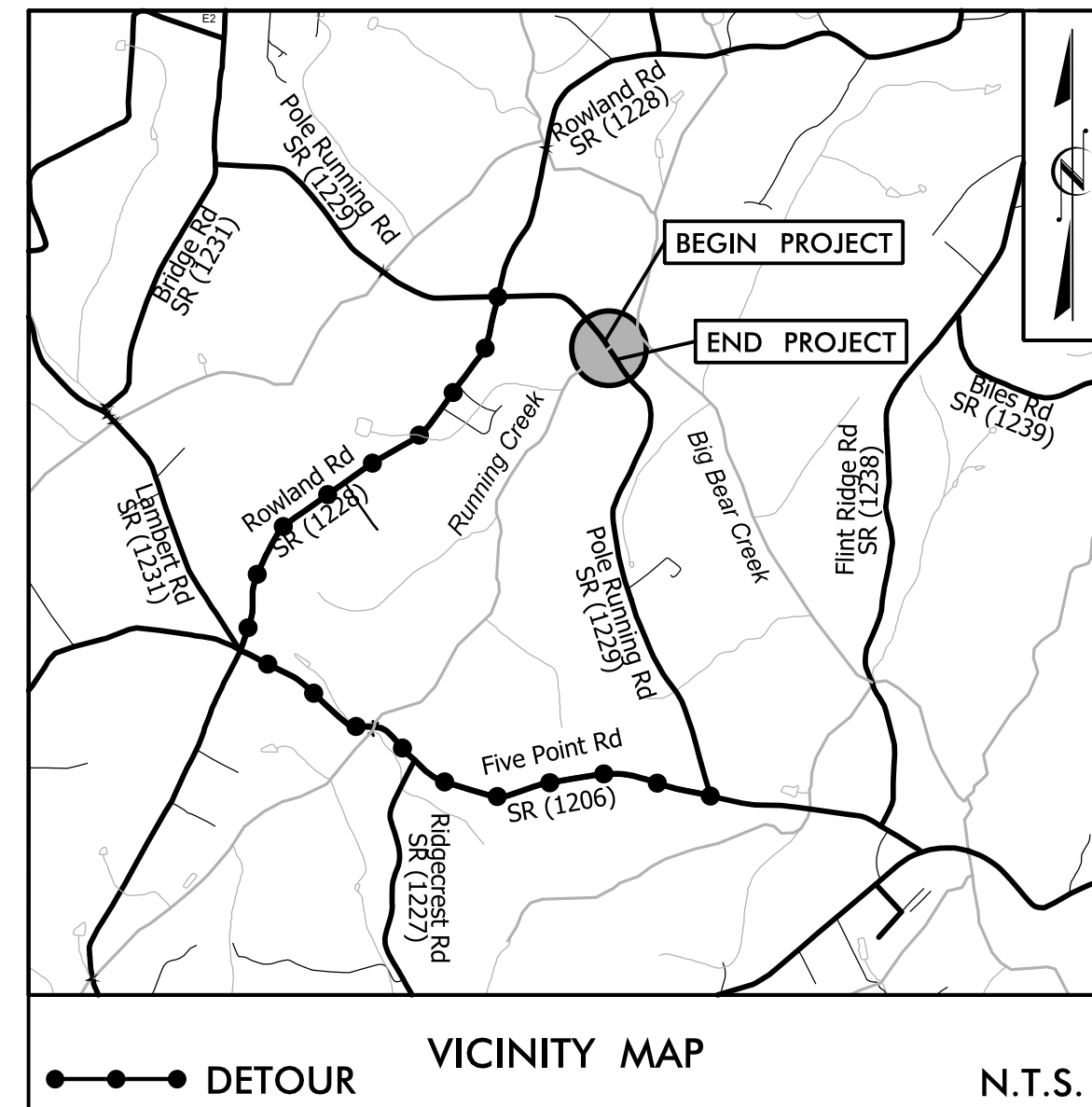


PROJECT WBS: 17BP.10.R.106

See Sheet 1A For Index of Sheets
See Sheet 1B For Standard Symbology Sheet

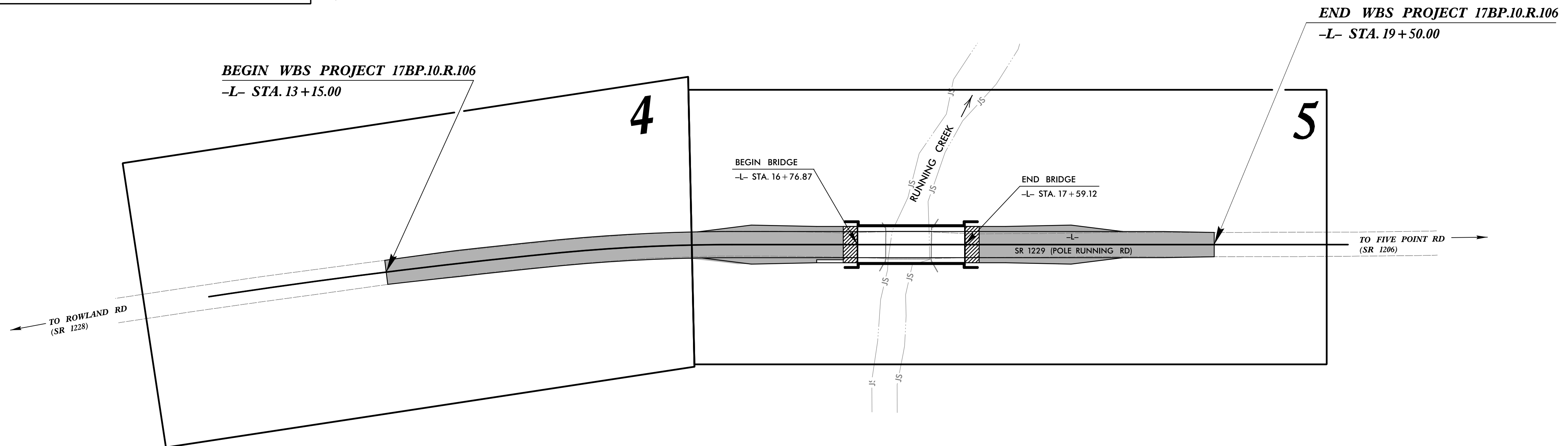
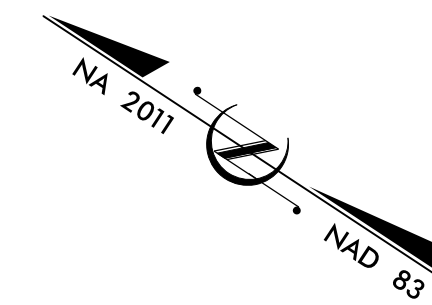
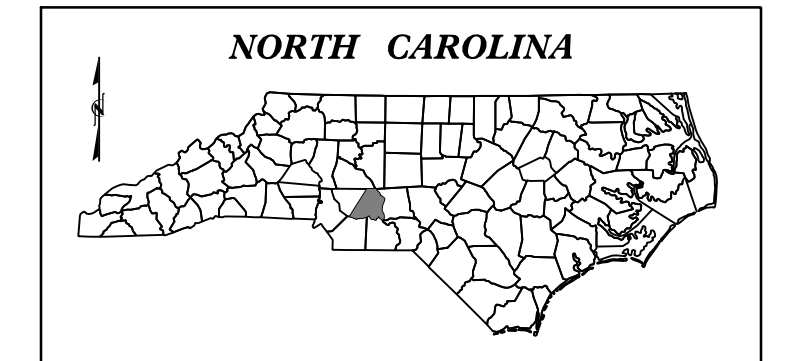


FINAL PLANS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
STANLY COUNTY

**LOCATION: BRIDGE #174 OVER RUNNING CREEK
ON SR 1229 (POLE RUNNING RD)
TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE**

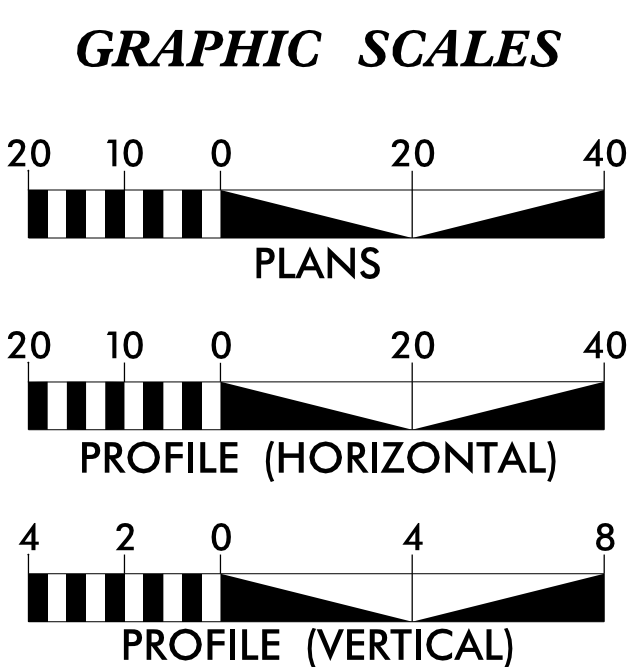
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.10.R.106	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.10.R.106		P.E.	
17BP.10.R.106		ROW & UTILITIES	
17BP.10.R.106		CONSTRUCTION	



DESIGN EXCEPTION APPROVED FOR K VALUE (12-20-2017).

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2000 =	50
ADT 2025 =	100
DHV =	N/A
D =	N/A
T =	N/A
V =	55 MPH
FUNC. CLASSIFICATION:	LOCAL

PROJECT LENGTH

LENGTH OF ROADWAY WBS PROJECT 17BP.10.R.106 = 0.104 MILES
LENGTH OF STRUCTURE WBS PROJECT 17BP.10.R.106 = 0.016 MILES
TOTAL LENGTH OF WBS PROJECT 17BP.10.R.106 = 0.120 MILES

NCDOT CONTACT: GARLAND HAYWOOD, PE
Division Bridge Manager

PLANS PREPARED FOR THE NCDOT BY:

STV 100 Years
STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

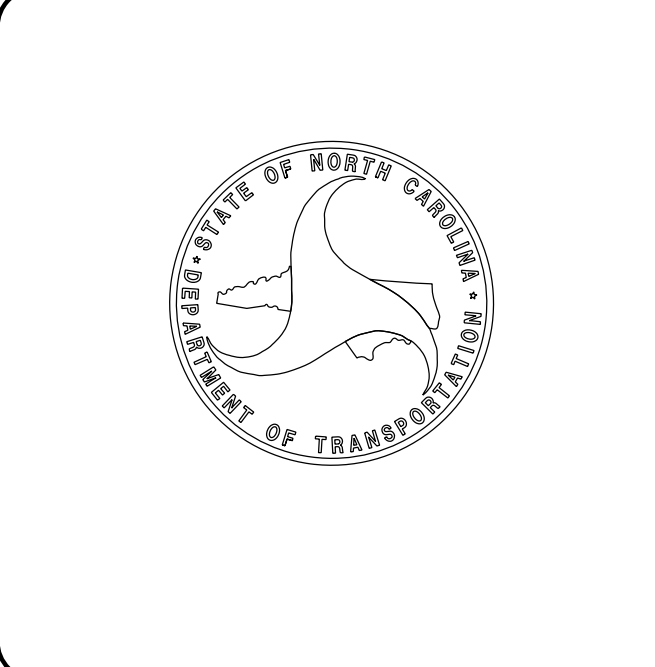
2018 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: FEBRUARY 16, 2018	NIKKI T. HONEYCUTT, PE PROJECT ENGINEER
LETTING DATE: AUGUST 1, 2018	CLARK GROVES PROJECT DESIGNER

HYDRAULICS ENGINEER

DocuSigned by:
Shirshant Sharma
SIGNATURE: SHIRSHANT SHARMA, PE
8/2/2018

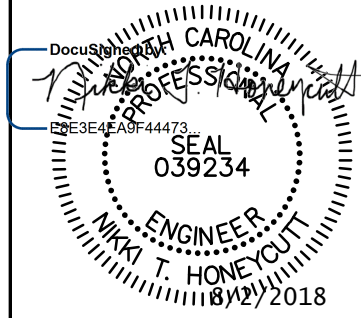
ROADWAY DESIGN ENGINEER

DocuSigned by:
Nikki T. Honeycutt
SIGNATURE: NIKKI T. HONEYCUTT, PE
8/2/2018





STV Engineers, Inc.
 800 West Trade St., Suite 715
 Charlotte, NC 28202
 NC License Number F-0991

PROJECT REFERENCE NO. <i>17BP-10.R.106</i>	SHEET NO. <i>1A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
	
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INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2C-1 THRU 2C-2	ROADWAY DETAILS
3	SUMMARIES AND TYPICAL SECTIONS SHEET
4 & 5	PLAN AND PROFILE SHEETS
TMP-1	TRAFFIC MANAGEMENT PLANS
EC-1 THRU EC-7	EROSION CONTROL PLANS
UO-1 THRU UO-3	UTILITIES BY OTHERS PLANS
X-1 THRU X-8	CROSS-SECTIONS
S-1 THRU S-15	STRUCTURE PLANS
SN	STANDARD NOTES

GENERAL NOTES

GENERAL NOTES: 2018 SPECIFICATIONS EFFECTIVE: 01-01-2018

GRADE LINE:
 GRADING AND SURFACING:
 THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:
 CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:
 ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:
 ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01.

GUARDRAIL:
 THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

END BENTS:
 THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

RIGHT-OF-WAY MARKERS:
 ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY THE DIVISION.

STANDARD DRAWINGS

2018 ROADWAY ENGLISH STANDARD DRAWINGS EFF. January, 2018

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 4 - MAJOR STRUCTURES	
422.02	Type II - Modified Approach Fill
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 8 - INCIDENTALS	
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Junction Box - for Cast Iron Double Frame and Grates
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets
DIVISION 11 - WORK ZONE TRAFFIC CONTROL	
1101.03	Temporary Road Closures
1110.01	Stationary Work Zone Signs - Mounting Height & Lateral Clearance
1145.01	Barricades - Type III

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Computed Property Corner	----- X
Property Monument	□ ECM
Parcel/Sequence Number	① 23
Existing Fence Line	-X-X-X-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	--- WLB ---
Proposed Wetland Boundary	--- WLB ---
Existing Endangered Animal Boundary	--- EAB ---
Existing Endangered Plant Boundary	--- EPB ---
Existing Historic Property Boundary	--- HPB ---
Known Contamination Area: Soil	☠ S ☠
Potential Contamination Area: Soil	☪ S ☪
Known Contamination Area: Water	☠ W ☠
Potential Contamination Area: Water	☪ W ☪
Contaminated Site: Known or Potential	☠ ?

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	□

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	-----
Jurisdictional Stream	--- JS ---
Buffer Zone 1	--- BZ 1 ---
Buffer Zone 2	--- BZ 2 ---
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	⋆
Proposed Lateral, Tail, Head Ditch	← FLOW
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Exist Permanent Easment Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	⊠
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	----- (R/W)
New Right of Way Line with Pin and Cap	----- (R/W) ▲
New Right of Way Line with Concrete or Granite R/W Marker	----- (R/W) ●
New Control of Access Line with Concrete CA Marker	----- (C/A)
Existing Control of Access	----- (C/A)
New Control of Access	----- (C/A)
Existing Easement Line	----- E
New Temporary Construction Easement	----- E
New Temporary Drainage Easement	----- TDE
New Permanent Drainage Easement	----- PDE
New Permanent Drainage / Utility Easement	----- DUE
New Permanent Utility Easement	----- PUE
New Temporary Utility Easement	----- TUE
New Aerial Utility Easement	----- AUE

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	--- C ---
Proposed Slope Stakes Fill	--- F ---
Proposed Curb Ramp	--- (CR) ---
Existing Metal Guardrail	--- T ---
Proposed Guardrail	--- T ---
Existing Cable Guiderail	--- □ ---
Proposed Cable Guiderail	--- □ ---
Equality Symbol	⊕
Pavement Removal	⊗

VEGETATION:

Single Tree	☪
Single Shrub	☪

Note: Not to Scale *S.U.E. = Subsurface Utility Engineering

Hedge	-----
Woods Line	-----
Orchard	☪ ☪ ☪ ☪
Vineyard	--- Vineyard ---

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	--- CONC ---
Bridge Wing Wall, Head Wall and End Wall	--- CONC WW ---
MINOR:	
Head and End Wall	--- CONC HW ---
Pipe Culvert	-----
Footbridge	--- ---
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○ S
Storm Sewer	----- S

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	⊕
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	○
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	----- P ---
U/G Power Line LOS C (S.U.E.*)	----- P ---
U/G Power Line LOS D (S.U.E.*)	----- P ---

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	○
U/G Telephone Cable LOS B (S.U.E.*)	----- T ---
U/G Telephone Cable LOS C (S.U.E.*)	----- T ---
U/G Telephone Cable LOS D (S.U.E.*)	----- T ---
U/G Telephone Conduit LOS B (S.U.E.*)	----- TC ---
U/G Telephone Conduit LOS C (S.U.E.*)	----- TC ---
U/G Telephone Conduit LOS D (S.U.E.*)	----- TC ---
U/G Fiber Optics Cable LOS B (S.U.E.*)	----- T FO ---
U/G Fiber Optics Cable LOS C (S.U.E.*)	----- T FO ---
U/G Fiber Optics Cable LOS D (S.U.E.*)	----- T FO ---

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	----- W ---
U/G Water Line LOS C (S.U.E.*)	----- W ---
U/G Water Line LOS D (S.U.E.*)	----- W ---
Above Ground Water Line	----- A/G Water

TV:

TV Pedestal	⊕
TV Tower	⊗
U/G TV Cable Hand Hole	○
U/G TV Cable LOS B (S.U.E.*)	----- TV ---
U/G TV Cable LOS C (S.U.E.*)	----- TV ---
U/G TV Cable LOS D (S.U.E.*)	----- TV ---
U/G Fiber Optic Cable LOS B (S.U.E.*)	----- TV FO ---
U/G Fiber Optic Cable LOS C (S.U.E.*)	----- TV FO ---
U/G Fiber Optic Cable LOS D (S.U.E.*)	----- TV FO ---

GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	----- G ---
U/G Gas Line LOS C (S.U.E.*)	----- G ---
U/G Gas Line LOS D (S.U.E.*)	----- G ---
Above Ground Gas Line	----- A/G Gas

SANITARY SEWER:

Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	----- SS ---
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
SS Forced Main Line LOS B (S.U.E.*)	----- FSS ---
SS Forced Main Line LOS C (S.U.E.*)	----- FSS ---
SS Forced Main Line LOS D (S.U.E.*)	----- FSS ---

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	----- TUL ---
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	□
Geoenvironmental Boring	⊕
U/G Test Hole LOS A (S.U.E.*)	○
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

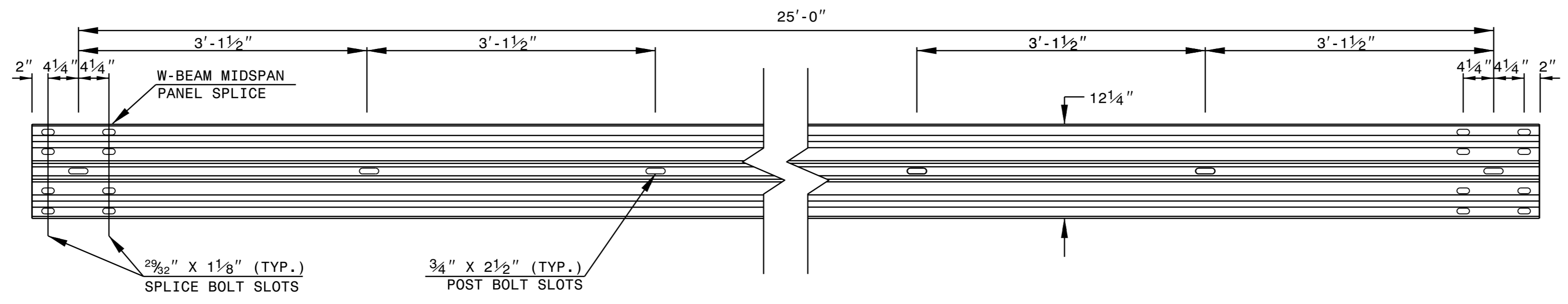
ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02

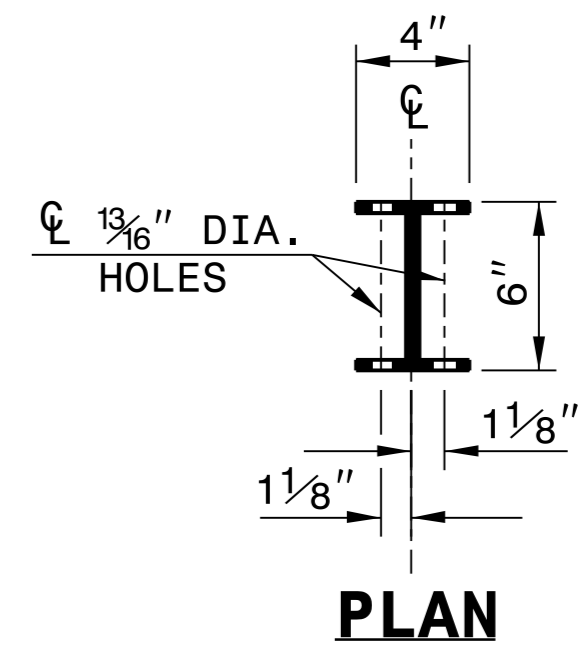
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

