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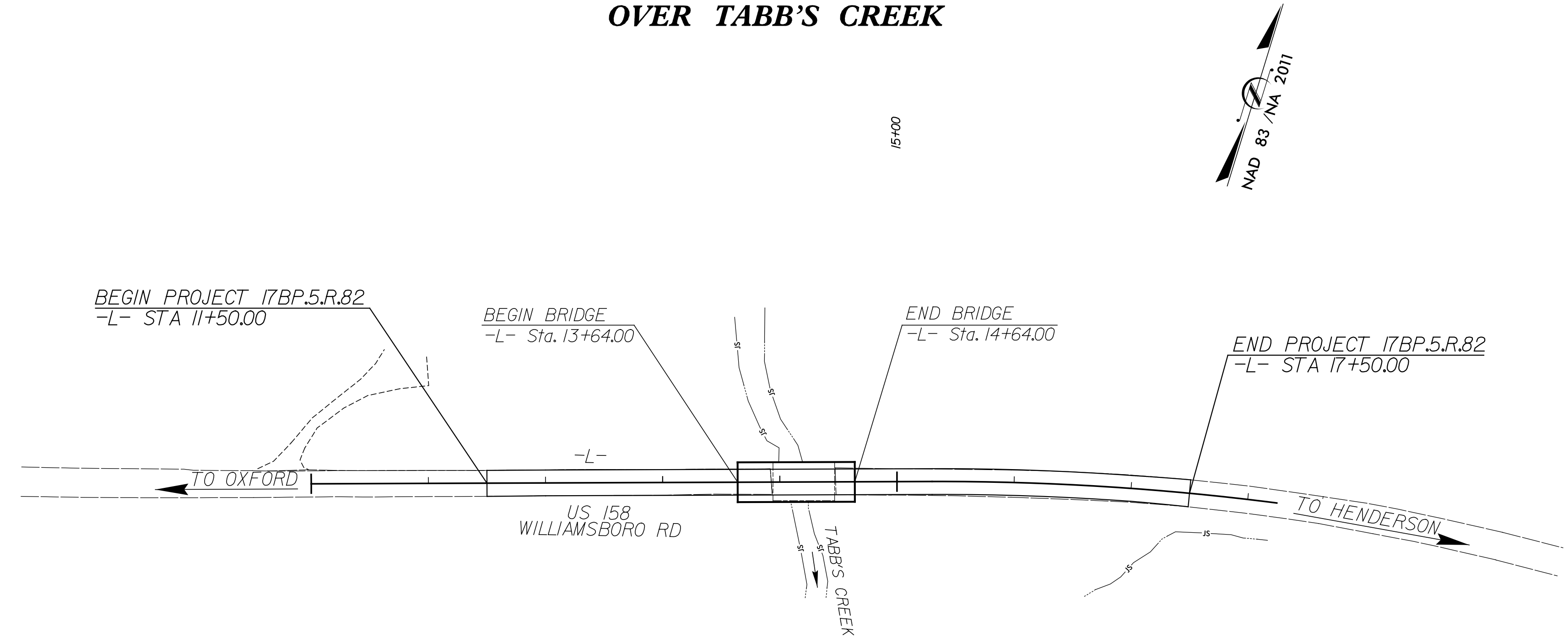
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| | | | |
|-----------------|-----------------------------|-------------|--------------|
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
| N.C. | 17BP.5.R.82 | EC-1 | |
| STATE PROJ. NO. | F.A. PROJ. NO. | DESCRIPTION | |
| | | | |
| | | | |
| | | | |

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL
GRANVILLE COUNTY

**BRIDGE NO. 40 ON US 158
 OVER TABB'S CREEK**



EROSION AND SEDIMENT CONTROL MEASURES

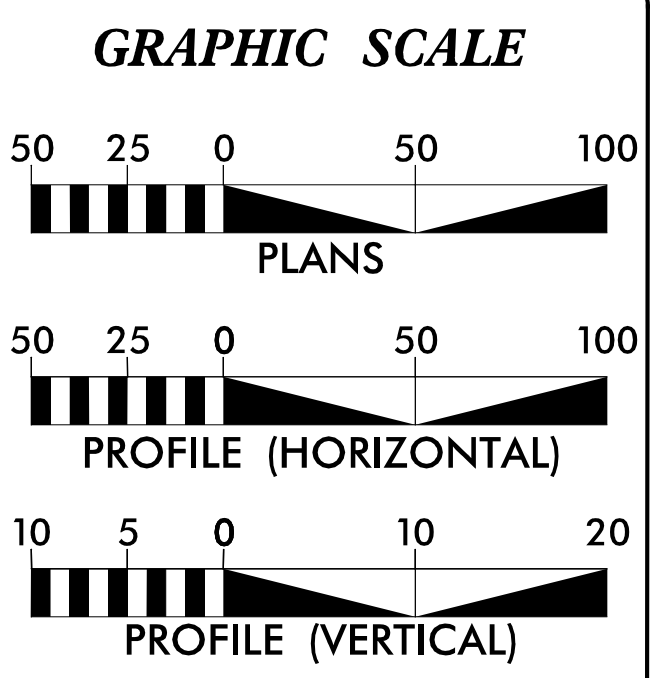
| Std. # | Description | Symbol |
|---------|--|--------|
| 1630.03 | Temporary Silt Ditch | TD |
| 1630.05 | Temporary Diversion | TD |
| 1605.01 | Temporary Silt Fence | |
| 1606.01 | Special Sediment Control Fence | ▲▲▲ |
| 1622.01 | Temporary Berms and Slope Drains | ▲▲▲ |
| 1630.02 | Silt Basin Type B | ▨ |
| 1633.01 | Temporary Rock Silt Check Type-A | ▨ |
| | Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM) | ▨ |
| 1633.02 | Temporary Rock Silt Check Type-B | ▨ |
| | Wattle / Coir Fiber Wattle | ▨ |
| | Wattle / Coir Fiber Wattle with Polyacrylamide (PAM) | ▨ |
| 1634.01 | Temporary Rock Sediment Dam Type-A | ▨ |
| 1634.02 | Temporary Rock Sediment Dam Type-B | ▨ |
| 1635.01 | Rock Pipe Inlet Sediment Trap Type-A | ▨ |
| 1635.02 | Rock Pipe Inlet Sediment Trap Type-B | ▨ |
| 1630.04 | Stilling Basin | ▨ |
| 1630.06 | Special Stilling Basin | ▨ |
| | Rock Inlet Sediment Trap: | |
| 1632.01 | Type A | A |
| 1632.02 | Type B | B |
| 1632.03 | Type C | C |
| | Skimmer Basin | ▨ |
| | Tiered Skimmer Basin | ▨ |
| | Infiltration Basin | ▨ |

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

THIS PROJECT HAS
 BEEN DESIGNED TO
 SENSITIVE WATERSHED
 STANDARDS.

ENVIRONMENTALLY
 SENSITIVE AREA(S) EXIST
 ON THIS PROJECT
 Refer To E. C. Special Provisions
 for Special Considerations.

