社会開発協力部報告書

No. 4

AFRICAN DEVELOPMENT BANK

GOVERNMENT OF MAURITIUS

BEAU BASSIN - PORT LOUIS LINK ROAD

QUANTITIES

OF

EARTH WORKS

SEPTEMBER 1980

Japan International Cooperation Agency

CONTENTS

1. Summary of Quantities

C : EARTHWORKS

ITEM NO	DESCRIPTION	UNIT	PHASE I	PHASE II	TOTAL	REMARKS
C.01	ROADWAY EXCAVATION/					
01	EXCAVATION , COMMON					
	MAIN ROAD	m^3	449,035.8	72,220.2	521,856.0	NET VOLUME
	ACCESS ROAD	"	6,612.1	---	6,612.1	
	CORDMANDEL I.C	"	57,972.8	---	57,972.8	
	MOTORWAY JUNCTION	"	144,203.0	676.0	145,799.0	
	TOTAL		652,423.7	73,516.2	731,937.9	
02	EXCAVATION , ROCK					
	MAIN ROAD	m^3	17,332.6	---	17,332.6	
	ACCESS ROAD	"	---	---	---	
	COM.MONDEL I.C	"	1,206.8	---	1,206.8	
	MOTORWAY JUNCTION	"	2,995.0	---	2,995.0	
	TOTAL	"	22,134.4	---	22,134.4	
C.02	STRUCTURE EXCAVATION/					
01	STRUCTURE EXCAVATION COMMON					
	BOX CULVERT	m^3	9,010.6	---	9,010.6	
	Fy - By	"	45.7	---	45.7	BRIDGE OF FRONTAGE ROAD
	CONCRETE RETHINING WALL	"	---	588.5	588.5	RETAINING WALL
	TOTAL	"	9,056.3	588.5	9,644.8	
02	STRUCTURE BACKFILL, SELECTED MATERIALS					
	SOIL	m^3	14,258.5	---	14,258.5	BOX CULVERT
	CRUSHER RUN	"	---	972.3	972.3	RETAINING WALL

D : STRUCTURAL CONCRETE AND CONCRETE ANCILLARIES WORKS

ITEM NO	DESCRIPTION	UNIT	PHASE I	PHASE II	TOTAL	REMARKS
D01	CONCRETE					
01	CONCRETE GRADE 25					
	BOX CULVERT	m^3	2,997.3	—		
	BRIDGE OF FRONTAGE ROAD	"	51.0	—		
	TOTAL	"	3048.3	—	3048.3	
02	CONCRETE GRADE 15					
	BOX CULVERT	m^3	173.7	—		
	RETAINING WALL	"	—	2220.7		
	TOTAL		173.7	2220.7	2394.4	
D02	FORM					
01	FORM TYPE - A					WALLS
	BOX CULVERT	m^2	3439.3	—		
	BRIDGE OF FRONTAGE ROAD	"	120.6	—		
	RETAINING WALL	"	—	1138.7		
	TOTAL	"	3559.9	1138.7	4698.6	
02	FORM TYPE - C					SOFFITS
	BOX CULVERT	m^2	1338.1	—		
	BRIDGE OF FRONTAGE ROAD	"	39.9	—		
	TOTAL	"	1428.0	—	1428.0	
03	FORM TYPE - E					
	BOX CULVERT	m^2	76.8	—		
	RETAINING WALL	"	—	1374.3		
	TOTAL		76.8	1374.3	1451.1	
D03	REINFORCING BAR					
01	MILD STEEL $\phi 16^{mm}$					
	RETAINING WALL	K.G	—	1148	1148	

ITEM NO	DESCRIPTION	UNIT	PHASE I	PHASE II	TOTAL	REMARKS
D03						
02	HIGH YIELD STEEL φ16mm≦					
	BOX CULVERT	Kg	146.657	—		
	BRIDGE OF FRONTAGE ROAD	〃	2,407	—		
	TOTAL	〃	149.064	—	149.064	
03	HIGH YIELD STEEL φ20mm≦					
	BOX CULVERT	Kg	80.779	—	80.779	
D04	EXPANSION JOINTS					
01	BOX CULVERT TYPE - D	m	219.7	—	219.7	
02	BRIDGE OF FRONTAGE ROAD	m	23.3	—	23.3	
D05	FOUNDATION	m^3				
	BOX CULVERT	m^3	374.5	—		SAND & GRAVEL
	BRIDGE OF FRONTAGE ROAD	〃	11.4	—		〃
	TOTAL	〃	385.9	—	385.9	
D06	TIMBERING					
	BOX CULVERT	空m^3	5,291.0	—	5,291.0	
D07	SCAFFOLDING					
	BOX CULVERT	空m^3	8,967.2	—	8,967.2	
D08	DRAIN PIPE φ0042					
	RETAINING WALL	m		789.0		P.V.C PIPE

E : PAVEMENTS AND ROAD ANCILLARIES WORKS

ITEM NO	DESCRIPTION	UNIT	PHASE I	PHASE II	TOTAL	REMARKS
E 01						
01	GRADED STONE SUB BASE COURSE t=30 cm	m²	149.230.8	15.721.6	164.952.4	MAIN ROAD
02	GRADED STONE SUB BASE COURSE t=20 cm	"	17.311.5	—	17.311.5	ACCESS ROAD
03	GRADED STONE BASE COURSE t=15 cm	"	32.600.4	2.776.9	35.377.3	SHOULDER OF MAIN ROAD
E02						
01	PRIME COAT	t	196.5	17.8	214.3	1 kg/m²
02	TACK COAT	"	180.4	17.6	198.0	0.6 kg/m²
E03	BITUMINOUS TREATED BASE COURSE t=10 cm	m²	158.227.4	14.803.4	173.030.8	
E04						
01	ASPHALT BINDER COURSE t=5 cm	m²	140.047.2	14.127.4	154.735.2	MAIN ROAD
02	ASPHALT WEARING COURSE t=5 cm	"	138.852.1	14.553.5	153.405.1	SARFACE COURSE OF MAIN ROAD
03	ASPHALT SURFACE t=5 cm	"	48.935.6	2.695.2	51.630.8	SHOULDER OF MAIN ROAD SARFACE COURSE OF ACCESS ROAD
E05						
01	SEEDING	m²	55 693.6	10.033.3	65.726.9	
02	TOP SOIL t=20 cm	"	54.772.0	3571.0	58.343.0	
E06						
01	GUARD RAIL	m	1.518.0	880.0	2398.0	
E07	FOOT WAY					
01	ASPHALT SURFACE t=4 cm	m²	6.950.0	—	6.950.0	FOOT WAY
02	GRADED STONE BASE COURSE t=10 cm	"	6.924.8	—	6.924.8	FOOT WAY
E08						
01	P.C.K (A)	m	12.251.0	1.353.0	13.604.0	
02	P.C.K (B)	m	4.300.0	147.0	4.447.0	
E09						
01	LANE MARKS	m²	5,617.6	982.0	6599.6	
02	CATS' EYES	nr	40	—	40	
03	ROADSTUD	"	130	50	180	
E10						
01	SIGN TYPE A	nr	99	10	109	
02	SIGN TYPE B	"	15	2	17	
03	SIGN TYPE C	"	27	5	32	
E11	FRONTAGE ROAD AND APPROACH ROAD					
	CRUSHED GRAVEL t=15 cm	m²	11.098.2	855.0	11.953.2	FRONTAGE ROAD AND APPROACH ROAD
E12	PREPARATION OF SUBGRADE SURFACE	"	206.067.5	18.498.5	224 566.0	

F: STORM DRAINAGE WORKS

ITEM NO	DESCRIPTION	UNIT	PHASE I	PHASE II	TOTAL	REMARKS
F01	OPEN DITCHES					
01	Ds - ED	m	4659.0	208.0	4.867.0	
02	Ds - RS	"	13,701.5	549.0	14.250.5	
03	Ds - RG	"	1.823.0	—	1,823.0	
04	DS - Pu (A)	"	10.612.0	1.425.0	12.037.0	
05	DS - Pu (B_1)	"	4300	—	4300	
06	DS - Pu (B_2)	"	511.0	80.0	591.0	
07	Ds - Pu (B_3)	"	206.0	72.0	278.0	
08	Ds - U (A)	"	20.5	—	20.5	
09	DS - U (C)	"	24.0	—	24.0	
10	Ds - U (D)	"	248.0	—	248.0	
11	Ds - U (E)	"	149.0	—	149.0	
12	DS - U (F)	"	5.0	—	5.0	
13	Ds - U (G)	"	116.0	—	116.0	
14	Ds - U (H)	"	30.0	—	30.0	
15	Ds - $\bar{U}$ (A)	"	168.5	—	168.5	
16	Ds - $\bar{U}$ (C)	"	28.0	—	28.0	
17	Ds - $\bar{U}$ (F)	"	116.0	—	116.0	
18	Ds - L (A)	"	51.0	—	51.0	
19	DS - L (B)	"	58.0	—	58.0	
20	Ds - L (C)	"	367.0	—	367.0	
21	Ds - L (D)	"	167.0	—	167.0	
22	Dv - U	"	89.2	14.5	103.7	
23	SL	nr	193	20	213	INLET
24	RL - WW	m	57.0	—	57.0	
25	COVER	"	193.0		193.0	COVERS OF DITCHES IN BOX CULVERTS
F02	PIPE CULVERT					
01	C - P (A) ϕ 0.152	m	63.0	—	63.0	
02	C - P (A) ϕ 0.304	"	125.0	—	125.0	
03	C - P (A) ϕ 0.380	"	237.0	—	237.0	
04	C - P (A) ϕ 0.457	"	14.0	—	14.0	
05	C - P (A) ϕ 0.762	"	406.0	—	406.0	
06	C - P (A) ϕ 1.066	"	49.0	—	49.0	

