



AECOM

M-51 from Indiana State Line to M-60BR
US-12 from 3rd Street to Cass County Line

Stakeholder Meeting #1

City of Niles, Niles Township, Berrien County

Wednesday, May 16, 2018

The AECOM Team:
AECOM, Bergmann Associates and SME



Stakeholder Meeting #1 Agenda

- Project Background, Process, & Schedule
- Project Overview
 - Bridge Condition
 - Traffic and Safety Review
 - Stakeholder/Public Involvement
- Overview of Small Group Discussion Topics
 - Identify Key Issues
 - Brainstorm Ideas and Potential Solutions
 - Understand the Challenges
- Small Group Discussions
- Report Small Group Findings
- Where do we go from here?

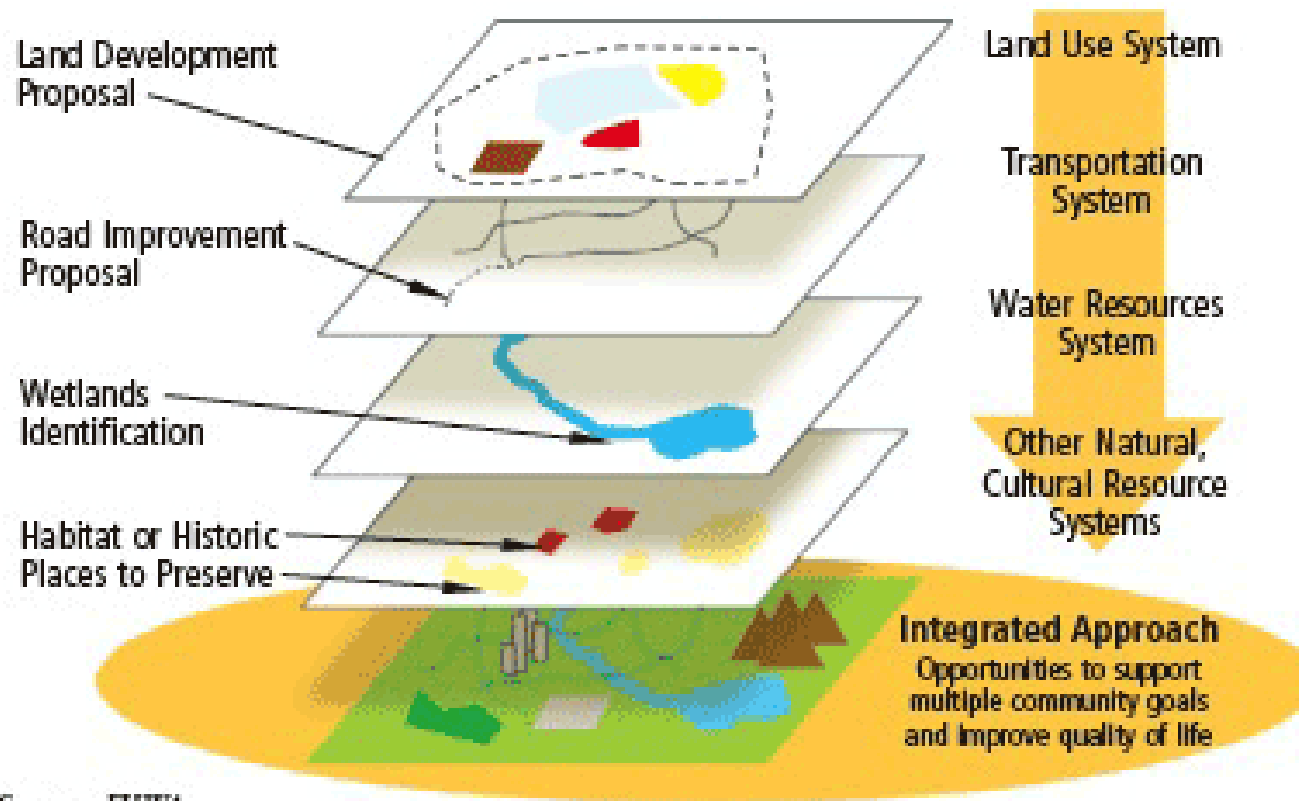
Project Background

- MDOT has initiated a feasibility study for the US-12/M-51 interchange.
- Study initiated because of aging US-12 bridges over M-51.
- Study will include examination of traffic operations and how to best configure the interchange to accommodate future transportation needs.
- Stakeholder and public involvement is a key component of the study.
- Study will also include pavement improvement analysis (pavement cores) on M-51 from State line to M-60BR.
 - This portion will include geotechnical analysis for pavement, storm sewers, and drainage structures.



