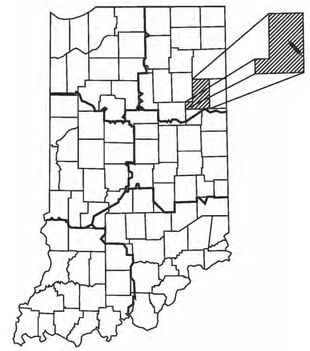
DEPARTMENT OF NATURAL RESOURCES

CULVERT REPLACEMENT/REPAIR

PROJECT NO: ENG2403734214

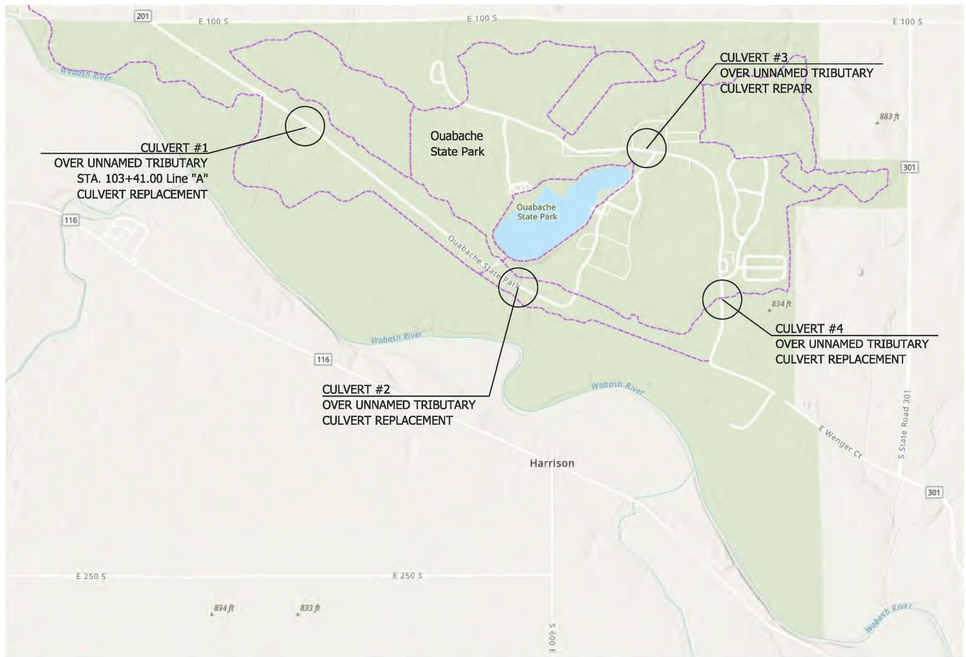
Culvert Replacements or Repair at Four Culverts Within Ouabache State Park. Located at 0.50, 1.20, 1.50 and 1.70 Miles Southeast of County Road 100 South in Section 7 and 12, T-26-N, R-12 and 13-E, Harrison Township, Wells County, Indiana



PROJECT LOCATION SHOWN BY
WELLS COUNTY

LATITUDE: VARIOUS LONGITUDE: VARIOUS

NO ADDITIONAL RIGHT OF WAY REQUIRED FOR THIS PROJECT



Wells County

SCALE: 1" = 1000'

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2024
TO BE USED WITH THESE PLANS

INDEX

UTILITIES

Telephone:

AT&T DISTRIBUTION
David Smith
116 E. Taylor Street
Kokomo, IN 46901
Email: DS8383@ATT.com
Mobile: (765) 760-4786

811 Know what's below. Call before you dig.

INDIANA UNDERGROUND
1-800-382-5544 OR CALL 811
24 HOURS A DAY 7 DAYS A WEEK

Sewer:

Bluffton Utilities
Jon Oman
1128 East Market Street
Bluffton, IN 46714
Email: jon.oman@blufftonindiana.gov
Office: (260) 824-2500

Communications (Fiber Optic):

Indiana Department of Natural Resources
Jon Winne, Property Manager
4920 E. SR 201
Bluffton, IN 46714
Email: jwinne@dnr.in.gov
Mobile: (260) 227-0132

AECOM
2450 South Tibbs Ave.
Indianapolis, IN 46241
317-532-5400

GERARD F. MROCZKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

PLANS PREPARED BY: AECOM 317-532-5400 PHONE NUMBER

CERTIFIED BY: 04/25/25 DATE

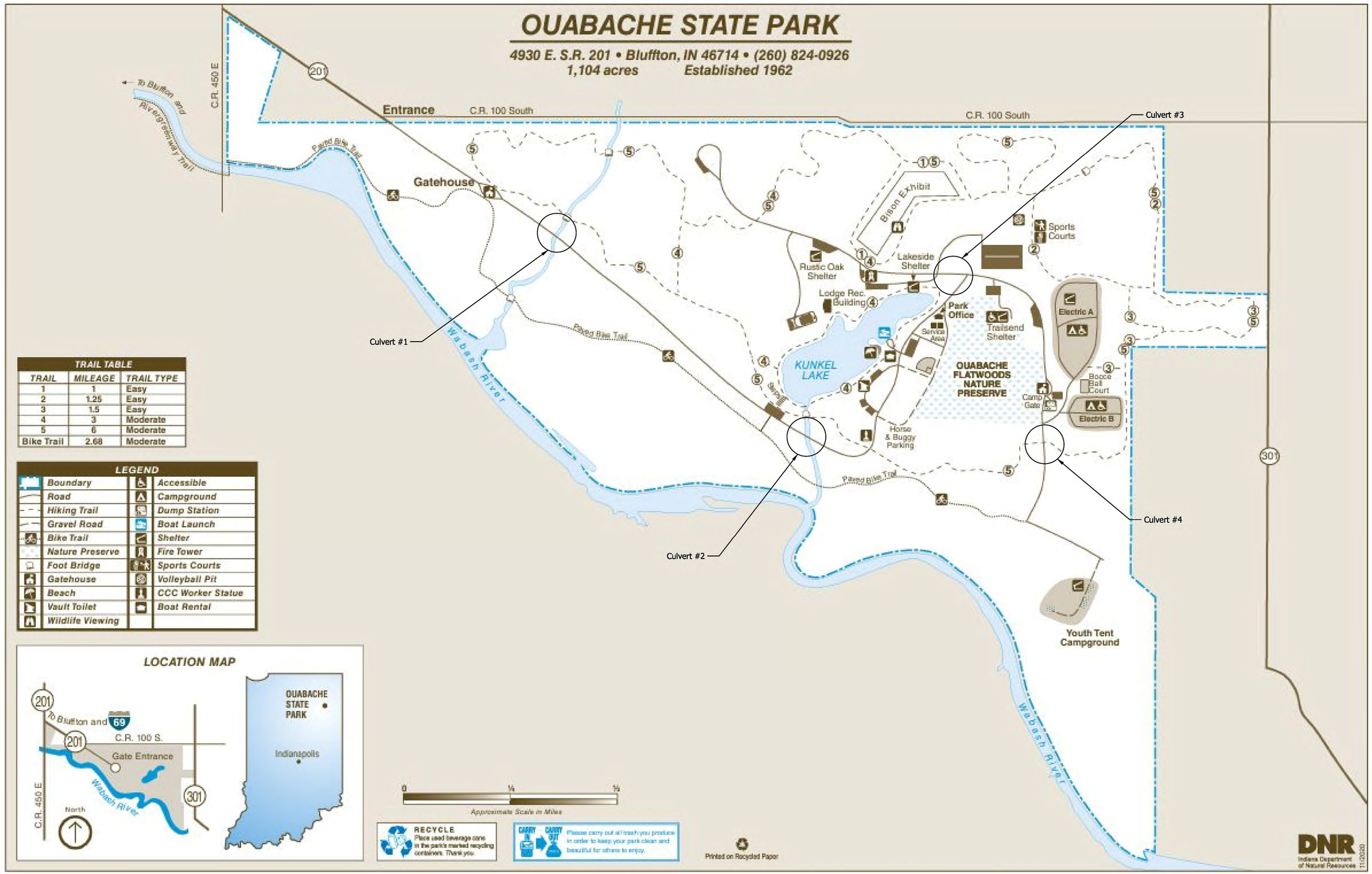
APPROVED FOR LETTING: DEPARTMENT OF NATURAL RESOURCES 08/14/25 DATE

DESIGNATION	
SURVEY BOOK	SHEETS
ELECTRONIC/AERIAL	1 of 32
CONTRACT	PROJECT
	ENG2403734214

DATE: 8/14/2025
TIME: 2:35:58 PM
LOCATION: c:\pwworking\um\dms03252\d200177_OuabacheSS_Title.dgn

OUABACHE STATE PARK

4930 E. S.R. 201 • Bluffton, IN 46714 • (260) 824-0926
1,104 acres Established 1962



TRAIL TABLE		
TRAIL	MILEAGE	TRAIL TYPE
1	1	Easy
2	1.25	Easy
3	1.5	Easy
4	3	Moderate
5	6	Moderate
Bike Trail	2.68	Moderate

LEGEND			
	Boundary		Accessible
	Road		Campground
	Hiking Trail		Dump Station
	Gravel Road		Boat Launch
	Bike Trail		Shelter
	Nature Preserve		Fire Tower
	Foot Bridge		Sports Courts
	Gatehouse		Volleyball Pit
	Beach		CCC Worker Statue
	Vault Toilet		Boat Rental
	Wildlife Viewing		

0 ¼ ½
Approximate Scale in Miles

RECYCLE
Place used beverage cans in the park's marked recycling containers. Thank you.

CARRY IN CARRY OUT
Please carry out all trash you produce in order to keep your park clean and beautiful for others to enjoy.

Printed on Recycled Paper

DNR
Indiana Department of Natural Resources

Ouabache State Park Recreation Area Map
Scale: NTS

DATE: 8/14/2025
TIME: 2:36:07 PM
LOCATION: c:\pwworking\usin\dm8025\r2200177_OuabacheSS_Location_Map.dgn

GERARD F. MROCZKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

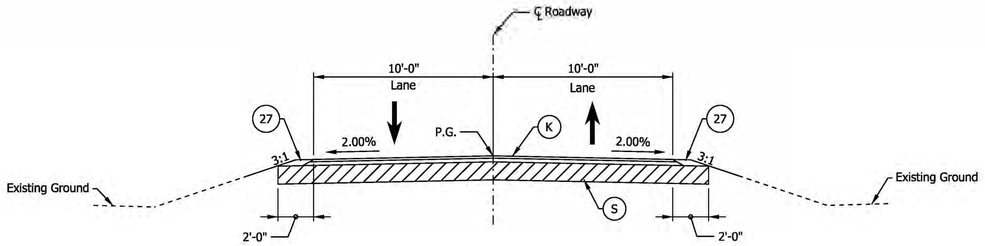
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA
CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

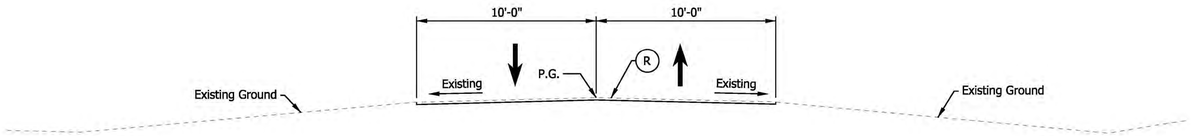
LOCATION MAP
CULVERTS

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	
SURVEY BOOK	SHEETS
	2 of 32
CONTRACT	PROJECT
	ENG2403734214



TYPICAL FULL DEPTH SECTION

Temporary Access Road
Sta. 103+10.00 to Sta. 103+70.00 Line "A" (Culvert #1)
Sta. 400+75.00 to Sta. 401+25.00 Line "STR2" (Culvert #2)
Sta. 300+75.00 to Sta. 301+15.00 Line "STR3" (Culvert #3)



TYPICAL INCIDENTAL SECTION

Sta. 102+60.00 to Sta. 103+10.00 Line "A" (Culvert #1)
Sta. 103+70.00 to Sta. 104+20.00 Line "A" (Culvert #1)

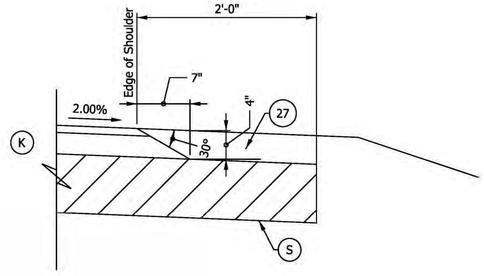
LEGEND

(K) 165 lbs/syd HMA Surface Type B on
275 lbs/syd HMA Intermediate Type B on
6" Compacted Aggregate No. 53 on
Geogrid Type IB

(R) Mill the existing asphalt pavement
1½ Inches, then Use
165 lbs/syd HMA Surface Type B

(S) 6" Compacted Aggregate No. 53

(27) Mulched Seeding, Type R



Safety Edge on HMA Pavement
Not to Scale

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GERARD F. MROCZKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

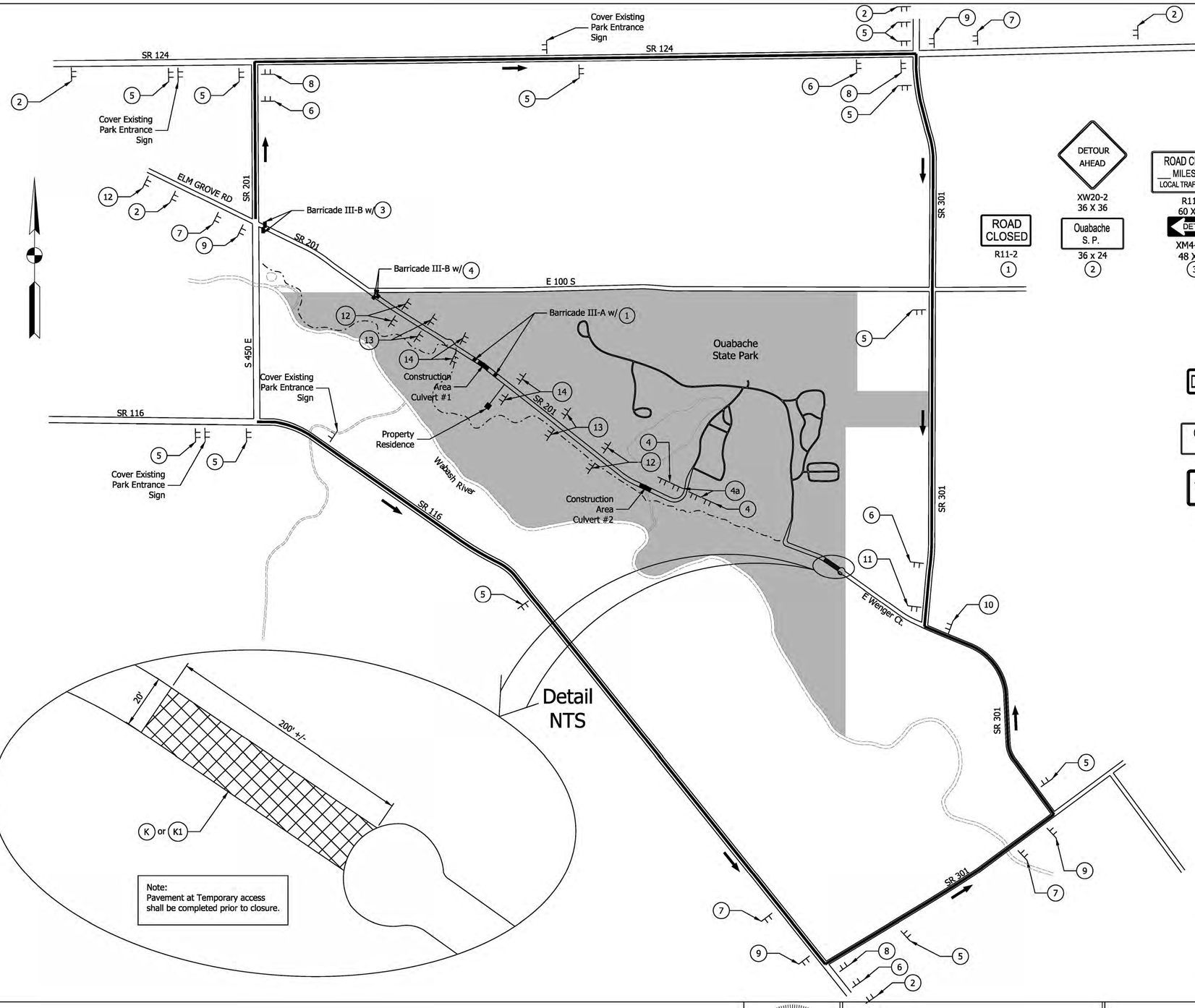
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

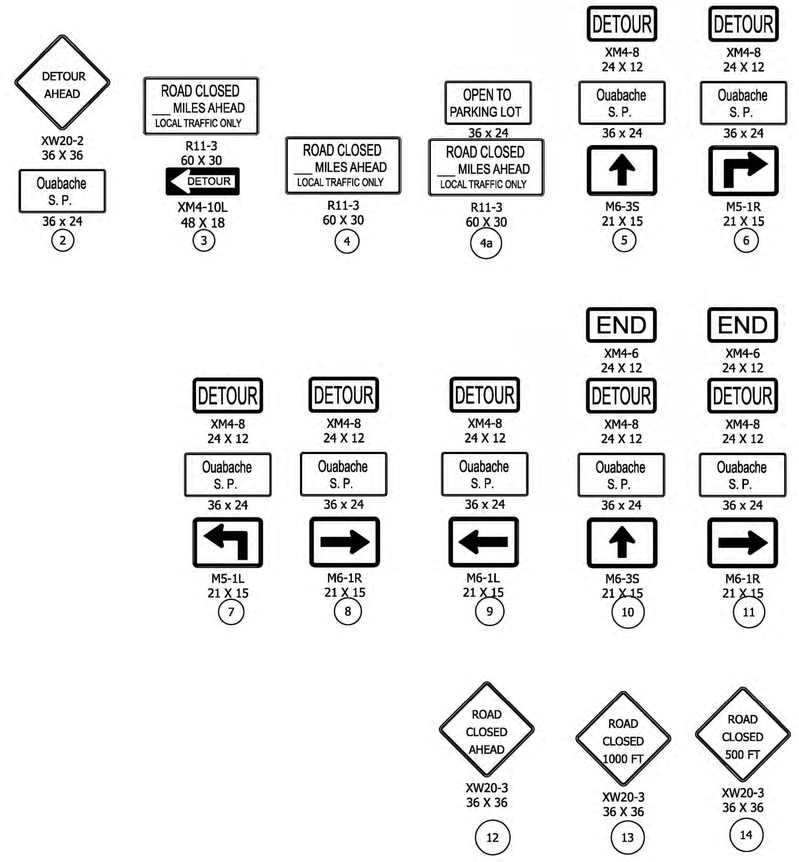
DESIGNED: MA DRAWN: MA
CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

TYPICAL SECTIONS

HORIZONTAL SCALE	BRIDGE FILE
1/4" = 1'-0"	
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
	3 of 32
CONTRACT	PROJECT
	ENG2403734214





Notes:
1. Culvert #1 and #2 shall not be constructed at the same time. Contractor to use the same detour for both.

