



PROJECT NO.:	00616087	SCALE: AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	02/22/2016	DRAWN BY:	KNN	1	06/15/15	KNN
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OVERVIEW
#582 L, J, H, F, XX

**CHESTER CREEK
BANK STABILIZATION**
CP NO. 1349, 1350, 1352, 1353

FILE NO.
00616087
SHEET
C 1

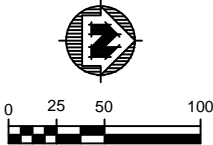


LOCATION OF ACCESS PATH TO PROJECT #582 J SITE SHALL BE APPROVED BY THE ENGINEER. THE CONTRACTOR MY UTILIZE A PORTION OF THE EXISTING FOOTPATH AND CLOSE IT TO PEDESTRIAN TRAFFIC.

CONSTRUCTION STAGING AREA SHALL BE WITHIN CITY MAINTENANCE YARD. (LIMITS AS DIRECTED BY THE ENGINEER)

INSTALL STONE CONSTRUCTION ENTRANCE AT KENWOOD AVE. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL CONSISTENT WITH MINNESOTA MUTCD LAYOUT 39 , RIGHT LANE CLOSURE, MULTI-LANE UNDIVIDED ROAD. SUBMIT TRAFFIC CONTROL PLAN TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.

LOCATION OF ACCESS PATH TO PROJECT #582 L SITE SHALL BE APPROVED BY THE ENGINEER. THE CONTRACTOR MAY UTILIZE A PORTION OF THE EXISTING FOOTPATH AND CLOSE IT TO PEDESTRIAN TRAFFIC.



EXISTING FOOT PATH (TYP.)

PROJECT #582 J

PROJECT #582 L

CHESTER CREEK

KENWOOD AVE

LOCATION OF ACCESS PATH TO PROJECT #582 H SITE SHALL BE APPROVED BY THE ENGINEER AND MAY UTILIZE THE EXISTING FOOTPATH. THE CONTRACTOR SHALL MAKE PROVISIONS TO LEAVE THE FOOTPATH OPEN TO THE PUBLIC AND PROVIDE FOR SAFE PASSAGE.

EXISTING FOOTPATH (TYP.)

MAINTENANCE AND RESTORATION OF ACCESS PATHS SHALL INCLUDE AGGREGATE, TOPSOIL, SEED MIXTURE 36-311 FOR WOODED AREAS AND SEED MIXTURE 25-131 FOR ROADSIDE AREAS AND EROSION CONTROL MAT 3N-2S. ANY NECESSARY FILTER LOGS SHALL BE INCIDENTAL TO PROJECT MOBILIZATION.

PROJECT #582 H

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ACCESS PLAN
PROJECT #582 L, J & H

CHESTER CREEK
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ACCESS PLAN
PROJECT #582 F & XX

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C 3



PHOTO A
CURRENT SITE CONDITIONS

EXAMPLE OF AREA TO
HARVEST ROCKS

EXISTING 30" RCP WITH RC FES
IE = 1064.74

EXISTING 10' X 10' BOX CULVERT
IE = 1064.74

KENWOOD AVE

CHESTER CREEK
FLOW

DISTURBANCE LIMITS (TYP.)
TOE OF RIP RAP (BURIED)

STA. 61+57 OFF 7' RT TO STA 61+44 OFF 25' RT.
RIPRAP SLOPE REPAIR
SEE TYPICAL SECTION D/C19

ENGINEER WILL MARK SELECT
STREAM ROCK IN THE FIELD TO BE
RECLAIMED AND PLACED ON THE
BEDROCK AT THE TOE OF SLOPE.
(SEE PHOTO "A" THIS SHEET)

TOE OF BANK SLOPE (TYP.)
DISTURBANCE LIMITS (TYP.)

TRANSITION AREA

TRANSITION AREA

EXISTING FOOT PATH

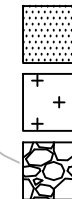


PHOTO B
CURRENT SITE CONDITIONS

STA. 60+81, OFF 26' RT. TO STA. 60+29 OFF 27' RT
RIP RAP SLOPE REPAIR & VRSS - TYPE B
SEE TYPICAL SECTION B/C17 AND D/C19

RESTORE EXISTING FOOT PATH AS
NECESSARY AFTER SLOPE REPAIR

EX. OF BEDROCK AT THE TOE OF SLOPE.

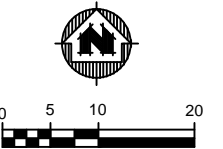


EROSION CONTROL MAT

V.R.S.S.

RIP RAP

NOTE: ENGINEER SHALL MARK SELECT TREES IN THE FIELD THAT ARE
TO BE REMOVED FROM THE EDGE OF THE FAILURE.



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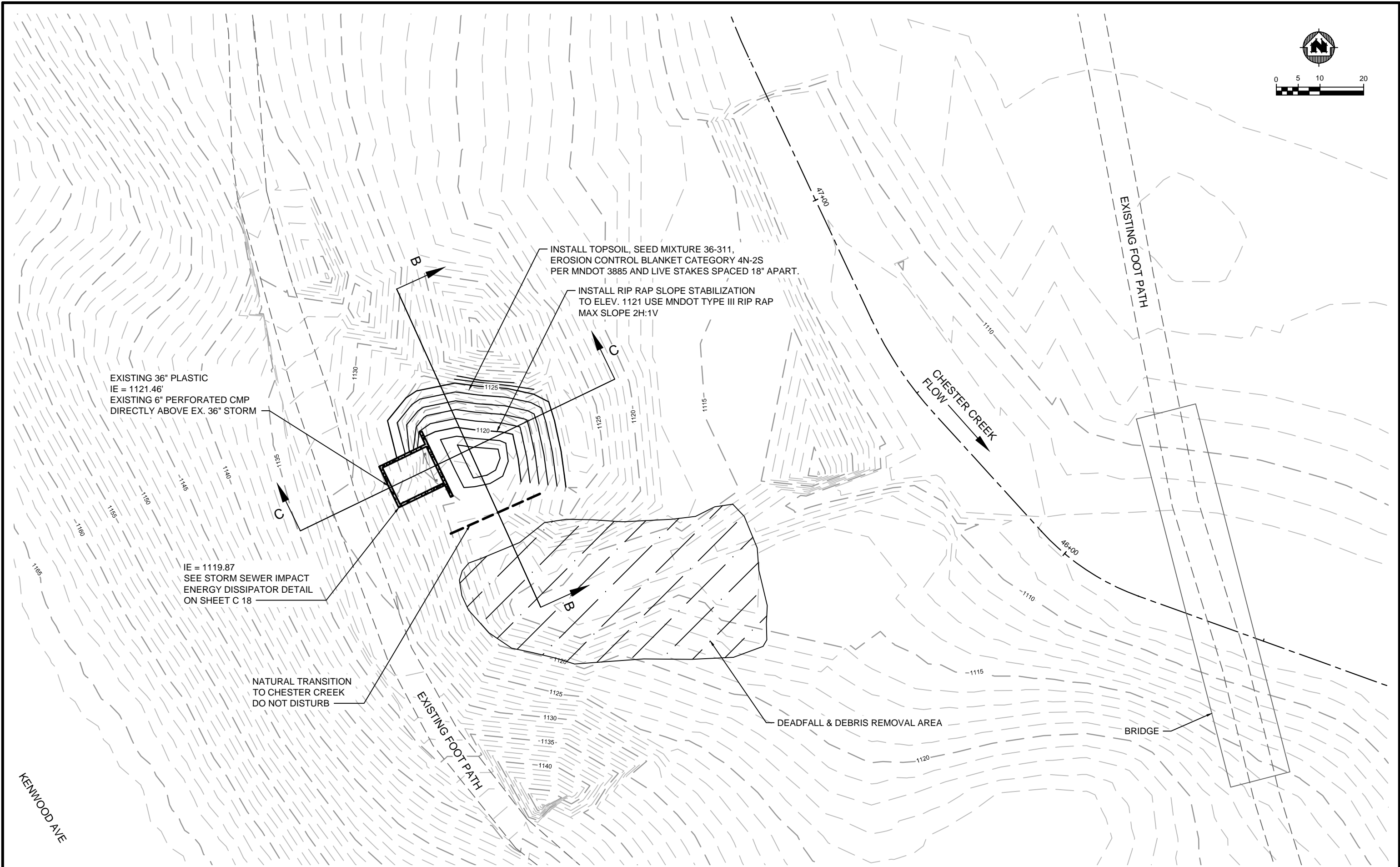


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PLAN SHEET
REACH 582 L

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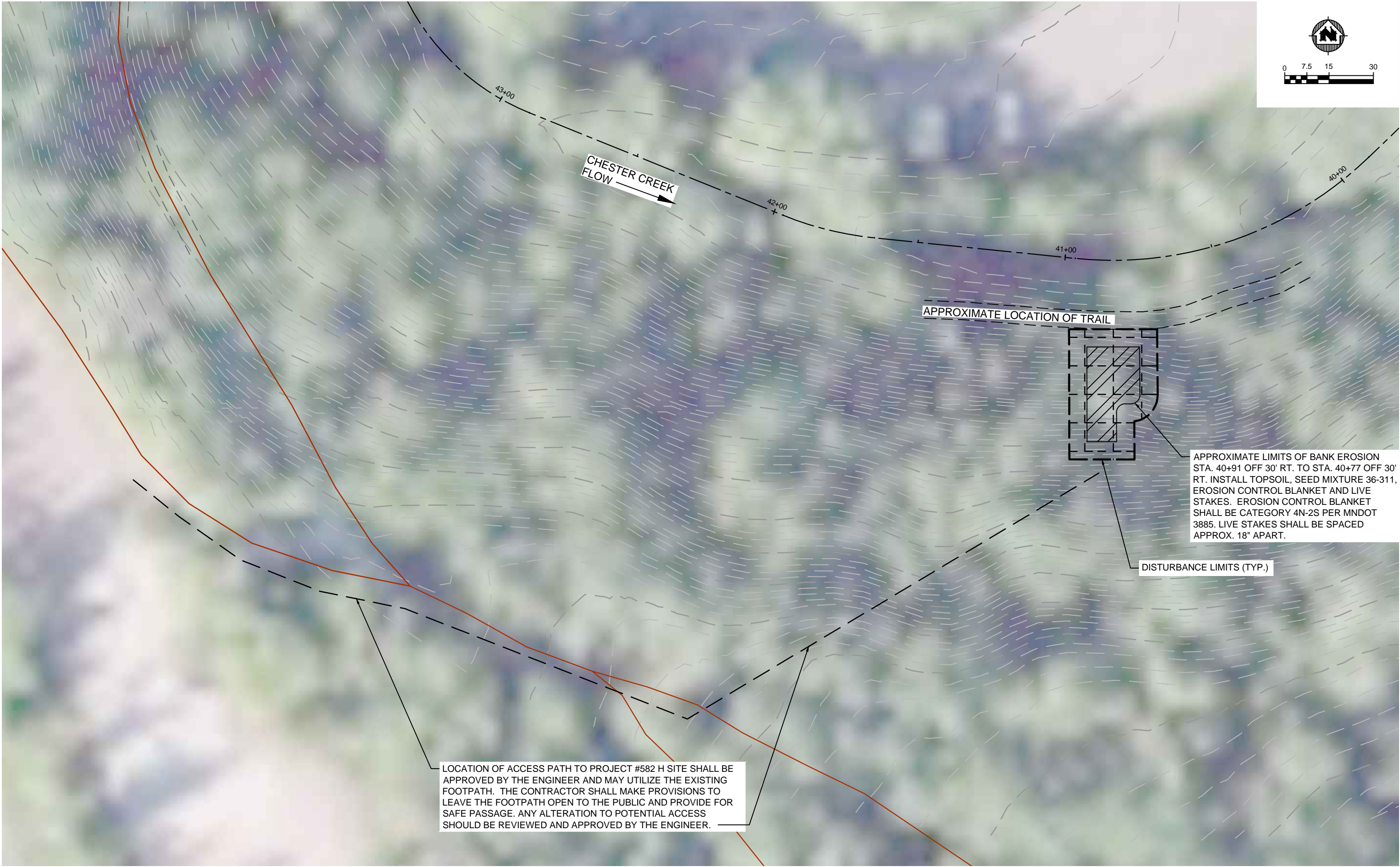
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PLAN SHEET REACH 582 J	CHESTER CREEK BANK STABILIZATION CP NO. 1349, 1350, 1352, 1353	FILE NO. 00616087 SHEET C 5
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LOCATION OF ACCESS PATH TO PROJECT #582 H SITE SHALL BE APPROVED BY THE ENGINEER AND MAY UTILIZE THE EXISTING FOOTPATH. THE CONTRACTOR SHALL MAKE PROVISIONS TO LEAVE THE FOOTPATH OPEN TO THE PUBLIC AND PROVIDE FOR SAFE PASSAGE. ANY ALTERATION TO POTENTIAL ACCESS SHOULD BE REVIEWED AND APPROVED BY THE ENGINEER.

