

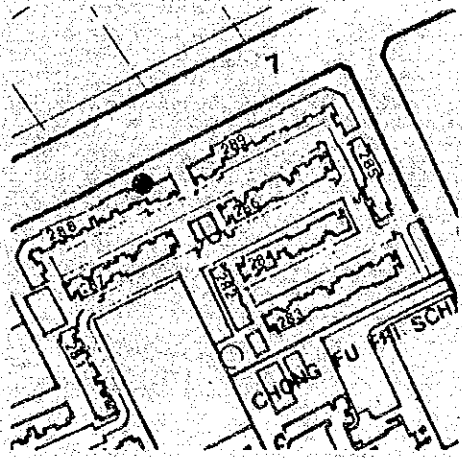
Appendix G

Photographs of Noise Survey on Alternative Routes

- 1 Yishun New Town
- 2 Ang Mo Kio - Hougang - Bedok Route
- 3 Orchard - Mt. Faber - Sentosa
- 4 Orchard - Marina Centre Route
- 5 CBD Ring Routes (1) - (3)

Photographs of Noise Survey Spots in Yishun New Town

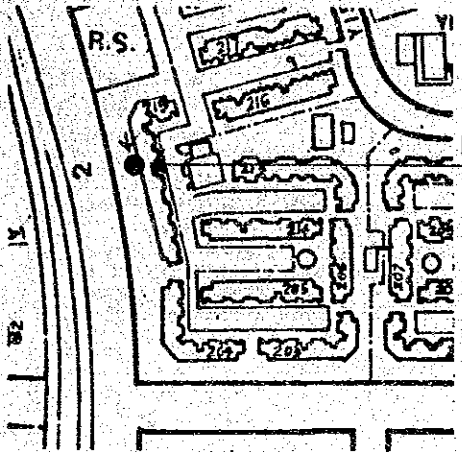
Spot 1



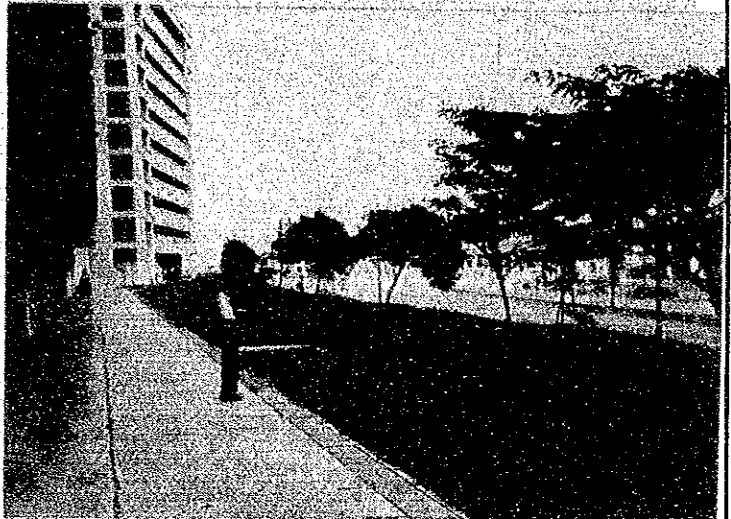
No. 1



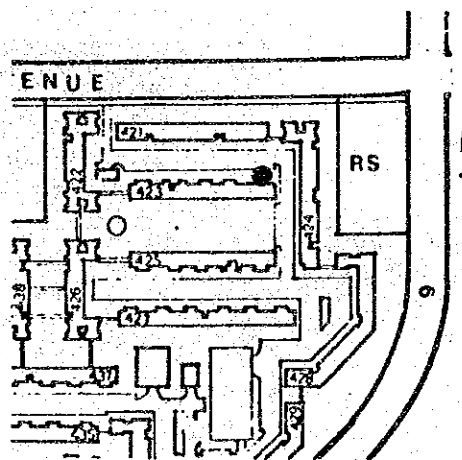
Spot 2



No. 2



Spot 3

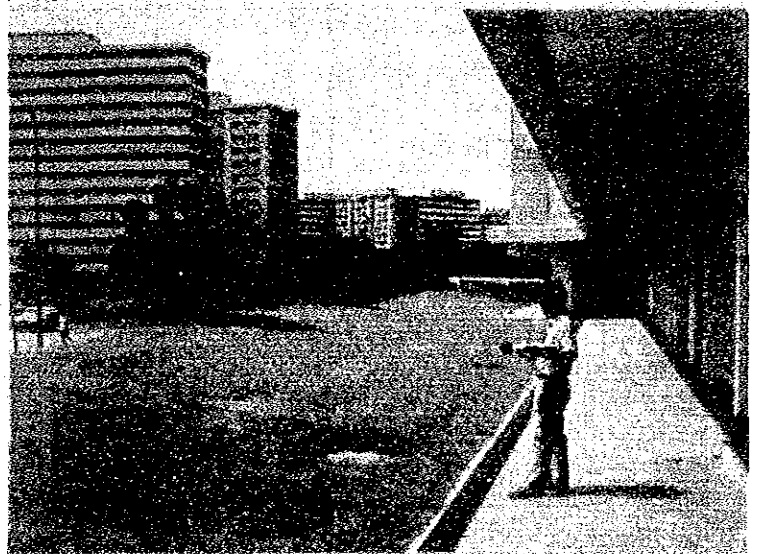
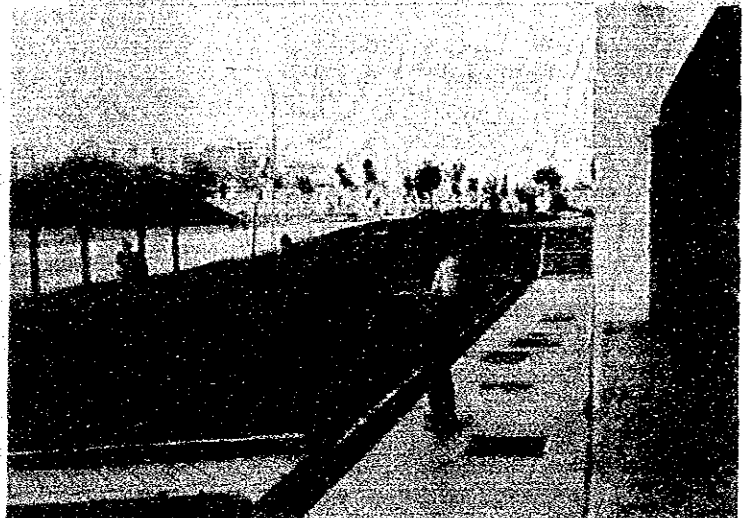
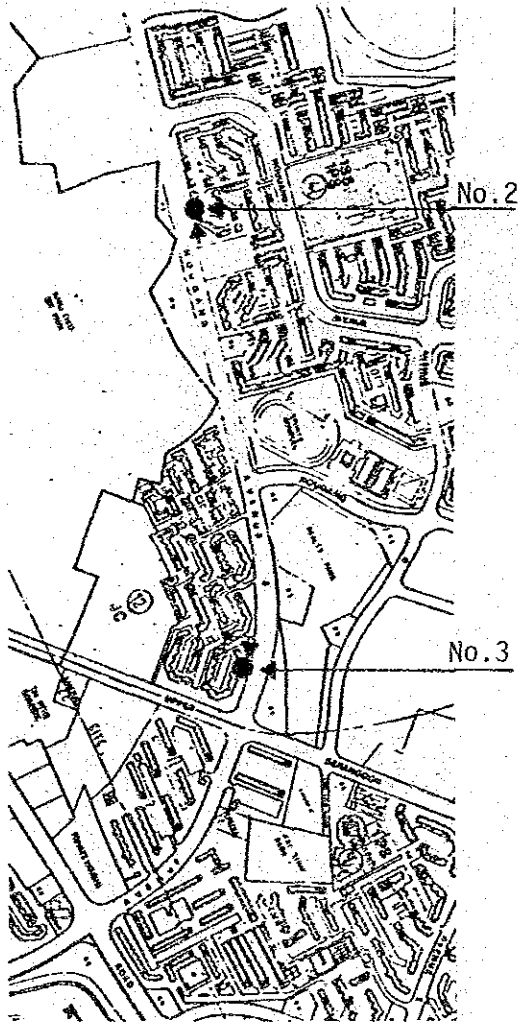
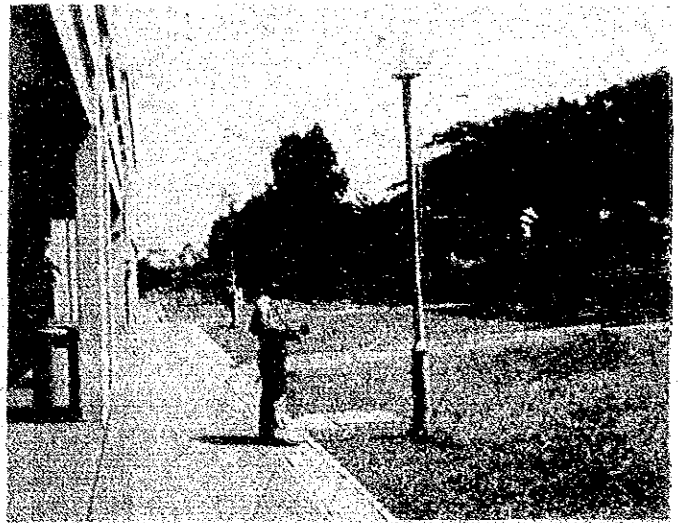
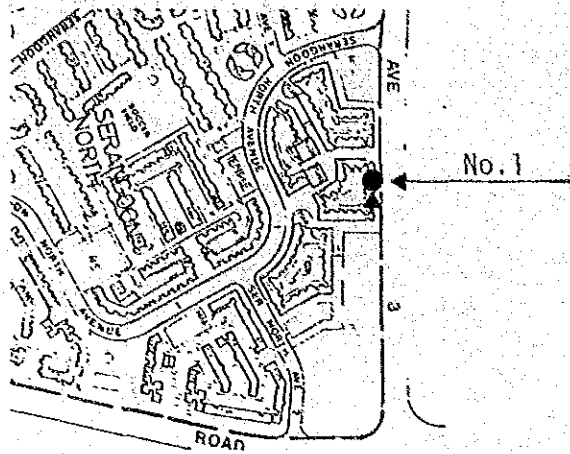


