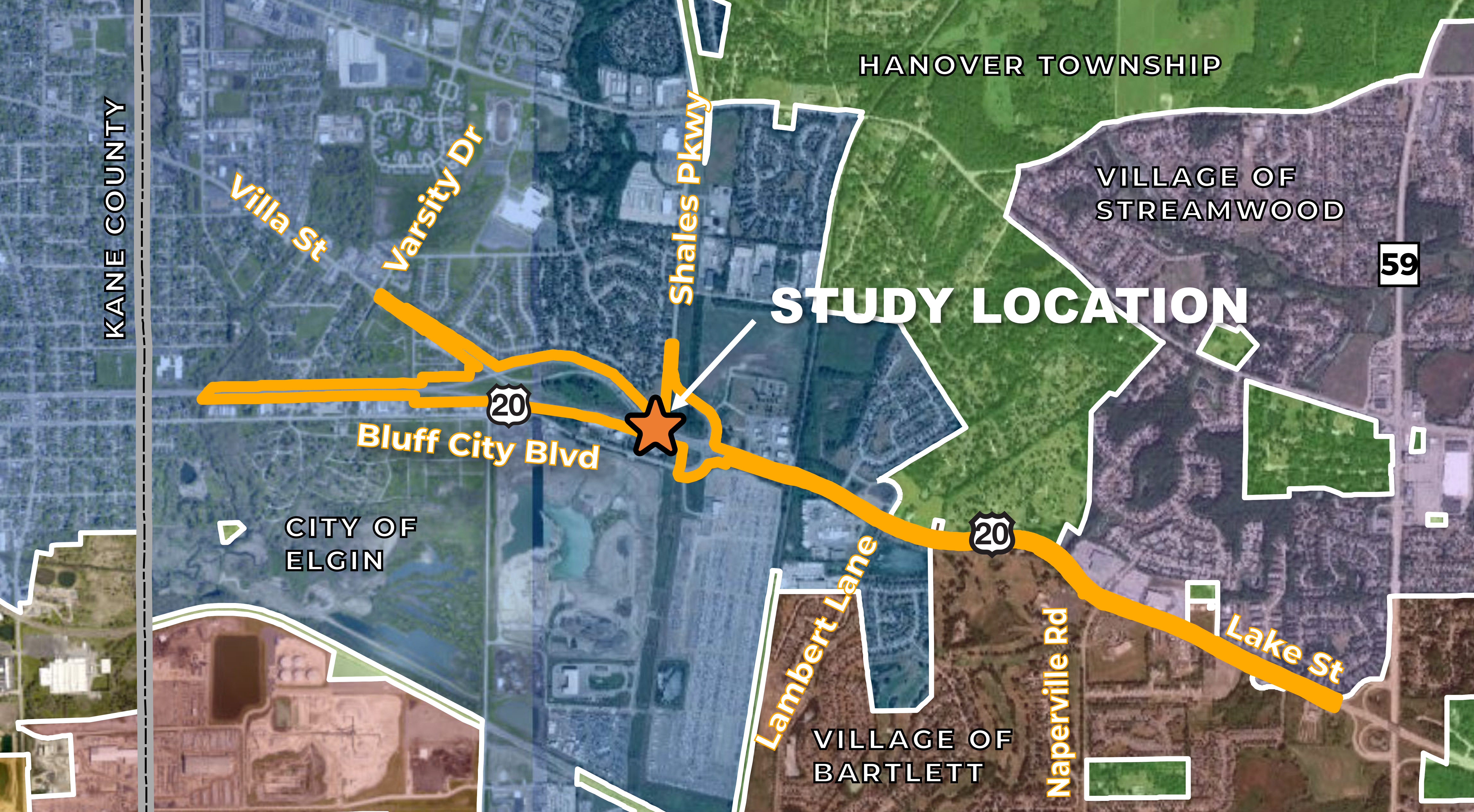


WELCOME

US 20 at Shales Parkway Phase I Engineering Study

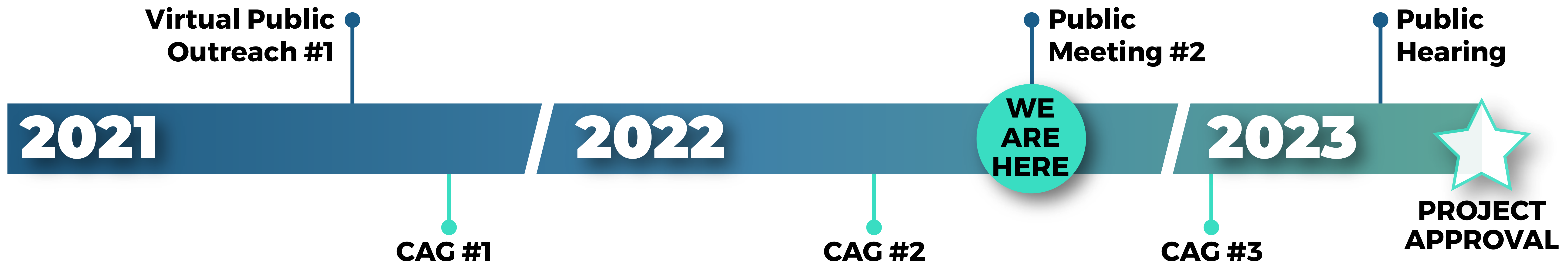
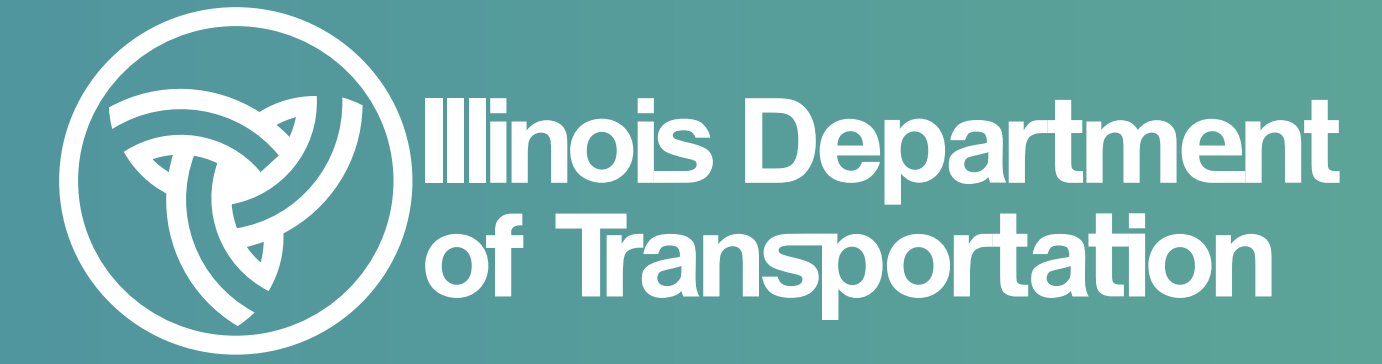


