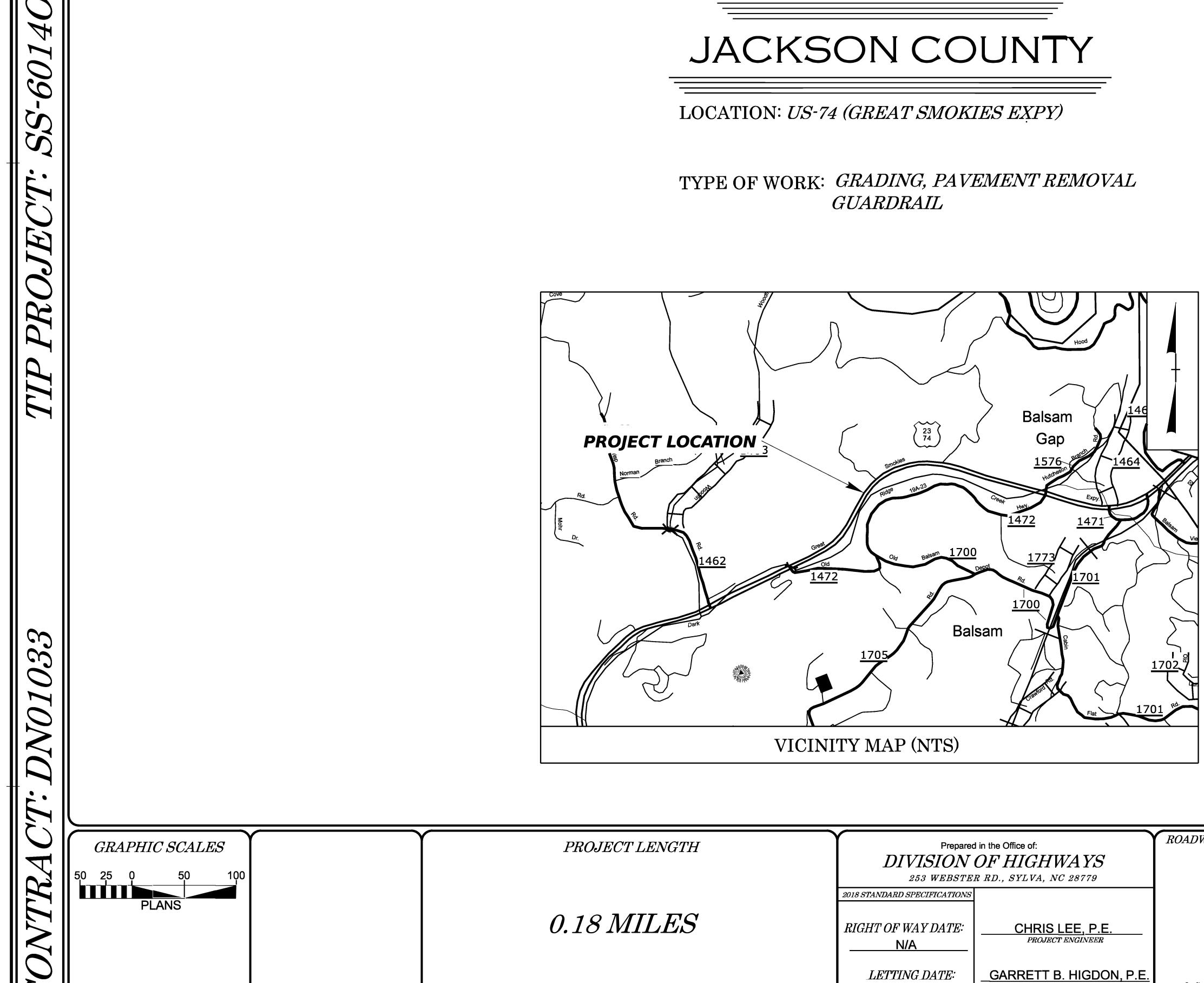
# This electronic collection of documents is provided for the convenience of the user and is Not a Certified Document -

The documents contained herein were originally issued and sealed by the individuals whose names and license numbers appear on each page, on the dates appearing with their signature on that page. This file or an individual page shall not be considered a certified document.

