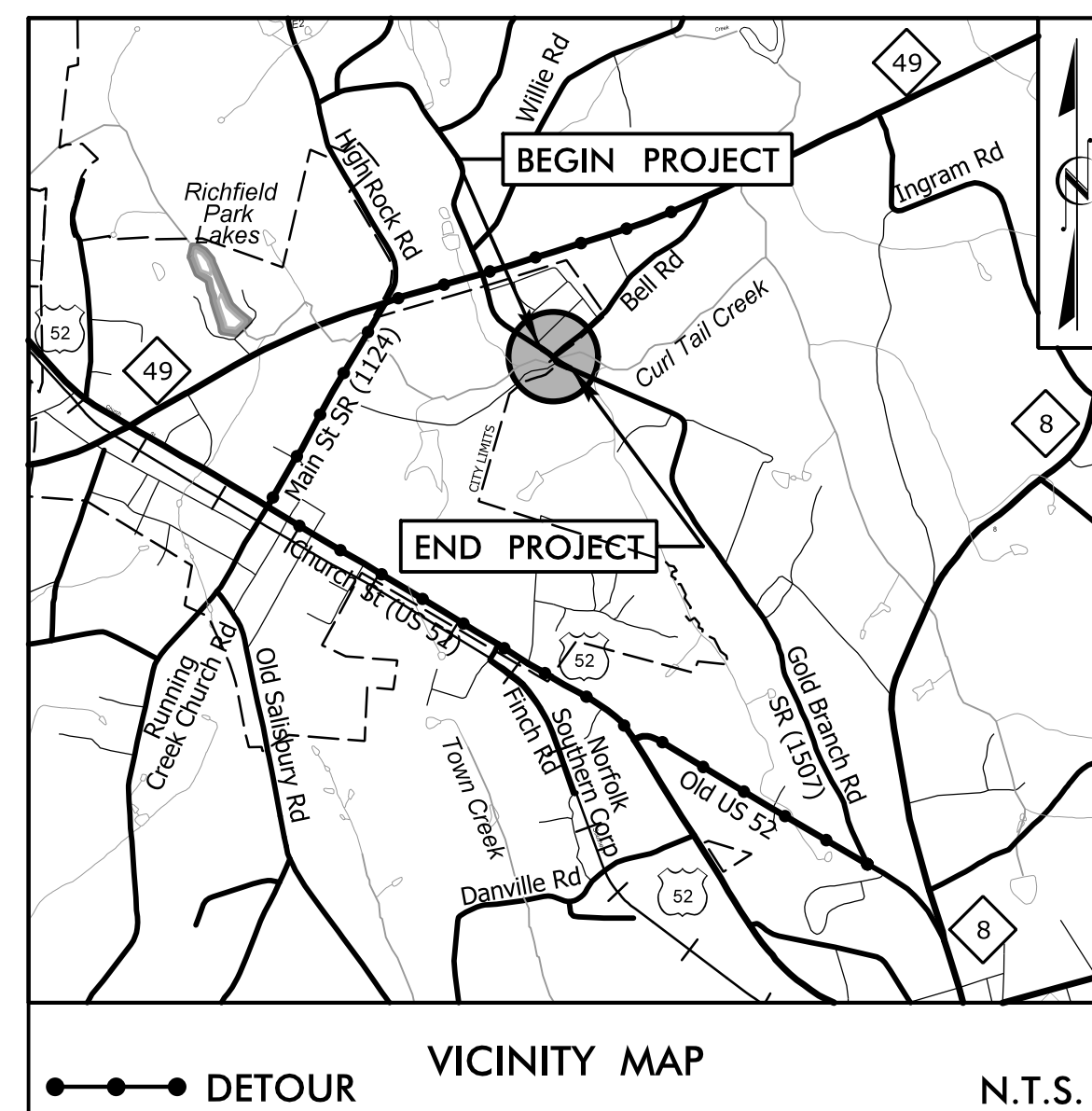


**TIP PROJECT: B-5820**

**CONTRACT: DJ00296**

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

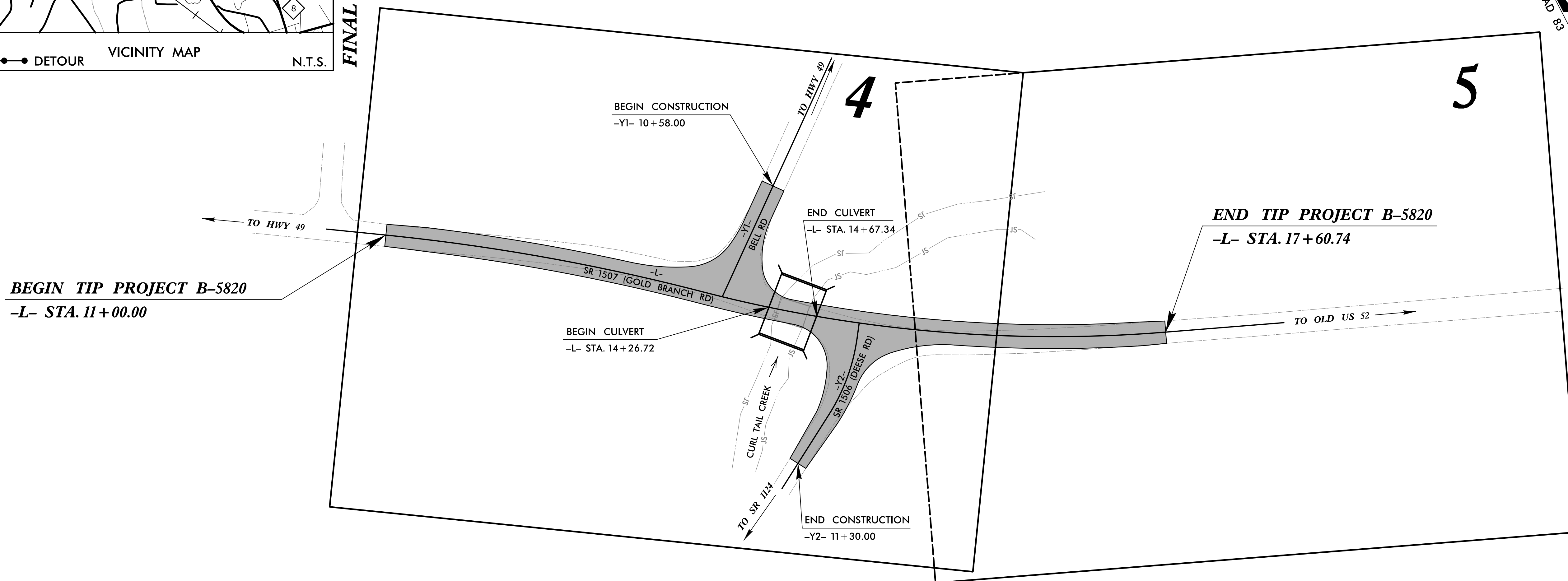
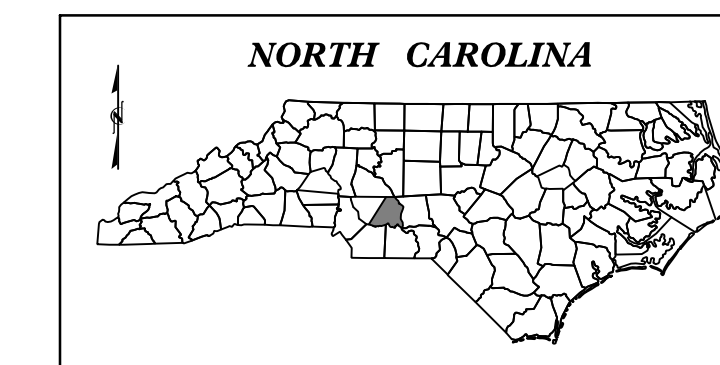


**FINAL PLANS**

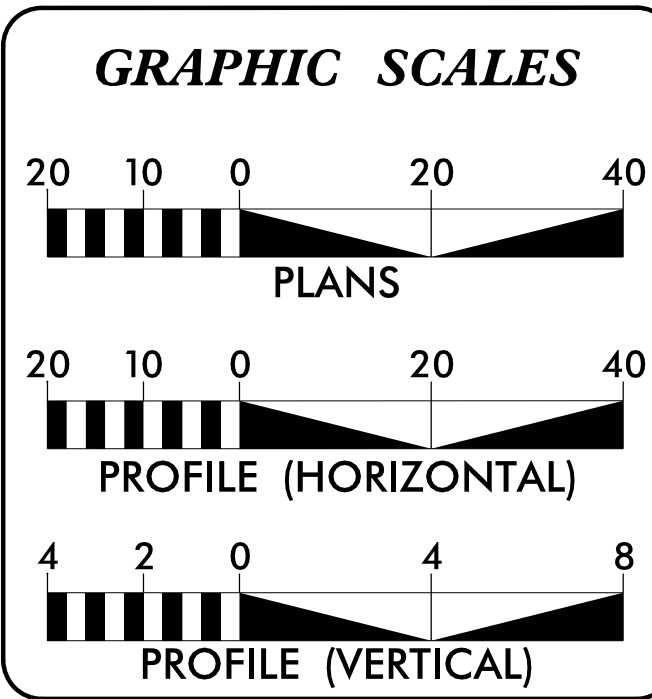
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**STANLY COUNTY**

**LOCATION: BRIDGE #221 OVER CURL TAIL CREEK  
ON SR 1507 (GOLD BRANCH RD)**  
**TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	<b>B-5820</b>	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45773.1	N/A	P.E.	
45773.2	N/A	ROW & UTILITIES	
45773.3	N/A	CONSTRUCTION	



**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



**DESIGN DATA**

ADT 2012 =	530
ADT 2025 =	1060
DHV =	N/A
D =	N/A
T =	6%
V =	35 MPH
FUNC. CLASSIFICATION:	LOCAL

**PROJECT LENGTH**

LENGTH OF ROADWAY TIP PROJECT B-5820 =	0.117 MILES
LENGTH OF STRUCTURE TIP PROJECT B-5820 =	0.008 MILES
TOTAL LENGTH OF TIP PROJECT B-5820 =	0.125 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	
<b>RIGHT OF WAY DATE:</b> MAY 22, 2017	<b>NIKKI T. HONEYCUTT, PE</b> PROJECT ENGINEER
<b>LETTING DATE:</b> AUGUST 15, 2018	<b>MAAMOON K. ABDELAZIZ</b> PROJECT DESIGNER

**HYDRAULICS ENGINEER**

DocuSigned by:  
*Edward J. Vance*  
SIGNATURE: EDWARD J. VANCE, PE  
02/23/2018

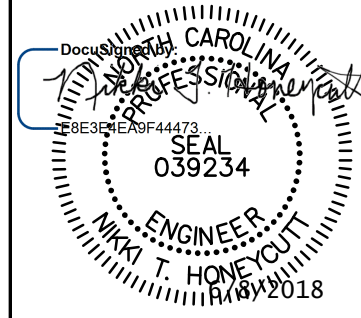
**ROADWAY DESIGN ENGINEER**

DocuSigned by:  
*Nikki T. Honeycutt*  
SIGNATURE: NIKKI T. HONEYCUTT, PE  
08/15/2018





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

PROJECT REFERENCE NO. <i>B-5820</i>	SHEET NO. <i>1A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

**INDEX OF SHEETS**

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
3	SUMMARIES AND TYPICAL SECTIONS SHEET
4-5	PLAN SHEETS
6-7	PROFILE SHEETS
TMP-1	TRAFFIC MANAGEMENT PLANS
EC-1 THRU EC-8	EROSION CONTROL PLANS
UC-1 THRU UC-4	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-3	UTILITIES BY OTHER PLANS
X-1 THRU X-6	CROSS-SECTIONS
C-1 THRU C-3	STRUCTURE PLANS

**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.

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
<b>DIVISION 2 - EARTHWORK</b>	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superlevation - Two Lane Pavement
<b>DIVISION 5 - SUBGRADE, BASES AND SHOULDERS</b>	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
<b>DIVISION 8 - INCIDENTALS</b>	
876.02	Guide for Rip Rap at Pipe Outlets
<b>DIVISION 11 - WORK ZONE TRAFFIC CONTROL</b>	
1101.03	Temporary Road Closures
1110.01	Stationary Work Zone Signs - Mounting Height & Lateral Clearance
1145.01	Barricades - Type III
<b>DIVISION 16 - EROSION CONTROL AND ROADSIDE DEVELOPMENT</b>	
1605.01	Temporary Silt Fence
1606.01	Special Sediment Control Fence
1607.01	Gravel Construction Entrance
1622.01	Temporary Berms and Slope Drains
1630.06	Special Stilling Basin
1631.01	Matting Installation
1633.01	Temporary Rock Silt Check Type A
1633.02	Temporary Rock Silt Check Type B
1635.02	Rock Pipe Inlet Sediment Trap Type B

# 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	⑩②③
Existing Fence Line	-x-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	---WLB---
Proposed Lateral, Tail, Head Ditch	-----
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	-----
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	○ CA
Existing Control of Access	○ CA
New Control of Access	○ CA
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	-----
Proposed Guardrail	-----
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	-----

### EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
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	-----

### UTILITIES:

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

### TELEPHONE:

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

### WATER:

Water Manhole	○ W
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
U/G Water Line LOS B (S.U.E.*)	-----
U/G Water Line LOS C (S.U.E.*)	-----
U/G Water Line LOS D (S.U.E.*)	-----
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.*)	-----
U/G TV Cable LOS C (S.U.E.*)	-----
U/G TV Cable LOS D (S.U.E.*)	-----
U/G Fiber Optic Cable LOS B (S.U.E.*)	-----
U/G Fiber Optic Cable LOS C (S.U.E.*)	-----
U/G Fiber Optic Cable LOS D (S.U.E.*)	-----

### GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	-----
U/G Gas Line LOS C (S.U.E.*)	-----
U/G Gas Line LOS D (S.U.E.*)	-----
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.*)	-----
SS Forced Main Line LOS C (S.U.E.*)	-----
SS Forced Main Line LOS D (S.U.E.*)	-----

### MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	-----
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.

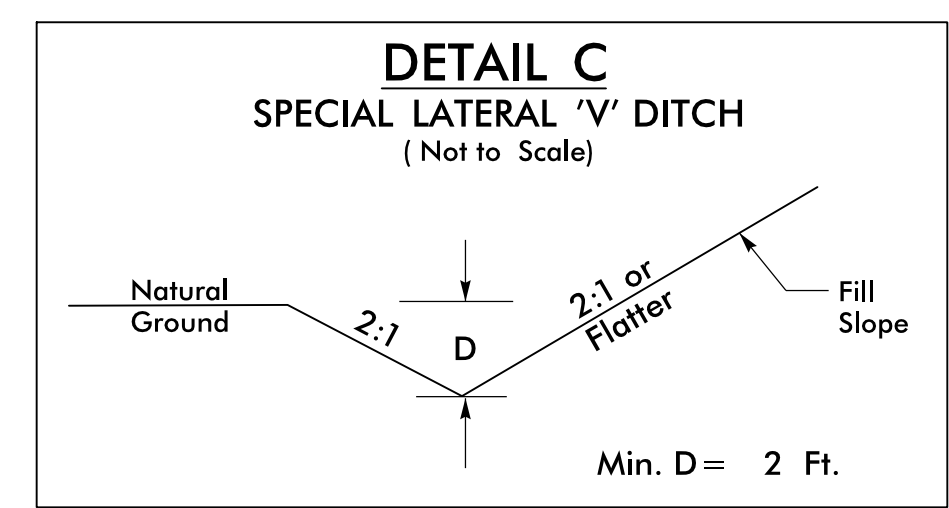
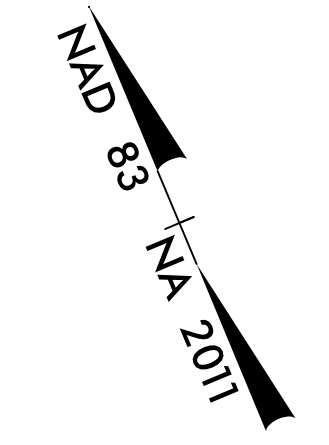




8/17/19

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

PROJECT REFERENCE NO. B-5820		SHEET NO. 5	
RW SHEET NO.		HYDRAULICS ENGINEER	
ROADWAY DESIGN ENGINEER			
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>			



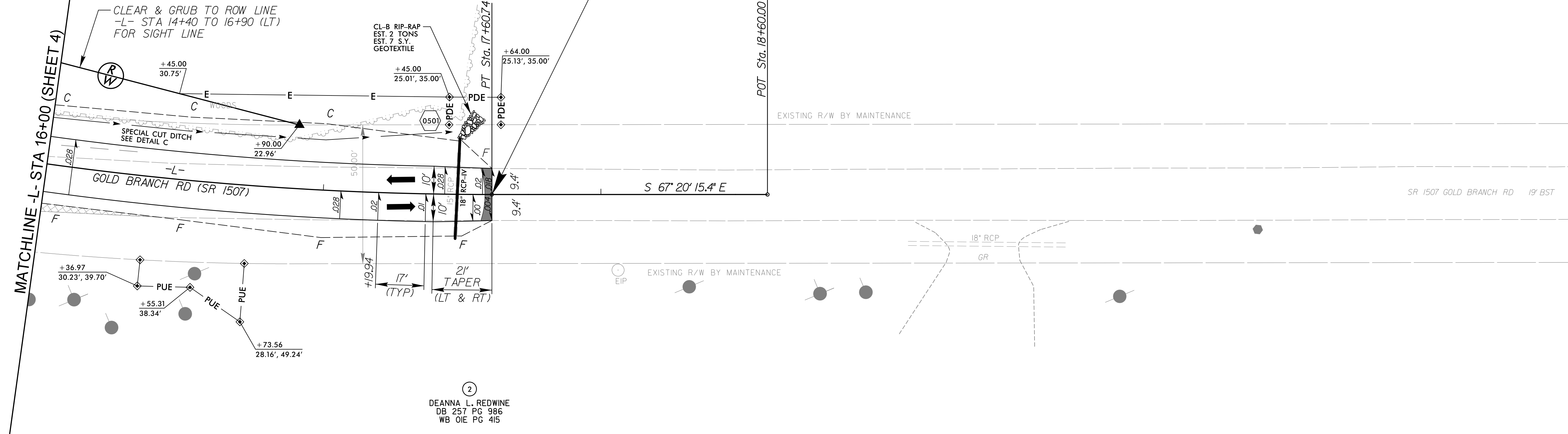
FROM STA. 16+00 (LT) TO STA. 17+48 (LT)

④  
 TIMOTHY W. ST. CLAIR, ET AL  
 DB 681 PG 023  
 PB 06 PG 86

②  
 DEANNA L. REDWINE  
 DB 257 PG 986  
 WB 01E PG 415

PI Sta 15+67.19  
 $\Delta = 19' 08' 11''$  (LT)  
 $D = 4' 53' 49.5''$   
 $L = 390.77'$   
 $T = 197.22'$   
 $R = 1,170.00'$

END TIP PROJECT B-5820  
 -L- STA 17+60.74



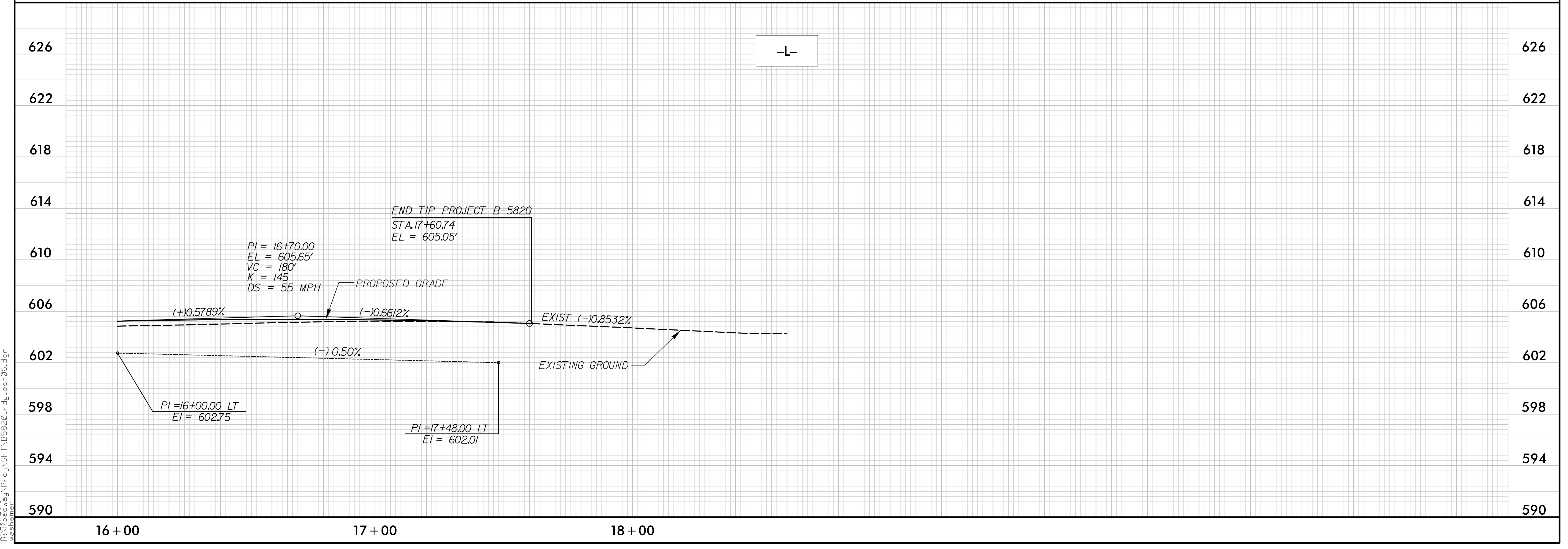
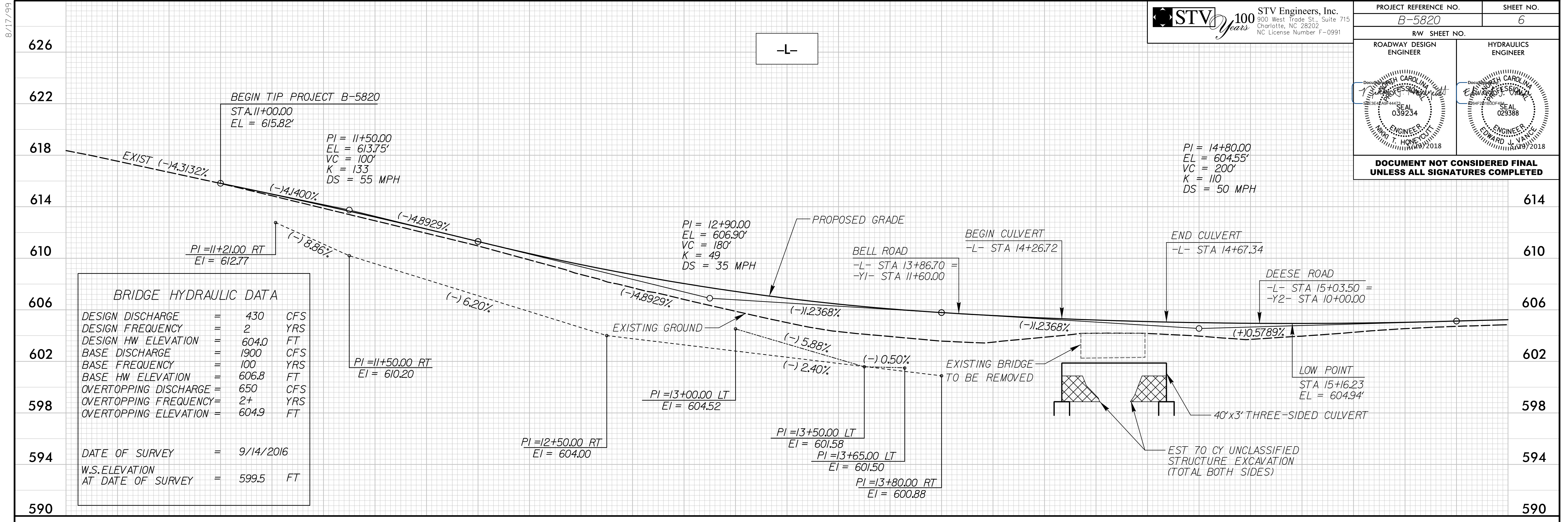
②  
 DEANNA L. REDWINE  
 DB 257 PG 986  
 WB 01E PG 415



NOTE: INCIDENTAL MILL APPROXIMATELY 50' AT EACH TIE IN TO PROVIDE A SMOOTH TRANSITION TO THE EXISTING ASPHALT PAVEMENT.

