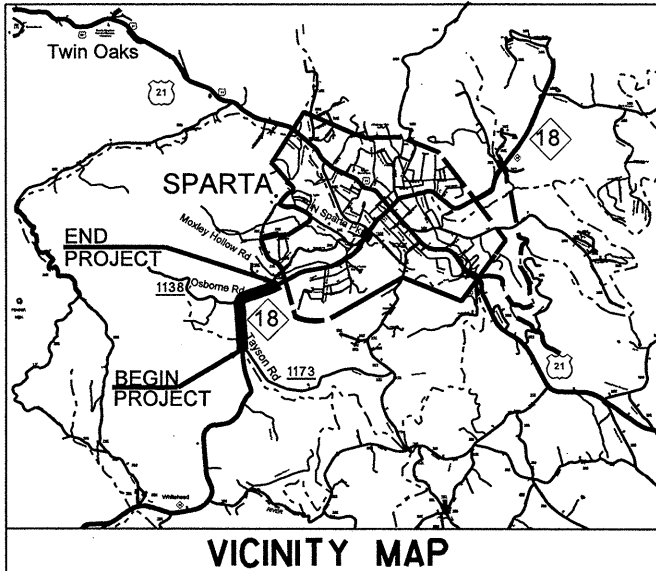


PROJECT: R-5160

CONTRACT:



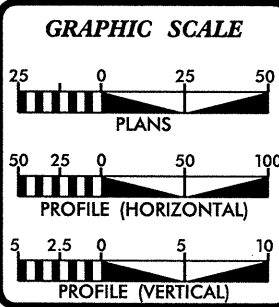
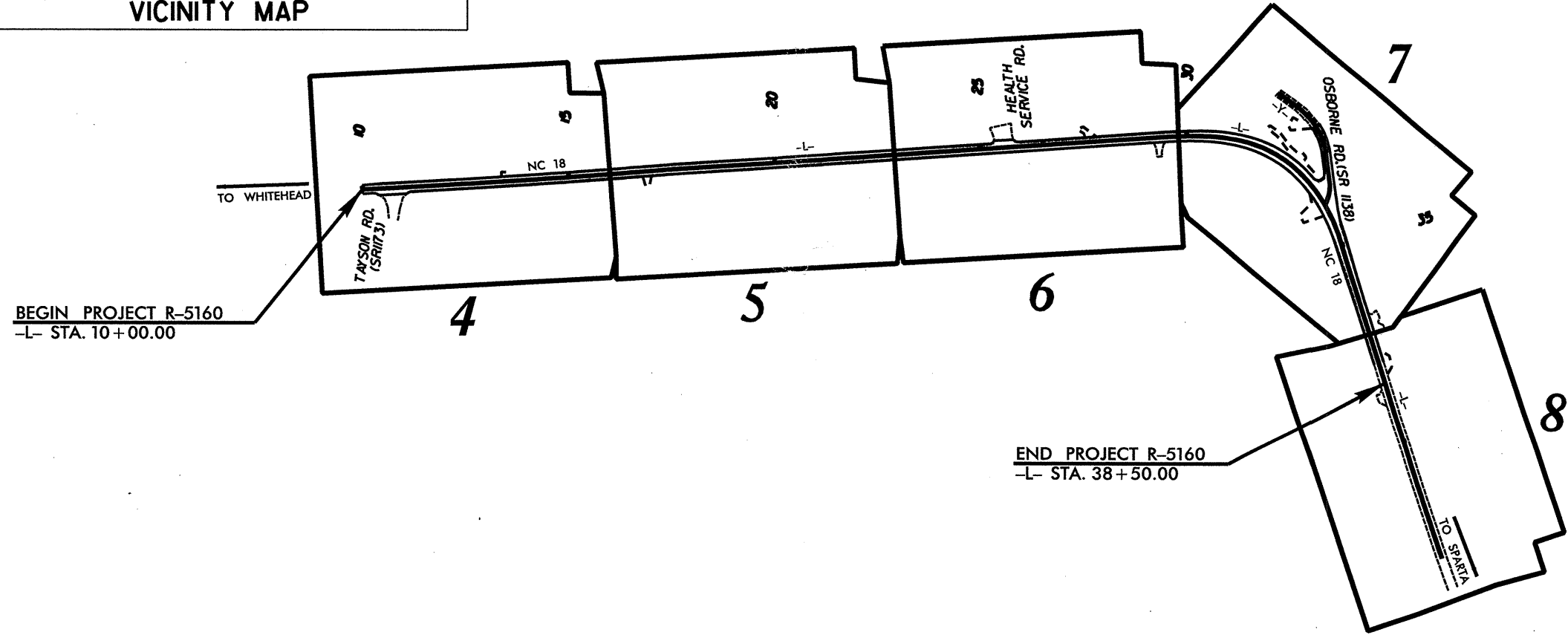
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ALLEGHANY COUNTY

LOCATION: NC 18 from SR 1173 (Tayson Road) to SR 1138 (Osborne Road)

TYPE OF WORK: Grading, Widening, Drainage, Milling and Resurfacing

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5160	1	
STATE PROGRAM	F.A. PROGRAM	DESCRIPTION	
45107.1.STI	STM-0018(14)	PE	
45107.3.STI	STM-0018(14)	CONSTR.	



DESIGN DATA

ADT 2007 =	3,200
ADT 2030 =	
DHV =	%
D =	%
T =	%
V =	%
TTST 6 %	DUAL 6 %

PROJECT LENGTH

TOTAL LENGTH ROADWAY PROJECT R-5160 = 0.540 MI

Prepared in the Office of:
DIVISION OF HIGHWAYS
801 STATESVILLE ROAD, NORTH WILKESBORO, NC 28659

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N/A

LETTING DATE: NOVEMBER 17, 2009

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

JOE L. LAWS, PE
DIVISION PROJECT MANAGER

MICHAEL A. PETTYJOHN, PE
DIVISION ENGINEER

STATE HIGHWAY DESIGN ENGINEER P.E.

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CONVENTIONAL SYMBOLS

*S.U.E = SUBSURFACE UTILITY ENGINEER

ROADS & RELATED ITEMS

Table listing symbols for roads and related items: Edge of Pavement, Curb, Prop. Slope Stakes Cut, Prop. Slope Stakes Fill, Prop. Woven Wire Fence, Prop. Chain Link Fence, Prop. Barbed Wire Fence, Prop. Wheelchair Ramp, Curb Cut for Future Wheelchair Ramp, Exist. Guardrail, Prop. Guardrail, Equality Symbol, Pavement Removal.

RIGHT OF WAY

Table listing symbols for right of way: Baseline Control Point, Existing Right of Way Marker, Exist. Right of Way Line w/Marker, Prop. Right of Way Line with Proposed RW Marker (Iron Pin & Cap), Prop. Right of Way Line with Proposed (Concrete or Granite) RW Marker, Exist. Control of Access Line, Prop. Control of Access Line, Exist. Easement Line, Prop. Temp. Construction Easement Line, Prop. Temp. Drainage Easement Line, Prop. Perm. Drainage Easement Line.