Illinois Department of Transportation



Location Map

Public Involvement Summary



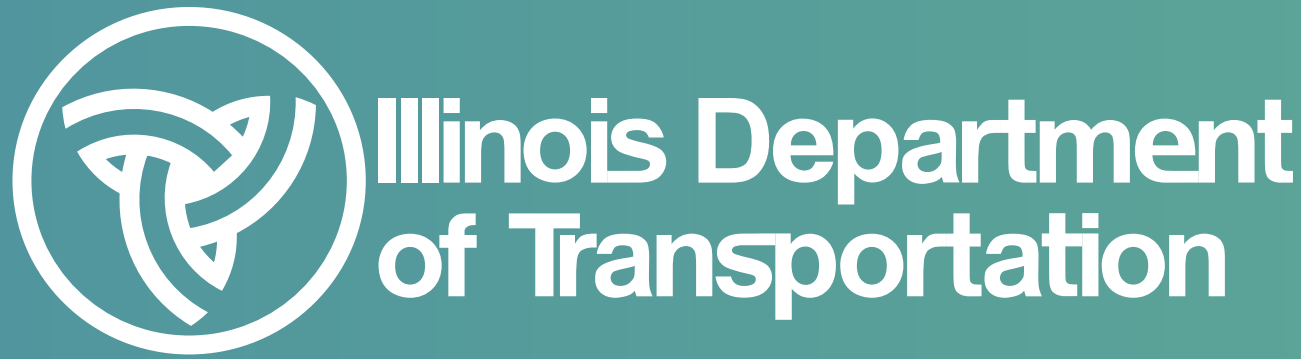
Virtual Public Outreach Event

- Held September 10 – October 20, 2021
- Provided an overview of the study process, schedule and anticipated public involvement activities
- Presented existing conditions
- Obtained public input on the transportation issues and needs within the study area

Community Advisory Group (CAG)

- Meeting #1: December 8, 2021
- Meeting #2: June 29, 2022
- Group of volunteer community stakeholders that shares issues and concerns
- Obtained feedback on existing study area conditions and draft interchange alternatives

Study Overview and Process



PROJECT PHASES

Phase I



Preliminary Engineering and Environmental Study

Fully Funded

Anticipated Completion - 2023

Phase II

Contract Plan Preparation and Land Acquisition

Included in FY 2023-2028 Multi-Year Improvement Program

24-36 months to complete

Phase III

Construction

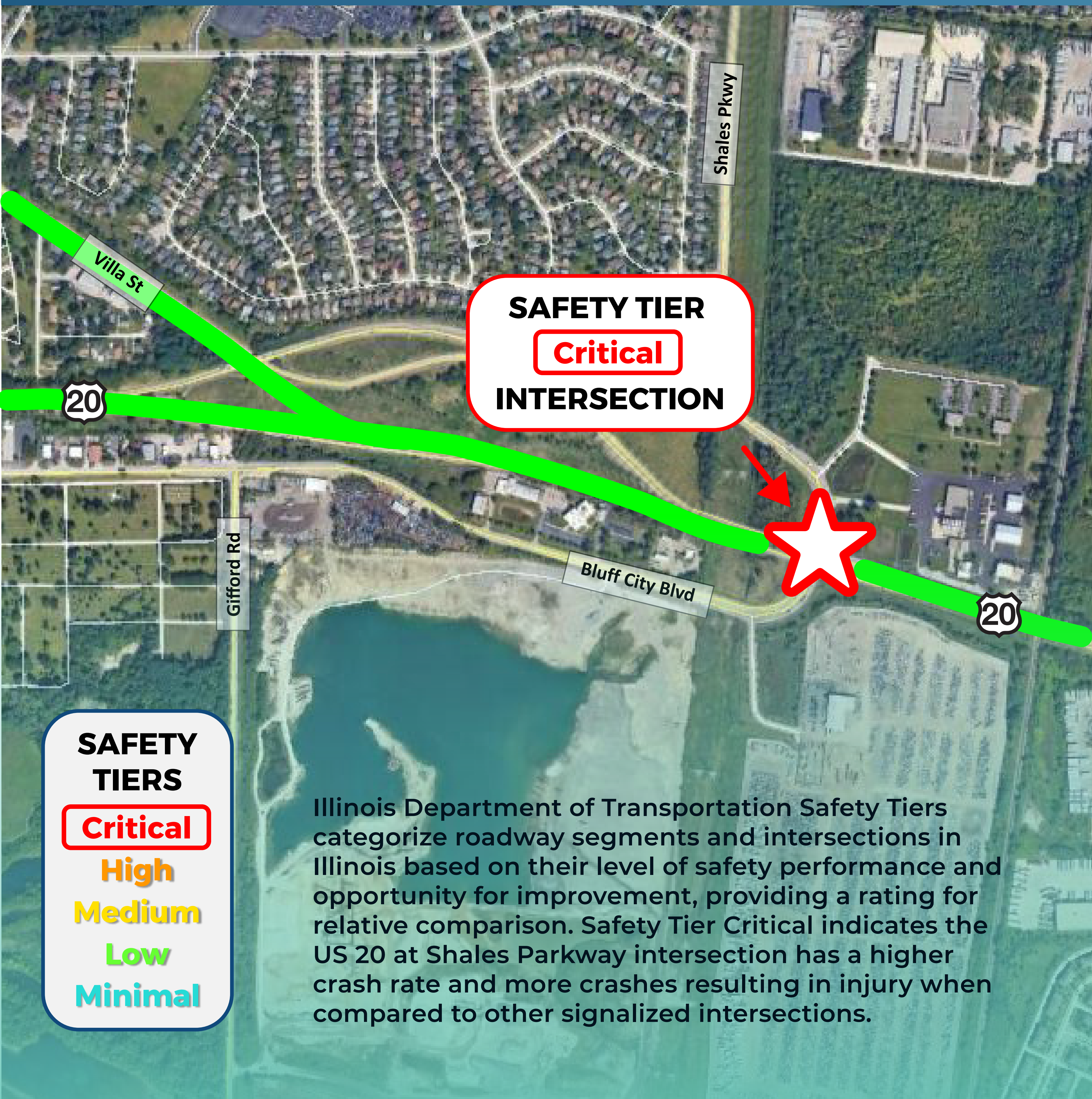
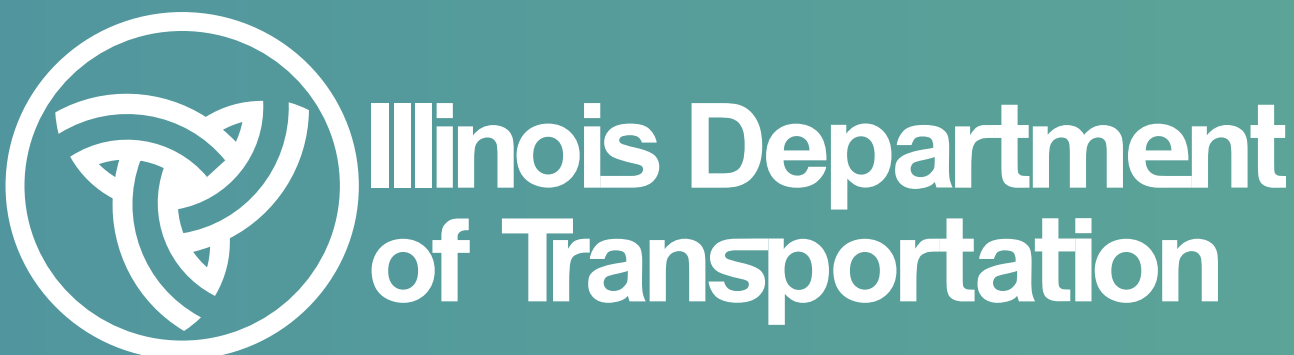
Included in FY 2023-2028 Multi-Year Improvement Program

