

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

NORTH SINAI DEVELOPMENT ORGANIZATION
MINISTRY OF WATER RESOURCES AND IRRIGATION
THE ARAB REPUBLIC OF EGYPT

THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT
(PHASE III)

(DETAILED DESIGN STUDY)

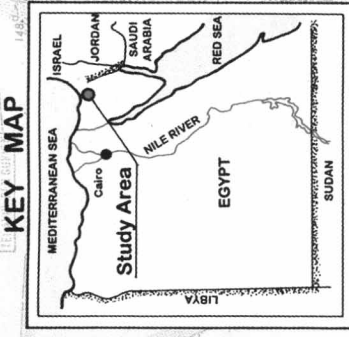
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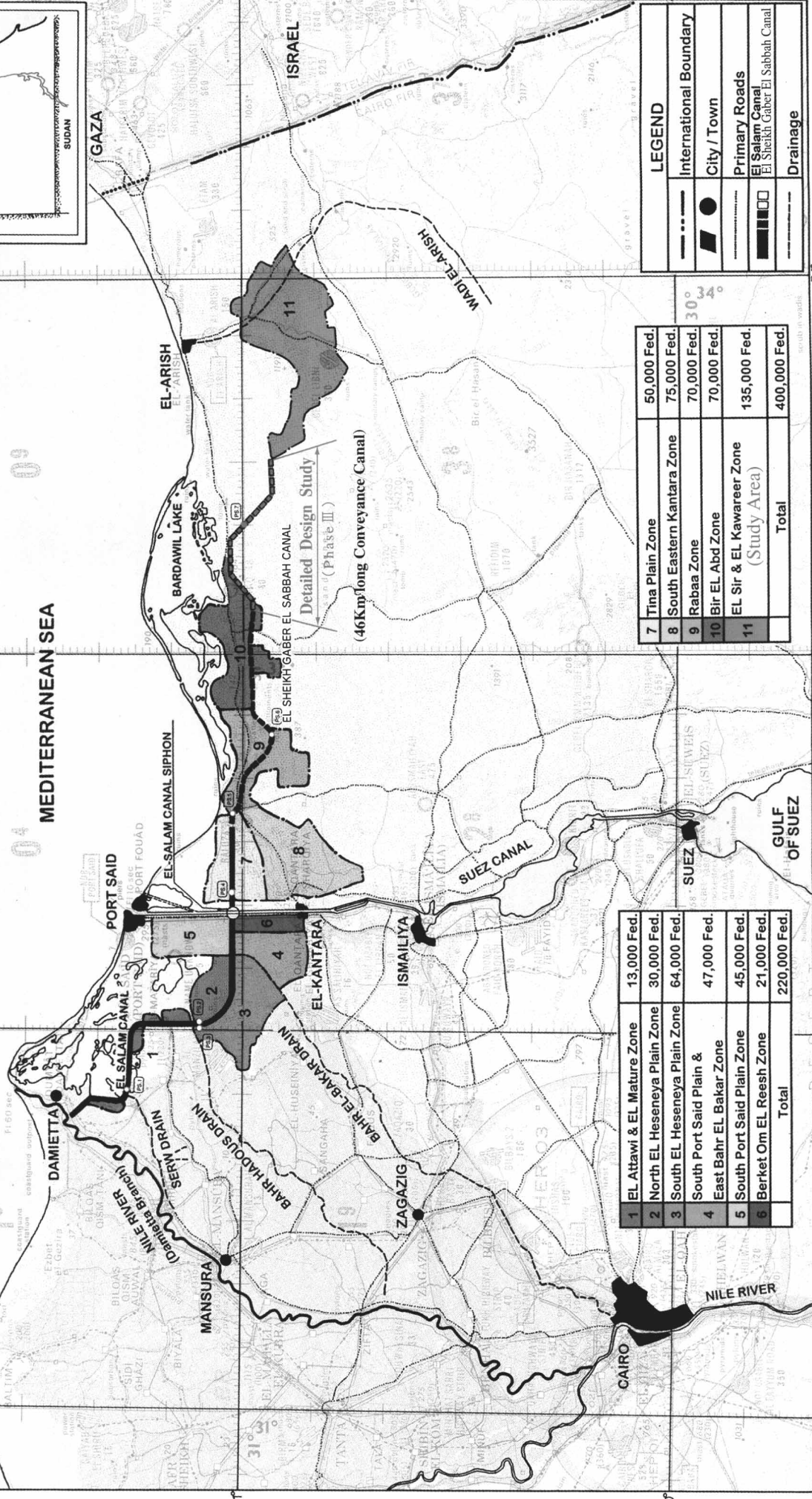
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**THE NORTH SINAI
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LOCATION MAP**