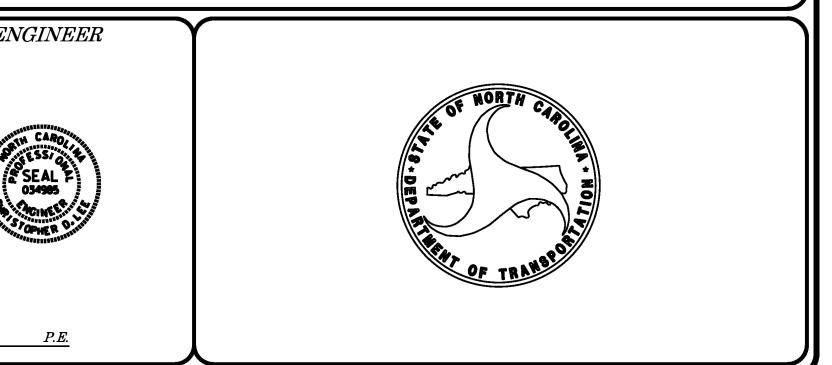


# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

LENGTH	DIVISION	I in the Office of: OF HIGHWAYS R RD., SYLVA, NC 28779	ROADWAY DESIGN	V E
ILES	2018 STANDARD SPECIFICATIONS RIGHT OF WAY DATE: N/A	CHRIS LEE, P.E. PROJECT ENGINEER		00
	<i>LETTING DATE:</i> _October 10th, 2023_	<u>GARRETT B. HIGDON, P.E.</u> PROJECT DESIGN ENGINEER	DocuSigned by: <u>B26D2C8704CF469</u> SIGNATURE:	

STATE	E STATE PROJECT REFERENCE NO.		SHEET NO.	T <u>OTAL</u> Sheets	
N.C. SS-6014O		11	111		
STAT	E PROJ. NO.	F. A. PROJ. NO.		DESCRIPT	ION
4	9454.1.1	N/Á	P.E	=	
	9454.2.1	N/A	RC	W	
	9454.3.1	N/A	CC	DNSTRU	CTION





### INDEX OF SHEETS

\_\_\_\_

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A	TYPICAL SECTIONS
2B	ROADWAY DETAILS
3B	ROADWAY SUMMARIES
4	PLAN
TMP-1 THRU TMP-	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-	PAVEMENT MARKING PLANS
EC-1 THRU EC-	EROSION CONTROL PLANS

**GENERAL NOTES:** 

2018 SPECIFICATIONS EFFECTIVE: 01-16-2018

**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. 2018 ROADWAY ENGLISH STANDARD DRAWINGS

and by reference hereby are considered a part of these plans: STD.NO. TITLE DIVISION 8 - INCIDENTALS 862.01 Guardrail Placement 862.02 Guardrail Installation DIVISION 11 - WORK ZONE TRAFFIC CONTROL 1101.01 WORK ZONE WARNING SIGNS 1101.02 TEMPORARY LANE CLOSURES 1101.03 TEMPORARY ROAD CLOSURES 1101.04 TEMPORARY SHOULDER CLOSURES 1101.05 WORK ZONE VEHICLE ACCESSES 1101.06 WARNING SIGNS FOR BLASTING ZONES 1101.11 TRAFFIC CONTROL DESIGN TABLES 1110.01 STATIONARY WORK ZONE SIGNS 1110.02 PORTABLE WORK ZONE SIGNS 1115.01 FLASHING ARROW BOARDS 1130.01 DRUMS 1135.01 CONES 1145.01 BARRICADES 1150.01 FLAGGING DEVICES 1160.01 TEMPORARY CRASH CUSHION 1165.01 TRUCK MOUNTED ATTENUATOR 1170.01 PORTABLE CONCRETE BARRIER 1180.01 SKINNY - DRUMS

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:

SS-60140

14

### Note: Not to Scale

### **BOUNDARIES AND PROPERTY:**

BOUNDARIES AND PROPERTY.	
State Line	
County Line	
Township Line	
City Line	
Reservation Line	· · ·
Property Line	
Existing Iron Pin (EIP)	<u>O</u> EIP
Computed Property Corner	— ×
Existing Concrete Monument (ECM)	Č
Parcel / Sequence Numbe <del>r</del>	— (23)
Existing Fence Line	xxx
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 ——	ЕРВ ————
Existing Historic Property Boundary	нрв ————
Known Contamination Area: Soil	— - ŷ? — s — ĵ? — s —
Potential Contamination Area: Soil	— - X — s — X — s —
Known Contamination Area: Water	— - 😿 — w — 😿 — w —
Potential Contamination Area: Water ——	<u>-</u> - X -w-X -w-
Contaminated Site: Known or Potential —	- XX XX
BUILDINGS AND OTHER CUL	TURE:
Gas Pump Vent or U/G Tank Cap	— o
Sign ———	\$
Well —	O
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	<u> </u>
Spring	3
Wetland	$\mathbf{x}$
Proposed Lateral, Tail, Head Ditch	
False Sump	$\langle \rangle$
	•

## (

### RAILROADS:

Standard Gauge	CSX TRANSPORTATION
RR Signal Milepost	① MILEPOST 35
Switch —	
RR Abandoned ————	<u>_</u>
RR Dismantled	

# RIGHT OF WAY & PROJECT CONTROL:Primary Horiz Control PointPrimary Horiz and Vert Control PointSecondary Horiz and Vert Control Point