24-36 months to complete

Public Involvement Summary



Crash History - US 20 at Shales Parkway



SAFETY TIER
Critical
INTERSECTION

SAFETY TIERS

Critical

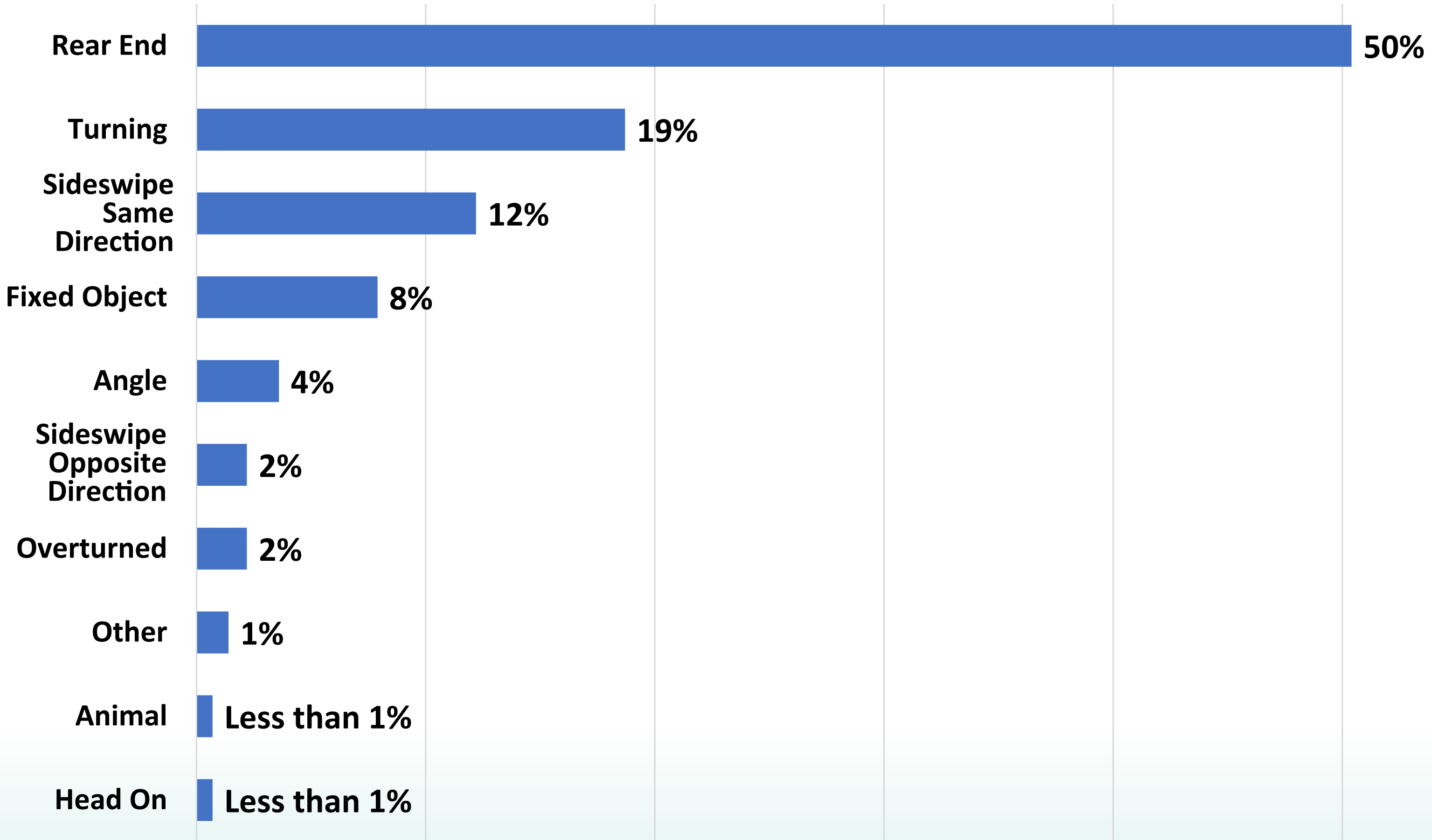
High

Medium

Low

Minimal

Illinois Department of Transportation Safety Tiers categorize roadway segments and intersections in Illinois based on their level of safety performance and opportunity for improvement, providing a rating for relative comparison. Safety Tier Critical indicates the US 20 at Shales Parkway intersection has a higher crash rate and more crashes resulting in injury when compared to other signalized intersections.

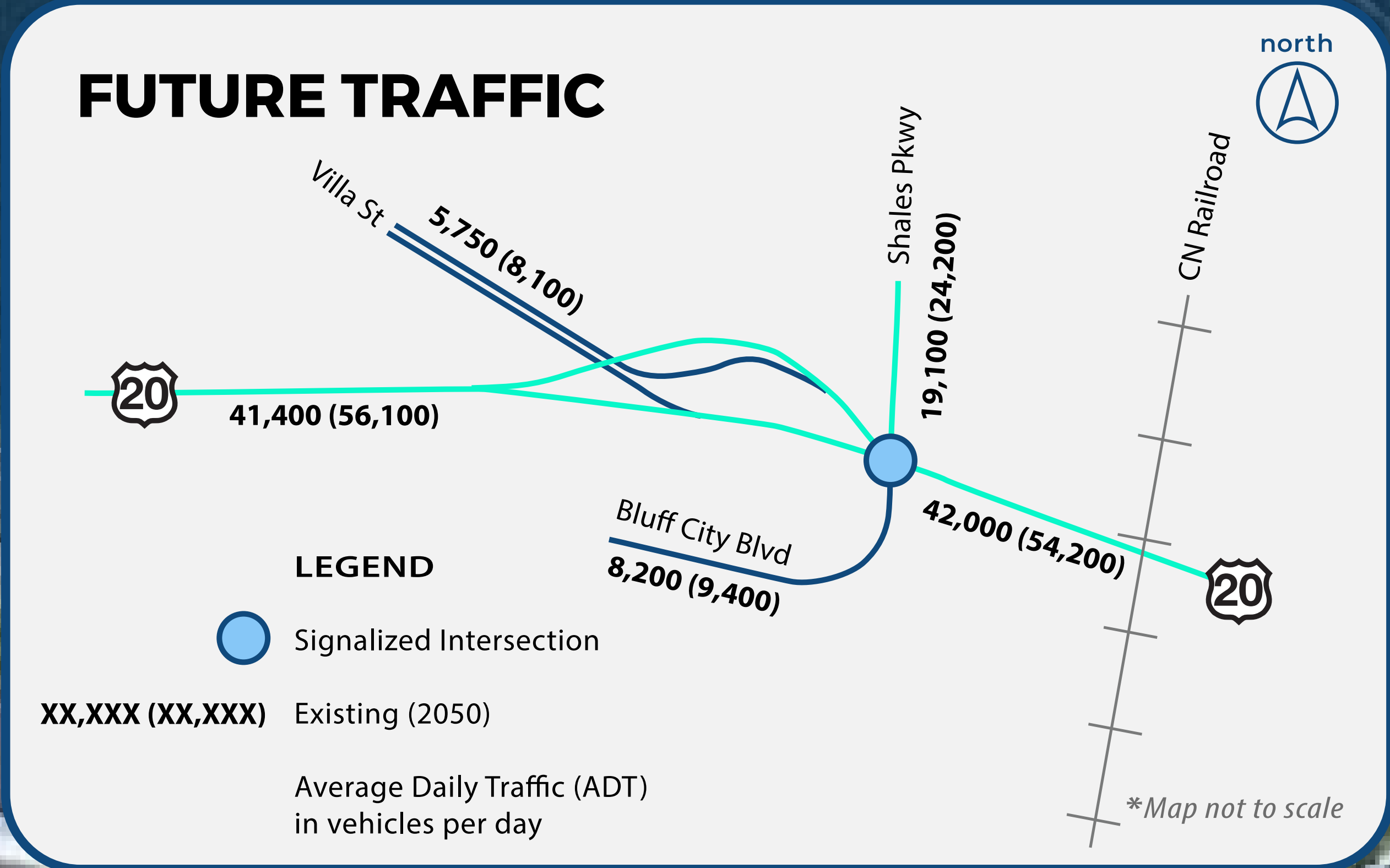


FIVE YEAR CRASH STATISTICS (2016-2020) US 20 AT SHALES PARKWAY	
Crash (Fatal)	0
Type A (Incapacitating)	6
Type B (Non-incapacitating)	16
Type C (Non-evident)	15
Property Damage Only	102
Total Crashes	139

