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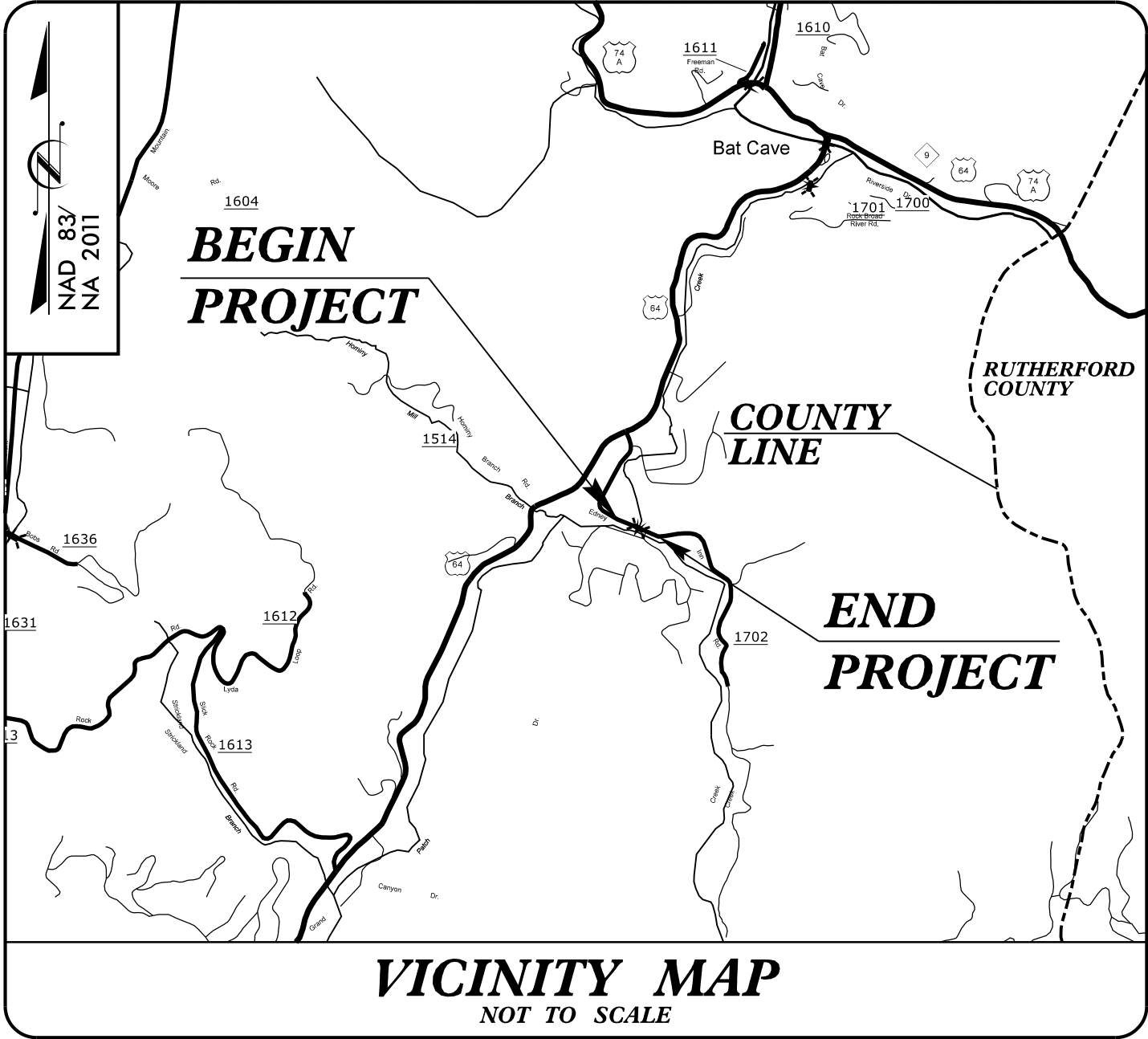
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HNTB

PROJECT: DF18314.2045330

CONTRACT: DN01164

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



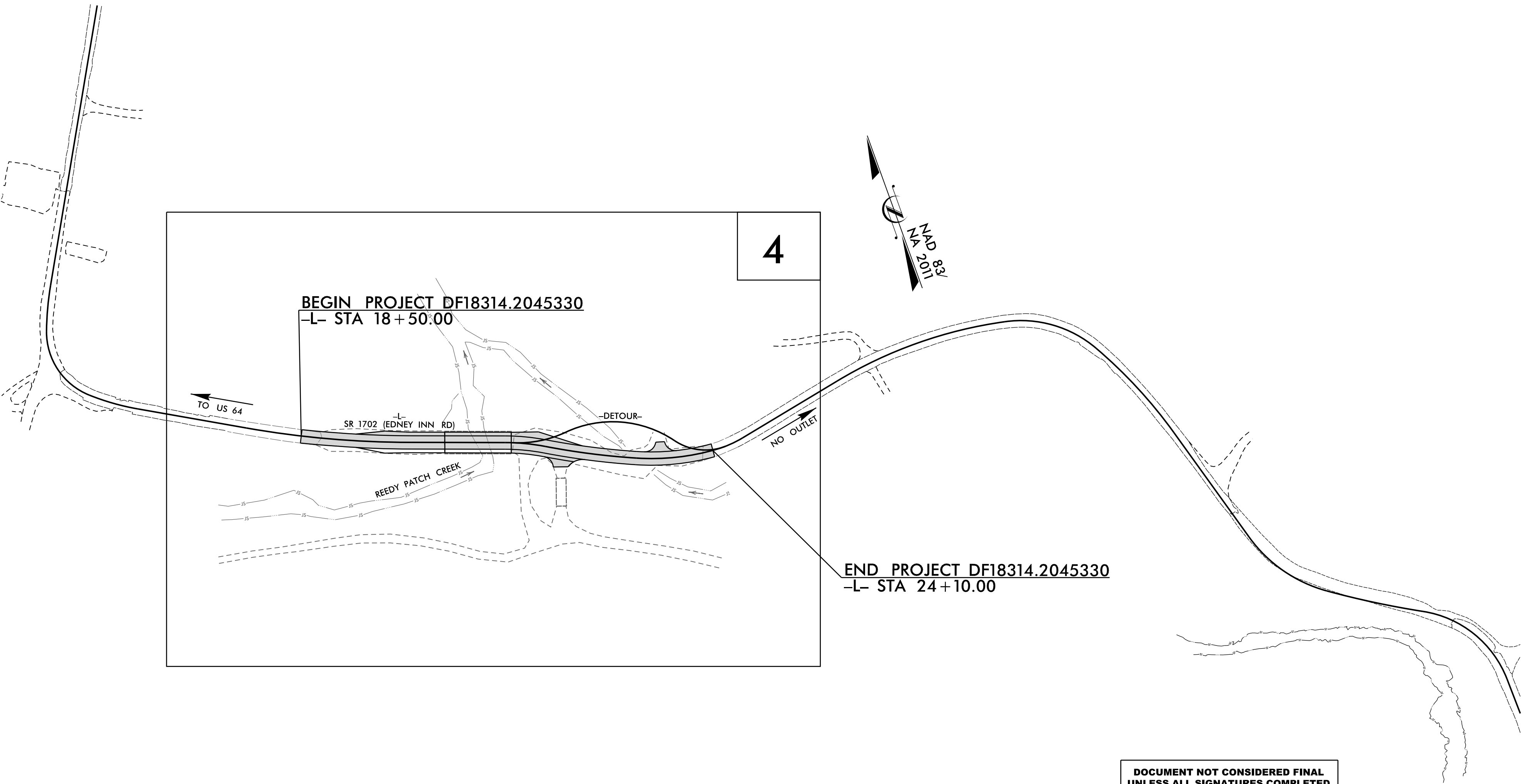
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY

**LOCATION: BRIDGE #440197 OVER REEDY PATCH CREEK
ON SR 1702 (EDNEY INN ROAD)**

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

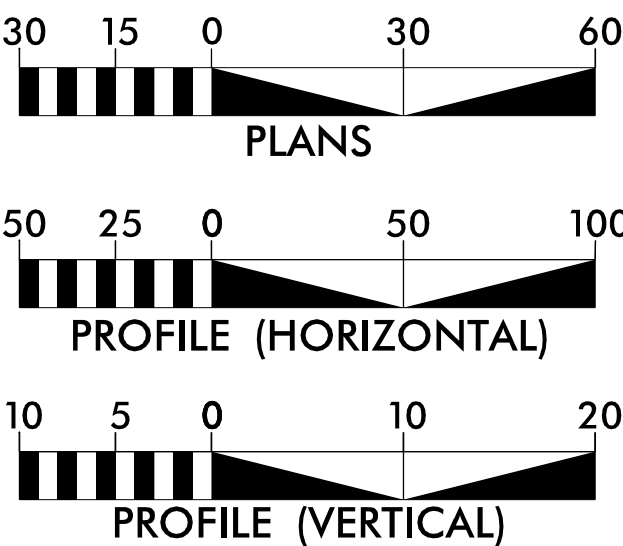
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	DF18314.2045330	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
DF18314.2045330		PE	
DF18314.2045330		ROW	
DF18314.2045330		CONST.	



NOTE:
THIS IS NOT A CONTROLLED ACCESS PROJECT.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2026 = 250
ADT 2046 = 350
T = 6%
V = 40 MPH

FUNC CLASS =
LOCAL RURAL
SUBREGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT DF18314.2045330 = 0.106 MILES

TOTAL LENGTH OF PROJECT DF18314.2045330 = 0.106 MILES

Prepared In the Office of:
HNTB
HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
FEBRUARY 25, 2026

LETTING DATE:
SEPTEMBER 8, 2026

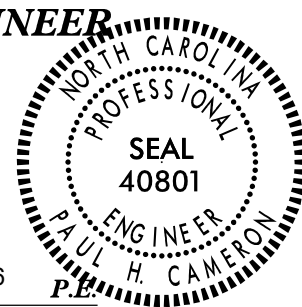
J. MATTHEW PICKENS, PE
PROJECT ENGINEER

ANDREW McOMBER, PE
PROJECT DESIGN ENGINEER

JARED BOND, PE
NCDOT CONTACT

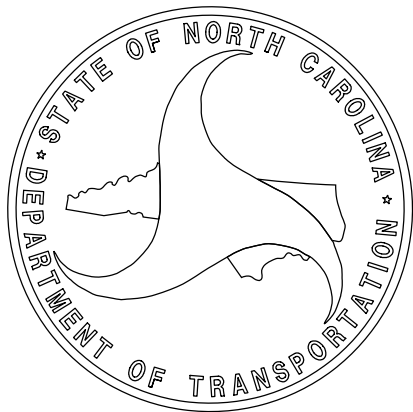
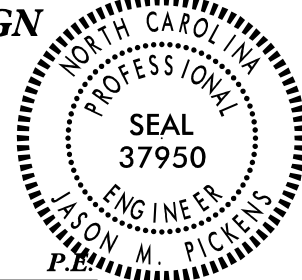
HYDRAULICS ENGINEER

Signed by:
Paul Cameron
6/30/2026
SIGNATURE:



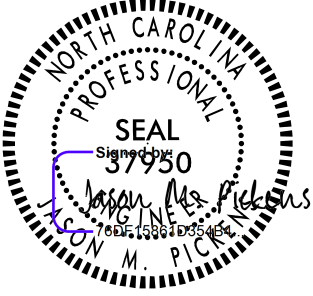
ROADWAY DESIGN ENGINEER

Signed by:
Jason M. Pickens
6/29/2026
SIGNATURE:



8/17/99

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HNTB

		HNTB		HNTB NORTH CAROLINA, P.C. 4000 Center at North Hills St. Suite 500 Raleigh, North Carolina 27609 NC License No: C-1554		PROJECT REFERENCE NO. DF18314.2045330	SHEET NO. 1A
						ROADWAY DESIGN ENGINEER  7/9/2026	
						DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
INDEX OF SHEETS		GENERAL NOTES:		2024 SPECIFICATIONS EFFECTIVE: 01-16-2024 REVISED:		EFF. 08-11-2025 REV. 11-26-2025	
SHEET NUMBER	SHEET					2024 ROADWAY ENGLISH STANDARD DRAWINGS	
1	TITLE SHEET					The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:	
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS	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.		STD.NO. TITLE	
1B	CONVENTIONAL SYMBOLS					DIVISION 2 - EARTHWORK	
2A-1	PAVEMENT SCHEDULE AND TYPICAL SECTIONS					200.02 Method of Clearing - Method II	
2B-1	ROADWAY DETAILS					225.02 Guide for Grading Subgrade - Secondary and Local	
2C-1	GUARDRAIL PLACEMENT DETAIL	CLEARING:		CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.		225.04 Method of Obtaining Superelevation - Two Lane Pavement	
2C-2	GUARDRAIL PLACEMENT DETAIL					DIVISION 3 - PIPE CULVERTS	
2C-3	METHOD OF PIPE INSTALLATION DETAIL	SUPERELEVATION:				300.01 Method of Pipe Installation (Use Details in Lieu of Standards for Sheets 1 and 2 of 2)	
2C-4	METHOD OF PIPE INSTALLATION DETAIL			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.		310.10 Driveway Pipe Construction	
2D-1 & 2D-2	DRAINAGE DETAILS					DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
3B-1	ROADWAY & DRAINAGE SUMMARIES	SHOULDER CONSTRUCTION:		ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01		560.01 Method of Shoulder Construction - High Side of Superelevated Curve - Method I	
3G-1	GEOTECHNICAL SUMMARY					DIVISION 8 - INCIDENTALS	
4	PLAN SHEET					815.02 Subsurface Drain	
5	PROFILE SHEET	SIDE ROADS:				862.01 Guardrail Placement (Use Details in Lieu of Standards for Sheets 4, 6, 11, 12, and 14 of 15)	
RW01 THRU RW04	RIGHT OF WAY SHEETS			THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.		862.02 Guardrail Installation (Use Detail in Lieu of Standard for Sheet 5 of 9)	
TMP-1 THRU TMP-12	TRAFFIC MANAGEMENT PLANS					876.01 Rip Rap in Channels and Ditches	
PMP-1 & PMP-2	PAVEMENT MARKING PLANS						
EC-1 THRU EC-5	EROSION CONTROL PLANS						
RF-1	REFORESTATION PLANS						
X-1	CROSS-SECTION INDEX						
X-1A	CROSS-SECTION SUMMARY SHEET						
X-2 THRU X-7	CROSS-SECTIONS						
S-1	STRUCTURES TITLE SHEET						
S1-1 THRU S1-7	STRUCTURE PLANS						
SN	STRUCTURE GENERAL NOTES						
		SUBSURFACE DRAINS:		SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.			
		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.			
		TEMPORARY SHORING:		SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.			
		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 DUKE ENGERY (POWER), AT&T (COMMUNICATIONS), CHARTER (COMMUNICATIONS)			
				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 OTHERS.			

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

State Line	
County Line	
Township Line	
City Line	
Reservation Line	
Property Line	
Existing Iron Pin (EIP)	
Computed Property Corner	
Existing Concrete Monument (ECM)	
Parcel/Sequence Number	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Existing Historic Property Boundary	
Known Contamination Area: Soil	
Potential Contamination Area: Soil	
Known Contamination Area: Water	
Potential Contamination Area: Water	
Contaminated Site: Known or Potential	

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

Stream or Body of Water	
Hydro, Pool or Reservoir	
Jurisdictional Stream	
Buffer Zone 1	
Buffer Zone 2	
Flow Arrow	
Disappearing Stream	
Spring	
Wetland	
Proposed Lateral, Tail, Head Ditch	
False Sump	

RAILROADS:

Standard Gauge	
RR Signal Milepost	
Switch	
RR Abandoned	
RR Dismantled	

RIGHT OF WAY & PROJECT CONTROL:

Primary Horiz Control Point	
Primary Horiz and Vert Control Point	
Secondary Horiz and Vert Control Point	
Vertical Benchmark	
Existing Right of Way Monument	
Proposed Right of Way Monument (Rebar and Cap)	
Proposed Right of Way Monument (Concrete)	
Existing Permanent Easement Monument	
Proposed Permanent Easement Monument (Rebar and Cap)	
Existing C/A Monument	
Proposed C/A Monument (Rebar and Cap)	
Proposed C/A Monument (Concrete)	
Existing Right of Way Line	
Proposed Right of Way Line	
Existing Control of Access Line	
Proposed Control of Access Line	
Proposed ROW and CA Line	
Existing Easement Line	
Proposed Temporary Construction Easement	
Proposed Temporary Drainage Easement	
Proposed Permanent Drainage Easement	
Proposed Permanent Drainage/Utility Easement	
Proposed Permanent Utility Easement	
Proposed Temporary Utility Easement	
Proposed Aerial Utility Easement	

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	
Pavement Removal	
Single Tree	
Single Shrub	
Hedge	

VEGETATION:

Woods Line	
Orchard	
Vineyard	

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	
Bridge Wing Wall, Head Wall and End Wall	
MINOR:	
Head and End Wall	
Pipe Culvert	
Footbridge	
Drainage Box: Catch Basin, DI or JB	
Paved Ditch Gutter	
Storm Sewer Manhole	
Storm Sewer	

UTILITIES:

* SUE – Subsurface Utility Engineering
LOS – Level of Service – A,B,C or D (Accuracy)

POWER:	
Existing Power Pole	
Proposed Power Pole	
Existing Joint Use Pole	
Proposed Joint Use Pole	
Power Manhole	
Power Line Tower	
Power Transformer	
U/G Power Cable Hand Hole	
H-Frame Pole	
U/G Power Line Test Hole (SUE – LOS A)*	
U/G Power Line (SUE – LOS B)*	
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)*	
U/G Fiber Optics Cable (SUE – LOS C)*	
U/G Fiber Optics Cable (SUE – LOS D)*	

WATER:

Water Manhole	
Water Meter	
Water Valve	
Water Hydrant	
U/G Water Line Test Hole (SUE – LOS A)*	
U/G Water Line (SUE – LOS B)*	
U/G Water Line (SUE – LOS C)*	
U/G Water Line (SUE – LOS D)*	
Above Ground Water Line	

TV:

TV Pedestal	
TV Tower	
U/G TV Cable Hand Hole	
U/G TV Test Hole (SUE – LOS A)*	
U/G TV Cable (SUE – LOS B)*	
U/G TV Cable (SUE – LOS C)*	
U/G TV Cable (SUE – LOS D)*	
U/G Fiber Optic Cable (SUE – LOS B)*	
U/G Fiber Optic Cable (SUE – LOS C)*	
U/G Fiber Optic Cable (SUE – LOS D)*	

GAS:

Gas Valve	
Gas Meter	
U/G Gas Line Test Hole (SUE – LOS A)*	
U/G Gas Line (SUE – LOS B)*	
U/G Gas Line (SUE – LOS C)*	
U/G Gas Line (SUE – LOS D)*	
Above Ground Gas Line	

SANITARY SEWER:

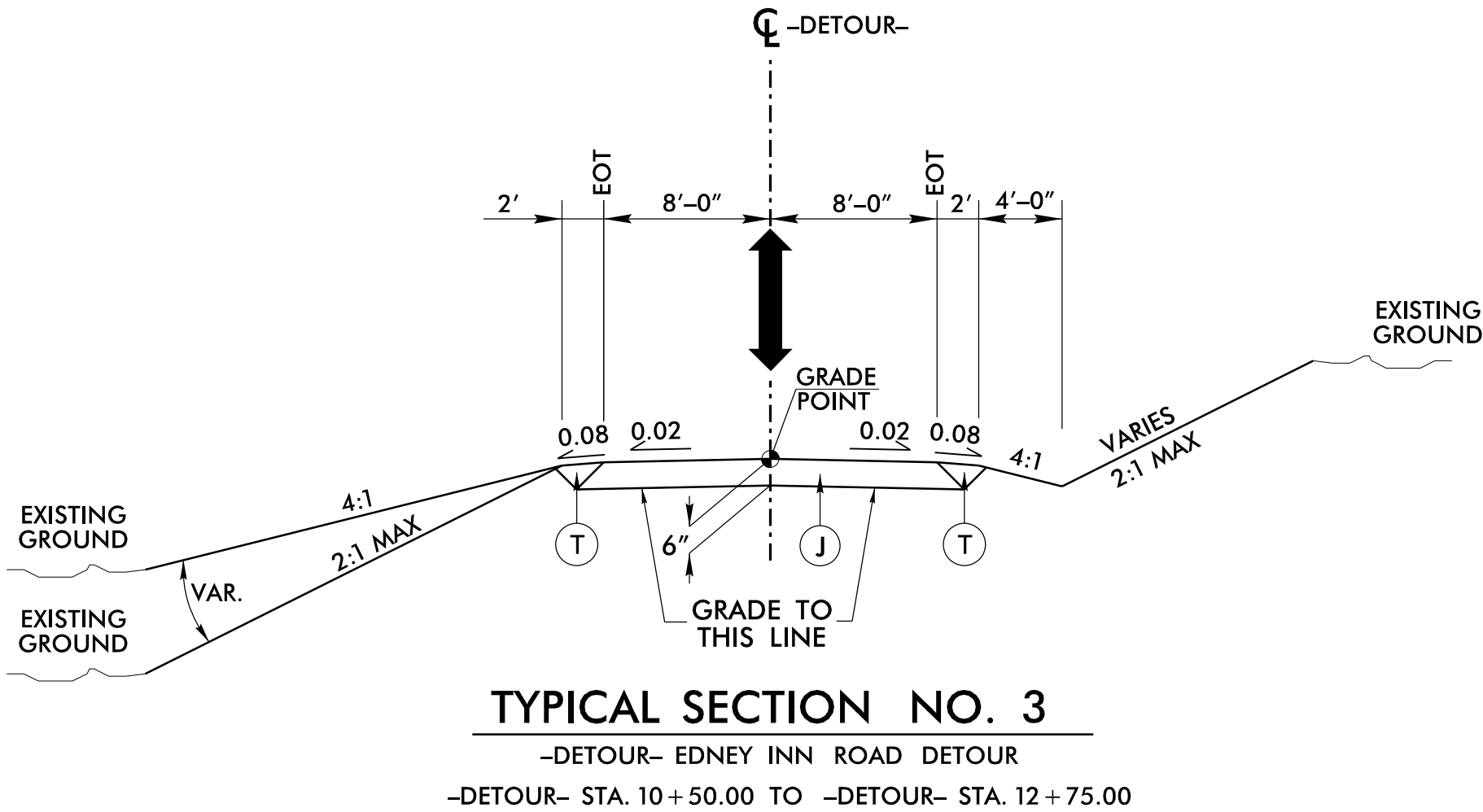
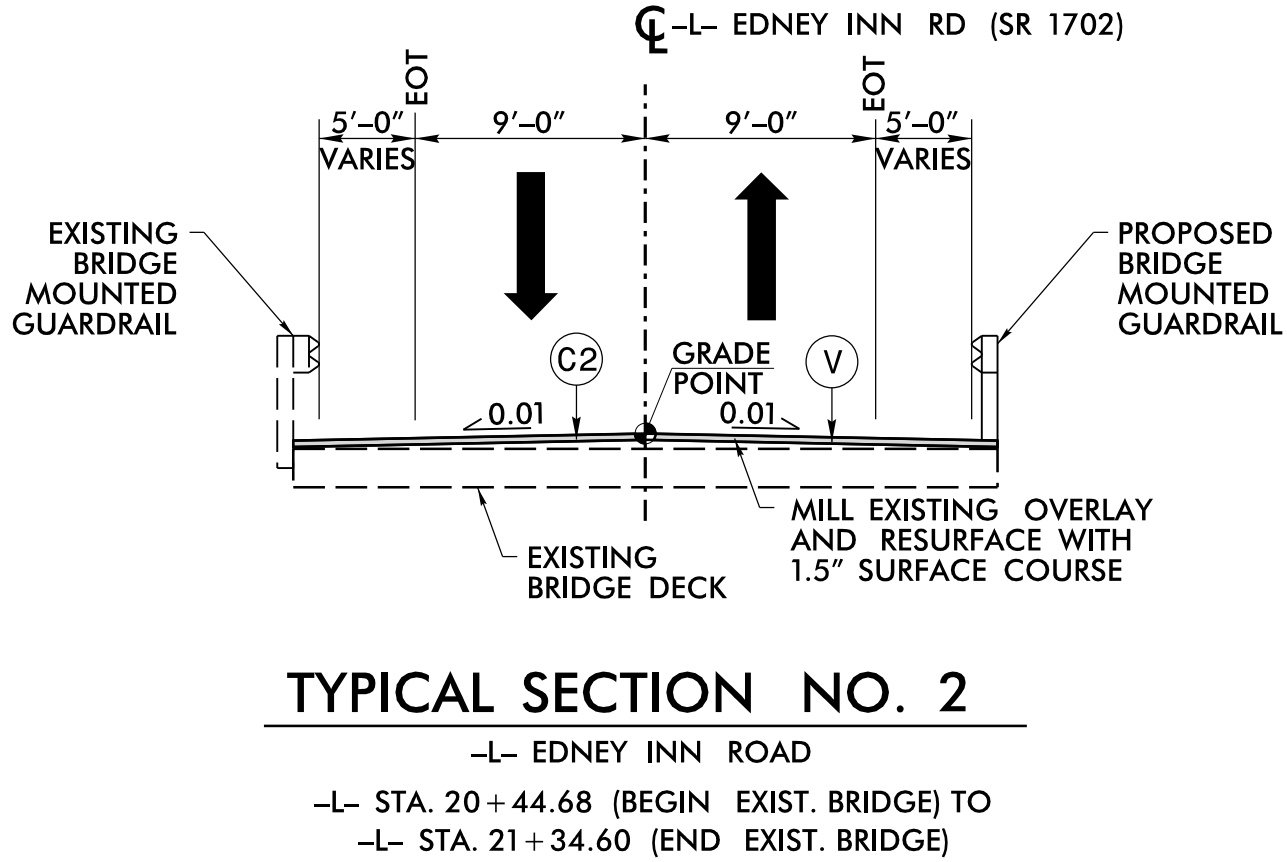
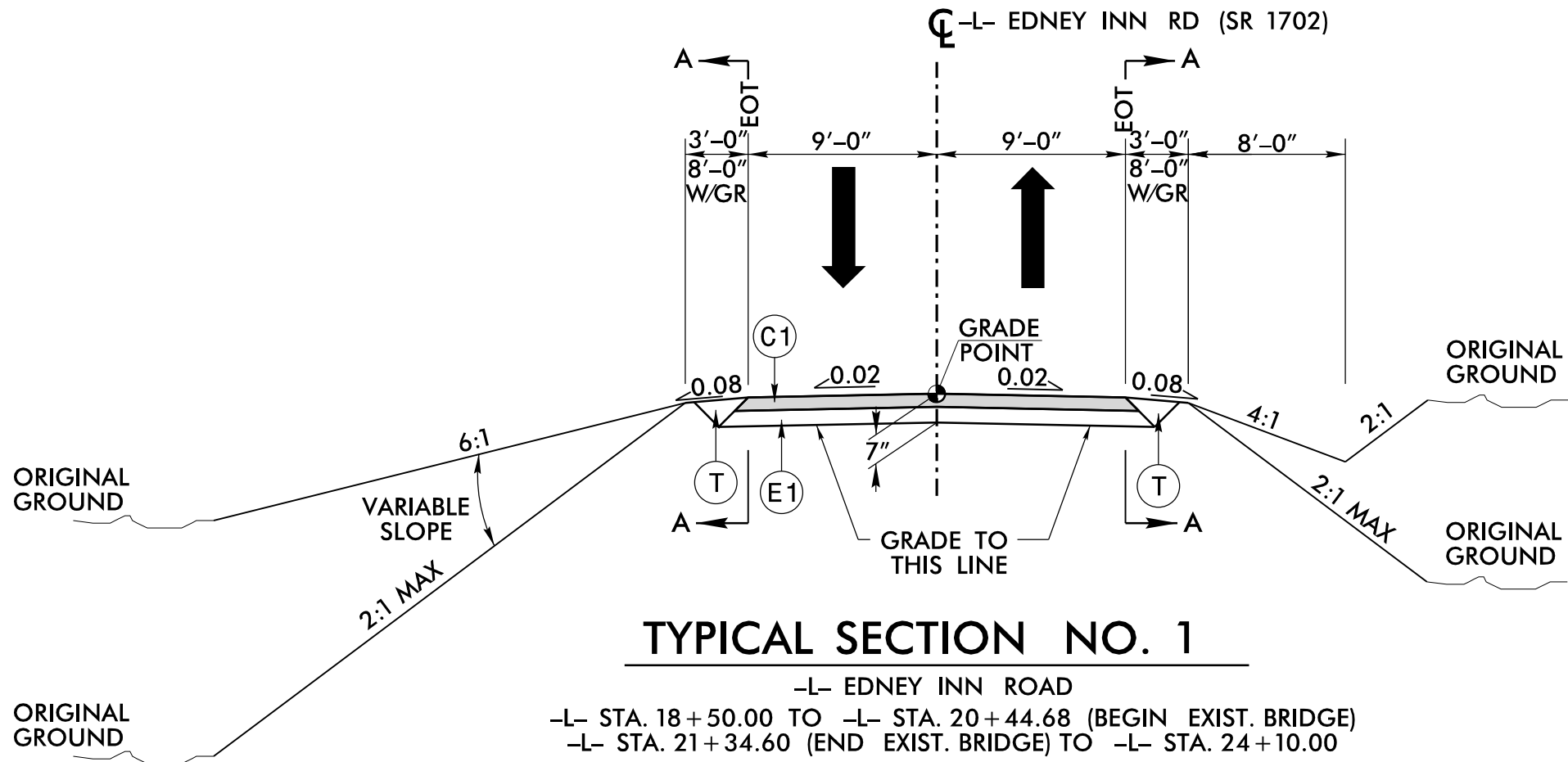
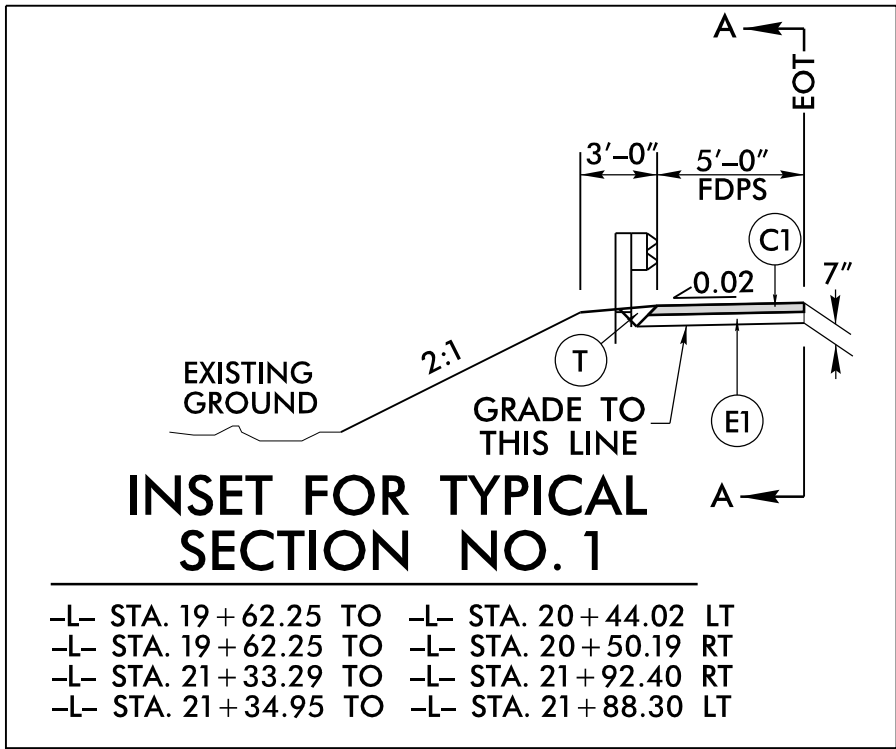
Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
U/G Sanitary Sewer Line	
Above Ground Sanitary Sewer	
SS Force Main Line Test Hole (SUE – LOS A)*	
SS Force Main Line (SUE – LOS B)*	
SS Force Main Line (SUE – LOS C)*	
SS Force Main Line (SUE – LOS D)*	

MISCELLANEOUS:

Utility Pole	
Utility Pole with Base	
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	
Geoenvironmental Boring	
Abandoned According to Utility Records	
End of Information	

FINAL PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. PLACED IN TWO LAYERS.
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
J	PROP 6" AGGREGATE BASE COURSE
T	EARTH MATERIAL
V	1½" MILLING

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



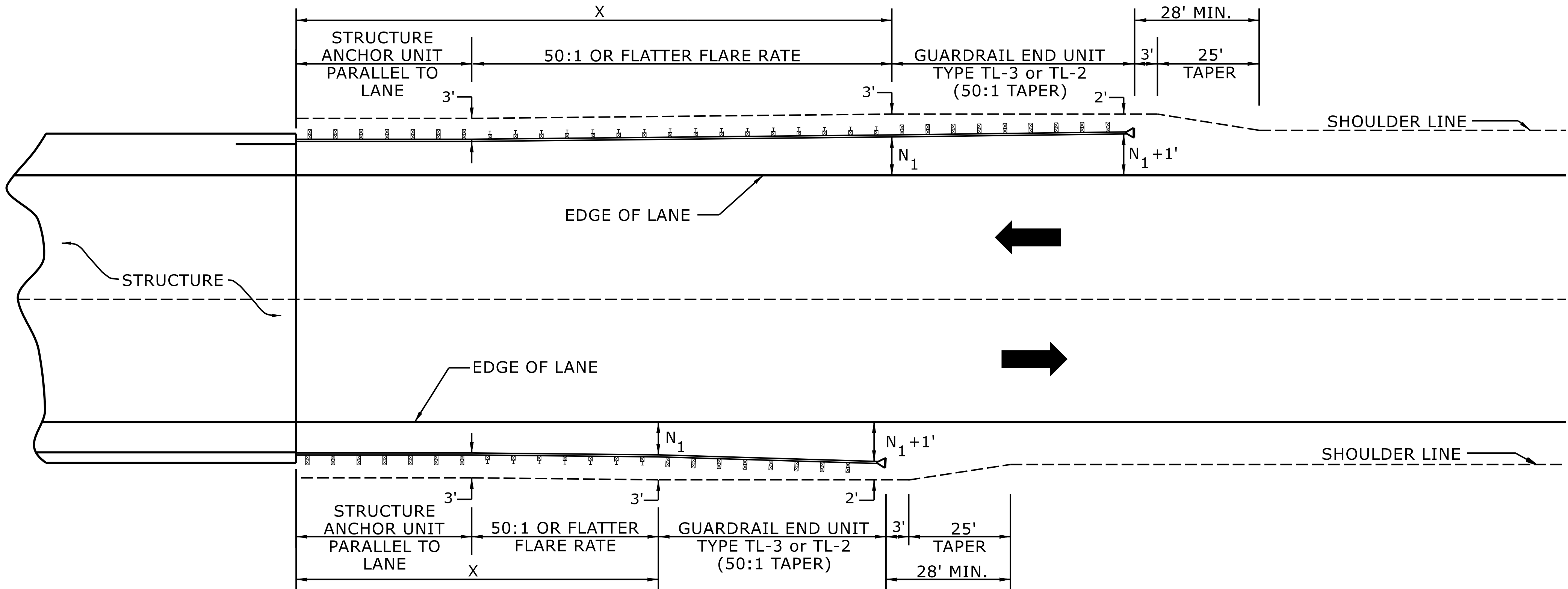
HNTB

HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	2A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
7/10/2026	7/13/2026
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	2C-1



USE FLARE RATE AS THE CONTROL IF THE "N₁" DISTANCE IS NOT OBTAINED.
("N₁" IS BASED ON SHOULDER WIDTHS IN THE ROADWAY DESIGN MANUAL)

SEE STD. 862.03 FOR STRUCTURE ANCHOR UNITS

FOR POSTED SPEEDS ≥ 45MPH USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45MPH USE GREU TYPE TL-2

GUARDRAIL LENGTH OF NEED (X) IS CALCULATED BASED ON THE AASHTO ROADSIDE DESIGN GUIDE.

