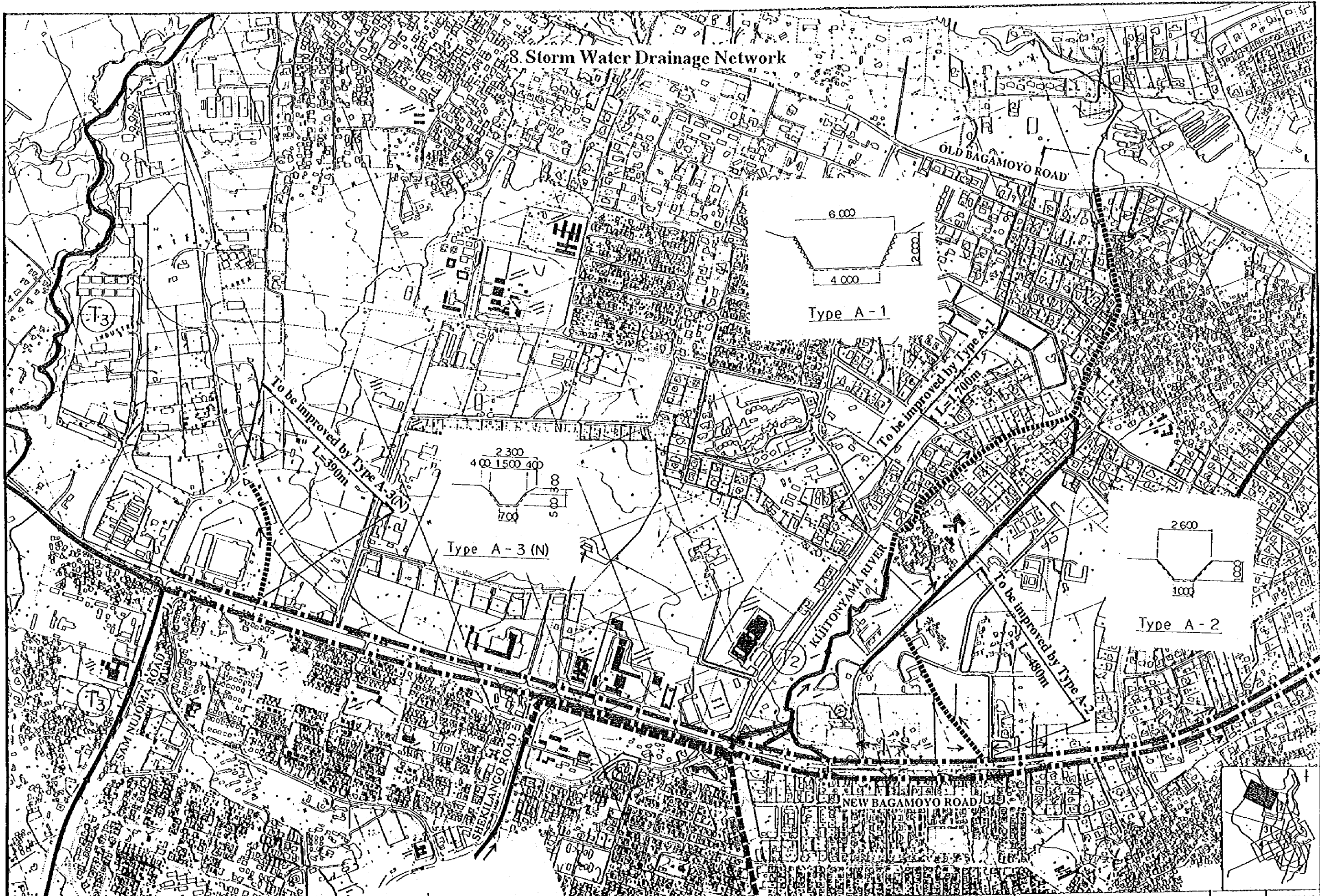
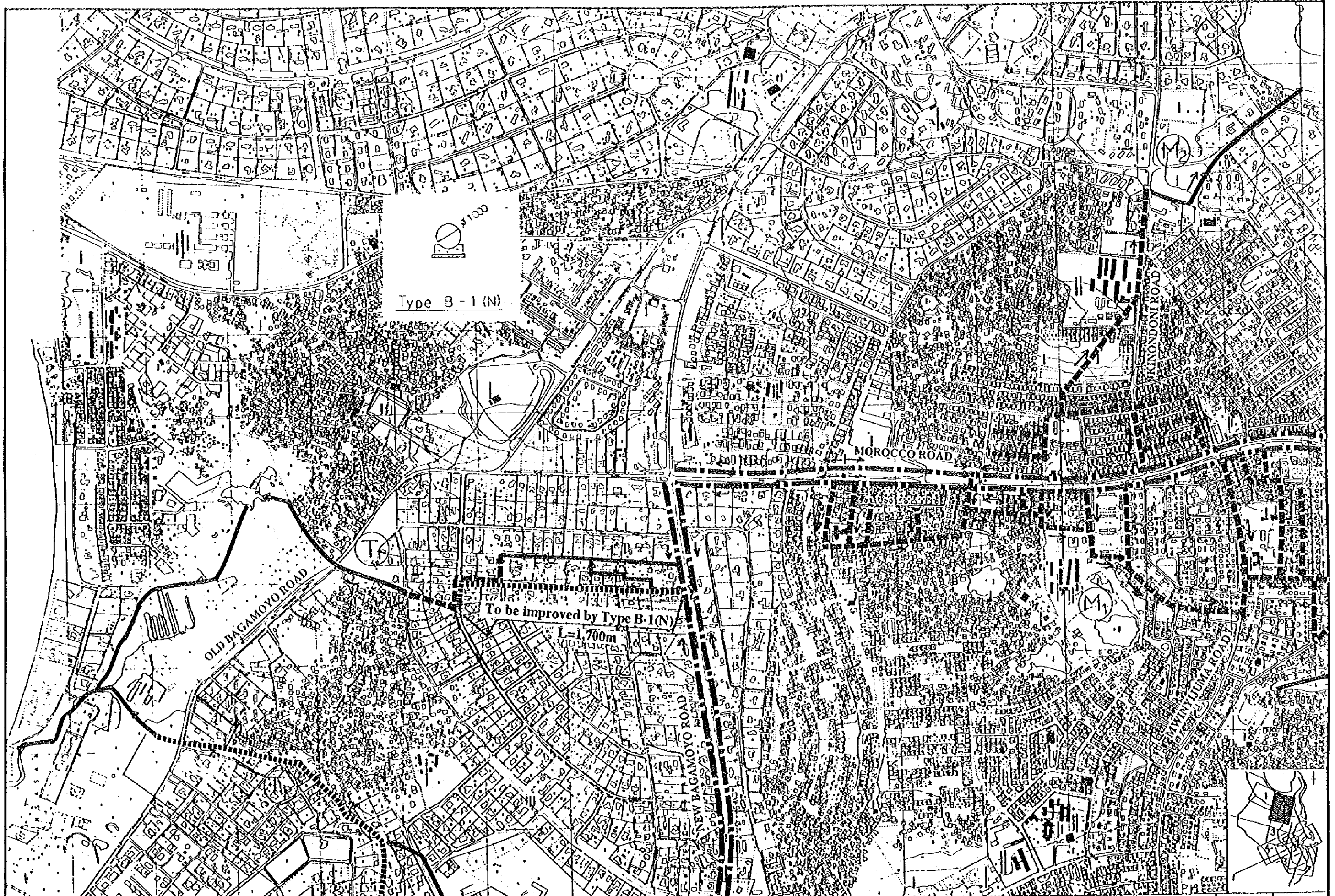
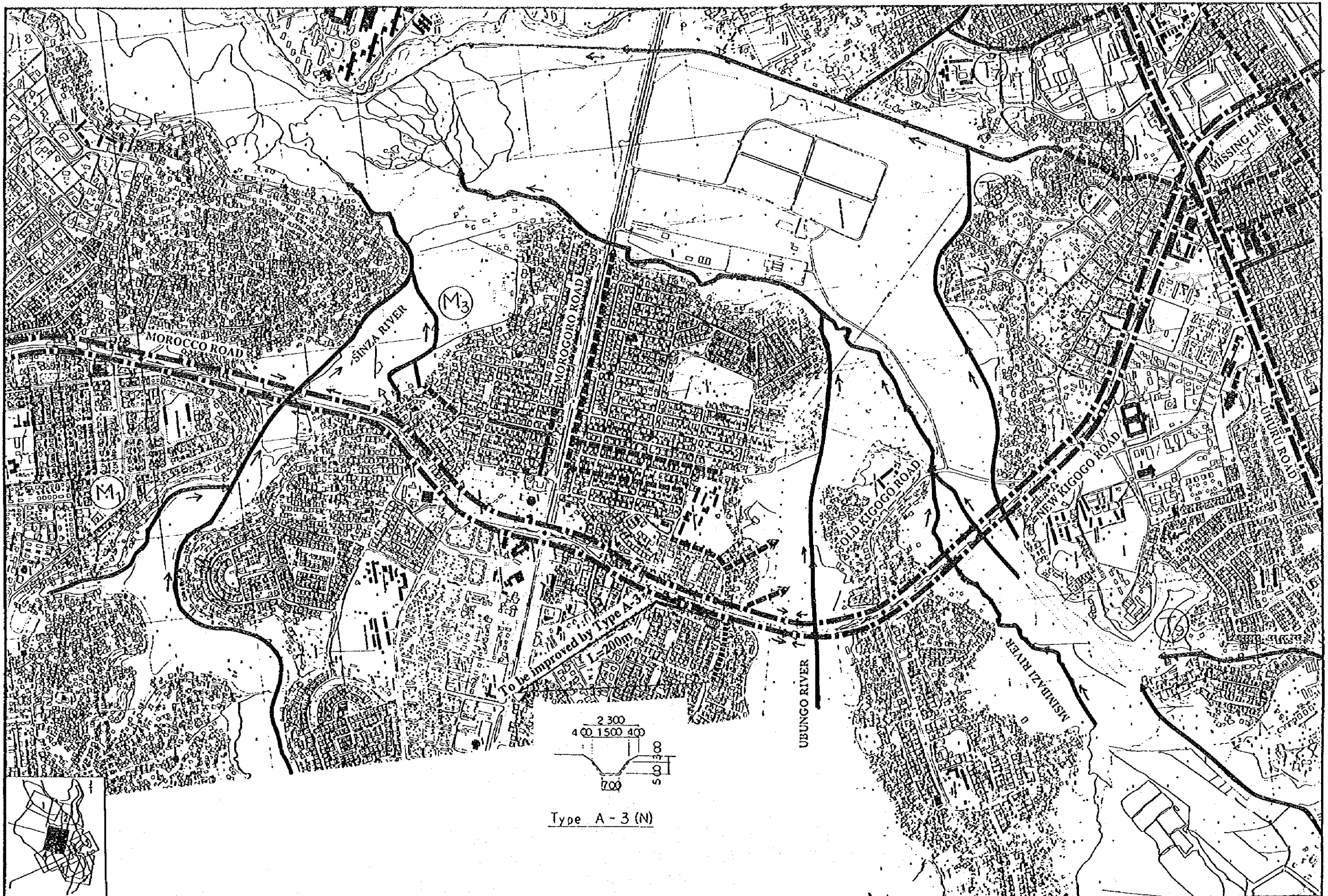