Project Process

PEL's Integrated Approach

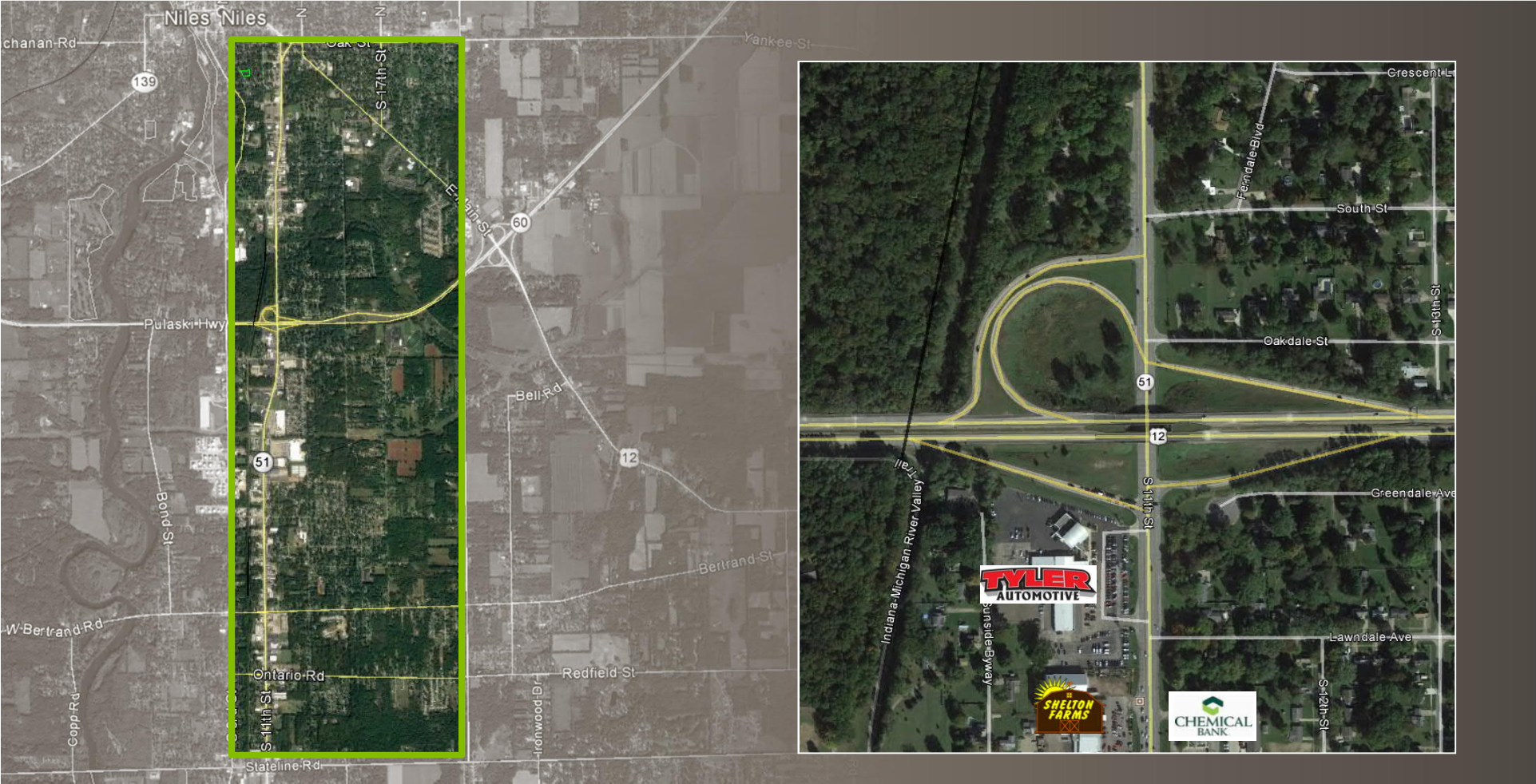


Source: FHWA

Project Schedule

- Stakeholder Meeting #1
(May 16, 2018)
 - Discuss issues and brainstorm ideas
- Public Meeting #1
(July 2018)
 - Present project purpose and schedule
- Interchange Traffic Analysis Review Meeting
(June 2018)
 - Review projected traffic impacts
- Drainage/Geotech Deliverables
(June 2018)
 - Review of drainage/geotech findings
- Preliminary Cost Estimates for Interchange Alternatives
(July 2018)
 - Initial cost estimates for each alternative
- M-51 Pavement, Utilities, & Interchange Concept Meeting
(July 2018)
 - Review of conceptual design options
- Stakeholder Meeting #2
(August 2018)
 - Present preliminary alternatives
- Progress Meetings
(September 2018)
 - Review of progress on all aspects
- Preliminary Scoping Report
(October 2018)
 - Draft report due for review
- Stakeholder Meeting #3
(October 2018)
 - Finalize project alternatives
- Public Meeting #2 (November 2018)
 - Present recommended option
- Finalize Scoping Report
(February 2019)
 - Final report due to MDOT

Aerial View of Project Area



Existing Laneage – M-51



Existing Laneage – US-12



M-51 Pavement Conditions



US-12 Bridge Condition

- Biannual Inspections



Piers

- Exposed Rebar
- Cracking Concrete
- Concrete Surface Flaking Off



Deck Surface

- Cracking
- Leaking



Deck Underside

- Minor rust stains on permanent metal decking
- False bottom to catch crumbling concrete