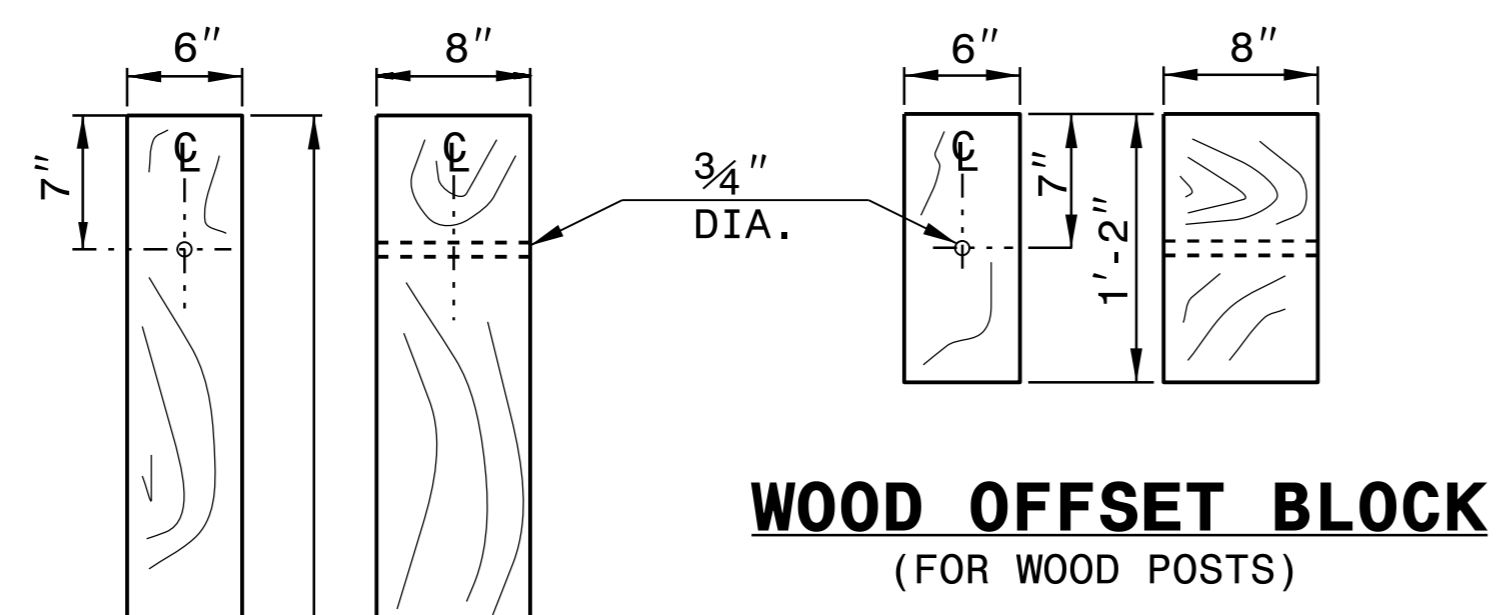
SHEET 6 OF 8
862D02



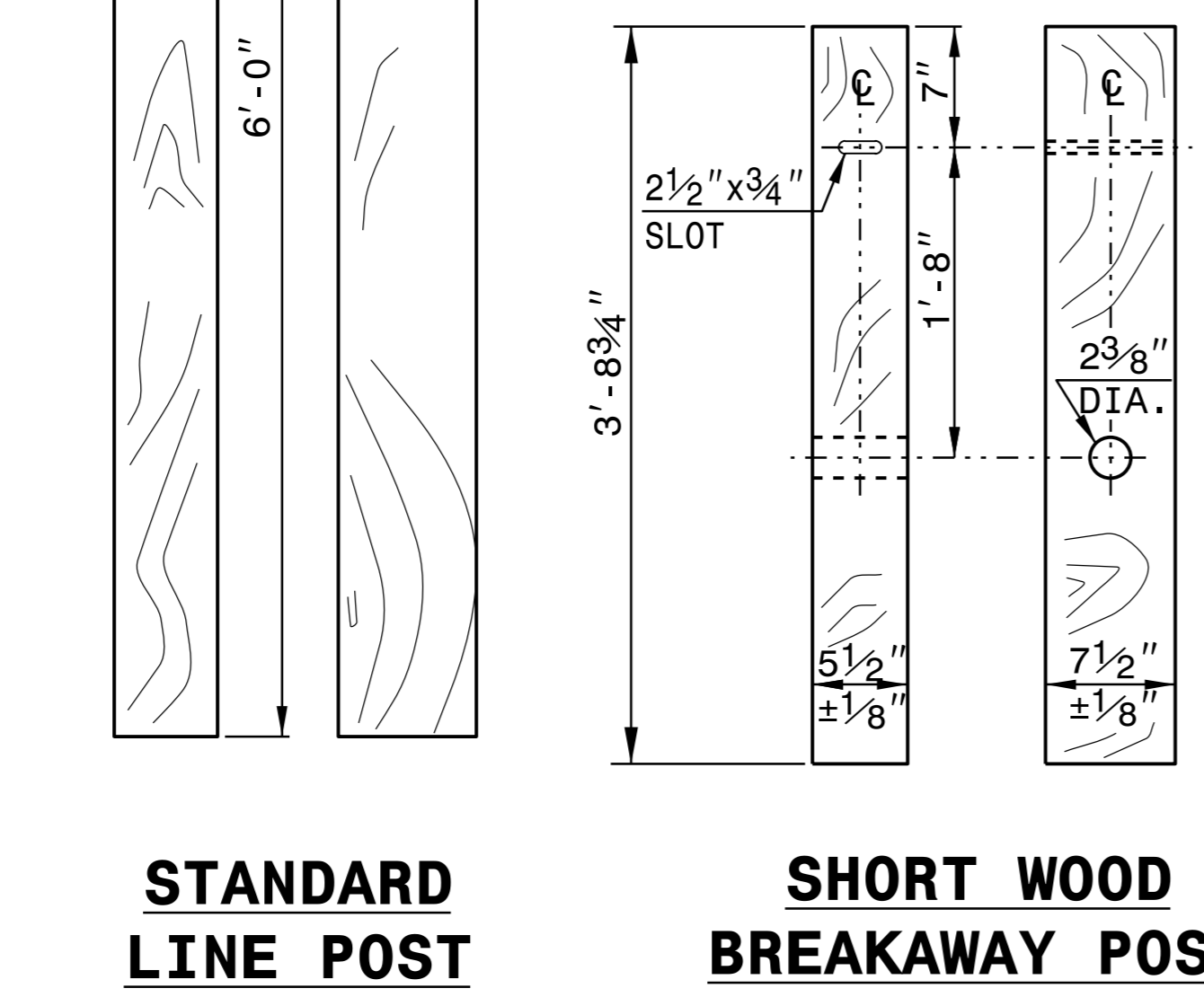
STANDARD W-BEAM GUARDRAIL



PLAN

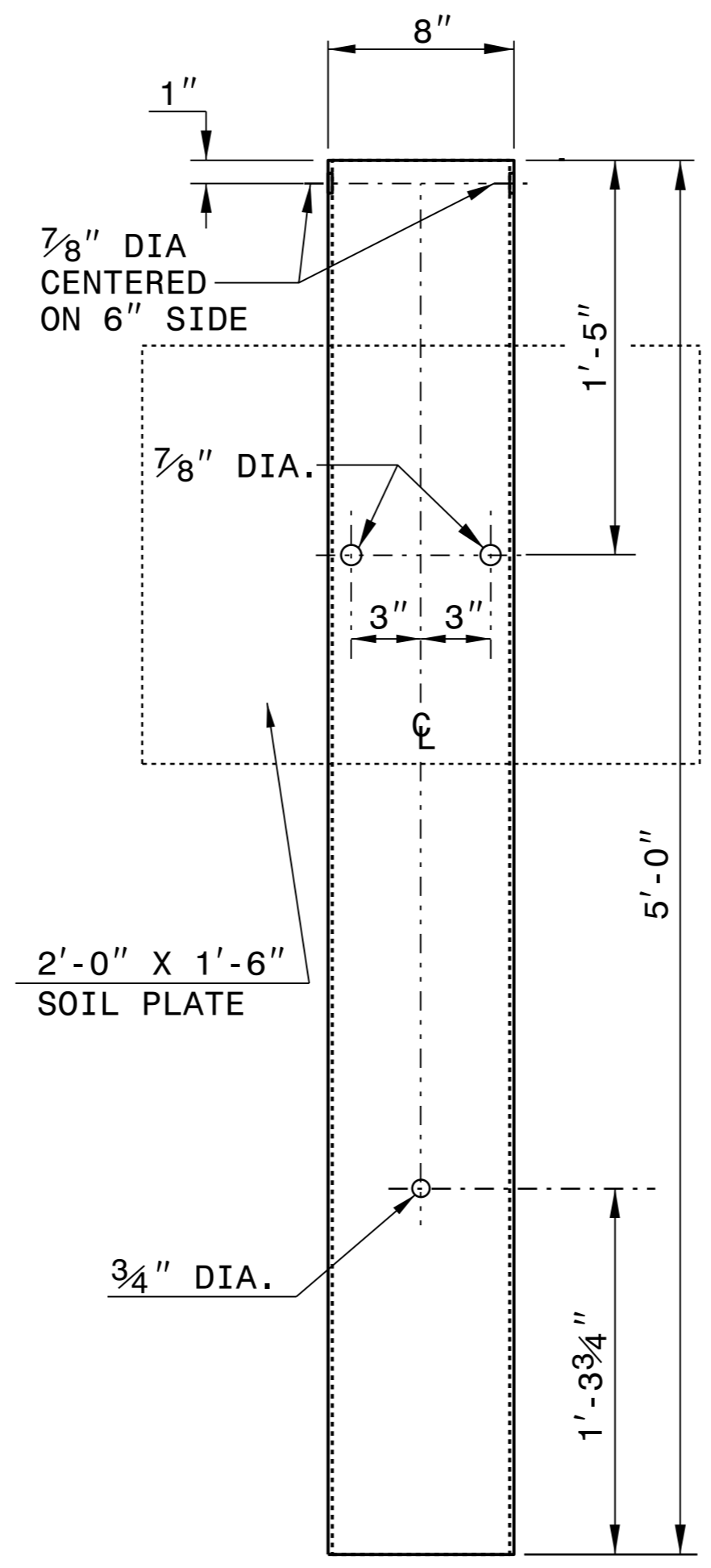


**WOOD OFFSET BLOCK
(FOR WOOD POSTS)**

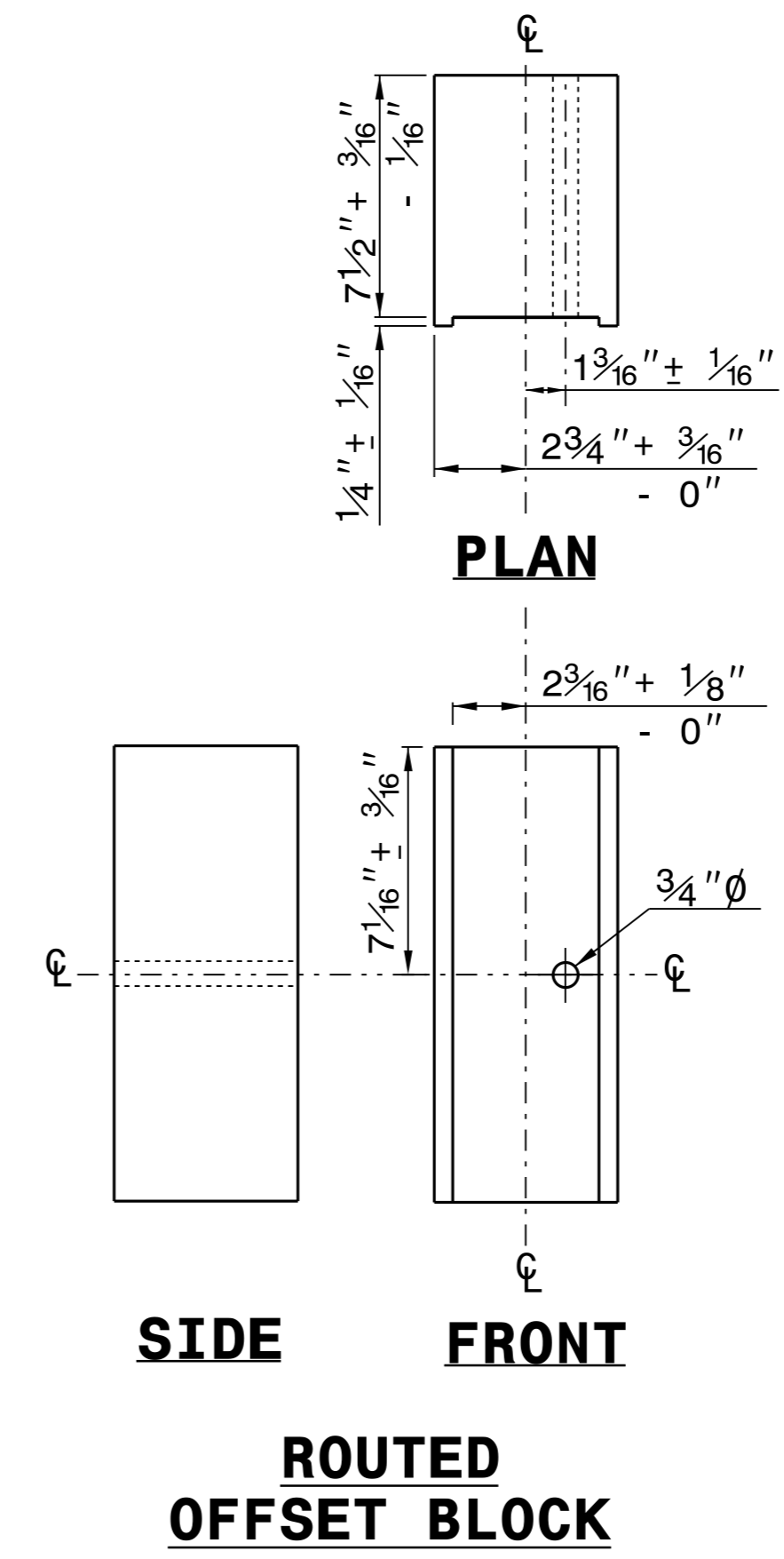


**STANDARD
LINE POST**

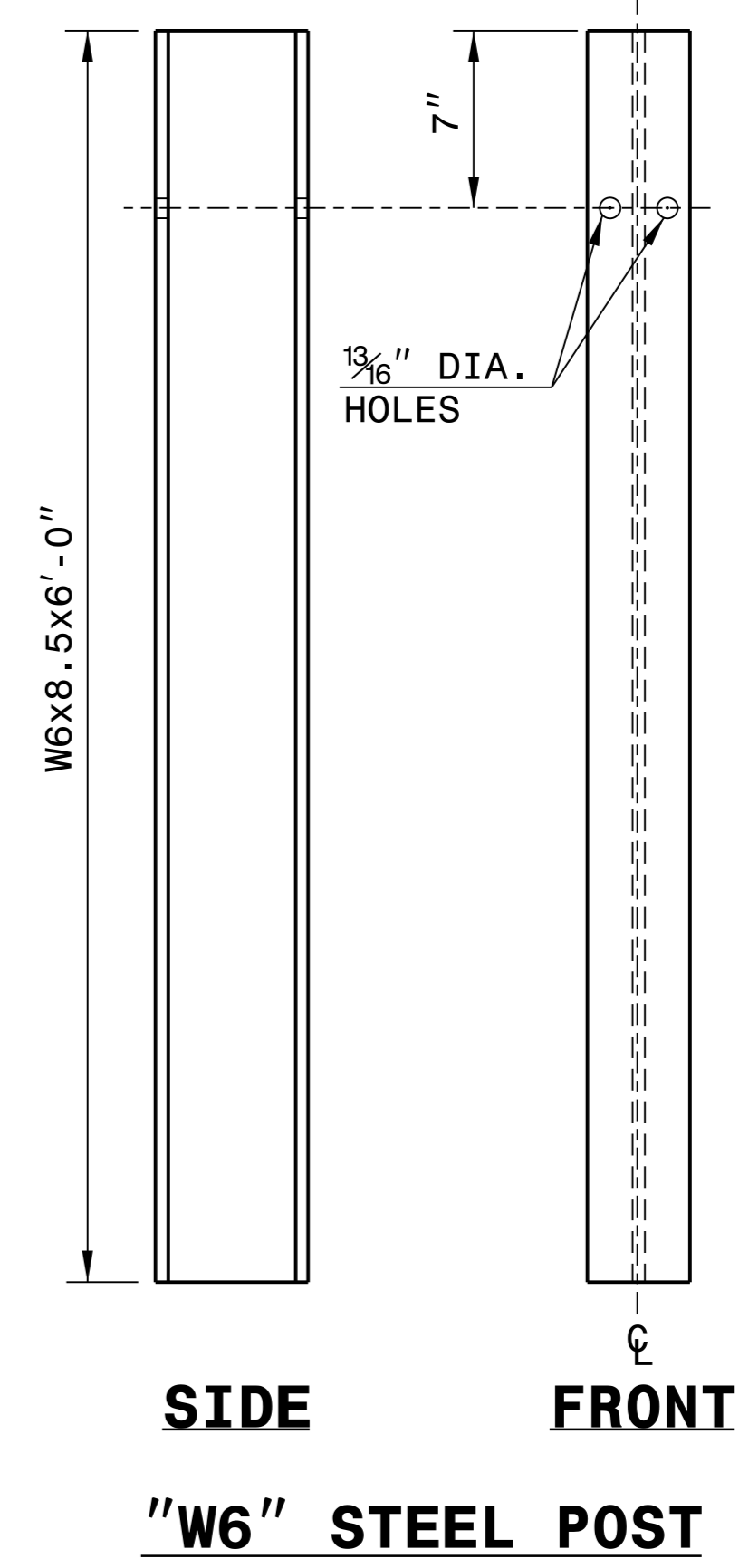
**SHORT WOOD
BREAKAWAY POST**



**STEEL TUBE
TS 6"x8"x0.1875"**

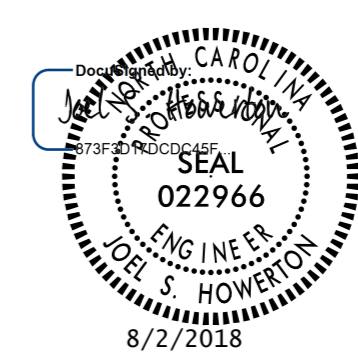


**ROUTED
OFFSET BLOCK**



W6" STEEL POST

SYSTEM PARTS



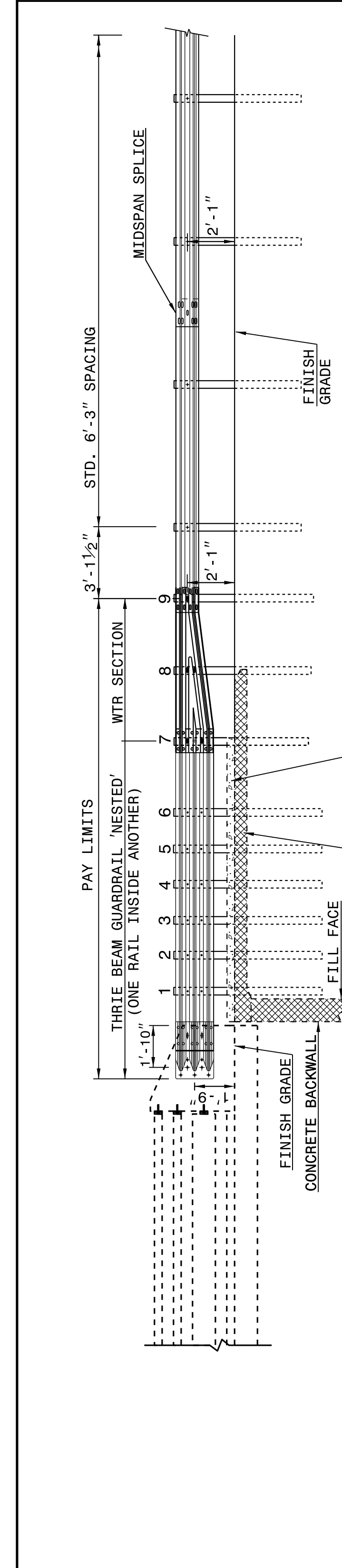
**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

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 MODIFIED BY: DATE: _____
 CHECKED BY: DATE: _____
 FILE SPEC.: _____

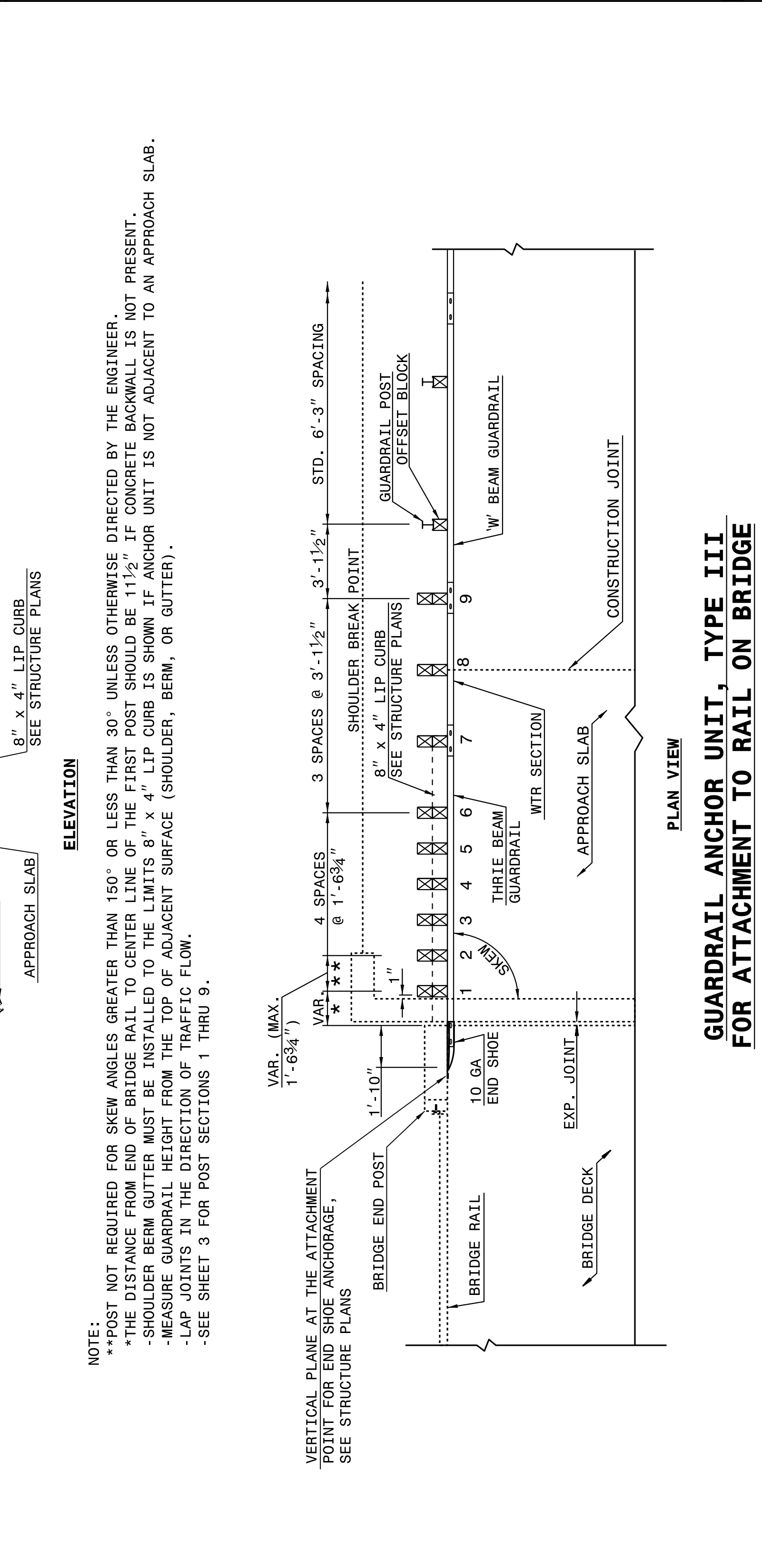
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STATE OF
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

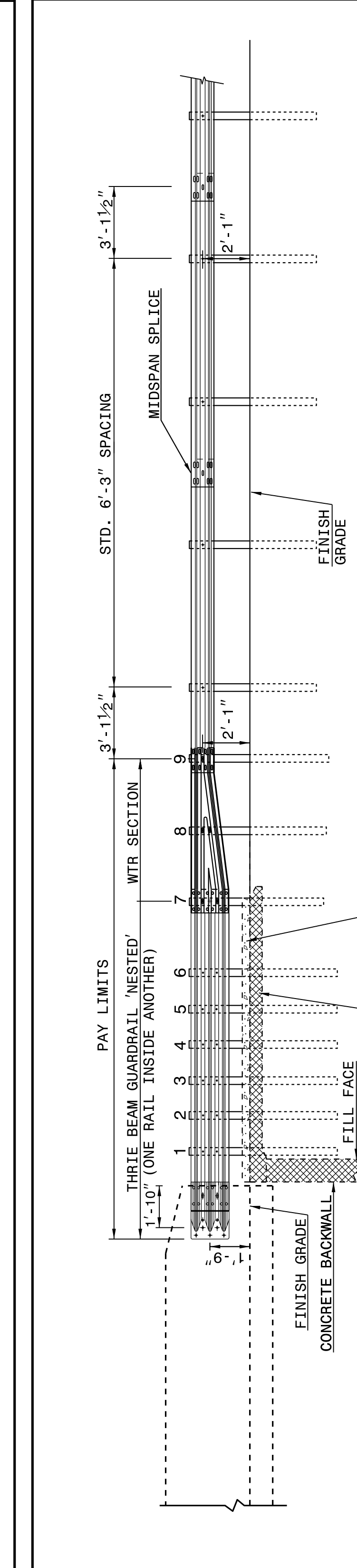


ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III
FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7
862D03

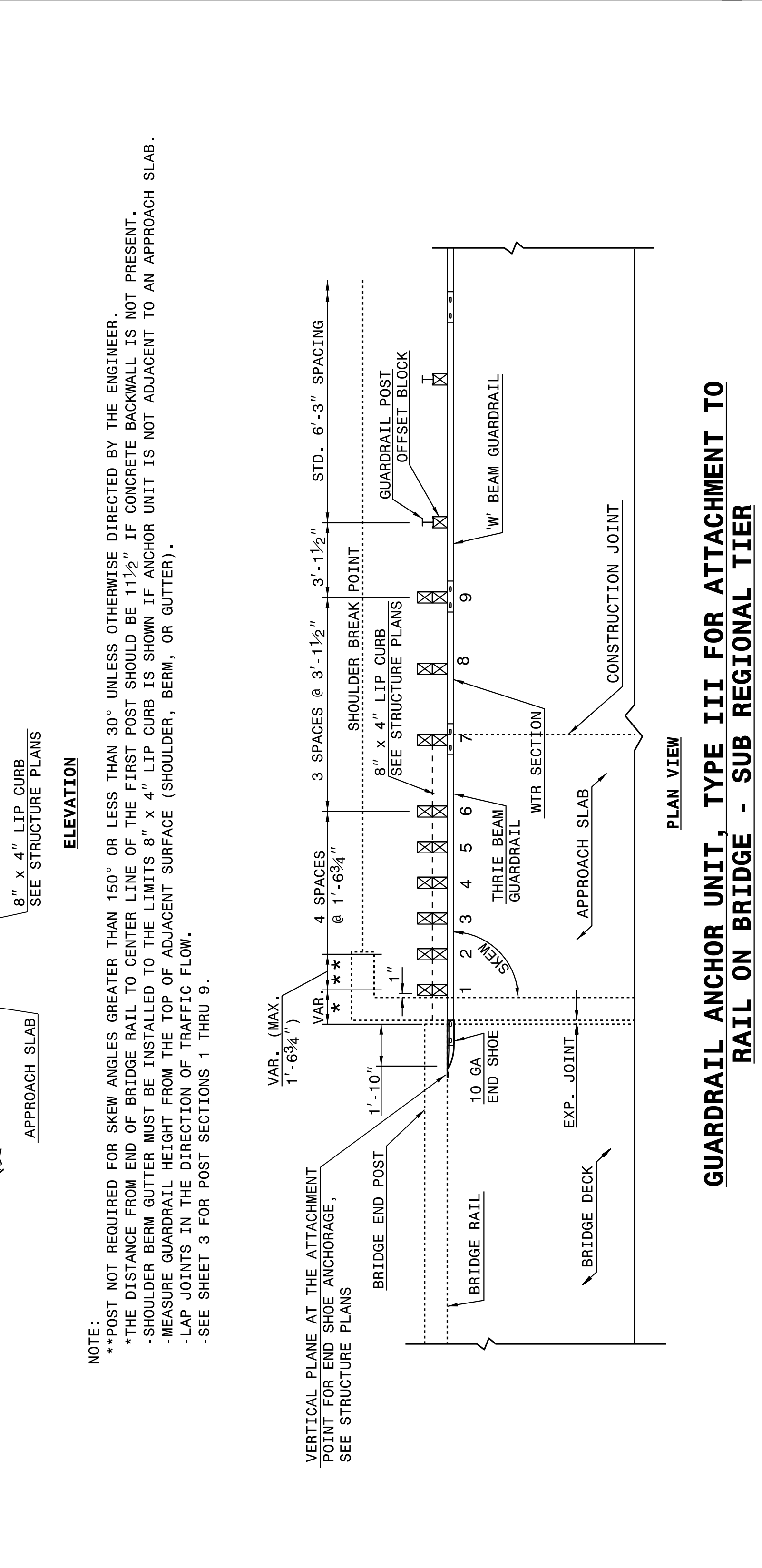


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RALEIGH, N.C.

