

US 30 East Purpose and Need Report

Final

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Prepared By

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1. PROPEL INTRODUCTION

This report summarizes the identified purpose, need and goals for the US 30 East Planning and Environment Linkages (PEL) study, as identified by available existing conditions data and public input.

A PEL study is a way for transportation agencies, such as INDOT, to make and document transportation planning decisions. PEL studies precede any design or construction decisions, allowing INDOT to better understand local and regional needs and to develop alternative solutions that meet those needs. The PEL process is intended to be consistent with, and complementary to, the National Environmental Policy Act (NEPA) project development process. PEL Studies connect the planning process and National Environmental Policy Act (NEPA) environmental review process, which occurs during INDOT's traditional project development process for projects utilizing federal funds or requiring federal approvals. The purpose and need statement is a core element of the NEPA environmental review process, and INDOT intends to use the purpose and need statement developed during this PEL study as the foundation of the subsequent NEPA review for any reasonable alternatives identified and funded for further development.

ProPEL is an INDOT initiative to use collaborative PEL studies that consider environmental, community and economic goals early in the planning process. Through ProPEL studies, INDOT seeks to create smarter transportation systems that build stronger communities. The ProPEL study will consider innovative ways to renovate our roadways and corridors, while prioritizing community needs and equitable infrastructure.

2. PROPEL STUDY

2.1. PROPEL US 30 & 31 STUDY OVERVIEW

Four ProPEL studies are being prepared along US 30 and US 31 (see map Figure 1). This effort includes two studies along US 30 from east of Valparaiso to the Indiana-Ohio State line, and two studies along US 31 from 276th Street in Hamilton County to its connection with US 30 in Marshall County.





Figure 1 – ProPEL US 30 & 31 Study Area Map

Each of these four studies is occurring along a similar timeline and are being closely coordinated with one another to establish a shared vision to drive planning decisions for the corridors.

ProPEL Study Timeline



Since the start of the ProPEL Studies, the study team has engaged in a robust public outreach program to listen and gather input from the communities. The first step of the purpose and need is the vision and scoping phase that began in September 2022 and extended through early 2023. This phase of the ProPEL study sets the direction and boundaries of the study and maintains consistency with the planning process and the public's interests. During this time the study team gathered existing data and information, reviewed existing conditions (safety, operations, design, roadway condition) and coordinated with the communities to identify and document the vision and goals of the community to guide the study.



2.2. PURPOSE OF THIS REPORT

As one of the first steps in the transportation planning process, the purpose and need statement establishes the "why" a study or project is being proposed. The purpose and need statement identifies the transportation problems (needs) to be addressed and describes the desired outcomes (purposes). The purpose and need is used as the framework for developing and evaluating alternatives to address the identified needs and achieve the desired purposes.

Additionally, goals for a study or project can be identified during the development of the purpose and need. Goals are other desirable, but not required outcomes that help to guide the development and screening of alternatives alongside other factors such as transportation performance, benefits and impacts, and cost.

The purpose, needs, and goals identified by this PEL study will be carried forward into subsequent project development phases to guide decision-making such that projects remain aligned with identified objectives and the identified needs as they are further developed and implemented.

2.3. PROPEL US 30 EAST STUDY AREA

The ProPEL US 30 East study area extends for approximately 58 miles along US 30 from Beech Road in Marshall County to I-69 west of Ft. Wayne, and from I-469 to the Indiana/Ohio state line in Allen County. US 30 is signed to travel along I-69 and I-469 around the north side of Ft. Wayne. This portion of the route is already constructed to interstate standards, and because INDOT regularly studies the needs of the interstates on a state-wide basis, additional analysis of the I-69 and I-469 interchanges is not included as part of this study.







A review of the highway and land use in the study area identified ten areas of the US 30 East study area that can be characterized as either rural or urban. These areas are shown on the US 30 East study area map (Figure 2) and summarized in Table 1.

Urban and rural areas were determined where the development patterns showed noticeable changes between land use characteristics. Urban areas are where there is a greater density of cross streets that together form a street grid that is more typical of urban development, and where intersections along US 30 are mostly signalized or grade separated. Urban areas also have a wider mix of land uses, including residential, commercial, and manufacturing., and civic land uses.



Rural areas are where there is a lower density of streets and intersections with US 30 and are more agricultural in character. Roadway intersections in these areas are usually unsignalized. Residential development is low-density and often more homestead in character. There is limited, if any, commercial, manufacturing, or civic land uses along rural segments.

Based on this review, the study area is more rural in character, with 62% (37.8 miles) of the study area's corridor length categorized as such. An urban setting currently makes up 38% of the study area but can be expected to increase as development and growth in the study area continues.

#	Area	Length (mi)	Character
1	Beech Road to CR 200 W	10.5 mi	Primarily rural and agricultural, with non-signalized intersections; passes through Etna Green, IN which is a low-density residential town with a signalized intersection at Walnut St; Lower density of access points outside of Etna Green.
2	CR 200 W to east of CR 325 E	7.5 mi	Warsaw & Winona Lake (urban) Primarily suburban development pattern, with commercial, industrial, medical, and civic land uses; access points to properties are mostly limited to signalized intersections; regular breaks in the center median to allow for U-turns and left turning movements.
3	East of CR 325 E to E Van Ness Rd.	2.6 mi	Mostly rural & open space with only one intersection (CR 450 E, non- signalized); Norfolk Southern railroad parallel to the south.
4	E Van Ness Rd. to west of CR 900 E	2 mi	Pierceton (urban): Primarily industrial in character north of US 30 and residential development south of US 30 (accessible via Main Street); only 1 signalized intersection at Main Street, with remaining intersections unsignalized; breaks in the center median to allow for U-turns and left turning movements.
5	West of CR 900 E to west of W Lincolnway	9 mi	Predominantly rural and agricultural, with non-signalized intersections; passes through Larwill, IN which is primarily a low-density residential town with a signalized intersection at Center Street; greater density of property access points west of Larwill.

Table 1 – LIS 30 Fast	Roadway Character	Sections – Rura	l & Urban Areas
Table 1 - 05 50 Last	Noauway character	Sections - Rura	a Urban Areas



#	Area	Length (mi)	Character
6	West of W Lincolnway to County Line Rd.	10.2 mi	Columbia City & Coesse (urban): Primarily suburban in character through Columbia City, with commercial, medical, and civic land uses; open space and parks as US 30 approaches Blue River and Eel River; land use becomes more low- density light industrial through western edge of Columbia City and Coesse; property entrances consolidated at signalized intersections; minimal breaks in center median for U-turns and left turning movements.
7	County Line Rd. to Flaugh Rd.	5.8 mi	Currently rural and agricultural, with non-signalized intersections; no direct property access points. The section of roadway from Felger Road to the east is the subject of a separate study that has identified proposed improvements including an interchange at Flaugh Road, and an overpass at O'Day Road. These improvements are in support of current and future development in this area.
8	Flaugh Rd to west of I-69 interchange	2.5 mi	Ft. Wayne (urban): Primarily suburban in character, with several shipping/logistics, and light industrial land uses as well; Coyote Creek Golf course located near US 30 and I 69 interchange; signalized intersections with no breaks in the center median.
9	East of I-469 Interchange to west of Franke Rd.	0.8 mi	New Haven (urban): Developing area that is expected to see continued retail and commercial development in the future near the intersection of US 30 and Doyle Rd; existing light industrial land uses to the north along Doyle Rd; more agricultural character east of Doyle Road that extends to the study area limit at State Line Road.
10	West of Franke Rd to State Line Rd	9.9 mi	Rural and agricultural, with non-signalized intersections; low-density residential communities near major intersections; limited property access points.

