

GENERAL NOTES FOR VENTILATION AIR CONDITIONING AND PLUMBING SYSTEM

1. DESIGN CRITERIA

OUTDOOR DESIGN CONDITIONS	: 37°CDB, 23°CWB
INDOOR DESIGN CONDITIONS	: 25±1°CDB, 50±10%RH
VENTILATION REQUIREMENT	
<u>ROOM</u>	<u>VENTILATION RATE</u>
WORK SHOP IN PUMP HOUSE	: 20 AC/H
WORK SHOP IN ADMINISTRATION BLDG TOILET	: 15 AC/H
SUB-STATION	: 15 AC/H
DC POWER UNIT ROOM	: 30 AC/H

2. LEGEND

<u>SYMBOL</u>	<u>DESCRIPTION</u>
---	POTABLE WATER PIPE
—	SEWAGE PIPE
—X—	GATE VALVE
—N—	CHECK VALVE
—(ST)—	STRAINER "Y" TYPE
□	AIR CONDITIONER,
□	OUTDOOR CONDENSING UNIT
←□	EXHAUST FAN
□	AXIAL FLOW FAN
⊗	MANHOLE
(LS)	LEVEL SWITCH

3. ABBREVIATIONS

SAR	SUPPLY AIR REGISTER
CMM	CUBIC METER PER MINUTES
RA	RETURN AIR
SA	SUPPLY AIR
TYP.	TYPICAL
VAC	VENTILATION AND AIR CONDITIONING
AC/H	AIR CHANGE PER HOUR
DB	DRY BULB
RH	RELATIVE HUMIDITY
A/C	AIR CONDITIONER

4. GENERAL NOTES

- 4.1 DRAWING OF VENTILATION, AIR CONDITIONING AND PLUMBING SYSTEM SHALL BE READ IN CONJUNCTION WITH RELEVANT ARCHITECTURAL AND OTHER SERVICES DRAWINGS.
- 4.2 ALL DIMENSIONS ARE MILLEMMETER UNLESS OTHERWISE INDICATED.
- 4.3 THE WORK SHALL BE EXECUTED IN CLOSE COORDINATION WITH ALL TRADES.
- 4.4 ALL FLOOR MOUNTED EQUIPMENT SHALL BE PROVIDED WITH VIBRATION ISOLATORS TO PREVENT VIBRATION AND NOISE TRANSMISSION.
- 4.5 PRIMARY POWER TO THE MOTOR CONTROL PANEL (MCP) SHALL BE SUPPLIED BY THE ELECTRICAL WORK. MCP AND WIRING BETWEEN MCP AND EQUIPMENT SHALL ALSO BE THE SCOPE OF THE ELECTRICAL WORK.
- 4.6 PROVIDE AUTOMATIC AIR VENT VALVE AT HIGH POINT AND DRAIN VALVE AT LOW POINT IN THE WATER PIPING SYSTEM.
- 4.7 PROVIDE PIPE SLEEVES FOR ALL PIPING PASSING THROUGH BUILDING STRUCTURE.
- 4.8 PROVIDE ACCESS DOOR AT THE PIPE SHAFT AND ACCESS PANEL AT THE CEILING WHERE REQUIRED FOR PROPER OPERATION AND MAINTENANCE.
- 4.9 THE CONDENSATE DRAINPIPE SHALL BE DISCHARGED TO THE GROUND.
- 4.10 LOCATION OF OUTDOOR AIR INTAKE LOUVERS SHOWN ON THE DRAWINGS SHALL BE INDICATIVE ONLY AND SHALL BE REFERRED TO THE ARCHITECTURAL DRAWINGS.
- 4.11 ROOF OVER THE AIR CONDITIONED SPACE SHALL BE INSULATED.
- 4.12 THE PROPELLER TYPE EXHAUST FAN SHALL BE PROVIDED WITH GRAVITY LOUVER AND INSECT SCREEN.

THE ARAB REPUBLIC OF EGYPT MINISTRY OF WATER RESOURCES AND IRRIGATION NORTH SINAI DEVELOPMENT ORGANIZATION THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE III)	
CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBABH CANAL BETWEEN KM 108.466 AND KM 118.560 EL SALAAM No. 7 (BIR EL ABD) PUMPING STATION PUMP HOUSE GENERAL NOTES FOR VAC AND PLUMBING SYSTEM	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) SANYU CONSULTANTS INC, PACIFIC CONSULTANTS INTERNATIONAL	
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DRAWING NO.	PSB-238

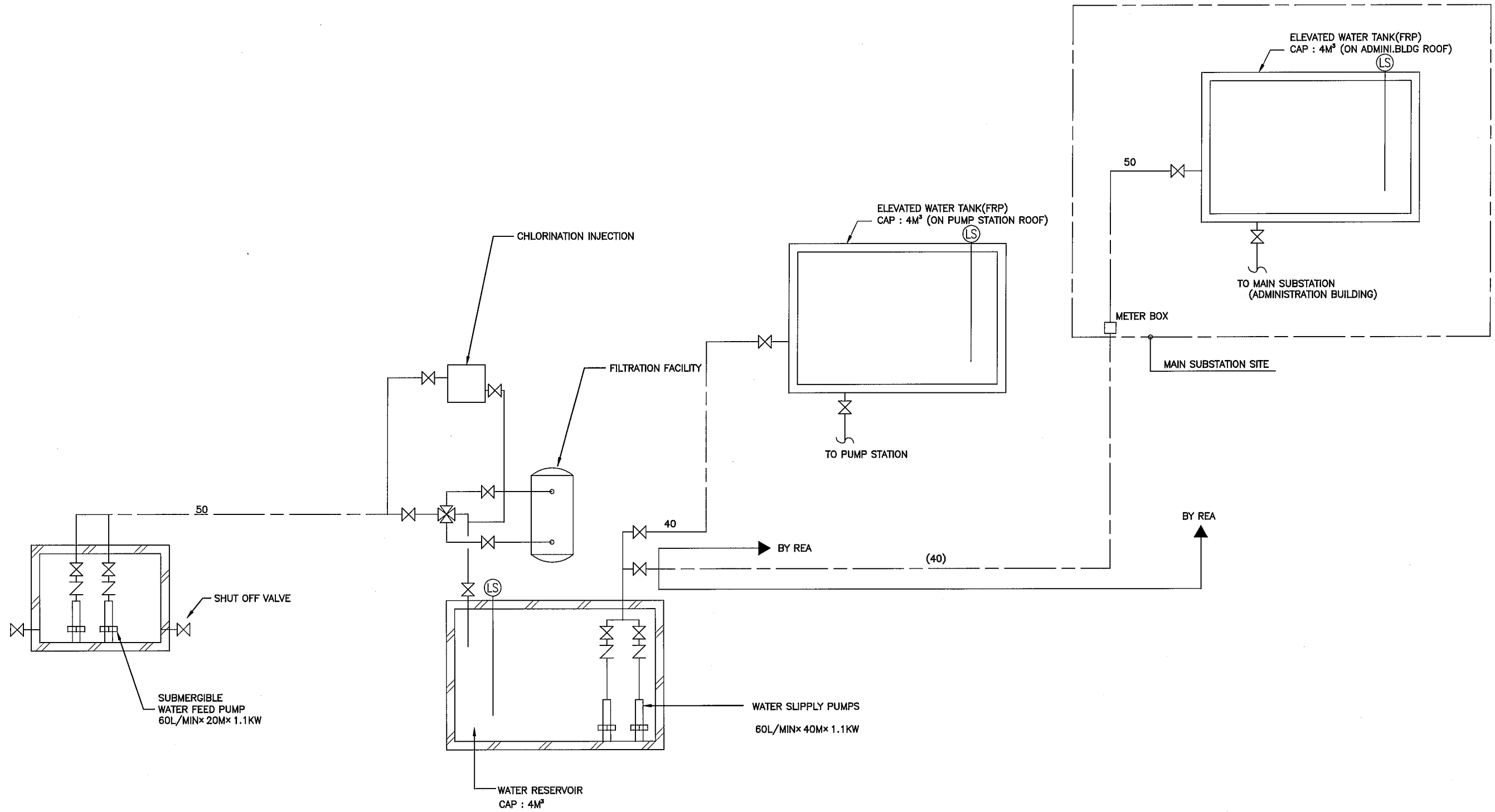
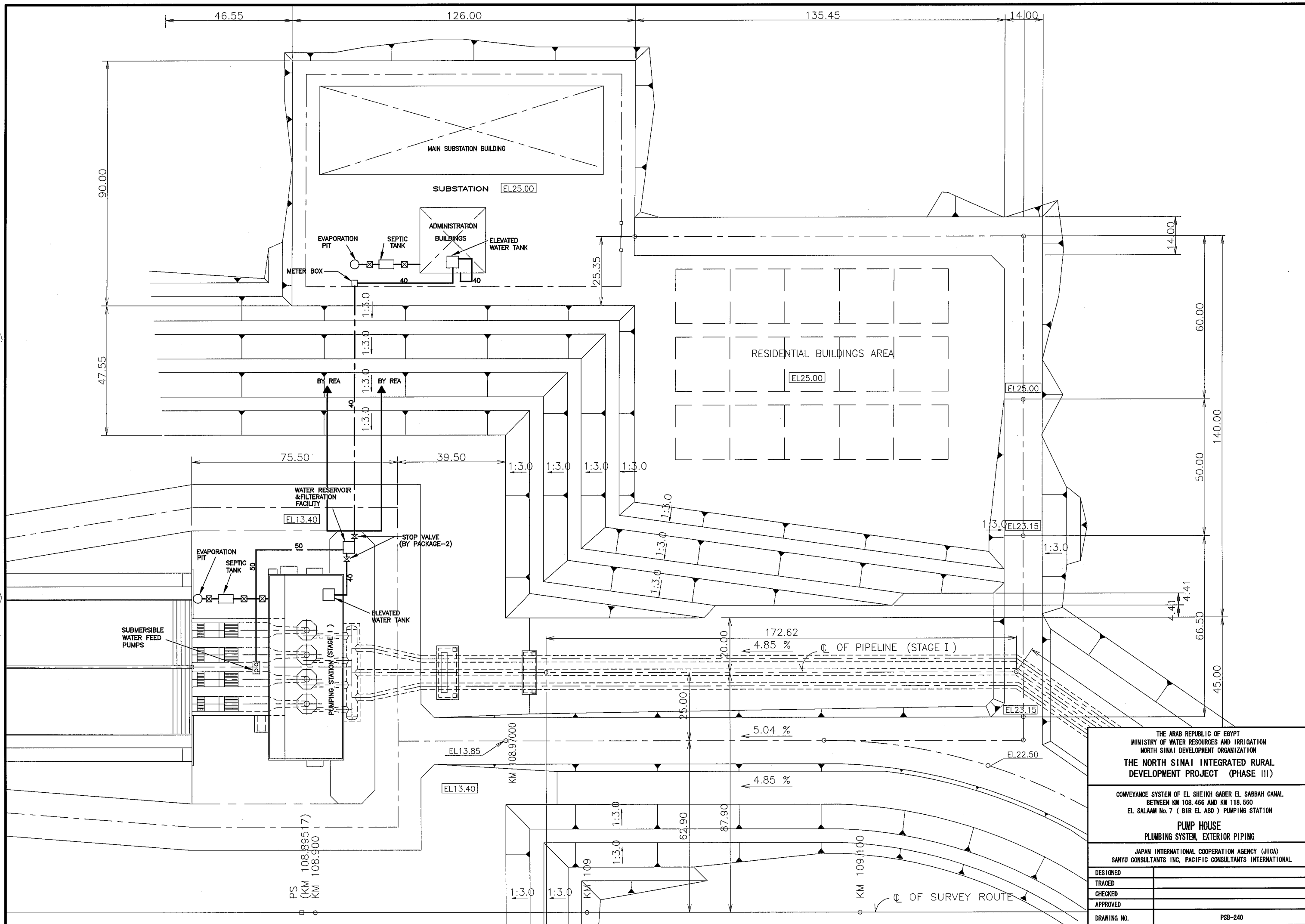
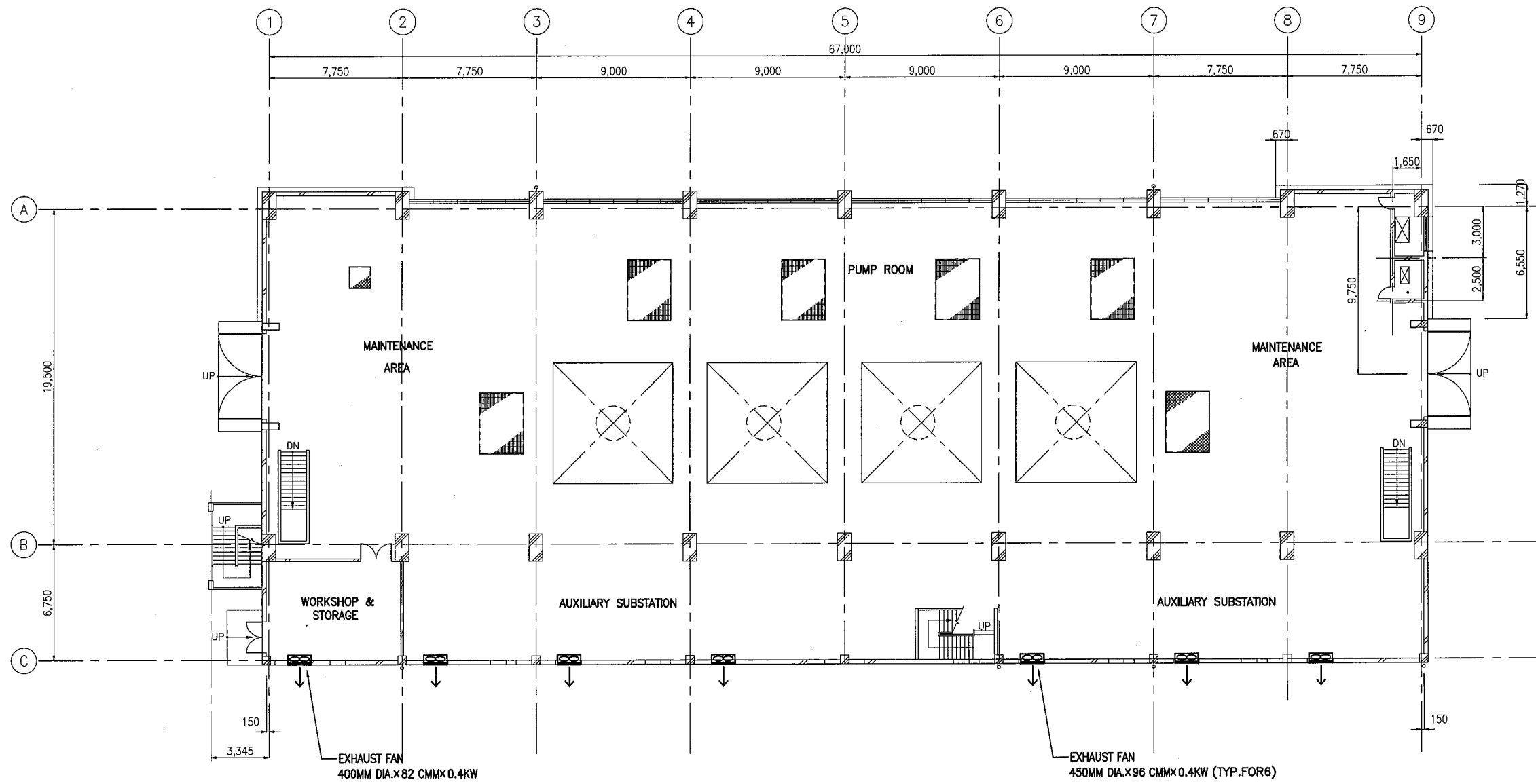