Beams

- Section Loss (i.e. rust)
- Pack Rust at majority of beams



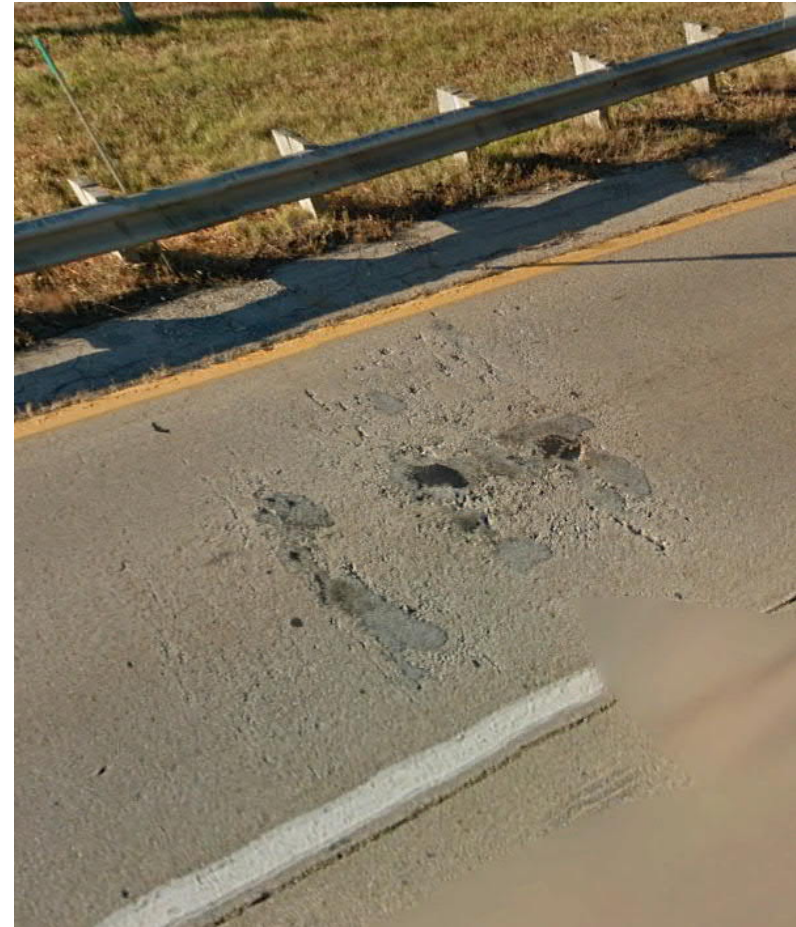
Bridge Railing

- Exposed Rebar
- Cracking Concrete
- Concrete Surface Flaking Off

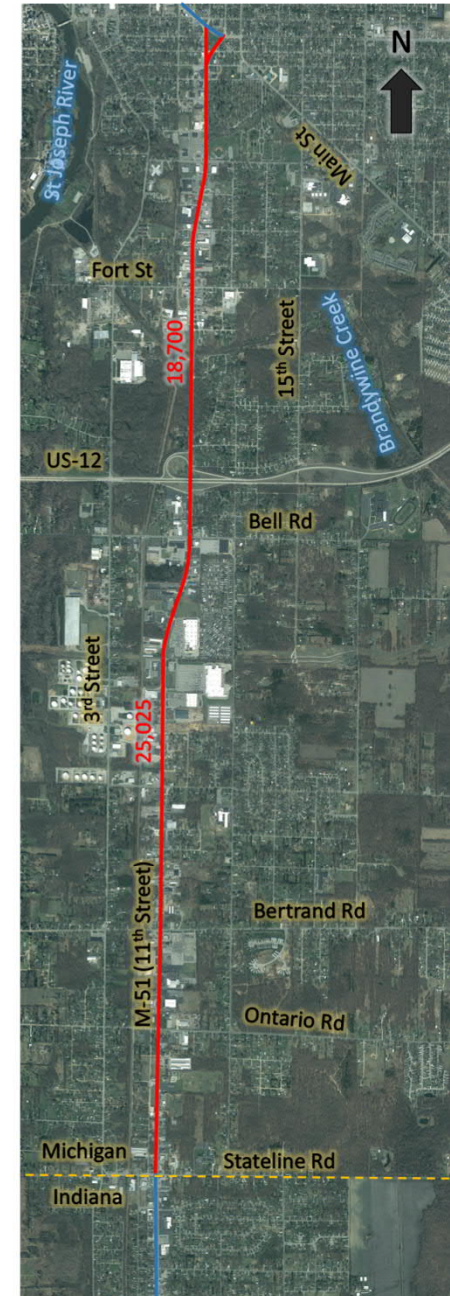
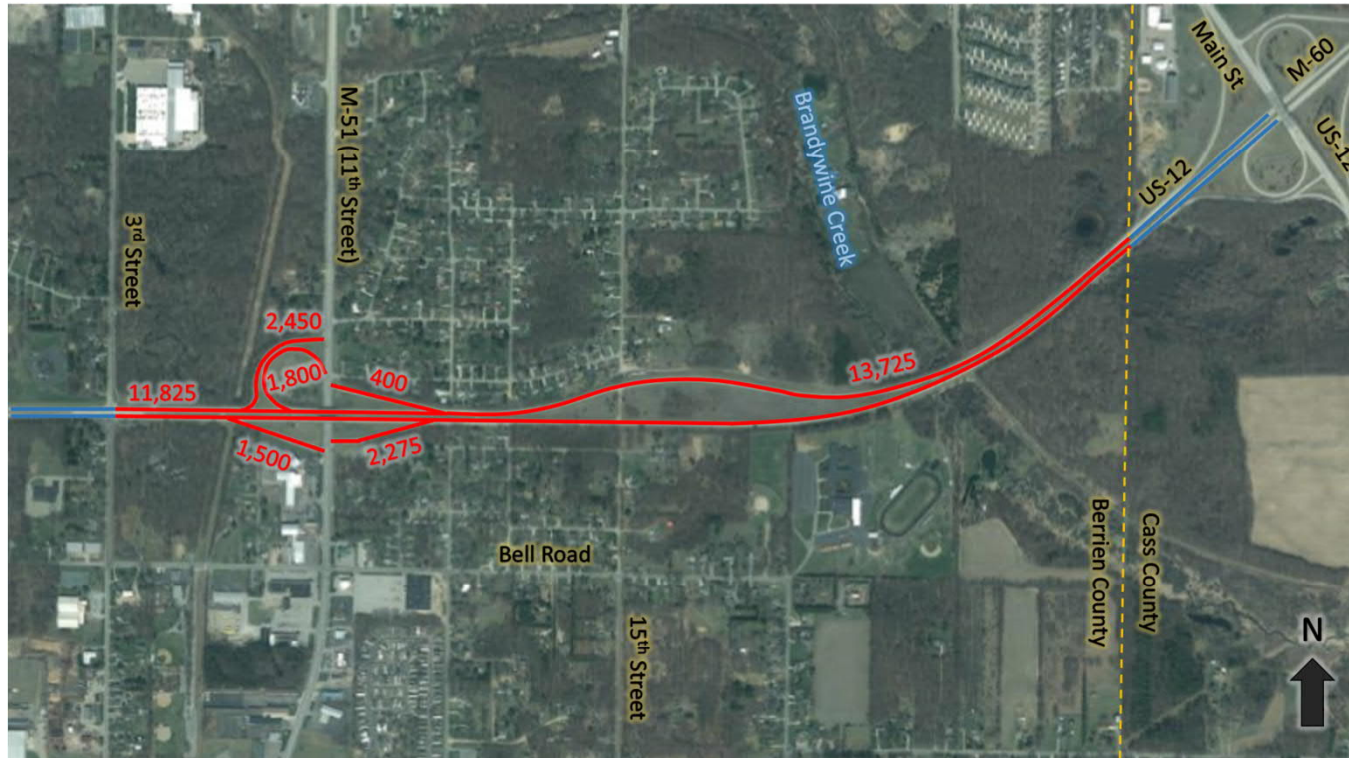


Bridge Approaches

- Settlement
- Pavement Cracking
- Patch Deterioration

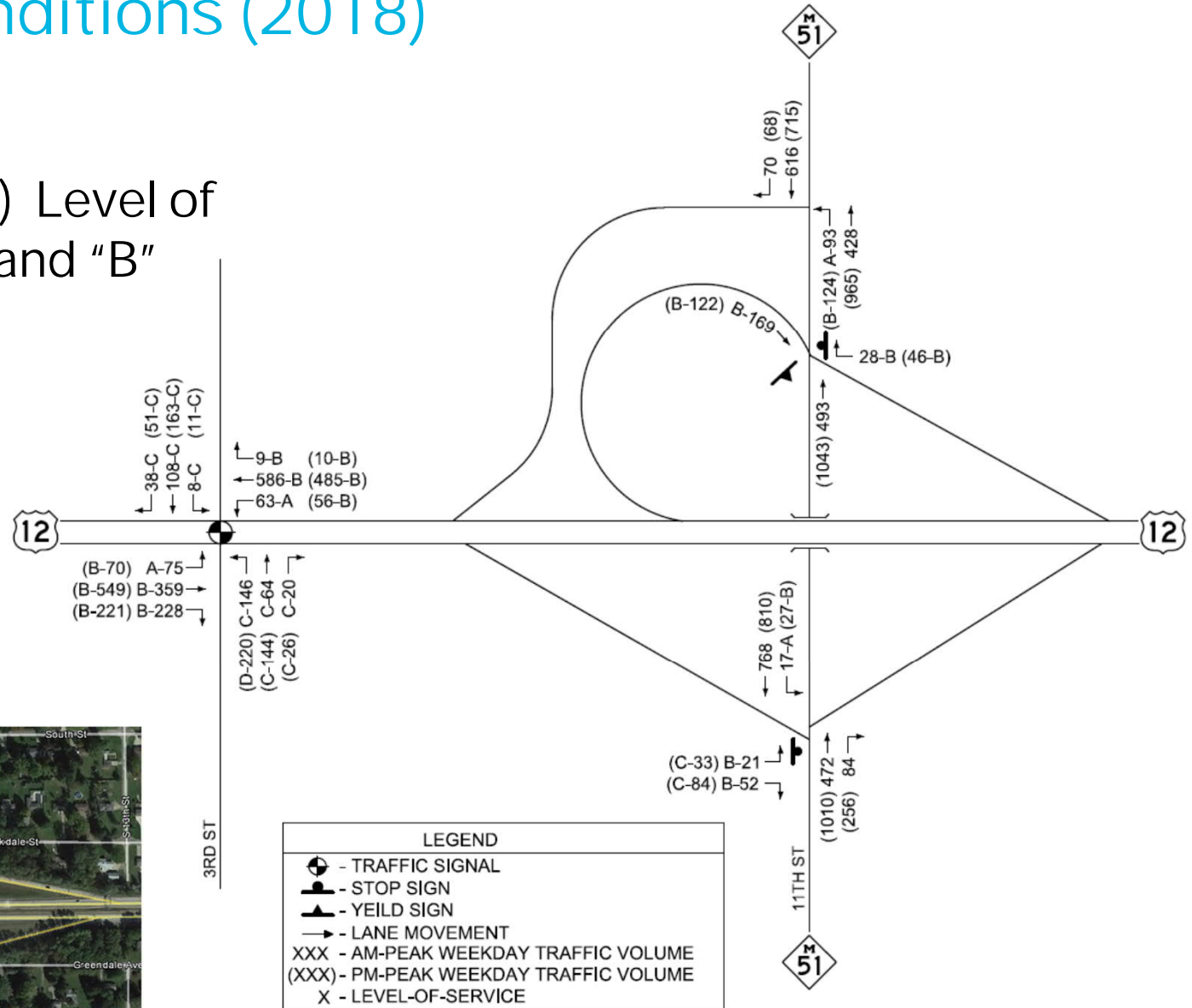


Existing Conditions (2018)