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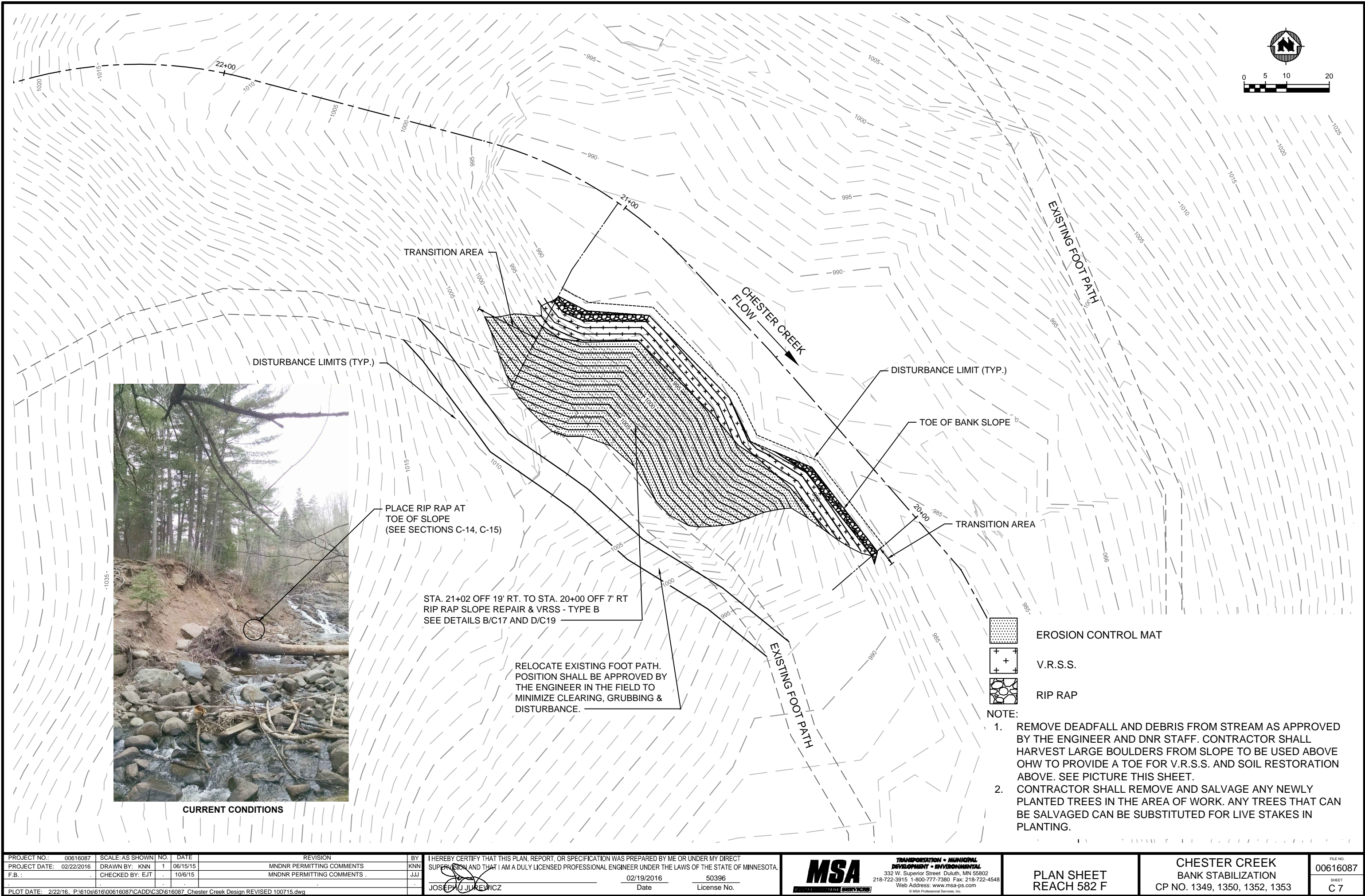
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PLAN SHEET
REACH 582 H

CHESTER CREEK
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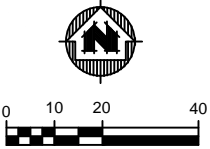
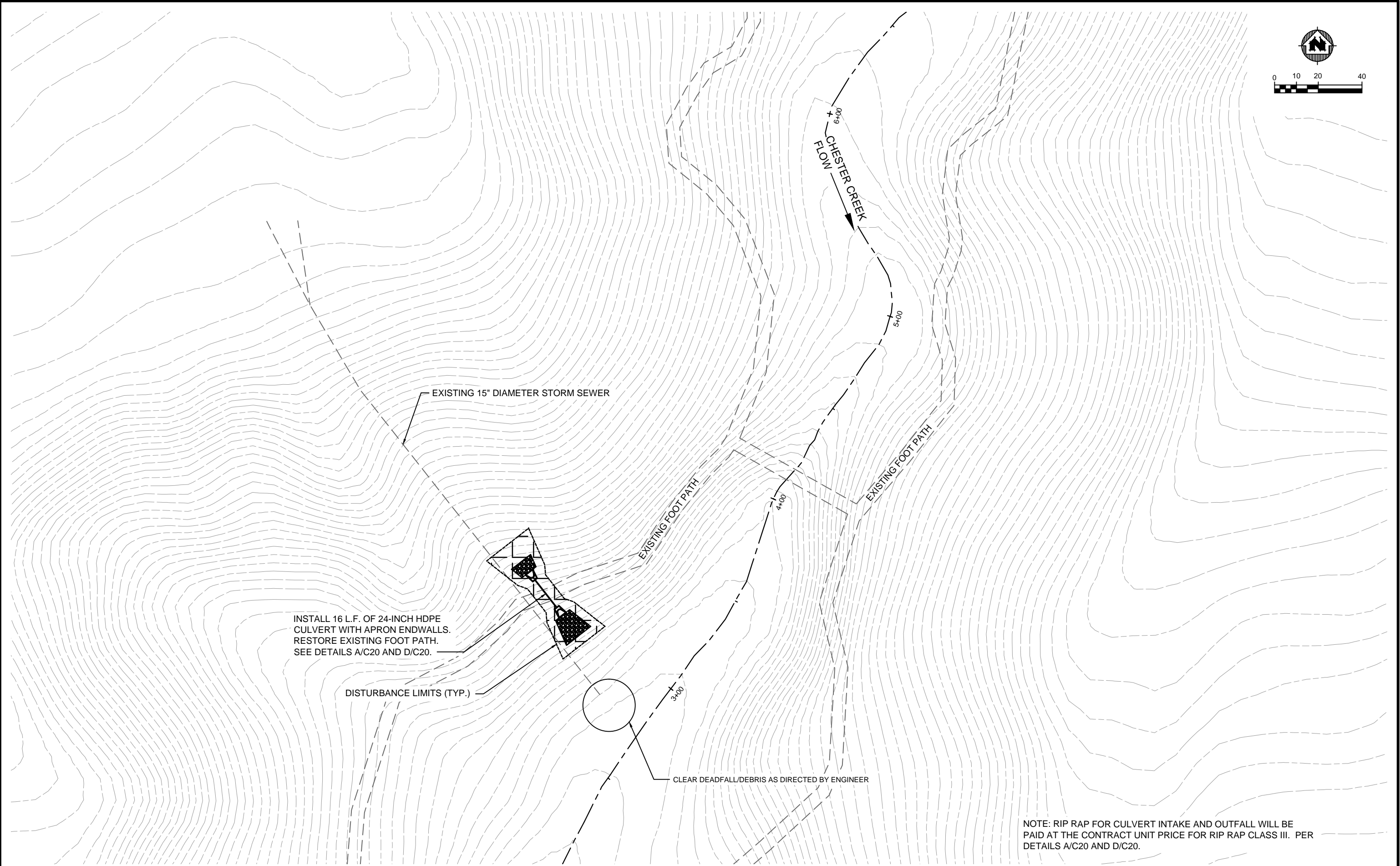
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PLAN SHEET
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CHESTER CREEK
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CP NO. 1349, 1350, 1352, 1353

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C 7



EXISTING 15" DIAMETER STORM SEWER

INSTALL 16 L.F. OF 24-INCH HDPE CULVERT WITH APRON ENDWALLS. RESTORE EXISTING FOOT PATH. SEE DETAILS A/C20 AND D/C20.

DISTURBANCE LIMITS (TYP.)

EXISTING FOOT PATH

EXISTING FOOT PATH

CHESTER CREEK FLOW

3+00



4+00

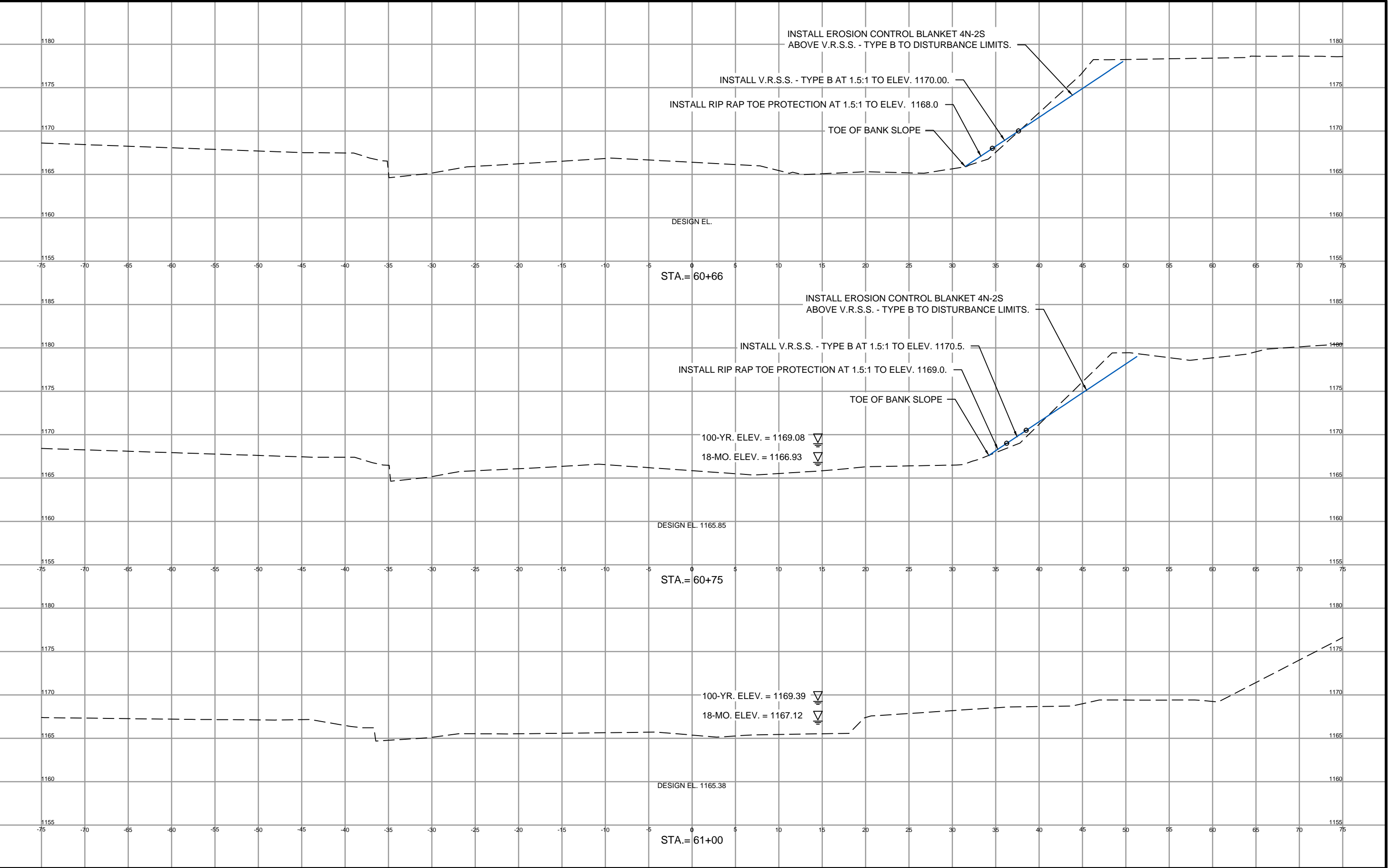
5+00

6+00

CLEAR DEADFALL/DEBRIS AS DIRECTED BY ENGINEER

NOTE: RIP RAP FOR CULVERT INTAKE AND OUTFALL WILL BE PAID AT THE CONTRACT UNIT PRICE FOR RIP RAP CLASS III. PER DETAILS A/C20 AND D/C20.