HYDROLOGY

Table listing symbols for hydrology: Stream or Body of Water, River Basin Buffer, Flow Arrow, Disappearing Stream, Spring, Swamp Marsh, Shoreline, Falls, Rapids, Prop Lateral, Tail, Head Ditches.

STRUCTURES

Table listing symbols for structures: MAJOR Bridge, Tunnel, or Box Culvert; Bridge Wing Wall, Head Wall and End Wall.

Table listing symbols for minor structures: MINOR Head & End Wall, Pipe Culvert, Footbridge, Drainage Boxes, Paved Ditch Gutter.

UTILITIES

Table listing symbols for utilities: Exist. Pole, Exist. Power Pole, Prop. Power Pole, Exist. Telephone Pole, Prop. Telephone Pole, Exist. Joint Use Pole, Prop. Joint Use Pole, Telephone Pedestal, U/G Telephone Cable Hand Hold, Cable TV Pedestal, U/G TV Cable Hand Hold, U/G Power Cable Hand Hold, Hydrant, Satellite Dish, Exist. Water Valve, Sewer Clean Out, Power Manhole, Telephone Booth, Cellular Telephone Tower, Water Manhole, Light Pole, H-Frame Pole, Power Line Tower, Pole with Base, Gas Valve, Gas Meter, Telephone Manhole, Power Transformer, Sanitary Sewer Manhole, Storm Sewer Manhole, Tank; Water, Gas, Oil, Water Tank With Legs, Traffic Signal Junction Box, Fiber Optic Splice Box, Television or Radio Tower, Utility Power Line Connects to Traffic Signal Lines Cut Into the Pavement.

Table listing symbols for utilities (continued): Recorded Water Line, Designated Water Line (S.U.E.*), Sanitary Sewer, Recorded Sanitary Sewer Force Main, Designated Sanitary Sewer Force Main(S.U.E.*), Recorded Gas Line, Designated Gas Line (S.U.E.*), Storm Sewer, Recorded Power Line, Designated Power Line (S.U.E.*), Recorded Telephone Cable, Designated Telephone Cable (S.U.E.*), Recorded U/G Telephone Conduit, Designated U/G Telephone Conduit (S.U.E.*), Unknown Utility (S.U.E.*), Recorded Television Cable, Designated Television Cable (S.U.E.*), Recorded Fiber Optics Cable, Designated Fiber Optics Cable (S.U.E.*), Exist. Water Meter, U/G Test Hole (S.U.E.*), Abandoned According to U/G Record, End of Information.

BOUNDARIES & PROPERTIES

Table listing symbols for boundaries and properties: State Line, County Line, Township Line, City Line, Reservation Line, Property Line, Property Line Symbol, Exist. Iron Pin, Property Corner, Property Monument, Property Number, Parcel Number, Fence Line, Existing Wetland Boundaries, High Quality Wetland Boundary, Medium Quality Wetland Boundaries, Low Quality Wetland Boundaries, Proposed Wetland Boundaries, Existing Endangered Animal Boundaries, Existing Endangered Plant Boundaries.

BUILDINGS & OTHER CULTURE

Table listing symbols for buildings and other culture: Buildings, Foundations, Area Outline, Gate, Gas Pump Vent or U/G Tank Cap, Church, School, Park, Cemetery, Dam, Sign, Well, Small Mine, Swimming Pool.

TOPOGRAPHY

Table listing symbols for topography: Loose Surface, Hard Surface, Change in Road Surface, Curb.

VEGETATION

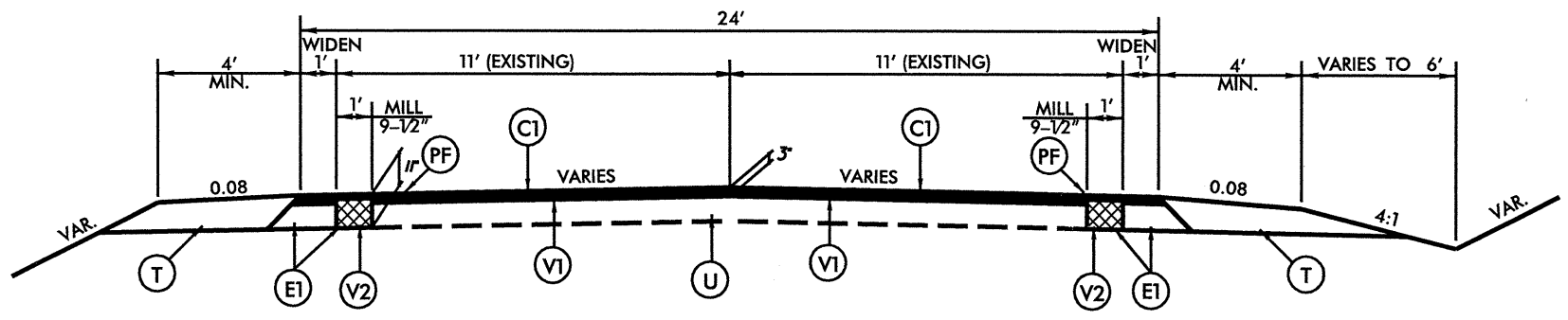
Table listing symbols for vegetation: Right of Way Symbol, Guard Post, Paved Walk, Bridge, Box Culvert or Tunnel, Ferry, Culvert, Footbridge, Trail, Footpath, Light House, Single Tree, Single Shrub, Hedge, Woods Line, Orchard, Vineyard.

RAILROADS

Table listing symbols for railroads: Standard Gauge, RR Signal Milepost, Switch.

