

# Appendix I

## Engineering Documents

# Bridge Inspection Report

912-45-02543 B  
MICHIGAN AVENUE  
over  
SR 912 EB/WB, RAMPS, RR



Inspection Date: 09/29/2020

Inspected By: Cristin Burlage

Inspection Type(s): Routine

Bridge Inspection Report

**IDENTIFICATION**

(1) STATE CODE:	<b>185 - Indiana</b>	(12) BASE HIGHWAY NETWORK:	<b>1</b>
(8) STRUCTURE:	<b>033032</b>	(13A) INVENTORY ROUTE:	<b>0000000001</b>
(5 A-B-C-D-E) INV. ROUTE:	<b>1 - 5 - 1 - 00000 - 0</b>	(13B) SUBROUTE NUMBER:	<b>01</b>
(2) HIGHWAY AGENCY DISTRICT:	<b>04 - La Porte</b>	(16) LATITUDE:	<b>41.65288</b>
(3) COUNTY CODE:	<b>045 - LAKE</b>	(17) LONGITUDE:	<b>-87.443161</b>
(4) PLACE CODE:	<b>19486 - EAST CHICAGO</b>	(98) BORDER	
(6) FEATURES INTERSECTED:	<b>SR 912 EB/WB, RAMPS, RR</b>	A) STATE NAME:	
(7) FACILITY CARRIED:	<b>MICHIGAN AVENUE</b>	B) PERCENT	<b>%</b>
(9) LOCATION:	<b>01.34 W US 12</b>	(99) BORDER BRIDGE STRUCT. NO:	
(11) MILEPOINT:	<b>0000.000</b>		

**STRUCTURE TYPE AND MATERIAL**

(43) STRUCTURE TYPE, MAIN:		(45) NUMBER OF SPANS IN MAIN UNIT:	<b>007</b>
A) KIND OF MATERIAL/DESIGN:	<b>4 - Steel continuous</b>	(46) NUMBER OF APPROACH SPANS:	<b>0000</b>
B) TYPE OF DESIGN/CONSTR:	<b>02 - Stringer/Multi-beam or Girder</b>	(107) DECK STRUCTURE TYPE:	<b>1 - Concrete Cast-in-Place</b>
(44) STRUCTURE TYPE, APPROACH SPANS:		(108) WEARING SURFACE/PROT SYS:	
A) KIND OF MATERIAL/DESIGN:	<b>0 - Other</b>	A) WEARING SURFACE:	<b>1 - Monolithic Concrete (concurrently placed with structural deck)</b>
B) TYPE OF DESIGN/CONSTR:	<b>00 - Other</b>	B) DECK MEMBRANE:	<b>0 - None</b>
		C) DECK PROTECTION:	<b>1 - Epoxy Coated Reinforcing</b>

**AGE OF SERVICE**

(27) YEAR BUILT:	<b>1959</b>	(28) LANES:	
(106) YEAR RECONSTRUCTED:	<b>2000</b>	A) ON BRIDGE:	<b>04</b>
(42) TYPE OF SERVICE:		B) UNDER BRIDGE:	<b>12</b>
A) ON BRIDGE:	<b>1 - Highway</b>	(29) AVERAGE DAILY TRAFFIC:	<b>005195</b>
B) UNDER BRIDGE:	<b>4 - Highway - railroad</b>	(30) YEAR OF AVERAGE DAILY TRAFFIC:	<b>2004</b>
		(109) AVERAGE DAILY TRUCK TRAFFIC:	<b>05 %</b>
		(19) BYPASS DETOUR LENGTH:	<b>001 MI</b>

Bridge Inspection Report

**GEOMETRIC DATA**

(48) LENGTH OF MAX SPAN: <b>00104.0 FT</b>	(35) STRUCTURE FLARED: <b>0 - No flare</b>
(49) STRUCTURE LENGTH: <b>00686.0 FT</b>	(10) INV RTE, MIN VERT CLEARANCE: <b>99.99 FT</b>
(50) CURB/SIDEWALK WIDTHS:	(47) TOT HORIZ CLEARANCE: <b>041.3 FT</b>
A) LEFT <b>00.0 FT</b>	(53) VERT CLEAR OVER BR RDWY: <b>99.99 FT</b>
B) RIGHT: <b>00.0 FT</b>	(54) MIN VERTICAL UNDERCLEARANCE:
(51) BRDG RDWY WIDTH CURB-TO-CURB: <b>059.0 FT</b>	A) REFERENCE FEATURE: <b>H</b>
(52) DECK WIDTH, OUT-TO-OUT: <b>074.4 FT</b>	B) MIN VERT UNDERCLEAR: <b>20.04 FT</b>
(32) APPROACH ROADWAY <b>062.0 FT</b>	(55) LATERAL UNDERCLEARANCE RIGHT:
(33) BRIDGE MEDIAN: <b>2 - Closed median (no barrier)</b>	A) REFERENCE FEATURE: <b>H</b>
(34) SKEW: <b>00 DEG</b>	B) MIN LATERAL UNDERCLEAR: <b>009.4 FT</b>
	(56) MIN LATERAL UNDERCLEAR ON LEFT: <b>008.0 FT</b>

**INSPECTIONS**

(90) INSPECTION DATE: <b>09/29/2020</b>	(91) DESIGNATED INSPECTION FREQUENCY: <b>24 MONTHS</b>
(92) CRITICAL FEATURE INSPECTION:	(93) CRITICAL FEATURE INSPECTION DATE:
A) FRACTURE CRITICAL REQUIRED/FREQUENCY: <b>N</b>	A) FRACTURE CRITICAL DATE:
B) UNDERWATER INSPECTION REQUIRED/FREQUENCY: <b>N</b>	B) UNDERWATER INSP DATE:
C) OTHER SPECIAL INSPECTION REQUIRED/FREQUENCY: <b>Y 60</b>	C) OTHER SPECIAL INSP DATE: <b>06/13/2018</b>

**CONDITION**

(58) DECK: <b>6 - Satisfactory Condition (minor deterioration)</b>	(60) SUBSTRUCTURE: <b>5 - Fair Condition (minor section loss)</b>
(58.01) WEARING SURFACE: <b>6 - Satisfactory Condition</b>	(61) CHANNEL/CHANNEL PROTECTION: <b>N - Not Applicable</b>
(59) SUPERSTRUCTURE: <b>5 - Fair Condition (minor section loss)</b>	(62) CULVERTS: <b>N - Not Applicable</b>

**CONDITION COMMENTS**

**(58) DECK: 6 - Satisfactory Condition (minor deterioration)**

Comments:

Minor deck pan rusting throughout. The wearing surface of the deck has numerous longitudinal and transverse cracks, some have been sealed.

**(58.01) WEARING SURFACE: 6 - Satisfactory Condition**

Comments:

See deck comments.

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**(59) SUPERSTRUCTURE: 5 - Fair Condition (minor section loss)**

Comments:  
 Corrosion throughout steel beams.

(2018 Special Inspection Notes) There are multiple cracks in welds on the cover plates and minor section loss in multiple beams. There is some corrosion at the end of the cover plates in the bottom flanges that is initiating section loss. Also it was determined that there are cracked welds possibly due to pack rust at the west end of Span D.

**(60) SUBSTRUCTURE: 5 - Fair Condition (minor section loss)**

Comments:  
 The abutments and pier walls have extensive wide cracks. There has been attempts to seal the cracks however they have cracked through the seal.

**(61) CHANNEL/CHANNEL PROTECTION N - Not Applicable**

Comments:

**(62) CULVERTS: N - Not Applicable**

Comments:

**LOAD RATING AND POSTING**

(31) DESIGN LOAD:	<b>5 - HS 20</b>	(66) INVENTORY RATING:	<b>39</b>
(70) BRIDGE POSTING	<b>5 - Equal to or above legal loads</b>	(65) INVENTORY RATING METHOD:	<b>1 - Load Factor (LF)</b>
(41) STRUCTURE OPEN/POSTED/CLOSED:	<b>A - Open</b>	(66B) INVENTORY RATING (H):	<b>32</b>
(64) OPERATING RATING:	<b>65</b>	(66C) TONS POSTED :	
(63) OPERATING RATING METHOD:	<b>1 - Load Factor (LF)</b>	(66D) DATE POSTED/CLOSED:	

**APPRAISAL**

SUFFICIENCY RATING:	<b>77.3</b>	(36) TRAFFIC SAFETY FEATURE:	
STATUS:	<b>2</b>	36A) BRIDGE RAILINGS:	<b>1</b>
(67) STRUCTURAL EVALUATION:	<b>5</b>	36B) TRANSITIONS:	<b>1</b>
(68) DECK GEOMETRY:	<b>4</b>	36C) APPROACH GUARDRAIL:	<b>1</b>
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL:	<b>3</b>	36D) APPROACH GUARDRAIL ENDS:	<b>1</b>
(71) WATERWAY ADEQUACY:	<b>N - Not Applicable</b>		
Comments:			
(72) APPROACH ROADWAY ALIGNMENT:	<b>8 - Equal to present desirable criteria</b>		
Comments:			
The alignment does not require a speed reduction.			
(113) SCOUR CRITICAL BRIDGES:	<b>N - Not over waterway</b>		
Comments:			

# Bridge Inspection Report

912-45-06596 B

RAMP B

over

RAMP B



Inspection Date: 09/29/2020

Inspected By: Amy Wines

Inspection Type(s): Routine

Bridge Inspection Report

**IDENTIFICATION**

(1) STATE CODE:	185 - Indiana	(12) BASE HIGHWAY NETWORK:	1
(8) STRUCTURE:	033035	(13A) INVENTORY ROUTE:	0000000001
(5 A-B-C-D-E) INV. ROUTE:	1 - 3 - 7 - 00912 - 0	(13B) SUBROUTE NUMBER:	01
(2) HIGHWAY AGENCY DISTRICT:	04 - La Porte	(16) LATITUDE:	41.65193
(3) COUNTY CODE:	045 - LAKE	(17) LONGITUDE:	-87.44409
(4) PLACE CODE:	19486 - EAST CHICAGO	(98) BORDER	
(6) FEATURES INTERSECTED:	RAMP B	A) STATE NAME:	
(7) FACILITY CARRIED:	RAMP B	B) PERCENT	%
(9) LOCATION:	01.33 W US 12	(99) BORDER BRIDGE STRUCT. NO:	
(11) MILEPOINT:	0004.510		

**STRUCTURE TYPE AND MATERIAL**

(43) STRUCTURE TYPE, MAIN:		(45) NUMBER OF SPANS IN MAIN 001 UNIT:	
A) KIND OF MATERIAL/DESIGN:	1 - Concrete	(46) NUMBER OF APPROACH SPANS:	0000
B) TYPE OF DESIGN/CONSTR:	07 - Frame (except frame culverts)	(107) DECK STRUCTURE TYPE:	1 - Concrete Cast-in-Place
(44) STRUCTURE TYPE, APPROACH SPANS:		(108) WEARING SURFACE/PROT SYS:	
A) KIND OF MATERIAL/DESIGN:	0 - Other	A) WEARING SURFACE:	3 - Latex Concrete or similar additive
B) TYPE OF DESIGN/CONSTR:	00 - Other	B) DECK MEMBRANE:	0 - None
		C) DECK PROTECTION:	0 - None

**AGE OF SERVICE**

(27) YEAR BUILT:	1959	(28) LANES:	
(106) YEAR RECONSTRUCTED:	2000	A) ON BRIDGE:	01
(42) TYPE OF SERVICE:		B) UNDER BRIDGE:	01
A) ON BRIDGE:	1 - Highway	(29) AVERAGE DAILY TRAFFIC:	003780
B) UNDER BRIDGE:	1 - Highway, with or w/out pedestrian	(30) YEAR OF AVERAGE DAILY TRAFFIC:	2004
		(109) AVERAGE DAILY TRUCK TRAFFIC:	10 %
		(19) BYPASS DETOUR LENGTH:	010 MI

Bridge Inspection Report

**GEOMETRIC DATA**

(48) LENGTH OF MAX SPAN: 0047.0 FT	(35) STRUCTURE FLARED: 0 - No flare
(49) STRUCTURE LENGTH: 00054.0 FT	(10) INV RTE, MIN VERT CLEARANCE: 99.99 FT
(50) CURB/SIDEWALK WIDTHS:	(47) TOT HORIZ CLEARANCE: 037.0 FT
A) LEFT 00.0 FT	(53) VERT CLEAR OVER BR RDWY: 99.99 FT
B) RIGHT: 00.0 FT	(54) MIN VERTICAL UNDERCLEARANCE:
(51) BRDG RDWY WIDTH CURB-TO-CURB: 037.0 FT	A) REFERENCE FEATURE: H
(52) DECK WIDTH, OUT-TO-OUT: 040.3 FT	B) MIN VERT UNDERCLEAR: 15.08 FT
(32) APPROACH ROADWAY 035.0 FT	(55) LATERAL UNDERCLEARANCE RIGHT:
(33) BRIDGE MEDIAN: 0 - No median	A) REFERENCE FEATURE: H
(34) SKEW: 29 DEG	B) MIN LATERAL UNDERCLEAR: 005.0 FT
	(56) MIN LATERAL UNDERCLEAR ON LEFT: 005.0 FT

**INSPECTIONS**

(90) INSPECTION DATE: 09/29/2020	(91) DESIGNATED INSPECTION FREQUENCY: 24 MONTHS
(92) CRITICAL FEATURE INSPECTION:	(93) CRITICAL FEATURE INSPECTION DATE:
A) FRACTURE CRITICAL REQUIRED/FREQUENCY: N	A) FRACTURE CRITICAL DATE:
B) UNDERWATER INSPECTION REQUIRED/FREQUENCY: N	B) UNDERWATER INSP DATE:
C) OTHER SPECIAL INSPECTION REQUIRED/FREQUENCY: N	C) OTHER SPECIAL INSP DATE:

**CONDITION**

(58) DECK: 5 - Fair Condition (minor section loss)	(60) SUBSTRUCTURE: 5 - Fair Condition (minor section loss)
(58.01) WEARING SURFACE: 4 - Poor Condition	(61) CHANNEL/CHANNEL PROTECTION: N - Not Applicable
(59) SUPERSTRUCTURE: 5 - Fair Condition (minor section loss)	(62) CULVERTS: N - Not Applicable

**CONDITION COMMENTS**

(58) DECK: 5 - Fair Condition (minor section loss)  
 Comments:  
 See superstructure comments.

(58.01) WEARING SURFACE: 4 - Poor Condition  
 Comments:  
 Wide centerline crack. Widespread map cracking.

(59) SUPERSTRUCTURE: 5 - Fair Condition (minor section loss)  
 Comments:  
 Underside slab cracking. Spalling along center joint and coping spalls and cracking.



Bridge Inspection Report

(60) SUBSTRUCTURE: 5 - Fair Condition (minor section loss)

Comments:  
 Wide vertical and horizontal cracking in abutments

(61) CHANNEL/CHANNEL PROTECTION: N - Not Applicable

Comments:

(62) CULVERTS: N - Not Applicable

Comments:

**LOAD RATING AND POSTING**

(31) DESIGN LOAD:	5 - HS 20	(66) INVENTORY RATING:	36
(70) BRIDGE POSTING	5 - Equal to or above legal loads	(65) INVENTORY RATING METHOD:	0 - Field evaluation and documented engineering judgment
(41) STRUCTURE OPEN/POSTED/CLOSED:	A - Open	(66B) INVENTORY RATING (H):	28
(64) OPERATING RATING:	60	(66C) TONS POSTED :	
(63) OPERATING RATING METHOD:	0 - Field evaluation and documented engineering judgment	(66D) DATE POSTED/CLOSED:	

**APPRAISAL**

SUFFICIENCY RATING:	82.6	(36) TRAFFIC SAFETY FEATURE:	
STATUS:	0	36A) BRIDGE RAILINGS:	1
(67) STRUCTURAL EVALUATION:	5	36B) TRANSITIONS:	1
(68) DECK GEOMETRY:	9	36C) APPROACH GUARDRAIL:	1
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL:	4	36D) APPROACH GUARDRAIL ENDS:	1

(71) WATERWAY ADEQUACY: N - Not Applicable  
 Comments:

(72) APPROACH ROADWAY ALIGNMENT: 6 - Equal to present minimum criteria  
 Comments:  
 The bridge is in a curved ramp. The speed is reduced due the the curved ramp.

