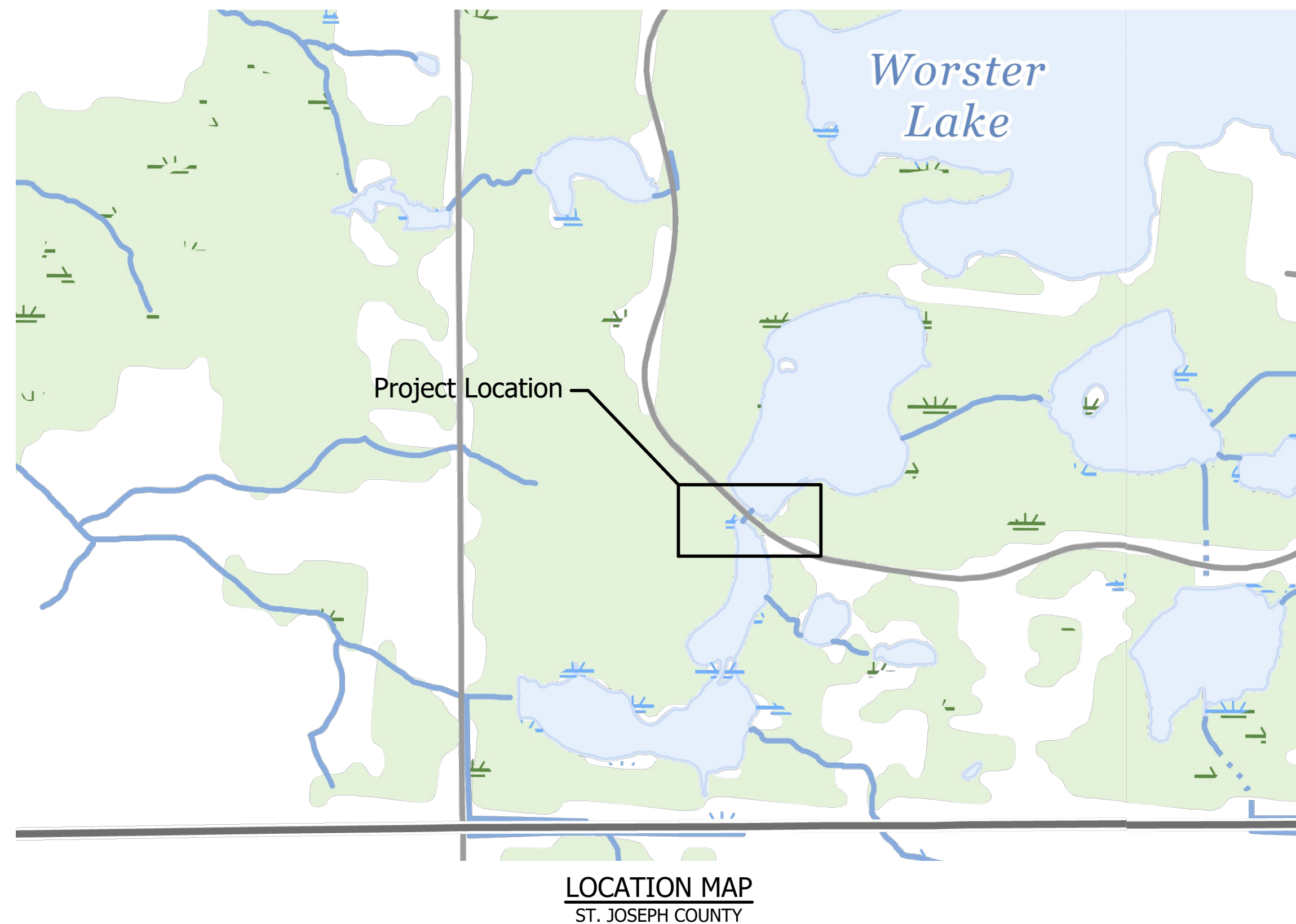


INDIANA DEPARTMENT OF ADMINISTRATION (IDOA)
INDIANA DEPARTMENT OF NATURAL RESOURCES (IDNR)

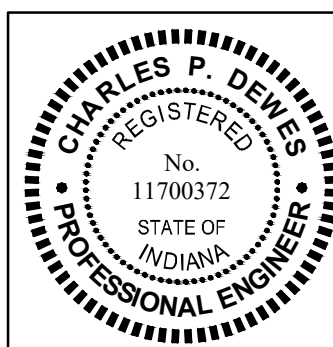
PROJECT No. ENG 2603736023
SPUD RUN CULVERT REPLACEMENT
LIBERTY TOWNSHIP, ST. JOSEPH COUNTY, INDIANA
SECTION 26, T-36-N, R-1-E



DRAWING INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND AND GENERAL NOTES
3	DEMOLITION PLAN
4	PLAN AND PROFILE
5	STRUCTURE LAYOUT
6	CONSTRUCTION DETAILS
7	EROSION CONTROL AND PUMP AROUND PLANS
8	NORTH ACCESS ROAD IMPROVEMENTS ALTERNATIVE

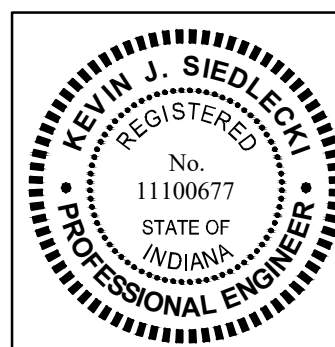
ISSUED FOR BID
AUGUST 22, 2025

LFA
LAWSON-FISHER ASSOCIATES P.C.
525 W. WASHINGTON AVENUE
SOUTH BEND, INDIANA 46601
PH. (574) 234-3167



Charles P. Dewes
SIGNATURE
8/22/25
DATE

Kerri J. Siedlecki
SIGNATURE
8/22/25
DATE




INDIANA DEPARTMENT OF NATURAL RESOURCES
POTATO CREEK STATE PARK
SPUD RUN CULVERT REPLACEMENT


COVER SHEET


REVISIONS		HORIZONTAL SCALE 1" = 600'	VERTICAL SCALE	PROJECT NUMBER	
				ENG 2603736023	
DRAWN: PJV		SURVEY BOOK		SHEETS	
CHECKED: CPD		DATE AUGUST 2025		1	OF 8


U:\2025\2025008 IDNR Spud Run Lateral\Cad\Plan Set\Civil\2500800HY_IN.dwg (GENERAL NOTES AND LEGEND) 8/21/2025 10:48 AM - U:\2025\2025008 IDNR Spud Run Lateral\Cad\Plan Set\Civil\2500800HY_IN.dwg (GENERAL NOTES AND LEGEND)


EXISTING FEATURES LEGEND:


- 

Existing Benchmark
- 

Existing Control Point
- 

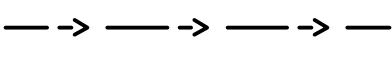
Existing Deciduous Tree
- 

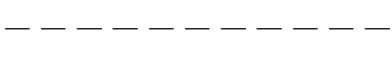
Pipe Invert
- 


Ordinary High Water Mark
- 

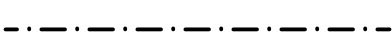
Water Surface Elevation

EXISTING PATTERNS

- 

Existing Ditch Centerline
- 

Existing Top of Bank/Toe of Slope
- 

Existing Vegetation Line
- 

Existing Wetland

PUBLIC UTILITY

The existing utilities listed below and shown on these plans represent the best information available as obtained on our surveys. This information does not relieve the contractor of the responsibility to be satisfied as to its accuracy and the location of existing utilities.

OWNER

Comcast North

Mediacom, LLC (Auburn)
Mediacom, LLC (North Webster)
Contact: Scott Brewer
845-521-6898
sbrewer1@mediacomcc.com
903 E Howard St.
Pontiac, IL 61764

AT&T Distribution
AT&T Indiana Utility Coordination
g09871@att.com

Brightspeed
Contact: Sonni Smith
704-314-2662
sonni.smith@brightspeed.com
1120 S Tryon St., Suite 700
Charlotte, NC 28203
Alternate Contact: Tanya Palone
980-376-1707
tanya.palone@brightspeed.com

Marshall County R.E.M.C.
Contact: Shawnda Wenino
574-936-3161
swenino@marshallremc.com
P.O. Box 250
Plymouth, IN 46563

NIPSCO (Laporte, Plymouth)
Utility Coordination:
utilitycoordination@nisource.com
Damage Prevention Screening Center:
cdcamagepreventioncenter@nisource.com

American Electric Power
Contact: J. Jay Marlow
260-408-3447

Kankakee Valley R.E.M.C.
Contact: Cody Fletcher
574-302-9786
cfletcher@kvremc.com
8642 W U.S. 30
Wanatah, IN 46390
Alternate Contact: Justin Higerson
219-615-7348
8642 W U.S. 30
Wanatah, IN 46390