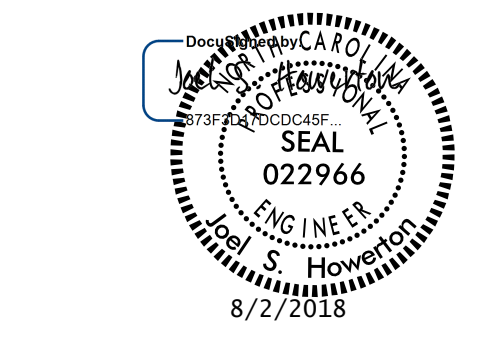
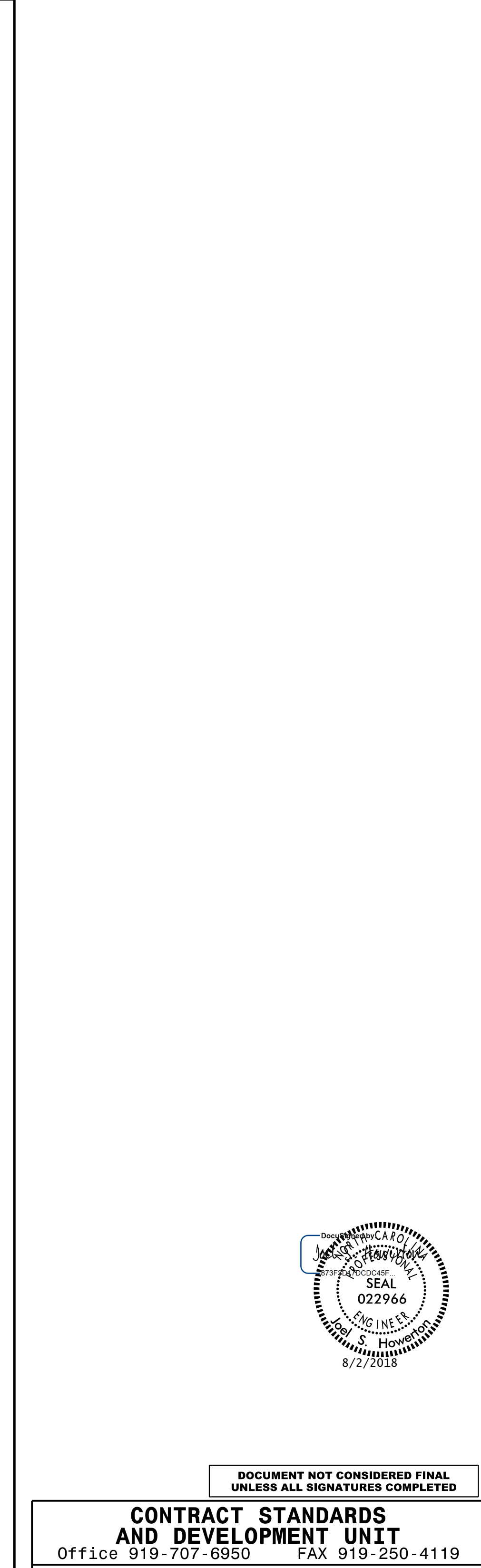


ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON BRIDGE - SUB REGIONAL TIER

SHEET 2 OF 7
862D03



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RALEIGH, N.C.



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**CONTRACT STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: J HOWERTON	DATE: 06-22-12
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:	

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III
FOR ATTACHMENT TO RAIL ON BRIDGE

SHEET 1 OF 7
862D03

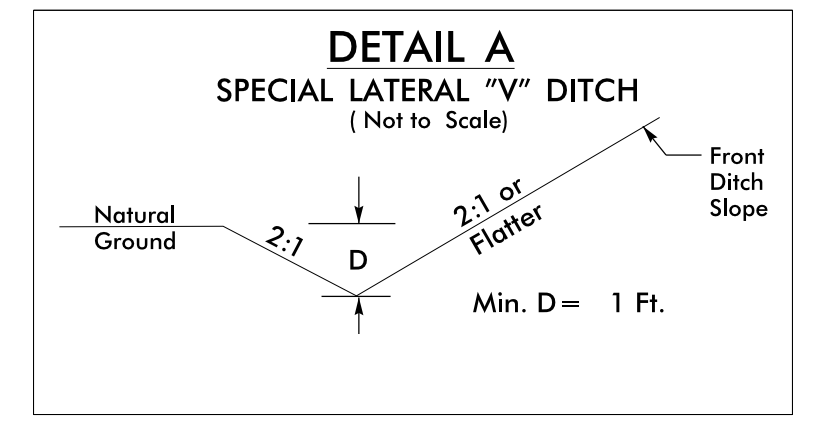
STATE OF
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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
STRUCTURE ANCHOR UNITS
GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO
RAIL ON BRIDGE - SUB REGIONAL TIER

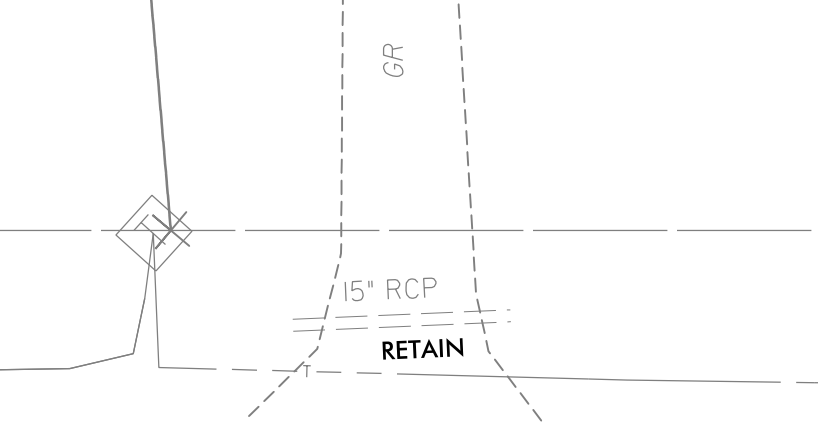
SHEET 2 OF 7
862D03

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

8/17/19



FROM STA. 13+50 TO STA. 13+80 LT
FROM STA. 14+21 TO STA. 14+50 RT



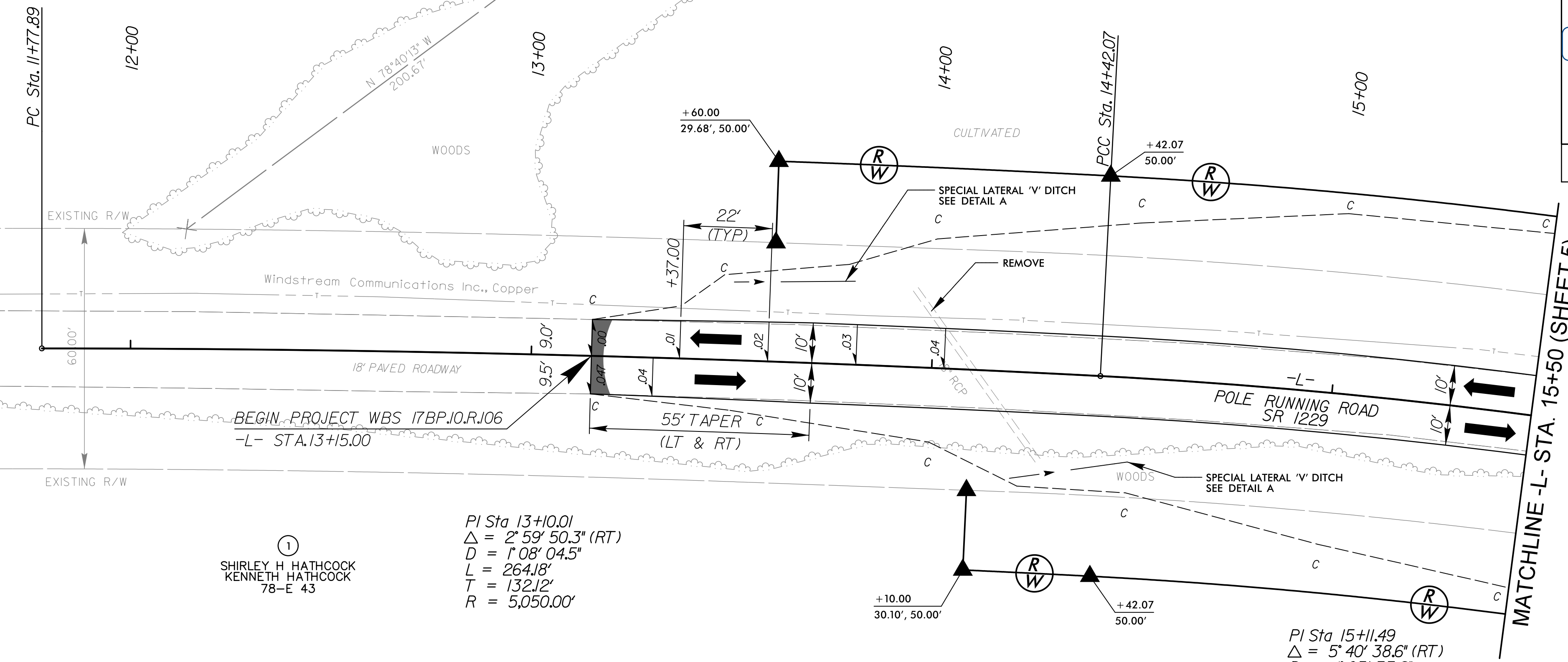
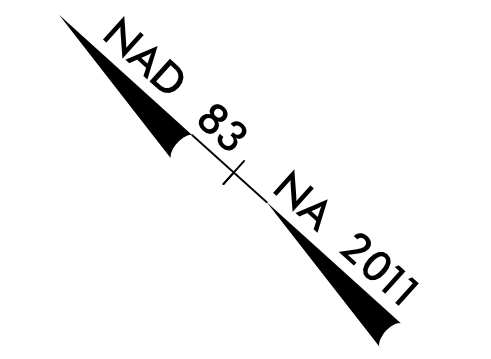
JAMES A LOWDER
BARBARA S LOWDER
DB 982 PG 636
PB 18 PG 276

SHIRLEY H HATHCOCK
KENNETH HATHCOCK
78-E 43

STV 100 Years STV Engineers, Inc.
300 West Trade St., Suite 715
Charlotte, NC 28202
NC License Number F-0991

PROJECT REFERENCE NO. 17BP.10.R.106	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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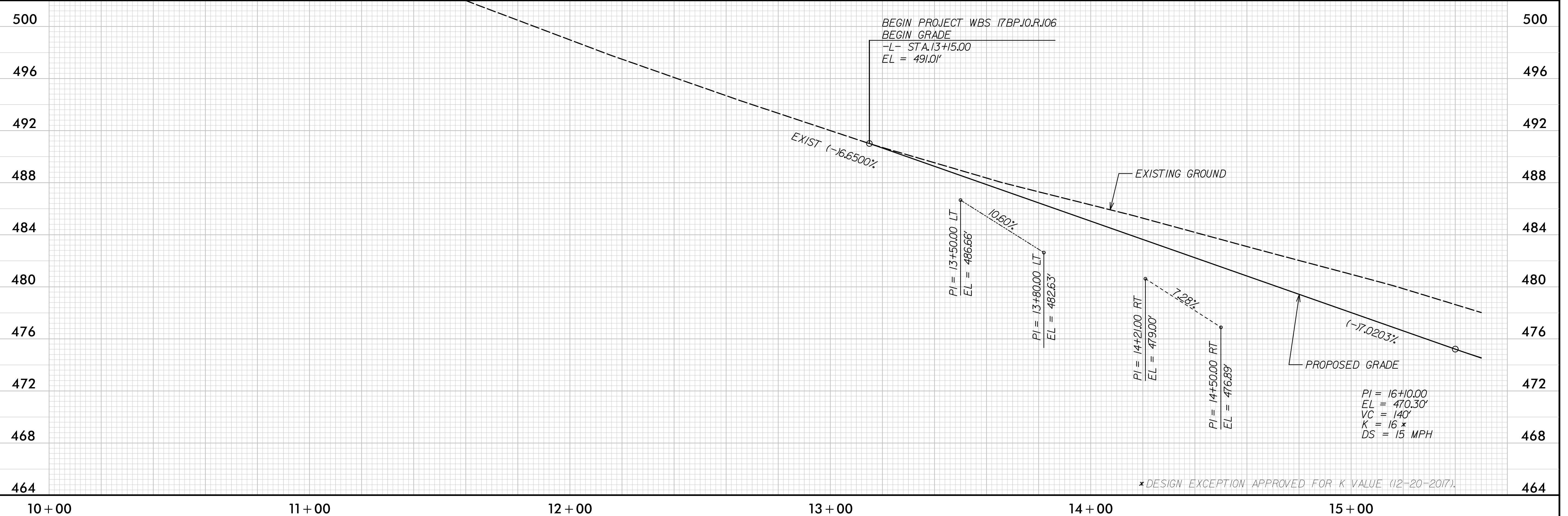
DATUM DESCRIPTION
THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY SEPI FOR MONUMENT "830174-2"
WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 586493.2680(±) EASTING: 1596361.6410(±) ELEVATION: 471.20(±)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99984928 1/X IS: 1.00015074
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "830174-2" TO -L- STATION 13+15.00 IS
N 34°38'01.9462"W 323.068 (±)
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

BM-1	N 586498.6616	E 1596326.6709	ELEV 470.48'
BM-2	N 586388.9868	E 1596491.1351	ELEV 468.83'
830174-2	N 586493.2680	E 1596361.6410	ELEV 471.20'

SHIRLEY H HATHCOCK
KENNETH HATHCOCK
78-E 43

PI Sta 13+10.01
 $\Delta = 2' 59' 50.3" (RT)$
 $D = 1' 08' 04.5"$
 $L = 264.18'$
 $T = 132.12'$
 $R = 5,050.00'$

PI Sta 15+11.49
 $\Delta = 5' 40' 38.6" (RT)$
 $D = 4' 05' 33.2"$
 $L = 138.72'$
 $T = 69.42'$
 $R = 1,400.00'$

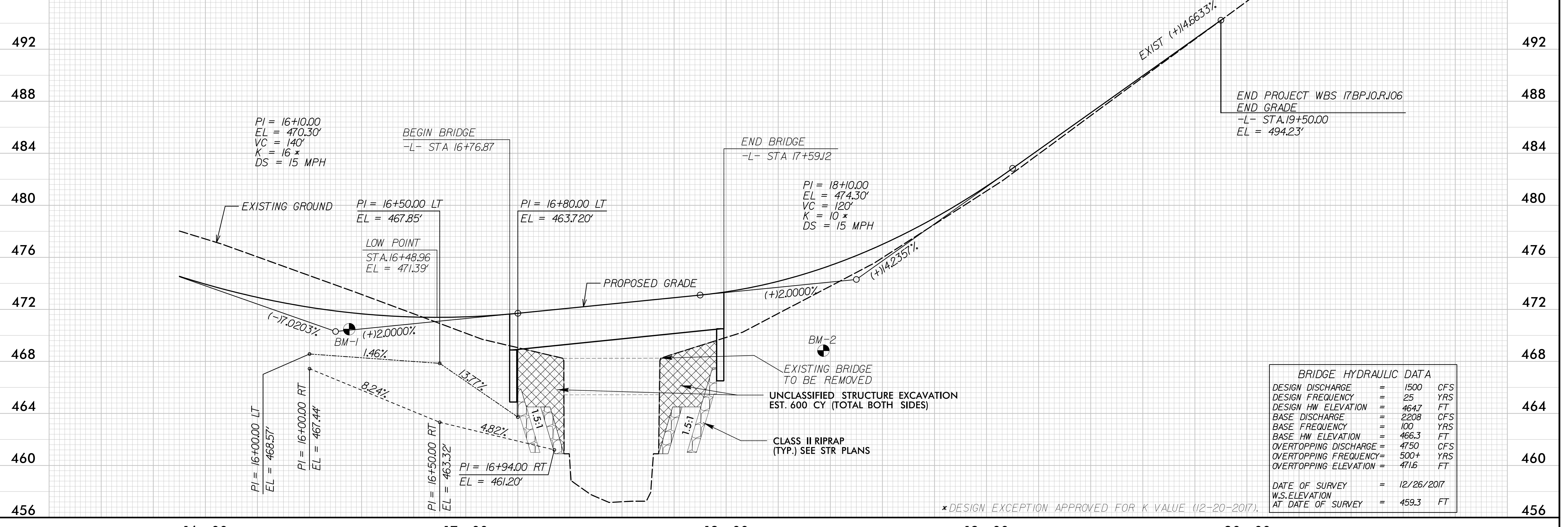
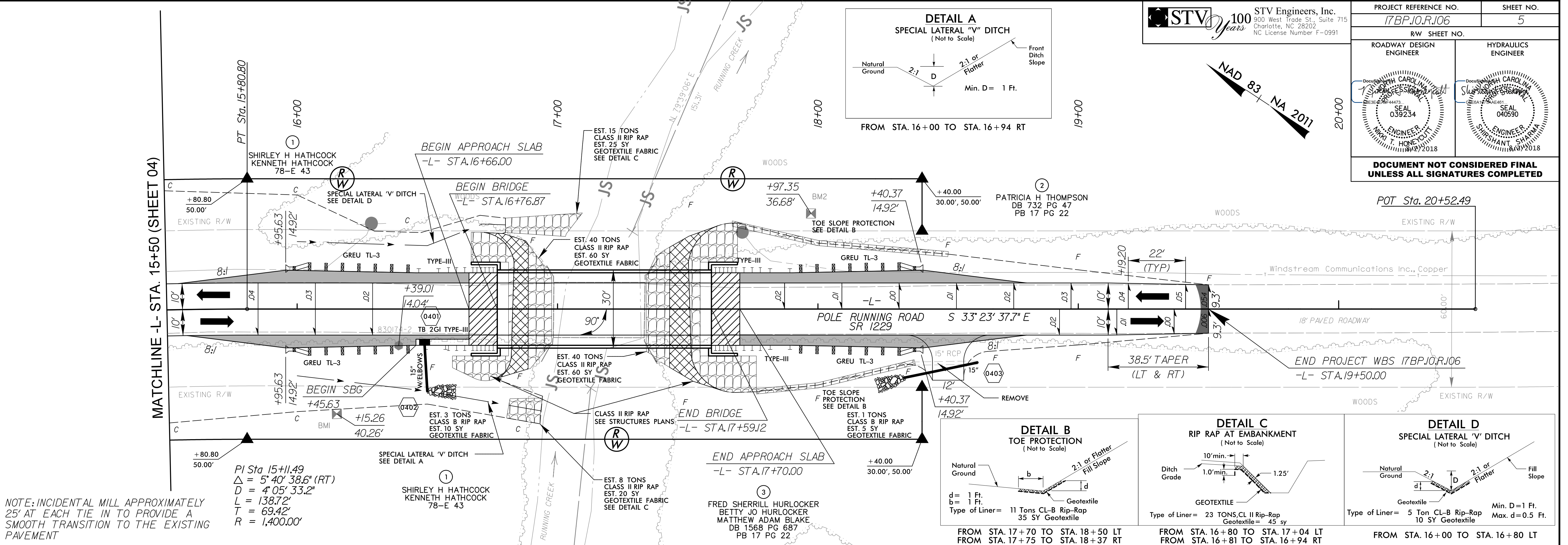


8/17/2018 10:05:00 AM \\Proj\SH\17BP.10.R.106_rdy_psh04.dgn

8/17/19

STV 100 Years
 STV Engineers, Inc.
 800 West Trade St., Suite 715
 Charlotte, NC 28202
 NC License Number F-0991

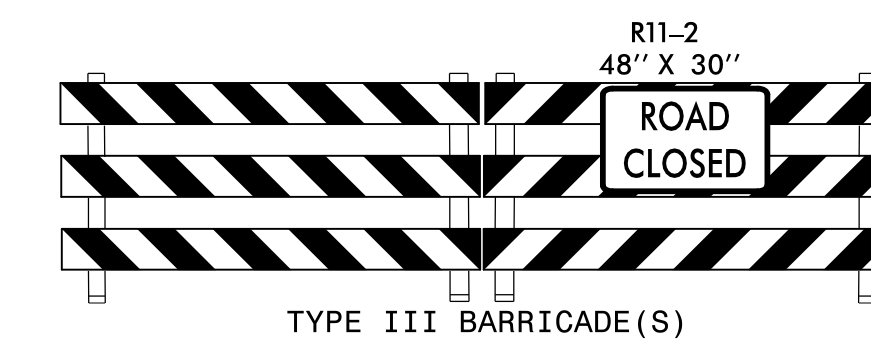
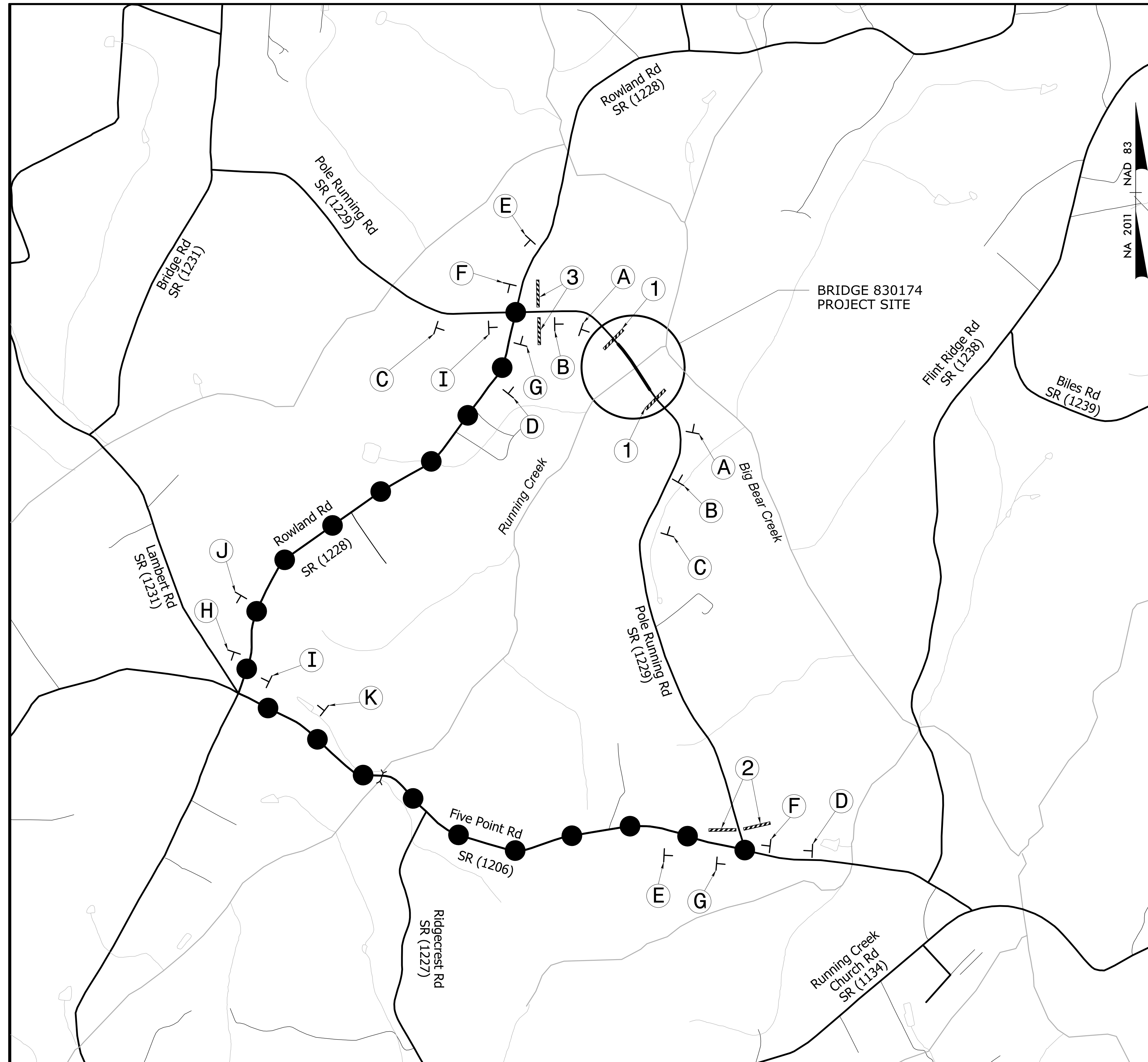
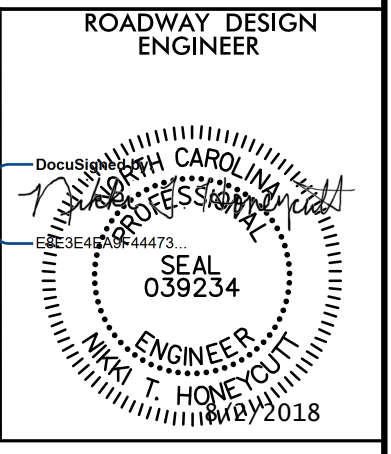
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RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