(113) SCOUR CRITICAL BRIDGES: N - Not over water way  
 Comments:

# Bridge Inspection Report

912-45-06596 JA  
RAMP H  
over  
RAMP B



Inspection Date: 09/29/2020

Inspected By: Cristin Burlage

Inspection Type(s): Routine

Bridge Inspection Report

**GEOMETRIC DATA**

(48) LENGTH OF MAX SPAN: 0051.8 FT	(35) STRUCTURE FLARED: 0 - No flare
(49) STRUCTURE LENGTH: 00056.0 FT	(10) INV RTE, MIN VERT CLEARANCE: 99.99 FT
(50) CURB/SIDEWALK WIDTHS:	(47) TOT HORIZ CLEARANCE: 033.1 FT
A) LEFT 00.0 FT	(53) VERT CLEAR OVER BR RDWY: 99.99 FT
B) RIGHT: 00.0 FT	(54) MIN VERTICAL UNDERCLEARANCE:
(51) BRDG RDWY WIDTH CURB-TO-CURB: 033.1 FT	A) REFERENCE FEATURE: H
(52) DECK WIDTH, OUT-TO-OUT: 036.2 FT	B) MIN VERT UNDERCLEAR: 16.09 FT
(32) APPROACH ROADWAY 033.0 FT	(55) LATERAL UNDERCLEARANCE RIGHT:
(33) BRIDGE MEDIAN: 0 - No median	A) REFERENCE FEATURE: H
(34) SKEW: 19 DEG	B) MIN LATERAL UNDERCLEAR: 005.0 FT
	(56) MIN LATERAL UNDERCLEAR ON LEFT: 005.0 FT

**INSPECTIONS**

(90) INSPECTION DATE: 09/29/2020	(91) DESIGNATED INSPECTION FREQUENCY: 24 MONTHS
(92) CRITICAL FEATURE INSPECTION:	(93) CRITICAL FEATURE INSPECTION DATE:
A) FRACTURE CRITICAL REQUIRED/FREQUENCY: N	A) FRACTURE CRITICAL DATE:
B) UNDERWATER INSPECTION REQUIRED/FREQUENCY: N	B) UNDERWATER INSP DATE:
C) OTHER SPECIAL INSPECTION REQUIRED/FREQUENCY: N	C) OTHER SPECIAL INSP DATE:

**CONDITION**

(58) DECK: 5 - Fair Condition (minor section loss)	(60) SUBSTRUCTURE: 6 - Satisfactory Condition (minor deterioration)
(58.01) WEARING SURFACE: 5 - Fair Condition	(61) CHANNEL/CHANNEL PROTECTION: N - Not Applicable
(59) SUPERSTRUCTURE: 5 - Fair Condition (minor section loss)	(62) CULVERTS: N - Not Applicable

**CONDITION COMMENTS**

(58) DECK: 5 - Fair Condition (minor section loss)  
 Comments:  
 Longitudinal cracking throughout deck length, some transverse cracking.

(58.01) WEARING SURFACE: 5 - Fair Condition  
 Comments:  
 See deck comments.

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(59) SUPERSTRUCTURE: 5 - Fair Condition (minor section loss)

Comments:

There are large scrapes and minor spalls from collision damage.

1. PCBB #5 from W, E. Edge Spall: 6"x1"x2' over S. E/L.
2. PCBB #8 from W, W. Edge Spall: 6"x3"x2' w/ exposed strand over C/L of Ramp B.
3. PCBB #9 from W. W. Edge & Center Spall: 6"x2"x2'.

(60) SUBSTRUCTURE: 6 - Satisfactory Condition (minor deterioration)

Comments:

Vertical cracks throughout abutments, some horizontal cracking.

(61) CHANNEL/CHANNEL PROTECTION N - Not Applicable

Comments:

(62) CULVERTS: N - Not Applicable

Comments:

**LOAD RATING AND POSTING**

(31) DESIGN LOAD:	5 - HS 20	(66) INVENTORY RATING:	33
(70) BRIDGE POSTING	5 - Equal to or above legal loads	(65) INVENTORY RATING METHOD:	1 - Load Factor (LF)
(41) STRUCTURE OPEN/POSTED/CLOSED:	A - Open	(66B) INVENTORY RATING (H):	26
(64) OPERATING RATING:	56	(66C) TONS POSTED :	
(63) OPERATING RATING METHOD:	1 - Load Factor (LF)	(66D) DATE POSTED/CLOSED:	

**APPRAISAL**

SUFFICIENCY RATING:	71.4	(36) TRAFFIC SAFETY FEATURE:	
STATUS:	0	36A) BRIDGE RAILINGS:	1
(67) STRUCTURAL EVALUATION:	5	36B) TRANSITIONS:	1
(68) DECK GEOMETRY:	9	36C) APPROACH GUARDRAIL:	1
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL:	4	36D) APPROACH GUARDRAIL ENDS:	1

(71) WATERWAY ADEQUACY: N - Not Applicable  
 Comments:

(72) APPROACH ROADWAY ALIGNMENT: 6 - Equal to present minimum criteria  
 Comments:  
 Slight speed reduction is required due to being on a elevated curve.

(113) SCOUR CRITICAL BRIDGES: N - Not over waterway  
 Comments:

Bridge Inspection Report

**CLASSIFICATION**

(20) TOLL:	3 - On Free Road	(21) MAINT. RESPONSIBILITY:	01 - State Highway Agency
(22) OWNER:	01 - State Highway Agency	(26) FUNCTIONAL CLASS OF INVENTORY RTE:	12 - Urban - Principal Arterial - Other Freeway or Expressway
(37) HISTORICAL SIGNIFICANCE:	5 - Not eligible	(100) STRAHNET HIGHWAY:	Not a STRAHNET route
(101) PARALLEL STRUCTURE:	N - No parallel structure	(102) DIRECTION OF TRAFFIC:	1-way traffic
(103) TEMPORARY STRUCTURE:		(104) HIGHWAY SYSTEM OF INVENTORY ROUTE:	1 - Structure/Route is on NHS
(105) FEDERAL LANDS HIGHWAYS:	0-Not Applicable	(110) DESIGNATED NATIONAL NETWORK:	Inventory route on National Truck Network
(112) NBIS BRIDGE LENGTH:	Yes		

**NAVIGATION DATA**

(38) NAVIGATION CONTROL:	N - Not applicable, no water way	(39) NAVIGATION VERTICAL CLEAR:	000.0 FT
(111) PIER OR ABUTMENT PROTECTION:		(116) MINIMUM NAVIGATION VERT. CLEARANCE, VERT. LIFT BRIDGE:	FT
		(40) NAV HORIZONTAL CLEARANCE:	0000.0 FT

**PROPOSED IMPROVEMENTS**

(75A) TYPE OF WORK:		(95) ROADWAY IMPROVEMENT COST:	\$ 000000
(75B) WORK DONE BY:		(96) TOTAL PROJECT COST:	\$ 000000
(76) LENGTH OF IMPROVEMENT:	00000.0 FT	(97) YR OF IMPROVEMENT COST EST:	
(94) BRIDGE IMPROVEMENT COST:	\$ 000000	(114) FUTURE AVG DAILY TRAFFIC:	020483
		(115) YR OF FUTURE ADT:	2030

# Bridge Inspection Report

912-45-02543 A RI  
SR 912 RAMP (INLAND)  
over  
ELEVATION CHANGE-UP RAMP



Inspection Date: 09/29/2020

Inspected By: Justin D. Brown

Inspection Type(s): Routine

Bridge Inspection Report

**IDENTIFICATION**

(1) STATE CODE:	185 - Indiana	(12) BASE HIGHWAY NETWORK:	1
(8) STRUCTURE:	033037	(13A) INVENTORY ROUTE:	0000000001
(5 A-B-C-D-E) INV. ROUTE:	1 - 3 - 7 - 00912 - 0	(13B) SUBROUTE NUMBER:	01
(2) HIGHWAY AGENCY DISTRICT:	04 - La Porte	(16) LATITUDE:	41.65219
(3) COUNTY CODE:	045 - LAKE	(17) LONGITUDE:	-87.441994
(4) PLACE CODE:	19486 - EAST CHICAGO	(98) BORDER	
(6) FEATURES INTERSECTED:	ELEVATION CHANGE-UP RAMP	A) STATE NAME:	
(7) FACILITY CARRIED:	SR 912 RAMP (INLAND)	B) PERCENT	%
(9) LOCATION:	01.17 W US 12	(99) BORDER BRIDGE STRUCT. NO:	
(11) MILEPOINT:	0004.670		

**STRUCTURE TYPE AND MATERIAL**

(43) STRUCTURE TYPE, MAIN:		(45) NUMBER OF SPANS IN MAIN 012 UNIT:	
A) KIND OF MATERIAL/DESIGN:	6 - Prestressed concrete continuous	(46) NUMBER OF APPROACH SPANS:	0000
B) TYPE OF DESIGN/CONSTR:	02 - Stringer/Multi-beam or Girder	(107) DECK STRUCTURE TYPE:	1 - Concrete Cast-in-Place
(44) STRUCTURE TYPE, APPROACH SPANS:		(108) WEARING SURFACE/PROT SYS:	
A) KIND OF MATERIAL/DESIGN:	0 - Other	A) WEARING SURFACE:	3 - Latex Concrete or similar additive
B) TYPE OF DESIGN/CONSTR:	00 - Other	B) DECK MEMBRANE:	0 - None
		C) DECK PROTECTION:	0 - None

**AGE OF SERVICE**

(27) YEAR BUILT:	1980	(28) LANES:	
(106) YEAR RECONSTRUCTED:	2000	A) ON BRIDGE:	01
(42) TYPE OF SERVICE:		B) UNDER BRIDGE:	00
A) ON BRIDGE:	1 - Highway	(29) AVERAGE DAILY TRAFFIC:	009570
B) UNDER BRIDGE:	0 - Other	(30) YEAR OF AVERAGE DAILY TRAFFIC:	2004
		(109) AVERAGE DAILY TRUCK TRAFFIC:	05 %
		(19) BYPASS DETOUR LENGTH:	010 MI

Bridge Inspection Report

**GEOMETRIC DATA**

(48) LENGTH OF MAX SPAN: 0075.0 FT	(35) STRUCTURE FLARED: 0 - No flare
(49) STRUCTURE LENGTH: 00830.0 FT	(10) INV RTE, MIN VERT CLEARANCE: 99.99 FT
(50) CURB/SIDEWALK WIDTHS:	(47) TOT HORIZ CLEARANCE: 025.0 FT
A) LEFT 00.0 FT	(53) VERT CLEAR OVER BR RDWY: 99.99 FT
B) RIGHT: 00.0 FT	(54) MIN VERTICAL UNDERCLEARANCE:
(51) BRDG RDWY WIDTH CURB-TO-CURB: 025.0 FT	A) REFERENCE FEATURE: N
(52) DECK WIDTH, OUT-TO-OUT: 028.5 FT	B) MIN VERT UNDERCLEAR: 0 FT
(32) APPROACH ROADWAY 025.0 FT	(55) LATERAL UNDERCLEARANCE RIGHT:
(33) BRIDGE MEDIAN: 0 - No median	A) REFERENCE FEATURE: N
(34) SKEW: 99 DEG	B) MIN LATERAL UNDERCLEAR: 000.0 FT
	(56) MIN LATERAL UNDERCLEAR ON LEFT: 00.0 FT

**INSPECTIONS**

(90) INSPECTION DATE: 09/29/2020	(91) DESIGNATED INSPECTION FREQUENCY: 24 MONTHS
(92) CRITICAL FEATURE INSPECTION:	(93) CRITICAL FEATURE INSPECTION DATE:
A) FRACTURE CRITICAL REQUIRED/FREQUENCY: N	A) FRACTURE CRITICAL DATE:
B) UNDERWATER INSPECTION REQUIRED/FREQUENCY: N	B) UNDERWATER INSP DATE:
C) OTHER SPECIAL INSPECTION REQUIRED/FREQUENCY: N	C) OTHER SPECIAL INSP DATE:

**CONDITION**

(58) DECK: 6 - Satisfactory Condition (minor deterioration)	(60) SUBSTRUCTURE: 6 - Satisfactory Condition (minor deterioration)
(58.01) WEARING SURFACE: 5 - Fair Condition	(61) CHANNEL/CHANNEL PROTECTION: N - Not Applicable
(59) SUPERSTRUCTURE: 6 - Satisfactory Condition (minor deterioration)	(62) CULVERTS: N - Not Applicable

**CONDITION COMMENTS**

- (58) DECK: 6 - Satisfactory Condition (minor deterioration)  
 Comments:  
 Delamination on under side of deck at span G, several cracks with minor efflorescent starting to form
- (58.01) WEARING SURFACE: 5 - Fair Condition  
 Comments:  
 Several small spalls near North end of bridge on wearing surface. Many transverse cracks and map cracking
- (59) SUPERSTRUCTURE: 6 - Satisfactory Condition (minor deterioration)  
 Comments:  
 Several beam ends are spalled with some exposed steel



Inspector: Justin D. Brown  
Inspection Date: 09/29/2020

Asset Name: 912-45-02543 A RI  
Facility Carried: SR 912 RAMP  
(INLAND)

Bridge Inspection Report

(60) SUBSTRUCTURE: 6 - Satisfactory Condition (minor deterioration)

Comments:

Some cracking on the bottom of Pier 5 cap and spalling on Pier 3 far East column with tension strands exposed

(61) CHANNEL/CHANNEL PROTECTION N - Not Applicable

Comments:

(62) CULVERTS: N - Not Applicable

Comments:

**LOAD RATING AND POSTING**

(31) DESIGN LOAD:	5 - HS 20	(66) INVENTORY RATING:	42
(70) BRIDGE POSTING	5 - Equal to or above legal loads	(65) INVENTORY RATING METHOD:	3 - Load and Resistance Factor (LRFR)
(41) STRUCTURE OPEN/POSTED/CLOSED:	A - Open	(66B) INVENTORY RATING (H):	26
(64) OPERATING RATING:	55	(66C) TONS POSTED :	
(63) OPERATING RATING METHOD:	3 - Load and Resistance Factor (LRFR)	(66D) DATE POSTED/CLOSED:	

**APPRAISAL**

SUFFICIENCY RATING:	92.8	(36) TRAFFIC SAFETY FEATURE:	
STATUS:	0	36A) BRIDGE RAILINGS:	1
(67) STRUCTURAL EVALUATION:	6	36B) TRANSITIONS:	1
(68) DECK GEOMETRY:	7	36C) APPROACH GUARDRAIL:	1
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL:	N	36D) APPROACH GUARDRAIL ENDS:	N

(71) WATERWAY ADEQUACY: N - Not Applicable  
Comments:

(72) APPROACH ROADWAY ALIGNMENT: 8 - Equal to present desirable criteria  
Comments:  
A speed reduction is not necessary for traffic to safely travel across the structure

(113) SCOUR CRITICAL BRIDGES: N - Not over waterway  
Comments:

# Bridge Inspection Report

P912-45-02543 A NEC  
SR 912 RAMP NEC  
over  
RR YARD, RAMP NER, RD



Inspection Date: 09/29/2020

Inspected By: Amy Wines

Inspection Type(s): Routine

Bridge Inspection Report

**IDENTIFICATION**

(1) STATE CODE:	185 - Indiana	(12) BASE HIGHWAY NETWORK:	1
(8) STRUCTURE:	033034	(13A) INVENTORY ROUTE:	0000000001
(5 A-B-C-D-E) INV. ROUTE:	1 - 3 - 7 - 00912 - 0	(13B) SUBROUTE NUMBER:	01
(2) HIGHWAY AGENCY DISTRICT:	04 - La Porte	(16) LATITUDE:	41.65356
(3) COUNTY CODE:	045 - LAKE	(17) LONGITUDE:	-87.44347
(4) PLACE CODE:	19486 - EAST CHICAGO	(98) BORDER	
(6) FEATURES INTERSECTED:	RR YARD, RAMP NER, RD	A) STATE NAME:	
(7) FACILITY CARRIED:	SR 912 RAMP NEC	B) PERCENT	%
(9) LOCATION:	01.40 W US 12	(99) BORDER BRIDGE STRUCT. NO:	
(11) MILEPOINT:	0004.440		

**STRUCTURE TYPE AND MATERIAL**

(43) STRUCTURE TYPE, MAIN:		(45) NUMBER OF SPANS IN MAIN UNIT:	006
A) KIND OF MATERIAL/DESIGN:	4 - Steel continuous	(46) NUMBER OF APPROACH SPANS:	0000
B) TYPE OF DESIGN/CONSTR:	02 - Stringer/Multi-beam or Girder	(107) DECK STRUCTURE TYPE:	1 - Concrete Cast-in-Place
(44) STRUCTURE TYPE, APPROACH SPANS:		(108) WEARING SURFACE/PROT SYS:	
A) KIND OF MATERIAL/DESIGN:	0 - Other	A) WEARING SURFACE:	3 - Latex Concrete or similar additive
B) TYPE OF DESIGN/CONSTR:	00 - Other	B) DECK MEMBRANE:	0 - None
		C) DECK PROTECTION:	0 - None

**AGE OF SERVICE**

(27) YEAR BUILT:	1980	(28) LANES:	
(106) YEAR RECONSTRUCTED:	2000	A) ON BRIDGE:	01
(42) TYPE OF SERVICE:		B) UNDER BRIDGE:	03
A) ON BRIDGE:	6 - Overpass structure at an interchange or second level of a multilevel interchange	(29) AVERAGE DAILY TRAFFIC:	001873
B) UNDER BRIDGE:	4 - Highway - railroad	(30) YEAR OF AVERAGE DAILY TRAFFIC:	2004
		(109) AVERAGE DAILY TRUCK TRAFFIC:	05 %
		(19) BYPASS DETOUR LENGTH:	010 MI

