

**Manistee County Road Commission
Plans and Specifications**

**High Bridge Road
2026**

**Dickson Township
Manistee County, Michigan**

October 1, 2026

PLAN INDEX

SHEET NUMBER	SHEET DESCRIPTION
1	TITLE SHEET
2	VICINITY SHEET
3-6	TYPICAL CROSS SECTIONS
7	NOTE/LEGEND SHEET
8-15	PLAN & PROFILE SHEETS

MANISTEE COUNTY ROAD COMMISSION

PLANS OF PROPOSED IMPROVEMENTS TO

HIGH BRIDGE ROAD

DICKSON TOWNSHIP, MANISTEE COUNTY

PLACING OF TEMPORARY TRAFFIC CONTROL ITEMS SHALL BE DONE IN ACCORDANCE WITH THE 2011 EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AS REVISED.

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 2020 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND SUPPLEMENTAL SPECIFICATIONS, AS AMENDED.

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH SECTION C, RESURFACING, RESTORATION AND REHABILITATION (3R) OF THE MICHIGAN DEPARTMENT OF TRANSPORTATION LOCAL AGENCY PROGRAMS GUIDELINES FOR GEOMETRICS DATED JULY 24, 2017.

TRAFFIC DATA

YEAR	2026	2046
A.D.T.....	2287	3080
% COMMERCIAL.....	3%	3%
POSTED SPEED.....	55 MPH	
DESIGN SPEED.....	55 MPH	



3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
OR 811

PROJECT LENGTH = 0.168 MILES

CONTRACT FOR:
HMA REMOVAL, EMBANKMENT, EXCAVATION, AGGREGATE BASE, DRAINAGE IMPROVEMENTS AND GUARDRAIL.

MANISTEE COUNTY ROAD COMMISSION APPROVALS

KEITH MOORE, MCRC MANAGER

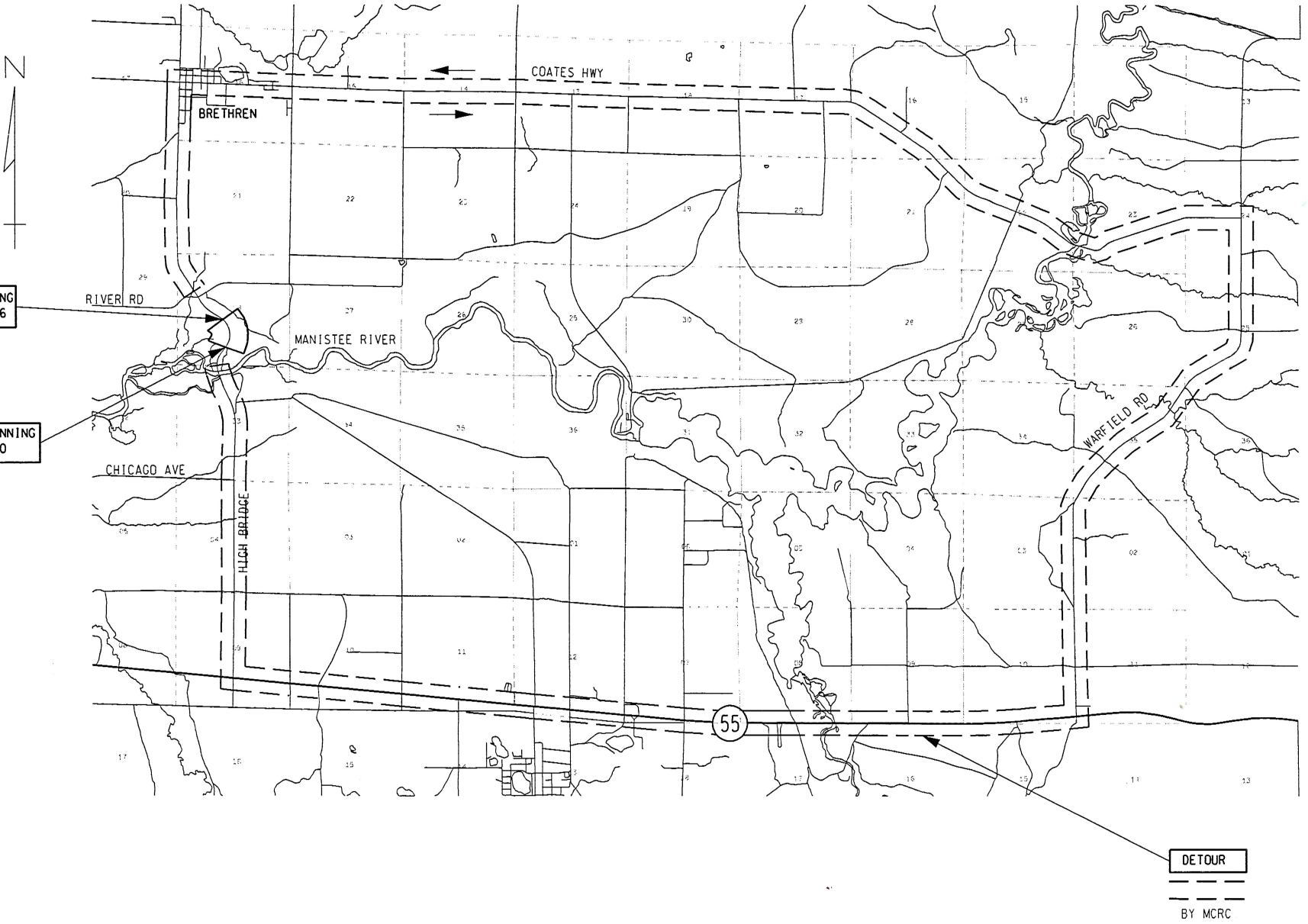
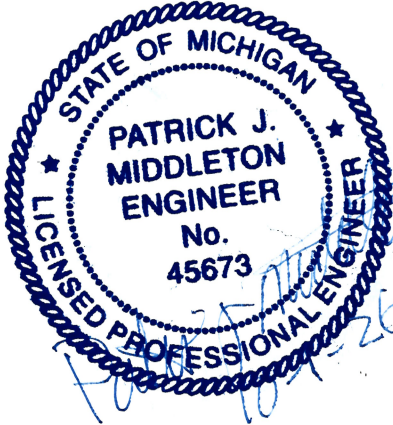
DATE

