NOTICE OF APPLICATION FOR FEDERAL CONSISTENCY REVIEW
LAKE MICHIGAN COASTAL ZONE PROGRAM

Project Number: ER-17018-1

Name of Applicant: Lisa Herber

Address of Applicant:
Indiana Department of Transportation
100 North Senate Avenue
Room N642
Indianapolis, IN 46204

Project Description:
I-65/Borman Expressway interchange flood protection: constructing floodwalls, and installing flood valves, gatewalls and stormwater lift stations, Gary; Des. #1172334

Location of Project: Gary, IN; Lake Co.

Send comments to the following no later than Friday, November 29, 2013**:**

Federal Consistency Review Coordinator, Environmental Unit
Division of Fish and Wildlife
Department of Natural Resources
402 West Washington Street, Room W273
Indianapolis, IN 46204
Electronic mail: **environmentalreview@dnr.in.gov**

Copies of the request, accompanying information and data are available for inspection at the following location:

Environmental Unit
Division of Fish and Wildlife
Department of Natural Resources
402 West Washington Street, Room W273
Indianapolis, IN 46204

N|B

INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

100 North Senate Avenue
Room N642
Indianapolis, Indiana 46204

PHONE: (317) 232-5348
FAX: (317) 232-4929

Michael R. Pence, Governor
Karl B. Browning, Commissioner

November 12, 2013

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DNR
DIV. OF WATER

Technical Services
Indiana Department of Natural Resources, Division of Water
402 West Washington Street, Room W264
Indianapolis, Indiana 46204

Re: Interstate-65/Borman Expressway Interchange Flood Protection Project
DES Number 1172334
Request for Federal Consistency Review
Lake County

To Whom It May Concern:

As you may be aware, the Indiana Department of Transportation (INDOT) is planning to complete a flood risk reduction project for the Interstate 65/Borman Expressway Interchange. The project site encompasses approximately 17 acres and is located in Section 14, Township 36 North, Range 8 West near Gary, Lake County. Flood protection measures to be completed include, in general, constructing floodwalls, installing flood valves at the ends of certain cross-culverts, installing gatewells with closure devices at the inlet ends of certain culverts and installing stormwater lift stations to prevent the interchange from being flooded as a result of local rainfalls during river flood stages. An earlier phase of flood control measures completed in 2011 included three (3) flood walls and several gatewell closure structures.

The proposed project was the subject of two (2) review documents prepared by the Indiana Department of Natural Resources (IDNR): Early Coordination/Environmental Assessment ER-17018 dated June 21, 2013 and a separate letter dated June 24, 2013. The June 24, 2013 letter noted that the proposed project is within the Lake Michigan Coastal Zone Management area and therefore will require a federal consistency review and determination. The purpose of this letter and the listed attachments is to formally request the consistency review and determination. We believe the proposed activity complies with Indiana's approved coastal management program and will be conducted in a manner consistent with such program.

Although the project will not require a permit from the IDNR under the Flood Control Act, permits and approvals will be required from the Indiana Department of Environmental Management (IDEM) and the U.S. Army Corps of Engineers (USACE).

To aid in your consideration of this request, please find attached the following material:

- Site Location Map
- Project Plans

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- IDEM Permit Application
- USACE Permit Application
- Copy of June 24, 2013 IDNR Letter
- Copy of June 21, 2013 IDNR ER-17018

If you have any questions, please contact Sandra Bowman at (317) 233-5568 or me at (317) 232-5135.

Sincerely,

Lisa Herber
Team Lead, Ecology and Waterway Permitting Office

Enclosures

cc: Runfa Shi, INDOT, Project Manager
Sarah Wright, Christopher B. Burke Engineering, LLC
Permit File

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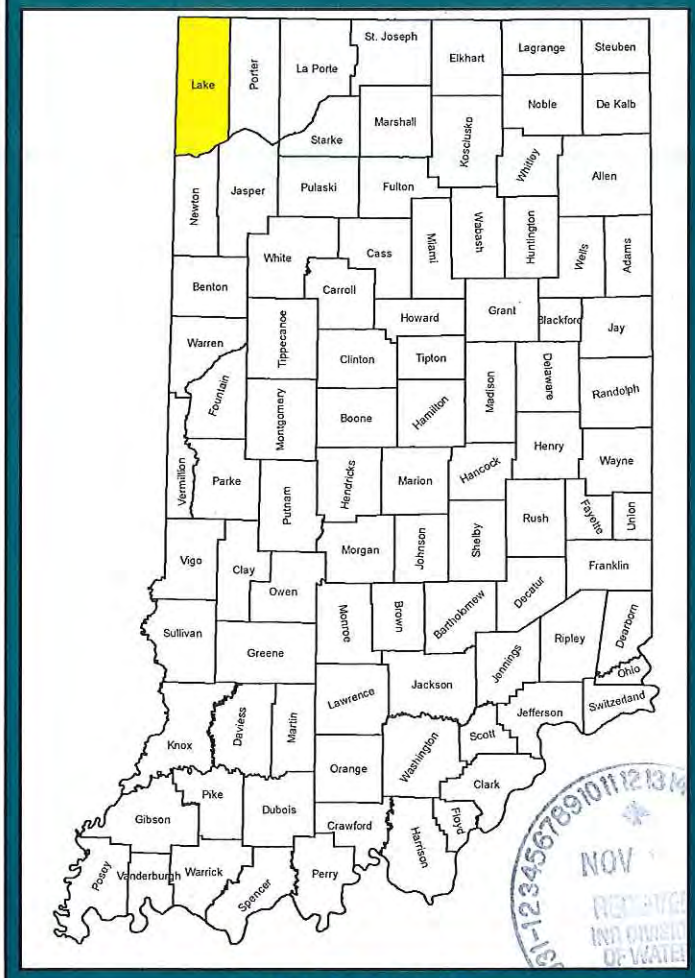
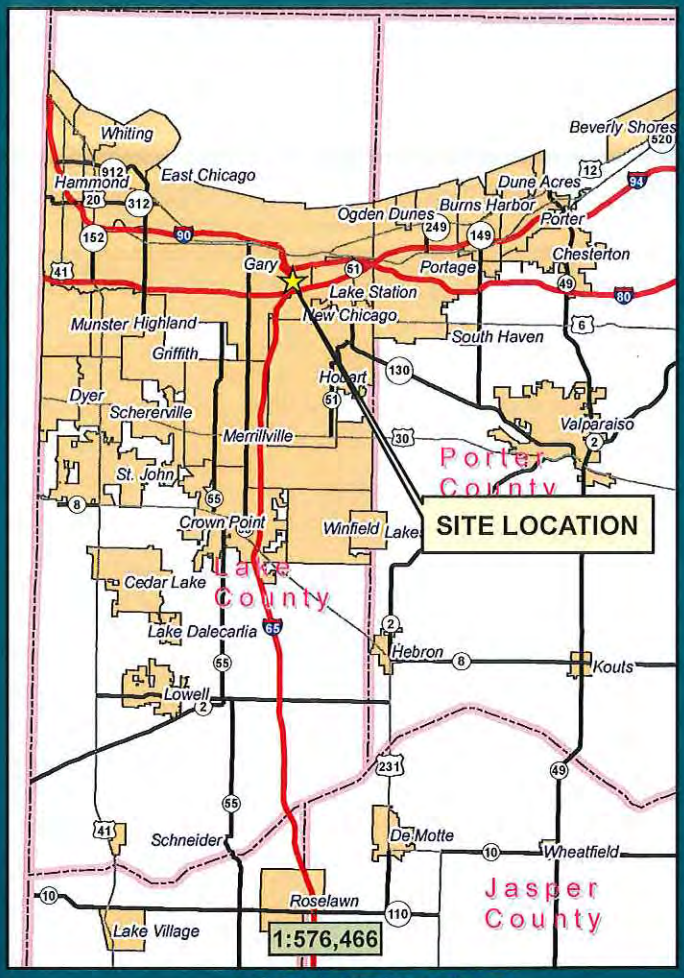
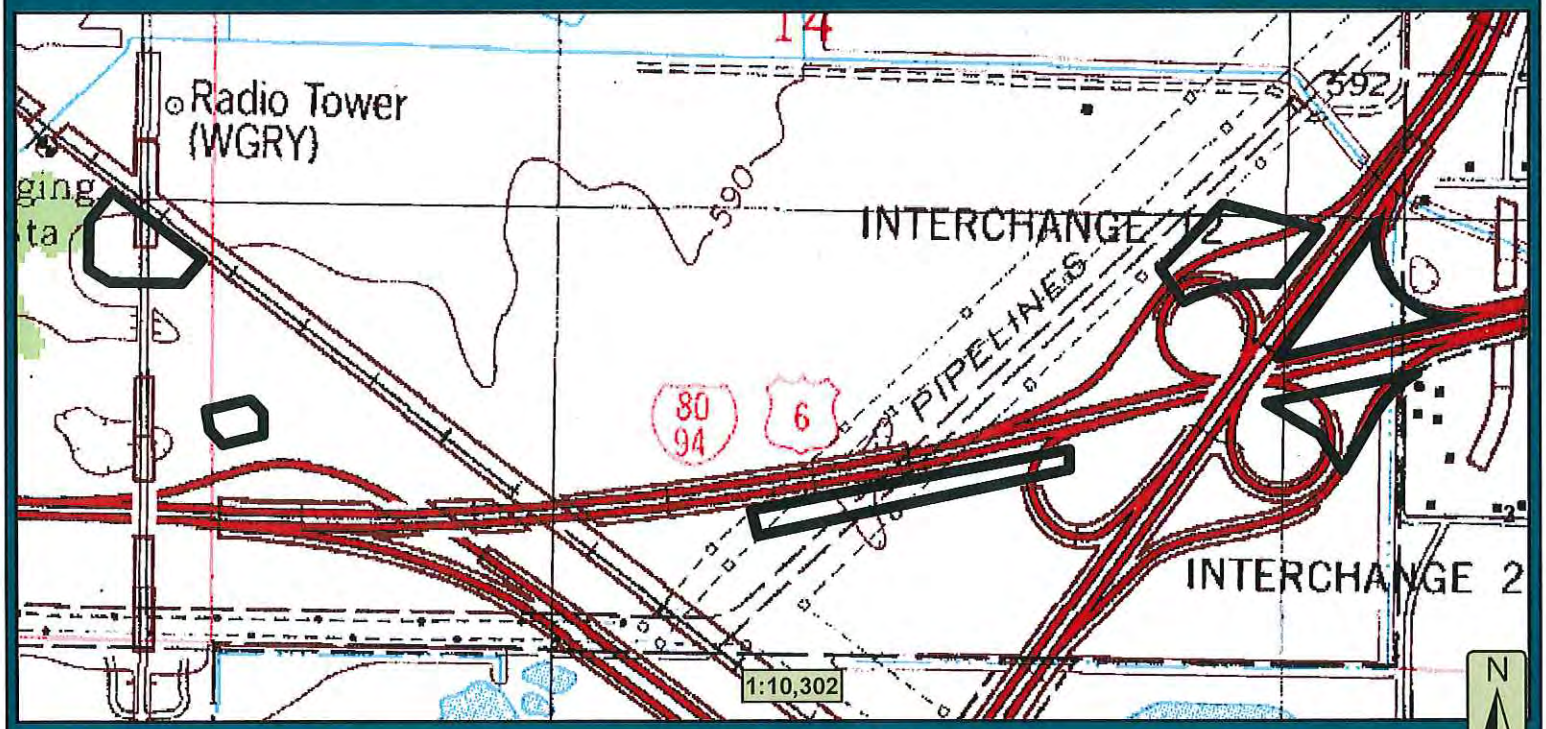
RECEIVED
DIVISION OF WATER



STATE MAP



VICINITY MAP



AREA MAP

Christopher B. Burke Engineering, LLC
PNC Center, Suite 1368 South
115 West Washington Street
Indianapolis, Indiana 46204
(t) 317.266.8000 (f) 317.632.3306

PROJECT:	I-65 & Borman Expressway DES# 1172334	PROJECT NO. 08-0662 BG6	APPROX. SCALE as shown
TITLE:	SITE LOCATION		DATE: 03/2013
			EXHIBIT 1

PROJECT	DESIGNATION
1172334	1172334
CONTRACT	BRIDGE FILE
IR-33802	N/A

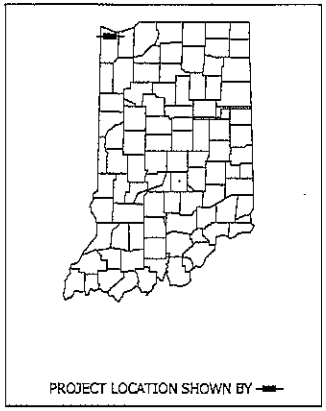
INDIANA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLANS

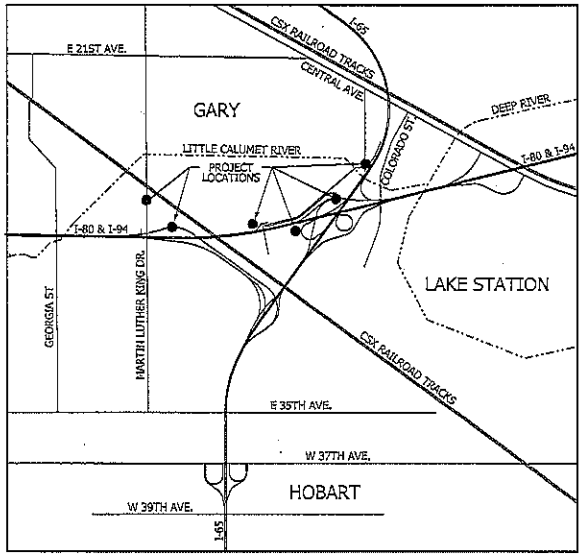
FOR DRAINAGE STRUCTURE AND LOCAL FLOOD PROTECTION IMPROVEMENTS

PROJECT NO. 1172334

FLOOD PROTECTION IMPROVEMENTS ALONG I-80/94 AND I-65 INTERCHANGE IN CALUMET AND LAKE STATION TOWNSHIPS, LAKE COUNTY, INDIANA.



IR-33802



NOT TO SCALE

LOCATION MAP
CALUMET TOWNSHIP, LAKE COUNTY

TRAFFIC DATA - I-80/94*	
A.A.D.T. (2009)	168,881 V.P.D.
A.A.D.T. (2029)	253,492 V.P.D.
D.H.V. (2029)	14,199 V.P.H.
DIRECTIONAL DISTRIBUTION	50%
TRUCKS	25% A.A.D.T.
DESIGN DATA	
DESIGN SPEED	70 MPH
PROJECT DESIGN CRITERIA	COMPLETE RECONSTRUCTION (FREEWAY)
FUNCTIONAL CLASSIFICATION	INTERSTATE
RURAL/URBAN	URBAN
TERRAIN	LEVEL
ACCESS CONTROL	FULL

TRAFFIC DATA - I-65*	
A.A.D.T. (2006)	85,150 V.P.D.
A.A.D.T. (2026)	128,800 V.P.D.
D.H.V. (2026)	8,741 V.P.H.
DIRECTIONAL DISTRIBUTION	50%
TRUCKS	27% A.A.D.T.
DESIGN DATA	
DESIGN SPEED	60 MPH
PROJECT DESIGN CRITERIA	COMPLETE RECONSTRUCTION (FREEWAY)
FUNCTIONAL CLASSIFICATION	INTERSTATE
RURAL/URBAN	URBAN
TERRAIN	LEVEL
ACCESS CONTROL	FULL

TRAFFIC DATA - MARTIN LUTHER KING DRIVE*	
A.A.D.T. (2013)	9,070 V.P.D.
A.A.D.T. (2033)	12,855 V.P.D.
D.H.V. (2033)	N/A V.P.H.
DIRECTIONAL DISTRIBUTION	50% / 50%
TRUCKS	N/A D.H.V.
	27% A.A.D.T.
DESIGN DATA	
DESIGN SPEED	40 MPH
PROJECT DESIGN CRITERIA	4R (NON-FREEWAY)
FUNCTIONAL CLASSIFICATION	LOCAL AGENCY COLLECTOR
RURAL/URBAN	URBAN/INTERMEDIATE
TERRAIN	LEVEL
ACCESS CONTROL	NONE

*TRAFFIC DATA FROM INDOT ROAD PLANS, CONTRACTS IR-28982, B-33424 AND IR-29901

INDIANA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS DATED 2014 TO BE USED WITH THESE PLANS.

HNTB
111 Monument Circle, Suite 1200
Indianapolis, IN 46204-5178
Bus (317) 636-4682
Fax (317) 917-5211

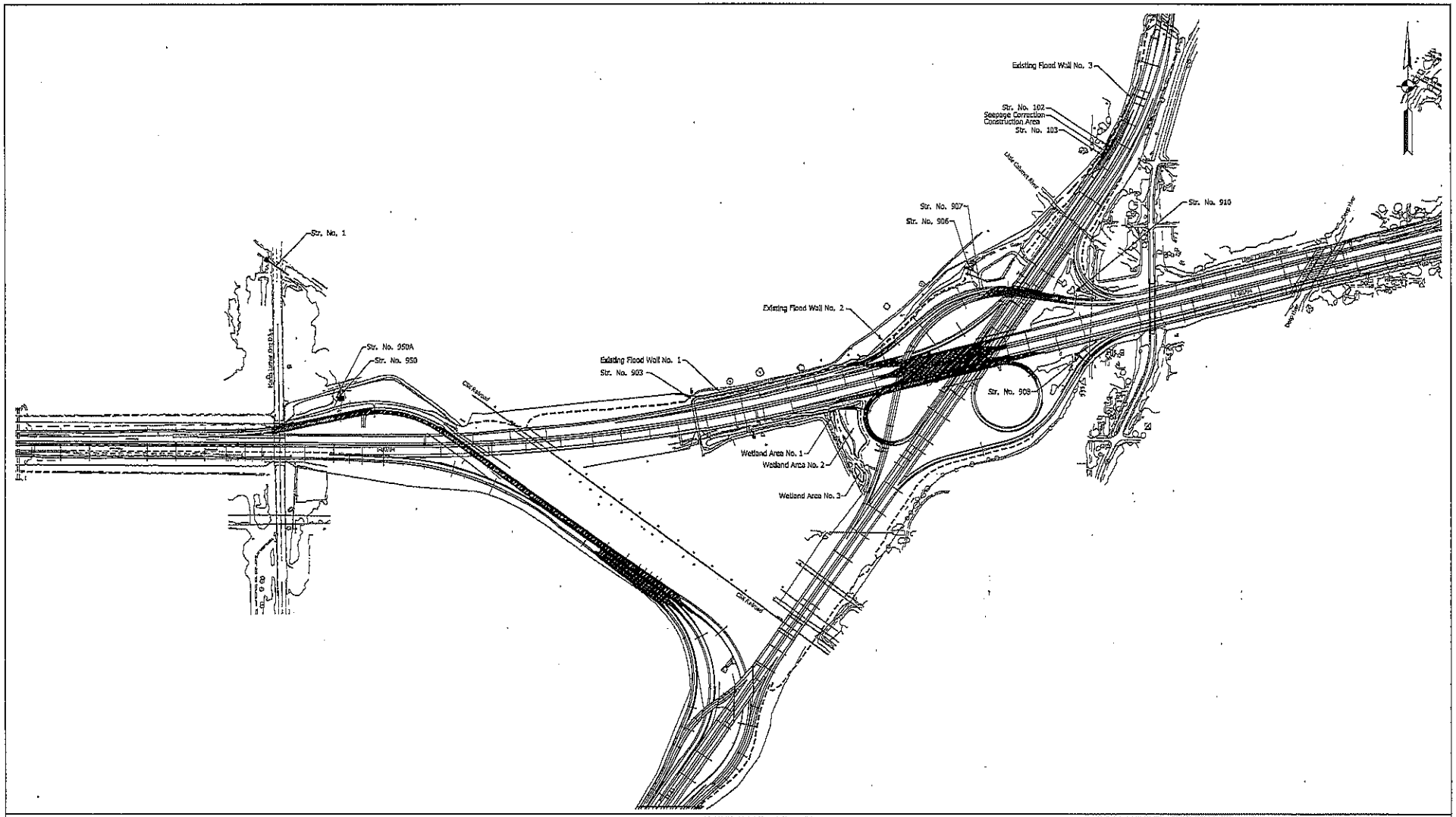
HNTB PROJECT NO. 56736

FEDERAL HIGHWAY ADMINISTRATION
U.S. DEPT. OF TRANSPORTATION
APPROVED: _____ DATE
DIVISION ADMINISTRATOR

PLANS PREPARED BY: HNTB CORPORATION 317-636-4682 PHONE NUMBER
CERTIFIED BY: Jason R. Rhoades 10/30/13 DATE
APPROVED FOR LETTING: _____ INDIANA DEPARTMENT OF TRANSPORTATION DATE

JASON R. RHOADES, REGISTERED No. 10403316 STATE OF INDIANA PROFESSIONAL ENGINEER

LATITUDE	BRIDGE FILE
41°34'49" N	N/A
LONGITUDE	DESIGNATION
87°18'2" W	1172334
SURVEY BOOK	SHEET
N/A	1 of 39
CONTRACT	PROJECT
IR-33802	1172334

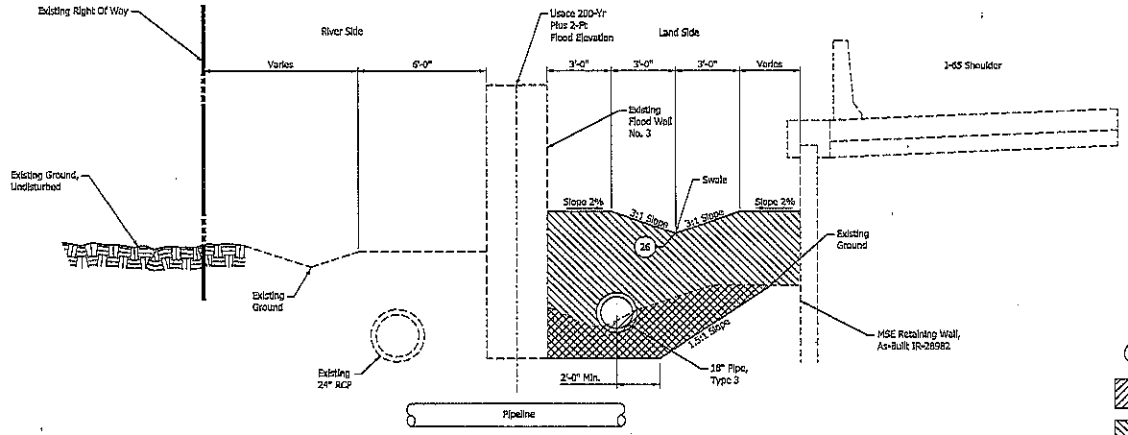


LEGEND

- Estimated 100-Yr Flood Inundation Area
- Estimated 500-Yr Flood Inundation Area
- Line Of Flood Protection On Embankment

JASON R. RHODES REGISTERED No. 10403316 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	Jason R. Rhodes 10/30/13	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE: 1"=300' / BRIDGE FILE: N/A
	DESIGN ENGINEER / DATE		VERTICAL SCALE: N/A / DESIGNATION: 1172334
DESIGNED: RTP	DRAWN: CPH	FLOOD PREVENTION IMPROVEMENTS OVERVIEW PLAN	SURVEY BOOK: N/A / SHEET NO.: 3 of 59
CHECKED: JRR	CHECKED: JRR		CONTRACT: IR-328802 / PROJECT: 1172334