Existing and Future Traffic

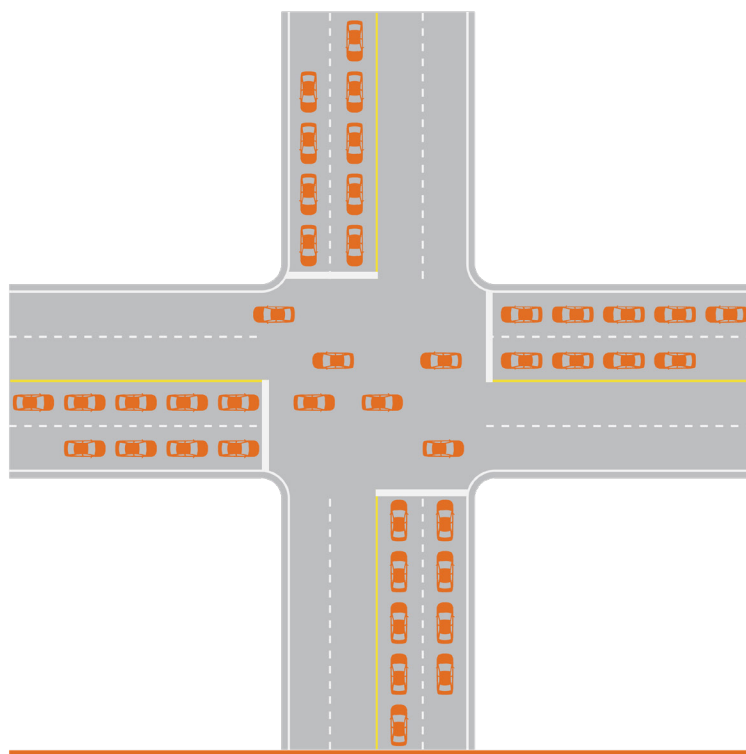
Level of Service

In accordance with methodology defined by the Federal Highway Administration, the Illinois Department of Transportation defines and measures traffic delays by a Level of Service or LOS rating using a scale from A to F, with free flow or no congestion rated as Level of Service A and heavy congestion rated as Level of Service F. Level of Service D is considered acceptable along state roadways in the Chicago metropolitan area.



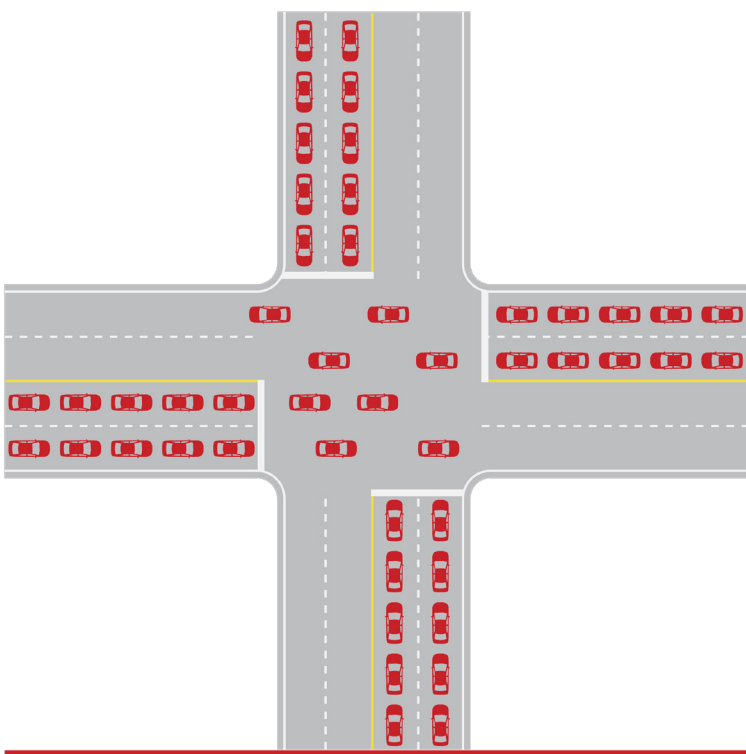
EXISTING QUEUES

Existing Operations - Failing



Maximum capacity of the intersection. Average vehicle delays are 55 to 80 seconds.

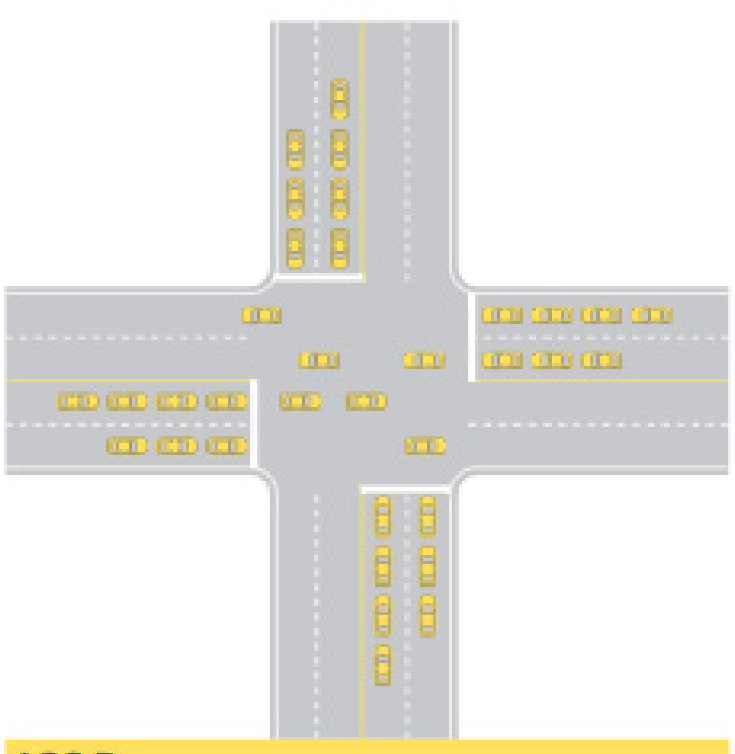
AM Peak Hour - LOS "E"



Jammed conditions where the intersection is over capacity. Average delays exceed 80 seconds.

PM Peak Hour - LOS "F"

Acceptable Operations



Delays to approaching vehicles may be substantial during short periods, but excessive backups are negligible. Average vehicle delays are 35 to 55 seconds.