SEE SHEET 6 FOR PROFILE

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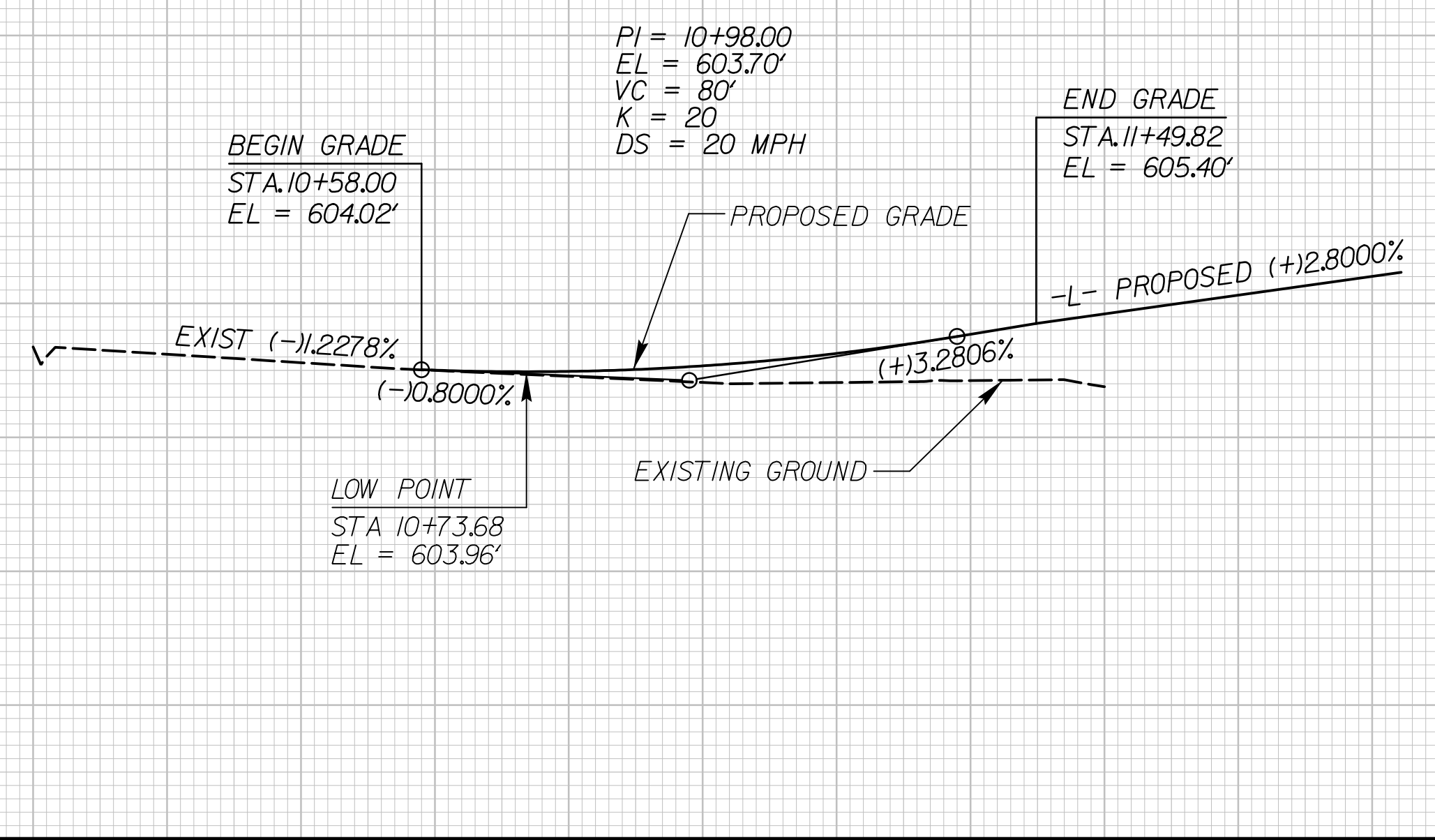
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PROJECT REFERENCE NO. B-5820		SHEET NO. 7
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>		

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622  
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-Y1-

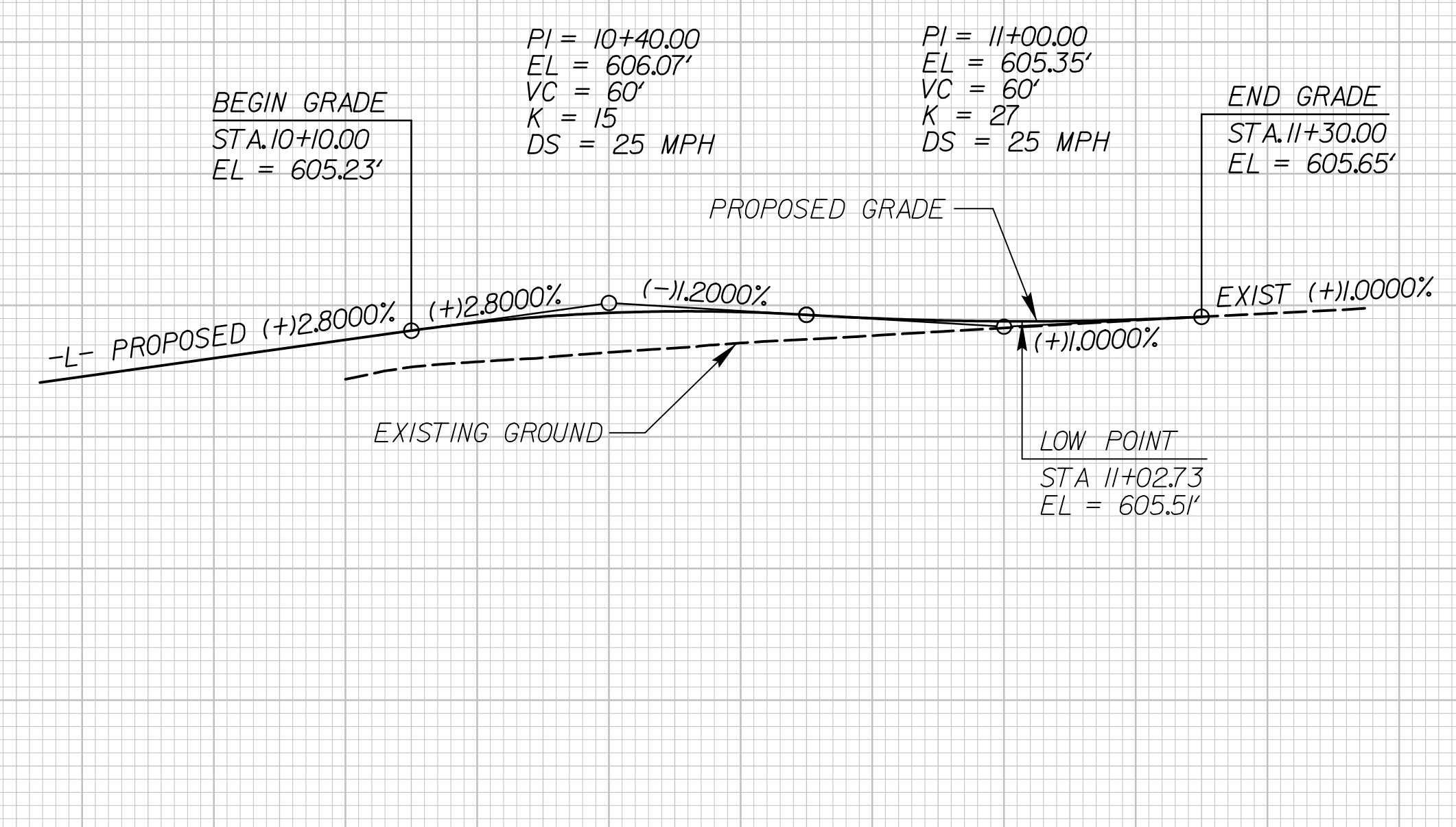


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10+00 11+00 12+00

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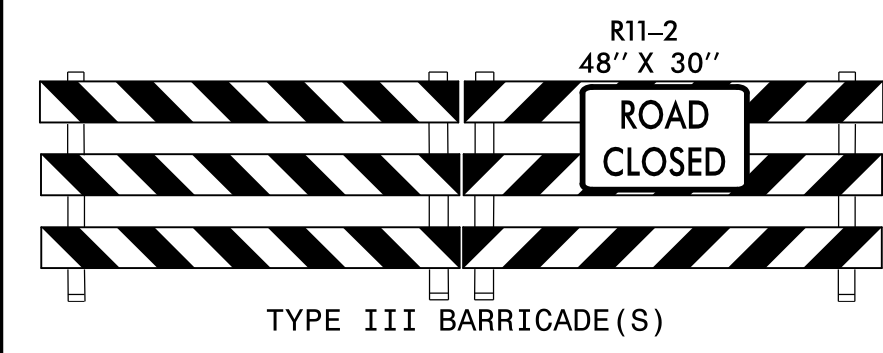
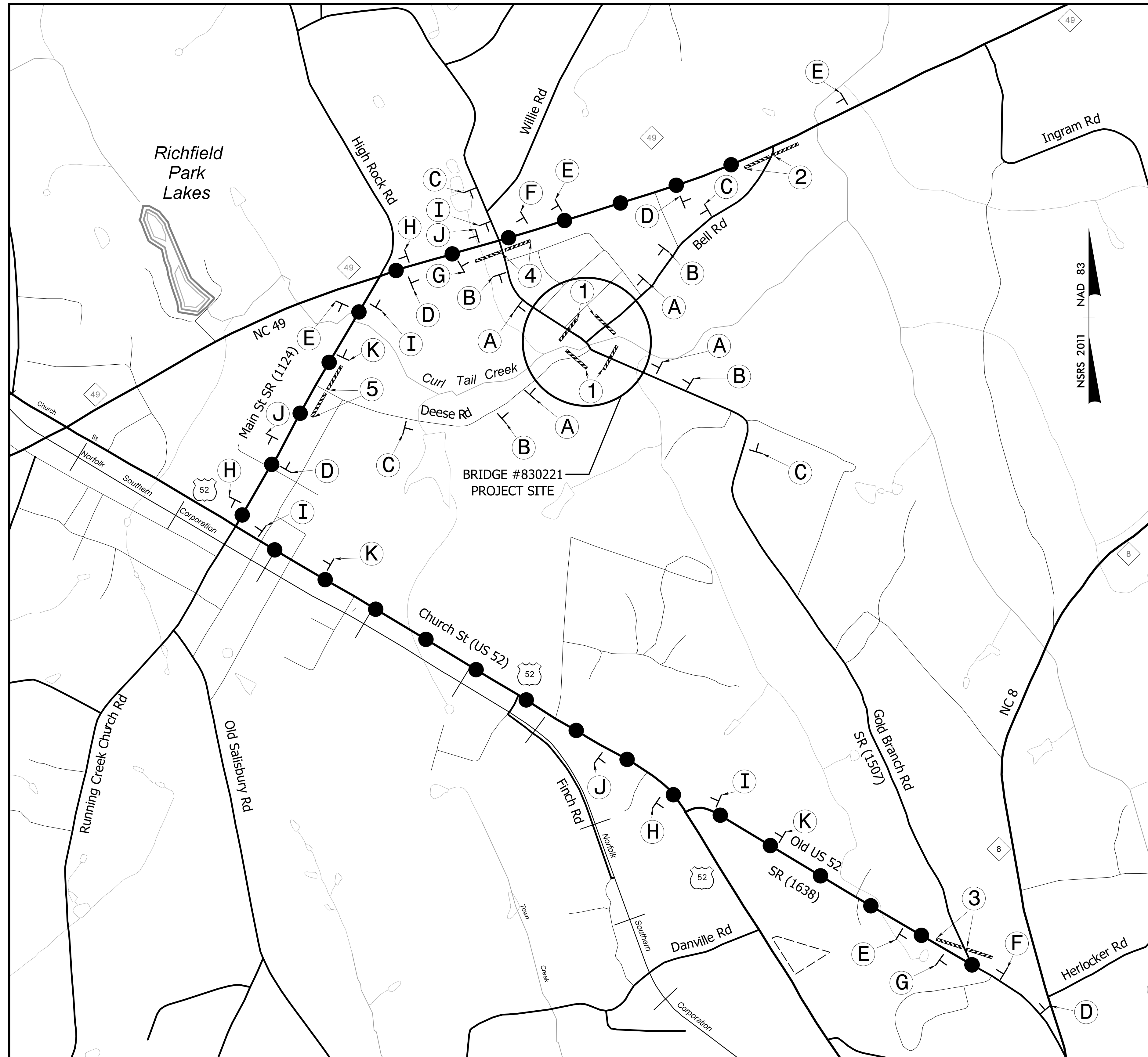
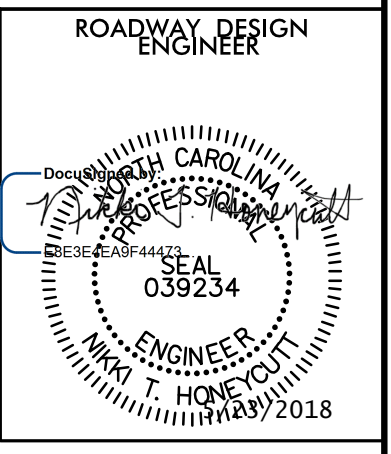
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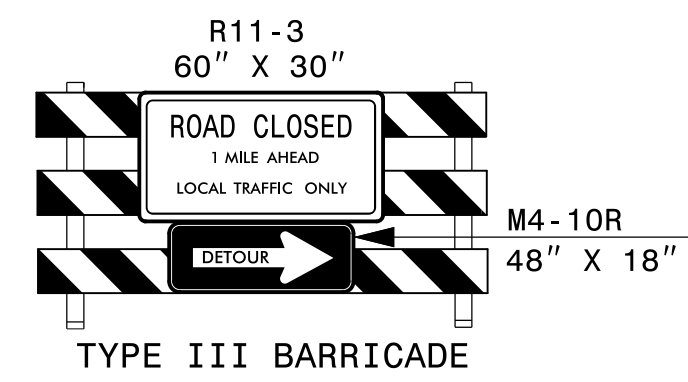


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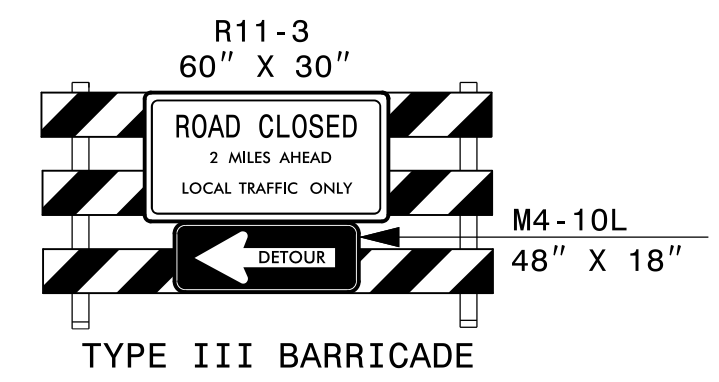
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RW SHEET NO.	
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<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	



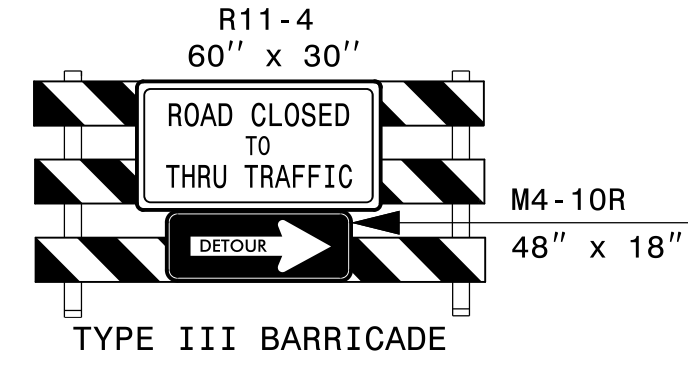
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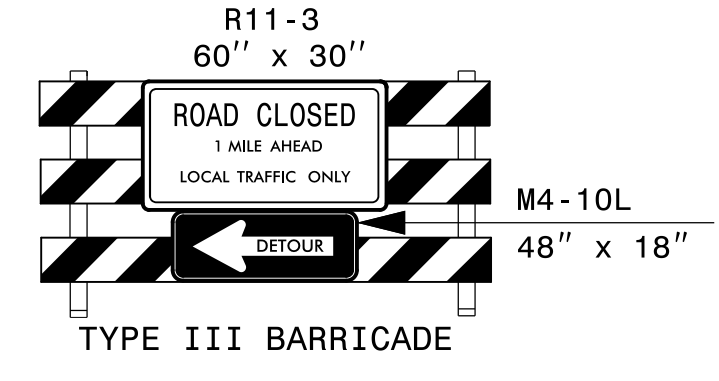
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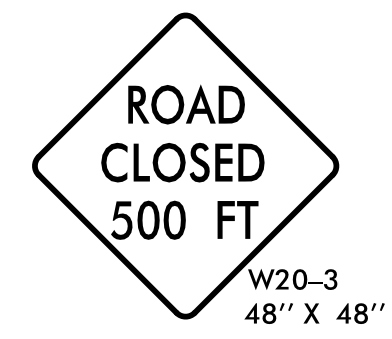
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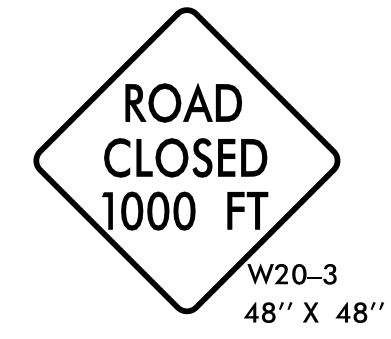
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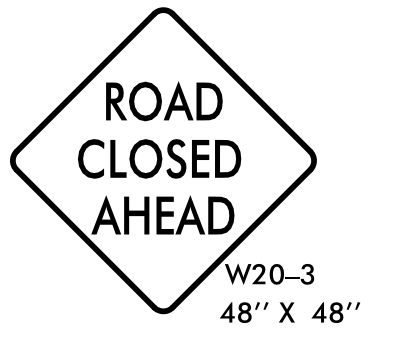
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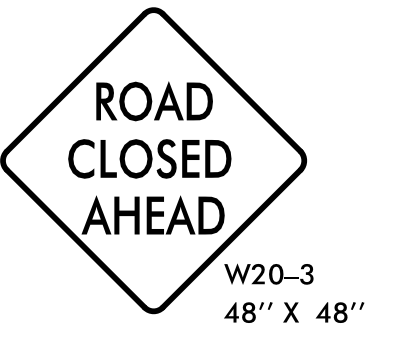
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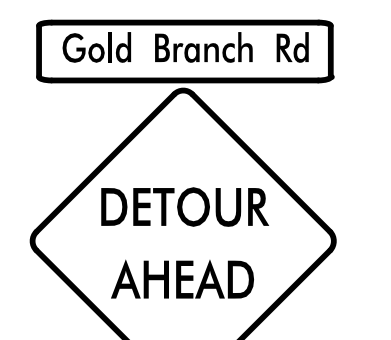
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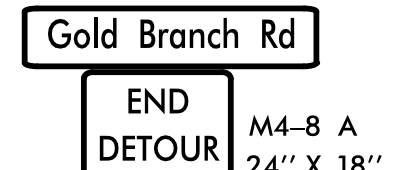
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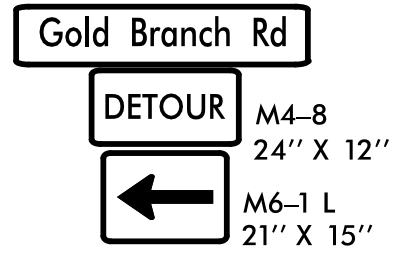
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G



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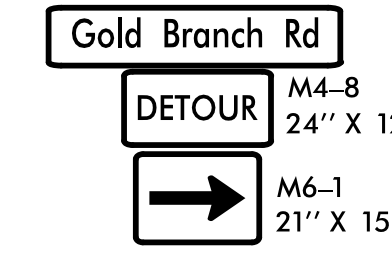
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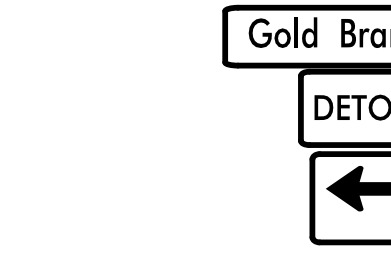
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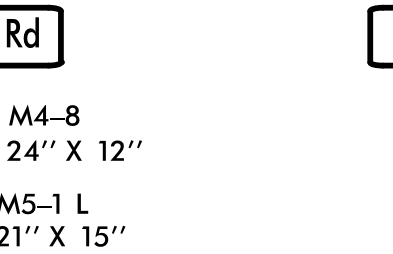
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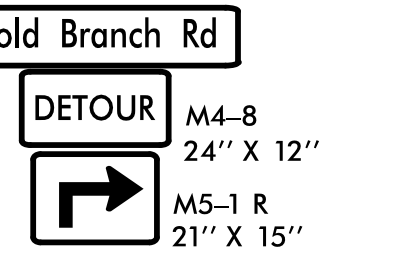
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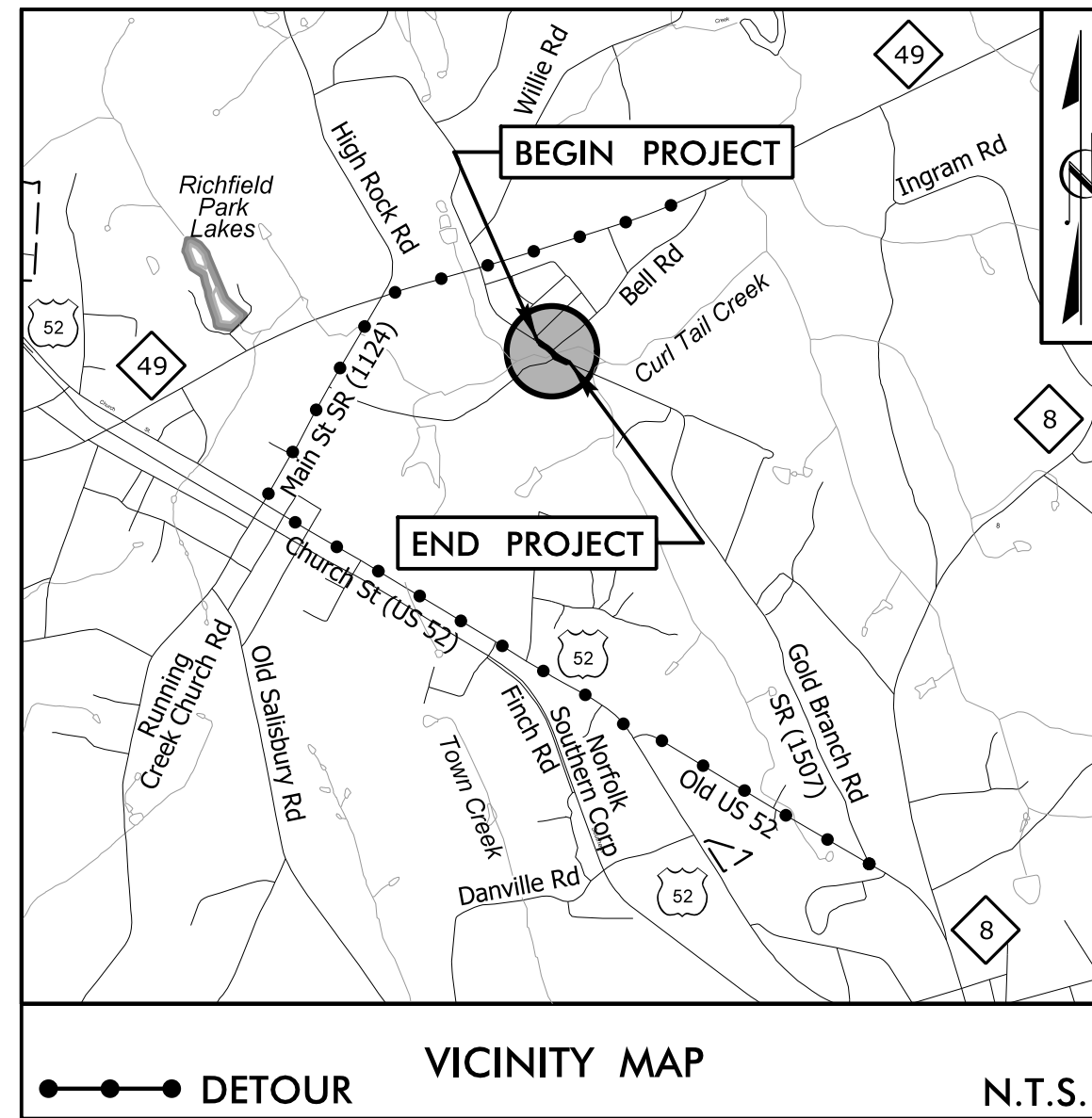
SEE ROADWAY STD DWG 1101.03, SHEET 1 OF 9 FOR ADVANCE WARNING AND BARRICADE PLACEMENT.



