AFRICAN DEVELOPMENT BANK

GOVERNMENT OF MAURITIUS

BEAU BASSIN-PORT LOUIS LINK ROAD

FEASIBILITY STUDY

FINAL REPORT

VOLUME 3

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Japan International Cooperation Agency

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C O N T E N T S

APPENDICES FOR CHAPTER III

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Appendix Table III-1 Overseas Migration 1/

Year	Passenger Arrivals			Passenger Departures			Net Overseas migration
	total	by sea	by air	total	by sea	by air	
1962	15,189	4,258	10,931	16,075	4,374	11,701	- 886
1965	18,047	4,660	13,387	18,299	4,432	13,867	- 252
1964	21,221	5,187	16,034	22,331	5,478	16,853	-1,110
1965	22,024	4,886	17,138	24,150	5,463	18,687	-2,126
1966	26,456	5,544	20,912	29,301	6,330	22,971	-2,845
1967	29,321	4,901	24,420	32,925	6,515	26,410	-3,604
1968	31,403	4,264	27,139	35,988	5,967	30,021	-4,585
1969	35,919	3,483	32,436	38,929	4,632	34,297	-3,010
1970	48,819	3,984	44,835	51,969	4,376	47,593	-3,150
1971	60,826	3,857	56,969	63,997	4,295	59,702	-3,171
1972	77,174	3,741	73,433	81,493	4,072	77,421	-4,319
1973	101,184	4,238	96,946	104,697	4,027	100,670	-3,513
1974	109,044	3,848	105,196	113,362	3,772	109,590	-4,318
1975	117,548	4,485	113,063	120,703	4,255	116,448	-3,155
1976	139,303	4,367	134,936	141,148	4,441	136,707	-1,845

Source: Bi-annual Statistics, Central Statistical Office

1/ Includes : (a) the very small number of engaged or discharged seamen;
(b) emigrants to and immigrants from the dependencies; and
(c) movement of military personnel as from the 1962 population census.

Appendix Table III-2 Historical Trend of Population of Mauritius by District, 1921-1972

persons
(%)

District	1921	1931	1944	1952	1962	1972
Port Louis	50,307 (13.4)	54,435 (13.8)	65,962 (15.7)	84,539 (16.9)	119,950 (17.6)	133,996 (16.2)
Pamplemousses	37,448 (9.9)	36,847 (9.4)	34,131 (8.1)	40,663 (8.1)	55,899 (8.2)	68,948 (8.3)
Rivière du Rempart	31,807 (8.5)	30,792 (7.8)	33,238 (7.9)	40,323 (8.0)	53,309 (7.8)	66,995 (8.1)
Flacq	53,423 (14.2)	52,640 (13.4)	50,842 (12.1)	56,867 (11.3)	73,061 (10.7)	89,050 (10.8)
Grand Port	50,273 (13.4)	48,619 (12.4)	46,533 (11.1)	52,709 (10.5)	69,023 (10.1)	80,719 (9.8)
Savanne	32,825 (8.7)	31,101 (7.9)	32,944 (7.9)	35,309 (7.1)	46,380 (6.8)	53,011 (6.4)
Plaines Wilhems	75,688 (20.1)	95,258 (24.2)	120,770 (28.8)	149,614 (29.8)	208,184 (30.6)	258,699 (31.3)
Moka	29,897 (7.9)	29,283 (7.5)	22,863 (5.4)	27,961 (5.6)	37,245 (5.5)	48,610 (5.9)
Black River	14,717 (3.9)	14,263 (3.6)	12,502 (3.0)	13,430 (2.7)	18,568 (2.7)	26,171 (3.2)
TOTAL	376,385 (100.0)	393,238 (100.0)	419,785 (100.0)	501,415 (100.0)	681,619 (100.0)	826,199 (100.0)

Source: Central Statistical Office

Appendix Table III-3 Population Increase of Townships, 1952-1976

Township	1952	1962	1972	1973	1974	1975	1976	Annual Average Increase (%) 1962-76	Annual Average Increase (%) 1972-76
Port Louis	84,539	119,950	133,996	134,764	136,593	137,955	139,399	1.09	1.03
Beau Bassin/ Rose Hill	28,690	62,296	80,318	80,627	81,232	81,753	82,460	2.12	0.67
Quatre Bornes	17,708	38,567	50,770	51,136	51,650	52,144	52,735	2.35	0.96
Vacoas/Phoenix	27,780	41,743	47,638	48,114	48,611	49,157	49,934	1.28	1.16
Curepipe	30,000	44,244	51,956	52,244	52,598	52,960	53,445	1.40	0.70
Urban Population	188,716	306,800	464,678	366,885	370,684	373,969	377,973	1.54	0.91
Rural Population	312,699	374,819	461,521	467,896	475,071	482,547	489,912	1.95	1.51
Total	501,415	681,619	826,199	834,781	845,755	856,516	867,885	1.77	1.24

Source: Central Statistical Office

Appendix Table III-4 Quantities and Values of Exports

Quantity: 000 tons
Value : Rs. million (f.o.b.)

	1970	1971	1972	1973	1974	1975	1976
Total Value 1/	384.6	361.7	573.8	748.3	1,787.4	1,838.9	1,799.8
Re-exports Value	8.2	6.0	7.7	11.6	15.4	20.9	33.5
Domestic Exports Total value	376.3	355.7	566.1	736.8	1,772.0	1,818.0	1,763.0
Sugar;							
Quantity	575.0	489.3	670.0	699.2	666.3	497.5	550.9
Value	341.2	313.4	507.6	608.1	1,538.0	1,548.8	1,321.5
Molasses;							
Quantity	100.4	133.4	142.4	185.2	169.0	121.2	129.1
Value	10.6	9.2	14.2	40.3	46.2	23.6	31.7
Tea;							
Quantity	2.6	3.1	3.9	3.7	3.1	2.1	3.4
Value	14.1	17.0	20.8	18.9	19.7	16.0	29.2
Fish and Fish preparations;							
Value	0.7	0.5	0.9	8.0	14.6	14.3	18.8
Ginger;							
Value;	0.4	0.7	0.6	0.9	1.7	1.0	1.1

Source: Bi-annual Digest of Statistics, Dec. 1976, Central Statistical Office

1/ Including value of sugar quota certificates and the bonus received in lieu of the Commonwealth Preference on sugar exports but excluding sales value of bunker fuels and ships' stores.

Appendix Table III-5(1) Quantities of Imports

		1970	1971	1972	1973	1974	1975	1976
Rice	(000 tons)	58.8	54.1	72.3	58.1	87.5	67.0	79.2
Wheat flour	(000 tons)	45.2	43.4	49.3	44.0	50.4	57.2	40.1
Vegetable edible oils	(000 tons)	10.5	12.0	10.6	8.6	12.4	7.9	11.7
Fertilizers	(000 tons)	57.0	62.0	88.0	72.1	67.7	56.1	36.5
Cotton fabrics	(million sq. metres)	6.8	7.5	8.2	7.5	6.5	8.9	10.2
Other textile fabrics	(million sq. metres)	4.8	4.7	8.6	9.5	12.7	15.6	18.9
Cement	(000 tons)	65.0	82.2	93.3	131.4	151.0	193.7	220.9
Iron and Steel	(000 tons)	18.2	16.3	22.0	27.5	40.5	29.0	39.8

Source: Bi-annual Statistics, Central Statistical Office

Appendix Table III-5(2) Values of Imports

Rs. million (c.i.f)

	1970	1971	1972	1973	1974	1975	1976
Rice	38.2	31.3	42.6	70.9	227.0	133.0	130.5
Wheat flour	22.8	23.5	29.0	33.8	85.7	98.9	70.9
Alcoholic beverages	3.8	4.7	6.0	6.8	9.4	9.2	12.0
Petroleum products	29.3	28.9	49.9	62.6	159.5	192.7	206.3
Vegetable edible oils	15.3	21.4	16.7	15.7	52.8	35.2	47.3
Fertilizers manufactured	18.2	16.8	28.5	30.9	55.8	63.6	21.8
Cotton fabrics	9.5	11.2	12.2	17.0	22.4	31.7	45.7
Other textile fabrics	14.3	15.1	29.1	36.7	64.9	79.7	114.6
Cement	7.1	9.1	10.1	18.2	28.7	56.2	71.2
Iron and steel	21.3	17.8	22.7	36.0	95.3	72.1	86.8
Manufactures of metals, n.e.s.	11.2	13.3	17.6	27.4	44.8	52.1	78.0
Machinery other than electric	22.6	41.6	44.9	92.0	128.8	213.1	258.2
Electric machinery apparatus and appliances	15.9	18.2	41.4	52.1	111.9	138.6	182.1
Road motor vihicles and parts	15.0	16.7	23.6	40.8	55.4	82.0	132.7

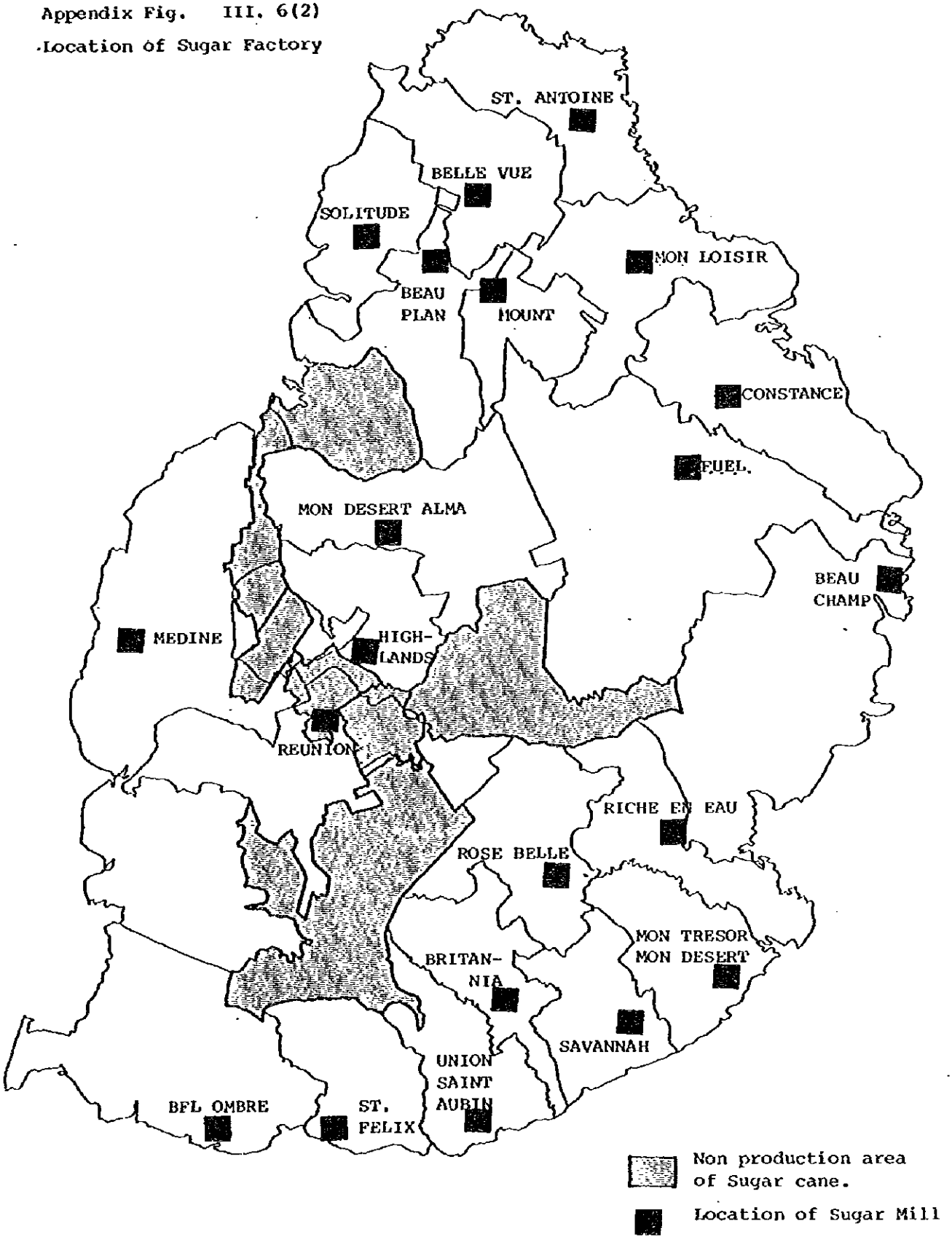
Source: Bi-annual Digest of Statistics, Central Statistical Office

Appendix Table III-6(1) Sugar Production by Factory Area

	Factory	Factory Area (ha)	Average Production 1971-76 (ton/year)	Capacity of Mill (ton/hr)
1.	St. Antoine	7,520	24,399	108
2.	Belle Vue	6,901	31,965	130
3.	Solitude	5,043	22,864	90
4.	Beau Plan	9,732	22,977	90
5.	Mount	3,813	24,674	90
6.	Mon Loisir	9,024	30,363	130
7.	Constance	9,467	29,682	115
8.	F.U.E.L.	17,871	81,198	258
9.	Mon Desert Alma	10,086	36,657	150
10.	Highlands	3,981	24,503	100
11.	Beau Champ	9,113	46,596	160
12.	Riche en Eau	10,705	28,930	109
13.	Rose Belle	5,308	24,052	94
14.	Mon Tresor Mon Desert	4,601	28,473	105
15.	Savannah	4,866	34,786	120
16.	Britannia	3,893	23,730	78
17.	Union Saint Aubin	5,397	30,977	115
18.	St. Felix	4,247	15,512	56
19.	BFL Ombre	10,705	18,515	70
20.	Reunion	7,255	22,868	100
21.	Medine	20,791	48,720	175
	TOTAL	170,319	652,441	2,443

Source: M.H.L.T.C.P.

Appendix Fig. III. 6(2)
Location of Sugar Factory



APPENDICES FOR CHAPTER IV

Appendix Table IV-1	Land Use by District
Appendix Table IV-2	Population Forecast by MATIM
Appendix Table IV-3	Estimated Future Population by Traffic Zone and by District
Appendix IV.4	Prediction of Number of Vehicles and Vehicle-Miles
Appendix Fig. IV-5	Pointe aux Sables; Development Concept Plan

Appendix Table IV-1 Land Use by District

District	Total	Area in sq. Kms		
		Mountains	Sugarcane Cultivated	Others
Port Louis	39	14	-	25
Pamplemousses	179	15	125	39
Riviére du Rempart	148	0	105	43
Flacq	297	29	173	95
Grand Port	232	22	101	109
Savanne	262	64	130	68
Plaines Wilhems	243	85	110	48
Moka	262	87	67	108
Black River	203	0	53	150
Total	1,865	316	864	685

Source: MATIM

Appendix Table IV-2 Population Forecast by MATIM

	1976	1992 T 1/	1992 P 2/	1992 (T+P)/2
				%
Port Louis	16.1	12.3	12.1	12.2
Plaines Wilhems	30.9	32.1	30.3	31.2
(B/Bassin Rose Hill)	9.5	9.3	8.8	9.1
(Quatre Bornes)	5.9	7.2	5.5	6.3
(Vacoas/Phoenix)	5.7	4.7	4.8	4.8
(Curepipe)	6.2	5.7	5.9	5.8
(Rest of P/wilhems)	3.6	5.2	5.3	5.2
Black River	3.2	5.0	3.5	4.2
Moka	5.9	7.4	5.4	6.4
Savanne	6.4	5.0	5.0	5.0
Grand Port	9.8	8.3	10.1	9.2
Flacq	11.0	11.6	16.8	14.2
R. du Rempart Pamplemousses	16.7	18.3	16.8	17.6
Total	100.0	100.0	100.0	100.0

1/ Trend

2/ Planned allocation

Appendix Table IV-3 Estimated Future Population by Traffic Zone and by District

District	Traffic Zone	1976	1982	1987	1992	2002
PORT LOUIS	01	137,860	140,000	141,900	142,000	142,000
	08A1 [1]	1,539	1,600	1,700	4,000	4,000
	Total	139,399	141,600	143,600	146,000	146,000
PLAINES WILHEMS	02A	1,440	2,000	2,700	3,600	5,400
	02B	2,436	3,600	4,800	6,200	9,400
	03A	16,218	17,800	18,900	19,500	20,400
	03B	11,107	12,100	12,700	13,100	13,800
	03C	9,452	9,300	8,900	8,300	7,500
	04A	17,476	17,500	17,500	17,500	17,500
	04B	9,030	10,700	11,900	12,800	14,600
	04C	15,301	17,800	19,300	20,200	22,200
	05A	19,624	20,700	20,800	21,000	22,300
	05B	19,947	21,500	22,100	22,100	22,100
	05C [2]	11,946	16,900	21,800	26,300	35,100
	06A	10,572	13,800	16,800	19,500	25,200
	06B	49,934	52,600	53,500	53,500	53,500
	06C	7,773	8,800	9,400	9,800	10,700
	13A	53,445	59,200	62,900	65,300	69,100
	13B	5,286	7,000	8,600	10,400	14,600
	12	7,462	10,900	14,500	19,900	30,300
	Total	268,449	302,200	327,100	349,000	393,700
BLACK RIVER	08A2 [1]	862	2,800	6,200	16,000	18,800
	08B	8,547	10,300	10,300	11,000	13,000
	05C2 [2]	2,394	3,400	4,400	5,400	6,600
	09	2,568	4,000	5,500	7,200	12,000
	10	6,968	7,300	7,400	7,500	8,200
	11	6,484	6,700	6,800	6,900	7,400
	Total	27,823	34,500	40,600	54,000	66,000
MOKA	07A	2,403	3,200	3,900	4,700	6,200
	07B	18,205	22,100	25,400	28,700	34,900
	16	30,529	33,900	36,300	38,200	43,700
	Total	51,137	59,200	65,600	71,600	84,800
SAVANNE	14	55,480	57,600	58,300	58,300	58,300
GRAND PORT	15	85,048	93,200	98,600	102,900	116,100
FLACQ	17	95,675	114,900	131,200	144,200	170,400
RIVIERE DU REMPART PAMPLEMOUSSES	18	144,874	165,800	182,000	193,000	226,700
MAURITIUS		867,885	969,000	1,047,000	1,119,000	1,262,000

1) Part of 08A is included in Port Louis but major Area is in Black River District.

2) Major part of 05C is included in Plaines Wilhems District but a part of it is in Black River District.

Appendix IV.4 Prediction of Number of Vehicles and Vehicle-Miles

The method by which the Ministry of Works predicted the future population of motor vehicles and vehicle-miles by type of vehicle will be outlined below.

1) Passenger Cars

The average per capita number of vehicles would increase in line with average per capita GDP on the following logistic curve up to the maximum of 0.3 vehicles per head:

$$Y = \frac{S}{1 + \frac{S - Yo}{Yo} \cdot \left(\frac{i}{i_o}\right)^{-bs} \cdot e^{-as(t-to)}}$$

Where Y : Average per capita number of vehicles in year t
Yo: Such number in year to
i : Per capita GDP in year to
io: Per capita GDP in year to
s : Saturation point of average per capita number of vehicles = 0.3 vehicles per head
a.b: Constant; a = 0.000164095, b = 5.5414

Vehicle-miles were estimated based on increases from the average annual mileage of 12,000 miles per vehicle by annual increase rate of 5%.

2) Vans

The future number of vans was estimated under the following two assumptions:

(1) The number of vans would increase by GDP increase, but faster than trucks. Increase of vans would be fairly rapid until the number surpasses the number of trucks. In fact, the ratio between vans and trucks in the United Kingdom shifted from about 50:50 in 1955 to 63:37 in 1973. Such ratio in Mauritius was only 34:66 in 1977.

(2) The number of vans is closely related to the number of passenger cars, but its ratio to passenger cars would bo declined.

Also, vehicle-miles of vans were estimated in a similar manner as passenger cars.

3) Trucks

The number of trucks has so far increased each year in proportion to the increase in GDP of the year before, and the increase rate of truck growth was 20% higher than that of GDP increase.

The future number of track was estimated here under the assumption that the increase rate of truck would continue to be 20 % higher than the increase rate of GDP.

Also, the future vehicle-miles of trucks were estimated based on an increase from the current 20,000 miles per truck by 1% per annum.

4) Buses

Although public transportation in underdeveloped in Mauritius, it cannot be rated inadequate if all the registered buses are efficiently utilized.

In view of the very rapid increase in the number of passenger cars, the number of buses cannot be expected to increase very rapidly in the future.

The future number of buses was estimated under the following four assumptions:

(1) The per capita average number of buses would reach 0.00225 per head, the European level, within 5 years. This is assumed to be the saturation level of buses in Mauritius.

(2) The average per capita number of buses would increase at the annual rate of 6.5%, which is the rate for the past eleven years, until the saturation level has been reached. The future number of buses was obtained by multiplying the per capita number by population.

(3) The total number of buses would increase by the rate of population growth in after the saturation level is reached.

(4) The annual average mileage which is used for the computation is 31,000 miles.

5) Motorcycles

It is fairly difficult to determine the saturation level of per capita number of motorcycles. In the United Kingdom, for instance, the number reached 0.035 motorcycles per head in 1960, subsequent to which the number declined down to 0.0185 per head. On the other hand, such per capita number is as high as from 0.05 to 0.07 in some Far Eastern countries.

Saturation level was set at 0.055 for Mauritius for the following reasons:

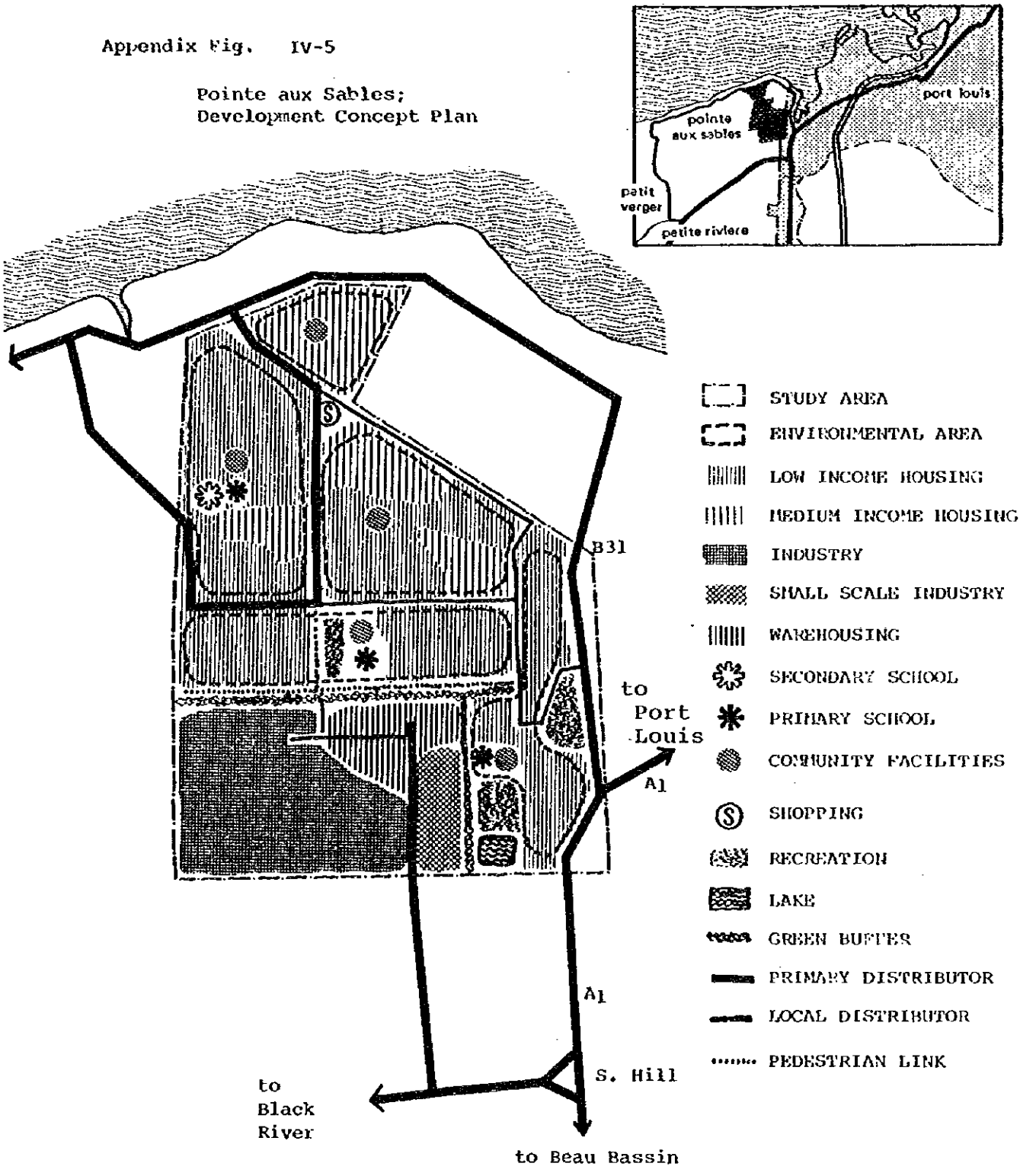
(1) In view of the climatic condition, the per capita average number of motorcycles would exceed the British level.

(2) The per capita average number of motorcycles is high in areas where trip length is short and the temperature is high.

(3) Motorcycle ownership is an intermediate situation before acquiring a passenger car, therefore, the rate of motorcycle ownership is high in areas where the rate of passenger car ownership is still low.

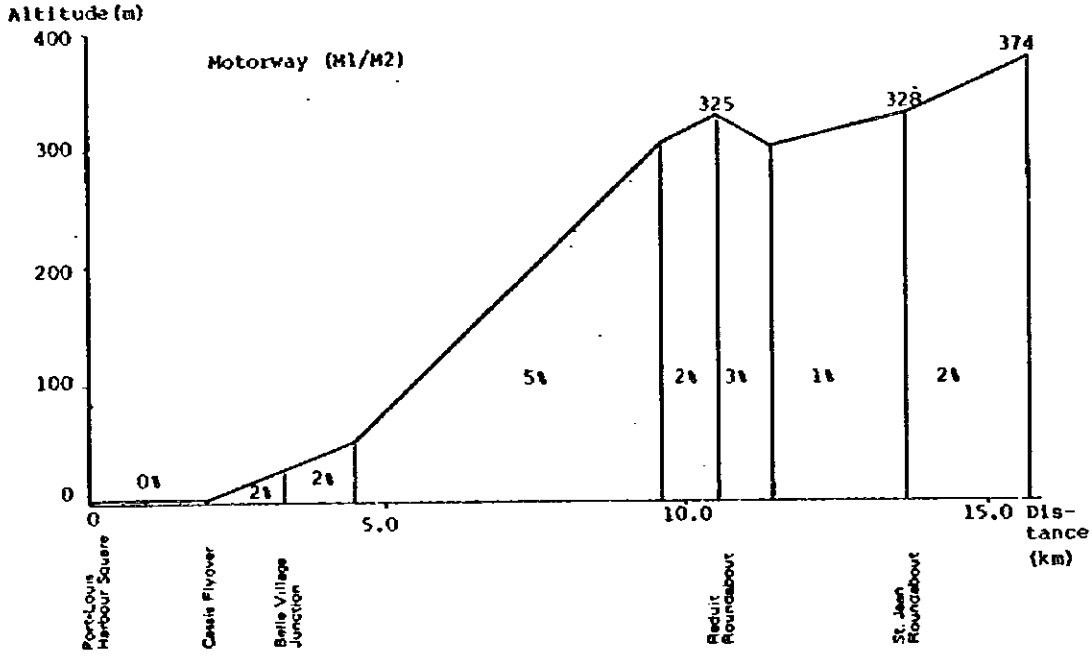
Appendix Fig. IV-5

Pointe aux Sables;
Development Concept Plan

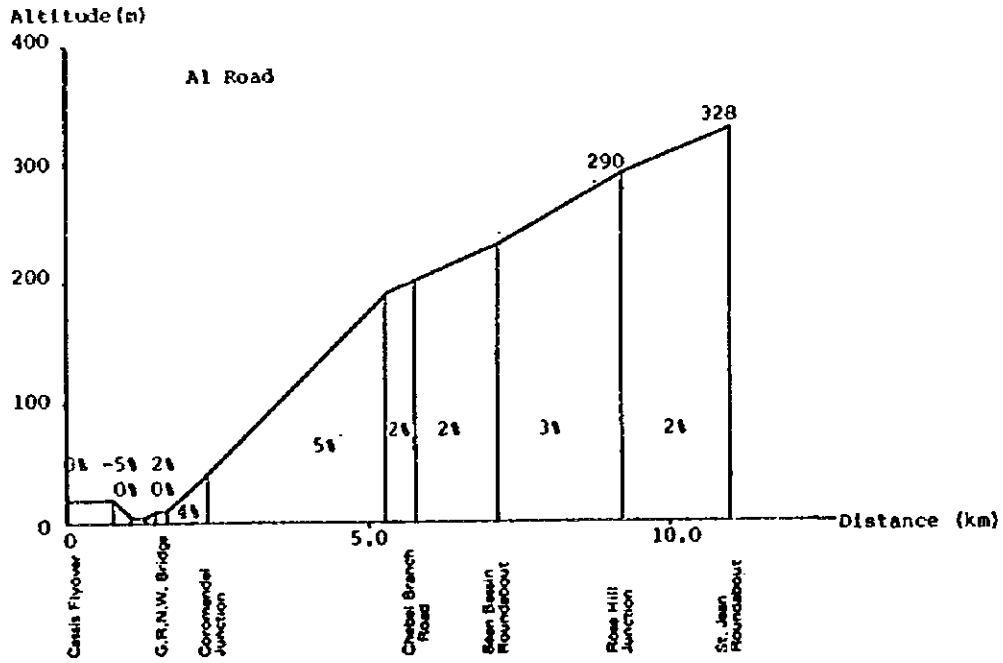


APPENDICES FOR CHAPTER V

Appendix Fig. V-1-(1) Outline Profile of Motorway

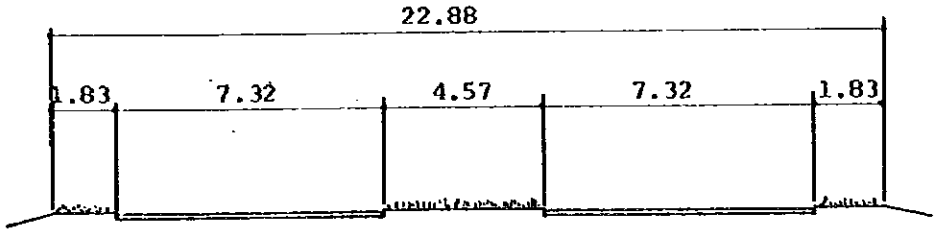


Appendix Fig. V-1-(2) Outline Profile of A1 Road



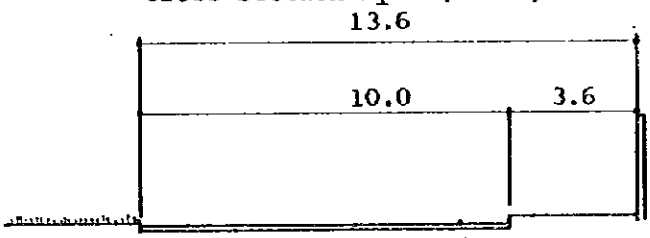
Appendix
Fig. V-2 Typical Cross Section of Major Sections of Motorway and A1 Road