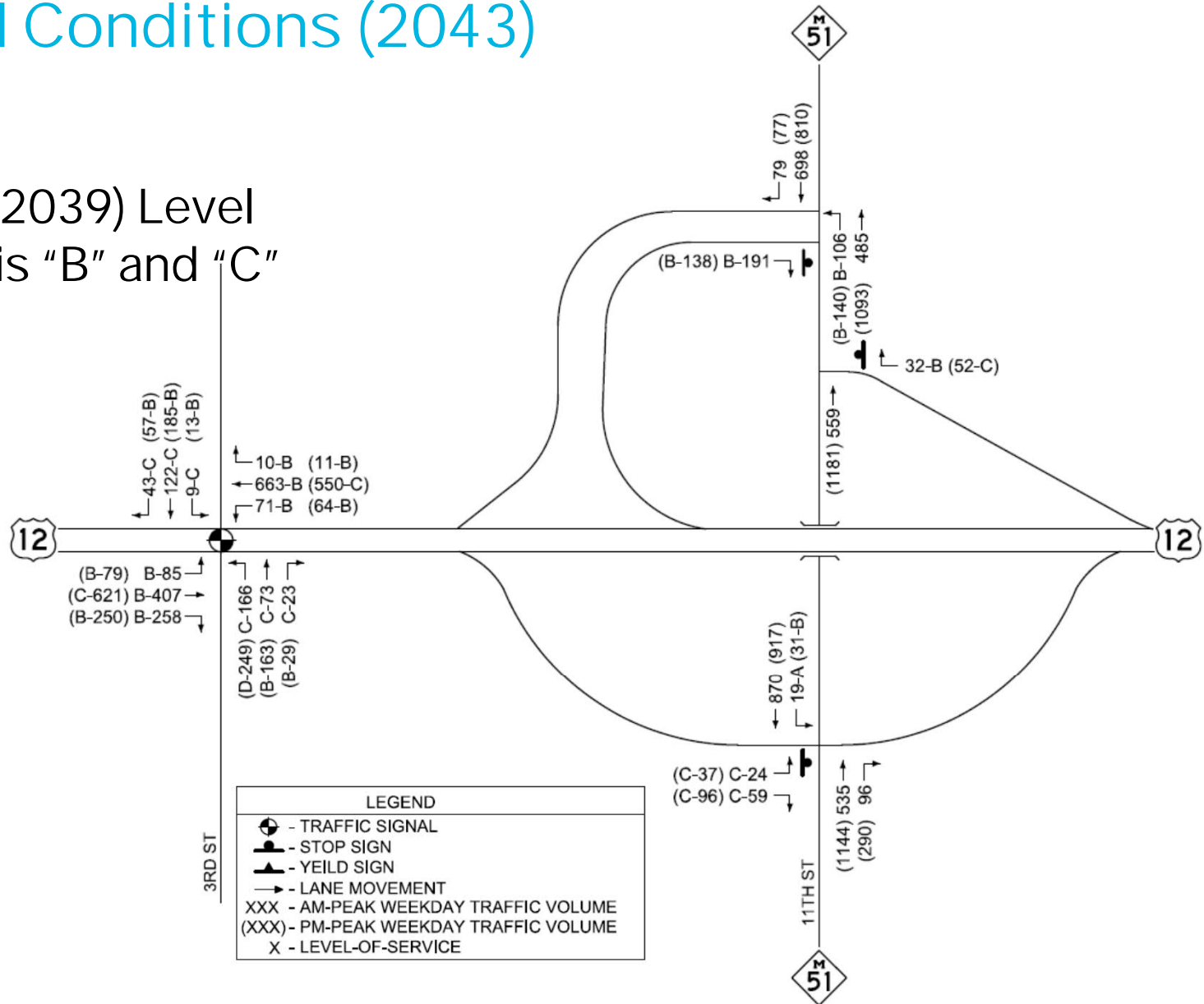
Existing Conditions (2018)

- Existing (2018) Level of Service is "A" and "B" range



Projected Conditions (2043)

- Projected (2039) Level of Service is "B" and "C" range



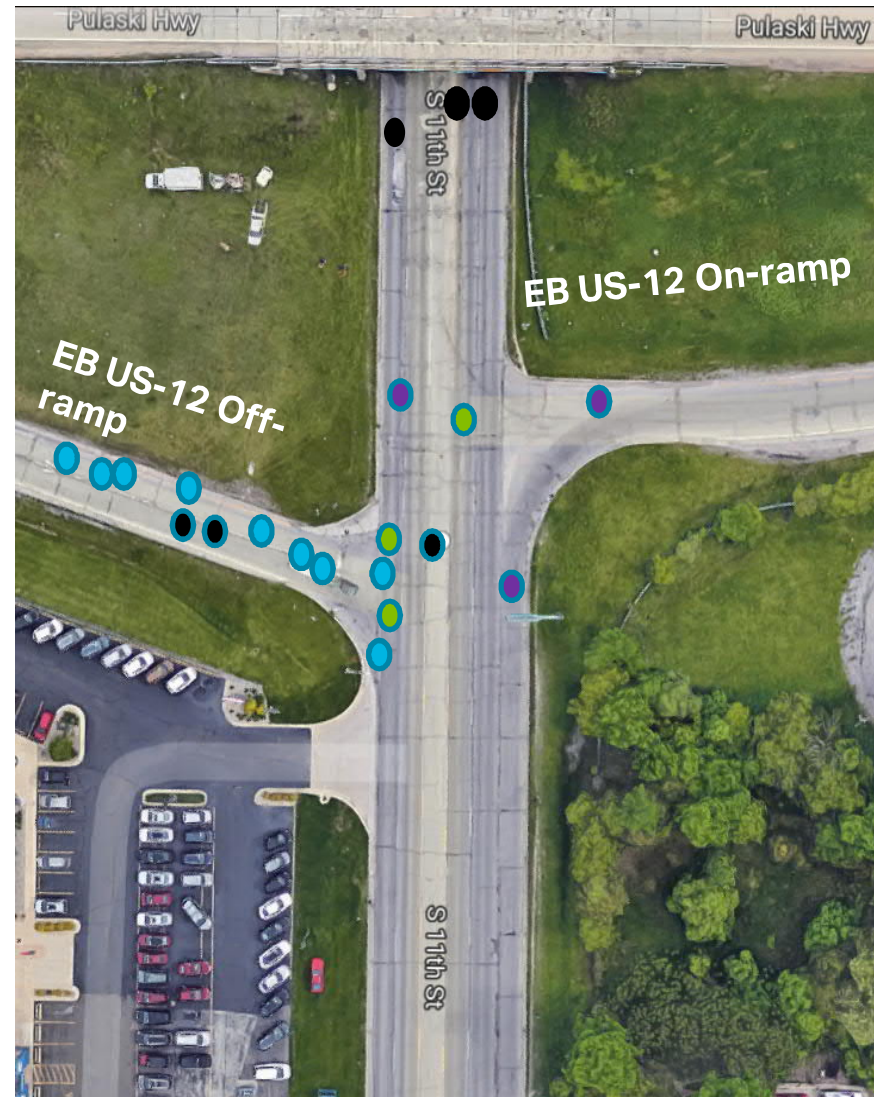
EB US-12 Off-ramp @ M-51 Crashes (2015-2017)

- 14 of 21 crashes along off-ramp or at off-ramp terminal
- Rear-end crash pattern: 9 rear-end crashes on eastbound off-ramp
- 2 on-ramp related crashes