Scale: 1" = 800'

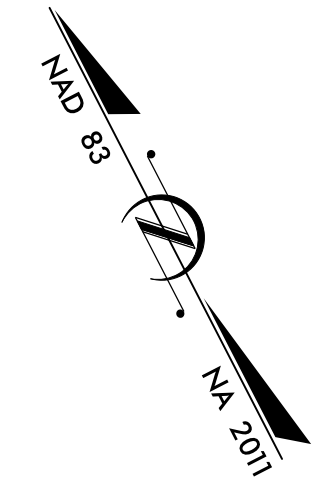
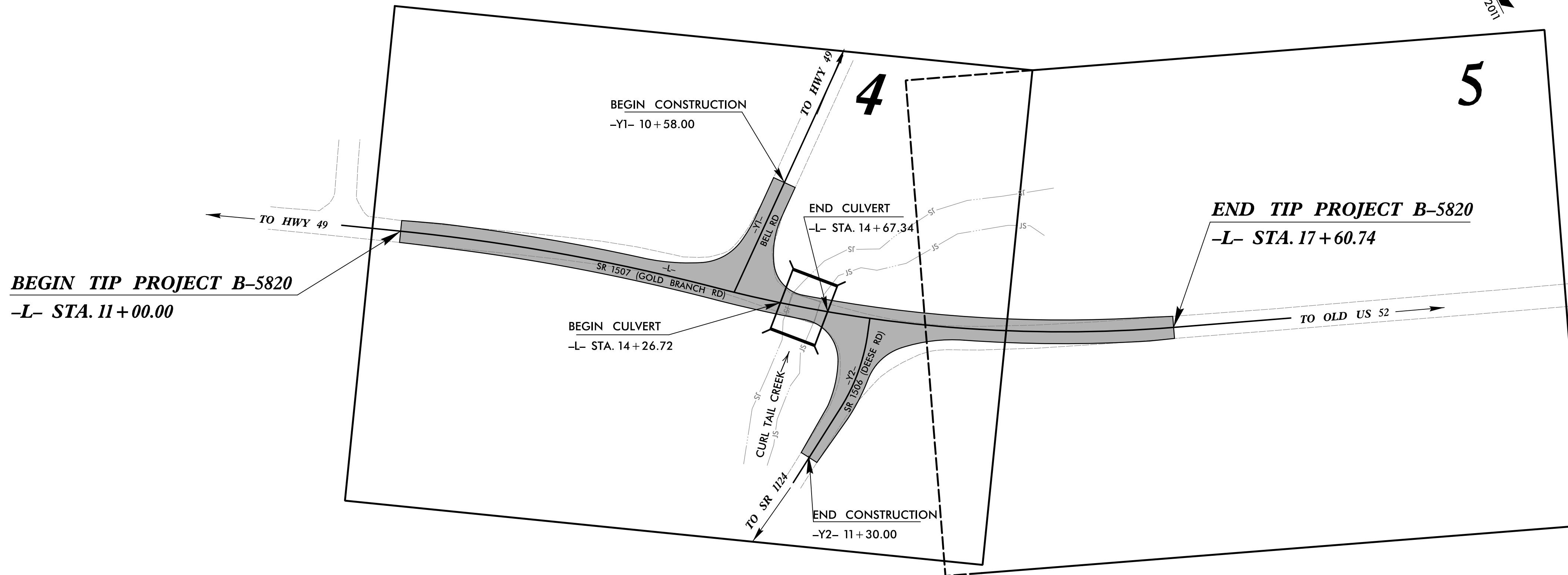
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**TIP PROJECT: B-5820**



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

**LOCATION: BRIDGE #221 OVER CURL TAIL CREEK  
ON SR 1507 (GOLD BRANCH RD)  
TYPE OF WORK: GRADING, PAVING, DRAINAGE, & STRUCTURE**



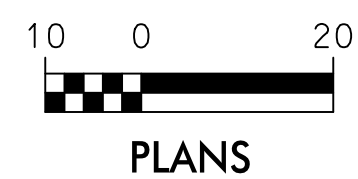
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5820	EC-1	9
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45773.1	N/A	P.E.	
45773.2	N/A	ROW & UTILITIES	
45773.3	N/A	CONSTRUCTION	

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1650.05	Temporary Silt Ditch	TD
1650.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	III III III
1622.01	Guide for Temporary Berms and Slope Drains	III III III
1650.02	Silt Basin Type B	III III III
1633.01	Temporary Rock Silt Check Type-A	III III III
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	III III III
1633.02	Temporary Rock Silt Check Type-B	III III III
	Wattle/Coir Fiber Wattle	III III III
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	III III III
1634.01	Temporary Rock Sediment Dam Type-A	III III III
1634.02	Temporary Rock Sediment Dam Type-B	III III III
1655.01	Rock Pipe Inlet Sediment Trap Type-A	III III III
1655.02	Rock Pipe Inlet Sediment Trap Type-B	III III III
1650.04	Stilling Basin for Pumped Effluent	III III III
1650.06	Special Stilling Basin	III III III
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	III III III
	Tiered Skimmer Basin	III III III
	Infiltration Basin	III III III

**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 3, 2011 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.**

Prepared In the Office of:



**2018 STANDARD SPECIFICATIONS**

Designed by:

**EDWARD VANCE, P.E.** 0161  
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	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 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		

PROJECT REFERENCE NO. B-5820	SHEET NO. EC-2
RW SHEET NO.	
 <b>STV Engineers, Inc.</b> 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	

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

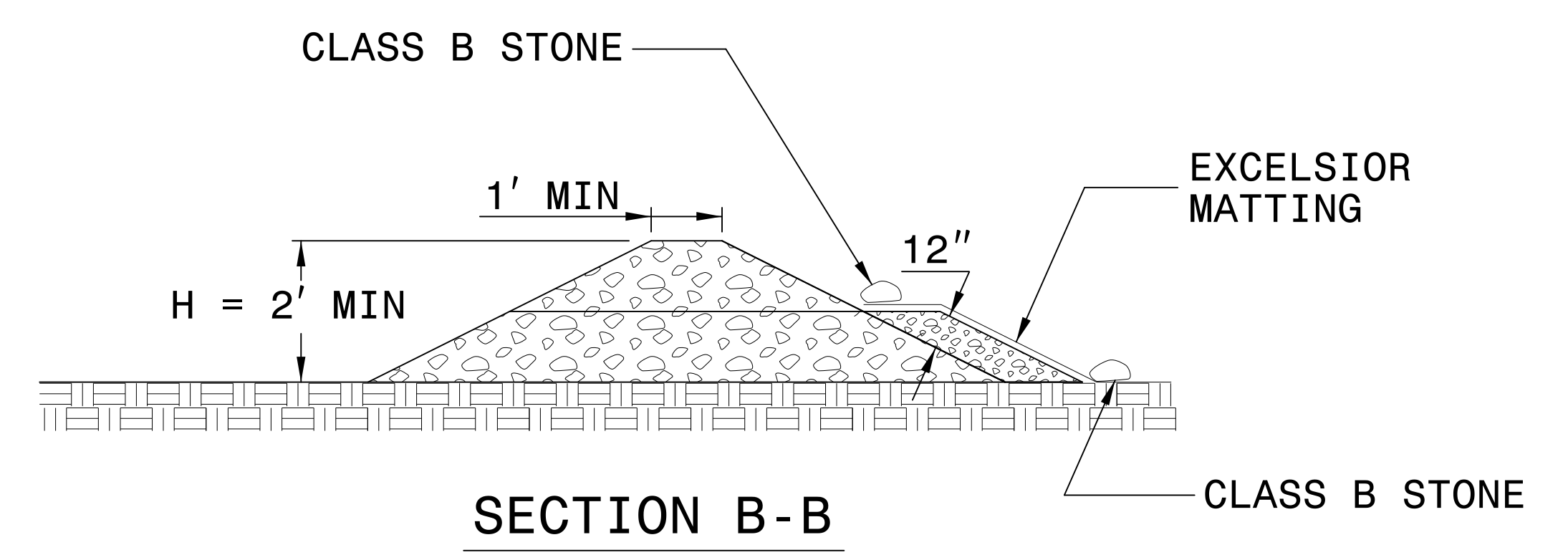
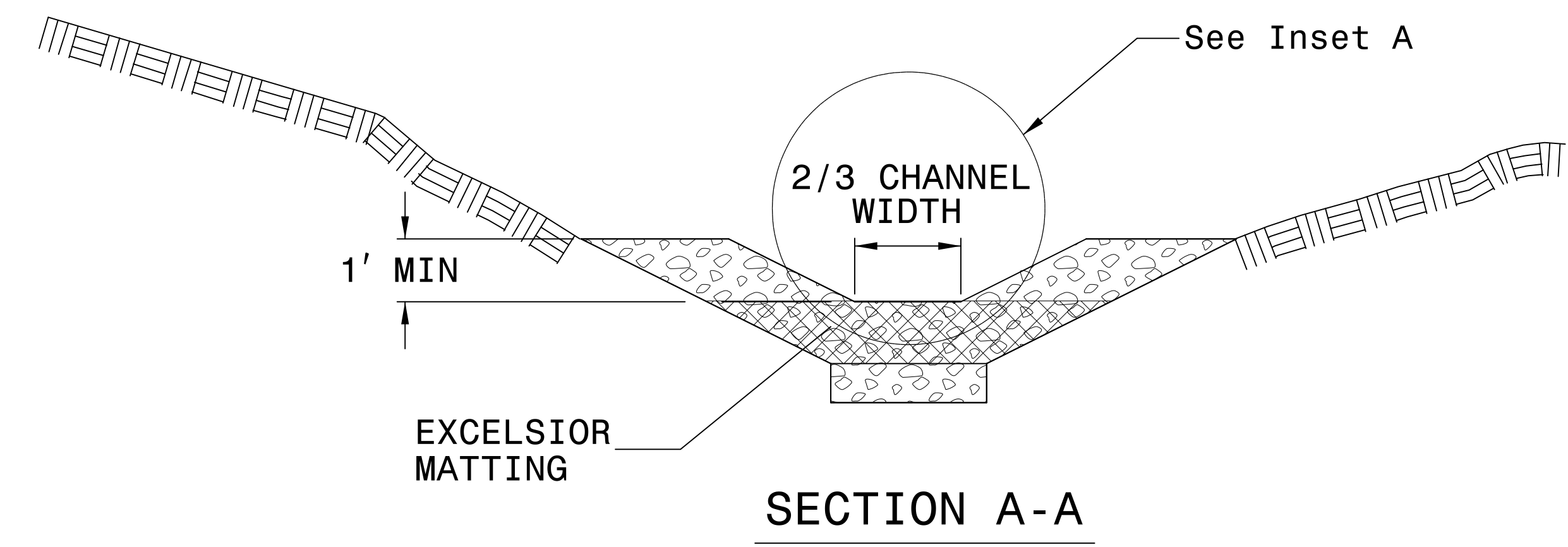
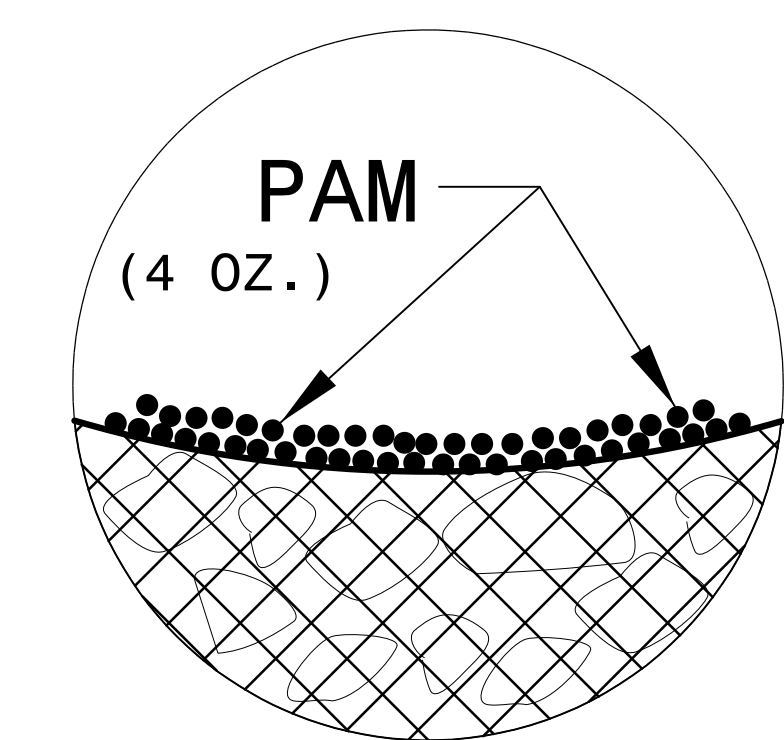
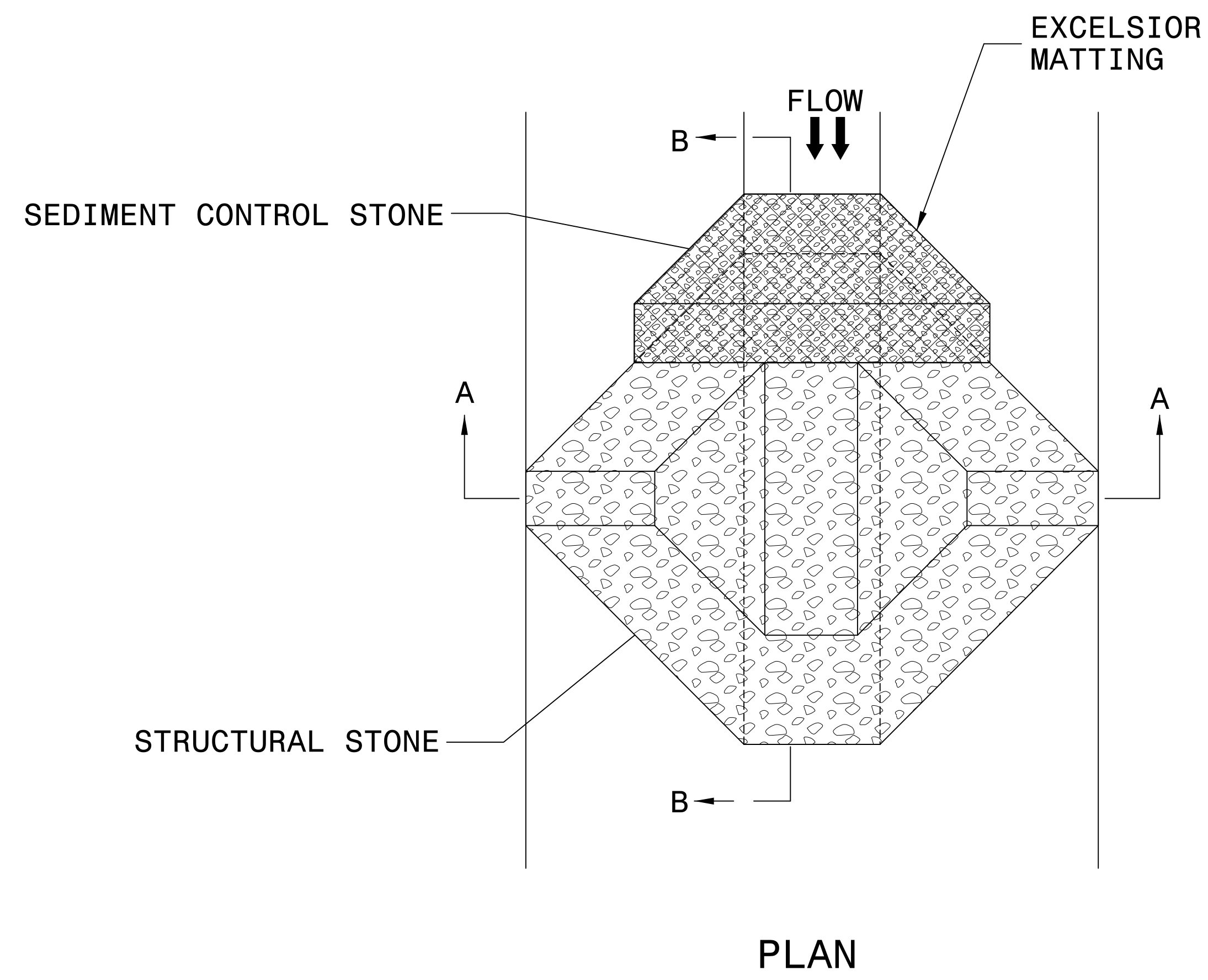
## NOTES

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

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DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO. <i>B-5820</i>	SHEET NO. <i>EC-3</i>
RW SHEET NO.	
STV Engineers, Inc. <small>900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991</small>	

**SOIL STABILIZATION SUMMARY SHEET**

**MATTING FOR EROSION CONTROL  
(FOR SLOPE STABILIZATION)**

**PERMANENT SOIL REINFORCEMENT MATTING  
(FOR DITCH STABILIZATION)**


CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	-L- 'V'-DITCH	12+50	13+80	RT	120
			SUBTOTAL		120
	MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER				715
				TOTAL	835
				SAY	900

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	GEO FOR DRAINAGE ESTIMATE (SY)
4	SEE DETAILS				

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5/23/2018


DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

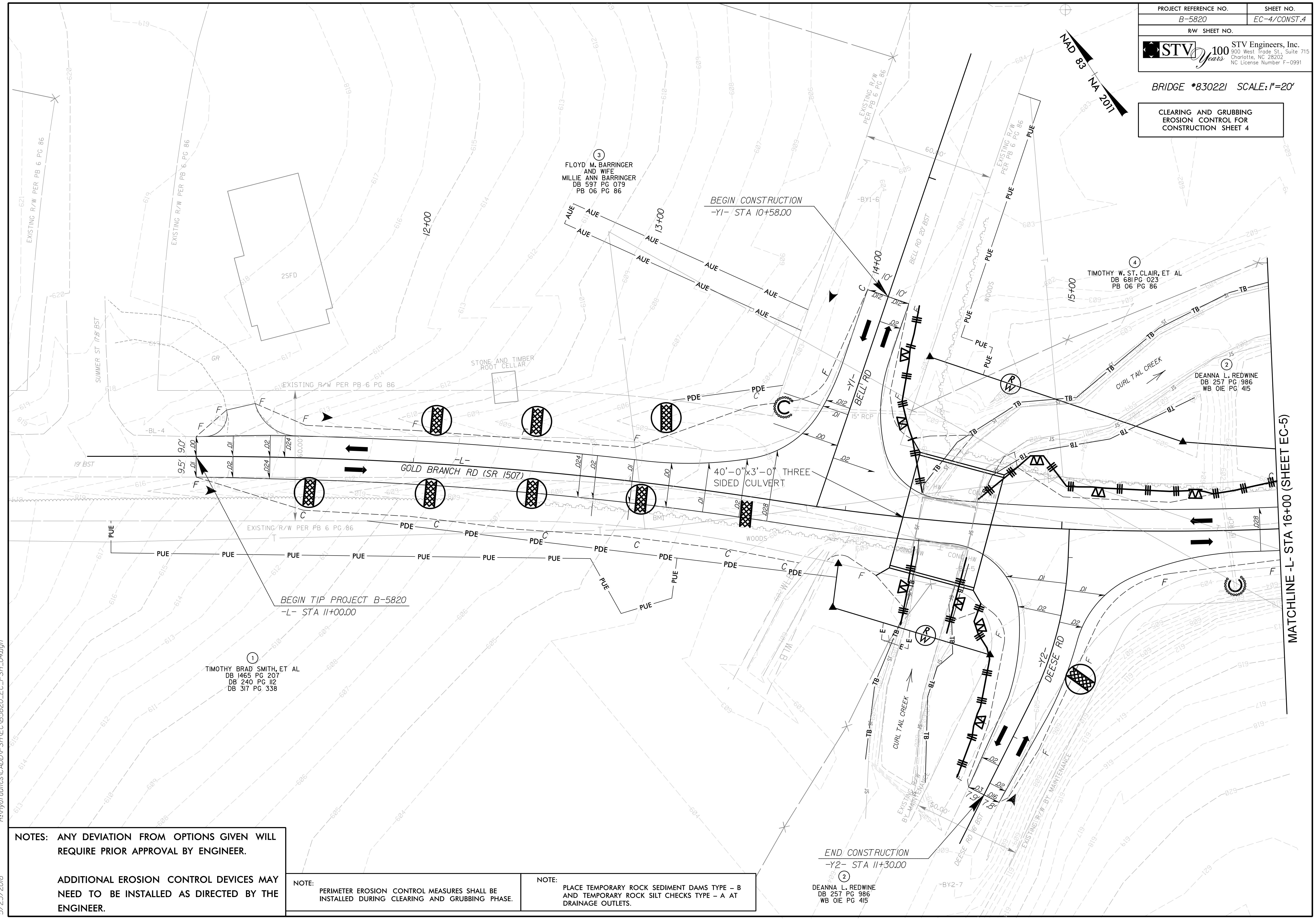
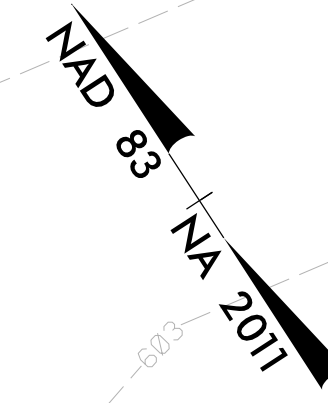
PROJECT REFERENCE NO. B-5820	SHEET NO. EC-3A
RW SHEET NO.	
 <b>STV Engineers, Inc.</b> <small>900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991</small>	

## ***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.

Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit effective August 3, 2011 issued by the North Carolina Department of Environment and Natural Resources Division of Water Quality. Temporary or permanent ground cover stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity. Temporary and permanent ground cover stabilization shall be achieved in accordance with the provisions in this contract and as directed.

PROJECT REFERENCE NO. B-5820	SHEET NO. EC-4/CONST.4
RW SHEET NO.	
 <b>STV</b> 100 Years STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	
BRIDGE #830221 SCALE: 1"=20'	
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4	



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5/23/2018

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

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

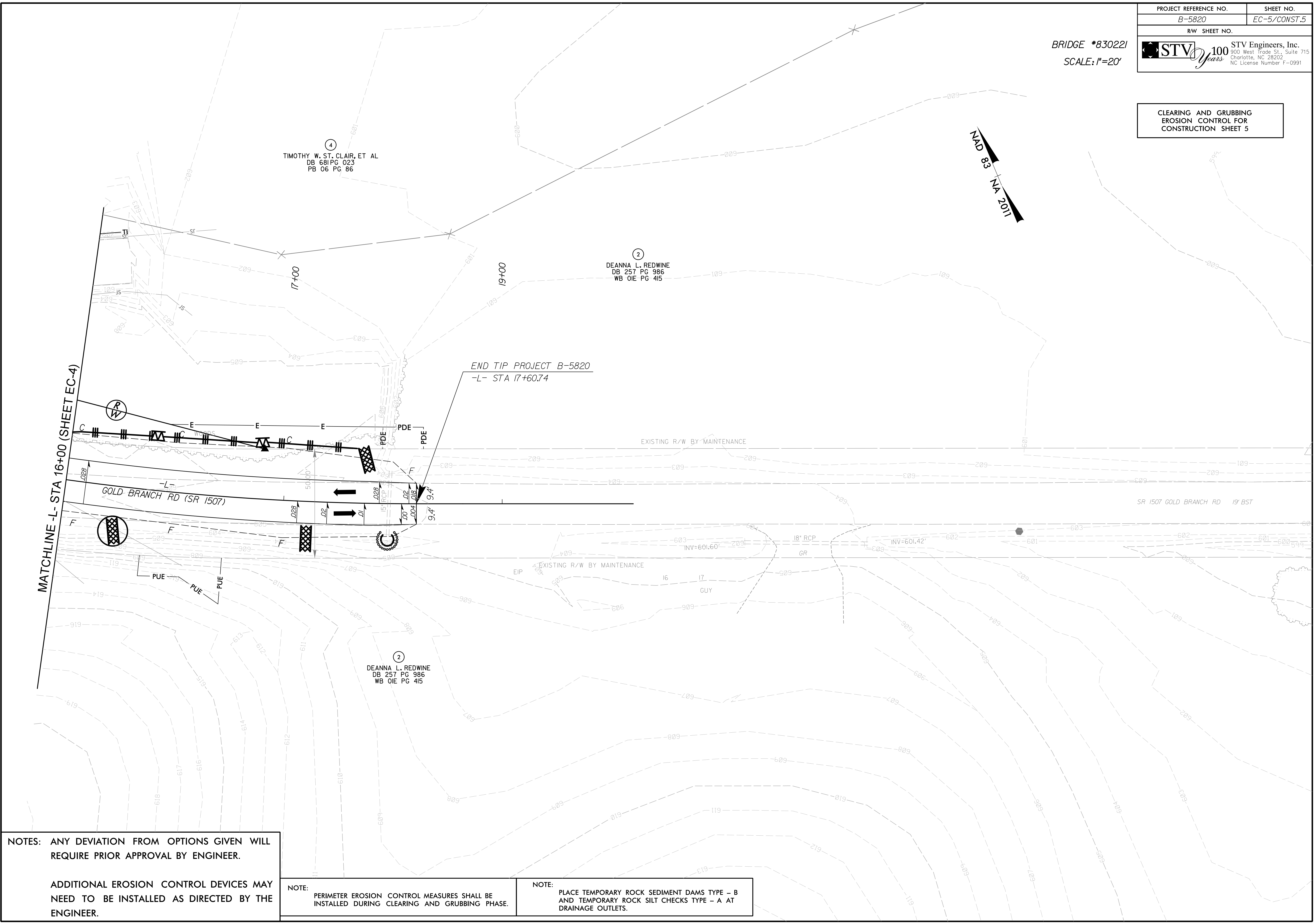
END CONSTRUCTION  
-Y2- STA 11+30.00  
②  
DEANNA L. REDWINE  
DB 257 PG 986  
WB 01E PG 415

MATCHLINE -L- STA 16+00 (SHEET EC-5)

PROJECT REFERENCE NO. B-5820	SHEET NO. EC-5/CONST.5
RW SHEET NO.	
 <b>STV Engineers, Inc.</b> 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	

BRIDGE #830221  
SCALE: 1"=20'

CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 5



④  
TIMOTHY W. ST. CLAIR, ET AL  
DB 681 PG 023  
PB 06 PG 86

②  
DEANNA L. REDWINE  
DB 257 PG 986  
WB 01E PG 415

②  
DEANNA L. REDWINE  
DB 257 PG 986  
WB 01E PG 415

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.

