PROJECT	DESIGNATION
1900176	1900176
CONTRACT	BRIDGE FILE
B-42240	340-11-10492

STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
340-11-10492	Precast Concrete Three-Sided Structure	36'-0" Span x 12'-0" Rise Skew: None	PURDY RUN	438+82.50 Line "A"

KIN DESIGNATION NUMBERS	
1900339	SMALL STRUCTURE REPLACEMENT on S.R. 46
2000877	SMALL STRUCTURE MAINTENANCE AND REPAIR on U.S. 40

LEAD DESIGNATION NUMBERS	
1900176	BRIDGE REPLACEMENT on S.R. 340 over PURDY RUN

INDIANA DEPARTMENT OF TRANSPORTATION

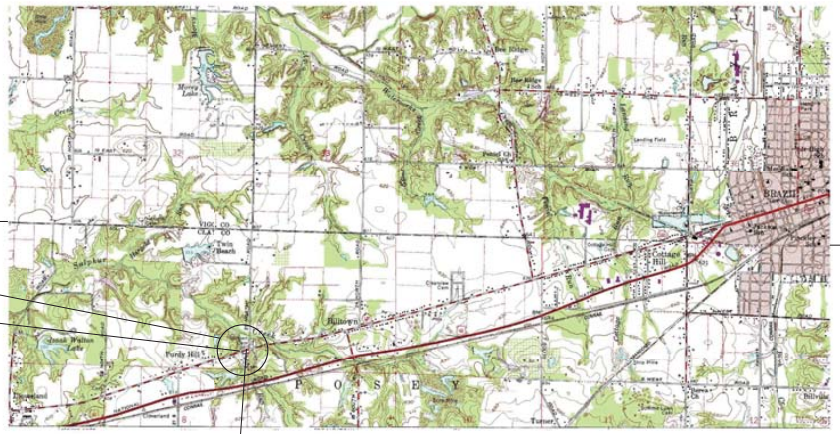
BRIDGE PLANS

FOR SPANS OVER 20 FEET

ROUTE: S.R. 340 AT: RP 2+00

PROJECT NO. 1900176 P.E.
1900176 R/W
1900176 CONST.

Bridge Replacement on SR 340 over Purdy Run,
Located 2.09 Miles East of W. U.S. 40 Jct. in Section 5,
T-12-N, R-7-W, Posey Township, Clay County, Indiana.

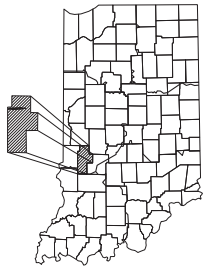


VICINITY MAP
Clay County
Posey Township

PFC PLANS
May 7, 2021

TRAFFIC DATA		
A.A.D.T.	(2024)	1,565 V.P.D.
A.A.D.T.	(2044)	1,565 V.P.D.
D.H.V.	(2044)	167 V.P.H.
DIRECTIONAL DISTRIBUTION		55.97 % EB
TRUCKS	(2044)	1.92% A.A.D.T.
		1.20% D.H.V.

DESIGN DATA	
DESIGN SPEED	40 M.P.H.
PROJECT DESIGN CRITERIA	3R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	STATE COLLECTOR
RURAL/URBAN	RURAL
TERRAIN	LEVEL
ACCESS CONTROL	NONE



PROJECT LOCATION SHOWN BY

LATITUDE: 39°30'28.08" N LONGITUDE: 87°12'05.29" W

BRIDGE LENGTH:	0.008	MI.
ROADWAY LENGTH:	0.029	MI.
TOTAL LENGTH:	0.037	MI.
MAX. GRADE:	-5.20%	%

HUC: 05120111030060

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2020
TO BE USED WITH THESE PLANS.

CHA
Union Station, 300 S. Meridian St.
Indianapolis, IN 46225
317.786.0461 - www.chacompanies.com

PLANS PREPARED BY: CHA CONSULTING, INC. (317) 786-0461 PHONE NUMBER

CERTIFIED BY: _____ DATE

APPROVED FOR LETTING: _____ INDIANA DEPARTMENT OF TRANSPORTATION DATE

BRIDGE FILE
340-11-10492
DESIGNATION
1900176

SURVEY BOOK	SHEETS
	1 of 19
CONTRACT	PROJECT
B-42240	1900176

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DATE PLOTTED: 5/4/2021
TIME PLOTTED: 10:00:40 AM

UTILITIES

ELECTRIC

Duke Energy
Cindy Rowland
100 S. Mill Creek Rd.
Noblesville, IN 46062
317-776-5341
cindy.rowland@duke-energy.com

GAS/PIPELINE

Vectren (North)
16000 Allisonville Rd.
Noblesville, IN 46061
812-491-4765
publicproject@centerpointenergy.com

TELECOMMUNICATIONS

New Wave Communications
Bart Kotter
102 North 5th St.
Vincennes, IN 47591
812-887-8996
bart.kotter@newwavecom.com

Frontier
Joe Sarll
8001 West Jefferson Blvd.
Fort Wayne, IN 46804
260-461-3324
utilitycordreg@ftr.com

GENERAL NOTES

All earth shoulders, median areas, and cut and fill slopes shall be plain or mulch seeded except where sodding is specified.

This set of plans shall not be construed to be a property replacement survey. Where apparent property lines, owners, or section corner information is shown it is based upon physical evidence or testimony.

The topography information for this project was supplied by CeCon. Attempts have been made to periodically update portions of this project. However, the design consultant does not warrant the accuracy of this data and advises the contractor to field verify all information.

The Vertical Datum Used For The Project Is N.A.V.D. Of 1988. For Additional Information On The Vertical And Horizontal Datums, Refer To The Survey Field Books On File With The INDOT Records Section And Provided To The Contractor Through The Contract Services.

INDEX

REVISIONS

SHEET NO.	DATE	REVISED

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: KAB
DRAWN: PCR
CHECKED: RJP
CHECKED: KAB

INDIANA
DEPARTMENT OF TRANSPORTATION

INDEX

HORIZONTAL SCALE	BRIDGE FILE
	340-11-10492
VERTICAL SCALE	DESIGNATION
	1900176
SURVEY BOOK	SHEETS
	2 of 19
CONTRACT	PROJECT
B-42240	1900176

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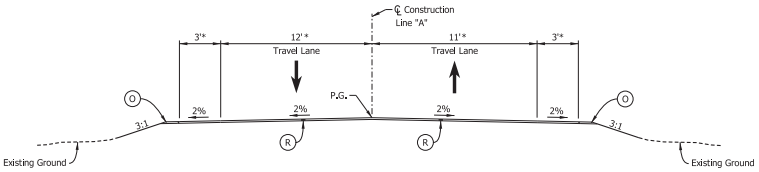
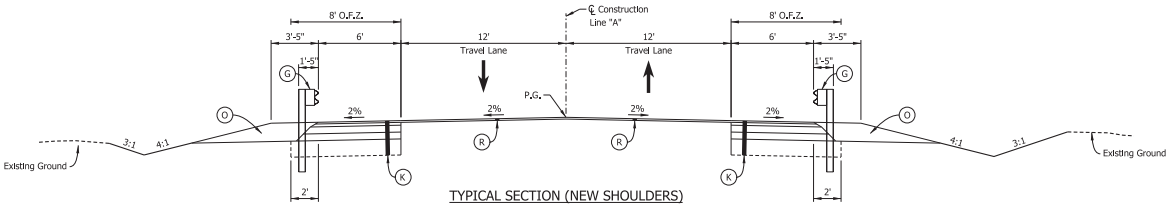


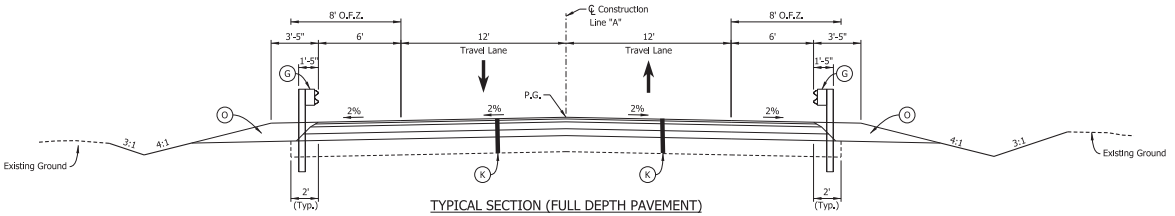
TYPICAL INCIDENTAL CONSTRUCTION SECTION

Sta. 436+58.82 To Sta. 437+84.14 "A"
Sta. 439+80.86 To Sta. 440+66.89 "A"



TYPICAL SECTION (NEW SHOULDERS)

Sta. 437+84.14 To Sta. 438+50.00 "A"
Sta. 439+15.00 To Sta. 439+80.86 "A"



TYPICAL SECTION (FULL DEPTH PAVEMENT)

Sta. 438+50.00 To Sta. 439+15.00 "A"

LEGEND

(K) Full Depth HMA Pavement (Assumed)
165 lbs/sys QC/QA HMA, 3, 64, Surface, 9.5 mm on
275 lbs/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 lbs/sys QC/QA HMA, 3, 64, Base, 19.0 mm on
330 lbs/sys QC/QA HMA, 3, 64, Base, 19.0 mm on
(Provide Tack Coat between HMA layers)
Subgrade Treatment, Type IC

(R) Transition Milling (2" Max.) and Overlay
165 lbs/sys QC/QA HMA, 3, 64, Surface, 9.5 mm on
As Required, 275 lbs/sys QC/QA HMA, 3, 64, Intermediate, 19.00 mm

(O) Variable Depth Compacted Aggregate No. 53

(G) Guardrail, MGS W-Beam

O.F.Z. = Obstruction Free Zone

* = Match Existing

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: NAZ DRAWN: TPH

CHECKED: RJP CHECKED: NAZ

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
1/4" = 1'-0"	340-11-10492
VERTICAL SCALE	DESIGNATION
	1900176
SURVEY BOOK	SHEETS
	3 of 19
CONTRACT	PROJECT
B-42240	1900176

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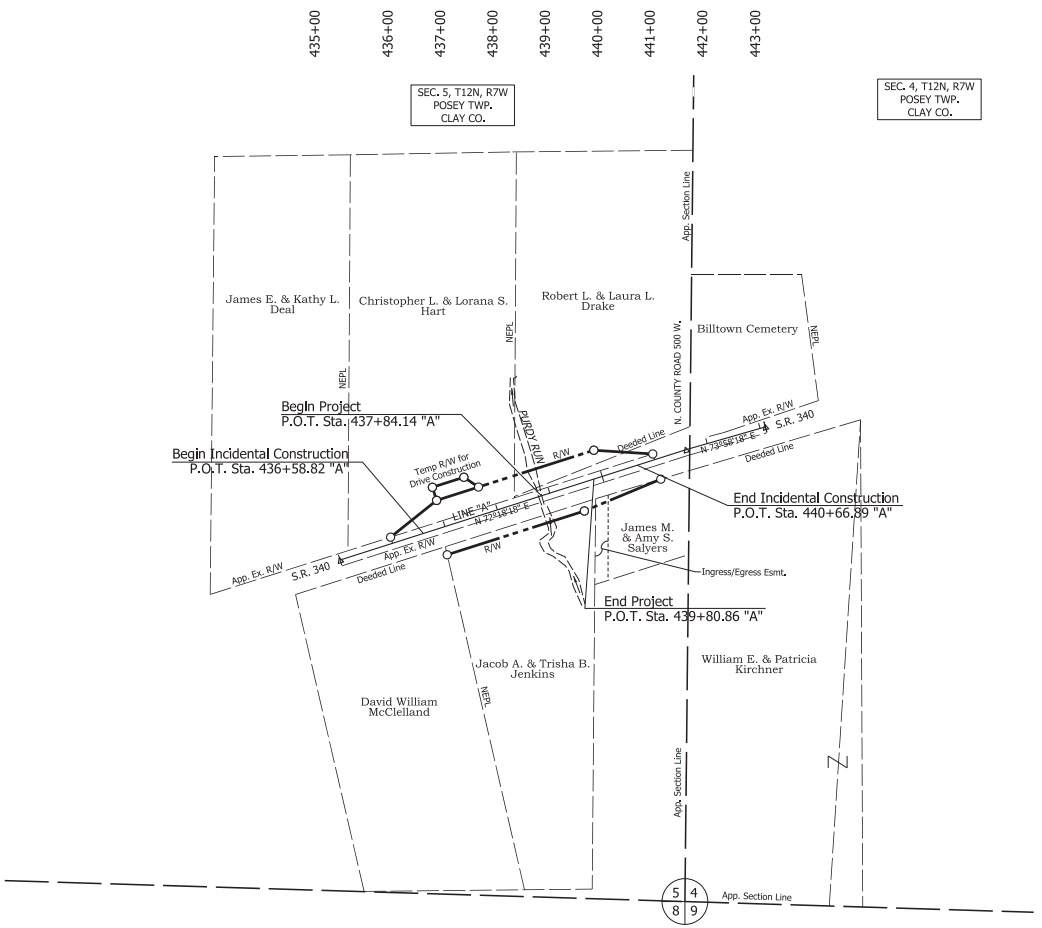

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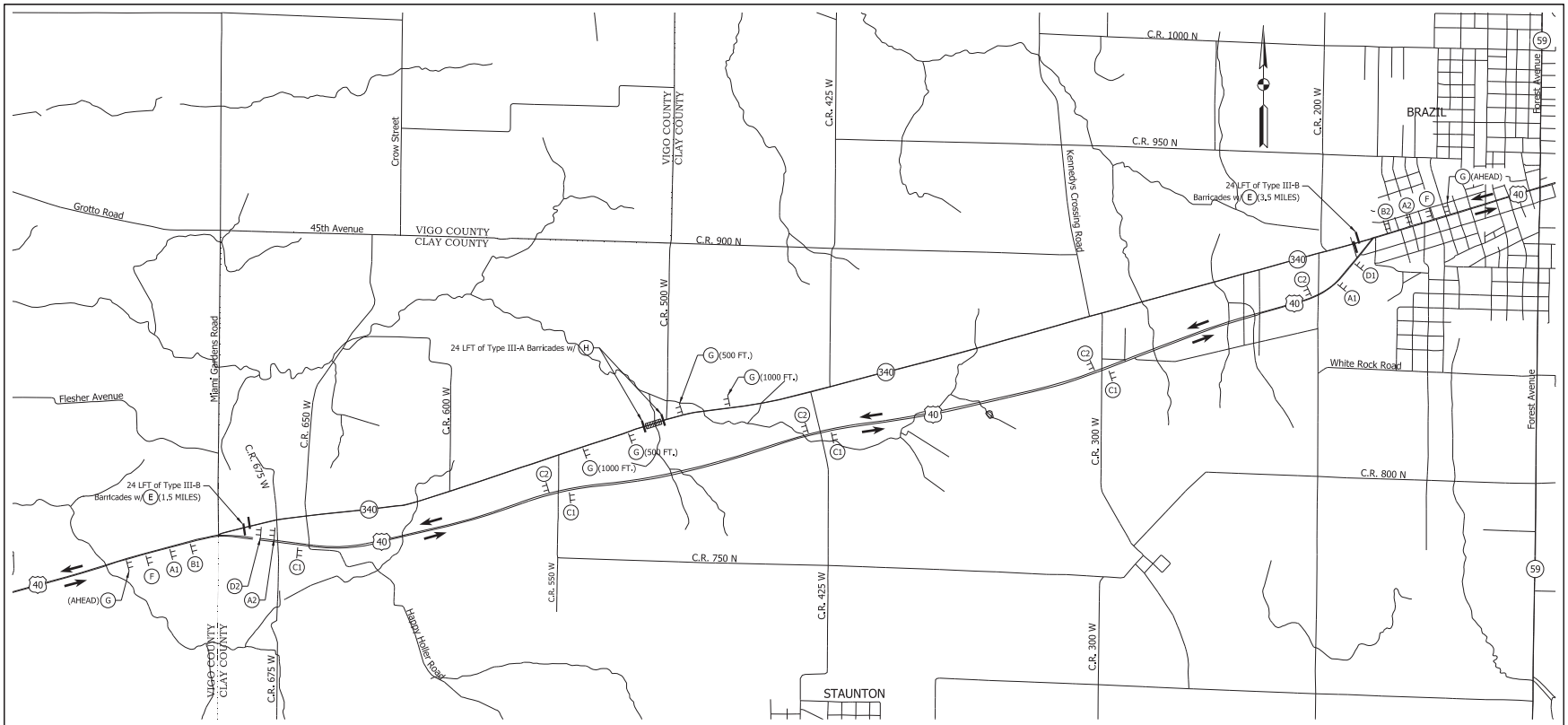
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1" = 100'	BRIDGE FILE 340-11-10492
		VERTICAL SCALE N/A	DESIGNATION 1900176
DESIGNED: NAZ / DRAWN: TPH	PLAT NO.1	SURVEY BOOK	SHEETS 4 of 19
CHECKED: RJP / CHECKED: NAZ		CONTRACT B-42240	PROJECT 1900176