Cross Section of Motorway (M_2)
(No. 1 ∿ 5)

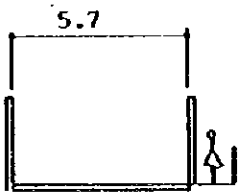


Cross Section of A_1 Road

Cross Section A_1-1 (No. 6)



Cross Section A_1-2 (No. 7)



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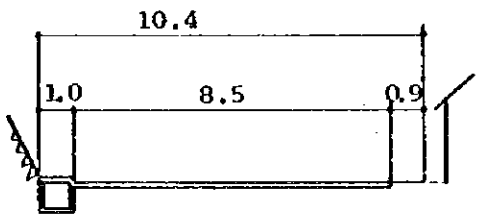

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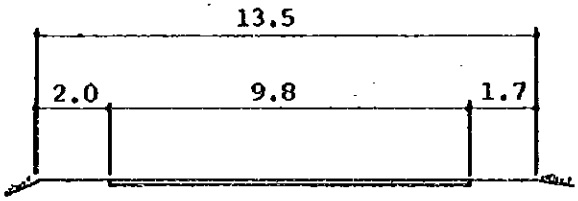

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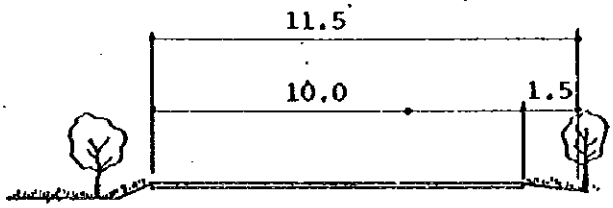

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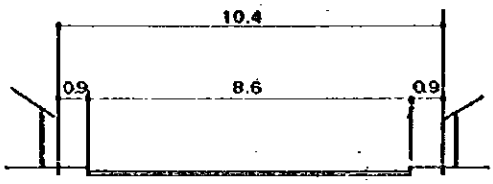
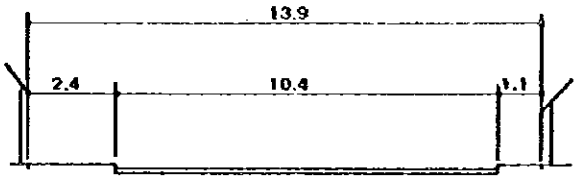
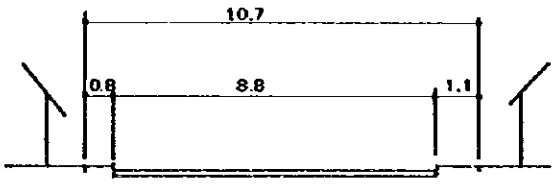


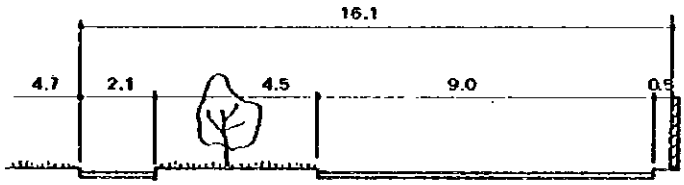
Cross Section A_1-6 (No.12, 13)



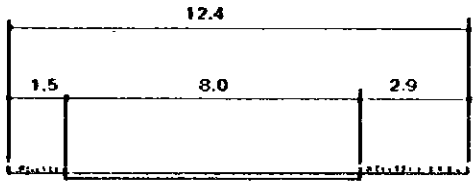
Cross Section A_1-7 (No.14)



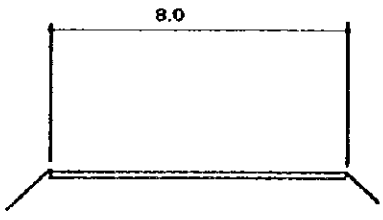
Cross Section of A11 Road (No.15, 16)



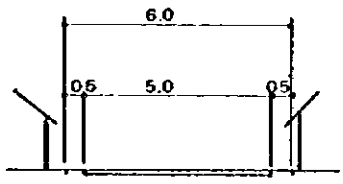
Cross Section of A8 Road



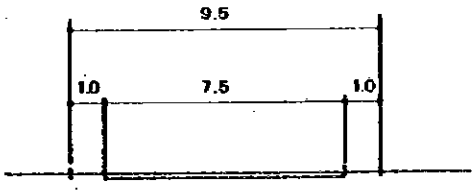
Cross Section of B_1 (No.20)



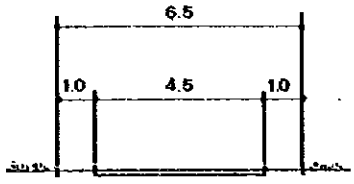
Cross Section of Richelieu Approach Road



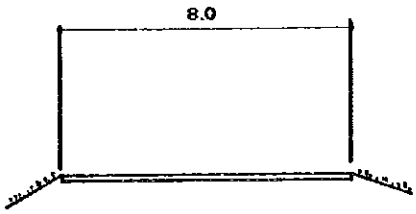
Cross Section of A_3 (No.19)



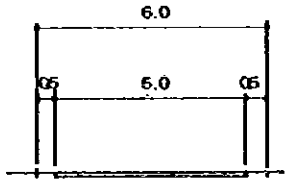
Cross Section of Chefel Beanch Road



Cross Section of Belle Village Road (No.17)



Cross Section of Beau Bassin/Quatre Borne

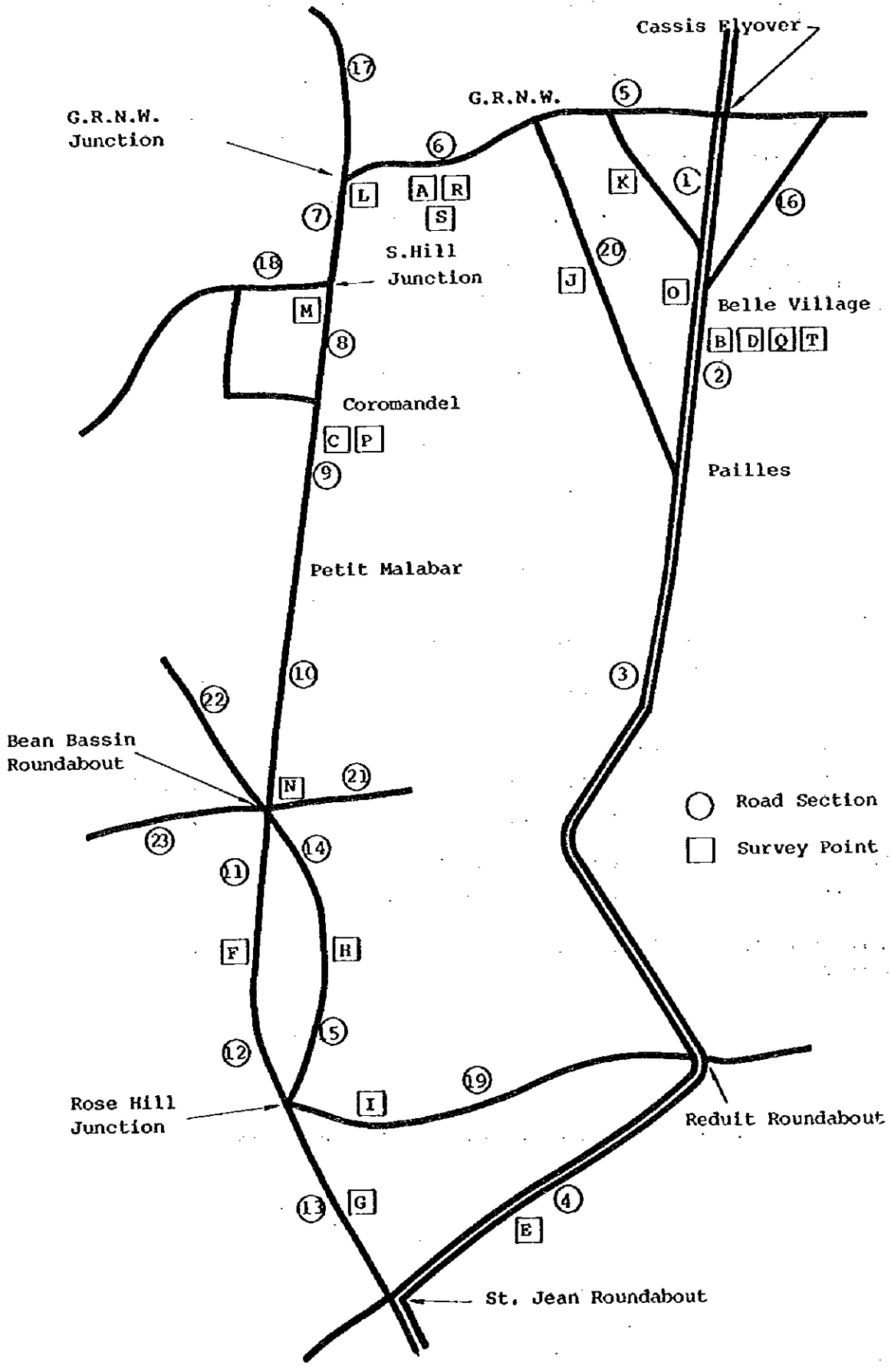


Appendix Table V - 3 Outline of Traffic Surveys Conducted

Type		Station	Station Code 1/	Period	
O-D Survey	1)	Al Road, G.R.N.W. Bridge	A	Dec. 5, 7	6-18
	2)	Motorway, Belle Village	B	Dec. 6, 8	6-18
1 Week Traffic Count	1)	Al Road, Coromandel	C	Dec. 12∿18 (Night Count on Dec.14)	6-18
	2)	Motorway, Belle Village	D	"	
1 Day Traffic Count, Road Sections	1)	Motorway, Trianon	E	Dec. 14	6-18
	2)	Al Road, Rose Hill Town Hall	F	Dec. 15	6-18
	3)	Al Road, Belle Rose	G	Dec. 14	6-18
	4)	All Road, Balfour Garden	H	Dec. 15	6-18
	5)	Bl Road, Robertson Bridge	I	Dec. 14	6-18
	6)	Pailles Junction Road, G.R.N.W.	J	Dec. 16	6-18
	7)	Plaine Lauzun Shortcut, Plaine Lauzun	K	Dec. 16	6-18
1 Day Traffic Count, Major Junctions	1)	G.R.N.W. Junction	L	Dec. 12	6-18
	2)	S.Hill Junction	M	Dec. 12	6-18
	3)	Bean Bassin Roundabout	N	Dec. 13	6-18
	4)	Junction of Motorway and Belle Village Road	O	Dec. 8	6-18
Spot Speed Survey	1)	Al Road, Coromandel	P	Dec. 14∿16	
	2)	Motorway, Belle Village	Q	Dec. 14∿16	
	3)	Al Road, G.R.N.W. Bridge	R	Dec. 15	
Other Interview Survey	1)	Al Road, G.R.N.W. Bridge	S	Dec. 5, 7	6-18
	2)	Motorway, Belle Village	J	Dec. 6, 8	6-18
Airport Traffic Survey	1)	Plaisance Airport		Dec. 9	6-18

1/ Location of Station is shown in Appendix Fig. V. 4

Appendix Fig. V-4 Location of Survey Points and Road Sections



TRAFFIC COUNT SURVEY SHEET

Station No.	Date of Count	Weather	Direction	Name of Surveyor	Name of Supervisor	Sheet No.
			—			

Type of Vehicle	0 ~ 1	1 ~ 2	2 ~ 3	3 ~ 4	4 ~ 5	5 ~ 6	6 ~ 7	7 ~ 8	8 ~ 9	9 ~ 10	10 ~ 11	11 ~ 12	12 ~ 13	13 ~ 14	14 ~ 15	15 ~ 16	16 ~ 17	17 ~ 18	18 ~ 19	19 ~ 20	20 ~ 21	21 ~ 22	22 ~ 23	23 ~ 24	Total
1. Car 																									
2. Taxi 																									
3. Van, pick-up 																									
4. Medium truck 																									
5. Heavy truck 																									
6. Truck-trailer 																									
7. Bus 																									
8. Motor cycle																									
9. Bicycle																									
10. Others																									
Total																									

Appendix Fig. V-5
Traffic Count Survey Sheet

PORT LOUIS – BEAU BASSIN LINK ROAD PROJECT

ROAD–SIDE INTERVIEW QUESTIONNAIRE

Station No.		Name of interviewer	Sheet No.
Date of interview			
Weather		Name of surveyor	
Direction			

1. Time of interview (Enter actual time)

2. Type of vehicle

1	Car	6	Truck - trailer
2	Taxi	7	Bus
3	Van, Pick-up	8	Motor cycle
4	Medium truck	9	Bicycle
5	Heavy truck	10	Others

Model of the vehicle		5. Origin	6. Destination	7. Trip purpose	Passenger cars		Trucks			13. Average travel time
3. Model/ Make	4. Age	Name of the place where you start the trip	Name of the place where you finally finish the trip	1. Home-Workplace 2. Work 3. To Home 4. Social intercourse, recreation 5. Others	8. Capacity (No. of persons)	9. No. of passengers aboard	10. Loading capacity (tons)	11. Type of commodities carried	12. Weigh of the commodities (tons)	

1. Time	2. Type of vehicle	3. Model/make of the vehicle	4. Age	5. Origin	6. Destination	7. Trip purpose	8. Capacity	9. No. of pass.	10. Loading Capacity	11. Type of commodities carried	12. Weight	13. Average travel time

Appendix Fig. V-6
Road-side Interview Questionnaire

PORT LOUIS – BEAU BASSIN LINK ROAD PROJECT

Appendix Table V-7 Sample Rate of OD Interviews

Station	Direction	Type of Vehicle	8:00 ~ 8:59 T	8:00 ~ 8:59 N	8:00 ~ 8:59 Sample Rate (%)	16:00 ~ 16:59 T	16:00 ~ 16:59 N	16:00 ~ 16:59 Sample Rate (%)	Off Peak T	Off Peak N	Off Peak Sample Rate (%)	Total T	Total N	Total Sample Rate (%)
A_1, C.R.N.W. Bridge	To Port Louis	Car + Taxi	1555	229	14.7	500	59	11.8	5773	1044	18.1	7828	1332	17.0
		Van, Pick-Up	121	76	62.8	76	14	18.4	936	271	29.0	1133	361	31.9
		Medium + Heavy Truck	89	56	62.9	43	10	23.3	826	305	36.9	958	371	38.7
		Truck - Trailer	11	4	36.4	10	1	10.0	126	32	25.4	147	37	25.2
		Motor Cycle	211	23	10.9	123	18	14.6	1498	207	13.8	1832	248	13.5
		Total	1987	388	19.5	752	102	13.6	9159	1859	20.3	11898	2349	19.7
	From Port Louis	Car + Taxi	362	108	29.8	1359	198	14.6	5814	1060	18.2	7535	1366	18.1
		Van, Pick-Up	136	39	28.7	119	23	19.3	1103	276	25.0	1358	338	24.9
		Medium + Heavy Truck	86	32	37.2	116	11	9.5	917	178	19.4	1119	221	19.7
		Truck - Trailer	18	-	-	7	-	-	86	11	12.8	111	11	9.9
		Motor Cycle	96	21	21.9	200	44	14.7	1455	289	19.9	1851	354	19.1
		Total	698	200	28.7	1901	276	14.5	9375	1814	19.3	11974	2290	19.1
M_2, Belle Village	To Port Louis	Car + Taxi	2739	167	6.1	629	95	15.1	7103	784	11.0	10471	1046	10.0
		Van, Pick-Up	152	23	15.1	117	21	17.9	1163	220	18.9	1432	264	18.4
		Medium + Heavy Truck	136	19	14.0	56	16	28.6	992	270	27.2	1184	305	25.8
		Truck— Trailer	18	1	5.6	17	1	5.9	303	31	10.2	338	33	9.8
		Motor Cycle	130	18	13.8	89	14	15.7	768	108	14.1	987	140	14.2
		Total	3175	228	7.2	908	147	16.2	10329	1413	13.7	14412	1788	12.4
	From Port Louis	Car + Taxi	359	71	19.8	2245	165	7.3	6301	684	10.9	8905	920	10.3
		Van, Pick-Up	84	28	33.3	123	29	23.6	985	196	19.9	1192	252	21.1
		Medium + Heavy Truck	91	20	22.0	90	14	15.6	841	193	22.9	1022	227	22.2
		Truck - Trailer	38	2	5.3	25	1	4.0	199	16	8.0	262	19	7.3
		Motor Cycle	46	13	28.3	125	23	18.4	671	161	24.0	842	197	23.4
		Total	618	133	21.5	2608	232	8.9	8997	1250	13.9	12,223	1615	13.2

T: Traffic Volume at O.D. Survy

N: Number of Samples Obtained

Appendix Table V-8 Hourly Traffic Volume of A.D.T 1/

Coromandel (A1)

From Beau Bassin to Port Louis

	6:00 ~ 6:59	7:00 ~ 7:59	8:00 ~ 8:59	9:00 ~ 9:59	10:00 ~ 10:59	11:00 ~ 11:59	12:00 ~ 12:59	13:00 ~ 13:59	14:00 ~ 14:59	15:00 ~ 15:59	16:00 ~ 16:59	17:00 ~ 17:59	18:00 ~ 18:59	19:00 ~ 19:59	20:00 ~ 20:59	21:00 ~ 21:59	22:00 ~ 22:59	23:00 ~ 23:59	0:00 ~ 0:59	1:00 ~ 1:59	2:00 ~ 2:59	3:00 ~ 3:59	4:00 ~ 4:59	5:00 ~ 5:59	Total
Car Taxi	148	276	696	428	331	282	255	260	235	231	231	244	223	248	252	162	152	167	85	41	18	16	10	36	5,027
Van	26	51	61	50	47	38	37	48	44	45	38	31	17	27	15	18	11	12	3	4	4	3	3	8	641
Truck	33	42	42	33	32	34	30	33	28	27	16	10	9	6	5	4	6	2	3	1	0	1	1	8	406
Trailer	2	2	1	2	2	1	3	3	3	1	2	1	0	0	0	1	0	0	0	00	0	0	0	1	25
Bus	53	117	85	79	52	60	61	67	68	91	82	71	61	41	29	3	0	0	0	0	0	0	1	28	1,049
M/C	92	122	82	70	52	48	42	48	38	48	58	88	30	37	21	15	19	9	2	2	2	1	3	15	939
Total	354	610	967	662	516	458	428	459	416	443	427	445	340	359	322	203	188	190	93	48	24	21	18	96	8,087
P.C.U	528	951	1272	923	714	684	651	703	654	716	658	614	507	463	404	218	195	191	100	50	23	24	22	178	11,501

From Port Louis to Beau Bassin

	6:00 ~ 6:59	7:00 ~ 7:59	8:00 ~ 8:59	9:00 ~ 9:59	10:00 ~ 10:59	11:00 ~ 11:59	12:00 ~ 12:59	13:00 ~ 13:59	14:00 ~ 14:59	15:00 ~ 15:59	16:00 ~ 16:59	17:00 ~ 17:59	18:00 ~ 18:59	19:00 ~ 19:59	20:00 ~ 20:59	21:00 ~ 21:59	22:00 ~ 22:59	23:00 ~ 23:59	0:00 ~ 0:59	1:00 ~ 1:59	2:00 ~ 2:59	3:00 ~ 3:59	4:00 ~ 4:59	5:00 ~ 5:00	Total
Car Taxi	46	114	152	198	246	269	301	291	287	350	619	460	323	288	204	174	140	238	70	30	22	10	8	29	4,869
Van	13	26	43	57	56	44	42	47	46	47	55	44	25	16	9	7	8	14	12	6	5	2	3	8	635
Truck	15	17	33	36	38	39	48	40	30	44	53	28	16	8	9	6	1	2	3	1	0	0	0	3	470
Trailer	0	1	1	3	1	2	2	3	2	2	2	2	0	3	0	1	0	0	0	0	0	0	0	0	25
Bus	55	103	81	94	67	60	56	64	61	62	85	70	54	50	30	7	0	3	1	0	0	0	1	17	1,021
M/C	28	48	51	44	51	53	69	61	64	76	130	90	52	35	28	17	10	6	1	3	1	0	1	14	933
Total	157	309	361	432	459	467	518	506	490	581	944	694	470	400	280	212	159	263	87	40	28	12	13	71	7,953
P.C.U	326	575	623	742	710	704	760	754	700	824	1243	909	626	542	367	242	157	273	98	42	28	12	16	114	11,522

Both direction

	6:00 ~ 6:59	7:00 ~ 7:59	8:00 ~ 8:59	9:00 ~ 9:59	10:00 ~ 10:59	11:00 ~ 11:59	12:00 ~ 12:59	13:00 ~ 13:59	14:00 ~ 14:59	15:00 ~ 15:59	16:00 ~ 16:59	17:00 ~ 17:59	18:00 ~ 18:59	19:00 ~ 19:59	20:00 ~ 20:59	21:00 ~ 21:59	22:00 ~ 22:59	23:00 ~ 23:59	0:00 ~ 0:59	1:00 ~ 1:59	2:00 ~ 2:59	3:00 ~ 3:59	4:00 ~ 4:59	5:00 ~ 5:59	Total
Car Taxi	194	390	848	626	577	551	556	551	522	581	850	704	546	536	456	336	292	405	155	71	40	26	18	65	9,896
Van	39	77	104	107	103	82	79	95	90	92	93	75	42	43	24	25	19	26	15	10	9	5	6	16	1,276
Truck	48	59	75	69	70	73	78	73	58	71	69	38	25	14	14	10	7	4	6	2	0	1	1	11	876
Trailer	2	3	2	5	3	3	5	6	5	3	4	3	0	3	0	2	0	0	0	0	0	0	0	1	50
Bus	108	220	166	173	119	120	117	131	129	153	167	141	115	91	59	10	0	3	1	0	0	0	2	45	2,070
M/C	120	170	133	114	103	96	111	109	102	124	188	178	82	72	49	32	29	15	3	5	3	1	4	29	1,872
Total	511	919	1328	1094	975	925	946	965	906	1024	1371	1139	810	759	602	415	347	453	180	88	52	33	31	167	16,040
P.C.U	854	1526	1895	1665	1424	1388	1411	1457	1354	1540	1901	1523	1133	1005	771	460	352	464	198	92	51	36	38	292	23,023

1/ excluding Sunday

Appendix Table V-9 Hourly Traffic Volume of A.D.T 1/

Belle Village (M2)

From st Jean to Port Louis

	6:00 ↗ 6:59	7:00 ↗ 7:59	8:00 ↗ 8:59	9:00 ↗ 9:59	10:00 ↗ 10:59	11:00 ↗ 11:59	12:00 ↗ 12:59	13:00 ↗ 13:59	14:00 ↗ 14:59	15:00 ↗ 15:59	16:00 ↗ 16:59	17:00 ↗ 17:59	18:00 ↗ 18:59	19:00 ↗ 19:59	20:00 ↗ 20:59	21:00 ↗ 21:59	22:00 ↗ 22:59	23:00 ↗ 23:59	0:00 ↗ 0:59	1:00 ↗ 1:59	2:00 ↗ 2:59	3:00 ↗ 3:59	4:00 ↗ 4:59	5:00 ↗ 5:59	Total
Car, Taxi	166	405	1352	803	515	386	385	361	352	323	356	273	214	276	143	79	70	68	87	6	5	7	7	32	6,671
Van	22	66	63	61	71	53	45	57	62	63	52	35	34	21	16	6	6	8	10	4	0	1	1	21	778
Truck	31	81	74	62	48	43	42	51	46	46	28	15	13	5	16	2	0	0	3	0	1	0	2	15	624
Trailer	5	12	13	14	19	19	21	17	13	14	13	6	10	10	2	1	0	0	0	0	0	0	0	7	196
Bus	28	40	43	18	12	12	9	10	10	12	14	16	10	8	4	0	0	0	0	0	0	0	0	1	247
M/C	50	77	65	52	50	35	36	31	30	36	43	40	22	19	5	5	9	3	4	0	0	1	4	10	627
Total	302	681	1610	1010	715	548	538	527	513	494	506	385	303	339	186	93	85	79	104	10	6	9	14	86	9,143
P.C.U	328	749	1682	1059	753	590	578	574	553	534	529	395	318	348	202	93	81	78	104	10	7	9	14	97	9,684

From Port Louis to st Jean

	6:00 ↗ 6:59	7:00 ↗ 7:59	8:00 ↗ 8:59	9:00 ↗ 9:59	10:00 ↗ 10:59	11:00 ↗ 11:59	12:00 ↗ 12:59	13:00 ↗ 13:59	14:00 ↗ 14:59	15:00 ↗ 15:59	16:00 ↗ 16:59	17:00 ↗ 17:59	18:00 ↗ 18:59	19:00 ↗ 19:59	20:00 ↗ 20:59	21:00 ↗ 21:59	22:00 ↗ 22:59	23:00 ↗ 23:59	0:00 ↗ 0:59	1:00 ↗ 1:59	2:00 ↗ 2:59	3:00 ↗ 3:59	4:00 ↗ 4:59	5:00 ↗ 5:59	Total
Car, Taxi	68	171	257	337	357	434	506	439	532	750	1265	567	294	219	103	103	77	54	32	14	11	7	4	25	6,626
Van	15	28	57	67	57	63	63	63	68	63	61	35	28	15	13	14	5	4	0	1	1	0	0	5	726
Truck	27	27	45	40	47	60	57	48	48	53	48	25	15	5	7	3	2	1	0	0	0	0	1	10	569
Trailer	8	8	23	13	12	15	15	14	12	10	13	9	2	3	0	0	0	0	0	0	0	0	1	8	166
Bus	15	22	15	12	13	10	13	13	18	33	38	26	9	4	0	0	1	0	0	0	0	0	1	2	245
M/C	26	50	37	35	41	47	43	32	40	58	64	52	32	12	13	6	3	3	1	0	0	0	0	11	606
Total	159	306	434	504	527	629	697	609	718	967	1489	714	380	258	136	126	88	62	33	15	12	7	7	61	8,938
P.C.U	186	327	482	539	565	674	744	653	760	1015	1536	736	385	262	136	125	89	62	33	15	12	7	9	70	9,419

Both direction

	6:00 ↗ 6:59	7:00 ↗ 7:59	8:00 ↗ 8:59	9:00 ↗ 9:59	10:00 ↗ 11:00	11:00 ↗ 11:59	12:00 ↗ 12:59	13:00 ↗ 13:59	14:00 ↗ 14:59	15:00 ↗ 15:59	16:00 ↗ 16:59	17:00 ↗ 17:59	18:00 ↗ 18:59	19:00 ↗ 19:59	20:00 ↗ 20:59	21:00 ↗ 21:59	22:00 ↗ 22:59	23:00 ↗ 23:59	0:00 ↗ 0:59	1:00 ↗ 1:59	2:00 ↗ 2:59	3:00 ↗ 3:59	4:00 ↗ 4:59	5:00 ↗ 5:59	Total
Car, Taxi	234	576	1609	1140	872	820	891	800	884	1073	1621	840	508	495	246	182	147	122	119	20	16	14	11	57	13,297
Van	37	94	120	128	128	116	108	120	130	126	113	70	62	36	29	20	11	12	10	5	1	1	1	26	1,504
Truck	58	108	119	102	95	103	99	99	94	99	76	40	28	10	23	5	2	1	3	0	1	0	3	25	1,193
Trailer	13	20	36	27	31	34	36	31	25	24	26	15	12	13	2	1	0	0	0	0	0	0	1	15	362
Bus	43	62	58	30	25	22	22	23	28	45	52	42	19	12	4	0	1	0	0	0	0	0	1	3	492
M/C	76	127	102	87	91	82	79	63	70	94	107	92	54	31	18	11	12	6	5	0	0	1	4	21	1,233
Total	461	987	2044	1514	1242	1177	1235	1136	1231	1461	1995	1099	683	597	322	219	173	141	137	25	18	16	21	147	18,081
P.C.U	514	1076	2164	1598	1318	1264	1322	1227	1313	1549	2065	1131	703	610	338	218	170	140	137	25	19	16	23	167	19,103

1/ excluding Sunday

Appendix Table V-10 Weekly Variation of 12 hour traffic 1/ at Coromandel (A1) and Belle Village (M2)

Station	Type of Vehicls	Dec. 12 (Mon)	13 (Tue)	14 (Wed)	15 (Thu)	16 (Fri)	17 (Sat)	18 (Sun)	Average 2/	Average 3/
Coromandel (A1)	Car. Taxi	7255	6723	7098	6835	6803	6984	4630	6950	6618
	Van	976	1159	1167	1129	1086	698	304	1036	931
	Truck	914	778	767	770	746	705	72	780	679
	Trailer	49	56	32	43	35	42	1	43	37
	Bus	1704	1779	1777	1751	1825	1616	1605	1742	1722
	M/C	1631	1542	1699	1603	1557	1255	851	1548	1448
	Total	12529	12037	12540	12131	12052	11300	7463	12099	11435
	P.C.U	18647	18060	18388	17995	18049	16816	11400	18011	17051
Belle Village (M2)	Car. Taxi	12179	12037	12108	11427	11977	8419	5494	11358	10520
	Van	1371	1353	1406	1315	1295	997	344	1290	1154
	Truck	1124	1205	1231	1163	1104	722	81	1092	947
	Trailer	377	349	343	322	338	177	13	318	274
	Bus	481	449	574	457	461	349	239	452	422
	M/C	1072	1132	1067	1115	1092	952	625	1072	1008
	Total	16605	16525	16669	15799	16267	11616	3796	15582	13897
	P.C.U	17655	17561	17806	16795	17242	12137	6749	16537	15135

1/ includes both direction and excludes by-cycles

2/ Average traffic, excludes Sunday

3/ Average traffic of whole week

Appendix Table V-11-(1) Traffic Volume[1] on Major Road Sections

Station; Motorway, Trianon
Station Code[2]; E

Type of Vehicle	from Quatre Bornes to Port Louis				from Port Louis to Quatre Bornes			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Car Taxi	1,273 (89.4)	270 (80.4)	3,220 (79.4)	4,763 (81.9)	185 (70.1)	1,108 (88.0)	3,216 (81.4)	4,519 (82.6)
Van, Pick-up	48 (3.4)	35 (10.4)	330 (8.1)	413 (7.1)	29 (11.0)	43 (3.4)	359 (9.1)	421 (7.7)
Medium & Heavy Truck	62 (4.4)	30 (8.9)	413 (10.2)	505 (8.7)	38 (14.4)	64 (5.1)	369 (9.4)	471 (8.6)
Truck-Trailor	9 (0.6)	9 (2.7)	103 (2.5)	121 (2.1)	14 (5.3)	10 (0.8)	88 (2.2)	112 (1.9)
Bus	32 (2.2)	4 (1.2)	64 (1.6)	100 (1.7)	7 (2.7)	22 (1.7)	68 (1.7)	97 (1.8)
Motor-cycle	48 (3.4)	23 (6.8)	255 (6.3)	326 (5.6)	20 (7.5)	55 (4.4)	208 (5.3)	283 (5.2)
Total	1,424 (100.0)	336 (100.0)	4,055 (100.0)	5,815 (100.0)	264 (100.0)	1,259 (100.0)	3,949 (100.0)	5,472 (100.0)

Appendix Tablve V-11-(2) Traffic Volume[1] on Major Road Sections

Station; A_1 Road, G.R.N.W. Bridge
Station Code[2]; A

Type of Vehicle	to Port Louis				from Port Louis			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Car, Taxi	739 (70,9)	246 (56.6)	2,854 (54.7)	3,839 (57.3)	156 (39.2)	629 (66.5)	2,856 (53.0)	3,641 (54.1)
Van, Pick-up	53 (5.1)	33 (7,6)	443 (8.5)	529 (7.9)	79 (19.8)	60 (6.3)	564 (10.5)	703 (10.4)
Med. & Hev. Truck	49 (4.7)	17 (3.9)	416 (8.0)	482 (7.2)	39 (9.8)	37 (3.9)	446 (8.3)	522 (7.8)
Truck Trailor	6 (0.6)	5 (1.1)	70 (1.3)	81 (1.2)	- (-)	- (-)	50 (0.9)	50 (0.7)
Bus	87 (8.3)	74 (17.0)	747 (14.3)	908 (13.6)	81 (20.4)	88 (9.3)	775 (14.4)	944 (14.0)
Motor Cycle	108 (10.4)	60 (13.8)	688 (13.2)	856 (12.8)	43 (10.8)	132 (14.0)	698 (12.9)	873 (13.0)
Total	1,042 (100.0)	435 (100.0)	5,218 (100.0)	6,695 (100.0)	398 (100.0)	946 (100.0)	5,389 (100.0)	6,733 (100.0)

1/ Adjusted into 12 hour (6:00 a.m. - 6:00 p.m.) daily average excluding Sunday.