3. CORRIDOR VISION

A clear and compelling vision statement serves as guide for the development of the study's purpose and need. A well-crafted vision statement can help align stakeholder interests and create an initial framework for decision-making, leading to a more thoughtful plan for the corridor.

The US 30 East PEL study has included a range of stakeholder outreach and engagements that, has included:

- ✓ Two rounds of public information meetings that resulted in four individual public meetings: Meetings held in Fort Wayne, Warsaw, New Haven, and Columbia City.
- ✓ Two virtual public meetings coinciding with each of the two rounds of public meetings.
- ✓ Twenty-two dates with community office hours at various locations in the study area (Warsaw, Columbia City, New Haven and Monroeville).
- ✓ Four virtual Stakeholder Advisory Committee (SAC) meetings.
- ✓ Multiple individual stakeholder coordination meetings upon request including County Commissioners, town councils, chambers of commerce, and local businesses.



✓ Pop-ups at various community events: Kosciusko County Winter Farmers Market (Warsaw), Fat and Skinny Tire Festival (Warsaw), Whitley County 4-H Fair (Columbia City), Fiesta Fort Wayne

Notices of the meetings and other updates about the study have been communicated through eblast emails, news releases, public meeting advertisements and media interviews. As of August 2023, over 1,000 stakeholders are listed in the Public Information Management Application (PIMA) database for the US 30 East ProPEL study area. Through these engagement activities as well as outreach via social media (www.facebook.com/PropelU.S.30/, twitter.com/PropelUS30, and www.instagram.com/propelus30_31/) and a study website (www.propelUS30.com), more than 800 study-related comments have been received, responded to and documented during the scoping and visioning and Purpose and Need development phases.

Public input has included a range of themes including safety, access to US 30, economic development, bypasses, truck traffic, traffic signals, and bike and pedestrian improvements. In consideration of the comments and feedback received in both the US 30 East and US 30 West study areas, as well as an assessment of existing conditions along the entire US 30 corridor, the US 30 corridor vison statement below was prepared. This statement is purposely broad, intended to provide an overarching and forward-looking vison for the US 30 East and West study areas. In addition to the corridor vision, each ProPEL study shall develop study area specific study purposes based on identified needs.

Corridor Vision Statement

The US 30 corridor will continue to serve local, regional, and national travelers by balancing mobility and access considerations in a way that:

- Enhances safety for all users,
- Provides equitable transportation solutions, and
- Complements local community goals and objectives, including maintaining the character of the study area.

4. STUDY AREA NEEDS

Scoping and data collection summary documents including an *Existing Transportation Conditions Report* and *Environmental Constraints Report* were prepared for the US 30 East Study Area and are available on the study website (<u>https://propelus30.com/us-30-east/</u>). These reports summarize the data collected and the results of the existing condition evaluations. This data and analysis, alongside stakeholder input is the basis for determining the transportation improvement needs that are used in the identification, development and analysis of alternatives.

Transportation improvements are needed to address the following three identified needs:

- Safety for all users: Many locations along the US 30 East study corridor are experiencing a higher than average severity and frequency of crashes which is not in line with INDOT's goal of reducing the number of serious and fatal injuries on Indiana's roads.
 - A total of 66 intersections were found to have an elevated crash frequency and/or a crash severity level that was higher than expected based on the history of crashes at similar locations in Indiana.
 - Making up 38% of the study area, urban areas along US 30 East account for 65% of the study area severe crashes.



- Stakeholders have expressed a concern for improved safety of non-motorized users along US 30 in the study area.
- Crashes also contribute to unpredictable traffic conditions and affect the US 30 corridor's ability to provide safe, reliable and efficient mobility.
- Local Mobility: Growth in the corridor is anticipated to increase traffic and negatively affect the movement of people, goods, and services crossing, accessing and turning left off of US 30, increasing mobility challenges that impact local residents and business' ability to commute, conduct business, and support recreation.
 - Currently there are 6 intersections with failing/unacceptable traffic operations. With no action, this number is expected to grow to 12 intersections by year 2045.
- Regional and Statewide Mobility: Provide safe, high-quality mobility for long-distance passenger and freight trips through and beyond the study corridor.

A more detailed discussion of both safety and mobility needs is provided in the following sections. The *Existing Transportation Conditions Report* provides additional details, including analysis methodology and data sources, for the transportation data summarized below.

4.1. SAFETY

A review of the US 30 East study area crashes reported from January 1, 2017 through December 31, 2021 was completed and the overall crash statistics are summarized in Table 2. Figure 3 provides a visual representation of where crashes and severity of crashes are distributed along US 30 East.

Based on the five-years of crash data reviewed, 2,717 crashes were reported, averaging approximately 9 crashes per mile per year across the US 30 East study area. A comparison of crash rates (crashes per mile per year) between urban and rural segments indicates that crash rates in urban areas are over four times higher than rural areas. Approximately three-fourths of all crashes have occurred in urban areas, with urban areas representing a little over one-third of the study area length.



						US 30 East Segments									
05	5 JU East			-		1	2	3	4	5	6	7	8	9	10
20	017-2021	0	erall	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Urban	Rural
All	Crashes						Warsaw		Pierceton		Columbia City		Ft. Wayne	New Haven	
Tot	al Crashes	2,	717	703	2,014	209	921	50	98	179	709	152	231	55	113
Cra	shes/mi/year	1	8.9	3.7	17.5	4.0	24.6	3.8	9.8	4.0	13.9	5.2	18.5	13.7	2.3
% of C	Overall Crashes	1	00%	26%	74%	8%	34%	2%	<mark>4%</mark>	7%	26%	6%	9%	2%	4%
Category	Crash Types														
1.00	Intersection	1,465	54%	39%	59%	49%	68%	24%	57%	24%	51%	45%	52%	51%	45%
Location	Non-Intersection	1,246	46%	60%	41%	51%	32%	76%	42%	75%	49%	55%	48%	49%	54%
	Driveway	6	0%	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	1%
	Passenger	2,144	79%	74%	81%	75%	84%	80%	87%	75%	79%	76%	78%	53%	63%
Vehicle	Tractor/Truck	561	21%	26%	19%	25%	16%	20%	13%	25%	20%	23%	22%	45%	36%
Туре	Farm	7	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	2%	1%
	Ped/Bike	5	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%
	PDO	2,029	75%	72%	76%	67%	75%	60%	80%	78%	75%	76%	81%	67%	70%
Cautarity	Non-incapacitating	297	11%	9%	12%	12%	14%	12%	11%	5%	10%	9%	10%	7%	8%
Severity	Incapacitating	370	14%	17%	12%	17%	11%	26%	8%	16%	15%	13%	9%	24%	22%
	Fatal	21	1%	2%	0%	3%	0%	2%	1%	1%	1%	1%	0%	2%	0%
	Rear End	1,254	46%	16%	57%	21%	57%	16%	52%	13%	60%	14%	51%	38%	15%
Same	Direction Sideswipe	391	14%	14%	15%	9%	15%	12%	11%	20%	10%	14%	28%	16%	15%
Туре	Ran Off Road	399	15%	34%	8%	26%	6%	46%	21%	44%	6%	33%	16%	4%	29%
	Right Angle	329	12%	20%	9%	27%	10%	8%	8%	7%	11%	22%	2%	22%	27%
	All Other	344	13%	16%	11%	18%	12%	18%	7%	16%	13%	16%	3%	20%	14%

Tahle 2 _	IIS 30 Fast	Distribution	of All Crashes	hy Location	Mode	Severity and	l Tyne
i abie z –	03 30 Lasi	DISTINUTION	UI AII CI ASIIES	by Location,	would,	Severity and	туре

Crash severity was predominantly Property Damage Only (PDO), accounting for 76% of all crashes. Rates of higher severity crashes (non-PDO crashes) were slightly higher in rural areas (27%) vs urban areas (23%) most likely attributed to higher average speeds in rural sections.

