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PROJECT: 17BP.7.R.130

CONTRACT:

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.7.R.130	1	

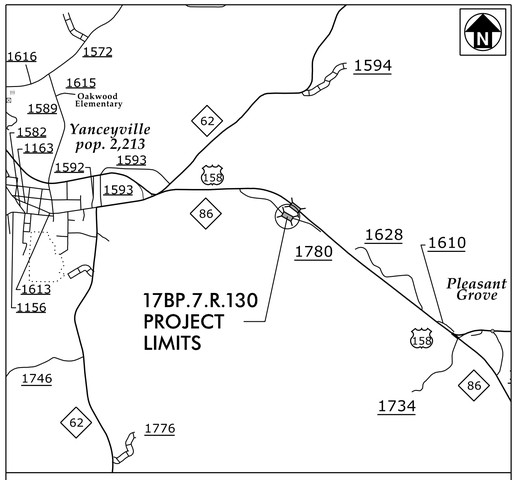
STATE PROJECT NO.	F.A. PROJ. NO.	DESCRIPTION

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CASWELL COUNTY

LOCATION: BRIDGE NO. 117 OVER COUNTRY LINE CREEK ON SR 1780 (GATEWOOD ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE REMOVAL



VICINITY MAP
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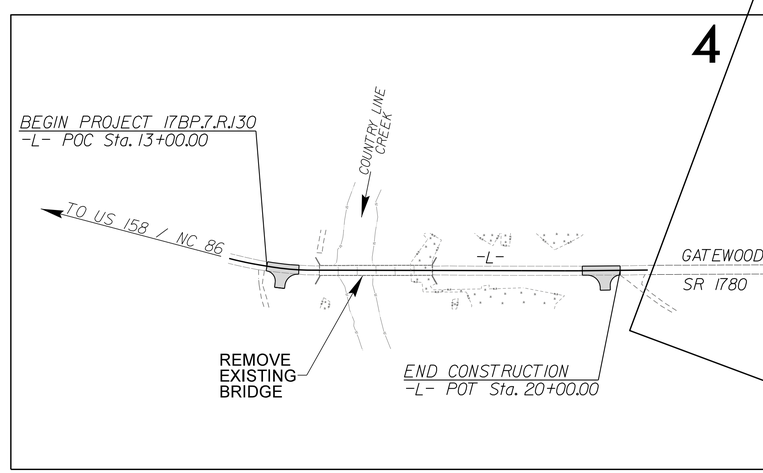

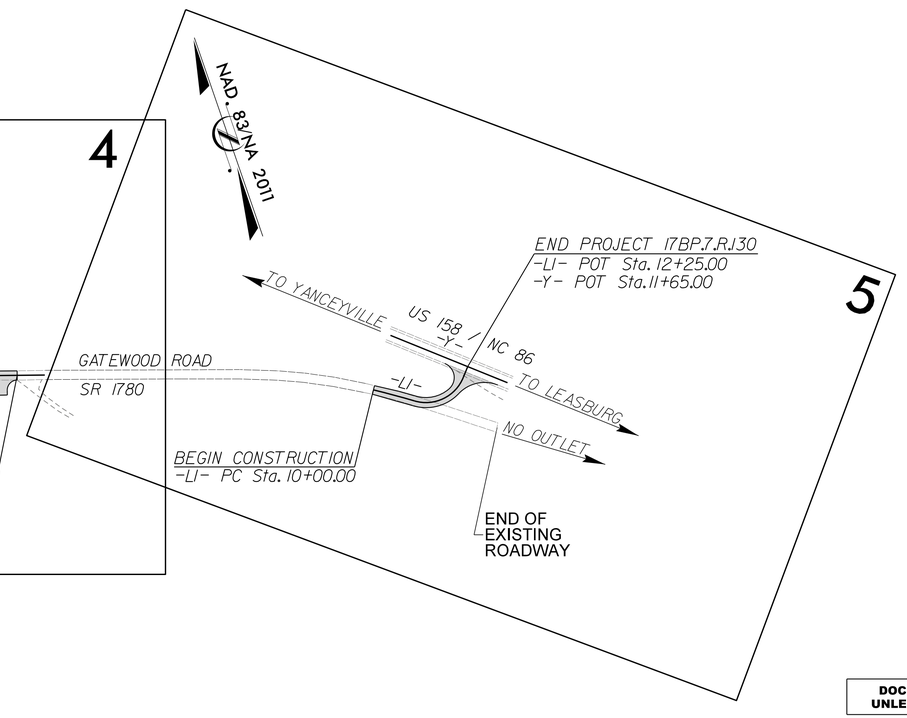

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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN DATA

ADT 1981 = 100

ADT 2025 = 200

V = 35 MPH

SUB REGIONAL TIER
LOCAL

PROJECT LENGTH

LENGTH ROADWAY PROJECT	=	0.175 MILES
LENGTH STRUCTURE PROJECT	=	0.000 MILES
TOTAL LENGTH PROJECT	=	0.175 MILES

Prepared In the Office of Mott MacDonald for

DIVISION 7

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2024 STANDARD SPECIFICATIONS

LETTING DATE:

SEPTEMBER 5, 2024

TIM JORDAN, PE
PROJECT ENGINEER

ELENI M. RIGGS, PE
HYDRAULICS ENGINEER

NCDOT CONTACT:

DANIEL DAGENHART
DIVISION BRIDGE PROGRAM MANAGER

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES TIMOTHY MOTT JORDAN

Signed by: James Timothy Mott Jordan
DBD87ED8D8F6487...
12-Aug-2024
SIGNATURE: P.E.

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 036821 ENGINEER ELENI M. RIGGS

DocuSigned by: Eleni Riggs
C32AE1B87AF84...
12-Aug-2024
SIGNATURE: P.E.

PLANS PREPARED BY:

MOTT MACDONALD

930 Main Campus Drive, Suite 200
Raleigh, NC 27606
(919) 552-2253
www.mottmac.com

LICENSE NO. F-0669

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PROJECT REFERENCE	SHEET NO.
17BP.7.R.130 – CASWELL 117	1A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER

Signed by: 12-AUG-2024

MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

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Prepared in the Office of:
MOTT MACDONALD
930 Main Campus Drive, Suite 200
Raleigh, NC 27606
www.mottmac.com

GENERAL NOTES

GENERAL NOTES: 2024 SPECIFICATIONS

EFFECTIVE: 01–16–24

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.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE LUMEN (CENTURYLINK) AND MCNC

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT–OF–WAY MARKERS:

ALL RIGHT–OF–WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.

LIST OF ROADWAY STANDARD DRAWINGS

EFF. 01–16–2024

2024 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch – N. C. Department of Transportation – Raleigh, N. C., Dated January, 2024 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 5 – SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction – High Side of Superelevated Curve – Method I
DIVISION 8 – INCIDENTALS	
806.01	Concrete Right–of–Way Marker
806.02	Granite Right–of–Way Marker
806.03	Concrete Control–of–Acess Marker
862.01	Guardrail Placement
862.02	Guardrail Installation
876.01	Rip Rap in Channels

INDEX OF SHEETS

SHEET NUMBER	DESCRIPTION
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A–1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
3B–1	GUARDRAIL AND EARTHWORK SUMMARY
4 THRU 5	PLAN & PROFILE SHEETS
RW02C–1 THRU RW02C–3	SURVEY CONTROL SHEETS
TMP–1 THRU TMP–3	TRAFFIC MANAGEMENT PLANS
EC–1 THRU EC–7	EROSION CONTROL PLANS
UO–01	UTILITIES BY OTHERS PLAN
X–1 THRU X–4	CROSS–SECTIONS

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PROJECT REFERENCE	SHEET NO.
17BP.7.R.130 – CASWELL 117	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

S.U.E. = *Subsurface Utility Engineering*

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Computed Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- 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 — CSX TRANSPORTATION
- 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 — RW
- New Right of Way Line with Pin and Cap — RW
- New Right of Way Line with Concrete or Granite R/W Marker — RW
- New Control of Access Line with Concrete C/A 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
- 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 — P
- 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 — T
- Telephone Pedestal — T
- 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 — W
- 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 — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- 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 — S
- Utility Unknown U/G Line LOS B (S.U.E.*) — ?UTL
- U/G Tank; Water, Gas, Oil
- Underground Storage Tank, Approx. Loc. — UST
- 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.

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PROJECT REFERENCE	SHEET NO.
17BP.7.R.130 – CASWELL 117	2A–1

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES TIMOTHY HOGAN

DocuSigned by: 12-Aug-2024

MOTT MACDONALD I & E, LLC
LICENSE NO. F-0669

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Raleigh, NC 27606
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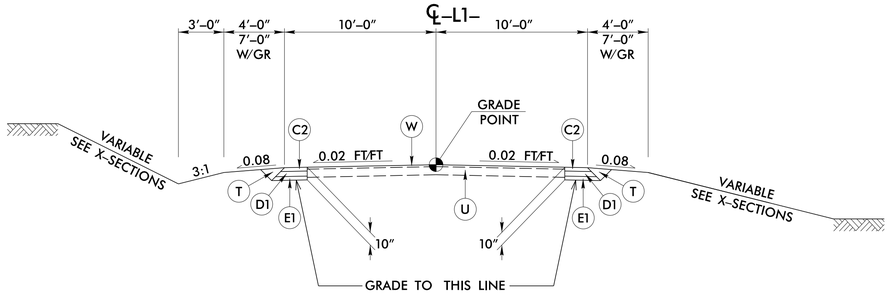
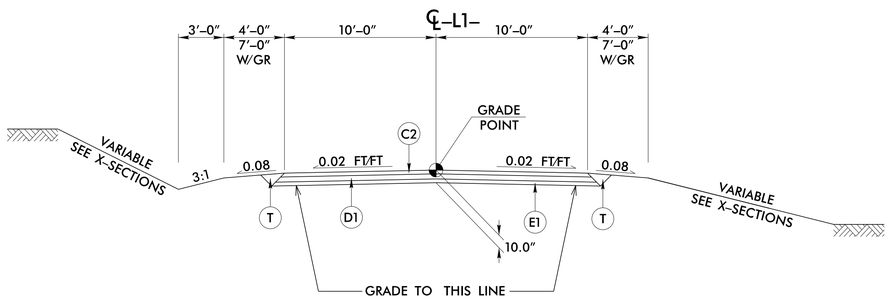


