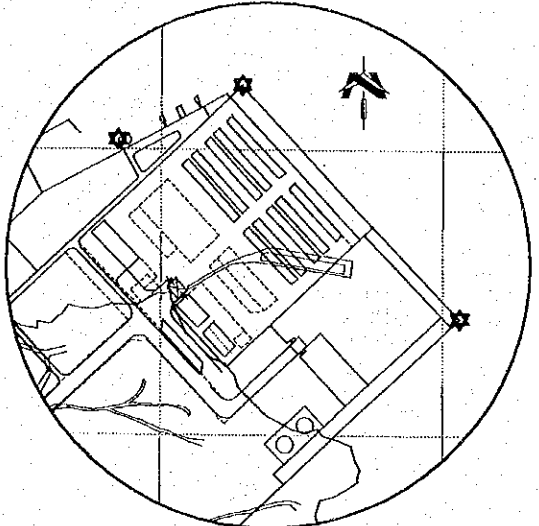
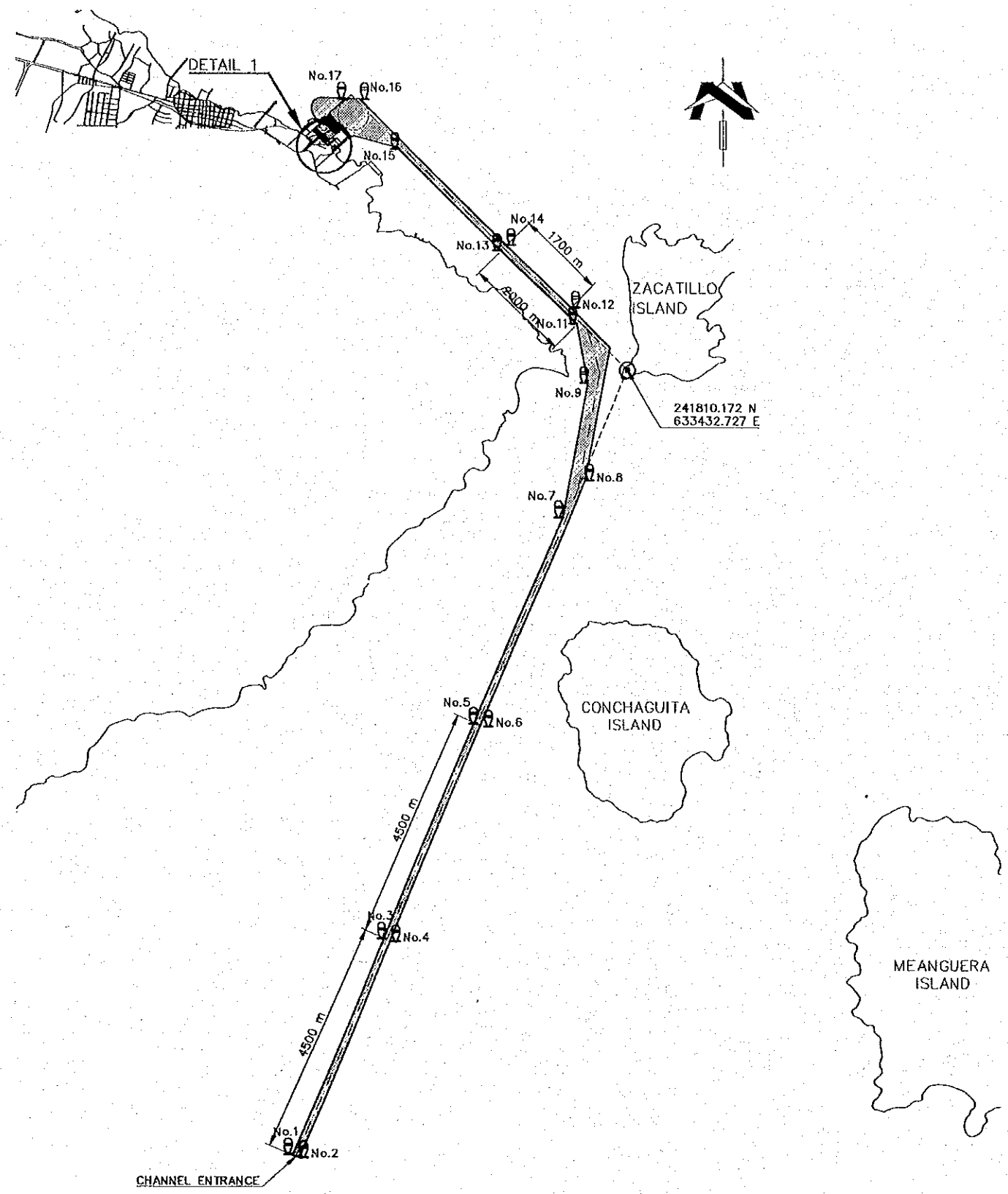