No. 3

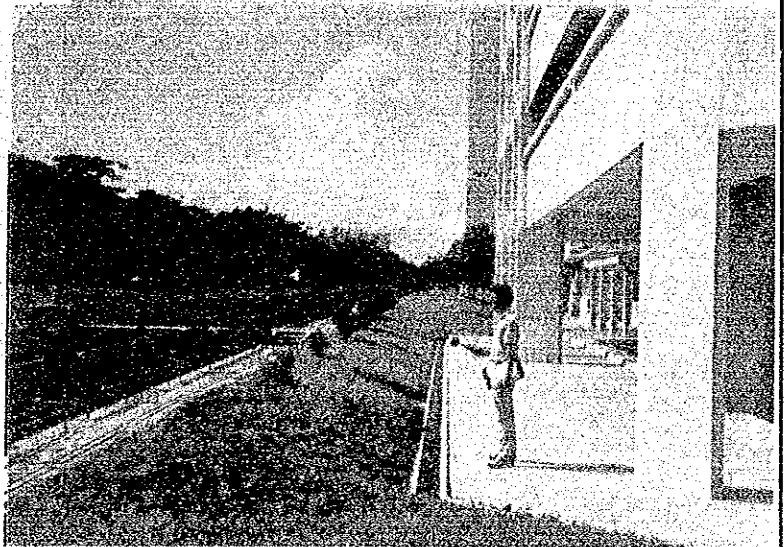
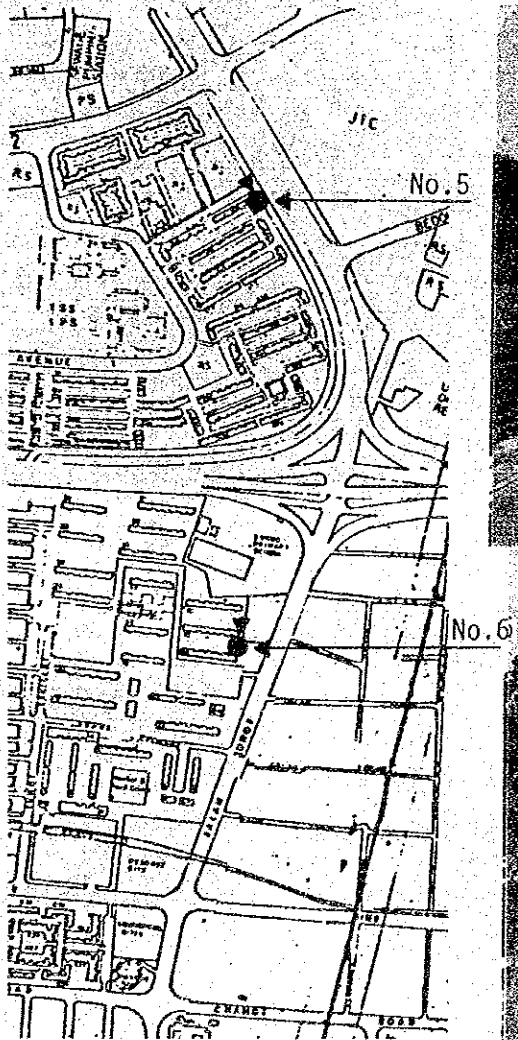
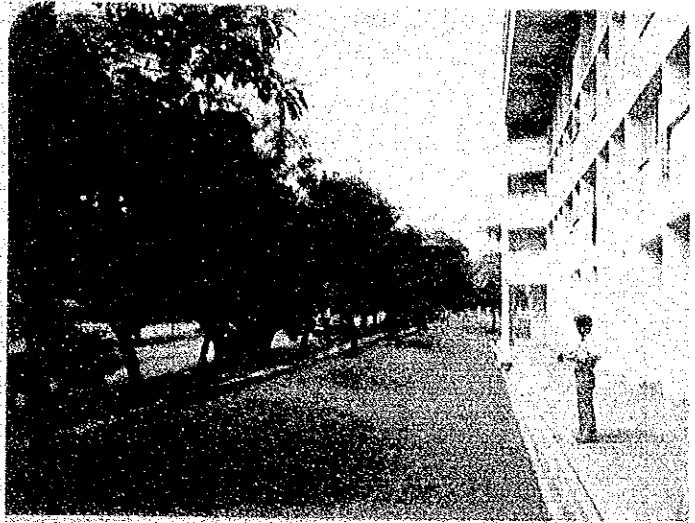
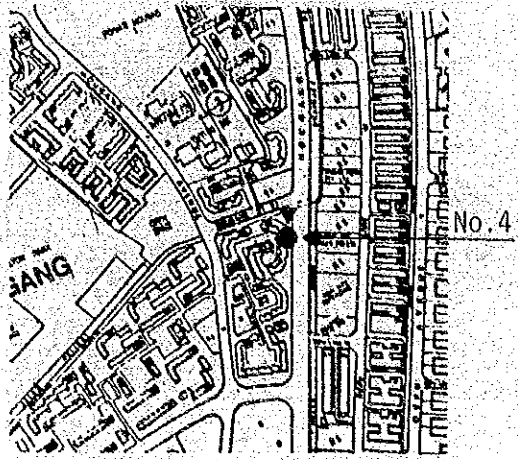