TYPICAL SECTION NO. 1

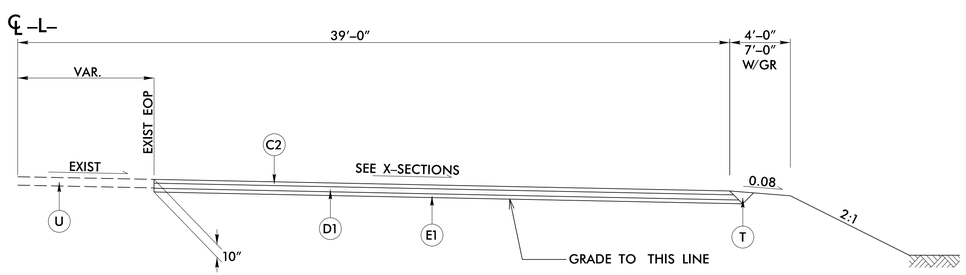
TRANSITION FROM EXISTING TO TYPICAL SECTION NO. 1:
–L1– STA 10+00.00 TO 10+50.00

USE TYPICAL SECTION NO. 1:
–L1– STA 10+50.00 TO 11+36.22



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2:
–L1– STA 11+36.22 TO 12+15.00



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3:
–L– STA 13+20.72 TO 13+39.28
–L– STA 19+60.00 TO 19+80.00

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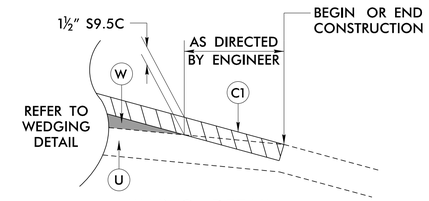
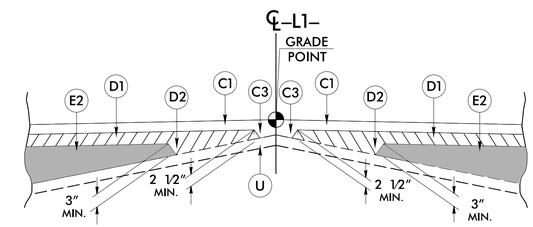


MILLING DETAIL

DETAIL SHOWING PROFILE VIEW



Detail Showing Method of Wedging

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1″ DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1½″ IN DEPTH OR GREATER THAN 2″ IN DEPTH.
D1	PROP. APPROX. 4″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½″ IN DEPTH OR GREATER THAN 4″ IN DEPTH.
E1	PROP. APPROX. 3″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3″ IN DEPTH OR GREATER THAN 5½″ IN DEPTH.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	WEDGING (SEE DETAIL SHOWING METHOD OF WEDGING).

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

PROJECT REFERENCE	SHEET NO.
17BP.7.R.130 – CASWELL 117	3B–1

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON–GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS									IMPACT ATTENUATOR TYPE 350			REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	TES	AT–1								NO.	PERMITTED G	PERMITTED NG	
–L–	13+16.37	13+45.77	RT	29.50′					4′	7′					2												
–L–	13+67.72		CL	29.50′					4′	7′					2												
–L–	19+21.00		CL	29.50′					4′	7′					2												
–L–	19+55.25	19+84.75	RT	29.50′					4′	7′					2												
–Y– /–L1–	11+25.00	11+77.25	RT /LT		31.25′				4′	7′						1											REMOVE GUARDRAIL = 45′
		SUBTOTAL		118.00′	31.25′																						
		LESS ANCHOR DEDUCTIONS																									
		TES	8 x 2.25′ =	–18.00′																							
		AT–1	1 x 6.25′ =		–6.25′																						
		TOTAL		100.00′	25.00′										8	1											5 ADDITIONAL GUARDRAIL POSTS

SUMMARY OF EARTHWORK
IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
–L– 13+00.00 TO 13+63.73	7		380	373	
–L– 19+25.00 TO 20+00.00	7		43	36	
–L1– 10+00.00 TO 12+15.00	67		378	311	
SUBTOTAL	81		801	720	
WASTE IN LIEU OF BORROW					
PROJECT TOTAL	81			720	
5% TO REPLACE BORROW				36	
LOSS DUE TO CLEARING & GRUBBING	–175			175	
GRAND TOTAL	–94			931	
SAY	0			980	

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PROJECT REFERENCE	SHEET NO.
17BP.7.R.130 – CASWELL 117	4

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES TIMOTHY MORGAN 12-Aug-2024	NORTH CAROLINA PROFESSIONAL SEAL 036821 ENGINEER WILLIAM RIGGS 12-Aug-2024
MOTT MACDONALD I & E, LLC LICENSE NO. F-0669	MOTT MACDONALD I & E, LLC LICENSE NO. F-0669

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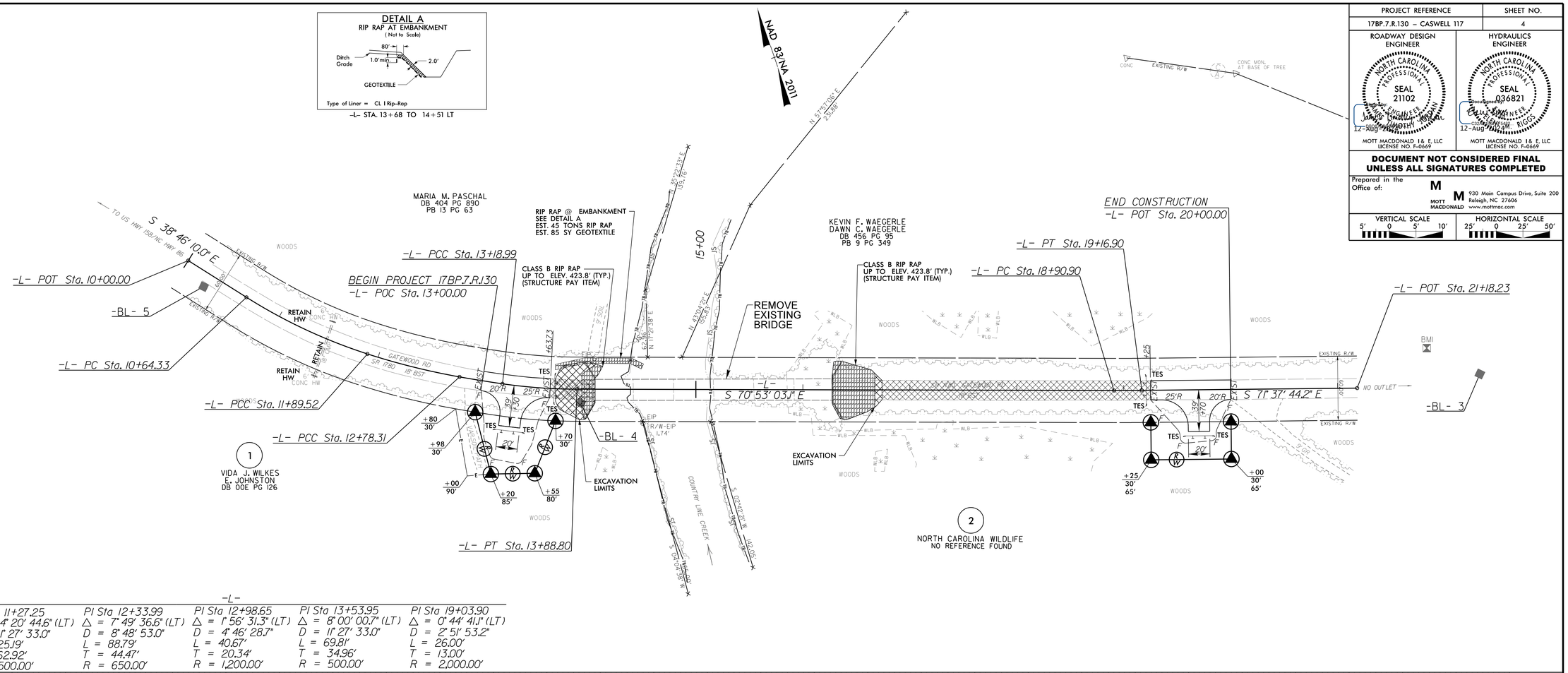

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PI Sta 11+27.25	PI Sta 12+33.99	PI Sta 12+98.65	PI Sta 13+53.95	PI Sta 19+03.90
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D = 11° 27' 33.0"	D = 8° 48' 53.0"	D = 4° 46' 28.7"	D = 11° 27' 33.0"	D = 2° 51' 53.2"
L = 125.19'	L = 88.79'	L = 40.67'	L = 69.81'	L = 26.00'
T = 62.92'	T = 44.47'	T = 20.34'	T = 34.96'	T = 13.00'
R = 500.00'	R = 650.00'	R = 1,200.00'	R = 500.00'	R = 2,000.00'

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PROJECT REFERENCE	SHEET NO.
17BP.7.R.130 – CASWELL 117	5

