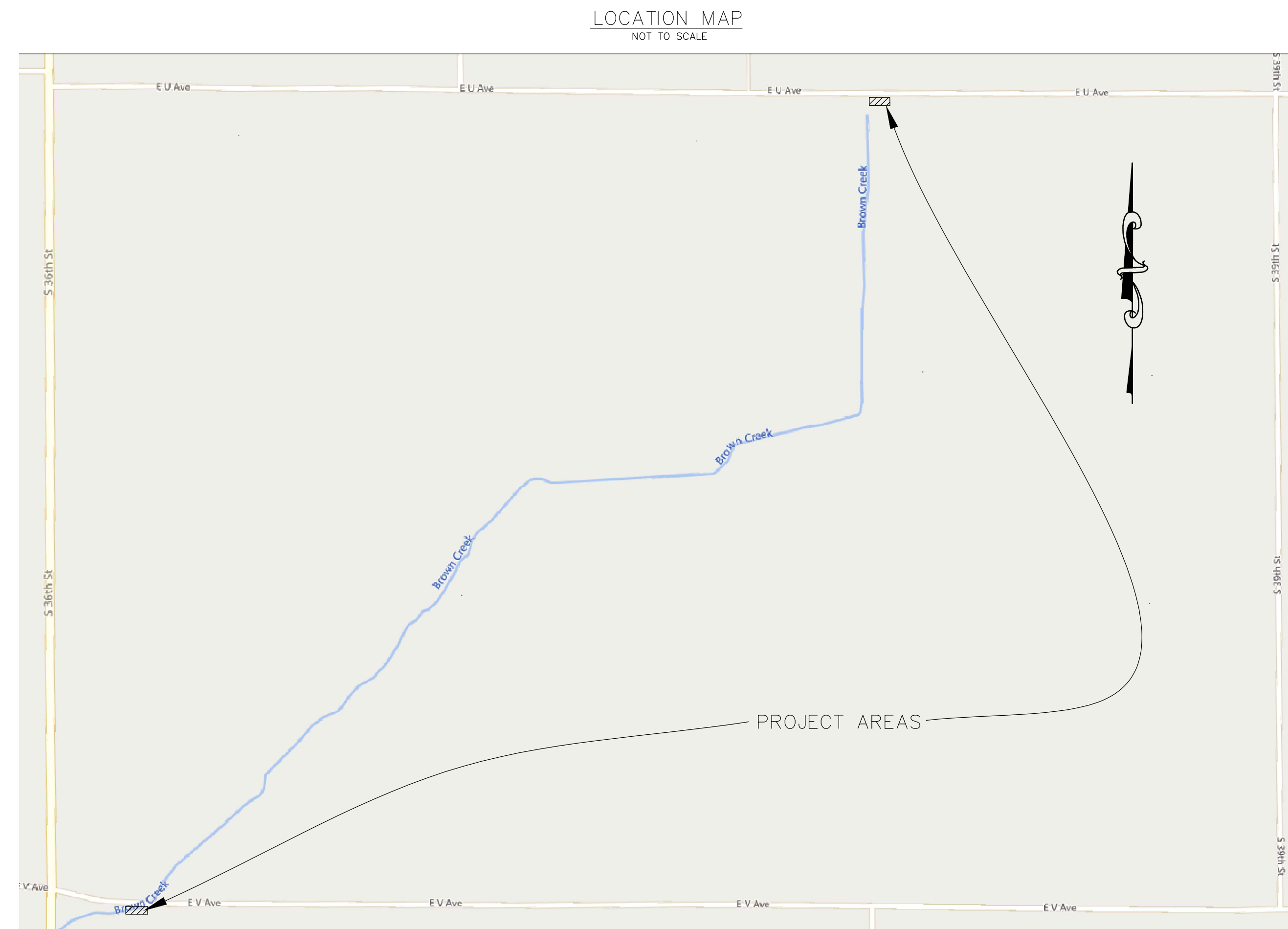


PARKER DRAIN IMPROVEMENTS

KALAMAZOO COUNTY, NW 1/4 OF THE NW 1/4 OF SECTION 8, AND NW 1/4 OF THE NW 1/4 OF SECTION 18, OF WAKESHMA TWP (T4S, R9W)



CLIENT:
PARKER DRAIN DRAINAGE DISTRICT
JASON WIERSMA
KALAMAZOO COUNTY DRAIN COMMISSIONER
201 W KALAMAZOO AVE.
KALAMAZOO, MI 49007

The location of existing utilities, both underground and overhead are approximate only and have not independently been verified by the owner or its representative. The contractor shall be responsible for determining the exact location of all existing utilities whether shown on these plans or not, before commencing work, and shall be fully responsible for any and all damages which might be caused by the contractor's failure to exactly locate and preserve any and all utilities.

Call Miss Dig

ALL WORK TO BE DONE IN ACCORDANCE WITH THE KALAMAZOO COUNTY DRAIN COMMISSIONER AND THE ROAD COMMISSION OF KALAMAZOO COUNTY SPECIFICATIONS.

CEI CIVIL ENGINEERS INC.
 "Professional Engineering Since 1993"
JOB NO. 240203

14250 Beadle Lake Road
 Suite 150
 Battle Creek, MI 49014
 269 962 5127
 Fax: 962 8310
 www.cei-bc.com

MISS DIG 811 3 WORKING DAYS
BEFORE YOU DIG
 CALL MISS DIG®
 1-800-482-7171
 PHONE 811
 COLOR CODES FOR UTILITY LOCATING:

Yellow	OIL & GAS	Blue	WATER
Orange	PHONE & CATV	Green	STORM DRAIN
Red	ELECTRIC	Brown	SEWER
White	PROPOSED EXCAVATION	Pink	SURVEYING

IF YOU ARE GOING TO WORK NEAR OVERHEAD WIRES ... CALL MISS DIG

- INDEX:**
1. COVER
 2. PLAN & PROFILE E U AVE. ACCESS DRIVE
 3. PLAN & PROFILE E V AVE. ACCESS DRIVE
 4. DETAIL SHEET
 5. SESC PLAN

DATE: 4/24/26
 REV:
 SHEET 1 OF 5

Apr 23, 2026 10:51am C:\Users\jw\AppData\Local\Temp\AcPublish_10464\11-19-2025\TJA_plan-U_Ave.dwg



Civil Engineers Inc.
14250 Beadle Lk Rd
Suite 150
Battle Creek, MI
49014-7202
www.cei-bc.com
269-962-5127

JOB NO: 240203
DATE: 4/24/26

DRAWN BY: CDB
REVIEWED BY: TJA

OWNER
PARKER DRAIN
DRAINAGE DISTRICT
KALAMAZOO COUNTY
DRAIN COMMISSIONER
JASON WIERSMA



PARKER DRAIN IMPROVEMENTS
PLAN & PROFILE E U AVE. ACCESS DRIVE

Know What's
Below, Call
MISS DIG.