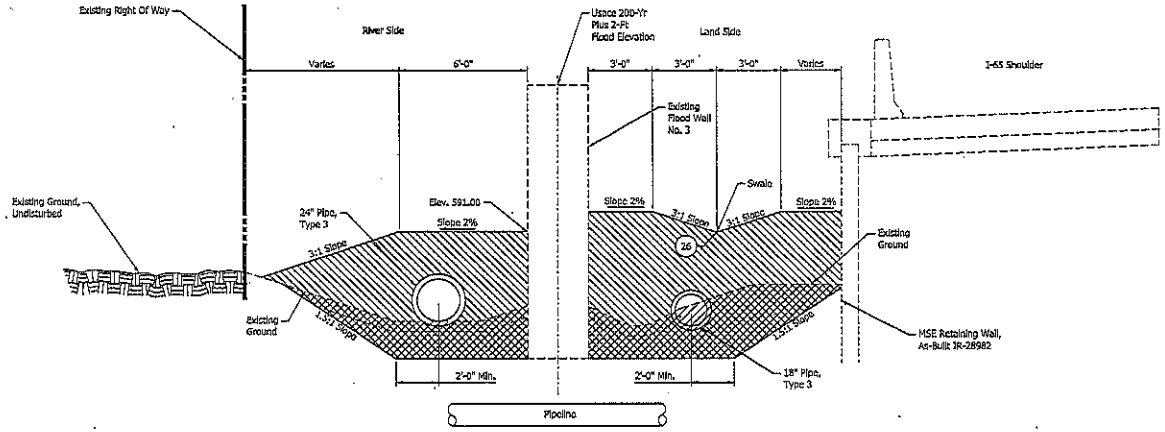
TYPICAL SECTION - FLOOD WALL NO. 3
SEEPAGE CORRECTION EMBANKMENT
ADDED TO LAND SIDE OF FLOOD WALL ONLY

LEGEND

26 Sodding

Excavation and Removal of Existing Fill, Paved Side Ditch, and Stone

Impervious Fill



TYPICAL SECTION - FLOOD WALL NO. 3
SEEPAGE CORRECTION EMBANKMENT
ADDED TO BOTH SIDES OF FLOOD WALL

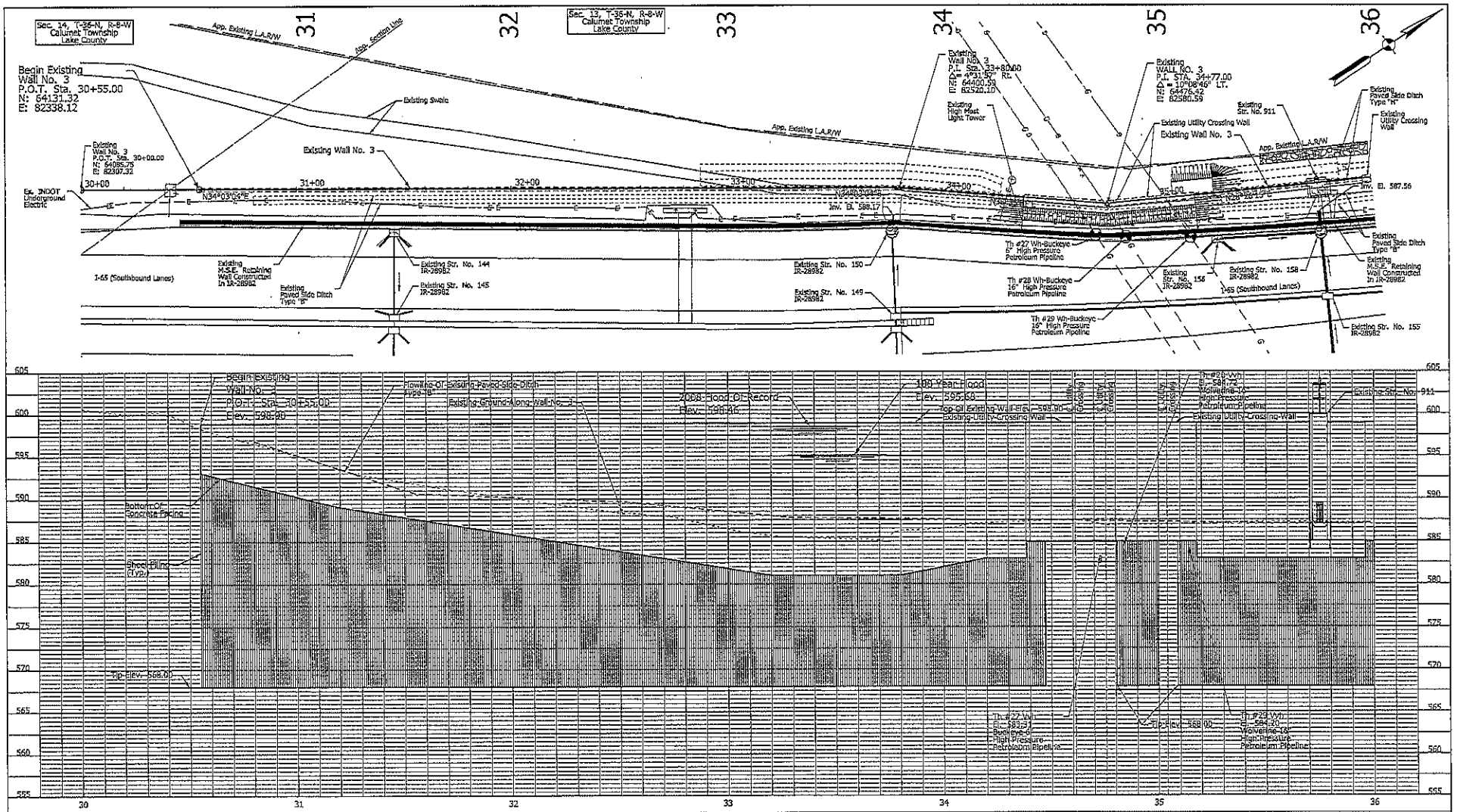
JASON R. RHOADES
No. 10403316
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Jason R. Rhoades 10/30/13	DESIGN ENGINEER	DATE	
DESIGNED: JRR	DRAWN: CPH		
CHECKED: RTP	CHECKED: JRR		

INDIANA
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
3/8" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1172334
SURVEY BOOK	SHEET NO.
N/A	10 of 39
CONTRACT	PROJECT
IR-33802	1172334



HYDRAULIC DESIGN CRITERIA:
TOP OF FLOODWALLS EXCEED DESIGN 100-YEAR FLOOD ELEVATION FOR LITTLE CALUMET RIVER (595.68 NAVD88), PLUS INDOT REQUIRED 2-FEET OF FREEBOARD,
TOP OF FLOODWALLS SET AT 200-YEAR DESIGN FLOOD ELEVATION FOR LITTLE CALUMET RIVER (596.50 NAVD88) PLUS 2-FEET OF FREEBOARD.

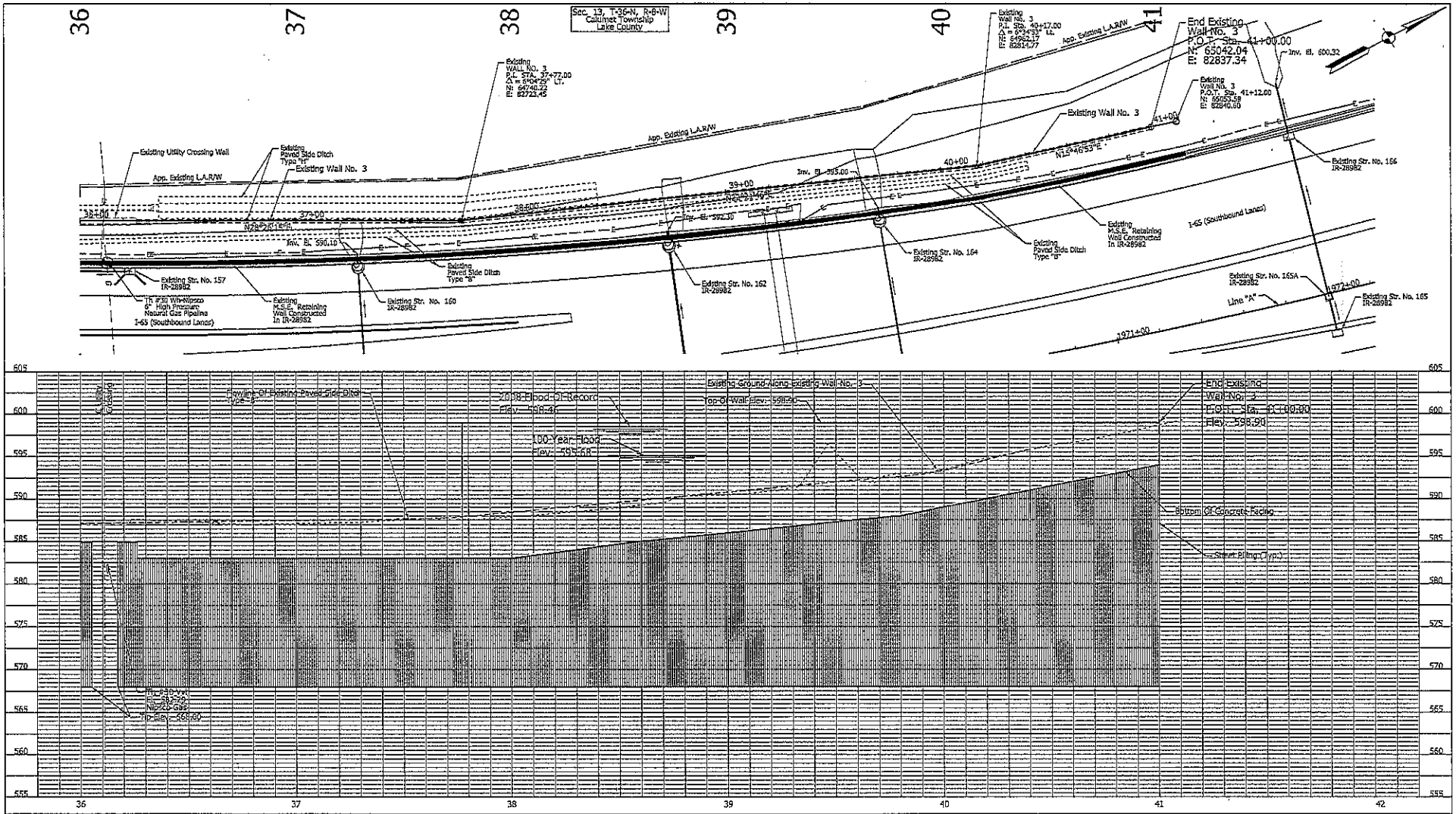
ALL FLOOD ELEVATIONS PROVIDED BY USACE.

THE 200-YEAR FLOOD ELEVATION PLUS 2-FEET OF FREEBOARD EXCEEDS SEPTEMBER 2008 FLOOD OF RECORD ELEVATIONS (FROM FLOOD OF SEPTEMBER 2008 IN NORTHWESTERN INDIANA, U.S. DEPARTMENT OF THE INTERIOR, U.S. GEOLOGICAL SURVEY, 2010) ALONG THE LITTLE CALUMET RIVER IN THE VICINITY OF THE I-80/I-65 INTERCHANGE.

JASON R. RHOADS REGISTERED No. 10403316 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	Jason R. Rhoads 10/30/13 DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION
DESIGNED: JRR	DRAWN: CPH	FLOOD WALL NO. 3 PLAN AND PROFILE
CHECKED: RTP	CHECKED: JRR	

HORIZONTAL SCALE 1" = 20'	BRIDGE FILE N/A
VERTICAL SCALE 1" = 5'	DESIGNATION 1172334
SURVEY BOOK N/A	SHEET NO. 11 of 39
CONTRACT JR-33802	PROJECT 1172334



HYDRAULIC DESIGN CRITERIA:
TOP OF FLOODWALLS EXCEED DESIGN 100-YEAR FLOOD ELEVATION FOR LITTLE CALUMET RIVER (595.68 NAVD88), PLUS INDOT REQUIRED 2-FEET OF FREEBOARD.
TOP OF FLOODWALLS SET AT 200-YEAR DESIGN FLOOD ELEVATION FOR LITTLE CALUMET RIVER (596.90 NAVD88) PLUS 2-FEET OF FREEBOARD.

ALL FLOOD ELEVATIONS PROVIDED BY USACE.

THE 200-YEAR FLOOD ELEVATION PLUS 2-FEET OF FREEBOARD EXCEEDS SEPTEMBER 2008 FLOOD OF RECORD ELEVATIONS (FROM FLOOD OF SEPTEMBER 2008 IN NORTHWESTERN INDIANA, U.S. DEPARTMENT OF THE INTERIOR, U.S. GEOLOGICAL SURVEY, 2010) ALONG THE LITTLE CALUMET RIVER IN THE VICINITY OF THE I-80/I-65 INTERCHANGE.

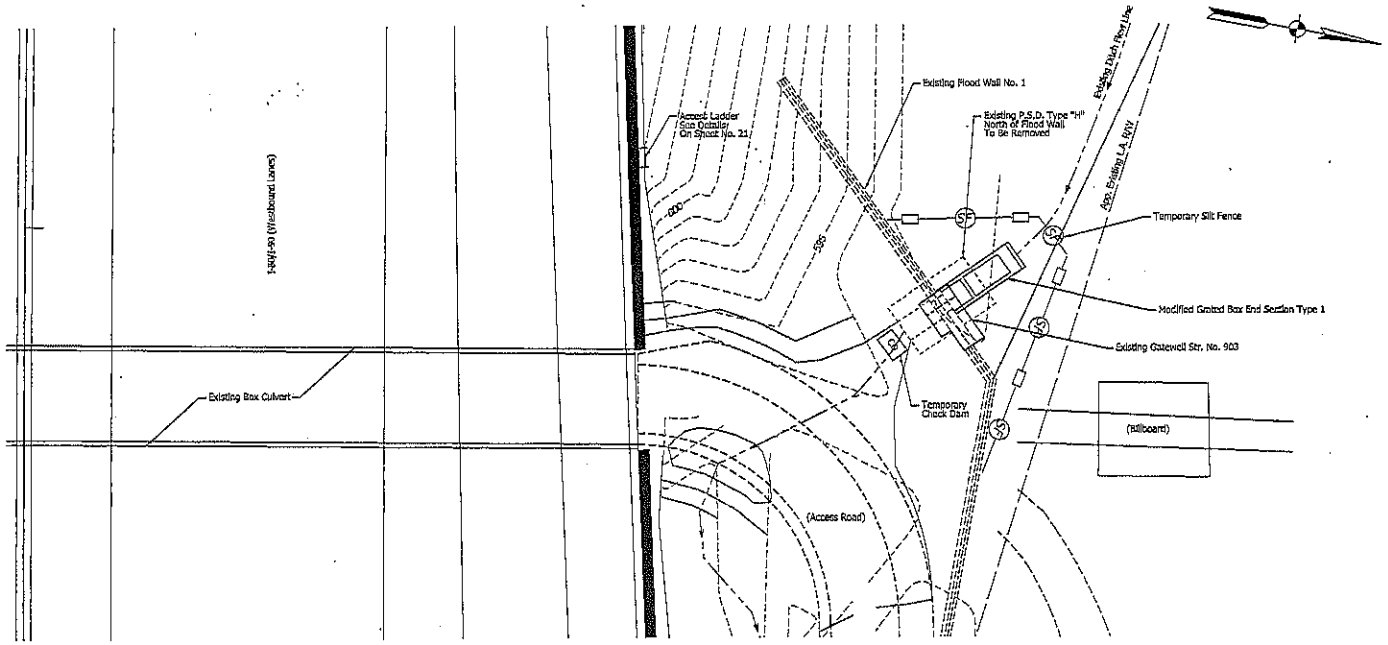
JOHN R. RHOADES
No. 10403316
STATE OF INDIANA
PROFESSIONAL ENGINEER

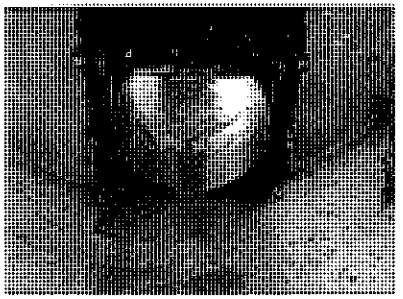
RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE 10/30/13
DESIGNED: JRR	DRAWN: CPH	
CHECKED: RTP	CHECKED: JRR	

INDIANA
DEPARTMENT OF TRANSPORTATION

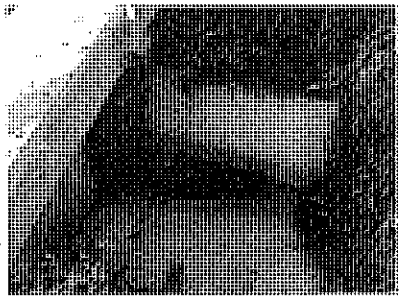
FLOOD WALL NO. 3
PLAN AND PROFILE

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	DESIGNATION
1" = 5'	1172334
SURVEY BOOK	SHEET NO.
N/A	12 of 39
CONTRACT	PROJECT
IR-33602	1172334



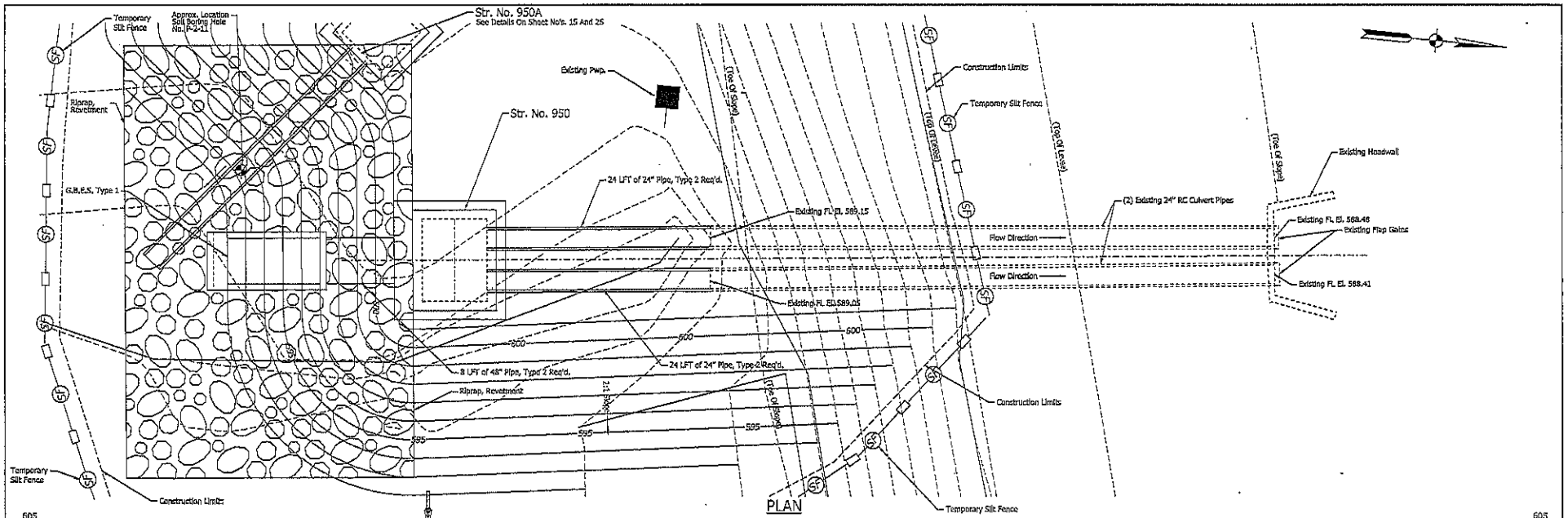


Photograph Looking South at Sluice Gate

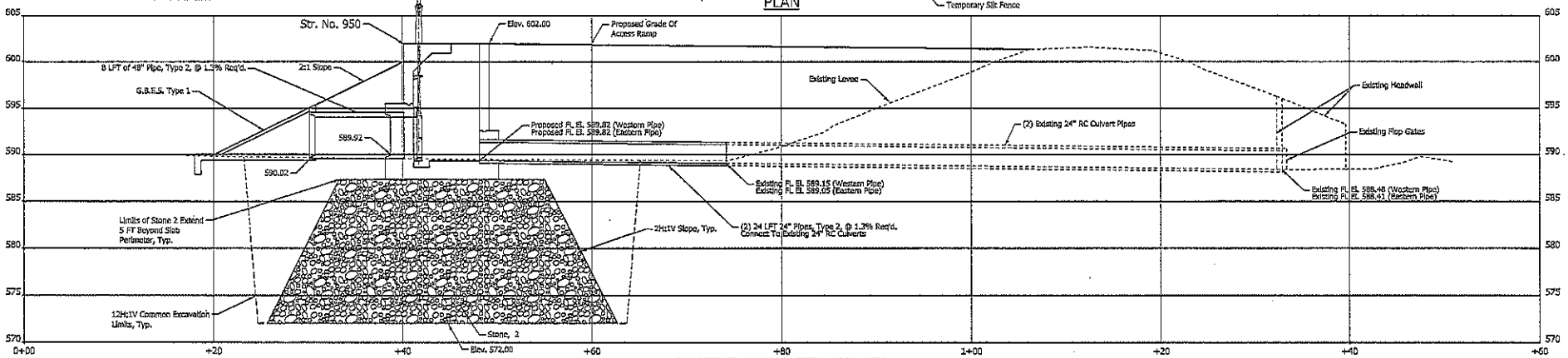


Photograph Looking Down at Sluice Gate and Paved Side Ditch

JASON R. RHOADES, REGISTERED No. 10403316 STATE OF INDIANA PROFESSIONAL ENGINEER	RECOMMENDED FOR APPROVAL Jason R. Rhoades 10/30/13 DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1" = 10'	BRIDGE FILE N/A
	DESIGNED: JRR DRAWN: CPH		VERTICAL SCALE N/A	DESIGNATION 1172334
	CHECKED: RTP CHECKED: JRR	GATEWELL STRUCTURE NO. 903 MODIFICATION SITE PLAN	SURVEY BOOK N/A	SHEET NO. 13 of 39
			CONTRACT IR-33802	PROJECT 1172334