Intersection Operations	
Existing Level of Service	Future Level of Service
D	F
Nearing Capacity (Acceptable)	Over Capacity (Failing)

US 20 Roadway

SAFETY TIERS

Critical

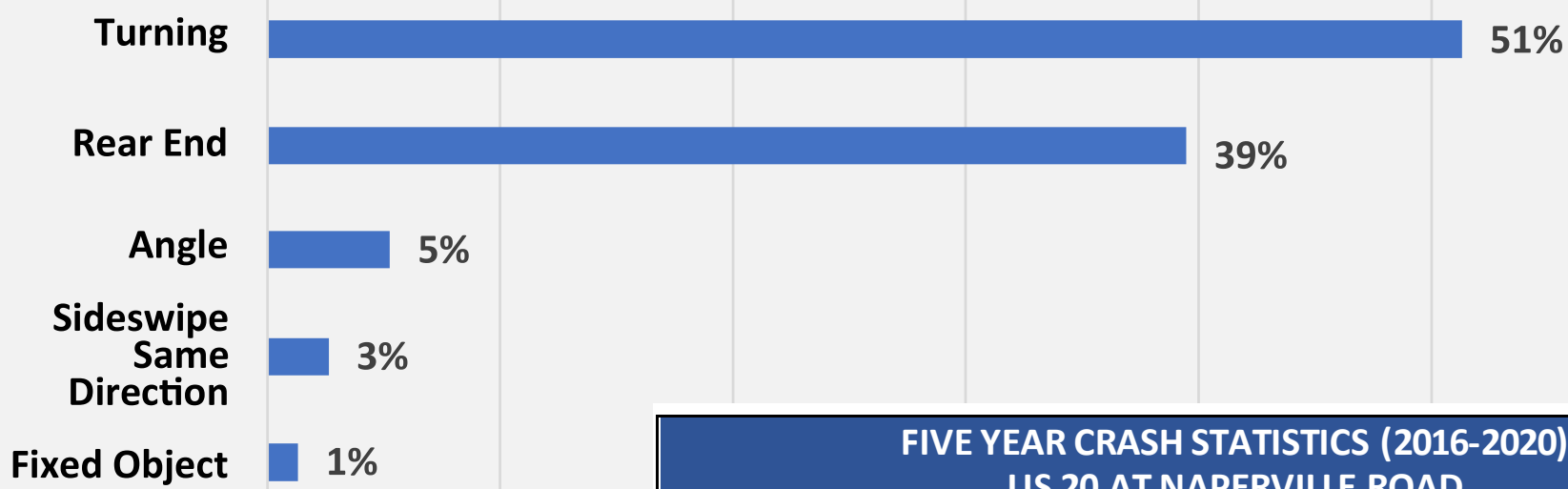
High

Medium

Low

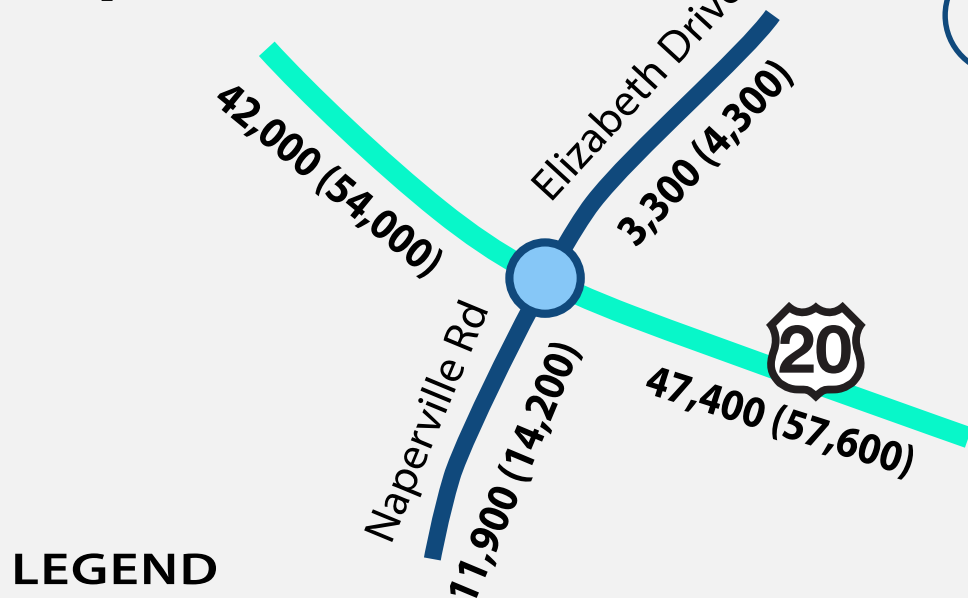
Minimal

Naperville Road



FIVE YEAR CRASH STATISTICS (2016-2020) US 20 AT NAPERVILLE ROAD	
Crash (Fatal)	0
Type A (Incapacitating)	0
Type B (Non-incapacitating)	10
Type C (Non-evident)	18
Property Damage Only	48
Total Crashes	76

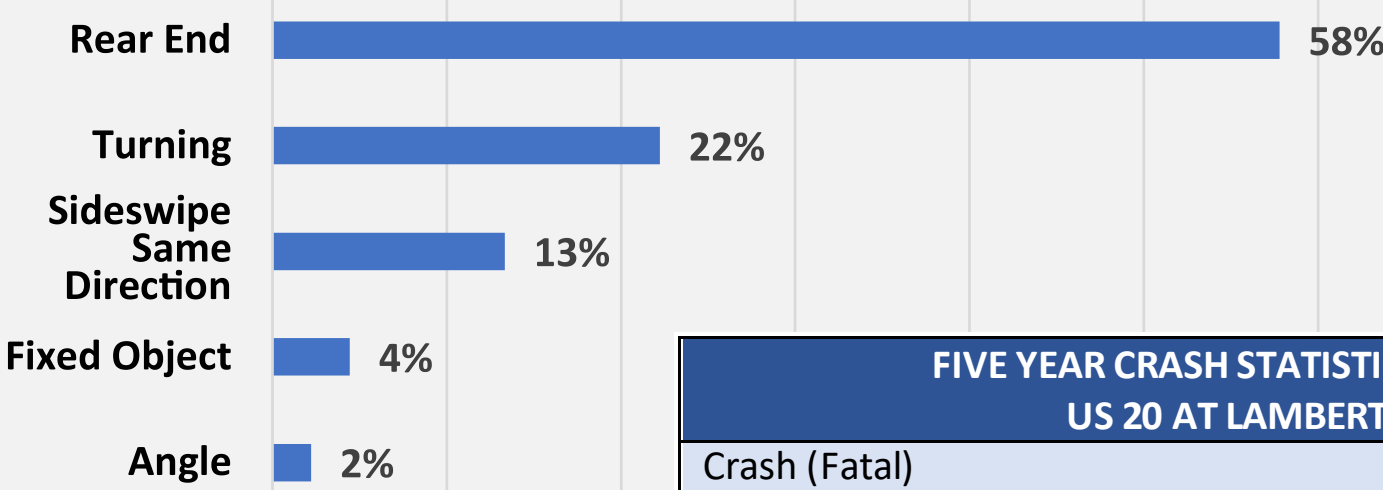
Naperville Road



LEGEND

Signalized Intersection
XX,XXX (XX,XXX) Existing (2050)
*Map not to scale

Lambert Lane



FIVE YEAR CRASH STATISTICS (2016-2020) US 20 AT LAMBERT ROAD	
Crash (Fatal)	0
Type A (Incapacitating)	4
Type B (Non-incapacitating)	7
Type C (Non-evident)	4
Property Damage Only	30
Total Crashes	45

Lambert Lane



LEGEND

Signalized Intersection
XX,XXX (XX,XXX) Existing (2050)
*Map not to scale

Elizabeth Drive

Monarch Drive

Illinois Department of Transportation Safety Tiers categorize roadway segments and intersections in Illinois based on their level of safety performance and opportunity for improvement, providing a rating for relative comparison. Safety Tier Critical indicates the US 20 intersections at Lambert Lane and Naperville Road have higher crash rates and more crashes resulting in injury when compared to other signalized intersections.