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



6/25/2026

LENGTHS AND OFFSETS FOR PROPOSED GUARDRAIL AT TWO LANE - TWO WAY LOCATIONS

SHEET 4 OF 15

862D01

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**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**

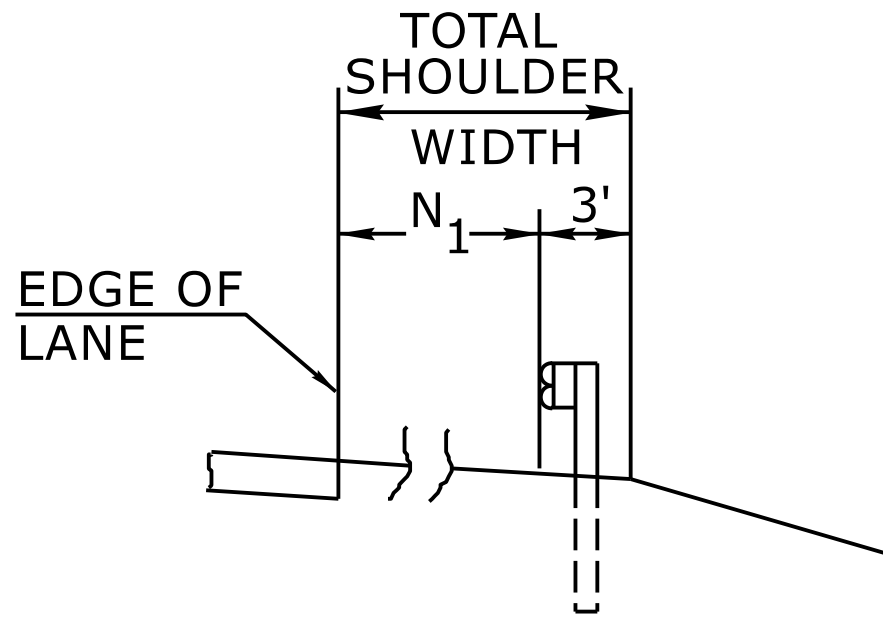
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FAX 919-250-4119

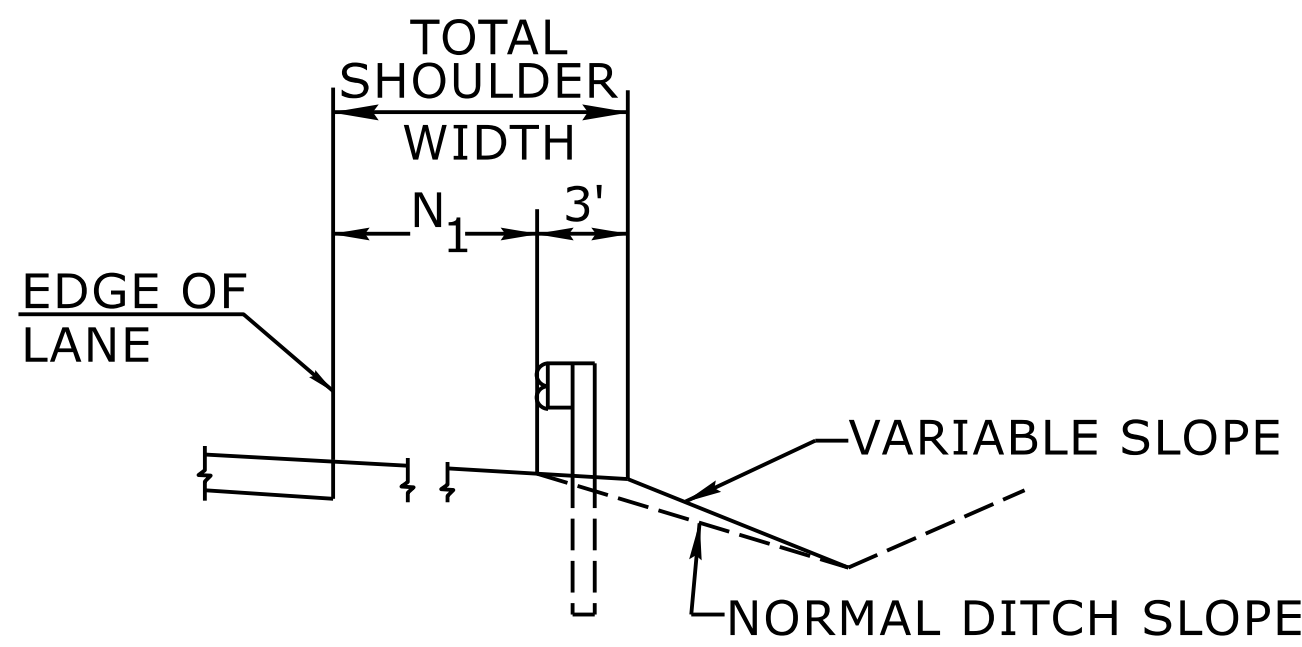
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ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	2C-2

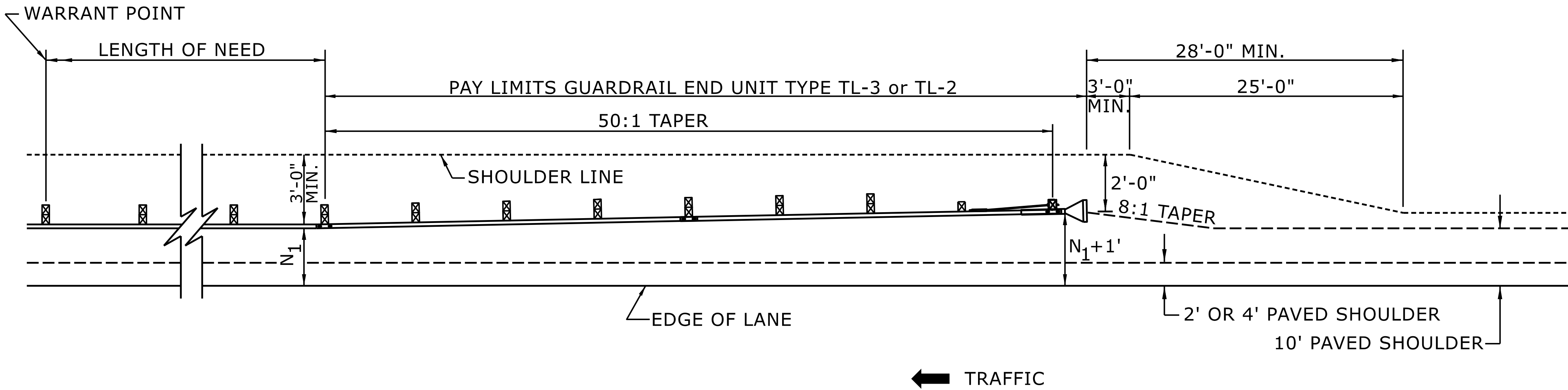


FILL SECTION



CUT SECTION

"N₁"= DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.



FOR POSTED SPEEDS ≥ 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45mph USE GREU TYPE TL-2

DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



6/25/2026

SHEET 6 OF 15
862D01

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**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**

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ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: DATE:

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

ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
FLEXIBLE PIPE

SHEET 1 OF 2
300.01

Diagram showing a pipe in a trench with normal earth foundation. The pipe is surrounded by compacted material. Labels include: TOP OF FILL, GROUND LINE, H, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 3', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, and NORMAL EARTH FOUNDATION.

Diagram showing a pipe in a trench with a rock foundation. The pipe is surrounded by compacted material, and a rock layer is shown below the bedding. Labels include: TOP OF FILL, GROUND LINE, H, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 3', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, ROCK, TYPE 4a GEOTEXTILE, I.D. /6 MIN. NOT LESS THAN 6", 1/2" PER FOOT OF 'H' BUT NOT LESS THAN 12" NOR MORE THAN 24" AS DIRECTED BY ENGR., and ROCK FOUNDATION PIPE IN TRENCH.

Diagram showing a pipe in a trench with an unsuitable material foundation. The pipe is surrounded by compacted material, and a layer of unsuitable material is shown below the bedding. Labels include: TOP OF FILL, GROUND LINE, H, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 3', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, EARTH, TYPE 4a GEOTEXTILE, I.D. /6 MIN. NOT LESS THAN 6", 1/2" PER FOOT OF 'H' BUT NOT LESS THAN 12" NOR MORE THAN 24" AS DIRECTED BY ENGR., and UNSUITABLE MATERIAL FOUNDATION.

Diagram showing a pipe above ground with normal earth foundation. The pipe is surrounded by compacted material. Labels include: TOP OF FILL, GROUND LINE, H, MIN. O.D., 1:1, COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 2', and NORMAL EARTH FOUNDATION.

Diagram showing a pipe above ground with a rock foundation. The pipe is surrounded by compacted material, and a rock layer is shown below the bedding. Labels include: TOP OF FILL, GROUND LINE, H, MIN. O.D., 1:1, COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 2', TYPE 4a GEOTEXTILE, I.D. /6 MIN. NOT LESS THAN 6", 1/2" PER FOOT OF 'H' BUT NOT LESS THAN 12" NOR MORE THAN 24" AS DIRECTED BY ENGINEER, and ROCK FOUNDATION PIPE ABOVE GROUND.

Diagram showing a pipe above ground with an unsuitable material foundation. The pipe is surrounded by compacted material, and a layer of unsuitable material is shown below the bedding. Labels include: TOP OF FILL, GROUND LINE, H, MIN. O.D., 1:1, COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 2', TYPE 4a GEOTEXTILE, I.D. /6 MIN. NOT LESS THAN 6", 1/2" PER FOOT OF 'H' BUT NOT LESS THAN 12" NOR MORE THAN 24" AS DIRECTED BY ENGINEER, and UNSUITABLE MATERIAL FOUNDATION.

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

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

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN	DATE: 7-25-2024
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC.:	

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

ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

SHEET 2 OF 2
300.01

Diagram showing a pipe in a trench with normal earth foundation. Labels include: TOP OF FILL, GROUND LINE, H, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 3', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, NORMAL EARTH FOUNDATION.

Diagram showing a pipe in a trench with rock foundation. Labels include: TOP OF FILL, GROUND LINE, H, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 3', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, ROCK, TYPE 4a GEOTEXTILE, I.D. /6 MIN. NOT LESS THAN 6", 1/2" PER FOOT OF 'H' BUT NOT LESS THAN 12" NOR MORE THAN 24" AS DIRECTED BY ENGR., UNSUITABLE MATERIAL FOUNDATION.

Diagram showing a pipe in a trench with unsuitable material foundation. Labels include: TOP OF FILL, GROUND LINE, H, I.D. /6 MIN. NOT LESS THAN 6", O.D. + 3', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, EARTH, TYPE 4a GEOTEXTILE, I.D. /6 MIN. NOT LESS THAN 6", 1/2" PER FOOT OF 'H' BUT NOT LESS THAN 12" NOR MORE THAN 24" AS DIRECTED BY ENGR., UNSUITABLE MATERIAL FOUNDATION.

Diagram showing a pipe above ground with normal earth foundation. Labels include: TOP OF FILL, GROUND LINE, H, MIN. O.D., I.D. /6 MIN. NOT LESS THAN 6", O.D. + 2', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, NORMAL EARTH FOUNDATION.

Diagram showing a pipe above ground with rock foundation. Labels include: TOP OF FILL, GROUND LINE, H, MIN. O.D., I.D. /6 MIN. NOT LESS THAN 6", O.D. + 2', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, ROCK, TYPE 4a GEOTEXTILE, I.D. /6 MIN. NOT LESS THAN 6", 1/2" PER FOOT OF 'H' BUT NOT LESS THAN 12" NOR MORE THAN 24" AS DIRECTED BY ENGINEER, UNSUITABLE MATERIAL FOUNDATION.

Diagram showing a pipe above ground with unsuitable material foundation. Labels include: TOP OF FILL, GROUND LINE, H, MIN. O.D., I.D. /6 MIN. NOT LESS THAN 6", O.D. + 2', COMPACT AFTER PIPE IS PLACED & PRIOR TO PLACEMENT OF FILL, EARTH, TYPE 4a GEOTEXTILE, I.D. /6 MIN. NOT LESS THAN 6", 1/2" PER FOOT OF 'H' BUT NOT LESS THAN 12" NOR MORE THAN 24" AS DIRECTED BY ENGINEER, UNSUITABLE MATERIAL FOUNDATION.

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACTS STANDARDS
AND DEVELOPMENT UNIT

Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY:	S.CALHOUN	DATE:	7-25-2024
MODIFIED BY:		DATE:	
CHECKED BY:		DATE:	
FILE SPEC.:			

HNTB

HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.

DF18314.2045330

RW SHEET NO.

PROJECT REFERENCE NO.

DF18314.2045330

SHEET NO.

2D-1

HYDRAULICS ENGINEER

SEAL

6/30/2026

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

LITTLE CREEK RELOCATION DETAIL

CHANNEL TYPICAL SECTION

W_{thal} = 5 ft.
W_{bed} = 18 ft.
W_{bankfull} = 24 ft.
W_{bench} = 10 ft.
D_{toe} = 0.5 ft.
D_{max} = 2 ft.

FROM STA. 00+15 TO STA. 1+00
FROM STA. 01+30 TO STA. 3+40

Type of Liner= NATURAL CHANNEL MATERIAL

ROCK CROSS VANE QUANTITIES:
75 TONS – #57 STONE
50 TONS – BOULDERS
300 SY – GEOTEXTILE FOR DRAINAGE

EARTHWORK QUANTITIES		
STA	XS EXCAVATION AREA (SF)	XS FILL AREA (SF)
3+25	85.1	–
3+00	47.4	8.7
2+75	97.3	61.2
2+50	176.6	143.3
2+25	222.8	–
2+00	237.4	–
1+75	257.2	–
1+50	282.5	–
1+25	–	–
1+00	97.5	–
0+75	192.5	–
0+50	165.6	–
0+25	97.1	8.2
0+00	–	–
TOTAL	1,729	205
APPROX. NET EXCAVATION = 1,524 CY*		
*CALCULATED USING AVERAGE END AREA METHOD		

1/3 BANKFULL WIDTH

1/3 BANKFULL WIDTH

1/3 BANKFULL WIDTH

BANKFULL

20° TO 30°

BANKFULL

HEADER ROCK, TYP. SEE PROFILE FOR ELEVATION

BACKFILL, TYP.

#57 STONE

EXCAVATED TRENCH FOR ROCK CROSS VANE CONSTRUCTION

GEOTEXTILE

POOL

POOL EXCAVATED PER DIRECTION OF ENGINEER

KEY IN VANE TO BANK MINIMUM OF 5' AT AN ELEVATION EQUAL TO BANKFULL OR SLIGHTLY LOWER

SECTION A-A

SECTION B-B

PLAN VIEW

ROCK CROSS VANE DETAIL

NOT TO SCALE

NOTES:

1) DEEPEST PART OF POOL TO BE IN LINE WITH WHERE VANE ARM TIES INTO BANKFULL.

2) DO NOT EXCAVATE POOL TOO CLOSE TO FOOTER BOULDERS.

3) CLASS "A" STONE CAN BE USED TO REDUCE VOIDS BETWEEN HEADERS AND FOOTERS.

4) COMPACT BACKFILL TO EXTENT POSSIBLE OR AT THE DIRECTION OF THE ENGINEER.

5) POOL DEPTH SHOULD BE 2 TO 3 TIMES BANKFULL DEPTH.

30-JUN-2026 07:15
\\Hydraulics\CENTR

HNTB

HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.
DF18314.2045330

SHEET NO.
2D-2

RW SHEET NO.

HYDRAULICS ENGINEER

6/30/2026

SEAL

40801

PAUL AMERSON

Professional Engineer

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DETAIL 4-3

UPSTREAM EXCAVATION AND BANK STABILIZATION

(Not to Scale)

Left Bank
12 CY Fill

CLASS 'II' RIP RAP
2.0' THICK (TYP.)

LT BANK EXCAVATION:
282 CY

FLOOD BENCH
@ 1562.0'

CLASS 'II' RIP RAP
2.0' THICK

30' BASE CHANNEL
BOTTOM ELEV 1560.0'

MAIN CHANNEL EXCAVATION:
117 CY

EXISTING BRIDGE

POST HURRICANE
EX GROUND

CLASS 'II' RIP RAP
2.0' THICK (TYP.)

RT BANK EXCAVATION:
149 CY

FLOOD BENCH
@ 1562.0'

CLASS 'II' RIP RAP
2.0' THICK

MAIN CHANNEL
APPROX
2 CY FILL

EXCAVATION

GRADING/FILL

DETAIL E1

EMBANKMENT STABILIZATION

(Not to Scale)

1.0' min.

1.5'

Place Geotextile Under
Riprap in Locations
Directed by Engineer

Press Riprap into
Graded Berm
Until Refusal

Type of Liner= 10 TONS CL 'B'; Rip-Rap, Keyed-In
16 SY GEOTEXTILE

FROM -DETOUR- STA. 11+37 TO STA. 11+50 LT

DETAIL SC1

SPECIAL CUT 'V' DITCH

(Not to Scale)

Natural Ground

2:1 or Flatter

D

4:1

Front Ditch Slope

Min. D = 1.5 Ft.

FROM -L- STA. 21+25 TO STA. 23+25 LT

DETAIL SC2

SPECIAL CUT 'V' DITCH

(Not to Scale)

Natural Ground

2:1

D

4:1 or Flatter

Front Ditch Slope

Min. D = 1 Ft.

FROM -DETOUR- STA. 11+50 TO STA. 11+75 LT
FROM -DETOUR- STA. 12+25 TO STA. 12+57 LT

DETAIL S1

STANDARD 'V' DITCH

(Not to Scale)

Natural Ground

2:1

D

2:1

Natural Ground

Min. D = 2 Ft.

FROM -L- STA. 21+23 (44.4' LT) TO STA. 21+75 (32.5' LT)
EST. 51 CY DDE

DETAIL 4-4

DOWNSTREAM EXCAVATION AND BANK STABILIZATION

(Not to Scale)

POST HURRICANE
EX GROUND

FLOOD BENCH
ELEV=1562.0

RT BANK EXCAVATION:
241 CY

CLASS 'II' RIP RAP
2.0' THICK

2:1

FLOOD BENCH
ELEV=1562.0

LEFT OVERBANK
APPROX 40 CY FILL

CLASS 'II' RIP RAP
2.0' THICK

2:1

30' BASE CHANNEL
BOTTOM ELEV 1560.0'

MAIN CHANNEL EXCAVATION
294 CY

EXCAVATION

GRADING/FILL

30-JUN-2026 07:45
\\Hydraulics\CENTRAL\30-JUN-2026 07:45\97-HYD_Details & PFL.dgn

SUMMARY OF EARTHWORK

STATION	STATION	UNCL. EXCAV.	EMBAK. + %	BORROW	WASTE
-DETOUR- 10 + 50.00	12 + 75.00	201	653	452	
-DETOUR- 10 + 50.00	12 + 75.00		231	231	
-L- 18 + 50.00	20 + 44.68	120	158	158	120
-L- 21 + 34.60	24 + 10.00	81	296	296	81
SUBTOTAL:		402	1,338	1,137	201
TOTAL:		402	1,338	1,137	201
MATERIAL FOR STREAM BANK RESTORATION BACKFILL			62	62	
PROJECT TOTALS:		402	1,400	1,199	201
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				60	
GRAND TOTALS:		402	1,400	1,259	201
SAY:		410		1,300	

UNDERCUT EXCAVATION PER GEOTECH RECOMMENDATIONS:	250 CY (CONTINGENCY)
SELECT GRANULAR MATERIAL PER GEOTECH RECOMMENDATIONS:	200 CY (CONTINGENCY)
GEOTEXILE FOR SOIL STABILIZATION PER GEOTECH RECOMMENDATIONS:	200 SY (CONTINGENCY)
SHALLOW EXCAVATION PER GEOTECH RECOMMENDATIONS:	225 CY (CONTINGENCY)
CLASS IV SUBGRADE STABILIZATION PER GEOTECH RECOMMENDATIONS:	150 TONS (CONTINGENCY)
GEOTEXILE FOR SUBGRADE STABILIZATION PER GEOTECH RECOMMENDATIONS:	225 SY (CONTINGENCY)
EST DDE = 51 CY	

These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Removal of Existing Asphalt Pavement, and Clearing and Grubbing will be paid for at the contract lump sum price for "Grading."

Earthwork quantities are calculated by the Roadway Design Unit.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.

DF18314.2045330

SHEET NO.

3B-1

ASPHALT PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LY/RT/CL	ASPHALT REMOVAL (SY)
-L-	18 + 50	18 + 77	CL	49.99
-L-	24 + 02	24 + 10	CL	27.60
			TOTAL:	77.59
			SAY:	80

"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 TL-3
 NG = NON-GATING IMPACT ATTENUATOR TL-3

GUARDRAIL SUMMARY

[illegible]

NOTE: Invert Elevations are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

SUB-REGIONAL

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

[illegible]

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF GEOTEXTILE
FOR SUBGRADE STABILIZATION

LINE	Station	Station	Geotextile for Subgrade Stabilization SY
CONTINGENCY			
		TOTAL SY:	0*

*Total square yards of "Geotextile for Subgrade Stabilization" is only the estimated quantity for subgrades and may only represent a portion of the geotextile quantity shown in the Item Sheets of the Proposal.

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU(1/2)/AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Subgrade Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY			ASU-1		75	150	225		
			TOTAL CY/TONS/SY:		75	150**	225**	0	0

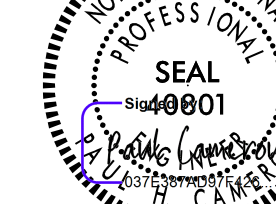
*ASU(1/2) = Aggregate Subgrade (Type 1 or 2)
*AST = Aggregate Stabilization
**Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Subgrade Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.

SUMMARY OF SUBSURFACE DRAINAGE

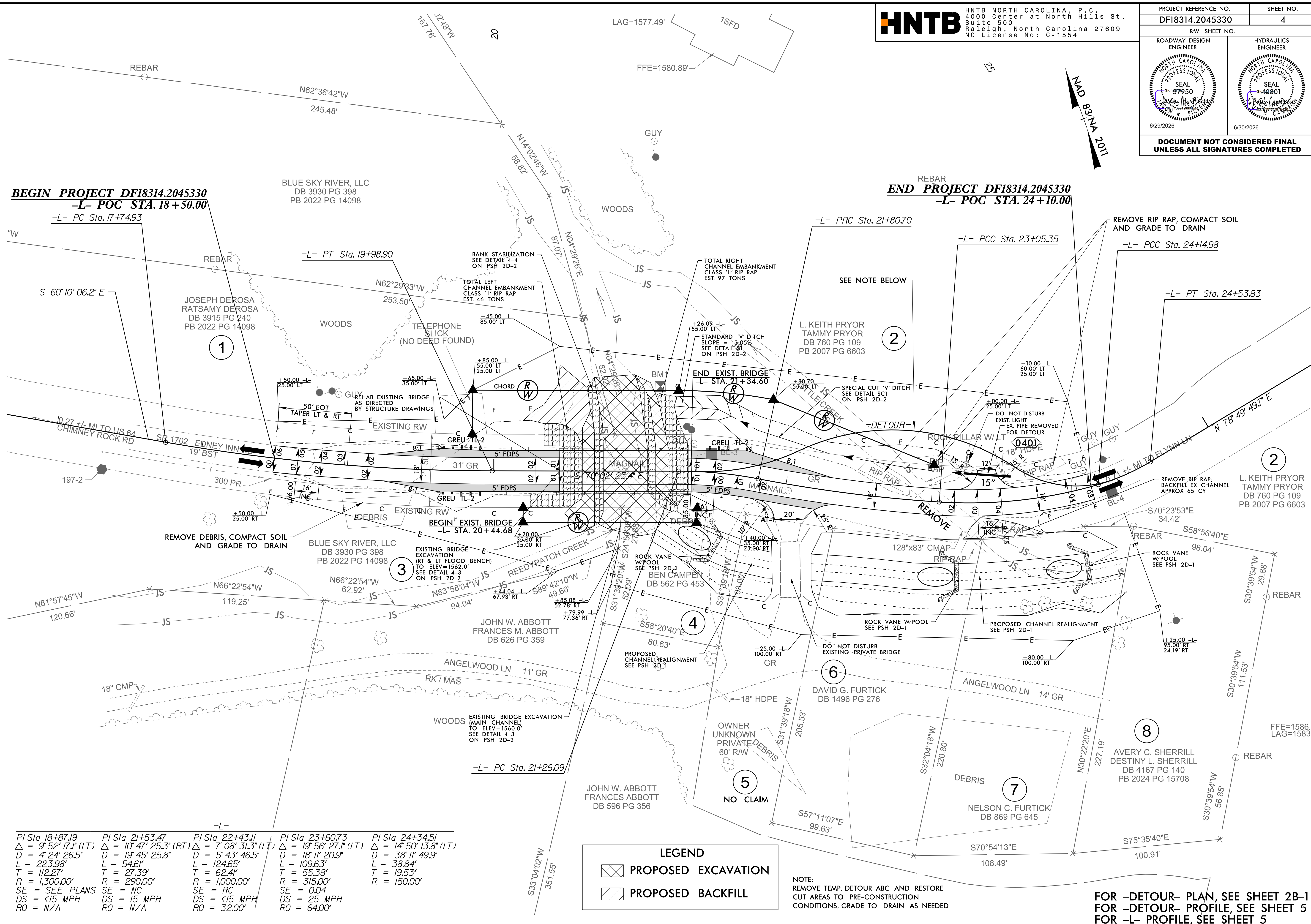
LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	150
				TOTAL LF:	150

*UD = Underdrain
*BD = Blind Drain
*SD = Subsurface Drain

HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
6/29/2026	6/30/2026
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UNLESS ALL SIGNATURES COMPLETE**

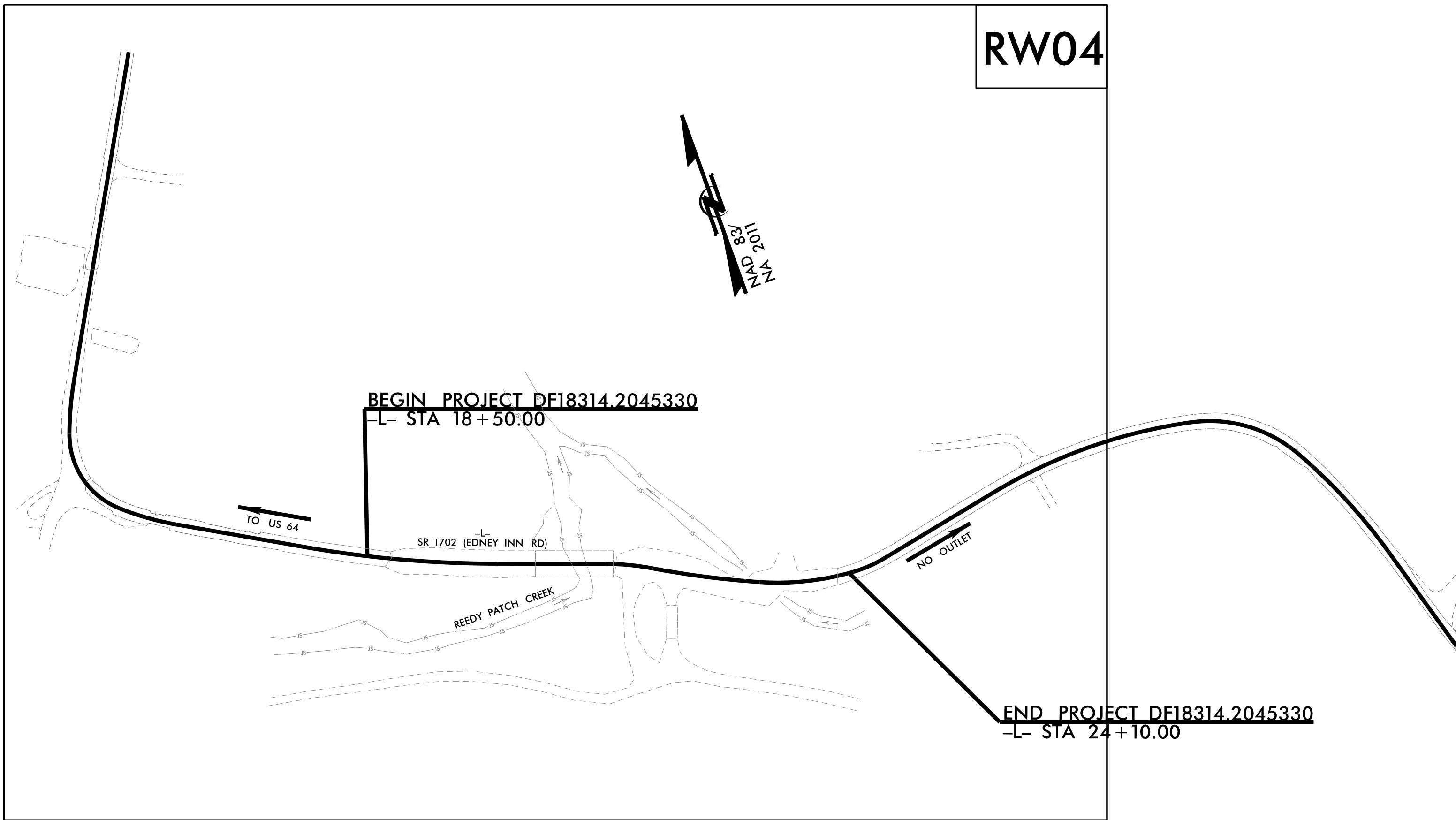
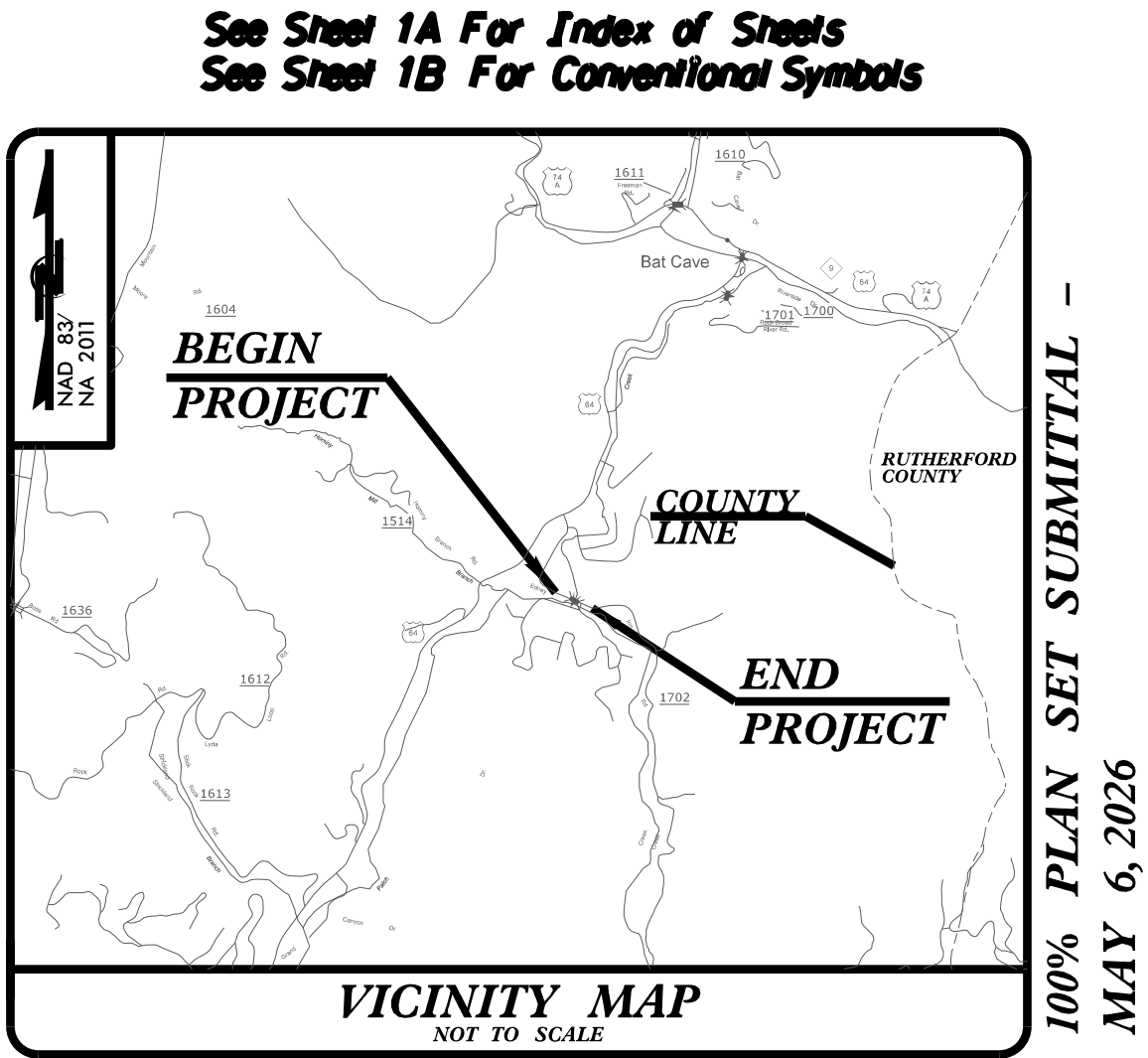
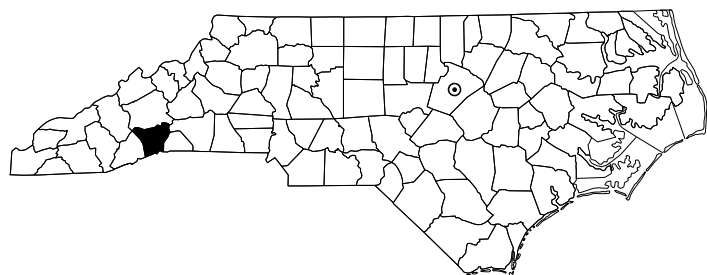