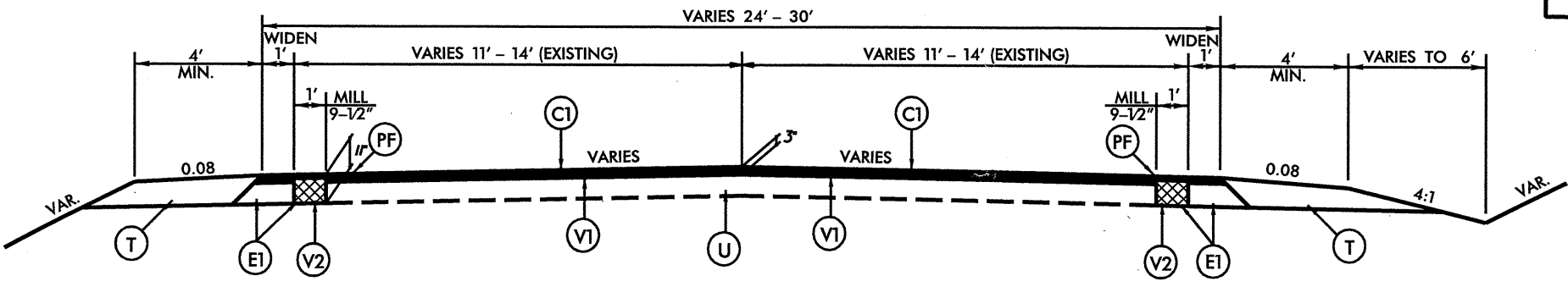
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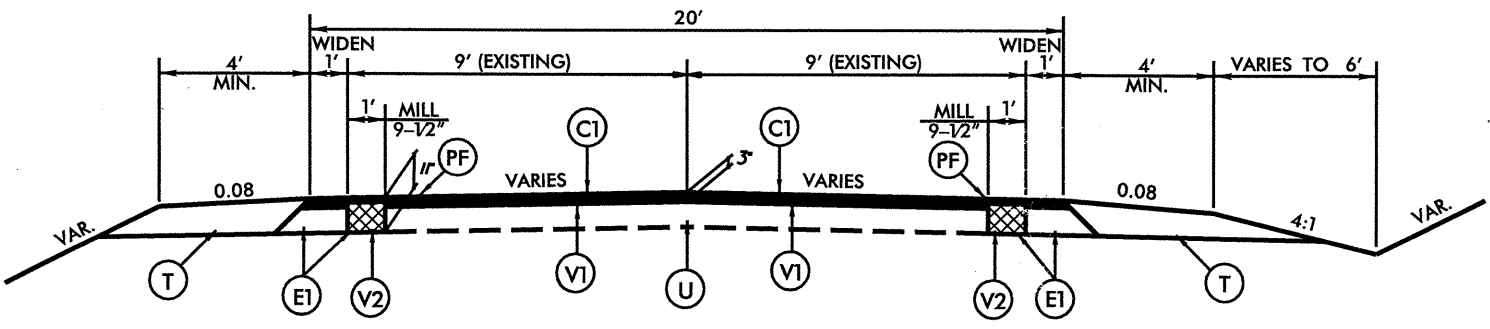
TYPICAL SECTION NO. 1

-L- STA. 10+00 TO -L- STA. 30+00 (MILL ASPHALT 1.5")
 -L- STA. 36+50 TO -L- STA. 38+00 (MILL ASPHALT 1.5")



TYPICAL SECTION NO. 2

-L- STA. 30+00 TO -L- STA. 36+50 (MILL ASPHALT 1.5")



TYPICAL SECTION NO. 3

-Y- STA. 10+00 TO -L- STA. 12+00 (MILL ASPHALT 1.5")

PAVEMENT SCHEDULE	
C1	3" ASPHALT CONCRETE SURFACE COURSE, TYPE S 9.5 B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E1	8" ASPHALT CONCRETE BASE COURSE, TYPE B25.0, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
PF	PAVEMENT FABRIC PLACED ACCORDING TO PROJECT SPECIAL PROVISIONS.
T	EARTH MATERIAL
U	EXISTING PAVEMENT.
V1	1-1/2" DEPTH MILLING ASPHALT PAVEMENT.
V2	9-1/2" DEPTH MILLING ASPHALT PAVEMENT.

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

R-5160: NC 18 FROM SR 1173 TO SR 1138

DIVISION II ALLEGHANY COUNTY

REVISIONS	INT.	DATE

SCALE: N/A DATE: 7/2009

N.C. DEPARTMENT of TRANSPORTATION
 DIVISION of HIGHWAYS
 DIVISION ELEVEN

PREPARED BY: J. L. LAWS
 REVIEWED BY:

23-SEP-2009 09:23 c:\projects\special details\eric\erwd\stds\06\stds to special details\30001\0300d01.dgn
 \$\$\$USERNAME\$\$\$

5/14

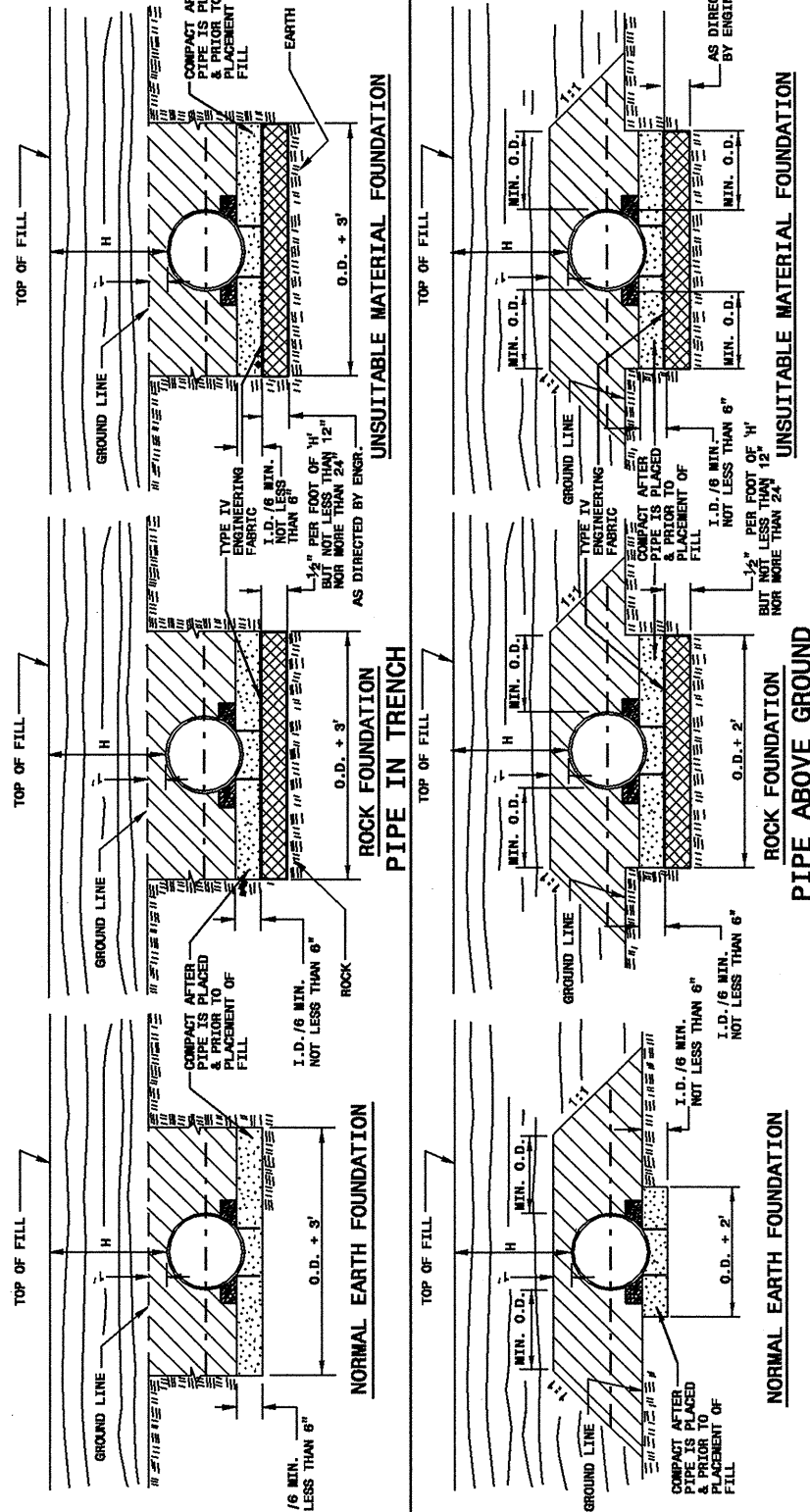
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

7-06

ENGLISH DETAIL DRAWING FOR
 METHOD OF PIPE INSTALLATION

FLEXIBLE PIPE

SHEET 1 OF 3
 300D01



GENERAL NOTES:
 I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
 O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
 H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

■ TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
 ■ LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE I UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTON.