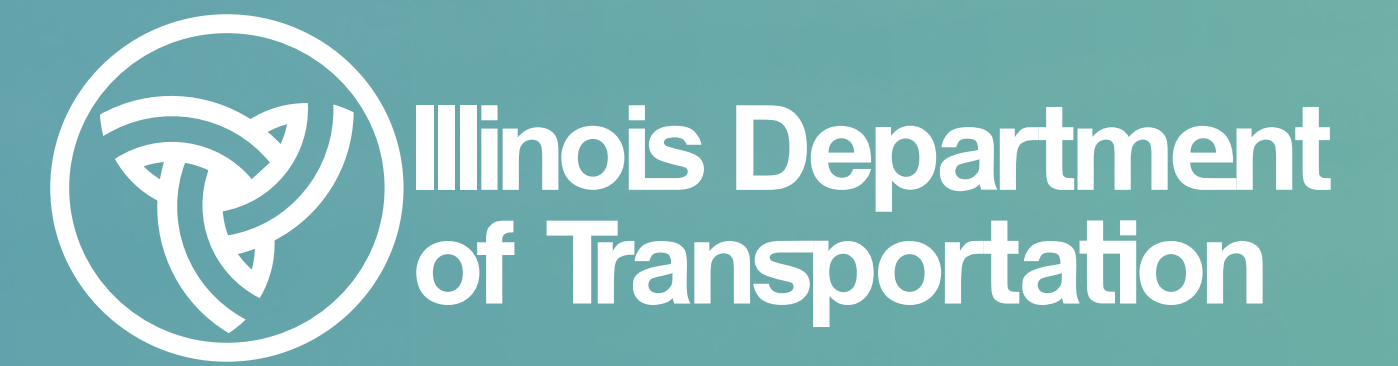
Purpose and Need

- The purpose of the US 20 at Shales Parkway project is to improve safety, increase mobility and improve multimodal connections along the US 20 corridor.
- The US 20 at Shales Parkway signalized intersection has been identified as Safety Tier Critical, the highest tier, by IDOT's Division of Transportation Safety. The existing design and configuration of the intersection no longer accommodates travel demands. The need for the US 20 and Shales Parkway intersection is supported by high crash rates and severity of the crashes.
- Improvements are needed to:
 - Reduce potential for severe and fatal crashes on US 20
 - Improve operational efficiency and reliability at US 20 and Shales Parkway
 - Accommodate multimodal connections in the study area
 - Support goals of the City of Elgin's Comprehensive Plan

Interchange Options

- Feasibility Study (2017)
- Single Point Urban Interchange (SPUI) at Shales Parkway
- Diverging Diamond Interchange (DDI) west of Shales Parkway
- Roundabout west of Shales Parkway

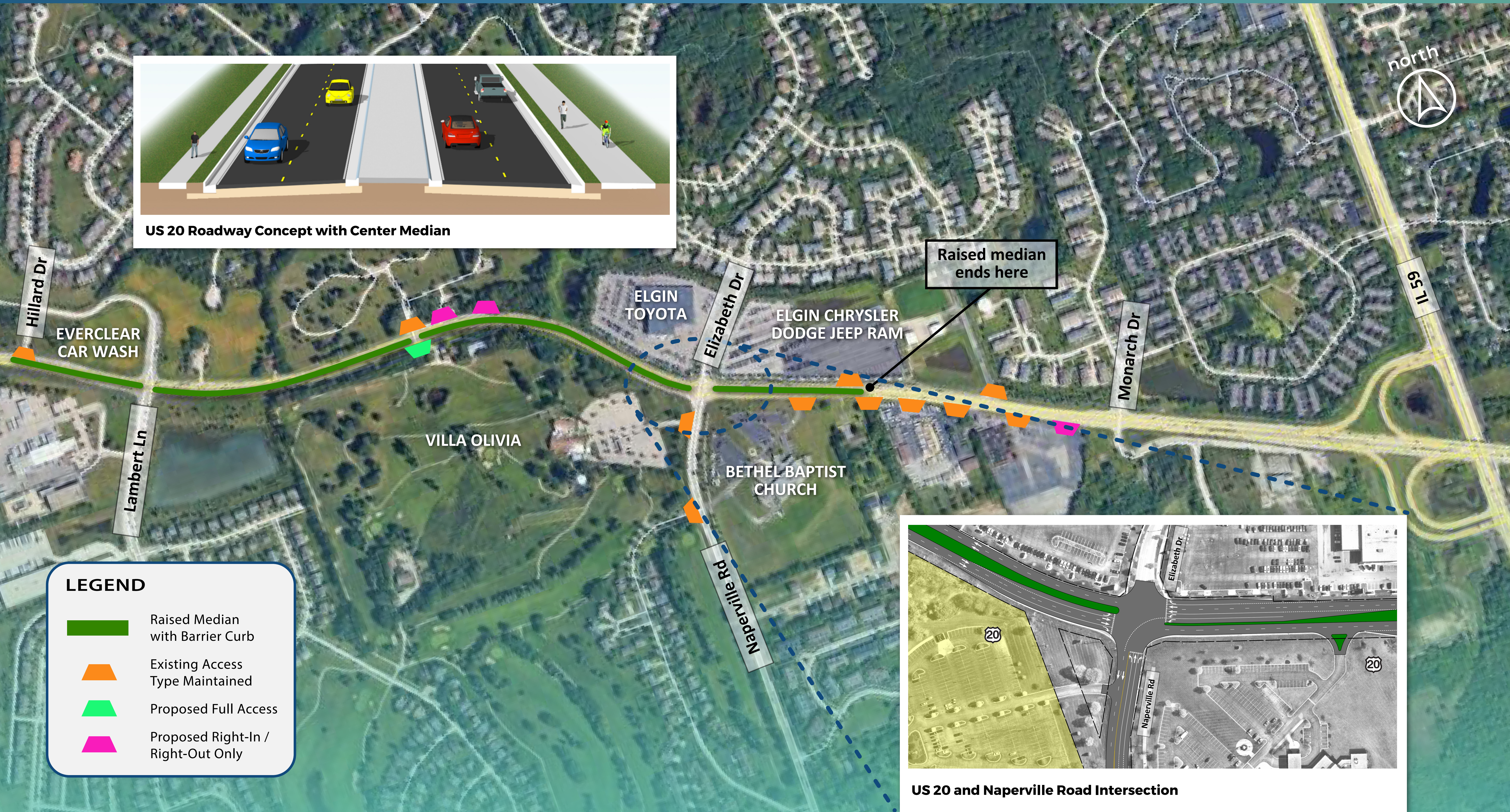
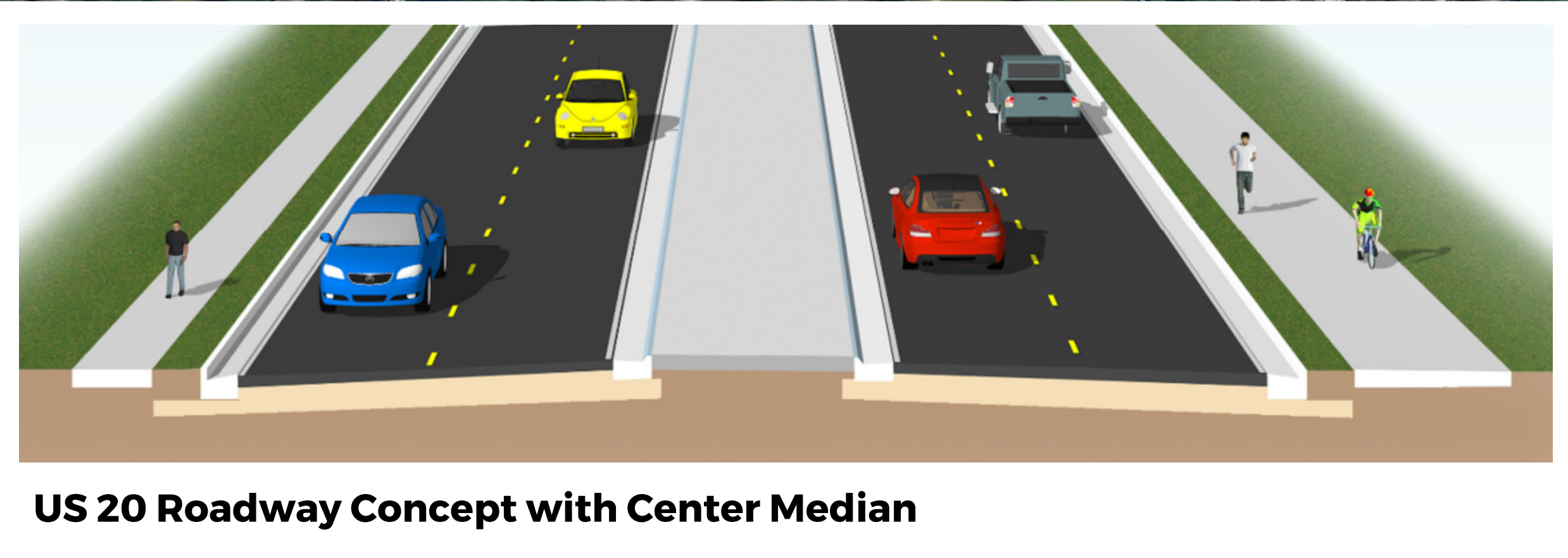
US 20 Lambert Lane to IL 59