Scale 1:5,000

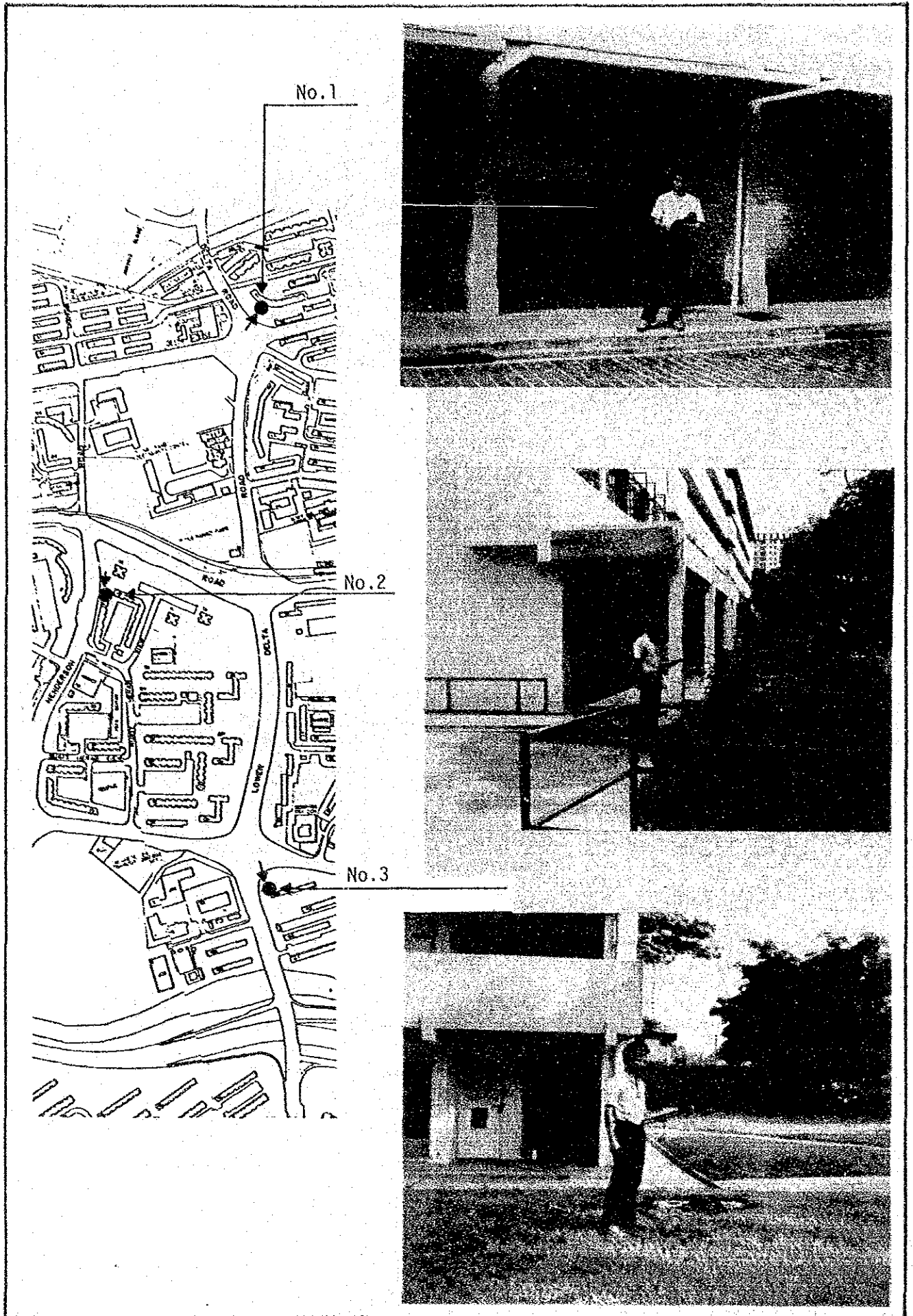
Photographs of Noise Survey Spots of Ang Mo Kio - Hougang - Bedok Route (1)



Photographs of Noise Survey Spots of Ang Mo Kio - Hougang - Bedok Route (2)

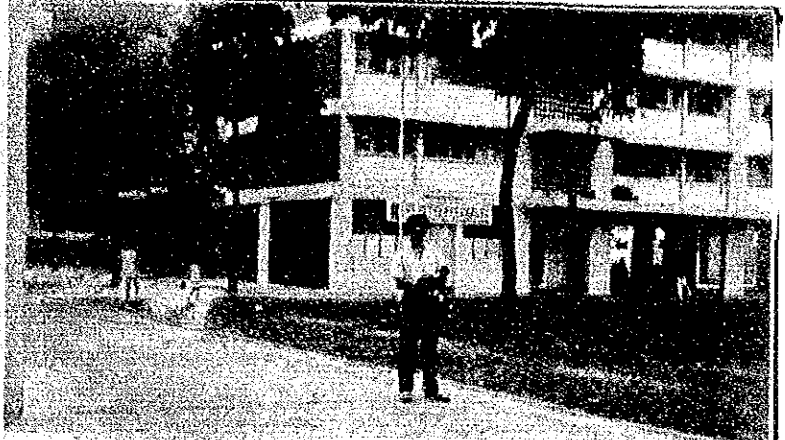
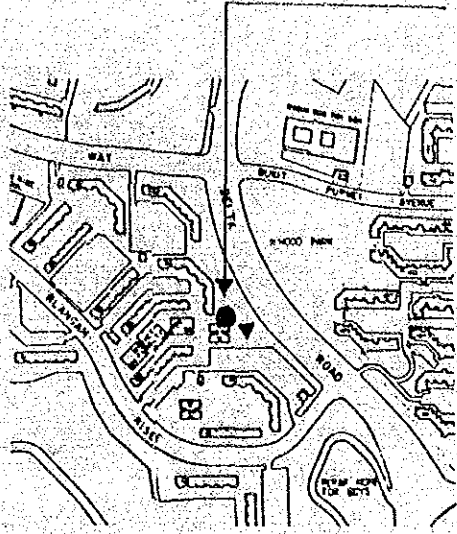


Photographs of Noise Survey Spots of Orchard - Mt.Favor - Sentosa Route (1)

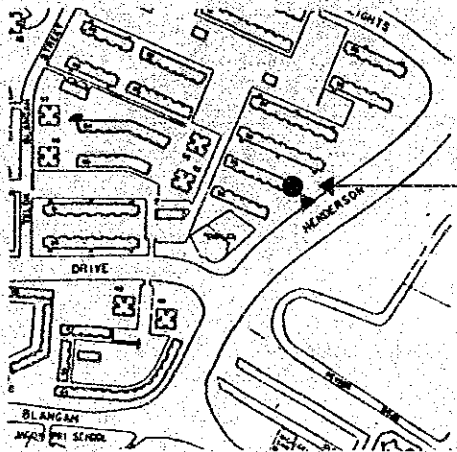


Photographs of Noise Survey Spots of Orchard - Mt.Favor - Sentosa Route (2)