Crash Type

- Angle
- Rear-End
- Fixed Object
- Other

EB US-12 Off-ramp @ M-51:
21 Total Crashes, including
9 Rear-End Crashes



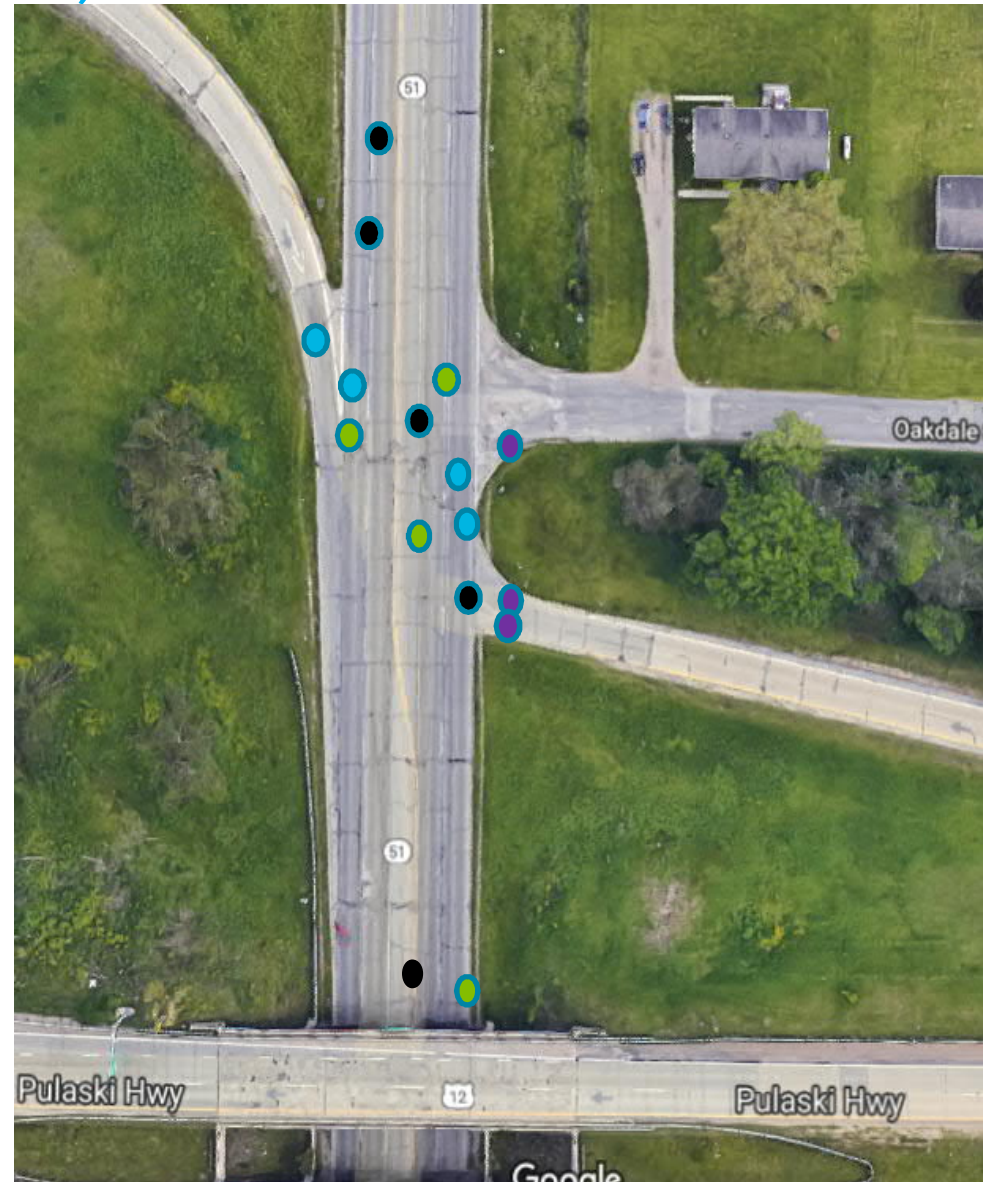
WB US-12 Off-ramp @ M-51 Crashes (2015-2017)

- 3 loop ramp merging crashes
- 3 westbound off-ramp crashes (slip ramp)
- 2 rear-end (Right-Turn) crashes and 1 angle crash at Oakdale

Crash Type

- Rear-End
- Side-Swipe Same
- Fixed Object
- Other

WB US-12 Off-ramp @ M-51:
15 Total Crashes



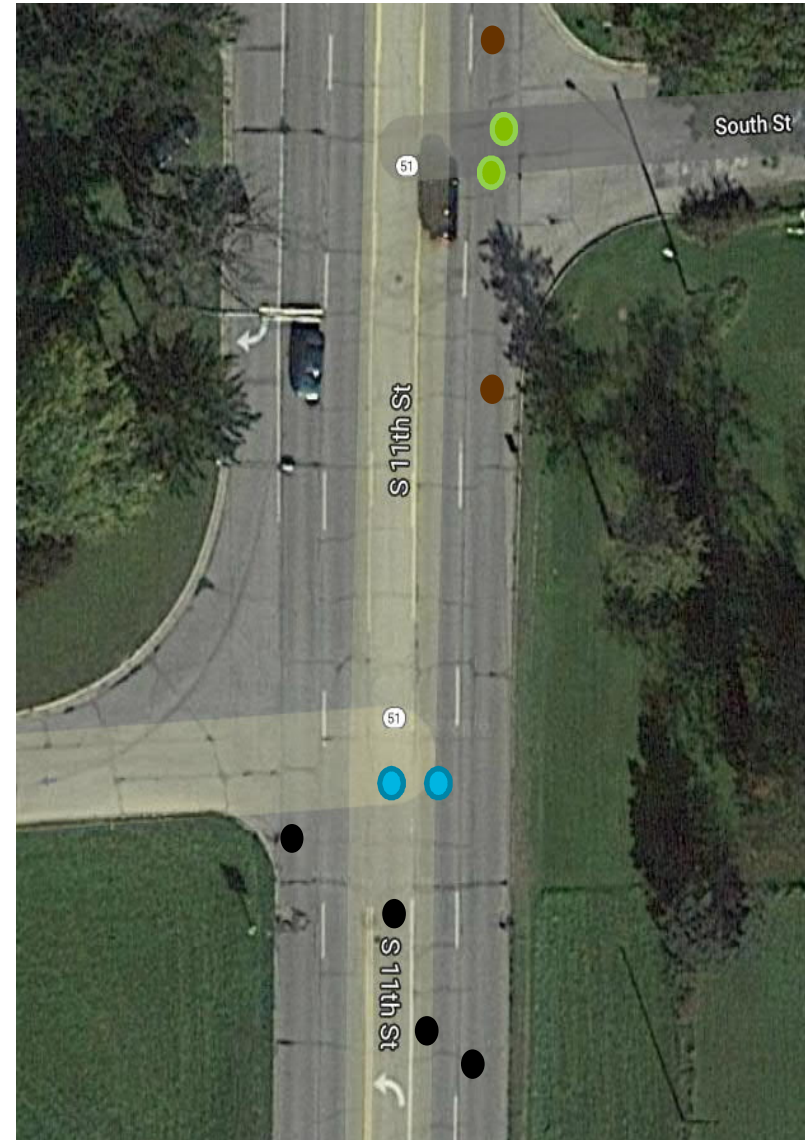
WB US-12 On-ramp @ M-51 Crashes (2015-2017)

- 4 westbound on-ramp related crashes
- 1 Angle and 1 Head-On Left-Turn crash at South Street

Crash Type

- Angle/Head-On Left-Turn
- Rear-End
- Deer
- Other

WB US-12 On-ramp @ M-51:
10 Total Crashes



M-51 Intersections Crashes (2013-2015 vs 2015-2017)

- 3 intersections had large crash reductions (shaded in table), 2013-2015 vs. 2015-2017.
- Bulk of the reduced crashes were rear-end type on M-51, likely due to signal timing optimization in 2016
- 2015 - 2017: Angle crash patterns on M-51 at Silverbrook and at Fort

M-51 in NILES CRASH HISTORY COMPARISON AND AVERAGE CRASH RATES COMPARISON, 2013-2015 vs 2015-2017

M-51 Intersection	Total Crashes		Crash Rate ⁽²⁾	
	2013 - 2015	2015 - 2017	2013 - 2015	2015 - 2017
M-51 (11th) @ Silverbrook	65	51	2.18	1.71
M-51 (11th) @ Fort ⁽¹⁾	34	34	1.34	1.34
M-51 (11th) @ Bell	63	50	1.95	1.55
M-51 (11th) @ Chestnut	51	47	1.77	1.63
M-51 (11th) @ Fulkerson	39	16	1.52	0.63
M-51 (11th) @ Bertrand	30	31	1.21	1.21
TOTAL CRASHES	282	229		

⁽¹⁾ Overhead flashing beacon.

