

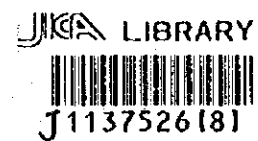
JAPAN INTERNATIONAL COOPERATION AGENCY

HANOI PEOPLE'S COMMITTEE
SOCIALIST REPUBLIC OF VIET NAM

THE MASTER PLAN OF URBAN TRANSPORT
FOR HANOI CITY
IN VIET NAM

FEASIBILITY STUDY
ON
NEW CBD DEVELOPMENT PROJECTS

DRAWINGS



JANUARY 1997

YACHIYO ENGINEERING CO.LTD
KATAHIRA & ENGINEERS INTERNATIONAL

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96-149

JAPAN INTERNATIONAL COOPERATION AGENCY

**HANOI PEOPLE'S COMMITTEE
SOCIALIST REPUBLIC OF VIET NAM**

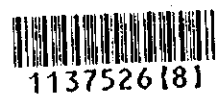
**THE MASTER PLAN OF URBAN TRANSPORT
FOR HANOI CITY
IN VIET NAM**

**FEASIBILITY STUDY
ON
NEW CBD DEVELOPMENT PROJECTS**

DRAWINGS

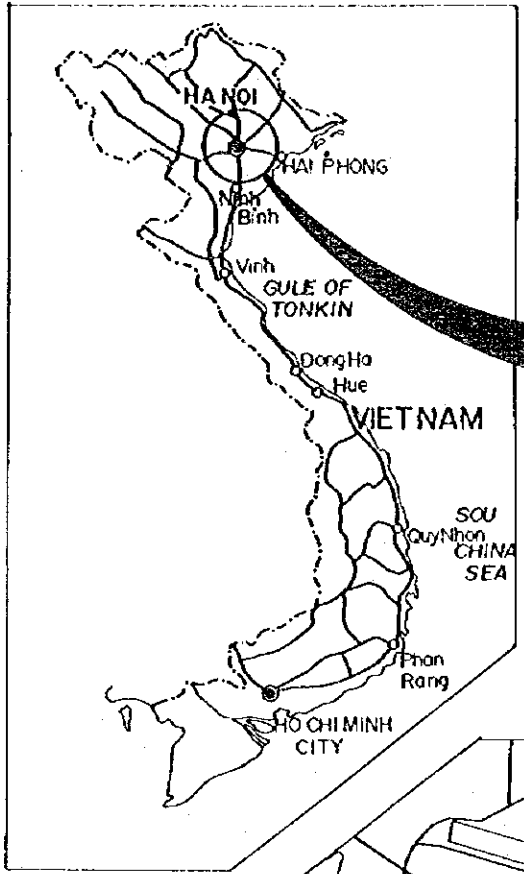
JANUARY 1997

**YACHIYO ENGINEERING CO.LTD
KATAHIRA & ENGINEERS INTERNATIONAL**

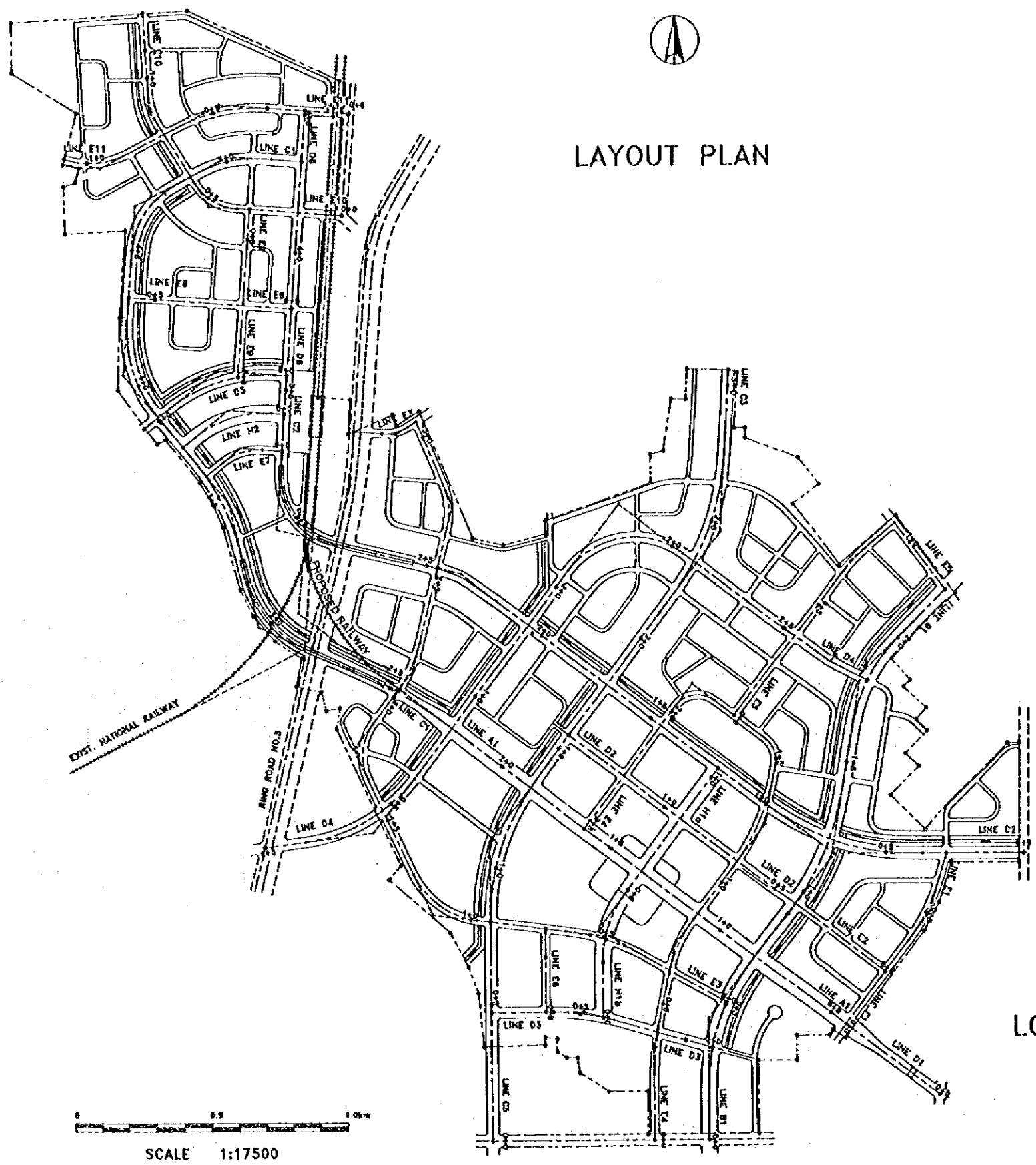


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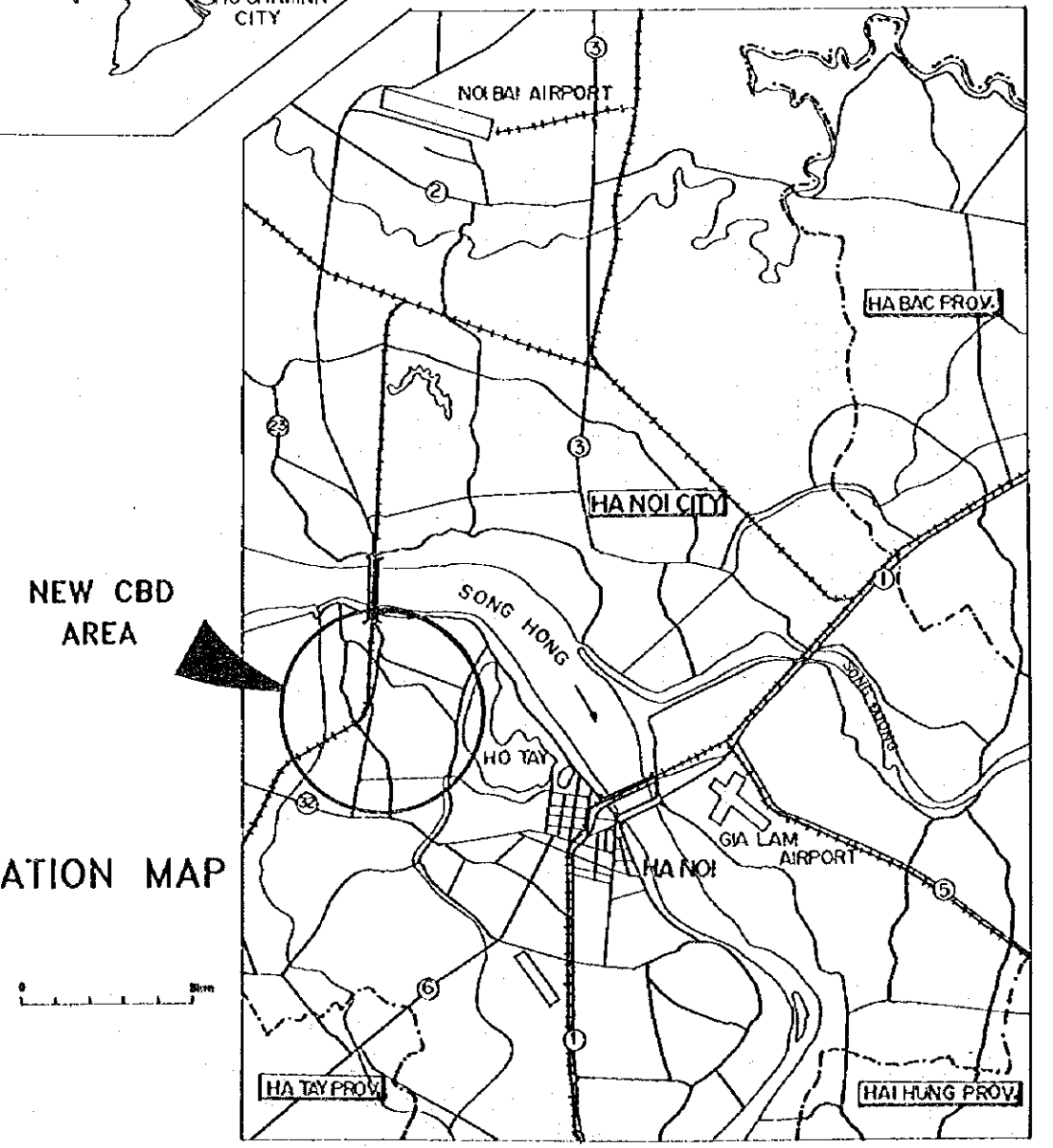
SOCIALIST REPUBLIC OF VIETNAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
LOCATION MAP OF NEW CBD	AS SHOWN	



LAYOUT PLAN



LOCATION MAP



ABBREVIATIONS

A	PARAMETER OF CLOTHOID	m ² (OR SQM)	SQUARE METER
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	MAX.	MAXIMUM
ABUT	ABUTMENT	MIN.	MINIMUM
AC	ASPHALT CONCRETE	MISC	MISCELLANEOUS
AH	AHEAD	MM	MILLIMETER
APPROX	APPROXIMATE	MO	MIDDLE ORDINATE
ASTM	AMERICAN STANDARD FOR TESTING AND MATERIALS	MONT	MONUMENT
AVG	AVERAGE	MSL	MEAN SEA LEVEL
AZIM(OR AZ)	AZIMUTH	N	NORTHING
BK	BACK	NC	NORMAL CROWN
BM	BENCH MARK	No.	NUMBER
BP	BEGINNING POINT	NTS	NOT TO SCALE
BRDG(OR BR.)	BRIDGE	PCC	PORTLAND CEMENT CONCRETE
CB	CATCH BASIN	PC	POINT OF CURVATURE
C/C(OR C TO C)	CENTER TO CENTER	PI	POINT OF HORIZONTAL INTERSECTION
CL	CLEARANCE	POT	POINT ON TANGENT
cm	CENTIMETER	PT	POINT OF TANGENT
cm ²	SQUARE CENTIMETER	R	RADIUS
CONC.	CONCRETE	RC	REINFORCED CONCRETE
CS	CURVE TO SPIRAL(CLOTHOID)	RCB	REINFORCED CONCRETE BOX
CUM(OR m ³)	CUBIC METER	RCP	REINFORCED CONCRETE PIPE
DIA.Ø	DIAMETER	ROW(OR R/W)	RIGHT OF WAY
DIST	DISTANCE	S	SCALE OR SLOPE
DL	DATUM LINE	SC	SPIRAL(CLOTHOID) TO CURVE
DWG.	DRAWING	SEC(OR Sec)	SECANT LENGTH
e(OR SE)	FULL SUPERELEVATION IN PERCENT	SP	SPAN
E	EXTERNAL DISTANCE OF SIMPLE CURVE OR EASTING	S.R.	SIDE ROAD
EL.(OR ELEV.)	ELEVATION	ST	SPIRAL(CLOTHOID) TO TANGENT
EP	END POINT	STA	STATION
EQ.(OR=)	EQUATION OR EQUAL	STD	STANDARD
EXIST.	EXISTING	STR	STRAIGHT
EXC	EXCAVATION	S/W	SIDE WALK
EXP	EXPANSION	T	TANGENT LENGTH OF SIMPLE CURVE
FG	FINISHED GRADE	Th.(OR t)	THICKNESS
g	GRADE IN PERCENT	TS	TANGENT TO SPIRAL(CLOTHOID)
HOR.	HORIZONTAL	TR	TRANSVERSE
HDWL	HEADWALL	TYP	TYPICAL
HWL	HIGH WATER LEVEL	V(OR VERT.)	VERTICAL
JT	JOINT	VAR	VARIABLE
KG	KILOGRAM	VCL	VERTICAL CURVE LENGTH
KM(OR Km)	KILOMETER	VCR	VERTICAL CURVE RADIUS
KPH(OR Km/hr)	KILOMETER PER HOUR	VPI	POINT OF VERTICAL INTERSECTION
L	LENGTH OF HORIZONTAL CURVE, LENGTH	w	WIDENING
LEV	LEVEL	W	WIDTH
LM	LINEAR METER	C(OR c)	CENTERLINE
LT	LEFT	X	PERCENT
LWL	LOW WATER LEVEL	&	AND
m	METER	Ø	SPACING

SYMBOLS

	PROPOSED ROAD		INDIVIDUAL TREE
	EXIST. OR PLANNING ROAD		BRICK HOUSE 1 STORY
	PROJECT LIMIT		BRICK HOUSE 2,3 STORIES
	RAILWAY		WIRE FENCE
	NATIONAL HIGHWAY		BRICK WALL
	RIVER		WELL
	WATERWAY, DITCH		POND AND LAKE
	BRIDGE, VIADUCT		IRRIGATION CANAL
	HIGH WATER LEVEL		CEMETERY
	SLOPE		ELECTRICITY TRANSFER STATION
	BORE HOLE		ELECTRICITY POST
	SKEW REFERENCE (SKEW LT,RT FORWARD)		GROUND CONTROL POINT