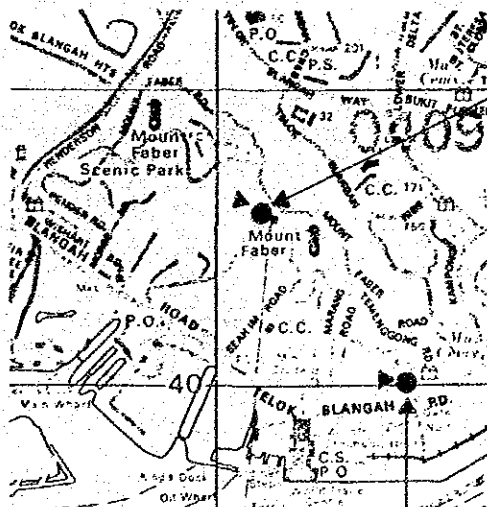
No. 4



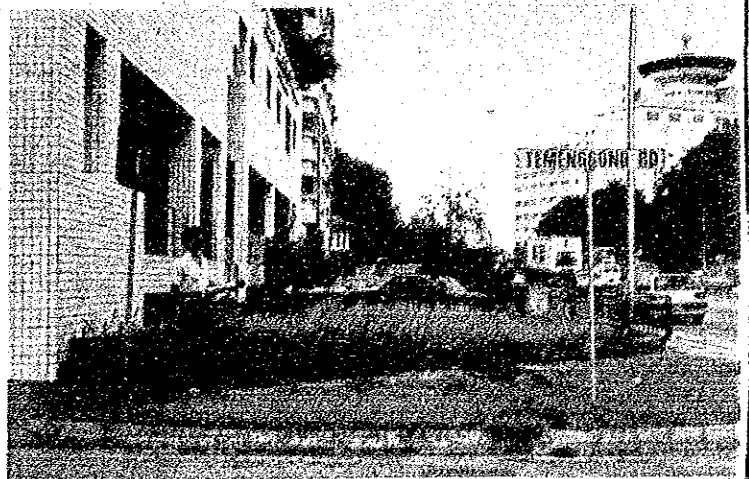
No. 5



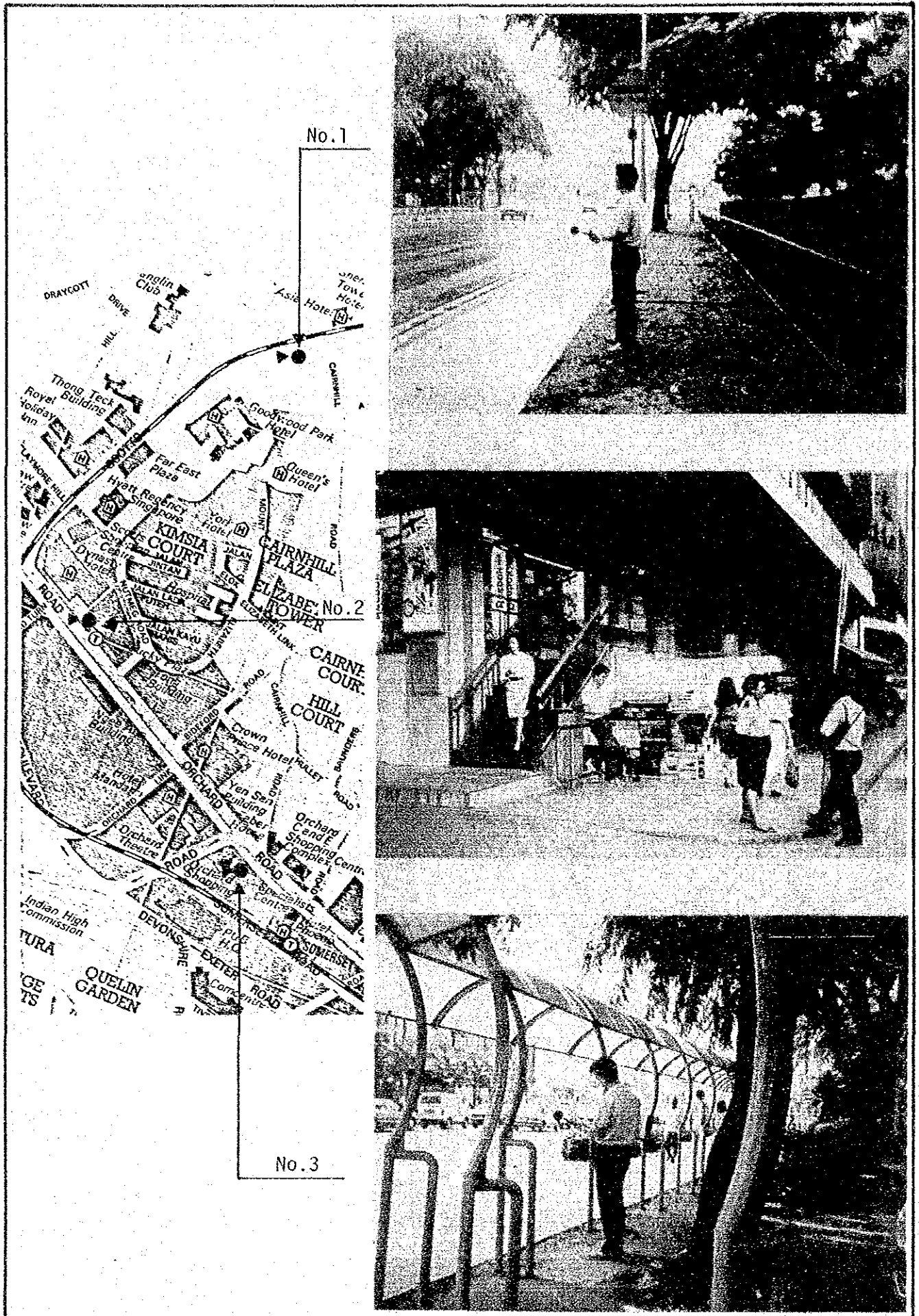
No. 6



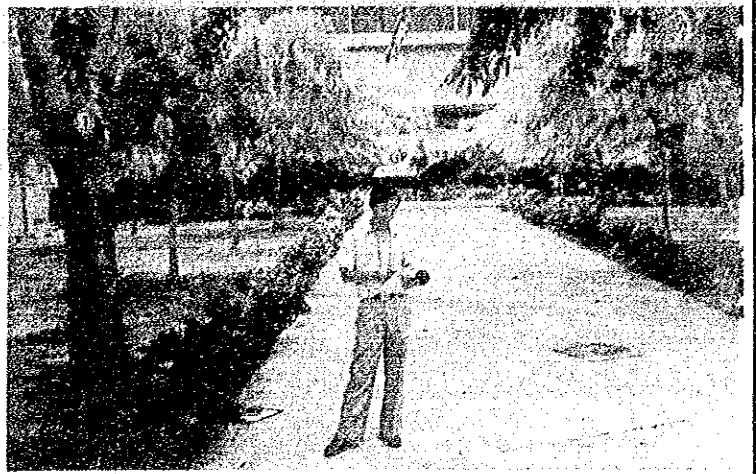
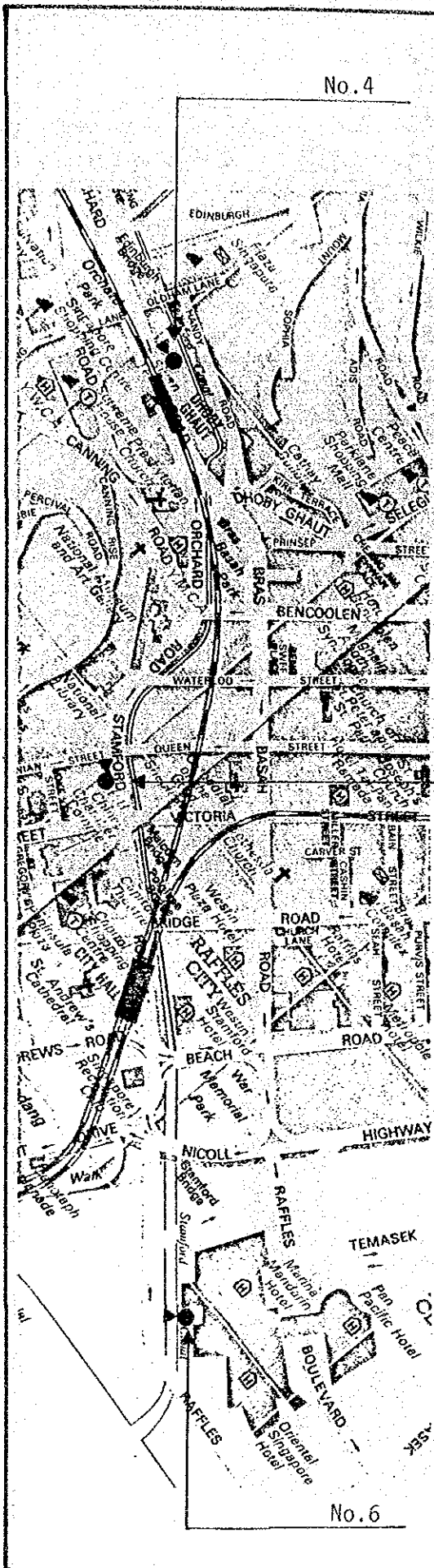
No. 7



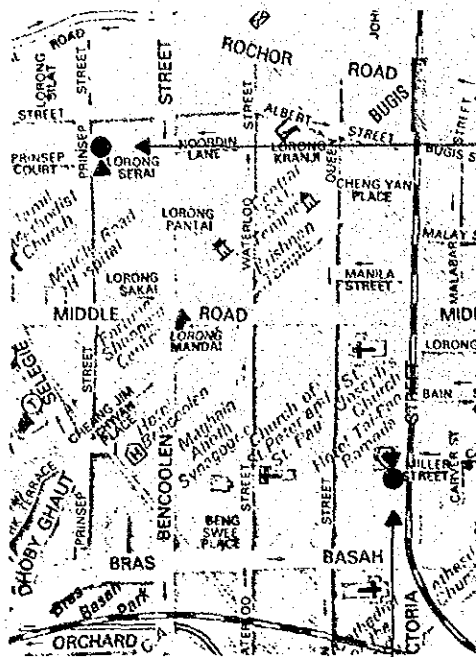