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	DF18314.2045330	RW01	5

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SURVEY CONTROL, EXISTING CENTERLINES,
RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

HENDERSON COUNTY



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT
IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY
NCDOT FOR MONUMENT 197-2
WITH NAD83/2011 STATE PLANE GRID COORDINATES OF
NORTHING: 630513.4460' EASTING: 1018449.7360'
ELEVATION: 1575.44'
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT
(GROUND TO GRID) IS: 0.99980732
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

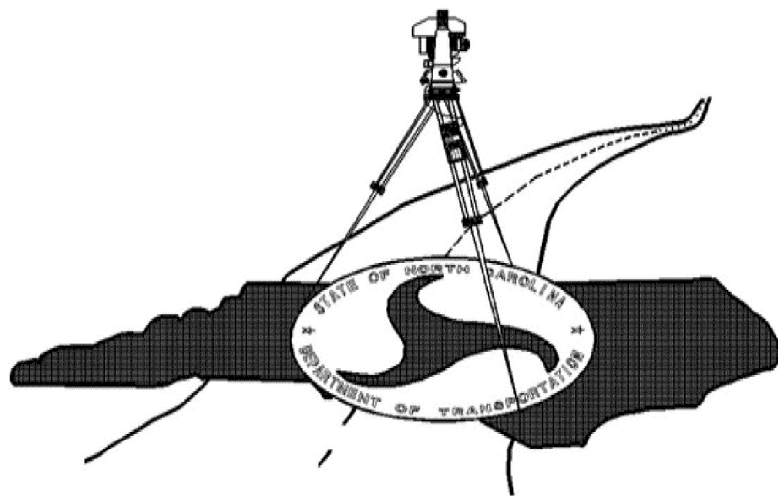
Prepared in the Office of:

LOCATION AND SURVEYS
DIVISION 14
122 BONNIES LANE
SYLVA, NC 28779

PROFESSIONAL LAND
SURVEYOR



Signed by: *Brian Barritt* 07/09/2026
ASSUREANCE: *Brian A. Barritt*
SIGNATURE: DATE:

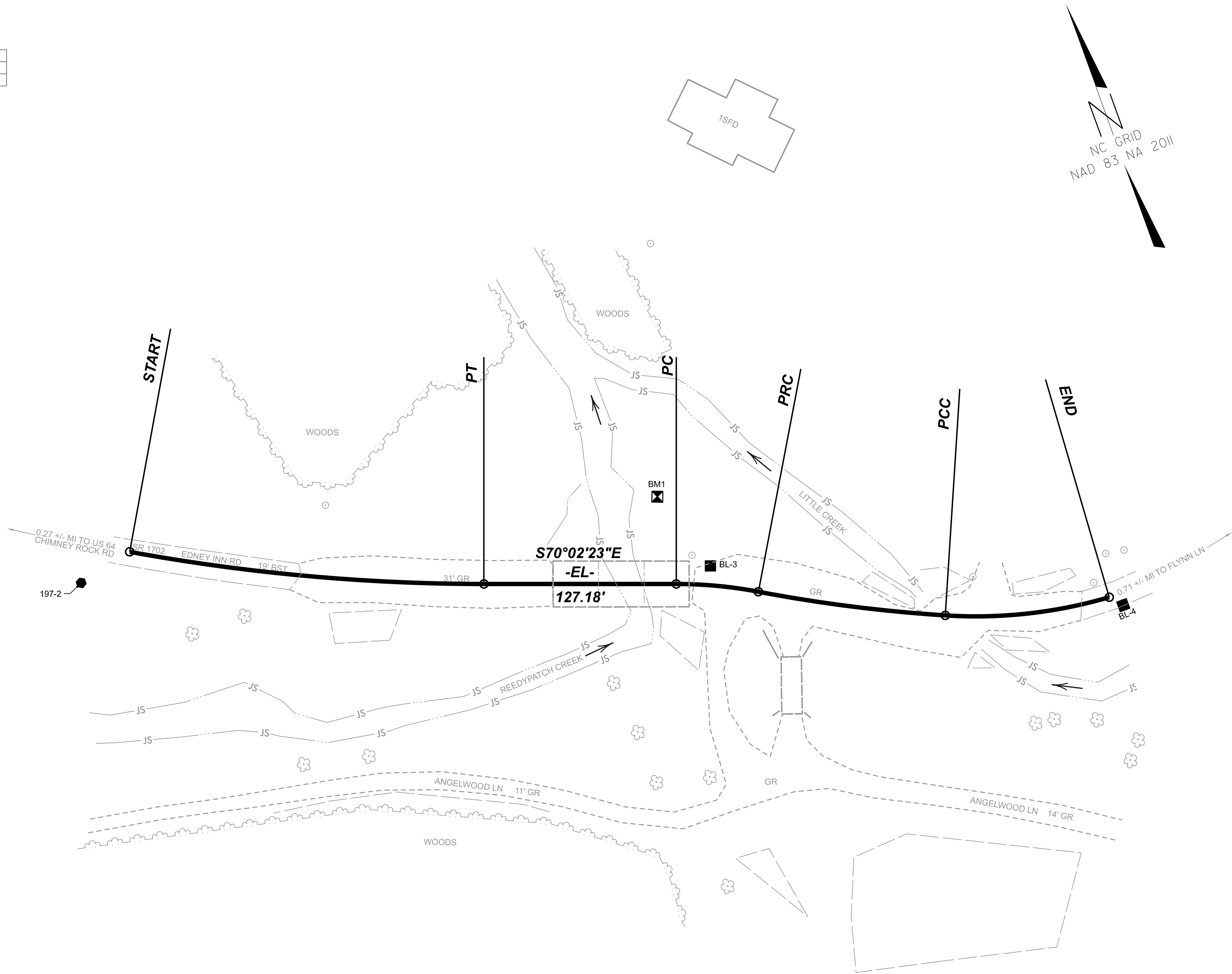


SURVEY CONTROL SHEET
W/EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

BASELINE POINTS TABLE				
POINT	DESC	NORTH	EAST	ELEVATION
1	197-1	630752.7800	1018205.7530	1575.7900
2	197-2	630513.4460	1018449.7360	1575.4400
3	BL-3	630382.0001	1018844.5813	1570.8900
4	BL-4	630264.4654	1019092.3099	1579.9100

BENCHMARK TABLE				
POINT	DESC	NORTH	EAST	ELEVATION
BM1	RR SPIKE IN 20" HICKORY	630436.9759	1018827.2710	1567.2300

197-1



I, MATTHEW T. CORNWELL, PLS, CERTIFY THAT THE PROJECT CONTROL WAS PERFORMED UNDER MY SUPERVISION FROM AN ACTUAL GPS SURVEY MADE UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:

CLASS OF SURVEY: **AA**
TYPE OF GPS FIELD PROCEDURE: RTN
DATES OF SURVEY: 10/14/2024
DATUM/EPOCH: NAD83/2011
PUBLISHED/FIXED-CONTROL USE: N/A
LOCALIZED AROUND: 197-2
NORTHING: 630513.446
EASTING: 1018449.736
COMBINED GRID FACTOR: 0.99980732
GEOID MODEL: GEOID18
UNITS: US SURVEY FEET

I ALSO CERTIFY THAT THE BASELINE CONTROL FOR THIS PROJECT WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT ALL HORIZONTAL CLOSURES HAD A MINIMUM RATIO OF PRECISION OF 1:20,000 (CLASS AA) AND VERTICAL ACCURACY TO CLASS A. FIELD WORK WAS PERFORMED OCTOBER 2024, AND ALL COORDINATES ARE BASED ON NAD 83/NA 2011 AND ALL ELEVATIONS ARE BASED ON NAVD 88; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS OF 21NCAC 56.1600 AS APPLICABLE.

THIS 7/7/2026
Signed by: Matthew Cornwell
EBD38F11473E475
PROFESSIONAL LAND SURVEYOR L-4775

EXISTING ALIGNMENT NAME:EL									
POINT	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R
PC	630521.8403	1018486.8918							
CURVE					10°22'47.4" Left	04°24'26.5"	235.511	118.079	1300.000
PT	630421.8872	1018699.7842							
LINE			S70°02'23.4"E	127.1829					
PC	630378.4711	1018819.3272							
CURVE					10°47'25.3" Right	19°45'25.8"	54.615	27.388	290.000
PRC	630355.1179	1018868.6081							
CURVE					07°08'31.3" Left	05°43'46.5"	124.652	62.407	1000.000
PCC	630298.2163	1018979.4241							
CURVE					19°56'27.1" Left	18°11'20.9"	109.631	55.375	315.000

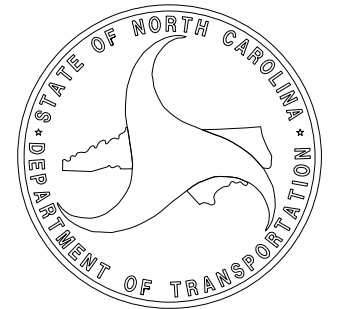
NOTES:

1. THE PROPOSED ALIGNMENT 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.

DF18314.2045330

R/W 02C-I

NORTH CAROLINA
DEPARTMENT
OF TRANSPORTATION



PROFESSIONAL LAND
SURVEYOR

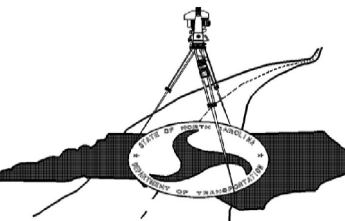


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FINAL UNLESS ALL SIGNATURES
ARE COMPLETED

2024 STANDARD
SPECIFICATIONS

TIP PROJECT: DF18314.2045330
County: Henderson

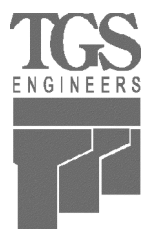
PREPARED FOR



LOCATION AND
SURVEYS UNIT

PREPARED BY

TGS ENGINEERS
201 WEST MARION ST.
SUITE 200
SHELBY, NC 28150
704-476-0003



PROPOSED ALIGNMENT CONTROL SHEET

I, BRIAN BARWATT, PLS. CERTIFY THAT THE DATA COMPILED CAME FROM AVAILABLE SURVEYS/MAPPING PERFORMED BY OTHERS AND PROVIDED TO ME BY NCDOT AND DO NOT CERTIFY TO THE ACCURACY OR QUALITY OF THE INDIVIDUAL DATA SOURCES.

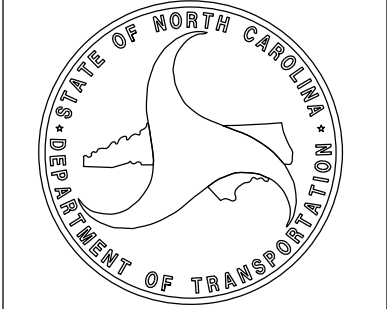
THIS 9TH DAY OF JULY, 2026.

Signed by: *Brian Barwatt*
PROFESSIONAL LAND SURVEYOR L-4727

DF18314.2045330

R/W020-I

NORTH CAROLINA
DEPARTMENT
OF TRANSPORTATION



PROFESSIONAL LAND
SURVEYOR



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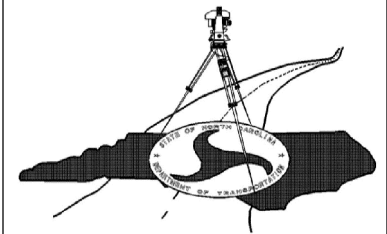
PROPOSED ALIGNMENT: L												
POINT	STATION	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R	LT	ST
START	10+00.00	631122.7800	1018501.4790	S29°20'06.4"W	383.9850							
PC	13+83.99	630788.0340	1018313.3590	S24°54'09.8"W	62.7130	08°51'53.2"	14°07'17.2"	62.7750	31.4500	405.7360		
PCC	14+46.76	630731.1520	1018286.9520	S13°54'14.1"E	103.8860	68°44'54.6"	62°16'40.9"	110.3900	62.9330	92.0000		
PCC	15+57.15	630630.3100	1018311.9150	S54°13'23.8"E	68.6010	11°53'24.9"	17°18'05.4"	68.7240	34.4860	331.1610		
PT	16+25.87	630590.2050	1018367.5710	S60°10'06.2"E	149.0530							
PC	17+74.93	630516.0580	1018496.8730	S65°06'14.8"E	223.6990	09°52'17.1"	04°24'26.5"	223.9750	112.2660	1300.0000		
PT	19+98.90	630421.8870	1018699.7840	S70°02'23.4"E	127.1830							
PC	21+26.09	630378.4710	1018819.3270	S64°38'40.7"E	54.5340	10°47'25.3"	19°45'25.8"	54.6150	27.3880	290.0000		
PRC	21+80.70	630355.1180	1018868.6080	S62°49'13.7"E	124.5710	07°08'31.3"	05°43'46.5"	124.6520	62.4070	1000.0000		
PCC	23+05.35	630298.2160	1018979.4240	S76°21'42.9"E	109.0780	19°56'27.1"	18°11'20.9"	109.6310	55.3750	315.0000		
PCC	24+14.98	630272.4970	1019085.4270	N86°14'56.6"E	38.7350	14°50'13.8"	38°11'49.9"	38.8440	19.5310	150.0000		
PT	24+53.83	630275.0310	1019124.0790	N78°49'49.7"E	148.7810							
PC	26+02.61	630303.8520	1019270.0420	S89°38'03.4"E	241.2890	23°04'13.8"	09°29'48.8"	242.9270	123.1320	603.3110		
PCC	28+45.54	630302.3120	1019511.3260	S53°53'14.7"E	128.7740	48°25'23.5"	36°29'38.9"	132.6880	70.5970	157.0000		
PCC	29+78.22	630226.4160	1019615.3580	S22°46'19.4"E	155.2040	13°48'27.1"	08°52'29.5"	155.5800	78.1690	645.5960		
PT	31+33.80	630083.3100	1019675.4320	S15°52'05.9"E	174.5080							
PC	33+08.31	629915.4510	1019723.1470	S35°24'51.2"E	127.8030	39°05'30.7"	29°59'52.0"	130.3160	67.8090	191.0000		
PCC	34+38.63	629811.2940	1019797.2070	S58°05'58.7"E	133.2680	06°16'44.3"	04°42'33.0"	133.3350	66.7340	1216.6880		
PRC	35+71.96	629740.8690	1019910.3470	S31°14'30.7"E	145.9880	59°59'40.4"	39°14'37.3"	152.8770	84.2840	146.0000		
PT	37+24.84	629616.0520	1019986.0640	S01°14'40.5"E	98.6100							
PC	38+23.45	629517.4650	1019988.2060	S12°33'57.8"W	139.9130	27°37'16.6"	19°33'04.2"	141.2770	72.0390	293.0550		
PT	39+64.73	629380.9040	1019957.7660	S26°22'36.1"W	90.7160							
END	40+55.44	629299.6320	1019917.4630									

NOTES:

1. THE PROPOSED ALIGNMENT 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.

TIP PROJECT: DF18314.2045330
County: HENDERSON

PREPARED FOR



LOCATION AND
SURVEYS UNIT

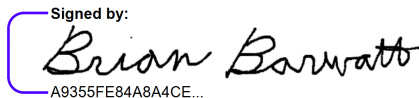
PREPARED BY

LOCATION AND SURVEYS
DIVISION 14
122 BONNIE LANE
SYLVA, NC 28779

RIGHT OF WAY CONTROL SHEET

I, BRIAN BARWATT, PLS, CERTIFY THAT THE RIGHT OF WAY AND PERMANENT EASEMENT MONUMENTATION FOR THIS PROJECT SHOWN HEREIN WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT ALL HORIZONTAL CLOSURES HAD A MINIMUM RATIO OF PRECISION OF 1:10,000 (CLASS A). FIELD WORK WAS PERFORMED ON 7/7/26, AND ALL COORDINATES ARE BASED ON NAD83/NA 2011; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS OF 21NCAC 56.1600 AS APPLICABLE.

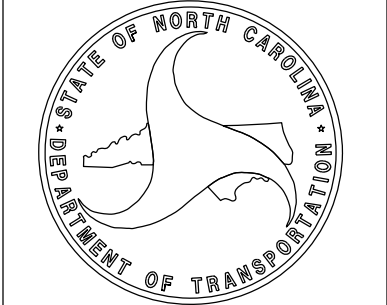
THIS 9TH DAY OF JULY, 2026.

Signed by: 
PROFESSIONAL LAND SURVEYOR L-4727

DF18314.2045330

R/W03E-1

NORTH CAROLINA
DEPARTMENT
OF TRANSPORTATION



PROFESSIONAL LAND
SURVEYOR

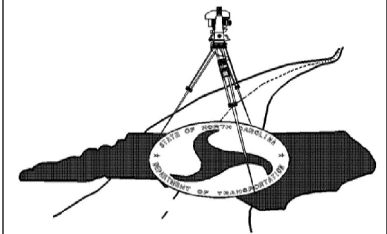


DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL SIGNATURES
ARE COMPLETED

PERMANENT ROW MARKER IRON PIN AND CAP: L				
STATION	OFFSET	NORTH	EAST	
19+85.00	-25.00	630450.1084	1018695.5275	-NOT SET (IN ROCK)
19+85.00	-55.00	630478.1952	1018706.0694	
20+20.00	25.00	630391.1869	1018711.0802	
20+20.00	35.00	630381.7876	1018707.6666	
21+26.09	-55.00	630430.1673	1018838.1024	
21+40.00	35.00	630341.1226	1018818.7751	
21+40.00	25.00	630350.3474	1018822.6357	
21+80.70	-55.00	630402.3850	1018896.7297	
23+00.00	-25.00	630323.2265	1018984.6603	
				-NOT SET (IN ROCK)

TIP PROJECT: DF18314.2045330
County: HENDERSON

PREPARED FOR



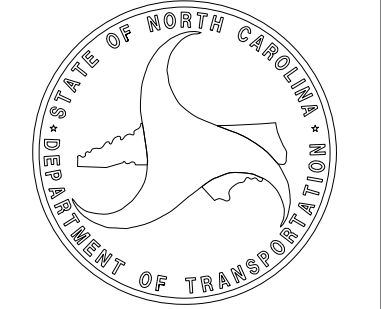
LOCATION AND
SURVEYS UNIT

PREPARED BY

LOCATION AND SURVEYS
DIVISION 14
122 BONNIE LANE
SYLVA, NC 28779

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.



I, BRIAN BARWATT, PLS, CERTIFY THAT THE RIGHT OF WAY AND PERMANENT EASEMENT MONUMENTATION FOR THIS PROJECT SHOWN HEREIN WAS COMPLETED UNDER MY DIRECT AND RESPONSIBLE CHARGE FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT ALL HORIZONTAL CLOSURES HAD A MINIMUM RATIO OF PRECISION OF 1:10,000 (CLASS A). FIELD WORK WAS PERFORMED ON 7/7/26, AND ALL COORDINATES ARE BASED ON NAD83/NA 2011; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS OF 21NCA 56.1600 AS APPLICABLE.

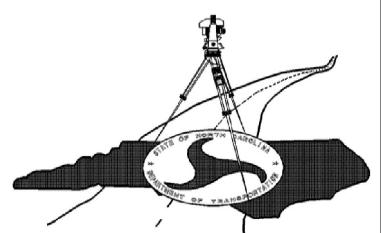
THIS 9TH DAY OF JULY, 2026.

Signed by:
Brian Barwatt
A03355EEB48A6ACE
PROFESSIONAL LAND SURVEYOR L-4727

PROFESSIONAL LAND SURVEYOR L-4727

TIP PROJECT: DF18314.2045330
County: HENDERSON

PREPARED FOR



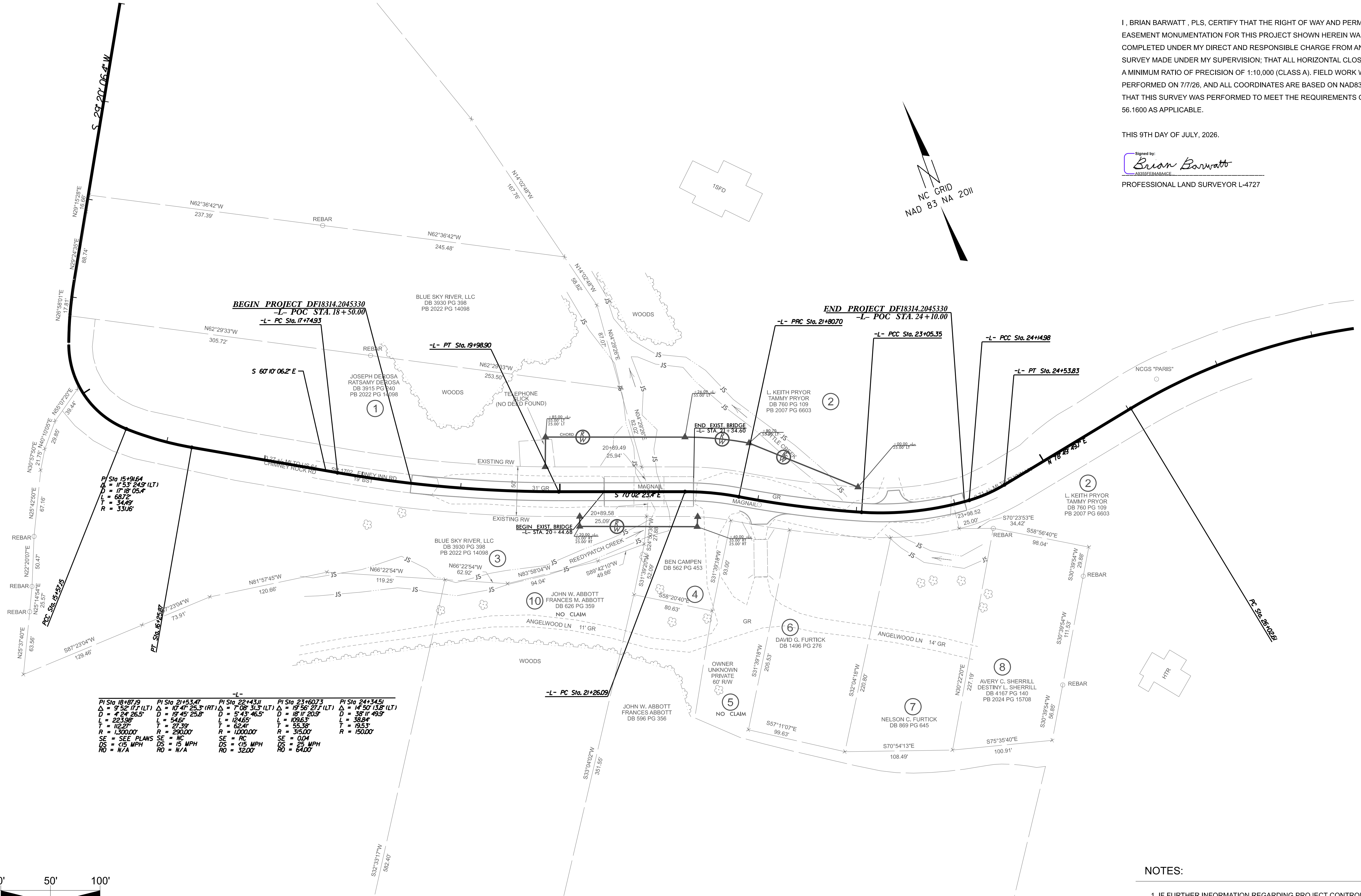
LOCATION AND
SURVEYS UNIT

PREPARED BY

LOCATION AND SURVEYS
DIVISION 14
122 HONNIE LANE
SYLVA, NC 28779

NOTES:

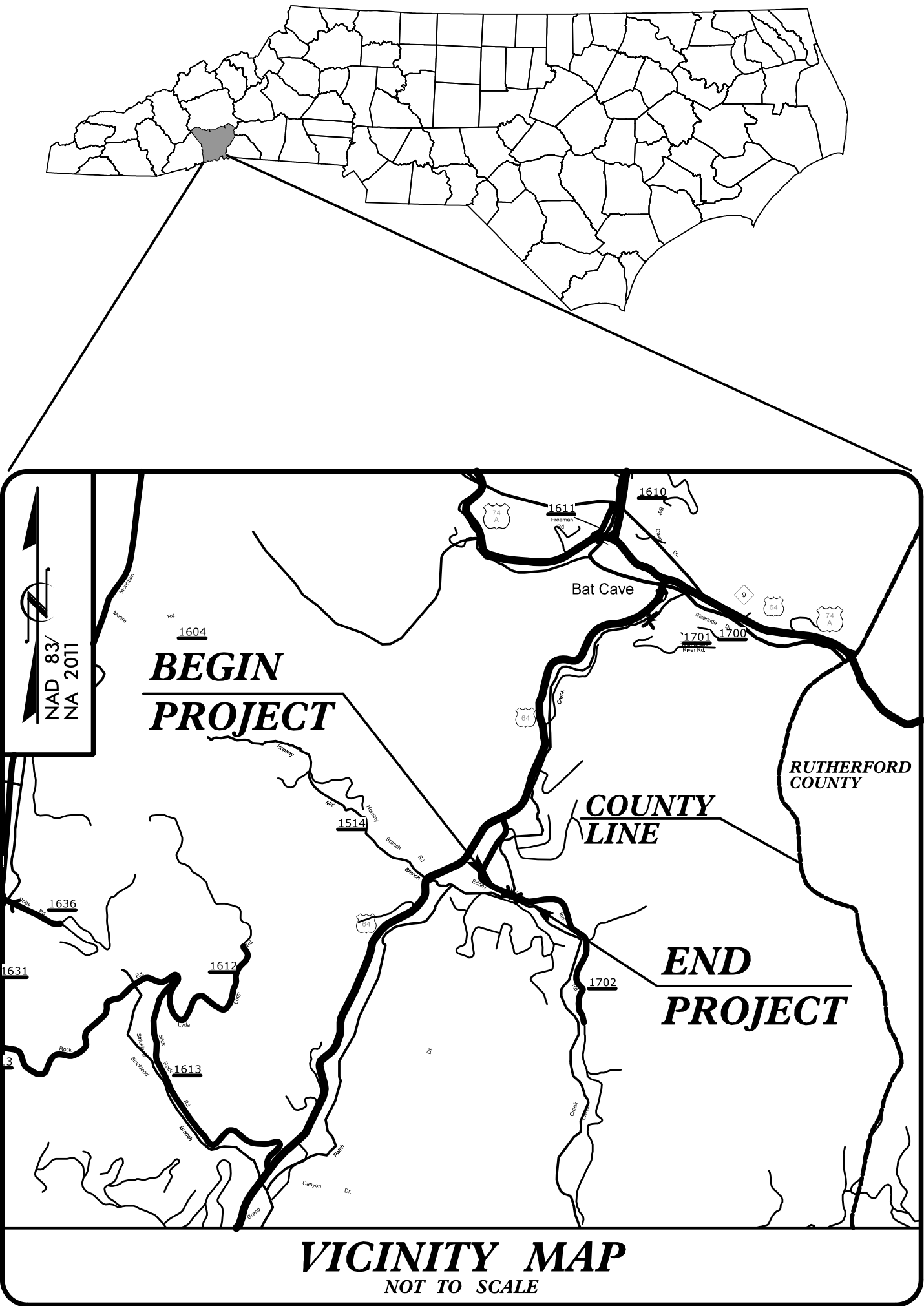
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.



-L-					
PI Sta 18+87.19	PI Sta 21+53.47	PI Sta 22+43.11	PI Sta 23+60.73	PI Sta 24+34.51	
Δ = 9°52'17.1(LT)	Δ = 10°47'25.3(RT)	Δ = 7°08'31.3(LT)	Δ = 17°56'27.1(LT)	Δ = 14°50'13.8(LT)	
D = 4°24'26.5"	D = 19°45'25.8"	D = 5°43'46.5"	D = 18°11'20.9"	D = 38°11'49.9"	
L = 223.98'	L = 54.61'	L = 124.65'	L = 109.63'	L = 38.84'	
T = 112.27'	T = 27.39'	T = 62.41'	T = 55.38'	T = 19.53'	
R = 1300.00'	R = 290.00'	R = 1000.00'	R = 315.00'	R = 150.00'	
SE = SEE PLANS	SE = NC	SE = RC	SE = 0.04'	SE = 0.04'	
DS = 15 MPH	DS = 15 MPH	DS = 15 MPH	DS = 15 MPH	DS = 15 MPH	
RO = N/A	RO = N/A	RO = 32.00'	RO = 64.00'	RO = 64.00'	

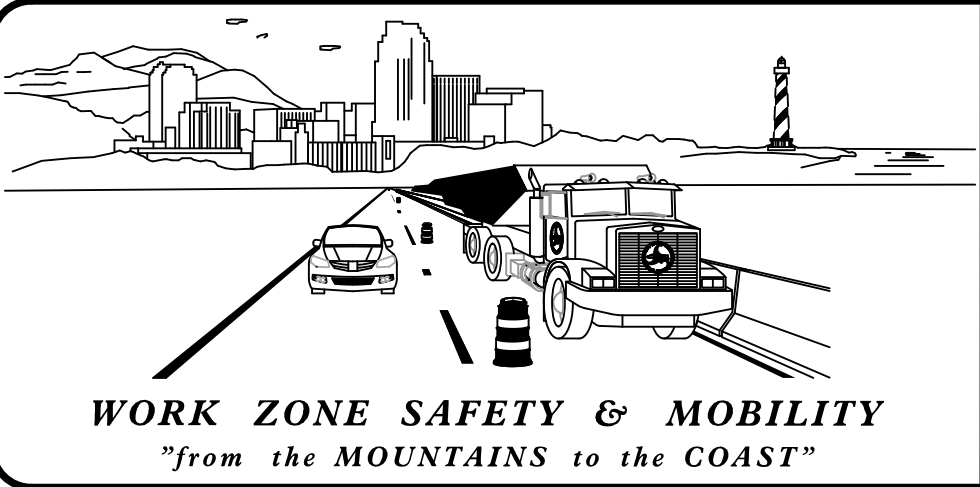
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN
HENDERSON COUNTY



LOCATION: BRIDGE #440197 OVER REEDY PATCH CREEK
ON SR 1702 (EDNEY INN ROAD)

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



PLANS PREPARED BY: HNTB
H. SHYU, PE
TRAFFIC CONTROL PROJECT ENGINEER
D. O'NEAL, PE
TRAFFIC CONTROL DESIGNER

NCDOT CONTACTS:
J. BOND, PE
NCDOT CONTACT



HNTB
HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997

APPROVED: Dylan O'Neal
DATE: 7/2/2026
SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
Dylan O'Neal
SEAL
062995

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET: VICINITY MAP AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKINGS
TMP-1B - 1C	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES)
TMP-2 - 2A	PHASE I & II CUT SECTIONS
TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4 THRU 6	PHASE I DETAIL SHEET
TMP-7 AND 8	PHASE II DETAIL SHEETS
TMP-9 AND 10	PHASE IIIA DETAIL SHEETS
TMP-11	PHASE IIIB DETAIL SHEET
TMP-12	PHASE IV DETAIL SHEET

SHEET NO.
TMP-1

DF18314.2045330

TIP PROJECT:

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - CONTRACT STANDARDS AND DEVELOPMENT 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 ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
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	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
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
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

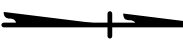
LEGEND

GENERAL

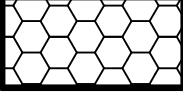
 DIRECTION OF TRAFFIC FLOW

 DIRECTION OF PEDESTRIAN TRAFFIC FLOW

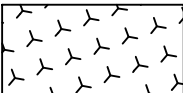
 EXIST. PVMT.

