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TIP PROJECT: B-5374

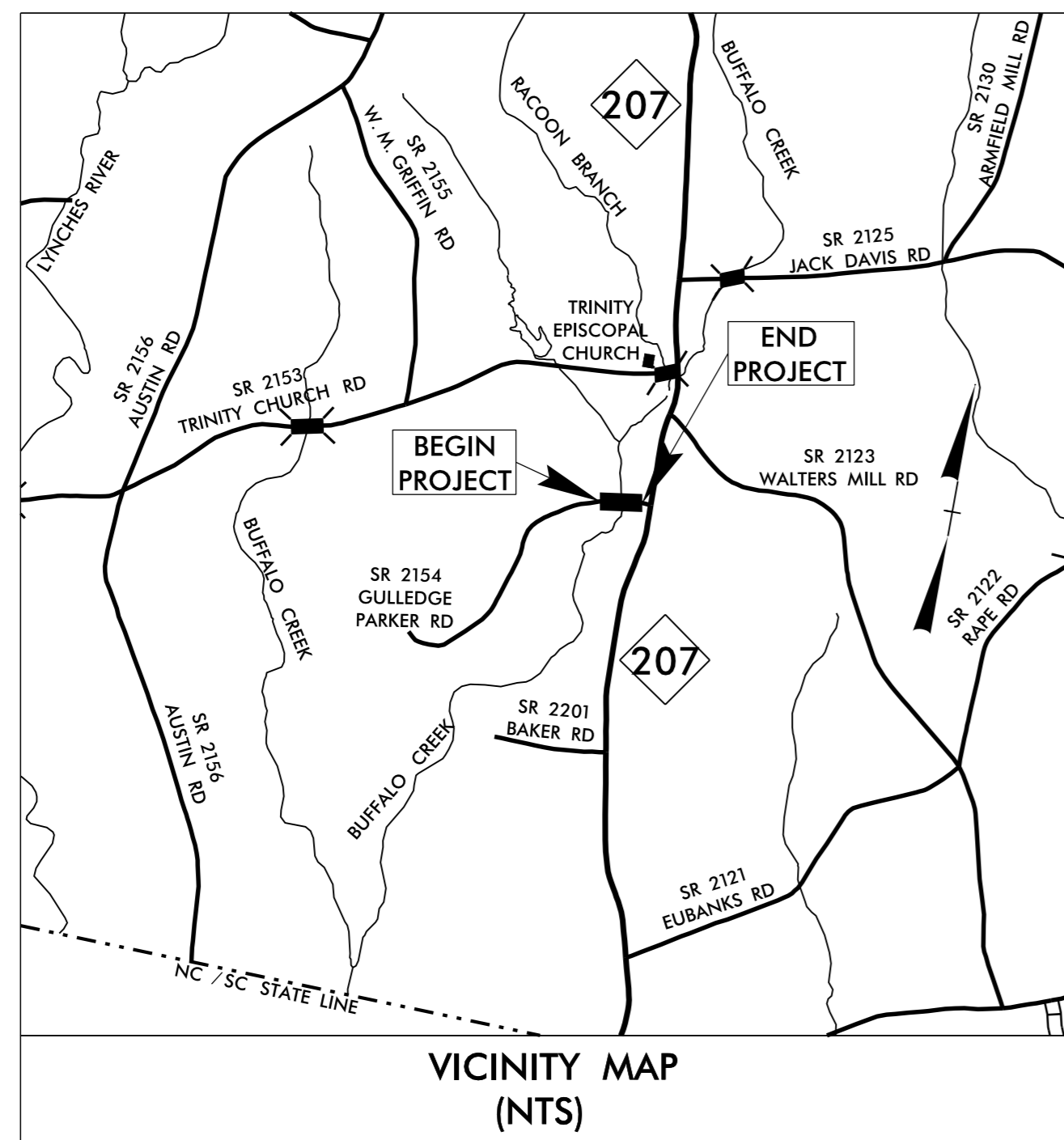
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UNION COUNTY

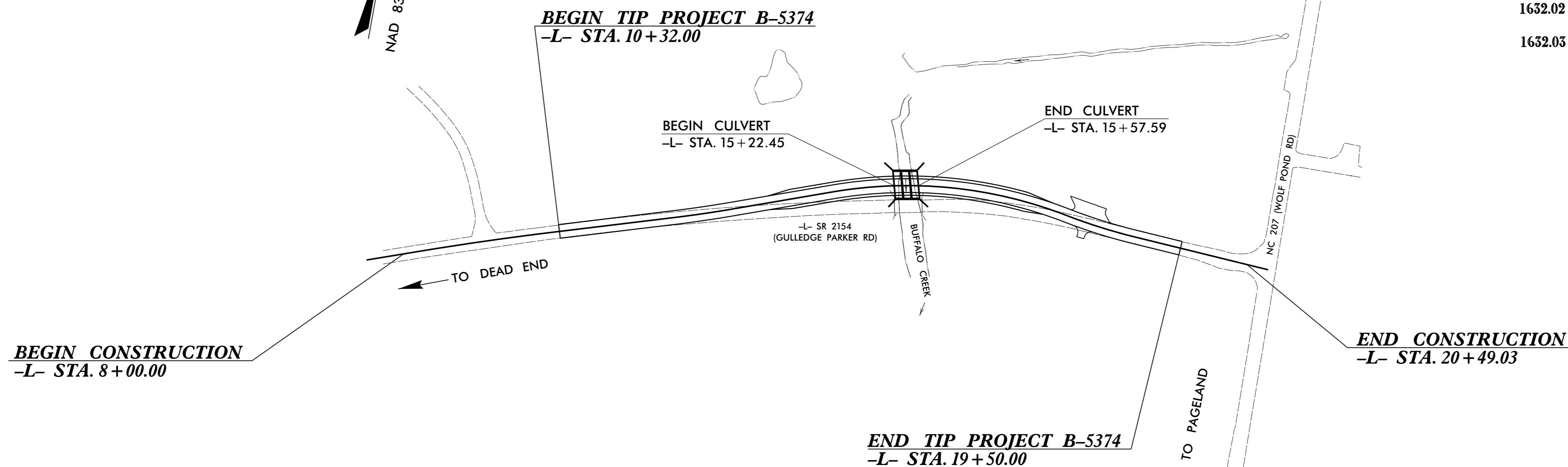
**LOCATION: BRIDGE NO. 448 OVER BUFFALO CREEK
ON SR 2154 (GULLEDGE PARKER RD)**

TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND CULVERT

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL



VICINITY MAP
(NTS)