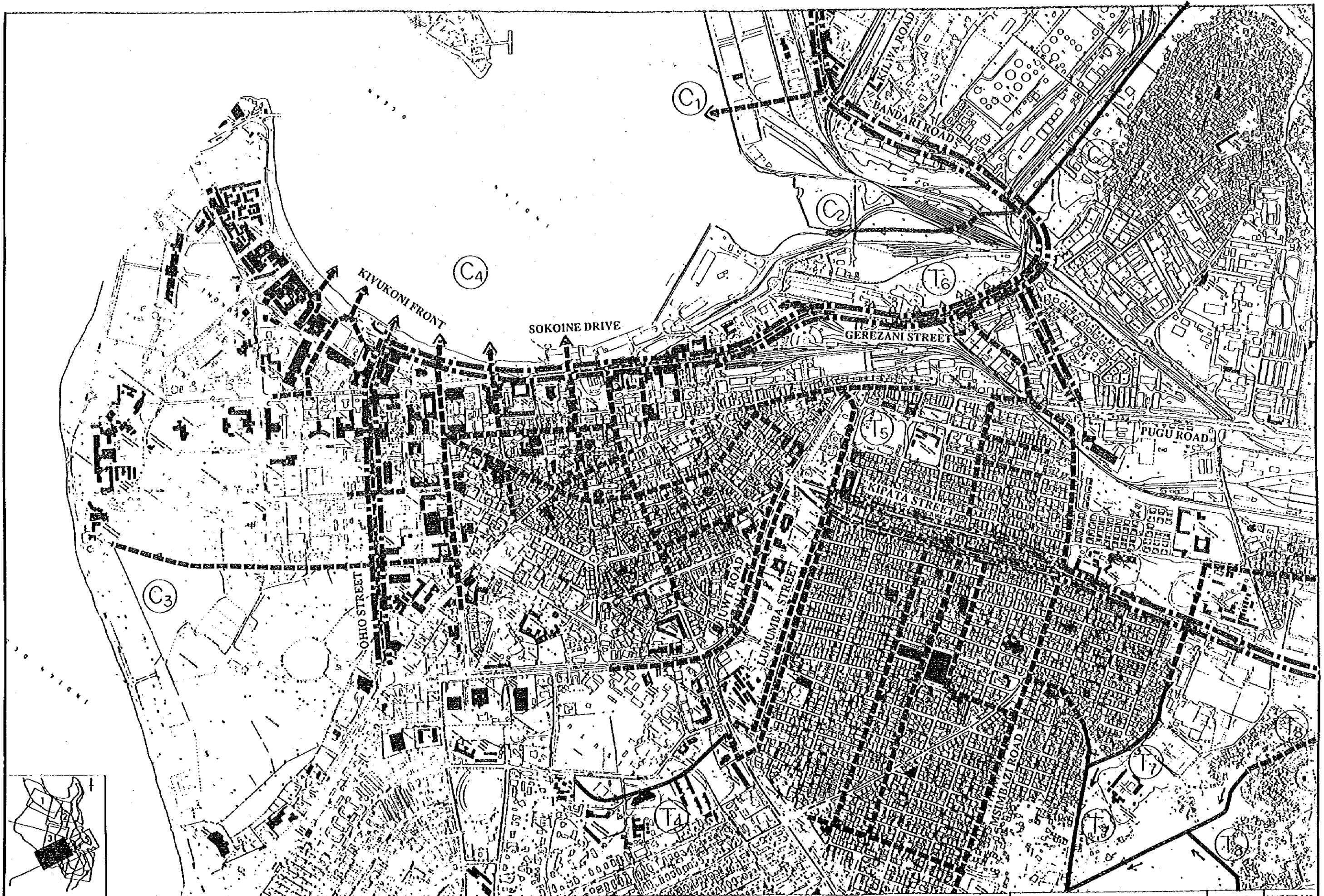
# 8. Storm Water Drainage Network











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THE STUDY  
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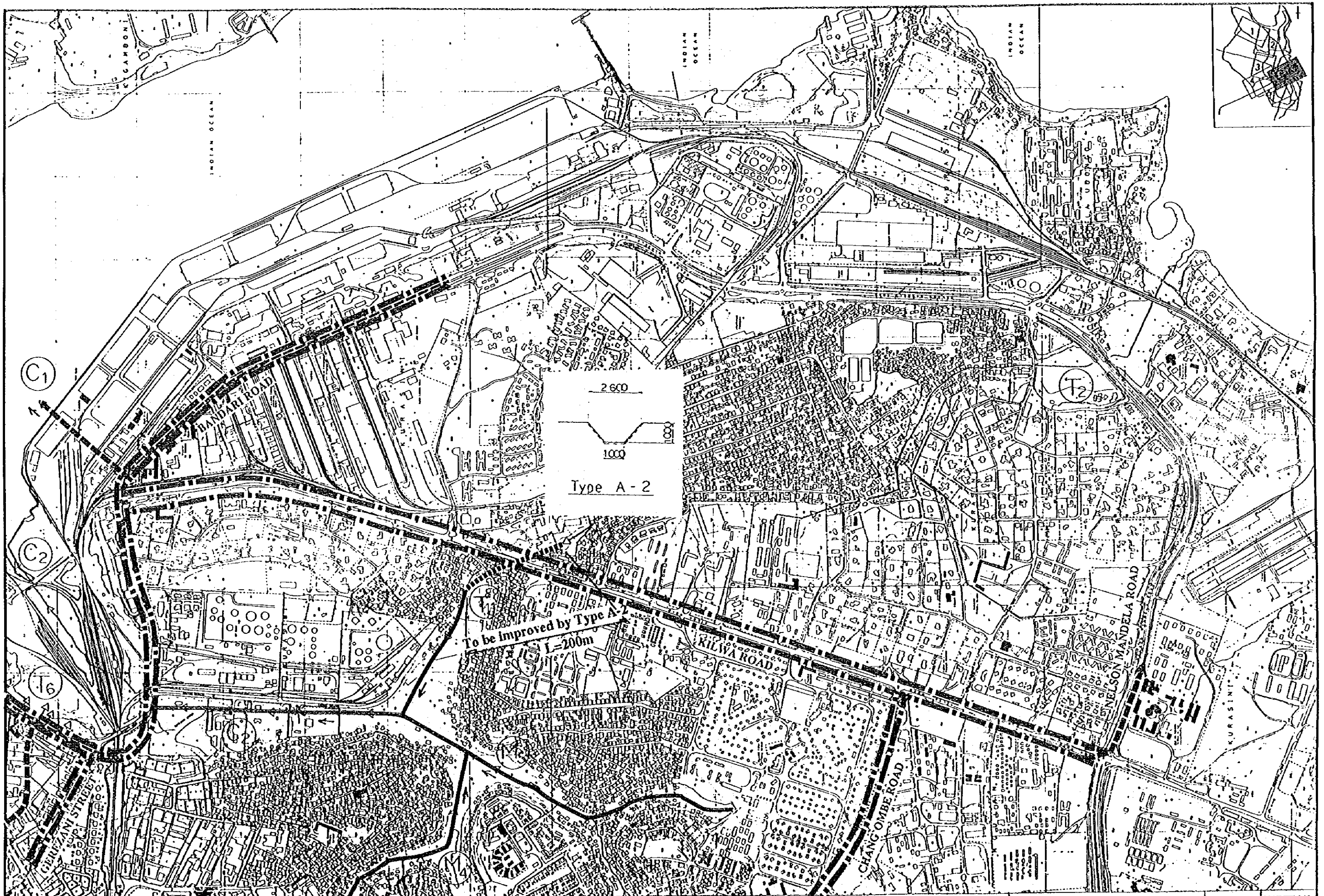
JAPAN INTERNATIONAL  
COOPERATION AGENCY

STORM WATER DRAINAGE NETWORK (4) MARCH 1995

DATE SHEET NO

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MINISTRY OF WORKS

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JAPAN INTERNATIONAL  
COOPERATION AGENCY

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THE UNITED REPUBLIC OF TANZANIA  
MINISTRY OF WORKS

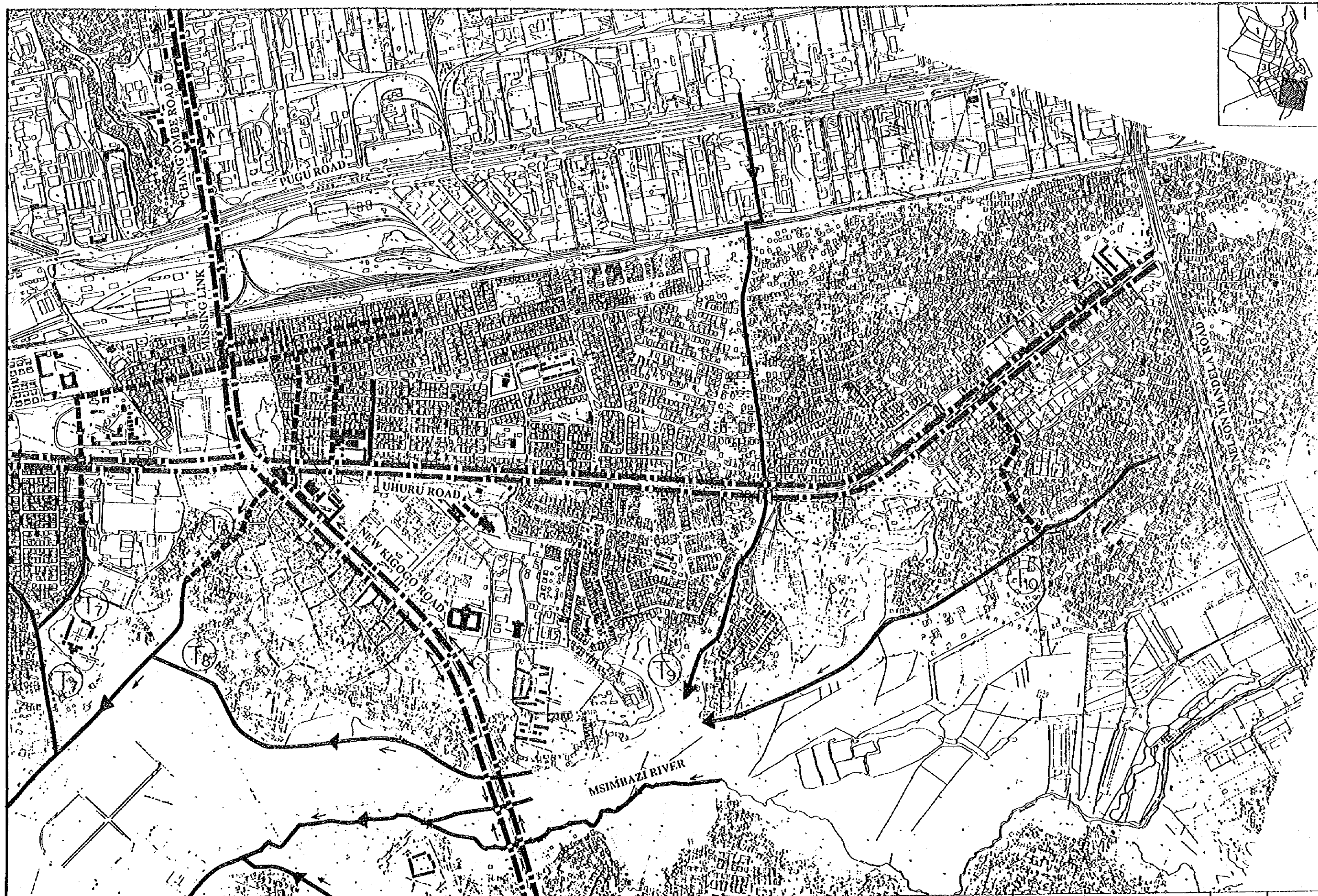
THE STUDY  
ON  
DAR-ES-SALAAM ROAD DEVELOPEMENT PLAN