MEDITERRANEAN SEA



1	EL Attawi & EL Mature Zone	13,000 Fed.
2	North EL Heseneya Plain Zone	30,000 Fed.
3	South EL Heseneya Plain Zone	64,000 Fed.
4	South Port Said Plain & East Bahr EL Bakar Zone	47,000 Fed.
5	South Port Said Plain Zone	45,000 Fed.
6	Berket Om EL Reesh Zone	21,000 Fed.
	Total	220,000 Fed.

7	Tina Plain Zone	50,000 Fed.
8	South Eastern Kantara Zone	75,000 Fed.
9	Rabaa Zone	70,000 Fed.
10	Bir EL Abd Zone	70,000 Fed.
11	EL Sir & EL Kawareer Zone (Study Area)	135,000 Fed.
	Total	400,000 Fed.

LEGEND

	International Boundary
	City / Town
	Primary Roads
	El Salam Canal
	El Sheikh Gaber El Sabbah Canal
	Drainage

31° 32° 33° 34° 30° 31° 32° 33° 34°

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ABBREVIATION AND UNIT

1. Abbreviations :

ASTM	: American Society for Testing and Materials
AWWA	: American Water Works Association
BM	: Bench Marks
BP	: Beginning Points
DCIP	: Ductile Cast Iron Pipe
EC	: Electrical Conductance
EEA	: Egyptian Electrical Authority
EI	: Environmental Impact Assessment
EIRR	: Economic Internal Rate of Return
EP	: End Points
FRP	: Fiberglass Reinforced Plastic Mortar Pipe
FWSL	: Full Water Supply Level
GIA	: Gross Irrigation Area
GOE	: Government of Egypt
IEC	: International Electrical Commission
IEE	: Institution of Electrical Engineers
IP	: Intersection Points
ISO	: International Standardization Organization
JICA	: Japan International Cooperation Agency
JIS	: Japan Industrial Standard
KM	: Kilo Meter
MCC	: Motor Control Center
MCM	: Million Cubic Meter
MED	: Mechanical and Electrical Department under MPWWR
MOAFFJ	: Ministry of Agriculture, Forestry and Fisheries of Japan
MOCJ	: Ministry of Construction of Japan
MPWWR	: Ministry of Public Works and Water Resources
MSL	: Mean Sea Level
MVA	: Mega Volt Ampere
MW	: Mega Watt
NSDO	: North Sinai Development Organization
O/M, O&M	: Operation and Maintenance
P.S.	: Pumping Station

PCCP	: Prestressed Concrete Cylinder Pipe
PMC	: Project Management Committee
PPD	: Project Preparation Department under MPWWR
PSC	: Project Steering Committee
PVC	: Unplasticized Polyvinyl Chloride Pipe
REA	: Rural Electrification Authority
RTD	: Resistance Temperature Detector
SP	: Steel Pipe
TDS	: Total Dissolved Solid
USCS	: Unified Soil Classification System
VVVF	: Variable Voltage Variable Frequency

2. Unit :

°C	: degree centigrade
%	: percent
cm	: centimeter
cm/s	: centimeter per second
'Fed.	: Feddans
ha	: hectare
hp	: horsepower
hr	: hour
kg	: kilogram
kg/cm ²	: kilogram per square centimeter
km	: kilometer
km/hr	: kilometer per hour
km ²	: square kilometer
kV	: kilovolt
kW	: kilowatt
LE	: Egyptian Pounds
m	: meter
m/sec	: meter per second
m ²	: square meter
m ³	: cubic meter
m ³ /day	: cubic meter per day
m ³ /hr	: cubic meter per hour

m ³ /sec	: cubic meter per second
m ³ /year	: cubic meter per year
MCM	: million cubic meter
mg/l	: Milligram per liter
m	: millimeter
MSL	: mean sea level
MW	: mega-watt
Nos	: numbers
pH	: poetical of hydrogen
ppm	: parts per million
sec	: second
US\$: US Dollar