2/ Location of Station is shown in Appendix Fig. V.4.

Appendix Table V-11-(3) Traffic Volume[1] on Major Road Sections

Station; A_1 Road, Belle Rose
Station Code[2]; G

Vehicles (%)

Type of Vehicle	from Quatre Bornes to Beau Bassin				from Beau Bassin to Quatre Bornes			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Car, Taxi	382 (76.2)	398 (70.9)	2,731 (68.0)	3,511 (69.1)	287 (67.4)	450 (74.9)	2,859 (67.5)	3,596 (68.3)
Van, Pick-pp	29 (5.8)	30 (5.3)	301 (7.5)	360 (7.1)	36 (8.5)	40 (6.7)	339 (8.0)	415 (7.9)
Medium & Heavy Truck	36 (7.2)	38 (6.8)	352 (8.7)	426 (8.4)	39 (9.2)	39 (6.5)	385 (9.1)	463 (8.8)
Truck-Trailor	0 (-)	4 (0.7)	11 (0.3)	15 (0.3)	4 (0.9)	0 (-)	11 (0.3)	15 (0.3)
Bus	52 (10.4)	59 (10.5)	545 (13.6)	656 (12.9)	52 (12.2)	51 (8.5)	551 (13.0)	654 (12.4)
Motor-cycle	31 (6.2)	62 (11.1)	378 (9.4)	471 (9.3)	44 (10.3)	61 (10.1)	429 (10.1)	534 (10.1)
Total	501 (100.0)	561 (100.0)	4,017 (100.0)	5,079 (100.0)	426 (100.0)	601 (100.0)	4,235 (100.0)	5,262 (100.0)

Appendix Tablve V-11-(4) Traffic Volume[1] on Major Road Sections

Station; A_{12} Road, Rose Hill Town Hall
Station Code[2]; F

Vehicles (%)

Type of Vehicle	from Quatre Bornes to Beau Bassin				from Beau Bassin to Quatre Bornes			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Car, Taxi	253 (66.2)	321 (67.3)	2,222 (63.3)	2,796 (64.0)	220 (68.1)	368 (67.4)	2,186 (65.6)	2,774 (66.0)
Van, Pick-up	17 (4.4)	27 (5.7)	228 (6.5)	272 (6.2)	13 (4.0)	23 (4.2)	210 (6.3)	246 (5.9)
Medium & Heavy Truck	26 (6.8)	14 (2.9)	148 (4.3)	188 (4.3)	16 (5.0)	7 (1.3)	119 (3.6)	142 (3.3)
Truck-Trailor	1 (0.3)	0 (-)	5 (0.1)	6 (0.1)	1 (0.3)	0 (-)	14 (0.4)	15 (0.4)
Bus	48 (12.6)	80 (16.8)	570 (16.2)	698 (16.0)	61 (18.9)	67 (12.3)	554 (16.6)	682 (16.2)
Motor-cycle	54 (14.1)	62 (13.0)	563 (16.0)	679 (15.5)	25 (7.7)	104 (19.0)	458 (13.8)	587 (14.0)
Total	382 (100.0)	477 (100.0)	3,508 (100.0)	4,367 (100.0)	323 (100.0)	546 (100.0)	3,331 (100.0)	4,200 (100.0)

1/ Adjusted into 12 hour (6:00 a.m. - 6:00 p.m.) daily average excluding Sunday.
2/ Location of Station is shown in Appendix Fig. V.4.

Appendix Table-V-11 (5) Traffic Volume[1] on Major Road Sections

Station; B1 Road, Robertson Bridge
Station Code[2]; I

Vehicles (%)

Type of Vehicle	from Rose Hill to Reduit				from Reduit to Rose Hill			
	8:00 9:00	16:00 17:00	Off-peak	Total	8:00 9:00	16.00 17:00	Off-peak	Total
Car, Taxi	341 (85.3)	119 (74.4)	1,260 (72.9)	1,720 (75.2)	122 (73.9)	352 (86.1)	1,264 (75.6)	1,738 (77.3)
Van, Pick-up	26 (6.5)	18 (11.3)	149 (8.6)	193 (8.4)	20 (12.1)	22 (5.4)	146 (8.7)	188 (8.4)
Medium & Heavy Truck	14 (3.5)	0 (-)	121 (7.0)	135 (5.9)	10 (6.0)	7 (1.7)	79 (4.7)	96 (4.2)
Truck-Trailor	0 (-)	1 (0.6)	0 (-)	1 (0.0)	0 (-)	0 (-)	8 (0.5)	8 (0.4)
Bus	15 (3.8)	19 (11.9)	159 (9.2)	193 (8.4)	13 (7.9)	15 (3.7)	143 (8.5)	171 (7.6)
Motor-cycle	30 (7.5)	21 (13.1)	188 (10.9)	239 (10.5)	20 (12.1)	35 (8.5)	179 (10.7)	234 (10.4)
Total	400 (100.0)	160 (100.0)	1,728 (100.0)	2,288 (100.0)	165 (100.0)	409 (100.0)	1,673 (100.0)	2,247 (100.0)

Appendix Tablve V-11-(6) Traffic Volume[1] on Major Road Sections

Station; A11 Road, Balfour Garden
Station Code[2]; H

Vehicles (%)

Type of Vehicle	from Quatre Bornes to Beau Bassin				from Beau Bassin to Quatre Bornes			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Car, Taxi	166 (77.7)	180 (80.0)	1,223 (78.0)	1,569 (78.2)	180 (81.4)	274 (78.7)	1,550 (74.5)	2,004 (75.7)
Van, Pick-up	12 (5.6)	5 (2.2)	138 (8.8)	155 (7.7)	24 (10.8)	19 (5.5)	225 (10.8)	268 (10.1)
Medium & Heavy Truck	15 (7.0)	17 (7.6)	164 (10.5)	196 (9.8)	20 (9.0)	26 (7.5)	275 (13.3)	321 (12.1)
Truck-Trailor	0 (-)	1 (0.4)	3 (0.2)	4 (0.2)	0 (-)	0 (-)	7 (0.3)	7 (0.3)
Bus	5 (2.3)	4 (1.8)	16 (1.0)	25 (1.2)	0 (-)	1 (0.3)	10 (0.5)	11 (0.4)
Motor-cycle	28 (13.1)	23 (10.2)	161 (10.3)	212 (10.6)	21 (9.5)	47 (13.5)	238 (11.4)	306 (11.6)
Total	214 (100.0)	225 (100.0)	1,567 (100.0)	2,006 (100.0)	221 (100.0)	348 (100.0)	2,080 (100.0)	2,649 (100.0)

1/ Adjusted into 12 hour (6:00a.m. - 6:00 p.m.) daily average excluding Sunday.
2/ Location of Station is shown in Appendix Fig. V.4.

Appendix Table V-11-(7) Traffic Volume[1] on Major Road Sections

Station : Plaine Lauzun Shortcut, Plaine Lauzun
Station Code[2] ; K

Vehicles (%)

Type of Vehicle	from Pailles to G.R.N.W.				from G.R.N.W. to Pailles			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Car, Taxi	86 (72.9)	31 (55.4)	447 (69.7)	564 (69.2)	101 (69.2)	59 (68.6)	670 (69.4)	830 (69.3)
Van, Pick-up	19 (16.1)	2 (3.6)	93 (14.5)	114 (14.0)	18 (12.3)	24 (27.9)	185 (19.2)	227 (18.9)
Medium & Heavy Truck	12 (10.2)	2 (3.6)	59 (9.2)	73 (9.0)	8 (5.5)	2 (2.3)	48 (5.0)	58 (4.8)
Truck-Trailor	0 (-)	0 (-)	11 (1.7)	11 (1.3)	0 (-)	0 (-)	8 (0.8)	8 (0.7)
Bus	6 (5.1)	8 (14.3)	40 (6.2)	54 (6.6)	0 (-)	0 (-)	12 (1.2)	12 (1.0)
Motor-cycle	14 (11.9)	15 (26.8)	84 (13.1)	113 (13.9)	37 (25.3)	25 (29.1)	228 (23.6)	290 (24.2)
Total	118 (100.0)	56 (100.0)	641 (100.0)	815 (100.0)	146 (100.0)	86 (100.0)	966 (100.0)	1,198 (100.0)

Appendix Tablve V-11-(8) Traffic Volume[1] on Major Road Sections

Station; Pailles Junction Road, G.R.N.W.
Station Code[2] ; J

Vehicles (%)

Type of Vehicle	from G.R.N.W. to Pailles				from Pailles to G.R.N.W.			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Car, Taxi	47 (68.1)	24 (67.6)	237 (63.2)	308 (64.3)	43 (68.3)	37 (54.4)	255 (66.9)	335 (65.4)
Van, Pick-up	10 (14.5)	1 (2.8)	56 (14.9)	67 (14.0)	9 (14.3)	6 (8.8)	52 (13.6)	67 (13.1)
Medium & Heavy Truck	3 (4.3)	4 (11.4)	39 (10.4)	46 (9.6)	8 (12.7)	8 (11.8)	37 (9.7)	53 (10.3)
Truck-Trailor	0 (-)	0 (-)	2 (0.5)	2 (0.4)	0 (-)	0 (-)	1 (0.3)	1 (0.2)
Bus	1 (1.4)	0 (-)	3 (0.8)	4 (0.8)	0 (-)	1 (1.5)	0 (-)	1 (0.2)
Motor-cycle	18 (26.1)	7 (20.0)	94 (25.1)	119 (24.8)	12 (19.0)	22 (32.3)	88 (23.1)	122 (23.8)
Total	69 (100.0)	35 (100.0)	375 (100.0)	479 (100.0)	63 (100.0)	68 (100.0)	381 (100.0)	512 (100.0)

1/ Adjusted into 12 hour (6:00 a.m.-6:00 p.m.) daily average exoluding Sunday.
2/ Location of Station is shown in Appendix Fig. V.4.

Appendix Table V-12-(1) Traffic Volume[1/] at Major Road Junctions

Station; G.R.N.W. Junction
Station Code[2/]; L

Vehicles (%)

Type of Vehicle	from Port Louis to Beau Bassin 1				from Beau Bassin to Port Louis 2			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	215 (52.4)	762 (70.4)	3,103 (62.4)	4,080 (63.1)	805 (76.5)	235 (57.2)	2,843 (62.9)	3,883 (64.9)
Heavy	47 (11.5)	51 (4.7)	494 (9.9)	592 (9.1)	61 (5.8)	31 (7.5)	428 (9.5)	520 (8.7)
Bus	74 (18.0)	90 (8.3)	677 (13.6)	841 (13.0)	83 (7.9)	73 (17.8)	642 (14.2)	798 (13.3)
Motor-cycle	74 (18.0)	179 (16.5)	700 (14.1)	953 (14.7)	103 (9.8)	72 (17.6)	603 (13.4)	778 (13.1)
Total	410 (100.0)	1,082 (100.0)	4,974 (100.0)	6,466 (100.0)	1,052 (100.0)	411 (100.0)	4,516 (100.0)	5,979 (100.0)

Appendix Table V-12-(2) Traffic Volume[1/] at Major Road Junctions

Station; G.R.N.W. Junction
Station Code[2/]; L

Vehicles (%)

Type of Vehicle	from Beau Bassin to P. aux Sables P. aux Sables 3				from P. aux Sables to Beau Bassin 4			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	14 (51.9)	8 (61.5)	128 (64.6)	150 (63.0)	20 (76.9)	20 (66.7)	135 (67.5)	175 (68.4)
Heavy	5 (18.5)	3 (23.1)	33 (16.7)	41 (17.2)	5 (19.2)	4 (13.3)	37 (18.5)	46 (18.0)
Bus	0 (-)	0 (-)	7 3.5)	7 (2.9)	0 (-)	0 (-)	0 (-)	0 (-)
Motor-cycle	8 (29.6)	2 (15.4)	30 (15.2)	40 (16.8)	1 (3.9)	6 (20.0)	28 (14.0)	35 (13.7)
Total	27 (100.0)	13 (100.0)	198 (100.0)	238 (100.0)	26 (100.0)	30 (100.0)	200 (100.0)	256 (100.0)

1/ Adjusted into 12 hour (6:00 a.m. - 6:00 p.m.) daily average excluding Sunday.

2/ Location of Station is shown in Appendix Fig. V.4 and Appendix Fig. V.12.(22)

Appendix Table V-12-(3) Traffic Volume[1/] at Major Road Junctions

Station; G.R.N.W. Junction
Station Code[2/] ; L

Vehicles (%)

Type of Vehicle	from Port Louis to P. aux Sables 5				from P. aux Sables to Port Louis 6			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	23 (50.0)	42 (30.2)	356 (65.3)	421 (57.7)	64 (68.1)	32 (76.2)	297 (64.4)	393 (65.8)
Heavy	7 (15.2)	3 (2.1)	61 (11.2)	71 (9.7)	10 (10.6)	2 (4.8)	53 (11.5)	65 (10.9)
Bus	7 (15.2)	9 (6.5)	48 (8.8)	64 (8.7)	7 (7.4)	4 (9.5)	47 (10.2)	58 (9.7)
Motor-cycle	9 (19.6)	85 (61.2)	80 (14.7)	174 (23.8)	13 (13.8)	4 (9.5)	64 (13.9)	81 (13.6)
Total	46 (100.0)	139 (100.0)	545 (100.0)	730 (100.0)	94 (100.0)	42 (100.0)	461 (100.0)	597 (100.0)

Appendix Table V-12-(4) Traffic Volume[1/] at Major Road Junctions

Station; S. Hill Junction
Station Code[2/]; M

Vehciles (%)

Type of Vehicle	from Beau Bassin to Petite Riviere 1				from Petite Riviere to Beau Bassin 2			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9.00	16:00 ~ 17:00	Off-peak	Total
Light	7 (43.8)	5 (62.5)	70 (58.3)	82 (56.9)	3 (50.0)	4 (50.0)	42 (57.5)	49 (56.3)
Heavy	4 (25.0)	2 (25.0)	28 (23.3)	34 (23.6)	2 (33.3)	3 (37.5)	18 (24.7)	23 (26.4)
Bus	0 (-)	0 (-)	3 (2.5)	3 (2.1)	0 (-)	1 (12.5)	3 (4.1)	4 (4.6)
Motor-cycle	5 (31.2)	1 (12.5)	19 (15.8)	25 (17.4)	1 (16.7)	0 (-)	10 (13.7)	11 (12.6)
Total	16 (100.0)	8 (100.0)	120 (100.0)	144 (100.0)	6 (100.0)	8 (100.0)	73 (100.0)	87 (100.0)

1/ Adjusted into 12 hour (6:00 a.m. - 6:00 p.m.) daily average excluding Sunday.

2/ Location of Station is shown in Appendix Fig. V.4 and Appendix Fig. V.12 (22).

Appendix Table V-12-(5) Traffic Volume[1/] at Major Road Junctions

Station; S. Hill Junction
Station Code[2/]; M

Vehicles (%)

Type of Vehicle	from Port Louis to Beau Bassin ③				from Beau Bassin to Port Louis ④			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	179 (56.1)	819 (76.7)	2,994 (67.4)	3,992 (68.5)	811 (81.8)	201 (63.0)	2,675 (68.0)	3,687 (70.3)
Heavy	32 (10.0)	48 (4.5)	357 (8.0)	437 (7.5)	25 (2.5)	13 (4.1)	250 (6.4)	288 (5.5)
Bus	65 (20.4)	75 (7.0)	603 (13.6)	743 (12.8)	70 (7.1)	53 (16.6)	558 (14.2)	681 (13.0)
Motor-cycle	43 (13.5)	126 (11.8)	486 (10.9)	655 (11.2)	85 (8.6)	52 (16.3)	448 (11.4)	585 (11.2)
Total	319 (100.0)	1,068 (100.0)	4,440 (100.0)	5,827 (100.0)	991 (100.0)	319 (100.0)	3,931 (100.3)	5,241 (100.0)

Appendix Table V-12-(6) Traffic Volume[1/] at Major Road Junctions

Station; S. Hill Junction
Station Code[2/]; M

Vehicles (%)

Type of Vehicle	from Port Louis to Petite Riviere ⑤				from Petite Riviere to Port Louis ⑥			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	39 (50.0)	73 (80.2)	423 (56.9)	535 (58.7)	97 (65.1)	38 (58.5)	372 (53.4)	507 (55.7)
Heavy	19 (24.4)	7 (7.7)	143 (19.2)	169 (18.5)	26 (17.4)	11 (16.9)	147 (21.1)	184 (20.2)
Bus	5 (6.4)	5 (5.5)	68 (9.1)	78 (8.5)	6 (4.0)	8 (12.3)	86 (12.3)	100 (11.0)
Motor-cycle	15 (19.2)	6 (6.6)	109 (14.7)	130 (14.3)	20 (13.4)	8 (12.3)	92 (13.2)	120 (13.1)
Total	78 (100.0)	91 (100.0)	743 (100.0)	912 (100.0)	149 (100.0)	65 (100.0)	697 (100.0)	911 (100.0)

1/ Adjusted into 12 hour (6:00 a.m. - 6:00 p.m.) daily average excluding Sunday.

2/ Location of Station is shown in Appendix Fig. V. 4 and Appendix Fig. V.12.(22).

Appendix Table V-12-(7) Traffic Volume[1/] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2/]; N

Vehicles (%)

Type of Vehicle	from Port Louis to Vandermersch 1				from Vandermersch to Port Louis 2			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	140 (72.5)	196 (76.6)	1,151 (70.7)	1,487 (71.6)	134 (79.8)	91 (79.1)	678 (76.8)	903 (77.4)
Heavy	31 (16.1)	29 (11.3)	275 (16.9)	335 (16.1)	19 (11.3)	12 (10.4)	110 (12.5)	141 (12.1)
Bus	1 (0.5)	3 (1.2)	11 (0.7)	15 (0.7)	2 (1.1)	2 (1.7)	10 (1.1)	14 (1.2)
Motor-cycle	21 (10.9)	28 (10.9)	190 (11.7)	239 (11.5)	13 (7.7)	10 (8.7)	85 (9.6)	108 (9.3)
Total	193 (100.0)	256 (100.0)	1,627 (100.0)	2,076 (100.0)	168 (100.0)	115 (100.0)	883 (100.0)	1,166 (100.0)

Appendix Table V-12-(8) Traffic Volume[1/] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2/]; N

Vehicles (%)

Type of Vehicle	from Port Louis to Rose Hill 3				from Rose Hill to Port Louis 4			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	116 (51.8)	204 (57.1)	1,400 (58.9)	1,720 (58.2)	320 (78.8)	229 (71.3)	1,902 (69.8)	2,451 (71.0)
Heavy	18 (8.0)	24 (6.7)	138 (5.8)	180 (6.1)	24 (5.9)	16 (5.0)	202 (7.4)	242 (7.0)
Bus	69 (30.8)	61 (17.1)	530 (22.3)	660 (22.3)	54 (13.3)	60 (18.7)	528 (19.4)	642 (18.6)
Motor-cycle	21 (9.4)	68 (19.0)	307 (12.9)	396 (13.4)	8 (2.0)	16 (5.0)	93 (3.4)	117 (3.4)
Total	224 (100.0)	357 (100.0)	2,375 (100.0)	2,956 (100.0)	406 (100.0)	321 (100.0)	2,725 (100.0)	3,452 (100.0)

1/ Adjusted into 12 hour (6:00 a.m. - 6:00 p.m.) daily average excluding Sunday.

2/ Location of Station is shown in Appendix Fig. V.4 and Appendix Fig. V.12.(22).

Appendix Table V-12-(9) Traffic Volume[1] at Major Road Junctions

Station ; Beau Bassin Roundabout
Station Code[2] N

Vehicles (%)

Type of Vehicle	from Vandermersch to Rose Hill 5				from Rose Hill to Vandermersch 6			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	4 (100.0)	5 (83.3)	40 (75.5)	49 (77.8)	19 (100.0)	7 (46.7)	62 (61.4)	88 (65.2)
Heavy	0 (-)	0 (-)	3 (5.7)	3 (4.8)	0 (-)	4 (26.7)	6 (5.9)	10 (7.4)
Bus	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	1 (0.9)	1 (0.7)
Motor-cycle	0 (0)	1 (16.7)	10 (18.9)	11 (17.5)	0 (-)	4 (26.7)	32 (31.7)	36 (26.7)
Total	4 (100.)	6 (100.0)	53 (100.0)	63 (100.0)	19 (100.0)	15 (100.0)	101 (100.0)	135 (100.0)

Appendix Table V-12-(10) Traffic Volume[1] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2]; N

Vehicles (%)

Type of Vehicle	from Port Louis to Church Road 7				from Church Road to Port Louis 8			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	12 (85.7)	31 (79.5)	109 (73.7)	152 (75.7)	11 (64.7)	5 (71.4)	80 (80.8)	96 (78.0)
Heavy	0 (-)	2 (5.1)	6 (4.1)	8 (4.0)	1 (5.9)	1 (14.3)	2 (20.0)	4 (3.3)
Bus	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)
Motor-cycle	2 (14.3)	6 (15.4)	33 (22.3)	41 (20.4)	5 (29.4)	1 (14.3)	17 (17.1)	23 (18.7)
Total	14 (100.0)	39 (100.0)	148 (100.0)	201 (100.0)	17 (100.0)	7 (100.0)	99 (100.0)	123 (100.0)

1/ Adjusted into 12 hour (6:00 a.m. - 6.00 p.m.) daily average excluding Sunday.

2/ Location of Station is shown in Appendix Fig. V. 4 and Appendix Fig. V.12.(22).

Appendix Table V-12-(11) Traffic Volume[1/] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2/]; N

Vehicles (%)

Type of Vehicle	from Vandermersch to Church Road 9				from Church Road to Vandermersch 10			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	0 (-)	0 (-)	8 (88.9)	8 (88.9)	9 (75.0)	5 (83.3)	50 (74.6)	64 (75.3)
Heavy	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	4 (6.0)	4 (4.7)
Bus	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)
Motor-cycle	0 (-)	0 (-)	1 (11.1)	1 (11.1)	3 (25.0)	1 (16.8)	13 (19.4)	17 (20.0)
Total	0 (100.0)	0 (100.0)	9 (100.0)	9 (100.0)	12 (100.0)	6 (100.0)	67 (100.0)	85 (100.0)

Appendix Table V-12-(12) Traffic Volume[1/] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2/]; N

Vehicles (%)

Type of Vehicle	from Church Road to Rose Hill 11				from Rose Hill to Church Road 12			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	7 (53.9)	9 (52.9)	72 (76.6)	88 (71.0)	6 (75.0)	7 (46.7)	50 (53.8)	63 (54.3)
Heavy	1 (7.7)	0 (-)	5 (5.3)	6 (4.8)	0 (-)	1 (6.7)	13 (14.0)	14 (12.0)
Bus	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)
Motor-cycle	5 (38.5)	8 (47.1)	17 (18.0)	30 (24.2)	2 (25.0)	7 (46.7)	30 (32.3)	39 (33.6)
Total	13 (100.0)	17 (100.0)	94 (100.0)	124 (100.0)	8 (100.0)	15 (100.0)	93 (100.0)	116 (100.0)

1/ Adjusted into 12 hour (6:00 a.m. - 6:00 p.m.) daily average excluding Sunday.

2/ Location of Station is shown in Appendix Fig. V. 4 and Appendix Fig. V.12.(22).

Appendix Table V-12-(13) Traffic Volume[1] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2]; N

Vehicles (%)

Type of Vehicle	from Beau Bassin N.W. to Rose Hill 13				from Rose Hill to Beau Bassin N.W. 14			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	8 (57.1)	11 (91.7)	35 (66.6)	54 (68.4)	6 (60.0)	5 (71.4)	57 (75.0)	68 (73.1)
Heavy	0 (-)	0 (-)	1 (18.9)	1 (1.3)	2 (20.3)	0	4 (5.3)	6 (6.5)
Bus	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)
Motor-cycle	6 (42.9)	1 (8.3)	17 (32.0)	24 (30.4)	2 (20.0)	2 (28.6)	15 (19.7)	19 (20.4)
Total	14 (100.0)	12 (100.0)	53 (100.0)	79 (100.0)	10 (100.0)	7 (100.0)	76 (100.0)	93 (100.0)

Appendix Table V-12-(14) Traffic Volume[1] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2];

Vehicles (%)

Type of Vehicle	from Beau Bassin N.W. to Port Louis 15				from Port Louis to Beau Bassin N.W. 16			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16;00 ~ 17:00	Off-peak	Total
Light	9 (62.9)	3 (50.5)	38 (65.5)	50 (65.0)	3 (60.0)	8 (100.0)	12 (66.7)	23 (74.2)
Heavy	0 (-)	0 (-)	1 (1.7)	1 (1.3)	0 (-)	0 (-)	0 (-)	0 (-)
Bus	0 (-)	0 (-)	0 (-)	0 (-)	1 (20.0)	0 (-)	0 (-)	1 (3.2)
Motor-cycle	4 (30.8)	3 (50.5)	19 (32.8)	26 (33.8)	1 (20.1)	0 (-)	6 (33.3)	7 (22.6)
Total	13 (100.0)	6 (100.0)	58 (100.0)	77 (100.0)	5 (100.0)	8 (100.0)	18 (100.0)	31 (100.0)

[1] Adjusted into 12 hour (6:00 a.m. - 6.00 p.m.) daily average excluding Sunday.

[2] Location of Station is shown in Appendix Fig. V. 4 and Appendix Fig. V.12.(22).

Appendix Table V-12-(15) Traffic Volume[1/] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2/]; N

Vehicles (%)

Type of Vehicle	from Beau Bassin N.W. to Vandermersch 17				from Vandermersch to Beau Bassin N.W. 18			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	5 (50.5)	2 (50.0)	36 (75.0)	43 (69.4)	7 (77.9)	2 (66.7)	11 (47.8)	20 (57.1)
Heavy	0 (-)	0 (-)	3 (6.3)	3 (4.8)	1 (11.1)	0	4 (17.4)	5 (14.3)
Bus	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)
Motor-cycle	5 (50.5)	2 (50.0)	9 (18.8)	16 (25.9)	1 (11.1)	1 (33.3)	8 (34.8)	10 (28.6)
Total	10 (100.0)	4 (100.0)	48 (100.0)	62 (100.0)	9 (100.0)	3 (100.0)	23 (100.0)	35 (100.0)

Appendix Table V-12-(16) Traffic Volume[1/] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2/]; N

Vehicles (%)

Type of Vehicle	from Beau Bassin N.W. to Church Road 19				from Church Road to Beau Bassin N.W. 20			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	1 (100.0)	2 (66.7)	15 (88.2)	18 (85.7)	0 (-)	1 (100.0)	1 (25.0)	2 (40.0)
Heavy	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	3 (75.0)	3 (60.0)
Bus	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)
Motor-cycle	0 (-)	1 (33.3)	2 (11.8)	3 (14.3)	0 (-)	0 (-)	0 (-)	0 (-)
Total	(100.0)	3 (100.0)	17 (100.0)	21 (100.0)	0 (100.0)	1 (100.0)	4 (100.0)	5 (100.0)

1/ Adjusted into 12 hour (6:00 a.m. - 6:00 p.m.) daily average excluding Sunday.

2/ Location of Station is shown in Appendix Fig. V. 4 and Appendix Fig. V. 12.(22).