2. Sign #4A shall be used during the construction of Culvert #1 ONLY.

3. Access to Property Residence shall be maintained at all times.

SUMMARY OF QUANTITIES	
DETOUR ROUTE MARKER ASSEMBLY	29 EACH
ROAD CLOSURE ASSEMBLY	4 EACH
CONSTRUCTION SIGN, A	17 EACH
CONSTRUCTION SIGN, B	7 EACH
BARRICADE, III-A	48 LFT
BARRICADE, III-B	40 LFT

(K) 8" Compacted Aggregate No. 53 on Geogrid Type IB

(K1) 165 lbs/syd HMA Surface Type B on 275 lbs/syd HMA Intermediate Type B on 6" Compacted Aggregate No. 53 on Geogrid Type IB

GERARD F. MROCZKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

MAINTENANCE OF TRAFFIC DETOUR CULVERTS #1 AND #2

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	
SURVEY BOOK	SHEETS
	4 of 32
CONTRACT	PROJECT
	ENG2403734214

DATE: 8/14/2025
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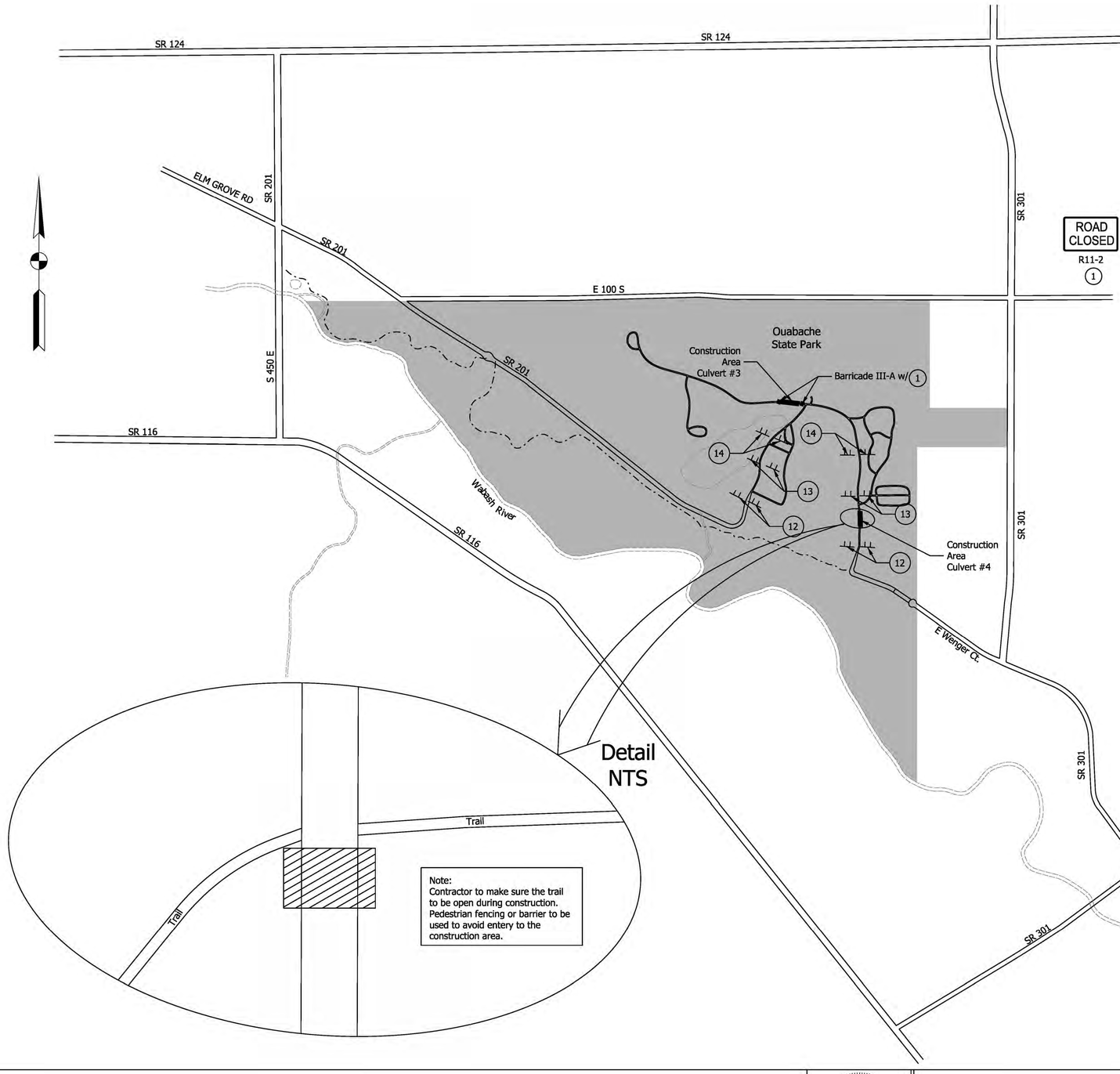

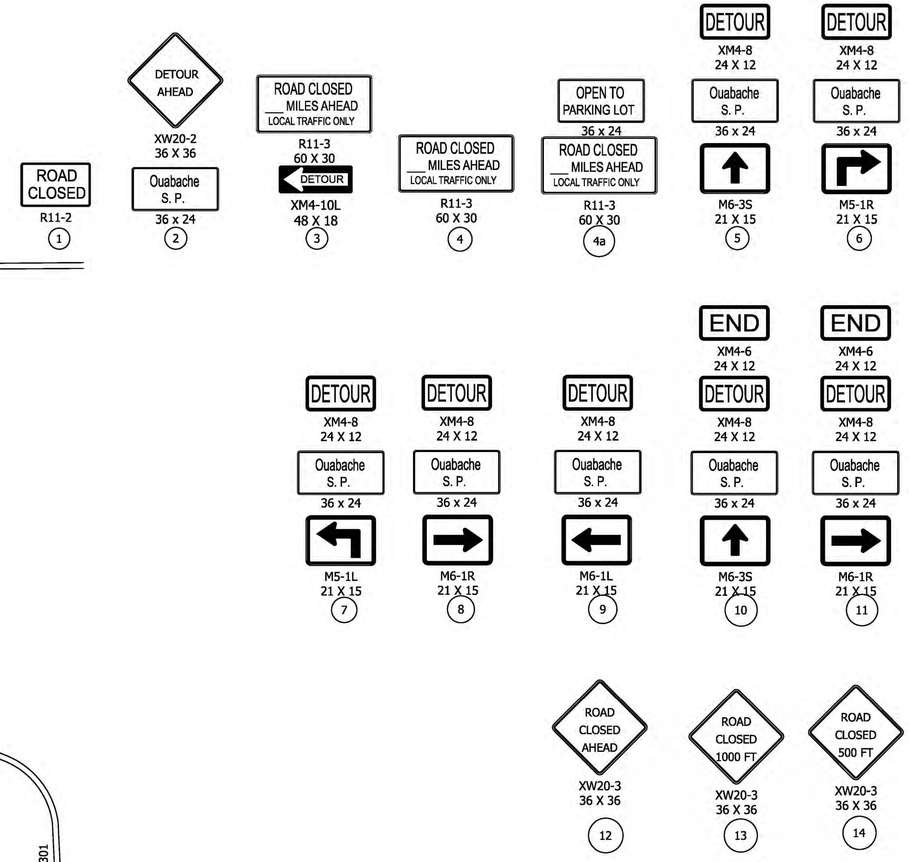

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GERARD F. MROCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

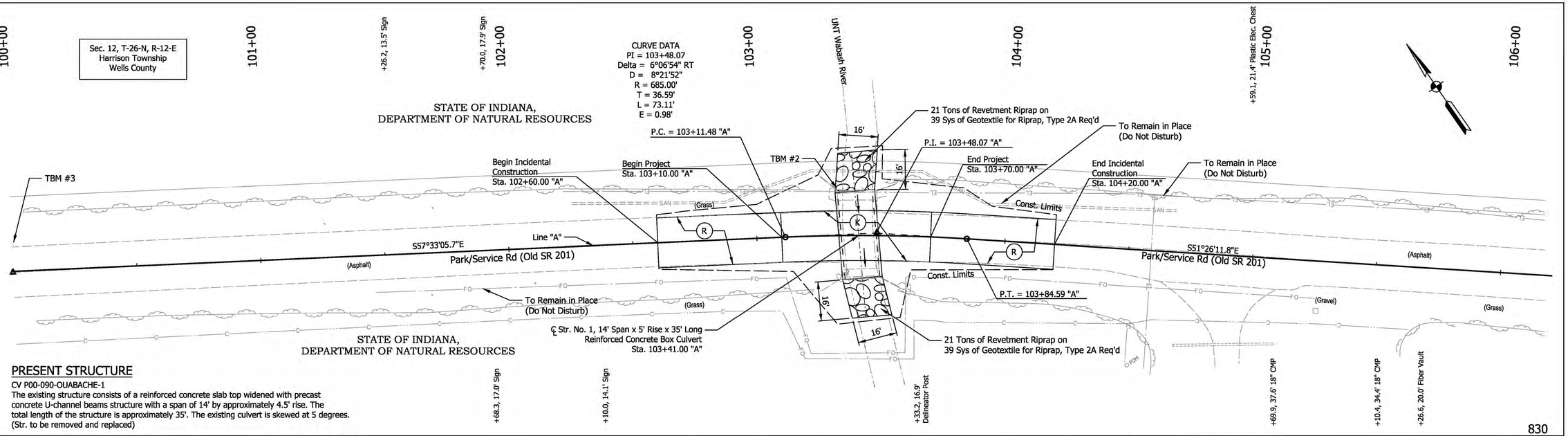
DEPARTMENT OF NATURAL RESOURCES

MAINTENANCE OF TRAFFIC DETOUR
CULVERTS #3 AND #4

HORIZONTAL SCALE	BRIDGE FILE
N/A	
VERTICAL SCALE	DESIGNATION
N/A	
SURVEY BOOK	SHEETS
	5 of 32
CONTRACT	PROJECT
	ENG2403734214

Sec. 12, T-26-N, R-12-E
Harrison Township
Wells County

CURVE DATA
PI = 103+48.07
Delta = 6°06'54" RT
D = 8°21'52"
R = 685.00'
T = 36.59'
L = 73.11'
E = 0.98'



PRESENT STRUCTURE

CV P00-090-OUABACHE-1
The existing structure consists of a reinforced concrete slab top widened with precast concrete U-channel beams structure with a span of 14' by approximately 4.5' rise. The total length of the structure is approximately 35'. The existing culvert is skewed at 5 degrees. (Str. to be removed and replaced)

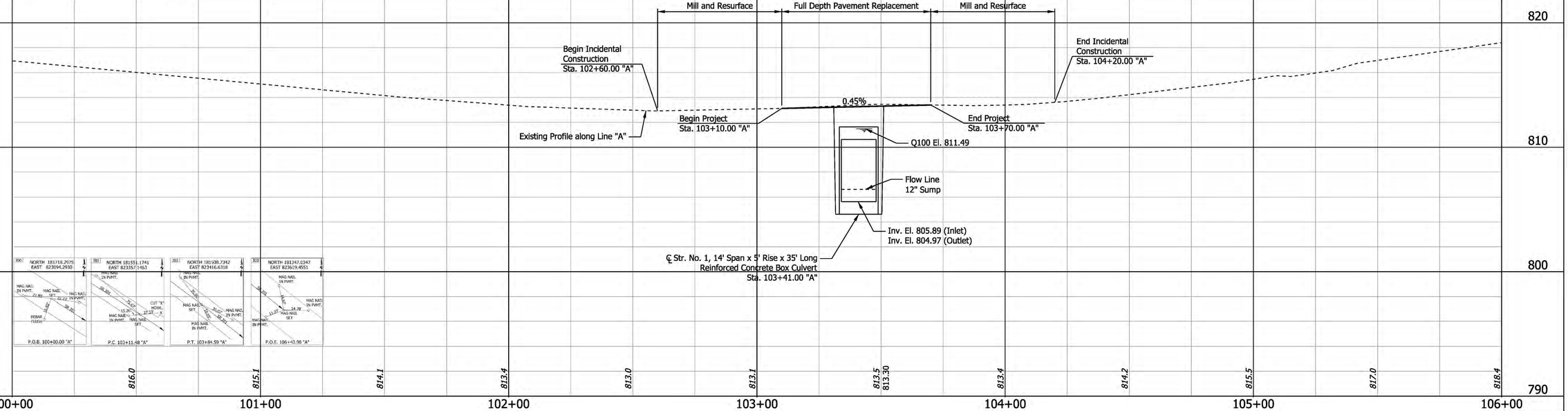
EARTHWORK TABULATION

Fill + 25%	80 Cys
Structural Backfill	66 Cys
Common Excavation	12 Cys
Common Excavation (Temp. Access Rd)	124 Cys
Surplus Foundation Excavation	0 Cys
Borrow	0 Cys
Benching (Estimated)	0 Cys
Waste	56 Cys

HYDRAULIC DATA

Waterway Opening Required	70 Sq. ft.	Existing Q100 Headwater Elevation	812.18 ft.
Waterway Opening Provided	70 Sq. ft.	Backwater	1.82 ft
Drainage Area	1.10 Sq. Mi.	Existing Waterway Opening	63 Sq. ft.
Design Discharge, Q100	551 CFS	Existing Backwater	3.4 ft.
Natural Channel Velocity, Q10	1.92 ft/s	Upper Limit of Wet Exc. Elev.	N/A

Temporary Benchmark:
TBM #2 Cut X on Top of the Northwest Corner Headwall, Elev. = 813.77'
TBM #3 Mag Nail set flush 0.5' in Roadway from Travel Lane Edge, Elev. = 816.67'



LEGEND

Riprap

Survey Line

(K) 165 lbs/syd HMA Surface Type B on 275 lbs/syd HMA Intermediate Type B on 6" Compacted Aggregate No. 53 on Geogrid Type IB

(R) Mill the existing asphalt pavement 1 ½ inches, then use 165 lb/syd 165 lbs/syd HMA Surface Type B

GERARD F. MROCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA
CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

PLAN AND PROFILE SHEET
CULVERT #1

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
1" = 5'	
SURVEY BOOK	SHEETS
	6 of 32
CONTRACT	PROJECT
	ENG2403734214

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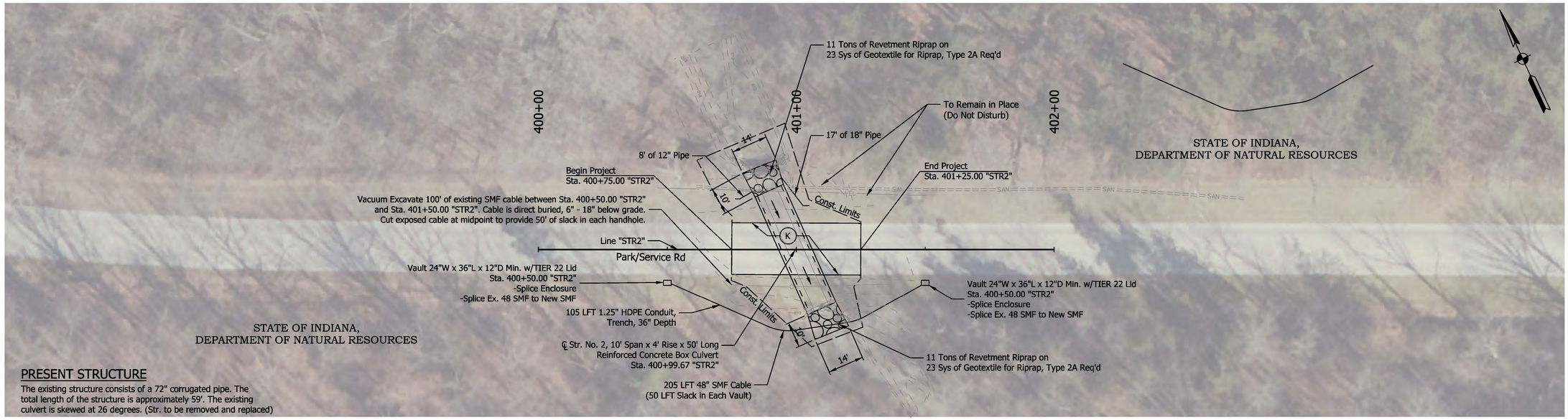