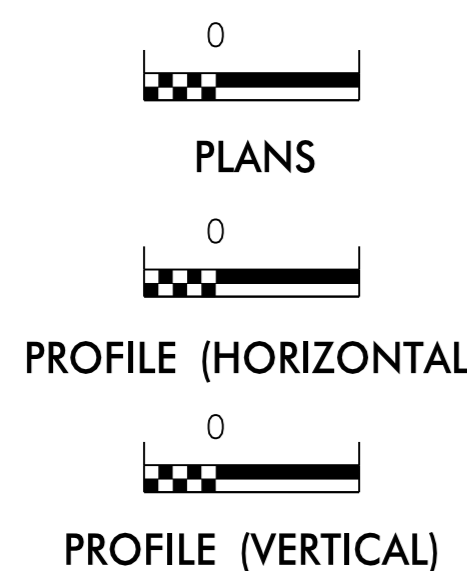


EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	--- TSD ---
1630.05	Temporary Diversion	--- TD ---
1605.01	Temporary Silt Fence	--- SIF ---
1606.01	Special Sediment Control Fence	--- SCF ---
1622.01	Temporary Berms and Slope Drains	--- TBSD ---
1630.02	Silt Basin Type B	--- SB ---
1633.01	Temporary Rock Silt Check Type-A	--- TRSCA ---
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	--- TRSCA/PAM ---
1633.02	Temporary Rock Silt Check Type-B	--- TRSCB ---
	Wattle/Coir Fiber Wattle	--- W ---
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	--- W/PAM ---
1634.01	Temporary Rock Sediment Dam Type-A	--- TRSDA ---
1634.02	Temporary Rock Sediment Dam Type-B	--- TRSDB ---
1635.01	Rock Pipe Inlet Sediment Trap Type-A	--- RPISRTA ---
1635.02	Rock Pipe Inlet Sediment Trap Type-B	--- RPISRTB ---
1630.04	Stilling Basin	--- SBAS ---
1630.06	Special Stilling Basin	--- SSBAS ---
	Rock Inlet Sediment Trap:	
1632.01	Type A	--- RISRTA ---
1632.02	Type B	--- RISRTB ---
1632.03	Type C	--- RISRTC ---
	Skimmer Basin	--- SKBAS ---
	Tiered Skimmer Basin	--- TSKBAS ---
	Infiltration Basin	--- IBAS ---

THIS PROJECT CONTAINS
EROSION CONTROL PLANS
FOR CLEARING AND
GRUBBING PHASE OF
CONSTRUCTION.

GRAPHIC SCALE



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2016 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared in the Office of:

Moffatt and Nichol
4700 Falls of Neuse Rd. Suite 300
Raleigh, NC 27609

Designed by:

JEFFERY L. RECK, PE 3585
NAME LEVEL III CERTIFICATION NO.

Reviewed in the Office of:

ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

Reviewed by:

WES CHANDLER, PE

Roadway Standard Drawings

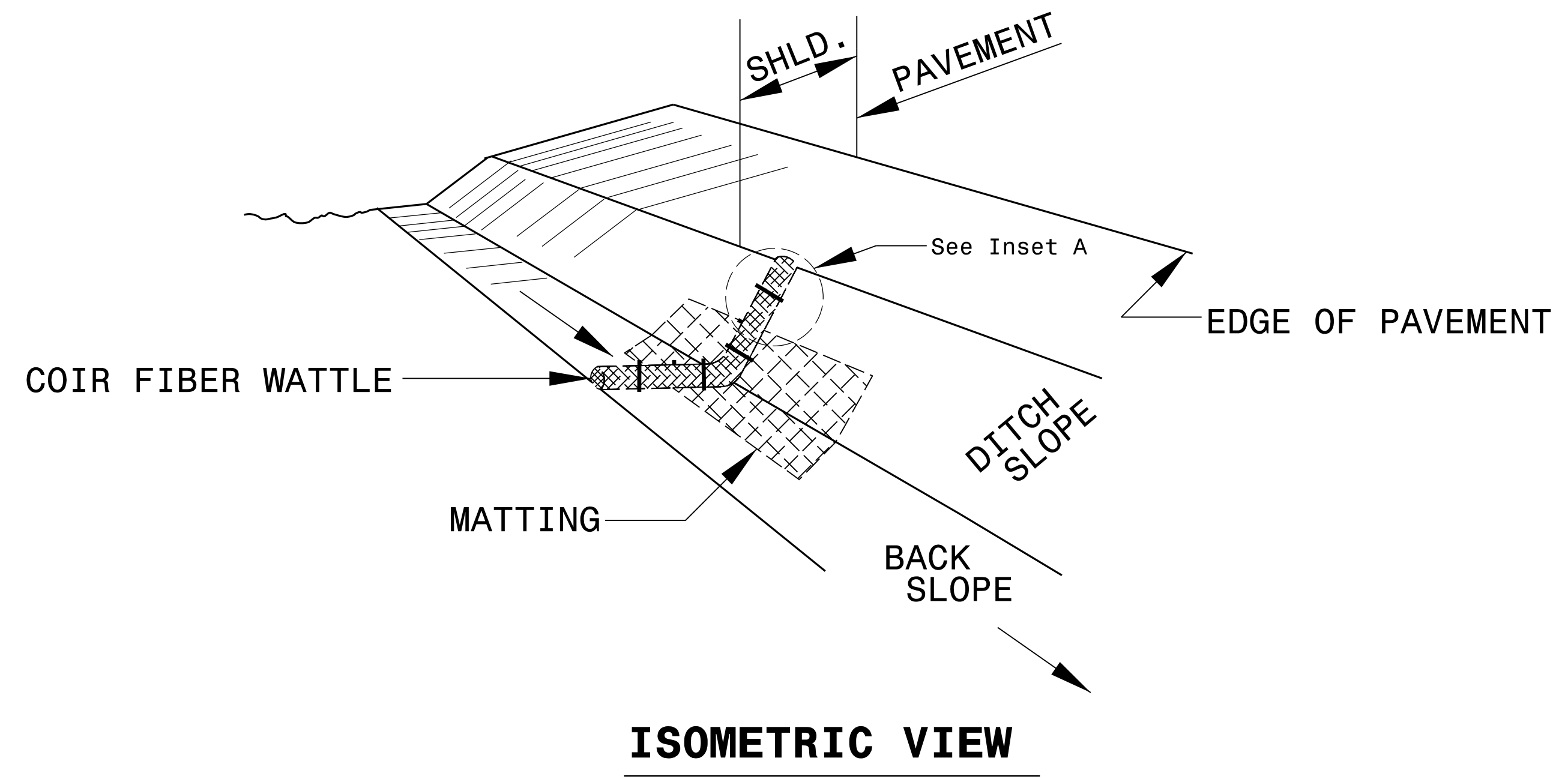
The following roadway english standards as appear in "Roadway Standard Drawings"-- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2018 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

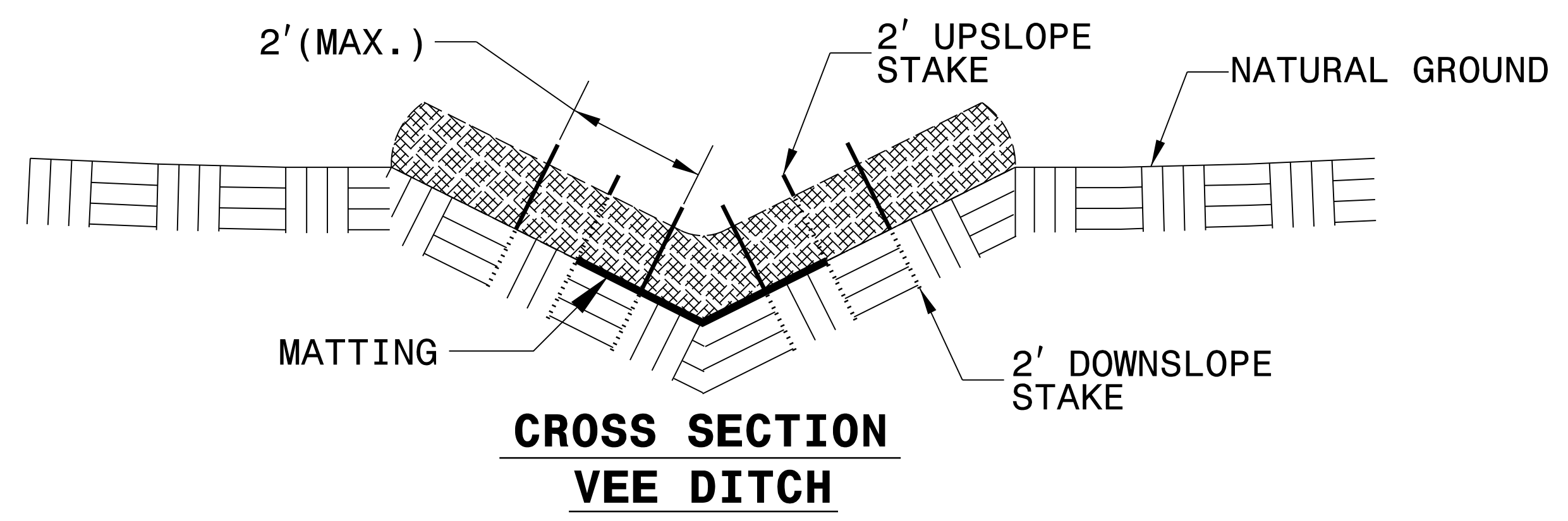
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