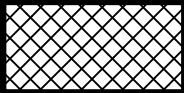
 NORTH ARROW

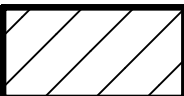
 PROPOSED PVMT.

 TEMPORARY PAVEMENT

 WORK AREA

 ONGOING CONSTRUCTION

 REMOVAL

 WEDGE/ WIDEN
(LANE OR ROAD CLOSURE REQUIRED)

TEMPORARY PAVEMENT MARKING

SYMBOL	DESCRIPTION
PAINT (4")	
P1	WHITE EDGELINE
P13	YELLOW DOUBLE CENTER
PAINT (24")	
P61	WHITE STOPBAR

PAVEMENT MARKINGS

-  EXISTING LINES
-  TEMPORARY LINES

TRAFFIC CONTROL DEVICES

 BARRICADE (TYPE III)

 CONE

 DRUM

 SKINNY DRUM

 TUBULAR MARKER

 FLASHING ARROW PANEL (TYPE C)

 FLAGGER

 LAW ENFORCEMENT

 TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

 CHANGEABLE MESSAGE SIGN

 FLASHING ARROW PANEL IN 'CAUTION MODE'

TEMPORARY SIGNING

 PORTABLE SIGN

 STATIONARY SIGN

 STATIONARY OR PORTABLE SIGN

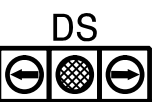
SIGNALS

 EXISTING

 PROPOSED

 TEMPORARY

 PORTABLE

 DRIVEWAY

PAVEMENT MARKINGS

-  EXISTING LINES
-  TEMPORARY LINES

PAVEMENT MARKING SYMBOLS

 PAVEMENT MARKING SYMBOLS





 EXISTING MARKING SYMBOLS





MANAGEMENT STRATEGIES

TRAFFIC CONTROL STRATEGIES:

- LANE CLOSURES, WIDTH REDUCTIONS, AND SHIFTS
- ONE-LANE, TWO-WAY OPERATION

TRAFFIC CONTROL DEVICES:

- CHANNELIZING DEVICES (DRUMS)
- BARRICADES (TYPE III)
- TEMPORARY SIGNS (WARNING)
- TEMPORARY LONGITUDINAL BARRIERS (WFB & TEMP GUARDRAIL)
- CHANGEABLE MESSAGE SIGNS
- TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM
- FLAGGERS
- TEMPORARY PAVEMENT MARKINGS (PAINT)

CORRIDOR / NETWORK MANAGEMENT STRATEGIES:

- TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM

WORK ZONE SAFETY MANAGEMENT STRATEGIES:

- TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM
- TEMPORARY LONGITUDINAL BARRIERS (WFB & TEMP GUARDRAIL)
- SPEED ADVISORY SIGNS

PUBLIC AWARENESS STRATEGIES:

- PRESS RELEASES / MEDIA ALERTS
- COORDINATION WITH MEDIA / EMERGENCY SERVICES / SCHOOLS / BUSINESSES

MOTORIST INFORMATION STRATEGIES:

- CHANGEABLE MESSAGE SIGNS

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 STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
ANY ROAD	MONDAY THRU FRIDAY 6:00 AM TO 9:00 AM AND 3:00 PM TO 7:00 PM	15 MINUTES FOR TRAFFIC SHIFTS, TIE-INS, & MARKING PLACEMENT

- 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 WITHIN 5 FT OF AN OPEN TRAVEL LANE ON AN UNDIVIDED FACILITY, 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 WITHIN 10 FT OF AN OPEN TRAVEL LANE ON A DIVIDED FACILITY, 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.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- G) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPEN TRAVEL LANE THAT HAS A 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.

- H) 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 FT) IN ADVANCE AND A MINIMUM OF ONCE EVERY HALF MILE THOUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

- I) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- J) 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.

- K) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

- L) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

- 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 BARRIER

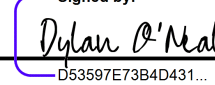
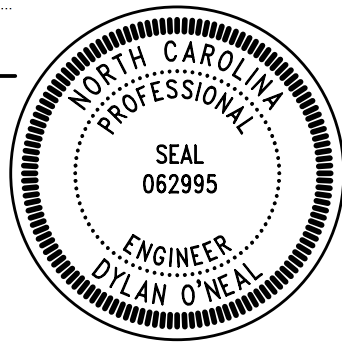
- O) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

PROJ. REFERENCE NO.	SHEET NO.
DF18314.2045330	TMP-1B

APPROVED: 	Signed by: Dylan O'Neal 05397F7B4D431...
DATE: 7/8/2026	
SEAL	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



TRANSPORTATION
MANAGEMENT PLAN

GENERAL NOTES AND
MANAGEMENT
STRATEGIES

GENERAL NOTES

TRAFFIC CONTROL DEVICES

- P) 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.

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

R) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES (DRUMS) PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.
- Y) PROTECT THE APPROACH END OF TEMPORARY GUARDRAIL AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE GUARDRAIL BY A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS).

PAVEMENT MARKINGS AND MARKERS

- S) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	NONE

- T) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- U) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- V) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

- W) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) (350 FT) AND (700 FT) RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

LOCAL NOTE

- X) DUE TO SITE CONDITIONS, PLACEMENT OF THE WATERFILLED BARRIER IS NOT REQUIRED TO BE ON ASPHALT OR CONCRETE SURFACE.

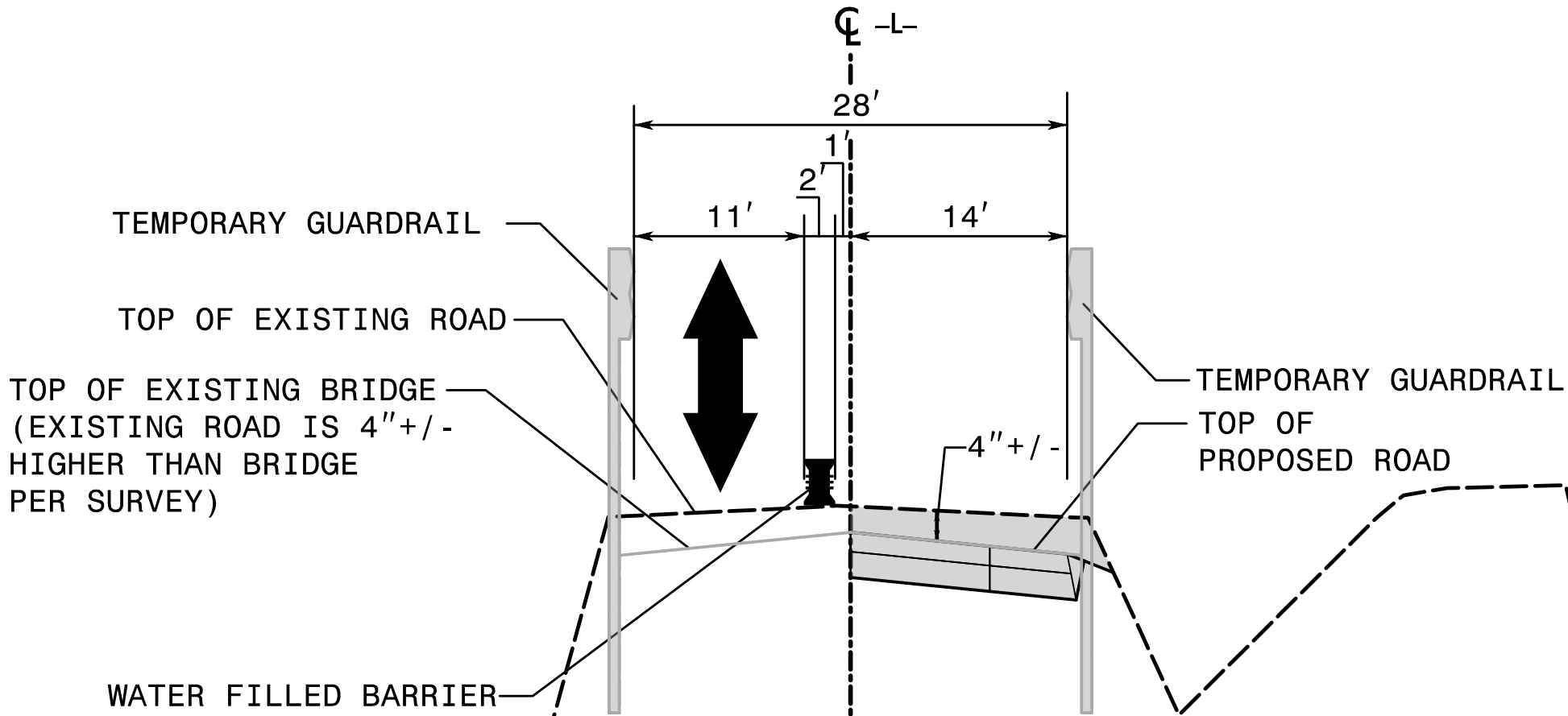
THE WATERFILLED BARRIER IS NOT INTENDED TO PROVIDE POSITIVE PROTECTION FOR WORKERS OR EQUIPMENT AND CONTRACTOR SHALL BE MINDFUL OF THAT WHEN WORKERS ARE PRESENT AND BEHIND THE WATERFILLED BARRIER. IT IS INTENDED TO SERVE AS A DELINEATOR OF NEW CONSTRUCTION WITHIN THE CLEAR ZONE WITH PROTECTIVE PROPERTIES THAT ARE SUPERIOR TO DRUMS, SKINNY DRUMS AND TRAFFIC CONES.

CONTRACTOR SHALL HAVE A WATER TRUCK ON-SITE PRIOR TO WATER REMOVAL FOR THE PURPOSE OF TEMPORARILY RELOCATING THE WATERFILLED BARRIER. DRAINING OF WATER SHALL BE CONDUCTED IN A MANNER THAT DOES NOT DAMAGE THE UNPAVED ROADWAY.

PROJ. REFERENCE NO.	SHEET NO.
DF18314.2045330	TMP-2

PHASE I (-L- STA 20+25+/-)

HORIZONTAL SCALE = 1"=10'
VERTICAL SCALE = 1"=2'

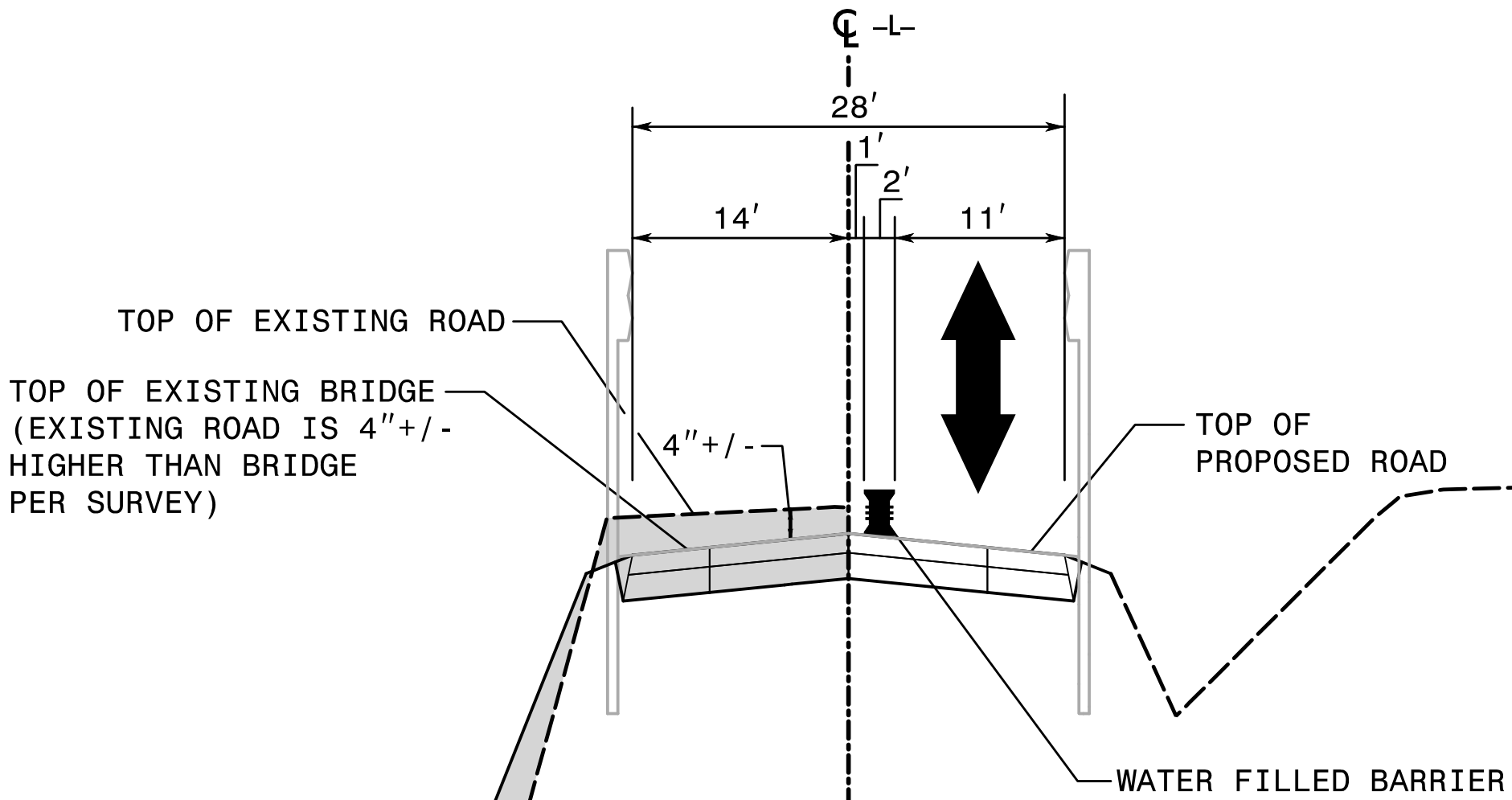


A-A'

(SEE TMP-5)

PHASE II (-L- STA 20+25+/-)

HORIZONTAL SCALE = 1"=10'
VERTICAL SCALE = 1"=2'

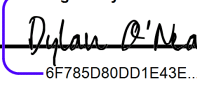
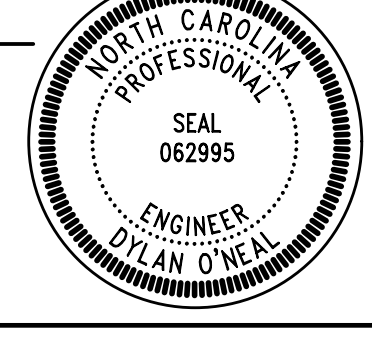


A-A'

(SEE TMP-7)

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TRANSPORTATION
MANAGEMENT PLAN

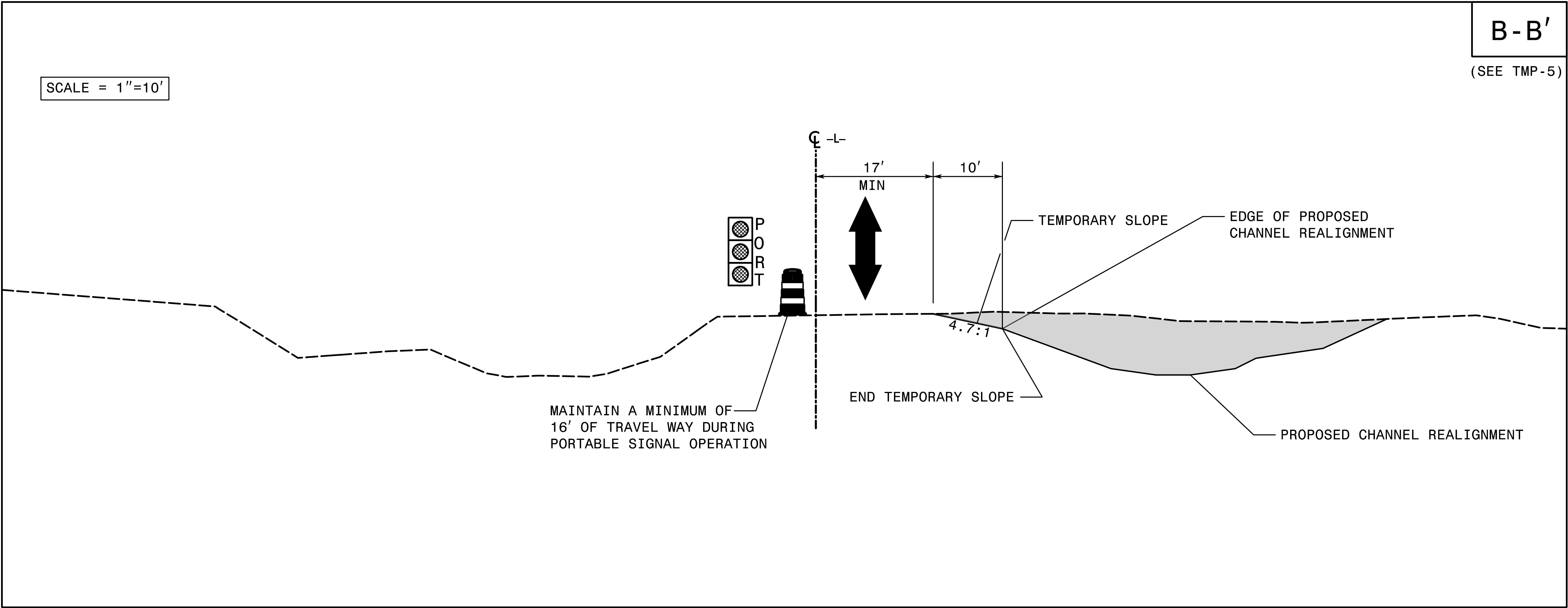
PHASE I & II
CUT SECTIONS

PHASE I (-L- STA 22+50+/-)

SCALE = 1"=10'

B-B'

(SEE TMP-5)



NOTES:

REPLACE MARKINGS AND RETURN TRAFFIC TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

MAINTAIN VEHICULAR ACCESS TO ALL RESIDENCES AND BUSINESSES DURING THE LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

COMPLETE ANY PROPOSED WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE. THIS MAY REQUIRE A COMBINATION OF INSTALLATION OF PROPOSED PIPES, TEMPORARY PIPES, STEEL PLATES, AND TEMPORARY DITCHES.

CONSTRUCT UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE IN ALL PHASES UNTIL STATED TO INSTALL FINAL LAYER IN THE PHASING.

THE TERM RSD DENOTES "ROADWAY STANDARD DRAWINGS".

NOTE: SEE GENERAL NOTE X) IN REGARDS TO WATER FILLED BARRIER

PHASE I (SEE TMP-4 THRU TMP-6)

STEP 1: USING RSD 1101.01 (SHEET 3 OF 3), INSTALL WORK ZONE ADVANCE WARNING SIGNS ON -L-.

STEP 2: PLACE TYPE III BARRICADES TO CLOSE THE ANGELWOOD LANE BRIDGE WHILE MAINTAINING ACCESS TO EDNEY INN ROAD VIA THE ADJACENT WESTERN DRIVEWAY. THEN USING RSD 1101.02 (SHEET 1 OF 19), INSTALL TEMPORARY PAVEMENT AT THE ANGELWOOD LN BRIDGE AS SHOWN IN TMP-5.

STEP 3: REOPEN THE ANGELWOOD LN BRIDGE TO TRAFFIC AND CLOSE THE ADJACENT WESTERN DRIVEWAY TO TRAFFIC (AS SHOWN IN TMP-5).

STEP 4: USING RSD 1101.02 (SHEET 1 OF 19), COMPLETE THE FOLLOWING:

- CONSTRUCT TEMPORARY PAVEMENT FROM -L- STA 17+60+/- (LT) TO -L- STA 19+02+/- (LT)
- STABILIZE THE EXISTING BRIDGE RAIL ON THE NORTH SIDE AND INSTALL TEMPORARY GUARDRAIL FROM -L- (LT) STA 19+79 TO THE BRIDGE (SEE TMP-5) (SEE LOCAL NOTE Y)

STEP 5: USING RSD 1101.03 (SHEET 8 OF 9), COMPLETE THE FOLLOWING:

- INSTALL WATERFILLED BARRIER AND DRUMS (SEE LOCAL NOTE X)
- INSTALL TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM (INCLUDING DRIVEWAY SIGNAL) PER RSD 1101.02 (SHEET 17 OF 19). SEE DETAIL SHEETS TMP-4 THRU 6 FOR TEMPORARY SIGN PLACEMENT AND TEMPORARY PAVEMENT MARKINGS
- SHIFT TRAFFIC TO THE ONE LANE TWO WAY PATTERN SHOWN IN PHASE I DETAIL SHEETS AND ACTIVATE PORTABLE SIGNALS

STEP 6: COMPLETE STEP 6A, THEN STEPS 6B THRU 6D CAN BE DONE CONCURRENTLY OR IN ANY ORDER. THESE SUBSTEPS WILL USE RSD 1101.03 (SHEET 8 OF 9) OR BE CONSTRUCTED AWAY FROM TRAFFIC UNLESS SPECIFIED OTHERWISE.

STEP 6A: CONSTRUCT THE SOUTH SIDE BRIDGE RAIL [-L- (RT)], CONCRETE REPAIRS (SEE STRUCTURE PLANS) AND TEMPORARY GUARDRAIL FROM THE BRIDGE TO -L- STA 21+94+/- (RT).

STEP 6B: CONSTRUCT THE RIGHT SIDE OF -L- (INCLUDING PROPOSED GUARDRAIL) FROM -L- STA 18+50+/- TO THE EXISTING BRIDGE

STEP 6C: CONSTRUCT TEMPORARY PAVEMENT FROM -L- STA 17+60+/- (RT) TO -L- STA 19+58+/- (RT)

STEP 6D: CONSTRUCT PROPOSED CHANNEL REALIGNMENT (SEE HYDRAULIC AND EROSION CONTROL PLANS), USE TEMPORARY SLOPES AS NEEDED TO MAINTAIN EXISTING PAVEMENT AT LEAST 17' RIGHT OF PROPOSED -L-. COVER PORTABLE SIGNALS AND USING RSD 1101.02 (SHEET 1 OF 19) AS NEEDED, CONSTRUCT TEMPORARY PAVEMENT FROM -L- STA 23+26+/- (RT) TO -L- STA 24+40+/- (RT). USE TEMPORARY SLOPES OF 2:1 MAX FROM THE SHOULDER POINT OF THE TEMP PAVEMENT TO TIE TO THE CHANNEL REALIGNMENT FROM -L- STA 23+25+/- TO -L- STA 24+00+/- . PORTABLE SIGNALS WILL BE UNCOVERED ONCE WORK CAN BE COMPLETED AWAY FROM TRAFFIC.

PHASING

PHASE II (SEE TMP-7 AND TMP-8)

STEP 1: USING RSD 1101.03 (SHEET 8 OF 9) AS NEEDED, COMPLETE THE FOLLOWING:

- REMOVE WATER FILLED BARRIER AS NEEDED AND INSTALL AS FOLLOWS: (SEE LOCAL NOTE X)
 - -L- STA 17+68+/- (LT) TO -L- STA 23+05+/- (RT)
 - -L- STA 22+75+/- (RT) TO -L- STA 24+40+/- (RT)
 - -L- STA 23+57+/- (RT) TO -L- STA 24+60+/- (LT)
- SHIFT DRUMS, SIGNS AND TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM AS SHOWN.
- INSTALL TEMPORARY PAVEMENT MARKING
- SHIFT TRAFFIC AS SHOWN AND ACTIVATE TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM.

STEP 2: STEPS 2A THRU 2G CAN BE DONE CONCURRENTLY OR IN ANY ORDER. THESE SUBSTEPS WILL BE COMPLETED BEHIND WATER FILLED BARRIER AND AWAY FROM TRAFFIC

STEP 2A: CONSTRUCT THE LEFT SIDE OF -L- FROM -L- STA 18+50+/- TO THE BRIDGE. REMOVE TEMPORARY GUARDRAIL AND INSTALL PROPOSED GUARDRAIL AS WELL

STEP 2B: CONSTRUCT CONCRETE REPAIRS ON THE NORTH SIDE OF THE BRIDGE AND ANY BRIDGE RAIL REPAIRS (SEE STRUCTURE PLANS).

STEP 2C: INSTALL TEMPORARY GUARDRAIL FROM THE BRIDGE TO -L- STA 21+72+/- (LT)

STEP 2D: CONSTRUCT TEMPORARY PAVEMENT FROM -L- STA 21+71+/- (LT) TO -L- STA 21+83+/- (LT)

STEP 2E: CONSTRUCT -DETOUR- AND TEMPORARY DRAINAGE

STEP 2F: CONSTRUCT THE LEFT SIDE OF -L- FROM THE EXISTING BRIDGE TO -L- STA 22+10+/- , AND FROM -L- STA 23+57+/- TO THE EXISTING PAVEMENT EDGE

STEP 2G: CONSTRUCT THE RIGHT SIDE OF -L- FROM -L- STA 23+86+/- [3' (RT)] TO THE EXISTING PAVEMENT EDGE

PHASE IIIA (SEE TMP-9 AND TMP-10)

STEP 1: USING RSD 1101.03 (SHEET 8 OF 9) AS NEEDED, COMPLETE THE FOLLOWING:

- REMOVE WATER FILLED BARRIER AS NEEDED AND INSTALL AS FOLLOWS: (SEE LOCAL NOTE X)
 - -L- STA 19+78+/- (RT) TO -L- STA 22+10+/- (LT)
 - -L- STA 22+02+/- (RT) TO -L- STA 22+58+/- (LT)
 - -L- STA 22+75+/- (RT) TO -L- STA 24+43+/- (RT)
- SHIFT DRUMS, SIGNS AND PORTABLE SIGNALS AS SHOWN.

- REMOVE CONFLICTING PAVEMENT MARKINGS, AND INSTALL TEMPORARY PAVEMENT MARKING

- SHIFT TRAFFIC AS SHOWN AND TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM.

STEP 2: BEHIND WFB AND AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING:

- CONSTRUCT THE RIGHT SIDE OF -L- FROM THE EXISTING BRIDGE TO -L- STA 22+06+/-

- REMOVE TEMPORARY GUARDRAIL ON THE SOUTHEAST SIDE OF THE EXISTING BRIDGE. INSTALL PROPOSED GUARDRAIL FROM THE EXISTING BRIDGE TO -L- STA 21+77+/- (RT) AND ANCHOR THE GUARDRAIL WITH A TEMPORARY AT-1 UNIT

PHASE IIIB (SEE TMP-11)

STEP 1: USING RSD 1101.03 (SHEET 8 OF 9) AS NEEDED, COMPLETE THE FOLLOWING:

- REMOVE WATER FILLED BARRIER AS NEEDED AND INSTALL AS FOLLOWS: (SEE LOCAL NOTE X)
 - -L- STA 21+46+/- (LT) TO -L- STA 21+61+/- (LT)
 - -L- STA 21+96+/- (RT) TO -L- STA 22+36 (LT) AND -L- STA 21+96+/- (RT) TO 22+16+/- (RT)
 - -DETOUR- STA 12+07+/- (RT) TO -L- STA 24+14+/- (RT)
- SHIFT DRUMS, SIGNS AND PORTABLE SIGNALS AS SHOWN.
- SHIFT TRAFFIC AS SHOWN AND TEMPORARY PORTABLE TRAFFIC SIGNAL SYSTEM.