American Electric Power Telecom
Contact: Brian Chute
614-933-2853
bdchute@aep.com
8600 Smiths Mill Rd.
New Albany, OH 43054
Alternate Contact: Tim Hovious
765-677-6036
thhovious@aep.com
4504 S Lincoln Blvd., 01
Marion, IN 46953

UTILITY

Cable TV

Cable TV

Communications

Communications

Electric

Electric

Electric

Electric

Fiber Optic

OWNER

Choice Light, Inc.
Contact: Brandon Liggett
574-968-5342
bliggett@choicelight.org
130 S Main St.
South Bend, IN 46601

Surf Internet
Contact: Ryan Coates
574-389-3100
rcoates@surfinternet.com

NIPSCO (South Bend, Laporte, Plymouth)
Utility Coordination:
utilitycoordination@nisource.com
Damage Prevention Screening Center:
cdcamagepreventioncenter@nisource.com

Crossroads Pipeline

Town of North Liberty
Contact: Jason Lambright
574-440-5808
nlutility@yahoo.com
300 S Main St.
North Liberty, IN 46554

Frontier

UTILITY

Fiber Optic

Fiber Optic

Gas

Pipeline

Sewer, Water

Telephone

GENERAL NOTES:

- All items shown are existing unless otherwise indicated as required.
- The contractor shall locate all underground utilities prior to starting work and shall conduct his operation in such manner as to insure that those utilities will not be disturbed.
- The Contractor is responsible for locating all utilities private & public, which should include potholing with a hydro-excavation, etc. Any damaged utilities shall be repaired at the contractors expense.
- Any damage to access roads, bridges, private or public property, and to existing structure not specified to be altered and caused by the contractor during construction shall be repaired at the expense of the contractor.
- Prior to starting construction the contractor shall conduct check surveys on each aspect of the work as provided in the specifications. The results of the check surveys may affect the quantities.
- If any errors become apparent, they shall be brought to the attention of the engineer prior to construction so that clarification or redesign may occur.
- Contractor shall power wash all equipment upon arriving on site in order to decrease the spread of any invasive species.
- Contractor shall not remove trees between April 1st to October 1st due to date restrictions with the endangered Indiana bat species.
- Contractor shall seed and mulch all disturbed areas within the construction limits unless noted otherwise.
- INDOT Standard Specification (latest edition) shall be used with these plans.

SURVEY NOTES:

- Unless noted otherwise, all bearings, distances, areas, and coordinates shown hereon are based upon the Indiana State Plane Coordinate System's East Zone (InSPC-1301) per NAD 83 (2011) Epoch 2010.00 and are reported in U.S. Survey Feet and decimal parts thereof.
- Unless noted otherwise, all elevations shown hereon are based upon the North American Vertical Datum of 1988 (NAVD 88) as established on National Geodetic Survey (NGS) marker M 154 (PID ME0054) elevation; 729.54 (NAVD 88).
- Equipment Used:
 - Trimble R10 GNSS Receiver (3mm // 8mm+1ppm RMS)
 - Trimble DiNi Digital Level (0.7mm/km)
 - Trimble S6 Robotic Total Station (3" 2mm+2ppm)
- No underground utilities were marked or surveyed. Absence of underground utilities was verified by Indiana 811 under the following ticket number: 2407243140.
- The topographic survey was completed July 24-25, 2024.

HORIZONTAL CONTROL (INSPC – EAST ZONE // U.S. FEET)

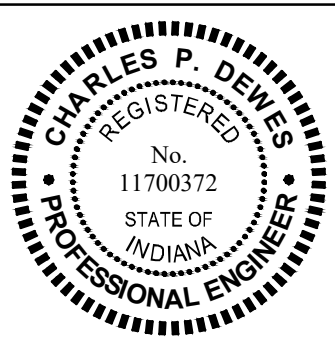
Id.	Northing	Easting	Latitude	Longitude	Elevation (NAVD 88)	Marker
CP1	2292754.4625	131684.7088	N41°32'25.82460"	W86°23'02.70097"	764.28	½"x18" Rebar w/ Cap Stamped 'LAWSON-FISHER'
CP2	2292321.9996	132187.2500	N41°32'21.59337"	W86°22'56.04580"	753.62	½"x18" Rebar w/ Cap Stamped 'LAWSON-FISHER'


Control point elevations are provided for reference. It should be understood that the markers used are subject to vertical movement due to frost heave,vehicle movements and other environmental factors. All horizontal control point elevations are superseded by bench mark elevations.

VERTICAL CONTROL (NAVD 88)

Id.	Elevation (NAVD 88)	Remarks	Northing	Easting	Latitude	Longitude
TBM A	752.69	Mag Spike in Asph. w/ Washer Stamped 'Lawson-Fisher'	2292399.9	132090.1	N41°32'22.36"	W86°22'57.33"
TBM B	754.80	Mag Spike in Asph. w/ Washer Stamped 'Lawson-Fisher'	2292275.6	132208.6	N41°32'21.14"	W86°22'55.76"

Bench mark horizontal coordinates are provided for reference. It should be understood that the method and means used to establish the horizontal coordinates of the bench marks is not the same class and standard as those used to establish the horizontal control points. The coordinates only serve as an aid in locating the marks and are superseded by horizontal control point coordinates.





8/22/25
DATE

SIGNATURE

DATE

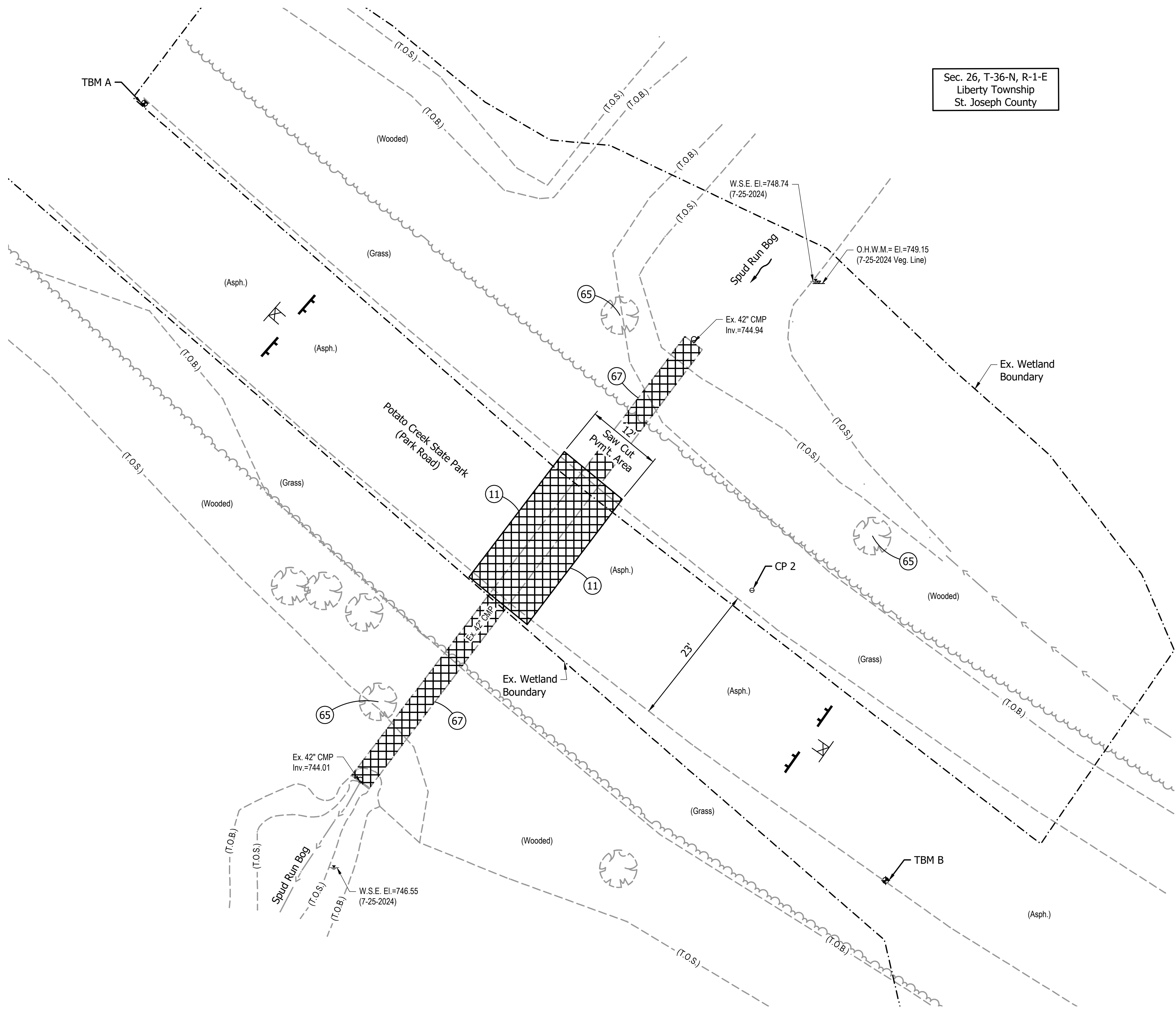
SIGNATURE

INDIANA DEPARTMENT OF NATURAL RESOURCES
POTATO CREEK STATE PARK
SPUD RUN CULVERT REPLACEMENT

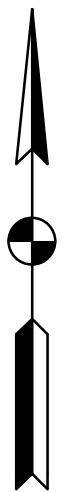
LEGEND AND GENERAL NOTES

REVISIONS		HORIZONTAL SCALE	PROJECT NUMBER	
		VERTICAL SCALE	ENG 2603736023	
DRAWN: PJV		SURVEY BOOK	SHEETS	
CHECKED: CPD		DATE AUGUST 2025	2	OF 8