NOTES:

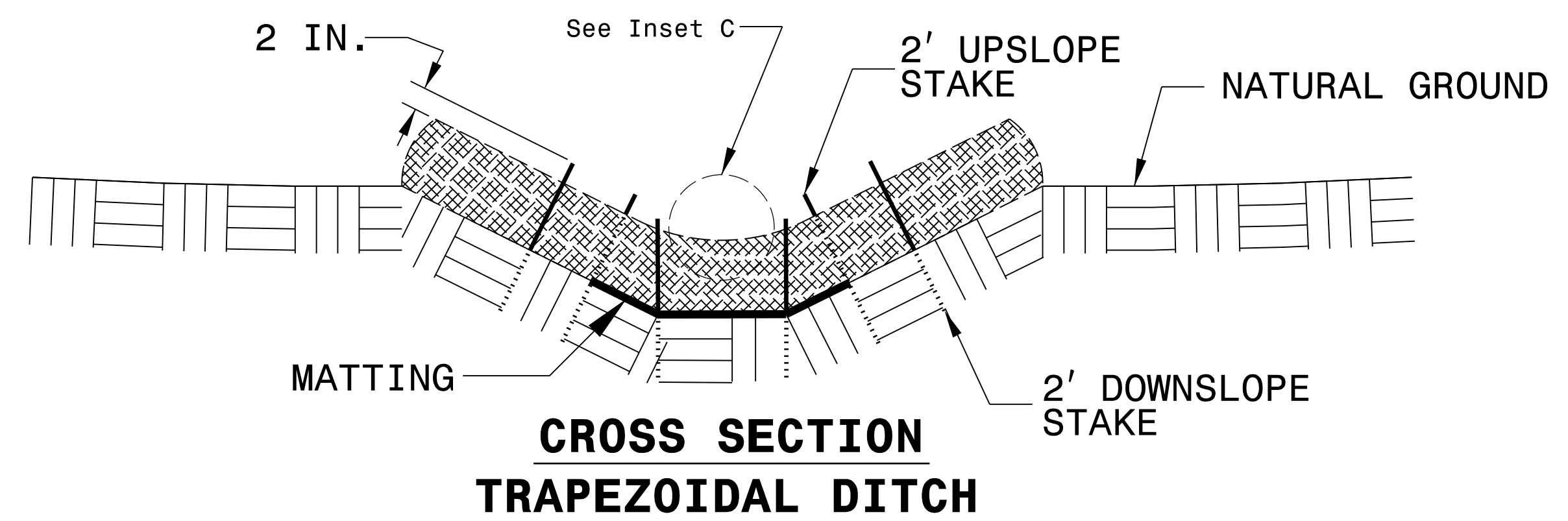
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
- PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
- INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



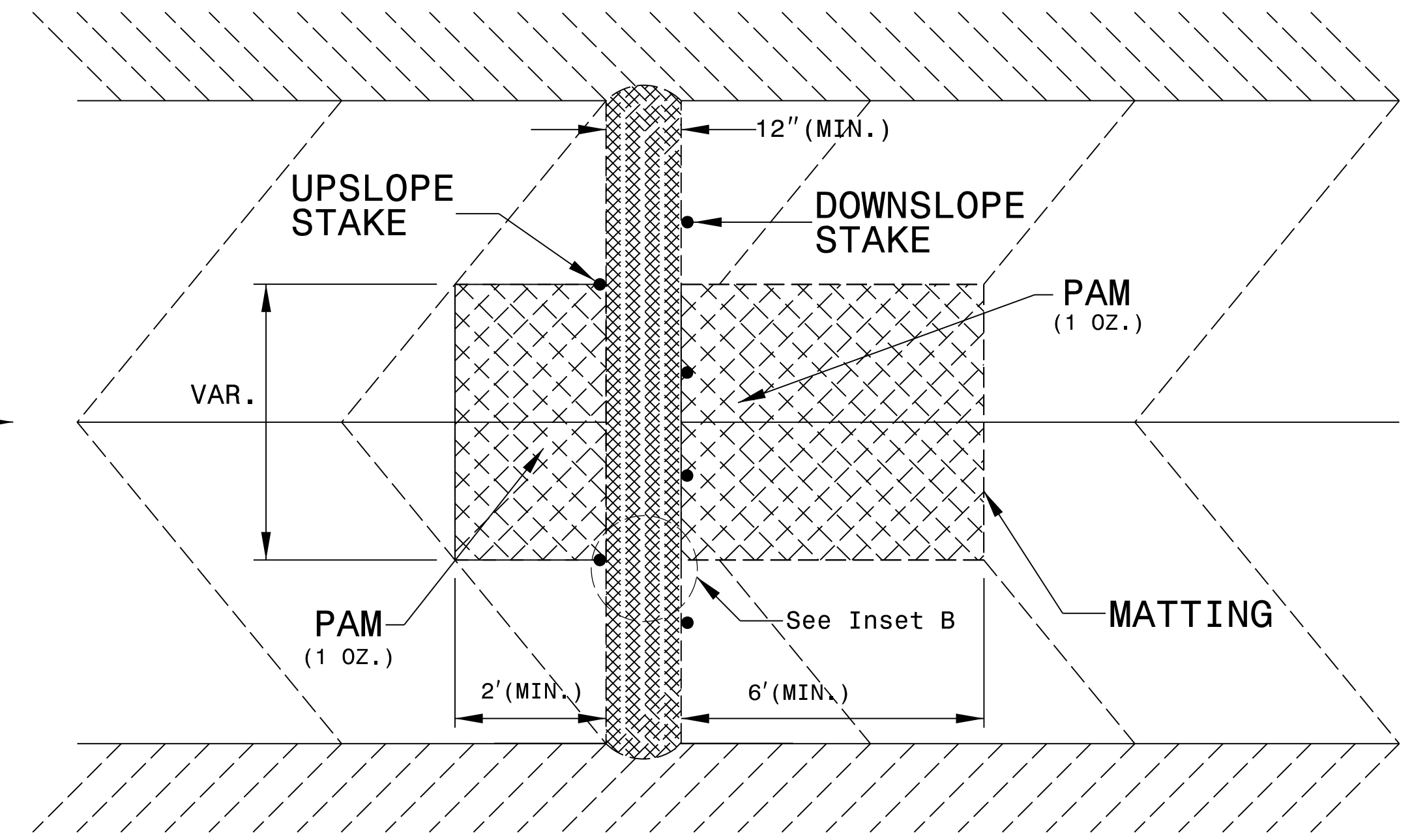
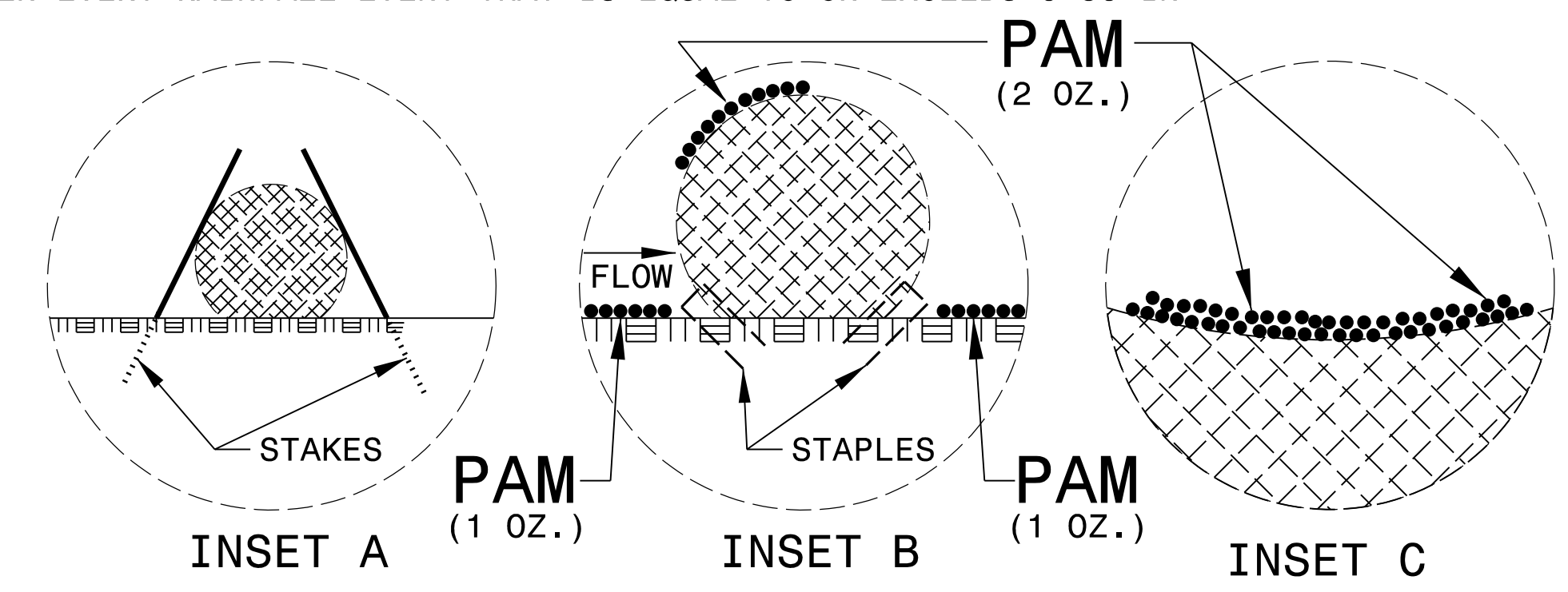
ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

