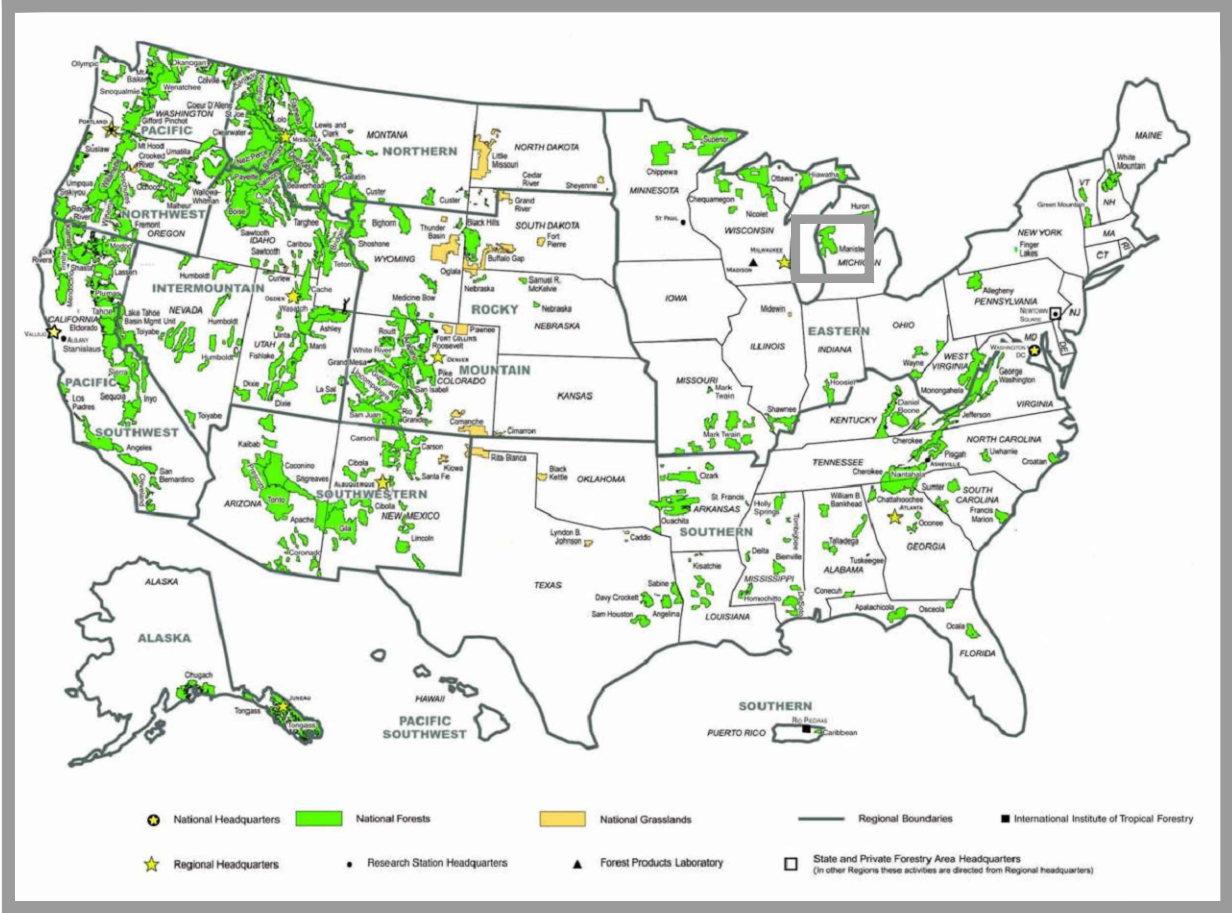




NEWAYGO COUNTY
MICHIGAN

FLINTON CREEK RESTORATION PROJECT
SPRUCE RD AT FLINTON CREEK



PROJECT LOCATION



PROJECT SITE
43.560862, -85.741681

INDEX OF SHEETS		
SHEET	SHEET TITLE	DATE
G-01	COVER SHEET	
C-01	GENERAL NOTES AND QUANTITIES	
C-02	EXISTING PLAN VIEW	
C-03	EXCAVATION AND DIVERSION PLAN	
C-04	PROPOSED PLAN & PROFILE	
C-05	EROSION CONTROL AND COFFER DAM DETAILS	

PREPARED FOR:
NEWAYGO COUNTY
ROAD COMMISION

PREPARED BY:
TROUT UNLIMITED, INC.

APPROVED:

FOREST SERVICE ENGINEER

DATE

6/28/26 20:07 CHAD.KOTKE C:\USERS\CHAD.KOTKE\DESKTOP\DESKTOP 11-25-2022\GIS_DATA\TU PROJECTS\MICHIGAN\MANISTEE\INFLINTON CRISPRUCE\RD\INFLINTON AT SPRUCE USFS_FINAL.DWG;

General Notes:

1. Specifications for design, materials and construction shall meet or exceed the following:
- 1.1. MDOT – Michigan Department of Transportation "2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION", 2020, with current standard plans and supplemental specifications.