Appendix Table V-12-(17) Traffic Volume[1] by Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2]; N

Vehicles (%)

Type of Vehicle	from Beau Bassin N.W. to Beau Bassin West 21				from Beau Bassin West to Beau Bassin N.W. 22			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	1 (50.0)	1 (50.0)	7 (50.0)	9 (50.0)	1 (100.0)	0 (-)	9 (75.0)	9 (62.9)
Heavy	0 (-)	0 (-)	0 (-)	(-)	0 (-)	0 (-)	3 (25.0)	3 (23.1)
Bus	0 (-)	1 (50.0)	6 (42.9)	7 (38.9)	0 (-)	0 (-)	0 (-)	0 (-)
Motor-cycle	1 (50.0)	0 (-)	1 (7.1)	2 (11.1)	0 (-)	0 (-)	0 (-)	0 (-)
Total	2 (100.0)	2 (100.0)	14 (100.0)	18 (100.0)	1 (100.0)	0 (100.0)	12 (100.0)	13 (100.0)

Appendix Table V-12-(18) Traffic Volume[1] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2]; N

Vehicles (%)

Type of Vehicle	from Beau Bassin West to Port Louis 23				from Port Louis to Beau Bassin West 24			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	20 (87.0)	12 (92.3)	65 (77.4)	97 (80.8)	15 (79.0)	5 (62.5)	66 (82.5)	86 (80.4)
Heavy	0 (-)	0 (-)	5 (6.0)	5 (4.2)	3 (15.8)	0 (-)	5 (6.3)	8 (7.5)
Bus	0 (-)	0 (-)	0 ( )	0 (-)	1 (5.3)	1 (12.5)	0 (-)	2 (1.9)
Motor-cycle	3 (13.0)	1 (7.7)	14 (16.7)	18 (15.8)	0 (-)	2 (25.0)	9 (11.3)	11 (10.3)
Total	23 (100.0)	13 (100.0)	84 (100.0)	120 (100.0)	19 (100.0)	8 (100.0)	80 (100.0)	107 (100.0)

[1] Adjusted into 12 hour (6:00 a.m. - 6:00 p.m.) daily average excluding Sunday.

[2] Location of Station is shown in Appendix Fig. V.4 and Appendix Fig. V. 12.(22).

Appendix Table V-12-(19) Traffic Volume[1/] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2/]; N

Vehicles (%)

Type of Vehicle	from Beau Bassin West to Church Road 25				from Church Road to Beau Bassin West 26			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	2 (40.0)	0 (-)	3 (37.5)	5 (38.5)	0 (-)	3 (100.0)	5 (71.4)	8 (66.7)
Heavy	0	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)
Bus	0	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)
Motor-cycle	3 (60.0)	0 (-)	5 (62.5)	8 (61.5)	2 (100.0)	0 (-)	2 (28.6)	4 (33.3)
Total	5 (100.0)	0 (100.0)	8 (100.0)	13 (100.0)	2 (100.0)	3 (100.0)	7 (100.0)	12 (100.0)

Appendix Table V-12-(20) Traffic Volume[1/] at Major Road Junctions

Station; Beau Bassin Roundabout
Station Code[2/]; N

Vehicles (%)

Type of Vehicle	from Beau Bassin West to Vandermersch 27				from Vandermersch to Beau Bassin West 28			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	4 (66.7)	6 (75.0)	20 (71.4)	30 (71.4)	5 (83.3)	2 (66.7)	27 (75.0)	34 (75.6)
Heavy	0 (-)	0 (-)	0 (-)	0 (-)	1 (16.7)	1 (33.3)	4 (11.1)	6 (13.3)
Bus	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)
Motor-cycle	2 (33.3)	2 (25.0)	8 (28.6)	12 (28.6)	0 (-)	0 (-)	5 (13.9)	5 (11.1)
Total	6 (100.0)	8 (100.0)	28 (100.0)	42 (100.0)	6 (100.0)	3 (100.0)	36 (100.0)	45 (100.0)

1/ Adjusted into 12 hour (6:00 a.m. - 6:00 p.m.) daily average excluding Sunday.

2/ Location of Station is shown in Appendix Fig. V.4 and Appendix Fig. V.12.(22).

Appendix Table V-12-(21) Traffic Volume[1] at Major Road Junctions

Station ; Beau Bassin Roundabout
Station Code[2] ; N

Vehicles (%)

Type of Vehicle	from Beau Bassin West to Rose Hill 29				from Rose Hill to Beau Bassin West 30			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	2 (50.0)	4 (100.0)	46 (86.8)	52 (85.3)	6 (75.0)	0 (-)	31 (81.6)	37 (80.4
Heavy	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	1 (2.6)	1 (2.2)
Bus	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)
Motor-cycle	2 (50.0)	0 (-)	7 (13.2)	9 (14.8)	2 (25.0)	0 (-)	6 (15.8)	8 (17.4)
Total	4 (100.0)	4 (100.0)	53 (100.0)	61 (100.0)	8 (100.0)	0 (100.0)	38 (100.0)	46 (100.0)

Appendix Table V-12-(22) Traffic Volume[1] at Major Road Junctions

Station; Junction of Motorway and Bell Village Road
Station Code[2] ; O

Vehicles (%)

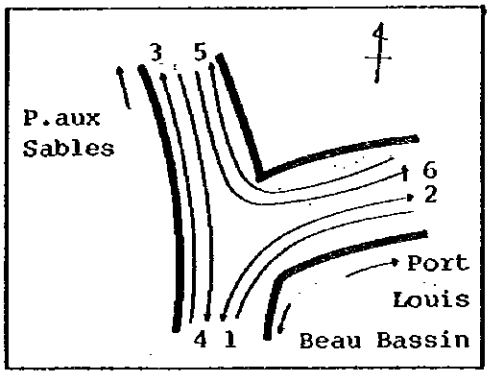
Type of Vehicle	from Quatre Bornes to Port Louis 31				from Port Louis to Quatre Bornes 32			
	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total	8:00 ~ 9:00	16:00 ~ 17:00	Off-peak	Total
Light	301 (78.8)	183 (75.6)	1,366 (72.0)	1,850 (73.4)	151 (70.6)	367 (86.4)	1,688 (78.5)	2,186 (79.1)
Heavy	16 (4.2)	20 (8.3)	180 (9.5)	216 (8.6)	31 (14.5)	12 (2.8)	153 (7.2)	196 (7.1)
Bus	35 (9.2)	16 (6.6)	143 (7.5)	194 (7.7)	9 (4.2)	13 (3.1)	101 (4.8)	123 (4.4)
Motor-cycle	30 (7.8)	23 (9.5)	209 (11.0)	262 (10.4)	23 (10.7)	33 (7.8)	204 (9.6)	260 (9.4)
Total	382 (100.0)	242 (100.0)	1,898 (100.0)	2,522 (100.0)	214 (100.0)	425 (100.0)	2,126 (100.0)	2,765 (100.0)

1/ Adjusted into 12 hour (6:00 a.m. - 6:00 p.m.) daily average excluding Sunday.

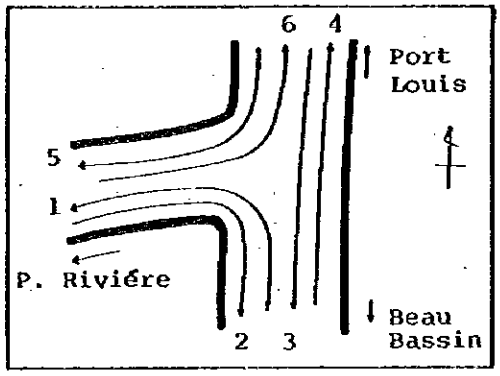
2/ Location of Station is shown in Appendix Fig. V.4 and Appendix Fig. V. 12.(22).

Appendix Fig. V-12-(23) Location of Traffic Direction at Major Junctions

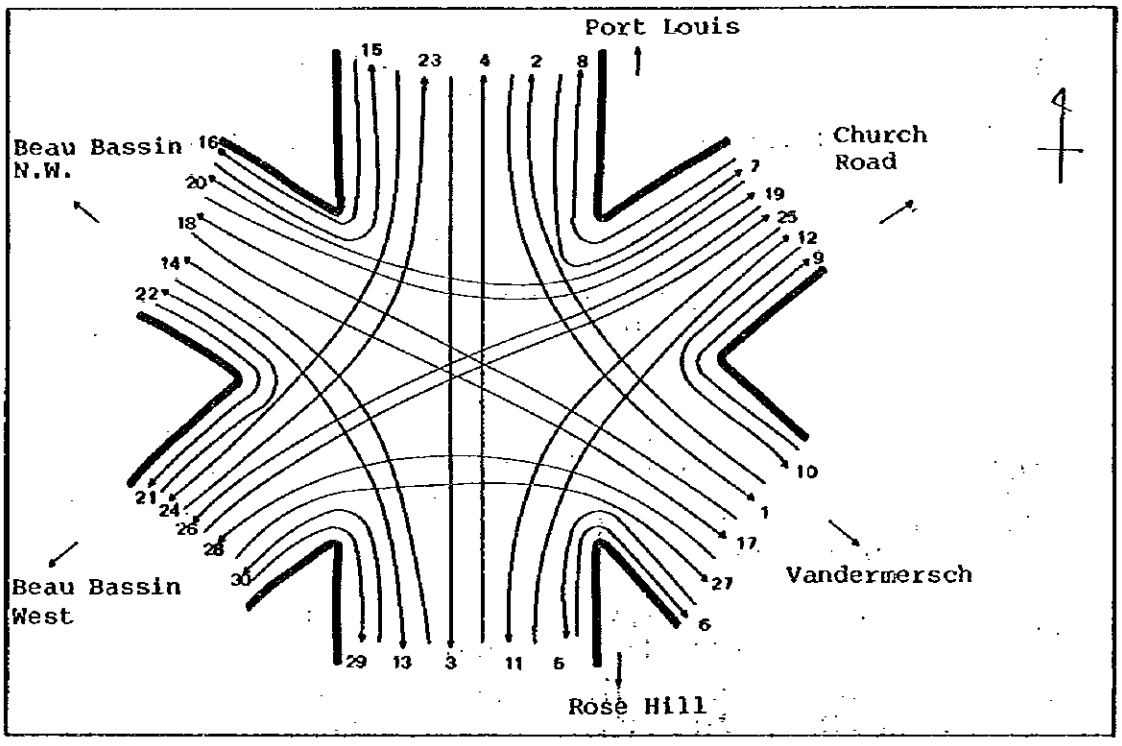
G.R.N.W. Junction (L)



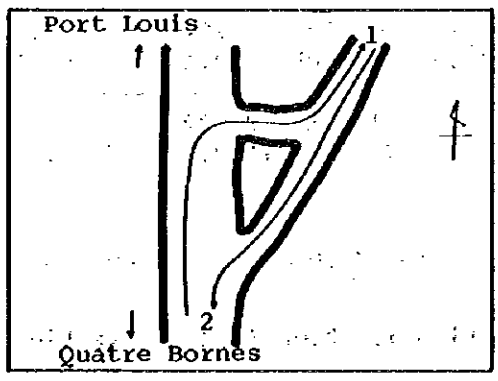
S. Hill Junction (M)



Beau Bassin Roundabout (N)



Junction of Motorway and Belle Village Road (O)



Appendix Table V-13-(1) Average Trip Length

	Car	Taxi	Van	Med. & Hev. Truck	Trailer-Truck
Average Trip Length (km)	16.8	17.1	17.9	18.4	20.7

Appendix Table V-13-(2) Trip Purpose by Period of Hour

(%)

		to Work	at Work	to Home	Others	Total
A1	Morning Peak	65.9	23.5	0.3	10.3	100.0
	Evening Peak	0.0	18.4	59.1	22.5	100.0
	Off Peak	18.7	39.8	15.3	26.2	100.0
	12 Hours	22.1	35.7	18.2	24.0	100.0
M2	Morning Peak	61.2	21.6	0.6	16.0	100.0
	Evening Peak	0.0	21.1	59.3	19.6	100.0
	Off Peak	17.3	37.2	15.4	30.1	100.0
	12 Hours	20.9	33.0	19.2	26.9	100.0
A1+M2	Morning Peak	63.0	22.3	0.5	14.2	100.0
	Evening Peak	0.0	20.2	59.2	20.6	100.0
	Off Peak	17.8	38.3	15.4	28.5	100.0
	12 Hours	21.4	34.1	18.8	25.7	100.0

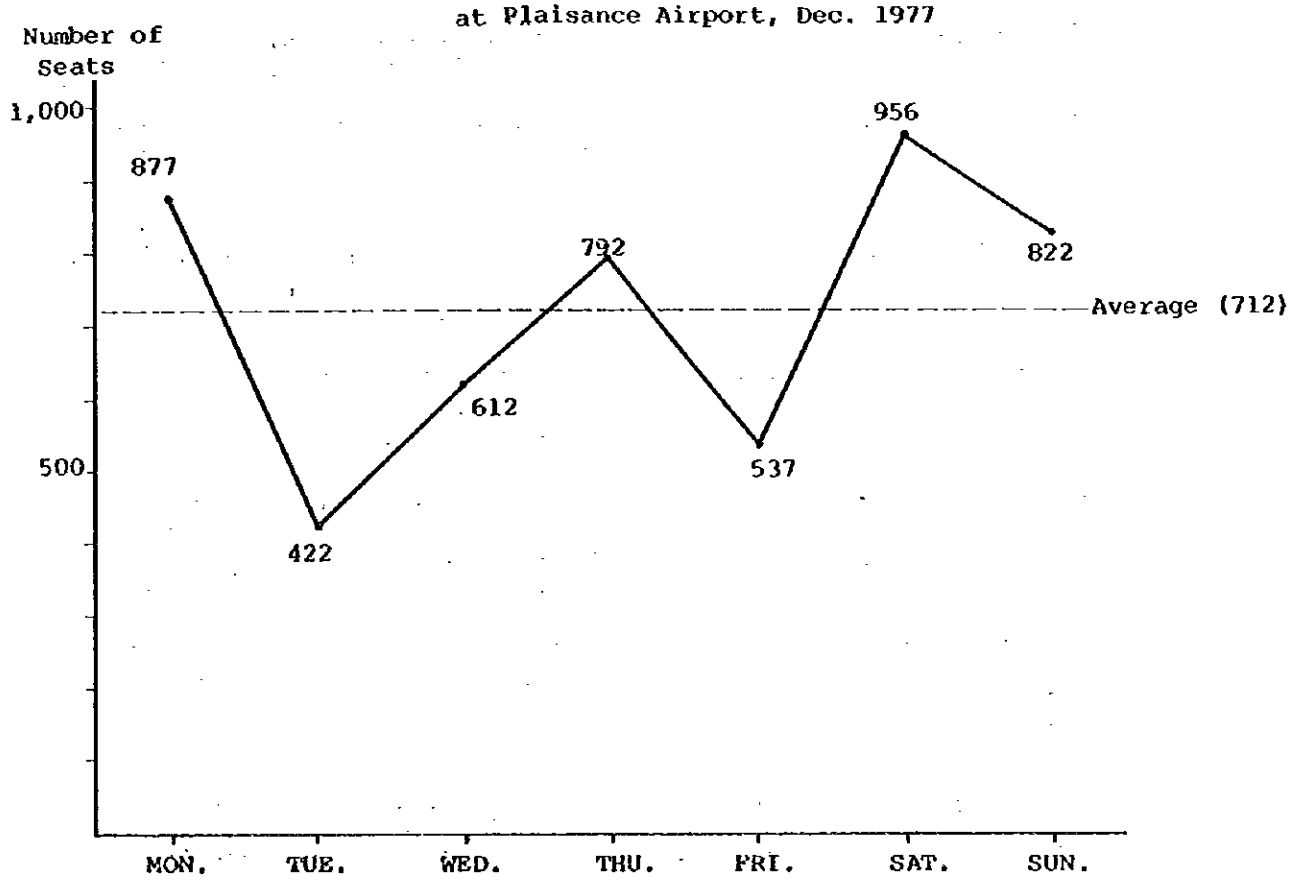
Appendix Table V-14 Summary of Bus Operation

Name of Bus Company	Section Served between		Route 1/	Type of Service (Express or Ordinary)	No. of Seats of the Bus	No. of Busstops in the Route	No. of Services per Day	Frequency of Service			Time of Service		Travel Time	
								Peak Hours	Off-peak Hours	Sundays	From	To	Peak Hours	Off-peak Hours
Vacoas Transport	Vacoas	P. Louis	1	Ordinary	44~63	52	300~325	25/h.	10~15/h.	20~30/h.	5:00	20:30	60 mins	50~55 mins
	Vacoas	P. Louis	2	Express	44~63	Almost non-stop	40	9~10/h.	-	-	7:00 17:00	9:00 17:00	40 mins	-
		P. Louis	3	Ordinary	40~63	37	24 ~ 30	4/h.	1/h.	2/h.	6:00	20:00	80 mins	70 mins
	P. aux Sables	P. Louis	4	Ordinary	40~63	11	50	7~8/h.	2/h.	4/h.	6:00	20:00	20 mins	15 mins
United Bus Service	Curepipe	P. Louis	5	Ordinary	40~64	40	240~250	17~22/h.	15/h.	25~30/h.	4:45	20:40	60 mins	50 mins
	Curepipe	P. Louis	6	Express	40~74	Almost non-stop	54 ~ 56	13~14/h.	-	-	7:00 15:00	9:00 17:00	40 mins	-
	Cassis	Plaine Verte	7	Ordinary	32~45	11	160~200	10~15/h.	8~9/h.	10~12/h.	5:00	20:00	30 mins	25 mins
	Pailles	P. Louis	8	Ordinary	32~45	13	67 ~ 68	7/h.	5/h.	5 ~ 6/h.	5:30	17:30	50 mins	35 mins
Rose Hill Transport	St. Patrick	P. Louis	9	Ordinary	45~59	32	156	20/h.	10/h.	13~15/h.	6:30	20:45	50 mins	40 mins
	Rose Hill	P. Louis	10	Ordinary	45~59	22	130	15/h.	8~10/h.	13~15/h.	6:00	20:45	40 mins	25 mins
Southern Express	Medine	P. Louis	11	Ordinary	48~57	25	90	7/h.	4/h.	8/h.	5:15	19:00	50 mins	40 mins
Moka Flacq Transport	Moka	P. Louis	12	Ordinary	45~59	23	70 ~ 75	7~8/h.	4/h.	5/h.	6:00	20:00	35 mins	30 mins

Source; Interviews with United Bus Service, Vacoas Transport, Rose Hill Transport, Southern Express and Moka-Flacq Transport.

1/ Location of Bus Routes is shown in Appendix Fig. V.15.

Appendix.Fig. V-15 Weekly Variation of the Total Number of Seats of Aircrafts departing and arriving at Plaisance Airport, Dec. 1977



Source: Interviews with Airport Staffs.

APPENDIX V-16 CARGO TRANSPORTATION

The kind and the volume of cargo loaded were inquired at the time the origin-destination survey was taken. This interview finding is summarized in the next table, Table V.17.1. Cargo has been classifed into the following 7 categories of commodity, each of which is as explained:

1.	Sugar	: Sugar, molasses, etc.
2.	Primary agricultural products	: Vegetables, livestock, fruits, and others primary products,
3.	Process Food	: Soft drinks, alcoholic beverages, flour, tinned provisions, and other food beverages,
4.	Consumer goods	: Textile products, cosmetics, furniture, electric applicances, and other daily necessaries.
5.	Construction materials	: lumbers, timbers, sand, cement, aggregate, bricks, window sashes, and other materials,
6.	Fuel	: gasoline, kerosene, and other fuel,
7.	Miscellaneous	: Water, empty bottles, empty drum cans, and the like.

Of the above categories, sugar represents the major volume, or about 39% of total cargo, followed by construction materials (28%), and consumer goods (14%).

With regard to cargo flow, that which originates or terminates in Port Louis represents more than 80% of total cargo movement or, particularly in the case of sugar, more than 99%. Such percentage is low at about 65% in the case of construction materials, a good portion of which is aggregate directly shipped out of crushing plants in various locations to contruction sites.

In the case of consumer goods, construction materials, and fuels, which heavily rely on imports, those which originate from Port Louis represent a large portion of total transportation. In the case of sugar, which is exported, that which terminates in Port Louis represents an overwhelming majority. The volume of primary agricultural products originating in Port Louis, where such products are gathered for distribution, is greater than the volume of those moving into the city, even though they are little imported.

Appendix Table V-16-1 Commodity Movement, Dec. 1977

* double counted (tons/day)

OD	Commodity Group		Sugar, Morasse	Unprocessed Agricultural Products	Processed Foods	General Consumer Goods	Construction Materials	Fuel	Others	Total
Coromandel, P. Malabar, B. Bassin, Rose Hill	→	Port Louis	24	6	16	68	150	5	6	275
"	←	"	19	27	27	150	192	12	0	427
"	→	Others	0	*2	*5	*33	*259	*90	*2	*391
Quatre Bornes, Vacoas/Phoenix	→	Port Louis	317	4	144	27	138	0	12	642
"	←	"	38	15	78	152	219	0	56	558
"	←	Others	0	*6	*62	*5	*110	0	*35	*218
Pailles, Moka	→	Port Louis	108	31	35	15	15	0	3	207
"	←	"	31	62	6	40	64	77	0	280
"	→	Others	0	*14	*5	*17	*49	*17	*4	*106
Northern Part of Black River	←	Port Louis	412	0	3	20	75	18	10	538
"	←	"	41	4	0	29	88	1	15	178
"	←	Others	*16	*20	*5	*53	*71	0	0	*165
Southern Part of Black River	→	Port Louis	0	0	18	4	0	5	7	34
"	←	"	13	1	0	1	0	0	0	15
"	→	Others	0	0	*1	0	*17	0	0	*18
Curepipe, Coriolis, Henrietta	→	Port Louis	73	4	2	13	0	1	4	97
"	→	"	0	18	35	73	55	2	6	189
"	←	Others	0	*2	*8	0	*19	*1	0	*30
Savanne	→	Port Louis	757	3	2	3	11	0	3	779
"	←	"	0	14	1	50	8	24	2	99
"	→	Others	0	0	0	0	*23	0	0	*23
Grand Port	→	Port Louis	529	8	1	4	13	0	5	560
"	←	"	7	22	9	75	70	0	15	198
"	←	Others	0	*1	0	0	*33	*100	0	*134
Quartier Militaire	→	Port Louis	18	1	0	0	9	0	0	28
"	←	"	0	1	0	10	0	0	18	29
"	←	Others	0	0	0	*5	0	0	0	*5
Flacq	→	Port Louis	0	0	5	0	0	0	0	5
"	→	"	0	0	1	8	0	0	0	9
"	→	Others	0	*9	*5	*1	*61	*10	*2	*88
Pamplemousses, Rivière du Rempart	→	Port Louis	0	0	0	4	13	0	0	17
"	←	"	0	0	0	1	0	4	0	5
"	→	Others	*16	*16	*71	*94	*406	*36	*39	*678
Others	→		6	0	5	17	77	7	14	126
Total	→		2,409	256	469	868	1,721	283	217	6,223

APPENDICES FOR CHAPTER VII

Appendix VII. 1 Geological and Soil Survey

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Appendix VII. 1 Geological and Soil Surveys

1. Outline of Surveys

The surveys cover the area ranging from Port Louis, the capital of Mauritius, to Beau Bassin/Rose Hill. They are classified broadly into a surface geological survey, subgrade soil survey, foundation ground survey at bridge construction sites and aggregate survey.

Fig. VII.1.1 shows the location of the surveys. The methods of survey and the number of sampling and geological testing surveyed are stated below.

1-1. Surface geological survey

A surface reconnaissance was carried out to analyse the sequence, lithofacies, distribution and structure of the strata along the proposed routes and in adjacent areas.

1-2. Subgrade soil survey

A surface reconnaissance, test pit digging, sampling and soil test were carried out to analyse soil distribution and the nature of subgrade soil along the proposed routes.

On the basis of the result of the surface reconnaissance, a test pit digging was performed at five points and each of which was 1.0 to 1.5 m in depth. Disturbed and undisturbed soil samples were collected at the depth of 1.0 m in each test pit in order to carry out a field density test which was carried out at the Ministry of Works laboratory.

The working items and the number of sampling can be illustrated in Table VII.1.1 while Table VII.1.2 shows the soil test items and the number of sampling.

1-3. Foundation ground survey at bridge construction sites

The purpose of the surface reconnaissance, mechanical borings, test pit digging, sampling, soil test and lithological test was to analyse the sequence, lithofacies, distribution, strength, permeability and other characteristics of the strata at the bridge sites. A mechanical boring was carried out at a point near the railway bridge and at another point some 100 m downstream from the roadway bridge on A1 Road. A standard penetration test was conducted at each meter of depth in the borehole.

A test pit digging was performed at a point in the river bed beneath the old railway bridge and disturbed samples were obtained from the pit.

The samples collected from the test pit and core samples from the boreholes were examined by means of soil and lithological tests at the Ministry of Works and Mauritius University laboratories.

The working items and the number of sampling can be illustrated in Table VII.1.1, while Table VII.1.2 shows the soil test items and the number of sampling.

1-4. Aggregate survey

A field reconnaissance and a lithological test were carried out to determine the quality and reserves of material which are used for aggregates.

The lithological test was conducted at the Ministry of Works laboratory and the number of test items can be illustrated in Table VII.1.2.

1-5. Collection of data

Meteorological, lithological, geological, soil, ground water and other pertinent data were obtained from the Ministry of Works and the Central Water Authority.

Major data collected include:

- Columnar section of geology, ground water level and water pumping up conditions
- Geological and lithological survey reports
- Soil distribution map

2. General Description of Topography and Geology

2-1. Topography

The topography of the surveyed area is featured by mountains with serrated ridges, gently sloped lava plateau with Curepipe atop, and rivers which have heavily eroded the plateau.

The highest mountain in the vicinity of the surveyed area is Mt. Pieter Both (with an elevation of 823 m) located in the southeast of Port Louis. The ridge of the mountain runs from northeast to southwest and descends gradually in the northwestern direction. The mountain adjoins the lava plateau on the southeast side where it forms precipices, and eroded valleys are not found.

On the northwest side (nearer to Port Louis), however, eroded valleys have been formed and the topography of this part is less steep. Mt. Petit Malabar, with an elevation of 227 m, is found near Chebel. This mountain is gently sloped and is dome-shaped, looking as if it were rising above the lava plateau, compared with other mountains near the surveyed area.

The plateau is formed by younger lavas which flowed from shield volcanos having of a total of 25 craters and runs across the island in the NNE-SSW direction.

At the top, the plateau having Curepipe crater with an elevation of 605 m descends in the NW-NNW direction and is gently sloped. The surveyed are covers nearly all of this plateau. Except for the Grand River N.W. and the St. Louis River, the area is generally free from undurations and ranges in elevation from 20 to 210 m.

The Grand River N.W., the longest and widest river in Mauritius, and the St. Louis River, flow through the surveyed area. They are running in the N-NNW direction and small rivers meet each other on the upper reaches.

The Grand River N.W. is featured by U-shaped or V-shaped valleys and ajoins the lava plateau. The relative height defference between the valleys and the plateau is 30 to 100 m. The river zigzags on the down-stream area where terraces are being formed by three tiers with different hights. The St. Louis River is featured by a V-shaped valley and is graded with high degrees. It may be said to be in its infancy or youth. A delta is formed at the mouths of the two rivers.

2-2. General geology

The geological formations of the surveyed area may be grouped broadly into older lavas forming the mountains, younger lavas forming the plateau, and river terrace deposits are found in the terraces and superficial deposits.

A general description of the geological sequence is given in Table VII.1.3 and the geological map in Fig. VII.1.2.

[Older Lavas]

Older lavas regarded as the oldest stratum are found in the surveyed area and constitute its bedrock. They mainly contain olivene basalt erupting in the Early Tertiary era (or older). They are the principal constituents of the mountains and, in the vicinity of the surveyed area, the formation is inclined about 10 degrees toward the northwest direction. It is reported that the older lavas are intermingled with pyroclastic sediment and are also intruded by dykes, such as trechiteandesite, trechite, and phonolitic trechite.

[Younger Lavas]

It is reported that the younger lavas are the outcome of eruptions of the shield volcano in the Pliocene era or early period of Quaternary Diluvial era.

The volcano reportedly has 25 craters, one of which located at Curepipe Point has the largest volcanic cone and is the only well-maintained crater in Mauritius.

Some constituent parts of the lava plateau lying in the vicinity of the surveyed area consist of lava flows from the Curepipe Point, and the lavas being thickest at Plaines Willhems. The lavas consist mainly of vesiculated olivene basalt and dolerite and they are formed from magma which is accompanied with high liquidity and volatility.

A distribution of pillow lavas, formed when lavas flow into water, is observed in the vicinity of both the Grand River N.W. and the St. Louis River. Reddish brown soils produced by the weathering of the lava surfaces are distributed on the plateau.

[River Terrace Deposits]

Terraces in three tiers with different heights have been observed on the lower reaches of the Grand River N.W. The terraces indicating the past river bed consist primarily of gravel mixed with sand, silt and clay.

[Superficial Deposits]

Superficial deposits include river deposits, detritus deposits and sand hill.

River deposits are distributed on the beds of the Grand River N.W. and the St. Louis River. They consist mainly of gravel mixed with sand, silt and clay.

Detritus deposits distributed on the slopes of the mountains are psephytic and consist mainly of sand, silt and clay. Generally, their gravel content increases with an increase in the elevation and they tend to have a larger content of fine-grained soils with a decrease in the elevation.

Sand hills are distributed along the coast and consist primarily of coral sand.

2-3. Ground water

A copy of the "Hydrology Year Book 1974-1975" was obtained from the Central Water Authority for information on ground water distribution in the surveyed area. According to the book, the ground water level in the existing boreholes in the vicinity of the surveyed area is shown as follows: (The locations of the existing boreholes can be illustrated in Fig. VII.1.1 and the boring log in Fig. VII.1.3)

Borehole No.	Ground Water Level
No. 33	55.7 - 56.3 m
No. 143	-
No. 148	21.6 - 22.05 m
No. 160	18.6 - 20.4 m
No. 209	17.1 - 17.4 m
No. 221	13.4 - 16.0 m

Judging from the above-mentioned data, the ground water level is in the range of 13.4 to 56.3 m below the ground level and obviously falls gradually in the NW to NNW direction, as the configuration of the area does.

Ground water is currently pumped up at Borehole No. 160 at a daily rate of 1,632 tons. A pumping test conducted at this borehole gave a coefficient of transmissibility $T = 1.73 \times 10^{-3}$ m^2/sec.

The ground water level was 21 m below the ground level at the start of the pumping test and the maximum fall in the ground water level recorded during the test was 15 m. Since the bottom of the borehole tested was at 45 m below the ground level, the coefficient of permeability, is estimated to be considerably low, i.e. $K = \alpha \times 10^{-6}$ cm/sec.

