6/21/00

COMPUTED BY: W. T. Best	DATE: April 20, 2004
CHECKED BY: T.L. La Bolle	DATE: July 2, 2004

PROJECT REFERENCE NO.	SHEET NO.
B-3873	3-A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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 ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL
-L- 12+50	RT	1		1260.30	1257.30		
-L- 12+50	RT	1	2		1257.30	1255.00	
-L- 13+03	LT	3	4		1256.00	1259.54	
-L- 13+29	LT	4		1265.04	1259.54		
-L- 13+30	LT	4	5		1259.54	1261.25	
TOTAL							

STATION	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) 12"	15"	18"	24"	30"	36"	42"	48"
-L- 12+50								
-L- 12+50								
-L- 13+03				48				
-L- 13+29								
-L- 13+30								
TOTAL				48				

STATION	BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHRWISE) 12" .064	15" .064	18" .064	24" .064	24"	30" .079	30"	36" .079	36"	42" .109	42"	48" .109	48"
-L- 12+50													
-L- 12+50			20										
-L- 13+03													
-L- 13+29													
-L- 13+30						28							
TOTAL			20			28							

STATION	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 * TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') PER EACH (0' THRU 5.0')	LIN. *FT. 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
-L- 12+50						1						
-L- 12+50												
-L- 13+03												
-L- 13+29						1	0.53					
-L- 13+30												
TOTAL						2	0.53					

STATION	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME & GRATE STD. 840.16	M.D.I. TYPE "A" STD. 840.17 OR 840.26	M.D.I. TYPE "B" STD. 840.18 OR 840.27	M.D.I. TYPE "D" STD. 840.19 OR 840.28	M.D.I. FRAME WITH TWO GRATES STD. 840.22	M.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29	T.B.D.I. STD. 840.35	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN.FT.	REMARKS
-L- 12+50							1	1					
-L- 12+50									2@18"				OUTLET PIPE, CLASS 'B' RIP RAP REQ'D
-L- 13+03													TIE TO CULVERT, REM EX. 18" NO QUANT.
-L- 13+29							1	1					
-L- 13+30													INLET PIPE
TOTAL							2	2	2@18"				

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

"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 STRAIGHT	LENGTH SHOP CURVED	LENGTH DOUBLE FACED	WARRANT POINT APPROACH END	WARRANT POINT TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END
-L-	11+79.40	13+27.15	LT	125.00'	31.25'		12+63.06	13+11.20	6.00'	9.00'	50.00'			
-L-	11+47.17	13+59.67	RT	212.50'			12+53.71	13+05.74	6.00'	9.00'	50.00'	50.00'		
			SUBTOTAL	337.50'	31.25'									
			LESS ANCHOR DEDUCTIONS	-150.00'	-6.25'									
			TOTAL	187.50'	25.00'									
			SAY	200.00'	37.50'									

SURVEY LINE	ANCHORS XI MOD	XI	GRAU 350	M-350	XIII	CAT-1	VI MOD	BIC	AT-1	IMPACT ATTENUATOR TYPE 350 EA	G	NG	SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
-L- (LT)			1						1							
-L- (RT)			2													
SUBTOTAL			3						1							

GUARDRAIL ANCHOR UNIT DEDUCTIONS
3 GRAU-350 @ 50' = 150 FT
1 AT-1 @ 6.25' = 6.25 FT
TOTAL = 156.25 FT

ADDITIONAL GUARDRAIL POST = 5 each

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