(A1) XM4-8 DETOUR / M3-2 EAST / M1-5 340 / M5-1 (L or R)

(B1) XM4-8 DETOUR / M3-2 EAST / M1-5 340 / M6-1 (L or R)

(C1) XM4-8 DETOUR / M3-2 EAST / M1-5 340 / M6-3

(D1) XM4-8a END DETOUR / M3-2 EAST / M1-5 340 / M6-1 (L or R)

(A2) XM4-8 DETOUR / M3-4 WEST / M1-5 340 / M5-1 (L or R)

(B2) XM4-8 DETOUR / M3-4 WEST / M1-5 340 / M6-1 (L or R)

(C2) XM4-8 DETOUR / M3-4 WEST / M1-5 340 / M6-3

(D2) XM4-8a END DETOUR / M3-4 WEST / M1-5 340 / M6-1 (L or R)

(E) R11-3 ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY / XM4-10 (L or R) DETOUR
Road Closure Sign Assembly

(F) DETOUR AHEAD
XW20-2 48"x48"

(G) ROAD CLOSED XXXX
XW20-3 48"x48"

(H) ROAD CLOSED
R11-2 Road Closure Sign Assembly

ITEM DESCRIPTION	UNIT	QUANTITY
ROAD CLOSURE SIGN ASSEMBLY	EACH	4
DETOUR ROUTE MARKER ASSEMBLY	EACH	16
CONSTRUCTION SIGN, A	EACH	8
MAINTAINING TRAFFIC	LS	1
BARRICADE, III-A	LFT	48
BARRICADE, III-B	LFT	48

Sequence of Operations:
1) Install Traffic Control Devices for Detour of SR 340.
2) Detour thru traffic and construct project.

NOTES:
1. Detour Route Marker Assemblies shall be provided according to Standard Drawing E 801-TCDT-04.
2. Type B Construction Warning Lights shall be used with all signs located on barricades. Type A Construction Warning Lights shall be used on all other construction signs.

LEGEND
- Directional Traffic Lane Indication Arrow
- Closure/Construction Area
- Construction Sign
- Barricade Type-III-A or III-B As Required

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER _____ DATE

DESIGNED: KAB | DRAWN: JSS
CHECKED: NAZ | CHECKED: KAB

INDIANA
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
DETOUR ROUTE

HORIZONTAL SCALE	BRIDGE FILE
1" = 1200'	340-11-10492
VERTICAL SCALE	DESIGNATION
N/A	1900176
SURVEY BOOK	SHEETS
	7 of 19
CONTRACT	PROJECT
B-42240	1900176

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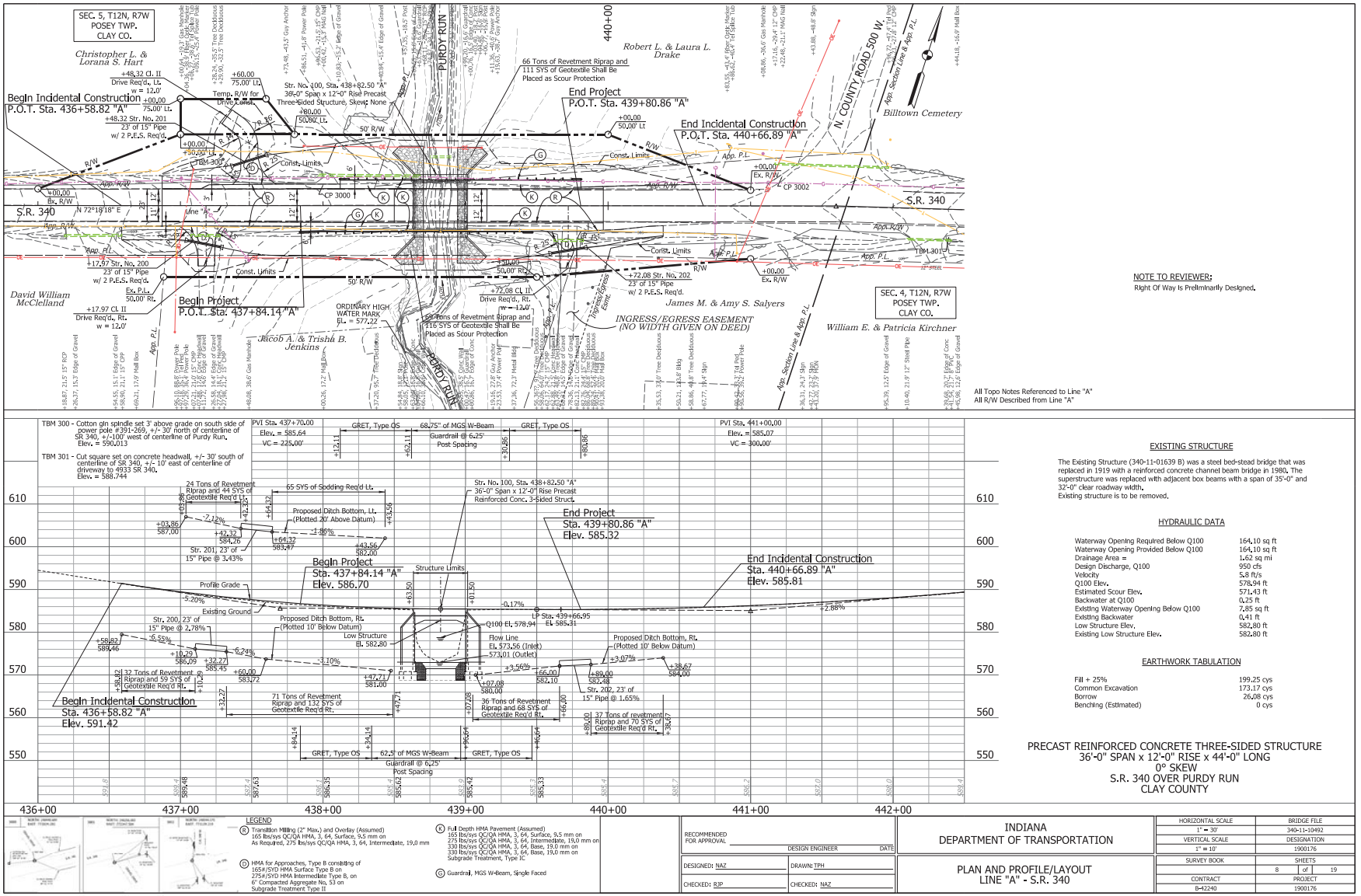

NOTE TO REVIEWER:
Right Of Way Is Preliminarily Designed.

All Topo Notes Referenced to Line "A"
All R/W Described from Line "A"

EXISTING STRUCTURE

The Existing Structure (340-11-01639 B) was a steel bed-stead bridge that was replaced in 1919 with a reinforced concrete channel beam bridge in 1980. The superstructure was replaced with adjacent box beams with a span of 35'-0" and 32'-0" clear roadway width.
Existing structure is to be removed.

HYDRAULIC DATA

Waterway Opening Required Below Q100	164.10 sq ft
Waterway Opening Provided Below Q100	164.10 sq ft
Drainage Area =	1.62 sq mi
Design Discharge, Q100	950 cfs
Velocity	5.8 ft/s
Q100 Elev.	578.94 ft
Estimated Scour Elev.	571.43 ft
Backwater at Q100	0.25 ft
Existing Waterway Opening Below Q100	7.85 sq ft
Existing Backwater	0.41 ft
Low Structure Elev.	582.80 ft
Existing Low Structure Elev.	582.80 ft

EARTHWORK TABULATION

Fill + 25%	199.25 cys
Common Excavation	173.17 cys
Borrow	26.08 cys
Benching (Estimated)	0 cys

PRECAST REINFORCED CONCRETE THREE-SIDED STRUCTURE
36'-0" SPAN x 12'-0" RISE x 44'-0" LONG
0° SKEW
S.R. 340 OVER PURDY RUN
CLAY COUNTY

LEGEND

(R) Transition Milling (2" Max.) and Overlay (Assumed)
165 lbs/sys QC/QA HMA, 3, 64, Surface, 9.5 mm on
As Required, 275 lbs/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm

(D) HMA for Approaches, Type B consisting of
165#/SYD HMA Surface Type B on
275#/SYD HMA Intermediate Type B, on
6" Compacted Aggregate No, 53 on
Subgrade Treatment Type II

(K) Full Depth HMA Pavement (Assumed)
165 lbs/sys QC/QA HMA, 3, 64, Surface, 9.5 mm on
275 lbs/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
330 lbs/sys QC/QA HMA, 3, 64, Base, 19.0 mm on
330 lbs/sys QC/QA HMA, 3, 64, Base, 19.0 mm on
Subgrade Treatment, Type IC

(G) Guardrail, MGS W-Beam, Single Faced

RECOMMENDED FOR APPROVAL: _____ DESIGN ENGINEER DATE

DESIGNED: NAZ DRAWN: TPH
CHECKED: RJP CHECKED: NAZ

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE/LAYOUT
LINE "A" - S.R. 340

HORIZONTAL SCALE	BRIDGE FILE
1" = 30'	340-11-10492
VERTICAL SCALE	DESIGNATION
1" = 10'	1900176
SURVEY BOOK	SHEETS
	8 of 19
CONTRACT	PROJECT
B-42240	1900176

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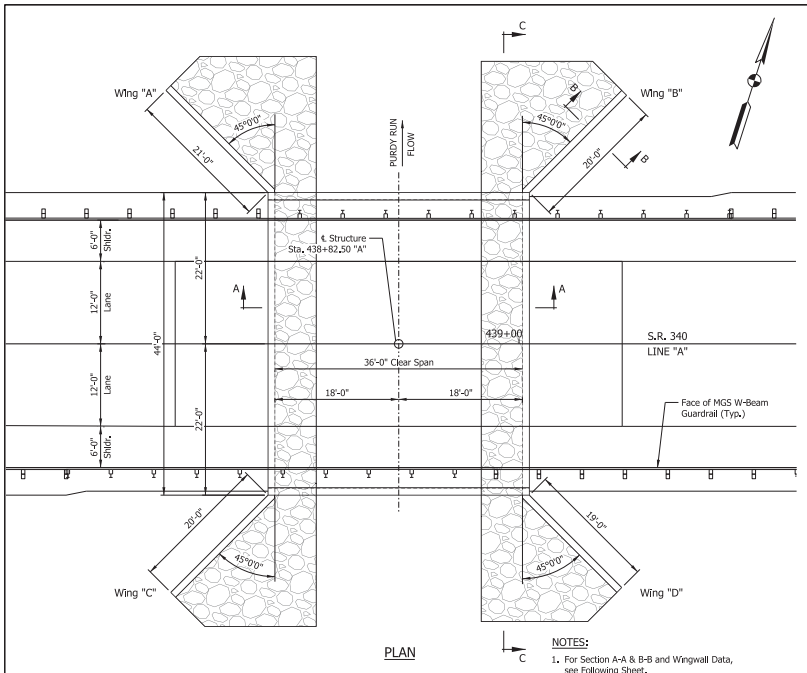
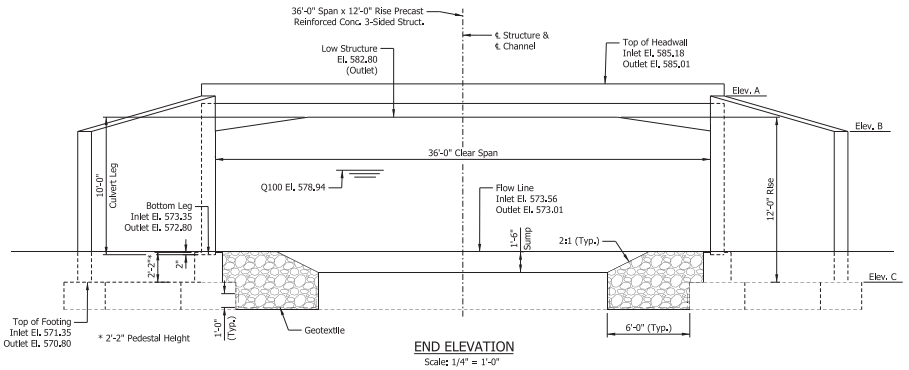


PLAN

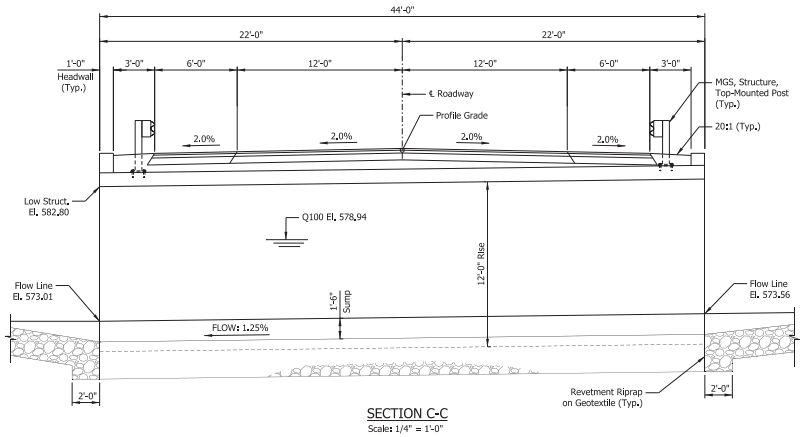
NOTES:

1. For Section A-A & B-B and Wingwall Data, see Following Sheet.



END ELEVATION

Scale: 1/4" = 1'-0"



SECTION C-C

Scale: 1/4" = 1'-0"

PRECAST REINFORCED CONCRETE
THREE-SIDED STRUCTURE
36'-0" SPAN x 12'-0" RISE x 44'-0" LONG
SKEW: NONE
S.R. 340 OVER PURDY RUN
CLAY COUNTY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: KAB | DRAWN: PCR

CHECKED: ELM | CHECKED: KAB

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	340-11-10492
VERTICAL SCALE	DESIGNATION
N/A	1900176
SURVEY BOOK	SHEETS
	9 of 19
CONTRACT	PROJECT
B-42240	1900176

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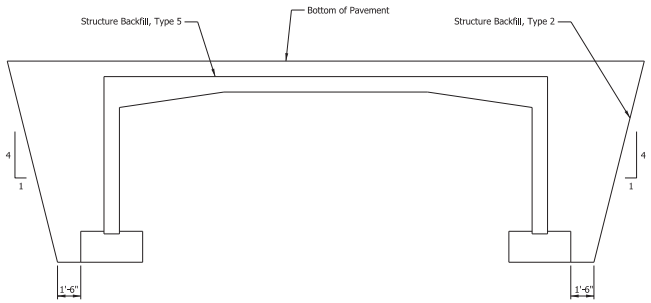
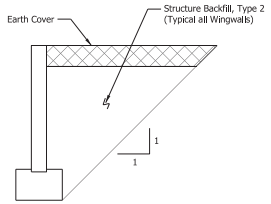


SECTION A-A
No Scale



SECTION B-B
No Scale

GENERAL NOTES

All Dimensions are in feet (Ft.) except as noted.

A three-sided arch-topped or true arch structure will not be permitted at this location.

See Standard Drawing E601-MGSA for W-Beam Guardrail Installation.

See Standard Drawing E723-CCSP-03 & -04 for stream bed scour protection and sumping detail.

Contractor shall verify the Existing Flowline Elevation to set the appropriate Sump Depth.