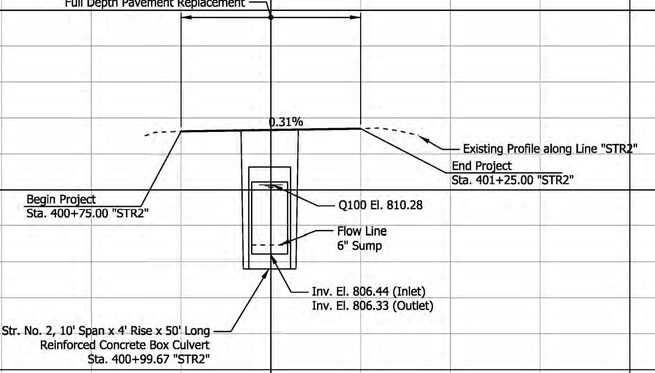
PRESENT STRUCTURE

The existing structure consists of a 72" corrugated pipe. The total length of the structure is approximately 59'. The existing culvert is skewed at 26 degrees. (Str. to be removed and replaced)

EARTHWORK TABULATION

Fill + 25%	83 Cys
Structural Backfill	113 Cys
Common Excavation	175 Cys
Common Excavation (Temp. Access Rd)	0 Cys
Surplus Foundation Excavation	0 Cys
Borrow	0 Cys
Benching (Estimated)	0 Cys
Waste	92 Cys

Waterway Opening Required	40 Sq. ft.	Existing Q100 Headwater Elevation	813.04 ft.
Waterway Opening Provided	40 Sq. ft.	Backwater	1.24 ft
Drainage Area	0.35 Sq. Mi.	Existing Waterway Opening	28.27 Sq. ft.
Design Discharge, Q100	226.8 CFS	Existing Backwater	3.13 ft.
Natural Channel Velocity, Q10	3.85 ft/s	Upper Limit of Wet Exc. Elev.	N/A



830 820 810 800 790

398+00 399+00 400+00 401+00 402+00 403+00 404+00

LEGEND

Riprap

Survey Line

(K) 165 lbs/syd HMA Surface Type B on 275 lbs/syd HMA Intermediate Type B on 6" Compacted Aggregate No. 53 on Geogrid Type IB

(R) Mill the existing asphalt pavement 1 ½ inches, then use 165 lb/syd 165 lbs/syd HMA Surface Type B

GERARD F. MROCZKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

PLAN AND PROFILE SHEET
CULVERT #2

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
	7 of 32
CONTRACT	PROJECT
	ENG2403734214

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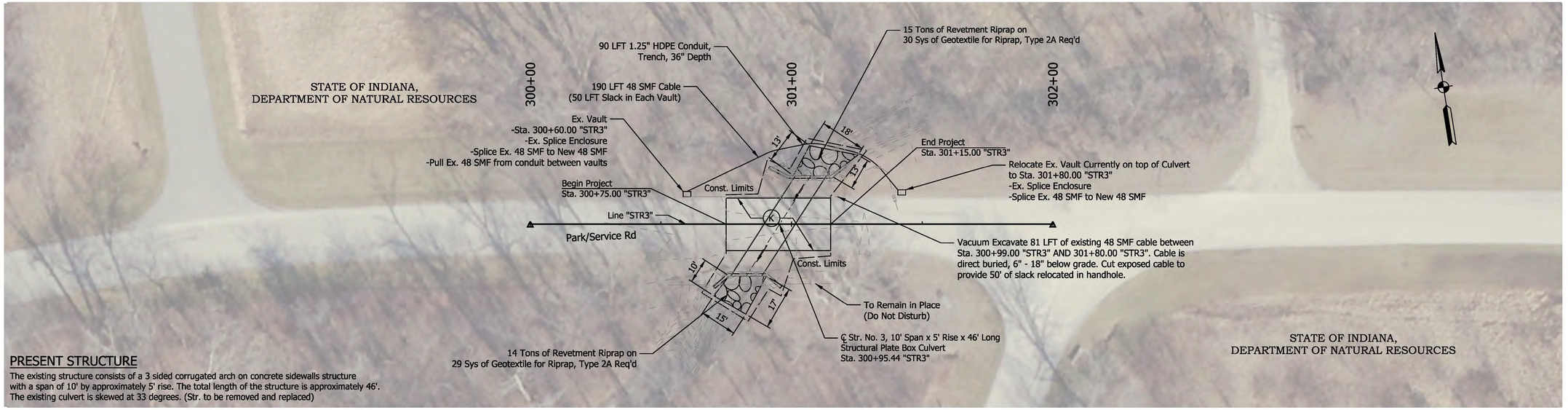


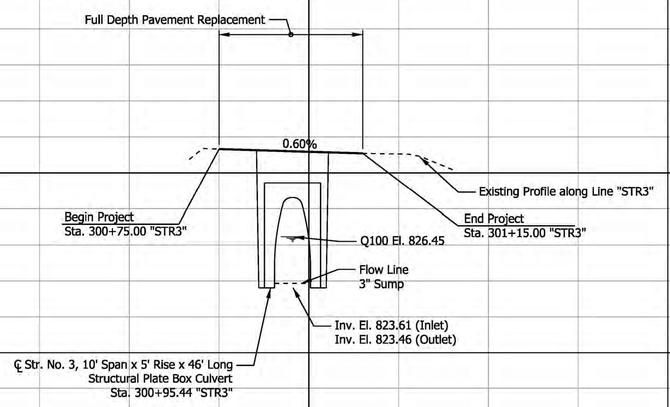
PRESENT STRUCTURE

The existing structure consists of a 3 sided corrugated arch on concrete sidewalls structure with a span of 10' by approximately 5' rise. The total length of the structure is approximately 46'. The existing culvert is skewed at 33 degrees. (Str. to be removed and replaced)

EARTHWORK TABULATION

Fill + 25%	61 Cys
Structural Backfill	93 Cys
Common Excavation	121 Cys
Common Excavation (Temp. Access Rd)	0 Cys
Surplus Foundation Excavation	0 Cys
Borrow	0 Cys
Benching (Estimated)	0 Cys
Waste	60 Cys

Waterway Opening Required	59.25 Sq. ft.	Existing Q100 Headwater Elevation	827.35 ft.
Waterway Opening Provided	59.25 Sq. ft.	Backwater	0.75 ft
Drainage Area	0.22 Sq. Mi.	Existing Waterway Opening	59.25 Sq. ft.
Design Discharge, Q100	141.0 CFS	Existing Backwater	0.75 ft.
Natural Channel Velocity, Q10	4.49 ft/s	Upper Limit of Wet Exc. Elev.	N/A



850 840 830 820 810

298+00 299+00 300+00 301+00 302+00 303+00 304+00

LEGEND

Riprap

Survey Line

(K) 165 lbs/syd HMA Surface Type B on 275 lbs/syd HMA Intermediate Type B on 6" Compacted Aggregate No. 53 on Geogrid Type IB

(R) Mill the existing asphalt pavement 1 ½ inches, then use 165 lb/syd 165 lbs/syd HMA Surface Type B

GERARD F. MROCKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

PLAN AND PROFILE SHEET
CULVERT #3

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS 8 of 32
CONTRACT	PROJECT ENG2403734214

DATE: 8/14/2025
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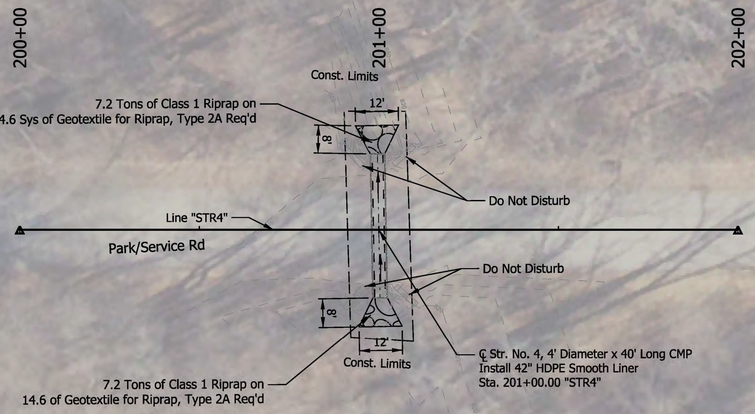
STATE OF INDIANA,
DEPARTMENT OF NATURAL RESOURCES



STATE OF INDIANA,
DEPARTMENT OF NATURAL RESOURCES

PRESENT STRUCTURE

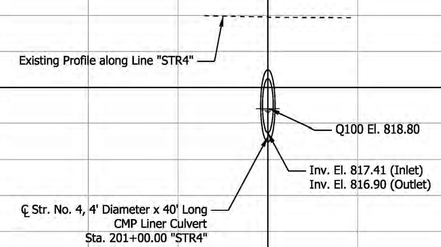
The existing structure consists of a corrugated metal pipe structure with a dimater of 48". The total length of the structure is approximately 40'. (Str. to be lined)

EARTHWORK TABULATION

Fill + 25%	0 Cys
Structural Backfill	0 Cys
Common Excavation	0 Cys
Common Excavation (Temp. Access Rd)	0 Cys
Surplus Foundation Excavation	0 Cys
Borrow	0 Cys
Benching (Estimated)	0 Cys
Waste	0 Cys

HYDRAULIC DATA

Waterway Opening Required	12.57 Sq. ft.	Existing Q100 Headwater Elevation	823.87 ft.
Waterway Opening Provided	12.57 Sq. ft.	Backwater	3.76 ft
Drainage Area	0.18 Sq. Mi.	Existing Waterway Opening	12.57 Sq. ft.
Design Discharge, Q100	107.4 CFS	Existing Backwater	4.18 ft.
Natural Channel Velocity, Q10	2.64 ft/s	Upper Limit of Wet Exc. Elev.	N/A



840 830 820 810 800

198+00 199+00 200+00 201+00 202+00 203+00 204+00

LEGEND

Riprap

Survey Line

(K) 165 lbs/syd HMA Surface Type B on
275 lbs/syd HMA Intermediate Type B on
6" Compacted Aggregate No. 53 on
Geogrid Type IB

(R) Mill the existing asphalt pavement
1 ½ inches, then use 165 lb/syd
165 lbs/syd HMA Surface Type B

GERARD F. MRUCZKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

PLAN AND PROFILE SHEET
CULVERT #4

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS 9 of 32
CONTRACT	PROJECT ENG2403734214

DATE: 8/14/2025
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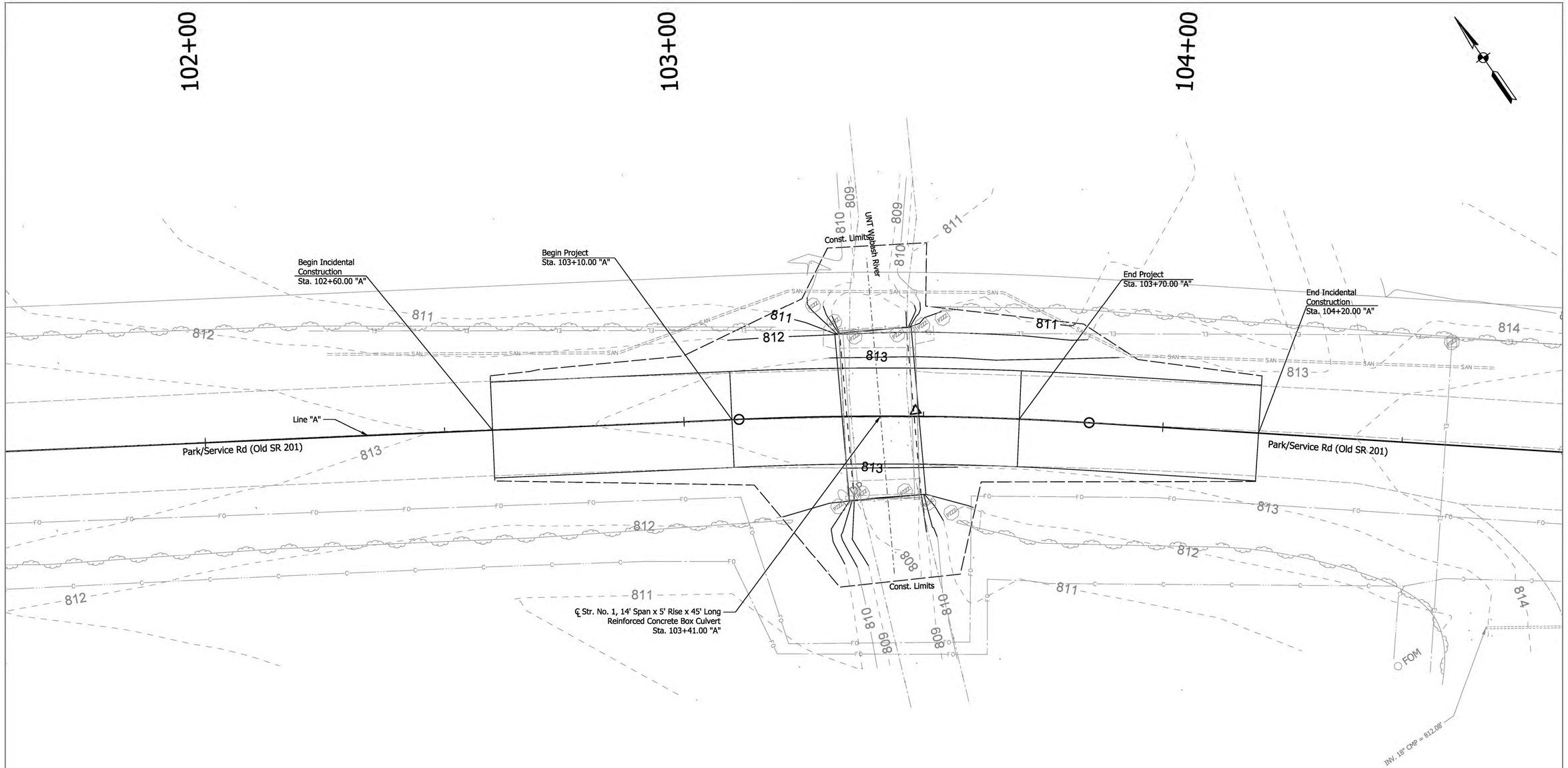

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GERARD F. MROCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

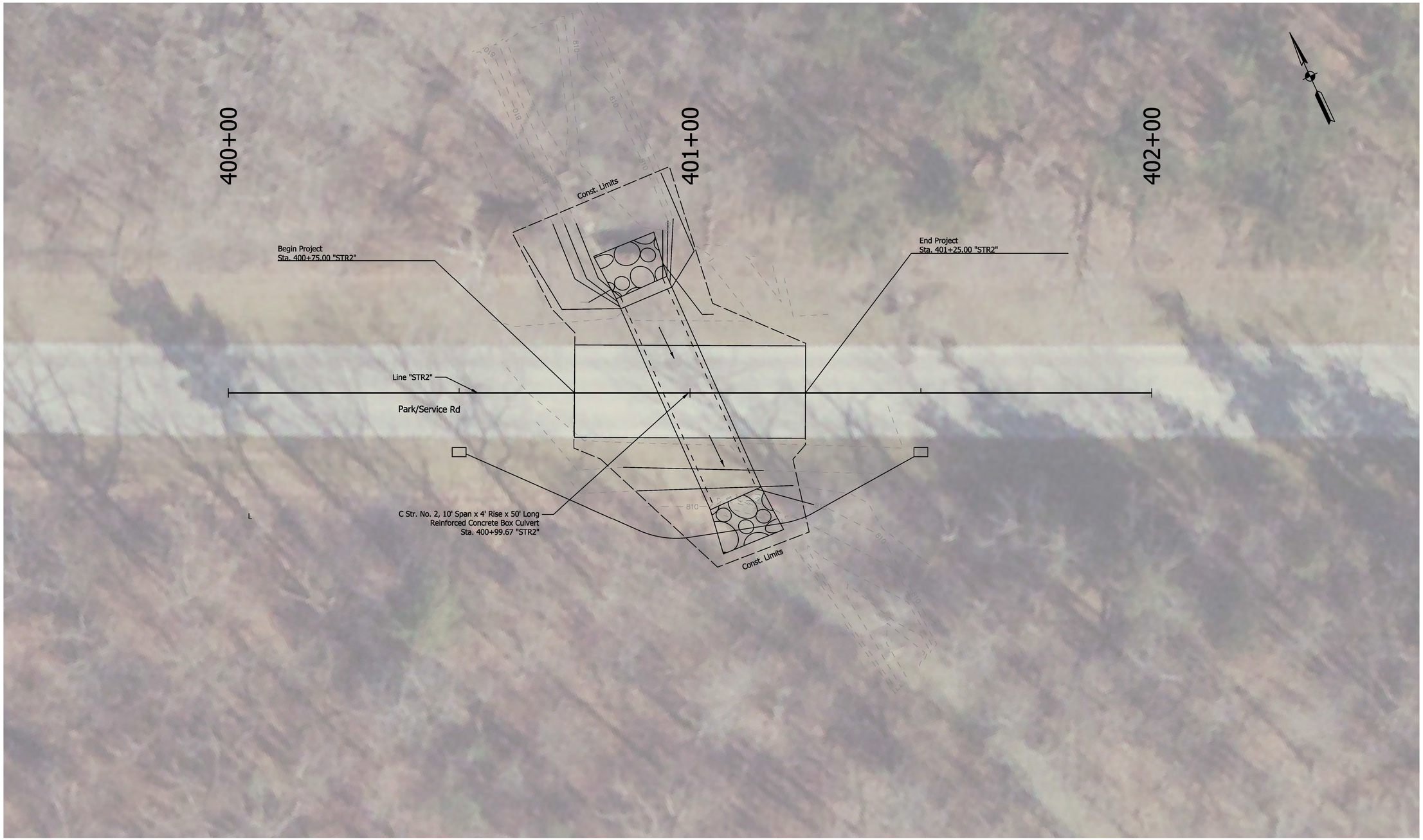
DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

