is the only intersection under pedestrian recall.

The results of this supplemental analysis are summarized in **Table 16**. Detailed output sheets are provided in **Appendix L**. Each of these intersections are expected to operate acceptably while serving pedestrian phases in each cycle of the traffic signal.

Table 16: Existing (2025) Intersection Operations with Pedestrian Crossings (select locations)

Intersection	Approach or Movement	Existing Conditions (2025)					
		A.M. Peak			P.M. Peak		
		LOS	Delay (sec/veh)	v/c	LOS	Delay (sec/veh)	v/c
U.S. 41 at Ohio St. (Signalized)	Eastbound	D	38.6	0.69	D	39.3	0.61
	Northbound	A	1.7	0.57	A	1.6	0.62
	Southbound	A	1.3	0.53	A	1.0	0.52
	Overall	**A**	**9.1**	**-**	**A**	**6.7**	**-**
U.S. 41 at Wabash Ave. (Signalized)	Westbound	D	40.4	0.47	D	40.2	0.76
	Northbound	A	0.3	0.38	A	0.3	0.44
	Southbound	A	0.1	0.38	A	0.2	0.33
	Overall	**A**	**1.1**	**-**	**A**	**3.2**	**-**
U.S. 41 at Cherry St. (Signalized)	Westbound	D	35.1	0.26	D	40.6	0.53
	Northbound	A	2.0	0.37	A	1.7	0.42
	Southbound	D	39.8	0.93	D	35.0	0.93
	Overall	**C**	**21.6**	**-**	**B**	**19.3**	**-**
U.S. 41 at Chestnut St. (Signalized)	Eastbound	C	31.0	0.19	C	30.8	0.22
	Westbound	C	29.9	0.05	C	30.9	0.24
	Northbound	D	41.3	0.85	C	29.4	0.92
	Southbound	D	46.1	0.84	D	47.9	0.83
	Overall	**D**	**43.4**	**-**	**D**	**37.4**	**-**

5.2 Review of U.S. 41 Lane Reduction Locations

This section provides a summary of field observations for the locations on U.S. 41 where the number of through traffic lanes is reduced from three lanes to two.

5.2.1 Southbound U.S. 41, Between Johnson Drive and Town South Plaza

South of Johnson Drive, U.S. 41 narrows from three lanes to two, with the outside lane becoming a right-turn-only lane adjacent to Town South Plaza (approximately 400 feet south of Johnson Drive). Field observations during both the a.m. and p.m. peak hours revealed no significant queuing or operational issues associated with this lane reduction. On the southbound U.S. 41 approach to Johnson Drive, most vehicles used the two inside through lanes (non-drop lanes), and the signal appeared to provide sufficient capacity to accommodate this existing lane utilization.

5.2.2 Northbound U.S. 41, Between I-70 and Margaret Avenue

North of I-70, U.S. 41 transitions from three lanes to two, with the outside lane becoming a right-turn-only lane at Margaret Avenue (approximately 700 feet north of the interstate). Field observations indicate that during both the a.m. and p.m. peak hours, northbound traffic queues extend from the Margaret Avenue signal back to the westbound I-70 ramp terminal intersection, forming a queue approximately 600 feet long. Because the outside lane is designated for right turns only, the queue is concentrated in the two inside lanes. Vehicles exiting I-70 were occasionally observed blocking the outside lane as they attempted to merge into the end of the northbound queue.

5.2.3 Southbound U.S. 41, Between Washington Avenue and Hulman Drive

South of Washington Avenue, U.S. 41 transitions from three lanes to two lanes, with the outside lane becoming a right-turn-only lane at Hulman Drive (approximately 1,400 feet south of Washington Avenue). Field observations during both the a.m. and p.m. peak hours indicated no operational issues at the Washington Avenue intersection resulting from the downstream lane reduction. At the Hulman Drive intersection, recurring queues were observed on the southbound U.S. 41 approach (which has two through lanes) during each signal cycle. The signal appeared to provide adequate capacity, as the queues cleared with each cycle.

5.2.4 Northbound U.S. 41, Between Maple Avenue and S.R. 63

North of Maple Avenue, U.S. 41 transitions from three lanes to two lanes. At this point, the outside lane diverges to S.R. 63, while the center lane serves as an option lane for either S.R. 63 or U.S. 41. This divergence occurs approximately 300 feet north of Maple Avenue. Field observations during both the a.m. and p.m. peak hours indicated no operational issues at either the U.S. 41/S.R. 63 diverge or the U.S. 41/Maple Avenue intersection.

5.3 Bicycle and Pedestrian Level of Traffic Stress (LTS)

The following chapter subsections document and analyze multimodal conditions in the corridor today. The purpose is to identify baseline conditions for the existing modal network (bike, pedestrian, transit) for use as the future No-Build scenario, from which all study mobility alternatives will be developed and compared.

5.3.1 Level of Traffic Stress (LTS) Methodology

Level of traffic stress (LTS) is a transportation planning method that quantifies the amount of discomfort people feel when they bike or walk near roadway traffic. The methodology was developed in 2012 by the Mineta Transportation Institute and San Jose State University to qualitatively evaluate stress for cyclists using the transportation network through measurable criteria.[4]

Bike Level of Traffic Stress (BLTS) has gained industrywide acceptance and has been adopted by numerous municipalities and state DOTs as a multimodal planning and design tool. A similar metric for pedestrian level of traffic stress (PLTS) has been developed to identify numerous built and social environment factors that influence pedestrian behavior across transportation networks. PLTS methods have been used by the Oregon Department of Transportation (ODOT) and the Washington State Department of Transportation (WSDOT), among state DOTs across the United States.

Both BLTS and PLTS methodologies are used in the PEL study and will help identify baseline facility conditions for bicyclists and pedestrians on the U.S. 41 corridor.

5.3.2 LTS Analysis

To evaluate factors that can contribute to stress for bicyclists and pedestrians, an LTS analysis is performed assigning a stress level to road segments based upon measurable roadway characteristics.

For bicyclists, Bicycle Level of Traffic Stress (BLTS) is assessed by:

- Traffic volume (assessed using Effective Average Daily Traffic)
- Number of travel lanes (per direction)
- Travel speeds (posted speed - mph)

[4] Mekuria, Maaza, Peter G. Furth, and Hilary Nixon, Low-Stress Bicycling and Network Connectivity, San Jose, CA: Mineta Transportation Institute, 2012.

For pedestrians, Pedestrian Level of Traffic Stress (PLTS) is assessed by:

- Traffic volume (assessed using Effective Average Daily Traffic)
- Travel speeds (posted speed - mph)
- Sidewalk width (for PLTS analysis only)
- Sidewalk buffer width (for PLTS analysis only)

5.3.3 LTS Scoring Results

LTS scores for a roadway segment are assigned on a scale of 1 through 4 with "1" being the lowest level of stress for users and "4" being the highest stress level for users. **Table 17** provides a description for each level of stress and qualifies how stress levels may be differentiated.

Table 17: LTS Scoring Scale

Stress Value Scale	Bicyclists Level of Traffic Stress (BLTS)	Pedestrians Level of Traffic Stress (PLTS)
1	High Comfort for All	High Comfort for All
2	High Comfort for Adults	High Comfort for Adults
3	Increasing Stress for Most	Increasing Stress for Most
4	"Strong and Fearless" Cyclists	High Stress Pedestrian Experience

For biking on an unprotected facility, or on a facility in mixed traffic, scoring reflects a strong correlation between a higher number of travel lanes, high travel speed and high traffic volumes with high BLTS stress values (BLTS 3 and BLTS 4), and a lower number of travel lanes, low travel speed and low traffic volumes correlated with low BLTS stress values (BLTS 1 and BLTS 2) providing greater comfort for users. For pedestrians, a buffer or physical separation between the sidewalk path and vehicular travel lanes strongly impacts the level of pedestrian comfort. **Table 18** and **Table 19** summarize the roadway characteristic standards to which scoring is scaled.