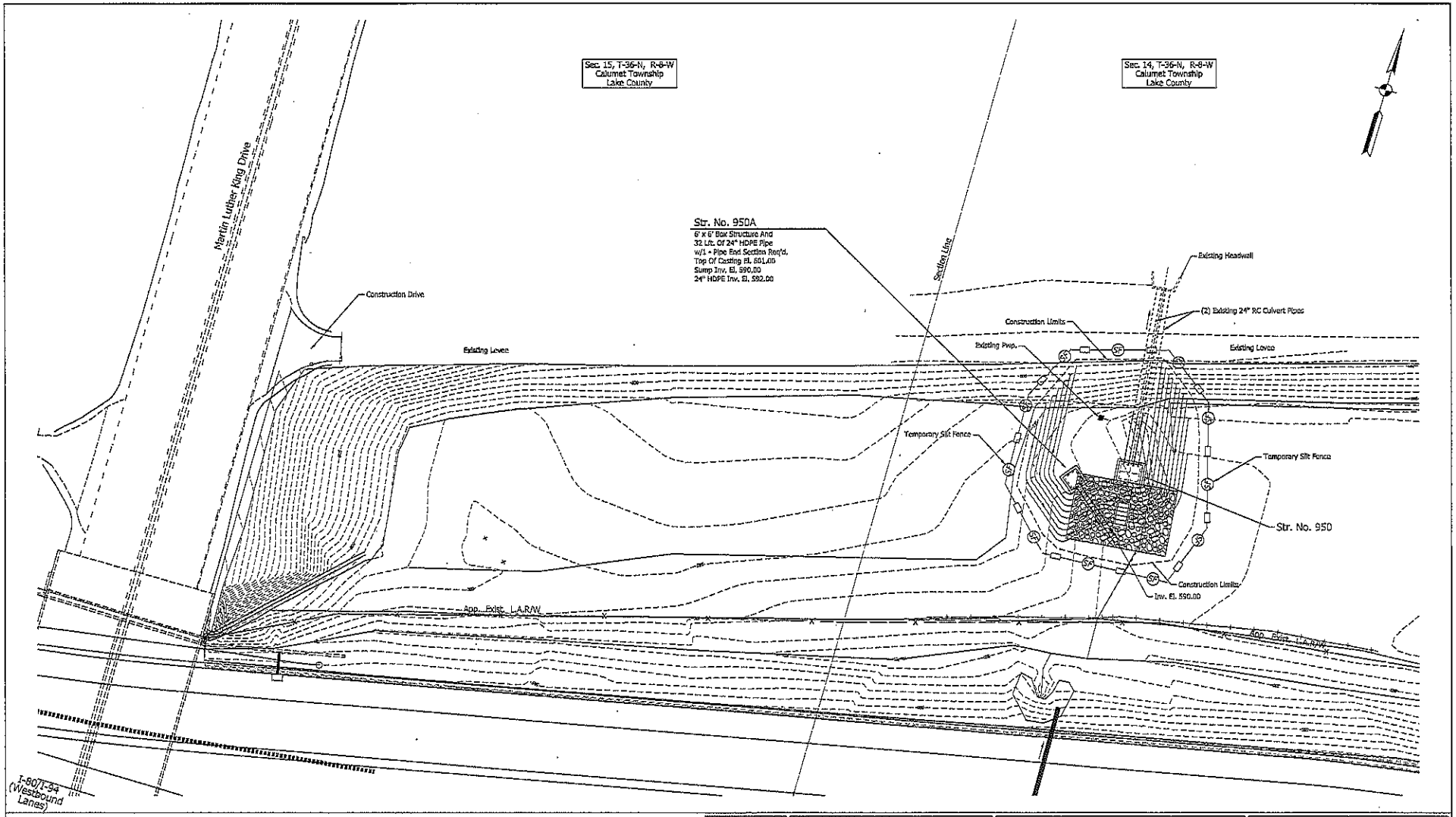


PLAN



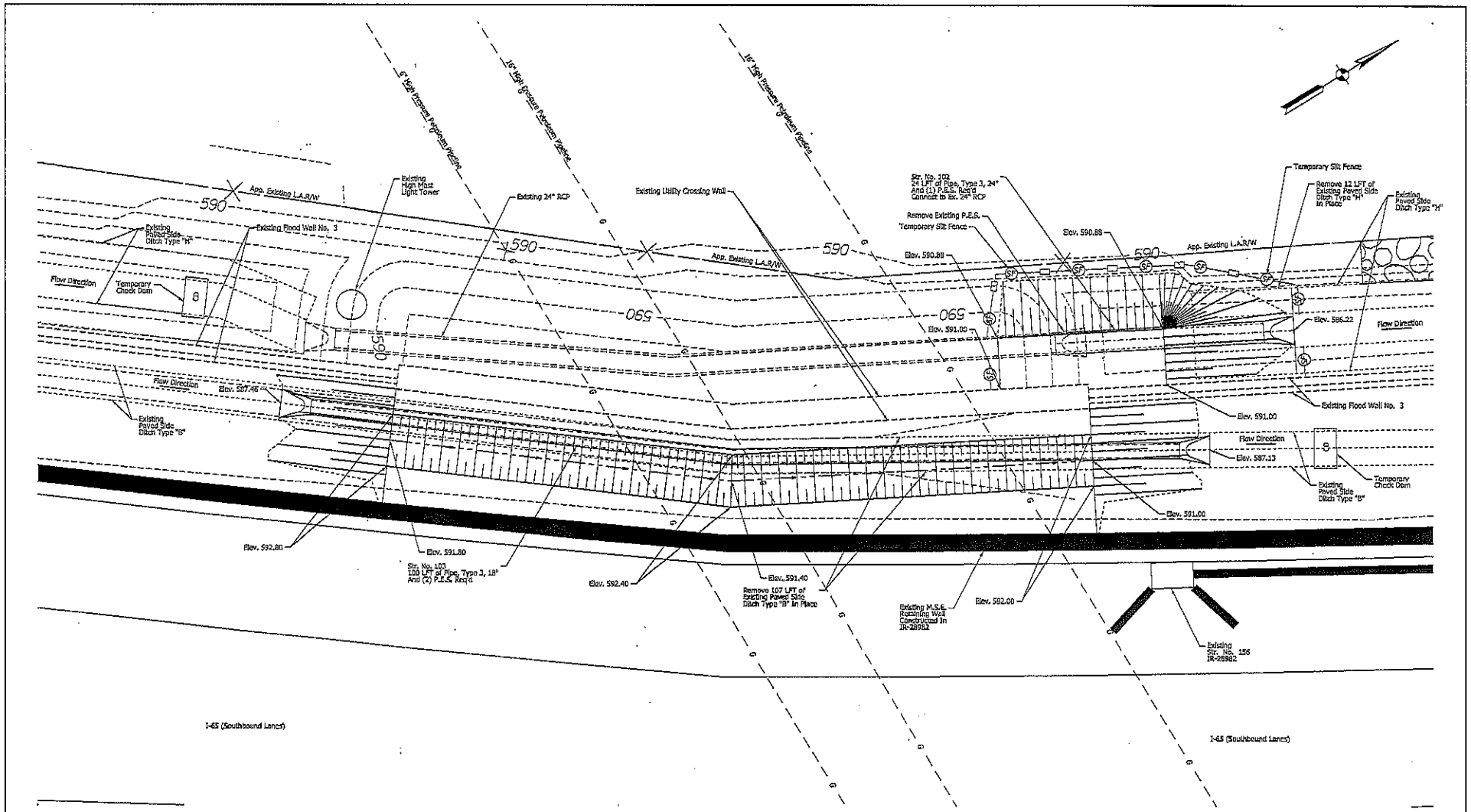
PROFILE ALONG STR. NO. 950

JASON R. RHOADES REGISTERED No. 10403316 STATE OF INDIANA PROFESSIONAL ENGINEER	RECOMMENDED FOR APPROVAL Jason R. Rhoades 10/30/13 DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1" = 5' / BRIDGE FILE N/A
	DESIGNED: JRR / DRAWN: CPH	PLAN AND PROFILE STRUCTURE NO. 950	VERTICAL SCALE 1" = 5' / DESIGNATION 1172334
	CHECKED: RTP / CHECKED: JRR		SURVEY BOOK N/A / SHEET NO. 14 OF 39
			CONTRACT IR-33602 / PROJECT 1172334



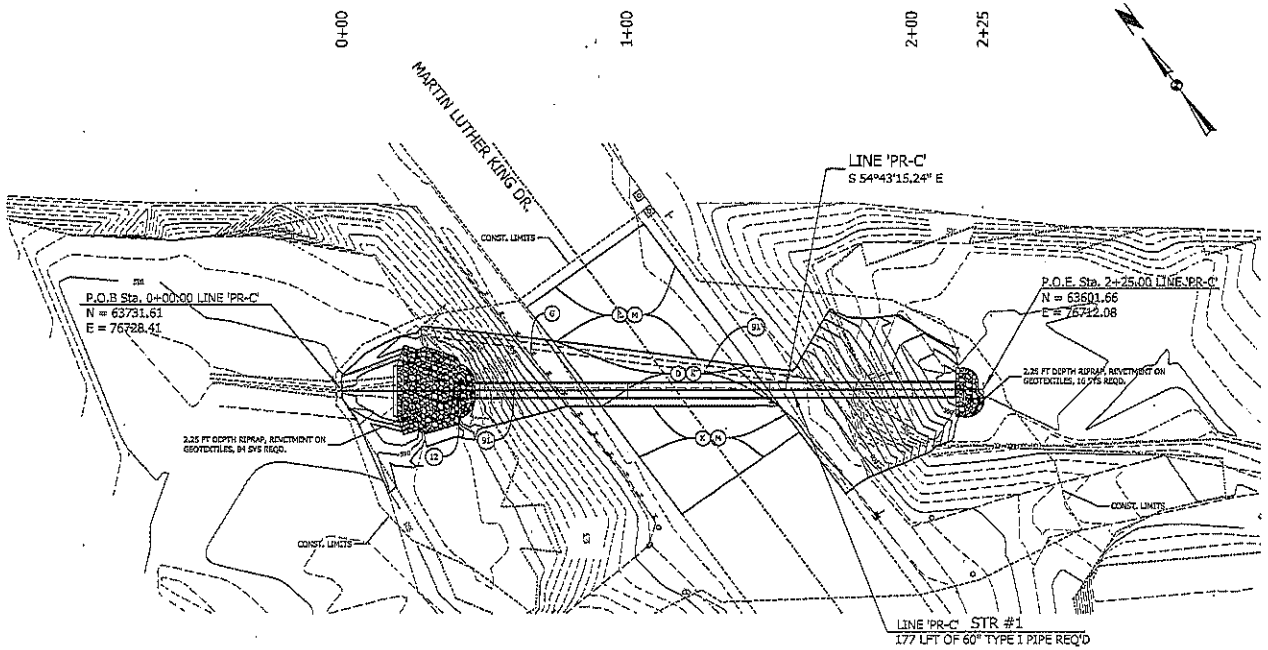
RECOMMENDED FOR APPROVAL: DESIGN ENGINEER — DATE 10/30/13	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1" = 20'	BRIDGE FILE N/A
		VERTICAL SCALE N/A	DESIGNATION 1172334
DESIGNED: RTP / DRAWN: CPH	STRUCTURE NO. 950 EROSION CONTROL AND SITE PLAN	SURVEY BOOK N/A	SHEET NO. 15 of 30
CHECKED: JRR / CHECKED: JRR		CONTRACT IR-33802	PROJECT 1172334

JASON R. BRIDGES REGISTERED No. 10403316 STATE OF INDIANA PROFESSIONAL ENGINEER



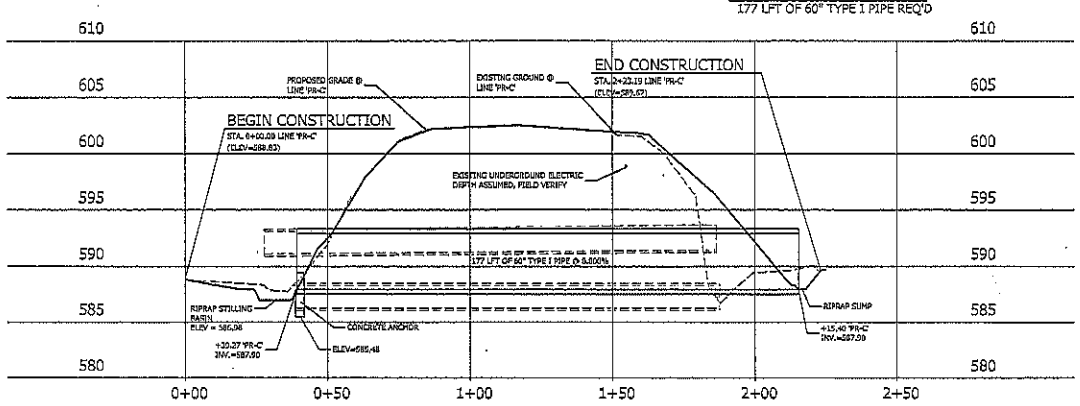
RECOMMENDED FOR APPROVAL Jason R. Rhoades 10/30/13 DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1" = 5'	BRIDGE FILE N/A
		VERTICAL SCALE N/A	DESIGNATION 1172334
DESIGNED: JRR DRAWN: CPH	FLOOD WALL NO. 3 SEEPAGE CORRECTION SITE PLAN	SURVEY BOOK N/A	SHEET NO. 16 of 20
CHECKED: RTP CHECKED: JRR		CONTRACT IR-33802	PROJECT 1172334

JASON R. RHOADES REGISTERED No. 10403316 STATE OF INDIANA PROFESSIONAL ENGINEER



LEGEND

- (12) CONCRETE ANCHOR, 60 IN.
- (9L) PIPE, REMOVE
- (D) HMA FOR STRUCTURE INSTALLATION, TYPE A TO BE: 660 LBS/SYS HMA BASE, TYPE A
- (G) GUARDRAIL, RESET
- (K) 165 LBS/SYS HMA SURFACE, TYPE A
- (M) MILLING, ASPHALT, 1.5 IN.
- EXISTING ROADWAY CENTERLINE
- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF WATER
- EXISTING ELECTRIC LINE
- EXISTING GUARDRAIL
- EXISTING POWER POLE
- EXISTING FENCE POST
- EXISTING SIGNAL SUPPORT FOUNDATION (RAIL)
- EXISTING TRAFFIC SIGN
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR/MINOR CONTOUR
- RESET GAURDRAIL
- CONSTRUCTION LIMITS
- PROPOSED RIPRAP, REVETMENT



DAVID RICHARD JACK REGISTERED No. PE10911246 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 10/30/2013

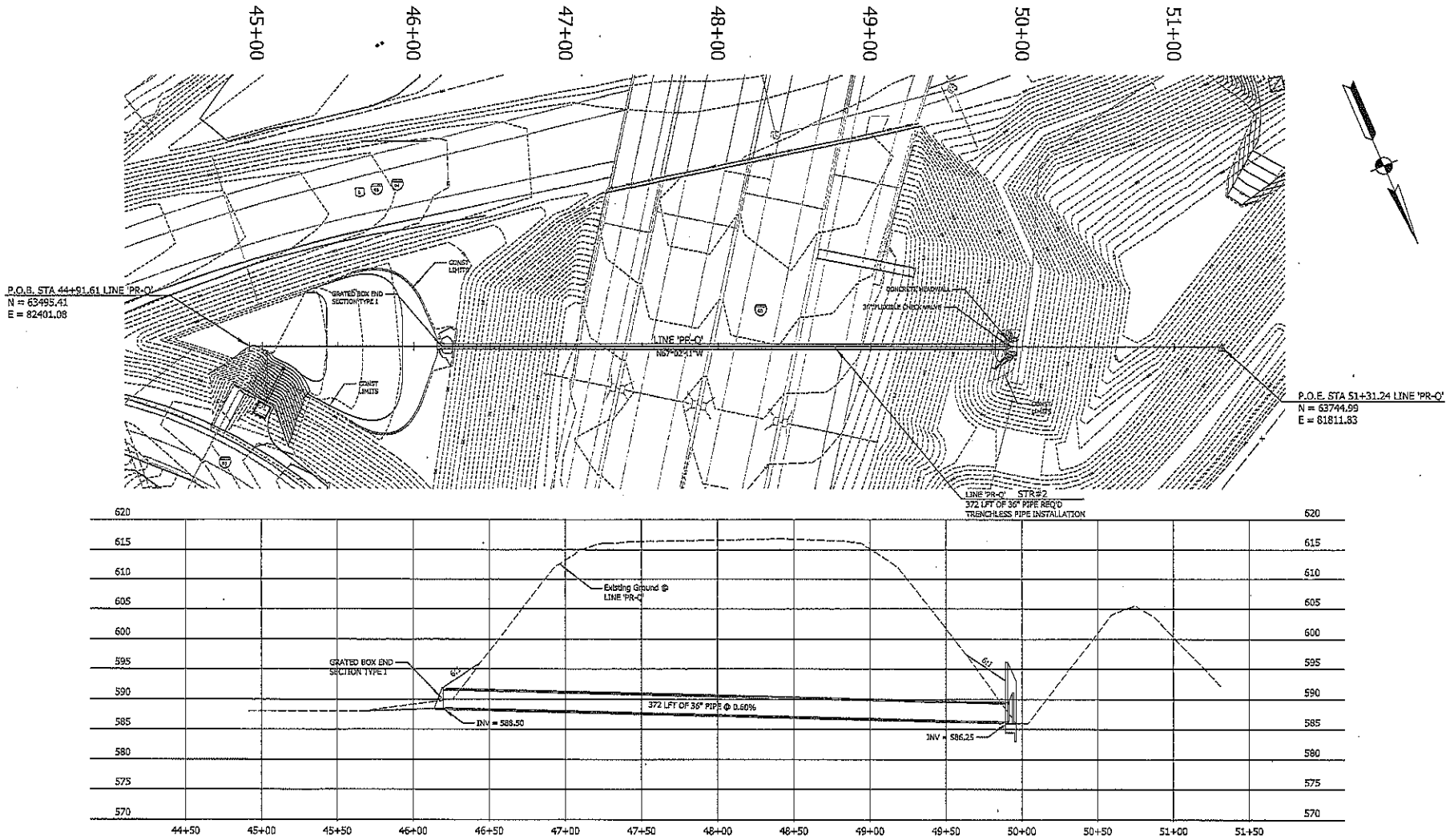
DESIGNED: WJK | DRAWN: WJK

CHECKED: DRH | CHECKED: JGC

INDIANA
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
LINE 'PR-C'

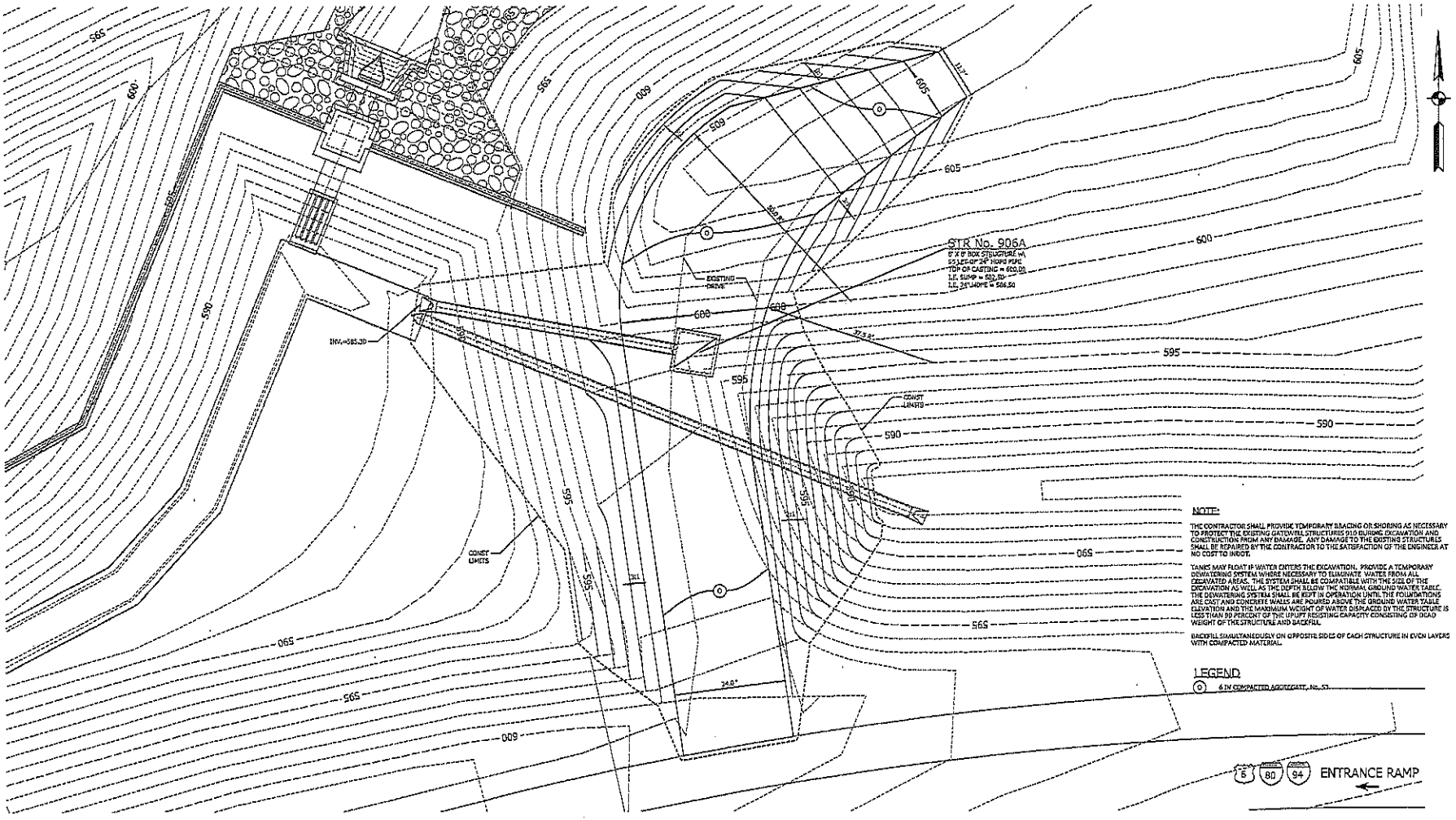
HORIZONTAL SCALE	BRIDGE FILE
1"=50'	N/A
VERTICAL SCALE	DESIGNATION
1"=5'	1172334
SURVEY BOOK	SHEETS
N/A	18 of 39
CONTRACT	PROJECT
IR-03802	1172334



RECOMMENDED FOR APPROVAL: DESIGN ENGINEER	10/30/2013 DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1"=30' / BRIDGE FILE N/A
DESIGNED: WDK	DRAWN: WDK	PLAN AND PROFILE LINE 'PR-Q'	VERTICAL SCALE N/A / DESIGNATION 1172334
CHECKED: DRH	CHECKED: JSC		SURVEY BOOK N/A / SHEETS 19 of 39
			CONTRACT DP-03802 / PROJECT 1172334

DAVID RICHARD HALL REGISTERED No. PE10911246 STATE OF INDIANA PROFESSIONAL ENGINEER

NOV 4



NOTE:

THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING OR SHORING AS NECESSARY TO PROTECT THE EXISTING GATEWELL STRUCTURES 910 DURING EXCAVATION AND CONSTRUCTION FROM ANY DAMAGE. ANY DAMAGE TO THE EXISTING STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT NO COST TO INDOT.

TANKS MAY FLOAT IF WATER ENTERS THE EXCAVATION. PROVIDE A TEMPORARY DEWATERING SYSTEM WHERE NECESSARY TO ELIMINATE WATER FROM ALL EXCAVATED AREAS. THE SYSTEM SHALL BE COMPATIBLE WITH THE SIZE OF THE EXCAVATION AS WELL AS THE DEPTH BELOW THE NORMAL GROUND WATER TABLE. THE DEWATERING SYSTEM SHALL BE KEPT IN OPERATION UNTIL THE FOUNDATIONS ARE CAST AND CONCRETE WALLS ARE POURED ABOVE THE GROUND WATER TABLE ELEVATION AND THE MINIMUM WEIGHT OF WATER DISPLACED BY THE STRUCTURE IS LESS THAN 90 PERCENT OF THE UPLIFT RESISTING CAPACITY CONSISTING OF DEAD WEIGHT OF THE STRUCTURE AND BACKFILL.