Further review of crash data indicates that truck/heavy vehicle crashes account for 21% of all crashes and 25% of all injury crashes (165 out of 662 total injury crashes) while these vehicles make up approximately 28% of the vehicle fleet, on average. This indicates that overall, trucks are not disproportionately contributing crashes along US 30 East and truck crashes have trended slightly lower than their contribution to the fleet mix could suggest.

INDOT's primary objective with respect to safety is to reduce severe crashes which are those crashes that resulted in an incapacitating or fatal injury. Table 3 provides a summary of the severe crash statistics in the study corridor. Of the 2,717 crashes recorded in the corridor, 246 crashes (9%) were indicated as severe, including twenty-one fatal crashes resulting in 24 fatalities.

The predominant severe crash types in the US 30 East study area are rear end and right-angle crashes, accounting for a combined 67% of all severe crash types. However, the predominant crash types differ between urban and rural areas. At 48% in urban areas, rear-end crashes are the primary type of severe crash followed by right-angle (24%). In rural areas, right-angle crashes are the primary type (45%) followed by ran-off-road (27%).



The difference in the predominant crash types between urban and rural areas can be attributed to various factors. Urban areas experience a higher occurrence of rear-end crashes due to congestion and stop-and-go traffic, while rural areas see more right-angle crashes at intersections due to reduced levels of traffic control at intersections and higher speeds. Ran-off-road crashes are more common in rural areas where there is less lighting and were traffic travels at higher speeds with longer stretches of road between intersections.

US 30 East						US 30 East Segments									
201	7-2021				1	2	3	4	5	6	7	8	9	10	
Seve	re Iniurv	0	verall	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Urban	Rural
Cr	ashes						Warsaw		Pierceton		Columbia City		Ft Wayne	New Haven	
Tota	I Crashes		246	85	161	16	23	5	3	20	102	21	20	13	23
% of In	jury Crashes	1	00%	35%	65%	7%	9%	2%	1%	8%	41%	9%	8%	5%	9%
Category	Crash Types														
	Intersection	132	54%	47%	57%	63%	65%	0%	67%	25%	52%	57%	65%	69%	57%
Location	Non-Intersection	112	46%	52%	42%	38%	35%	100%	33%	70%	47%	43%	35%	31%	43%
	Driveway	2	1%	1%	1%	0%	0%	0%	0%	5%	1%	0%	0%	0%	0%
	Passenger	166	67%	69%	66%	63%	74%	80%	67%	70%	68%	81%	55%	62%	61%
Vehicle	Tractor/Truck	77	31%	28%	33%	38%	22%	20%	33%	25%	32%	14%	45%	38%	39%
Туре	Farm	0	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
	Ped/Bike	3	1%	2%	1%	0%	4%	0%	0%	5%	0%	5%	0%	0%	0%
	Rear End	88	36%	13%	48%	19%	48%	20%	33%	20%	48%	5%	60%	31%	9%
	Right Angle	76	31%	45%	24%	69%	22%	0%	0%	25%	25%	52%	0%	54%	48%
Туре	Ran Off Road	34	14%	27%	7%	13%	4%	40%	33%	30%	5%	24%	20%	0%	35%
Same Dire	ection Sideswipe	13	5%	6%	5%	0%	4%	0%	0%	15%	3%	5%	20%	0%	4%
	All Other	35	14%	9%	17%	0%	22%	40%	33%	10%	19%	14%	0%	15%	4%

Table 3 – US 30 East Distribution of Severe Crashes by Location, Mode, Severity and Type

Figure 3 – US 30 East Crash Data Summary by Location





4.1.1. ELEVATED CRASH FREQUENCY AND SEVERITY LOCATIONS

A total of 164 locations (92 intersections and 72 segments) along US 30 were reviewed and compared against statewide averages for crash frequency and costs related to crashes using the RoadHAT analysis tool developed by the Center for Road Safety at Purdue University. This tool helps to pinpoint locations that indicate a statistically high frequency of crashes (ICF) and high cost of crashes (ICC) which is an indication of severity. A ICF or ICC value greater than 0.0 is considered elevated and indicates that frequency and/or severity of crashes are higher compared to similar locations in Indiana. Figure 4 provides a heat map of where crashes have been occurring along the corridor as well as the locations where an elevated crash frequency (ICF) or severity (ICC) was identified.

A total of 62 intersections with US 30 and 3 roadway sections of US 30 were determined to have a frequency (ICF) and/or and severity (ICC) value greater than zero. Nine and 16 locations have elevated ICF and ICC values, respectively, and 40 locations have both elevated ICF and ICC values. Section 5.2 and Appendix A of the *US 30 East Existing Transportation Conditions Report* summarizes the findings of the RoadHat analysis for all intersections and roadway segments.

To address safety issues along US 30, identifying and prioritizing countermeasures that address the higher severity crash types and/or reduce the number of conflict points that contribute to severe crashes will improve safety. The primary crash types related to the elevated frequency and severity locations are rear end crashes occurring along US 30 at signalized intersections, typically associated with higher traffic volume intersections within urban areas. Right-angle crashes also contributed to a high number of severe crashes that involved an injury in both urban and rural areas.

Figure 4 – US 30 East Crash Heat Map & Crash Frequency and Severity on US 30





4.1.2. AVERAGE CORRIDOR TRAVEL SPEEDS

A review of travel speeds along US 30 East for year 2022 was completed using the US Department of Transportation's National Performance Management Research Data Set (NPMRDS). The NPMRDS data contains Global Positioning System (GPS) based time and speed data collected anonymously from a fleet of probe vehicles (passenger vehicles and trucks) equipped with mobile devices.

Table 4 summarizes the average 2022 weekday, mid-day (10am to 4pm) travel speeds on US 30 East by each rural and urban context section. A summary is provided for 'all vehicles', as well as broken out by 'passenger vehicles' and 'trucks'. Posted speeds vary within the segments, so an average posted speed for each segment was calculated to compare against observed speeds. The percent changes in the table represent the difference between average posted speed and observed average speeds and pink shading is correlated to percent change.