Vertical Benchmark —— Existing Right of Way Mor Proposed Right of Way M (Rebar and Cap) Proposed Right of Way Mo (Concrete) **Existing Permanent Easer** Proposed Permanent Ease (Rebar and Cap) Existing C/A Monument – Proposed C/A Monument Proposed C/A Monument Existing Right of Way Line Proposed Right of Way Lir **Existing Control of Access** Proposed Control of Acces Proposed ROW and CA Li Existing Easement Line— Proposed Temporary Cons Proposed Temporary Drain Proposed Permanent Drain Proposed Permanent Drain Proposed Permanent Utilit Proposed Temporary Utility Proposed Aerial Utility Eas ROADS AND RELA Existing Edge of Pavement-Existing Curb ——— Proposed Slope Stakes Cu

Proposed Slope Stakes Cu Proposed Slope Stakes Fill Proposed Curb Ramp — Existing Metal Guardrail — Proposed Guardrail — Existing Cable Guiderail – Proposed Cable Guiderail – Equality Symbol — Pavement Removal *VEGETATION:* 

Single Tree	
Single Shrub	
Hedge ——	

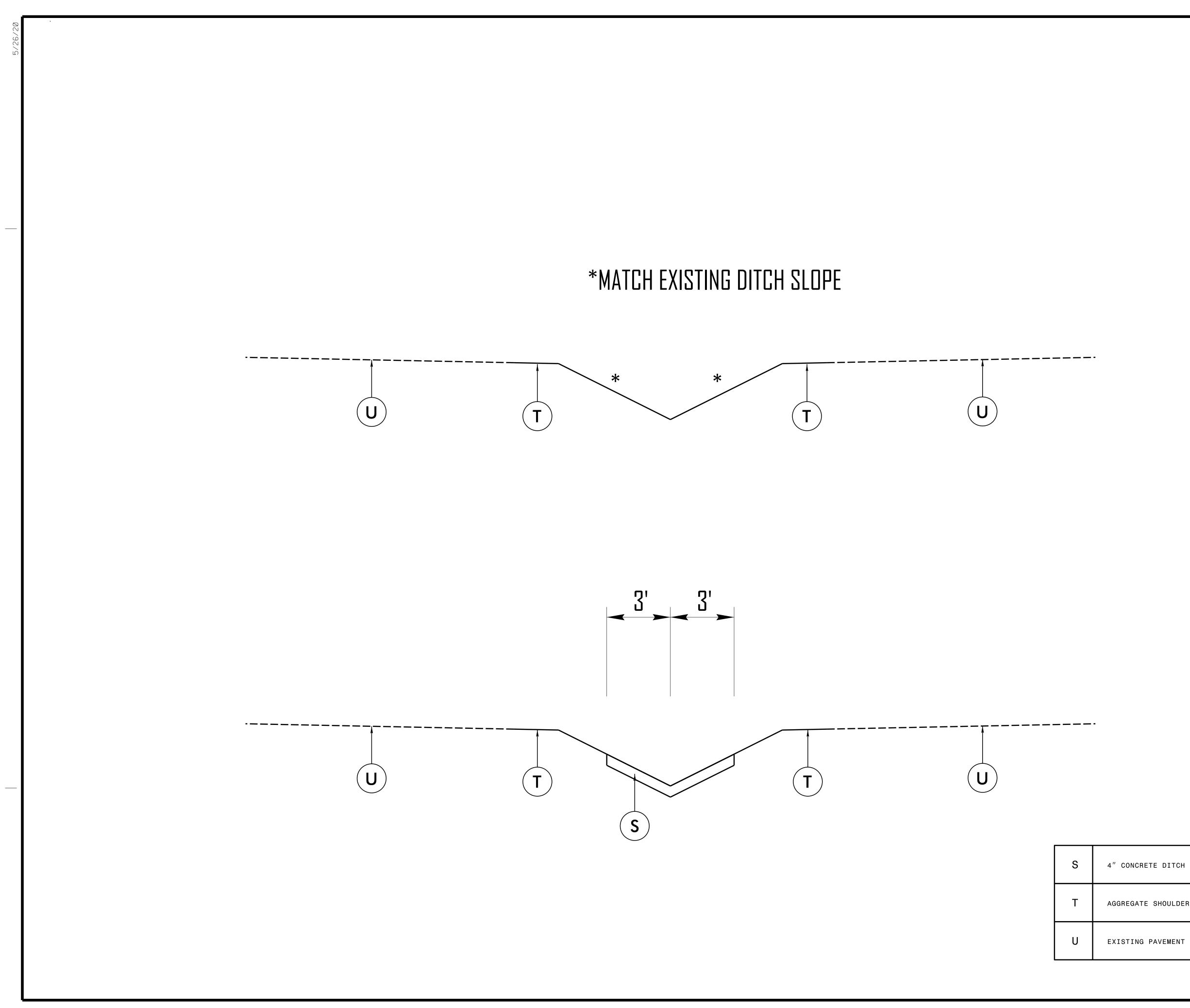
# STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

t Control Point ——	
nument	
Ionument	
Ionument	
ment Monument	$\langle \cdot \rangle$
sement Monumen <del>t</del>	
	$\land$
(Rebar and Cap) —	A
e	
ine	
s Line	( <u>A</u> )
ess Line	
struction Easement	
inage Easement——	TDE
inage Easement——	PDE
inage/Utility Easement	DUE
ity Easement	PUE
ty Easement	TUE
sement	AUE
ATED FEATURES	<i>S:</i>