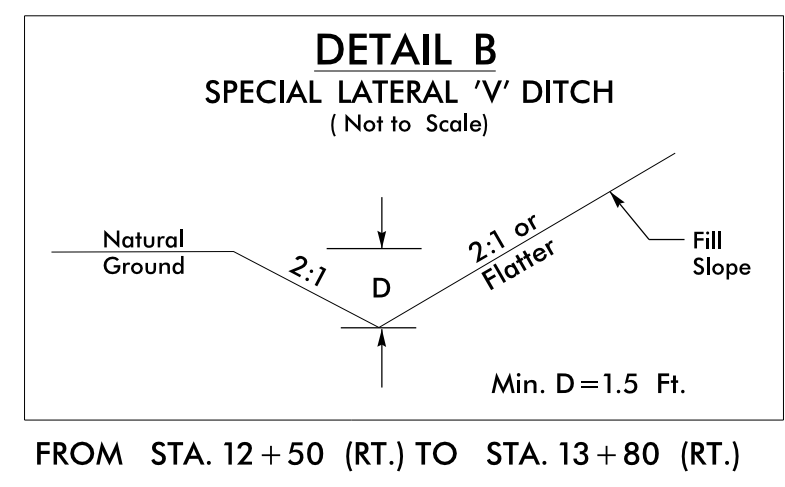
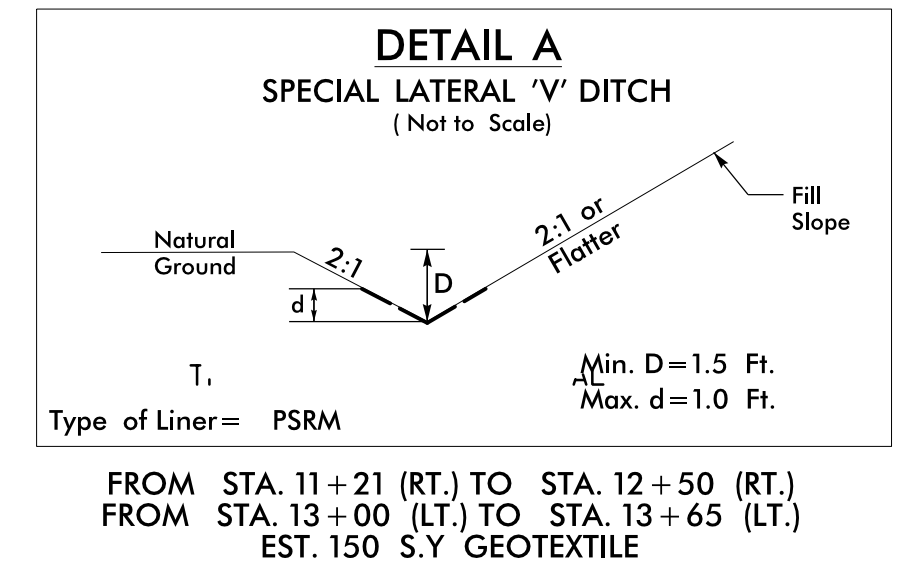
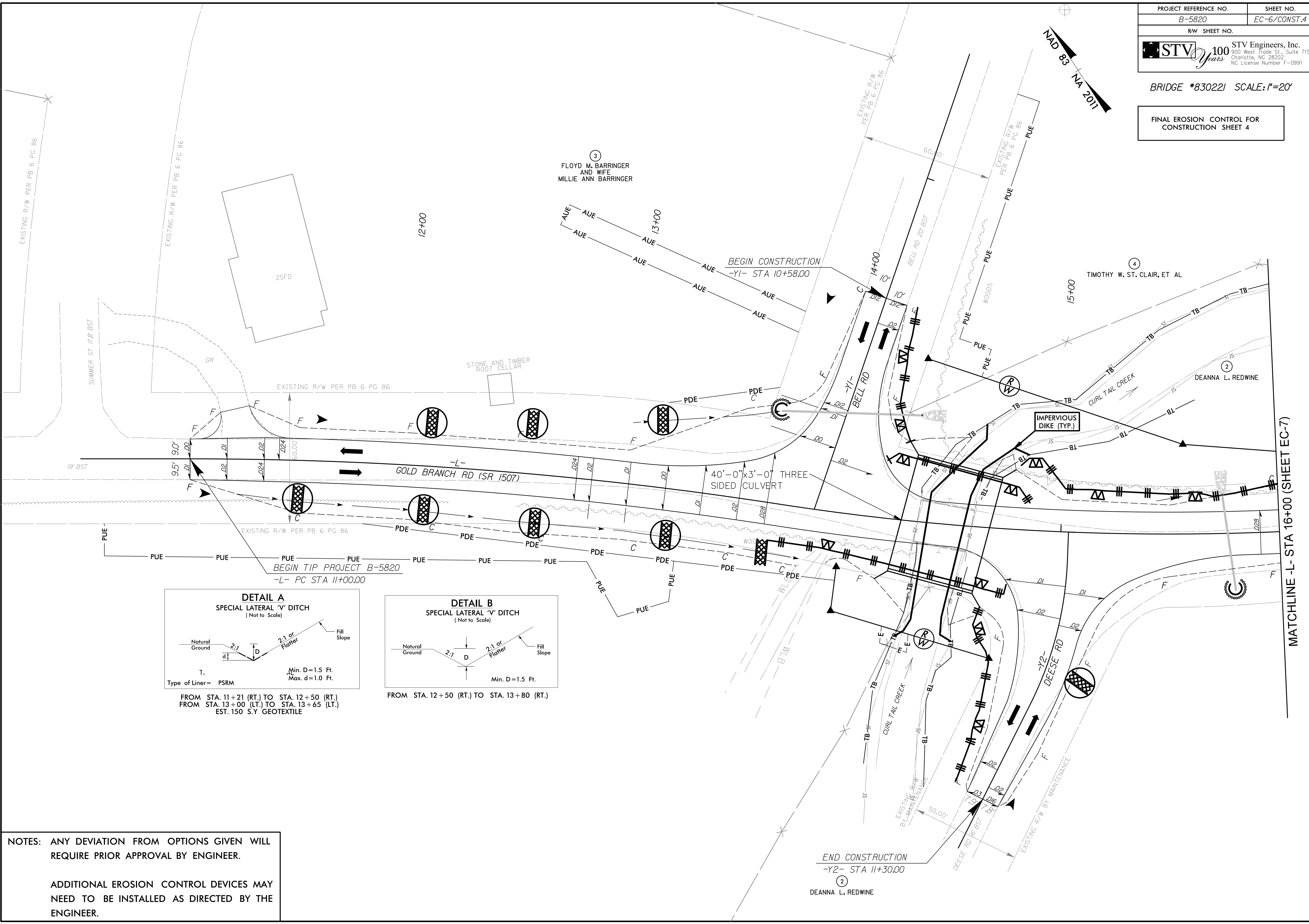
NOTE: PERIMETER EROSION CONTROL MEASURES SHALL BE INSTALLED DURING CLEARING AND GRUBBING PHASE.

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

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5/23/2018

PROJECT REFERENCE NO. B-5820	SHEET NO. EC-6/CONST.4
RW SHEET NO.	
 <b>STV</b> 100 Years STV Engineers, Inc. 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	
BRIDGE #830221 SCALE: 1"=20'	
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.

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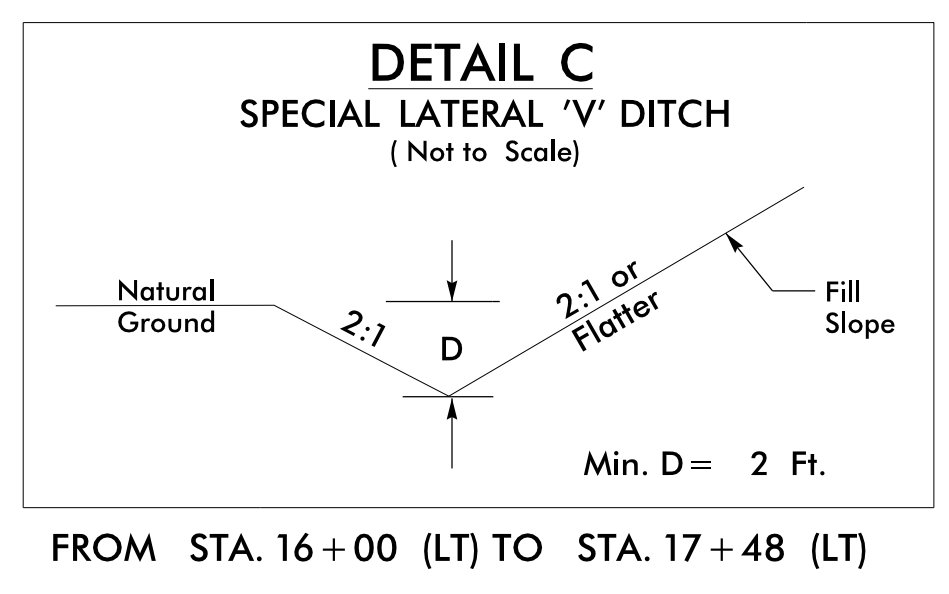
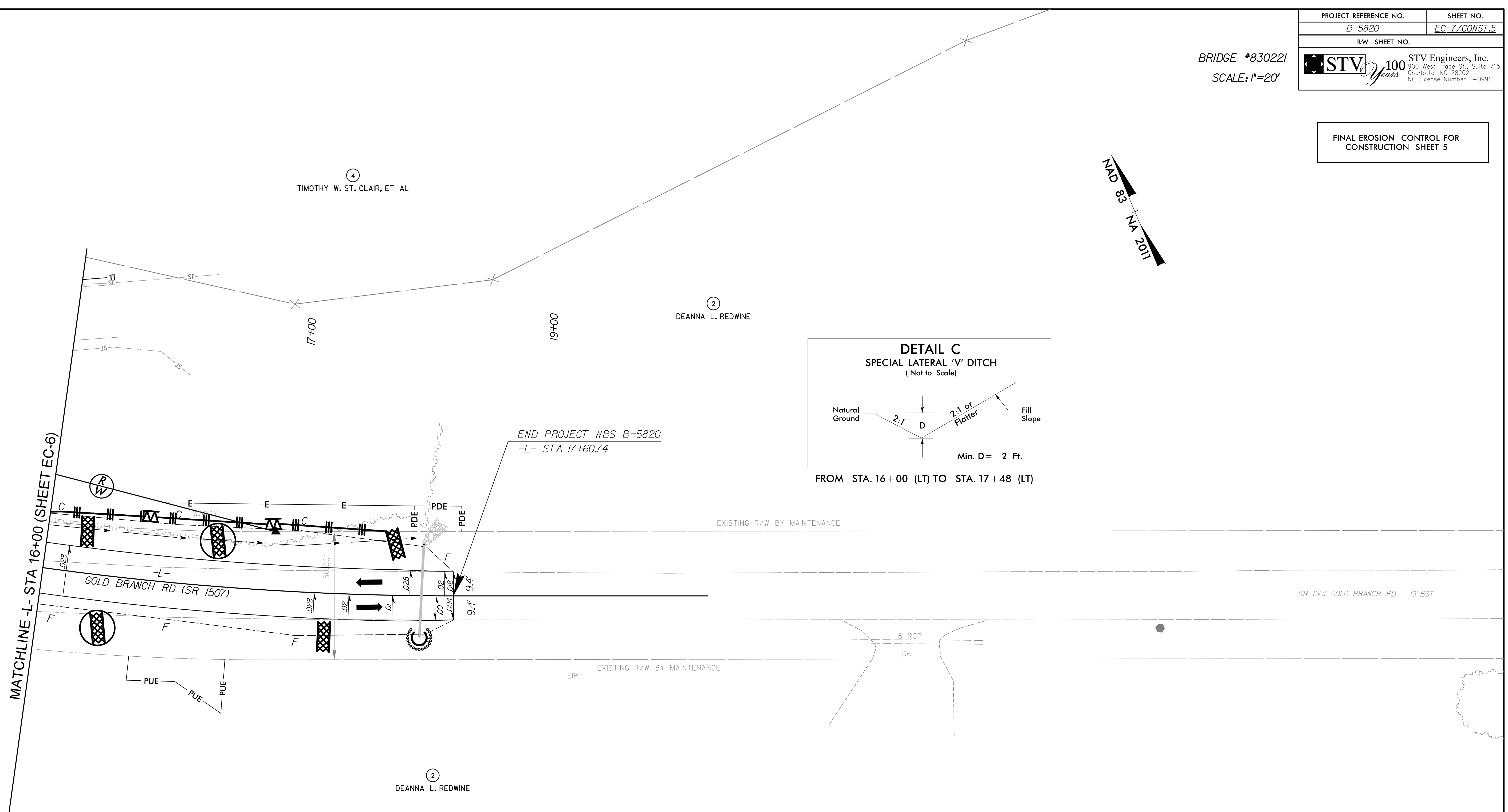
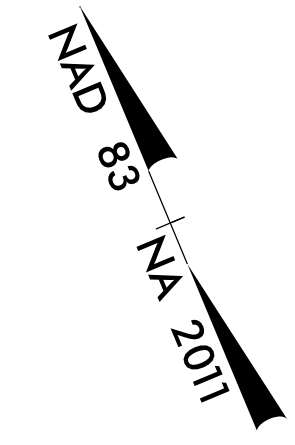
MATCHLINE -L- STA 16+00 (SHEET EC-7)



PROJECT REFERENCE NO.	SHEET NO.
B-5820	EC-7/CONST.5
RW SHEET NO.	
 <b>STV Engineers, Inc.</b> 900 West Trade St., Suite 715 Charlotte, NC 28202 NC License Number F-0991	

BRIDGE #830221  
SCALE: 1"=20'

FINAL EROSION CONTROL FOR CONSTRUCTION SHEET 5



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.

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5/23/2018

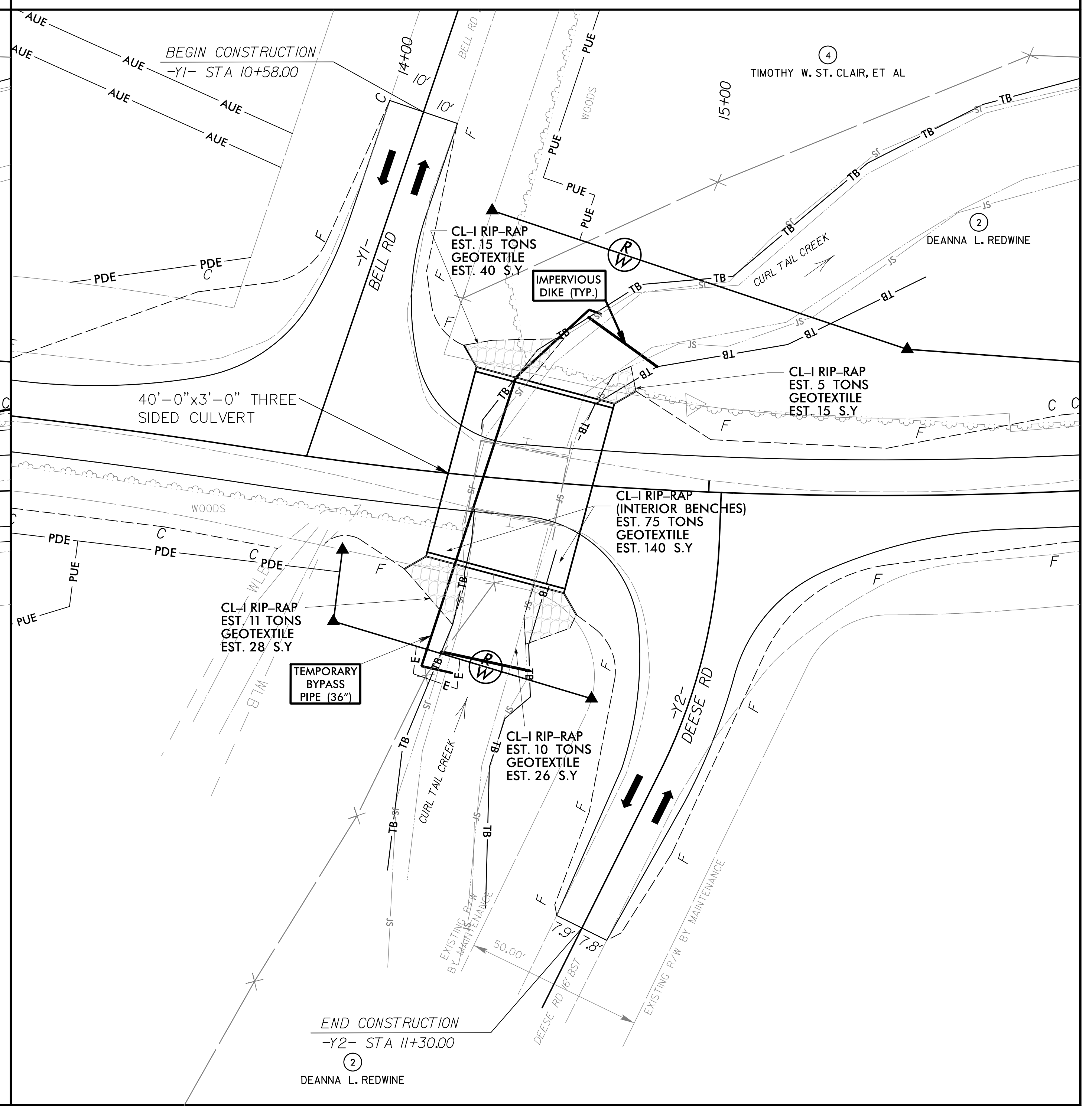
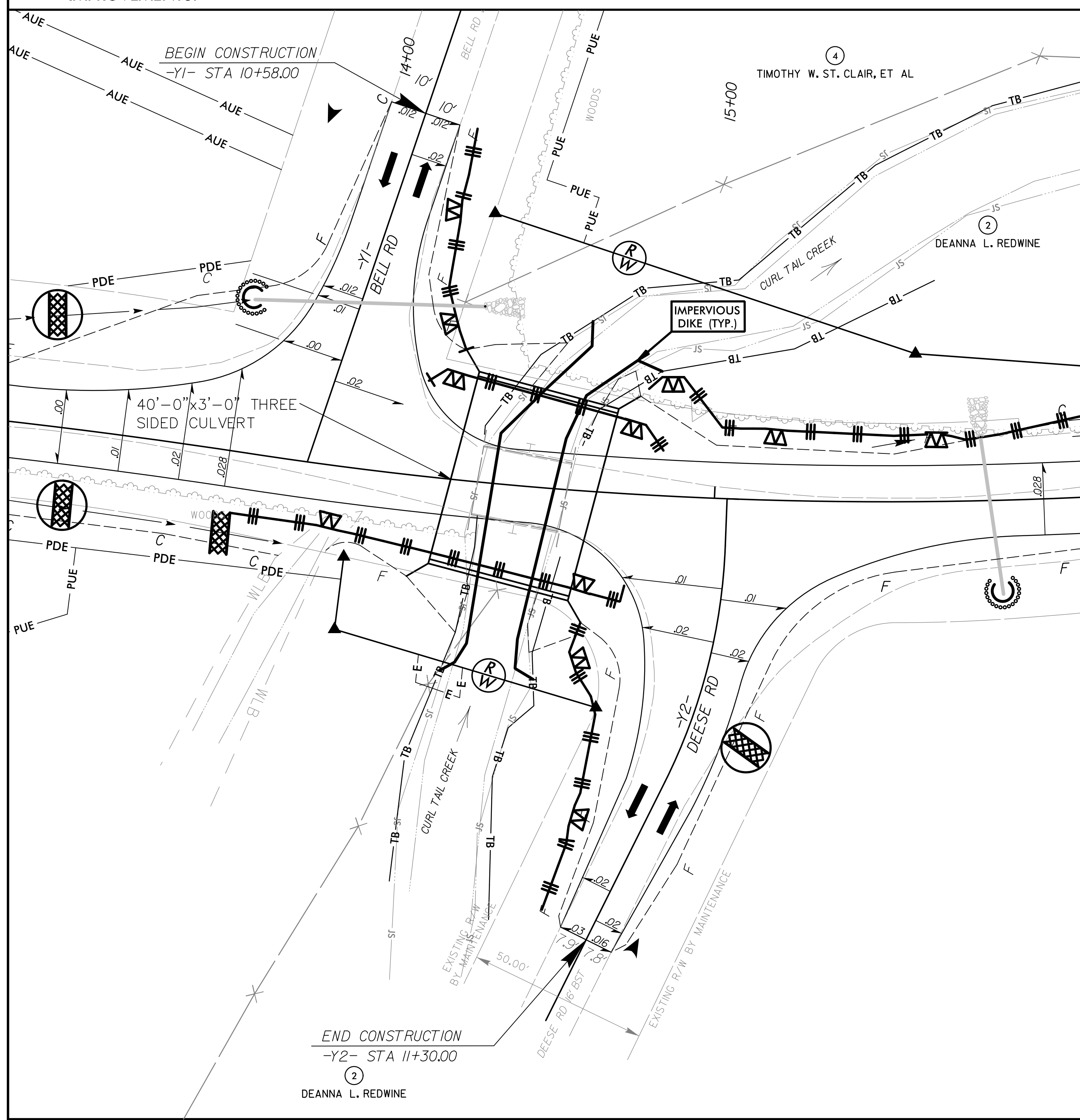
# CULVERT CONSTRUCTION SEQUENCE STA. 17+45 -L-

## PHASE I

1. UTILIZE SPECIAL STILLING BASIN(S) AS NEEDED THROUGHOUT CULVERT CONSTRUCTION.
2. CONSTRUCT IMPERVIOUS DIKES, USE SPECIAL STILLING BASINS TO DEWATER EXCAVATION AREA.
3. EXCAVATE AND CONSTRUCT FOOTINGS.
4. CONSTRUCT PROPOSED 40'-0"x3'-0" THREE SIDED CULVERT.
5. CONSTRUCT THE WING WALLS FOR THE PROPOSED CULVERT AND ANY NECESSARY EMBANKMENT IMPROVEMENTS.

## PHASE II

6. EXCAVATE ANY REMAINING SILT; REMOVE SPECIAL STILLING BASINS.
7. REMOVE IMPERVIOUS DIKES ALLOWING NORMAL FLOW THROUGH CULVERT.
8. COMPLETE DRAINAGE, INCLUDING FLOOD BENCH RIPRAP.
9. COMPLETE ROADWAY.

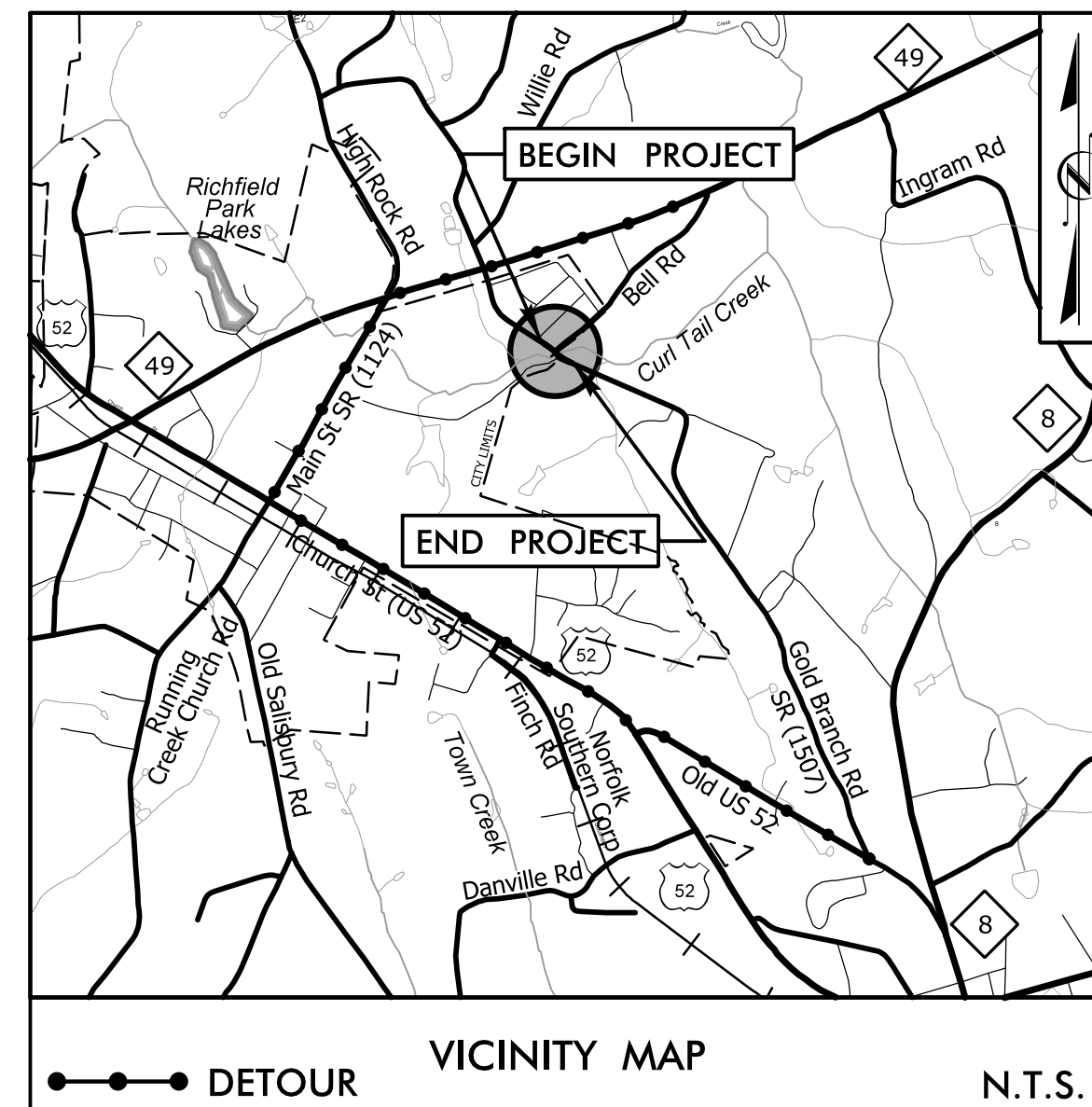


END CONSTRUCTION  
-Y2- STA 11+30.00  
DEANNA L. REDWINE

END CONSTRUCTION  
-Y2- STA 11+30.00  
DEANNA L. REDWINE

**TIP PROJECT: B-5820**

See Sheet UC-1 For Index of Sheets  
See Sheet UC-2 For Standard Symbology Sheet



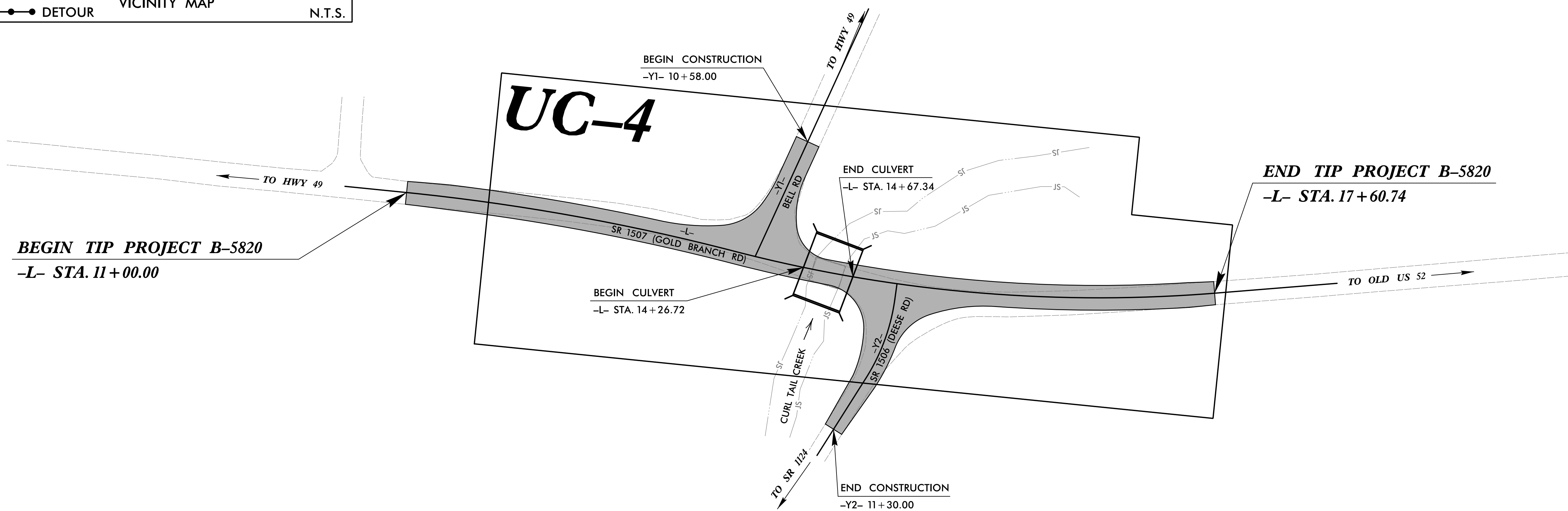
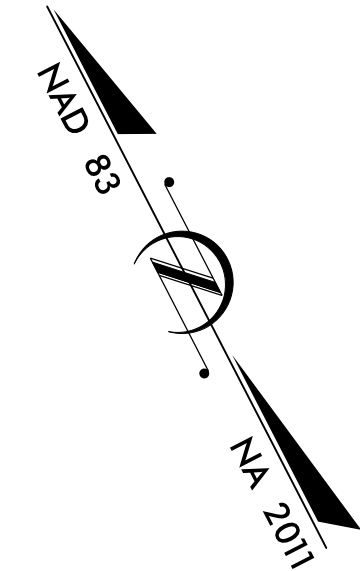
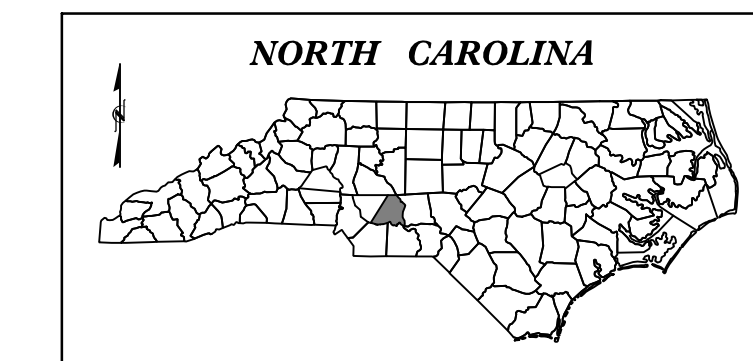
# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## UTILITY CONSTRUCTION PLANS STANLY COUNTY