--- SPRINGLINE OF PIPE
 ■ APPROVED SUITABLE LOCAL MATERIAL.
 ■ UNDISTURBED EARTH MATERIAL
 ■ SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH ENGINEERING FABRIC AS DIRECTED BY THE ENGINEER.

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

7-06

ENGLISH DETAIL DRAWING FOR
 METHOD OF PIPE INSTALLATION

FLEXIBLE PIPE

SHEET 1 OF 3
 300D01

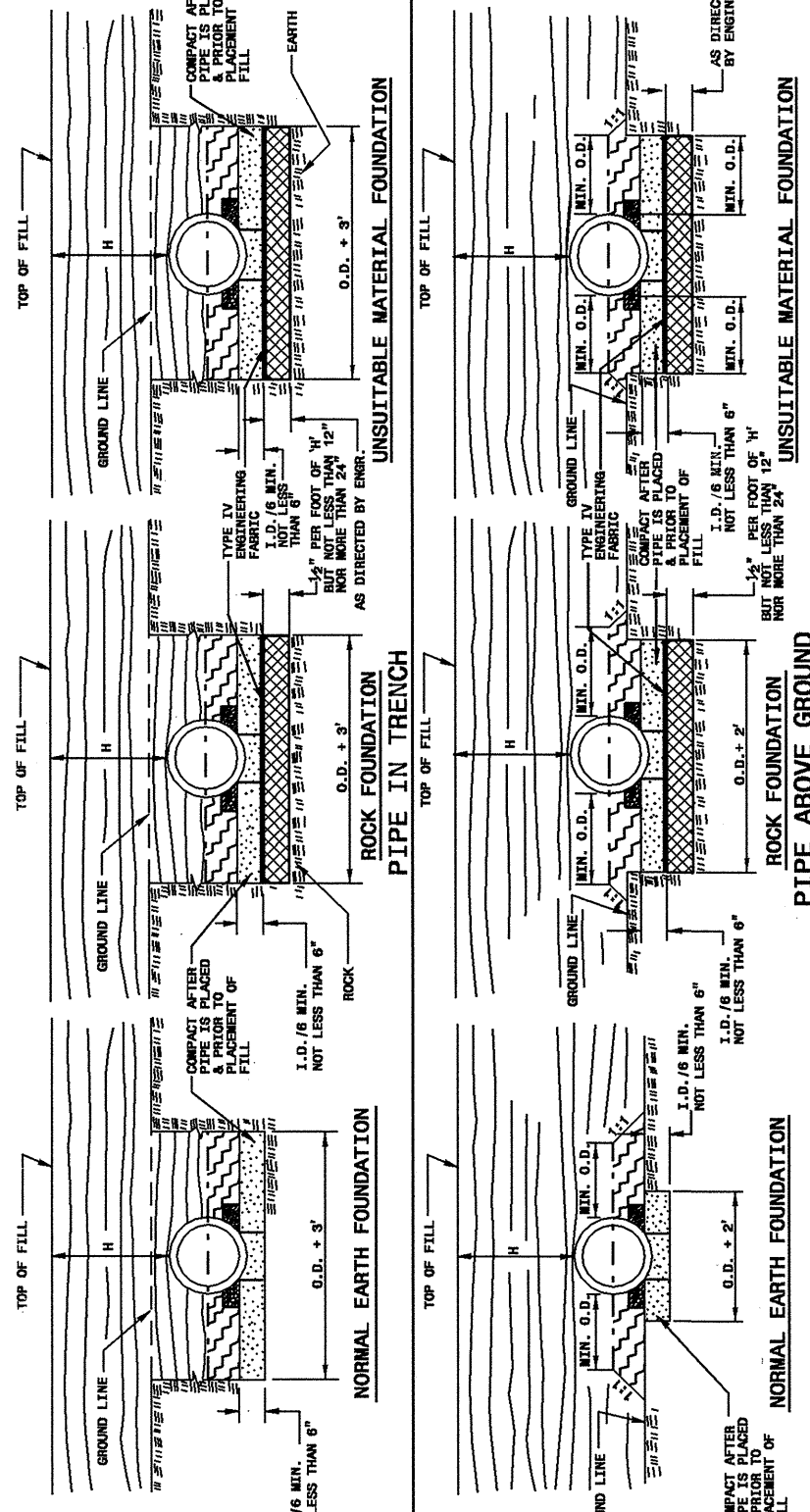
STATE OF NORTH CAROLINA
 DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 RALEIGH, N.C.

7-06

ENGLISH DETAIL DRAWING FOR
 METHOD OF PIPE INSTALLATION

RIGID PIPE

SHEET 2 OF 3
 300D01



GENERAL NOTES:
 I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
 O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
 H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

■ TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
 ■ LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE I UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTON.

--- SPRINGLINE OF PIPE
 ■ APPROVED SUITABLE LOCAL MATERIAL ABOVE SPRINGLINE.
 ■ UNDISTURBED EARTH MATERIAL
 ■ SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH ENGINEERING FABRIC AS DIRECTED BY THE ENGINEER.

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

7-06

ENGLISH DETAIL DRAWING FOR
 METHOD OF PIPE INSTALLATION

RIGID PIPE

SHEET 2 OF 3
 300D01

PROJECT SERVICES UNIT
 STANDARDS AND SPECIAL DESIGN
 Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: K Kempf DATE: 8-18-09
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC: c:\projects\stds\stds\stds\06\stds to special details\30001\0300d01.d

12-5160 1-2-A

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

7-06

ENGLISH DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
 FILL HEIGHT TABLES

SHEET 3 OF 3
300D01

FLEXIBLE PIPE

Round Corrugated Steel Pipe
 2 2/3 x 1/2 corrugation **

Diameter (Inches)	Minimum cover (Inches)	Maximum Height of Cover (feet)			
		(6a) 16	14	12	B
12	12	204	256		
15	12	162	204		
18	12	135	169	239	
21	12	115	145	204	
24	12	100	126	178	
30	12	79	100	142	
36	12	65	83	117	152
42	12	55	70	100	130
48	12	48	61	87	113
54	12	42	54	77	100
60	12			69	90
66	12				81
72	12				74
78	12				68
84	12				69

HDPE - * (Minimum fill) 2' for pipe diameters ≥ 12" and ≤ 60"
 * (Maximum fill) 20' for pipe diameters ≤ 24"
 17' for pipe diameters ≥ 30" and ≤ 60"

PVC - * (Minimum fill) 2' for pipe diameters ≥ 12" and ≤ 36"
 * (Maximum fill) 30' for pipe diameters ≥ 12" and ≤ 36"