GRADING PLAN
CULVERT #1

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	
VERTICAL SCALE	DESIGNATION
N/A	
SURVEY BOOK	SHEETS
	10 of 32
CONTRACT	PROJECT
	ENG2403734214



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GERARD F. MRUCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ 04/25/25
DESIGN ENGINEER DATE

DESIGNED: MA DRAWN: MA
CHECKED: GFM CHECKED: GFM

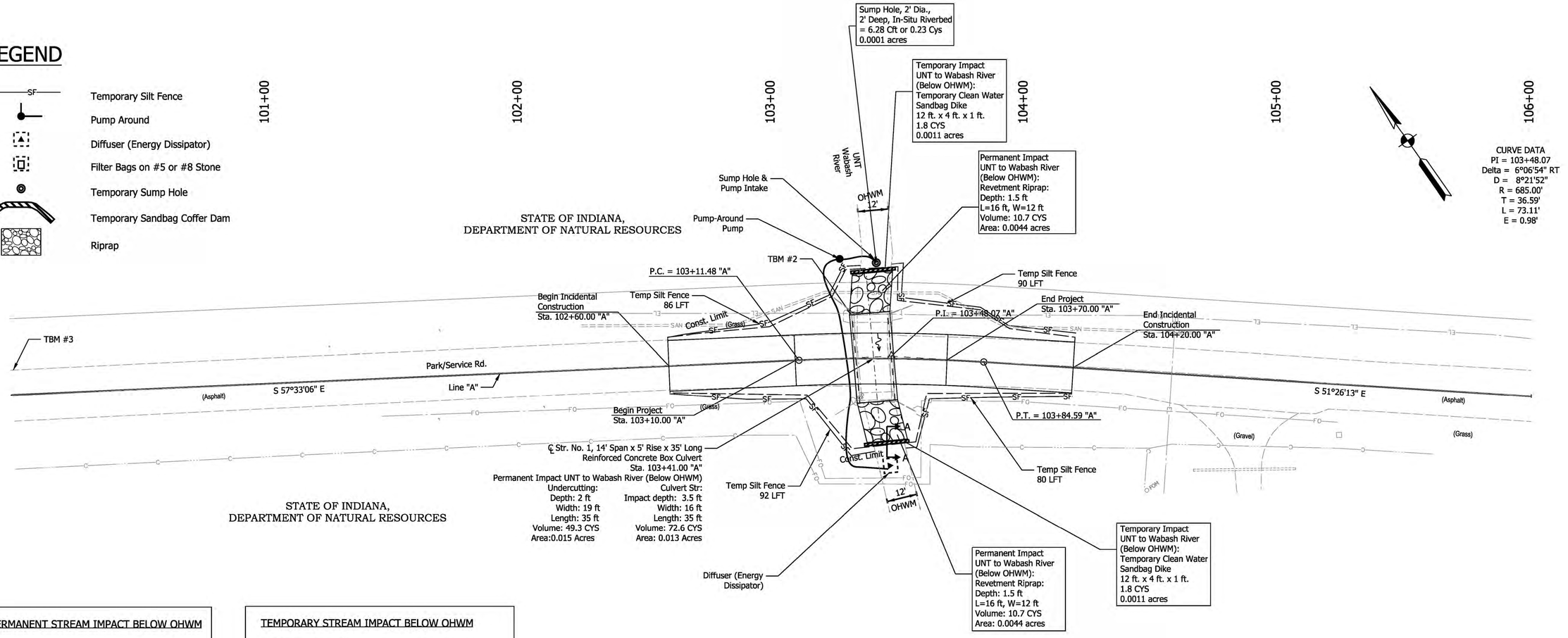
DEPARTMENT OF NATURAL RESOURCES

GRADING PLAN
CULVERT #2

HORIZONTAL SCALE	BRIDGE FILE
1" = 10'	
VERTICAL SCALE	DESIGNATION
N/A	
SURVEY BOOK	SHEETS
	11 of 32
CONTRACT	PROJECT
	ENG2403734214

LEGEND

- Temporary Silt Fence
- Pump Around
- Diffuser (Energy Dissipator)
- Filter Bags on #5 or #8 Stone
- Temporary Sump Hole
- Temporary Sandbag Coffer Dam
- Riprap



PERMANENT STREAM IMPACT BELOW OHWM

(i) Undercutting:
Impact Depth: 2 ft
Volume: 49.3 CYS
Area: 0.015 Acres
Length: 35 LFT

(ii) Culvert Str:
Impact Depth: 3.5 ft
Volume: 72.6 CYS
Area: 0.013 Acres
Length: 35 LFT

(iii) Revetment Riprap:
Impact Depth: 1.5 ft
Volume: 21.4 CYS
Area: 0.0088 Acres
Length: 32 LFT

Total Impact:
Volume: 143.3 CYS
Area: 0.037 Acres
Length: 102 LFT

Wetland Impact: N/A

TEMPORARY STREAM IMPACT BELOW OHWM

(i) Sandbag Dike (x2):
Impact Depth: 1 ft
Width: 12 ft
Length: 4 LFT (Along the stream)
Area: (2 x 0.0011) = 0.0022 Acres
Volume: (2 x 1.8) = 3.6 CYS

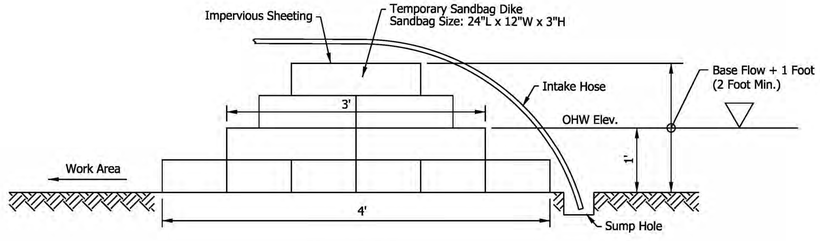
(ii) Sump Hole
Impact Depth: 2 ft
Diameter: 2 ft
Area: 0.00007 Acres
Volume: 0.23 CYS

Total Impact:
Volume: 3.8 CYS
Area: 0.0023 Acres
Length: 24 LFT

Wetland Impact: N/A

TEMPORARY EROSION CONTROL QUANTITIES

ITEM	QUANTITY	UNIT
Temporary Silt Fence	348	LFT



SECTION A-A
No Scale

GERARD F. MRUCZKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA

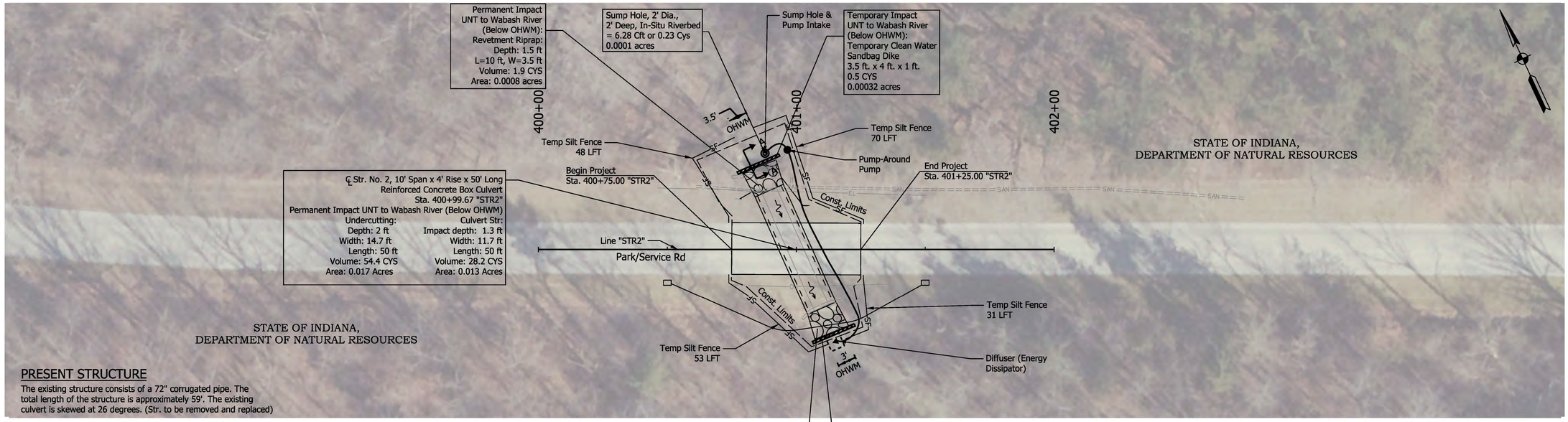
CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

EROSION CONTROL
CULVERT #1

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	
VERTICAL SCALE	DESIGNATION
1" = 5'	
SURVEY BOOK	SHEETS
	12 of 32
CONTRACT	PROJECT
	ENG2403734214

DATE: 8/14/2025
TIME: 2:37:32 PM
LOCATION: C:\pwworking\jain\d0025232\2200177_OakbacheS5_ErosionControl_01.dgn



PRESENT STRUCTURE

The existing structure consists of a 72" corrugated pipe. The total length of the structure is approximately 59'. The existing culvert is skewed at 26 degrees. (Str. to be removed and replaced)

LEGEND

- Temporary Silt Fence
- Pump Around
- Diffuser (Energy Dissipator)
- Filter Bags on #5 or #8 Stone
- Temporary Sump Hole
- Temporary Sandbag Coffer Dam
- Riprap

PERMANENT STREAM IMPACT BELOW OHWM

(i) Undercutting:
Impact Depth: 2 ft
Volume: 54.4 CYS
Area: 0.017 Acres
Length: 50 LFT

(ii) Culvert Str:
Impact Depth: 1.3 ft
Volume: 28.2 CYS
Area: 0.013 Acres
Length: 50 LFT

(iii) Revetment Riprap:
Impact Depth: 1.5 ft
Volume: 3.6 CYS
Area: 0.0015 Acres
Length: 20 LFT

Total Impact:
Volume: 86.2 CYS
Area: 0.03 Acres
Length: 120 LFT

Wetland Impact: N/A

TEMPORARY STREAM IMPACT BELOW OHWM

(i) Sandbag Dike (x2):
Impact Depth: 1 ft
Width: 6.5 ft
Length: 4 LFT (Along the stream)
Area: 0.00059 Acres
Volume: 0.9 CYS

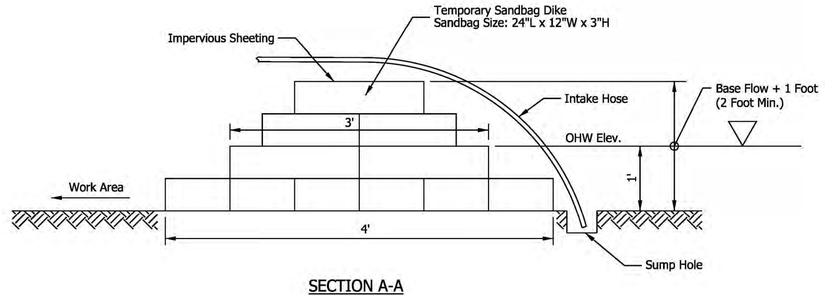
(ii) Sump Hole
Impact Depth: 2 ft
Diameter: 2 ft
Area: 0.00001 Acres
Volume: 0.23 CYS

Total Impact:
Volume: 1.1 CYS
Area: 0.0006 Acres
Length: 6.5 LFT

Wetland Impact: N/A

TEMPORARY EROSION CONTROL QUANTITIES

ITEM	QUANTITY	UNIT
Temporary Silt Fence	202	LFT



SECTION A-A
No Scale

GERARD F. MROCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA
CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

EROSION CONTROL
CULVERT #2

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS 13 of 32
CONTRACT	PROJECT ENG2403734214

DATE: 8/14/2025
TIME: 2:37:41 PM
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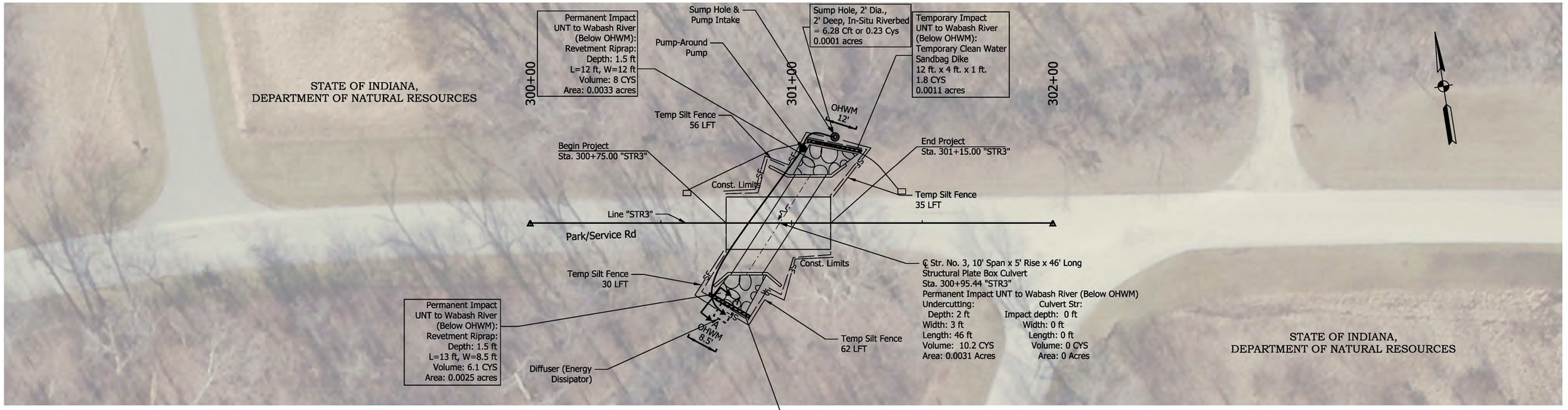


LEGEND

- Temporary Silt Fence
- Pump Around
- Diffuser (Energy Dissipator)
- Filter Bags on #5 or #8 Stone
- Temporary Sump Hole
- Temporary Sandbag Coffer Dam
- Riprap

PERMANENT STREAM IMPACT BELOW OHWM

(i) Undercutting:
Impact Depth: 2 ft
Volume: 10.2 CYS
Area: 0.0031 Acres
Length: 46 LFT

(ii) Culvert Str:
Impact Depth: 0 ft
Volume: 0 CYS
Area: 0 Acres
Length: 0 LFT

(iii) Revetment Riprap:
Impact Depth: 1.5 ft
Volume: 14.1 CYS
Area: 0.0058 Acres
Length: 25 LFT

Total Impact:
Volume: 24.3 CYS
Area: 0.0089 Acres
Length: 71 LFT

Wetland Impact: N/A

TEMPORARY STREAM IMPACT BELOW OHWM

(i) Sandbag Dike (x2):
Impact Depth: 1 ft
Width: 20.5 ft
Length: 4 LFT (Along the stream)
Area: 0.0019 Acres
Volume: 3.06 CYS

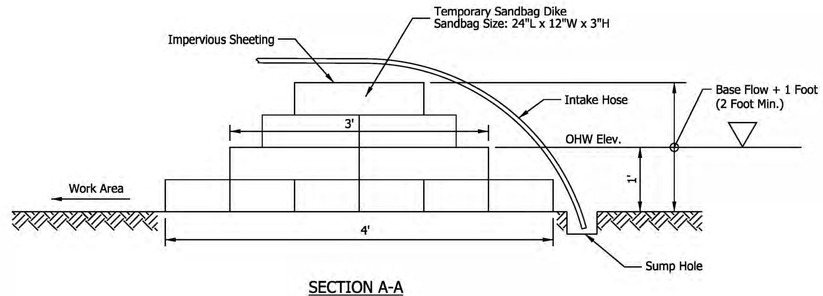
(ii) Sump Hole
Impact Depth: 2 ft
Diameter: 2 ft
Area: 0.00001 Acres
Volume: 0.23 CYS

Total Impact:
Volume: 3.29 CYS
Area: 0.0019 Acres
Length: 20.5 LFT

Wetland Impact: N/A

TEMPORARY EROSION CONTROL QUANTITIES

ITEM	QUANTITY	UNIT
Temporary Silt Fence	284	LFT



SECTION A-A
No Scale

DATE: 8/14/2025
TIME: 2:37:52 PM
LOCATION: c:\pwworking\ulein\dms03252\d200177_OutboundS5_ErosionControl_03.dgn