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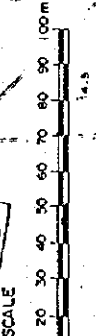
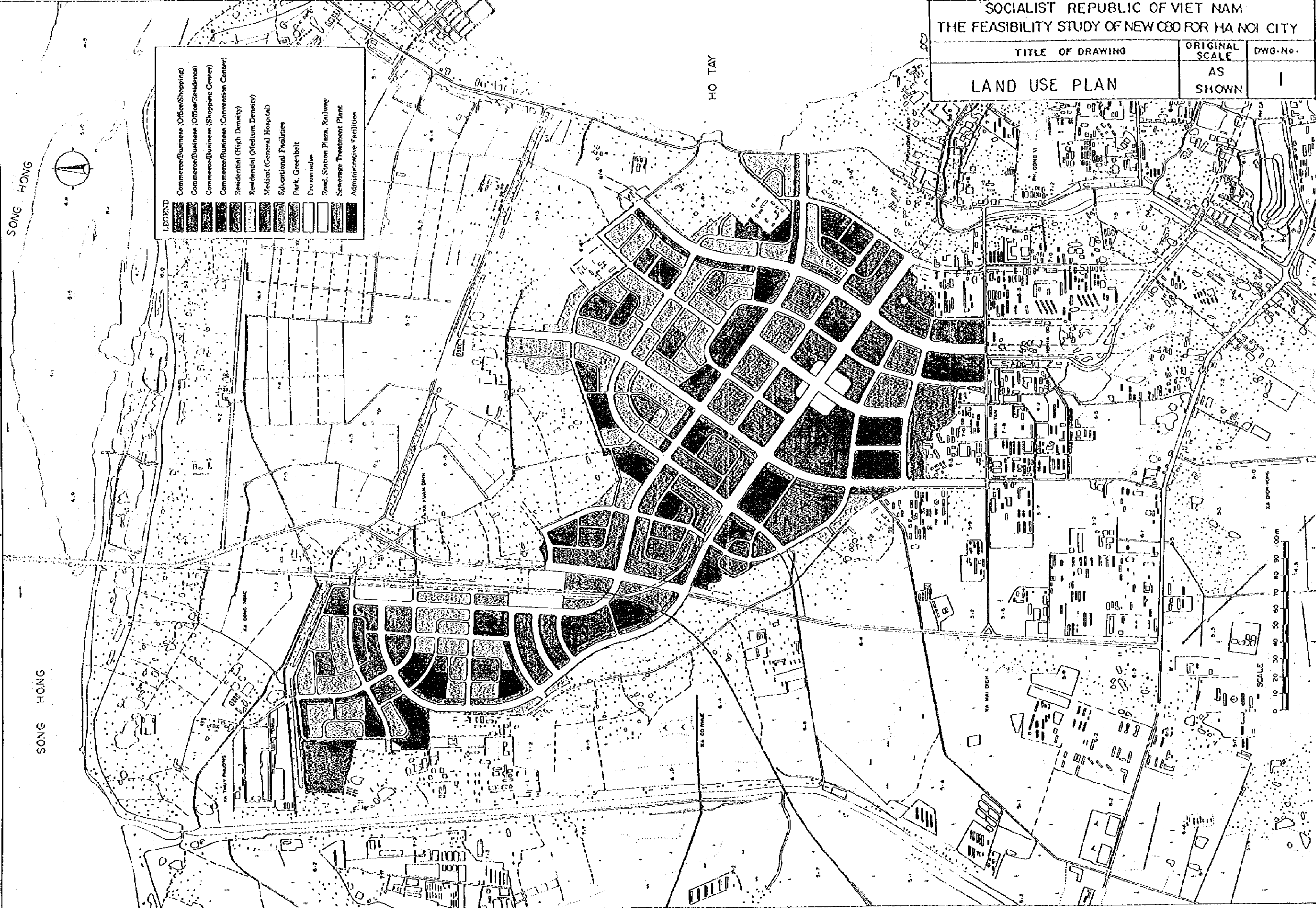
I. LAND USE

SOCIALIST REPUBLIC OF VIET NAM
THE FEASIBILITY STUDY OF NEW CBD FOR HA NOI CITY

TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
LAND USE PLAN	AS SHOWN	1

LEGEND

- Commerce/Business (Office/Shopping)
- Commerce/Business (Office/Residence)
- Commerce/Business (Shopping Center)
- Commerce/Business (Convention Center)
- Residential (High Density)
- Residential (Medium Density)
- Medical (General Hospital)
- Educational Facilities
- Park, Greenbelt
- Promenade
- Road, Station Plaza, Railway
- Sewerage Treatment Plant
- Administrative Facilities



SONG HONG

SONG HONG

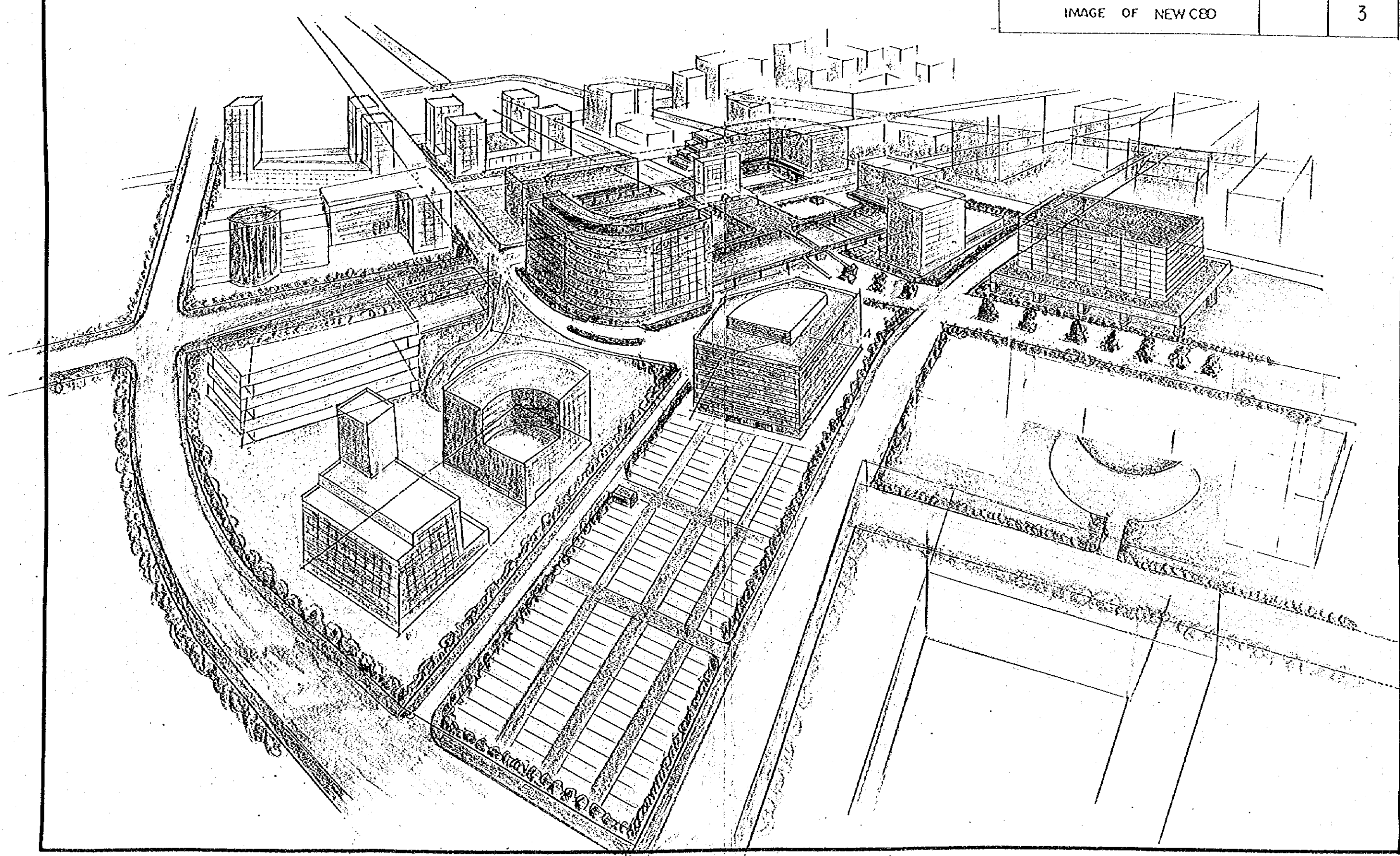
HO TAY

SOCIALIST REPUBLIC OF VIET NAM
THE FEASIBILITY STUDY OF NEW CBD FOR HA NOI CITY

TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
POSITION OF IMAGE	AS SHOWN	2

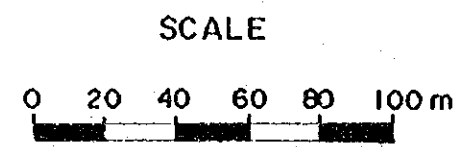
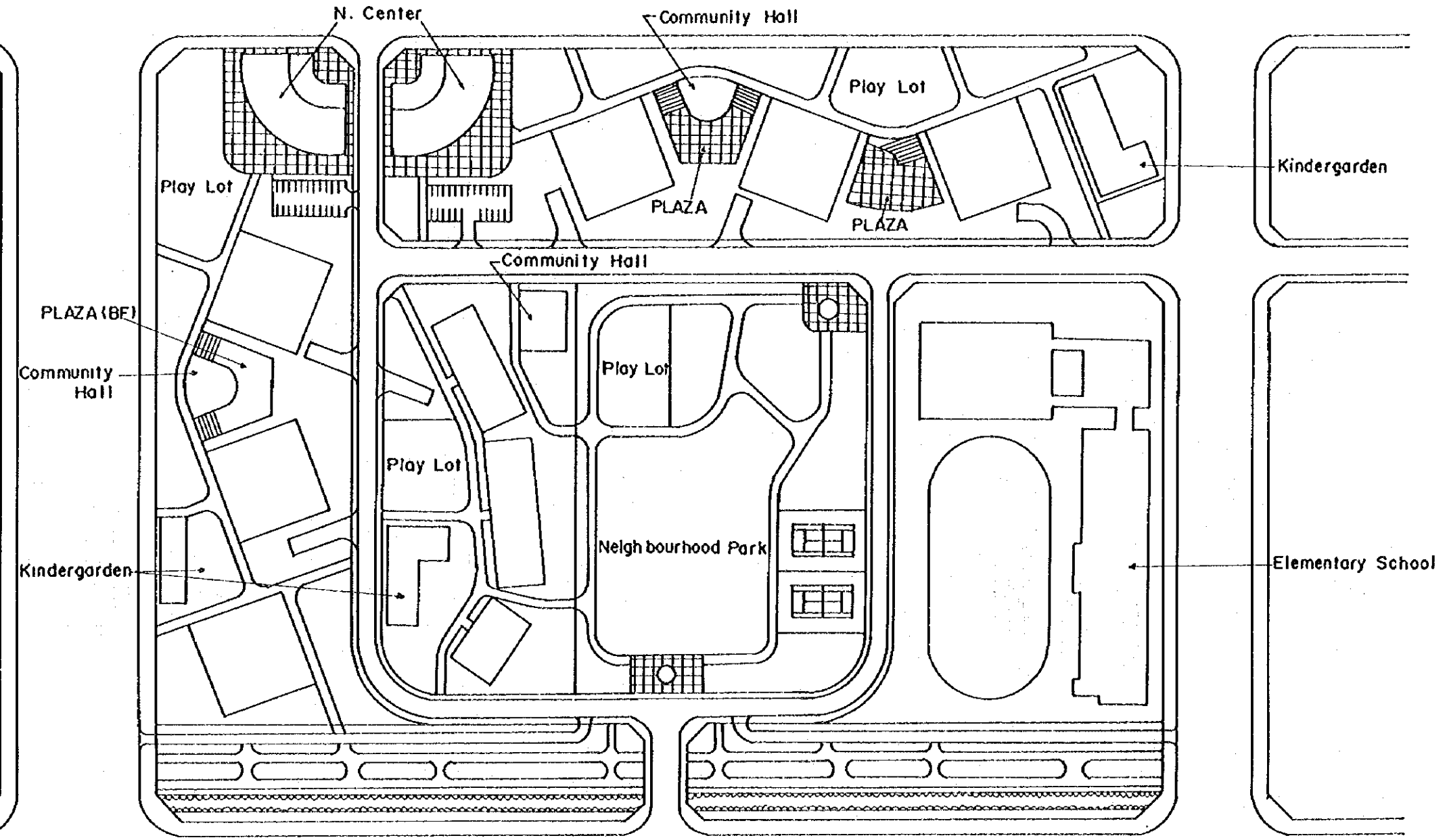


SOCIALIST REPUBLIC OF VIET NAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG.No.
IMAGE OF NEW CBD		3

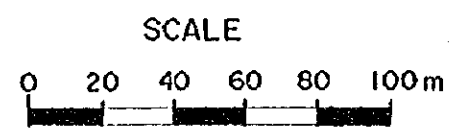
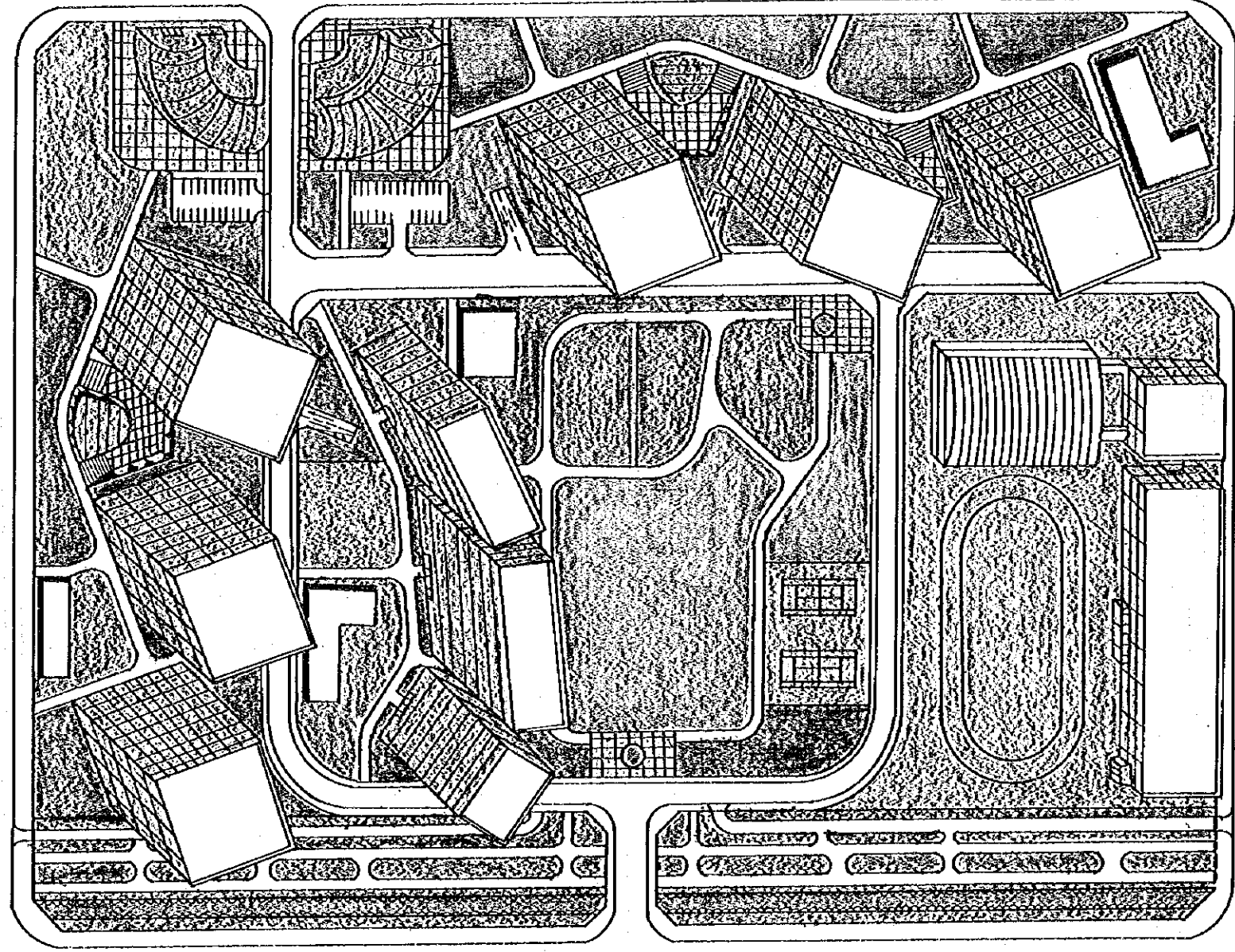


SOCIALIST REPUBLIC OF VIET NAM
 THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY

TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
IMAGE OF NEIGHBOURHOOD (HIGH DENSITY) (1)	AS SHOWN	4

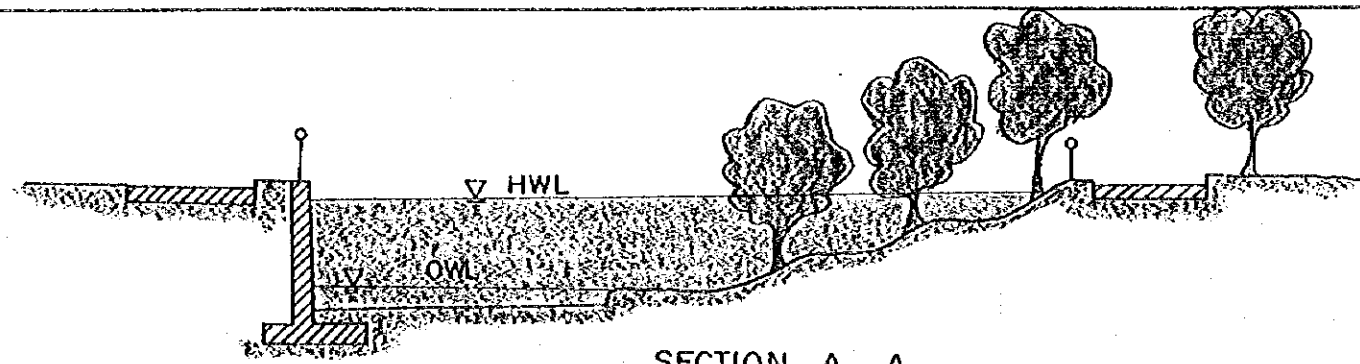


SOCIALIST REPUBLIC OF VIET NAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HA NOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG.No.
IMAGE OF NEIGHBOURHOOD (HIGH DENSITY) (2)	AS SHOWN	5



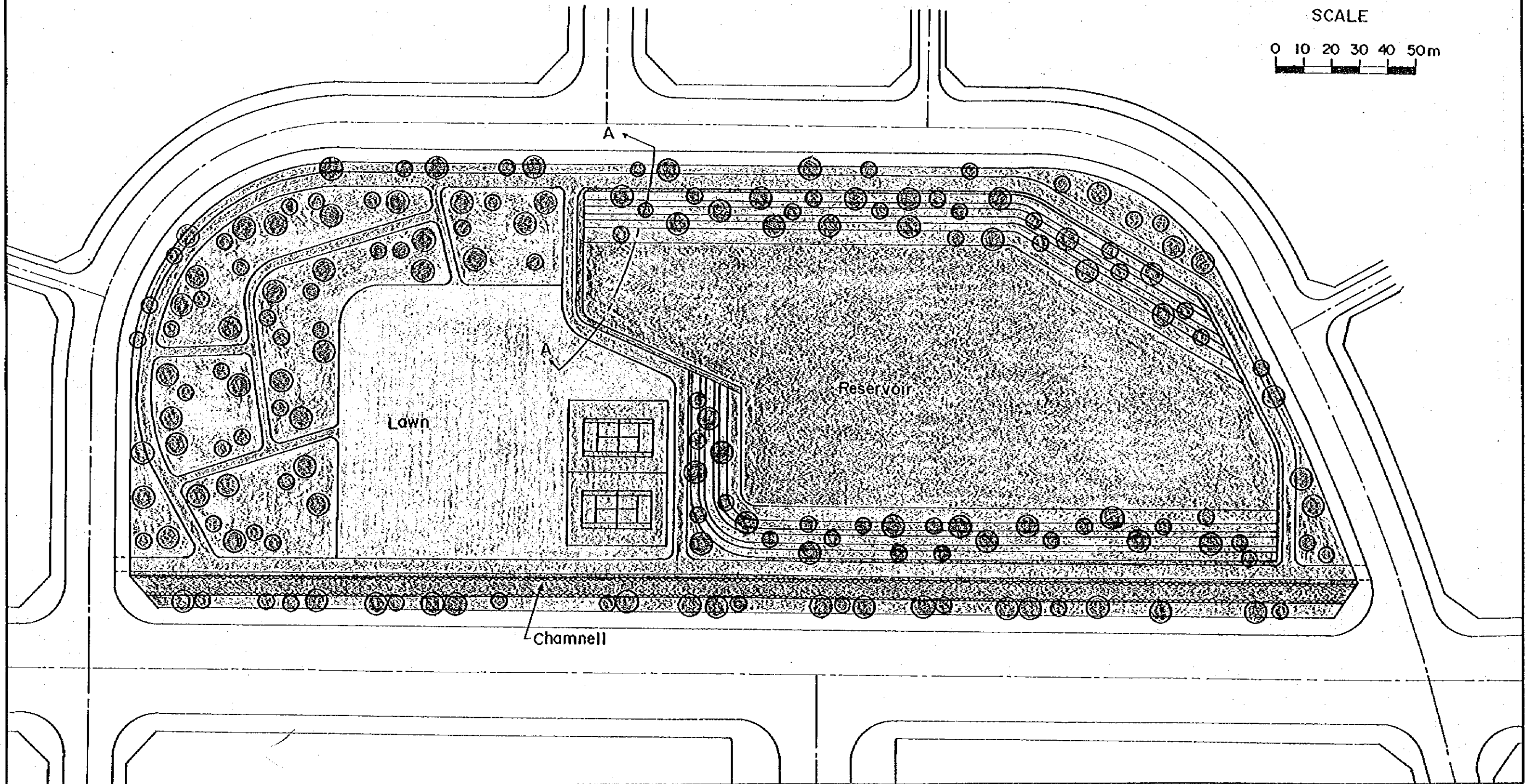
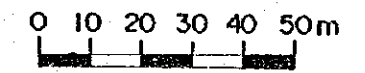
SOCIALIST REPUBLIC OF VIET NAM
 THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY

TITLE OF DRAWING	ORIGINAL SCALE	DWG.No.
IMAGE OF DISTRICT PARK (2)	AS SHOWN	6



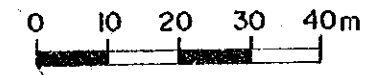
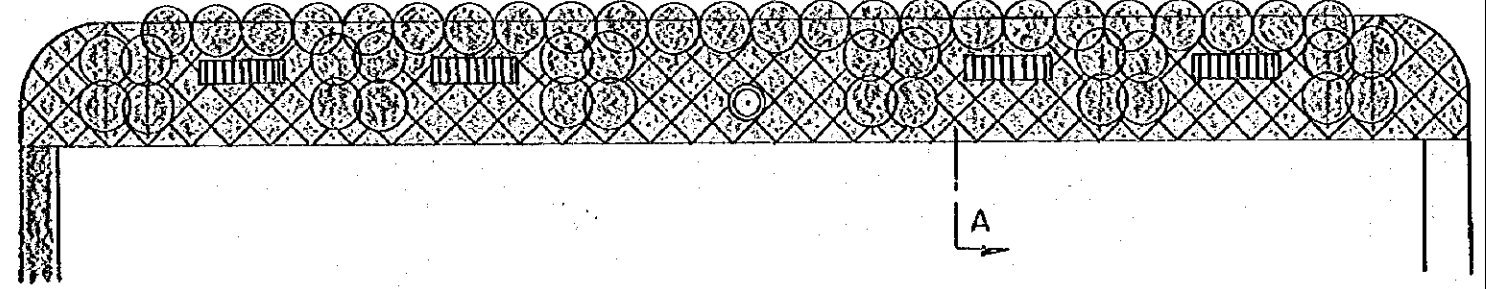
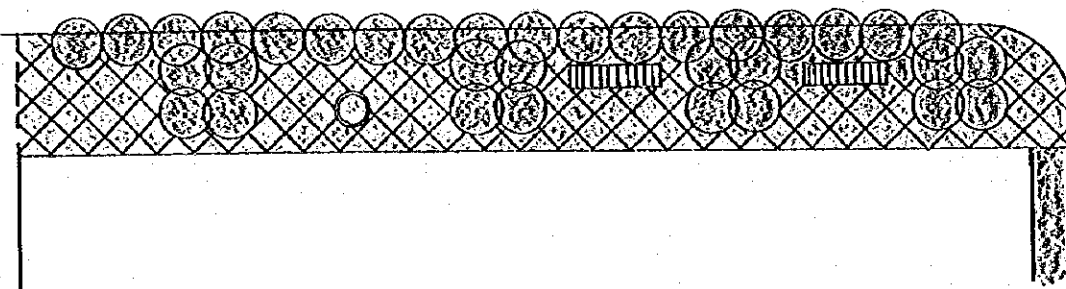
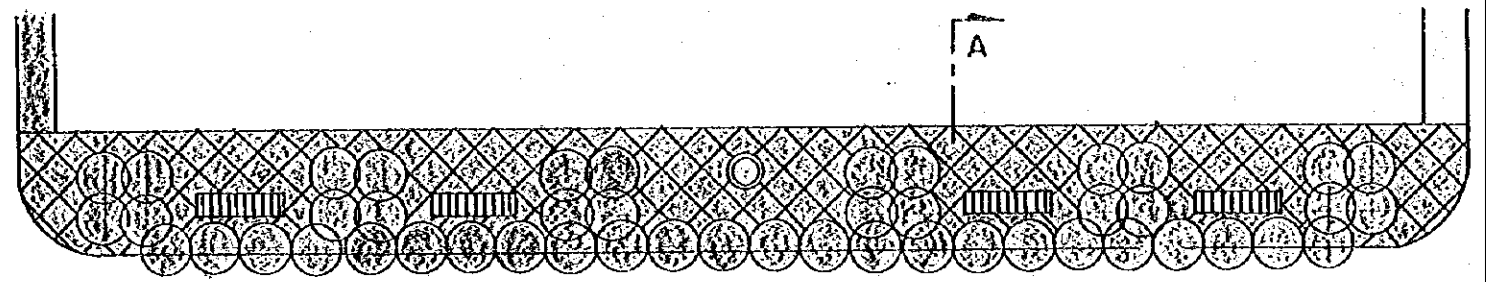
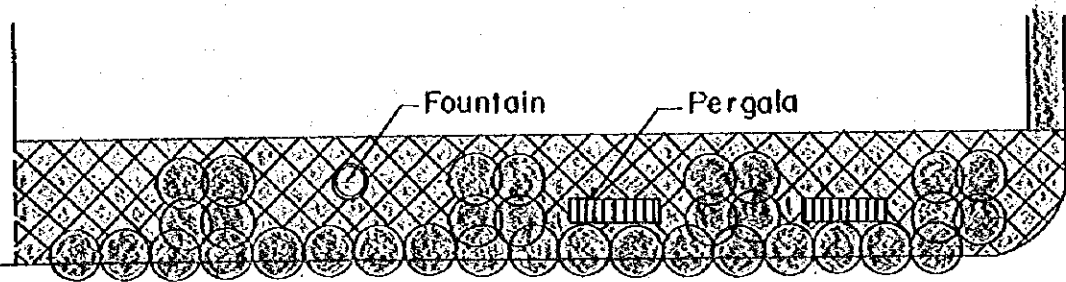
SECTION A - A

SCALE

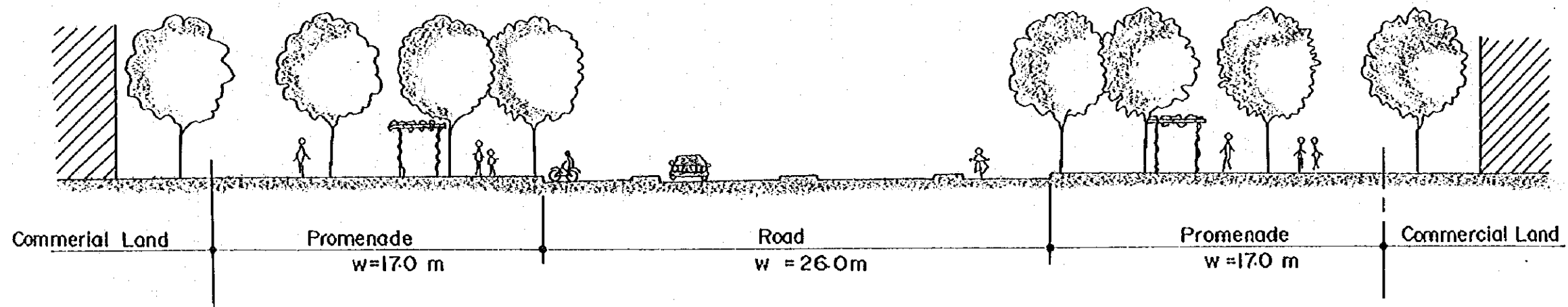


SOCIALIST REPUBLIC OF VIET NAM
 THE FEASIBILITY STUDY OF NEW CBD FOR HA NOI CITY

TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
IMAGE OF PROMENADE (1)	AS SHOWN	7

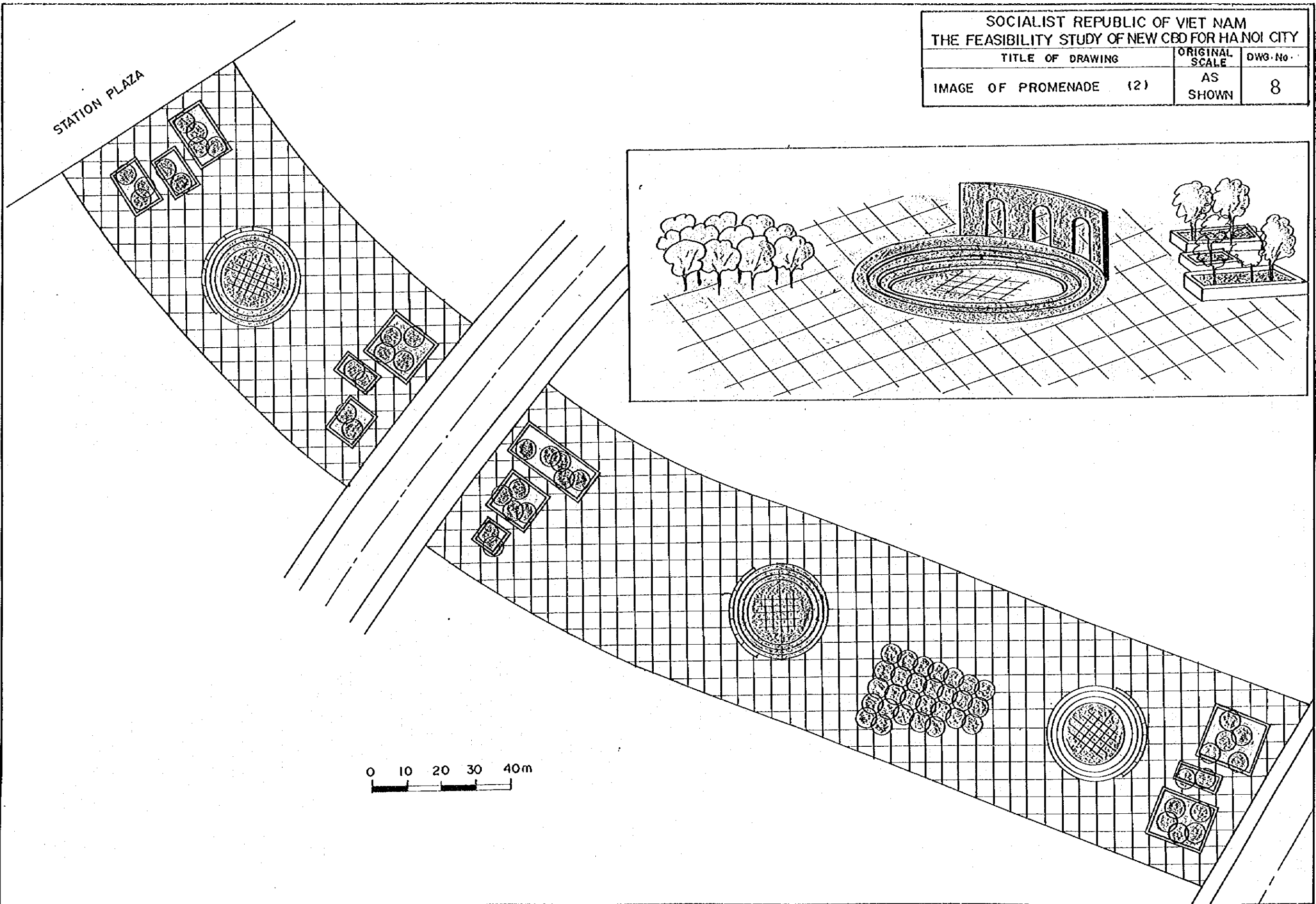
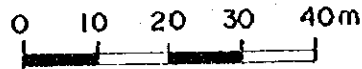
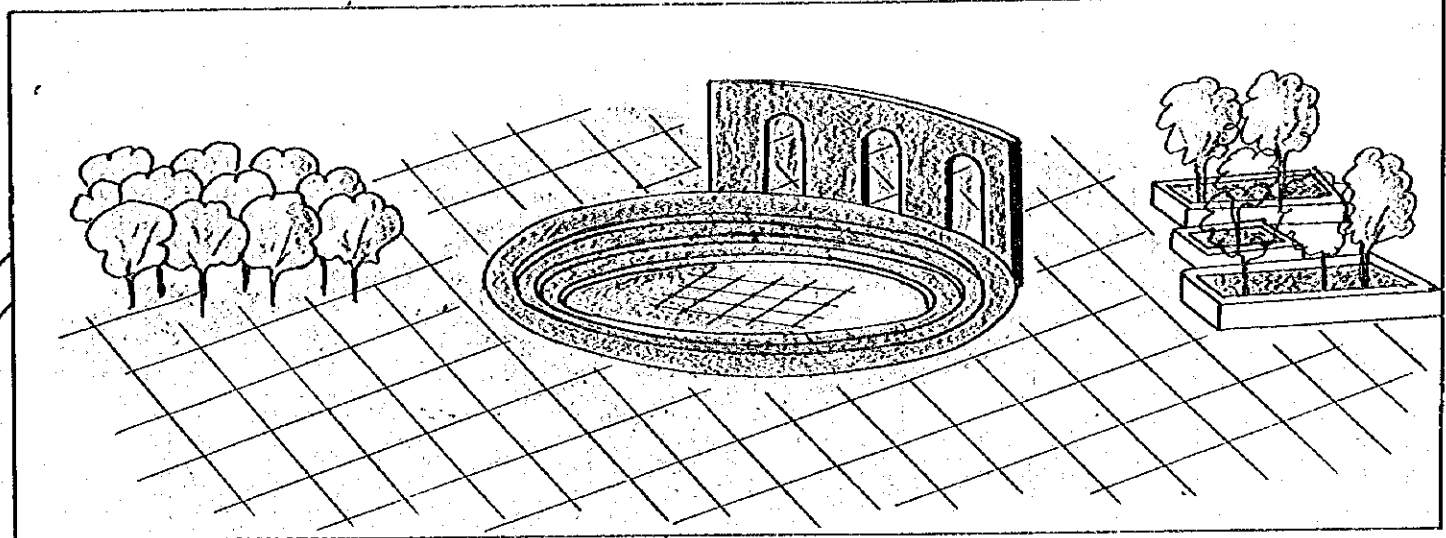


CROSS SECTION A-A

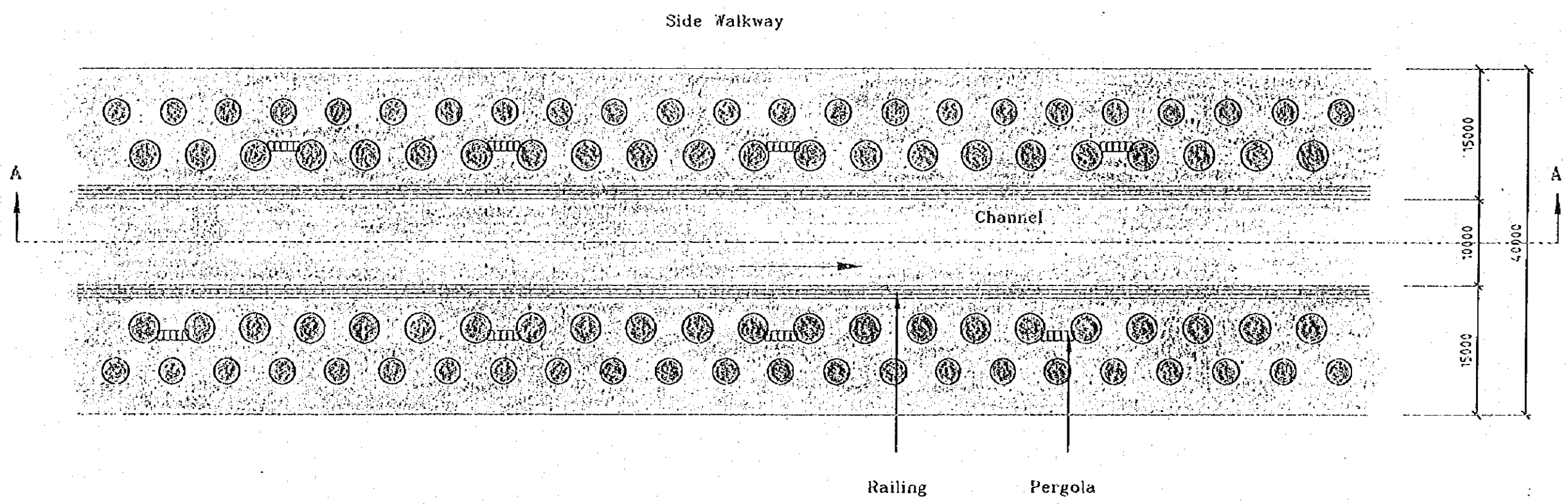


SOCIALIST REPUBLIC OF VIET NAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
IMAGE OF PROMENADE (2)	AS SHOWN	8

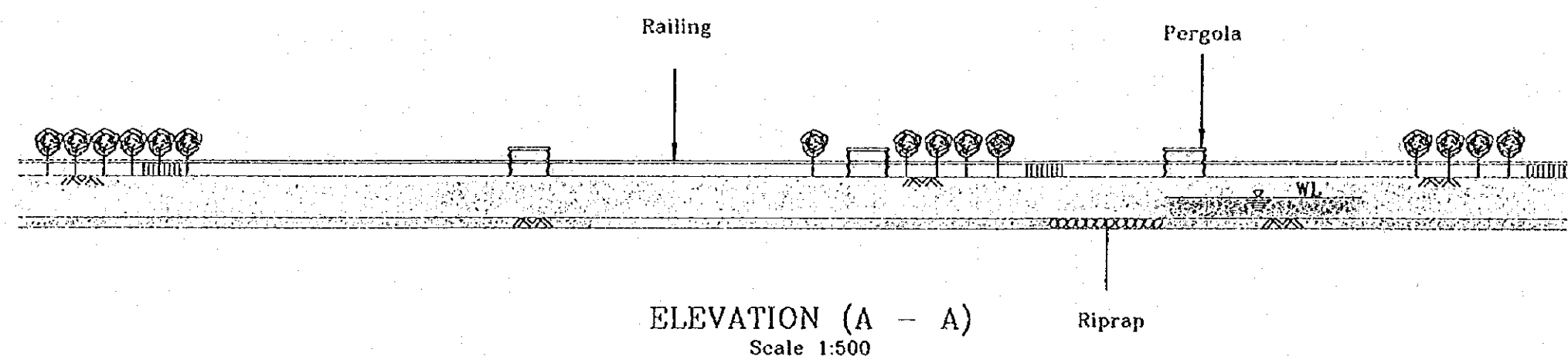
STATION PLAZA



SOCIALIST REPUBLIC OF VIET NAM		
THE FEASIBILITY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No
Green belt (Plan and Profile)	AS SHOWN	9

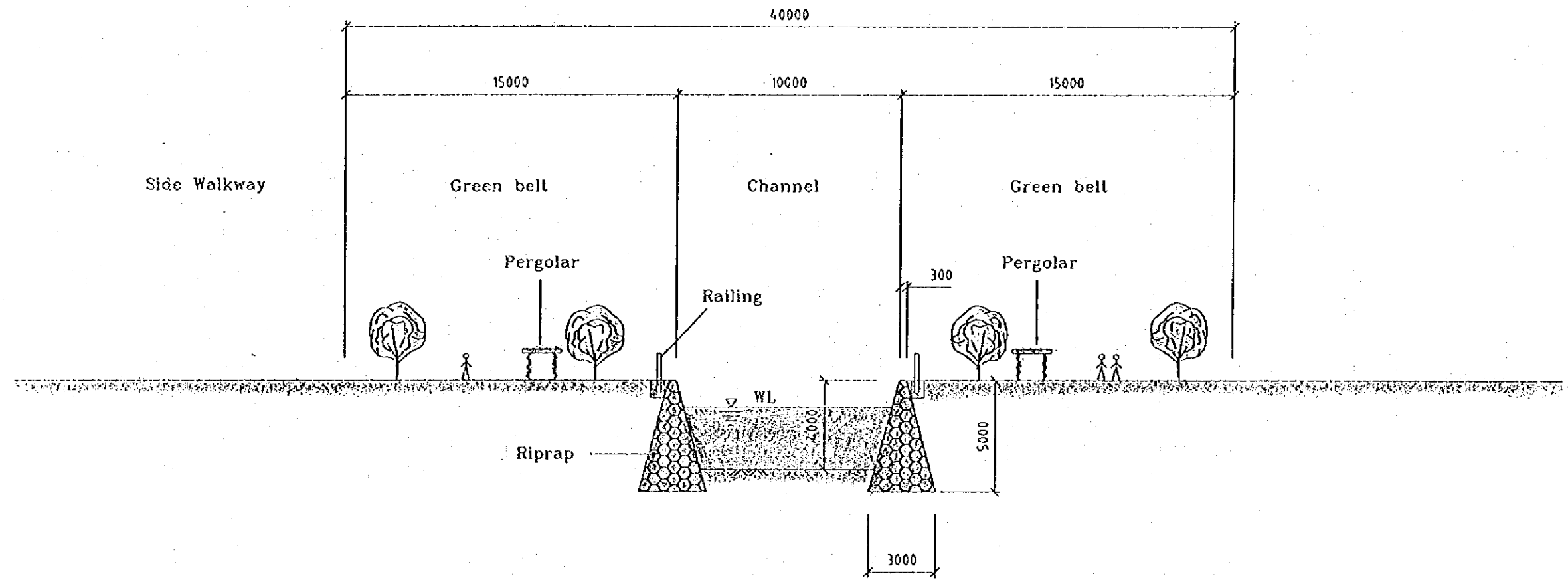


PLAN
Scale 1:500



ELEVATION (A - A)
Scale 1:500

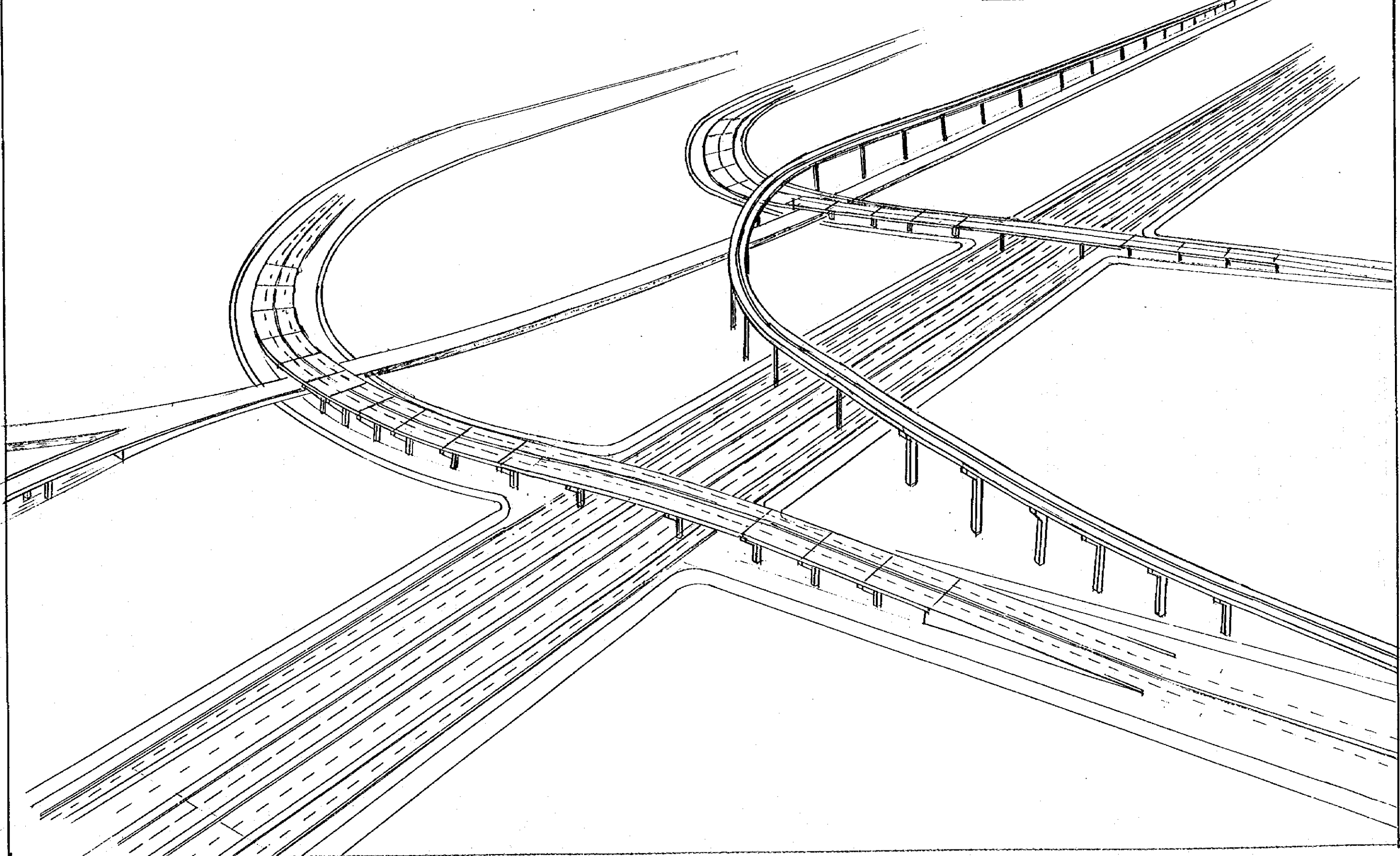
SOCIALIST REPUBLIC OF VIET NAM		
THE FEASIBILITY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No
Green belt (Cross Section)	AS SHOWN	10



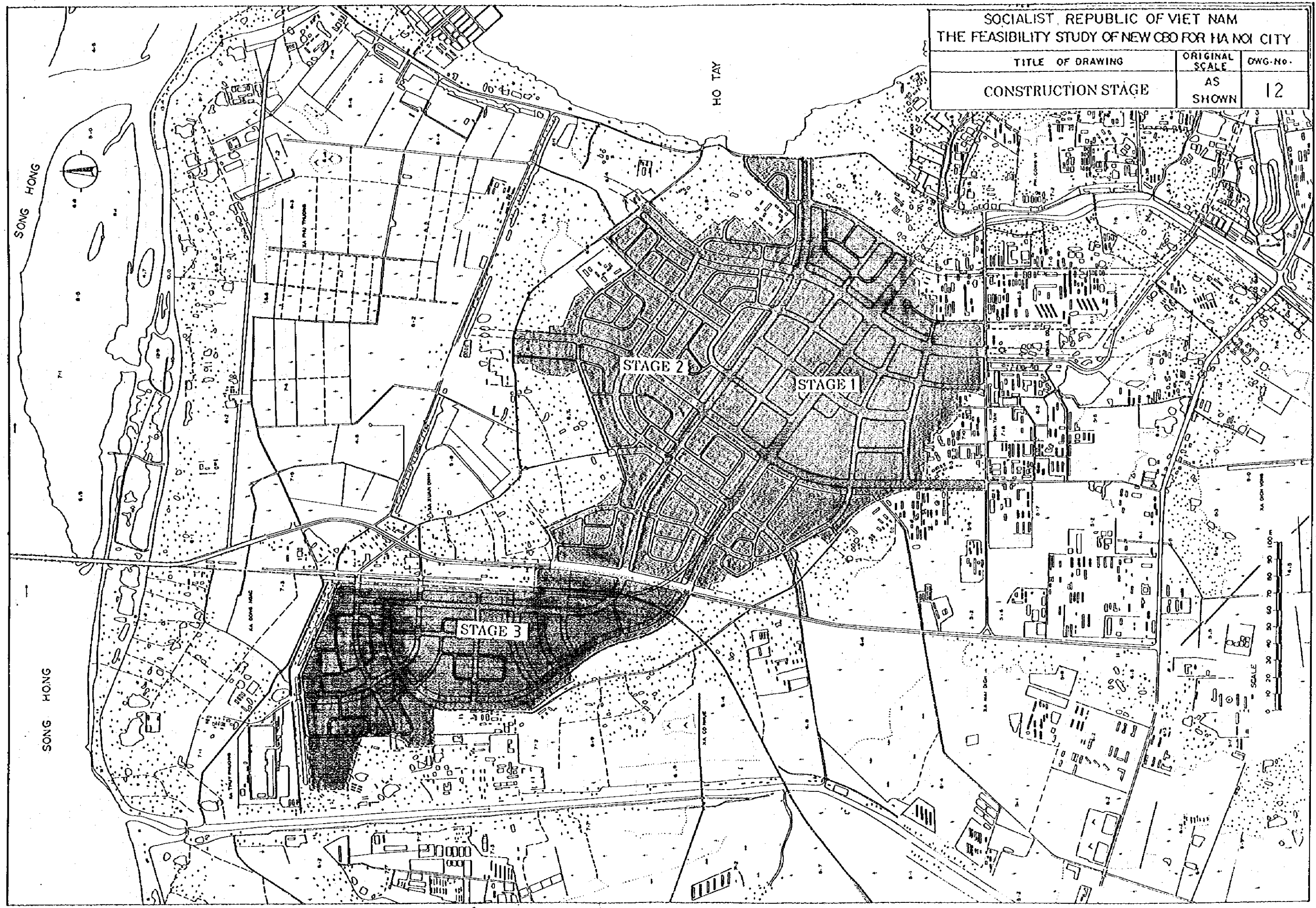
CROSS SECTION
Scale 1:200

SOCIALIST REPUBLIC OF VIET NAM
THE FEASIBILITY STUDY OF NEW CBD FOR HA NOI CITY

TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
IMAGE OF FLYOVER	AS SHOWN	11



SOCIALIST REPUBLIC OF VIET NAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. NO.
CONSTRUCTION STAGE	AS SHOWN	12



SONG HONG

HO TAY

STAGE 2

STAGE 1

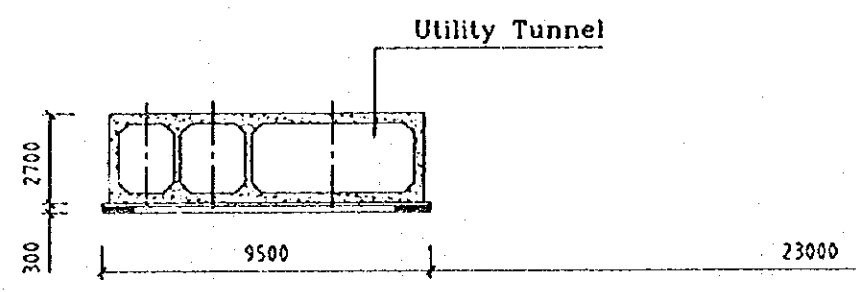
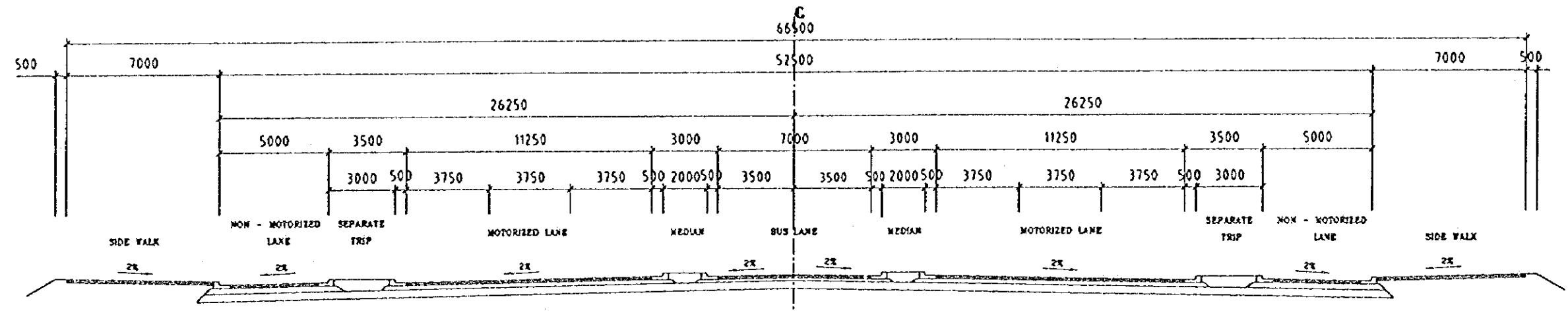
STAGE 3

SONG HONG

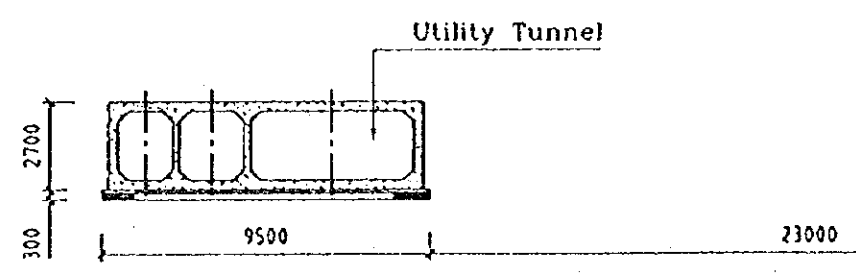
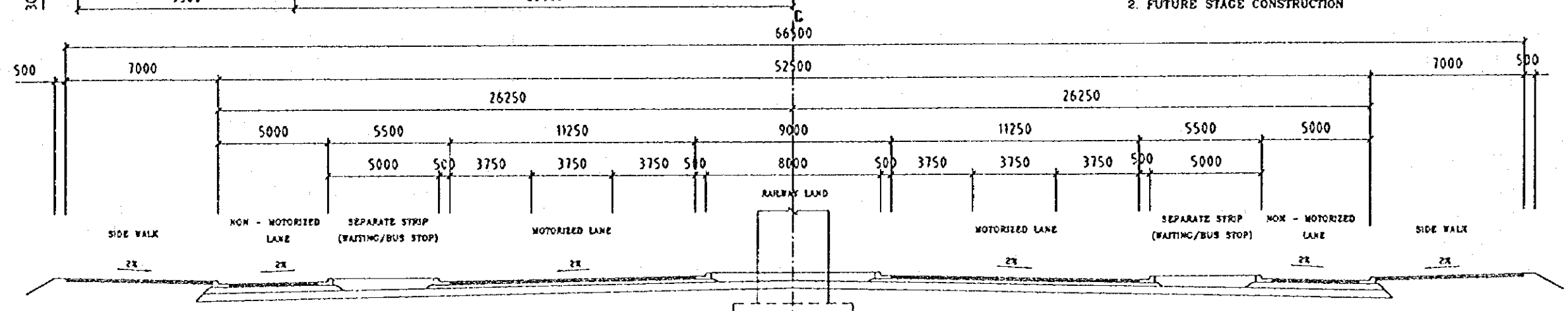
SCALE
0 10 20 30 40 50 60 70 80 90 100 m

SOCIALIST REPUBLIC OF VIET NAM		
THE FEASIBILITY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No
Cross Section of Arterial Road (1)	AS SHOWN	13

TYPICAL CROSS SECTION TYPE - A
 TYPICAL CROSS SECTION MAIN ROAD OF ARTERIAL ROAD TYPE - 1
 1. FIRST STAGE CONSTRUCTION



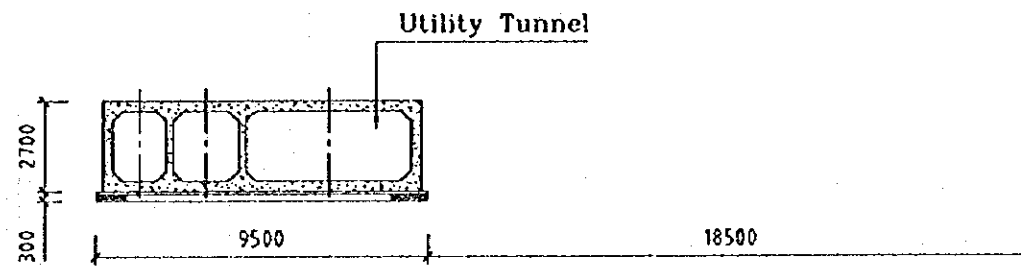
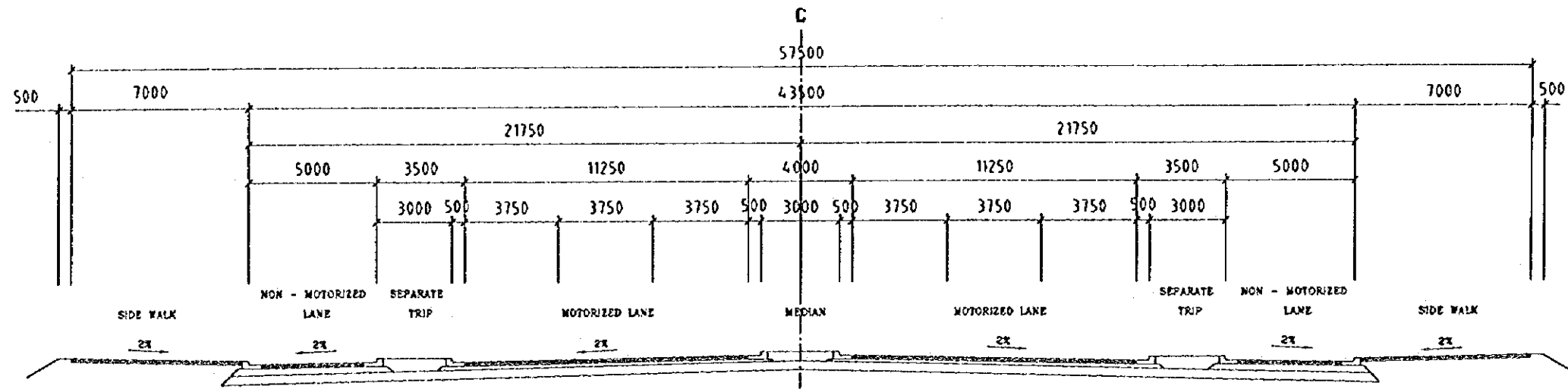
TYPICAL CROSS SECTION MAIN ROAD OF ARTERIAL ROAD TYPE - 1
 2. FUTURE STAGE CONSTRUCTION



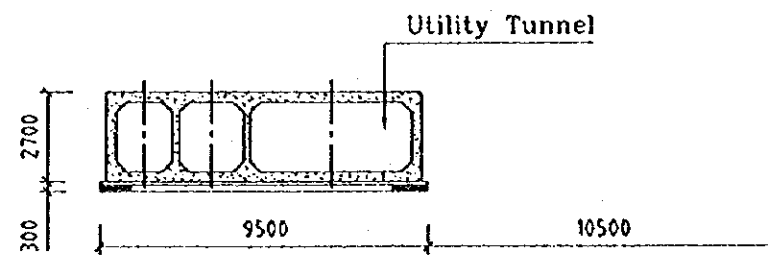
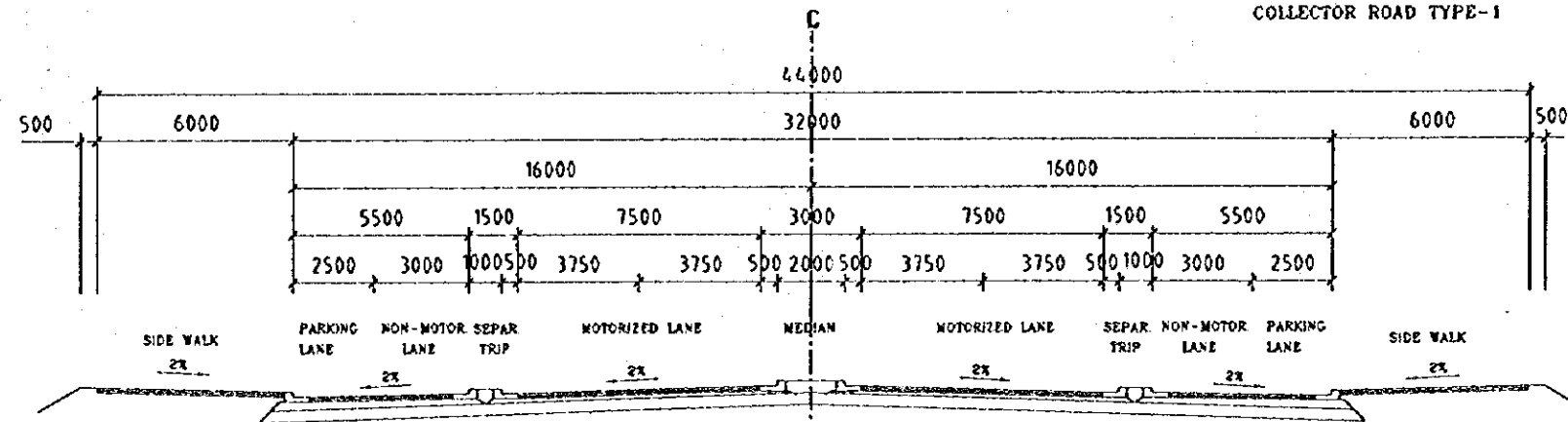
Scale 1:200

SOCIALIST REPUBLIC OF VIET NAM		
THE FEASIBILITY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No
Cross Section of Arterial Road (2)	AS SHOWN	14

TYPICAL CROSS SECTION TYPE - B
ARTERIAL ROAD TYPE-2 (RING ROAD No.2)



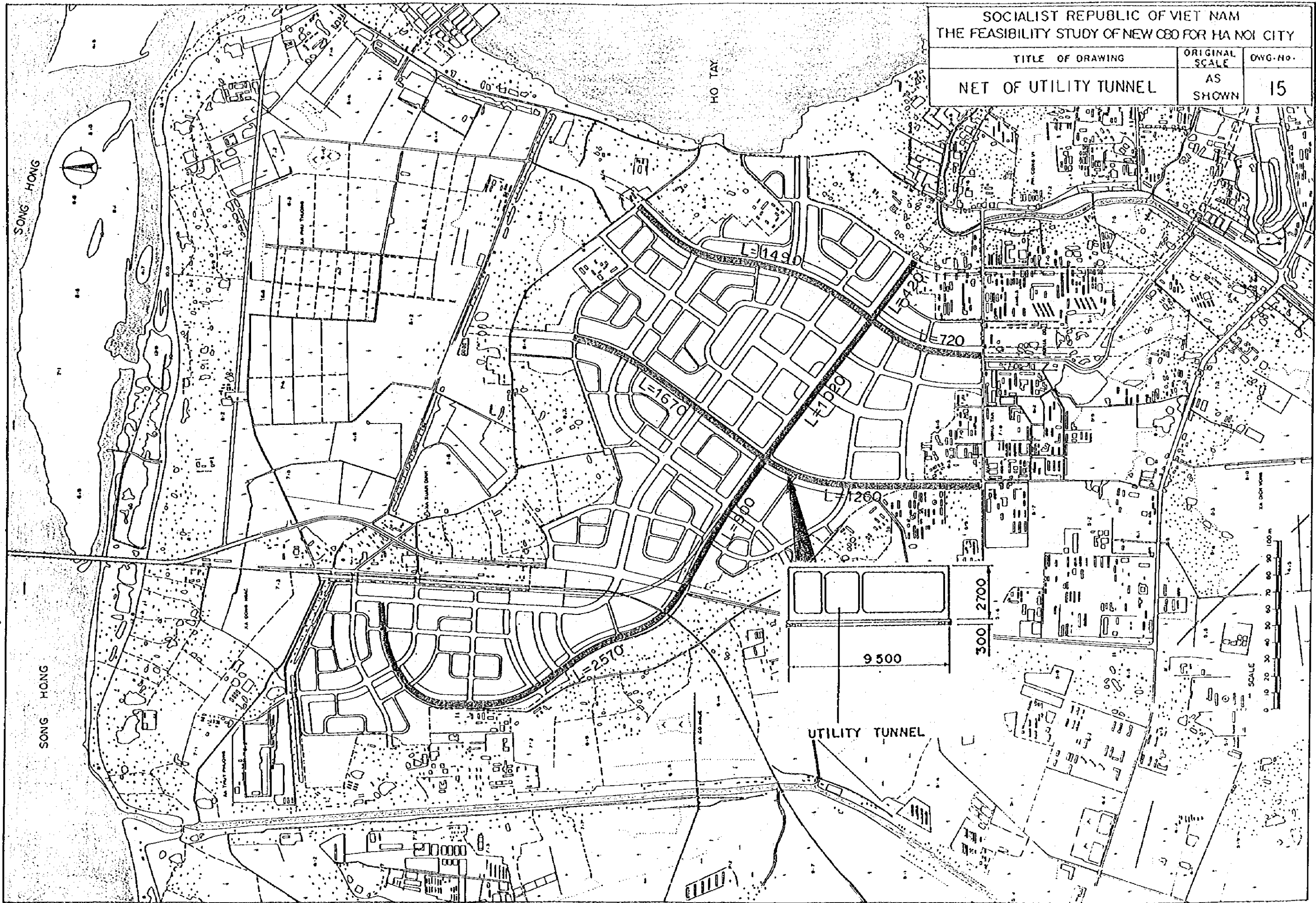
TYPICAL CROSS SECTION TYPE - C
COLLECTOR ROAD TYPE-1



Scale 1:200

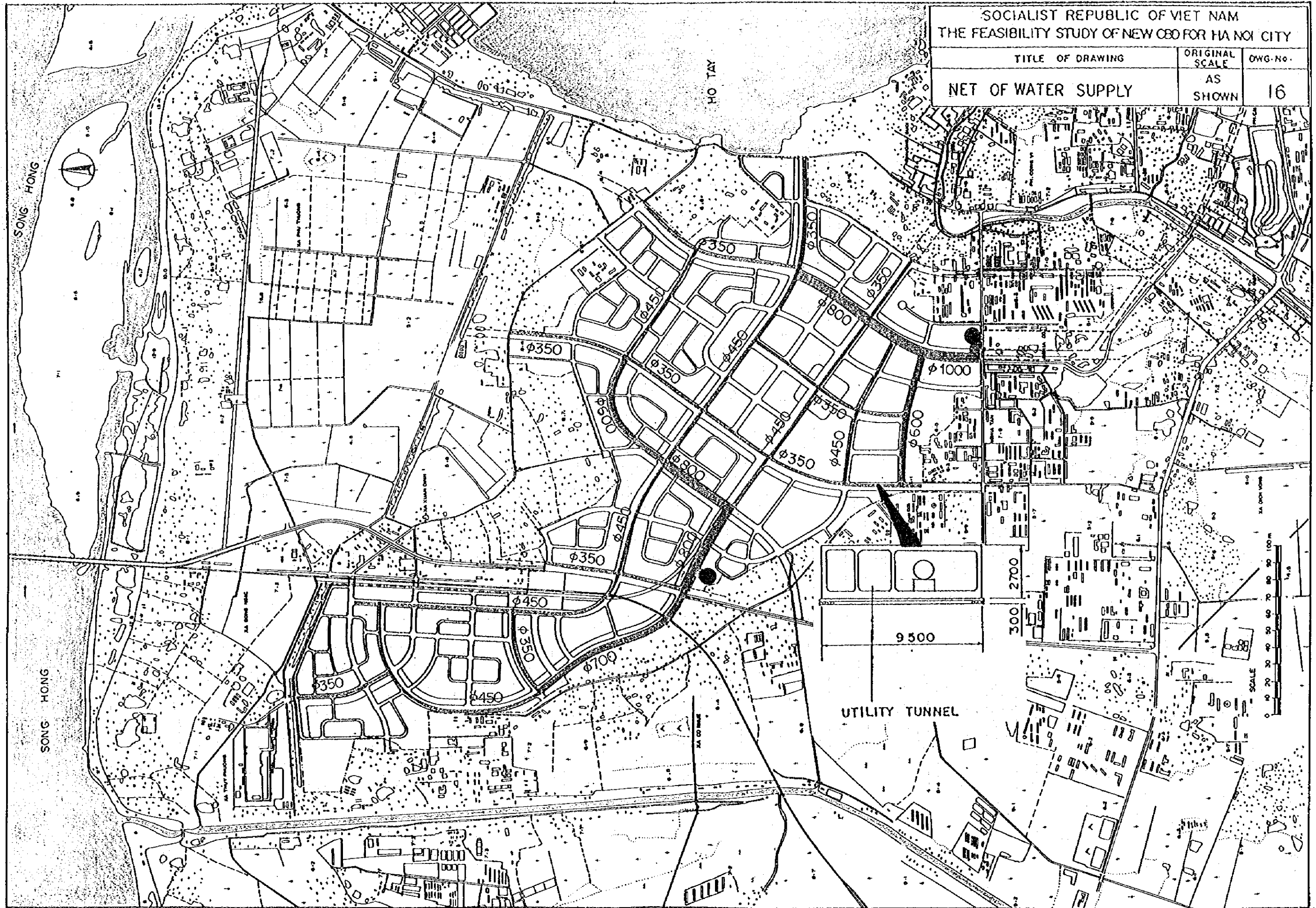
SOCIALIST REPUBLIC OF VIET NAM
 THE FEASIBILITY STUDY OF NEW CBD FOR HA NOI CITY

TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
NET OF UTILITY TUNNEL	AS SHOWN	15



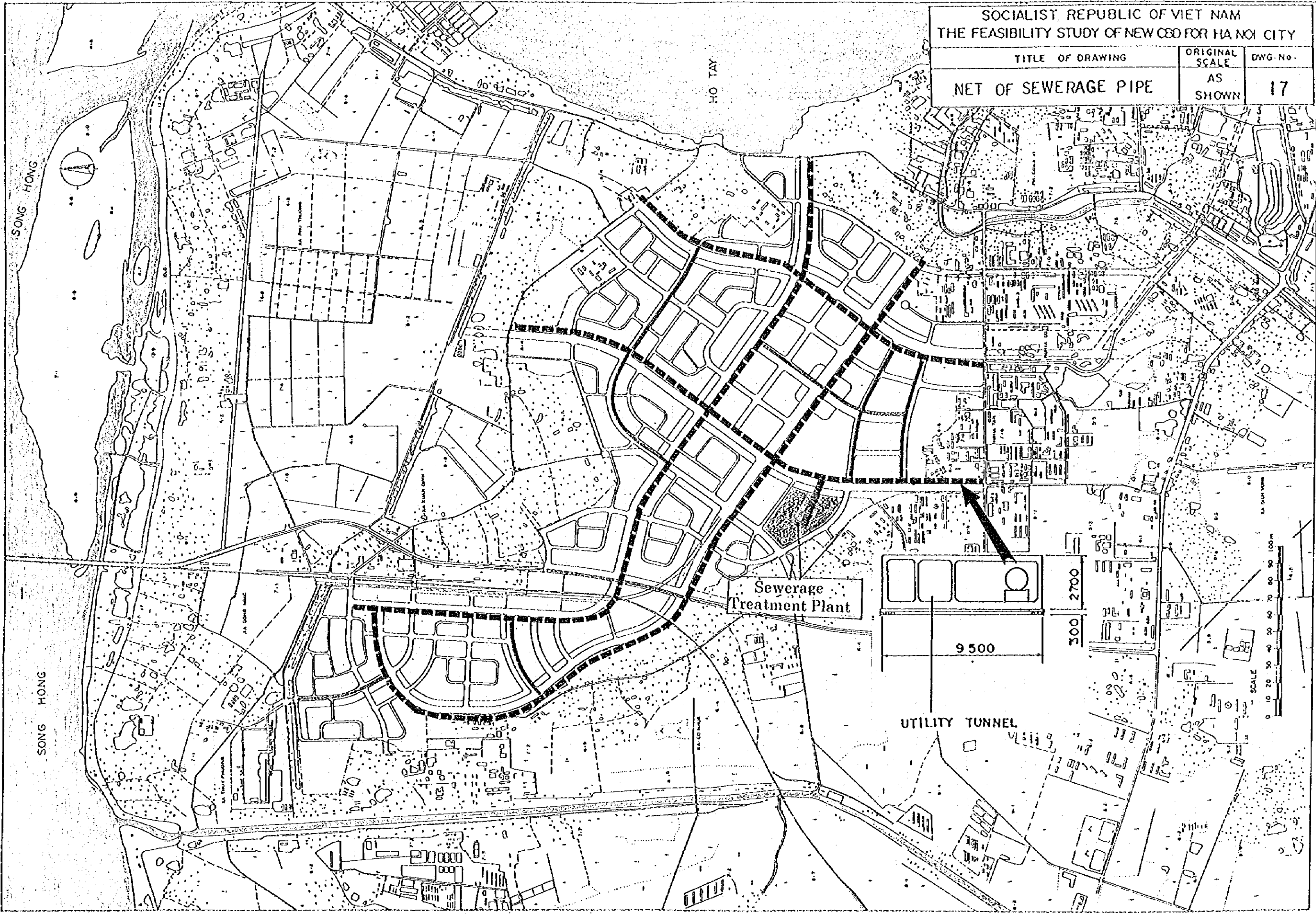
SOCIALIST REPUBLIC OF VIET NAM
 THE FEASIBILITY STUDY OF NEW CBD FOR HA NOI CITY

TITLE OF DRAWING	ORIGINAL SCALE	OWG-NO.
NET OF WATER SUPPLY	AS SHOWN	16



SOCIALIST REPUBLIC OF VIET NAM
 THE FEASIBILITY STUDY OF NEW CBD FOR HA NOI CITY

TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
NET OF SEWERAGE PIPE	AS SHOWN	17



SONG HONG

SONG HONG

HO TAY

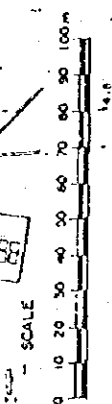
Sewerage Treatment Plant

UTILITY TUNNEL

9 500

300

2700



II. ROAD NETWORK

E=506200

E=504300

N=332500

E=502400

SHEET NO.2

SHEET NO.4

SHEET NO.6

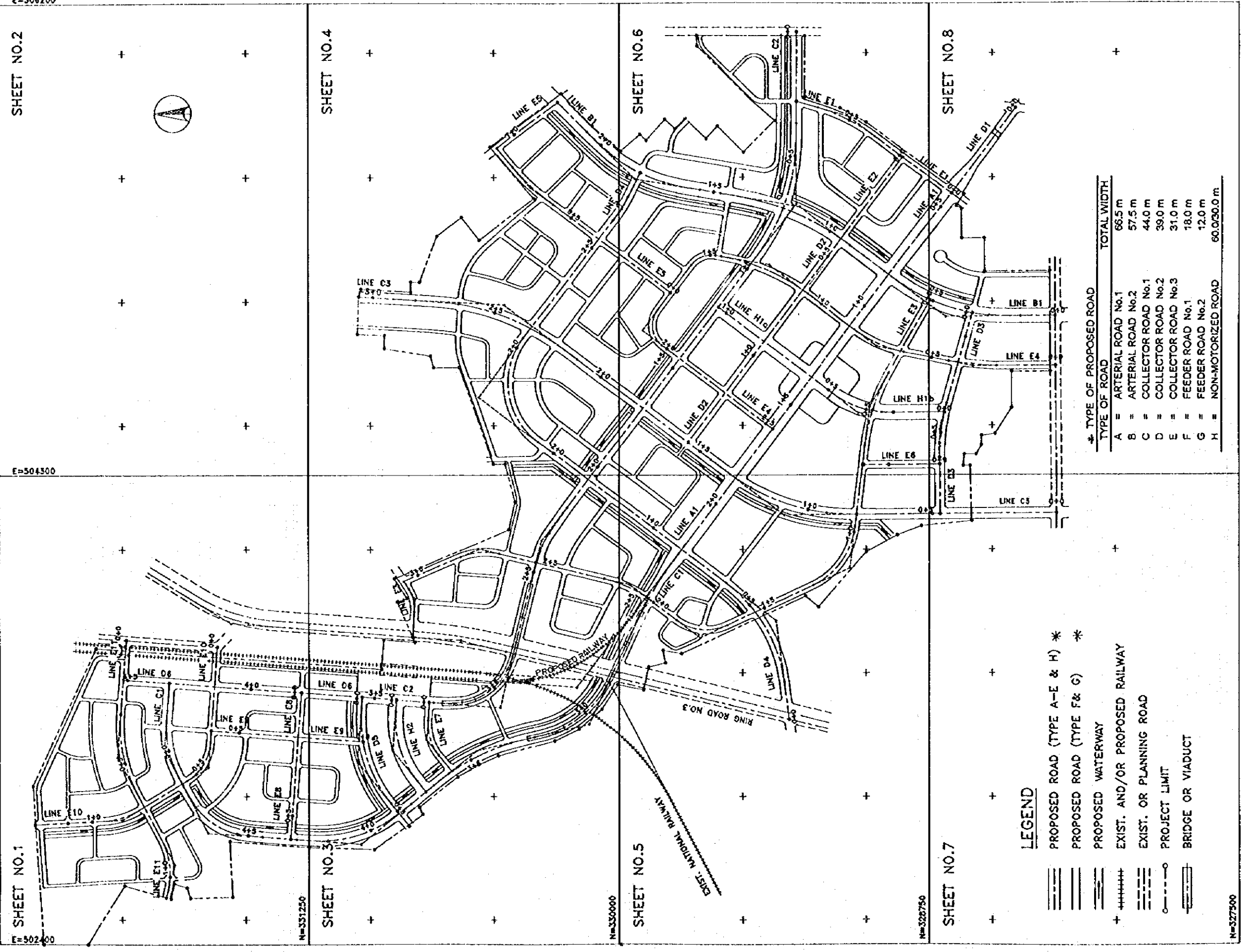
SHEET NO.8

SHEET NO.1

SHEET NO.3

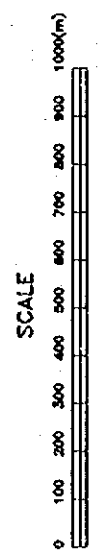
SHEET NO.5

SHEET NO.7



TYPE OF PROPOSED ROAD	TOTAL WIDTH
A = ARTERIAL ROAD No.1	66.5 m
B = ARTERIAL ROAD No.2	57.5 m
C = COLLECTOR ROAD No.1	44.0 m
D = COLLECTOR ROAD No.2	39.0 m
E = COLLECTOR ROAD No.3	31.0 m
F = FEEDER ROAD No.1	18.0 m
G = FEEDER ROAD No.2	12.0 m
H = NON-MOTORIZED ROAD	60.0/30.0 m

- LEGEND**
- PROPOSED ROAD (TYPE A-E & H) *
 - PROPOSED ROAD (TYPE F & G) *
 - PROPOSED WATERWAY
 - + EXIST. AND/OR PROPOSED RAILWAY
 - EXIST. OR PLANNING ROAD
 - PROJECT LIMIT
 - BRIDGE OR VIADUCT



N=327500

①	②
③	④
⑤	⑥
⑦	⑧

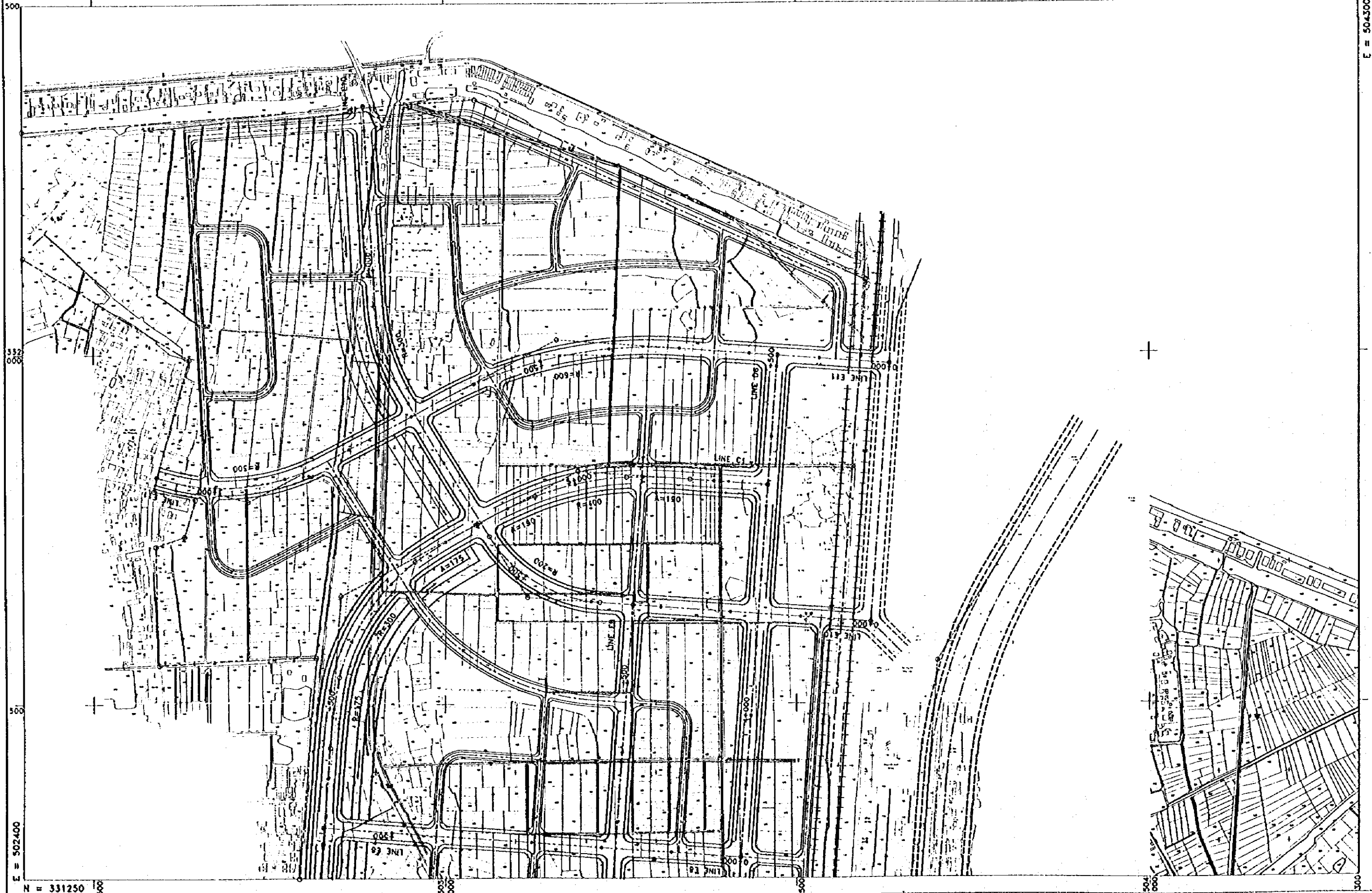
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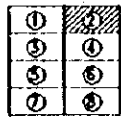
SHEET NO.1

SOCIALIST REPUBLIC OF VIETNAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
ROAD NETWORK(1/8)	1:2500	19

N = 332500

E = 504300



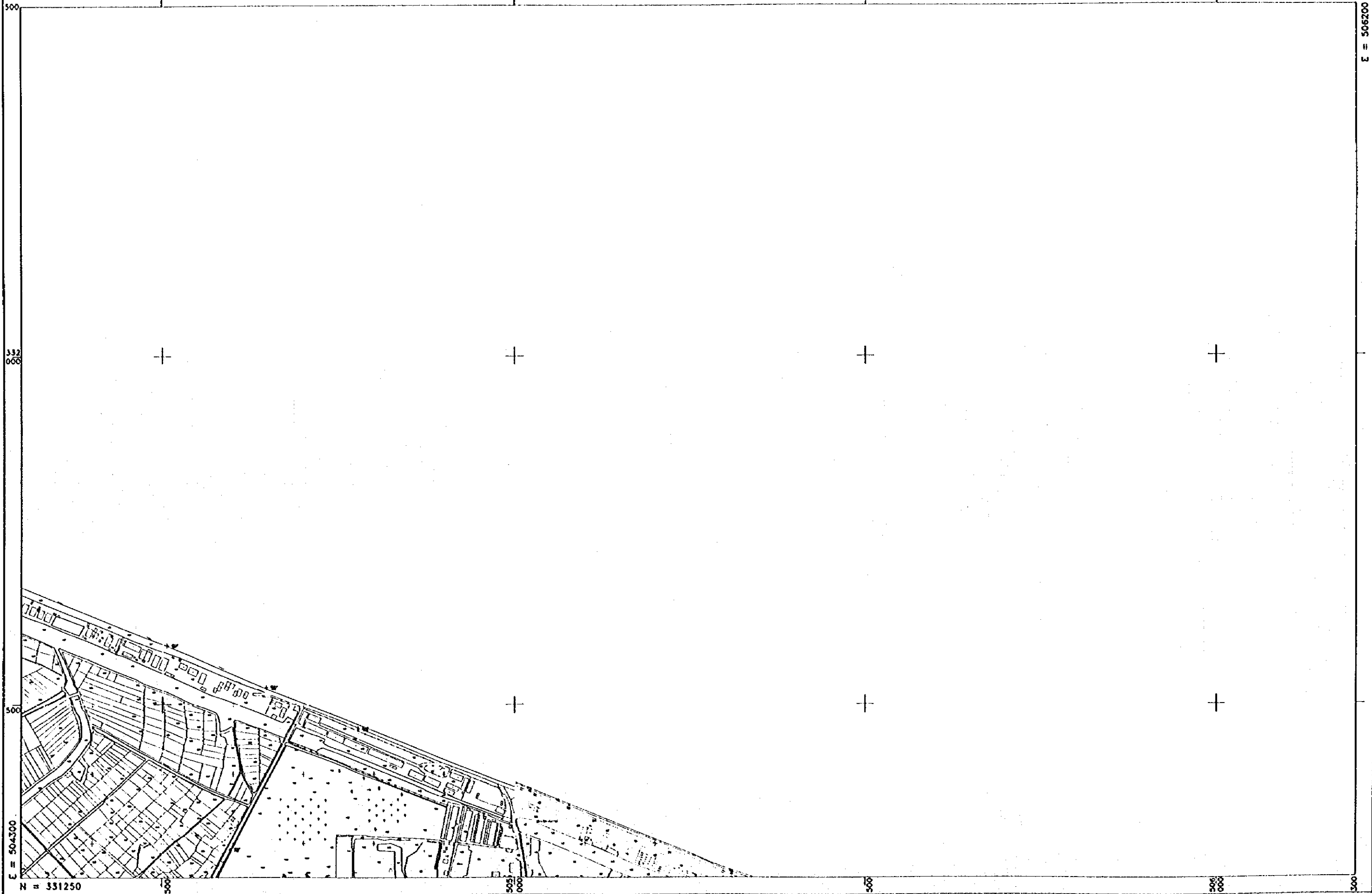


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SHEET NO.2

SOCIALIST REPUBLIC OF VIETNAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
ROAD NETWORK(2/8)	1:2500	20

N = 332500



①	②
③	④
⑤	⑥
⑦	⑧

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SHEET NO.3

SOCIALIST REPUBLIC OF VIETNAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
ROAD NETWORK (3/8)	1:2500	21

N = 331250
E = 504300



TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
ROAD NETWORK (4/8)	1:2500	22

N = 331250

①	②
③	④
⑤	⑥
⑦	⑧

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SHEET NO.4

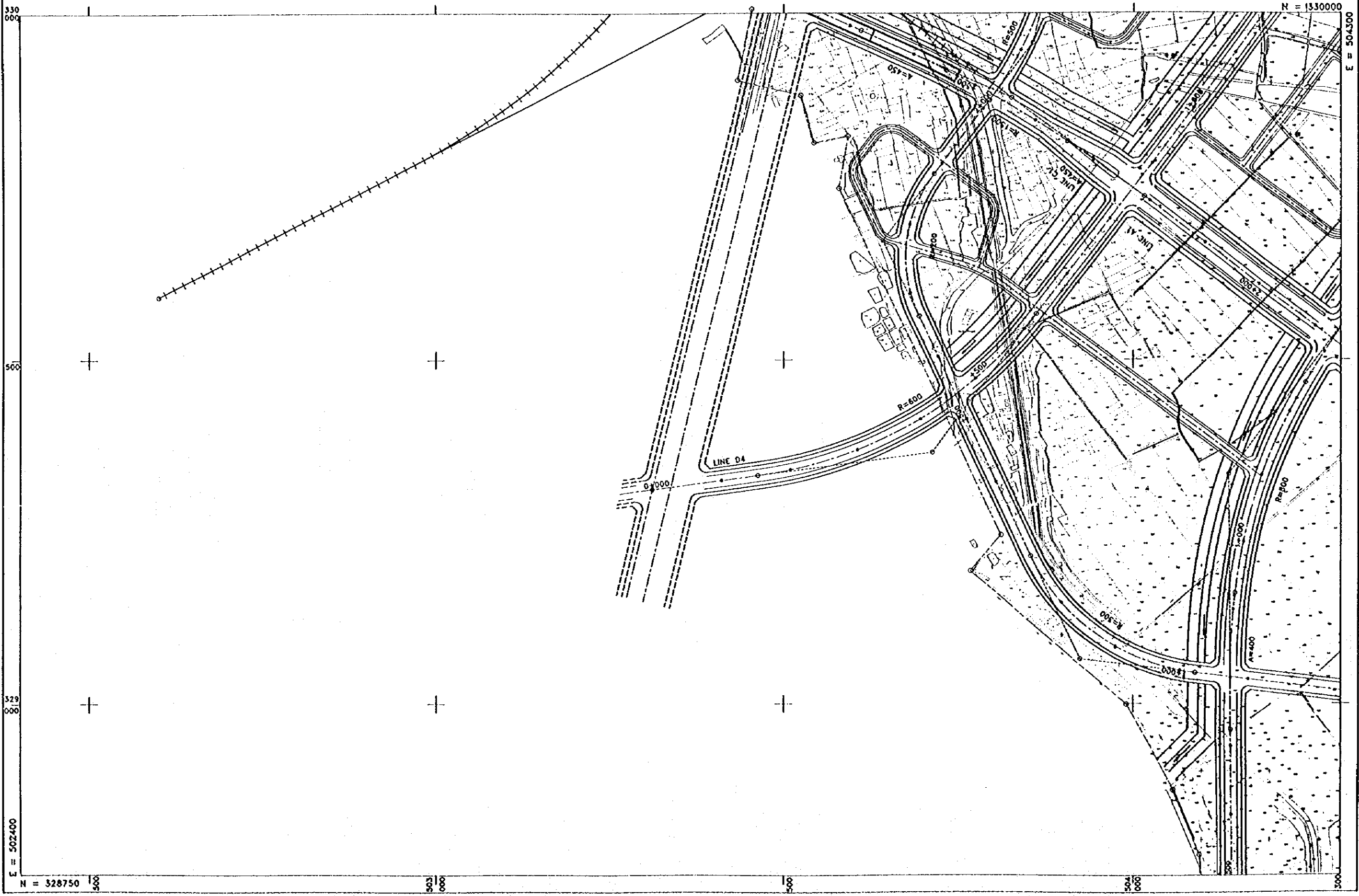


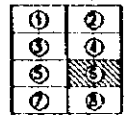
①	②
③	④
⑤	⑥
⑦	⑧

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SHEET NO.5

SOCIALIST REPUBLIC OF VIETNAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
ROAD NETWORK (5/8)	1:2500	23



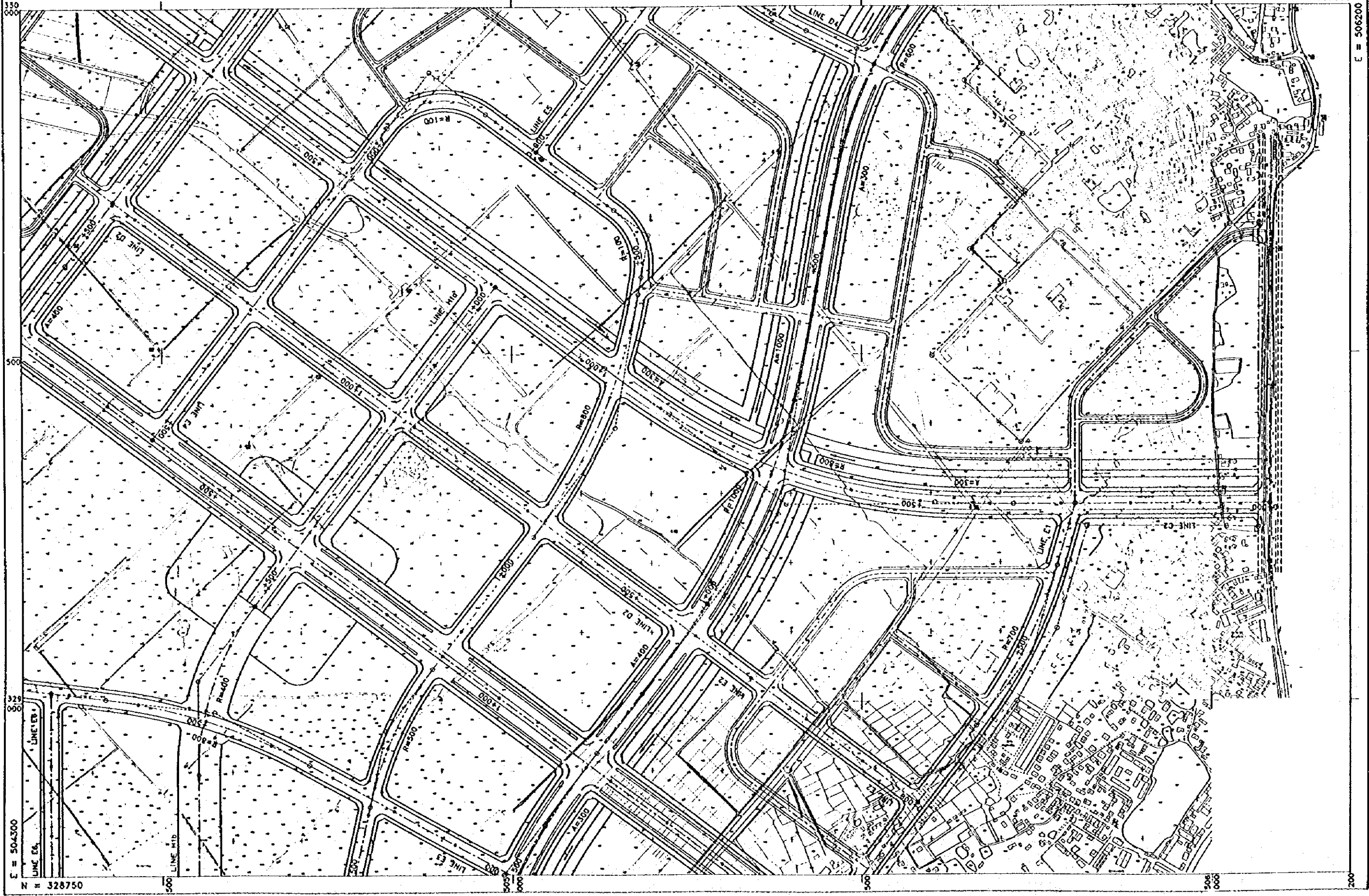


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SHEET NO.6

SOCIALIST REPUBLIC OF VIETNAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
ROAD NETWORK (6/8)	1:2500	24

N = 330000



E = 504300
N = 328750

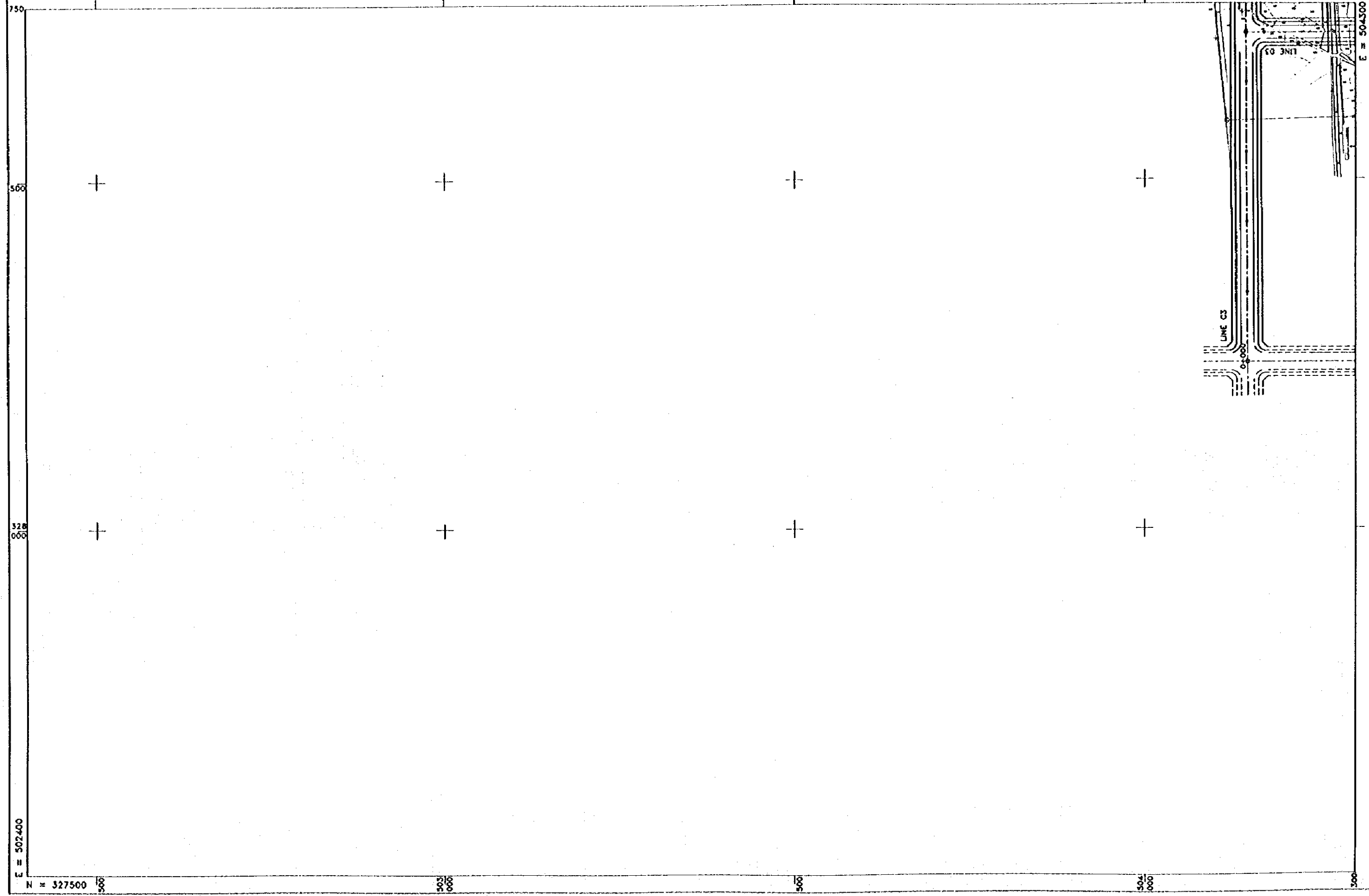
E = 506200
N = 330000

①	②
③	④
⑤	⑥
⑦	⑧

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SHEET NO.7

SOCIALIST REPUBLIC OF VIETNAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
ROAD NETWORK (7/8)	1:1500	25



SOCIALIST REPUBLIC OF VIETNAM		
THE FEASIBILITY STUDY OF NEW CBD FOR HANOI CITY		
TITLE OF DRAWING	ORIGINAL SCALE	DWG. No.
ROAD NETWORK (8/B)	1:2500	26

SHEET NO.8

①	②
③	④
⑤	⑥
⑦	⑧

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N = 328750