PREPARED UNDER SUPERVISION OF

PATRICK J. MIDDLETON, P.E.
REGISTERED PROFESSIONAL ENGINEER

45673
REGISTRATION NUMBER

KPM ENGINEERING
CIVIL ENGINEERING CONSULTANTS

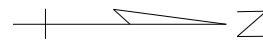


DETOUR
BY MCRC

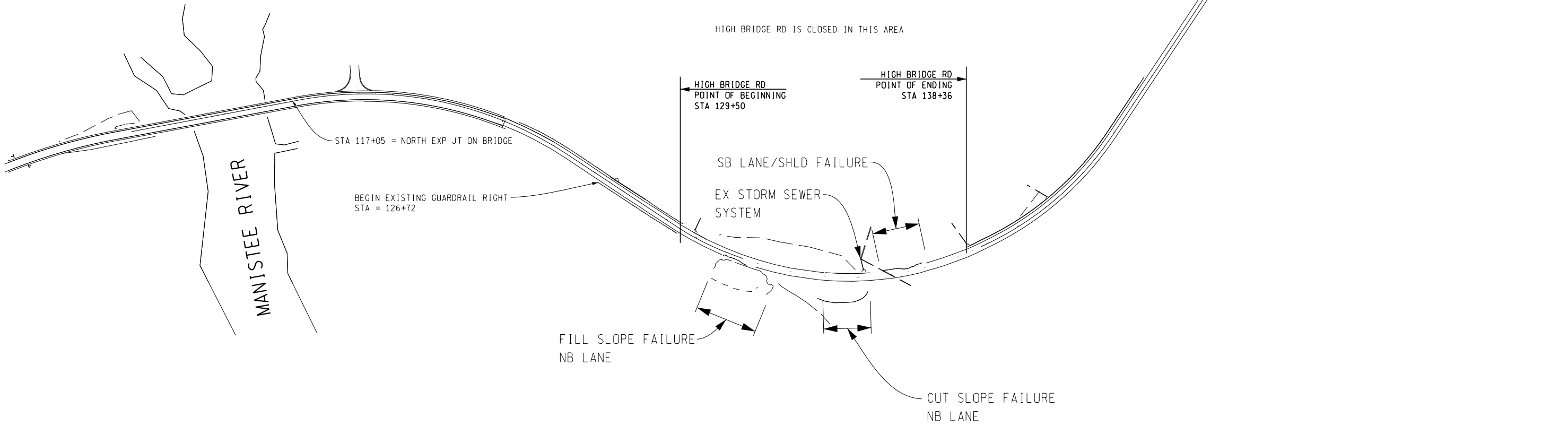


COUNTY KEY

HIGH BRIDGE ROAD MANISTEE COUNTY

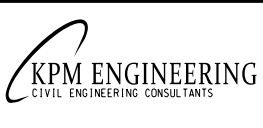


RIVER
ROAD
STA 158+60±

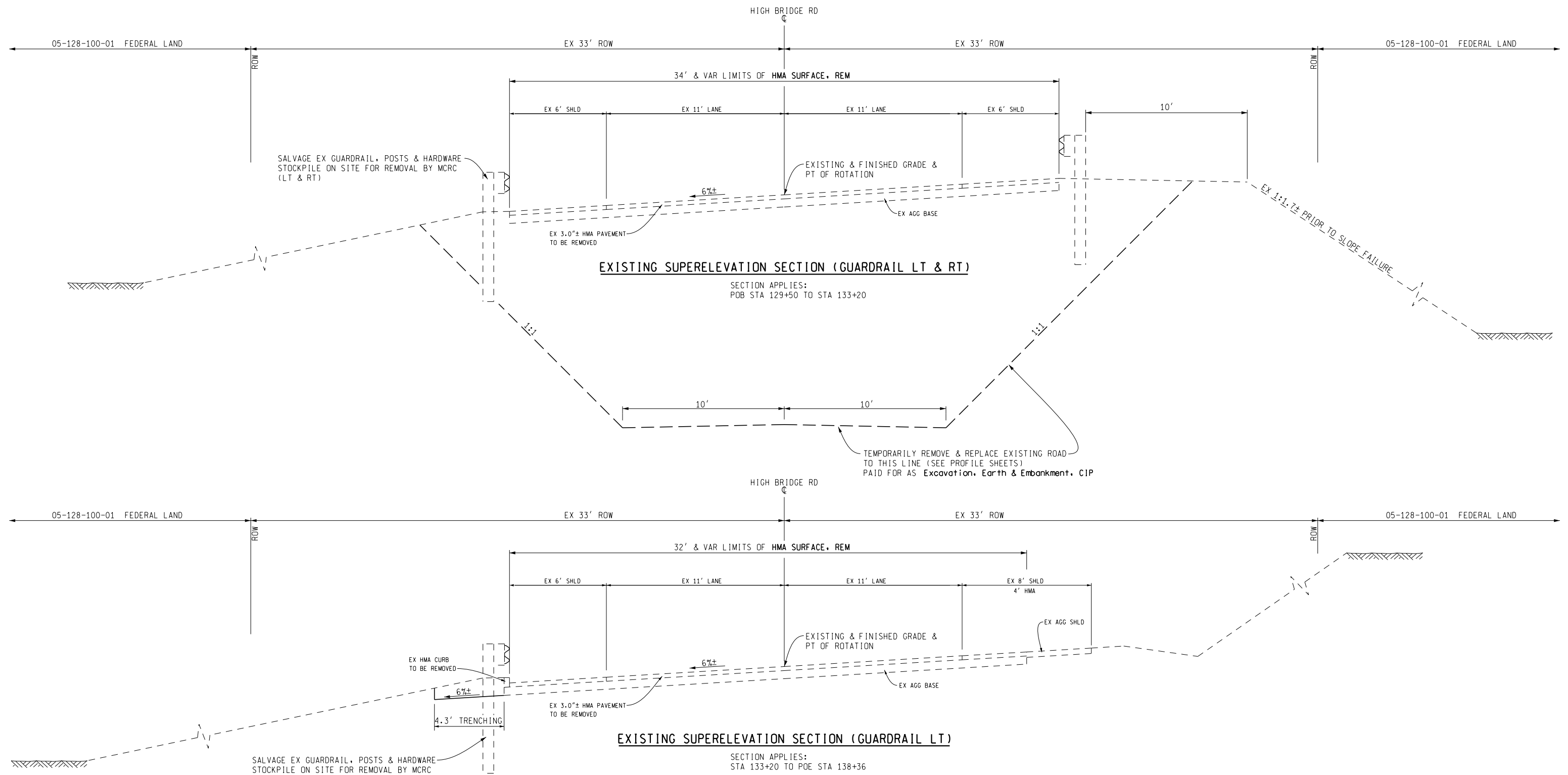


3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
OR 811

MANISTEE
County Road Commission



HIGH BRIDGE ROAD VICINITY SHEET			
DATE	TOWNSHIP	JOB NO.	SHEET NO.
10/1/2026	DICKSON	NA	2



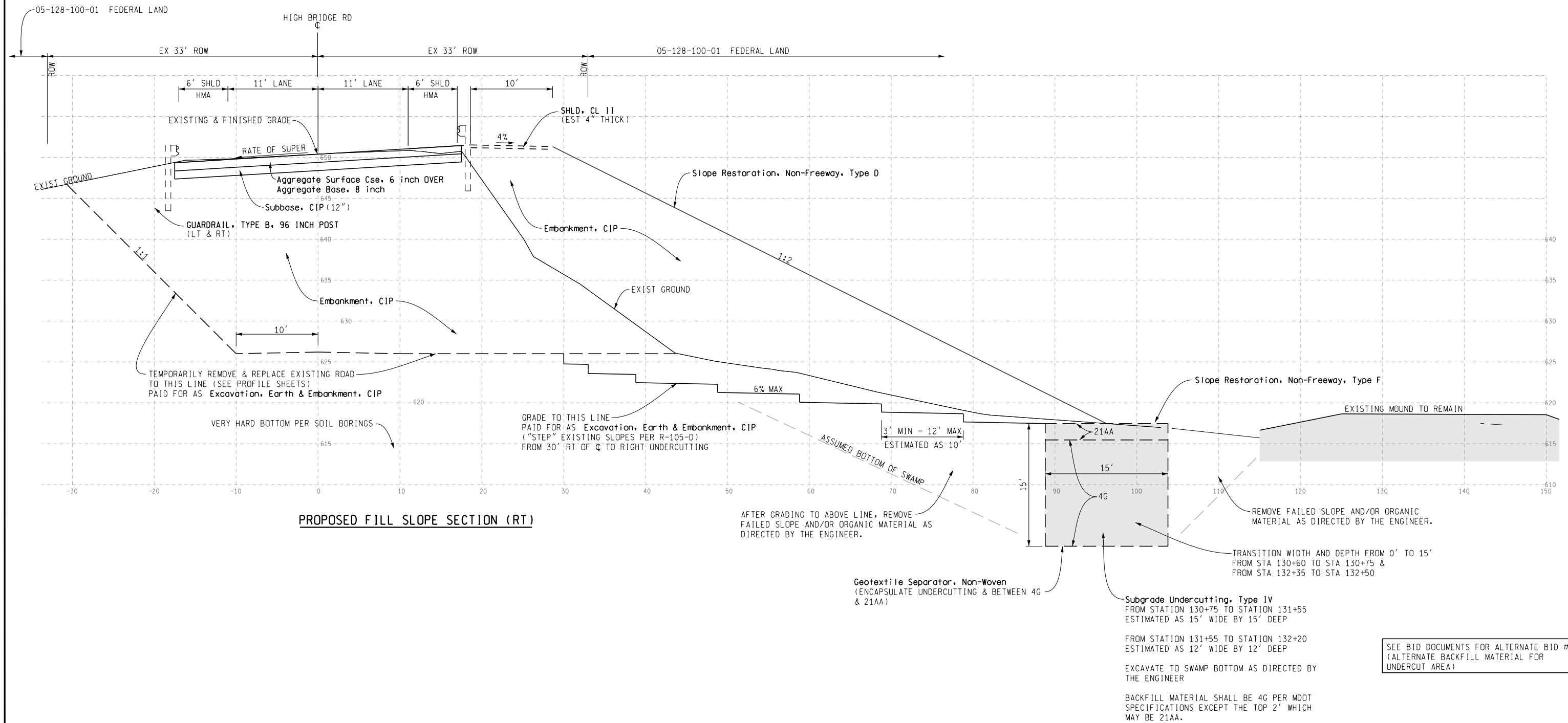
3 WORKING DAYS
 BEFORE YOU DIG
 CALL MISS DIG
 800-482-7171
 OR 811

MANISTEE
 County Road Commission



HIGH BRIDGE ROAD TYPICAL CROSS SECTIONS

DATE	TOWNSHIP	JOB NO.	SHEET NO.
10/1/2026	DICKSON	NA	3

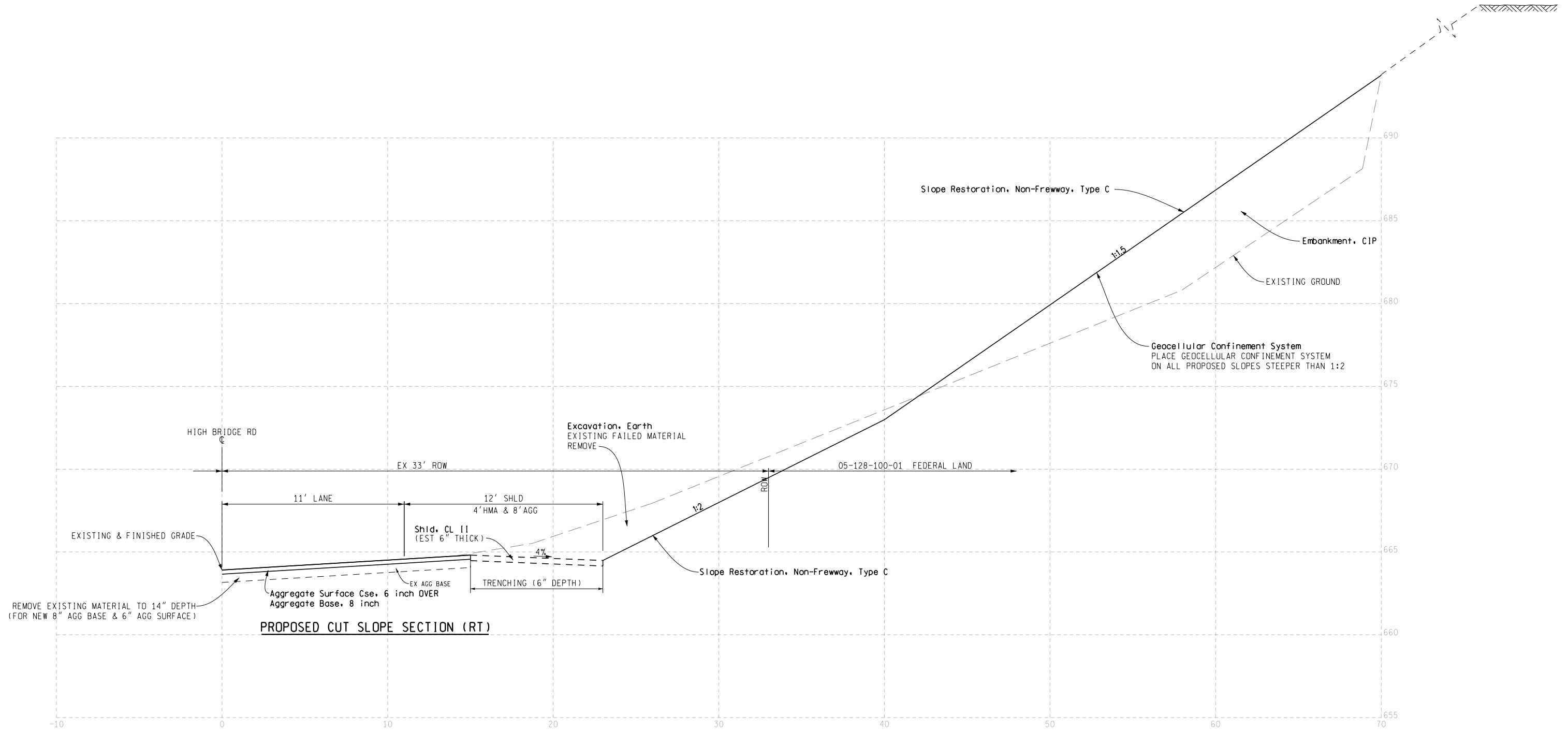


3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
OR 811

MANISTEE
County Road Commission

KPM ENGINEERING
CIVIL ENGINEERING CONSULTANTS

HIGH BRIDGE ROAD TYPICAL CROSS SECTIONS			
DATE	TOWNSHIP	JOB NO.	SHEET NO.
10/1/2026	DICKSON	NA	4



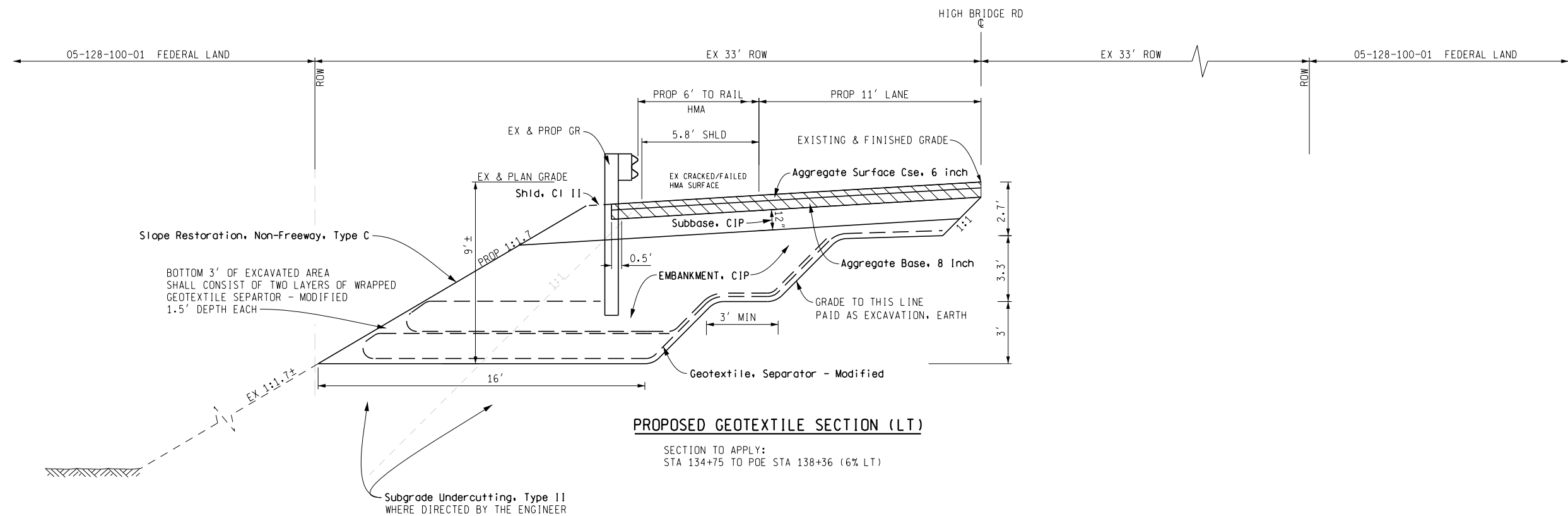
3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
OR 811

MANISTEE
County Road Commission



HIGH BRIDGE ROAD TYPICAL CROSS SECTIONS

DATE	TOWNSHIP	JOB NO.	SHEET NO.
10/1/2026	DICKSON	NA	5



3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
800-482-7171
OR 811

MANISTEE
County Road Commission



HIGH BRIDGE ROAD TYPICAL CROSS SECTIONS

DATE
10/1/2026

TOWNSHIP
DICKSON

JOB NO.
NA

SHEET NO.
6

MISCELLANEOUS SYMBOLS

☆

PINE TREE

☼

TREE

⌵

STUMP

⚡

SWAMP

⊗T.H.#

TEST HOLE NO.