DIAGRAM FOR WATER SUPPLY SYSTEM
NOT TO SCALE

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CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAH CANAL BETWEEN KM 108.466 AND KM 118.560 EL SALAAM No. 7 (BIR EL ABD) PUMPING STATION	
PUMP HOUSE DIAGRAM FOR WATER SUPPLY SYSTEM	
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CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAH CANAL BETWEEN KM 108.466 AND KM 118.560 EL SALAAM No. 7 (BIR EL ABD) PUMPING STATION	
PUMP HOUSE PLUMBING SYSTEM, EXTERIOR PIPING	
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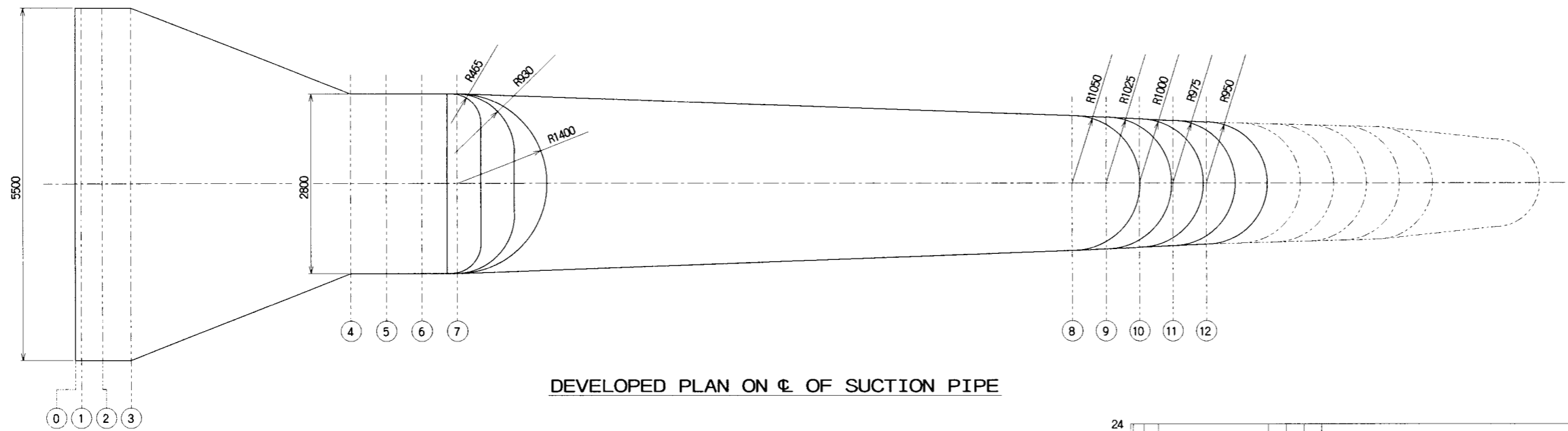
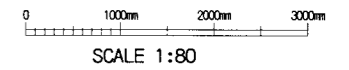


VETILATION AND AIR CONDITIONING SYSTEM, GROUND FLOOR

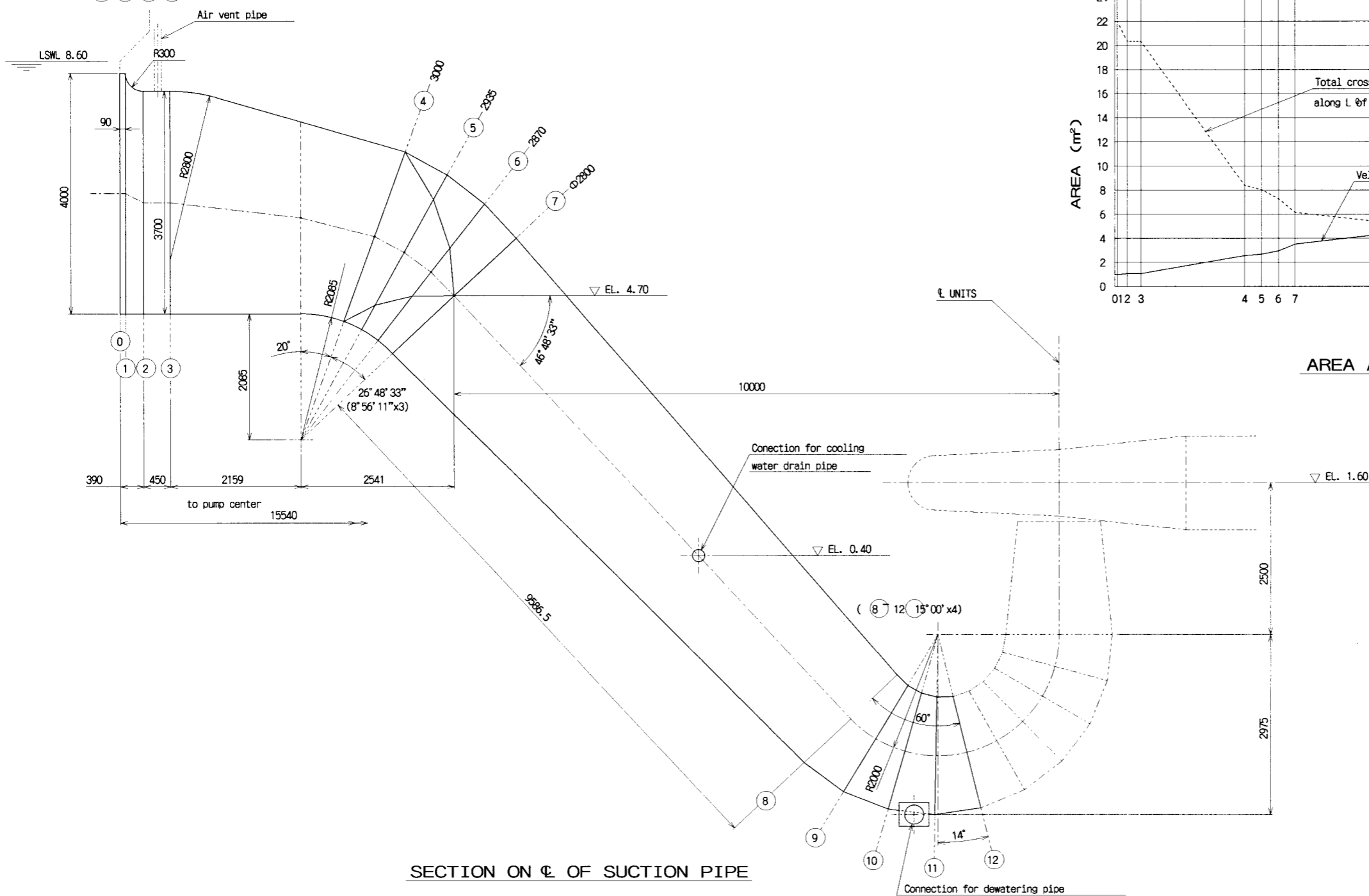
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CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAH CANAL BETWEEN KM 108.466 AND KM 118.560 EL SALAAM No. 7 (BIR EL ABD) PUMPING STATION PUMP HOUSE VENTILATION AND AIR CONDITIONING SYSTEM, GROUND FLOOR	
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NOTES:

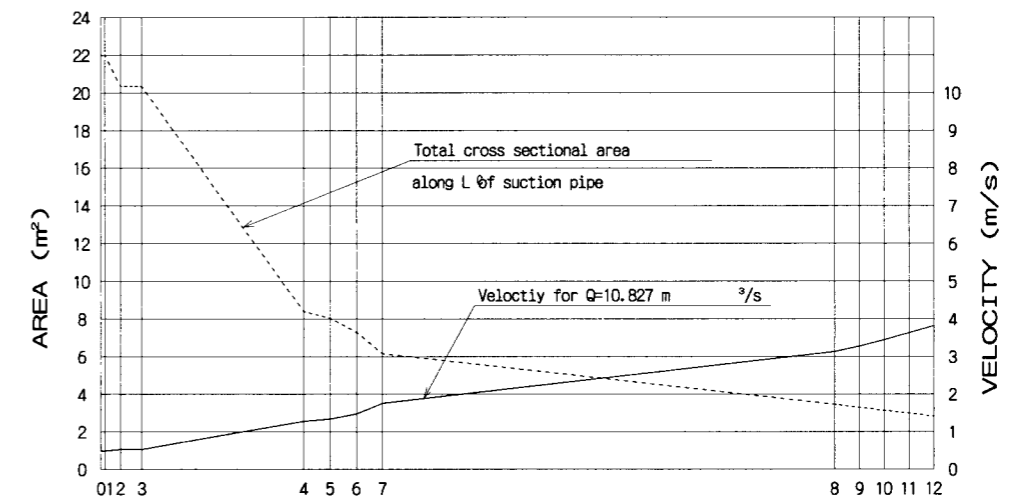
1. This drawing scale is 1:80



DEVELOPED PLAN ON Ø OF SUCTION PIPE

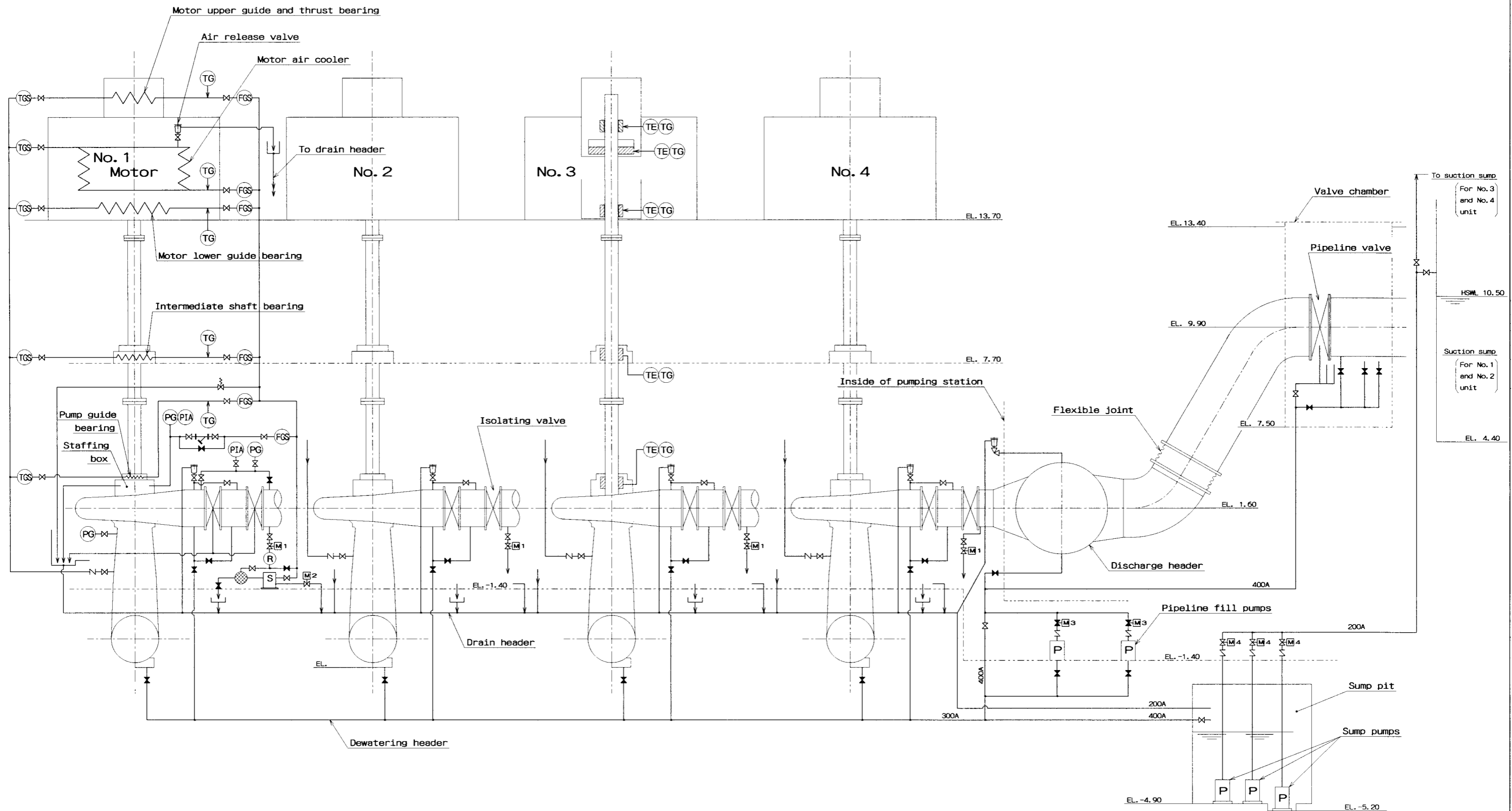


SECTION ON Ø OF SUCTION PIPE



AREA AND VELOCITY CURVES

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THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE III)	
CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBABH CANAL BETWEEN KM 108.456 AND KM 118.500 EL SALAAM No. 7 (BIR EL ABD) PUMPING STATION	
MECHANICAL EQUIPMENT NEAT LINE OF SUCTION PIPE	
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SYMBOLS AND DESIGNATIONS

- | | | | |
|--|--|--|---------------------------|
| | Motor operated valve(Open under operation) | | Pressure gauge |
| | Gate valve or globe valve(Normally open) | | Pressure indication alarm |
| | Gate valve or globe valve(Normally close) | | Temperature gauge |
| | Pressure release valve | | Temperature gauge switch |
| | Air valve | | Flow gauge switch |
| | Check valve | | Temperature element |
| | Y Strainer | | |
| | Pressure reducing valve | | |
| | Auto strainer | | |
| | Sand separator | | |

MOTOR LISTS

- | | | | |
|--|---------|--------------------------|--------|
| | 0.75 kw | Pipeline fill pump motor | 240 kw |
| | 0.2 kw | Sump pump motor | 7.5 kw |
| | 0.75 kw | Auto strainer | 0.2 kw |
| | 0.2 kw | Pipeline valve actuator | 7.5 kw |
| | | Isolating valve actuator | 5.5 kw |

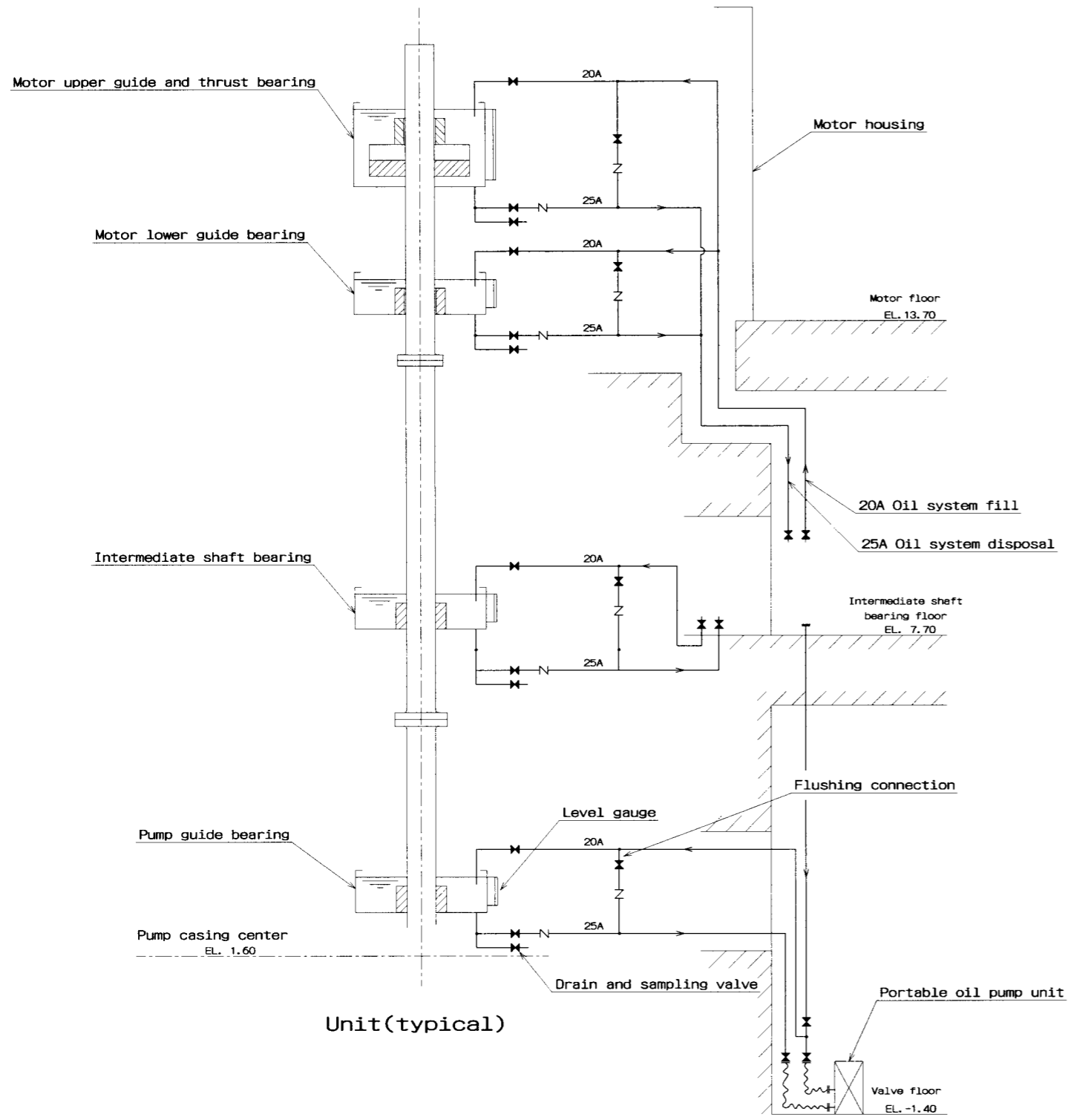
THE ARAB REPUBLIC OF EGYPT
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THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE III)
 CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAH CANAL
 BETWEEN KM 108.466 AND KM 118.960
 EL SALAAM No. 7 (BIR EL ABO) PUMPING STATION

**MECHANICAL EQUIPMENT
 PIPING DIAGRAM(WATER)**

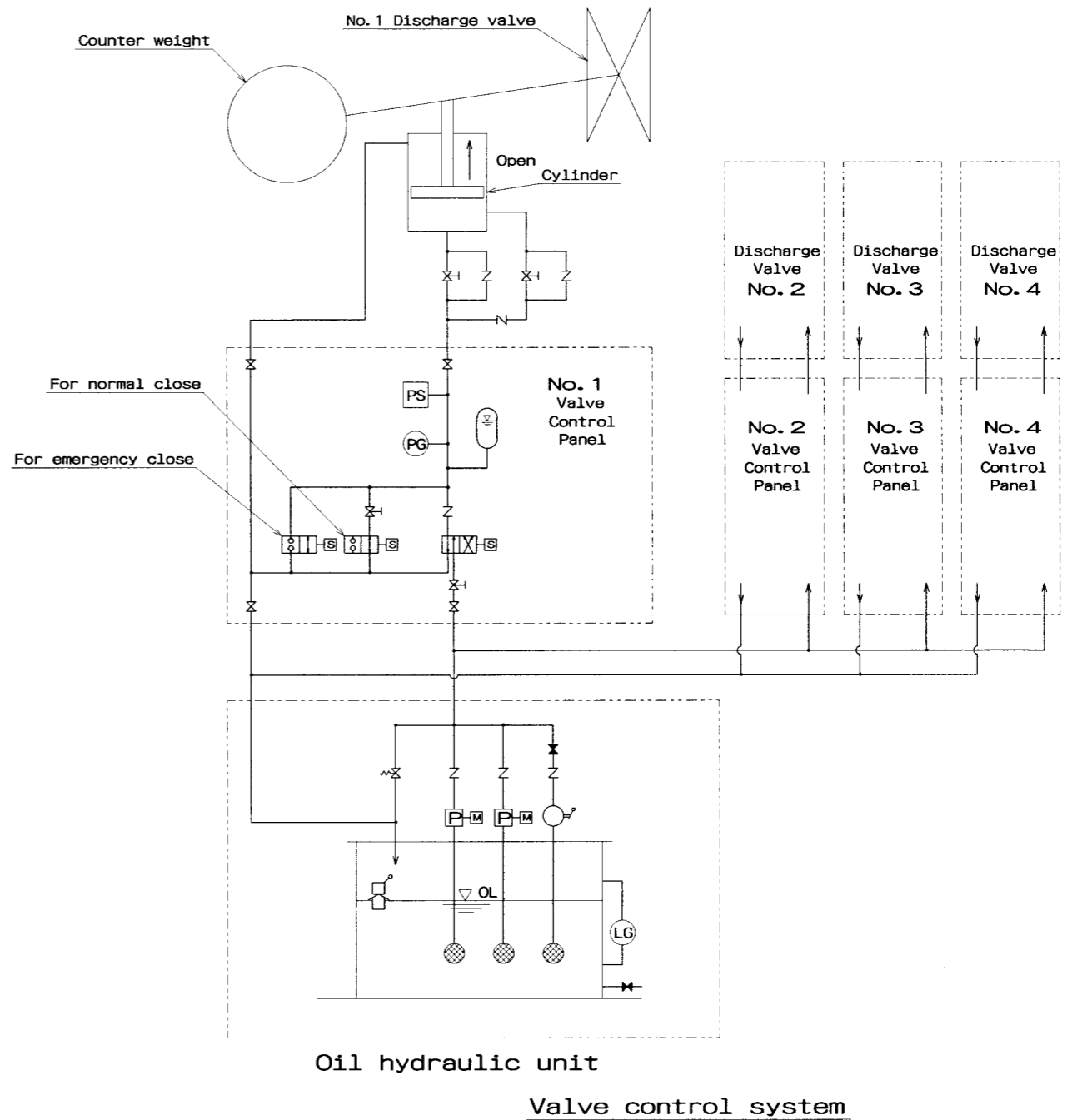
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Unit (typical)