Designers should coordinate with the Office of Hydraulics to determine the necessary adjustments to invert and top of footing elevations. Typically, if the difference between the flowline elevation shown in the plans and existing flowline is half the sump depth or greater, the structure elevations should be lowered accordingly to provide the sump as shown on the plans. If the existing flowline elevation is higher than the flowline elevation shown on the plans, no changes are required to the structure elevations.

SUMMARY OF QUANTITIES

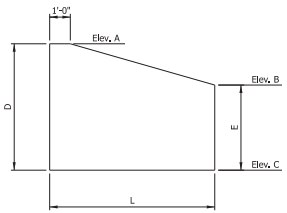
STRUCTURE BACKFILL, TYPE 2 = 523 CYS
STRUCTURE BACKFILL, TYPE 5 = 42 CYS

DESIGN DATA

Designed for HL-93 loading in accordance with AASHTO LRFD Bridge Design Specifications, Ninth Edition, 2020.

DEAD LOAD

Actual weight plus 35 lb/ft^2 for future wearing surface.



WINGWALL ELEVATION
No Scale

WINGWALL TABLE					
	Wing A	Wing B	Wing C	Wing D	
Elev. A	584.96	584.85	584.96	584.85	
Elev. B	580.06	580.05	580.29	580.29	
Elev. C	570.80	570.80	571.35	571.35	
D	14.16'	14.05'	13.61'	13.50'	
E	9.26'	9.25'	8.94'	8.94'	
L	21.0'	20.0'	20.0'	19.0'	Total
Area (SFT.)	245.9	233.0	225.5	213.2	917.6

WINGWALL SOIL PARAMETERS
T.B.D.

PRECAST REINFORCED CONCRETE
THREE-SIDED STRUCTURE
36'-0" SPAN x 12'-0" RISE x 44'-0" LONG
SKEW: NONE
S.R. 340 OVER PURDY RUN
CLAY COUNTY

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: KAB DRAWN: PCR
CHECKED: ELM CHECKED: KAB

INDIANA
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	340-11-10492
VERTICAL SCALE	DESIGNATION
N/A	1900176
SURVEY BOOK	SHEETS
	10 of 19
CONTRACT	PROJECT
B-42240	1900176

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PAVEMENT QUANTITIES AND APPROACH TABLE

LOCATION		DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	RADII		DISTANCE BEYOND R/W LINE	SURFACE BEYOND R/W LINE			GRADE				EXCAVATION		CLEAR ZONE AT DRIVE	HMA FOR APPROACHES				HMA MATERIALS				JOINT ADHESIVE, SURFACE	JOINT ADHESIVE, INTERMEDIATE	LIQUID ASPHALT SEALANT	HMA MATERIAL FOR:		COMPACTED AGGREGATE FOR BASE NO. 53					COMPACTED AGGREGATE NO 53.	MILLING, TRANSITION	SUBGRADE TREATMENT, TYPE II	SUBGRADE TREATMENT, TYPE IC	REMARKS
								COMPACTED AGGREGATE BASE	HMA	CONCRETE								LBS. PER SYD.				QC/QA-HMA, 3, 64, SURFACE 9.5 mm		QC/QA-HMA, 3, 64, INTERMED., 19.0 mm		QC/QA-HMA, 3, 64, BASE, 19.0 mm				PRIME COAT	TACK COAT	DEPTH									
FROM STATION	TO STATION				IN	OUT					1	2	3	4	CUT	FILL		165	275			165		275		660						6"									
			FT	FT	FT	FT	FT	SYS	SYS	SYS	%	%	%	%	CYS	CYS	FT	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	LFT	LFT	LFT	SYS	SYS	CYS	TONS	TONS	TONS	TONS	SYS	SYS	SYS	
Line "A"																																								
436+87.20	439+96.65																					93.63		60.06		150.00	928.35	435.90	928.35		1,583.68					155.87	715.35		502.86	
437+17.97		Class II Drive	12.00	27.95	25.00	15.00												4.05	6.75												8.18						49.09			
437+48.32		Class II Drive	12.00	53.95	25.00	15.00												6.89	11.48												13.92						83.51			
439+72.08		Class II Drive	12.00	25.73	25.00	15.00												3.38	5.63												6.82						40.91			
Totals																		14.32	23.86			93.63		60.06		150.00	928.35	435.90	928.35		1,583.68	28.92				155.87	715.35	173.51	502.86	

STRUCTURE DATA

STRUCTURE NUMBER	LOCATION					SIZE	DESCRIPTION		LENGTH	VIDEO INSPECTION LENGTH	SKEW	COVER		FLOW LINE		SUMP DEPTH	TOP OF CASTING	SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	STRUCTURE BACKFILL TYPE 1	STRUCTURE BACKFILL TYPE 2	STRUCTURE BACKFILL TYPE 5	FLOWABLE BACKFILL TYPE ??	UNDERCUT			GEOTEXTILES for RIPRAP TYPE?? (??)	REVETMENT RIPRAP	SCOUR PROTECTION			CONCRETE, CLASS A, FOR STR.	PIPE, REMOVE	VIDEO INSPECTION	PIPE END SECTION	GRATED BOX END SECTION			SAFETY METAL END SECTION			CONNECT TO STR.	CULVERT ASSET ID	REMARKS
	STATION	LEFT	RIGHT	CROSS	OFFSET		PIPE TYPE	MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE AND TYPE				MIN	MAX	UP STREAM	DOWN STREAM											EXCAVATION	COMPACTED AGGREGATE #5	COMPACTED AGGREGATE #53			GEOTEXTILES for RIPRAP TYPE?? (??)	REVETMENT RIPRAP	CLASS ? RIPRAP													
					FT	IN.			LFT	LFT		FT	FT	ELEV.	ELEV.	IN.	ELEV.	YRS				CYS	CYS	CYS	CYS	CYS.	? IN. TONS	? IN. TONS	TONS	SYS	TON	SYS.	TONS	TONS	CYS	LFT	LFT	EA.	TYPE	SLOPE	EA.	TYPE	SLOPE	EA.			
Line A																																													
100	438+82.50			X		36' x 12'			44			0	0.62	573.56	573.01	18.00		75	NA	7			523	42																					COATED
200	437+17.97			X		15	3	Drive Pipe	23																															2					
201	437+48.32	X				15	3	Drive Pipe	23																															2					
202	439+72.08			X		15	3	Drive Pipe	23																															2					

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TIME PLOTTED: 10:01:45 AM

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: NAZ | DRAWN: TPH

CHECKED: RJP | CHECKED: NAZ

INDIANA DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS TABLES

HORIZONTAL SCALE	BRIDGE FILE
	340-11-10492
VERTICAL SCALE	DESIGNATION
	1900176
SURVEY BOOK	SHEETS
	11 of 19
CONTRACT	PROJECT
B-42240	1900176

GUARDRAIL SUMMARY TABLE

LOCATION		MGS W-BEAM GUARDRAIL LENGTH														CURVED W-BEAM GUARDRAIL SYSTEM									
FROM STATION	TO STATION	LEFT	MEDIAN LEFT	MEDIAN RIGHT	RIGHT	STANDARD POST AT 6 FT 3 IN. SPA.	STANDARD POST AT 3 FT 1.5 IN. SPA.	DOUBLE FACED AT 6 FT 3 IN. SPA.	DOUBLE FACED AT 3 FT 1.5 IN. SPA.	HEIGHT TRANSITION	GUARDRAIL TRANSITION WITH CURB	GUARDRAIL TRANSITION WITHOUT CURB	STRUCTURE TOP-MOUNTED POST	CABLE TERMINAL ANCHOR	SHOP CURVED AT ____ FT. SPA.	LONG-SPAN GUARDRAIL TYPE 2	GUARDRAIL FLARE RATE	GUARDRAIL END TREATMENT TYPE OS	GUARDRAIL END TREATMENT TYPE NS	GUARDRAIL TRANSITION TYPE TOB	W-BEAM STANDARD POST AT ____ SPA.	TERMINAL SYSTEM		CONNECTOR SYSTEM		GUARDRAIL REMOVE	GUARDRAIL RESET	IMPACT ATTENUATOR TYPE ____	REMARKS
						LFT	LFT	LFT	LFT	EACH	EACH	EACH	EACH	EACH	LFT	EACH		EACH	EACH	EACH	LFT	TYPE	EACH	TYPE	EACH	LFT	LFT	EACH	
Line "A"																													
437+84.14	439+46.64				X	68.75							6					2											
438+12.11	439+80.86	X				62.50							6					2											
TOTALS						131.25							12					4											

PAVED SIDE DITCH, RIPRAP DITCH, AND SODDING SUMMARY TABLE

LOCATION					PAVED SIDE DITCH						RIPRAP DITCH					SODDING						
FROM STATION	TO STATION	LEFT	MEDIAN	RIGHT	ACTUAL LENGTH	CUT OFF WALLS (8' EQUIVAL. LENGTH EACH)	LUGS (8' EQUIVAL. LENGTH EACH)	TOT. EQV. PAY LNTH. TYPE A	TOT. EQV. PAY LNTH. TYPE E	TOT. EQV. PAY LNTH. TYPE J	CLASS I	CLASS II	REVETMENT RIPRAP	UNIFORM RIPRAP	GEOTEXTILES	FOR PAVED SIDE DITCHES	FOR DITCHES	FOR MEDIAN	FOR SHOULDER BREAK	SODDING AT BRIDGE CONE	TOTAL SODDING	NURSERY SODDING FOR LAWNS
					LFT	EACH	EACH	LFT	LFT	LFT	TONS	TONS	TONS	TONS	SYS	SYS	SYS	SYS	SYS	SYS	SYS	SYS
Line "A"																						
437+03.86	437+42.32	X											24		44							
437+64.32	438+43.56	X															65				65	
436+58.82	437+10.29			X									32		59							
437+32.27	438+47.71			X									71		132							
439+07.08	439+66.00			X									36		68							
439+78.08	440+38.67			X									37		70							
TOTALS													200		373		65				65	

PAVEMENT MARKINGS SUMMARY TABLE

LOCATION		Line, Solid		Raised Pavement Markers	NOTES
		White	Yellow		
From Station	To Station	4 in.	4 in.		
		LFT	LFT	EACH	
Line A					
436+87.20	439+96.65	309			
436+87.20	439+96.65		309		
436+87.20	439+96.65		309		
436+87.20	439+96.65	309			
TOTALS		619	619		

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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

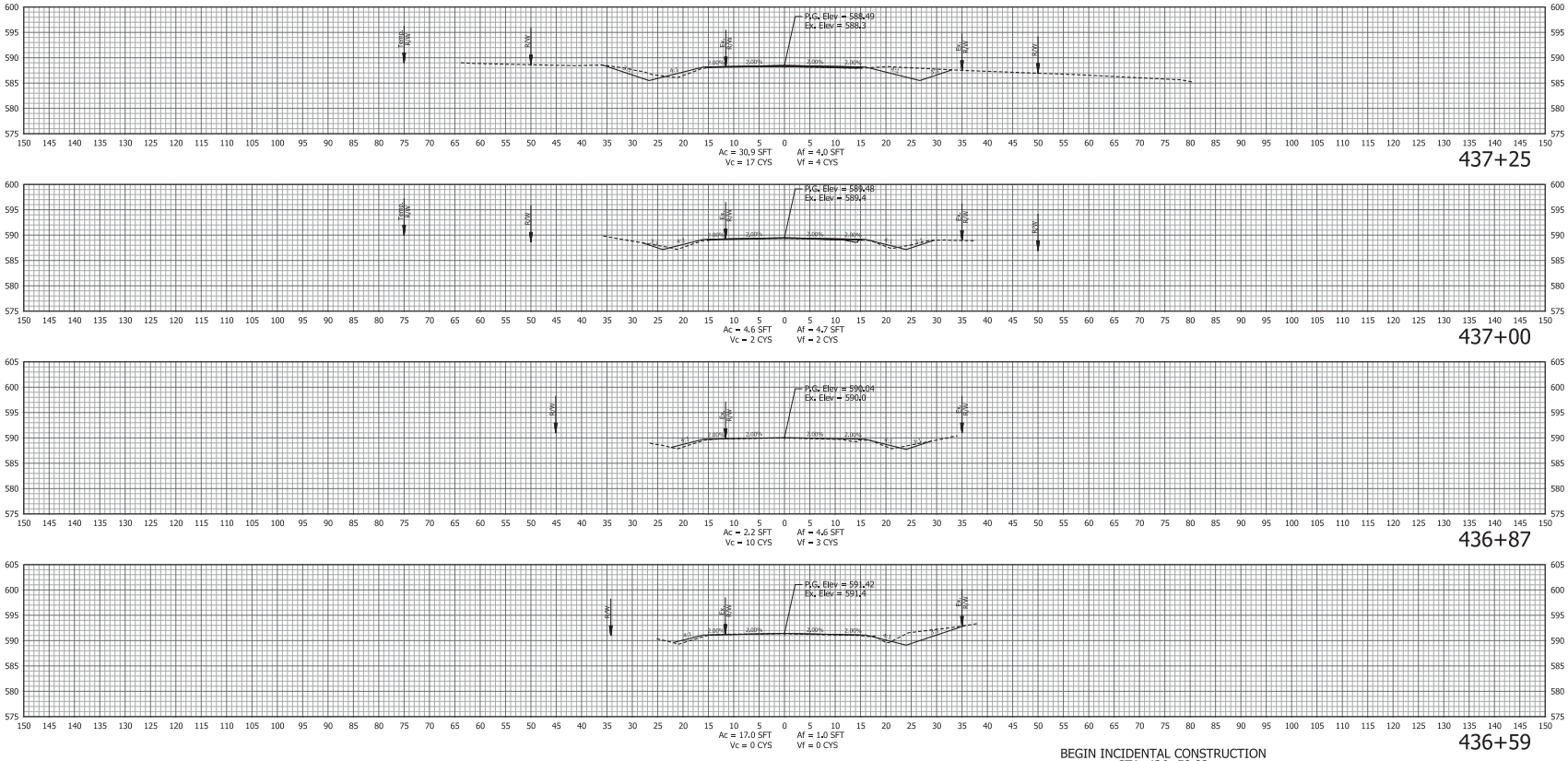
DESIGNED: NAZ | DRAWN: TPH

CHECKED: RJP | CHECKED: NAZ

INDIANA DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS TABLES

HORIZONTAL SCALE	BRIDGE FILE
	340-11-10492
VERTICAL SCALE	DESIGNATION
	1900176
SURVEY BOOK	SHEETS
	12 of 19
CONTRACT	PROJECT
B-42240	1900176