U:\2025\2025008 IDNR Spud Run Lateral\Cad\Plan Set\Civil\2500800HY_DM.dwg (DEMOLITION PLAN)



Sec. 26, T-36-N, R-1-E
Liberty Township
St. Joseph County



- NOTES:**
- Contractor shall coordinate with IDNR to provide an advanced schedule of road closure prior to saw cutting of pavement and pipe removal work.
 - Contractor is responsible for disposal of 42" CMP pipe, asphalt, and excess borrow material from the open cut at an offsite location.
 - Contractor shall preserve trees within and near the work area where indicated.
 - Contractor shall maintain a dry work area using pump around or dewatering systems. Dewatering and pump around systems shall be presented to the Engineer and Owner for review and approval prior to their use. (See sheet 7 for typical detail).
 - Contractor shall leave barricades and signs in place throughout construction duration.

- LEGEND:**
- (11) Saw Cut
 - (65) Protect Tree
 - (67) Remove 42" CMP Pipe
 - Demolition Area
 - Type III Barricade
 - Road Closure Sign Assembly

ROAD
CLOSED

R11-2
48" x 30"
ROAD CLOSURE
SIGN ASSEMBLY

LFA
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PH. (574) 234-3167

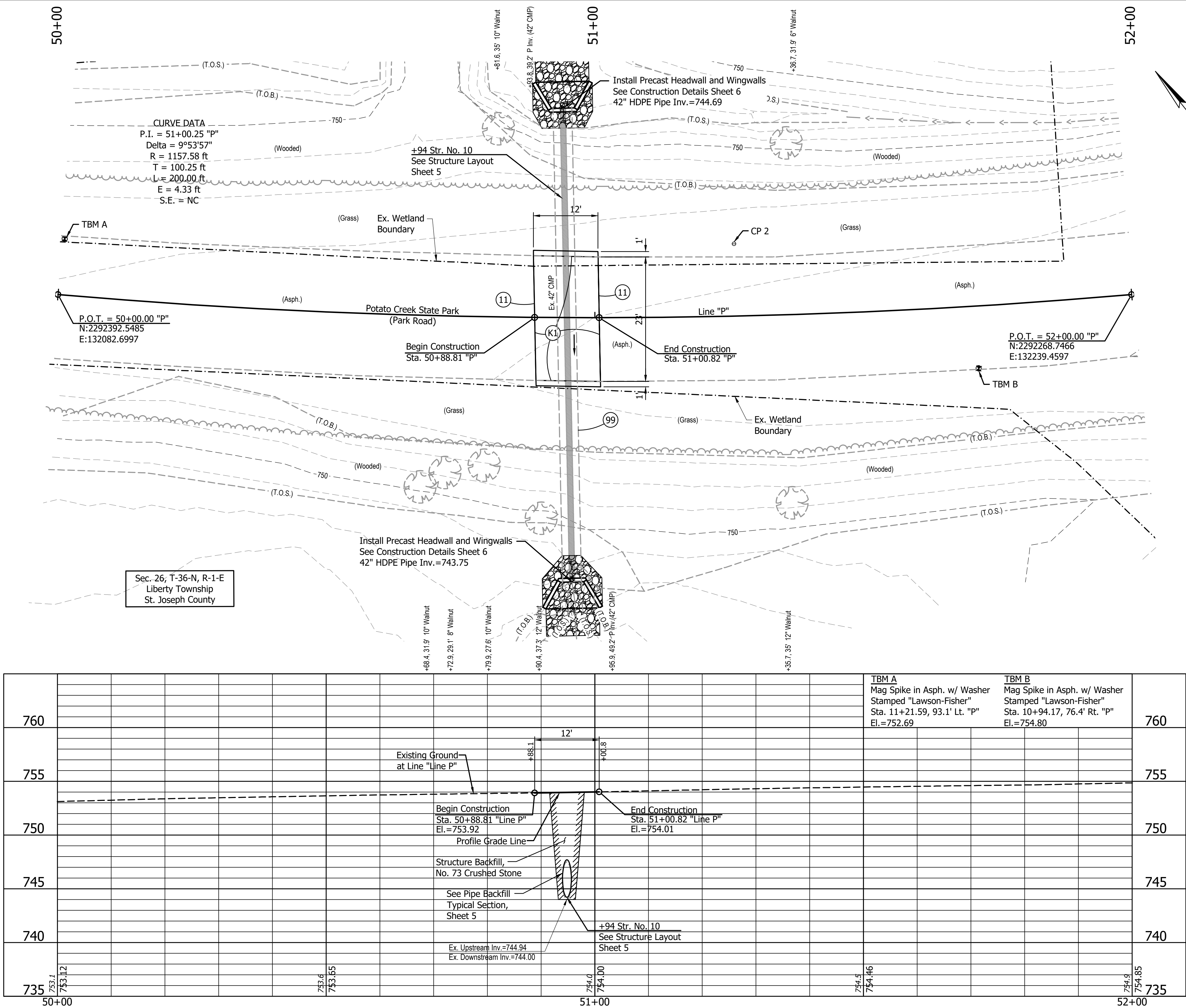
REGISTERED
No. 11700372
STATE OF INDIANA
PROFESSIONAL ENGINEER
CHARLES P. DEWES

Charles Dewes
SIGNATURE
8/22/25
DATE

INDIANA DEPARTMENT OF NATURAL RESOURCES
POTATO CREEK STATE PARK
SPUD RUN CULVERT REPLACEMENT
DEMOLITION PLAN

REVISIONS		HORIZONTAL SCALE		PROJECT NUMBER	
		1" = 10'		ENG 2603736023	
		VERTICAL SCALE			
DRAWN: JAJ		SURVEY BOOK		SHEETS	
CHECKED: CPD		DATE		3 OF 8	
		AUGUST 2025			

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EARTHWORK BALANCE		
Line "T-1"		
Structural Backfill +25%	=	108 cys
Common Excavation	=	162 cys
Cohesive Borrow	=	65 cys
* Excludes Pavement Removal		

LEGEND:	
(K1)	165 #/sys QC/QA HMA, 3, 64, Surface, 9.5 mm on 275 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on 660 #/sys QC/QA HMA, 3, 64, Base 25.0 mm on Subgrade Treatment Type IC on Geotextile for Pavement, Type 2B
(11)	Saw Cut
(99)	Remove
	18" Revetment Riprap

LFA

LAWSON-FISHER ASSOCIATES P.C.