NAVIGATION AIDS



DETAIL 1
SCALE 1:1,250

COORDINATES OF MARKER BUOYS

	NORTH	EAST
CENTER OF CHANNEL ENTRANCE	226678.269	627155.313
No.1	226703.700	627095.500
No.2	226652.900	627215.100
No.3	230845.900	628853.600
No.4	230795.100	628973.300
No.5	234988.200	630611.800
No.6	234937.400	630731.400
No.7	238970.200	632186.700
No.8	239678.600	632620.500
No.9	241547.600	632662.700
No.11	242678.600	632433.700
No.12	242985.100	632319.300
No.13	244068.000	630995.100
No.14	244166.100	631096.500
No.15	245973.200	629012.000
No.16	246916.700	628234.900
No.17	246925.600	627954.800

LOCATIONS OF LIGHT BEACON

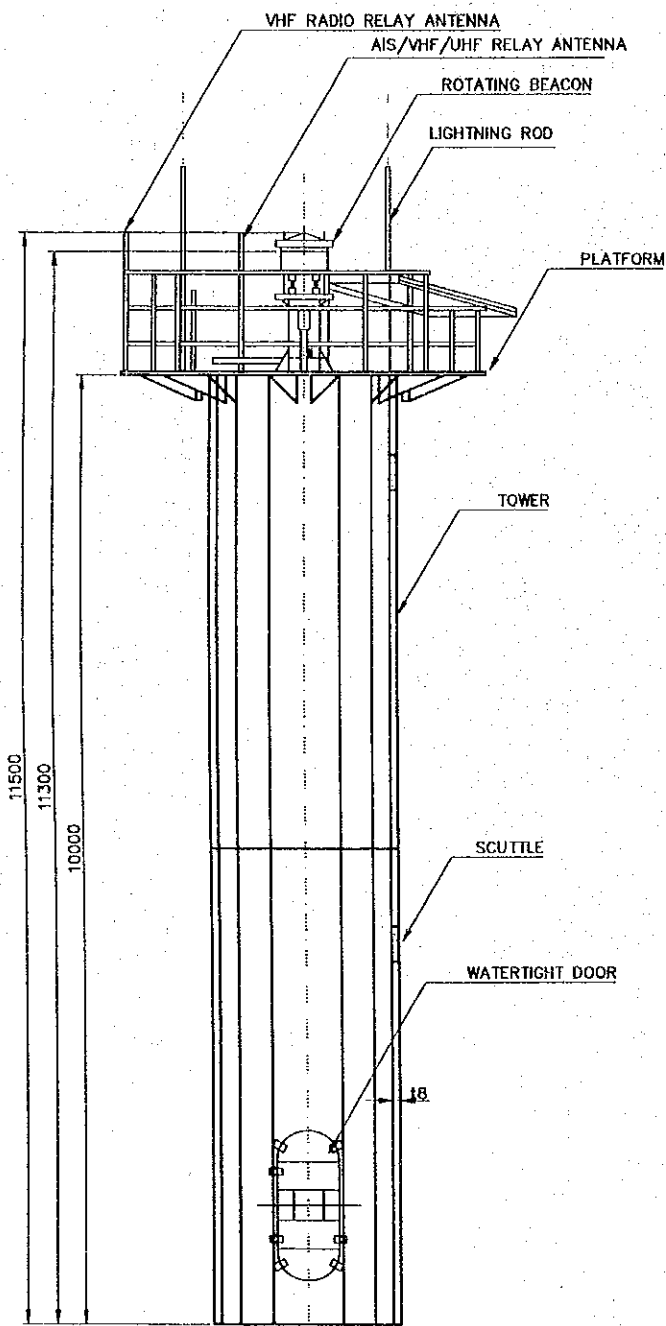
AT THE CORNER OF THE BERTHS AND ON THE PASSENGER TERMINAL PLATFORM

LEGEND

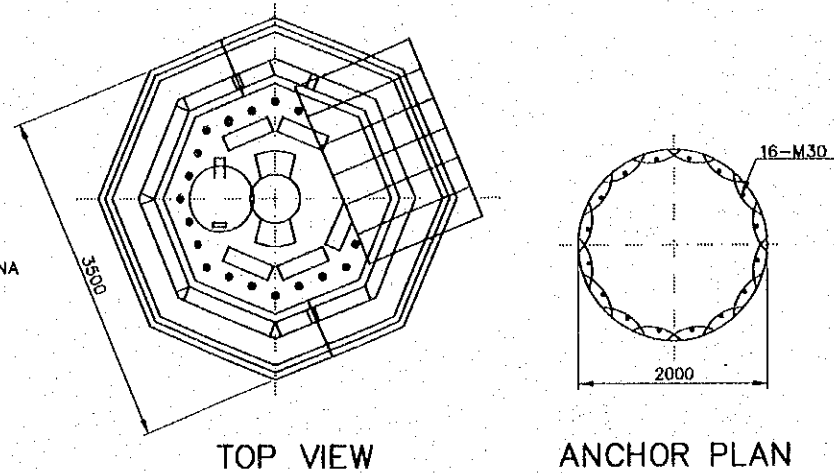
- LIGHTED BUOY : 16 nos.
- LIGHTHOUSE : 1 no.
- LIGHT BEACONS (JETTY MARKER): 3 nos.

SCALE 1:10,000

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)		THE DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR NIPPON KOEI CO., LTD.	
						DESIGNED BY :	SECTION : NAVIGATION AID	DATE : OCTOBER/2002	
						CHECKED BY :	SUB-SECTION : GENERAL	SCALE : AS INDICATED	
						APPROVED BY :	TITLE : LAYOUT OF NAVIGATION AID	DRAWING NO: NA-00-001	