1.2. This plan set and all conditions, specifications and supplements to standard specifications contained within the project manual.
2. Final resolution to conflicts within the specifications or any substitutions shall be determined by the Engineer.
3. Utilities:
- 3.1. The Contractor shall Call Miss Dig, 1–800–482–7171 three working days, excluding Saturday, Sunday and holidays, before starting your project.

3.2. The Contractor shall not disturb any existing property corner, monument, survey marker, or benchmark without first making provisions for its replacement or relocation.

Stream Construction Notes:

1. Item 62901 – Channel Bed Material – Suitable excavated material may be used for construction of stream bed but must meet the gradation requirements in the specifications within these plans and must be approved by the Onsite Coordinator prior to placement.
2. Item 62901 – Bank Rock and Riffle Construction – Bank rocks and Riffle Construction shall be placed at the direction of the Onsite Coordinator and shall be sized as provided in these plans. Excavation required for placement of bank rocks shall be paid for incidental to this item.
3. For Channel Bed Material and Bank Rock, Contractor to use native rocks when available, artificial and white stone are not acceptable.

General Construction Notes:

1. See Sheet #C–08 for notes on the construction sequence for erosion and sediment control.
2. All testing shall be ordered by the the Contractor in accordance with MDOT, AASHTO and project specifications. Contractor shall give the Engineer 24 hours advance notice prior to placing materials requiring testing.
3. Determination of maximum densities for sand and gravels are the responsibility of the Contractor. Proctor tests ordered by the Contractor shall be sampled and performed by an independent testing laboratory and paid for by the Contractor. Control strips, if required, shall be performed by the Contractor, observed by the Engineer, and paid for by the Contractor. Include all costs in the Item unit price.
4. Existing 24” culvert will be used for water diversion.
5. Areas outside the limits of proposed work disturbed by the Contractor’s operations shall be restored by the Contractor to their original condition at the Contractor’s expense.
6. All soil moving equipment shall be thoroughly cleaned to make it free of soil, non–native invasive species or other debris that could contain or hold seeds prior to being delivered to the project site. Equipment shall be considered free of non–native or invasive species and other such debris when a visual inspection by the Engineer, completed prior to the equipment being moved to the site, does not disclose such material present.
7. The color of stone used for streambed, stream banks, and riprap during construction shall be either earth tones or medium to dark gray and shall be approved by the on–site coordinator prior to placement. Artificial material, limestone or dolostone are not acceptable.
8. Suitable excavated material used for the stream bed shall consist of an inert material that is hard, durable stone and coarse sand free from surface coatings and deleterious materials, and shall meet the gradation requirements in the notes and must be approved by the On–Site Coordinator prior to placement.

Structural Notes:

1. Item 20304 – Removal of Structure. This item shall include removal and legal disposal off the project site of the existing culvert pipe and any other materials associated with removal of the existing road–stream crossing structure. All materials shall become property of the Contractor.
2. Item 60350 – Culvert – See special provisions in project manual. This item shall include all materials and procedures required for purchasing, design, delivery, storage, installation and protection of the culvert, components, crane and rigging. All design calculations shall be completed by a Michigan Professional Engineer and submitted for record along with shop drawings.

Estimated Quantities for Informational Purposes Only

ITEM NO.	DESCRIPTION	PAY UNIT	EST. QTY.
Stream and Culvert Construction			
20601	Removal of Structure, disposal method 'A'-Remove from Project	LS	1
20603	Unsuitable Excavation	CY	75
20603	Structure excavation	CY	875
20603	2NS granular backfill	CY	600
20805	Diversion and Dewatering	LS	1
50102	Plant-Produced Hot Mix Asphalt	TON	70
50103	Asphalt Construction	SF	2,400
60350	15'-4" SPAN x 6'-5" RISE ALSP Box with FLOOR PLATE LOAD RATING = HL-93	LF	60
62503	Seeding, dry method (including fertilizing)	LS	1
62901	Erosion control mat type ENS2 (or equal)	SY	2,525
62901	Stream Simulation Streambed Mix MDOT 23A (80 CY), 12-16 IN WASHED STONE (30 CY)	CY	110

Bypass Construction Notes:

1. During work on the crossing, and until the site is stabilized, the stream shall be passed through a temporary channel. The temporary channel shall be completely stabilized with riprap placed over geotextile filter fabric prior to passing flow and maintained in good working condition until the culvert is installed and stabilized.
2. Any work in the stream must be completed when the water elevation is below bank height.
3. If the temporary bypass channel has less hydraulic capacity than the existing structure, steps must be taken to remove stream diversions when the water exceeds bank height to prevent upstream flooding and harmful interference.
4. The applicant and their contractor are responsible for monitoring water levels to ensure their temporary construction access methods will not cause upstream flooding.