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES T. MCMOTTRY, III	NORTH CAROLINA PROFESSIONAL SEAL 036821 ENGINEER DONALD M. SIGGS
DocuSigned by: 12-Aug-2024	DocuSigned by: 12-Aug-2024
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Raleigh, NC 27606
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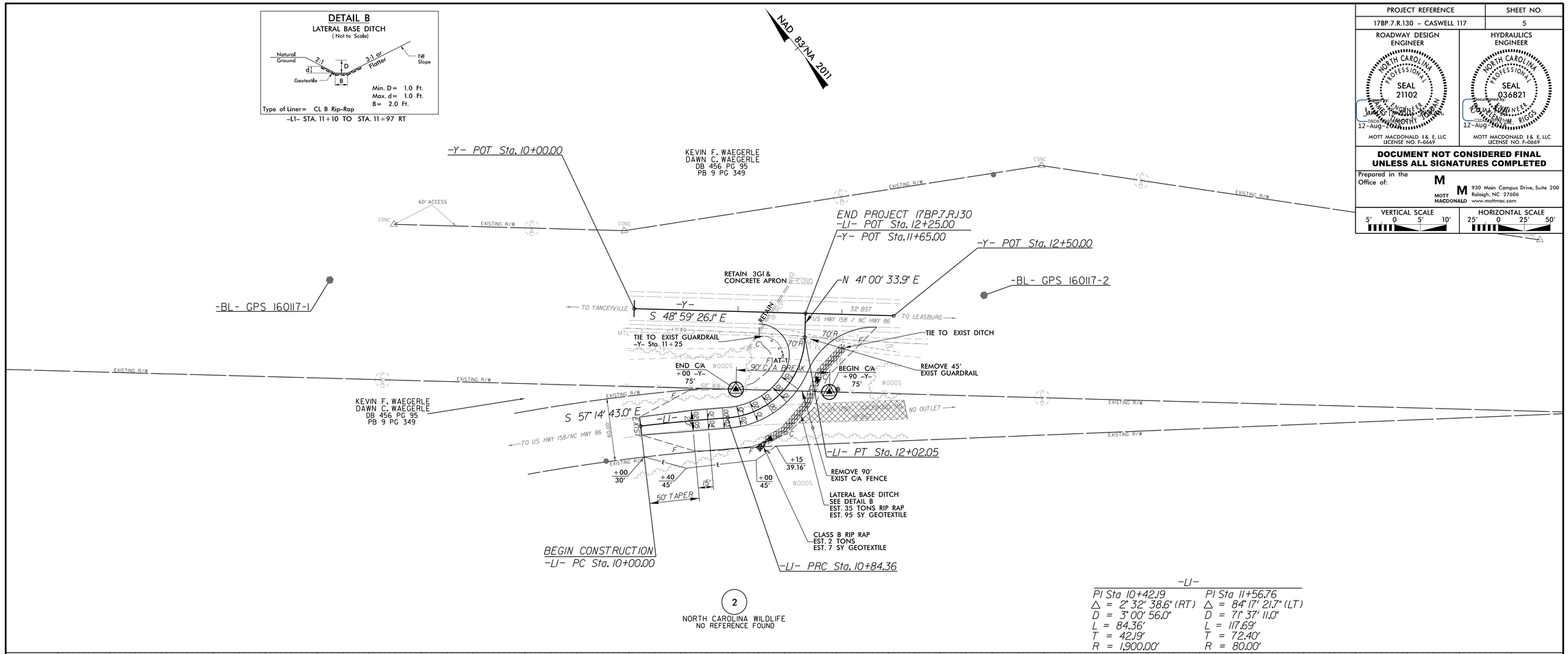
VERTICAL SCALE 5' 0 5' 10'
HORIZONTAL SCALE 25' 0 25' 50'

DETAIL B
LATERAL BASE DITCH
(Not to Scale)

Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
B = 2.0 Ft.

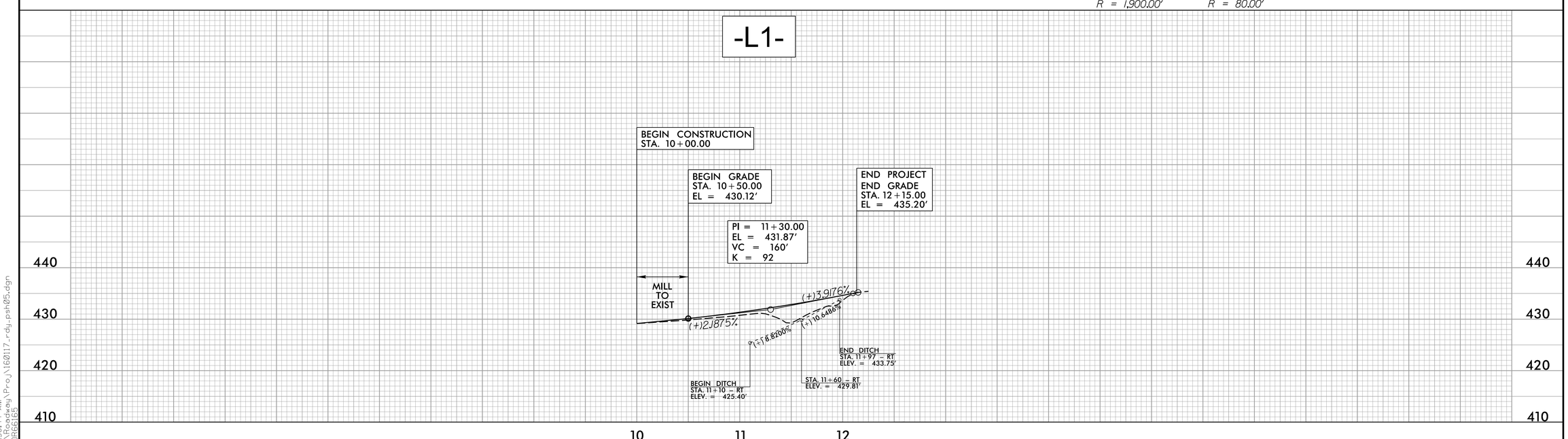
Type of Liner = CL B Rip-Rap

-L1- STA. 11+10 TO STA. 11+97 RT



-L1-

PI Sta 10+42.19	PI Sta 11+56.76
Δ = 2° 32' 38.6" (RT)	Δ = 84° 17' 21.7" (LT)
D = 3° 00' 56.0"	D = 71° 37' 11.0"
L = 84.36'	L = 117.69'
T = 42.19'	T = 72.40'
R = 1,900.00'	R = 80.00'



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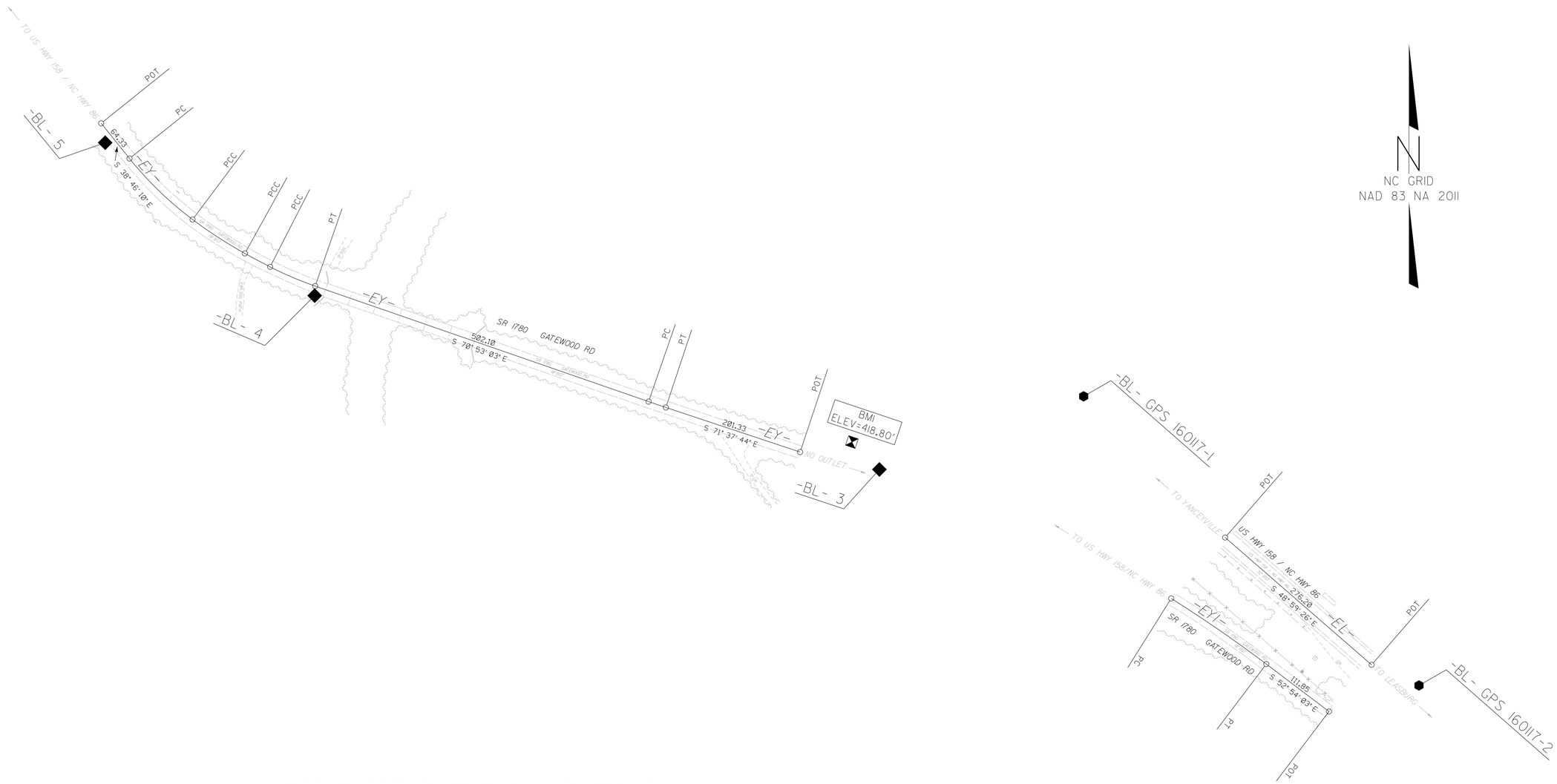
JOR66165

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.R.130 – CASWELL 117	RW02C-1
Location and Surveys	
ALLIED ASSOCIATES, P.A.	

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



SEE SHEET RW02C-2 & RW02C-3
FOR FURTHER
ALIGNMENT DETAILS

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

6/2/99

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6/2/99

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.R.130 – CASWELL 117	RW02C-2
Location and Surveys	
ALLIED ASSOCIATES, P. A.	