ITEM NO	DESCRIPTION	UNIT	PHASE I	PHASE II	TOTAL	REMARKS
F02						
07	C-P (B) φ0.304	m	156.0	—	156.0	
08	C-P (B) φ0.380	〃	409.5	46.0	455.5	
09	C-P (B) φ0.457	〃	67.0	—	67.0	
10	C-P (B) φ0.533	〃	20.0	9.0	29.0	
11	C-P (C) φ0.762	〃	90.3	22.0	112.3	
12	C-P (C) φ1.066	〃	134.0	—	134.0	
13	C-P (TWIN) φ1.066	〃	93.0	—	93.0	
14	C-P (C) φ0.609	〃	22.0	—	22.0	
15	C-P (C) φ0.685	〃	9.0	—	9.0	
16	C-P (C) φ0.914	〃	18.0	—	18.0	
17	C-P (D) φ0.762	〃	335.0	—	335.0	
18	PLASTIC PIPE φ0.179	〃	6.4	17.0	23.4	
F03	CATCH BASIN					
01	DE - (A_1)	nr	23	7	30	
02	DE - (A_2)	〃	9	5	14	
03	DE - (A_3)	〃	11	—	11	
04	DE - (A_4)	〃	6	—	6	
05	DE - (A_5)	〃	1	—	1	
06	DE - (A_6)	〃	1	1	2	
07	DE - (A_7)	〃	1	—	1	
08	DE - (B_1)	〃	22	—	22	
09	DE - (B_2)	〃	2	—	2	
10	DE - (O)	〃	18	—	18	
11	DE - (K)	〃	3	—	3	
12	DE - (N_1)		1	—	1	
13	DE - (N_2)		1	—	1	
14	DE - (N_3)		5	—	5	
15	DC - (C)		25	3	28	
16	DC - (E)		18	2	20	
17	DC - (F)		5	—	5	

ITEM NO	DESCRIPTION	UNIT	PHASE I	PHASE II	TOTAL	REMARKS
F03						
18	Dc - (G)	nr	1	—	1	
19	Dc - (H)	"	1	—	1	
20	Dc - (I)	"	1	—	1	
21	Dc - (J_1)	"	1	—	1	
22	Dc - (J_2)	"	1	—	1	
23	Dc - (J_3)	"	4	—	4	
24	Dc - (L_1)	"	2	—	2	
25	Dc - (L_2)	"	1	—	1	
26	Dc - (L_3)	"	1	1	2	
27	Dc - (M_1)	"	1	—	1	
28	Dc - (M_2)	"	1	—	1	
F04	INLET OR OUTLET					
01	φ0.762	TYPE - A INLET OR OUTLET	nr	8	—	8	
02	φ0.762	TYPE - B INLET OR OUTLET	"	13	—	13	
03	φ0.762	TYPE - C H: 1.40m INLET OR OUTLET	"	2	—	2	
04	φ0.762	TYPE - C H: 1.60m INLET	"	1	—	1	
05	φ0.762	TYPE - C H: 2.20m INLET OR OUTLET	"	2	—	2	
06	φ1.066	TYPE - A INLET OR OUTLET	"	2	—	2	
07	φ1.066	TYPE - B INLET OR OUTLET	"	3	—	3	
08	φ1.066	TYPE - C H: 1.60m INLET	"	1	—	1	
09	φ1.066	TYPE - C H: 1.90m INLET OR OUTLET	"	2	—	2	
10	φ1.066 TWIN	INLET	"	2	—	2	
11	φ1.066 TWIN	OUTLET	"	2	—	2	

ITEM NO	DESCRIPTION	UNIT	PHASE I	PHASE II	TOTAL	REMARKS
FOS	HEAD WALL					
01	HW - (A)	NR	38	3	41	
02	HW - (B)	"	1	—	1	
03	HW - (C_1)	"	1	—	1	
04	HW - (C_2)	"	1	—	1	
05	HW - (C_3)	"	3	—	3	

G : MASONRY WORKS

ITEM NO	DESCRIPTION	UNIT	PHASE I	PHASE II	TOTAL	REMARKS
G.01						
01	GROUTED RUBBLE MASONRY					
	CUT TYPE	m^2	7.219.2	—	7.219.2	
	ENBANKMENT TYPE	"	3.133.4	2955.2	6.088.6	
02	CONCRETE BASE	m	2742.3	650.2	3.392.5	

2. Earth Work

C O N T E N T S

	DESCRIPTION		CUT (SOIL) NET VOLUME	CUT (SOIL) CORRECTION VOLUME	CUT (ROCK) NET VOLUME	CUT (ROCK) CORRECTION VOLUME	TOTAL NET VOLUME	TOTAL CORRECTION VOLUME	EMBANKMENT EMBANKMENT	EMBANKMENT DEDUCTION	EMBANKMENT TOTAL	RE-USE VOLUME	BALANCE				
PHASE I	MAIN ROAD		449.035.8	404.132.3	17332.6	19.983.1	466.368.9	424.015.4	426.639.0	BOX 16.522.7	410.116.3	BOX 7.592.8	⊕21.541.9	20.923.1			
	ACCESS ROAD		6.612.1	5.950.9	—	—	1.612.1	5.950.9	17.929.2	BOX 339.5	17.589.7	BOX 498.8	⊖11.140.0	2.467.8			
	COROMANDEL I.C		51.972.8	52.175.7	1.806.8	2.077.9	59.779.6	54.253.6	1.970.3	—	1970.3	—	⊕52.283.0				
	MOTORWAY JUNCTION		144.803.0	130.322.7	2.995.0	3.444.3	147.798.0	133.767.1	16.105.5	—	16.105.5	—	⊕118.161.5				
	TOTAL		658.423.7	592.581.8	22.134.9	25.455.3	680.558.1	618.036.6	461.644.0	16.862.2	444.781.8	8.091.6	⊕181.346.4	23.390.9			
PHASE II	MAIN ROAD		72.820.2	65.538.2	—	—	72.820.2	65.538.2	57.360.2	13,121.0	44.239.2	—	⊕21.299.0				
	MOTORWAY JUNCTION	(H-RAMP)	696.0	626.3	—	—	696.0	626.3	4486.0	—	4486.0	—	⊖ 3.859.7				
	TOTAL		73.516.2	66.164.5	—	—	73.516.2	66.164.5	61.846.2	13.121.0	48.725.2	—	⊕17.439.3				
	TOTAL		731.939.9	658.745.8	22.134.4	25.455.3	754.074.3	684.201.1	523.490.2	29.983.2	493.507.9	8.091.6	⊕198.785.7	23.390.9			

§ 2 EARTH WORK QUANTITIES OF PHASE I

1) ACCUMULATED EARTH WORK QUANTITIES

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES	REMOVAL SOIL IN SAME SECTION	REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
0 + 20	0	27.2															
+ 60	40.000	23.2	1.008.0	907.2				907.2						+ 907.2	+ 907.2	0	
1 + 00	"	18.0	824.0	741.6				741.6	0					+ 741.6	+ 1.648.8	0	
+ 40	"	15.6	672.0	604.8	0			604.8	0.6	12.0		12.0		+ 592.8	+ 2.241.6	12.0	
+ 80	"	22.0	752.0	676.8	4.4	88.0	101.2	778.0	0	12.0		12.0		+ 766.0	+ 3.007.6	12.0	
2 + 20	"	75.2	1.344.0	1.209.6	21.6	520.0	598.0	1.807.6						+ 1.307.6	+ 4.315.2	0	
+ 60	"	74.6	1.796.0	1.616.4	70.8	1.848.0	2.125.2	3.741.6						+ 3.741.6	+ 8.556.8	0	
3 + 00	"	32.6	1.544.0	1.389.6	63.3	2.682.0	3.084.3	4.473.9						+ 4.473.9	+ 13.030.7	0	
+ 40	"	43.6	1.524.0	1.371.6	0	1.266.0	1.455.9	2.827.5	0					+ 2.827.5	+ 15.858.2	0	
+ 80	"	1.5	902.0	811.8				811.8	1.5.2	304.0		304.0		+ 507.8	+ 16.366.0	304.0	
4 + 20	"	0.5	40.0	36.0				36.0	56.4	1.432.0		1.432.0		- 1.396.0	+ 14.970.0	36.0	
+ 60	"	1.7	44.0	39.6				39.6	6.2.4	2.376.0		2.376.0		- 2.336.4	+ 12.633.6	39.6	
5 + 00	"	1.0	54.0	48.6				48.6	78.0	2.258.0		2.308.0		- 2.759.4	+ 9.874.2	48.6	
+ 40	"	3.4	88.0	79.2				79.2	80.0	3.160.0		3.160.0		- 3.080.8	+ 6.793.4	79.2	
+ 80	"	1.0	88.0	79.2				79.2	40.8	2.416.0		2.416.0		- 2.336.8	+ 4.456.6	79.2	
6 + 20	"	1.0	40.0	36.0				36.0	37.6	1.548.0		1.568.0		- 1.532.0	+ 2.924.6	36.0	
+ 60	"	1.0	40.0	36.0				36.0	28.4	1.320.0		1.320.0		- 1.284.0	+ 1.640.6	36.0	
7 + 00	"	1.4	48.0	43.2				43.2	13.3	834.0		834.0		- 790.8	+ 849.8	43.2	
+ 40	"	10.2	232.0	208.8				208.8	1.2	290.0		290.0		- 81.2	+ 768.6	208.8	
+ 80	"	11.0	424.0	381.6				381.6	3.7	98.0		98.0		+ 283.6	+ 1.052.2	98.0	
8 + 20	"	1.0	240.0	216.0				216.0	59.2	1.258.0		1.258.0		- 1.042.0	+ 10.2	216.0	
+ 60	"	1.8	56.0	50.4				50.4	160.0	4.384.0		4.384.0		- 4.333.6	- 4.323.4	50.4	
9 + 00	"	0.5	46.0	41.4				41.4	126.0	5.720.0		5.720.0		- 5.678.6	- 10.002.0	41.4	
+ 40	"	1.0	30.0	27.0				27.0	135.2	5.224.0	3.899.7	1.524.3	2.127.2	+ 629.9	- 9.372.1	1.524.3	
+ 80	"	0.5	30.0	27.0				27.0	100.0	4.704.0		4.704.0		- 4.677.0	- 14.049.1	27.0	
10 + 20	"	14.5	300.0	270.0				270.0	25.6	2.512.0		2.512.0		- 2.242.0	- 16.291.1	270.0	
+ 60	"	6.8	426.0	383.4				383.4	18.0	872.0		872.0		- 488.6	- 16.779.7	383.4	
11 + 00	"	15.7	450.0	405.0				405.0	4.3	446.0		446.0		- 41.0	- 16.820.7	405.0	
+ 40	"	41.7	1.148.0	1.033.2				1.033.2	0	86.0		86.0		+ 947.2	- 15.873.5	86.0	
+ 80	"	7.5	984.0	885.6				885.6	0	0		0		+ 885.6	- 14.987.9	0	
12 + 20	"	0.5	160.0	144.0				144.0	80.0	1.600.0		1.600.0		- 1.456.0	- 16.443.9	144.0	
+ 60	"	1.0	30.0	27.0				27.0	110.4	3.808.0		3.808.0	- 11.140.0	- 14.921.0	- 31.364.9	27.0	ACCESS ROAD BORROW 11.140.0 m³
13 + 00	"	0	20.0	18.0				18.0	120.8	4.624.0		4.624.0		- 4.606.0	- 35.970.9	18.0	
+ 40	"	0.5	10.0	9.0				9.0	132.0	5.056.0		5.056.0		- 5.047.0	- 41.017.9	9.0	
+ 80	"	12.5	460.0	237.0				234.0	127.6	5.192.0	1.817.6	3.374.4	374.8	- 2.765.6	- 43.783.5	908.8	
14 + 20	"	7.9	348.0	313.2				313.2	165.2	5.856.0		5.856.0		- 5.542.8	- 49.026.3	313.2	
+ 60	"	1.7	132.0	118.8				118.8	173.6	6.776.0		6.776.0		- 6.657.2	- 55.683.5	118.8	
SUB TOTAL			16.134.0	14.520.6		6.404.0	7.364.6	21.885.2		74.748.0	5.517.3	69.230.7	- 8.338.0			5.574.9	