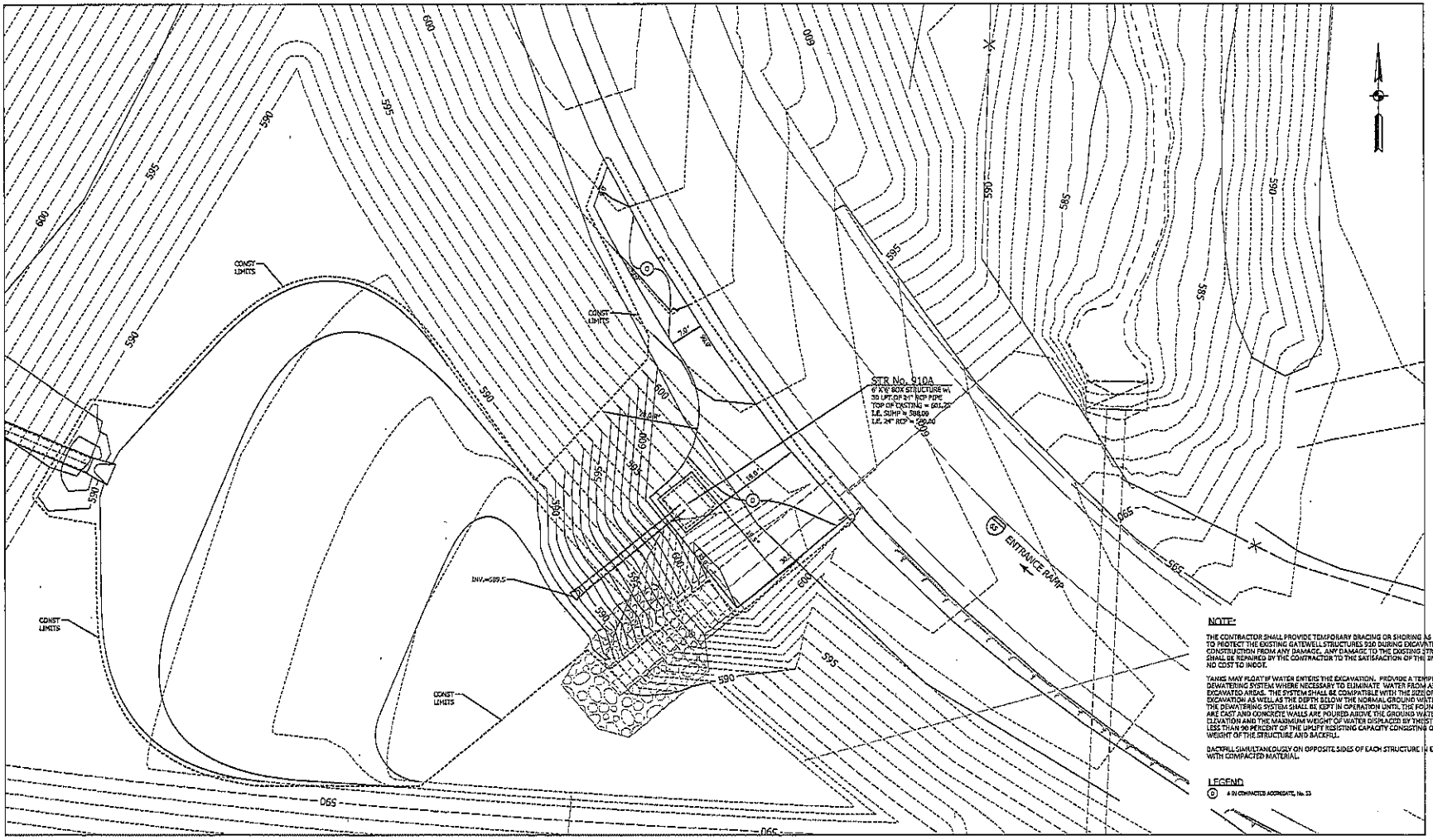
BACKFILL SIMULTANEOUSLY ON OPPOSITE SIDES OF EACH STRUCTURE IN EVEN LAYERS WITH COMPACTED MATERIAL.

LEGEND

⊙ 6 IN COMPACTED AGGREGATE, No. 53

DAVID RICHARD HALL REGISTERED No. PE10911246 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	10/30/2012 DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1"=10' / BRIDGE FILE N/A
DESIGNED: WJK	DRAWN: WJK	PUMP STATION 906 GRADING PLAN	VERTICAL SCALE N/A / DESIGNATION 1172034
CHECKED: DBH	CHECKED: MJC		SURVEY BOOK N/A / SHEETS 20 of 39
			CONTRACT IN-93902 / PROJECT 1172034



DAVID RICHARD HALL
REGISTERED
No. PE10911246
STATE OF INDIANA
PROFESSIONAL ENGINEER

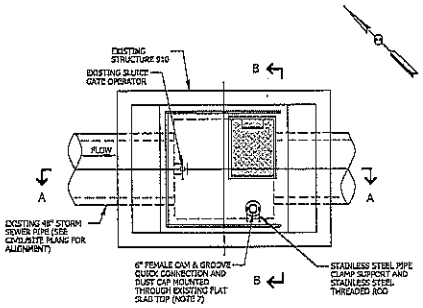
RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 10/28/2013

DESIGNED: WOK | DRAWN: WOK
CHECKED: DRH | CHECKED: JSC

INDIANA
DEPARTMENT OF TRANSPORTATION

PUMP STATION 910A
GRADING PLAN

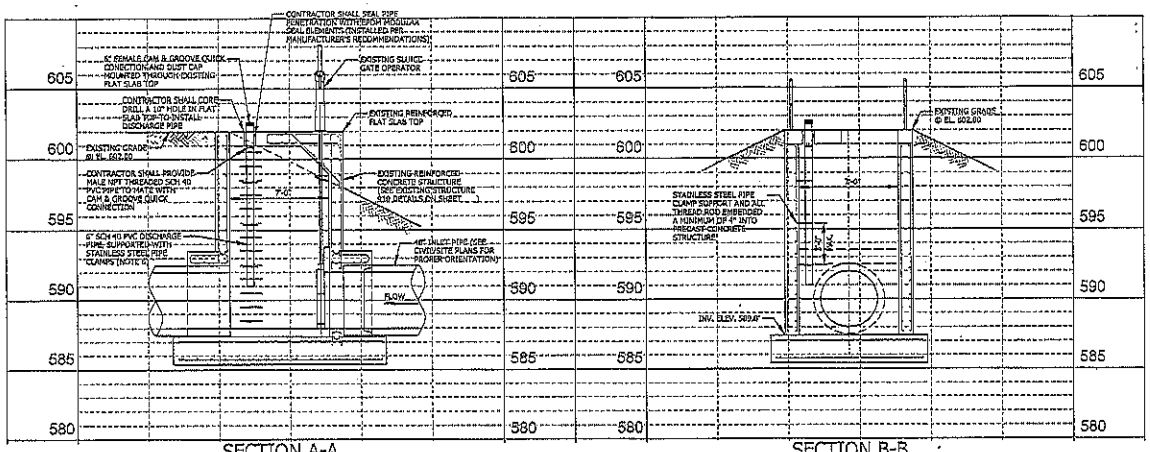
HORIZONTAL SCALE	BRIDGE FILE
1"=10'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1172334
SURVEY BOOK	SHEETS
N/A	21 of 39
CONTRACT	PROJECT
IR-13802	1172334



PLAN VIEW

MODIFICATION NOTES

1. Any and all dewatering required during construction shall be the responsibility of the Contractor.
2. Orientation of piping, ducts/conduits, equipment etc. may vary. Contractor to coordinate with equipment locations shown on other sheets.
3. Dimensions not shown to scale are indicated as N.T.S.
4. Contractor responsible for equipment orientation.
5. All fasteners and mounting hardware shall be stainless steel.
6. Contractor shall support vertical pipe with stainless steel plan clamp fastened to structure with 1/2" stainless steel all thread rods (embedded a min. of 4") and Hilti-RE 500 epoxy adhesive. Pipe clamps shall be spaced a maximum of 4 ft. apart.
7. Contractor shall locate existing rebar by x-ray, or approved similar method, prior to coring 10" dia. hole in flat slab top to ensure that existing rebar is not damaged or cut during modifications to the structure.



SECTION A-A
SCALE: ¼" = 1'-0"

SECTION B-B
SCALE: ¼" = 1'-0"

JOHN P. CAMUSO
REGISTERED
No. PE11012145
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE 10/10/2005	INDIANA DEPARTMENT OF TRANSPORTATION
DESIGNED: KB	DRAWN:		STRUCTURE 910 MODIFICATIONS TO EXISTING STRUCTURE
CHECKED: JPC	CHECKED:		

SCALE	BRIDGE FILE
1"=10'	N/A
	DESIGNATION
	1172334
SURVEY BOOK	SHEETS
N/A	22 of 39
CONTRACT	PROJECT
DR-33002	1172334

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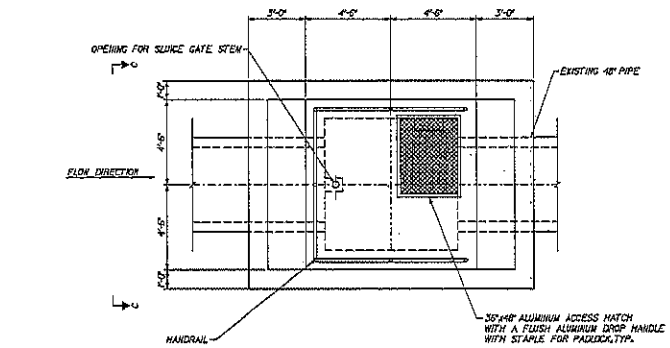
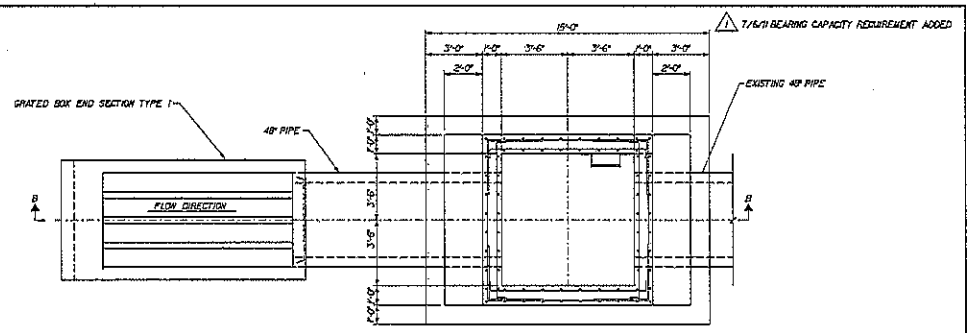


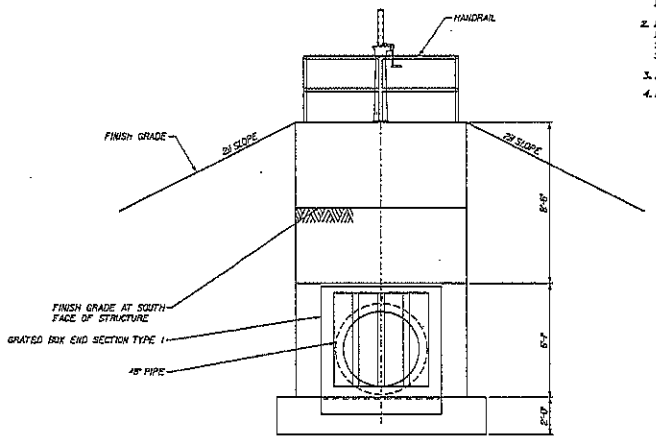
TOP PLAN VIEW



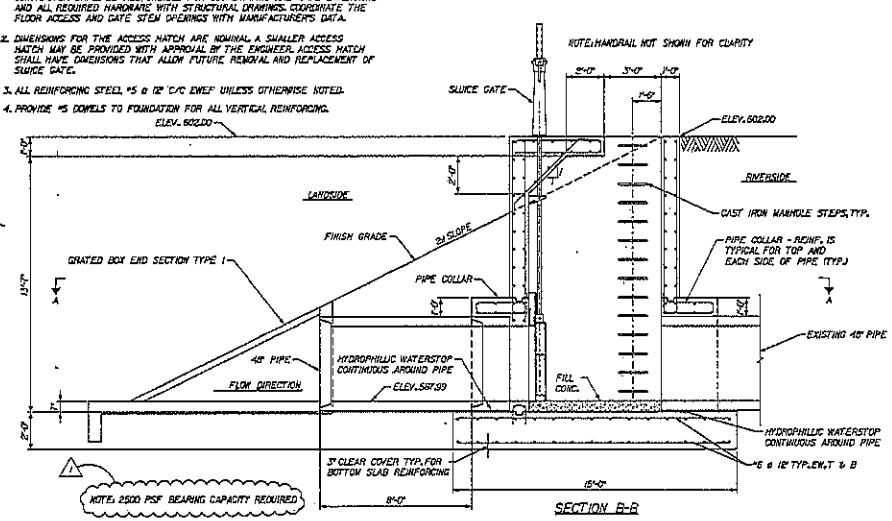
SECTION A-A

NOTES:

1. SLUICE GATE DIMENSIONS AND LIFTING HARDWARE VARY PER MANUFACTURER. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE GATE DIMENSIONS AND ALL REQUIRED HARDWARE WITH STRUCTURAL DRAWINGS. COORDINATE THE FLOOR ACCESS AND GATE STEM OPENINGS WITH MANUFACTURER'S DATA.
2. DIMENSIONS FOR THE ACCESS HATCH ARE NOMINAL. A SMALLER ACCESS HATCH MAY BE PROVIDED WITH APPROVAL BY THE ENGINEER. ACCESS HATCH SHALL HAVE DIMENSIONS THAT ALLOW FUTURE REMOVAL AND REPLACEMENT OF SLUICE GATE.
3. ALL REINFORCING STEEL #5 @ 12" C/C EWEF UNLESS OTHERWISE NOTED.
4. PROVIDE #5 DOWELS TO FOUNDATION FOR ALL VERTICAL REINFORCING.



ELEVATION C-C



SECTION B-B

JEFFREY ROSS BALLARD REGISTERED No. 860191 STATE OF INDIANA PROFESSIONAL ENGINEER	RECOMMENDED FOR APPROVAL: DESIGN ENGINEER 7/16/2011 DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE: 1/4" = 1'-0" / BRIDGE FILE: N/A
	DESIGNED: MJT / DRAWN: JRB	STRUCTURE NO. 910 DETAILS	VERTICAL SCALE: 1/4" = 1'-0" / DESIGNATION: 0002005
	CHECKED: JRB / CHECKED: JRB		SURVEY BOOK: N/A / SHEET NO.: 53 of 108
			CONTRACT: IR-33005 / PROJECT: 0002005

JOHN P. CARUSO REGISTERED No. PE11012145 STATE OF INDIANA PROFESSIONAL ENGINEER	RECOMMENDED FOR APPROVAL: DESIGN ENGINEER 10/10/2013 DATE	INDIANA DEPARTMENT OF TRANSPORTATION	SCALE: N.T.S. / BRIDGE FILE: N/A
	DESIGNED: KB / DRAWN:	EXISTING STRUCTURE 910 DETAILS (FOR INFORMATIONAL PURPOSES ONLY)	DESIGNATION: 1172334
	CHECKED: JPC / CHECKED:		SURVEY BOOK: N/A / SHEETS: 23 of 39
			CONTRACT: IR-33002 / PROJECT: 1172334

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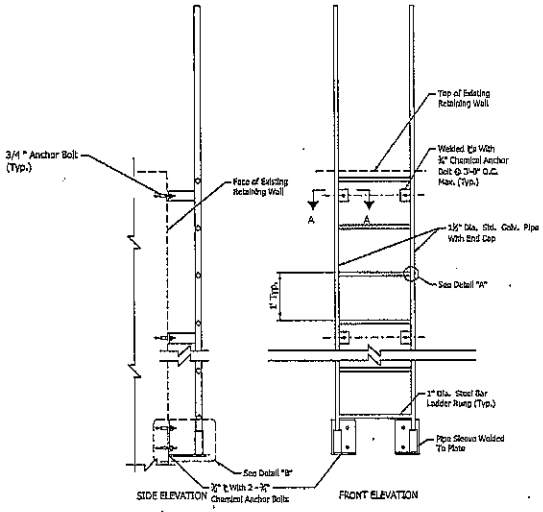
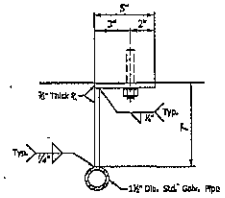
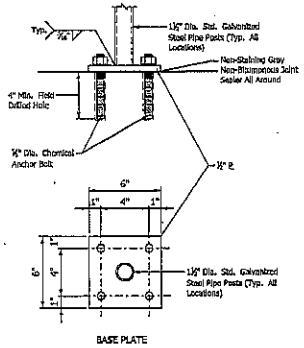


ACCESS LADDER DETAILS
N.T.S.



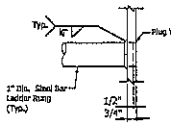
SECTION A-A
N.T.S.



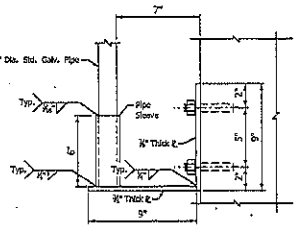
POST NOTE:

1. All members shall be galvanized after fabrication.

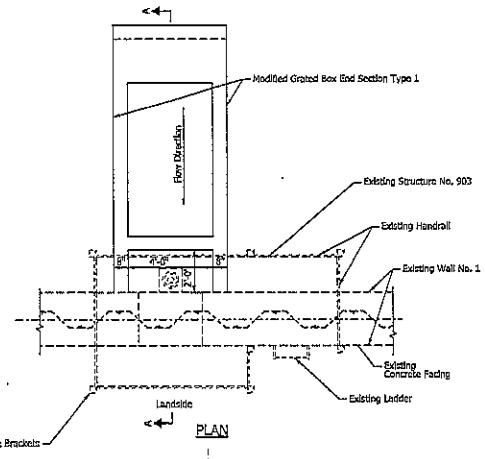
POST MOUNTING DETAILS
N.T.S.



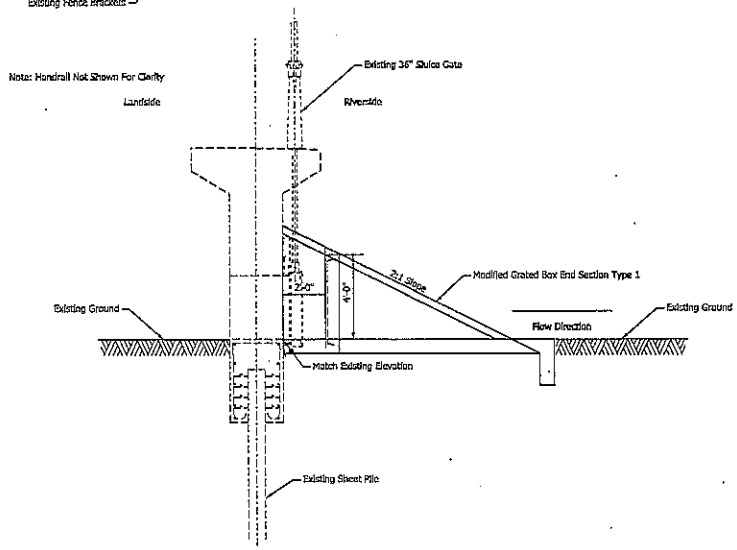
DETAIL "A"
N.T.S.



DETAIL "B"
N.T.S.

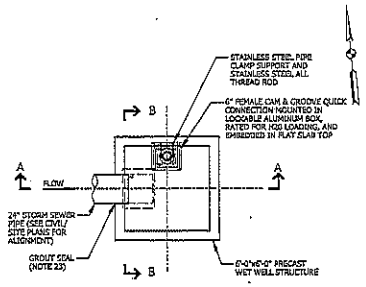


PLAN

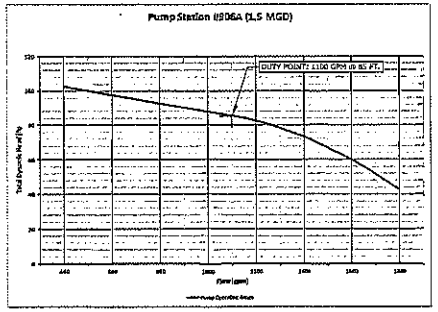


SECTION A-A

JEFFREY ROSS BALLARD REGISTERED No. 860191 STATE OF INDIANA PROFESSIONAL ENGINEER	RECOMMENDED FOR APPROVAL: Jeffrey R. Ballard, 10/30/13 — DESIGN ENGINEER, DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE: ¾" = 1'-0"
	DESIGNED: MLT — DRAWN: CPH	STRUCTURE NO. 903 DETAILS	VERTICAL SCALE: ¾" = 1'-0"
	CHECKED: JRB — CHECKED: JRB		SURVEY BOOK: N/A
			CONTRACT: 1R-33802
			BRIDGE FILE: N/A
			DESIGNATION: 1172334
			SHEET NO.: 24 of 36
			PROJECT: 1172334



PLAN VIEW

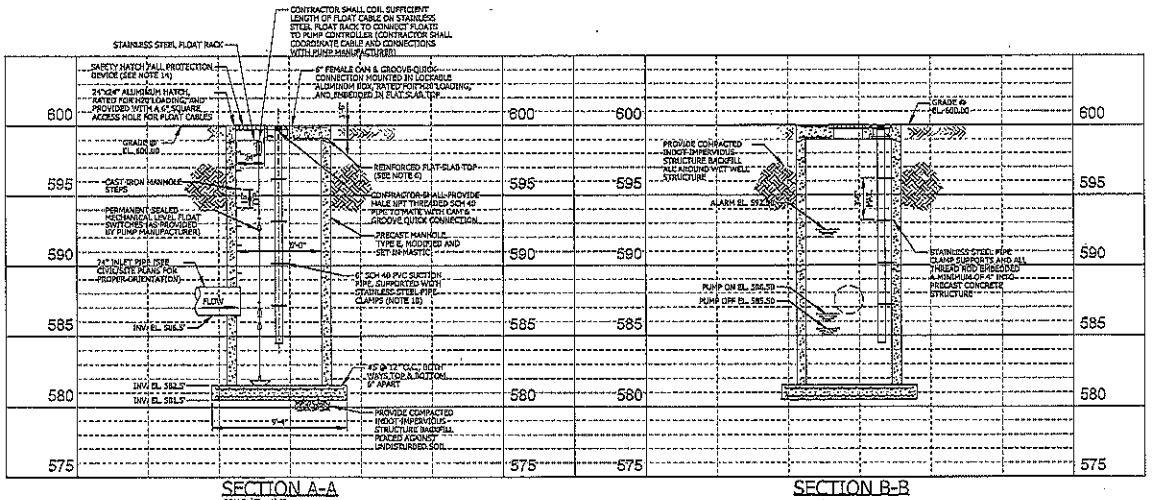


PUMP SYSTEM HEAD CURVE

NOTE: PUMP SP-906A SHALL BE CAPABLE OF MEETING THE RATED CONDITIONS INDICATED, OR AS REQUIRED BY THE PUMP MANUFACTURER.