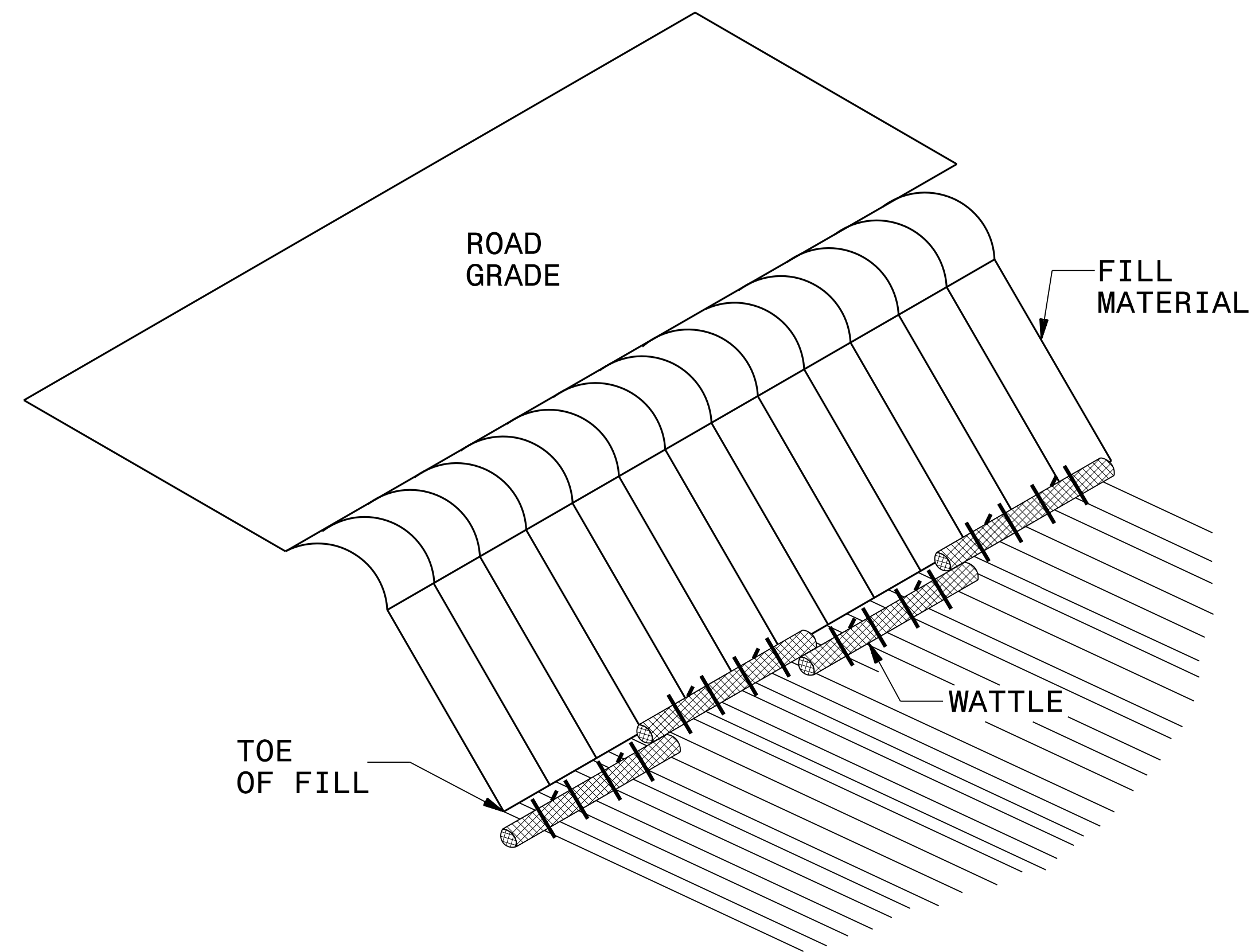


TOP VIEW

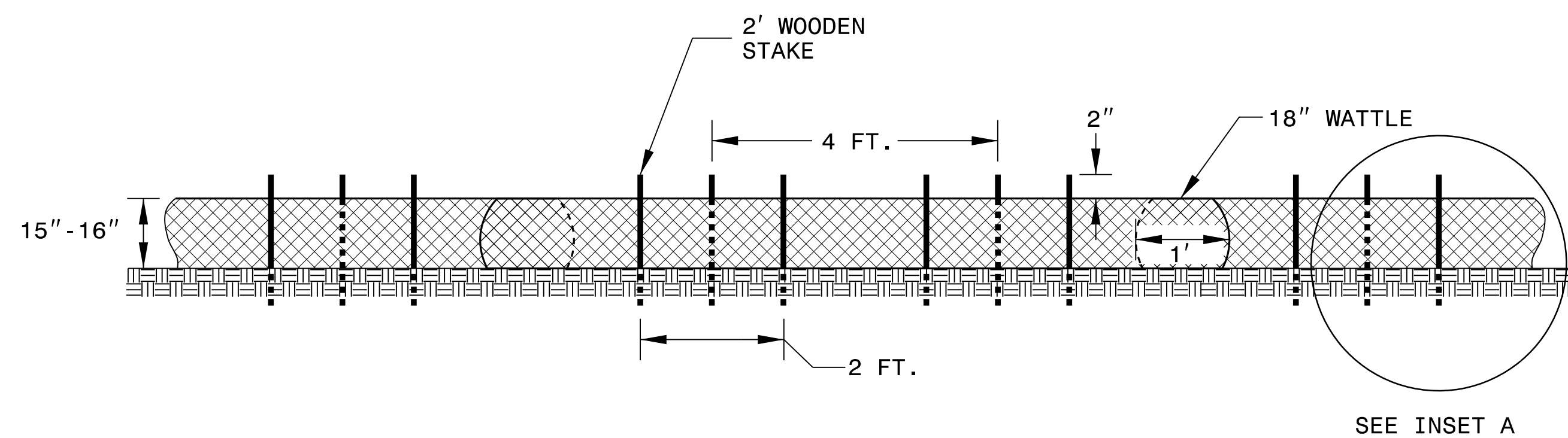
REVISIONS

8/17/99
10/27/2007
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