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES	REMOVAL SOIL IN SAME SECTION	REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
14+60		1.7							173.6						- 55,683.5		
15+00	40.000	1.0	57.0	48.6				48.6	190.8	7,288.0	1,133.9	6,154.1	197.6	- 5,907.9	- 61,591.4	248.2	
+40	〃	1.0	40.0	36.0				36.0	146.8	6,752.0		6,752.0		- 6,716.0	- 68,307.4	36.0	
+80	〃	1.2	44.0	39.6				39.6	102.0	4,976.0	1,371.2	3,604.2	109.8	- 3,455.4	- 71,762.8	149.4	
16+20	〃	1.4	52.0	46.8				46.8	84.0	3,120.0		3,720.0		- 3,673.2	- 75,436.0	46.8	
+60	〃	1.0	48.0	43.2				43.2	92.0	3,520.0		3,520.0		- 3,476.8	- 78,912.8	43.2	
17+00	〃	1.0	40.0	36.0				36.0	32.4	2,488.0		2,488.0		- 2,452.0	- 81,364.8	36.0	
+40	〃	1.0	40.0	36.0				36.0	13.9	926.0		926.0		- 890.0	- 82,254.8	36.0	
+80	〃	1.0	40.0	36.0				36.0	22.0	718.0		718.0		- 682.0	- 82,936.8	36.0	
18+20	〃	1.0	40.0	36.0				36.0	66.0	1,760.0		1,760.0		- 1,724.0	- 84,660.8	36.0	
+60	〃	1.0	40.0	36.0				36.0	22.0	1,760.0		1,760.0		- 1,724.0	- 86,384.8	36.0	
19+00	〃	8.4	188.0	169.2				169.2	1.6	472.0		472.0		- 302.8	- 86,687.6	169.2	
+40	〃	21.1	590.0	531.0				531.0	0	32.0		32.0		+ 499.0	- 86,188.6	32.0	
+80	〃	56.7	1,556.0	1,400.4				1,400.4						+ 1,400.4	- 84,788.2	0	
20+20	〃	102.2	3,178.0	2,860.2				2,860.2						+ 2,860.2	- 81,928.0	0	
+60	〃	142.9	4,902.0	4,411.8				4,411.8						+ 4,411.8	- 77,516.2	0	
21+00	〃	229.3	7,444.0	6,699.6				6,699.6	0					+ 6,699.6	- 70,816.6	0	
+40	〃	266.4	9,914.0	8,922.6				8,922.6	4.0	80.0		80.0		+ 8,842.6	- 61,974.0	30.0	
+80	〃	299.0	11,308.0	10,177.2				10,177.2	0	80.0		80.0		+10,097.2	- 51,876.8	30.0	
22+20	〃	333.8	12,656.0	11,390.4				11,390.4						+11,390.4	- 40,486.4	0	
+60	〃	393.0	14,536.0	13,082.4				13,082.4						+13,082.4	- 27,404.0	0	
23+00	〃	414.4	16,148.0	14,533.2				14,533.2						+14,533.2	- 12,870.8	0	
+40	〃	362.4	15,536.0	13,982.4				13,982.4						+13,982.4	+ 1,111.6	0	
+80	〃	303.7	11,922.0	10,729.8				10,729.8						+10,729.8	+ 11,841.4	0	
24+20	〃	126.8	7,210.0	6,489.0				6,489.0						+ 6,489.0	+ 18,330.4	0	
+60	〃	62.4	3,784.0	3,405.6				3,405.6						+ 3,405.6	+ 21,736.0	0	
25+00	〃	65.1	2,550.0	2,295.0				2,295.0						+ 2,295.0	+ 24,031.0	0	
+40	〃	49.2	2,286.0	2,057.4				2,057.4	0					+ 2,057.4	+ 26,088.4	0	
+80	〃	47.6	1,936.0	1,742.4				1,742.4	15.6	312.0		312.0		+ 1,430.4	+ 27,518.8	312.0	
26+20	〃	9.7	1,146.0	1,031.4				1,031.4	15.6	624.0		624.0		+ 407.4	+ 27,926.2	624.0	
+60	〃	1.0	214.0	192.6				192.6	73.6	1,184.0		1,184.0		- 991.4	+ 26,934.8	192.6	
27+00	〃	1.0	40.0	36.0				36.0	42.0	1,712.0		1,712.0		- 1,676.0	+ 25,258.8	36.0	
+40	〃	1.0	40.0	36.0				36.0	37.6	1,592.0		1,592.0		- 1,556.0	+ 23,702.8	36.0	
+80	〃	1.0	40.0	36.0				36.0	36.0	1,472.0	334.1	1,137.9	83.1	- 1,018.8	+ 22,684.0	119.1	
28+20	〃	1.0	40.0	36.0				36.0	52.0	1,760.0		1,760.0		- 1,724.0	+ 20,960.0	36.0	
+60	〃	1.0	40.0	36.0				36.0	83.6	2,712.0		2,712.0		- 2,676.0	+ 18,284.0	36.0	
29+00	〃	1.0	40.0	36.0				36.0	134.0	4,352.0		4,352.0		- 4,316.0	+ 13,968.0	36.0	
SUB TOTAL			129,682.0	116,713.8				116,713.8		50,292.0	2,839.2	47,452.8	390.5			2,190.5	

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES	REMOVAL SOIL IN SAME SECTION	REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
29 + 00		1.0							137.0						+ 13,968.0		
+ 40	40.000	1.0	40.0	36.0				36.0	122.8	5,136.0		5,136.0		- 5,100.0	+ 8,868.0	36.0	
+ 80	"	1.0	40.0	36.0				36.0	72.0	3,896.0		3,896.0		- 3360.0	+ 5,008.0	36.0	
30 + 20	"	1.0	40.0	36.0				36.0	60.4	2,648.0		2,648.0		- 2,612.0	+ 2,396.0	36.0	
+ 60	"	23.3	486.0	437.4				437.4	77.2	2,752.0	749.5	2,002.5	2408.2	+ 843.1	+ 3,239.1	2,002.5	
31 + 00	"	1.0	486.0	437.4				437.4	81.2	5,168.0		3,168.0		- 2,730.6	+ 508.5	437.4	
+ 40	"	1.0	40.0	36.0				36.0	38.0	1,384.0		2,384.0		- 2,348.0	- 1,839.5	36.0	
+ 80	"	4.5	110.0	99.0				99.0	9.6	952.0		952.0		- 853.0	- 2,692.5	99.0	
32 + 20	"	10.7	304.0	273.6				273.6	2.0	232.0		232.0		+ 41.6	- 2,650.9	232.0	
+ 60	"	26.3	740.0	666.0				666.0	0	40.0		40.0		+ 626.0	- 2,024.9	40.0	
33 + 00	"	27.4	1,074.0	966.6				966.6						+ 966.6	- 1,058.3	0	
+ 40	"	43.8	1,424.0	1,281.6				1,281.6	0					+ 1,281.6	+ 223.3	0	
+ 80	"	14.7	1,170.0	1,053.0				1,053.0	1.1	22.0		22.0		+ 1,031.0	+ 1,254.3	22.0	
34 + 20	"	7.8	450.0	405.0				405.0	30.0	622.0		622.0		- 217.0	+ 1,037.3	405.0	
+ 60	"	1.0	176.0	158.4				158.4	148.0	3,560.0		3,560.0		- 3,401.6	- 2,364.3	158.4	
35 + 00	"	1.0	40.0	36.0				36.0	277.6	8,512.0		8,512.0		- 8,476.0	- 10,840.3	36.0	
+ 40	"	0.5	30.0	27.0				27.0	287.6	11,304.0		11,304.0		- 11,277.0	- 22,117.3	27.0	
+ 80	"	0.5	20.0	18.0				18.0	294.0	11,632.0		11,632.0		- 11,614.0	- 33,731.3	18.0	
36 + 20	"	0.7	24.0	21.6				21.6	280.0	11,480.0		11,480.0		- 11,458.4	- 45,189.7	21.6	
+ 60	"	0.6	26.0	23.4				23.4	228.0	10,160.0		10,160.0		- 10,136.6	- 55,326.3	23.4	
37 + 00	"	1.0	32.0	28.8				28.8	19.2	4,944.0		4,944.0		- 4,915.2	- 60,241.5	28.8	
+ 40	"	7.3	166.0	149.4				149.4	11.6	616.0		616.0		- 466.6	- 60,708.1	149.4	
+ 80	"	0.5	156.0	140.4				140.4	39.2	2,016.0		2,016.0		- 1,875.6	- 62,583.7	140.4	
38 + 20	"	0.5	20.0	18.0				18.0	184.8	5,780.0	2,777.5	2,702.5	583.1	- 2,101.4	- 67,685.1	601.1	
+ 60	"	1.0	30.0	27.0				27.0	184.0	7,376.0		7,376.0		- 7,349.0	- 72,034.1	27.0	
39 + 00	"	1.0	40.0	36.0				36.0	185.6	7,392.0		7,392.0		- 7,356.0	- 79,390.1	36.0	
+ 40	"	2.4	68.0	61.2				61.2	178.0	7,272.0		7,272.0		- 7,210.8	- 86,600.9	61.2	
+ 80	"	1.0	68.0	61.2				61.2	167.6	6,912.0		6,912.0		- 6,850.8	- 93,451.7	61.2	
40 + 20	"	1.0	40.0	36.0				36.0	116.8	5,688.0		5,688.0		- 5,652.0	- 99,103.7	36.0	
+ 60	"	1.0	40.0	36.0				36.0	33.2	3,000.0		3,000.0		- 2,967.0	-102,067.7	36.0	
41 + 00	"	24.2	504.0	453.6				453.6	2.4	712.0		712.0		- 258.4	-102,326.1	453.6	
+ 40	"	45.7	1,398.0	1,258.2				1,258.2	0	48.0		48.0		+ 1,210.2	- 101,115.9	48.0	
+ 80	"	89.6	2,706.0	2,435.4				2,435.4						+ 2,435.4	- 98,680.5	0	
42 + 20	"	106.4	3,920.0	3,528.0				3,528.0						+ 3,528.0	- 95,152.5	0	
+ 60	"	68.4	3,496.0	3,146.4				3,146.4	0					+ 3,146.4	- 92,006.1	0	
43 + 00	"	23.4	1,836.0	1,652.4				1,652.4	0.2	4.0		4.0		+ 1,648.4	- 90,357.7	4.0	
+ 40	"	4.8	564.0	507.6				507.6	25.6	516.0		516.0		- 8.4	- 90,366.1	507.6	
SUBTOTAL			21,804.0	19,623.6				19,623.6		130,476.0	3,527.0	126,949.0	2,991.3			5,856.6	