Ground water is found in basaltic lavas. Since the basaltic lavas are hydrologically impermeable, it is highly probable that the ground water in the surveyed area is flowing between fissures.

3. Result of Survey and Analysis

3-1. Geological survey on the proposed roads

Soil profiles in the vicinity of the proposed roads can be illustrated in Fig. VII.1.4 (Geological section; A-A', B-B')

(A-A' Section)

A-A' section indicates that older lavas found in the surveyed area constitute its bedrock underlying younger lavas. Furthermore, soils stemming from the weathering of the younger lavas are overlying the younger lavas. River deposits are found in both St. Louis River and Grand River, N.W. and river terrace deposits in both embankments of the Grand River N.W.

It has been observed that the older lavas showing dark or jet grey colour consist mainly of olivene basalt, and are considerably hard in quality and vesiculated. Good-conditioned outcrops of the lavas are observed in the Grand River N.W. and the St. Louis River and the lavas can be clearly distinguished from the overlying younger lavas and also the existing boring data give clear distinguishment.

The upper layer of the older lavas is estimated to be extending at a depth of 5 to 20 m below the ground water level.

The younger lavas; which are considerably hard in quality and vesiculated, consist primarily of olivenr basalt and dolerite. However the upper part of the younger lavas contains cracks and the parts along the cracks are greatly influenced by weathering. Unweathered parts of the younger lavas are either dark grey or jet grey, while most of the weathered parts are brownish. Pillow lavas are distributed near the Grand River N.W. The pillow lavas are remarkably weathered, badly qualified becoming softer in quality.

Soil distributed on the top of the plateau is of reddish brown or dark reddish brown silty clay and contains gravels of olivene basalt and dolerite.

The maximum diameter of gravel is approximately 500 mm; but the higher the ground level, the bigger the diameter of gravel and the higher the gravel content ratio will be. Most of the soil having an approximate width of 1 to 2 m are dry, shrunk and soft in quality, with cracks contained in the soil.

River deposits distributed on the beds of the St. Louis River and the Grand River N.W. consist mainly of gravels mixed with sand, silt and clay. The gravels consisting of olivene basalt are considerably hard with 1.0 to 1.5 m in maximum diameter. Thickness of the river deposits could be approximately 4 to 5 m.

River terrace deposits observed on both embankments of the Grand River N.W. consist mainly of gravels mixed with sand, silt and clay.

It is estimated that one of the gravels is 80 cm in maximum diameter and thickness of the river terrace deposits is approximately 4 m.

[B-B' Section]

This indicates the section between B and B' which has been described

in A-A' section. It is a geological section of the proposed roads which is nearer the existing road, A_1, than in the A-A' section. The B-B' section shows nearly the same geological conditions as that of the A-A' section.

However, some difference can be found in the thickness of the younger lavas, with the thickness of the B-B' section thinner than that of the A-A' section. In other words, older lavas are distributed closer to the ground level. Particularly, in the vicinity of Mt. Petit Malabar, outcrops of older lavas have been observed, but not of younger lavas, while the older lavas are covered directly by detritus deposits.

Detritus deposits containing a lot of gravels are of clay showing dark grey on black colour, and are very dry and hard in quality with cracks. The deposits are formed by detrition of Mt. Petit Malabar which consists of older lavas. Thickness of the deposits is estimated to be less than 1.5 m.

Geological survey on the proposed roads has been described above. For earth works in the proposed roads, it is proposed to carry out excavation of older and younger lavas mainly by ripping and partly by using explosives. Judging from our observation it is possible to excavate soil and detritus deposits by use of bulldozers.

It is desirable to make the gradient of excavated slopes at about 5 % when excavation of older lavas and younger lavas is penformed and the gradient of slopes in earth cutting works at the area where soil is distributed should be at about 10 %. Gradient of embankment slopes are desirable to be at 15 to 18 %. When the embankment is higher than 10 meters, however, it is desirable to be at more than 18 %.

3-2. Subgrade soil

3-2-1. Soil of the area along the proposed roads

As a result of surface reconnaissance in the area along the proposed roads, subgrade soil can be classified into the following 4 categories. Its distribution is shown in Fig. VII.1.5 (Soil map).

(i) High weathered rocks
(ii) Silty clay showing dark reddish brown to brown colour
(iii) Silty clay showing reddish brown colour
(iv) Clay showing dark grey to black colour

Of the above-mentionned 4 categories of soil, high weathered rocks are distributed beneath clay layer of (ii), (iii) and (iv) and can be used as material of subgrade soil after being excavated. There is no problem in using these high weathered rocks as material for subgrade soil after its excavement. there is no problem in using these high weathered rocks as material for subgrade soil from the stand point of their strength and quality. Test pit digging was carried out at main points where soils of (ii), (iii) and (iv) are distributed and we collected both disturbed and undisturbed. The results of the test pit digging are shown in Fig. VII.1.6 - 7. The relationship between sample number obtained at the test pits and soil type can be shown as follows:

Soil Type	Sample Number
(ii)	T-1, T-2, T-4
(iii)	T-5
(iv)	T-3

The soil type (ii) is widely distributed in the proposed area and most parts of the proposed road belong to the area in which this soil is distributed. This layer is dry and shrunk and consequently becomes harder in quality. It contains gravels and one of which is approximately 300 mm in maximum size.

The soil type (iii) is distributed on the plateau near Beau Bassin. The proposed road passes through some parts of the area in which the soil is distributed. This layer exists on the upstream of the distribution area of the soil type (ii) and can be distinguished from the soil type (ii) because of difference in colour, a higher gravel content ratio than that of the soil type (ii) and larger gravel size than that of the type (ii). However, both types produced by weathering and degenerating the younger lavas are the same in origin. The soil type (iii) becomes considerably harder in quality due to drying shrinkage. It contains gravels and one of which is approximately 500 mm in maximum size.

The soil type (iv) is distributed on the area near the foot of Mt. Petit Malabar. The proposed road partly passes through this area. This layer is of weathered and degenerated soil of older lavas and can be clearly distinguished from the soil distributed on the plateau. The layer is featured by soil conditions such as widespread crack. Most of gravels contained in the layer are 50 to 300 mm in size and one of the gravels is approximately 600 to 700 mm in maximum size.

3-2-2. Quality of material for subgrade soil

Out of soils considered to be used as material for subgrade soil, highly-weathered rocks are considered appropriate as material. Soil test has been performed for other soils. Results of the test are shown in Table VII.1.4 and Fig. VII.1.8 - 10.

The soil type (ii):

The type (ii) is featured by a lower value of the natural water content (29 to 34 %) than that of the plastic limit (34 to 39 %) and the value of the natural water content is approximately equal to the optimum water content. Besides, the natural dry density (1.28 to 1.29 g/cm^3) is higher than 90 % of the maximum dry density (1.37 to 1.44 g/cm^3). These imply that the soil layers are dry, shrunk and become harder in quality; and this is verified by the fact that the degree of saturation is low at 69.5 - 77.8 %.

The soil type (iii):

The type (iii) is featured by the fact that a value of the natural water content (25.7%) is considerably lower than that of the plastic limit (32.6%) and the value of the natural water content is 5 % lower than that of the optimum water content (31.2%), for it richly contains gravels and the soil layer becomes harder in quality due to drying shrinkage. However, the natural density is estimated to be 1.37 g/cm^3 and which shows a much lower value than that of the type (ii), for it is observed that soils obtained from this soil layer which is rich in gravels have been disturbed by performing the mold sampling method to measure the natural density.

The soil type (iv):

The type (iv) is featured by the fact that the value of the natural water content (20 %) is considerably lower than that of the plastic limit (43.9 %) as well as lower than that of the optimum water content (28.7 %). Besides, as characteristics of the type (iv), the natural dry density (1.48 g/cm^3) is estimated to be approximately equal to the maximum dry density and the coefficient of swelling (7.4 %) is considerably high.

The above-mentioned soil types (ii), (iii) and (iv) are all classified to be "MH" according to the unified Soil Classification Method. From the standpoint of quality, it is observed that both types (ii) and (iii) have quite similar properties.

On the basis of the results of laboratory tests and studies, it is considered desirable that the following values are used for design parameters:

Specific gravity	2.77
Natural water content	30 %
Natural wet density	1.72 t/m^3
Construction water content	30 ±5%
Construction dry density	1.27 t/m^3
Construction wet density	1.65 t/m^3
Convertion ratio to mass	1.04

3-2-3. Design CBR values

CBR values for asphalt pavement design are determined in terms of the CBR test. Results of the CBR test can be shown in Table VII.1.5.

The CBR value of the soil type (ii) is 4 to 11.3 % in undisturbed sample and 1.9 to 9.4 % in disturbed sample. It is observed that the estimated values are scattered in both cases, and there exists a great difference between the highest and the lowest values due to sampling disturbance. In order to determine design CBR values, therefore, the results of sampling tests which are supposed to be disturbed should be ignored. Judjing from the similar properties between the soil types (ii) and (iii) with respect to the quality of soil, the same CBR design values are adopted for both of the soils. Furthermore, since a difference between undisturbed sample and disturbed sample is quite small, the same CBR design values are adopted for both of them.

In the soil type (iv), since its CBR value is considerably low, i.e. 0.5 to 1.5 %, and its coefficient of swelling is considerably high, the type (iv) is considered unsuitable for material of subgrade soil. Accordingly, in the areas when such soil layer is distributed, it is necessary to use good material for subgrade soil.

According to the results of the tests and studies, it is considered appropriate to adopt the following CBR values for asphalt pavement design:

[in case of using soil types (ii) and (iii) as subgrade soil]

design CBR value = 9.0 %

[in case of using highly weathered rocks as subgrade soil]

design CBR value > 10.0 %

3-3. Foundation rock at bridge construction sites

Geological investigation has been performed at the disused railway bridge and at the new bridge construction site in order to examine foundation rocks at the bridge construction site. Geological conditions at the proposed site can be illustrated in Fig. VII.1.11 and the results of boring tests in Fig. VII.1.12 - 13, respectively.

3-3-1. Foundation rock at the disused railway bridge

Bedrock of this area is of older lavas (olivine basalt) which is underlying younger lavas (pillow lavas). Furthermore, river terrace deposits are distributed on terrace area and river deposits on river bed.

The older lavas are hard and vesiculated. Judging from the result of standard penetration test, the N value of 50 implies that there exists no problem arising from the lavas as far as foundation rock of structures is concerned.

Pillow lavas are distributed in the vicinity of St. Louis River and Grand River N.W. The layer of the pillow lavas is highly weathered, reddish brown or brown with soft rocks. The N value of the layer is is estimated to be more than 50.

River terrace deposits are distributed on the banks of the Grand River N.W., the layer of which has a width of 4.3 m at boring No.1 point. The layer generally consists of gravels, sand, silt and clay. Nevertheless, it is mainly composed of hard and round gravels whose sizes are 5 to 10 cm. The maximum size of the gravels may be approximately 80 cm. The upper layer of the deposits which ranges 1.65 m is mainly composed of sand, silt and clay, showing the N value of 10, whereas the lower layer which consists mainly of gravels, shows that the N value has been estimated to be more than 50.

River deposits are mainly composed of huge gravels mixed with fine gravels, sand, silt and clay. The gravels are hard with a maximum size of 1.5 to 2.0 m. Since the layer of the deposits is highly compacted, the N value is estimated to be more than 50 and a thickness of the layer may be 4 to 5 m. In the case of using this layer for foundation rock of structures, the layer will be well-qualified for compaction. However, more attention should be paid to the existance of scouring.

3-3-2. Foundation rock at proposed bridge site

Soil at the proposed site is composed of older lavas (olivine basalt) regard as foundation rock and underlying the distribution of river deposits.

The older lavas are highly vesiculated and also highly cracked. Nevertheless, the layer of the lavas are hard and unweathered, showing that the N value is more than 50. It has been observed that the layer is well-qualified for compaction. Therefore, for this reason, there exists no problem in the case of using the layer for foundation rock.

On the other hand, river deposits are composed of gravels, sand, silt and clay. However, some differences should be made on geological conditions between the present river bed and lowlands (delta) excluded from the present river bed.

In the present river bed, it mainly consits of gravels mixed with a large proportion of sand. The gravels are hard with a maximum size of about 15 to 20 cm. Besides, thickness of the layer of the gravels is estimated to be about 5 m. As far as geological conditions of the bed are concerned, the layer shows that the N value is approximately 20.

The lowlands (delta) exoluding from the present river bed are mainly composed of sand, silt and clay mixed with a small proportion of gravels. Most of the gravels are about 2 to 5 cm and partly about 20 to 30 cm in size. Besides, the layer of the gravels has a thickness of 2.6 m, showing

the N value of 12 in the layer which heavily contains gravels and the N value of 4 in the layer which contains a small proportion of gravels.

Judging from the above-mentioned geological conditions, it is concluded that the river deposits are unsuitable for foundation rock of major structures.

3-3-3. Result of soil tests

Soil tests have been carried out with samples obtained from river deposits distributed on Grand River N.W. and also from embankment in the vicinity of the left bank. The result of the tests can be illustrated in Table VII.1.4 and Fig. VII.1.14 to 17.

The river deposits are mainly composed of gravels. According to the result of the test, the gravel content ratio is estimated to be 62 %. Nevertheless, it does not show real percentage. The value obtained by the result of the test is applicable to the case in which the maximum size of the gravel is assumed to be 9.52 mm. The actual content ratio of gravels to river deposits will be estimated to be more than 90 %. Besides, in case of a maximum size of 9.52 mm, its internal friction angle will be 37°, whereas in the case of a maximum size of 5.0 mm, its internal friction angle and cohesion will be 30° and 0.16 kg/cm^2 respectively. These values do not show actual values of the river deposits.

On the basis of the fact that the gravels are hard, well-distributed and highly dense, the actual internal friction angle will be anticipated to be more than 40° to 45°.

On the other hand, the result of the test for embankment shows 43 % of gravel, 28 % of sand and 29 % of site and clay.

According to the result of unified soil classification method, the internal friction angle and cohesion will be 33°48' and 1.13 kg/cm^2, respectively.

3-4. Distribution and quality of aggregates

Almost everywhere in the Island, there is a dense distribution of olivine basalt blocks called "stones", and as it is easy to secure such material, aggregates can be supplied with sufficient quantities. At present, coarse and fine aggregates produced by crushing the olivine basalt blocks called "stones" are used. The blocks are of olivine basalt lavas and most of them are vesiculated. The result of the test for the blocks can be shown in Table VII.1.6.

According to the result, dry density is 2.25 to 2.55 g/cm^3, specific gravity is 2.71 to 2.81 and compression strength is 862 to 950 kg/cm^2. Their values are considerably high. Basides, water content ratio is 0.7 - 1.2 %, effective porosity ratio is 5.1 to 5.9 % and water absorption ratio is 1.1 to 2.2 %. Their values are considerably low. Judging from the above-mentioned results, the olivine basalt blocks are evaluated to be well-qualified for aggregates.

Table VII.1.1 Field Work

Work Item	Number of Point	Total Depth (m)	Samples	Location of Work
Boring with Standard Penetration Test	2	11	All core	Bridge site
Test Pits	5	6.5	10	The area along the proposed routes
Test Pits	1	1.6	3	Bridge site
Geological Survey	-	-	-	Project area

Table VII.1.2 Number of Samples and Test Items for Laboratory Test

Test Item	Soil		Rock	Total
	Road	River		
Specific Gravity	5	3	3	11
Natural Water Content	5	3	3	11
Grain Size Analysis	5	3	0	8
Atterberg Limits	5	0	0	5
Compaction Test	5	0	0	5
C.B.R. Test	10	0	0	10
Unconfined Compaction Strength	0	0	3	3
Direct Shear Test	0	3	0	3
Natural Density	5	0	3	8

Table VII.1.3 Geological Sequence

Era	Period	Epoch	Formation	Lithofacies
Cenozoic	Quaternary	Alluvium	Detritus Deposits	Gravel Sand Silt Clay
			Sand Hill	Sand
			River Deposits	Gravel Sand Silt Clay
		Diluvium	River Terrace Deposits	Gravel Sand Silt Clay
	Tertiary	Pliocen	Younger Lavas (Younger Volcanic Series)	. Oliben-basalt . Dolerite . Pillow Lava
		Early Tertiary (or Older)	Older Lavas (Older Volcanic Series)	. Oliven-basalt . Pyroclastic . Dykes

Table VII.1.4 SUMMARY OF SOIL TEST

Test Items	Sample No.	Subgrade Soil					River Deposit	Embankment Material
		T-1	T-2	T-3	T-4	T-5	T-6	T-7
Natural Water Content	(Wn %)	34.0	29.0	20.0	32.3	25.7	-	-
Specific Gravity	(Gs)	2.86	2.78	2.75	2.77	2.77	2.73	2.75
Natural Wet Density	(γt g/cm^3)	1.72	1.66	1.78	1.71	1.37	1.72-2.17*	1.72*
Natural Dry Density	(γd g/cm^3)	1.28	1.29	1.48	1.29	1.09	-	-
Natural Void Ratio	(e_o)	1.23	1.16	0.86	1.15	1.54	-	-
Degree of Natural Saturation	(Sr %)	79.1	69.5	64.0	77.8	46.2	-	-
Grain Size Analysis	2.0^{mm} < Ds	3	5	32	0	19	62	43
	2.0^{mm} - 0.074^{mm}	31	18	12	8	15	36	28
	0.074^{mm} > Ds	66	77	56	92	66	2	29
Atterberg Limits	Liquid Limit (LL %)	61.0	62.0	91.1	71.0	57.5	-	-
	Plastic Limit (PL %)	39.0	34.0	43.9	35.0	32.6	-	-
	Plastic Index (PI %)	22.0	28.0	47.2	36.0	24.9	-	-
Compaction Test	Maximum Dry Density (max.γd g/cm^3)	1.37	1.44	1.43	1.37	1.46	-	-
	Optimum Water Content (Wopt %)	36.4	32.6	28.7	36.0	31.2	-	-
Direct Shear Test	Internal Friction Angle (ϕ °)	-	-	-	-	-	30^o- 37^o	$33^o48'$
	Cohesion (C kg/cm^2)	-	-	-	-	-	0.15-0.16	1.13
CBR Test	California Bearing Ratio (CBR %) Undisturbed	4.0	11.3	1.5	9.8	2.2	-	-
	California Bearing Ratio (CBR %) Disturbed	9.4	1.9	0.9	4.4	2.2		
	Expansion Content (EC %) Undisturbed	0.08	0.50	7.40	0.30	1.18	-	-
	Expansion Content (EC %) Disturbed	0.46	0.30	8.70	0.16	1.16		
Classification		MH	MH	MH	MH	MH	SW	SC

* Wet Density of Before Test

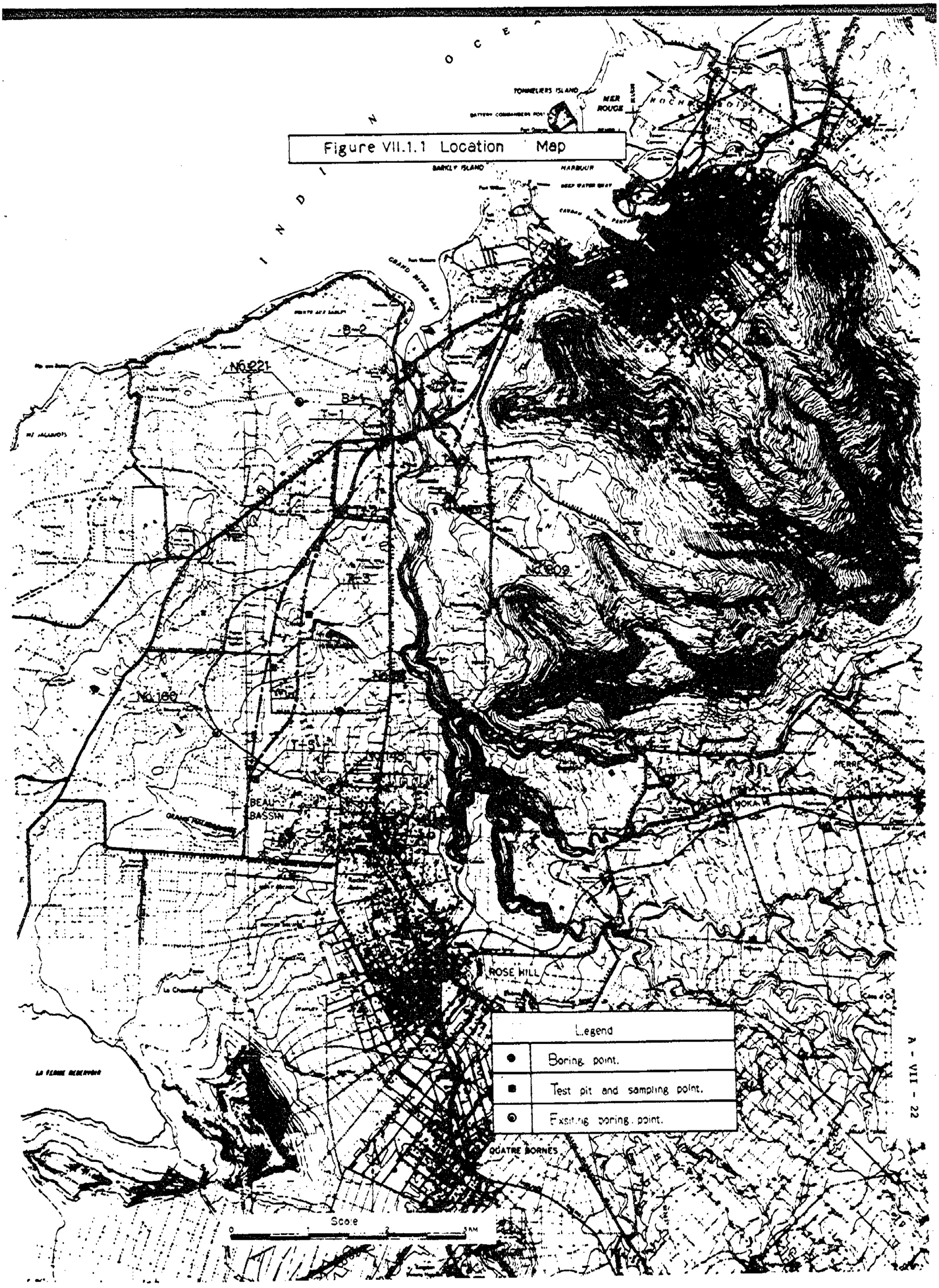
Table VII.1.5 SUMMARY OF CBR TEST

Sample No.	Soil Type	Sample Condition	Natural Water Content (%)	Wet Density (g/cm^3)	Dry Density (g/cm^3)	Swelling Content (%)	CBR Value (%)
T-1	(ii)	Undisturbed	34.0	1.72	1.28	0.08	4.0
		Disturbed	34.0	1.78	1.33	0.46	9.4
T-2	(ii)	Undisturbed	29.0	1.66	1.29	0.50	11.3
		Disturbed	29.0	1.63	1.26	0.30	1.9
T-3	(iv)	Undisturbed	20.0	1.78	1.48	7.40	1.5
		Disturbed	20.0	1.68	1.40	8.70	0.9
T-4	(ii)	Undisturbed	32.3	1.71	1.29	0.30	9.8
		Disturbed	32.3	1.68	1.27	0.16	4.4
T-5	(iii)	Undisturbed	25.7	1.37	1.09	1.18	2.2
		Disturbed	25.7	1.62	1.29	1.16	2.2

Table VII.1.6 RESULT OF ROCK TEST

	Sample No. Depth (m)		
	B-No.1	B-No.1	B-No.2
	1.20 - 1.40	4.30 - 4.50	4.50 - 4.70
Natural Weight (g) : (a)	639.0	543.5	691.0
After Saturation Weight (g) : (b)	646.5	550.0	698.0
In Water Weight (g) : (c)	399.0	345.5	440.0
After Dry Weight (g) : (d)	632.0	539.5	683.0
Natural Density $\frac{(a)}{(b)-(c)}$ (g/cm^3)	2.582	2.658	2.678
Dry Density $\frac{(d)}{(b)-(c)}$ (g/cm^3)	2.554	2.638	2.647
Saturated Density $\frac{(b)}{(b)-(c)}$ (g/cm^3)	2.612	2.689	2.705
Natural Water Content $\frac{(a)-(d)}{(d)} \times 100$ (%)	1.1	0.7	1.2
Degree of Saturation $\frac{(a)-(d)}{(b)-(d)} \times 100$ (%)	48.3	38.1	53.3
Effective Porosity $\frac{(b)-(d)}{(b)-(c)} \times 100$ (%)	5.9	5.1	5.8
Absorption $\frac{(b)-(d)}{(d)} \times 100$ (%)	1.1	1.9	2.2
Specific Gravity $\frac{(d)}{(d)-(c)}$	2.71	2.78	2.81
Compression Strength (kg/cm^2)	862.0	950.6	863.1

Figure VII.1.1 Location Map



Legend	
●	Boring point.
■	Test pit and sampling point.
◉	Exsiting boring point.

Figure VII.1.2 Geological Map

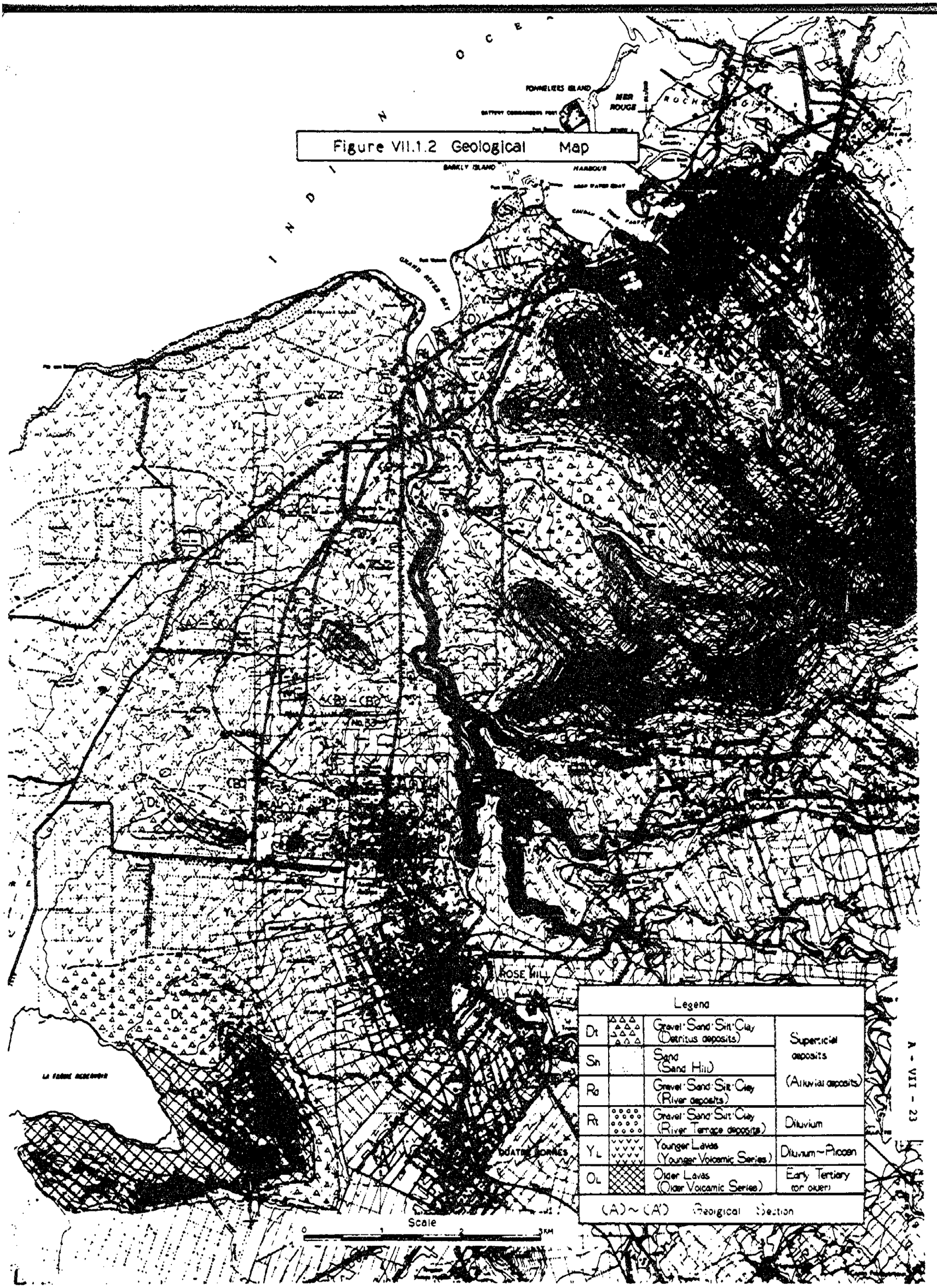
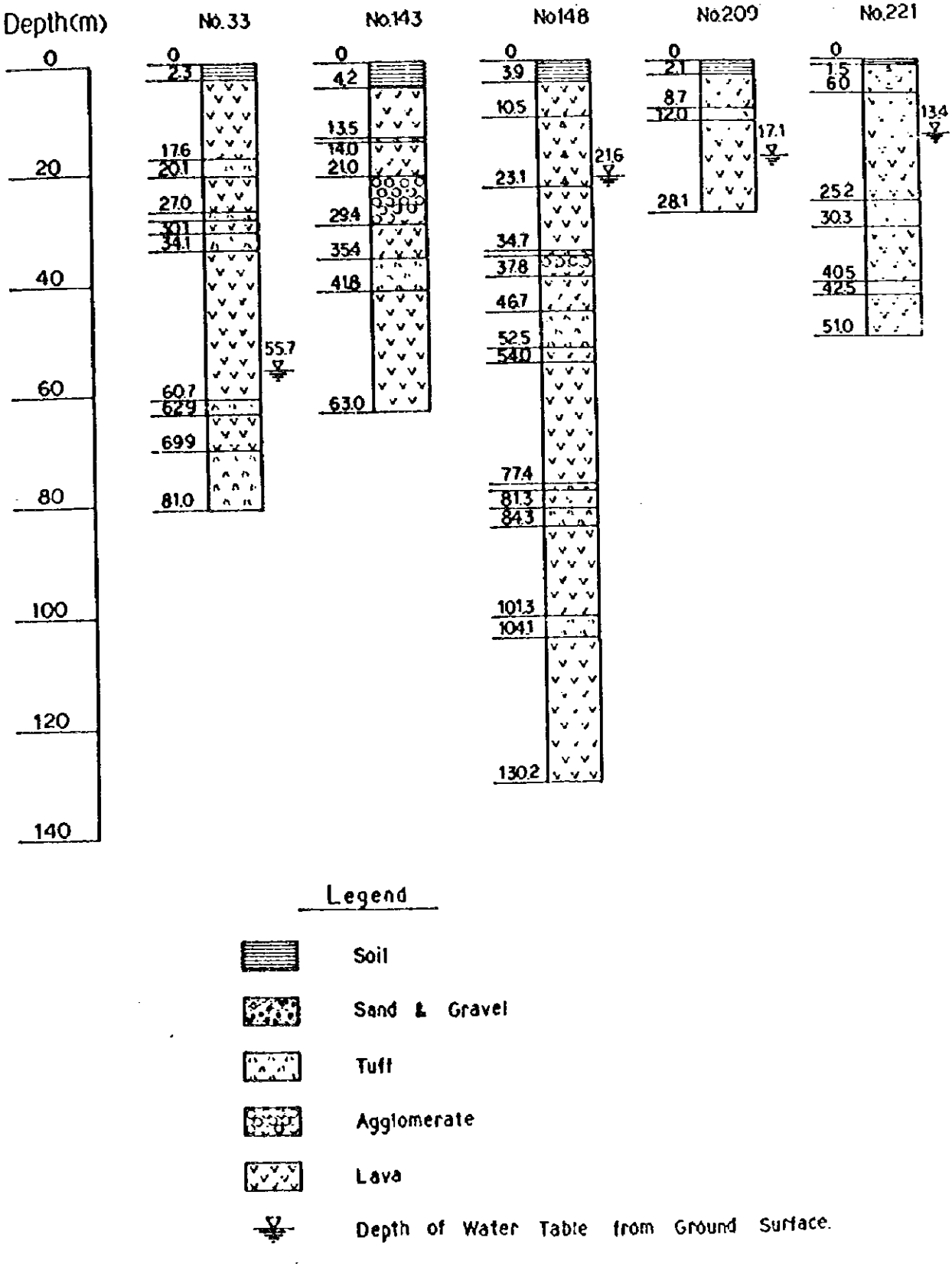