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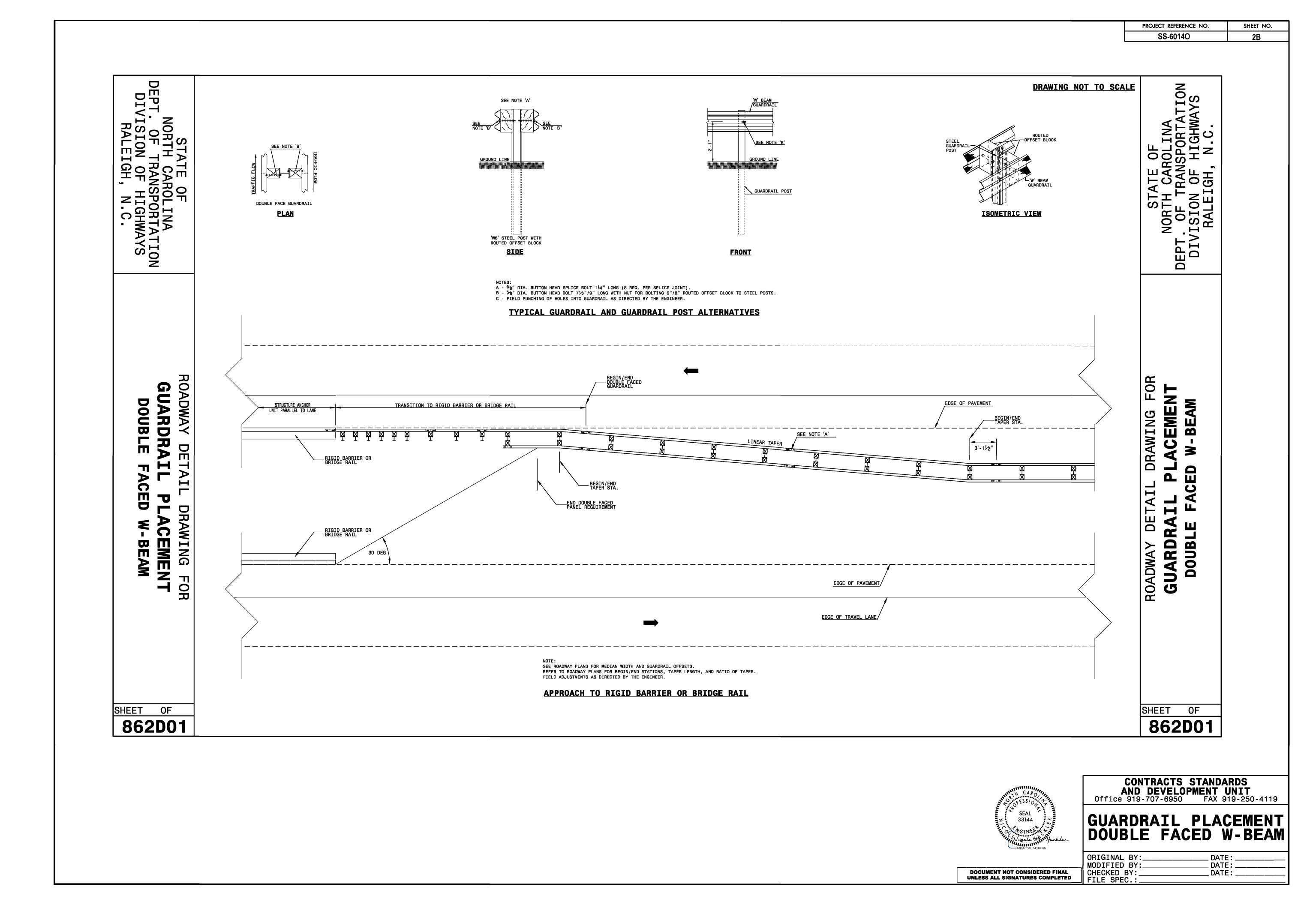
Woods Line	
Orchard	- සි සි සි සි
Vineyard	- Vineyard
EXISTING STRUCTURES:	
MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	- ) CONC WW (
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	
Footbridge —	≻≺
Drainage Box: Catch Basin, DI or JB	СВ
Paved Ditch Gutter ———	<u> </u>
Storm Sewer Manhole ————	S
Storm Sewer	s
<i>UTILITIES:</i> * SUE - Subsurface Utility Engineering LOS - Level of Service - A,B,C or D (A POWER:	Accuracy)
Existing Power Pole	
Proposed Power Pole	
Existing Joint Use Pole	<b>_</b> _
Proposed Joint Use Pole	
Power Manhole	· (P)
Power Line Tower	
Power Transformer	_
	. Р <sub>Н</sub>
U/G Power Cable Hand Hole	
H-Frame Pole	
U/G Power Line Test Hole (SUE - LOS A)* — U/G Power Line (SUE - LOS B)* ————	P
U/G Power Line (SUE - LOS C)*	
U/G Power Line (SUE - LOS D)*	
TELEPHONE:	•
Existing Telephone Pole	
Proposed Telephone Pole	
Telephone Manhole	
Telephone Pedestal	
Telephone Cell Tower	
U/G Telephone Cable Hand Hole	
U/G Telephone Test Hole (SUE - LOS A)* —	
U/G Telephone Cable (SUE - LOS B)*	
U/G Telephone Cable (SUE - LOS C)*	
U/G Telephone Cable (SUE - LOS D)*	
U/G Telephone Conduit (SUE - LOS B)*	
U/G Telephone Conduit (SUE - LOS C)*	
U/G Telephone Conduit (SUE - LOS D)*	
U/G Fiber Optics Cable (SUE - LOS B)*	— — — — T FO— — — ·
U/G Fiber Optics Cable (SUE - LOS C)* ——	— — — T FO— — —
U/G Fiber Optics Cable (SUE - LOS D)*	T F0

