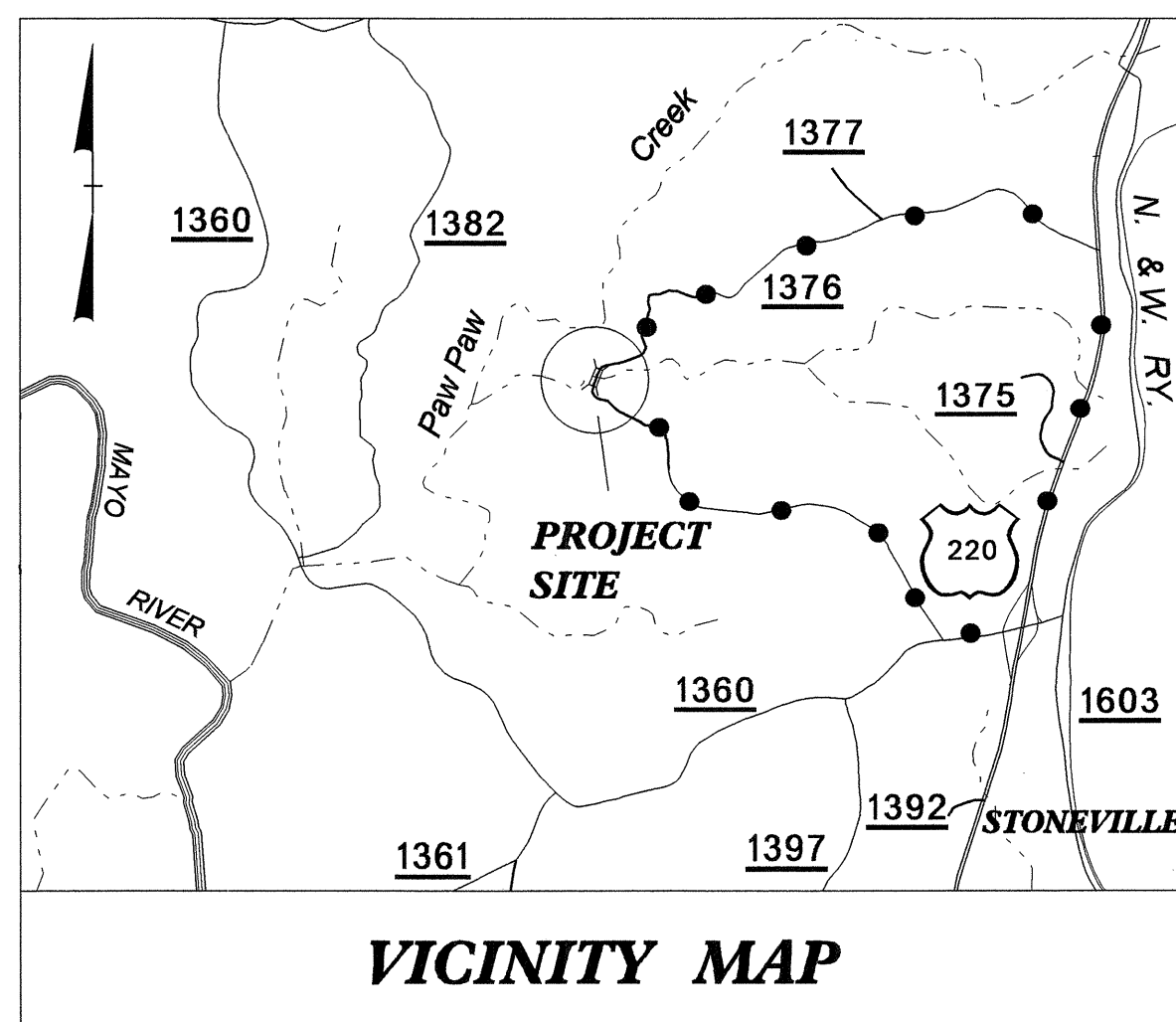


09/08/99

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



VICINITY MAP

--- DENOTES DETOUR

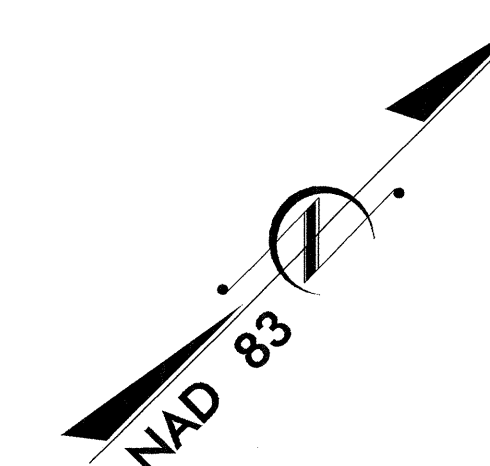
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROCKINGHAM COUNTY

LOCATION: BRIDGE NO. 165 OVER A CREEK ON
SR 1376 (PAW PAW ROAD)

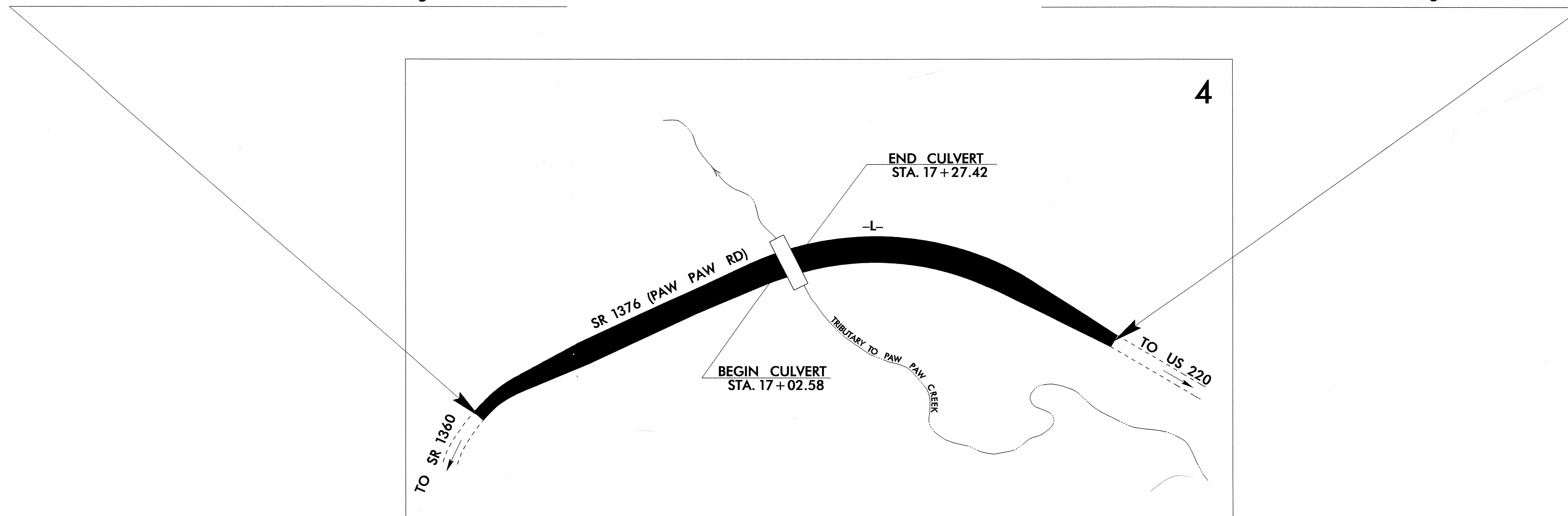
TYPE OF WORK: GRADING, DRAINAGE, AND
CULVERT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3900	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33336.1.1	BRZ-1376(1)	P.E.	
33336.2.1	BRZ-1376(1)	RW & UTIL	
33336.3.1	BRZ-1376(1)	CONST.	