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

BASELINE

BL

POINT	DESC.	NORTH	EAST	ELEVATION
5	BL-5	966102.5881	1911551.0707	457.17
4	BL-4	965884.8900	1911849.1566	434.33
3	BL-3	965637.4459	1912652.7642	422.83
1	GPS 160117-1	965741.5680	1912943.5350	427.38
2	GPS 160117-2	965329.9000	1913420.6764	436.60

```
****************************************
1       ELEVATION = 427.38
N 965742      E 1912944
GPS 160117-1
****************************************
```

NOTES:

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cwlewter AT LS-312549

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.R.130 – CASWELL 117	RW02C-3
Location and Surveys	
ALLIED ASSOCIATES, P. A.	

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

ALIGNMENTS

EL

POINT	N	E	BEARING	DIST
POT	965540.550	1913144.811		
LINE			S 48°59'26.1" E	276.20
POT	965359.310	1913353.235		

EY

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
POT	966130.280	1911545.437							
LINE			S 38°46'10.0" E	64.33					
PC	966080.124	1911585.719							
CURVE			S 45°56'32.3" E	124.86	14°20'44.6"(LT)	11°27'33.0"	125.19	62.92	500.00
PCC	965993.296	1911675.451							
CURVE			S 57°01'42.9" E	88.72	07°49'36.6"(LT)	08°48'53.0"	88.79	44.47	650.00
PCC	965945.011	1911749.885							
CURVE			S 61°54'46.8" E	40.67	01°56'31.3"(LT)	04°46'28.7"	40.67	20.34	1200.00
PCC	965925.862	1911785.767							
CURVE			S 66°53'02.8" E	69.76	08°00'00.7"(LT)	11°27'33.0"	69.81	34.96	500.00
PT	965898.476	1911849.924							
LINE			S 70°53'03.1" E	502.10					
PC	965734.049	1912324.337							
CURVE			S 71°15'23.7" E	26.00	00°44'41.1"(LT)	02°51'53.2"	26.00	13.00	2000.00
PT	965725.695	1912348.955							
LINE			S 71°37'44.2" E	201.33					
POT	965662.241	1912540.028							

EY1

POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
PC	965453.763	1913068.073							
CURVE			S 55°22'50.9" E	164.43	04°57'36.7"(RT)	03°00'56.0"	164.49	82.29	1900.00
PT	965360.345	1913203.394							
LINE			S 52°54'02.6" E	111.85					
POT	965292.879	1913292.601							

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

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cwlewter AT LS-312549

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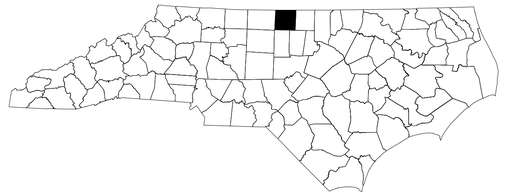
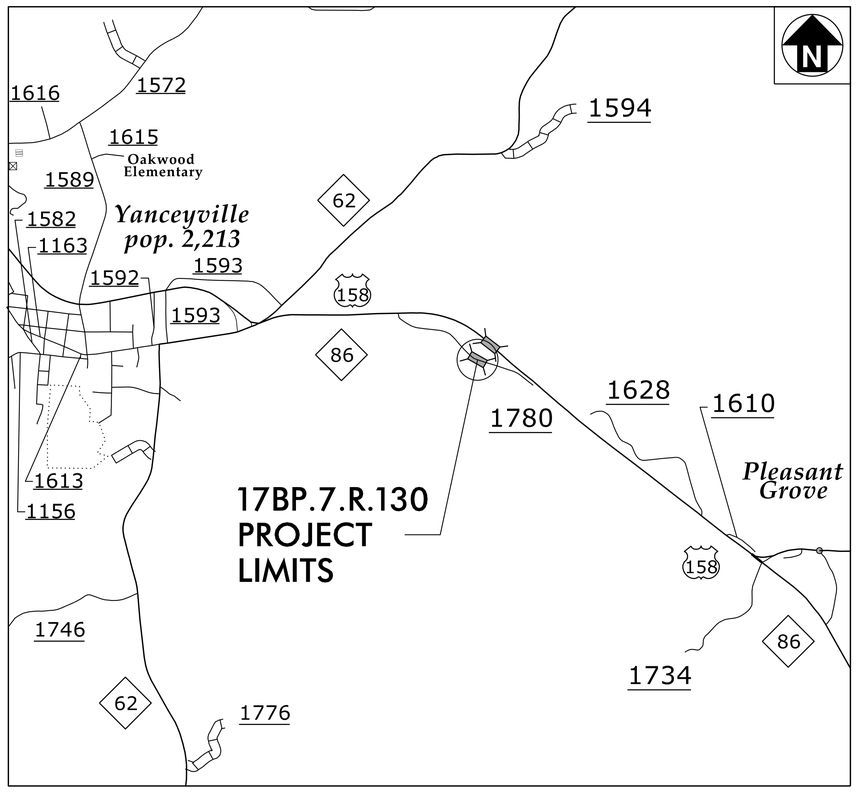
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

CASWELL COUNTY

BRIDGE NO. 117 OVER COUNTY LINE CREEK ON SR 1780 (GATEWOOD ROAD)





INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND FINAL PAVEMENT MARKING SCHEDULE
TMP-1B	GENERAL NOTES
TMP-2	TEMPORARY TRAFFIC CONTROL AND PHASING
TMP-3	TEMPORARY TRAFFIC CONTROL AND PHASING

TIP PROJECT: 17BP.7.R.130

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

PREPARED IN THE OFFICE OF MOTT MACDONALD
FOR NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

TIM JORDAN, PE — TRAFFIC CONTROL PROJECT ENGINEER

PADDY JORDAN — TRAFFIC CONTROL DESIGN ENGINEER

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

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DATE: 12-AUG-2024

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PROJ. REFERENCE NO.	SHEET NO.
17BP.7.R.130	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- REMOVAL
- PAVEMENT OVERLAY
- USER DEFINED (IF NEEDED)

SIGNALS

EXISTING PROPOSED TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKINGS

T1 THERMOPLASTIC WHITE EDGELINE (4")
T5 THERMOPLASTIC 2 FT. - 6FT./SP WHITE MINISKIP (4")

APPROVED: Signed by: James Timothy Jordan DATE: 12-Aug-2024

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NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES TIMOTHY JORDAN

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ROADWAY STANDARD DRAWINGS, LEGEND, & PAVEMENT MARKING SCHEDULE

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PROJ. REFERENCE NO.	SHEET NO.
17BP.7.R.130	TMP-1B

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. US 158 / NC 86 (-Y-)	ANYTIME

B) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

H) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

I) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 200 FEET IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

K) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

M) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

O) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

P) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS

Q) INSTALL PAVEMENT MARKINGS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
1. ALL ROADS	THEMOPLASTIC	

R) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

S) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

APPROVED: Signed by: James Timothy Jordan DATE: 12-Aug-2024

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NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES TIMOTHY JORDAN

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GENERAL NOTES

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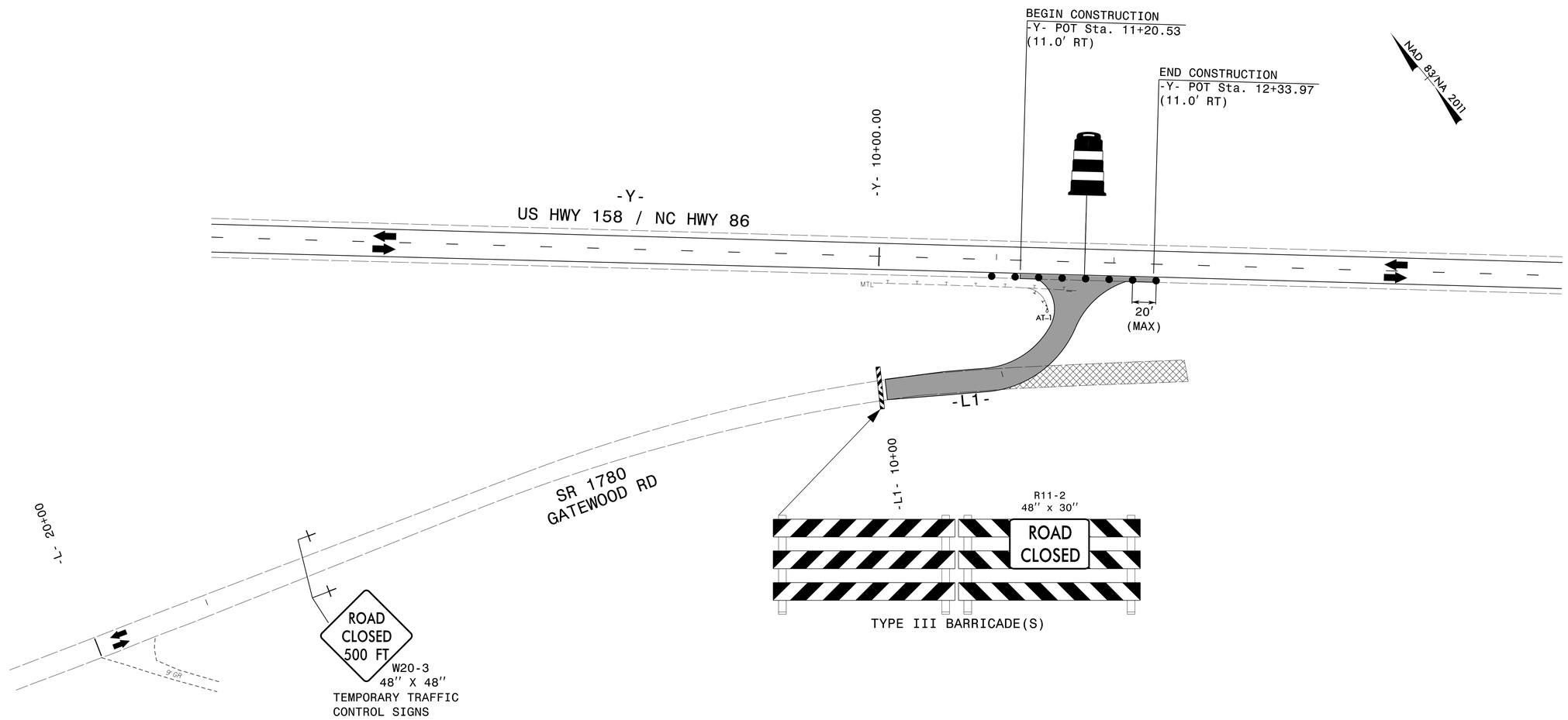
PROJECT REFERENCE NUMBER	SHEET NO.
17BP.7.R.130 CASWELL 117	TMP-2

PHASE I

STEP 1: INSTALL ADVANCED WARNING SIGNS AS SHOWN ON RSD 1101.01, SHEET 3 OF 3 ON -L-, -L1- AND -Y- USING RSD 1101.02, SHEET 1 OF 14 AND FLAGGERS AS NEEDED.