GERARD F. MROCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

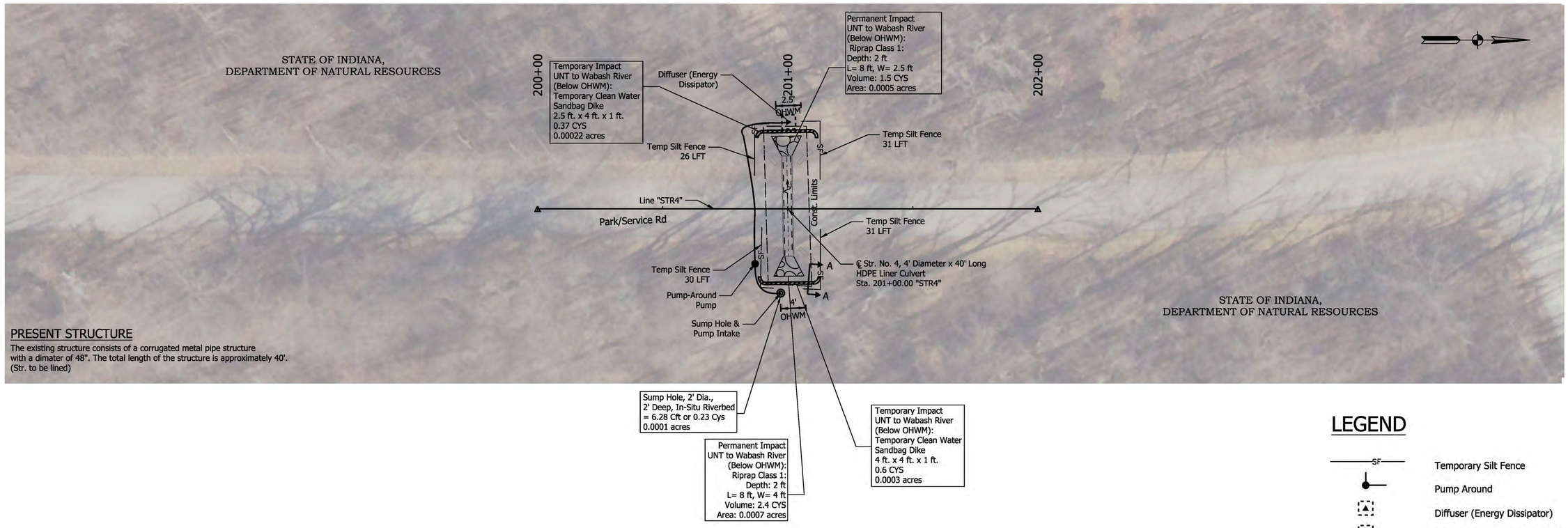
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA
CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

EROSION CONTROL
CULVERT #3

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
	14 of 32
CONTRACT	PROJECT
	ENG2403734214

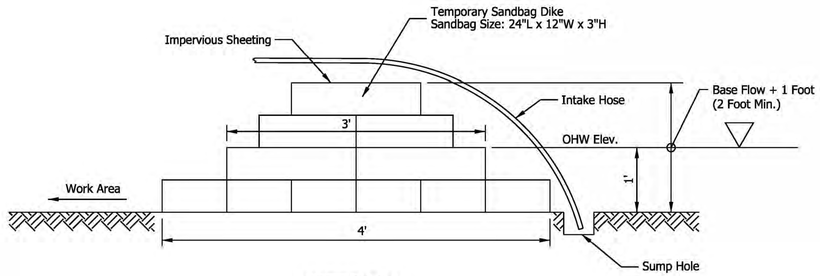


PRESENT STRUCTURE

The existing structure consists of a corrugated metal pipe structure with a dimater of 48". The total length of the structure is approximately 40'. (Str. to be lined)

LEGEND

- Temporary Silt Fence
- Pump Around
- Diffuser (Energy Dissipator)
- Filter Bags on #5 or #8 Stone
- Temporary Sump Hole
- Temporary Sandbag Coffer Dam
- Riprap



SECTION A-A
No Scale

PERMANENT STREAM IMPACT BELOW OHWM

(i) Undercutting:
Impact Depth: 0 ft
Volume: 0 CYS
Area: 0 Acres
Length: 0 LFT

(ii) Culvert Str:
Impact Depth: 0 ft
Volume: 0 CYS
Area: 0 Acres
Length: 0 LFT

(iii) Riprap Class 1:
Impact Depth: 0 ft
Volume: 3.6 CYS
Area: 0.0015 Acres
Length: 16 LFT

Total Impact:
Volume: 3.6 CYS
Area: 0.0015 Acres
Length: 16 LFT

Wetland Impact: N/A

TEMPORARY STREAM IMPACT BELOW OHWM

(i) Sandbag Dike (x2):
Impact Depth: 1 ft
Width: 6.5 ft
Length: 4 LFT (Along the stream)
Area: 0.00052 Acres
Volume: 0.97 CYS

(ii) Sump Hole
Impact Depth: 2 ft
Diameter: 2 ft
Area: 0.00001 Acres
Volume: 0.23 CYS

Total Impact:
Volume: 1.2 CYS
Area: 0.00053 Acres
Length: 6.5 LFT

Wetland Impact: N/A

TEMPORARY EROSION CONTROL QUANTITIES

ITEM	QUANTITY	UNIT
Temporary Silt Fence	118	LFT

DATE: 8/14/2025
TIME: 2:38:03 PM
LOCATION: c:\pwworking\jam\dm03252\d200177_OakbacketSS_ErosionControl_04.dgn

GERARD F. MRUCZKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

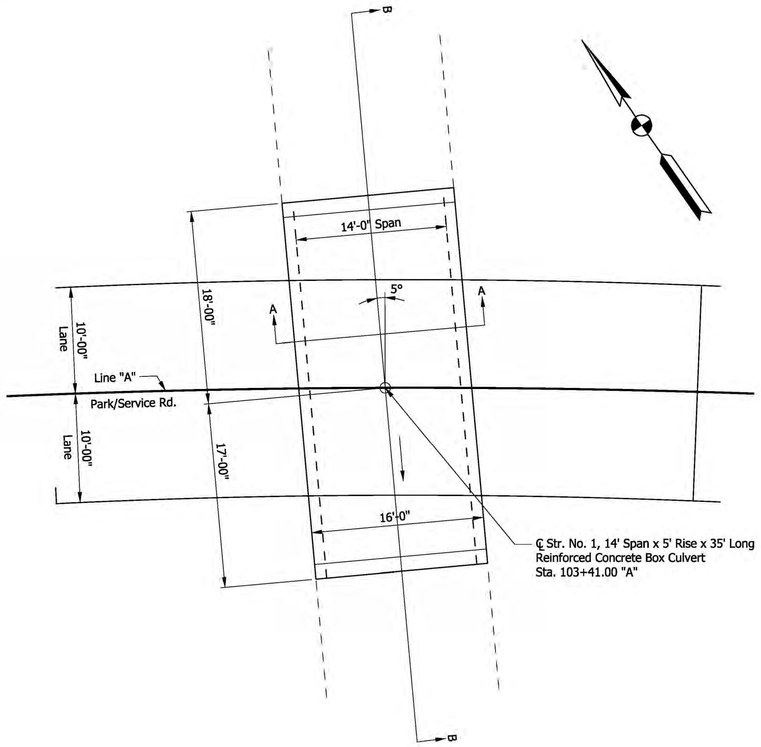
RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA
CHECKED: GFM CHECKED: GFM

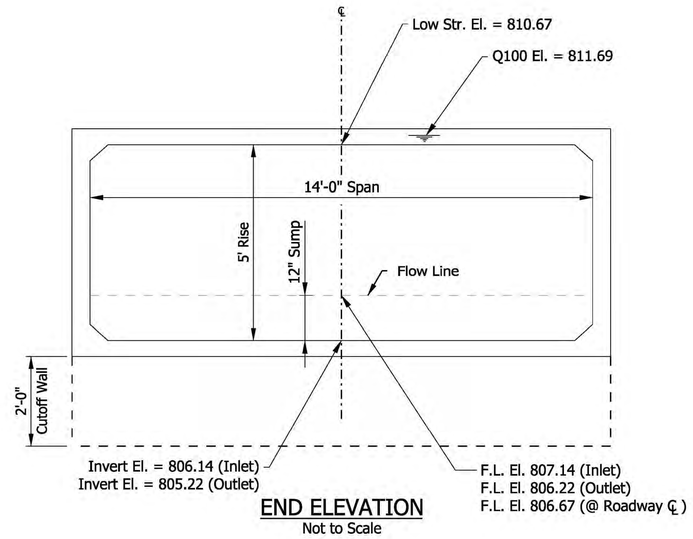
DEPARTMENT OF NATURAL RESOURCES

EROSION CONTROL
CULVERT #4

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS 15 of 32
CONTRACT	PROJECT ENG2403734214



PLAN
Not to Scale



END ELEVATION
Not to Scale

GENERAL NOTES

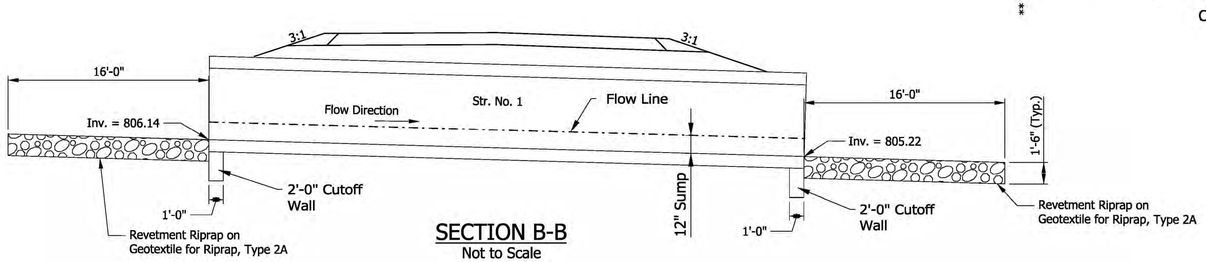
Operate equipment used to replace structure from the existing roadway.

Note:
If the distance between the top of the pavement and the top of the structure is less than 2 ft as measured at the edge of travel lane, all reinforcement in the three sided structure or an oversized box structure should be coated. Coated reinforcement should be indicated in the Structure Data Table's stucture-description name.

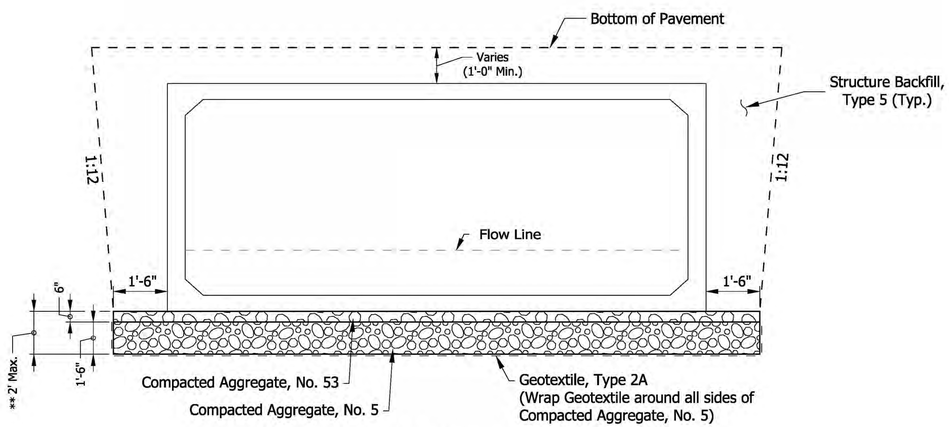
Notes:
* To Be Determined By Manufacturer

** If soft soils are encountered at the proposed invert elevation, over-excavate to a maximum depth of one foot, line the excavation with geotextile fabric in compliance with Section 918 of the INDOT 2024 Standard Spec,, and backfill with 6" of No. 5 aggregate capped with 6" of No. 53 aggregate. If unsuitable materials at the base of the structure or Wingwall Footings extend to depths greater than 2', John Spears (DNR Civil Engineering Manager) shall be contacted for guidance.

*** Top joints of structure shall be filled with a non-shrink grout in accordance with 707.09 and ASTM C1107



SECTION B-B
Not to Scale



SECTION A-A
Not to Scale

14' x 5' REINFORCED CONCRETE BOX CULVERT

1 SPAN @ 14'-0", SKEW 5° Lt., 5'-0" RISE

PARK/SERVICE RD. OVER
UNNAMED TRIBUTARY TO
WABASH RIVER WELLS COUNTY

GERARD F. MROCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA

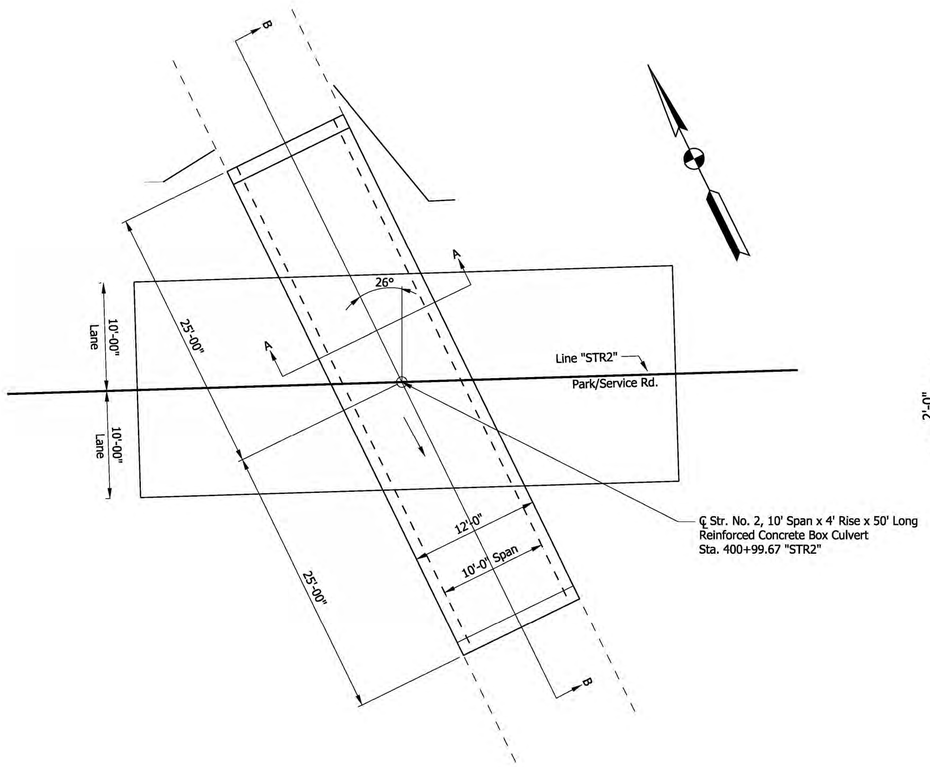
CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

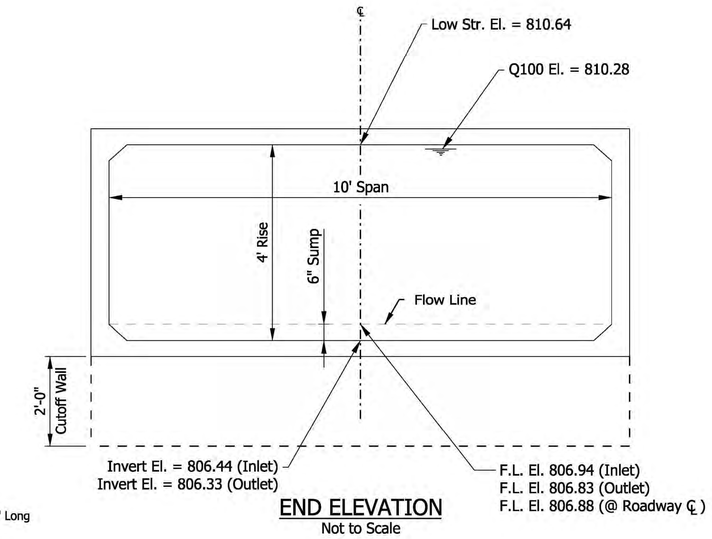
CULVERT DETAILS
CULVERT #1

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS 16 of 32
CONTRACT	PROJECT ENG2403734214

DATE: 8/14/2025
TIME: 2:38:14 PM
LOCATION: c:\pwworking\jain\d0032532\I200177_OakbatchSS_General Plan_01.dgn



PLAN
Not to Scale



END ELEVATION
Not to Scale

GENERAL NOTES

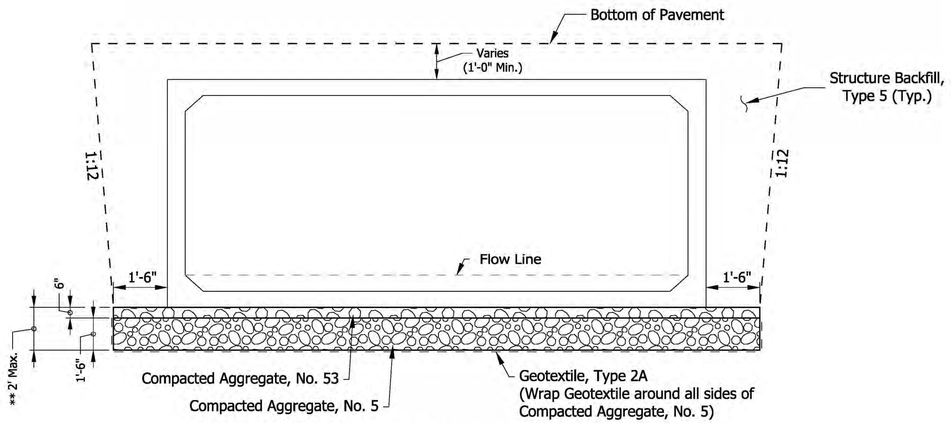
Operate equipment used to replace structure from the existing roadway.