TIP PROJECT: 17BP.5.R.82



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:

HR

HDR Engineering, Inc. of the Carolinas
 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
 N.C.B.E.L.S. License Number: F-0116

Designed by:

ALEXANDER D. SNIDER, PE **3064**

NAME LEVEL III CERTIFICATION NO.

Reviewed In the Office of:

ROADSIDE ENVIRONMENTAL UNIT

1 South Wilmington St.
 Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

Reviewed by:

DONALD PEARSON, EI

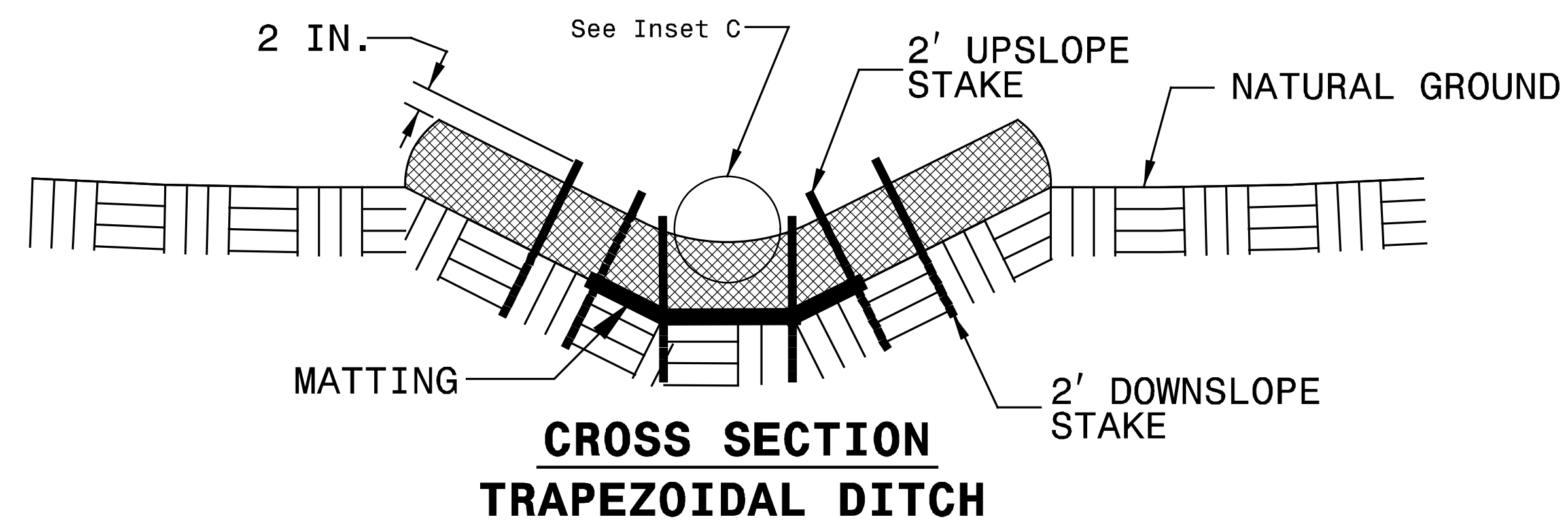
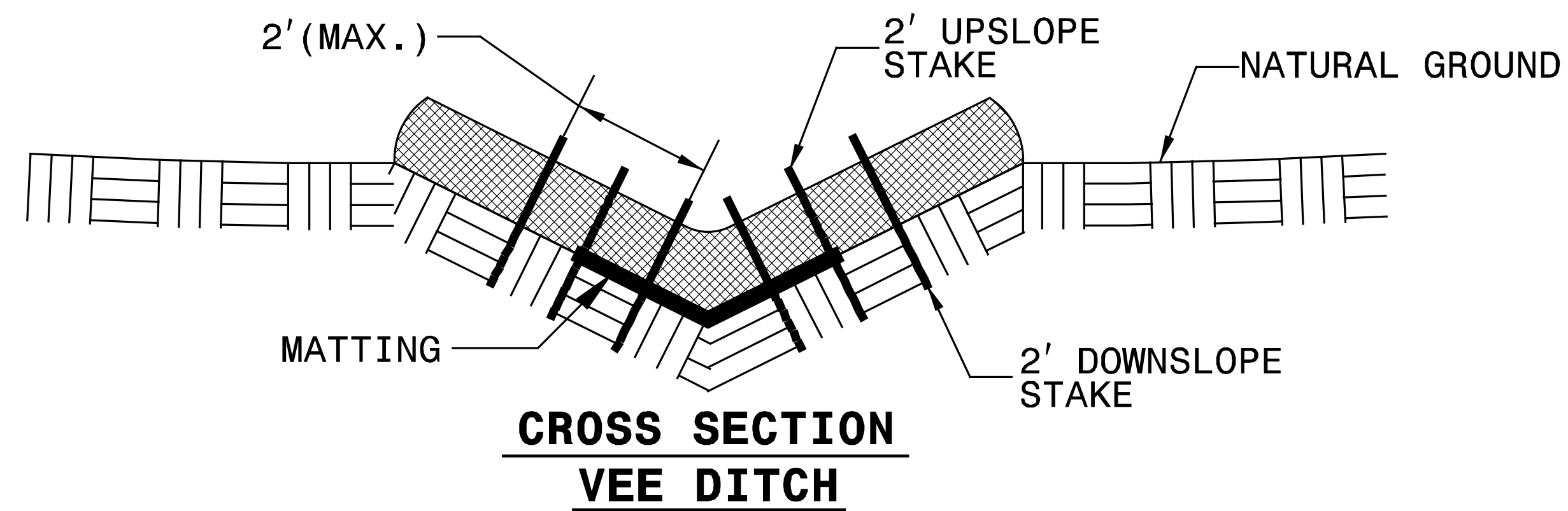
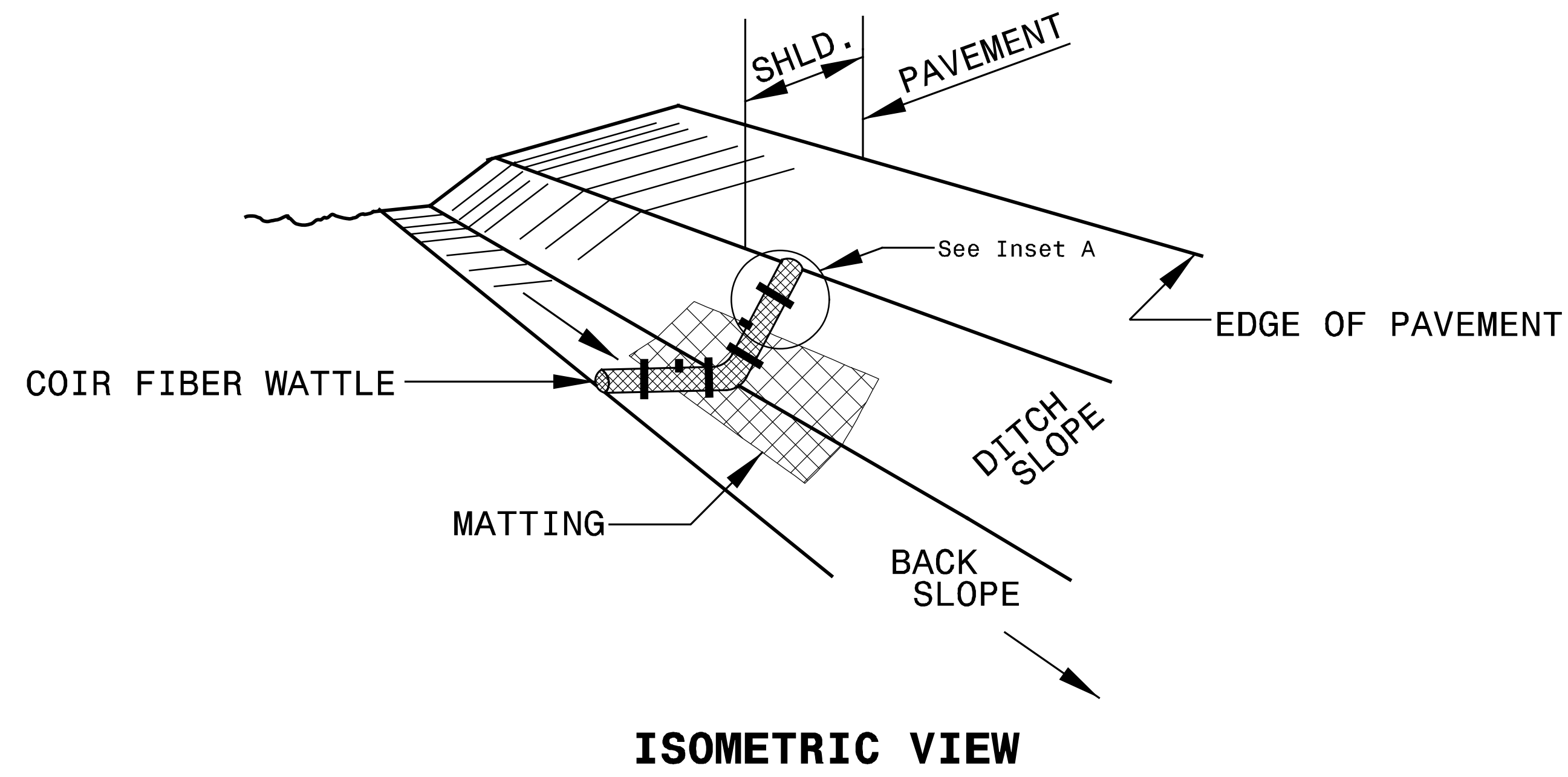
Roadway Standard Drawings