STEP 2: USING TYPE III BARRICADES AND TEMPORARY TRAFFIC CONTROL SIGNING, CLOSE SR 1780 AT -L1- STA 10+00 TO TRAFFIC

STEP 3: USING RSD 1101.02, SHEET 1 OF 19 AND FLAGGERS AS NEEDED, CONSTRUCT -L1-, INCLUDING PROPOSED GUARDRAIL. MAINTAIN CLOSURE OF -L1- USING TYPE III BARRICADES AND TEMPORARY BARRICADE SIGN.



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NORTH CAROLINA PROFESSIONAL SEAL 21102 ENGINEER JAMES TIMOTHY JORDAN

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DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

PHASE I DETAIL AND PHASING

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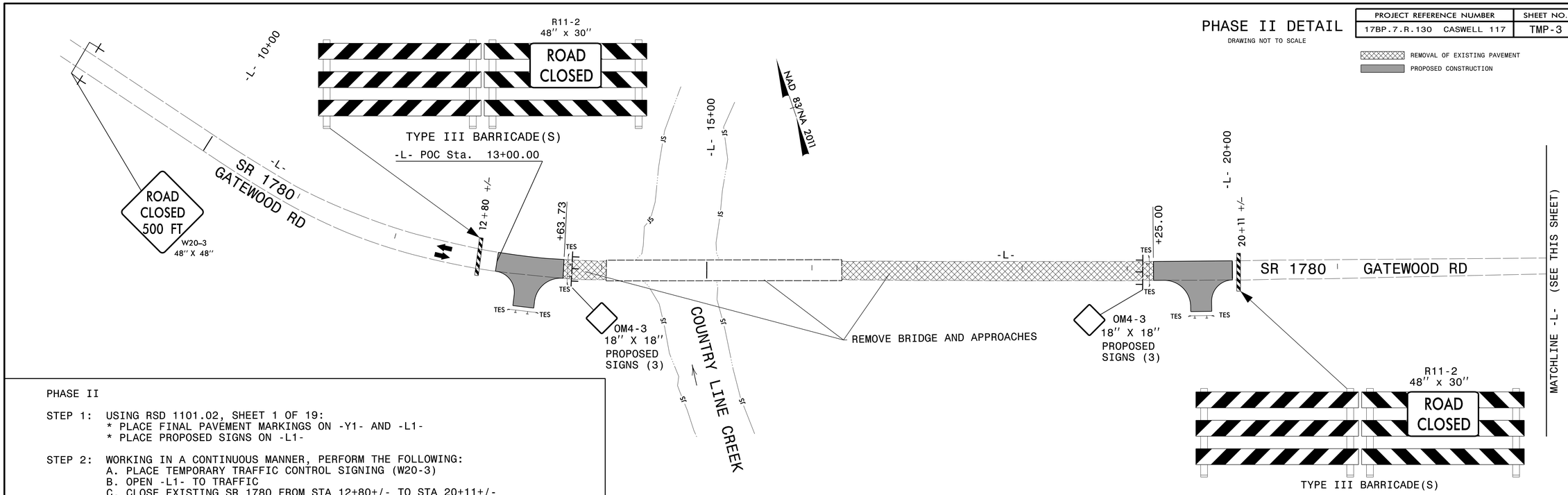
PHASE II DETAIL

DRAWING NOT TO SCALE

PROJECT REFERENCE NUMBER	SHEET NO.
17BP.7.R.130 CASWELL 117	TMP-3

REMOVAL OF EXISTING PAVEMENT

PROPOSED CONSTRUCTION



PHASE II

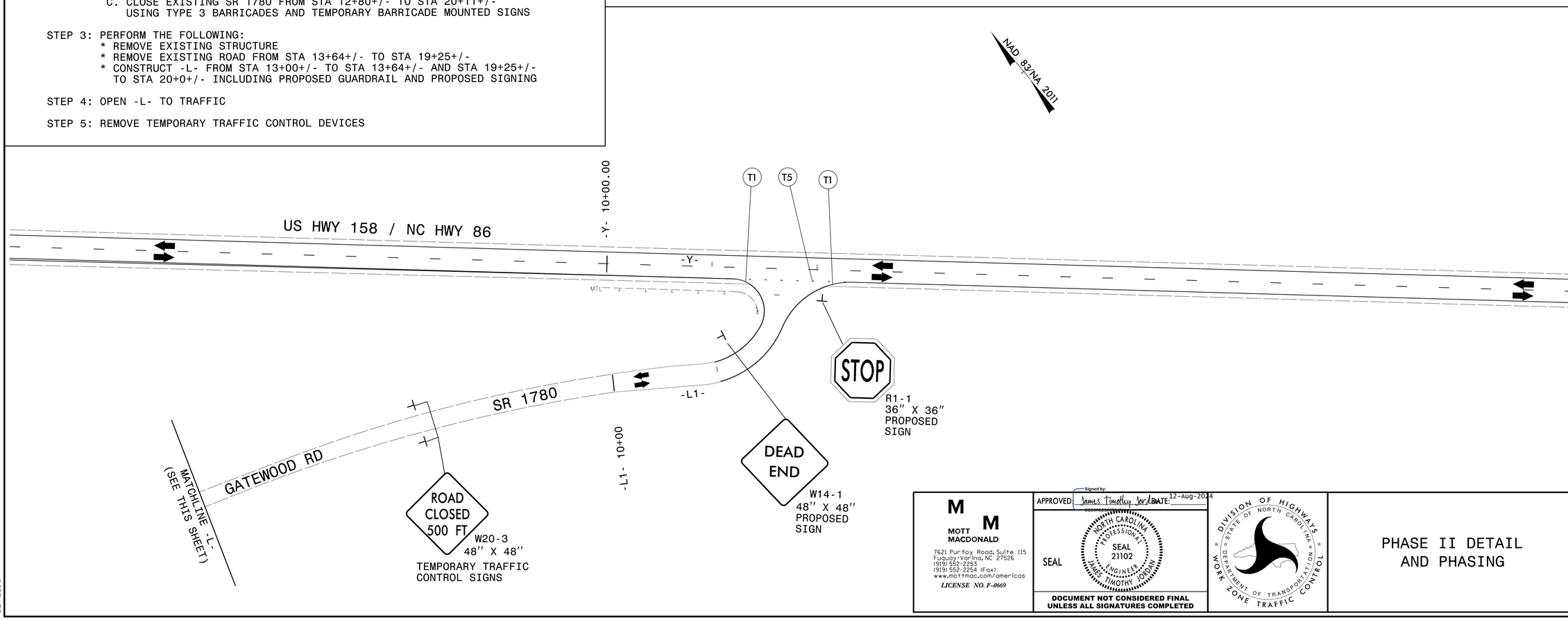
STEP 1: USING RSD 1101.02, SHEET 1 OF 19:
* PLACE FINAL PAVEMENT MARKINGS ON -Y1- AND -L1-
* PLACE PROPOSED SIGNS ON -L1-

STEP 2: WORKING IN A CONTINUOUS MANNER, PERFORM THE FOLLOWING:
A. PLACE TEMPORARY TRAFFIC CONTROL SIGNING (W20-3)
B. OPEN -L1- TO TRAFFIC
C. CLOSE EXISTING SR 1780 FROM STA 12+80+/- TO STA 20+11+/- USING TYPE 3 BARRICADES AND TEMPORARY BARRICADE MOUNTED SIGNS

STEP 3: PERFORM THE FOLLOWING:
* REMOVE EXISTING STRUCTURE
* REMOVE EXISTING ROAD FROM STA 13+64+/- TO STA 19+25+/-
* CONSTRUCT -L- FROM STA 13+00+/- TO STA 13+64+/- AND STA 19+25+/- TO STA 20+0+/- INCLUDING PROPOSED GUARDRAIL AND PROPOSED SIGNING

STEP 4: OPEN -L- TO TRAFFIC

STEP 5: REMOVE TEMPORARY TRAFFIC CONTROL DEVICES



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APPROVED Signed by: James Timothy Jordan DATE: 12-Aug-2024

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DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

PHASE II DETAIL AND PHASING

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PROJECT: 17BP.7.R.130

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.7.R.130	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION

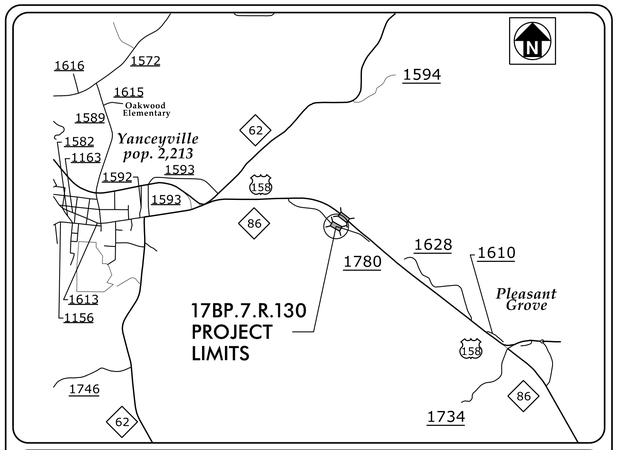
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