		Context	erall erage	ral erage	ban erage	Rural	Warsaw	Rural	Pierceton	Rural	Columbia City	Rural	Ft.Wayne	NewHaven	Rural
		Section #	8 Q	Av Av	- A V	1	2	3	4	5	6	7	8	9	10
		Length (mi)	58.0	41.5	16.5	8.9	7.5	2.6	2.0	9.0	5.0	11.0	1.2	0.8	10.1
A	ve. P	osted Spd (mph)	58.5	59.9	55.1	60.0	51.8	60.0	57.4	59.6	57.1	60.0	60.0	60.0	60.0
es	8	Ave. Spd (mph)	53.9	57.3	45.3	55.9	40.7	52.2	53.9	55.0	43.9	58.8	57.3	57.2	60.3
hicl	3	% Diff	-8%	-4%	-18%	-7%	-21%	-13%	-6%	-8%	-23%	-2%	-4%	-5%	1%
Ve	m	Ave. Spd (mph)	54.1	57.2	46.3	54.5	41.7	54.1	55.1	55.8	46.0	57.8	55.4	55.5	61.0
A	Ξ	% Diff	-8%	-5%	<mark>-16%</mark>	-9%	-20%	-10%	-4%	-6%	-19%	-4%	-8%	-8%	2%
er	8	Ave. Spd (mph)	55.0	58.5	46.3	57.1	41.2	51.1	54.5	55.2	45.4	61.1	60.7	58. <mark>1</mark>	61.6
eng	3	% Diff	-6%	-2%	-16%	-5%	-20%	-15%	-5%	-7%	-21%	2%	1%	-3%	3%
ass	m	Ave. Spd (mph)	54.9	58.1	47.0	55.5	42.6	54.6	56.3	55.6	45.9	59.7	57.4	55.8	61.8
à	Ш	% Diff	-6%	-3%	-15%	-8%	-18%	-9%	-2%	-7%	-20%	-1%	-4%	-7%	3%
	8	Ave. Spd (mph)	52.6	56.1	44.0	54.4	40.1	52.0	53.1	54.8	41.6	56.4	55.5	56.0	59.3
cks	3	% Diff	-10%	-6%	-20%	-9%	-23%	-13%	-7%	-8%	-27%	-6%	-8%	-7%	-1%
Tra	m	Ave. Spd (mph)	52.9	55.9	45.3	53.2	40.6	52.7	53.3	55.2	45.4	55.5	53.8	54.7	60.2
	Ш	% Diff	-10%	-7%	-18%	-11%	-22%	-12%	-7%	-7%	-20%	-7%	-10%	-9%	0%

Table 4 – US 30 East Average Annual Weekday Midday Speeds by Section and Vehicle Type

Overall, average observed 2022 travel speeds do not indicate that speeding is prevalent in the corridor. Along US 30 East average mid-day travel speeds are around 8% below posted speeds, corridor wide, with higher average speed trends in the east (east of New Haven) and lower average speeds in the west. Speeds in rural areas are averaging 4% to 5% below posted speed limits compared to urban areas where speeds are averaging between 16% and 18% below posted speed limits. Slower speeds in urban areas such as Warsaw and Columbia City are attributed to signal control delay, higher traffic volumes and reduced traffic progression through the multiple closely spaced signalized intersections that causes stop and go travel. In rural areas, slower speeds are primarily attributed to trucks that are traveling at lower speeds and are slower to accelerate when exiting urban areas with lower speed limits.



4.1.3. BIKE AND PEDESTRIAN SAFETY

One crash involving a bicyclist and three crashes that involved pedestrians were identified, with one pedestrian crash resulting in a fatality. All four bike/ped crashes occurred during dark conditions late at night or early in the morning which indicates that lighting/visibility may have been a factor. Police reports indicate the bicyclist was likely biking under the influence of alcohol. Overall, bike/ped crash statistics themselves do not point to any predominant trends or patterns who may be avoiding the corridor due to a lack of bike and pedestrian accommodations. During the vision, scoping and purpose and need study phase, members of the public expressed a desire for improvements that accommodate additional and safer crossings of US 30 for bicyclists, pedestrians and disabled stakeholders; improvements that include sidewalks, pedestrian bridges, and trails that connect the north and south sides of US 30.

4.1.4. CRASHES EFFECT ON MOBILITY

The timing of crashes cannot be predicted and can have a substantial impact on congestion and reliability on highways. A crash can cause congestion by blocking one or more highway lanes, disrupting the flow of traffic and have a ripple effect with congestion spreading to adjacent lanes. Crashes also have a substantial impact on reliability as when crashes occur, travel times become unpredictable, and drivers are forced to slow down or take alternate routes. Crashes also create the risk of causing secondary crash events when drivers are distracted, causing further disruptions to traffic flow and risk of injury.

Based on the 5-year crash data, US 30 East experiences 1.5 crashes per day, on average, somewhere along its 58 mile length. Annually, the frequency and likelihood that 1 or more crash events occurred per day along US 30 East is summarized in Table 5.

# crashes reported per day	Average Occurrences Over 5 Years	Average # of Days Occurring Per Year	% Chance of Occurrence on a Given Day
1	591 days	118 days	32%
2	375 days	75 days	21%
3	203 days	41 days	11%
4+	156 days	31 days	9%
TOTAL	1,325 days	265 days	73%

Table 5 – US 30 East	Daily Frequency	of Crashes
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Although automotive based technologies, such as Automatic Emergency Braking (AEB), Lane Departure Warning (LDW) and Lane Keeping Assist (LKA), Blind Spot Detection (BSD), Adaptive Cruise Control (ACC), Pedestrian detection and avoidance, and others will help mitigate crash potential, as traffic volumes increase in the future the likelihood of crashes occurring along US 30 East may also increase. Improvements that can address factors contributing to crashes will improve mobility and increase safety.



4.1.5. ECONOMIC BENEFITS OF IMPROVED SAFETY

INDOT's number one priority is safety as it plans, builds and maintains Hoosier roadways. Reducing crashes and related injuries is an important focus for improving the lives of those who live, work or travel through the state. Further, there is a clear link between improved safety and economic benefit for communities. According to the National Highway Traffic Safety Administration [crashstats.nhtsa.dot.gov], the economic cost of motor vehicle crashes that occurred in 2019 totaled \$339.8 billion. This is equivalent to approximately \$1,035 for every person living in the United States and 1.6 percent of the US Gross Domestic Product.

Highway crashes can also have a negative effect on the economy in several other ways, including loss of productivity, increased costs for emergency response and law enforcement, additional strain on the local healthcare system, disruption of tourism and commerce, and a negative reputation and perception of the area that may deter local business and residential growth. Identifying solutions that improve roadway safety can help mitigate negative economic impacts due to crashes.

4.2. MOBILITY

US 30 East is vital to the local and regional economy serving the many local, regional and statewide travelers that rely on this road for daily commuting, local traffic circulation, commerce and freight movement, as well as recreation and tourist activities. Evaluating mobility can provide insight into how effectively existing facility is serving these needs and where the impacts to mobility may be more pronounced.

4.2.1. LOCAL MOBILITY

Poor intersection operations are affecting mobility for local travel accessing, crossing, and exiting off of US 30, particularly in urban areas.

Traffic counts were collected in 2022 at 29 major intersections along US 30 East and used to evaluate the existing and future anticipated level of service at each location. Future traffic volumes along US 30 and intersecting roadways were forecasted for year 2045 using Indiana's state-wide travel demand model.

Traffic level of service refers to how well traffic flows on a particular road or intersection. It's a measure of how easily vehicles can move through an area without getting stuck in traffic or experiencing delays. The level of service is described using a letter grade, ranging from A to F, with A representing free-flowing traffic and F representing severe congestion. In urban areas IDOT targets a level of service D or better and in rural areas a level of service C or better is desired for operations.