⁽²⁾ Crashes per 1 million entering vehicles.

Source: Crash Data-Traffic Crash Analysis Tool 2.0, Traffic Improvement Association

Source: Crash Rates-Crash Analysis Process, SEMCOG, Appendix A, January 2016

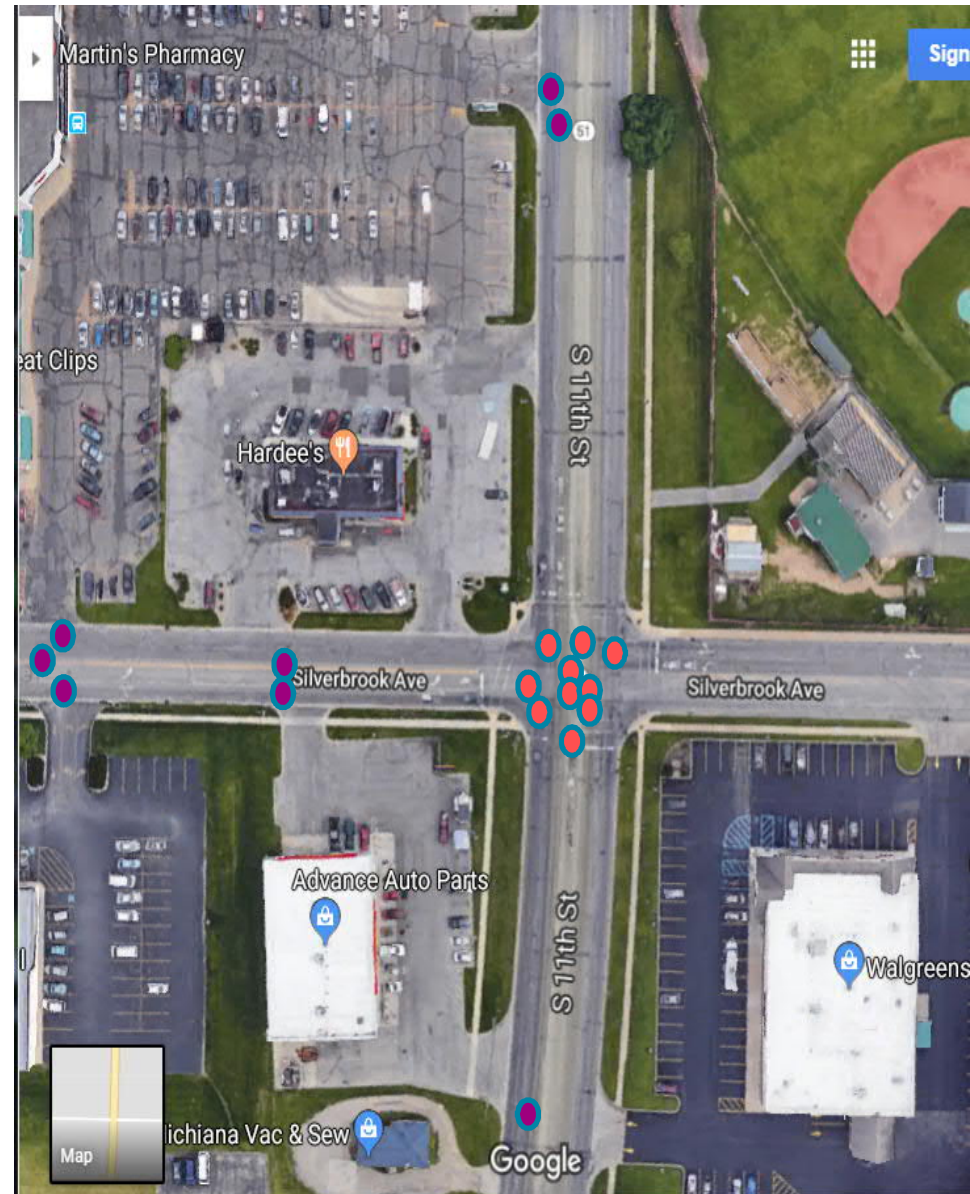
Large crash reduction

M-51 @ Silverbrook Ave Crashes (2015-2017)

M-51 @ Silverbrook Ave – 18 Angle
Crashes (10 intersection, 8 driveway)

- Angle crash pattern:
18 Angle crashes
- 10 intersection Angle crashes, somewhat evenly distributed
- 8 of 18 Angle crashes were driveway-related
- All 8 Angle driveway crashes involved driveway exiting vehicle failing to yield

- Intersection Angle Crash
- Driveway-related Angle Crash

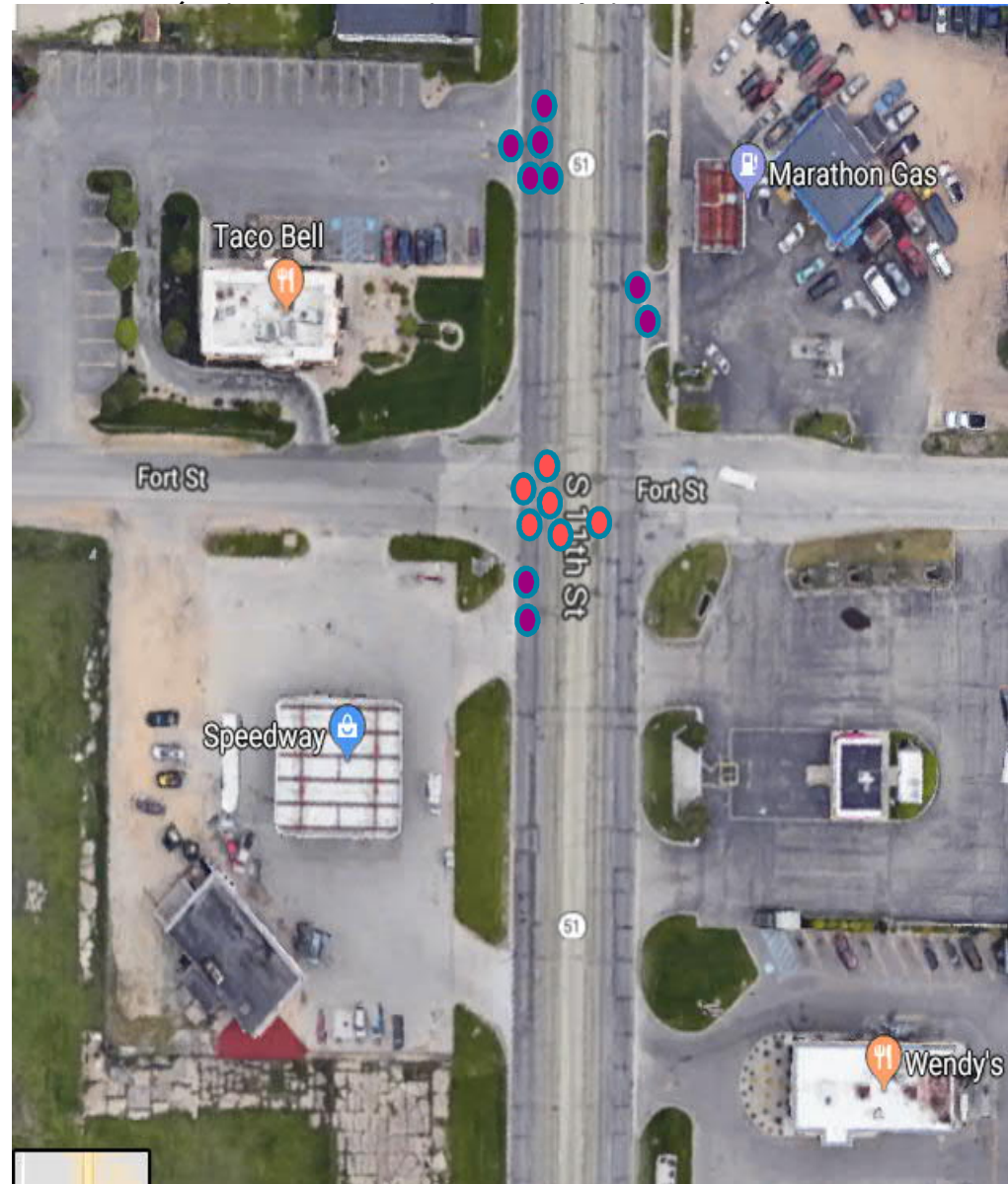


M-51 @ Fort St Crashes (2015-2017)