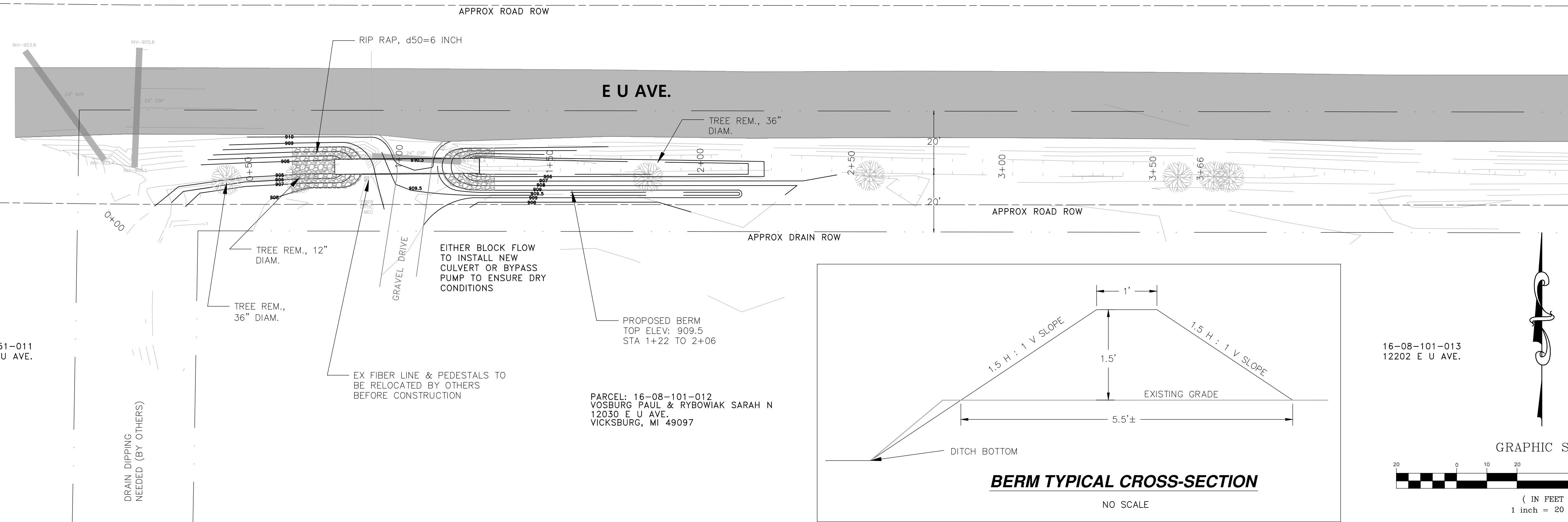


REVISIONS

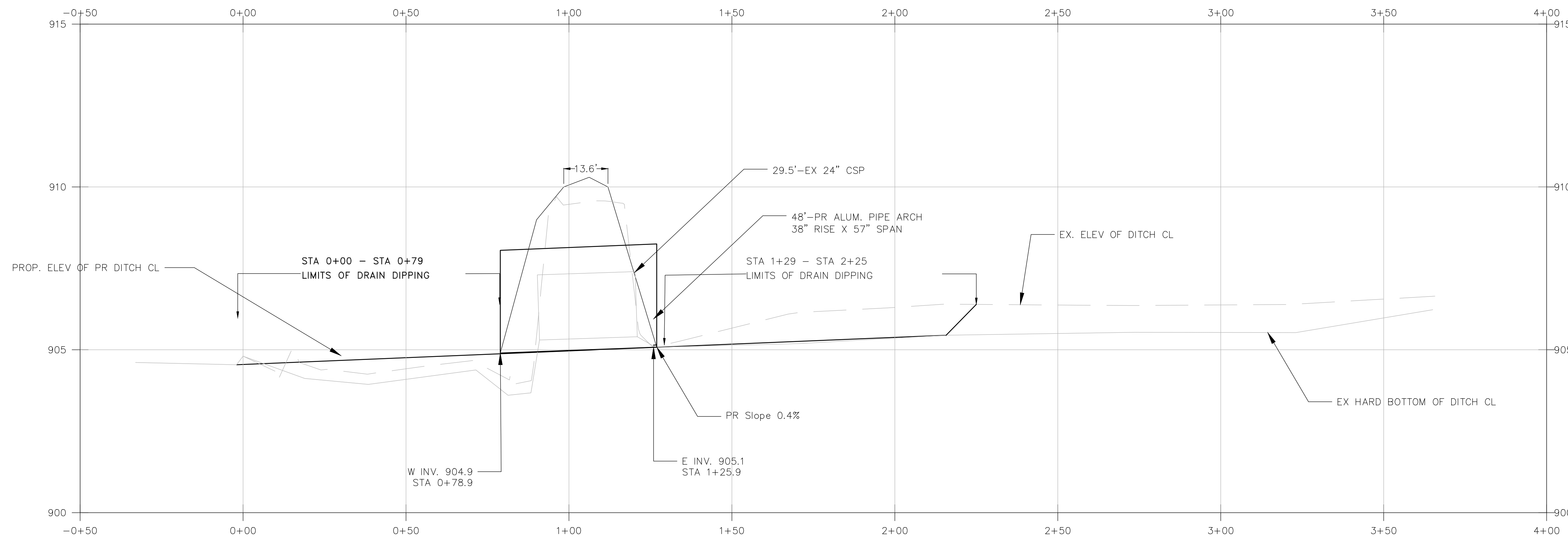
Date	Comment

SHEET
2/5

16-05-360-010
11671 E U AVE.



SCALE: 1:20 H
1:2 V





Civil Engineers Inc.
14250 Beadle Lk Rd
Suite 150
Battle Creek, MI
49014-7202
www.cei-bc.com
269-962-5127

JOB NO: 240203
DATE: 4/24/26

DRAWN BY: CDB
REVIEWED BY: RAR

OWNER
PARKER DRAIN
DRAINAGE DISTRICT
KALAMAZOO COUNTY
DRAIN COMMISSIONER
JASON WIERSMA



PARKER DRAIN IMPROVEMENTS
PRELIMINARY PLAN & PROFILE E V AVE. ACCESS DRIVE

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Date	Comment

SHEET
3/5

16-05-360-010
11671 E U AVE.

E V AVE.

INV-893.9

LIMITS OF AGG. BASE, 22A, 6 INCH

RIP RAP, d50=6 INCH (TYP.)