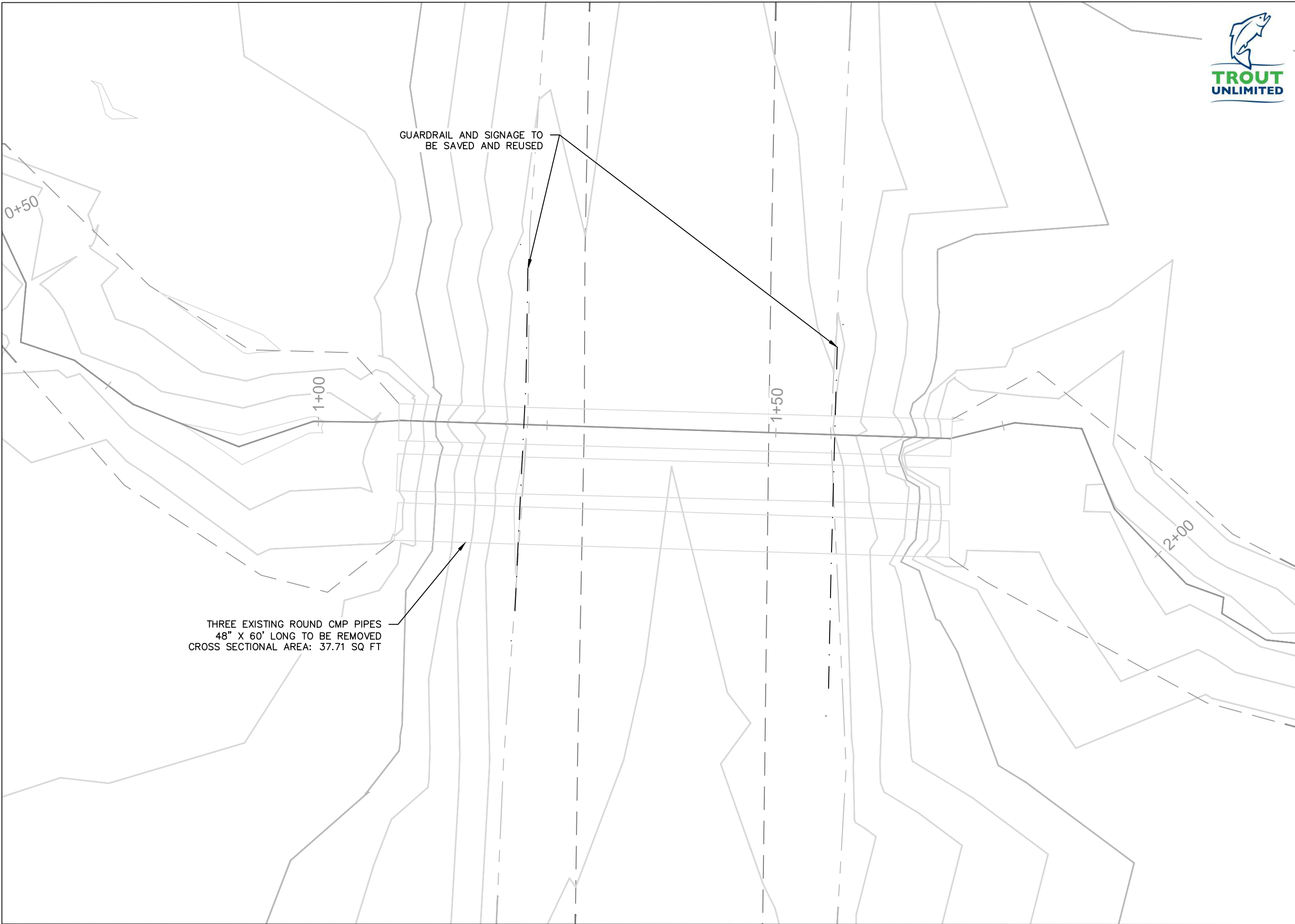
STAMPS, LOGOS, AND SEALS

PROJECT NAME
FLINTON CREEK
AOP PROJECT

DRAWING TITLE
ESTIMATED QUANTITIES
AND NOTES

DATE 06/28/2026	ARCHIVE NO.
DESIGNER C. KOTKE	DRAWING SHEET NO. C-01
DRAWN C. KOTKE	
CHECKED M. BREGE	
PROJECT NO.	SHEET 2 OF 6

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STAMPS, LOGOS, AND SEALS

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NO.	REVISION / ISSUE	DATE

PROJECT NAME

FLINTON CREEK
AOP PROJECT

DRAWING TITLE

EXISTING
SITE PLANS

DATE 06/02/2026	ARCHIVE NO.
DESIGNER C. KOTKE	DRAWING SHEET NO. C-02
DRAWN C. KOTKE	
CHECKED M. BREGE	
PROJECT NO.	SHEET 3 OF 6