Bridge Inspection Report

**GEOMETRIC DATA**

(48) LENGTH OF MAX SPAN: 00112.5 FT	(35) STRUCTURE FLARED: 0 - No flare
(49) STRUCTURE LENGTH: 00627.0 FT	(10) INV RTE, MIN VERT CLEARANCE: 99.99 FT
(50) CURB/SIDEWALK WIDTHS:	(47) TOT HORIZ CLEARANCE: 025.0 FT
A) LEFT 00.0 FT	(53) VERT CLEAR OVER BR RDWY: 99.99 FT
B) RIGHT: 00.0 FT	(54) MIN VERTICAL UNDERCLEARANCE:
(51) BRDG RDWY WIDTH CURB-TO-CURB: 025.0 FT	A) REFERENCE FEATURE: H
(52) DECK WIDTH, OUT-TO-OUT: 028.3 FT	B) MIN VERT UNDERCLEAR: 16.48 FT
(32) APPROACH ROADWAY 027.0 FT	(55) LATERAL UNDERCLEARANCE RIGHT:
(33) BRIDGE MEDIAN: 0 - No median	A) REFERENCE FEATURE: H
(34) SKEW: 99 DEG	B) MIN LATERAL UNDERCLEAR: 009.5 FT
	(56) MIN LATERAL UNDERCLEAR ON LEFT: 010.1 FT

**INSPECTIONS**

(90) INSPECTION DATE: 09/29/2020	(91) DESIGNATED INSPECTION FREQUENCY: 24 MONTHS
(92) CRITICAL FEATURE INSPECTION:	(93) CRITICAL FEATURE INSPECTION DATE:
A) FRACTURE CRITICAL REQUIRED/FREQUENCY: N	A) FRACTURE CRITICAL DATE:
B) UNDERWATER INSPECTION REQUIRED/FREQUENCY: N	B) UNDERWATER INSP DATE:
C) OTHER SPECIAL INSPECTION REQUIRED/FREQUENCY: N	C) OTHER SPECIAL INSP DATE: 07/23/2013

**CONDITION**

(58) DECK: 6 - Satisfactory Condition (minor deterioration)	(60) SUBSTRUCTURE: 7 - Good Condition (some minor problems)
(58.01) WEARING SURFACE: 6 - Satisfactory Condition	(61) CHANNEL/CHANNEL PROTECTION: N - Not Applicable
(59) SUPERSTRUCTURE: 6 - Satisfactory Condition (minor deterioration)	(62) CULVERTS: N - Not Applicable

**CONDITION COMMENTS**

(58) DECK: 6 - Satisfactory Condition (minor deterioration)  
 Comments:  
 Cracking in the deck and wearing surface. Note that there are two jersey barriers set on the bridge deck. There are two steel angle that are bolted to the deck behind the jersey barriers.

(58.01) WEARING SURFACE: 6 - Satisfactory Condition  
 Comments:

(59) SUPERSTRUCTURE: 6 - Satisfactory Condition (minor deterioration)  
 Comments:  
 Significant surface rust.

Inspector: Amy Wines  
 Inspection Date: 09/29/2020

Asset Name: P912-45-02543 A  
 Facility Carried: <sup>NEC</sup> SR 912 RAMP NEC

Bridge Inspection Report

(60) SUBSTRUCTURE: 7 - Good Condition (some minor problems)

Comments:  
 Minor cracking.

(61) CHANNEL/CHANNEL PROTECTION: N - Not Applicable

Comments:

(62) CULVERTS: N - Not Applicable

Comments:

**LOAD RATING AND POSTING**

(31) DESIGN LOAD:	5 - HS 20	(66) INVENTORY RATING:	0
(70) BRIDGE POSTING	0 - More than 39.9% below legal loads (0 tons)	(65) INVENTORY RATING METHOD:	2 - Allowable Stress (AS)
(41) STRUCTURE OPEN/POSTED/CLOSED:	K - Closed	(66B) INVENTORY RATING (H):	32
(64) OPERATING RATING:	0	(66C) TONS POSTED :	
(63) OPERATING RATING METHOD:	2 - Allowable Stress (AS)	(66D) DATE POSTED/CLOSED:	

**APPRAISAL**

SUFFICIENCY RATING:	31.6	(36) TRAFFIC SAFETY FEATURE:	
STATUS:	2	36A) BRIDGE RAILINGS:	1
(67) STRUCTURAL EVALUATION:	0	36B) TRANSITIONS:	1
(68) DECK GEOMETRY:	0	36C) APPROACH GUARDRAIL:	1
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL:	6	36D) APPROACH GUARDRAIL ENDS:	1

(71) WATERWAY ADEQUACY: N - Not Applicable  
 Comments:

(72) APPROACH ROADWAY ALIGNMENT: 8 - Equal to present desirable criteria  
 Comments:  
 Bridge closed to traffic.

(113) SCOUR CRITICAL BRIDGES: N - Not over waterway  
 Comments:

# Bridge Inspection Report

P912-45-02545 ADJ  
PEDESTRIAN TRAIL  
over  
RR YARD, SERVICE RD



Inspection Date: 09/29/2020

Inspected By: Justin D. Brown

Inspection Type(s): Routine

Bridge Inspection Report

**IDENTIFICATION**

(1) STATE CODE:	185 - Indiana	(12) BASE HIGHWAY NETWORK:	0
(8) STRUCTURE:	033033	(13A) INVENTORY ROUTE:	
(5 A-B-C-D-E) INV. ROUTE:	- - - -	(13B) SUBROUTE NUMBER:	
(2) HIGHWAY AGENCY DISTRICT:	04 - La Porte	(16) LATITUDE:	41.653721
(3) COUNTY CODE:	045 - LAKE	(17) LONGITUDE:	-87.442795
(4) PLACE CODE:	19486 - EAST CHICAGO	(98) BORDER	
(6) FEATURES INTERSECTED:	RR YARD, SERVICE RD	A) STATE NAME:	
(7) FACILITY CARRIED:	PEDESTRIAN TRAIL	B) PERCENT	%
(9) LOCATION:	01.40 W US 12	(99) BORDER BRIDGE STRUCT. NO:	
(11) MILEPOINT:	0000.000		

**STRUCTURE TYPE AND MATERIAL**

(43) STRUCTURE TYPE, MAIN:		(45) NUMBER OF SPANS IN MAIN 003 UNIT:	
A) KIND OF MATERIAL/DESIGN:	4 - Steel continuous	(46) NUMBER OF APPROACH SPANS:	0004
B) TYPE OF DESIGN/CONSTR:	02 - Stringer/Multi-beam or Girder	(107) DECK STRUCTURE TYPE:	1 - Concrete Cast-in-Place
(44) STRUCTURE TYPE, APPROACH SPANS:		(108) WEARING SURFACE/PROT SYS:	
A) KIND OF MATERIAL/DESIGN:	6 - Prestressed concrete continuous	A) WEARING SURFACE:	1 - Monolithic Concrete (concurrently placed with structural deck)
B) TYPE OF DESIGN/CONSTR:	05 - Box Beam or Girders - Multiple	B) DECK MEMBRANE:	0 - None
		C) DECK PROTECTION:	0 - None

**AGE OF SERVICE**

(27) YEAR BUILT:	1980	(28) LANES:	
(106) YEAR RECONSTRUCTED:	0000	A) ON BRIDGE:	00
(42) TYPE OF SERVICE:		B) UNDER BRIDGE:	02
A) ON BRIDGE:	3 - Pedestrian-bicycle	(29) AVERAGE DAILY TRAFFIC:	
B) UNDER BRIDGE:	4 - Highway - railroad	(30) YEAR OF AVERAGE DAILY TRAFFIC:	
		(109) AVERAGE DAILY TRUCK TRAFFIC:	%
		(19) BYPASS DETOUR LENGTH:	000 MI

Bridge Inspection Report

**GEOMETRIC DATA**

(48) LENGTH OF MAX SPAN: 0118.8 FT	(35) STRUCTURE FLARED: 0 - No flare
(49) STRUCTURE LENGTH: 00565.0 FT	(10) INV RTE, MIN VERT CLEARANCE: 99.99 FT
(50) CURB/SIDEWALK WIDTHS:	(47) TOT HORIZ CLEARANCE: 006.0 FT
A) LEFT 00.0 FT	(53) VERT CLEAR OVER BR RDWY: 99.99 FT
B) RIGHT: 00.0 FT	(54) MIN VERTICAL UNDERCLEARANCE:
(51) BRDG RDWY WIDTH CURB-TO-CURB: 006.0 FT	A) REFERENCE FEATURE: R
(52) DECK WIDTH, OUT-TO-OUT: 007.0 FT	B) MIN VERT UNDERCLEAR: 23 FT
(32) APPROACH ROADWAY 008.0 FT	(55) LATERAL UNDERCLEARANCE RIGHT:
(33) BRIDGE MEDIAN: 0 - No median	A) REFERENCE FEATURE: R
(34) SKEW: 99 DEG	B) MIN LATERAL UNDERCLEAR: 006.5 FT
	(56) MIN LATERAL UNDERCLEAR ON LEFT: 00.0 FT

**INSPECTIONS**

(90) INSPECTION DATE: 09/29/2020	(91) DESIGNATED INSPECTION FREQUENCY: 24 MONTHS
(92) CRITICAL FEATURE INSPECTION:	(93) CRITICAL FEATURE INSPECTION DATE:
A) FRACTURE CRITICAL REQUIRED/FREQUENCY: N	A) FRACTURE CRITICAL DATE:
B) UNDERWATER INSPECTION REQUIRED/FREQUENCY: N	B) UNDERWATER INSP DATE:
C) OTHER SPECIAL INSPECTION REQUIRED/FREQUENCY: N	C) OTHER SPECIAL INSP DATE: 01/21/2016

**CONDITION**

(58) DECK: N - Not Applicable	(60) SUBSTRUCTURE: N - Not Applicable
(58.01) WEARING SURFACE: N - Not Applicable	(61) CHANNEL/CHANNEL PROTECTION: N - Not Applicable
(59) SUPERSTRUCTURE: N - Not Applicable	(62) CULVERTS: N - Not Applicable

**CONDITION COMMENTS**

(58) DECK: N - Not Applicable  
 Comments:  
 Good condition walkway.  
 - SE handrail bent 1' West over 21'6".  
 - Br. Jt. 2 is curling up at end edges.  
 Poor condition, advanced deterioration, spiral ramp. JDB 7-12-2018



Inspector: Justin D. Brown  
 Inspection Date: 09/29/2020

Asset Name: P912-45-02545 ADJ  
 Facility Carried: PEDESTRIAN TRAIL

Bridge Inspection Report

(58.01) WEARING SURFACE: N - Not Applicable

Comments:  
 Good condition walkway  
 Poor condition, advanced deterioration, spiral ramp.  
 Pedestrian Bridge is rarely used by steel employees, only  
 2 pedestrian tracks seen today, 01/21/16 and they were joggers. Spiral Ramp needs Rehabilitation by Arcelor Mittal Steel Company.  
 (JDB 7-12-2018

(59) SUPERSTRUCTURE: N - Not Applicable

Comments:  
 Good condition walkway.  
 Poor condition, advanced deterioration, spiral ramp JDB 7-12-2018

(60) SUBSTRUCTURE: N - Not Applicable

Comments:  
 Good condition walkway.  
 Poor condition, advanced deterioration. JDB 7-12-2018

(61) CHANNEL/CHANNEL PROTECTION N - Not Applicable

Comments:

(62) CULVERTS: N - Not Applicable

Comments:

**LOAD RATING AND POSTING**

(31) DESIGN LOAD:	7 - Pedestrian	(66) INVENTORY RATING:	0
(70) BRIDGE POSTING	0 - More than 39.9% below legal loads (0 tons)	(65) INVENTORY RATING METHOD:	0 - Field evaluation and documented engineering judgment
(41) STRUCTURE OPEN/POSTED/CLOSED:	A - Open	(66B) INVENTORY RATING (H):	
(64) OPERATING RATING:	0	(66C) TONS POSTED :	
(63) OPERATING RATING METHOD:	0 - Field evaluation and documented engineering judgment	(66D) DATE POSTED/CLOSED:	

**APPRAISAL**

SUFFICIENCY RATING:		(36) TRAFFIC SAFETY FEATURE:	
STATUS:	1	36A) BRIDGE RAILINGS:	N
(67) STRUCTURAL EVALUATION:	3	36B) TRANSITIONS:	N
(68) DECK GEOMETRY:	N	36C) APPROACH GUARDRAIL:	N
(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL:	3	36D) APPROACH GUARDRAIL ENDS:	N

(71) WATERWAY ADEQUACY: N - Not Applicable

Comments:

(72) APPROACH ROADWAY ALIGNMENT: N

Comments:

# Roadway Project Application

Application Date	12/11/2017			Des	1800067		
Proposed FY	2023			Work Type	Concrete Pavement Restoration		
<b>Project Information</b>				<b>Project History</b>			
Pvmt Section ID	4590, 4591			Project Type	Contract #	Work Type	Year
Route	SR 912			Functional	R-11288	New Road Construction, Concrete	1978
Limits	From US 41 (Calumet Ave) to US 12 (Columbus Dr)			Structural	R-13813	New Road Construction, Concrete	1984
				<b>Maintenance History</b>			
From RP + Offset	0+81	From SL	0.00	Last Major Treatment:		Year:	
To RP + Offset	5+88	To SL	5.01	Last Minor Treatment:		Year:	
<b>Existing Roadway Information</b>				<b>2016 Condition Data</b>			
AAADT/AAADTT	22,976 / 2,056			% Functional Cracking		Rut (in)	
AAADT Year	2016			% Structural Cracking		IRI (in/mile)	
Project Length	5.01			<b>Purpose/ Need of Project</b>			
# Thru Lanes	6			<p>The purpose of this project is provide improve the condition and extend the life of the existing concrete pavement on SR 912 and the interchange ramps.</p> <p>The need of this project is to address the joint distresses, mid-panel cracking, corner breaks, and surface spalling in the existing Concrete pavement. HMA shoulders along the sides of the concrete also should be addressed. Some of these shoulders have heaved significantly away from their adjacent pavements.</p>			
# Lane Miles	9.00						
Pavement Area (sys)	94,200						
Pavement Type	Concrete						
Urban/Rural	Urban						
County	Lake						
Subdistrict	Gary						
Functional Class	Freeway						
On NHS?	Yes						
Are Underdrains Present?	Yes						
Are Curbs Present?	No						

Excerpts

### Call Application Report Project (AbbEngRpt)

Updated 06/29/2018

Date:	09/10/2018	Work Type:	Bridge Removal	Score:
Proposed FY:	2023	Work Category:	District Bridge Project (Rehabilitation)	
DES:	1703000			
Enter NBI #:	<b>33033</b>	<i>(or 033033)</i>		
Existing Structure	<b>912-45-02545 ADJ</b>	Structure Type	4 - Steel continuous	
District	Laporte	County	Lake	<a href="#">County Map</a>
Sub	Gary	Route	SR 912	<b>RP: 4</b>
Description	Pedestrian Walk@.-Rr Yard, Service Rd	Rural/Urban	Urban	<b>Offset: 0.52</b>
Location:	01.40 W US 12	Functional Class		<b>Latitude 41.65372</b>
Route Over	Pedestrian Walk	Principal Arterial - Fwy/Exps		<b>Longitude -87.44280</b>
Route Under	Rr Yard, Service Rd			<a href="#">NBI Map</a>
Existing Facility				
Year Built	1957	Inspection Date	10/10/2017	<b>AADT:</b>
Year Reconst.		Operational Tons		<b>Year:</b>
Struct. Length	565	Operational Tons Value		
Deck Width	7	Unofficial Suff Rating		
Area	3955	Deck Wear Surface	N - Not Applicable	
Road Width	8	Condition of Deck	N - Not Applicable	
Lanes Over		Condition of Super Structure		
Lanes Under	2	Condition of Sub Structure	N - Not Applicable	
Max Length Span	118.8	Scour	N - Bridge not over waterway.	
No of Spans	3			

# of records for this NBI: 2, (1 with Des No)

Des NO:	Status	Contract	Letting	CN Estimate	Work Type	ADT	ADT Year
1703000	C			\$409,472	Bridge Removal	12017	2015

# of NBI Records within: **5** Miles 167 Records (55 with Active Project)

# of Projects within: **7** Miles 113 Projects (42 Awarded, 71 Others)

FY	Awarded	To Let	Call	Prop.	Prov.	CN \$
2015	7			1		\$10,400,580
2016	13					\$7,771,756
2017	14					\$27,324,918
2018	8	3				\$11,617,694
2019		26				
2020 - 29		40				

**Call Application Report Project (AbbEngRpt)**

**NBI :33033**

**Project Purpose and Need:**

The structure was built in 1958 and is in overall in a poor condition. Bridge is not fit for pedestrian traffic and is no longer used.

The purpose of the project is to remove the structure.