Table 18: Bike Lane Level of Traffic Stress (BLTS) – Mixed Traffic Segments

Number of Through Lanes	Effective ADT	Prevailing Speed				
		25 mph	30 mph	40 mph	45 mph	50+ mph
1 per direction	0-750	1	2	3	3	3
1 per direction	751-1,500	2	2	3	4	4
1 per direction	1,501+	3	3	4	4	4
2 per direction	8,001+	3	4	4	4	4
3+ per direction	any ADT	3	4	4	4	4

**For corridor segment bike lanes in mixed traffic (no marked bicycle lane, with or without shoulder)*

Table 19: Pedestrian Level of Traffic Stress (PLTS)

Speed (mph)	Sidewalk Width (ft)	Buffer Width and Type			
		>10'	5' - 9'	1' - 4'	None
26 - 30	5' - 7'	2	3	3	4
31- 35	5' - 7'	3	3	4	4
35 or more	5' - 7'	3	3	4	4

5.3.4 LTS Scoring Results by Segments

Posted speeds on U.S. 41 range from 30 to 50 mph with two or three lanes per direction at various locations along the corridor. AADT values exceed 8,000 vehicles per day for all but one segment with a typical sidewalk width of 5-to-7 feet where sidewalks are present. Sidewalk buffers occur at only three segments of U.S. 41.

Table 20 depicts bicycle and pedestrian level of traffic stress for study area segments identified along U.S. 41.

Table 20: U.S. 41 BLTS and PLTS Results by Corridor Segments

Segment Location	Mainline AADT	Total Travel Lanes	Posted Speed (mph)	Bike Facility	BLTS	PLTS
South of Harlan Dr.	16,400	4	50	None	4	4
Harlan Dr. to Dallas Dr.	20,700	4	50	None	4	4
Canter Dr. to Carlisle St.	19,800	4	50	None	4	4
Carlisle St. to 56th Dr.	28,600	4	50	None	4	4
56th Dr. to Old Royse Rd.	33,100	4	50	None	4	4
7th St. to Raymond Dr.	33,100	4	50	None	4	4
Raymond Dr. to Spring Hill St.	24,300	4	40	None	4	4
Mayfair Dr. to Fairgrounds Dr.	33,500	4	40	None	4	4
Fairgrounds Dr. to Johnson Dr.	30,700	4	40	None	4	4
Johnson Dr. to Davis Dr.	32,600	6	40	None	4	4
Davis Dr. to I-70 EB	36,100	6	40	None	4	4
Margaret Ave. to Voorhees St.	30,400	4	40	None	4	4
Voorhees St. to Hulman Dr.	28,700	4	40	None	4	3
Hulman Dr. to Washington Ave.	29,000	6	40	None	4	4
Washington Ave. to Farrington St.	30,100	6	40	None	4	4
Farrington St. to Poplar St.	28,000	6	30	None	4	4
Cherry St. to Chestnut St.	29,100	6	30	None	4	4
Chestnut St. to Locust St.	21,100	6	30	None	4	4
Locust St. to 8th Ave.	24,100	6	40	None	4	4
8th Ave. to Maple Ave.	22,200	6	40	None	4	4
S.R. 63 to Fort Harrison Rd.	14,800	4	55	None	4	4
Fort Harrison Rd. to Haythorne Ave.	8,200	4	55	None	4	4
North of Haythorne Ave.	6,100	4	55	None	4	4

Level of traffic stress for biking is “BLTS 4” for all segments of U.S. 41, indicating that U.S. 41 has the highest stress conditions for bicyclists today. These conditions may only be acceptable for “strong and fearless” bicyclists who tolerate roadway conditions with high car traffic volumes and high travel speed. There are no marked bicycle lanes on U.S. 41 delineating any network accommodation for bicycling in mixed traffic.

Level of traffic stress for pedestrians is a “PLTS 4” for all but one segment of U.S. 41, indicating high stress conditions for pedestrians throughout the study corridor. The high PLTS scores indicate

most segments either lack sidewalks or have sidewalks with little to no buffer separating pedestrians from high volumes of fast-moving car and truck traffic.

5.4 Intersection Crossing Analysis

Pedestrian comfort crossing U.S. 41 was evaluated by correlating pedestrian travel delay in seconds to pedestrian exposure distance for U.S. 41 pedestrian crossings at signalized and unsignalized intersections. Six additional intersections adjacent to U.S. 41 were also evaluated. The longer a pedestrian is required to wait for a pedestrian crossing signal at an intersection and the greater the crossing distance, the more likely they are to disregard a crosswalk signal and engage in "higher risk" behavior. A pedestrian crossing delay of 40 seconds is identified by the National Association of City Transportation Officials (NACTO) as a key threshold that can influence unsafe or higher-risk pedestrian crossing behavior increasing likelihood for the frequency and severity of roadway crashes involving pedestrians.

A qualitative matrix was developed, depicted in **Table 21**, correlating pedestrian crossing delays to crossing distances applying a scoring range of 1 to 4 with "1" indicating minimal crossing delays and exposure risks to "4" indicating high crossing delays and risk exposure representing unsatisfactory conditions.

Table 21: U.S. 41 – Crossing Delay Conditions Matrix

Linear Feet	Delay (seconds)							
	<= 10	<= 20	<= 30	<= 40	<= 50	<= 60	<= 70	> 70
<= 60	1	1	2	3	3	3	4	4
<= 80	1	1	2	3	3	3	4	4
<= 100	2	2	2	3	3	4	4	4
<= 120	3	3	3	3	4	4	4	4
<= 140	3	3	3	4	4	4	4	4
<= 160	3	3	4	4	4	4	4	4
<= 180	4	4	4	4	4	4	4	4
> 180	4	4	4	4	4	4	4	4

Table 22 depicts the results of the analysis for corridor intersections. Approximately 95% of all intersection approaches have a pedestrian crossing delay score of 3 or greater indicating high pedestrian risks at corridor intersections and crossings.

Table 22: U.S. 41 – Crossing Delay Score Results

Intersection	Delay (Highest Value)	Linear Feet	Sidewalk Present	Pedestrian Delay Score
U.S. 41 at Harlan Dr. (Signalized)	48.2	120	No	4
	45.0	120	No	4
U.S. 41 at Dallas Dr. (Unsignalized)	13.2	150	No	3
	14.5	150	No	3
U.S. 41 at Jessica Dr. (Signalized)	38.5	120	No	3
	38.7	120	No	3
U.S. 41 at Canter Dr. (Signalized)	38.4	110	No	3
	39.0	125	No	4
U.S. 41 at Carlisle St. (Signalized)	52.7	135	No	4
	72.2	125	No	4
U.S. 41 at 56th Dr. (Signalized)	66.7	130	No	4
	65.5	140	No	4
U.S. 41 at Old Royse Rd. (Unsignalized)	47.8	180	No	4
U.S. 41 at 7th St. (Signalized)	60.1	115	No	4
	56.4	115	No	4
U.S. 41 at Raymond Dr. (Signalized)	66.4	140	No	4
	60.4	140	No	4
U.S. 41 at Springhill Dr. (Signalized)	63.9	110	No	4
	68.5	110	No	4
U.S. 41 at Mayfair Dr. (Unsignalized)	36.6	140	No	4
	44.3	140	No	4
U.S. 41 at McCallister Dr. (Signalized)	66.2	130	No	4
U.S. 41 at Johnson Dr. (Signalized)	59.1	140	No	4
	50.1	130	No	4
U.S. 41 at Davis Dr. (Signalized)	63.9	125	No	4
	60.1	105	No	4
U.S. 41 at I-70 EB (Signalized)	59.3	120	Yes	4
U.S. 41 at I-70 WB (Signalized)	57.9	120	Yes	4
U.S. 41 at Margaret Ave. (Signalized)	66.3	100	Yes	4
	77.2	95	Yes	4
U.S. 41 at Voorhees St. (Signalized)	42.7	65	Yes	3
	32.5	70	Yes	3
U.S. 41 at Hulman Dr. (Signalized)	42.2	85	Yes	3
	30.7	90	Yes	3
	38.8	90	Yes	3