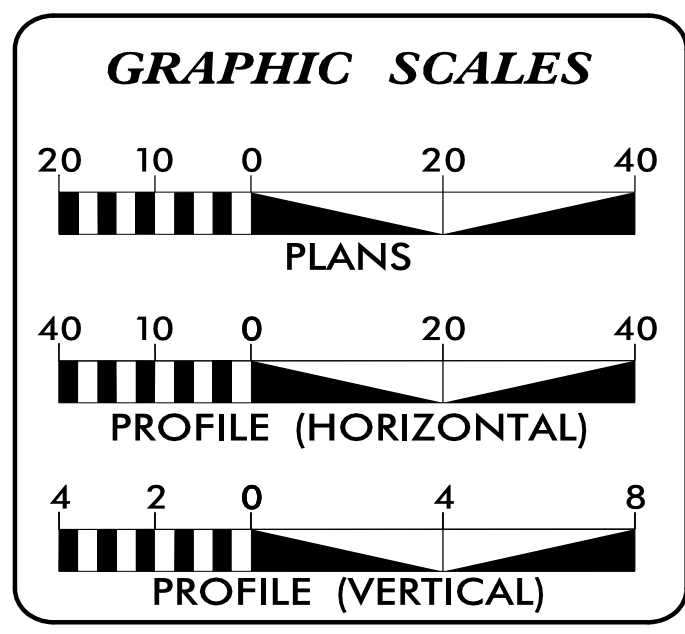
**LOCATION: BRIDGE #221 OVER CURL TAIL CREEK  
ON SR 1507 (GOLD BRANCH RD)**

**TYPE OF WORK: WATER LINE AND SANITARY SEWER RELOCATIONS**

PROJECT WBS NO.	SHEET NO.
<b>B-5820</b>	<b>UC-1</b>



DOCUMENT NOT CONSIDERED FINAL  
UNTIL ALL SIGNATURES ARE COMPLETED



SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLGY
UC-3	NOTES
UC-3A THRU UC-3B	DETAILS
UC-4	UTILITY CONSTRUCTION SHEET

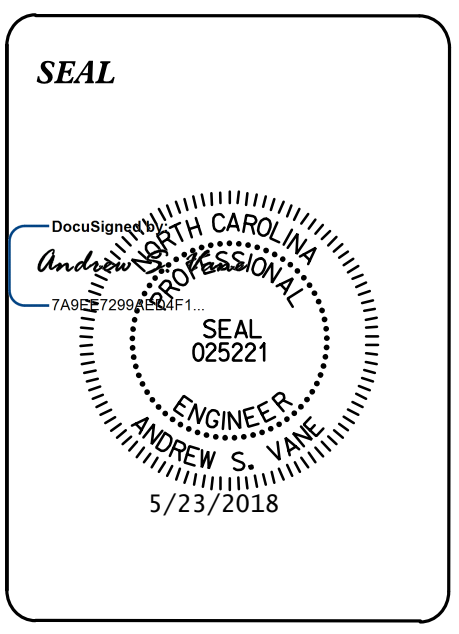
**WATER AND SEWER OWNERS ON PROJECT**

(A) WATER - PFEIFFER-NORTH STANLY WATER ASSOCIATION  
(B) SANITARY SEWER - STANLY COUNTY UTILITIES

PREPARED IN THE OFFICE OF

STV Engineers, Inc.  
900 West Trade St., Suite 715  
Charlotte, NC 28202  
NC License Number F-0991  
(704) 372-1885 FAX: (704) 372-3393

NIKKI T. HONEYCUTT, PE PROJECT ENGINEER  
ANDREW VANE, PE PROJECT DESIGN ENGINEER



**DIVISION OF HIGHWAYS UTILITIES UNIT**  
1555 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

CARL BARCLAY UTILITIES REGIONAL ENGINEER  
UTILITIES ENGINEER  
AMY DUPREE UTILITIES AREA COORDINATOR  
MARK CRUMP UTILITIES COORDINATOR

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

Table listing proposed water symbols including Water Line (Sized as Shown), various Degree Bends (11 1/4, 22 1/2, 45, 90), Plug, Tee, Cross, Reducer, Gate Valve, Butterfly Valve, Tapping Valve, Line Stop, Line Stop with Bypass, Blow Off, Fire Hydrant, Relocate Fire Hydrant, Remove Fire Hydrant, Water Meter, Relocate Water Meter, Remove Water Meter, Water Pump Station, RPZ Backflow Preventer, DCV Backflow Preventer, Relocate RPZ Backflow Preventer, Relocate DCV Backflow Preventer.

PROPOSED SEWER SYMBOLS

Table listing proposed sewer symbols including Gravity Sewer Line (Sized as Shown), Force Main Sewer Line (Sized as Shown), Manhole (Sized per Note), Sewer Pump Station.

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Table listing proposed miscellaneous utilities symbols including Power Pole, Telephone Pole, Joint Use Pole, Telephone Pedestal, Utility Line by Others (Type as Shown), Trenchless Installation, Encasement by Open Cut, Encasement.

Table listing miscellaneous utilities symbols including Thrust Block, Air Release Valve, Utility Vault, Concrete Pier, Steel Pier, Plan Note, Pay Item Note.

EXISTING UTILITIES SYMBOLS

Table listing existing utilities symbols including Power Pole, Telephone Pole, Joint Use Pole, Utility Pole, Utility Pole with Base, H-Frame Pole, Power Transmission Line Tower, Water Manhole, Power Manhole, Telephone Manhole, Sanitary Sewer Manhole, Hand Hole for Cable, Power Transformer, Telephone Pedestal, CATV Pedestal, Gas Valve, Gas Meter, Located Miscellaneous Utility Object, Abandoned According to Utility Records (AATUR), End of Information (E.O.I.), \*Underground Power Line, \*Underground Telephone Cable, \*Underground Telephone Conduit, \*Underground Fiber Optics Telephone Cable, \*Underground TV Cable, \*Underground Fiber Optics TV Cable, \*Underground Gas Pipeline, Aboveground Gas Pipeline (A/G Gas), \*Underground Water Line, Aboveground Water Line (A/G Water), \*Underground Gravity Sanitary Sewer Line, Aboveground Gravity Sanitary Sewer Line (A/G Sanitary Sewer), \*Underground SS Forced Main Line, Underground Unknown Utility Line, SUE Test Hole, Water Meter, Water Valve, Fire Hydrant, Sanitary Sewer Cleanout.

\*For Existing Utilities Utility Line Drawn from Record (Type as Shown) Designated Utility Line (Type as Shown)

5/14/99

5/27/2018 P:\1111\1111\water\_and\_sewer\design\B5820.WS\_UC2.dgn

REV: 2/1/2012

# UTILITY CONSTRUCTION

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

**DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED**

PROJECT REFERENCE NO. <b>B-5820</b>	SHEET NO. <b>UC-3</b>
DESIGNED BY: <b>CTH</b>	
DRAWN BY: <b>CTH</b>	
CHECKED BY: <b>ASV</b>	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

## GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.
2. THE EXISTING WATER AND SEWER UTILITIES BELONG TO PFEIFFER-NORTH STANLY WATER ASSOCIATION AND STANLY COUNTY UTILITIES, RESPECTIVELY.
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

## PROJECT SPECIFIC NOTES:

1. PROPOSED WATER LINE FROM -WL1- LINE STATION 10+00 TO -WL1- LINE STATION 11+35 SHALL BE PC350 D.I. PIPE WITH DUCTILE IRON FITTINGS. PROPOSED FORCE MAIN FROM -FSS1- LINE STATION 10+00 TO -FSS1- LINE STATION 11+17 SHALL BE PC350 D.I. PIPE WITH DUCTILE IRON FITTINGS.
2. NOTE EXACT FORCE MAIN LOCATION NOT KNOWN. CONTRACTOR TO PERFORM PRELIMINARY SOFT DIGS AND INVESTIGATIONS TO VERIFY TIE-IN LOCATIONS OF FORCE MAIN AND WATER LINE PRIOR TO ORDERING MATERIALS.
3. CONTRACTOR SHALL INSTALL AND TEST PROPOSED FORCE MAIN PRIOR TO TYING IN TO EXISTING FORCE MAIN. CONTRACTOR SHALL COORDINATE TIE-INS AT BOTH ENDS WITHIN A 6-HOUR TIME FRAME (10:00 AM - 4:00 PM). COORDINATE SHUTDOWN WITH TOWN OF RICHFIELD (SAMUEL STEED, (704) 960-3034) MINIMUM 72 HOURS IN ADVANCE. TOWN OF RICHFIELD WILL HANDLE TEMPORARY BYPASS PUMPING. CONTRACTOR SHALL HAVE ALL NECESSARY MATERIALS ON HAND PRIOR TO SHUT-DOWN.
4. CONTRACTOR SHALL COORDINATE SHUT-DOWN OF 8" WATER LINE MINIMUM 72 HOURS IN ADVANCE WITH PFEIFFER-NORTH STANLY WATER ASSOCIATION (BILL BARRINGER, (704) 463-7117). CONTRACTOR SHALL COMPLETE TIE-INS WITHIN AN 8-HOUR WORKDAY.

## UTILITY CONSTRUCTION PLANS ONLY





8/17/99

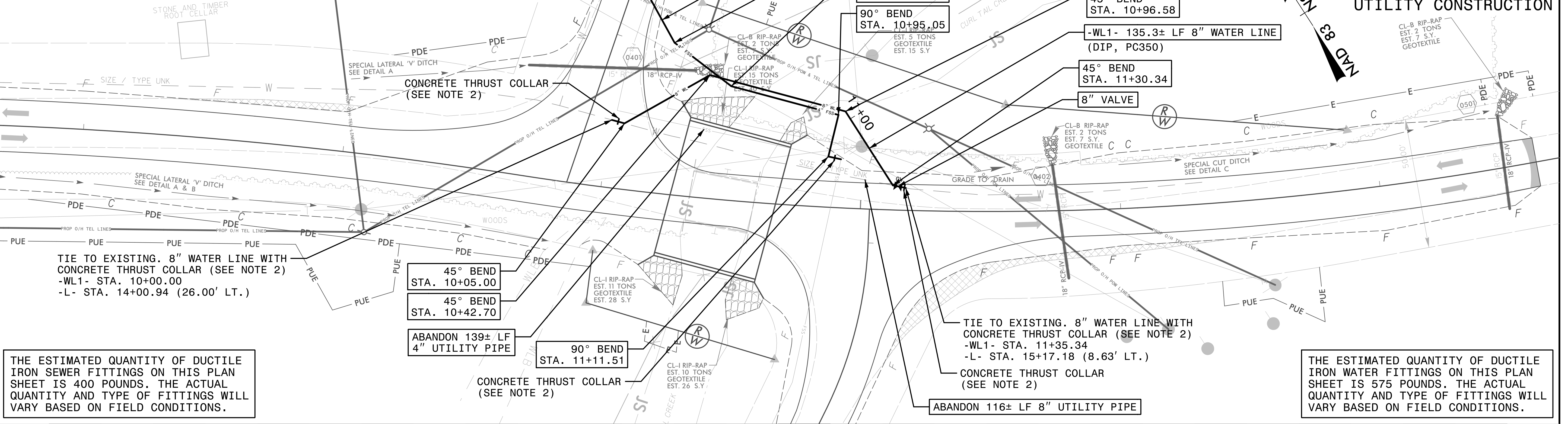
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- NOTES:
1. CONNECT PROPOSED 8" DIP WATER MAIN TO EXISTING 8" WATER MAIN USING NECESSARY FITTINGS AND TRANSITION COUPLINGS RECOMMENDED BY PIPE MANUFACTURERS. CONTRACTOR TO SCHEDULE SHUT DOWN AND CONNECTION TO EXISTING WATER LINE WITH UTILITY OWNER. CONTRACTOR TO FIELD VERIFY EXISTING PIPE MATERIAL AND DEPTHS AT TIE-IN POINTS.
  2. CONTRACTOR SHALL RESTRAIN THE TRANSITION CONNECTION. REFER TO SHEET UC-3A FOR CONCRETE THRUST COLLAR DETAIL.
  3. CONTRACTOR TO SCHEDULE SHUT DOWN AND CONNECTION TO EXISTING FORCE MAIN SEWER WITH UTILITY OWNER.

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 Charlotte, NC 28202  
 NC License Number F-0991

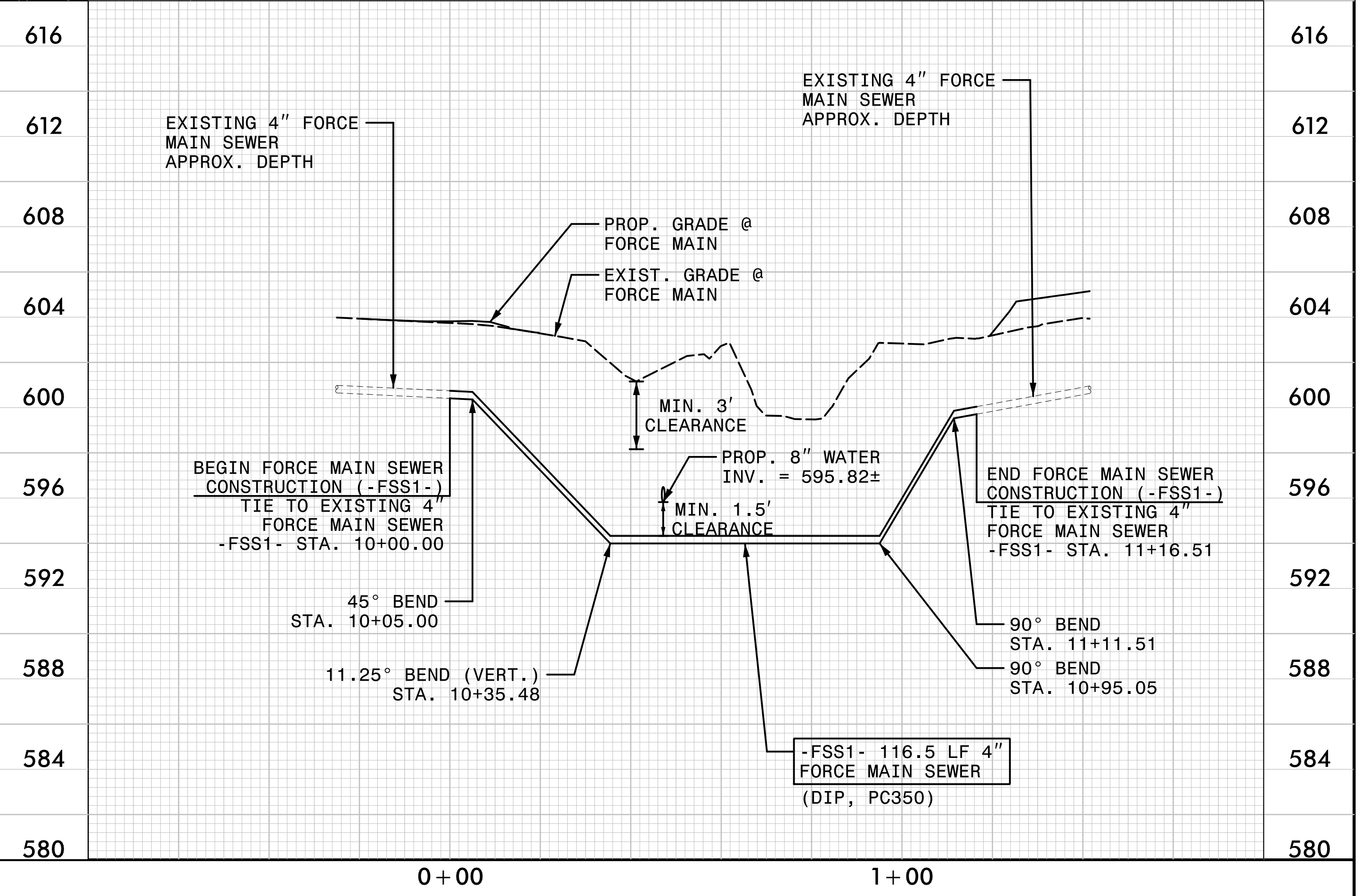
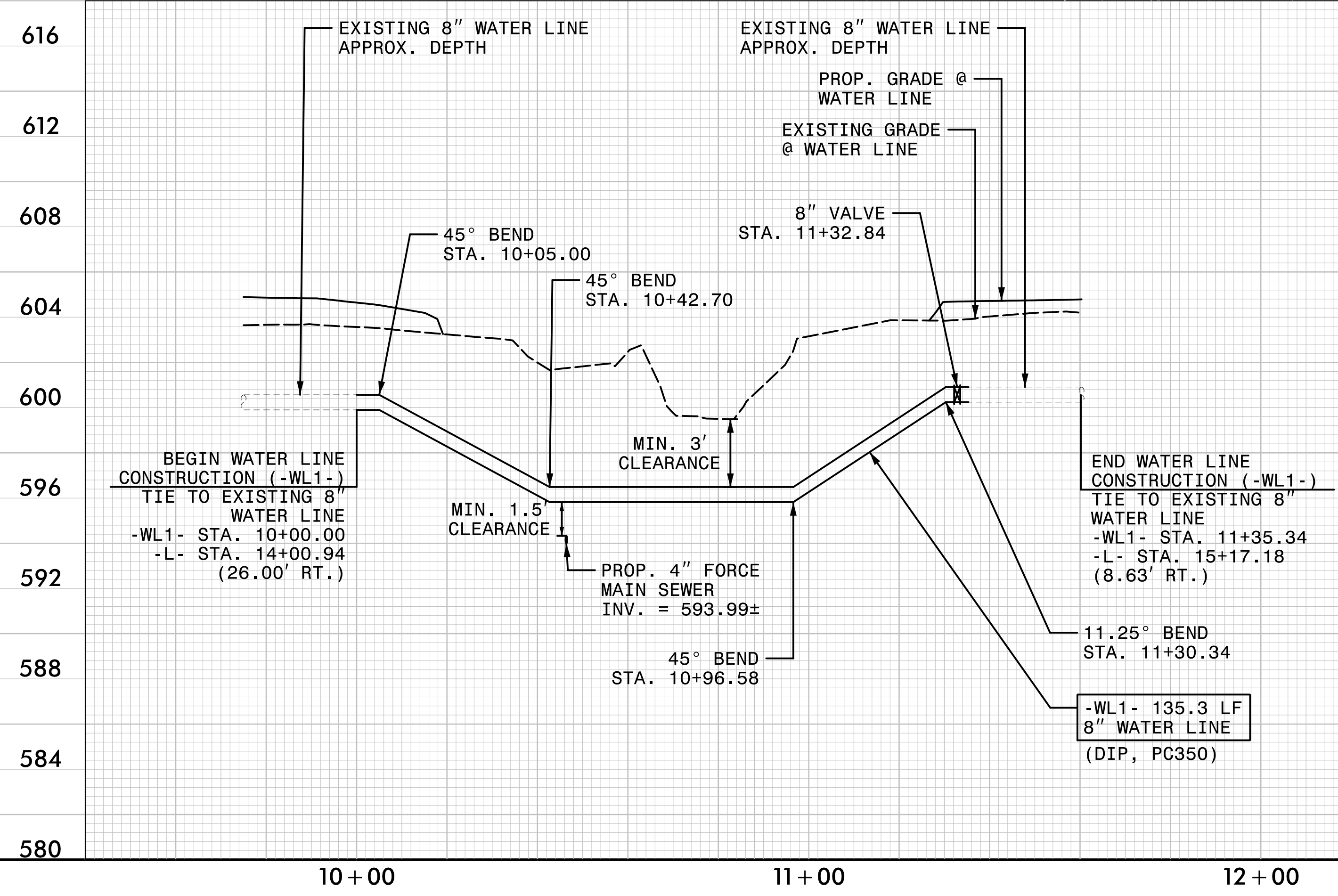
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 UNLESS ALL SIGNATURES COMPLETED**

PROJECT REFERENCE NO. <b>B-5820</b>	SHEET NO. <b>UC-4</b>
DESIGNED BY: <b>CTH</b>	
DRAWN BY: <b>CTH</b>	
CHECKED BY: <b>ASV</b>	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	



THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER FITTINGS ON THIS PLAN SHEET IS 400 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.

THE ESTIMATED QUANTITY OF DUCTILE IRON WATER FITTINGS ON THIS PLAN SHEET IS 575 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.