STEP 2: BEHIND WFB AND AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING:

- REMOVE EXISTING CULVERT AND CONSTRUCT THE RIGHT SIDE OF -L- FROM -L- STA 22+06+/- TO -L- STA 23+86+/- AND TO THE EXISTING PAVEMENT EDGE
- CONSTRUCT THE LEFT SIDE OF -L- FROM 22+10+/- TO -L- STA 23+57+/-

PHASE IV (SEE TMP-12)

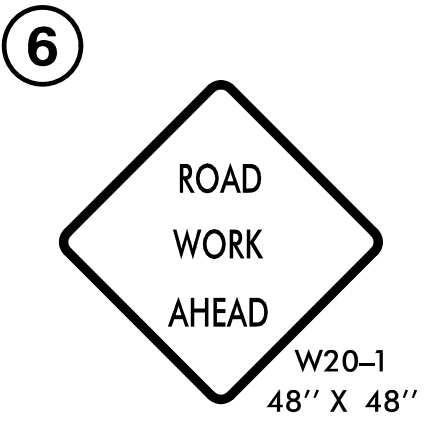
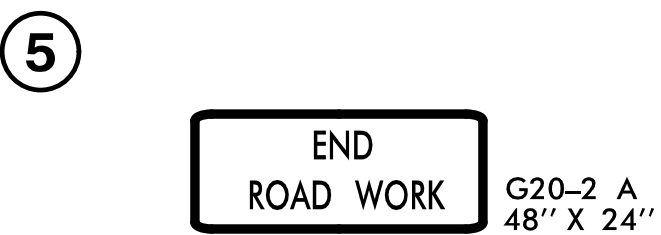
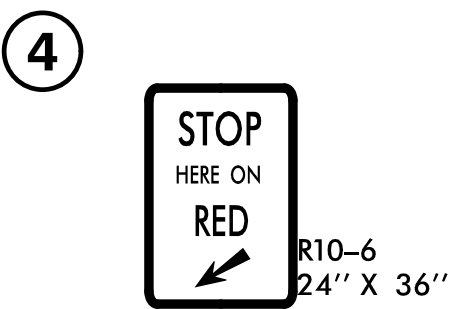
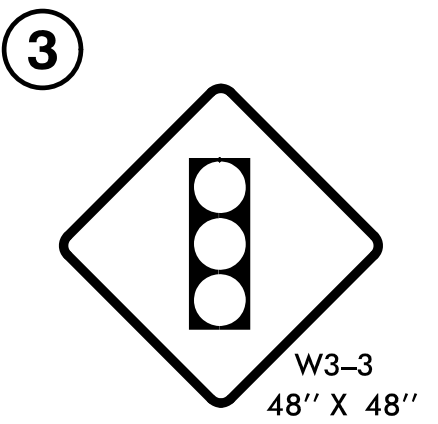
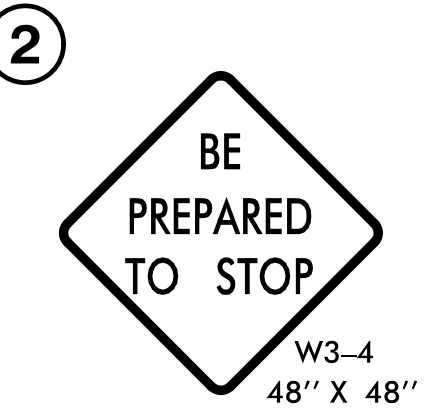
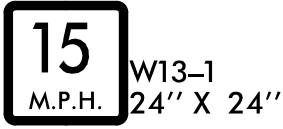
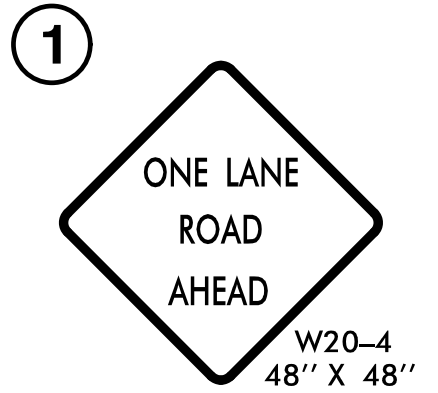
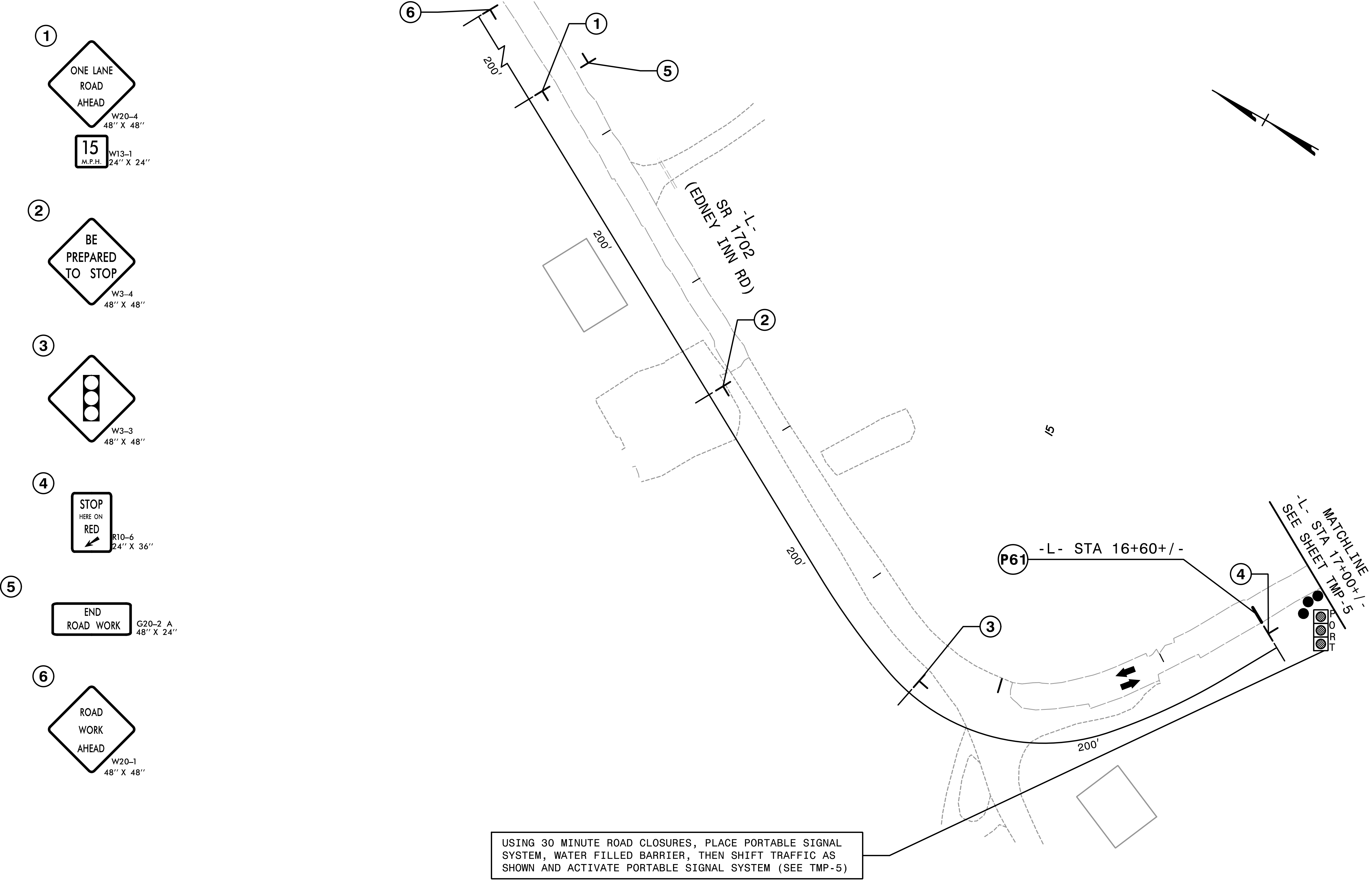
STEP 1: USING RSD 1101.03 (SHEET 8 OF 9), COMPLETE THE FOLLOWING:

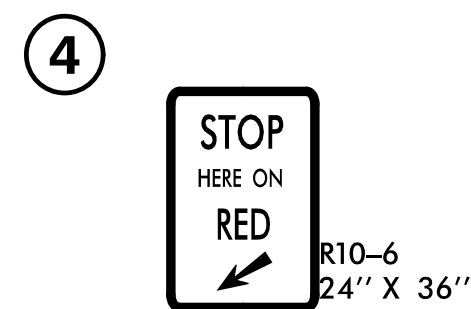
- REMOVE ALL TEMPORARY PORTABLE TRAFFIC SIGNALS
- REMOVE ALL WATER FILLED BARRIER
- REMOVE/COVER TEMPORARY SIGNS RELEVANT TO TEMPORARY PORTABLE SIGNAL OPERATION. SEE RSD 1101.02 (SHEET 17 OF 19)
- REMOVE AND RESET DRUMS AS NEEDED
- REMOVE ALL REMAINING TEMPORARY GUARDRAIL AND INSTALL THE REST OF PROPOSED GUARDRAIL. REMOVE ANY CONFLICTING TEMPORARY PAVEMENT.
- APPLY TEMPORARY PAVEMENT MARKINGS AND SHIFT TRAFFIC TO ITS FINAL PATTERN

STEP 2: USING RSD 1101.02 (SHEET 1 OF 19) AS NEEDED, COMPLETE THE FOLLOWING:

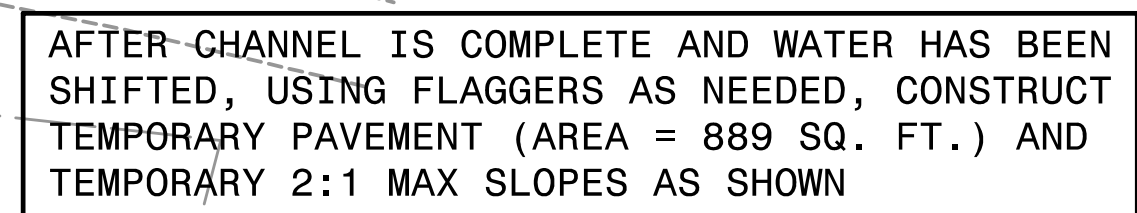
- REMOVE -DETOUR- AND TEMPORARY DRAINAGE.
 - NOTE: ACCESS TO THE NORTHERN DRIVEWAY SHALL BE MAINTAINED AT ALL TIMES
- CONSTRUCT REMAINING PROPOSED ABC PAVEMENT. RSD 1101.03 (SHEET 8 OF 9) CAN BE USED FOR ANGELWOOD LANE BRIDGE IF NECESSARY
- WEDGE FROM THE EXISTING PAVEMENT EDGE TO -L- STA 24+10+/-
- REMOVE ANY REMAINING TEMPORARY PAVEMENT
 - NOTE: ACCESS TO ANGELWOOD LN SHALL BE MAINTAINED AT ALL TIMES
- PLACE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS AND OPEN TO TRAFFIC

STEP 3: COMPLETE ANY REMAINING WORK AWAY FROM TRAFFIC, THEN REMOVE ALL TRAFFIC CONTROL DEVICES

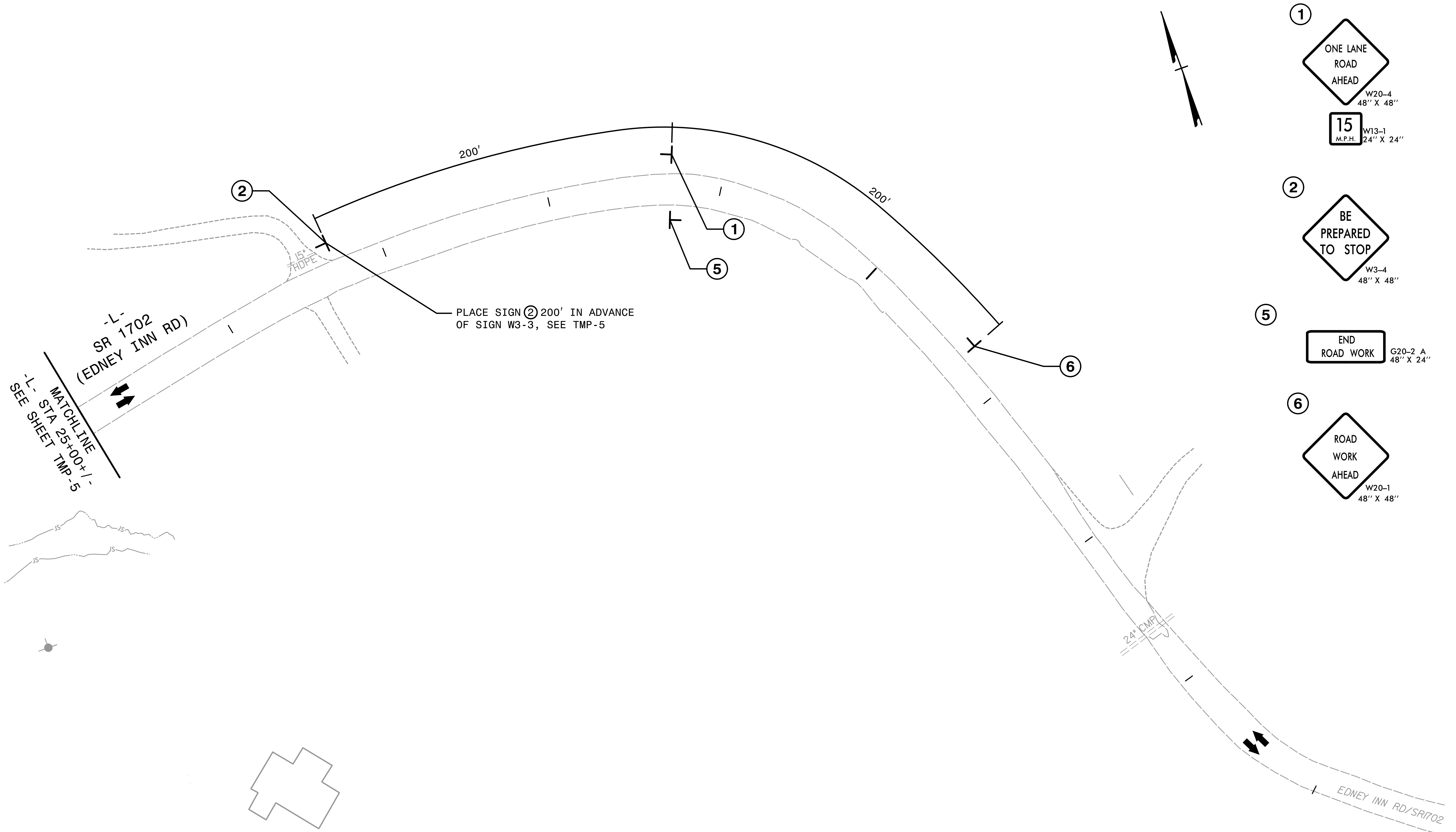




MAINTAIN EXISTING PAVEMENT AT
— LEAST 17' RIGHT OF PROPOSED -L-.
USE TEMPORARY SLOPES AS NEEDED
TO TIE TO PROPOSED EDGE OF
THE CHANNEL REALIGNMENT



PHASE I DETAIL



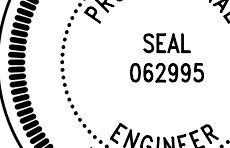
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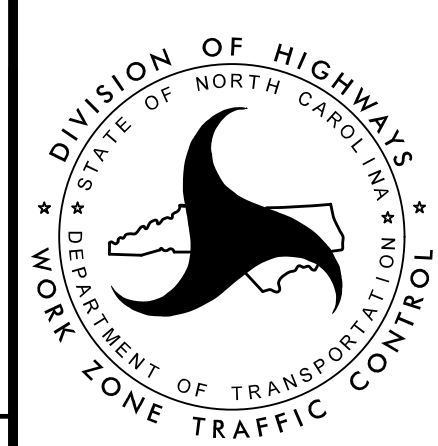
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DATE: 7/2/2026

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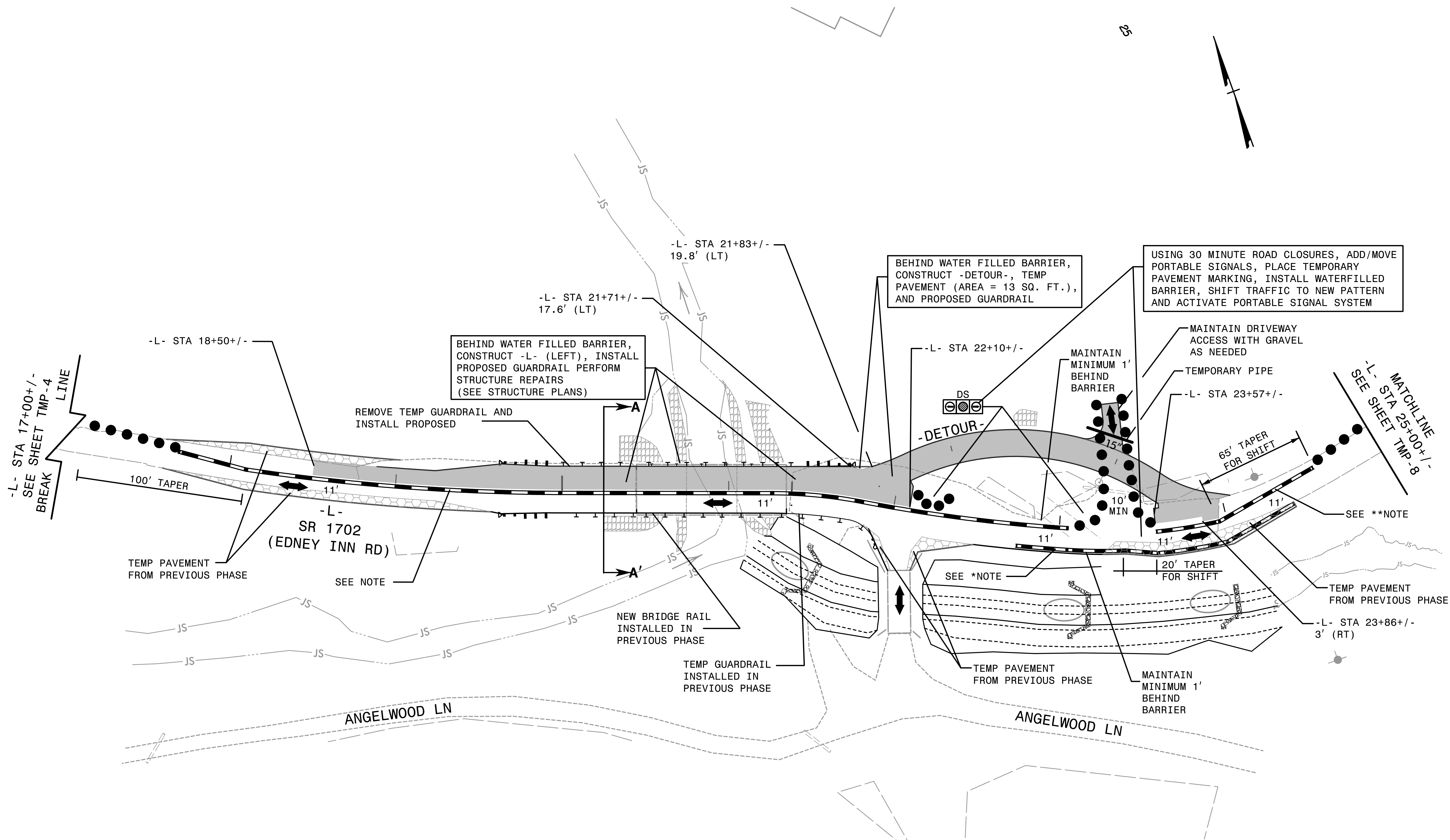


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TRANSPORTATION
MANAGEMENT PLAN

PHASE I
DETAIL

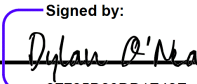


NOTE: BEGIN WATER-FILLED BARRIER AT
-L- STA 17+68 +/- 2.1' (LT)
AND END AT -L- STA 23+05 +/- 2.0' (RT)

*NOTE: BEGIN WATER-FILLED BARRIER AT
-L- STA 22+75 +/- 15.0' (RT)
AND END AT -L- STA 24+40 +/- 8.7 (RT)

**NOTE: BEGIN WATER-FILLED BARRIER AT
-L- STA 23+57 +/- 5.0' (RT) AND END AT
-L- STA 24+60 +/- 4.6' (LT)

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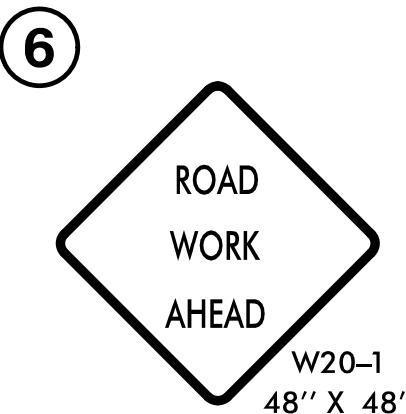
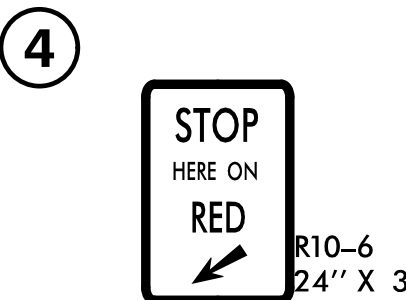
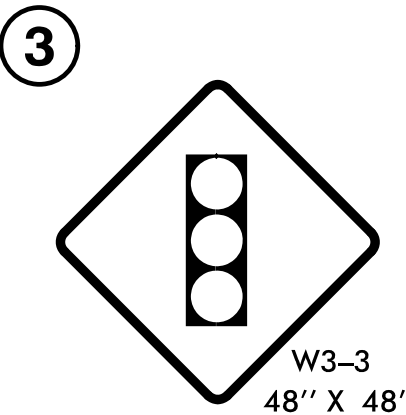
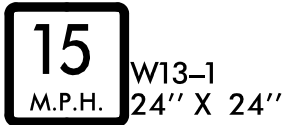
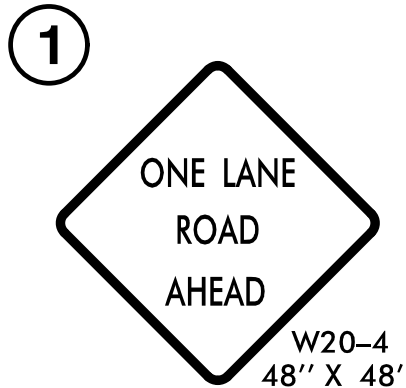
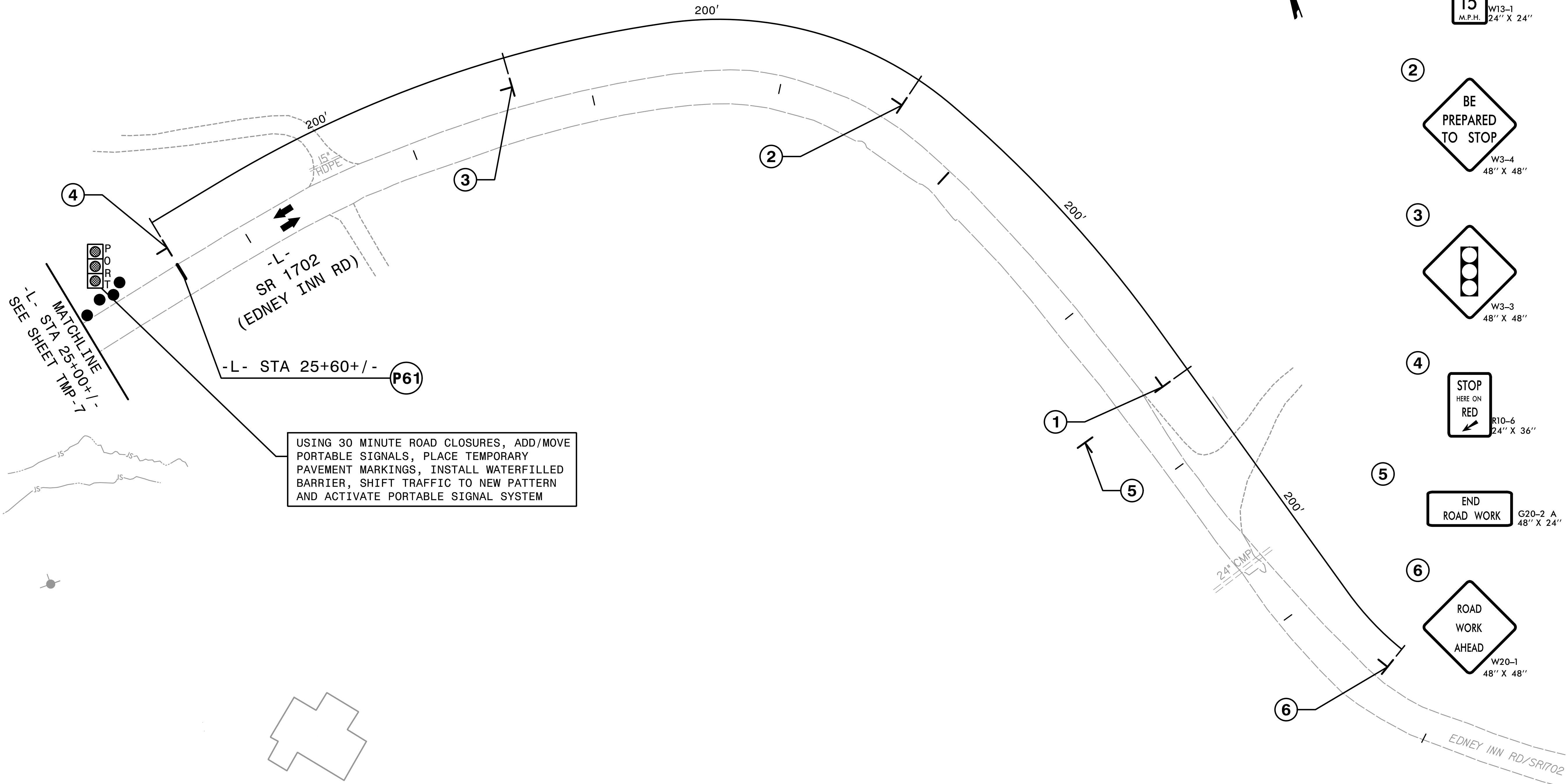
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TRANSPORTATION
MANAGEMENT PLAN

PHASE II
DETAIL

PROJ. REFERENCE NO.	SHEET NO.
DF18314.2045330	TMP-8

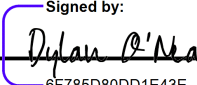
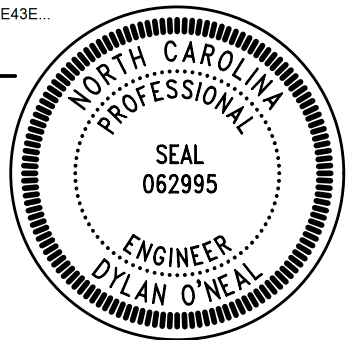


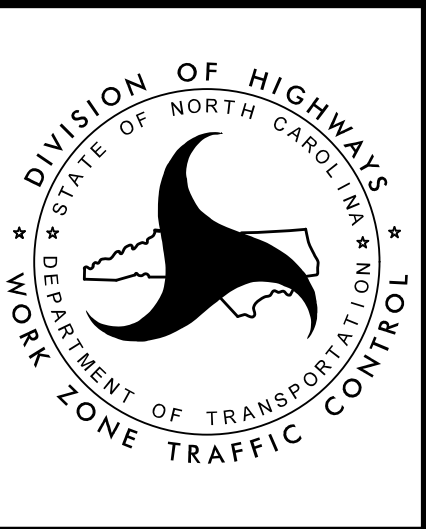
USING 30 MINUTE ROAD CLOSURES, ADD/MOVE PORTABLE SIGNALS, PLACE TEMPORARY PAVEMENT MARKINGS, INSTALL WATERFILLED BARRIER, SHIFT TRAFFIC TO NEW PATTERN AND ACTIVATE PORTABLE SIGNAL SYSTEM

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6/30/2026



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TRANSPORTATION
MANAGEMENT PLAN

PHASE II
DETAIL

- 1

ONE LANE ROAD AHEAD
W20-4
48" X 48"
- 15

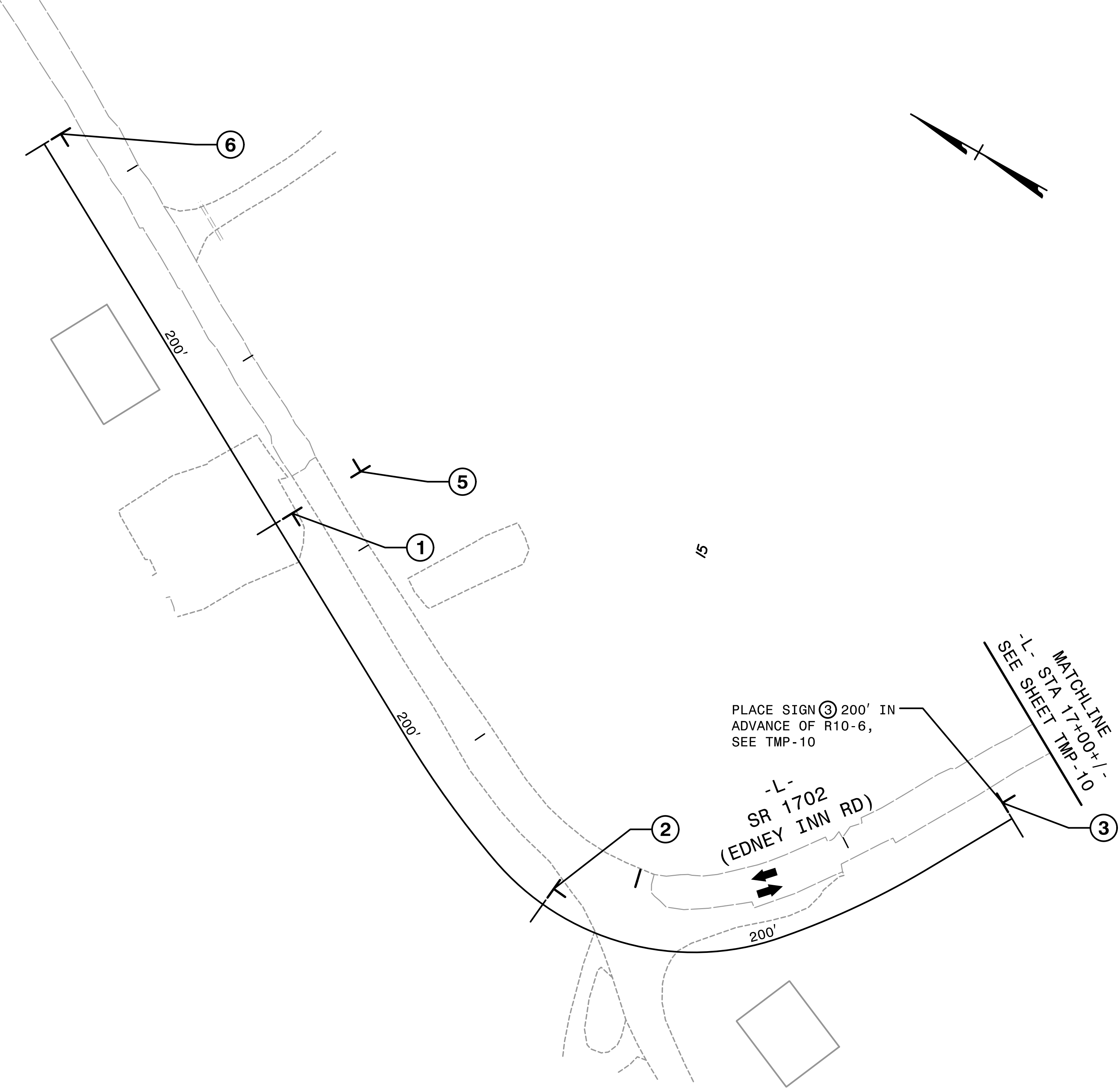
W13-1
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- 2

BE PREPARED TO STOP
W3-4
48" X 48"
- 3

W3-3
48" X 48"
- 5

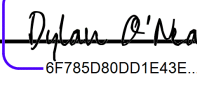
END ROAD WORK
G20-2 A
48" X 24"
- 6

ROAD WORK AHEAD
W20-1
48" X 48"



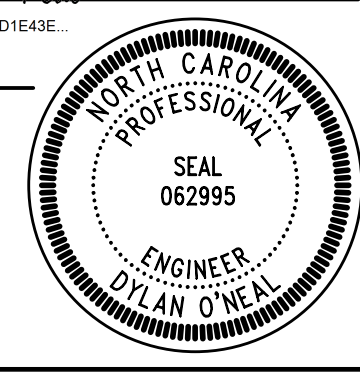
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DATE: 7/2/2026

SEAL

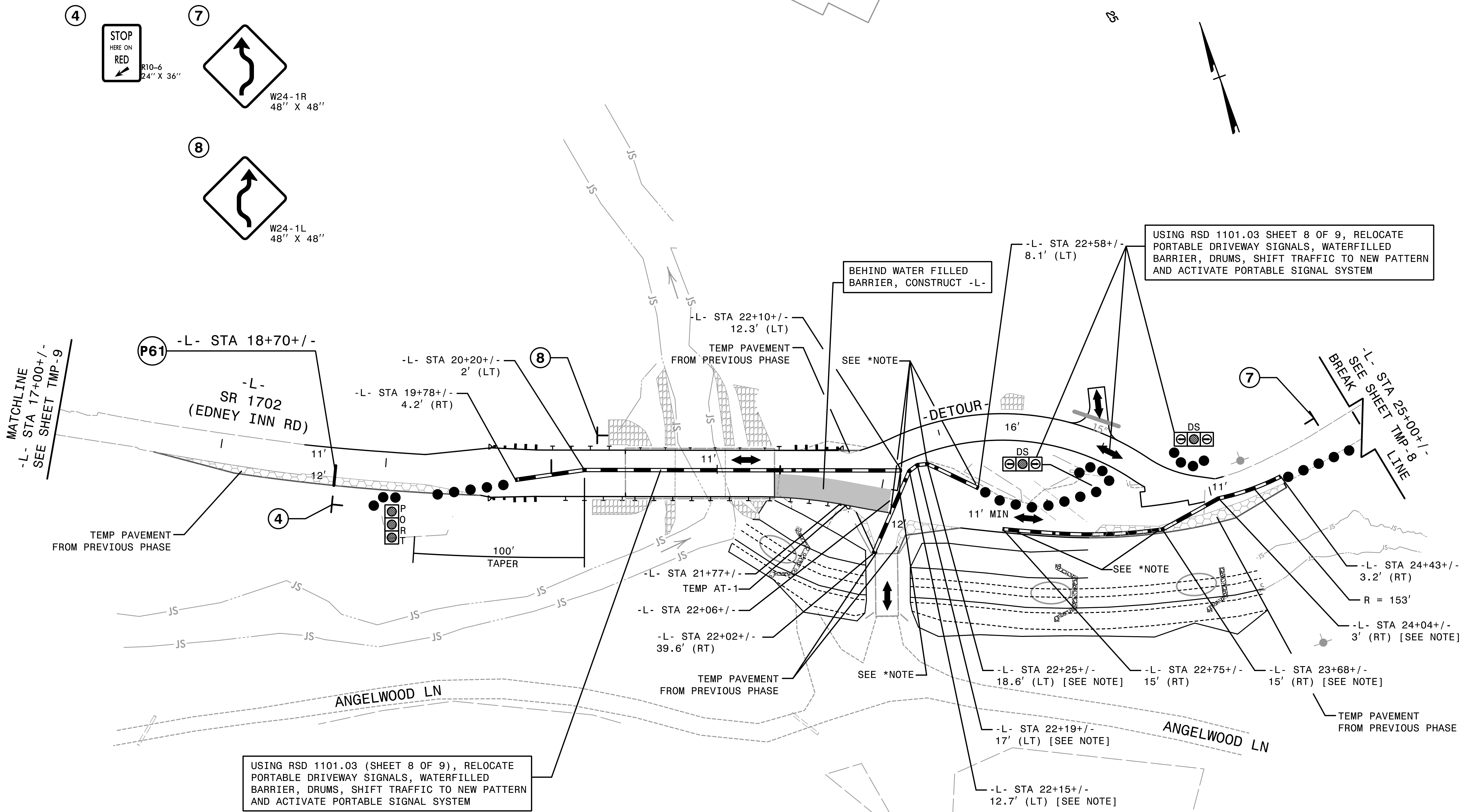


DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION
MANAGEMENT PLAN

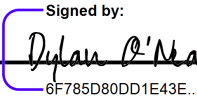
PHASE IIIA
DETAIL

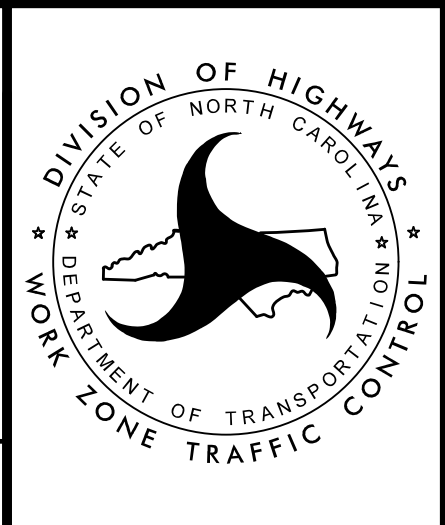


NOTE: VERIFY MAX DEGREE PIVOT BETWEEN WATER-FILLED BARRIERS PER SPECS, THIS PLAN ASSUMES 30°PIVOTS

*NOTE: MAINTAIN A MINIMUM OF 1' BEHIND WATER-FILLED BARRIER

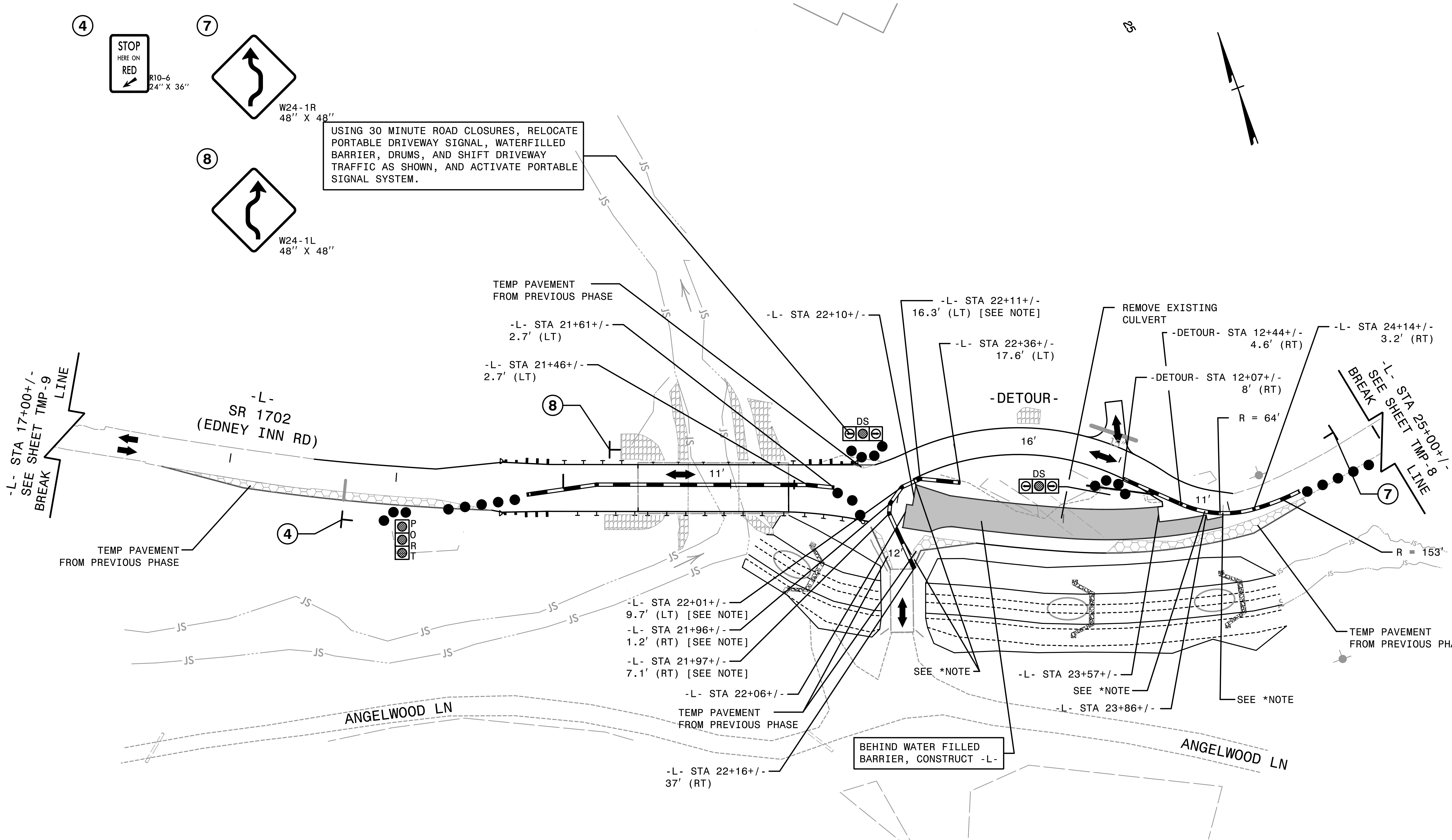
HNTB HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