525 W. WASHINGTON AVENUE
SOUTH BEND, INDIANA 46601
PH. (574) 234-3167

REGISTERED PROFESSIONAL ENGINEER
No. 11700372
STATE OF INDIANA
CHARLES P. DEWES

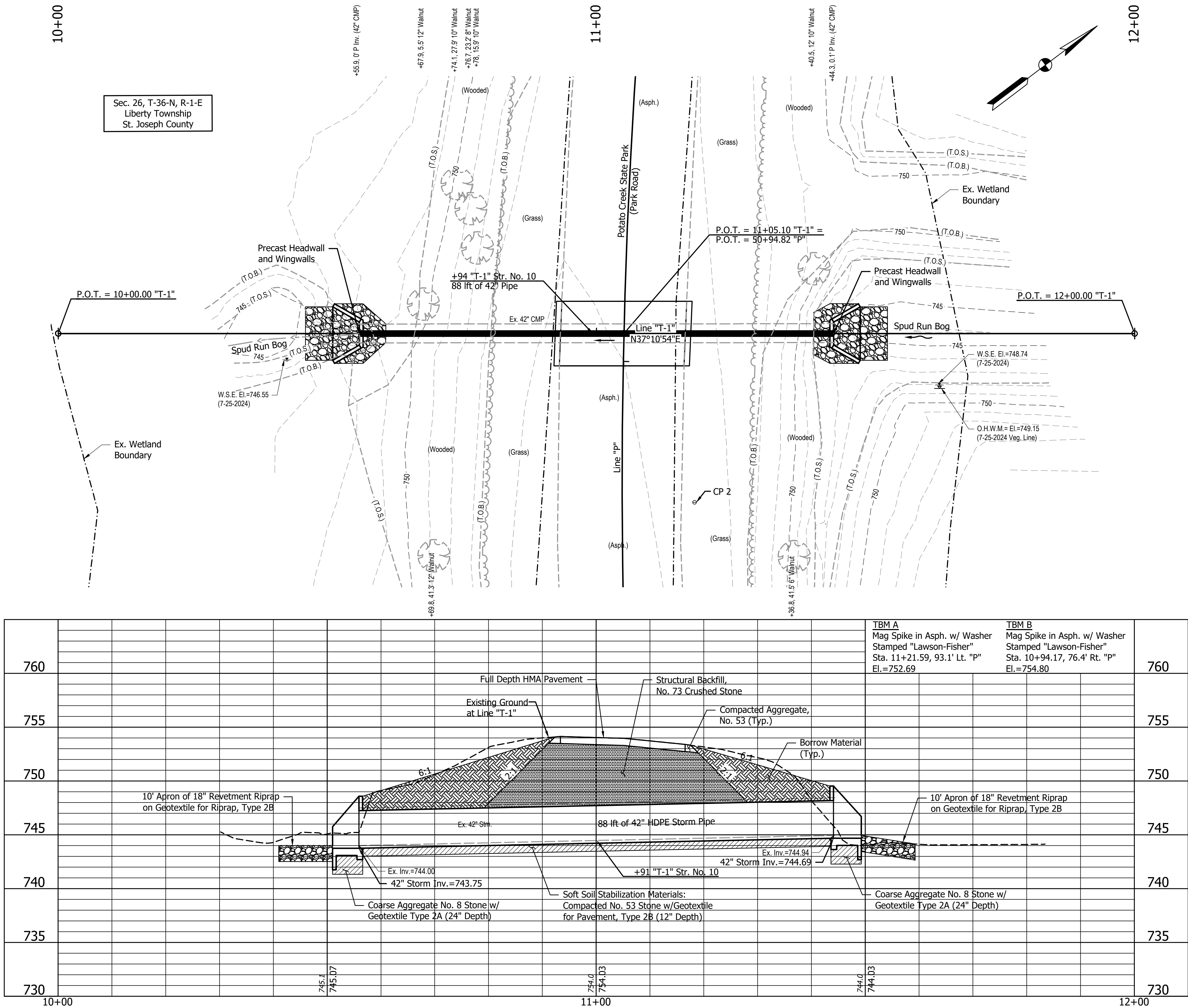
Charles P. Dewes
SIGNATURE
8/22/25
DATE

INDIANA DEPARTMENT OF NATURAL RESOURCES
POTATO CREEK STATE PARK
SPUD RUN CULVERT REPLACEMENT

PLAN AND PROFILE
STA. 10+00 TO STA. 12+00 - LINE "C"

REVISIONS	HORIZONTAL SCALE 1" = 10' VERTICAL SCALE 1" = 5'	PROJECT NUMBER ENG 2603736023
DRAWN: JAJ	SURVEY BOOK	SHEETS
CHECKED: CPD	DATE AUGUST 2025	4 OF 8

JAU - 8/21/2025 10:48 AM - U:\2025\2025008 IDNR Spud Run Lateral\Cad\Plan Set\Civil\2500800HY_SI.01.dwg (STRUCTURE LAYOUT)



HYDRAULIC DATA

Drainage Area	431.5 Acres
Q ₁₀₀ Discharge	413.9 ft ³ /sec
Q ₁₀₀ Headwater Elevation	754.0 ft
Backwater	746.55 ft
Velocity at Q ₅₀	7.81 ft/sec
Gross Waterway Area (Below Q ₁₀₀ Elevation)	9.62 ft ²
Required Waterway Opening	9.62 ft ²
Waterway Opening Provided	9.62 ft ²
Roadway Overflow Area	0 ft ²

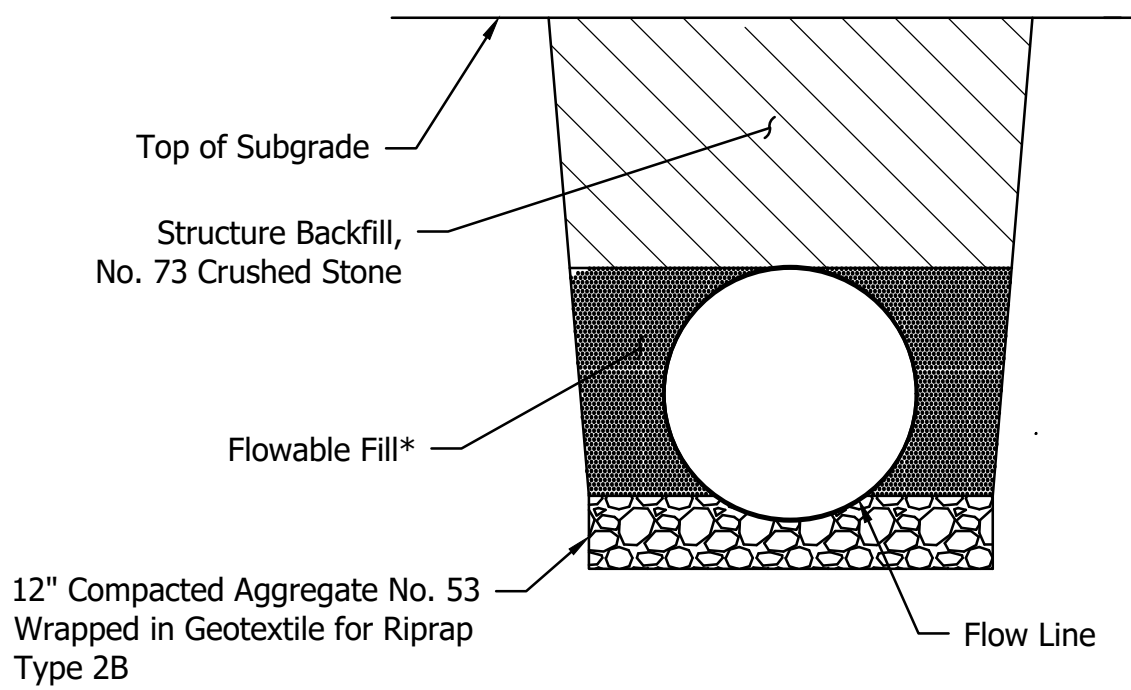
LEGEND:

①

165 #/sys QC/QA HMA, 3, 64, Surface, 9.5 mm on
275 #/sys QC/QA HMA, 3, 64, Intermediate, 19.0 mm on
660 #/sys QC/QA HMA, 3, 64, Base 25.0 mm on
Subgrade Treatment Type IC on
Geotextile for Pavement, Type 2B