APPROX ROAD ROW

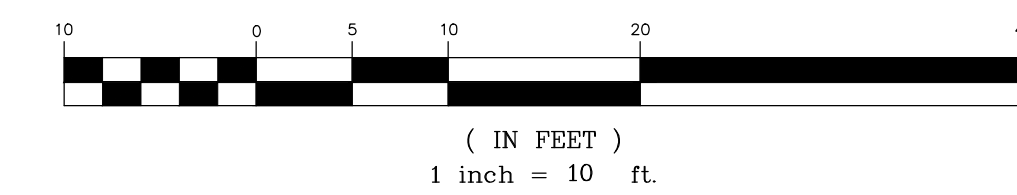
EX. 19.5', 42" CSP

REM. TWIN 18" TREE (LEANING)

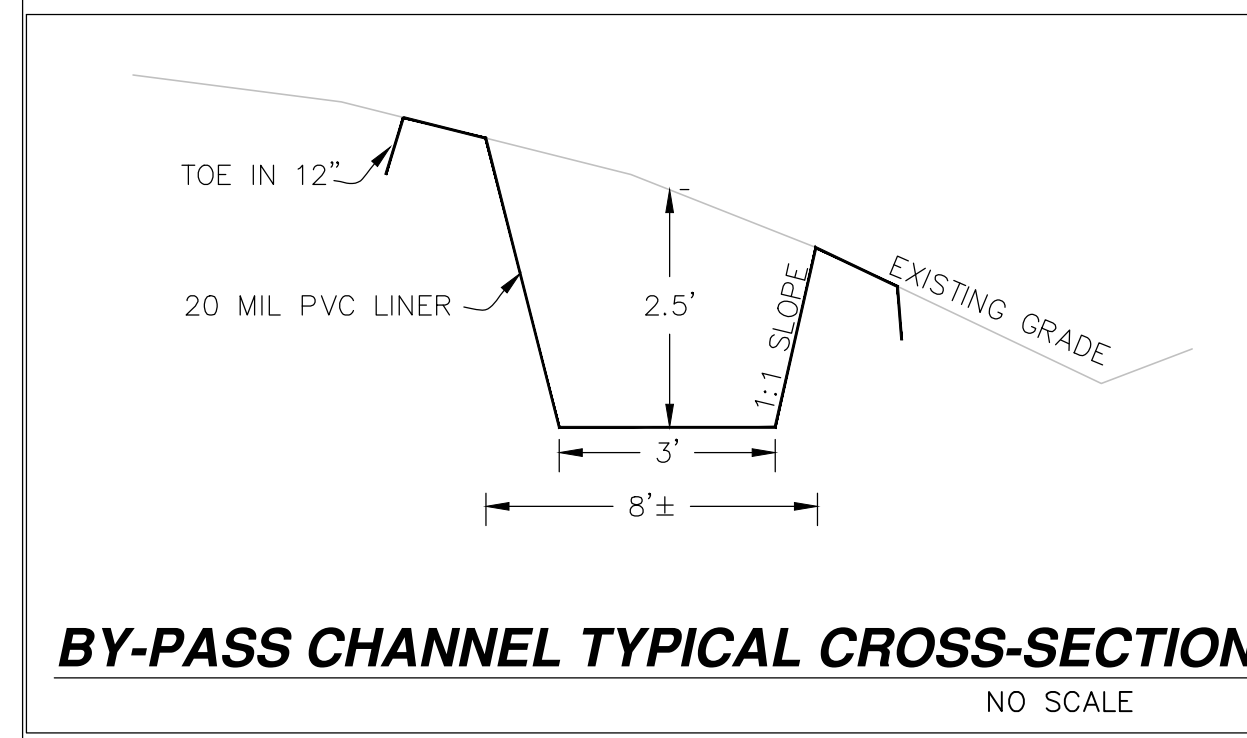
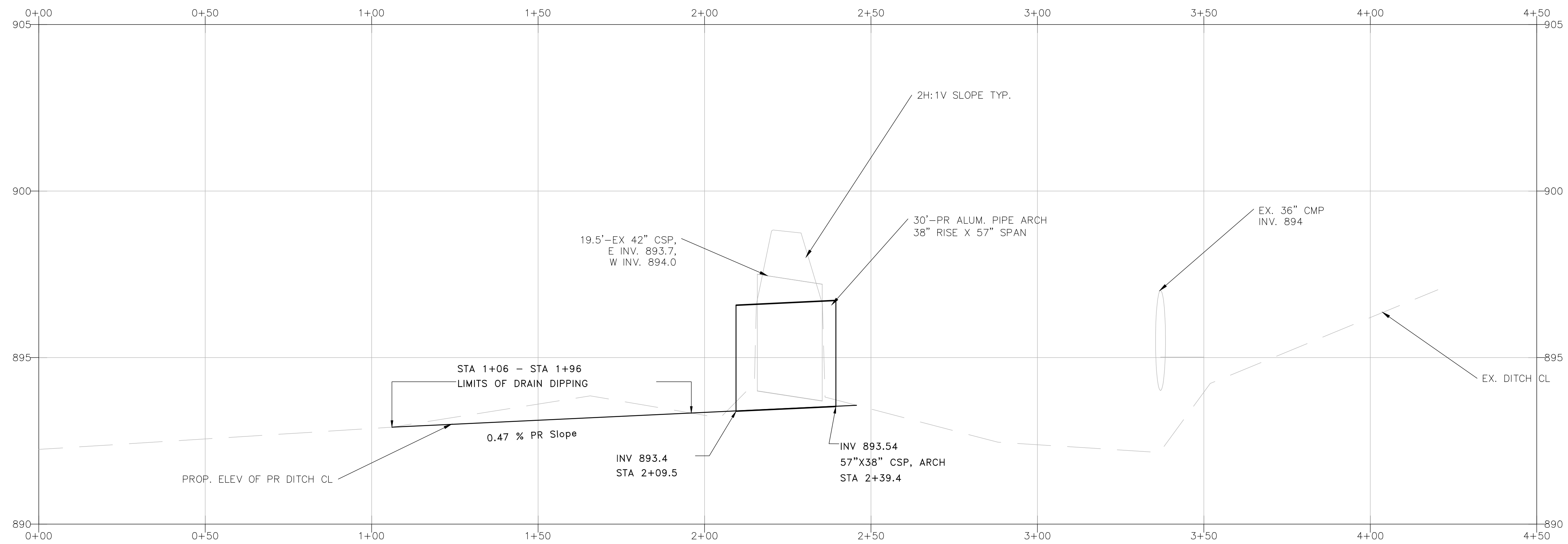
APPROX DRAIN ROW

LIMITS OF TEMP. BYPASS CHANNEL

GRAPHIC SCALE



SCALE: 1:20 H
1:2 V



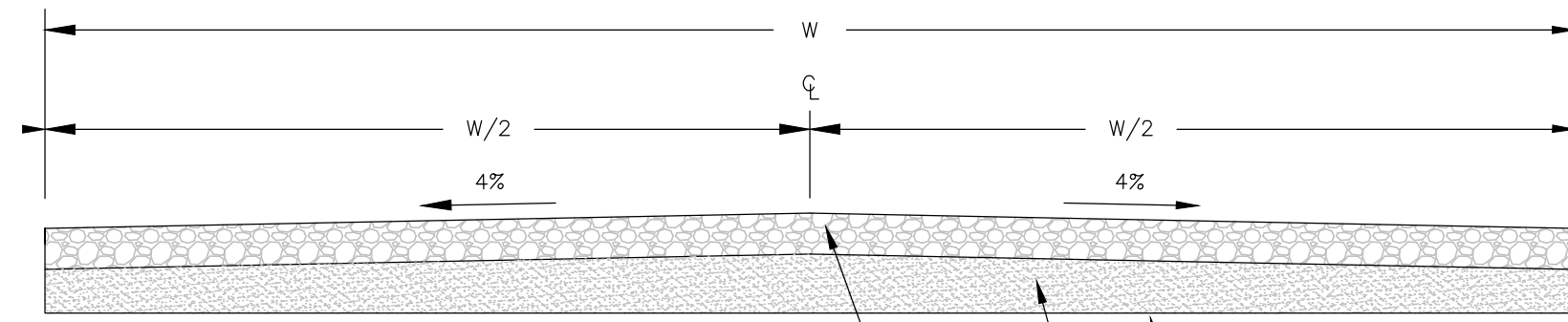
BY-PASS CHANNEL TYPICAL CROSS-SECTION
NO SCALE