APPROVED: 
DATE: 7/2/2026
SEAL
DOCUMENT NOT CONSIDERED FINAL
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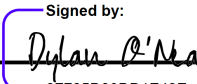
TRANSPORTATION
MANAGEMENT PLAN

PHASE IIIA
DETAIL

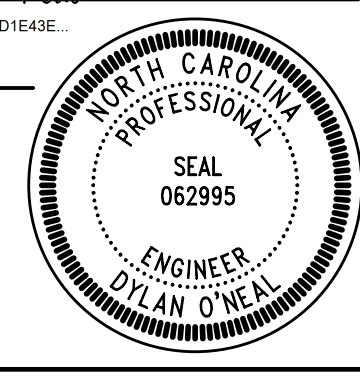


NOTE: VERIFY MAX DEGREE PIVOT BETWEEN WATER-FILLED BARRIERS PER SPECS, THIS PLAN ASSUMES 30°PIVOTS

*NOTE: MAINTAIN A MINIMUM OF 1' BEHIND WATER-FILLED BARRIER

APPROVED: 
DATE: 7/2/2026

SEAL

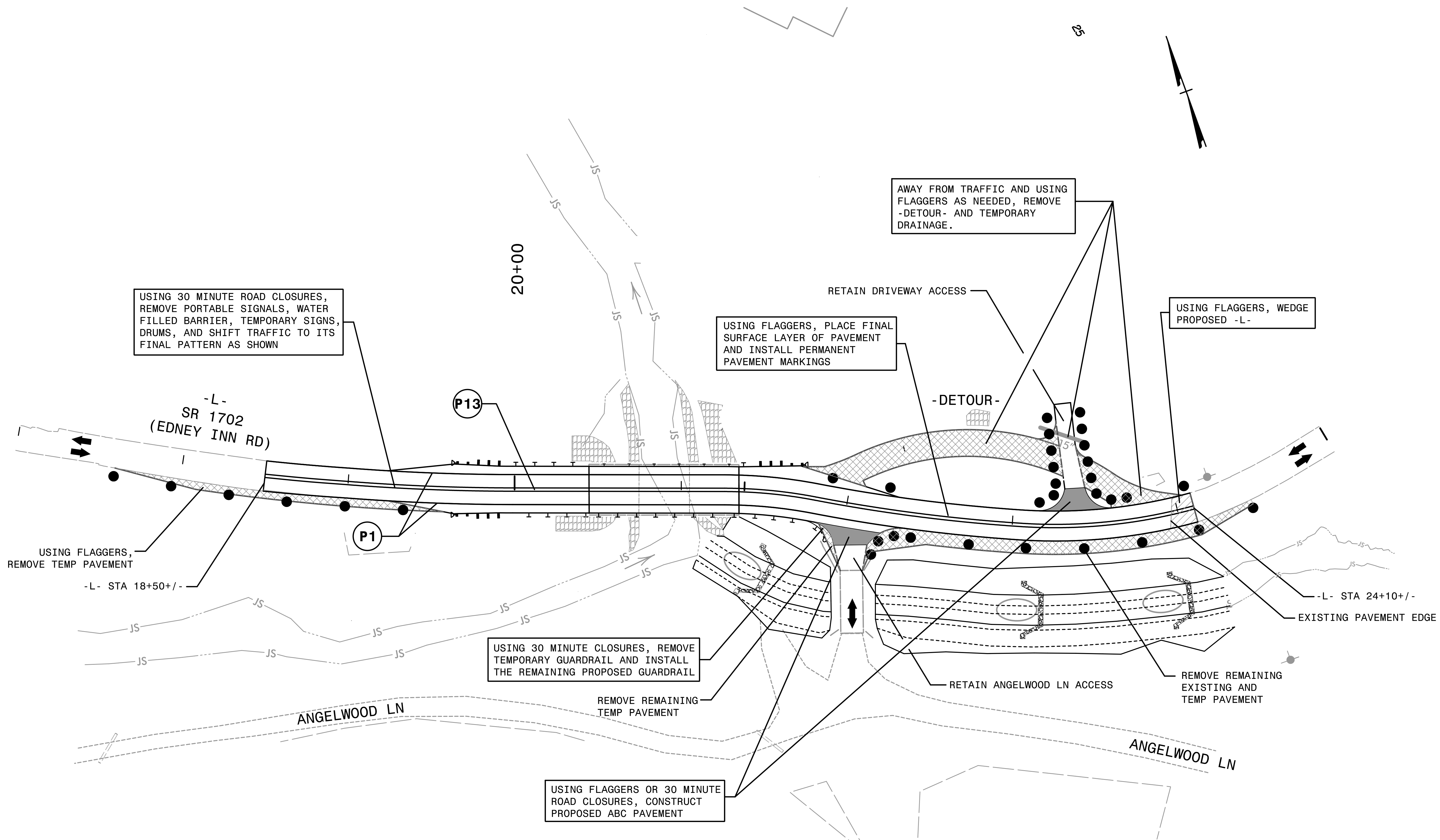


DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION
MANAGEMENT PLAN

PHASE IIIB
DETAIL



1:24:34 PM
\\TCP\Henderson\197_TC_P4.D5.dgn
7/7/2026

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HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

APPROVED: *Dylan O'Neil*
DATE: 7/7/2026

SEAL

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



TRANSPORTATION
MANAGEMENT PLAN

PHASE IV
DETAIL

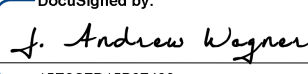
PROJECT: DF18314.2045330

CONTRACT:

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING & PAVEMENT MARKING PLAN
HENDERSON COUNTY

LOCATION: BRIDGE #440197 OVER REEDY PATCH CREEK
ON SR 1702 (EDNEY INN ROAD)

PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	PMP - 1
APPROVED: Discussed by:  15E6C7D15637483.	
DATE: 7/2/2026	
SEAL	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - CONTRACT STANDARDS AND DEVELOPMENT 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
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

INDEX

SHEET NO.	DESCRIPTION
PMP-1	SIGNING & PAVEMENT MARKING PLAN TITLE/SCHEDULE
PMP-2	SIGNING & PAVEMENT MARKING PLAN

PAY ITEM NOTES

1 DISPOSAL OF SIGN SYSTEM, U-CHANNEL

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4155000000 4810000000	907 1205	DISPOSAL OF SIGN SYSTEM, U-CHANNEL PAINT PAVEMENT MARKING LINES (4")	1 4480	EA LF

GENERAL NOTES

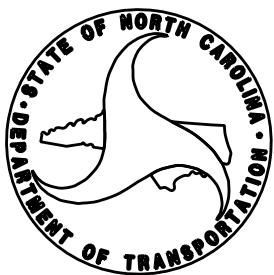
- THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.
- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:
- | | | |
|-------------|---------|--------|
| ROAD NAME | MARKING | MARKER |
| -L- SR 1702 | PAINT | NONE |
- B) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.
- C) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON CONCRETE BRIDGE DECKS PRIOR TO PLACING PAINT PAVEMENT MARKING MATERIAL.
- D) IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- E) ALL EXISTING SIGNS ON U-CHANNEL SUPPORT(S) WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- F) SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

FINAL PAVEMENT MARKING SCHEDULE

MATERIAL	SYMBOL	DESCRIPTION
PAVEMENT MARKING		
PAINT (4")		
	P1	WHITE EDGELINE
	P13	YELLOW DOUBLE CENTER

PLAN PREPARED FOR: N.C.D.O.T. SIGNING AND DELINEATION UNIT

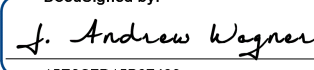
KELVIN L. JORDAN SIGNING & DELINEATION REGIONAL ENGINEER

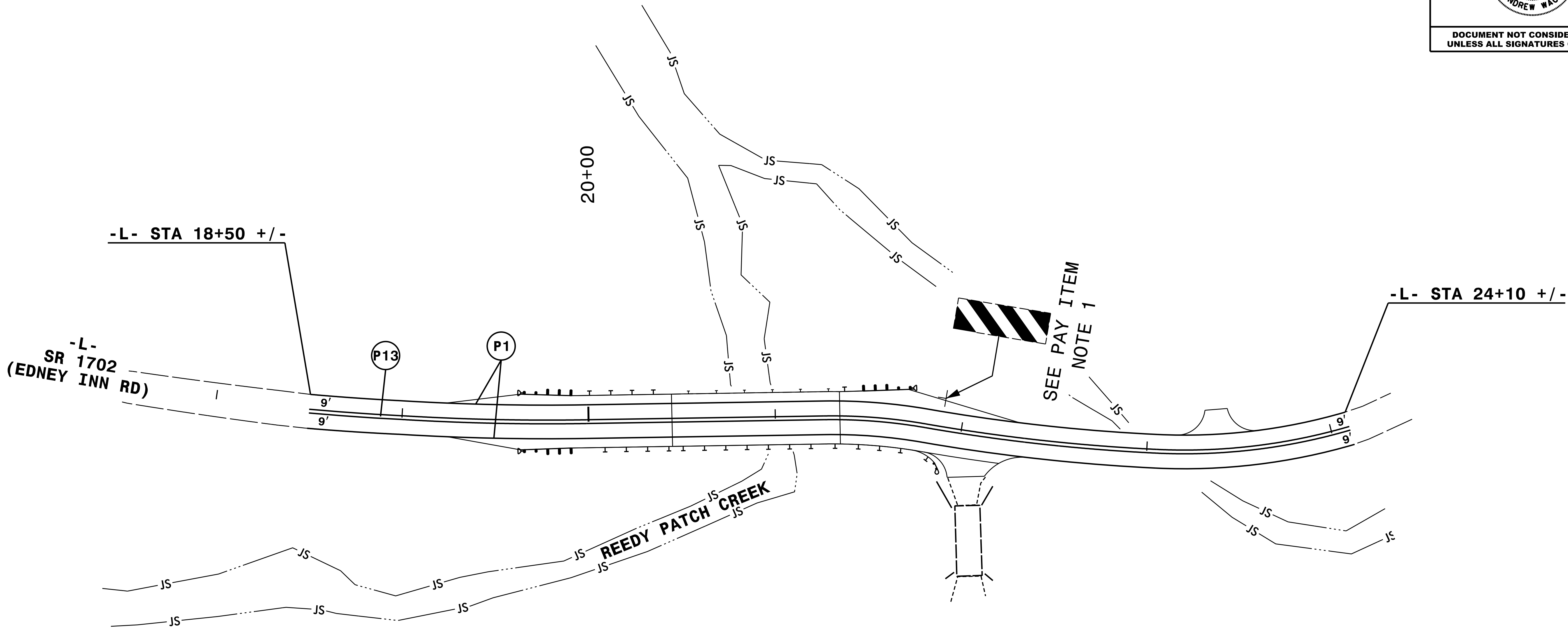


PLAN PREPARED BY: HNTB NORTH CAROLINA, P.C.

J. ANDREW WAGNER, PE PROJECT ENGINEER
GARRETT D. BERRY DESIGN TECHNICIAN

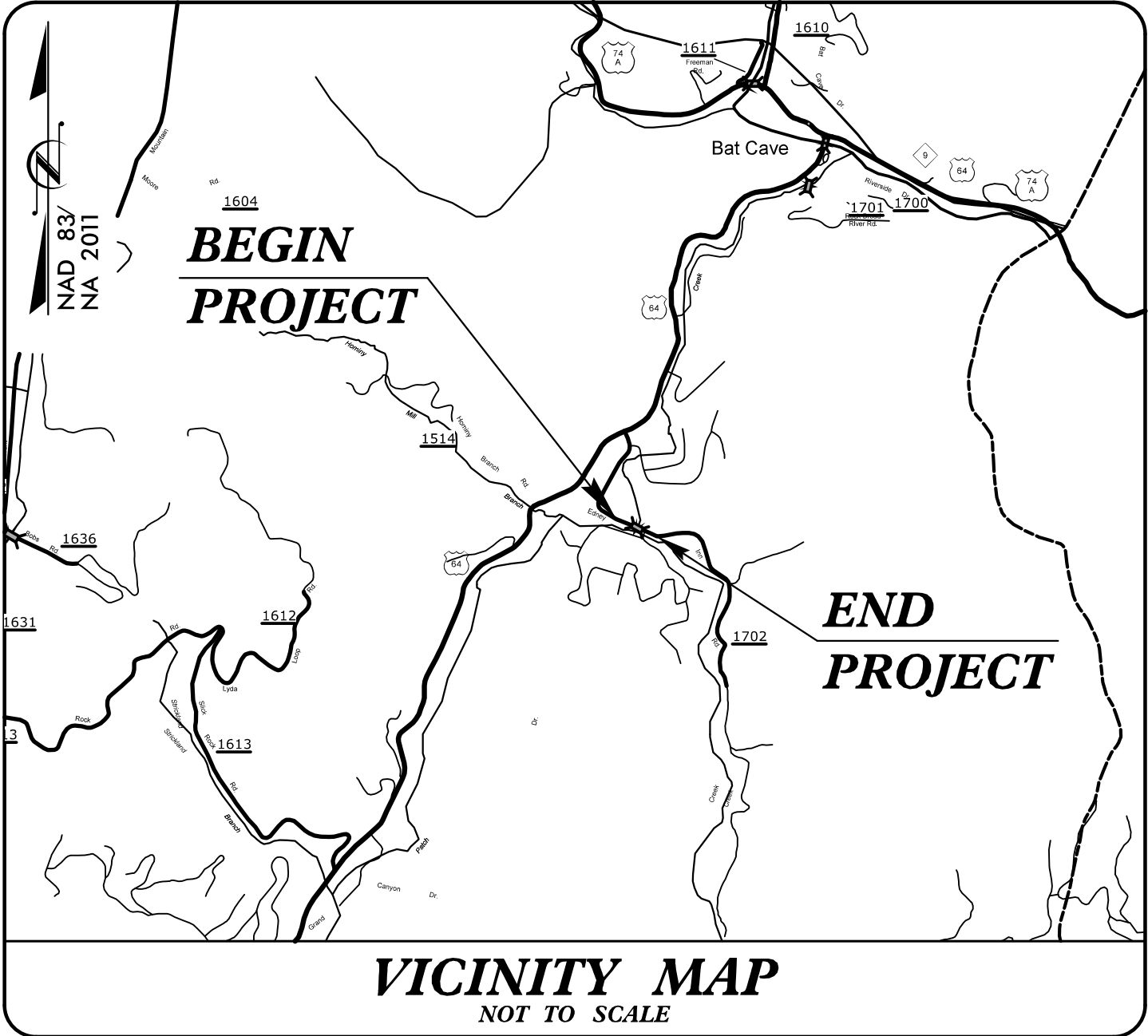
HNTB HNTB NORTH CAROLINA, P.C.
4000 CENTER AT NORTH HILLS ST STE 500
RALEIGH, NORTH CAROLINA 27609
NC License No: C-1554
(919) 546-8997

PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	PMP-2
APPROVED: Declassified by:  15EBC7D15637483.	
DATE: 7/2/2026	
SEAL	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	DF18314.2045330	EC-1	
STATE PROJ.NO.	F.A.PROJ.NO.	DESCRIPTION	

TIP PROJECT: DF18314.2045330



VICINITY MAP
NOT TO SCALE

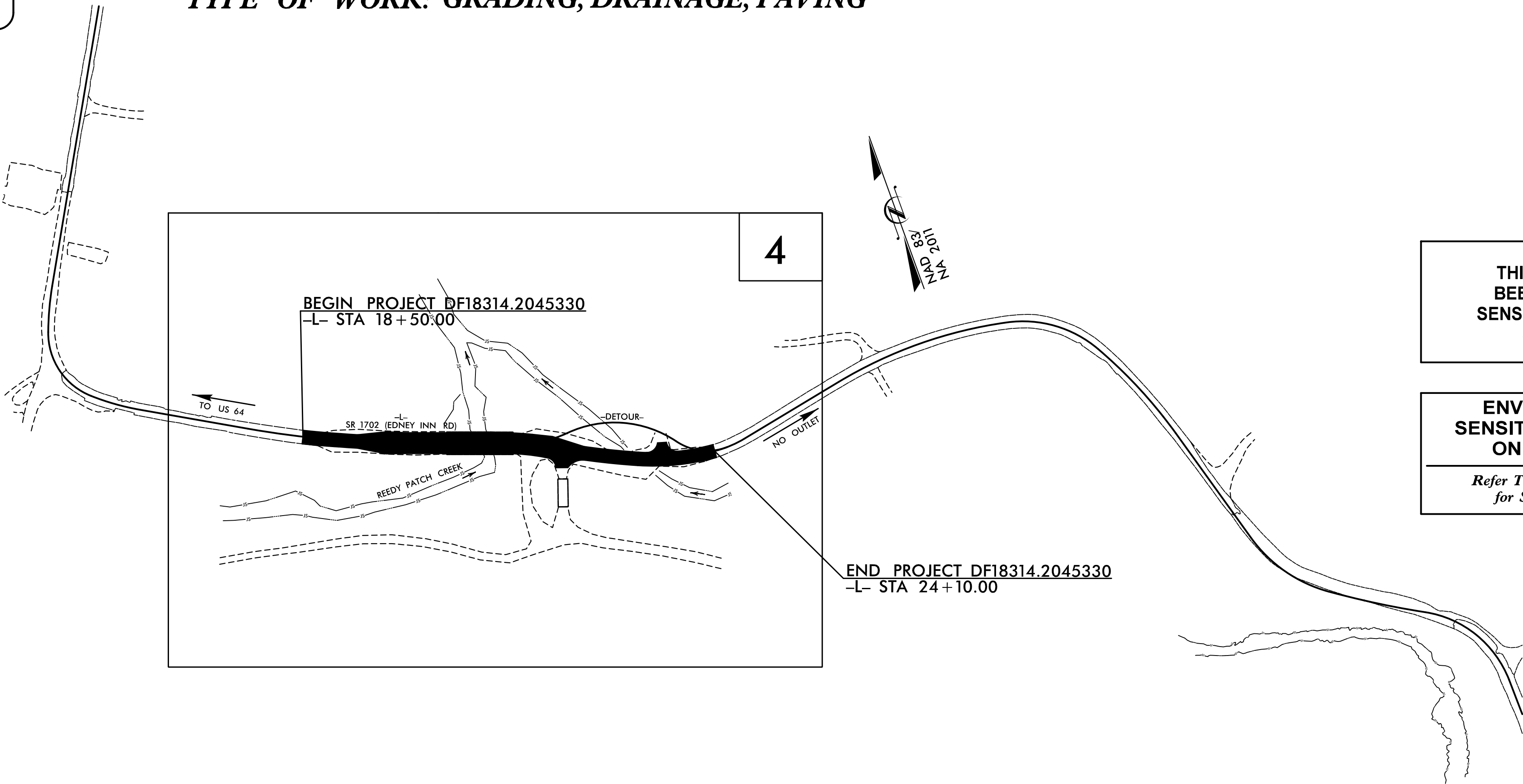
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

HENDERSON COUNTY

LOCATION: BRIDGE #440197 OVER REEDY PATCH CREEK
ON SR 1702 (EDNEY INN ROAD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING



THIS PROJECT HAS
BEEN DESIGNED TO
SENSITIVE WATERSHED
STANDARDS.

ENVIRONMENTALLY
SENSITIVE AREA(S) EXIST
ON THIS PROJECT

Refer To E. C. Special Provisions
for Special Considerations.

GRAPHIC SCALE



PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY
WITH THE REGULATIONS SET FORTH BY THE
NCG-010000 GENERAL STORMWATER CONSTRUCTION PERMIT
ISSUED BY THE NORTH CAROLINA DEPARTMENT OF
ENVIRONMENTAL QUALITY DIVISION OF ENERGY,
MINERAL, AND RESOURCES.

HNTB

Prepared In the Office of:

HNTB HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

Designed by:

NATALIE CHAN, P.E.
NAME

3444
LEVEL III CERTIFICATION NO.

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.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	EC-2
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

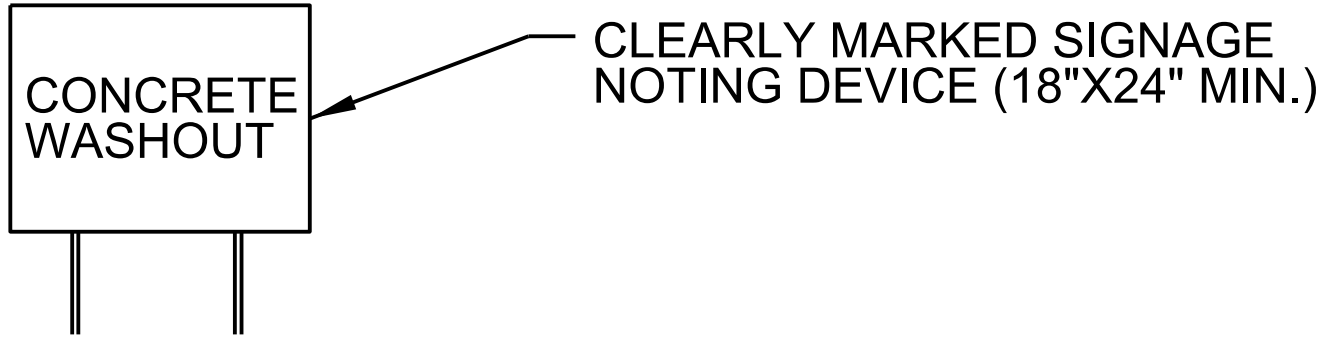
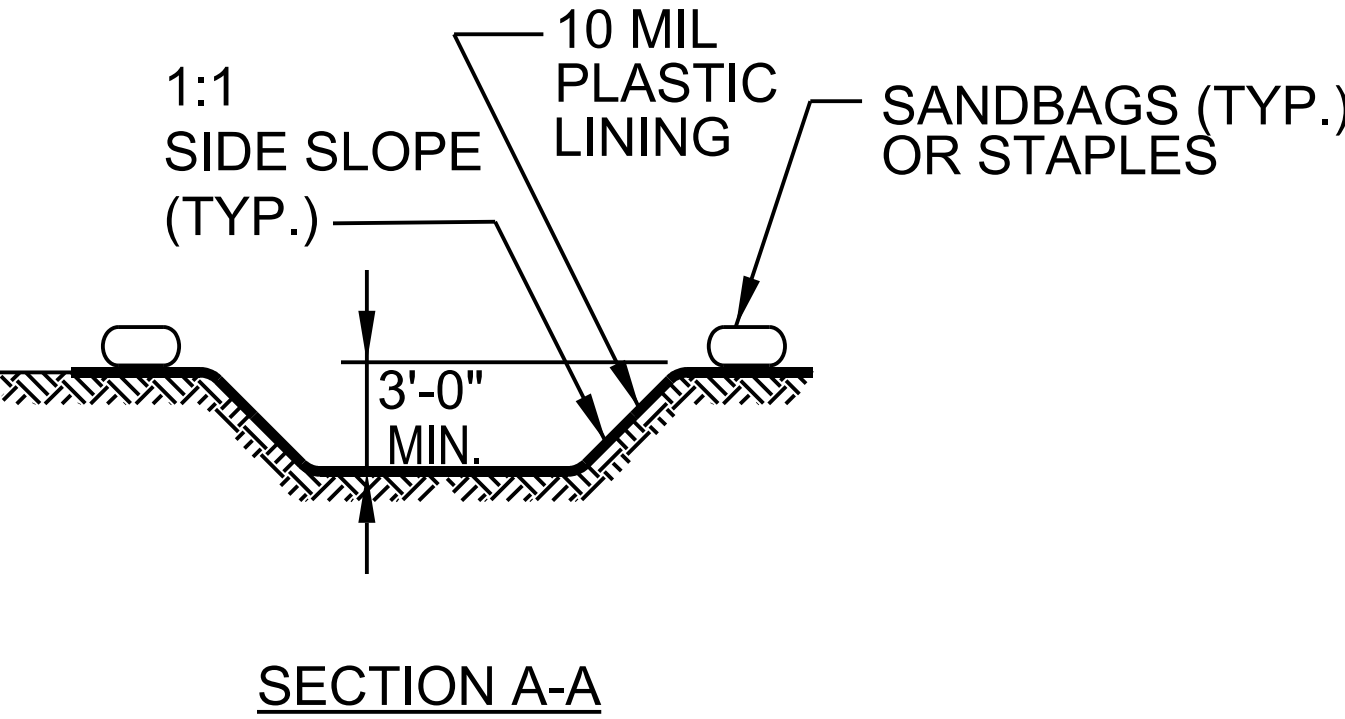
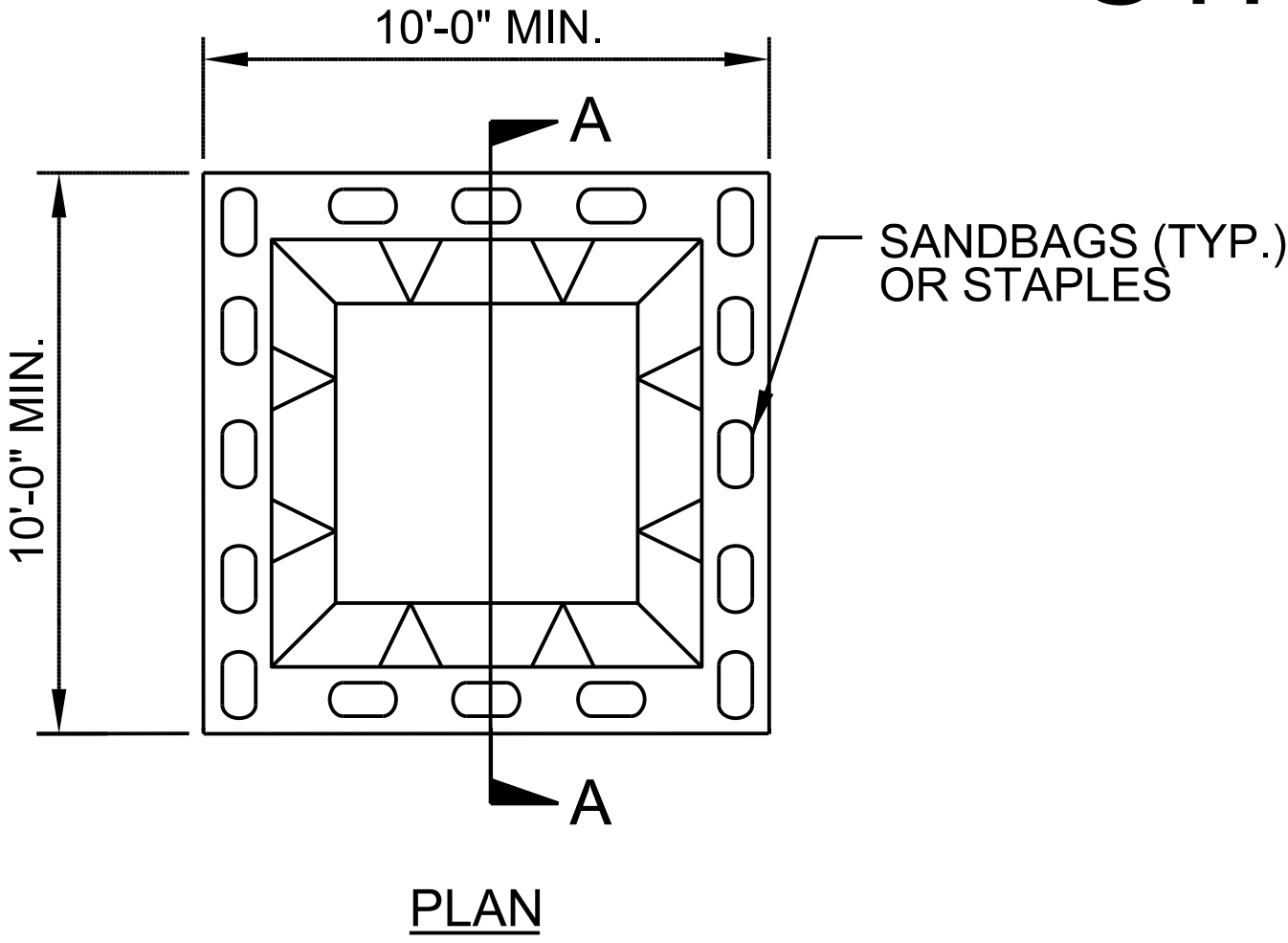
EROSION & SEDIMENT CONTROL LEGEND

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	
1630.04	Stilling Basin	
1630.05	Temporary Diversion	
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	
1632.02	Type B	
1632.03	Type 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	
1635.02	Rock Pipe Inlet Sediment Trap Type 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	
	Silt Fence Coir Fiber Wattle Break	
1636.03	Excelsior Wattle Barrier	
1636.03	Coir Fiber Wattle Barrier	