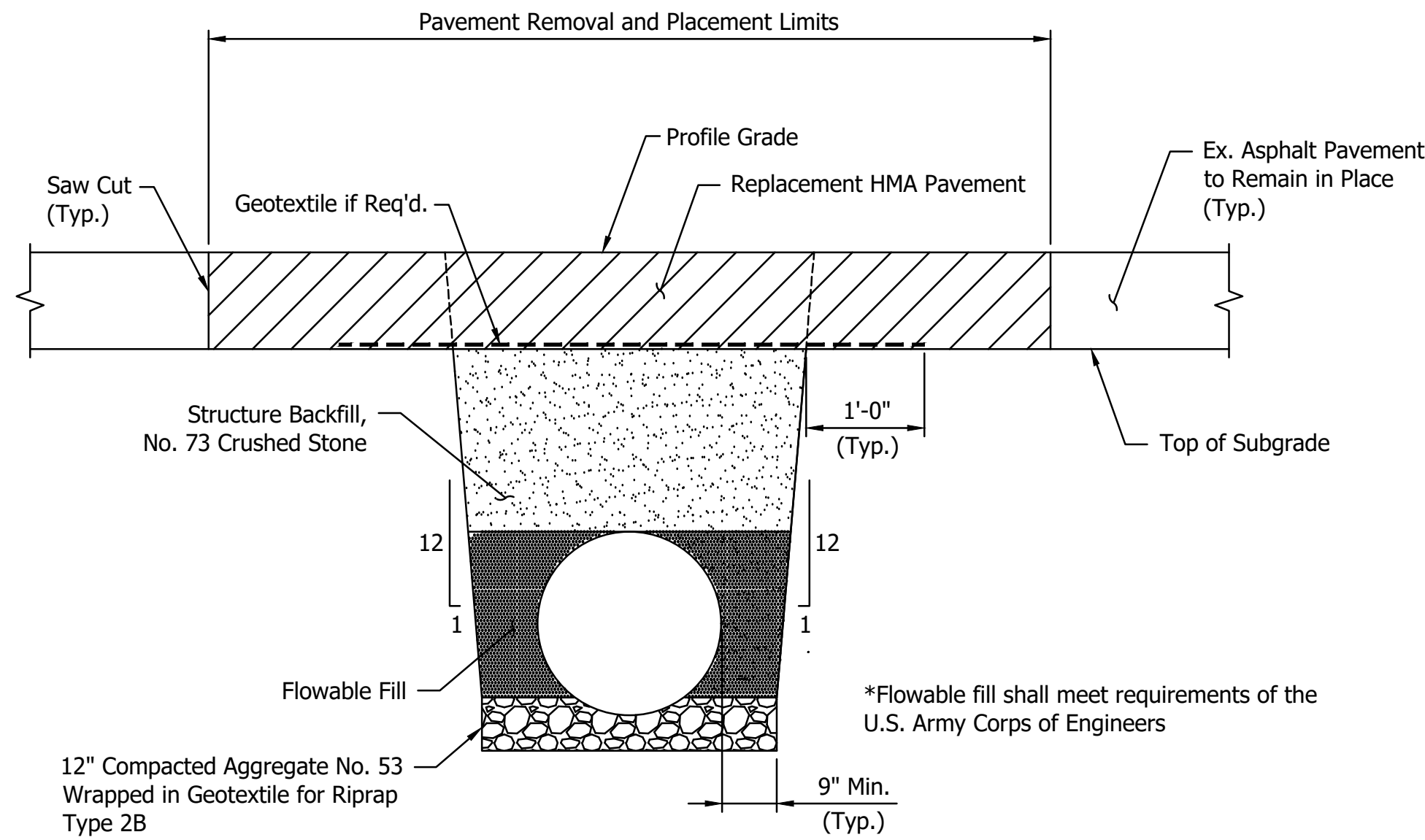
18" Revetment Riprap



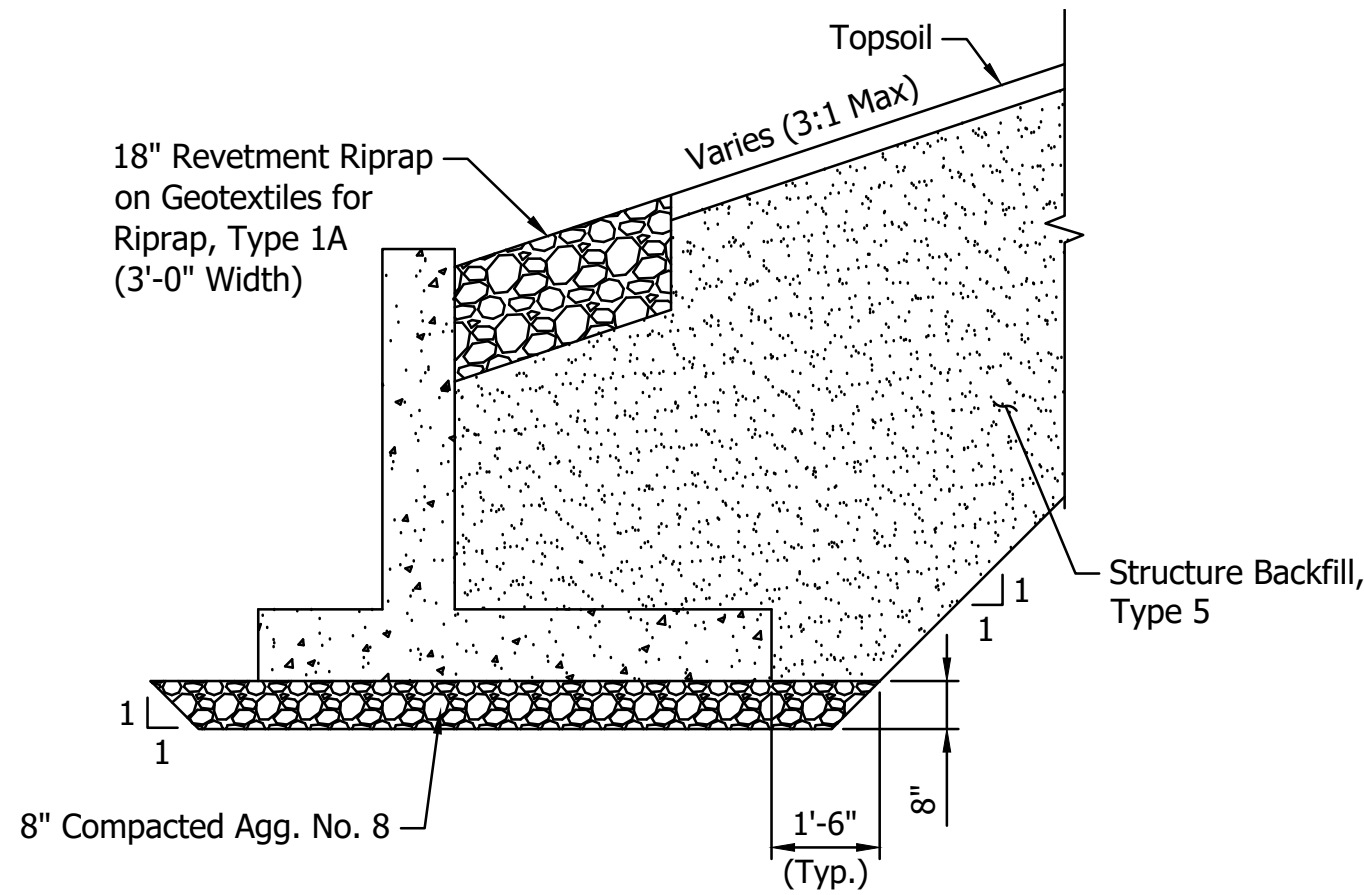
*Flowable Fill Shall Meet Requirements of the U.S. Army Corps of Engineers

PIPE BACKFILL
TYPICAL SECTION
Not to Scale

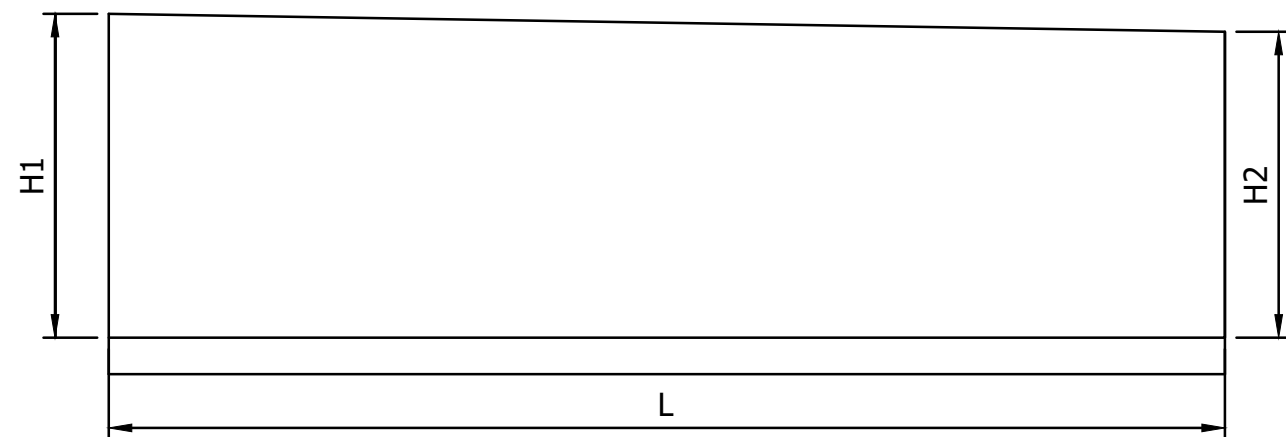
U:\2025\2025008 IDNR Spud Run Lateral\Cad\Plan Set\Civil\2500800HY_CD01.dwg (CONSTRUCTION DETAILS)



ASPHALT REPLACEMENT PAVEMENT
Scale: $\frac{3}{8}$ " = 1'-0"