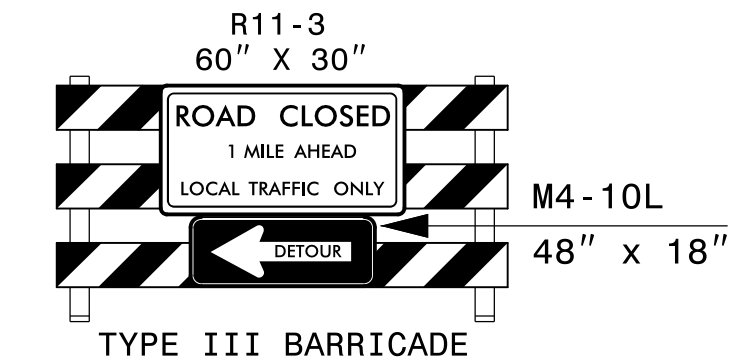
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OFF-SITE DETOUR SIGNING AND ROAD CLOSURE SIGNING

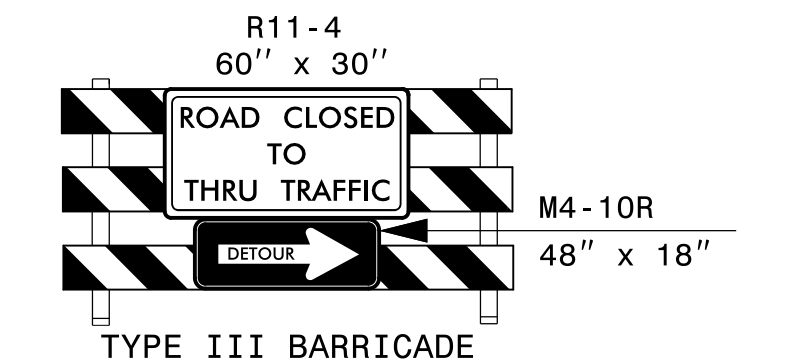
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RW SHEET NO.	
STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



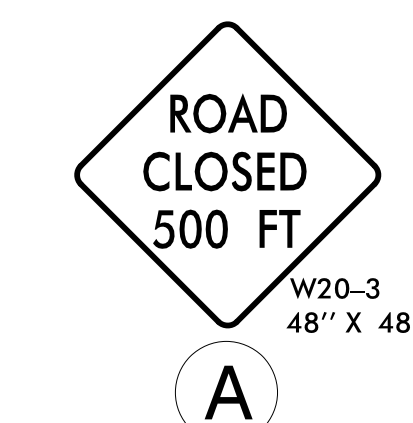
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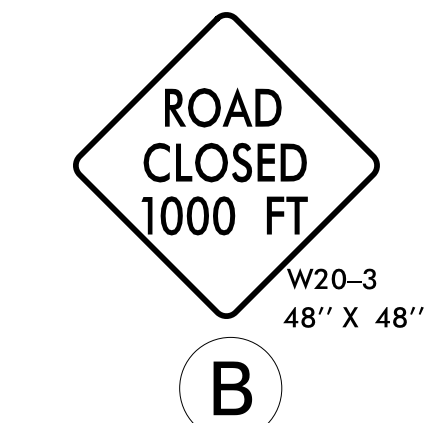
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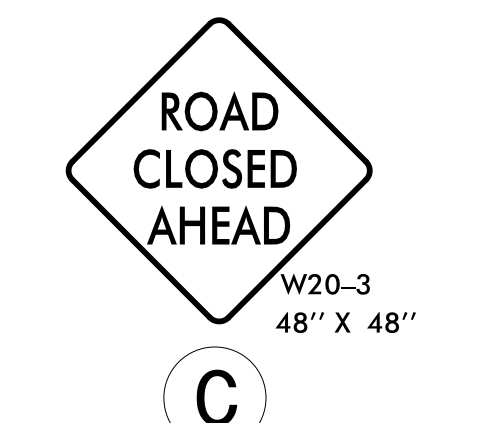
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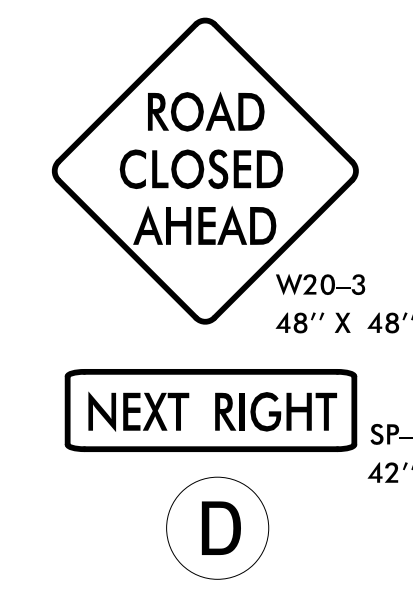
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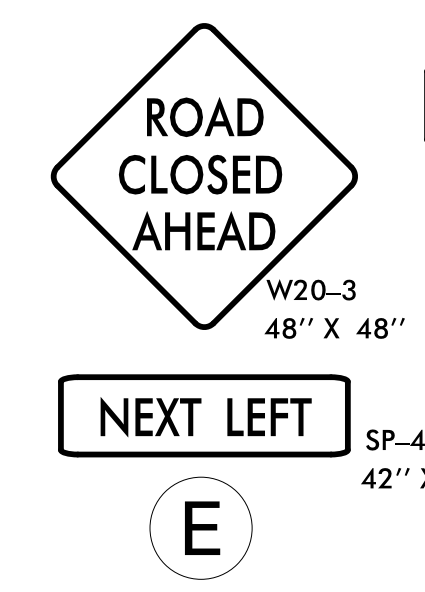
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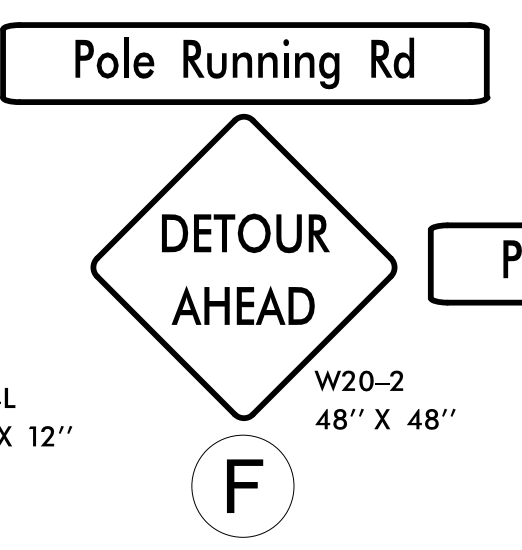
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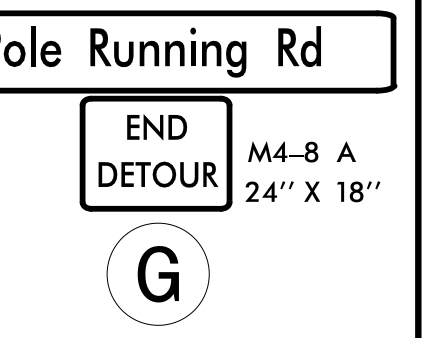
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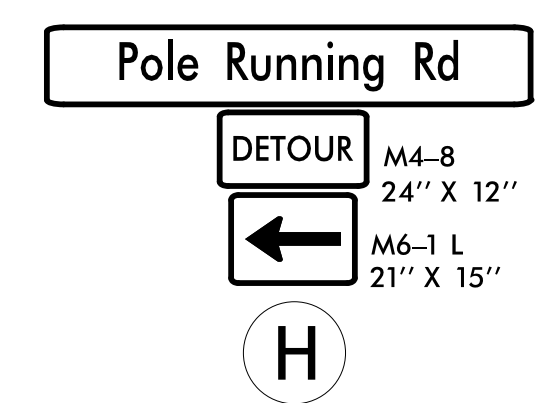
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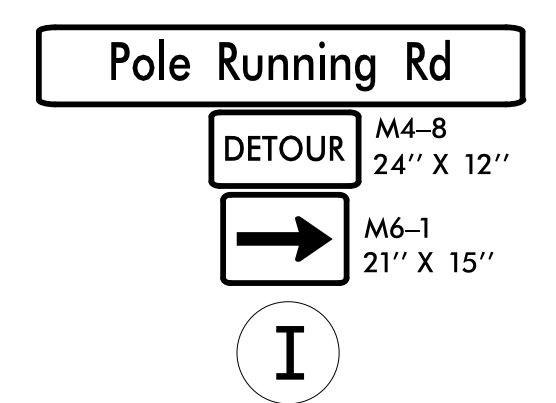
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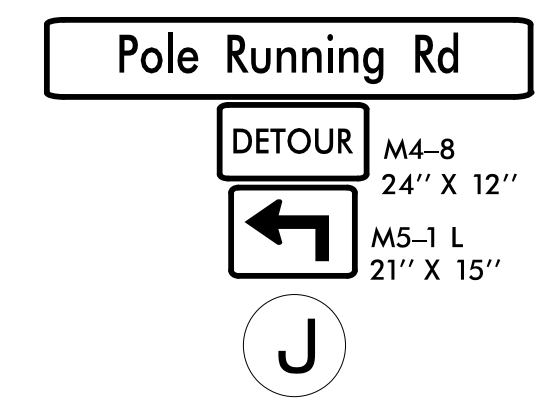
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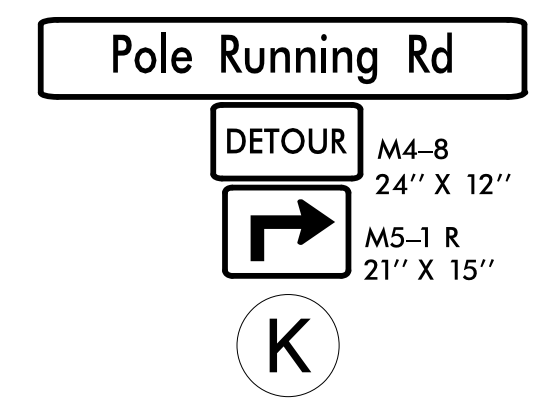
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I



J



K

SEE ROADWAY STD DWG 1101.03, SHEET 1 OF 9 FOR ADVANCE WARNING AND BARRICADE PLACEMENT.

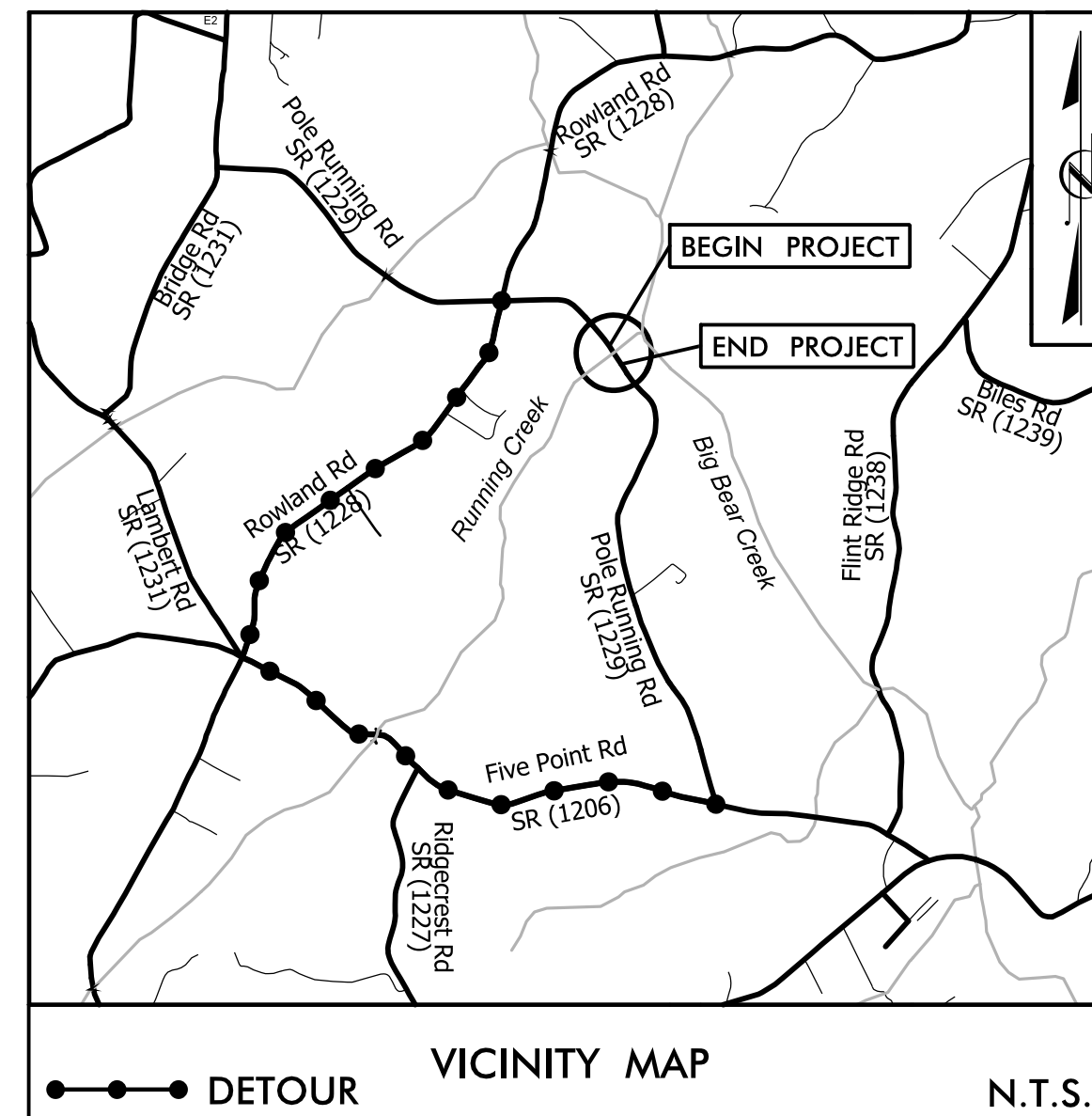


Scale: 1" = 800'

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PROJECT WBS: 17BP.10.R.106

See Sheet 1A For Index of Sheets
See Sheet 1B For Standard Symbology Sheet



STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

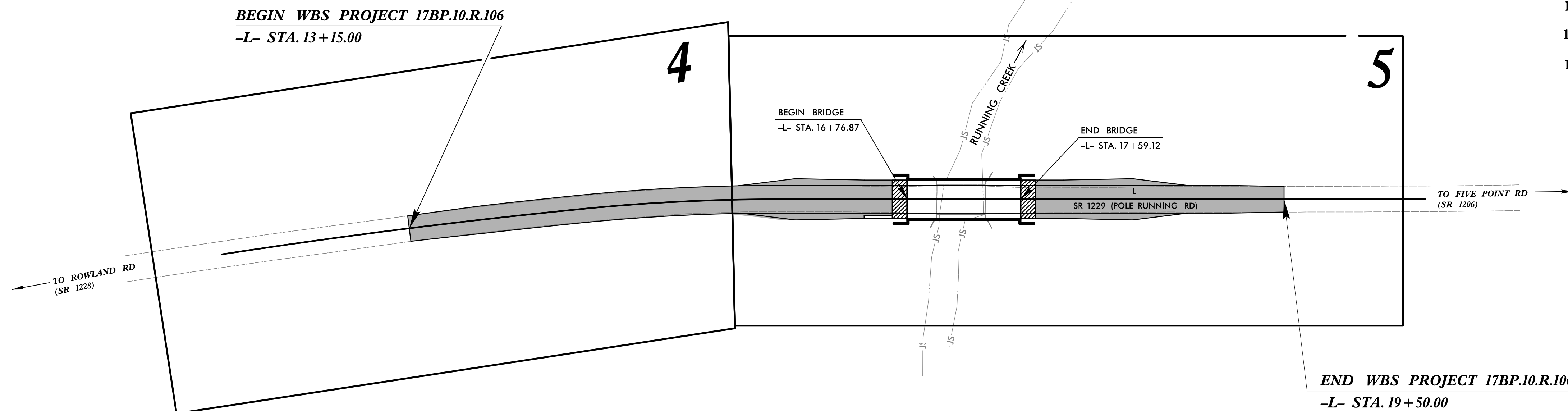
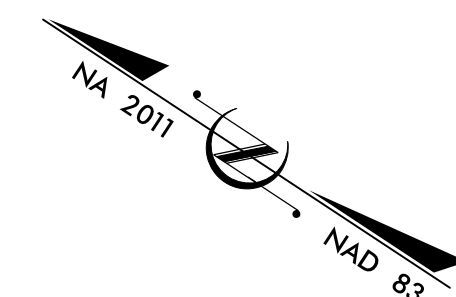
PLAN FOR PROPOSED

HIGHWAY EROSION CONTROL

STANLY COUNTY

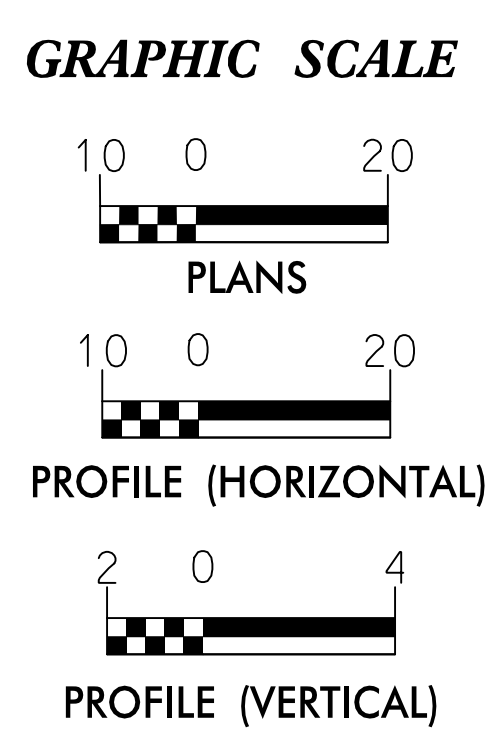
**LOCATION: BRIDGE #174 OVER RUNNING CREEK
ON SR 1229 (POLE RUNNING RD)**

TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE



Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	TSF
1606.01	Special Sediment Control Fence	SSF
1622.01	Guide for Temporary Berms and Slope Drains	GTS
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	WCFW
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	WCFW-PAM
1634.01	Temporary Rock Sediment Dam Type-A	TRSDA
1634.02	Temporary Rock Sediment Dam Type-B	TRSDA-B
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPISTRA
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPISTRB
1630.04	Stilling Basin for Pumped Effluent	SBPE
1630.06	Special Stilling Basin	SSB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SKB
	Tiered Skimmer Basin	TSKB
	Infiltration Basin	IB

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



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared In the Office of:
STV ENGINEERS, INC.
900 WEST TRADE STREET, SUITE 715
CHARLOTTE, NC 28202

2018 STANDARD SPECIFICATIONS

Designed by:
JORDAN BENDL 3928
NAME LEVEL III CERTIFICATION NO.

Reviewed In the Office of:
ROADSIDE ENVIRONMENTAL UNIT
1 South Wilmington St.
Raleigh, NC 27611

2018 STANDARD SPECIFICATIONS

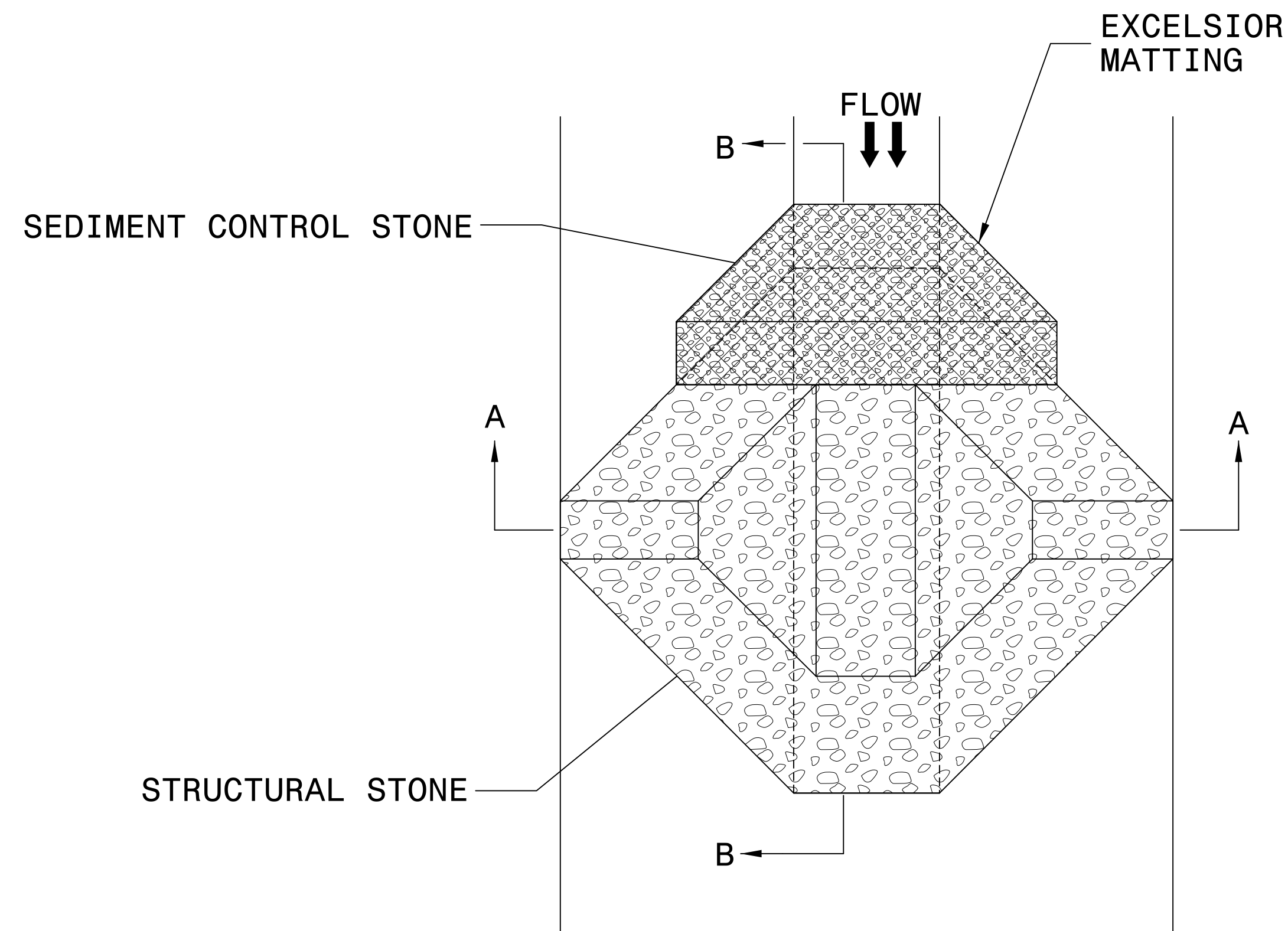
Reviewed by:
PHIL SUGGS, CPESC

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 Guide for Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Silt 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 for Pumped Effluent	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	

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



PLAN

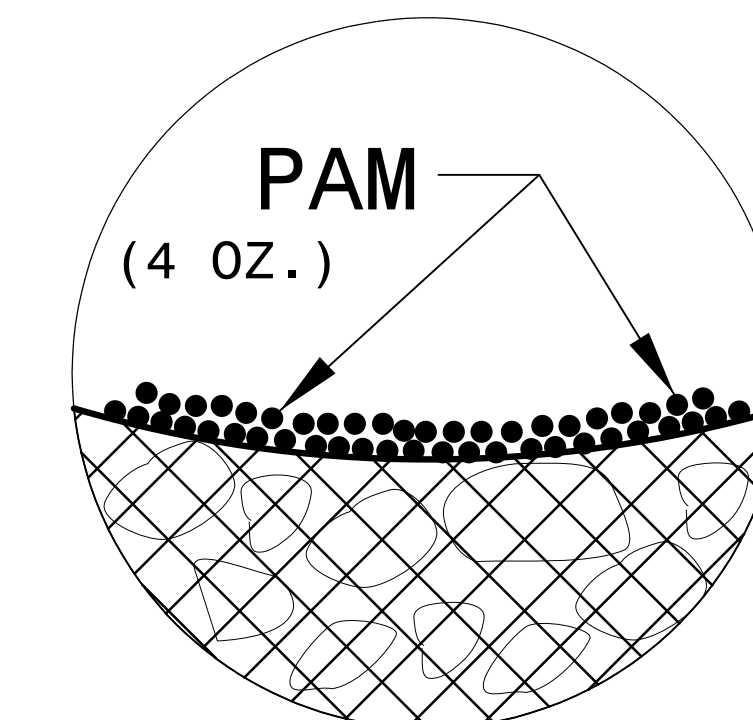
NOTES:

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

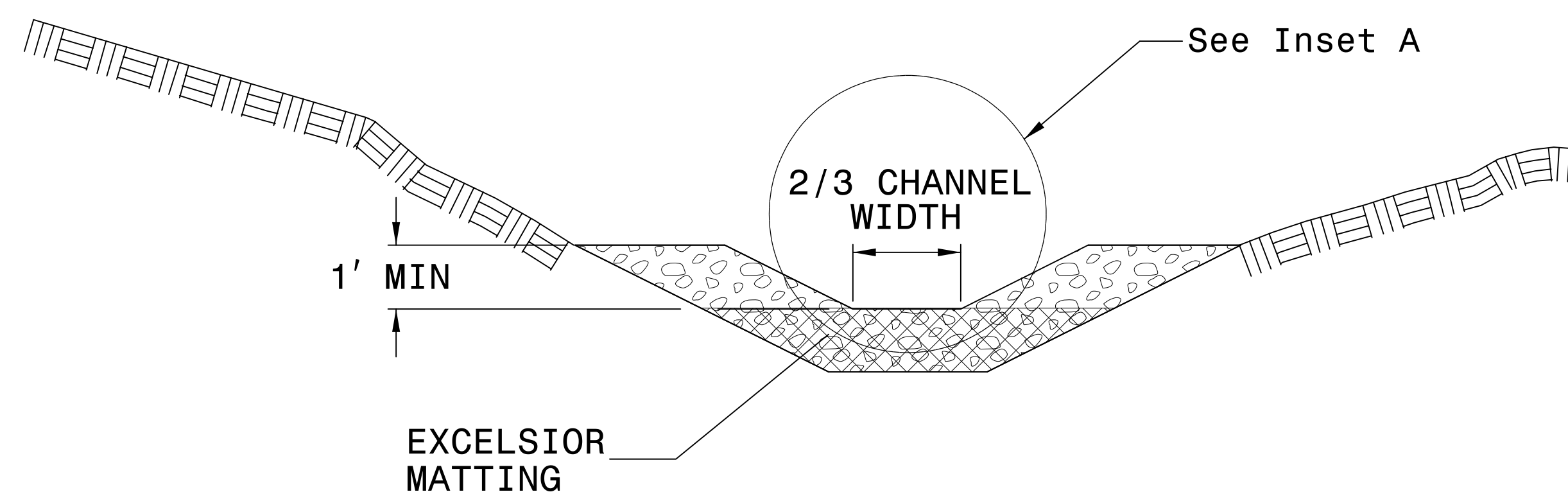
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

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.