COIR FIBER WATTLE BARRIER DETAIL



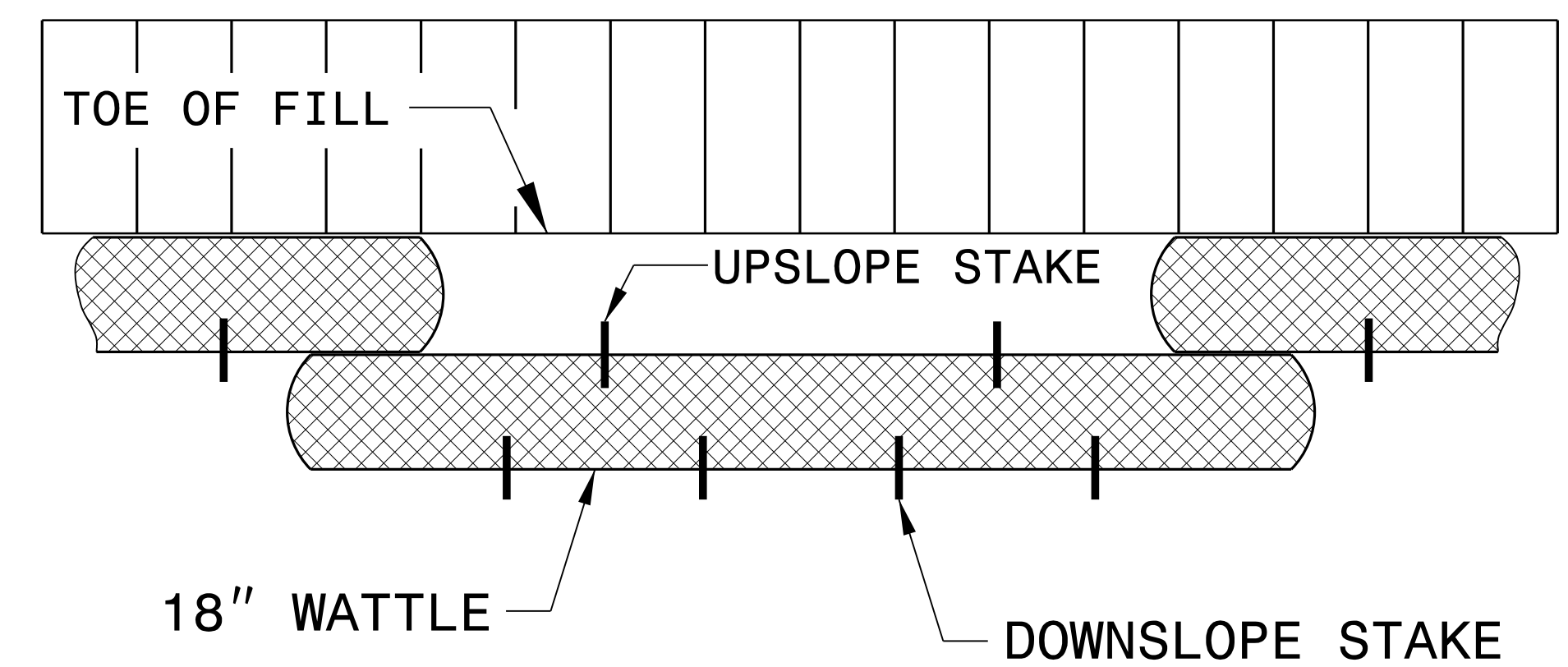
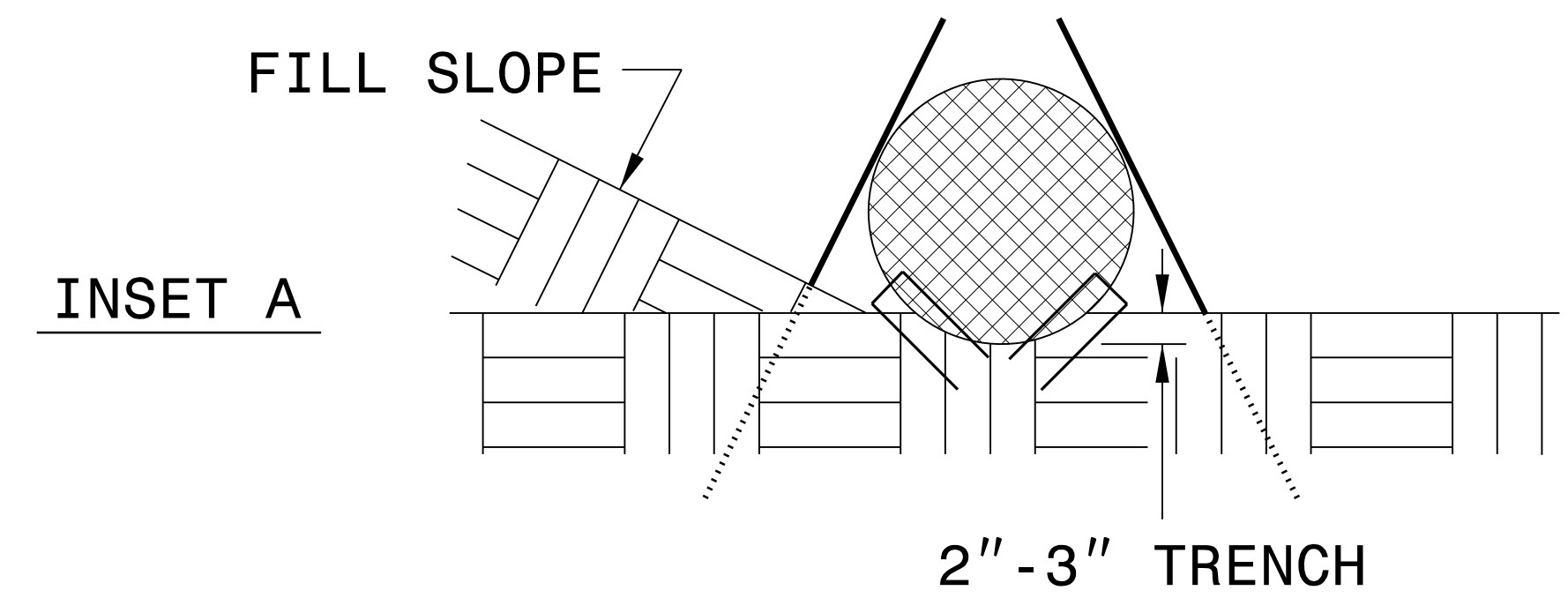
ISOMETRIC VIEW