	SS-60140
	<u> </u>
WATER:	
Water Manhole	W
Water Meter	Ο
Water Valve —	$\otimes$
Water Hydrant ———	¢
U/G Water Line Test Hole (SUE - LOS A)* $-$	
U/G Water Line (SUE - LOS B)*	w
U/G Water Line (SUE - LOS C)*	w
U/G Water Line (SUE - LOS D)*	
Above Ground Water Line ——————————-	A/G Water
TV:	
TV Pedestal	C
TV Tower —	$\otimes$
U/G TV Cable Hand Hole	Ħн
U/G TV Test Hole (SUE - LOS A)*	
U/G TV Cable (SUE - LOS B)*	— — — Tv— — — –
U/G TV Cable (SUE - LOS C)*	Tv
U/G TV Cable (SUE - LOS D)*	Tv
U/G Fiber Optic Cable (SUE - LOS B)*	- — — — TV FO— — —
U/G Fiber Optic Cable (SUE - LOS C)*	TV FO
U/G Fiber Optic Cable (SUE - LOS D)*	
GAS:	
Gas Valve	$\diamond$
Gas Meter ————	$\diamond$
U/G Gas Line Test Hole (SUE - LOS A)* —	٢
U/G Gas Line (SUE - LOS B)*	c
U/G Gas Line (SUE - LOS C)*	c
U/G Gas Line (SUE - LOS D)*	G
Above Ground Gas Line	A/G Gas
SANITARY SEWER:	
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	÷
U/G Sanitary Sewer Line	-
Above Ground Sanitary Sewer	
SS Force Main Line Test Hole (SUE - LOS A)*	
· · · · · · · · · · · · · · · · · · ·	— — — — FSS — — — -
SS Force Main Line (SUE - LOS C)*	FSS
SS Force Main Line (SUE - LOS D)*	
MISCELLANEOUS:	
Utility Pole	●
•	$[\cdot]$
Utility Pole with Base	—
•	$\odot$
Utility Located Object	⊙ S
Utility Located Object Utility Traffic Signal Box	-
Utility Located Object Utility Traffic Signal Box Utility Unknown U/G Line (SUE - LOS B)*	S
Utility Located Object Utility Traffic Signal Box Utility Unknown U/G Line (SUE - LOS B)* U/G Tank; Water, Gas, Oil	5 
Utility Located Object Utility Traffic Signal Box Utility Unknown U/G Line (SUE - LOS B)* U/G Tank; Water, Gas, Oil Underground Storage Tank, Approx. Loc	S
Utility Located Object Utility Traffic Signal Box Utility Unknown U/G Line (SUE - LOS B)* U/G Tank; Water, Gas, Oil Underground Storage Tank, Approx. Loc A/G Tank; Water, Gas, Oil	5 
Utility Located Object Utility Traffic Signal Box Utility Unknown U/G Line (SUE - LOS B)* U/G Tank; Water, Gas, Oil Underground Storage Tank, Approx. Loc	5 



<u> 77-p</u>	<u>10140</u>
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ROADWA ENGI	Y DESIGN INEER CARO!!!!
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	1985
	HEY 241111 326D2C8704CF469
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AGGREGATE SHOULDER BORROW



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## SUMMARY OF EARTHWORK

IN CUBIC YARDS

STATION	ST/	ATION	UNCL. EXCAV.	EMBANK. + %	BORROW	WASTE
BEGIN PROJEC	CT END	PROJECT	20			20
S	UBTOTALS:					20
	JECT TOTALS:					20
FRO	JECT TOTALS:					20
GRA	ND TOTALS:					20
	SAY:					20