◁

EXISTING CULVERT END SECTION

▷

PROPOSED CULVERT END SECTION

⊙

SECTION CORNER

⊗

QUARTER QUARTER CORNER

⊕

QUARTER CORNER

⊙

HALF QUARTER CORNER

⊥

SIGN

⊥

SIGN2

⊗

RIPRAP

⊙

EXISTING PROPERTY CORNER

UTILITIES SYMBOLS

●

POWER POLE

●

GUY POLE

●

TELEPHONE POLE

⊕

TELEPHONE MANHOLE

⊕

TELEPHONE PEDESTAL

⊗

GAS LINE MARKER

⊗

GAS VALVE

⊗

MAIL BOX

⊗

DEADMAN FOR GUYWIRE

HAZARDOUS OR FLAMMABLE MATERIAL

CAUTION - CRITICAL UNDERGROUND UTILITY

TOPO LINSTYLES

→→→→→

UNDERDRAIN

—(26)—

SILT FENCE

—SSL— —SS

SLOPE STAKE LINE

~~~~~

TREE LINE

-----

CULVERT - EXISTING

=====

CULVERT (SIZE VARIES)

⊕

CATCH BASIN W/COVER (DIA VARIES)

▨

HMA SURFACE REMOVAL AND/OR PAVEMENT REMOVAL

▨

PROPOSED HMA APPROACH

▨

PROP CL II APPROACH

UNDERGROUND UTILITY LINSTYLES

—ELEC—

ELECTRICAL LINE

— —

GAS LINE

—12"OIL—

OIL LINE

—TELE—

TELEPHONE LINE

—36"WM—

WATER LINE

—CTV—

CABLE TV

—FO—

FIBER OPTICS

ABOVE GROUND UTILITY LINSTYLES

— —

OVERHEAD ELECTRIC

— —

OVERHEAD CABLE

— — T-OH — —

OVERHEAD TELEPHONE

UTILITIES

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO ITS ACCURACY AND THE LOCATION OF EXISTING UTILITIES.

UTILITY NAME

UTILITY TYPE

BLUEBIRD FIBER  
414-340-9110  
CONTACT: MIKE HUANG  
MIKE.HUANG@BLUEBIRDFIBER.COM

FIBER

KALEVA TELEPHONE  
9462 OSMD STREET  
KALEVA, MI 49645  
231-846-4660  
CONTACT: STEVEN CONRAD

FIBER

MISCELLANEOUS ESTIMATES

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT AS DIRECTED BY THE ENGINEER. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN AND PROFILE SHEETS:

MISCELLANEOUS ITEMS

1 LSUM  
100 Cyd

Mobilization, Max. Embankment, LM

1 LSUM  
500 Syd  
100 Cyd

Traffic Control Slope Restoration, Non-Freeway, Type C Excavation, Earth (FOR EXPLORATORY TRENCHING)

GENERAL PLAN NOTES

MISS DIG/UNDERGROUND UTILITY NOTIFICATION  
CONTACT MISS DIG SYSTEM, INC. FOR THE PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH MCL 460.721 ET SEQ, BY PHONE AT 811 OR 800-482-7171 OR VIA THE WEB AT EITHER ELOCATE.MISSDIG.ORG FOR SINGLE ADDRESS OR RTE.MISSDIG.ORG, A MINIMUM OF 3 WORKING DAYS PRIOR TO EXCAVATING, EXCLUDING WEEKENDS AND HOLIDAYS.

SOIL EROSION MEASURES  
APPROPRIATE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EARTH-DISTURBING ACTIVITIES. PLACE TURF ESTABLISHMENT ITEMS AS SOON AS POSSIBLE ON POTENTIAL ERODIBLE SLOPES AS DIRECTED BY THE ENGINEER. CRITICAL DITCH GRADES SHALL BE PROTECTED WITH EITHER SOD OR SEED/MULCH OR MULCH BLANKET AS DIRECTED BY THE ENGINEER.

AGGREGATE BASE  
USE AGGREGATE 22A FOR AGGREGATE BASES UNLESS OTHERWISE SPECIFIED.

SEEDING MIXTURE  
SEEDING USED ON THIS PROJECT SHALL BE MIXTURE THV AT THE RATE OF 220 LB/ACRE.

SAWCUTTING  
SAWCUT AT ALL LIMITS OF CONSTRUCTION INCLUDING DRIVEWAYS. PAYMENT FOR SAWCUTTING REQUIRED THROUGHOUT THE PROJECT SHALL BE INCLUDED IN OTHER ITEMS.

SOIL BORINGS AND PAVEMENT CORES  
THE SOIL BORING LOGS AND PAVEMENT CORES REPRESENT POINT INFORMATION. NO INFERENCE SHOULD BE MADE THAT SUBSURFACE OR PAVEMENT CONDITIONS ARE THE SAME AT OTHER LOCATIONS.

STATIONING  
ALL STATIONING & OFFSETS REFERENCED IN THESE PLANS IS RELATIVE TO THE CONSTRUCTION ☉ UNLESS OTHERWISE NOTED.

SILT FENCE  
AT ENDINGS OF SILT FENCE, CREATE A U-SHAPED TURNAROUND TO DIRECT ANIMALS AWAY FROM THE CONSTRUCTION SIDE OF THE FENCE. THE TURN AROUND SHOULD EXTEND AT A 45 DEGREE ANGLE AWAY FROM THE CONSTRUCTION ZONE FOR 3 FEET.

RECREATIONAL PROPERTIES  
THE CONTRACTOR SHALL NOT PARK ANY VEHICLES OR STORE ANY EQUIPMENT ON PUBLIC RECREATIONAL PROPERTY. ACCESS TO THE RECREATIONAL PROPERTIES MUST ALSO BE MAINTAINED AT ALL TIMES.

MARKETABLE TIMBER  
MARKETABLE TIMBER SHALL BE MADE AVAILABLE TO THE PROPERTY OWNER IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PERMANENT SIGNING NOTES  
1. GENERAL  
ALL SIGNS SHALL BE INSTALLED, REMOVED AND/OR SALVAGED ACCORDING TO THE CURRENT EDITION OF "MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND THE CURRENT EDITION OF MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) "STANDARD SPECIFICATIONS FOR CONSTRUCTION."  
  
ALL SIGNS ON THE PLANS OR IN THE LOG THAT DO NOT HAVE A RECOMMENDATION ARE TO BE RETAINED.  
  
2. EXISTING SIGN RELOCATION  
SALVAGE AND RESET ANY PERMANENT SIGNS REQUIRING RELOCATION DUE TO CONTRACTOR OPERATIONS AT LOCATIONS DESIGNATED BY THE ENGINEER. REPLACE SIGNS AND POSTS DAMAGED DURING THE REMOVAL AND STORAGE OPERATIONS WITH NEW SIGNS AND POSTS. THE COST OF THIS WORK IS THE CONTRACTOR'S RESPONSIBILITY.

NOTES APPLYING TO ROAD STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

R-1-G

DRAINAGE STRUCTURES

R-10-D

COVER E

R-46-D

PAVED AND COBBLE DITCHES, & DRAINAGE TREATMENT DETAILS

R-60-J

GUARDRAIL TYPES A, B, BD, T, TD, MGS-8, & MGS-8D

R-62-H

GUARDRAIL APPROACH TERMINAL TYPE 2M

R-80-F \*

GRANULAR BLANKET, UNDERDRAINS, OUTLET ENDINGS FOR UNDERDRAINS, AND SEWER BULKHEADS

R-82-D

BEDDING AND FILLING AROUND PIPE CULVERTS

R-83-C

UTILITY TRENCHES

R-86-F

PRECAST CONCRETE END SECTION FOR PIPE CULVERT

R-96-E

SOIL EROSION & SEDIMENTATION CONTROL MEASURES

R-100-I \*

SEEDING AND TREE PLANTING

R-105-D

GRADING CROSS-SECTIONS

\* DENOTES SPECIAL DETAIL

NOTES APPLYING TO TRAFFIC AND SAFETY STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

SIGN-100-G

STANDARD SIGN INSTALLATIONS

SIGN-120-E

ROADSIDE SIGN LOCATIONS & SUPPORT SPACING

SIGN-200-E

STEEL POSTS

SIGN-740-B

MISCELLANEOUS SIGN CONNECTION DETAILS

WZD-100-A \*

GROUND DRIVEN SIGN SUPPORTS FOR TEMP SIGNS

WZD-125-E \*

TEMPORARY TRAFFIC CONTROL DEVICES

LOG OF EXISTING ☉ PAVEMENT MARKINGS

THE FOLLOWING IS A LOG OF EXISTING AND PROPOSED ☉ PAVEMENT MARKINGS. LIMITS OF PROPOSED PAVEMENT MARKINGS SHALL BE ADJUSTED TO MEET CURRENT STANDARDS, AS DETERMINED BY THE ENGINEER.

STATION LIMITS

EXISTING PAVEMENT MARKINGS

STA 125+00 TO STA 142+00

DOUBLE YELLOW

3 WORKING DAYS BEFORE YOU DIG  
CALL MISS DIG  
800-482-7171  
OR 811

MANISTEE