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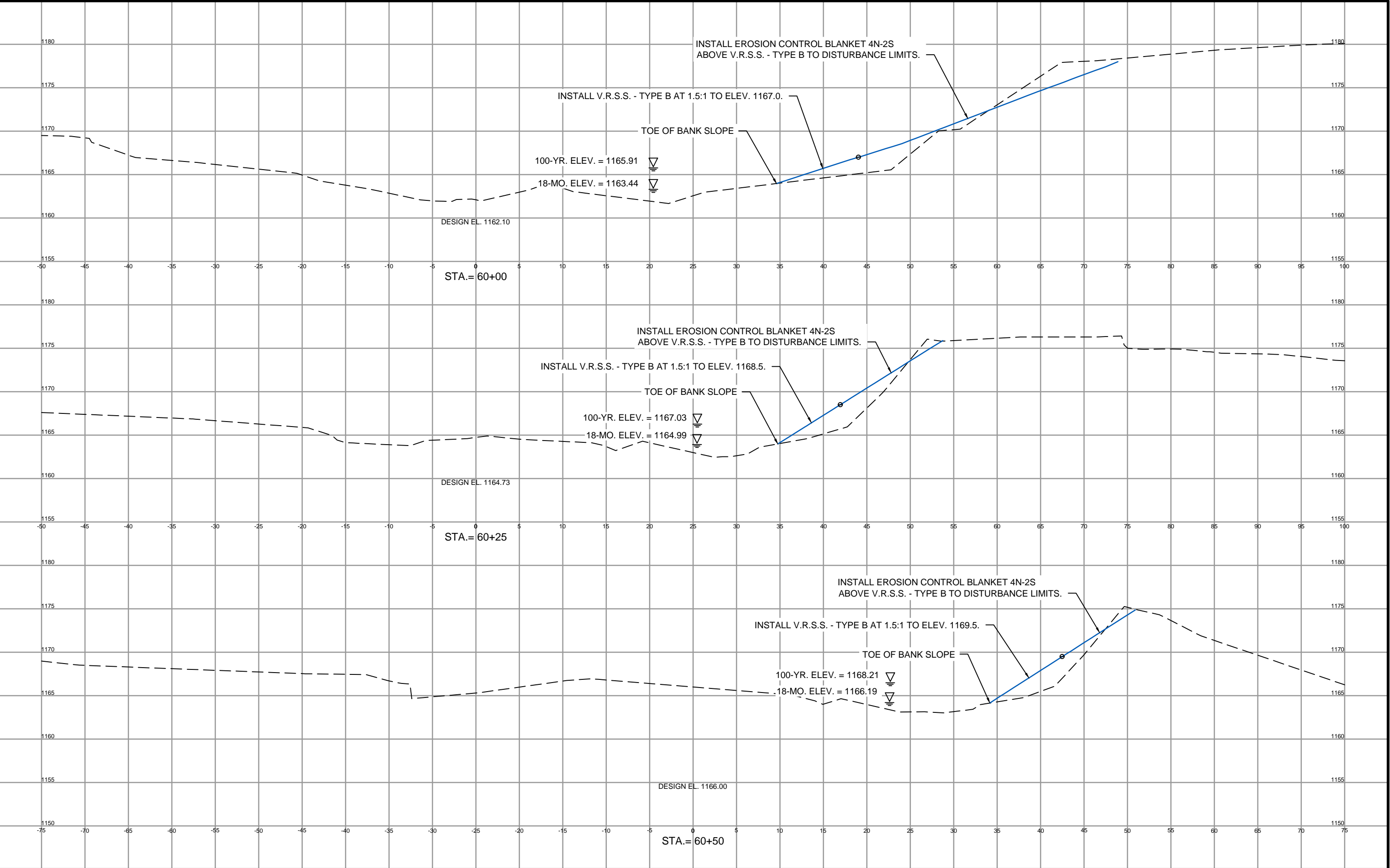
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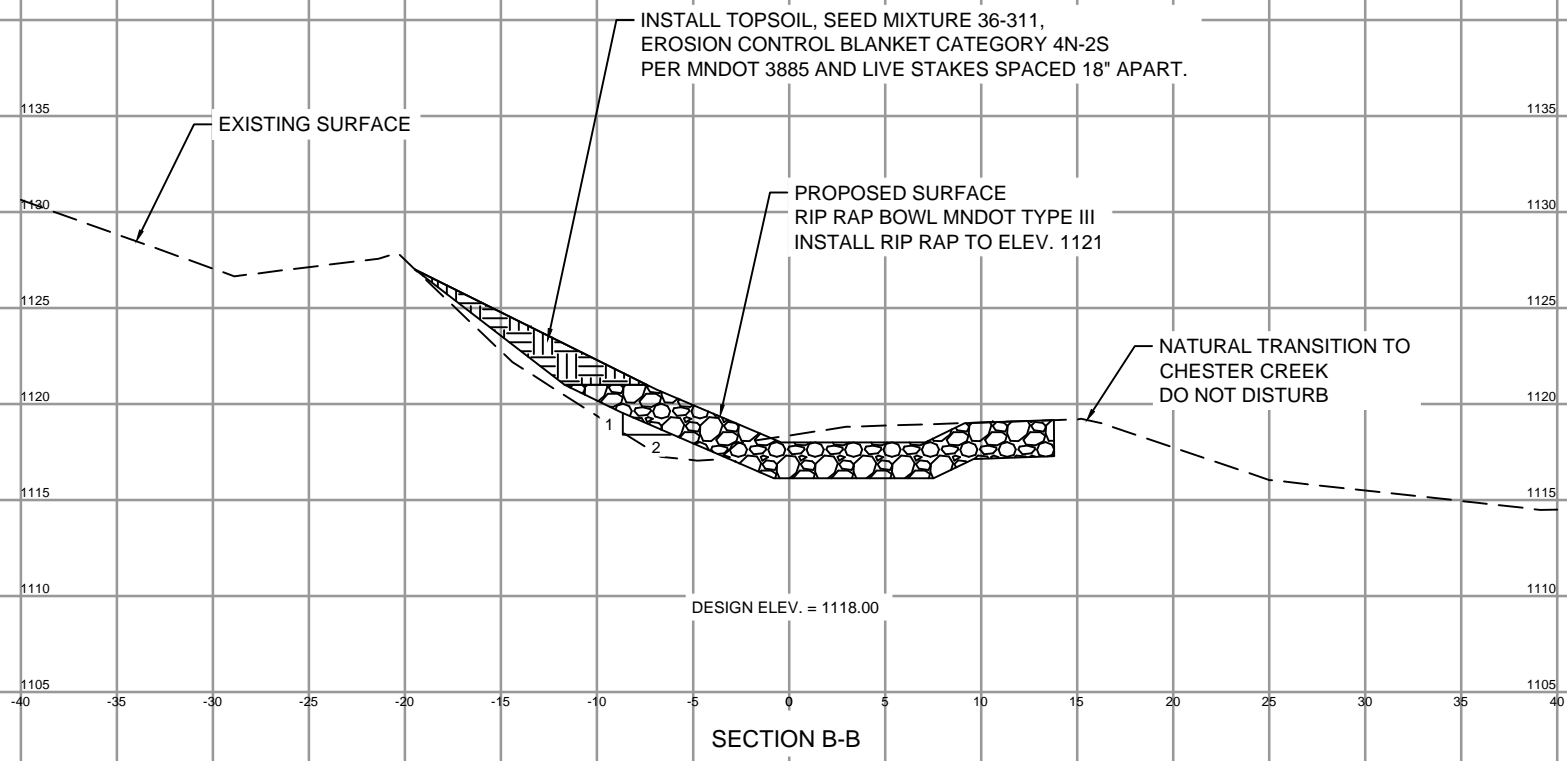
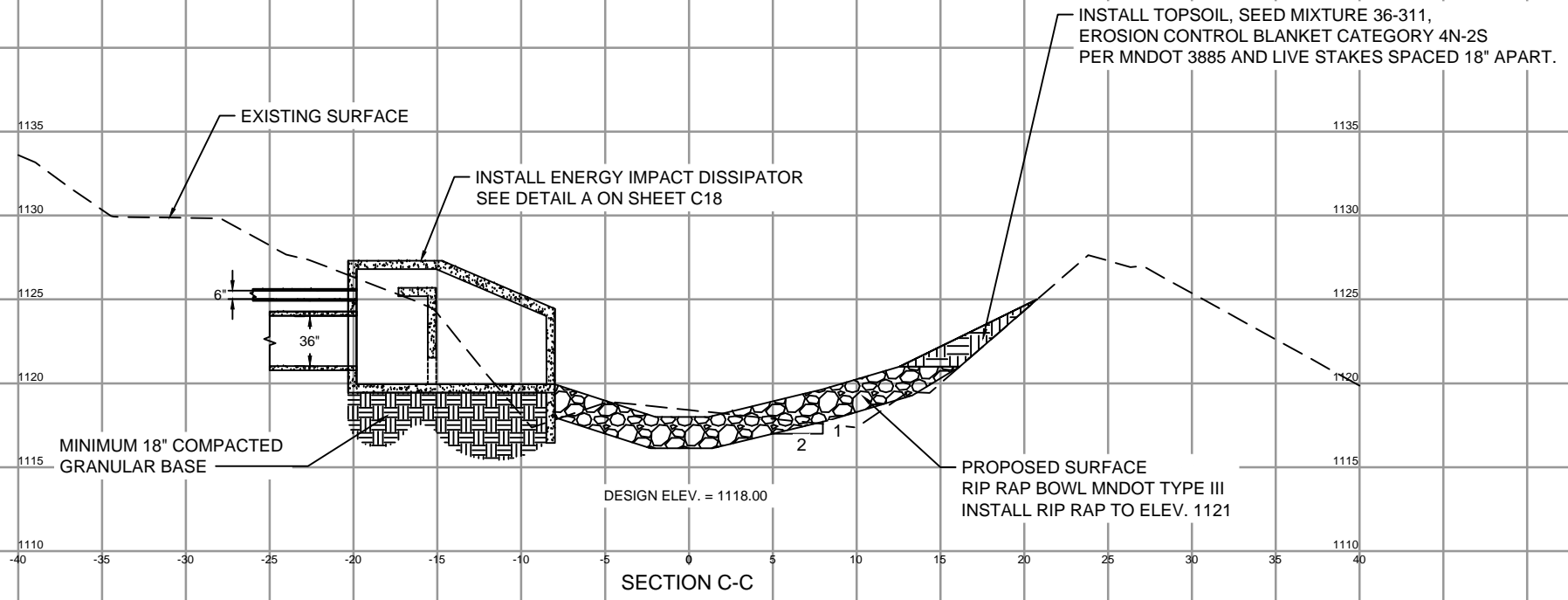
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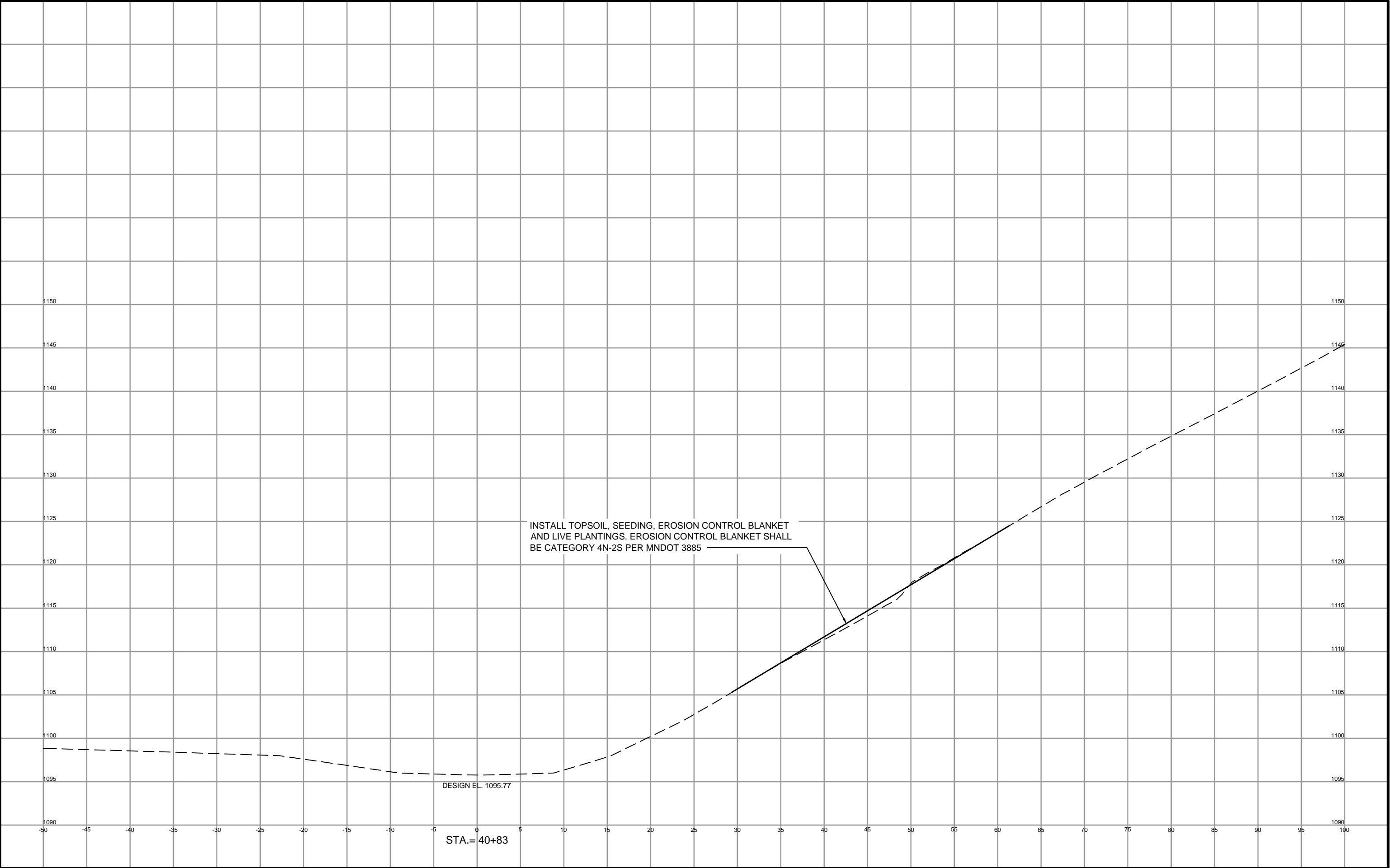
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REACH 582 L

