



## SUMMARY OF EARTHWORK IN CUBIC METERS

STATION	UNCL. EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L-					
-L- STA. 10+00 TO 14+20	183	0	44,794	44629	18
(INCL. -RPCY1- STA. 10+00 TO 11+70.400)					
(INCL. RPB1 STA. 10+00 TO 11+06.808)					
SRI STA. 12+60 TO 14+64.277	897	0	60	0	837
SUMMARY 1 SUBTOTAL	1080	0	44,854	44629	855
-L-					
-L- STA. 14+20 TO 23+20	14	0	195,111	195,098	1
(INCL. -RPCY1- STA. 11+70.400 TO 12+87)					
(INCL. RPB1 STA. 11+06.808 TO 15+83.600)					
(INCL. LPDY1 STA. 10+00 TO 10+82)					
(INCL. LPAY1 STA. 10+00 TO 10+83.739)					
-SRI-					
-SRI- STA. 14+64.277 TO 19+33.600	69	0	38,631	38569	7
-SRI- STA. 19+33.600 TO 24+04.291	16	0	53,778	53764	2
-SRI- STA. 24+04.291 TO STA. 25+50	357	0	979	658	36
-RPCY1-					
-RPCY1- 12+87 TO 14+00	0	0	30,515	30,515	0
-LPDY1-					
-LPDY1- STA. 10+82 TO 15+10	0	0	108,761	108,761	0
-YI RT-					
(INCL. LPDY1 STA. 15+10 TO 16+30.982)					
-YI- STA. 10+60 TO 16+28.191 (BRG)	548	0	213,596	213103	55
-RPBY1-					
-RPCY1- 15+83.600 TO 18+22.750	0	0	57,538	57,538	0
-YI LT-					
-YI- STA. 17+76.791 (BRG) TO 25+20	806	0	121,140	120415	81
(INCL. RPB1 STA. 18+22.750 TO STA. 19+22.689)					
-Y3-					
-Y3- STA. 10+00 TO STA. 11+40	82	0	4,161	4087	8
-LPAY1-					
-LPAY1- STA. 10+83.739 TO 12+30.740	0	547	3,336	3,336	547
-LPAY1- STA. 12+30.740 TO 13+15.740	0	0	2,159	2,159	0
-RPDY1-					
-RPDY1- STA. 11+00 TO 12+00	14	0	2,301	2288	1
-RPDY1 STA. 12+00 TO STA. 19+40	6	4,007	79,454	79449	4008
-SR2-					
-SR2- STA. 10+20 TO 17+43	95	1,848	17,919	17833	1857
TEMP. X-OVERS -X1-					
-X1- STA. 22+00 TO STA. 24+65.641	215	0	9,808	9614	21
TEMP. X-OVERS -X2-X3-					
-L- STA. 8+80 TO 14+93.393	742	0	4416	3748	74
SUMMARY 2 SUBTOTAL	2,964	6,402	943,603	940935	6698
-L-					
-L- STA. 23+20 TO 32+20	0	0	121,173	121,173	0
(INCL. RPB1 STA. 10+00 TO STA. 11+36.250)					
(INCL. RPDY1 STA. 10+00 TO 11+00)					
TEMP. X-OVERS -X1-					
-X1- STA. 24+65.641 TO STA. 26+32.807	537	0	46	0	491
-SR2-					
-SR2- STA. 17+43 TO STA. 25+46.757	0	0	23,786	23,786	0
-RPAY1-					
-RPAY1- STA. 11+36.250 TO STA. 12+33	0	0	2,904	2,904	0
-RPAY1- STA. 12+33 TO STA. 14+48.812	170	745	6,014	5861	762
SUMMARY 3 SUBTOTAL	707	745	153,923	153724	1253

STATION	UNCL. EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L-					
-L- STA. 32+20 TO STA. 41+20	0	0	101,206	101,206	0
-SR2-					
-SR2- STA. 25+46.757 TO STA. 34+46.757	0	0	41,204	41,204	0
SUMMARY 4 SUBTOTAL	0	0	142,410	142,410	0
-L-					
-L- STA. 41+20 TO 50+20	64	0	108,284	108226	6
-SR2-					
-SR2- STA. 34+46.757 TO STA. 39+60.757	26	315	15,110	15087	318
SUMMARY 5 SUBTOTAL	90	315	123,394	123313	324
-L-					
-L- STA. 50+20 TO 59+20	0	0	84,384	84,384	0
SUMMARY 6 SUBTOTAL	0	0	84,384	84,384	0
-L-					
-L- STA. 59+20 TO 64+00	0	0	68,375	68,375	0
(INCL. RPB2 STA. 10+00 TO STA. 11+04.750)					
(INCL. RPCY2 STA. 10+00 TO STA. 10+60.113)					
SUMMARY 7 SUBTOTAL	0	0	68,375	68,375	0
-L-					
-L- STA. 64+00 TO 73+00	0	0	145,255	145,255	0
(INCL. RPCY2 STA. 10+60.113 TO STA. 11+19.750)					
(INCL. RPB2 STA. 11+31.540 TO STA. 11+71)					
-RPDY2-					
-RPDY2- STA. 12+88.500 TO STA. 11+50.500	0	0	11,823	11,823	0
-RPDY2- STA. 12+88.500 TO STA. 14+88	0	0	58,004	58,004	0
-RPBY2-					
-RPBY2- STA. 11+04.750 TO STA. 12+82.500	0	0	11,238	11,238	0
-RPBY2- STA. 12+82.5 TO STA. 15+00	0	0	67,473	67,473	0
-RPCY2-					
-RPCY2- STA. 11+19.750 TO STA. 12+36.750	0	0	4,895	4,895	0
-RPCY2- STA. 12+36.750 TO STA. 16+10	0	0	124,173	124,173	0
-Y2 -					
-Y2- STA. 11+00 TO STA. 16+52.708(BRG)	717	0	133,154	132509	72
-Y2- STA. 17+27.408(BRG) TO STA. 22+20	416	0	127,550	127176	42
-RPAY2-					
-RPAY2- STA. 11+71 TO STA. 12+69.500	0	0	5,699	5,699	0
-RPAY2- STA. 12+69.500 TO STA. 16+30	0	0	87,114	87,114	0
-SR3-					
-SR3- STA. 10+20 TO STA. 13+05	0	0	12,368	12,368	0
SUMMARY 8 SUBTOTAL	1,133	0	788,746	787727	114
-L-					
-L- STA. 73+00 TO STA. 80+00	0	0	88,985	88,985	0
(INCL. RPB2 STA. 10+00 TO STA. 11+31.540)					
(INCL. RPDY2 STA. 10+00 TO STA. 11+50.500)					
-SR3-					
(INCL. SR3 STA. 14+01.400 TO 20+02.381)	0	0	23,820	23,820	0
-SR3 STA. 13+05 TO STA. 14+01.400)	0	0	6,333	6,333	0
SUMMARY 9 SUBTOTAL	0	0	119,138	119,138	0