Intersection	Delay (Highest Value)	Linear Feet	Sidewalk Present	Pedestrian Delay Score
U.S. 41 at Washington Ave. (Signalized)	39.9	90	Yes	3
U.S. 41 at Farrington St. (Signalized)	39.9	95	Yes	3
	39.6	95	Yes	3
U.S. 41 at Poplar St. (Signalized)	40.5	90	Yes	3
	40.6	90	Yes	3
U.S. 41 at Walnut St. (Signalized)	42.8	85	Yes	3
U.S. 41 at Ohio St. (Signalized)	41.2	90	Yes	3
U.S. 41 at Wabash Ave. (Signalized)	40.4	85	Yes	3
U.S. 41 at Cherry St. (Signalized)	46.9	90	Yes	3
U.S. 41 at Chestnut St. (Signalized)	40.9	85	Yes	3
	40.3	85	Yes	3
U.S. 41 at Locust St. (Signalized)	24.9	95	Yes	2
	41.1	130	Yes	4
U.S. 41 at 8th Ave. (Signalized)	40.4	105	Yes	4
	30.6	85	Yes	3
U.S. 41 at Maple Ave. (Signalized)	75.3	150	Yes	4
	53.7	150	No	4
1st St. at Maple Ave. (Unsignalized)	19.2	45	No	1
U.S. 41 at Fort Harrison Rd. (Signalized)	35.1	135	No	4
	29.5	130	No	3
U.S. 41 at Haythorne Ave. (Unsignalized)	9.0	130	No	3
	15.0	130	No	3
1st St. at U.S. 150E (Signalized)	45.3	60	Yes	3
1st St. at U.S. 150W (Signalized)	29.9	70	Yes	2
7th St. at Poplar St. (Signalized)	35.2	40	Yes	3
	38.7	40	Yes	3
7th St. at Ohio St. (Signalized)	41.6	40	Yes	3
7th St. at Wabash Ave. (Signalized)	37.5	40	Yes	3
	38.3	40	Yes	3
7th St. at Cherry St. (Signalized)	42.8	40	Yes	3

5.5 Pedestrian/Bicycle Mode Shift Propensity

The Terre Haute Area MPO (THAMPO) Travel Demand Model (2022 Base Year) was used to evaluate the potential for mode shift from automobile-based trips to walking/biking trips within the study area. Origin-destination (O-D) data was used to identify trips of 0.5 mile or less in length, which have potential to become walking trips, and trips between 0.5 and 1.5-miles in length, which have a potential for shifting to bicycle trips. These short-distance trips were aggregated within each Traffic Analysis Zone (TAZ) to identify areas with potential for mode shift. The zonal short-distance trip data was also overlayed with existing bike/ped facilities to identify infrastructure deficiencies that should be addressed to promote mode shift.

The maps in **Appendix M** show that most trips of 0.5 mile in length or less are concentrated in the urbanized core of Terre Haute, where residential neighborhoods, commercial destinations and institutional uses are closely connected. Along the U.S. 41 corridor, two areas stand out for higher volumes of short trips with a length less than 0.5 mile, particularly around the Terre Haute Regional Hospital, Terre Haute South Vigo High School and Haute City Center to the south, and near Indiana State University and Union Hospital to the north. While these areas have pedestrian facilities, they are scored a PLTS 4, indicating high stress areas for pedestrians. Enhancing the quality and design of pedestrian infrastructure in these areas could significantly improve the walking experience for individuals making short trips.

Trips likely to shift from automobile to bicycle are distributed more broadly, with higher concentrations between Maple Avenue and Locust Street and East Davis Drive and Spring Hill Drive, for neighborhoods adjacent to major commercial centers. However, bicycle facilities are limited, disconnected, or not available in study area locations especially south of the I-70 interchange. The study will further evaluate limited multimodal connections.

5.6 Transit Analysis

Public transit in the City of Terre Haute is operated by Terre Haute Transit Utility (THTU). THTU provides both fixed-route bus service and ADA paratransit service throughout Terre Haute. The fixed-route system consists of six daytime routes running from approximately 6 a.m. to 6 p.m. and two evening routes operating from about 6 p.m. to 9 p.m. with a 60-minute service frequency. In addition, campus routes are available for Indiana State University and Ivy Tech Community College. The ISU route has a service frequency of 25-minutes, while the Ivy Tech route has a service frequency of 30- to 60-minute intervals depending on the time of day.

Ridership on THTU services has seen notable fluctuations in recent years, particularly due to the COVID-19 pandemic. **Table 23** below shows annual ridership between 2019 and 2023. Ridership peaked in 2019 at over 237,000 trips and then gradually declined, with the sharpest drop in 2020 due to the pandemic. Ridership has remained lower than pre-pandemic levels, with a recovery

observed from 2021 to 2023. In comparison, statewide transit ridership also dropped significantly due to the pandemic but has recovered at a more rapid rate than THTU has experienced.

Table 23: Terre Haute Transit Utility (THTU) Annual Ridership

Year	Terre Haute Transit Utility		Statewide	
	Annual Ridership (persons)	Percent Change	Annual Ridership (persons)	Percent Change
2019	237,867	-	32,921,934	-
2020	144,126	-39%	17,471,539	-47%
2021	129,031	-10%	17,185,253	-2%
2022	131,633	2%	20,068,265	17%
2023	145,758	11%	23,371,469	16%

Transit Propensity Index (TPI) evaluates how zonal socioeconomic characteristics could potentially impact travel demands for transit mode, by considering impactful factors such as race, gender, income and auto ownership, etc. In general, a high TPI indicates a high likelihood of using transit for trip making. For the ProPEL US 41 study, TPI was developed for the U.S. 41 study corridor and Terre Haute urban/suburban area, using the latest census data at block level. In common planning practice, major destinations of transit trips, including job centers and major amenities (e.g., hospitals and colleges), can be overlayed with the zonal TPI as well as the existing transit facilities data to assess the connectivity and accessibility of the transit service in the region and identify potential gaps.

Figure 18 maps show that the transit stops and facilities are heavily concentrated within the urbanized area of Terre Haute, particularly along and near the U.S. 41 study limit. The highest density of transit stops aligns closely with areas of high transit propensity, as indicated by the darker blue shaded zones. The U.S. 41 corridor (marked in red) runs through areas of moderate to high transit propensity, suggesting that transit service routes and stop locations may need to be evaluated to understand how transit coverage and operations impact ridership levels.

Key destinations such as colleges, hospitals and job centers are generally well-served by existing transit facilities along the U.S. 41 corridor, except for an observed gap on the U.S. 41 corridor south of 56th Drive (Walmart Supercenter). Job centers are clustered along and near the U.S. 41 study limit, particularly in the southern portion near I-70, where transit coverage is strong. However, some outlying job centers on the edges of the study area fall outside the transit network, indicating opportunities for service expansion or multimodal solutions.

6 Mobility Analysis – Horizon Year No-Build Conditions

This chapter documents planned projects and horizon year (2050) mobility conditions of the No-Build scenario.

6.1 Planned Projects

The Statewide Transportation Improvement Program (STIP) is a planning document that lists all projects to be funded with federal funds and all state funded projects that are regionally significant. This document covers all projects funded and scheduled for the upcoming four-to-five-year period. The current STIP covers years 2026 – 2030.

The STIP contains five projects within the PEL study area, which are summarized in **Table 24**. STIP projects within the PEL study area are listed because they have the potential to impact the future No-Build conditions and/or asset conditions.