Lubrication oil system



Oil hydraulic unit

Valve control system

SYMBOLS AND DESIGNATIONS

- ⊗ Gate valve or globe valve (Normally open)
- ⊕ Gate valve or globe valve (Normally close)
- N Check valve
- PG Pressure gauge
- PS Pressure switch
- ⊗ Strainer
- ⊗ Flow control valve
- ⊗ Pressure release valve
- P-M Motor operated pressure oil pump
- Oil level switch
- S Solenoid valve
- Hand pump
- Accumulator
- LG Level gauge

MOTOR LISTS

Oil pump motor 7.5 kw

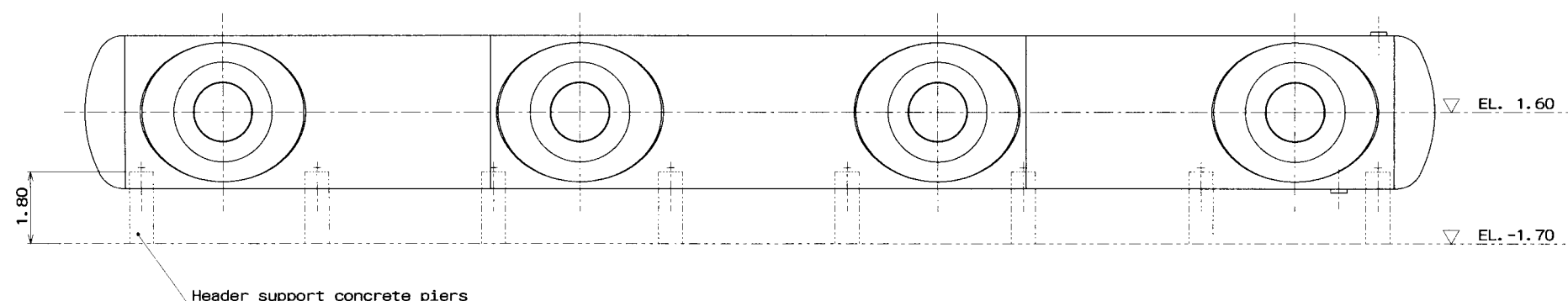
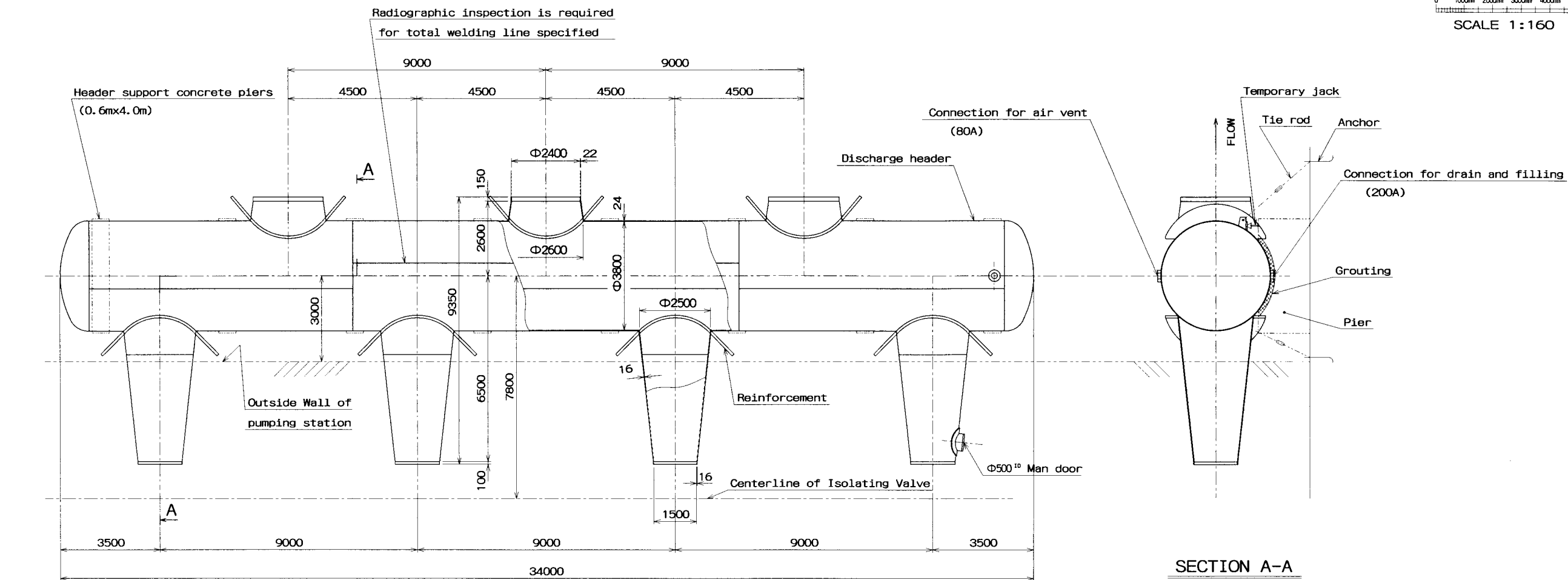
THE ARAB REPUBLIC OF EGYPT MINISTRY OF WATER RESOURCES AND IRRIGATION NORTH SINAI DEVELOPMENT ORGANIZATION	
THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE III)	
CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAH CANAL BETWEEN KM 108.466 AND KM 118.560 EL SALAAM No. 7 (BIR EL ABD) PUMPING STATION	
MECHANICAL EQUIPMENT PIPING DIAGRAM (OIL)	
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NOTES:

1. This drawing scale is 1:160



SCALE 1:160



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THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE III)	
CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBABH CANAL BETWEEN KM 108.466 AND KM 118.560 EL SALAM No. 7 (BIR EL ABD) PUMPING STATION	
MECHANICAL EQUIPMENT GENERAL ARRANGEMENT OF DISCHARGE HEADER	
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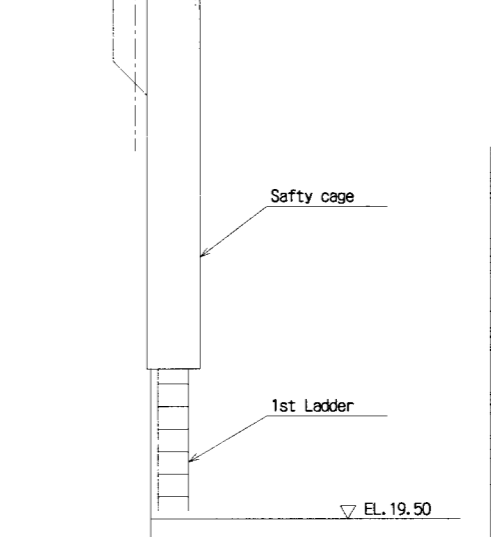
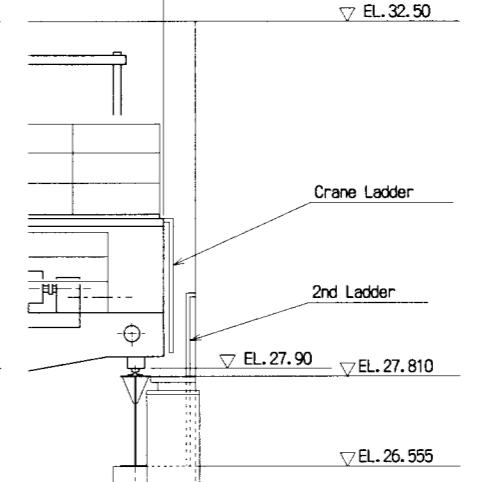
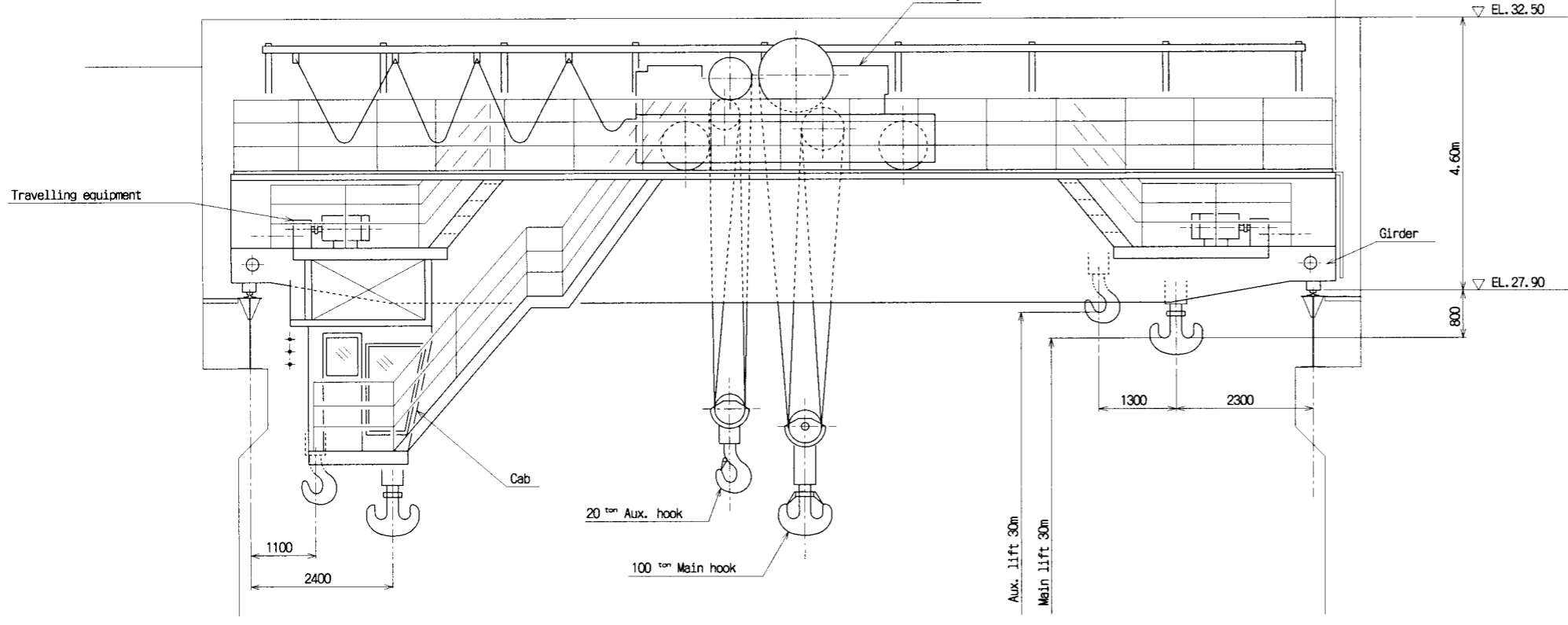
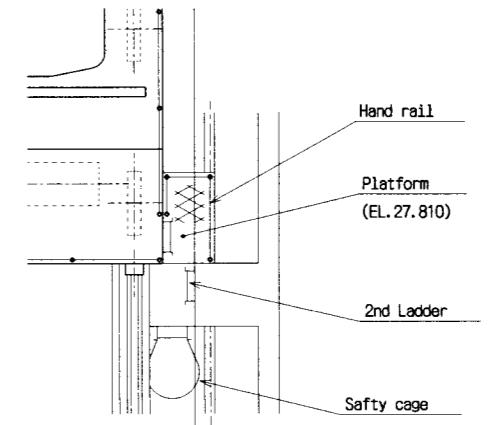
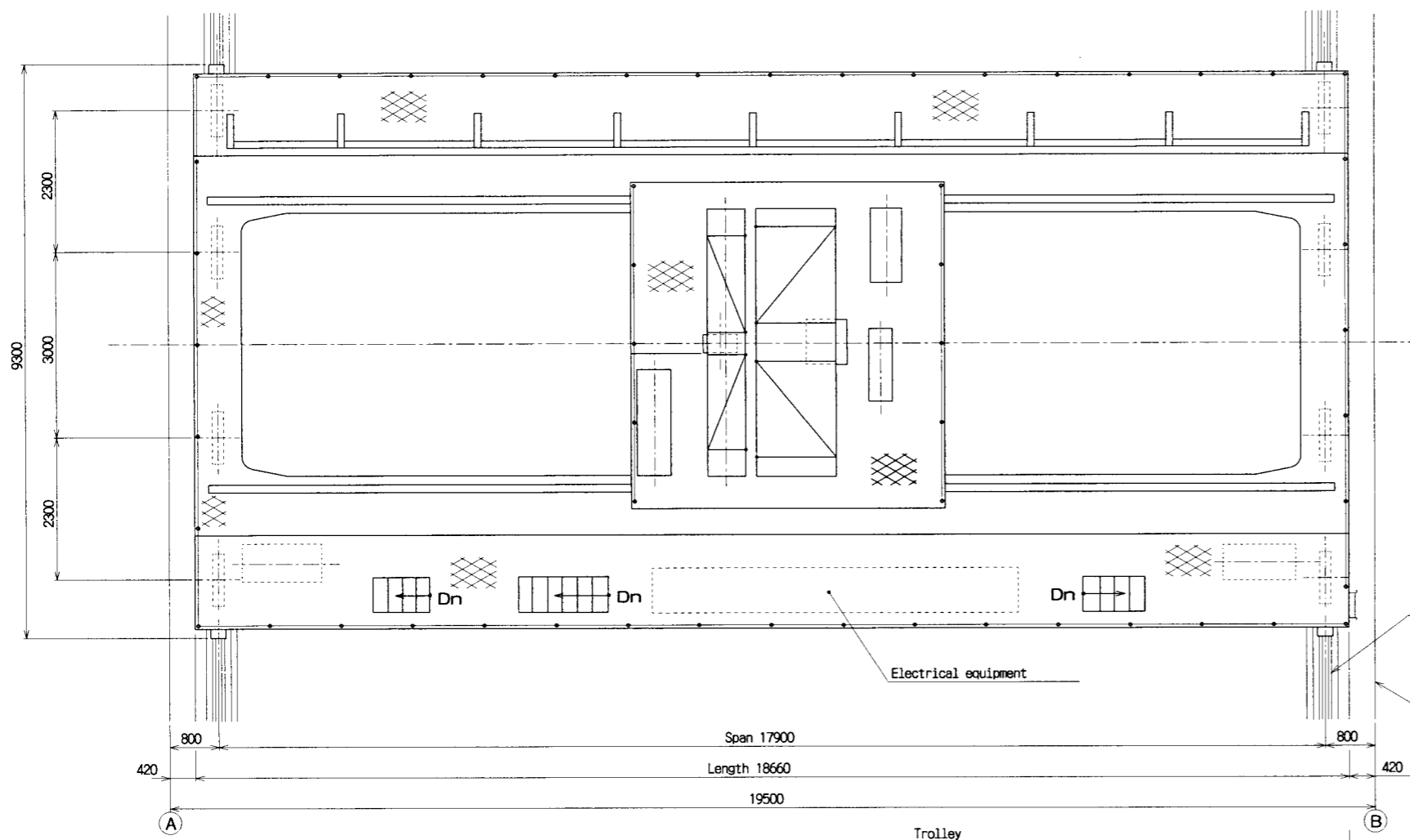
SPECIFICATION