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

RIGID PIPE

RCP - * (Minimum fill) 1' for Class IV & Class V
 2' for Class III & Class II
 * (Maximum fill) 10' - Class II pipe
 20' - Class III pipe
 30' - Class IV pipe
 40' - Class V pipe

(For fills > 40' & < 80' use LRFD Direct Design Method)

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

Round Corrugated Aluminum Pipe
 2 2/3 x 1/2 corrugation **

Diameter (Inches)	Minimum cover (Inches)	Maximum Height of Cover (feet)			
		(6a) 16	14	12	B
12	12	123	155	218	344
15	12	98	123	174	275
18	12	81	102	144	228
21	12	69	87	123	195
24	12	60	76	108	171
27	12	67	95	123	151
30	12	60	85	111	136
36	12	50	71	92	113
42	12	60	60	78	96
48	12	52	52	68	84
54	12	46	46	50	74
60	12			50	62
66	12				51
72	12				41

** FOR DIFFERENT CORRUGATIONS AND ARCH PIPES REFER TO ROADWAY DESIGN MANUAL OR MANUFACTURERS SPECIFICATION.

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

- CSP - AASHTO M36
- CAAP - AASHTO M196
- HDPE - AASHTO M294
- PVC - ASTM F949 or AASHTO M304

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

- RCP - AASHTO M170

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

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

7-06

ENGLISH DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
 FILL HEIGHT TABLES

SHEET 3 OF 3
300D01

PROJECT SERVICES UNIT
 STANDARDS AND SPECIAL DESIGN
 Office 919-250-4128 FAX 919-250-411

SEE PLATE FOR TITLE

ORIGINAL BY: K Kempf DATE: 5-16-09
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC: c:\ericward\stds\stdstodetails\30001\0300d01

PROJECT NO.	SHEET NO.	TOTAL NO.
R-5160	3	
45107.3.ST1		

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP	ROUTE	DESCRIPTION	TYP	LENGTH MI	WIDTH FT	CONSTRUCTION SURVEYING LS	GRADING LS	FOUNDATION COND. MAT., MINOR STRUCT. TON	FOUNDATION COND. FABRIC SY	15" SIDE DRAIN PIPE LF	18" SIDE DRAIN PIPE LF	15" RC PIPE CULVERTS, CLASS III LF	18" RC PIPE CULVERTS, CLASS III LF	24" RC PIPE CULVERTS, CLASS III LF	PIPE REMOVAL LF	INCIDENTAL STONE BASE TONS	1 1/2" MILLING SY	9 1/2" MILLING SY	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5B TONS	PG 64-22 PLANT MIX TONS	AC PLANT MIX (REPAIR) TONS
R-5160 45107.3.ST1	Allegheny	1	NC 18	FROM SR 1173 TO SR 1138	1,2	0.54	24	1	1	44	139	20	16	20	208	152	206	100	7,710	665	745	1,465	120	18
TOTAL FOR PROJ NO. R-5160						0.54		1	1	44	139	20	16	20	208	152	206	100	7,710	665	745	1,465	120	18
GRAND TOTAL						0.54		1	1	44	139	20	16	20	208	152	206	100	7,710	665	745	1,465	120	18

PROJECT NO	COUNTY	MAP	ROUTE	DESCRIPTION	TYP	LENGTH MI	WIDTH FT	PIPE COLLARS CY	MASONRY DRAINAGE STRUCTURES EA	FRAME WITH TWO GRATES, STD. 840.16 EA	PAVEMENT FABRIC SY	TEMPORARY SILT FENCE LF	STONE FOR EROSION CONTROL, CLASS B TON	SEDIMENT CONTROL STONE TON	TEMPORARY MULCHING ACR	SEED FOR TEMPORARY SEEDING LB	SILT EXCAVATION CY	MATTING FOR EROSION CONTROL SY	1/4" HARDWARE CLOTH LF	SEED & MULCHING AC	RESPONSE FOR EROSION CONTROL EA	RIP RAP, CLASS B TON	FILTER FABRIC FOR DRAINAGE SY
R-5160 45107.3.ST1	Allegheny	1	NC 18	FROM SR 1173 TO SR 1138	1,2	0.54	24	0.45	3	3	1,980	2,510	150	150	1.5	20	100	350	250	2.5	5	13	38
TOTAL FOR PROJ NO. R-5160						0.54		0.45	3	3	1,980	2,510	150	150	1.5	20	100	350	250	2.5	5	13	38
GRAND TOTAL						0.54		0.45	3	3	1,980	2,510	150	150	1.5	20	100	350	250	2.5	5	13	38

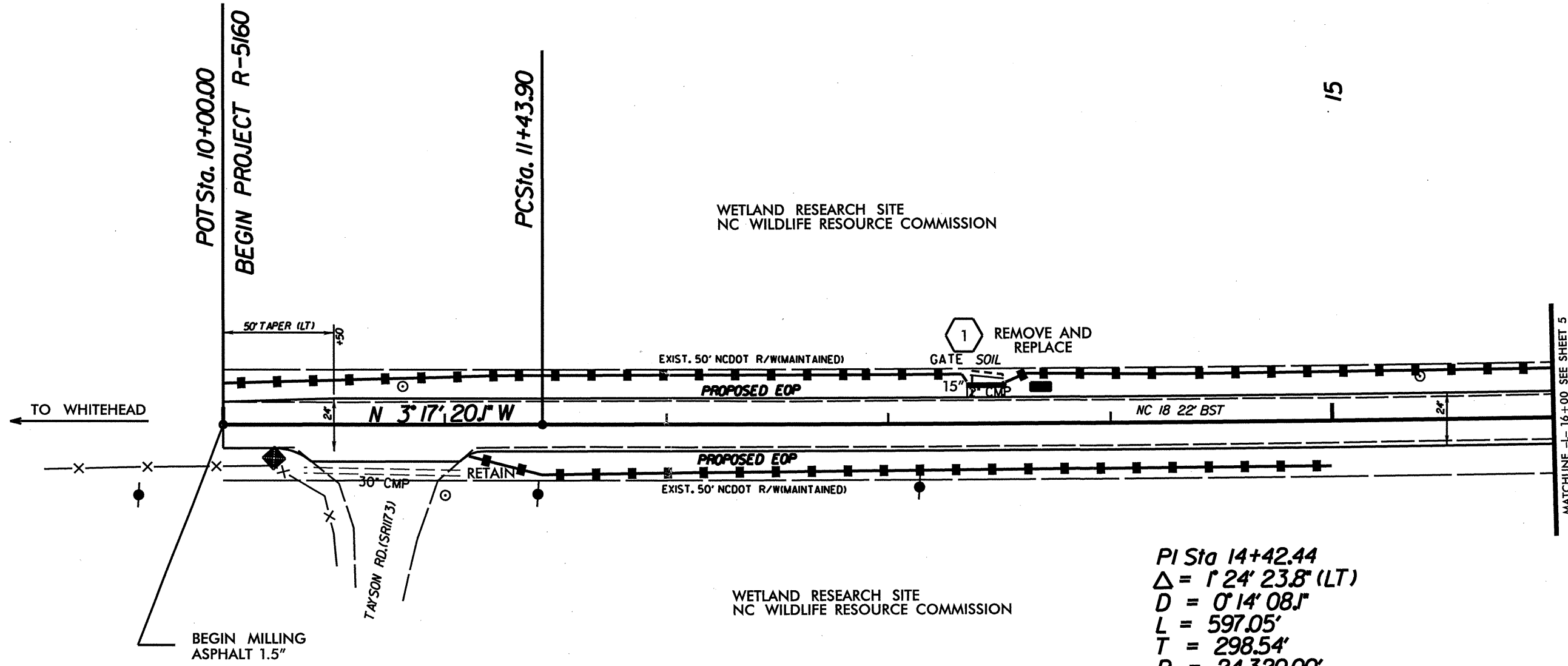
POLYUREA AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP	ROUTE	DESCRIPTION	4589000000-N	4810000000-E		4847000000-E		4905000000-N
					TRAFFIC CONTROL LS	4" WHITE PAINT LF	4" YELLOW PAINT LF	4" WHITE POLYUREA STANDARD BEADS LF	4" YELLOW POLYUREA STANDARD BEADS LF	SNOW PLOWABLE MARKERS EA
R-5160 45107.3.ST1	Allegheny	1	NC 18	FROM SR 1173 TO SR 1138	1.00	5,700	5,760	5,700	5,760	45
TOTAL FOR PROJ NO. R-5160					1	5,700	5,760	5,700	5,760	45
GRAND TOTAL					1	5,700	5,760	5,700	5,760	45