County Road Commission

KPM ENGINEERING

CIVIL ENGINEERING CONSULTANTS

DATE

10/1/2026

TOWNSHIP

DICKSON

JOB NO.

NA

SHEET NO.

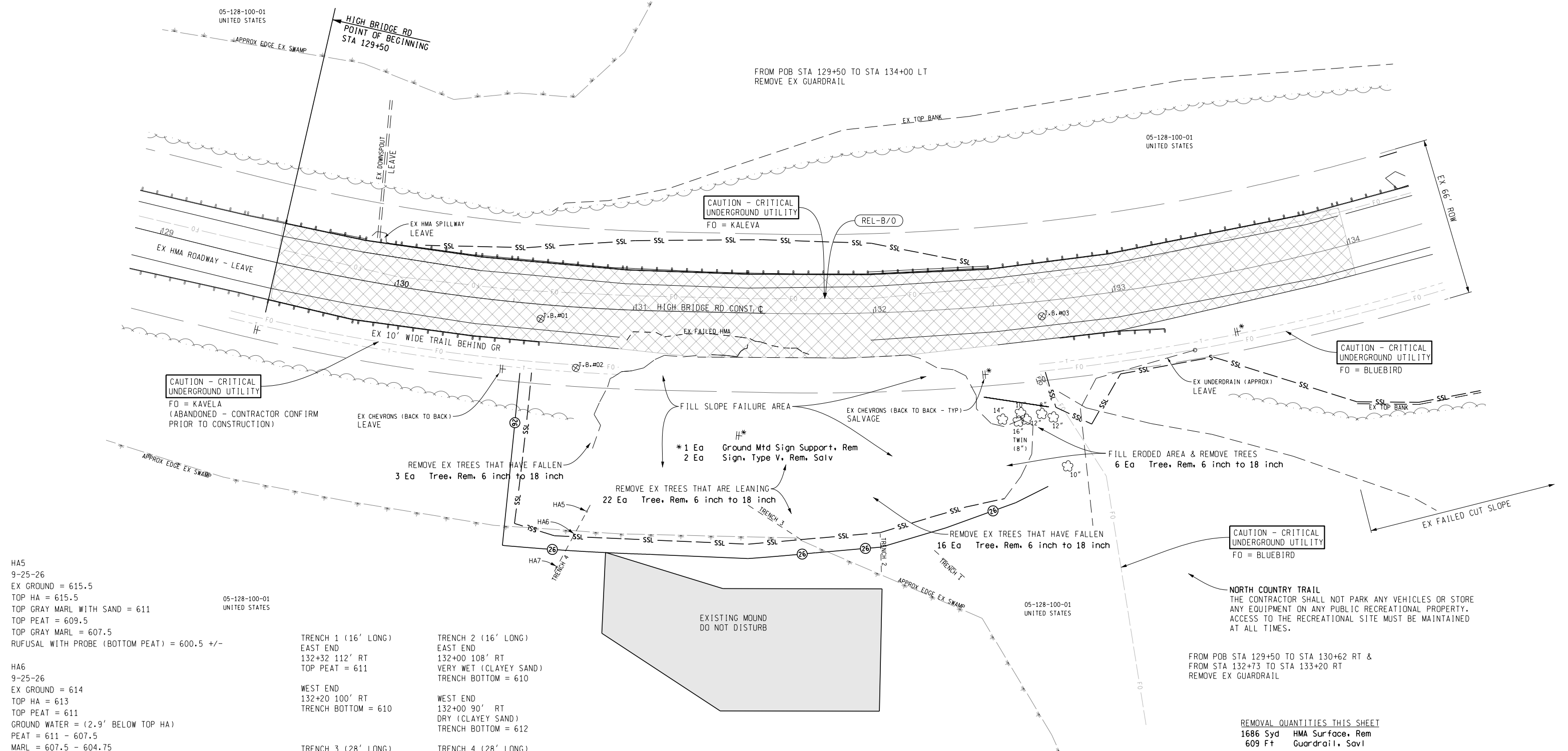
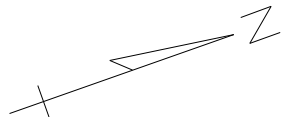
7

10/1/2026

6:35:20 AM

Y:\Projects\2026\2602-MRC-High-Bridge-Slope\CAD\Sheets\07-High-Bridge-Road-Note-Legend.dgn

PRIOR TO OTHER WORK  
TEMPORARILY REMOVE EXISTING ROADWAY  
(SEE PROFILE SHEETS FOR ELEVATIONS)



HA5  
9-25-26  
EX GROUND = 615.5  
TOP HA = 615.5  
TOP GRAY MARL WITH SAND = 611  
TOP PEAT = 609.5  
TOP GRAY MARL = 607.5  
RUFUSAL WITH PROBE (BOTTOM PEAT) = 600.5 +/-

HA6  
9-25-26  
EX GROUND = 614  
TOP HA = 613  
TOP PEAT = 611  
GROUND WATER = (2.9' BELOW TOP HA)  
PEAT = 611 - 607.5  
MARL = 607.5 - 604.75  
REFUSAL WITH PROBE (BOTTOM PEAT) = 604.75 +/-

HA7  
9-25-26  
EX GROUND = 612.5  
TOP HA = 611  
TOP PEAT = 611  
REFUSAL WITH PROBE (BOTTOM PEAT) = 600.5 +/-

05-128-100-01  
UNITED STATES

TRENCH 1 (16' LONG)  
EAST END  
132+32 112' RT  
TOP PEAT = 611

WEST END  
132+20 100' RT  
TRENCH BOTTOM = 610

TRENCH 3 (28' LONG)  
EAST END  
131+74 95' RT  
WET (CLAYEY SAND)  
TRENCH BOTTOM = 610

WEST END  
131+50 80' RT  
DRY (CLAYEY SAND)  
TRENCH BOTTOM = 611

TRENCH 2 (16' LONG)  
EAST END  
132+00 108' RT  
VERY WET (CLAYEY SAND)  
TRENCH BOTTOM = 610

WEST END  
132+00 90' RT  
DRY (CLAYEY SAND)  
TRENCH BOTTOM = 612

TRENCH 4 (28' LONG)  
EAST END  
130+78 110' RT  
TOP PEAT = 611

WEST END  
130+84 82' RT  
END PEAT - BEGIN FIRM CLAY = 611

REMOVAL QUANTITIES THIS SHEET  
1686 Syd HMA Surface, Rem  
609 Ft Guardrail, Savi



3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
800-482-7171  
OR 811

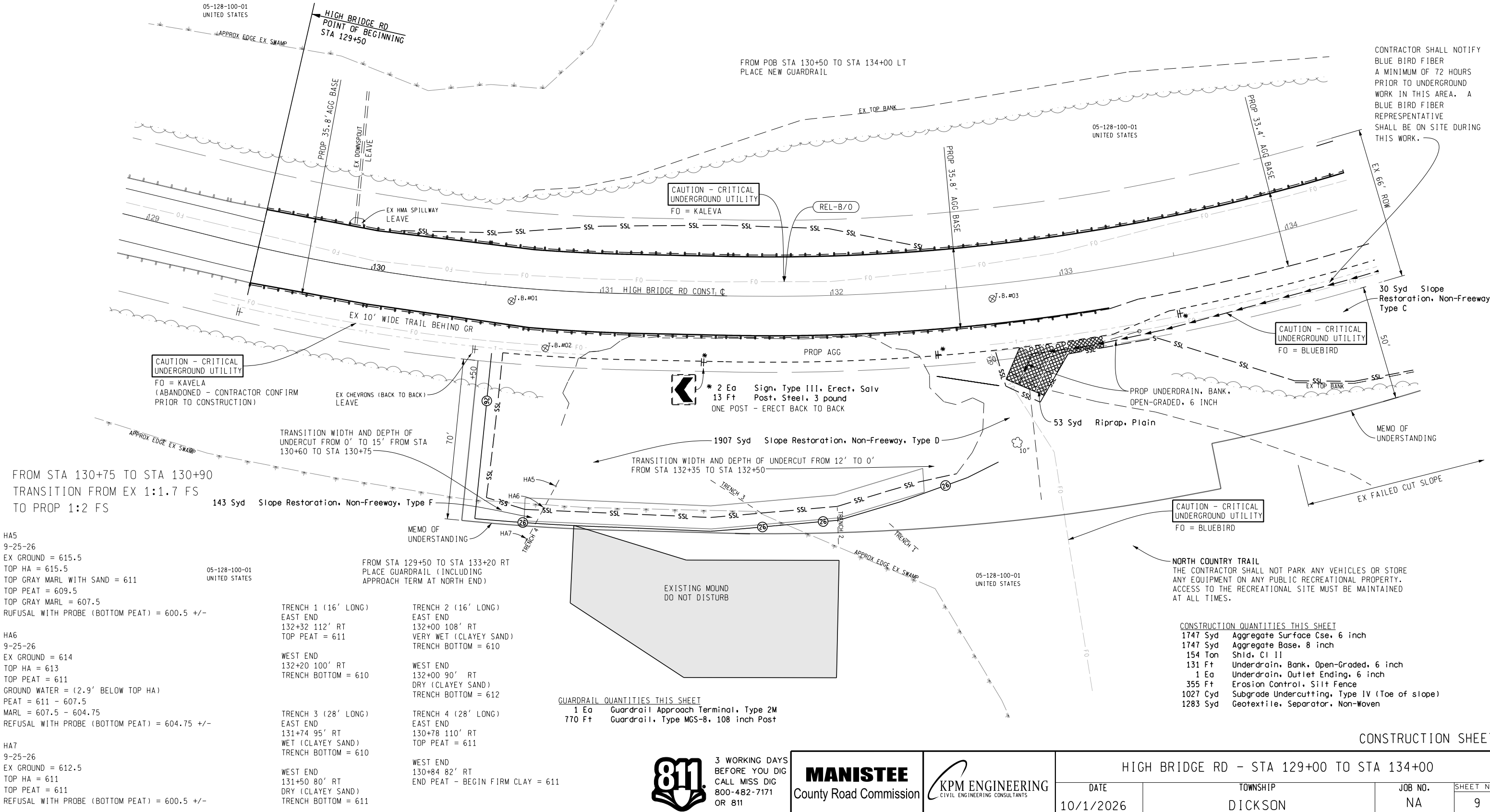
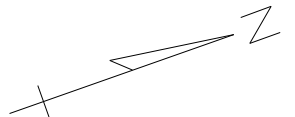
**MANISTEE**  
County Road Commission

**KPM ENGINEERING**  
CIVIL ENGINEERING CONSULTANTS

| HIGH BRIDGE RD - STA 129+00 TO STA 134+00 |          |         |           |
|-------------------------------------------|----------|---------|-----------|
| DATE                                      | TOWNSHIP | JOB NO. | SHEET NO. |
| 10/1/2026                                 | DICKSON  | NA      | 8         |

Y:\Projects\2026\2602-MRC-High Bridge-Slope CAD\Sheets\08-2900-High Bridge Road.dgn 6/3/23 AM 10/7/2026

PRIOR TO OTHER WORK  
TEMPORARILY REMOVE EXISTING ROADWAY  
(SEE PROFILE SHEETS FOR ELEVATIONS)



HA5  
9-25-26  
EX GROUND = 615.5  
TOP HA = 615.5  
TOP GRAY MARL WITH SAND = 611  
TOP PEAT = 609.5  
TOP GRAY MARL = 607.5  
RUFUSAL WITH PROBE (BOTTOM PEAT) = 600.5 +/-

HA6  
9-25-26  
EX GROUND = 614  
TOP HA = 613  
TOP PEAT = 611  
GROUND WATER = (2.9' BELOW TOP HA)  
PEAT = 611 - 607.5  
MARL = 607.5 - 604.75  
REFUSAL WITH PROBE (BOTTOM PEAT) = 604.75 +/-

HA7  
9-25-26  
EX GROUND = 612.5  
TOP HA = 611  
TOP PEAT = 611  
REFUSAL WITH PROBE (BOTTOM PEAT) = 600.5 +/-

05-128-100-01  
UNITED STATES

TRENCH 1 (16' LONG)  
EAST END  
132+32 112' RT  
TOP PEAT = 611  
WEST END  
132+20 100' RT  
TRENCH BOTTOM = 610

TRENCH 3 (28' LONG)  
EAST END  
131+74 95' RT  
WET (CLAYEY SAND)  
TRENCH BOTTOM = 610  
WEST END  
131+50 80' RT  
DRY (CLAYEY SAND)  
TRENCH BOTTOM = 611

TRENCH 2 (16' LONG)  
EAST END  
132+00 108' RT  
VERY WET (CLAYEY SAND)  
TRENCH BOTTOM = 610  
WEST END  
132+20 90' RT  
DRY (CLAYEY SAND)  
TRENCH BOTTOM = 612

TRENCH 4 (28' LONG)  
EAST END  
130+78 110' RT  
TOP PEAT = 611  
WEST END  
130+84 82' RT  
END PEAT - BEGIN FIRM CLAY = 611

GUARDRAIL QUANTITIES THIS SHEET  
1 Ea Guardrail Approach Terminal, Type 2M  
770 Ft Guardrail, Type MGS-8, 108 inch Post



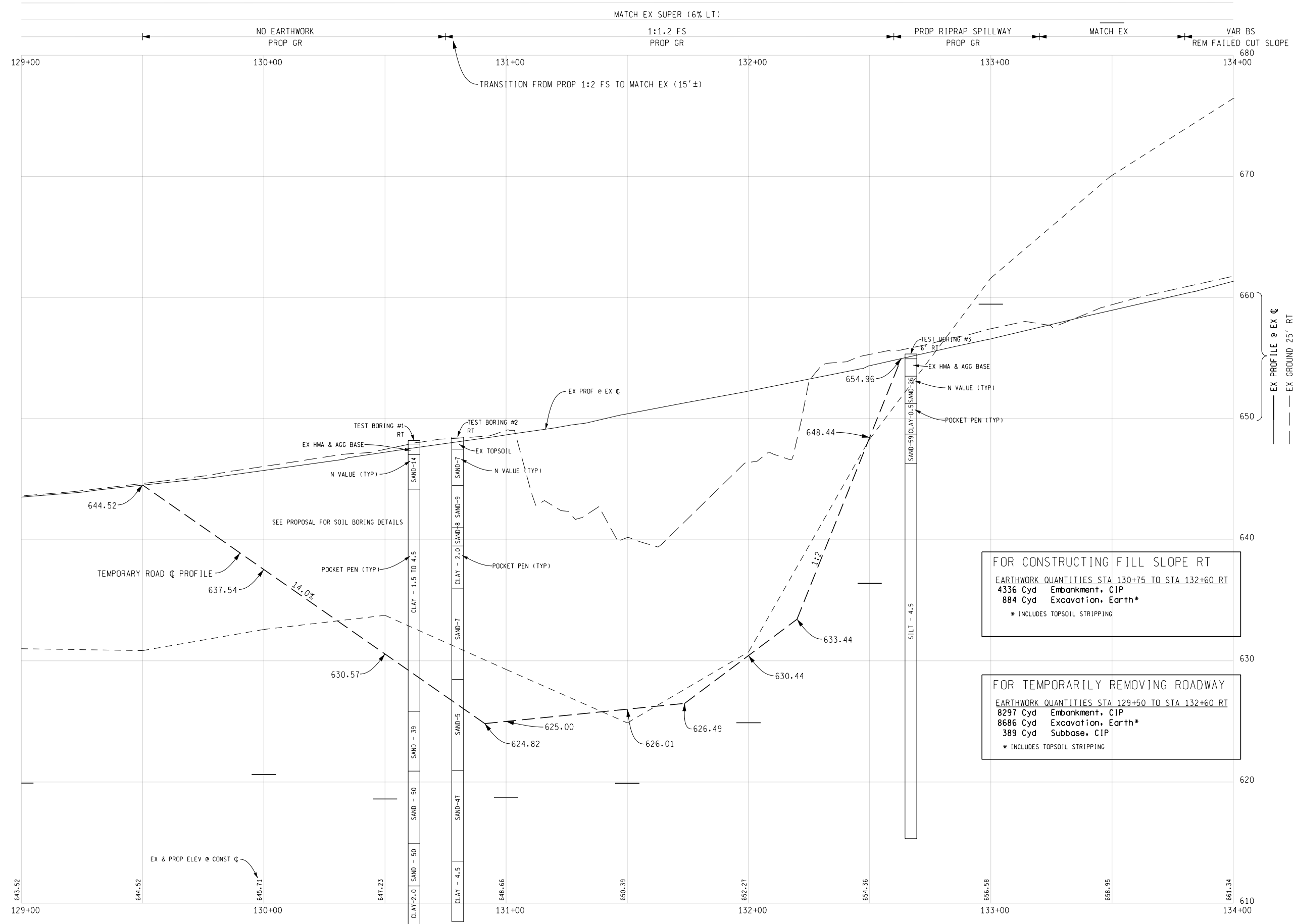
3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
800-482-7171  
OR 811

**MANISTEE**  
County Road Commission

**KPM ENGINEERING**  
CIVIL ENGINEERING CONSULTANTS

| HIGH BRIDGE RD - STA 129+00 TO STA 134+00 |          |         |           |
|-------------------------------------------|----------|---------|-----------|
| DATE                                      | TOWNSHIP | JOB NO. | SHEET NO. |
| 10/1/2026                                 | DICKSON  | NA      | 9         |

Y:\Projects\2026\2602-MRC-High Bridge-Slope CAD\Sheets\08-2900-High Bridge Road.dgn 6/3/24 AM 10/7/2026



FOR CONSTRUCTING FILL SLOPE RT  
EARTHWORK QUANTITIES STA 130+75 TO STA 132+60 RT  
4336 Cyd Embankment, CIP  
884 Cyd Excavation, Earth\*  
\* INCLUDES TOPSOIL STRIPPING

FOR TEMPORARILY REMOVING ROADWAY  
EARTHWORK QUANTITIES STA 129+50 TO STA 132+60 RT  
8297 Cyd Embankment, CIP  
8686 Cyd Excavation, Earth\*  
389 Cyd Subbase, CIP  
\* INCLUDES TOPSOIL STRIPPING

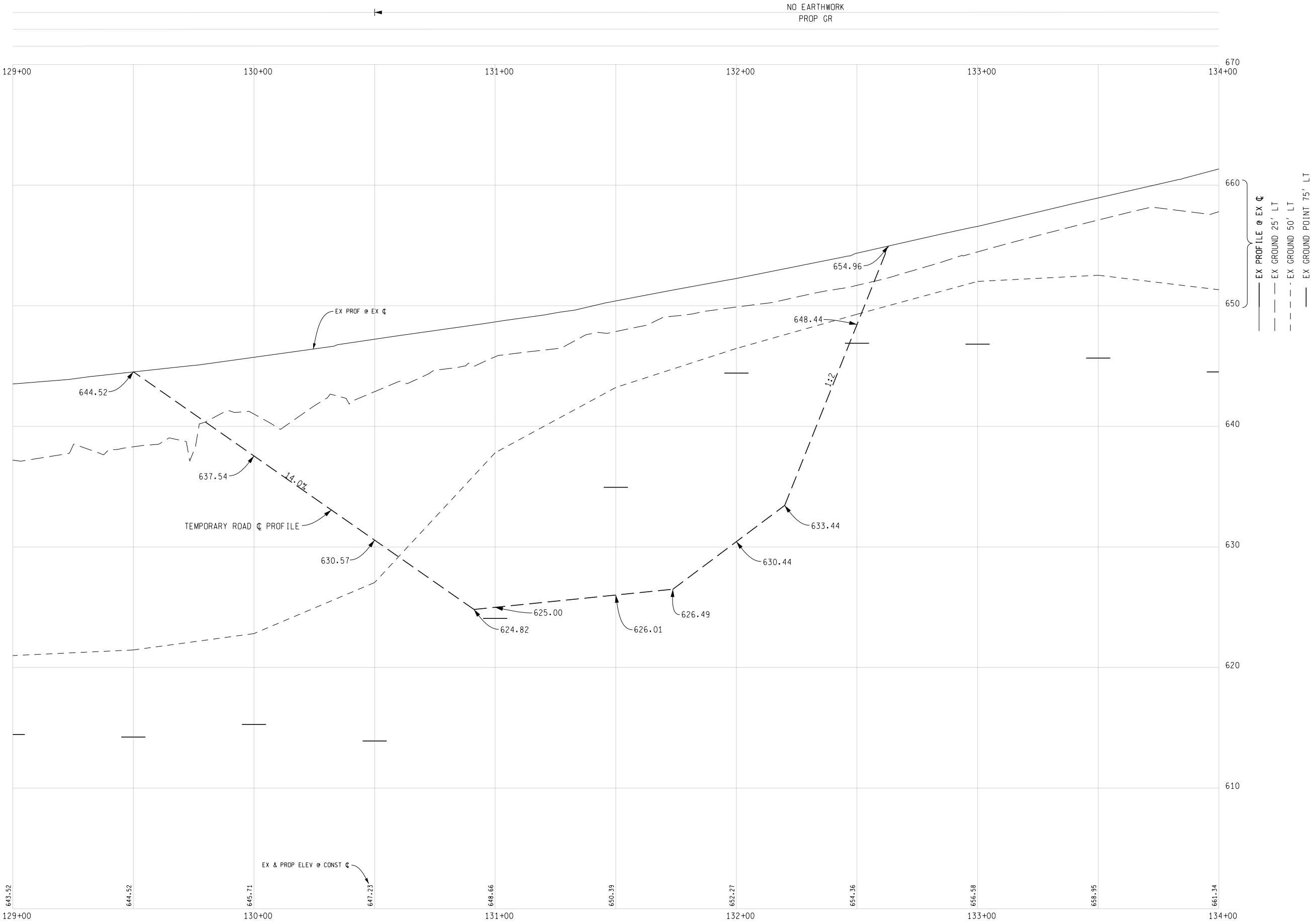


3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
800-482-7171  
OR 811

**MANISTEE**  
County Road Commission

**KPM ENGINEERING**  
CIVIL ENGINEERING CONSULTANTS

| HIGH BRIDGE RD - STA 129+00 TO STA 134+00 - RT |          |         |           |
|------------------------------------------------|----------|---------|-----------|
| DATE                                           | TOWNSHIP | JOB NO. | SHEET NO. |
| 10/1/2026                                      | DICKSON  | NA      | 10        |

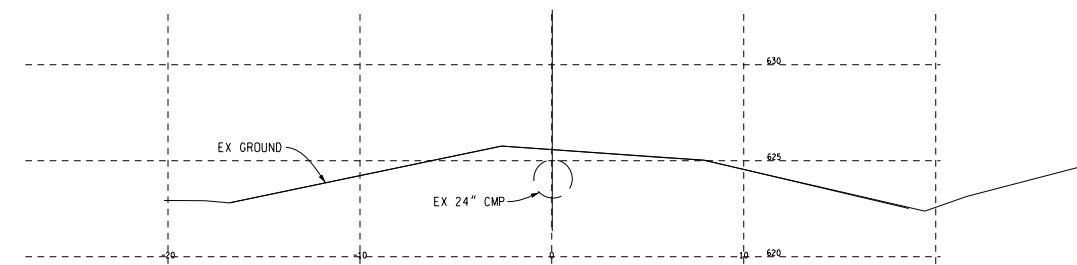
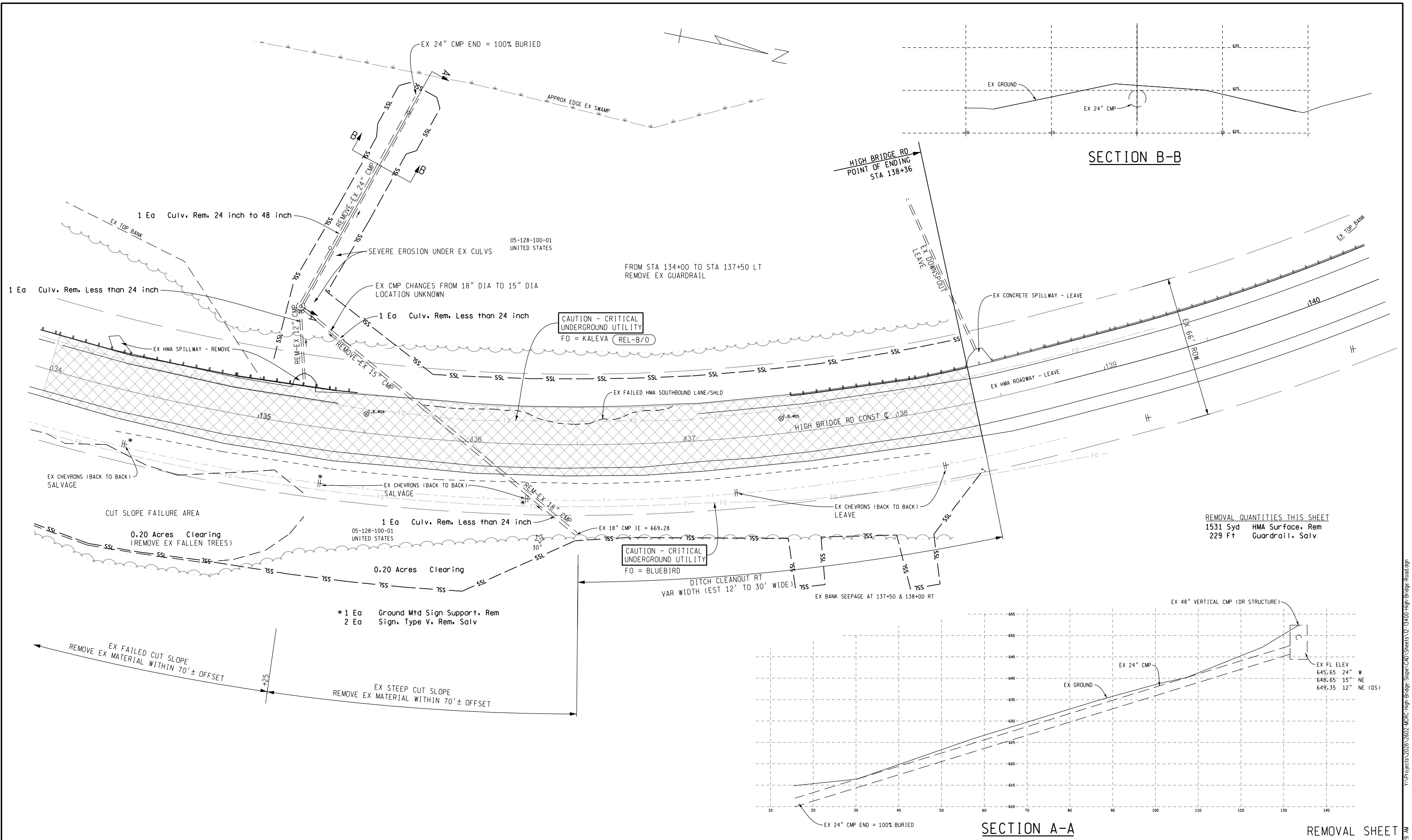


3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
800-482-7171  
OR 811

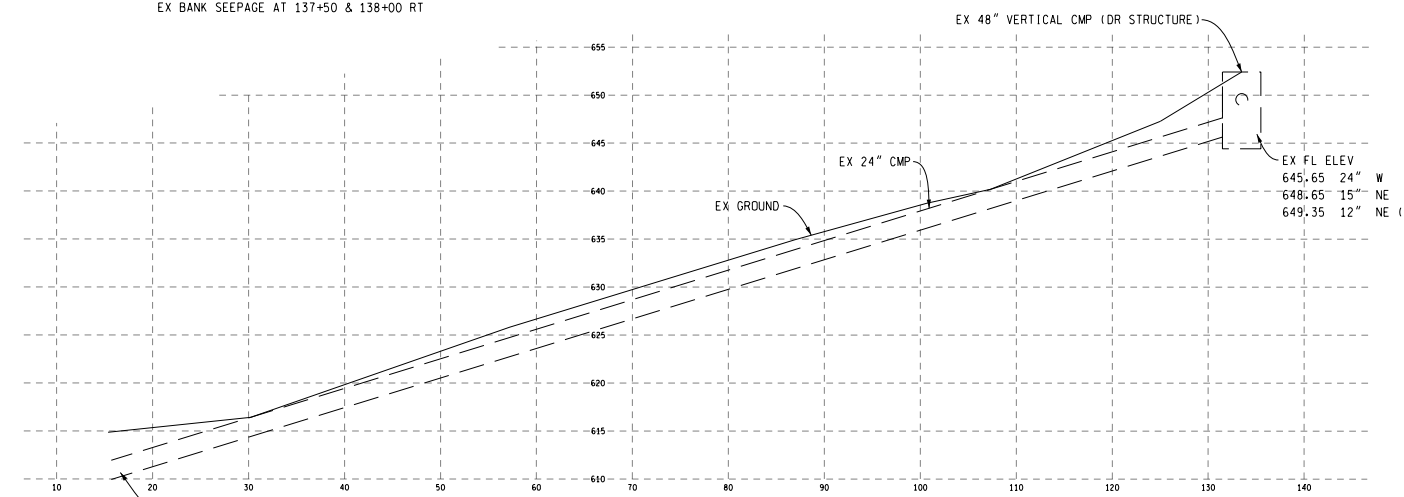
**MANISTEE**  
County Road Commission

**KPM ENGINEERING**  
CIVIL ENGINEERING CONSULTANTS

| HIGH BRIDGE RD - STA 129+00 TO STA 134+00 - LT |          |         |           |
|------------------------------------------------|----------|---------|-----------|
| DATE                                           | TOWNSHIP | JOB NO. | SHEET NO. |
| 10/1/2026                                      | DICKSON  | NA      | 11        |



SECTION B-B



SECTION A-A

REMOVAL QUANTITIES THIS SHEET  
 1531 Syd HMA Surface, Rem  
 229 Ft Guardrail, Salv

REMOVAL SHEET



3 WORKING DAYS  