NOTES:

1. This drawing scale is 1:100



Hoisting capacity		
Main hoist		100tons
Auxiliary hoist		20tons
Lifting speed		
Main hoist		1.2m/min.
Auxiliary hoist		3.0m/min.
Travel speed of girder 20m/min.		
Traverse speed of trolley 10m/min.		



THE ARAB REPUBLIC OF EGYPT
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 NORTH SINAI DEVELOPMENT ORGANIZATION

THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE III)

CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBABH CANAL
 BETWEEN KM 108.466 AND KM 118.560
 EL SALAAM No. 7 (BIR EL ABO) PUMPING STATION

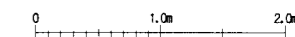
**MECHANICAL EQUIPMENT
 GENERAL ARRANGEMENT OF
 OVERHEAD TRAVELLING CRANE**

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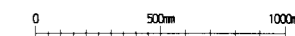
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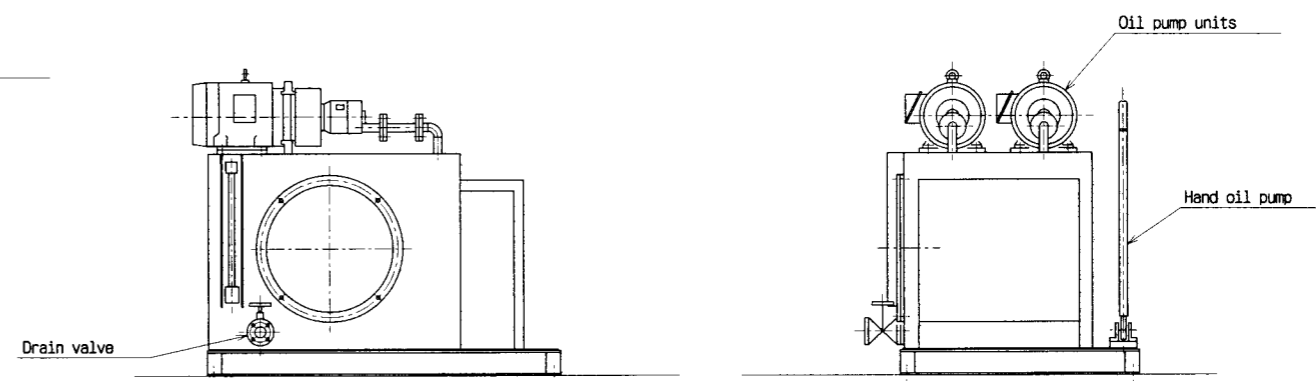
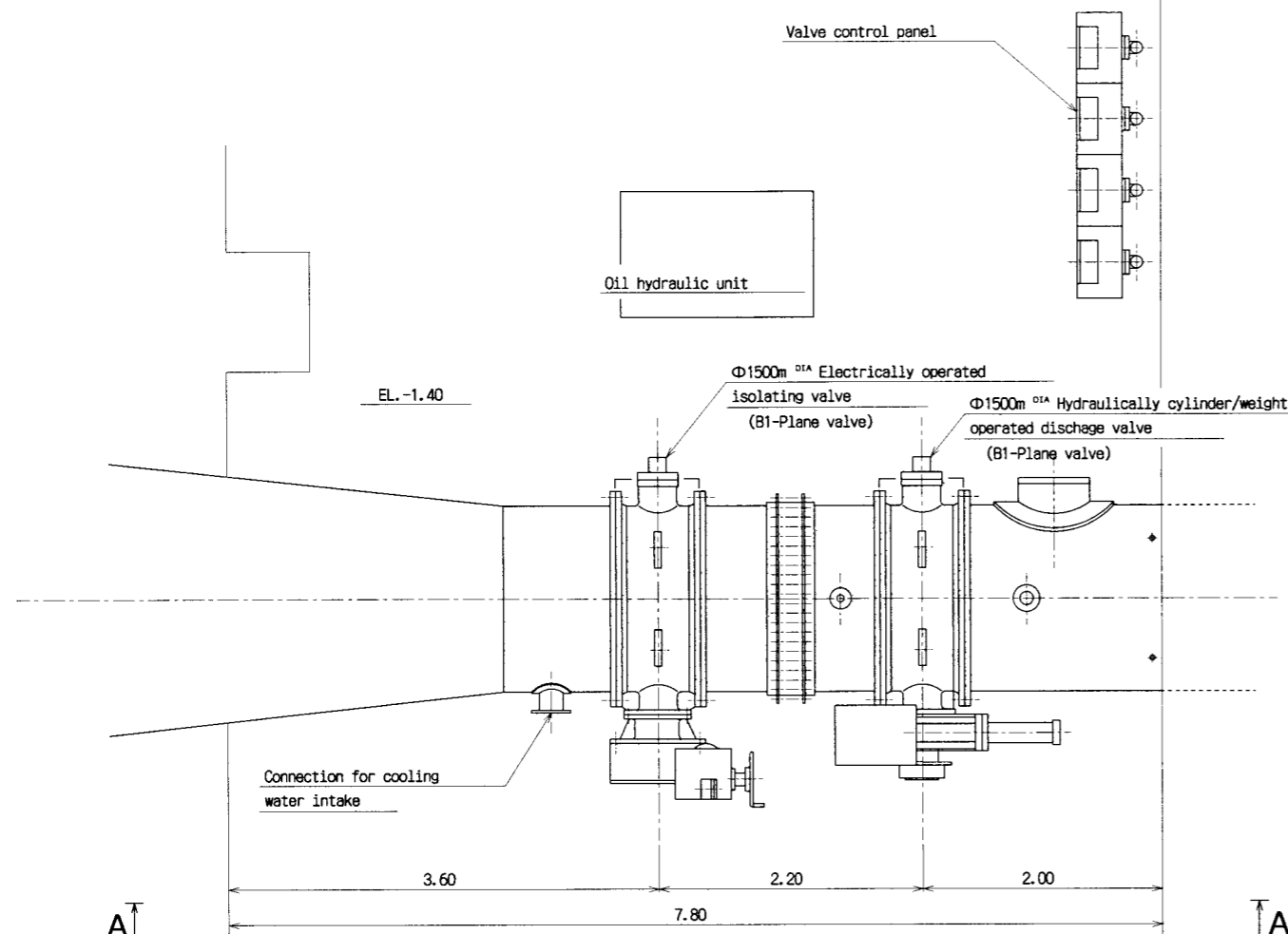
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SCALE 1:60