Figure VII.1.3 Columnar Section

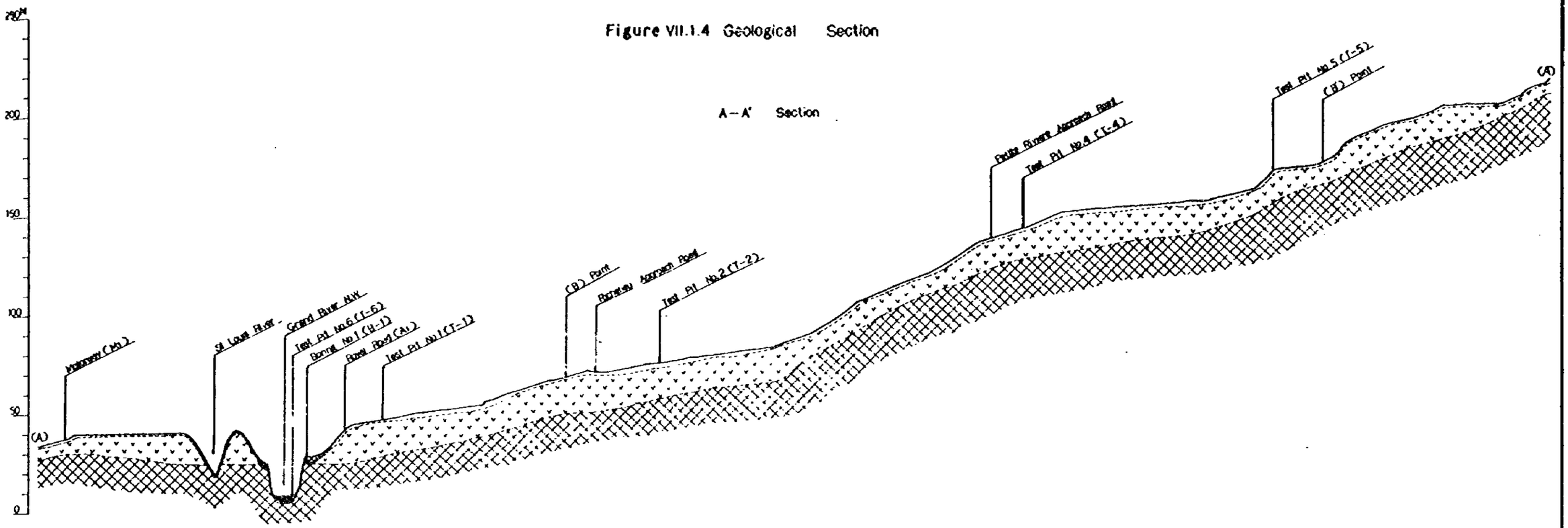


Legend

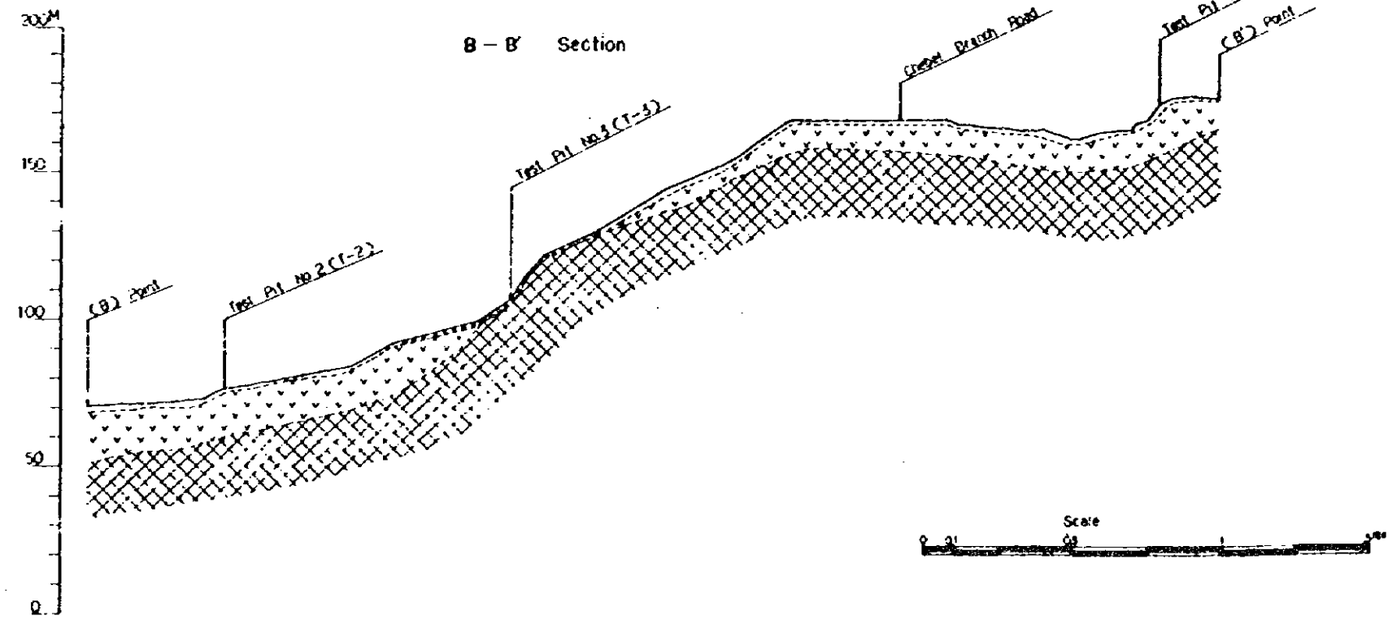
- Soil
- Sand & Gravel
- Tuff
- Agglomerate
- Lava
- Depth of Water Table from Ground Surface.

Figure VII.1.4 Geological Section

A – A' Section



B – B' Section



Legend	
	Soil (Weathered younger lavas)
	Detritus deposits
	River deposits
	River terrace deposits
	Younger lavas
	Older lavas

Figure VII.1.5 Soil Map

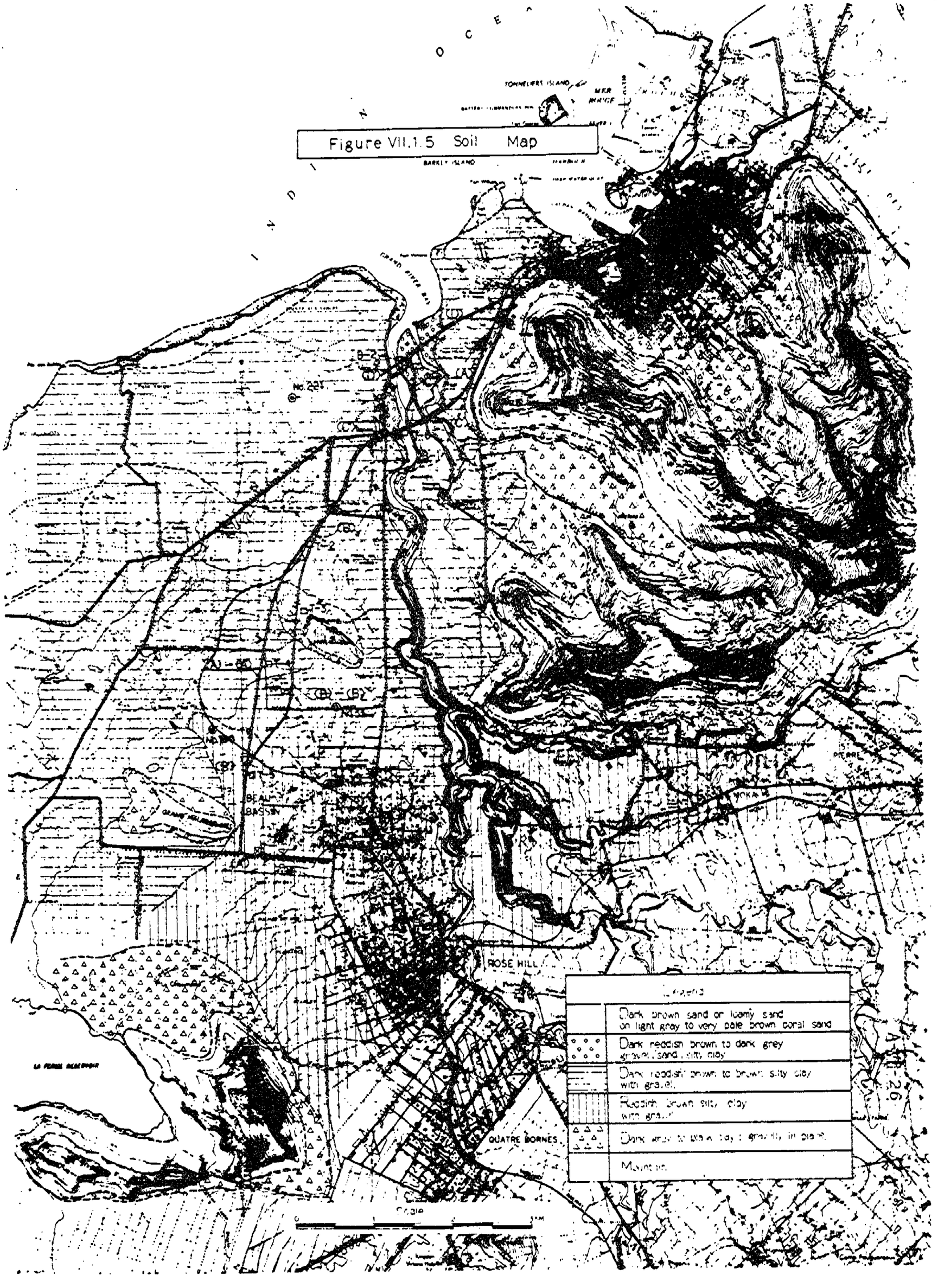
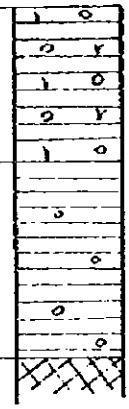
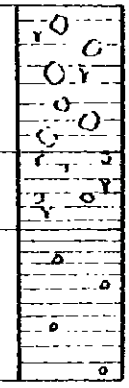


Fig. VII.1.6 SOIL PROFILES

T - 1

Depth	Profile	Appearance	Condition
0m			
		Dark reddish brown soil with organic matter and gravel(ø20-50mm)	Dry and very hard
0.50			
		Dark reddish brown soil with small gravel(ø2-5mm) a little	Dry and hard
1.50			
		Black brown weathered lava	Hard rock

T - 2

Depth	Profile	Appearance	Condition
0m			
		Dark reddish brown soil and gravel(ø100-300mm) mixed with organic matter (bank)	Dry and hard
0.40			
		Black brown soil with organic matter and gravel(ø50-100mm)	Dry and very hard
0.60			
		Dark reddish brown soil with small gravel(ø2-5mm) a little	Dry and very hard
1.50			

T - 3

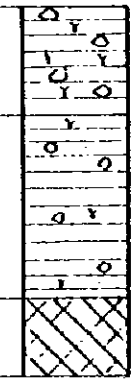
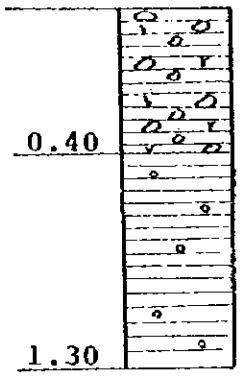
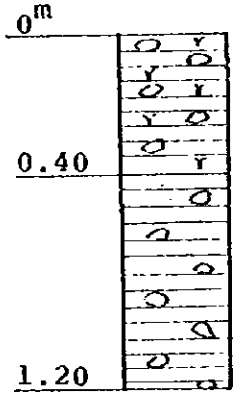
Depth	Profile	Appearance	Condition
0m			
		Black soil with organic matter and gravel(ø100-300mm) rich	Dry and very hard
0.30			
		Black soil with organic matter and gravel(ø50-200mm) (small crack rich)	Dry and very hard
0.85			
		Highly weathered black basalt	Soft rock
1.00			

Fig. VII.1.7 SOIL PROFILES

T - 4

Depth	Profile	Appearance	Condition
0m		Reddish brown soil with organic matter and gravel(ø50-100mm)	Dry and hard
0.40		Reddish brown soil with gravel(ø10-50mm) a little	Dry and very hard
1.30			

T - 5

Depth	Profile	Appearance	Condition
0m		Reddish brown soil with organic matter and gravel(ø100-500mm)	Dry and hard
0.40		Reddish brown soil with gravel(ø100-500mm) rich	Dry and very hard
1.20			

T - 6

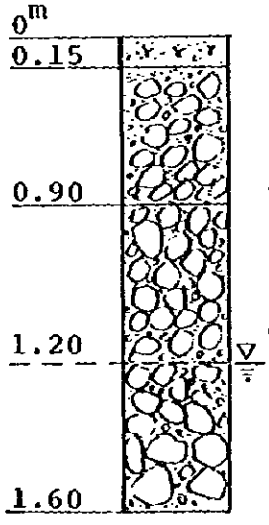
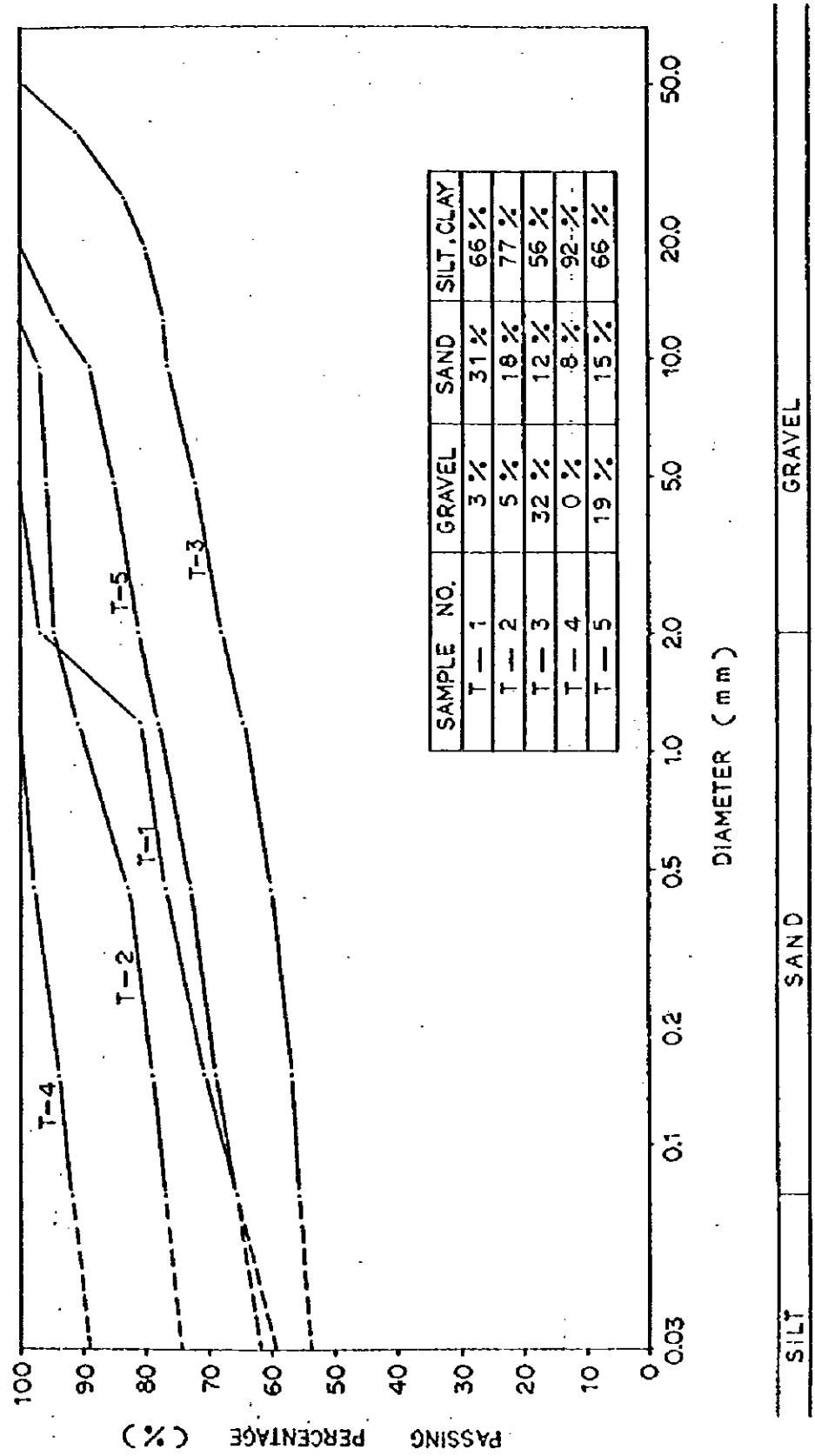
Depth	Profile	Appearance	Condition
0m			
0.15		Dark brown sand with organic matter rich	Dry and loose
0.90		Dark brown sand and gravel (gravel max. size 500mm) with organic matter	Dry and very dense
1.20		Dark gray gravel and sand (gravel max. size 700mm) gravel>sand>silt	Very dense Large permeability
1.60			

Figure VII. 1.8 GRAIN SIZE DISTRIBUTION CURVES

(Subgrade Soil)



SAMPLE NO.	GRAVEL	SAND	SILT, CLAY
T — 1	3 %	31 %	66 %
T — 2	5 %	18 %	77 %
T — 3	32 %	12 %	56 %
T — 4	0 %	8 %	92 %
T — 5	19 %	15 %	66 %

Figure VII.1.9 PLASTICITY CHART

(Subgrade Soil)

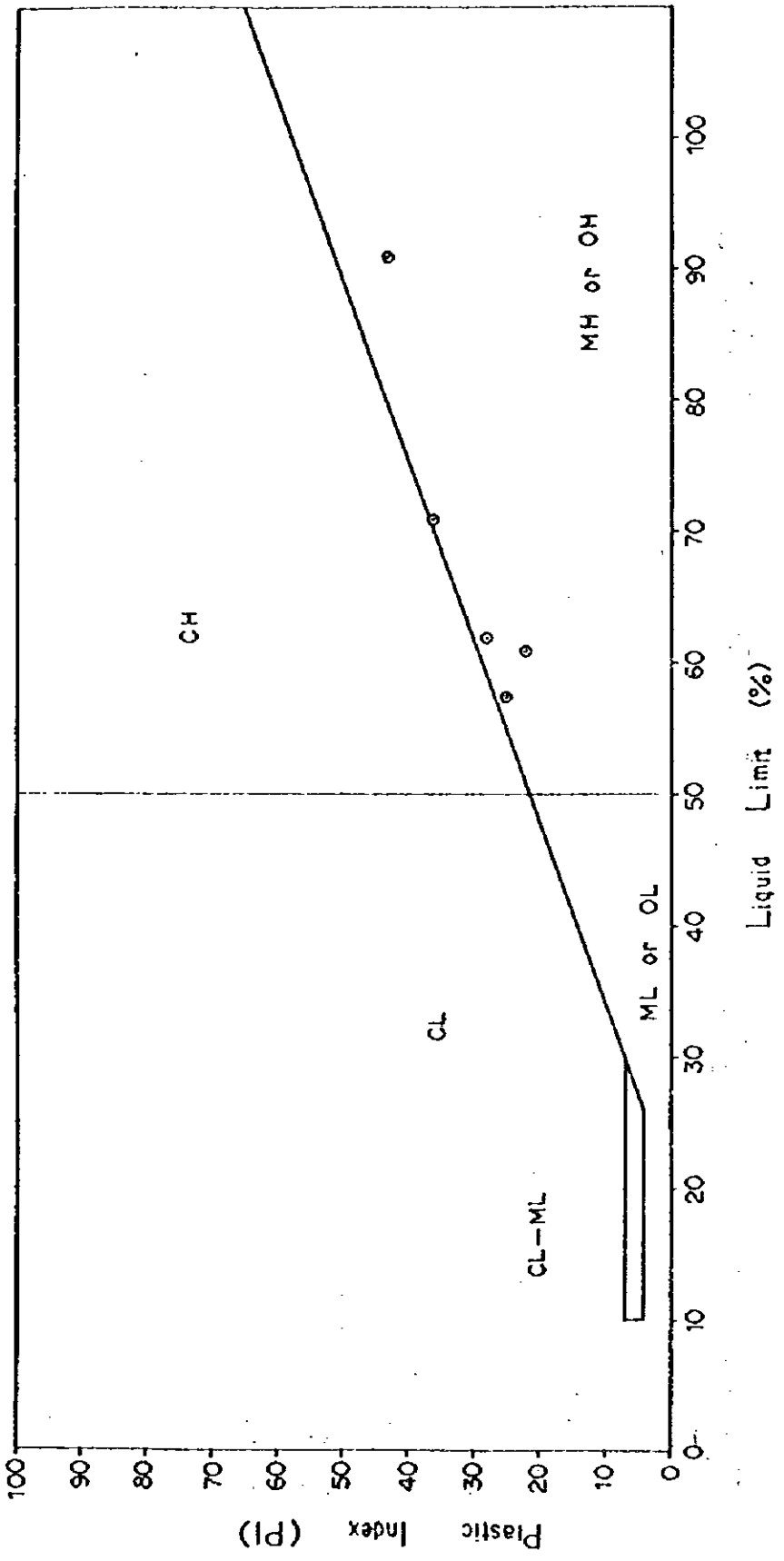
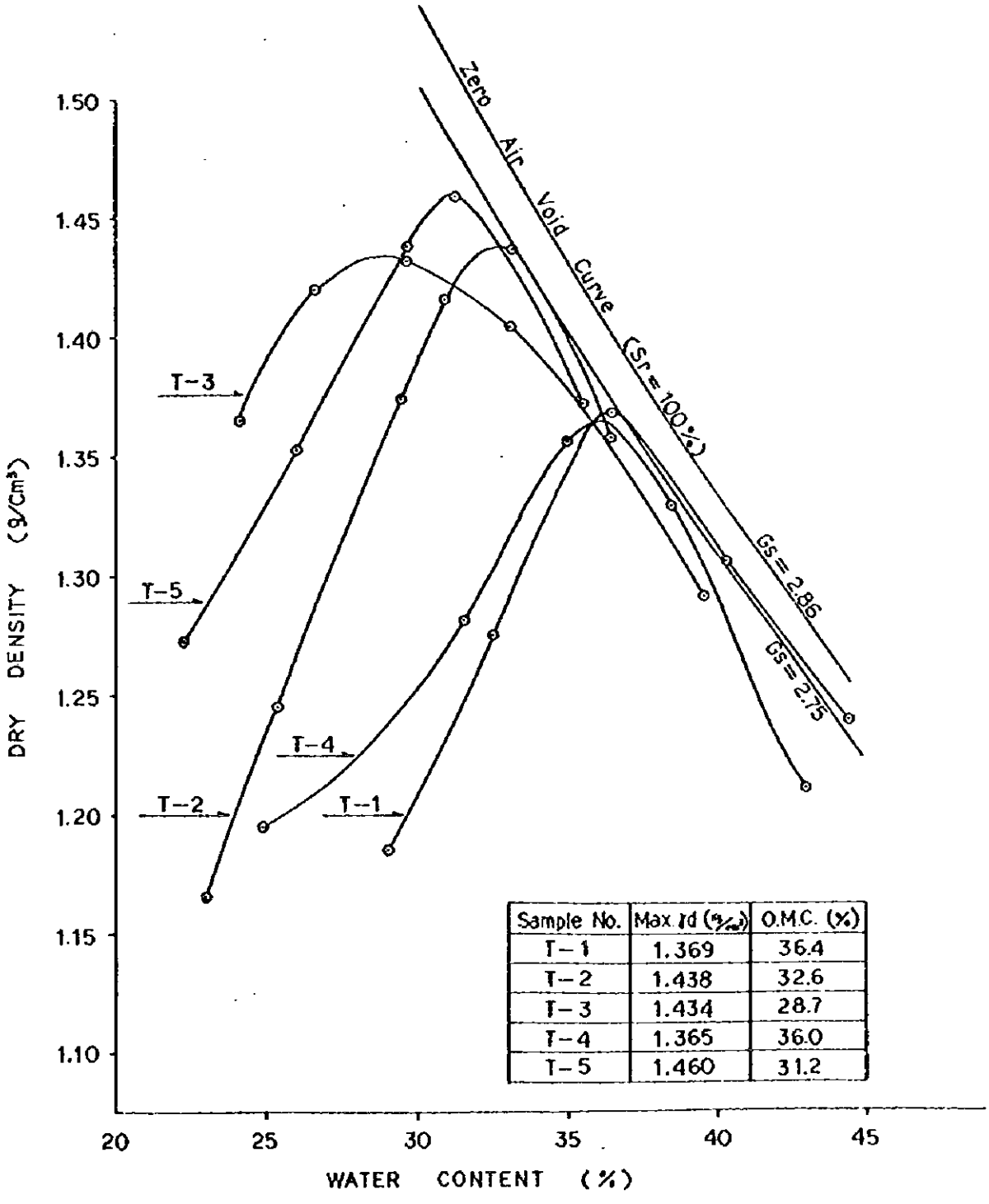


Figure VII.1.10 SUMMARY OF COMPACTION TEST

(Subgrade Soil)



Sample No.	Max. γd (g/cm³)	O.M.C. (%)
T-1	1.369	36.4
T-2	1.438	32.6
T-3	1.434	28.7
T-4	1.365	36.0
T-5	1.460	31.2

Figure VII.1.11 Geological Section

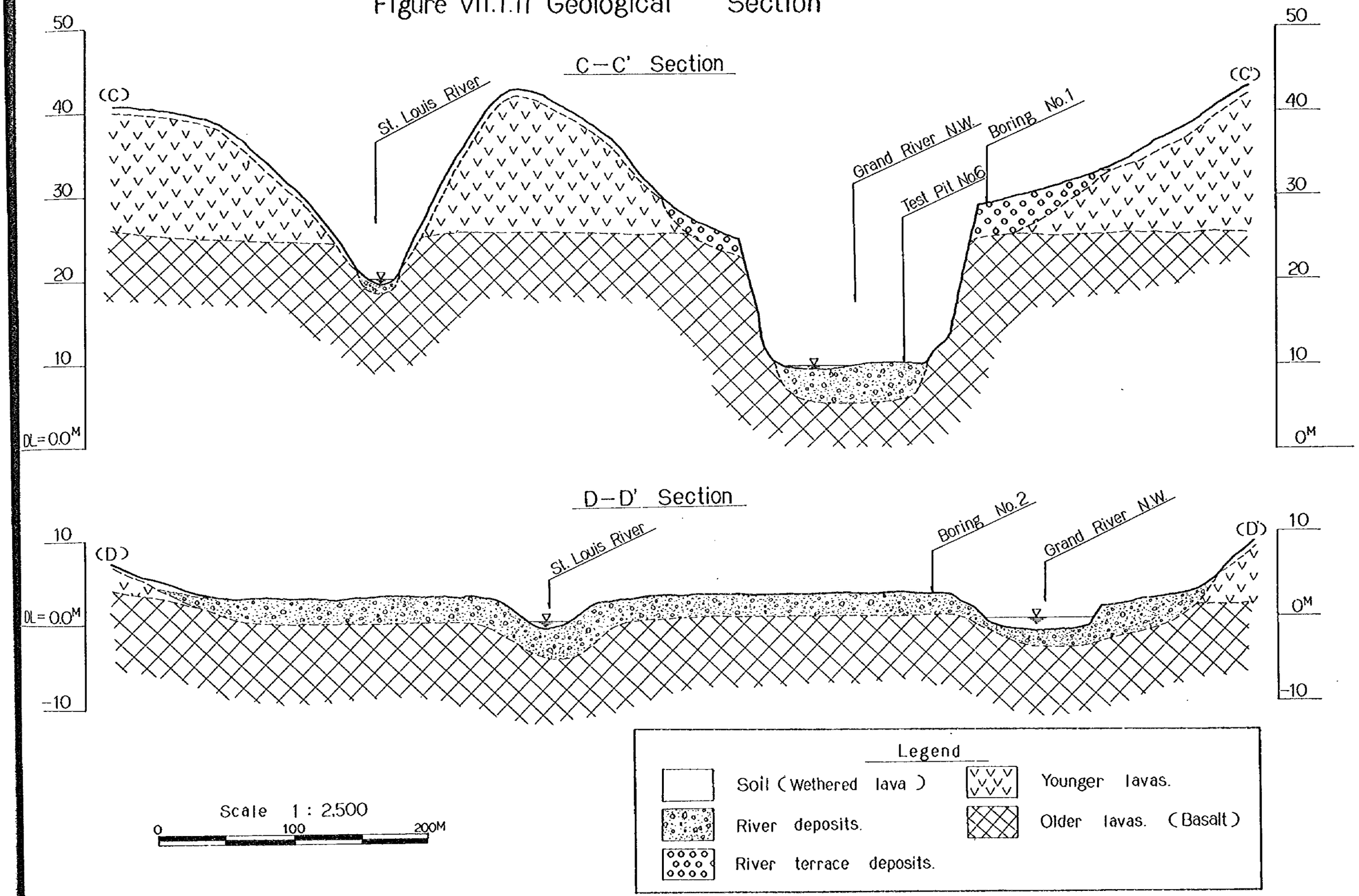


Fig. VII.1.12 COLUMNAR SECTION

Boring No.: 1

Location: Right Bank of 100 - 150 m down stream from the existing roadway bridge on A_1

Term of Boring: Started 6th December, 1977
Finished 9th December, 1977

Diameter of Bore Hole: 55 mm

Ground Height: 1.98 m

Underground Water Level: Unconfirmed

Depth (m)	Thickness of Strata	Legend	Geological Name	Discription	Standard Penetration Test Depth	N - Value 10 20 30 40 50
1.00	1.00		Reddish Brown Silty Clay	. Dry . With organic matter and gravel (max. size = 100 mm)	1.00	N>50
1.30	0.30		Black Gray Gravel	. ø300 mm Gravel (Basalt)		
1.65	0.35		Dark Gray Silty Clay	. Soft . With Gravel (ø = 10mm)		
2.25	0.60		Dark Gray Gravel	. Very hard . With sand and clay . Gravel max. size=150mm	2.00	N>50
2.65	0.40		Dark Brown Gravel Sand Silt mixed	Gravel > Sand > Silt		
3.20	0.55		Dark Brown Sand and Gravel	. Gravel max. size = 100mm . Gravel > Sand	3.00	N=20/20=30/30
4.00	0.80		Black Gray Gravel (Basalt)	. Very hard . max. Core length=200mm	3.20 4.00	
4.30	0.30		Dark Gray Sand and Gravel	. max. size = 50mm . Gravel > Sand		N=15
6.00	1.70		Black Gray Basalt	. Very hard . max. Core length=230mm . Vesiculated (Base Rock)	4.30 5.00 6.00	N>50 N>50

Fig. VII.1.13 COLUMNAR SECTION

Boring No.: 2

Location: Left bank of disused railway bridge of the G.R.N.W.