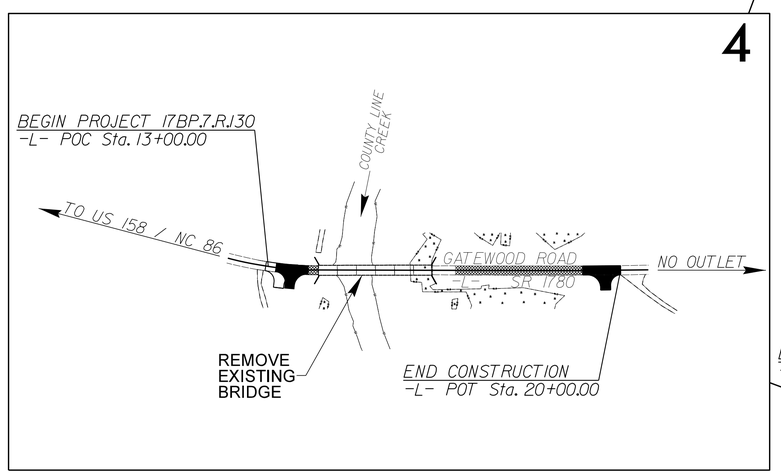
CASWELL COUNTY

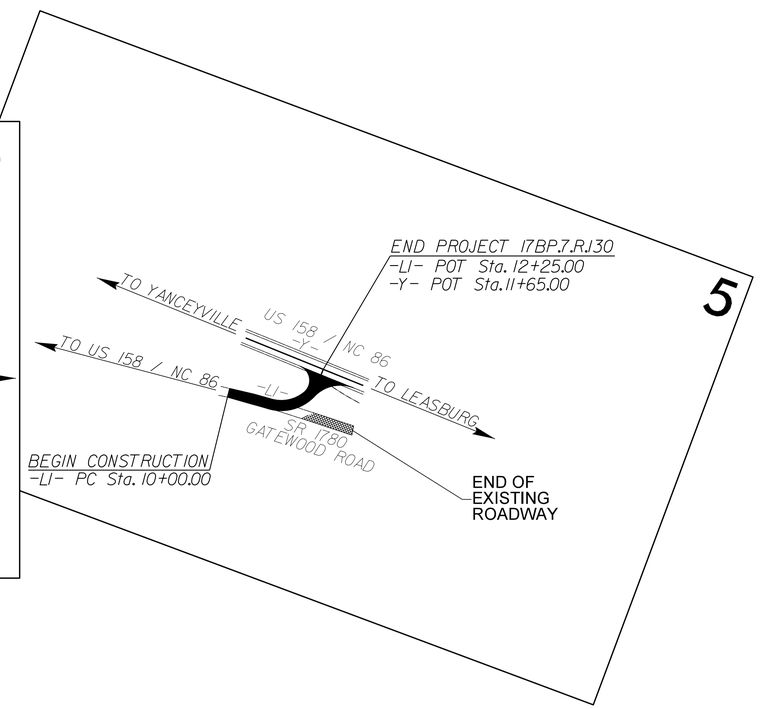
LOCATION: BRIDGE NO. 117 OVER COUNTY LINE CREEK ON SR 1780 (GATEWOOD ROAD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE REMOVAL



VICINITY MAP
NOT TO SCALE





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

GRAPHIC SCALE

50 25 0 50 100
PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE APPLICABLE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF WATER RESOURCES.

Prepared in the Office of:

MOTT MACDONALD
930 Main Campus Drive, Suite 200
Raleigh, NC 27606
(919) 552-2253
www.mottmac.com

LICENSE NO. F-0669

Designed by:

Trenton J Cormier, PE 3377
NAME LEVEL III CERTIFICATION NO.

Reviewed in the Office of:

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

Reviewed by:

Aaron Harper, PE

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2024 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

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PROJECT REFERENCE NO.	SHEET NO.
17BP.7.R.130	EC-02

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

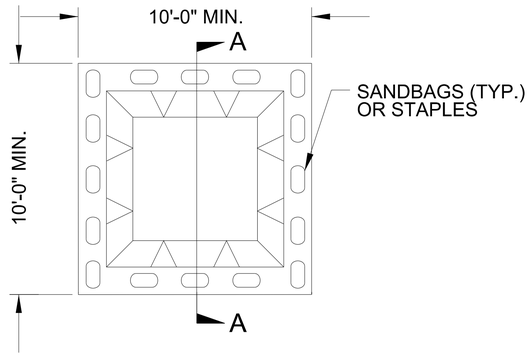
EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	TSD
1630.04	Stilling Basin	
1630.05	Temporary Diversion	TD
1630.06	Special Stilling Basin	
1630.07	Skimmer Basin	
1630.08	Tiered Skimmer Basin	
1630.09	Earthen Dam with Skimmer	
	Infiltration Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C

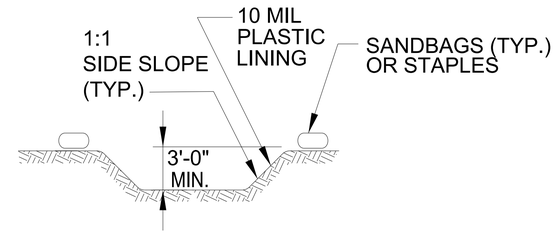
Std. #	Description	Symbol
1633.01	Temporary Rock Silt Check Type A	
1633.02	Temporary Rock Silt Check Type B	
1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1634.01	Temporary Rock Sediment Dam Type A	
1634.02	Temporary Rock Sediment Dam Type B	
1635.01	Rock Pipe Inlet Sediment Trap Type A	A
1635.02	Rock Pipe Inlet Sediment Trap Type B	B
1636.01	Excelsior Wattle Check	
1636.01	Excelsior Wattle Check with Flocculant	
1636.01	Coir Fiber Wattle Check	
1636.01	Coir Fiber Wattle Check with Flocculant	
1636.02	Silt Fence Excelsior Wattle Break	EW
	Silt Fence Coir Fiber Wattle Break	CFW
1636.03	Excelsior Wattle Barrier	—EW—EW—EW—
1636.03	Coir Fiber Wattle Barrier	—CFW—CFW—CFW—

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.R.130	EC-02A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



PLAN



SECTION A-A

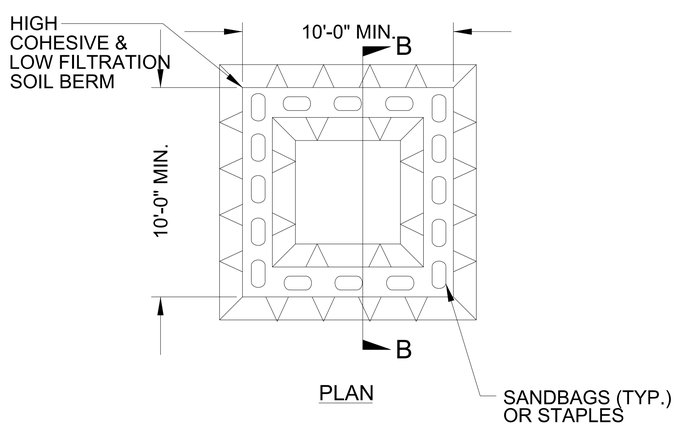
NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

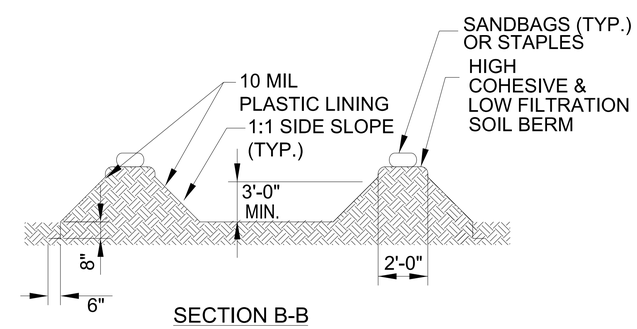
3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE

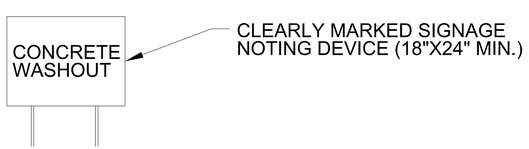
NOT TO SCALE



PLAN



SECTION B-B



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
17BP.7.R.130	EC-3

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
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 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES

PROJECT REFERENCE	SHEET NO.
17BP.7.R.130	EC-4 /CONST. 4

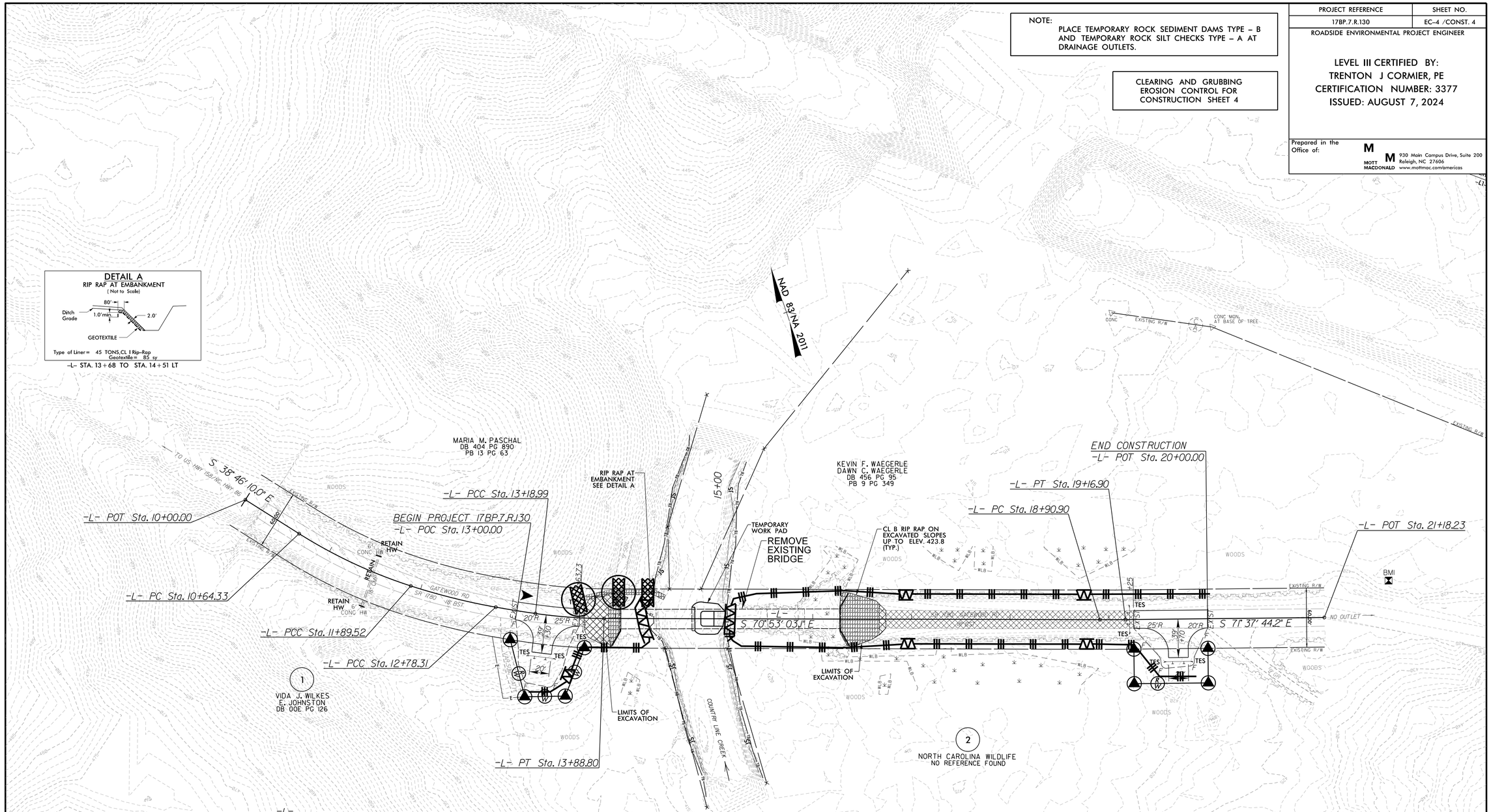
ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