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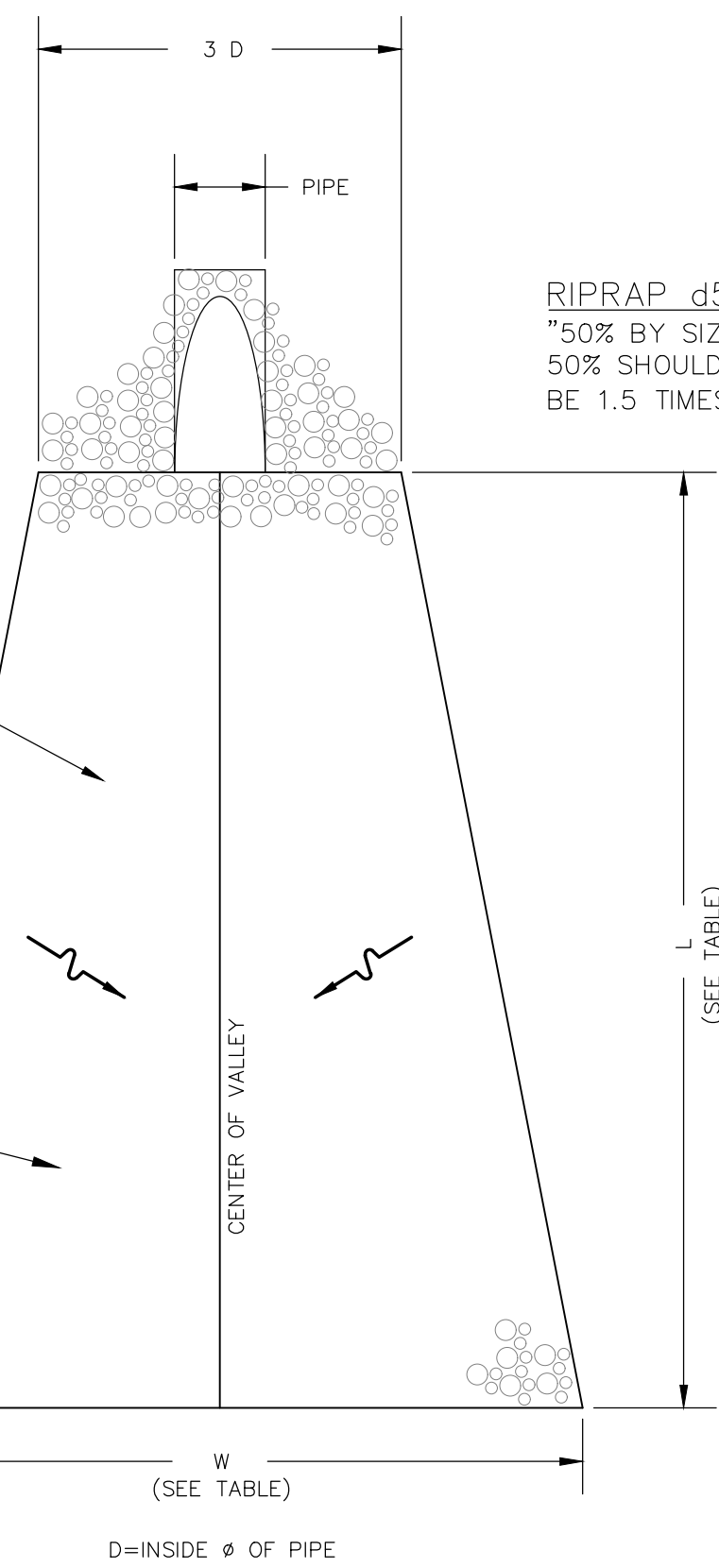
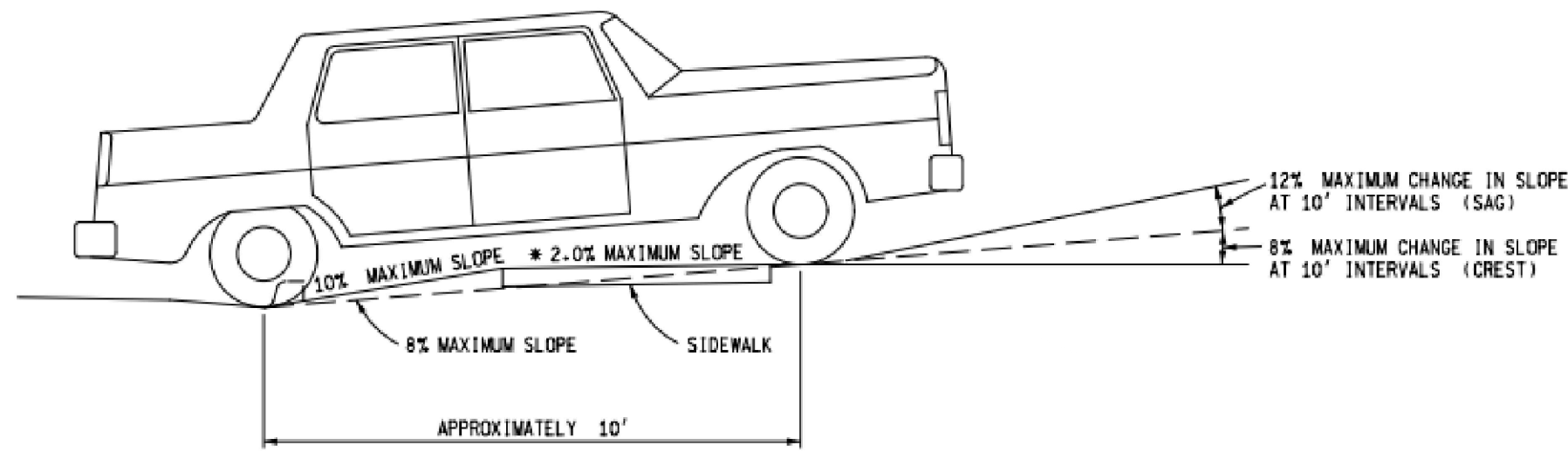
ADDITIONAL SPECIFICATIONS NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING, AND ABIDING BY ANY NECESSARY PERMITS UNLESS OTHERWISE STATED. THE FOLLOWING PERMITS WILL BE REQUIRED:
A. SOIL EROSION & SEDIMENTATION CONTROL PERMIT
B. COUNTY COMMISSION RIGHT-OF-WAY PERMIT
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION SITE SAFETY.
- THE CONTRACTOR SHALL MAINTAIN INSURANCES FOR THE DURATION OF THE PROJECTS THAT ARE TYPICAL TO THE INDUSTRY FOR THIS TYPE OF CONSTRUCTION.
- CLEARING: THE CONTRACTOR MUST REMOVE ALL ORGANIC MATERIAL & NONORGANIC DEBRIS NECESSARY TO PERFORM THE WORK INDICATED IN THESE PLANS. DISPOSAL OF MATERIAL & DEBRIS IS THE CONTRACTOR'S RESPONSIBILITY. ON-SITE BURNING WILL ONLY BE ALLOWED WITH THE OWNER'S PERMISSION & WITH NECESSARY BURNING PERMITS. BURIAL OF MATERIAL & DEBRIS WILL NOT BE PERMITTED.
- STRIP & STOCKPILE TOPSOIL: THE CONTRACTOR SHALL REMOVE ALL TOPSOIL & STOCKPILE THE UNCONTAMINATED (FREE OF ROCKS, STICKS, & NONORGANIC SOIL UNDER THE TOPSOIL) TOPSOIL FOR REUSE IN AREAS ACCEPTABLE TO THE OWNER.
- RELOCATE EXISTING BURIED UTILITY LINES THAT CONFLICT WITH NEW SEWER. COORDINATE WITH SERVICE PROVIDER.
- COMPACTION: THE CONTRACTOR MUST COMPACT ALL FILL MATERIAL. COMPACTION MUST BE TO 95% MAXIMUM DENSITY. ONE FOOT LIFTS ARE RECOMMENDED, & MUST BE PRACTICED UNDER ROADS.
- FILL MATERIAL MUST AT A MINIMUM MEET THE REQUIREMENTS OF MDT 2020 STANDARD SPECIFICATIONS FOR CLASS III GRANULAR MATERIALS. FOR PIPE TRENCH SEE THE DETAILS ON THIS SHEET.
- PROOF ROLLING: THE CONTRACTOR MUST PERFORM PROOF ROLLING PRIOR TO PLACEMENT OF THE AGGREGATE BASE. THIS MUST BE DONE USING APPROVED EQUIPMENT, & WILL NOT BE ACCEPTED UNLESS IT IS DONE IN THE PRESENCE OF A REPRESENTATIVE OF CIVIL ENGINEERS, INC.
- THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING FULLY VEGETATED COVER THAT STABILIZES EROSION. A MINIMUM OF 3" OF TOPSOIL, FERTILIZER, LAWN SEED & MULCH MUST BE PLACED. EROSION CONTROL BLANKETS SHOULD BE USED ON SLOPES THAT MAY CONTINUALLY WASHOUT SO THAT THE CONTRACTOR CAN MINIMIZE RETURN TRIPS TO FIX THESE WASHOUTS.
- ANY INFORMATION OR DATA ON THIS DRAWING IS NOT INTENDED TO BE SUITABLE FOR REUSE BY ANY PERSON, FIRM, OR CORPORATION OR ANY OTHERS ON EXTENSIONS OF THIS PROJECT OR FOR ANY USE ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION AND ADAPTATION BY THE ENGINEER FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO THE ENGINEER.