STA. 13+50.00 -L- BEGIN TIP PROJECT B-3900

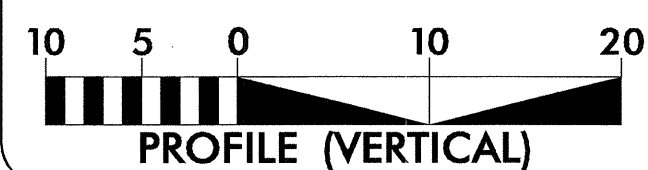
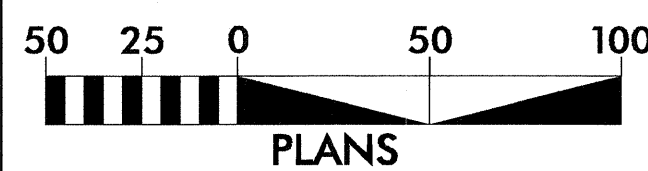
STA. 20+50.00 -L- END TIP PROJECT B-3900



TIP PROJECT: B-3900

CONTRACT: C201583

GRAPHIC SCALES



DESIGN DATA

ADT 2007 = 125
 ADT 2027 = 208
 DHV = 10 %
 D = 60 %
 T = 3 % *
 ** V = 60 MPH
 * TTST 1% DUAL 2%
 FUNC. CLASS = LOCAL RURAL
 ** DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED (30 MPH)

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-3900 = 0.128 MILE
 LENGTH OF STRUCTURE TIP PROJECT B-3900 = 0.005 MILE
 TOTAL LENGTH OF TIP PROJECT B-3900 = 0.133 MILE

Prepared In the Office of:
DIVISION OF HIGHWAYS
 1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

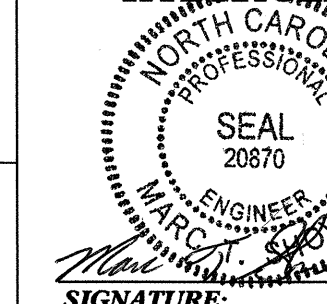
RIGHT OF WAY DATE:
 OCTOBER 3, 2005

LETTING DATE:
 JULY 17, 2007

BRENDA MOORE, PE
 PROJECT ENGINEER

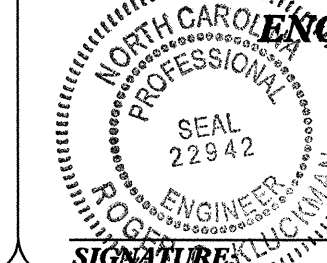
ROGER KLUCKMAN, PE
 PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER



SIGNATURE: [Signature] 4-17-07 P.E.

ROADWAY DESIGN ENGINEER



SIGNATURE: [Signature] 4-17-07 P.E.

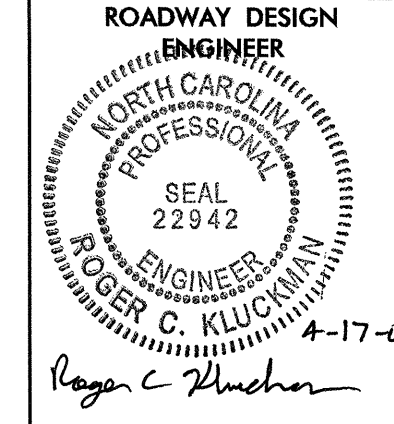
DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

[Signature] P.E.

STATE DESIGN ENGINEER
 DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION

APPROVED
 DIVISION ADMINISTRATOR DATE

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 \$\$\$USERNAME\$\$\$



SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS
1-B	CONVENTIONAL SYMBOLS
1-C	SURVEY CONTROL SHEET
2	TYPICAL SECTIONS AND PAVEMENT SCHEDULE
3	SUMMARY OF QUANTITIES
3-A	GUARDRAIL SUMMARY AND EARTHWORK SUMMARY
4	PLAN SHEET
5	PROFILE SHEET
TCP-1 THRU TCP-5	TRAFFIC CONTROL PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
UO-1 THRU UO-2	UTILITY BY OTHERS PLANS
X-1A	CROSS-SECTION SUMMARY
X-1 THRU X-5	CROSS-SECTIONS
C-1 THRU C-3	STRUCTURE PLANS

GENERAL NOTES:

2006 SPECIFICATIONS
EFFECTIVE: 07-18-06
REVISED: 07-18-06

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 SURFACE ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED SURFACE 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.