**TIP PROJECT: B-5820**

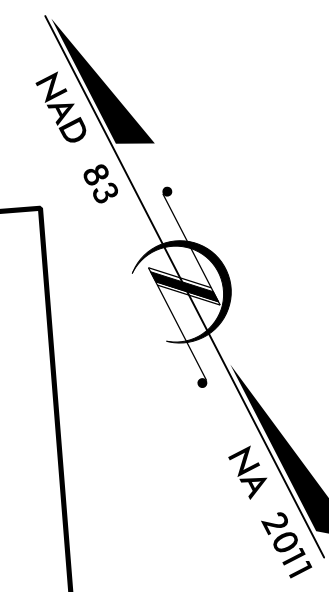
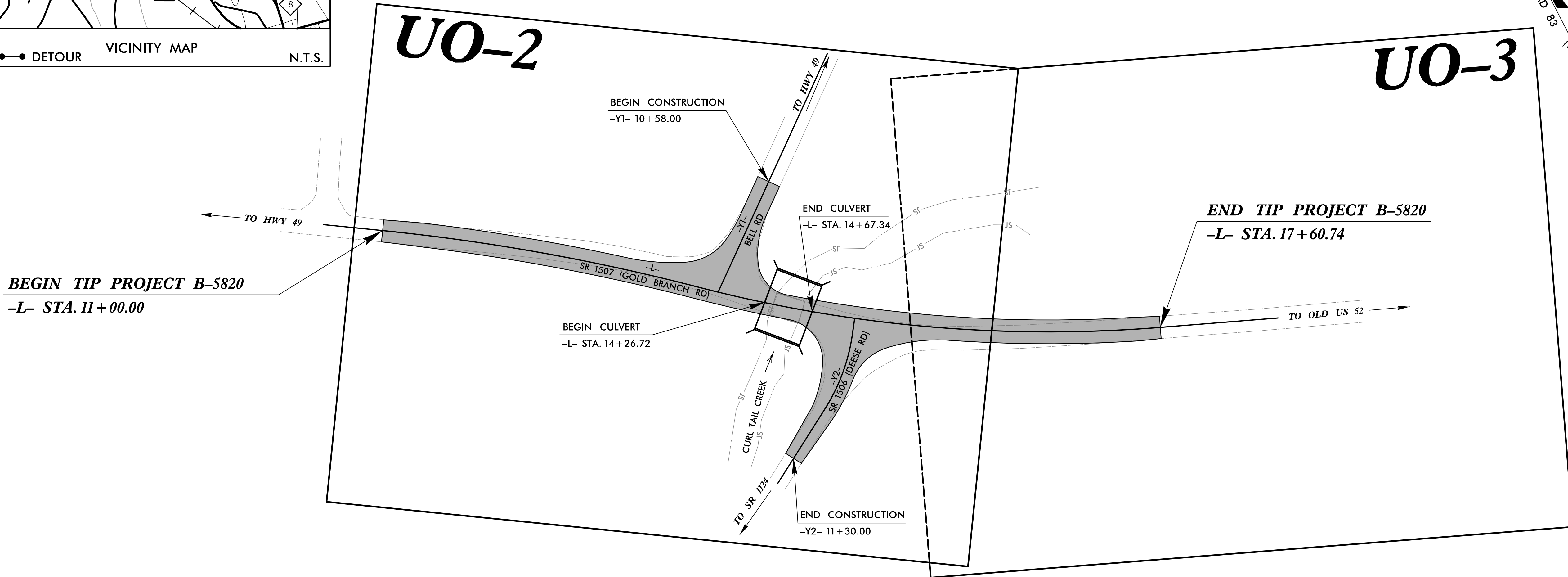
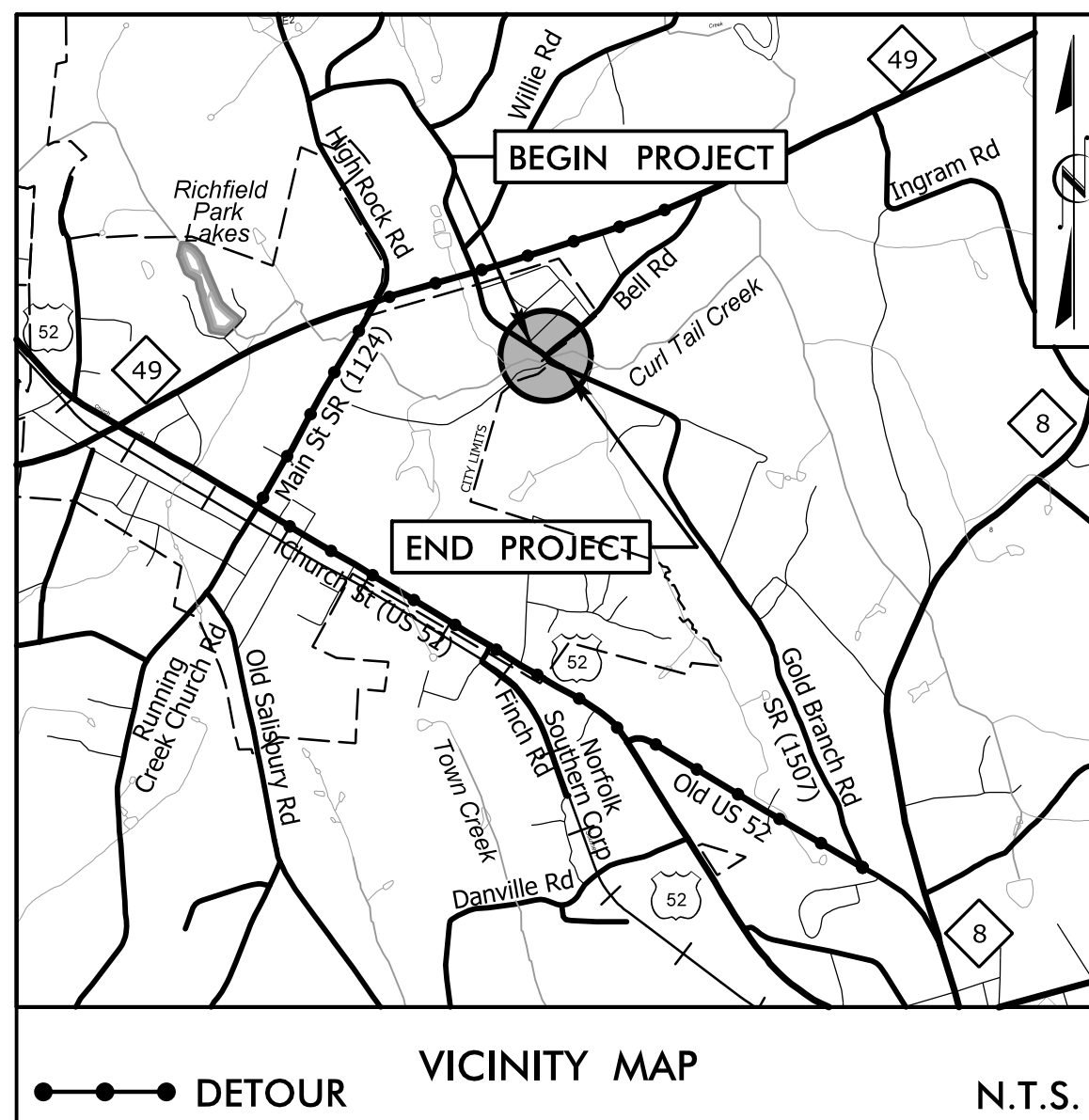
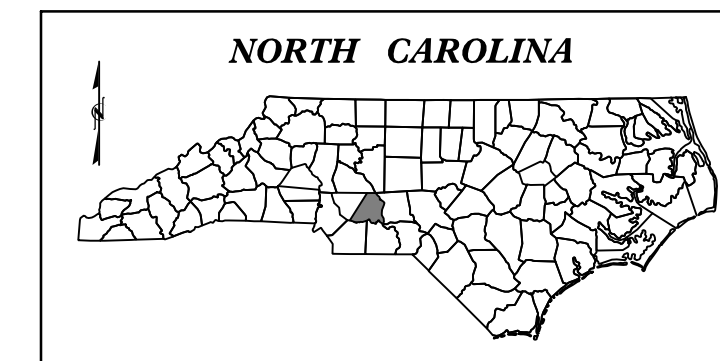
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
B-5820	UO-1

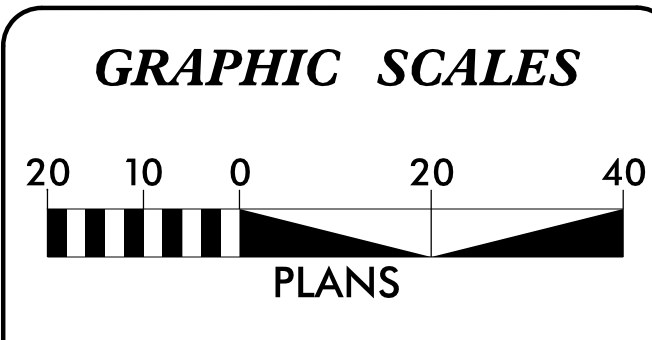
# UTILITIES BY OTHERS PLANS STANLY COUNTY

**LOCATION: BRIDGE #221 OVER CURL TAIL CREEK  
ON SR 1507 (GOLD BRANCH RD)**

**TYPE OF WORK: OVERHEAD POWER, TELEPHONE, AND CATV**



**CONTRACT:**



SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-3	UTILITIES BY OTHERS PLAN SHEETS

**UTILITY OWNERS ON PROJECT**

(A) UNION POWER EMC - POWER  
(B) WINDSTREAM - TELEPHONE  
(C) CHARTER - CABLE

**V&M**  
Vaughn & Melton  
Consulting Engineers

Charlotte, North Carolina  
704-357-0488

Raleigh, NC     Asheville, NC  
 919-977-9455     828-253-2796  
 Atlanta, GA  
 770-627-3509

Boone, NC    828-355-9933  
 Tri-Cities, TN    423-467-8401  
 Knoxville, TN    865-546-5800  
 Spartanburg, SC    864-574-4775  
 Charleston, SC    843-974-5650  
 Middlesboro, KY    606-248-6600

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PREPARED IN THE OFFICE OF:  
**DIVISION OF HIGHWAYS  
UTILITIES UNIT  
UTILITIES ENGINEERING**

1555 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

\_\_\_\_\_  
UTILITIES SECTION ENGINEER

\_\_\_\_\_  
UTILITIES SQUAD LEADER PROJECT ENGINEER

**Nicholas V. Asaro, PLS** UTILITIES PROJECT DESIGNER

UTILITIES BY OTHERS

NOTE: ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS

UNION POWER TO INSTALL JOINT USE POLE

UNION POWER TO INSTALL OVERHEAD POWER, WINDSTREAM TO INSTALL OVERHEAD TELEPHONE

UNION POWER TO REPLACE JOINT USE POLE

WINDSTREAM TO INSTALL OVERHEAD TELEPHONE LINE

UNION POWER TO INSTALL OVERHEAD POWER, WINDSTREAM TO INSTALL OVERHEAD TELEPHONE

UNION POWER TO INSTALL JOINT USE POLE

WINDSTREAM TO REPLACE OVERHEAD TELEPHONE LINE

WINDSTREAM TO INSTALL OVERHEAD TELEPHONE LINE

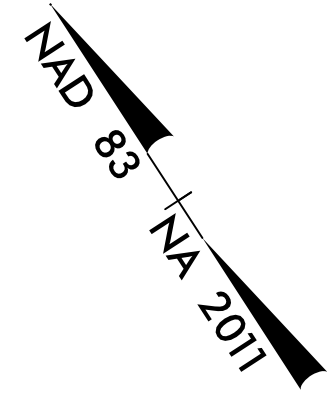
WINDSTREAM TO INSTALL OVERHEAD TELEPHONE LINE

NEW SINGLE USE WINDSTREAM POLE

CHARTER COMMUNICATIONS WILL REMOVE EXISTING OVERHEAD CABLE LINE

WINDSTREAM TO INSTALL OVERHEAD TELEPHONE LINE

UNION POWER TO INSTALL OVERHEAD POWER



FLOYD M. BARRINGER AND WIFE MILLIE ANN BARRINGER DB 597 PG 079 PB 06 PG 86

TIMOTHY W. ST. CLAIR, ET AL DB 681 PG 023 PB 06 PG 86

DEANNA L. REDWINE DB 257 PG 986 WB OIE PG 415

TIMOTHY BRAD SMITH, ET AL DB 1465 PG 207 DB 240 PG 112 DB 317 PG 338

DEANNA L. REDWINE DB 257 PG 986 WB OIE PG 415

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 Tri-Cities, Tennessee 423-467-8400  
 Knoxville, Tennessee 865-546-5800  
 Middlesboro, Kentucky 606-248-6600  
 Spartanburg, South Carolina 864-574-4775

Charlotte, North Carolina 704-357-0488

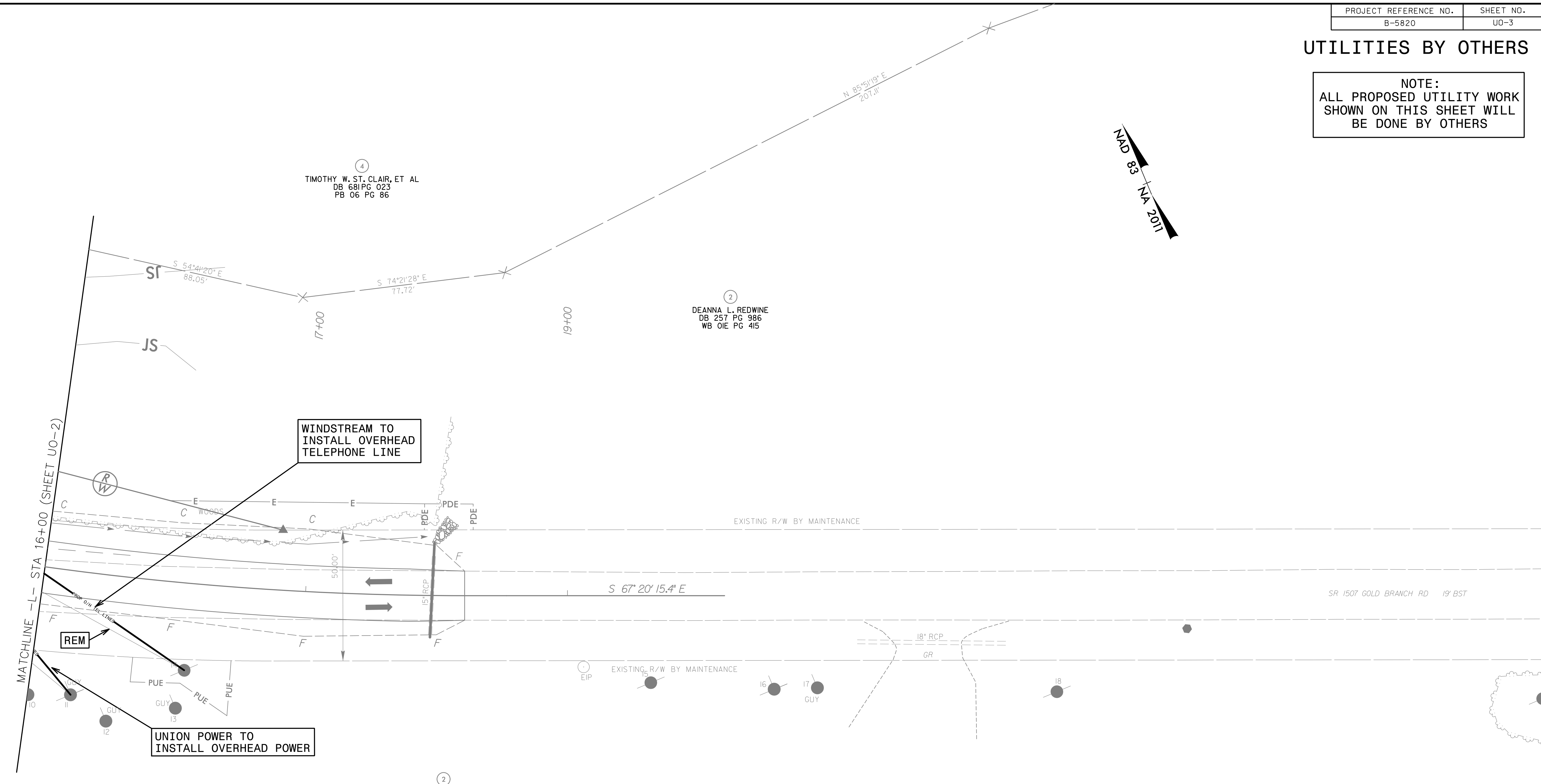
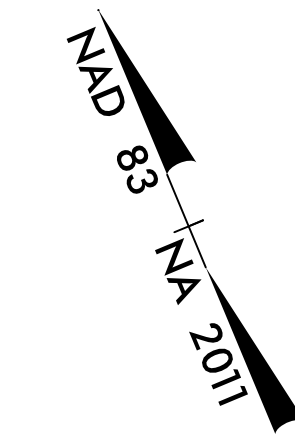
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MATCHLINE -L- STA 16+00 (SHEET UO-3)

# UTILITIES BY OTHERS

**NOTE:**  
ALL PROPOSED UTILITY WORK  
SHOWN ON THIS SHEET WILL  
BE DONE BY OTHERS



④  
TIMOTHY W. ST. CLAIR, ET AL  
DB 681 PG 023  
PB 06 PG 86

②  
DEANNA L. REDWINE  
DB 257 PG 986  
WB 01E PG 415

②  
DEANNA L. REDWINE  
DB 257 PG 986  
WB 01E PG 415

MATCHLINE -L- STA 16+00 (SHEET UO-2)

WINDSTREAM TO  
INSTALL OVERHEAD  
TELEPHONE LINE

UNION POWER TO  
INSTALL OVERHEAD POWER

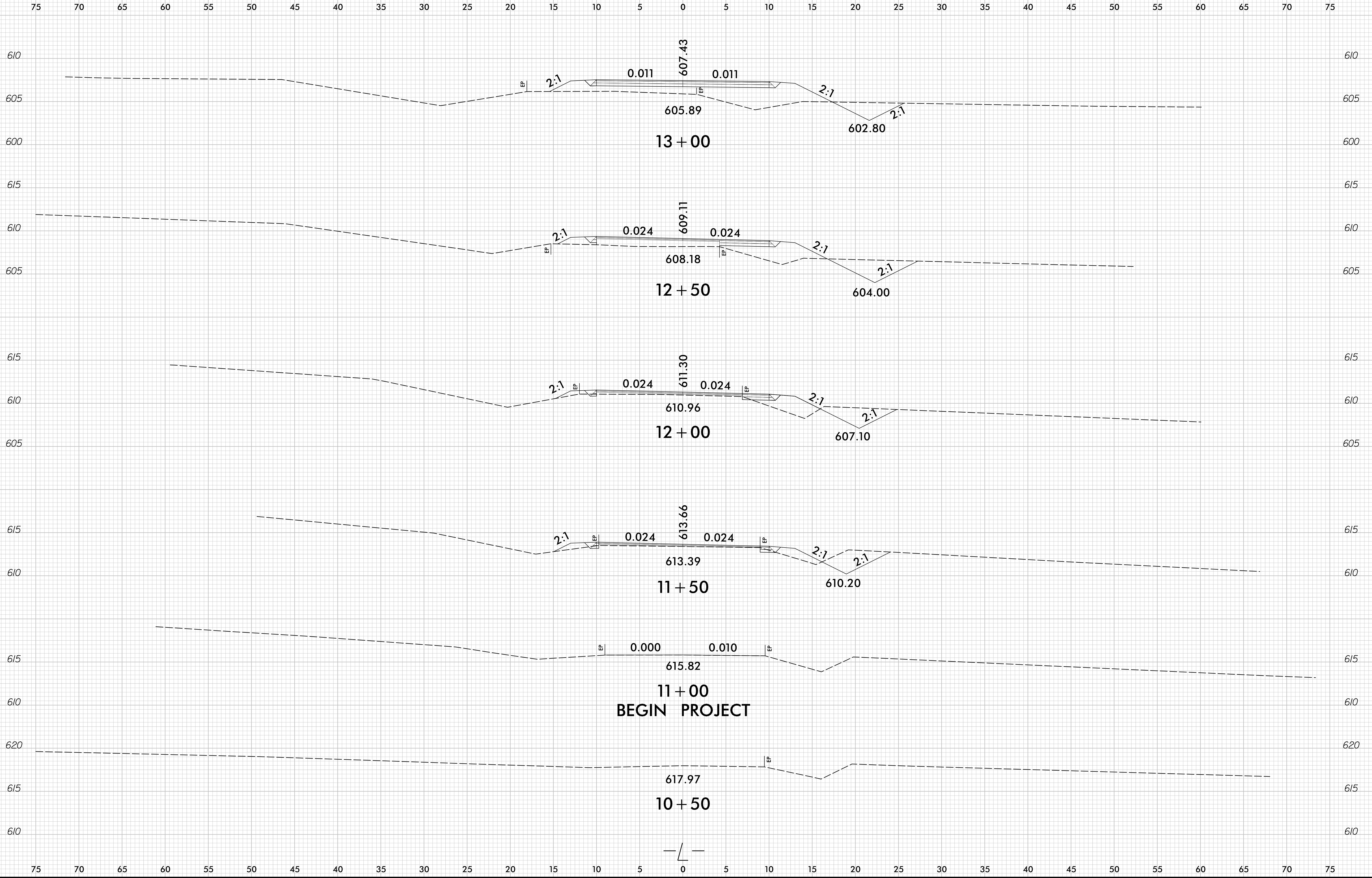
REM

Asheville, North Carolina 828-253-2796  
 Tri-Cities, Tennessee 423-467-9400  
 Knoxville, Tennessee 865-546-5800  
 Middlesboro, Kentucky 606-748-6600  
 Charlotte, North Carolina 704-357-0488  
 Spartanburg, South Carolina 864-574-4775

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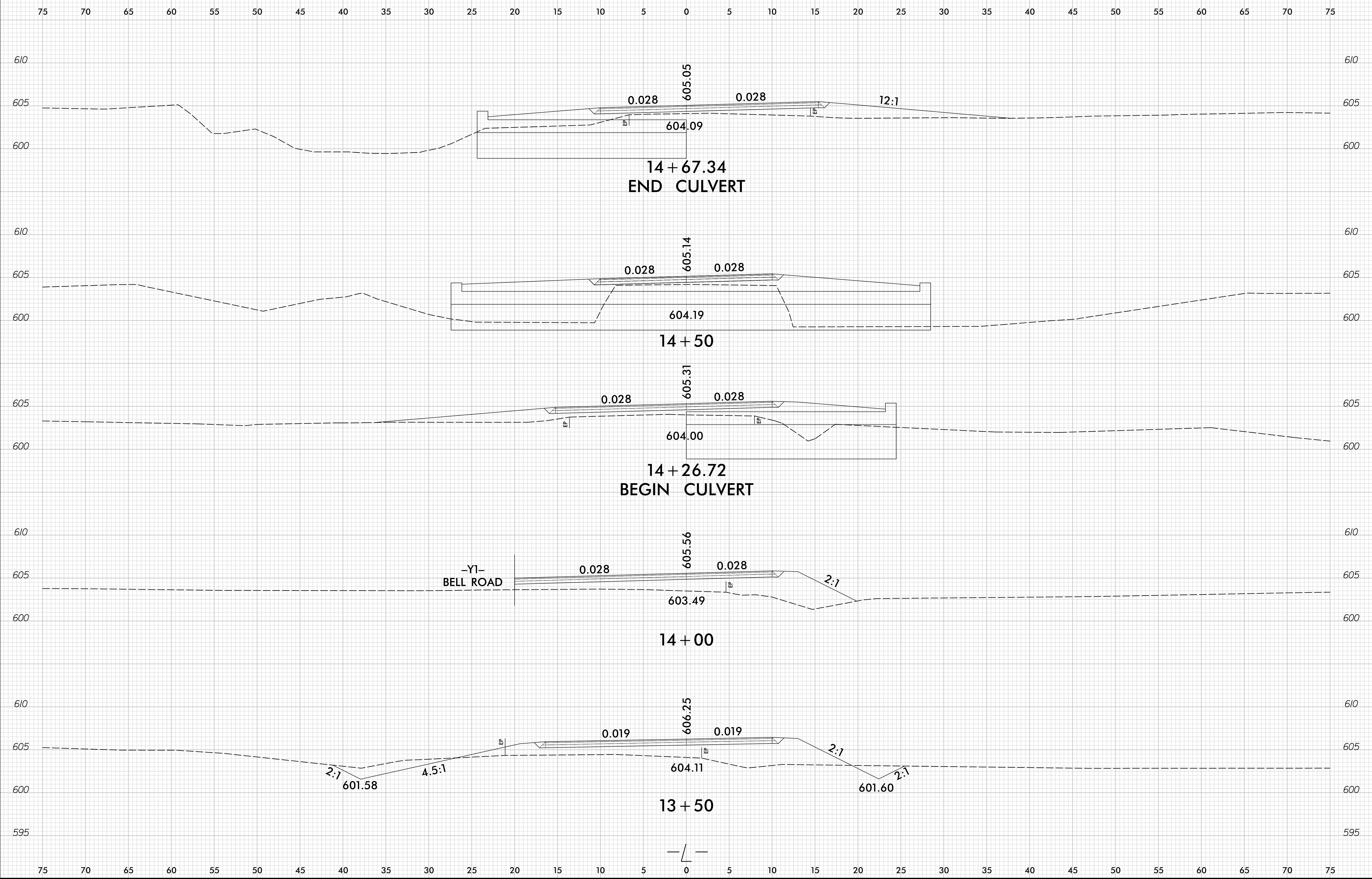
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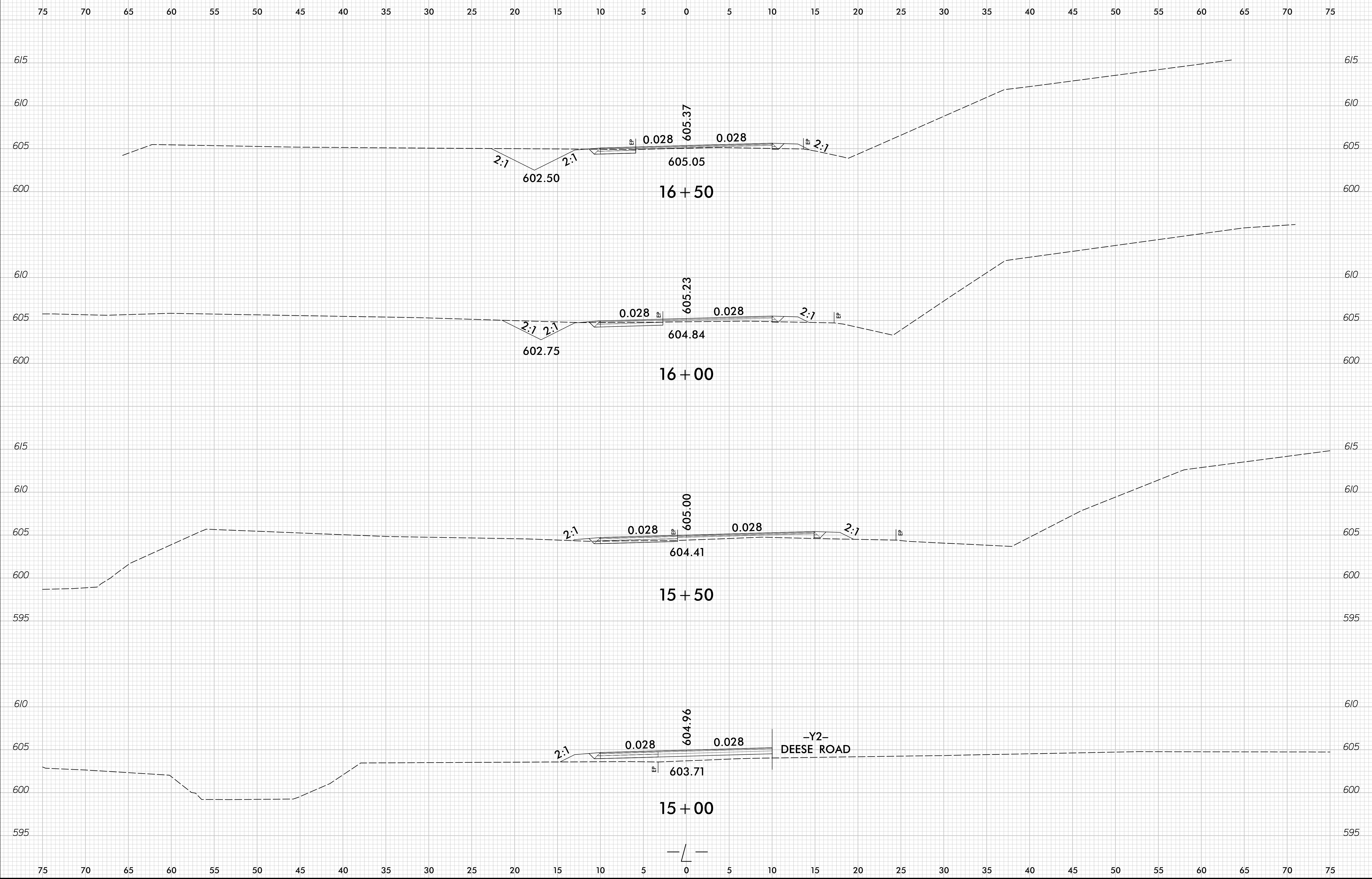
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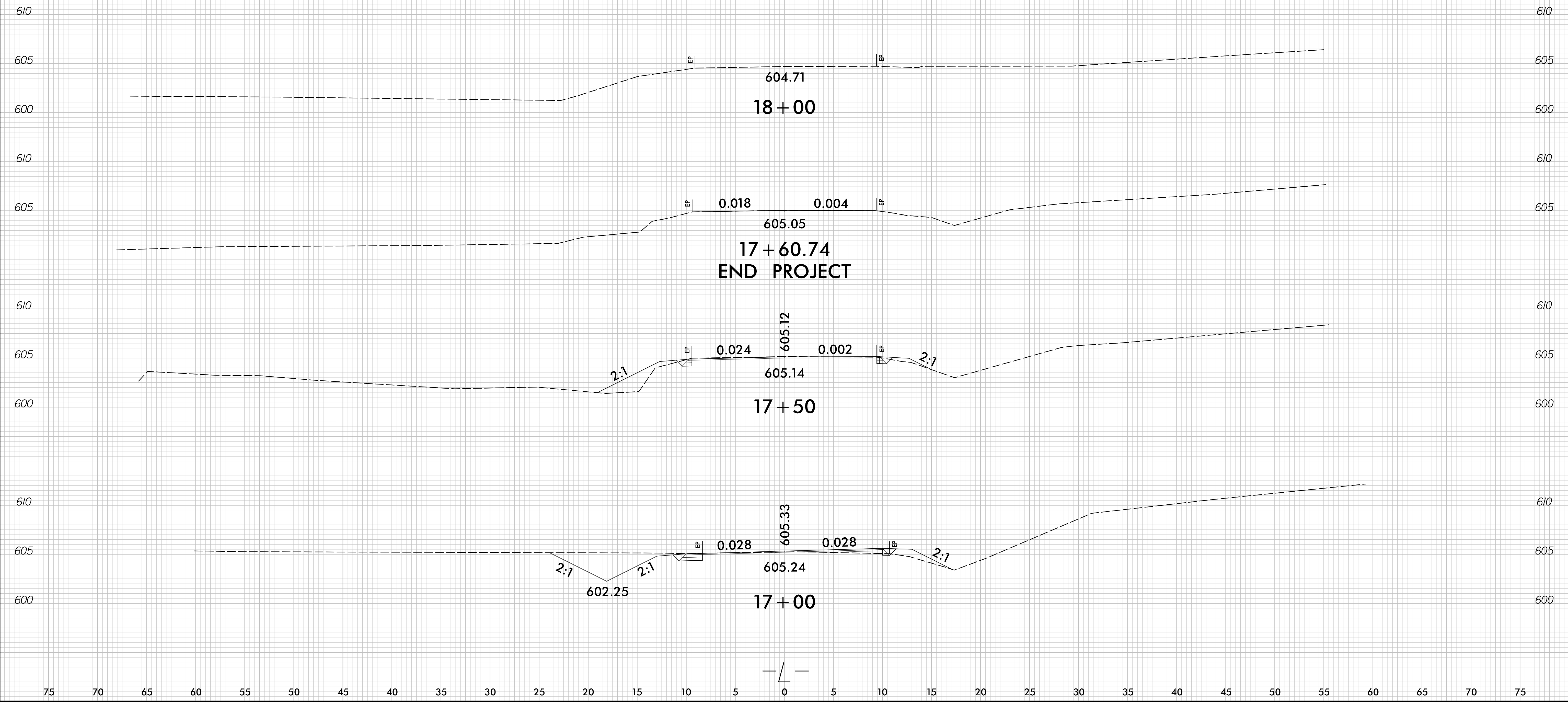


