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09/05/2019

See Sheet 1A For Index of Sheets

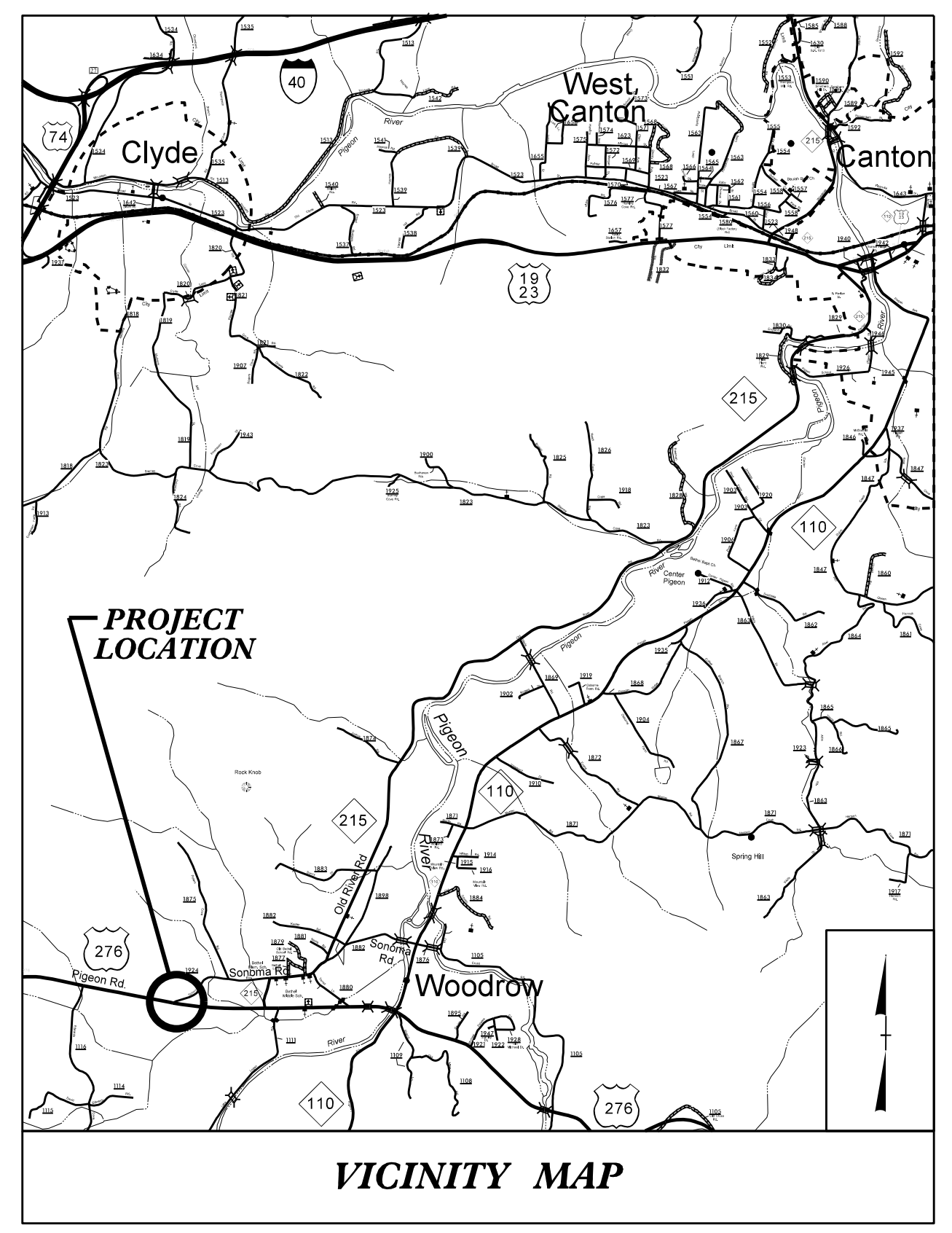
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HAYWOOD COUNTY

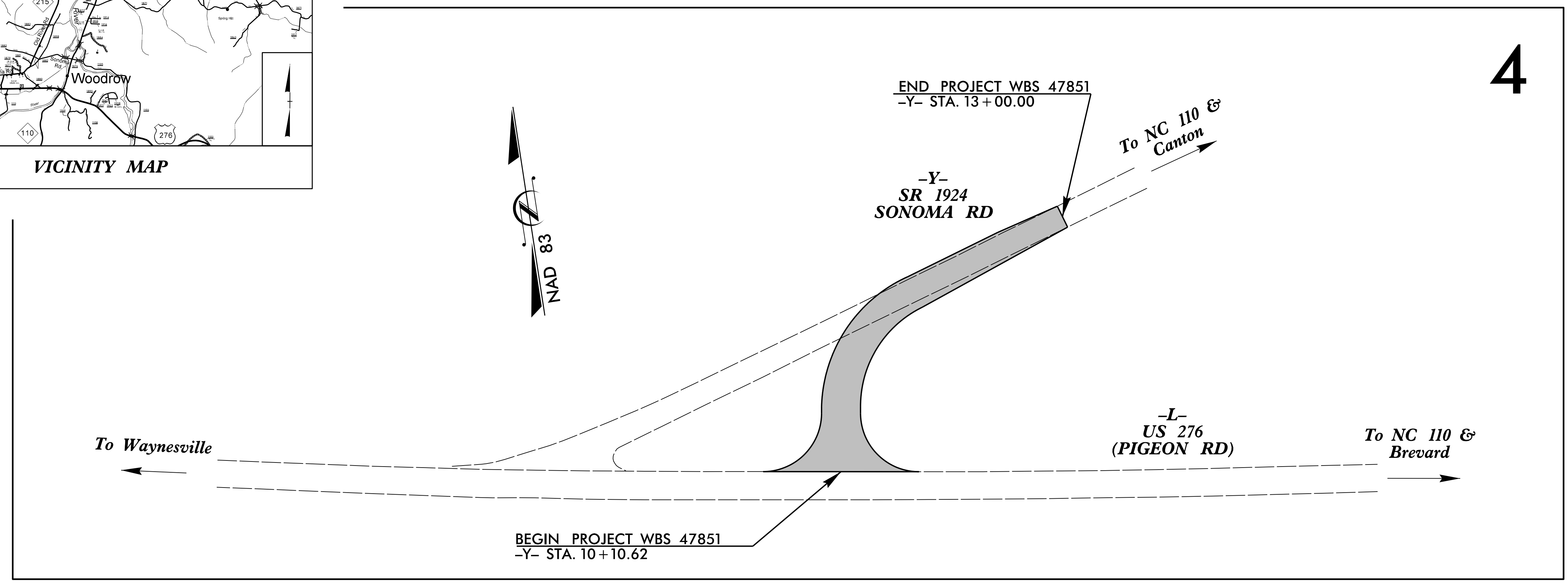
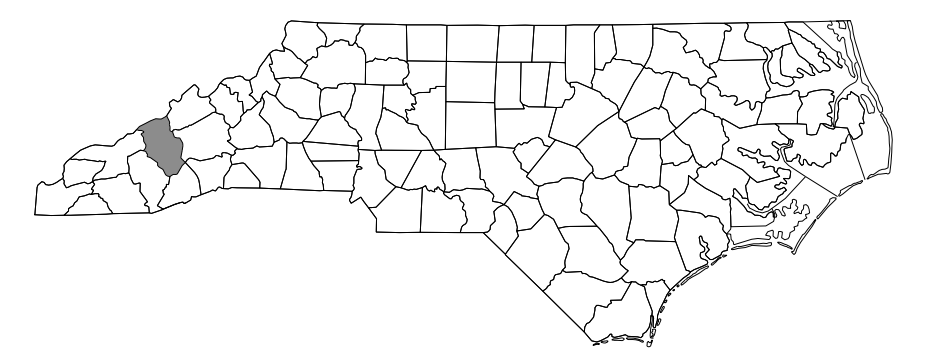
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	WBS 47851	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
WBS 47851		PE	
WBS 47581		RW, UTILITIES	
WBS 47581		CONSTRUCTION	

PROJECT: WBS 47851

CONTRACT: DN00680



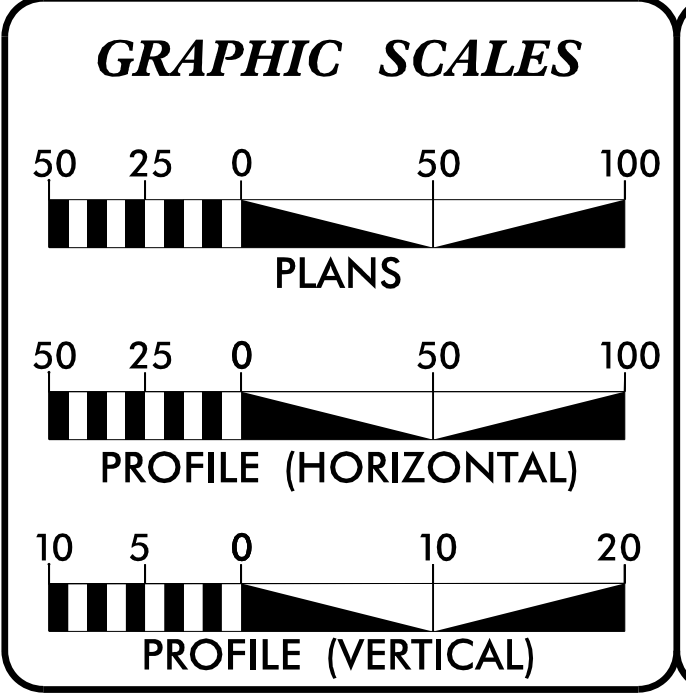
LOCATION: INTERSECTION OF US 276 (PIGEON RD) AND SR 1924 (SONOMA RD)
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND PAVEMENT MARKINGS



4

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

NCDOT CONTACT:
JONATHAN WOODARD, PE
DIVISION 14, ASSISTANT
PROJECT DEVELOPMENT ENGINEER
(828) 631-5481



DESIGN DATA

ADT 2015 = 1,400 (-Y-)
ADT 2017 = 6,000 (-L-)
V = 40 MPH

FUNC CLASS =
RURAL LOCAL
SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY PROJECT WBS 47851 = 0.055 mi
TOTAL LENGTH PROJECT WBS 47851 = 0.055 mi

Prepared For NCDOT:
DIVISION OF HIGHWAYS
Division 14, 253 Webster Road, Sylva, NC 28779

By:
Weston & Sampson
688 East Chatham Street Suite 137
Cary, NC 27511
Phone: 919.297.0220 Fax: 919.297.0221
NC License: C-4847

2018 STANDARD SPECIFICATIONS
RIGHT OF WAY DATE:
SEPTEMBER 14, 2018

LETTING DATE:
JUNE 14, 2022

KEVIN S. HUTCHENS, PE
PROJECT ENGINEER

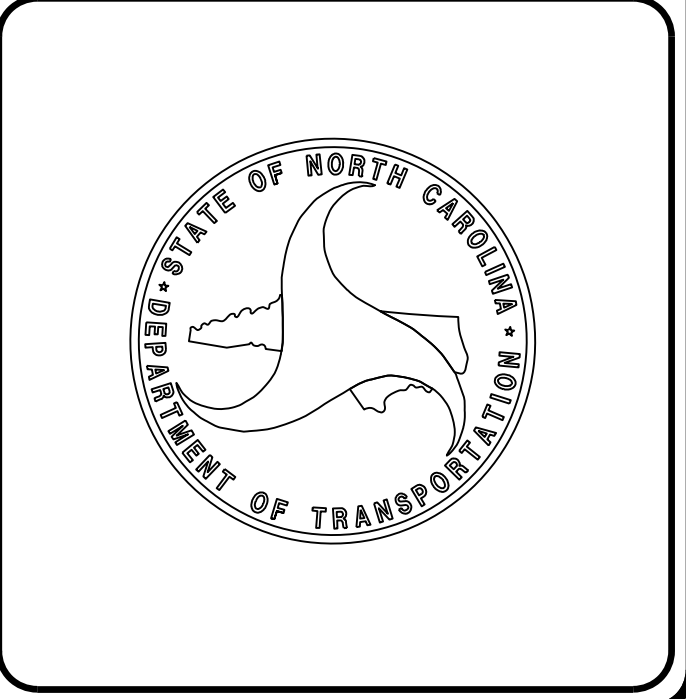
ROBERT W. PORTER, JR PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

5/16/2022
DocuSigned by:
Paul Cameron
SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

5/16/2022
DocuSigned by:
Kevin S. Hutchens
SIGNATURE: P.E.



8/17/19

GENERAL NOTES: 2018 SPECIFICATIONS
EFFECTIVE: 01-16-2018
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

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

SUPERELEVATION:

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

SHOULDER CONSTRUCTION:

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

SIDE ROADS:

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.

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE:
POWER - DUKE ENERGY
PHONE - AT & T
CABLE TV - CHARTER

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.

2018 ROADWAY ENGLISH STANDARD DRAWINGS EFF. 01-16-2018
REV.

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

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement

DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction

DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I

DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs

DIVISION 8 - INCIDENTALS	
815.03	Pipe Underdrain and Blind Drain
876.02	Guide for Rip Rap at Pipe Outlets

PROJECT REFERENCE NO. WBS 47851	SHEET NO. 1A
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 39283 4/26/2019 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 M A Engineering Consultants, Inc. 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221 NC License: F-0160	

SHEET NUMBER	INDEX OF SHEETS
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1	PAVEMENT SCHEDULE AND TYPICAL SECTION
3B-1	SUMMARIES OF EARTHWORK, PAVEMENT REMOVAL, DRAINAGE, SUBSURFACE DRAINAGE, AND AGGREGATE SUBGRADE/STABILIZATION
4	PLAN AND PROFILE SHEET
RW01 THRU RW04	SURVEY CONTROL, EXISTING CENTERLINES, RIGHT OF WAY, EASEMENTS, & PROPERTY TIES
TMP-1 THRU TMP-5	TRANSPORTATION MANAGEMENT PLANS
PMP-1	PAVEMENT MARKING PLAN
EC-1 THRU EC-4	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-2	SIGNING PLANS
UD-1 THRU UD-2	UTILITIES BY OTHERS PLANS
X-1A	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-5	CROSS-SECTIONS

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

12/2/2016

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Computed Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	①23
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	----- WLB
Proposed Wetland Boundary	----- WLB
Existing Endangered Animal Boundary	----- EAB
Existing Endangered Plant Boundary	----- EPB
Existing Historic Property Boundary	----- HPB
Known Contamination Area: Soil	☠ S ☠
Potential Contamination Area: Soil	☠ S ☠
Known Contamination Area: Water	☠ W ☠
Potential Contamination Area: Water	☠ W ☠
Contaminated Site: Known or Potential	☠ ?

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

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

RIGHT OF WAY & PROJECT CONTROL:

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

ROADS AND RELATED FEATURES:

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

VEGETATION:

Single Tree	○
Single Shrub	○

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

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

EXISTING STRUCTURES:

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

UTILITIES:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

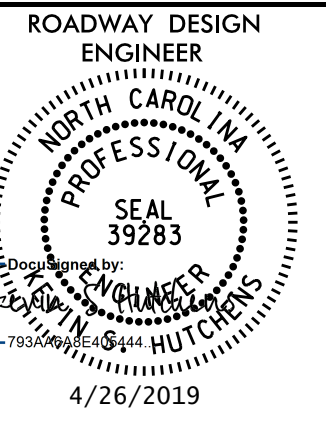
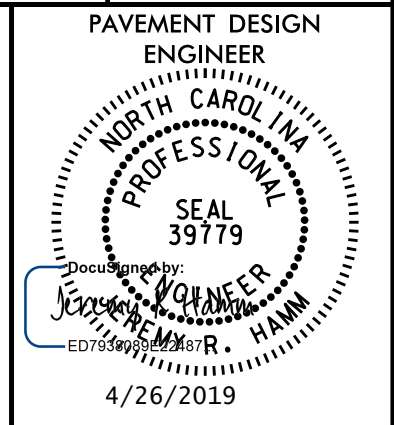

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	----- G
U/G Gas Line LOS C (S.U.E.*)	----- G
U/G Gas Line LOS D (S.U.E.*)	----- G
Above Ground Gas Line	----- A/G Gas

SANITARY SEWER:

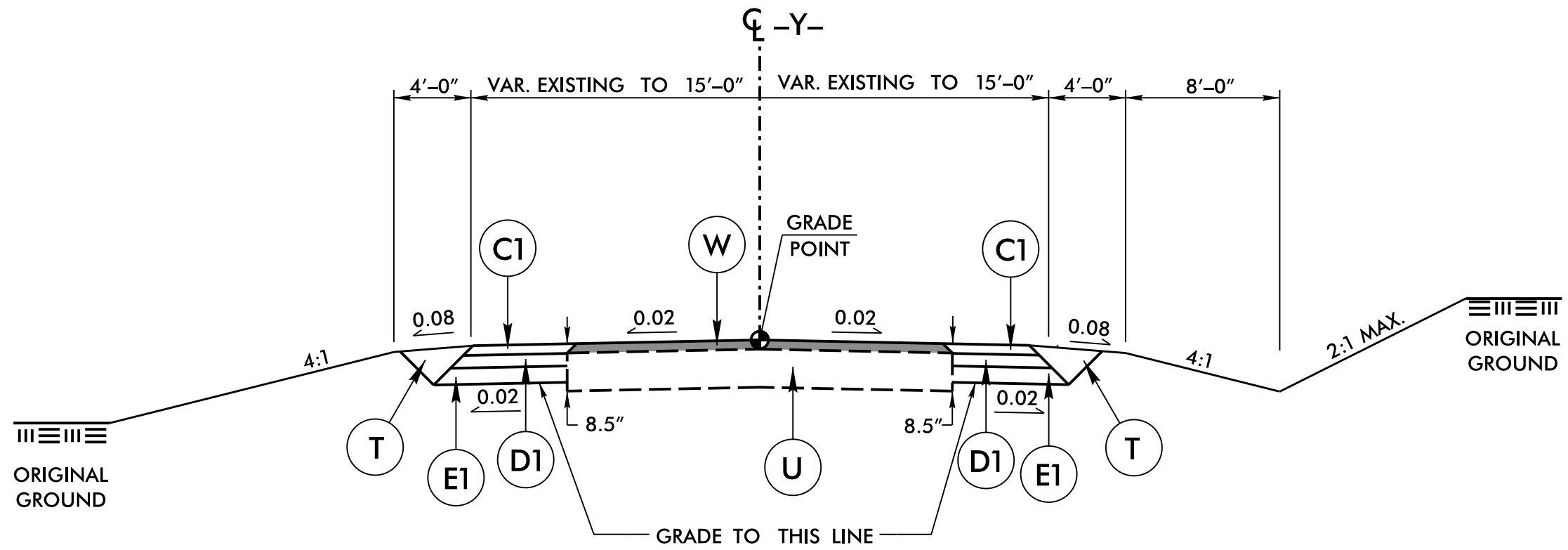
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	----- SS
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
SS Forced Main Line LOS B (S.U.E.*)	----- FSS
SS Forced Main Line LOS C (S.U.E.*)	----- FSS
SS Forced Main Line LOS D (S.U.E.*)	----- FSS

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	----- 7UTL
U/G Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	⊕
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	⊕
U/G Test Hole LOS A (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

PROJECT REFERENCE NO. WBS 47851	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
	

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YARD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1.0" OR GREATER THAN 2.0" IN DEPTH.
D1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YARD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" OR GREATER THAN 4.0" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YARD PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING (VARIABLE DEPTH ASPHALT PAVEMENT, SEE DETAIL ON THIS SHEET)
PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.	