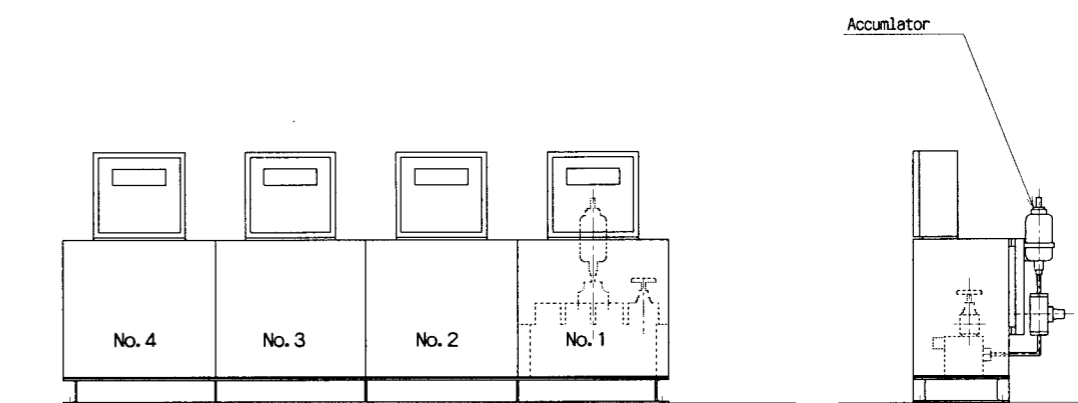
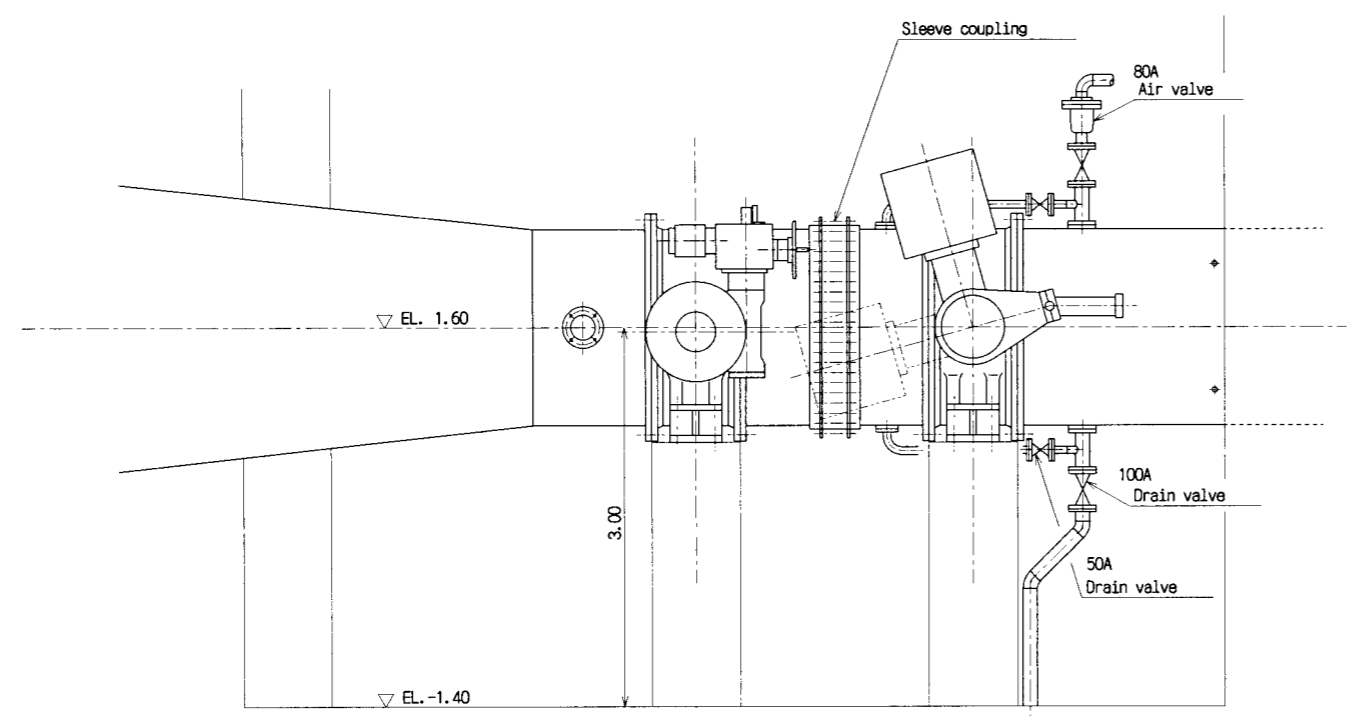


SCALE 1:30



Oil hydraulic unit

SCALE 1:30



Valve control panel

SCALE 1:30

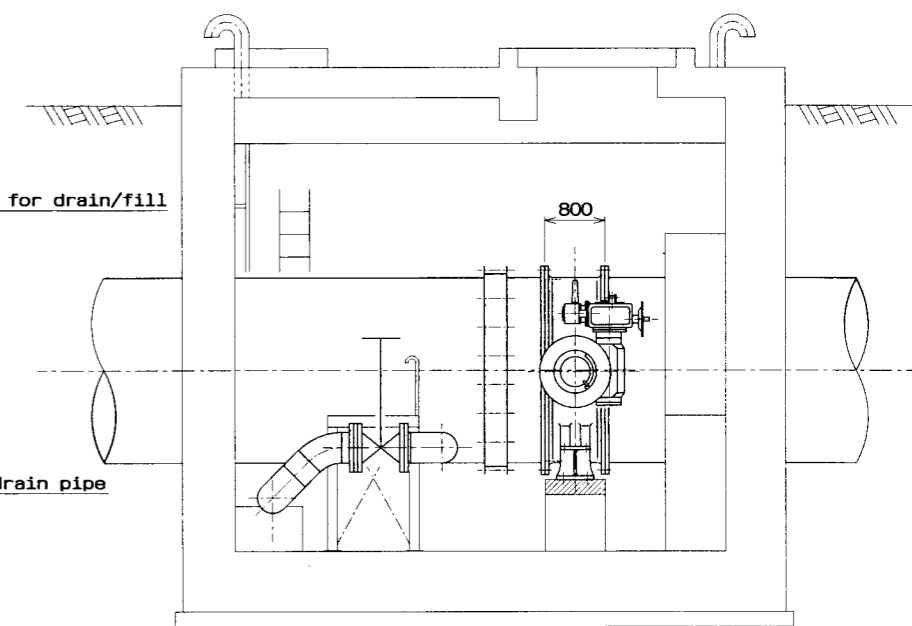
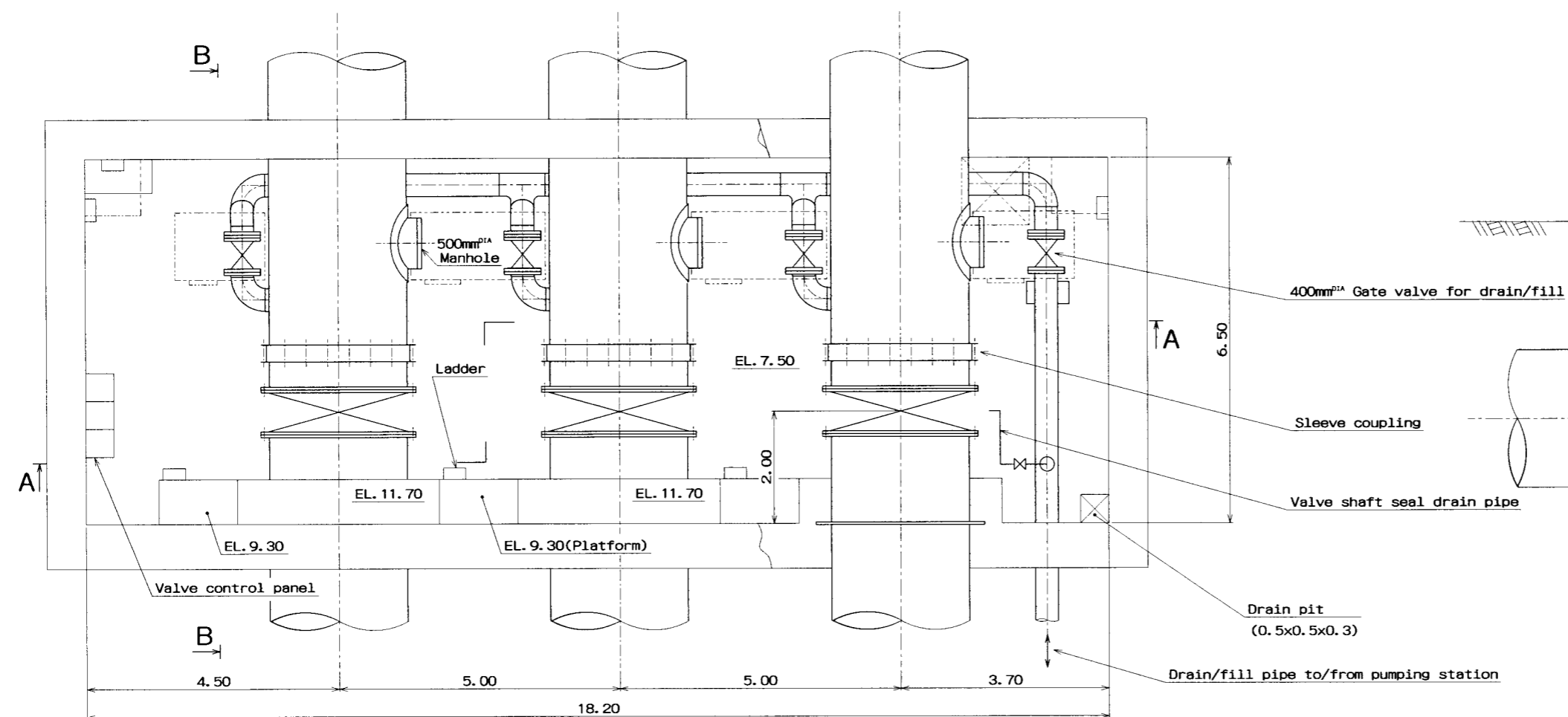
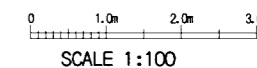
VIEW A-A

SCALE 1:60

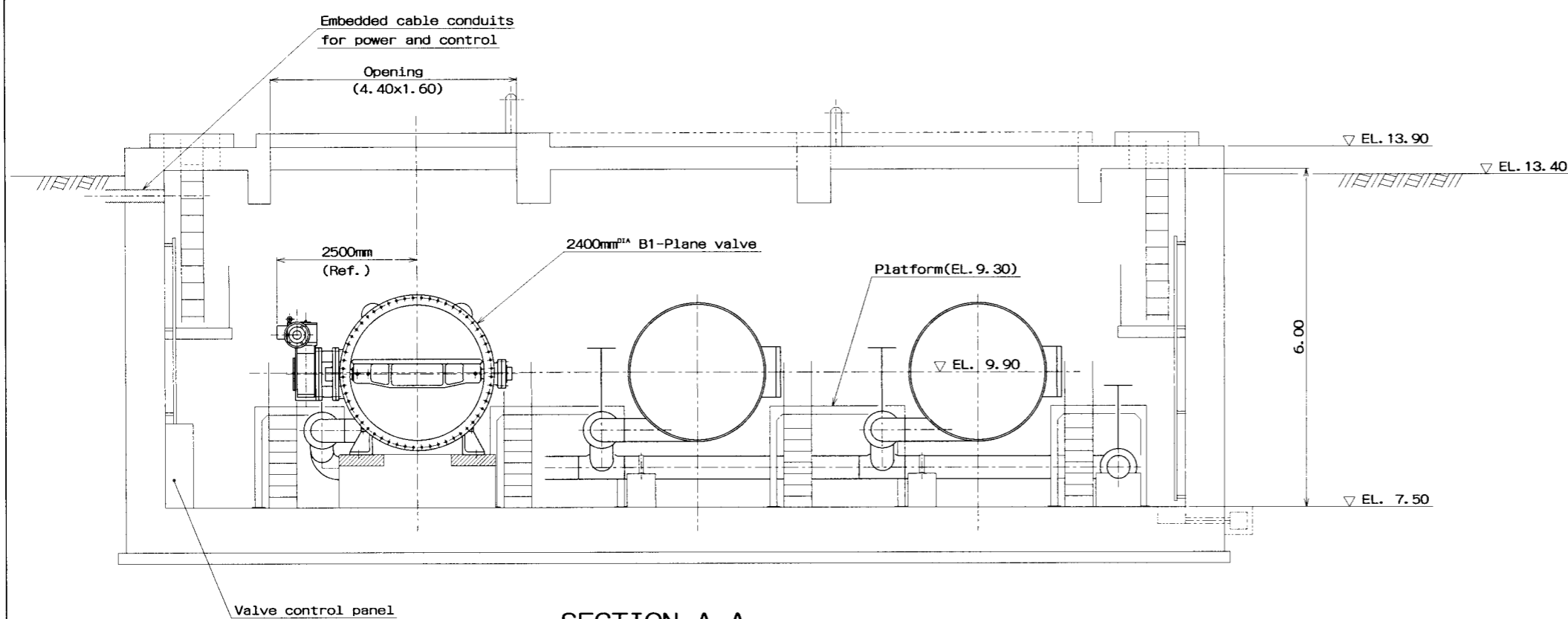
THE ARAB REPUBLIC OF EGYPT MINISTRY OF WATER RESOURCES AND IRRIGATION NORTH SINAI DEVELOPMENT ORGANIZATION	
THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE III)	
CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBABH CANAL BETWEEN KM 108.466 AND KM 118.560 EL SALAAM No. 7 (BIR EL ABD) PUMPING STATION	
MECHANICAL EQUIPMENT GENERAL ARRANGEMENT OF PUMP DISCHARGE VALVE, ISOLATING VALVE AND VALVE OPERATING SYSTEMS	
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NOTES:

1. This drawing scale is 1:100



SECTION B-B



SECTION A-A

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MINISTRY OF WATER RESOURCES AND IRRIGATION
NORTH SINAI DEVELOPMENT ORGANIZATION