STATION	UNCL. EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L-					
-L- STA. 80+00 TO 85+80	0	0	116,476	116,476	0
-SR3-					
-SR3- STA. 20+02.381 TO STA. 25+82.381	0	0	41,910	41,910	0
SUMMARY 10 SUBTOTAL	0	0	158,386	158,386	0
-X1- REMOVAL	9,593	0	0	0	9,593
-X2, X3- REMOVAL	3,674	0	0	0	3,674
-TEMPY1-	6	0	6,626	6,621	1
-TEMPY1- REMOVAL	6,621	0	0	0	6,621
SUMMARY 11 SUBTOTAL	19,893		6,626	6,621	19,889
SUMMARY (1-11) SUBTOTAL	25,867	7,462	2633839	2629642	29133
WASTE TO REPLACE BORROW				-21072	-21072
SELECT MAT'L IN LIEU OF BORROW				-38,000	-38,000
SHOULDER MATERIAL			78,625	78,625	
ADDITIONAL EST. UNDERCUT PER GEOTECH		2,000	2,500	2,500	2,000
SUBTOTAL	25,867	9,462	2714964	2651695	10061
EST. 5% FOR REPLACING TOPSOIL ON PIT				132585	
-TOTAL R-0513A-	25,867	9,462	2714964	2784280	10061
SAY R-0513A	25,870			2785000	
-TOTAL R-0513BA-	13230	4,058	2,165,979	2209567	4,058
SAY R-0513BA	13330			2210000	
-GRAND TOTAL SAY-	39170			4995000	
R-0513A DDE = 17,776 CM					
R-0513BA DDE = 22,739 CM					
GRAND TOTAL DDE = 40,515 CM					

## SHOULDER BERM GUTTER LOCATION SUMMARY

LINE	LOCATION	BEGINNING STATION	ENDING STATION	LENGTH
-Y1-	RT	-LPDY1- 15+55.24	16+17.564(BRIDGE)	74.81m
			TOTAL R-0513A:	74.81m
			SAY:	76m
			TOTAL R-0513BA:	3266.69m
			SAY:	3300m
			GRAND TOTAL:	3376m

## DOUBLE FACE CABLE GUIDERAIL SUMMARY

SURVEY LINE	BEGINNING STATION	ENDING STATION	LOCATION	GROSS LENGTH	INTERMEDIATE CABLE GUIDERAIL ANCHOR UNITS (EACH)	TERMINAL CABLE GUIDERAIL ANCHOR UNITS (EACH)	TOTAL CABLE GUIDERAIL ANCHOR UNITS (INTERMEDIATE ANCHOR UNITS + 2)	DEDUCTIONS FROM TOTAL GUIDERAIL LENGTH (M) (7.6 M FOR EACH TERMINAL ANCHOR UNIT)	REMARKS
-L-	10+00.00	17+66.38	CL	766.38	1	2	3	15.2	OFFSET CABLE GUIDERAIL 1.2M FROM CENTER OF MEDIAN DITCH LEFT OR RIGHT(SEE PLANS)
-L-	19+69.88	67+82.30	CL	4812.42	8	2	10	15.2	OFFSET CABLE GUIDERAIL 1.2M FROM CENTER OF MEDIAN DITCH LEFT OR RIGHT(SEE PLANS)
-L-	69+69.02	85+80.00	CL	1610.98	3	2	5	15.2	OFFSET CABLE GUIDERAIL 1.2M FROM CENTER OF MEDIAN DITCH LEFT OR RIGHT(SEE PLANS)
			TOTAL R-0513A:	7189.78			18	45.6	
			LESS ANCHOR DEDUCTIONS:	-45.6					
			TOTAL R-0513A:	7144.18			18		
			SAY R-0513A:	7150			20		
			TOTAL R-0513BA:	6597.76			18		
			SAY R-0513BA:	6650			20		
			SAY:	13800			40		