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 | |

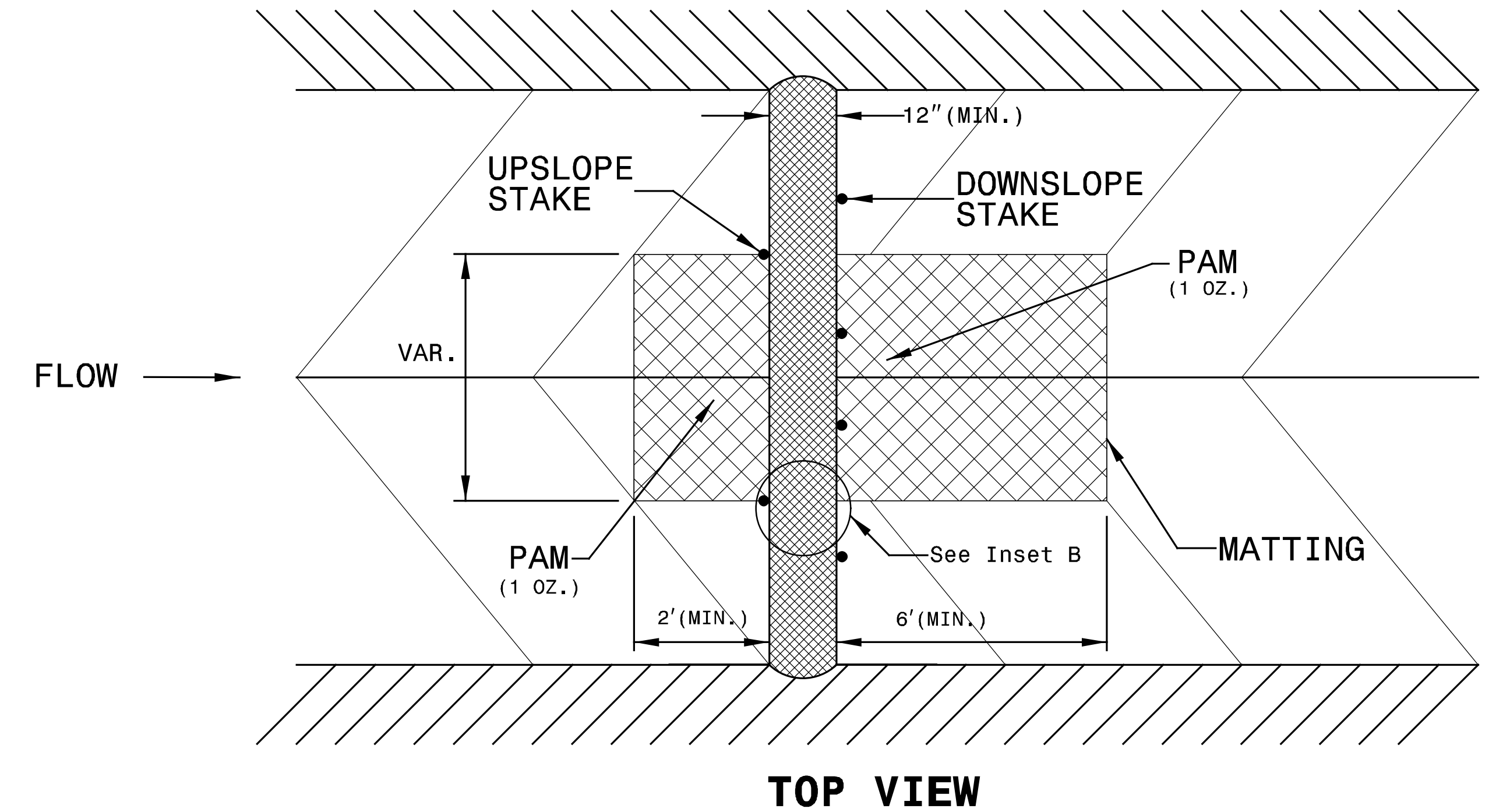
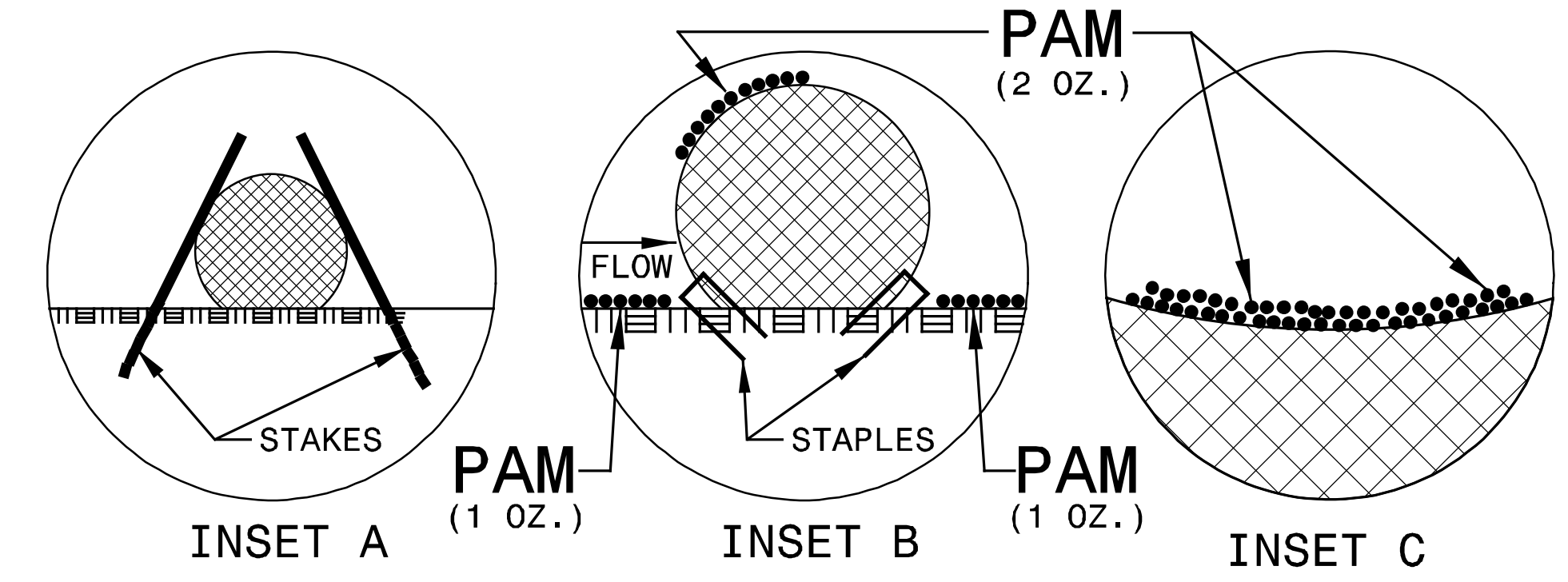
\$\$\$ SYSTEMS \$\$\$
 \$\$\$ DGN \$\$\$
 \$\$\$ USERNAME \$\$\$