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

BERM DITCHES:
BERM DITCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 240.01 AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

GUARDRAIL:
THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

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

UTILITIES:
THE UTILITY OWNER ON THIS PROJECT IS Energy United
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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

2006 ROADWAY STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated July 18, 2006 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
240.01	Guide for Berm Ditch 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
806.02	Granite Right-of-Way Marker
815.03	Pipe Underdrain and Blind Drain
816.04	Markers for Drainage Structure and Concrete Pad
862.01	Guardrail Placement
862.02	Guardrail Installation
876.04	Drainage Ditches with Class 'B' Rip Rap

EFF. 07-18-06
REV. 01-02-07

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL SYMBOLS

*S.U.E = SUBSURFACE UTILITY ENGINEER

ROADS & RELATED ITEMS

Edge of Pavement	-----
Curb	-----
Prop. Slope Stakes Cut	----- C -----
Prop. Slope Stakes Fill	----- F -----
Prop. Woven Wire Fence	○ ○
Prop. Chain Link Fence	□ □
Prop. Barbed Wire Fence	◇ ◇
Prop. Wheelchair Ramp	(WCR)
Curb Cut for Future Wheelchair Ramp	(CCFR)
Exist. Guardrail	-----
Prop. Guardrail	-----
Equality Symbol	⊕
Pavement Removal	XXXXXX

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	-----
R/W Marker (Iron Pin & Cap)	▲
Prop. Right of Way Line with Proposed	-----
(Concrete or Granite) R/W Marker	⊕
Exist. Control of Access Line	⊕
Prop. Control of Access Line	⊕
Exist. Easement Line	----- E -----
Prop. Temp. Construction Easement Line	----- E -----
Prop. Temp. Drainage Easement Line	----- TDE -----
Prop. Perm. Drainage Easement Line	----- PDE -----

HYDROLOGY

Stream or Body of Water	-----
River Basin Buffer	----- BZ -----
Flow Arrow	→
Disappearing Stream	-----
Spring	○
Swamp Marsh	-----
Shoreline	-----
Falls, Rapids	-----
Prop Lateral, Tail, Head Ditches	----- FLOW -----

STRUCTURES

MAJOR	
Bridge, Tunnel, or Box Culvert	----- CONC -----
Bridge Wing Wall, Head Wall and End Wall	(CONC WW)

MINOR

Head & End Wall	----- CONC HW -----
Pipe Culvert	-----
Footbridge	-----
Drainage Boxes	□ CB
Paved Ditch Gutter	-----

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	⊕
UG Telephone Cable Hand Hold	⊕
Cable TV Pedestal	⊕
UG TV Cable Hand Hold	⊕
UG 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	----- TS -----

Recorded Water Line	----- W -----
Designated Water Line (S.U.E.*)	----- W -----
Sanitary Sewer	----- SS -----
Recorded Sanitary Sewer Force Main	----- FSS -----
Designated Sanitary Sewer Force Main(S.U.E.*)	----- FSS -----
Recorded Gas Line	----- G -----
Designated Gas Line (S.U.E.*)	----- G -----
Storm Sewer	----- S -----
Recorded Power Line	----- P -----
Designated Power Line (S.U.E.*)	----- P -----
Recorded Telephone Cable	----- T -----
Designated Telephone Cable (S.U.E.*)	----- T -----
Recorded U/G Telephone Conduit	----- TC -----
Designated U/G Telephone Conduit (S.U.E.*)	----- TC -----
Unknown Utility (S.U.E.*)	----- ?UTL -----
Recorded Television Cable	----- TV -----
Designated Television Cable (S.U.E.*)	----- TV -----
Recorded Fiber Optics Cable	----- FO -----
Designated Fiber Optics Cable (S.U.E.*)	----- FO -----
Exist. Water Meter	⊕
U/G Test Hole (S.U.E.*)	⊕
Abandoned According to U/G Record	ATTUR
End of Information	E.O.I.

BOUNDARIES & 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	----- X -----
Existing Wetland Boundaries	----- WW & ISBW -----
High Quality Wetland Boundary	----- HO WLB -----
Medium Quality Wetland Boundaries	----- MO WLB -----
Low Quality Wetland Boundaries	----- LO WLB -----
Proposed Wetland Boundaries	----- WLB -----
Existing Endangered Animal Boundaries	----- EAB -----
Existing Endangered Plant Boundaries	----- EPB -----

BUILDINGS & 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

Loose Surface	-----
Hard Surface	-----
Change in Road Surface	-----
Curb	-----
Right of Way Symbol	R/W
Guard Post	⊕ GP
Paved Walk	-----
Bridge	-----
Box Culvert or Tunnel	-----
Ferry	-----
Culvert	-----
Footbridge	-----
Trail, Footpath	-----
Light House	-----

VEGETATION

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

RAILROADS

Standard Gauge	-----
RR Signal Milepost	-----
Switch	-----

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PROJECT REFERENCE NO.	SHEET NO.
B-3900	IC
LOCATION AND SURVEYS	

B-3900 SURVEY CONTROL SHEET

NOTES

I. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:

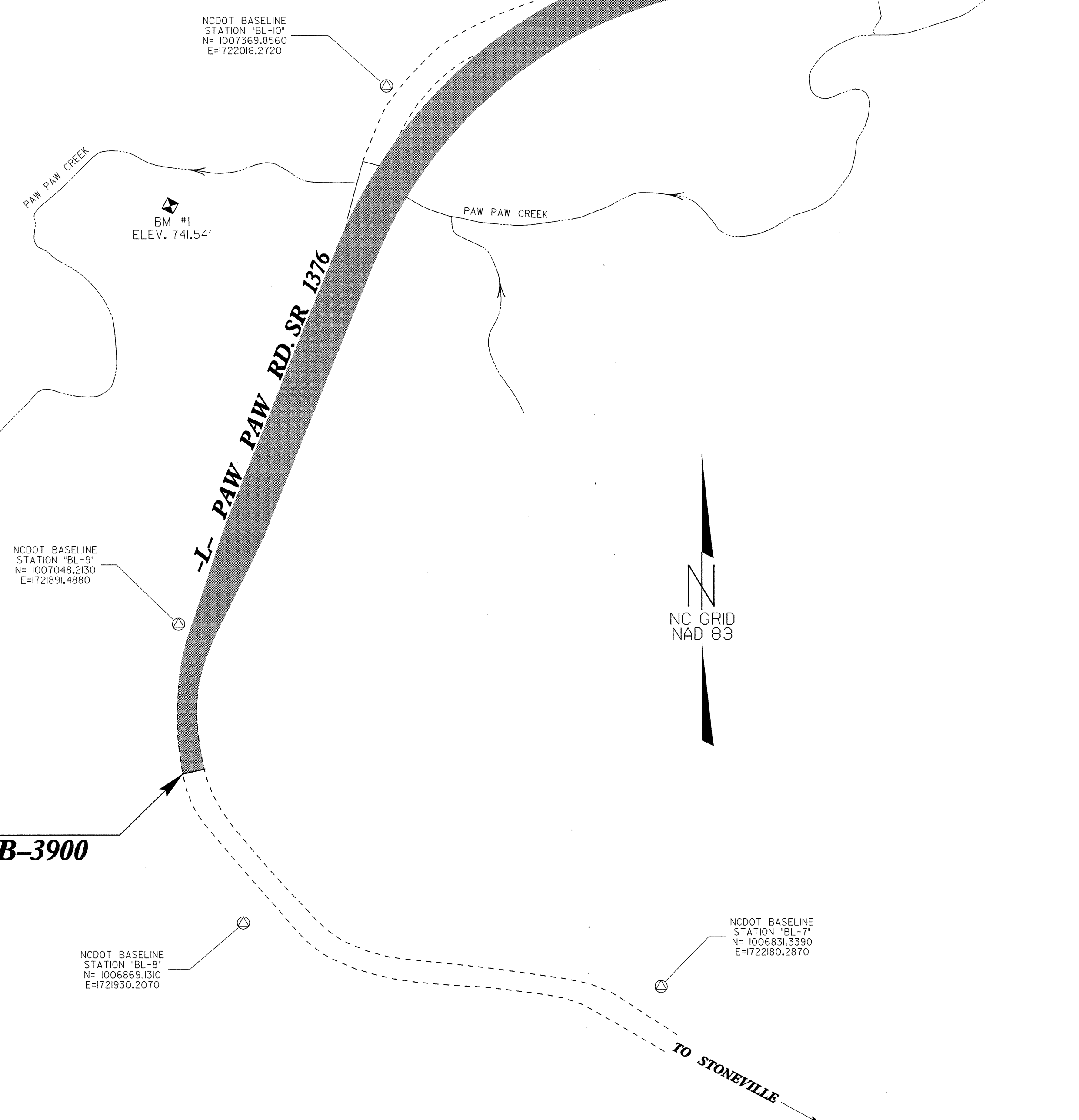
HTTP://WWW.DOH.DOT.STATE.NC.US/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/

FILE: b3900_ls_control_050422.txt

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

STA. 20+50.00 -L-
END TIP PROJECT B-3900

NCDOT BASELINE STATION "BL-11"
N= 1007614.3040
E=1722806.0570



CONTROL DATA

BL POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
7	BL-7	1006831.3390	1722180.2870	819.79	10+21.66	27.28 RT
8	BL-8	1006869.1310	1721930.2070	785.19	12+59.52	27.40 LT
9	BL-9	1007048.2130	1721891.4880	767.80	14+33.19	14.79 LT
10	BL-10	1007369.8560	1722016.2720	743.55	17+68.36	35.80 LT
11	BL-11	1007614.3040	1722806.0570	777.94		OUTSIDE PROJECT LIMITS

BENCHMARK DATA

.....
 BM1 ELEVATION = 741.54
 N 1007298 E 1721887
 L STATION 16+63 113 LEFT
 RR SPIKE IN BASE OF 14" SPRUCE PINE

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "B3900-2"
 WITH NAD 83 STATE PLANE GRID COORDINATES OF
 NORTHING: 1005969.4448(ft) EASTING: 1723205.0444(ft)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.000074460
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B3900-2" TO -L- STATION 13+50.00 IS
 N 52° 45' 05" W 1,638.59'
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

STA. 13+50.00 -L-
BEGIN TIP PROJECT B-3900

NCDOT BASELINE STATION "BL-8"
N= 1006869.1310
E=1721930.2070

NCDOT BASELINE STATION "BL-7"
N= 1006831.3390
E=1722180.2870

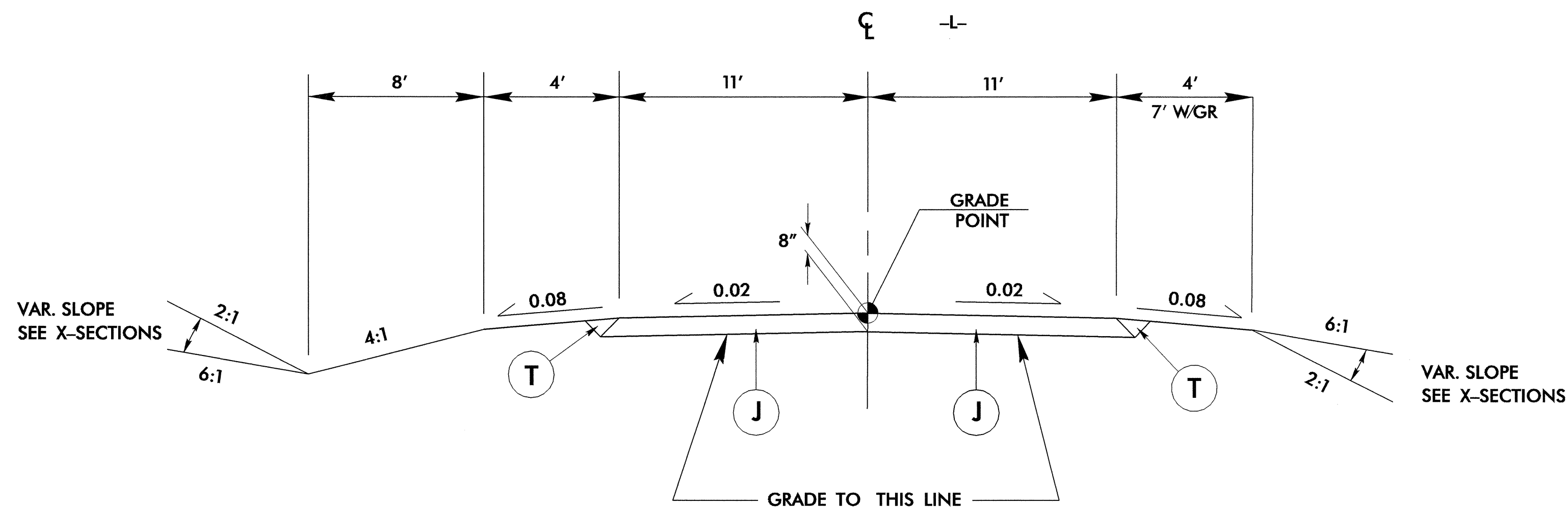
N
NC GRID
NAD 83

⊙ 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 NGS ONLINE POSITIONING USER SERVICE (OPUS)
 NOTE: DRAWING NOT TO SCALE

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FINAL PAVEMENT SCHEDULE	
J	PROP. 8" AGGREGATE BASE COURSE.
T	EARTH MATERIAL.