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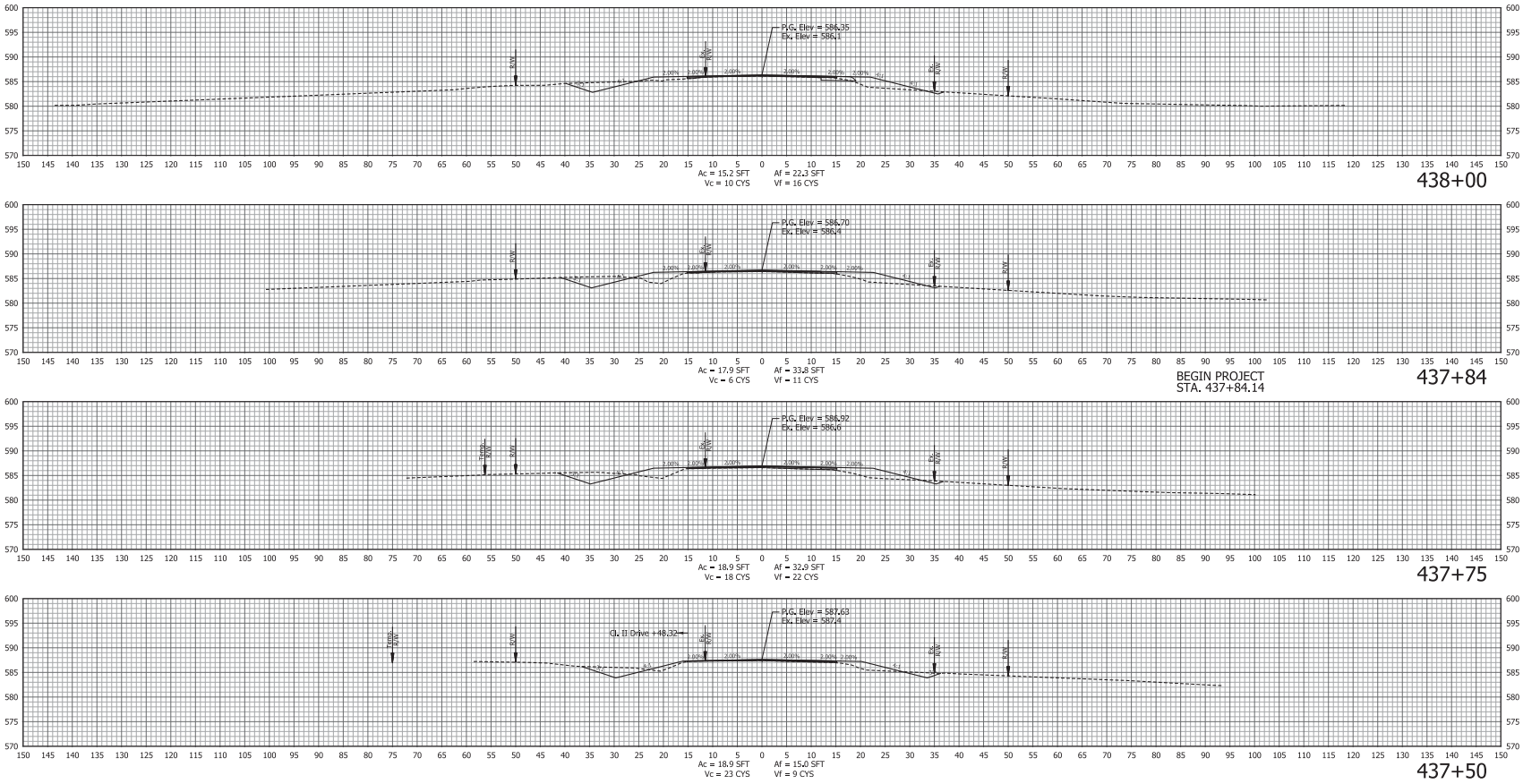
CHECKED: RJP | CHECKED: NAZ

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "A" - S.R. 340

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	340-11-10492
VERTICAL SCALE	DESIGNATION
1" = 10'	1900176
SURVEY BOOK	SHEETS
	13 of 19
CONTRACT	PROJECT
B-42240	1900176



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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

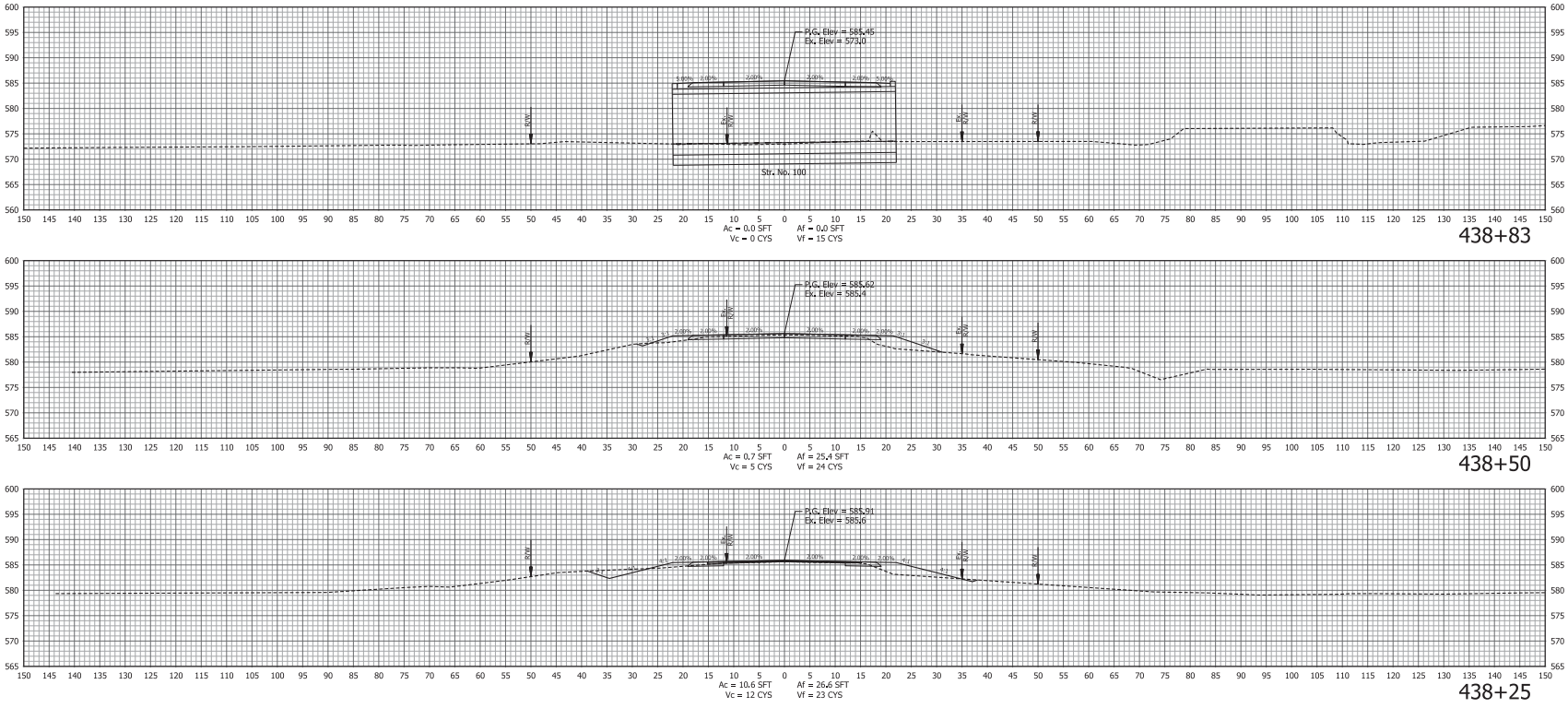
DESIGNED: NAZ | DRAWN: TPH

CHECKED: RJP | CHECKED: NAZ

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "A" - S.R. 340

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	340-11-10492
VERTICAL SCALE	DESIGNATION
1" = 10'	1900176
SURVEY BOOK	SHEETS
	14 of 19
CONTRACT	PROJECT
B-42240	1900176



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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: NAZ | DRAWN: TPH

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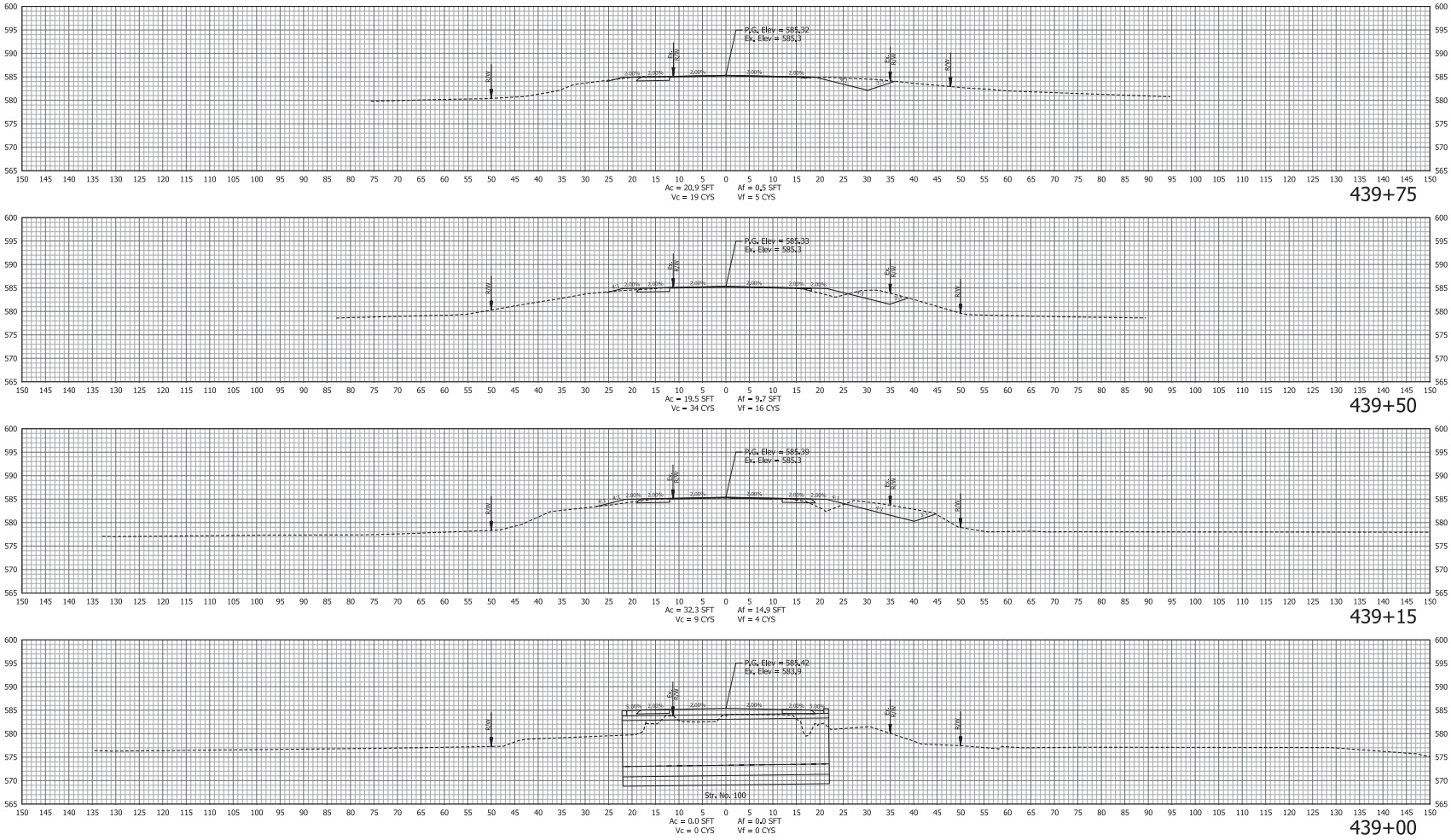
INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "A" - S.R. 340

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	340-11-10492
VERTICAL SCALE	DESIGNATION
1" = 10'	1900176
SURVEY BOOK	SHEETS
	15 of 19
CONTRACT	PROJECT
B-42240	1900176



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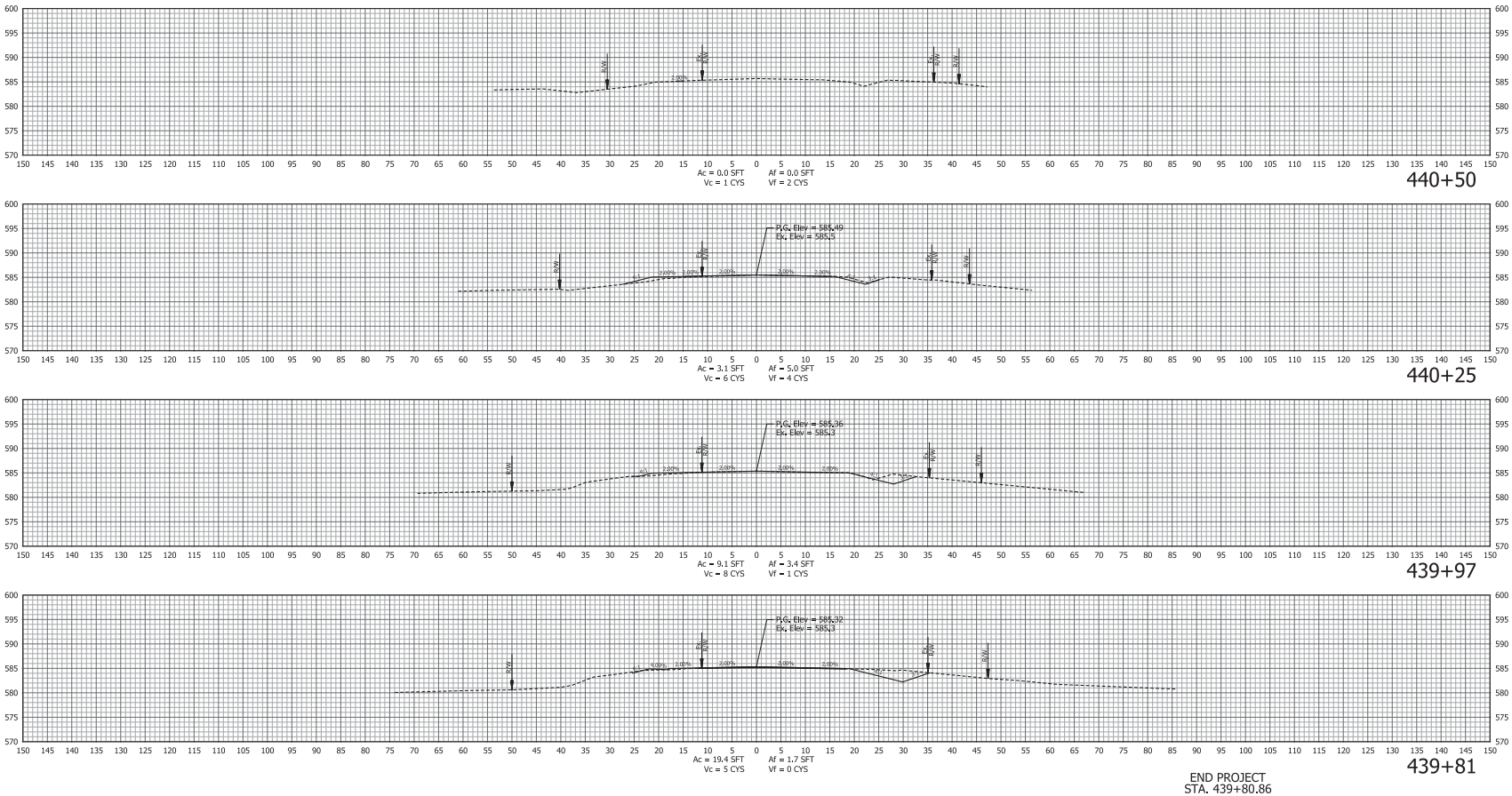
DESIGNED: NAZ | DRAWN: TPH

CHECKED: RJP | CHECKED: NAZ

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "A" - S.R. 340

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	340-11-10492
VERTICAL SCALE	DESIGNATION
1" = 10'	1900176
SURVEY BOOK	SHEETS
	16 of 19
CONTRACT	PROJECT
B-42240	1900176



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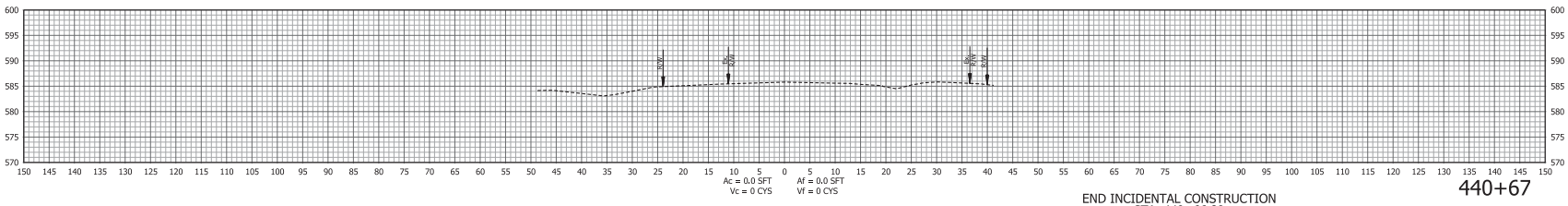
DESIGNED: NAZ | DRAWN: TPH

CHECKED: RJP | CHECKED: NAZ

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "A" - S.R. 340

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	340-11-10492
VERTICAL SCALE	DESIGNATION
1" = 10'	1900176
SURVEY BOOK	SHEETS
	17 of 19
CONTRACT	PROJECT
B-42240	1900176



END INCIDENTAL CONSTRUCTION
STA. 440+66.89

440+67

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RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

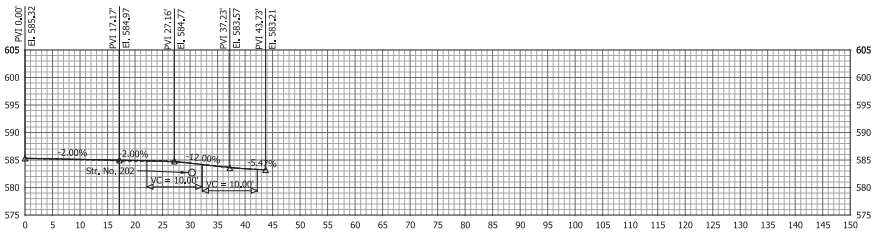
DESIGNED: NAZ | DRAWN: TPH

CHECKED: RJP | CHECKED: NAZ

INDIANA
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
LINE "A" - S.R. 340

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	340-11-10492
VERTICAL SCALE	DESIGNATION
1" = 10'	1900176
SURVEY BOOK	SHEETS
	18 of 19
CONTRACT	PROJECT
B-42240	1900176



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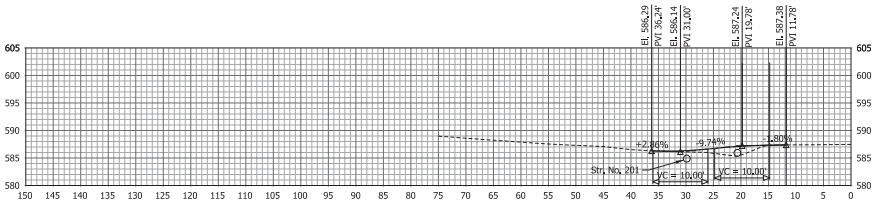
Cl. II Drive, Rt.