 BEFORE YOU DIG  
 CALL MISS DIG  
 800-482-7171  
 OR 811

**MANISTEE**  
 County Road Commission

**KPM ENGINEERING**  
 CIVIL ENGINEERING CONSULTANTS

| HIGH BRIDGE RD - STA 134+00 TO POE STA 138+36 |          |         |           |
|-----------------------------------------------|----------|---------|-----------|
| DATE                                          | TOWNSHIP | JOB NO. | SHEET NO. |
| 10/1/2026                                     | DICKSON  | NA      | 12        |

Y:\Projects\2026\2602-MCR-High-Bridge-Slope-CAD\Sheets\12-13400-High-Bridge-Road.dgn 6/3/2026 10/7/2026

PLACE CULVERTS W/END SECTS

& RIPRAP SPILLWAY

- 88 Ft Culv. CI E. 18 inch
- 56 Ft Culv. CI E. 24 inch
- 38 Ft Culv. Downspout, 12 inch
- 1 Ea Culv End Sect. Conc. 18 inch
- 1 Ea Culv End Sect. Conc. 24 inch
- 1 Ea Dr Structure, 48 inch dia
- 2.5 Ft Dr Structure, Add Depth of 48 inch dia, 8 foot to 15 foot
- 1 Ea Dr Structure Cover, Type E
- 100 Cyd Embankment, CIP (FILL ERODED TRENCH)
- 62 Syd Riprap, Plain

MEMO OF UNDERSTANDING

30 Syd Slope Restoration, Non-Freeway, Type D

APPROX EDGE EX SWAMP

05-128-100-01  
UNITED STATES

990 Syd Slope Restoration, Non-Freeway, Type C

CAUTION - CRITICAL  
UNDERGROUND UTILITY  
FO = KALEVA (REL-B/O)

HIGH BRIDGE RD  
POINT OF ENDING  
STA 138+36

PROF 33.4' AGG BASE  
EX DOWNSPOUT  
LEAVE

EX CONCRETE SPILLWAY - LEAVE

EX HMA ROADWAY - LEAVE

SECTION B-B

196 Syd Slope Restoration, Non-Freeway, Type D 6'+ WIDE DITCH BOTTOM

CONSTRUCTION QUANTITIES THIS SHEET

- 892 Syd Aggregate Surface Cse, 6 inch
- 892 Syd Aggregate Base, 8 inch
- 180 Ton Shld, CI II
- 150 Ft Underdrain, Bank, Open-Graded, 6 inch
- 596 Ft Erosion Control, Silt Fence
- 3410 Syd Geotextile, Separator - Modified
- 5 Sta Trenching

GRANULAR BLANKET TYPE 1

- 15 CYD Granular Blanket, Type 1
- 12 Syd Slope Restoration, Non-Freeway, Type C

GRANULAR BLANKET TYPE 1

- 15 CYD Granular Blanket, Type 1
- 12 Syd Slope Restoration, Non-Freeway, Type C

- \* 2 Ea Sign, Type III, Erect, Salv
- 13 Ft Post, Steel, 3 pound
- ONE POST - ERECT BACK TO BACK

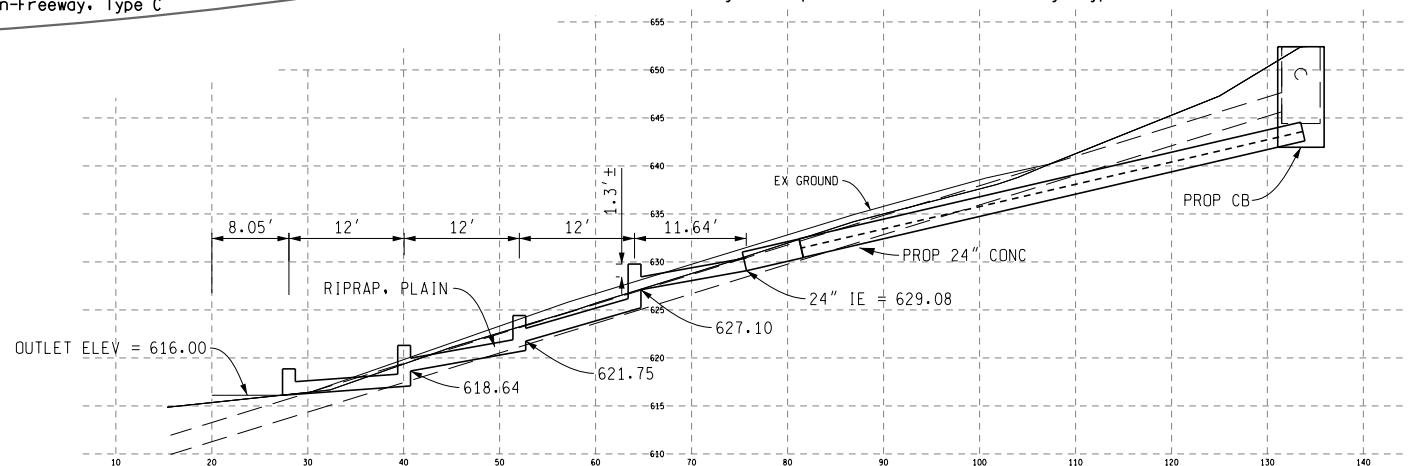
936 Syd Slope Restoration, Non-Freeway, Type C

300 Ft Underdrain, Bank, 6 inch

709 Syd Geocellular Confinement System

MEMO OF UNDERSTANDING

GUARDRAIL QUANTITIES THIS SHEET  
436 Ft Guardrail, Type MGS-8, 108 inch Post



SECTION A-A

CONSTRUCTION SHEET



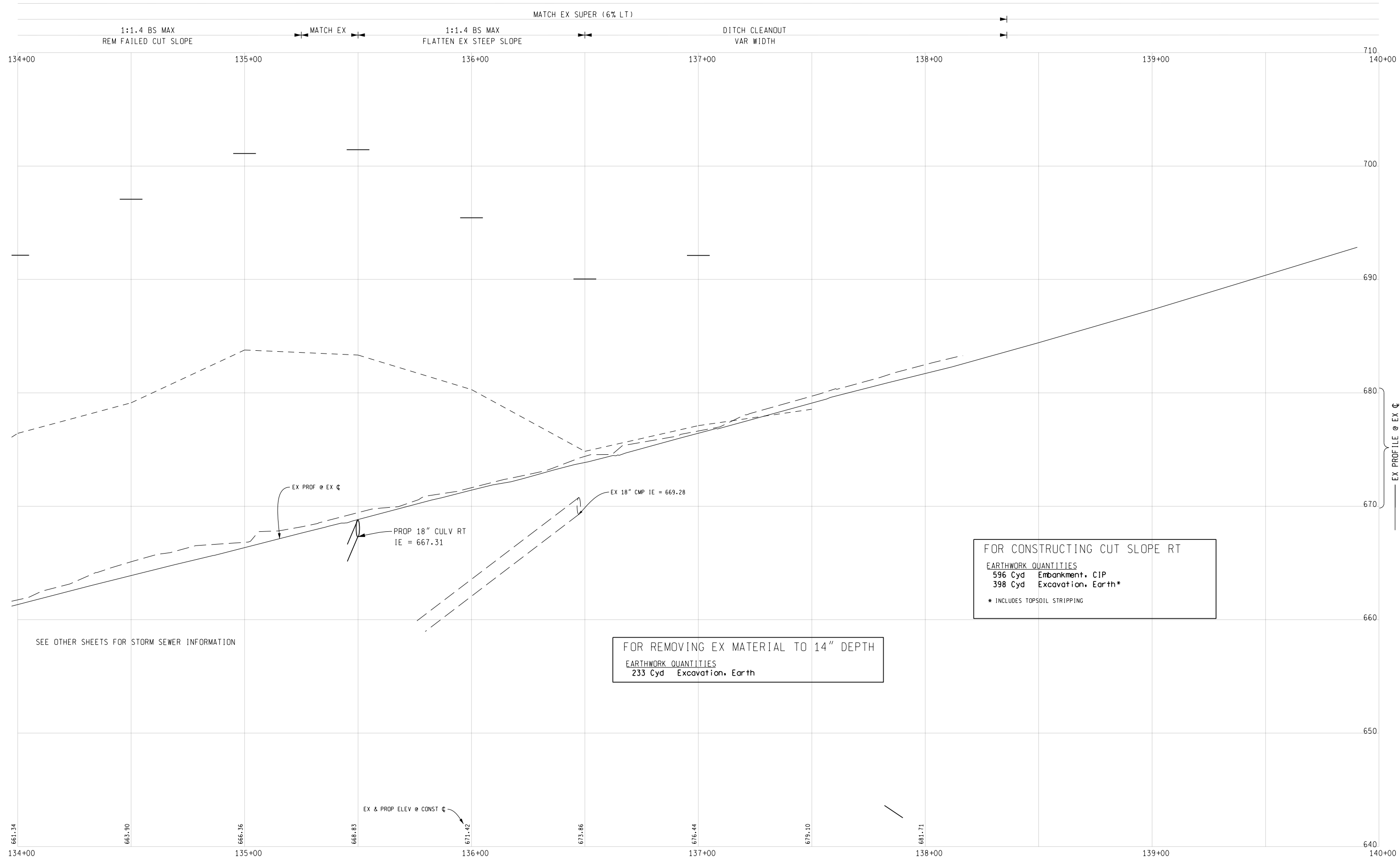
3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
800-482-7171  
OR 811

**MANISTEE**  
County Road Commission

**KPM ENGINEERING**  
CIVIL ENGINEERING CONSULTANTS

HIGH BRIDGE RD - STA 134+00 TO POE STA 138+36

| DATE      | TOWNSHIP | JOB NO. | SHEET NO. |
|-----------|----------|---------|-----------|
| 10/1/2026 | DICKSON  | NA      | 13        |

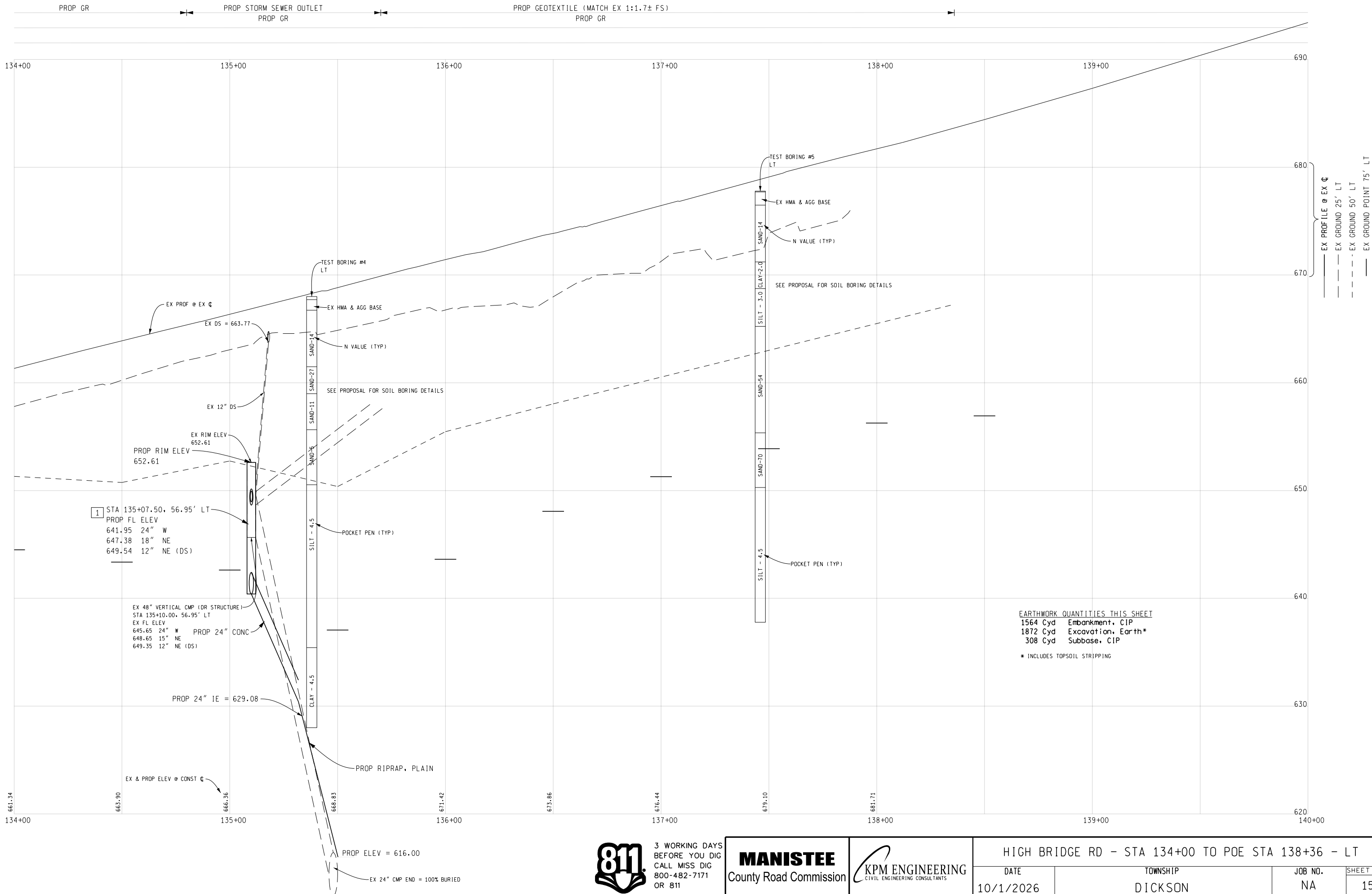


3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
800-482-7171  
OR 811

**MANISTEE**  
County Road Commission

**KPM ENGINEERING**  
CIVIL ENGINEERING CONSULTANTS

| HIGH BRIDGE RD - STA 134+00 TO POE STA 138+36 - RT |          |         |           |
|----------------------------------------------------|----------|---------|-----------|
| DATE                                               | TOWNSHIP | JOB NO. | SHEET NO. |
| 10/1/2026                                          | DICKSON  | NA      | 14        |



3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
800-482-7171  
OR 811

**MANISTEE**  
County Road Commission

**KPM ENGINEERING**  
CIVIL ENGINEERING CONSULTANTS

|                                                    |          |         |           |
|----------------------------------------------------|----------|---------|-----------|
| HIGH BRIDGE RD - STA 134+00 TO POE STA 138+36 - LT |          |         |           |
| DATE                                               | TOWNSHIP | JOB NO. | SHEET NO. |
| 10/1/2026                                          | DICKSON  | NA      | 15        |

MANISTEE COUNTY ROAD COMMISSION

**NOTICE TO BIDDERS  
UTILITY COORDINATION**

KPM:PJM

Page 1 of 1

10-01-26  
High Bridge Road 2026

The Contractor shall cooperate and coordinate construction activities with the owners of utilities as stated in subsection 104.08 of the Standard Specifications for Construction. In addition, for the protection of underground utilities, the Contractor shall follow the requirements in subsection 107.12 of the Standard Specifications for Construction. Contractor delay claims, resulting from a utility, will be determined based upon subsection 108.09 and 109.05 of the Standard Specifications for Construction.

For protection of underground utilities and in conformance with Public Acts 174 of 2013, the Contractor shall dial 1-800-482-7171 or 811 a minimum of three full working days, excluding Saturdays, Sundays, and holidays prior to beginning each excavation in areas where public utilities have not been previously located. Members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be a part of the MISS DIG alert system.

**Public Utilities:**

The following Public Utilities have facilities located within the Right-of-Way:

**Fiber**

Kaleva Telephone Company  
9281 Osmo Street  
Kaleva, MI 49645  
231-846-4660  
Contact: Steven Conrad

**Fiber**

Bluebird Fiber  
Contact: Mike Huang  
414-340-9110  
Mike.huang@bluebirdfiber.com

The owners of existing service facilities that are within grading or structure limits will move them to locations designated by the Engineer or will remove them entirely from the highway Right-of-Way, when feasible. Owners of Public Utilities will not be required by the County to move additional poles or structures in order to facilitate the operation of construction equipment unless it is determined by the Engineer that such poles or structures constitute a hazard to the public or are extraordinarily dangerous to the Contractor's operations.