PRIVATE DRIVE CROSS-SECTION DETAIL
NO SCALE

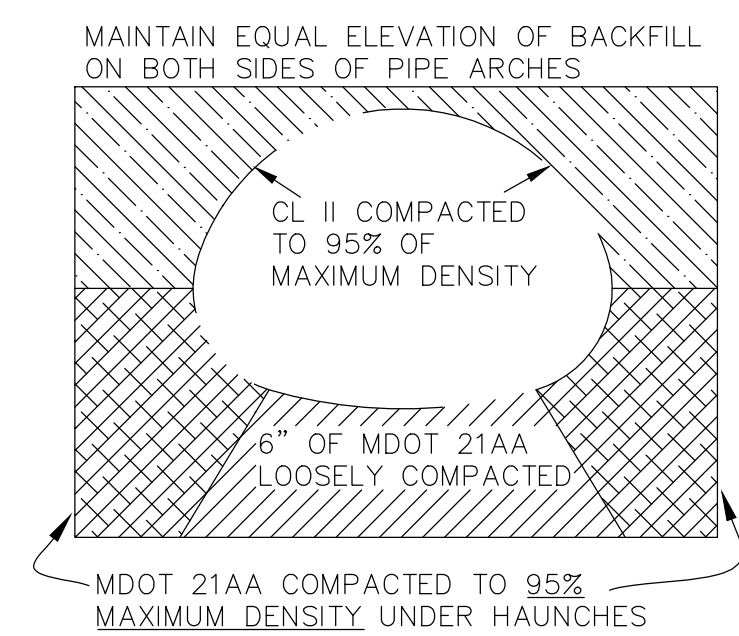


- 1 - 8" C.I.P. MDOT 22A AGGREGATE BASE (MIN. 98% COMPACTION)
 - 2 - MDOT CLASS II SAND (MIN. 95% COMPACTION) DEPTH VARIES
 - 3 - COMPACTED SUBGRADE
- W = EXISTING WIDTH OF PRIVATE DRIVE ACCESS