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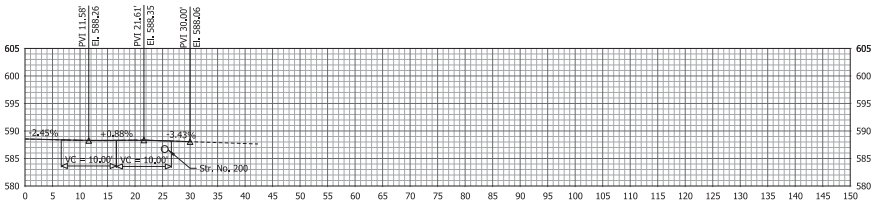

Sta. 437+17.97 "A"
Cl. II Drive, Rt.

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INDIANA
DEPARTMENT OF TRANSPORTATION

DRIVE PROFILES

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	340-11-10492
VERTICAL SCALE	DESIGNATION
1" = 10'	1900176
SURVEY BOOK	SHEETS
	19 of 19
CONTRACT	PROJECT
B-42240	1900176

Appendix C

Early Coordination

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 232-5113
FAX: (317) 233-4929

Eric Holcomb, Governor
Joe McGuinness, Commissioner

June 2, 2021

Example Early Coordination Letter

{See Attached List}

Re: Des. No. 1900176
State Road (SR) 340 – Bridge Project (#340-11-01639C)
Approximately 2.09 mile east of the junction with United States (US) Highway 40 West
Clay County, Indiana

Dear Sir or Madam:

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration, proposes to proceed with a bridge project on SR 340 in Posey Township, Clay County, Indiana. CHA Consulting, Inc. is under contract with the INDOT to advance the environmental documentation for the referenced project. This letter is part of the early coordination phase of the environmental review process. We are requesting comments from your area of expertise regarding any possible environmental effects associated with this project. Please use the above designation number and description in your reply. We will incorporate your comments into a study of the project's environmental impacts. Your cooperation in this endeavor is appreciated.

PROJECT LOCATION

The proposed undertaking is located on SR 340, approximately 2.09 mile east of the junction with US Highway 40 West Posey Township, Clay County, Indiana. The project will extend along SR 340 from approximately 285 feet west of the bridge to 220 feet east of the bridge. Specifically, the project is located in Section 5, Township 12 North, Range 7 West as shown on the 7.5 Minute Brazil West, Indiana United States Geological Survey (USGS) quadrangle map.

EXISTING CONDITIONS

SR 340 is functionally classified as Rural Major Collector within the project area. SR 340 consists of two-12 ft travel lanes and 2-foot-6-inch paved shoulders. The posted speed limit along SR 340 in the project area is 40 mph.

The original structure (#340-11-01639) was built in 1920. The superstructure was replaced with adjacent prestressed concrete box beams in 1964 (#340-11-01639A) and a concrete deck was placed over the boxes in 1980 (#340-11-01639B). The deck out-to-out width is 38-foot and the clear roadway width is 32-foot. The roadway cross-section on the bridge is composed of two 12-foot travel lanes, 4-foot shoulders and 1-foot wide concrete curbs. Land use in the project area consists of residential properties and forested areas located to the north and south of the project area. Additionally, a cemetery is located in the northeast corner of SR 340 and N CR 500 W.

The National Wetland Inventory (NWI) maps and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) were reviewed for the presence of water features in the project area. One stream segment was mapped within the project area, Purdy Run (a.k.a. Sulphur Creek). One mapped wetland and one mapped floodplain were identified within the project area. A preliminary Waters of the US investigation was conducted on October 22, 2020 and confirmed that the one stream listed above, Purdy Run, was within the project area. A Waters of the US Report will be prepared and coordination with INDOT Environmental Services Division (ESD) Ecology and Waterway Permitting Office (EWPO) will occur. This project qualifies for the application of the USFWS range-wide programmatic informal consultation for the Indiana bat and northern longeared bat and project information will be submitted through USFWS's Information for Planning and Consultation (IPaC) separately.

PROJECT PURPOSE AND NEED

The draft need for the project stems from the overall deterioration of the existing bridge (#340-11-01639B). According to the November 9, 2020 Bridge Inspection Report, the superstructure, substructure, deck, and wearing surface all have a condition rating of 5 (fair condition). The condition ratings range from 0 to 9, 0 being a failed structure and nine being a structure in excellent condition. Specifically, the box beams associated with the superstructure (1 through 7 and 9) were noted to have hair line cracking. Both abutments of the substructure have concrete that has broken away (spalled) from the south ends of the structure exposing the brick from behind. The masonry bricks are dry laid without mortar and

some have fallen out. The west abutment was also noted to have horizontal cracking with efflorescence while both abutments were noted to have vertical cracking.

The draft purpose of the project is to address the deteriorated condition of the bridge carrying SR 340 over Purdy Run and to increase the condition rating to at least an 8 out of 9 and the service life to 75 years.

PROPOSED IMPROVEMENTS

The proposed project will involve replacing the existing structure with an underfill structure. The proposed replacement structure is a 36-foot wide by 12-foot high by 44-foot long precast reinforced concrete three-sided structure. The new structure will require guardrail protection. The proposed roadway typical section in areas without guardrail consists of 12-foot travel lanes and 3-foot paved shoulders. This section matches the existing condition. Where guardrail is warranted, the proposed roadway typical section consists of 12-foot travel lanes and 6-foot paved shoulder to the front face of guardrail.

Right-of-way limits are not currently known; however, existing right-of-way is assumed to be the edge of pavement, approximately 14-foot-6-inches from the centerline, either side. Right-of-way acquisition will be required from 4 parcels. Permanent right-of-way is anticipated to be approximately 0.35 acre. In addition, 0.014 acre of temporary right-of-way is expected for construction of the bridge and approaches.

The proposed maintenance of traffic (MOT) is a full closure of SR 340 with the official detour route using US 40. The official detour length would be approximately 5.6 miles. Local access will be maintained throughout construction in accordance with the Indiana Design Manual (IDM) Chapter 503. The final determination of maintenance of traffic plans will be coordinated with the District Traffic Engineer, Area Engineer, and INDOT Project Manager.

HISTORIC RESOURCES

As the Section 106 process advances, the project area will be surveyed by individuals satisfying the Secretary of the Interior Professional Qualification Standards to determine an area of potential effect (APE), make recommendations on eligibility determinations and assess effects on potential historic resources. Additionally, the project area will be subjected to an archaeological reconnaissance by a qualified archaeologist. Coordination with INDOT Cultural Resources Office will occur. The results of this investigation will be forwarded to the State Historic Preservation Officer (SHPO) for review and concurrence.

EARLY COORDINATION

As part of our early coordination effort for the proposed project, please study the enclosed information and provide a written evaluation of the potential impacts upon resources that are under your jurisdiction. It is requested, that you return a reply within 30-days of receipt of this packet. However, should you find that an extension to the response time is necessary, a reasonable amount may be granted upon request. If you have any questions regarding this matter, please feel free to contact Toni Lynn Giffin, Environmental Planner, CHA Consulting, at tgiffin@chacompanies.com or (317) 780-7185, or Ann Bishop, INDOT Project Manager, at abishop@indot.in.gov or (765) 361-5241. Thank you in advance for your input.

Best Regards,

CHA Consulting, Inc.

Toni Lynn Giffin
Environmental Planner

Attachments:
Project Area Maps
Project Area Photographs

cc: Ms. Ann Bishop, INDOT Project Manager
Mr. Ali Hekmatfar , P.E., Project Manager, CHA
File#059747

Bridge Project – SR 340 over Purdy Run
Clay County, Indiana
Des. No. 1900176
Agencies Receiving Early Coordination Packet **Distribution Date: June 2, 2021**

Federal Highway Administration
Federal Office Building, Room 254
575 North Pennsylvania Street
Indianapolis, Indiana 46204
k.carmanygeorge@dot.gov

State Conservationist
Natural Resources Conservation Service
6013 Lakeside Boulevard
Indianapolis, Indiana 46278
Attn: rick.neilson@in.usda.gov

Indiana Geological and Water Survey
611 North Walnut Grove
Bloomington, IN 47405
(Website submittal)

Environmental Coordinator
Indiana Department of Natural Resources
Division of Fish and Wildlife
402 West Washington Street, Rm. W273
Indianapolis, IN 46204
environmentalreview@dnr.in.gov

Indiana Department of Environmental Management
Office of Planning and Assessment
(Website submittal)

Ms. Ann Bishop, Project Manager
Indiana Department of Transportation
41 West 300 North
Crawfordsville, IN 47933
abishop@indot.in.gov

Regional Environmental Coordinator
Midwest Regional Office
National Park Service
601 Riverfront Drive
Omaha, Nebraska 68102
Mwro_Compliance@nps.gov

Ms. Deborah Snyder
US Army Corps of Engineers
Louisville District, Indianapolis Regulatory Office
Indianapolis, IN 46216
RegulatoryApplicationsLRL@usace.army.mil

Field Environmental Officer, Chicago Regional Office
US Department of Housing & Urban Development
Metcalf Fed. Bldg.
77 West Jackson Boulevard, Room 2401
Chicago, IL 60604
Melanie.H.Castillo@hud.gov

Mr. Asfahan Khan, In-House Services Manager
Indiana Department of Transportation
41 West 300 North
Crawfordsville, IN 47933
akhan@indot.in.gov

Mr. Brandon Miller, Senior Environmental Manager
100 North Senate Avenue, Room N642-ES
Indianapolis, IN 46204
bramiller1@indot.in.gov

Wellhead Proximity Determinator website
(Website submittal)

Commander, Eighth Coast Guard District
Attn: Bridge Branch
1222 Spruce Street, Rm 2.102D
St Louis, MO 63103-2832
Eric.wasburn@uscg.mil

Mr. Jeremy Weir, Director
Terre Haute Area Economic Development Corporation
630 Wabash Ave., Suite 221
Terre Haute, IN 47807
jweir@terrehauteedc.com

Mr. Bryan K. Allender, Commissioner
Clay County Commissioners
609 E. National Ave., Room 106
Brazil, IN 47834
bryan.allender@frontier.com

Mr. Brad W. Stultz, Highway Supervisor
409 North Stater road 59
Center Point, IN 47840
stultzb@claycountyin.gov

Mr. Vernon W. Maesch, Surveyor
Clay County
maeschv@claycountyin.gov

Mr. Jason Thomas, District 3
Clay County Council
609 E. National Ave., Room 106
Brazil, IN 47834
Jason.c.thomas@att.net

Mr. Jeffery D. Fritz, Superintendent
Clay Community Schools
1013 South Forest Avenue
Brazil, IN 47834
administrator@clay.k12.in.us

Mr. Stan Frank, EMS Coordinator, District 7
Indiana Department of Homeland Security
302 West Washington Street, Room E208
Indianapolis, IN 46204
sfrank@dhs.in.gov

Mr. Rob Gambill, Director
Clay County Emergency Management Agency
609 E National Ave RM 205
Brazil, IN 47834
clayema@claycountyin.gov

Please Note- The maps and photographs attached to the original letter have been removed and included in Appendix B of this document

Organization and Project Information

Project ID: 059747
Des. ID: 1900176
Project Title: State Road (SR) 340 – Bridge Project (#340?11?01639C)
Name of Organization: CHA Consulting, Inc.
Requested by: Toni Giffin

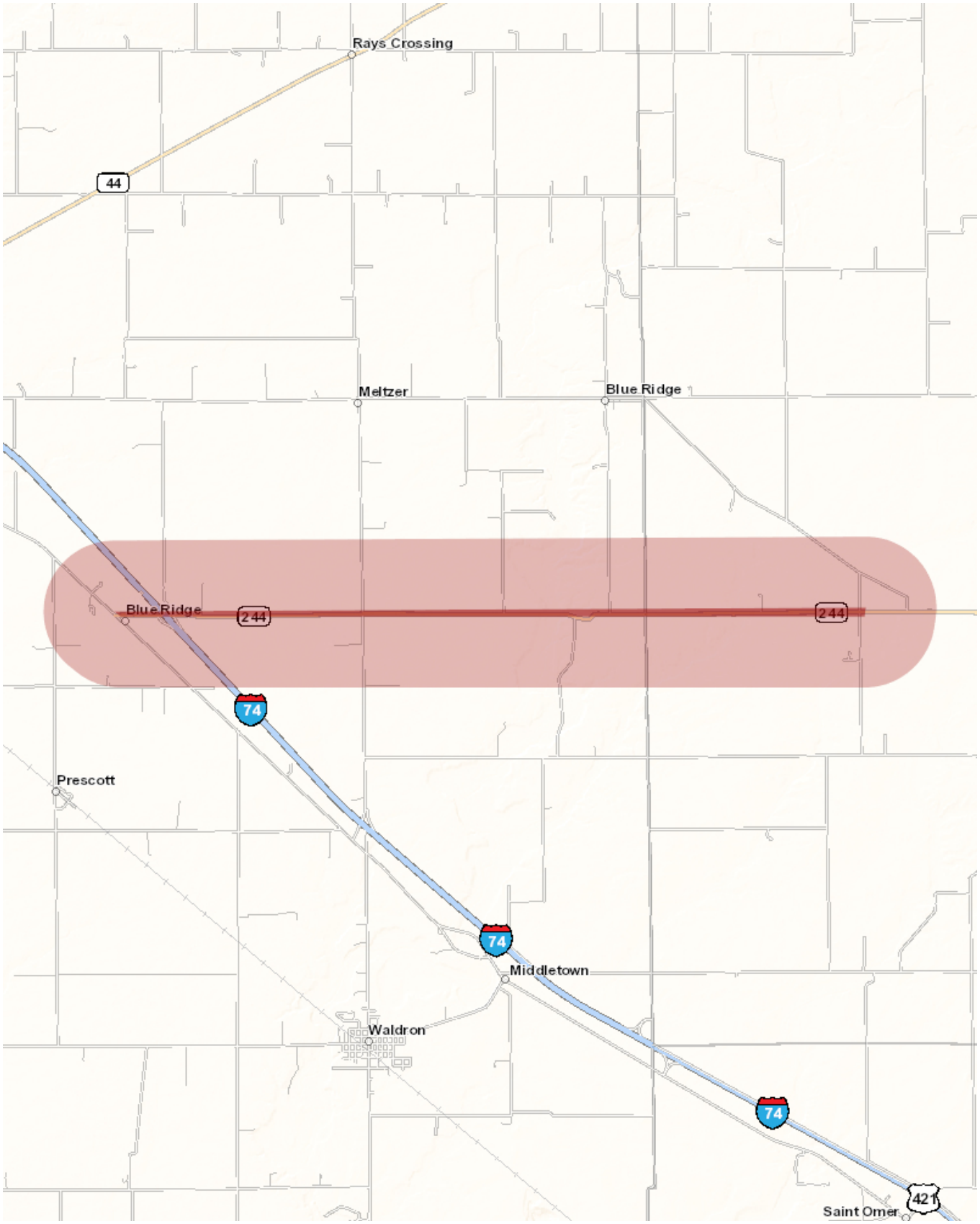
Environmental Assessment Report

1. Geological Hazards:
    - High liquefaction potential
    - 1% Annual Chance Flood Hazard
2. Mineral Resources:
    - Bedrock Resource: High Potential
    - Sand and Gravel Resource: Low Potential
3. Active or abandoned mineral resources extraction sites:
    - Petroleum Exploration Wells
    - Abandoned Industrial Minerals Quarries

*All map layers from Indiana Map (maps.indiana.edu)

This information was furnished by Indiana Geological Survey
Address: 420 N. Walnut St., Bloomington, IN 47404
Email: IGSEnvir@indiana.edu
Phone: 812 855-7428

Date: June 04, 2021



Indiana Department of Environmental Management

We Protect Hoosiers and Our Environment.