WET WELL STRUCTURE NOTES

1. Any and all dewatering required during construction shall be the responsibility of the Contractor.
2. Orientation of piping, ducts/conduits, equipment etc. may vary. Contractor to coordinate with equipment locations shown on other sheets.
3. Dimensions not shown to scale are indicated as N.T.S.
4. Location orientation and number of embedded and/or buried ducts & conduits shall be the responsibility of the contractor. Minimum number of ducts/conduits are shown on duct/conduit plan. Cables integrally wired and provided with pumps and floats to be of sufficient length to connect to controller without splicing, unless specifically shown on drawings.
5. Use of pumps supplied under this contract for the purpose of dewatering during construction, will not be permitted.
6. Precast concrete structures shall be reinforced to meet H20 truck loading requirements, at a minimum. Contractor shall provide structure details, calculations and shop drawings stamped by a professional engineer licensed in the State of Indiana.
7. Hatches shall be aluminum with stainless steel hardware and lift spring. Load rating shall meet H20 requirements for occasional, low speed traffic. Hatches shall be provided with recessed lift handle, alarm lock, and recessed padlock clip. Contractor shall coordinate hatch size and orientation as required.
8. Contractor shall be responsible for equipment orientation.
9. Provide plastic coated 10 lb min. anchor for float switches to prevent movement.
10. All fasteners, mounting hardware and lift chains shall be stainless steel.
11. Exterior and interior surfaces of wet well structure below grade to be coated as follows: exterior with bituminous water proofing and interior with coating equal to Tnemec series 46-465 H.S. Tnemecol. Two coatings, each 8 mils thick (dry) to be provided.
12. See System Operation, located on this sheet, for details of wet well operation.
13. The float switch system shall operate the pump on/off set points. The Contractor shall coordinate connection to pump controller with the pump manufacturer.
14. Safety grate shall span the entire opening of each hatch. A single safety grate spanning all hatches will not be acceptable. Grate shall be capable of supporting 300 PSF.
15. Prior to fabrication, contractor shall verify grade elevations and inverts of existing/proposed sewers and structures. Contractor shall coordinate inverts such that joints do not fall at location(s) of pipe penetrations.
16. Provide water tight joint by filling annular space between pipe opening and pipe with sealing grout. Typical for all piping which penetrates wet well structure.
17. Backfill shall be impervious structure backfill placed in lift thicknesses not exceeding 8 in. and compacted in accordance to the Contract Specifications.
18. Contractor shall support vertical pipe with stainless steel pipe clamp fastened to structure with 3/8" stainless steel all thread rods (embedded a min. of 4") and Hilti-HE 500 epoxy adhesive. Pipe clamps shall be spaced a maximum of 3 ft. apart.



SECTION A-A

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

SECTION B-B

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

SYSTEM OPERATION

System operation shall be by means of a portable diesel pump. As sump level rises within the structure, the second lowest float switch ("pump on") shall be energized and start the pump. Once the sump levels lowers back down to the first float switch ("pump off") the pump shall be de-energized. If the sump level continues to rise reaching the third float switch (high water level alarm), an alarm shall notify the Owner via cellular communication. Contractor to coordinate.

CAUTION:

DO NOT ALLOW EXCAVATION TO FILL WITH WATER. STRUCTURE WILL FLOAT. CONTRACTOR TO TAKE APPROPRIATE PRECAUTIONS, AND PROVIDE DEWATERING AS REQUIRED.

JOHN P. CARIGO REGISTERED No. PE11012145 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 10/26/2023

DESIGNED: KB | DRAWN: | CHECKED: JPC | CHECKED:

INDIANA DEPARTMENT OF TRANSPORTATION

PUMP STATION 906A WET WELL STRUCTURE DETAILS

SCALE	BRIDGE FILE
0'	N/A
	DESIGNATION
	1172334
SURVEY BOOK	SHEETS
N/A	25 of 39
CONTRACT	PROJECT
IR-32832	1172334

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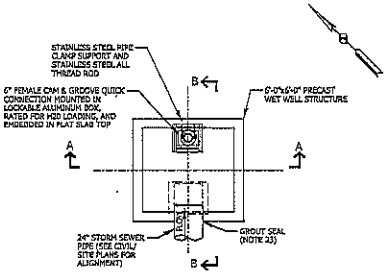
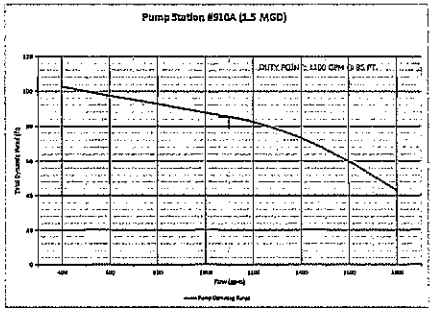


PLAN VIEW

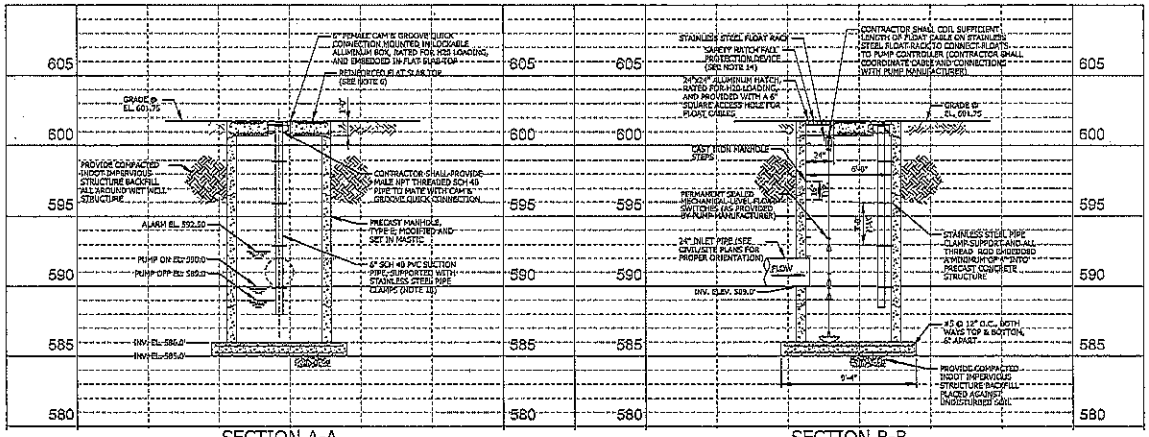


PUMP SYSTEM HEAD CURVE

NOTE: PUMP EP-910A SHALL BE CAPABLE OF MEETING THE RATED CONDITIONS INDICATED, OR AS REQUIRED BY THE PUMP MANUFACTURER.

WET WELL STRUCTURE NOTES

1. Any and all dewatering required during construction shall be the responsibility of the Contractor.
2. Orientation of piping, ducts/conduits, equipment etc. may vary. Contractor to coordinate with equipment locations shown on other sheets.
3. Dimensions not shown to scale are indicated as N.T.S.
4. Location orientation and number of embedded and/or buried ducts & conduits shall be the responsibility of the contractor. Minimum number of ducts/conduits are shown on duct/conduit plan. Conduit integrity must and provided with pumps and floats to be of sufficient length to connect to controller without splicing, unless specifically shown on drawings.
5. Use of pumps supplied under this contract for the purpose of dewatering during construction, will not be permitted.
6. Precast concrete structures shall be reinforced to meet H520 truck loading requirements, at a minimum. Contractor shall provide structural details, calculations and shop drawings stamped by a professional engineer licensed in the State of Indiana.
7. Hatches shall be aluminum with stainless steel hardware and lift eyes. Load rating shall meet H20 requirements for occasional, low speed traffic. Hatches shall be provided with recessed lift handle, slam lock, and recessed padlock clip. Contractor shall coordinate hatch size and orientation as required.
8. Contractor shall be responsible for equipment orientation.
9. Provide plastic coated 10 lb min. anchor for float switches to prevent movement.
10. All fasteners, mounting hardware and lift chains shall be stainless steel.
11. Exterior and interior surfaces of wet well structure below grade to be coated as follows: exterior with bituminous water proofing and interior with coating equal to Thoroseal series 45-455 H.S. Thoroseal. Two coatings, each 8 mils DFT (dry) to be provided.
12. See System Operation, located on this sheet, for details of wet well operation.
13. The float switch system shall operate the pump on/off set points. The Contractor shall coordinate connection to pump controller with the pump manufacturer.
14. Safety grate shall span the entire opening of each hatch. A single safety grate spanning all hatches will not be acceptable. Grate shall be capable of supporting 300 PSF.
15. Prior to fabrication, contractor shall verify grade elevations and inverts of existing/proposed sewers and structures. Contractor shall coordinate inverts such that joints do not fall at location(s) of pipe penetrations.
16. Provide water tight joint by filling annular space between pipe opening and pipe with casting grout. Typical for all pipes which penetrates wet well structure.
17. Backfill shall be impervious structure backfill placed in lift thicknesses not exceeding 8 in. and compacted in accordance to the Contract Specifications.
18. Contractor shall support vertical pipe with stainless steel pipe clamp fastened to structure with 5/8" stainless steel all thread rods (embedded a min. of 4") and HSI-RX 500 epoxy adhesive. Pipe clamps shall be spaced a maximum of 3 ft. apart.



SECTION A-A
SCALE: 1/4" = 1'-0"

SECTION B-B
SCALE: 1/4" = 1'-0"

SYSTEM OPERATION

System operation shall be by means of a portable diesel pump. As sump level rises within the structure, the second lowest float switch ("pump on") shall be energized and start the pump. Once the sump levels lowers back down to the first float switch ("pump off") the pump shall be de-energized. If the sump level continues to rise reaching the third float switch (high water level alarm), an alarm shall notify the Owner via cellular communication. Contractor to coordinate.

CAUTION:

DO NOT ALLOW EXCAVATION TO FILL WITH WATER. STRUCTURE WILL FLOAT. CONTRACTOR TO TAKE APPROPRIATE PRECAUTIONS, AND PROVIDE DEWATERING AS REQUIRED.

JOHN P. CARLINO INDIANA No. PE11012145 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — DATE 10/30/2015

DESIGNED: KS — DRAWN: —

CHECKED: JPC — CHECKED: —

INDIANA DEPARTMENT OF TRANSPORTATION

PUMP STATION 910A
WET WELL STRUCTURE DETAILS

SCALE	BRIDGE FILE
4"	N/A
	DESIGNATION
	1172334
SURVEY BOOK	SHEETS
N/A	26 of 39
CONTRACT	PROJECT
IR-03002	1172334

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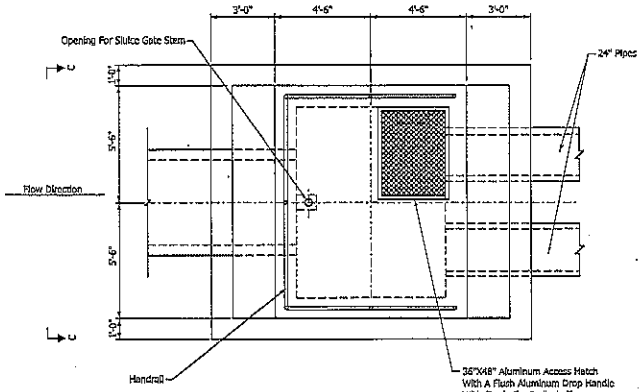
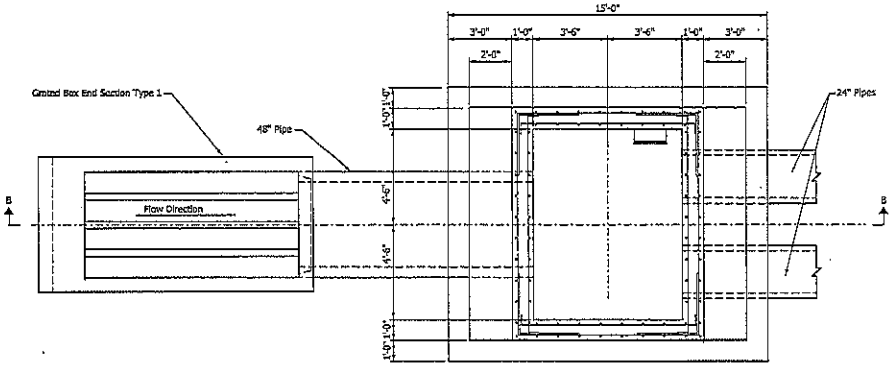


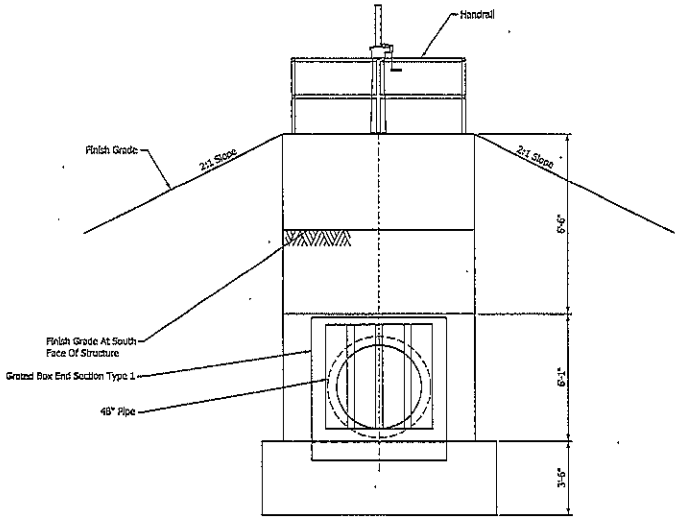
TOP PLAN VIEW



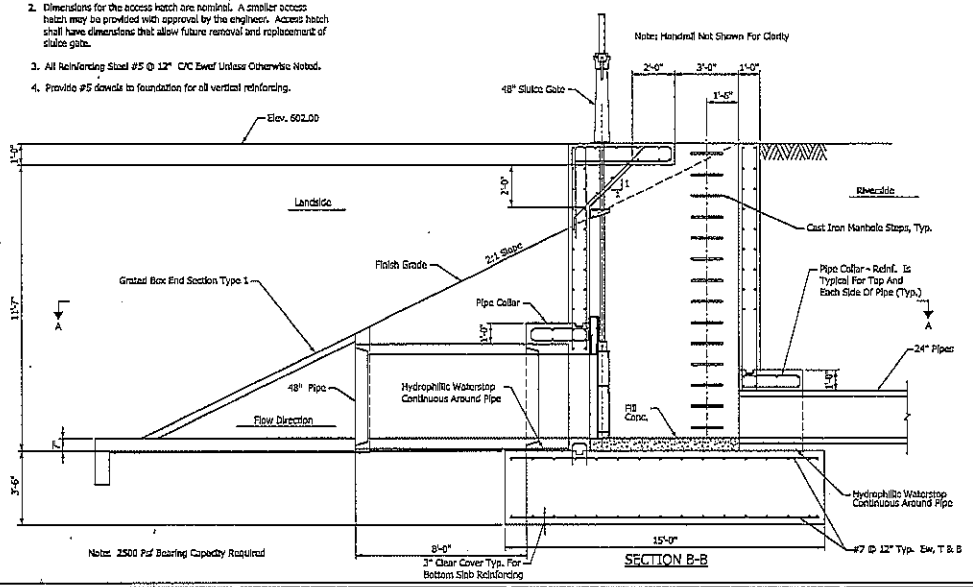
SECTION A-A

Notes:

1. Sluice gate dimensions and lifting hardware vary per manufacturer. Contractor shall be responsible for coordinating the gate dimensions and all required hardware with structural drawings. Coordinate the floor access and gate stem openings with manufacturer's data.
2. Dimensions for the access hatch are nominal. A smaller access hatch may be provided with approval by the engineer. Access hatch shall have dimensions that allow future removal and replacement of sluice gate.
3. All Reinforcing Steel #5 @ 12" C/C Ewef Unless Otherwise Noted.
4. Provide #5 dowels to foundation for all vertical reinforcing.



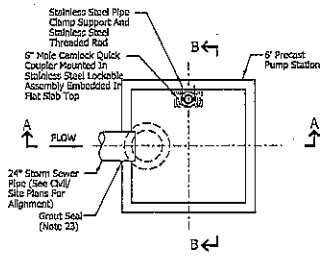
ELEVATION C-C



Note: 2500 Psf Bearing Capacity Required

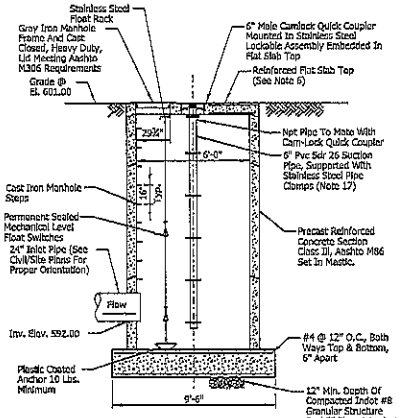
SECTION B-B

JEFFREY ROSS BALLARD REGISTERED No. 860191 STATE OF INDIANA PROFESSIONAL ENGINEER	RECOMMENDED FOR APPROVAL Jeffrey R. Ballard 10/30/13 DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 3/8" = 1'-0" / BRIDGE FILE N/A
	DESIGNED: MDT / DRAWN: JRR	STRUCTURE NO. 950 DETAILS	VERTICAL SCALE 3/8" = 1'-0" / DESIGNATION 1172334
	CHECKED: JRD / CHECKED: JRD		SURVEY BOOK N/A / SHEET NO. 27 of 39
			CONTRACT 1R-33802 / PROJECT 1172334

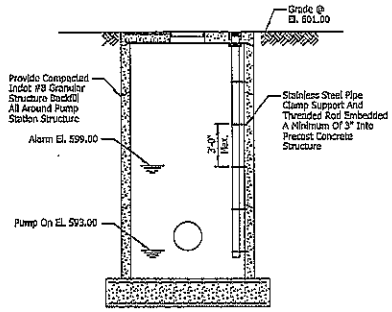


PLAN VIEW

Note:
For Pump Information See Sheet No. 23



SECTION A-A
Scale: ¼" = 1'-0"



SECTION B-B
Scale: ¼" = 1'-0"

PUMP STATION NOTES

1. Any and all dewatering required during construction shall be the responsibility of the contractor.
2. Orientation of piping, ducts/conduits, equipment etc. may vary. contractor to coordinate with equipment locations shown on other sheets.
3. Dimensions not shown to scale are indicated as nts..
4. Location orientation and number of embedded and/or buried ducts & conduits shall be the responsibility of the contractor. minimum number of ducts/conduits are shown on duct/conduit plan. cables integrally wired and provided with pumps and floats to be of sufficient length to connect to controller without splicing, unless specifically shown on drawings.
5. Use of pumps supplied under this contract for the purpose of dewatering during construction, will not be permitted.
6. Precast concrete structures shall be reinforced to meet hs20 truck loading requirements, at a minimum. contractor shall provide structure details, calculations and shop drawings stamped by a licensed structural engineer.
7. Manhole frame and lid shall be cast gray iron meeting aashto m306 load rating. contractor to coordinate the location of and orientation of the frame and lid as required.
8. Contractor responsible for equipment orientation.
9. Provide plastic coated anchor for float switch to prevent movement.
10. All fasteners, mounting hardware and lift chains shall be stainless steel.
11. Exterior and interior surfaces of wet well structure below grade to be coated as follows: exterior with bituminous water proofing and interior with coating equal to thermec series 46-465 h.b. thermcol. two coatings, each 8 mils thick (dry) to be provided.
12. See operation of system for details of lift station operation. refer to equipment specification sheet.
13. The float switch system shall operate as a back-up system. a primary level management system shall be provided and shall consist of a pressure transducer and controller.
14. Prior to fabrication, contractor shall verify grade elevations and inverts of existing/proposed sewers and structures. contractor shall coordinate inverts such that joints do not fall at location(s) of pipe penetrations.
15. Provide water tight joint by filling annular space between pipe opening and pipe with sealing grout. typical for all piping which penetrates pump station structure.
16. Backfill shall be granular structure backfill placed in loose lift thicknesses not exceeding 8 in. and compacted in accordance to the contract specifications.
17. Contractor shall support vertical pipe with stainless steel pipe clamp fastened to structure with ½" stainless steel threaded rods (embedded a min. of 3") and hilti-re 500 epoxy adhesive. pipe clamps shall be spaced a maximum of 3 ft. apart.

SYSTEM OPERATION

System operation shall be by means of a portable diesel pump. as sump level rises within the structure, the lowest float switch shall be energized and start the pump. once the sump levels lowers back down to the first float switch the pump shall be de energized. if the pump level continues to rise, reaching the second float switch, an alarm shall notify the owner.

Caution:
Do not allow excavation to fill with water. Structure will float. Contractor to take appropriate precautions, and provide dewatering as required.

JASON R. RIBANDO
REGISTERED
No. 10403316
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	Jason R. Ribando, DESIGN ENGINEER	10/30/13 DATE	
DESIGNED: RTP	DRAWN: CPH		
CHECKED: JRR	CHECKED: RTP		

INDIANA
DEPARTMENT OF TRANSPORTATION

PUMP STATION STRUCTURE NO. 950A
PUMP STATION DETAILS

HORIZONTAL SCALE	BRIDGE FILE
1/4" = 1'-0"	N/A
VERTICAL SCALE	DESIGNATION
N/A	1172334
SURVEY BOOK	SHEET NO.
	28 of 38
CONTRACT	PROJECT
IR-33802	1172334

MECHANICAL/ELECTRICAL GENERAL NOTES

1. Utilities exist in the area where work is proposed. Actual depth of utilities are unknown. Should any given utility interfere with the proposed work, pipe routing, etc., the Contractor shall, at no extra cost to the Owner, resolve any and all interference problems. Contractor shall be responsible for coordination of work as required.
2. All removal or excavation items being disposed of at an uncontaminated soil fill operation or Clean Construction and Demolition Debris (CCDD) fill site shall meet the requirements of State disposal requirements. All costs associated with meeting these requirements shall be included in the unit price cost for the associated removal or excavation items in the contract. These costs shall include but are not limited to all required testing, lab analysis, certification by a licensed professional Owner's Representative, and state and local tipping fee.
3. All utility companies shall be contacted and their facilities shall be located prior to any work in any easement, right-of-way, or suspected utility location.
4. All work shall be in accordance with the latest edition of the following specifications, which are hereby made a part hereof:
   - A. Indiana Department of Transportation Standard Specifications, latest edition.
   - B. Indiana design manual
   - C. Owner and current municipal codes
   - D. National Electric Code.

   Where contradictions occur between the above listed specification, codes and/or contract documents, the more stringent shall apply.
5. The contract documents are not intended to show all details of work to by performed or equipment to be supplied. The intent of the contract documents is to illustrate the conceptual design and layout. The Contractor shall be knowledgeable and regularly engaged in the type of work described by these contract documents, and shall be responsible for understanding their intent. Any work to be performed or item of equipment to be supplied which is not specifically called for by these contract documents but which is necessary to provide a complete and successful working system shall be included in the Contractor's scope of work at no additional cost to the Owner.
6. It is the Contractor's responsibility to determine all material quantities and appraise himself/herself of all conditions. The contract price submitted by the Contractor shall be considered as the total cost for the complete project. No claims for extra work will be recognized due to the contractor's failure to understand the scope of work.
7. Approximate 100 year flood elevation, if applicable, in the area of concern is shown on the site plans.
8. The work performed under this contract shall in no way interfere with the normal operation of any existing utility service. The Contractor shall furnish all necessary items of equipment required to maintain such normal operation at no additional cost to the Owner. The cost associated for this work shall be considered incidental to the cost of the contract.
9. Orientation of piping, conduits, equipment, etc. may vary. Contractor to coordinate same with the Owner.
10. Any and all dewatering required to keep excavations dry as well as bracing and shoring excavated walls during utility operations shall be the responsibility of the Contractor. Compliance with the above will be incidental to the utility installations.
11. Soil erosion protection shall be in accordance with IDEM standards and specifications for soil erosion and sediment control. All disturbed areas shall be fine graded, top-soil restored (min. 4 inches), and sod applied unless otherwise specified on the plans.
12. The Contractor shall be responsible for means and methods and techniques of construction. Owner's Representative/ Engineer's review of same does not relieve Contractor of this responsibility. Contractor shall be solely responsible for safety and job site safety.
13. Any and all by-pass pumping as may be required for the construction of the proposed improvements shall be the responsibility of the Contractor.
14. All equipment and materials provided shall comply with Owner's design requirements.