Is a full Engineer's Report required?

No

Is the structure historic and require a Historic Bridge Alternatives Analysis?

Yes

ADA Ramps?

Shoulder Corrugations?

Rumble Stripes?

Kind:

**Identification of Proposed Solution**

**Recommended Alternative:**

The structure does not warrant rehabilitation efforts, and rehabilitation of the structure is not warranted. Structure is to be removed to eliminate any future safety issues with the structure.

The intent of this structure was to provide pedestrian access from a parking lot for steel workers over the various railroad tracks to the steel mill. Currently it is the only pedestrian access over the SR912/railroad corridor in the City of East Chicago. The structure is a continuous composite steel beam bridge with cast-in-place concrete deck. Existing plans for the substructure show spread footings under the existing piers and abutments.

*Note: Costs are reflected on Page 3*

**Consequences if No Action Is Taken (Do Nothing Alternative Is Selected):**

The bridge will continue to deteriorate, with more widespread cracking, spalling, and exposed rebar. It is also a safety hazard if pedestrians were to attempt to use the bridge.

**Potential Design Exceptions / Open Road Ideas:**

Accelerated bridge construction techniques will be used to facilitate removal of the structure.

**Maintenance of Traffic Concept**

Is this a mobility significant project/require a TMP?

Yes

Can the road be closed to traffic (detour)?

Yes

Does the project require an IHCP Exception?

No

Empty rectangular box for additional information or notes.

*Attach extra sheets as necessary to fully describe the recommended alternative.*



# Final Engineer's Report Excerpts SR 912 Interchange Improvement

Des. 1703011

Indiana Department of Transportation

October 2020



## Section 5: Alternatives Descriptions and Analyses

The project team analyzed a variety of alternatives in order to determine the most optimized solution. Two “dismissed” alternatives are reviewed first. Following this, four more competitive alternatives are more fully described.

### 5.1 ALTERNATIVES DISMISSED (BY ENGINEERING JUDGEMENT)

This section documents some of the possible alternatives that were investigated but discarded because of major flaws.

#### No-Build Alternative: No Change to Existing Condition

The no-build alternative does not address the purpose and need of the project and is therefore eliminated.

#### Ramp NEC, Ramp I, and Michigan Avenue “fill island” intersection

One innovation considered to reduce the number of bridges in the interchange was to convert the Ramp I and Ramp NEC bridges into roadway ramps on fill and split the Michigan Avenue Overpass bridge into two units. This would eliminate 35,000 SFT of bridge to be maintained and put all bridges at this interchange on a similar maintenance cycle. A conceptual sketch for this alternative is illustrated in Figure 8.

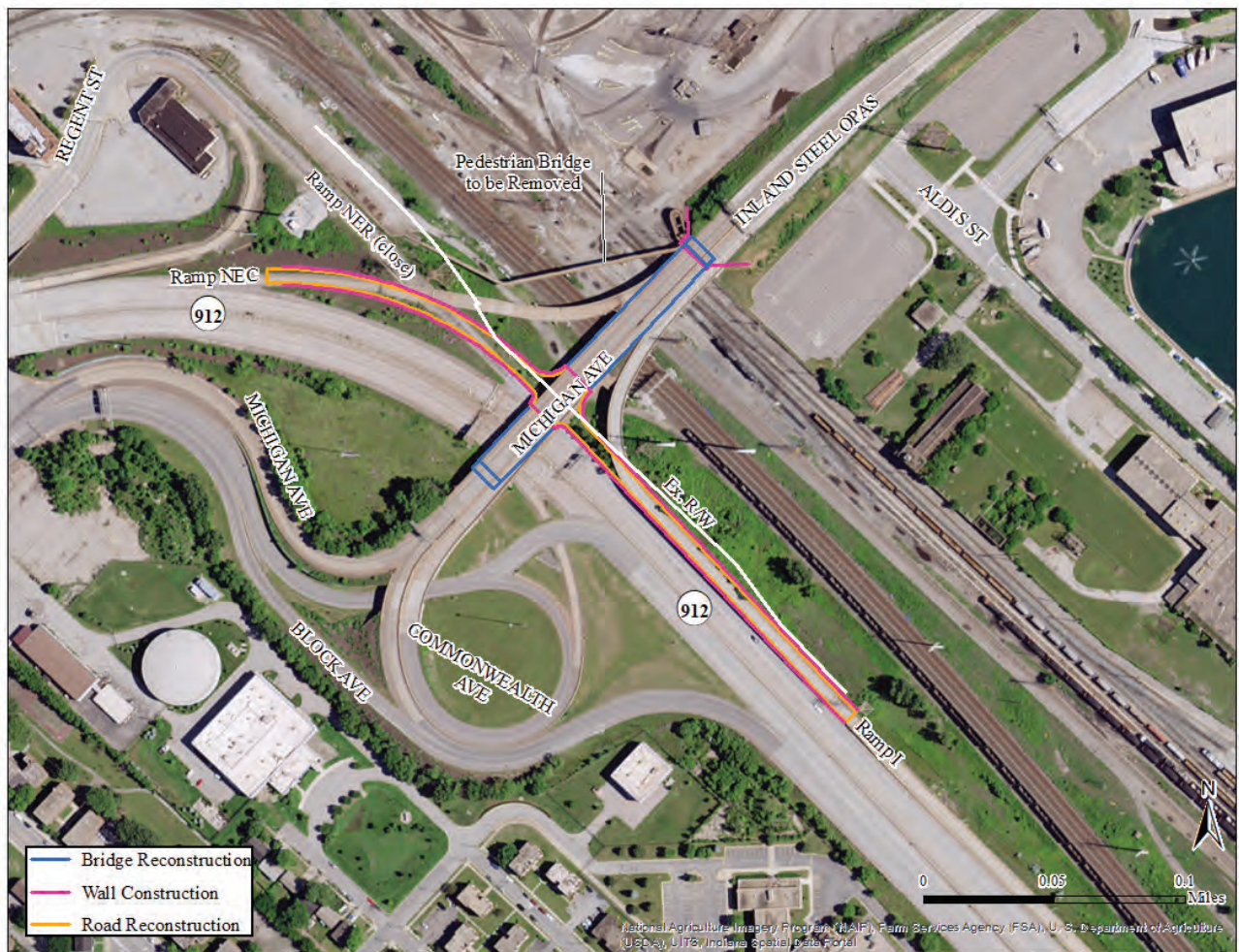


Figure 8. Fill-island Alternative to eastern portion of interchange

This alternative presents numerous advantages with regard to structures:

1. Elimination of 1 span on Michigan Ave. Overpass and 35,000 SFT of elevated ramp structures
2. Elimination of complex framing and tapering structure widths associated with merging elevated ramps
3. Division of the 686 ft long Michigan Ave overpass into two rectangular units separated by a fill island. The separation and simplification of deck geometry reduces area of supported structure, the number of piers, and allows use of integral abutment bridges, eliminating joints and maintenance

Despite these advantages, significant drawbacks have also been identified:

1. The susceptibility of the soils to consolidation will not permit ramp construction with conventional weight fill. The re-aligned ramps shown in the sketch would require very lightweight fill, presumably expanded polystyrene (EPS) blocks with a 4' conventional fill cover.
2. The alignment and proximity to R/W lines and utility constraints would require the fills be retained on both sides. Narrow retained fills, particularly tall narrow retained fills, introduce design challenges and costs that can offset any apparent benefit of "eliminating structure".
3. Existing Ramp I and NEC structures are not at the end of the useful service life. Their residual value would be accounted as an additional cost to the construction of the new retained-fill roadways.
4. R/W restrictions would require the fill island dividing the Michigan Ave Overpass to be a very large and technically complex retained lightweight fill. Bridge abutment detailing of increased complexity and cost would be required to support and restrain the bridge spans while attempting to retain elimination of joints.
5. Without adding significant undesirable complexity to the structural solution, R/W restrictions will require trucks to achieve the curve radii from a stop condition, which is not ideal for an expressway / freeway design. Acquiring R/W to the north would allow some improvement of horizontal geometry, but the expense and complication of retained lightweight fill remains. Significant, permanent R/W takes from a railroad owner are not currently contemplated for the project.
6. The option would require elimination of the existing Ramp NER movement. This is unlikely to be preferred by major stakeholder ArcelorMittal whose property is served by NER, and may draw additional scrutiny and challenge from FHWA as it has added an intersection where free flowing movements currently exist.

Due to the numerous drawbacks outweighing the advantages, this option was eliminated by engineering judgement.

## 5.2 BASE SCOPE

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### DESCRIPTION

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The Base Scope reflects the project as assembled and advertised by the RFP. The Michigan Avenue bridge is to be replaced, with attention given to possibly filling / eliminating the currently unused southern span. Ramps I and NEC, on the north side of the interchange, are subject to patching and overlay. On the southern side of the interchange, Ramps B and H were scoped for replacement, with an objective of both increasing span length and increasing vertical clearance. The large retaining wall spanning from the Michigan Avenue south abutment down to Ramp B over B north abutment is scoped for replacement, with MSE wall type excluded from consideration.

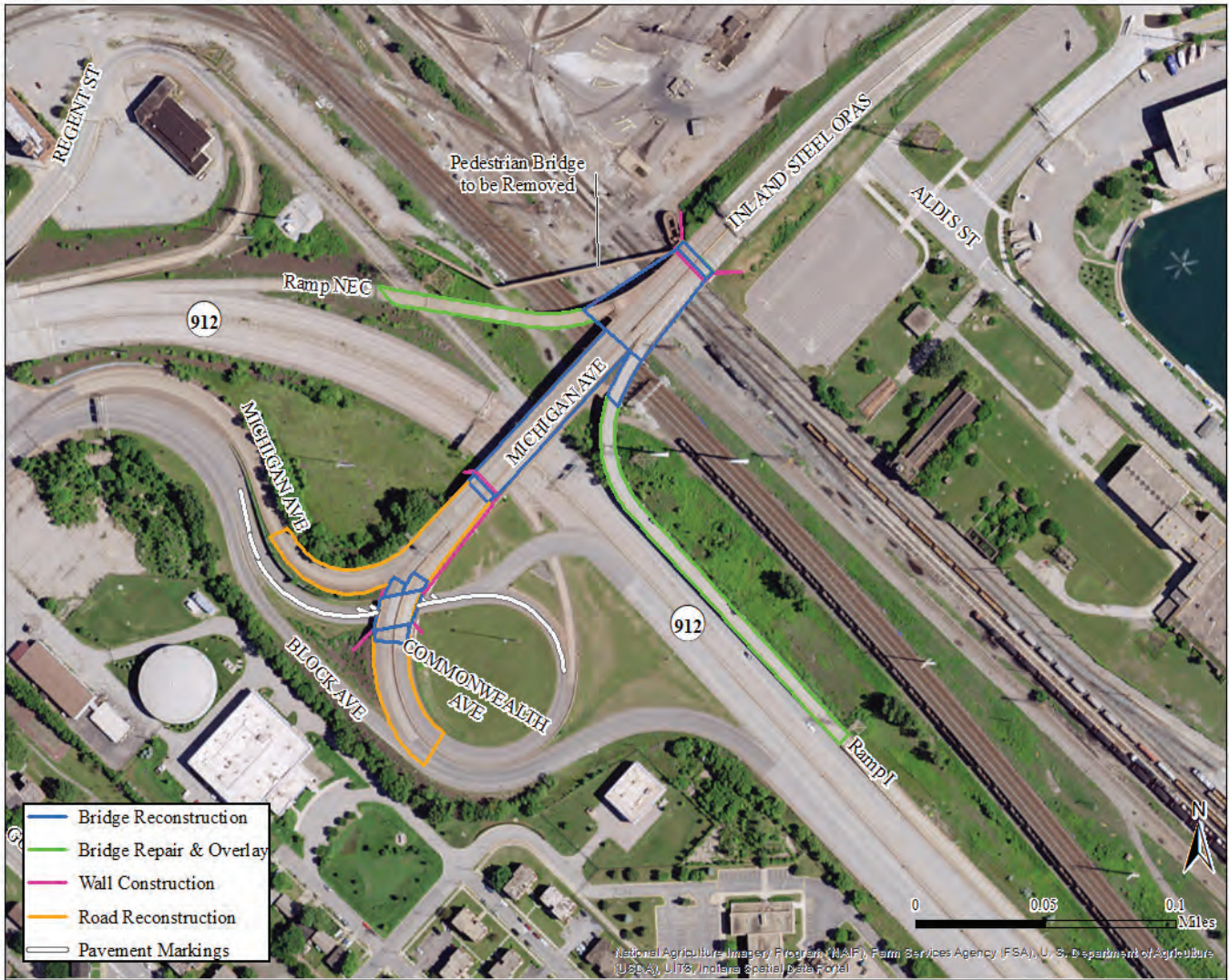


Figure 9: Base Design Proposed Layout

## ROADWAY

The Base Design alternative is intended to leave the horizontal and vertical geometrics the same as the existing condition. Roadway reconstruction is necessary in locations where retaining walls are proposed to be replaced, areas surrounding new approach slabs, and the southern span of Michigan Avenue over SR 912 that is to be eliminated. In order to remove the existing footings of the retaining walls, a majority of the roadway pavement behind the wall will need to be removed and reconstructed. The median barrier is substandard in height, or consists of temporary traffic barrier on median curb. The barrier within the project limits is proposed to be replaced. Ramp B is proposed to be reduced to a single lane before the Ramp H over B Bridge. This will provide additional stopping sight distance and potentially allow for a shorter bridge for Ramp B over B. The limits of roadway reconstruction have been identified in Figure 9 above.

Several level 1 design features do not meet standards and exceptions will be applied for in the proposed design. Inadequate inside and outside shoulder widths will be maintained, substandard vertical clearances will be maintained, and deviations for horizontal stopping sight distance will need to be applied. Several level 2 design exceptions will also be required for barrier offset widths and potentially roadside safety elements. There is existing curb and gutter along the various roadways and it is anticipated it will be replaced in kind.



### 5.3 ALTERNATIVE 1 - MORE MICHIGAN AVENUE BRIDGE, LESS WALL AND LIGHT-WEIGHT FILL

This alternative is similar to the base design alternative but replaces the southern-most span of Michigan Avenue over SR 912 in-kind and replaces the closed wall abutment and the eastern retaining wall between the Michigan Avenue bridge and Ramp B over B with 2:1 embankment slopes.

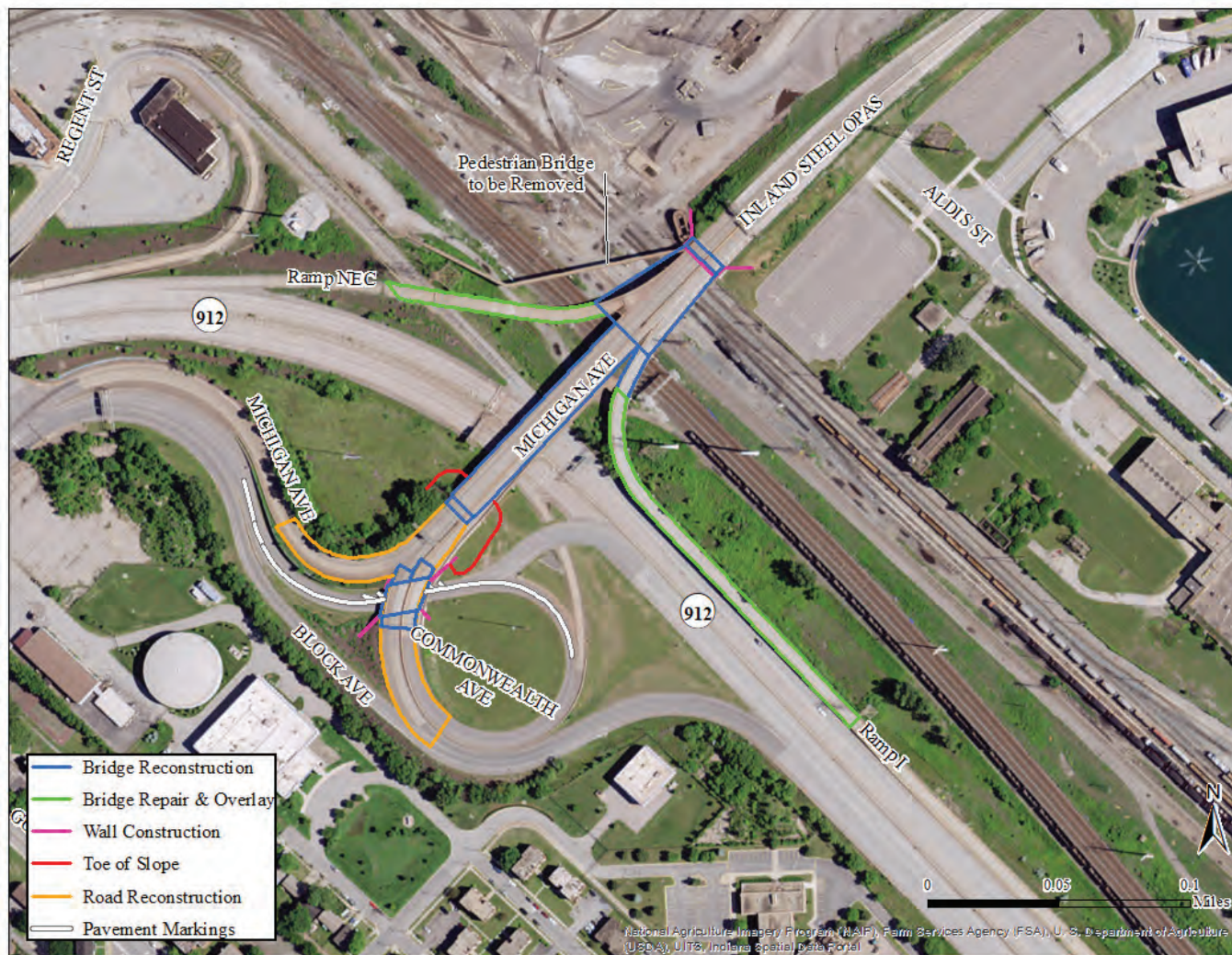


Figure 10: Alternative 1 Proposed Layout

## ROADWAY

Alternative 1 retains the same ramp geometry as the Based Design. Alternative 1 varies from the Base Design by replacing the Michigan Avenue bridge as the same length as the existing bridge. The retaining wall along the right side of Michigan Avenue, from Ramp B to the SR 912 overpass, will be removed and replaced with embankment. For additional details, refer to Section 5.2. The limits of roadway reconstruction have been identified in Figure 10 above.