JAPAN INTERNATIONAL  
COOPERATION AGENCY

STORM WATER DRAINAGE NETWORK (6)

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THE UNITED REPUBLIC OF TANZANIA  
MINISTRY OF WORKS

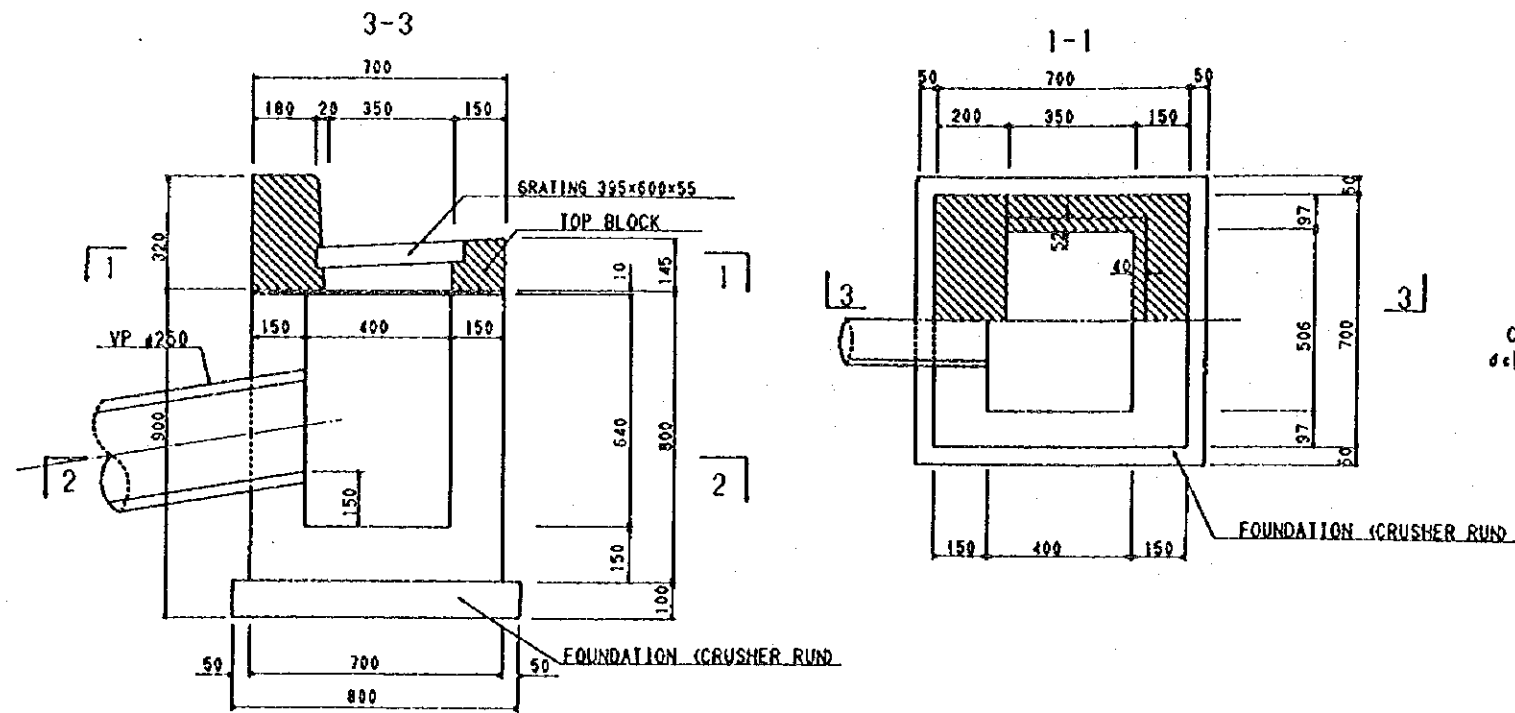
THE STUDY  
ON  
DAR-ES-SALAAM ROAD DEVELOPEMENT PLAN

JAPAN INTERNATIONAL  
COOPERATION AGENCY

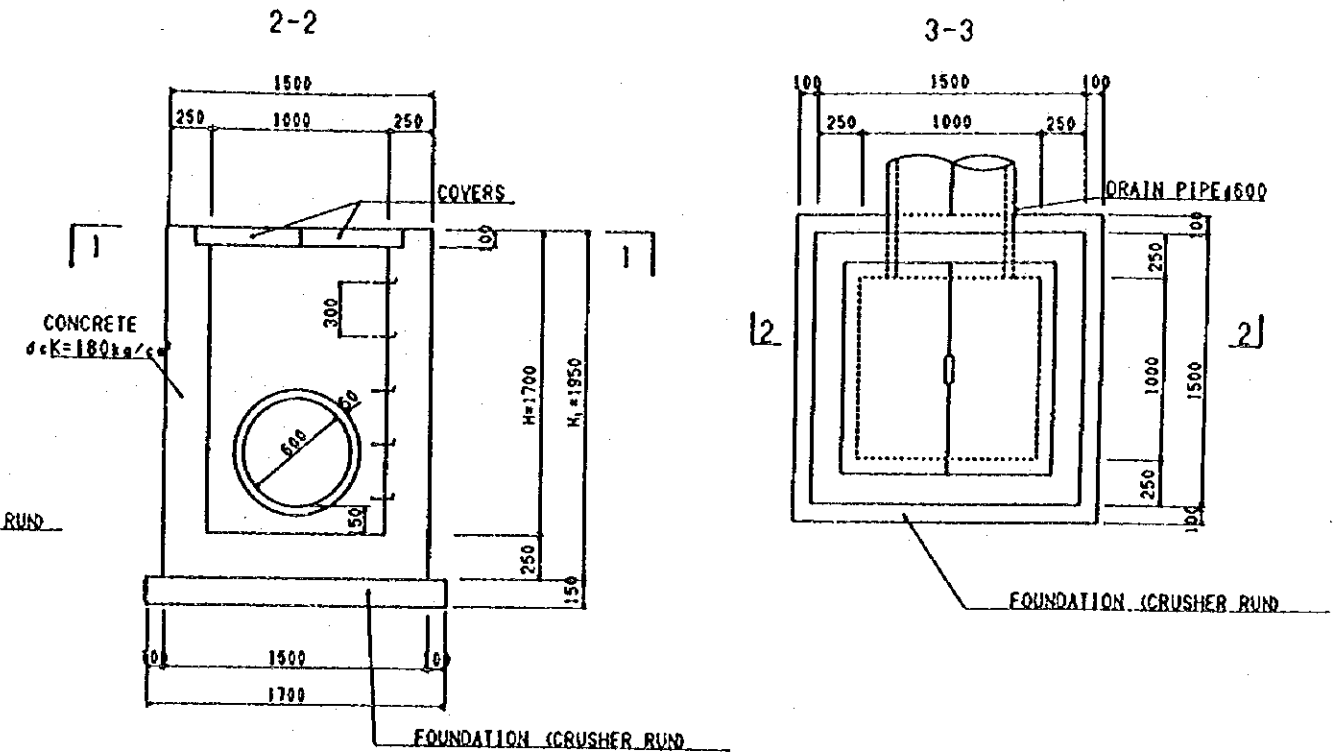
DATE	SHEET NO
MARCH 1995	100

## 9. Drainage Structures and Miscellaneous

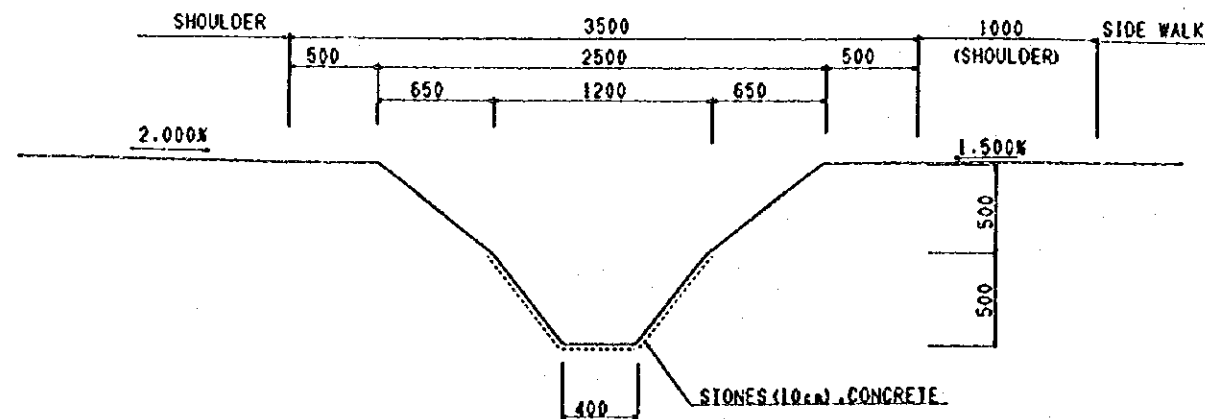
**CATCH PIT**  $s = 1:10$   
B400-L506-H640