RECORD DRAWINGS & UTILITY NOTES

1. Certain information shown on these drawings has been obtained from drawings of record. Contractor shall verify such information prior to actual start of work. Where discrepancies are discovered the Contractor shall immediately notify the Owner's Representative. Failure by the Contractor to immediately notify the Owner's Representative of such discrepancies shall result in the Contractor bearing the full burden of all risks/costs attributed to the discovered discrepancy.
2. Easements for the existing utilities, both public and private, and utilities within public right-of-ways are shown on the drawings according to available records. The Contractor shall be responsible for determining the exact location in the field of these utility lines and their protection from damage due to construction operations.
3. The existing buried utility lines, public and private, are shown on the drawings according to information available from records. The location and depth of existing buried utility lines shown on the drawings is therefore approximate and may vary from field conditions. It shall be the Contractor's responsibility to determine the exact location and depth of buried utility lines. The Contractor shall be responsible for notifying all utility companies to mark the location of buried utilities in the field before beginning excavation. The Contractor shall be responsible for the protection of all utility lines and shall repair any utility lines he damages at his own expense.
4. Before installing any buried pipe, the Contractor shall carefully uncover all existing buried utility lines which cross new construction so he can determine their exact location and depth. If existing buried utility lines are encountered that conflict with new construction, the Contractor shall notify the Owner's Representative so that the conflict may be resolved.

SUBSURFACE OPERATION PLAN

Before commencing activity at the site, the Contractor shall prepare an "operation plan" drawing showing the sequence of operation and timing that is proposed for the subsurface work. This plan drawing shall be exclusive of all other plans and schedules required under the contract. The plan shall show in plan and profile supplemented by sketches, text and bar diagrams the extent and sequence of work required for the subsurface construction. The plan shall show all excavation, sheeting, protection, dewatering procedures, utilities support, drains and all other features required to perform the subsurface operation. The plan shall be submitted to the Owner's Representative for review. Insofar as possible all information shall be shown on the plan for convenience of interpretation under field conditions. The plan shall be sealed by an Illinois registered structural engineer.

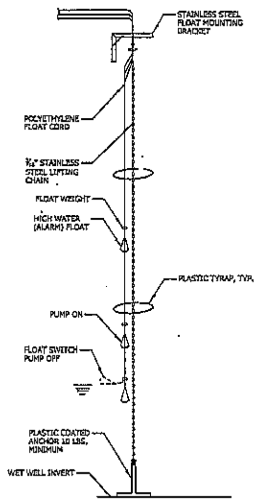
All sheeting/shoring and earth retention/protection of the excavations, around the project work site shall be the sole responsibility of the Contractor.

FINAL ACCEPTANCE AND INSPECTION

1. Upon completion of all specified work and the installation of equipment, the Contractor shall perform final tests of the equipment to verify that the installation performs satisfactorily. Acceptance tests conducted on the completed installation will be witnessed and subject to the approval of the Owner. No separate payment will be made for final testing. The cost of final test shall be considered incidental to the work. As a minimum testing shall include but not be limited to operational testing of all devices and equipment. Equipment suppliers shall provide factory trained field personnel for final check-out, start-up and testing. Prior to such final testing all piping shall be hydrostatically tested in accordance with industry standards.
2. When all the work as shown on the drawings and included in the specifications has been completed and the equipment has been installed, tested, placed into operation, and subsequently has satisfactorily operated for 45 days, a thorough inspection of the equipment will be made by the Owner in the company of the Contractor, and if the work is found to comply with the drawings and specifications, the work will be formally accepted and the Contractor so notified as to the final acceptance of the work by the Owner. Notification of final acceptance will be in writing.
3. Should any work be found to be inadequate, faulty, or otherwise not in accordance with these drawings and specifications, it shall be the responsibility of the Contractor to correct such work at his/ her own expense, prior to final acceptance.
4. The period of equipment and workmanship guarantees shall commence immediately after final acceptance of the work. Upon being notified of the final acceptance of the work, the Contractor shall supply to the Owner, a certificate of guarantee which shall guarantee all equipment and workmanship under the Contractor's scope of work for a period of one year.
5. Upon final acceptance the Contractor shall provide record drawings of the work to the Owner's Representative, both in print and electronic versions.

SHOP DRAWING REVIEW NOTES

1. The Contractor shall submit for review dimensioned outline shop drawings showing the general arrangement of the equipment to be furnished, and items to be installed. As a minimum four copies of all shop drawings shall be submitted for review.
2. Before proceeding with manufacture of the equipment, the Contractor shall submit for review general assembly shop drawings, subassembly shop drawings, detail shop drawings, calculations, design data, catalog cuts and similar engineering documents required to demonstrate fully that all parts will conform to the provisions and intent of the drawings and specifications and to the requirements of their installation, operation, and maintenance. These shop drawings shall show all necessary dimensions and fabrication details, including the design of welded and bolted joint connections, tolerances on fits and clearances, and all field joints and subassemblies in which the Contractor proposes to ship the equipment. Design criteria, calculations, and detailed specifications, shall be submitted for the design of all major components and for other features or details when requested by the Owner.
3. All submittals by the Contractor shall be certified by the respective equipment manufacturer.
4. The Contractor shall submit complete full-line wiring diagrams covering all equipment furnished by him. The Contractor shall furnish shop drawings of switch developments for all instrument and control switches and internal connection diagrams for all instruments, relays, regulators, etc.
5. Shop drawings shall include electrical devices, accessories and wiring furnished as component parts of mechanical equipment and shall show arrangement and dimensions.
6. The Contractor shall prepare and submit shop drawings for all work areas, indicating solutions to space problems and coordination with requirements of existing conditions.
7. Prior to final inspection provide four duplicate loose leaf three ring bound copies of operations and maintenance manuals in durable covers of the following items organized and tab indexed in accordance with the specifications format as follows:
   - A. Maintenance and operating instructions as published by the material suppliers and/or equipment manufacturers.
   - B. Specified equipment guarantees and warranties.
   - C. Emergency instructions.
   - D. Wiring diagrams.
   - E. Shop drawings and product data.
   - F. Inspection procedures and service recommendations.
   - G. Assembly drawings and parts lists with identification symbols or part numbers for all replaceable parts and assemblies.
   - H. Test reports.



NOTES:

1. Contractor shall provide the specified number of float pump switches as indicated on Wet Well Structure Details. The above detail is schematic and does not detail proposed installation.
2. Contractor shall furnish and install pump manufacturer's mechanical float switches, as shown in above detail. Contractor shall coil sufficient length of float cord on mounting bracket to connect leads to portable pump controller (Contractor shall coordinate with pump manufacturer).

MECHANICAL FLOATS INSTALLATION IN WET WELL STRUCTURE

N.T.S.

JOHN P. CARUSO REGISTERED No. PE11012145 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: [signature] 10/30/2015 DESIGN ENGINEER DATE		INDIANA DEPARTMENT OF TRANSPORTATION	SCALE: N.T.S.	BRIDGE FILE: N/A
				DESIGNATION: 1172334
DESIGNED: KR	DRAWN:	PUMP STATION GENERAL NOTES & DETAILS	SURVEY BOOK: N/A	SHEETS: 29 of 39
CHECKED: JPC	CHECKED:		CONTRACT: IR-33602	PROJECT: 1172334

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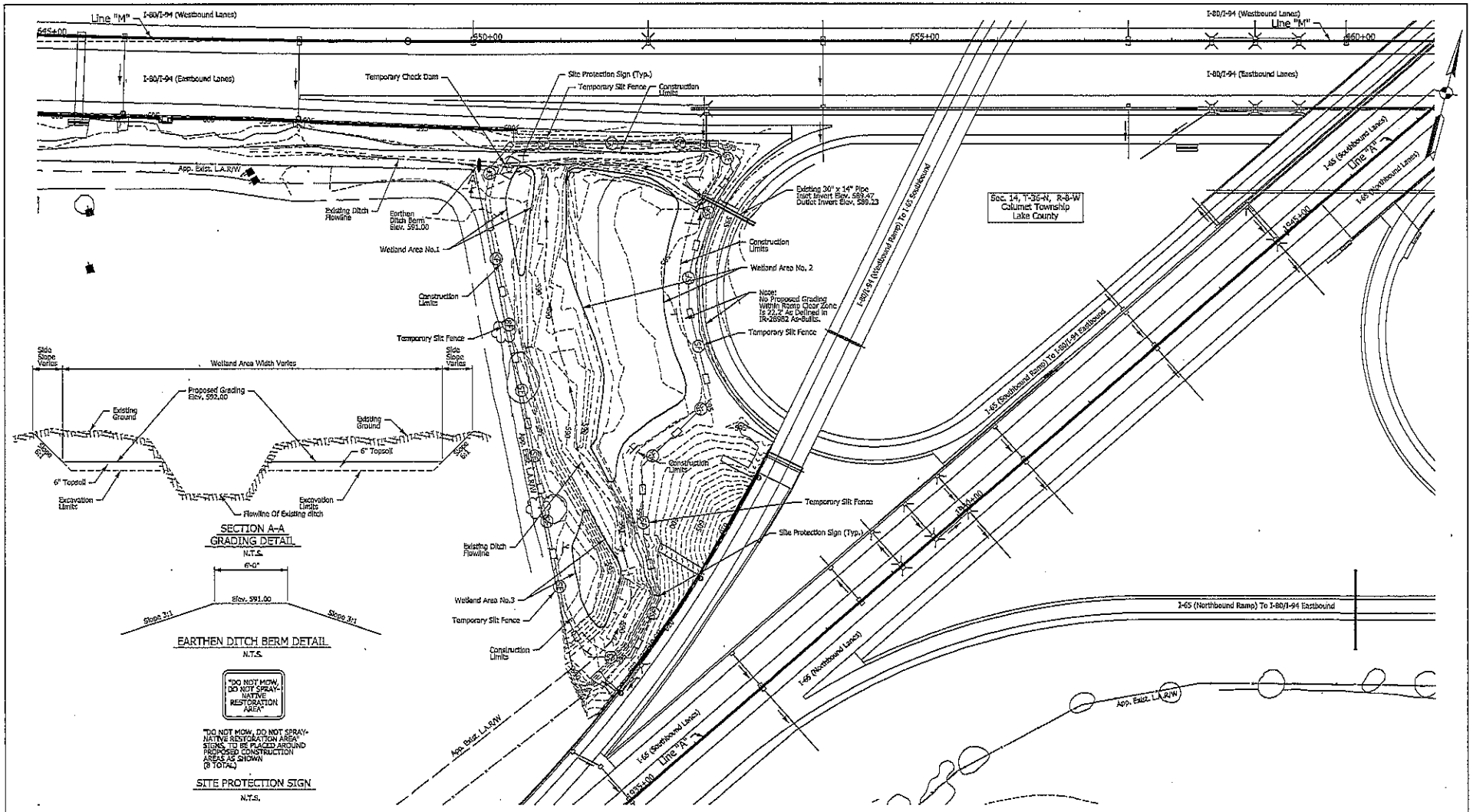


Note: Total Area Of All Proposed Wetlands Is 0.88 Acres.

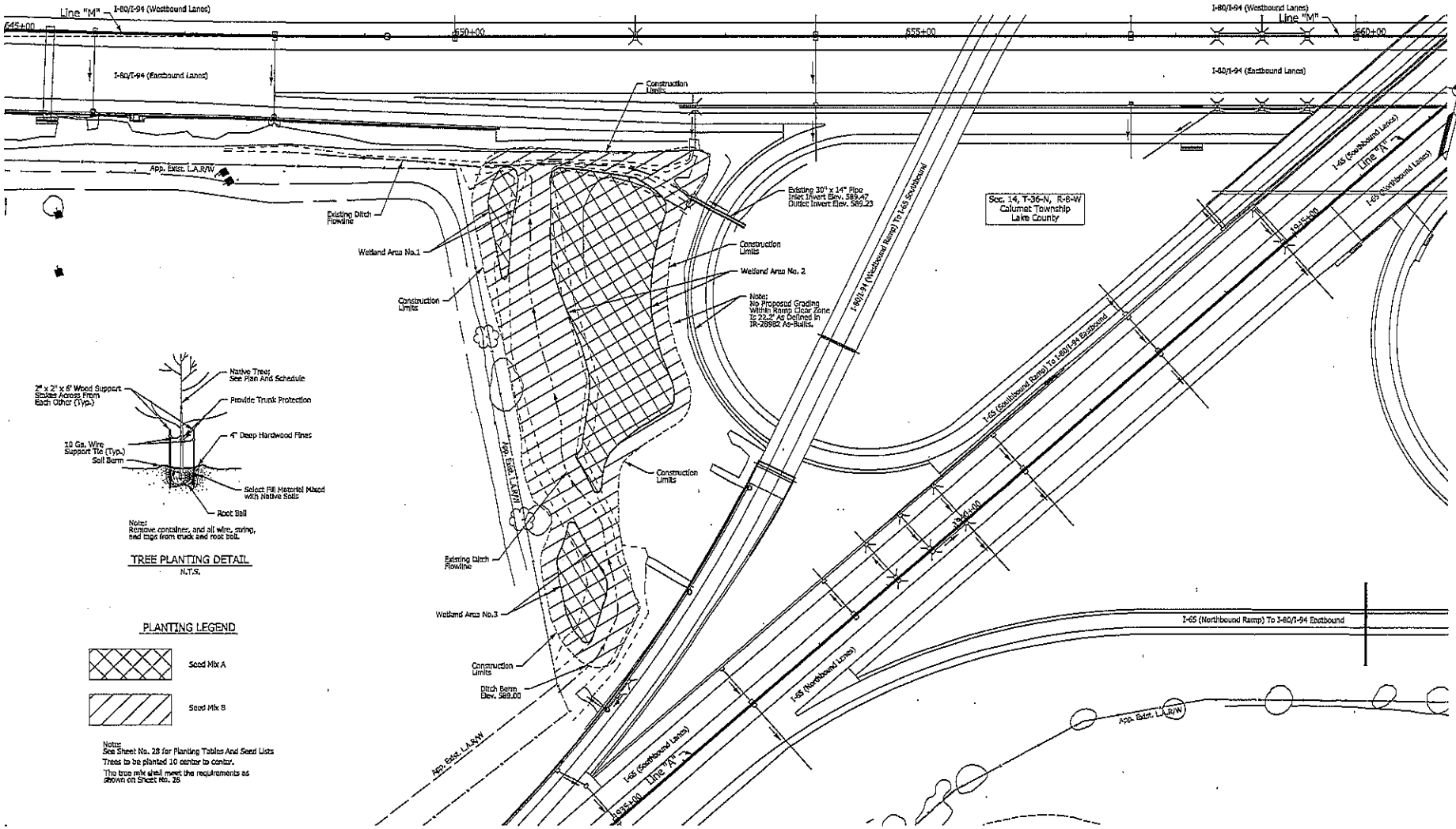
JASON R. ENGLISH REGISTERED No. 10403316 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	Jason R. Rhoades DESIGN ENGINEER	10/30/13 DATE	
DESIGNED: JRR	DRAWN: CPH		
CHECKED: RTP	CHECKED: JRR		

INDIANA
DEPARTMENT OF TRANSPORTATION

I-80 / I-90 FLOOD PROTECTION
MITIGATION SITE

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1172334
SURVEY BOOK	SHEET NO.
N/A	30 of 39
CONTRACT	PROJECT
IR-33802	1172334



Note: Total Area Of All Proposed Wetlands Is 0.88 Acres.

JASON R. RHOADES
No. 10403316
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	Jason R. Rhoades 10/30/13		
	DESIGN ENGINEER	DATE	
DESIGNED:	JRR	DRAWN:	CPH
CHECKED:	RTP	CHECKED:	JRR

INDIANA
DEPARTMENT OF TRANSPORTATION

I-80 / I-90 FLOOD PROTECTION
MITIGATION PLANTING PLAN

HORIZONTAL SCALE	BRIDGE FILE
-1" = 50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1172334
SURVEY BOOK	SHEET NO.
N/A	31 of 39
CONTRACT	PROJECT
IR-33802	1172334

Seed Mix A (Forested Wetland Seed Mix)

Common Name	Scientific Name	Ounces/Acre
Graminoids:		
Frank's Sedge	*Carex frankii*	2
Burr Sedge	*Carex grayi*	2
Common Hop Sedge	*Carex lupulina*	2
Palm Sedge	*Carex muskingumensis*	1
Spreading Oval Sedge	*Carex normalis*	1
Pointed Oval Sedge	*Carex tribuloides*	1
Fox Sedge	*Carex vulpinoidea*	2
Riverbank Wild Rye	*Elymus riparius*	16
Virginia Wild Rye	*Elymus virginicus*	64
Fowl Manna Grass	*Glyceria striata*	2
Bottlebrush Grass	*Hystrix patula*	3
Forbs:		
Wingstem	*Actinomeris alternifolia*	2
Side-Flowering Aster	*Aster lateriflorus*	2
Swamp Aster	*Aster puniceus*	1
Panicled Aster	*Aster simplex*	2
Hairy Wood Mint	*Blephilia hirsuta*	0.5
Autumn Sneezeweed	*Helenium autumnale*	2
False Sunflower	*Heliopsis helianthoides*	2
Great Blue Lobelia	*Lobelia siphilitica*	0.5
Monkey Flower	*Mimulus ringens*	0.5
Smooth Penstemon	*Penstemon calysosus*	1
Green-Headed Coneflower	*Rubbeckia laciniata*	2
Cupplant	*Silphium perfoliatum*	3
Late Goldenrod	*Solidago gigantea*	1.5
Culver's Root	*Veronicastrum virginicum*	0.5
Golden Alexanders	*Zizia aurea*	2
Temporary Cover:		Pounds/Acre
Seed Oats	*Avena sativa*	60
Annual Rye Grass	*Lolium perenne*	60
		120 Total

Seed Mix B (Wet-Mesic Prairie Buffer)

Common Name	Scientific Name	Ounces/Acre
Graminoids:		
Big Bluestem	*Andropogon gerardii*	16
Yellow Fox Sedge	*Carex annectans*	2
Frank's Sedge	*Carex frankii*	2
Fox Sedge	*Carex vulpinoidea*	6
Canada Wild Rye	*Elymus canadensis*	32
Virginia Wild Rye	*Elymus virginicus*	32
Fowl Manna Grass	*Glyceria striata*	2
Switchgrass	*Panicum virgatum*	4
Indian Grass	*Sorghastrum nutans*	16
Forbs:		
Shining Aster	*Aster firmus*	1
New England Aster	*Aster novae-angliae*	1
Flat-Top Aster	*Aster umbellatus*	1
White False Indigo	*Baptisia leucantha*	2
Wild Senna	*Cassia hebecarpa*	3
Tall Coreopsis	*Coreopsis tripteris*	3
Purple Coneflower	*Echinacea purpurera*	4
Rattlesnake Master	*Eryngium yuccifolium*	2
Sawtooth Sunflower	*Helianthus grosseserratus*	1
False Sunflower	*Heliopsis helianthoides*	3
Dense Blazing Star	*Liatris spicata*	2
Bergamot	*Monarda fistulosa*	0.5
Foxglove Beardtongue	*Penstemon digitalis*	0.5
Mountain Mint	*Pycnanthemum virginianum*	0.5
Yellow Coneflower	*Ratibida pinnata*	4
Showy Black-Eyed Susan	*Rudbeckia fulgida speciosa*	3
Black-Eyed Susan	*Rudbeckia hirta*	4
Sweet Black-Eyed Susan	*Rudbeckia submentosa*	3
Rosinweed	*Silphium integrifolium*	2
Prairie Dock	*Silphium terebinthinaceum*	2
Riddell's Goldenrod	*Solidago riddellii*	1
Stiff Goldenrod	*Solidago rigida*	2
Smooth Ironweed	*Vernonia fasiculata*	2
Culver's Root	*Veronicastrum virginicum*	0.5
Temporary Cover:		Pounds/Acre
Seed Oats	*Avena sativa*	60
Annual Rye Grass	*Lolium perenne*	60
		120 Total

Part V Trees and Shrubs Products

Common Name	Scientific Name	Type	Size	Quantity
Black Chokeberry	*Aronia melanocarpa*	S	3 gal.	25
River Birch	*Betula nigra*	T	3 gal.	30
Buttonbush	*Cephalanthus occidentalis*	S	3 gal.	25
Red Osier Dogwood	*Cornus sericea*	S	3 gal.	25
Winterberry	*Ilex verticillata*	S	3 gal.	25
Common Ninebark	*Physocarpus opulifolia*	S	3 gal.	25
Sycamore	*Platanus occidentalis*	T	3 gal.	30
Swamp White Oak	*Quercus bicolor*	T	3 gal.	30
Bur Oak	*Quercus macrocarpa*	T	3 gal.	30
Pin Oak	*Quercuis palustris*	T	3 gal.	30
Shumard Oak	*Quercus shumardii*	T	3 gal.	25
Peachleaf Willow	*Salix amygdaloides*	T	3 gal.	30
Elderberry	*Sambucus canadensis*	S	3 gal.	30

Acceptable Substitutes:

Common Name	Scientific Name	Type
Ohio Buckeye	*Aesculus glabra*	T
Purple Chokeberry	*Aronia prunifolia*	S
Shellbark Hickory	*Carya laciniosa*	T
Pale Dogwood	*Cornus obliqua*	S
Spicebush	*Lindera benzoin*	S
Shingle Oak	*Quercus imbricaria*	T