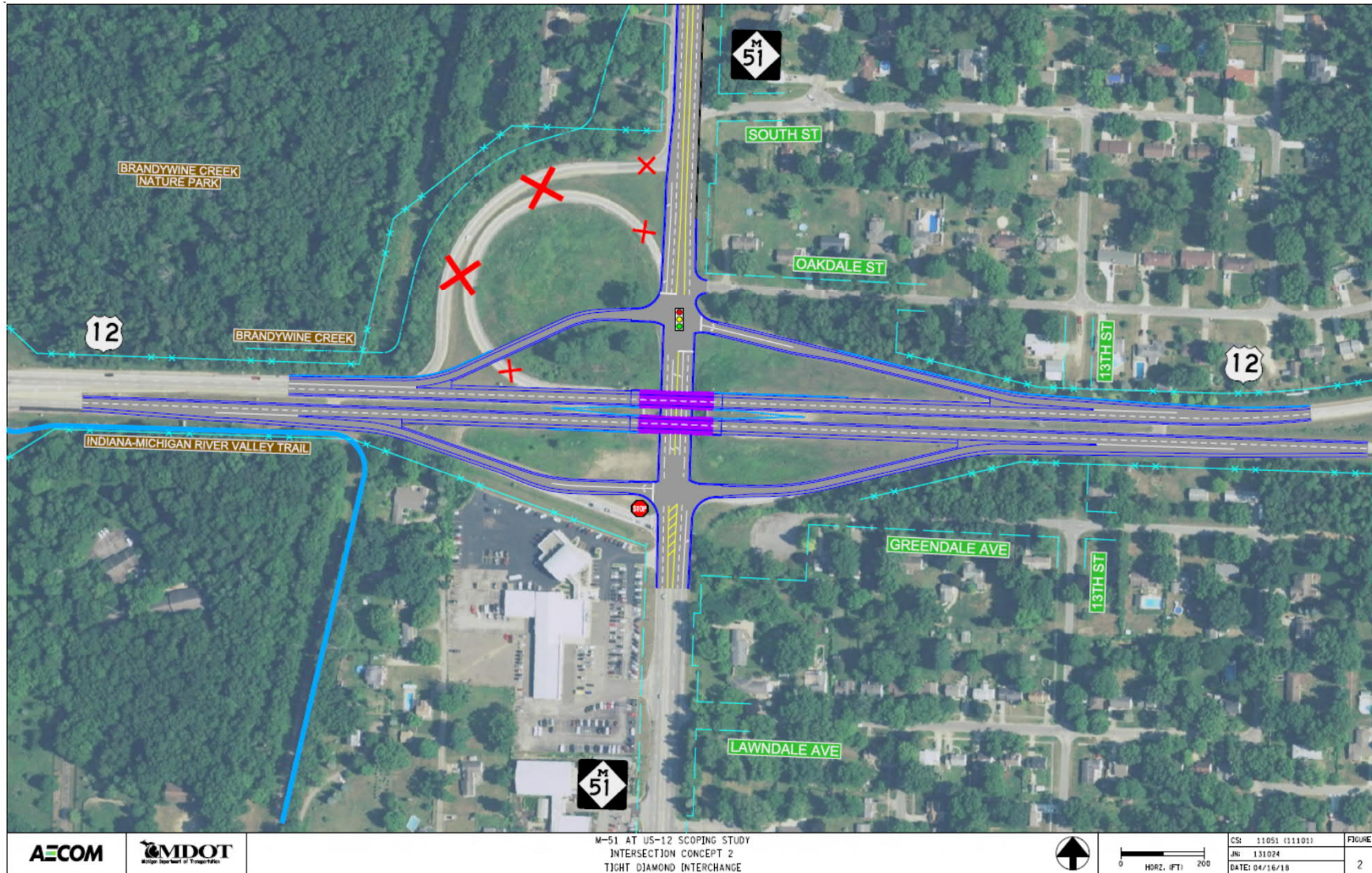
- Angle crash pattern:
15 Angle crashes
- 6 intersection Angle crashes, mostly SB-EB
- 9 of 16 Angle crashes were driveway-related.
- 5 of the 9 Angle driveway crashes were at the Taco Bell driveway on M-51
- 17 driveways are located within 250 feet of the intersection