**MAN HOLE**  $s = 1:20$   
B1500-L1500-H

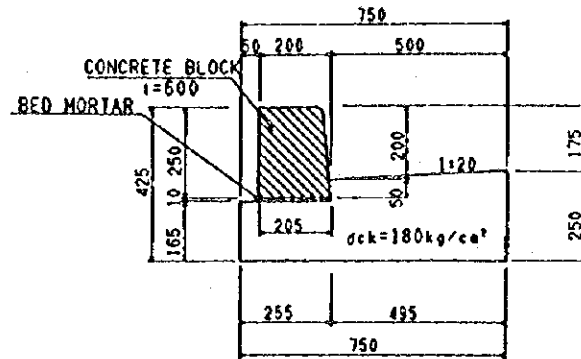


**DRAINAGE (ROCK RIPRAP) TYPE-A**  $s = 1:20$

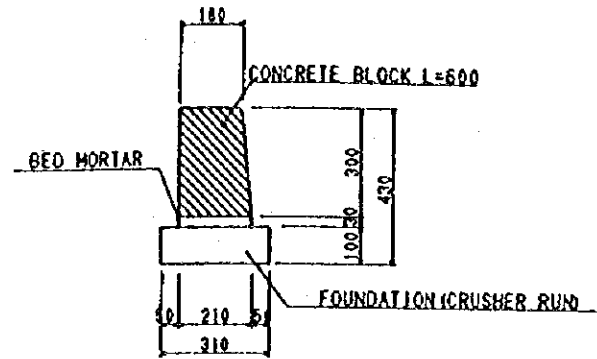




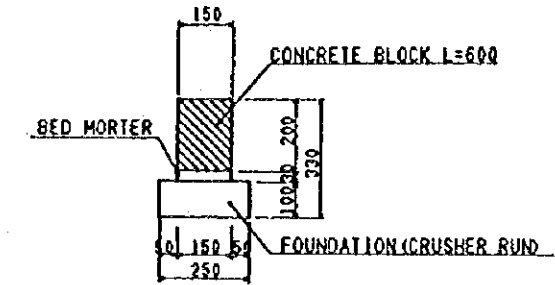
L-SIDE DITCH S=1:10



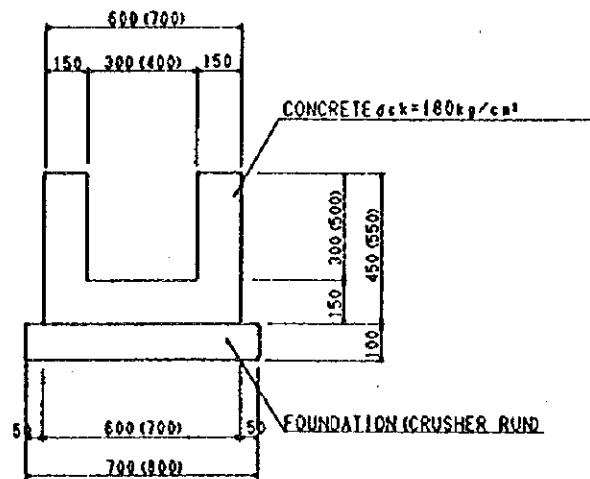
KERB (FOR MEDIAN STRIP) S=1:10



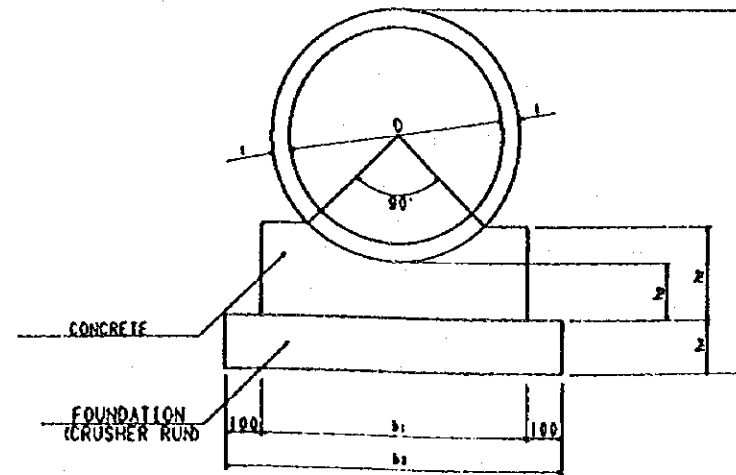
BOUNDARY BLOCK S=1:10



U-SHAPED DRAIN 300x300 (400x500)  
S = 1:10

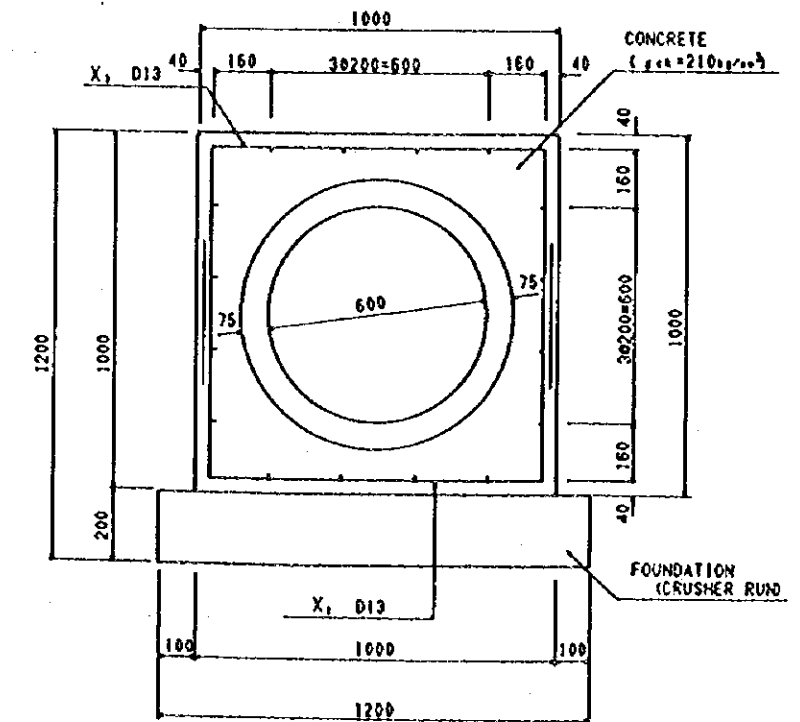


PIPE CULVERT TYPE-B  
(D=300~1000) S=1:10



TYPE	D	t	b <sub>1</sub>	b <sub>2</sub>	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>
D-300	300	30	500	700	610	160	100	150
D-600	600	50	750	950	1000	260	150	150
D-1000	1000	82	1200	1400	1564	380	200	200