FRONT VIEW

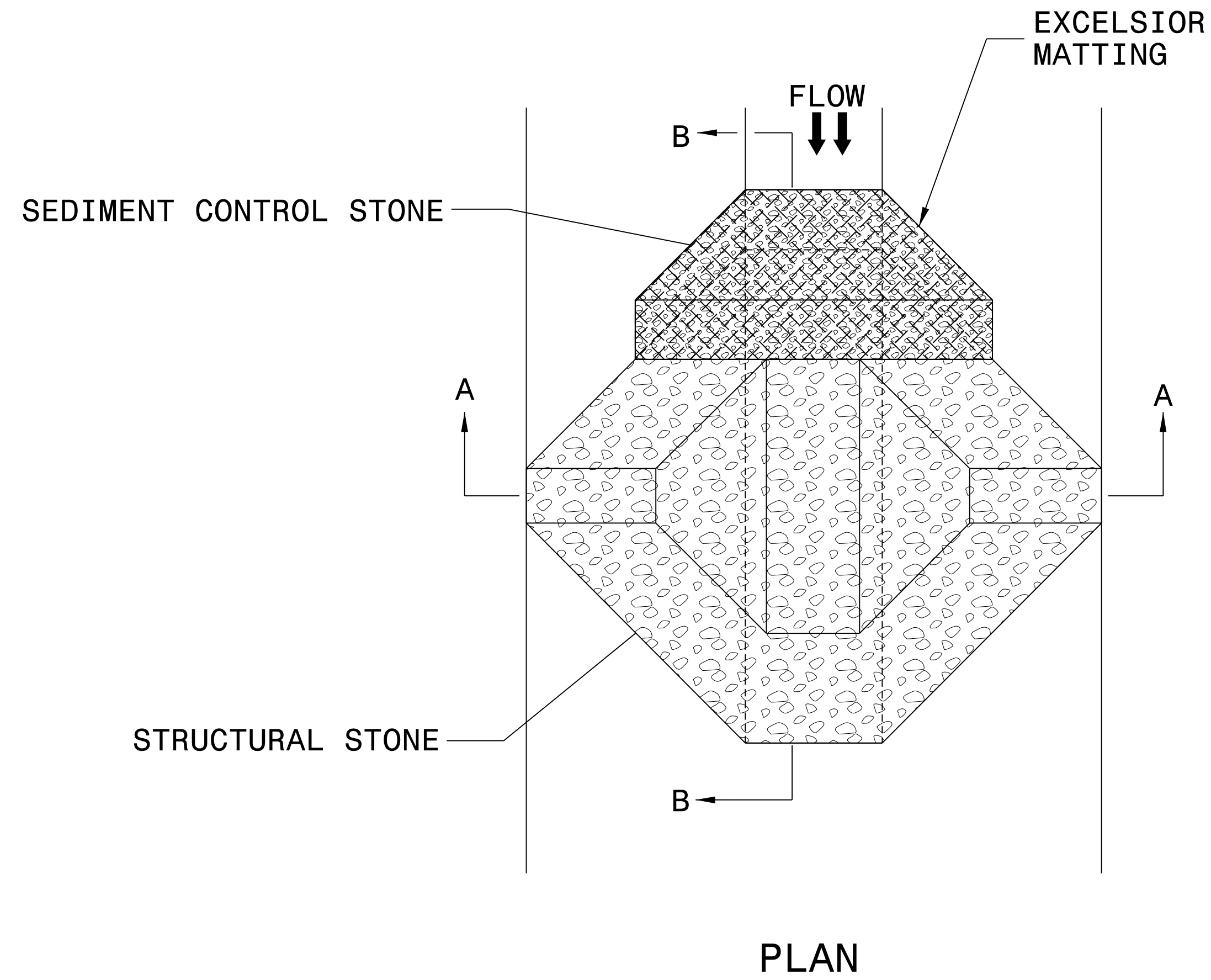
NOTES:

- USE MINIMUM 18 IN. NOMINAL DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLES ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 25 FT.