LEVEL III CERTIFIED BY:
TRENTON J CORMIER, PE
CERTIFICATION NUMBER: 3377
ISSUED: AUGUST 7, 2024

Prepared in the Office of:
MOTT MACDONALD
930 Main Campus Drive, Suite 200
Raleigh, NC 27606
www.mottmac.com/americas

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

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4



-L-

PI Sta 11+27.25	PI Sta 12+33.99	PI Sta 12+98.65	PI Sta 13+53.95	PI Sta 19+03.90
Δ = 14° 20' 44.6" (LT)	Δ = 7° 49' 36.6" (LT)	Δ = 1° 56' 31.3" (LT)	Δ = 8° 00' 00.7" (LT)	Δ = 0° 44' 41.1" (LT)
D = 11° 27' 33.0"	D = 8° 48' 53.0"	D = 4° 46' 28.7"	D = 11° 27' 33.0"	D = 2° 51' 53.2"
L = 125.19'	L = 88.79'	L = 40.67'	L = 69.81'	L = 26.00'
T = 62.92'	T = 44.47'	T = 20.34'	T = 34.96'	T = 13.00'
R = 500.00'	R = 650.00'	R = 1,200.00'	R = 500.00'	R = 2,000.00'

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PROJECT REFERENCE	SHEET NO.
17BP.7.R.130	EC-5 /CONST. 5

ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

LEVEL III CERTIFIED BY:
TRENTON J CORMIER, PE
CERTIFICATION NUMBER: 3377
ISSUED: AUGUST 7, 2024

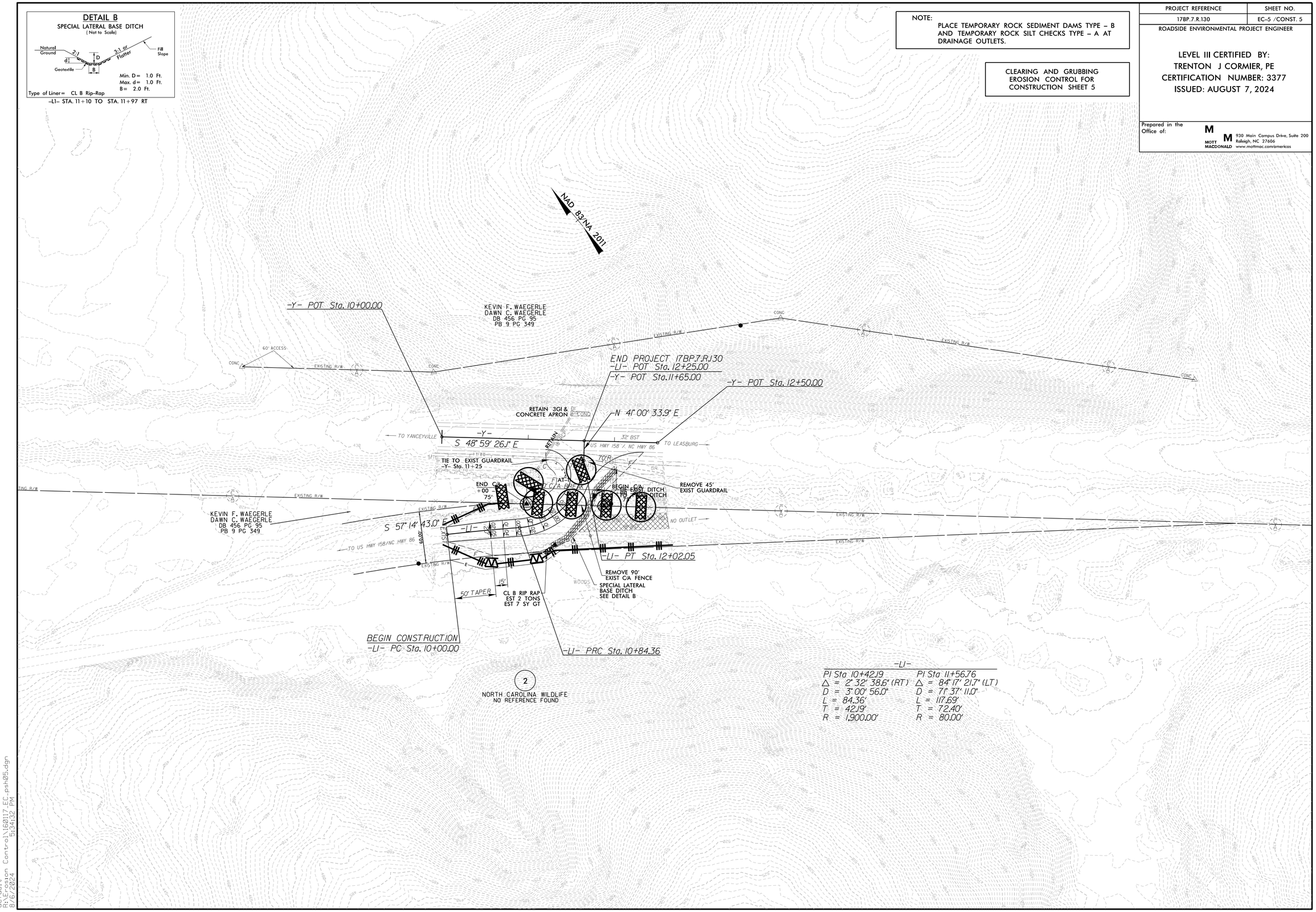
Prepared in the Office of:
MOTT MACDONALD
930 Main Campus Drive, Suite 200
Raleigh, NC 27606
www.mottmac.com/americas

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

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 5

DETAIL B
SPECIAL LATERAL BASE DITCH
(Not to Scale)

Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
B = 2.0 Ft.
Type of Liner = CL B Rip-Rap
-L1- STA. 11+10 TO STA. 11+97 RT



-L1-

PI Sta 10+42.19	PI Sta 11+56.76
Δ = 2° 32' 38.6" (RT)	Δ = 84° 17' 21.7" (LT)
D = 3° 00' 56.0"	D = 71° 37' 11.0"
L = 84.36'	L = 117.69'
T = 42.19'	T = 72.40'
R = 1,900.00'	R = 80.00'

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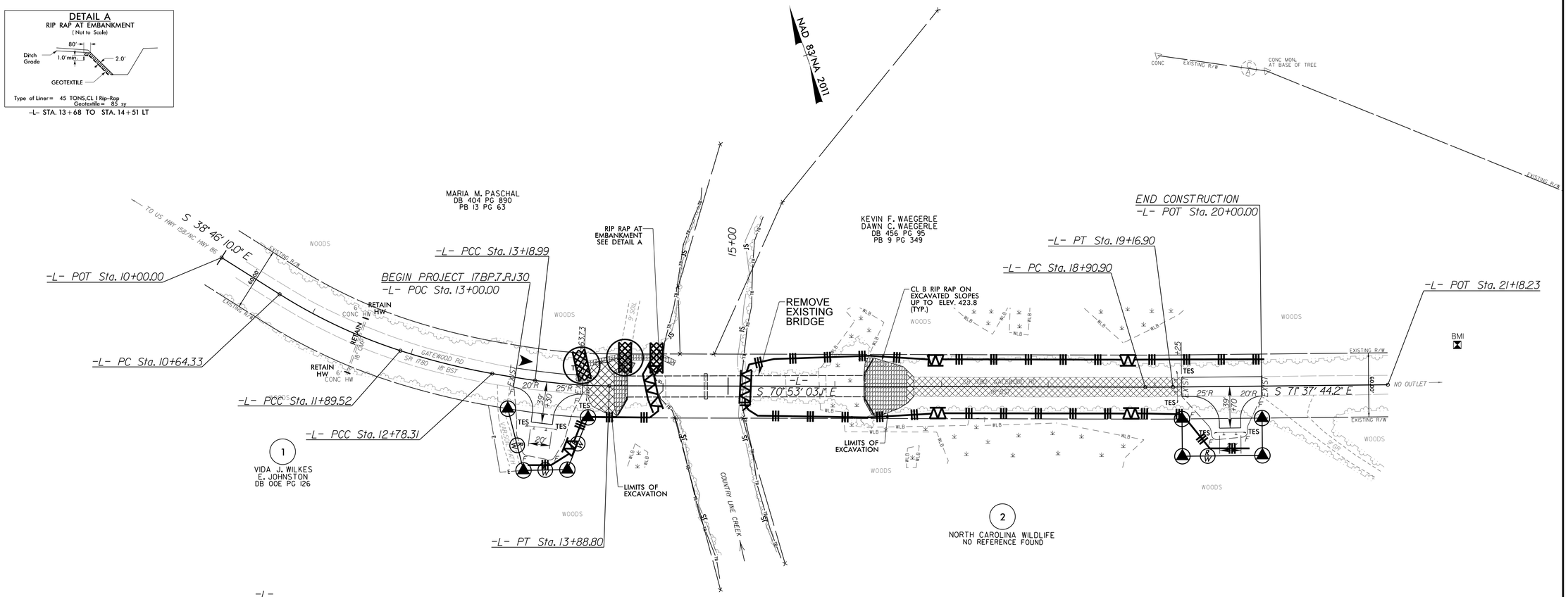
PROJECT REFERENCE	SHEET NO.
17BP.7.R.130	EC-6 /CONST. 4

ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

LEVEL III CERTIFIED BY:
TRENTON J CORMIER, PE
CERTIFICATION NUMBER: 3377
ISSUED: AUGUST 7, 2024

Prepared in the Office of:
MOTT MACDONALD
930 Main Campus Drive, Suite 200
Raleigh, NC 27606
www.mottmac.com/americas



-L-

PI Sta 11+27.25	PI Sta 12+33.99	PI Sta 12+98.65	PI Sta 13+53.95	PI Sta 19+03.90
Δ = 14° 20' 44.6" (LT)	Δ = 7° 49' 36.6" (LT)	Δ = 1° 56' 31.3" (LT)	Δ = 8° 00' 00.7" (LT)	Δ = 0° 44' 41.1" (LT)
D = 11° 27' 33.0"	D = 8° 48' 53.0"	D = 4° 46' 28.7"	D = 11° 27' 33.0"	D = 2° 51' 53.2"
L = 125.19'	L = 88.79'	L = 40.67'	L = 69.81'	L = 26.00'
T = 62.92'	T = 44.47'	T = 20.34'	T = 34.96'	T = 13.00'
R = 500.00'	R = 650.00'	R = 1,200.00'	R = 500.00'	R = 2,000.00'

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PROJECT REFERENCE	SHEET NO.
17BP.7.R.127 – GUILFORD 67	EC–7 /CONST. 5

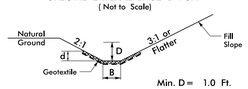
ROADSIDE ENVIRONMENTAL PROJECT ENGINEER

LEVEL III CERTIFIED BY:
TRENTON J CORMIER, PE
CERTIFICATION NUMBER: 3377
ISSUED: AUGUST 7, 2024

Prepared in the Office of:
MOTT MACDONALD
930 Main Campus Drive, Suite 200
Raleigh, NC 27606
www.mottmac.com/americas

DETAIL B

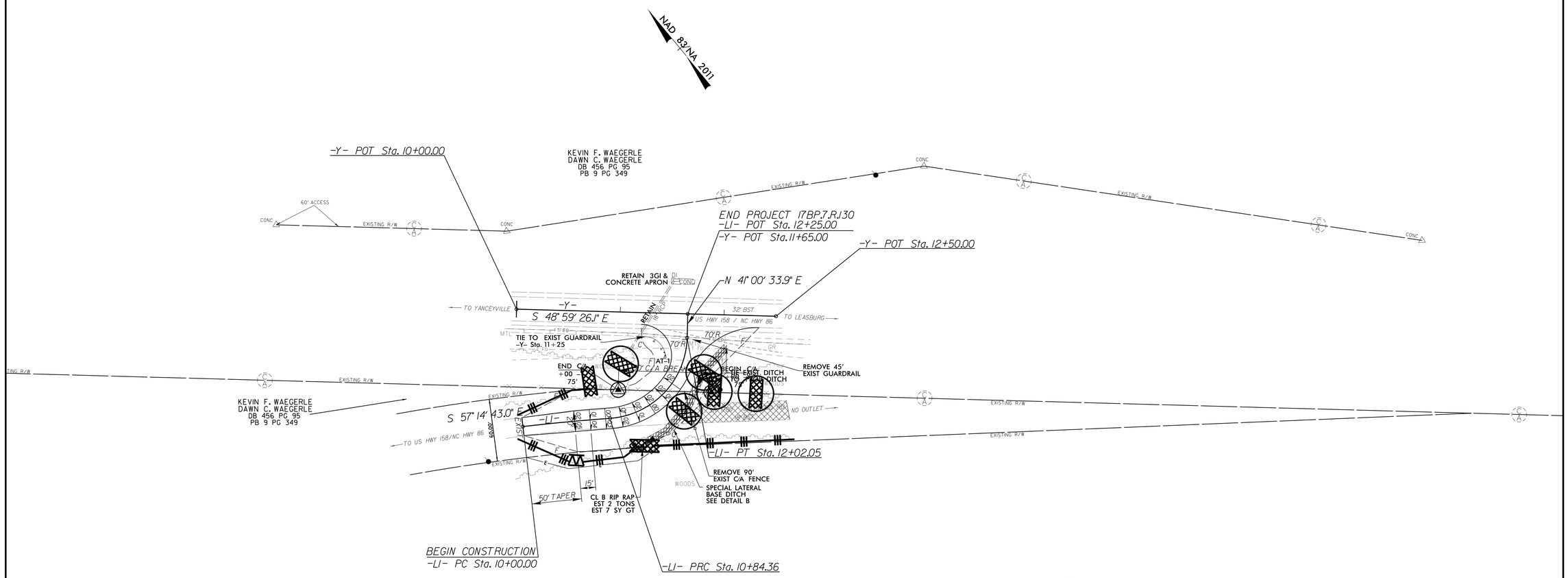
SPECIAL LATERAL BASE DITCH
(Not to Scale)



Min. D = 1.0 Ft.
Max. d = 1.0 Ft.
B = 2.0 Ft.

Type of Liner = CL B Rip-Rap

–L1– STA. 11+10 TO STA. 11+97 RT



–L1–

PI Sta 10+42.19	PI Sta 11+56.76
Δ = 2° 32' 38.6" (RT)	Δ = 84° 17' 21.7" (LT)
D = 3° 00' 56.0"	D = 71° 37' 11.0"
L = 84.36'	L = 117.69'
T = 42.19'	T = 72.40'
R = 1,900.00'	R = 80.00'

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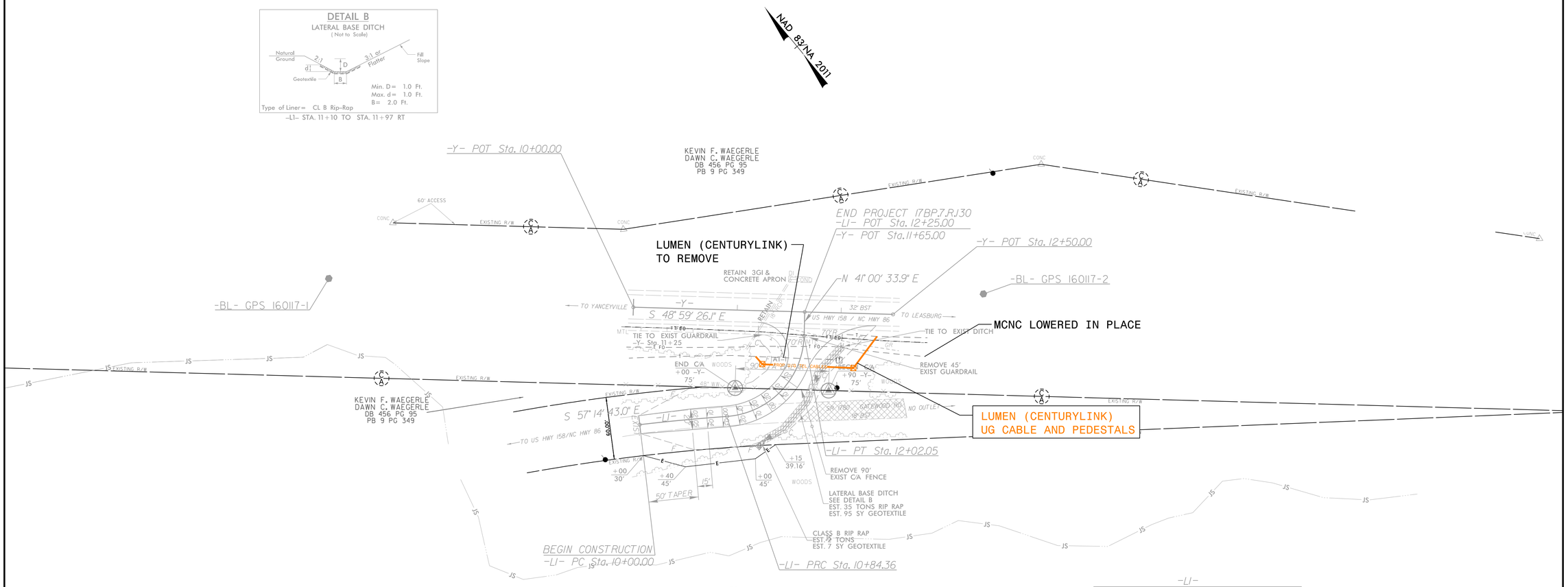
PROJECT REFERENCE NO.	SHEET NO.
117BP.7.R.130	U0-01
THIS SHEET CORRESPONDS TO RDY-5	

Prepared in the Office of: MOTT MACDONALD
7621 Purfoy Road, Suite 115
Fuquay-Varina, NC 27526
www.mottmac.com

UTILITIES BY OTHERS

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.



-L1-

PI Sta 10+42.19	PI Sta 11+56.76
Δ = 2° 32' 38.6" (RT)	Δ = 84° 17' 21.7" (LT)
D = 3° 00' 56.0"	D = 71° 37' 11.0"
L = 84.36'	L = 117.69'
T = 42.19'	T = 72.40'
R = 1,900.00'	R = 80.00'

EXISTING PAVEMENT REMOVAL

8/17/99

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