- Median Improvements
- Intersection Improvements



Median and Intersection Safety Improvements



Interchange Alternatives Comparison



	Category	Unit of Measure	Feasibility Study	SPUI	DDI	Roundabout
Purpose and Need Evaluation	Safety Improvements - Interchange vs. Intersection	N/A	May Reduce All Crashes by Up to 42%*			
	Traffic Operations Level of Service (LOS)	LOS	LOS C	LOS C	LOS C	LOS D
	Does this meet the City of Elgin Comprehensive Plan?	Yes / No	Yes	Yes	Yes	Yes

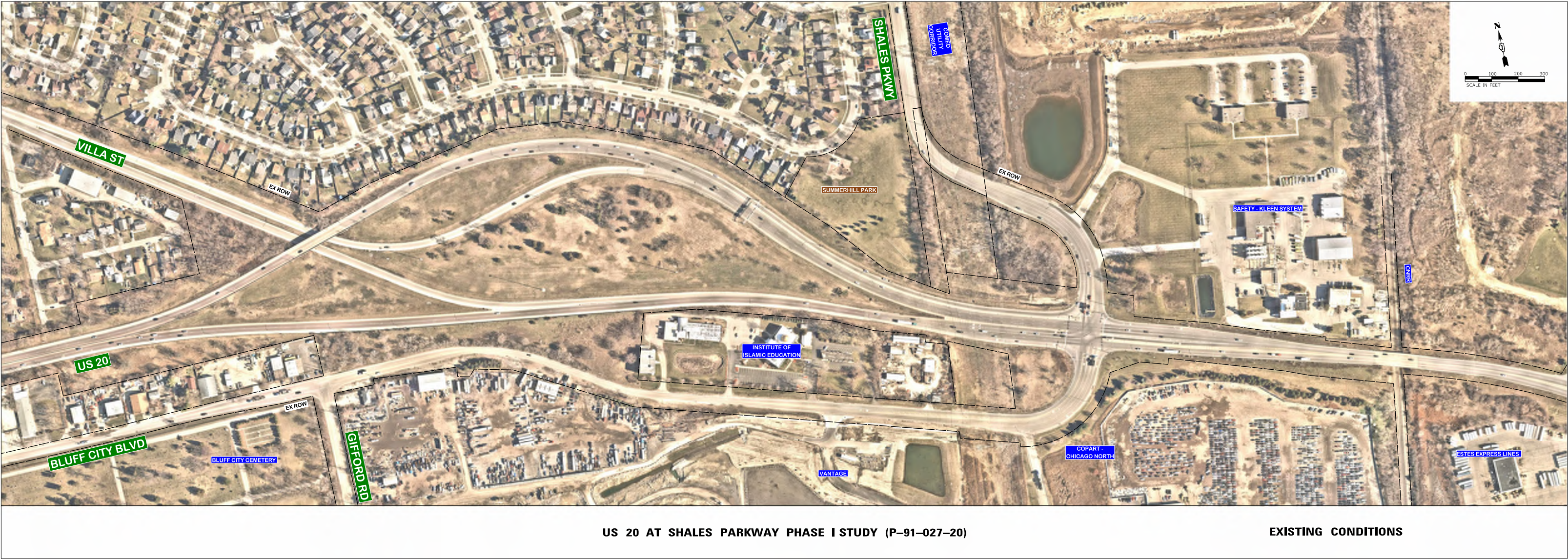
Legend	
Blue	Meets Purpose and Need
Gray	Does Not Meet

	Category	Unit of Measure			Feasibility Study	SPUI	DDI	Roundabout
Impact Evaluation	Impervious Roadway Area	Acres			34.73	32.06	31.50	32.42
	Number of New Bridges	Each			4	4	3	5
	Surface Area of New Bridges	Square Yards			5,680	5,310	3,480	5,520
	Wetland Impacts	Acres			0.025	0	0	0
	Number of Potential Full Displacement	Each			3	1	2	1
	Right-of-Way	Acres			24.46	4.51	5.63	3.86
	Anticipated Summerhill Park Impacts	Acres			2.87	0.25	0.45	0.53
	Area for Open Space	Less	Equal	More	Less	More	Less	More
	Accommodates Bike and Pedestrian Facilities	Yes / No			Yes	Yes	Yes	Yes
	Ease of Construction	Low	Medium	High	Low	High	Low	Medium
	Villa Street Access	Yes / No			Yes	Yes	Yes	Yes
	US 20 Westbound Access	Yes / No			Yes	Yes	Yes	Yes
	Overall Cost	\$	\$\$	\$\$\$	\$\$\$	\$\$	\$\$	\$\$

Legend	
Dark Blue	Lower Impact
Light Blue	Neutral
Cyan	Higher Impact

*According to the Highway Safety Manual, a guidance document for incorporating quantitative safety analysis in the highway transportation project planning and development process, converting a four-leg at-grade intersection into a grade-separated interchange may have the following reductions in crashes:

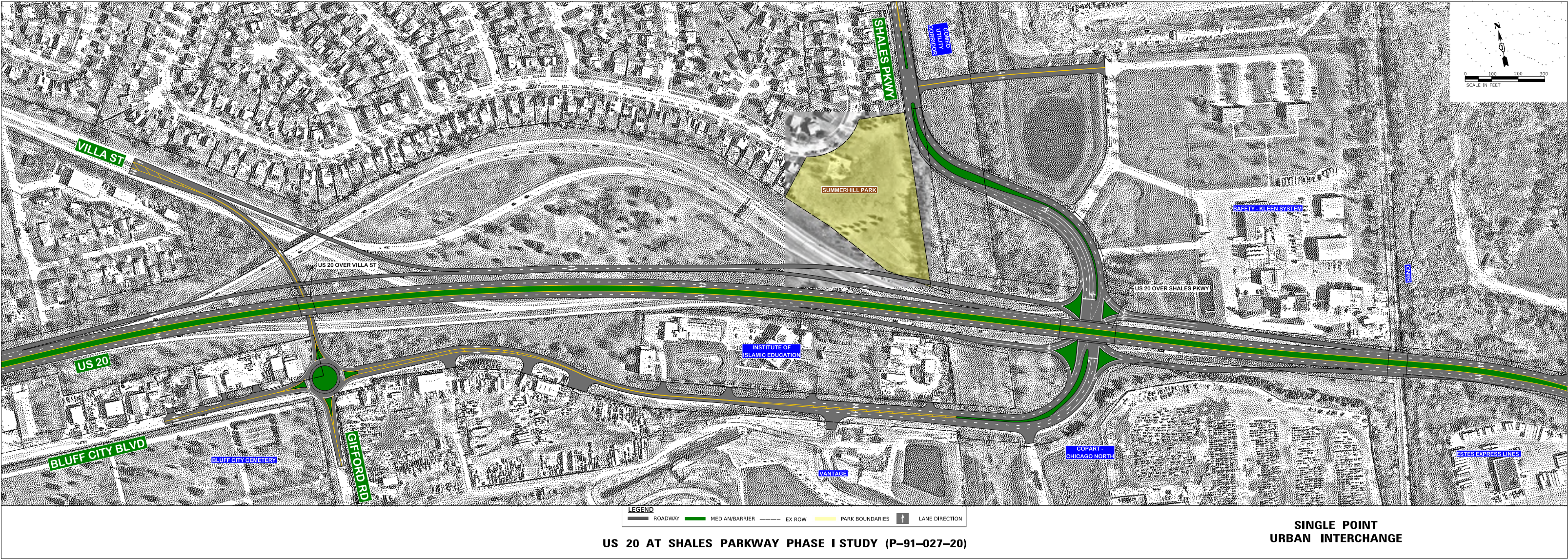
- All crashes in the area of intersection – 42% reduction
- Injury related crashes in the area of intersection – 57% reduction
- Non-injury related crashes in the area of intersection – 36% reduction

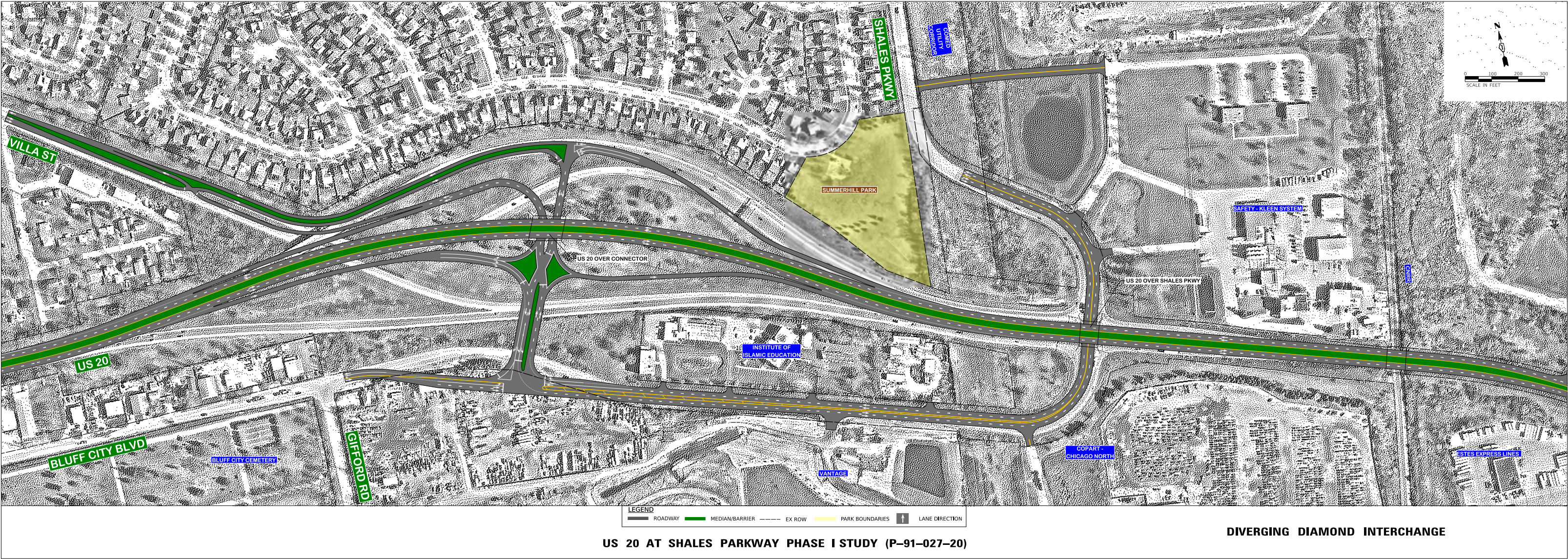


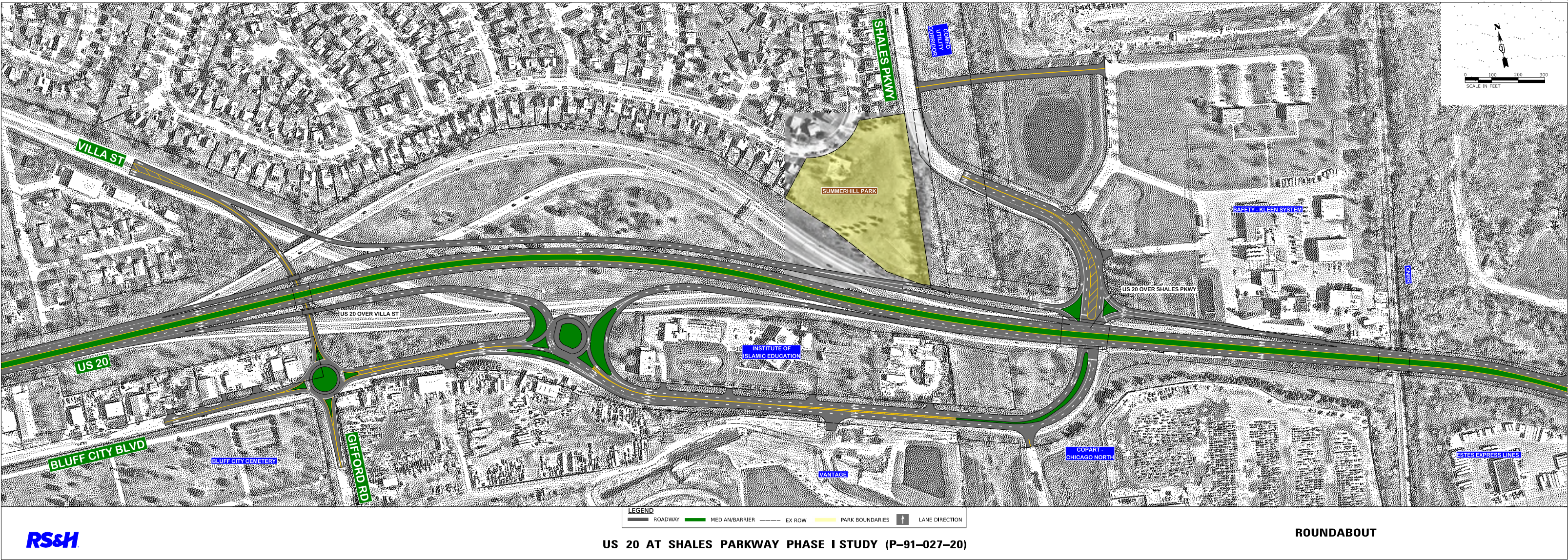


US 20 AT SHALES PARKWAY PHASE I STUDY (P-91-027-20)

FEASIBILITY STUDY (2017)









US 20 AT SHALES PARKWAY PHASE I STUDY (P-91-027-20)

US 20 – LAMBERT LANE TO IL 59