# MANISTEE COUNTY ROAD COMMISSION

## SPECIAL PROVISION FOR GEOCELLULAR CONFINEMENT SYSTEM

KPM/PJM

1 of 2

10-01-2026

**a. Description.** This work consists of providing all labor, materials and equipment to furnish and install a geocellular confinement system (geocell) to the limits shown on the plans or as directed by the Engineer. The geocellular confinement system includes, preparing, and compacting grades; furnishing, placing, and anchoring the geocell mattress. Construct in accordance with the manufacturer's published guidelines, the Michigan Department of Transportation (MDOT) 2020 Standard Specifications for Construction and as detailed herein.

**b. Materials.**

**Geocell**

The geocell must consist of a three-dimensional high-density polyethylene expandable cell mattress which is perforated with a 4-inch cell depth, 50 mil wall thickness, and a minimum 0.40 square foot cell area.

The following products, or an approved equal, are acceptable:

| <b>Product</b> | <b>Manufacturer</b> |
|----------------|---------------------|
| EnviroGrid     | GeoProducts         |
| Geoweb         | Presto Geosystems   |
| TerraCell      | Webtec, Inc.        |

**Anchors**

Anchor with #4 steel reinforcement bars or an approved equal. Bars must be a minimum of 24 inches in length. The head or top of the bar must be hooked or capable of being securely capped with prefabricated tips which connect at least two contiguous cell walls simultaneously together.

**Fill Material**

The individual cells of the expanded and anchored geocell mattress must be filled with Topsoil in accordance with the MDOT 2020 Standard Specifications for Construction.

**c. Construction.**

Submit shop drawings of the proposed geocell system for approval a minimum of 14 calendar days prior to the start of the installation. Approval must be received from the Engineer before installation may begin.

Install geocell in accordance with the manufacturer's recommendations, the *MDOT 2020 Standard Specifications for Construction* and this special provision. Prepare the grade by grading and compacting existing ground to achieve uniform grades and grade transitions. At the top of the slope, trench in the geocell a minimum of 12 inches or otherwise anchor as recommended by the manufacturer.

Vibrate and/or drive the reinforcement bars to expand and anchor the geocell. Advance the hook or prefabricated cap until it fits snugly across two adjacent cell walls without causing deformation of the geocell mattress material. The anchored geocell must conform closely to the grade without gaps beneath the cell walls or other signs of obvious misalignment. Anchor placement or spacing adjustments may be required to ensure uniform placement of the geocell. The geocell mattress installation must be approved by the Engineer prior to placing fill material.

Completely fill the cells with Topsoil. Controlled overfilling of cells is required to allow for consolidation and compaction of the fill. Use manual vibration to remove voids in the fill. Compact as recommended by the manufacturer. Mechanical vibration is prohibited, and equipment is not permitted to run on the expanded geocell mattress. Smooth excess material with a screed. Place the fill flush with the upper surface of the cells. Replace any geocell sections damaged during installation at no expense to the Department. Perform final slope restoration as soon as possible but no longer than 5 days after installation and backfill of the geocell.

**d. Measurement and Payment.** The completed work will be measured and paid for using the following pay item.

**Contract Item (Pay Item)**

**Pay Unit**

Geocellular Confinement System ..... Square Yard

**Geocellular Confinement System** includes equipment, labor and materials necessary to construct the work as described.

Fill material (Topsoil) quantity and payment are included in the Slope Restoration items.

MANISTEE COUNTY ROAD COMMISSION

SPECIAL PROVISION  
FOR  
GEOTEXTILE, SEPARATOR - MODIFIED

KPM/PJM

1 of 1

10-01-2026

**a. Description.** This work consists of furnishing and installing a Geotextile fabric in accordance with Section 308 of the 2012 Standard Specifications for Construction and as modified herein.

**b. Materials.** Furnish woven polyester or polypropylene geotextile fabric with 950 lb/ft Allowable Tensile Strength (ASTM D 4595) at 5 percent or less strain. Fabric shall also have a minimum Ultimate Tensile Strength (ASTM D 4595) of 4,800 lb/ft in the machine direction, and permittivity not less than 0.1 sec (ASTM D 4491). Test Data certification, documenting the specified properties as minimum average roll values (MARV) shall be obtained from the supplier.

**c. Construction.** Place the first layer of geotextile fabric on the prepared grade so that the strengths specified previously act perpendicular to the roadway and as shown in the typical cross sections. Completely install each layer of geotextile fabric before beginning installation of the succeeding layer. No seams or overlaps will be permitted parallel to the roadway, 24 inch minimum overlaps will be allowed perpendicular to the roadway.

Care shall be taken to minimize wrinkles in the fabric. Do not end-dump directly onto the geotextile. Compact each backfill layer to a minimum of 95 percent of the maximum density as determined by AASHTO T99. Do not use vibratory rollers or sheep'sfoot and other rollers with protusions.

**d. Measurement and Payment.** The completed work will be measured and paid for using the following pay item.

| Contract Item (Pay Item)               | Pay Unit    |
|----------------------------------------|-------------|
| Geotextile, Separator - Modified ..... | Square Yard |

Manistee County Road Commission  
Special Provision  
For  
**Maintaining Traffic**

KPM:PJM

Page 1 of 1

10/01/26