Note:
If the distance between the top of the pavement and the top of the structure is less than 2 ft as measured at the edge of travel lane, all reinforcement in the three sided structure or an oversized box structure should be coated. Coated reinforcement should be indicated in the Structure Data Table's stucture-description name.

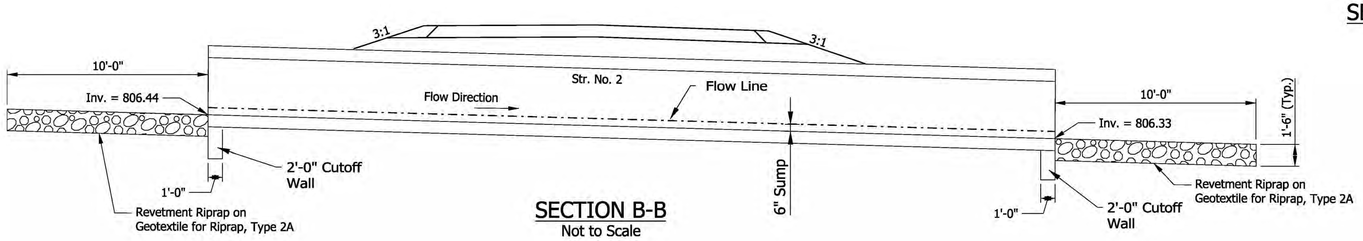
Notes:
* To Be Determined By Manufacturer

** If soft soils are encountered at the proposed invert elevation, over-excavate to a maximum depth of one foot, line the excavation with geotextile fabric in compliance with Section 918 of the INDOT 2024 Standard Spec,, and backfill with 6" of No. 5 aggregate capped with 6" of No. 53 aggregate. If unsuitable materials at the base of the structure or Wingwall Footings extend to depths greater than 2', John Spears (DNR Civil Engineering Manager) shall be contacted for guidance.

*** Top joints of structure shall be filled with a non-shrink grout in accordance with 707.09 and ASTM C1107



SECTION A-A
Not to Scale



SECTION B-B
Not to Scale

10' x 4' REINFORCED CONCRETE BOX CULVERT

1 SPAN @ 10'-0", SKEW 26° Lt., 4'-0" RISE

PARK/SERVICE RD. OVER TRIBUTARY OF WABASH RIVER TO KUNKEL LAKE

DATE: 8/14/2025
TIME: 2:38:20 PM
LOCATION: c:\pwworking\jwin\dms03252\d200177_OsabochdSS_General Plan_02.dgn

GERARD F. MROCZKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

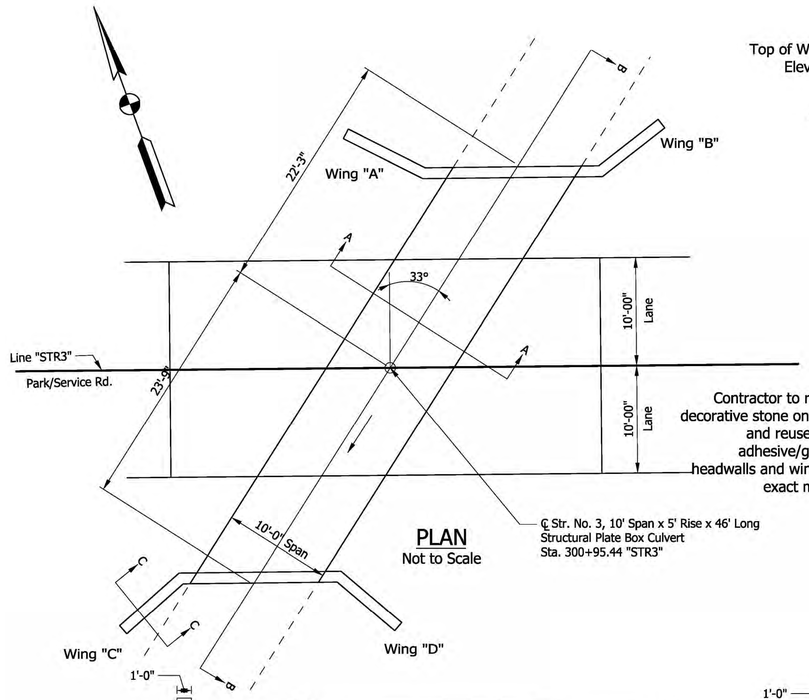
DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

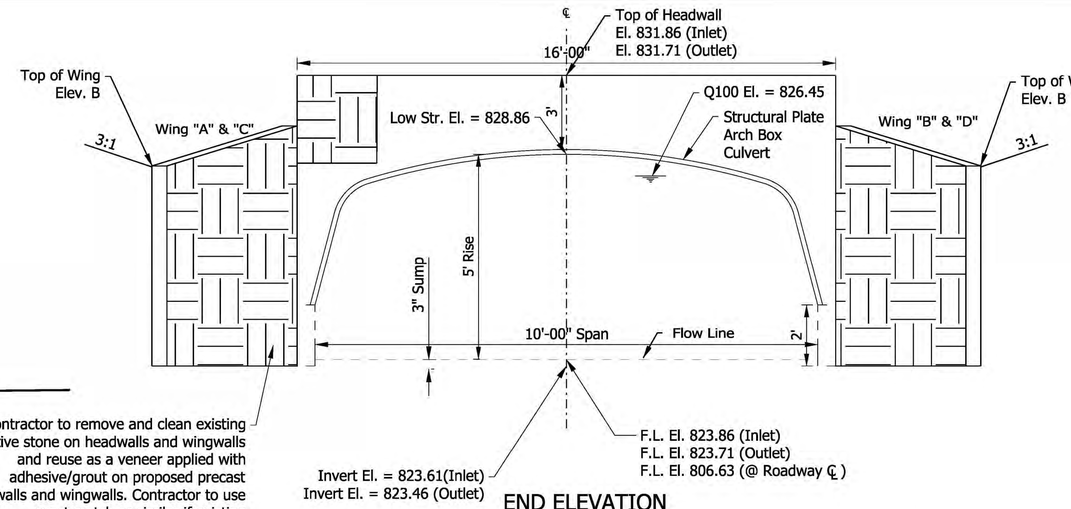
DEPARTMENT OF NATURAL RESOURCES

CULVERT DETAILS
CULVERT #2

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS 17 of 32
CONTRACT	PROJECT ENG2403734214



PLAN
Not to Scale



END ELEVATION
Not to Scale

GENERAL NOTES

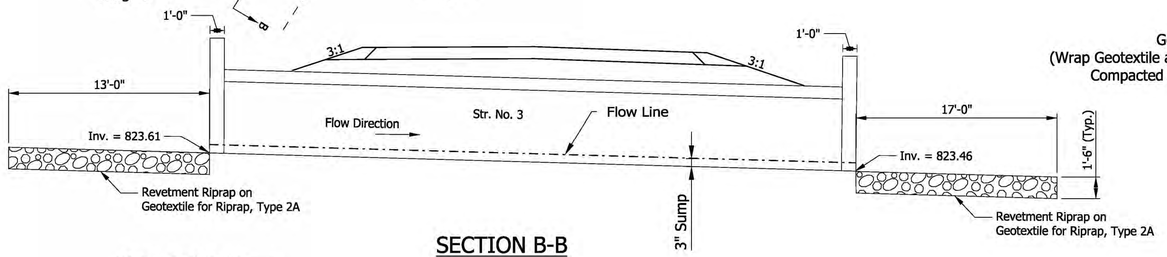
Operate equipment used to replace structure from the existing roadway.

Note:
If the distance between the top of the pavement and the top of the structure is less than 2 ft as measured at the edge of travel lane, all reinforcement in the three sided structure or an oversized box structure should be coated. Coated reinforcement should be indicated in the Structure Data Table's stucture-description name.

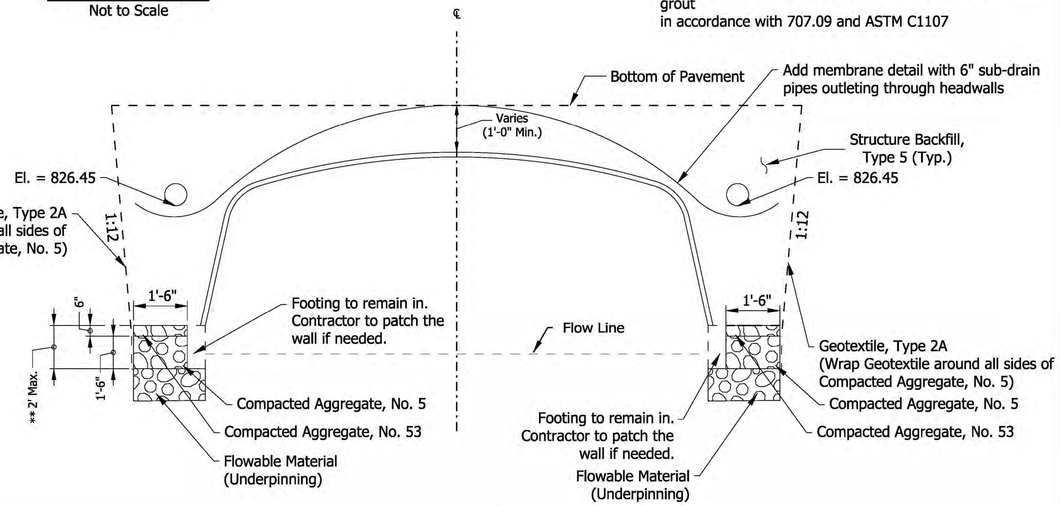
Notes:
* To Be Determined By Manufacturer

** If soft soils are encountered at the proposed invert elevation, over-excavate to a maximum depth of one foot, line the excavation with geotextile fabric in compliance with Section 918 of the INDOT 2024 Standard Spec,, and backfill with 6" of No. 5 aggregate capped with 6" of No. 53 aggregate. If unsuitable materials at the base of the structure or Wingwall Footings extend to depths greater than 2', John Spears (DNR Civil Engineering Manager) shall be contacted for guidance.

*** Top joints of structure shall be filled with a non-shrink grout
in accordance with 707.09 and ASTM C1107

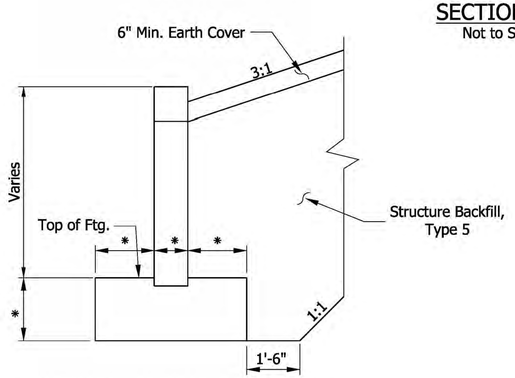


SECTION B-B
Not to Scale

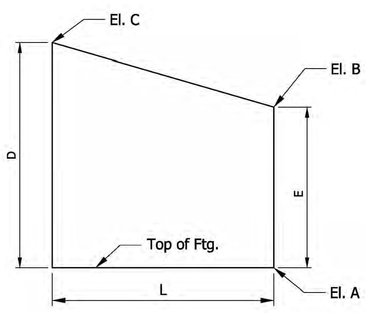


SECTION A-A
Not to Scale

Note:
If the bottom of the footing is deeper than 2 ft, and the condition of the footing is satisfactory, no need for underpinning.



WINGWALL TYPICAL SECTION C-C
Not to Scale



WINGWALL ELEVATION
WALLS A - D

LOCATION	WINGWALL			
	"A"	"B"	"C"	"D"
A	823.61	823.61	823.46	823.46
B	828.41	825.61	825.46	825.46
C	828.61	828.61	828.46	828.46
D	5	5	5	5
E	4.8	2	2	2
L	8	7	7	7
Area (Sft.)	39.2	24.5	24.5	24.5

10' x 5' STRUCTURAL PLATE BOX CULVERT

1 SPAN @ 10'-0", SKEW 33° Lt., 5'-0" RISE

PARK/SERVICE RD. OVER TRIBUTARY OF WABASH TO KUNKEL LAKE

GERARD F. MRUCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL — DESIGN ENGINEER — 04/25/25 DATE

DESIGNED: MA | DRAWN: MA

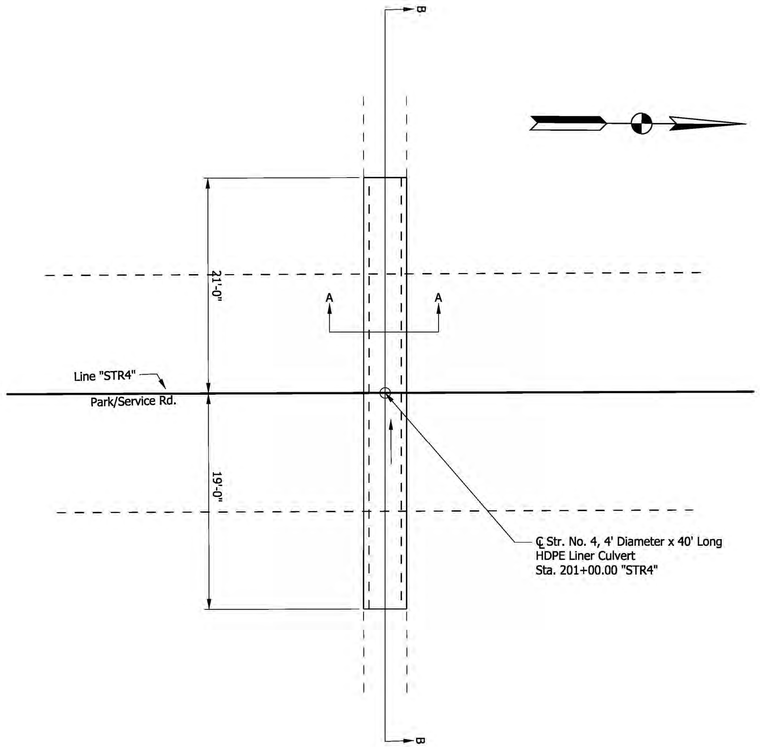
CHECKED: GFM | CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

CULVERT DETAILS
CULVERT #3

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS 18 of 32
CONTRACT	PROJECT ENG2403734214

DATE: 8/14/2025
TIME: 2:38:26 PM
LOCATION: C:\pwworking\jain\d0025\i3200177_OualbacheSS_General Plan_03.dgn



PLAN
Not to Scale

GENERAL NOTES

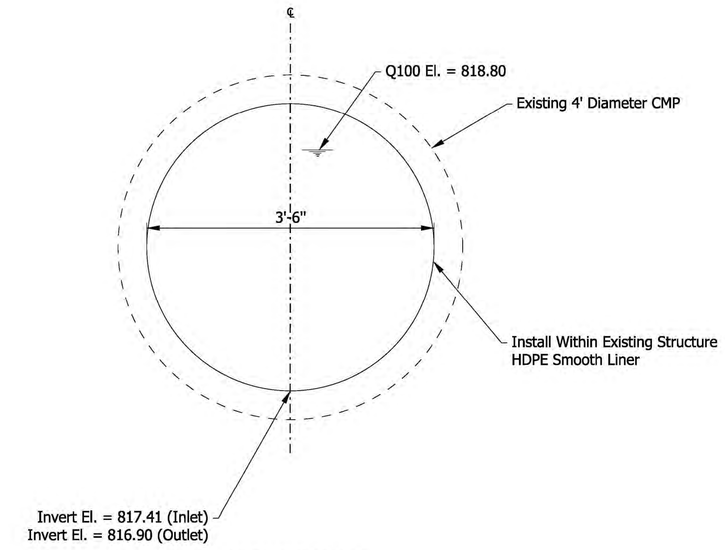
Operate equipment used to replace structure from the existing roadway.

Note:
If the distance between the top of the pavement and the top of the structure is less than 2 ft as measured at the edge of travel lane, all reinforcement in the three sided structure or an oversized box structure should be coated. Coated reinforcement should be indicated in the Structure Data Table's stucture-description name.

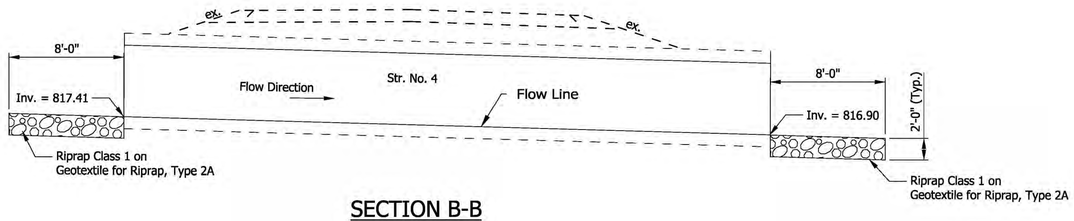
Notes:
* To Be Determined By Manufacturer

** If soft soils are encountered at the proposed invert elevation, over-excavate to a maximum depth of one foot, line the excavation with geotextile fabric in compliance with Section 918 of the INDOT 2024 Standard Spec,, and backfill with 6" of No. 5 aggregate capped with 6" of No. 53 aggregate. If unsuitable materials at the base of the structure or Wingwall Footings extend to depths greater than 2', John Spears (DNR Civil Engineering Manager) shall be contacted for guidance.