Several level 1 design features do not meet standards and exceptions will be applied for in the proposed design. Inadequate inside and outside shoulder widths will be maintained, substandard vertical clearances will be maintained, and deviations for horizontal stopping sight distance will need to be applied. Several level 2 design exceptions will also be required for barrier offset widths and potentially roadside safety elements. There is existing curb and gutter on the corridor and it is anticipated to be replaced in kind.

The pavement design and patching limits will be identified in final design. The proposed design will maintain pavement on existing embankment so both HMA and PCCP designs will be identified. A large amount of pavement patching is anticipated. A “CPR” (concrete pavement restoration) project has been included in the contract to address the patching needs on the ramps and other areas of SR 912. There are also drainage issues that will need to be addressed with new inlets structures and curb cuts.

It is anticipated that all the overhead sign structures and lighting will need to be replaced.

## **STRUCTURES/GEOTECHNICAL**

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As shown in Figure 10, Alternative 1 holds the south limit of the Michigan Avenue Overpass at its present location but takes advantage of the open space around that location to simplify design and future maintenance. The vacant south span and open infield to the east allow trading large quantities of retaining wall for lower maintenance 2:1 slopes and trading the closed cantilever abutment wall for a simpler semi-integral stub abutment. The retaining wall that runs between Ramp B over Ramp B and Michigan Avenue Overpass will be replaced by 2:1 embankment. The extreme lightweight fill represented by EPS block in the Base Scope is traded for a reduced weight fill that can be placed and compacted with more conventional means.

Compared to the Base Scope, total bridge deck area increases by 5467 SFT, while retaining wall area decreases by 8100 SFT. The 9200 CY of lightweight EPS-and-cover embankment is replaced by 6400 CY of intermediate density fill.

Geotechnically, this represents a transition condition between loading of consolidated and unconsolidated areas. The current closed abutment and east wall represent a sharp division between 20+ ft of fill and structure foundation areas, against unconsolidated areas. Over the consolidated footprint, there is no effective grade raise. Outside of that footprint, the new embankments are tapering down at 2:1 slope. To effectively remove the existing walls and abutment, there will be a significant amount of 1:1 cut back into the existing embankment. Following the preliminary geotechnical report, calculations suggest that filling the resulting wedge, 1:1 into the existing embankment volume and 2:1 in front, with an approximate 60 PCF fill material, total long-term induced settlement can be limited to around 2”. Two options for such a fill that have been used in and around Indiana are:

1. Expanded Shale, Clay and Slate (ESCS) lightweight aggregate. This material can be trucked, dumped, and compacted similar to conventional fill.
2. Lightweight Cellular Concrete (with or without geogrid reinforcement). This material is typically mixed on site and pumped into place, cured, and covered with conventional fill.

EPS block would also remain as a 3<sup>rd</sup> option, replacing only enough conventional fill to provide approximately a net 60 PCF density.

The remainder of the Michigan Avenue Overpass, its Ramp I Connector span, and the Ramp I and Ramp NEC rehabilitation work is the same as discussed for the Base Scope.

The Ramp B and Ramp H bridges over Ramp B deck and abutment geometries are also similar to the Base Scope. On the northeast quadrant, a return retaining wall which tied into the full height southeast retaining wall for the base scope is converted to a simple wingwall. This wall terminates the 2:1 embankment that is introduced with this alternative.

## **TRAFFIC**

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Alternative 1 was analyzed from a traffic perspective and performs similar to the Base Design. Please refer to Section 5.2 for traffic discussion for this alternative.

## **RIGHT-OF-WAY**

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Alternative 1 has the same right-of-way concerns as the Base Design. Please refer to Section 5.2 for discussion of right-of-way.

## ENVIRONMENTAL

As stated above in Section 5.2, because this bridge was identified as “Non-Select”, this project must analyze to confirm that there are no “feasible and prudent” alternatives to the use of this resource. Per preliminary consultation with INDOT Cultural Resources Office, it was recommended to follow the historic bridge programmatic evaluation steps for Section 4(f) (instead of the HBAA process, see above). This will require agreement from the Federal Highway Administration (FHWA). A preliminary investigation for impacts to the historic bridge has been performed, and findings show the bridge is not prudent of feasible to remain, as the Appendix F analysis should show. Other historic resources were identified south of the project area. No impacts are expected to these resources.

Alternative 1 has the same environmental concerns as the Base Design. Please refer to Section 5.2 for an environmental discussion.

### 5.4 ALTERNATIVE 2 – ROUNDABOUT ELIMINATION OF RAMP B

This alternative proposes to replace the southern portion of the Michigan Avenue and SR 912 interchange with a roundabout interchange. This results in realigning the ramps and reconstructing the pavement. The Ramp H and Ramp B over Ramp B bridges will be removed.

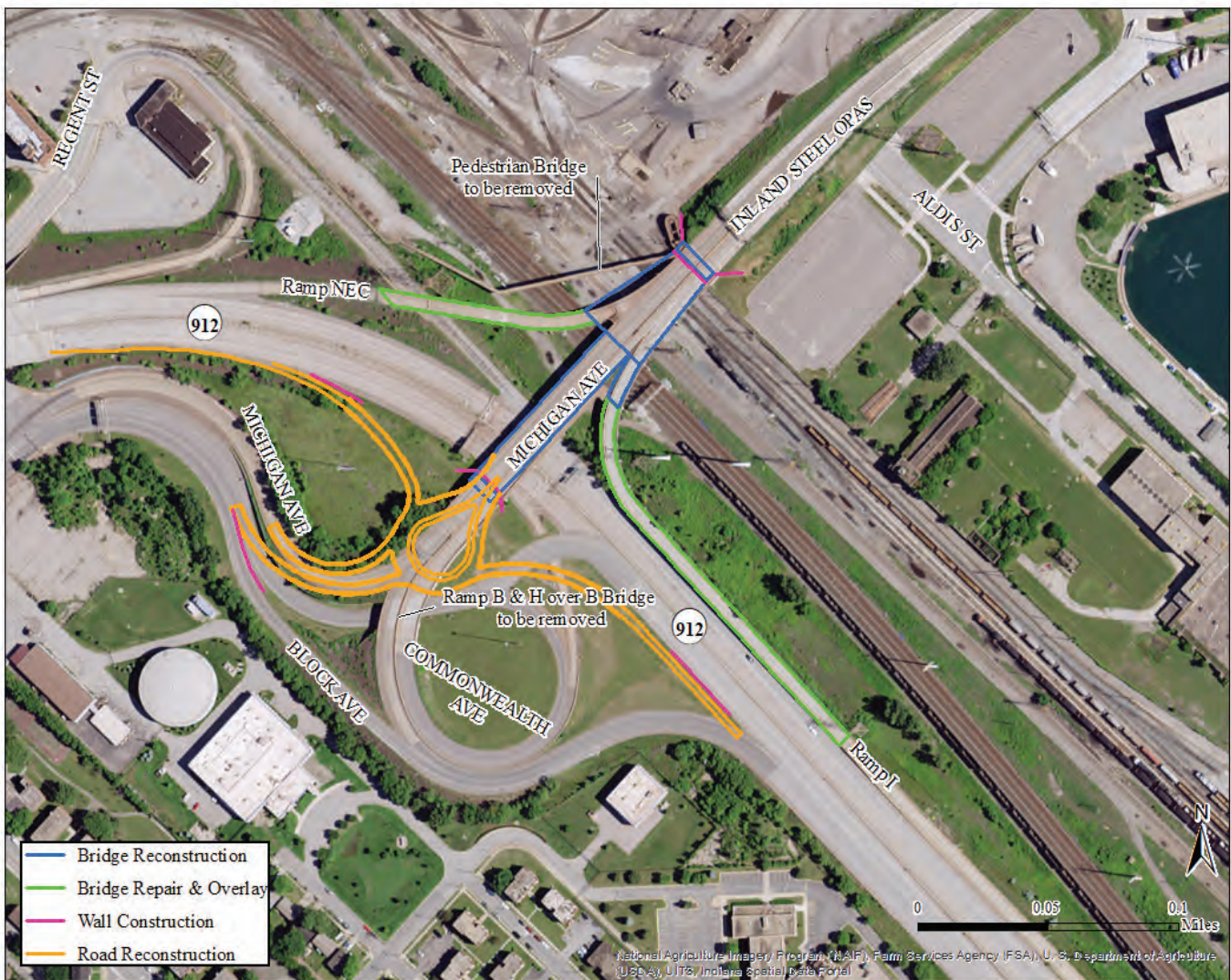


Figure 11: Alternative 2 Proposed Layout

## ROADWAY

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Alternative 2 proposes a new roundabout on the southern portion of the interchange. This will allow the ramps to be reconstructed to reduce the number of sharp curves, eliminate one of the merging areas, and replace the pavement. The EB SR 912 off ramp will be realigned to tie directly into the roundabout. This eliminates the existing merging area with Ramp B, which currently occurs in an unsafe, very tight curve of the loop ramp. The realignment does decrease the deceleration distance from the existing situation; however, SR 912 approaching the off ramp is higher in elevation than the surrounding area which will allow motorists to see the roundabout from the point of exiting SR 912. Michigan Avenue to SR 912 will also be realigned. The existing roadway retaining walls will be removed on and placed on embankment, but this does not preclude the use of retaining walls if desired. Ramp B will run parallel with SB Michigan Avenue and also tie directly into the roundabout. The existing retaining walls have the option to be removed and replaced in-kind or removed and replaced with embankment slopes. The Ramp H and Ramp B over Ramp B bridges will be removed.

Alternative 2 will eliminate the need for level 1 design exceptions for the roadways within the southern portion of the interchange. Adequate HSSD will be provided for all ramps; substandard vertical clearance at Ramp B and H over Ramp B will be eliminated as these structures will be removed from service; and curb and gutter will be provided for the ramps to eliminate the substandard shoulder widths. Michigan Avenue over SR 912 will still require design exceptions for inside and outside shoulder widths and existing vertical clearance over the railroads, but this is the case for every alternative. Level 2 design exceptions will also be required for barrier offset widths and potentially roadside safety elements.

The roundabout alternative requires the most reconstruction of new roadway off existing roadbeds. This means it will require the greatest need of new embankment on virgin soil, which will most likely result in the alternative that will have the most settlement concern. The use of light weight fill material will help reduce the amount of settlement for the realigned roadways. Proposing the use of HMA will also help for future maintenance. Future settlement is inevitable but allowing a pavement that can be milled and overlaid to fix any settlement will make maintenance much easier, than if PCCP was proposed. This option replaces all the deteriorated existing pavement within this portion of the interchange, eliminating expensive CPR and fixing drainage issues for this area at the same time.

It is anticipated that all the overhead sign structures will need to be replaced. A new roundabout lighting system will need to be designed.

## STRUCTURES/GEOTECHNICAL

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As shown in Figure 11, introduction of the roundabout geometry pushes the south abutment of the Michigan Avenue Overpass northward, filling the existing vacated southern span area. As with the Base Scope, this implies a substantial EPS lightweight fill, to mitigate settlement in the unconsolidated zones. In contrast with the Base Scope solution, the fill is not continuously retained along its eastern side. Rather, the amount of retaining wall is minimized by running the cast-in-place abutment wall out in 45 degree wingwalls and running the embankments out in 2:1 slopes. The volume of EPS fill may increase, but to do otherwise could introduce large amounts of retaining wall, which in turn leads to concrete barrier and moment slab around significant parts of the roundabout, which is undesirable.

The Michigan Avenue south abutment construction and bridge deck areas are similar to the Base Scope. The amount of retaining wall is reduced while the amount of lightweight fill is marginally increased. The Overpass north unit, abutment, and the Ramp I and Ramp NEC work are the same as for the Base Scope.

The approach & departure ramps to the roundabout are assumed to give rise to three modest retaining wall structures. These will be required to accommodate grade change between adjacent roadways at:

1. EB 912 exit to the roundabout, separating through lanes from exit lane
2. EB 912 entrance from the roundabout, separating entrance ramp from through lanes
3. Block Ave / Michigan Avenue connections

## 5.5 ALTERNATIVE 3 – FREE FLOWING

Alternative 3 proposes to realign the NB Michigan Avenue ramp, the on and off ramp between Michigan Avenue and SR 912. A collector-distributor ramp (C-D ramp) is proposed to accommodate the SR 912 on and off ramps to and from Michigan Avenue. NBN Michigan Avenue is realigned to tie directly into the Michigan overpass. This alternative provides a “free flowing” option for motorists.

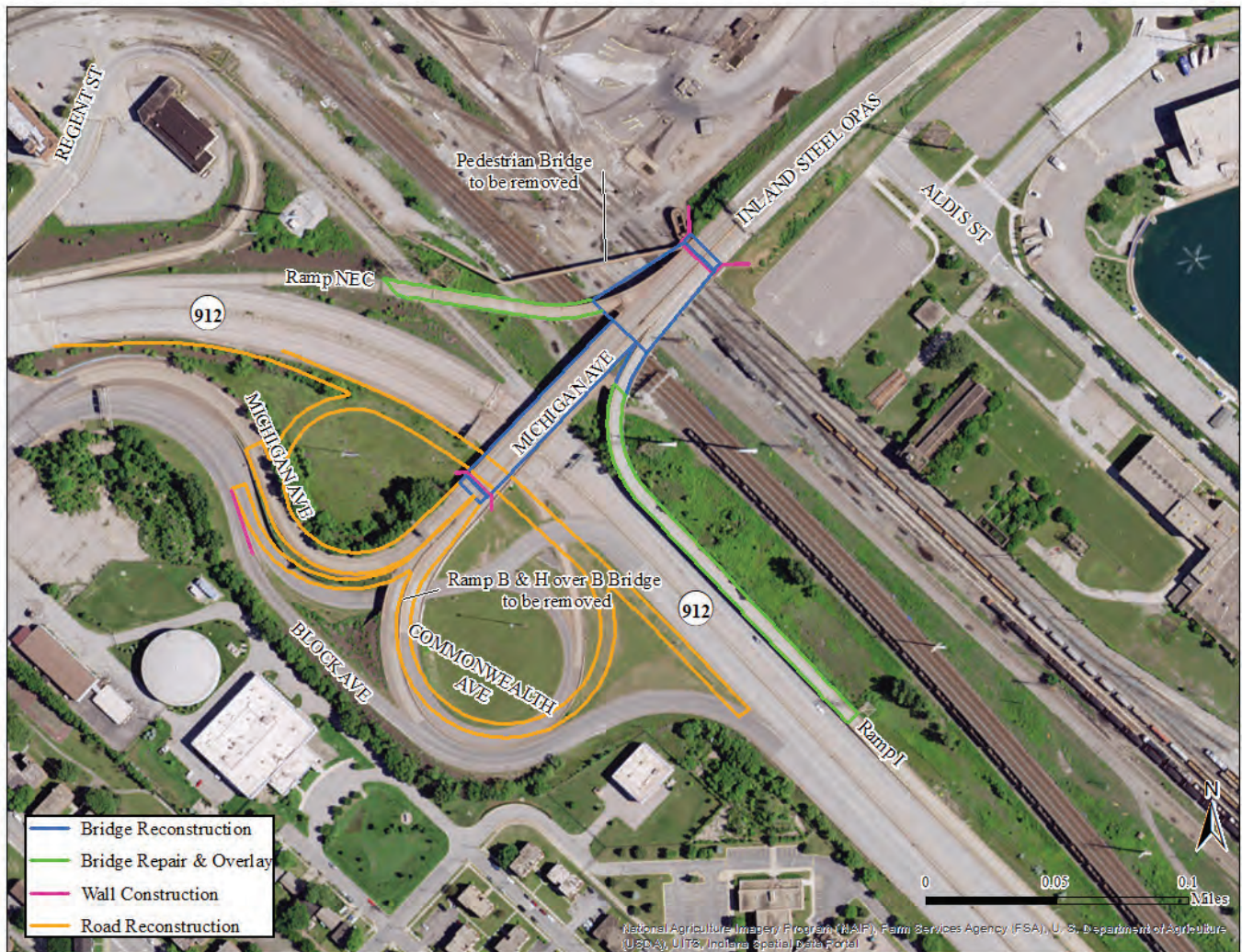


Figure 12: Alternative 3 Proposed Layout

## ROADWAY

Alternative 3 will provide a “C-D” ramp system for motorists entering and exiting EB SR 912. The new ramp system will be barrier separated from SR 912 to restrict weaving. The NB Michigan Avenue ramp will be realigned, running parallel with SB Michigan Avenue ramp. The alternative has the flexibility to replace the existing retaining walls with an embankment slope or replace in-kind. This realignment will eliminate the Ramp H and B bridges. The NBN Michigan Avenue and SR 912 off ramp will merge in a tangent on the bridge, and not in the tight radius loop ramp. The SB Michigan Avenue movement, as it passes over SR 912, will be presented with a more traditional ramp movement that keeps traffic to the right, instead of veering to the left to merge onto EB SR 912. Traffic wishing to proceed to SR 912 and Block Avenue will also be able to merge in a tangent, and not in the curve, as it does today. Merging in a tangent provides additional safety over merging in a curve with reduced sight distance. A C-D system may also improve safety and mobility by providing physical separation from SR 912.