**General**

Traffic will be maintained in accordance with the standard specifications including any supplemental specifications and as herein specified. All traffic control devices and their usage shall comply with the 2011 edition of the Michigan Manual of Uniform Traffic Control Devices (MMUTCD), as amended.

The Manistee County Road Commission (MCRC) may perform maintenance work within or adjacent to the Construction Influence Area (CIA). The MCRC will coordinate their operations to minimize the interference to the Contractor. No additional payment will be made to the Contractor for the joint use of the traffic control items.

**Construction Influence Area (CIA)**

The CIA limits shall include the area within the right-of-way for High Bridge Road per plans in Dickson Township, plus a distance in advance as required for the advance construction signing and traffic control devices. The CIA shall also extend down all intersecting roadways a distance of 550 feet.

**Traffic and Work Restrictions**

High Bridge Road is closed and will continue to be detoured until the completion of this project (detour provided by MCRC).

**Measurement and Payment**

The completed work for Maintaining Traffic, including furnishing and placement of all materials, labor, and equipment, will be measured and paid for at the contract unit price for the following contract items (pay items).

**Contract Item**

**Pay Unit**

Traffic Control.....Lump Sum

**Estimates of Maintaining Traffic Quantities**

|                                        |            |
|----------------------------------------|------------|
| Plastic Drum, Fluorescent, Furn, ..... | 30 Each    |
| Plastic Drum, Fluorescent, Oper, ..... | 30 Each    |
| Minor Traf Devices .....               | 1 Lump Sum |

Estimated quantities for the items above are provided for information only. They shall be included in the lump sum pay items.

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
SLOPE RESTORATION, NON-FREEWAY

RSD:NJM

1 of 4

APPR:DMG:KJK:08-19-25

**a. Description.** This work consists of preparing all lawns and slopes on non-freeway projects designated for slope restoration on the plans or as directed by the Engineer and applying topsoil, fertilizer, seed, mulch with mulch anchor, mulch blanket, high velocity mulch blanket, permanent turf reinforcement mat, bonded fiber matrix, or modified mulch blanket to those areas. Ensure turf establishment is in accordance with section 816 and 917 of the Standard Specifications for Construction and Standard Plan R-100 Series, except as modified herein or otherwise directed by the Engineer.

**b. Materials.** The materials, application rates, and construction methods specified in sections 816 and 917 of the Standard Specifications for Construction apply unless modified by this special provision or otherwise directed by the Engineer. Furnish the following materials on this project:

1. Seeding mixture as called for on the plans.
2. Chemical fertilizer nutrient, Class A.
3. Topsoil. The following percentages of furnished and salvaged topsoil are estimated for this project and provided for informational purposes only.

Topsoil Furnished: 100 percent

Topsoil Salvaged: 0 percent

4. Mulching materials.
5. Permanent Turf Reinforcement Mat (TRM) for Slope Restoration, Non-Freeway, Type D, must be 100 percent synthetic and consist of 100 percent ultraviolet (UV) stabilized polyolefin fibers sewn between two layers of UV stabilized polypropylene netting with polyolefin thread. The TRM must meet the following "minimum average roll value" requirements:

| <u>Property</u>         | <u>Test Method</u>       | <u>Requirement</u> |
|-------------------------|--------------------------|--------------------|
| Mass/Unit Area          | <i>ASTM D6566</i>        | 10 oz/syd          |
| UV Stability @ 1000 hrs | <i>ASTM D4355/D4355M</i> | 80 percent         |
| Tensile Strength (MD)   | <i>ASTM D6818</i>        | 165 lbs/ft         |

Acceptance. Supply a general certification for the permanent TRM from one of the following manufacturers or approved equal:

|              |                                       |                |
|--------------|---------------------------------------|----------------|
| Recyclex TRM | American Excelsior Co., Arlington, TX | (800) 777-7645 |
| P300 TRM     | North American Green, Poseyville, IN  | (800) 772-2040 |

|                  |                                      |                |
|------------------|--------------------------------------|----------------|
| Landlok 450 TRM  | Propex, Inc., Chattanooga, TN        | (800) 621-1273 |
| Excel PP5-10 TRM | Western Excelsior, Evansville, IN    | (866) 540-9810 |
| Vmax P550 TRM    | North American Green, Poseyville, IN | (800) 772-2040 |

6. Modified Mulch Blanket. Where modified mulch blanket is required, furnish an excelsior mulch blanket free of chemical additives. Ensure the netting thread is 100 percent biodegradable and manufactured with non-plastic materials such as jute, sisal, or coir fiber. Degradable, photodegradable, UV-degradable, oxo-degradable, or oxo-biodegradable plastic netting including polypropylene, nylon, polyethylene, and polyester is not an acceptable alternative. All netting materials must have a loose weave design with movable junctions between the machine and cross-machine direction twines that move independently and reduce the potential for wildlife entanglement.

For Slope Restoration, Non-Freeway, Type F, furnish a single net modified mulch blanket from the list below or an approved equal.

|                                   |                            |                |
|-----------------------------------|----------------------------|----------------|
| Premier Straw Single Net FibreNet | American Excelsior Co.     | (800) 777-7645 |
| Curlex NetFree 100% Biodegradable | American Excelsior Co.     | (800) 777-7645 |
| ECS-1B Biodegradable Single Straw | East Coast Erosion Control | (800) 582-4005 |
