★SUMMARY OF EARTHWORK
IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	EMBT +%	BORROW	WASTE
PHASE I					
-L- (RT) STA. 12+00.00	-L- (RT) STA. 15+80.00	57	217	160	0
-L- STA. 15+80.00	-L- STA. 19+50.69 (BEGIN BRIDGE)	45	4,999	4,954	0
-DRW2- STA. 10+15.03	-DRW2- STA. 12+02.02	15	1,213	1,198	0
SUBTOTAL		117	6,429	6,312	0
-L- STA. 22+33.31 (END BRIDGE)	-L- STA. 24+90.00	11	7,567	7,556	0
-L- (RT) STA. 24+90.00	-L- (RT) STA. 28+00.00	73	1,527	1,454	0
-DRW4- STA. 10+15.00	-DRW4- STA. 12+34.21	0	4,591	4,591	0
-DRW5- STA. 10+15.02	-DRW5- STA. 11+15.00	0	328	328	0
SUBTOTAL		84	14,013	13,929	0
SUBTOTAL PHASE I		201	20,442	20,241	0
TOTAL PHASE I		201	20,442	20,241	0
PHASE II					
-L- (LT) STA. 12+00.00	-L- (LT) STA. 19+50.69 (BEGIN BRIDGE)	868	186	0	682
-Y1- STA. 10+50.00	-Y1- STA. 11+33.79	4	22	18	0
-DRW1- STA. 10+95.00	-DRW1- STA. 11+55.25	55	0	0	55
-DRW1A- STA. 10+65.00	-DRW1A- STA. 11+59.28	72	13	0	59
SUBTOTAL		999	221	18	796
-L- (LT) STA. 22+33.31 (END BRIDGE)	-L- (LT) STA. 28+00.00	34	153	119	0
-DRW3- STA. 10+00.00	-DRW3- STA. 11+15.14	5	345	340	0
SUBTOTAL		39	498	459	0
SUBTOTAL PHASE II		1,038	719	477	796
WASTE TO BE USED IN LIEU OF BORROW		0	0	-477	-477
TOTAL PHASE II		1,038	719	0	319
PHASE I-II TOTALS		1,239	21,161	20,241	319
LOSS DUE TO CLEARING & GRUBBING		-30	0	30	0
PROJECT TOTALS		1,209	21,161	20,271	319
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				1,014	
GRAND TOTALS		1,209		21,285	319
SAY		1,300		22,500	

ESTIMATED UNDERCUT EXCAVATION = 400 C.Y.
ESTIMATED SELECT GRANULAR MATERIAL = 250 C.Y.

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.

★ASPHALT PAVEMENT REMOVAL SUMMARY
IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
-L-	14+90	19+60	EXIST. ROAD	1,175
-DRW1-	10+95	11+20	EXIST. ROAD	100
-DRW1A-	10+65	11+15	EXIST. ROAD	245
-L-	22+25	26+85	EXIST. ROAD	960
			TOTAL:	2,480
			SAY:	2,500

★ Approximate quantities only. Unclassified Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

"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 SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS							IMPACT ATTENUATOR TYPE 350			SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	AT-1	TYPE III	GRAU 350	M-350	XIII	CAT-1	VI MOD	BIC	EA	G	NG				
-L-	18+32.94	19+51.69 (BR)	LT	118.75′			19+51.69 (BR)		4.25′	9′		100′		2′		1	1											
-L-	18+32.94	19+51.69 (BR)	RT	118.75				19+51.69 (BR)	4.25′	9′	100′		2′			1	1											
-L-	22+32.31 (BR)	23+23.06	LT	81.25′	31.25′			22+32.31 (BR)	4.25′	9′	62.5′		1.25′		1	1												
-L-	22+32.31 (BR)	23+18.84	RT	81.25′	31.25′		22+32.31 (BR)		4.25′	9′		62.5′		1.25′	1	1												
-L-	22+23.62	22+48.91	LT																							25′		
-L-	22+23.88	22+50.38	LT																							28′		
			SUBTOTAL:	400′	62.50′																							
			ANCHOR DEDUCTION:	-175′	-12.50′																							
			TOTAL:	225′	50′										2	4	2									53′		
			SAY:	250′																								

ANCHOR DEDUCTION FOR STRAIGHT:
TYPE III: 4 @ 18.75′ = 75′
GRAU 350: 2 @ 50′ = 100′
TOTAL = 175′

ANCHOR DEDUCTION FOR SHOP CURVED:
TYPE AT-1: 2 @ 6.25′ = 12.50′
TOTAL = 12.50′

ADDITIONAL GUARDRAIL POSTS: 5