STATION	DISTANCE	CUT (SOIL) x 0.90			CUT (ROCK) x 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES	REMOVAL SOIL IN SAME SECTION	REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
43 + 40		4.8							25.6					-	- 90,366.1		
+ 80	40.000	0.5	106.0	95.4				95.4	76.8	2,048.0		2,048.0		- 1,952.6	- 92,318.7	95.4	
44 + 20	"	0.5	20.0	18.0				18.0	104.0	3,616.0		3,616.0		- 3,598.0	- 95,916.7	18.0	
+ 60	"	0.1	12.0	10.8				10.8	113.0	7,370.0		7,370.0		- 7,329.2	- 100,245.9	10.8	
45 + 00	"	0.1	4.0	3.6				3.6	94.5	7,150.0		7,150.0		- 7,146.4	- 104,392.3	3.6	
+ 40	"	0.9	20.0	18.0				18.0	62.8	3,146.0		3,146.0		- 3,128.0	- 107,520.3	18.0	
+ 80	"	0	18.0	16.2				16.2	76.4	2,184.0		2,184.0		- 2,167.8	- 109,688.1	16.2	
46 + 20	"	5.2	104.0	93.6				93.6	11.2	1,152.0		1,152.0		- 1,058.4	- 110,746.5	93.6	
+ 60	"	40.8	920.0	828.0				828.0	0	224.0		224.0		+ 604.0	- 110,142.5	224.0	
47 + 00	"	42.8	1,672.0	1,504.8				1,504.8						+ 1,504.8	- 108,637.7	0	
+ 40	"	32.8	1,512.0	1,360.8				1,360.8						+ 1,360.8	- 107,276.9		
+ 80	"	36.4	1,387.0	1,248.6				1,248.6						+ 1,248.6	- 106,031.3		
48 + 20	"	33.2	1,392.0	1,252.8				1,252.8						+ 1,252.8	- 104,778.5		
+ 60	"	43.2	1,528.0	1,375.2				1,375.2						+ 1,375.2	- 103,403.3		
49 + 00	"	60.4	2,072.0	1,864.8				1,864.8						+ 1,864.8	- 101,538.5		
+ 40	"	64.0	2,488.0	2,239.2				2,239.2						+ 2,239.2	- 99,299.3		
+ 80	"	62.4	2,528.0	2,275.2				2,275.2						+ 2,275.2	- 97,024.1		
50 + 20	"	55.8	2,364.0	2,127.6				2,127.6						+ 2,127.6	- 94,896.5		
+ 60	"	51.5	2,146.0	1,931.4				1,931.4						+ 1,931.4	- 92,965.1		
51 + 00	"	57.7	2,184.0	1,965.6				1,965.6						+ 1,965.6	- 90,999.5		
+ 40	"	62.0	2,394.0	2,154.6				2,154.6						+ 2,154.6	- 88,844.9		
+ 80	"	97.8	3,136.0	2,822.4				2,822.4						+ 2,822.4	- 86,022.5		
52 + 20	"	130.3	4,512.0	4,060.8				4,060.8						+ 4,060.8	- 81,961.7		
+ 60	"	172.3	6,072.0	5,464.8	0			5,464.8						+ 5,464.8	- 76,496.9		
53 + 00	"	202.4	7,504.0	6,753.6	2.8	56.0	64.4	6,818.0						+ 6,818.0	- 69,678.9		
+ 40	"	239.2	8,832.0	7,948.8	0.7	70.0	80.5	8,029.3						+ 8,029.3	- 61,649.6		
+ 60	20.000	164.8	4,090.0	3,636.0	0.7	14.0	16.1	3,652.1						+ 3,652.1	- 57,997.5		
+ 80	"	194.4	3,592.0	3,232.8	0	7.0	8.1	3,240.9						+ 3,240.9	- 54,756.6		
54 + 00	"	222.4	4,168.0	3,751.2	0.5	5.0	5.8	3,757.0						+ 3,757.0	- 50,999.6		
+ 20	"	244.8	4,672.0	4,204.8	0.9	14.0	16.1	4,220.9						+ 4,220.9	- 46,778.7		
+ 40	"	241.6	4,864.0	4,377.6	2.5	34.0	39.1	4,416.7					4,246.7	+ 8,663.4	- 38,115.3		B RAMP RE-USE VOLUME 4,246.7
+ 60	"	233.2	4,748.0	4,273.2	4.0	65.0	74.8	4,348.0						+ 4,348.0	- 33,767.3		
+ 80	"	225.6	4,588.0	4,129.2	5.7	97.0	111.6	4,240.8						+ 4,240.8	- 29,526.5		
55 + 20	40.000	239.2	9,296.0	8,366.4	19.8	510.0	586.5	8,952.9					5,911.3	+ 14,864.2	- 14,663.3		E RAMP RE-USE VOLUME 5,911.3
+ 60	"	239.6	9,576.0	8,618.4	16.6	728.0	837.2	9,455.6					147.8	+ 9,603.4	- 5,059.9		G RAMP RE-USE VOLUME 147.8
56 + 00	"	250.8	9,808.0	8,827.2	23.1	794.0	913.1	9,740.3					4,809.4	+ 14,549.7	+ 9,490.8		F RAMP RE-USE VOLUME 4,809.4
56 + 20	20.000	255.6	5,064.0	4,557.6	21.3	444.0	510.6	5,068.2						+ 5,068.2	+ 14,559.0		
SUBTOTAL			119,340.0	107,406.0		2,838.0	3,263.9	110,669.9		20,860.0		20,860.0	15,115.2			479.6	

STATION	DISTANCE	CUT (SOIL) x 0.90			CUT (ROCK) x 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES	REMOVAL SOIL IN SAME SECTION	REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
55+20		265.6			21.3										+ 14,559.0		
+40	20.000	246.8	5,024.0	4,521.6	18.7	400.0	460.0	+ 981.6						+ 981.6	+ 15,540.6		
+60	"	272.0	5,188.0	4,669.2	17.1	358.0	411.7	5,080.9						+ 5080.9	+ 24,621.5		
+80	"	258.8	5,308.0	4,777.2	20.0	371.0	426.7	5,203.9					13,531.6	+ 18,735.5	+ 43,357.0		D RAMP RE-USE VOLUME 13,531.6
57+00	"	246.8	5,056.0	4,550.4	23.6	436.0	501.4	5,051.8					7,471.4	+ 12,523.2	+ 55,880.2		C RAMP RE-USE VOLUME 7,471.4
+20	"	240.4	4,872.0	4,384.8	25.9	282.0	324.3	4,709.1						+ 4,709.1	+ 60,589.3		
+40	"	222.8	4,632.0	4,168.8	21.0	469.0	539.4	4,708.2						+ 4,708.2	+ 65,297.5		
+60	"	195.2	4,180.0	3,762.0	10.7	317.0	364.6	4,126.6						+ 4,126.6	+ 69,424.1		
+80	"	301.6	4,968.0	4,471.2	8.6	193.0	222.0	4,693.2						+ 4,693.2	+ 74,117.3		
58+20	40.000	469.6	15,424.0	13,881.6	12.8	428.0	492.2	14,373.8						+ 14,373.8	+ 88,491.1		
+60	"	461.2	18,616.0	16,754.4	5.2	360.0	414.0	17,168.4						+ 17,168.4	+ 105,659.5		
59+00	"	406.0	17,344.0	15,609.6	20.0	504.0	579.6	16,189.2					16,164.8	+ 132,354.0	+ 148,013.5		H RAMP RE-USE VOLUME 16,164.8
+40	"	334.8	14,816.0	13,334.4	12.8	1,856.0	2,134.4	15,468.8	0					+ 15,468.8	+ 163,482.3	0	
+80	"	78.8	8,272.0	7,444.8	6.0	1,576.0	1,812.4	9,257.2	44	330		880		+ 9,169.2	+ 162,651.5	880	
60+20	"	24.9	2,074.0	1,865.6	0	1,200.0	1380	2,004.6	33.2	752.0		752.0		+ 1,252.6	+ 163,904.1	752.0	
+60	"	23.7	972.0	874.8				874.8	57.2	1,808.0		1,808.0		- 933.2	+ 162,970.9	874.8	
+87	27.000	16.1	537.3	483.6				483.6	66.0	1,663.2		1,663.2		- 1,179.6	+ 161,791.3	483.6	
	BRIDGE																
62+82		12.2							95.4						+ 161,791.3		
63+00	18.000	12.2	219.6	197.6				197.6	95.1	1,726.2		1,726.2		- 1,528.6	+ 160,262.7	197.6	
+20	20.000	15.0	272.0	244.8	0			244.8	62.5	1,584.0		1,584.0		- 1,339.2	+ 158,923.5	244.8	
+40	"	42.4	574.0	516.6	0.8	8.0	9.2	525.8	0	625.0		625.0		- 99.2	+ 158,824.3	525.8	
+60	"	97.6	1,400.0	1,260.0	8.4	92.0	105.8	1,365.8						+ 1,365.8	+ 160,190.1	0	
+80	"	121.2	2,188.0	1,969.2	0.9	93.0	107.0	2,076.2						+ 2,076.2	+ 162,266.3		
64+00	"	143.6	2,648.0	2,383.2	0.5	14.0	16.1	2,399.3						+ 2,399.3	+ 164,665.6		
+20	"	165.2	3,088.0	2,779.2	0.7	12.0	13.8	2,793.0						+ 2,793.0	+ 167,458.6		
+40	"	294.4	4,596.0	4,136.4	3.0	37.0	42.6	4,179.0						+ 4,179.0	+ 171,637.6		
+60	"	309.6	6,040.0	5,436.0	0	30.0	34.5	5,470.5						+ 5,470.5	+ 177,108.1		
+80	"	147.2	7,568.0	7,111.2	3.0	30.0	34.5	7,145.7	0					+ 7,145.7	+ 184,253.8		
65+00	"	38.0	1,852.0	1,666.8	2.8	58.0	66.7	1,733.5	8.7	87.0		87.0		+ 1,646.5	+ 182,900.3	87.0	
+29	29.000	8.2	668.9	602.9	0	40.6	46.7	649.6	3.0	169.7		169.7		+ 479.9	+ 183,380.2	169.7	
	BRIDGE																
65+57		8.1							30.4						+ 183,380.2		
+80	23.000	6.7	147.2	132.5				132.5	7.6	437.0		437.0		- 304.5	+ 183,075.7	132.5	
66+00	20.000	6.1	128.0	115.2				115.2	147.8	1,524.0		1,524.0		- 1,408.8	+ 181,666.9	115.2	
+20	"	6.4	125.0	112.5				112.5	11.2	1,560.0		1,560.0		- 1,447.5	+ 180,219.4	112.5	
+40	"	22.8	292.0	262.8				262.8	1.3	125.0		125		+ 137.8	+ 180,357.2	125.0	
SUB TOTAL			146,091.0	131,481.9		8,087.5	9,297.6	140,779.5		12,149.1		12,149.1	37,167.8			3,908.5	