Alternative 3 will reduce the number of level 1 design exceptions required for the project. Within the southern portion of the interchange, adequate HSSD will be provided for every ramp, the substandard vertical clearance under Ramp H and Ramp B over Ramp B will be eliminated as these structures will be removed, but some of the ramps may need inside and outside shoulder exceptions. Michigan Avenue over SR 912 will still require design exceptions for inside and outside shoulder widths and existing vertical clearance over the railroads, but this is the case for every alternative. This alternative also eliminates merging points occurring in curves and places them in tangents. Level 2 design exceptions will also be required for barrier offset widths and potentially roadside safety elements. There is existing curb and gutter along the corridors and it is anticipated to be replaced.

The “free flowing” option will require portions of new roadway off existing roadbeds; however, it is not anticipated that large fills are required at these locations. Due to the poor soils, some settlement is anticipated in these locations, but the embankment will mostly be soil fill and not light weight fill material. The pavement design will be determined in final design, but the use of HMA will help for future maintenance due to settlement. Future settlement is inevitable but allowing a pavement that can be milled and overlaid to fix any settlement will make maintenance much easier, than if PCCP was proposed. This option replaces all the deteriorated existing pavement within this portion of the interchange, eliminating expensive CPR and fixing drainage issues for this area at the same time.

It is anticipated that all the overhead sign structures and lighting will need to be replaced.

## **STRUCTURES/GEOTECHNICAL**

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Alternative 3 represents another reconfiguration of the south spans of the Michigan Avenue Overpass. The layout of the C-D ramp arrangement conflicts with the existing EB shoulder pier of SR 912. For purposes of this Assessment Report, the pier is relocated north, to sit within the barrier wall separating through traffic from the C-D. The shortened span over EB 912 is mimicked with a similar length span over the C-D, supported on a retained abutment configuration, conceptually similar to Alternative 2 (compare Figures 11 and 12))

Also like Alternative 2, the embankment behind this abutment is retained with 45 degree wingwalls and graded out in open 2:1 slopes either side of Michigan Avenue. The Ramp H and Ramp B bridges will be completely removed, their retaining walls and abutments cut down and buried, and their current omission filled to bring the EB to NB ramp up to the overpass on embankment. The SB Michigan Avenue and SB to EB ramp movements will require removal of the existing wall along the southwest part of the interchange. One modest new wall is anticipated in the southwest location similar to that discussed in Alternative 2.

The Overpass north unit, north abutment, and the Ramp I and Ramp NEC work are the same as for the Base Scope.

Geotechnically, conditions surrounding the south abutment over the overpass are similar to Alternative 2: a closed abutment is brought far enough forward into unconsolidated area that a CIP wall retaining EPS fill with 4' cover is assumed for the approach embankment. Some additional EPS fill is employed to allow 2:1 side slopes on this embankment, which minimizes the amount of CIP retaining wall required.

Alternative 3 differs from the others in that an Overpass pier is required to be built on unconsolidated area adjacent to the EB through lanes of SR 912. The span lengths supported by the pier are somewhat reduced, but preliminary calculations suggest that this pier, located between a pile-supported abutment and a preconsolidated pier in the median of SR 912, would have unacceptable long-term settlements; a pile-supported footing is thus assumed for this pier. This alternative also differs in that the existing Ramp B and H omission must be filled to support the new EB to NB ramp movement. This fill will be of great enough depth and area extent that conventional fill material could lead to unacceptable long-term settlements, requiring at least partial depth EPS construction.

## **TRAFFIC**

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Alternative 3 was analyzed from a traffic perspective the same as the Base Design. Please refer to Section 5.2 for discussion of traffic.

## Section 6: Safety Analysis

The safety performance of the existing facility cannot be evaluated due to the Cline Avenue bridge closure. SR 912 west of the interchange and some of the ramps have remained closed to traffic since 2009. Due to the closures, there is incomplete “picture” of the interchange, from a crash data perspective, so the interchange could not be analyzed. The project design assumes full traffic on SR 912 and all interchange ramps open. An increase in traffic, and new traffic patterns, are expected for this interchange once SR 912 is reopened and transformed into a toll road.

The safety analysis for this project is based on the comparison of design features and elements among the alternatives. The design alternatives significantly vary from one another and address different safety concerns in each alternative. Due to lack of applicable and reliable crash modification factors for various design elements at different locations in each of the alternatives, the safety performance cannot be correctly predicted using tools like IHSDM. The overall safety analysis of each alternative is performed qualitatively.

The alternatives remain the same on the Michigan Avenue bridge, north of the bridge, and for westbound SR 912 traffic. The analysis focuses on the differences on the interchange geometry south of the Michigan Avenue bridge and their merging points with SR 912 eastbound. The safety implications of some design features are compared in Table 3 below with green for expected increased safety and red for expected decrease in safety.

Table 3: Safety Analysis per Alternative

	Existing Condition	Base & Alternative 1	Alternative 2	Alternative 3
Weaving	No weave between SR 912 off ramp traffic and on ramp traffic	No weave between SR 912 off ramp traffic and on ramp traffic	No weave between SR 912 off ramp traffic and on ramp traffic	Introduces weave between SR 912 on ramp and off ramp traffic
Speed Differential	High speed differential between ramp and mainline traffic	High speed differential between ramp and mainline traffic	High speed differential but with fewer compound and “S” curves	Ramps are connected to a CD road and do not interfere with mainline traffic
Vertical Clearance	Lacks vertical clearance under Ramp B	Lacks vertical clearance under Ramp B	Eliminates roadway vertical clearance issues	Eliminates roadway vertical clearance issues
Traffic on Sharp Curve	High speed going thru sharp curve on SR 912 on ramp	High speed going thru sharp curve on SR 912 on ramp	Tight curves are desirable with roundabouts	Only Michigan Ave traffic uses sharp curve ramp on to SR 912
Shoulder widths and stopping sight distance	Limited HSSD and shoulder widths on the loop ramp	Limited HSSD and shoulder widths on the loop ramp	HSSD and Shoulder width limitations are eliminated	HSSD and shoulder width limitations are eliminated
Lane merges	Traffic from SR 912 off ramp and Michigan Ave merge on a sharp curve on the loop ramp	Traffic from SR 912 off ramp and Michigan Ave merge on a sharp curve on the loop ramp	Eliminates merge on the curve and roundabout is used to maintain the traffic flow	The merge of traffic from SR 912 off ramp and Michigan Ave is shifted to a tangent just ahead of the bridge
Merging points	Only one exit and entry point for traffic onto SR 912	Only one exit and entry point for traffic onto SR 912	Only one exit and entry point for traffic onto SR 912	Only one exit and entry point for traffic onto SR 912
Crash Modification Factors	-	-	Providing a roundabout has introduced an at grade intersection	Adding a CD road can be expected to reduce overall crashes by 20%.

The cost comparisons performed in this report have specifically recognized the retaining wall technologies and associated fill types discussed above. The use of PBES substructures, and any innovative framing and construction methods for Unit 2 have not. However, unit price assumptions have been slightly biased to the conservative side, and a large 20% contingency is applied on the entire project, recognizing that if selected, these techniques will increase cost.

No particular acceleration has been considered for the painting and deck repair work (overlay replacement) anticipated for Ramps NEC and I. For alternatives which include reconstruction of the Ramp B and Ramp H bridges, the time-consuming cast-in-place construction of closed abutments and wingwalls is assumed to be replaced with precast modular wall construction and independent pile support of the bridges.

## Section 9: Related Projects

There are several other projects in the area; however, most will be in construction during the 2020 season and finished before the letting of the subject project. To the west on SR 912, the Cline Avenue toll bridge over the Indiana Harbor Canal and its approach viaducts is scheduled for completion in 2020.

## Section 10: Summary of Recommended Alternative

### SUMMARY OF ANALYSIS

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Each alternative was evaluated for feasibility, constructability, construction cost, and geotechnical challenges. Key features of these projects are compiled into a decision matrix (Appendix A), to aid decision making. All alternatives are marginally different in price (within 5% of each other); the contingency recommended for the current level of estimating is much larger than the distinction between any two of the alternatives.

The Base Scope alternative and Alternative 1 aim to keep the current interchange geometry. These alternatives, however, leave all the substandard design features in place and were thus not desirable.

Alternative 2 reconfigures the interchange and introduces a new roundabout. This alternative improves the geometry of the interchange, reduces the number of required design exceptions, provides the potential for pedestrian mobility with least impact to proposed work, significantly increases safety to the intersection, but introduces significant amount of light weight fill and some new retaining walls.

Alternative 3 reconfigures the interchange to use new free flow ramps and a C-D ramp along SR 912. This alternative improves the geometry, reduces the number of required design exceptions, and has no obvious drawback. Compared to the Base Scope alternative, the recommend alternative costs only 5% more but delivers a brand new interchange that eliminates numerous Level One Design Exceptions.

### RECOMMENDATION

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With the decision matrix aid, Alternative 2 was identified as the recommended alternative. Alternative 2 presented numerous advantages, and relatively minor drawbacks, as shown in Appendix A. A follow up discussion with several INDOT LaPorte District individuals and Parsons was held after the "DRAFT" report was submitted, and Alternative 2 was confirmed as the preferred alternative due to the prioritization of safety. Please see Appendix E for additional details.

It is noted that the intent of this assessment was to compare and contrast the proposed alternatives, and not necessarily to provide an exhaustive cost estimate of all project elements, which will be assessed during future plan development

Typical sections of the Michigan Avenue Bridge for Alternative 2 are provided in the following figures. Level one design exceptions required for this alternative are compiled in Table 4, and the vertical clearances for all the bridges at this interchange are compiled in Table 5.



## Section 12: Concurrence

The aforementioned information regarding the proposed structures for SR 912 interchange (Lead Des. 1703011) has been agreed upon by:

Alan  
Holderread

Digitally signed by Alan  
Holderread  
Date: 2020.10.16  
13:41:17 -05'00'

Signature Date

Alan Holderread, PE, LaPorte Traffic Asset Engineer



10/16/2020

Signature Date

Mark Pittman, PE, Bridge Asset Engineer



10/13/2020

Signature Date

Paul South, PE, Scoping Manager

Steve J  
Benczik

Digitally signed by Steve J  
Benczik  
Date: 2020.10.20  
09:16:12 -05'00'

Signature Date

Steve Benczik, PE, System Asset Manager



10/1/2020

Signature Date

John LaBlonde P.E., Parsons Project Manager

# Appendix J

## **Additional Studies/Reports**

## Utility Log for SR 912 Des. 1703011

Date	To	From	Method of Contact	Request
2/21/2020	All Utilities	Parsons	Email	Initial Notice
4/17/2020	Linde	Parsons	Email	Discussed size, type, and location of facilities
8/3/2021	All Utilities	Parsons	Site visit	Preliminary Field Check
8/17/2021	Parsons	City of East Chicago	Phone	Discuss options for locating facilities
9/7/2021	NIPSCO Electric	Parsons	Phone	Discuss overall project
12/16/2021	NIPSCO Electric	Parsons	Phone	Addressed previous conversations
12/16/2021	US Steel	Parsons	Email	Additional contact information
12/20/2021	NIPSCO Electric	Parsons	Email	Work plan
12/27/2021	US Steel	Parsons	Email	Work Plan
1/31/2022	Parsons	AT&T	Email	Updated contact information
2/2/2022	Parsons	AT&T	Email	Discuss relocation options
2/14/2022	Linde	Parsons	Email	Field measurements
3/7/2022	US Steel	Parsons	Teams	Confirm information and reminder of work plan request

UTILITIES		
<p><b>AT&amp;T Indiana</b></p> <p>Angelo LaMantia 302 S East St. Crown Point, IN 46307 219-662-4418 al1242@att.com</p> <p><b>Lumen (CTL National)</b></p> <p>Wendell Solomon 317-644-0949 wendell.solomon@ocmgroups.com</p> <p><b>City of East Chicago Sanitary Sewer</b></p> <p>Joe Wright 5201 Indianapolis Blvd. East Chicago, IN 46312 jwright@eastchicago.com</p> <p><b>City of East Chicago Water</b></p> <p>Winna Guzman Ed Santen 5201 Indianapolis Blvd. East Chicago, IN 46312 wguzman@eastchicago.com esanten@eastchicago.com</p>	<p><b>INDOT Lighting</b></p> <p>Prakash Patel 100 N. Senate Ave. Indianapolis, IN 46204 317-233-3702 prpatel@indot.in.gov</p> <p><b>MCI</b></p> <p>Joe Chaney Jr. 720 West Henry Street Indianapolis, IN 46225 312-617-2131 joe.chaney@verizon.com</p> <p><b>NIPSCO Electric</b></p> <p>Jim Skiff 801 East 86th Ave. Merrillville, IN 46410 219-647-5411 utilitycoordination@nsource.com jrskiff@nsource.com</p> <p><b>NIPSCO Gas</b></p> <p>George Rodgers GeorgeRoadgers@nsource.com</p>	<p><b>Praxair Inc</b></p> <div style="border: 1px solid blue; display: inline-block; padding: 2px;">aka Linde</div> <p>Kenny Diego 4450 Kennedy Avenue East Chicago, IN 46312 219-391-5183 Kenny_Diego@praxair.com</p> <p><b>Windstream</b></p> <p>Christopher Rogers 812-253-1554 christopher.rogers@windstream.com</p> <p><b>Zayo Bandwidth</b></p> <p>Waylon Higgins 209 Castlegate Dr. Indianapolis, IN 46256 765-341-1199 waylon.higgins@zayo.com</p>

April 5, 2022

**Environmental Justice (EJ) Analysis  
SR 912 and Michigan Avenue Bridges Project  
City of East Chicago, Lake County  
Des. Nos. 1703011, 1703012, 1700105, 1700359, 1700370, and 1703000**

**Introduction**

The Indiana Department of Transportation (INDOT) and the Federal Highway Administration (FHWA) are planning a bridges project in East Chicago, Lake County, Indiana, along SR 912 approximately 1.34 miles northwest of US 12. The project interchange is the main entrance into the Cleveland Cliffs steel mill and an alternate access to the Ameristar Casino and other lakefront facilities. The project is located in a highly developed urban area of East Chicago surrounded by industrial, commercial, and residential properties.

The proposed project will reconstruct the seven-span Michigan Avenue bridge over SR 912, ramps, and three railroads (Str. No. 912-45-02543 B). A new roundabout on the southern portion of the interchange is proposed. The southern ramps, Ramp H (Str. No. 912-45-06596 JA) and Ramp B (Str. No. 912-45-06596 B), will be realigned, and the Ramp H and Ramp B over Ramp B bridges will be removed. The northern ramps, Ramp NEC (Str. No. 912-45-02543 A NEC) and Ramp I (Str. No. 912-45-02543 A RI), and their bridges will be rehabilitated. Existing pavement, curb and gutter will be repaired or replaced as needed. A closed pedestrian bridge (Str. No. P912-45-02545 ADJ) over the railroad corridor will be removed. Additionally, drainage issues south of SR 912 will be addressed. Replacement of overhead sign structures and installation of a new roundabout lighting system are also anticipated.