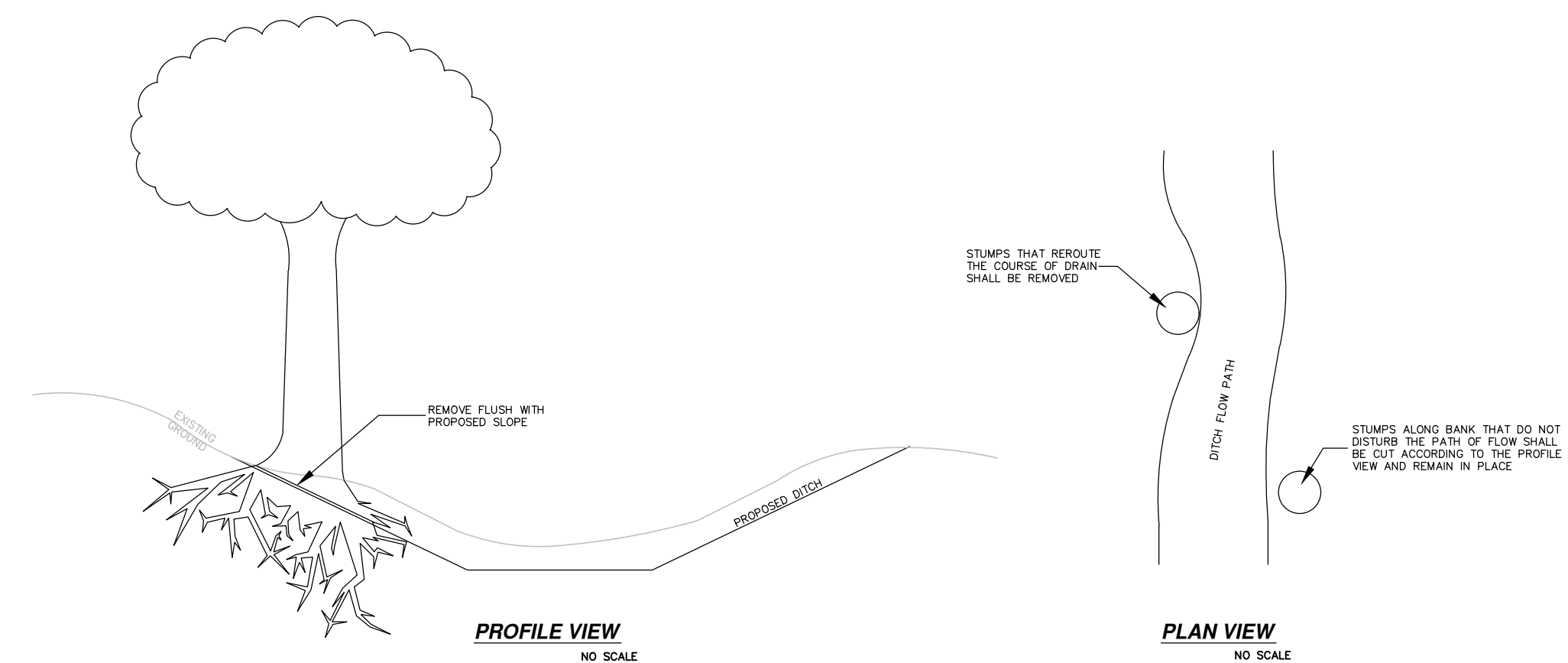
RIPRAP PLAN VIEW DETAIL
NO SCALE

RIPRAP d50 SPECIFICATION:
"50% BY SIZE OF THE RIPRAP MIXTURE SHOULD BE LARGER THAN d50 AND 50% SHOULD BE SMALLER. THE LARGEST STONE IN THE MIXTURE SHOULD BE 1.5 TIMES d50. THE RIPRAP SHOULD BE REASONABLY WELL-GRADED."



NO CRUSHED CONCRETE ALLOWED AS BACKFILL. 21AA MUST BE INSTALLED IN DRY CONDITIONS.