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

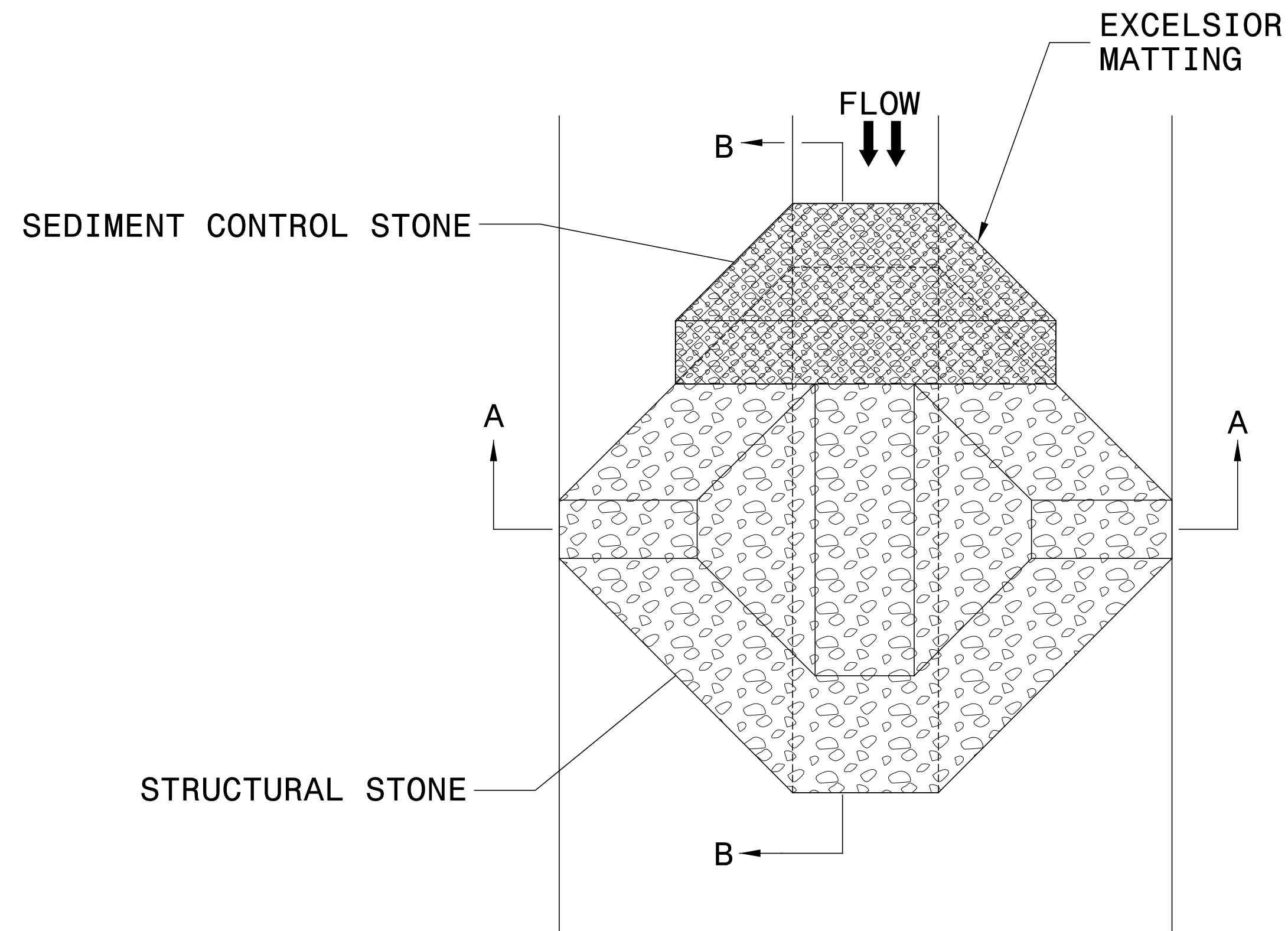


NOTES:

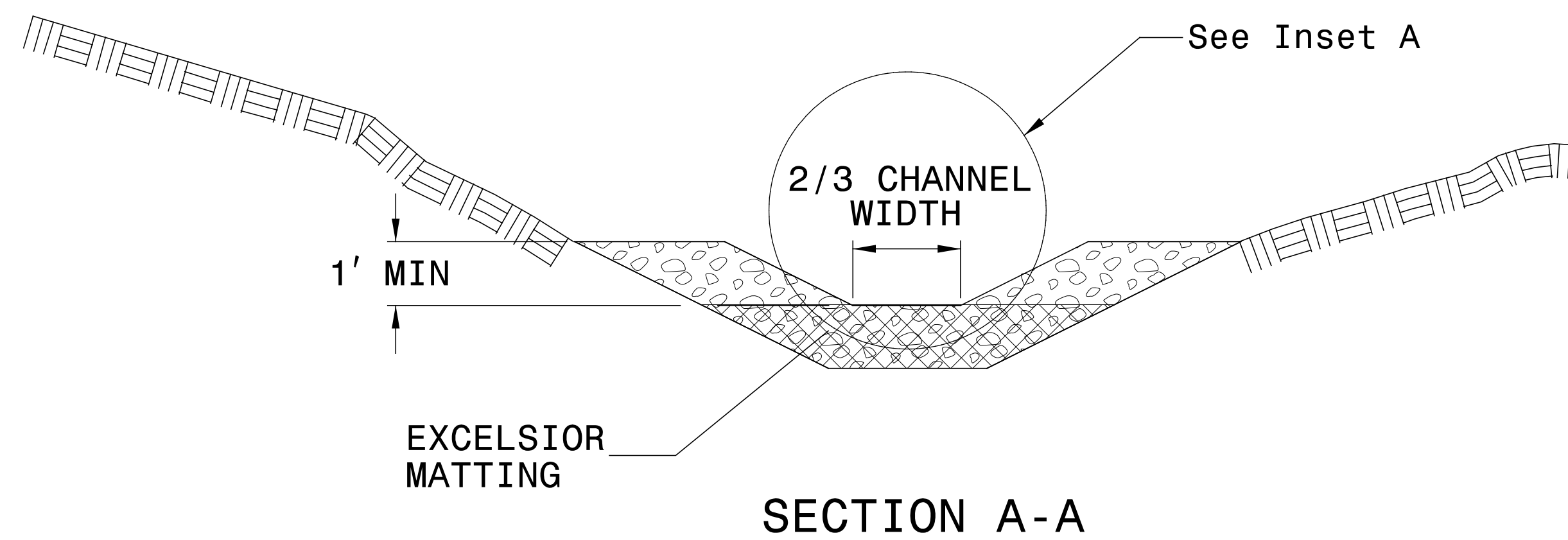
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 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 MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



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



PLAN



SECTION A-A

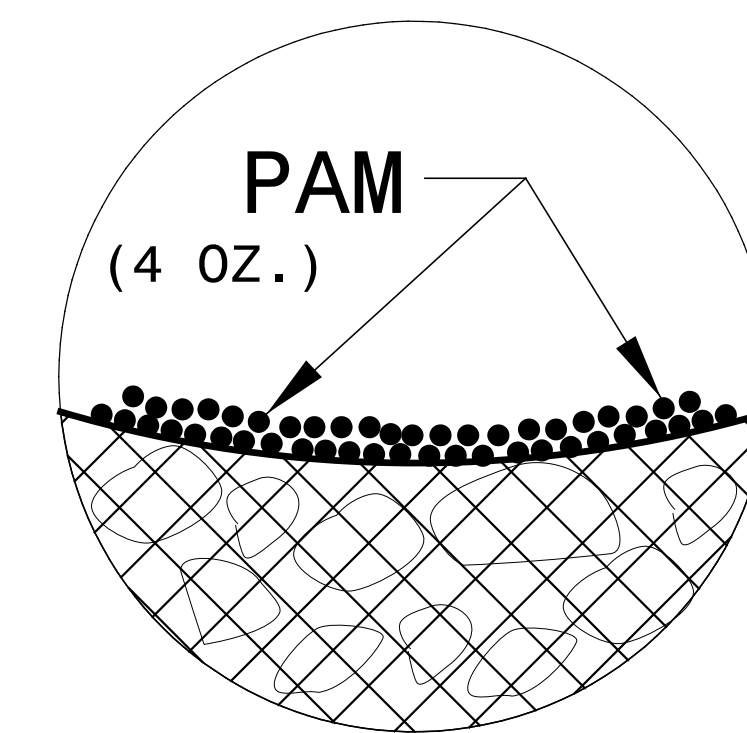
NOTES:

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

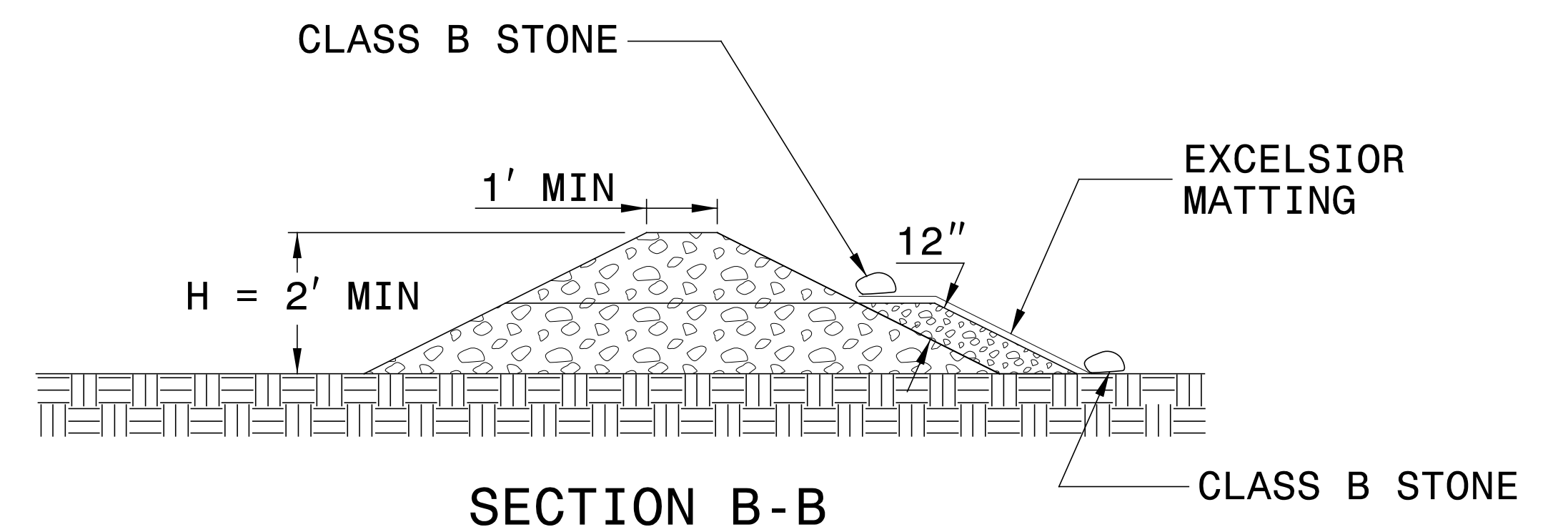
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.