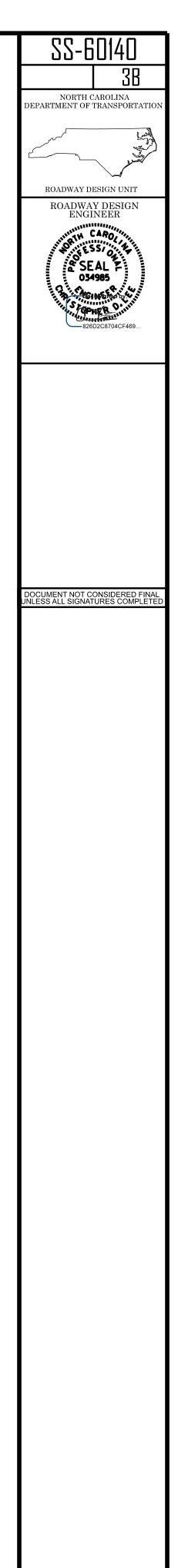
SURVEY		LENGTH DOUBLE GREU   STRAIGHT SHOP DOUBLE GREU   FACED TL-3 .			ANCHORS					IMP/ ATTENU TYPE	ACT JATOR 350	FOR EXTRA LENGTH O GUARDRAIL						
LINE										PERMITTED		POSIS	-	·	REMARKS			
-L-				600	2													
SUBTOTAL				600	2													
DEDUCTIO	NS FOR GREU			50		2 @ 25	5' = 50'											
TOTAL				550														