Under FHWA Order 6640.23A, FHWA and the project sponsor, as a recipient of funding from FHWA, are responsible to ensure that their programs, policies, and activities do not have a disproportionately high and adverse effect on minority or low-income populations. Per the current INDOT *Categorical Exclusion Manual*, an EJ Analysis is required for any project that has two or more relocations or 0.5 acre of additional permanent right-of-way (ROW). This project is in a disadvantaged area, and will require approximately 0.11 acre of permanent ROW, 2.81 acres of temporary ROW, as well as 2.02 acres of temporary "right of entry" ROW. Furthermore, this is anticipated to be a CE-4 level project due to the proposed removal of the historic Ramp B over B bridge (Des. 1703012). Therefore, it was decided an EJ analysis is warranted.

**Identification of EJ Populations**

Potential EJ impacts are detected by locating minority and low-income populations relative to a reference population to determine if populations of EJ concern exist, and whether there could be disproportionately high and adverse impacts to them. The reference population may be a county, city or town and is called the community of comparison (COC). In this project, the COC is Lake County (see Attachments, page 1). The community that overlaps the project area is called the affected community (AC). In this project, the ACs are the following Census Tract (CT) Block Groups (CTBGs): Block Group 2, CT 303 (AC-A), Block Group 1, CT 302 (AC-B), and Block Group 1, CT 301 (AC-C) (see Attachments, page 2).

An AC has a population of concern for EJ if the population is more than 50% minority or low-income or if the low-income or minority population is 125% of the COC. Data from the Census.gov 2019 American Community Survey (ACS) 5-year Estimates were obtained from the [census.gov](https://www.census.gov) website on February 10, 2022. The data collected for minority and low-income populations within the AC are summarized in the below table.

<b>Table 1: Minority and Low-Income Data (2019 ACS 5-Year Estimates)</b>				
	COC Lake County	AC-A	AC-B	AC-C
Percent Minority	38.1	91.5	84.2	98.2
125% of COC	<b>47.6</b>	AC > 125% COC?		
EJ Population of Concern?		<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
Percent Low-Income	15.6	54.7	42.8	72.2
125% of COC	<b>19.5</b>	AC > 125% COC?		
EJ Population of Concern?		<b>Yes</b>	<b>Yes</b>	<b>Yes</b>

Source: [census.gov](https://www.census.gov)

AC-A has a percent minority of 91.5, which is above 50% and the 125% COC threshold. Therefore, AC-A does contain a minority population of EJ concern. AC-A has a percent low-income of 54.7, which is above 50% and the 125% COC threshold. Therefore, AC-A does contain a low-income population of EJ concern.

AC-B has a percent minority of 84.2, which is above 50% and the 125% COC threshold. Therefore, AC-B does contain a minority population of EJ concern. AC-B has a percent low-income of 42.8, which is below 50%, but is above the 125% COC threshold. Therefore, AC-B does contain a low-income population of EJ concern.

AC-C has a percent minority of 98.2, which is above 50% and the 125% COC threshold. Therefore, AC-C does contain a minority population of EJ concern. AC-C has a percent low-income of 72.2, which is above 50% and the 125% COC threshold. Therefore, AC-C does contain a low-income population of EJ concern.

The census data sheets, maps, and calculations can be found in the attachments.

The US Department of Housing and Urban Development (HUD) Resource Locator (<https://resources.hud.gov/>) was researched to identify potential EJ resources and/or populations. Sixty-one HUD resources were identified within 0.5 mile of the project area (Attachments, pages 5 and 6). No impacts are expected.

### Impact Analysis

ROW and Relocations: The proposed ROW impacts per AC are summarized in the following table.

<b>AC / EJ Population?</b>	<b>Permanent ROW (Acres) / Type(s)</b>	<b>Temporary ROW (Acres) / Type(s)</b>
<b>AC-A / Yes</b>	0.11 / Industrial	4.83 / Industrial
<b>AC-B / Yes</b>	0.00 N/A	0.00 / N/A
<b>AC-C / Yes</b>	0.00 N/A	0.00 / N/A

N/A = not applicable

The proposed permanent and temporary ROW is contained within AC-A, which does contain EJ populations. The proposed ROW will be acquired from industrial properties. These areas are on the north side of the project area, adjacent to the Michigan Avenue bridge and the railroad (see Attachments, page 10). There are no relocations resulting from the project. Therefore, the proposed acquisition of ROW is not anticipated to disproportionately impact EJ populations.

Maintenance of Traffic (MOT): The proposed MOT will maintain traffic along SR 912 and will likely include ramp and bridge closures. Access to all residences and businesses will be maintained throughout construction. Therefore, the proposed MOT is not anticipated to disproportionately impact EJ populations.

Transit Service: Two public transit authorities operate in the project area, Gary Public Transportation Corporation and East Chicago Transit (see Attachments, page 7). The East Chicago Transit West Calumet route utilizes the Michigan Avenue bridge (see Attachment, page 9). Coordination with the two transit authorities and local government officials will be required (firm commitment). Therefore, the proposed project is not anticipated to impact transit service.

Pedestrian Facilities: A closed pedestrian structure will be removed. This bridge formerly connected legacy parking areas to the steel mill. This structure, and the associated parking areas south of the railroad corridor, have not been used for over 10 years. The bridge is unsafe, and is in poor condition (Final Engineer's Report, Des. 1703011, October 2020). There are no other pedestrian facilities associated with the project. The proposed project will not impact pedestrian access.

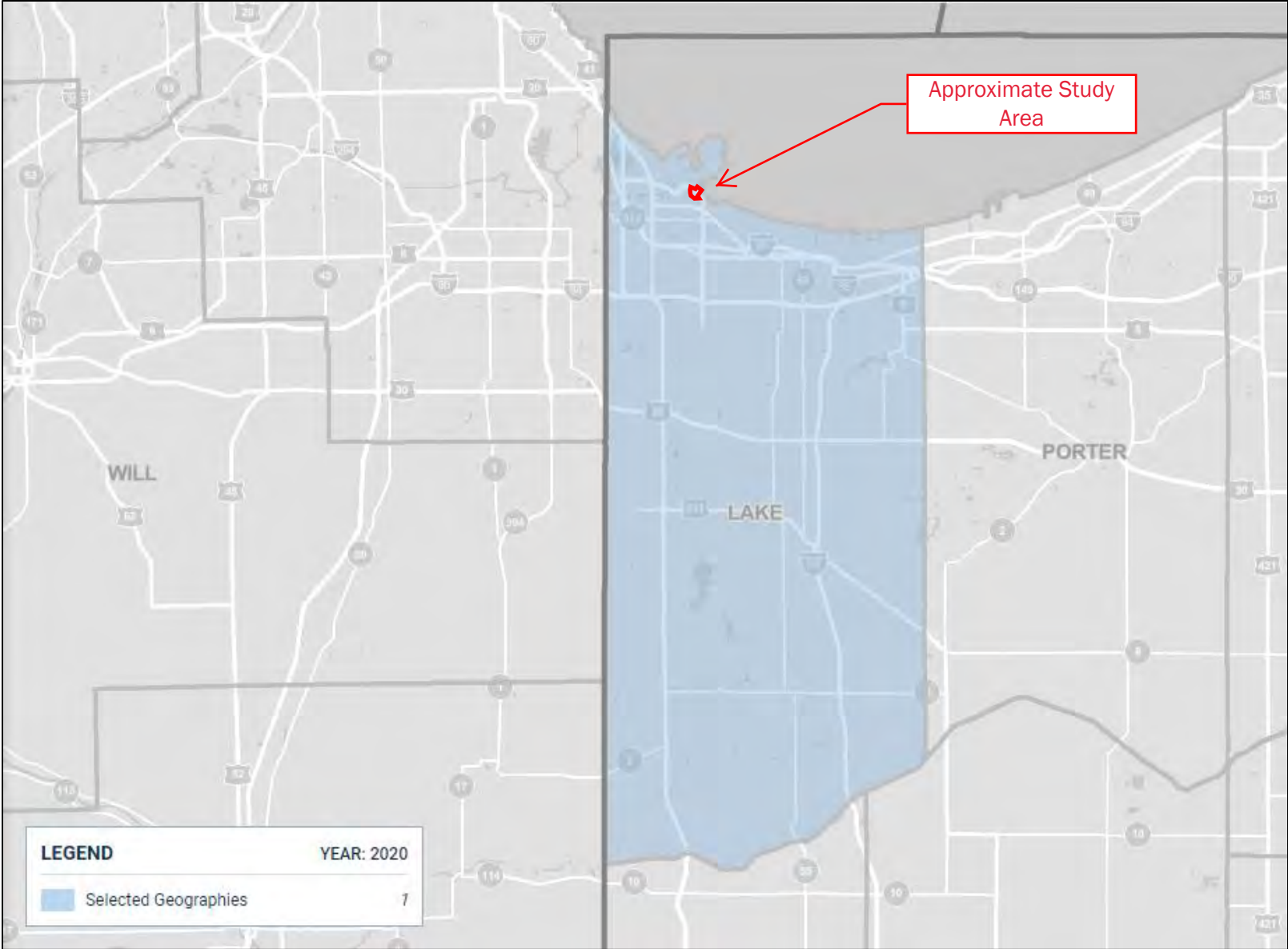
### Conclusions

The project area contains EJ populations of concern. This project will address maintenance concerns associated with the project bridges and will eliminate safety concerns associated with the closed pedestrian bridge. There will be no change in access for motorized vehicles and pedestrians. Therefore, the SR 912 Michigan Avenue Bridges project should provide a benefit to the community. The proposed ROW impacts are limited to acquisitions from industrial properties. Potential impacts to public transit during construction will be minimized through coordination with transit

authorities and local governmental officials (firm commitment). Based on this analysis, there does not appear to be disproportionately high and adverse impacts to EJ populations in or near the project area.

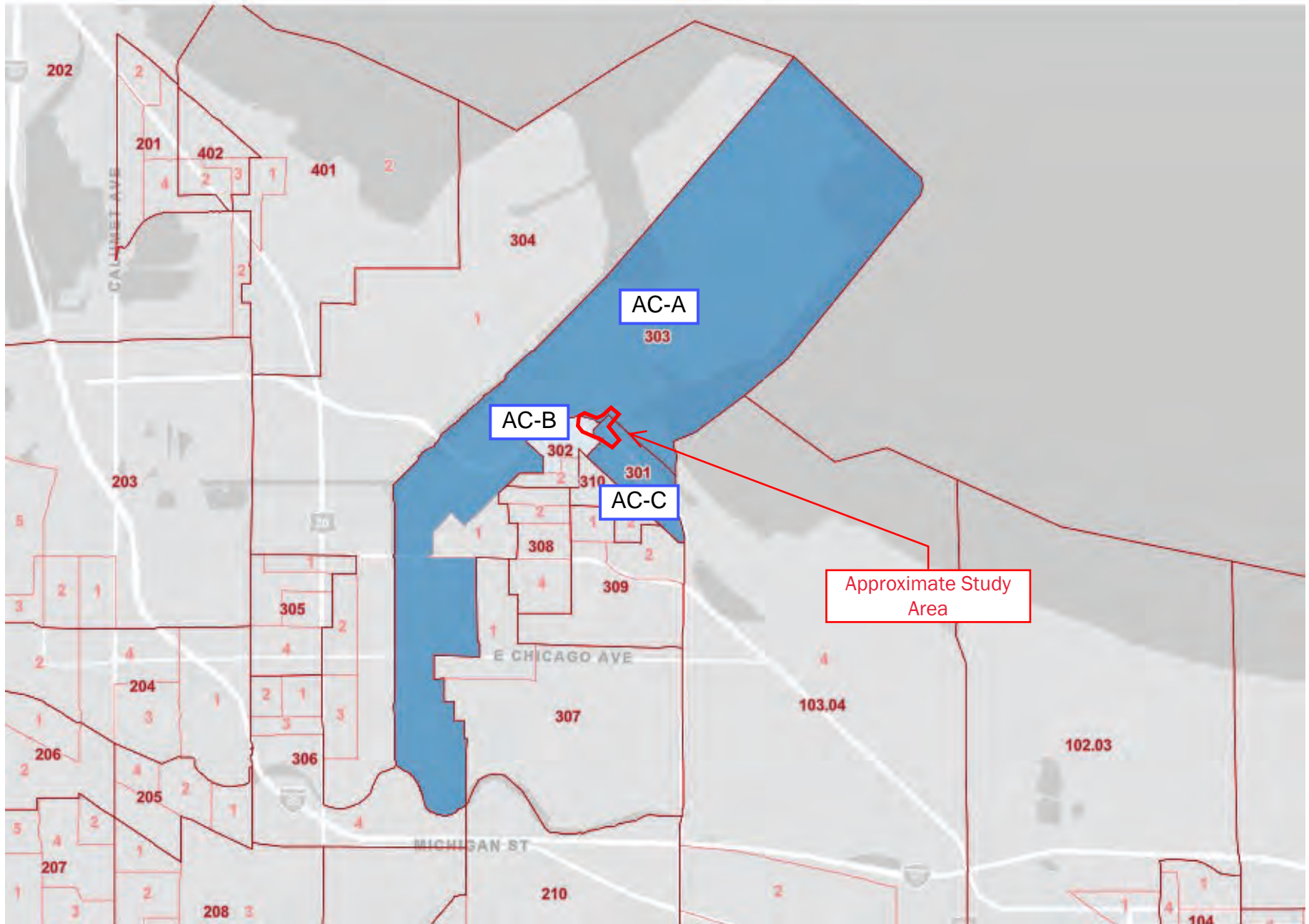
The project's draft Public Involvement Plan (PIP), concurred by INDOT on November 23, 2021, discusses the presence of EJ populations and individuals with limited English proficiency (LEP). The proposed engagement activities will include adaptive and innovative approaches to overcome language, cultural, economic, and other potential barriers to effective participation in the project development process. Engagement activities will include stakeholders who represent EJ populations including elected officials, transit, local housing authorities, adjoining landowners, public schools, religious institutions, and civic organization, as identified in the PIP.

**Des. 1703011 et al. SR 912 and Michigan Avenue Bridges Community of Comparison (COC) Map:  
Lake County**



# Des. 1703011 et al. SR 912 and Michigan Avenue Bridges Affected Communities (ACs) Map

Census Tract (CT) Block Groups (CTBGs)  
BG 2 CT 303 (AC-A), BG 1 CT 302 (AC-B), BG 1 CT 301 (AC-C)





# Race Table

https://data.census.gov/cedsci/table?q=B02001&g=0500000US18089\_1500000US180890301001,180890302001,180890303002&tid=ACSDT5Y2019.B02001&moe=false

United States Census Bureau

B02001

Press F11 to exit full screen

Advanced Search

All **Tables** Maps Pages

Microdata Help FAQ Fee

American Community Survey

## B02001 | RACE

2019: ACS 5-Year Estimates Detailed Tables | Universe: Total population

Notes 4 Geos Years Topics Surveys Codes 123 Hide **COC** Margin of Error **AC-C** Excel Download Print **AC-B** **AC-A**

	Lake County, Indiana	Block Group 1, Census Tract 301, La...	Block Group 1, Census Tract 302, Lak...	Block Group 2, Census Tract 303, Lake C...
Label	Estimate	Estimate	Estimate	Estimate
▼ Total:	485,707	1,344	1,034	1,201
White alone	300,770	24	163	102
Black or African American alone	114,891	1,294	632	837
American Indian and Alaska Native alone	1,286	0	0	0
Asian alone	6,911	0	0	16
Native Hawaiian and Other Pacific Islander alone	153	0	0	0
Some other race alone	45,169	15	239	241
▼ Two or more races:	16,527	11	0	5
Two races including Some other race	5,928	11	0	0
Two races excluding Some other race, and thre...	10,599	0	0	5

COC: Percent Minority  
 $(485,707 - 300,770)/485,707 = 38.1\%$   
 $125\% (38.1 \times 1.25) = 47.6\%$

AC-C  
 Percent Minority  
 $(1,344 - 24)/1,344 = 98.2\%$

AC-B  
 Percent Minority  
 $(1,034 - 163)/1,034 = 84.2\%$

AC-A  
 Percent Minority  
 $(1,201 - 102)/1,201 = 91.5\%$

# Income Table

[https://data.census.gov/cedsci/table?q=B17021&g=0500000US18089\\_1500000US180890301001,180890302001,180890303002&tid=ACSDT5Y2019.B17021&moe=false](https://data.census.gov/cedsci/table?q=B17021&g=0500000US18089_1500000US180890301001,180890302001,180890303002&tid=ACSDT5Y2019.B17021&moe=false)

An official website of the United States government [Here's how you know](#)

United States Census Bureau

B17021

All **Tables** Maps Pages

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American Community Survey

## B17021 | POVERTY STATUS OF INDIVIDUALS IN THE PAST 12 MONTHS BY LIVING ARRANGEMENT

2019: ACS 5-Year Estimates Detailed Tables | Universe: Population for whom poverty status is determined

Notes 4 Geos Years Topics Surveys Codes 123 Hide Tran **COC** Margin of Error Resto **AC-C** Download Print Map **AC-B** **AC-A**