100 North Senate Avenue - Indianapolis, IN 46204
(800) 451-6027 - (317) 232-8603 - www.idem.IN.gov

INDOT

, IN

Date

CHA Consulting, Inc.
Toni Lynn Giffin
300 South Meridian Street
Indianapolis , IN 46225

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The proposed project will involve replacing the existing structure with an underfill structure. The proposed replacement structure is a 36-foot wide by 12-foot high by 44-foot long precast reinforced concrete three-sided structure. The new structure will require guardrail protection. The proposed roadway typical section in areas without guardrail consists of 12-foot travel lanes and 3-foot paved shoulders. This section matches the existing condition. Where guardrail is warranted, the proposed roadway typical section consists of 12-foot travel lanes and 6-foot paved shoulder to the front face of guardrail.

This letter from the Indiana Department of Environmental Management (IDEM) serves as a standardized response to enquiries inviting IDEM comments on roadway construction, reconstruction, or other improvement projects within existing roadway corridors when the proposed scope of the project is beneath the threshold requiring a formal National Environmental Policy Act-mandated Environmental Assessment or Environmental Impact Statement. As the letter attempts to address all roadway-related environmental topics of potential concern, it is possible that not every topic addressed in the letter will be applicable to your particular roadway project.

For additional information on specific roadway-related topics of interest, please visit the appropriate Web pages cited below, many of which provide contact information for persons within the various program areas who can answer questions not fully addressed in this letter. Also please be mindful that some environmental requirements may be subject to change and so each person intending to include a copy of this letter in their project documentation packet is advised to download the most recently revised version of the letter; found at: http://www.in.gov/idem/5283.htm (http://www.in.gov/idem/5283.htm).

To ensure that all environmentally-related issues are adequately addressed, IDEM recommends that you read this letter in its entirety, and consider each of the following issues as you move forward with the planning of your proposed roadway construction, reconstruction, or improvement project:

WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service

National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (http://www.lrl.usace.army.mil/orf/default.asp) (http://www.lrl.usace.army.mil/orf /default.asp (http://www.lrl.usace.army.mil/orf/default.asp)) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciosko, and Wells counties; smaller portions of Jasper, Starke, Marshall , Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at http://www.in.gov/idem/4396.htm (http://www.in.gov/idem/4396.htm). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: http://www.in.gov/idem/4384.htm (http://www.in.gov/idem/4384.htm).

3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana . A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.

4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: http://www.in.gov/idem/4384.htm (http://www.in.gov/idem/4384.htm) for the appropriate staff contact to further discuss your project.

5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the follow statutes:
    - IC 14-26-2 Lakes Preservation Act 312 IAC 11
    - IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
    - IC 14-28-1 Flood Control Act 310 IAC 6-1
    - IC 14-29-1 Navigable Waterways Act 312 IAC 6
    - IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
    - IC 14-29-4 Construction of Channels Act No related code

For information on these Indiana (statutory) Code and Indiana Administrative Code citations, see the DNR Web site at: http://www.in.gov/dnr/water/9451.htm (http://www.in.gov/dnr/water/9451.htm) . Contact the DNR Division of Water at 317-232-4160 for further information.

The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

6. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for of a Rule 5 Storm Water Runoff Permit. Visit the following Web page
    - http://www.in.gov/idem/4902.htm (http://www.in.gov/idem/4902.htm)

   To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (http://www.in.gov/idem/4917.htm#constreq (http://www.in.gov/idem/4917.htm#constreq)), and as described in 327 IAC 15-5-6.5 (http://www.in.gov/legislative/iac/T03270/A00150 [PDF] (http://www.in.gov/legislative/iac/T03270/A00150.PDF), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (http://www.in.gov/isda/soil/contacts/map.html (http://www.in.gov/isda/soil/contacts/map.html)).

   Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

   Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: http://www.in.gov/idem/4900.htm (http://www.in.gov/idem/4900.htm).

   If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

   Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.

8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.

9. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.

10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

AIR QUALITY

The above-noted project should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (http://www.in.gov/idem/4148.htm (http://www.in.gov/idem/4148.htm)) under specific conditions. You also can seek an open burning variance from IDEM.

   However, IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on site (you must register with IDEM if more than 2,000 pounds is to be composted; contact 317/232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) onsite, although burying large quantities of such material can lead to subsidence problems, later on.

   Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

   Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus Histoplasma capsulatum, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

2. The U.S. EPA and the Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. (For a county-by-county map of predicted radon levels in Indiana, visit: http://www.in.gov/idem/4145.htm (http://www.in.gov/idem/4145.htm).)

   The U.S. EPA further recommends that all homes (and apartments within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L, or higher, EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L, or higher, EPA recommends the installation

of radon-reduction measures. (For a list of qualified radon testers and radon mitigation (or reduction) specialists visit: http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf (http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf).) It also is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

To learn more about radon, radon risks, and ways to reduce exposure visit: http://www.in.gov/isdh/regsvcs/radhealth/radon.htm (http://www.in.gov/isdh/regsvcs/radhealth/radon.htm), http://www.in.gov/idem/4145.htm (http://www.in.gov/idem/4145.htm), or http://www.epa.gov/radon/index.html (http://www.epa.gov/radon/index.html).

3. With respect to asbestos removal: all facilities slated for renovation or demolition (except residential buildings that have (4) four or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

   If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

   For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

   However, in all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at http://www.in.gov/icpr/webfile/formsdiv/44593.pdf (http://www.in.gov/icpr/webfile/formsdiv/44593.pdf).

   Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of $150 per project; projects below these amounts will be billed a fee of $50 per project. All notification remitters will be billed on a quarterly basis.

   For more information about IDEM policy regarding asbestos removal and disposal, visit: http://www.in.gov/idem/4983.htm (http://www.in.gov/idem/4983.htm).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978 , or a child-occupied facility is required to comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: http://www.in.gov/isdh/19131.htm (http://www.in.gov/isdh/19131.htm).

5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2 , Asphalt Paving Rule

(http://www.ai.org/legislative/iac/T03260/A00080.PDF (http://www.ai.org/legislative/iac/T03260/A00080.PDF)).

6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: www.ai.org/legislative/iac/t03260/a00020.pdf (http://www.ai.org/legislative/iac/t03260/a00020.pdf).) New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.

7. For more information on air permits visit: http://www.in.gov/idem/4223.htm (http://www.in.gov/idem/4223.htm), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD atdem.state.in.us.

LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ)at 317-308-3103.

2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit http://www.in.gov/idem/4998.htm (http://www.in.gov/idem/4998.htm).

3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.

4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.

5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).

6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: http://www.in.gov/idem/4999.htm (http://www.in.gov/idem/4999.htm).

FINAL REMARKS

Should you need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that you notify all adjoining property owners and/or occupants within ten days your submittal of each permit application. However, if you are seeking multiple permits, you can still meet the notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Should the scope of the proposed project be expanded to the extent that a National Environmental Policy Act Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, IDEM will actively participate in any early interagency coordination review of the project.

Meanwhile, please note that this letter does not constitute a permit, license, endorsement or any other form of approval on the part of the Indiana Department of Environmental Management regarding any project for which a copy of this letter is used. Also note that is it the responsibility of the project engineer or consultant using this letter to ensure that the most current draft of this document, which is located at http://www.in.gov/idem/5284.htm (http://www.in.gov/idem/5284.htm), is used.

Signature(s) of the Applicant

I acknowledge that the following proposed roadway project will be financed in part, or in whole, by public monies.

Project Description

The proposed project will involve replacing the existing structure with an underfill structure. The proposed replacement structure is a 36-foot wide by 12-foot high by 44-foot long precast reinforced concrete three-sided structure. The new structure will require guardrail protection. The proposed roadway typical section in areas without guardrail consists of 12-foot travel lanes and 3-foot paved shoulders. This section matches the existing condition. Where guardrail is warranted, the proposed roadway typical section consists of 12-foot travel lanes and 6-foot paved shoulder to the front face of guardrail.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Date: _____

Signature of the INDOT
Project Engineer or Other Responsible Agent _____

Date: 02/24/2022

Signature of the
For Hire Consultant Lanae J. Woods

Lanae Woods

USDA
United States Department of Agriculture

Natural Resources Conservation Service
Indiana State Office
6013 Lakeside Boulevard
Indianapolis, IN 46278
317-290-3200

June 24, 2021

Toni Lynn Giffin
CHA Consulting, Inc.
Union Station
300 South Meridian Street
Indianapolis, Indiana 46225

Dear Ms. Giffin:

The proposed project to make bridge improvements along State Road 340 in Clay County, Indiana (Des No. 1900176), as referred to in your letter received June 2, 2021, will not cause a conversion of prime farmland.

If you need additional information, please contact John Allen at 317-295-5859.

Sincerely,

RICHARD NEILSON
Digitally signed by RICHARD NEILSON
Date: 2021.06.24 13:42:58 -04'00'

RICK NEILSON
State Soil Scientist

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

DNR #: ER-23758 **Request Received:** June 3, 2021

Requestor: CHA Consulting, Inc
Toni L Giffin
300 South Meridian Street
Indianapolis, IN 46225

Project: SR 340 bridge (#340-11-01639C) replacement over Purdy Run, about 2.09 mile east of US 40 West junction; Des #1900176

County/Site info: Clay

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

Regulatory Assessment: This proposal will require the formal approval of our agency for construction in a floodway pursuant to the Flood Control Act (IC 14-28-1), unless it qualifies for a bridge exemption (see enclosure). Please include a copy of this letter with the permit application if the project does not meet the bridge exemption criteria.

Natural Heritage Database: The Natural Heritage Program's data have been checked.
To date, no plant or animal species listed as state or federally threatened, endangered, or rare have been reported to occur in the project vicinity.

Fish & Wildlife Comments: Avoid and minimize impacts to fish, wildlife, and botanical resources to the greatest extent possible, and compensate for impacts. The following are recommendations that address potential impacts identified in the proposed project area:

1) Crossing Structure:
For purposes of maintaining fish and wildlife passage through a crossing structure, the Environmental Unit recommends bridges rather than culverts and bottomless culverts rather than box or pipe culverts. Wide culverts are better than narrow culverts, and culverts with shorter through lengths are better than culverts with longer through lengths. If box or pipe culverts are used, the bottoms should be buried a minimum of 6" (or 20% of the culvert height/pipe diameter, whichever is greater up to a maximum of 2') below the stream bed elevation to allow a natural streambed to form within or under the crossing structure. Crossings should: span the entire channel width (a minimum of 1.2 times the OHWM width); maintain the natural stream substrate within the structure; and have stream depth, channel width, and water velocities during low-flow conditions that are approximate to those in the natural stream channel.

Based on the photos submitted, the spill slopes currently appear to be natural surfaces with no riprap coverage which allows unimpaired wildlife passage under the road along the banks. The new, replacement, or rehabbed structure, and any bank stabilization under the structure, should not create conditions that are less favorable for wildlife passage under the structure compared to the current conditions. The addition of riprap on the spill slopes will impair or obstruct wildlife passage compared to current conditions.

Attachments: A - Bridge Exemption Criteria

If riprap is planned for scour protection under the bridge, an 18" to 24" wide (at minimum) level path free of riprap, must be included in the design. Where a riprap-free path is not feasible, one alternative could be to choke the riprap on the wildlife passage area with a 6" thick cover of compacted #53 stone.

2) Bank Stabilization:
Limit the use of riprap on the channel banks to toe protection extending up to the ordinary high water mark (OHWM). Do not place riprap in the bed of the channel (unless sumped across the bed to avoid creating a fish passage obstruction) and use alternative erosion protection materials whenever possible. From the OHWM to the top of the banks, heavy duty erosion control blankets or turf reinforcement mats or a similar bioengineering method should be used and these materials should be seeded with native plants to allow a natural, vegetated stream bank to develop.

Information about bioengineering techniques can be found at http://www.in.gov/legislative/iac/20120404-IR-312120154NRA.xml.pdf. Also, the following is a USDA/NRCS document that outlines many different bioengineering techniques for streambank stabilization: http://directives.sc.egov.usda.gov/17553.wba.

3) Riparian Habitat:
We recommend a mitigation plan be developed (and submitted with the permit application, if required) for any unavoidable habitat impacts that will occur. The DNR's Habitat Mitigation Guidelines (and plant lists) can be found online at: http://iac.iga.in.gov/iac/20200527-IR-312200284NRA.xml.pdf.

Impacts to non-wetland forest of one (1) acre or more should be mitigated at a minimum 2:1 ratio. If less than one acre of non-wetland forest is removed in a rural setting, replacement should be at a 1:1 ratio based on area. Impacts to non-wetland forest under one (1) acre in an urban setting should be mitigated by planting five trees, at least 2 inches in diameter-at-breast height (dbh), for each tree which is removed that is 10" dbh or greater (5:1 mitigation based on the number of large trees) or by using the 1:1 replacement ratio based on area depending on the type of habitat impacted (individual canopy tree removal in an urban streetscape or park-like environment versus removal of habitat supporting a tree canopy, woody understory, and herbaceous layer). Impacts under 0.10 acre in an urban area may still involve the replacement of large diameter trees but typically do not require any additional mitigation or additional plantings beyond seeding and stabilizing disturbed areas. There are exceptions for high quality habitat sites however.

The mitigation site should be located in the floodway, downstream of the one (1) square mile drainage area of that stream (or another stream within the 8-digit HUC, preferably as close to the impact site as possible) and adjacent to existing forested riparian habitat.

The additional measures listed below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:
1. Revegetate all bare and disturbed areas with a mixture of native grasses, sedges, wildflowers, and also native hardwood trees and shrubs if any woody plants are disturbed during construction as soon as possible upon completion. Do not use any varieties of Tall Fescue or other non-native plants, including prohibited invasive species (see 312 IAC 18-3-25).
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting

Attachments: A - Bridge Exemption Criteria

THIS IS NOT A PERMIT

State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife
Early Coordination/Environmental Assessment

(greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
6. Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
7. Use minimum average 6 inch graded riprap stone extended below the normal water level to provide habitat for aquatic organisms in the voids.
8. Plant native hardwood trees along the top of the bank and right-of-way to replace the vegetation destroyed during construction.
9. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
10. Seed and protect all disturbed streambanks and slopes not protected by other methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

Contact Staff: Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife
Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.

Christie L. Stanifer **Date:** July 2, 2021

Christie L. Stanifer
Environ. Coordinator
Division of Fish and Wildlife

Attachments: A - Bridge Exemption Criteria

The Flood Control Act (IC 14-28-1) contains a provision (Section 22), which exempts certain bridge projects from its permitting requirement. Specifically, the Act states:

A permit is not required for "a construction or reconstruction project on a state or county highway bridge in a rural area that crosses a stream having an upstream drainage area of not more than fifty (50) square miles…"

Therefore, in order for a bridge project to be exempt, it must:

- be a state or county highway department project;
- be a bridge;
- be located in a rural area; and
- cross a stream having an upstream drainage area of less than 50 square miles.

The initial criterion is very specific - the structure must be a state or county highway department project.

The second requirement mandates that the project be a bridge (for this provision, the Department of Natural Resources considers a culvert to be a bridge). Projects such as bank protection, spoil disposal, borrow pits, etc. are not automatically exempt. Anyone proposing to undertake a non-bridge related activity should consult with the Division of Water's Technical Services Section staff at 317-232-4160 (or toll free at 1-877-928-3755) regarding the applicability of the exemption prior to initiating work.