Evaluation of 2022 peak hour traffic operations identified three intersections performing with unacceptable levels of service during peak morning and afternoon travel hours (levels of service E and F): Lincolnway, SR 109, and SR 9. The unacceptable operations are associated with local traffic that is entering onto or crossing US 30 from the north and from the south.



Table 6 – US 30 East 2022 Congested Interse	ections (Peak Hours)
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			22 Leve	of Serv	vice
	Context	Through		Local	
Intersection	Context	EB	WB	NB	SB
		AM/PM	AM/PM	AM/PM	AM/PM
US 30 at LINCOLNWAY	Columbia City Signal	B / B	B / B	E / E	E / E
US 30 at SR109	Columbia City Signal	D / D	B/A	E / E	F / E
US 30 at SR9	Columbia City Signal	C / D	D / C	E / E	E / D

Generally, 2022 operations for east-west through traffic along US 30 are found to be acceptable with levels of service D or better for all intersections. However, operations for left-turning traffic from US 30 to the local streets were found to be operating at unacceptable levels of service E and F at four locations (Table 7): CR 200N, Parker St, Old US 30, and SR 9. See Figure 5 for a map of locations with failing intersection operations in year 2022.

US 30 Level of Service - Left Turns						
		20	22			
				Local		
Intersection	Context		Intersection Context		EB	WB
			Left	Left		
			AM/PM	AM/PM		
US 30 at CR200N	Warsaw	Signal	E / E	E / E		
US 30 at Parker	Warsaw	Signal	E / F	F / E		
US 30 at Old US 30	Warsaw	Signal	E / F	E / E		
US 30 at SR9	Columbia Ci	ty Signal	D/E	E/E		

Table 7 – US 30 East 2022 Congested Left Turns From US 30 (Peak Hours)

Overall, six locations that serve local traffic have unacceptable operations in 2022. With no improvements, by year 2045 the projected traffic growth is anticipated to increase the number of intersections along US 30 East that experience poor operations along local roads. Table 8 lists the ten intersections that are forecasted to experience delays that result in one or more intersection approach movements with an unacceptable level of service (LOS) of E or F. A map of these locations is provided in Figure 5.

Table 8 – US 30 East 2045 Congested Intersections (Peak H	lours)
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			204	5 Leve	of Serv	vice
			Thro	ough	Local	
Intersection	Context		EB	WB	NB	SB
			AM/PM	AM/PM	AM/PM	AM/PM
US 30 at CR800W	Rural	2-way stop	A/A	A/A	C / D	C / F
US 30 at MEIJER	Warsaw	Signal	A / B	B/B	D/E	
US 30 at PARKER	Warsaw	Signal	D/D	D/D	D/D	D/E
US 30 at CENTER	Warsaw	Signal	C/C	B/C	D/D	E / D
US 30 at CR250E	Warsaw	Signal	A/A	C/C	F/F	E / F
US 30 at LINCOLNWAY	Columbia City	Signal	B/C	B/B	E/E	E/E
US 30 at ARMSTRONG	Columbia City	Signal	A/A	C/A		D / E
US 30 at SR109	Columbia City	Signal	D/D	A/C	E/E	F/E
US 30 at SR9	Columbia City	Signal	D/E	C / D	E/E	F/D
US 30 at SR205	Columbia City	Signal	C/C	C / D	D/E	D/D



In 2045, operations for east-west through traffic along US 30 was found to be acceptable with levels of service D or better for all but one location, SR 9. In 2045, operations for left-turning traffic from US 30 to the local streets were found to be operating at an unacceptable level of service F at four locations (Table 7): CR 200N, Parker St, Old US 30, and SR 9. See Figure 5 for a map of locations with failing intersection operations in year 2045.

US 30 Level of Service - Left Turns							
		20	45				
			Lo	cal			
Intersection	Intersection Context		Context EB		EB	EB WB	
			Left		Left	Left	
			AM/PM	AM/PM			
US 30 at CR200N	Warsaw S	ignal	E / E	D / F			
US 30 at Parker	Warsaw S	ignal	E / F	F / E			
US 30 at Old US 30	Warsaw S	ignal	E / F	E / E			
US 30 at SR9	Columbia City S	ignal	D / F	E / F			

Table 9 – US 30 East 2045 Congested Left Turns From US 30 (Peak Hours)

Overall, projected operations indicate that local mobility will be further affected by year 2045 as operations continue to worsen for movements that serve local traffic, including traffic from local roads accessing or crossing US 30 and from traffic exiting US 30 onto local roads.

Figure 5 – US 30 East Congested Intersection Location Map





4.2.2. REGIONAL AND STATEWIDE MOBILITY

Connecting the cities of Fort Wayne, Columbia City, Warsaw, Plymouth, Valparaiso, and towns in between with Ohio and Chicago IL, US 30 east is Identified in *Indiana's 2045 Long Range Transportation Plan (LRTP)*¹ as one of the State's Major Mobility Corridors. With average daily traffic volumes along the corridor ranging between 15 thousand vehicles per day in rural sections west of Warsaw and East of Ft. Wayne and 29 thousand vehicles per day in more urban areas including Warsaw and Columbia City, transportation conditions along US 30 have a major impact on local, regional and state economic vitality, quality of life, and accessibility. The LRTP places a priority on improving US 30 safety and efficiency of traffic movement and maintaining a state of good repair.

The Indiana Multimodal Freight Plan Update (2018)² also identifies US 30 as a Statewide Mobility Corridor that experiences high truck traffic volume that would benefit from infrastructure improvements. Currently truck traffic volumes are around 28% of all traffic along US 30 and approximately 80% of the trips move through the region based on available origin-destination data. With the Freight Plan citing an expected 50% to 60% growth in overall freight volume in Kosciusko, Whitley, Allen counties (from 2015 to 2045) (), the 20% local truck volume percentage along US 30 is likely to see an increase from supporting that growth.

Traffic volume growth along US 30 and intersecting roadways were forecasted for year 2045 using Indiana's statewide travel demand model. The travel demand model was modified and enhanced to focus on the ProPEL study area and includes development growth assumptions in the corridor. Economic development included within the travel demand model accounts for average annual traffic growth projections ranging from -0.20% to as much as 2.94% throughout the corridor, and an overall corridor average annual traffic growth rate of 0.85% based on future land use development anticipated for the region. The travel demand model indicates that US 30 is an attractive corridor to accommodate anticipated growth in the region.

5. PURPOSE OF THE STUDY

Guided by the vision statement and driven by the identified safety and mobility issues, the purpose of this study is to further enhance US 30's role as a primary passenger and commerce corridor across northern Indiana by identifying future transportation improvements that:

- Improve roadway safety in the corridor for all users;
- Improve mobility for local users along and across the corridor; and
- Enhance the efficiency and reliability of US 30 as a regional and statewide corridor.

Given the size of the study area, as well as the needs identified, the purpose and need statement has been developed to support a range of potential improvement solutions. This could include corridor-wide improvements, as well as localized improvements that address the identified needs.

¹ https://www.in.gov/indot/files/INDOT_LRTP_FINAL_FullDocWebPost.pdf

² https://www.in.gov/indot/files/Indiana%202018%20State%20Freight%20Plan.pdf



6. PERFORMANCE MEASURES

With purpose and need and supporting goals established, the next step in the study is the identification and evaluation of alternatives that can address the needs and achieve the stated purpose. Performance measures are used in evaluating alternatives as a systematic and objective way to assess how well each alternative is likely to meet a project's goals and objectives. Performance measures are a defined set of metrics corresponding to the identified needs and used to evaluate how well each alternative performs compared to an existing or a forecasted future do-nothing condition.