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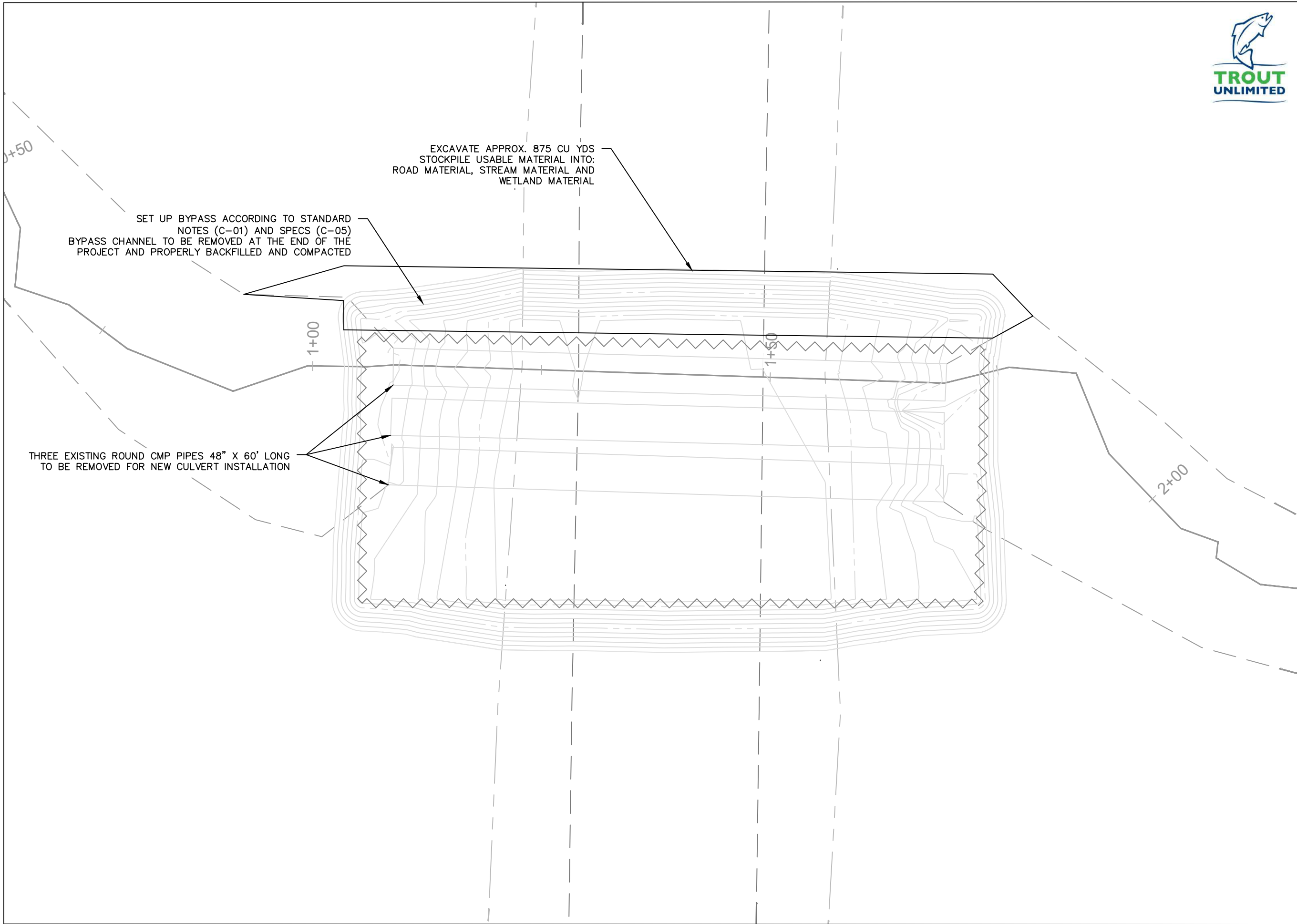
PROJECT NAME

FLINTON CREEK
AOP PROJECT

DRAWING TITLE

EXCAVATION AND
DIVERSION PLANS

DATE 06/28/2026	ARCHIVE NO.
DESIGNER C. KOTKE	DRAWING SHEET NO.
DRAWN C. KOTKE	C-03
CHECKED M. BREGE	
PROJECT NO.	SHEET 4 OF 6