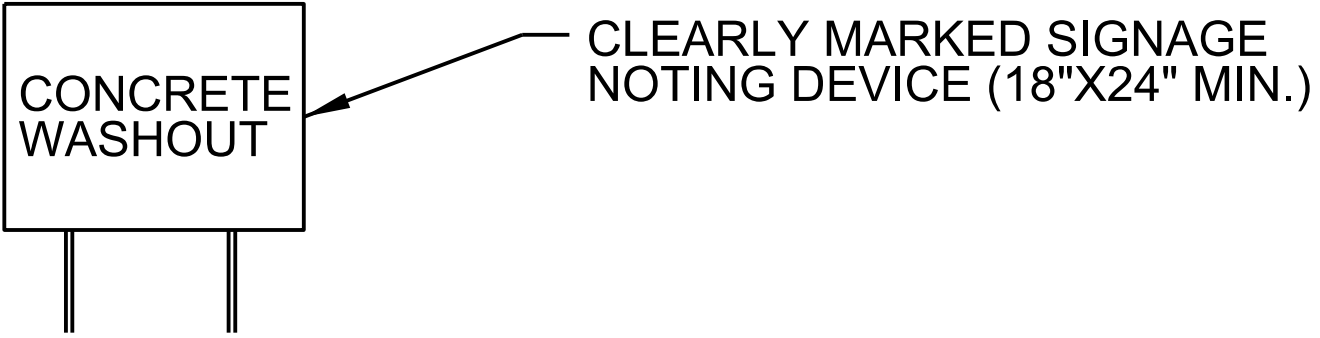
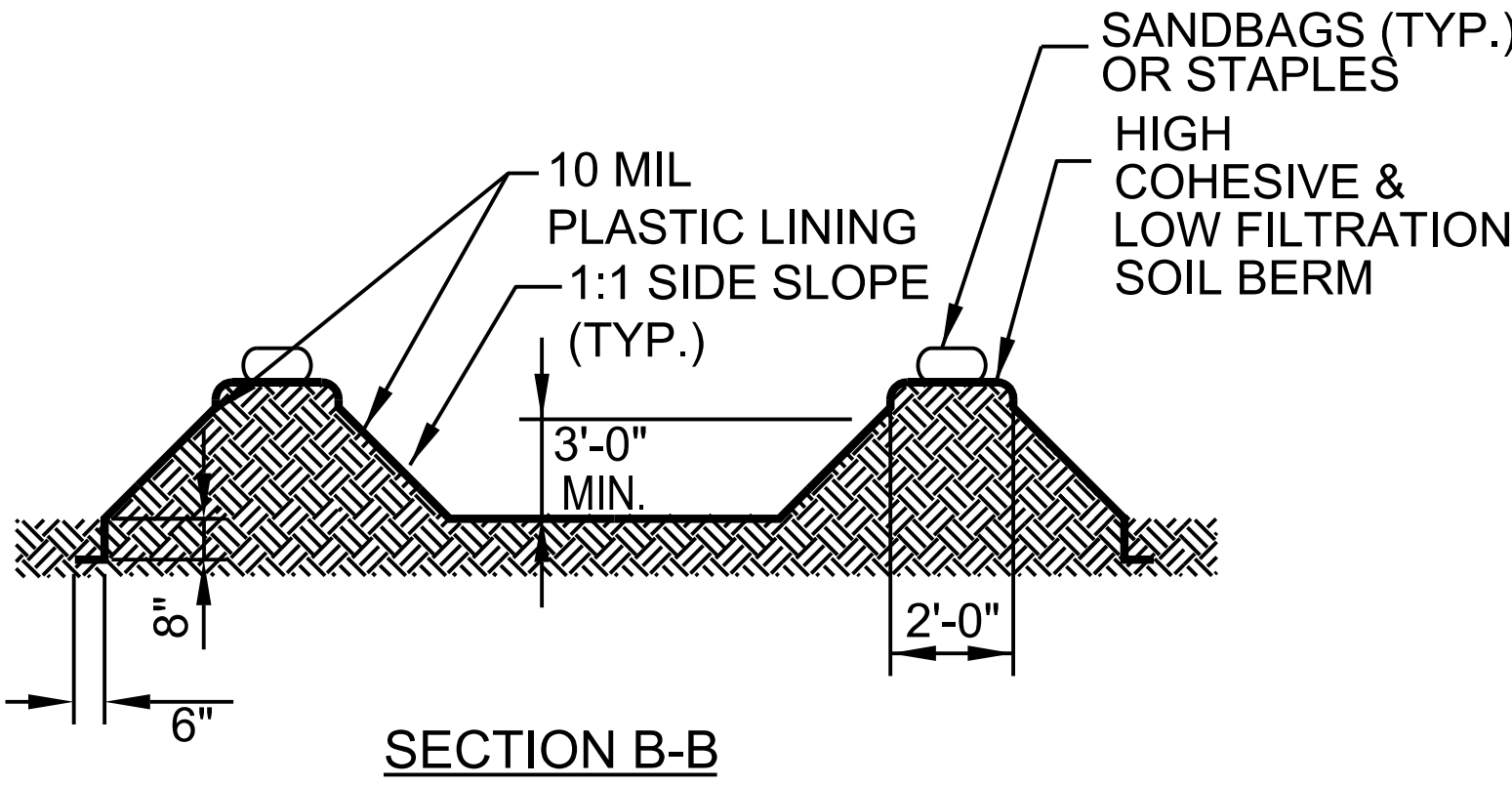
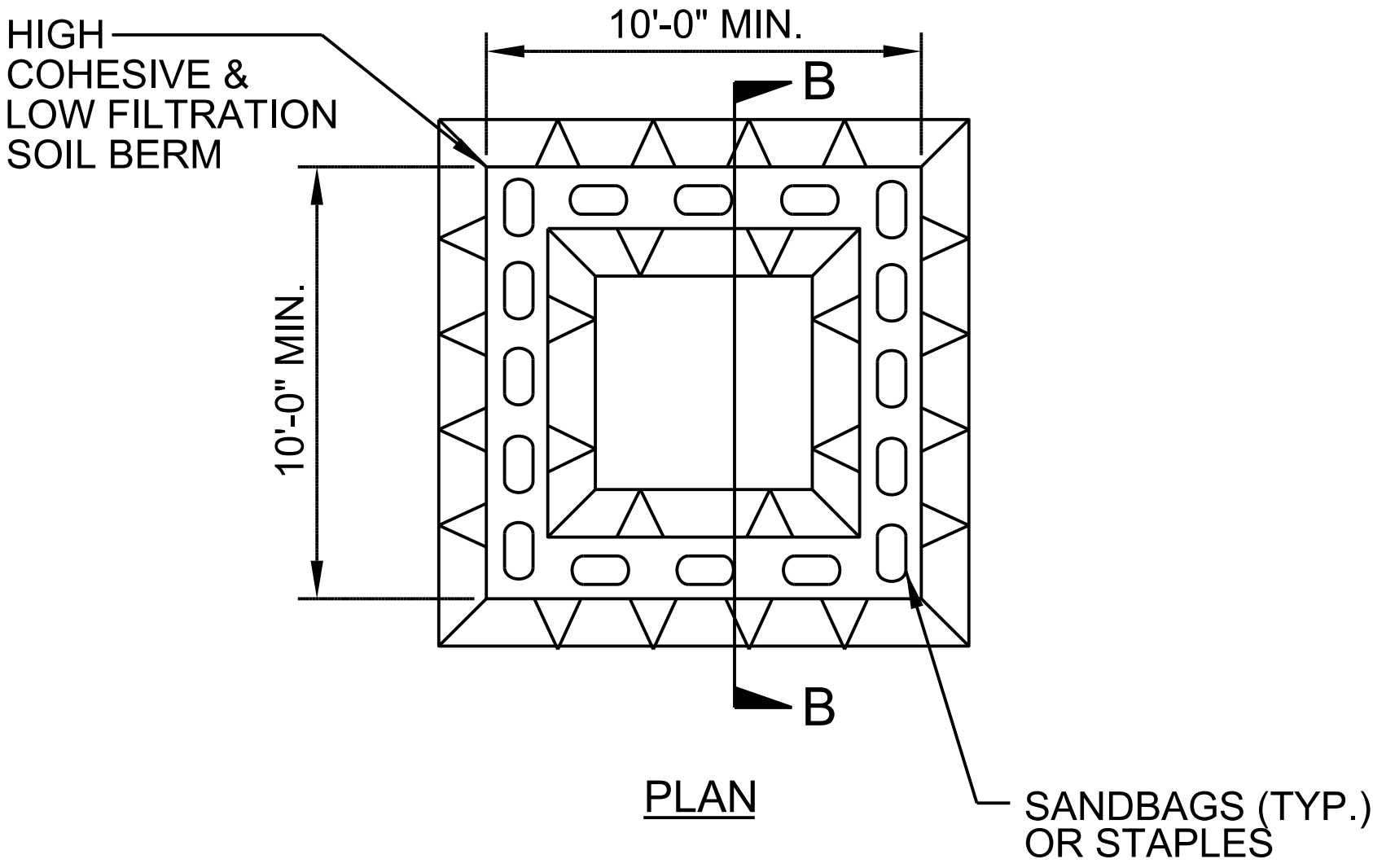
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER

PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



BELOW GRADE WASHOUT STRUCTURE
NOT TO SCALE

- 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 CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.



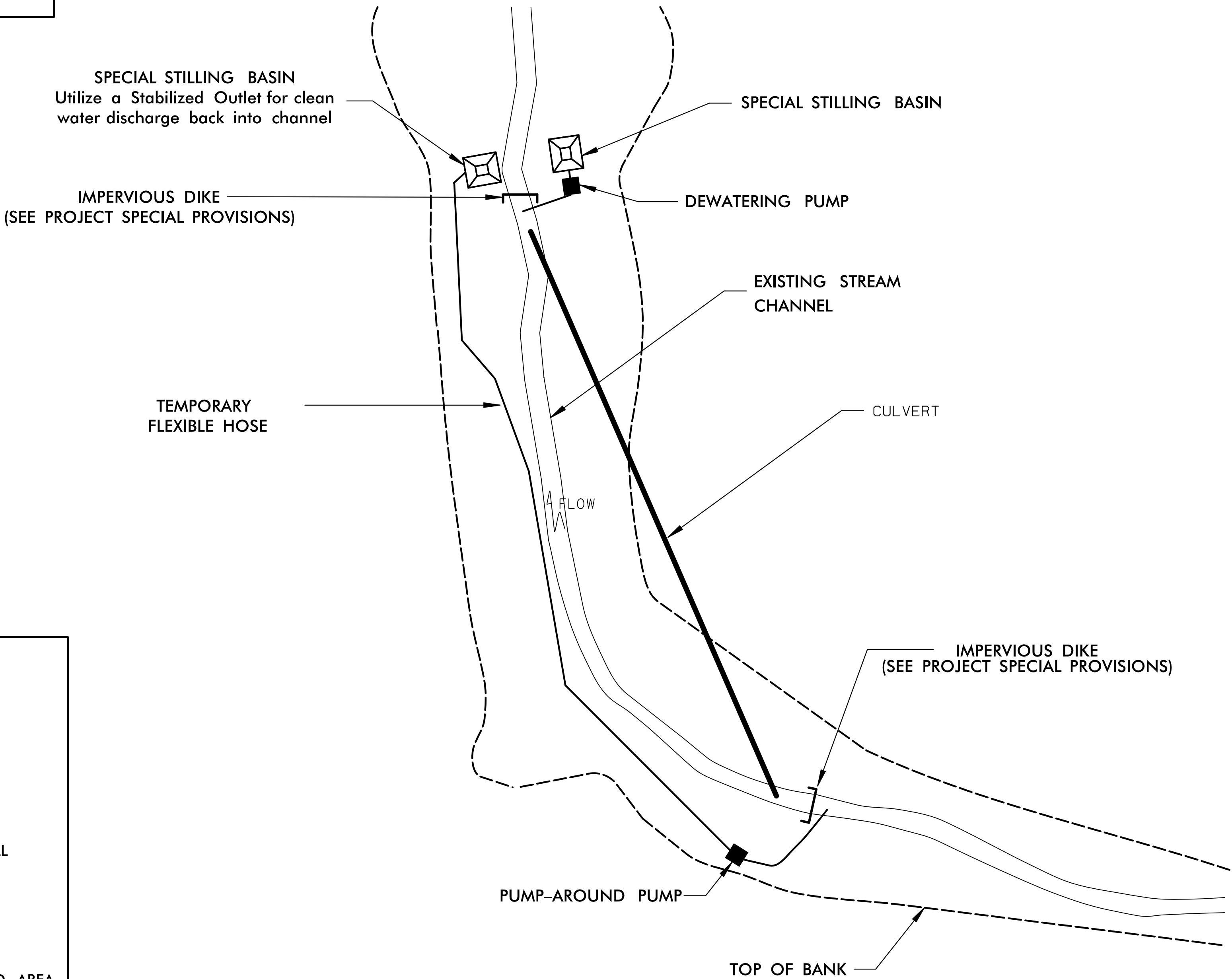
ABOVE GRADE WASHOUT STRUCTURE
NOT TO SCALE

- 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 CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

EXAMPLE OF PUMP-AROUND OPERATION

NOTES:

- 1) All excavation shall be performed in only dry or isolated areas of the work zone.
- 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
- 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
- 4) Pumps and hoses shall be of sufficient size to dewater the work area.

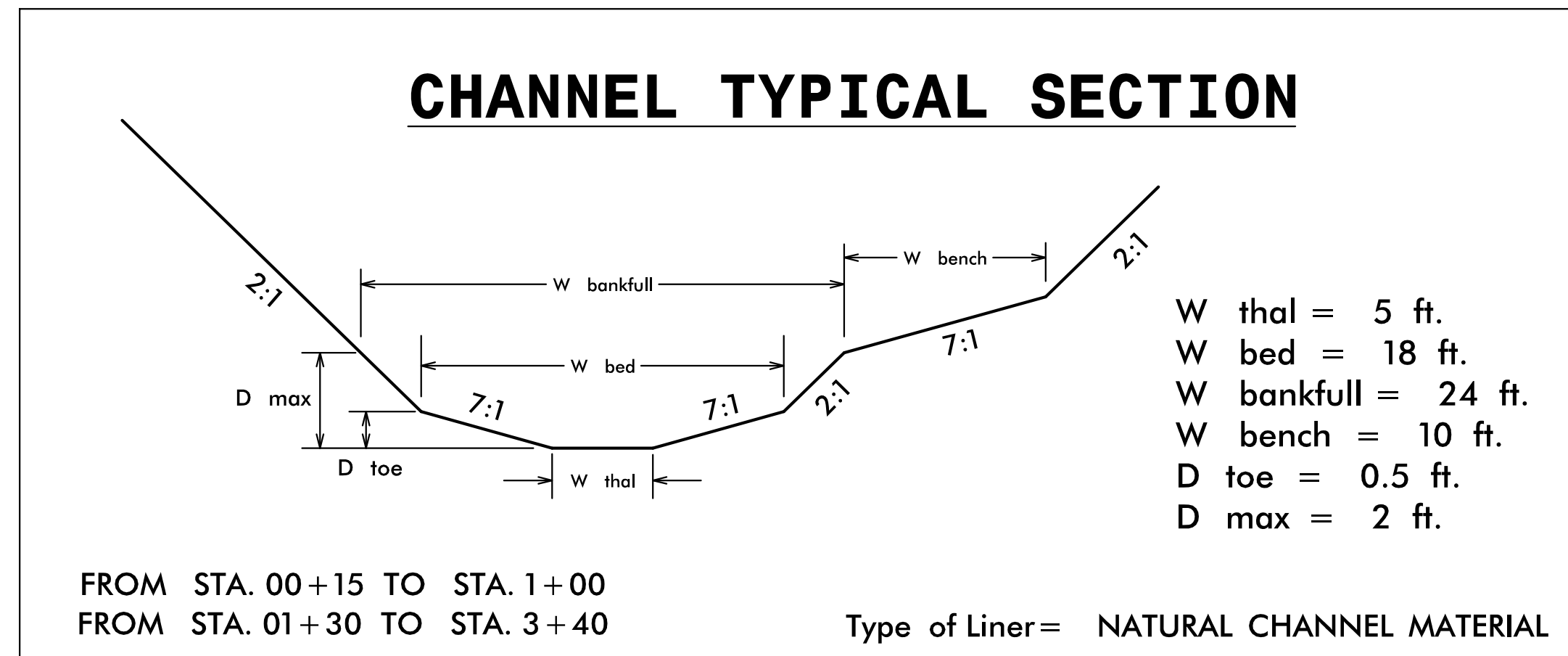


SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN.
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
6. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	EC-2C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

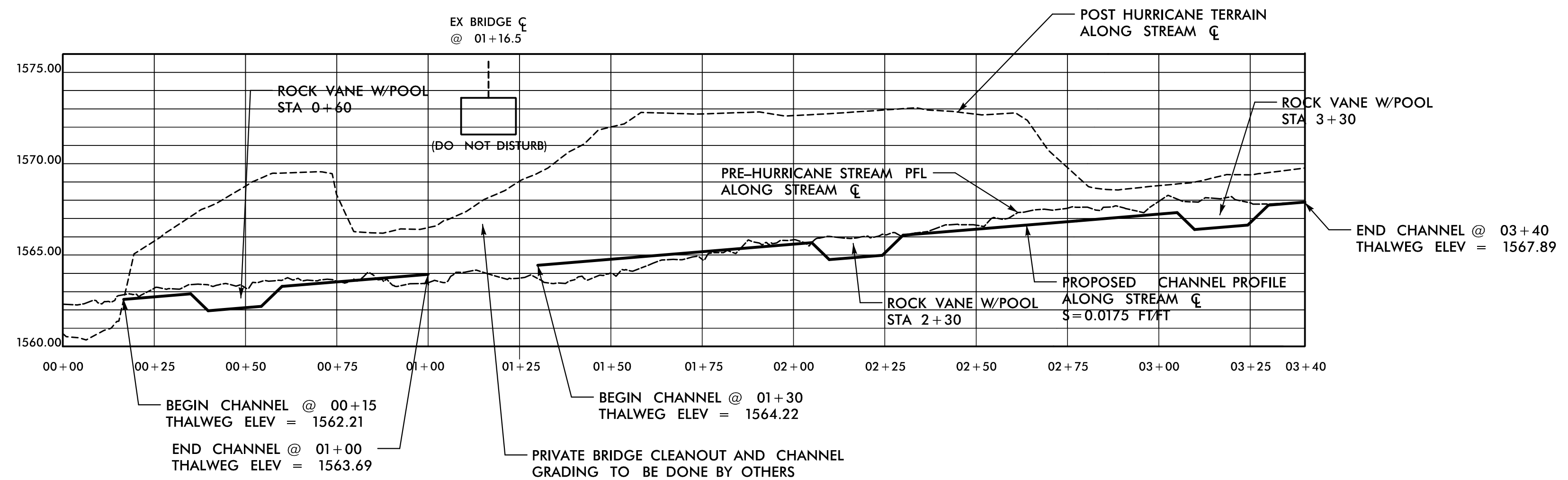
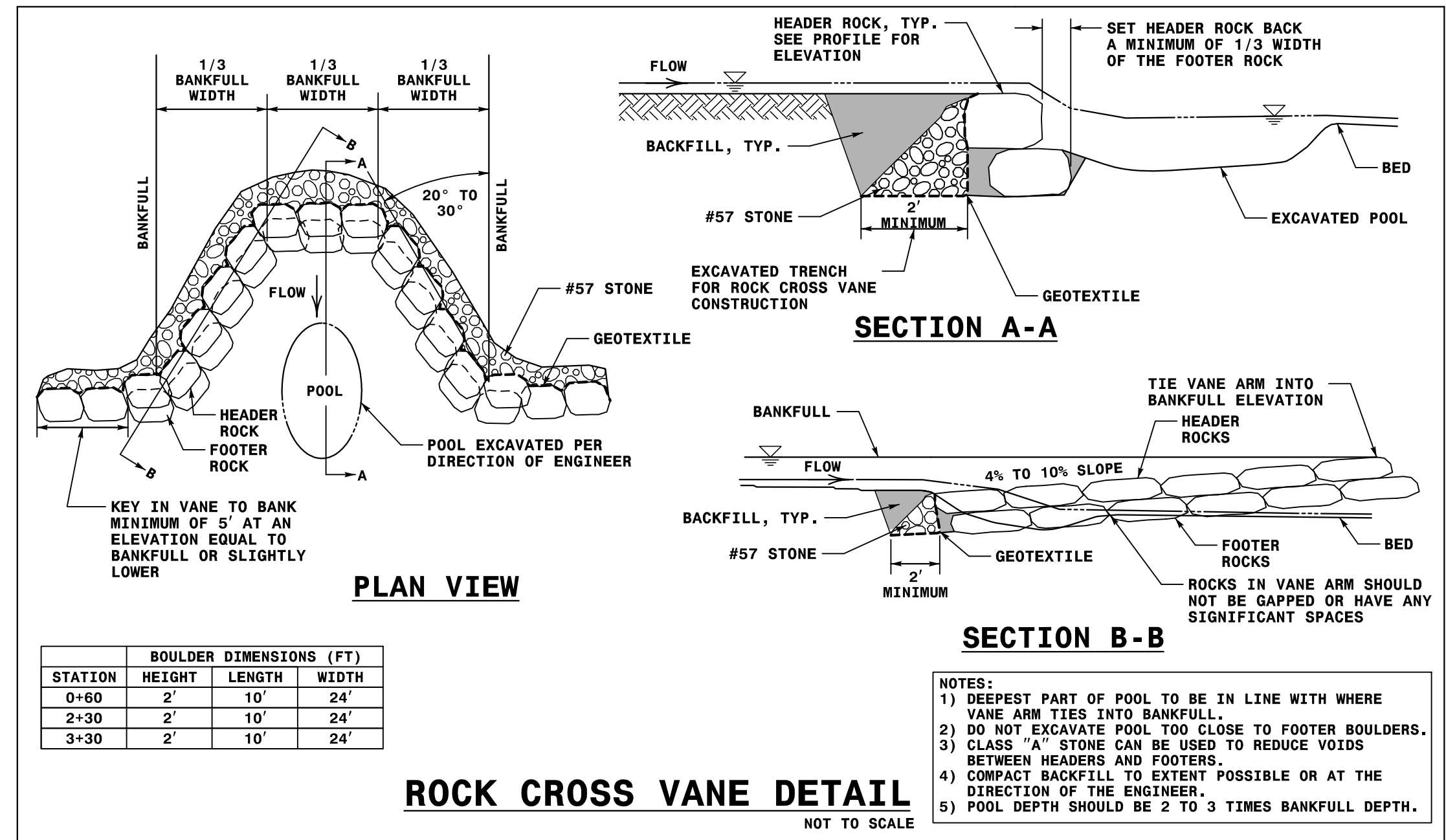
LITTLE CREEK RELOCATION DETAIL



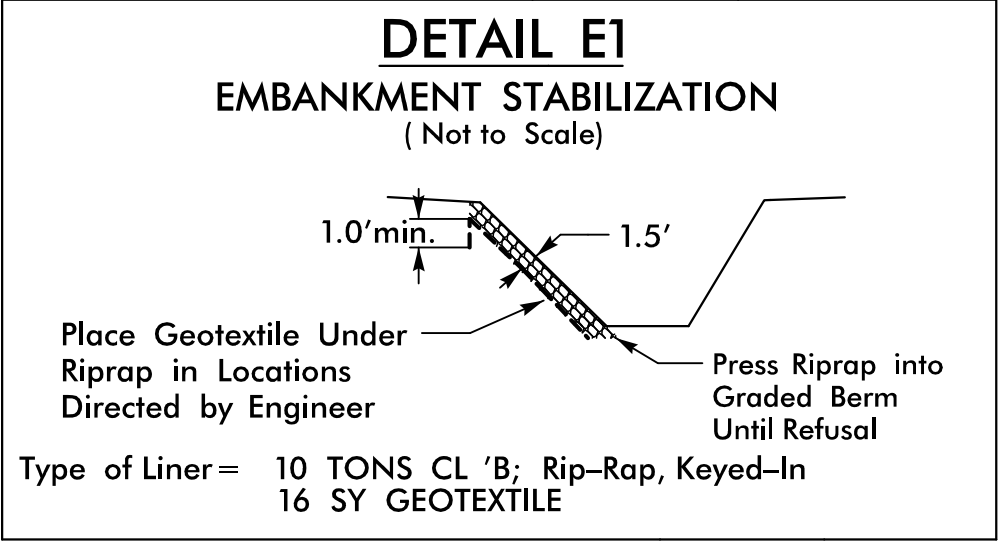
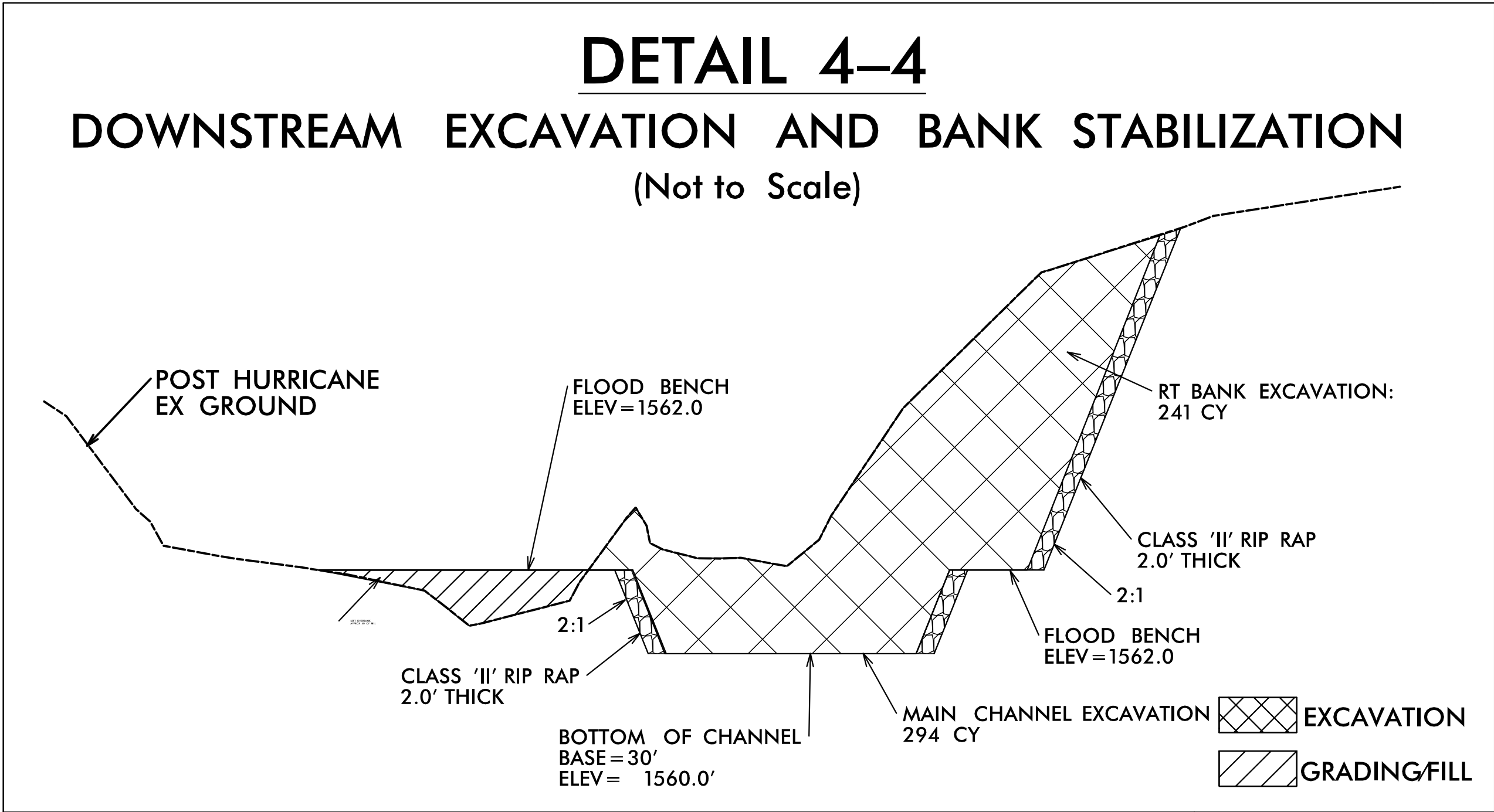
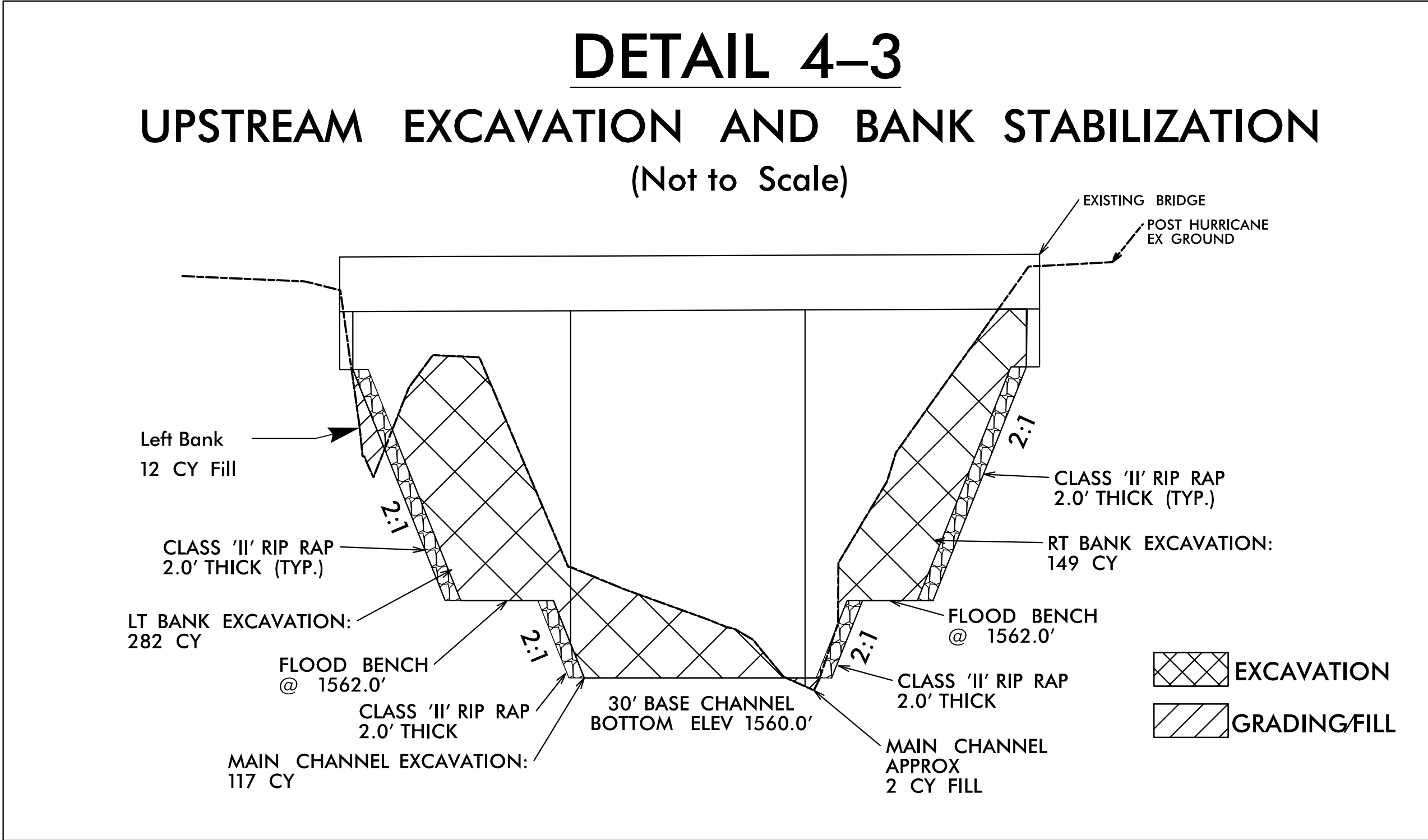
ROCK CROSS VANE QUANTITIES:
75 TONS – #57 STONE
50 TONS – BOULDERS
300 SY – GEOTEXTILE FOR DRAINAGE

EARTHWORK QUANTITIES		
STA	XS EXCAVATION AREA (SF)	XS FILL AREA (SF)
3+25	85.1	–
3+00	47.4	8.7
2+75	97.3	61.2
2+50	176.6	143.3
2+25	222.8	–
2+00	237.4	–
1+75	257.2	–
1+50	282.5	–
1+25	–	–
1+00	97.5	–
0+75	192.5	–
0+50	165.6	–
0+25	97.1	8.2
0+00	–	–
TOTAL	1,729	205
APPROX. NET EXCAVATION = 1,524 CY*		