PIPE CULVERT TYPE-A (D=600)  
DRAIN PIPE (A) S=1:10



# 10. Lighting Facilities and Traffic Signal

## LIGHTING FACILITIES

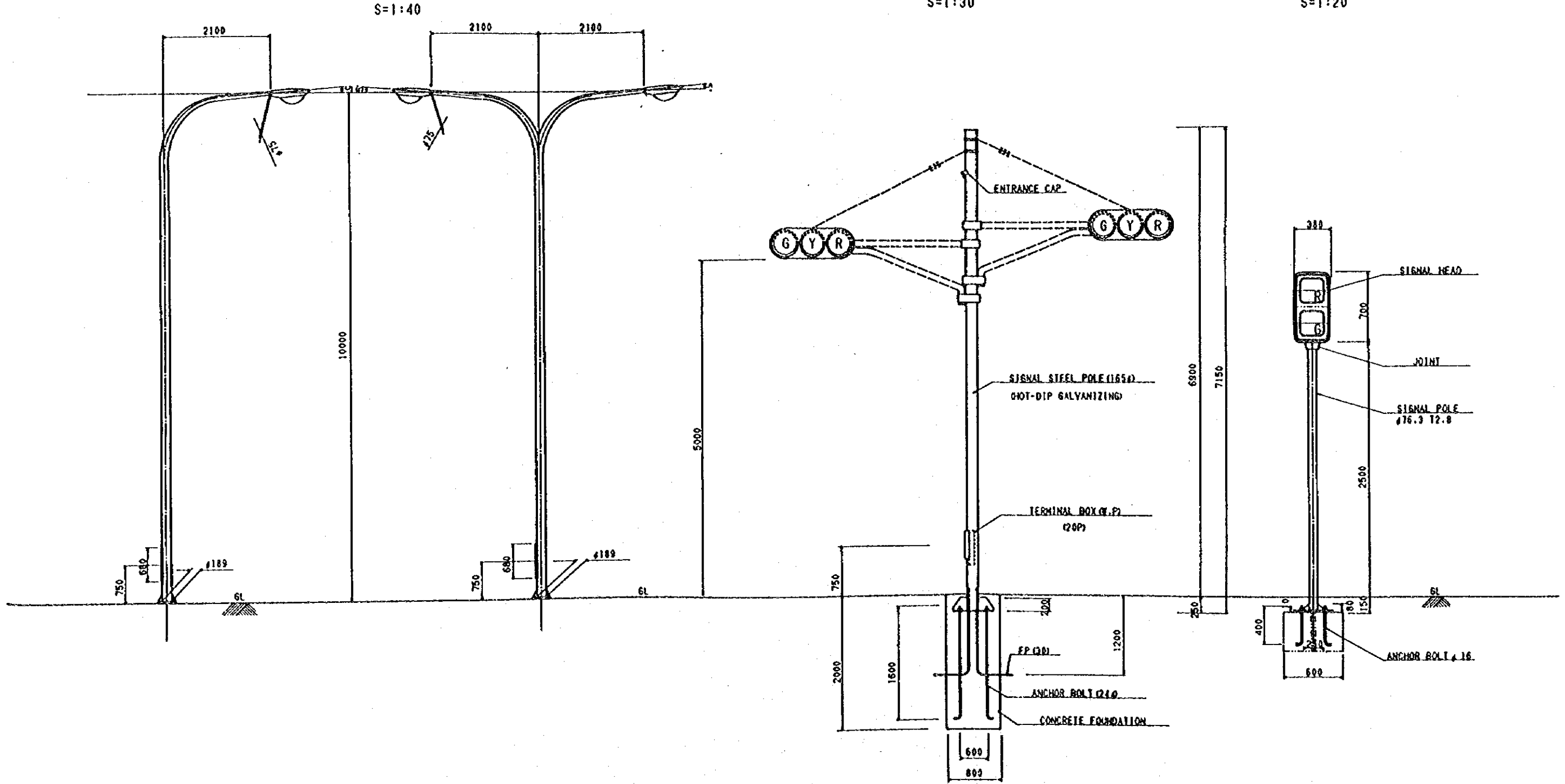
## TRAFFIC SIGNAL

TYPE-L

TYPE-T

SIGNAL STEEL POLE  
S=1:30

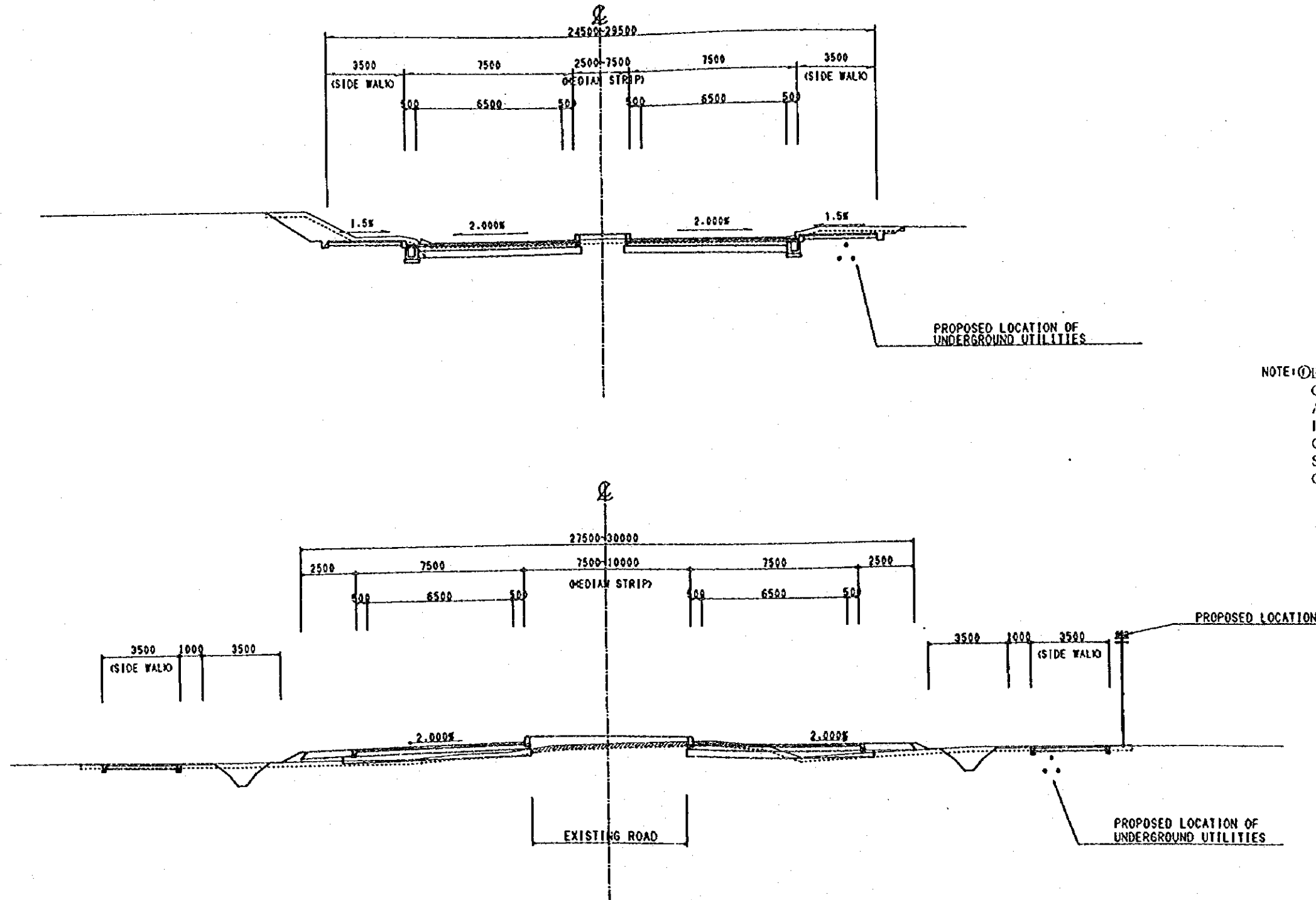
PEDESTRIAN SIGNAL  
S=1:20



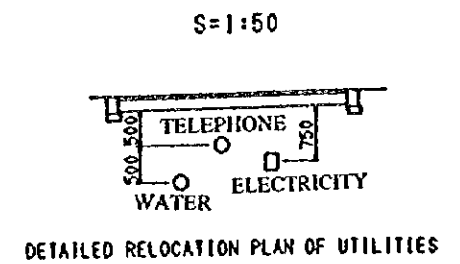


# 11. Underground Utilities

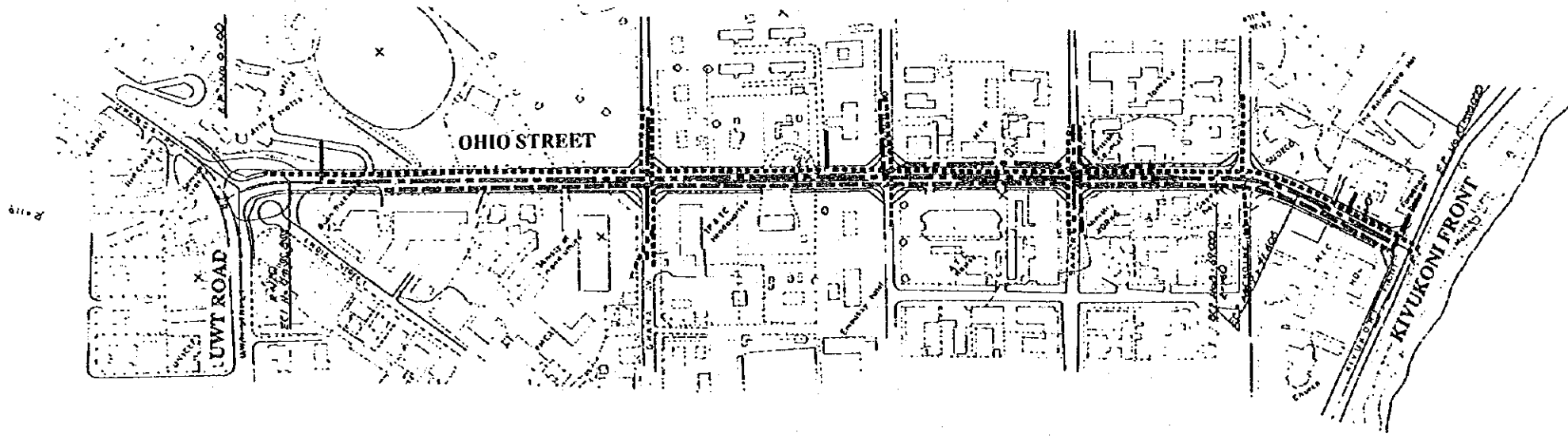
## RELOCATION PLAN OF EXISTING UTILITIES S=1:100



NOTE: (1) EXISTING TELEPHONE CABLES LAID ALONG CHANG'OMBE, SOKOINE DRIVE, GEREZANI AND BANDARI ROADS HAVE NOT BEEN INCLUDED IN THE PROJECT SINCE THE CABLES WILL BE IMPROVED AND REPLACED SOON WITH A ASSISTANCE OF JAPANESE GOVERNMENT.



UNITED REPUBLIC OF TANZANIA MINISTRY OF WORKS, COMMUNICATIONS AND TRANSPORT	THE STUDY ON DAR-ES-SALAAM ROAD DEVELOPEMENT PLAN	JAPAN INTERNATIONAL COOPERATION AGENCY	UNDERGROUND UTILITIES (1)	DATE MARCH 1995	SHEET NO 104
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**LEGEND**

-----	WATER MAIN	1,125 m
—————	ELECTRIC LINE	1,375 m
.....	TELEPHONE CABLE	1,125 m

THE UNITED REPUBLIC OF TANZANIA  
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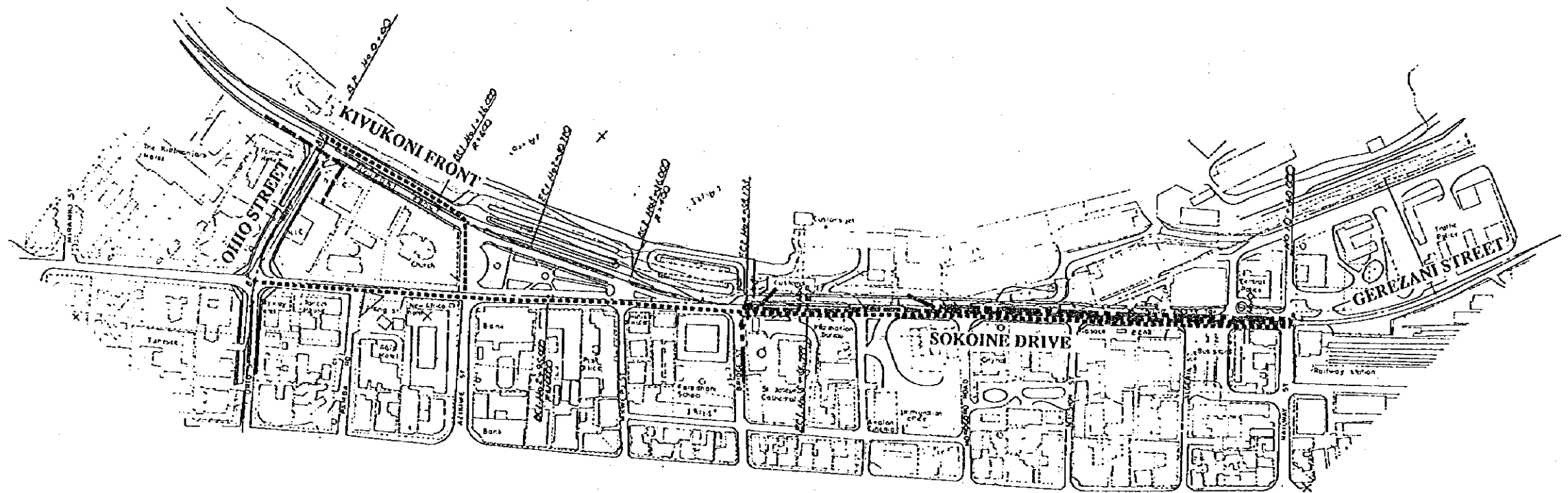
THE STUDY  
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JAPAN INTERNATIONAL  
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OHIO STREET  
UNDERGROUND UTILITIES (2)