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STAMPS, LOGOS, AND SEALS

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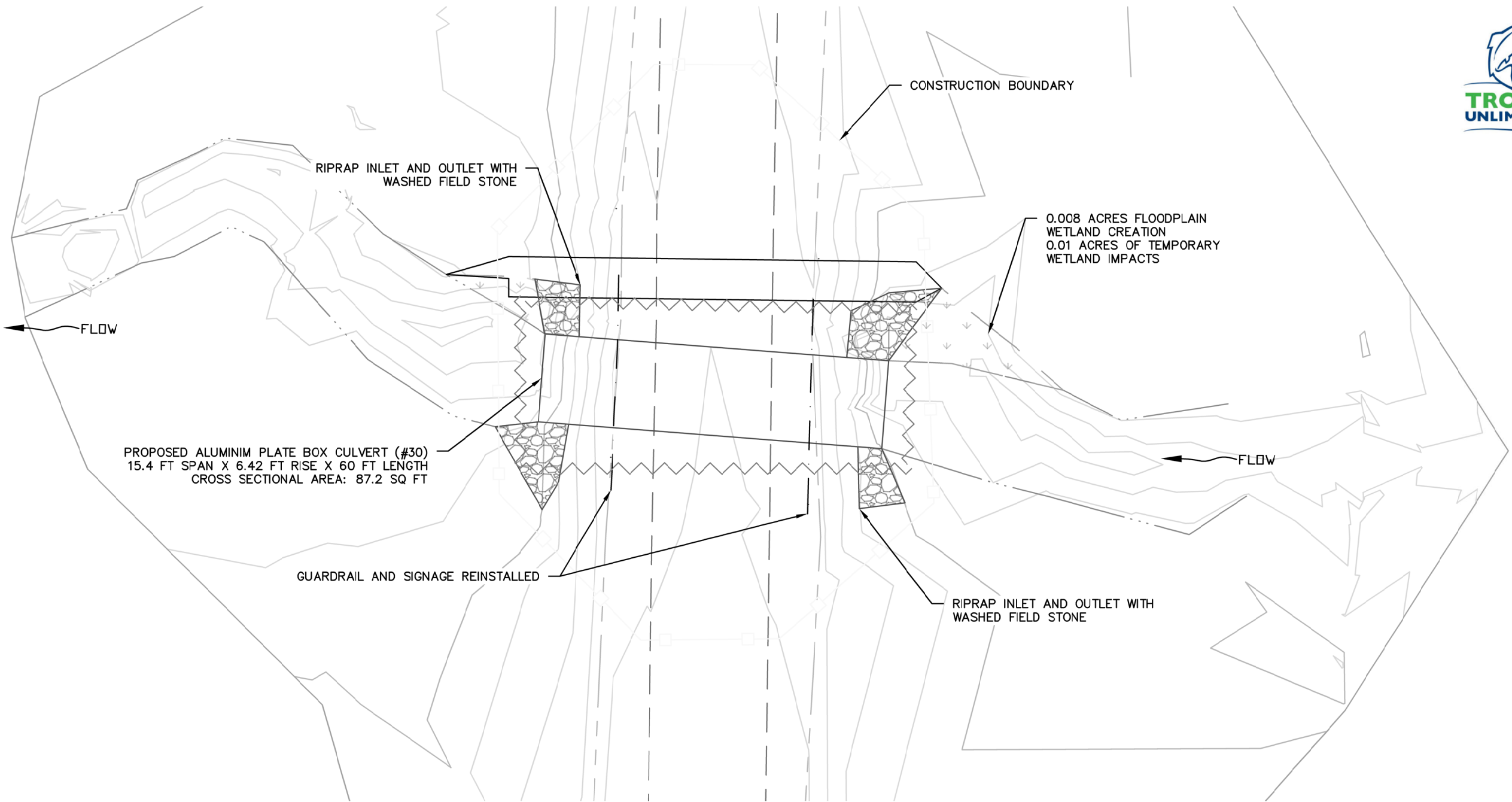
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FLINTON CREEK
AOP PROJECT

