COMPUTED BY: BDS	DATE: 1/2004
CHECKED BY: RWB	DATE: 3/4/04

6/16/99

"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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
B-3496	3-A

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH: STRAIGHT	LENGTH: SHOP CURVED	LENGTH: DOUBLE FACED	WARRANT POINT: APPROACH END	WARRANT POINT: TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH: APPROACH END	FLARE LENGTH: TRAILING END	W: APPROACH END	W: TRAILING END	ANCHORS: GRAU 350	ANCHORS: III	ANCHORS: AT-1	IMPACT ATTENUATOR TYPE 350: EA	IMPACT ATTENUATOR TYPE 350: G	IMPACT ATTENUATOR TYPE 350: NG	REMARKS
-L-	14+90.94	16+65.94	RT	175			16+65.94(BR)		4.71	11	156.25		3.13		1	1					
-L-	15+79.85	16+65.94	LT	43.75	68.75			16+65.94(BR)	4.71	11		6.25		4		1	1				
-L-	18+68.06	20+80.56	RT	212.5			18+68.06(BR)		4.71	11		193.75	3.875		1	1					
-L-	18+68.06	20+80.56	LT	212.5				18+68.06(BR)	4.71	11	193.75			3.875	1	1					
			SUBTOTAL	643.75	68.75						DEDUCTIONS FOR ANCHORS:				3	4	1				
			LESS ANCHORS	225	6.25						GRAU-350 3 @ 50 EA.			= 150							
											TYPE III 4 @ 18.75 EA.			= 75							
			TOTAL	418.75	62.5						AT-1 1 @ 6.25 EA.			= 6.25							
ADDITIONAL POSTS = 5 EACH			SAY	425	62.5						TOTAL			= 231.25							

EARTHWORK SUMMARY (CY)

LOCATION	UNCLASS. EXC.	UNDERCUT	EMBANK+%	BORROW	WASTE
-L- STA. 14+00 TO STA. 16+65.94 (BR)	76		254	193	15
-L- STA 18+68.06 (BR) TO STA 21+53.57	28		449	427	6
-Y2- STA 10+19.56 TO STA 11+62.74	58		152	106	12
PROJECT SUBTOTAL	162		855	726	33
EST. 5% TO REPLACE TOPSOIL ON BORROW PITS				36	
GRAND TOTAL	162			762	
SAY	165			770	

UNDERCUT PER GEOTECH = 200 CY
-L- AND -Y2- PAVEMENT STRUCTURE VOLUME = 35 CY
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."

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

STATION / SIZE / THICKNESS OR GAUGE	LOCATION (LT,RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELVATION	INVERT ELEVATION	INVERT ELEVATION		CLASS III R.C. PIPE 15"	CLASS III R.C. PIPE 24"	CLASS III R.C. PIPE 48"	CORREGATED ALUMINUM ALLOY PIPE (UNLESS NOTED OTHERWISE) 15" .064	24" .064	48" .064	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES: PER EACH (0' THRU 5.0')	* TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B'): A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G		M.D.I. TYPE "B" STD. 840.18 OR 840.27	T.B.D.I. STD. 840.35	M. D.I. (NS) FRAME W/TWO GRATES STD. 840.29	PREFORMED SCOUR HOLES W/LEVEL SPREADER APRON	CORR. ALUMINUM ALL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD 840.72	CONCRETE BRIDGE APPROACH DROP INLET	PIPE REMOVAL LIN.FT.	REMARKS
-L- 15+23	LT	1		9.9															1								1		1									
-L- 16+50	LT	2		4.6															1								1		1									
	LT	1	2		7.1	2.3		132																													67	
-L- 16+60	LT	2	3		2.3	2.0		16																														
-L- 18+88	LT	4		7.1															1										1						1			SEE DETAIL 2-I
-L- 18+88	RT	5		7.1															1										1						1			SEE DETAIL 2-I
		4	5		4.3	4.2		32																														
-L- 18+88	RT	5	6		4.2	2.6					20																				2@15"						
-L- 20+25		7	8		1.2	1.2							72																									
-L- 20+30	LT	9		7.3															1									1	1									
-L- 20+30	RT	10		7.3															1									1	1									
		9	10		4.5	4.4		40																														
-L- 20+30	RT	10	11		4.4	2.4					16																				2@15"						
-L- 21+80		12	13		1.5	1.5							56																									
TOTAL								220			36		128						6								2	2	6		4@15"		2	67				

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
M.D.I.	MEDIAN DROP INLET
M.D.I. (N.S.)	MEDIAN DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUCTION BOX

REMOVAL OF EXISTING ASPHALT PAVEMENT

LINE	BEG. STA.	END STA.	LOCATION	AREA (SY)
-L-	16+20.00	16+79.25(BR)	CL	158
-L-	17+18.62(BR)	19+00.00	CL	485
			TOTAL	643
			SAY	645

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