CHESTER CREEK
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CP NO. 1349, 1350, 1352, 1353

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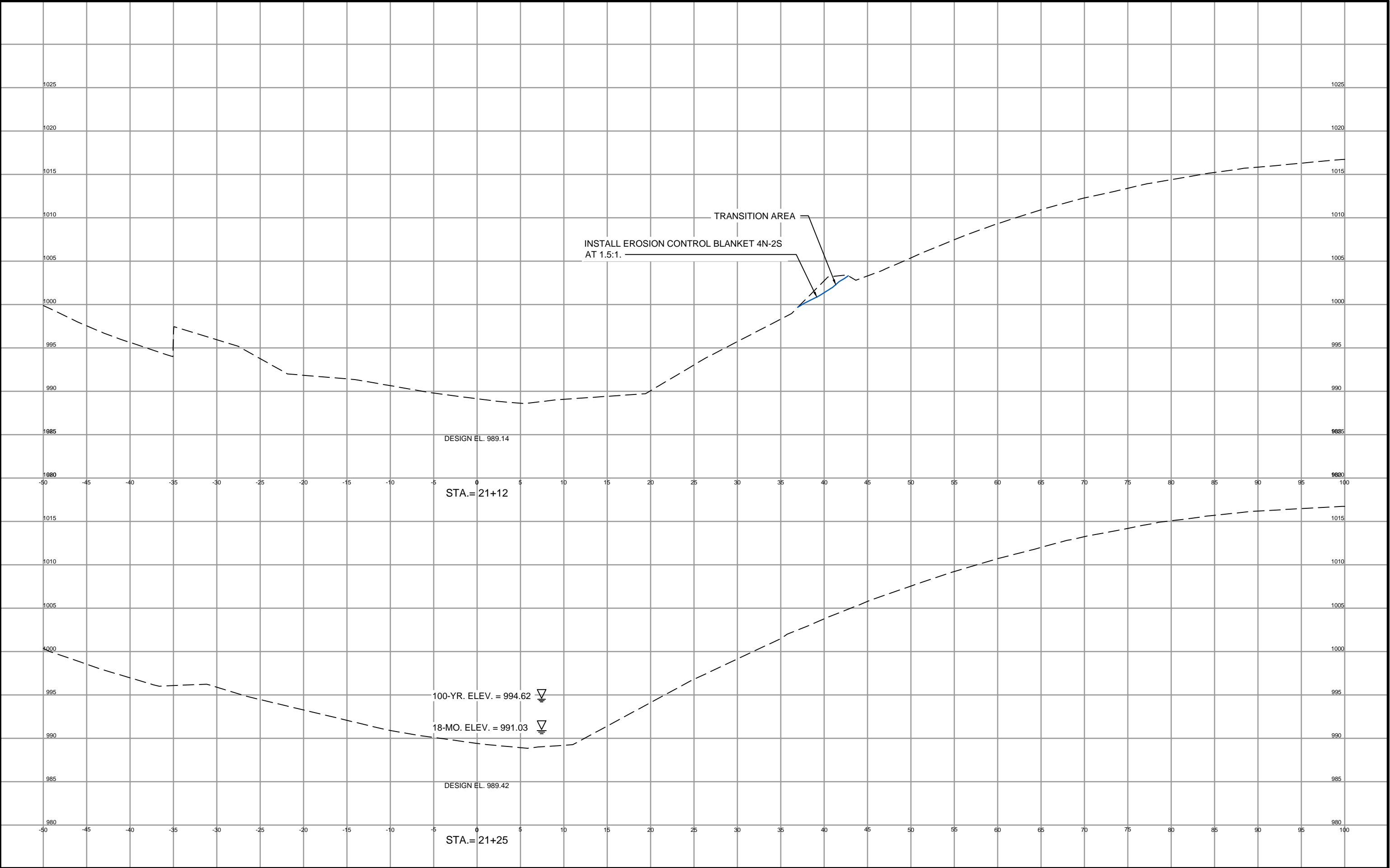
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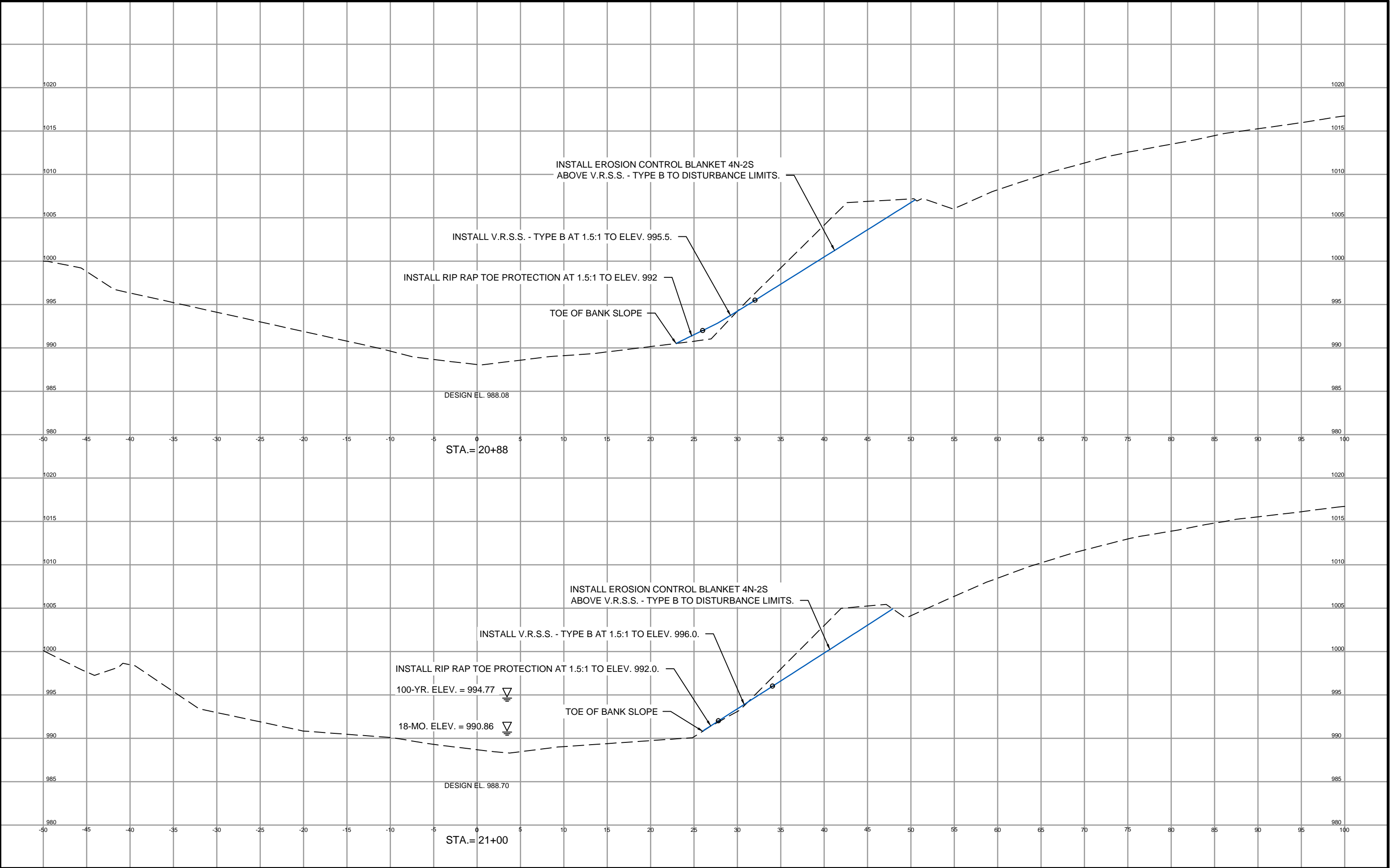
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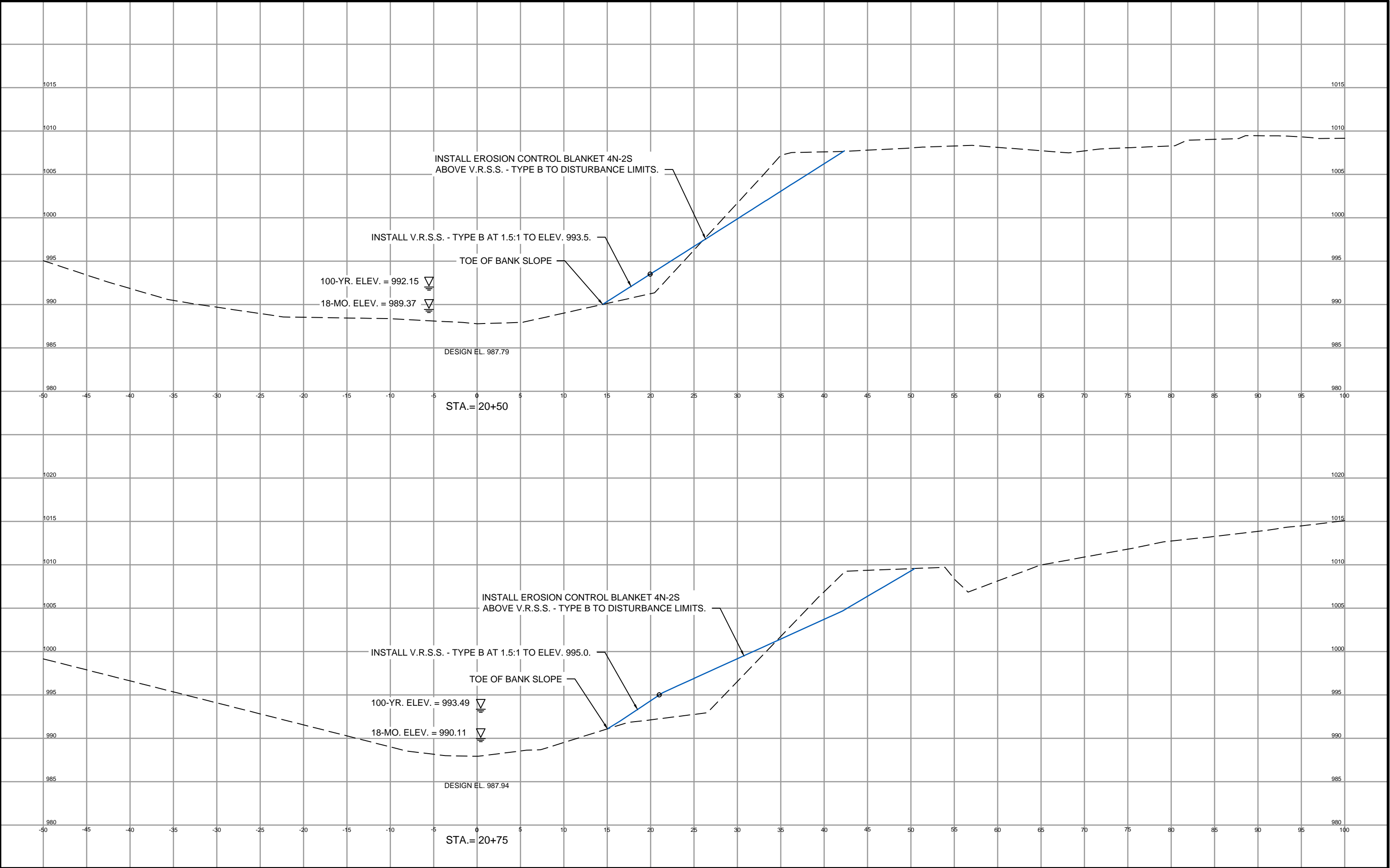