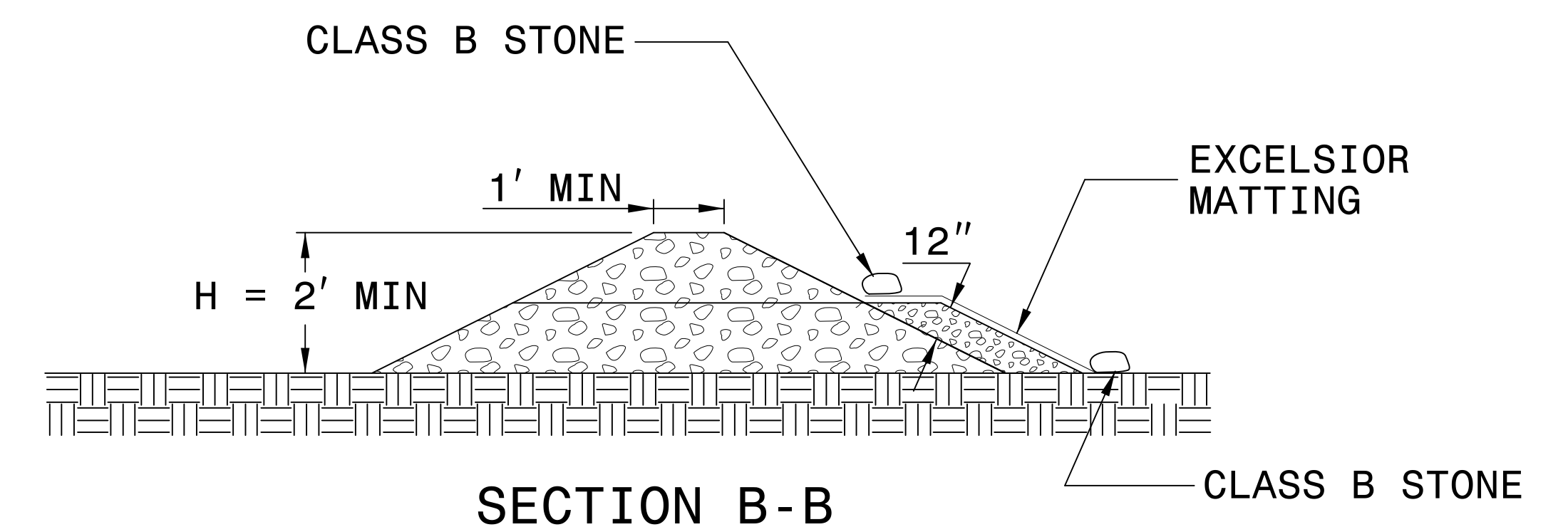
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION A-A



SECTION B-B

NOT TO SCALE

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.

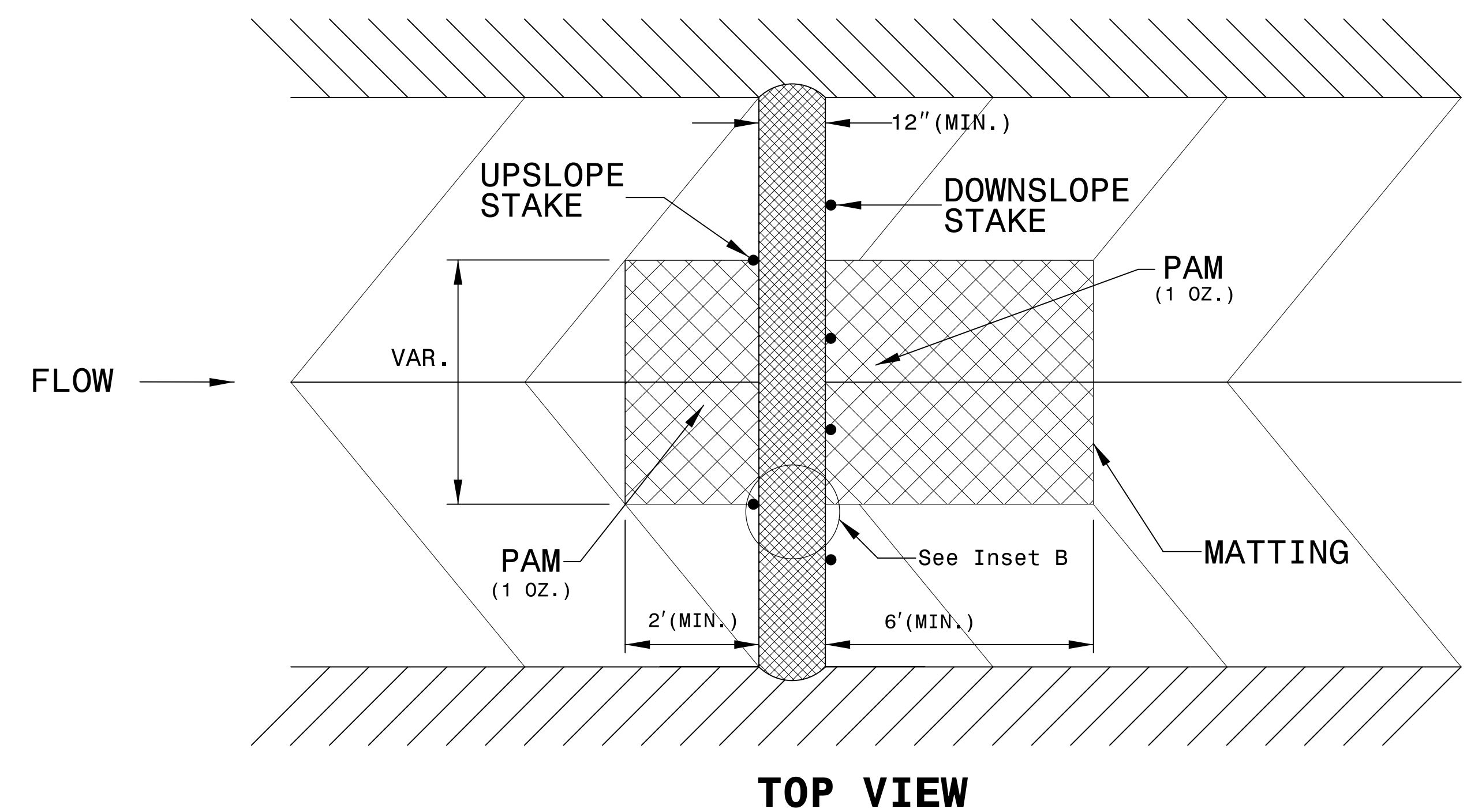
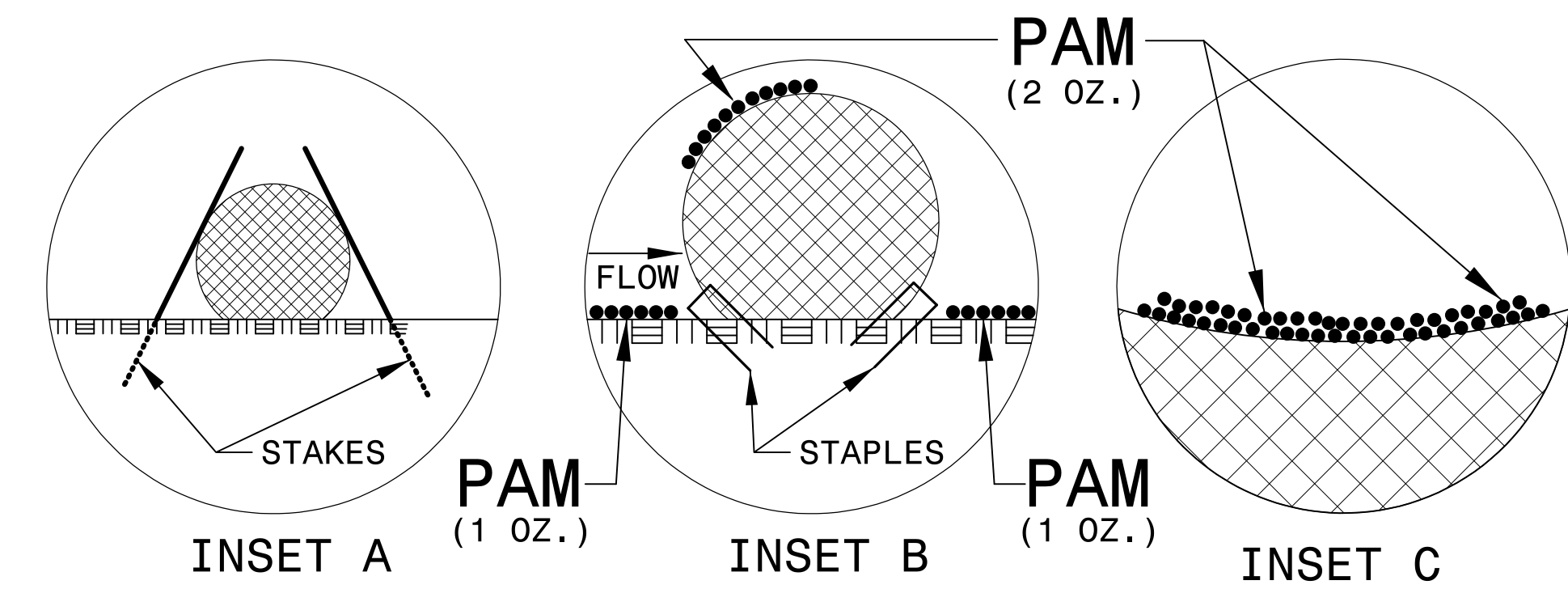
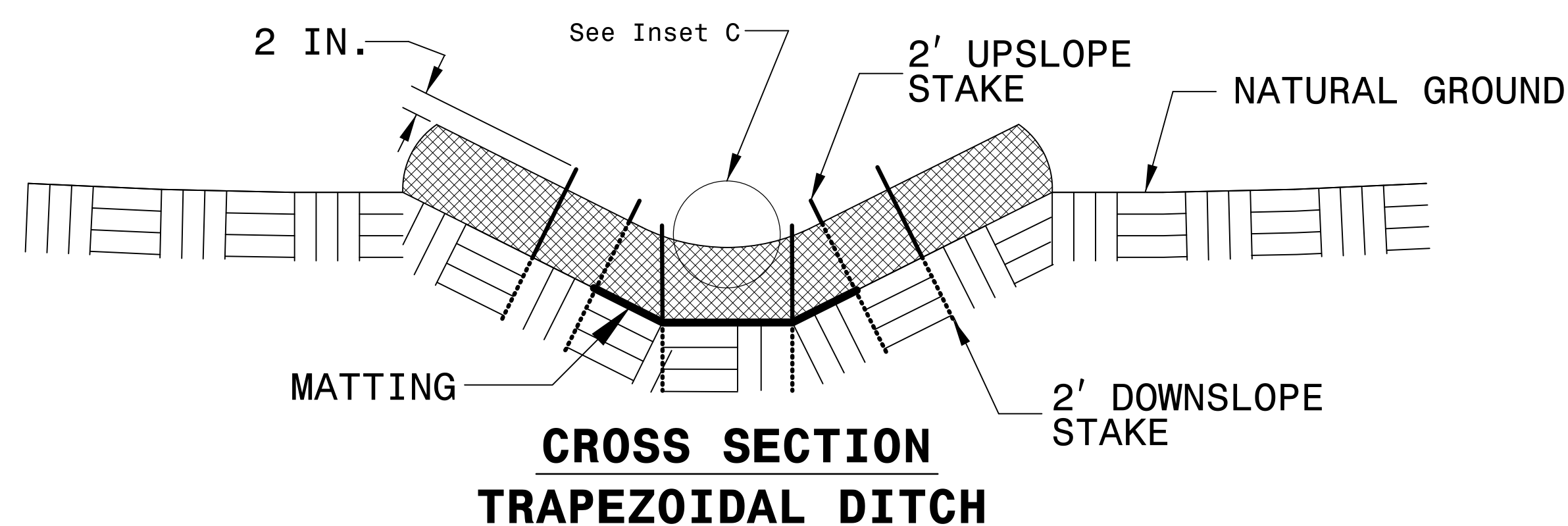
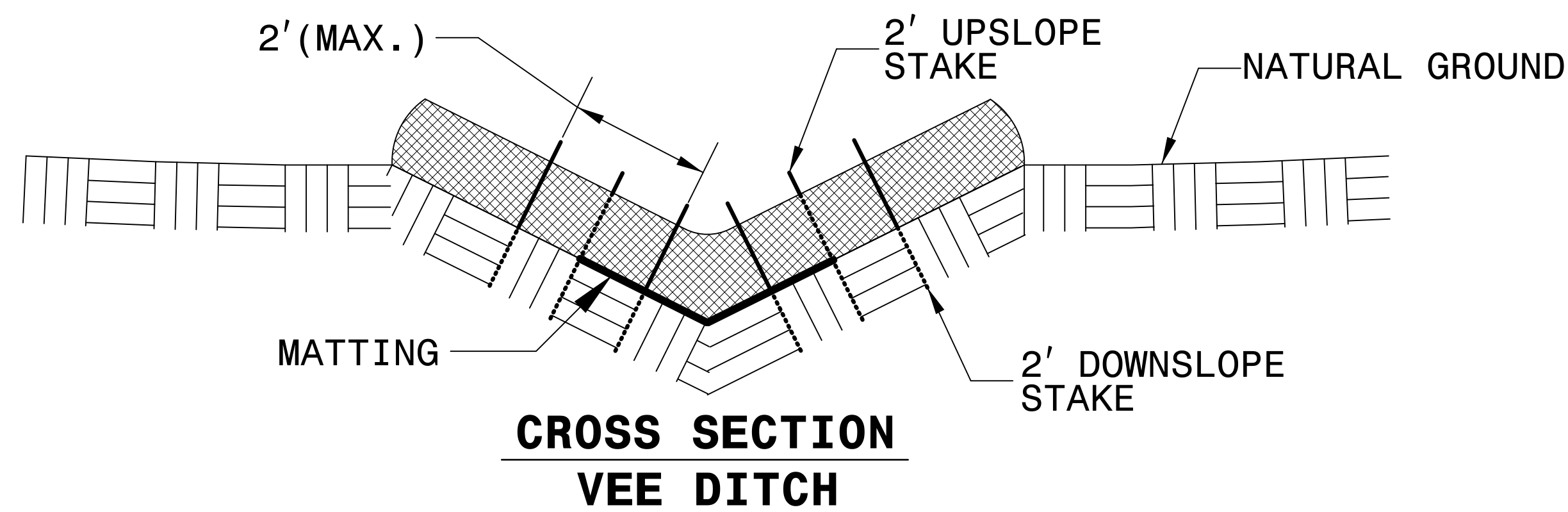
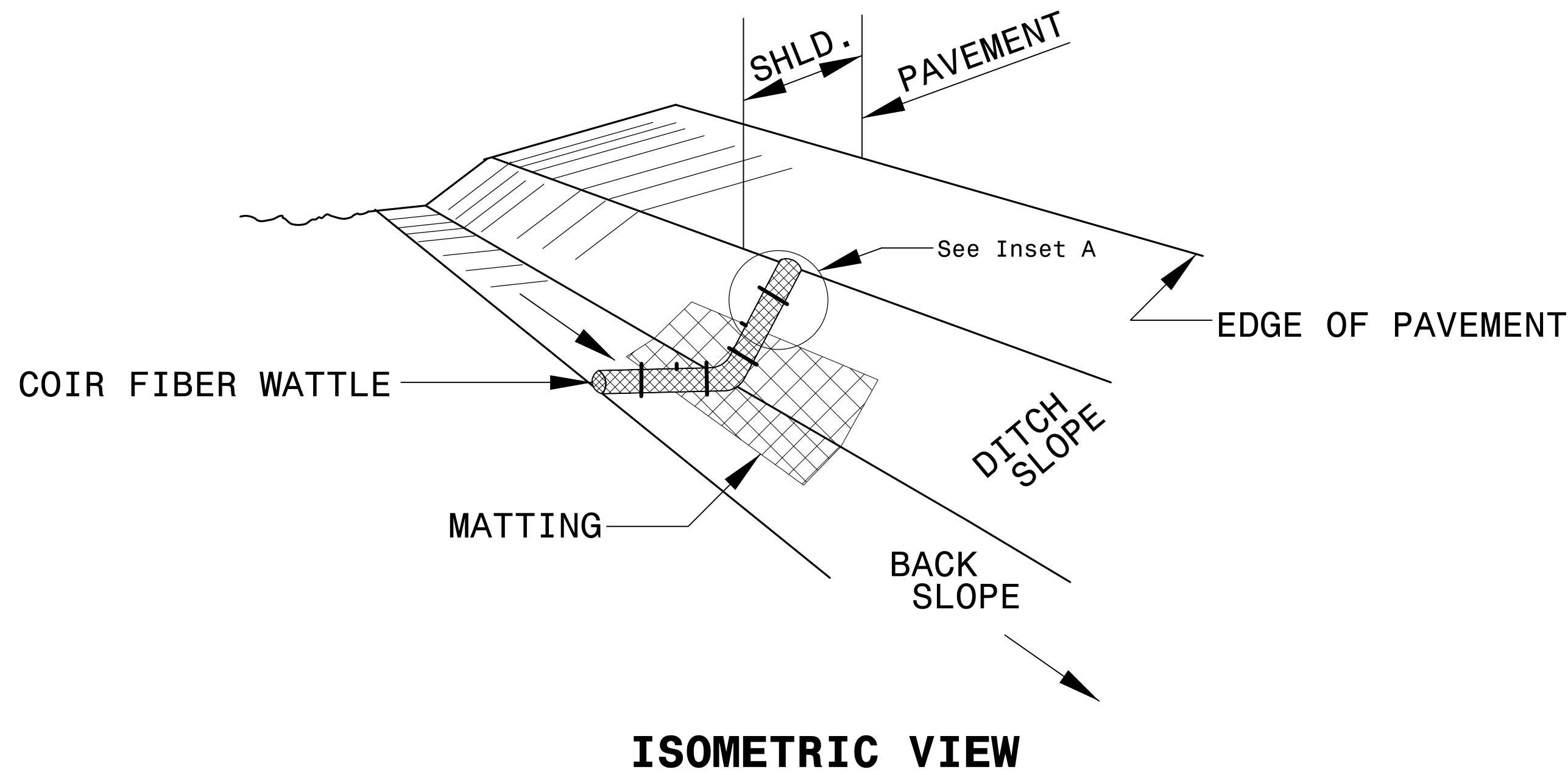
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

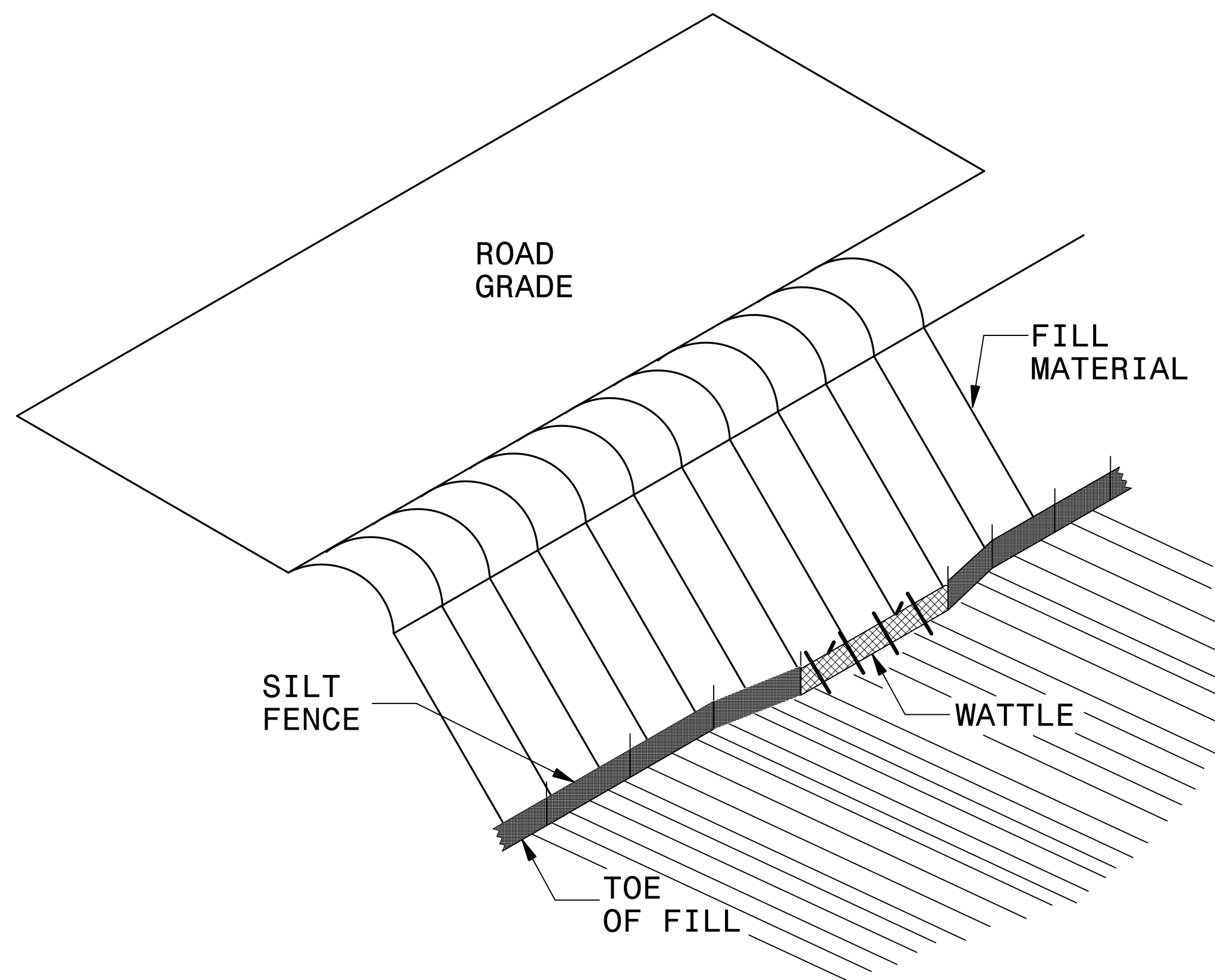
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

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.

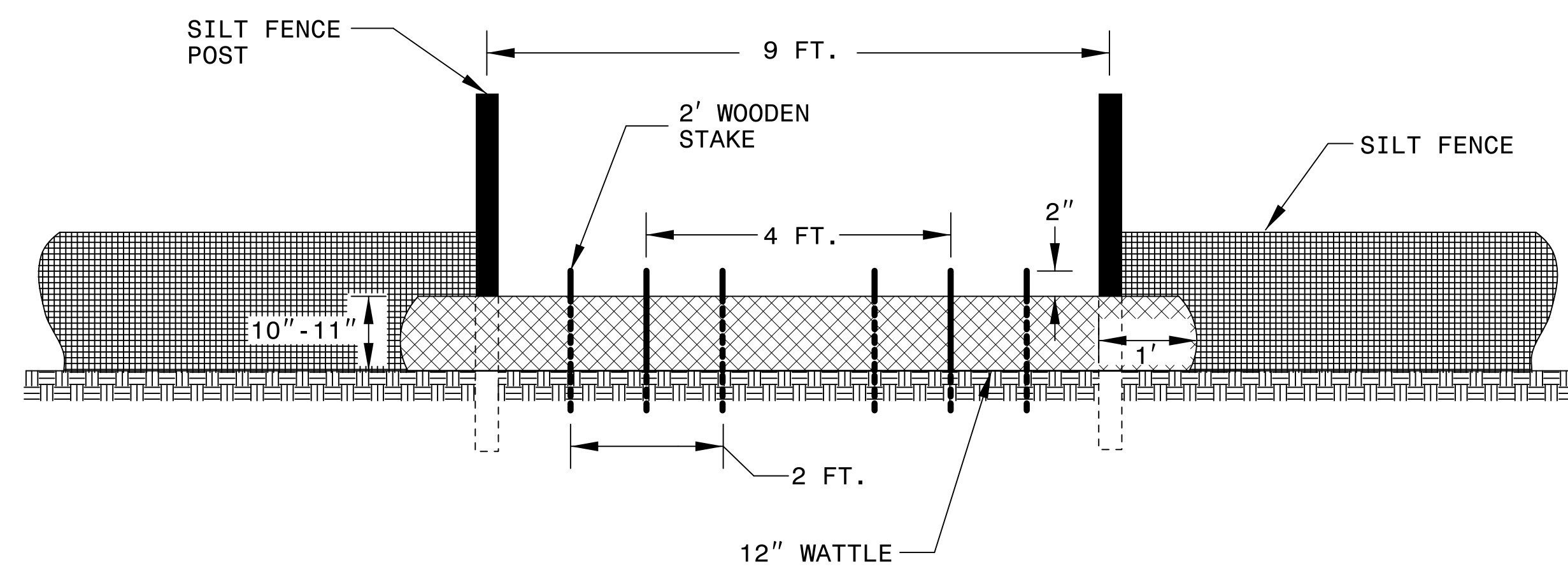
INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW

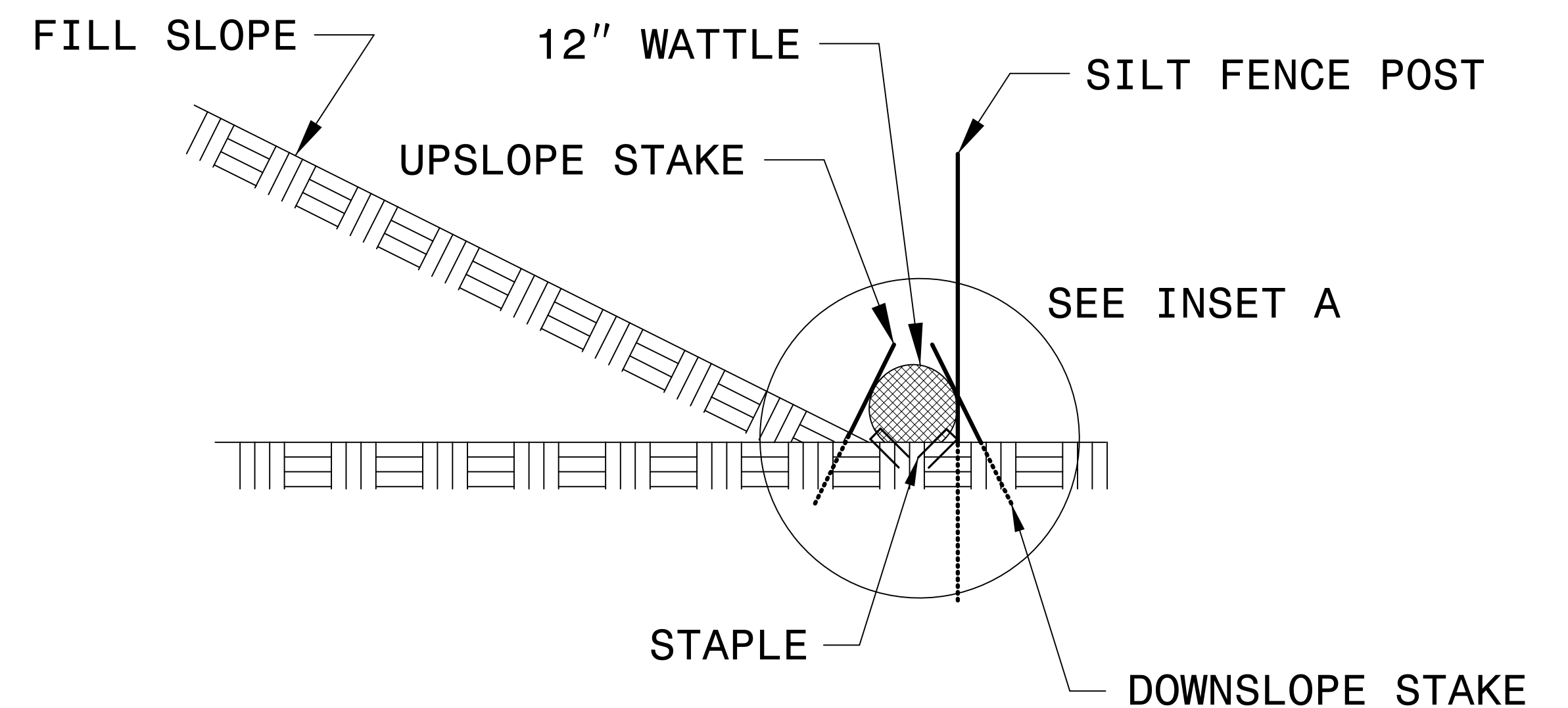
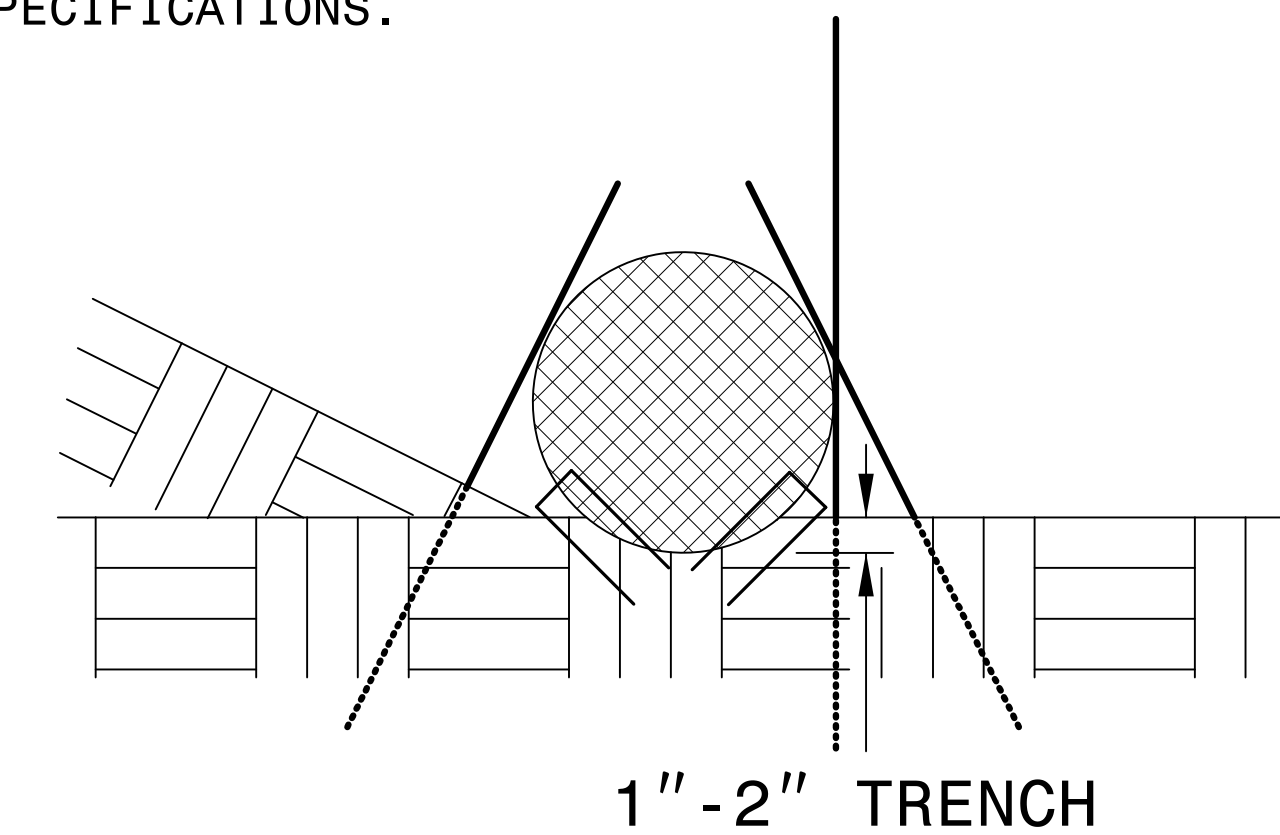


VIEW FROM SLOPE

NOTES:


- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE 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.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A




SIDE VIEW

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
17BP10.R106	EC-3A
RW SHEET NO.	
 STV Engineers, Inc. <small>900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991</small>	

SOIL STABILIZATION TIMEFRAMES

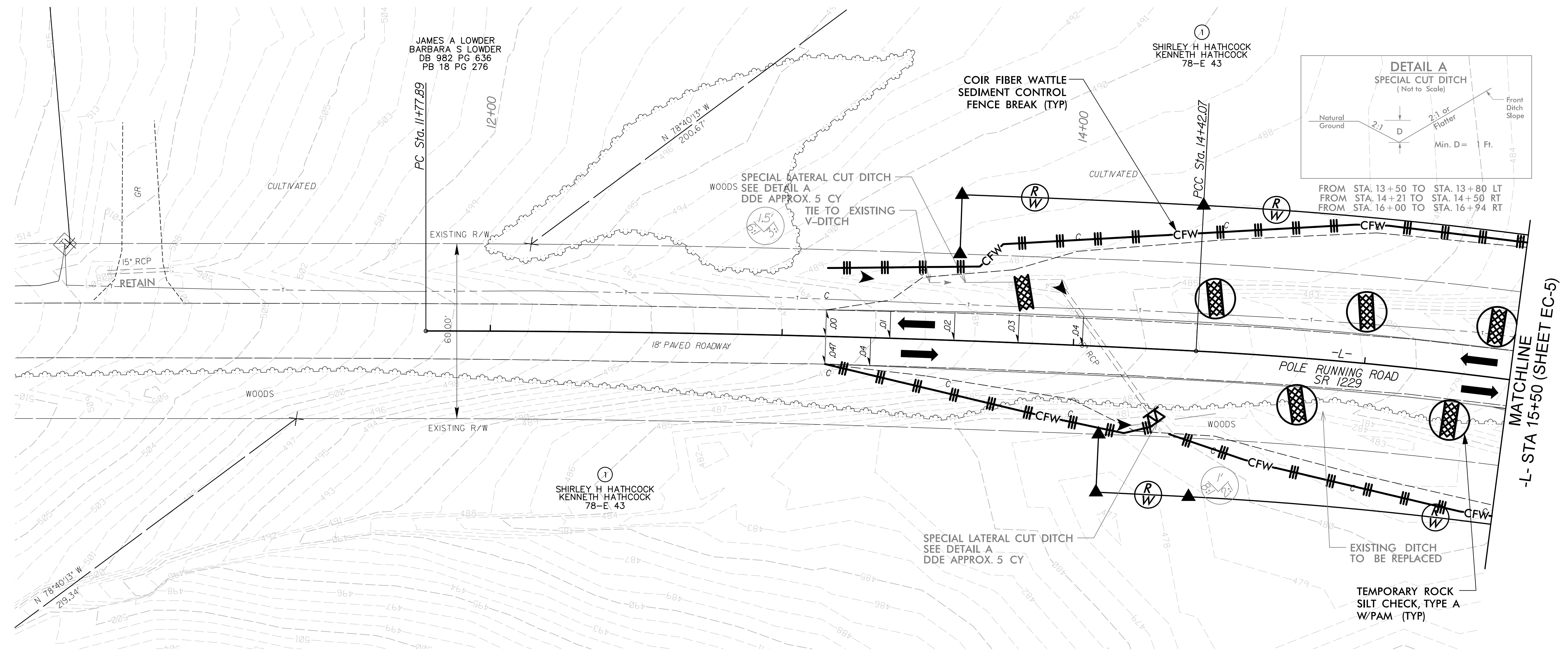
<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES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

PROJECT REFERENCE NO. 17BPJO.R.106	SHEET NO. EC-4/CONST.4
RW SHEET NO.	
 STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	

BRIDGE #830174
SCALE: 1"=20'
 NAD 83 NA 2011

**CLEARING AND GRUBBING
 EROSION CONTROL FOR
 CONSTRUCTION SHEET 4**

NOTE:
 PERIMETER EROSION CONTROL MEASURES SHALL BE
 INSTALLED DURING CLEARING AND GRUBBING PHASE.




NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL
 REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY
 NEED TO BE INSTALLED AS DIRECTED BY THE
 ENGINEER.

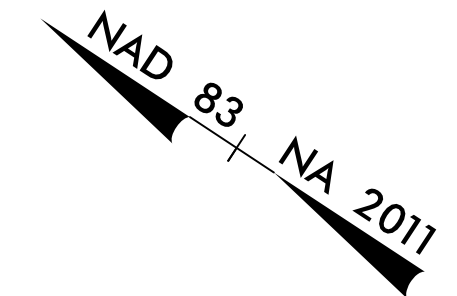
NOTE:
 UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING
 BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

NOTE:
 PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
 AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
 DRAINAGE OUTLETS.

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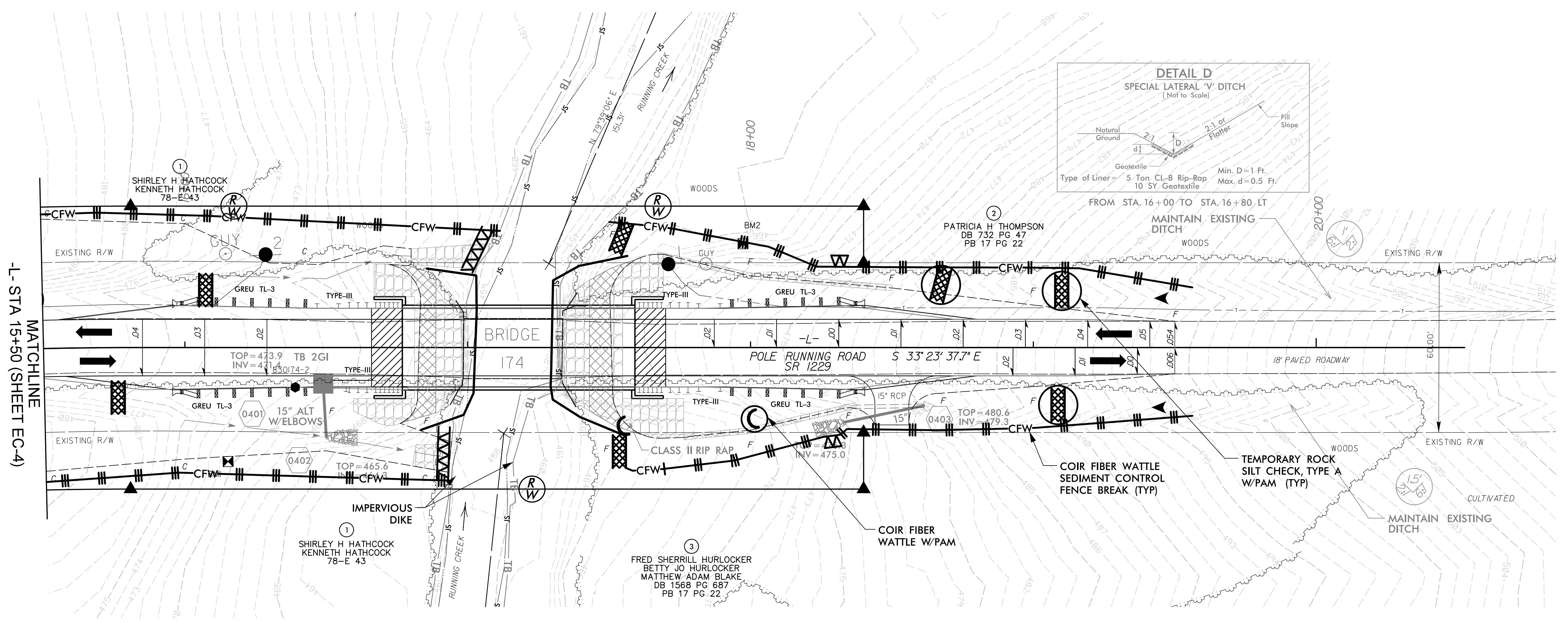
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RW SHEET NO.	
 STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	

BRIDGE #830174
SCALE: 1"=20'



CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

NOTE:
PERIMETER EROSION CONTROL MEASURES SHALL BE
INSTALLED DURING CLEARING AND GRUBBING PHASE.



NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL
REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY
NEED TO BE INSTALLED AS DIRECTED BY THE
ENGINEER.

NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING
BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

NOTE:
PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B
AND TEMPORARY ROCK SILT CHECKS TYPE - A AT
DRAINAGE OUTLETS.

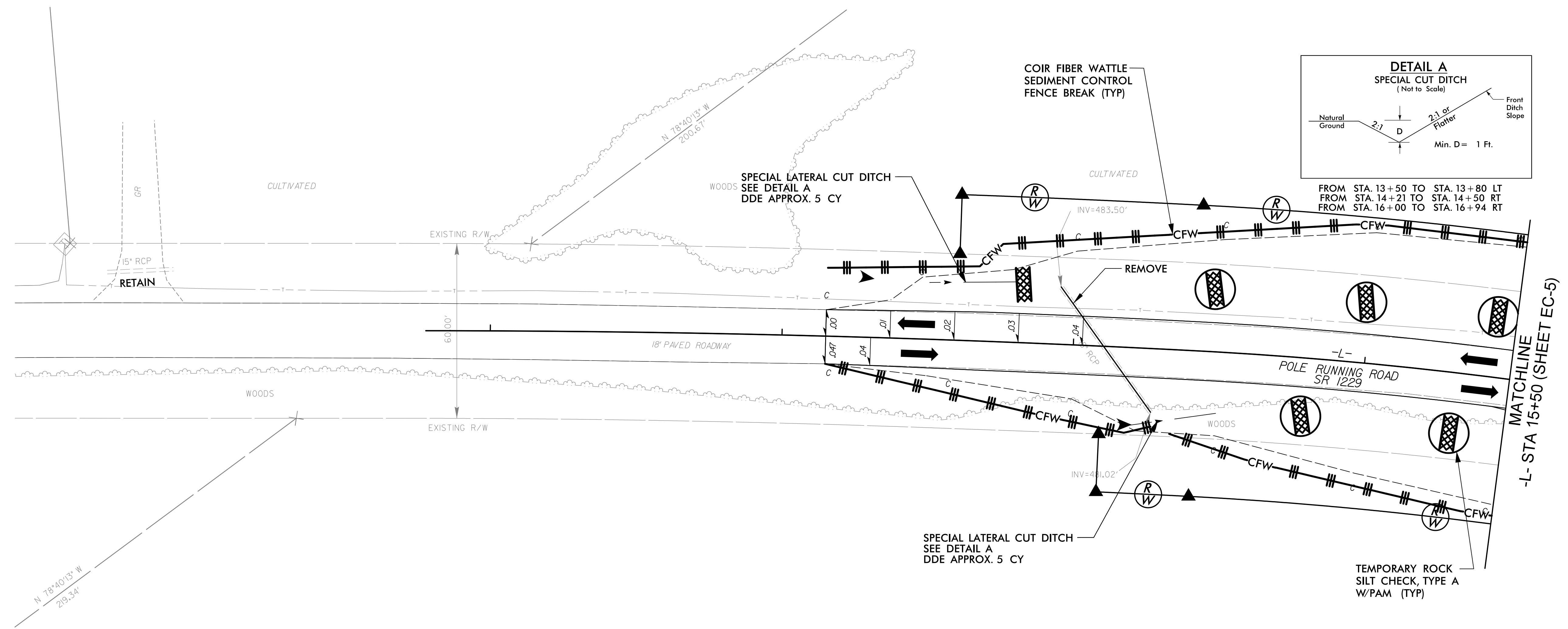
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PROJECT REFERENCE NO. 17BP10.R.106	SHEET NO. EC-6/CONST.4
RW SHEET NO.	

STV 100 Years
 STV Engineers, Inc.
 900 West Trade St., Suite 715
 Charlotte, NC 28202
 NC License Number F-0991

BRIDGE #830174
 SCALE: 1"=20'
 NAD 83 NA 2011

FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 4




NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

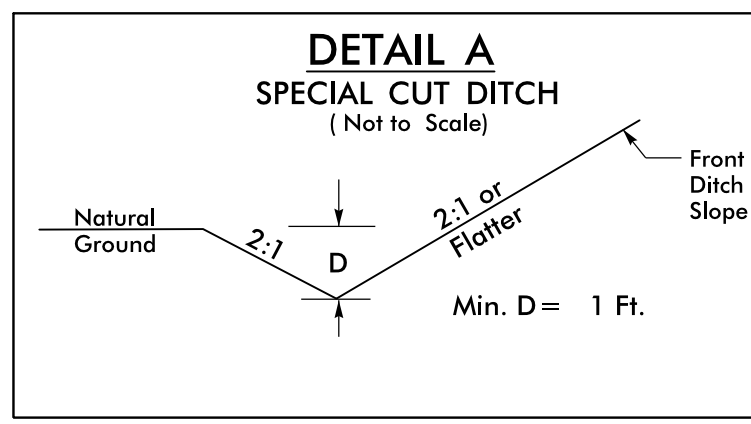
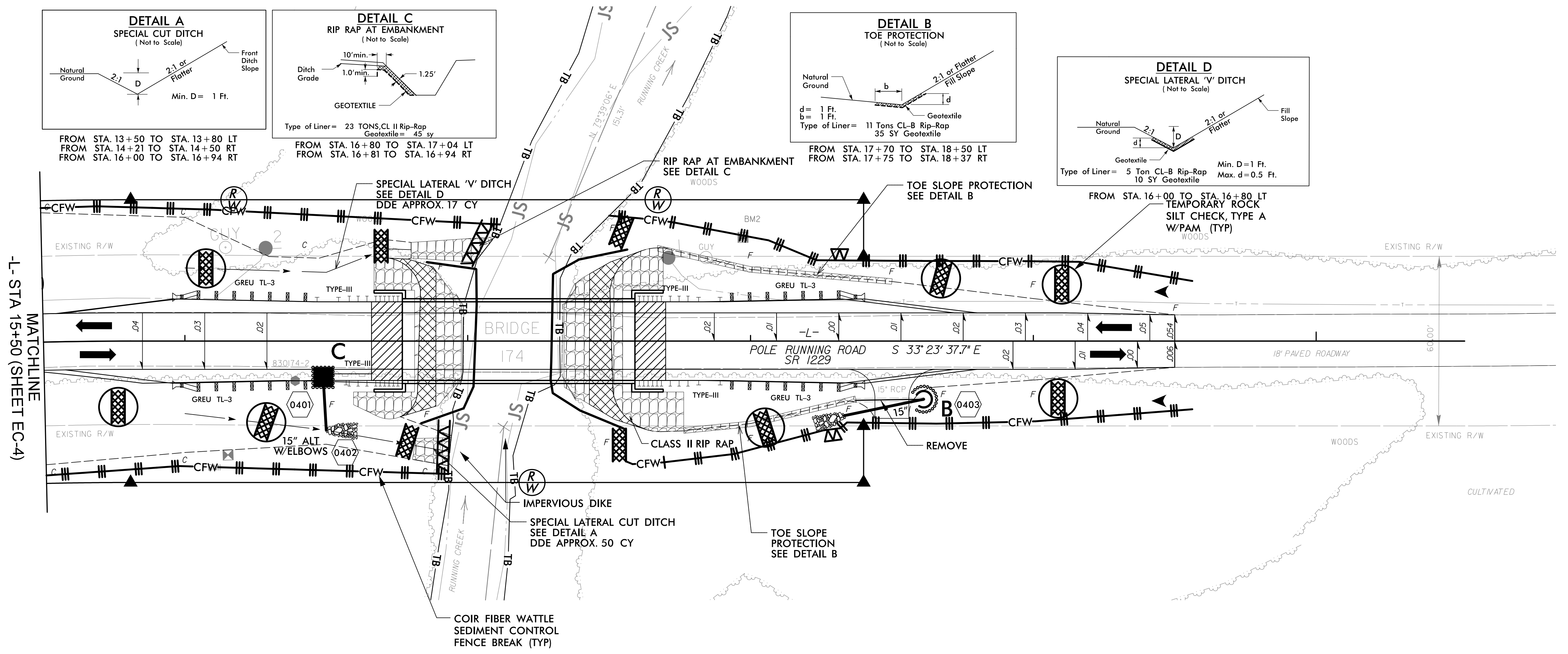
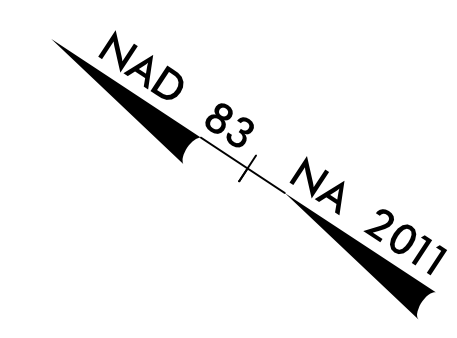
NOTE: UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

8/2/2018
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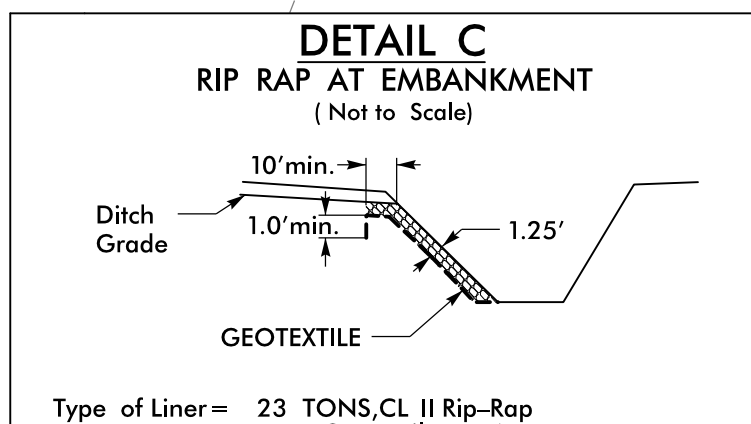
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RW SHEET NO.	
 STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	

BRIDGE #830174
SCALE: 1"=20'

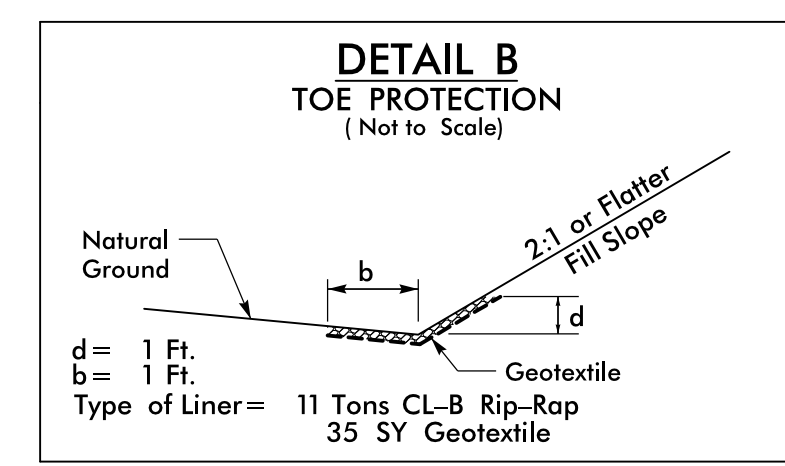
FINAL EROSION CONTROL FOR
CONSTRUCTION SHEET 5



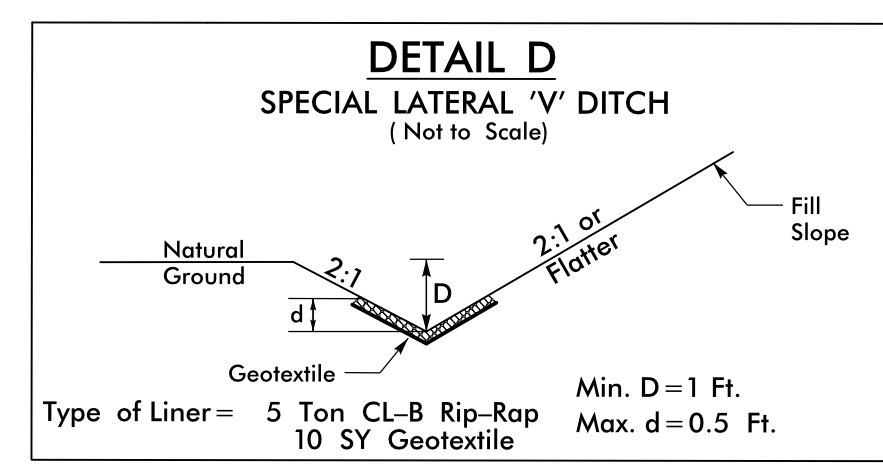
FROM STA. 13+50 TO STA. 13+80 LT
FROM STA. 14+21 TO STA. 14+50 RT
FROM STA. 16+00 TO STA. 16+94 RT



FROM STA. 16+80 TO STA. 17+04 LT
FROM STA. 16+81 TO STA. 16+94 RT



FROM STA. 17+70 TO STA. 18+50 LT
FROM STA. 17+75 TO STA. 18+37 RT



FROM STA. 16+00 TO STA. 16+80 LT
TEMPORARY ROCK
SILT CHECK, TYPE A
W/PAM (TYP)
WOODS

8/2/2018 R:\Environmental\Design\SHTR\106_EC_PSH_07.dgn

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

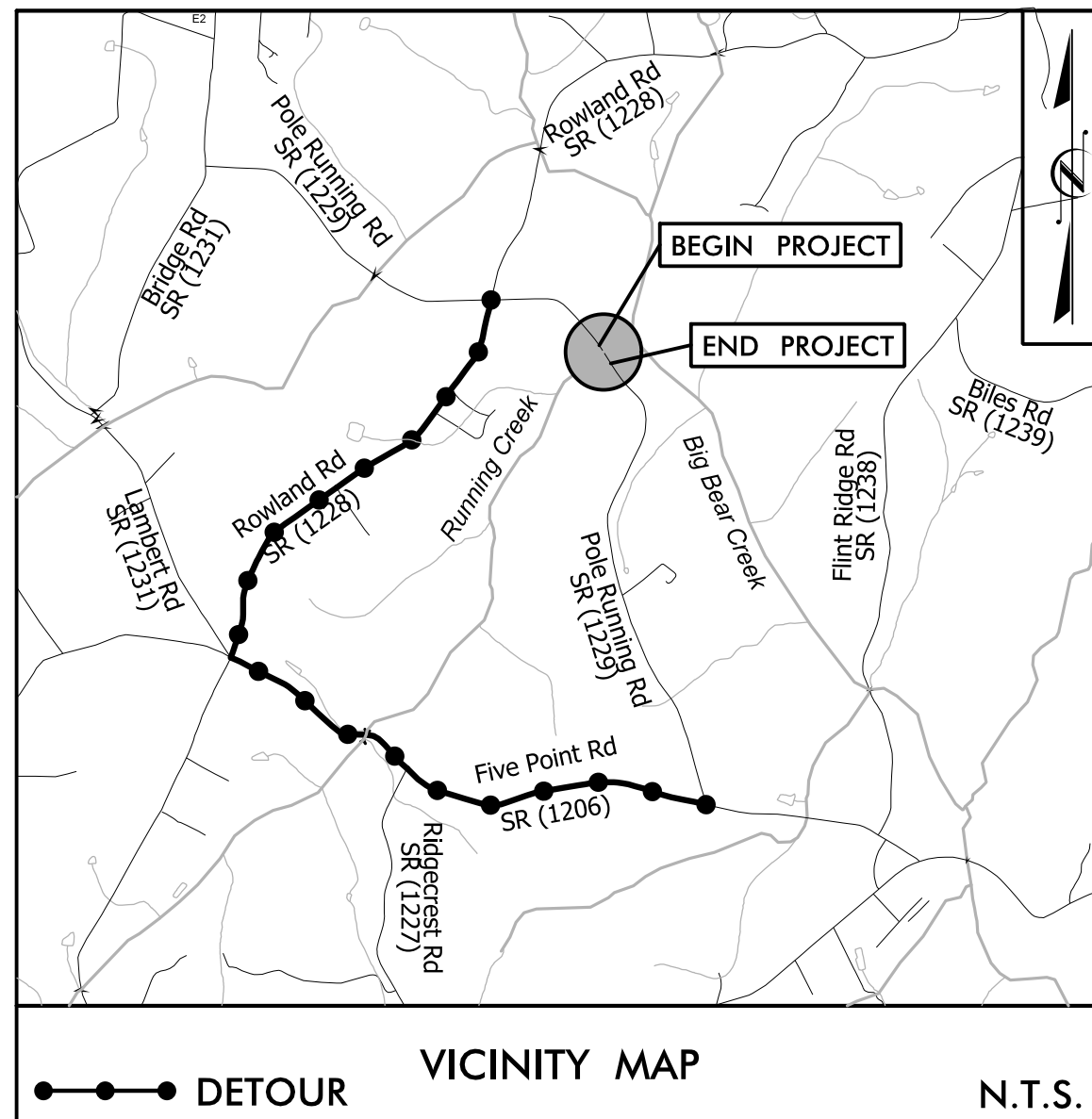
NOTE: UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

TIP PROJECT: 17BP.10.R.106

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
17BP.10.R.106	UO-1

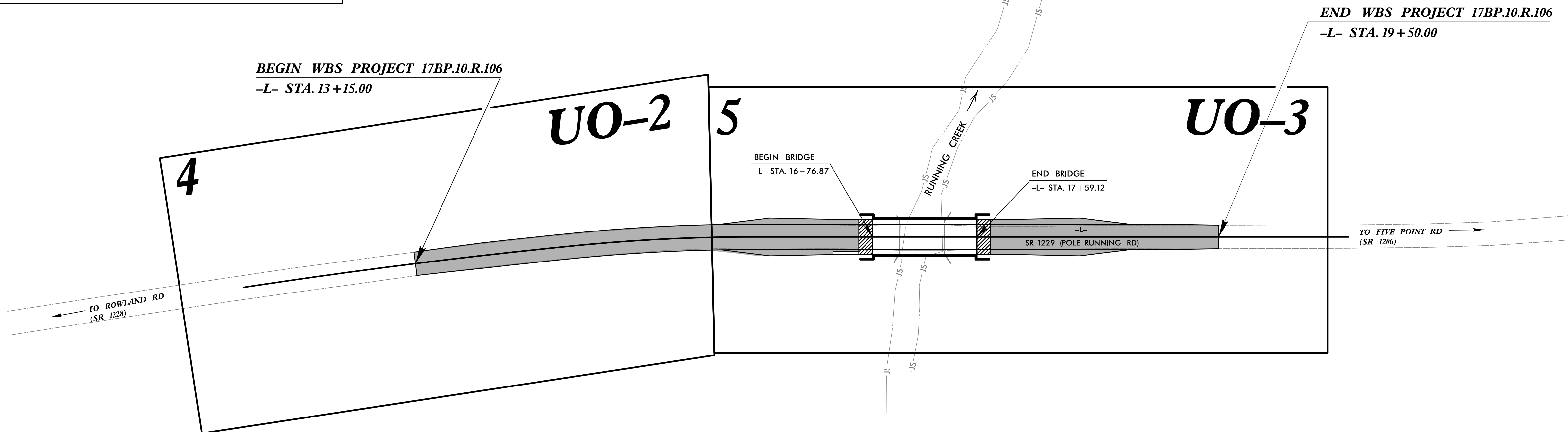
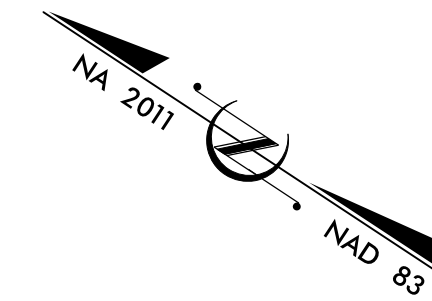
NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.



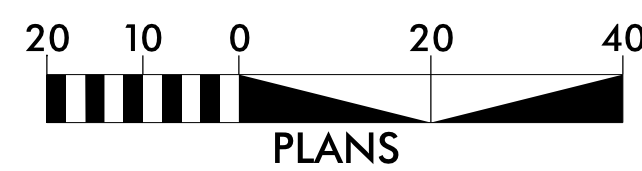
**UTILITIES BY OTHERS PLANS
STANLY COUNTY**

**LOCATION: BRIDGE #174 OVER RUNNING CREEK
ON SR 1229 (POLE RUNNING RD)**

**TYPE OF WORK: ABOVE GROUND AND
UNDER GROUND TELEPHONE RELOCATION**



GRAPHIC SCALES



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UO-1	TITLE SHEET
UO-2 THRU UO-3	UBO PLAN SHEETS

UTILITY OWNERS WITH CONFLICTS

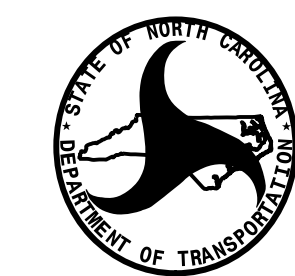
(A) FIBER - WINDSTREAM

PREPARED IN THE OFFICE OF:



Charlotte,
North Carolina
704-357-0488
NC License: F-1088

Reece M. Schuler, P.E. UTILITY PROJECT MANAGER
Nicholas V. Asaro, PLS PROJECT UTILITY COORDINATOR



**DIVISION OF HIGHWAYS
DIVISION 10**
716 West Main Street
Albemarle, NC 28001

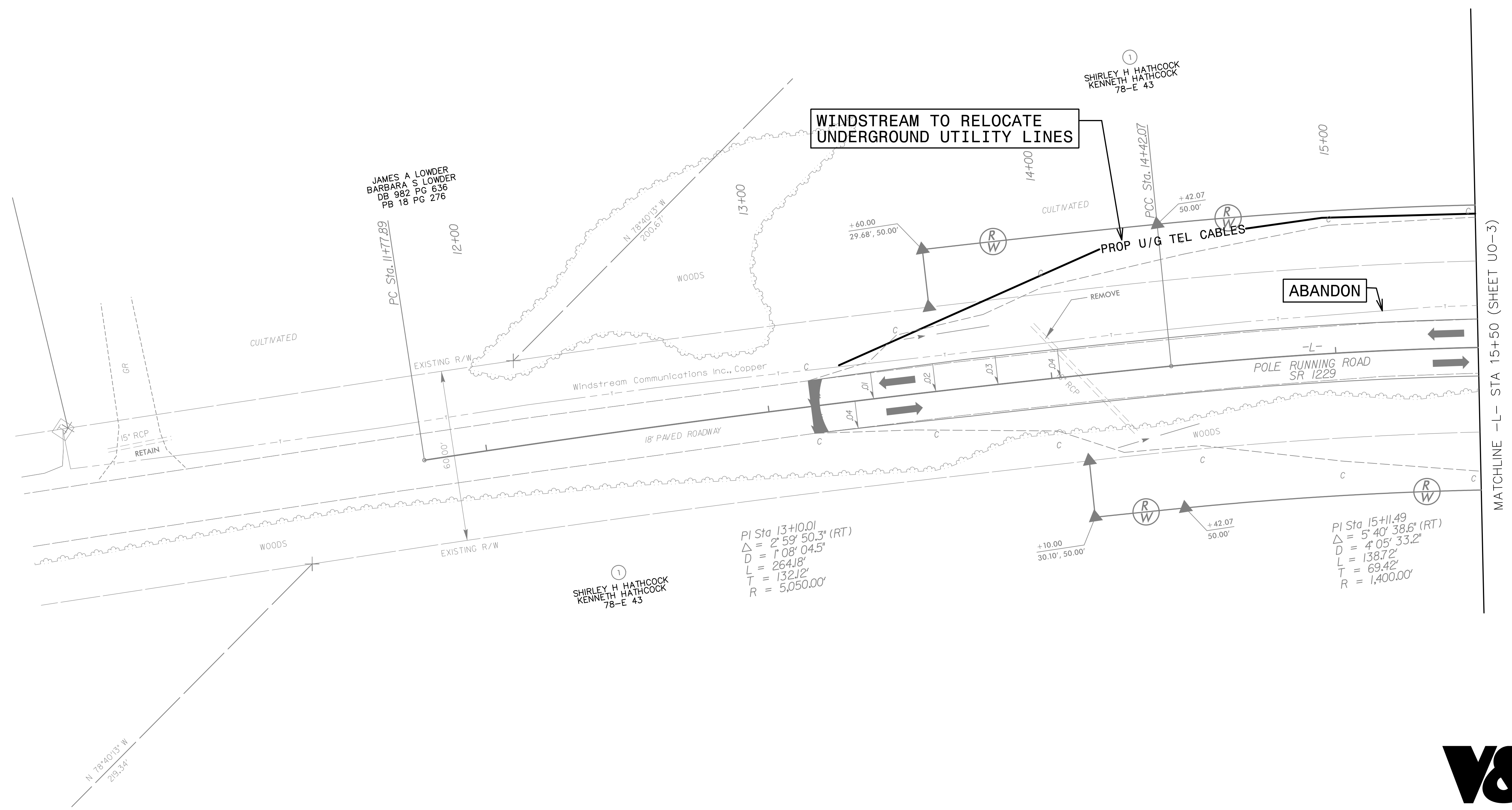
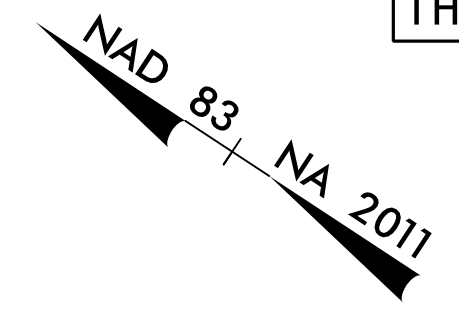
Mark Crump DIVISION CONTACT #1

5/14/99

PROJECT REFERENCE NO. 17BP.10.R.106	SHEET NO. UO-2
THIS SHEET CORRESPONDS TO RDY-PSH04	

UTILITIES BY OTHERS

ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



JAMES A LOWDER
BARBARA S LOWDER
DB 982 PG 636
PB 18 PG 276

SHIRLEY H HATHCOCK
KENNETH HATHCOCK
78-E 43

WINDSTREAM TO RELOCATE
UNDERGROUND UTILITY LINES

ABANDON

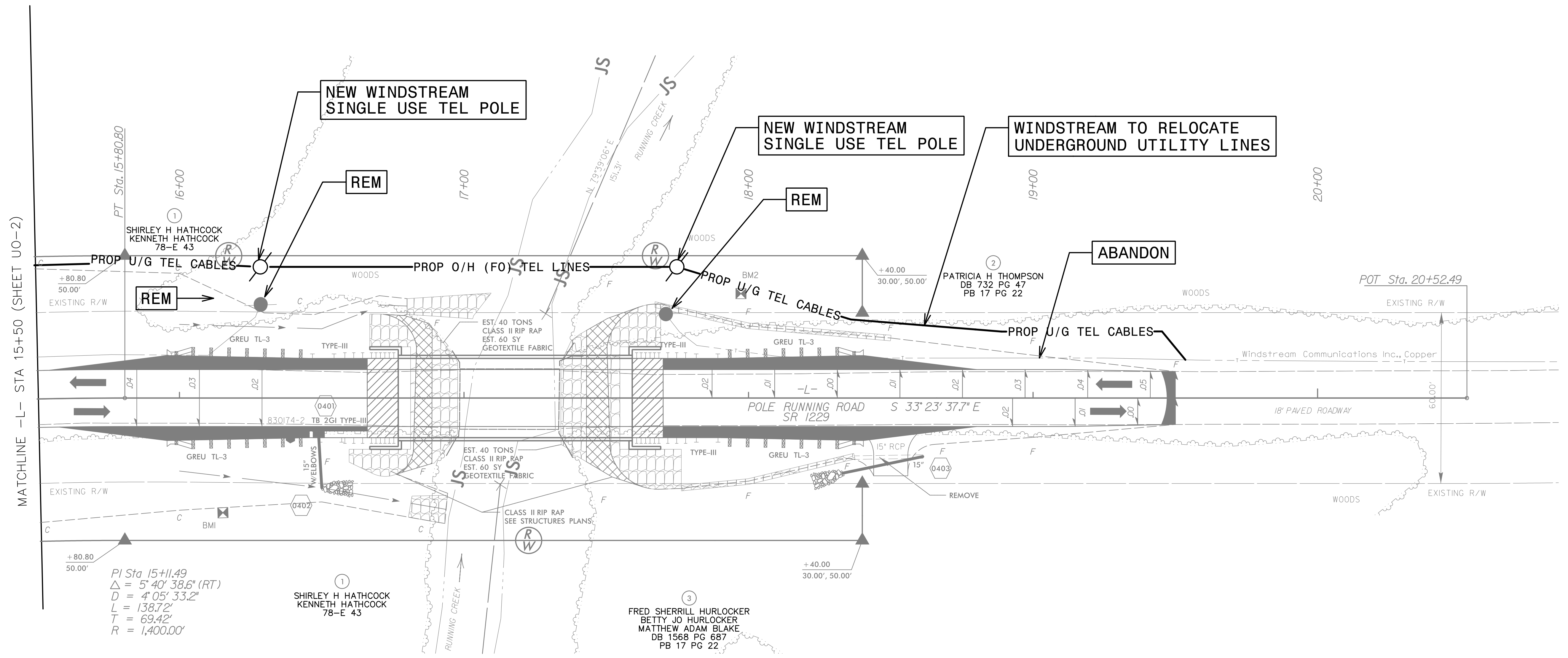
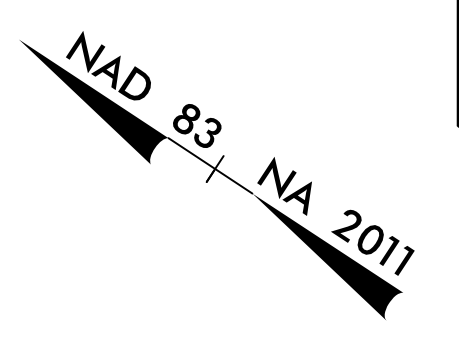
PI Sta 13+0.01
Δ = 2°59'50.3" (RT)
D = 1°08'04.5"
L = 264.18'
T = 132.12'
R = 5,050.00'

PI Sta 15+11.49
Δ = 5°40'38.6" (RT)
D = 4°05'33.2"
L = 138.72'
T = 69.42'
R = 1,400.00'

MATCHLINE -L- STA 15+50 (SHEET UO-3)

UTILITIES BY OTHERS

ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.



MATCHLINE -L- STA 15+50 (SHEET UO-2)

PT. Sta. 15+80.80
 +80.80
 50.00'
 EXISTING R/W

PI Sta 15+11.49
 $\Delta = 5' 40'' 38.6'' (RT)$
 $D = 4' 05'' 33.2''$
 $L = 138.72'$
 $T = 69.42'$
 $R = 1,400.00'$

1
 SHIRLEY H HATHCOCK
 KENNETH HATHCOCK
 78-E 43

3
 FRED SHERRILL HURLOCKER
 BETTY JO HURLOCKER
 MATTHEW ADAM BLAKE
 DB 1568 PG 687
 PB 17 PG 22

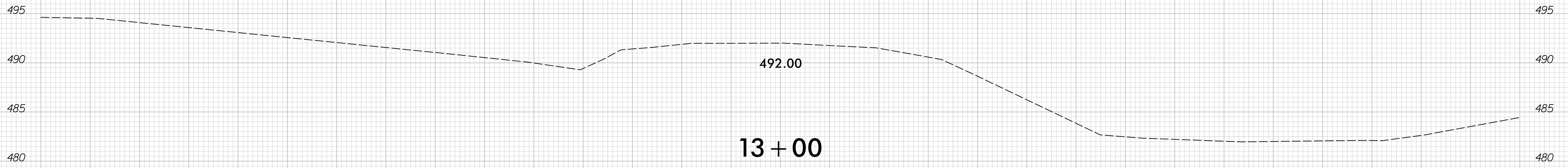
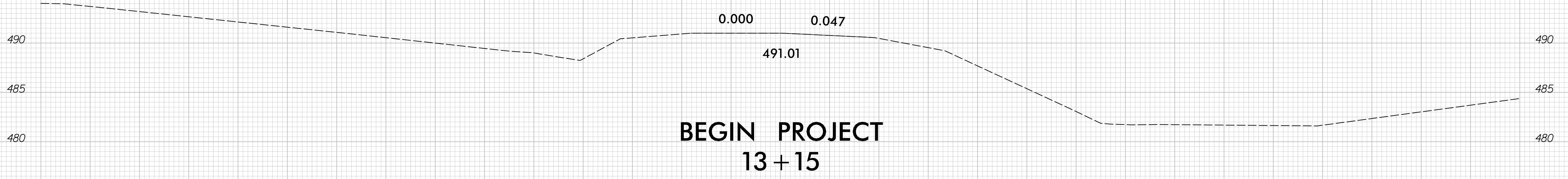
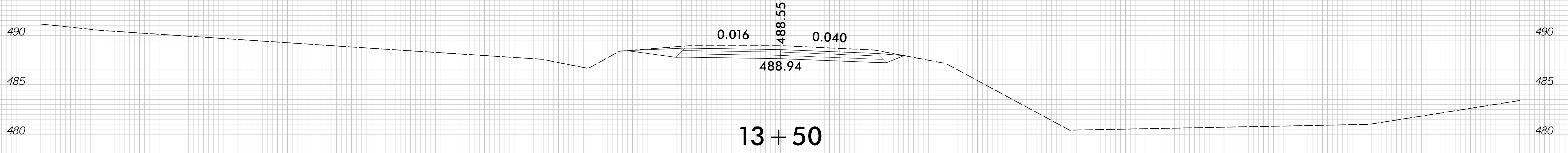
2
 PATRICIA H THOMPSON
 DB 732 PG 47
 PB 17 PG 22

POT Sta. 20+52.49

8/23/16

0 2.5 5	PROJ. REFERENCE NO. 17BP.10.R.106	SHEET NO. X-1
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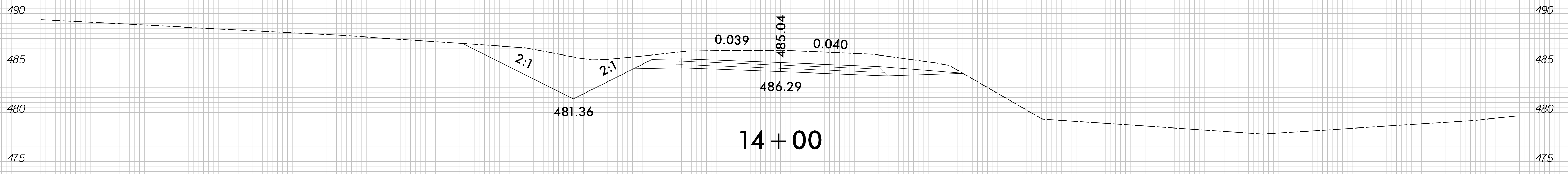
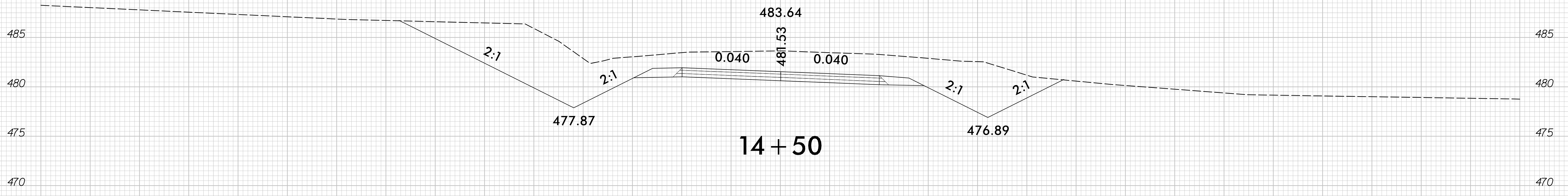
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8/2/2018
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gpraves

6/23/16

0 2.5 5	PROJ. REFERENCE NO. 17BP.10.R.106	SHEET NO. X-2
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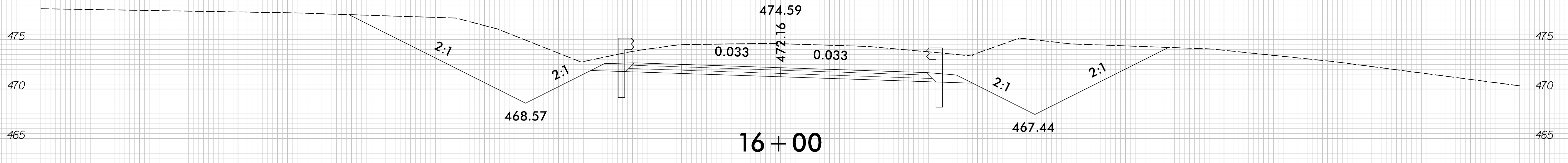
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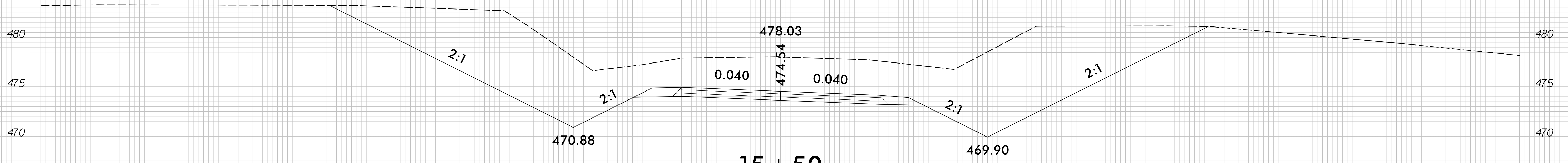
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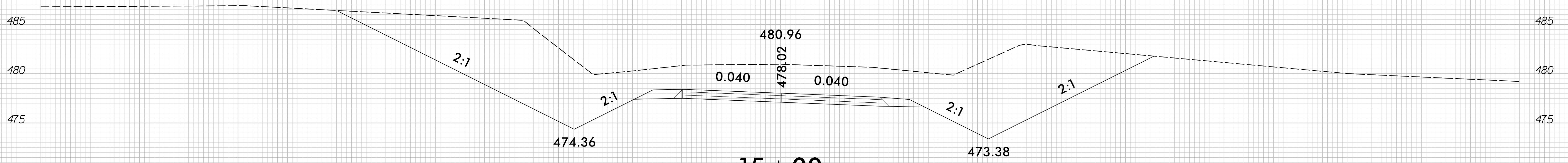
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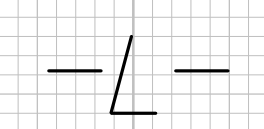
16 + 00



15 + 50



15 + 00



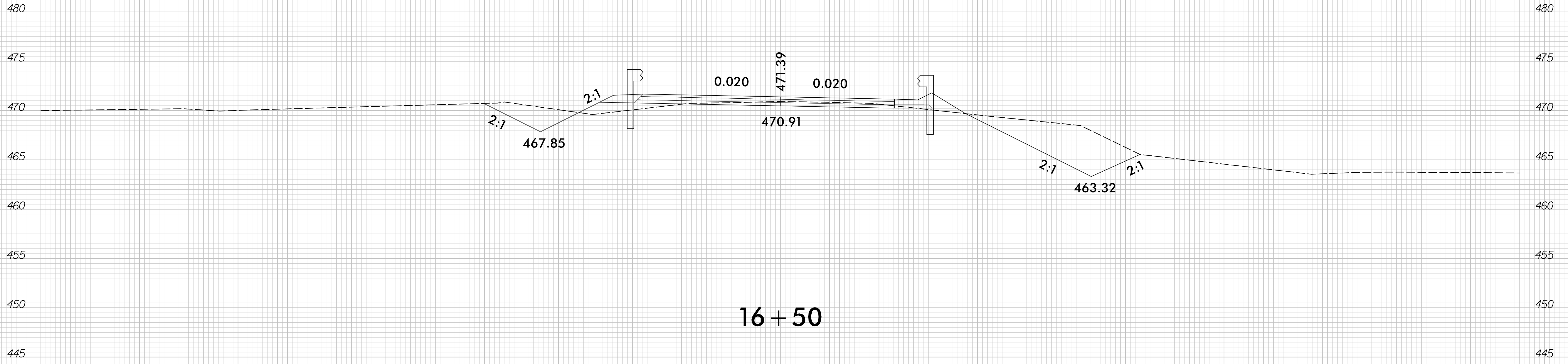
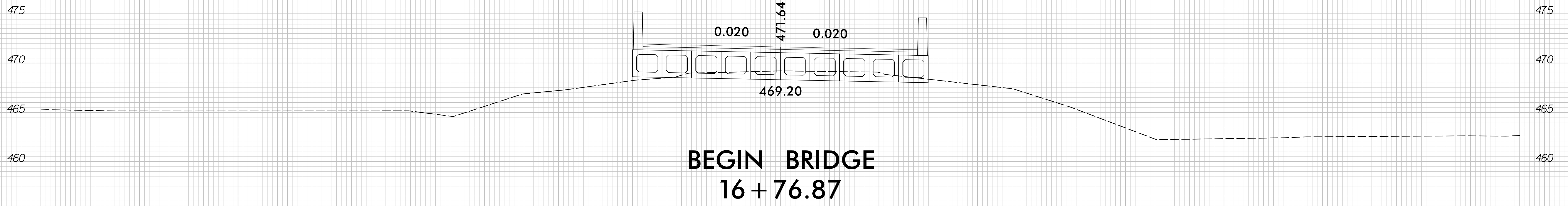
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8/23/16

0 2.5 5	PROJ. REFERENCE NO. 17BP.10.R.106	SHEET NO. X-4
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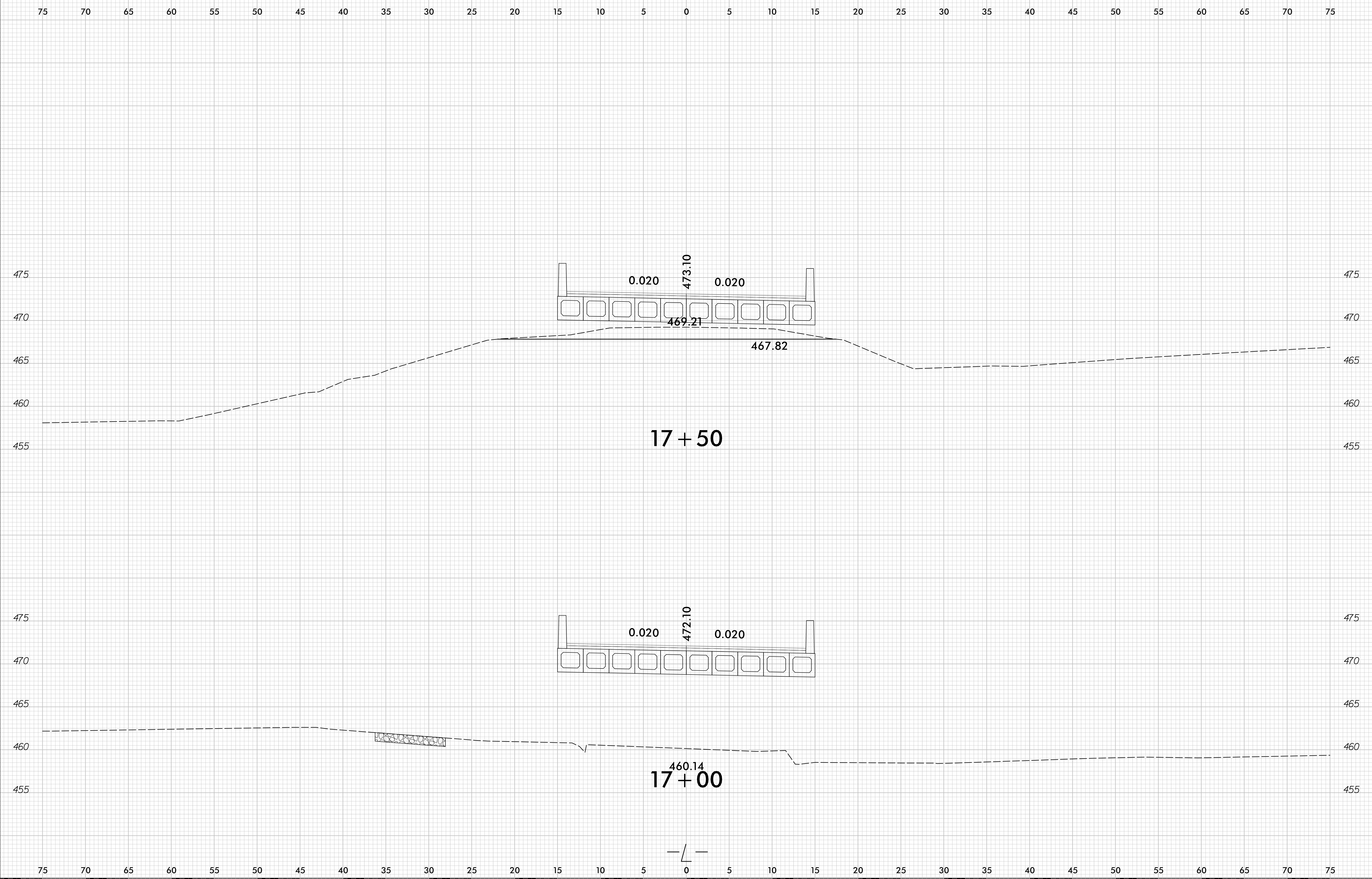


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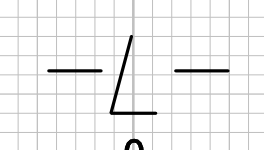
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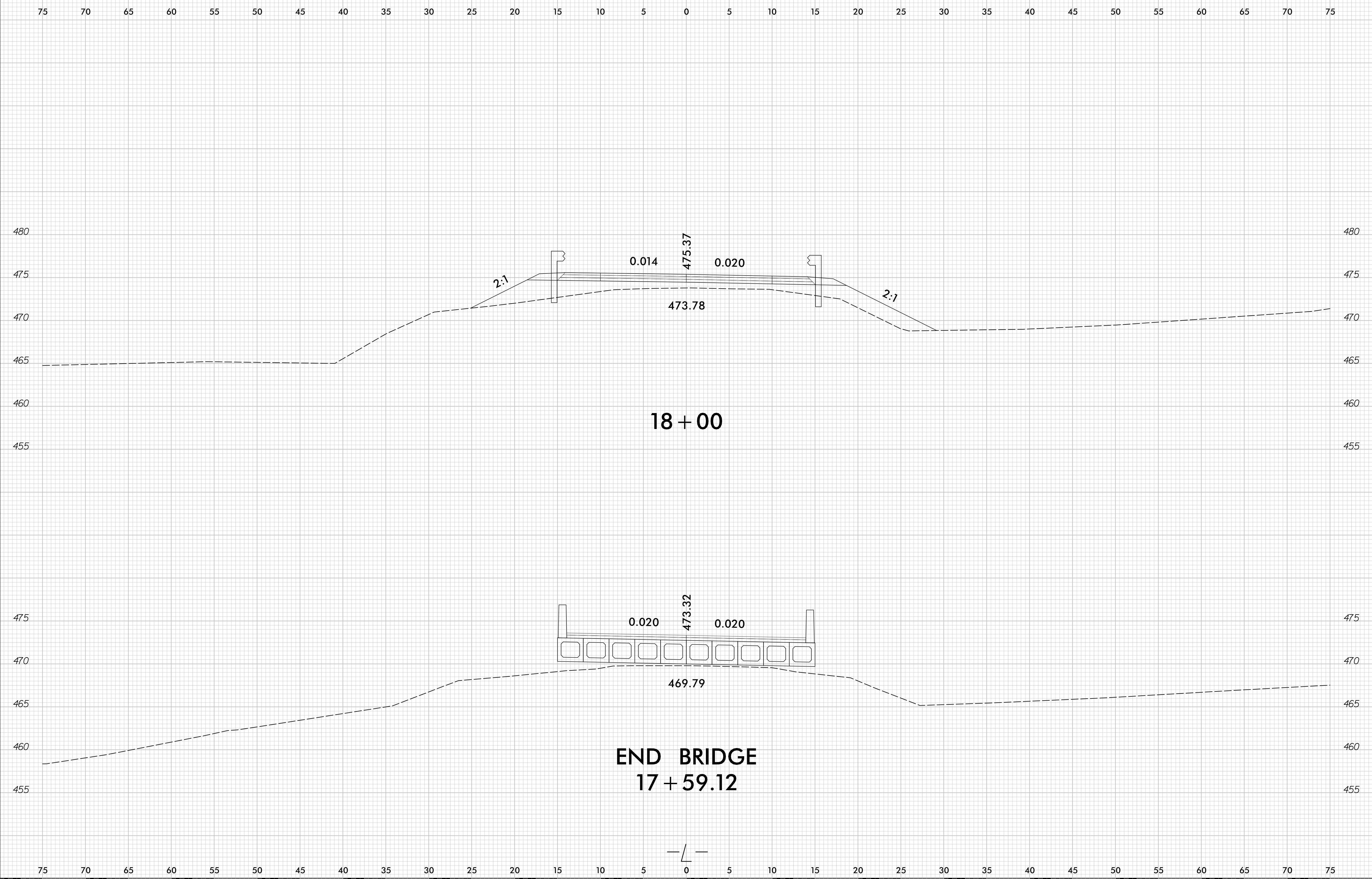


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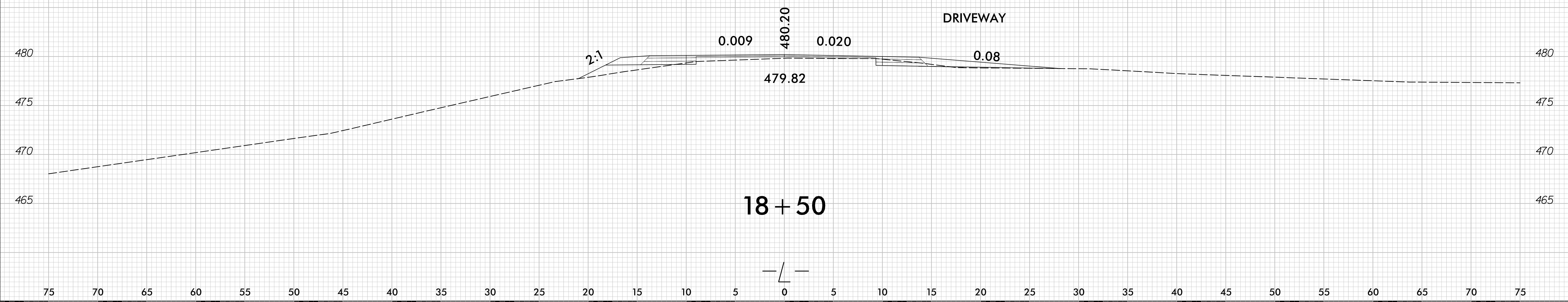
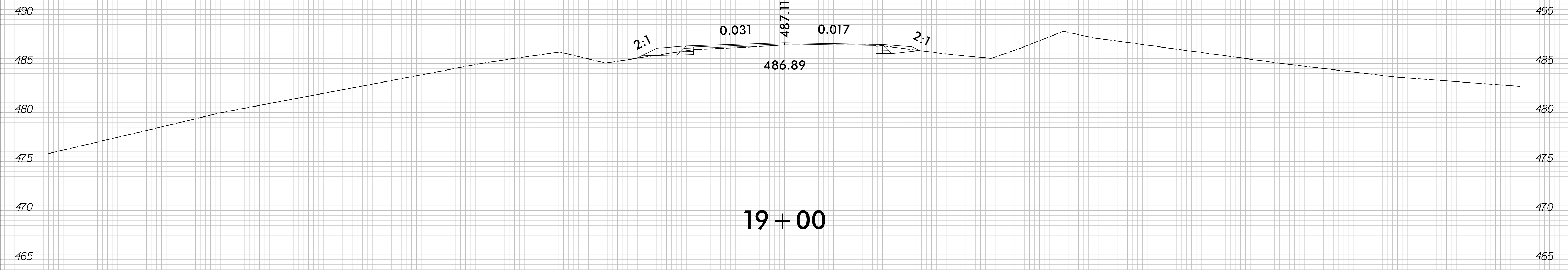


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6/23/16

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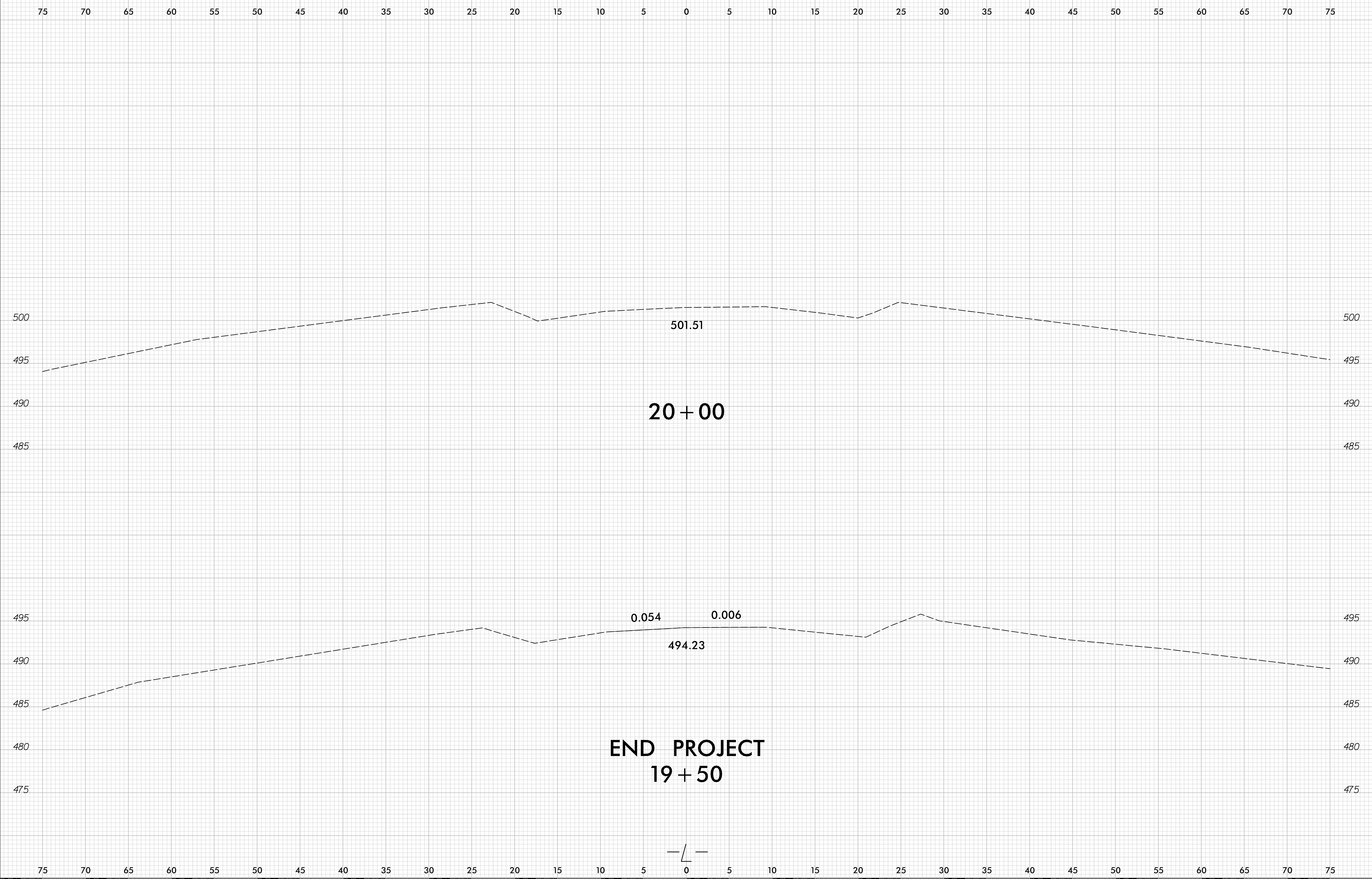


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8/2/2018
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