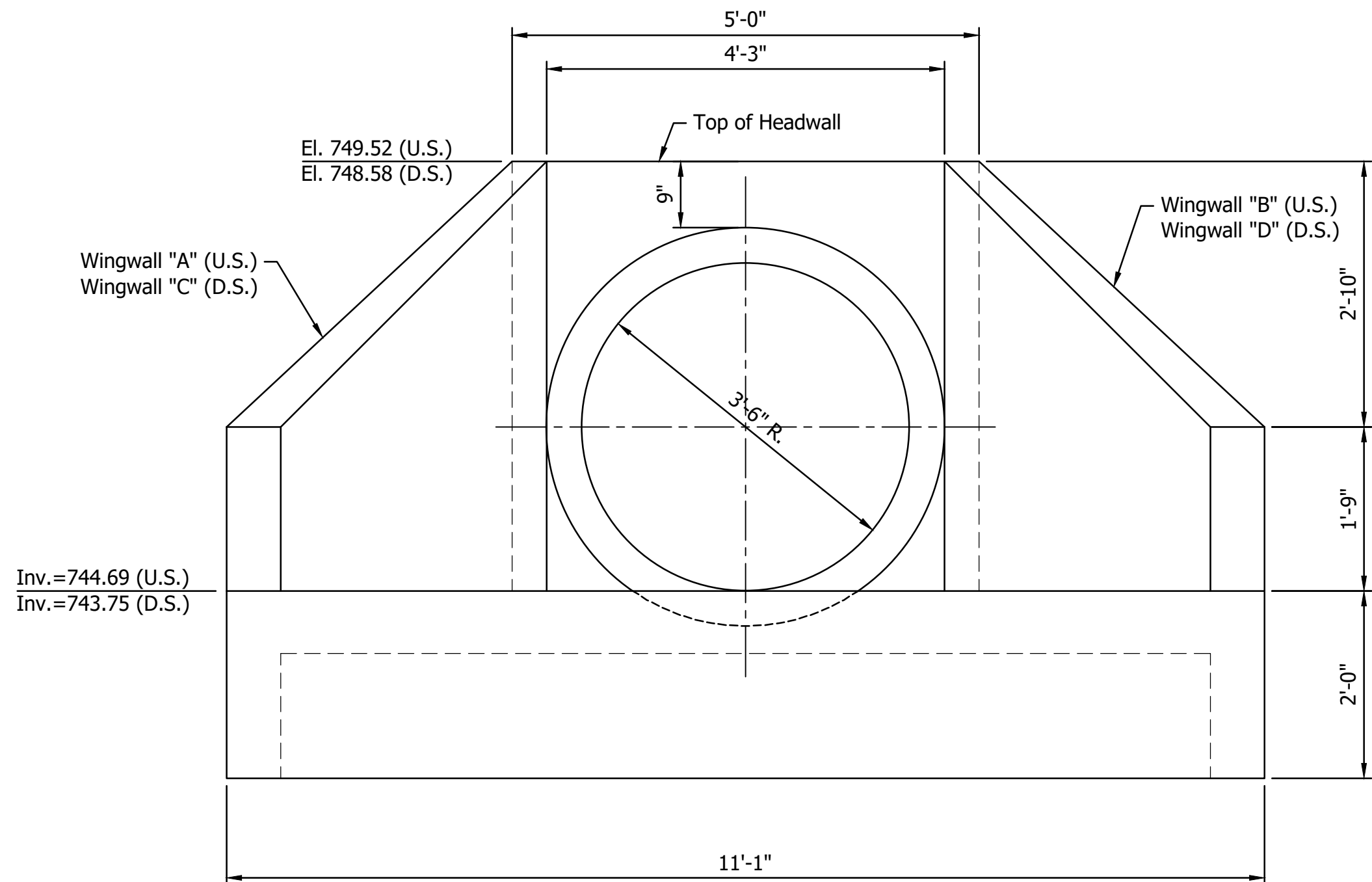
WINGWALL BACKFILL DETAIL
Scale: $\frac{3}{8}$ " = 1'-0"



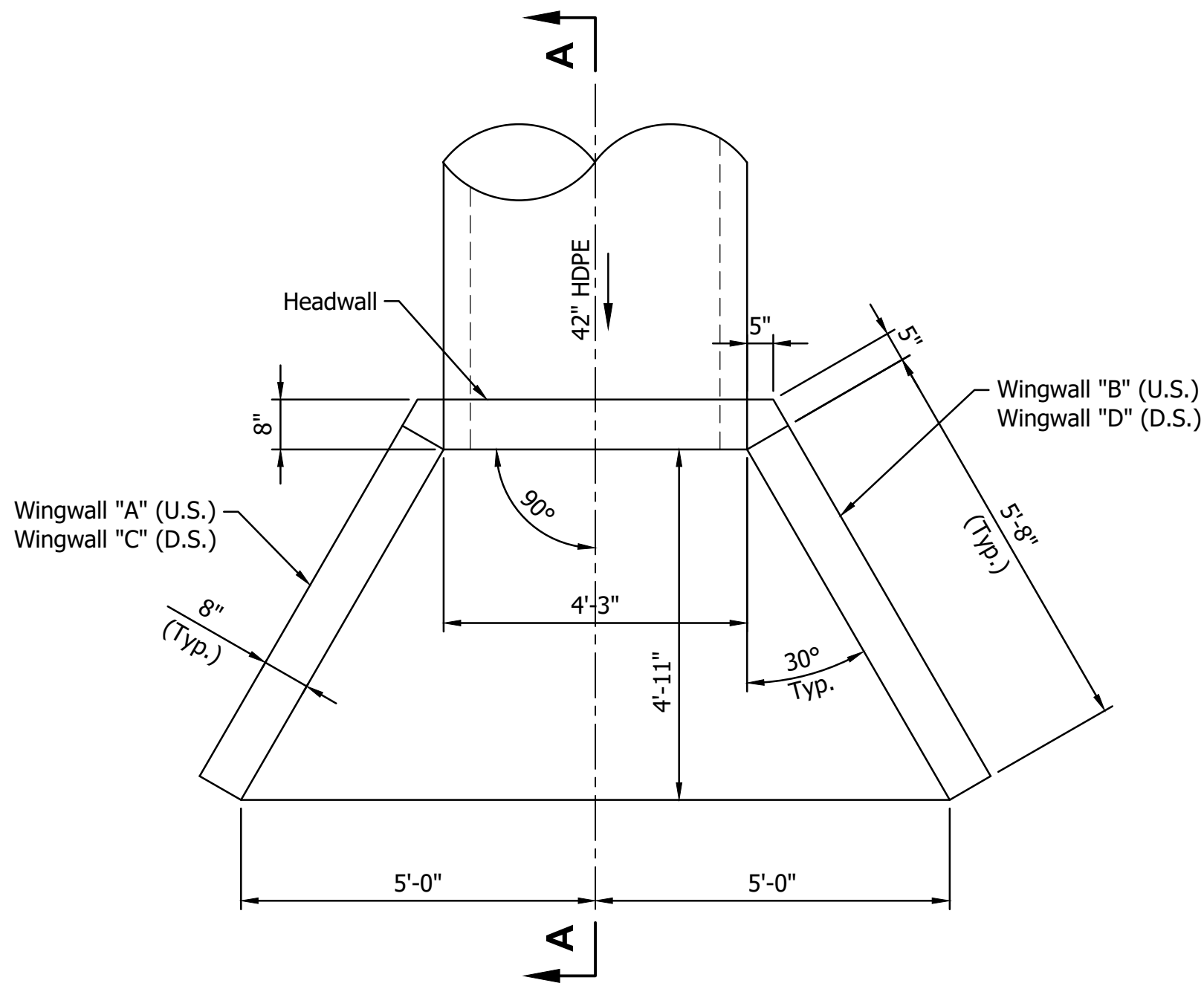
WINGWALLS				
DESIGNATION	AREA (SF)	H1 (FT)	H2 (FT)	L (FT)
"A"	16.5	4.8	1.8	5
"B"	16.5	4.8	1.8	5
"C"	16.5	4.8	1.8	5
"D"	16.5	4.8	1.8	5
TOTAL	65.8			

NOTES:

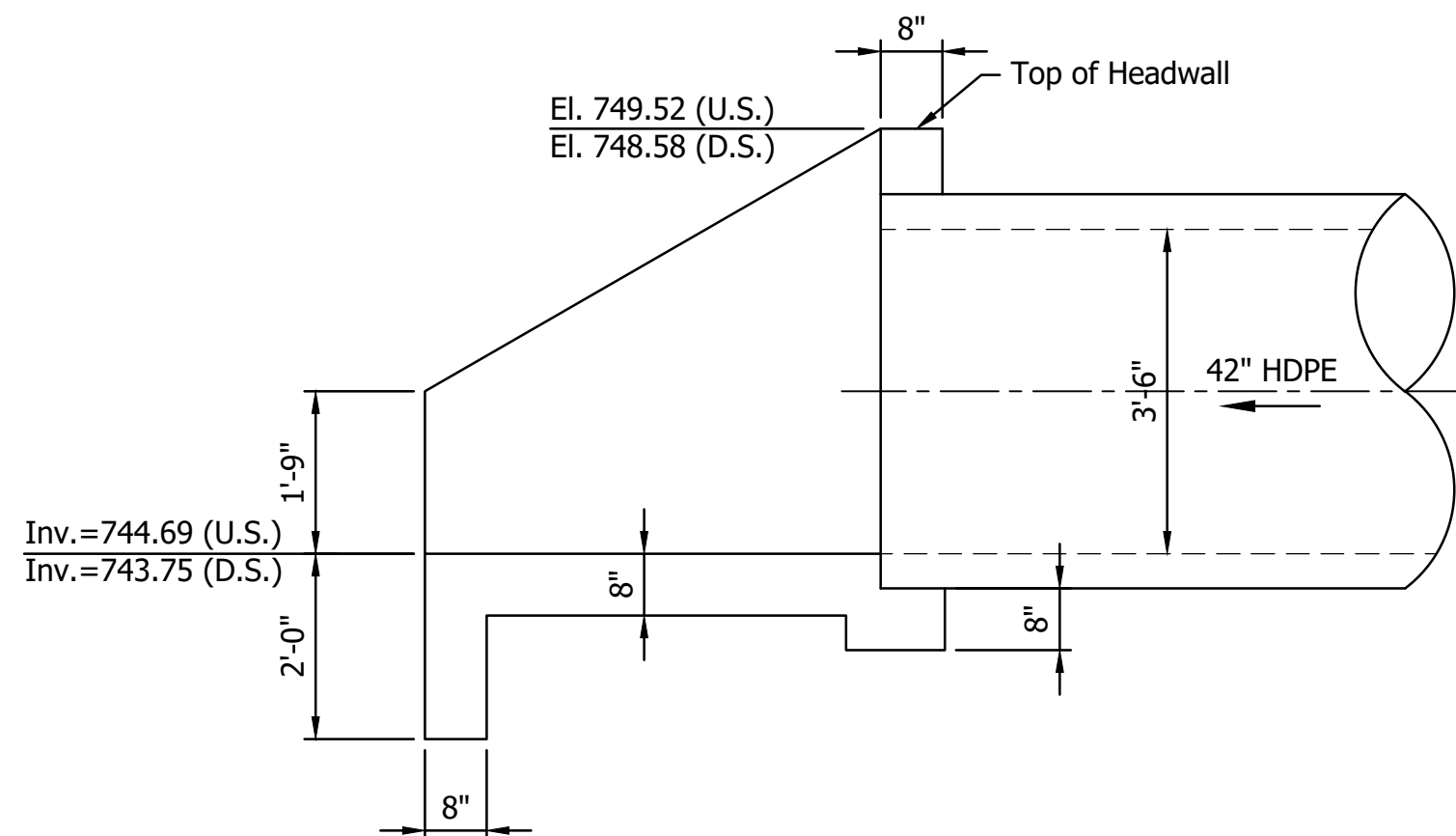
- Composition (per cubic yard):
Portland Cement (Type I or II): ≥ 100 Lbs (ASTM C150, low-alkali)
Or GGBFS: per ASTM C989 (Grade 100 or 120) as alternative
Fly Ash: ≥ 275 Lbs (ASTM C618, Class N, C, or F; avoid Class C with reactive aggregates)
Fine Aggregate (sand, SSD): $\approx 2,795$ Lbs (ASTM C33);
reactive-aggregate test needed if ≥ 200 cy (ASTM C1260, $<0.10\%$ expansion at 16 days)
Water: ≤ 370 Lbs (potable)
Air-Entraining Agent: ≥ 2 Oz (ASTM C260)
Water-Reducing Admixture (Type A or F): as needed for workability (ASTM C494)
- Fresh Properties:
Consistency: Batter-like; test with 3"x6" cylinder, expect ~8" spread, no segregation
- Hardened Properties:
Compressive strength: ~100 psi at 28 days
- Quality Control & Testing:
Compliance with ASTM standards (C150, C618, C33, C260, C494)
When using large quantities: ASTM C1260 for reactivity
Field sampling and testing for consistency and strength
- Workmanship:
Mix and place per site conditions using standard equipment; ensure proper flow and settlement



PIPE CULVERT HEADWALL
FRONT ELEVATION VIEW
(SAME UPSTREAM AND DOWNSTREAM)
Scale: $\frac{3}{4}$ " = 1'-0"

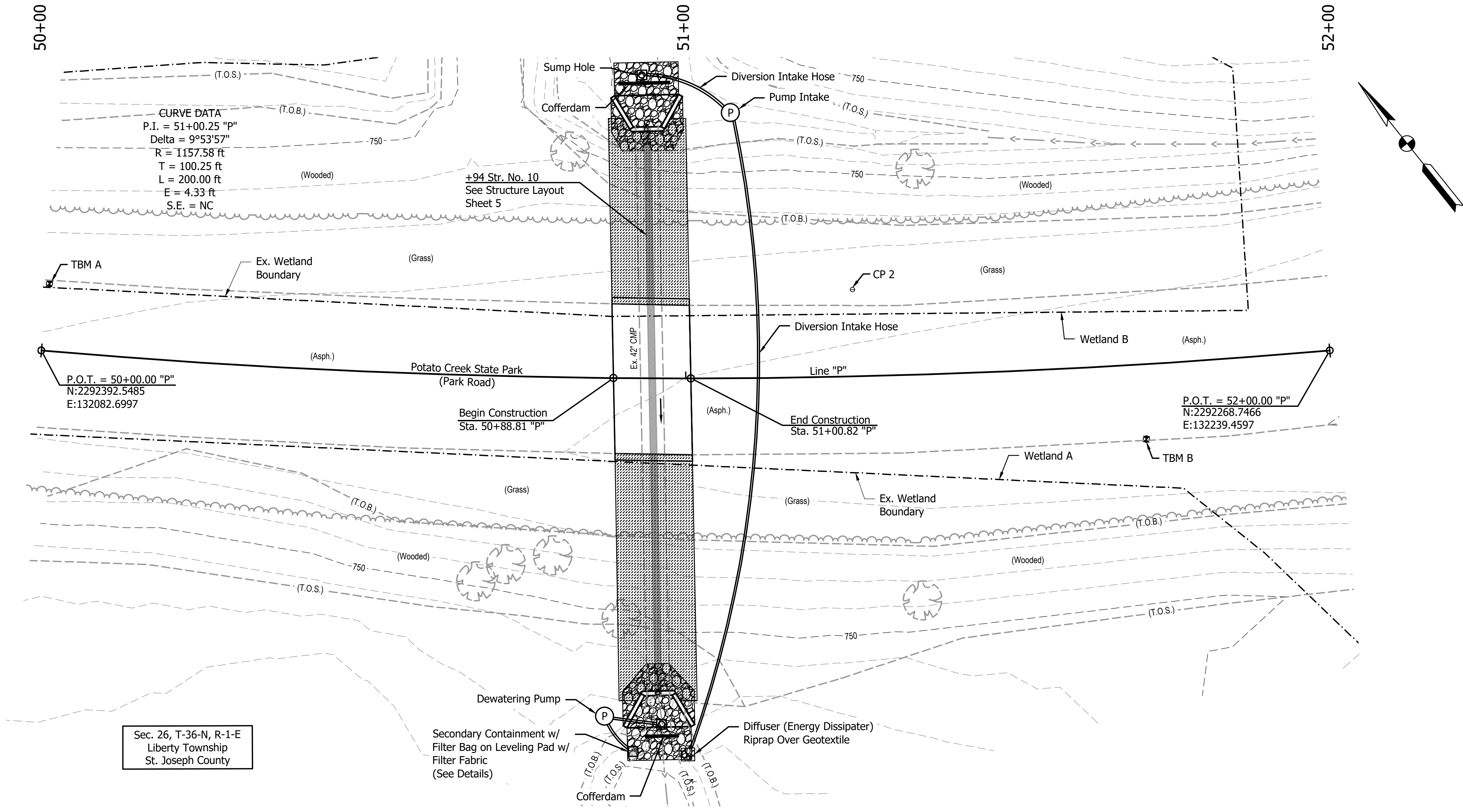


PIPE CULVERT HEADWALL
PLAN VIEW
(SAME UPSTREAM AND DOWNSTREAM)
Scale: $\frac{1}{2}$ " = 1'-0"



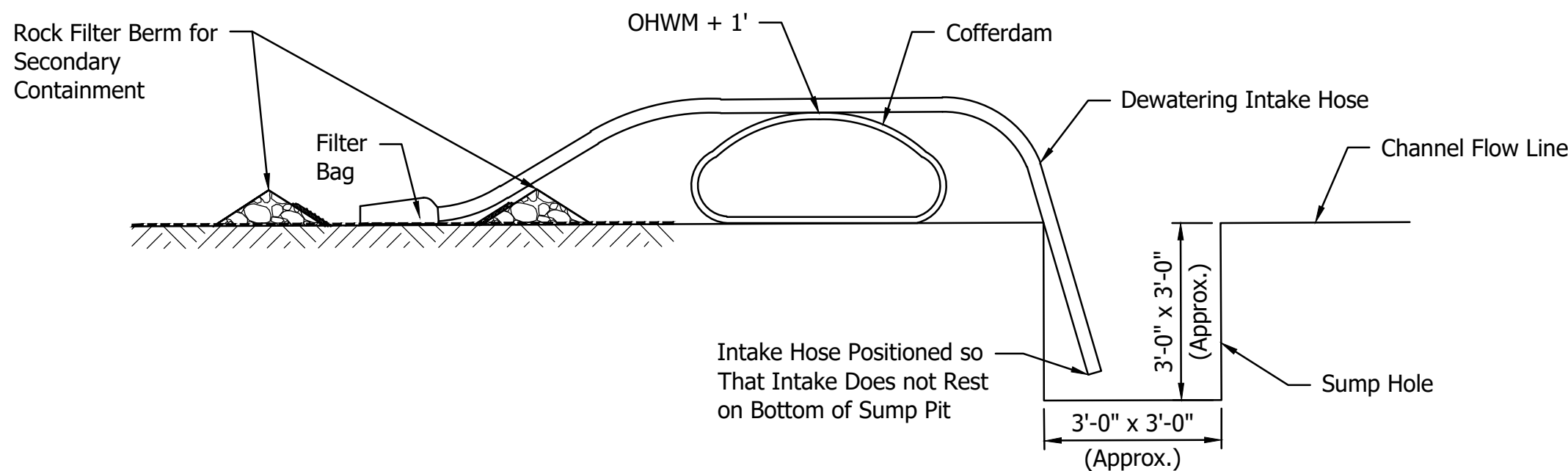
SECTION A-A
(SAME UPSTREAM AND DOWNSTREAM)
Scale: $\frac{1}{2}$ " = 1'-0"