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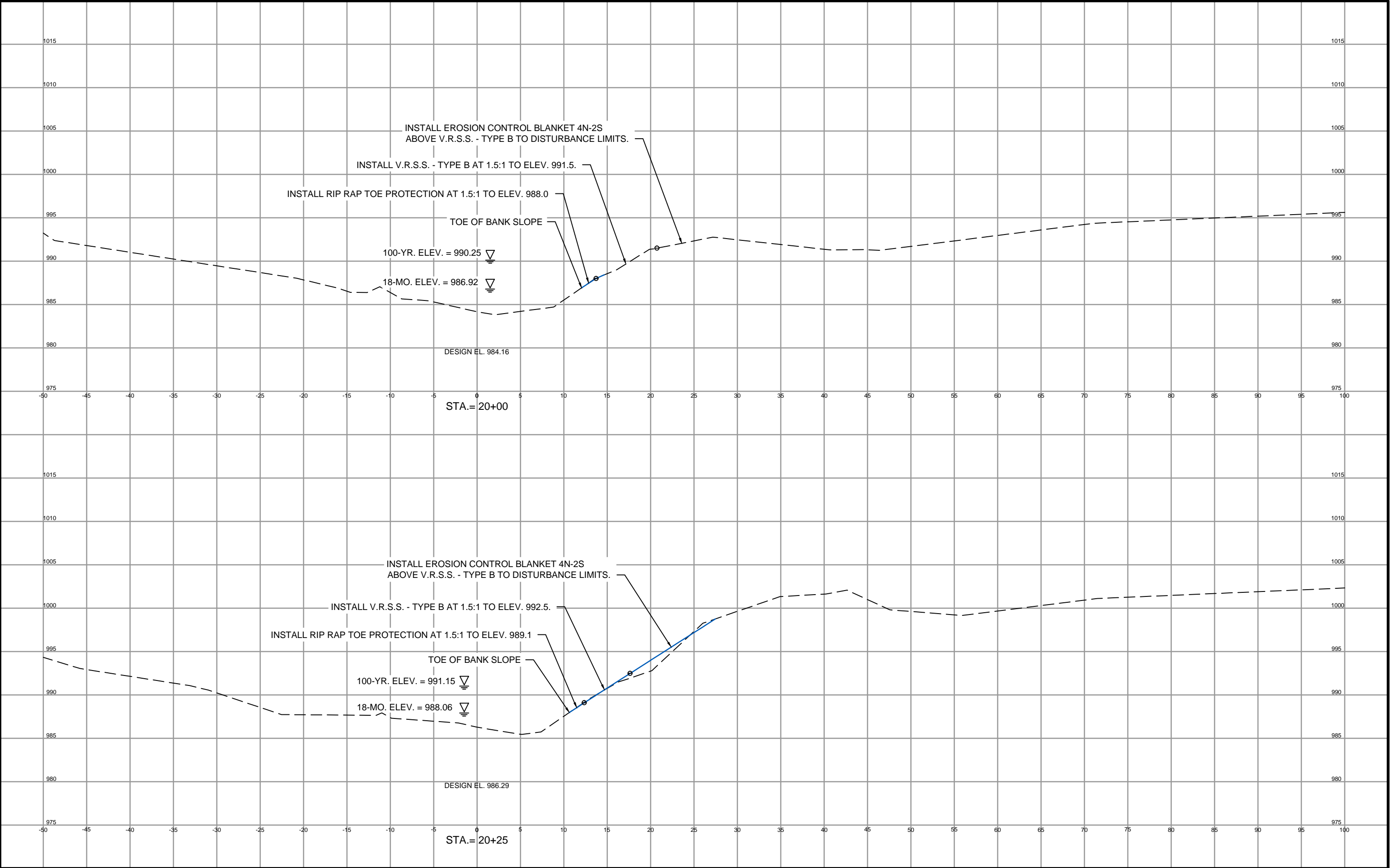
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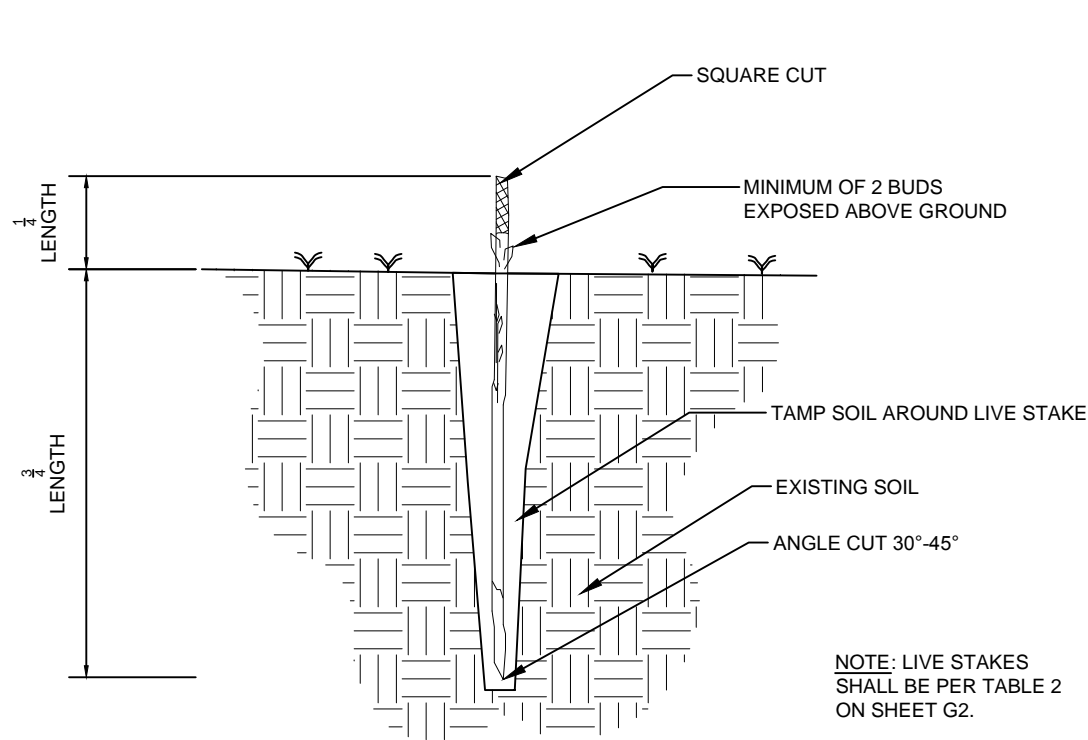
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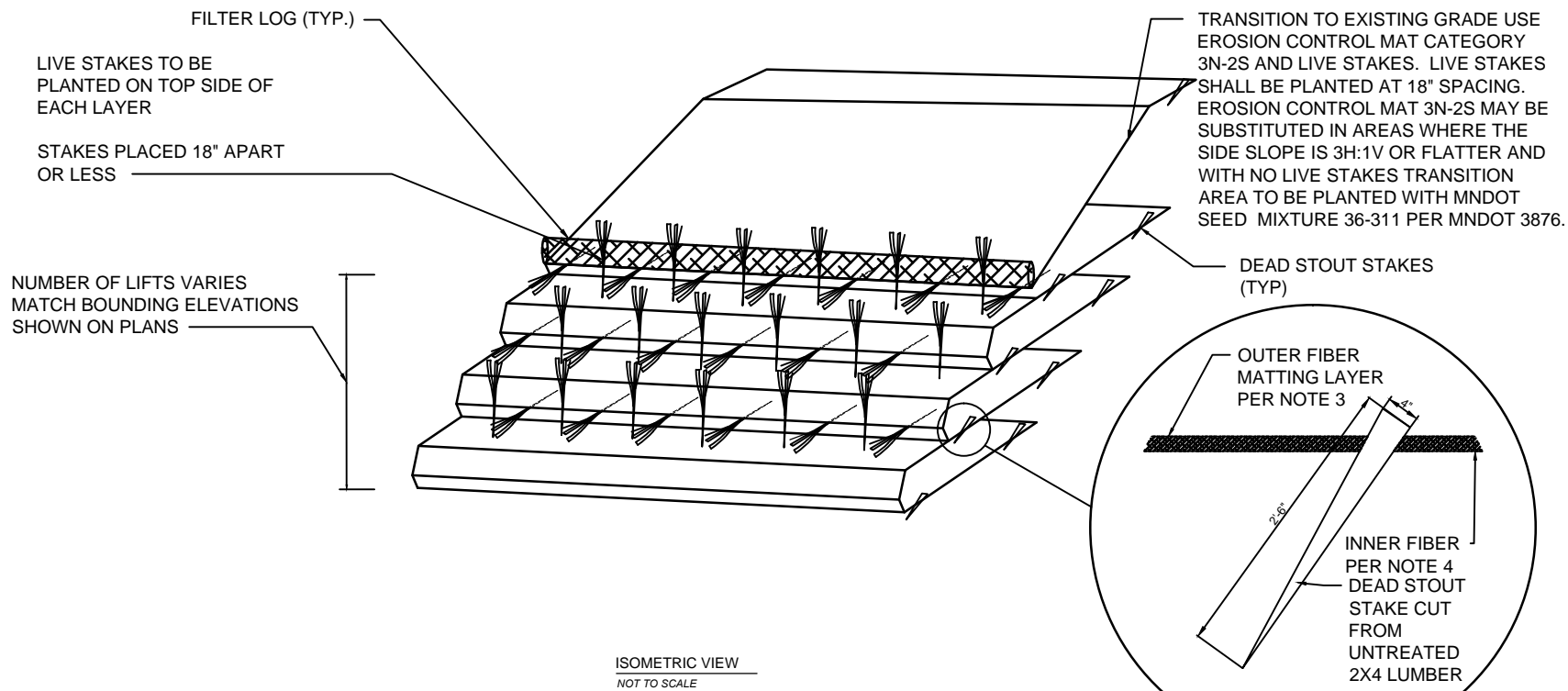
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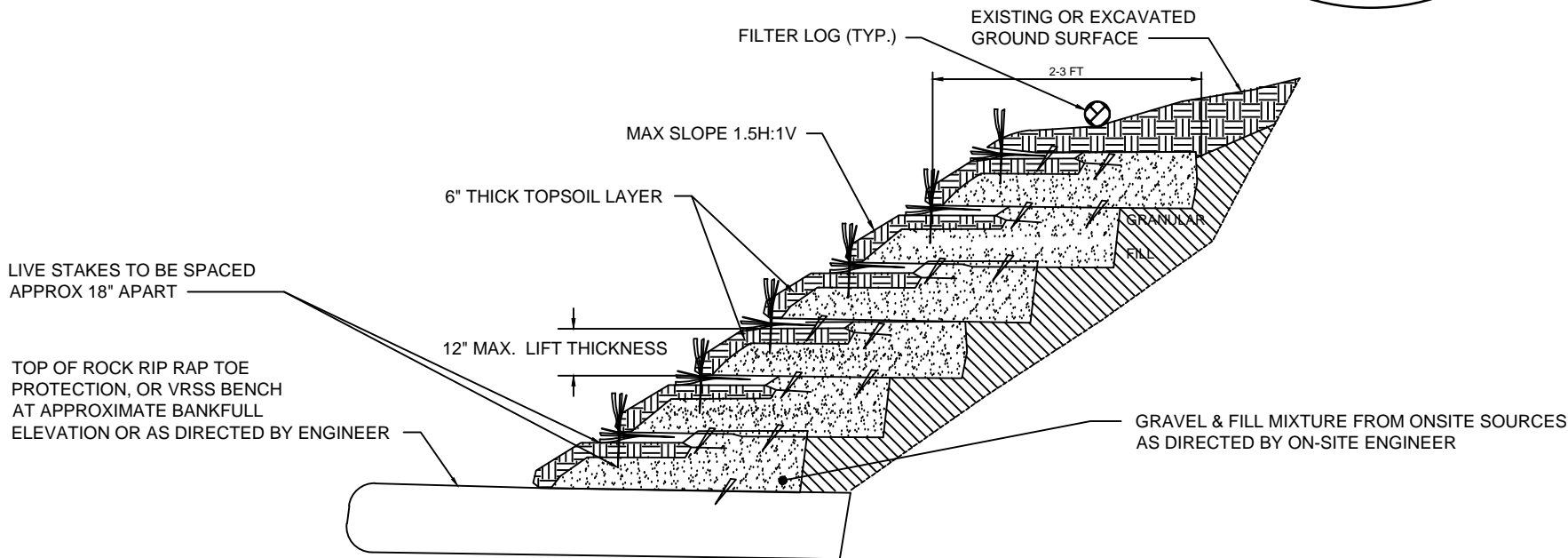
A LIVE STAKES
C17 NOT TO SCALE