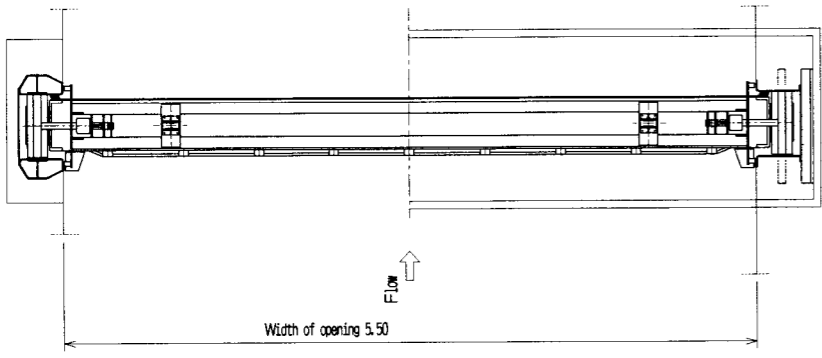
THE NORTH SINAI INTEGRATED RURAL
DEVELOPMENT PROJECT (PHASE III)

CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAAH CANAL
BETWEEN KM 108.466 AND KM 118.560
EL SALAAM No. 7 (BIR EL ABD) PUMPING STATION

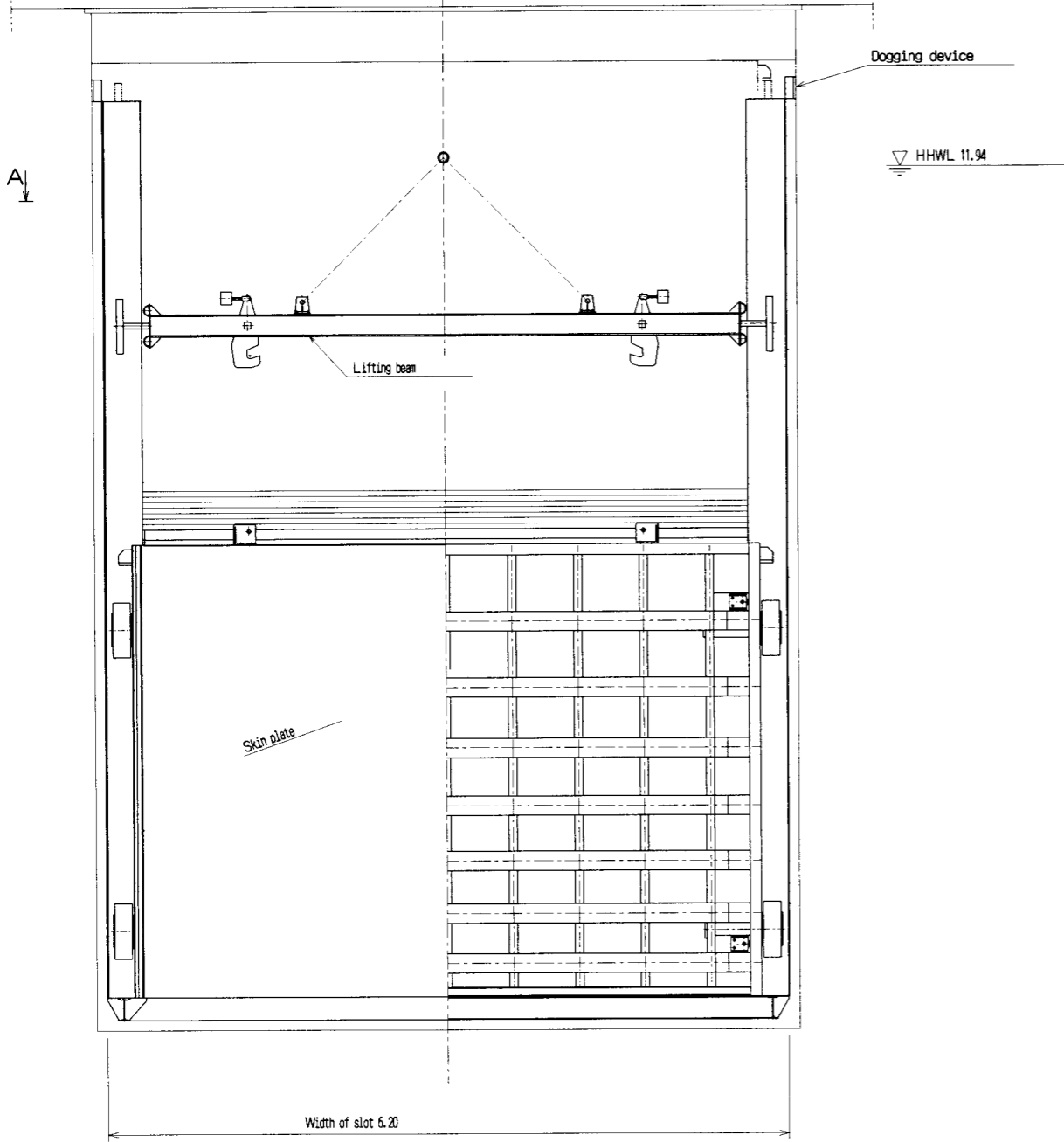
MECHANICAL EQUIPMENT
GENERAL ARRANGEMENT
OF PIPELINE VALVE

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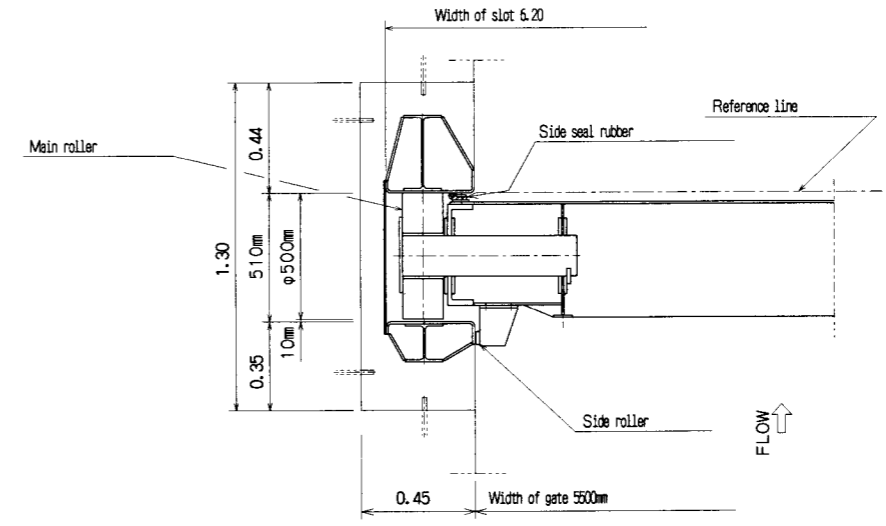
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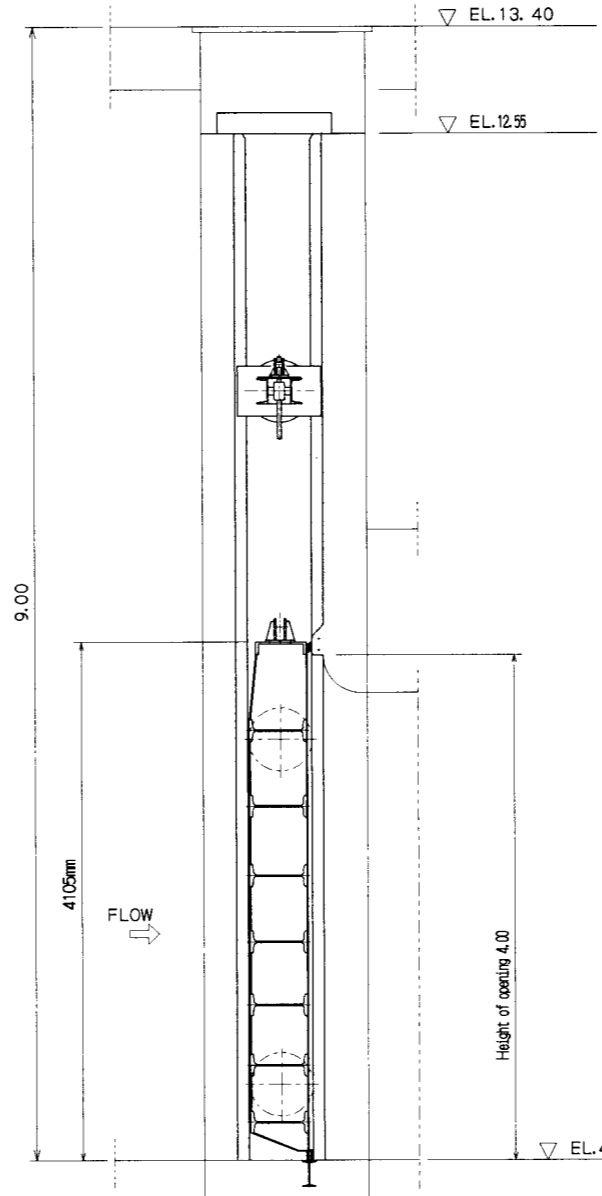
PLAN
SCALE 1:60