DATE	SHEET NO
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Sokoine Drive

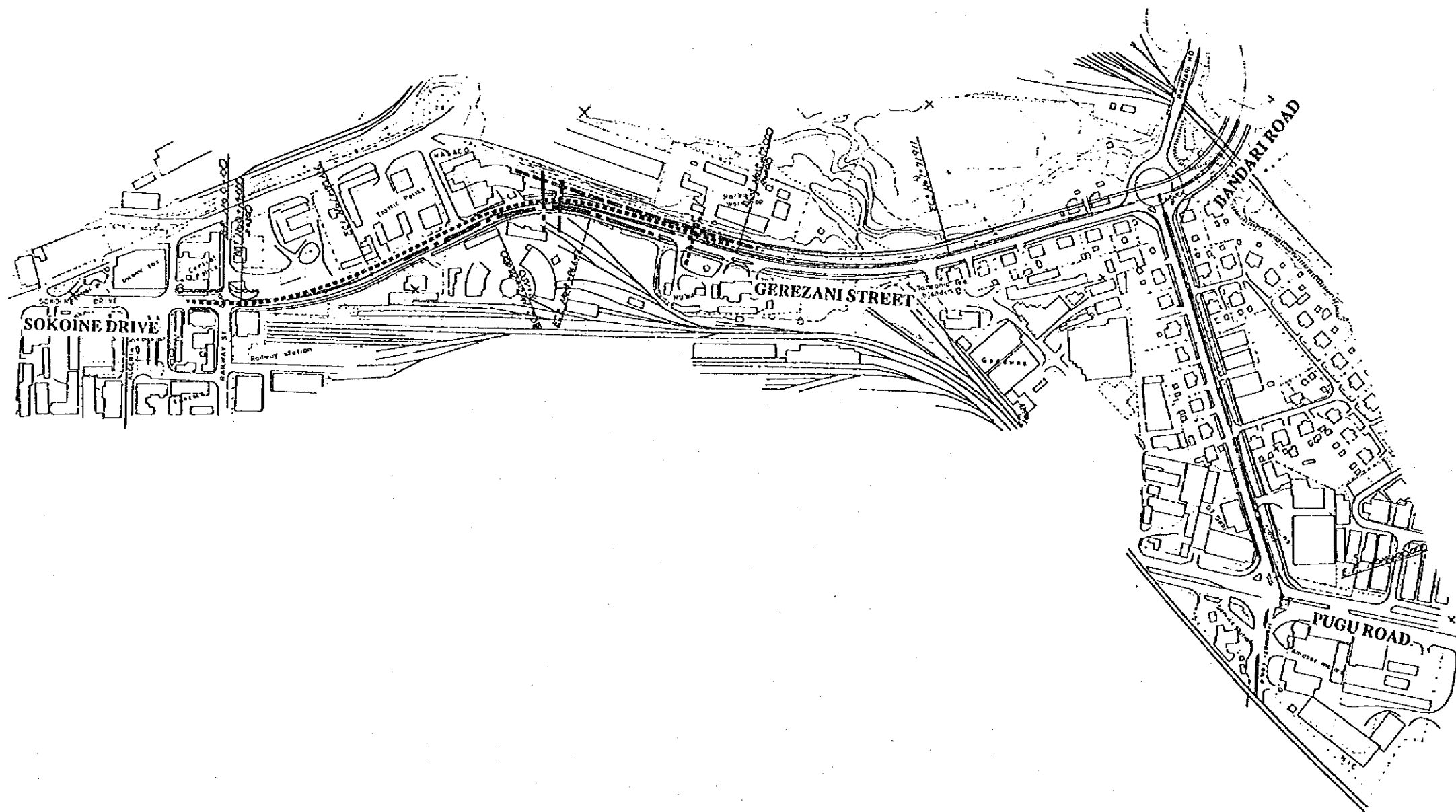
LEGEND

-----	WATER MAIN	598 m
-----	ELECTRIC LINE	590 m
-----	TELEPHONE CABLE	890 m

Kivukoni Front

LEGEND

-----	WATER MAIN	300 m
-----	ELECTRIC LINE	0 m
-----	TELEPHONE CABLE	25 m



**LEGEND**

.....	WATER MAIN	600 m
.....	ELECTRIC LINE	1,420 m
.....	TELEPHONE CABLE	1,700 m

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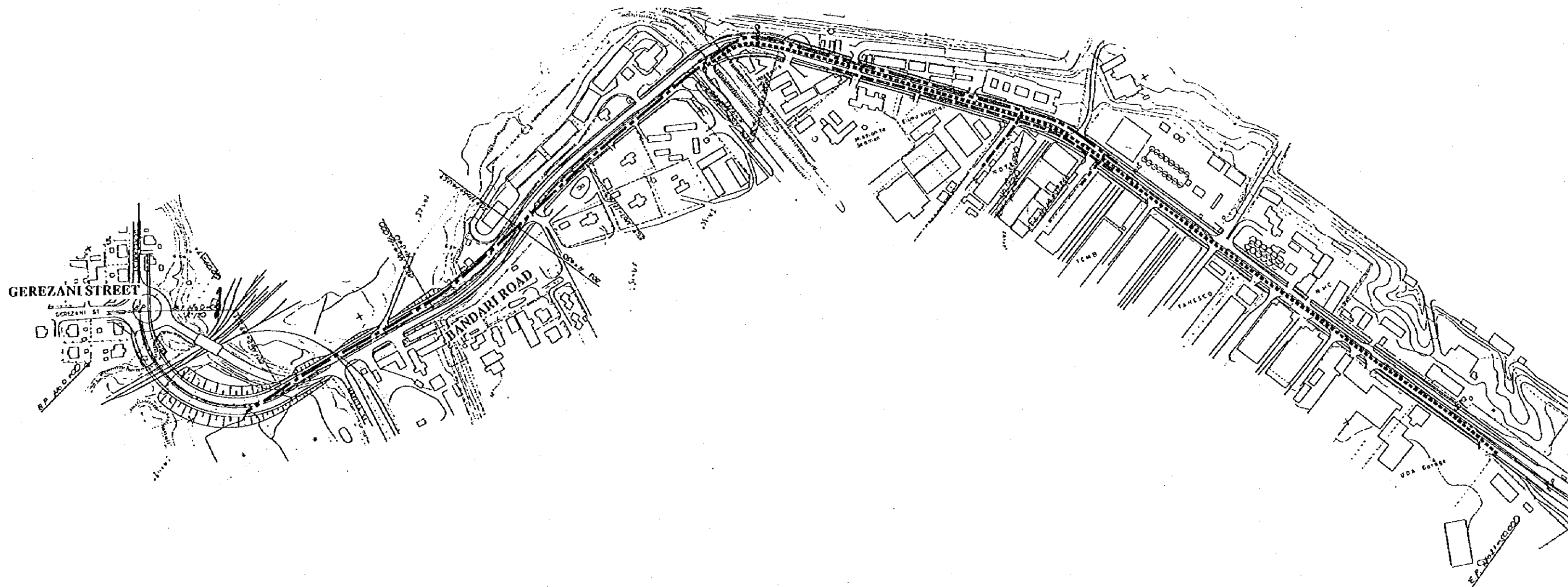
THE STUDY  
ON  
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JAPAN INTERNATIONAL  
COOPERATION AGENCY

GEREZANI STREET  
UNDERGROUND UTILITIES (4)

DATE	SHEET NO
MARCH 1995	107





**LEGEND**

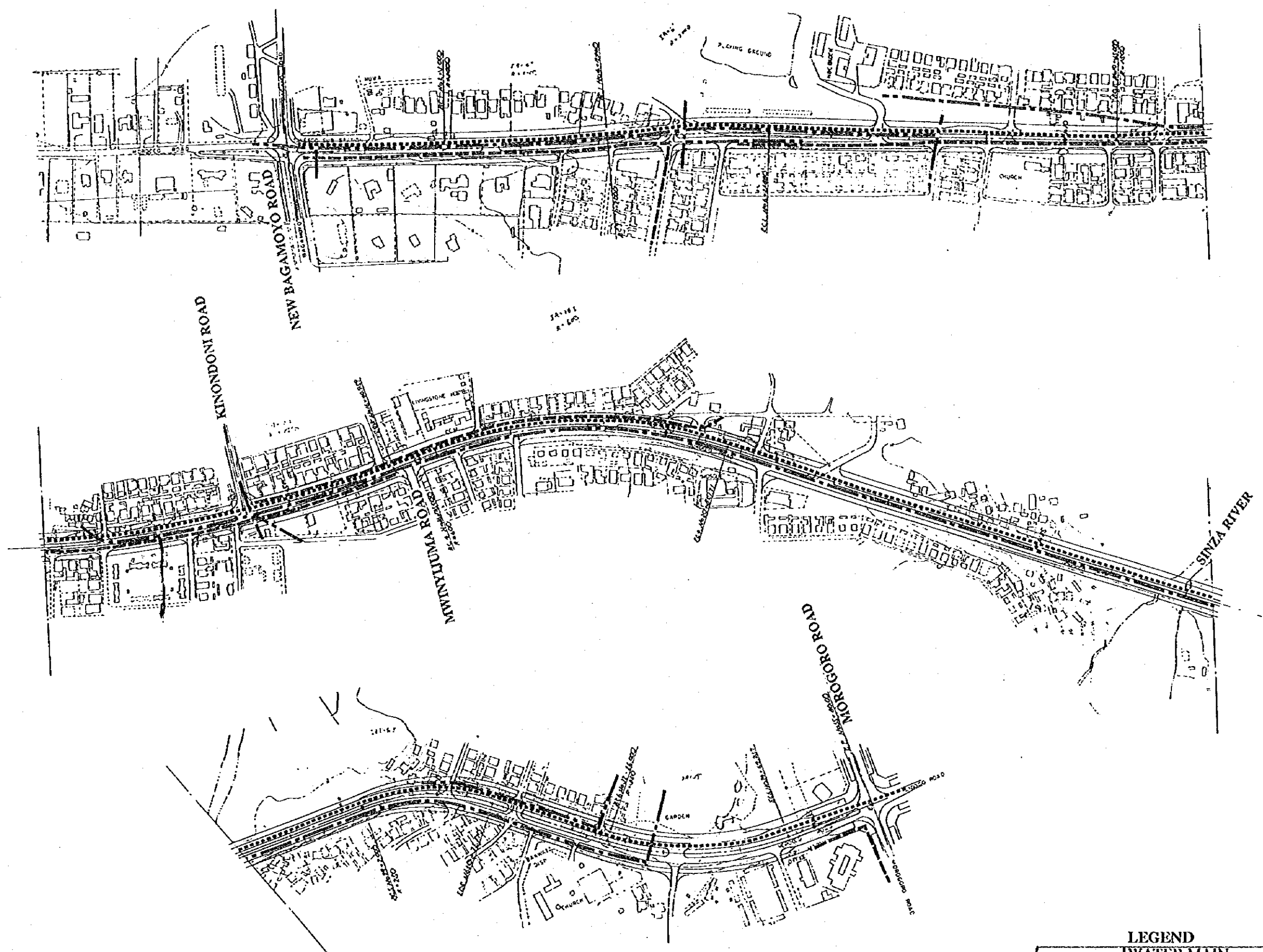
—————	WATER MAIN	1,200 m
-----	ELECTRIC LINE	1,380 m
.....	TELEPHONE CABLE	0 m

THE UNITED REPUBLIC OF TANZANIA  
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COOPERATION AGENCY

BANDARI ROAD	DATE	SHEET NO
UNDERGROUND UTILITIES (S)	MARCH 1995	108



**LEGEND**

-----	WATER MAIN	3,580 m
—————	ELECTRIC LINE	5,030 m
.....	TELEPHONE CABLE	2,200 m

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MINISTRY OF WORKS

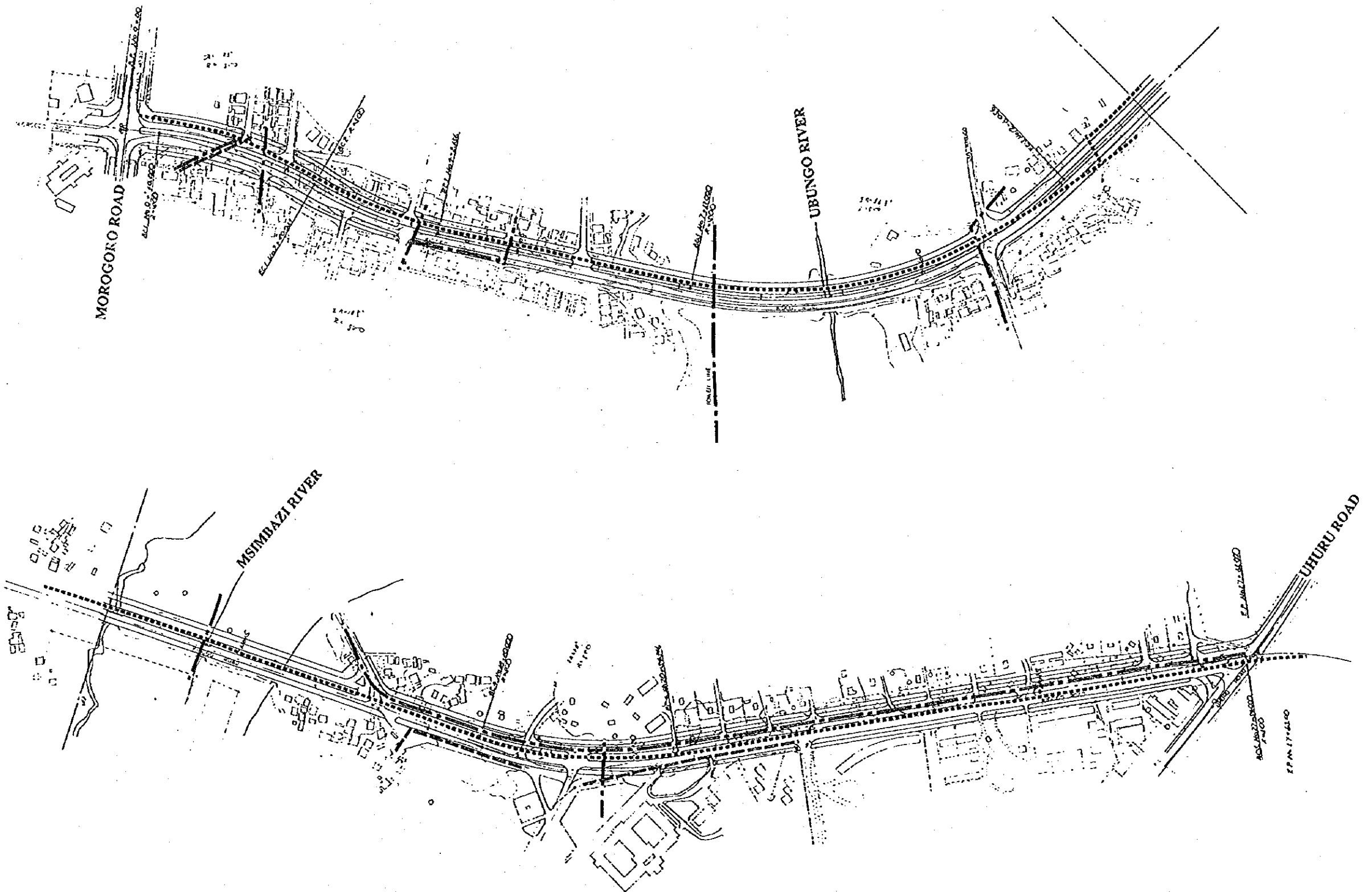
THE STUDY  
ON  
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MOROCCO ROAD  
UNDERGROUND UTILITIES (6)