The third criterion states that the project must be located in a rural area. The phrase "rural area" is defined as an area:

- where the lowest floor elevation, including a basement, of any residential, commercial, or industrial building impacted by the project is at least 2 feet above the 100 year flood elevation with the project in place;
- located outside the corporate boundaries of a consolidated or an incorporated city or town; and
- located outside of the territorial authority for comprehensive planning (generally, a 2 mile planning buffer around a city or town).

The final criterion limits the exemption to a project crossing a stream having an upstream drainage area of less than 50 square miles. The drainage area includes all land area contributing to runoff above the project site and is determined from the United States Geological Survey 7½ minute series quadrangle maps. The Department of Natural Resources will determine the drainage area upon written request.

This exemption has been grossly misunderstood and liberally applied in the past. As a result, the Department of Natural Resources is taking a firm stance on future violations. If challenged, it will be the responsibility of the person claiming the exemption to prove to the Department that all 4 criteria have been satisfied. Failure to do so will result in the Department initiating litigation with the potential for the imposition of fines in amounts up to $10,000 per day.

Note: This exemption only applies to the Flood Control Act. If a bridge is to be constructed over a navigable waterway, or over or near a public freshwater lake, a permit will be required.

Knotts, Mackenzie

From: Miller, Shaun (INDOT) <smiller@indot.IN.gov>
Sent: Thursday, October 7, 2021 8:54 AM
To: Knotts, Mackenzie
Cc: Kumar, Anuradha; Branigin, Susan
Subject: [--EXTERNAL--]: RE: Des 1900176 Bridge Project- SR 340, Clay County, Cemetery Development Plan Coordination

Follow Up Flag: Follow up
Flag Status: Completed

Good morning, Mackenzie.

Thanks for asking about the need for a cemetery development plan. A Cemetery Development Plan is not required for this project since there is no r/w being acquired from the cemetery and it will not be impacted during construction.

For your reference:

Cemetery Development Plans are not required if a project does not impact a cemetery. Acquisition of r/w from a cemetery is an impact. So, if there is no temporary or permanent r/w being acquired from a cemetery, a CDP is not required. This guidance applies to the majority of INDOT and LPA projects. The only exceptions are when there are unmarked cemeteries determined to be near a project based on historic mapping or other anecdotal evidence or when the boundaries of a cemetery are so indeterminate that it can't be ascertained if the property extends into INDOT or county/city right-of-way or not.

Let me know if you have any additional questions or if something in this guidance is unclear.

Thanks again and have a great day,

Shaun Miller
INDOT, Cultural Resources Office
Archaeology Team Lead
(317)416-0876

From: Knotts, Mackenzie <MKnotts@chacompanies.com>
Sent: Wednesday, October 6, 2021 12:04 PM
To: Kumar, Anuradha <akumar@indot.IN.gov>; Miller, Shaun (INDOT) <smiller@indot.IN.gov>; Branigin, Susan <SBranigin@indot.IN.gov>
Subject: Des 1900176 Bridge Project- SR 340, Clay County, Cemetery Development Plan Coordination

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Hello,

Our firm was selected by INDOT to prepare the environmental documentation to advance the following Bridge Project:

Des. No. 1900176, Bridge Project- SR 340, Clay County, Indiana.

This project is bridge project on SR 340 (#340-11-01639B) replacing the existing structure with a 36-foot span by 12-foot rise by 44-foot long precast reinforced concrete three-sided structure. Billtown Cemetery is located within 100 ft of the east end of the project boundary. Per guidance if a cemetery is within 100 ft. of the project, coordination with INDOT CRO needs to occur as a Cemetery development plan may be required.

I wanted to reach out and confirm a Cemetery Development Plan is not required. Per the INDOT CRO manual 3-1.2 a CDP is not required if the state intends to (B) erect, alter, or repair an existing structure for an incidental or existing use that would not impact the burial ground or cemetery.

I have included the shapefiles for the project area, an aerial map, and a map showing the location of the cemetery in relation to the project area. Please let me know if you need additional information from me.

Mackenzie Knotts
Scientist III
CHA
Office: (317) 780-7101
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www.chaccompanies.com

Responsibly Improving the World We Live In

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: January 18, 2022
Consultation Code: 03E12000-2021-SLI-1525
Event Code: 03E12000-2022-E-03554
Project Name: Des. No. 1900176 Bridge Project SR 340 over Purdy Run, Clay County, IN

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project "may affect" listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website http://ecos.fws.gov/ipac/ at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - http://www.fws.gov/midwest/endangered/section7/s7process/index.html. This website contains step-by-step instructions which will help you determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act *(*16 U.S.C. 703 *et seq*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

Project Summary

Consultation Code: 03E12000-2021-SLI-1525
Event Code: Some(03E12000-2022-E-03554)
Project Name: Des. No. 1900176 Bridge Project SR 340 over Purdy Run, Clay County, IN
Project Type: BRIDGE CONSTRUCTION / MAINTENANCE
Project Description: The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration, proposes to proceed with a bridge project on SR 340 in Posey Township, Clay County, Indiana. Specifically, the project is located on SR 340, approximately 2.09 mile east of the junction with US Highway 40. The proposed project will involve replacing the existing structure (#340−11−01639B) with an underfill structure. The proposed replacement structure is a 36-foot wide by 12-foot high by 44-foot long precast reinforced concrete three-sided structure. No permanent lighting will be installed as part of the project, however, there will be temporary lighting in place during construction of the project. There is suitable summer habitat within the project area; however, Indiana bat and NLEB have not been documented to occupy the suitable summer habitat. The project is surrounded by wooded rural residences and a wooded riparian corridor. Existing right-of-way (ROW) is assumed to be edge of pavement. Right-of-way will be acquired from 4 properties (0.35 acre permanent and 0.014 acre temporary) from 0 to 50 feet from existing pavement. Tree clearing will occur from 5 to 35 feet from the pavement. Approximately 0.55 acre of tree removal is required for the proposed project. The dominant species of tree within the project area consist of Mulberry (Morus alba), Hackberry (Celtis occidentalis), American elm (Ulmus americana), and Cottonwood (Populus sect. Aigeiros). A review of the USFWS database January 27, 2021 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The October 22, 2020 Bridge/Structure Bat Assessment Form for Bridge #340−11−01639B states that no evidence of bats was seen or heard under (or in) the structure. Work will occur in the 2024 construction season, typically February/March to October.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@39.50781375,-87.2014219422255,14z

Counties: Clay County, Indiana

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See www.fws.gov/midwest/endangered/mammals/nleb/index.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
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Phone: (812) 334-4261 Fax: (812) 334-4273
http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html

In Reply Refer To: August 10, 2021
Consultation code: 03E12000-2021-I-1525
Event Code: 03E12000-2021-E-08524
Project Name: Des. No. 1900176 Bridge Project SR 340 over Purdy Run, Clay County, IN

Subject: Concurrence verification letter for the 'Des. No. 1900176 Bridge Project SR 340 over Purdy Run, Clay County, IN' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **Des. No. 1900176 Bridge Project SR 340 over Purdy Run, Clay County, IN** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*).

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO.

For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities: If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please contact this Service Office.

Project Description

The following project name and description was collected in IPaC as part of the endangered species review process.

Name

Des. No. 1900176 Bridge Project SR 340 over Purdy Run, Clay County, IN

Description

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration, proposes to proceed with a bridge project on SR 340 in Posey Township, Clay County, Indiana. Specifically, the project is located on SR 340, approximately 2.09 mile east of the junction with US Highway 40. The proposed project will involve replacing the existing structure (#340−11−01639B) with an underfill structure. The proposed replacement structure is a 36-foot wide by 12-foot high by 44-foot long precast reinforced concrete three-sided structure. No permanent lighting will be installed as part of the project, however, there will be temporary lighting in place during construction of the project. There is suitable summer habitat within the project area; however, Indiana bat and NLEB have not been documented to occupy the suitable summer habitat. The project is surrounded by wooded rural residences and a wooded riparian corridor. Existing right-of-way (ROW) is assumed to be edge of pavement. Right-of-way will be acquired from 4 properties (0.35 acre permanent and 0.014 acre temporary) from 0 to 50 feet from existing pavement. Tree clearing will occur from 5 to 35 feet from the pavement. Approximately 0.55 acre of tree removal is required for the proposed project. The dominant species of tree within the project area consist of Mulberry (Morus alba), Hackberry (Celtis occidentalis), American elm (Ulmus americana), and Cottonwood (Populus sect. Aigeiros). A review of the USFWS database January 27, 2021 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The October 22, 2020 Bridge/Structure Bat Assessment Form for Bridge #340−11−01639B states that no evidence of bats was seen or heard under (or in) the structure. Work will occur in the 2024 construction season, typically February/March to October.

Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

Qualification Interview

1. Is the project within the range of the Indiana bat[1]?

   [1] See Indiana bat species profile

   Automatically answered
   Yes

2. Is the project within the range of the Northern long-eared bat[1]?

   [1] See Northern long-eared bat species profile

   Automatically answered
   Yes

3. Which Federal Agency is the lead for the action?

   A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

   [1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

   No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces[1]?

   [1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

   No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum[1]?

   [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

   No

7. Is the project located **within** a karst area?

   No

8. Is there *any* suitable[1] summer habitat for Indiana Bat or NLEB **within** the project action area[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   [2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the national consultation FAQs.

   Yes

9. Will the project remove *any* suitable summer habitat[1] and/or remove/trim any existing trees **within** suitable summer habitat?

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   Yes

10. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

    No

11. Have presence/probable absence (P/A) summer surveys[1][2] been conducted[3][4] **within** the suitable habitat located within your project action area?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    [2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    [3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

    [4] Negative presence/probable absence survey results obtained using the summer survey guidance are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

    No

12. Does the project include activities **within documented Indiana bat habitat**[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

13. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors?

    Yes

14. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented Indiana bat** roosting/foraging habitat or travel corridors occur[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    B) During the inactive season

15. Does the project include activities **within documented NLEB habitat**[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

16. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

    Yes

17. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

    B) During the inactive season

18. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

    Yes

19. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

    No

20. Are *all* trees that are being removed clearly demarcated?

    Yes

21. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

    No

22. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

    No

23. Does the project include slash pile burning?

    No

24. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

    Yes

25. Is there *any* suitable habitat[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

    [1] See the Service's current summer survey guidance for our current definitions of suitable habitat.

    Yes

26. Has a bridge assessment[1] been conducted **within** the last 24 months[2] to determine if the bridge is being used by bats?

    [1] See User Guide Appendix D for bridge/structure assessment guidance

    [2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

    Yes

    SUBMITTED DOCUMENTS

    - *Structure Bat Assessment Form SR 340 Bridge Des 1900176.pdf https://ecos.fws.gov/ipac/project/PNMOMATGHZEMDNIJ22Q7KTVIQE/projectDocuments/103453970*
    - *Bridge inspection report 2020-11-09.pdf https://ecos.fws.gov/ipac/project/PNMOMATGHZEMDNIJ22Q7KTVIQE/projectDocuments/103241108*

27. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)[1]?

    [1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

    Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

    No

28. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

    No

29. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

30. Will the project involve the use of **temporary** lighting *during* the active season?

    Yes

31. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

    Yes

32. Will the project install new or replace existing **permanent** lighting?

    No

33. Does the project include percussives or other activities (**not including tree removal/ trimming or bridge/structure work**) that will increase noise levels above existing traffic/ background levels?

    No

34. Are *all* project activities that are **not associated with** habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

    Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

    Yes

35. Will the project raise the road profile **above the tree canopy**?

    No

36. Are the project activities that are not associated with habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives consistent with a No Effect determination in this key?

    Automatically answered
    Yes, other project activities are limited to actions that DO NOT cause any additional stressors to the bat species as described in the BA/BO

37. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the tree removal/trimming that occurs outside of the Indiana bat's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

38. Is the habitat removal portion of this project consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the tree removal/trimming that occurs outside of the NLEB's active season occurs greater than 0.5 miles from the nearest hibernaculum, is less than 100 feet from the existing road/rail surface, includes clear demarcation of the trees that are to be removed, and does not alter documented roosts and/or surrounding summer habitat within 0.25 miles of a documented roost.

39. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

40. **General AMM 1**
    Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

    Yes

41. **Tree Removal AMM 1**
    Can *all* phases/aspects of the project (e.g., temporary work areas, alignments) be modified, to the extent practicable, to avoid tree removal[1] in excess of what is required to implement the project safely?

    Note: Tree Removal AMM 1 is a minimization measure, the full implementation of which may not always be practicable. Projects may still be NLAA as long as Tree Removal AMMs 2, 3, and 4 are implemented and LAA as long as Tree Removal AMMs 3, 5, 6, and 7 are implemented.

    [1] The word "trees" as used in the AMMs refers to trees that are suitable habitat for each species within their range. See the USFWS' current summer survey guidance for our latest definitions of suitable habitat.

    Yes

42. **Tree Removal AMM 3**
    Can tree removal be limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits)?

    Yes

43. **Tree Removal AMM 4**
    Can the project avoid cutting down/removal of *all* (1) **documented**[1] Indiana bat or NLEB roosts[2] (that are still suitable for roosting), (2) trees **within** 0.25 miles of roosts, and (3) documented foraging habitat any time of year?

    [1] The word documented means habitat where bats have actually been captured and/or tracked.

    [2] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    Yes

44. **Lighting AMM 1**
    Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

    Yes

Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

   N/A

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

   N/A

3. How many acres[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

   [1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

   0.55
4. Please describe the proposed bridge work:

   Remove and replace bridge
5. Please state the timing of all proposed bridge work:

   February/March 2024 to October 2024
6. Please enter the date of the bridge assessment:

   November 9, 2021

Avoidance And Minimization Measures (AMMs)

This determination key result includes the committment to implement the following Avoidance and Minimization Measures (AMMs):

LIGHTING AMM 1

Direct temporary lighting away from suitable habitat during the active season.

TREE REMOVAL AMM 2

Apply time of year restrictions for tree removal when bats are not likely to be present, or limit tree removal to 10 or fewer trees per project at any time of year within 100 feet of existing road/ rail surface and **outside of documented** roosting/foraging habitat or travel corridors; visual emergence survey must be conducted with no bats observed.

TREE REMOVAL AMM 3

Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

TREE REMOVAL AMM 4

Do not remove **documented** Indiana bat or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or
documented foraging habitat any time of year.

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

TREE REMOVAL AMM 1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to avoid tree removal.

Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat

This key was last updated in IPaC on April 22, 2021. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects. The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

Appendix D

Section 106 Consultation

Item	Appendix Page
Minor Projects PA Assessment Form	D-1 to D-4

Minor Projects PA Project Assessment Form – Category B Projects with Archaeology Work

Date: 8/19/21

Project Designation Number: 1900176

Route Number: SR 340

Project Description: Bridge Replacement, 2.09 miles east of US 40 west junction over Purdy Run

The Indiana Department of Transportation (INDOT), with funding from the Federal Highway Administration, proposes to proceed with a bridge project on SR 340, approximately 2.09 mile east of the junction with US Highway 40 West, in Posey Township, Clay County, Indiana. The proposed project is located in Section 5, Township 12 North, Range 7 West as shown on the 7.5 Minute Brazil West, Indiana United States Geological Survey (USGS) quadrangle map. The proposed project will extend along SR 340 from approximately 285 feet west of the bridge to 220 feet east of the bridge.

Land use in the project area consists of residential properties and forested areas located to the north and south of the project area. Additionally, a cemetery is located in the northeast corner of SR 340 and N CR 500 W. SR 340 is functionally classified as Rural Major Collector within the project area. SR 340 consists of two-12 ft travel lanes and 2-foot-6-inch paved shoulders. The posted speed limit along SR 340 in the project area is 40 mph. The original structure (#340-11-01639) was built in 1920. The superstructure was replaced with adjacent prestressed concrete box beams in 1964 (#340-11-01639A) and a concrete deck was placed over the boxes in 1980 (#340-11-01639B). The deck out-to-out width is 38 foot and the clear roadway width is 32 foot. The roadway cross-section on the bridge is composed of two 12-foot travel lanes, 4-foot shoulders and 1-foot wide concrete curbs.