Performance measures are evaluated for each alternative alongside other important factors such as impacts, benefits and costs. The following initial set of high-level performance measures have been identified for evaluating alternatives with respect to the study Purpose and Need. Performance measures will be further developed and refined as the study progresses through the alternatives identification, evaluation, screening and refinement steps.

Study Purpose	Performance Measure	Methodology
	Reduce intersection conflict points	Conflict points are where two or more road users (such as vehicles, pedestrians, or bicyclists) cross each other's paths creating a potential crash hazard. Reducing the number of conflicts, particularly higher speed and right-angle conflict points can improve safety performance
Improve roadway safety for all users i Add	Apply crash reduction measures that improve safety	Identify and evaluate safety countermeasures that may reduce the likelihood of severe crashes. Countermeasures are design improvements that can be implemented to prevent or reduce potential crashes, injuries, or fatalities.
	Address multimodal safety	Identify and evaluate safety countermeasures aimed at safeguarding vulnerable road users including pedestrians, cyclists, and special-use vehicles.
Improve mobility for local users along and across the corridor	Maintain or improve operations for north and south trips at intersections within the study corridor	Reduce intersection delay and improve level of service where unacceptable operations are forecasted for north-south approaches at intersections with US 30 and traffic exiting US 30 onto local roads. Maintain operations at other intersections that are forecasted to have acceptable operations.
Enhance the efficiency and reliability of US 30 as a regional and statewide corridor	Improve operations along US 30	Identify improvements that contribute to overall corridor reduction in delay and improve efficiency of longer distance passenger and freight trips along the study corridor.



7. STUDY GOALS

Goals are often used in a purpose and need statement for a transportation study to help define the desired outcomes and benefits of a project. These study goals, identified through stakeholder input and aligned with regional and local planning documents, have been coordinated across the four US 30 and US 31 Study areas and are intended help to refine the purpose of the study and guide the development of alternatives. Goals are not required to be achieved; however, they help align a given project with the desires of the community while also addressing the key transportation challenges, needs and opportunities.

For US 30 East, the identified transportation improvements should strive to meet the following identified goals:

• Economic Development | Provide transportation infrastructure to support local economies and economic development goals.

US 30 is a statewide corridor that connects local workforce and business growth to regional and national markets. The INDOT LRTP includes a goal for economic competitiveness, and within their comprehensive plans, local and regional planning agencies also consider economic development, competitiveness, and support. Fort Wayne is the second largest city in the state and the economic hub of northeast Indiana. Warsaw is known as the Orthopedic Capital of the World, with one-third of the \$38 billion global orthopedic industry headquartered in Kosciusko County. As businesses develop along US 30, freight volume on US 30 also has increased. The local Metropolitan Planning Organizations (Northeastern Indiana Regional Coordinating Council (NIRCC) and Michiana Area Council of Governments (MACOG)) have future plans that include goals for supporting business and freight movement. MACOG's plan engaged freight stakeholders in the area to develop priority projects to support freight, with specific goals for US 30 East to support freight movement and economic development. Local and county plans for the US 30 East study area also include goals to grow business and cities to align improvements with planned community growth. Groups like the Regional Chamber of Northeast Indiana and the Northeast Indiana Regional Partnership focus on regional economic resiliency and growth.

The Indiana Farm Bureau indicated that the study goals include balancing the needs of the farming community considering the safety for farm equipment that operates along and across US 30, accommodating the size of farm equipment, and access to land as part of farm business operations.

• Equity In Transportation | Provide equitable solutions that take into account the needs of traditionally underserved and disadvantaged communities.

Of the 113 Census Tracts (CTs) within the study area, seventy (70) are identified as communities with environmental justice (EJ) and equity concerns, with one or more of the following EJ demographic characteristics: minority race or ethnicity, low income/persons in poverty, households with limited vehicle access, households with limited internet access, and households with limited English proficiency. Many CTs in Fort Wayne demonstrate disproportionately high rates of many or all of these criteria. There are seven mobile home communities in the US 30 East study area, and half of these communities are located in Warsaw. There are higher proportions of foreign-born and limited-English populations in and around Fort Wayne and Warsaw.



• Multimodal Access & Connections | Accommodate non-vehicular modes of travel in and crossing the study corridor.

The physical and mental health benefits of active transportation have been well documented in the *Indiana Governor's Public Health Commission Report (2022)*³ as well as at the federal level by Centers for Disease Control and Prevention. Research suggests that rural communities are more likely to lack access to fitness facilities.^{4,5} In these communities, the importance of transportation investments that provide active transportation opportunities can help increase physical activity, which supports the Governor's public health initiatives. Following the guidelines set out by the federal government in the Bipartisan Infrastructure Law, INDOT is developing a carbon reduction strategy (CRS) to support efforts to reduce carbon dioxide emissions.⁶ The CRS is anticipated to identify active and alternative transportation modes (e.g., walking, biking, and transit) as a potential category of transportation projects and/or strategies that can support carbon reduction in Indiana.

The need for improved access to bicycle and pedestrian facilities to accommodate non-vehicular transportation across and along US 30 has been raised by the public since beginning the ProPEL study. Better access to sidewalks and trails along US 30 was the fourth most frequent public comment INDOT received via PIMA. When asked "What is your vision for the future of US 30, respondents at the December 6th, 2022, public meeting in Warsaw consistently ranked "providing safe crossings" and "better options for biking and walking" near the top of the list.

• Emerging Technologies | Support emerging technologies and related infrastructure, including alternative fuel, autonomous, or connected vehicles.

In accordance with the National Electric Vehicle (EV) Infrastructure (NEVI) Formula Program, the 2022 Indiana Electric Vehicle Infrastructure Deployment Plan outlines how Indiana will implement EV infrastructure over the course of the next five years and beyond, utilizing almost \$100 million in federal funding, and includes a proposed EV charging station within the US 30 East study area in the vicinity of the US 30 interchange with I-469 in Ft. Wayne. Also, an October 2023 update to the Deployment Plan⁷ nominated US 30 across Northern Indiana as an Alternative Fuel Corridor (AFC) where development of charging networks is prioritized. INDOT is also supporting regional and national research related to connected and automated vehicles (Indiana's Multimodal Freight Plan Update (2018)) and has committed to participate in the National Transportation Operations Coalition (NTOC) challenge to transportation infrastructure owners and operators to cooperate together to achieve deployment of Vehicle to Infrastructure (V2I) infrastructure. The 2022 INDOT Carbon Reduction Strategy (draft) identifies alternative fuels/energy efficiency (i.e., supporting electric or alternative fuel vehicle adoption) as one of five categories of transportation projects and strategies that can support carbon reduction in Indiana, and cites carbon reduction as a core element to the goal of environmental responsibility.

³ <u>https://www.in.gov/health/files/GPHC-Report-FINAL-2022-08-01_corrected.pdf</u>

⁴ <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4256125/</u>

⁵ <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8535724/</u>

⁶ <u>https://www.in.gov/indot/public-involvement/public-involvement/carbon-reduction-strategy/</u>

⁷ https://www.in.gov/indot/files/EV-Deployment-Plan.pdf



• Fiscal & Environmental Practicality | Identify fiscally responsible improvements and avoid/minimize impacts to the human and natural environment.

