

NEW HEADQUARTERS
ERICSSON DE COLOMBIA SA

PRELIMINARY APPROACH
Alfonso Ruiz Ojeda & German Ruiz Silva



Panorama of Bogotá from the Central Area to the North, showing the location of the project Site.

CONTENTS

1. INTRODUCTION
2. PROJECT SUMMARY
3. THE SITE
4. THE BUILDING
5. THE COSTS
6. CONCLUSIONS
7. APPENDIX

INTRODUCTION

This report contains a preliminary approach in the development of the new headquarters (offices, factory and warehouse) of:

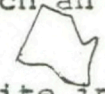
ERICSSON DE COLOMBIA S.A.

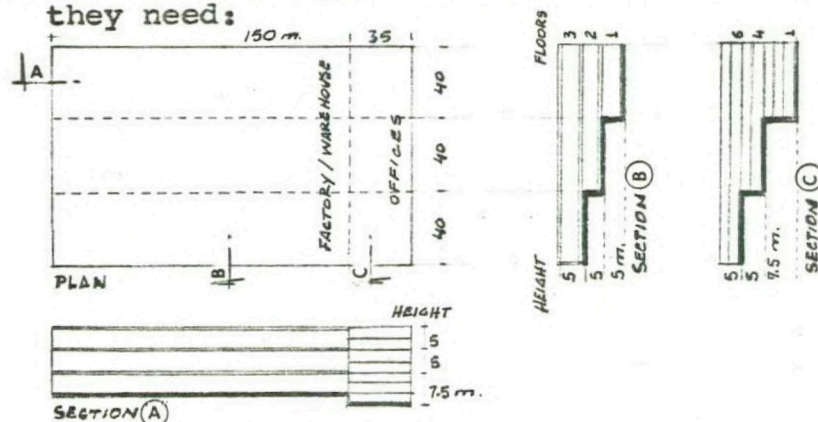
The report is intended to be a brief and rough analysis only. The time expended in the preparation of the document was very short and only very limited parameters were known.

The document was ordered by Mr. Albert F. La Spina, General Manager of PROYSER LTDA., to be presented to Ericsson de Colombia S.A.

Credits: Alfonso Ruiz Ojeda, Civil Engineer, National University. Bogotá.
Germán Ruiz Silva, M. Arch. A. S.. M.I.T. Cambridge, USA.
With support of Mr. Allan Uvhagen, General Manager of Ericsson de Colombia S.A., -
Mr. Albert F. La Spina, Mr. Enrique Beths and Mr. Alvaro Cifuentes.
Cover Photo: Instituto Geográfico "Agustín Codazzi". Bogotá.

PROJECT SUMMARY

- THE PROJECT** : Ericsson de Colombia S.A. is looking for the possibility of grouping in a single Site/Building the total functioning of its activities in Bogotá. This report is an initial attempt to help the firm in its project.
- THE SITE** : Mr. Albert F. La Spina has provided a possible site to the Ericsson complex. - The Site is located in a suburban and low developed area, 15 Km to the North of the city center, on a hill from which an overall view of the region is possible. Site size/shape : 131.798.55 M2. →  Site average slope : 20%. This report analyzes the proposed Site in relation to its convenience to the project.
- THE BUILDING** : Mr. Allan Uvhagen has stipulated the following characteristics of the building they need:



Area of Factory & Warehouse

- floor 1 : 40X150 -- 6.000
- floor 2 : 80X150 -- 12.000
- floor 3 : 120X150 -- 18.000

36.000 M2

Area of Offices

- floors 1-2-3 : 40X35 ea.-- 4.000
- floors 4-5 : 80X35 ea.-- 5.600
- floors 6-7 : 120X35 ea.-- 8.400

18.200 M2

TOTAL 54.200 M2

According with Mr. Uvhagen's estimations the following areas would be enough to the Ericsson necessities: Factory & Warehouse --- 35.000 M2
Offices --- 15.000 M2

This report analyzes briefly this building and presents preliminary new proposals as a basis for discussion.

- THE COSTS** :
- Site Cost ----- \$ 106,00 / M2 (Colombian Pesos)
 - Building Costs
 - Studies ----- \$ 25,00 / M2
 - Explanation --- \$ 19,00 / M3
 - Construction:
 - Factory ----- \$1.000,00 - \$1.500,00 / M2
 - Offices ----- \$2.000,00 / M2

This report analyzes briefly these costs in relation to the Site/Building.

THE SITE

LOCATION

- : The Site is located in the municipality of Suba (an old little village), in the extremity North of the Bogotá Metropolitan Area. It lies in a Residential, Industrial, Institutional area of low densities of construction, low grade of development and high potentiality of future growth.

BOUNDARIES

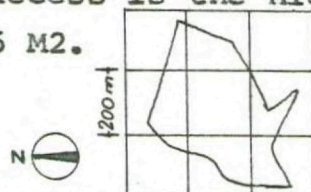
- : To the North: "Casablanca", a low income urbanization.
- : To the West: The so called "Camino del Boquerón", a 6 m. width unpaved route, which serves local private properties.
- : To the South: A) The so called "Antiguo Camino a Suba", a 6 m. width paved route, communicating Suba with the principal highway of the region. B) A private vacant land.
- : To the East: The so called "Escuela de Carabineros", a military training center. B) A 6 m. width unpaved route to serve local private properties.

APPROACHES/ACCESS

- : Main route of approach is the route Bogotá - Suba. Future main route of approach/access is the highway "Avenida Boyacá" (See Appendix).

SIZE/SHAPE/SOIL

- : 131.798.55 M2.



SOIL CONDITION : UNDISTURBED
SOIL RESISTENCE : 1 KILO/CM² (Approx)

TOPOGRAPHY

- : The Site overlooks the beautiful plateau in which Bogotá is located. Average altitude of the plateau: 2.600 meters above sea level. The Site is between 2.610 and 2.690 meters of altitude; It has a relatively regular slope of 20% with some simple undulations. There are two little, poor, old, unvaluable houses.

ZONING

- : The official reglamentations to the Site Area permits residential, industrial, commercial or institutional uses. Especifications of minimum lots sizes and maximum index of ocupation are being defined.

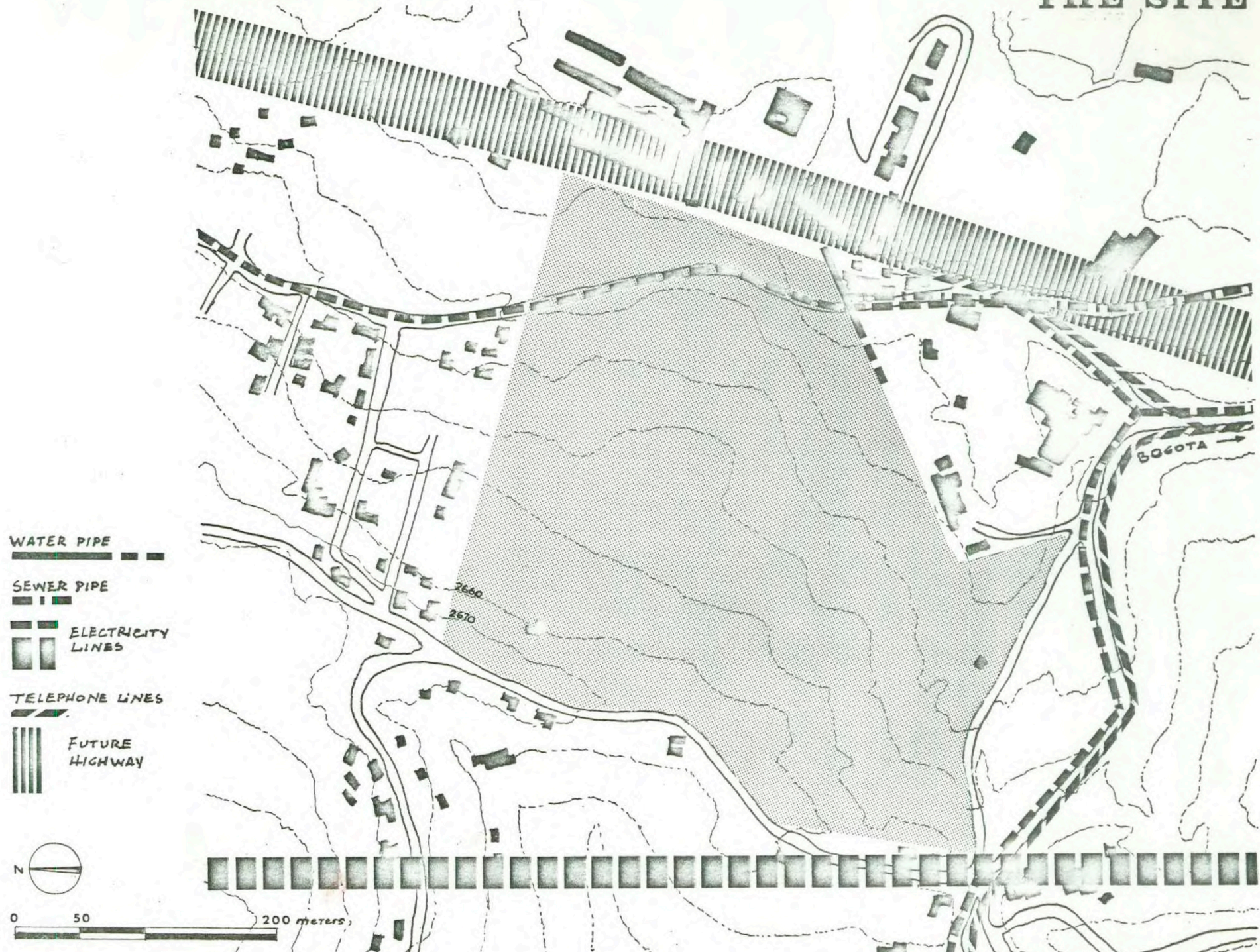
LAND TENURE/COST

- : Private; Mr. Oswaldo Buckle is the only owner of the land. The price of the land in the area changes from \$60,00 to \$180,00 M2 (Colombian Pesos).

INFRASTRUCTURE FACI:

- Ways: Available but inadequate (See Boundaries).
- Public Transport: Usually available but not always adequate.
- Water: Available; A ϕ 3" pipe can be seen at the East limit.
- Sewer/Drainage: Available; a ϕ 8" pipe can be seen at the East limit.
- Electricity: Available; A high tension line is near the West limit and low tension lines of distribution can be seen at the West and East limits.
- Telephone: Available; Telephone lines can be seen at the East limit.

THE SITE



LOCATION

- : As indicated it has been selected a location for the building within the Site, near the boundaries and with a similar slope to the stipulated size/organization of the building levels $5/40 = 12.5\%$.

Therefore the digging is the littlest possible (according with the stipulation; See costs), and there are good possibilities to subdivide the Site for different uses or to negotiate - just one part of the Site.

ACCESS

- : A preliminary general System of Circulation is presented.

SIZE

- : The stipulated sizes-levels of the building have been maintained.

SHAPE

- : Two preliminary proposals are presented:

A) An open space between Factory-Warehouse and Offices, in order to facilitate illumination, ventilation, a proper isolation of different activities and a general better organization of the building.
B) The change of the stipulated rectangular building Plan for a curved one in order to facilitate the obtention of more aesthetic interior and exterior spaces/volumes.

BUILDING

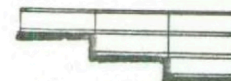
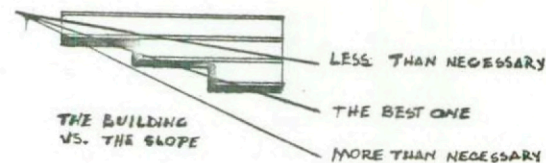
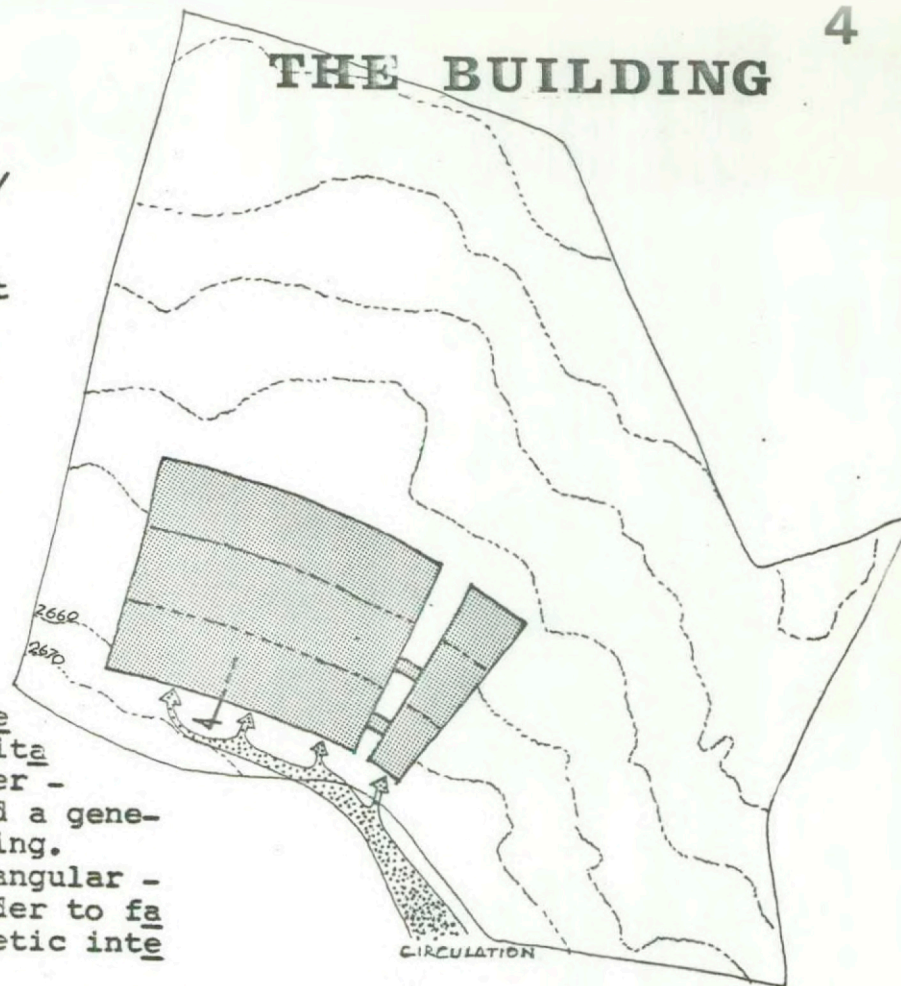
REGLAMENTATIONS

- : Are being changed; The area was recently added to the city and its reglamentation is presently being studied. Nevertheless, it is obvious that the common technical requirements of this kind of construction must be meet.

DEVELOPMENT
MODE

- : A preliminary proposal of stages of construction is presented.

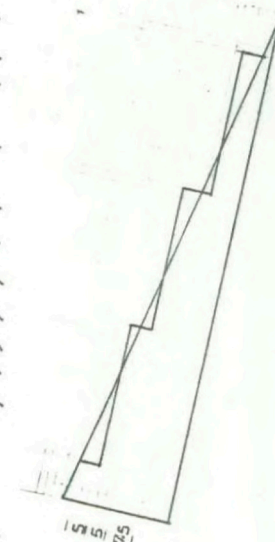
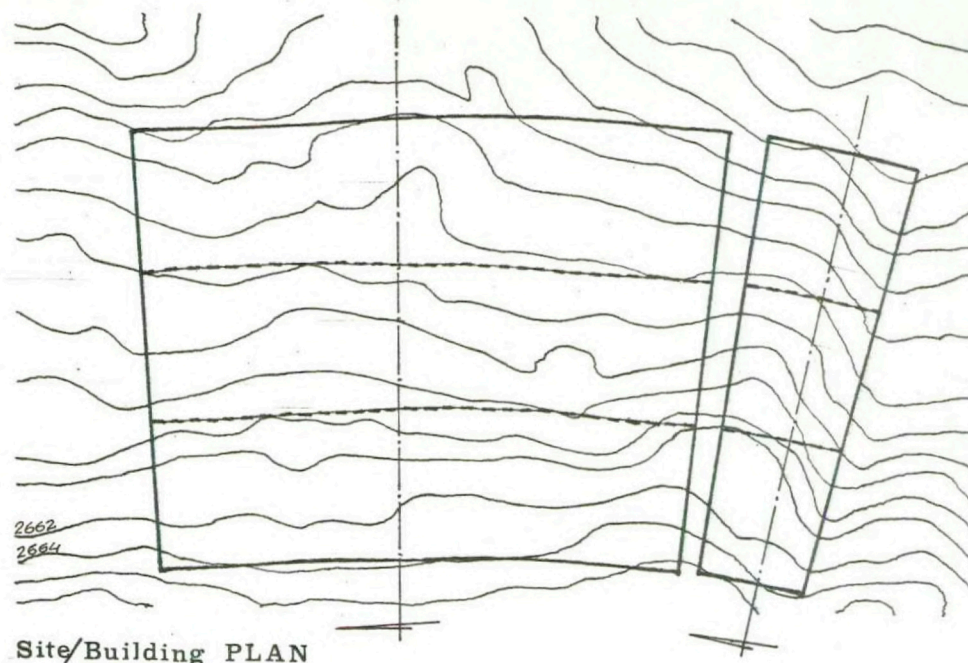
THE BUILDING



THE BUILDING STAGES OF DEVELOPMENT

THE COSTS

PRELIMINARY APPROACH



	Unit	Unit Price	A (stipulated)		B		C (no excavation)	
			Quantity	Total Price	Quantity	Total Price	Quantity	Total Price
a) Land	M2	\$ 106,00	131.799	\$13.970*	50.000	\$ 5.300*	50.000	\$ 5.300*
b) Excavation	M3	19,00	90.000	1.710*	45.000	855*	--	--
c) Studies (Soil/Structure/Utilities ...)	M2	15,00	50.000	750*	50.000	750*	50.000	750*
d) Construction of the Factory and Warehouse (Reinforced Concret)	M2	1000,00 1130,00 1260,00	35.000	35.000*	35.000	39.550*	35.000	44.100*
e) Construction of the Offices (Reinforced Concret)	M2	2000,00 2250,00 2500,00	15.000	30.000*	15.000	33.750*	15.000	37.500*
TOTALS				\$81.430*		\$80.205*		\$87.650*

Stipulated Solution (A) using 50.000 M2 of land \$72.760*

NOTES: A) According with local habits, the magnitude of project assure long term loans.
 B) Due to monetary changes, the costs estimated in March/74 (specially Construction - Costs) may have monthly variations of 1 to 1.34%.

CONCLUSIONS

- In terms of Location, Access, Size, Shape, Soil, Topography, Infrastructure Facilities and - Future Developments of the area, the Site may be considered excellent to the project.
- Including exterior areas (parking, access, ...), the proposed building can be constructed in 50.000 M2, almost $\frac{1}{3}$ of the Site size.
- Considering the relative high price of the land and the high potentiality of development of the area, $\frac{2}{3}$ of the Site could be used in the near future commercially or to complementary uses of the Ericsson headquarters.
- As far as we know, there is no technical reason to assure that the stipulated building is - the best and more economical solution.
- If the Site is properly utilized and if a professional study of the building is carried out, the including costs of the project can be reduced sustantially.

APPENDIX

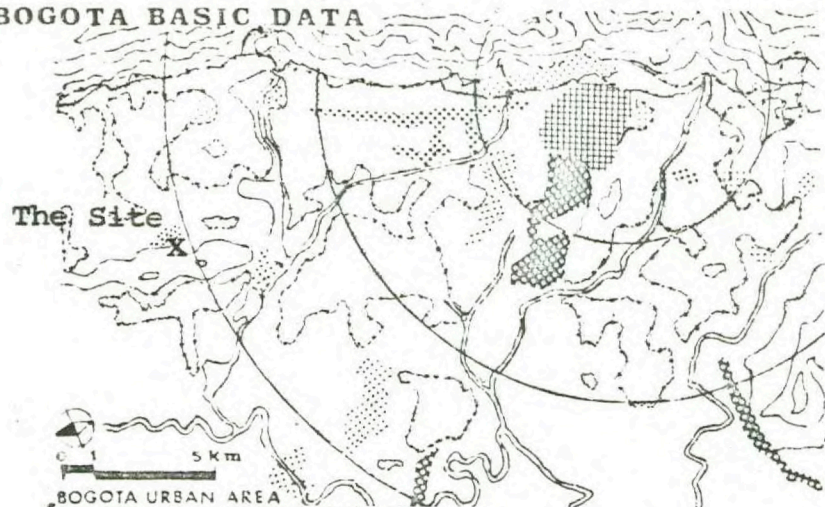
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The following information is intended to be a width and general base to make a judgement of the advantages of the Site Location.

Source: Official maps provided by authorities of Bogotá and previously used by Germán Ruiz Silva in his thesis study at M.I.T.

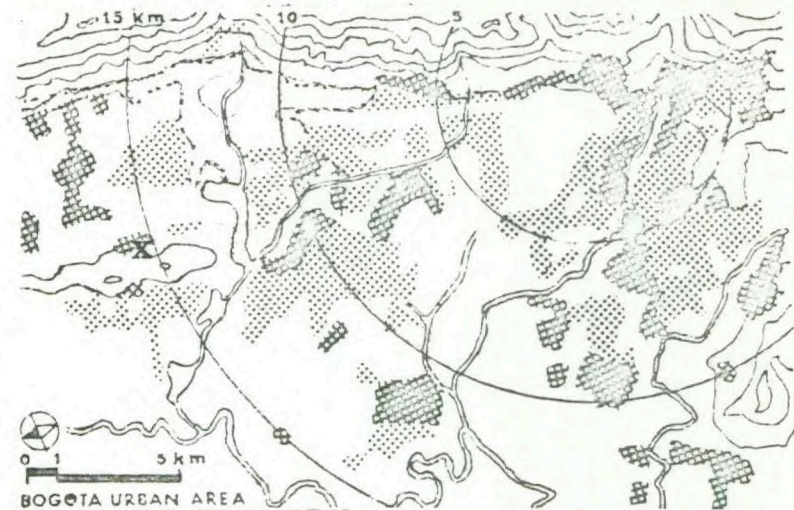
Location of the Site in Relation to City Patterns

BOGOTA BASIC DATA



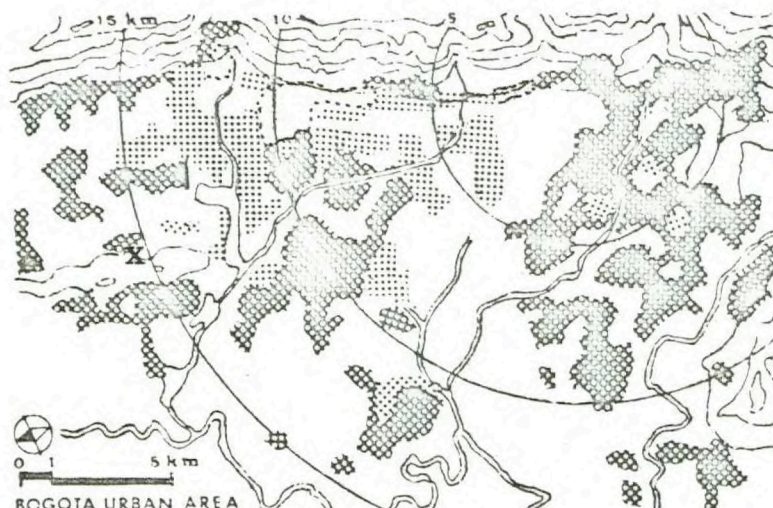
BOGOTA URBAN AREA LAND USE PATTERN

KEY	RESIDENTIAL	62	INSTITUTIONAL
	COMMERCIAL	5	MIXED
	INDUSTRIAL	8% of total area	



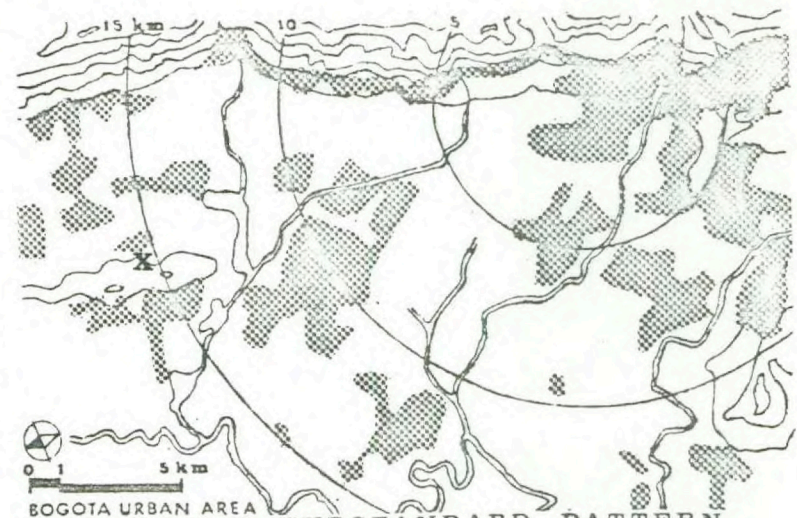
BOGOTA URBAN AREA DENSITY PATTERN

KEY	LOW	MEDIUM	HIGH
LOTS Ha	1-10	1-40	41-80
% RES AREA	12.5	56	31.5



BOGOTA URBAN AREA INCOME PATTERN

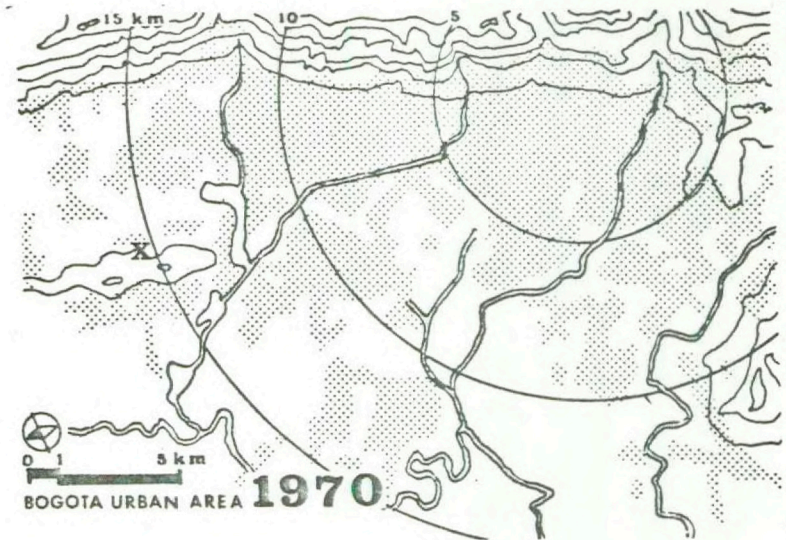
KEY	HIGH	MEDIUM	LOW
INCOME US\$	351 - Above	151 - 350	1-150
% POPULATION	5.3	20	74.7



BOGOTA URBAN AREA RESIDENTIAL SUBSTANDARD PATTERN

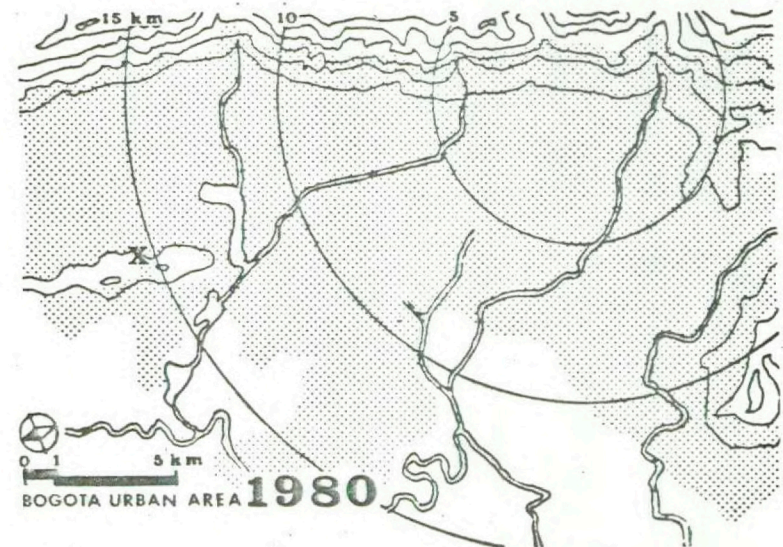
Substandard in terms of legal tenancy and/or services available and/or occupation density and/or construction specifications.

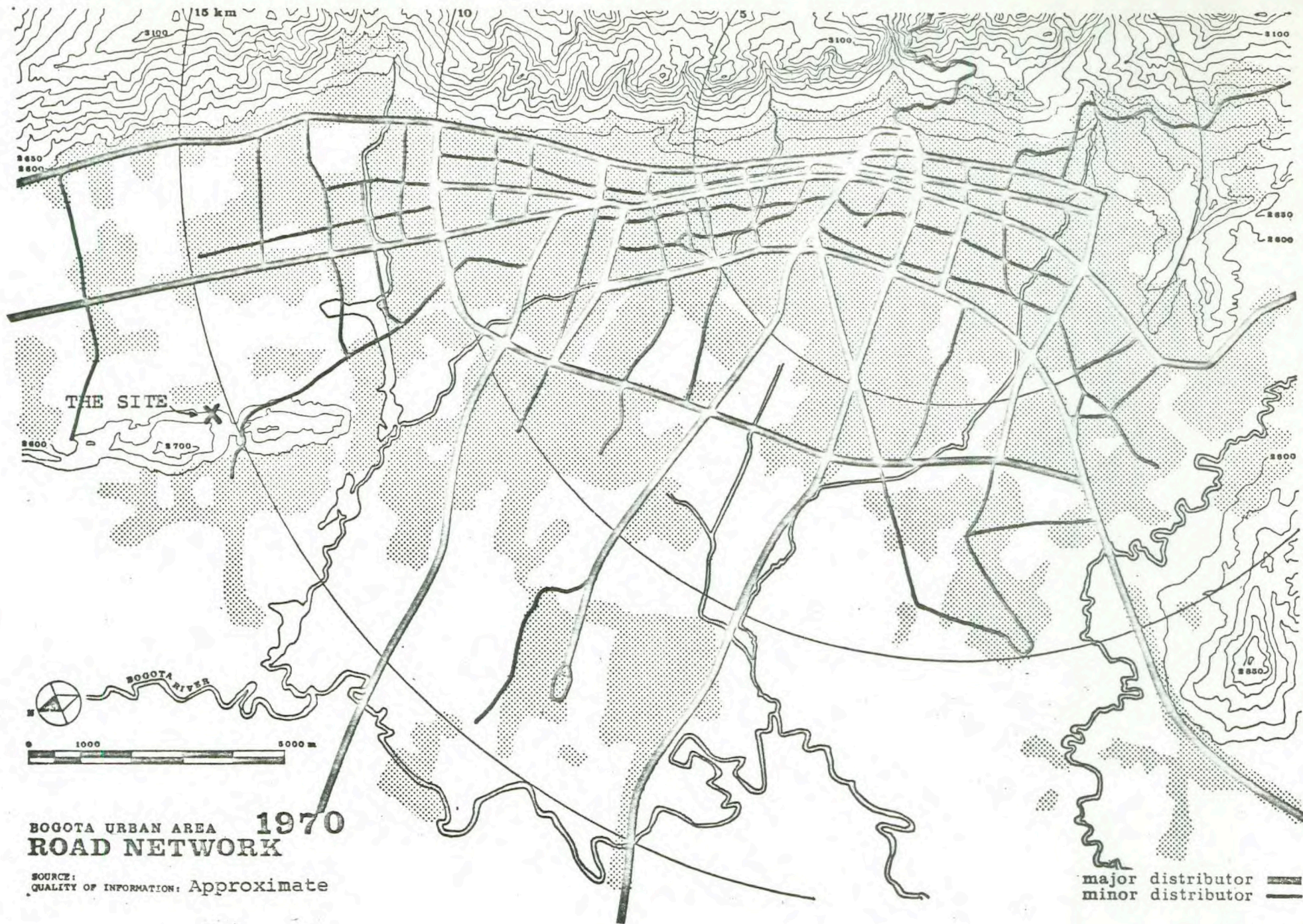
Location of the Site
in Relation to City Tendencies of Growth



Location of the Site
in Relation to City Tendencies of Growth.



As indicated the city presents an strong tendency of growth to the North. Consequence of this is the improvement of the Infrastructure Networks in the Site vicinity.

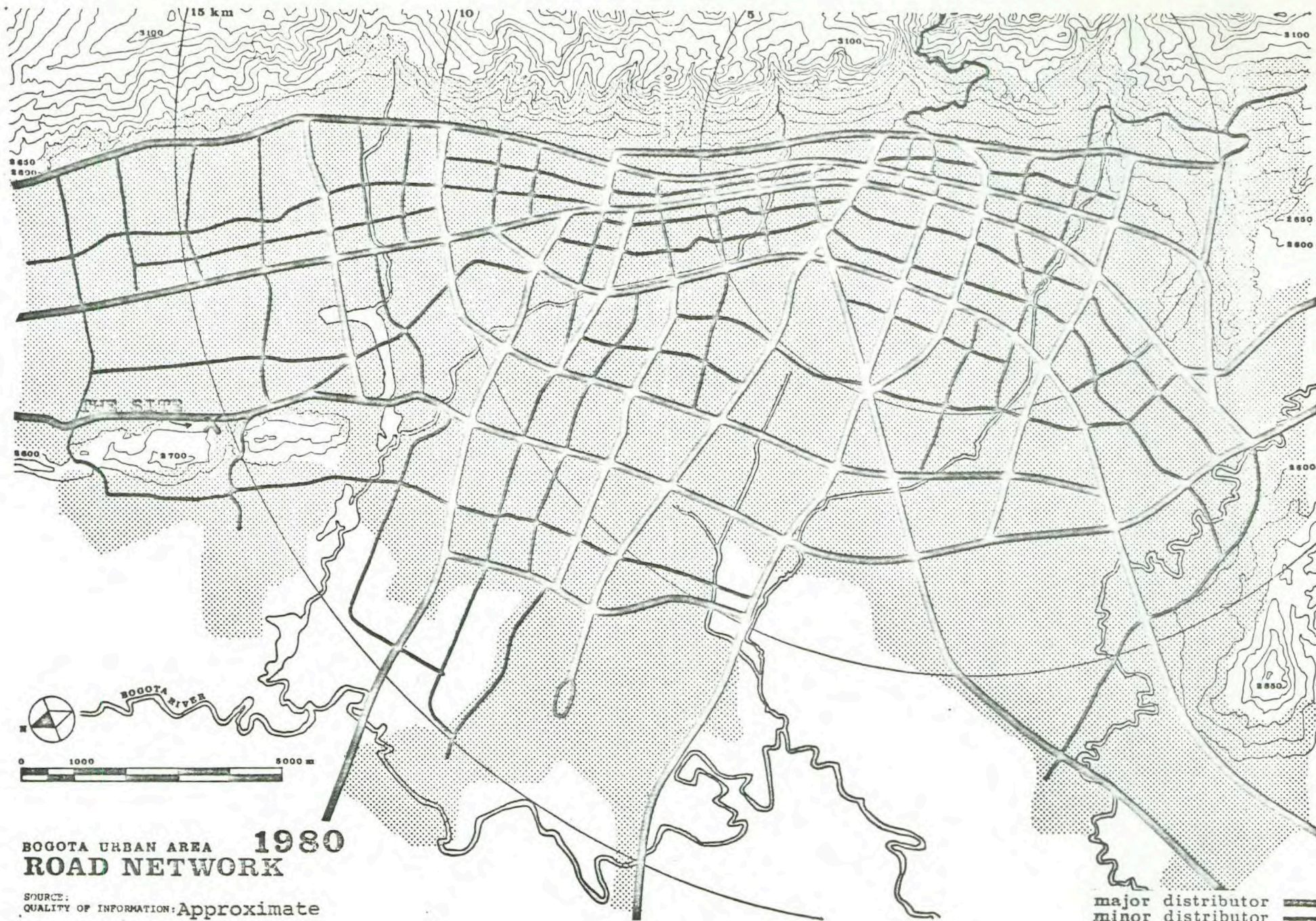




**BOGOTA URBAN AREA 1970
ROAD NETWORK**



SOURCE:
QUALITY OF INFORMATION: Approximate

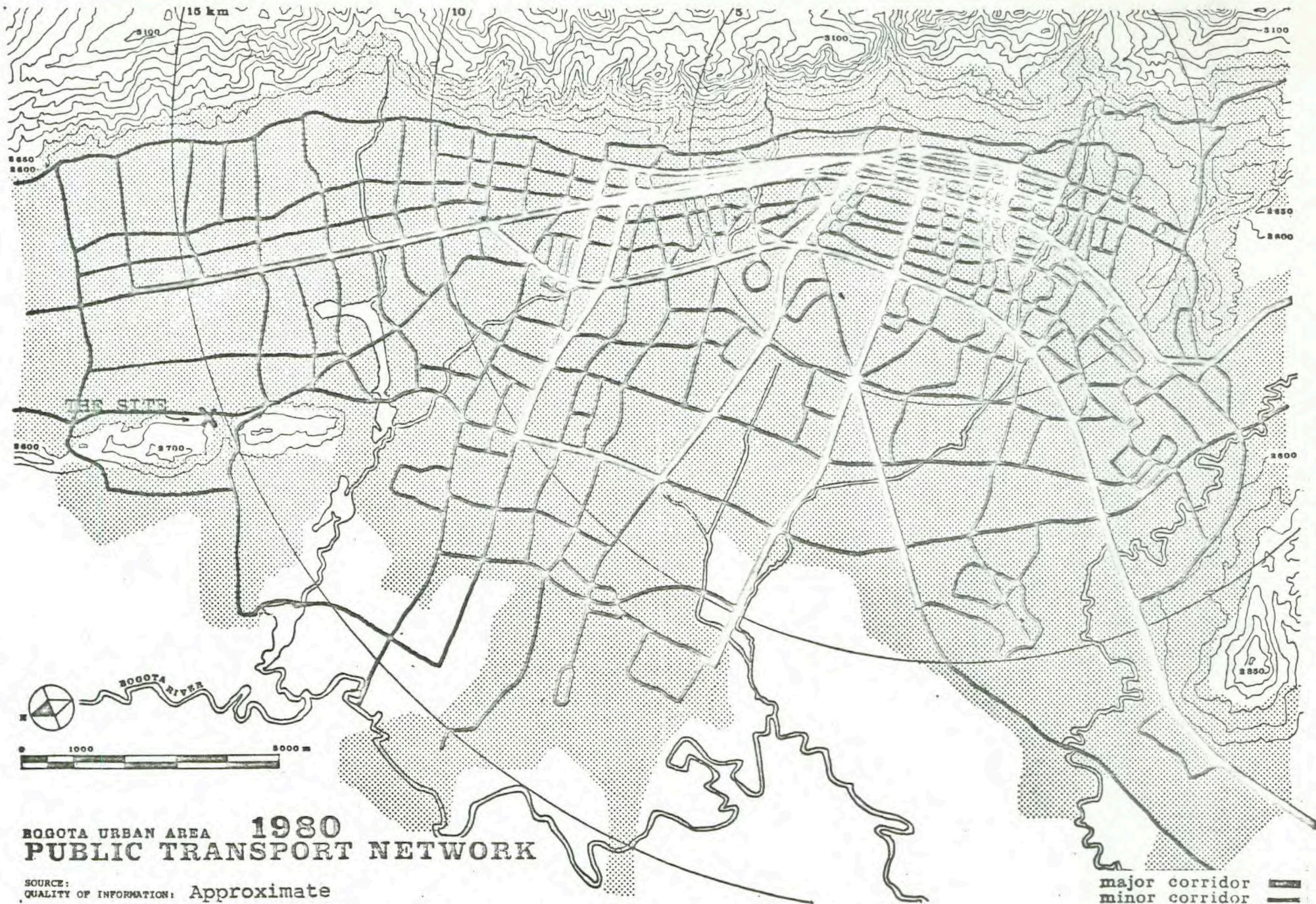
major distributor 
minor distributor 

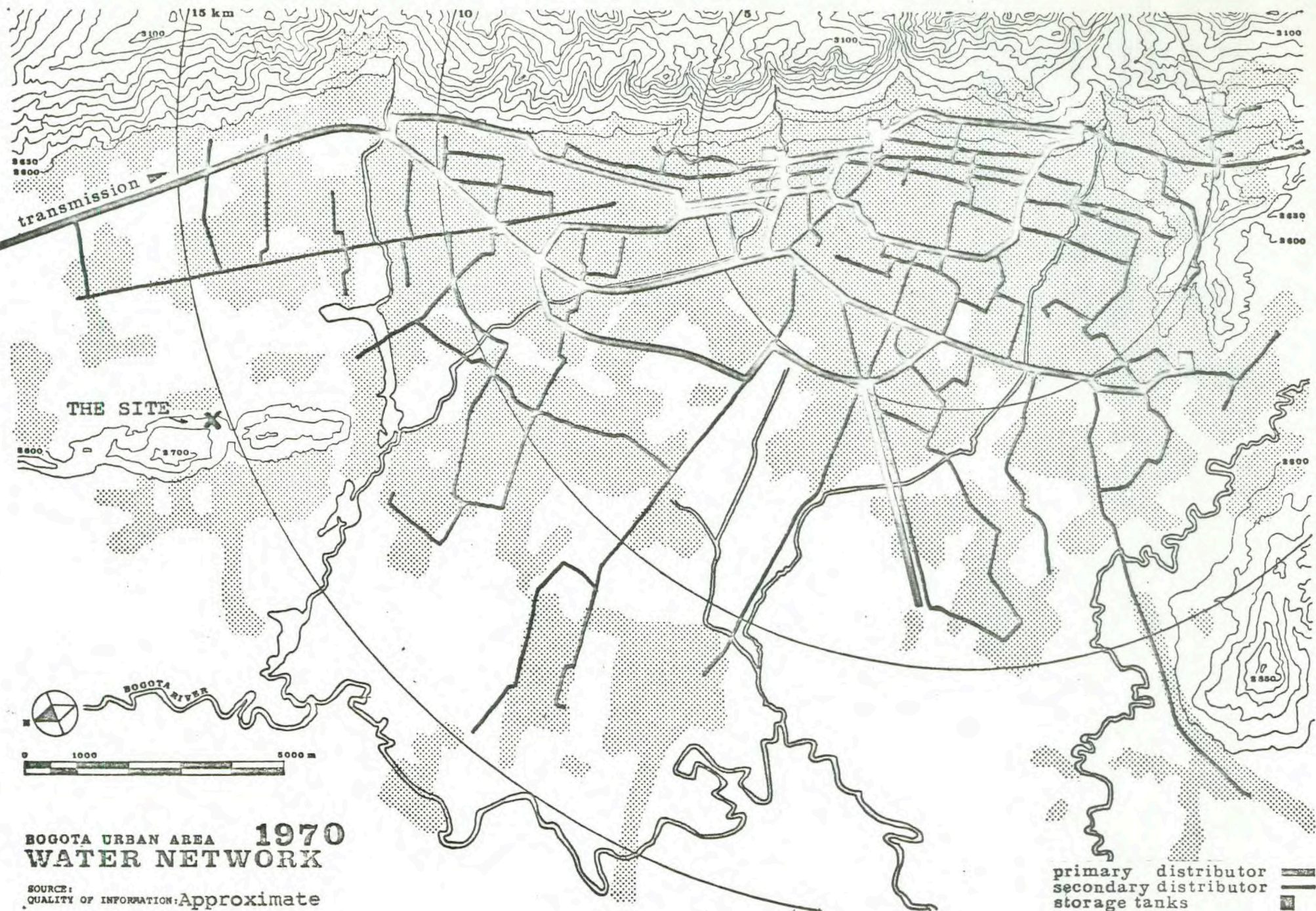


**BOGOTA URBAN AREA 1980
ROAD NETWORK**

SOURCE:
QUALITY OF INFORMATION: Approximate

major distributor 
minor distributor 

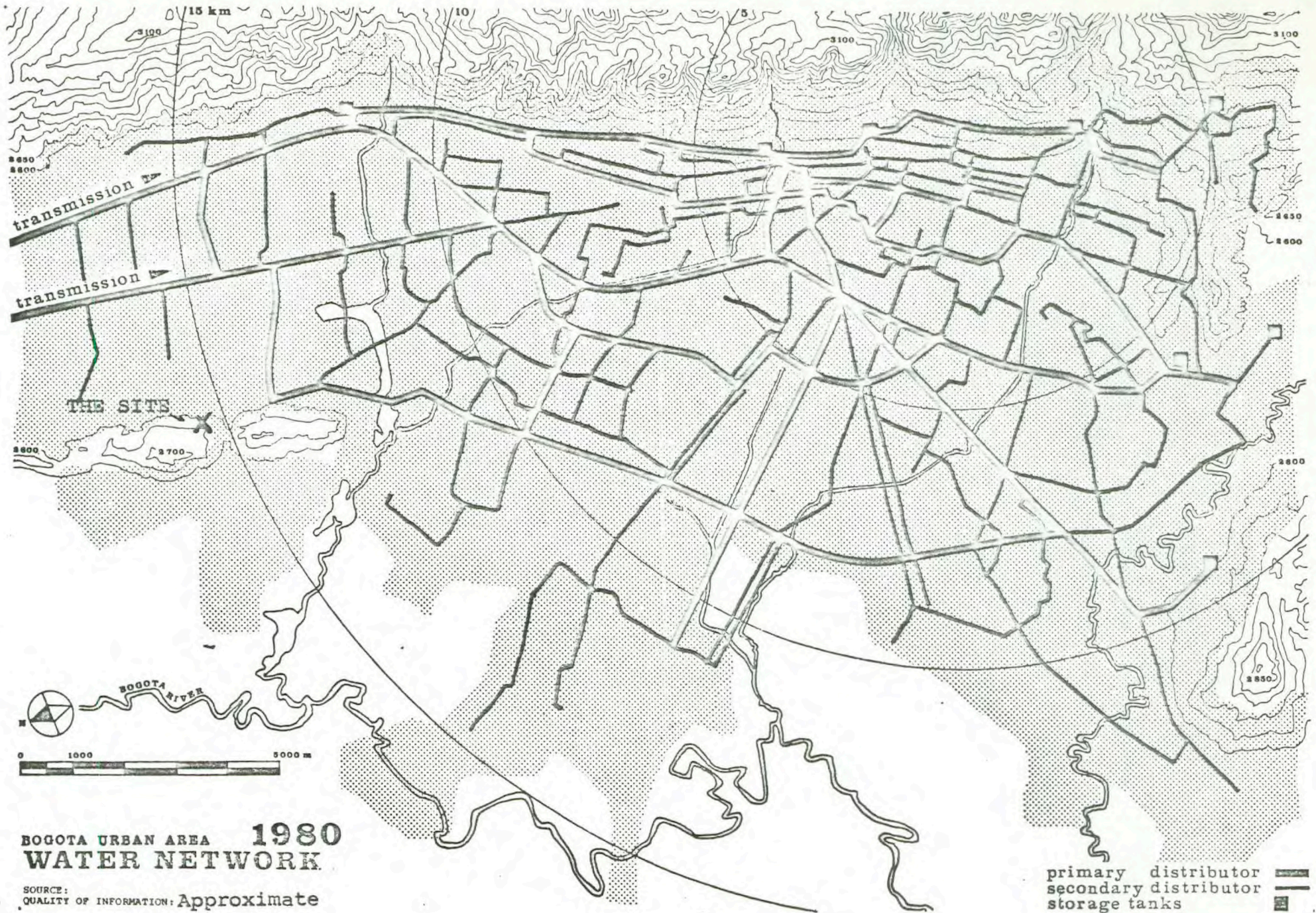




**BOGOTA URBAN AREA 1970
WATER NETWORK**

SOURCE:
QUALITY OF INFORMATION: Approximate

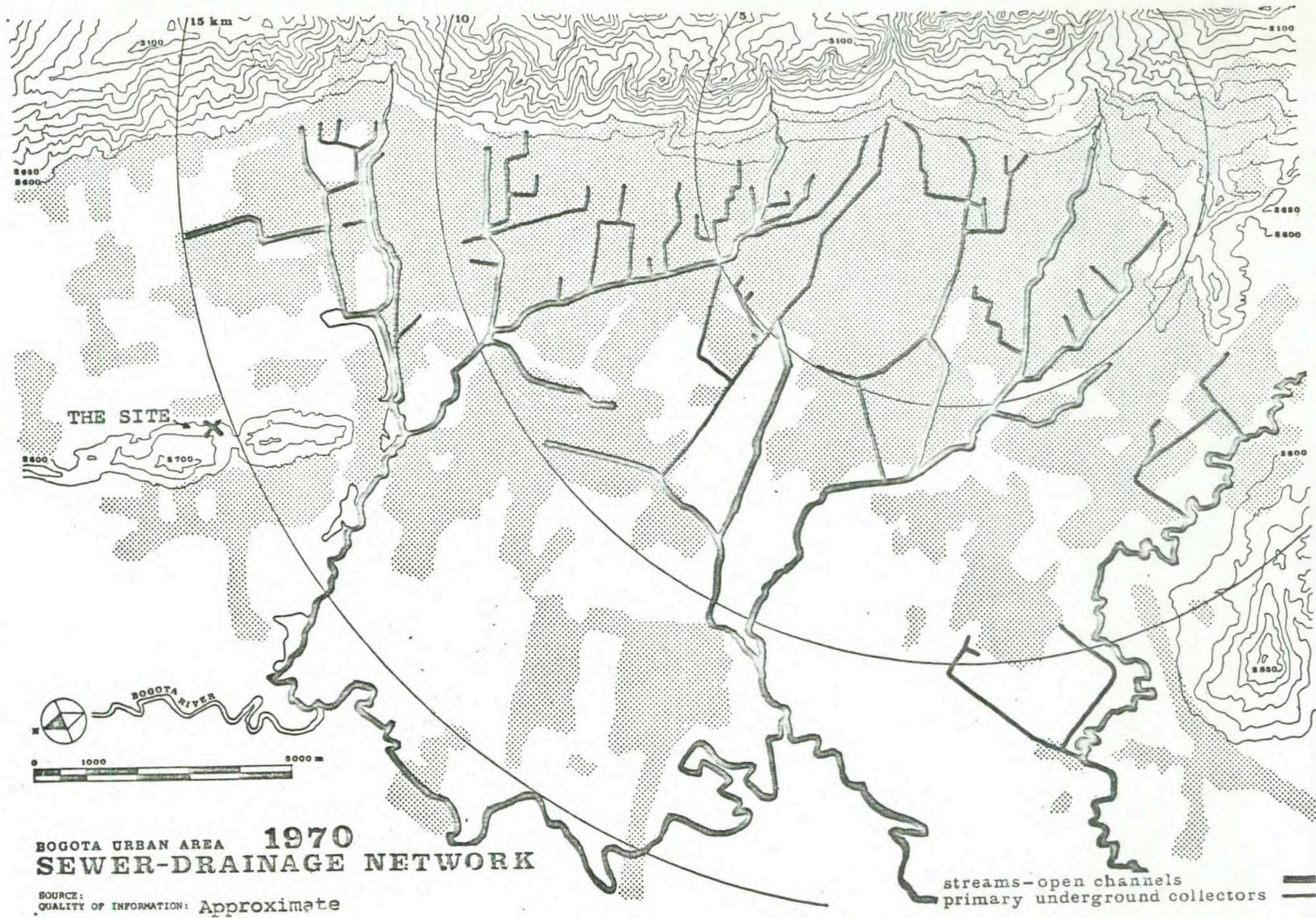
primary distributor
secondary distributor
storage tanks

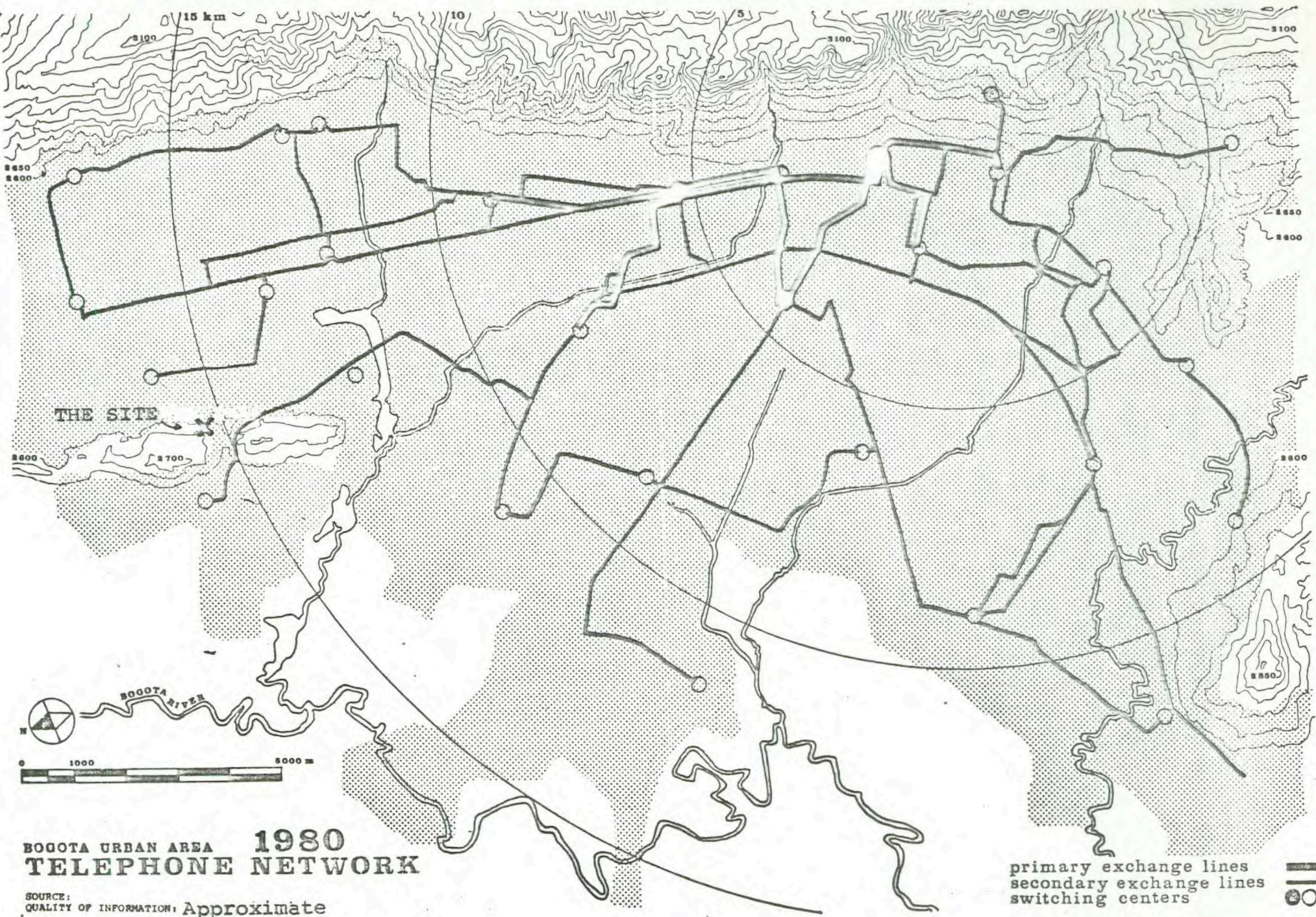


**BOGOTA URBAN AREA 1980
WATER NETWORK**

SOURCE:
QUALITY OF INFORMATION: Approximate

primary distributor
secondary distributor
storage tanks





**BOGOTA URBAN AREA 1980
TELEPHONE NETWORK**

SOURCE:
QUALITY OF INFORMATION: Approximate

primary exchange lines
secondary exchange lines
switching centers