JASON R. RIDGE SECRETARY No. 10403316 STATE OF INDIANA PROFESSIONAL ENGINEER

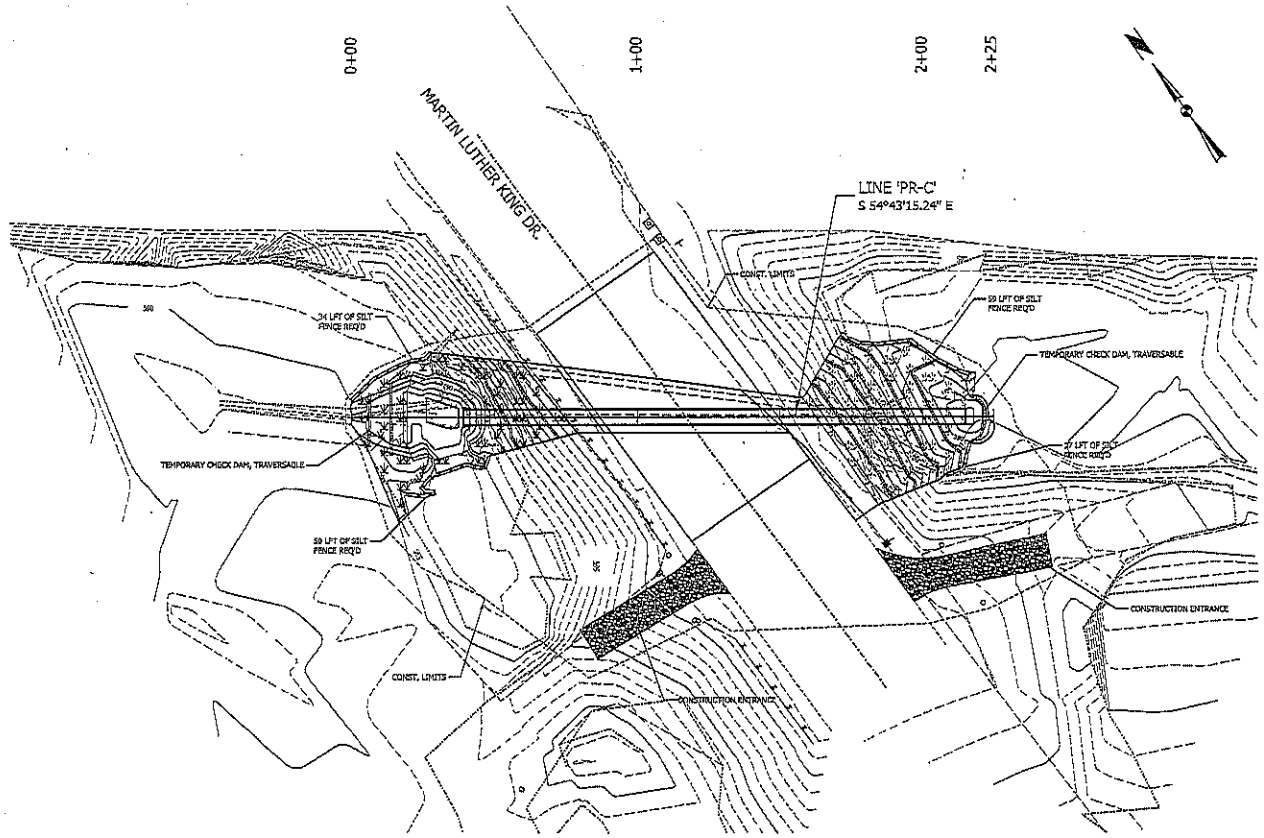
RECOMMENDED FOR APPROVAL: Jason R. Ridge — DESIGN ENGINEER — 10/30/13 DATE

DESIGNED: JRR | DRAWN: CPH
CHECKED: RTP | CHECKED: JRR

INDIANA
DEPARTMENT OF TRANSPORTATION

I-80 / I-90 FLOOD PROTECTION
MITIGATION PLANTING PLAN

HORIZONTAL SCALE	BRIDGE FILE
1" = 50'	N/A
VERTICAL SCALE	DESIGNATION
N/A	1172334
SURVEY BOOK	SHEET NO.
N/A	32 of 39
CONTRACT	PROJECT
IR-33802	1172334



LEGEND

- TEMPORARY SILT FENCE
- TEMPORARY CHECK DAM, TRAVERSABLE
- NO. 2 STONE
- PERMANENT SEEDING, MULCHED SEEDING, TYPE II WITH EROSION CONTROL BLANKET
- EXISTING ROADWAY CENTERLINE
- EXISTING EDGE OF PAVEMENT
- EXISTING WATER LINE
- EXISTING ELECTRIC LINE
- EXISTING GUARDRAIL
- EXISTING POWER POLE
- EXISTING FENCE POST
- EXISTING SIGNAL SUPPORT FOUNDATION (RAIL)
- EXISTING TRAFFIC SIGN
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR/MINOR CONTOUR
- RESET GAURDRAIL
- CONSTRUCTION LIMITS

NOTE:

ALL PERIMETER EROSION BARRIER TO BE INSTALLED PRIOR TO PRE-STAGE WORK. PERIMETER EROSION BARRIER AND DITCH CHECKS SHOWN AT APPROXIMATE OFFSET.

DAVID RICHARD HALL REGISTERED No. PE10911246 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 10/30/2013 DATE

DESIGNED: WJK | DRAWN: WJK

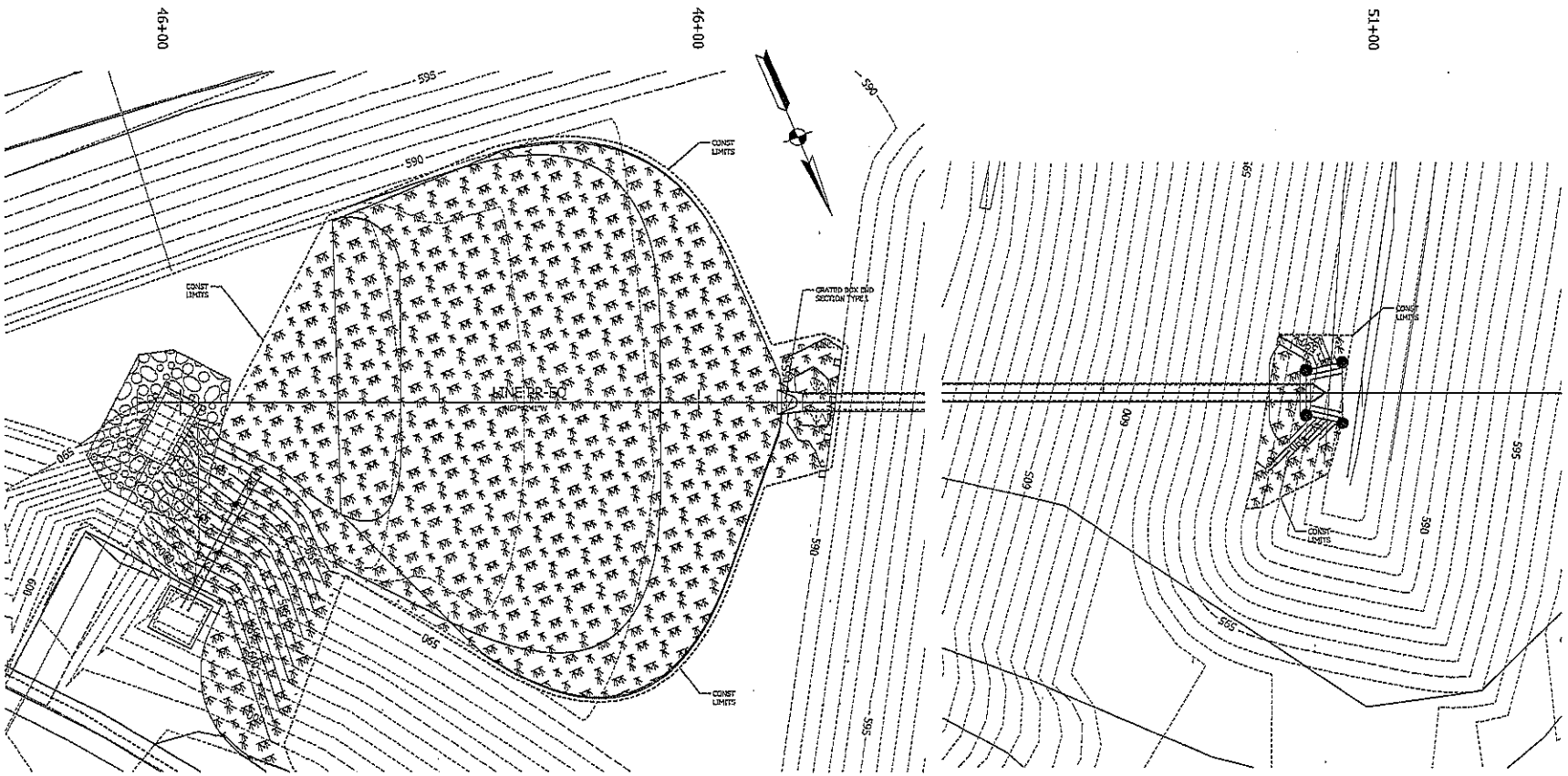
CHECKED: DRH | CHECKED: MC

INDIANA
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN
LINE 'PR-C'

HORIZONTAL SCALE	BRIDGE FILE
1"=20'	N/A
VERTICAL SCALE	DESIGNATION
	1172334
SURVEY BOOK	SHEETS
N/A	33 of 39
CONTRACT	PROJECT
IR-33802	1172334

NOV 2 2013 INDIANA DEPARTMENT OF TRANSPORTATION



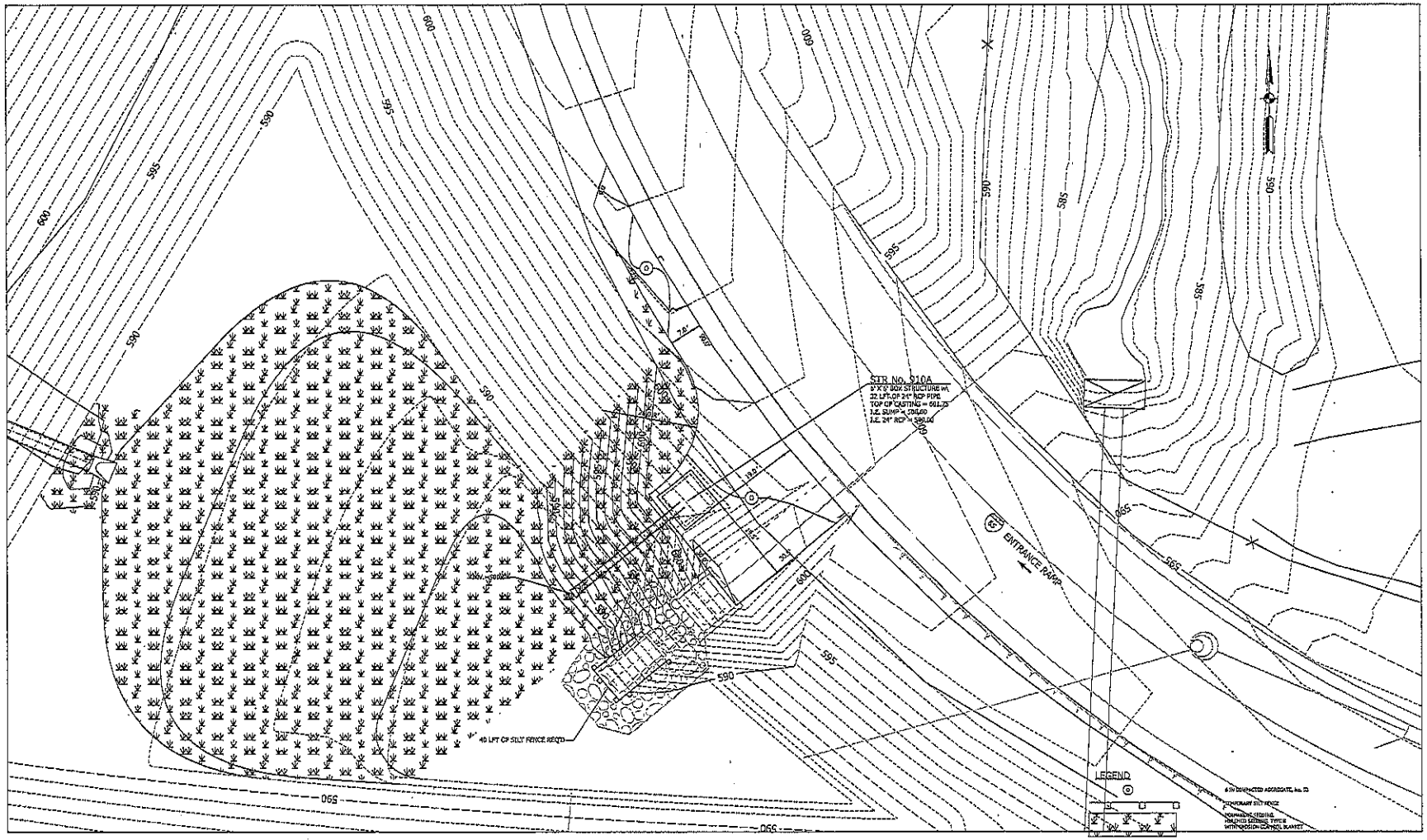
LEGEND

TEMPORARY SILT FENCE

PERMANENT SEEDING, MULCHED SEEDING, TYPE B WITH EROSION CONTROL BLANKET

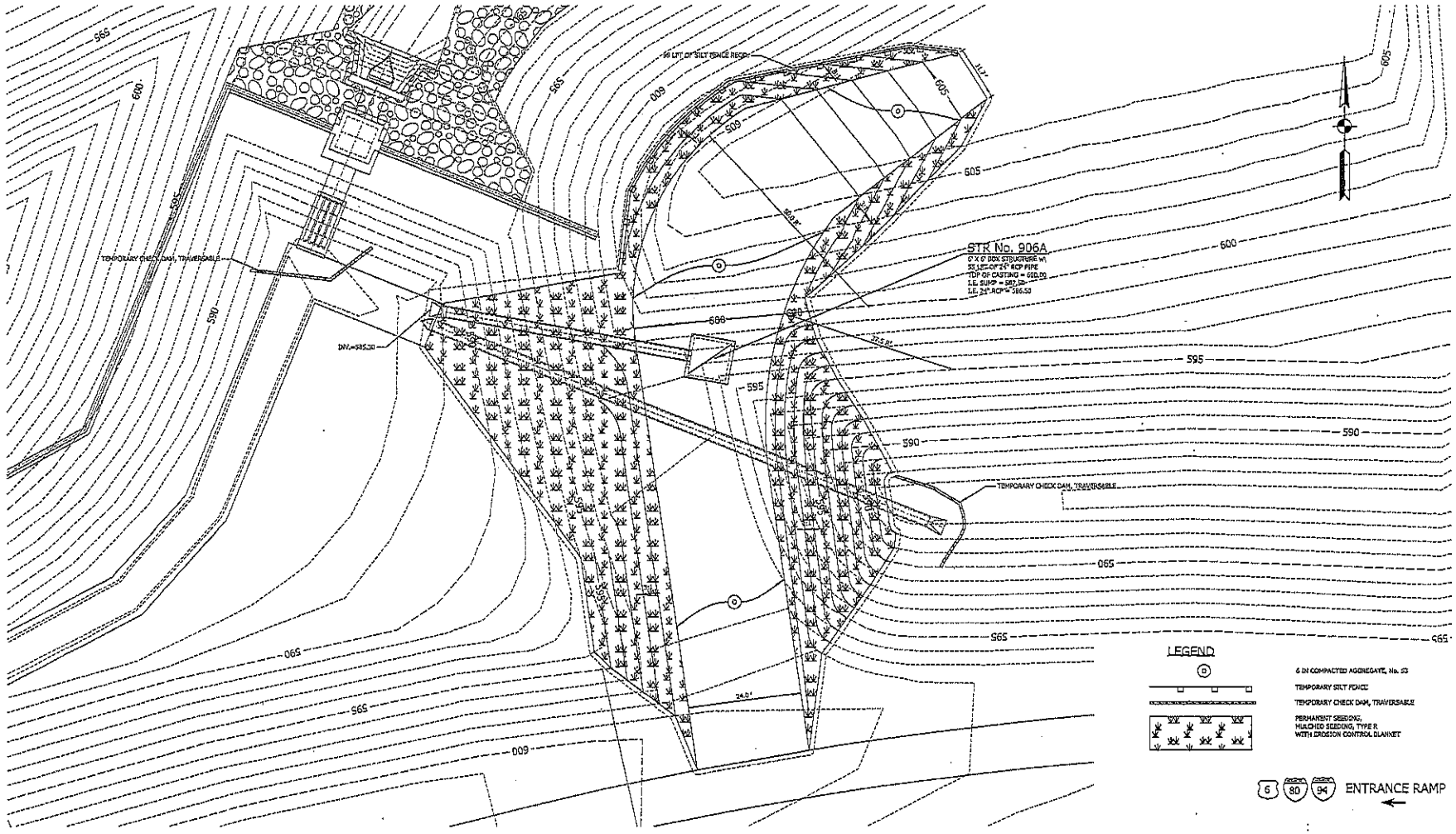
DAVID RICHARD HAAS REGISTERED No. PE10911246 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	DRH 10/30/2013 DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE: N/A; BRIDGE FILE: N/A
DESIGNED: WJK	DRAWN: WJK	EROSION CONTROL PLAN LINE 'PR-Q'	VERTICAL SCALE: 1:72334; DESIGNATION: 1172334
CHECKED: DRH	CHECKED: JSC		SURVEY BOOK: N/A; SHEETS: 34 of 39
			CONTRACT: IR-33802; PROJECT: 1172334



DAVID RICHARD HAAS
REGISTERED
No. PE10911246
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: DRH — DESIGN ENGINEER — 10/30/2013 DATE		INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE: 1"=10' — BRIDGE FILE: N/A
DESIGNED: WJK	DRAWN: WJK	PUMP STATION 910A EROSION CONTROL	VERTICAL SCALE: — DESIGNATION: 1172334
CHECKED: DRH	CHECKED: JSC		SURVEY BOOK: N/A — SHEETS: 35 of 39
			CONTRACT: IR-33802 — PROJECT: 1172334



DAVID RICHARD HAAS
REGISTERED
No. PE10911246
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL	DESIGN ENGINEER	DATE 10/30/2013
DESIGNED: WJK	DRAWN: WJK	
CHECKED: DRH	CHECKED: JSC	

INDIANA
DEPARTMENT OF TRANSPORTATION

PUMP STATION 906A
EROSION CONTROL

HORIZONTAL SCALE	BRIDGE FILE
1"=10'	N/A
VERTICAL SCALE	DESIGNATION
	1172334
SURVEY BOOK	SHEETS
N/A	36 of 39
CONTRACT	PROJECT
IR-33802	1172334

TEMPORARY EROSION CONTROL TABLE

LOCATION	LEFT	MEDIAN	RIGHT	TEMPORARY DITCH INLET PROTECTION	TEMPORARY REVETMENT RIPRAP CHECK DAM	SPLASHPAD RIPRAP	TEMPORARY CHECK DAM STRAW BALES	TEMPORARY SILT FENCE	SEDIMENT, REMOVE	SLOPE DRAIN	EROSION CONTROL MAT	GOETEXTILES	REVETMENT RIPRAP		REMARKS
				EACH	TON	TON	LFT	LFT	CYS	LFT	SYS	SYS	SYS		
STR. NO. 1							361	130			4689				
STR. NO. 903					24			78							
STR. NO. 906A								62			5025				
STR. NO. 910A								40			10001				
STR. NO. 950								333			1403				
FLOOD WALL NO. 3					12			53							
MITIGATION SITE					12			1536							
TOTAL					48		361	2232			3594				

LOCATION	LEFT	MEDIAN	RIGHT	TEMPORARY DITCH INLET PROTECTION	TEMPORARY REVETMENT RIPRAP CHECK DAM	SPLASHPAD RIPRAP	TEMPORARY SEDIMENT TRAP	TEMPORARY SILT FENCE	SEDIMENT, REMOVE	SLOPE DRAIN	EROSION CONTROL MAT				REMARKS
				EACH	TON	TON	TON	LFT	CYS	LFT	SYS				

JASON R. RHOADES
CERTIFIED
No. 10403316
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Jason R. Rhoades 10/30/13
DESIGN ENGINEER DATE

DESIGNED: JRR DRAWN: CPH
CHECKED: RTP CHECKED: JRR

INDIANA
DEPARTMENT OF TRANSPORTATION

I-80 / 1-65 FLOOD PROTECTION
TEMPORARY EROSION CONTROL TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	1172334
SURVEY BOOK	SHEET NO.
N/A	37 of 39
CONTRACT	PROJECT
IR-33802	1172334

NOV

PAVEMENT QUANTITIES AND APPROACH TABLE

LOCATION	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	RADII	DISTANCE BEYOND R/W LINE	SURFACE BEYOND R/W LINE: COMPACTED AGGREGATE BASE	SURFACE BEYOND R/W LINE: HMA	SURFACE BEYOND R/W LINE: CONCRETE	GRADE 1	GRADE 2	GRADE 3	GRADE 4	COMMON EXCAVATION	IMPERVIOUS FILL	BORROW	STONE, 2	HMA SURFACE TYPE A (LBS. PER SYD 165)	HMA BASE TYPE A (LBS. PER SYD 660)	HMA MATERIAL FOR PRIME COAT	HMA MATERIAL FOR TACK COAT	COMPACTED AGGREGATE NO. 53	REMARKS
		FT	FT	FT	FT	SYS	SYS	SYS	%	%	%	%	CYS	CYS	CYS	TONS	TONS	TONS	TONS	TONS	TONS	
MARTIN LUTHER KING DRIVE	PAVING																43	44			44	
MARTIN LUTHER KING DRIVE	EARTHWORKS														270							
STR. NO. 906A																					157	
STR. NO. 910A																					51	
STR. NO. 950	BERM CONSTRUCTION												1114		976	1050						
FLOOD WALL NO. 3	RIVER SIDE GRADING												14	48								
FLOOD WALL NO. 3	LAND SIDE GRADING												94	293								
MITIGATION SITE	EARTHWORKS												1400									
TOTALS													2622	341	1246	1050	43	44			252	

JASON R. RHOADES REGISTERED No. 10403316 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL Jason R. Rhoades 10/30/13
DESIGN ENGINEER DATE

DESIGNED: JRR DRAWN: CPH
CHECKED: RTP CHECKED: JRR

INDIANA
DEPARTMENT OF TRANSPORTATION

PAVEMENT QUANTITIES AND APPROACH TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	1172334
SURVEY BOOK	SHEET NO.
N/A	38 of 39
CONTRACT	PROJECT
IR-33802	1172334

STRUCTURE DATA

STRUCTURE NUMBER	LOCATION: STATION	LOCATION: LEFT	LOCATION: RIGHT	LOCATION: CROSS	LOCATION: OFFSET (FT)	SIZE (IN)	DESCRIPTION: PIPE TYPE	DESCRIPTION: MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE	LENGTH (FT)	SKEW	FLOW LINE: COVER (FT)	FLOW LINE: UP STREAM ELEV.	FLOW LINE: DOWN STREAM ELEV.	SERVICE LIFE (YRS)	SITE DESIGNATION	pH	BACKFILL RETAINED	STRUCTURE BACKFILL (CYS)	TYPE	FLOWABLE BACKFILL (CYS)	TYPE	GEOTEXTILES (SYS)	REVETMENT RIPRAP (TON)	CONCRETE CLASS A FOR STR. (CYS)	VIDEO INSPECTION (LFT)	PIPE END SECTION (EA)	GRATED BOX END SECTION: TYPE	GRATED BOX END SECTION: SLOPE	GRATED BOX END SECTION: EA.	SAFETY METAL END SECTION: TYPE	SAFETY METAL END SECTION: SLOPE	SAFETY METAL END SECTION: EA.	CONNECT TO STRUCTURE	REMARKS
1				X		60	1	PIPE	177					75	N/A	6.5						100	125										
102						24	3	PIPE	24					75	N/A	6.5										1							CONNECT TO EX. 24" RCP
103						18	3	PIPE	100					75	N/A	6.5										2							
903								EXISTING GATEWELL STRUCTURE																			1	2:1	1					MODIFIED G.B.E.S. SEE DETAILS.
906A						24	2	PIPE	55					75	N/A	6.5											1	3:1	1					
910A						24	2	PIPE	30					75	N/A	6.5											1	3:1	1					
950						48	2	GATEWELL STRUCTURE	8					75	N/A	6.5						117	130				1	2:1	1					
						24	2		24					75	N/A	6.5																	CONNECT TO EX. 24" RCP
						24	2		24					75	N/A	6.5																	CONNECT TO EX. 24" RCP
950A						24	2	PRECAST REINFORCED CONCRETE BOX	32					N/A	N/A	N/A										1							24" HDPE PIPE