- Intersection Angle Crash
- Driveway-related Angle Crash

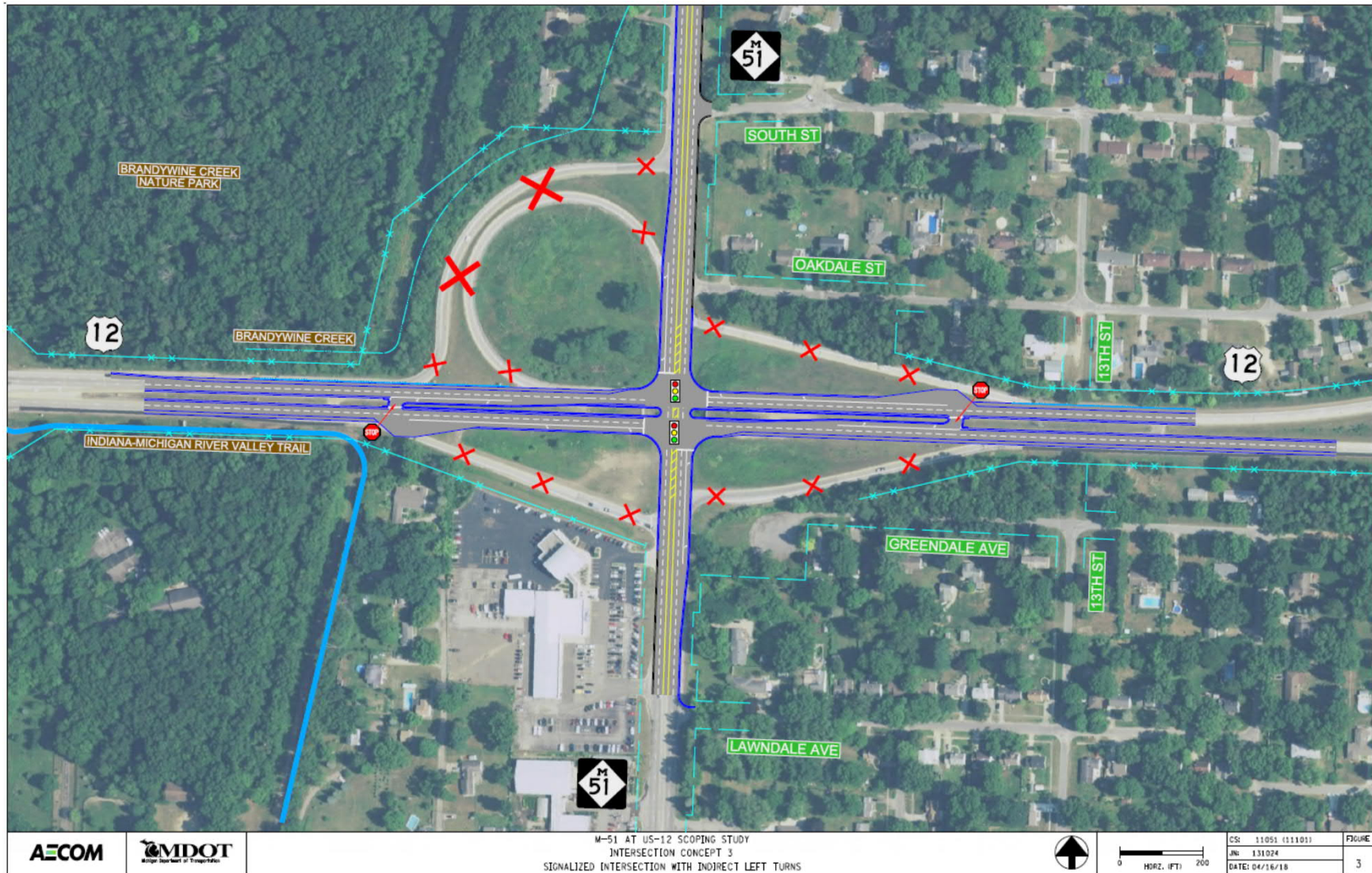
M-51 @ Fort St –
15 Angle Crashes



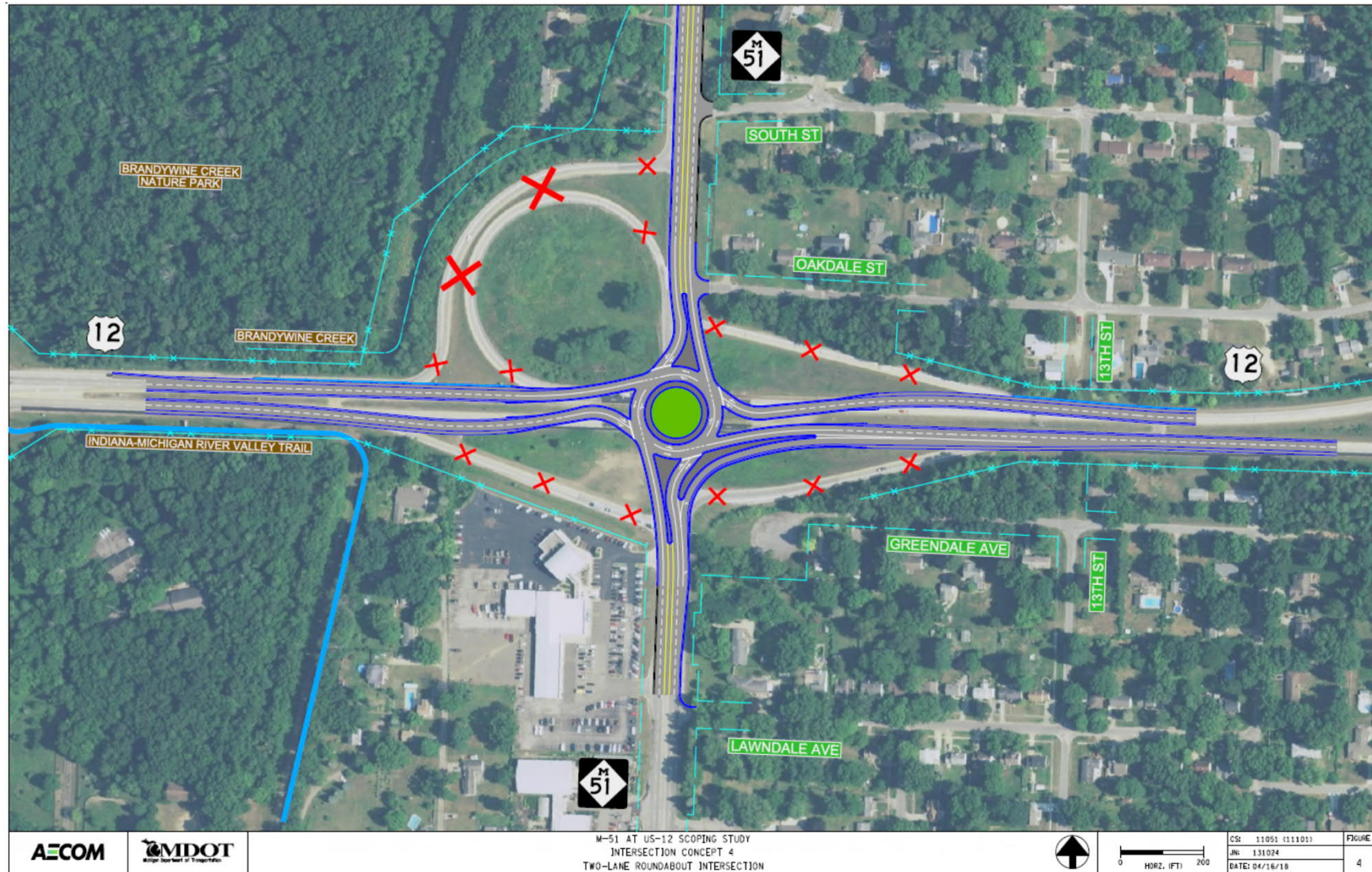
Interchange Preliminary Alternative Ideas



Interchange Preliminary Alternative Ideas



Interchange Preliminary Alternative Ideas



Interchange Preliminary Alternative Ideas



Walkability

- Complete Street Options
- Safety Concerns





Fiscal Realities

Stakeholder and Public Involvement

- MDOT wants your input!
- What kind of input is MDOT looking for?
 - What works well at the interchange?
 - What doesn't work well at the interchange?
 - What is missing?
- Other stakeholder comments/ideas
- Study in accordance with MDOT "Complete Streets Policy"



Small Group Discussions

- Each table will have a AECOM or MDOT representative to facilitate the discussion.
- Each table will:
 - Identify Key Issues
 - Brainstorm Ideas and Potential Solutions
 - Understand the Challenges
- You are encouraged to share your ideas and opinions. Now is the time to help us completely understand all the issues.
- Comment forms are provided for you to write down your issues, ideas, and concerns.
- A stakeholder from each table will give a brief synopsis of the discussions at his/her table.

Where do we go from here?

- AECOM and MDOT will compile today's comments and ideas and submit back to stakeholders for review.
- AECOM and MDOT will evaluate alternatives that best meet the goals and objectives we learned from you today.
 - Geometrics
 - Traffic Projections
 - Levels of Service
 - Cost Estimates
- Next Stakeholder Meeting in late August 2018
 - Findings of Alternatives Analysis
 - Comment on Alternatives

Contact Person

Kyle Rudlaff

Michigan Department of Transportation

Southwest Region Office

1501 Kilgore Road

Kalamazoo, MI 49001

PH: 269-337-3928

rudlaffk@michigan.gov

Thank you!

The AECOM logo is positioned in the top right corner of the slide. It consists of the word "AECOM" in a bold, white, sans-serif font, set against a dark blue background that is part of the overall image.The word "QUESTION?" is centered within a large, semi-transparent blue rectangular box. The text is in a white, bold, sans-serif font. To the left of this box is a vertical green bar. The background of the slide is a photograph of a highway interchange with a bridge, a grassy embankment, and a cloudy sky.

The AECOM Team:
AECOM, Bergmann Associates and SME