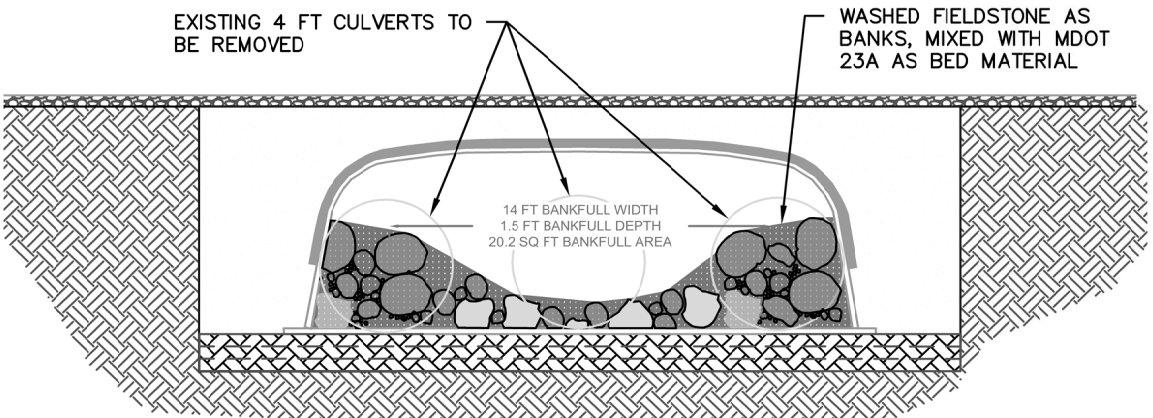
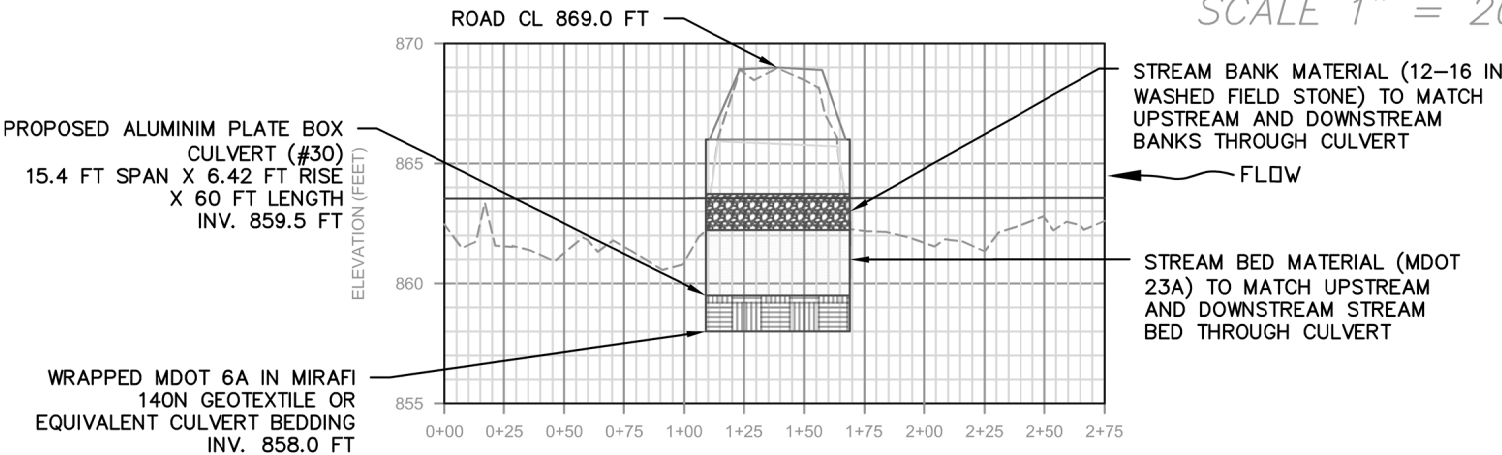
DRAWING TITLE