Table 24: Summary of STIP Projects within Study Area

Des No.	Route	Work Type	Description
1900195	I-70	Bridge Replacement	I-70 District Bridge Project (replacement) over removed CSX RR, 0.57 mile east of U.S. 41 (eastbound)
2400088	U.S. 41	Access Control	U.S. 41, Access Control, 0.57 mile south of I-70 at Dixie Bee Rd.
2000377	U.S. 41	Bridge Thin Deck Overlay	U.S. 41, Bridge Thin Deck Overlay, From 0.14 mile south of S.R. 63 Jct. to 5.92 miles south of S.R. 163
2300776	U.S. 40	Bridge Removal	Bridge removal project along U.S. 40 (bridge spans National Road Heritage Trail) to be replaced with a box culvert
2500564	ST 1031	Road Reconstruction	Margaret Avenue, road reconstruction (continuous center left turn lane) from Prairieton Rd. to South 3rd St. (U.S. 41/U.S. 150) while also incorporating sidewalks

The bridge thin deck overlay of a U.S. 41 bridge (Des No. 2000377) is expected to have no impact on No-Build safety or operations of the U.S. 41 corridor. The access control project at the U.S. 41 and Dixie Bee Road intersection (Des No. 2400088) will convert Dixie Bee Road and the opposing driveway to a right-in/right-out configuration. The project will also eliminate southbound left turns into Town South Plaza. This project is expected to be constructed in the summer of 2026. The Margaret Avenue improvements (Des 2500564) are funded for construction in 2030. The two

other projects in this list are expected to have no impacts on future No-Build conditions within the PEL study area.

6.2 Traffic Volumes

6.2.1 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 Terre Haute Area Metropolitan Planning Organization's travel demand model, which encompasses all of Vigo County. The travel demand model is a four-step trip-based model with a base year of 2022 and a planning horizon year of 2050. Four time periods (a.m., Mid-Day, p.m. and Nighttime) are represented in the model as well as three vehicle classes (auto, single-unit truck and combination truck).

The MPO's 2022 base model was enhanced to reflect 2025 conditions for use in this PEL study. The enhancements are described below.

- **Recent Traffic Counts** - The 2022 base model was calibrated to current conditions using traffic counts collected in 2024 and 2025 at 36 locations along the study corridor and traffic counts collected on nearly forty segments.
- **Traffic Analysis Zone (TAZ) Refinement** – The base model contains 520 TAZs that were refined and expanded to 615 TAZs 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. This included updating the key attributes of U.S. 41 and key roadways to reflect 2025 conditions and the addition of over 450 links with functional classification of Minor Collector or greater.

The 2025 base model was calibrated to the 2025 counts using an Origin-Destination Matrix Estimation (ODME) process. The calibration was approved by INDOT in November 2025. 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 December 2025.

- **Imminent developments** - Two major developments occurred or are imminent within the study area. A casino complex that opened in Spring 2024 was not added to the model as trips associated with the development are captured in the 2025 traffic counts. A battery plant is currently under construction in southern Vigo County. This plant and the approximately 600 jobs expected to be generated by the plant were added to the horizon year model.

- **Network Refinement** – All network enhancements made for the 2025 base model were carried forward to the horizon year model.
- **Recently Completed Projects** – All major capacity improvements incorporated into the 2025 base model were carried forward to the horizon year model.
- **Committed Projects** – The 2050 Metropolitan Transportation Plan (MTP) includes numerous cost feasible capacity projects within the MPO's planning area that were incorporated into 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 and 765.

6.2.2 Horizon Year Traffic Volumes

Average annual growth rates were calculated from a.m. and p.m. peak period and daily outputs of the base and horizon year travel demand models. These growth rates, listed in **Table 25**, were applied to 2025 traffic volumes to develop peak hour volumes for use in the horizon year capacity analysis to be described herein. Growth rates were calculated separately for a.m. and p.m. peak periods and for autos and trucks. Growth rates were also calculated for multiple geographic zones that closely follow the context zones presented in an earlier section of this report. The growth rate calculations and the resulting 2050 turning movement volumes and truck percentages for each study intersection are provided in **Appendix J**.

Table 25: U.S. 41 Average Annual Growth Rates

Segment	Average Annual Growth Rates (All Vehicles / Trucks)		
	A.M. Peak	P.M. Peak	Daily
E. Haythorne Ave. to S.R. 63	0.29% / 0.65%	0.22% / 0.78%	0.28% / 0.72%
S.R. 63 to Chestnut St.	0.50% / 1.29%	0.54% / 1.62%	0.59% / 1.45%
Chestnut St. to Poplar St.	0.22% / 0.56%	0.28% / 0.55%	0.20% / 0.54%
Poplar St. to I-70	0.33% / 1.00%	0.25% / 1.26%	0.31% / 1.13%
I-70 to S.R. 641	0.14% / 0.57%	0.19% / 0.75%	0.21% / 0.65%
S.R. 641 to E. Harlan Dr.	0.52% / 0.74%	0.61% / 0.96%	0.65% / 0.83%

Average Annual Daily Traffic (AADT) volumes and truck percentages along the U.S. 41 study corridor were developed by applying growth rates derived from the travel demand modeling to the 2025 volumes provided in Chapter 5. The AADT volumes along U.S. 41 are summarized in **Table 26**. The daily truck percentage was determined for the horizon year as depicted in **Table 26.**

Table 26: U.S. 41 Average Annual Daily Traffic Volumes (2050)

Count Location	2050 AADT Volumes	Daily Truck %	Average Daily Truck Volume
North of S.R. 63	15,500	8%	1,200
South of Locust St.	31,100	9%	2,700
North of I-70	36,800	7%	2,500
South of I-70	38,700	6%	2,200
South of S. 7th St.	34,500	6%	1,900
South of S.R. 641	25,600	11%	2,800

6.3 Travel Patterns

The travel demand modeling described in Section 6.1 utilized current travel patterns in Vigo County. These travel patterns are documented in origin-destination (O-D) trip tables, developed by THAMPO, that establish where trips begin (origins) and end (destinations). These O-D trip tables are one of the major inputs to the travel demand model developed by the MPO as part of its recent 2050 Metropolitan Transportation Plan (MTP) and are major inputs to the ProPEL US 41 travel demand model, which is based on the MPO's model. The trip tables are derived using the latest U.S. census data, best available employment data, and other survey results, and are calibrated to recent traffic counts.

Both the MPO and the ProPEL US 41 travel demand models separate a typical day into four distinct time periods, with one time period each representing a.m. and p.m. peak periods. Separate O-D trip tables are provided for each of these time periods. O-D trip tables of the a.m. and p.m. 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.

6.3.1 Travel Pattern #1

2025 model trips (three-hour peak periods) within the study area that enter and/or leave U.S. 41 in central Terre Haute (between I-70 and S.R. 63) are provided in **Table 27**.

Table 27: Travel Pattern #1 – U.S. 41 between I-70 and S.R. 63 Trips

Segment	All Vehicle trips		Heavy Vehicle and commercial truck trips	
	A.M.	P.M.	A.M.	P.M.
Between central Terre Haute to/from S.R. 63 or north of S.R. 63	3,892 trips / 12%	5,181 trips / 10%	232 trips / 7%	193 trips / 4%
Between central Terre Haute to/from I-70 or south of I-70	4,600 trips / 15%	7,565 trips / 15%	275 trips / 8%	250 trips / 6%
East/ West trips within central Terre Haute	7,487 trips / 24%	10,846 trips / 21%	255 trips / 8%	365 trips / 8%

The central Terre Haute area attracts and/or generates around half of all trips within the study area. This suggests that U.S. 41 within central Terre Haute is a primary arterial for motorists who come into central Terre Haute with origins and/or destinations on U.S. 41 or in the areas east or west of U.S. 41. The fact that the central Terre Haute area attracts or generates approximately half of all trips within the study boundary reinforces that U.S. 41 through central Terre Haute is an important route for local mobility needs.

