COMPUTED BY: R. SHILLILNGLAW	DATE: 12-08-2004
CHECKED BY: R. E. McCOLLUM	DATE: 12-28-2004

PROJECT REFERENCE NO.	SHEET NO.
B-4319	3-A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SHOULDER BERM GUTTER

LINE	STATION TO STATION	LOCATION	LENGTH FT.
-L-	13+90 TO 15+70	RIGHT	180'
-L-	16+88 TO 18+16	RIGHT	128'
-L-	14+53 TO 15+70	LEFT	117'
-L-	16+88 TO 18+16	LEFT	128'
	TOTAL		553'
	SAY		555'

SUMMARY OF PAVEMENT REMOVAL

IN SQUARE YARDS

LINE	STATION TO STATION	LOCATION	ASPHALT REMOVAL
-L-	15+34 TO 16+04	LEFT & RIGHT	193
-L-	16+56 TO 17+24	LEFT & RIGHT	183
	TOTAL		376
	SAY		380

SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	TOTAL UNCLASS. EXCAV.		UNDERCUT	EMBANKMENT + %	BORROW	TOTAL WASTE
-L- 12+30 TO 15+84 (BEG. BRIDGE)	26			288	262	
SUBTOTAL	26			288	262	
-L- 16+74 (END BRIDGE) TO 20+30	19			501	482	
SUBTOTAL	19			501	482	
PROJECT SUBTOTAL	45			789	744	
EST. 5% TO REPLACE TOPSOIL ON BORROW PIT					37	
PROJECT TOTAL	45				781	
SAY	50				800	

UNDERCUT EXCAVATION = 100 C.Y.

NOTE:
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"

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	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) 12"	15"	18"	24"	30"	36"	42"	48"	BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE) 12"	15"	18"	24"	30"	36"	42"	48"	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") LIN. *FT. A: PER EACH (0' THRU 5.0')	B: 5.0' THRU 10.0'	B: 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	M.D.I. (NS) FRAME WITH TWO GRATES, STD. 840.29	M.D.I. TYPE "B" STD. 840.18 OR 840.27	FLOWABLE FILL MATERIAL C.Y.	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- 13+95	RT	1		110.65	107.90																									1				1	1								SEE STD. 820.04
		1	2		107.90	105.6											16'																				2-15"					
-L- 14+59	LT	3		111.01	108.26																									1				1	1								SEE STD. 820.04
		3	4		108.26	105.3											20'																				2-15"					
-L- 18+11	RT	5		111.31	108.56																									1				1	1								SEE STD. 820.04
		5	6		108.56	108.43			40'																																		
-L- 18+11	LT	6		111.23	108.43																									1				1	1								SEE STD. 820.04
		6	7		108.43	105.6											16'																				2-15"					
PROJECT TOTAL									40'								52'													4				4	4								

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 SHOULDER WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END	ANCHORS XI MOD	III	GRAU 350	M-350	TEMP GRAU 350	TERMINAL SECTIONS	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-	12+66.75	15+73	RIGHT	306.25'			15+73 BRIDGE		8'	11'	50'		1'			1	1													
-Y- & -L-	-Y- 11+85	-L- 15+73	LEFT	131.25'	84'		15+73 BRIDGE		10'	13'						1							1							SHOP CURVED GUARDRAIL RADIUS = 45'
-L-	16+85	18+66.25	RIGHT	181.25'			16+85 BRIDGE		8'	11'		50'		1'		1	1													
-L-	16+85	19+91.25	LEFT	306.25'			16+85 BRIDGE		10'	13'	50'		1'			1	1													
			SUBTOTAL	925'	84'																									
		LESS ANCHOR DEDUCTIONS																												
		GRAU 350	3 @ 50' =	-150'																										
		TYPE III	4 @ 18.75' =	-75'																										
			TOTAL	700'	84'											4	3						1							
			ADDITIONAL GUARDRAIL POSTS = 5																											

10-JAN-2006 09:23
R:\Hydraulics\Projects\B4319_rdy_sum.dgn
rshillinglaw A39 R0226360