GENERAL NOTES ON V.R.S.S. - TYPE B

1. THE ENGINEER MUST BE NOTIFIED AT LEAST 3 DAYS PRIOR TO INSTALLATION AND MUST BE ON SITE DURING INSTALLATION.
2. THE BOTTOM OF V.R.S.S. STABILIZATION - TYPE B SHALL BE AT THE BANKFULL ELEVATION OR AS DIRECTED BY THE ENGINEER. THE TOP OF V.R.S.S. STABILIZATION - TYPE B SHALL BE ABOVE THE 100-YR ELEVATION AND AS DIRECTED BY THE ENGINEER.
3. LAY NATURAL FIBER MATTING ON BOTTOM OF THE BENCH, OVERLAPPING ADJACENT MATTING BY 1 FOOT. THE OUTER EXPOSED FIBER MATTING LAYER OF EACH SOIL LIFT SHALL BE GEOCOIR/DEKOWE 900 WOVEN COCONUT FIBER MESH, BIOD-MATTM 90, OR AN ENGINEER APPROVED EQUIVALENT.
4. THE INNER LAYER OF FIBER MATTING FOR EACH SOIL LIFT SHALL BE BIONET C125BN OR AN ENGINEER APPROVED EQUIVALENT AND SHALL BE LAID BENEATH THE TOPSOIL LAYER. LAY THE INNER LAYER OF BIONET ON TOP OF NATURAL FIBER MATTING OF EACH SOIL LIFT. FABRIC SHOULD BE INSTALLED SMOOTH WITH NO UNNECESSARY FOLDS OR WRINKLES. STAKE THE SHOREWARD END OF THE FIBER MATTING IN PLACE WITH WOODEN STAKED SPACED EVERY THREE FEET AS SHOWN ON THE DRAWINGS.
5. THE FIRST 6 TO 8 INCHES OF THE BOTTOM SOIL LIFT SHALL BE FILLED WITH GRANULAR MATERIAL EXCAVATED FROM THE STREAM BED. THE TOP 6 TO 8 INCHES ON THE FRONT OF THE SURFACE LAYER SHOULD BE COMPRISED OF TOPSOIL MIX AS SHOWN ON THE DRAWINGS.
6. THE TOPSOIL LAYER SHALL BE SEEDED WITH MNDOT SEED MIXTURE 34-361 PER MNDOT 3876 AT 0.7 POUNDS PER 1,000 SQUARE FEET OF LIFT SURFACE AREA AS SHOWN ON THE DRAWINGS.
7. FOLD THE FIBER MATTING OVER THE FILL MATERIAL AND STAKE IN PLACE SO THE FABRIC IS TAUT AND SMOOTH WITH NO UNNECESSARY FOLDS OR WRINKLES. BACKFILL BEHIND THE BOTTOM SOIL LIFT WITH GRANULAR FILTER MATERIAL TO MEET THE EXISTING SLOPE AS SHOWN ON THE DRAWINGS.
8. LIVE STAKES SHALL BE SPACED APPROXIMATELY 18-INCHES ON CENTER AND SHALL BE SELECTED FROM TABLE 2 ON SHEET G2.
9. V.R.S.S. - TYPE B SHALL BE MEASURED FOR PAYMENT BY SQUARE FOOT OF FACE (SFF) WHICH SHALL BE MEASURED HORIZONTALLY (AVERAGE OF THE TOP AND TOE OF V.R.S.S.) AND VERTICALLY FROM THE BOTTOM OF THE FIRST LIFT TO THE TOP OF THE LAST LIFT.
10. INSTALLATION OF V.R.S.S. - TYPE B SHALL INCLUDE FILL MIXTURE, OUTER AND INNER FABRIC TYPES SPECIFIED ABOVE, TOPSOIL AND SEED MIXTURE SPECIFIED ABOVE. LIVE STAKES ARE TO BE PAID FOR SEPARATELY.



ISOMETRIC VIEW
NOT TO SCALE



SECTIONAL VIEW
NOT TO SCALE

B LIVE PLANT VEGETATED REINFORCED SOIL SLOPE (V.R.S.S.) - TYPE B DETAIL
C17 NOT TO SCALE

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PROJECT DATE: 02/22/2016	DRAWN BY: KNN	1	06/15/15	MNDNR PERMITTING COMMENTS	KNN
F.B.:	CHECKED BY: EJT	-	-	-	-
PLOT DATE: 2/22/16, P:\610s\616\00616087\CADD\C3D\616087	Chester Creek Design	REVISED 100715.dwg			

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JOSEPH J. JUREWICZ
Date 02/19/2016 License No. 50396