Because such a high percentage of trips begin, end, or cross U.S. 41 within central Terre Haute, the traffic patterns observed along the corridor are largely driven by people who are intentionally accessing local destinations such as commercial districts, employment centers, educational facilities, and service-oriented land uses. This indicates the corridor's demand is closely tied to local mobility needs, in addition to serving longer-distance regional travel.

Heavy vehicle and commercial truck trips provide goods to the businesses in and around central Terre Haute with a combined 23% (a.m. peak period) and 19% (p.m. peak period) of truck trips in the study area using or crossing U.S. 41 to access the cross streets and businesses in this area.

As shown above, the east/west trips represent between 21% and 24% of total study area peak period trips. These trips either use U.S. 41 for a short distance or only cross U.S. 41 within the central Terre Haute area. These east-west trips represent potentially shorter trips that could be candidates for mode shift.

6.3.2 Travel Pattern #2

Trips passing through the entirety of central Terre Haute on U.S. 41, between I-70 and S.R. 63:

- All vehicle trips: 3% (833 trips, a.m.), 2% (1,195 trips, p.m.)

- Heavy vehicle and commercial truck trips: 3% (109 trips, a.m.), 3% (120 trips, p.m.)

The model travel patterns indicated a relatively low volumes of trips that pass through the entirety of central Terre Haute on U.S. 41, between I-70 and S.R. 63.

6.3.3 Travel Pattern #3

2025 peak period trips (three-hour totals) between the south or east ends of the study area and the north end of the study area:

- All vehicle trips: 3% (831, a.m. peak period), 2% (1,093, p.m. peak period)
- Heavy vehicle and commercial truck trips: 3% (105, a.m. peak period), 3% (118, p.m. peak period)

This analysis was conducted to approximate the amount of traffic that could potentially use a bypass link northeast of Terre Haute that connects I-70, east of Terre Haute, with U.S. 41, north of Terre Haute. Review of daily 2025 O-D model patterns indicated approximately 5,700 vehicles that currently use U.S. 41, with 710 trucks, could potentially use a northeast quadrant bypass on a typical day.

6.3.4 Travel Pattern #4

Study area trips using I-70 or S.R. 641 within the study area are provided in **Table 28**.

Table 28: Travel Pattern #4 – I-70 and S.R. 641 Trips

Segment	All Vehicle Trips		Heavy Vehicle and Commercial Truck Trips	
	A.M.	P.M.	A.M.	P.M.
I-70 to/from S.R. 63 or U.S. 41 (north of S.R. 63)	437 trips /1%	584 trips / 1%	79 trips / 2%	92 trips/ 2%
I-70 to/from U.S. 41 (south of S.R. 641)	154 trips / 0.5%	246 trips / 0.5%	217 trips / 7%	153 trips / 4%
S.R. 641 to/from U.S. 41 (south of S.R. 641)	1,795 trips / 6%	1,866 trips / 4%	217 trips / 7%	153 trips / 4%
I-70 to/from I-70 (east/west pass-through trips on I-70)	2,349 trips / 9%	4,197 trips / 8%	1,302 trips / 40%	2,469 trips / 57%
I-70 to/from U.S. 41 between S.R. 641 and S.R. 63	2,789 trips / 9%	4,509 trips / 9%	218 trips / 7%	187 trips / 4%

Total trips within the study area using I-70 or S.R. 641 represent 24% (a.m. peak period) and 22% (p.m. peak period). While only 7% (a.m. peak period) and 8% (p.m. peak period) of the total trips stay on I-70 through the study area (east/west passthrough trips), these east/west passthrough trips account for 40% (a.m. peak period) and 57% (p.m. peak period) of all study area heavy vehicle and commercial truck trips. This indicates that I-70 is a major freight corridor through Terre Haute.

6.4 Horizon Year (2050) No-Build Operating Conditions

Like the existing conditions analysis, Synchro 11 software and Highway Capacity Software (HCS7) software packages were used to evaluate future No-Build conditions. These analyses were performed using the 2050 peak hour traffic volumes described in **Section 6.2.2**. The results of the future (2050) No-Build operational analysis are summarized **Figure 32.**

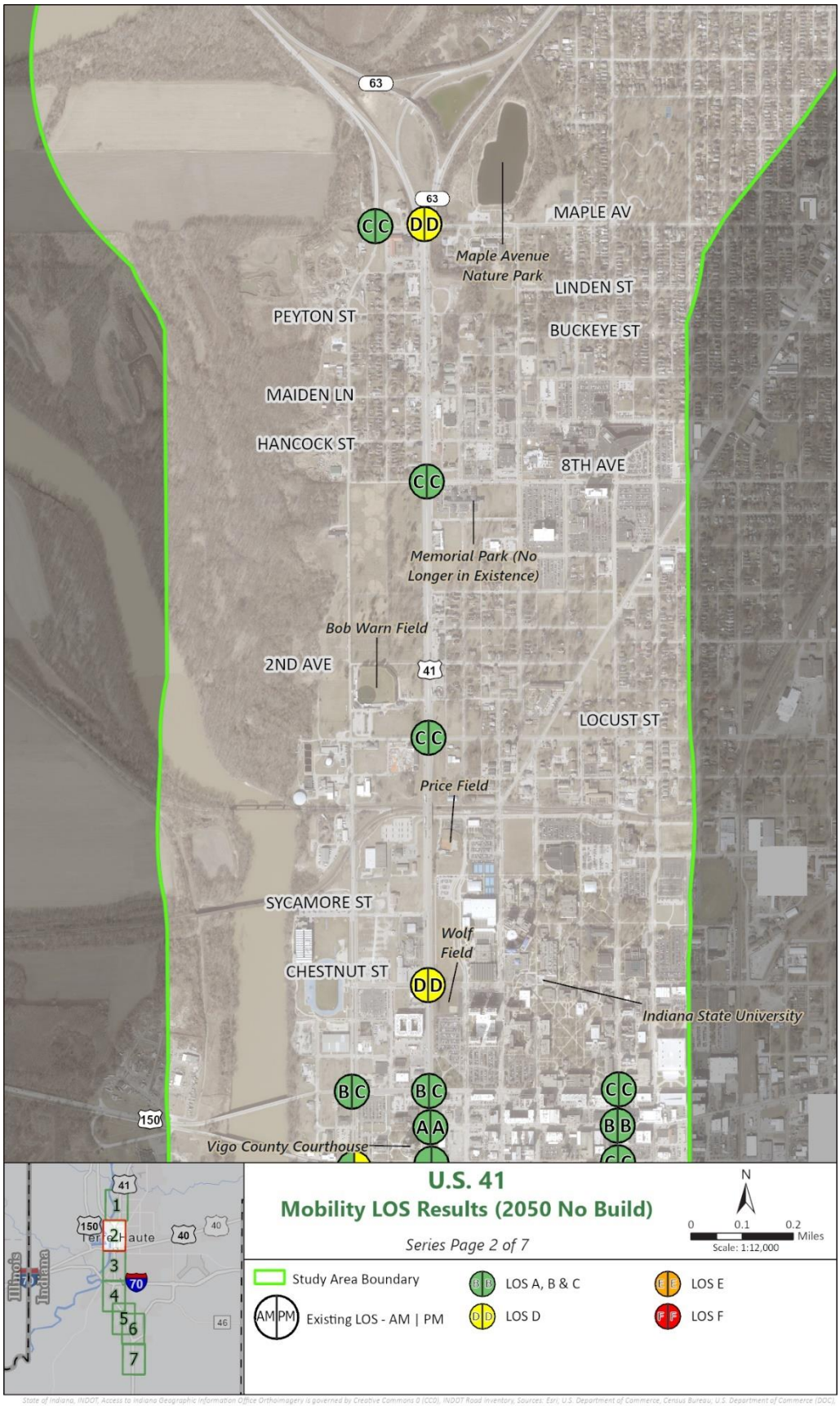
Under No-Build (2050) operating conditions, overall intersection performance throughout the study area is acceptable with an LOS D or better for all study intersections. Failing conditions exist for unsignalized intersection approaches during a.m./p.m. peak hours at the following locations:

- **U.S. 41 at Old Royse Rd.** – The eastbound approach of this intersection is expected to operate at LOS F during p.m. peak hour.
- **U.S. 41 at Mayfair Dr.** – The westbound through/left approach is expected to operate at LOS E and F respectively during a.m. and p.m. peak hours and eastbound approach is expected to operate at LOS E during p.m. peak.