Photographs of Noise Survey Spots of Orchard - Marina Centre Route (1)



Photographs of Noise Survey Spots of Orchard - Marina Centre Route (2)



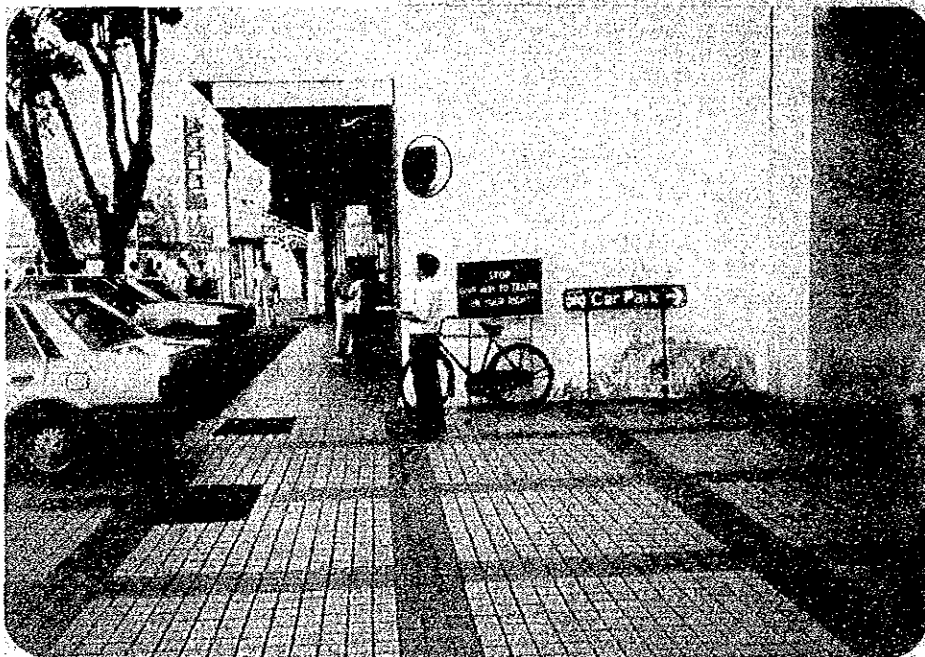
Photographs of Noise Survey Spots of CBD Ring Route (1)



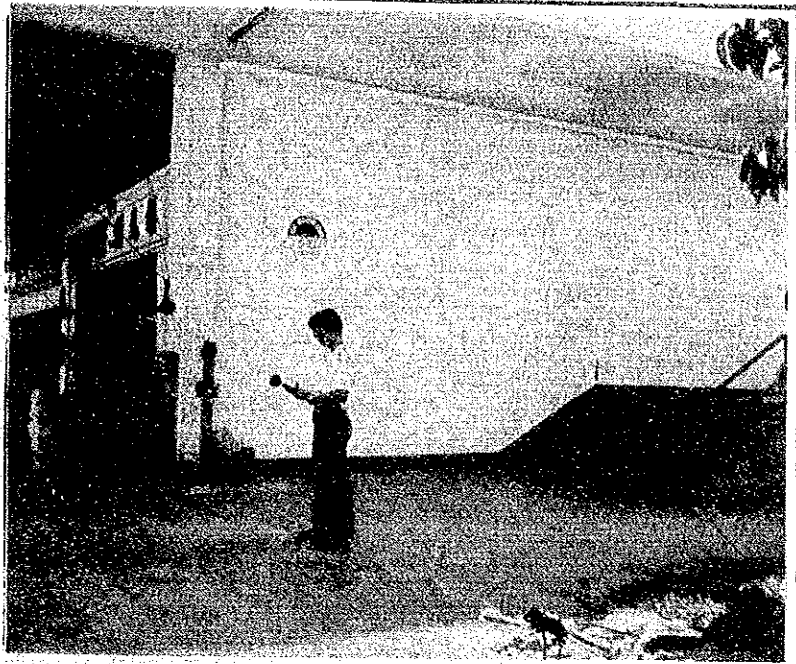
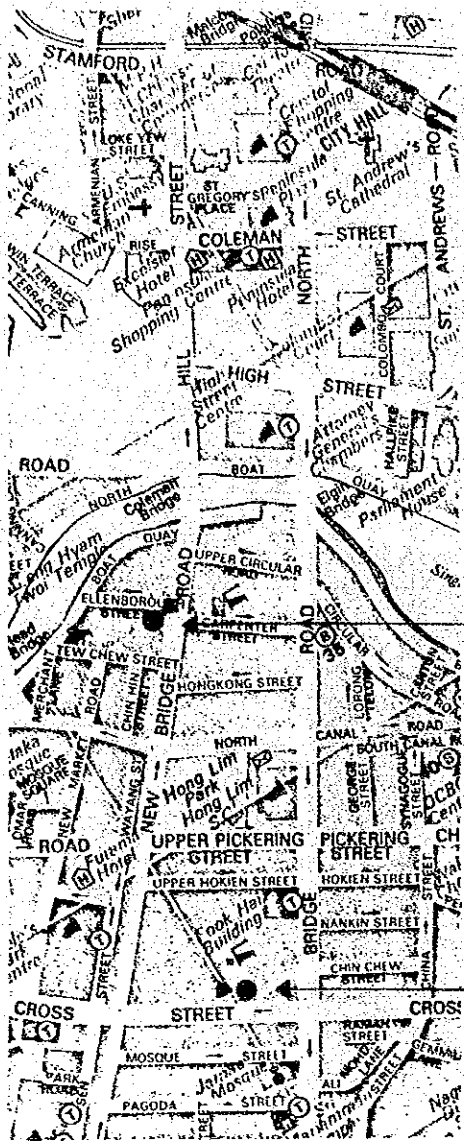
No. 1