*** Top joints of structure shall be filled with a non-shrink grout in accordance with 707.09 and ASTM C1107



SECTION A-A
Not to Scale



SECTION B-B
Not to Scale

4' DIAMETER CORRUGATED METAL PIPE PARK/SERVICE RD. OVER UNNAMED TRIBUTARY TO WABASH RIVER WELLS COUNTY

GERARD F. MROCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

CULVERT DETAILS
CULVERT #4

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS 19 of 32
CONTRACT	PROJECT ENG2403734214

DATE: 8/14/2025
TIME: 2:38:33 PM
LOCATION: c:\pwworking\ustin\dms03325\D2200177_Oaklands5_General Plan_04.dgn

PAVEMENT QUANTITIES AND APPROACH TABLE

LOCATION	DESCRIPTION (APPROACH TYPE OR CLASS)	WIDTH	LENGTH	RADII	DISTANCE BEYOND R/W LINE	SURFACE BEYOND R/W LINE			GRADE		EXCAVATION		CLEAR ZONE AT DRIVE	HMA FOR APPROACHES			QC/QA HMA FOR ROADS			WIDENING WITH HMA, B			JOINT ADHESIVE, SURFACE	JOINT ADHESIVE, INTERMEDIATE	LIQUID ASPHALT SEALANT	ASPHALT FOR COAT	CRACKS AND JOINTS IN ASPHALT PAVEMENT, GROUT AND SEAL	COMPACTED AGGREGATE FOR BASE NO. 53		COMPACTED AGGREGATE FOR SURFACE NO.73		COMPACTED AGGREGATE, NO. 53	COMPACTED AGGREGATE, NO. 53	MILLING, ASPHALT, 1.5"	GEOGRID, TYPE IB	EXCAVATION, UNCLASSIFIED		REMARKS
						COMPACTED AGGREGATE BASE	HMA	PCCP						SURFACE TYPE B	INTERMD TYPE B	BASE TYPE —	3, 64, Surface 9.5 mm	3, 64, Intermediate 19.0 mm	3, 64, Base 25.0 mm	HMA Surface, B	HMA Intermediate, B	HMA Base, B							DEPTH		DEPTH							
									1	2	CUT	FILL		LBS PER SYD			LBS PER SYD			LBS PER SYD								12 IN									
		FT	FT	FT	FT	SYS	SYS	SYS	%	%	CYS	CYS	FT	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	LFT	LFT	LFT	TON	TONS	TONS	TONS	TONS	TONS	CYS	TONS	SYS	SYS	CYS	
Structure 1											12	80								11.1	19.1		160	60	160	0.3						26.7		223	160.0		
Temporary Access Road											124									37.1	63.5		200	200	200	0.4						88.9			533.3		
Structure 2											175	83								9.3	15.9		50	50	50	0.2						22.2			133.3		
Structure 3											121	60								7.4	12.7		40	40	40	0.1						17.8			106.7		
TOTALS											432	223								64.9	111.2		450	350	450	1						155.6		223	933.3		

STRUCTURE DATA

STRUCTURE NUMBER	LOCATION			DESCRIPTION		LENGTH	VIDEO INSPECTION LENGTH	SKEW	COVER		INVERT		SUMP DEPTH	SERVICE LIFE	SCOUR PROTECTION			CULVERT REPLACEMENT									REMARKS
	STATION	Span	Rise	PIPE TYPE	MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE AND TYPE				MIN	MAX	UP STREAM	DOWN STREAM			GEOTEXTILE for RIPRAP TYPE 2A	REVETMENT RIPRAP	CLASS 1 RIPRAP	COMPACTED AGGREGATE NO. 5	COMPACTED AGGREGATE NO. 53	STRUCTURE BACKFILL TYPE 5	FLOWABLE BACKFILL, NON-REMOVABLE	PIPE REMOVE	Waterproofing Membrane System	GUARDRAIL, REMOVE	GEOTEXTILE, TYPE 2A	PRESENT STRUCTURE, REMOVE	
		IN.	IN.			LFT	LFT		FT	FT	ELEV.	ELEV.	IN.	YRS	SYS.	TONS	TON	CYS	CYS	CYS	CYS	LFT	SFT	LFT	SYS	LS	
Structure 1	103+41.00	168	60	RCB		45.0		5°			806.14	805.22	12	75	78	42		37.0	12.3	66				40	160	1	
Structure 2	400+75.00	120	48	RCB		50.0		26°			806.44	806.33	6	75	46	22		40.7	13.6	113		59			180		
Structure 3	300+95.44	120	60	Structural Plate Box		46.0		33°			823.61	823.46	3	75	59	29		7.7	2.6	93					62	1	
Structure 4	201+00.00			42" HDPE Smooth Liner		40.0					817.49	816.98		75	30		14										

DATE: 8/14/2025
TIME: 2:38:39 PM
LOCATION: c:\pwworking\usien\d0325\i2200177_OakbrchdS_Summary.dgn

GERARD F. MROCZKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

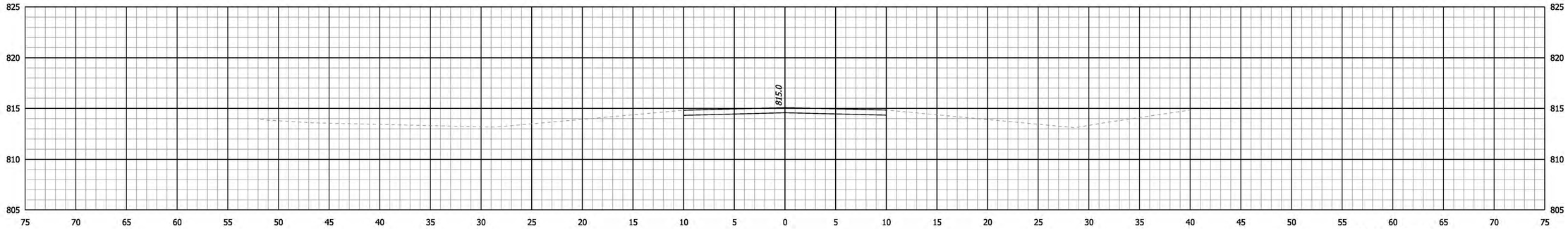
DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

ROADWAY SUMMARY

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
	20 of 32
CONTRACT	PROJECT
	ENG2403734214



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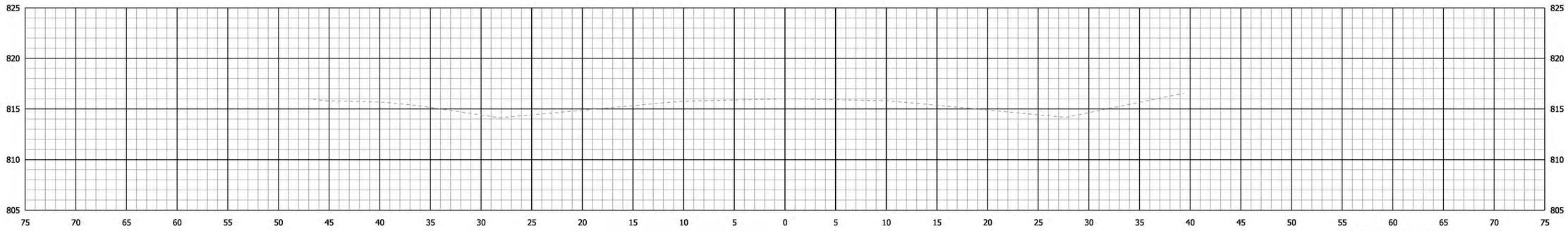
Vc = 0 cys

Af = 0.0 sf
Vf = 0 cys

Ab = 0.0 sf
Vb = 0 cys

101+00.00



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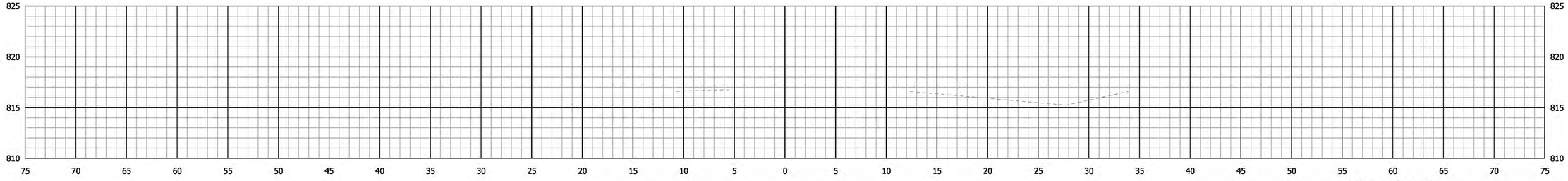
Vc = 0 cys

Af = 0.0 sf
Vf = 0 cys

Ab = 0.0 sf
Vb = 0 cys

100+50.00



Ac = 0.0 sf
Vc = 0 cys

Af = 0.0 sf
Vf = 0 cys

Ab = 0.0 sf
Vb = 0 cys

100+00.00

STA. 100+00.00 TO STA. 101+00.00

DATE: 8/14/2025
TIME: 2:39:19 PM
LOCATION: c:\pwworking\ustin\dms03254\d6560757_OakbutteSS_2200177_Cross Section.dgn

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: MA | DRAWN: MA

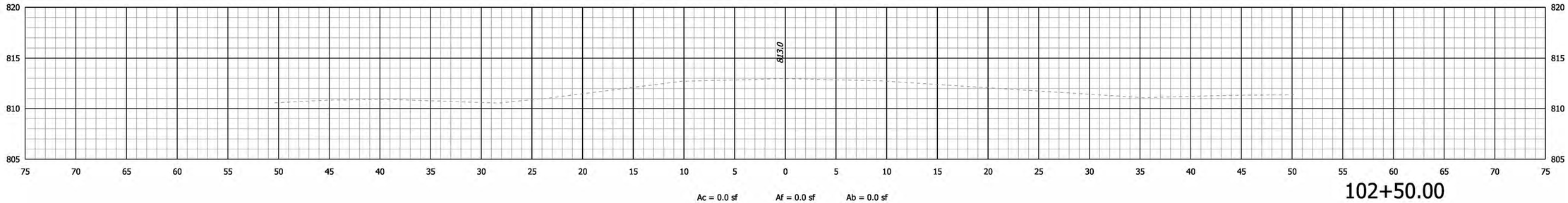
CHECKED: GFM | CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

CROSS SECTIONS
CULVERT #1

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS 21 of 32
CONTRACT	PROJECT ENG2403734214

Begin Incidental Construction
Sta. 102+60.00 "A"



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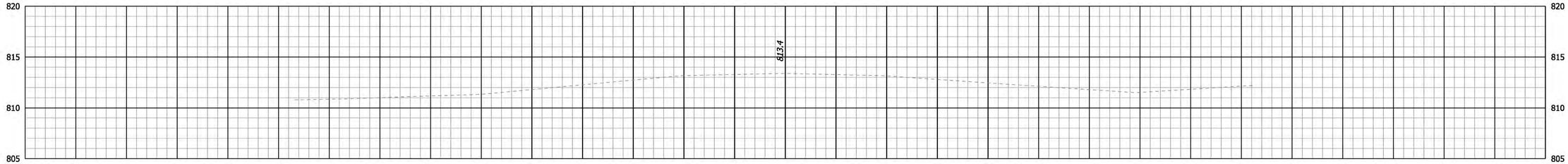
Af = 0.0 sf
Vf = 0 cys

Ab = 0.0 sf
Vb = 0 cys

102+50.00



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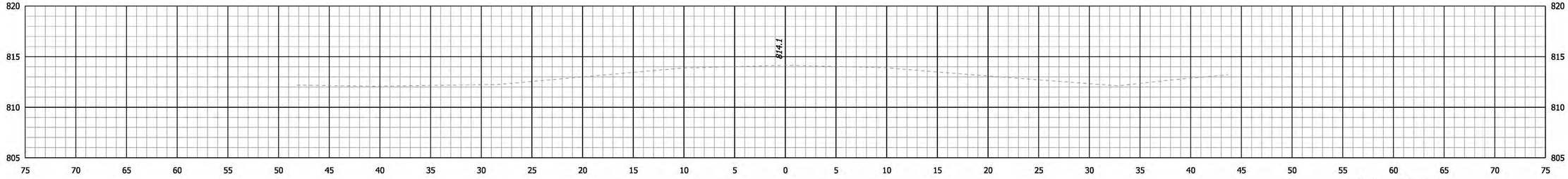
Vc = 0 cys

Af = 0.0 sf
Vf = 0 cys

Ab = 0.0 sf
Vb = 0 cys

102+00.00



Ac = 0.0 sf
Vc = 0 cys

Af = 0.0 sf
Vf = 0 cys

Ab = 0.0 sf
Vb = 0 cys

101+50.00

STA. 101+50.00 TO STA. 102+50.00

DATE: 8/14/2025
TIME: 2:39:19 PM
LOCATION: c:\pwworking\ulein\d0032516\d0680757_Oakbatch65_2200177_Cross Section.dgn

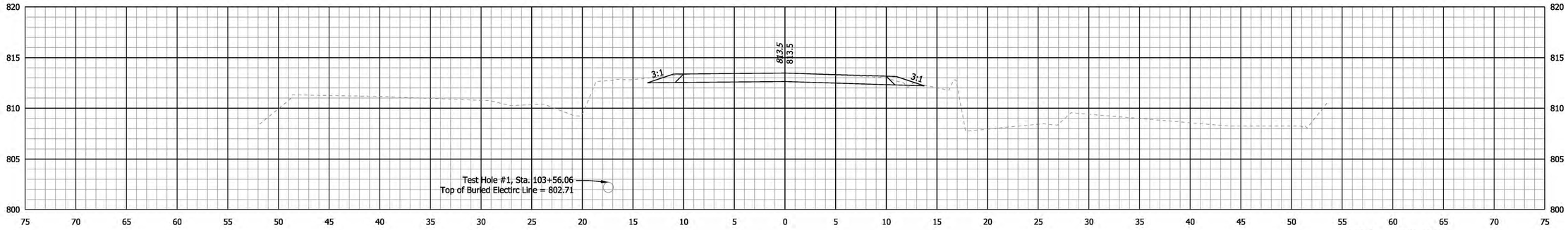
RECOMMENDED FOR APPROVAL
DESIGN ENGINEER DATE

DESIGNED: MA
DRAWN: MA
CHECKED: GFM
CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

CROSS SECTIONS
CULVERT #1

HORIZONTAL SCALE	BRIDGE FILE
1" = 5'	
VERTICAL SCALE	DESIGNATION
1" = 5'	
SURVEY BOOK	SHEETS
	22 of 32
CONTRACT	PROJECT
	ENG2403734214

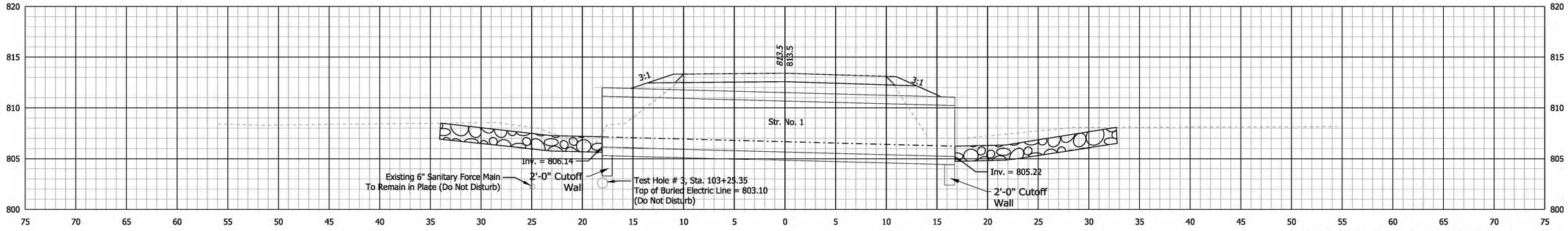


103+50.00

Ac = 1.7 sf
Vc = 0.6 cys

Af = 23.6 sf
Vf = 7.9 cys

Ab = 0.0 sf
Vb = 0 cys



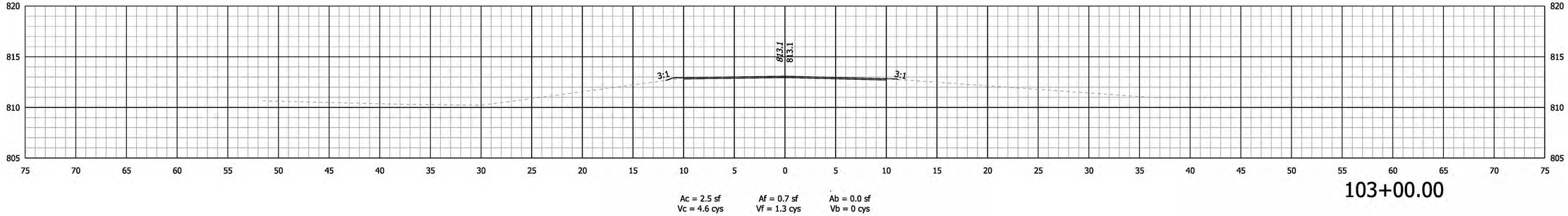
103+41.00 @ 5° Skew

Begin Project
Sta. 103+10.00 "A"

Ac = 2.5 sf
Vc = 3.8 cys

Af = 9.7 sf
Vf = 14.7 cys

Ab = 0.0 sf
Vb = 0 cys



103+00.00

Ac = 2.5 sf
Vc = 4.6 cys

Af = 0.7 sf
Vf = 1.3 cys

Ab = 0.0 sf
Vb = 0 cys

STA. 103+00.00 TO STA. 103+50.00

DATE: 8/14/2025
TIME: 2:39:19 PM
LOCATION: c:\jmworking\jun\dms035\f16582757_OakbrookSt_2200177_Cross Section.dgn