The need for the project stems from the overall deterioration of the existing bridge (#340-11-01639B). According to the November 9, 2020 Bridge Inspection Report, the superstructure, substructure, deck, and wearing surface all have a condition rating of 5 (fair condition). The condition ratings range from 0 to 9, 0 being a failed structure and nine being a structure in excellent condition. Specifically, the box beams associated with the superstructure (1 through 7 and 9) were noted to have hair line cracking. Both
abutments of the substructure have concrete that has broken away (spalled) from the south ends of the structure exposing the brick from behind. The masonry bricks are dry laid without mortar and some have fallen out. The west abutment was also noted to have horizontal cracking with efflorescence while both abutments were noted to have vertical cracking. The purpose of the project is to address the deteriorated condition of the bridge carrying SR 340 over Purdy Run and to increase the condition rating to at least an 8 out of 9 and the service life to 75 years.

The proposed project will involve replacing the existing structure with an underfill structure. The proposed replacement structure is a 36-foot wide by 12-foot high by 44-foot long precast reinforced concrete three-sided structure. The new structure will require guardrail protection. The proposed roadway typical section in areas without guardrail consists of 12-foot travel lanes and 3-foot paved shoulders. This section matches the existing condition. Where guardrail is warranted, the proposed roadway typical section consists of 12-foot travel lanes and 6-foot paved shoulder to the front face of guardrail.

Expected right-of-way acquisition: 0.35 acre permanent, 0.14 acre temporary

Feature crossed (if applicable): Purdy Run

Township: Posey

City/County: Clay

Information reviewed (please check all that apply):

☑ General project location map ☑ USGS map ☑ Aerial photograph ☑ Soil survey data

☑ Written description of project area ☑ General project area photos ☑ Interim Report

☐ Previously completed historic property reports ☑ Previously completed archaeology reports

☐ Bridge Inspection Information

Other (please specify): SHAARD GIS; Project information letter (including maps and photographs) from CHA Consulting, Inc. dated June 29, 2021 (on file at INDOT CRO)

Culver, Emily and Louis Bubb
2021 Phase Ia Archaeological Field Reconnaissance for the Proposed Replacement of the Bridge Carrying SR 340 over Purdy Run, 2.09 miles east of US 40 (Des. 1900176) in Posey Township, Clay County, Indiana. Document on file at INDOT Cultural Resources Office, Indianapolis, In.

Results of the Records Review for Above-Ground Resources:

An INDOT-Cultural Resources Office (CRO) historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 performed a desktop review of the surrounding area. Based on a review of online street-view imagery and aerial photography, the area immediately adjacent to the subject structure is composed primarily of large residential lots in wooded settings.

The State and National Register of Historic Places was referenced for Clay County. No listed properties were identified within 0.25 miles of the project which serves as a sufficient area of potential effect.

The Indiana Historic Sites and Structures Inventory (IHSSI) was checked via the Indiana Historic Building, Bridges, and Cemeteries Map (IHBBCM) and the State Historical Architectural and Archaeological Research Database (SHAARD). There are several surveyed properties located within the 0.25 miles of the project area including:

Site #021-064-15025: Billtown Cemetery -rated Contributing, located approximately 200 ft. east of project area
Site #021-064-15026: Craftsman house- rated Contributing, located approximately 830 ft. west of the project area
Site #021-064-15027: Tudor house-rated Notable, located approximately 0.25 miles west of the project area.

The properties rated Contributing do not appear to have the requisite integrity/significance to be considered National Register eligible. The Tudor style house may be potentially National Register eligible, but due to its distance from the project area at approximately 0.25 miles and intervening houses and woods there will be no visual impacts to the property.

One additional property worth documenting, but not previously surveyed was identified from the desktop review, a mid-twentieth century ranch at 4657 W. St Road 340 approximately 500 ft. east of the project area. While ranch houses are typically not individually eligible for the National Register, this house appears to have some high-style detailing and may have been architect design or at least exemplifies a higher style example of a ranch house. In any case, due to thick woods surrounding the property it would not have a direct view of the project area and will not be affected by the project.

The existing structure was determined not eligible in the Indiana Historic Bridge Inventory.

Based on all of this available information, as summarized above, no above-ground concerns exist as long as the project scope does not change.

Summary of Archaeology Investigation Results:

An INDOT Cultural Resources Office (CRO) archaeologist, who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61, reviewed the archaeological reconnaissance report prepared for this project (Culver and Bubb 2021) and approved of its results and recommendations. The archaeological records check found that no portions of the project area had been previously investigated and that no archaeological sites are within or adjacent to the project limits. The reconnaissance examined a 1.66-acre survey area through a combination of visual inspection of obviously disturbed areas (e.g. roadside ditches, road shoulders), coring of suspected disturbed soils, augering of alluvial soils, and shovel testing areas with less than 30% visibility. Eight shovel probes were excavated in undisturbed soils and two augers were excavated during the reconnaissance. No archaeological sites or potential for buried deposits were identified and no further work was recommended. Therefore, there are no archaeological concerns.

Does the project appear to fall under the Minor Projects PA? yes ☒ no ☐

If yes, please specify category and number (applicable conditions are highlighted):

B-12. Replacement, widening, or raising the elevation of the superstructure on existing bridges, and bridge replacement projects (when both the superstructure and substructure are removed), under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]***:

Condition A (Archaeological Resources)

One of the two conditions listed below must be met *(EITHER Condition i or Condition ii must be satisfied)*:

i. Work occurs in previously disturbed soils; *OR*

ii. Work occurs in undisturbed soils and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE**.**

Condition B (Above-Ground Resources)

The conditions listed below must be met ***(BOTH Condition i and Condition ii must be satisfied)***

i. Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *AND*

ii. With regard to the subject bridge, at least one of the conditions listed below is satisfied *(AT LEAST one of the conditions a, b or c, must be fulfilled)*:

a. The latest Historic Bridge Inventory did not identify the bridge as a National Register-listed or National Register-eligible (see http://www.in.gov/indot/2531.htm);
b. The bridge was built after 1945, and is a common type as defined in Section V. of the *Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* issued by the Advisory Council on Historic Preservation on November 2, 2012 for so long as that Program Comment remains in effect AND the considerations listed in Section IV of the Program Comment do not apply;
c. The bridge is part of the Interstate system and was determined not eligible for the National Register under the Section 106 Exemption Regarding Effects to the Interstate Highway System adopted by the Advisory Council on Historic Preservation on March 10, 2005, for so long as that Exemption remains in effect.

If no, please explain:

Additional comments: If any archaeological artifacts or human remains are uncovered during construction, demolition, or earth moving activities, construction within 100 feet of the discovery will be stopped, and the INDOT Cultural Resources Office and the Division of Historic Preservation and Archaeology will be notified immediately.

INDOT Cultural Resources staff reviewer(s): Patrick Carpenter and Shaun Miller

****Be sure to attach this form to the National Environmental Policy Act documentation for this project. Also, the NEPA documentation shall reference and include the description of the specific stipulation in the PA that qualifies the project as exempt from further Section 106 review.*

Appendix E

Red Flag and Hazardous Materials

INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue
Room N758-ES
Indianapolis, Indiana 46204

PHONE: (855) 463-6848
(855) INDOT4U

Eric Holcomb, Governor
Joe McGuinness,
Commissioner

Date: September 27, 2021

To: Site Assessment & Management
Environmental Policy Office - Environmental Services Division (ESD)
Indiana Department of Transportation
100 N Senate Avenue, Room N758-ES
Indianapolis, IN 46204

From: Mackenzie Knotts
CHA Consulting, Inc.
300 South Meridian Street
Indianapolis, IN 46225
mknotts@chacompanies.com

Re: RED FLAG INVESTIGATION
DES #1900176, State Project
Bridge Replacement
State Route (SR) 340 over Purdy Run State, 2.09 Mile East of United States (US) Highway 40 Junction
Clay County, Indiana

PROJECT DESCRIPTION

Brief Description of Project: The Indiana Department of Transportation (INDOT) is proposing to proceed with the above referenced bridge replacement project. The original structure, built in 1920, was composed of reinforced concrete girders. The superstructure was replaced in 1980. The bridge deck is 34 feet wide by 12 feet high, the bridge length is 38 feet. The proposed project will replace the existing structure with a three-sided flat top structure that is 36 feet wide by 12 feet rise, 48 feet in length. Full depth hot mix asphalt (HMA) pavement will be used at the bridge approaches and over the structure, approximately 200 feet long. The driveway approaches within the project area will be resurfaced with a HMA overlay and 23 feet of new 15-inch culverts installed at each. Additionally, the Class II drive in the northwest quadrant will be reconstructed and 23 feet of new 15-inch culvert will be installed. Guardrail will be installed north and south of the structure. Ditches will be regraded and stabilized with riprap and sod. Incidental construction will consist of transition milling (2 inches max) and overlay, with variable depth compacted aggregate shoulders for approximately 200 feet.

Bridge and/or Culvert Project: Yes ☒ No ☐ Structure # 340-11-01639B
If this is a bridge project, is the bridge Historical? Yes ☐ No ☒ , Select ☐ Non-Select ☐
(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).
Proposed right of way: Temporary ☒ # 0.014 acre Permanent ☒ # 0.35 acre, Not Applicable ☐
Type and proposed depth of excavation: 13 – 15 feet for placement of structure
Maintenance of traffic: A full closure of SR 340 with the official detour route using US 40. The official detour length would be approximately 5.6 miles.
Work in waterway: Yes ☒ No ☐ Below ordinary high-water mark: Yes ☒ No ☐
State Project: ☒ LPA: ☐
Any other factors influencing recommendations: N/A

INFRASTRUCTURE TABLE AND SUMMARY

Infrastructure Indicate the number of items of concern found within the 0.5-mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	**N/A**	Recreational Facilities	**N/A**
Airports[1]	**N/A**	Pipelines	**2**
Cemeteries	**1**	Railroads	**1**
Hospitals	**N/A**	Trails	**1**
Schools	**N/A**	Managed Lands	**N/A**

[1]In order to complete the required airport review, a review of public-use airports within 3.8 miles (20,000 feet) is required.

Explanation:
Pipelines: Two (2) pipeline segments are located within the 0.5-mile search radius. The nearest segment, Terre Haute Gas Corporation, is located approximately 0.23 mile south of the project area. No impact is expected.

Cemeteries: One (1) cemetery is located within the 0.5-mile search radius. Billtown Cemetery is located 0.02 mile northeast the project area. A Cemetery Development Plan may be required since this project is within 100 feet of the cemetery. Coordination with INDOT Cultural Resources will occur.

Railroads: One (1) railroad is located within the 0.5-mile search radius. The nearest railroad segment, an abandoned Conrail Railroad segment, is located approximately 0.25 mile south of the project area. No impact is expected.

Trails: One (1) trail segment is located within the 0.5-mile search radius. One potential trail segment is located approximately 0.27 mile south of the project area. No impact is expected.

WATER RESOURCES TABLE AND SUMMARY

Water Resources Indicate the number of items of concern found within the 0.5-mile search radius. If there are no items, please indicate N/A:			
NWI - Points	**N/A**	Canal Routes - Historic	**N/A**
Karst Springs	**N/A**	NWI - Wetlands	**22**
Canal Structures – Historic	**N/A**	Lakes	**10**
NPS NRI Listed	**N/A**	Floodplain - DFIRM	**1**
NWI-Lines	**19**	Cave Entrance Density	**N/A**
IDEM 303d Listed Streams and Lakes (Impaired)	**3**	Sinkhole Areas	**N/A**
Rivers and Streams	**11**	Sinking-Stream Basins	**N/A**

Explanation:
NWI-Lines: Nineteen (19) NWI-Line segments are located within the 0.5-mile search radius. Two (2) NWI-Lines are located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

IDEM 303d Listed Streams and Lakes (Impaired): Three (3) IDEM 303d Listed Streams and Lakes (Impaired) are located within the 0.5-mile search radius. Purdy Run is located within the project area. Purdy Run is listed as impaired for

E.coli. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

Rivers and Streams: Eleven (11) River and Stream segments are located within the 0.5-mile search radius. One (1) River and Stream, Purdy Run, is located within the project area. A Waters of the US Report will be prepared and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

NWI-Wetlands: Twenty-two (22) wetlands are located within the 0.5-mile search radius. One (1) wetland is located adjacent to the project area. A Waters of the US Report will be prepared and coordination with INDOT ESD Ecology and Waterway Permitting will occur.

Lakes: Ten (10) lakes are located within the 0.5-mile search radius. The nearest lake is located approximately 0.14-mile northwest of the project area. No impacts are expected.

Floodplains: One (1) floodplain polygon is located within the 0.5-mile search radius. The project area is located within the floodplain polygon. Coordination with INDOT ESD Ecology and Waterway Permitting will occur.

MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

Mining/Mineral Exploration Indicate the number of items of concern found within the 0.5-mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	**N/A**	Mineral Resources	**N/A**
Mines – Surface	**N/A**	Mines – Underground	**N/A**

Explanation: No mining/mineral resources were identified within the 0.5-mile search radius.

HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

Hazardous Material Concerns Indicate the number of items of concern found within the 0.5-mile search radius. If there are no items, please indicate N/A:			
Superfund	**N/A**	Manufactured Gas Plant Sites	**N/A**
RCRA Generator/ TSD	**N/A**	Open Dump Waste Sites	**N/A**
RCRA Corrective Action Sites	**N/A**	Restricted Waste Sites	**N/A**
State Cleanup Sites	**N/A**	Waste Transfer Stations	**N/A**
Septage Waste Sites	**N/A**	Tire Waste Sites	**N/A**
Underground Storage Tank (UST) Sites	**N/A**	Confined Feeding Operations (CFO)	**N/A**
Voluntary Remediation Program	**N/A**	Brownfields	**N/A**
Construction Demolition Waste	**N/A**	Institutional Controls	**N/A**
Solid Waste Landfill	**N/A**	NPDES Facilities	**N/A**
Infectious/Medical Waste Sites	**N/A**	NPDES Pipe Locations	**N/A**
Leaking Underground Storage (LUST) Sites	**N/A**	Notice of Contamination Sites	**N/A**

Unless otherwise noted, site specific details presented in this section were obtained from documents reviewed on the Indiana Department of Environmental Management (IDEM) Virtual File Cabinet (VFC).

Explanation: No hazardous material concerns were identified within the 0.5-mile search radius.

ECOLOGICAL INFORMATION SUMMARY

The Clay County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high-quality natural communities is provided at http://www.in.gov/dnr/naturepresrve/files/np_clay.pdf. A preliminary review of the Indiana Natural Heritage Database by INDOT ESD did not indicate the presence of ETR species within the 0.5-mile search radius. Coordination with USFWS and IDNR will occur.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in rural area surrounded by residences. The July 21, 2021, inspection report for Bridge #340-11-01639B states that no evidence of bats was seen or heard under the bridge. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

RECOMMENDATIONS SECTION

INFRASTRUCTURE:

Cemeteries: Billtown Cemetery is located 0.02 mile northeast the project area. Coordination with INDOT Cultural Resources will occur.

WATER RESOURCES:

The presence of the following water resources will require the preparation of a Waters of the US Report and coordination with INDOT ESD Ecology and Waterway Permitting:

- Two (2) NWI-Lines are located within the project area.
- One (1) stream segment, Purdy Run, flows through the project area.
- One (1) wetland is located adjacent to the project area.
- The project area is located within a floodplain (coordination only).

IDEM 303d Listed Streams and Lakes (Impaired): Purdy Run is listed as impaired for E.coli. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure.

MINING/MINERAL EXPLORATION: **N/A**

HAZARDOUS MATERIAL CONCERNS: **N/A**

ECOLOGICAL INFORMATION: Coordination with USFWS and IDNR will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation INDOT Projects".

INDOT ESD concurrence: Nicole Fohey-Breting Digitally signed by Nicole Fohey-Breting Date: 2021.09.30 14:14:49 -04'00' (Signature)

Prepared by:

Mackenzie Knotts

Mackenzie Knotts
Environmental Scientist
CHA Consulting, Inc.

Graphics:

SITE LOCATION: YES

INFRASTRUCTURE: YES

WATER RESOURCES: YES

MINING/MINERAL EXPLORATION: N/A

HAZARDOUS MATERIAL CONCERNS: N/A