STATION	DISTANCE	CUT (SOIL) x 0.90			CUT (ROCK) x 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES	REMOVAL SOIL IN SAME SECTION	REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
66 + 40		22.8			0				1.3						+180,357.2		
+ 60	20.000	99.2	1220.0	1098.0	0.5	3.0	3.5	1101.5	1.0	23.0		23.0		+1078.5	+181,435.7	23.0	
+ 80	"	149.5	2787.0	2238.3	0	3.0	3.5	2241.8	4.4	57.0		57.0		+2187.8	+183,623.5	57.0	
67 + 00	"	165.8	3153.0	2837.7				2837.7	4.8	92.0		92.0		+2745.7	+186,369.2	92.0	
+ 20	"	153.6	3191.0	2874.6				2874.6	10.7	152.0		152.0		+2722.6	+189,091.8	152.0	
+ 40	"	97.2	2508.0	2257.2				2257.2	16.7	268.0		268.0		+1989.2	+191,081.0	268.0	
+ 60	"	60.0	1572.0	1414.8				1414.8	20.9	368.0		368.0		+1046.8	+192,127.8	368.0	
+ 80	"	27.6	876.0	788.4				788.4	28.0	484.0		484.0		+304.4	+192,432.2	484.0	
68 + 00	"	0	276.0	248.4				248.4	106.2	1342.0		1342.0		-1093.6	+191,338.6	248.4	
+ 20	"							0	171.5	1777.0		1777.0		-1777.0	+189,561.6	0	
+ 40	"	0						0	293.2	4147.0		4147.0		-4147.0	+185,414.6	0	
+ 60	"	2.2	22.0	19.8				19.8	316.8	5100.0		5600.0		-5580.2	+179,834.4	19.8	
+ 80	"	13.6	158.0	142.2				142.2	220.8	5376.0	4639.2	736.8	1709.0	+ 817.4	+180,648.8	736.8	
69 + 00	"	12.0	256.0	230.4				230.4	267.4	4882.0		4882.0		-4651.6	+175,997.2	230.4	
+ 20	"	0	120.0	108.0				108.0	325.2	5926.0		5926.0		-5818.0	+170,179.2	108.0	
+ 40	"							0	307.2	6324.0		6324.0		-6324.0	+163,855.2	0	
+ 60	"								256.0	5632.0		5632.0		-5632.0	+158,223.2	0	
+ 80	"								0	2560.0		2560.0		-2560.0	+155,663.2	0	
70 + 00	"									0		0	-7163.0	-7163.0	+148,500.2	0	M.T - DRAIN P RE-USE VOLUME 7163.0
71 + 00	100.000									51808.0		51808.0	-3618.9	-55776.9	+ 93.023.3	0	EXTRA BANKING 51,808.0 M.T - ARAIN RE-USE VOLUME 3618.9
+ 60	60.000											0	125,840.6	+125,840.6	+218,863.9	0	M. M? ROAD RE-USE VOLUME 125,840.6
72 + 00	40.000											0	1914.9 1737.9	+ 3.652.8	+222,516.7	0	M.T - DRAIN RE-USE 1914.9 C " VOLUME 1737.9
73 + 00	100.000											0		0	+222,516.7	0	
+ 15	15.000	0						0	0			0		0	+222,516.7	0	
+ 40	25.000	0.5	6.3	5.7				5.7	389.2	4862.5		4862.5		-4856.8	+217,659.9	5.7	
+ 80	40.000	0.5	20.0	18.0				18.0	252.8	12.840.0		12.840.0		-12.822.0	+204,837.9	18.0	
74 + 00	20.000	0.5	10.0	9.0				9.0	228.4	4812.0		4812.0		-4803.0	+200,034.9	9.0	
+ 40	40.000	0.5	20.0	18.0				18.0	190.2	4032.4		4032.4		-4014.4	+196,020.5	18.0	
+ 60	20.000	0.5	10.0	9.0				9.0	180.4	3706.0		3706.0		-3697.0	+192,323.5	9.0	
75 + 00	40.000	0.5	20.0	18.0				18.0	140.2	2784.4		2784.4		-2965.4	+189,357.1	18.0	
+ 20	20.000	0.5	10.0	9.0				9.0	126.6	2.668.0		2.668.0		-2,659.0	+186,698.1	9.0	
+ 60	40.000	0.5	20.0	18.0				18.0	112.0	2.366.6		2,366.6		-2,348.6	+184,349.5	18.0	
76 + 00	"	0.5	20.0	18.0				18.0	110.0	2.312.0		2,312.0		-2,294.0	+182,055.5	18.0	
+ 13	13.000	0.5	6.5	5.9				5.9	0	715.0		715.0		- 709.1	+181,346.4	5.9	
SUB TOTAL			15.984.8	14.386.4		6.0	7.0	17.393.4		138,113.4	4.639.2	133,474.2	120,070.5			2,913.0	
TOTAL			419,035.8	404,132.3		17.332.6	19.939.1	424,065.4		426.639.0	16,522.7	410,116.3	157.238.3		+181,346.1	20,923.1	

2) ACCESS ROAD

DESCRIPTION		CUT (SOIL)		CUT (ROCK)		TOTAL		EMBANKMENT			RE-USE VOLUME	BALANCE	REMOVAL SOIL IN SAME SECTION			
		NET VOLUME	CORRECTION VOLUME	NET VOLUME	CORRECTION VOLUME	NET VOLUME	CORRECTION VOLUME	EMBANKMENT	DEDUCTION	TOTAL						
ACCESS ROAD		6.612.1	5.950.9	—	—	6.612.1	5.950.9	17.929.2	—	17.929.2	—	⊖ 11.978.3	2.467.8			
BOX CULVERTS								—	339.5	⊖ 339.5	498.8	⊕ 838.3	—			
TOTAL		6.612.1	5.950.9	—	—	6.612.1	5.950.9	17.929.2	339.5	17.589.7	498.8	⊖ 11.140.0	2.467.8			

ACCESS ROAD (1)

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES	REMOVAL SOIL IN SAME SECTION	REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
0 + 13	0.000	1.6							62.9								
+ 60	47.000	1.6	75.2	67.7				67.7	62.9	2,956.3		2,956.3		- 2,888.6	- 2,888.6	67.7	
+ 80	20.000	2.6	42.0	37.8				37.8	32.1	950.0		950.0		- 912.2	- 3,800.8	37.8	
1 + 00	"	1.0	36.0	32.4				32.4	29.6	617.0		617.0		- 584.6	- 4,385.4	32.4	
+ 20	"	1.7	27.0	24.3				24.3	19.0	486.0		486.0		- 461.7	- 4,847.1	24.3	
+ 40	"	3.3	50.0	45.0				45.0	7.5	265.0		265.0		- 220.0	- 5,067.1	45.0	
+ 60	"	6.0	93.0	83.7				83.7	3.5	107.0		107.0		- 23.3	- 5,090.4	83.7	
+ 80	"	4.6	106.0	95.4				95.4	10.9	141.0		141.0		- 45.6	- 5,136.0	95.4	
2 + 00	"	3.0	76.0	68.4				68.4	16.6	275.0		275.0		- 206.6	- 5,342.6	68.4	
+ 40	40.000	1.8	96.0	86.4				86.4	24.4	820.0		820.0		- 733.6	- 6,076.2	86.4	
+ 60	20.000	2.1	39.0	35.1				35.1	40.3	647.0	317.7	329.3	306.3	+ 12.1	- 6,064.1	329.3	
+ 80	"	1.9	40.0	36.0				36.0	36.3	766.0		766.0		- 730.0	- 6,794.1	36.0	
3 + 20	40.000	1.6	70.0	63.0				63.0	20.7	1,140.0		1,140.0		- 1,077.0	- 7,871.1	63.0	
+ 60	"	4.6	124.0	111.6				111.6	23.5	884.0		884.0		- 772.4	- 8,643.5	111.6	
4 + 00	"	1.7	126.0	113.4				113.4	22.1	912.0		912.0		- 798.6	- 9,442.1	113.4	
+ 40	"	1.9	72.0	64.8				64.8	15.9	760.0		760.0		- 695.2	- 10,137.3	64.8	
+ 80	"	3.0	298.0	268.2				268.2	0.2	322.0		322.0		- 53.8	- 10,191.1	268.2	
5 + 00	20.000	16.9	299.0	269.1				269.1	0	2.0		2.0		+ 267.1	- 9,923.0	2.0	
+ 20	"	22.6	395.0	355.5				355.5						+ 355.5	- 9,568.5	0	
+ 40	"	28.4	510.0	459.0				459.0						+ 459.0	- 9,109.5	0	
+ 60	"	28.4	568.0	511.2				511.2						+ 511.2	- 8,598.3	0	
+ 80	"	26.9	553.0	497.7				497.7						+ 497.7	- 8,100.6	0	
6 + 20	40.000	17.7	892.0	802.8				802.8	0					+ 802.8	- 7,297.8	0	
+ 60	"	9.5	544.0	489.6				489.6	0.2	4.0		4.0		+ 485.6	- 6,812.2	4.0	
7 + 00	"	3.0	250.0	225.0				225.0	1.6	36.0		36.0		+ 189.0	- 6,623.2	36.0	
+ 20	"	0.5	70.0	63.0				63.0	8.5	202.0		202.0		- 139.0	- 6,762.2	63.0	
+ 40	"	0.5	20.0	18.0				18.0	12.3	426.0		426.0		- 408.0	- 7,170.2	18.0	
8 + 00	20.000	0.5	10.0	9.0				9.0	11.0	238.0	21.8	216.2	192.5	- 14.7	- 7,184.9	101.5	
+ 20	"	7.0	75.0	67.5				67.5	17.5	255.0		255.0		- 187.5	- 7,372.4	67.5	
+ 60	40.000	0	140.0	126.0				126.0	11.4	518.0		518.0		- 392.0	- 7,764.4	126.0	
9 + 00	"	0	0	0				0	5.9	376.0		376.0		- 376.0	- 8,110.4	0	
+ 40	"	1.9	38.0	34.2				34.2	0.5	128.0		128.0		- 93.8	- 8,204.2	34.2	
+ 80	"	0.4	46.0	41.4				41.4	1.7	44.0		44.0		- 2.6	- 8,206.8	41.4	
10 + 20	"	0.4	16.0	14.4				14.4	1.8	70.0		70.0		- 55.6	- 8,262.4	14.4	
+ 60	"	0	8.0	7.2				7.2	8.7	210.0		210.0		- 202.8	- 8,465.2	7.2	
11 + 00	"		0	0				0	19.1	556.0		556.0		- 556.0	- 9,021.2	0	
+ 40	"								10.5	592.0		592.0		- 592.0	- 9,613.2	0	
SUBTOTAL			5,807.2	5,223.8				5,223.8		15,675.3	339.5	15,335.8	498.8		- 9,613.2	2,142.6	