INDOT has a responsibility to the taxpayers of the State of Indiana to ensure that the budget is spent in a costeffective manner that addresses the needs of the traveling public. INDOT's long- and short-range planning documents are required to be fiscally constrained, which means the projects programmed within them can be realistically completed with available and projected funding and revenue sources. Several of INDOT's planning documents also identify environmental responsibility as a stated agency goal, including a specific objective to minimize the potential impacts of improvements to the transportation system on the natural and human environment, including resources important to Tribal Nations. This objective, as well as others, plays a key role in shaping INDOT's investment strategies and policies.

• Driver Expectations | Consider roadway enhancements that provide smoother and more predictable transitions between rural and urban segments of US 30 East.

The US 30 East corridor passes through several communities with a substantial suburban development pattern around the roadway. This pattern includes reduced posted speed limits, traffic signals, and commercial driveways that interrupt and slow the flow of US 30 traffic through the communities. However, between the communities the roadway retains a rural character with few driveways, infrequent traffic signals, and open sightlines. Where the two development patterns meet, motorists may be distracted or caught by surprise when conditions change without adequate warning. Combining distraction and surprise with a high-speed roadway and driving decisions required around traffic signals and driveways can be a cause of crashes, and the data at certain intersections entering urbanized areas bear this out. Enhancing the rural-urban transitions to provide smoother and more predictable transitions can improve driver reactions and reduce the likelihood of driver mistakes in these transition areas.

8. PUBLIC COMMENTS

Feedback from residents, motorists, local and statewide leaders, businesses, and others is vital to the success of the ProPEL US 30 East study. A draft of the Purpose and Need was published to the study website on June 5th, 2023 and public input was solicited on the contents through various methods until July 31st, 2023. These methods included in-person and virtual Public Information Meetings held in June of 2023, stakeholder email blasts and social media posts, print and online public notices in newspaper publications, and in-person community office hours and community engagement events. All of these methods of outreach included the ability to leave in-person and online comments regarding the study and the Purpose and Need information included in the published draft document. A



full summary of involvement and outreach efforts is provided in the *Resource Agency, Stakeholder & Public Involvement Summary (RASPI) #1* and *RASPI #2*, available on the study website.

The study team received approximately 143 comments from the in-person and virtual public information meetings. Approximately 79 additional comments were received via the Community Office Hours, pop-up events, Stakeholder Advisory Committee meetings, and online comment form. The study team grouped the comments by general type of concern into one of the following categories. However, many of the comments pertain to one or more of the categories:

• Overall US 30 Corridor – The largest number of comments fell into this general category. Overall US 30 Corridor accounted for 91 comments, or 62.7 percent of the total comments received. Specifically, comments largely pertained to a desire for overpasses/underpasses, frontage roads, and access to the highway from interchanges. Commenters frequently mentioned a perceived growth in semi-truck traffic on US 30. There is generally opposition to bypasses of Warsaw and Columbia City. Most members of the public submitting comments would like to see US 30 stay within its current footprint and alignment.

• Safety – Safety was the second most commonly mentioned category of comments. There were 85 comments related to safety, which was 58.6 percent of all comments received. Semi-truck traffic was commonly mentioned in relation to safety. Commenters perceive trucks as traveling at high speeds, having difficulty stopping at traffic signals, frequently running red lights, and generally contributing to an increase in traffic on the corridor. Other safety concerns related to accessing or crossing the highway.

• Mobility – A total of 45 comments, or 31 percent of comments, fell into the mobility category. Numerous commenters expressed a desire to keep the current access to Parker Street in Warsaw. Concerns were expressed about the diversion of traffic through neighborhoods and potential negative impacts of businesses in the area near Menards. Commenters generally believe that traffic has increased on US 30 impacting mobility. There are also perceptions that an excess of traffic signals impede the movement of traffic. Some commenters mentioned the need for improved transportation options such as passenger rail.

• Economic Development – There were 39 comments related to economic development. That amounted to 26.8 percent of all comments. Making US 30 a controlled-access facility with frontage roads, overpasses and interchanges is seen by many as a key driver of job creation and business attraction and retention. Commenters also mentioned potentially negative impacts on businesses and farms from bypasses, expansion or relocation of US 30.

• Environmental – Comments in the environmental category included concerns about impacts to Chapman Lakes if a northern bypass of Warsaw is built. Property owners, businesses, farmers and other commenters are concerned about impacts of expanding the highway or relocating it on their homes and livelihoods. There were 31 total comments in the environmental category, or 21.3 percent of comments overall. A meeting was held on November 30, 2023 to update various resource agencies, including the Indiana Department of Natural Resources (IDNR), Natural Resources Conservation Service, and others on the study progress and next steps.

• Bike and Pedestrian – There were 18 comments categorized as Bike and Pedestrian for 12.4 percent of all comments. Difficulty crossing US 30 as a bicyclist or pedestrian in Warsaw was mentioned multiple times.



Commenters would like to see an overpass or tunnel to accommodate safe crossings. Embracing Complete Streets philosophies by adding sidewalks, bike lanes, and other features that enhance multimodal transportation was also mentioned.

These comments remain similar to the comments received prior to the Purpose and Need phase of the study, and do not conflict with the needs identified within the study document. Of note in the comments is economic development, which appeared in the comments more frequently than in the vision phase of the study. Due to this additional feedback, discussion of how each need point benefits economic development in the study area has been included within this final Purpose and Need document.



9. GLOSSARY OF COMMONLY USED TERMS

Access/Access Management | Access/accessibility is enabling traffic to reach a particular place, area, service, or activity. Access management is limiting vehicular access points to land parcels adjacent to a roadway to promote safe and efficient use of the transportation network. Within the ProPEL US 30 East study limits, US 30 is considered to have partial access control: access to and across US 30 is provided at a mixture of interchanges, at-grade roadways and driveways.

Agriculture/Agricultural Services | The agricultural industry is a large contributor to Indiana's economy. In context of the ProPEL US 30 East study, vehicles that support agriculture and the agricultural industry are characterized by heavy, slow-moving farm equipment as well as large trucks.

Census Tract | A census tract is a small geographic area defined by the U.S. Census Bureau for the purpose of collecting and organizing statistical data about populations. It is typically a subdivision of a county or a city, is used collect and analyze information about the people who live there.

Conflict Point | A conflict point on a roadway is any location where two or more vehicles' paths have the potential to merge, diverge, or cross. A single intersection or driveway can have numerous points where vehicles can potentially collide with one another. These are the locations the most likely for collisions to occur.

Disadvantaged Communities | As set forth in Executive Order (EO) 14008 on *Tackling the Climate Crisis at Home and Abroad*, disadvantaged communities are those that are marginalized, underserved, and overburdened by pollution. Indicators of burdens include the following:

- Affordable and sustainable housing
- Clean energy and energy efficiency
- Clean transit
- Climate change
- Development of critical clean water and wastewater infrastructure
- Training and workforce development
- Remediation and reduction of legacy pollution

Definitions and eligibility of what communities qualified as "disadvantaged" vary across United States Department of Transportation (USDOT) programs. For the ProPEL US 30 and US 31 studies, disadvantaged communities were identified using at least one of the tools identified by USDOT, which includes: the Climate and Economic Justice Screening Tool developed by the Council on Environmental Quality, the USDOT Disadvantaged Census Tracts tool, and the Areas of Persistent Poverty & Historically Disadvantaged Communities tool.