BACKFILL DETAIL FOR PIPE ARCH CULVERT
NO SCALE



DRAIN DIPPING AND CLEANING DETAIL
NO SCALE

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PARKER DRAIN IMPROVEMENTS

DETAIL SHEET

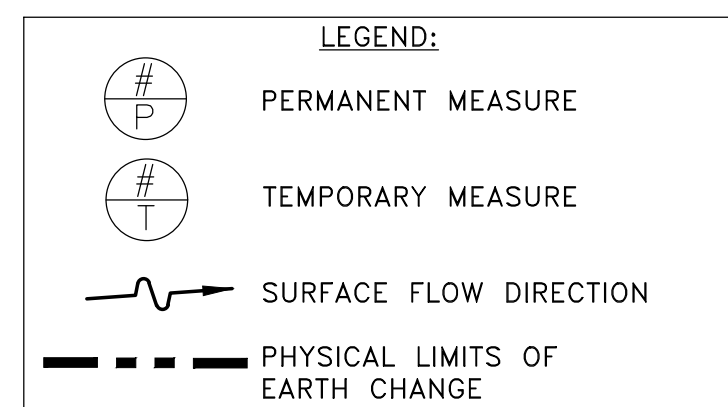
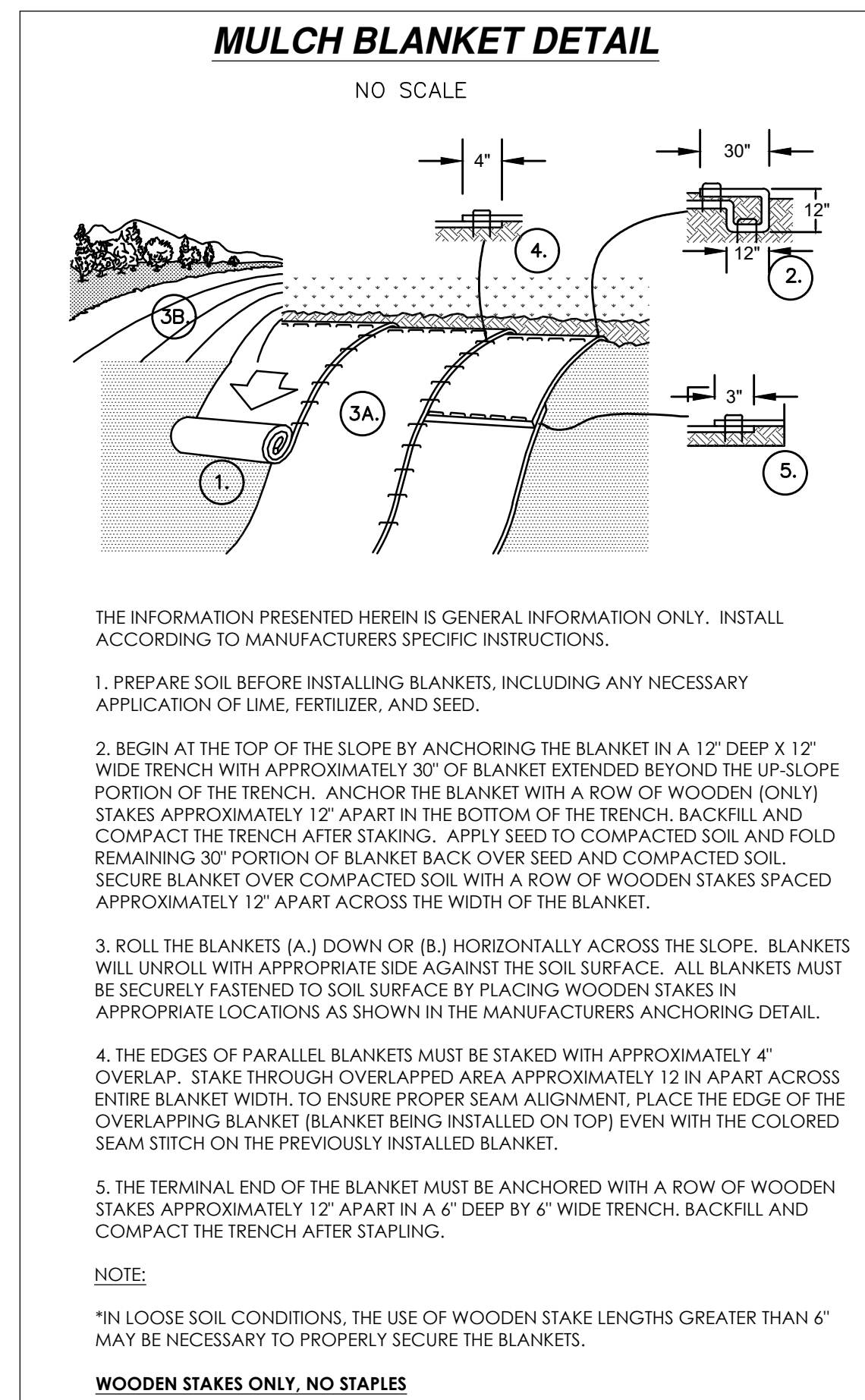
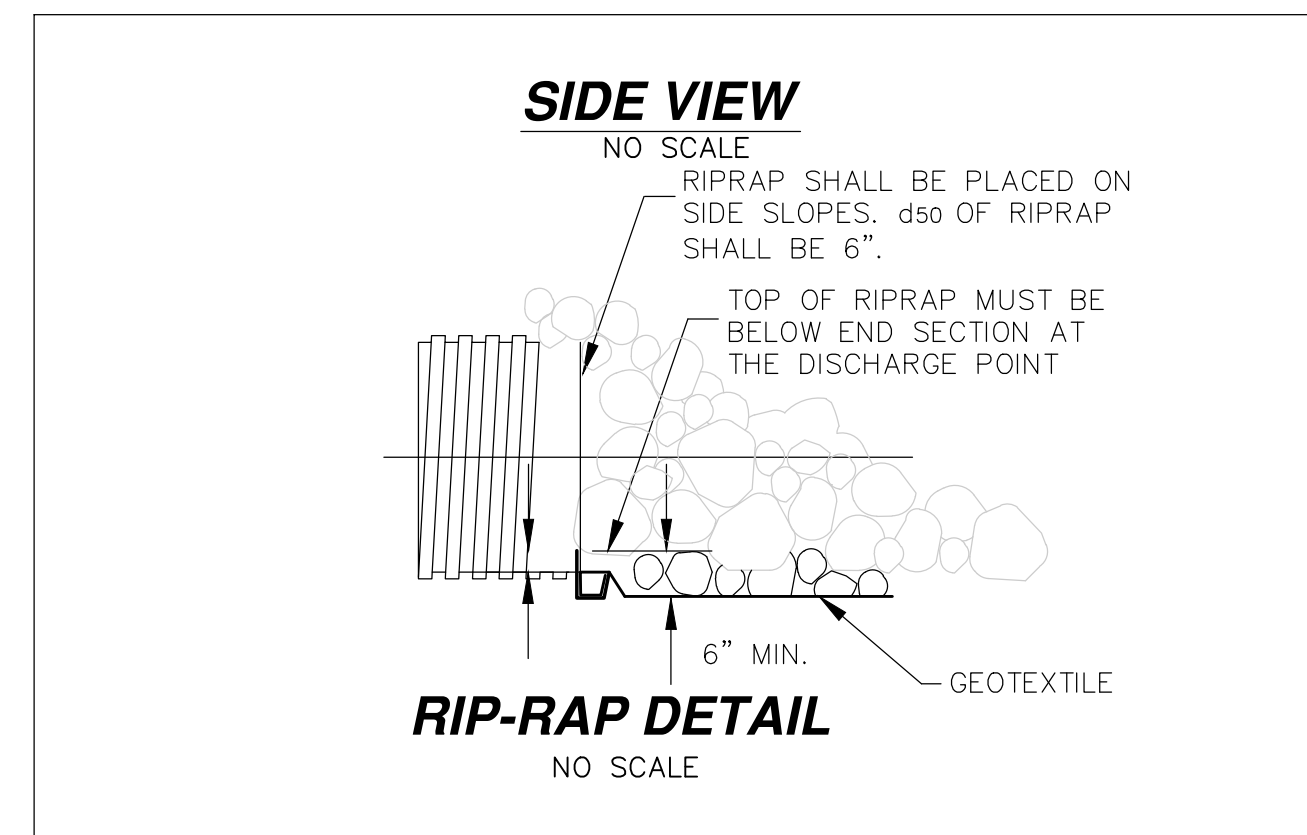
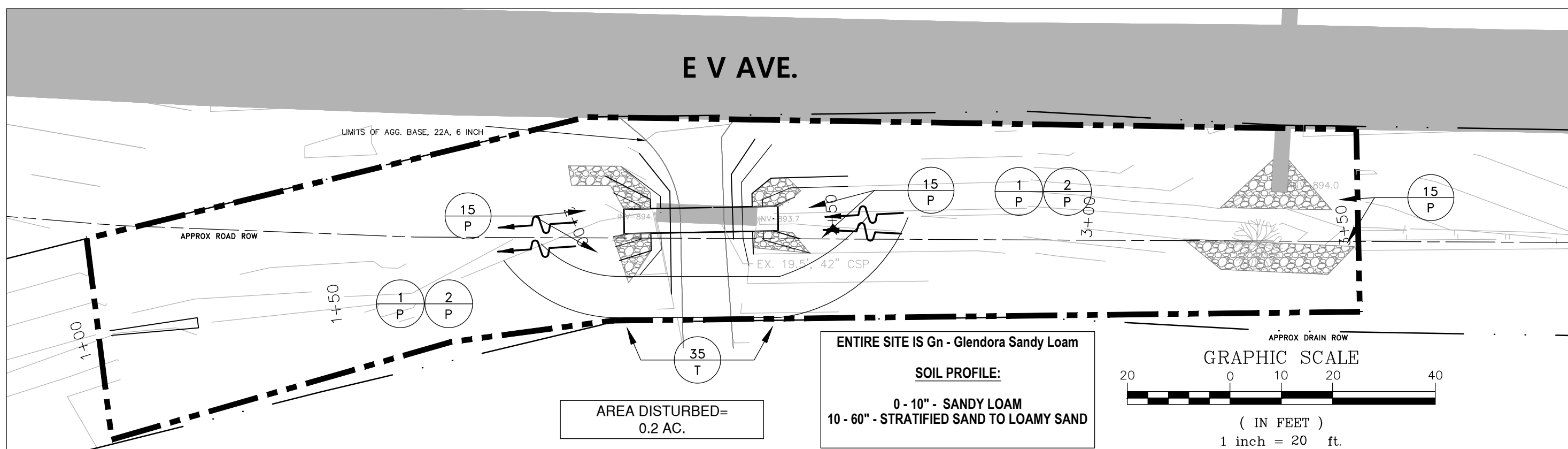
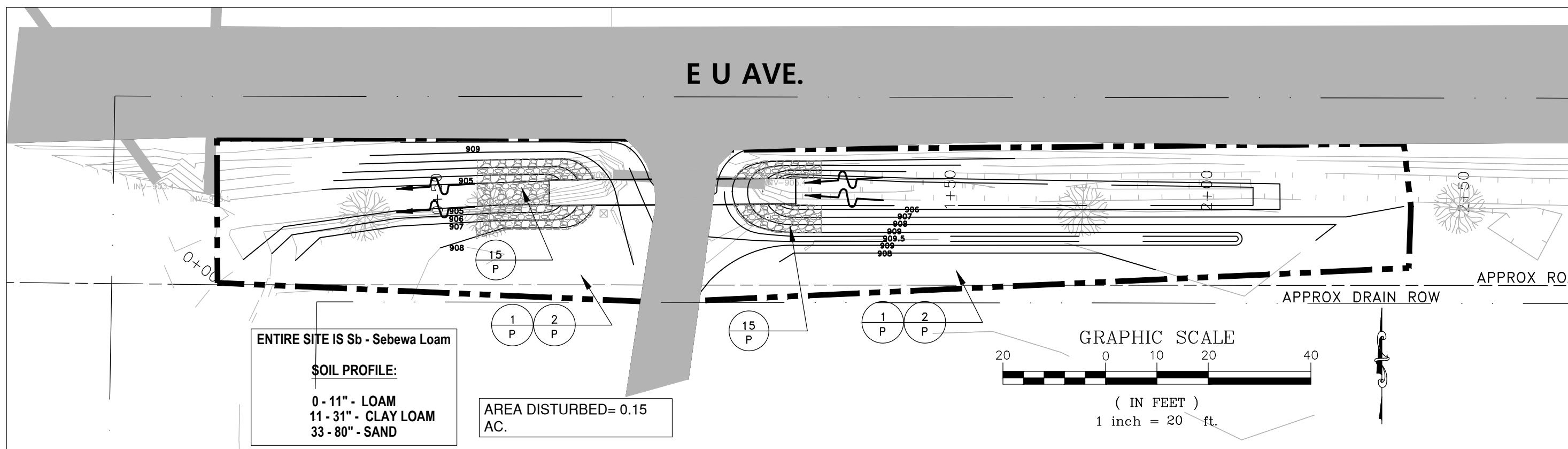
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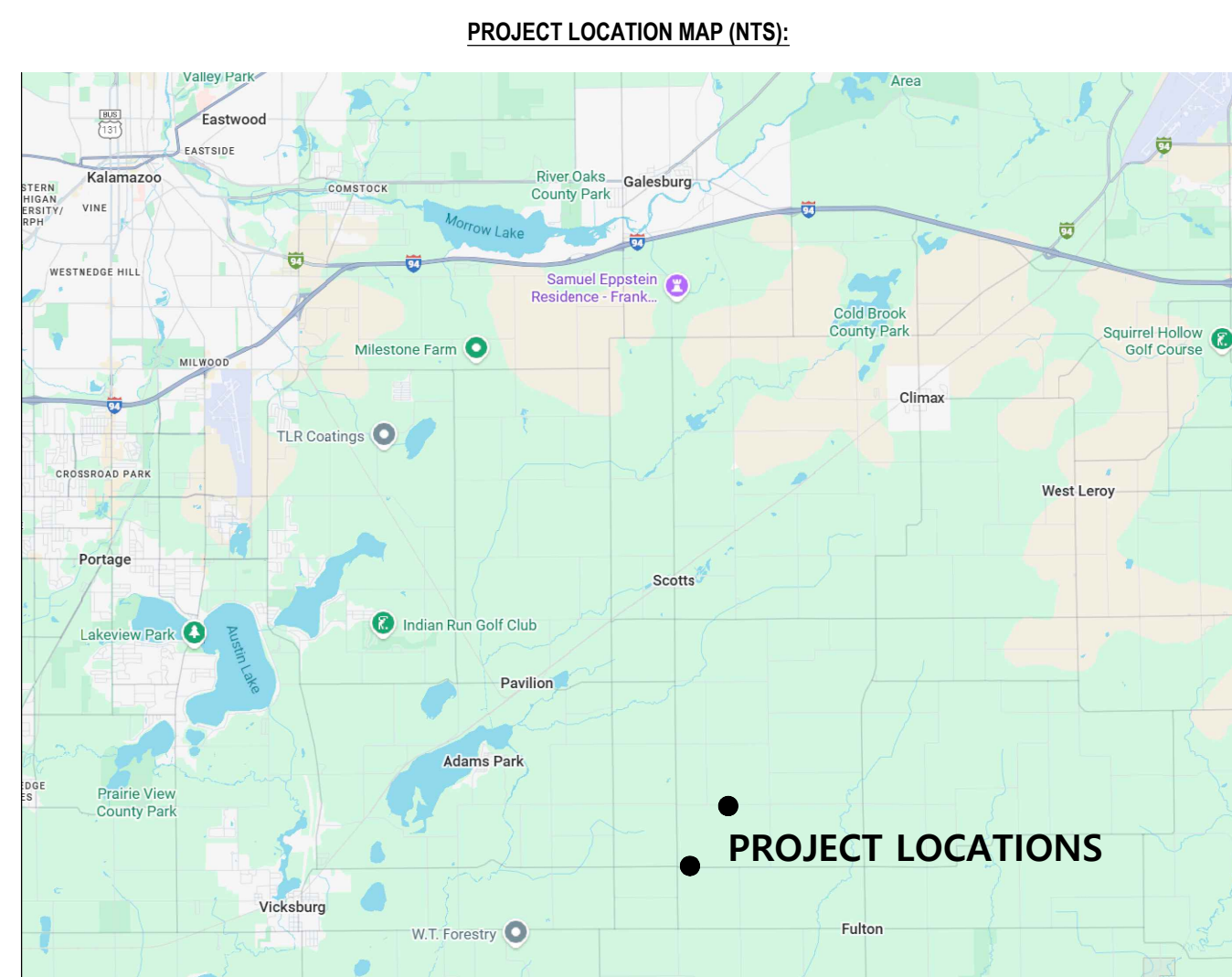
REVISIONS