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kashomer

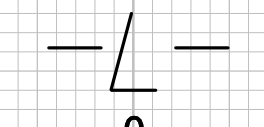
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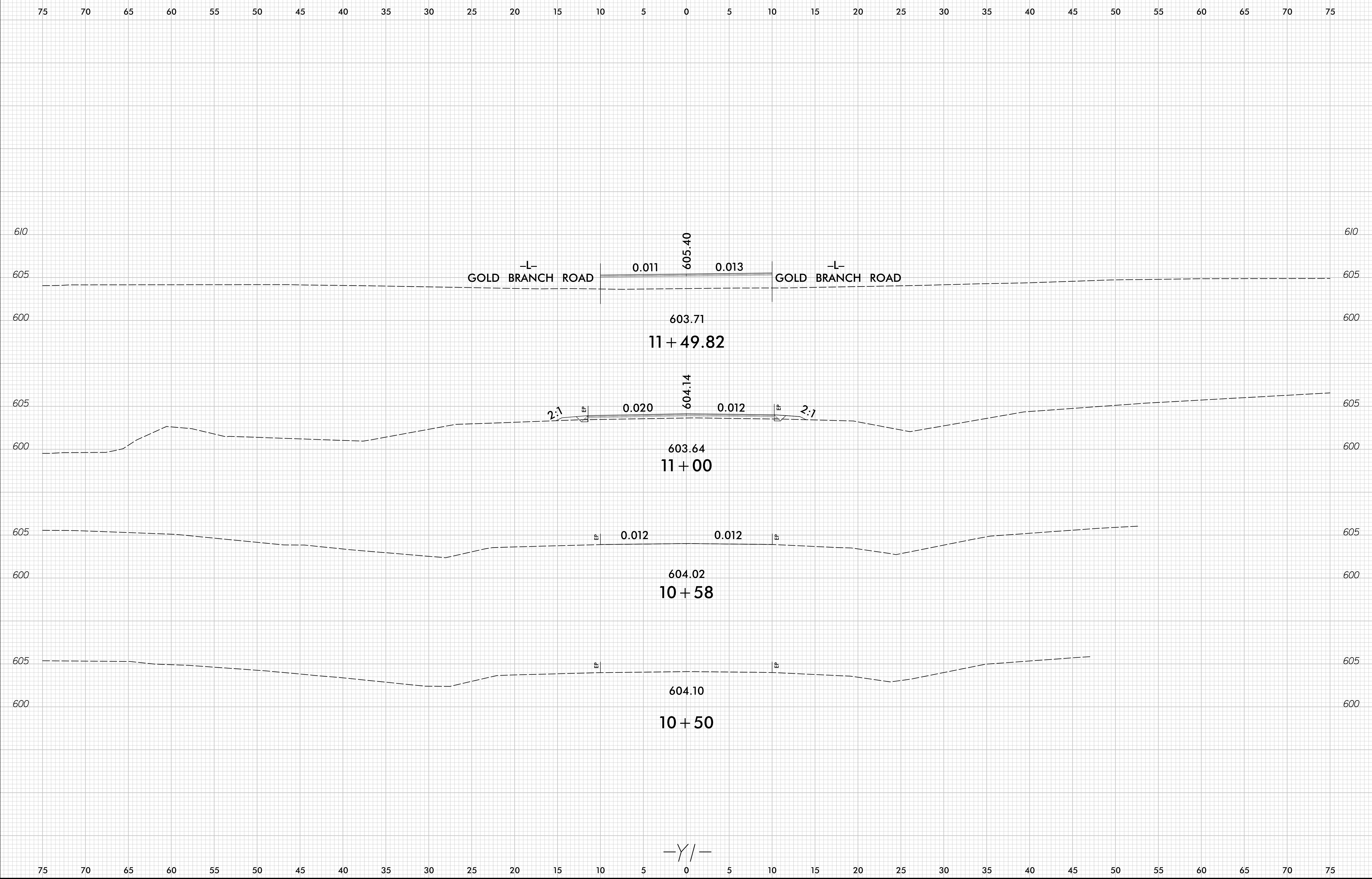


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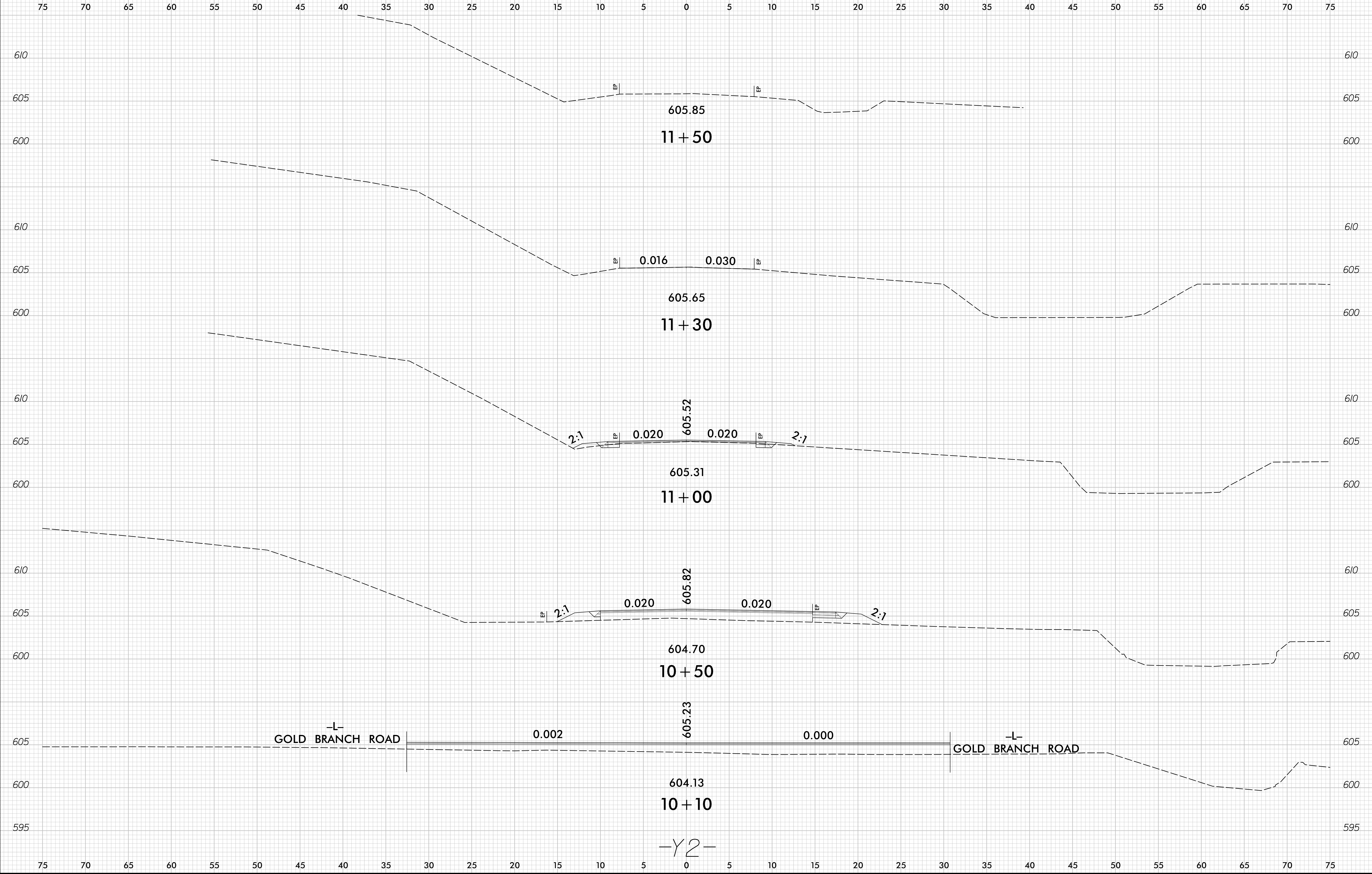


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Kashner

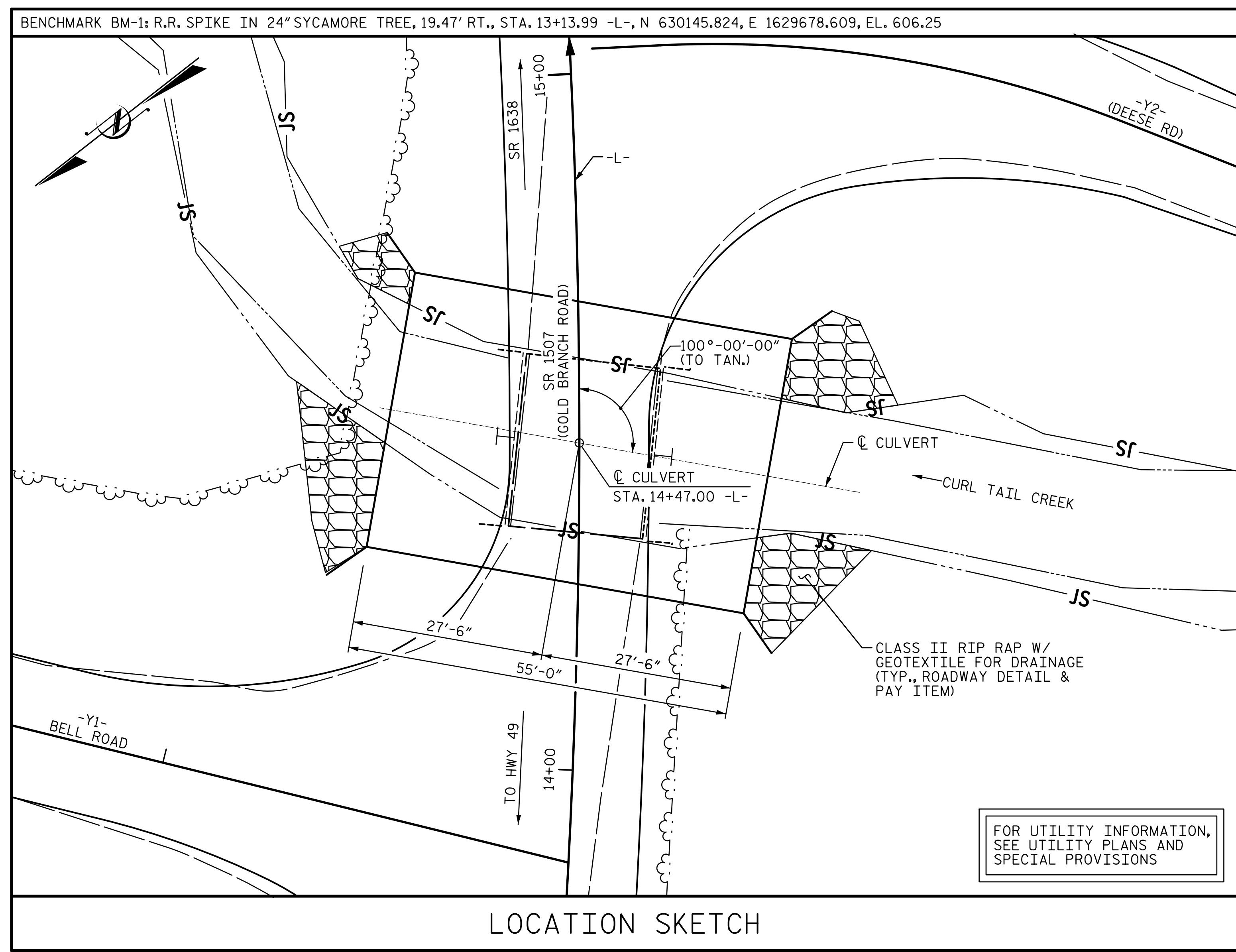


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kashomer



LOCATION SKETCH

**GENERAL NOTES**

ASSUMED LIVE LOAD -----HL-93 OR ALTERNATE LOADING.  
 MAXIMUM DESIGN FILL----- 3.7'  
 MINIMUM DESIGN FILL----- 2.3'

THE EXISTING STRUCTURE, CONSISTING OF (1) 25'-7"± TIMBER DECK ON I-BEAMS SPAN WITH A 19'-1" CLEAR ROADWAY WIDTH ON TIMBER CAPS WITH POSTS, SILLS AND TIMBER BULKHEADS AND LOCATED AT THE PROPOSED STRUCTURE, SHALL BE REMOVED.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE AT STATION 14+47.00 -L-".

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.  
 FOR PRECAST REINFORCED CONCRETE THREE-SIDED CULVERT, SEE SPECIAL PROVISIONS.  
 A 3 FOOT STRIP OF FILTER FABRIC SHALL BE ATTACHED TO THE FILL FACE OF THE WING COVERING THE ENTIRE LENGTH OF THE EXPANSION JOINT.  
 FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.  
 FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.  
 FOR CULVERT DIVERSION DETAILS AND PAY ITEM, SEE EROSION CONTROL PLANS.  
 FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.  
 FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THE PRECAST CULVERT SECTIONS SHALL BE DESIGNED TO HANDLE FULL DEPTH HYDROSTATIC PRESSURE IF WEEP HOLES ARE NOT UTILIZED. IF PROVIDED, WEEP HOLES SHALL BE LOCATED A MINIMUM HEIGHT OF 6 INCHES ABOVE THE NORMAL FLOW LINE AND HAVE A MAXIMUM SPACING OF 10 FEET.

THE CONTRACTOR SHALL SUBMIT, TO THE ENGINEER FOR APPROVAL, DESIGN AND DETAIL DRAWINGS FOR CAST-IN-PLACE HEADWALLS AND WINGWALLS. PLANS AND DESIGN CALCULATIONS SHALL BE CHECKED AND SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER. SEE SPECIAL PROVISIONS.

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF THE CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.

**FOUNDATION NOTES**

THE 3-SIDED CULVERT SHALL BE SUPPORTED ON SPREAD FOOTINGS AND ARE DESIGNED FOR A FACTORED RESISTANCE OF 6 TSF. CHECK FIELD CONDITIONS FOR THE REQUIRED RESISTANCE OF 13.5 TSF JUST BEFORE PLACING CONCRETE.

THE SCOUR CRITICAL ELEVATION FOR THE CULVERT IS THE BOTTOM OF FOOTING ELEVATION. THE SCOUR CRITICAL ELEVATIONS ARE USED TO MONITOR POSSIBLE SCOUR PROBLEMS DURING THE LIFE OF THE STRUCTURE.

TO PROVIDE PROTECTION FROM POSSIBLE SCOUR, DO NOT CONSTRUCT SPREAD FOOTINGS FOR THE CULVERT AT AN ELEVATION HIGHER THAN SHOWN ON THE PLANS.

KEY SPREAD FOOTINGS FOR CULVERT AT LEAST 12 INCHES INTO ROCK WITH A MINIMUM THICKNESS AS SHOWN ON THE PLANS.

SCOUR PROTECTION IS REQUIRED FOR SPREAD FOOTINGS AT THE CULVERT. DO NOT PLACE RIP RAP ABOVE THE STREAMBED.

FOR BLASTING ADJACENT TO HIGHWAY STRUCTURES, SEE ARTICLE 410-9 OF THE STANDARD SPECIFICATIONS.

**HYDRAULIC DATA**

DESIGN DISCHARGE:----- 430 CFS  
 FREQUENCY OF DESIGN FLOOD:----- 2 YRS.  
 DESIGN HIGH WATER ELEVATION:----- 604.0  
 DRAINAGE AREA:----- 4.65 SQ. MI.  
 BASE DISCHARGE (Q100):----- 1,900 CFS  
 BASE HIGH WATER ELEVATION:----- 606.8

**OVERTOPPING FLOOD DATA**

OVERTOPPING DISCHARGE:----- 650 CFS  
 FREQUENCY OF OVERTOPPING FLOOD:----- 2+ YRS.  
 OVERTOPPING FLOOD ELEVATION:----- 604.9

**GRADE DATA**

GRADE POINT ELEVATION @  
 STA. 14+47.00 -L- ----- 605.16

BED ELEVATION @  
 STA. 14+47.00 -L- ----- 599.4±

TOP OF FOOTING ELEVATION ----- 598.87

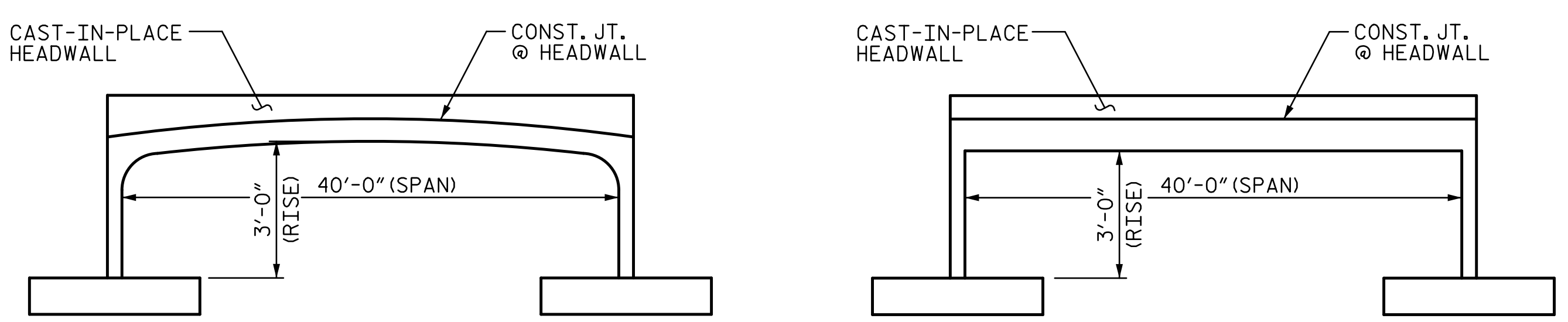
ROADWAY FILL SLOPES ----- 2:1 (MAX.)

**TOTAL STRUCTURE QUANTITIES**

REMOVAL OF EXISTING STRUCTURE @ STA. 14+47.00 -L-	LUMP SUM
UNCLASSIFIED STRUCTURE EXCAVATION	LUMP SUM
PRECAST REINFORCED CONCRETE THREE-SIDED CULVERT @ STA. 14+47.00 -L-	LUMP SUM
ASBESTOS ASSESSMENT	LUMP SUM

I HEREBY CERTIFY THESE ARE THE AS-BUILT PLANS

RESIDENT ENGINEER

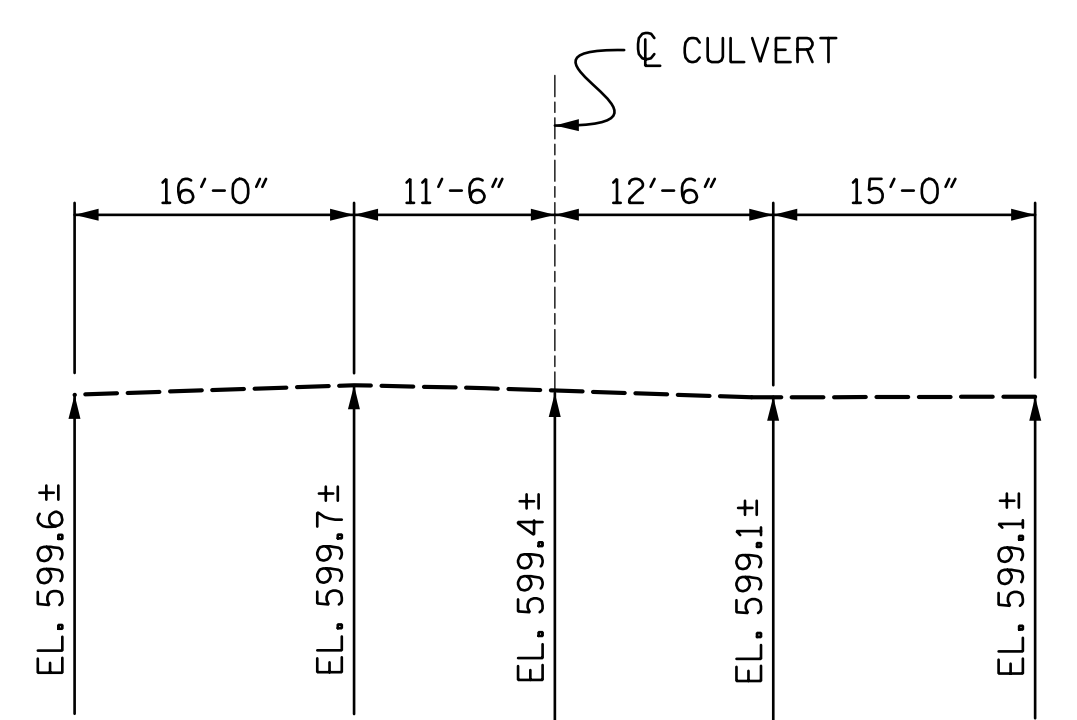


ARCH ALTERNATE

FLAT TOPPED ALTERNATE

**RIGHT ANGLE SECTION OF PRECAST CONCRETE THREE-SIDED CULVERT**

MIN. LOW CHORD EL. = 601.87 @ CULVERT



**PROFILE ALONG CULVERT**

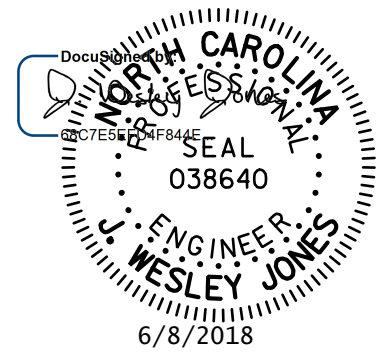
PROJECT NO. **B-5820**

**STANLY** COUNTY

STATION: **14+47.00 -L-**

SHEET 1 OF 3 REPLACES BRIDGE NO. 221

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**PRECAST REINFORCED CONCRETE THREE-SIDED CULVERT ON SR 1507 AT CURL TAIL CREEK 100° SKEW**