Environmental Justice | According to the Executive Order 14096 (Revitalizing our Nation's Commitment to Environmental Justice), environmental justice means the just treatment and meaningful involvement of all people,



regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people:

- (i) are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and
- (ii) have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices.

According to Executive Order 14096, it is intended to supplement the foundational efforts of Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority and Low-Income Populations), which was focused on identifying and addressing disproportionately high and adverse human health or environmental impacts on minority populations and low-income populations. For the ProPEL US 30 East study, the term environmental justice will refer to communities where low-income and/or minority populations, as currently defined by USDOT Order 5610.2(c) and FHWA Order 6640.23A Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, are present.

Equity | Equity is the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities (see definition below). According to the US Department of Transportation, equity in transportation seeks fairness in mobility and accessibility to meet the needs of all community members, particularly populations that are traditionally underserved. An equitable transportation plan considers the circumstances impacting a community's needs and identifies if any additional measures are needed to develop an equitable transportation network.

Free-flow | Free-flow traffic movements do not require a motorist to stop for other traffic movements, such as at signalized intersections or stop-controlled intersections. In typical conditions, free-flow traffic operates at the posted speed limit and motorists are practically unaffected by the presence of other vehicles on the roadway facility.

Freight |Freight is the movement of goods and materials, such as manufacturing outputs and bulk commodities, that supports the state's economic growth and competitive access to markets. In context of the ProPEL US 30 East study, freight is typified by heavy-duty commercial truck travel on US 30.

Goal |For the ProPEL US 30 East study, goals are elements that are desirable outcomes of any improvements. While goals will not be a basis for eliminating a solution or alternative, they will factor into the screening process and identifying solutions to move forward through the study.

Index of Crash Frequency (ICF)/ Index of Crash Cost (ICC) | The Index of Crash Frequency (ICF) is a measure of the frequency of crashes on a specific segment of road or at an intersection. The Index of Crash Cost (ICC) is a measure of crash severity that converts property damage and injuries or fatalities into a monetary value. The indices are generated using the RoadHAT software and represent the number of standard deviations that the observed crashes for the analyzed segment or intersection are above or below the statewide average for similar facilities in Indiana. An index greater than 0.0 is above the statewide average, while values less than zero indicate crash frequency or severity less than expected. Higher indices indicate worse safety performance as compared to lower numbers. The figures for the ProPEL US 30 East study indicate indices greater than 0.0 as elevated crash locations. These indices



help to prioritize locations for focus, but the whole US 30 corridor within the study area was investigated for correctible crash patterns.

Level of Service (LOS) |Level of Service is a performance measure that represents quality of service, measured on an A – F scale, with LOS A representing the best operating conditions from a traveler's perspective and LOS F representing the worst.

Mobility | Mobility is the ability and ease of a transportation system to move people and goods using one or more transportation modes. Mobility is characterized by the ability to connect people to the places they want to go in a safe and efficient manner, while minimizing travel time, making effective use of available capacity, and providing reliable performance.

Multi-modal |Multi-modal transportation opportunities provide more freedom in how people get around, especially for people who cannot or choose not to drive a car. Multi-modal transportation supports the needs of all users, whether they choose to walk, bike, or use transit, either for all or part of their journey or for recreational purposes.

The National Environmental Policy Act (NEPA) | A United States law that requires government agencies to consider the environmental impacts of their actions when making decisions. NEPA is intended to ensure that the environmental consequences of federal actions are taken into account and balanced with other considerations, such as economic and social factors, when making decisions that could affect the environment. NEPA mandates that agencies conduct an assessment of the potential environmental effects of their proposed actions, along with any possible alternatives, and make this information available to the public for review and comment.

Performance Measure | A measure of the degree to which an alternative satisfies an identified need or goal in a study or project.

Planning and Environment Linkages | A PEL study is a way for transportation agencies, such as INDOT, to make and document planning decisions. A PEL study precedes any construction decisions and allows INDOT to better understand community needs and to develop alternative solutions that meet those needs A collaborative and integrated approach to decision-making that:

- 1) Considers environmental, community, and economic goals early in the transportation planning process; and
- 2) Uses the information, analysis, and products developing during planning to inform the environmental reviews conducted in accordance with the National Environmental Policy Act (NEPA).

ProPEL |ProPEL is an INDOT initiative for transportation planning that uses collaborative PEL studies to better understand community needs and to develop alternatives that meet those needs. Through the PEL studies, INDOT aspires to create smarter transportation systems that build stronger communities. INDOT is using PEL studies on the US 30 and US 31 corridors in central and northern Indiana, of which ProPEL US 30 East is one.

Purpose and Need | Purpose and need are terms describing why a project is being completed. Need is the specific transportation problems that are present or projected to occur. The purpose defines the transportation problem(s) to be addressed. The Purpose and Need establishes a basis for the development of a range of reasonable alternatives. It also provides the basis for performance measures which assess the relative ability of alternatives to



address the project needs. If an alternative does not meet the purpose and need of a project, it is eliminated from consideration.

Safety Countermeasures | Safety countermeasures are improvements or strategies applied to a roadway with the specific goal of reducing roadway fatalities and serious injuries. Each countermeasure addresses at least one safety focus area – speed management, intersections, roadway departures, or pedestrians/bicyclists – while others are cross-cutting strategies that address multiple safety focus areas.

Scoping | Scoping happens early in the study and includes the gathering and analysis of information pertaining to the subject study to determine the scope of issues to be addressed and what issues should be studied in depth when considering transportation solutions. The scoping phase includes seeking input from the public and study stakeholders regarding what issues should be studied and input into what alternatives should be considered.

Stakeholders | In the context of a transportation study, stakeholders can refer to any individuals, groups, or organizations that have an interest in the transportation system being studied. Stakeholder can include government agencies (including federal, state, and local transportation departments, planning and development agencies, and regulatory bodies), transportation operators (such as bus, rail, and taxi companies, airports, and ports), businesses and industry, advocacy groups (such as those representing cyclists, pedestrians, public transit users, and environmentalists), communities and community groups (such as neighborhood associations, schools, and community centers), residents and commuters (including those who live, work, or travel in the area being studied), an emergency responders (including police, fire, and ambulance services) to name a few.

Study Area/Study Corridor |The ProPEL US 30 East study corridor is approximately 58 miles long from Beech Road in Marshall County to the Indiana/Ohio state line in Allen County, with portions within I-69 and I-469 around the north side of Fort Wayne excluded from the study. The study area is the larger general area served by US 30 within the study limits; for purposes of identification of resources that could be affected by the alternatives under consideration, the study area generally extends approximately a half-mile on either side of US 30.

Two-Way Stop-Controlled Intersection | An intersection where mainline traffic is free-flow and the side-street approaches have a stop sign and must yield the right-of-way to the mainline.

Underserved Communities | According to Executive Order 13985 Advancing Racial Equity and Support for Underserved Communities, the term underserved communities refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. For the ProPEL US 30 East study, underserved communities encompass all efforts to focus on achieving equitable outcomes related to safety, mobility, and access, and include: minority and low-income populations (including communities with environmental justice concerns), Disadvantaged Communities (see above), limited English proficiency (LEP) populations, populations with limited internet access, populations with limited vehicle access, and populations with disabilities.