JASON R. RHOADES
No. 10403316
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL: Jason R. Rhoades 10/30/13
DESIGN ENGINEER DATE

DESIGNED: JRR DRAWN: CPH
CHECKED: RTP CHECKED: JRR

INDIANA
DEPARTMENT OF TRANSPORTATION

STRUCTURE DATA TABLE

HORIZONTAL SCALE	BRIDGE FILE
N/A	N/A
VERTICAL SCALE	DESIGNATION
N/A	1172334
SURVEY BOOK	SHEET NO.
N/A	45 of 59
CONTRACT	PROJECT
IR-33802	1172334

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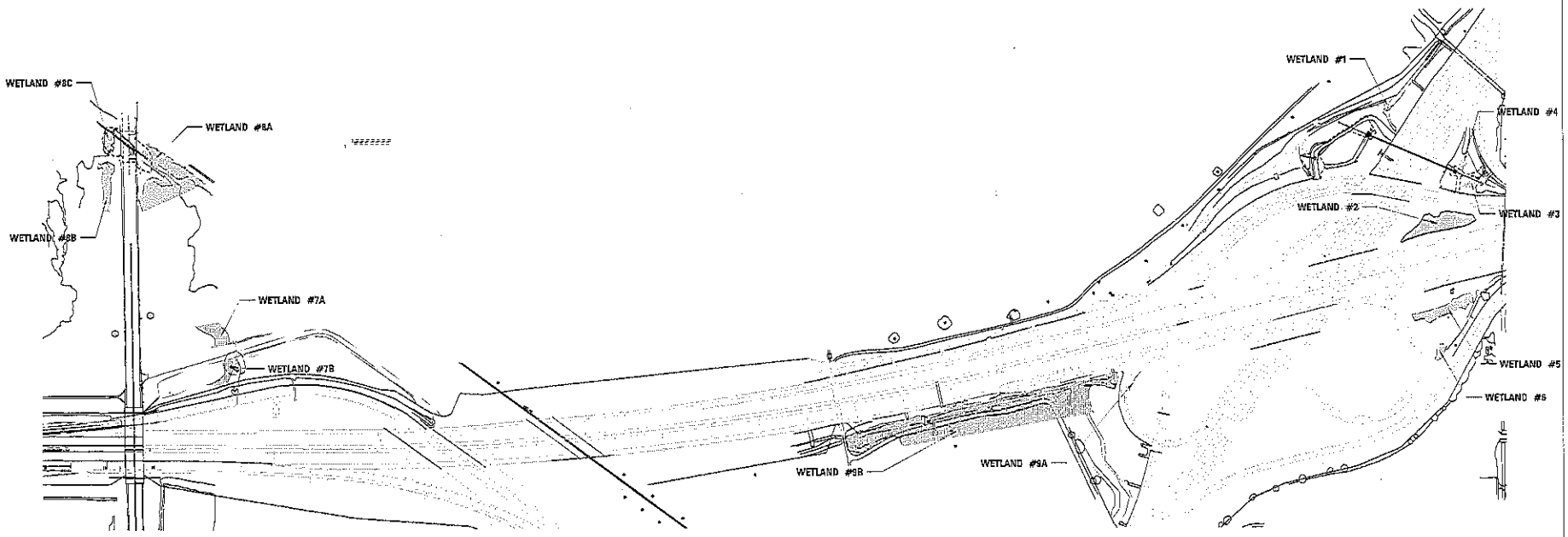
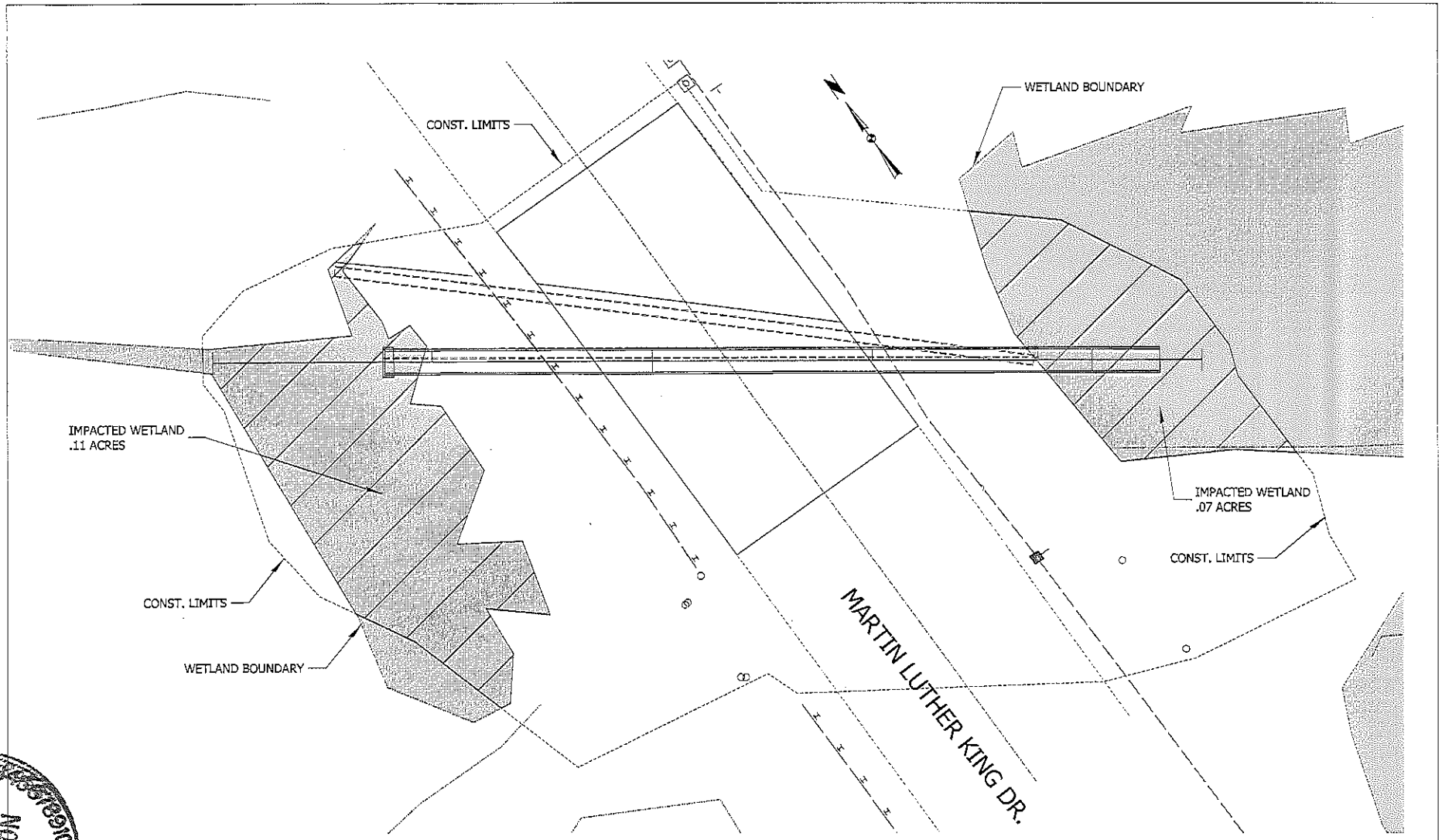
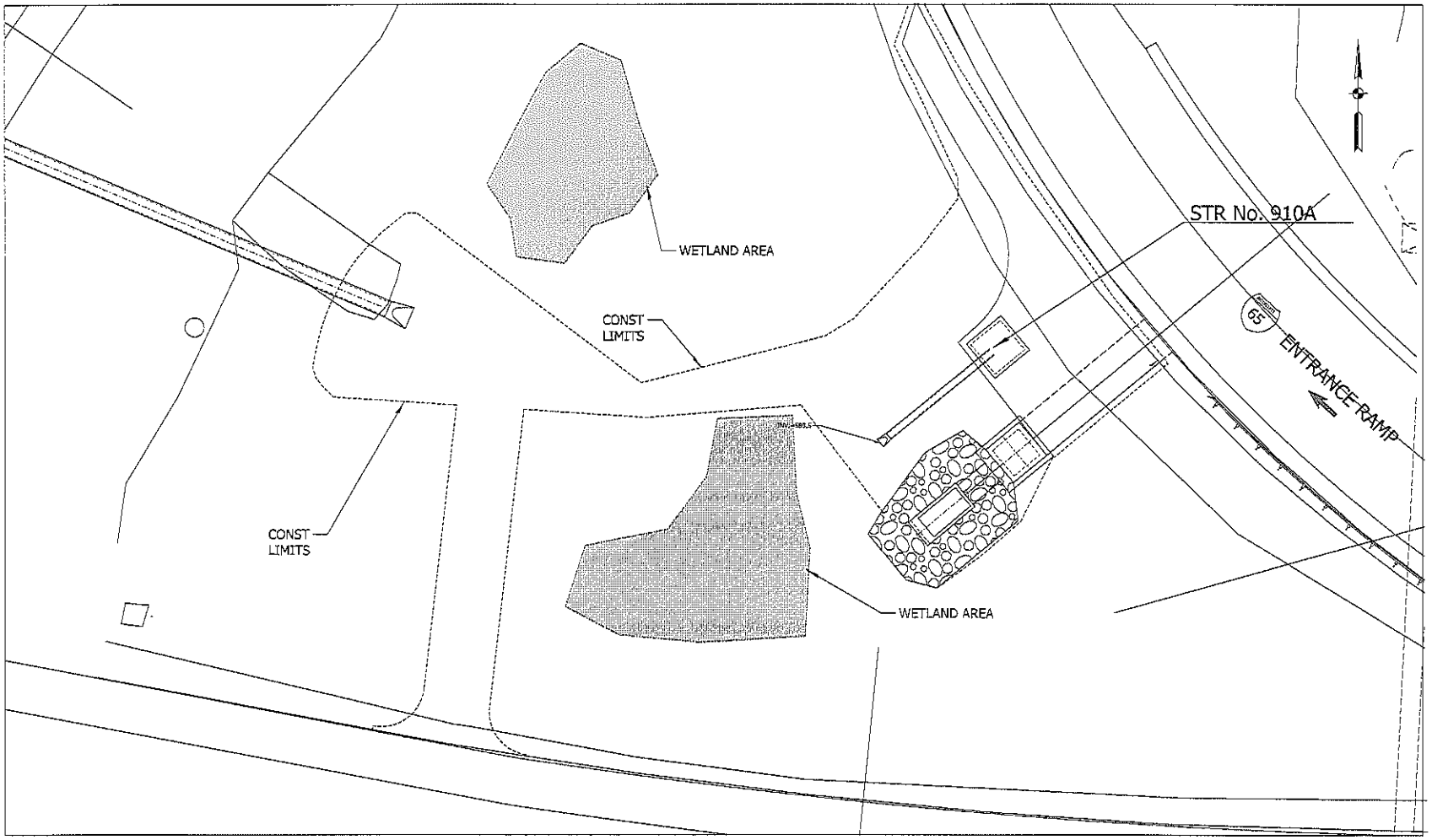


RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1"=200'	BRIDGE FILE N/A
		VERTICAL SCALE	DESIGNATION 1172334
DESIGNED: WJK / DRAWN: WJK	WETLAND AREA	SURVEY BOOK N/A	SHEETS of
CHECKED: DRH / CHECKED: JSC		CONTRACT IR-33802	PROJECT 1172334



RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE		INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1"=10' / VERTICAL SCALE
DESIGNED: WJK	DRAWN: WJK	LINE 'PR-C' WETLAND IMPACT	SURVEY BOOK N/A / CONTRACT DN-32802
CHECKED: DEH	CHECKED: JSC		

BRIDGE FILE	N/A
DESIGNATION	1172334
SHEETS	1 of 1
PROJECT	1172334



RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1"=10'	BRIDGE FILE N/A
		VERTICAL SCALE	DESIGNATION 1172334
DESIGNED: WJK DRAWN: WJK	PUMP STATION 910A WETLAND IMPACT	SURVEY BOOK N/A	SHEETS 1 of 1
CHECKED: DRH CHECKED: JDC		CONTRACT IR-03802	PROJECT 1172334

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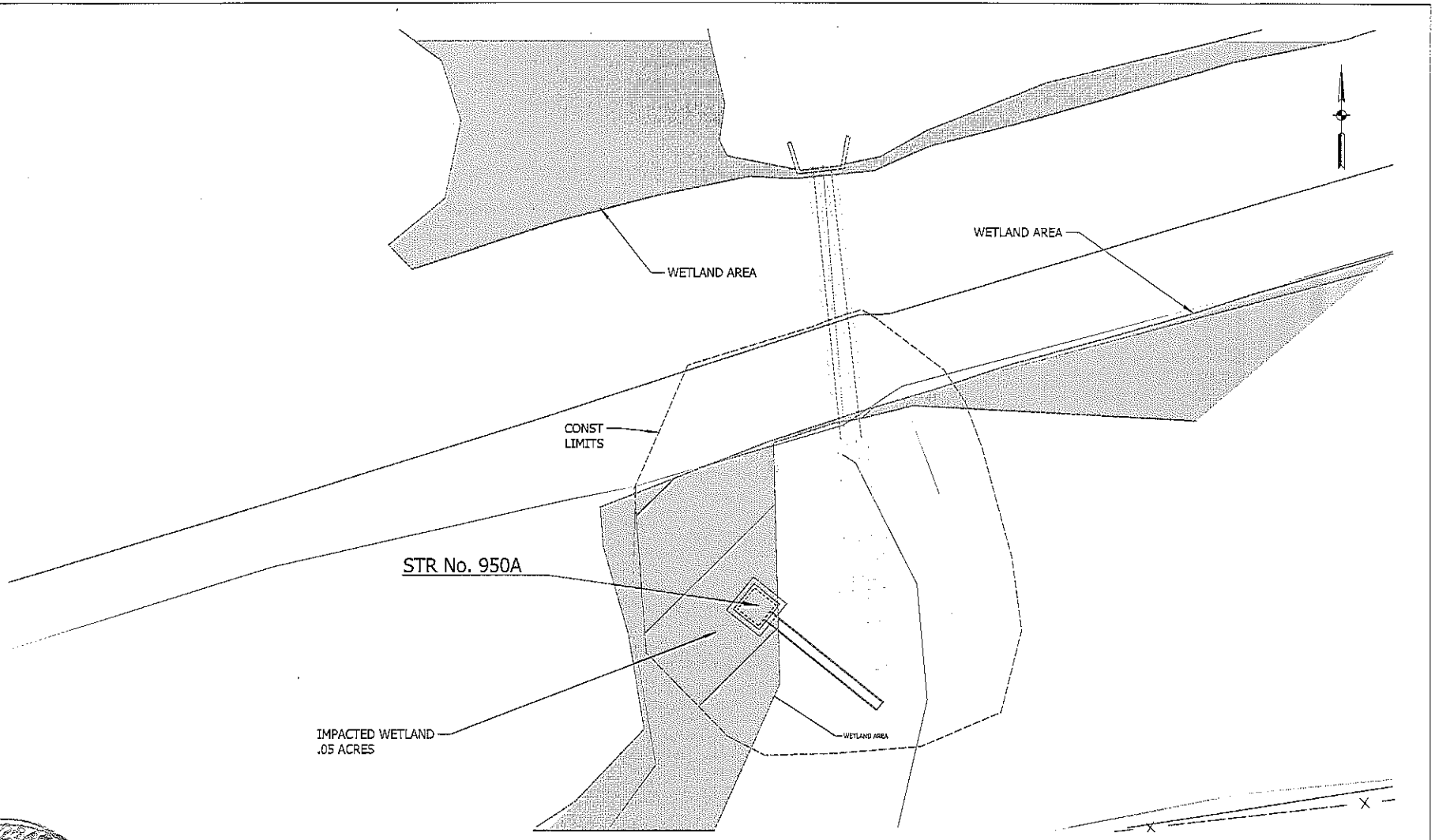

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE	INDIANA DEPARTMENT OF TRANSPORTATION	HORIZONTAL SCALE 1"=10'	BRIDGE FILE N/A
		VERTICAL SCALE	DESIGNATION 1172334
DESIGNED: WTK / DRAWN: WTK	PUMP STATION 950A WETLAND IMPACT	SURVEY BOOK N/A	SHEETS 1 of 1
CHECKED: DRH / CHECKED: TDC		CONTRACT IR-03802	PROJECT 1172334

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U.S. ARMY CORPS OF ENGINEERS

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

OMB APPROVAL NO. 0710-0003
EXPIRES: 28 FEBRUARY 2013

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Lisa Middle - Last - Herber	First - Sarah Middle - E. Last - Wright
Company - Indiana Department of Transportation	Company - Christopher B. Burke Engineering, LLC
E-mail Address - LHerber@indot.IN.gov	E-mail Address - swright@cbbel-in.com
6. APPLICANT'S ADDRESS:	9. AGENT'S ADDRESS:
Address- 100 N. Senate Avenue, RM N642	Address- 115 W. Washington Street, Suite 1368 South
City - Indianapolis State - IN Zip - 46204 Country - USA	City - Indianapolis State - IN Zip - 46204 Country - USA
7. APPLICANT'S PHONE NOs. w/AREA CODE	10. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business 317-232-5135 c. Fax	a. Residence b. Business 317-266-8000 c. Fax 317-632-3306

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

SIGNATURE OF APPLICANT _____ DATE _____

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)
I-65/Borman Expressway (I-80/94) Interchange Flood Protection Project, DES 1172334

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
	Address I-65/Borman Expressway Interchange
15. LOCATION OF PROJECT Latitude: °N 41.568983 Longitude: °W -87.300647	City - Little Chicago State- IN Zip-

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)
State Tax Parcel ID Municipality
Section - 14 Township - 36 North Range - 8 West

17. DIRECTIONS TO THE SITE

The site is located adjacent to the I-65 and I-80/94 Interchange and West of the Interchange on the North and South sides of I-80/94.

18. Nature of Activity (Description of project, include all features)

The I-65/Borman Expressway, Interchange Flood Protection (DES 1172334) project is needed because the interchange has been previously flooded. The purpose of this project is to reduce flooding along the I-65 and Borman Expressway corridor. These flood protection measures consist of: Constructing floodwalls to protect highway sections where profile grades are below design river flood stages; Installing flood valves at the ends of certain cross-culverts to prevent backflows into the interchange during design river flood stages; Installing gatewells with closure devices at the inlet ends of certain culverts to provide closure redundancy in the event that the flood valves do not operate correctly; And installing stormwater lift stations to prevent the interchange from being flooded as a result of local design rainfalls during river flood stages. There are a total of thirteen wetland sites (4.992 acres) in the project area. Portious of tbree sites (0.23 acre) will be permanently impacted by the project. There will be no temporary iupacts to any of the identified wetland areas. Cut material from the project and mitigation area will be utilized onsite, no offsite disposal is needed.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

This project is needed because the Borman Expressway interchange has been previously flooded. The purpose of this project is to reduce flooding along the I-65 and Borman Expressway corridor. Provide a safe road for the motoring public. Not disrupt traffic flow due to flooding.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

0.23 acre of wetland must be filled to accommodate the above mentioued flood iuprovements.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
Stone #2, 325 CYS	Clean Earthen Fill, 371 CY	

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres 0.23 acre of wetland will be filled.

or

Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

Wetland Mitigation will consist of creating a 0.82 acre forested wetland adjacent to the existing large wetland complex south of the Borman Expressway, just east of the I-65 southbound ramp to I-80/I-94 Eastbouud. The wetland mitigation site will be plauted with 360 three gallon size native trees and shrubs as well as a native forested wetland seed mix. The wetlaud will be surrounded by a wet-mesic prairie seed mix. The wetland areas are adjacent to a ditch, and will be graded to an elevation which will result in frequent saturation.

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

a. Address- See attached list

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

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26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

[signature] 11/12/13

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Gary City Parks and Recreation Board
300 Jackson St
Gary, IN 46402-1140

The State of Indiana
402 W Washington St, Room 478
Indianapolis, IN 46204

Jim Nowacki
PO Box 2571
Gary, IN 46403

Sam McKinley
538 Kentucky St
Gary, IN 46402

WITH Radio, Inc
1747 3rd St
Manhattan Beach, CA 90266

Little Calumet River Basin Development Commission
6100 Southport Road
Portage, IN 46368

City of Gary
401 Broadway Ave
Gary, IN 46402

Northern Indiana Public Service
80186th Ave
Merrillville, IN 46410

Glenmar Developers, LLC
4017 Washington Road
McMurray, PA 15317

Angel D Rodriguez
3836 Cameron Ave
Hammond, IN 46237

Lake County Parks & Recreation
8411 Lincoln Highway
Crown Point, IN 46307

Richard Poe
3201 27th Avenue
Lake Station, IN 46405-2464

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

DNR #: ER-17018 **Request Received:** May 30, 2013

Requestor: Christopher B Burke Engineering LLC
Sarah E Wright
National City Center, Suite 1368 South
115 West Washington Street
Indianapolis, IN 46204-3413

Project: I-65/Borman Expressway interchange flood protection: constructing floodwalls, and installing flood valves, gatewalls and stormwater lift stations, Gary; Des. #1172334

County/Site info: Lake

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 may require the formal approval of our agency pursuant to the Flood Control Act (IC 14-28-1) for any proposal to construct, excavate, or fill in or on the floodway of a stream or other flowing waterbody which has a drainage area greater than one square mile. Please submit more detailed plans to the Division of Water's Technical Services Section if you are unsure whether or not a permit will be required.

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) Riparian Habitat:
We recommend a mitigation plan be developed (and submitted with the permit application, if required) if habitat impacts will occur. The DNR's Floodway Habitat Mitigation guidelines (and plant lists) can be found online at:
http://www.in.gov/legislative/iac/20120801-IR-312120434NRA.xml.pdf.

Impacts that remove trees from a non-wetland, riparian area should be mitigated. Impacts to non-wetland forest over one (1) acre should be mitigated at a minimum 2:1 ratio. 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).

2) Wetland Habitat:
Due to the presence or potential presence of wetlands on site, we recommend contacting and coordinating with the Indiana Department of Environmental Management (IDEM) 401 program and also the US Army Corps of Engineers (USACE) 404 program. Impacts to wetlands should be mitigated at the appropriate ratio (see guidelines above).

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State of Indiana
DEPARTMENT OF NATURAL RESOURCES
Division of Fish and Wildlife

Early Coordination/Environmental Assessment

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 grasses (excluding all varieties of tall fescue), legumes, and native shrub and hardwood tree species as soon as possible upon completion.
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 roosting (greater than 3 inches dbh, living or dead, with loose hanging bark) from April 1 through September 30.
5. Minimize the movement of resuspended bottom sediment from the immediate project area.
6. 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.
7. Seed and protect all disturbed streambanks and slopes that are 3:1 or steeper with erosion control blankets (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.
8. Inspect structural erosion and sediment control practices daily and repair as necessary until all construction is complete and disturbed areas are permanently stabilized.

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:** June 21, 2013

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

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