Term of Boring: Started 12th December, 1977
Finished 14th December, 1977

Diameter of Bore Hole: 55 mm

Ground Height: 29.43 m

Underground Water Level: GH - 1.40 m

Depth (m)	Thickness of Strata	Legend	Geological Name	Discription	Standard Penetration Test Depth	N - Value 10 20 30 40 50
0.55	0.55		Dark Brown Sand Clay	. Watery and cohesive . with Gravel (ø 20mm)		
1.00	0.45		Brown Sand and Gravel	. Gravel max. size=150mm Gravel > Sand	1.00	
2.00	1.00		Reddish Brown Sandy Clay and Gravel	. Soft and viscosity . Gravel max. size=20mm	1.30 2.00	N=4
2.30	0.30		Dark Brown Sand and Gravel	. Gravel max. size=20mm		N=12
2.60	0.30		Gravel	. max. size=150mm . Very hard, with sand	2.30	
5.00	2.40		Black Gray Basalt	. Very hard . max. Core length=230mm . Vesiculated (Base Rock)	3.00 4.00 5.00	N>50 N>50 N>50

Figure VII.1.14 GRAIN SIZE DISTRIBUTION CURVES

(River deposit & Embankment material)

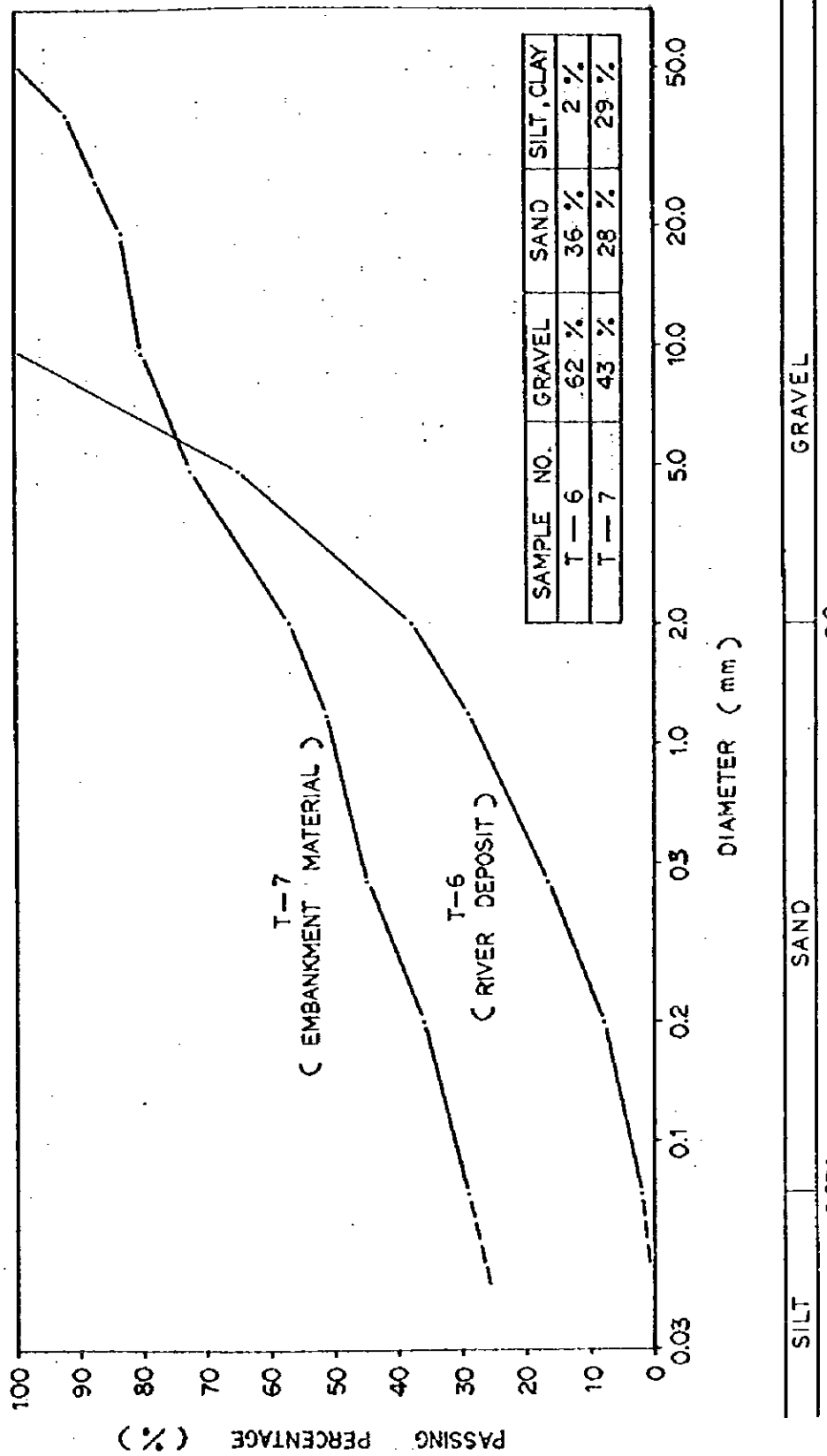
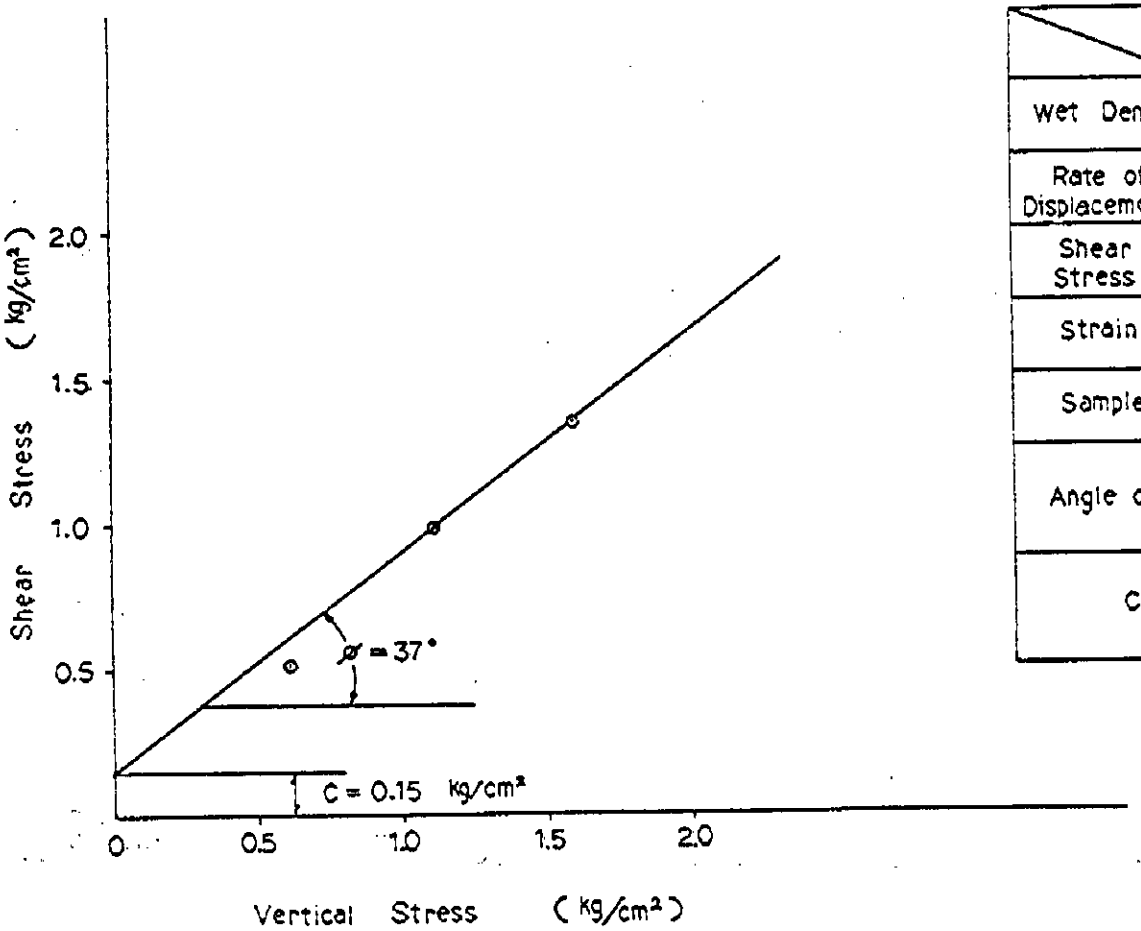


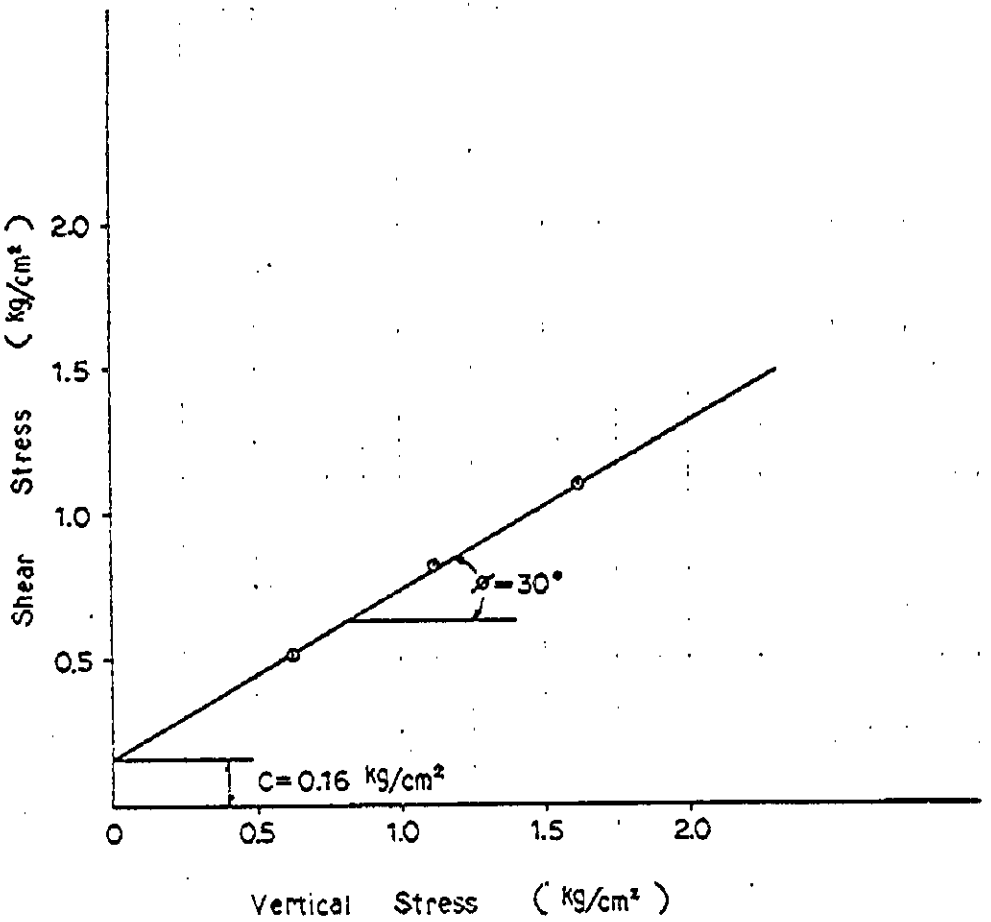
Figure VII.1.15 DIRECT SHEAR TEST RESULT



Sample No. 1

	Vertical Stress (kg/cm²)		
	0.62	1.12	1.61
Wet Density	1.72 g/cm³	1.72 g/cm³	1.72 g/cm³
Rate of Displacement	1.0 mm/min	1.0 mm/min	1.0 mm/min
Shear Stress	0.510 kg/cm²	0.980 kg/cm²	1.346 kg/cm²
Strain	11.0 %	15.0 %	15.0 %
Sample	River deposit (Sand & Gravel) Max. 9.52 mm		
Angle of internal friction	37°		
Cohesion	0.15 kg/cm²		

Figure VII.1.16 DIRECT SHEAR TEST RESULT



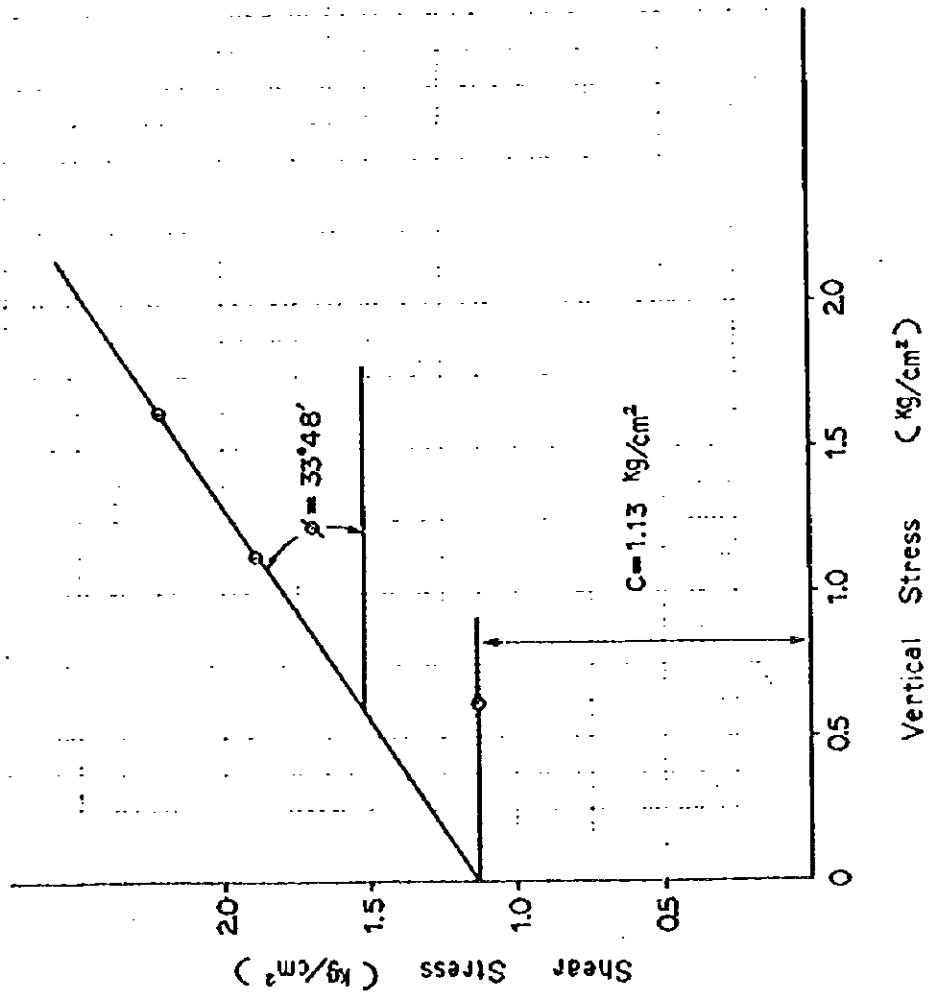
Sample No. 2

	Vertical Stress kg cm²		
	0.62	1.12	1.62
Wet Density	2.17 g/cm³	2.17 g/cm³	2.17 g/cm³
Rate of Displacement	1.0 mm/min	1.0 mm/min	1.0 mm/min
Shear Stress	0.510 kg/cm²	0.882 kg/cm²	1.090 kg/cm²
Strain	15.0 %	15.0 %	15.0 %
Sample	River deposit (Sand & Gravel) Max. 5.0 mm		
Angle of internal friction	30°		
Cohesion	0.16 kg/cm²		

Figure VII.1.17 DIRECT SHEAR TEST... RESULT

Sample No. 3

	Vertical Stress (kg/cm²)		
	0.62	1.12	1.61
Wet Density	1.72 g/cm³	1.72 g/cm³	1.72 g/cm³
Rate of Displacement	1.0 mm/min	1.0 mm/min	1.0 mm/min
Shear Stress	1.137 kg/cm²	1.884 kg/cm²	2.224 kg/cm²
Strain	15.0 %	15.0 %	15.0 %
Sample	Embankment Material		
Angle of internal friction	33°48'		
Cohesion	1.13 kg/cm²		



APPENDICES FOR CHAPTER VIII

Appendix Table VIII.1.(1)	Future Demand of Base Traffic by Zone (Cars, morning-peak hour)
Appendix Table VIII.1.(2)	- do - (Cars, evening-peak hour)
Appendix Table VIII.1.(3)	- do - (Cars, off-peak hours)
Appendix Table VIII.1.(4)	- do - (Vans, morning-peak hour)
Appendix Table VIII.1.(5)	- do - (Vans, evening-peak hour)
Appendix Table VIII.1.(6)	- do - (Vans, off-peak hours)
Appendix Table VIII.1.(7)	- do - (Medium & heavy trucks, morning-peak hour)
Appendix Table VIII.1.(8)	- do - (Medium & heavy trucks, evening-peak hour)
Appendix Table VIII.1.(9)	- do - (Medium & heavy trucks, off-peak hours)
Appendix Table VIII.2.(1)	OD Table of 1992 Traffic (Cars, morning-peak hour)
Appendix Table VIII.2.(2)	- do - (Vans, morning-peak hour)
Appendix Table VIII.2.(3)	- do - (Medium & heavy trucks, morning-peak hour)
Appendix Table VIII.2.(4)	- do - (Cars, evening-peak hour)
Appendix Table VIII.2.(5)	- do - (Vans, evening-peak hour)
Appendix Table VIII.2.(6)	- do - (Medium & heavy trucks, evening-peak hour)
Appendix Table VIII.2.(7)	- do - (Cars, off-peak hours)
Appendix Table VIII.2.(8)	- do - (Vans, off-peak hours)
Appendix Table VIII.2.(9)	- do - (Medium & heavy trucks, off-peak hours)
Appendix Table VIII.2.(10)	- do - (All types of vehicles, evening-peak hour)
Appendix Table VIII.2.(11)	- do - (All types of vehicles, evening-peak hour)
Appendix Table VIII.2.(12)	- do - (All types of vhicles, off-peak hours)
Appendix Table VIII.2.(13)	- do - (All types of vehicles, 12 hours)
Appendix Table VIII.3	Prediction of Bus Traffic for Major Links (Both Directions)
Appendix Table VIII.4.(1)	Movement of Sugar

Appendix Table VIII-1-(1) Future Demand of Base Traffic by Zone (Cars, morning-peak hour)

Vehicles, %

Zone No.	Name of Zone	Originating Traffic										Terminating Traffic									
		1977		1982		1987		1992		2002		1977		1982		1987		1992		2002	
01	Port Louis	378	14.9	518	13.8	724	13.4	999	13.1	1781	12.6	2068	81.3	2979	79.4	4167	77.1	5650	74.3	10320	72.9
02-A	Coromandel	19	0.7	34	0.9	60	1.1	100	1.3	250	1.8	34	1.3	80	2.1	203	3.8	442	5.8	896	6.3
02-B	Petit Malabar	34	1.3	64	1.7	118	2.2	207	2.7	529	3.7	9	0.4	19	0.5	44	0.8	83	1.1	136	1.0
03-A	Beau Bassin	155	6.1	222	5.9	310	5.7	398	5.2	696	4.9	9	0.4	15	0.4	22	0.4	29	0.4	59	0.4
03-B		106	4.2	150	4.0	207	3.8	268	3.5	471	3.3	12	0.5	20	0.5	28	0.5	39	0.5	75	0.5
03-C		90	3.5	117	3.1	146	2.7	169	2.2	253	1.8	11	0.4	14	0.4	19	0.4	22	0.3	35	0.2
04-A	Rose Hill	102	4.0	133	3.5	175	3.2	218	2.9	365	2.6	34	1.3	44	1.2	53	1	66	0.9	95	0.7
04-B		53	2.1	83	2.2	120	2.2	310	4.1	307	2.2	6	0.2	11	0.3	15	0.3	22	0.3	46	0.3
04-C		89	3.5	136	3.6	192	3.6	250	3.3	461	3.3	9	0.4	16	0.4	25	0.5	36	0.5	81	0.6
05-A	Quatre Bornes	113	4.4	155	4.1	206	3.8	258	3.4	457	3.2	13	0.5	17	0.5	23	0.4	28	0.4	44	0.3
05-B		115	4.5	161	4.3	217	4.0	271	3.6	453	3.2	6	0.2	9	0.2	15	0.3	20	0.3	44	0.3
05-C		83	3.3	152	4.1	261	4.8	392	5.2	861	6.1	8	0.3	12	0.3	15	0.3	20	0.3	35	0.2
06-A	Vacoas/Phoenix	35	1.4	60	1.6	96	1.8	139	1.8	296	2.1	4	0.2	7	0.2	10	0.2	16	0.2	35	0.2
06-B		162	6.4	222	5.9	298	5.5	372	4.9	621	4.4	20	0.8	27	0.7	36	0.7	45	0.6	73	0.5
06-C		25	1.0	37	1.0	52	1.0	69	0.9	122	0.9	1	0	1	0	4	0.1	6	0.1	13	0.1
07-A	Pailles	33	1.3	58	1.5	93	1.7	137	1.8	304	2.1	12	0.5	30	0.8	66	1.2	135	1.8	355	2.5
07-B	Moka	251	9.9	399	10.6	601	11.1	850	11.2	1718	12.1	121	4.8	181	4.8	254	4.7	336	4.4	562	4.0
08-A	Pointe aux Sables	13	0.5	31	0.8	74	1.4	231	3.0	439	3.1	10	0.4	20	0.5	36	0.7	86	1.1	177	1.2
08-B	Petite Rivière	45	1.8	71	1.9	93	1.7	124	1.6	243	1.2	8	0.3	12	0.3	17	0.3	25	0.3	44	0.3
09	Le Bosquet	3	0.1	7	0.2	10	0.2	17	0.2	50	0.4	-	-	-	-	-	-	-	-	-	-
10	Bambous	13	0.5	18	0.5	24	0.4	30	0.4	54	0.4	3	0.1	4	0.1	5	0.1	6	0.1	9	0.1
11	Tamarin	19	0.7	26	0.7	34	0.6	43	0.6	78	0.6	-	-	-	-	-	-	-	-	-	-
12	Henrietta	14	0.6	26	0.7	46	0.9	79	1.0	204	1.4	4	0.2	7	0.2	10	0.2	17	0.2	44	0.3
13-A	Curepipe	297	11.7	429	11.4	600	11.1	777	10.2	1371	9.7	45	1.8	68	1.8	98	1.8	131	1.7	261	1.8
13-B	Coriolis	29	1.1	50	1.3	81	1.5	122	1.6	286	2.0	4	0.2	8	0.2	11	0.2	17	0.2	47	0.3
14	Savanne	69	2.7	94	2.5	125	2.3	157	2.1	260	1.8	5	0.2	7	0.2	10	0.2	12	0.2	19	0.1
15	Grand Port	68	2.7	97	2.6	136	2.5	176	2.3	332	2.3	5	0.2	8	0.2	11	0.2	14	0.2	26	0.2
16	Quartier Militaire	32	1.3	47	1.3	65	1.2	86	1.1	165	1.2	4	0.2	7	0.2	8	0.1	12	0.2	22	0.2
17	Flacq	31	1.2	49	1.3	80	1.5	122	1.6	251	1.8	-	-	-	-	-	-	-	-	-	-
18	Pamplemousses	68	2.7	104	2.8	159	2.9	236	3.1	485	3.4	79	3.1	127	3.4	198	3.7	292	3.8	610	4.3
	Total	2544	100.0	3750	100.0	5403	100.0	7607	100.0	14163	100.0	2544	100.0	3750	100.0	5403	100.0	7607	100.0	14163	100.0

Appendix Table VIII·1·(2) Future Demand of Base Traffic Zone (Cars, evening peak hour)

Vehicles, %

Zone No.	Name of Zone	Originating Traffic										Terminating Traffic									
		1977		1982		1987		1992		2002		1977		1982		1987		1992		2002	
01	Port Louis	1724	68.7	2449	67.6	3410	65.3	4581	62.3	3404	61.4	640	25.5	887	24.5	1242	23.8	1710	23.3	3066	22.4
02-A	Coromandel	33	1.3	77	2.1	196	3.8	435	5.9	850	6.2	16	0.6	29	0.8	53	1.0	90	1.2	218	1.6
02-B	Petit Malabar	9	0.4	19	0.5	44	0.8	84	1.1	135	1.0	28	1.1	54	1.5	96	1.8	160	2.2	399	2.9
03-A	Beau Bassin	17	0.8	27	0.7	42	0.8	58	0.8	114	0.8	100	4.0	145	4.0	205	3.9	272	3.7	469	3.4
03-B		23	0.9	38	1.0	53	1.0	75	1.0	148	1.1	69	2.7	99	2.7	139	2.7	184	2.5	320	2.3
03-C		18	0.7	23	0.6	30	0.6	35	0.5	56	0.4	60	2.4	77	2.1	98	1.9	122	1.7	179	1.3
04-A	Rose Hill	41	1.6	53	1.5	63	1.2	70	1.0	93	0.7	94	3.7	123	3.4	166	3.2	215	2.9	352	2.6
04-B		7	0.2	12	0.3	18	0.3	24	0.3	52	0.4	48	1.9	76	2.1	111	2.1	156	2.1	291	2.1
04-C		13	0.5	22	0.6	35	0.7	52	0.7	114	0.8	82	3.3	124	3.4	181	3.5	245	3.3	443	3.2
05-A	Quatre Bornes	46	1.8	61	1.7	80	1.5	97	1.3	154	1.1	111	4.4	155	4.3	205	3.9	268	3.6	466	3.4
05-B		27	1.1	42	1.2	65	1.2	92	1.3	191	1.4	112	4.5	160	4.4	216	4.1	278	3.8	457	3.3
05-C		30	1.2	42	1.2	57	1.1	73	1.0	129	0.9	81	3.2	151	4.2	257	4.9	403	5.5	868	6.3
06-A	Vacoas/Phoenix	6	0.2	11	0.3	17	0.3	23	0.3	52	0.4	38	1.5	66	1.8	104	2.0	157	2.1	336	2.5
06-B		32	1.3	43	1.2	57	1.1	73	1.0	120	0.9	178	7.1	247	6.8	332	6.4	430	5.9	705	5.2
06-C		2	0.1	4	0.1	7	0.1	10	0.1	25	0.2	28	1.1	43	1.2	60	1.1	79	1.1	144	1.1
07-A	Pailles	15	0.6	38	1.0	83	1.6	169	2.3	437	3.2	17	0.7	31	0.9	49	0.9	75	1.0	163	1.2
07-B	Moka	156	6.2	232	6.4	334	6.4	467	6.4	800	5.8	124	5.0	198	5.5	302	5.8	438	6.0	879	6.4
08-A	Pointe aux Sables	20	0.8	40	1.1	72	1.4	148	2.0	285	2.1	11	0.4	27	0.7	62	1.2	205	2.8	384	2.8
08-B	Petite Rivière	24	9.6	36	1.0	52	1.0	76	1.0	131	1.0	36	1.4	57	1.6	75	1.4	104	1.4	203	1.5
09	Le Bosquet	4	0.2	5	0.1	9	0.2	10	0.1	18	0.1	-	-	-	-	-	-	-	-	-	-
10	Bambous	11	0.4	15	0.4	17	0.3	20	0.3	31	0.2	6	0.2	8	0.2	11	0.2	13	0.2	26	0.2
11	Tamarin	-	-	-	-	-	-	-	-	-	-	43	1.7	59	1.6	78	1.5	104	1.4	180	1.3
12	Henrietta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13-A	Curepipe	92	3.7	138	3.8	198	3.8	270	3.7	526	3.8	338	13.5	440	12.2	623	11.9	832	11.3	1447	10.6
13-B	Coriolis	8	0.3	15	0.4	24	0.5	39	0.5	93	0.7	33	1.3	52	1.4	86	1.6	133	1.8	306	2.2
14	Savanne	11	0.4	16	0.4	20	0.4	26	0.4	43	0.3	15	0.6	-	-	-	-	-	-	-	-
15	Grand Port	34	1.4	50	1.4	68	1.3	91	1.2	169	1.2	41	1.6	59	1.6	84	1.6	112	1.5	207	1.5
16	Quartier Militaire	11	0.4	15	0.4	24	0.5	32	0.4	62	0.5	15	0.6	23	0.6	31	0.6	43	0.6	78	0.5
17	Flacq	11	0.4	19	0.5	28	0.5	44	0.6	86	0.6	35	1.4	56	1.5	87	1.7	134	1.8	283	2.1
18	Pamplemousses	86	3.4	79	2.2	119	2.3	176	2.4	364	2.7	112	4.5	175	4.8	269	5.2	388	5.3	813	5.9
	Total	2511	100.0	3621	100.0	5222	100.0	7350	100.0	13682	100.0	2511	100.0	3621	100.0	5222	100.0	7350	100.0	13682	100.0