DATE	SHEET NO
MARCH 1995	109





**LEGEND**

.....	WATER MAIN	2,760 m
.....	ELECTRIC LINE	1,550 m
.....	TELEPHONE CABLE	1,000 m

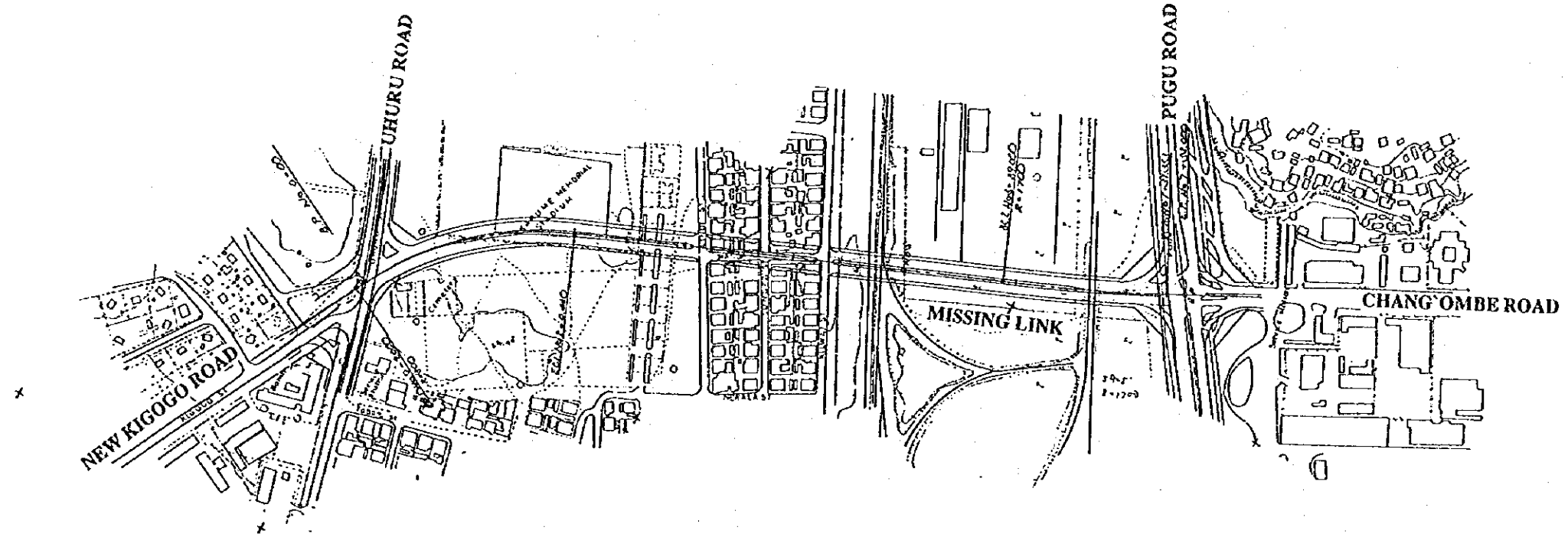
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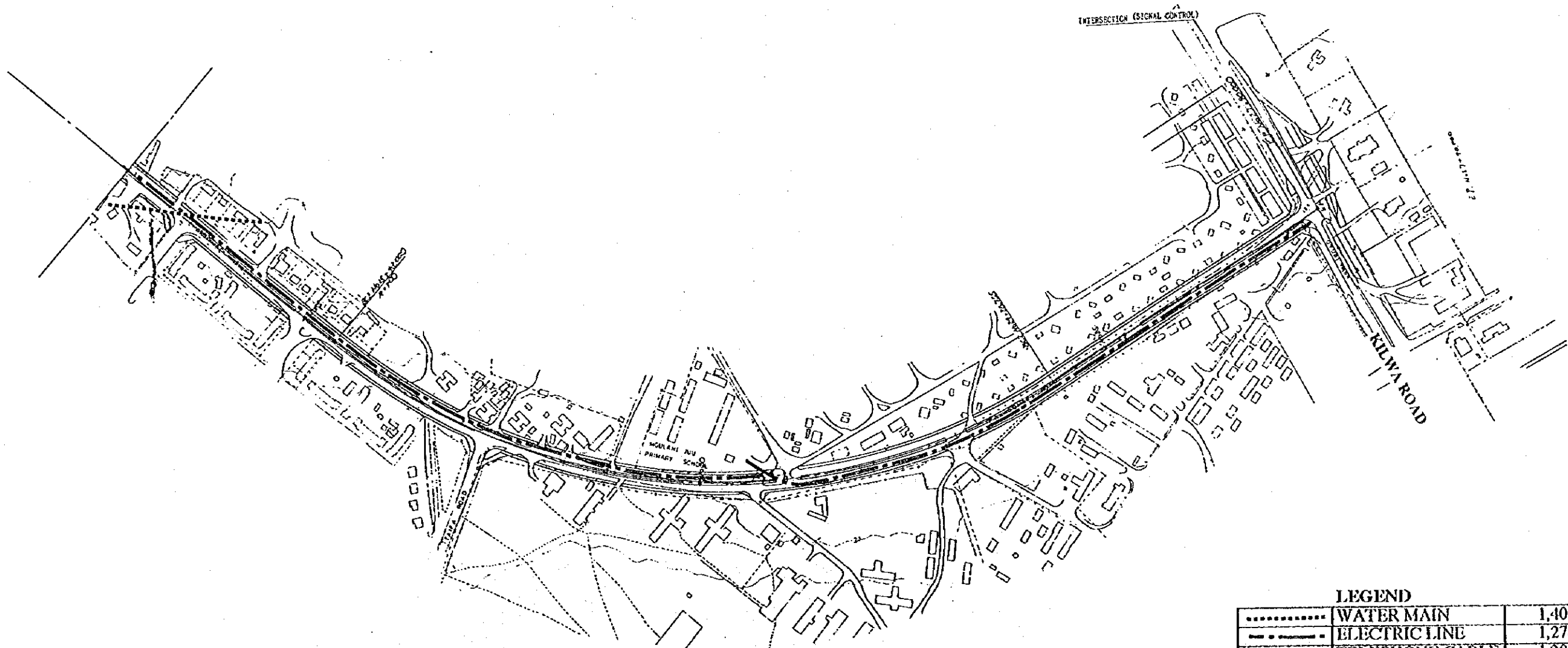
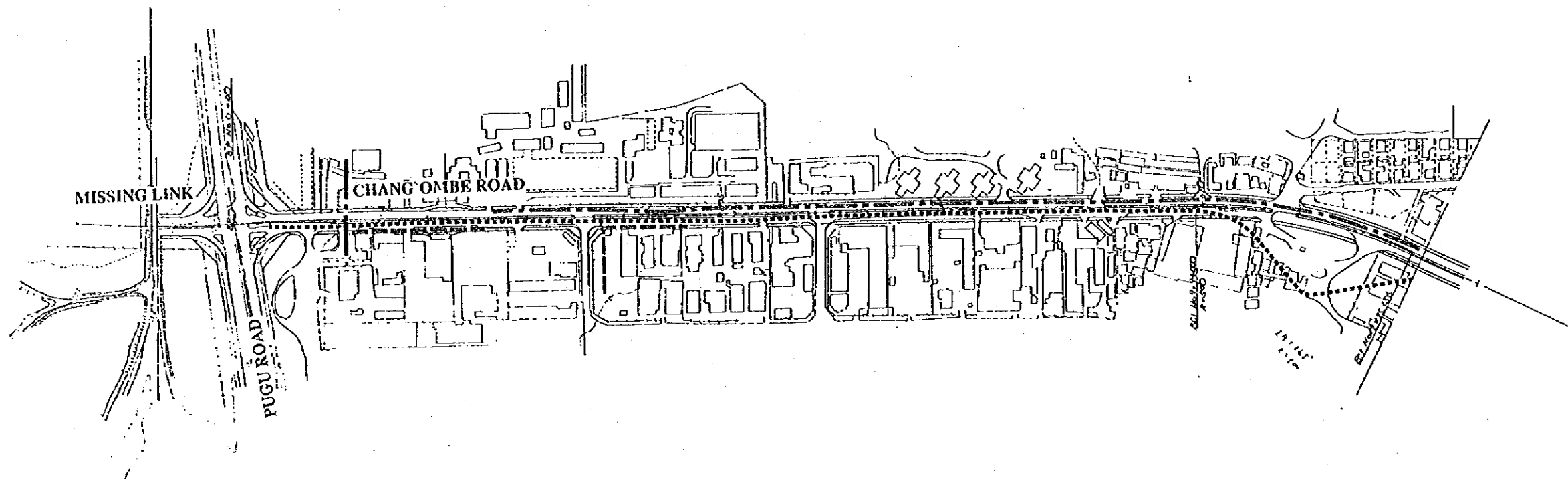
NEW KIGOGO ROAD  
UNDERGROUND UTILITIES (7)

DATE	SHEET NO
MARCH 1995	110



THE UNITED REPUBLIC OF TANZANIA MINISTRY OF WORKS	THE STUDY ON DAR ES SALAAM ROAD DEVELOPEMENT PLAN	JAPAN INTERNATIONAL COOPERATION AGENCY	MISSING LINK UNDERGROUND UTILITIES (8)	DATE MARCH 1995	SHEET NO 111
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**LEGEND**