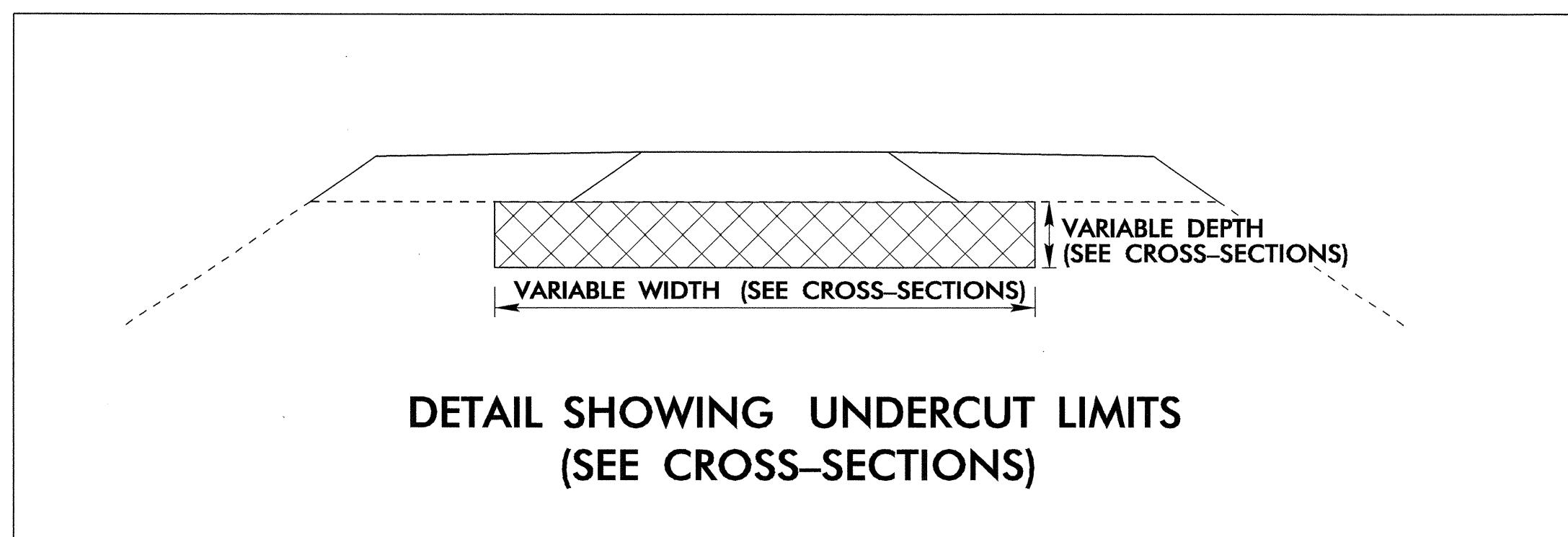
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



TYPICAL SECTION NO. 1

USE TYPICAL SECTION NO. 1
-L- STA. 13+50.00 TO STA. 20+50.00

TRANSITION SHOULDER AND DITCH FROM EXISTING
-L- STA. 13+50.00 TO STA. 14+00.00 (RT)



DETAIL SHOWING UNDERCUT LIMITS
(SEE CROSS-SECTIONS)

USE UNDERCUT DETAIL
-L- STA. 18+75.00 TO STA. 20+50.00

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201583

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
0001000000-E	200	Lump Sum		CLEARING & GRUBBING .. ACRE(S)
0008000000-E	200	1	ACR	SUPPLEMENTARY CLEARING & GRUBBING
0022000000-E	225	1,020	CY	UNCLASSIFIED EXCAVATION
0036000000-E	225	365	CY	UNDERCUT EXCAVATION
0080000000-E	SP	100	TON	CLASS IV SUBGRADE STABILIZATION
0106000000-E	230	6,500	CY	BORROW EXCAVATION
0134000000-E	240	45	CY	DRAINAGE DITCH EXCAVATION
0141000000-E	240	150	LF	BERM DITCH CONSTRUCTION
0195000000-E	265	100	CY	SELECT GRANULAR MATERIAL
0196000000-E	270	100	SY	FABRIC FOR SOIL STABILIZATION
1011000000-N	500	Lump Sum		FINE GRADING
1121000000-E	520	785	TON	AGGREGATE BASE COURSE
2000000000-N	806	16	EA	RIGHT OF WAY MARKERS
2022000000-E	815	22.4	CY	SUBDRAIN EXCAVATION
2033000000-E	815	16.8	CY	SUBDRAIN FINE AGGREGATE
2044000000-E	815	100	LF	6" PERFORATED SUBDRAIN PIPE
2055000000-E	815	3	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS
2066000000-N	815	1	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET
2077000000-E	815	6	LF	6" OUTLET PIPE (SUBDRAINS)
3030000000-E	862	500	LF	STEEL BM GUARDRAIL
3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS
3270000000-N	SP	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
3628000000-E	876	53	TON	RIP RAP, CLASS 1
3649000000-E	876	290	TON	RIP RAP, CLASS B
3656000000-E	876	1,216	SY	FILTER FABRIC FOR DRAINAGE
4400000000-E	1110	276	SF	WORK ZONE SIGNS (STATIONARY)

ItemNumber	Sec #	Quantity	Unit	Description
4410000000-E	1110	94	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4445000000-E	1145	80	LF	BARRICADES (TYPE III)
6000000000-E	1605	900	LF	TEMPORARY SILT FENCE
6006000000-E	1610	100	TON	STONE FOR EROSION CONTROL, CLASS A
6009000000-E	1610	125	TON	STONE FOR EROSION CONTROL, CLASS B
6012000000-E	1610	40	TON	SEDIMENT CONTROL STONE
6015000000-E	1615	1.5	ACR	TEMPORARY MULCHING
6018000000-E	1620	50	LB	SEED FOR TEMPORARY SEEDING
6021000000-E	1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
6024000000-E	1622	35	LF	TEMPORARY SLOPE DRAINS
6027000000-N	1622	1	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
6029000000-E	SP	400	LF	SAFETY FENCE
6030000000-E	1630	635	CY	SILT EXCAVATION
6036000000-E	1631	400	SY	MATting FOR EROSION CONTROL
6037000000-E	SP	20	SY	COIR FIBER MAT
6042000000-E	1632	50	LF	1/4" HARDWARE CLOTH
6069000000-E	1638	60	CY	STILLING BASINS
6071030000-E	SP	225	LF	COIR FIBER BAFFLES
6071050000-E	SP	3	EA	*** SKIMMER (2")
6084000000-E	1660	2	ACR	SEEDING & MULCHING
6087000000-E	1660	1	ACR	MOWING
6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
6096000000-E	1662	50	LB	SEED FOR SUPPLEMENTAL SEEDING
6108000000-E	1665	1.5	TON	FERTILIZER TOPDRESSING
6111000000-E	SP	60	LF	IMPERVIOUS DIKE