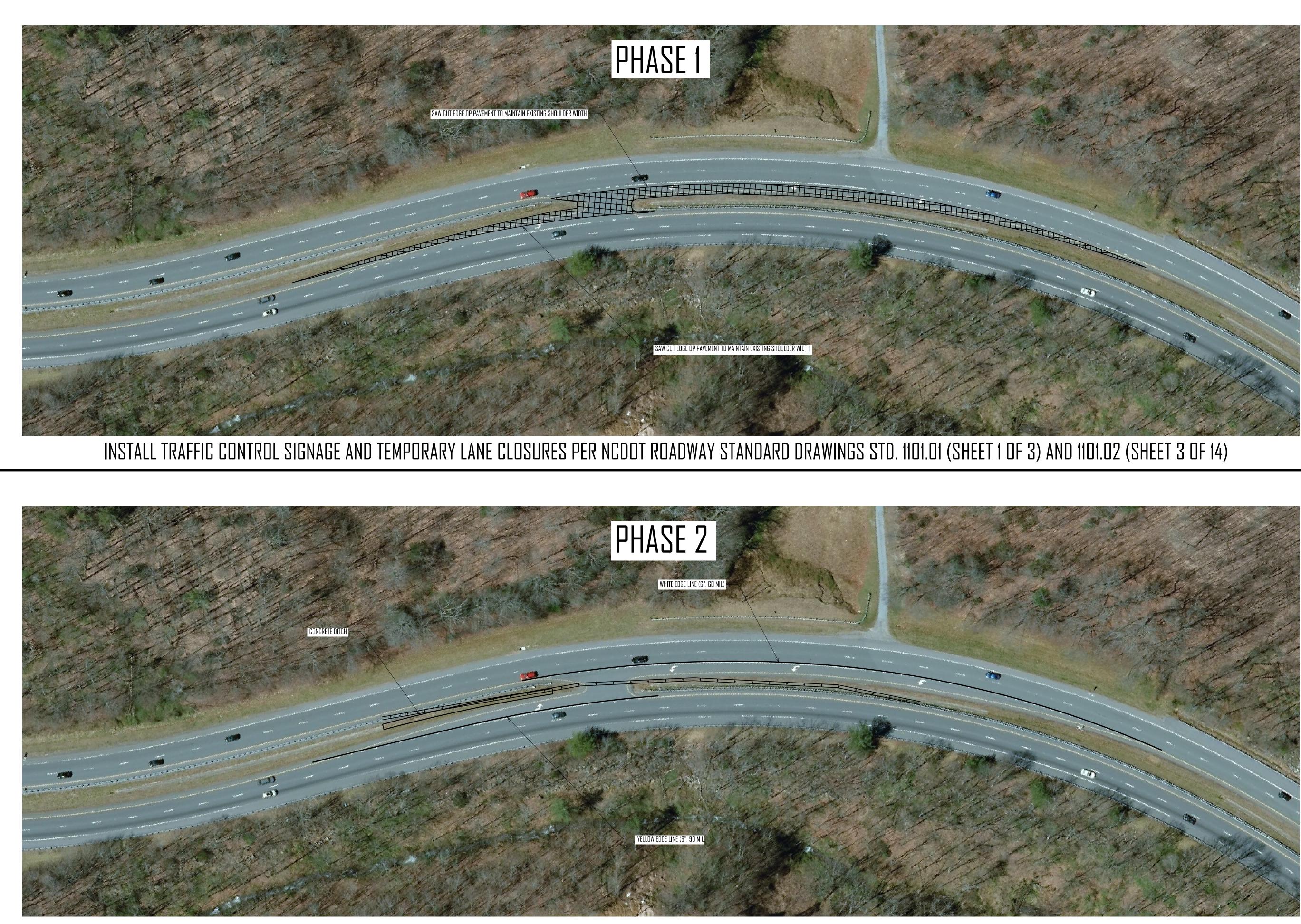
## REMOVAL OF ASPHALT PAVEMENT

SURVEY LINE	LOCATION LT/RT/CL	YD <sup>2</sup>
-L-	CL	1000
	TOTAL:	1000
	SAY:	1000

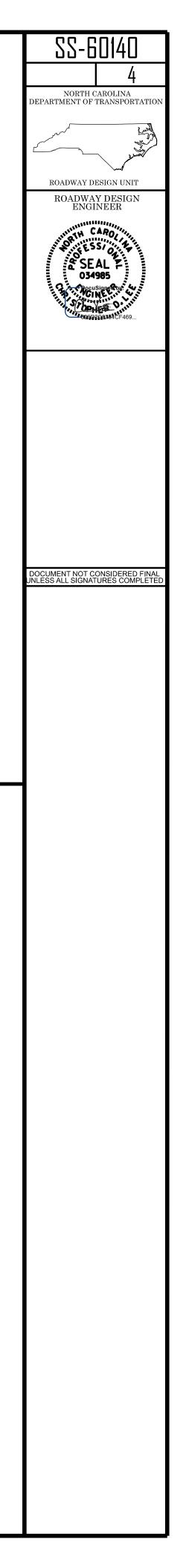
### GUARDRAIL SUMMARY



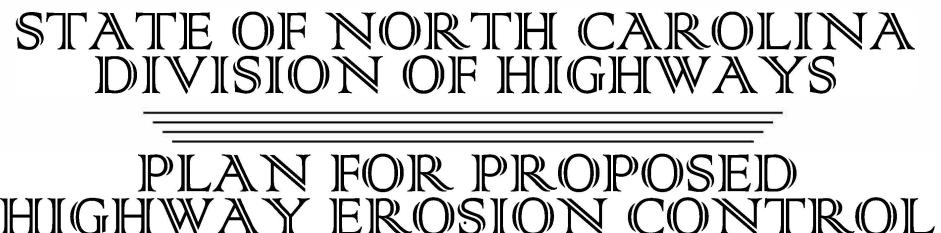


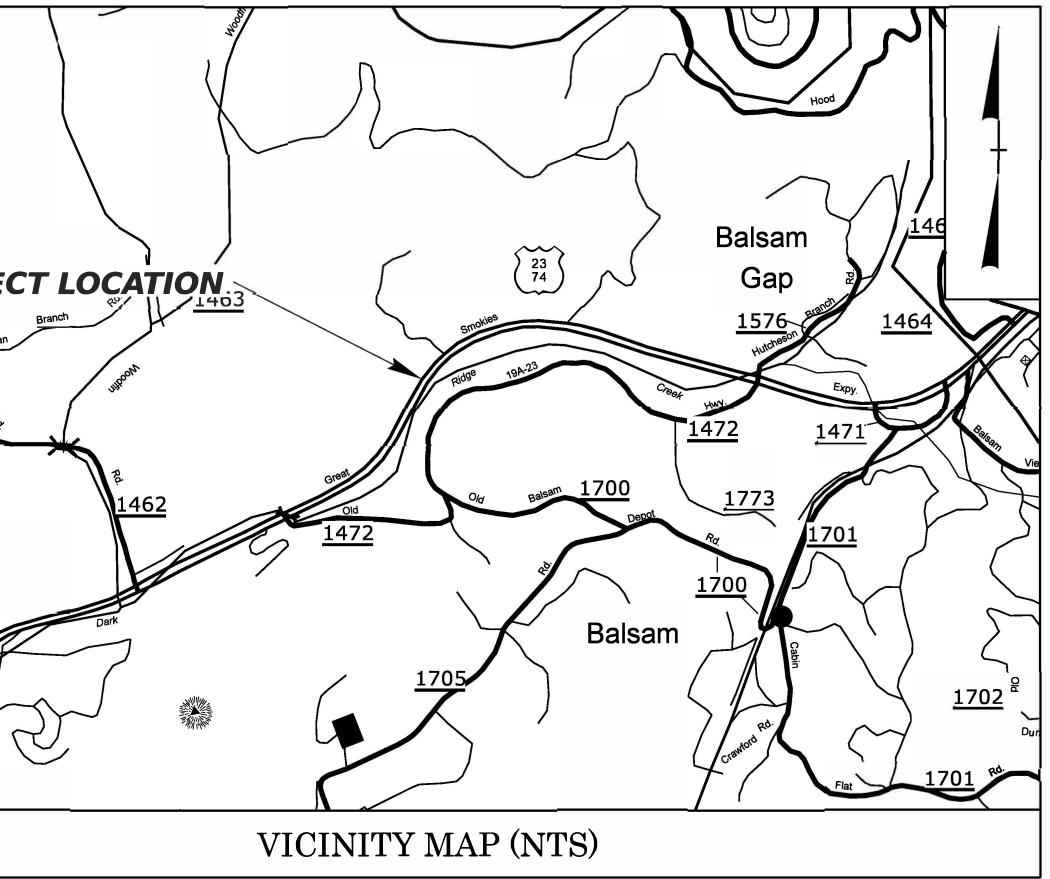


INSTALL TRAFFIC CONTROL SIGNAGE AND TEMPORARY LANE CLOSURES PER NCDOT ROADWAY STANDARD DRAWINGS STD. 1101.01 (SHEET 1 OF 3) AND 1101.02 (SHEET 3 OF 14)