PROPOSED
SITE PLANS

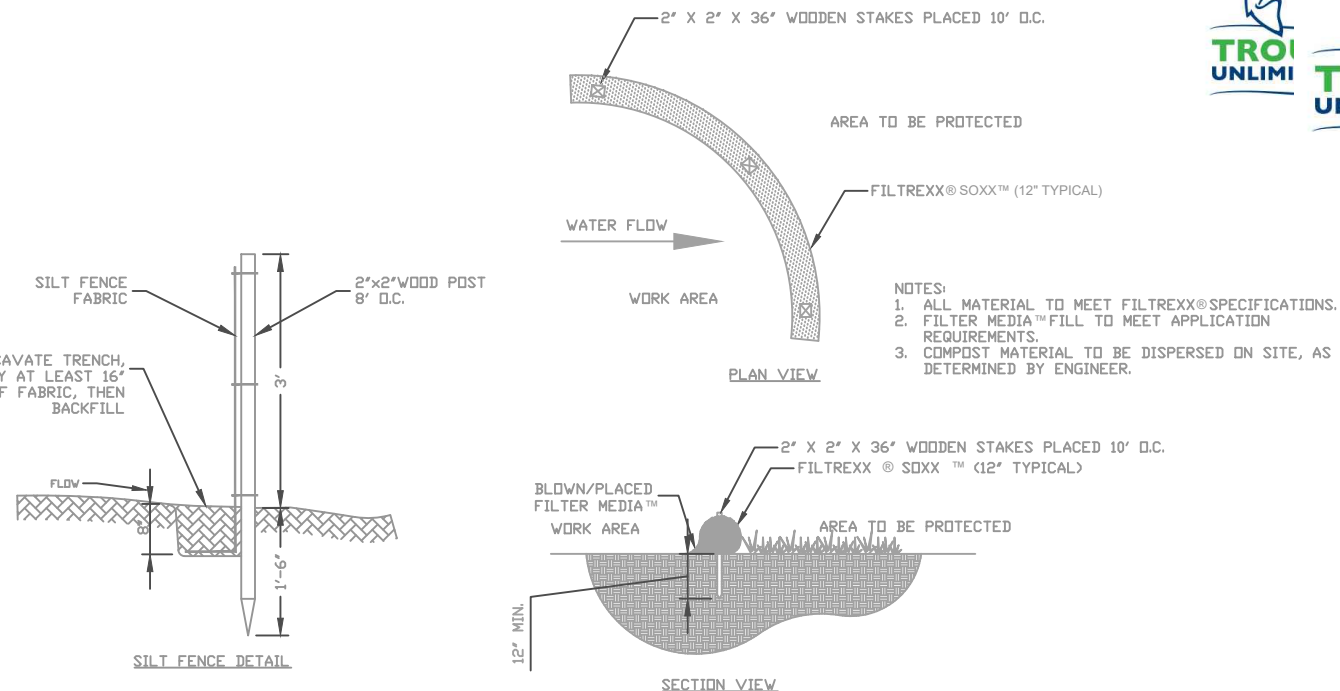
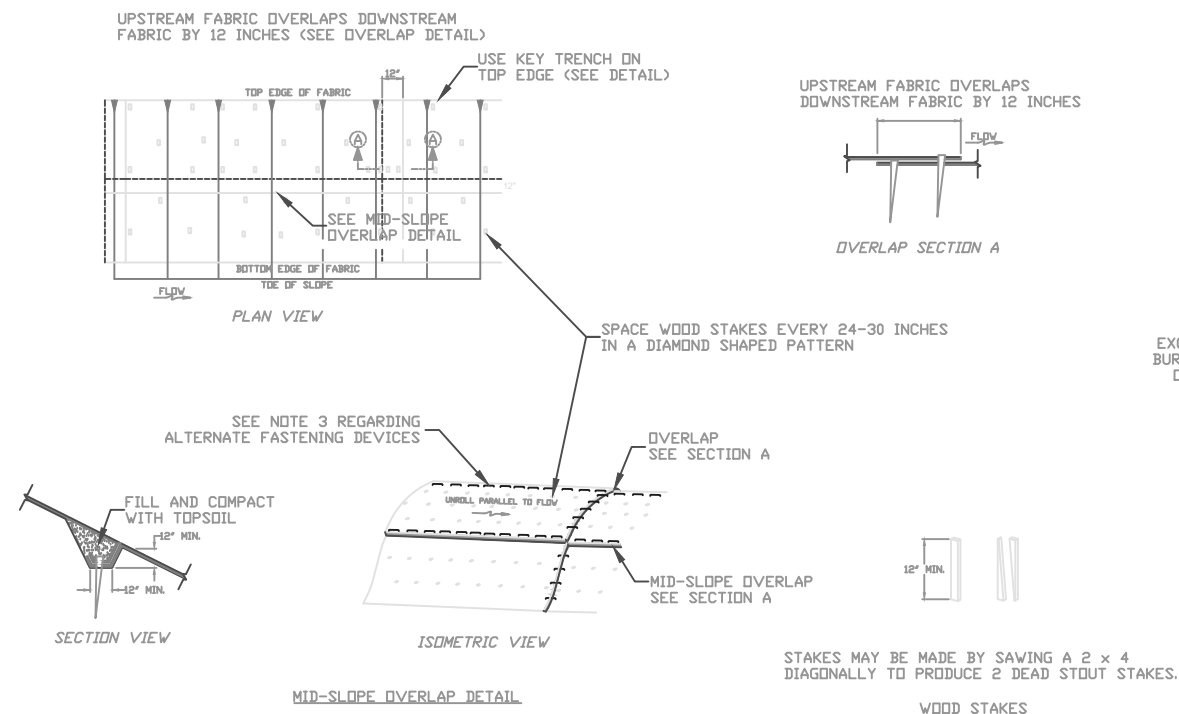
DATE 06/29/2026	ARCHIVE NO.
DESIGNER C. KOTKE	DRAWING SHEET NO.
DRAWN C. KOTKE	C-04
CHECKED M. BERGE	
PROJECT NO.	SHEET 5 OF 6



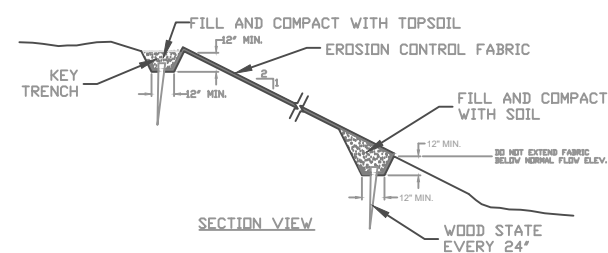
PROPOSED CULVERT LOCATION
SCALE 1" = 20'