INSET A



SECTION B-B

NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

| <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. |

LEVEL III CERTIFIED BY:
ALEXANDER D SNIDER, PE
 CERTIFICATION NUMBER: 3064
 ISSUED: JUNE 15, 2017

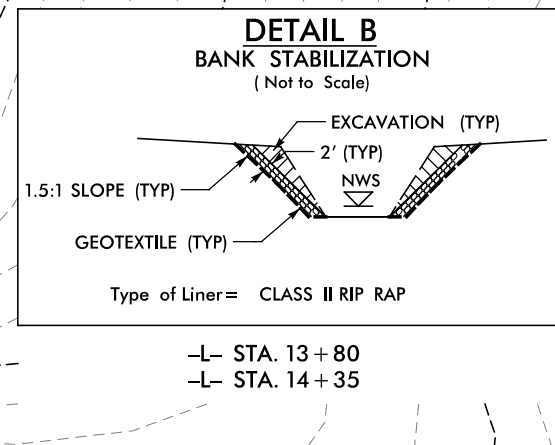
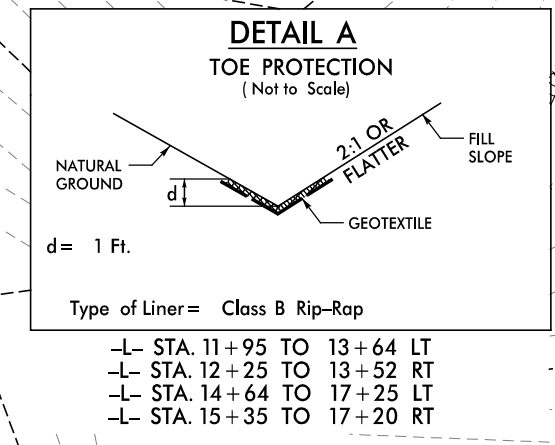
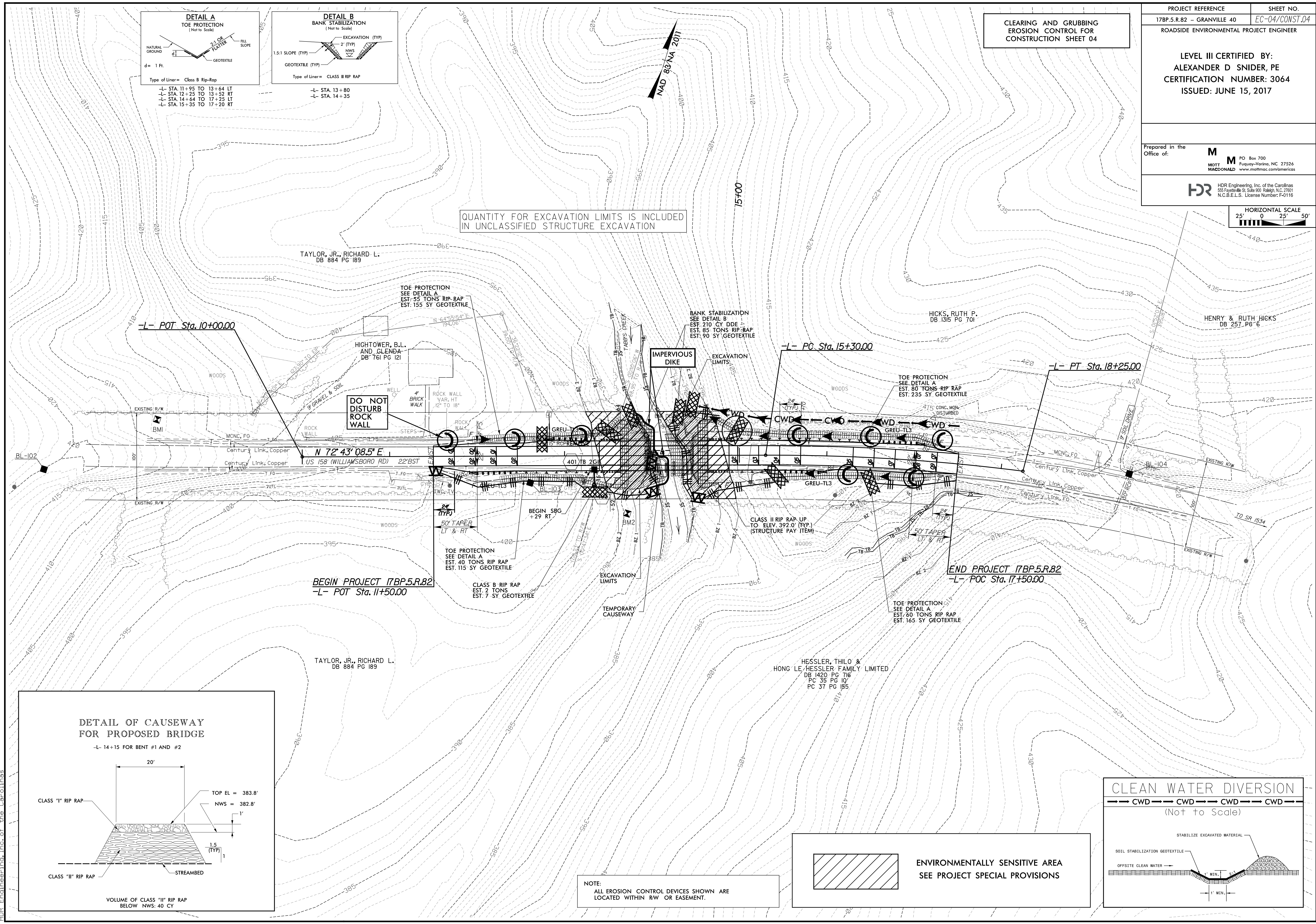
Prepared in the Office of:

M M PO Box 700
 FAYETTEVILLE, NC 27526
 MOTT MACDONALD www.mottmac.com/americas

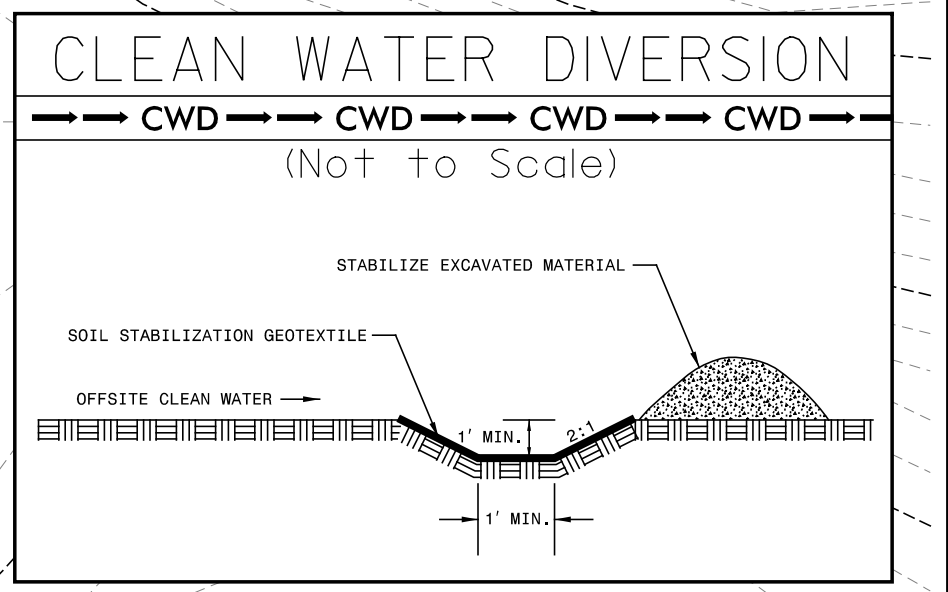
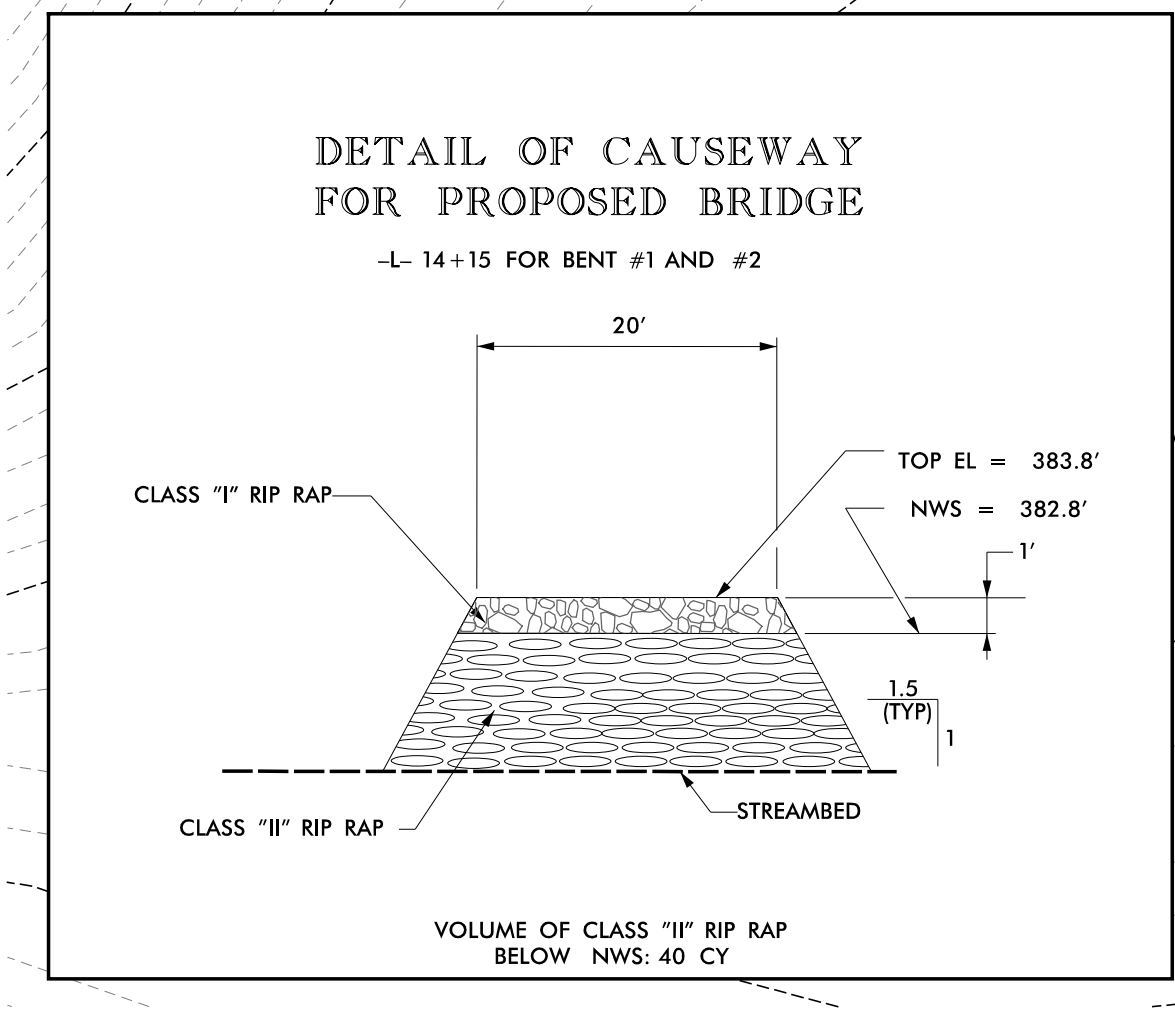
HDR HDR Engineering, Inc. of the Carolinas
 555 Fayetteville St., Suite 900 Raleigh, N.C. 27601
 N.C.B.E.L.S. License Number: F-0116



CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 04



QUANTITY FOR EXCAVATION LIMITS IS INCLUDED IN UNCLASSIFIED STRUCTURE EXCAVATION

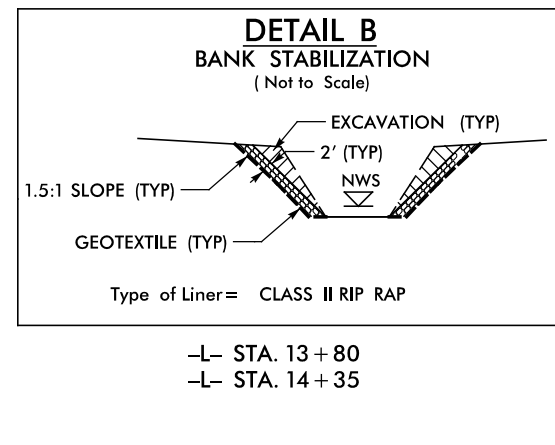
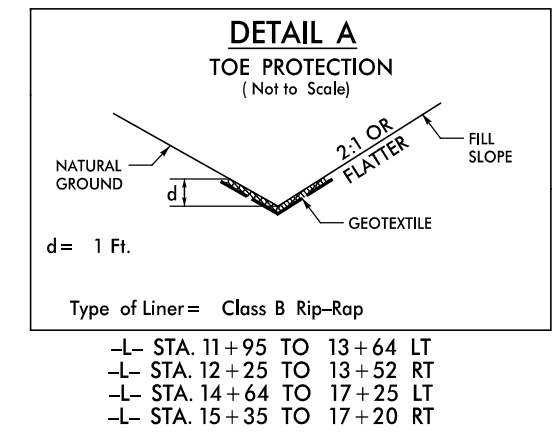