PROJECT REFERENCE NO. R-5160	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS

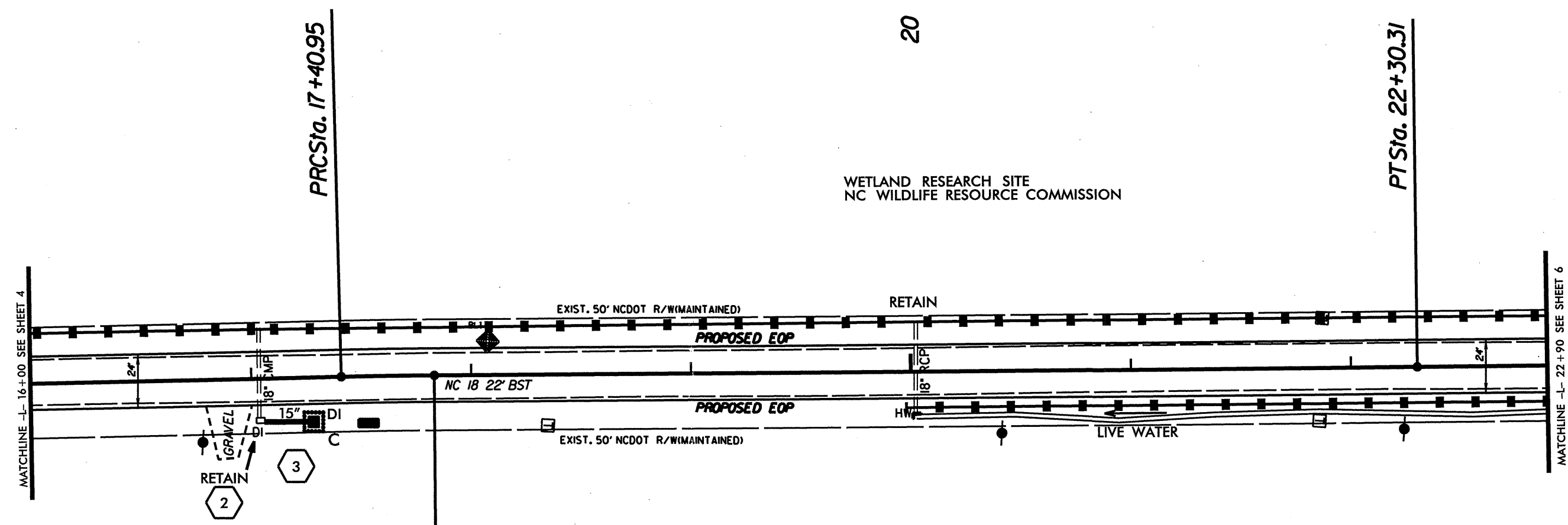
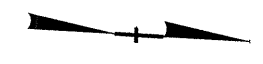


PI Sta 14+42.44
 $\Delta = 1' 24' 23.8" (LT)$
 $D = 0' 14' 08.1"$
 $L = 597.05'$
 $T = 298.54'$
 $R = 24,320.00'$

- EROSION AND SEDIMENT CONTROL MEASURES**
- SILT BASIN TYPE B
 - ROCK INLET PROTECTION TYPE C
 - TEMPORARY SILT FENCE
 - TEMPORARY ROCK SILT CHECK TYPE B

NOTE:
 TEMPORARY SILT FENCE SHALL BE INSTALLED AT THE TOE OF EXISTING FILL FROM -L- STA. 10+00 TO 25+30 LT AND -L- STA 10+00 TO 25+90 RT. NO ADDITIONAL FILL SHALL BE PLACED BEYOND THE TOE OF THE FILL IN THESE AREAS.

PROJECT REFERENCE NO. R-5160	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



PI Sta 17+62.06
 $\Delta = 1^{\circ}04'37''$ (RT)
 $D = 2^{\circ}33'02.7''$
 $L = 42.22'$
 $T = 21.11'$
 $R = 2,246.23'$

PRC Sta. 17+83.17

NOTE:
 TEMPORARY SILT FENCE SHALL BE INSTALLED AT THE TOE OF EXISTING FILL FROM -L- STA. 10+00 TO 25+30 LT AND -L- STA 10+00 TO 25+90 RT. NO ADDITIONAL FILL SHALL BE PLACED BEYOND THE TOE OF THE FILL IN THESE AREAS.

PI Sta 20+06.74
 $\Delta = 0^{\circ}22'21.7''$ (LT)
 $D = 0^{\circ}05'00.1''$
 $L = 447.14'$
 $T = 223.57'$
 $R = 68,742.11'$