Detailed results of the No-Build (2050) operational analysis are included in **Appendix N**. Signal timing data used in the operational analysis was provided by INDOT.

Figure 32: Mobility LOS No-Build (2050)





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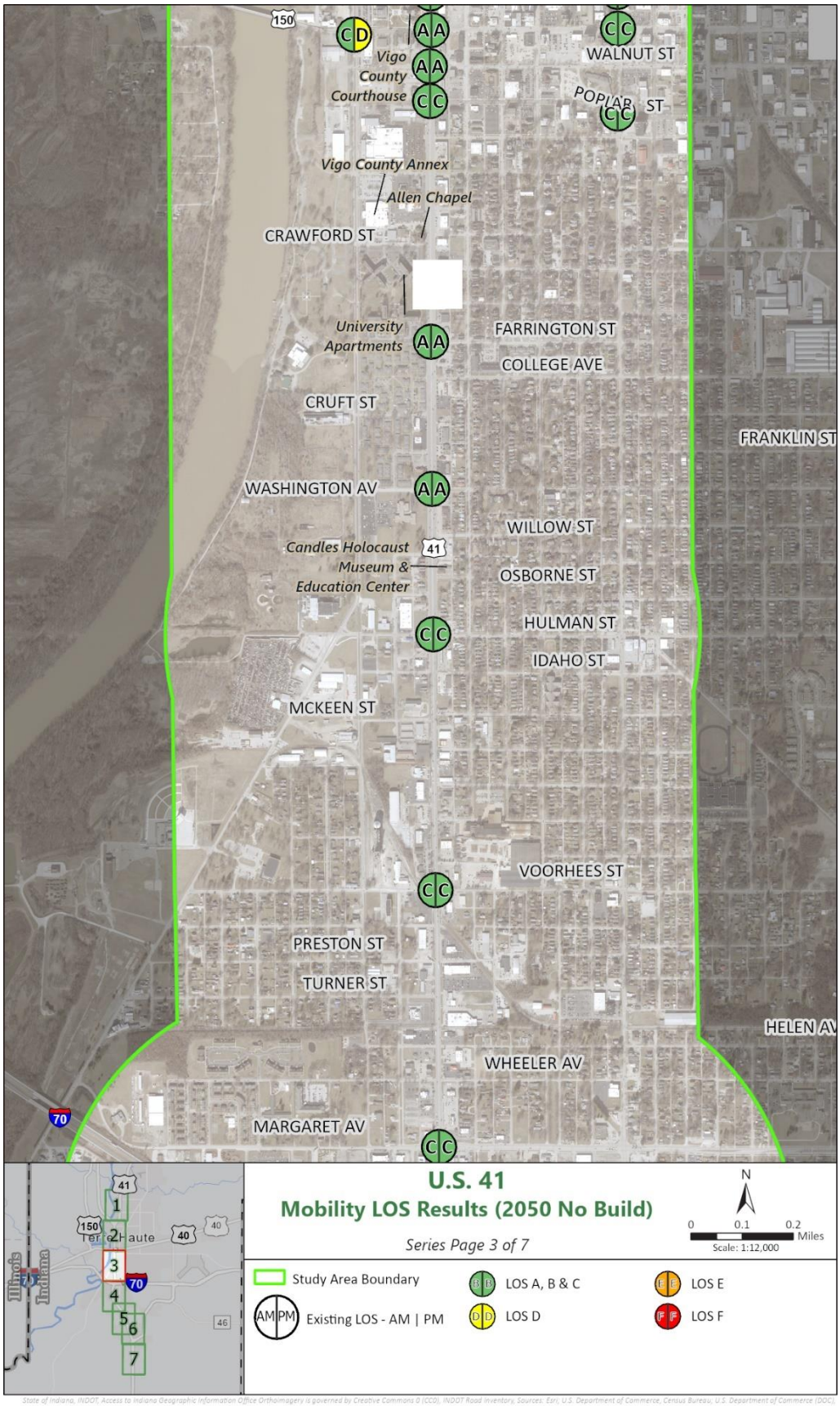

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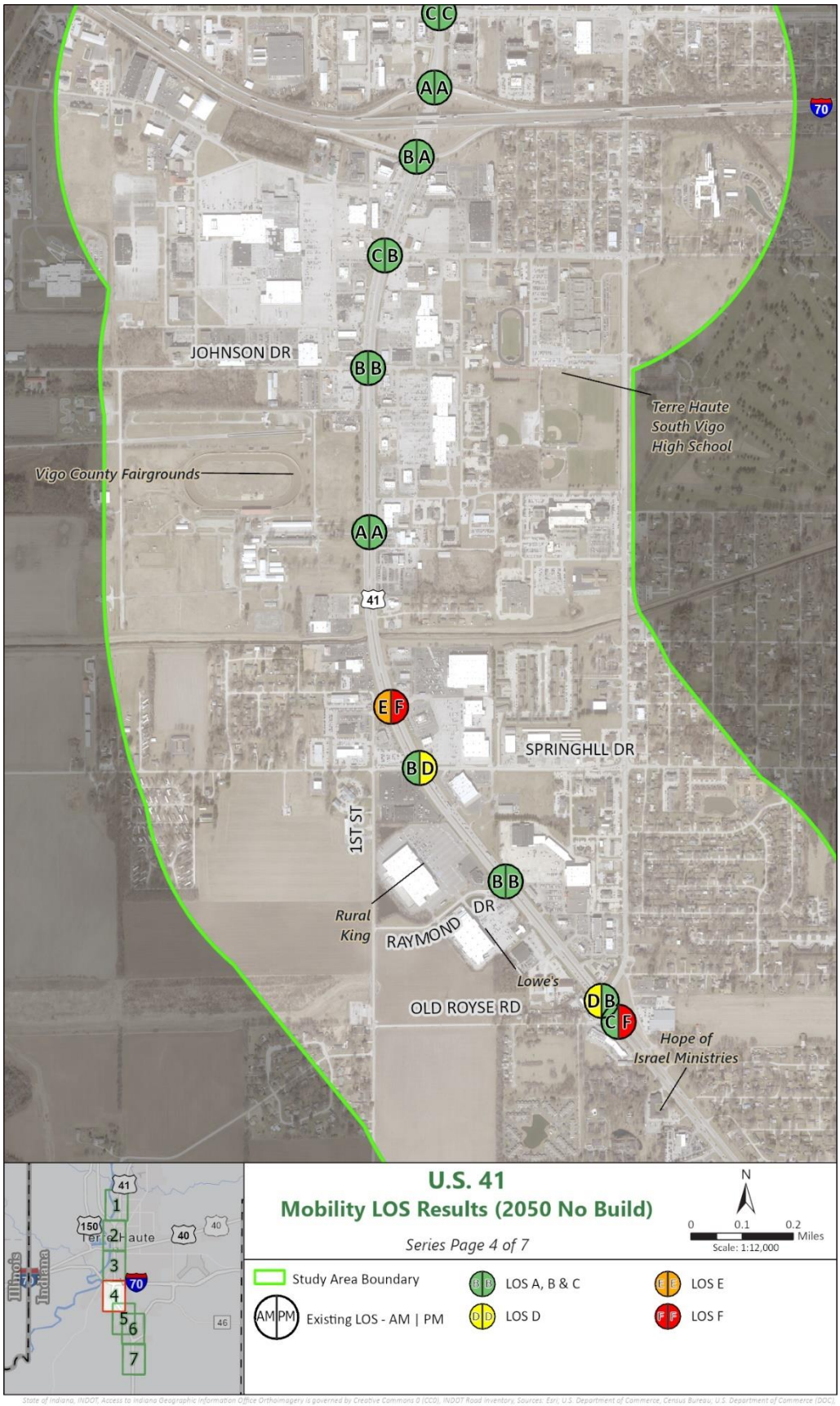