Apendix Table VIII-1-(3) Future Demand of Base Traffic by Zone (Cars, off-peak hours)

Vehicles, %

Zone No.	Name of Zone	Originating Traffic										Terminating Traffice									
		1977		1982		1987		1992		2002		1977		1982		1987		1992		2002	
01	Port Louis	6177	44.1	8578	41.6	11718	39.4	15275	36.5	25710	33.0	6678	47.7	9210	44.7	12425	41.8	16171	38.6	26765	34.4
02-A	Coromandel	120	0.9	218	1.1	398	1.3	693	1.7	1749	2.2	133	1.0	241	1.2	435	1.5	755	1.8	1865	2.4
02-B	Petit Malabar	203	1.5	398	1.9	715	2.4	1211	2.9	3081	4.0	226	1.6	440	2.1	782	2.6	1318	3.1	3299	4.2
03-A	Beau Bassin	354	2.5	514	2.5	733	2.5	995	2.4	1747	2.2	330	2.4	476	2.3	674	2.3	911	2.2	1571	2.0
03-B		243	1.7	351	1.7	495	1.7	670	1.6	1188	1.5	226	1.6	324	1.6	451	1.5	609	1.5	1063	1.4
03-C		206	1.5	270	1.3	346	1.2	422	1.0	640	0.8	194	1.4	251	1.2	319	1.1	389	0.9	583	0.7
04-A	Rose Hill	370	2.6	489	2.4	662	2.2	867	2.1	1458	1.9	361	2.6	475	2.3	631	2.1	827	2.0	1366	1.8
04-B		190	1.4	297	1.4	445	1.5	628	1.5	1204	1.5	188	1.3	293	1.4	433	1.5	607	1.5	1149	1.5
04-C		323	2.3	498	2.4	725	2.4	995	2.4	1843	2.4	317	2.3	485	2.4	697	2.3	955	2.3	1736	2.2
05-A	Quatre Bornes	351	2.5	488	2.4	660	2.2	876	2.1	1561	2.0	307	2.2	425	2.1	567	1.9	748	1.8	1317	1.7
05-B		358	2.6	510	2.5	706	2.4	924	2.2	1553	2.0	312	2.2	441	2.1	603	2.0	790	1.9	1305	1.7
05-C		257	1.8	480	2.3	834	2.8	1322	3.1	2924	3.8	225	1.6	418	2.0	717	2.4	1136	2.7	2468	3.2
06-A	Vacoas/Phoenix	119	0.9	205	1.0	336	1.1	509	1.2	1111	1.4	91	0.7	156	0.8	253	0.9	384	0.9	821	1.1
06-B		563	4.0	784	3.8	1071	3.6	1404	3.4	2359	3.0	425	3.0	588	2.9	793	2.7	1039	2.5	1718	2.2
06-C		87	0.6	130	0.6	187	0.6	256	0.6	470	0.6	65	0.5	98	0.5	137	0.5	187	0.4	336	0.4
07-A	Pailles	154	1.1	272	1.3	452	1.5	713	1.7	1593	2.0	133	1.0	233	1.1	381	1.3	600	1.4	1311	1.7
07-B	Moka	1125	8.0	1814	8.8	2820	9.5	4197	10.0	8632	11.1	1002	7.2	1600	7.8	2454	8.3	3643	8.7	7369	9.5
08-A	Pointe aux Sables	85	0.6	208	1.0	502	1.7	1667	4.0	3183	4.1	88	0.6	212	1.0	683	2.3	1678	4.0	3149	4.0
08-B	Petite Rivière	300	2.1	481	2.3	650	2.2	909	2.2	1808	2.3	312	2.2	496	2.4	659	2.2	918	2.2	1796	2.3
09	Le Bosquet	22	0.2	45	0.2	83	0.3	145	0.3	403	0.5	8	0.1	16	0.1	29	0.1	50	0.1	140	0.2
10	Bambous	110	0.8	153	0.7	208	0.7	275	0.7	505	0.6	54	0.4	74	0.4	99	0.3	132	0.3	241	0.3
11	Tamarin	83	0.6	116	0.6	156	0.5	208	0.5	379	0.5	39	0.3	53	0.3	72	0.2	94	0.2	168	0.2
12	Henrietta	19	0.1	37	0.2	66	0.2	119	0.3	301	0.4	11	0.1	21	0.1	36	0.1	66	0.2	169	0.2
13-A	Curepipe	887	6.3	1298	6.3	1854	6.2	2524	6.0	4488	5.8	288	2.1	420	2.0	593	2.0	810	1.9	1420	1.8
13-B	Coriolis	90	0.6	159	0.8	263	0.9	421	1.0	994	1.3	720	5.1	1249	6.1	2039	6.9	3228	7.7	7489	9.6
14	Savanne	139	1.0	190	0.9	259	0.9	339	0.8	571	0.7	104	0.7	141	0.7	190	0.6	249	0.6	411	0.5
15	Grand Port	257	1.8	373	1.8	529	1.8	724	1.7	1374	1.8	250	1.8	360	1.7	507	1.7	694	1.7	1301	1.7
16	Quartier Militaire	97	0.7	143	0.7	204	0.7	281	0.7	544	0.7	89	0.6	131	0.6	186	0.6	255	0.6	482	0.6
17	Flacq	92	0.7	148	0.7	230	0.8	332	0.8	662	0.8	137	1.0	219	0.5	335	1.1	479	1.1	939	1.2
18	Pamplemousses	611	4.4	956	4.6	1416	4.8	1952	4.7	3853	4.9	679	4.9	1057	5.1	1544	5.2	2131	5.1	4141	5.3
	Total	13992	100.0	20603	100.0	29723	100.0	41853	100.0	77888	100.0	13992	100.0	20603	100.0	29723	100.0	41853	100.0	77888	100.0

Appendix Table VIII·1·(4) Future Demand of Base Traffic by Zone (Vans, morning-peak hour)

Vehicles, %

Zone No.		Originating Traffic										Terminating Traffic									
		1977		1982		1987		1992		2002		1977		1982		1987		1992		2002	
01	Port Louis	107	54.0	165	51.4	222	47.7	305	47.4	544	46.7	87	43.9	133	41.4	180	38.7	242	37.6	438	37.6
02-A	Coromandel	8	4.0	20	6.2	47	10.1	91	14.1	173	14.9	10	5.1	25	7.8	61	13.1	109	16.9	206	17.7
02-B	Petit Malabar	2	1.0	4	1.2	10	2.2	16	2.5	25	2.1	2	1.0	4	1.2	10	2.2	15	2.3	24	2.1
03-A	Beau Bassin	3	1.5	6	1.9	7	1.5	8	1.2	15	1.3	4	2.0	7	2.2	10	2.2	11	1.7	22	1.9
03-B		4	2.0	7	2.2	10	2.2	12	1.9	20	1.7	5	2.5	8	2.5	11	2.4	13	2.0	24	2.1
03-C		3	1.5	4	1.2	5	1.1	5	0.8	8	0.1	5	2.5	7	2.2	9	1.9	8	1.2	12	1.0
04-A	Rose Hill	5	2.5	7	2.2	8	1.7	7	1.1	10	0.7	8	4.0	11	3.4	3	0.6	11	1.7	14	1.2
04-B		1	0.5	1	0.3	4	0.9	3	0.5	5	0.4	1	0.5	1	0.3	3	0.6	4	0.6	5	0.4
04-C		2	1.0	4	1.2	5	1.1	7	1.1	15	1.3	3	1.5	6	1.9	9	1.9	10	1.6	22	1.9
05-A	Quatre Bornes	6	3.0	9	2.8	10	2.2	11	1.7	18	1.5	2	1.0	3	0.9	3	0.6	4	0.6	5	0.4
05-B		4	2.0	7	2.2	10	2.2	12	1.9	23	2.0	1	0.5	1	0.3	2	0.4	4	0.6	5	0.4
05-C		5	2.5	7	2.2	10	2.2	11	1.7	17	1.5	1	0.5	1	0.3	2	0.4	2	0.3	3	0.3
06-A	Vacoas/Phoenix	1	0.5	1	0.3	4	0.9	3	0.5	8	0.7	1	0.5	1	0.3	3	0.6	4	0.6	8	0.7
06-B		4	2.0	6	1.9	7	1.5	8	1.2	13	1.1	3	1.5	4	1.2	5	1.1	5	0.8	10	0.9
06-C		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-A	Pailles	1	0.5	3	0.9	5	1.1	11	1.7	23	2.0	1	0.5	3	0.9	5	1.1	10	1.6	22	1.9
07-B	Moka	13	6.6	21	6.5	29	6.2	44	6.8	71	6.1	16	8.1	24	7.5	35	7.5	37	5.7	56	4.8
08-A	Pointe aux Sables	1	0.5	3	0.9	4	0.9	7	1.1	13	1.1	8	4.0	17	5.3	29	6.2	50	7.8	90	7.7
08-B	Petite Rivière	2	1.0	3	0.9	4	0.9	5	0.8	10	0.9	8	4.0	13	4.0	16	3.4	22	3.4	34	2.9
09	Le Bosquet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Bambous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Tamarin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Henrietta	-	-	-	-	-	-	-	-	-	-	2	1.0	3	0.9	5	1.1	8	1.2	17	1.5
13-A	Curepipe	5	2.5	9	2.8	11	2.4	12	1.9	22	1.9	7	3.5	11	3.4	15	3.2	17	2.6	32	2.7
13-B	Coriolis	1	0.5	1	0.3	4	0.9	3	0.5	9	0.8	1	0.5	1	0.3	3	0.6	4	0.6	10	0.9
14	Savanne	1	0.5	1	0.3	2	0.4	2	0.3	2	0.2	2	1.0	3	0.9	3	0.6	4	0.6	8	0.7
15	Grand Port	10	5.1	16	5.0	20	4.3	22	3.4	40	3.4	14	7.1	23	7.2	28	6.0	31	4.8	56	4.8
16	Quartier Militaire	-	-	-	-	-	-	-	-	-	-	2	1.0	3	0.9	5	1.1	5	0.8	10	0.9
17	Flacq	5	2.5	9	2.8	15	3.2	24	3.7	49	4.2	-	-	-	-	-	-	-	-	-	-
18	Pamplemousses	4	2.0	7	2.2	12	2.6	15	2.3	31	2.7	4	2.0	8	2.5	10	2.2	14	2.2	31	2.7
	Total	198	100.0	321	100.0	465	100.0	644	100.0	1164	100.0	198	100.0	321	100.0	465	100.0	644	100.0	1164	100.0

Appendix Table VIII.1.(5) Future Demand of Base Traffic by Zone (Vans, evening-peak hour)
Vehicles, %

Zone No.	Name of Zone	Originating Traffic										Terminating Traffic									
		1977		1982		1987		1992		2002		1977		1982		1987		1992		2002	
01	Port Louis	95	56.5	158	57.7	227	58.4	313	58.1	569	58.4	73	44.6	116	42.3	162	41.6	226	41.9	406	41.6
02-A	Coromandel	4	2.4	9	3.3	23	5.9	46	8.5	88	9.0	10	6.0	24	8.8	56	14.4	104	193.	197	20.2
02-B	Petit Malabar	1	0.6	3	1.1	5	1.3	9	1.1	13	1.3	3	1.8	7	2.6	14	3.6	22	4.1	35	3.6
03-A	Beau Bassin	-	-	-	-	-	-	-	-	-	-	3	1.8	6	2.2	6	1.5	7	1.3	14	1.4
03-B		1	0.6	2	0.7	2	0.5	3	0.6	5	0.5	4	2.4	7	2.6	9	2.3	11	2.0	18	1.8
03-C		1	0.6	3	0.7	2	0.5	2	0.4	3	0.3	3	1.8	4	1.5	5	1.3	5	0.9	7	0.7
04-A	Rose Hill	5	3.0	7	2.6	8	2.1	7	1.3	10	1.0	10	6.0	13	4.7	14	3.6	14	2.6	16	1.6
04-B		1	0.6	2	0.7	3	0.8	3	0.6	5	0.5	2	1.2	4	1.5	5	1.3	7	1.3	11	1.1
04-C		1	0.6	2	0.7	3	0.8	3	0.6	8	0.8	2	1.2	4	1.5	5	1.3	7	1.3	14	1.4
05-A	Quatre Bornes	2	1.2	3	1.1	3	0.8	3	0.6	5	0.5	5	3.0	7	2.6	8	2.1	7	1.3	11	1.1
05-B		1	0.6	2	0.7	2	0.5	3	0.6	5	0.5	3	1.8	6	2.2	6	1.5	7	1.3	16	1.6
05-C		2	1.2	3	1.1	3	0.8	3	0.6	8	0.8	3	1.8	4	1.5	5	1.3	7	1.3	10	1.0
06-A	Vacoas/Phoenix	1	0.6	2	0.7	3	0.8	3	0.6	8	0.8	1	0.6	1	0.4	3	0.8	3	0.6	7	0.7
06-B		4	2.4	6	2.2	6	1.5	9	1.7	13	1.3	7	4.2	10	3.6	13	3.3	12	2.2	21	2.2
06-C		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-A	Pailles	1	0.6	3	1.1	5	1.3	10	1.9	24	2.5	1	0.6	3	1.1	5	1.3	9	1.7	21	2.2
07-B	Moka	10	6.0	15	5.5	21	5.4	25	4.6	36	3.7	5	3.0	8	2.9	9	2.3	11	2.0	16	1.6
08-A	Pointe aux Sables	2	1.2	4	1.5	6	1.5	12	2.2	24	2.5	1	0.6	3	1.1	3	0.8	7	1.3	11	1.1
08-B	Petite Rivière	3	1.8	4	1.5	6	1.5	9	1.7	13	1.3	2	1.2	3	1.1	3	0.8	5	0.9	10	1.0
09	Le Bosquet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Bambous	2	1.2	-	-	3	0.8	3	0.6	-	-	-	-	-	-	-	-	-	-	-	-
11	Tamarin	-	-	-	-	-	-	-	-	-	-	3	1.8	6	2.2	8	2.1	11	2.0	26	2.7
12	Henrietta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13-A	Curepipe	13	7.7	21	7.7	27	6.9	33	6.1	62	6.4	13	7.7	20	7.8	26	6.7	30	5.6	55	5.6
13-B	Coriolis	1	0.6	2	0.7	3	0.8	3	0.6	10	1.0	1	0.6	1	0.4	3	0.8	3	0.6	10	1.0
14	Savanne	4	2.4	6	2.2	6	1.5	9	1.7	13	1.3	3	1.8	4	1.5	5	1.3	7	1.3	10	1.0
15	Grand Port	11	6.5	14	5.1	17	4.4	21	3.9	40	4.1	6	3.6	10	3.6	11	2.8	12	2.2	23	2.4
16	Quartier Militaire	-	-	-	-	-	-	-	-	-	-	2	1.2	3	1.1	5	1.3	5	0.9	10	1.0
17	Flacq	2	1.2	4	1.5	5	1.3	7	1.3	13	1.3	-	-	-	-	-	-	-	-	-	-
18	Pamplemousses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	168	100.0	274	100.0	389	100.0	539	100.0	975	100.0	168	100.0	274	100.0	389	100.0	539	100.0	975	100.0

Appendix Table VIII-1-(6) Future Demand of Base Traffic by Zone (Vans, off-peak hours)

Vehicles, %

Zone No.	Name of Zone	Originating Traffic										Terminating Traffic									
		1977		1982		1987		1992		2002		1977		1982		1987		1992		2002	
01	Port Louis	860	47.9	1325	45.5	1762	42.1	2246	38.5	3863	36.4	800	44.5	1218	41.8	1593	38.0	1998	34.3	3531	33.3
02-A	Coromandel	47	2.6	117	4.0	296	7.1	622	10.7	1174	11.1	75	4.2	187	6.4	464	11.1	956	16.4	1833	17.3
02-B	Petit Malabar	12	0.7	27	0.9	61	1.5	112	1.9	171	1.6	19	1.1	44	1.5	94	2.2	172	3.0	265	2.5
03-A	Beau Bassin	15	0.8	26	0.9	39	0.9	50	0.9	94	0.9	20	1.1	34	1.2	50	1.2	65	1.1	124	1.2
03-B		20	1.1	33	1.1	49	1.2	66	1.2	122	1.1	28	1.6	47	1.6	69	1.6	89	1.5	164	1.5
03-C		18	1.0	26	0.9	32	0.8	36	0.6	53	0.5	24	1.3	34	1.2	42	1.0	46	0.8	69	0.7
04-A	Rose Hill	68	3.8	94	3.2	109	2.6	120	2.1	148	1.4	72	4.0	97	3.3	113	2.7	119	2.0	149	1.4
04-B		11	0.6	20	0.7	30	0.7	40	0.7	79	0.7	13	0.7	23	0.8	34	0.6	44	0.8	92	0.9
04-C		22	1.2	42	1.4	64	1.5	90	1.5	191	1.8	22	1.2	40	1.4	61	1.5	85	1.5	181	1.7
05-A	Quatre Bornes	37	2.1	54	1.9	68	1.6	80	1.4	121	1.1	35	1.9	50	1.7	63	1.5	73	1.3	109	1.0
05-B		19	1.1	33	1.1	48	1.1	66	1.1	130	1.2	19	1.1	33	1.2	46	1.1	63	1.1	127	1.2
05-C		24	1.3	37	1.3	50	1.2	61	1.0	98	0.9	23	1.3	34	1.2	44	1.1	54	0.9	93	0.9
06-A	Vacoas/Phoenix	14	0.8	26	0.9	39	0.9	57	1.0	114	1.1	13	0.7	24	0.8	36	0.9	50	0.9	103	1.0
06-B		72	4.0	108	3.7	140	3.4	165	2.8	259	2.4	67	3.7	100	3.4	126	3.0	149	2.6	233	2.2
06-C		1	0.1	1	-	4	0.1	6	0.1	12	0.1	1	0.1	1	0	3	0.1	6	0.1	11	0.1
07-A	Pailles	15	0.8	41	1.4	9	0.2	189	3.2	494	4.7	11	0.6	30	1.0	64	1.5	121	2.1	300	2.8
07-B	Moka	162	9.0	263	9.0	369	8.9	489	8.4	774	7.3	109	6.1	174	6.0	234	5.6	285	4.9	432	4.1
08-A	Pointe aux Sables	26	1.4	56	1.9	101	2.4	204	3.5	389	3.7	24	1.3	52	1.8	90	2.1	172	3.0	317	3.0
08-B	Petite Rivière	27	1.5	43	1.5	60	1.5	92	1.6	159	1.5	25	1.4	40	1.4	54	1.3	77	1.3	128	1.2
09	Le Bosquet	5	0.3	7	0.2	11	0.3	12	0.2	24	0.2	-	-	-	-	-	-	-	-	-	-
10	Bambous	11	0.6	16	0.5	18	0.4	20	0.3	29	0.3	20	1.1	27	0.9	32	0.8	35	0.6	49	0.5
11	Tamarin	9	0.5	17	0.6	28	0.7	43	0.7	100	0.9	12	0.7	23	0.8	37	0.9	54	0.9	130	1.2
12	Henrietta	2	0.1	3	0.1	5	0.1	10	0.2	21	0.2	6	0.3	10	0.3	16	0.4	27	0.5	63	0.6
13-A	Curepipe	112	6.2	184	6.3	258	6.2	332	5.7	600	5.7	117	6.5	190	6.5	263	6.3	342	5.9	655	6.2
13-B	Coriolis	9	0.5	17	0.6	29	0.7	42	0.7	98	0.7	10	0.6	20	0.7	30	0.7	46	0.8	106	1.0
14	Savanne	18	1.0	27	0.9	35	0.8	42	0.7	66	0.6	37	2.1	54	1.9	70	1.7	84	1.4	132	1.2
15	Grand Port	56	3.1	88	3.0	120	2.9	151	2.6	481	4.5	63	3.5	98	3.4	132	3.2	164	2.8	297	2.8
16	Quartier Militaire	10	0.6	16	0.5	22	0.5	28	0.5	51	0.5	19	1.1	31	1.1	41	1.0	52	0.9	101	1.0
17	Flacq	24	1.3	43	1.5	70	1.7	109	1.9	207	2.0	25	1.4	43	1.5	70	1.7	106	1.8	209	2.0
18	Pamplemousses	71	4.0	121	4.2	180	4.4	250	4.3	480	4.5	88	4.9	153	5.3	216	5.2	296	5.1	599	5.6
	Total	1797	100.0	2911	100.0	4187	100.0	5830	100.0	10602	100.0	1797	100.0	2911	100.0	4187	100.0	5830	100.0	10602	100.0

Appendix Table VIII·1·(7) Future Demand of Base Traffic by Zone (Medium & heavy trucks, morning-peak hour)

Vehicles, %

Zone No.	Name of Zone	Originating Traffic										Terminating Traffic									
		1977		1982		1987		1992		2002		1977		1982		1987		1992		2002	
01	Port Louis	70	32.7	88	29.5	110	27.8	142	27.1	249	26.9	119	55.6	161	54.0	206	52.0	264	50.4	448	48.4
02-A	Coromandel	12	5.6	25	8.4	53	13.4	99	18.9	181	19.5	4	1.9	9	3.0	18	4.5	37	7.1	66	7.1
02-B	Petit Malabar	3	1.4	6	2.0	12	3.0	17	3.2	27	2.9	-	-	-	-	-	-	-	-	-	-
03-A	Beau Bassin	1	0.5	1	0.3	1	0.3	3	0.6	3	0.3	-	-	-	-	-	-	-	-	-	-
03-B		3	1.4	5	1.7	4	1.0	7	1.3	10	1.1	1	0.5	1	0.3	1	0.3	3	0.6	4	0.4
03-C		2	0.9	2	0.7	3	0.8	3	0.6	3	0.3	-	-	-	-	-	-	-	-	-	-
04-A	Rose Hill	8	3.7	9	3.0	9	2.3	9	1.7	10	1.1	1	0.5	1	0.3	1	0.3	2	0.4	2	0.2
04-B		1	0.5	1	0.3	3	0.8	3	0.6	3	0.3	-	-	-	-	-	-	-	-	-	-
04-C		2	0.9	4	1.3	4	1.0	5	1.0	10	1.1	-	-	-	-	-	-	-	-	-	-
05-A	Quatre Bornes	11	5.1	13	4.4	13	3.3	15	2.9	22	2.4	3	1.4	4	1.3	4	1.0	4	0.8	5	0.5
05-B		6	2.8	8	2.7	12	3.0	13	2.5	25	2.7	1	0.5	1	0.3	1	0.3	3	0.6	4	0.4
05-C		6	2.8	7	2.3	9	2.3	9	1.7	14	1.5	1	0.5	1	0.3	1	0.3	2	0.4	2	0.2
06-A	Vacoas/Phoenix	2	0.9	4	1.3	4	1.0	5	1.0	10	1.1	1	0.5	1	0.3	3	0.8	3	0.6	6	0.6
06-B		10	4.7	13	4.4	13	3.3	13	2.5	22	2.4	7	3.3	9	3.0	11	2.8	11	2.1	18	1.9
06-C		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
07-A	Pailles	2	0.9	5	1.7	9	2.3	13	2.5	34	3.7	2	0.9	5	1.7	9	2.3	15	2.9	38	4.1
07-B	Moka	20	9.3	27	9.1	32	8.1	34	6.5	49	5.3	25	11.7	35	11.7	42	10.6	47	9.0	67	7.2
08-A	Pointe aux Sables	4	1.9	7	2.3	12	3.0	19	3.6	32	3.5	2	0.9	4	1.3	6	1.5	13	2.5	26	2.8
08-B	Petite Rivière	5	2.3	7	2.3	7	1.8	10	1.9	16	1.7	1	0.5	1	0.3	1	0.3	3	0.6	4	0.4
09	Le Bosquet	-	-	-	-	-	-	-	-	-	-	1	0.5	1	0.3	1	0.3	2	0.4	4	0.4
10	Bambous	-	-	-	-	-	-	-	-	-	-	5	2.3	6	2.0	7	1.8	8	1.5	12	1.3
11	Tamarin	2	0.9	4	1.3	4	1.0	6	1.1	12	1.3	12	5.6	19	6.4	29	7.3	37	7.1	88	9.5
12	Henrietta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13-A	Curepipe	5	2.3	7	2.3	9	2.3	9	1.7	16	1.7	5	2.3	7	2.3	9	2.3	10	1.9	18	1.9
13-B	Coriolis	1	0.5	1	0.3	3	0.8	3	0.6	7	0.8	-	-	-	-	-	-	-	-	-	-
14	Savanne	4	1.9	5	1.7	5	1.3	6	1.1	9	1.0	2	0.9	2	0.7	3	0.8	3	0.6	6	0.6
15	Grand Port	4	1.9	5	1.7	7	1.8	6	1.1	12	1.3	4	1.9	5	1.7	7	1.8	7	1.3	14	1.5
16	Quartier Militaire	4	1.9	6	2.0	7	1.8	7	1.3	12	1.3	2	0.9	2	0.7	4	1.0	4	0.8	8	0.9
17	Flacq	7	3.3	11	3.7	14	3.5	17	3.2	33	3.6	-	-	-	-	-	-	-	-	-	-
18	Pamplemousses	19	8.9	27	9.1	37	9.3	51	9.7	105	11.3	15	7.0	23	7.7	32	8.1	46	8.8	86	9.3
	Total	214	100.0	298	100.0	396	100.0	524	100.0	926	100.0	214	100.0	298	100.0	396	100.0	524	100.0	926	100.0

Appendix Table VIII-1-(8) Future Demand of Base Traffic by Zone (medium & heavy trucks, evening-peak hour)

Vehicles, %

Zone No.	Name of Zone	Originating Traffic					Terminating Traffic				
		1977	1982	1987	1992	2002	1977	1982	1987	1992	2002
01	Port Louis	78 52.0	106 50.2	137 49.6	175 47.0	304 46.9	48 32.0	64 30.3	82 29.7	101 27.2	165 25.5
02-A	Coromandel	- -	- -	- -	- -	- -	2 1.3	5 2.4	11 4.0	24 6.5	46 7.1
02-B	Petit Malabar	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
03-A	Beau Bassin	- -	- -	- -	- -	- -	1 0.7	1 0.5	1 0.4	3 0.8	5 0.8
03-B		2 1.3	3 1.4	4 1.4	4 1.1	11 1.7	1 0.7	1 0.5	1 0.4	3 0.8	5 0.8
03-C		2 1.3	3 1.4	2 0.7	4 1.1	4 0.6	1 0.7	1 0.5	1 0.4	2 0.5	2 0.3
04-A	Rose Hill	- -	- -	- -	- -	- -	7 4.7	9 4.3	9 3.3	9 2.4	11 1.7
04-B		- -	- -	- -	- -	- -	1 0.7	1 0.5	3 1.1	3 0.8	5 0.8
04-C		- -	- -	- -	- -	- -	2 1.3	4 1.9	4 1.4	7 1.9	14 2.2
05-A	Quatre Bornes	2 1.3	3 1.4	3 1.1	4 1.1	5 0.8	9 6.0	11 5.2	12 4.3	16 4.3	23 3.5
05-B		1 0.7	1 0.5	6 2.2	4 1.1	5 0.8	2 1.3	2 0.9	4 1.4	5 1.3	11 1.7
05-C		1 0.7	1 0.5	1 0.4	2 0.5	3 0.5	2 1.3	2 0.9	3 1.1	3 0.8	6 0.9
06-A	Vacoas/Phoenix	1 0.7	1 0.5	3 1.1	4 1.1	7 1.1	2 1.3	4 1.9	4 1.4	7 1.9	14 2.2
06-B		6 4.0	8 3.8	9 3.3	11 3.0	17 2.6	8 5.3	10 4.7	12 4.3	14 3.8	23 3.5
06-C		1 0.7	1 0.5	3 1.1	5 1.3	10 1.5	- -	- -	- -	- -	- -
07-A	Pailles	3 2.0	8 3.8	15 5.4	29 7.8	71 11.0	2 1.3	5 2.4	9 3.3	17 4.6	43 6.6
07-B	Moka	32 21.3	46 21.8	56 20.3	74 19.9	112 17.3	18 12.0	25 11.8	33 12.0	39 10.5	56 8.6
08-A	Pointe aux Sables	- -	- -	- -	- -	- -	2 1.3	4 1.9	6 2.2	11 3.0	20 3.1
08-B	Petite Rivière	- -	- -	- -	- -	- -	1 0.7	1 0.5	1 0.4	3 0.8	5 0.8
09	Le Bosquet	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
10	Bambous	2 1.3	3 1.4	3 1.1	4 1.1	5 0.8	- -	- -	- -	- -	- -
11	Tamarin	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
12	Henrietta	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
13-A	Curepipe	7 4.7	10 4.7	12 4.3	17 4.6	33 5.1	6 4.0	9 4.3	11 4.0	14 3.8	25 3.9
13-B	Coriolis	1 0.7	1 0.5	3 1.1	4 1.1	10 1.5	1 0.7	1 0.5	3 1.1	3 0.8	9 1.4
14	Savanne	4 2.7	5 2.4	6 2.2	9 2.4	13 2.0	3 2.0	4 1.9	4 1.4	7 1.9	9 1.4
15	Grand Port	2 1.3	3 1.4	3 1.1	5 1.3	7 1.1	7 4.7	10 4.7	12 4.3	14 3.8	25 3.9
16	Quartier Militaire	2 1.3	3 1.4	4 1.4	5 1.3	10 1.5	3 2.0	4 1.9	6 2.2	7 1.9	14 2.2
17	Flacq	3 2.0	5 2.4	7 2.5	12 3.2	21 3.2	- -	- -	- -	- -	- -
18	Pamplemousses	- -	- -	- -	- -	- -	21 14.0	33 15.6	44 15.9	60 16.1	112 17.3
	Total	150 100.0	211 100.0	276 100.0	372 100.0	648 100.0	150 100.0	211 100.0	276 100.0	372 100.0	648 100.0