REVISIONS

8/17/99

 SYSTEMS
 DESIGN

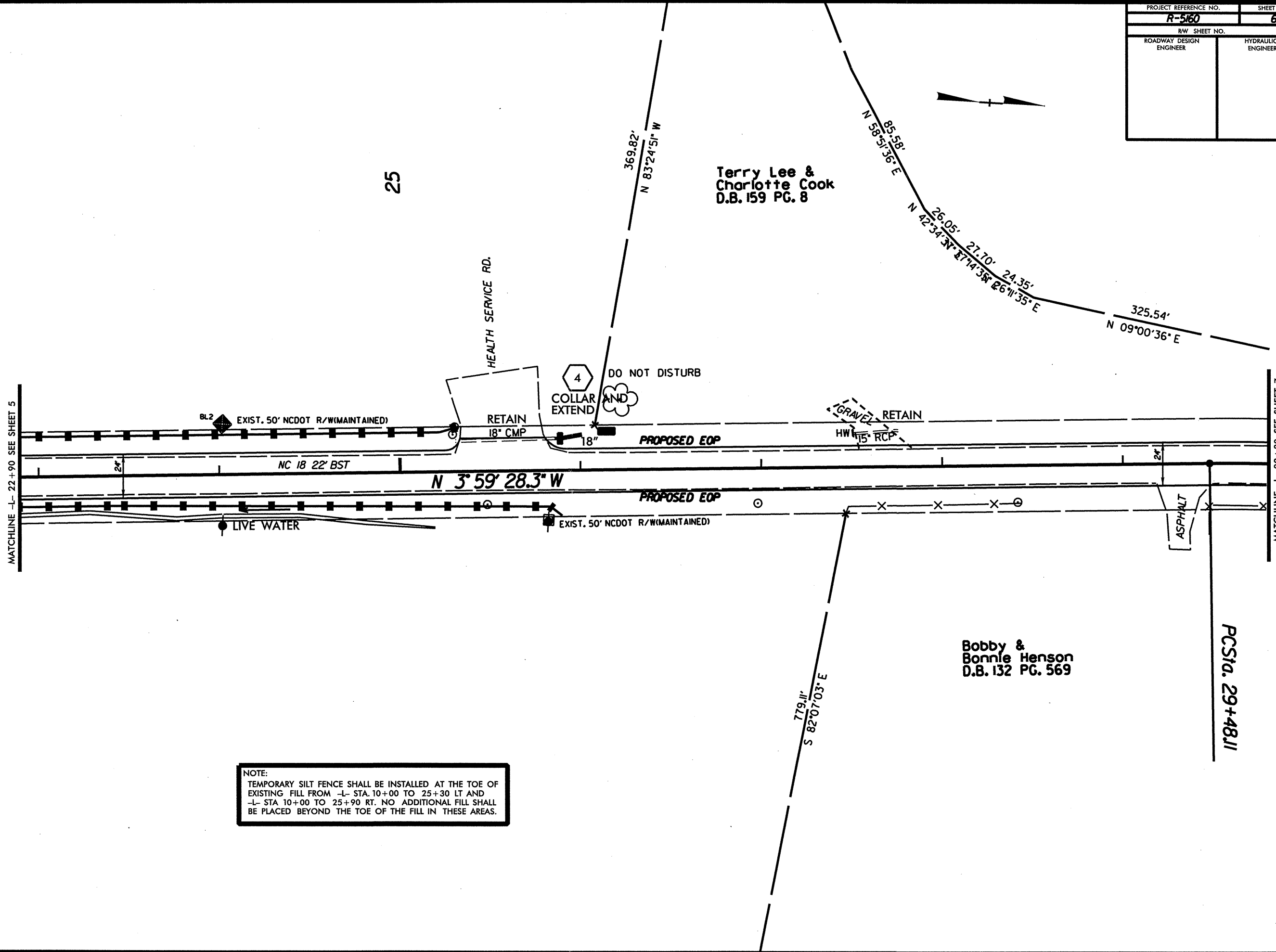
PROJECT REFERENCE NO.	SHEET NO.
R-5160	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

REVISIONS

*****SYTIME*****

*****EDG*****



NOTE:
 TEMPORARY SILT FENCE SHALL BE INSTALLED AT THE TOE OF EXISTING FILL FROM -L- STA. 10+00 TO 25+30 LT AND -L- STA 10+00 TO 25+90 RT. NO ADDITIONAL FILL SHALL BE PLACED BEYOND THE TOE OF THE FILL IN THESE AREAS.

PROJECT REFERENCE NO.	SHEET NO.
R-560	7
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

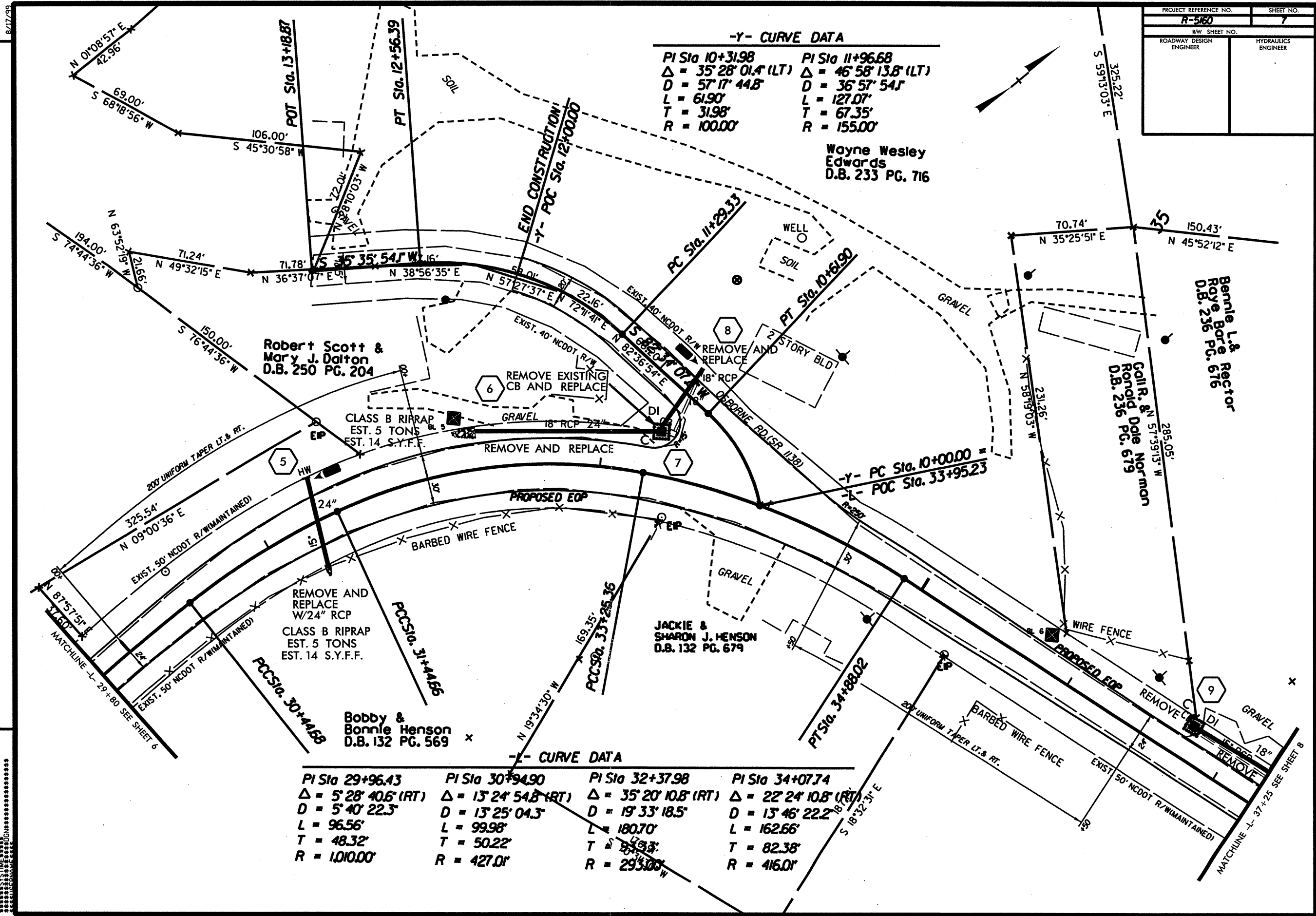
-Y- CURVE DATA

PI Sta 10+31.98	PI Sta 11+96.68
$\Delta = 35^\circ 28' 01.4" (LT)$	$\Delta = 46^\circ 58' 13.8" (LT)$
D = 57' 17" 44.8"	D = 36' 57" 54.1"
L = 61.90'	L = 127.07'
T = 31.98'	T = 67.35'
R = 100.00'	R = 155.00'

Wayne Wesley
Edwards
D.B. 233 PG. 716

-L- CURVE DATA

PI Sta 29+96.43	PI Sta 30+94.90	PI Sta 32+37.98	PI Sta 34+07.74
$\Delta = 5^\circ 28' 40.6" (RT)$	$\Delta = 13^\circ 24' 54.8" (RT)$	$\Delta = 35^\circ 20' 10.8" (RT)$	$\Delta = 22^\circ 24' 10.8" (RT)$
D = 5' 40" 22.3"	D = 13' 25" 04.3"	D = 19' 33" 18.5"	D = 13' 46" 22.2"
L = 96.56'	L = 99.98'	L = 180.70'	L = 162.66'
T = 48.32'	T = 50.22'	T = 85.33'	T = 82.38'
R = 1010.00'	R = 427.01'	R = 293.00'	R = 416.01'



REVISIONS

PROJECT REFERENCE NO. R-5160	SHEET NO. 8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

Bennie L. & Roye Bare Rector
D.B. 236 PG. 676

Bennie L. & Roye Bare Rector
D.B. 236 PG. 676

END PROJECT R-5160
-L- POT Sta. 38+50.00

PCSta. 40+24.53

40

MATCHLINE -L- 37+25 SEE SHEET 7

341.48'
S 16°17'28" E

10

REMOVE 15" RCP
18" GRAVEL

REMOVE 18" PVC

CLASS B RIPRAP
EST. 3 TONS
EST. 10 S.Y.F.F.

EXIST. 50' NCDOT R/W(MAINTAINED)

N 72° 38' 28.7" E

NC 18 24' BST

TIE TO EXISTING

ASPHALT

DI 15" RCP

DI

Bobby & Bonnie Henson
D.B. 67 PG. 405

EXIST. 50' NCDOT R/W(MAINTAINED)

N 10°06'30" W
109.13'

S 18°13'30" E
88.55'

Bobby & Bonnie Henson
D.B. 132 PG. 569

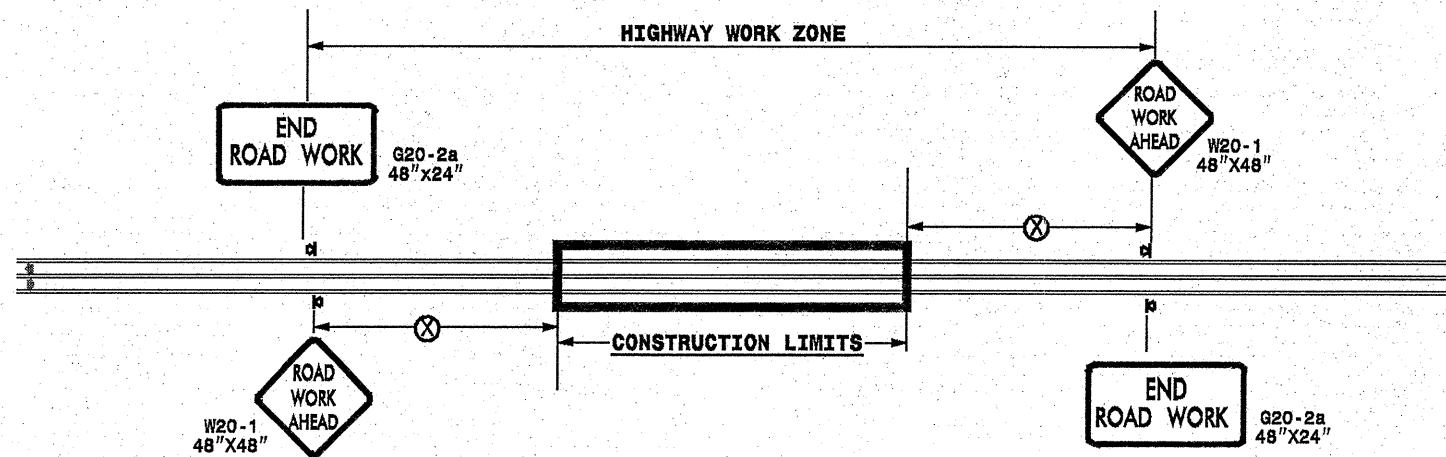
182.00'
S 66°23'30" W

367.48'
N 05°31'45" E

REVISIONS

SYSTEMS

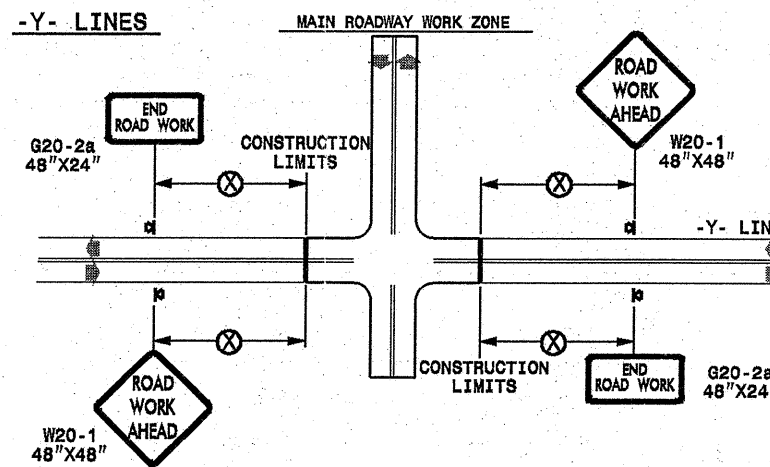
TWO-WAY UNDIVIDED ** (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
≤ 50	500'
≥ 55	1000'

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

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



DETAIL DRAWING
FOR TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCE WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

- ◁ PORTABLE SIGN
- ➔ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

APPROVED: _____	DATE: _____	DETAIL DRAWING FOR TWO-WAY UNDIVIDED ADVANCED WORK ZONE WARNING SIGNS	
SEAL	SCALE: NONE		REVISIONS
	DATE: _____		7-98 10/01
	DWG. BY: _____		10-98 03/04
	DESIGN BY: _____		01/01 11/04
	REVIEWED BY: _____		

16-SEP-2009 14:26 s:\signing\resurfacing\2009\div\c202395_451073.stl_r-5160_allegany.nc\c202395_451073.stl_r-5160_2wayundivurbfrwys\july2006.por-table.dgn