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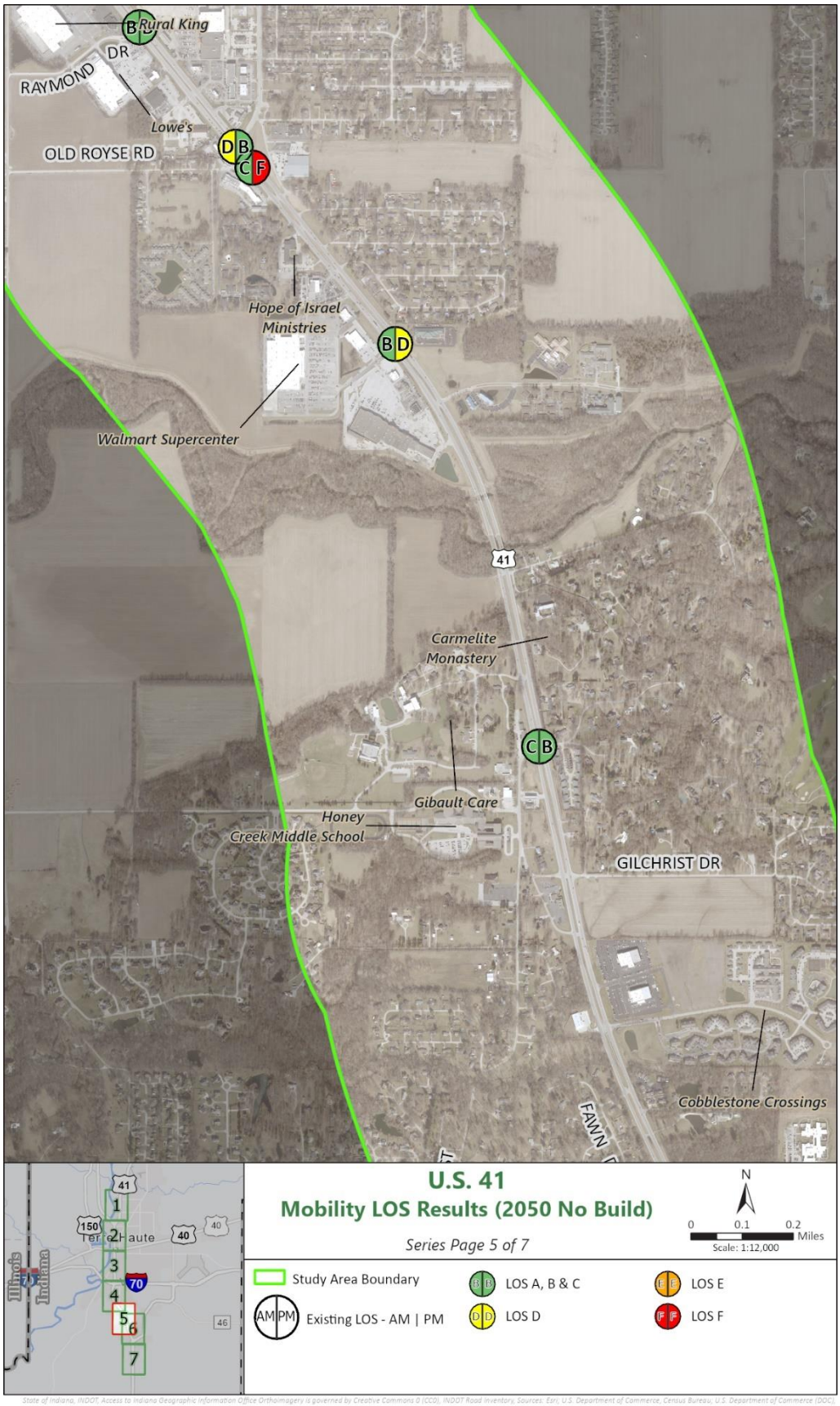
Rural King
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OLD ROYSE RD
Hope of Israel Ministries
Walmart Supercenter
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Carmelite Monastery
Gibault Care
Honey Creek Middle School
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Mobility LOS Results (2050 No Build)
Series Page 5 of 7
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Study Area Boundary
Existing LOS - AM | PM
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LOS F
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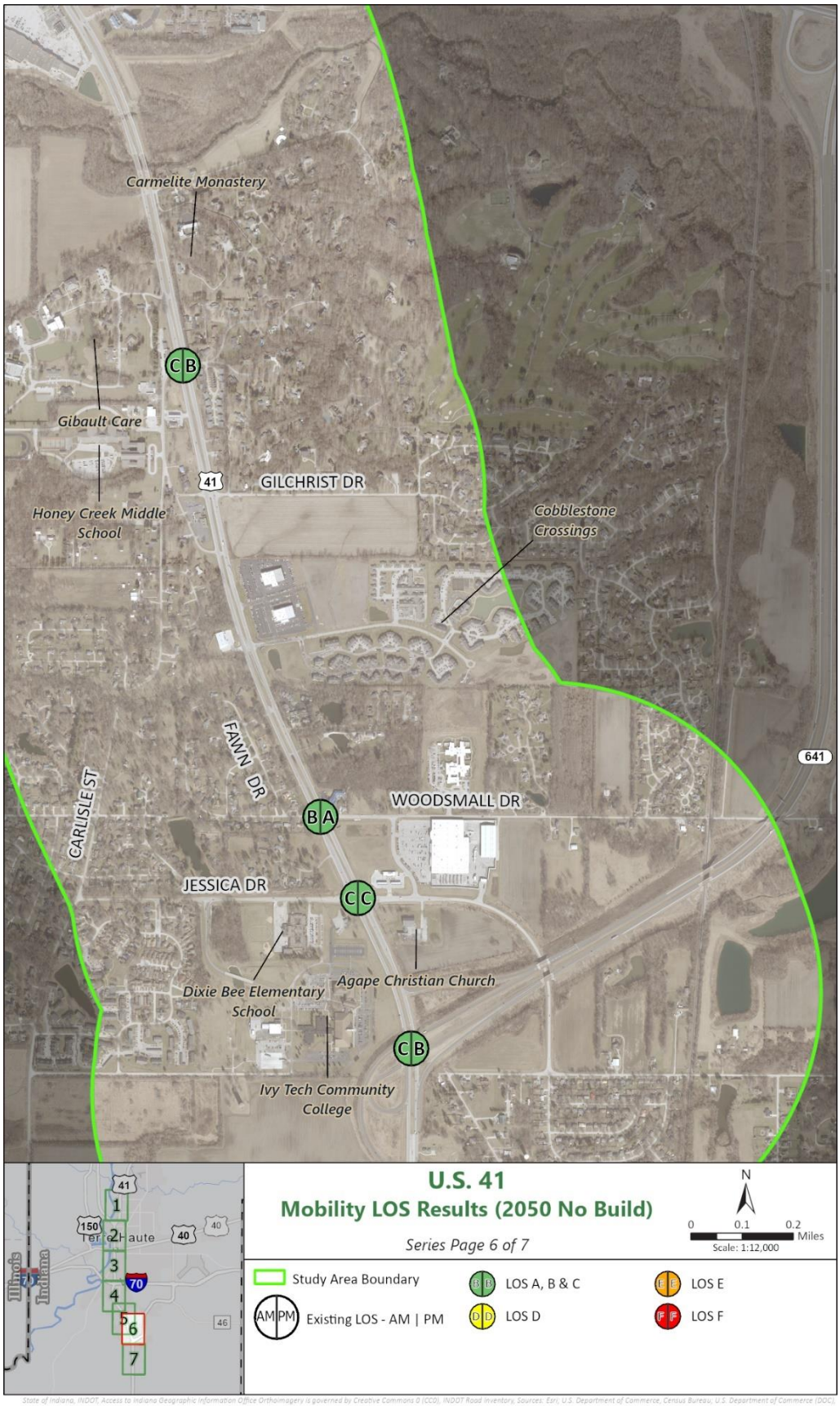