JAU - 8/21/2025 10:48 AM - U:\2025\2025008 IDNR Spud Run Lateral\Cad\Plan Set\Civil\2500800EC_PL01.dwg (EROSION CONTROL - PUMP AROUND)

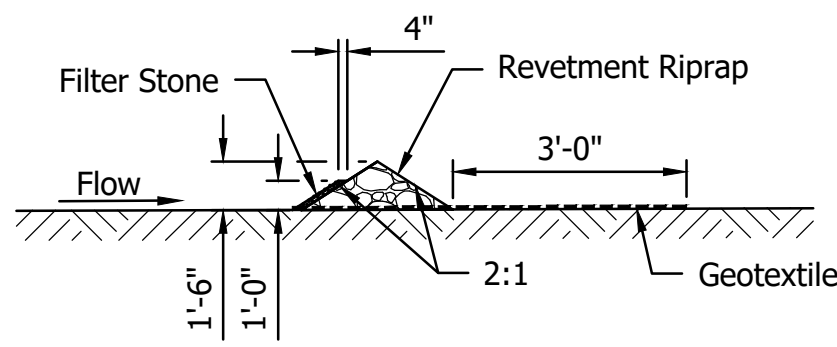


EROSION CONTROL	
Temporary Filter Sock	20 lft
No. 2 Stone	10 Tons

TEMPORARY IMPACTS BELOW OHWM	
Area (Cofferdams and Sump Hole)	60 sft
Length (Cofferdams and Sump Hole)	20 ft
Volume (Cofferdams and Sump Hole)	7 cys



DEWATERING & COFFERDAM / SUMP HOLE DETAIL
Not to Scale



ROCK FILTER BERM DETAIL
Not to Scale

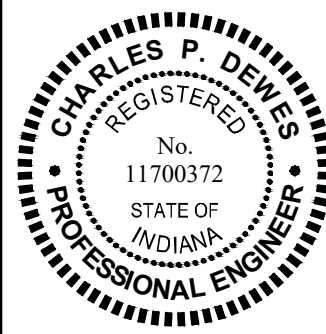
NOTES:

1. An adequate pump around system for this project will be the responsibility of the Contractor. This detail provides a typical pump around system. Contractor may use alternative means and methods, but shall submit dewatering and/or pump around plan to Owner and Engineer for review and approval prior to implementation.
2. Duration of use: 30 days.

LEGEND:

- Erosion Control Blanket and Seeding Mix
-
- Filter Sock

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SOUTH BEND, INDIANA 46601
PH. (574) 234-3167



Charles P. Dewes
SIGNATURE
8/22/25
DATE

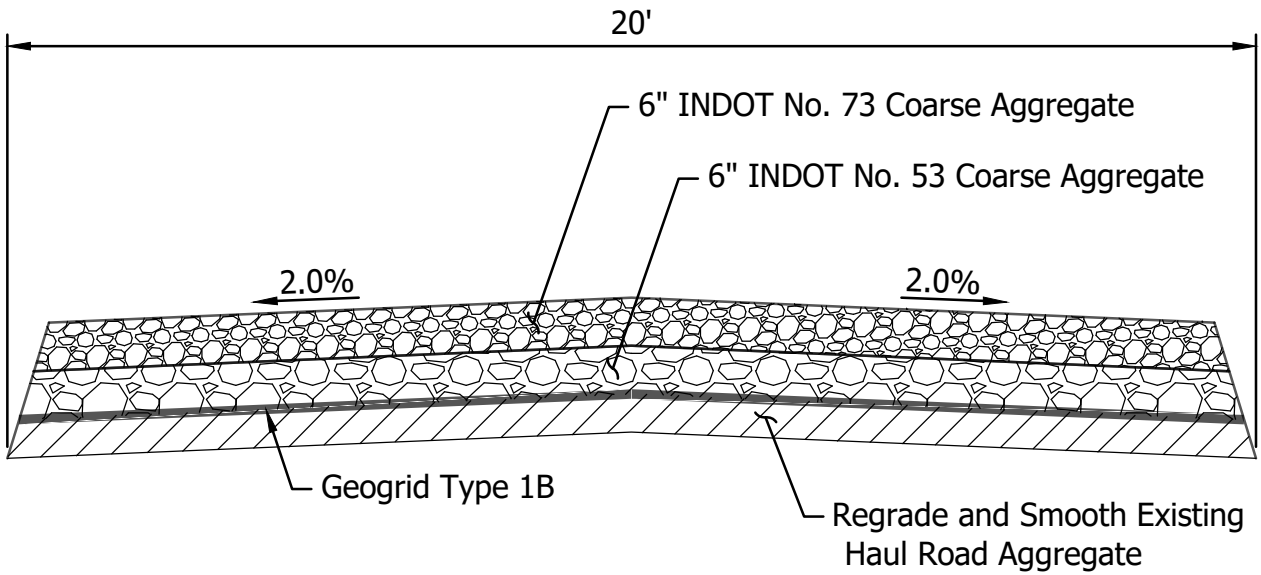
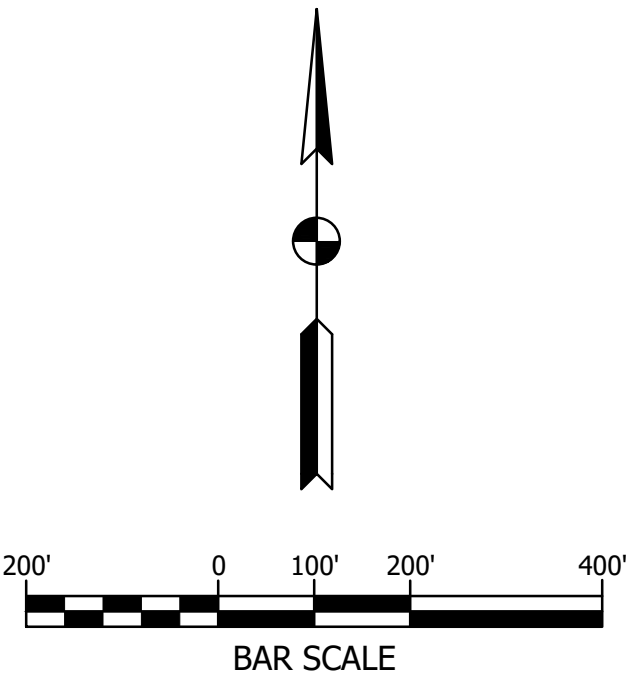
NOT FOR
CONSTRUCTION

INDIANA DEPARTMENT OF NATURAL RESOURCES
POTATO CREEK STATE PARK
SPUD RUN CULVERT REPLACEMENT

EROSION CONTROL
AND PUMP AROUND PLAN

REVISIONS		HORIZONTAL SCALE		PROJECT NUMBER	
		1" = 10'		ENG 2603736023	
		VERTICAL SCALE			
DRAWN: JAJ		SURVEY BOOK		SHEETS	
CHECKED: CPD		DATE		7 OF 8	
		AUGUST 2025			

U:\2025\2025008 IDNR Spud Run Lateral\Cad\Plan Set\Civil\2500600HY_DTO1-ALT.dwg (NORTH ACCESS ALT)



DETAIL 1
GRAVEL HAUL ROAD
Not to Scale

LFA

LAWSON-FISHER ASSOCIATES P.C.

525 W. WASHINGTON AVENUE
SOUTH BEND, INDIANA 46601
PH. (574) 234-3167

REGISTERED
No. 11700372
STATE OF INDIANA
PROFESSIONAL ENGINEER

Charles Dewes
SIGNATURE

8/22/25
DATE

INDIANA DEPARTMENT OF NATURAL RESOURCES
POTATO CREEK STATE PARK
SPUD RUN CULVERT REPLACEMENT

NORTH ACCESS ROAD IMPROVEMENTS
ALTERNATE

REVISIONS
DRAWN: JAJ
CHECKED: CPD

HORIZONTAL SCALE
1" = 200'
VERTICAL SCALE
SURVEY BOOK
DATE
AUGUST 2025

PROJECT NUMBER		
ENG 2603736023		
SHEETS		
8	OF	8