ItemNumber	Sec #	Quantity	Unit	Description
6114000000-N	SP	2	HR	SPECIALIZED HAND MOWING
6117000000-N	SP	8	EA	RESPONSE FOR EROSION CONTROL
6120000000-E	SP	175	CY	CULVERT DIVERSION CHANNEL

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COMPUTED BY: JHD DATE: 9-2-05
 CHECKED BY: RCK DATE: 4-17-07

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. <i>B-3900</i>	SHEET NO. <i>3-A</i>
--	-------------------------

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

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS			IMPACT ATTENUATOR TYPE 350			REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	GRAU 350	III	AT-1	EA	G	NG	
-L-	14+25.00	18+75.00	LT	450			17+24.00 (C)	15+00.00 (F)	4	7	50	50	1	1	2						
-L-	15+75.00	18+25.00	RT	250			17+03.00(C)	17+45.00 (C)	4	7	50	50	1	1	2						
			SUBTOTAL	700																	
			LESS ANCHORS	200																	
			TOTAL	500																	
ADDITIONAL POSTS = 5 EACH				SAY	500																
											DEDUCTIONS FOR ANCHORS:										
											GRAU-350 4 @ 50 EA. = 200										
											TOTAL = 200										
																4					
																4					

EARTHWORK SUMMARY (CY)

LOCATION	UNCLASS. EXC.	UNDERCUT	EMBANK +%	BORROW	WASTE
-L- STA. 13+50.00 TO STA. 20+50.00	1107		5731	5594	970
-L- STA. 18+75.00 TO STA. 20+50.00		259	311	311	259
PROJECT SUBTOTAL	1107	259	6042	5905	1229
LOSS DUE TO CLEAR & GRUBB	-90			90	
EST. UNDERCUT		100	120	120	100
PROJECT TOTAL	1017	359	6162	6115	1329
EST. 5% TO REPLACE TOPSOIL ON BORROW PIT				306	
GRAND TOTAL	1017	359		6421	
SAY	1020	365		6500	

DDE = 45 CY

-L- PAVEMENT STRUCTURE VOLUME = 64 CY

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.

8/17/99

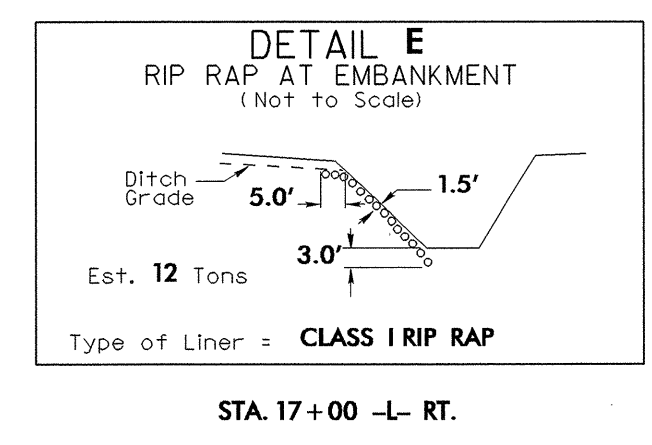
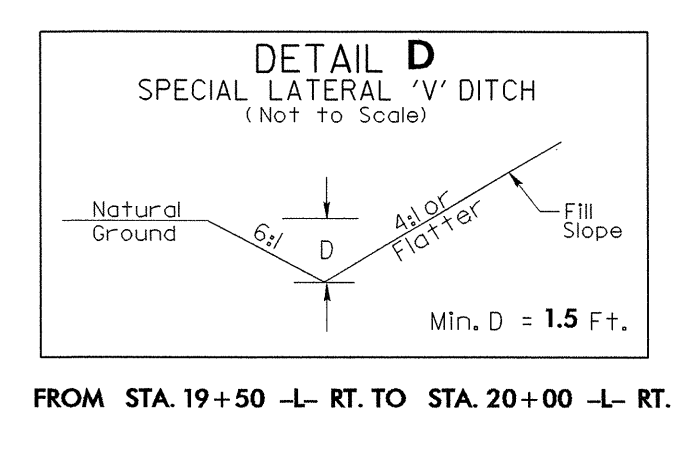
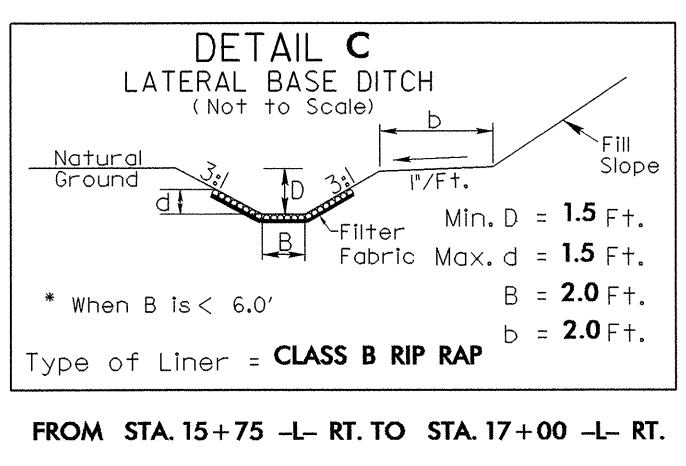
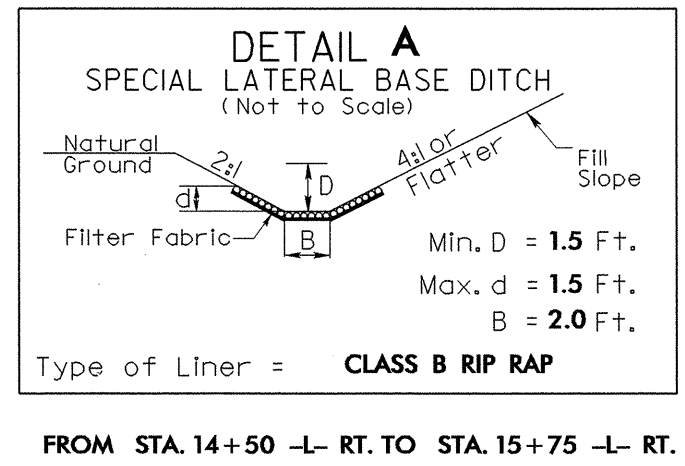
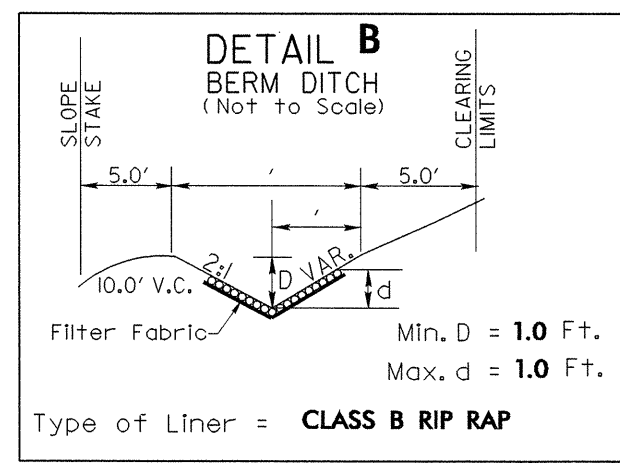
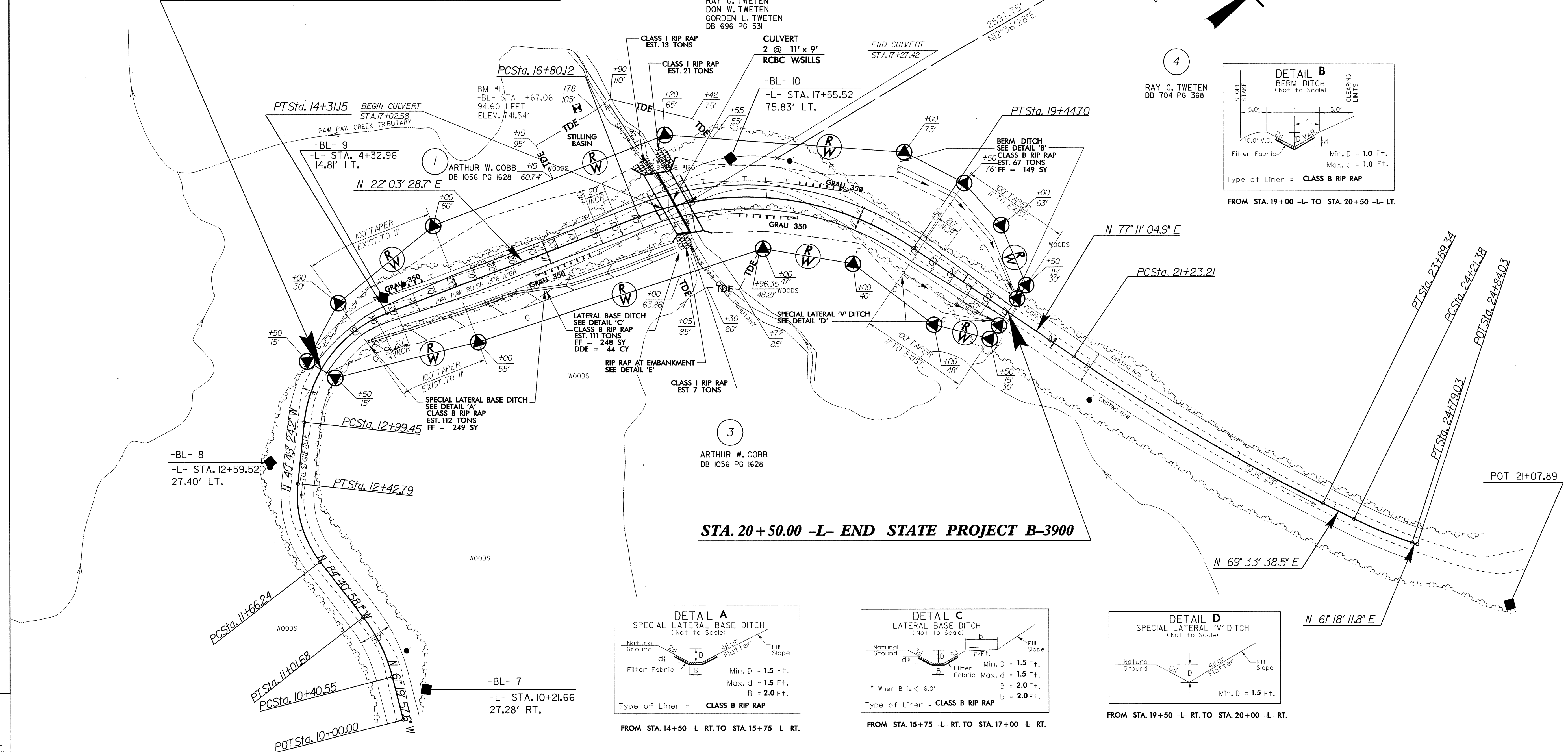
** NOTE: DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED (30MPH)

PROJECT REFERENCE NO. B-3900	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 22942 ROGER C. KLUCKMAN 4-17-07	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 28870 JRC T. SHOWN 4-12-07

PI Sta 10+71.55 Δ = 23° 21' 00.5" (LT) D = 38' 11" 49.9" L = 61.3' T = 31.00' R = 150.00'	PI Sta 12+06.50 Δ = 43° 51' 33.9" (RT) D = 57' 17" 44.8" L = 76.55' T = 40.26' R = 100.00'	PI Sta 13+72.81 Δ = 62° 52' 52.9" (RT) D = 47' 44" 47.3" L = 131.70' T = 73.37' R = 120.00'	PI Sta 18+23.66 Δ = 55° 07' 36.2" (RT) D = 20' 50" 05.4" L = 264.59' T = 143.54' R = 275.00' ** V = 30mph SE = SEE PLANS	PI Sta 22+56.47 Δ = 7° 37' 26.4" (LT) D = 2' 51" 53.2" L = 266.13' T = 133.26' R = 2,000.00'	PI Sta 24+50.25 Δ = 8° 15' 26.7" (LT) D = 14' 19" 26.2" L = 57.65' T = 28.87' R = 400.00'
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STA. 13+50.00 -L- BEGIN STATE PROJECT B-3900

STA. 20+50.00 -L- END STATE PROJECT B-3900



FOR -L- PROFILE SEE SHEET 5
SEE SHEETS C-1 THRU C-3 FOR CULVERT PLANS

REVISIONS

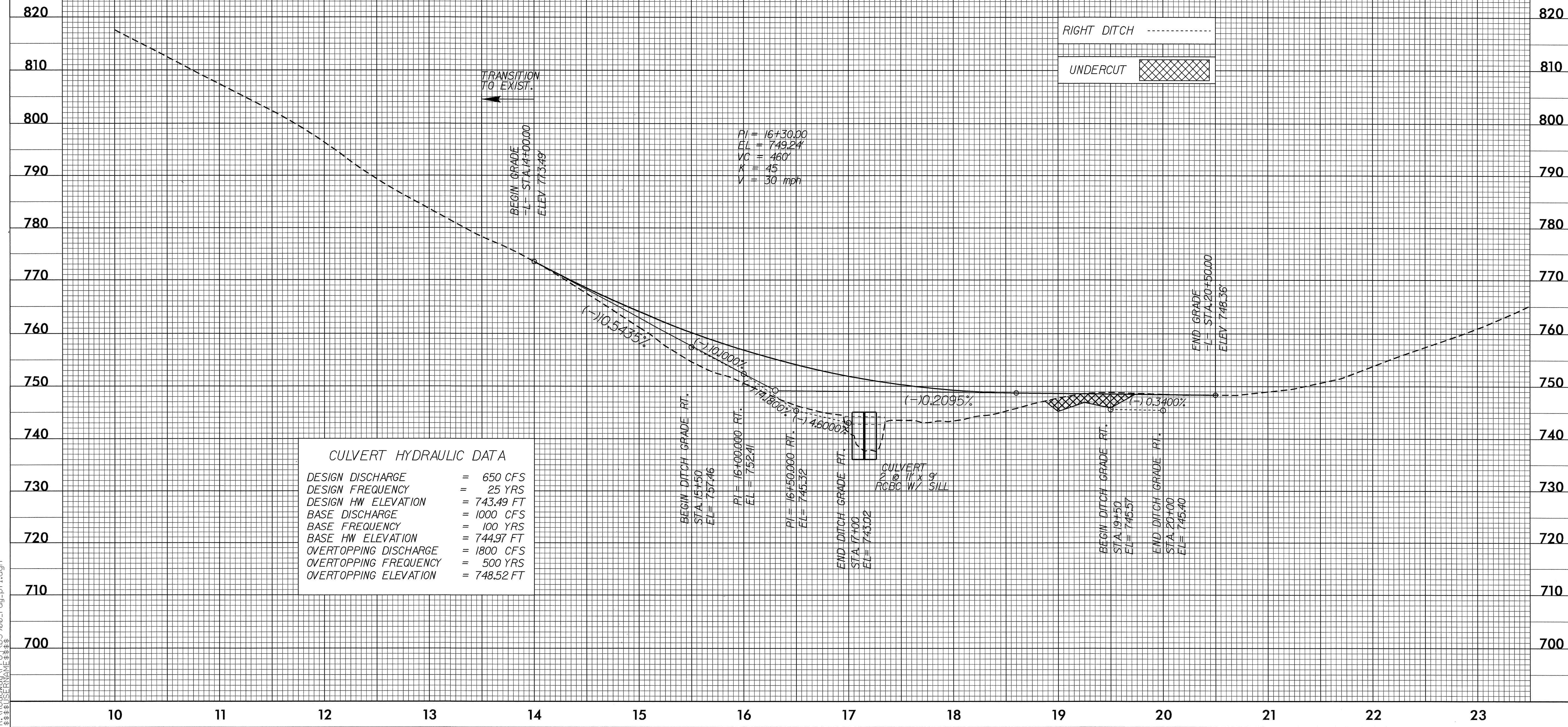
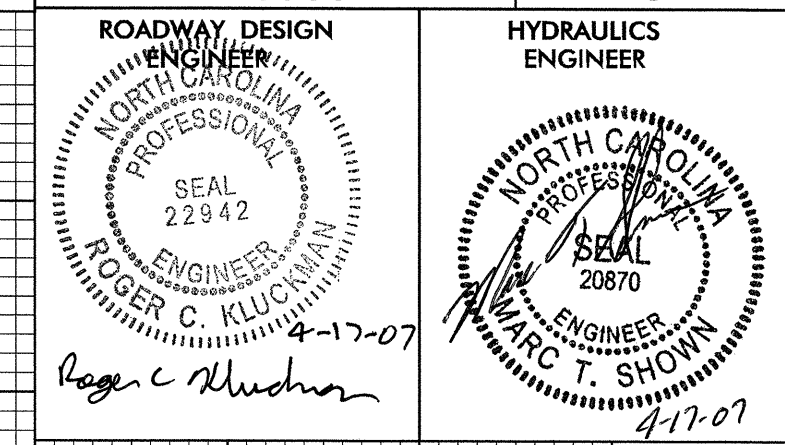
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5/14/99

NOTE: DESIGN EXCEPTION REQUIRED FOR DESIGN SPEED (30 mph)

PROJECT REFERENCE NO. B-3900 SHEET NO. 5

BM *1
R/R SPIKE IN BASE OF 14" SPRUCE PINE
95' LT OF -BL- STA. 11+67 ELEV. 741.54



CULVERT HYDRAULIC DATA	
DESIGN DISCHARGE	= 650 CFS
DESIGN FREQUENCY	= 25 YRS
DESIGN HW ELEVATION	= 743.49 FT
BASE DISCHARGE	= 1000 CFS
BASE FREQUENCY	= 100 YRS
BASE HW ELEVATION	= 744.97 FT
OVERTOPPING DISCHARGE	= 1800 CFS
OVERTOPPING FREQUENCY	= 500 YRS
OVERTOPPING ELEVATION	= 748.52 FT

P:\MAR-2007\1345
R:\FORWARD\B-3900_rdy-pf1.dgn
3/3/08 10:58:11 AM