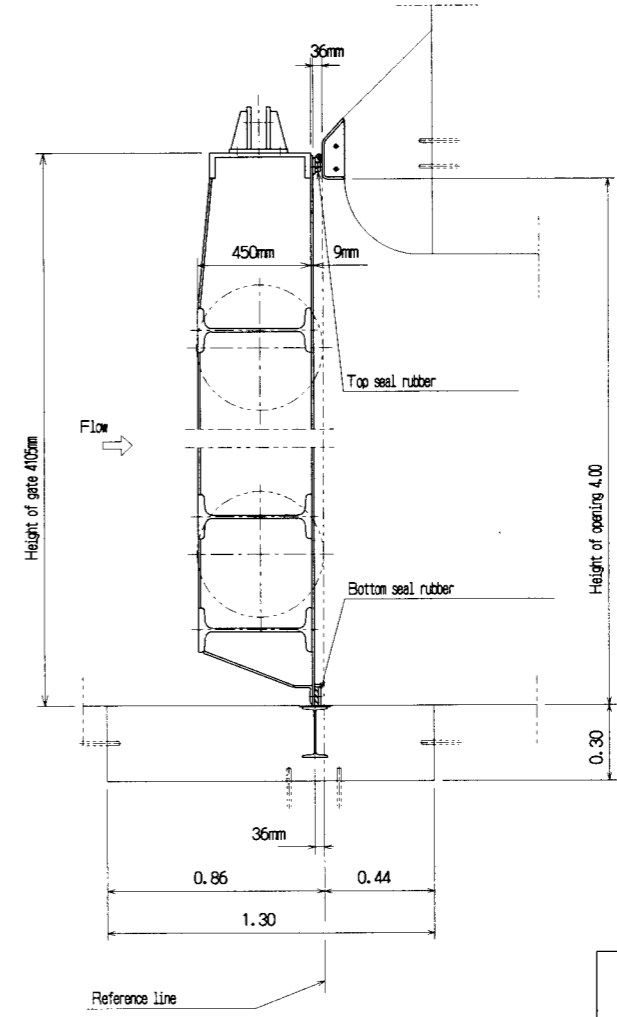
ELEVATION
SCALE 1:60



DETAIL OF SLOT
SCALE 1:20



PROFILE
SCALE 1:60

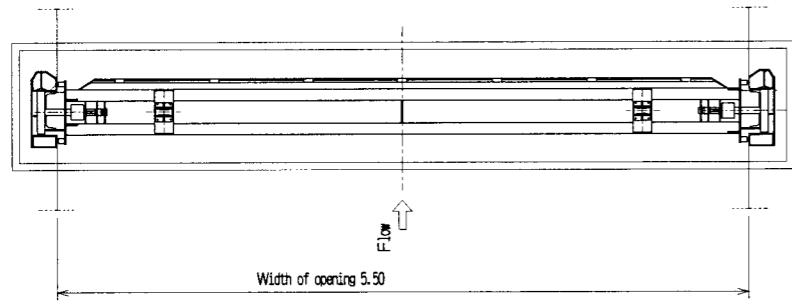


DETAIL OF TOP AND BOTTOM
SCALE 1:20

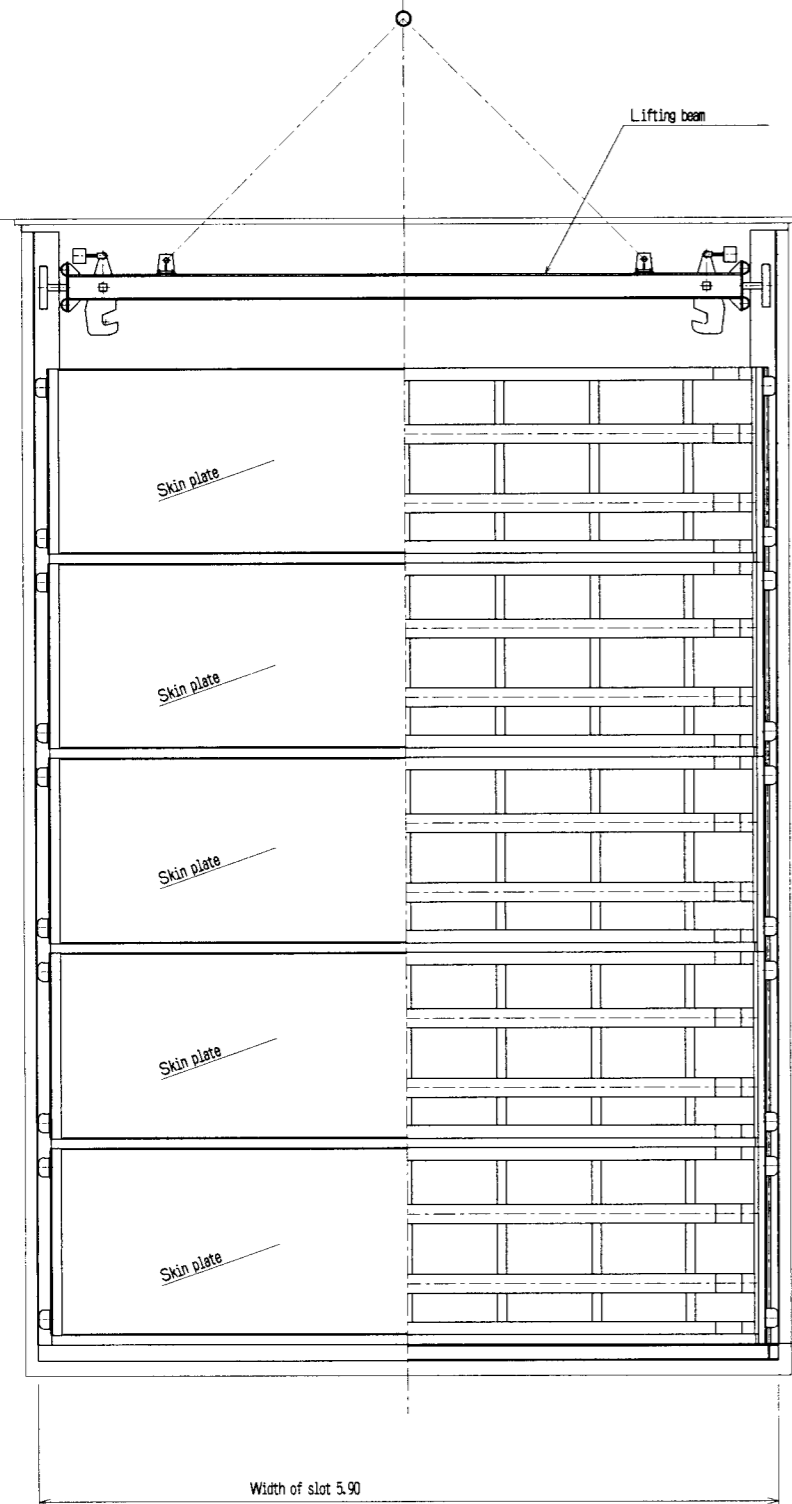
NOTES:
1. This drawing scale is 1:60 and 1:20

0 1.0m 2.0m 3.0m
SCALE 1:60
0 0.5m 1.0m
SCALE 1:20

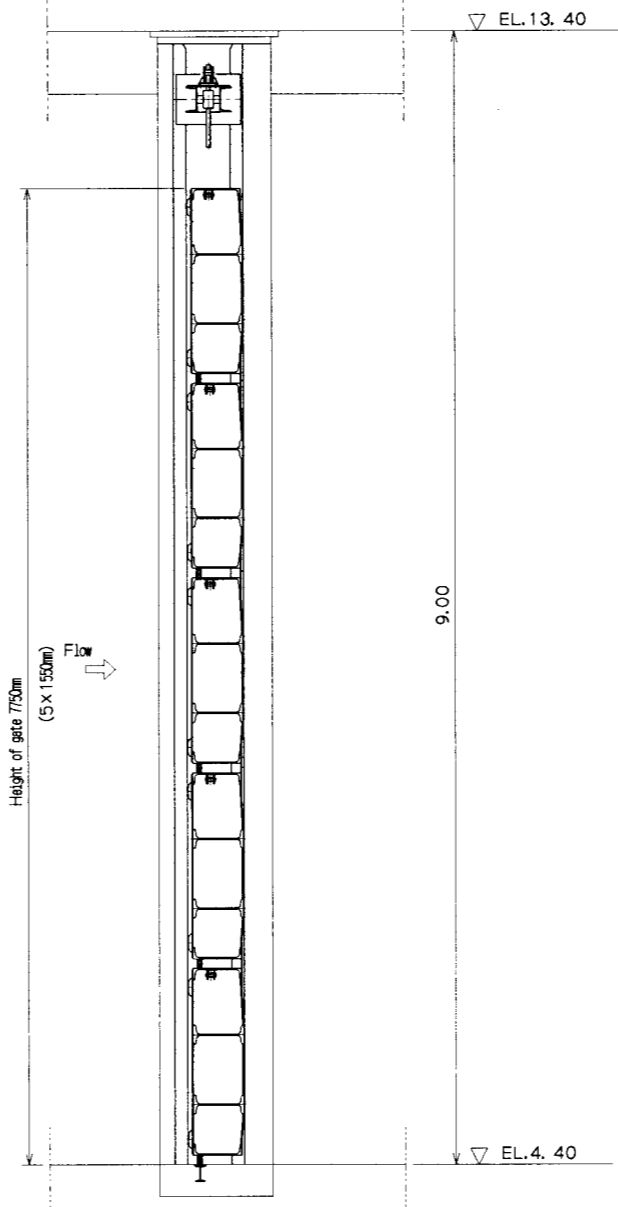
THE ARAB REPUBLIC OF EGYPT MINISTRY OF WATER RESOURCES AND IRRIGATION NORTH SINAI DEVELOPMENT ORGANIZATION	
THE NORTH SINAI INTEGRATED RURAL DEVELOPMENT PROJECT (PHASE III)	
CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBABH CANAL BETWEEN KM 108.466 AND KM 118.560 EL SALAAM No. 7 (BIR EL ABO) PUMPING STATION	
MECHANICAL EQUIPMENT GENERAL ARRANGEMENT OF BULKHEAD GATE	
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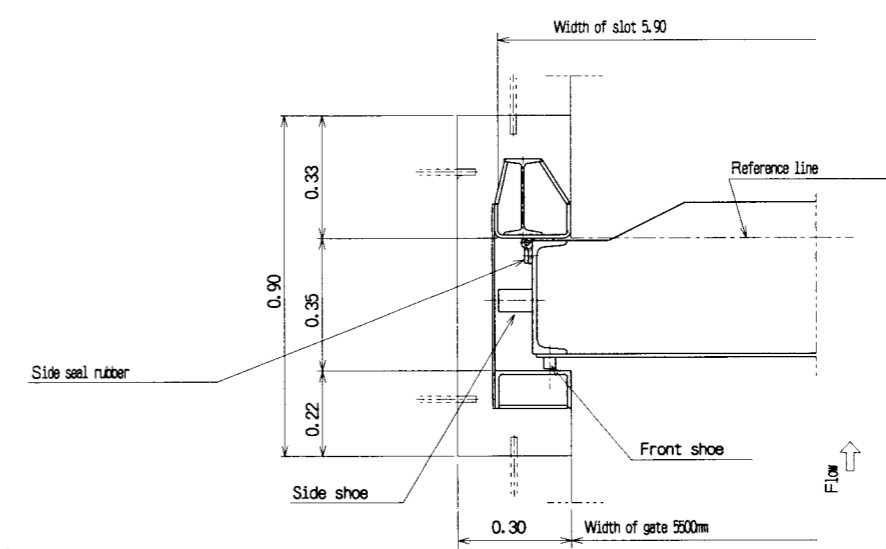
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SCALE 1:60



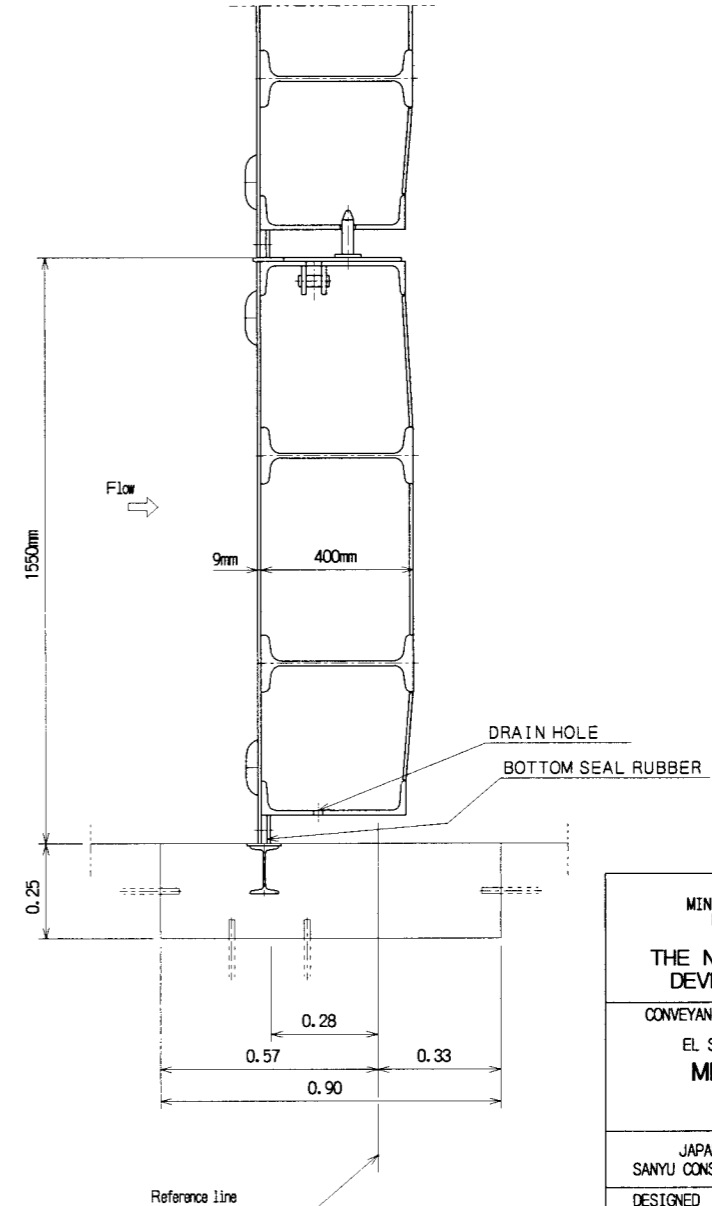
ELEVATION
SCALE 1:60



PROFILE
SCALE 1:60



DETAIL OF SLOT
SCALE 1:20



DETAIL OF TOP AND BOTTOM
SCALE 1:20

NOTES:
1. This drawing scale is 1:60 and 1:20

SCALE 1:60
SCALE 1:20

DESIGN DATA

Type	Stop log
Clear span	5.50m
Long height	1.55m x 5
Design head	7.54m
Water seal	3 edges Seal rubber

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CONVEYANCE SYSTEM OF EL SHEIKH GABER EL SABBAH CANAL
BETWEEN KM 108.466 AND KM 118.560
EL SALAAM No. 7 (BTR EL ABD) PUMPING STATION

MECHANICAL EQUIPMENT
GENERAL ARRANGEMENT
OF STOP LOGS

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