ACCESS ROAD (2)

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES	REMOVAL SOIL IN SAME SECTION	REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
11 + 40		0							10.5						- 9.613 2		
+ 80	40.000	0.9	18.0	16.2				16.2	3.0	270.0		270.0		- 253.8	- 9,867.0	16.2	
12 + 20	"	1.1	40.0	36.0				36.0	3.0	120.0		120.0		- 84.0	- 9,951.0	36.0	
+ 40	20.000	0	11.0	9.9				9.9	7.2	72.0		72.0		- 62.1	- 10,013.1	9.9	
+ 80	40.000	2.4	48.0	43.2				43.2	1.0	10.7.0		107.0		- 60.8	- 10,073.9	43.2	
13 + 00	20.000	0.1	25.0	22.5				22.5	4.1	51.0		51.0		- 28.5	- 10,102.4	22.5	
+ 40	40.000	0	2.0	1.8				1.8	2.9	170.0		170.0		- 138.2	- 10,240.6	1.8	
+ 30	"	0.5	10.0	9.0				9.0	2.8	114.0		114.0		- 105.0	- 10,345.6	9.0	
14 + 20	"	0	10.0	9.0				9.0	6.4	184.0		184.0		- 175.0	- 10,520.6	9.0	
+ 60	"	0	0	0				0	2.8	244.0		244.0		- 244.0	- 10,764.6	0	
15 + 00	"	0.7	14.0	12.6				12.6	2.3	162.0		162.0		- 149.4	- 10,914.0	12.6	
+ 40	"	0	14.0	12.6				12.6	7.9	204.0		204.0		- 191.4	- 11,105.4	12.6	
+ 80	"	0.3	6.0	5.4				5.4	5.1	260.0		260.0		- 254.6	- 11,360.0	5.4	
16 + 20	"	0.6	18.0	16.2				16.2	2.8	158.0		158.0		- 141.8	- 11,501.8	16.2	
+ 60	"	2.1	54.0	48.6				48.6	0.1	53.0		58.0		- 9.4	- 11,511.2	48.6	
+ 80	20.000	0.6	27.0	24.3				24.3	1.9	20.0		20.0		+ 4.3	- 11,506.9	20.0	
17 + 00	"	0.1	7.0	6.3				6.3	1.8	37.0		37.0		- 30.7	- 11,537.6	6.3	
+ 40	40.000	3.0	62.0	55.8				55.8	0.3	42.0		42.0		+ 13.8	- 11,523.8	42.0	
+ 80	"	5.8	176.0	158.4				158.4	0	6.0		6.0		+ 152.4	- 11,371.4	6.0	
18 + 11.650	31.650	11.0	265.9	239.3				239.3	0.5	7.9		7.9		+ 231.4	- 11,140.0	7.9	
SUBTOTAL			807.9	727.1				727.1		2,253.9		2,253.9				325.2	
TOTAL			6,612.1	5,950.9				5,950.9		17,929.2	339.5	17,589.7	498.8		-11,140.0	2,467.8	

3) COROMANDEL I·C

DESCRIPTION		CUT (SOIL)		CUT (ROCK)		TOTAL		EMBANKMENT			RE-USE VOLUME	BALANCE
		NET VOLUME	CORRECTION VOLUME	NET VOLUME	CORRECTION VOLUME	NET VOLUME	CORRECTION VOLUME	EMBANKMENT	DEDUCTION	TOTAL		
B - RAMP		4.569.4	4.112.5	127.8	143.5	4.697.2	4256.0	9.3	—	9.3	—	+ 4246.7
C - RAMP		8.466.8	7.620.1	—	—	8.466.8	7.620.1	148.7	—	148.7	—	+ 7471.4
D - RAMP		14.688.8	13.170.4	317.0	361.2	14.947.8	13.531.6	—	—	—	—	+ 13.531.6
E - RAMP		7.378.4	6.640.5	—	—	7.378.4	6.640.5	729.2	—	729.2	—	+ 5.911.3
F - RAMP		6.053.6	5.448.2	—	—	6.053.6	5448.2	638.8	—	638.8	—	+ 4.809.4
G - RAMP		642.0	577.8	—	—	642.0	571.8	430.0	—	430.0	—	+ 147.8
H - RAMP		16.228.8	14.605.9	1.368.0	1.573.2	17.596.8	16.179.1	14.3	—	14.3	—	+ 16.164.8
TOTAL		57.972.8	52.175.4	1.806.8	2.077.9	59.779.6	54.253.3	1970.3	—	1970.3	—	⊕52.283.0

COROMANDEL I.C. (1)

STATION	DISTANCE	CUT (SOIL) x 0.90			CUT (ROCK) x 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES		REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
(B) 4+14	0.000	81.2			7.8												
5	6.000	81.2	487.2	438.5	7.8	46.8	53.8										
6	20.000	78.8	1,600.0	1,440.0	0	73.0	89.7										
7	"	50.0	1,288.0	1,159.2													
8	"	23.6	736.0	662.4													
9	"	7.5	311.0	279.9					0								
10	"	3.9	114.0	102.6					0.5	5.0							
10+85	8.500	3.9	33.2	29.9					0.5	4.3							
TOTAL			4,559.4	4,112.5		124.8	143.5	4,256.0		9.3		9.3			+ 4,246.7		
(C) 5	0.000	135.6															
6	20.000	109.6	2,452.0	2,206.8													
7	"	83.6	1,932.0	1,738.8													
8	"	65.6	1,492.0	1,342.8													
9	"	47.6	1,132.0	1,018.8													
10	"	30.4	780.0	702.0													
11	"	15.6	460.0	414.0					0								
12	"	2.7	183.0	164.7					0.7	7.0							
13	"	0.5	32.0	28.8					7.2	79.0							
13+76	7.500	0.5	3.8	3.4					7.2	54.7							
TOTAL			8,466.8	7,620.1				7,620.1		148.7		148.7			+ 7,471.4		

CORONANDEL I·C (2)

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES		REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
(D) 8	0.000	159.2			14.4												
9	20.000	151.2	3,104.0	2,793.6	3.0	224.0	257.6										
10	"	130.8	2,820.0	2,538.0	0.5	25.0	97.8										
11	"	100.4	2,312.0	2,080.8	0	5.0	5.8										
12	"	84.4	1,848.0	1,663.2													
13	"	61.6	1,460.0	1,314.0													
14	"	45.2	1,068.0	961.2													
15	"	47.6	928.0	835.2													
16	"	21.6	692.0	622.8													
16 +18.6	18.600	21.6	701.8	361.6													
TOTAL			14,633.8	13,170.4		314.0	361.2	13,531.6		0		0			+13,531.6		
(E) 6	0.000	14.8							0								
7	20.000	14.8	296.0	266.4													
8	"	29.2	440.0	396.0					0								
9	"	7.7	369.0	332.1					8.0	80.0							
10	"	0.5	82.0	73.8					8.8	168.0							
11	"	1.0	15.0	13.5					7.6	164.0							
12	"	74.4	754.0	678.6					0	76.0							
12 +18	18.000	16.0	813.6	732.2													
	BRIDGE																
15 + 4	0.000	0.5							0.3								
16	16.000	22.0	180.0	162.0					1.6	15.2							
17	20.000	62.3	843.0	758.7					4.7	63.0							
18	"	61.6	1,239.0	1,115.1					0	47.0							
19	"	10.4	720.0	648.0					2.7	27.0							
20	"	11.6	220.0	198.0					0.7	34.0							
21	"	24.0	356.0	320.4					0	7.0							
22	"	20.8	448.0	403.2													
23	"	18.8	396.0	356.4													
23 + 11	11.000	18.8	206.8	186.1													
TOTAL			7,378.4	6,640.5				6,640.5		729.2		729.2			+5,911.3		

CORONANDEL I.C (3)

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES		REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
(F)10	0.000	0							11.6								
11	20.000	0.2	2.0	1.8					14.3	259.0							
12	〃	70.0	72.0	64.8					0	143.0							
13	〃	61.7	1317.0	1,185.3													
14	〃	54.0	1,157.0	1,041.3													
15	〃	26.4	804.0	723.6													
15+10	10.000	8.8	176.0	158.4													
17+18	0.000	0							6.4								
18	2.000	6.8	6.8	6.1					6.4	12.8							
19	20.000	56.5	633.0	569.7					4.0	109.0							
20	〃	60.6	1,171.0	1,053.9					3.6	76.0							
21	〃	6.8	674.0	606.6					0.5	41.0							
21+6	6.000	6.8	40.8	36.7					0.5	3.0							
TOTAL			6053.6	5,448.2				5,448.2		638.8		638.8			+4809.4		
(G)0	0.000	1.6															
1	20.000	3.3	49.0	44.1					0								
2	〃	8.0	113.0	101.7					1.0	10.0							
3	〃	0	80.0	72.0					18.4	194.0							
4	〃	14.0	140.0	126.0					2.0	204.0							
5	〃	4.2	182.0	163.8					0.1	21.0							
6	〃	3.6	78.0	70.2					0	1.0							
TOTAL			642.0	577.8				577.8		430.0		430.0			+147.8		

CORO MANDEL I.C (4)