TOP VIEW

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



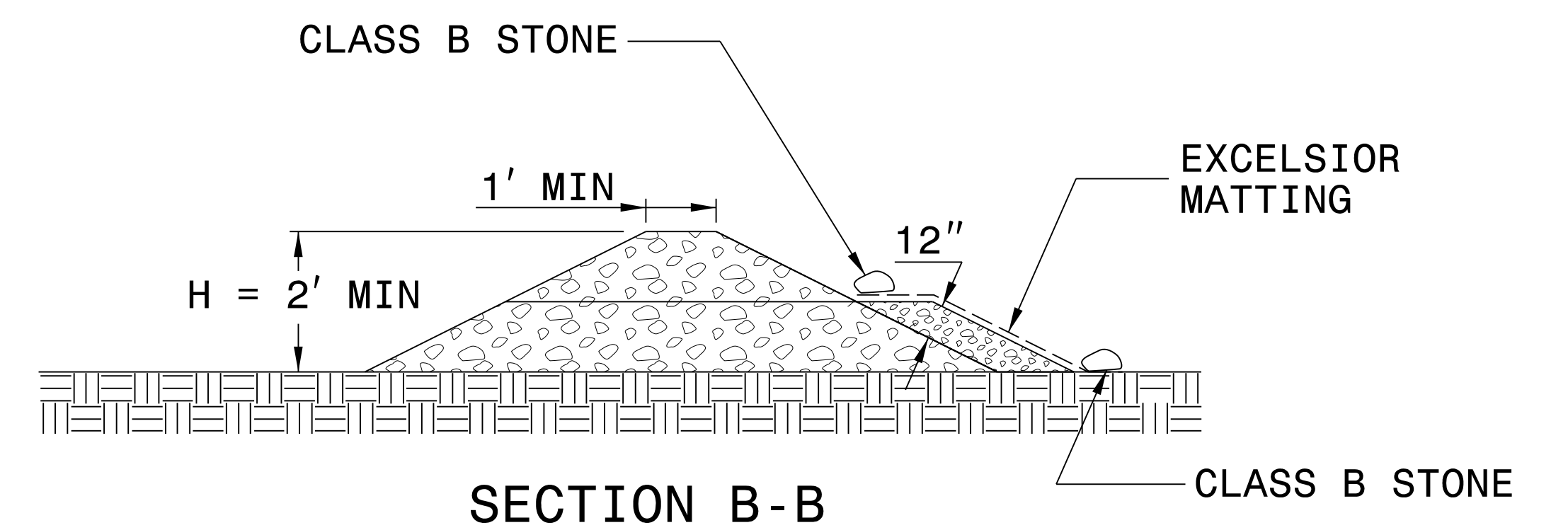
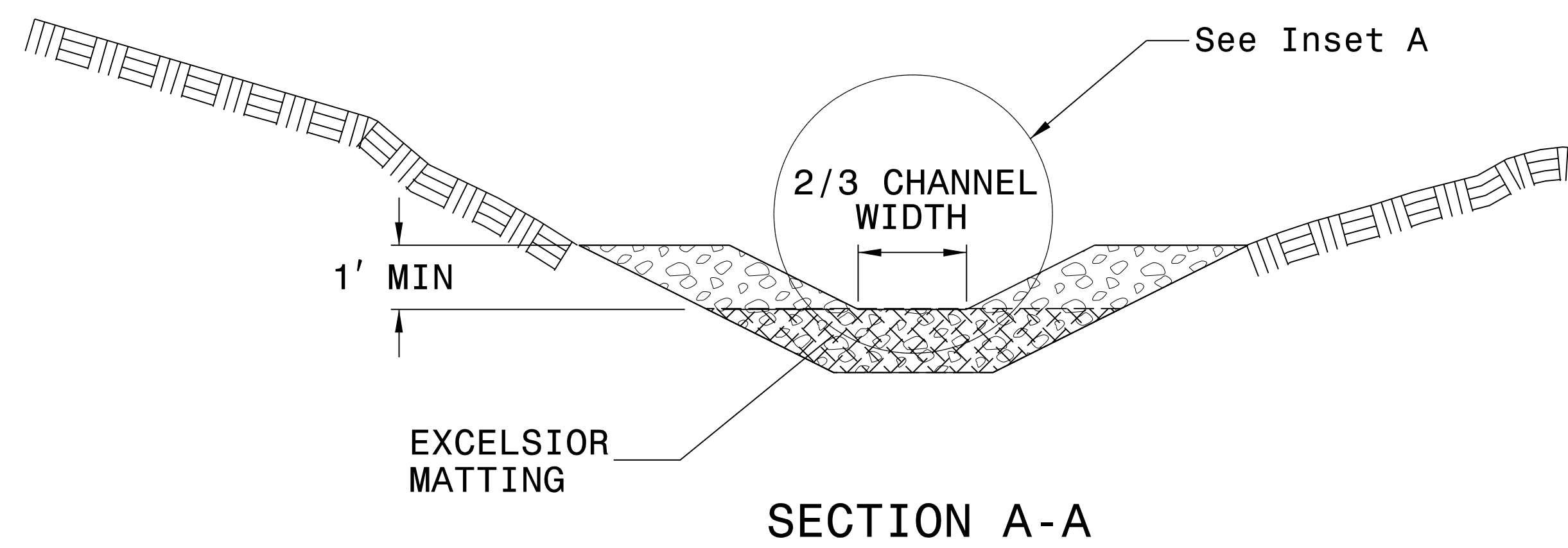
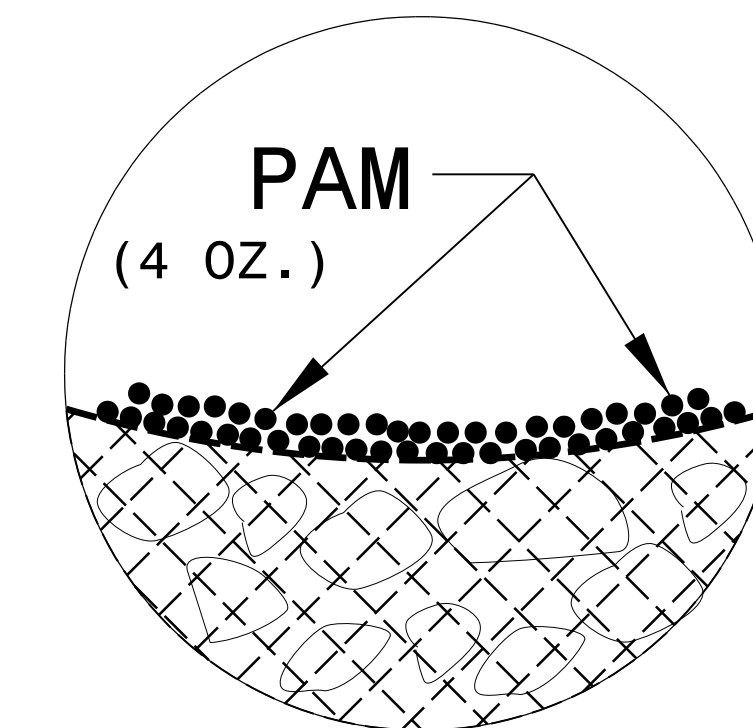
NOTES:

INSTALL TEMPORARY ROCK SILT CHECK TYPE A IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1633.01.

USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.




NOT TO SCALE

REVISIONS

8/17/99

10/27/2017
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8/17/99

PROJECT REFERENCE NO.	SHEET NO.
B-5374	EC-03A
RW SHEET NO.	
 <small>4100 FALLS OF NEUSE ROAD, SUITE 300 RALEIGH, NORTH CAROLINA 27609 (919) 781-4626 VOICE (919) 781-4869 FAX NC License NO.: F-0105</small>	