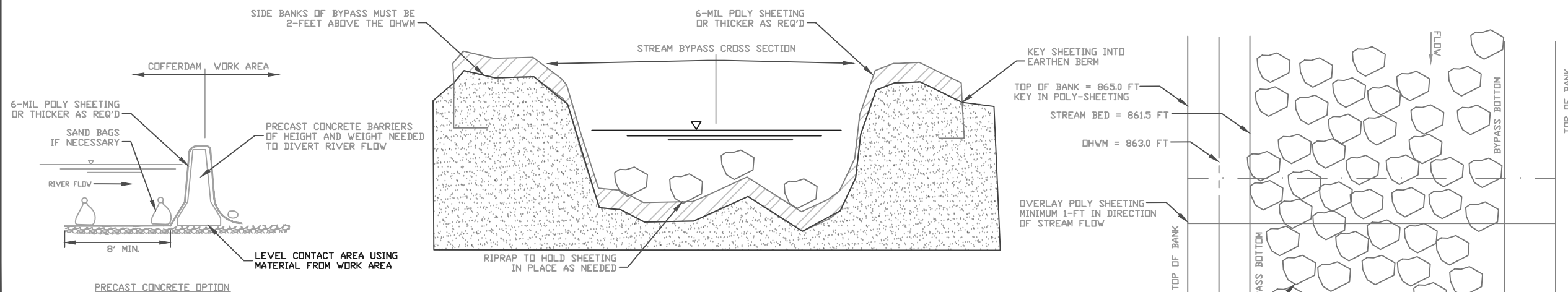
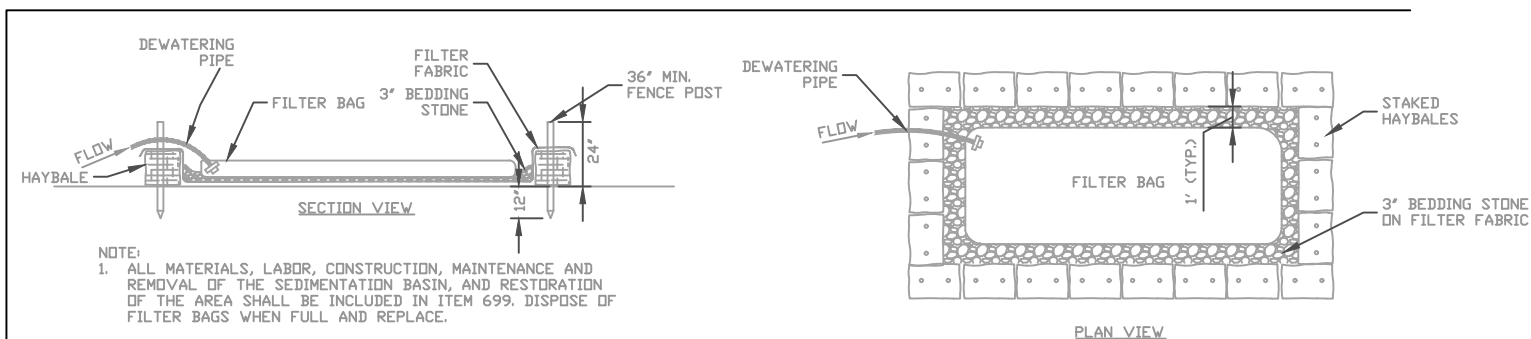
LONGITUDINAL PROFILE AND CROSS SECTION (NTS) VIEW



TYPICAL EROSION CONTROL
N.T.S.



- NOTES:**
1. USE EROSION CONTROL FABRIC DESCRIBED AS IN THE SPECIFICATIONS.
 2. PREPARE SOIL SURFACE AND INSTALL ACCORDING TO THIS DETAIL, THE LIMITS SHOWN ON SHEET 5, AND THE SPECIFICATIONS. SEED THE GROUND SURFACE BEFORE INSTALLING FABRIC.
 3. ALTERNATE FASTENING DEVICES REQUIRE ENGINEER'S APPROVAL BEFORE USE. ALL FASTENERS MUST BE MADE OF WOOD PRODUCTS; PLASTIC OR BIODEGRADABLE COMPOSITE PRODUCTS WILL NOT BE ACCEPTED.
 4. SESC PERMIT AND PERMIT REQUIREMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE SESC PLAN MUST BE PROVIDED 2 WEEKS PRIOR TO CONSTRUCTION.



COFFER DAM, LINED CHANNEL AND
SEDIMENTATION BASIN TYPICAL
N. T. S.

STAMPS, LOGOS, AND SEALS		
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3		
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NO.	REVISION / ISSUE	DATE

PROJECT NAME

**FLINTON CREEK
AOP PROJECT**

DRAWING TITLE

EROSION CONTROL AND COFFER DAM DETAILS DETAILS

DATE 06/28/2026	ARCHIVE NO.	
DESIGNER C. KOTKE		DRAWING SHEET NO. C-05
DRAWN C. KOTKE		
CHECKED M. BERGE		
PROJECT NO.		SHEET 6 OF 6

BYPASS