No. 2

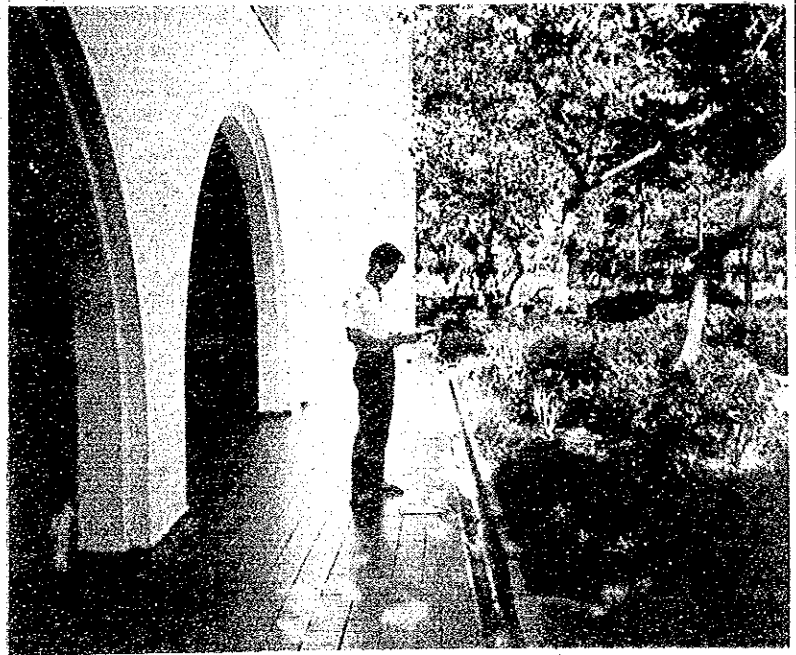


Photographs of Noise Survey Spots of CBD Ring Route (2)

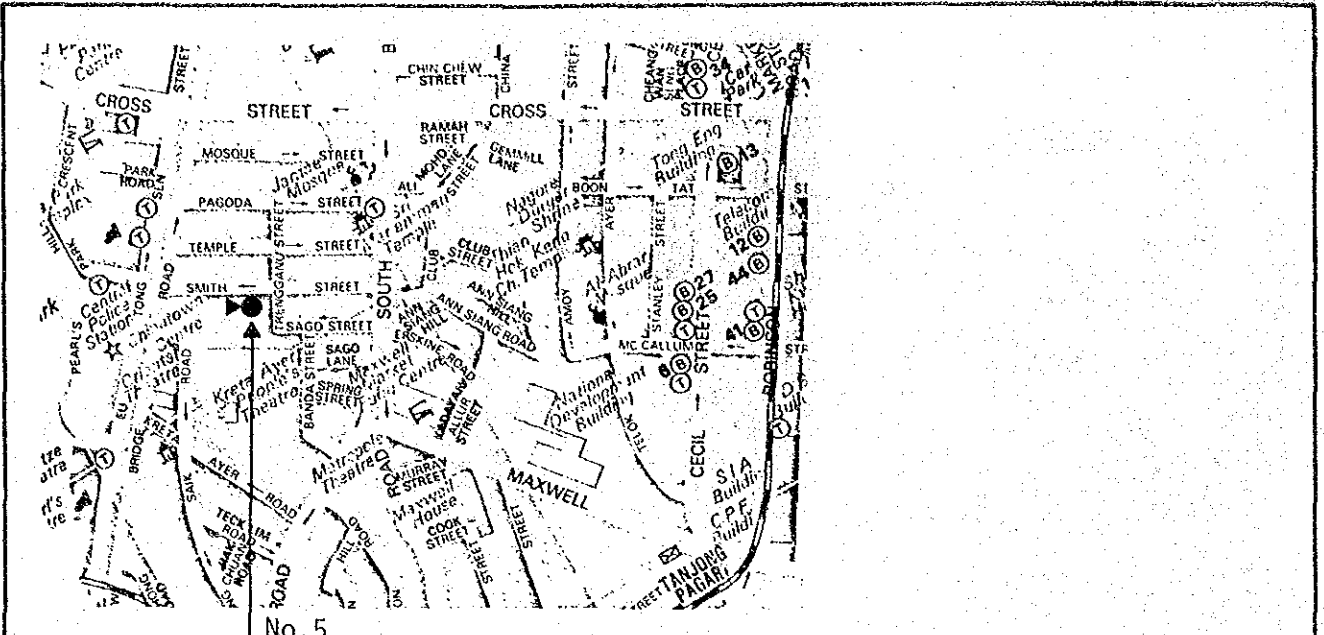


No. 3

NO. 4



Photographs of Noise Survey Spots of CBD Ring Route (3)



APPENDIX II

Noise Survey for Reference

APPENDIX H

Noise Survey for Reference

For reference purpose, the noise level was surveyed on the MRT train, in front of the musical fountain at Liang Court and in the office of SUTIS team at Maxwell House as shown in Table H-1. Location of the survey spots and photographs are shown in Figure H-1 and Photograph H-1, respectively.

Table H-1 Results of Noise Survey for Reference

Location	Noise Level, dBA			Remark
	L10	L50	L90	
Somerset-Tanjong Pagar	83	75	68	underground Photo 1
Redhill-Raffles Place	80	74	68	underground Photo 2
Redhill-Commonwealth	76	72	67	viaduct Photo 3
Clementi-Queenstown	77	74	67	viaduct Photo 4
Maxwell House				
SUTIS office (1)	59	52	51	
SUTIS office (2)	63	58	55	computer printer
Canteen	69	64	60	
Liang Court Musical Fountain	78	74	69	occasional music photo

The noise level surveyed on a train of MRT ranged from 72 to 75 dBA in terms of L50. The noise is a little higher when the train ran underground than the viaduct portion.

In the SUTIS office of Maxwell House, the noise level (L50) was 52 dBA under the normal condition. It became higher to 58 dBA when the computer printer was used. It was still lower, however than the noise (64 dBA) at the canteen on the ground floor.

The noise level surveyed at 5 meters away from the fountain in Liang Court was 74 dBA, which was as high as that of MRT although the music was played only occasionally.