ENVIRONMENTALLY SENSITIVE AREA
 SEE PROJECT SPECIAL PROVISIONS

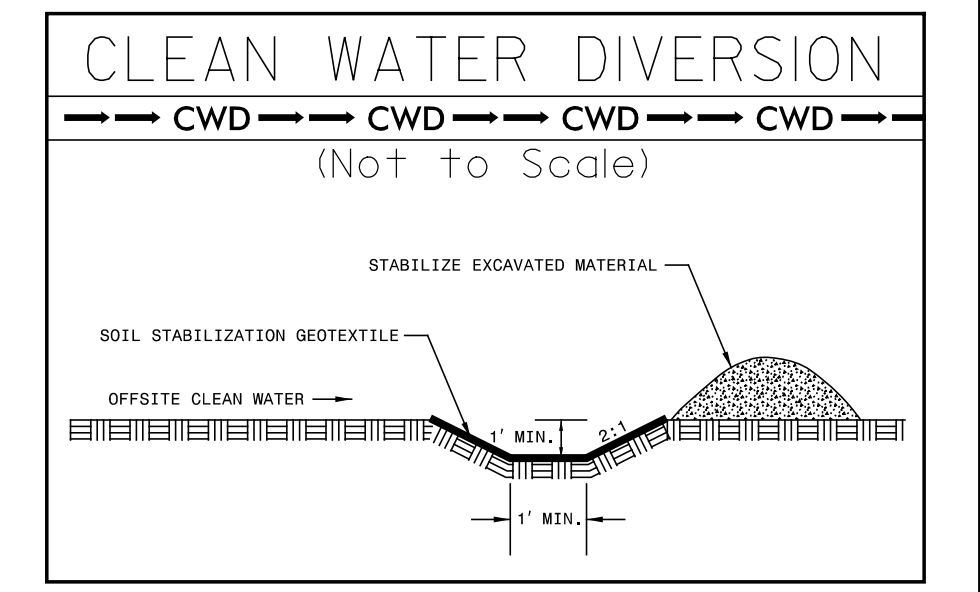
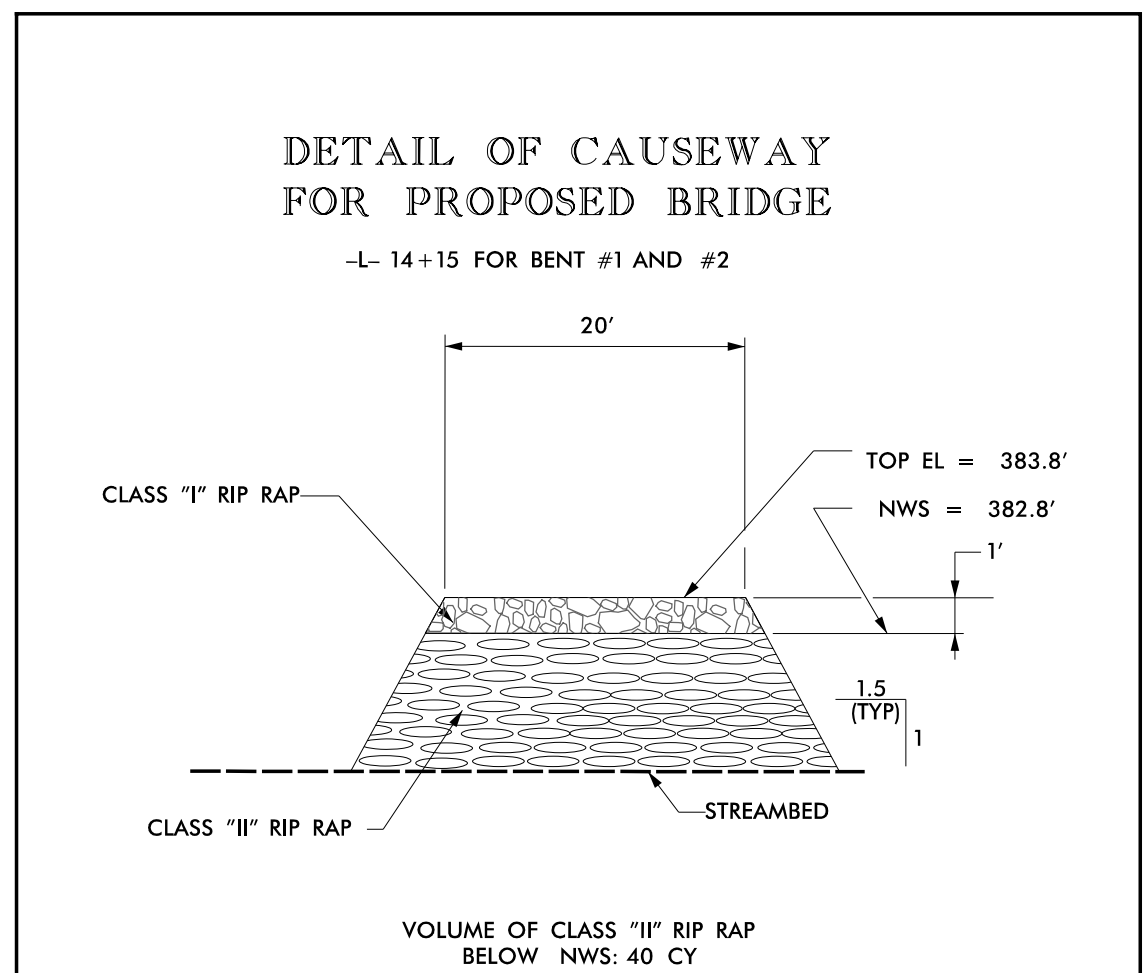
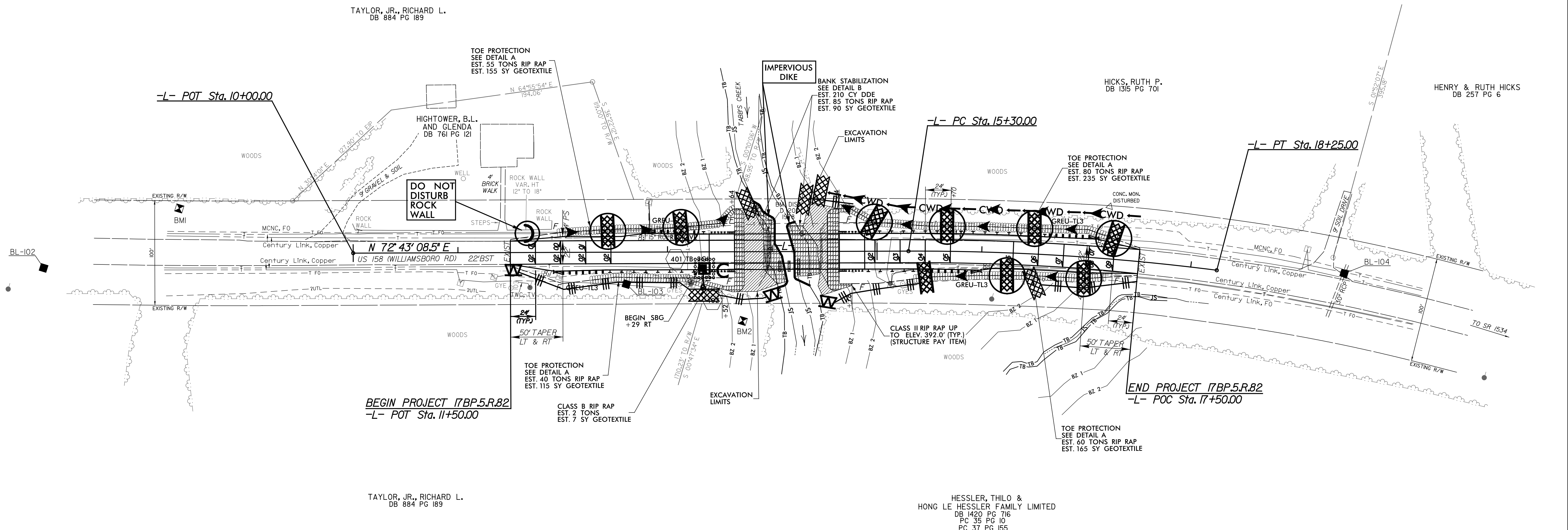
NOTE:
 ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN RW OR EASEMENT.

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FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 04



QUANTITY FOR EXCAVATION LIMITS IS INCLUDED IN UNCLASSIFIED STRUCTURE EXCAVATION



NOTE:
ALL EROSION CONTROL DEVICES SHOWN ARE LOCATED WITHIN RW OR EASEMENT.

2/4/2019 9:59:32 AM J:\Hydro\DDC\Granville_04\Hydraulics\Erosion Control\cadd\380040_hyd_erosion_final.dgn HDR Engineering, Inc. of the Carolinas