	Lake County, Ind...	Block Group 1, Census Tract 301, ...	Block Group 1, Census Tract 302, L...	Block Group 2, Census Tract 303, ...
Label	Estimate	Estimate	Estimate	Estimate
▼ Total:	479,398	1,344	1,034	1,117
➤ Income in the past 12 months below poverty level:	74,629	971	443	611
➤ Income in the past 12 months at or above poverty level:	404,769	373	591	506

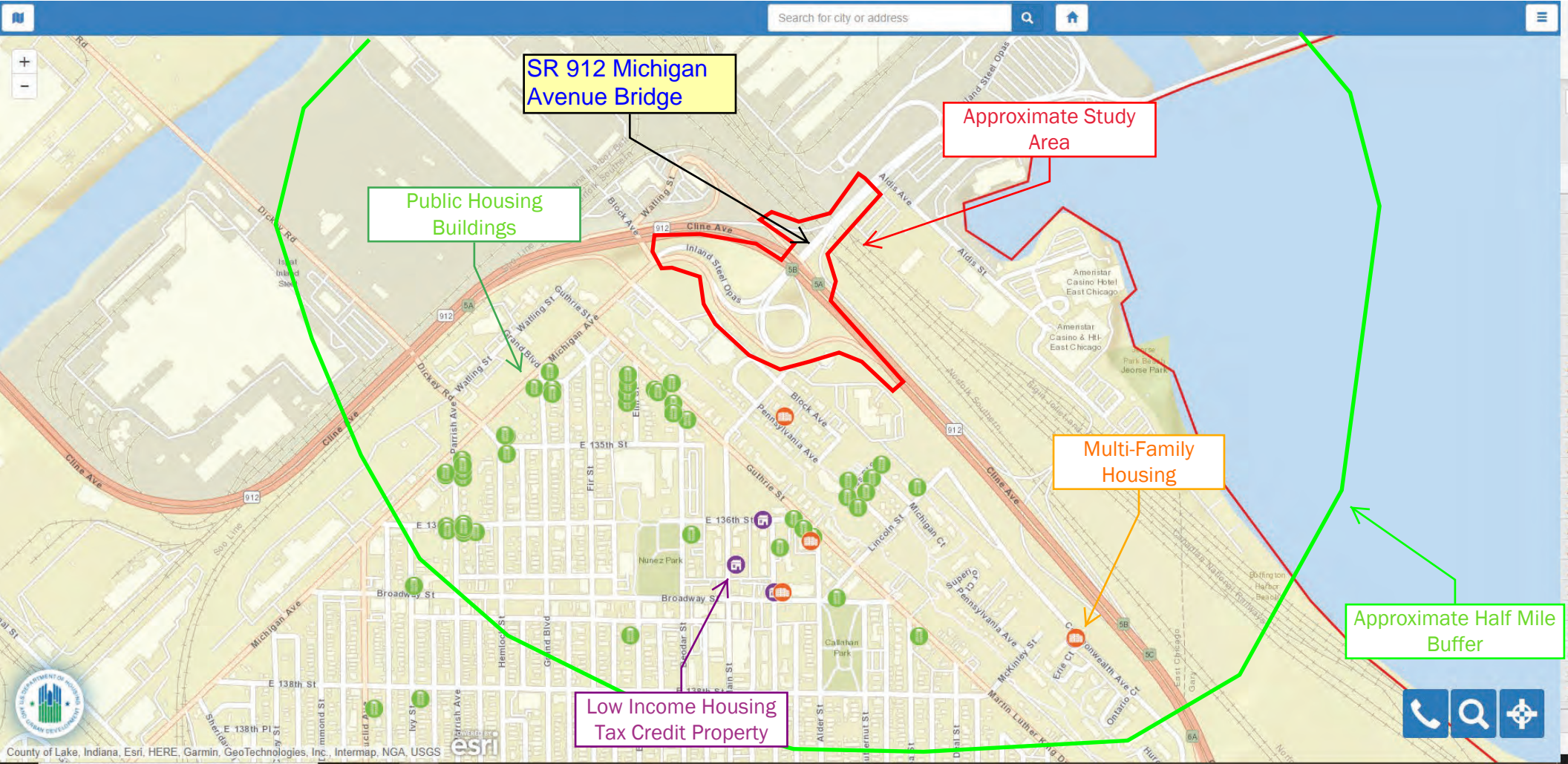
**COC: Percent Low Income**  
 $74,629/479,398 = 15.6\%$   
 $125\% (15.6 \times 1.25) = \mathbf{19.5\%}$

**AC-C**  
 Percent Low Income  
 $971/1,344 = \mathbf{72.2\%}$

**AC-B**  
 Percent Low Income  
 $443/1,034 = \mathbf{42.8\%}$

**AC-A**  
 Percent Low Income  
 $611/1,117 = \mathbf{54.7\%}$

# Des. 1703011 SR 912 and Michigan Avenue Bridges Project US HUD Resource Locator



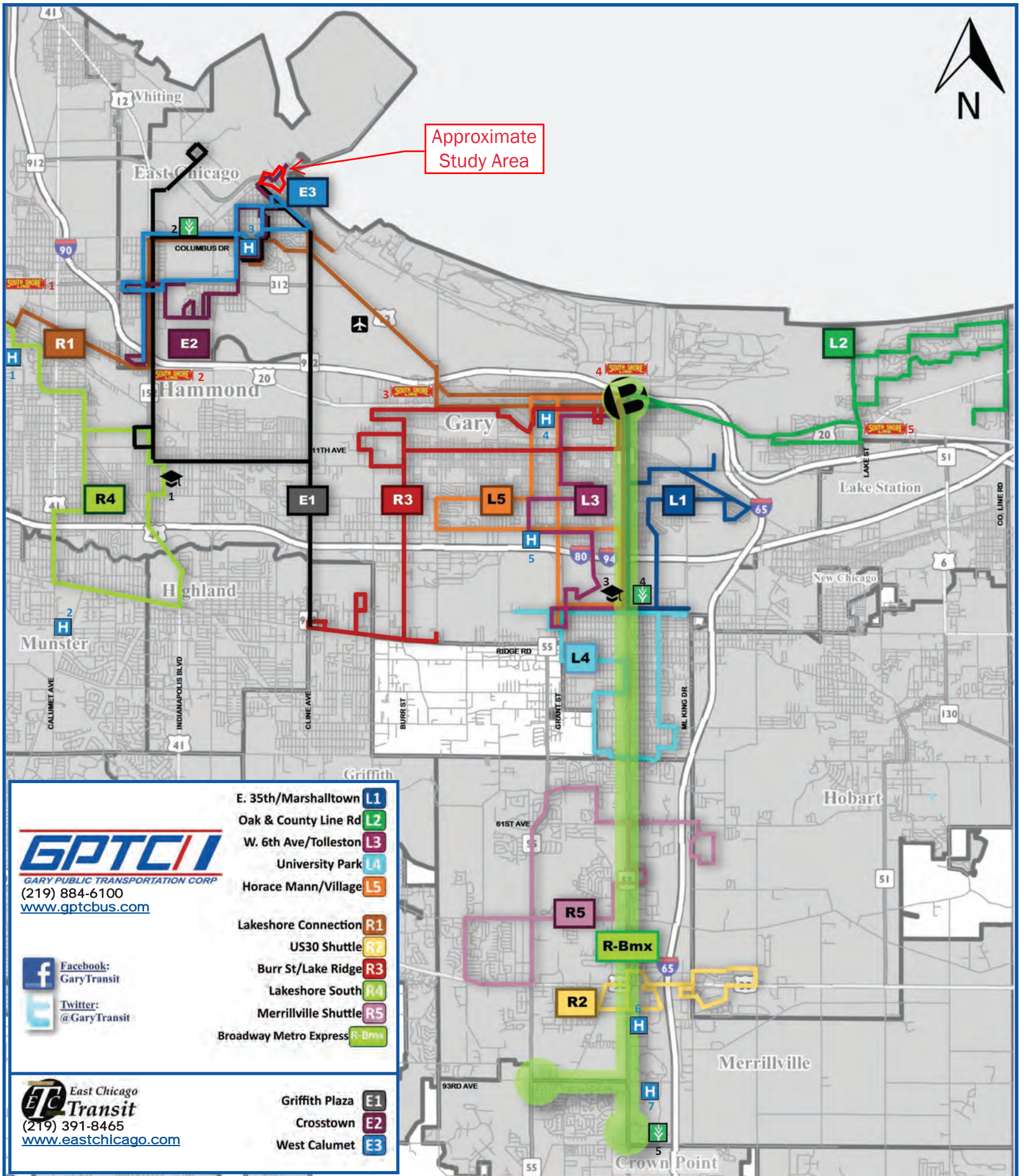
Obtained from: <https://resources.hud.gov/> on February 21, 2022

\*Public Housing Developments are present but displayed underneath some icons on the map.

## US HUD Resources within 0.5 Mile of the Des. 1703011 et al. SR 912 and Michigan Avenue Bridges Project

Resource Type	Property Name	Address	City	State	ZIP	Contact Name	Phone	Email	Company	Contact Address
Multifamily Property	NORTHTOWN VILLAGE SQUARE APARTMENTS	2320 Broadway St	East Chicago	IN	46312	Null	Null	Null	Null	Null
Multifamily Property	LAKESIDE GARDENS	3802 Erie Ct	East Chicago	IN	46312	DEBRA FLEEGER	2199381600	Null	L-B RESIDENTIAL MANAGEMENT COMPANY	8901 E 5TH AVE GARY, IN 46403
Multifamily Property	HARBORSIDE APARTMENTS	3610 Alder St	East Chicago	IN	46312	DEBRA FLEEGER	2199381600	Null	L-B RESIDENTIAL MANAGEMENT COMPANY	8901 E 5TH AVE GARY, IN 46403
Multifamily Property	HARBOR MEADOWS	3521 Pennsylvania Ave	East Chicago	IN	46312	Ronald M Gatton	(312) 527-0198	Null	Redevelopment Services Corporation	1 E. Wacker Drive Chicago, IL 60601
Low Income Housing Tax Credit Property	NORTH HARBOR	2302 BROADWAY ST	EAST CHICAGO	IN	46312					
Low Income Housing Tax Credit Property	LAKESIDE GARDENS	3806 ERIE CT	EAST CHICAGO	IN	46312					
Low Income Housing Tax Credit Property	NORTHTOWN VILLAGE TOWNHOMES	3600 PULASKI ST	EAST CHICAGO	IN	46312					
Low Income Housing Tax Credit Property	NORTHTOWN VILLAGE TOWNHOMES II	3637 MAIN ST	EAST CHICAGO	IN	46312					
Public Housing Development	JAMES HUNTER	3625 Pulaski St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Development	Roses of Sharon	3609 Deodar St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3513 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3414 Grand Blvd	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3426 Grand Blvd	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3734 Elm St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3406 Deodar St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3609 Deodar St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3509 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3521 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3529 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3613 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3418 Elm St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3412 Lincoln St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3592 Pennsylvania Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3590 Block Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	1718 E 135th St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3414 Elm St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3572 Guthrie St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3589 Pennsylvania Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3530 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	1515 E 136th St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3403 Grand Blvd	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3422 Grand Blvd	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3596 Block Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3602 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3608 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3609 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	1710 E 135th St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3410 Elm St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3442 Guthrie St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3454 Guthrie St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3400 Deodar St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3472 Guthrie St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
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Public Housing Building	Housing Authority of the City of East Chicago	3533 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
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Public Housing Building	Housing Authority of the City of East Chicago	3574 Pennsylvania Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3570 Pennsylvania Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3596 Pennsylvania Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3526 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3517 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3605 Parrish Ave	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		
Public Housing Building	Housing Authority of the City of East Chicago	3450 Guthrie St	East Chicago	IN	46312		2193979974	tcauley@echa-in.org		

Data Obtained on 2/21/22 from <https://resources.hud.gov/>



**HOSPITALS**

1. Franciscan Hammond
2. Community (Munster)
3. St. Catherine (E. Chicago)
4. Methodist Northlake (Gary)
5. Methodist Midlake (Gary)
6. Methodist Southlake (Merrillville)
7. Pinnacle (Crown Point)



**COLLEGES**

1. Purdue Northwest (Hammond)
2. Ivy Tech East Chicago
3. Indiana Univ. Northwest (Gary)
4. Ivy Tech Gary
5. Ivy Tech Crown Point/Merrillville



**SOUTH SHORE STATIONS**

1. Hammond
2. E. Chicago
3. Gary/Airport
4. Gary/Metro
5. Gary/Miller



# WEST CALUMET

Approximate Study Area



**East Chicago Bus Transit**

Des. 1703011 et al. SR 912 and Michigan Avenue Bridges  
Proposed Right-of-Way (ROW) Map: Lake County





## Port, Juliet [US-US]

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**From:** Fair, Terri <TFair@indot.IN.gov>  
**Sent:** Wednesday, April 6, 2022 5:16 PM  
**To:** Port, Juliet [US-US]  
**Cc:** Ronald Bales; Ronald Bales  
**Subject:** [EXTERNAL] SR 912 Michigan Ave Bridges draft EJ Memo Des 1703011  
**Attachments:** MEM\_SR912\_MichAveBridge\_1703011\_reEJ\_draft20220406.pdf

INDOT-Environmental Services Division (ESD) has reviewed the project information along with the Environmental Justice (EJ) Analysis for the above referenced project. With the information provided, the project may require minimal right-of-way, require no relocations, and would not disrupt community cohesion or create a physical barrier. With the information provided, INDOT-ESD would not consider the impacts associated with this project as causing a disproportionately high and adverse effect on minority and/or low-income populations of EJ concern relative to non EJ populations in accordance with the provisions of Executive Order 12898 and FHWA Order 6640.23a. No further EJ Analysis is required.

Land and Water Conservation Fund (LWCF) County Property List for Indiana (Last Updated July 2020)

ProjectNumber	SubProjectCode	County	Property
1800005	1800005	Lake	Dowling Park
1800011	1800011	Lake	Tolleston Park
1800012	1800012	Lake	Washington Park
1800040	1800040	Lake	Homestead Park
1800055	1800055	Lake	Sheppard Memorial Park
1800059	1800059	Lake	Cheever Park
1800062	1800062	Lake	Leroy Township Park
1800063	1800063	Lake	Markley Memorial ParkEllendale Park
1800071	1800071	Lake	Cheever Park
1800087	1800087	Lake	Sheppard Memorial Park
1800102	1800102	Lake	Grand Boulevard Lake Recreation Area
1800108	1800108	Lake	Riverview Park
1800137	1800137	Lake	Northgate Park
1800150	1800150	Lake	Meadows Park
1800168	1800168	Lake	Sunnyside Park
1800170	1800170	Lake	Howe Park
1800189	1800189	Lake	Dowling Park
1800193	1800193	Lake	Harrison Park
1800194	1800194	Lake	Martin Luther King Jr. Park (Formerly Maywood Park
1800199	1800199	Lake	Ridgeway Park
1800202	1800202	Lake	Hatcher Park
1800206	1800206	Lake	Meadows Park
1800226	1800226	Lake	Hoosier Prairie Nature Preserve
1800227	1800227	Lake	Liberty Park
1800231	1800231	Lake	Pheasant Hills Community Park & Cherry Hill Tot-Lot
1800237	1800237	Lake	Wolf Lake Park (N & S)
1800239	1800239	Lake	Bluebird Park
1800253	1800253	Lake	Centennial Park
1800272	1800272	Lake	Wolf Lake Park (N & S)
1800273	1800273	Lake	Grand Kankakee Marsh County Park
1800302	1800302	Lake	Munster Community Park
1800329	1800329	Lake	Jackson Park
1800369	1800369H	Lake	Harrison Park
1800369	1800369D	Lake	Lemon Lake County Park
1800377	1800377	Lake	Main Square Park
1800386	1800386	Lake	Gibson Woods Nature Preserve & Tolleston Ridges Nature Preserve
1800405	1800405G	Lake	Clark and Pine Dune Swale Nature Preserve
1800414	1800414	Lake	Wolf Lake Park (N & S)
1800417	1800417	Lake	Centennial (Dan Rabin) Plaza & Trail
1800424	1800424	Lake	Lake Etta County Park
1800455	1800455	Lake	Deep River - Woods Mill County Park
1800464	1800464	Lake	Festival Park & Lakefront Park
1800473	1800473	Lake	Oak Ridge Prairie Co. Park
1800488	1800488	Lake	Marquette Park
1800489	1800489	Lake	Festival Park & Lakefront Park
1800522	1800522	Lake	Pavese Park
1800523	1800523	Lake	Lakewood Park
1800523.5	1800523.5	Lake	River Drive Park
1800528	1800528	Lake	Lowell Sports Park
1800533	1800533	Lake	Hobart City Ball Park
1800555	1800555	Lake	Scherwood Golf Course
1800580	1800580	Lake	Oak Ridge Park
1800586	1800586	Lake	Teibel Nature Park
1800586.1	1800586.1	Lake	Teibel Nature Park
1800590	1800590	Lake	Deep River County Park
1800622	1800622	Lake	Fireman's Park
1800636	1800636	Lake	Parrish Avenue Park

Source: <https://www.in.gov/indot/engineering/files/IN-LWCF-sites-by-county.xlsx>