Date	Comment

SHEET
4/5



KEY	SESC MEASURE	SYMBOL	WHERE USED
1	SEEDING		WHEN BARE SOIL IS EXPOSED, TEMPORARILY OR PERMANENTLY, TO EROSION FORCES FROM WIND AND OR WATER ON FLAT AREAS, MILD SLOPES, GRASSED WATERWAYS AND SPILLWAYS, DIVERSION DITCHES AND DIKES, BORROW AND STOCKPILE AREAS, AND SPOIL PILES.
2	MULCH		ON FLAT AREAS, SLOPES, GRASSED WATERWAYS AND SPILLWAYS, DIVERSION DITCHES AND DIKES, BORROW AND STOCKPILE AREAS, AND SPOIL PILES WHEN AREAS ARE SUBJECT TO RAINDROP IMPACT, AND EROSION FORCES FROM WIND OR WATER.
15	RIPRAP		ALONG THE DRAIN BANKS, SHORELINES, OR WHERE CONCENTRATED FLOWS OCCUR. SLOWS VELOCITY, REDUCES EROSION AND SEDIMENT LOAD.
35	TEMPORARY BYPASS CHANNEL		IN AND ADJACENT TO A STREAM WHEN FLOW CONDITIONS PREVENT COMPLETING WORK ACTIVITY WITHOUT DIVERTING FLOW AROUND A WORK AREA.



CONSTRUCTION TIMING AND SEQUENCE (PER LOCATION)

CONSTRUCTION ACTIVITIES:	START DATE	END DATE
	DAY 1-3	DAY 4-7
ROUGH GRADING		
STORM SEWER		
FINAL GRADE		
TEMPORARY SESC MEASURES:		
EROSION CONTROL BLANKETS		
OTHER: BY-PASS CHANNEL		
PERMANENT SESC MEASURES:		
SEEDING/MULCH/LANDSCAPING		
PAVEMENT/GRAVEL		
MATERIAL TYPE: 22A		
RIP-RAP TYPE: d50 - 6		

- ALL WORK SHALL COMPLY WITH THE PROVISIONS OF PART 91 OF THE EROSION AND SEDIMENTATION CONTROL ACT OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION PA 451 OF 1994, AS AMENDED, AND AS ADMINISTERED BY THE KCDC, OR LOCAL JURISDICTION.
- PERMANENT SESC MEASURES WILL BE MONITORED AND MAINTAINED BY THE KALAMAZOO COUNTY DRAIN COMMISSIONERS STAFF.
- TEMPORARY SESC MEASURES WILL BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS ARE PERMANENTLY STABILIZED.
- SESC MEASURE INSTALLATION SHALL MEET THE REQUIREMENTS OF THE MICHIGAN ASSOCIATION OF COUNTY DRAIN COMMISSIONERS SESC APA PROCEDURES MANUAL INSTALLATION SPECIFICATIONS.

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Date	Comment