| S1000BD Single Net                | Enviroscape ECM, Ltd.      | (888) 550-1999 |
| Excel SR-1 All Natural            | Western Excelsior Corp.    | (866) 540-9810 |
| S75BN                             | Western Excelsior Corp.    | (866) 540-9810 |

**c. Construction.** Ensure construction methods are in accordance with subsection 816.03 of the Standard Specifications for Construction. Begin this work as soon as possible after final grading of the areas shown on the plans for slope restoration but no later than the time limitations in accordance with subsection 208.03.B of the Standard Specifications for Construction. It may be necessary, as directed by the Engineer, to place materials by hand.

Shape, compact, and ensure all areas to be seeded are weed-free prior to placing topsoil. Place topsoil to the minimum depth of 4 inches and in accordance with the plans and standard specifications to meet proposed finished grade. If the area being restored requires more than the minimum depth of topsoil to meet finished grade, fill this additional depth using topsoil or, at the Contractor's option, embankment. Furnishing and placing this additional material is included in this item of work for slope restoration.

Ensure topsoil is weed and weed seed free and friable prior to placing seed. Remove any stones greater than 1/2-inch in diameter or other debris. Apply seed mixture and fertilizer to prepared soil surface at the specified rates. Incorporate seed into top 1/2-inch of topsoil.

Spread mulch at a rate of two tons per acre. If the Engineer allows dormant seeding spread mulch at a rate of 3 tons per acre. Place mulch anchoring over the mulch at a rate in accordance with subsection 816.03.F of the Standard Specifications for Construction. Place mulch blanket and high-velocity mulch blanket in accordance with subsection 816.03.G of the Standard Specifications for Construction and Standard Plan R-100 Series.

Install areas constructed with the TRM on prepared (seeded) grades as shown on the plans in accordance with the manufacturer's published installation guidelines. Anchor the top edge of the TRM in a minimum six-inch deep trench. Operation of equipment on the slope is prohibited after placement of the TRM. No credit for splices, overlaps, tucks, or wasted material will be made.

Mix the BFM and organic binders thoroughly at a rate of 40 pounds for each 100 gallons of water or as otherwise recommended by the manufacturer. Hydraulically apply the BFM slurry in successive layers, from two or more directions, to fully cover 100 percent of the soil surface. Ensure the minimum application rate is at least 3000 pounds of BFM for each acre or otherwise apply in accordance with the manufacturer's recommendations as appropriate depending on site conditions.

Install modified mulch blanket in accordance with the manufacturer's published guidelines and as directed by the Engineer.

If an area washes out after this work has been properly completed and approved by the Engineer, make the required corrections to prevent future washouts and replace the topsoil, fertilizer, seed, and mulch treatment. This replacement will be paid for as additional work using the applicable pay items.

If an area washes out for reasons attributable to the Contractor's activity or failure to take proper precautions, replacement will be at no cost to the contract.

The Engineer will inspect the seeded turf to ensure it is well-established, in a vigorous growing condition, contains the species called for in the seeding mixture and acceptance is in accordance with subsection 816.03.K of the Standard Specifications for Construction.

If the seeded turf is not well-established at the end of the first growing season, the Contractor must reseed as detailed herein until the turf is well established and approved by the Engineer at no cost to the contract.

Provide weed control, if weeds are determined by the Engineer to cover more than 10 percent of the total area of slope restoration, in accordance with subsection 816.03.I of the Standard Specifications for Construction. Weed control will be at no additional cost to the contract.

**d. Measurement and Payment.** The completed work, as described, will be measured and paid for at the contract unit price using the following pay items:

| Pay Item                                  | Pay Unit    |
|-------------------------------------------|-------------|
| Slope Restoration, Non-Freeway, Type ____ | Square Yard |

1. Place **Slope Restoration, Non-Freeway, Type C** in areas that have a 1 on 2 slope, any ditch with a grade of 1.5 percent to 3 percent as shown on the plans, or as directed by the Engineer. **Slope Restoration, Non-Freeway, Type C** will be measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type C** includes installing Topsoil Surface; Fertilizer, Chemical Nutrient; seeding mixture; and Mulch Blanket, High Velocity.

2. Place **Slope Restoration, Non-Freeway, Type D** in areas that have a slope steeper than 1 on 2, any ditch with a grade steeper than 3 percent as shown on the plans, or as directed by the Engineer. **Slope Restoration, Non-Freeway, Type D** will be measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type D** includes installing Topsoil Surface; Fertilizer, Chemical Nutrient; seeding mixture; and Turf Reinforcement Mat.

3. Place **Slope Restoration, Non-Freeway, Type F** parallel (8 feet minimum) to the edge of the roadway, in areas that have a 1 on 3 slope or less, and in any ditch with a grade less than 1.5 percent as shown on the plans, or as directed by the Engineer. **Slope Restoration, Non-Freeway, Type F** will be measured by area in square yards in place. **Slope Restoration, Non-Freeway, Type F** includes installing Topsoil Surface; Fertilizer, Chemical Nutrient; seeding mixture; and single net modified Mulch Blanket.