.....	WATER MAIN	1,400 m
----	ELECTRIC LINE	1,278 m
----	TELEPHONE CABLE	1,300 m

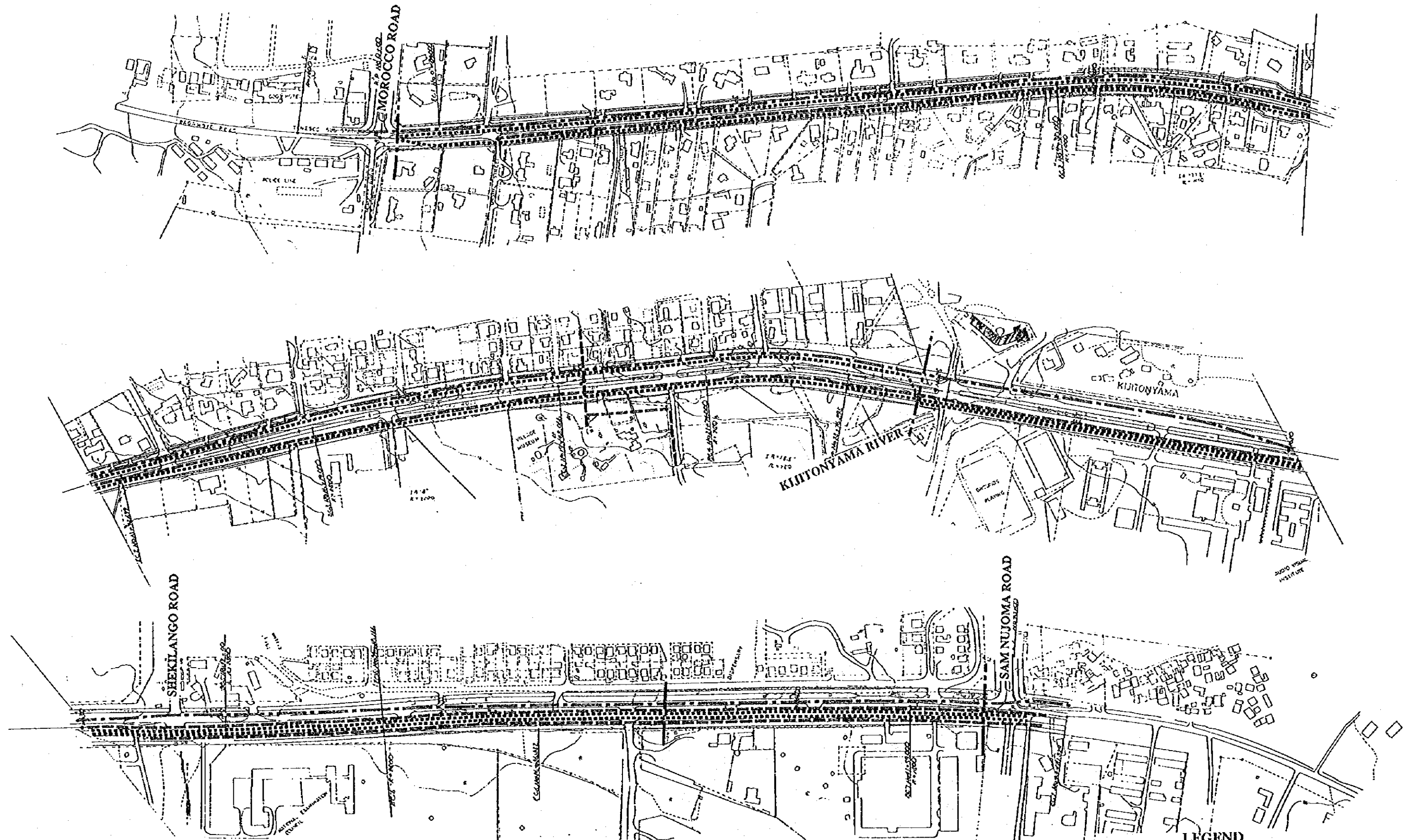
THE UNITED REPUBLIC OF TANZANIA  
MINISTRY OF WORKS

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JAPAN INTERNATIONAL  
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CHANG'OMBE ROAD  
UNDERGROUND UTILITIES (9)

DATE	SHEET NO
MARCH 1995	112



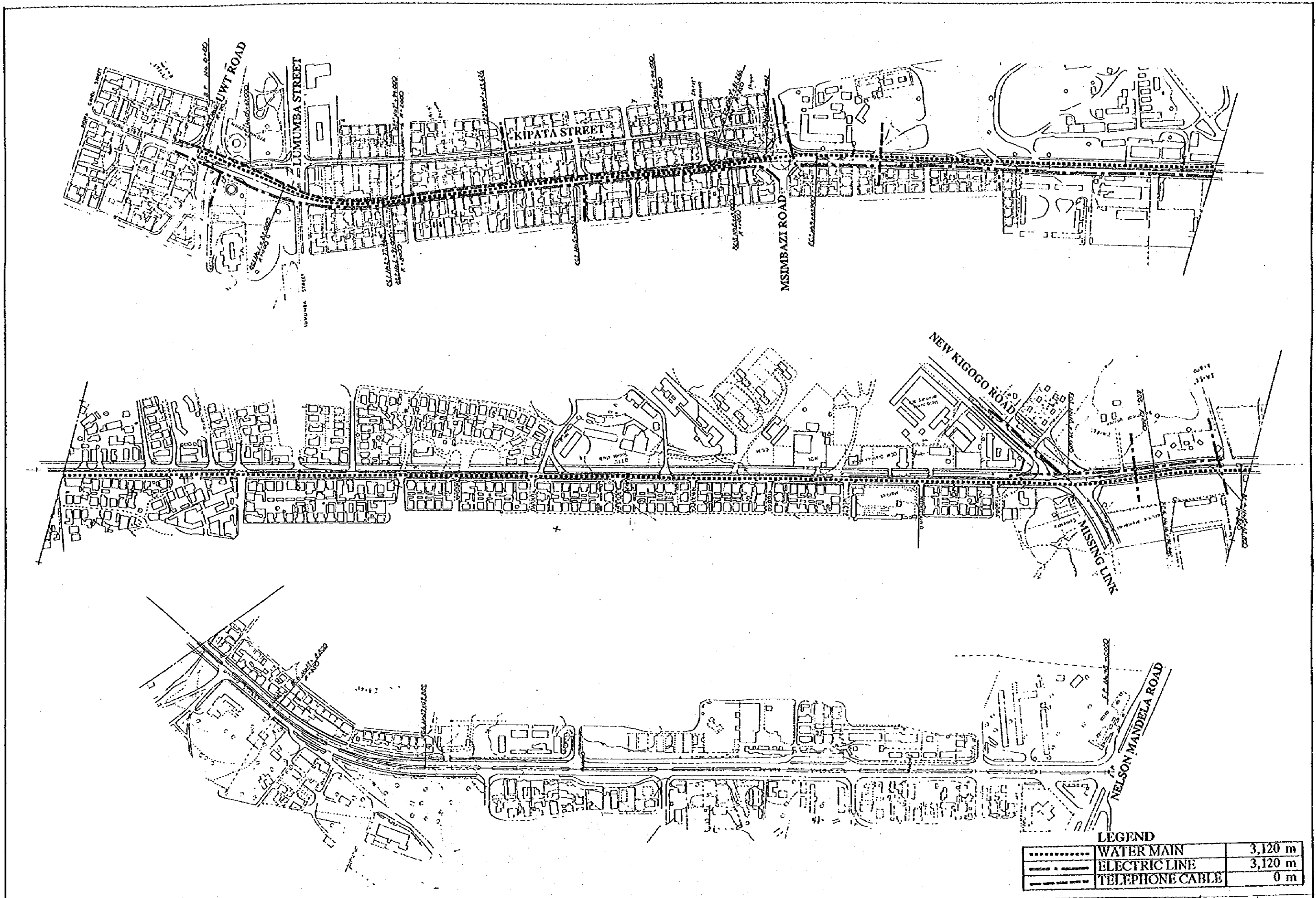
LEGEND		
.....	WATER MAIN	8,600 m
-----	ELECTRIC LINE	4,500 m
-----	TELEPHONE CABLE	4,400 m

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NEW BAGAMOYO ROAD	DATE	SHEET NO
UNDERGROUND UTILITIES (10)	MARCH 1993	113



**LEGEND**

-----	WATER MAIN	3,120 m
—————	ELECTRIC LINE	3,120 m
.....	TELEPHONE CABLE	0 m

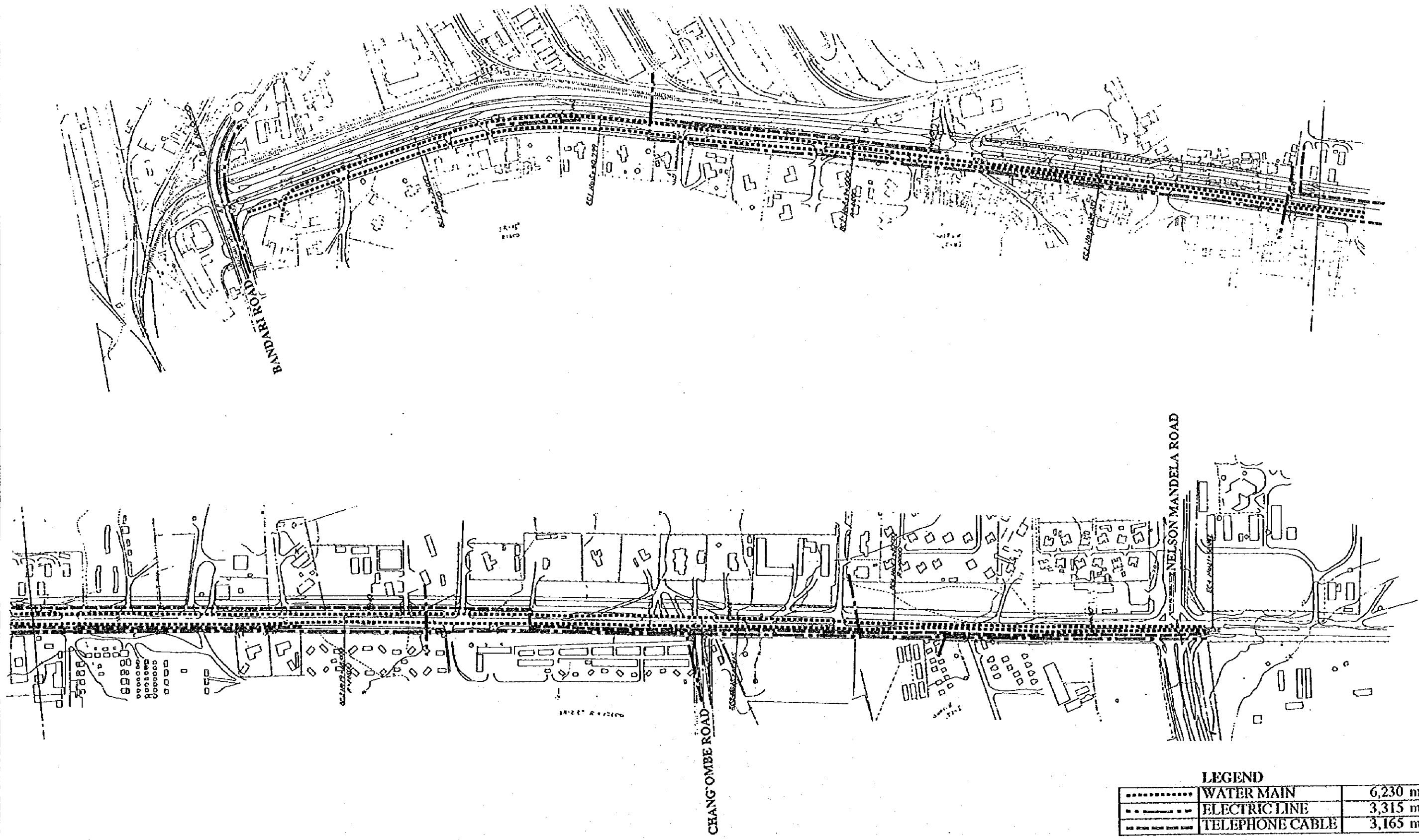
THE UNITED REPUBLIC OF TANZANIA  
MINISTRY OF WORKS

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JAPAN INTERNATIONAL  
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UHURU ROAD	DATE	SHEET NO
UNDERGROUND UTILITIES (II)	MARCH 1993	114





**LEGEND**

-----	WATER MAIN	6,230 m
----	ELECTRIC LINE	3,315 m
.....	TELEPHONE CABLE	3,165 m

THE UNITED REPUBLIC OF TANZANIA MINISTRY OF WORKS	THE STUDY ON DARES SALAAM ROAD DEVELOPEMENT PLAN	JAPAN INTERNATIONAL COOPERATION AGENCY	KILWA ROAD	DATE	SHEET NO
			UNDERGROUND UTILITIES (12)	MARCH 1995	115