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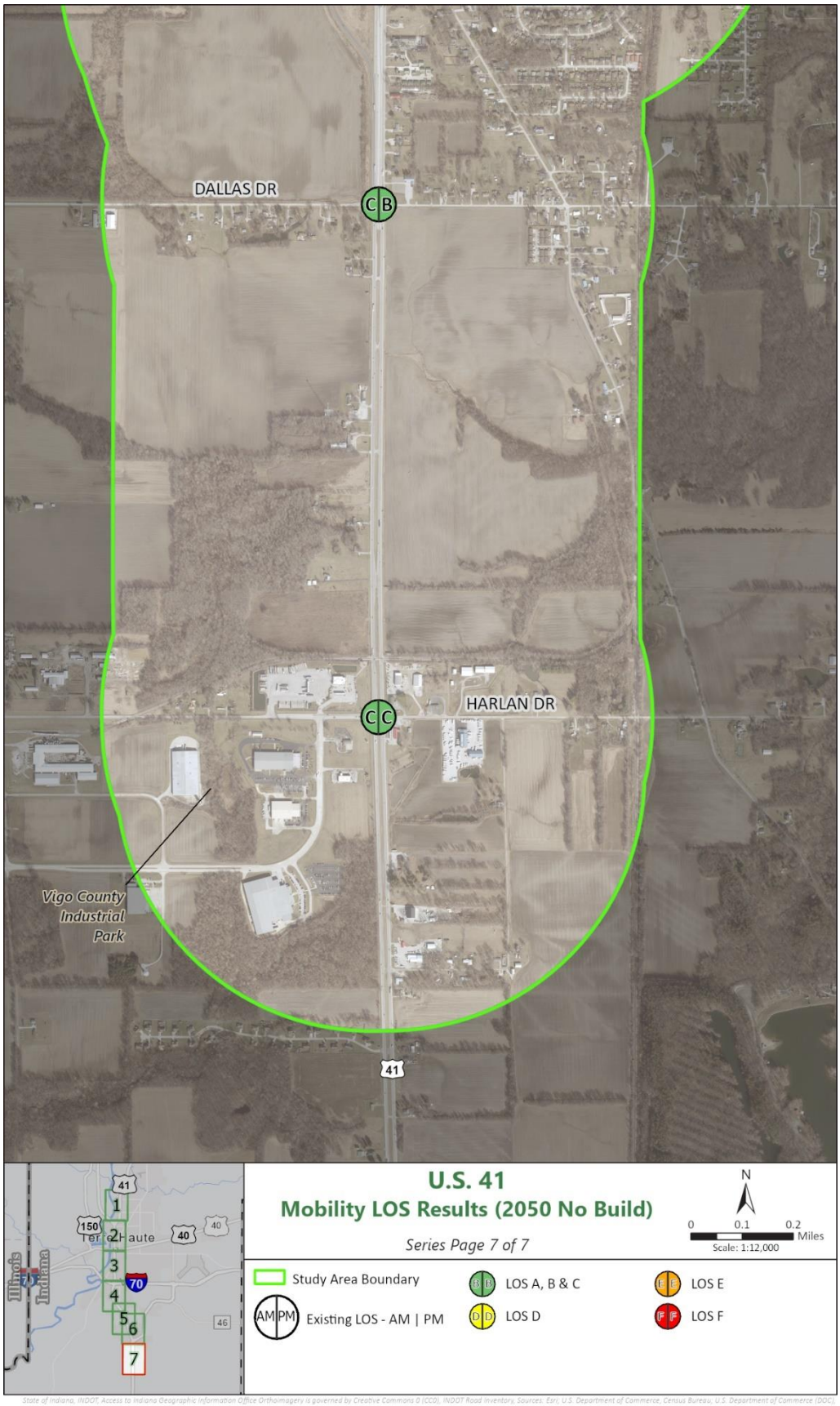

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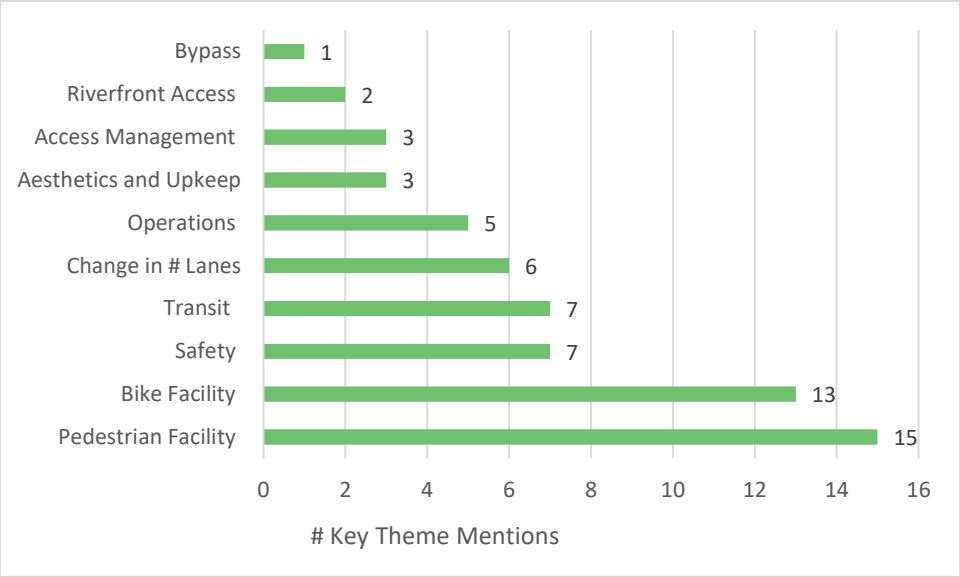
7 Public Involvement

Public involvement meetings were held in Fall 2025 within the study area for the initial kickoff phase of the study but will be ongoing throughout the duration of the study. The purpose of these meetings was to provide the public with an initial opportunity to voice concerns regarding the existing U.S. 41 corridor, and to express their needs and desires for the future of the corridor. The public was provided with the opportunity to submit comments via in-person meeting activities and through online comment forms available at the PIMA website portal. Public comments, as of early December 2025, are summarized below.

A total of 40 unique comments were received, most of which identify multiple concerns or wishes for the study area which are listed in **Figure 33.**

Figure 33: Public Comments by Key Themes



Approximately 15 of the 62 themes (24% total) express a need for greater pedestrian safety and/or greater access and accommodation for pedestrians at existing facilities. An additional 13 themes (21% total) express a need for greater bike safety and/or greater bike access and accommodation at existing facilities.

Multiple comments stated that south of I-70, there are limited bike and pedestrian facilities and limited north-south active transportation corridors. It was also expressed that safety is a concern (11% total) at corridor intersections with conflicts occurring across left turn movements and with speeding and red light running mentioned as safety concerns. Safety is evaluated for all intersections in **Section 4.**

Improved transit access and service along the corridor (11% total), change in the number of lanes (10% total) and traffic operations (8% of total) represent additional areas of interest and concern among the comments evaluated.

As the study advances, needs and ideas, such as those mentioned above, will inform the development of study purpose and need from which study concepts will be screened. Additional opportunities for public comment will be made available through the course of the study.