Photographs of Noise Survey for Reference



Photo 1
MRT
Somerset - Tanjong Pagar



Photo 2
MRT
Redhill - Raffles Place

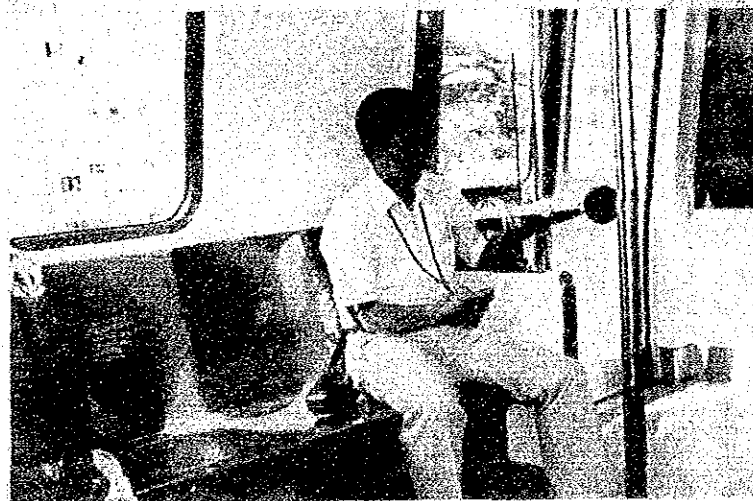


Photo 3
MRT
Redhill - Commonwealth

Photographs of Noise Survey for Reference



Photo 4
MRT
Clementi - Queenstown



Photo 5
Liang Court
Musical Fountain

APPENDIX I

Noise Survey of Existing New Transit System

APPENDIX I

Noise Survey of Existing New Transit System

1. Yuhkari Ga Oka

Noise survey results of existing ne transit system at Yuhkari Ga Oka (NTS-Y) are shown in Table I-1.

Table I-1 New Survey Results of Yuhkari Ga Oka

<u>Survey Item</u>	<u>Noise Level, dBA</u>			<u>Remark</u>
	<u>L10</u>	<u>L50</u>	<u>L90</u>	
On a train				
To secondary school	77	69	58	A few passengers (Photo)
To Jr station	76	69	59	A few passengers (Photo)
At the park				
Ambient	53	48	42	A few people (Photo)
NTS-Y (Peak Level)	-	56	-	20m from track (Photo)
On the bank				
NTS-Y (Peak Level)	-	71	-	5m from track (Photo)

The noise level on the trains of NTS-Y was 69 dBA by L50 when there were a few passengers. The ambient noise level at the park was 48 dBA, while the peak level of NTS-Y on a viaduct was 56 dBA at a point 20 meters away from the centre line of NTS and 1.2 meters high from the ground surface. The peak level became as high as 71 dBA when the survey spot was moved to a bank site 5 meters away from the edge of NTS right-of-way, where NTS was running at the foot of bank.

2. Chiba Mono-rail

Noise survey results of Chiba Mono-rail (CMR) are shown in Table I-2.

Table I-2 Noise Survey Results of Chiba Mono-rail

<u>Survey Item</u>	<u>Noise Level, dBA</u>			<u>Remark</u>
	<u>L10</u>	<u>L50</u>	<u>L90</u>	
On a train				
To Chishirodai North	70	66	64	Photo 1
To Tsugaation	73	70	68	
To Zoo	71	68	67	
At Chishirodai				Photo 2
Ambient - 1	64	56	51	Photo 3
- 2	42	56	52	Photo 4
CMR - 1 (up/down)		71/63		up: far side (Photo 5)
- 2		73/58		down: near side (Photo 6)
- 3		70/63		
- 4		76/67		

The ambient level on the train of CMR fluctuated from 66 dBA up to 70 being influenced by voice of passengers and announcement of a conductor. The ambient noise level at the residential area of Chishirodai was 56 dBA. The peak level of CMR heading for Tsuga ranged from 70 dBA to 76 and showed higher level than that heading for the opposite direction, whose noise level ranged from 58 dBA to 67.

Photographs of Noise Survey of Existing New Transit System

1) Yuhkari Ga Oka



Photo 1
To Secondary School

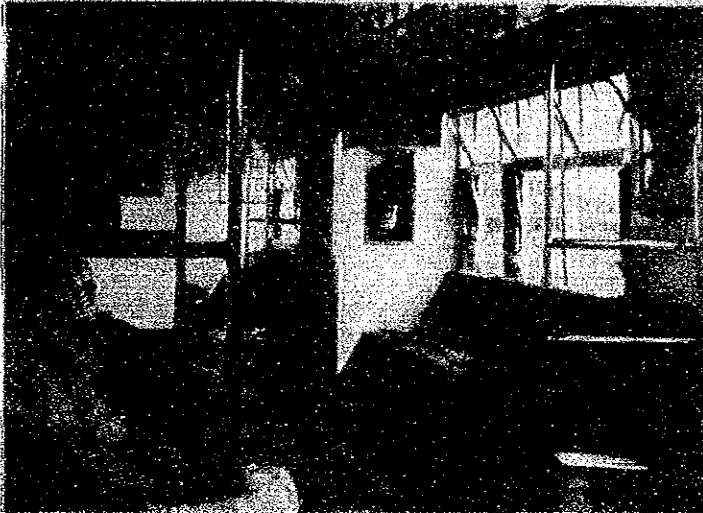


Photo 2
To JR Station

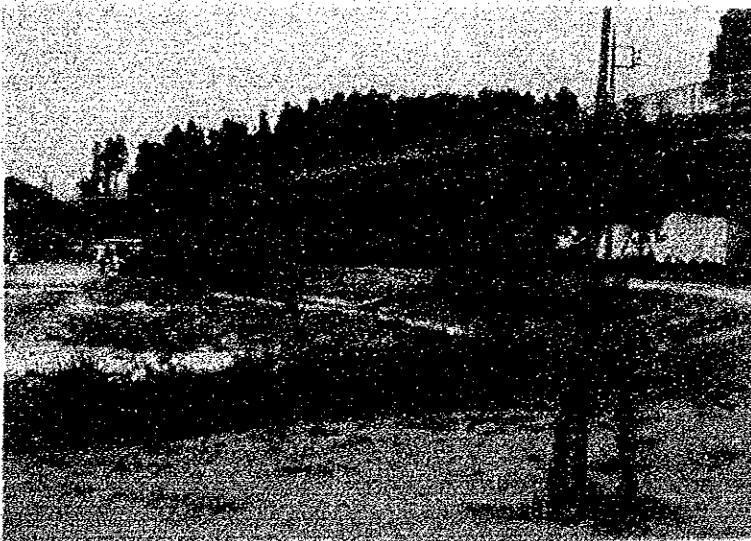


Photo 3
At the Park (Ambient)

Photographs of Noise Survey of Existing New Transit System

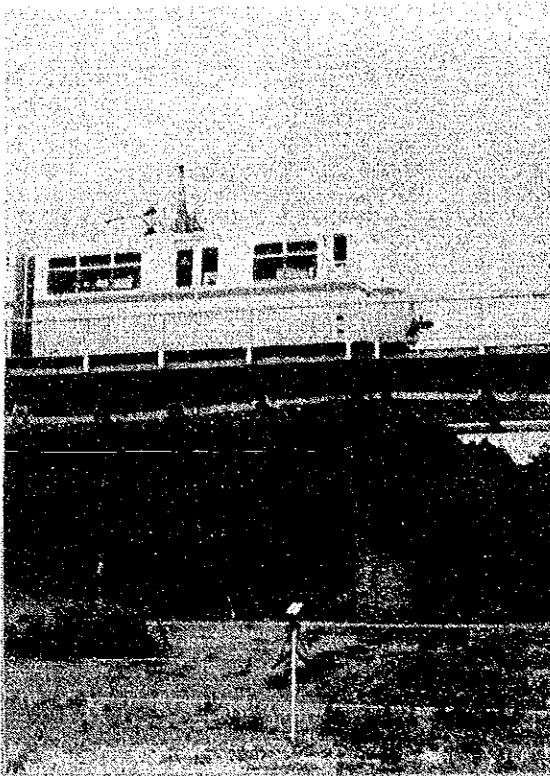


Photo 4

At the Park (NTS-Y)