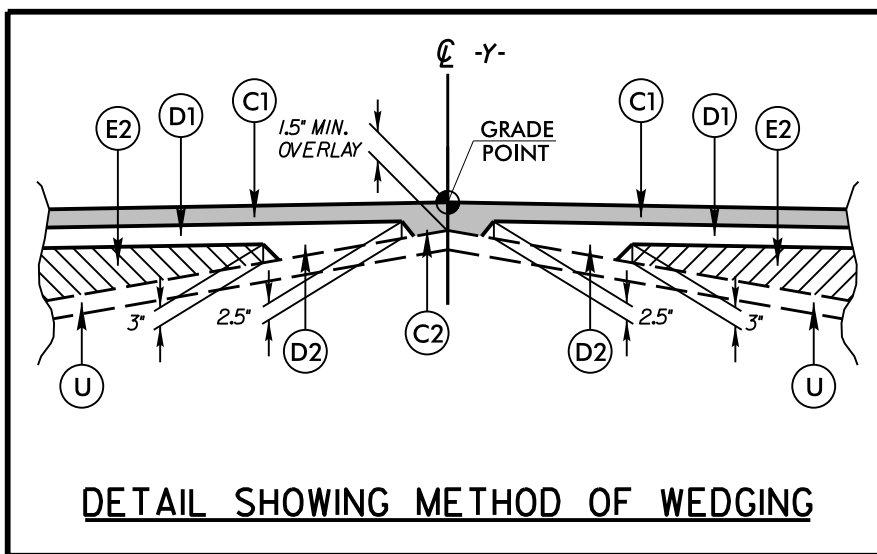


TYPICAL SECTION NO. 1

FROM -Y- STA. 11+08.88 TO 13+00.00

USE TYPICAL SECTION #1 WITH FULL WIDTH NEW PAVEMENT IN LIEU OF WEDGING AND WIDENING:

FROM -Y- STA. 10+10.62 TO 11+08.88



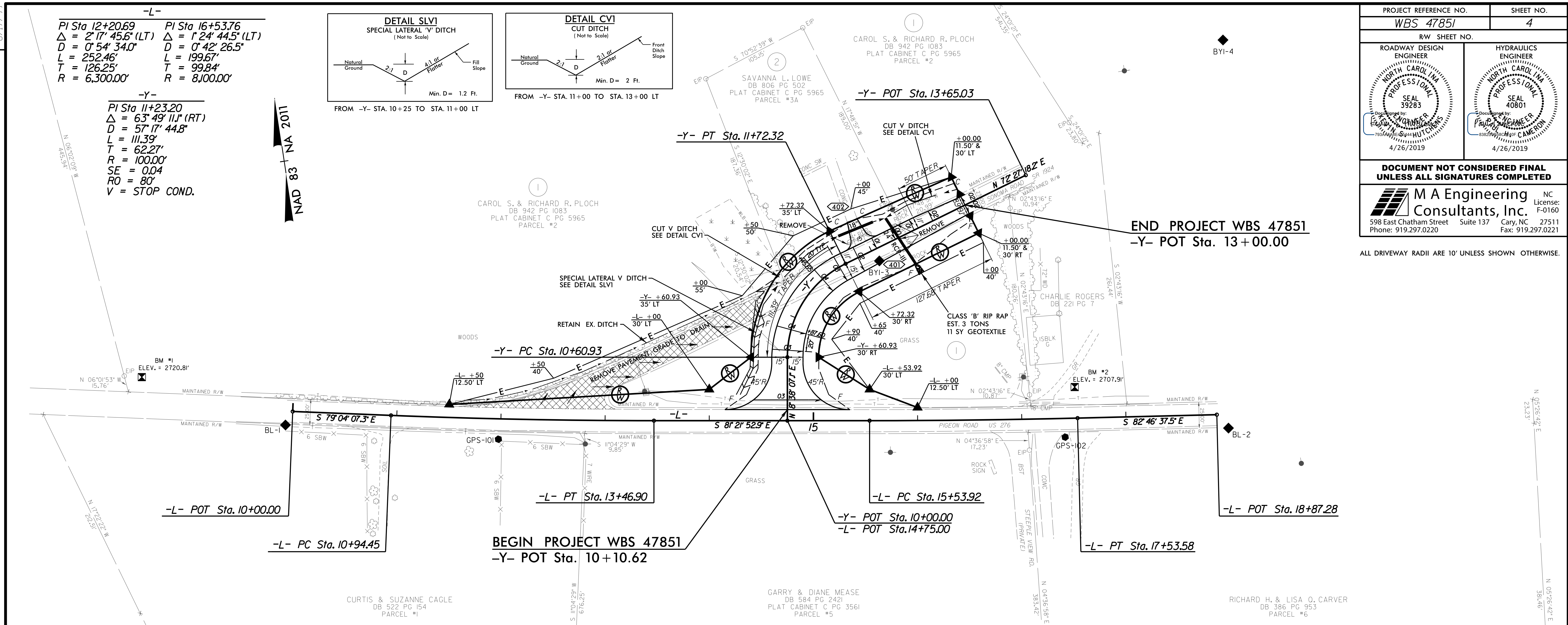
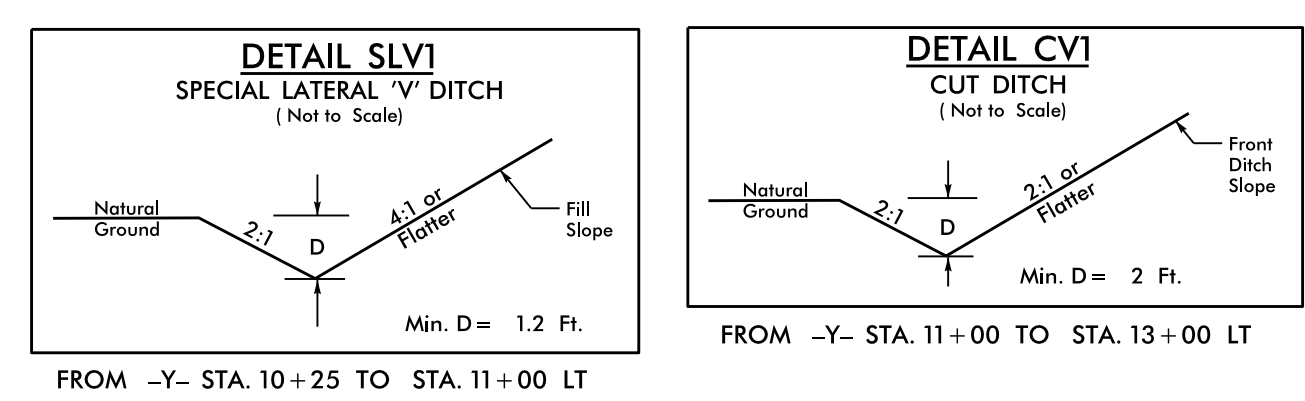
DETAIL SHOWING METHOD OF WEDGING

PROJECT REFERENCE NO. WBS 47851	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER W. H. HUTCHINGS SEAL 39283 4/26/2019	HYDRAULICS ENGINEER W. H. HUTCHINGS SEAL 40801 4/26/2019
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
M A Engineering Consultants, Inc. 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221	

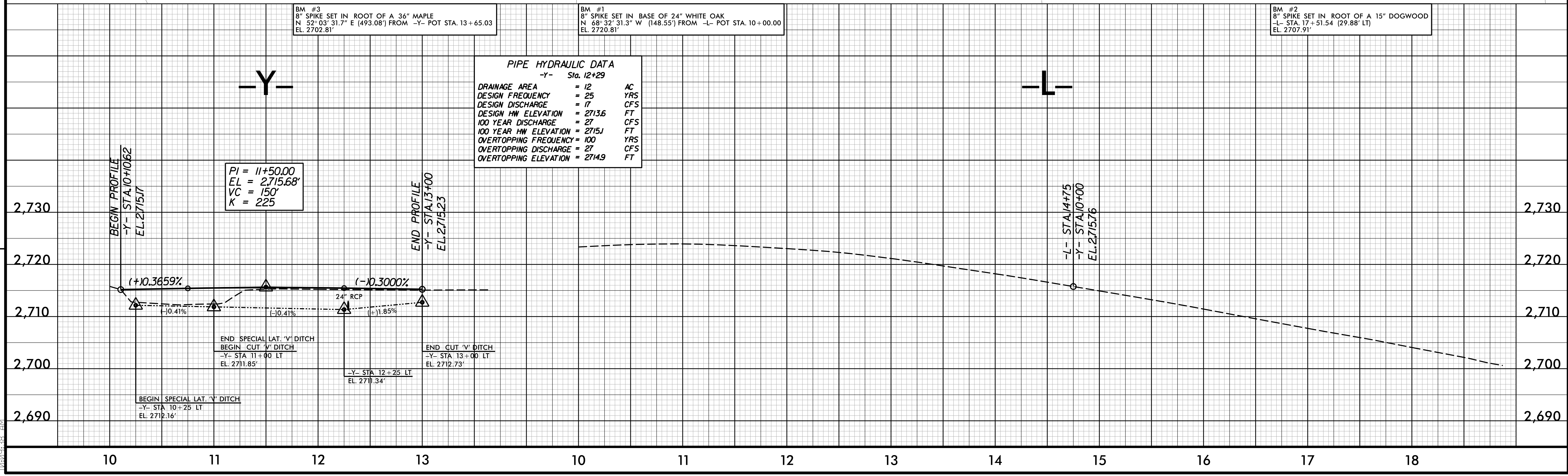
-L-
 PI Sta 12+20.69 Δ = 2° 17' 45.6" (LT)
 D = 0° 54' 34.0" L = 252.46'
 T = 126.25' R = 6,300.00'

-Y-
 PI Sta 16+53.76 Δ = 1° 24' 44.5" (LT)
 D = 0° 42' 26.5" L = 199.67'
 T = 99.84' R = 8,100.00'

-Y-
 PI Sta 11+23.20 Δ = 63° 49' 11.8" (RT)
 D = 57° 17' 44.8" L = 111.39'
 T = 62.27' R = 100.00'
 SE = 0.04
 RO = 80'
 V = STOP COND.



REVISIONS



PIPE HYDRAULIC DATA
-Y- Sta. 12+29

DRAINAGE AREA	= 12	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 17	CFS
DESIGN HW ELEVATION	= 2713.6	FT
100 YEAR DISCHARGE	= 27	CFS
100 YEAR HW ELEVATION	= 2715.1	FT
OVERTOPPING FREQUENCY	= 100	YRS
OVERTOPPING DISCHARGE	= 27	CFS
OVERTOPPING ELEVATION	= 2714.9	FT

BM #3
8" SPIKE SET IN ROOT OF A 36" MAPLE
N 52° 03' 31.7" E (493.08') FROM -Y- POT STA. 13+65.03
EL. 2702.81'

BM #1
8" SPIKE SET IN BASE OF 24" WHITE OAK
N 68° 32' 31.3" W (148.55') FROM -L- POT STA. 10+00.00
EL. 2702.81'

BM #2
8" SPIKE SET IN ROOT OF A 15" DOGWOOD
-L- STA. 17+51.54 (29.88' LT)
EL. 2707.91'

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09/08/99

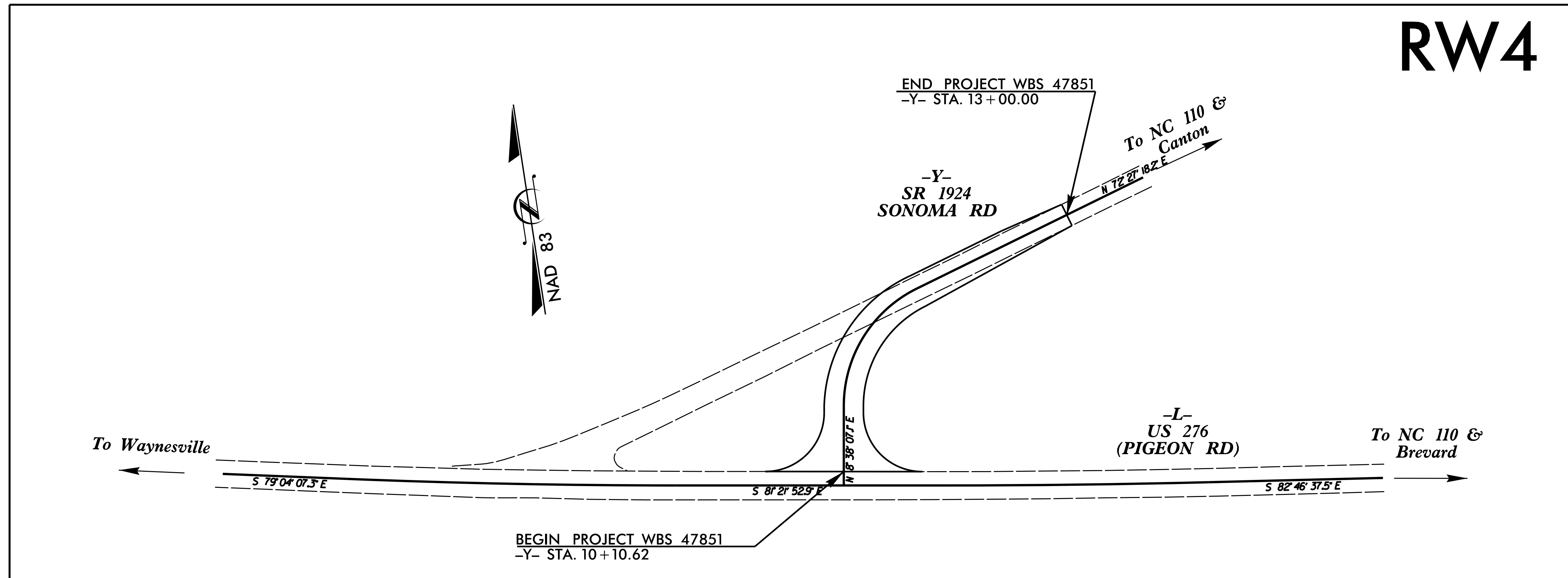
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	47851	RW01	

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

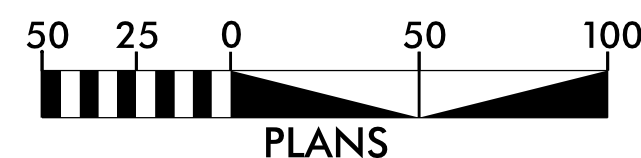
HAYWOOD COUNTY

TIP PROJECT: 47851



RW4

GRAPHIC SCALE



PLANS

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "G-101" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 649222.321(ft) EASTING: 837229.430(ft) ELEVATION: 2723.07(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999754855

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "G-101" TO -Y- STATION 10+10.62 IS S 87° 13' 02.9" E 278.86(ft)

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

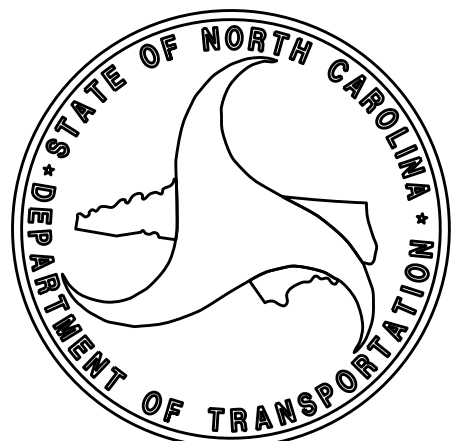
LOCATION AND SURVEYS, DIVISION 14
122 BONNIE LANE
SYLVA, NC 28779

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:

PROFESSIONAL LAND SURVEYOR



DocuSigned by:
Brian Barwatt
SIGNATURE: *Brian Barwatt* Date: 2/20/2019

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION

PROJECT REFERENCE NO. 47851	SHEET NO. RW02C-1
Location and Surveys	
LOCATION AND SURVEYS, DIVISION 14 122 BONNIE LANE SYLVA, NC 28779	

BM #3

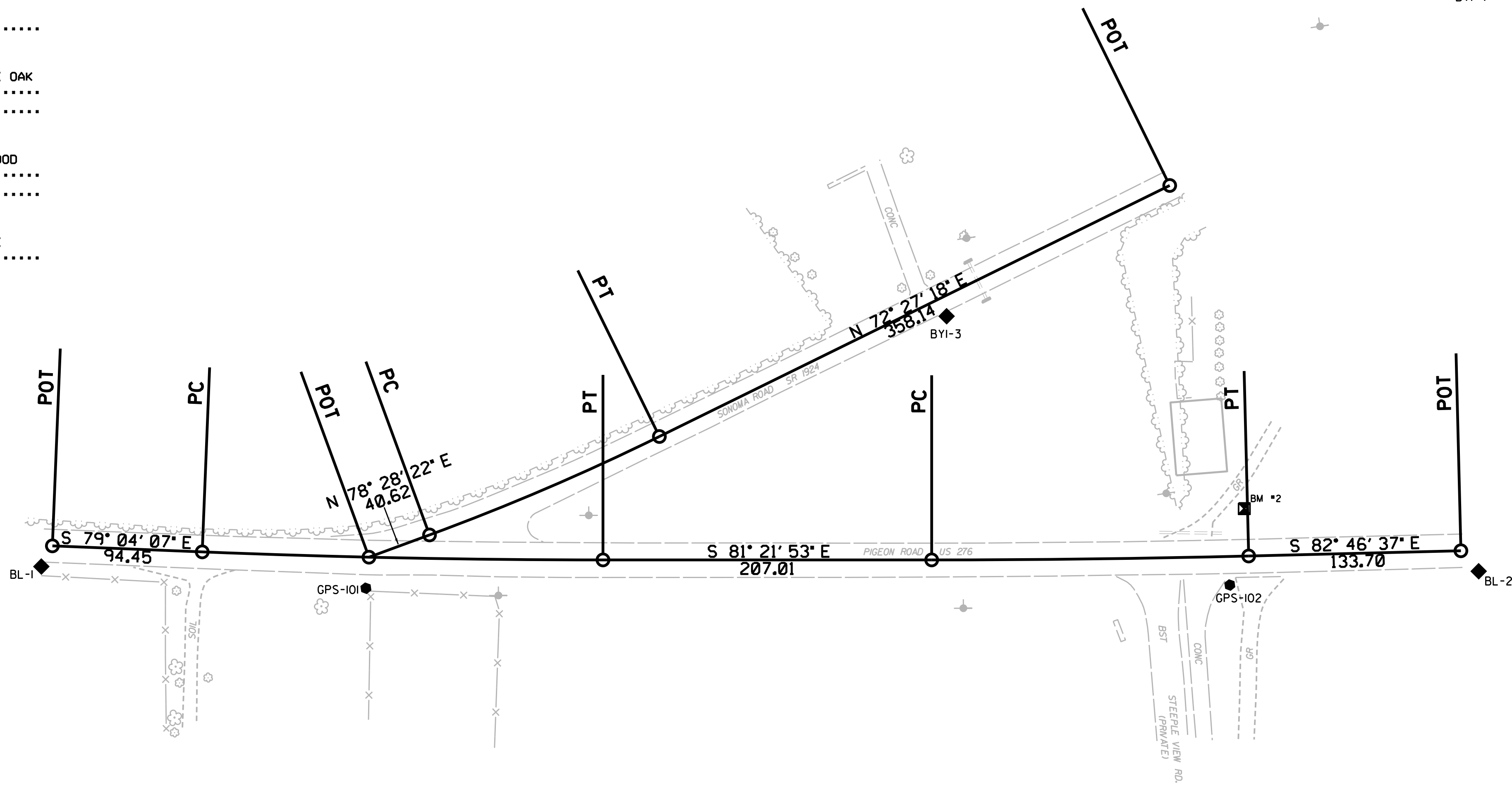
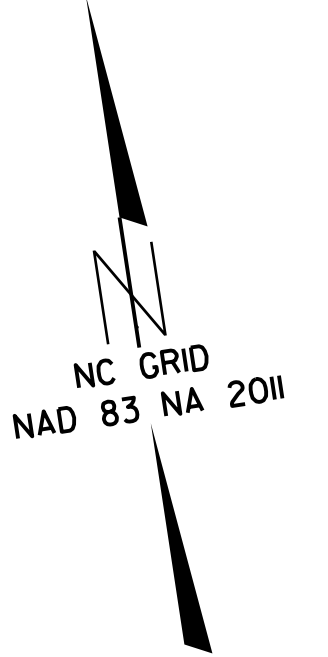
BL	POINT	DESC.	NORTH	EAST	ELEVATION
	1	BL-1	649266.5100	837029.4390	2722.49
	101	GPS-101	649222.3210	837229.4300	2723.07
	2	BL-2	649127.6600	837923.9500	2699.51

BY1	POINT	DESC.	NORTH	EAST	ELEVATION
	111	GPS-101	649222.3210	837229.4300	2723.07
	3	BY1-3	649336.6800	837616.7480	2714.42
	4	BY1-4	649496.8680	837974.6900	2713.70

.....
 BM1 ELEVATION = 2720.81
 N 649333 E 836900
 8" SPIKE SET IN ROOT OF A 24" WHITE OAK

 BM2 ELEVATION = 2707.91
 N 649189 E 837784
 8" SPIKE SET IN ROOT OF A 15" DOGWOOD

 BM3 ELEVATION = 2702.81
 N 649667 E 838114
 8" SPIKE SET IN ROOT OF A 36" MAPLE



EL	POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
	POT	649278.322	837038.224							
	LINE			S 79°04'07.3" E	94.45					
	PC	649260.412	837130.956							
	CURVE			S 80°13'00.1" E	252.44	02°17'45.6"(L.T)	00°54'34.0"	252.46	126.25	6300.00
	PT	649217.517	837379.725							
	LINE			S 81°21'52.9" E	207.01					
	PC	649186.435	837584.391							
	CURVE			S 82°04'15.2" E	199.66	01°24'44.5"(L.T)	00°42'26.5"	199.67	99.84	8100.00
	PT	649158.892	837782.146							
	LINE			S 82°46'37.5" E	133.70					
	POT	649142.082	837914.785							

EY1	POINT	N	E	BEARING	DIST	DELTA	D	L	T	R
	POT	649241.349	837234.278							
	LINE			N 78°28'21.8" E	40.62					
	PC	649249.467	837274.082							
	CURVE			N 75°27'50.0" E	157.47	06°01'03.6"(L.T)	03°49'11.0"	157.54	78.84	1500.00
	PT	649288.990	837426.511							
	LINE			N 72°27'18.2" E	358.14					
	POT	649396.953	837767.991							

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

REVISIONS

PROPOSED ALIGNMENT CONTROL SHEET

PROJECT REFERENCE NO.	SHEET NO.
47851	RW02D-1
Location and Surveys	
LOCATION AND SURVEYS, DIVISION 14 122 BONNIE LANE SYLVA, NC 28779	

REVISIONS

6/2/09

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L

TYPE	STATION	NORTH	EAST
POT	10+00.00	649278.3221	837038.2238
PC	10+94.45	649260.4122	837130.9556
PT	13+46.90	649217.5169	837379.7254
PC	15+53.92	649186.4351	837584.3911
PT	17+53.58	649158.8919	837782.1462
POT	18+87.28	649142.0818	837914.7848

Y

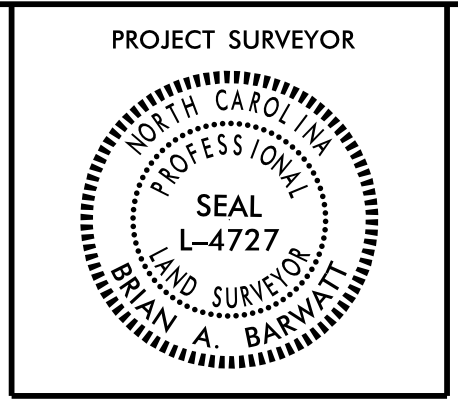
TYPE	STATION	NORTH	EAST
POT	10+00.00	649198.2839	837506.3700
PC	10+60.93	649258.5244	837515.5185
PT	11+72.32	649338.8580	837584.2395
POT	13+65.03	649396.9533	837767.9912

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.
2. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATINO REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

RIGHT OF WAY CONTROL SHEET

PROJECT REFERENCE NO. 47851	SHEET NO. RW03E-1
LOCATION AND SURVEYS, DIVISION 14 122 BONNIE LANE SYLVA, NC 28779	



I, Brian Barwatt, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

I further 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.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

Witness my original signature, registration number and seal this 20th day of February, 2019.

DocuSigned by:
Brian Barwatt
Professional Land Surveyor

L-4727
PLS #

Seal

ROW MARKER IRON PIN AND CAP - E

ALIGN	STATION	OFFSET	NORTH	EAST
L	11+50.00	-12.50	649262.4115	837187.8099
L	14+00.00	-30.00	649239.2046	837436.7245
L	15+53.92	-30.00	649216.0950	837588.8954
L	16+00.00	-12.50	649192.0142	837631.7789

ROW MARKER IRON PIN AND CAP - E

ALIGN	STATION	OFFSET	NORTH	EAST
Y	10+60.93	-35.00	649263.7795	837480.9152
Y	10+60.93	30.00	649254.0201	837545.1784
Y	11+72.32	-35.00	649372.2299	837573.6886
Y	11+72.32	30.00	649310.2536	837593.2831
Y	13+00.00	11.50	649366.3833	837709.4488
Y	13+00.00	30.00	649348.7439	837715.0257
Y	13+00.00	-11.50	649388.3134	837702.5153
Y	13+00.00	-30.00	649405.9528	837696.9385

NOTES:

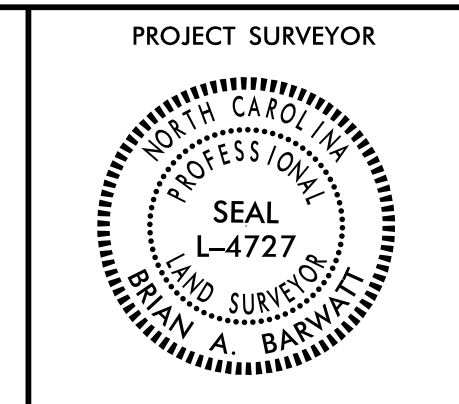
1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

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

REVISIONS

6/2/19

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C:\Users\barwatt\OneDrive\Documents\Projects\47851\RW Sheets (Revised TIP)\To Send\47851_L1_s_rw03e-1.dgn
barwatt



I, Brian Barwatt, a Professional Land Surveyor in the state of North Carolina hereby certify to the best of my knowledge and belief that the following work item(s) (Base map Compilation, R/W Staking) performed under my responsible charge meet NCDOT Survey Standards as directed in the NCDOT Location & Surveys guidelines and procedures.

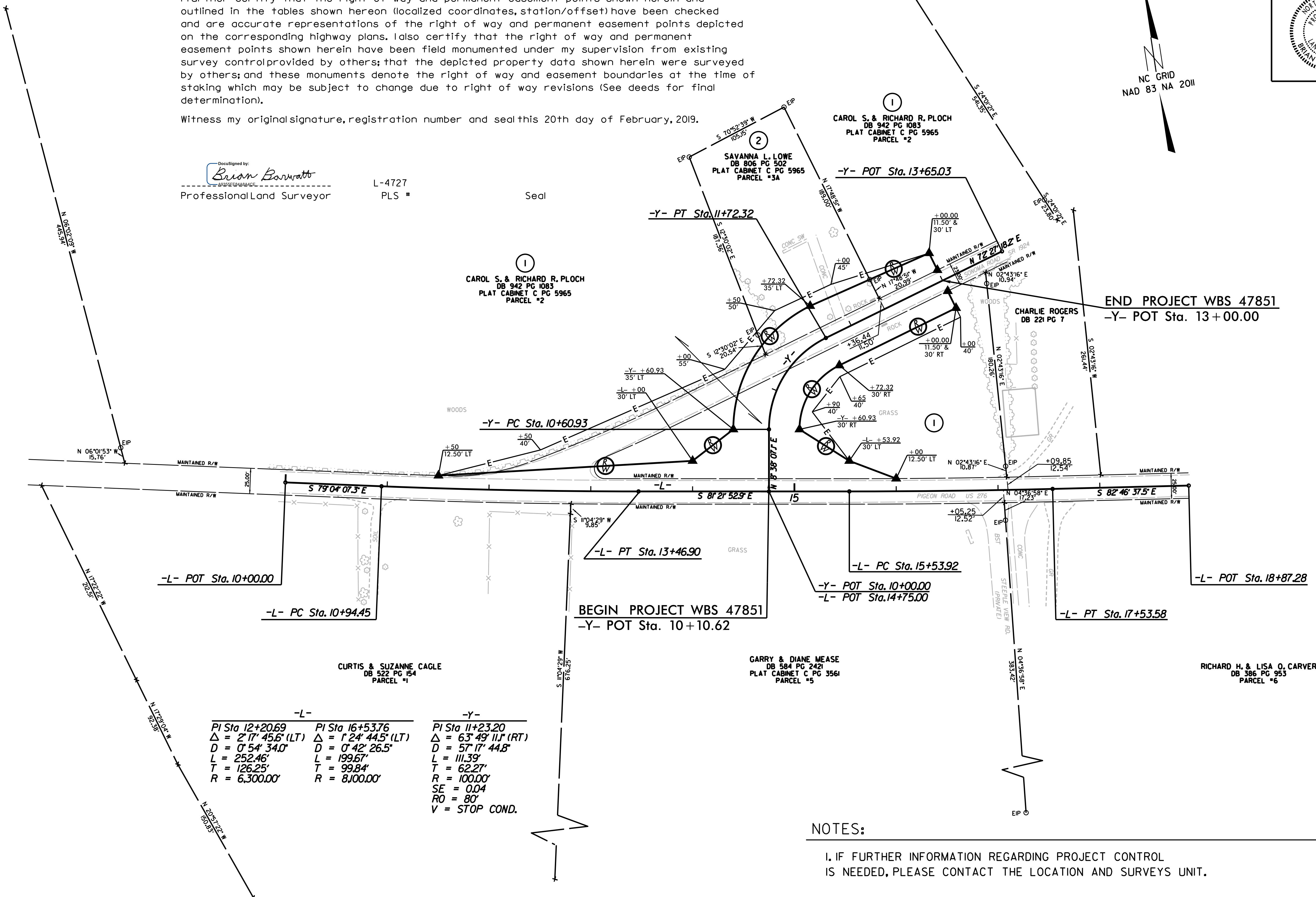
I further certify that the data compiled came from available surveys/mapping performed by others and provided to me by NCDOT and do not certify to the accuracy or quality of the individual data sources.

I further certify that the right of way and permanent easement points shown herein and outlined in the tables shown hereon (localized coordinates, station/offset) have been checked and are accurate representations of the right of way and permanent easement points depicted on the corresponding highway plans. I also certify that the right of way and permanent easement points shown herein have been field monumented under my supervision from existing survey control provided by others; that the depicted property data shown herein were surveyed by others; and these monuments denote the right of way and easement boundaries at the time of staking which may be subject to change due to right of way revisions (See deeds for final determination).

Witness my original signature, registration number and seal this 20th day of February, 2019.

DocuSigned by:
Brian Barwatt
Professional Land Surveyor L-4727
PLS #

Seal



-L-		-Y-	
PI Sta 12+20.69	PI Sta 16+53.76	PI Sta 11+23.20	
$\Delta = 2' 17'' 45.6''$ (LT)	$\Delta = 1' 24'' 44.5''$ (LT)	$\Delta = 63' 49'' 11.1''$ (RT)	
$D = 0' 54'' 34.0''$	$D = 0' 42'' 26.5''$	$D = 57' 17'' 44.8''$	
$L = 252.46'$	$L = 199.67'$	$L = 111.39'$	
$T = 126.25'$	$T = 99.84'$	$T = 62.27'$	
$R = 6,300.00'$	$R = 8,100.00'$	$R = 100.00'$	
		$SE = 0.04$	
		$RO = 80'$	
		$V = STOP COND.$	

NOTES:

- IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

REVISIONS

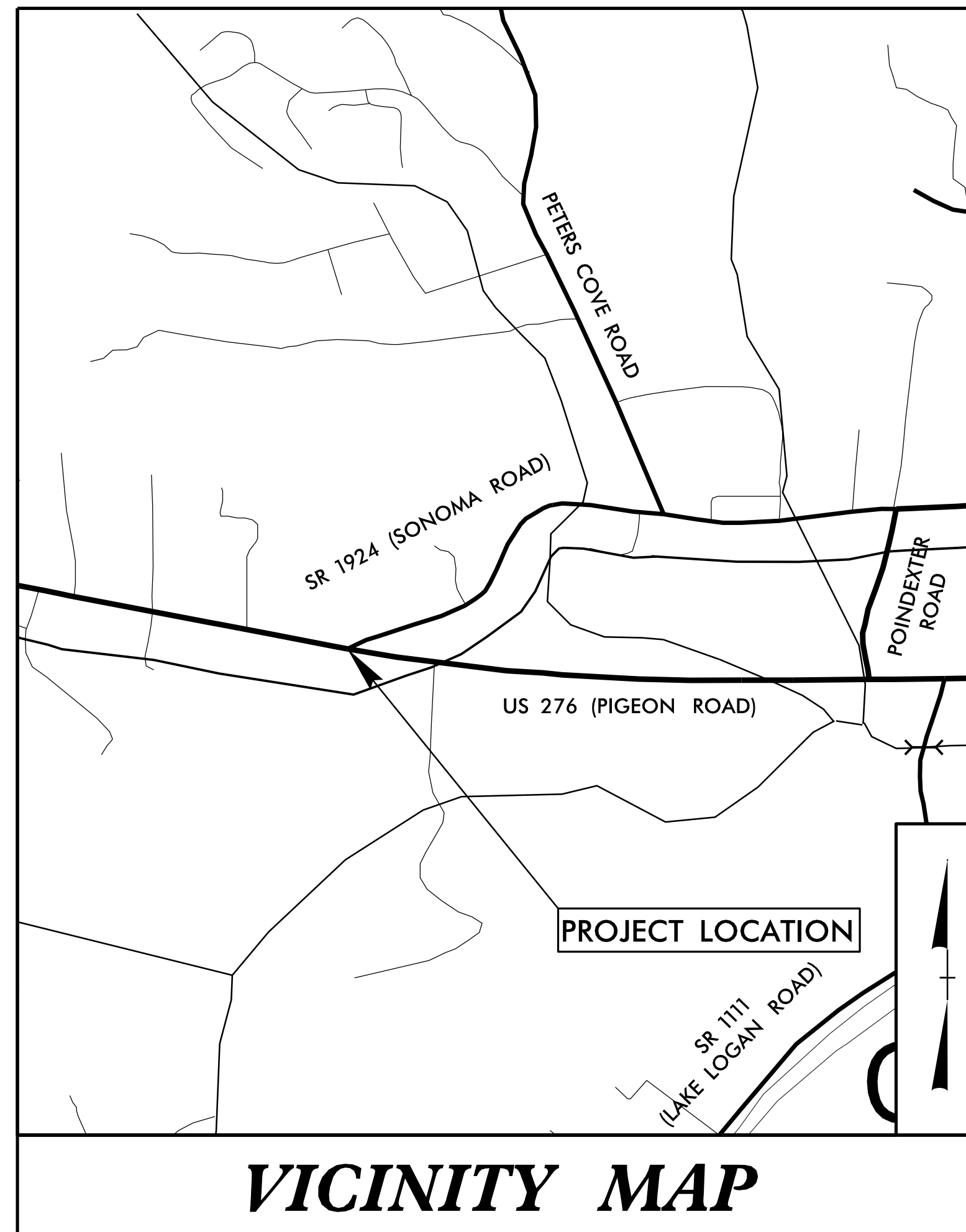
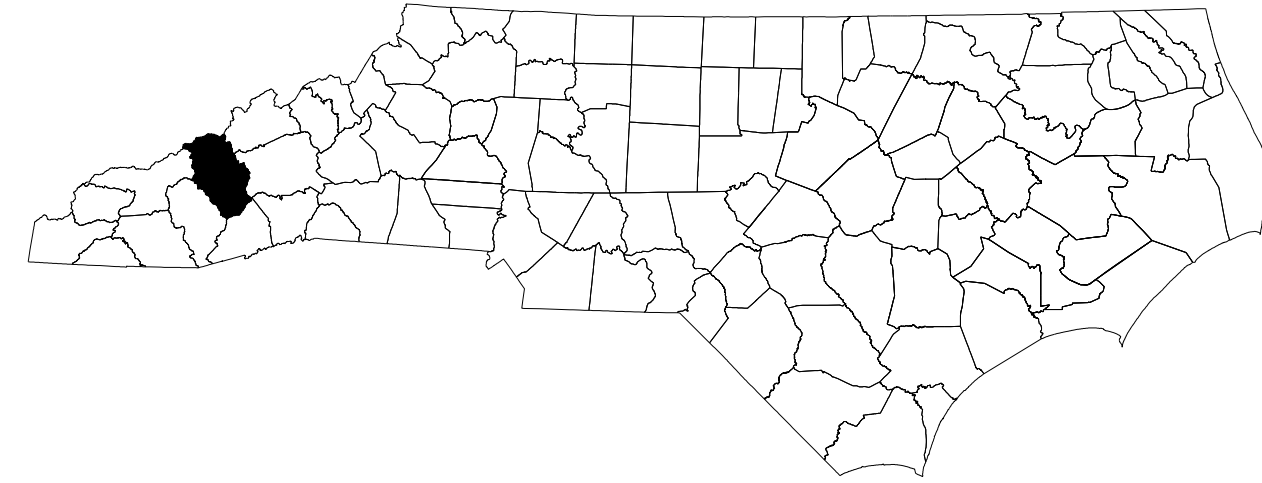
6/2/19
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Sheets (Revised TIP)\To_Send\47851_Ls_rw04.dgn
Brian Barwatt

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

HAYWOOD COUNTY

US 276 (PIGEON ROAD) AT SR 1924 (SONOMA ROAD)



VICINITY MAP

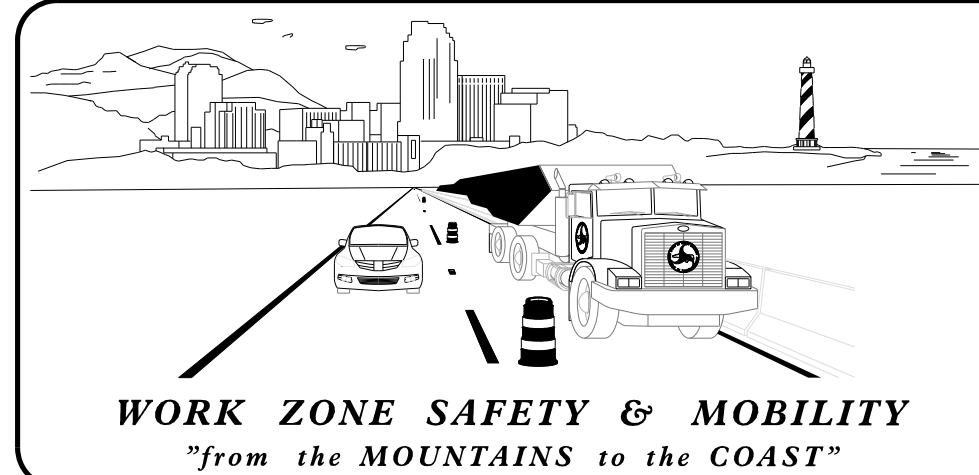
INDEX OF SHEETS

<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-2	ROADWAY STANDARD DRAWINGS & LEGEND
TMP-3	GENERAL NOTES
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE I
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE II

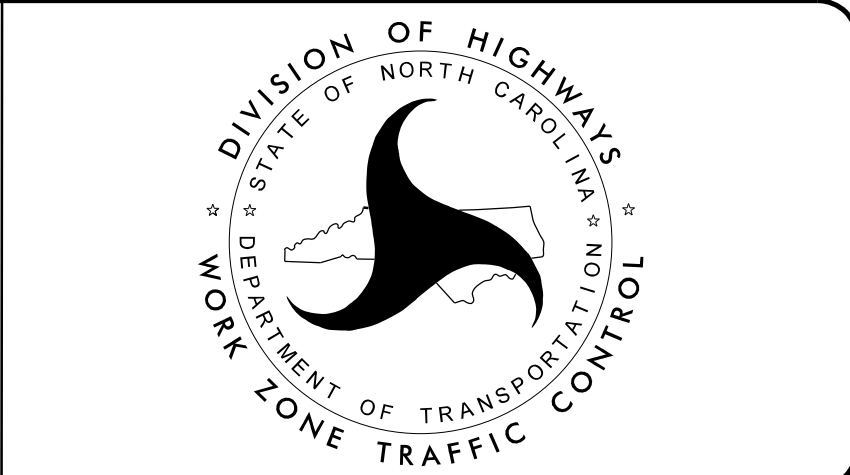
SHEET NO.
TMP-1

TIP PROJECT: WBS 47851

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



PLANS PREPARED BY:
NICK E. BURNS, P.E.
PROJECT ENGINEER
ZACH M. ESPOSITO, E.I.
PROJECT DESIGN ENGINEER



RAMEY KEMP & ASSOCIATES, INC.
Transportation Engineers
8307 University Executive Park Drive, Suite 260
Charlotte, North Carolina 28262
704-549-4260 Tel. 704-549-4277 Fax.
www.rameykemp.com
NC License No. C-0910

APPROVED: _____
DATE: _____
SEAL
Nicholas E. Burns
77848AE4004EB

CONTRACT:

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES - TYPE III
1150.01	FLAGGING DEVICES
1170.01	POSITIVE PROTECTION - PORTABLE CONCRETE BARRIER
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

- WORK AREA
- REMOVAL

- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

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

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

- P2 WHITE STOPBAR PAINT (24") LF
- PI YELLOW DOUBLE CENTER PAINT (4") LF

APPROVED: _____			<h2>ROADWAY STANDARD DRAWINGS & LEGEND</h2>
DATE: _____			
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>			

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 UNDESIRABLE 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.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) 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.
- B) 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.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- D) 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.
- E) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- F) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- H) 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.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
US 276 (PIGEON ROAD)	THERMOPLASTIC	NONE
SR 1924 (SONOMA ROAD)	THERMOPLASTIC	NONE

- J) 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.
- K) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- L) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

PHASING

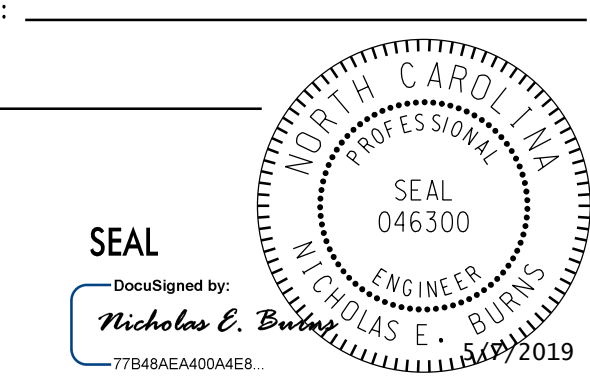

PHASE I

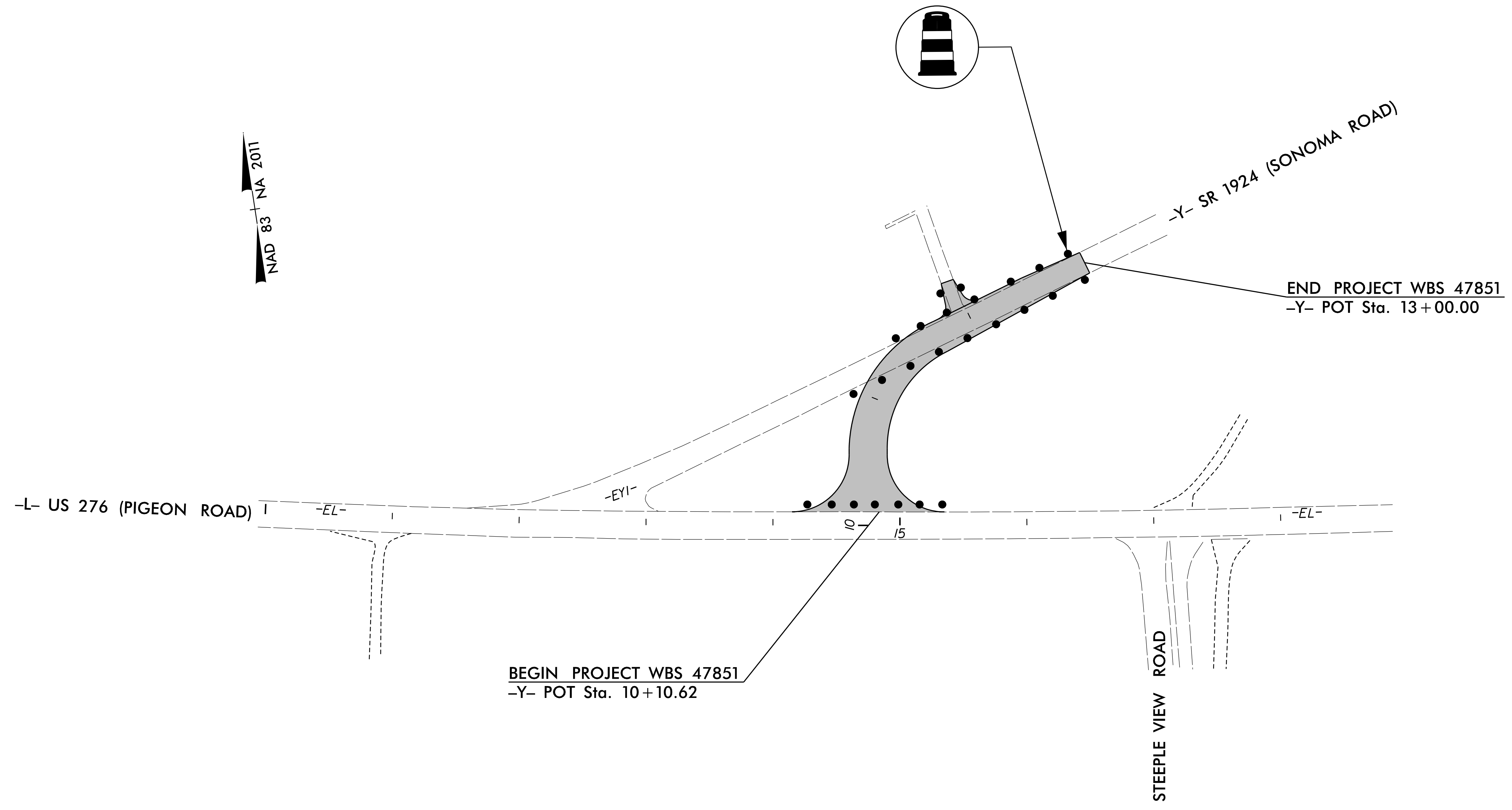
NOTE: WHEN REFERENCING THE USE OF FLAGGERS, SEE RSD 1101.02, SHEET 1 OF 14)

- STEP 1 -- INSTALL ADVANCE WARNING SIGNS (SEE RSD 1101.01) ON US 276 (PIGEON ROAD) AND SR 1924 (SONOMA ROAD).
- STEP 2 -- AWAY FROM TRAFFIC, CONSTRUCT NEW ALIGNMENT UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y- 10+20± TO 11+20± AS SHOWN IN TMP-4.
- STEP 3 -- USING FLAGGERS ALONG -EY1- AND -EL-, TIE-IN THE NEW ALIGNMENT -Y- ALIGNMENT AS SHOWN IN TMP-4.

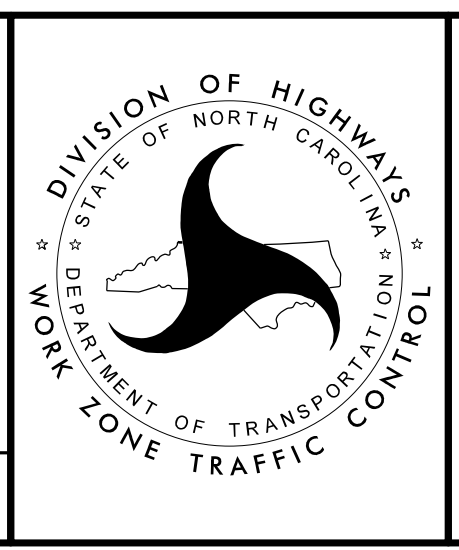
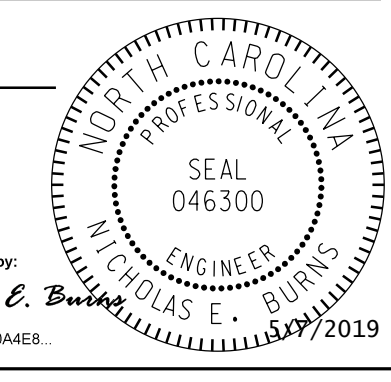
PHASE II

- STEP 1 -- SHIFT TRAFFIC ON NEW ALIGNMENT.
- STEP 2 -- DEMOLISH EXISTING -EY- FROM -EL- TO -Y- AS DETAILED ON TMP-5.
- STEP 3 -- USING ALTERNATING LANE CLOSURES AND FLAGGERS, PLACE THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS AND MARKERS THROUGHOUT THE PROJECT LIMITS.

APPROVED: _____ DATE: _____ <div style="text-align: center;">  </div>		<h1 style="margin: 0;">GENERAL NOTES</h1>
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

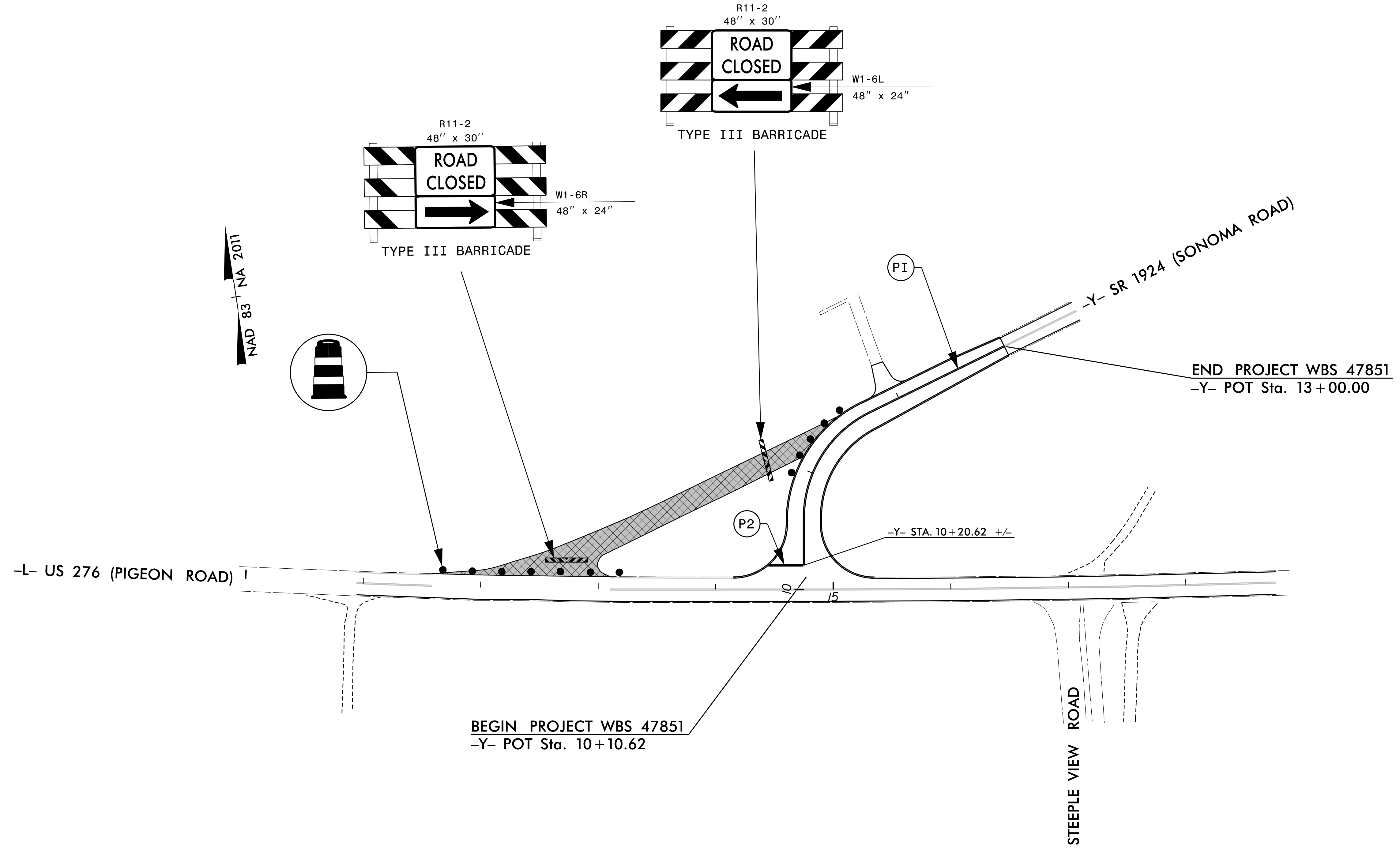


APPROVED: _____
 DATE: _____
 SEAL
 Documented by:
Nicholas E. Burns
 77848644004MES



**TEMPORARY
 TRAFFIC CONTROL
 PHASE I**

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

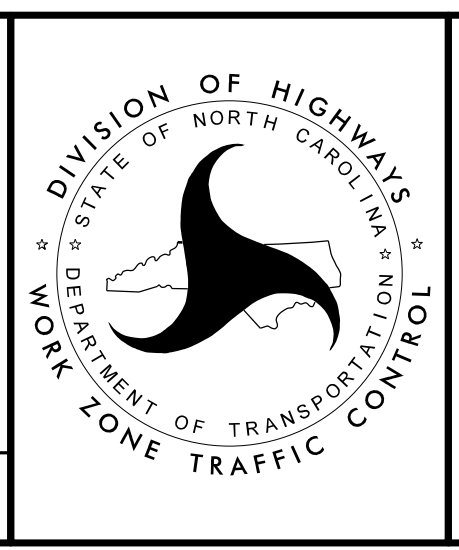


APPROVED: _____
 DATE: _____

SEAL
 DocuSigned by:
Nicholas E. Burns
 77848AE400A4E5

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 046300
 NICHOLAS E. BURNS
 11/15/2019

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



**TEMPORARY
 TRAFFIC CONTROL
 PHASE II**


T.I.P.: WBS 47851

CONTRACT: -

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
HAYWOOD COUNTY**

LOCATION: ROAD REALIGNMENT FOR US 276 (PIGEON ROAD) AND SR 1924 (SONOMA ROAD)

TIP NO. WBS 47851	SHEET NO. PMP - 1
APPROVED: _____	
DATE: _____	
SEAL	
	

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS

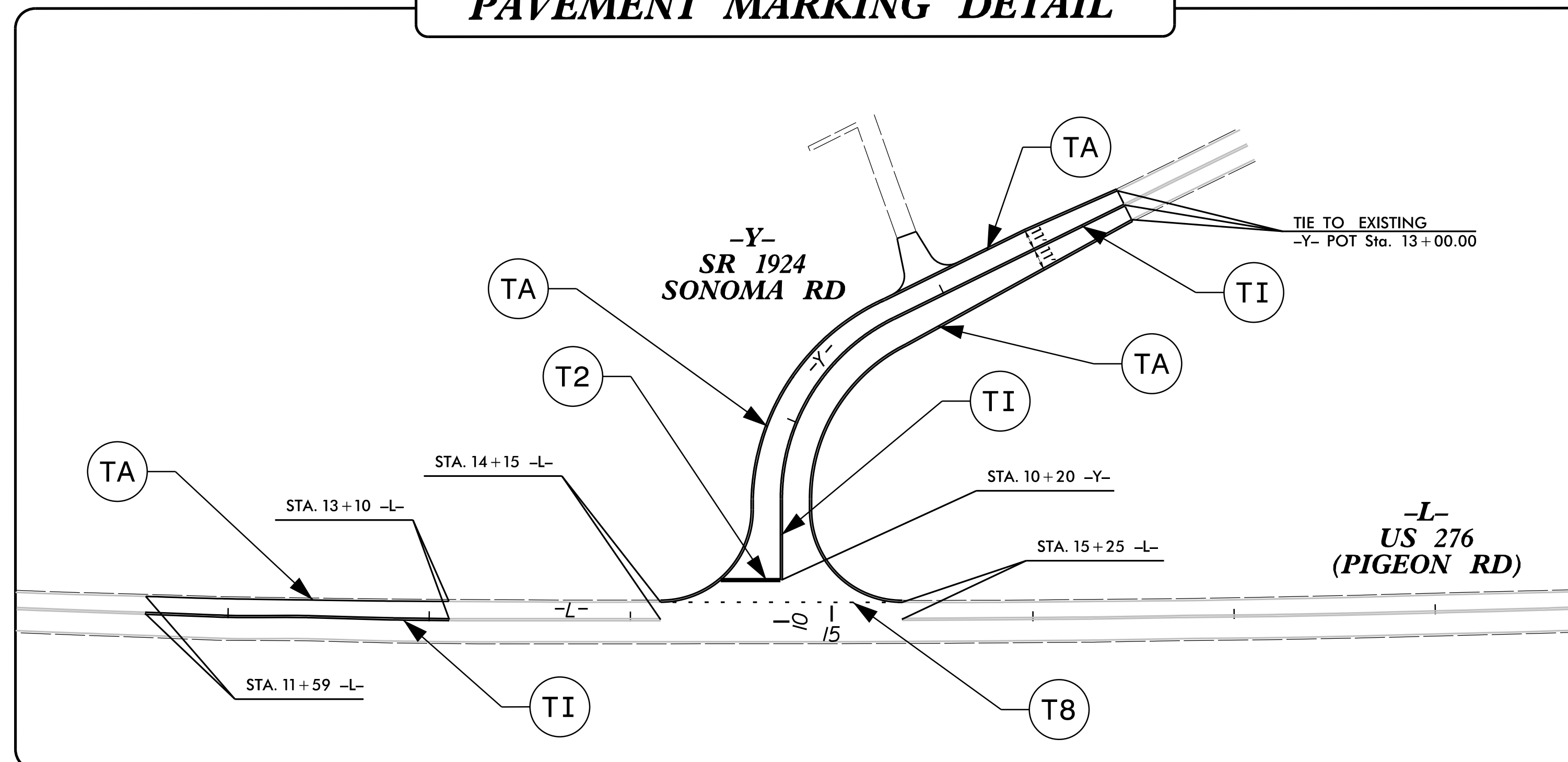
GENERAL NOTES

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
ALL	THERMOPLASTIC	NONE
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
- E) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

PAVEMENT MARKING DETAIL



PAVEMENT MARKING SCHEDULE

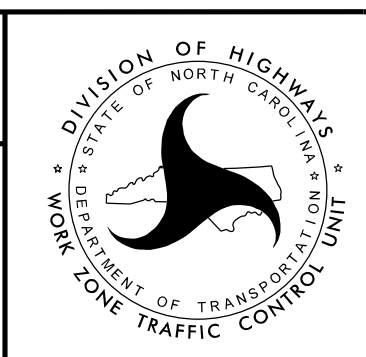
SYMBOL	DESCRIPTION
T2	WHITE STOPBAR (24", 120 MIL)
T8	2FT. -6FT. /SP WHITE MINISKIP (4", 120 MIL)
TA	WHITE EDGELINE (4", 90 MIL)
TI	YELLOW DOUBLE CENTER (4", 120 MIL)

INDEX

SHEET NO.	DESCRIPTION
PMP - 1	PAVEMENT MARKING PLAN TITLE SHEET AND PAVEMENT MARKING SCHEDULE AND PAVEMENT MARKING DETAILS

PLAN REVIEWED BY: N.C.D.O.T. HIGHWAY DIVISION 14

JONATHAN WOODARD NCDOT PROJECT MANAGER
ETHAN MILLER NCDOT PROJECT ENGINEER



PLAN PREPARED BY: Ramey Kemp & Associates

NICHOLAS E. BURNS, P.E. PROJECT MANAGER
ZACHARY M. ESPOSITO, E.I. PROJECT ENGINEER



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	WBS 47851	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
WBS 47851		PE	
WBS 47581		RW, UTILITIES	
WBS 47581		CONSTRUCTION	

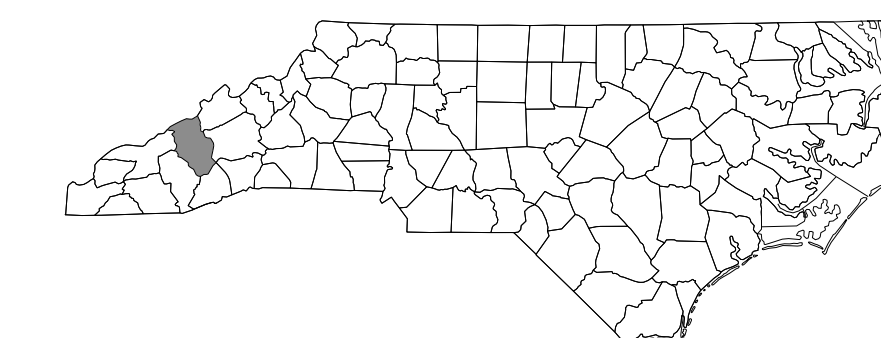
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HAYWOOD COUNTY

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

LOCATION: INTERSECTION OF US 276 (PIGEON RD) AND SONOMA RD. (SR 1924)

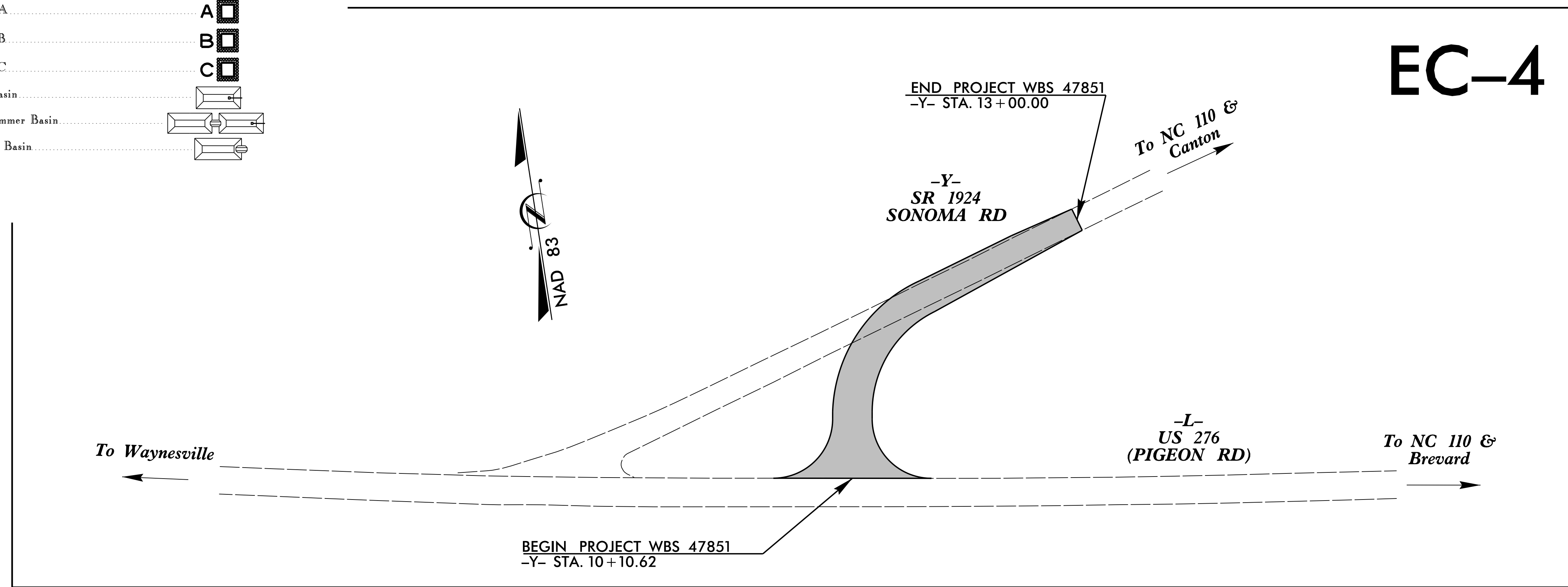
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND PAVEMENT MARKINGS



Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle/Coir Fiber Wattle	
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	
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	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

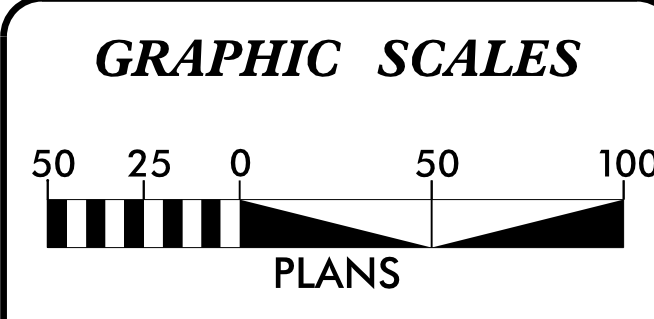
PROJECT: WBS 47851

CONTRACT: DN00680



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

NCDOT CONTACT:
JONATHAN WOODARD, PE
DIVISION 14, ASSISTANT
PROJECT DEVELOPMENT ENGINEER
(828) 631-5481



ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 1, 2018 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:
M A Engineering Consultants, Inc.
598 East Chatham Street - Suite 137
Cary, NC 27511
Phone: 919.297.0220 Fax: 919.297.0221
NC License: P-0160

Prepared For NCDOT:
DIVISION OF HIGHWAYS
Division 14, 253 Webster Road, Sylva, NC 28779
2018 STANDARD SPECIFICATIONS

Designed by:
PAUL CAMERON, PE 3624
NAME LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

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

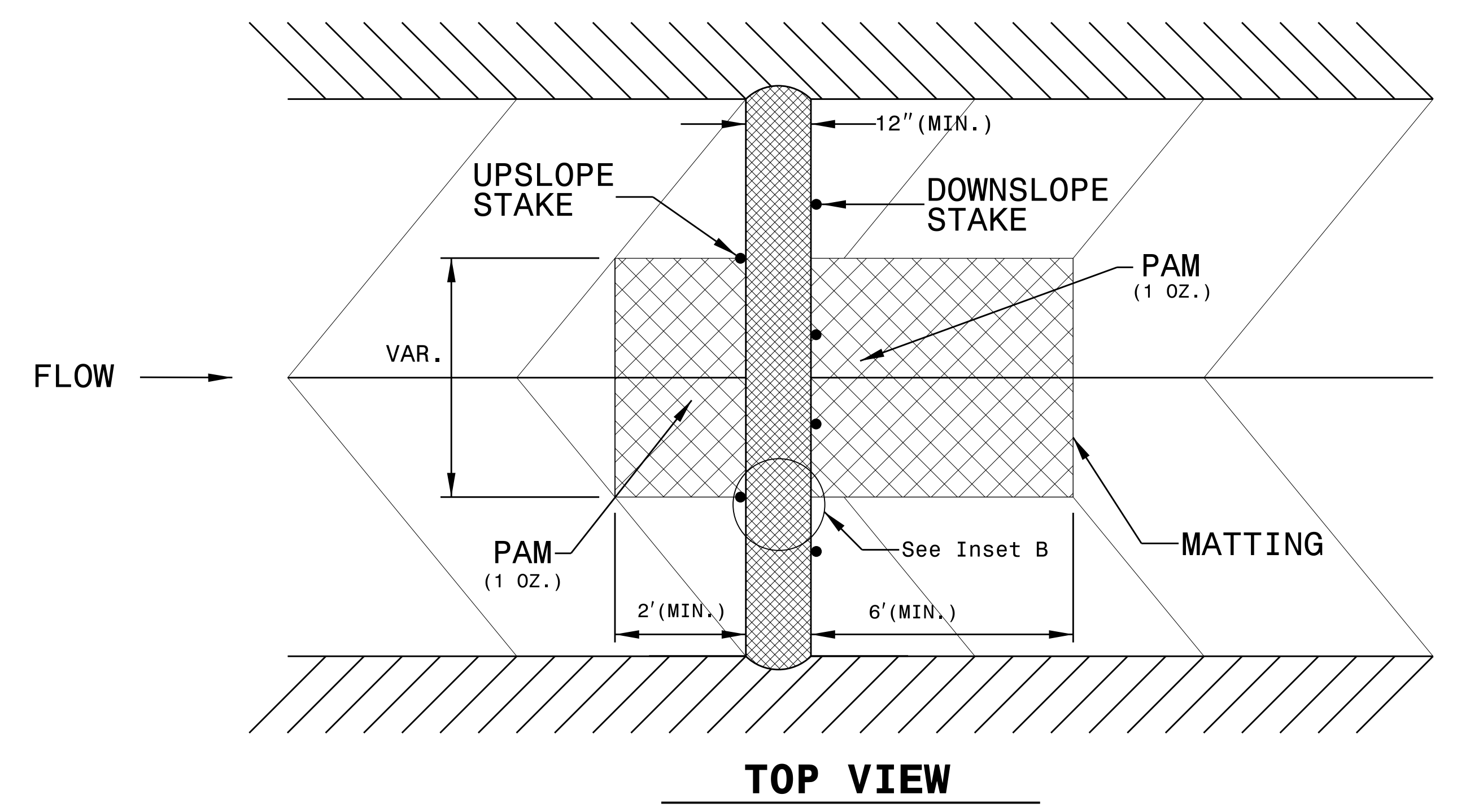
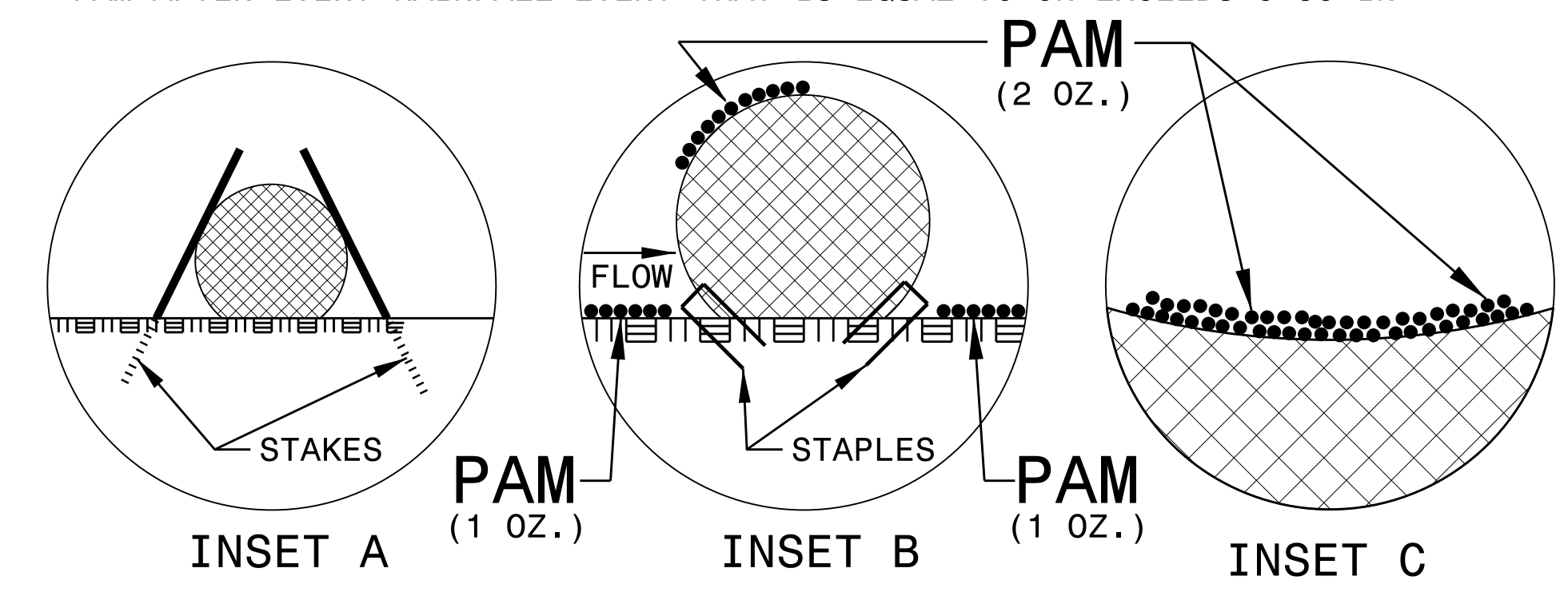
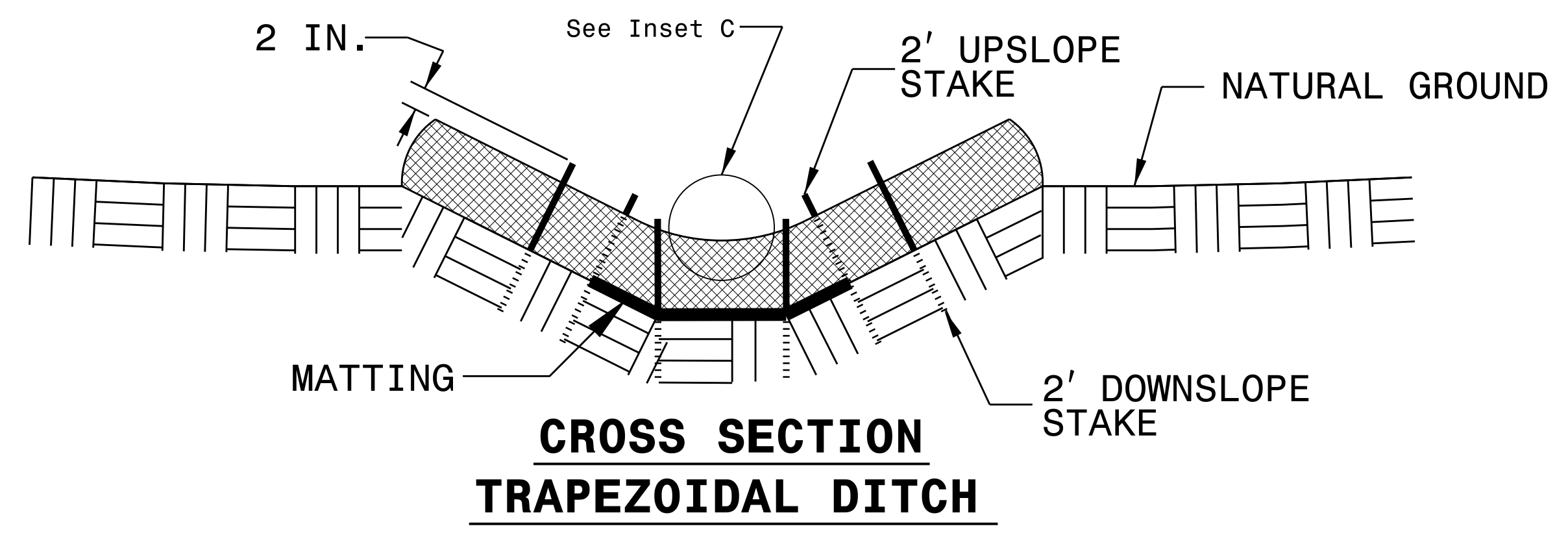
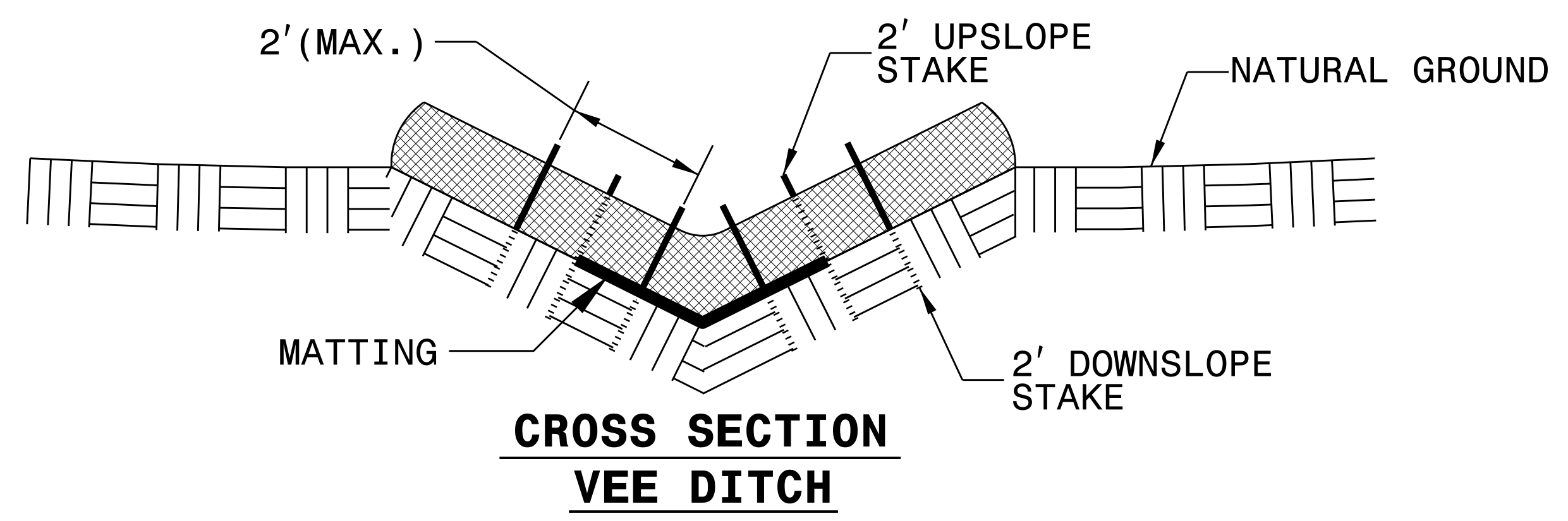
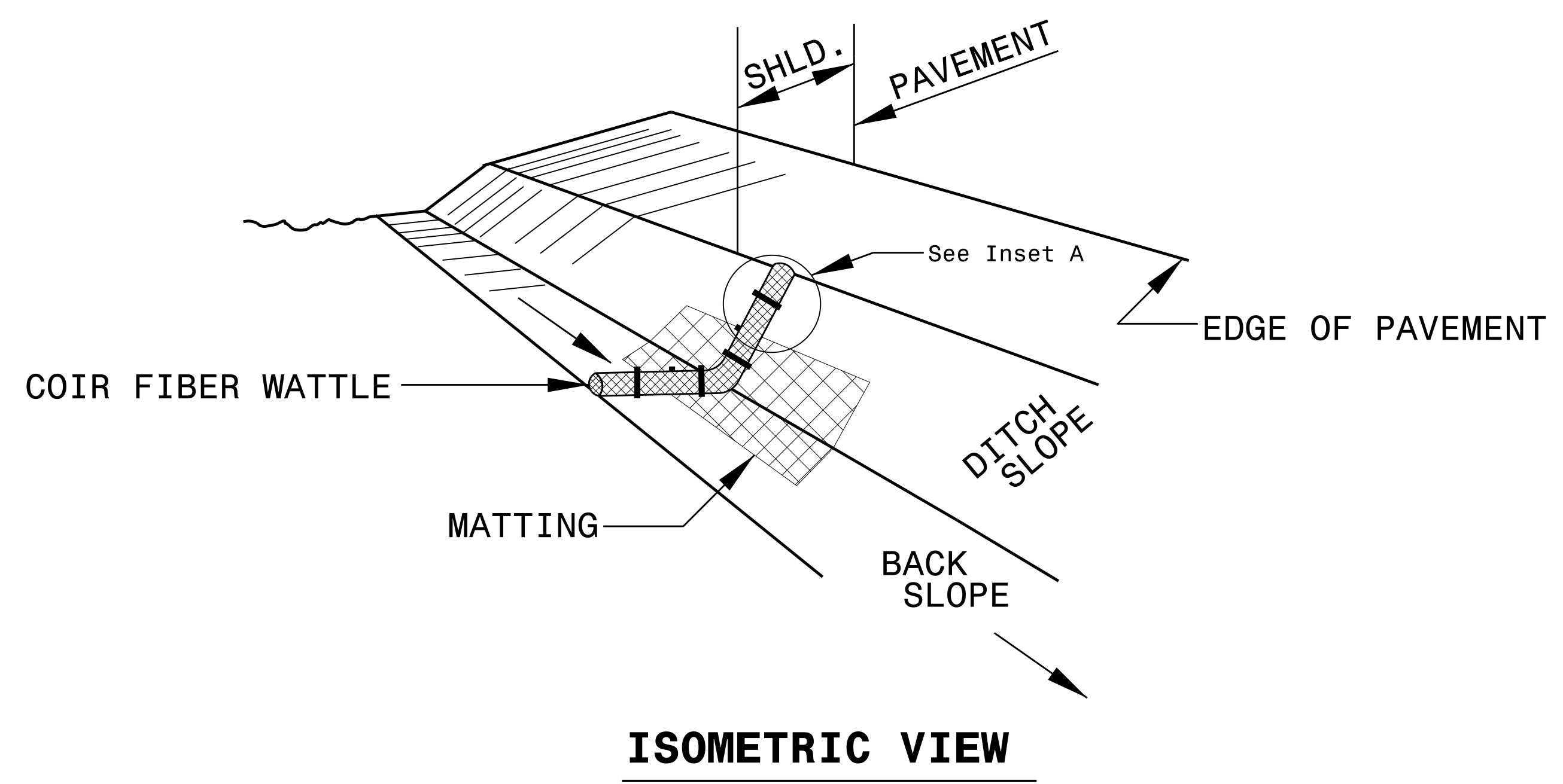
1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

PROJECT REFERENCE NO. WBS 47851	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL

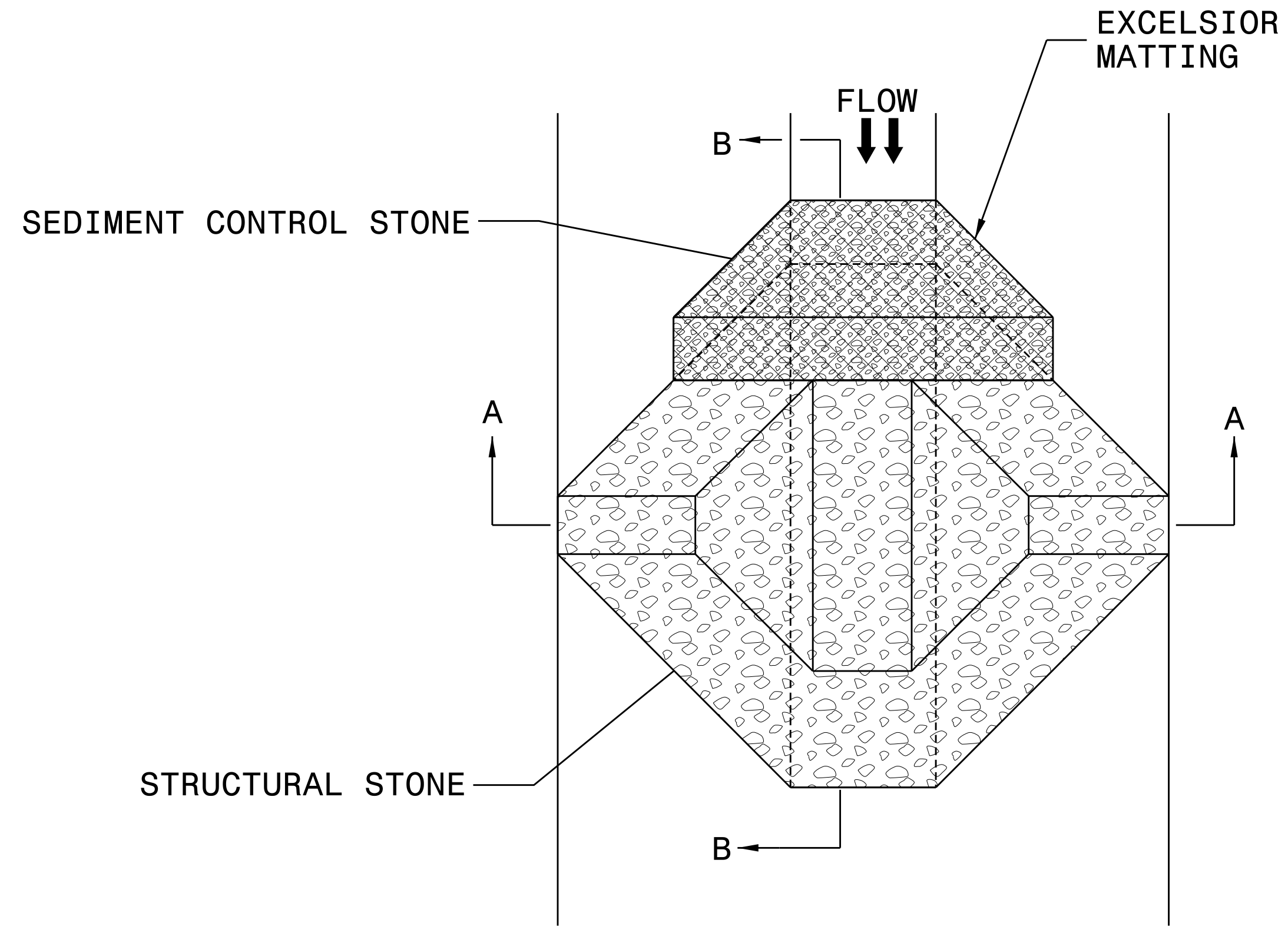
NOTES:

- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
- PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
- INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



PROJECT REFERENCE NO. WBS-47851	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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



PLAN

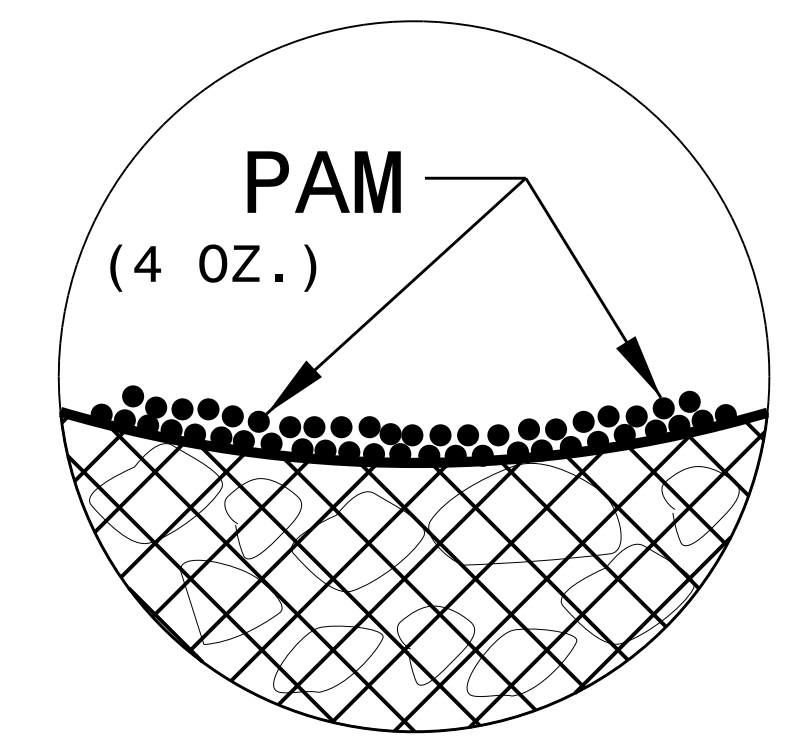
NOTES:

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

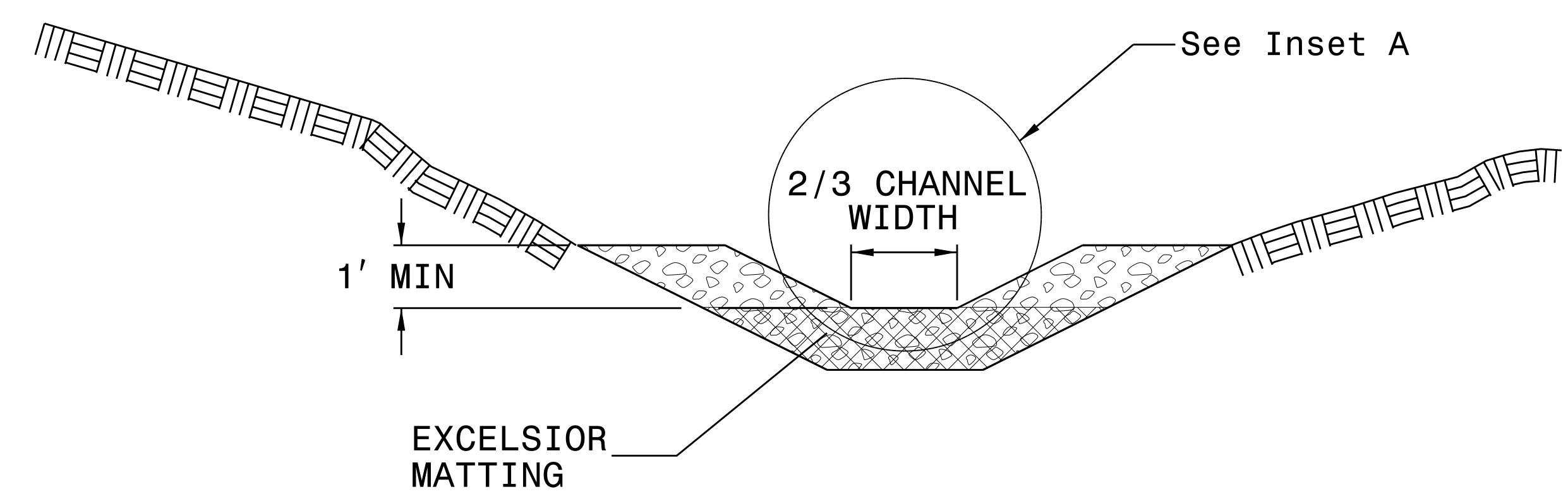
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

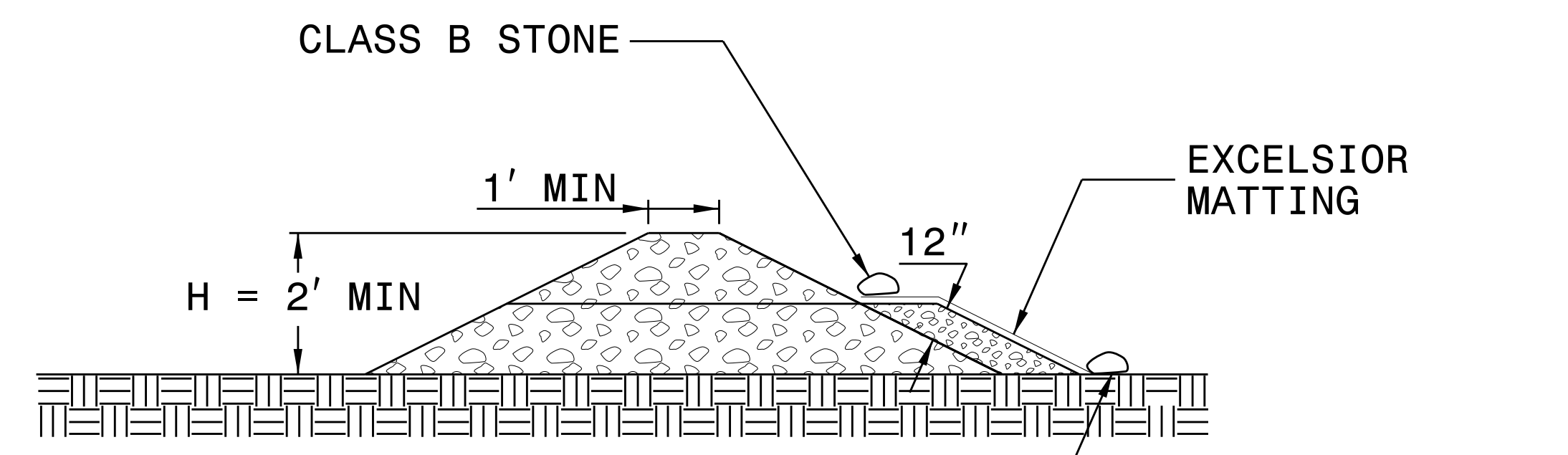
INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A




SECTION A-A



SECTION B-B

NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

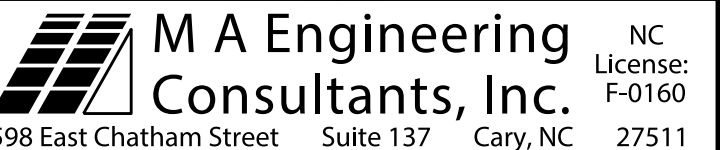
PROJECT REFERENCE NO.	SHEET NO.
WBS 47851	EC-3
 M A Engineering Consultants, Inc. <small>598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221</small>	

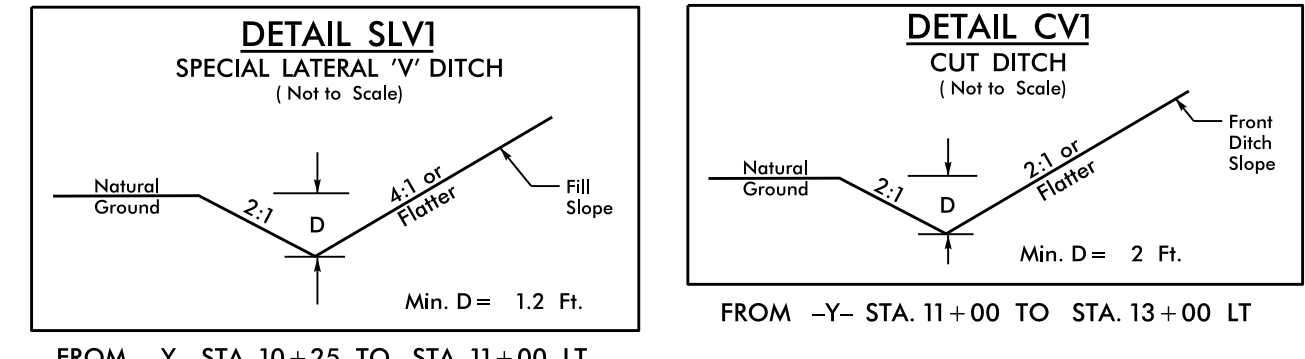
SOIL STABILIZATION SUMMARY SHEET
GEOTEXTILE FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
4	Y	1225	1300	LT	105
				SUBTOTAL	105
					MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER 5000
				TOTAL	5105
				SAY	5125

SOIL STABILIZATION TIME FRAMES

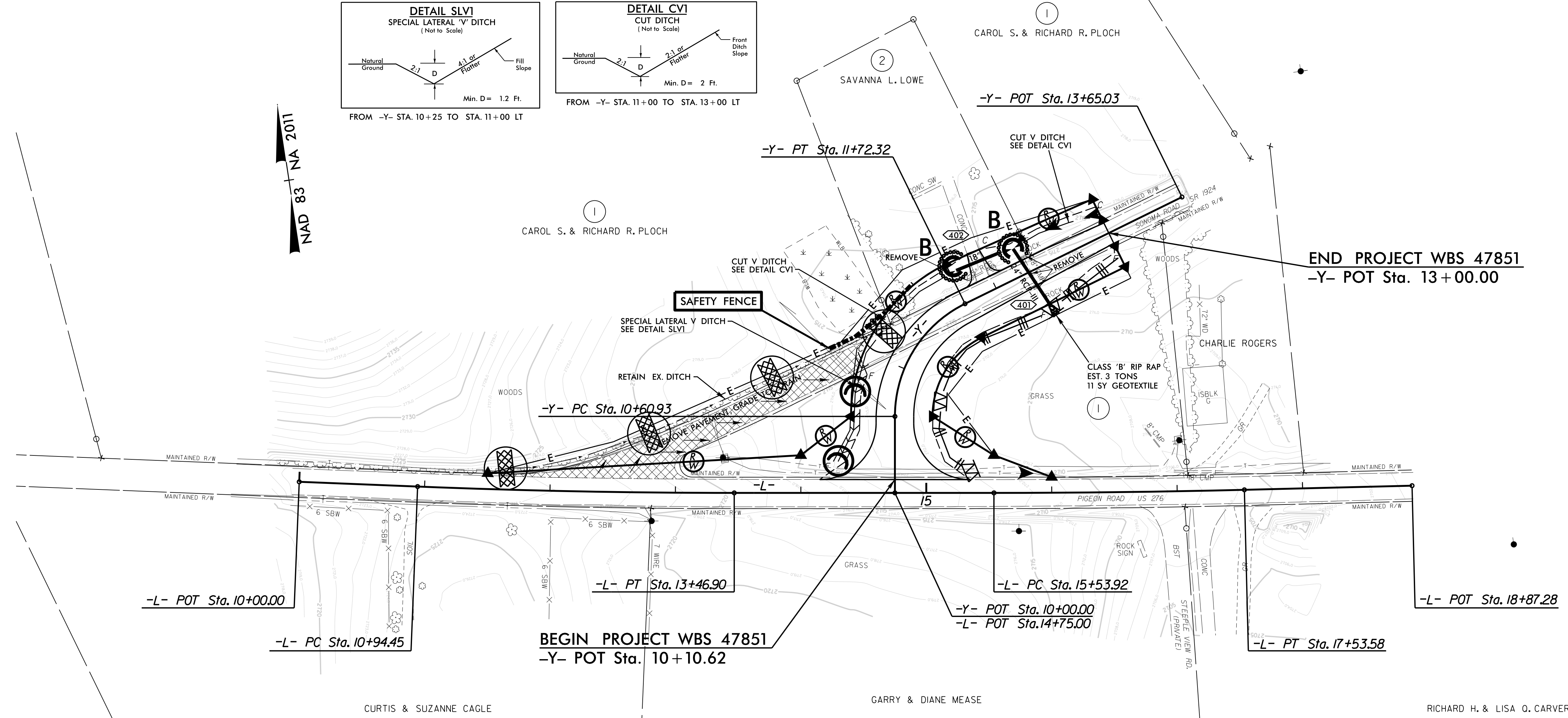
SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

PROJECT REFERENCE NO. WBS 47851	SHEET NO. EC-4/CONST.-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 M A Engineering Consultants, Inc. 598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221	



NAD 83 NA 2011

REVISIONS



INSTALL MATTING FOR EROSION CONTROL IN THE PROPOSED DITCH LINE AS NOTED ON EC-3

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

4/18/2018
C:\Users\j...s\EC\US276_EC_EC4.dgn
12:34:50 PM

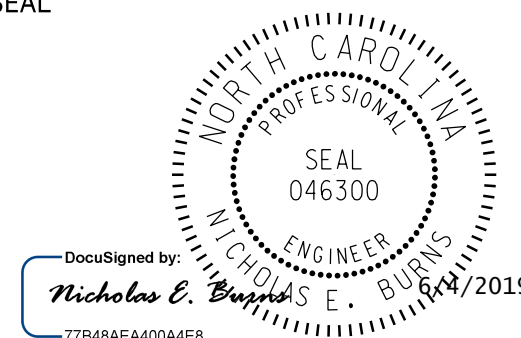
T.I.P.: WBS 47851

CONTRACT:

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

**SIGNING PLAN
HAYWOOD COUNTY**

LOCATION: ROAD REALIGNMENT FOR US 276 (PIGEON ROAD) AND SR 1924 (SONOMA ROAD)

<small>TIP NO.</small> WBS 47851	<small>SHEET NO.</small> SIGN-1
<small>APPROVED:</small> _____	
<small>DATE:</small> _____	
<small>SEAL</small>	
	

GENERAL NOTES

- . SIGNS FURNISHED BY STATE
- . SIGNING PLANS DO NOT INCLUDE TEMPORARY CONSTRUCTION SIGNING OR PAVEMENT MARKINGS. SEE TRAFFIC CONTROL PLANS.
- . WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER.
- . ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- . THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- . SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

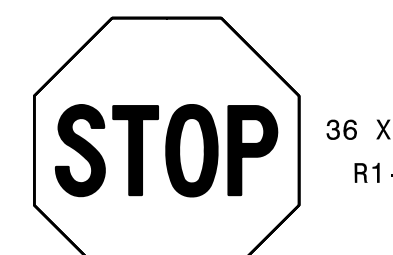
<u>STD. NO.</u>	<u>TITLE</u>
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

SUMMARY OF QUANTITIES


ITEM NO.	ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.		
4072000000	903	82	L.F.
4102000000	904	2	EA.
4108000000	904	2	EA.
4116100000	904	3	EA.
4192000000	907	2	EA.
4238000000	907	2	EA.

"E" SIGNS

(401) QUANTITY REQ'D 1	
(402) QUANTITY REQ'D 1	



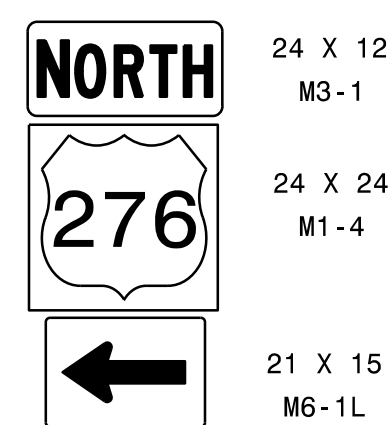
(401)



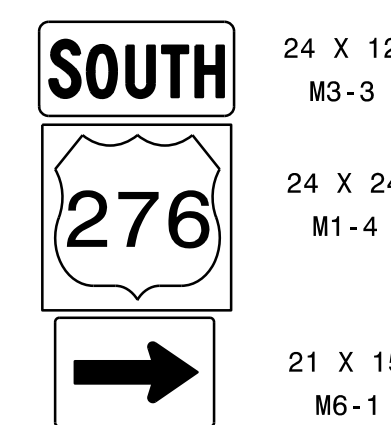
(402)

"F" SIGNS

(501) QUANTITY REQ'D 1	
(502) QUANTITY REQ'D 1	



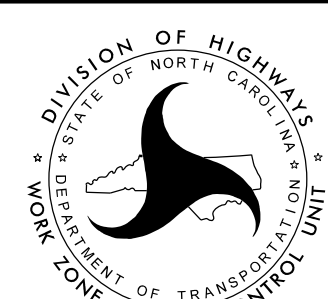
(501)




(502)

INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
SIGN-1	TITLE SHEET, SIGN DESIGN, E SIGNS, F SIGNS, NOTES, AND QUANTITIES
SIGN-2	PROPOSED SIGNS

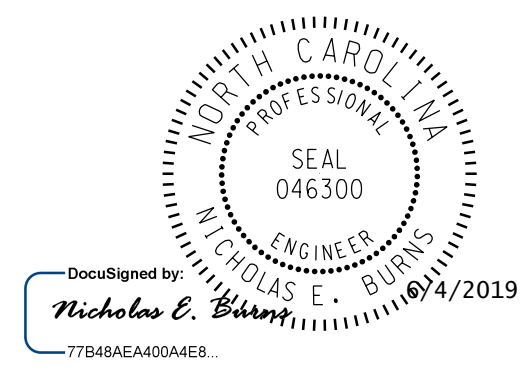
PLAN REVIEWED BY: N.C.D.O.T. HIGHWAY DIVISION 14		
JONATHAN WOODARD	NCDOT PROJECT MANAGER	
ETHAN MILLER	NCDOT PROJECT ENGINEER	

PLAN PREPARED BY: Ramey Kemp & Associates		
NICHOLAS E. BURNS, P.E.	PROJECT MANAGER	
ZACHARY M. ESPOSITO, E.I.	PROJECT ENGINEER	

APPROVED: _____

DATE: _____

SEAL

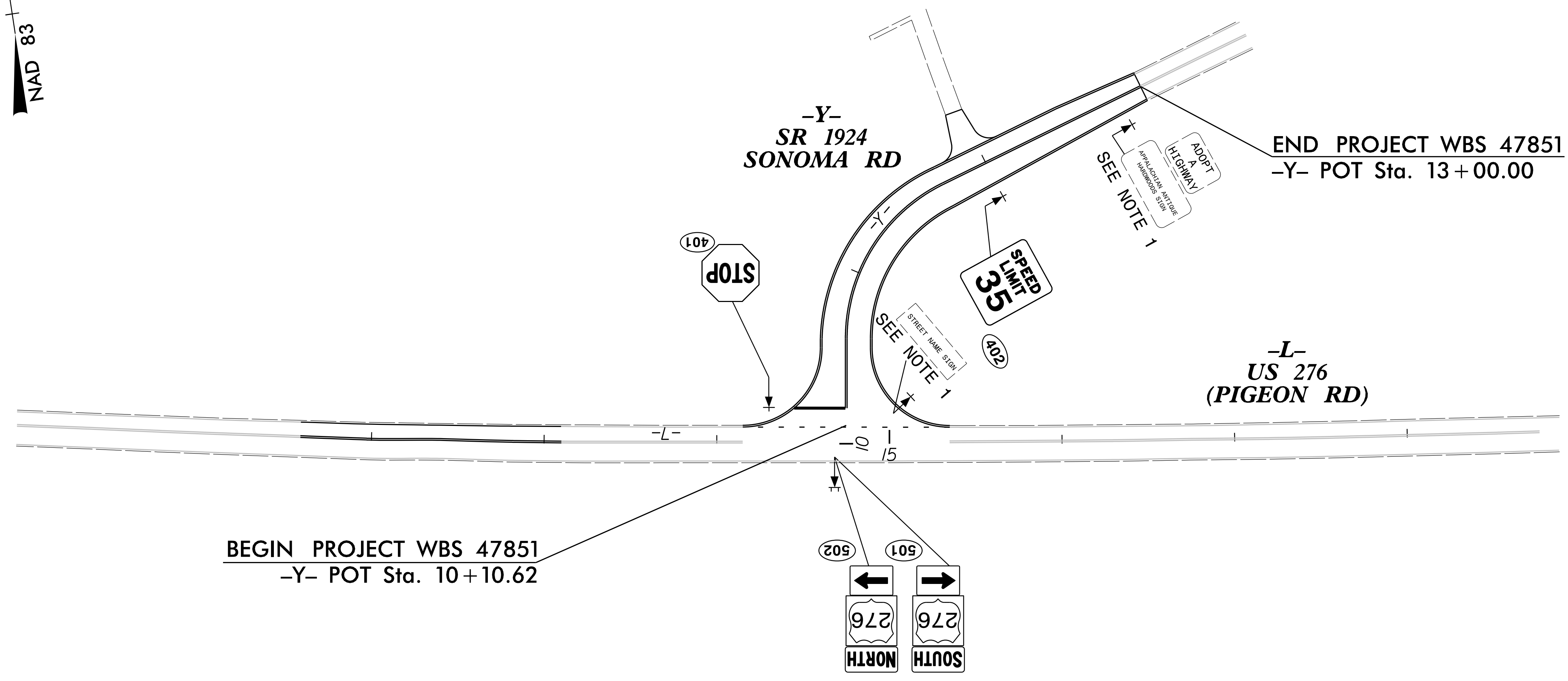
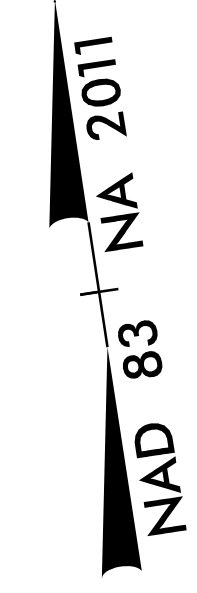


**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

RAMEY KEMP & ASSOCIATES, INC.
 Transportation Engineers
 8307 University Executive Park Drive, Suite 260
 Charlotte, North Carolina 28262
 704-549-4260 Tel. 704-549-4277 Fax.
 www.rameykemp.com
 NC License No. C-0910

PROJECT NOTES

- RELOCATE EXISTING SIGN ON NEW U-CHANNEL



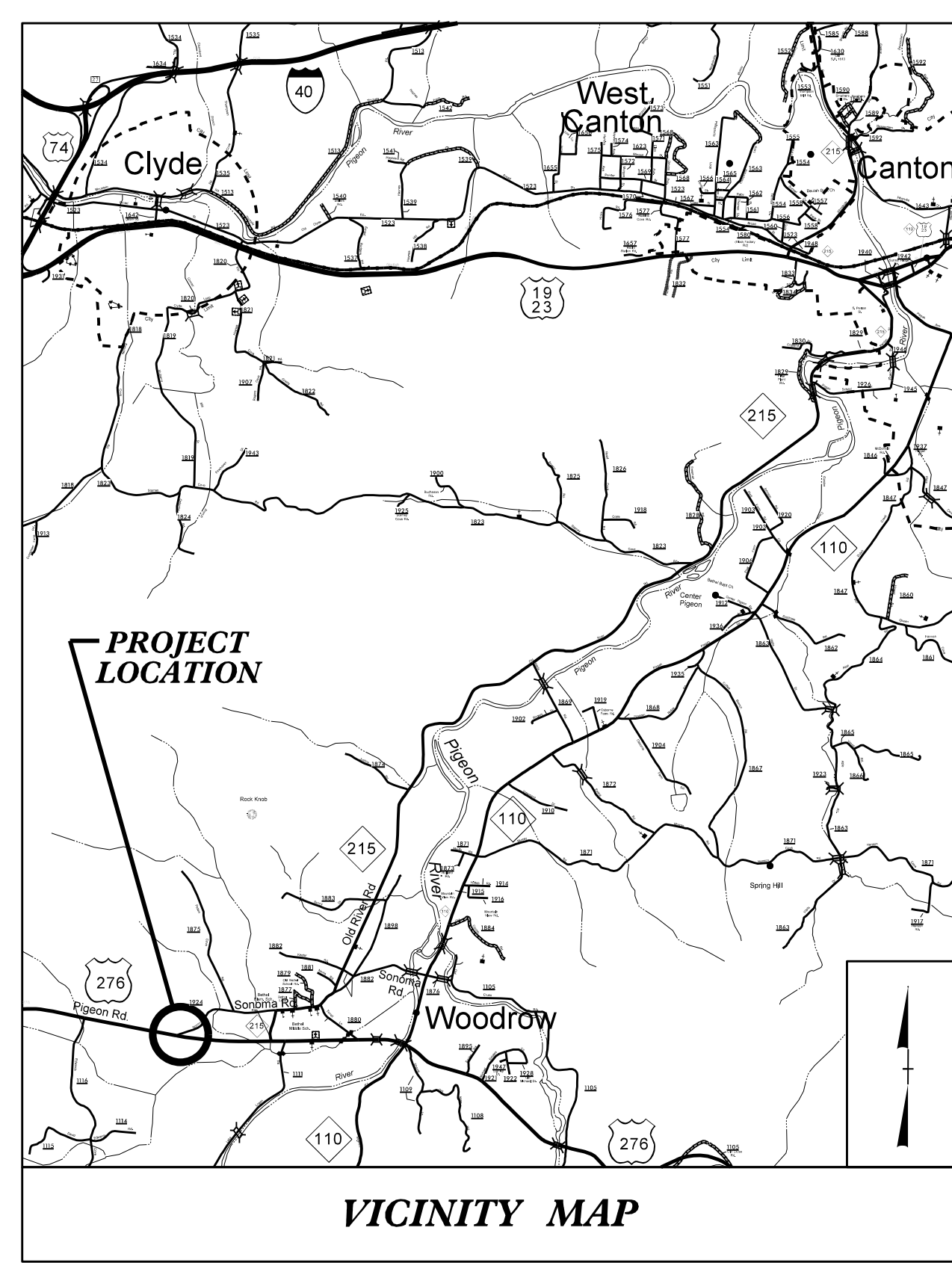
PROPOSED SIGNS

09/05/19

2/21/2019
P:\JOBS\0659\093\WBS4785\Utilities\Engineering\UBO\Proj\us276_uo_tsh.dgn
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PROJECT: WBS 47851

CONTRACT DN00680



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

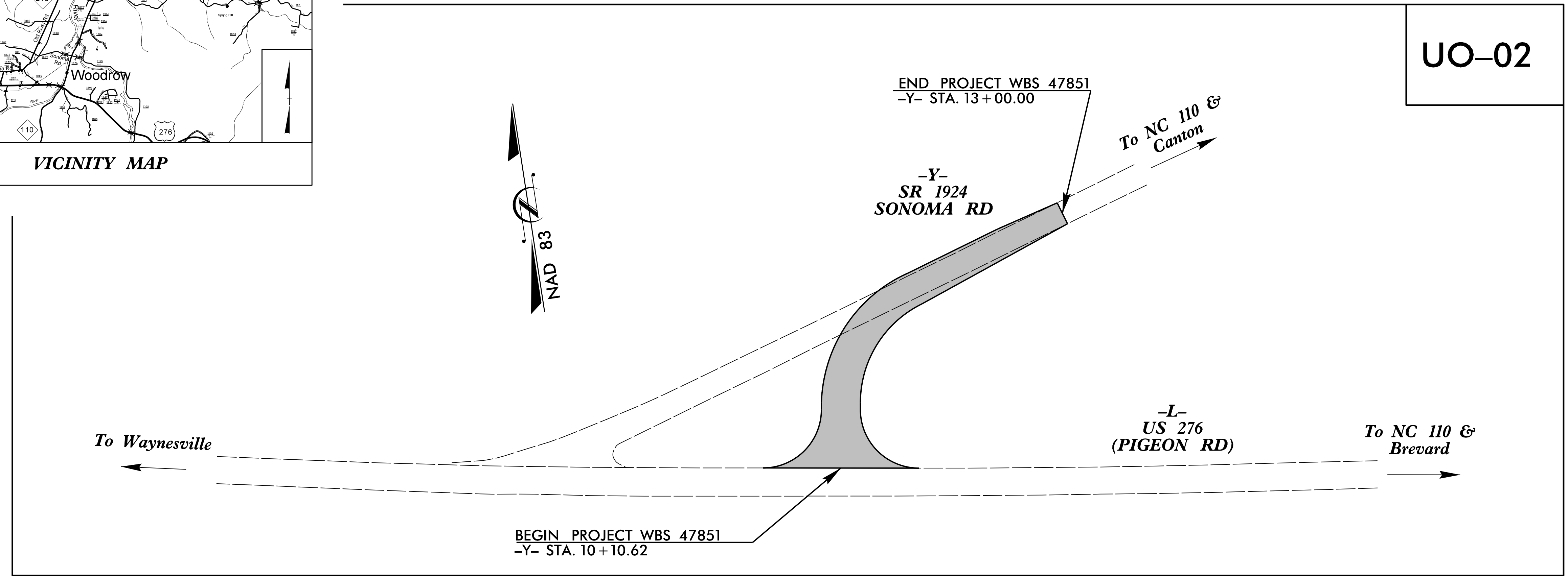
**UTILITIES BY OTHERS PLANS
HAYWOOD COUNTY**

LOCATION: INTERSECTION OF US 276 (PIGEON RD) AND SR 1924 (SONOMA RD)

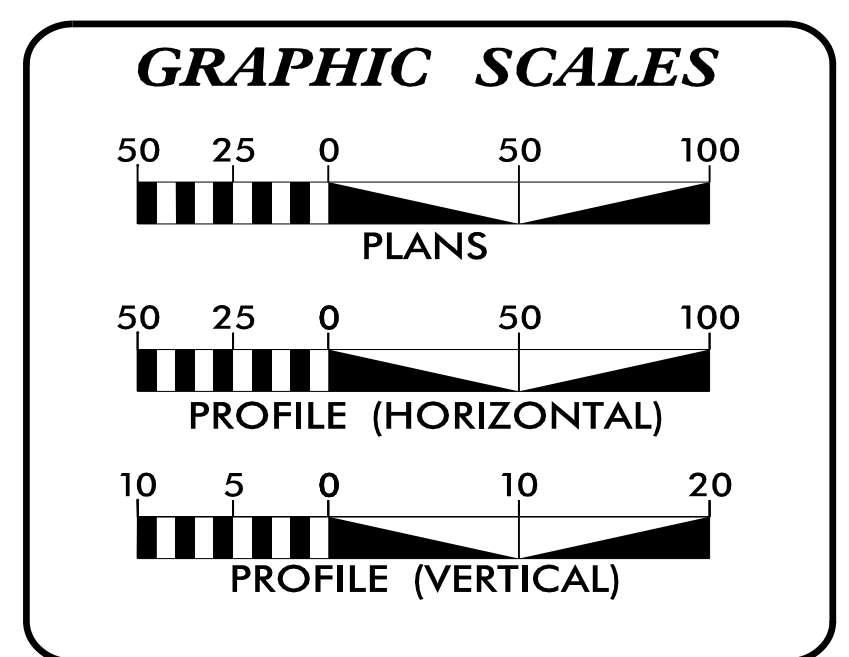
TYPE OF WORK: RELOCATE PHONE

T.I.P. NO.	SHEET NO.
WBS 47851	UO-01

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



UO-02



INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UO-01	TITLE SHEET
UO-02	UBO PLAN SHEET

UTILITY OWNERS WITH CONFLICTS

(A) PHONE - ATT

PREPARED IN THE OFFICE OF:

M A Engineering Consultants, Inc.
598 East Chatham Street - Suite 137
Cary, NC 27511
Phone: 919.297.0220 Fax: 919.297.0221
NC License: F-0160

WEBB WHITE UTILITY PROJECT MANAGER
BILLY GREEN PROJECT UTILITY COORDINATOR
BOB GOLDING PROJECT UTILITY ENGINEER

**DIVISION OF HIGHWAYS
DIVISION 14**
DIV ADDRESS
253 WEBSTER RD
SYLVA, NC 28779

JONATHAN WOODARD
DIVISION 14
SENIOR PROJECT ENGINEER

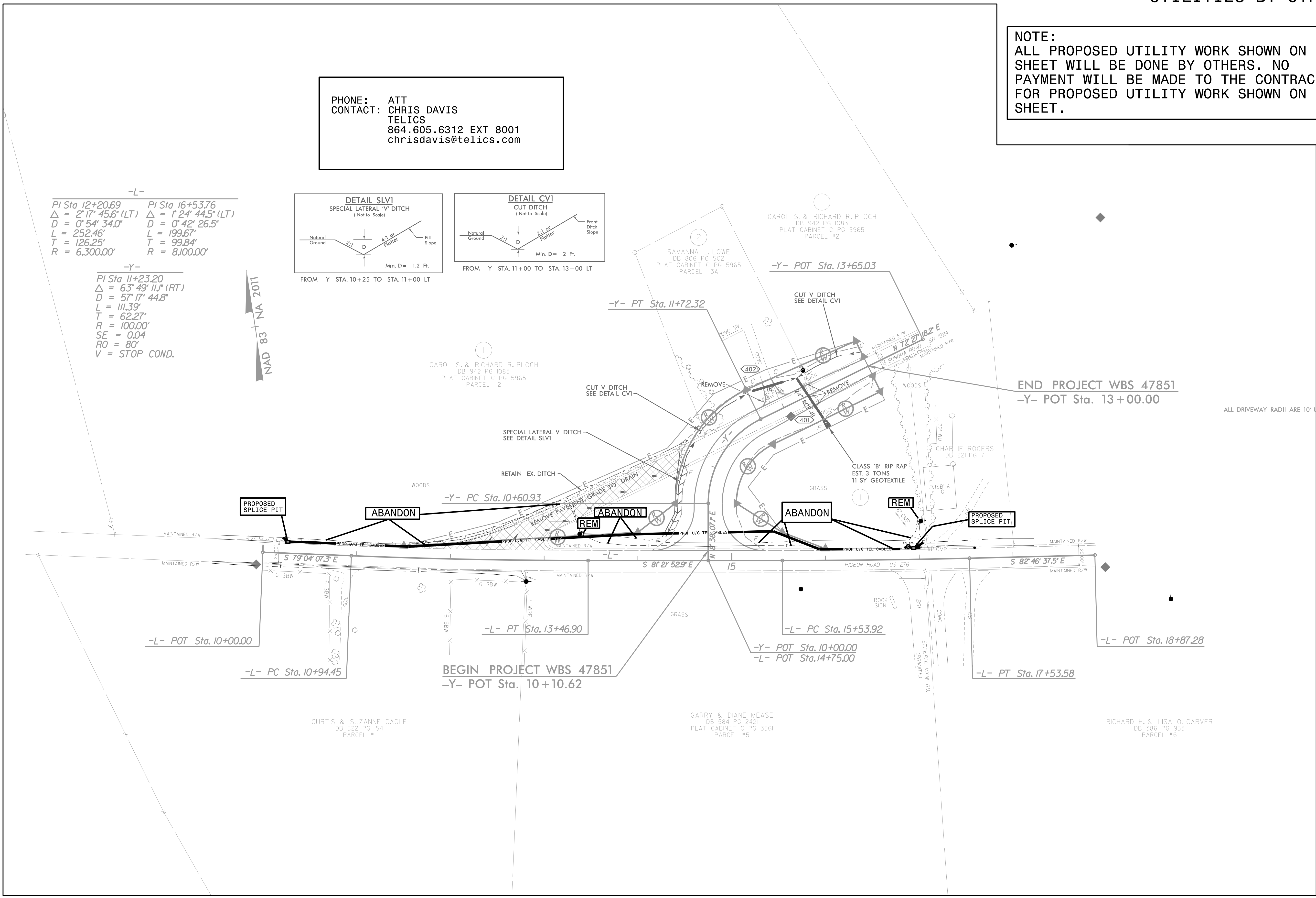
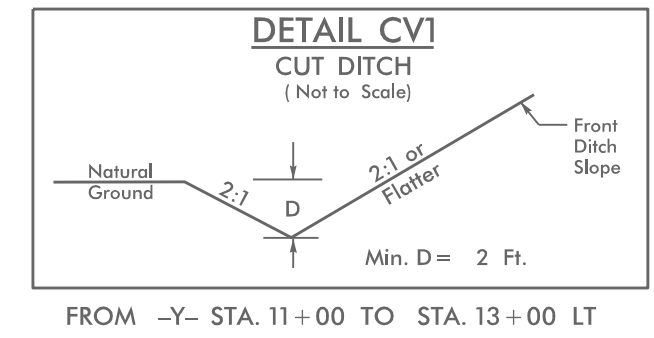
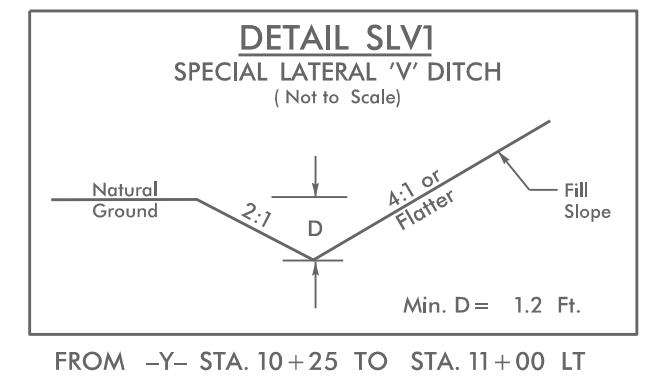
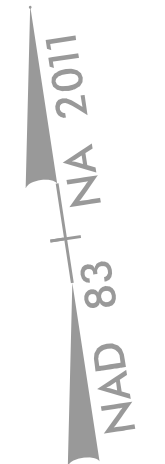
UTILITIES BY OTHERS

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

PHONE: ATT
 CONTACT: CHRIS DAVIS
 TELICS
 864.605.6312 EXT 8001
 chrisdavis@telics.com

-L-
 PI Sta 12+20.69 PI Sta 16+53.76
 $\Delta = 2^\circ 17' 45.6" (LT)$ $\Delta = 1^\circ 24' 44.5" (LT)$
 $D = 0' 54' 34.0"$ $D = 0' 42' 26.5"$
 $L = 252.46'$ $L = 199.67'$
 $T = 126.25'$ $T = 99.84'$
 $R = 6,300.00'$ $R = 8,100.00'$

-Y-
 PI Sta 11+23.20
 $\Delta = 63^\circ 49' 11.1" (RT)$
 $D = 57' 17" 44.8"$
 $L = 111.39'$
 $T = 62.27'$
 $R = 100.00'$
 $SE = 0.04$
 $RO = 80'$
 $V = STOP COND.$



8/17/99
 2/20/2019
 P:\1085\0659\093\WBS47851\Utilities\Engineering\UB0\Proj\us276_uo_pah02 - rev20192002.dgn
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