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

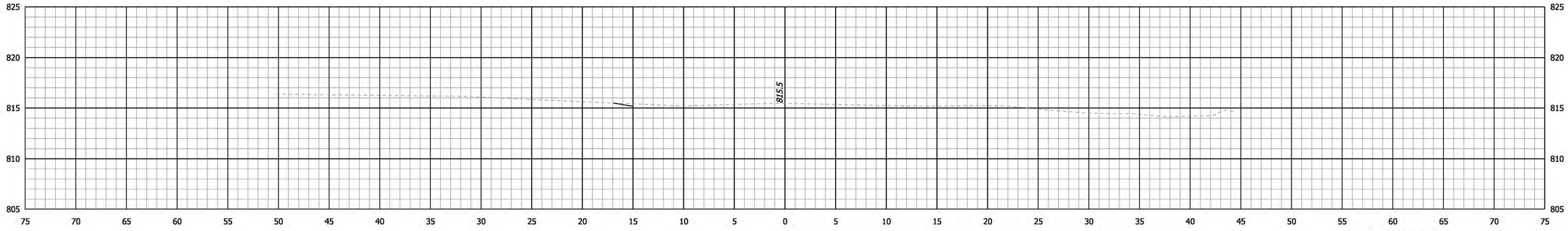
DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

CROSS SECTIONS
CULVERT #1

HORIZONTAL SCALE	BRIDGE FILE
1" = 5'	
VERTICAL SCALE	DESIGNATION
1" = 5'	
SURVEY BOOK	SHEETS
	23 of 32
CONTRACT	PROJECT
	ENG2403734214

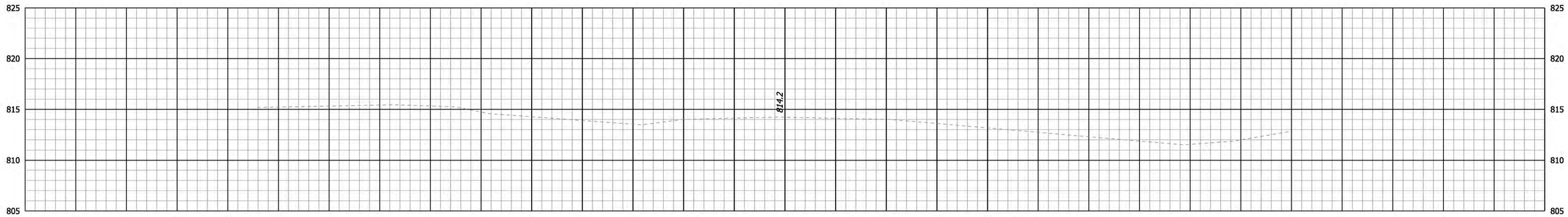


Ac = 0.0 sf
Vc = 0 cys

Af = 0.0 sf
Vf = 0 cys

Ab = 0.0 sf
Vb = 0 cys

105+00.00



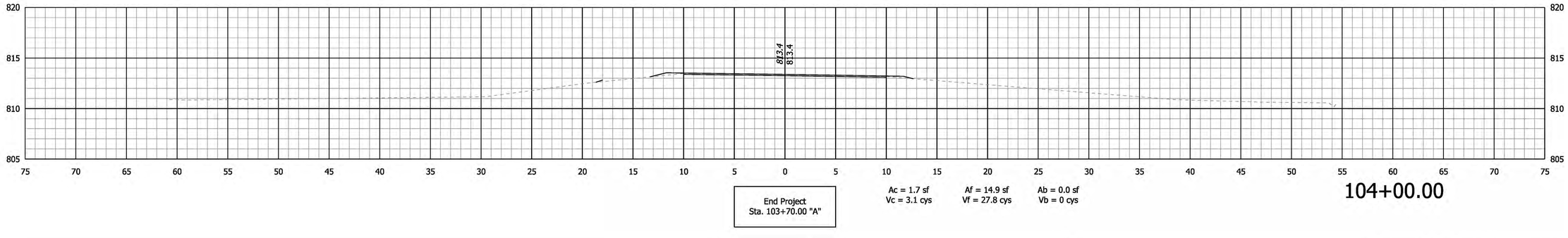
End Incidental Construction
Sta. 104+20.00 "A"

Ac = 0.0 sf
Vc = 0 cys

Af = 0.4 sf
Vf = 0.7 cys

Ab = 0.0 sf
Vb = 0 cys

104+50.00



End Project
Sta. 103+70.00 "A"

Ac = 1.7 sf
Vc = 3.1 cys

Af = 14.9 sf
Vf = 27.8 cys

Ab = 0.0 sf
Vb = 0 cys

104+00.00

STA. 104+00.00 TO STA. 105+00.00

DATE: 8/14/2025
TIME: 2:39:20 PM
LOCATION: c:\pwworking\ian\d0025416560757_OakbutteSS_2200177_Cross Section.dgn

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

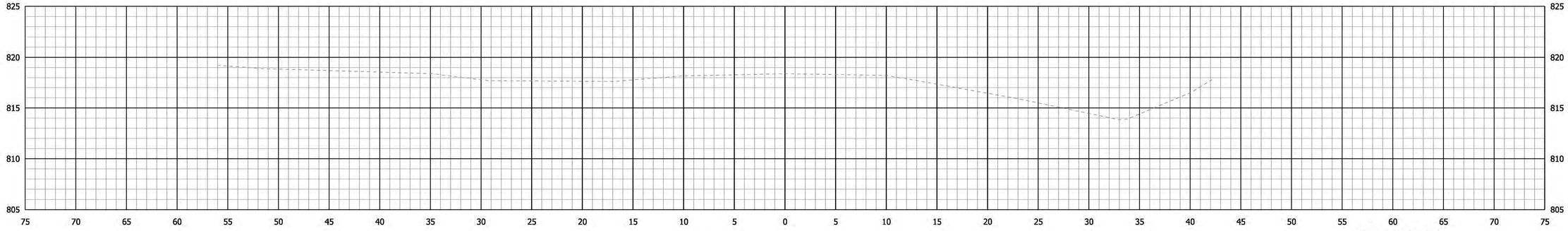
DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

CROSS SECTIONS
CULVERT #1

HORIZONTAL SCALE	BRIDGE FILE
1" = 5'	
VERTICAL SCALE	DESIGNATION
1" = 5'	
SURVEY BOOK	SHEETS
	24 of 32
CONTRACT	PROJECT
	ENG2403734214

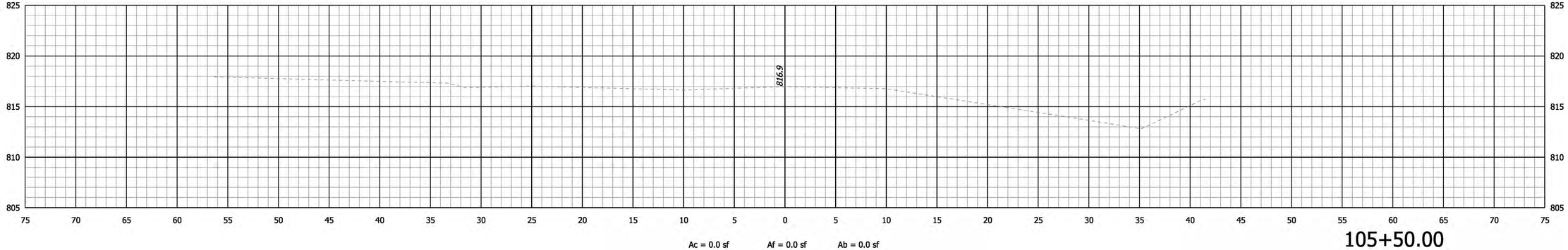


Ac = 0.0 sf
Vc = 0 cys

Af = 0.0 sf
Vf = 0 cys

Ab = 0.0 sf
Vb = 0 cys

106+00.00



Ac = 0.0 sf
Vc = 0 cys

Af = 0.0 sf
Vf = 0 cys

Ab = 0.0 sf
Vb = 0 cys

105+50.00

STA. 105+50.00 TO STA. 106+00.00

DATE: 8/14/2025
TIME: 2:39:20 PM
LOCATION: c:\pwworking\ustin\dms03254\d6560757_OsakisNetSS_2200177_Cross Section.dgn

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: MA | DRAWN: MA

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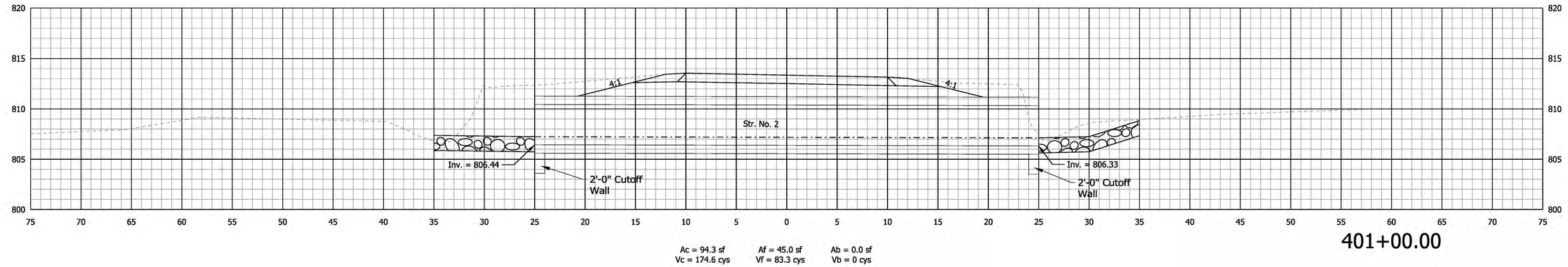
DEPARTMENT OF NATURAL RESOURCES

CROSS SECTIONS
CULVERT #1

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
	25 of 32
CONTRACT	PROJECT
	ENG2403734214



401+00.00

Ac = 94.3 sf
Vc = 174.6 cys

Af = 45.0 sf
Vf = 83.3 cys

Ab = 0.0 sf
Vb = 0 cys

STA. 401+00.00 TO STA. 401+00.00

DATE: 8/14/2025
TIME: 2:39:20 PM
LOCATION: c:\pwworking\ian\d0025416568757_OsakisNetSS_2200177_Cross Section.dgn

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

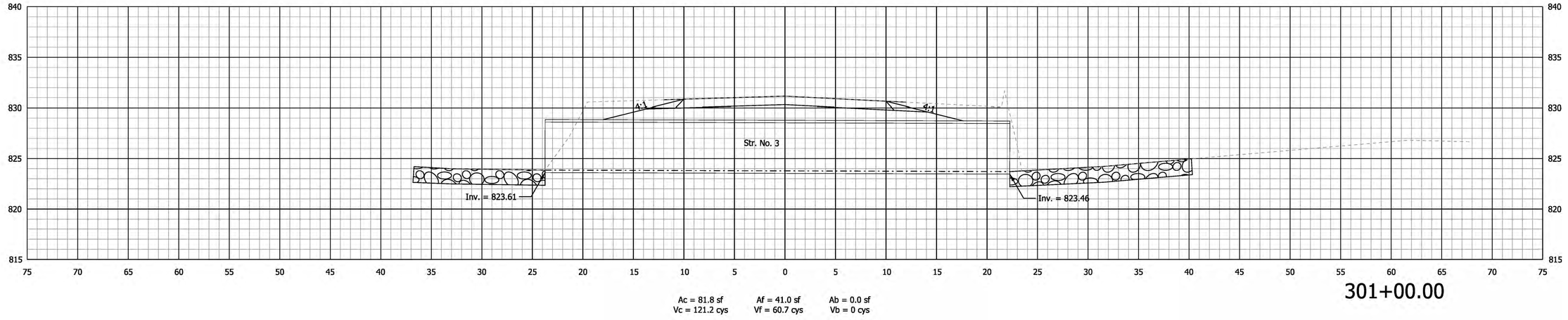
DESIGNED: MA | DRAWN: MA

CHECKED: GFM | CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

CROSS SECTIONS
CULVERT #2

HORIZONTAL SCALE	BRIDGE FILE
1" = 5'	
VERTICAL SCALE	DESIGNATION
1" = 5'	
SURVEY BOOK	SHEETS
	26 of 32
CONTRACT	PROJECT
	ENG2403734214



Ac = 81.8 sf
Vc = 121.2 cys

Af = 41.0 sf
Vf = 60.7 cys

Ab = 0.0 sf
Vb = 0 cys

301+00.00

STA. 301+00.00 TO STA. 301+00.00

DATE: 8/14/2025
TIME: 2:39:21 PM
LOCATION: c:\pwworking\ian\dms03254\i6560757_OsakisNHSS_2200177_Cross Section.dgn

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

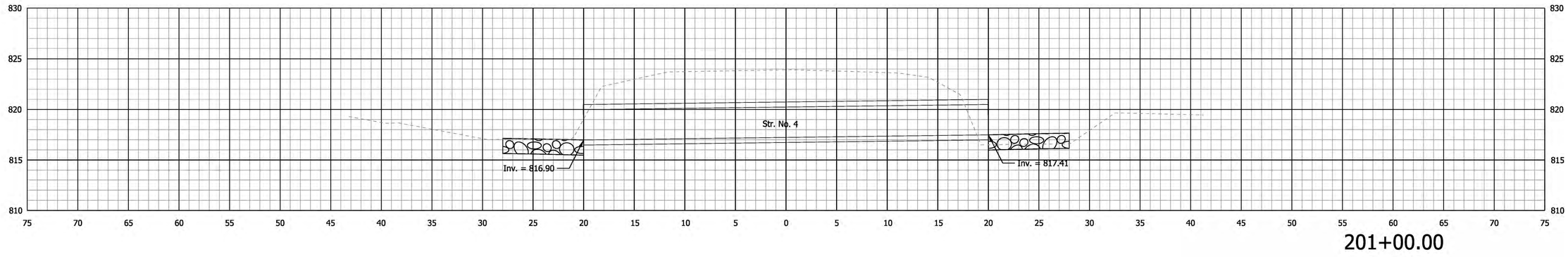
DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

CROSS SECTOINS
CULVERT #3

HORIZONTAL SCALE	BRIDGE FILE
1" = 5'	
VERTICAL SCALE	DESIGNATION
1" = 5'	
SURVEY BOOK	SHEETS
	27 of 32
CONTRACT	PROJECT
	ENG2403734214



201+00.00

DATE: 8/14/2025
TIME: 2:39:21 PM
LOCATION: c:\pwworking\ian\dms03254\l6560757_OsakisNetSS_2200177_Cross Section.dgn

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER DATE

DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

CROSS SECTIONS
CULVERT #4

HORIZONTAL SCALE	BRIDGE FILE
1" = 5'	
VERTICAL SCALE	DESIGNATION
1" = 5'	
SURVEY BOOK	SHEETS
	28 of 32
CONTRACT	PROJECT
	ENG2403734214

DATE: 8/14/2025
TIME: 2:39:58 PM
LOCATION: c:\pwworking\jamh\dms03252\D2200177_OakbotchSS_Pictures_1.dgn

GERARD F. MROCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA | DRAWN: MA

CHECKED: GFM | CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

EXISTING STRUCTURE PICTURES
CULVERT #1

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
	29 of 32
CONTRACT	PROJECT
	ENG2403734214

DATE: 8/14/2025
TIME: 2:46:12 PM
LOCATION: c:\pwworking\jalin\d0025212200177_OakbotHSS_Pictures_2.dgn

GERARD F. MROCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ 04/25/25
DESIGN ENGINEER DATE

DESIGNED: MA DRAWN: MA

CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

EXISTING STRUCTURE PICTURES
CULVERT #2

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS
	30 of 32
CONTRACT	PROJECT
	ENG2403734214

1. Side elevation at the downstream. Stone to be removed, salvaged, cleaned and reset.

2. Side elevation at the downstream. Stone to be removed, salvaged, cleaned and reset.

3. Side elevation at the downstream.

4. Side elevation at the upstream. Stone to be removed, salvaged, cleaned and reset.

5. Side elevation at the upstream. Stone to be removed, salvaged, cleaned and reset.

6. Side elevation at the upstream.

DATE: 8/14/2025
TIME: 2:40:24 PM
LOCATION: c:\jworking\usin\dms\0325\2200177_Oakbrch65_Pictures_3.dgn

GERARD F. MROCZKA
REGISTERED
No. 19400253
STATE OF INDIANA
PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ 04/25/25
DESIGN ENGINEER DATE

DESIGNED: MA DRAWN: MA
CHECKED: GFM CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

EXISTING STRUCTURE PICTURES
CULVERT #3

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS 31 of 32
CONTRACT	PROJECT ENG2403734214

DATE: 8/14/2025
TIME: 2:46:57 PM
LOCATION: C:\pwworking\usin\dm023252\2200177_OsabacheS_Pictures_4.dgn

GERARD F. MROCZKA REGISTERED No. 19400253 STATE OF INDIANA PROFESSIONAL ENGINEER

RECOMMENDED FOR APPROVAL _____ DESIGN ENGINEER 04/25/25 DATE

DESIGNED: MA | DRAWN: MA

CHECKED: GFM | CHECKED: GFM

DEPARTMENT OF NATURAL RESOURCES

EXISTING STRUCTURE PICTURES
CULVERT #4

HORIZONTAL SCALE	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEETS: 32 of 32
CONTRACT	PROJECT: ENG2403734214