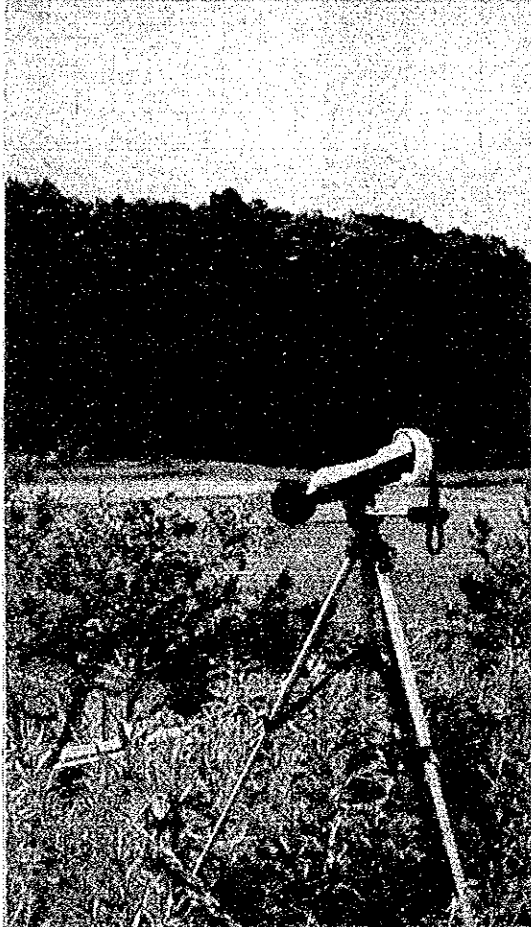


Photo 5

On the Bank (NTS-Y)

Photographs of Noise Survey of Existing New Transit System

2) Chiba Mono-rail

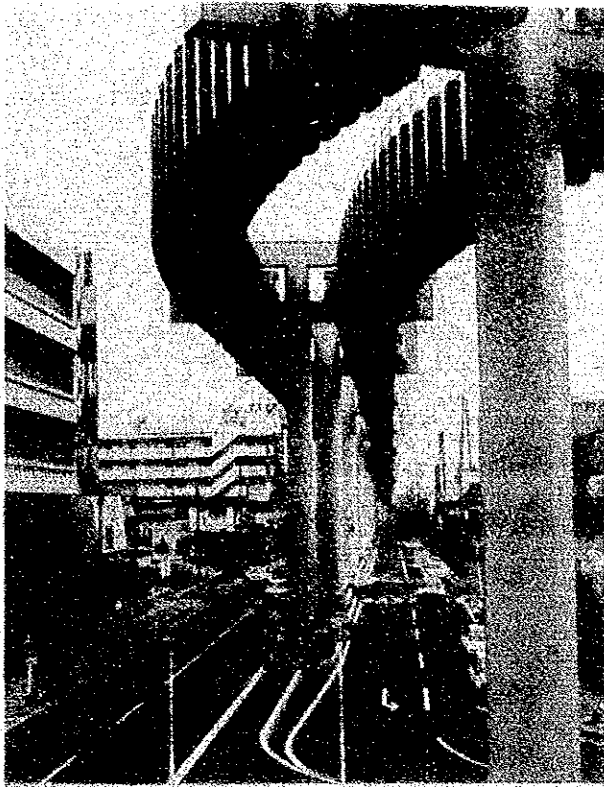


Photo 1

To Chishirodai North

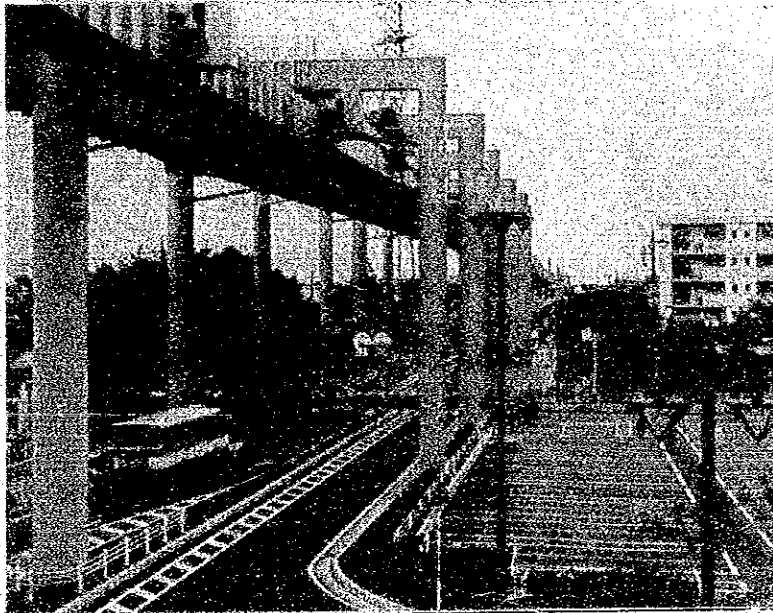


Photo 2

At Chishirodai



Photo 3

At Chishirodai

(Ambient - 1)

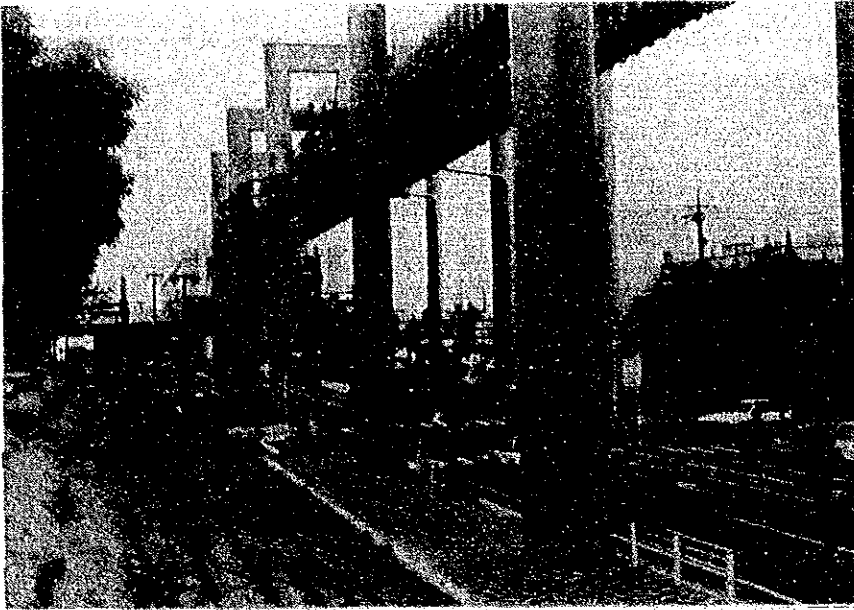


Photo 4
At Chishirodai
(Ambient - 2)

Photo 5
At Chishirodai
(CMR - 1)



Photo 6
At Chishirodai
(CMR - 2)



JICA