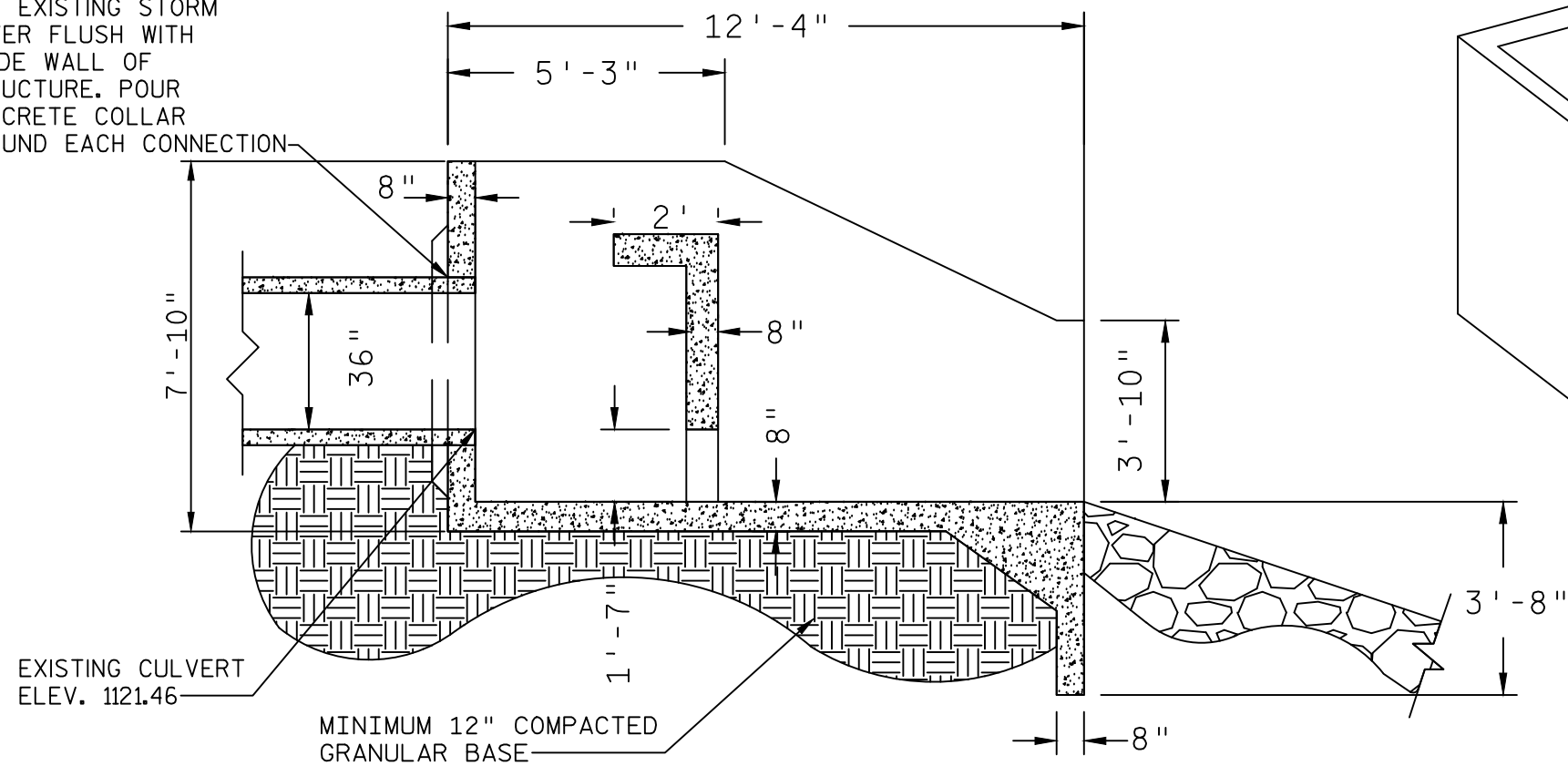
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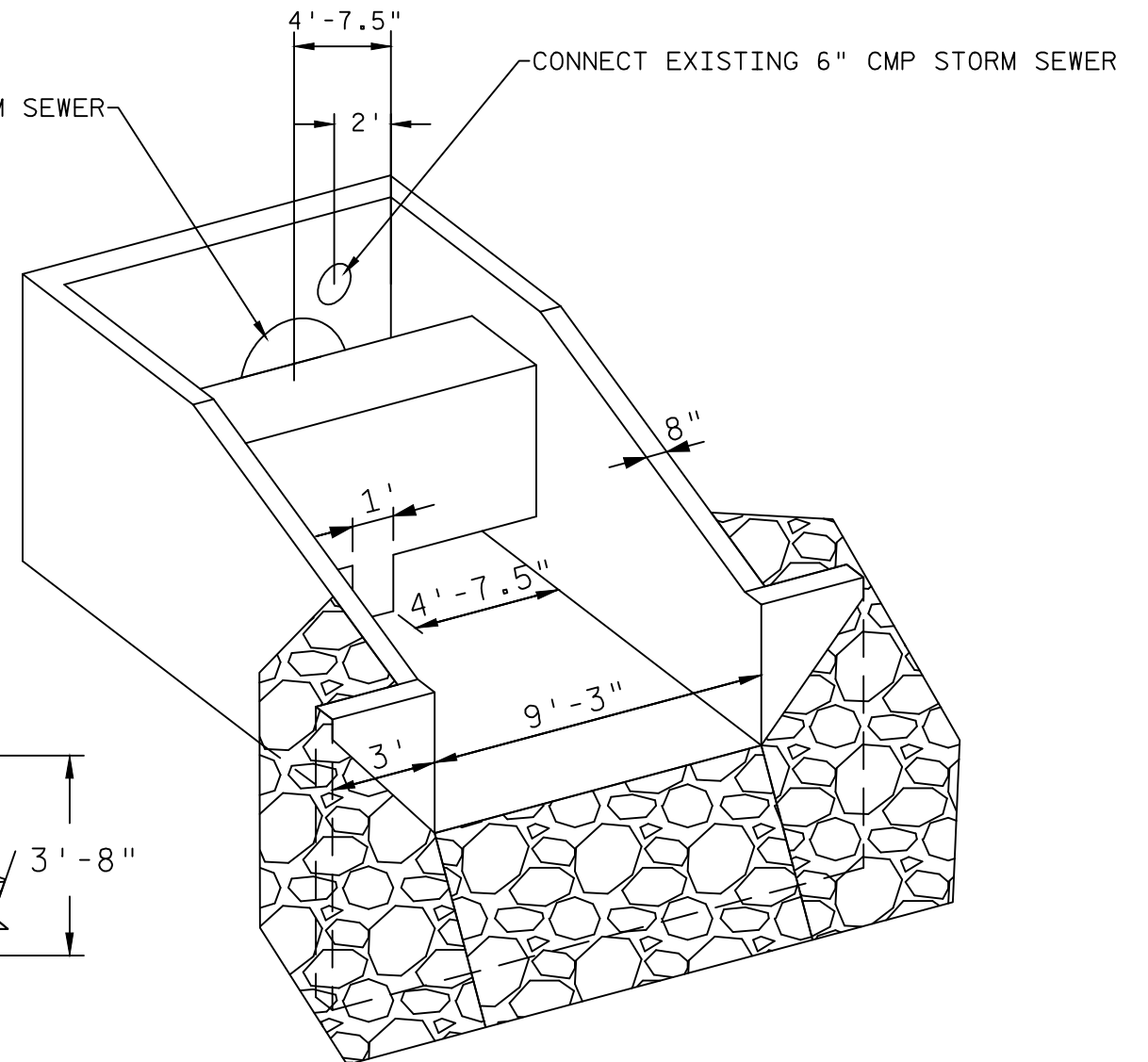
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FILE NO.
00616087
SHEET
C 17

CUT EXISTING STORM
SEWER FLUSH WITH
INSIDE WALL OF
STRUCTURE. POUR
CONCRETE COLLAR
AROUND EACH CONNECTION



PROFILE VIEW



ISOMETRIC VIEW

NOTES

1. ALL ELEMENTS TO BE REINFORCED WITH #5 REBAR AT 12" ON CENTER.
2. INSTALLATION SHALL INCLUDE TRASH RACK, BOLTED TO STRUCTURE AND COMPLETELY COVERING THE VERTICAL OPENING. TRASH RACK SHALL HAVE 4" MINIMUM OPENINGS.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR STRUCTURE, INCLUDING REBAR AND TRASH RACK.
4. GRANULAR BASE SHALL BE INCIDENTAL TO CONCRETE DISSIPATOR STRUCTURE.
5. BOULDERS SHALL BE INCIDENTAL TO RIP RAP, CLASS III.
6. CONTRACTOR SHALL PROVIDE FLOW BYPASS DURING CONSTRUCTION ACTIVITY. ANY WORK RELATED SHALL BE INCLUDED UNDER PAY ITEM "CONTROL OF WATER".

A STORM SEWER IMPACT ENERGY DISSIPATOR
C18 NOT TO SCALE

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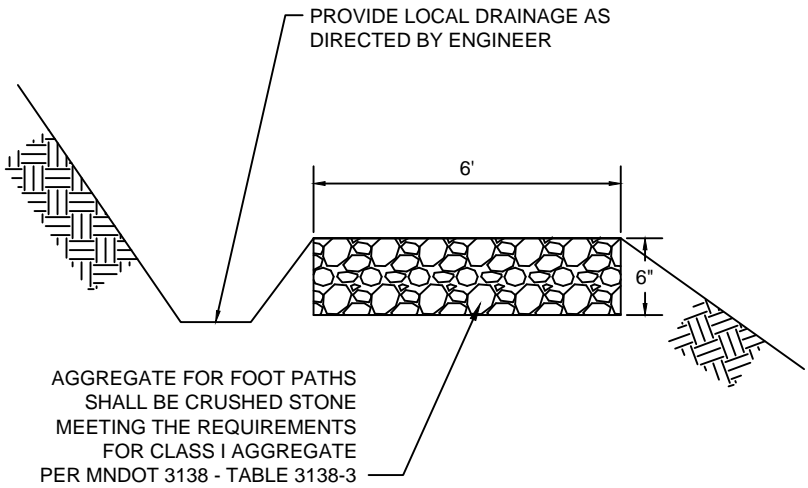
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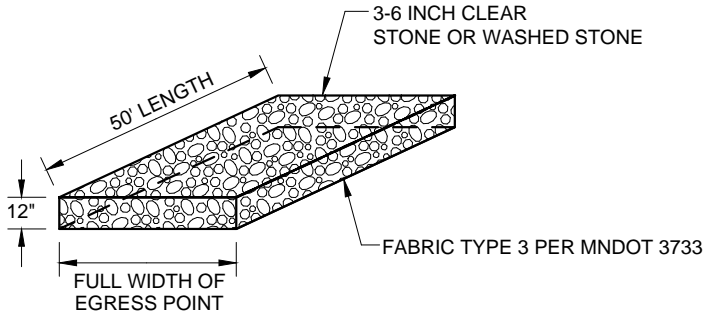
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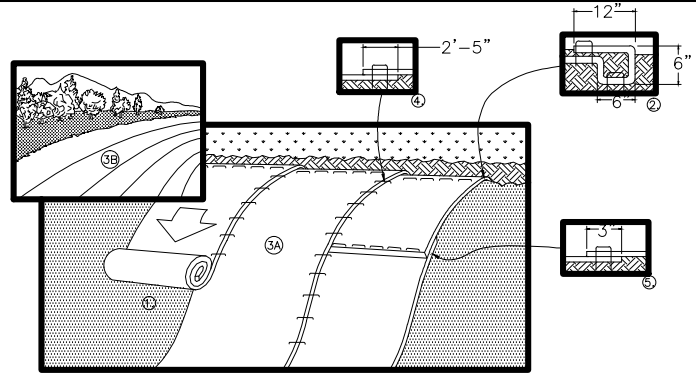
NOTES:
FOOT PATH CONSTRUCTION & RESTORATION SHALL
INCLUDE AGGREGATE, EROSION CONTROL MAT 3N-2S AND
MNDOT SEED MIXTURE 36-311 PER MNDOT 3876.



A FOOT PATH DETAIL
C19 NOT TO SCALE



B STONE TRACKING PAD DETAIL
C19 NOT TO SCALE

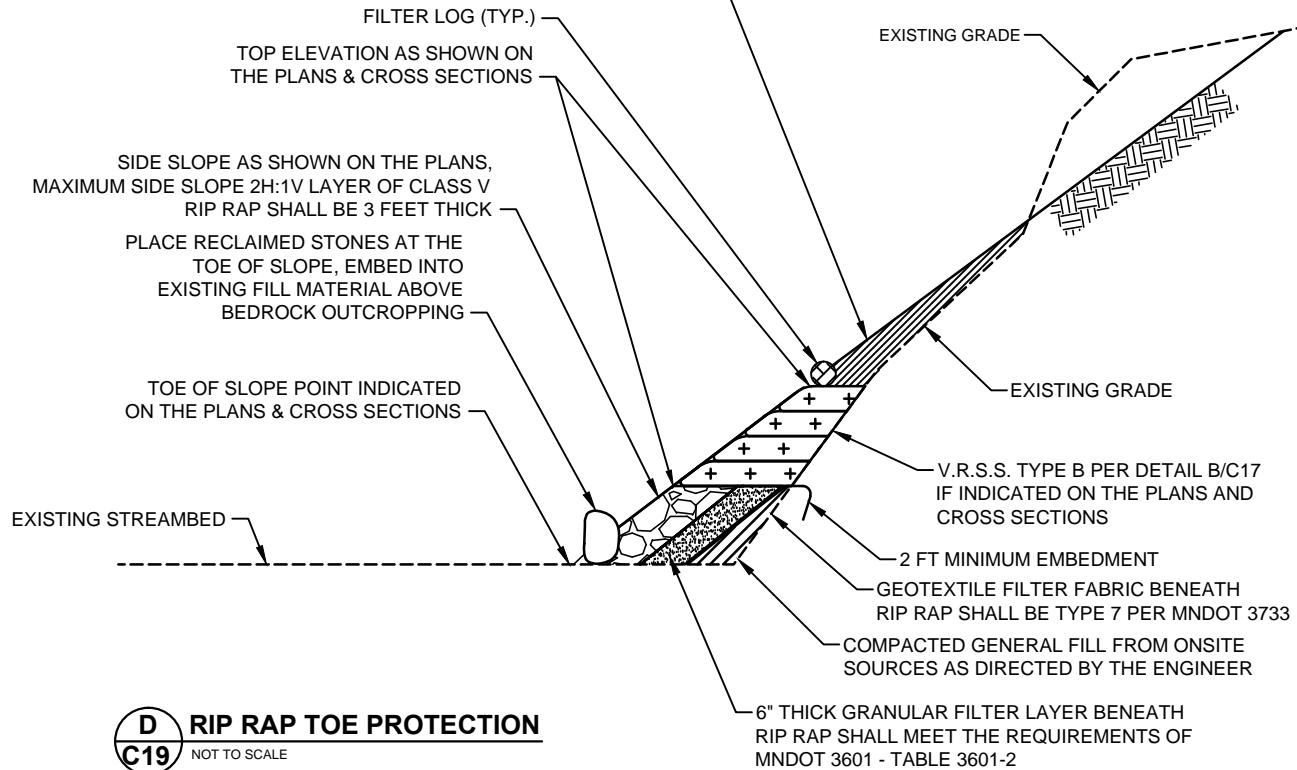


1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2'-5" (5 CM-12.5 CM) OVERLAP DEPENDING ON BLANKET TYPE.
5. CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE BLANKET WIDTH.
6. EROSION CONTROL BLANKET SHALL BE CATEGORY 4N-2S WITH ALL NATURAL NETTING & DITCHING PER MNDOT 3885 - TABLE 3885-3.

NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

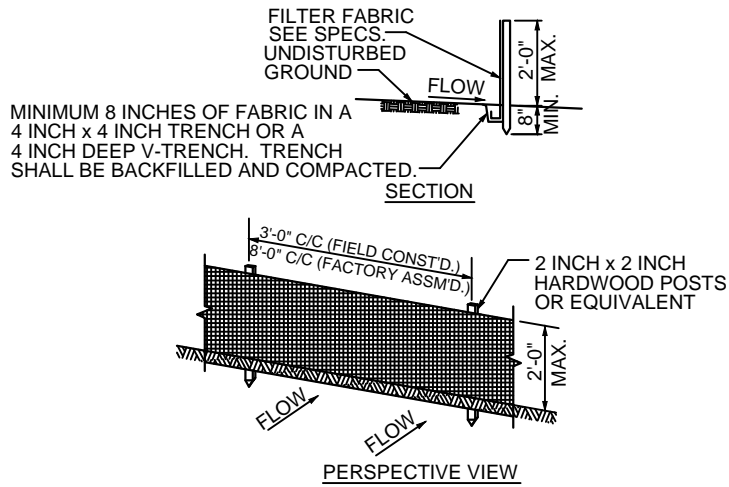
C EROSION CONTROL BLANKET DETAIL
C19 NOT TO SCALE

SLOPE STABILIZATION ABOVE RIP RAP AND/OR V.R.S.S. - TYPE B
TRANSITION TO EXISTING GRADE USE EROSION CONTROL MAT 4N-2S
AND LIVE STAKES. LIVE STAKES SHALL BE PLANTED AT 18" SPACING.
EROSION CONTROL MAT 3N-2S WITH NO LIVE STAKES MAY BE
SUBSTITUTED IN AREAS WHERE THE SIDE SLOPE IS 3H:1V OR FLATTER.



D RIP RAP TOE PROTECTION
C19 NOT TO SCALE

- NOTES:
1. LARGER ROCK SHALL BE PLACED ALONG THE OUTER EDGE OF THE TOE.
 2. INSTALLATION OF ROOT RAP SHALL INCLUDE TOPSOIL AND MNDOT SEED MIXTURE 34-361.
 3. RIP RAP TYPE V INSTALLATION SHALL INCLUDE GRANULAR FILTER LAYER, GEOTEXTILE FABRIC AND TYPE V RIP RAP.



- GENERAL NOTES:
1. ENDS OF FENCE SHALL BE TURNED UPSLOPE 1 TO 2 FEET IN ELEVATION TO PREVENT FLANKING.
 2. STAPLE FABRIC WITH 1/2 INCH (MINIMUM) STAPLES TO THE UPSLOPE SIDE OF THE POSTS.
 3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
 4. SILT FENCE SHALL BE INCIDENTAL TO PROJECT MOBILIZATION.

E TYPICAL SILT FENCE INSTALLATION AT SITE PERIMETER DETAIL
C19 NTS

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						10/6/15		MNDNR PERMITTING COMMENTS			JJJ
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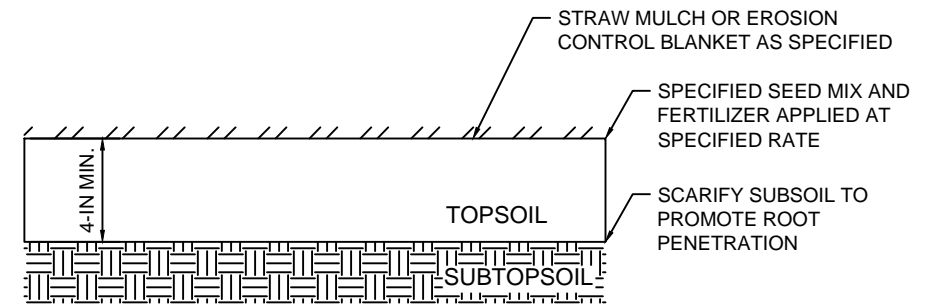
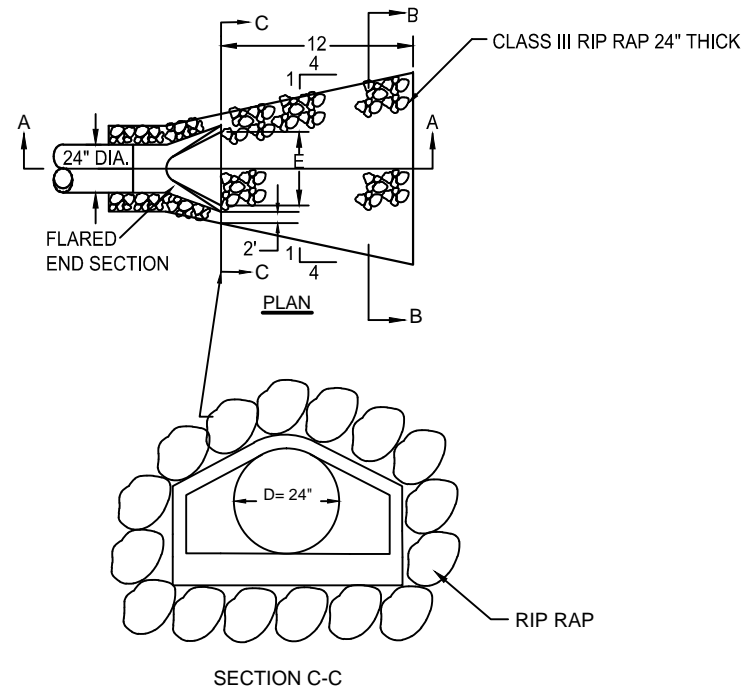
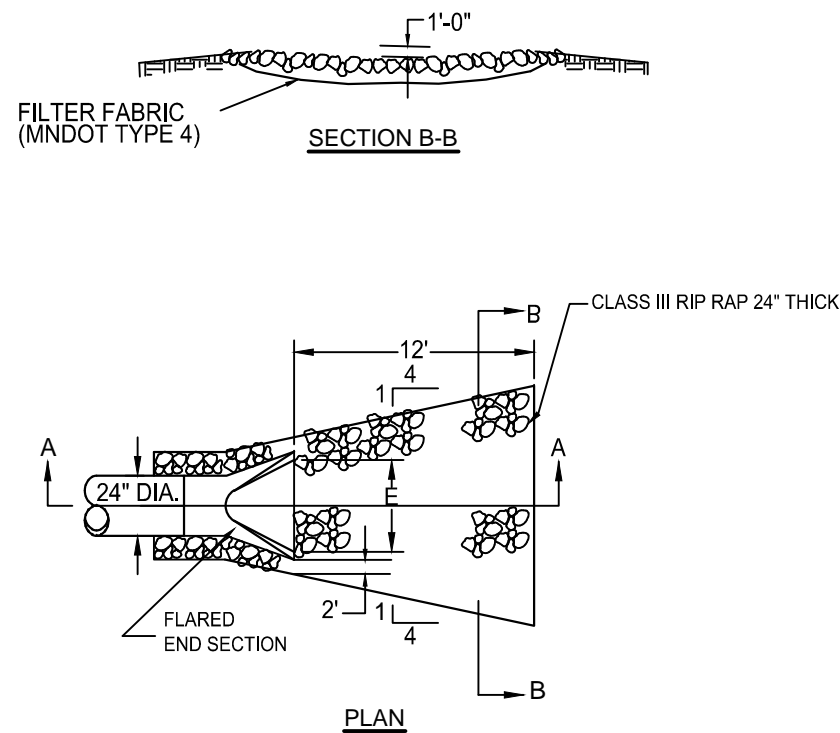


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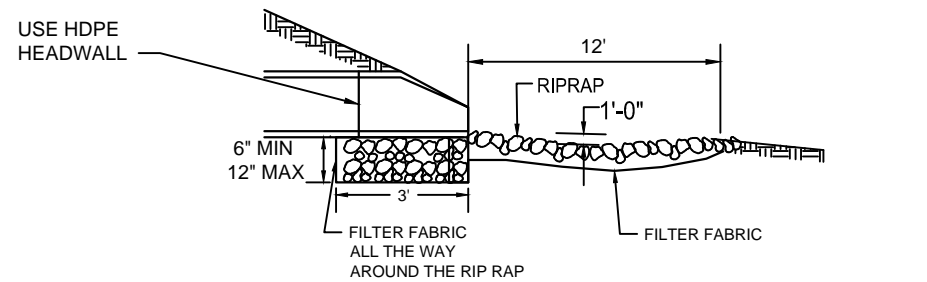
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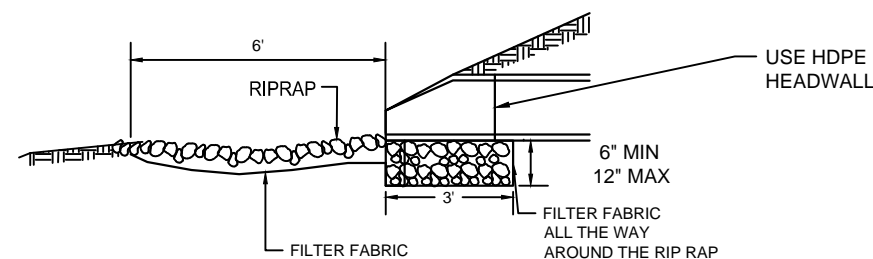
NOTE: WHERE REQUIRED, PLANT HERBACEOUS PLUGS ACCORDING TO PLAN.

D PROJECT # 582 XX- CULVERT INTAKE DETAIL
C20 NOT TO SCALE

B TOPSOIL AND SEEDING DETAIL
C20 NOT TO SCALE

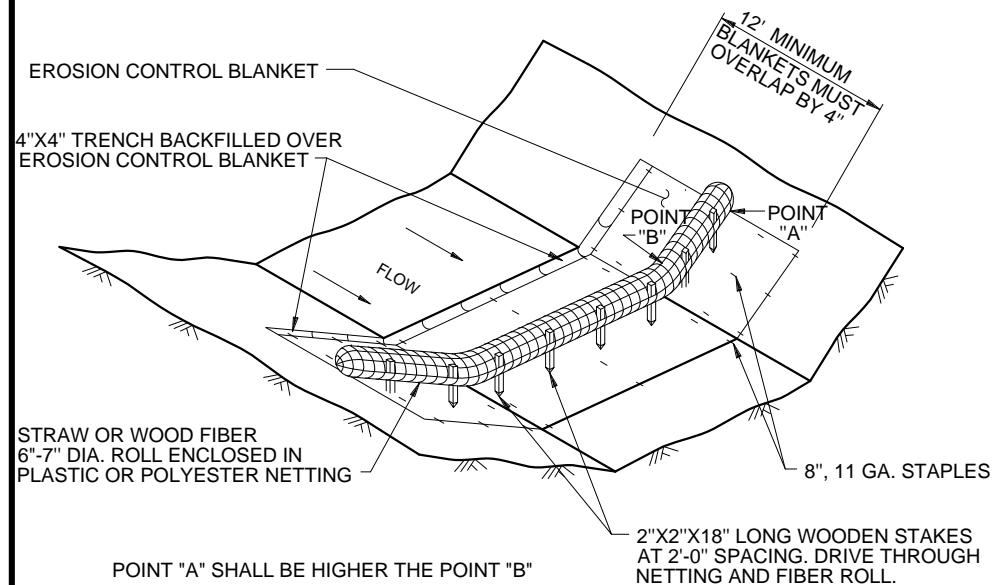


SECTION A-A (DOWNSTREAM)



SECTION A-A (UPSTREAM)

A PROJECT #582 XX - STORM SEWER OUTFALL DETAIL
C20 NOT TO SCALE



C FILTER LOG BLANKET SYSTEM DETAIL
C20 NOT TO SCALE

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