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

REVISIONS

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

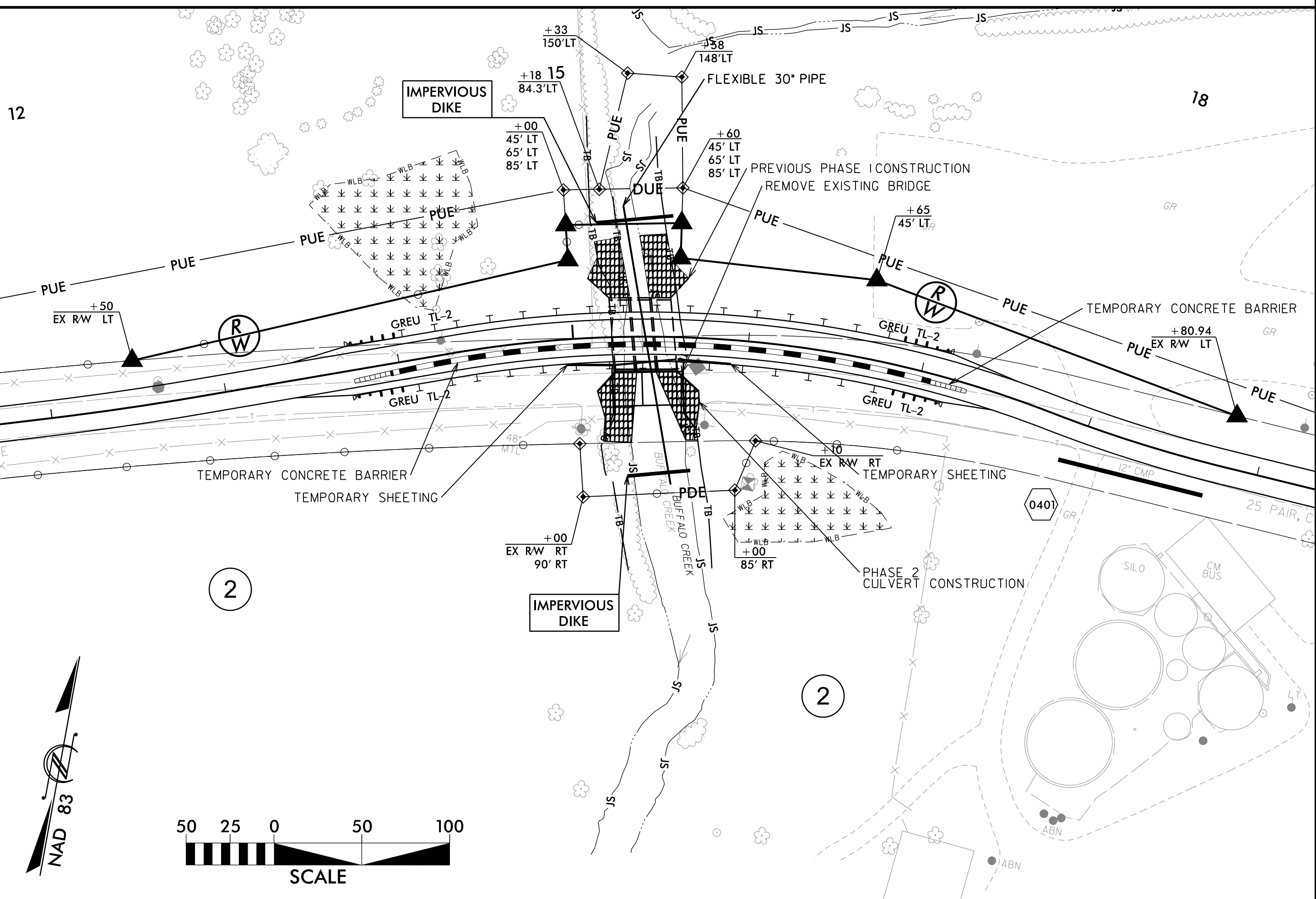
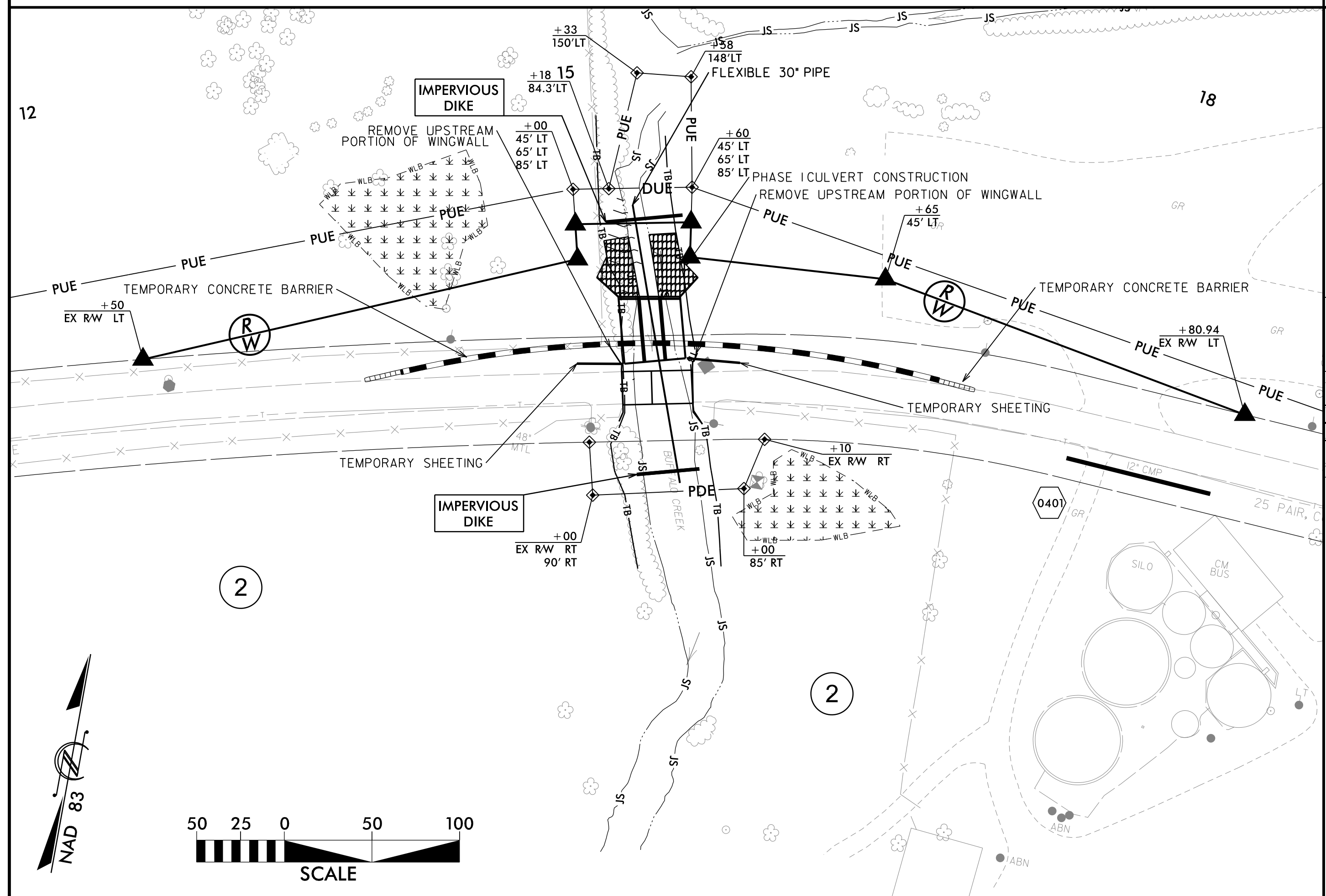
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CULVERT CONSTRUCTION SEQUENCE STA. 15 + 40 -L-

PHASE I

PHASE II

INSTALL DIKES /PIPE(S) IN JURISDICTIONAL AREAS W/O IMPACTING STREAM UNTIL AREA STABILIZED AND ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.



CULVERT CONSTRUCTION SEQUENCE

CULVERT CONSTRUCTION SEQUENCE

1. INSTALL SPECIAL STILLING BASIN FOR PUMPED EFFLUENT.
2. INSTALL FLEXIBLE 30" PIPE & IMPERVIOUS DIKES TO A TOP ELEV = 556.5' (UPSTREAM) & ELEV = 555.5' (DOWNSTREAM).
3. INSTALL TEMPORARY SHEETING.
4. REMOVE UPSTREAM PORTIONS OF EX. WINGWALL.
5. CONSTRUCT 37 +/- LF OF PROPOSED CULVERT, INCLUDING UPSTREAM WINGWALLS & UPSTREAM CHANNEL IMPROVEMENTS. REALIGN 30" BYPASS PIPE AS NECESSARY.
6. CONSTRUCT PORTION OF PROPOSED -L- ALIGNMENT TO ALLOW FOR (1) - 10' WIDE TEMPORARY TRAVEL LANE.
7. INSTALL TEMPORARY BARRIER & SHIFT TRAFFIC TO TEMPORARY LANE.

8. REMOVE EXISTING BRIDGE AND LAY BACK SLOPES AS NECESSARY.
9. CONSTRUCT REMAINING LENGTH OF PROPOSED CULVERT, INCLUDING DOWNSTREAM WINGWALLS & DOWNSTREAM CHANNEL IMPROVEMENTS. REALIGN 30" BYPASS PIPE AS NECESSARY.
10. CONSTRUCT REMAINING PORTION OF PROPOSED -L- ALIGNMENT AND REMOVE TEMPORARY SHEETING AS WORK ALLOWS.
11. REMOVE TEMPORARY BARRIER AND OPEN -L- ALIGNMENT TO 2-WAY TRAFFIC.
12. REMOVE SPECIAL STILLING BASIN, TEMPORARY PIPE AND IMPERVIOUS DIKES.

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