		DIVISIO PLAN HIGHWAY	NORTH CAROLINA OF HIGHWAYS FOR PROPOSED EROSION CONTROL 74 (GREAT SMOKIES EXPY) K: GRADING, PAVEMENT REMOVAL GUARDRAIL
TIP PROJECT: SS-60140		Dark Service S	Image: Window Strain
	GRAPHIC SCALES 50 25 0 50 100 PLANS	Reviewed in the Office of: <b>ROADSIDE ENVIRONMENTAL UNIT</b> 1 South Wilmington St. Raleigh, NC 27611	Prepared in the Office of: <b>DIVISION OF HIGHWAYS</b> 253 WEBSTER RD. SYLVA, NC 28779
	THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.	2018 STANDARD SPECIFICATIONS REVIEWED BY: <u>REID WHITEHEAD, PE</u>	2018 STANDARD SPECIFICATIONS     Designed by: <u>DREW C. RIVENBARK, E.I.</u> 4342     NAME   LEVEL III CERTIFICATION NO.





STATE	STATI		SHEET NO.	TOTAL SHEETS				
N.C.	5	S-6014O		EC-1	4			
STAT	LEPROJ. NO.	F. A. PROJ. NO.	-	DESCRIPT	ION			
	9454.1.1	N/A		P.E				
	9454.2.1	N/A		ROV	V			
	49454.3.1	N/A	CC	DNSTRL	ICTION			
		5						
<u> </u>								
		-						
EROSIO	N AND S	EDIMENT CONTR	<b>COL</b>	, MEAS	URES			
Std. #	Description			Symbol	L			
1630.03 1630.05		lt Ditch						
1630.05		iversion lt Fence			► ₩			
1606.01		ent Control Fence						
1622.01	-	erms and Slope Drains			-			
1630.02		vpe B	· · ·					
16 <b>36.</b> 01	• •	ock Silt Check Type-A.		XXX	<b>**</b>			
	lemporary R Matting and	ock Silt Check Type-A Polyacrylamide (PAM)	wit	h (x				
16 <b>33.02</b>		ock Silt Check Type-B Fiber Wattle						
	Wattle / Coir Fiber Wattle							
1634.01	• •	with Polyacrylamide (PAM) Temporary Rock Sediment Dam Type-A						
16 <b>34.02</b>		ock Sediment Dam Type			<u>NZN.</u>			
1635.01	-	nlet Sediment Trap Type-						
1635.02 1630.04		nlet Sediment Trap Type-						
1630.06	Stilling Basin							
		ediment Trap:		Ш				
16 <b>32.</b> 01				A				
16 <b>32.02</b>	Type B.	• • • • • • • • • • • • • • • • • • • •		B				
16 <b>32.</b> 03	Type C.			C	5			
	Skimmer Basi	m		🦳				
	Tiered Skim	mer Basin		5 <b></b> 24				
		Basin	l					
		r						
		THIS PROJECT EROSION CON						
		FOR CLEARI						
		GRUBBING						
		CONSTRU	CTIC	ON.				

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Roadway Standard Drawings

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

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



## SOIL STABILIZATION SUMMARY SHEET

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
	MA	ATTING FOR	DITCHLINE		
4	-L-	BEGIN	END	CL	325
			SUI	3TOTAL	325
MISCELLANEO	US MATTING TO BE INSTALLED AS	DIRECTED BY THE			75
				TOTAL	400
				SAY	400
				1	

### MATTING FOR EROSION CONTROL

פפ פחוגם
SS-60140 EC-2

## SITE DESCRIPTION

PERIMETER DIKES, SWALES, DITCHES AND SLOPES

HIGH QUALITY WATER (HQW) ZONES

SLOPES STEEPER THAN 3:1

SLOPES 3:1 OR FLATTER

ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1



# SOIL STABILIZATION TIMEFRAMES

STABILIZATION TIME	TIMEFRAM
7 DAYS	NONE
7 DAYS	NONE
7 DAYS	IF SLOPES ARE 10' OR L NOT STEEPER THAN 2:1
14 DAYS	7 DAYS FOR SLOPES GR LENGTH.
14 DAYS	NONE, EXCEPT FOR PEF

	רט הטועט
	SS-60140 • EC-3
IE EXCEPTIONS	
LESS IN LENGTH AND ARE	
1, 14 DAYS ARE ALLOWED.	
REATER THAN 50' IN	
RIMETERS AND HQW ZONES.	