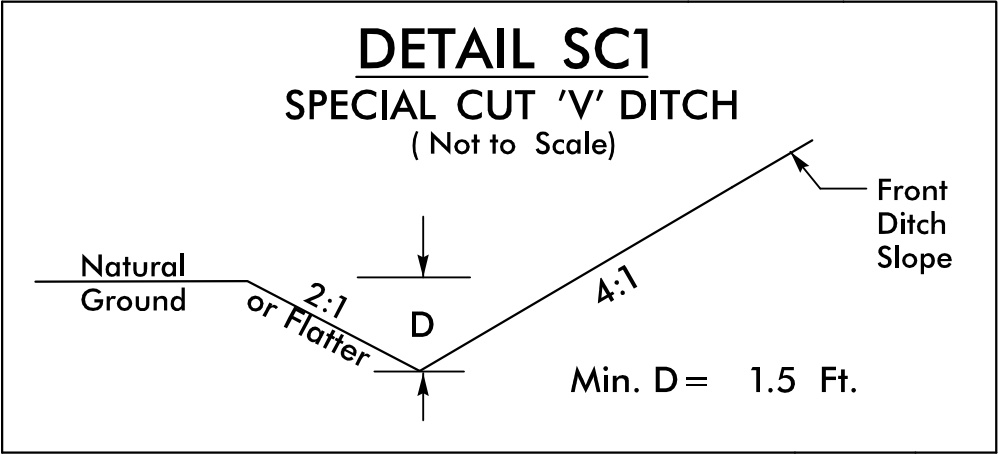
*CALCULATED USING AVERAGE END AREA METHOD



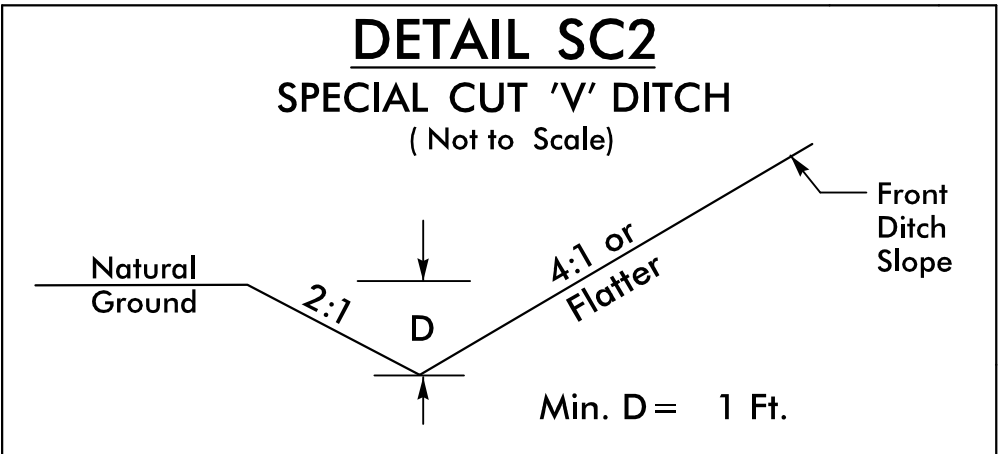
PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	EC-2D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



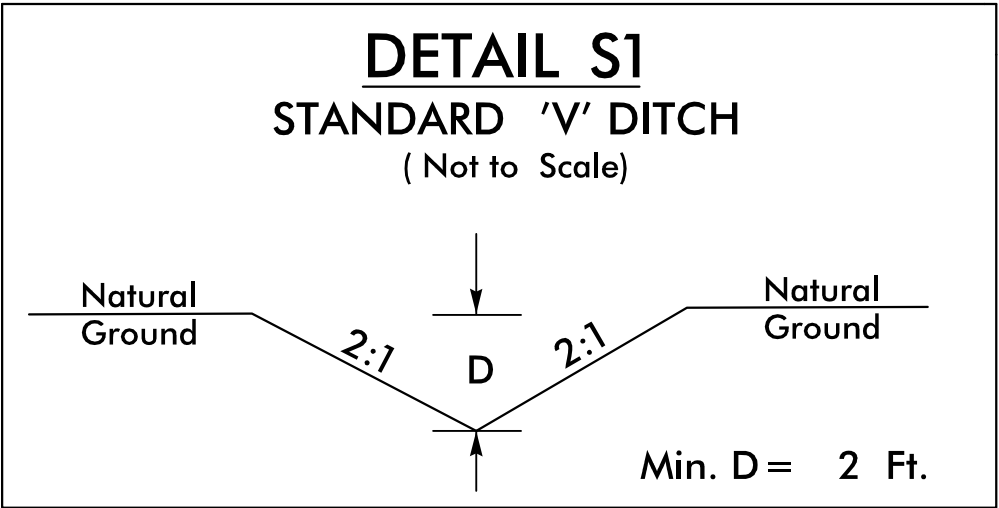
FROM -DETOUR- STA. 11+37 TO STA. 11+50 LT



FROM -L- STA. 21+25 TO STA. 23+25 LT



FROM -DETOUR- STA. 11+50 TO STA. 11+75 LT
FROM -DETOUR- STA. 12+25 TO STA. 12+57 LT



FROM -L- STA. 21+23 (44.4' LT) TO STA. 21+75 (32.5' LT)
EST. 51 CY DDE

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

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

PROJECT REFERENCE NO.
DF18314.2045330

SHEET NO.
EC-3A

ROADWAY DESIGN
ENGINEER

HYDRAULICS
ENGINEER

SOIL STABILIZATION SUMMARY SHEET

STRAW MATTING FOR EROSION CONTROL

[illegible]

EXCELSIOR MATTING FOR EROSION CONTROL

[illegible]

5/14/99

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HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.		SHEET NO.
DF18314.2045330		EC-4/CONST.4
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

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

NOTE:
PUMP AROUND OPERATIONS LOCATION
WILL BE FIELD ADJUSTED.

Place Matting for Erosion Control
on Slope as Work Allows.
-L- Sta. 20+00 to Sta. 20+35 LT
-Detour- Sta. 22+10 to Sta. 22+35 LT

BEGIN PROJECT DF18314.2045330
-L- POC STA. 18+50.00

-L- PC Sta. 17+74.93

-L- PT Sta. 19+98.90

BEGIN CONSTRUCTION
DETOUR- STA. 10+50.00 =
-L- STA. 21+85.42, 12/22' LT

END PROJECT DF18314.2045330
-L- POC STA. 24+10.00

-L- PRC Sta. 21+80.70

-L- PCC Sta. 23+05.35

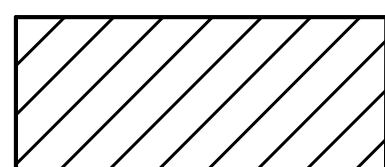
REMOVE RIP RAP, COMPACT SOIL
AND GRADE TO DRAIN

-L- PCC Sta. 24+4.98

-L- PT Sta. 24+53.83

S 60° 10' 06.2" E

N 78° 49' 49.7" E



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

PI Sta 18+87.19 Δ = 9° 52' 17.1" (LT) D = 4° 24' 26.5" L = 223.98' T = 112.27' R = 1,300.00' SE = SEE PLANS DS = <15 MPH RO = N/A	PI Sta 21+53.47 Δ = 10° 47' 25.3" (RT) D = 19° 45' 25.8" L = 54.61' T = 27.39' R = 290.00' SE = NC DS = <15 MPH RO = N/A	PI Sta 22+43.11 Δ = 7° 08' 31.3" (LT) D = 5° 43' 46.5" L = 124.65' T = 62.41' R = 1,000.00' SE = RC DS = <15 MPH RO = 32.00'	PI Sta 23+60.73 Δ = 19° 56' 27.1" (LT) D = 18° 11' 20.9" L = 109.63' T = 55.38' R = 315.00' SE = 0.04 DS = 25 MPH RO = 64.00'	PI Sta 24+34.51 Δ = 14° 50' 13.8" (LT) D = 38° 11' 49.9" L = 38.84' T = 19.53' R = 150.00'
---	--	--	---	---

LEGEND

- PROPOSED EXCAVATION
- PROPOSED BACKFILL

NOTE:
REMOVE TEMP. DETOUR ABC AND RESTORE
CUT AREAS TO PRE-CONSTRUCTION
CONDITIONS, GRADE TO DRAIN AS NEEDED

FOR -DETOUR- PLAN, SEE SHEET 2B-1
FOR -DETOUR- PROFILE, SEE SHEET 5
FOR -L- PROFILE, SEE SHEET 5

STREAM REALIGNMENT CONSTRUCTION SEQUENCE

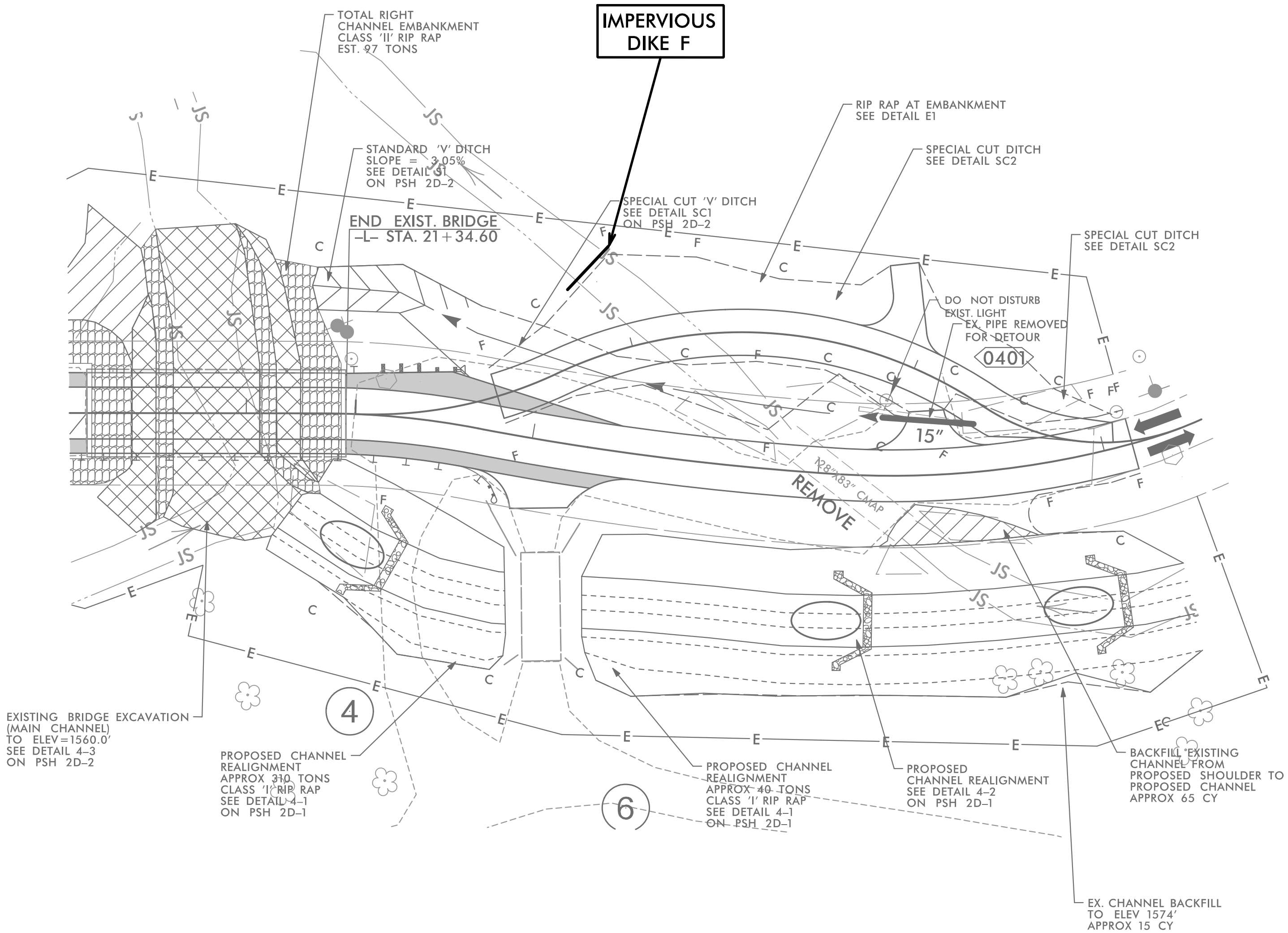
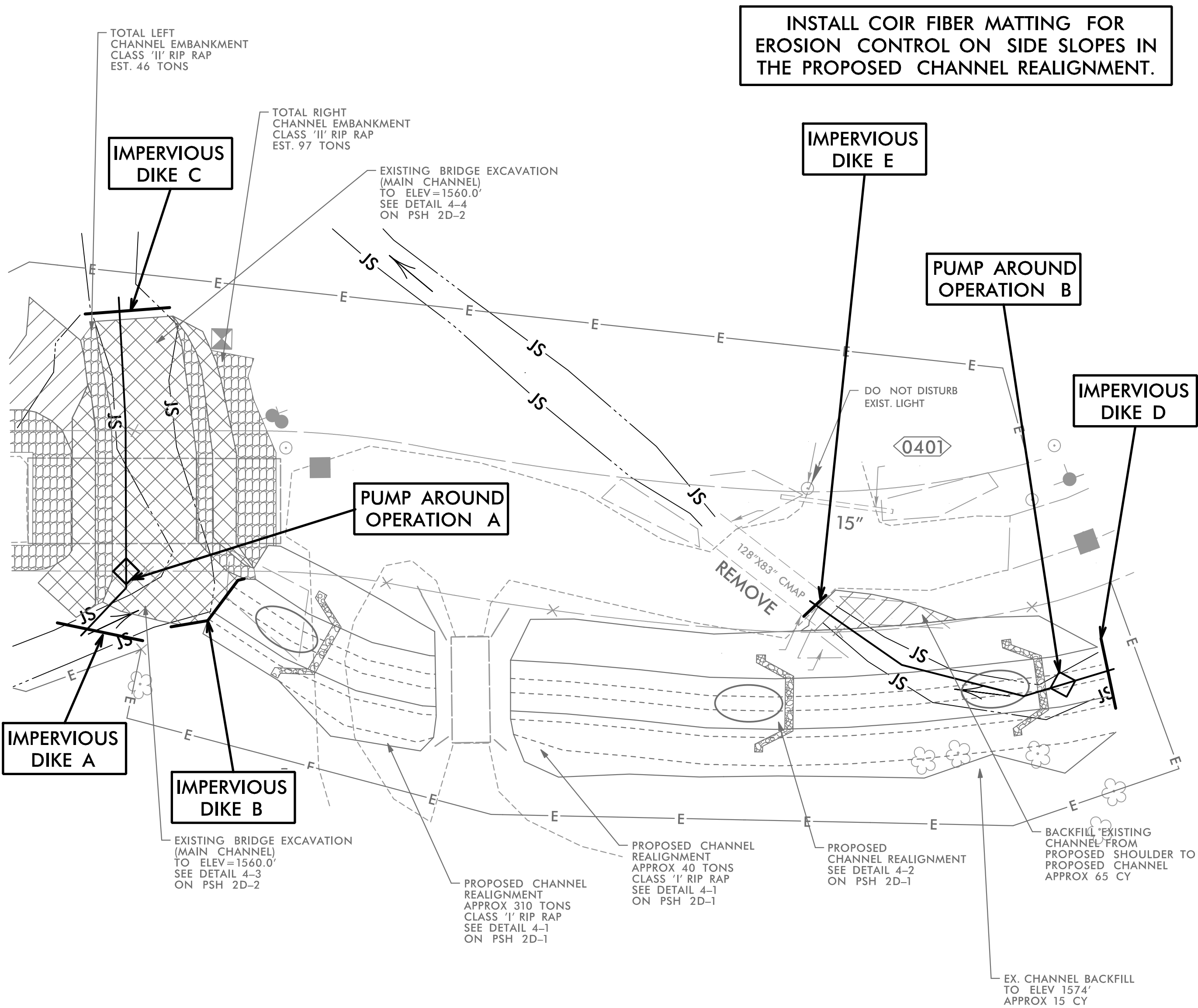
PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	EC-4A/CONST.4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

PHASE I

1. UTILITIZE SPECIAL STILLING BASIN(S) DURING STREAM REALIGNEMNT INSTALLATION.
2. INSTALL IMPERVIOUS DIKES A, B, C, AND PUMP AROUND OPERATION A.
3. DEWATER WORK AREA(S) WITH SPECIAL STILLING BASIN(S).
4. EXCAVATE THE MAIN CHANNEL UNDER EXISTING BRIDGE ACCORDING TO DETAIL 4-3 AND 4-4 ON PSH 2D-2.
5. REHAB EXISTING BRIDGE AS DIRECTED BY STRUCTURE DRAWINGS.
6. CONSTRUCT LEFT AND RIGHT CHANNEL EMBANKMENT ACCORDING TO DETAIL 4-3 AND 4-4 ON PSH 2D-2.
7. INSTALL IMPERVIOUS DIKES D, E, AND PUMP AROUND OPERATION B.
8. CONSTRUCT PROPOSED CHANNEL REALIGNMENT ACCORDING TO DETAIL 4-1 AND 4-2 ON PSH 2D-1.
9. BACKFILL EXISTING CHANNEL FROM PROPOSED SHOULDER TO PROPOSED CHANNEL AS SHOWN ON PLAN.

PHASE II

1. REMOVE IMPERVIOUS DIKES A, B, C, D, E, AND PUMP AROUND OPERATIONS A AND B.
2. ROUTE WATER TO NEWLY CONSTRUCTED CHANNEL REALIGNMENT.
3. INSTALL IMPERVIOUS DIKE F AND CONSTRUCT DETOUR.
4. SHIFT TRAFFIC TO NEWLY CONSTRUCTED DETOUR ACCORDING TO TRAFFIC CONTROL PLAN.
5. REMOVE EXISTING 128" X 83" CMAP.
6. COMPLETE ROADWAY AND REMOVE DETOUR.
7. REMOVE IMPERVIOUS DIKE F AND ALL REMAINING SPECAIL STILLING BASIN(S).



5/14/99

5/14/99
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NC License No: C-1554

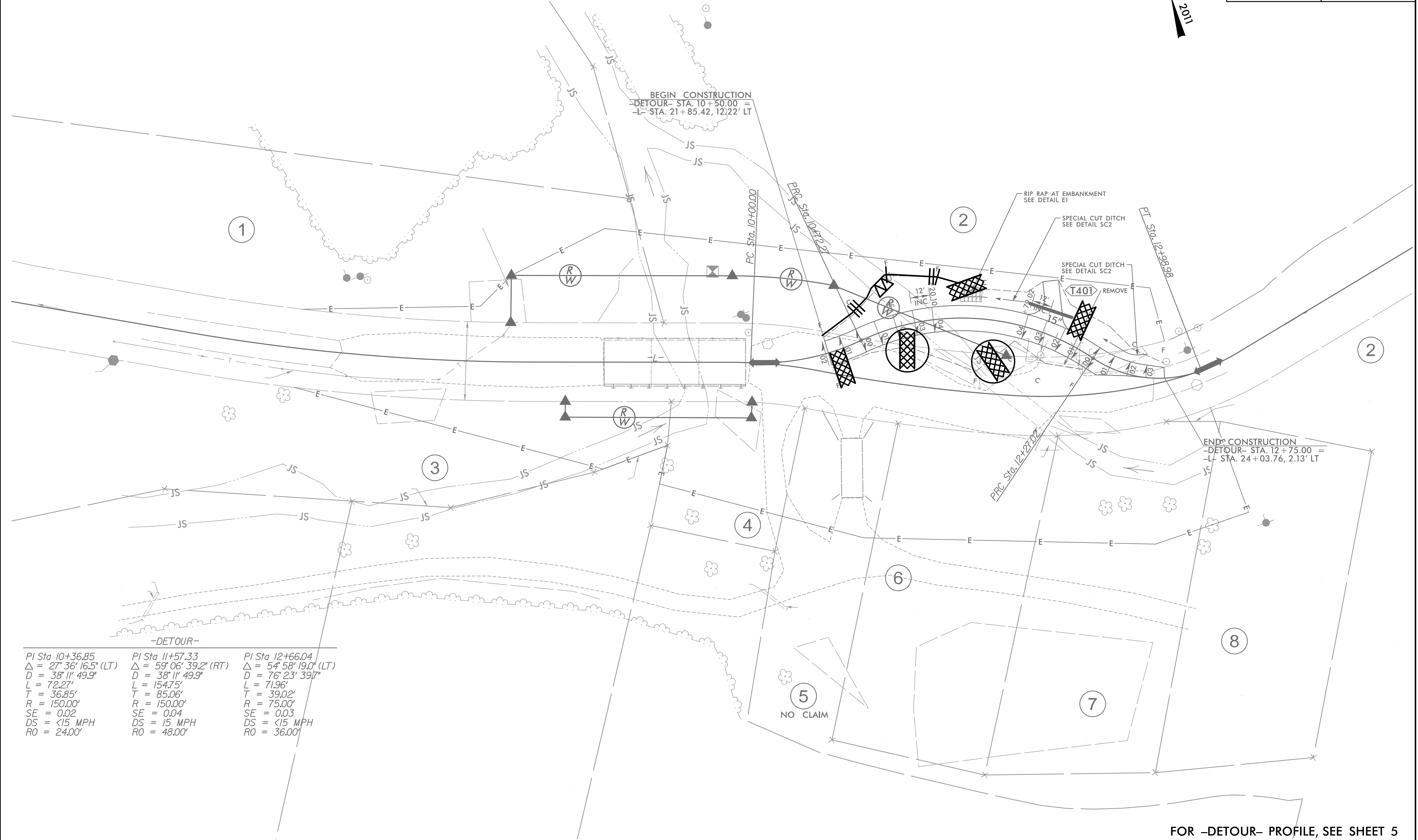
HNTB

HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St.
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Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT REFERENCE NO.	SHEET NO.
DF18314.2045330	EC-5/CONST.2B-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETOUR

NAD 83/NA 2011



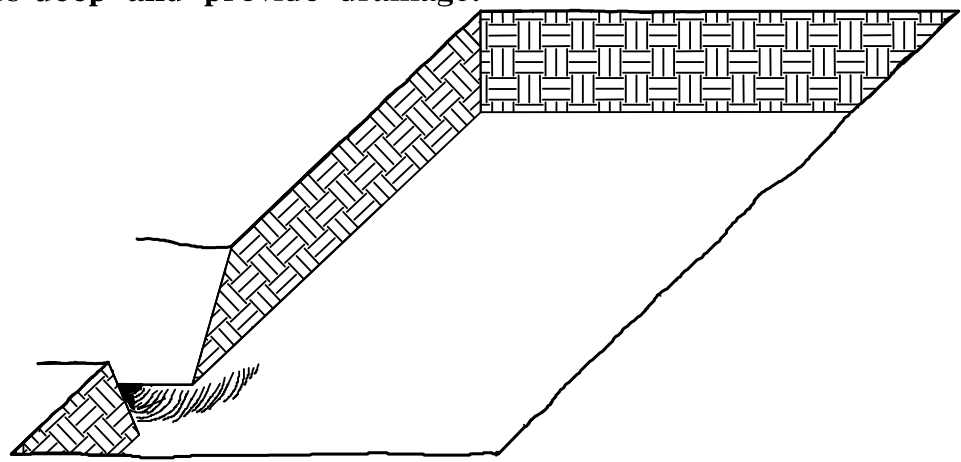
-DETOUR-		
PI Sta 10+36.85 $\Delta = 27^\circ 36' 16.5''$ (LT) $D = 38^\circ 11' 49.9''$ $L = 72.27'$ $T = 36.85'$ $R = 150.00'$ $SE = 0.02$ $DS = <15$ MPH $RO = 24.00'$	PI Sta 11+57.33 $\Delta = 59^\circ 06' 39.2''$ (RT) $D = 38^\circ 11' 49.9''$ $L = 154.75'$ $T = 85.06'$ $R = 150.00'$ $SE = 0.04$ $DS = 15$ MPH $RO = 48.00'$	PI Sta 12+66.04 $\Delta = 54^\circ 58' 19.0''$ (LT) $D = 76^\circ 23' 39.7''$ $L = 71.96'$ $T = 39.02'$ $R = 75.00'$ $SE = 0.03$ $DS = <15$ MPH $RO = 36.00'$

FOR -DETOUR- PROFILE, SEE SHEET 5

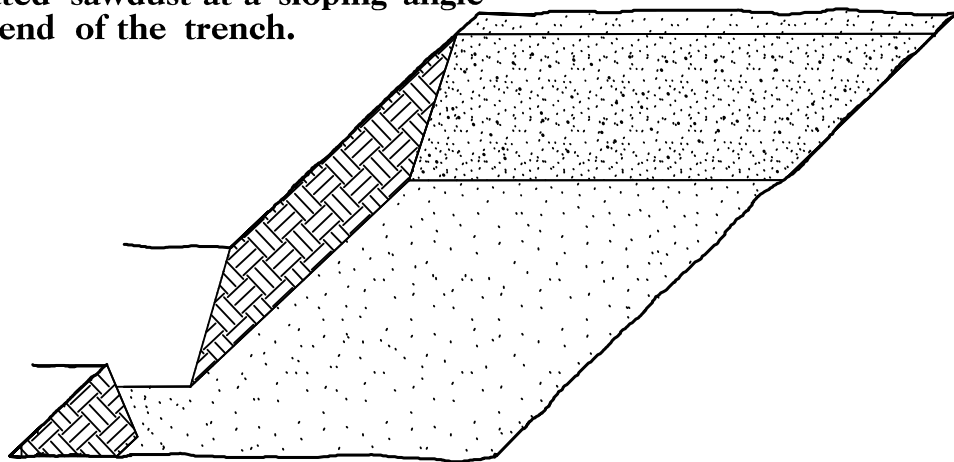
PLANTING DETAILS
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

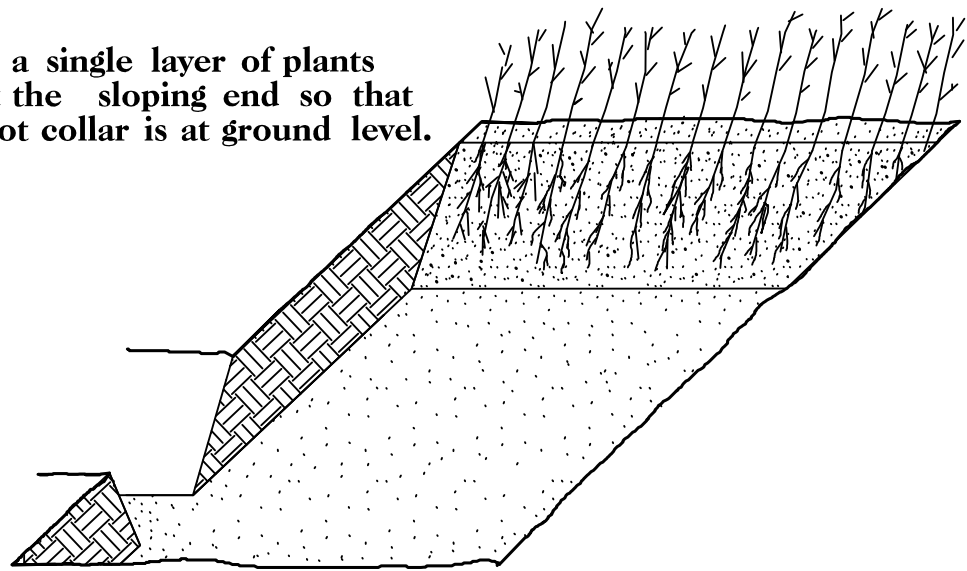
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



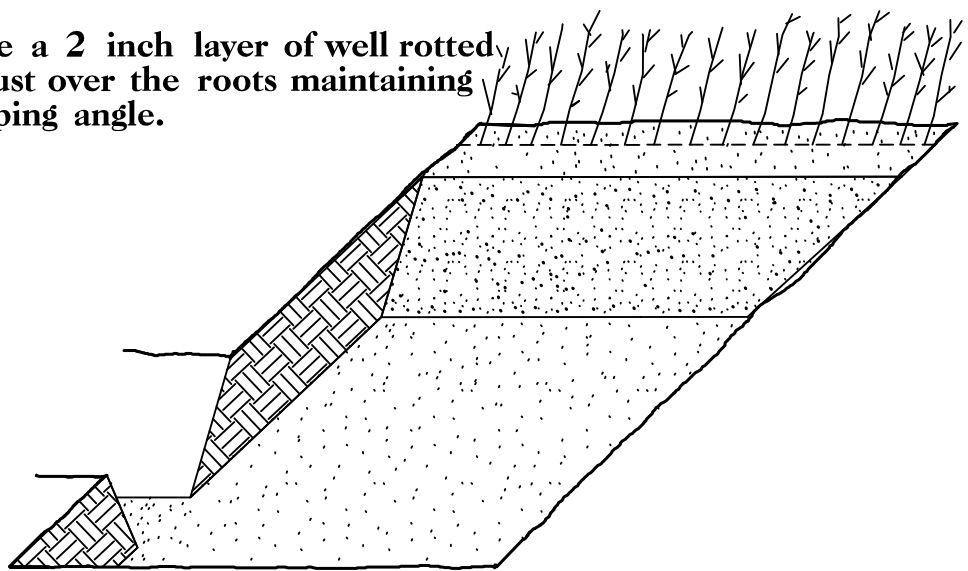
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



4. Place a single layer of plants against the sloping end so that the root collar is at ground level.

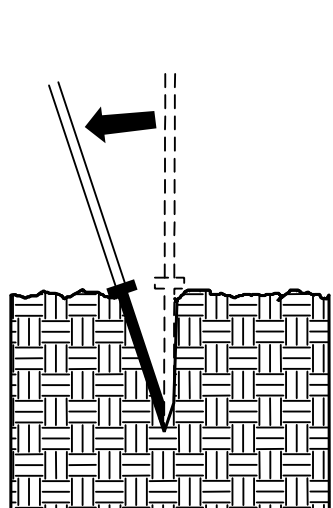


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

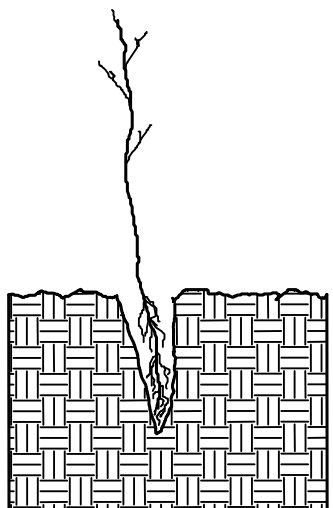


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

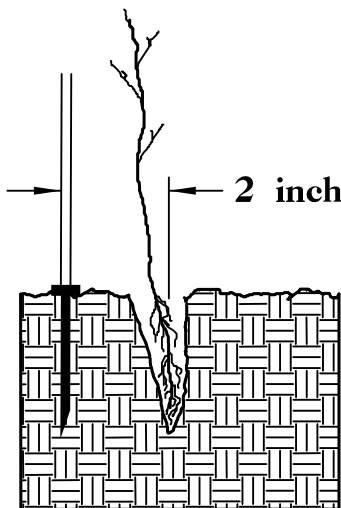
DIBBLE PLANTING METHOD
USING THE KBC PLANTING BAR



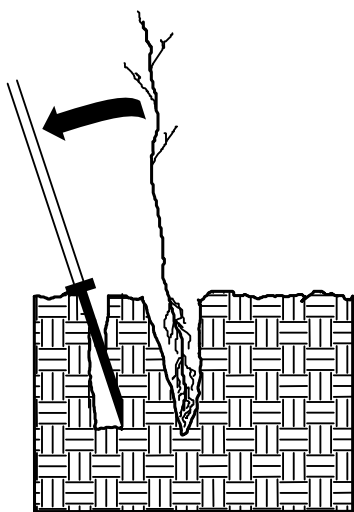
1. Insert planting bar as shown and pull handle toward planter.



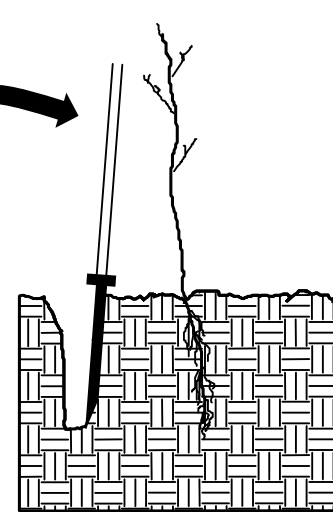
2. Remove planting bar and place seedling at correct depth.



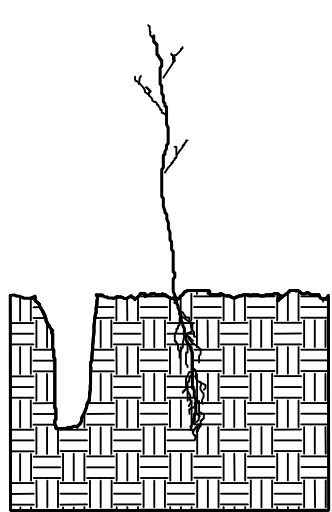
3. Insert planting bar 2 inches toward planter from seedling.



4. Pull handle of bar toward planter, firming soil at bottom.



5. Push handle forward firming soil at top.



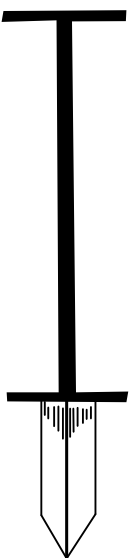
6. Leave compaction hole open. Water thoroughly.

PLANTING NOTES:

PLANTING BAG
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.



KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.



ROOT PRUNING
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.

REFORESTATION

- TREE REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

34%	LIRIODENDRON TULIPIFERA	TULIP POPLAR	12 in - 18 in BR
33%	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	12 in - 18 in BR
33%	BETULA NIGRA	RIVER BIRCH	12 in - 18 in BR

REFORESTATION DETAIL SHEET

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT