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

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

09/08/99

TIP PROJECT: P-4900B

CONTRACT: DF00127

See Sheet 1-A For Index of Sheets
See Sheet 1-B for Convential Symbols

STATE OF NORTH CAROLINA
NCDOT RAIL DIVISION

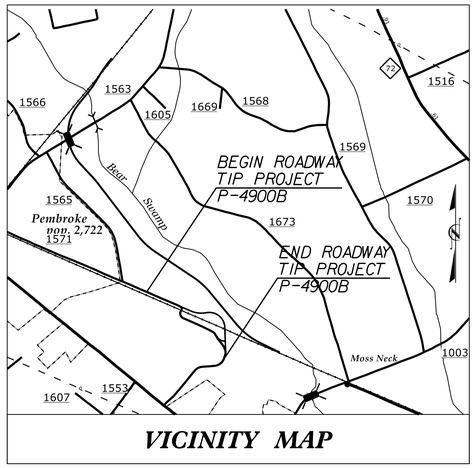
ROBESON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	P-4900B	1	

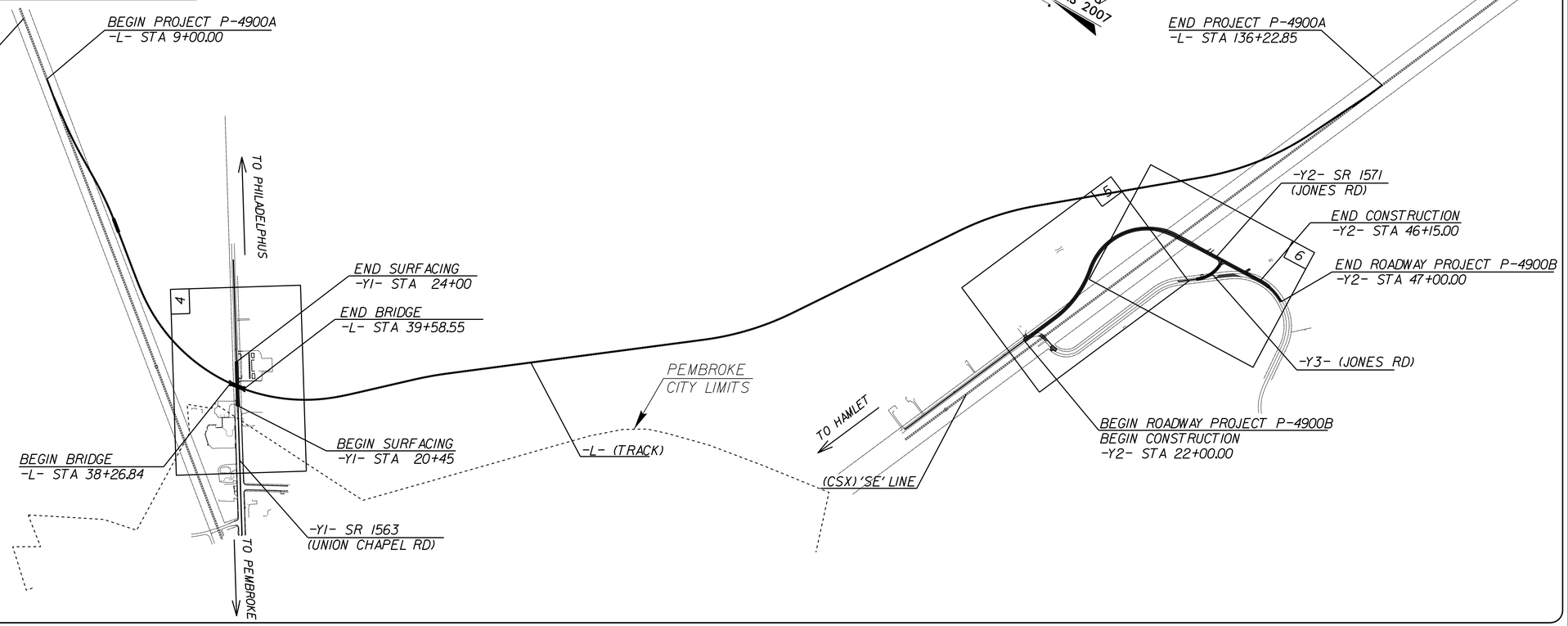
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
41099.1.S3.4		PE
41099.2.S1		RW
41099.3.3		CONST.

LOCATION: GRADE CROSSING RELOCATION ON SR 1571 (JONES RD).

TYPE OF WORK: GRADING, DRAINAGE, & PAVING



VICINITY MAP



GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA -Y1-

ADT 2016 = 9157
ADT 2036 = 16011
DHV = 10 %
D = 60 %
T = 3 % *
V = 40 MPH
* TTST =1 DUAL =2
FUNC CLASS = LOCAL

SUB REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT P-4900 = 0.473

TOTAL LENGTH OF ROADWAY PROJECT P-4900 = 0.473

Prepared in the Office of:
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MAY 30, 2014

LETTING DATE:
MAY 18, 2016

DAVID W. BASS, P.E.
PROJECT ENGINEER

BRIAN BLACKWELL, E.I.
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 15764 ENGINEER JAMES A BYRD

DocuSigned by: James A. Byrd 10/13/2015 P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 020107 ENGINEER DAVID W BASS

DocuSigned by: David W. Bass 10/13/2015 P.E.
SIGNATURE:

NC DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
DESIGN AND CONSTRUCTION

30-SEP-2015 14:02
\\rdlw00\projects\088 Rail\55624 Pembroke FinalDesign\Roadway\Proj\P4900B\p4900b_rdy_tsh.dgn
$$$$USERNAME$$$$

NORTH CAROLINA PROFESSIONAL SEAL 020107 ENGINEER DAVID W. BASS 10/13/2015

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

INDEX OF SHEETS

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-2012
REVISED: 10-31-2014

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 III.

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.

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.

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

SUBSURFACE PLANS:

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

EFF. 01-17-2012
REV. 10-30-2012

2012 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2012 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
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
310.03	Cross Pipe End Section - Precast Concrete Section for 18" to 30" Pipe
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 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
815.02	Subsurface Drain
816.01	Concrete Pads - for Shoulder Drain Installation
816.04	Markers for Drainage Structure and Concrete Pad
840.00	Concrete Base Pad for Drainage Structures
852.01	Concrete Islands
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets

04/06/15

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	1B

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

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

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Existing Historic Property Boundary — HPB
- Known Contamination Area: Soil
- 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 — S
- Well — W
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

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

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY:

- Baseline Control Point
- Existing Right of Way Marker
- Existing Right of Way Line
- Proposed Right of Way Line — RW
- Proposed Right of Way Line with Iron Pin and Cap Marker — RW
- Proposed Right of Way Line with Concrete or Granite R/W Marker — RW
- Proposed Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- Proposed Control of Access — CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Proposed Temporary Drainage Easement — TDE
- Proposed Permanent Drainage Easement — PDE
- Proposed Permanent Drainage / Utility Easement — DUE
- Proposed Permanent Utility Easement — PUE
- Proposed Temporary Utility Easement — TUE
- Proposed Aerial Utility Easement — AUE
- Proposed Permanent Easement with Iron Pin and Cap Marker

ROADS AND RELATED FEATURES:

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

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — Vineyard

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert — CONC
- Bridge Wing Wall, Head Wall and End Wall — CONC WW

MINOR:

- Head and End Wall — CONC HW
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB — CB
- Paved Ditch Gutter
- Storm Sewer Manhole — S
- Storm Sewer — S

UTILITIES:

POWER:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

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

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	1C-1
Location and Surveys	

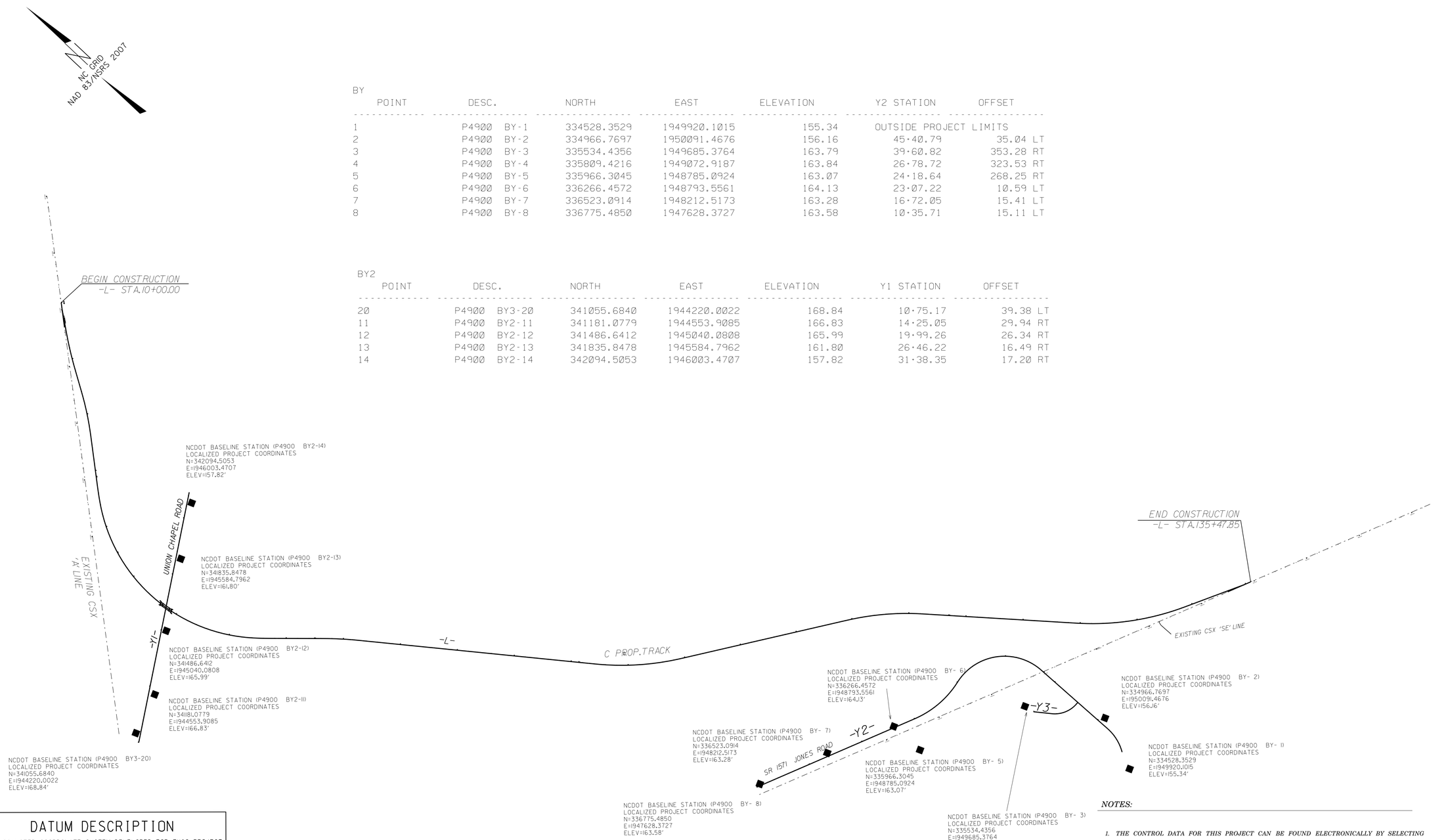
SURVEY CONTROL SHEET P-4900B

BY

POINT	DESC.	NORTH	EAST	ELEVATION	Y2 STATION	OFFSET
1	P4900 BY-1	334528.3529	1949920.1015	155.34	OUTSIDE PROJECT LIMITS	
2	P4900 BY-2	334966.7697	1950091.4676	156.16	45+40.79	35.04 LT
3	P4900 BY-3	335534.4356	1949685.3764	163.79	39+60.82	353.28 RT
4	P4900 BY-4	335809.4216	1949072.9187	163.84	26+78.72	323.53 RT
5	P4900 BY-5	335966.3045	1948785.0924	163.07	24+18.64	268.25 RT
6	P4900 BY-6	336266.4572	1948793.5561	164.13	23+07.22	10.59 LT
7	P4900 BY-7	336523.0914	1948212.5173	163.28	16+72.05	15.41 LT
8	P4900 BY-8	336775.4850	1947628.3727	163.58	10+35.71	15.11 LT

BY2

POINT	DESC.	NORTH	EAST	ELEVATION	Y1 STATION	OFFSET
20	P4900 BY3-20	341055.6840	1944220.0022	168.84	10+75.17	39.38 LT
11	P4900 BY2-11	341181.0779	1944553.9085	166.83	14+25.05	29.94 RT
12	P4900 BY2-12	341486.6412	1945040.0808	165.99	19+99.26	26.34 RT
13	P4900 BY2-13	341835.8478	1945584.7962	161.80	26+46.22	16.49 RT
14	P4900 BY2-14	342094.5053	1946003.4707	157.82	31+38.35	17.20 RT



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "PROSPECT"
WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
NORTHING: 372029.5512(ft) EASTING: 1938868.6682(ft)
ELEVATION: 196.92(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99991940
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "PROSPECT" TO -L- STATION 10+00.00 IS
N 15° 18' 43.77" W 28949.9515'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

NOTE: DRAWING NOT TO SCALE

NOTES:

1. *THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:*
   HTTPS://CONNECT.NCDOT.GOV/RESOURCES/LOCATION/

   THE FILES TO BE FOUND ARE AS FOLLOWS:
   P4900_LS_CONTROL.TXT

   SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

© *INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.*
PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
NETWORK ESTABLISHED FROM EXISTING HARN MONUMENTATION
SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

28-SEP-2015 08:00
N:\Projects\088 Rail\55624 Pembroke Final Design\Roadway\Proj\P4900BY\P4900b_LS_1c_1.dgn
$$$$USERNAME$$$$

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	1C-2
Location and Surveys	

SURVEY CONTROL SHEET P-4900B

PRELIMINARY ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	40+47.13	-77.94	341483.0847	1945302.3889
L	31+33.85	100.00	342398.6132	1945205.6615
L	28+57.25	-105.00	342544.4412	1945516.1608
L	20+78.38	-70.00	343171.0912	1945969.0135
L	17+84.04	-69.66	343422.5757	1946135.1876
L	13+39.13	-50.49	343806.3077	1946352.3687
L	25+92.66	-89.81	342756.2646	1945659.1624
L	41+14.48	-95.00	341426.4077	1945335.3076
L	46+46.14	90.00	340873.6572	1945413.3702
L	46+46.13	-95.00	340986.7392	1945559.7856
L	49+12.14	-95.00	340793.4310	1945729.1920
L	49+11.85	90.00	340667.3959	1945593.7659
L	53+87.99	-80.00	340434.1084	1946043.4795
L	53+09.98	-95.00	340502.6202	1946000.7228
L	53+89.86	100.07	340312.0020	1945911.1173
L	53+89.80	89.49	340319.1400	1945918.9333
L	55+95.68	91.79	340164.9491	1946045.4131
L	56+06.66	54.17	340179.5692	1946081.7163
L	55+85.74	-80.00	340278.7565	1946174.4817
L	56+64.02	-65.00	340206.9425	1946211.0726
L	56+50.11	65.00	340138.8414	1946099.4712
L	76+53.02	-65.00	338628.6751	1947421.5215
L	77+77.02	-75.00	338538.6476	1947504.5448
L	77+77.02	65.00	338450.4740	1947395.8000
L	76+53.02	65.00	338549.5608	1947318.3667
L	85+24.88	60.00	337946.1250	1947968.9453
L	85+24.88	-70.00	338054.1308	1948041.2969
L	84+00.88	-75.00	338127.0692	1947943.3586
L	84+00.88	65.00	338012.9052	1947862.3240
L	93+06.03	50.00	337519.6828	1948623.5025
L	93+05.49	60.00	337511.6757	1948617.4877
L	93+11.71	-55.00	337603.7580	1948686.6579
L	93+12.52	-70.00	337615.7688	1948695.6801
L	97+98.01	50.00	337245.8699	1949032.2482
L	97+97.72	65.00	337233.5674	1949023.6615
L	98+00.02	-55.00	337331.9872	1949092.3551
L	98+00.31	-70.00	337344.2897	1949100.9418
L	100+21.85	65.00	337108.9036	1949207.7925
L	100+21.85	-70.00	337218.9903	1949285.9329
L	105+55.09	-70.00	336851.8501	1949693.2118
L	105+55.09	65.00	336762.7472	1949591.7935
L	106+79.09	-50.00	336743.0095	1949759.2126
L	106+79.09	-65.00	336752.6014	1949770.7450
L	106+79.09	50.00	336679.0634	1949682.3303
L	106+79.09	65.00	336669.4715	1949670.7979
L	119+08.98	-50.00	335797.4431	1950545.6776
L	119+08.98	-65.00	335807.0350	1950557.2099
L	119+08.98	50.00	335733.4970	1950468.7952
L	119+08.98	65.00	335723.9051	1950457.2628
L	122+65.38	60.00	335460.3605	1950708.5358
L	128+30.82	-65.00	335231.1989	1951238.0002
L	98+97.85	-70.00	337290.0013	1949181.9830
L	98+97.85	65.00	337177.8415	1949106.8487
L	39+60.24	90.00	341533.5908	1945120.0664
L	39+05.05	100.00	341590.1143	1945100.8445
L	38+91.32	-75.34	341627.5242	1945272.7015
L	38+06.06	-105.00	341709.9998	1945294.1507

PRELIMINARY ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	37+88.92	-65.00	335726.0556	1950094.6628
Y2	30+02.33	-65.00	336189.4013	1949445.6761
Y2	25+03.18	-65.00	336238.5874	1948995.0111
Y2	21+19.82	-65.00	336390.8075	1948643.1648
Y2	21+19.22	-31.49	336360.2868	1948629.3090
Y2	40+04.49	-65.00	335503.7350	1950104.8084
Y2	46+15.67	-65.00	334892.8483	1950123.7343
Y2	46+59.25	-65.93	334842.4135	1950123.5798
Y2	39+43.38	65.00	335560.7934	1949972.9784
Y2	41+50.00	65.00	335354.2728	1949979.3765
Y2	46+75.00	-30.00	334828.2555	1950086.1771
Y2	41+75.00	100.00	335328.2010	1949945.1675

PRELIMINARY ROW MARKER IRON PIN AND CAP-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y3	11+24.42	-30.00	335381.0937	1949824.1156

PRELIMINARY ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
L	105+71.02	65.23	336750.9177	1949601.8131
L	106+19.94	65.41	336714.3004	1949632.8279

PRELIMINARY ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
Y2	27+00.00	-65.00	336186.7883	1949168.4792
Y2	28+25.41	-76.03	336186.6551	1949283.6899
Y2	28+82.83	-76.24	336187.5394	1949335.8475
Y2	31+00.00	-75.00	336209.3613	1949555.9069
Y2	32+00.00	-75.00	336196.2978	1949670.4237
Y2	33+00.00	-65.00	336150.9471	1949775.7367

L

TYPE	STATION	NORTH	EAST
POT	10+00.00	344107.2825	1946513.7059
POT	10+59.54	344061.1188	1946476.1010
TS	12+44.94	343911.7012	1946366.3345
SC	13+06.94	343861.6195	1946329.7859
CS	15+65.11	343646.3976	1946187.3295
ST	16+27.11	343593.1868	1946155.5084
TS	17+47.11	343490.0039	1946094.2443
SC	18+71.11	343383.9016	1946030.0766
CS	21+27.29	343174.0741	1945883.2835
ST	22+51.29	343077.4226	1945805.6068
TS	25+83.27	342820.3542	1945595.5503
SC	28+62.27	342598.7858	1945426.1902
CS	46+40.56	340933.0863	1945481.2030
ST	49+19.56	340723.1770	1945664.8153
TS	52+95.51	340448.3859	1945921.3884
SC	53+88.51	340380.0687	1945984.4879
CS	55+73.02	340239.2880	1946103.7155
ST	56+66.02	340165.8008	1946160.7105
TS	76+53.02	338589.1179	1947369.9441
SC	77+77.02	338491.4118	1947446.2887
CS	84+00.88	338065.9099	1947899.9472
ST	85+24.88	337995.9738	1948002.3383
TS	98+97.85	337231.8444	1949143.0245
SC	100+21.85	337161.9082	1949245.4156
CS	105+55.09	336805.6486	1949640.6245
ST	106+79.09	336711.0364	1949720.7715
TS	119+08.98	335765.4701	1950507.2364
SC	120+32.98	335670.8579	1950587.3834
CS	128+68.20	335156.4980	1951239.6542
ST	129+92.20	335100.6208	1951350.3463
POT	134+88.31	334881.0584	1951795.2225
POT	135+47.85	334857.4079	1951849.8656

Y1

TYPE	STATION	NORTH	EAST
POT	10+00.00	340982.6073	1944176.8547
POT	32+25.00	342154.7750	1946068.0575

Y2

TYPE	STATION	NORTH	EAST
POT	10+00.00	336775.7934	1947589.5945
PC	25+03.18	336178.9311	1948969.2019
PRC	30+02.33	336125.5820	1949458.0091
PT	38+41.73	335664.4107	1950034.7994
PC	46+15.67	334890.8356	1950058.7654
PT	48+56.69	334661.1436	1949997.8076

Y3

TYPE	STATION	NORTH	EAST
POT	10+00.00	335462.1982	1949725.1145
PC	11+57.93	335336.2684	1949820.4163
PT	13+96.41	335237.2525	1950027.5067
POT	14+16.93	335237.8878	1950048.0134

ALL DATA AND R/W INFORMATION FOR –L– ALIGNMENT IS NOT PART OF THIS PROJECT. SEE TIP PROJECT P-4900A.

NOTE: DRAWING NOT TO SCALE

28-SEP-2015 08:58
$$$$USERNAME$$$$
C:\Projects\088 Rail\55624 Pembroke Final Design\Roadway\Proj\P4900B\P4900b_LS_1c_2.dgn

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	2A-1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT ENGINEER

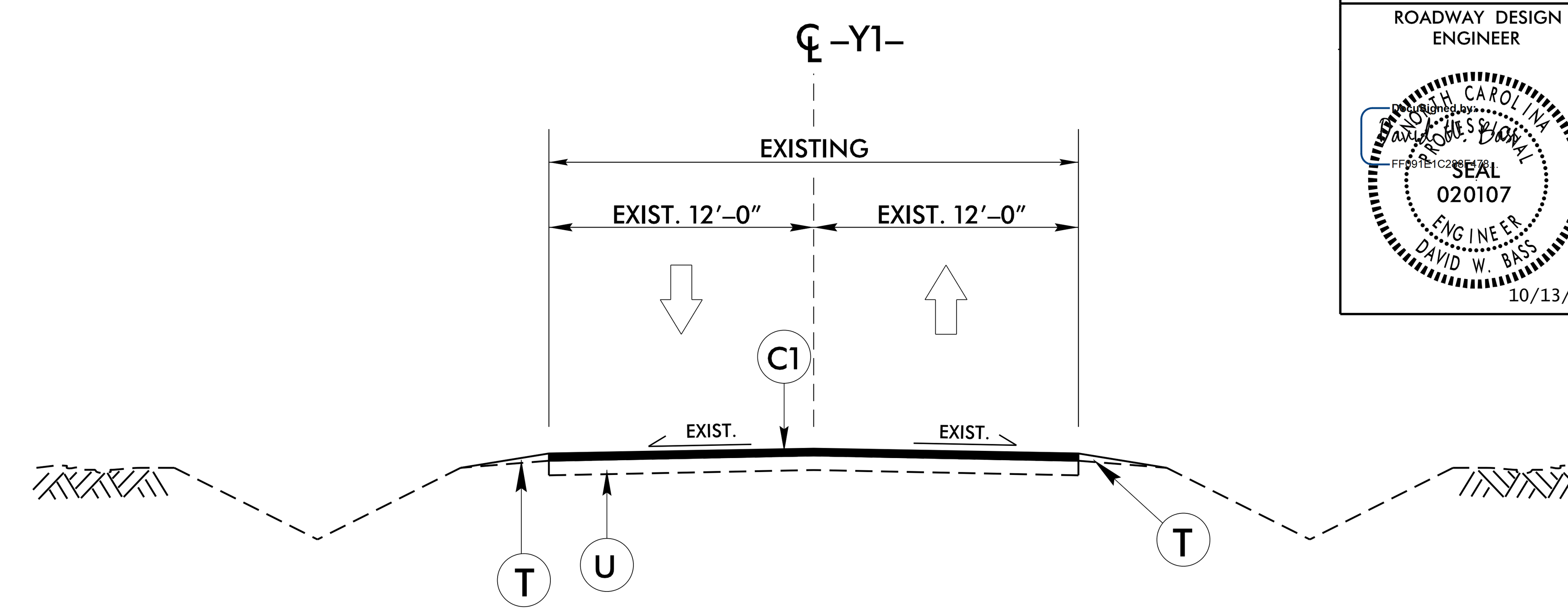
NORTH CAROLINA PROFESSIONAL SEAL 020107 ENGINEER DAVID W. BASS 10/13/2015

REVISIONS

PRELIMINARY PAVEMENT SCHEDULE

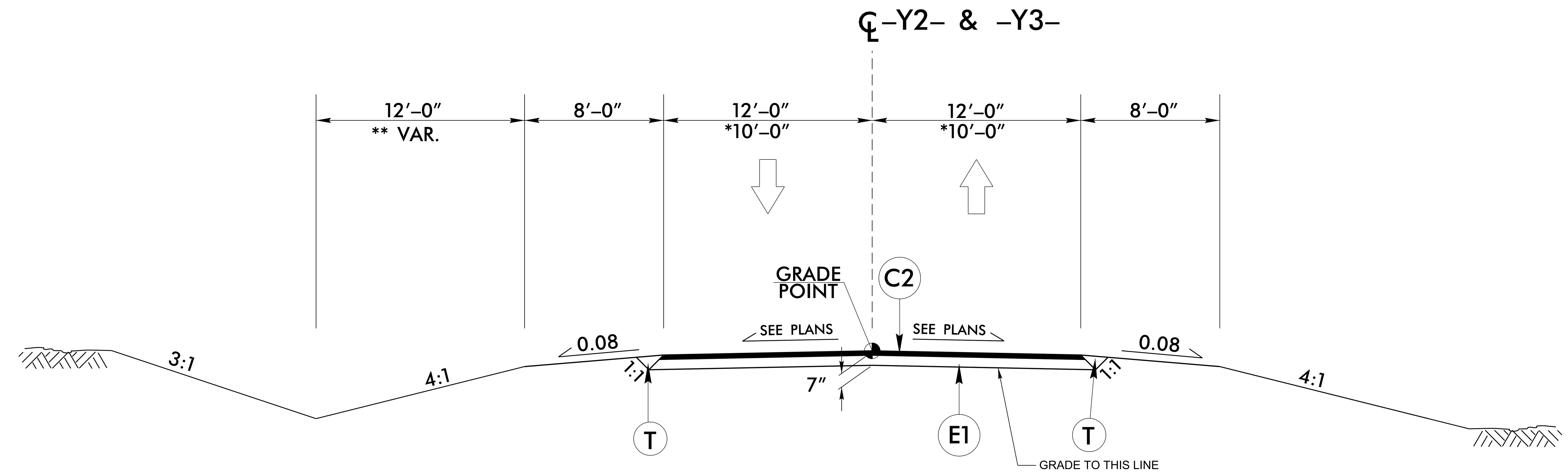
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD.
C2	PROP. APPROX. 3.0" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD IN EACH OF TWO LAYERS.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YARD.
R1	5" MONOLITHIC CONCRETE ISLAND (KEYED-IN)
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	WEDGING (SEE DETAIL)

ALL PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
-Y1- STA. 20+45+/- TO 24+00+/-

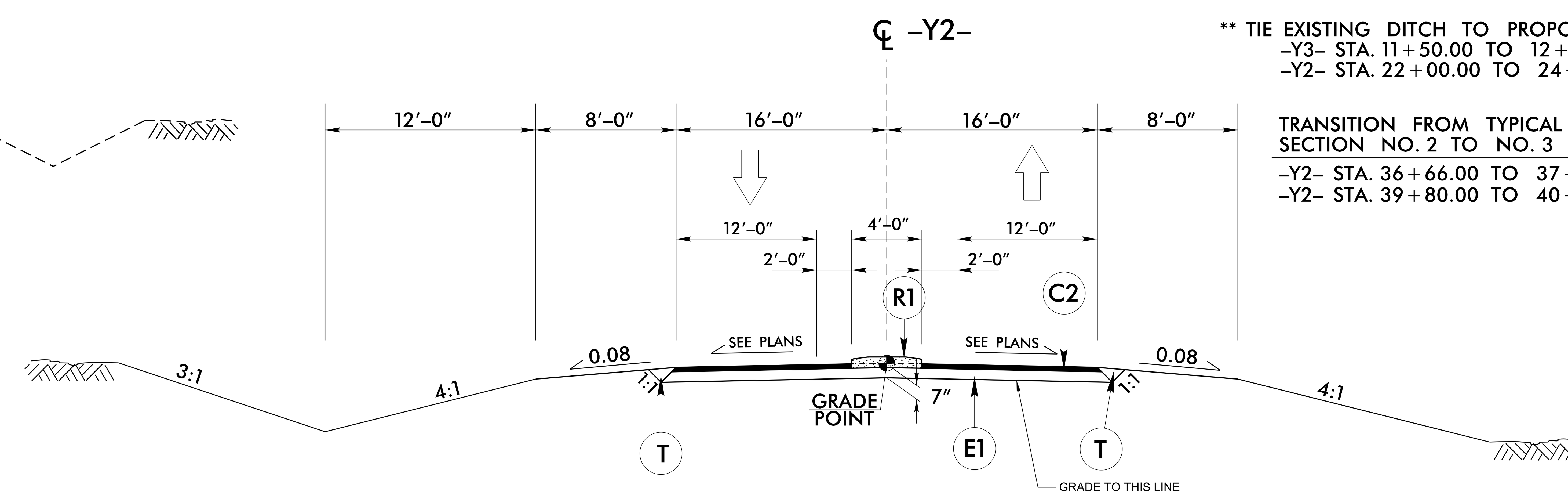


TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
-Y2- STA. 24+25.00 TO 36+66.00
-Y2- STA. 40+60.00 TO 47+00.00
*-Y3- STA. 12+50.00 TO 14+04.93

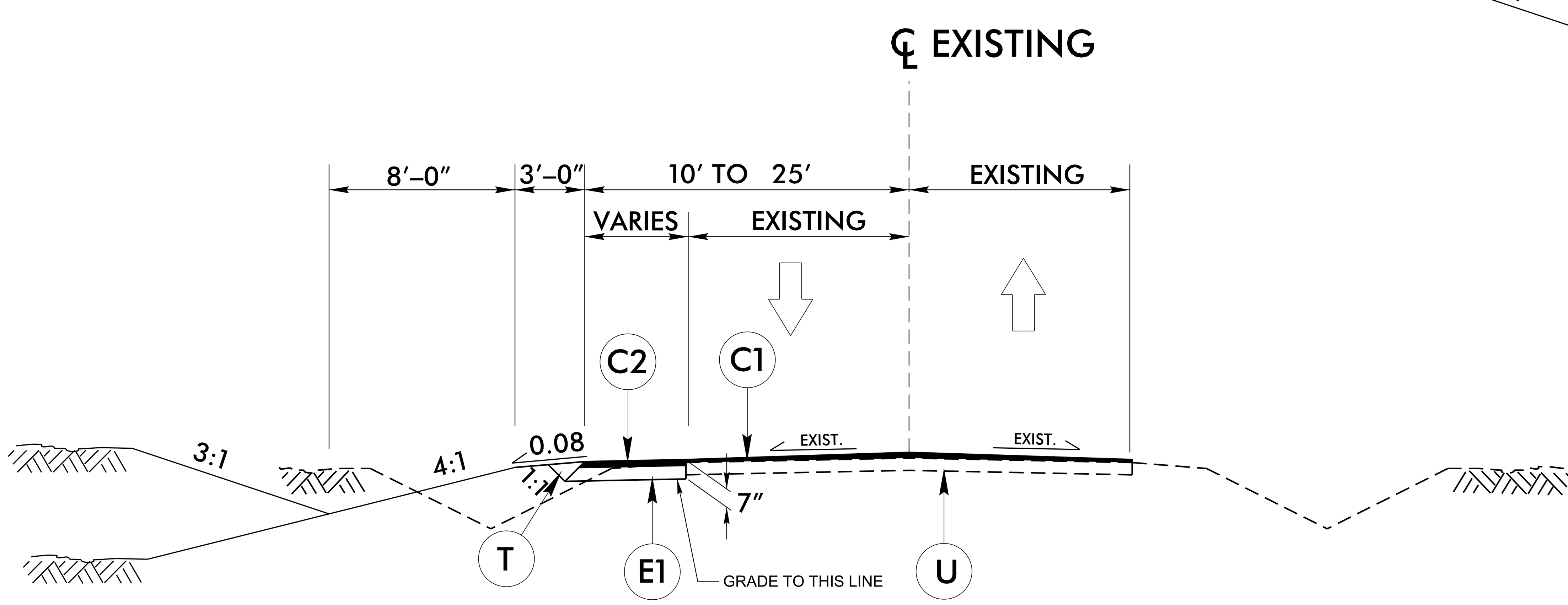
** TIE EXISTING DITCH TO PROPOSED
-Y3- STA. 11+50.00 TO 12+50.00
-Y2- STA. 22+00.00 TO 24+25.00

TRANSITION FROM TYPICAL SECTION NO. 2 TO NO. 3
-Y2- STA. 36+66.00 TO 37+46.00
-Y2- STA. 39+80.00 TO 40+60.00



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
-Y2- STA. 37+46.00 TO 39+80.00



TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4
HAMMERHEAD LOCATION (SEE PLANS)

28-SEP-2015 13:59
\\ralw00\projects\088 Rail\55624 Pembroke Final Design\Roadway\Proj\P4900B\p4900b_rdy_typ.dgn
$$$$USERNAME$$$$

5/9/06

COMPUTED BY: MONICA J. DUVAL DATE: 09/28/15
CHECKED BY: DAVID W. BASS, PE DATE: 09/28/15

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	3B-1

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
-Y1- STA. 20+45.00 TO 24+00.00	0		0	-	0
-Y2- STA. 22+00.00 TO 47+00	9686		14996	5810	500
-Y3- STA. 11+50.00 TO 14+05.00	1239		5	0	1234
SUBTOTAL	10925		15001	5810	1734
TOTAL	10925		15001	5810	1734
LOSS DUE TO CLEARING AND GRUBBING.	-100				-100
EST. UNDERCUT (PER GEOTECH	0				
WASTE IN LIEU OF BORROW	0			-1134	-1134
PROJECT TOTAL	10825		15001	4676	500
EST. 5% TO REPLACE TOP SOIL ON BORROW				234	
GRAND TOTAL	10825		15001	4910	500
SAY	11000			5000	500
EST. UNDERCUT 1400 CY (PER GEOTECH)					
EST. SELECT GRANULAR MATERIAL 1400 CY (PER GEOTECH)					

NOTE: Earthwork quantities are calculated by the Roadway Design Unit. 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, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

PAVEMENT REMOVAL SUMMARY

IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD2
-Y2-	23+06	23+45	RT	1819
-Y3-/-Y2-	-Y3- STA 11+50.00	-Y2- STA 46+15	RT	8217
			TOTAL:	10036
			SAY:	10100

29-SEP-2015 07:59
\\ralw00\projects\088 Rail\55624 Pembroke Final Design\Roadway\Proj\P4900B\p4900b_rdy_sum.dgn
$$$$USERNAME$$$$

RALD046

COMPUTED BY:	JFW	DATE:	9/23/14
CHECKED BY:	DWB	DATE:	9/28/2015

PROJECT NO.	SHEET NO.
P-4900B	3D-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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

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

LINE & STATION SIZE THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER		TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	R. C. PIPE CLASS III														
		FROM	TO					12	15	18	24	30	36	42	48	54	60	66	72	78	84	
Y2 31+00.0	CL	0501	OUT		157.89	157.58	0.3				96											
Y2 38+48.1	CL	R0602	OUT		161.50	161.50																
Y2 38+77.3	CL	R0603	OUT		161.70	161.70																
Y2 23+29.7	186 RT	R0502	OUT																			
Y2 30+43.1	291 LT	R0503	OUT																			
Y2 41+52.1	40 LT	R0604	OUT																			
Y2 44+90.1	38 LT	R0606	OUT																			
Y2 46+33.6	33 LT	R0607	OUT																			
Y3 13+78.0		0601	OUT		156.64	156.00					76											
Y3 12+04.7	25 LT	R0605	OUT																			
SHEET TOTALS											172											
PROJECT TOTALS											172											

LINE & STATION	R. C. PIPE CLASS IV															R. C. PIPE CLASS V														
	12	15	18	24	30	36	42	48	54	60	66	72	78	84		12	15	18	24	30	36	42	48	54	60	66	72	78	84	
Y2 31+00.0																														
Y2 38+48.1			58																											
Y2 38+77.3			58																											
Y2 23+29.7																														
Y2 30+43.1																														
Y2 41+52.1																														
Y2 44+90.1																														
Y2 46+33.6																														
Y3 13+78.0																														
Y3 12+04.7																														
SHEET TOTALS			116																											
PROJECT TOTALS			116																											

QUANTITIES FOR DRAINAGE STRUCTURES — NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)

LINE & STATION	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	CONCRETE TRANSITIONAL SECTION C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.2	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.2	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.2	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	18" PIPE END SECTION	##" PIPE END SECTION	##" PIPE END SECTION	##" PIPE END SECTION		PIPE REMOVAL LIN. FT.	REMARKS
Y2 31+00.0																																				
Y2 38+48.1																														2						
Y2 38+77.3																														2						
Y2 23+29.7		36																																	24	REMOVE EXISTING DRIVE PIPE
Y2 30+43.1			32																																	
Y2 41+52.1		60																																		
Y2 44+90.1		48																																	36	REMOVE EXISTING DRIVE PIPE
Y2 46+33.6		40																																	20	REMOVE EXISTING DRIVE PIPE
Y3 13+78.0																																				
Y3 12+04.7																																				
SHEET TOTALS		184	32																											4					80	
PROJECT TOTALS		184	32																											4					80	

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

COMPUTED BY: Monica DuVal DATE: 09/28/15
CHECKED BY: David W. Bass, PE DATE: 09/28/15

PROJECT NO.	SHEET NO.
P-4900B	3G-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY					2000
				TOTAL LF:	2000

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

SUMMARY OF BRIDGE WAITING PERIODS

Bridge Description	End Bent/ Bent No.	MONTHS

SUMMARY OF SETTLEMENT GAUGES

Gauge No.	LINE	Approx. Station	Approx. Offset
		TOTAL GAUGES (EACH):	

SUMMARY OF ROCK PLATING

LINE	Beginning Slope	Approx. Station	Ending Slope	Approx. Station	Location LT/RT	Rock Plating Detail No. 1/2/3/4	Riprap Class* 1/2/B	SY
							TOTAL SY:	0

*Use Class 1, 2 or B riprap if riprap class is not shown for rock plating location.

SUMMARY OF EMBANKMENT WAITING PERIODS

LINE	Station	Station	MONTHS

SUMMARY OF SURCHARGES AND SURCHARGE WAITING PERIODS

LINE	Station	Station	Surcharge Height FT	MONTHS

SUMMARY OF REINFORCED SOIL SLOPES (RSS)

LINE	Beginning Slope	Approx. Station	Ending Slope	Approx. Station	Location LT/RT	SY
					TOTAL SY:	0

SUMMARY OF GEOTEXTILE FOR PAVEMENT STABILIZATION

LINE	Station	Station	SY
CONTINGENCY			0
		TOTAL SY:	0

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type ASU/AST	Aggregate Thickness INCHES	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Soil Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY							1400		
			TOTAL CY/TONS/SY:		0	0	1400*	0	0

ASU = Aggregate Subgrade, AST = Aggregate Stabilization
*Total square yards of Geotextile for Soil Stabilization is only the estimated quantity for ASU/AST and may only represent a portion of the geotextile quantity shown in the Item Sheets of the Proposal.

PROJ. REFERENCE NO.	SHEET NO.
P-4900B	3P-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
2	4	SHIRLEY LOCKLEAR AND HUSBAND JOSEPH
3	4	ETHA C HARRIS
4	4	SAMUEL R LOCKLEAR
5	4	CHARLES MAYNOR AND WIFE SHELIA
14	5	JOHN ROBERT JONES FAMILY TRUST
15	5-6	DANNY BULLARD
16	6	BRUCE BRAYBOY
17	5	JOSEPH OXENDINE
18	6	JERRY D CUMMINGS

PARCEL No.	SHEET No.	PROPERTY OWNER NAME

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	4
R/W SHEET NO.	

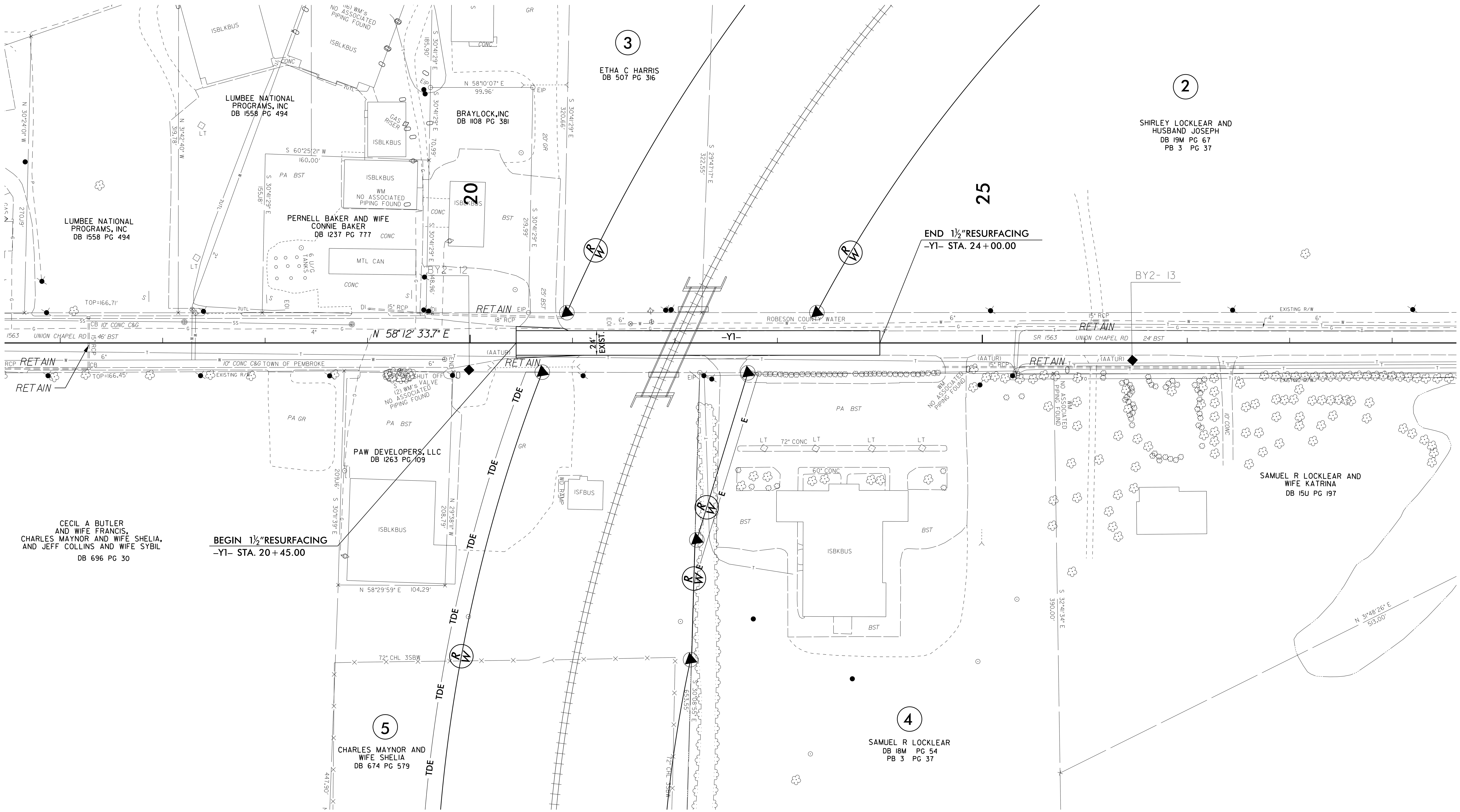
ROADWAY DESIGN ENGINEER — SEAL 020107, DAVID W. BASS, 10/13/2015

HYDRAULICS ENGINEER — SEAL 15764, JAMES A BYRD, 10/13/2015

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ALL PROPOSED R/W AND RAIL WORK (INCLUDING STRUCTURE) TO BE PERFORMED UNDER TIP PROJECT P-4900A

NAD 83/NSRS 2007

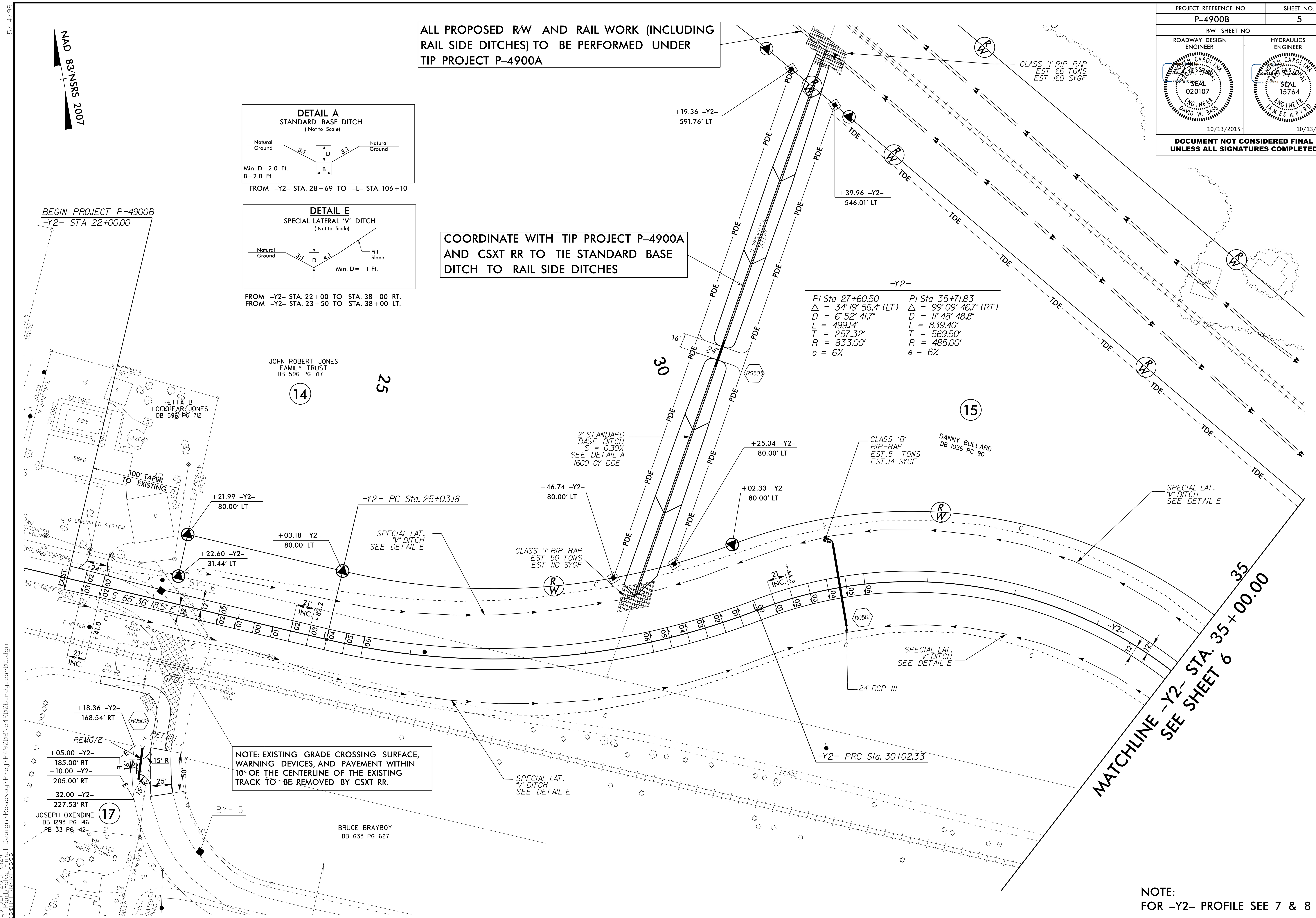


3
ETHA C HARRIS
DB 507 PG 316
2
SHIRLEY LOCKLEAR AND HUSBAND JOSEPH
DB 19M PG 67
PB 3 PG 37
LUMBEE NATIONAL PROGRAMS, INC
DB 1558 PG 494
BRAYLOCK,INC
DB 1108 PG 381
PERNELL BAKER AND WIFE CONNIE BAKER
DB 1237 PG 777
25
20
END 1½"RESURFACING
-Y1- STA. 24+00.00
BY2-13
BY2-12
RETAIN
N 58°12' 33.7" E
-Y1-
24' EXIST
UNION CHAPEL RD
SR 1563
ROBESON COUNTY WATER
TOWN OF PEMBROKE
PAW DEVELOPERS, LLC
DB 1263 PG 109
CECIL A BUTLER AND WIFE FRANCIS, CHARLES MAYNOR AND WIFE SHELIA, AND JEFF COLLINS AND WIFE SYBIL
DB 696 PG 30
BEGIN 1½"RESURFACING
-Y1- STA. 20+45.00
SAMUEL R LOCKLEAR AND WIFE KATRINA
DB 15U PG 197
4
SAMUEL R LOCKLEAR
DB 18M PG 54
PB 3 PG 37
5
CHARLES MAYNOR AND WIFE SHELIA
DB 674 PG 579
TDE

NOTE:
FOR -Y1- PROFILE SEE SHEET 7

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	5
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
SEAL 020107 DAVID W. BASS 10/13/2015	SEAL 15764 JAMES A. BYRD 10/13/2015

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



NAD 83/NSRS 2007
ALL PROPOSED R/W AND RAIL WORK (INCLUDING RAIL SIDE DITCHES) TO BE PERFORMED UNDER TIP PROJECT P-4900A
DETAIL A
STANDARD BASE DITCH
(Not to Scale)
Natural Ground
3:1
D
3:1
Natural Ground
Min. D=2.0 Ft.
B=2.0 Ft.
B
FROM -Y2- STA. 28+69 TO -L- STA. 106+10
DETAIL E
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground
3:1
D
4:1
Fill Slope
Min. D= 1 Ft.
FROM -Y2- STA. 22+00 TO STA. 38+00 RT.
FROM -Y2- STA. 23+50 TO STA. 38+00 LT.
COORDINATE WITH TIP PROJECT P-4900A AND CSXT RR TO TIE STANDARD BASE DITCH TO RAIL SIDE DITCHES
CLASS 'I' RIP RAP
EST 66 TONS
EST 160 SYGF
+19.36 -Y2-
591.76' LT
+39.96 -Y2-
546.01' LT
BEGIN PROJECT P-4900B
-Y2- STA 22+00.00
-Y2-
PI Sta 27+60.50
Δ = 34° 19' 56.4" (LT)
D = 6° 52' 41.7"
L = 499.14'
T = 257.32'
R = 833.00'
e = 6%
PI Sta 35+71.83
Δ = 99° 09' 46.7" (RT)
D = 11° 48' 48.8"
L = 839.40'
T = 569.50'
R = 485.00'
e = 6%
JOHN ROBERT JONES FAMILY TRUST
DB 596 PG 717
14
25
30
15
R0503
ETTA B LOCKLEAR JONES
DB 596 PG 712
POOL
GAZEBO
100' TAPER TO EXISTING
2' STANDARD BASE DITCH
S = 0.30%
SEE DETAIL A
1600 CY DDE
+25.34 -Y2-
80.00' LT
CLASS 'B' RIP-RAP
EST. 5 TONS
EST. 14 SYGF
DANNY BULLARD
DB 1035 PG 90
+21.99 -Y2-
80.00' LT
-Y2- PC Sta. 25+03.18
+46.74 -Y2-
80.00' LT
+02.33 -Y2-
80.00' LT
SPECIAL LAT. "V" DITCH SEE DETAIL E
+03.18 -Y2-
80.00' LT
+22.60 -Y2-
31.44' LT
SPECIAL LAT. "V" DITCH SEE DETAIL E
CLASS 'I' RIP RAP
EST 50 TONS
EST 110 SYGF
U/G SPRINKLER SYSTEM
BY-6
S 66° 36' 18.5" E
21' INC.
+82.2
21' INC.
+44.3
R0501
SPECIAL LAT. "V" DITCH SEE DETAIL E
24" RCP-III
35
MATCHLINE -Y2- STA. 35+00.00
SEE SHEET 6
+18.36 -Y2-
168.54' RT
R0502
REMOVE
RET WN
+05.00 -Y2-
185.00' RT
+10.00 -Y2-
205.00' RT
+32.00 -Y2-
227.53' RT
15' R
25'
50'
NOTE: EXISTING GRADE CROSSING SURFACE, WARNING DEVICES, AND PAVEMENT WITHIN 10' OF THE CENTERLINE OF THE EXISTING TRACK TO BE REMOVED BY CSXT RR.
SPECIAL LAT. "V" DITCH SEE DETAIL E
-Y2- PRC Sta. 30+02.33
JOSEPH OXENDINE
DB 1293 PG 146
PB 33 PG 142
17
BY-5
BRUCE BRAYBOY
DB 633 PG 627

NOTE:
FOR -Y2- PROFILE SEE 7 & 8

28-SEP-2015 16:24
...\55624 Pembroke Final Design\Roadway\Proj\P4900B\p4900b_rdy_psh05.dgn
$$$$USERNAME$$$$

DocuSign Envelope ID: BCE3BA6F-7EEF-4C35-A580-CAC6F8355F1B

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
SEAL 020107 DAVID W. BASS 10/13/2015	SEAL 15764 JAMES A. BYRD 10/13/2015

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-Y2-

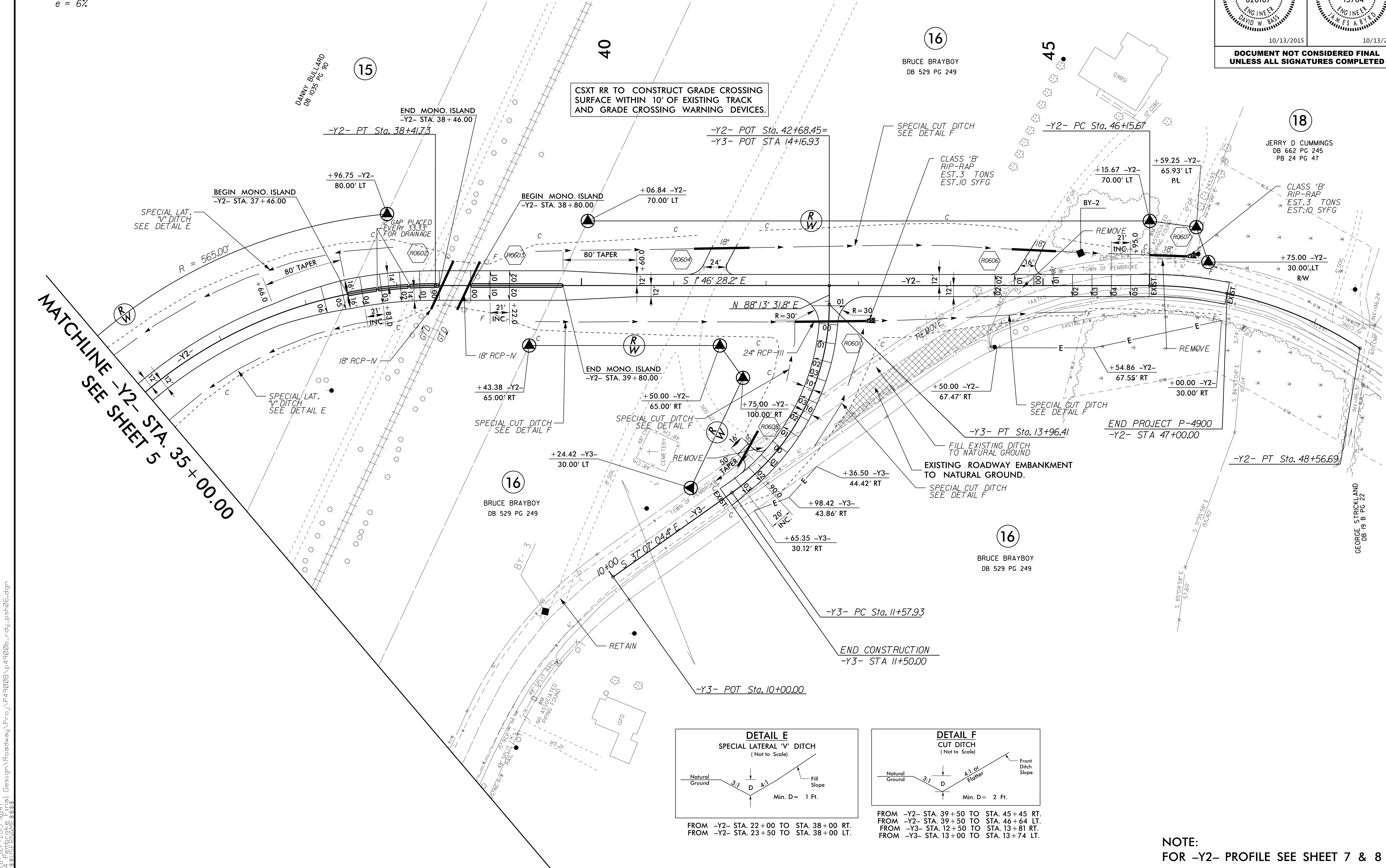
PI Sta 35+71.83
Δ = 99° 09' 46.7" (RT)
D = 11° 48' 48.8"
L = 839.40'
T = 569.50'
R = 485.00'
e = 6%

PI Sta 47+39.69
Δ = 33° 16' 30.6" (RT)
D = 13° 48' 22.4"
L = 241.02'
T = 124.01'
R = 415.00'

-Y3-

PI Sta 12+87.12
Δ = 54° 39' 23.8" (LT)
D = 22° 55' 05.9"
L = 238.48'
T = 129.19'
R = 250.00'

NAD 83/NSRS 2007



CSXT RR TO CONSTRUCT GRADE CROSSING SURFACE WITHIN 10' OF EXISTING TRACK AND GRADE CROSSING WARNING DEVICES.
MATCHLINE -Y2- STA. 35+00.00 SEE SHEET 5
DANNY BULLARD DB 1035 PG 90
BRUCE BRAYBOY DB 529 PG 249
JERRY D CUMMINGS DB 662 PG 245 PB 24 PG 47
GEORGE STRICKLAND DB 19 B PG 22
END MONO. ISLAND -Y2- STA. 38+46.00
-Y2- PT Sta. 38+41.73
BEGIN MONO. ISLAND -Y2- STA. 37+46.00
BEGIN MONO. ISLAND -Y2- STA. 38+80.00
END MONO. ISLAND -Y2- STA. 39+80.00
-Y2- POT Sta. 42+68.45= -Y3- POT STA 14+16.93
-Y2- PC Sta. 46+15.67
-Y2- PT Sta. 48+56.69
-Y3- PT Sta. 13+96.41
-Y3- PC Sta. 11+57.93
-Y3- POT Sta. 10+00.00
END PROJECT P-4900 -Y2- STA 47+00.00
END CONSTRUCTION -Y3- STA 11+50.00
SPECIAL LAT. "V" DITCH SEE DETAIL E
SPECIAL CUT DITCH SEE DETAIL F
CLASS 'B' RIP-RAP EST. 3 TONS EST. 10 SYFG
EXISTING ROADWAY EMBANKMENT TO NATURAL GROUND.
FILL EXISTING DITCH TO NATURAL GROUND
GAP PLACED EVERY 33.33' FOR DRAINAGE
R = 565.00'
80' TAPER
S 1° 46' 28.2" E
N 88° 13' 31.8" E
S 37° 07' 04.4" E
18" RCP-IV
24" RCP-III
REMOVE
RETAIN
BY-2
BY-3
+96.75 -Y2- 80.00' LT
+06.84 -Y2- 70.00' LT
+43.38 -Y2- 65.00' RT
+50.00 -Y2- 65.00' RT
+75.00 -Y2- 100.00' RT
+24.42 -Y3- 30.00' LT
+36.50 -Y3- 44.42' RT
+98.42 -Y3- 43.86' RT
+65.35 -Y3- 30.12' RT
+50.00 -Y2- 67.47' RT
+54.86 -Y2- 67.55' RT
+00.00 -Y2- 30.00' RT
+75.00 -Y2- 30.00' LT R/W
+15.67 -Y2- 70.00' LT
+59.25 -Y2- 65.93' LT P/L

DETAIL E

SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Natural Ground — 3:1 — D — 4:1 — Fill Slope

Min. D = 1 Ft.

FROM -Y2- STA. 22+00 TO STA. 38+00 RT.
FROM -Y2- STA. 23+50 TO STA. 38+00 LT.

DETAIL F

CUT DITCH
(Not to Scale)

Natural Ground — 3:1 — D — 4:1 or Flatter — Front Ditch Slope

Min. D = 2 Ft.

FROM -Y2- STA. 39+50 TO STA. 45+45 RT.
FROM -Y2- STA. 39+50 TO STA. 46+64 LT.
FROM -Y3- STA. 12+50 TO STA. 13+81 RT.
FROM -Y3- STA. 13+00 TO STA. 13+74 LT.

NOTE:
FOR -Y2- PROFILE SEE SHEET 7 & 8

28-SEP-2015 16:47
$$$$USERNAME$$$$

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
P–4900B	7

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 020107 ENGINEER DAVID W. BASS

10/13/2015

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15764 ENGINEER JAMES A. BYRD

10/13/2015

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

–Y1– PROFILE

EL = 182.48

EL = 166.98'

*NOTE: THERE IS NO –Y1– CONSTRUCTION. EXISTING PROFILE GENERATED TO VERIFY FUTURE EXPANSION.

NOTE: FOR –Y1– PLAN SEE SHEET 4

15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 24+00 26+00 27+00 28+00

180 170 160 150 140 130

–Y2–

LEFT DITCH –·–·–·–·–

RIGHT DITCH ----------

BEGIN GRADE
–Y2– STA 22+00.00
EL 164.69'

PI = 31+00.00
EL = 167.40'
VC = 500'
K = 832

(–) 0.3000%

(+) 0.3011%

(–)0.3000%

(–) 0.8800%

(–) 0.5000%

(–) 0.3000%

(+) 0.5000%

(+) 0.5000%

(+) 0.3000%

24" RCP

PROPOSED DITCH (RT)

PROPOSED DITCH (LT)

BEGIN SPECIAL LAT. V DITCH RT
PI = 22+00.00
EL = 162.73

PI = 23+50.00
EL = 162.28

BEGIN SPECIAL LAT. V DITCH LT
PI = 23+50.00
EL = 159.02

PI = 27+17.241
EL = 159.05

PI = 28+69.020
EL = 156.42

PI = 31+00.000
EL = 157.57

PI = 31+00.000
EL = 157.90

PIPE HYDRAULIC DATA

DRAINAGE STRUCTURE NO. 0501

DRAINAGE AREA	= 4.8	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 12	CFS
DESIGN HW ELEVATION	= 159.9	FT
100 YEAR DISCHARGE	= 14	CFS
100 YEAR HW ELEVATION	= 160.1	FT
OVERTOPPING FREQUENCY	= >100	YRS
OVERTOPPING DISCHARGE	= 15	CFS
OVERTOPPING ELEVATION	= 162.5	FT

NOTE: FOR –Y2– PLAN SEE SHEET 5 & 6

21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00

180 170 160 150 140 130

28-SEP-2015 15:57
$$$$USERNAME$$$$

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	8

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 020107 DAVID W. BASS
10/13/2015

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15764 JAMES A. BYRD
10/13/2015

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

-Y2-

LEFT DITCH ----------
RIGHT DITCH ----------

PI = 38+00.00
EL = 165.30'
VC = 100'
K = 333

PI = 39+50.00
EL = 165.30'
VC = 150'
K = 142

PI = 44+00.00
EL = 160.56'
VC = 200'
K = 135

PI = 46+15.00
EL = 155.12'
VC = 150'
K = 81

-Y2- STA 42+68.45 =
-Y3- STA 14+16.93

END GRADE
-Y2- STA 47+00.00
EL 154.54'

(+)0.5000%
(+)0.3000%
(+)0.0000%
(-)1.0530%
(-)1.1200%
(-)1.5000%
(-)0.8500%
(-)1.0530%
(-)2.5310%
(-)0.5656%
(-)2.5310%
(-)0.6838%
(-)0.3000%

PROPOSED DITCH (LT)
PROPOSED DITCH (RT)
PROPOSED DITCH (RT)
PROPOSED DITCH (LT)

END SPECIAL LAT. 'V' DITCH LT
PI = 38+00.00
EL = 159.67

END SPECIAL LAT. 'V' DITCH RT
PI = 38+00.00
EL = 161.40

BEGIN SPECIAL CUT 'V' DITCH LT
PI = 39+50.00
EL = 160.22

BEGIN SPECIAL CUT 'V' DITCH RT
PI = 39+50.00
EL = 159.71

PI = 42+00.000
EL = 156.91

PI = 43+50.000
EL = 155.64

PI = 44+00.000
EL = 153.47

END SPECIAL CUT 'V' DITCH RT
PI = 45+45.38
EL = 154.53

END SPECIAL CUT 'V' DITCH LT
PI = 46+64.55
EL = 152.68

NOTE: FOR -Y2- PLAN SEE SHEET 5 & 6

180 170 160 150 140 130

35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00

-Y3-

LEFT DITCH ----------
RIGHT DITCH ----------

BEGIN GRADE
-Y3- STA 11+50.00
EL 162.16'

PI = 12+75.00
EL = 161.32'
VC = 100'
K = 103

END GRADE EOP
-Y3- STA 14+04.93
EL 161.71'

(-)0.6744%
(+)0.3000%
(+)2.0000%
(-) 1.1016%
(-) 1.6967%
24" RCP

BEGIN SPECIAL CUT 'V' DITCH RT
PI = 12+50.00
EL = 158.22

BEGIN SPECIAL CUT 'V' DITCH LT
PI = 13+00.00
EL = 157.48

END SPECIAL CUT 'V' DITCH LT
PI = 13+74.44
EL = 156.66

END SPECIAL CUT 'V' DITCH RT
PI = 13+80.84
EL = 156.00

PIPE HYDRAULIC DATA
DRAINAGE STRUCTURE NO. 0601

DRAINAGE AREA	= 7.7	AC
DESIGN FREQUENCY	= 25	YRS
DESIGN DISCHARGE	= 15	CFS
DESIGN HW ELEVATION	= 158.6	FT
100 YEAR DISCHARGE	= 18	CFS
100 YEAR HW ELEVATION	= 159.0	FT
OVERTOPPING FREQUENCY	= >100+	YRS
OVERTOPPING DISCHARGE	= -	CFS
OVERTOPPING ELEVATION	= 160.2	FT

NOTE: FOR -Y3- PLAN SEE SHEET 6

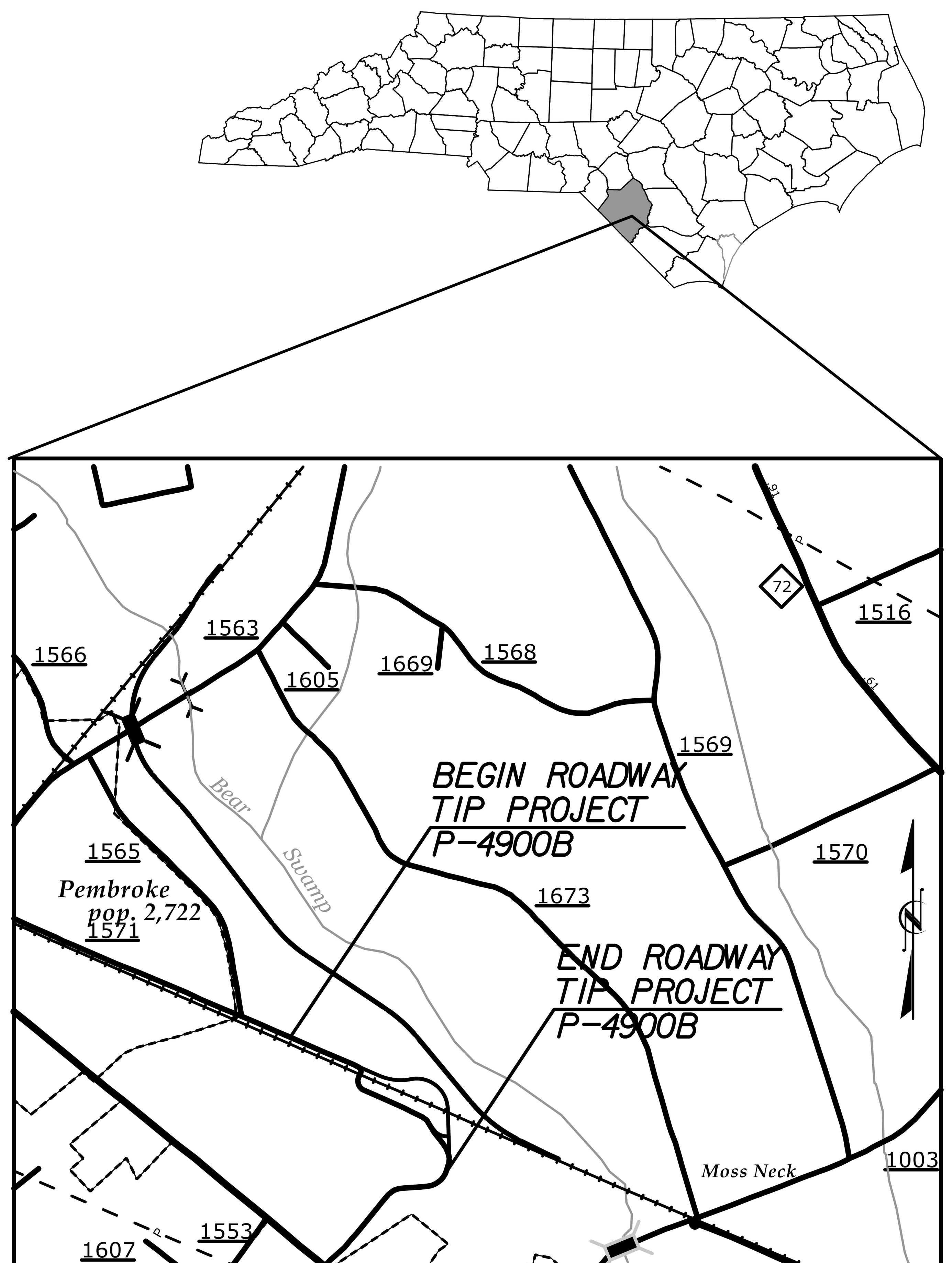
170 160 150 140 130 120 110

10+00 11+00 12+00 13+00 14+00

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ROBESON COUNTY



VICINITY MAP

LOCATION: GRADE CROSSING RELOCATION ON SR 1571 (JONES RD)

SHEET NO.
TMP-1

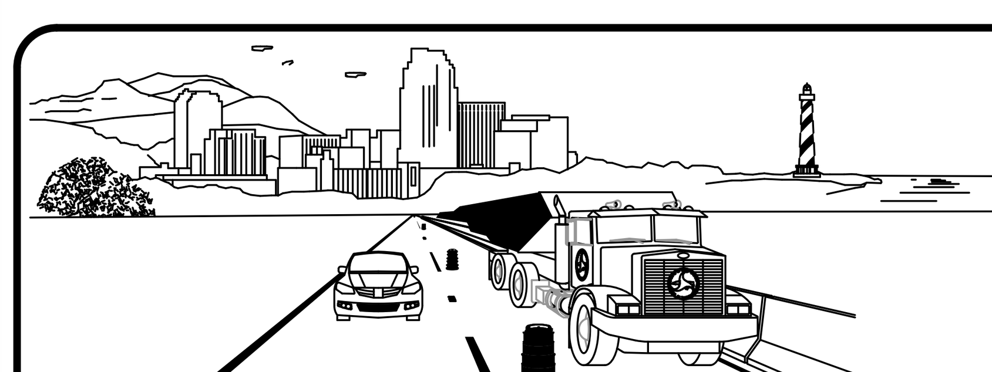
INDEX OF SHEETS

TIP PROJECT: P-4900B

HNTB

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

R. B. EARLY, PE — *TRAFFIC CONTROL PROJECT ENGINEER*
R. B. EARLY, PE — *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*
J. A. PHILLIPS — *TRAFFIC CONTROL DESIGN ENGINEER*



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

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. — *STATE TRAFFIC MANAGEMENT ENGINEER*
J. S. KITE, P.E. — *EASTERN TRAFFIC CONTROL ENGINEER*
D. A. PARKER — *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*

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

APPROVED: Rhonda B. Early
DATE: 10/13/2015

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

REVISIONS

QA/QC STAGE:
REVIEW:
CONCUR:
REVISE:
VERIFY:

10:12:50 AM
...\TIP\P4900B\P4900_te_TMP_01.dgn
$$$$USERNAME$$$$

8/17/99

REVISIONS

PROJ. REFERENCE NO.	SHEET NO.
P-4900B	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANAUARY 2012 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
1101.04	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
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS

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
- WEDGE / WIDEN

SIGNALS

EXISTING PROPOSED TEMPORARY (TEMP)

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

SYMBOL	DESCRIPTION	PAY ITEM
	PAVEMENT MARKING LINES	
PA PI	WHITE EDGELINE YELLOW DOUBLE CENTER LINE	PAINT (4")
P1	WHITE LINE, RR X	PAINT (16")
P2	WHITE STOPBAR	PAINT (24")
QI	ALPHANUMERIC CHARACTER	PAINT

HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

APPROVED: DocuSigned by: Rhonda B. Early F34CAF5AC68F45A...

DATE: 10/13/2015

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

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

TRANSPORTATION MANAGEMENT PLAN

ROADWAY STANDARD DRAWINGS & LEGENDS

3:13:18 PM
P:\P-4900B\DP4900_te_TMP_01A.dgn
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.
P-4900B	TMP-1B

GENERAL NOTES

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

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

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.

PAVEMENT EDGE DROP OFF REQUIREMENTS

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

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

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

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

G) 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 OF THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

I) 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.

J) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERNS.

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

TRAFFIC CONTROL DEVICES

L) 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.

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
1. -Y2- AND -Y3- (SR 1571, JONES RD)	PAINT	NONE

O) 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.

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

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

R) IN THE EVENT A TIE-IN CONNOT BE MADE IN ONE DAYS 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) 200 FT AND 200 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

LOCAL NOTES

LN-1 PROVIDE TEMPORARY WEDGING TO MAINTAIN TRAFFIC ON EXISTING PAVEMENT WITH SMOOTH TRANSITION GRADES DURING CONSTRUCTION OF TIE-INS.

LN-2 COORDINATE ALL ACTIVITIES AROUND RAILROAD WITH CSXT GENERAL MANAGER. RAILROAD FLAGGER(S) MUST BE PRESENT AT ANY TIME A TRAIN IS EXPECTED WHEN SIGNAL(S) ARE NOT IN OPERATION &/OR AT LOCATIONS THAT ARE NOT SIGNALIZED.

LN-3 USE INCIDENTAL STONE TO PROVIDE SMOOTH GRADE TYING EXISTING SOIL OR GRAVEL ROAD/DRIVE TO NEW PAVEMENT OR CONSTRUCTION AREA.

LN-4 COORDINATE ALL ACTIVITIES AROUND RAILROAD WITH CSXT GENERAL MANAGER. WHEN USING ONE-LANE, TWO-WAY TRAFFIC ACROSS RAIL-ROAD, RAILROAD FLAGGER(S) MUST BE PRESENT AT ANY TIME A TRAIN IS EXPECTED.

LN-5 CSXT TO COMPLETE ALL WORK WITHIN 10' OF EXISTING TRACKS (INCLUDING SIGNAL REMOVAL).

LN-6 PLACEMENT OF FINAL LAYER OF SURFACE COURSE IS TO INCLUDE Y1 FROM STA 20+45+/- TO STA 24+00+/- (CONSTRUCTED UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE IN P-4900A).

PHASING

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 TEMPORARY DITCHES.

PAVE PROPOSED CONSTRUCTION, 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 DRAWING".

PHASE I

(SEE TMP-2 AND TMP-3)

STEP 1: INSTALL WORK ZONE ADVANCE WARNING SIGNS ON SR 1571 (JONES RD) ACCORDING TO RSD 1101.01.

STEP 2: AWAY FROM TRAFFIC, CONSTRUCT -Y2- FROM STA 23+50+/- TO STA 40+90+/- AND -Y2- FROM STA 41+70+/- TO STA 43+40+/-. CONSTRUCT PROPOSED ISLANDS AND INSTALL RAILROAD SIGNALS. CONSTRUCT -Y3- FROM STA 13+00+/- TO -Y2-. (LN-2,5)

USING RSD 1101.02 (SHEET 1 OF 15) AS NEEDED, CONSTRUCT -Y2- FROM STA 40+90+/- TO STA 41+70+/-, -Y2- FROM STA 43+40+/- TO STA 47+00+/-, AND -Y3- FROM 11+50+/- TO STA 13+00+/-. SEE SHEETS TMP-2 & TMP-3. (LN-1,3)

STEP 3: ACTIVATE RR SIGNALS AT -Y2- STA 38+50+/- AND PLACE TEMPORARY PAVEMENT MARKING AS MUCH AS POSSIBLE AWAY FROM TRAFFIC. SEE SHEETS TMP-4 & TMP-5. (LN-2,5)

STEP 4: USING RSD 1101.02 (SHEET 1 OF 15) AND INCIDENTAL STONE OR AGGREGATE BASE COURSE TO MAINTAIN TRAFFIC, REMOVE EXISTING PAVEMENT AND CONSTRUCT -Y2- TIE-IN FROM STA 22+00+/- TO STA 23+50+/-. PLACE PAVEMENT MARKINGS AND SHIFT TRAFFIC TO NEW ALIGNMENT. SEE SHEET TMP-2. (LN-4)

PHASE II

(SEE TMP-4 AND TMP-5)

STEP 1: USING RSD 1101.02 (SHEET 1 OF 15) AS NEEDED, COMPLETE THE FOLLOWING:
* REMOVE EXISTING PAVEMENT AND CONSTRUCT CULDESAC & DRIVEWAY RIGHT OF -Y2- STA 23+00+/-. (LN-2,5)
* REMOVE EXISTING PAVEMENT FROM -Y3- STA 11+50+/-(RT) TO -Y2- STA 46+00+/-(RT).
* COMPLETE SHOULDER CONSTRUCTION RIGHT OF -Y2- STA 41+50+/-.
* COMPLETE SHOULDER CONSTRUCTION AND DRIVEWAY LEFT OF -Y3- STA 12+00+/-.

STEP 2: USING RSD 1101.02 (SHEET 1 OF 15), PLACE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS ON ALL ROADS ACCORDING TO THE FINAL PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER. (LN-4,6)

REVISIONS

8/17/99

3:13:47 PM
$$$$USERNAME$$$$
...tmp_01Bnotes.dgn

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

APPROVED: Rhonda B. Early
DocuSigned by: F34CAF5AC6BF48A...
DATE: 10/13/2015

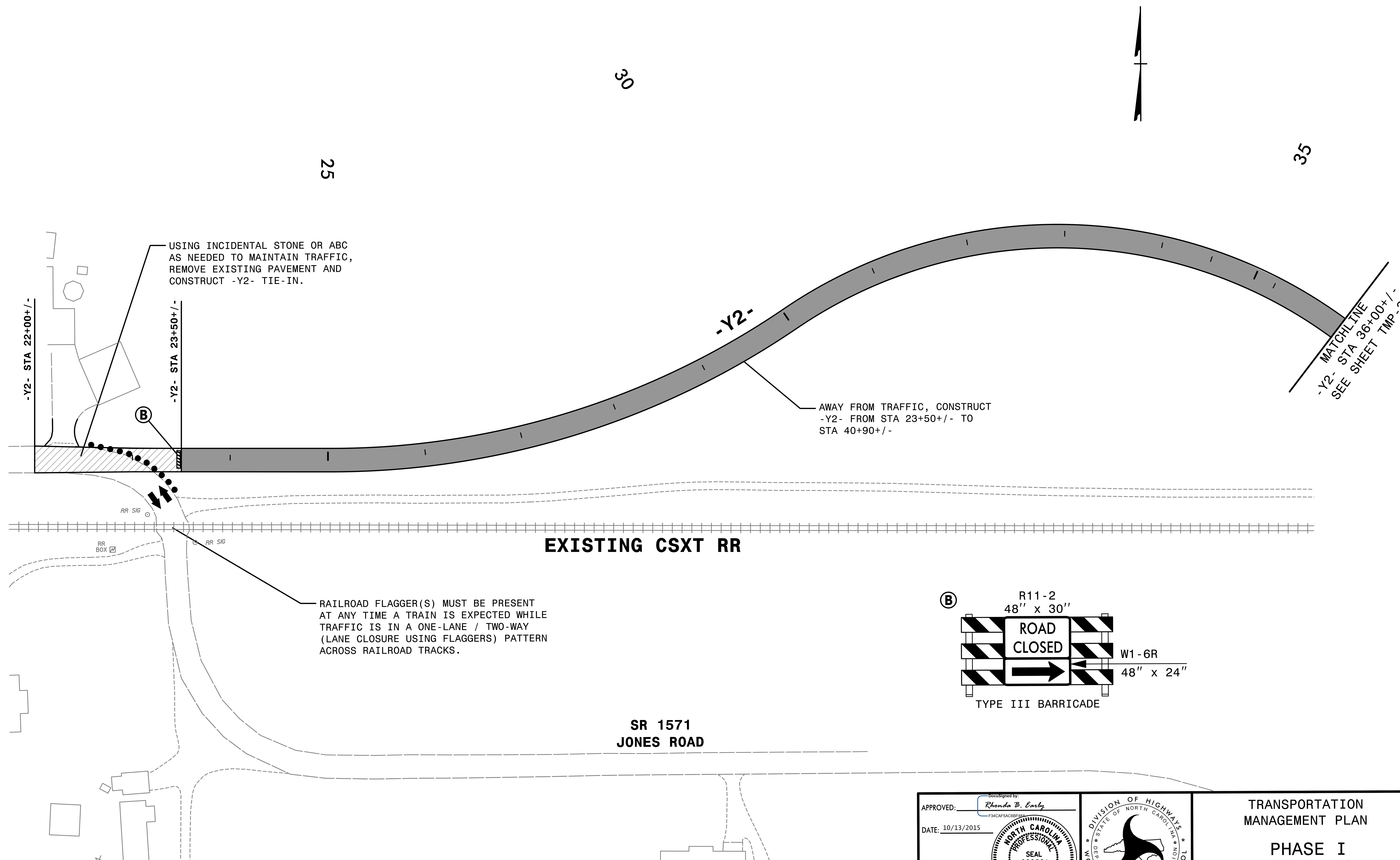
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

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

TRANSPORTATION MANAGEMENT PLAN

GENERAL NOTES & PHASING

PROJ. REFERENCE NO.	SHEET NO.
P-4900B	TMP-2



30
25
35
USING INCIDENTAL STONE OR ABC AS NEEDED TO MAINTAIN TRAFFIC, REMOVE EXISTING PAVEMENT AND CONSTRUCT -Y2- TIE-IN.
-Y2- STA 22+00+/-
-Y2- STA 23+50+/-
B
-Y2-
MATCHLINE -Y2- STA 36+00+/- SEE SHEET TMP-3
AWAY FROM TRAFFIC, CONSTRUCT -Y2- FROM STA 23+50+/- TO STA 40+90+/-
RR SIG
RR BOX
EXISTING CSXT RR
RAILROAD FLAGGER(S) MUST BE PRESENT AT ANY TIME A TRAIN IS EXPECTED WHILE TRAFFIC IS IN A ONE-LANE / TWO-WAY (LANE CLOSURE USING FLAGGERS) PATTERN ACROSS RAILROAD TRACKS.
R11-2
48" x 30"
ROAD CLOSED
W1-6R
48" x 24"
TYPE III BARRICADE
SR 1571
JONES ROAD

REVISIONS

8/17/99

3:44:16 PM
$$$$USERNAME$$$$

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

APPROVED: Rhonda B. Early

DATE: 10/13/2015

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023521 RHONDA B. EARLY

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

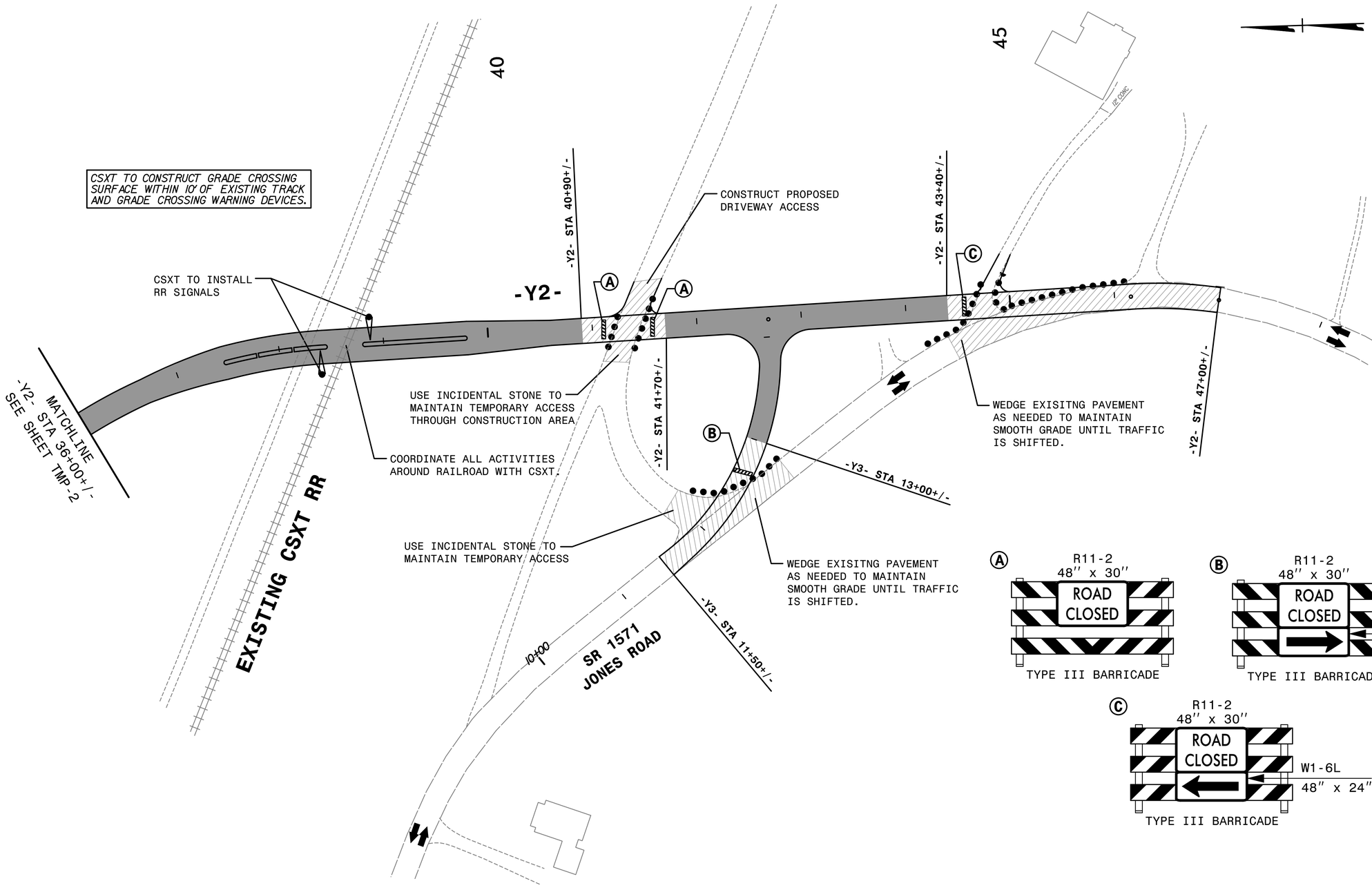
TRANSPORTATION MANAGEMENT PLAN

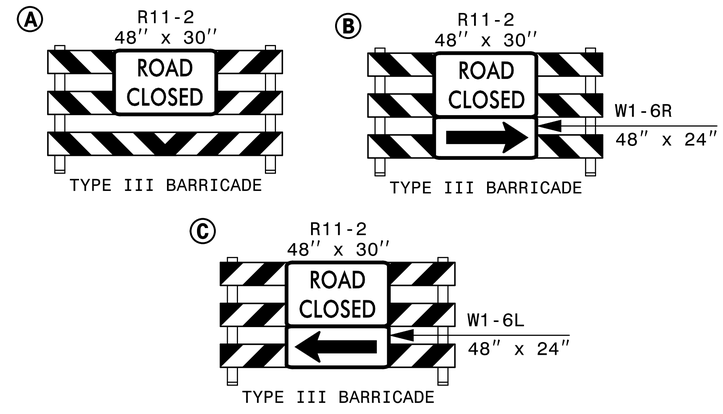
PHASE I
DETAIL 1

PROJ. REFERENCE NO.	SHEET NO.
P-4900B	TMP-3

8/17/99

REVISIONS





HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

APPROVED: DocuSigned by: Rhonda B. Early F34CAF5AC8BF484...

DATE: 10/13/2015

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023521 ENGINEER RHONDA B. EARLY

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

TRANSPORTATION MANAGEMENT PLAN

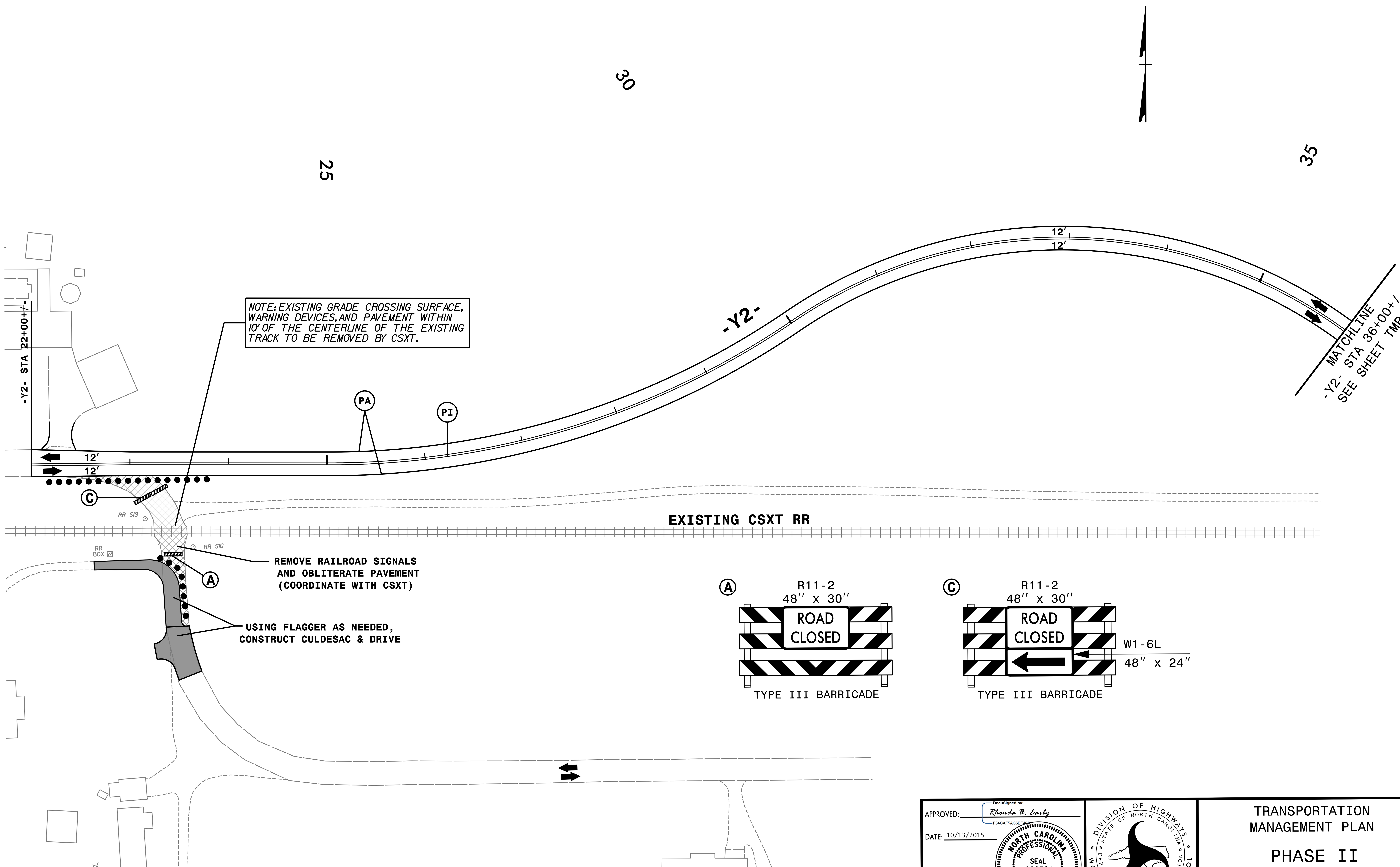
PHASE I
DETAIL 2

3:44:44 PM
I:\TIP\P4900B\p4900_te_pld3.dgn
$$$$USERNAME$$$$

8/17/99

REVISIONS

PROJ. REFERENCE NO.	SHEET NO.
P-4900B	TMP-4



30
25
35
-Y2- STA 22+00+/-
NOTE: EXISTING GRADE CROSSING SURFACE, WARNING DEVICES, AND PAVEMENT WITHIN 10' OF THE CENTERLINE OF THE EXISTING TRACK TO BE REMOVED BY CSXT.
PA
PI
12'
12'
-Y2-
MATCHLINE
-Y2- STA 36+00+/-
SEE SHEET TMP-5
C
RR SIG
EXISTING CSXT RR
RR BOX
RR SIG
A
REMOVE RAILROAD SIGNALS AND OBLITERATE PAVEMENT (COORDINATE WITH CSXT)
USING FLAGGER AS NEEDED, CONSTRUCT CULDESAC & DRIVE
A
R11-2
48" x 30"
ROAD CLOSED
TYPE III BARRICADE
C
R11-2
48" x 30"
ROAD CLOSED
W1-6L
48" x 24"
TYPE III BARRICADE

HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

APPROVED: Rhonda B. Early

DATE: 10/13/2015

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023521 RHONDA B. EARLY

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

TRANSPORTATION MANAGEMENT PLAN

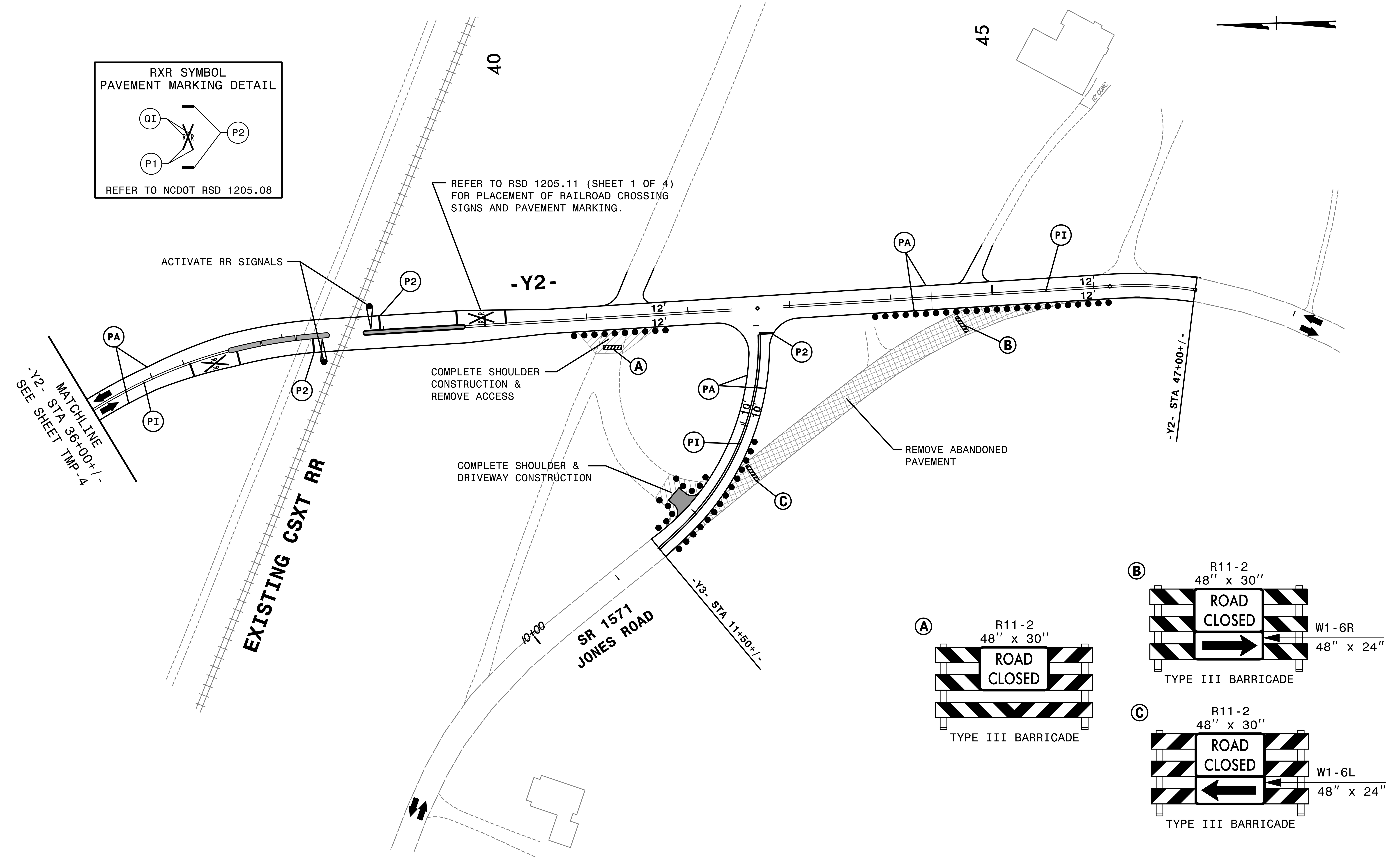
PHASE II
DETAIL 1

3:15:09 PM
..\TCP\P4900B\p4900_tc_p2d1.dgn
$$$$USERNAME$$$$

8/17/99

PROJ. REFERENCE NO.	SHEET NO.
P-4900B	TMP-5

REVISIONS



RXR SYMBOL
PAVEMENT MARKING DETAIL
QI
P1
P2
RXR
REFER TO NCDOT RSD 1205.08
40
45
REFER TO RSD 1205.11 (SHEET 1 OF 4)
FOR PLACEMENT OF RAILROAD CROSSING
SIGNS AND PAVEMENT MARKING.
ACTIVATE RR SIGNALS
-Y2-
12'
PA
PI
P2
MATCHLINE
-Y2- STA 36+00+/-
SEE SHEET TMP-4
COMPLETE SHOULDER
CONSTRUCTION &
REMOVE ACCESS
A
B
C
-Y2- STA 47+00+/-
REMOVE ABANDONED
PAVEMENT
COMPLETE SHOULDER &
DRIVEWAY CONSTRUCTION
10
EXISTING CSXT RR
10+00
SR 1571
JONES ROAD
-Y3- STA 11+50+/-
R11-2
48" x 30"
ROAD
CLOSED
TYPE III BARRICADE
W1-6R
48" x 24"
W1-6L
48" x 24"

APPROVED: Rhonda B. Early

DATE: 10/13/2015

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023521 RHONDA B. EARLY

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

HNTB

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

TRANSPORTATION
MANAGEMENT PLAN

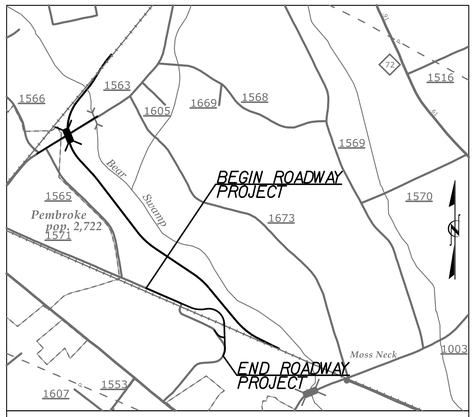
PHASE II
DETAIL 2

3:15:35 PM
..\TMP\4900B_r4900_te_p2d2.dgn
$$$$USERNAME$$$$

09/08/09

CONTRACT: TIP PROJECT: P-4900B

See Sheet 1-A For Index of Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
NCDOT RAIL DIVISION

ROBESON COUNTY

EROSION CONTROL

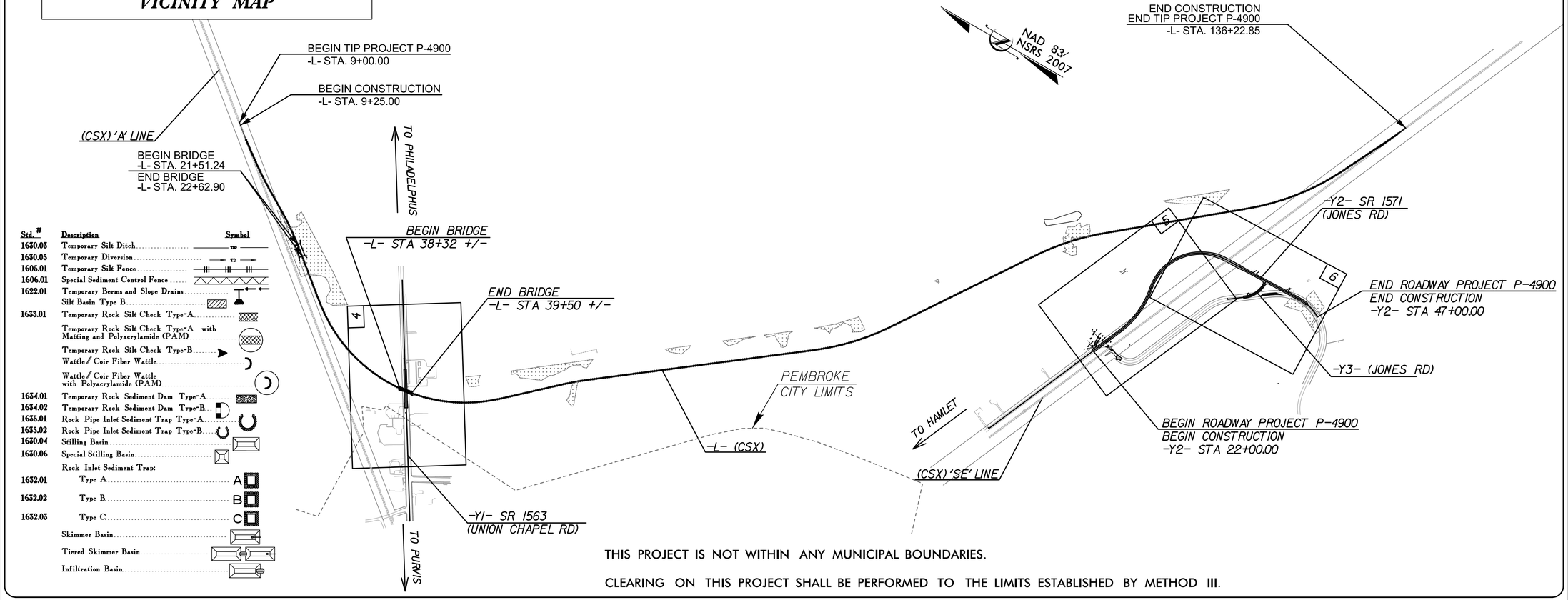
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	P-4900B	EC-1	12

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

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

LOCATION: RAIL GRADE SEPARATION OVER SR 1563 (UNION CHAPEL RD) & GRADE CROSSING RELOCATION ON SR 1571 (JONES RD).

TYPE OF WORK: GRADING, DRAINAGE, PAVING, & STRUCTURE.

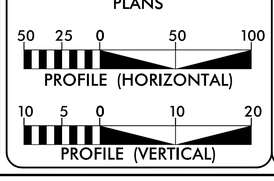


Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TSD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
	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	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

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

GRAPHIC SCALES



DESIGN DATA

ADT 2012 = 7,800
ADT 2035 = 15,600
DHV = 10 %
D = 60 %
T = 3 % *
V = 40 MPH
* TTST =1 DUAL =2
FUNC CLASS = LOCAL

SUB REGIONAL TIER

Prepared In the Office of:

HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

2012 STANDARD SPECIFICATIONS

JOHN F. WATSON, P.E.
EROSION CONTROL
LEVEL III-A
CERTIFICATION #3419

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 2012 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

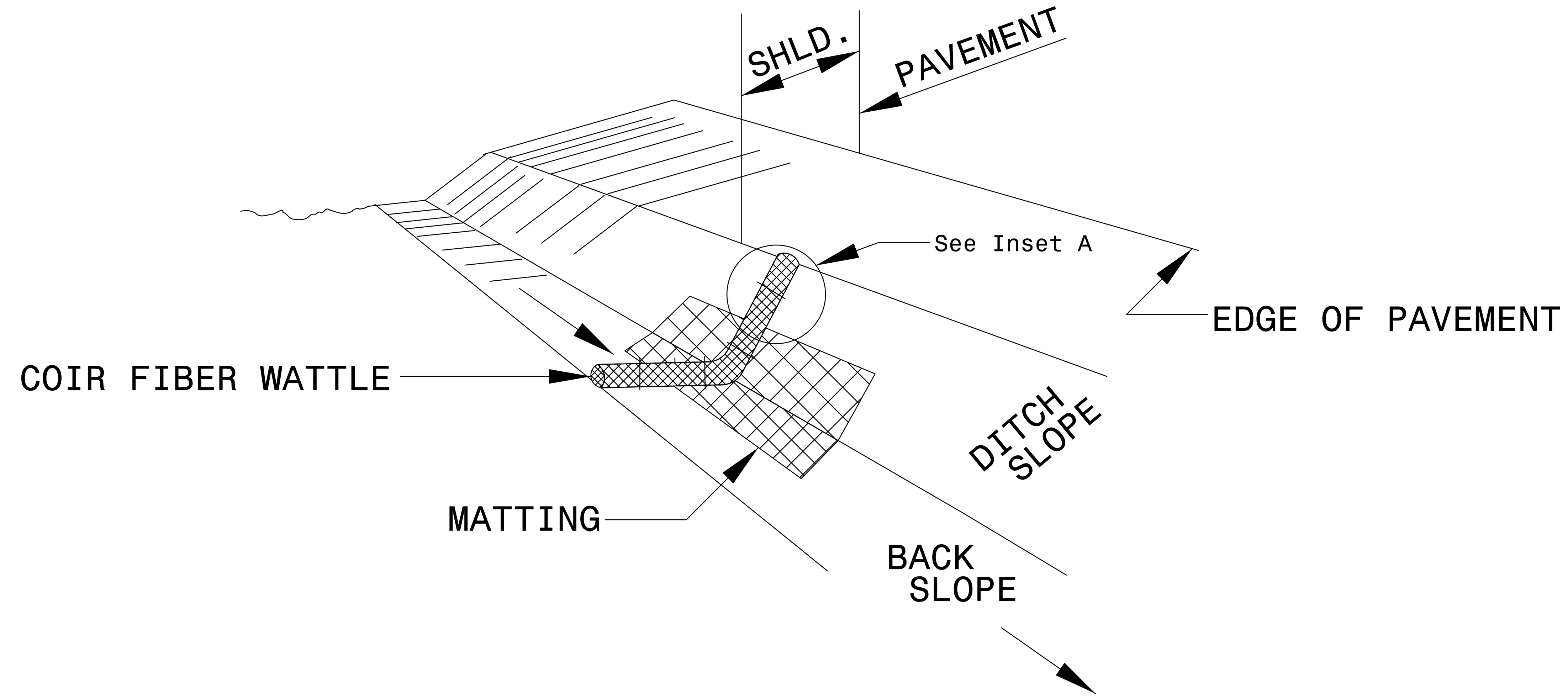
1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	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		

NC DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PLANNING AND DEVELOPMENT

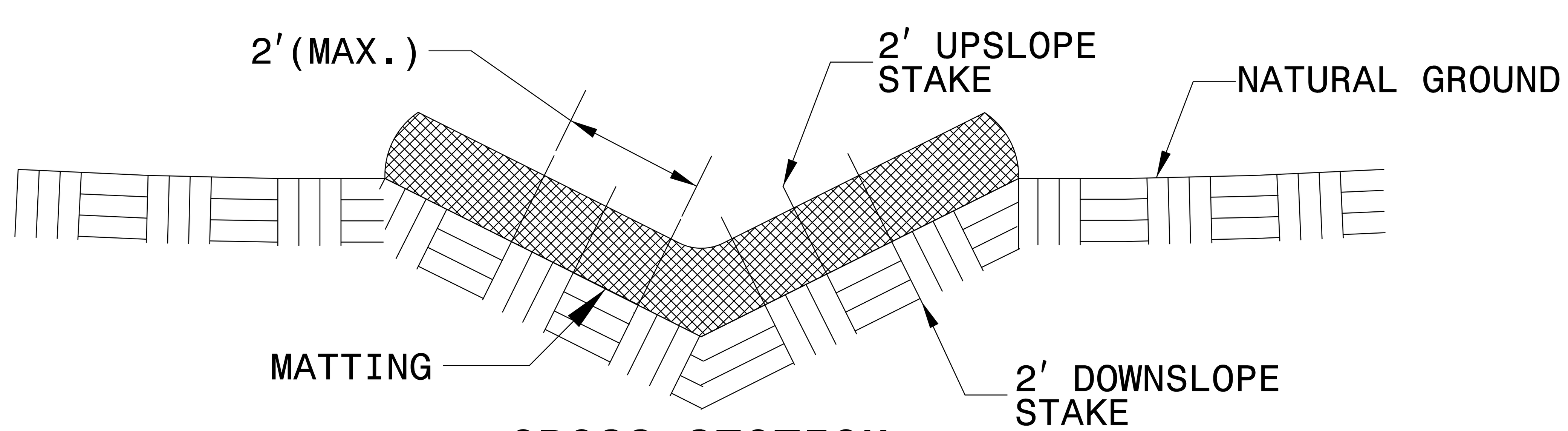
8:53:20 AM
...\55624_rdy_EC_tsh.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	EC-2
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

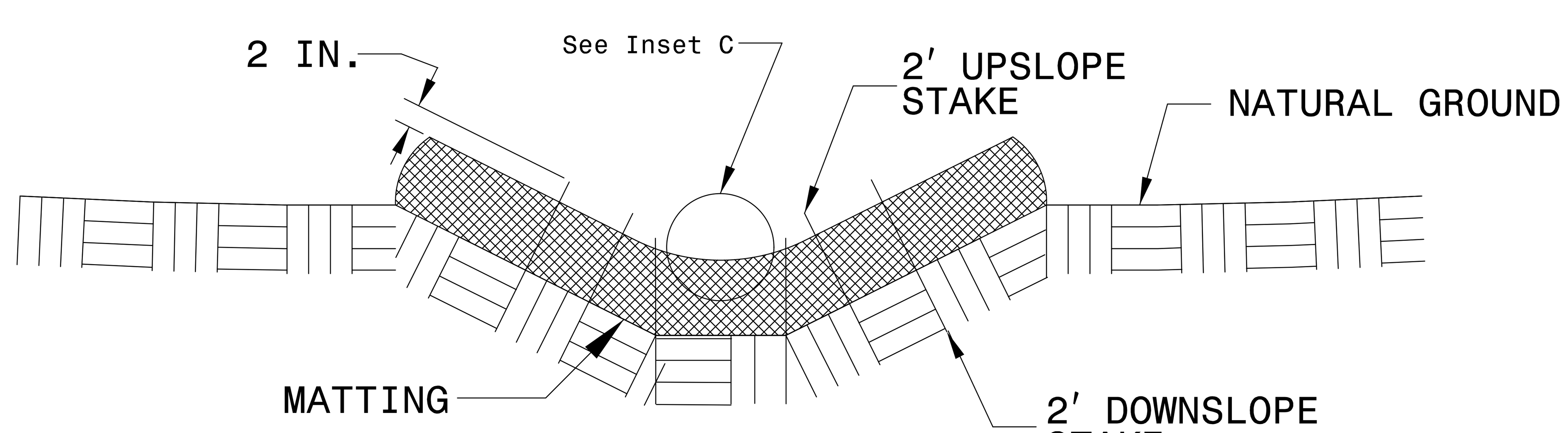
COIR FIBER WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

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.

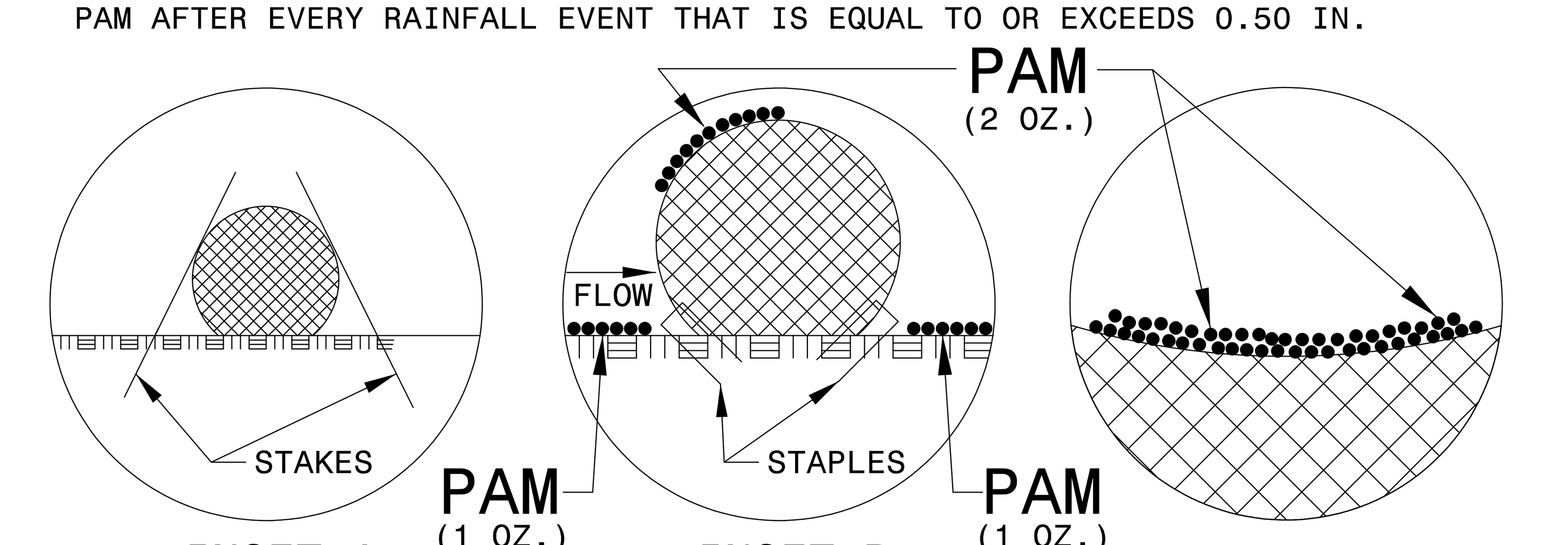
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

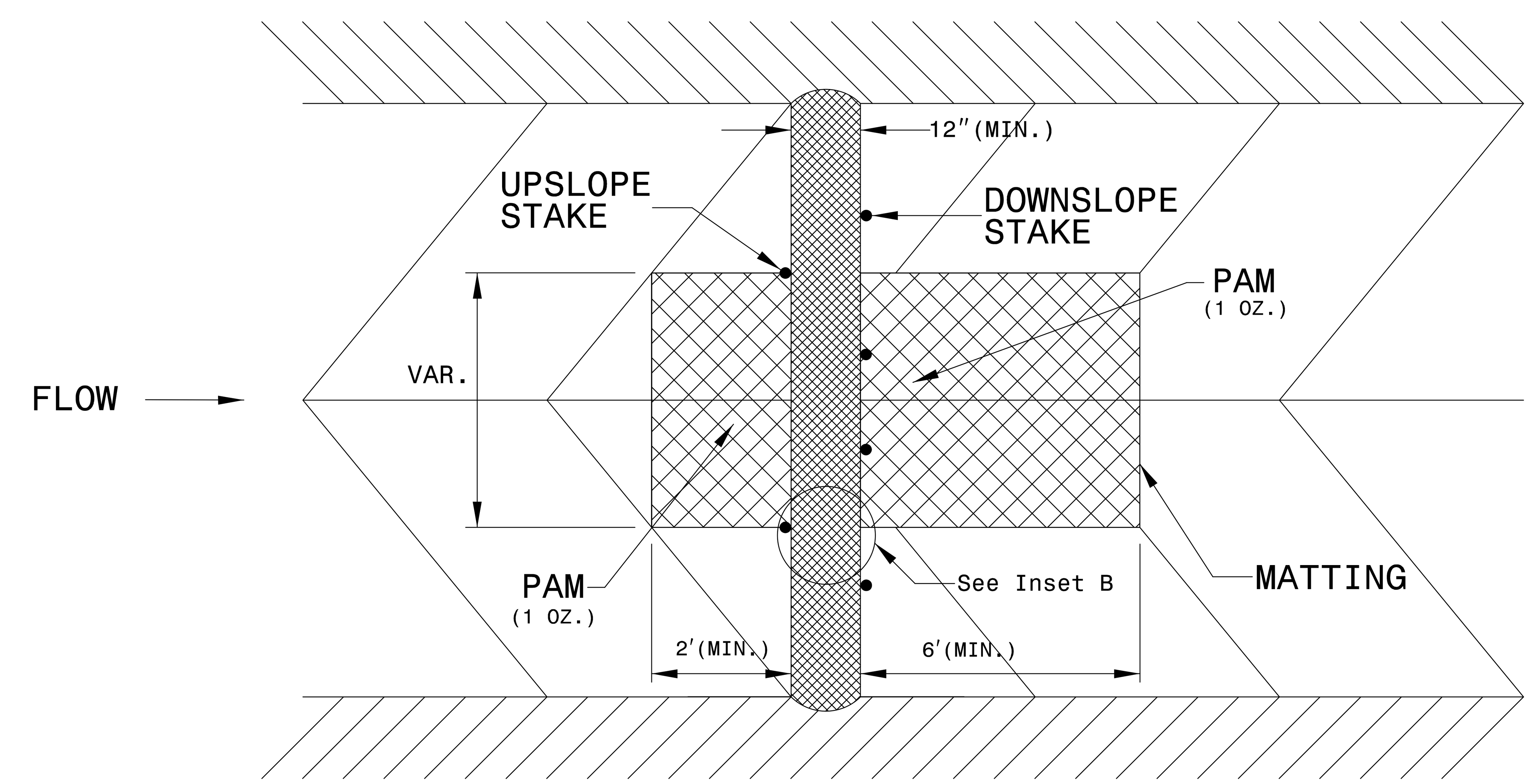
INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

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 MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



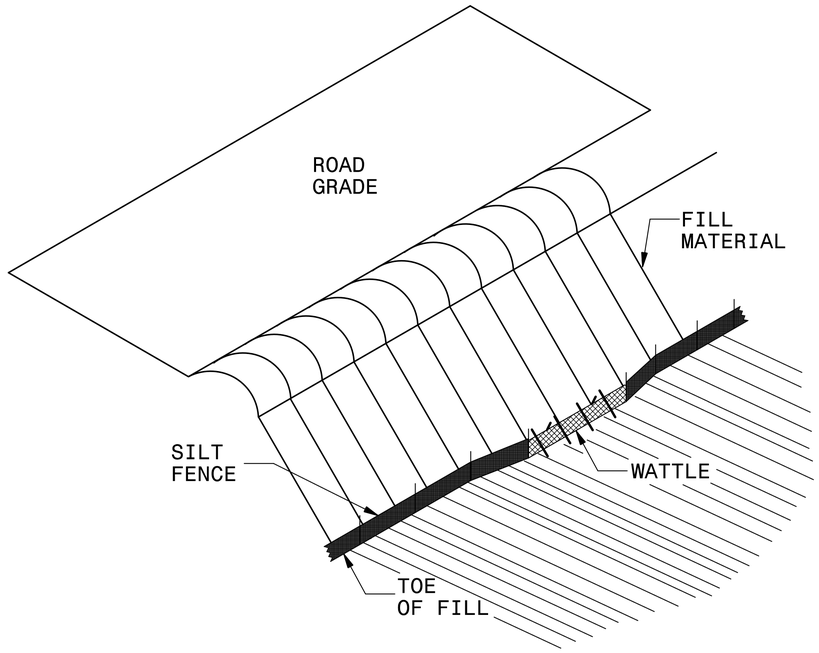
INSET A INSET B INSET C



TOP VIEW

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	EC-2A
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



ISOMETRIC VIEW

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

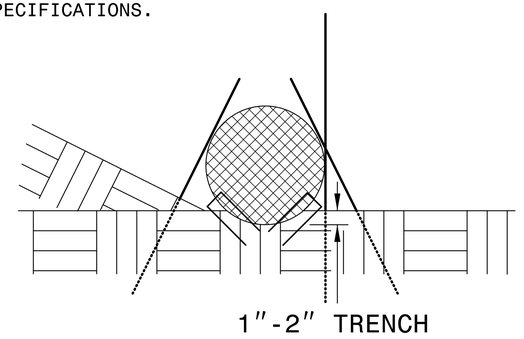
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12″ IN LENGTH.

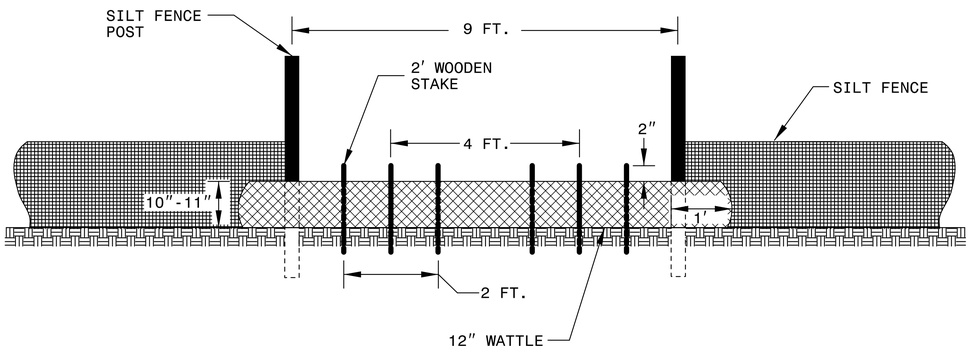
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

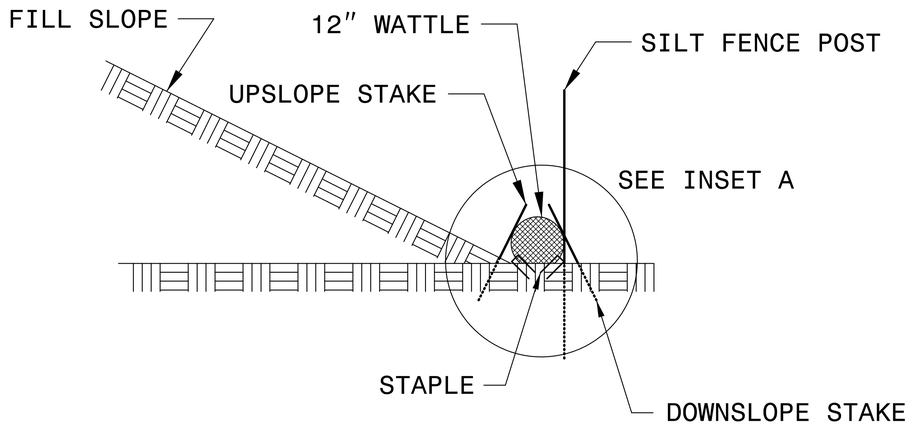
INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

INSET A





VIEW FROM SLOPE

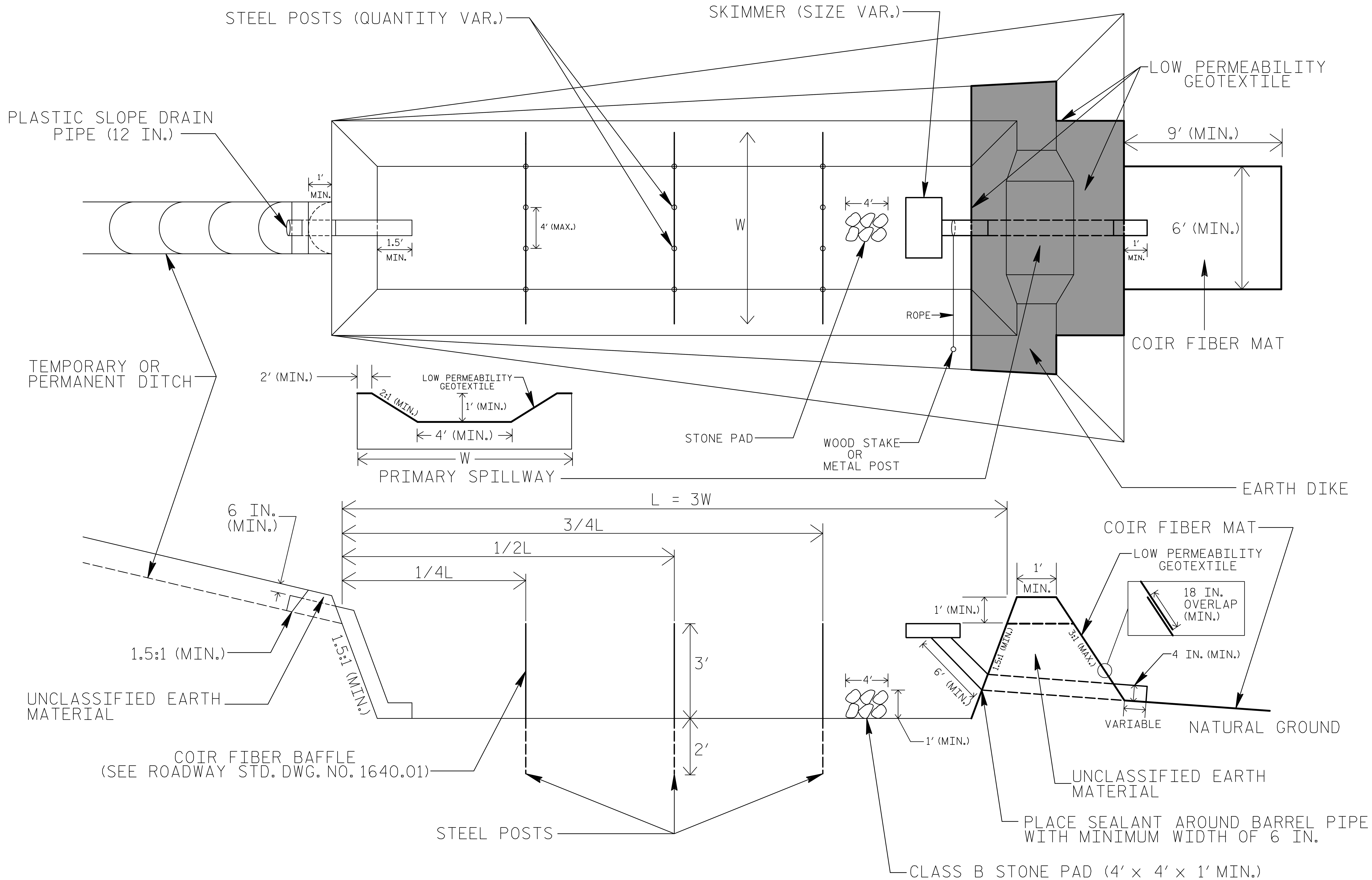


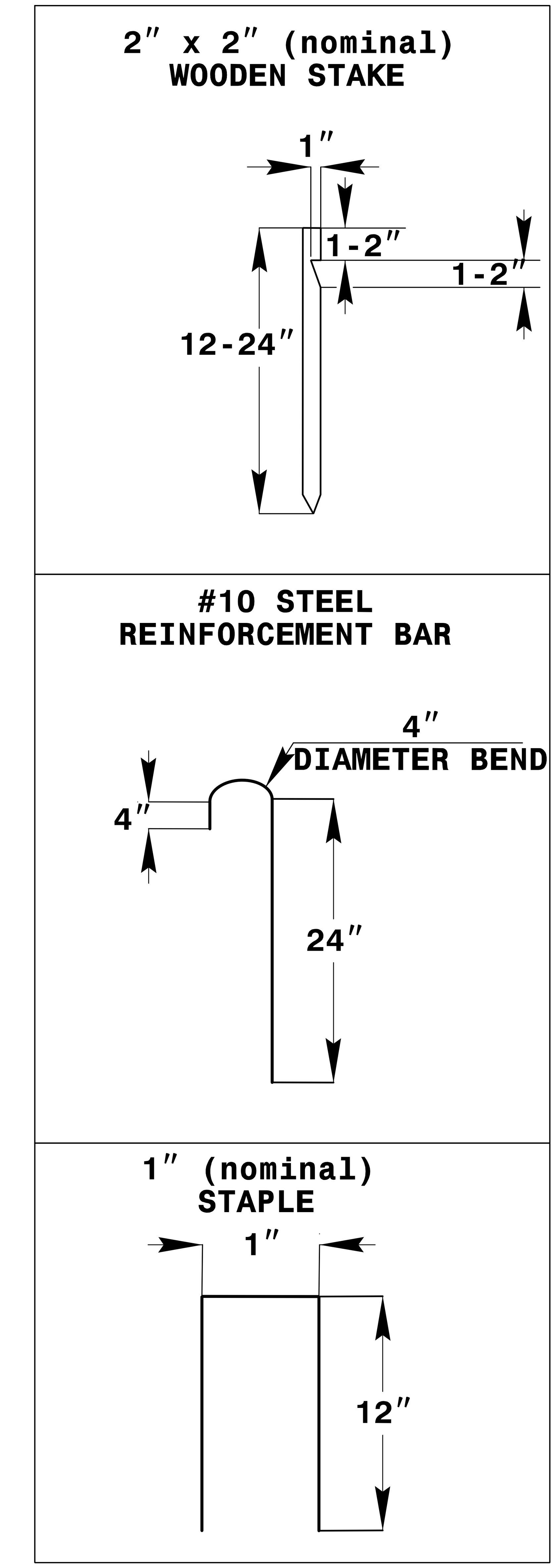
SIDE VIEW

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	EC-2B
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

SKIMMER BASIN WITH BAFFLES DETAIL (EAST)





COIR FIBER MAT ANCHOR OPTIONS

NOTES

1. SEED AND PLACE MATTING FOR EROSION CONTROL ON INTERIOR AND EXTERIOR SIDESLOPES.
2. LIMIT EARTH DIKE HEIGHT TO 5 FT.
3. FOR BASIN DEPTH OF 3 FT., THE MINIMUM BASIN WIDTH SHALL BE 9 FT.
4. DETERMINE PRIMARY SPILLWAY WEIR LENGTH (FT.) USING Q/0.4, WHERE Q IS FLOW RATE (CFS) INTO BASIN.
5. PLASTIC SLOPE DRAIN PIPE AT INLET OF BASIN MAY BE REPLACED BY FILTRATION GEOTEXTILE OR TARP AS DIRECTED.
6. LOW PERMEABILITY GEOTEXTILE FOR PRIMARY SPILLWAY SHALL BE ONE CONTINUOUS PIECE OF MATERIAL OR OVERLAPPED 18 IN. (MIN.).

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	EC-3
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION SUMMARY SHEET

MATTING FOR EROSION CONTROL

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
5	Y2	23+50	31+00	LT	1810
5	Y2	23+50	38+00	RT	3495
5	Y2	28+69	OUTFALL	LT	1815
6	Y2	39+50	46+65	LT	1495
6	Y2	39+50	45+45	RT	1245
6	Y3	11+50	13+74	LT	470
6	Y3	11+50	13+81	RT	485
				SUBTOTAL	10,815
MISCELLANEOUS MATTING TO BE INSTALLED AS DIRECTED BY THE ENGINEER					311
				TOTAL	11,126
				SAY	11,250

PERMANENT SOIL REINFORCEMENT MAT

CONST SHEET NO.	LINE	FROM STATION	TO STATION	SIDE	ESTIMATE (SY)
			SUBTOTAL		
		ADDITIONAL PSRM TO BE INSTALLED			
				TOTAL	
				SAY	

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	EC-3A
R/W SHEET NO.	
RAILROAD DESIGN ENGINEER	HYDRAULICS ENGINEER

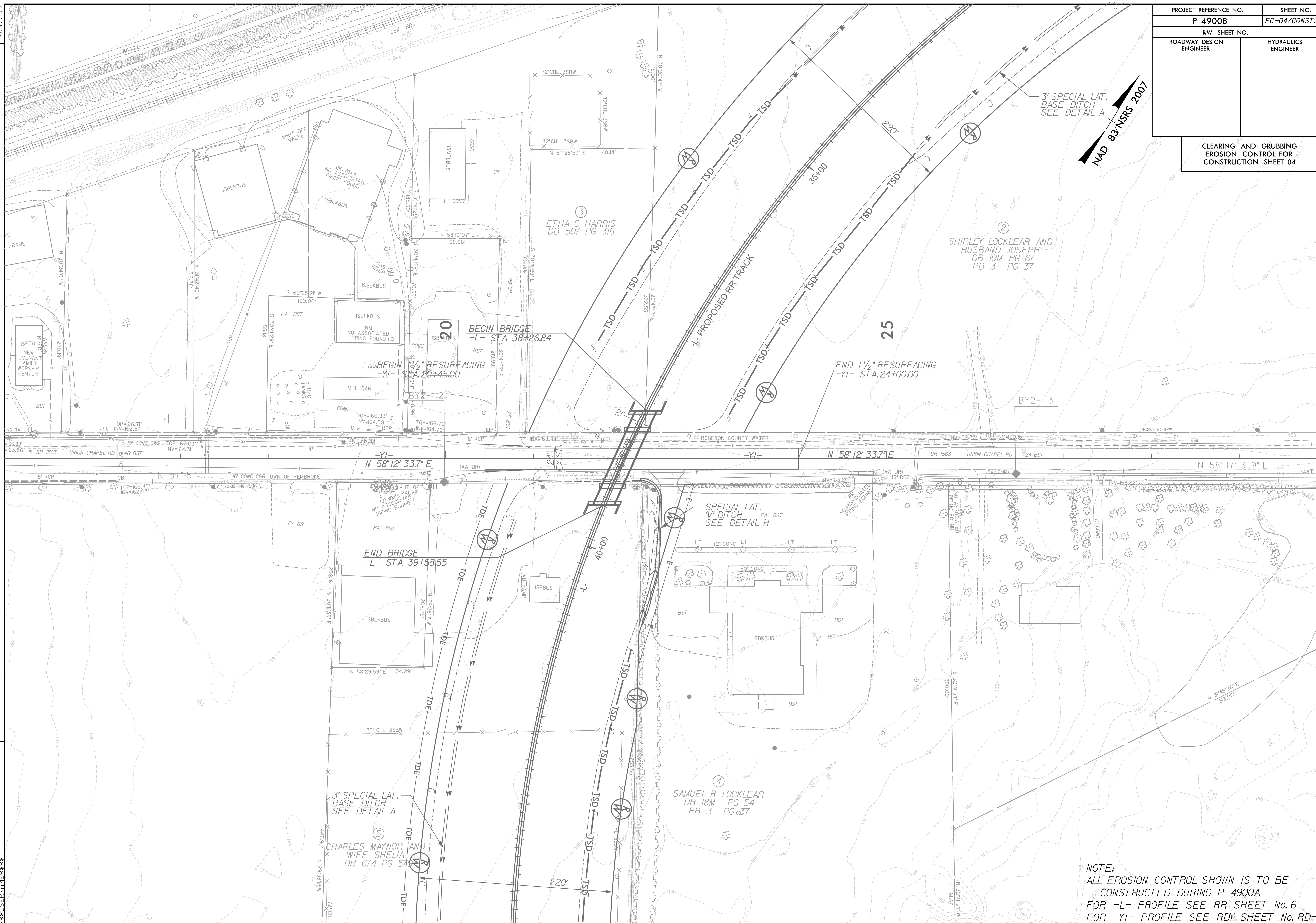
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 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.	SHEET NO.
P-4900B	EC-04/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 04



NAD 83/NSRS 2007
REVISIONS
8/17/99
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
ETHA C HARRIS DB 507 PG 316
SHIRLEY LOCKLEAR AND HUSBAND JOSEPH DB 19M PG 67 PB 3 PG 37
-L- PROPOSED RR TRACK
BEGIN BRIDGE -L- STA 38+26.84
BEGIN 1½" RESURFACING -YI- STA 20+45.00
END 1½" RESURFACING -YI- STA 24+00.00
-YI- N 58°12' 33.7" E
SR 1563 UNION CHAPEL RD
N 58°17' 31.9" E
SPECIAL LAT. 'V' DITCH SEE DETAIL H
END BRIDGE -L- STA 39+58.55
SAMUEL R LOCKLEAR DB 18M PG 54 PB 3 PG 37
CHARLES MAYNOR AND WIFE SHELIA DB 674 PG 57
220'
ISFCH NEW COVENANT FAMILY WORSHIP CENTER
ROBESON COUNTY WATER
BY2-13

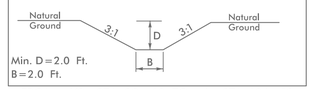
NOTE:
ALL EROSION CONTROL SHOWN IS TO BE CONSTRUCTED DURING P-4900A
FOR -L- PROFILE SEE RR SHEET No. 6
FOR -YI- PROFILE SEE RDY SHEET No. RD-7

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	EC-05/CONST.05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 05

REVISIONS 8/17/99

DETAIL A
STANDARD BASE DITCH
(Not to Scale)



Min. D=2.0 Ft.
B=2.0 Ft.

FROM –Y2– STA. 28+69 TO –L– STA. 106+10

DETAIL E
SPECIAL LATERAL 'V' DITCH
(Not to Scale)

Min. D= 1 Ft.

FROM –Y2– STA. 22+00 TO STA. 38+00 RT.
FROM –Y2– STA. 23+50 TO STA. 38+00 LT.

NAD 83/NSRS 2007

BEGIN PROJECT P-4900B
–Y2– STA 22+00.00

110 x 45 x 3
2.0 inch Skimmer
with 1.875 inch
Orifice Diameter
37 ft. weir
ID 5.1

2' STANDARD BASE DITCH S = 0.30% SEE DETAIL A

CLASS 'I' RIP RAP
EST 66 TONS
EST 160 SYGF

–Y2–
PI Sta 27+60.50
Δ = 34° 19' 56.4" (LT)
D = 6° 52' 41.7"
L = 499.14'
T = 257.32'
R = 833.00'
e = 6%

PI Sta 35+71.83
Δ = 99° 09' 46.7" (RT)
D = 11° 48' 48.8"
L = 839.40'
T = 569.50'
R = 485.00'
e = 6%

–Y2– PC Sta. 25+03.18

CLASS 'I' RIP RAP
EST 50 TONS
EST 110 SYGF

CLASS 'B' RIP-RAP
EST.5 TONS
EST.14 SYGF

SPECIAL LAT. 'V' DITCH SEE DETAIL E

24" RCP-III

–Y2– PRC Sta. 30+02.33

NOTE: EXISTING GRADE CROSSING SURFACE, WARNING DEVICES, AND PAVEMENT WITHIN 10' OF THE CENTERLINE OF THE EXISTING TRACK TO BE REMOVED BY CSXT RR.

JOHN ROBERT JONES FAMILY TRUST DB 596 PG 717

LETTA B LOCKLEAR JONES DB 596 PG 712

DANNY BULLARD DB 1035 PG 90

BRUCE BRAYBOY DB 633 PG 627

OXENDINE DB 146 PG 142

MATCHLINE –Y2– STA 35+00.00
SEE SHEET RD-6

NOTE:
FOR –Y2– PROFILE SEE RDY SHEET No. RD-7 & RD-8

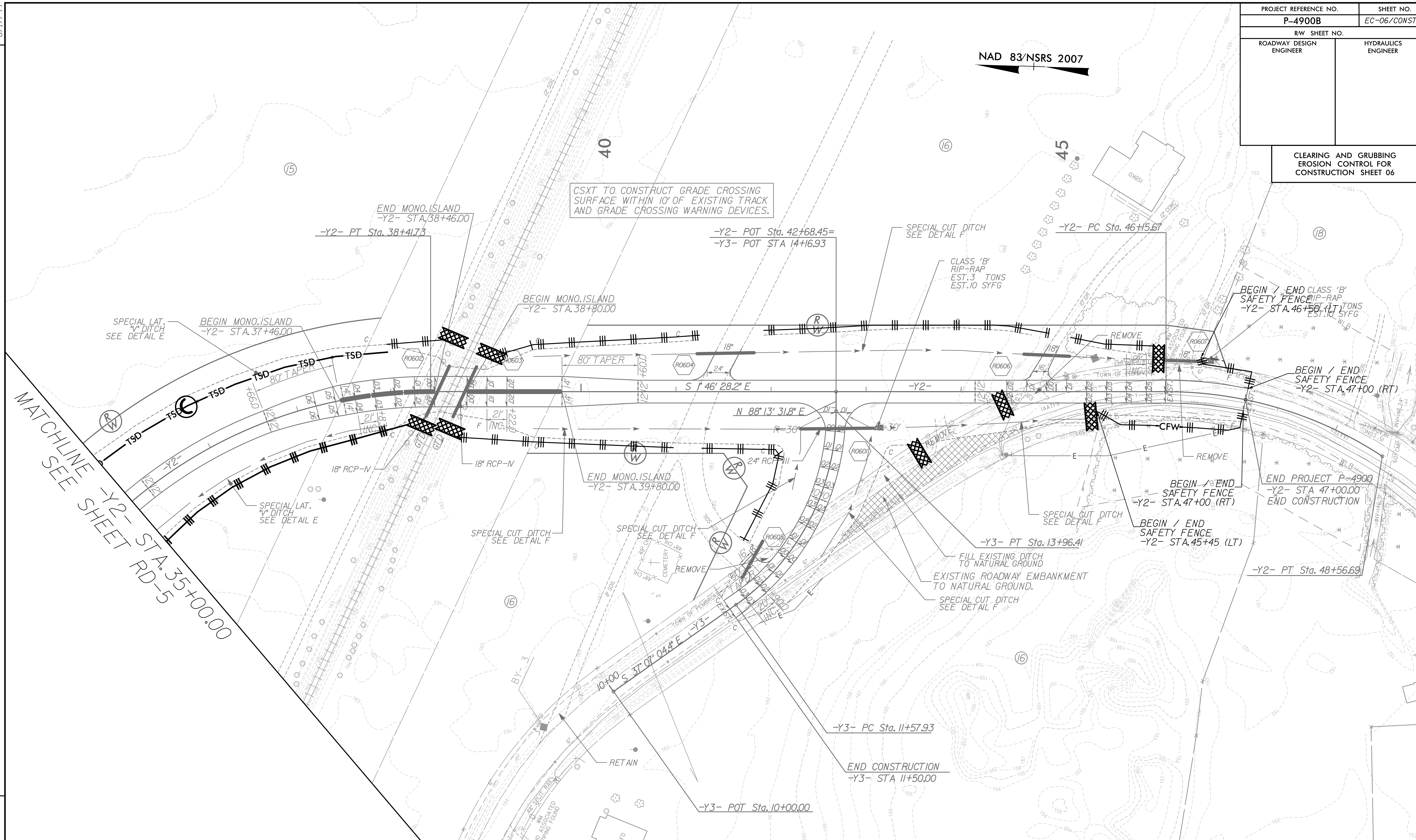
9:40:04 AM
$$$$USERNAME=$$$$

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	EC-06/CONST.06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

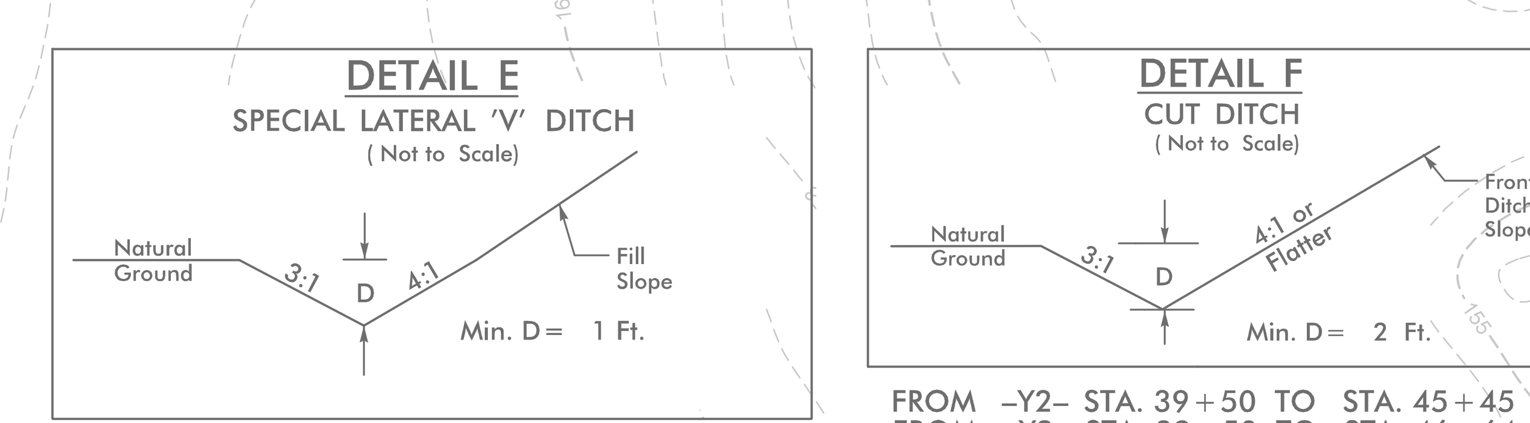
CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 06

8/17/99

REVISIONS



NAD 83/NSRS 2007
CSXT TO CONSTRUCT GRADE CROSSING SURFACE WITHIN 10' OF EXISTING TRACK AND GRADE CROSSING WARNING DEVICES.
END MONO.ISLAND -Y2- STA.38+46.00
-Y2- PT Sta. 38+41.73
BEGIN MONO.ISLAND -Y2- STA.38+80.00
SPECIAL LAT. "V" DITCH SEE DETAIL E
BEGIN MONO.ISLAND -Y2- STA.37+46.00
-Y2- POT Sta. 42+68.45= -Y3- POT STA 14+16.93
SPECIAL CUT DITCH SEE DETAIL F
CLASS 'B' RIP-RAP EST.3 TONS EST.10 SYFG
-Y2- PC Sta. 46+15.67
BEGIN / END SAFETY FENCE -Y2- STA.46+50 (LT)
BEGIN / END SAFETY FENCE -Y2- STA.47+00 (RT)
80' TAPER
S 1° 46' 28.2" E
N 88° 13' 31.8" E
-Y2-
REMOVE
18" RCP-IV
END MONO.ISLAND -Y2- STA.39+80.00
24" RCP-III
SPECIAL CUT DITCH SEE DETAIL F
END PROJECT P-4900 -Y2- STA 47+00.00 END CONSTRUCTION
BEGIN / END SAFETY FENCE -Y2- STA.47+00 (RT)
BEGIN / END SAFETY FENCE -Y2- STA.45+45 (LT)
-Y3- PT Sta. 13+96.41
FILL EXISTING DITCH TO NATURAL GROUND
EXISTING ROADWAY EMBANKMENT TO NATURAL GROUND.
-Y2- PT Sta. 48+56.69
MATCHLINE -Y2- STA.35+00.00 SEE SHEET RD-5
S 37° 07' 04.4" E -Y3-
10+00
RETAIN
-Y3- PC Sta. 11+57.93
END CONSTRUCTION -Y3- STA 11+50.00
-Y3- POT Sta. 10+00.00
BY-3
40
45



FROM -Y2- STA. 22+00 TO STA. 38+00 RT.
FROM -Y2- STA. 23+50 TO STA. 38+00 LT.

FROM -Y2- STA. 39+50 TO STA. 45+45 RT.
FROM -Y2- STA. 39+50 TO STA. 46+64 LT.
FROM -Y3- STA. 12+50 TO STA. 13+81 RT.
FROM -Y3- STA. 13+00 TO STA. 13+74 LT.

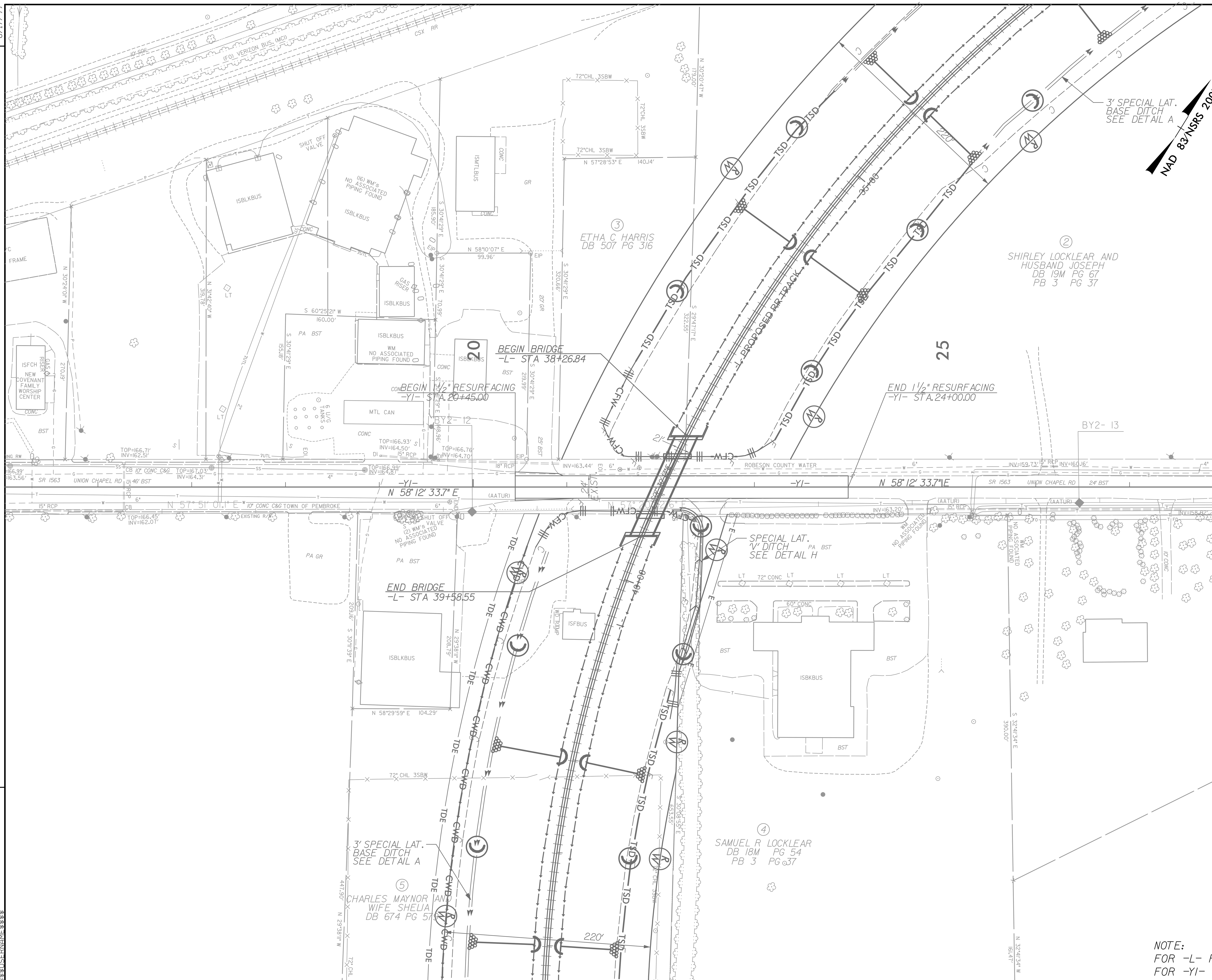
NOTE:
FOR -Y2- PROFILE SEE RDY SHEET No. RD-7 & RD-8

9:55:59 AM
R:\Roadway\Proj\P-4900B_rdy_EC_CGpsh06.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	EC-07/CONST.04
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS

8/17/99


NAD 83/NSRS 2007
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
ETHA C HARRIS DB 507 PG 316
SHIRLEY LOCKLEAR AND HUSBAND JOSEPH DB 19M PG 67 PB 3 PG 37
PROPOSED RR TRACK
BEGIN BRIDGE -L- STA 38+26.84
BEGIN 1½" RESURFACING -Y1- STA.20+45.00
END 1½" RESURFACING -Y1- STA.24+00.00
N 58°12' 33.7" E
N 58°17' 31.9" E
SR 1563 UNION CHAPEL RD
ROBESON COUNTY WATER
(F0) VERIZON BUS (MCI)
CSX RR
NEW COVENANT FAMILY WORSHIP CENTER
SPECIAL LAT. 'V' DITCH SEE DETAIL H
END BRIDGE -L- STA 39+58.55
SAMUEL R LOCKLEAR DB 18M PG 54 PB 3 PG 37
3' SPECIAL LAT. BASE DITCH SEE DETAIL A
CHARLES MAYNOR AND WIFE SHELIA DB 674 PG 570
BY2-12
BY2-13
25
30
20

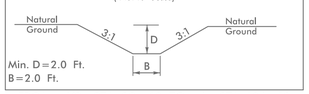
NOTE:
FOR -L- PROFILE SEE RR SHEET No. 6
FOR -Y1- PROFILE SEE RDY SHEET No. RD-7

9:19:48 AM
$$$$USERNAME$$$$
...EC_psh04.dgn

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	EC-08/CONST.05
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

REVISIONS 8/17/99

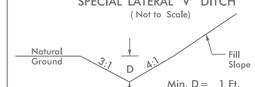
DETAIL A
STANDARD BASE DITCH
(Not to Scale)



Min. D=2.0 Ft.
B=2.0 Ft.

FROM –Y2– STA. 28+69 TO –L– STA. 106+10

DETAIL E
SPECIAL LATERAL 'V' DITCH
(Not to Scale)



Min. D= 1 Ft.

FROM –Y2– STA. 22+00 TO STA. 38+00 RT.
FROM –Y2– STA. 23+50 TO STA. 38+00 LT.

NAD 83/NSRS 2007

BEGIN PROJECT P-4900B
–Y2– STA 22+00.00

110 x 45 x 3
2.0 inch Skimmer
with 1.875 inch
Orifice Diameter
37 ft. weir
ID 5.1

2' STANDARD BASE DITCH S = 0.30% SEE DETAIL A

–Y2–

PI Sta 27+60.50
△ = 34° 19' 56.4" (LT)
D = 6° 52' 41.7"
L = 499.14'
T = 257.32'
R = 833.00'
e = 6%

PI Sta 35+71.83
△ = 99° 09' 46.7" (RT)
D = 11° 48' 48.8"
L = 839.40'
T = 569.50'
R = 485.00'
e = 6%

CLASS 'I' RIP RAP
EST 66 TONS
EST 160 SYGF

CLASS 'B' RIP-RAP
EST.5 TONS
EST.14 SYGF

CLASS 'I' RIP RAP
EST 50 TONS
EST 110 SYGF

–Y2– PC Sta. 25+03.18

–Y2– PRC Sta. 30+02.33

SPECIAL LAT. 'V' DITCH SEE DETAIL E

24" RCP-III

NOTE: EXISTING GRADE CROSSING SURFACE, WARNING DEVICES, AND PAVEMENT WITHIN 10' OF THE CENTERLINE OF THE EXISTING TRACK TO BE REMOVED BY CSXT RR.

REMOVE

RET WL

JOHN ROBERT JONES FAMILY TRUST DB 596 PG 717

ETTA B LOCKLEAR JONES DB 596 PG 712

DANNY BULLARD DB 1035 PG 90

BRUCE BRAYBOY DB 633 PG 627

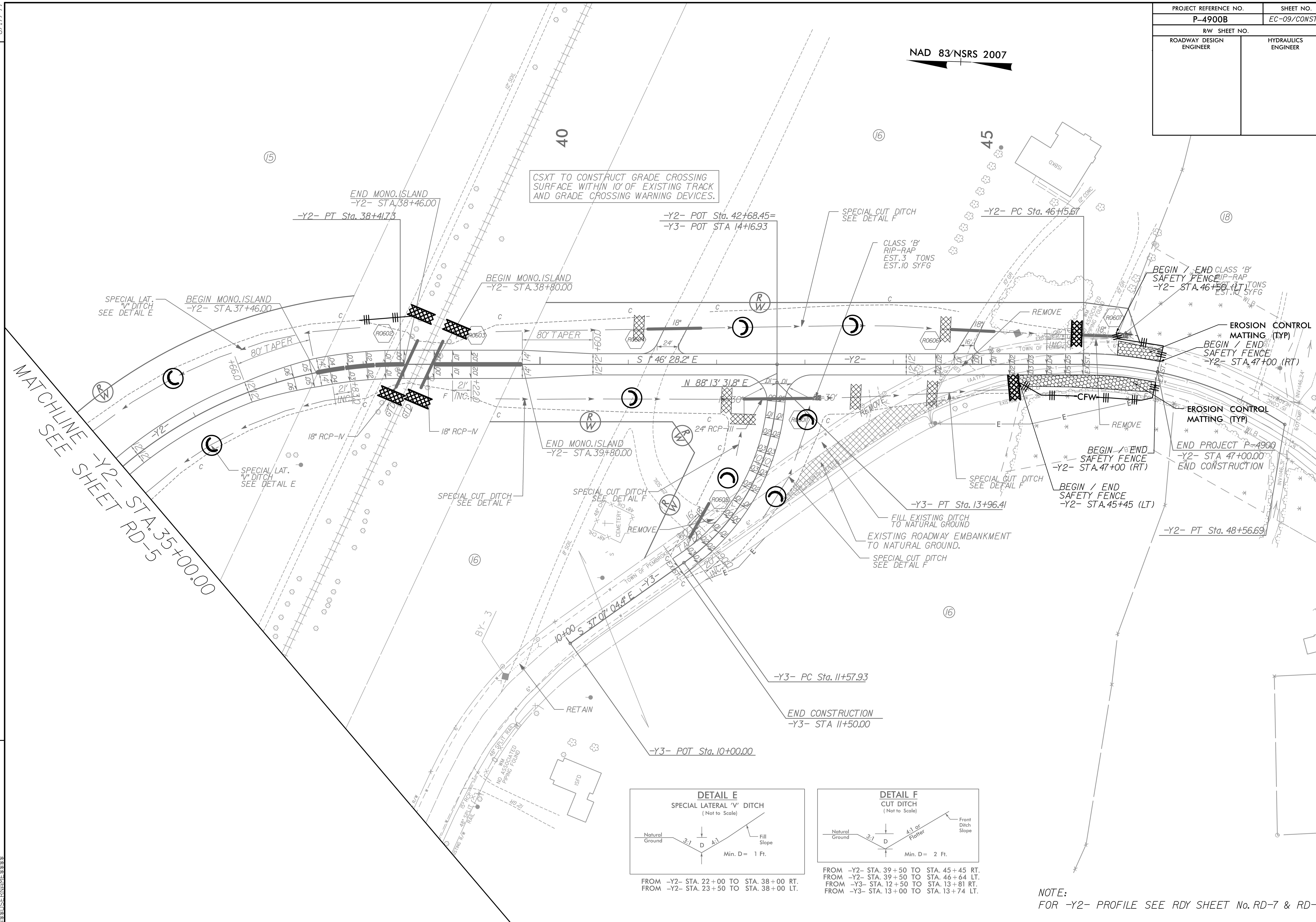
OXENDINE PG 146 PG 142

MATCHLINE –Y2– STA.35+00.00
SEE SHEET RD-6

NOTE:
FOR –Y2– PROFILE SEE RDY SHEET No. RD-7 & RD-8

9:23:35 AM
2/25/2022
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
P-4900B	EC-09/CONST.06
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER


NAD 83/NSRS 2007
CSXT TO CONSTRUCT GRADE CROSSING SURFACE WITHIN 10' OF EXISTING TRACK AND GRADE CROSSING WARNING DEVICES.
MATCHLINE -Y2- STA.35+00.00 SEE SHEET RD-5
END MONO.ISLAND -Y2- STA.38+46.00
-Y2- PT Sta. 38+41.73
BEGIN MONO.ISLAND -Y2- STA.38+80.00
SPECIAL LAT. "V" DITCH SEE DETAIL E
BEGIN MONO.ISLAND -Y2- STA.37+46.00
80' TAPER
18" RCP-IV
END MONO.ISLAND -Y2- STA.39+80.00
SPECIAL CUT DITCH SEE DETAIL F
-Y2- POT Sta. 42+68.45= -Y3- POT STA 14+16.93
CLASS 'B' RIP-RAP EST.3 TONS EST.10 SYFG
-Y2- PC Sta. 46+15.67
S 1° 46' 28.2" E
N 88° 13' 31.8" E
REMOVE
BEGIN / END SAFETY FENCE -Y2- STA.46+50 (LT)
EROSION CONTROL MATTING (TYP)
BEGIN / END SAFETY FENCE -Y2- STA.47+00 (RT)
END PROJECT P-4900 -Y2- STA 47+00.00 END CONSTRUCTION
BEGIN / END SAFETY FENCE -Y2- STA.45+45 (LT)
-Y3- PT Sta. 13+96.41
FILL EXISTING DITCH TO NATURAL GROUND
EXISTING ROADWAY EMBANKMENT TO NATURAL GROUND.
-Y2- PT Sta. 48+56.69
-Y3- PC Sta. 11+57.93
END CONSTRUCTION -Y3- STA 11+50.00
-Y3- POT Sta. 10+00.00
S 37° 07' 04.4" E
RETAIN
CFW
DETAIL E
SPECIAL LATERAL 'V' DITCH
(Not to Scale)
Natural Ground
Fill Slope
Min. D= 1 Ft.
FROM -Y2- STA. 22+00 TO STA. 38+00 RT.
FROM -Y2- STA. 23+50 TO STA. 38+00 LT.
DETAIL F
CUT DITCH
(Not to Scale)
Front Ditch Slope
4:1 or Flatter
Min. D= 2 Ft.
FROM -Y2- STA. 39+50 TO STA. 45+45 RT.
FROM -Y2- STA. 39+50 TO STA. 46+64 LT.
FROM -Y3- STA. 12+50 TO STA. 13+81 RT.
FROM -Y3- STA. 13+00 TO STA. 13+74 LT.

NOTE:
FOR -Y2- PROFILE SEE RDY SHEET No. RD-7 & RD-8

REVISIONS

8/17/99

PROJ. REFERENCE NO.	SHEET NO.
P-4900B	X-1A

TIP NO. P-4900B

CROSS SECTION INDEX

LOCATION	STATION TO STATION	SHEET NO.
	EARTHWORK SUMMARY SHEET	X-1B
-Y2-	STA. 22+00.00 TO STA. 47+00.00	X-2 THRU X-18
-Y3-	STA. 11+50.00 TO STA. 14+16.93	X-19 THRU X-20

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJ. REFERENCE NO.	SHEET NO.
P-4900B	X-1B

CROSS-SECTION SUMMARY

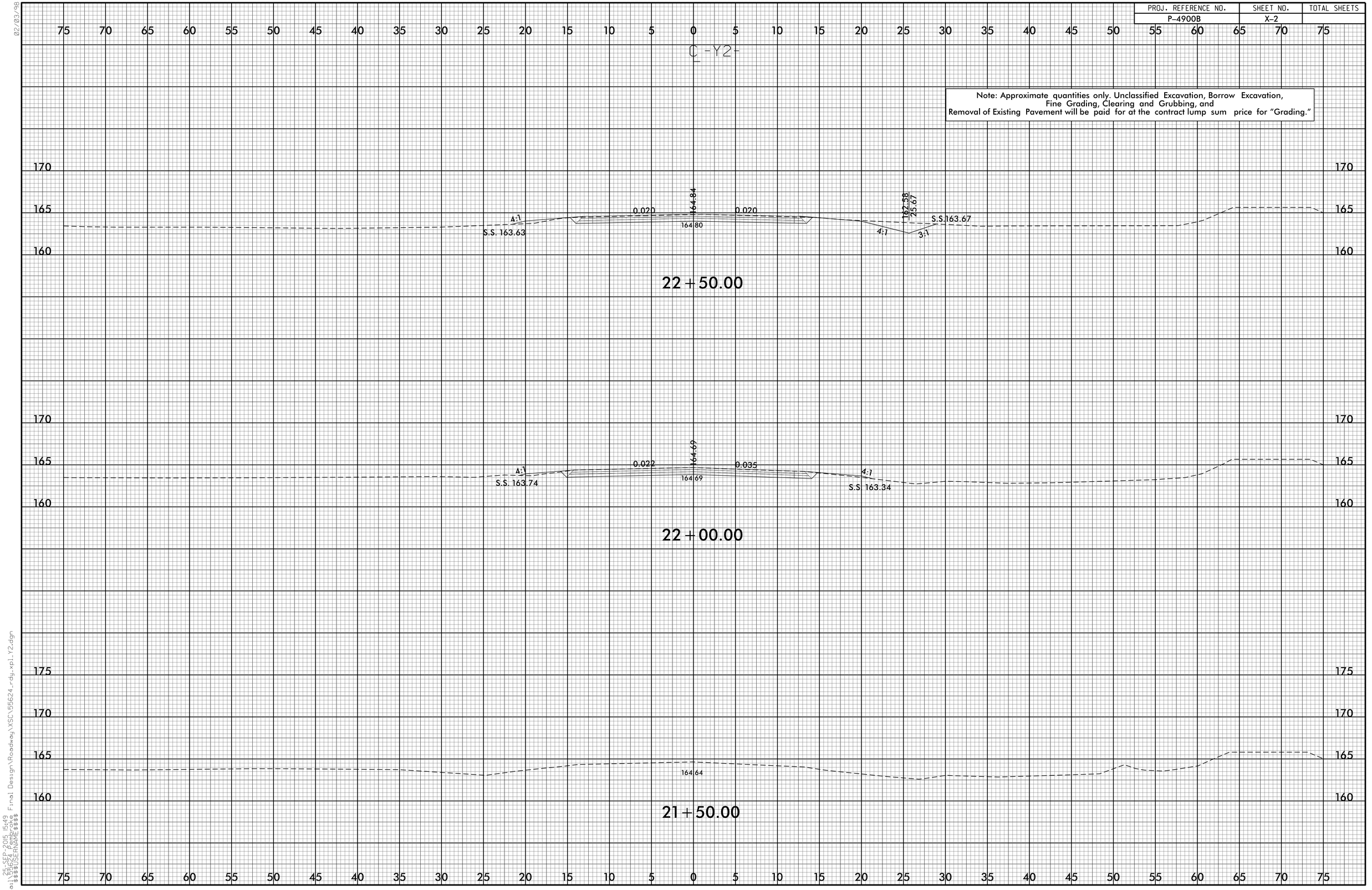
Approximate quantities only. Unclassified excavation, borrow excavation, fine grading, clearing and grubbing, and removal of existing pavement will be paid for at the lump sum price for "Grading".

NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT

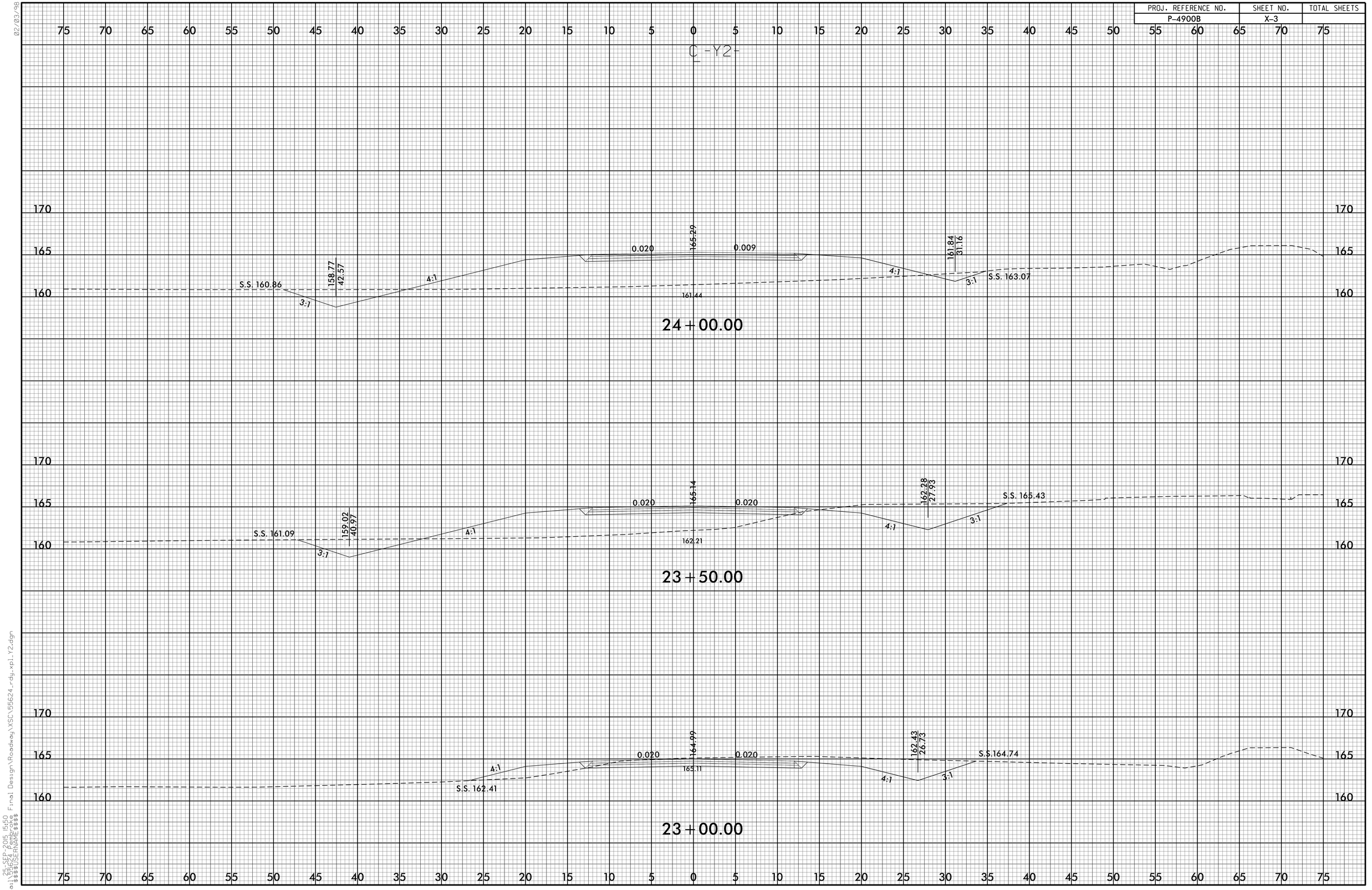
Station Y2	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)	Station Y3	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
22+00.00	0	0	11+50.00	0	0
22+50.00	48	3	12+00.00	70	0
23+00.00	73	13	12+50.00	172	0
23+50.00	92	91	13+00.00	294	2
24+00.00	63	223	13+50.00	399	2
24+50.00	42	299	14+00.00	297	0
25+00.00	82	287			
25+50.00	153	243			
26+00.00	218	223			
26+50.00	263	219			
27+00.00	304	226			
27+50.00	340	237			
28+00.00	354	263			
28+50.00	309	354			
29+00.00	235	491			
29+50.00	183	592			
30+00.00	146	634			
30+50.00	126	657			
31+00.00	116	685			
31+50.00	111	691			
32+00.00	112	659			
32+50.00	122	601			
33+00.00	148	522			
33+50.00	172	441			
34+00.00	175	376			
34+50.00	178	331			
35+00.00	171	295			
35+50.00	131	300			
36+00.00	101	310			
36+50.00	90	280			
37+00.00	85	246			
37+50.00	81	220			
38+00.00	68	204			
38+50.00	37	158			
39+00.00	7	121			
39+50.00	45	131			
40+00.00	124	104			
40+50.00	181	65			
41+00.00	244	46			
41+50.00	244	22			
42+00.00	340	7			
42+50.00	413	0			
43+00.00	509	0			
43+50.00	687	0			
44+00.00	712	0			
44+50.00	611	5			
45+00.00	355	10			
45+50.00	151	22			
46+00.00	66	36			
46+50.00	34	34			
47+00.00	34	20			

PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-2	

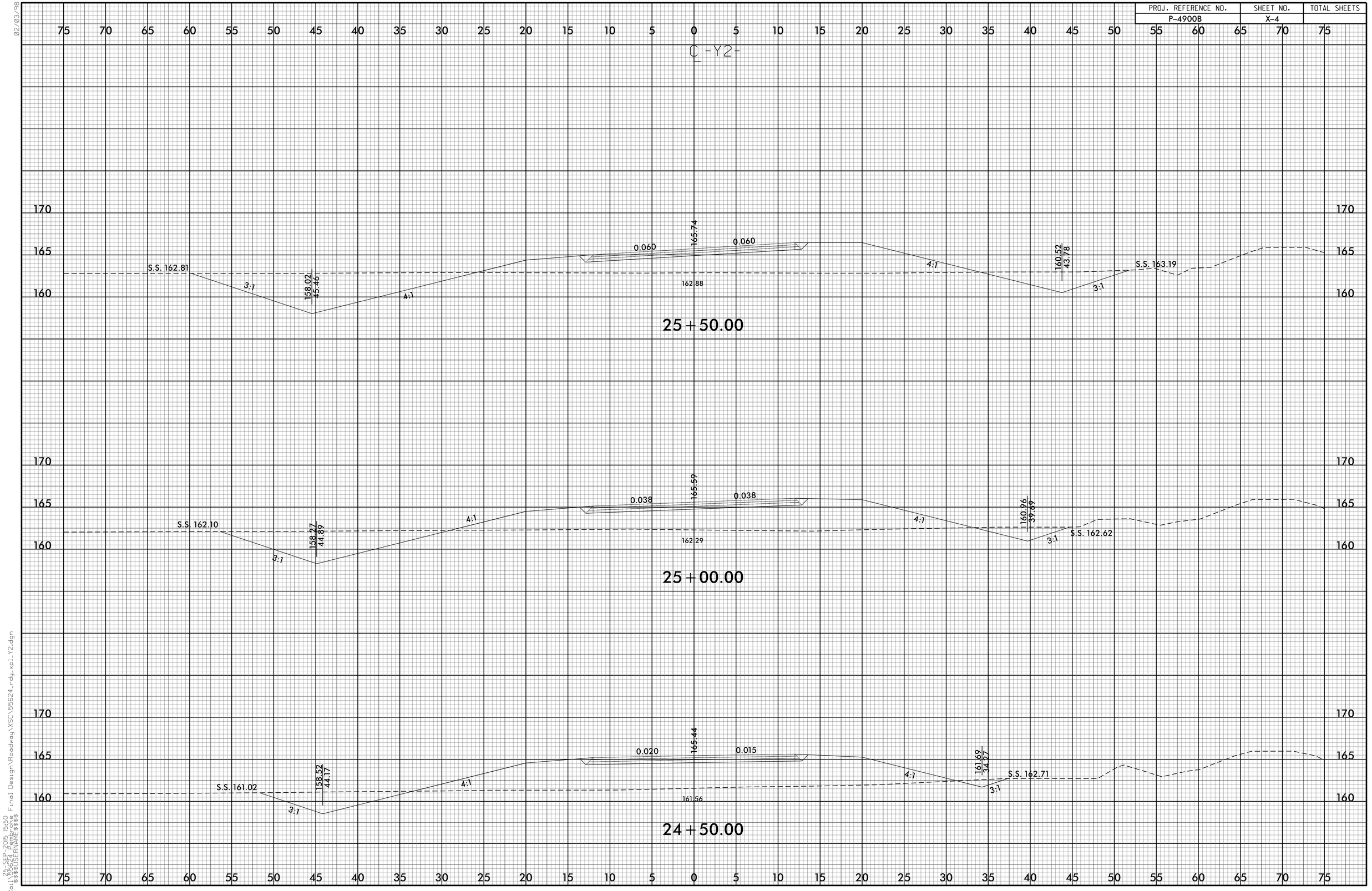
Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."



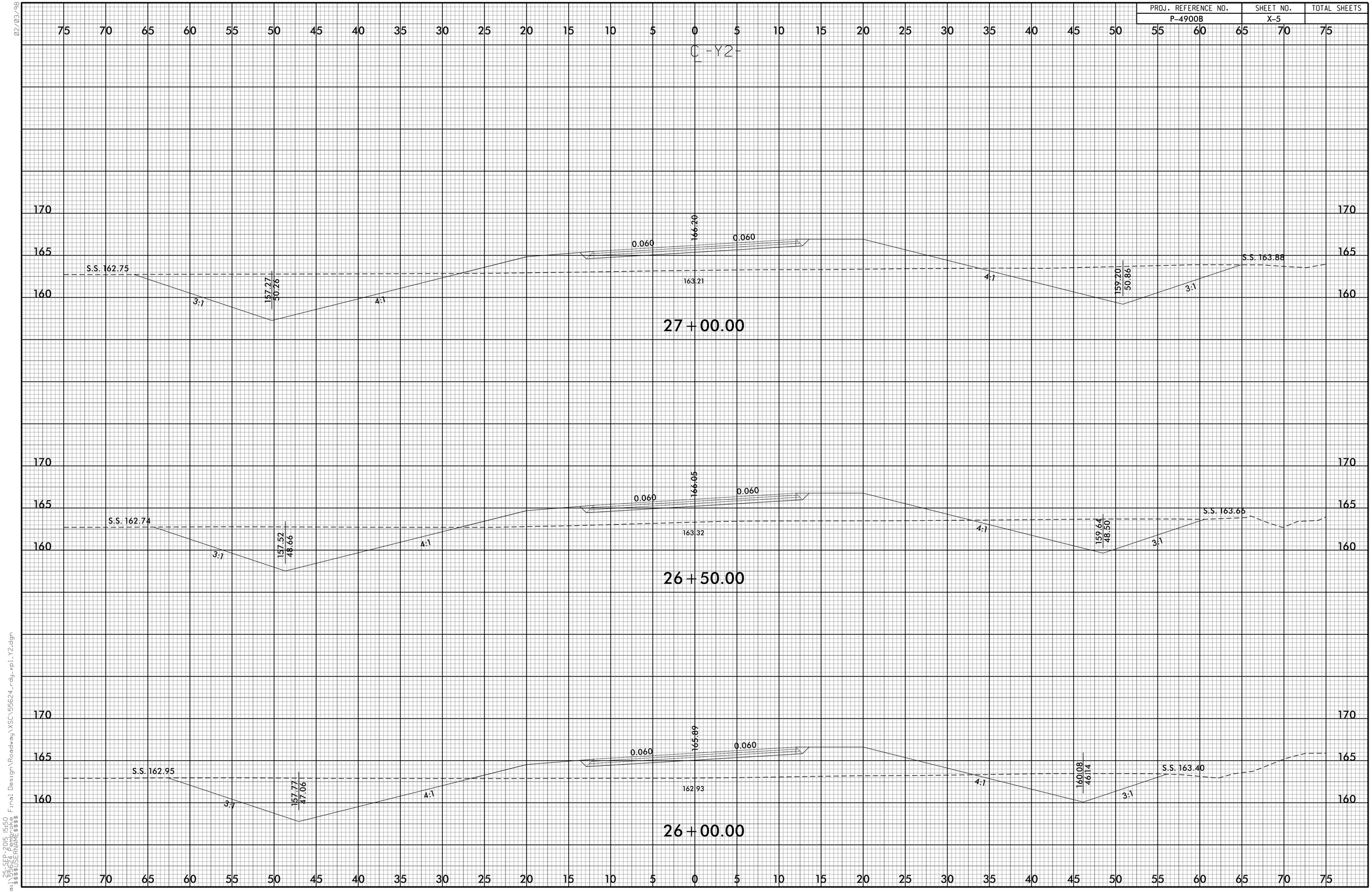
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-3	



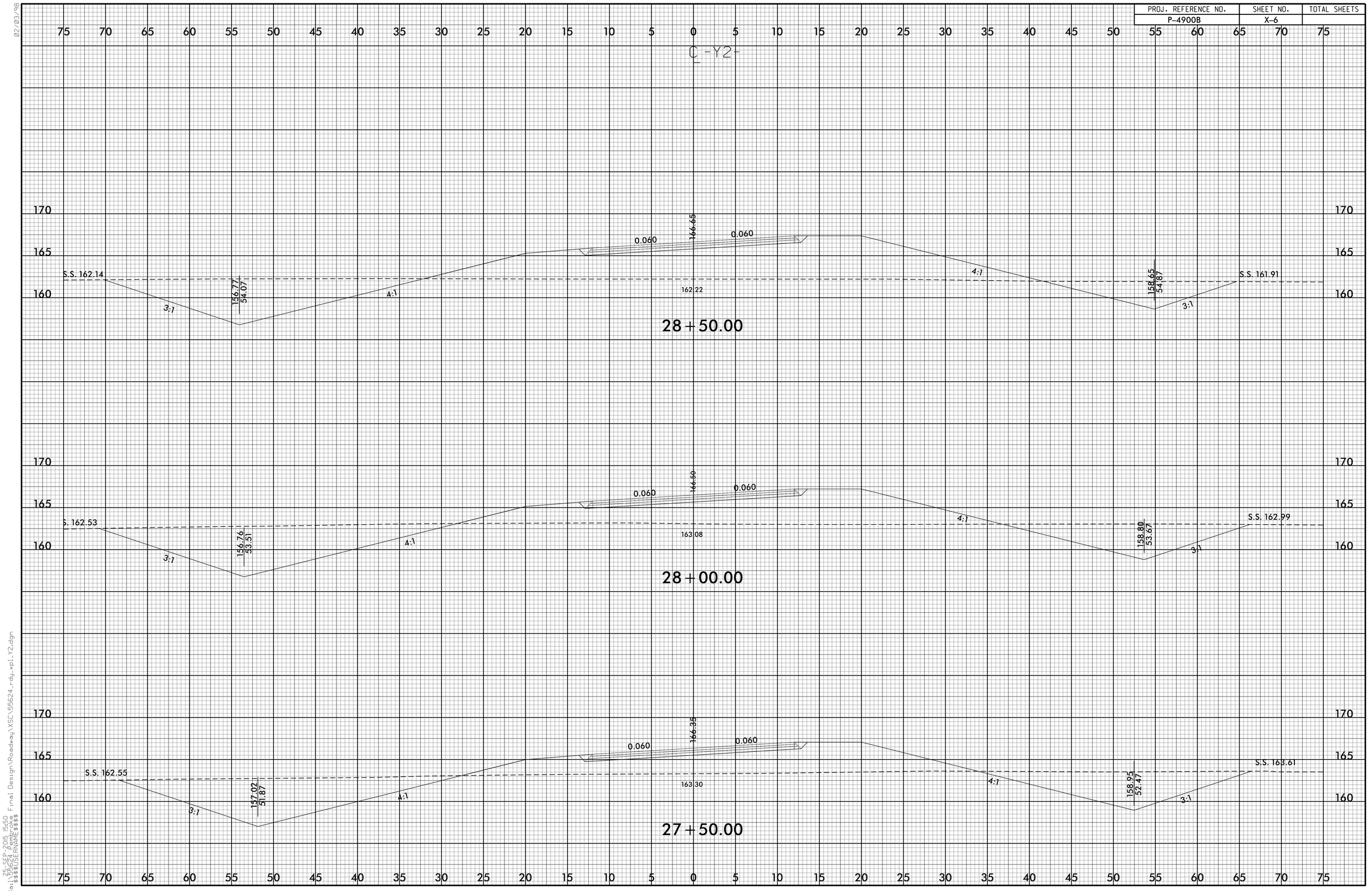
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-4	



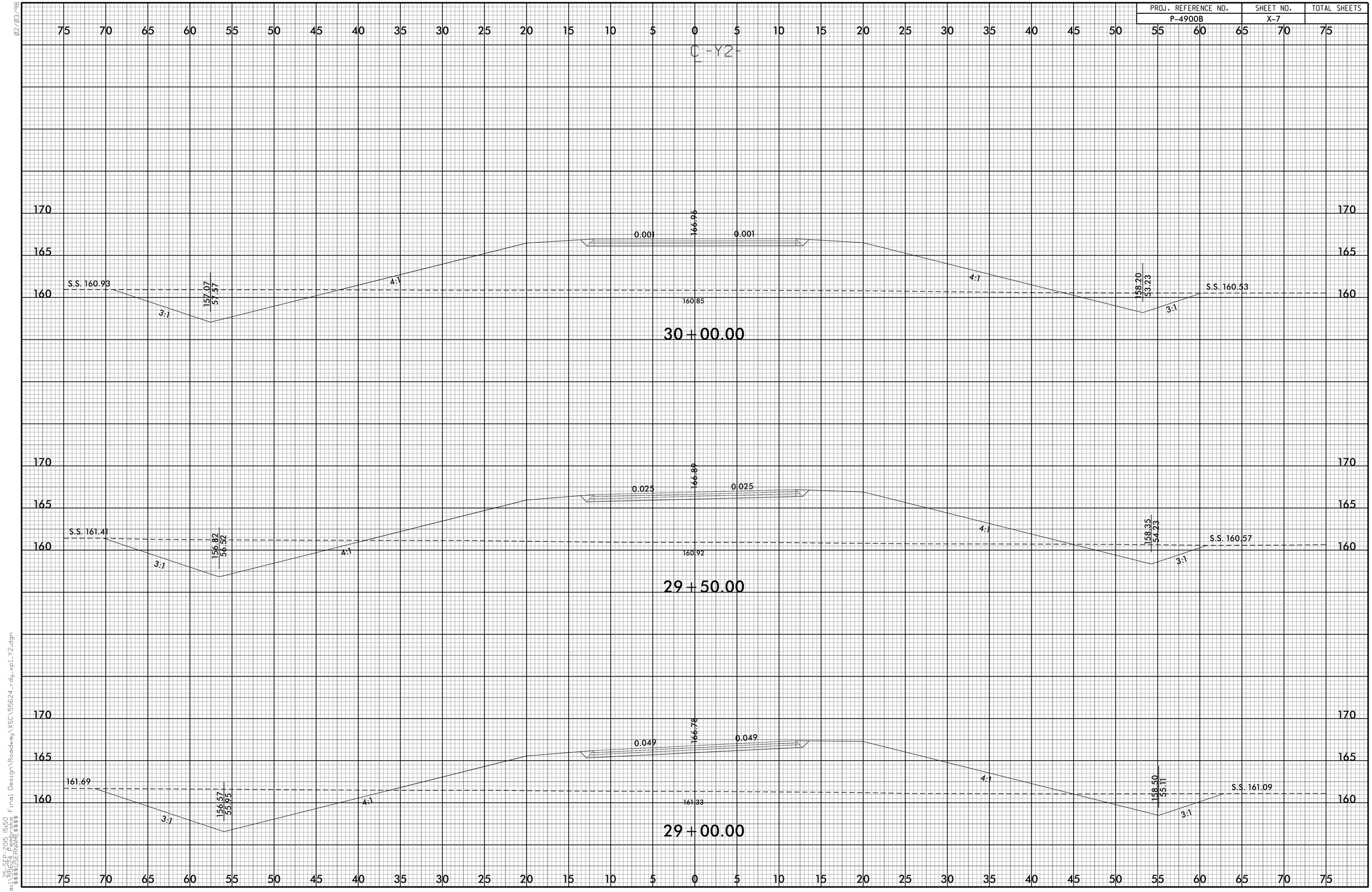
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-5	



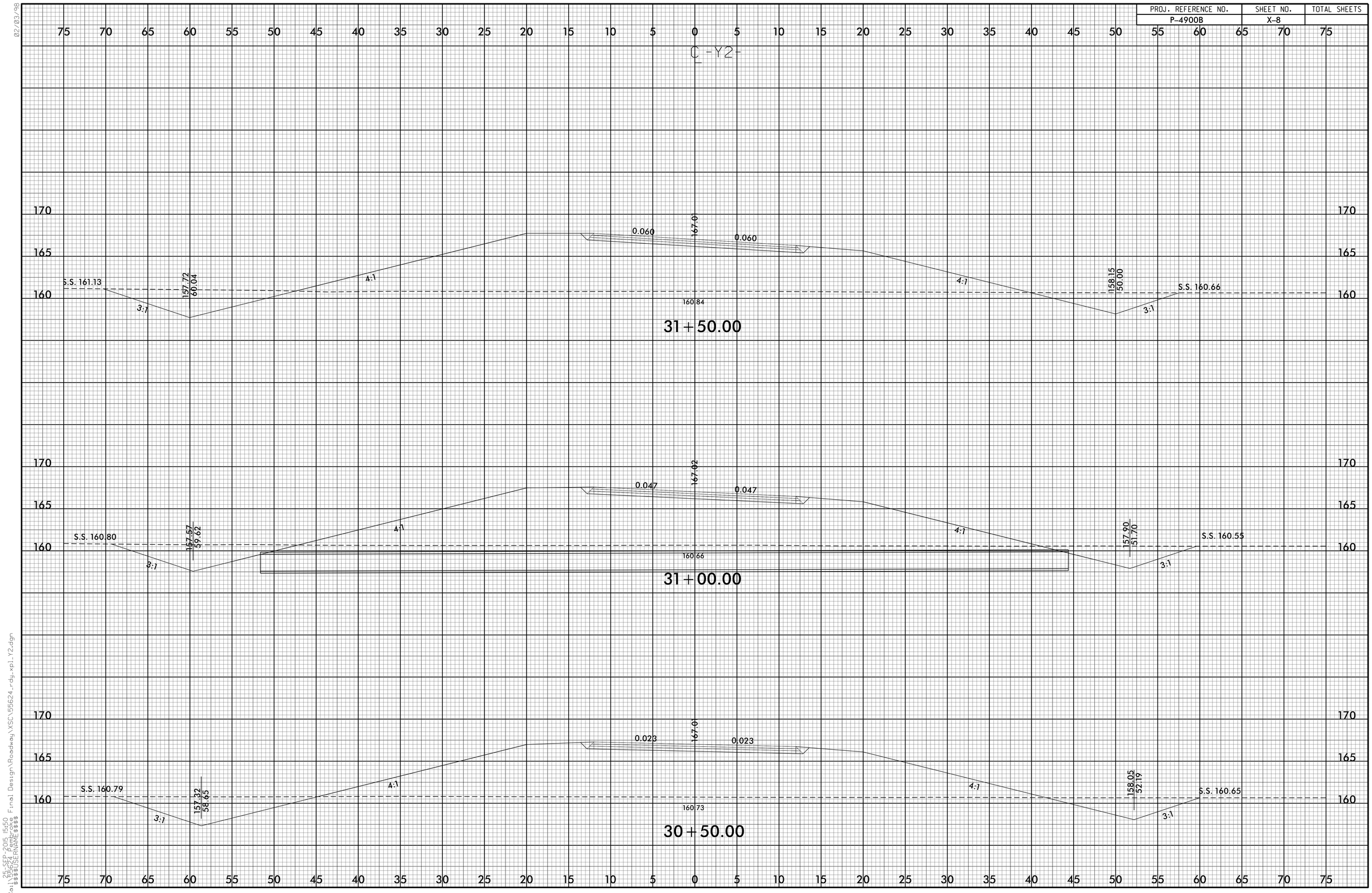
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-6	



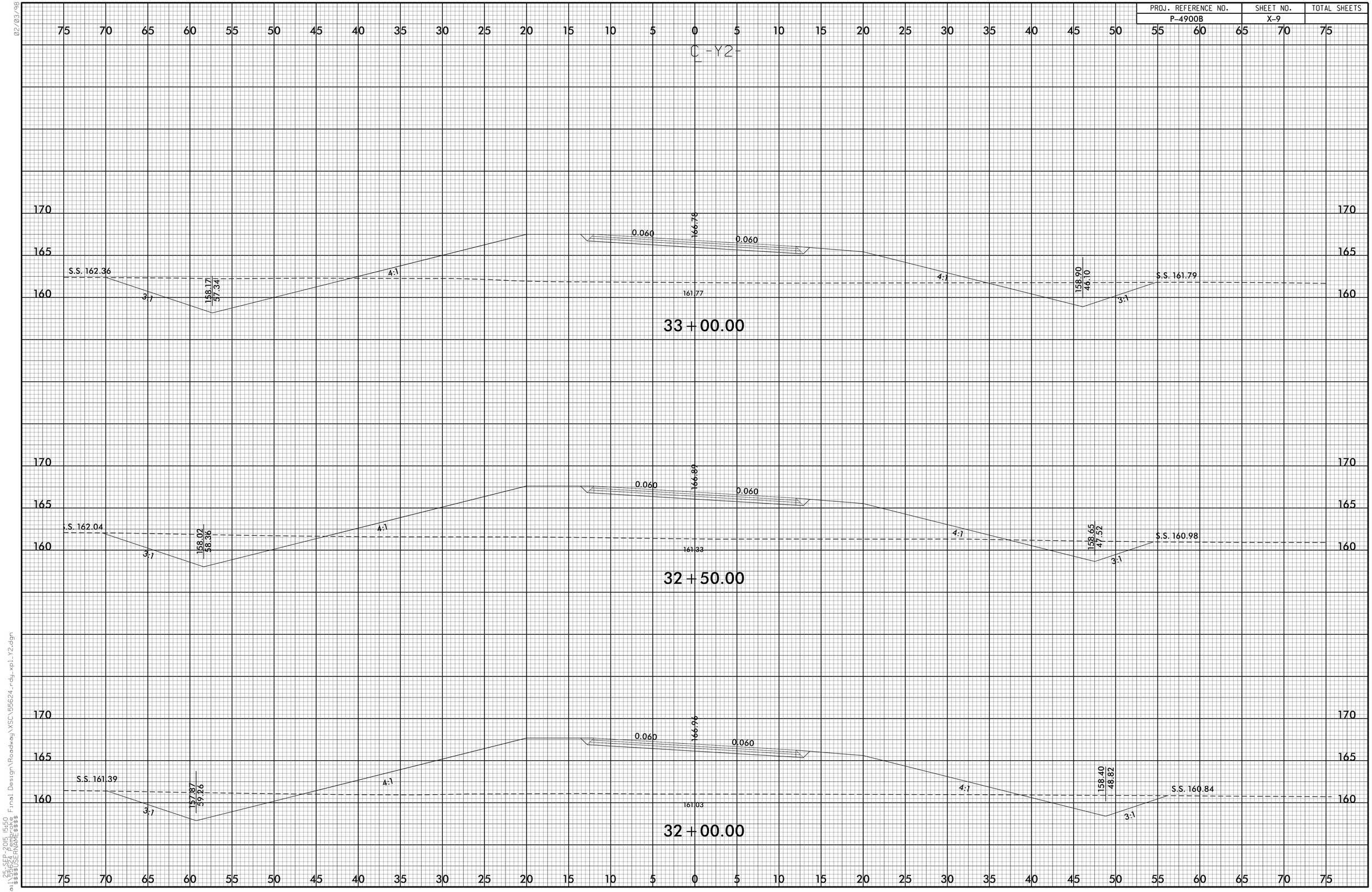
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-7	



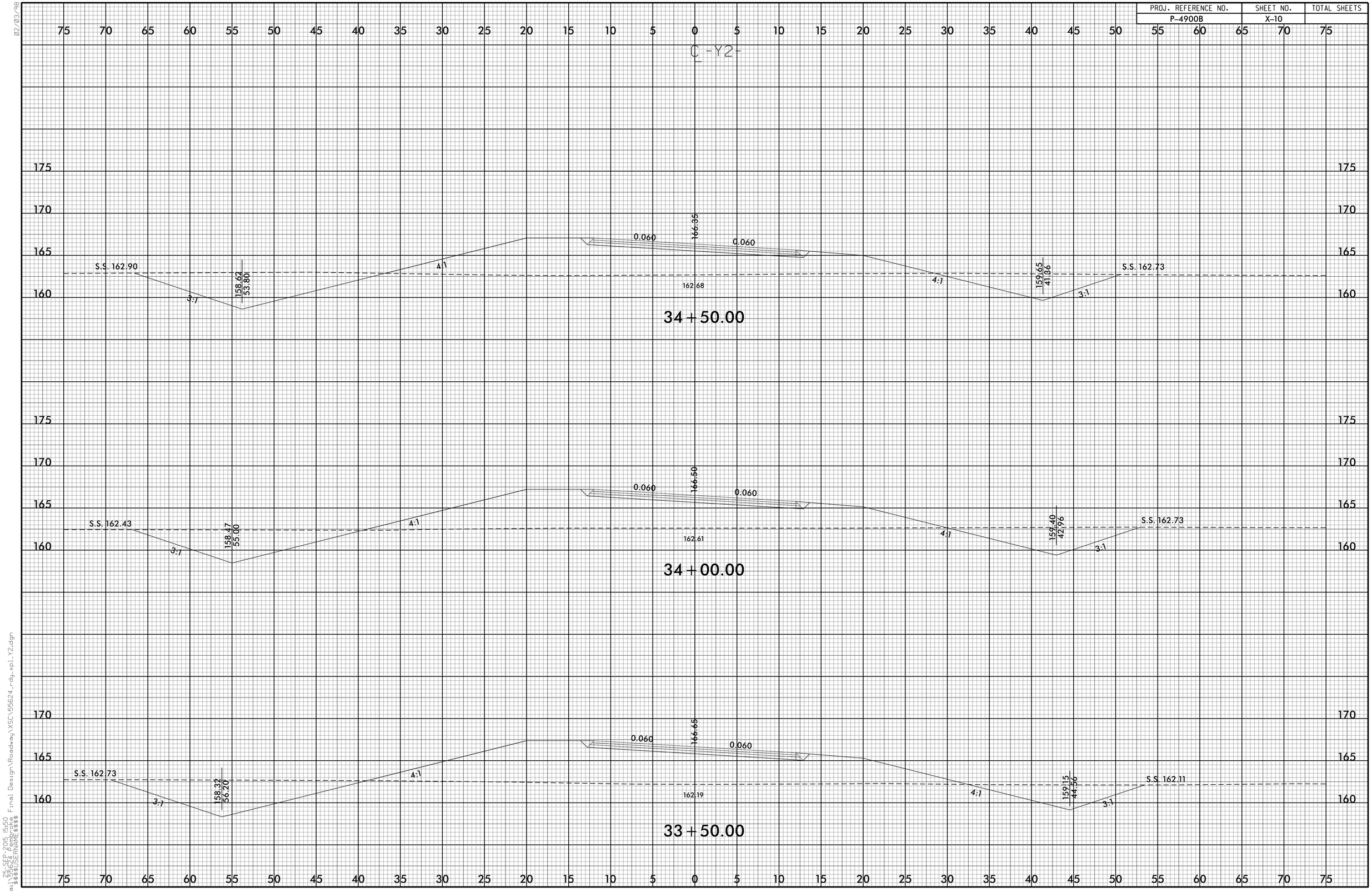
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-8	



PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-9	



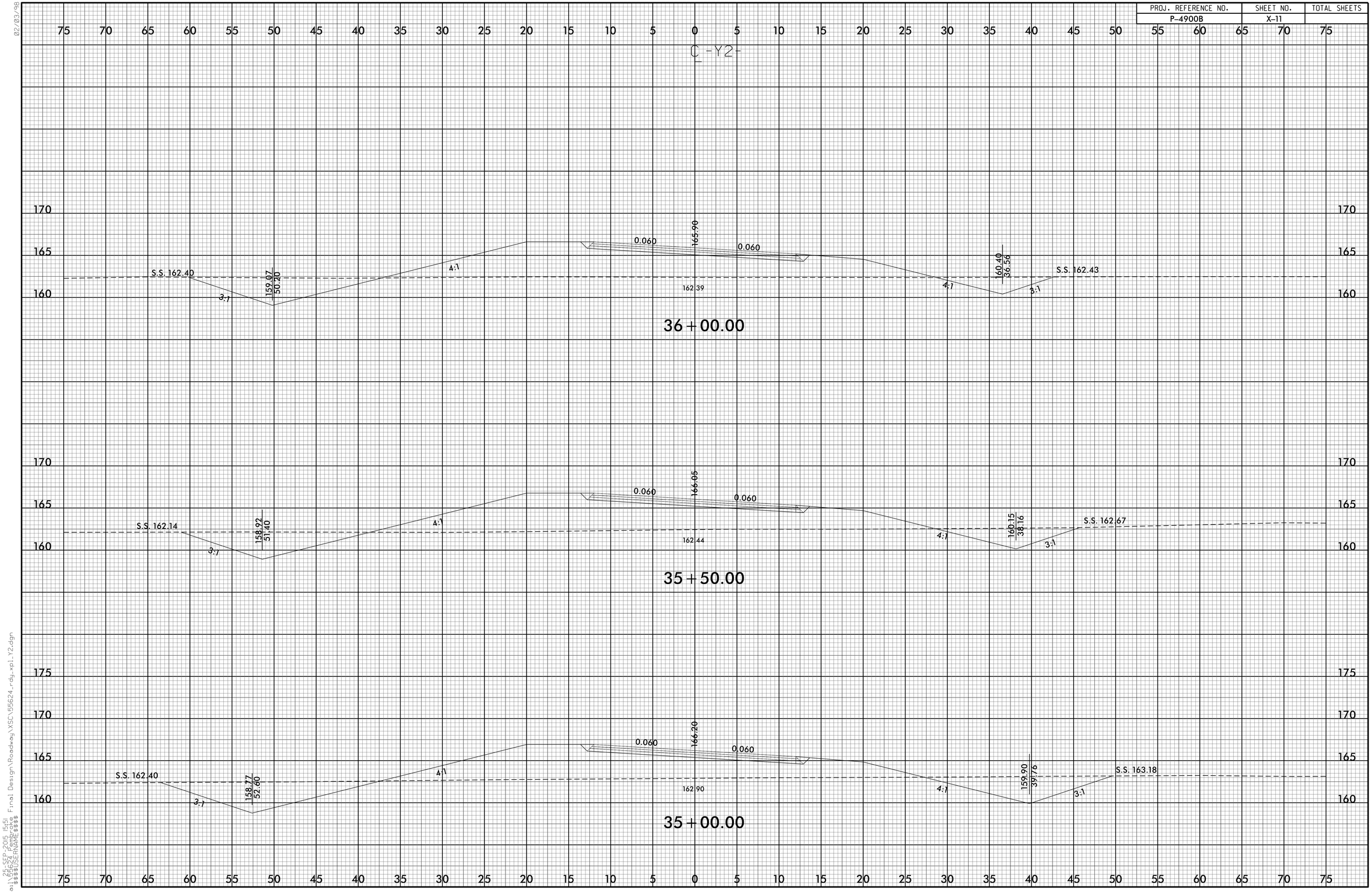
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-10	



02/03/98

25-SEP-2015 15:50
55624 Pembroke Final Design\Roadway\XSC\55624-rdy-xpl.Y2.dgn
$$$$USERNAME$$$$
98 Rail\

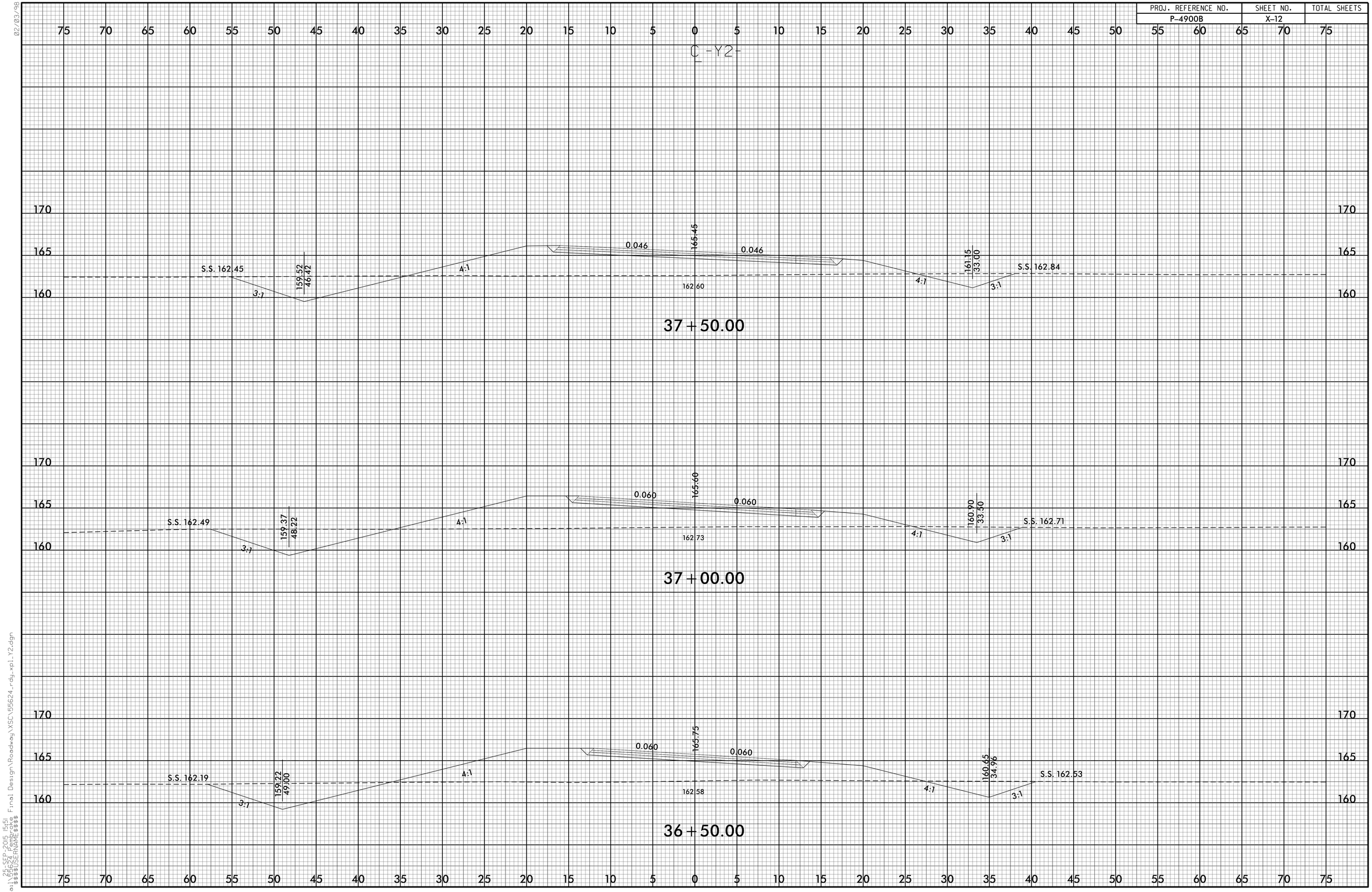
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-11	



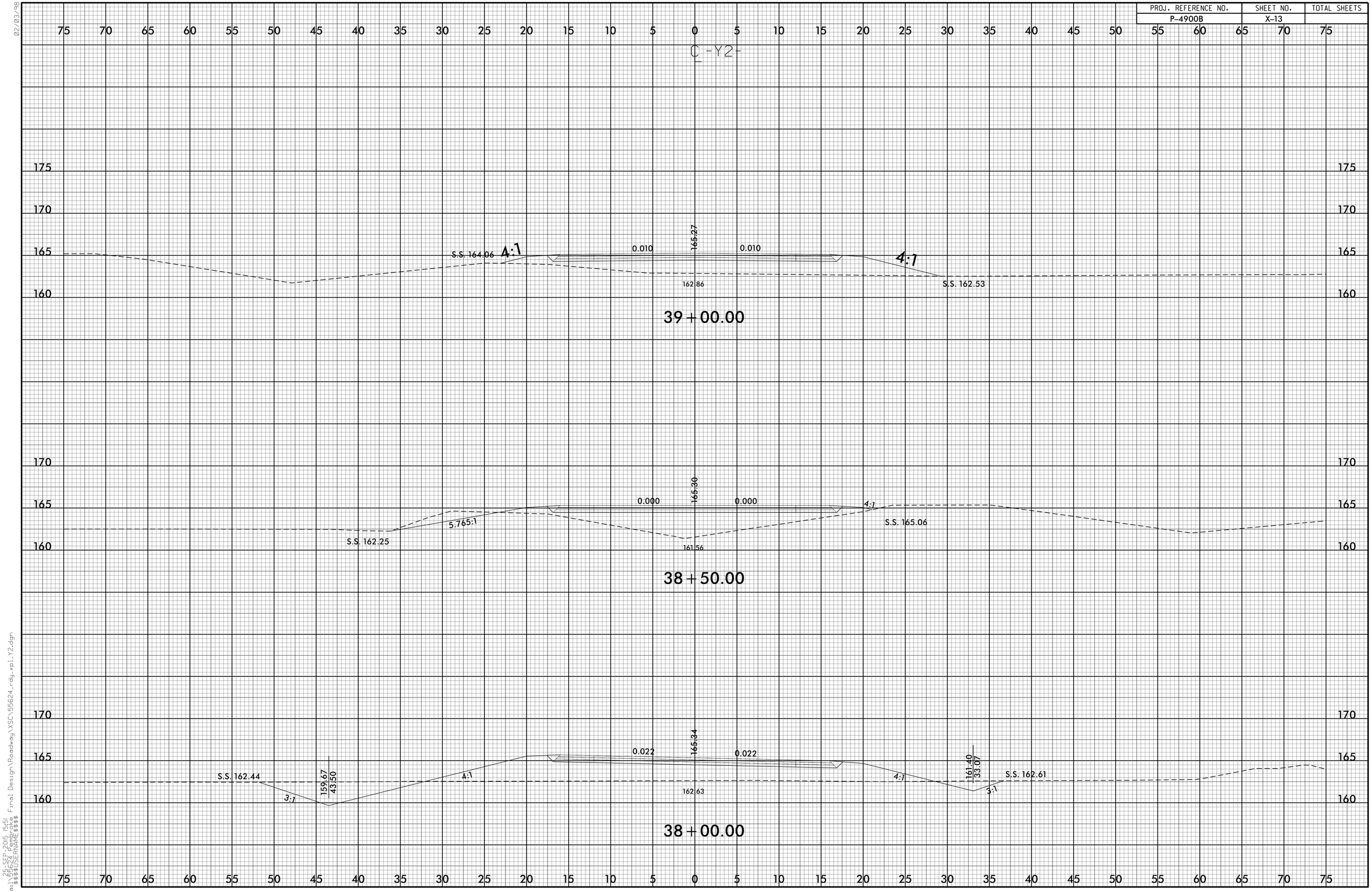
02/03/98

25-SEP-2015 15:51
98 Rail\5624 Pembroke Final Design\Roadway\XSC\55624-rdy-xpl-Y2.dgn
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-12	



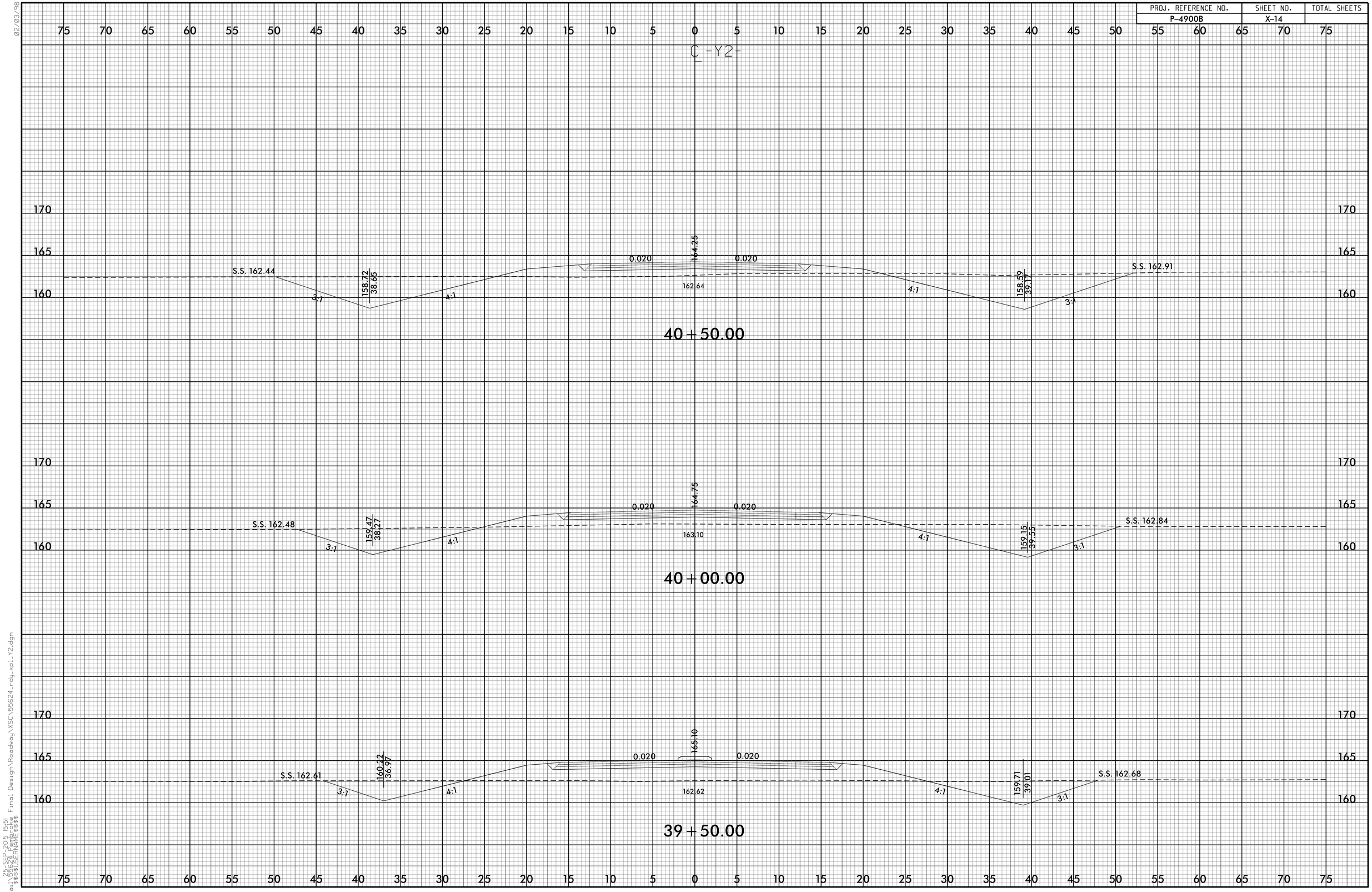
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-13	



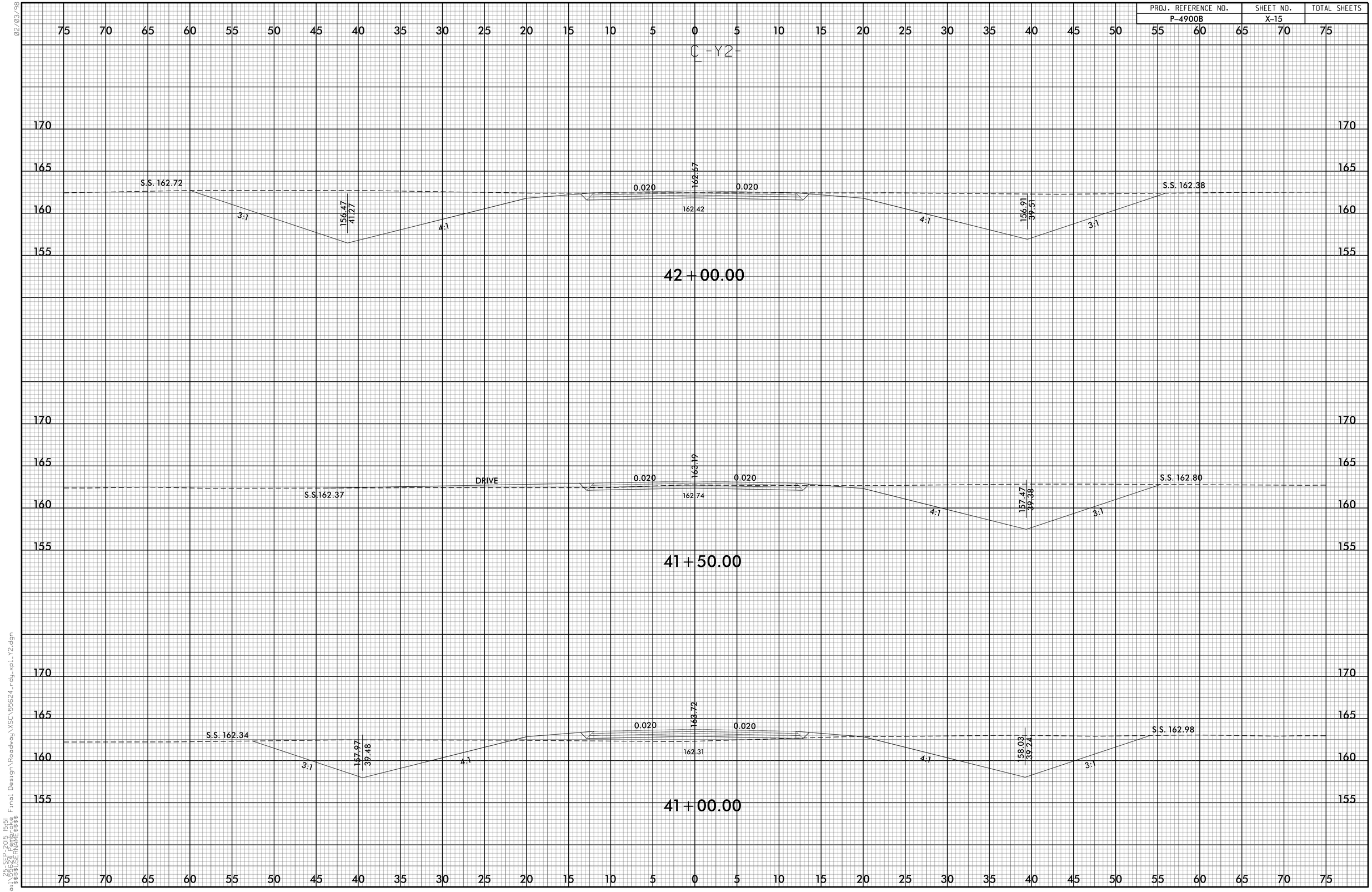
02/03/98

98 Rail\5624 Pembroke\Final Design\Roadway\XSC\55624-rdy-xpl_Y2.dgn 25-SEP-2015 15:51 $$$$USERNAME$$$$

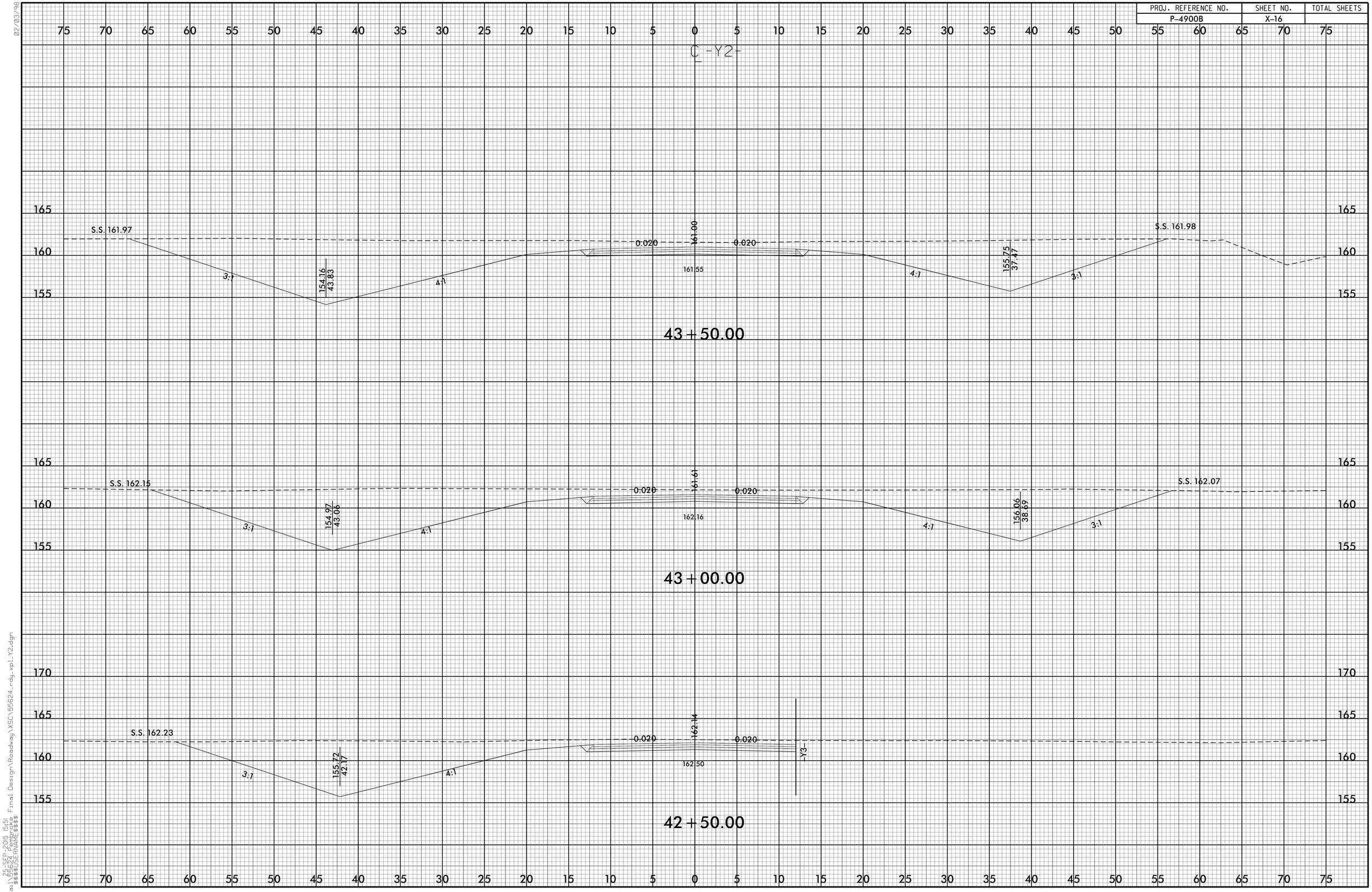
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-14	



PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-15	



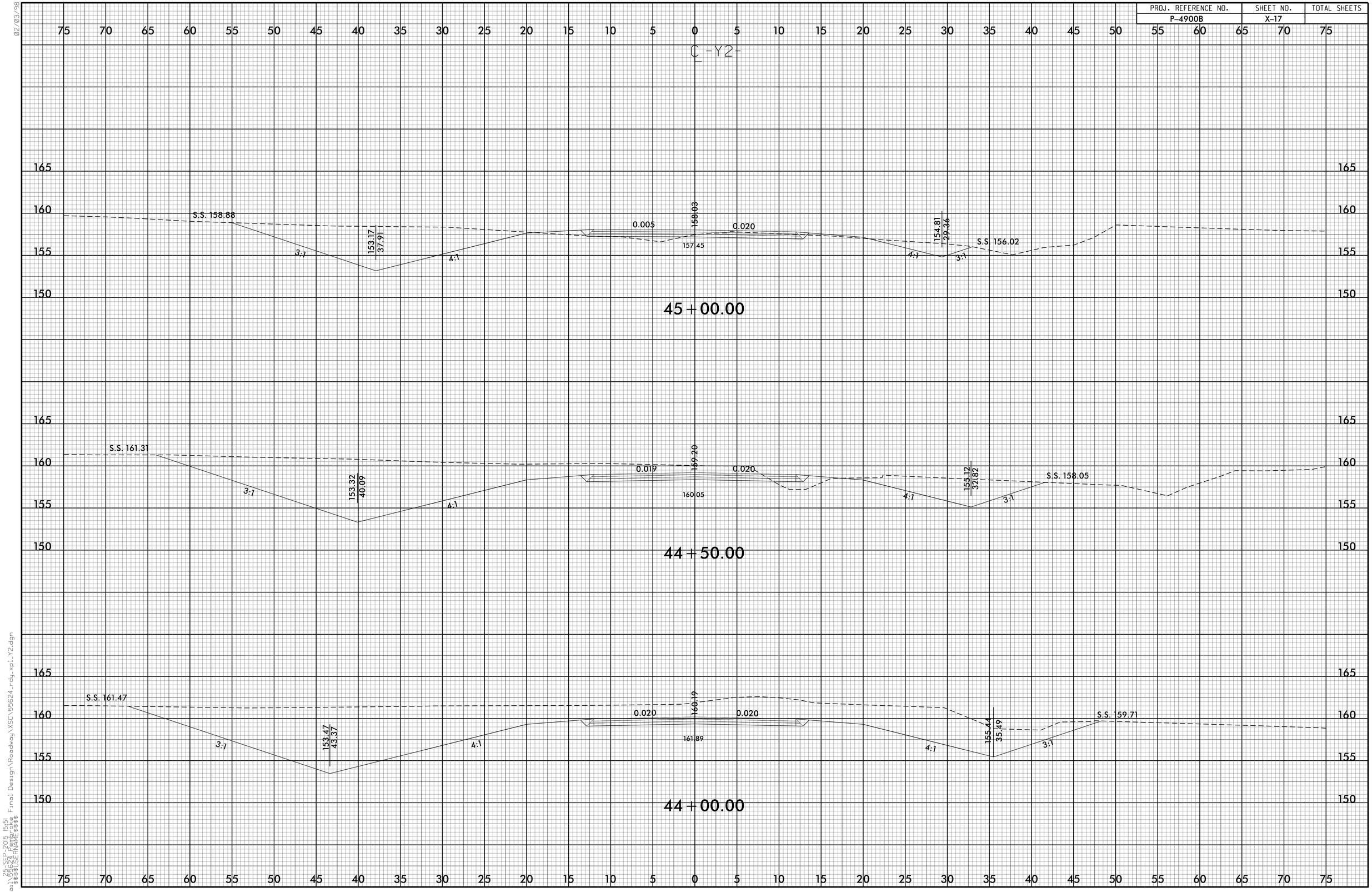
PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-16	



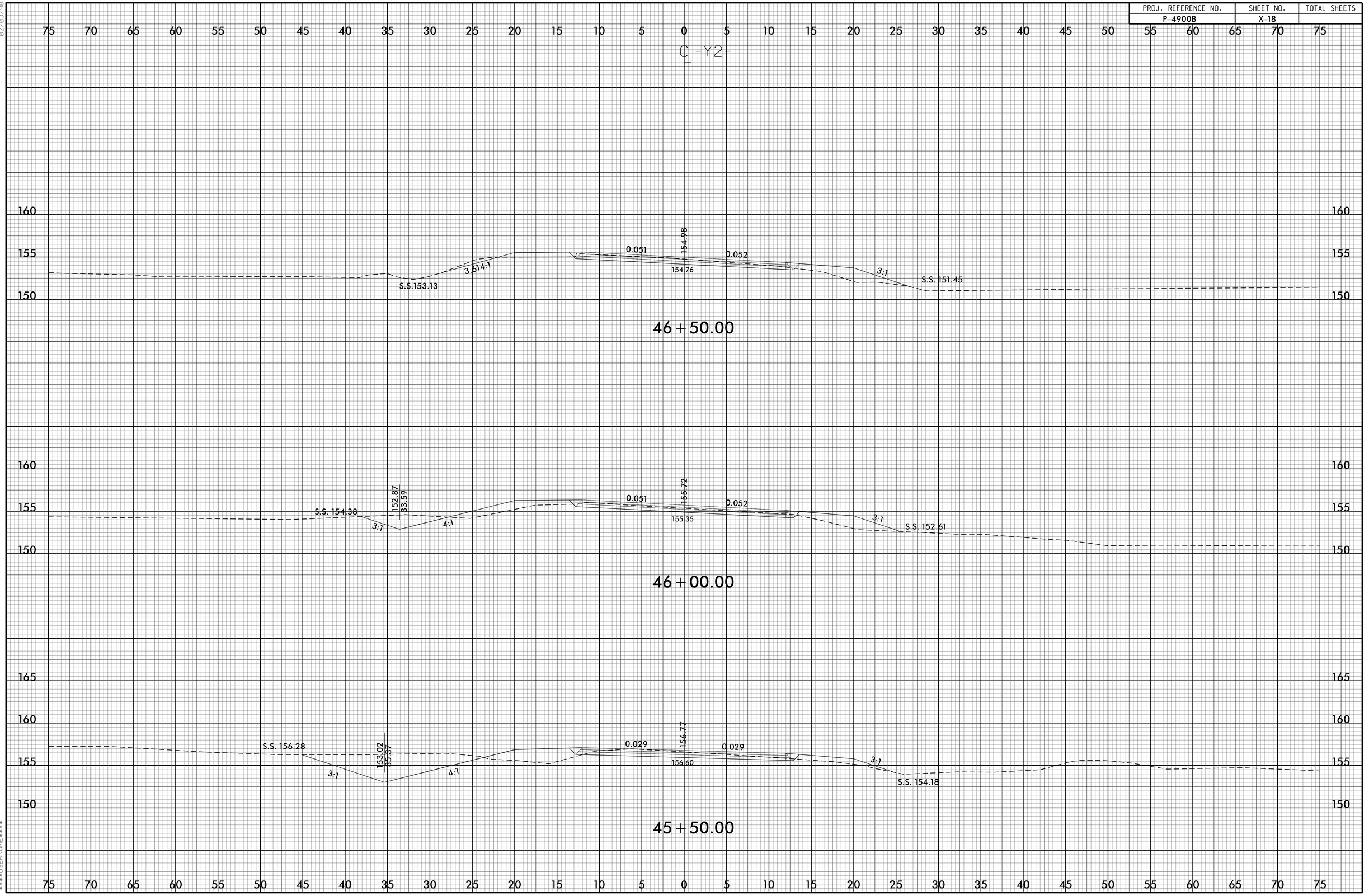
02/03/98

98 Rail\5624 Pembroke Final Design\Roadway\XSC\55624-rdy-xpl.Y2.dgn
25-SEP-2015 15:51
$$$$USERNAME$$$$

PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-17	

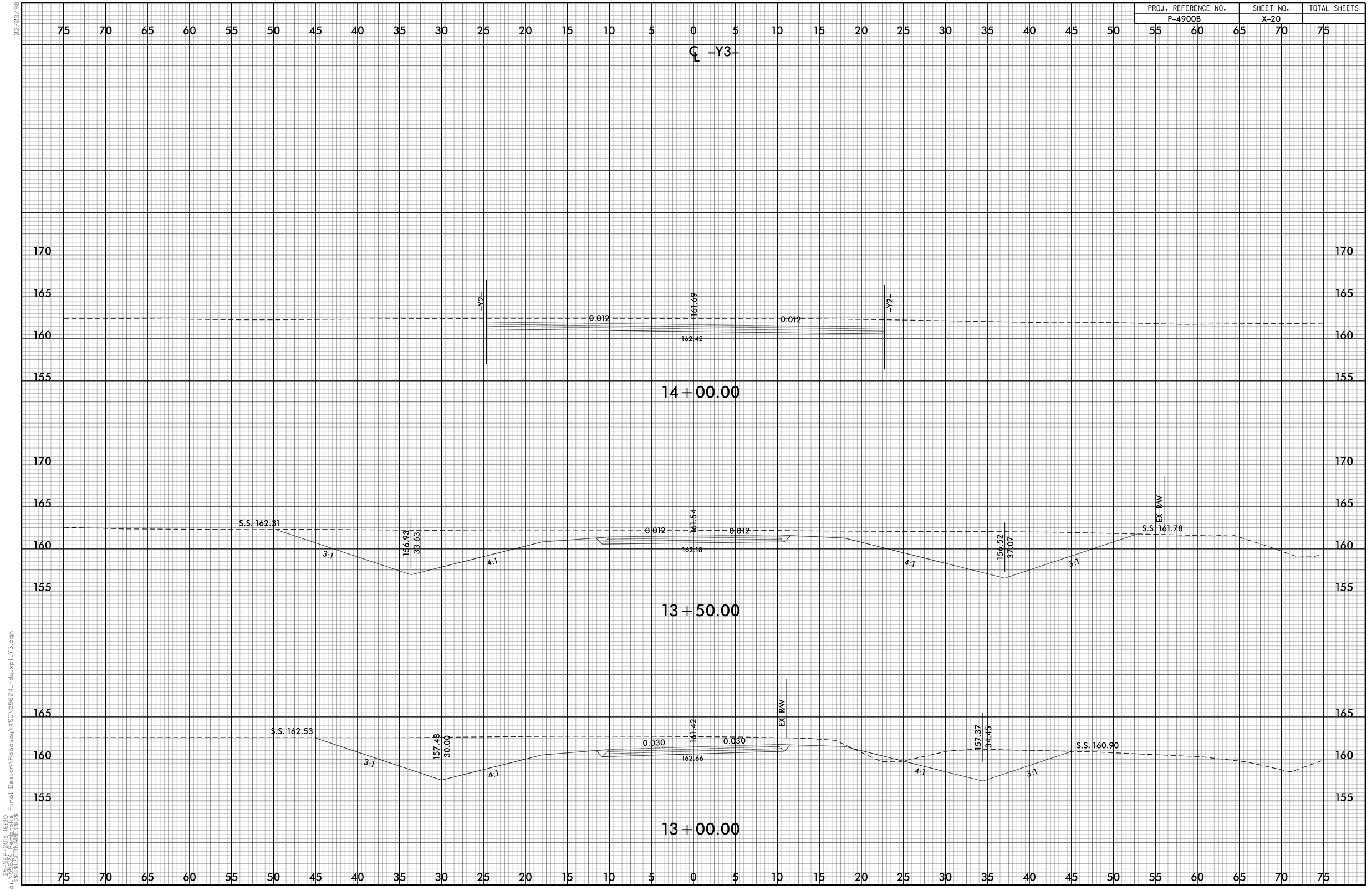


PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-18	



PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-19	

PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
P-4900B	X-20	



02/03/98

25-SEP-2015 16:30
55624 Pembroke Final Design\Roadway\XSC\55624-rdy-xpl_Y3.dgn
$$$$USERNAME$$$$
88 Rail\