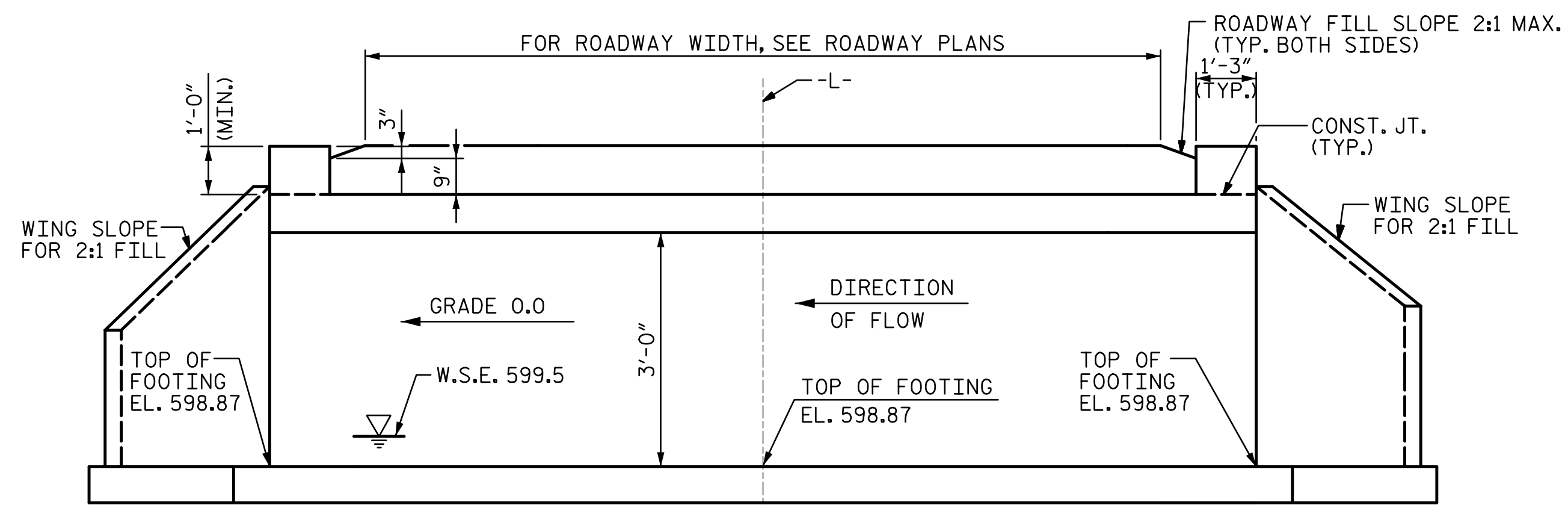
**STV** 100 YEARS  
 STV ENGINEERS, INC.  
 900 West Trade St., Suite 715  
 Charlotte, NC 28202  
 NC License Number F-0991

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

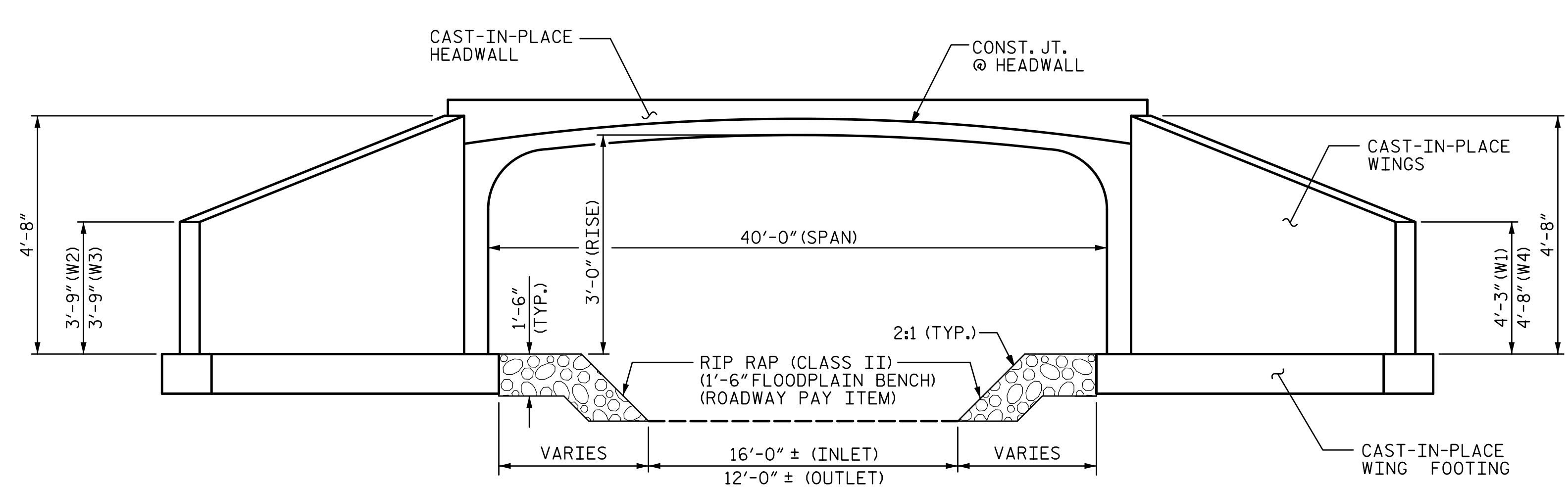
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NO.	BY:	DATE:	NO.	DATE:
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 TOTAL SHEETS 3

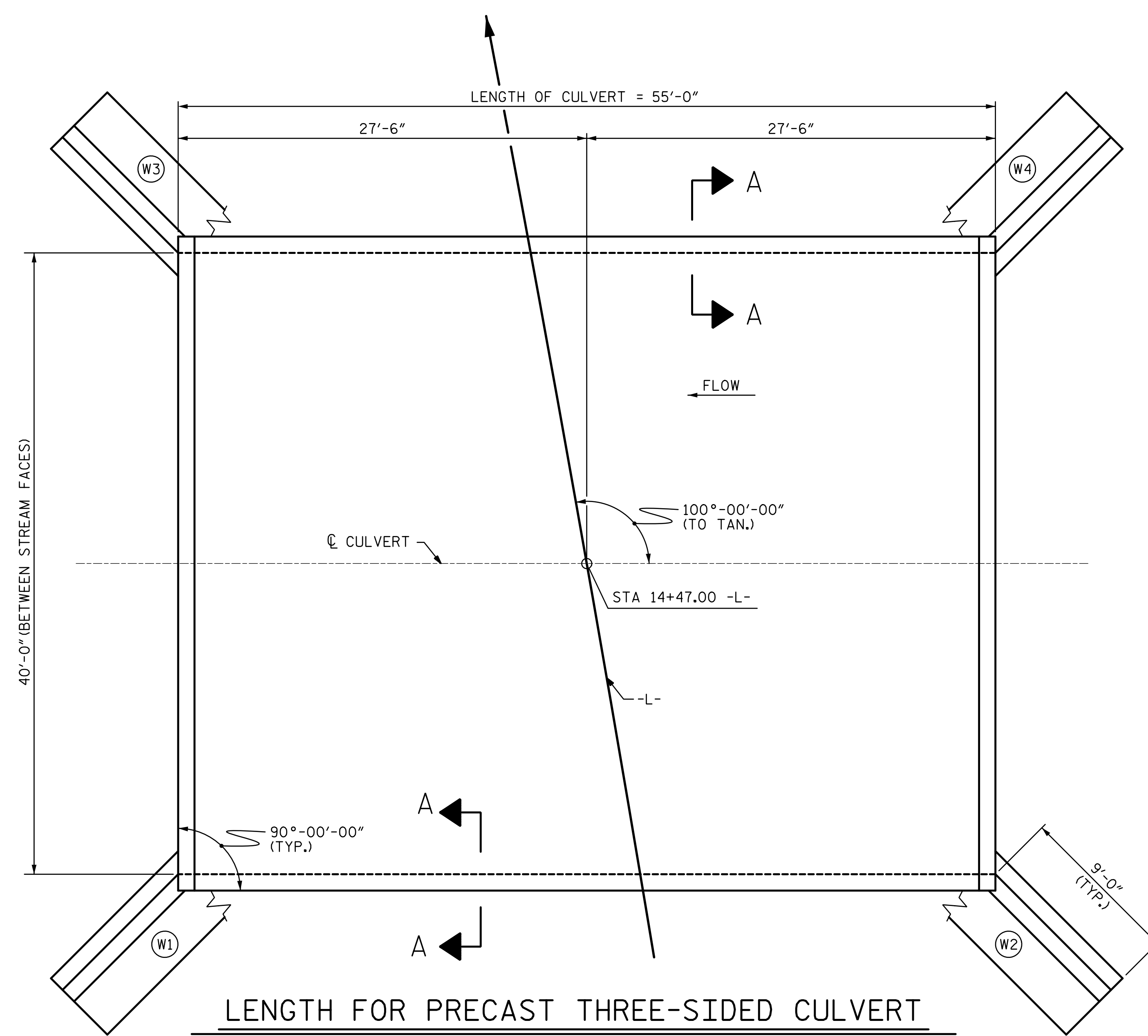
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**CULVERT SECTION NORMAL TO ROADWAY**



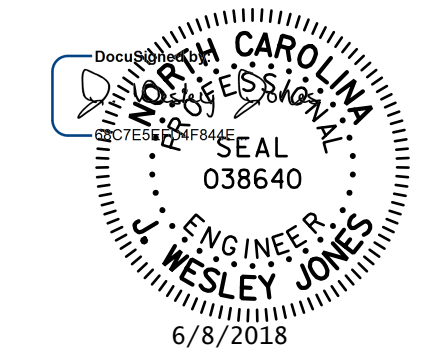
**END ELEVATION NORMAL TO SKEW**



**LENGTH FOR PRECAST THREE-SIDED CULVERT**

(SEE SHEET 3 OF 3 FOR SECTION A-A)

PROJECT NO. B-5820  
STANLY COUNTY  
 STATION: 14+47.00 -L-  
 SHEET 2 OF 3



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 Charlotte, NC 28202  
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DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

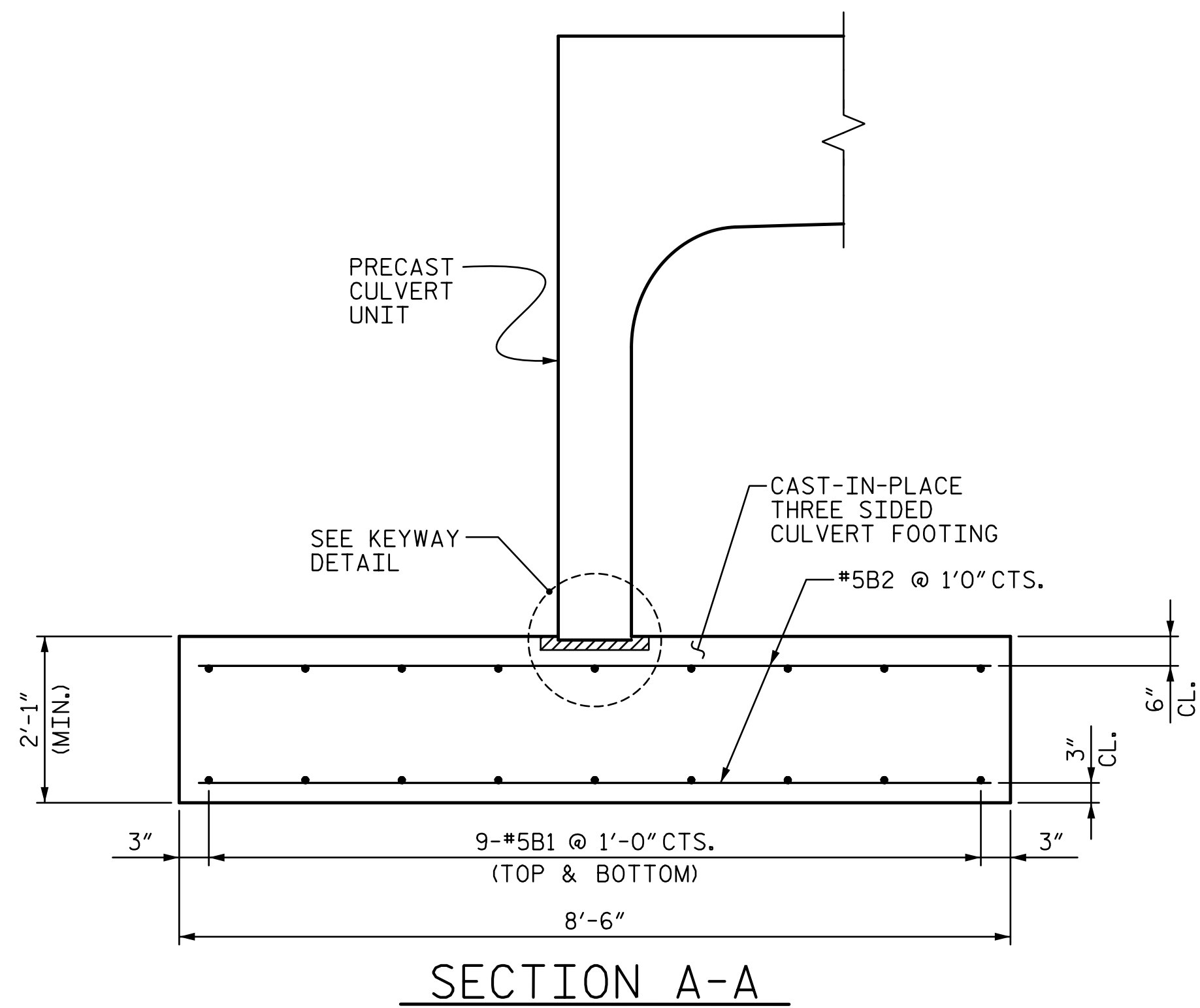
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**PRECAST REINFORCED  
 CONCRETE THREE-SIDED  
 CULVERT  
 100° SKEW**

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

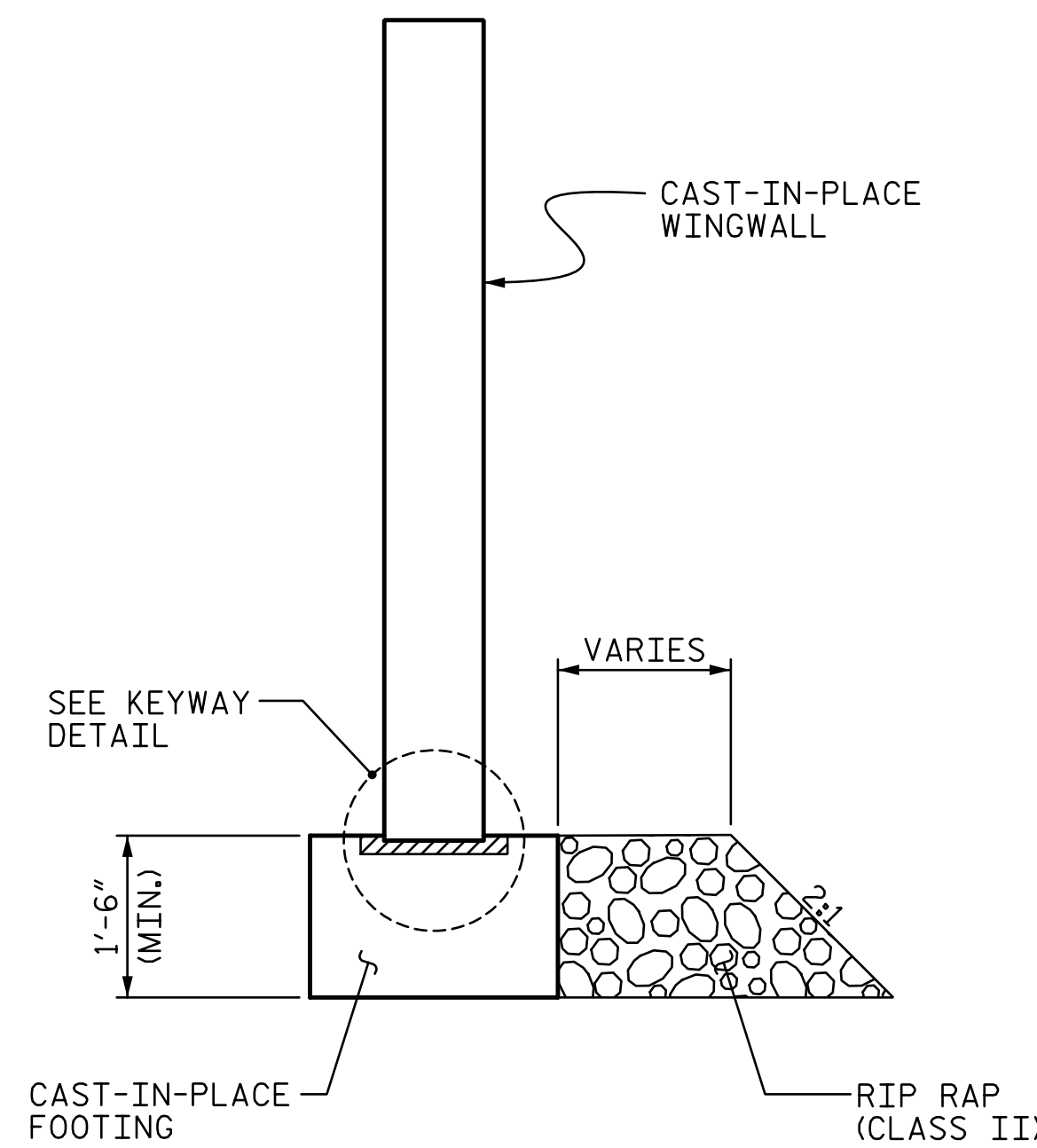
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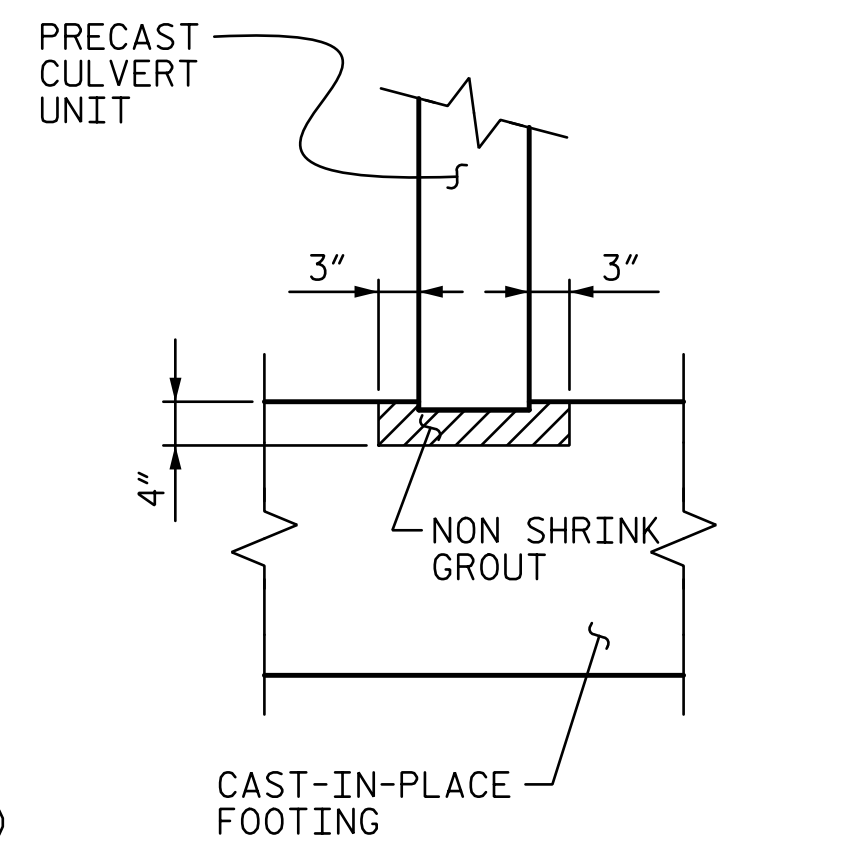
DRAWN BY : LGH DATE : 9-17  
 CHECKED BY : MLO DATE : 9-17  
 DESIGN ENGINEER OF RECORD : JWJ DATE : 6-18



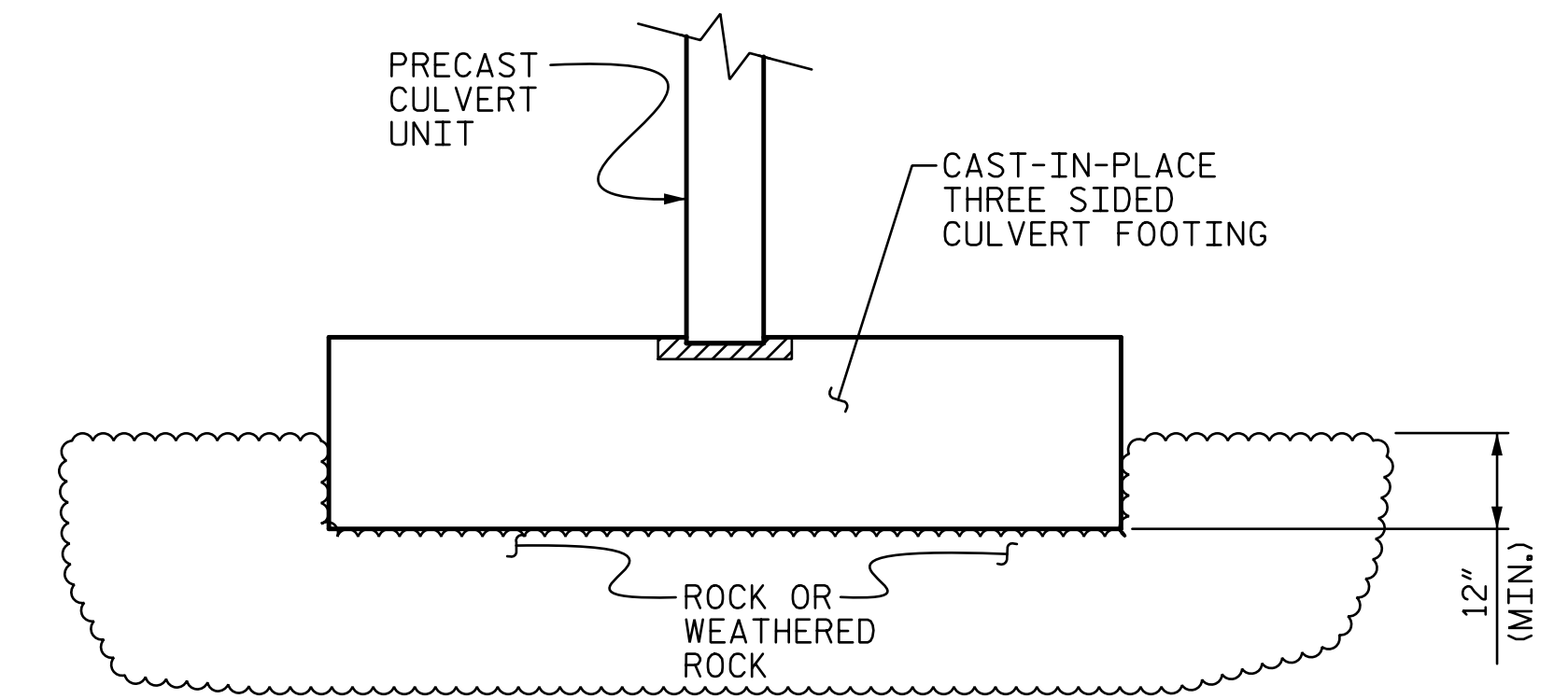
**SECTION A-A**



**SECTION THRU WINGWALL**



**KEYWAY DETAIL**  
(PRECAST CULVERT UNIT FOOTING SHOWN, WING WALL FOOTING SIMILAR)



**KEYED FOOTING DETAIL**  
SIDES OF FOOTING SHALL BE IN CONTACT WITH UNDISTURBED MATERIAL FOR MINIMUM DIMENSION SHOWN.

BILL OF MATERIAL					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	36	#5	STR	54'-6"	2,046
B2	220	#5	STR	8'-0"	1,836
REINFORCING STEEL				3,882 LBS.	
CLASS A CONCRETE				72.1 C.Y.	

NOTE: ALL MATERIALS FOR CAST-IN-PLACE FOOTINGS SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR "PRECAST REINFORCED CONCRETE THREE-SIDED CULVERT @ STA. 14+47.00 -L-".

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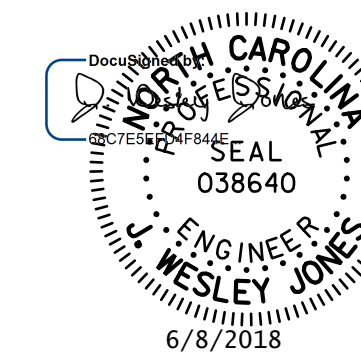
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6/5/2018

Jones

DRAWN BY : LGH DATE : 9-17  
 CHECKED BY : MLO DATE : 9-17  
 DESIGN ENGINEER OF RECORD : JWJ DATE : 6-18

**STV** 100 Years  
 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

PROJECT NO. B-5820

STANLY COUNTY

STATION: 14+47.00 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. C-3
PRECAST REINFORCED CONCRETE THREE-SIDED CULVERT 100° SKEW						TOTAL SHEETS 3
REVISIONS						
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

## STANDARD NOTES

### DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36	--	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	--	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	--	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	----	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	----	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT. (MINIMUM)

### MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2018 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

### CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

### CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED  $\frac{3}{4}$ " WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO  $\frac{1}{2}$ " RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A  $\frac{1}{4}$ " FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A  $\frac{1}{4}$ " RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

### DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

### ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

### REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

### STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE  $\frac{7}{8}$ "  $\emptyset$  SHEAR STUDS FOR THE  $\frac{3}{4}$ "  $\emptyset$  STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 -  $\frac{7}{8}$ "  $\emptyset$  STUDS FOR 4 -  $\frac{3}{4}$ "  $\emptyset$  STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF  $\frac{7}{8}$ "  $\emptyset$  STUDS ALONG THE BEAM AS SHOWN FOR  $\frac{3}{4}$ "  $\emptyset$  STUDS BASED ON THE RATIO OF 3 -  $\frac{7}{8}$ "  $\emptyset$  STUDS FOR 4 -  $\frac{3}{4}$ "  $\emptyset$  STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST  $\frac{5}{16}$ " IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY  $\frac{1}{16}$  INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

### HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

### SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

# ENGLISH

JANUARY, 1990