STATION	DISTANCE	CUT (SOIL) x 0.90			CUT (ROCK) x 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES		REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
(H) 8	0.000	N.2.8			78.0												
9	20.000	157.6	3,104.0	2,793.6	28.0	760.0	874.0										
10	"	138.0	2,956.0	2,660.4	13.6	416.0	478.4										
11	"	137.0	2,720.0	2,448.0	2.8	164.0	188.6										
12	"	101.6	2,356.0	2,120.4	0	28.0	32.2										
13	"	76.4	1,780.0	1,602.0													
14	"	54.8	1,312.0	1,180.8													
15	"	41.6	964.0	867.6													
16	"	21.2	628.0	565.2													
17	"	8.8	300.0	270.0					0								
18	"	1.6	104.0	93.6					1.1	11.0							
18+3	3.000	1.6	4.8	4.3					1.1	3.3							
TOTAL			16,228.8	14,605.9		1,368.0	1,573.2	16,179.1		14.3		14.3			+ 16,164.8		

4) MOTORWAY JUNCTION (PHASE I)

DESCRIPTION		CUT (SOIL)		CUT (ROCK)		TOTAL		EMBANKMENT			RE-USE VOLUME	BALANCE
		NET VOLUME	CORRECTION VOLUME	NET VOLUME	CORRECTION VOLUME	NET VOLUME	CORRECTION VOLUME	EMBANKMENT	DEDUCTION	TOTAL		
A - RAMP		2.559.0	2.303.1	—	—	2.557.0	2303.1	5.972.0	—	5.972.0	—	⊖ 3.668.9
B - RAMP		3701.0	3.330.9	—	—	3.701.0	3.330.9	1.416.0	—	1.416.0	—	⊕ 1.914.9
C - RAMP		1.956.0	1.760.4	—	—	1.956.0	1.760.4	22.5	—	22.5	—	⊕ 1.737.9
D - RAMP		290.0	261.0	—	—	290.0	261.0	7.424.0	—	7.424.0	—	⊖ 7.163.0
M1 - M2 ROAD		136.297.0	122.667.3	2.995.0	3.444.6	139.292.0	126.111.6	271.0	—	271.0	—	⊕ 125.840.6
TOTAL		144.803.0	130.322.7	2.995.0	3.444.6	147.798.0	133.767.0	15.105.5		15.105.5		⊕ 118.661.5

MOTORWAY JUNCTION (PHASE I) (1)

STATION	DISTANCE	CUT (SOIL) x 0.90			CUT (ROCK) x 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES		REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
A-RAMP																	
15	0	0.1							3.4.0								
16	20.000	0	1.0	0.9					2.7	46.0							
18	40.000								11.6	180.0							
20	"								18.8	408.0							
21	20.000								20.8	396.0							
22	"								23.2	440.0							
23	"								24.0	472.0							
24	"								26.4	504.0							
25	"								32.8	512.0							
26	"								22.0	408.0							
27	"								26.4	444.0							
28	"	0							10.0	364.0							
30	40.000	11.6	232.0	208.8					0	200.0							
31	20.000	25.5	371.0	333.9													
32	"	38.0	635.0	571.5													
33	"	40.0	780.0	702.0													
+13.50	13.500	40.0	540.0	486.0													
TOTAL			2.559.0	2.303.1				2.303.1		5.972.0		5.972.0			⊖3.668.9		

MOTORWAY JUNCTION (PHASE I) (2)

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES		REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
B-RAMP																	
10+15.0	0.	54.4	0														
11	15.000	44.1	741.0	666.9													
12	20.000	27.4	718.0	646.2													
13	"	22.0	494.0	444.6													
14	"	11.6	336.0	302.4					0	0							
15	"	1.7	103.0	119.7					3.2	32.0							
16	"	0.4	21.0	18.9					7.6	102.0							
17	"	0	4.0	3.6					11.6	192.0							
19	40.000	0.8	16.0	14.4					12.8	160.0							
20	20.000	6.3	71.0	63.9					5.2	240.0							
21	"	9.6	159.0	143.1					4.8	100.0							
22	"	11.2	208.0	187.2					0.8	14.0							
23	"	1.2	124.0	111.6					1.5	28.0							
24	"	16.4	176.0	158.4					0.9	24.0							
25	"	11.2	276.0	248.4					0.8	17.0							
26	"	11.2	224.0	201.6					0.8	16.0							
TOTAL			3.701.0	3.330.9				3330.9		1.416.0		1.416.0			⊕ 1.914.9		
C-RAMP																	
2+15	0	8.0	0						0.7	0							
3	5.000	8.0	40.0	36.0					0.7	3.5							
4	20.000	10.4	184.0	165.6					0.6	13.0							
5	"	22.0	324.0	291.6					0	6.0							
6	"	35.6	576.0	518.4						0							
7	"	47.6	832.0	748.8													
TOTAL			1.956.0	1.760.4				1760.4		22.5		22.5			⊕ 1737.9		

MOTORWAY JUNCTION (PHASE I) (3)

STATION	DISTANCE	CUT (SOIL) x 0.90			CUT (ROCK) x 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES		REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
D-RAMP																	
13+12.50	0	4.8	0						4.8	0							
14	7.500	4.8	36.0	32.4					4.8	36.0							
15	20.000	0	48.0	43.2					10.0	148.0							
16	"	6.6	66.0	59.4					8.0	130.0							
18	40.000	0	132.0	118.8					22.4	408.0							
19	20.000								42.0	674.0							
20	"								26.8	688.0							
21	"								18.4	452.0							
22	"								11.2	276.0							
23	"								17.6	288.0							
24	"								32.8	504.0							
25	"								58.0	208.0							
26	"	0							73.6	1,816.0							
27	"	0.8	8.0	7.2					62.0	1,856.0							
TOTAL			290.0	261.0				261.0		7427.0		7284.0			⊖ 7163.0		

M, . M2 ROAD

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES		REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
0 + 40	0.000	0															
+ 60	20.000	7.6	76.0	68.4													
+ 80	〃	13.6	212.0	190.8													
1 + 00	〃	22.0	356.0	320.4													
+ 40	40.000	36.0	1,160.0	1,044.0													
+ 80	〃	40.8	1,536.0	1,382.4													
2 + 20	〃	54.0	1,896.0	1,706.4													
+ 60	〃	82.0	2,720.0	2,448.0													
3 + 00	〃	110.8	3,856.0	3,470.4													
+ 20	20.000	139.0	2,498.0	2,248.2													
+ 40	〃	150.8	2,898.0	2,608.2													
+ 60	〃	175.6	3,264.0	2,937.6					0								
4 + 00	40.000	191.3	7,338.0	6,604.2					5.2	104.0		104.0					
+ 20	20.000	138.4	3,297.0	2,967.3					0.1	53.0		53.0					
+ 40	〃	86.0	1,944.0	1,749.6					0	1.0		1.0					
+ 60	〃	178.4	3,347.0	3,009.6													
5 + 00	40.000	213.2	7,832.0	7,048.8	0												
+ 40	〃	246.8	9,200.0	8,280.0	1.2	24.0	27.6										
+ 80	〃	254.8	10,032.0	9,028.8	12.0	264.0	303.6										
6 + 00	20.000	232.8	4,876.0	4,388.4	21.4	337.0	387.1										
+ 20	〃	256.0	4,888.0	4,399.2	24.0	457.0	522.1										
+ 60	40.000	237.2	9,864.0	8,877.6	25.1	932.0	1,129.3		0								
7 + 00	〃	228.0	9,304.0	8,373.6	11.3	728.0	837.2		0.5	10.0		10.0					
+ 20	20.000	218.8	4,468.0	4,021.2	3.6	149.0	171.4		0.2	7.0		7.0					
+ 40	〃	198.0	4,168.0	3,751.2	0.3	77.0	80.6		0	2.0		2.0					
+ 60	〃	172.0	3,700.0	3,330.0	0	16.0	18.4										
+ 80	〃	134.8	3,068.0	2,761.2													
8 + 00	〃	116.4	2,512.0	2,260.8													
+ 40	40.000	186.0	6,048.0	5,443.2													
+ 60	20.000	169.2	3,552.0	3,196.8													
9 + 00	40.000	131.2	6,008.0	5,407.2													
+ 40	〃	85.6	4,336.0	3,902.4													
+ 80	〃	50.0	2,712.0	2,440.8					0								
10 + 20	〃	21.2	1,424.0	1,281.6					0.5	10.0		10.0					
+ 60	〃	8.4	592.0	532.8					1.6	42.0		42.0					
11 + 00	〃	7.5	318.0	286.2					0.5	42.0		42.0					
TOTAL			136,297.0	122,667.3		2,995.0	3,444.3	126,111.6		271.0		271.0			125,840.6		

DEDUCTION (BOX CULVERTS)

MAIN ROAD

STATION	DEDUCTION	RESIDUAL SOIL	USED VOLUME	REMARKS
STA 9+37.20	3,699.7	2,363.5	2,127.2	
STA 13+95.00	1,817.5	749.8	674.8	
STA 15+13.40	1,133.9	219.5	197.6	
STA 15+66.00	1,371.2	122.0	109.8	
STA 27+82.00	334.1	92.3	83.1	
STA 30+73.20	749.5	2,675.8	2,408.2	
STA 38+20.00	2,777.5	647.9	583.1	
STA 68+88.00	4,639.2	1,565.6	1,409.0	
合計	16,522.7	8,436.4	7,592.8	

USED VOLUME = RESIDUAL SOIL × 0.90

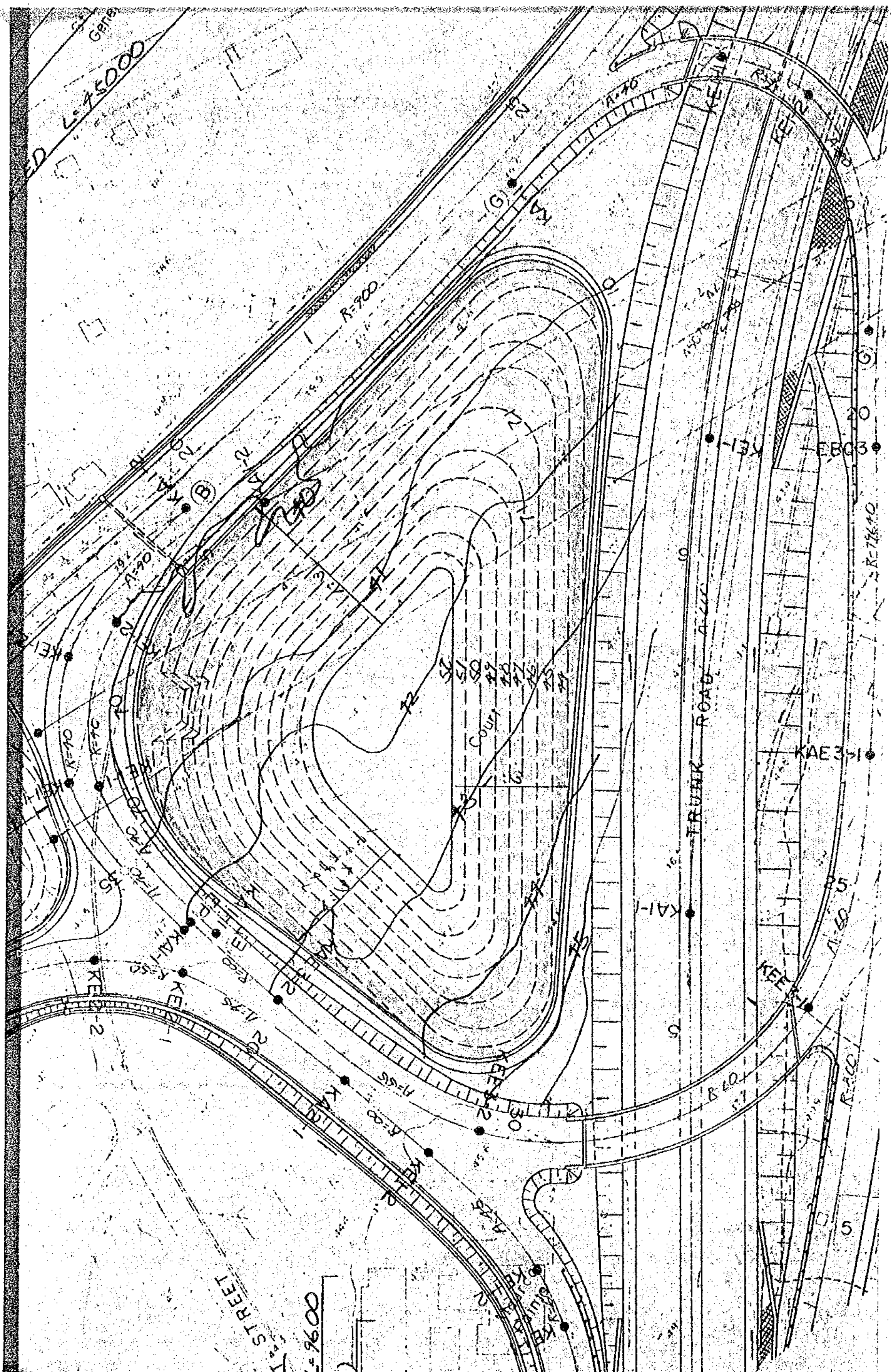
ACCESS ROAD

STATION	DEDUCTION	RESIDUAL SOIL	USED VOLUME	REMARKS
STA 2+65.00	317.7	340.3	306.3	
STA 8+00	218	213.9	192.5	
合計	339.5	554.2	498.8	

BANKING VOLUME AT PHASE (I) CONSTRUCTION

CONTOUR LINE HIGHT	HIGHT m	BANKING VOLUME	
		AREA m^2	VOLUME m^3
52	0	1,312.0	
51	1.0	1,824.0	1,568.0
50	"	2,432.0	2,128.0
49	"	3,200.0	2,816.0
48	"	4,000.0	3,600.0
47	"	4,880.0	4,440.0
46	"	6,000.0	5,440.0
45	"	7,168.0	6,584.0
44	"	7,680.0	7,424.0
43	"	6,960.0	7,320.0
42	"	4,576.0	5,768.0
41	"	2,432.0	3,504.0
40	"	0	1,216.0
TOTAL			51,808 m^3

No.



L=45000
R=900
EB03
KAE3-1
TRUNK ROAD
STREET
L=9600

§ 3. EARTH WORK QUANTITIES OF PHASE II

MAIN ROAD (1)

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES		REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
67 + 60	0	0	0														
+ 80	20.000	7.5	75.0	67.5				67.5						67.5			
68 + 00	"	65.2	727.0	654.3				654.3						654.3			
+ 20	"	71.6	1.368.0	1.231.2				1.231.2						1.231.2			
+ 40	"	97.2	1.688.0	1.519.2				1.519.2						1.519.2			
+ 60	"	102.4	1.996.0	1.796.4				1.796.4	0	0				1.796.4			
+ 80	"	11.4	1.138.0	1.024.2				1.024.2	10.0	100.0		100.0		927.2			
69 + 00	"	16.5	179.0	161.1				161.1	9.0	190.0		190.0		⊖ 28.9			
+ 20	"	32.0	485.0	436.5				436.5	28.2	372.0		372.0		64.5			
+ 40	"	17.2	492.0	442.8				442.8	67.0	952.0		952.0		⊖ 509.2			
+ 60	"	2.8	200.0	180.0				180.0	108.7	1.754.0		1.754.0		⊖ 1574.0			
+ 80	"	0	28.0	25.2				25.2	387.7	4.128.0	250.0 950.0	3.128.0		⊖ 3.102.8			MJ-ALINE-1 Br A1 ABUTMENT " B " 1 Br A1 ABUTMENT
	BRIDGE																
70 + 10	0										1202.8 1290.0	⊖ 2.492.0		2492.0			MJ ALINE-1 Br A2 ABUTMENT " B " " A2 ABUTMENT
+ 20	10.000																
+ 40	20.000																
+ 60	"			22.150.0	19.335.0			19.335.0		17.038.7		17.038.7		2.896.6			Refer To EXTRA BANKING
+ 80	"																
71 + 00	"										1140.0	⊖ 1140.9		1140.0			MJ B LINE 2 Br A1 ABUTMENT
+ 17	17.000										1440.0 299.0	⊖ 1.687.0		1687.0			MJ A LINE 2 Br A1 ABUTMENT MJ E RAMP Br A1 ABUTMENT
	BRIDGE																
72 + 7	0	22.8							160.0	0	1775.0 1120.0 854.0	⊖ 2.295.0		2295.0			MJ B LINE 2 Br A2 ABUTMENT MJ A LINE 2 Br A2 ABUTMENT MJ E RAMP Br A2 ABUTMENT
+ 20	13.000	28.0	330.2	297.2				297.2	295.2	2958.8		2.104.8		⊖ 1.807.6			
+ 40	20.000	36.8	678.0	583.2				583.2	445.2	7.404.0		7404.0		⊖ 6.820.8			
+ 60	"	48.8	856.0	770.4				770.4	436.4	8.816.0		8816.0		⊖ 8.045.6			
+ 85	25.000	51.6	1.255.0	1.129.5				1129.5	200.0	7915.0	879.0 937.0	6.139.0		⊖ 5.009.5			MJ A LINE 3 Br A1 ABUTMENT " B " " A1 ABUTMENT
	BRIDGE																
73 + 3	0	45.2							87.0	0	522.0 518.0	⊖ 1.040.0		1.040.0			MJ A LINE 3 Br A2 ABUTMENT " B " " A2 ABUTMENT
+ 20	17.000	8.8	459.0	413.1				413.1	198.0	2.397.0		2.397.0		⊖ 1983.9			
+ 40	20.000	207.8	2.136.0	1.922.4				1.922.4	11.6	2.096.0		2.096.0		⊖ 173.6			
+ 80	"	147.2	3.520.0	3.168.0				3.168.0	5.4	170.0		170.0		2.998.0			
79 + 00	"	154.8	4.020.0	3.618.0				3.618.0	1.6	70.0		70.0		3.548.0			
+ 40	40.000	176.6	6.628.0	5.965.2				5.965.2	1.2	56.0		56.0		5.909.2			
+ 60	20.000	185.6	3.622.0	3.257.8				3.257.8	0.8	20.0		20.0		3.237.8			
75 + 00	40.000	150.4	6.720.0	6.048.0				6.048.0	0.4	24.0		24.0		6.024.0			
+ 20	20.000	140.8	2912.0	2620.8				2.620.8	0.3	7.0		7.0		2.613.8			
SUB TOTAL				63.632.2	57.269.0			57.269.0		57.308.2	13.121.0	44.187.2		13.081.8			

MAIN ROAD (2)

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES		REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
75+20	0	140.8	0						0.8								
760	40.000	115.2	5.120.0	4608.0				4608.0	0.7	20.0		20.0		4588.0			
76+00	"	88.2	4.068.0	3.661.2				3.661.2	0.7	32.0		32.0		3.629.2			
SUB TOTAL			9.188.0	8.269.2				8.269.2		52.0	0	52.0		8.217.2			
TOTAL			72.820.2	65.538.2				65.538.2		57360.2	13.121.0	44.239.2		21.299.0			

H-RAMP

STATION	DISTANCE	CUT (SOIL) × 0.90			CUT (ROCK) × 1.15			TOTAL	EMBANKMENT		DEDUCTION	TOTAL	RE-USE VOLUME	BALANCE	ACCUMULATED EARTH WORK QUANTITIES		REMARKS
		SECTION	NET VOLUME	CORRECTION VOLUME	SECTION	NET VOLUME	CORRECTION VOLUME		SECTION	NET VOLUME							
3	0	8.4							112.8								
4	20.000	10.0	184.0	165.5				165.5	21.6	2044.0		2044.0		⊖ 1878.5			
5	"	9.2	192.0	172.8				172.8	42.7	1540.0		1540.0		⊖ 1367.2			
6	"	4.8	140.0	126.0				126.0	18.8	612.0		612.0		⊖ 486.0			
7	"	4.8	96.0	86.4				86.4	8.7	225.0		225.0		⊖ 138.6			
8	"	3.6	87.0	75.6				75.6	2.8	65.0		65.0		10.6			
TOTAL			696.0	626.3				626.3		4486.0		4486.0		⊖ 3859.7			

3) DEDUCTION (BRIDGE)

LOCATION		DEDUCTION
M.J-A-LINE · 1·BRIDGE	A_1 ABUTMENT	850.°
	A_2 ABUTMENT	1.202.°
MJ- A-LINE · 2 BRIDGE	A_1 ABUTMENT	1440.°
	A_2 ABUTMENT	1120.°
M.J- A·LINE 3 BRIDGE	A_1 ABUTMENT	879.°
	A_2 ABUTMENT	522.°
MJ- B-LINE 1 BRIDGE	A_1 ABUTMENT	950.°
	A_2 ABUTMENT	1290.°
MJ-B-LINE 2 BRIDGE	A_1 ABUTMENT	1190.°
	A_2 ABUTMENT	1.175.°
MJ- B-LINE 3 BRIDGE	A_1 ABUTMENT	937.°
	A_2 ABUTMENT	518.°
M.J - E-RAMP BRIDGE	A_1 ABUTMENT	244.°
	A_2 ABUTMENT	854.°
TOTAL		13.121.°