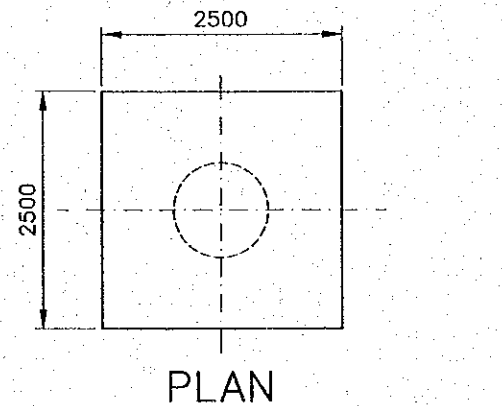
LIGHT HOUSE



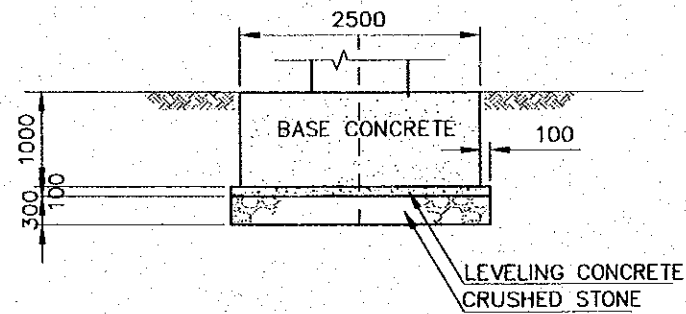
TOP VIEW

ANCHOR PLAN

LIGHT HOUSE FOUNDATION
SCALE 1:100

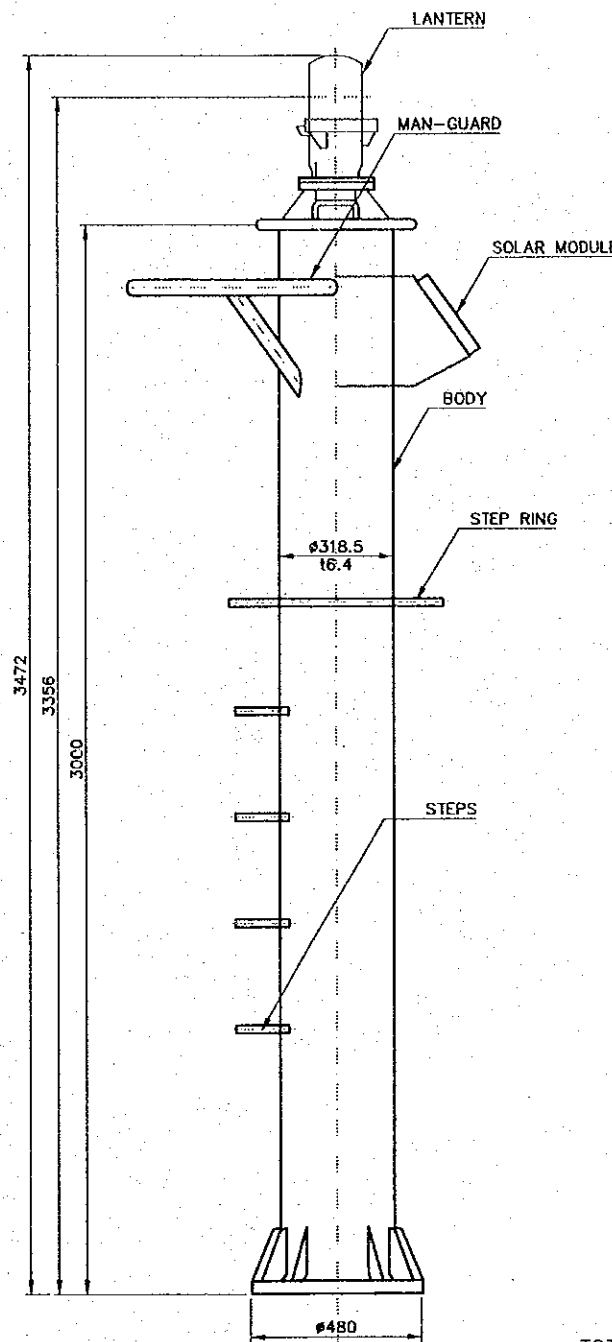


PLAN



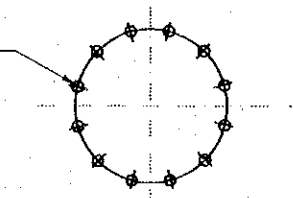
FRONT VIEW

TOTAL MASS : APPROX. 3t
(WITHOUT LIGHTING EQUIPMENT
AND POWER SOURCE)
MAIN MATERIAL : ALUMINUM ALLOY



LIGHT BEACON

12-M24
P.C.D. 430



ANCHOR PLAN

TOTAL WEIGHT : APPROXIMATELY 240 kg
(WITHOUT POWER SOURCE)
MAIN MATERIAL : STEEL (HOT DIP GALVANIZED)
DESIGNATION : 3m HEIGHT LIGHT BEACON

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE

JICA
JAPAN INTERNATIONAL
COOPERATION AGENCY
(JICA)

Cepa
COMISION EJECUTIVA
PORTUARIA AUTONOMA
(CEPA)

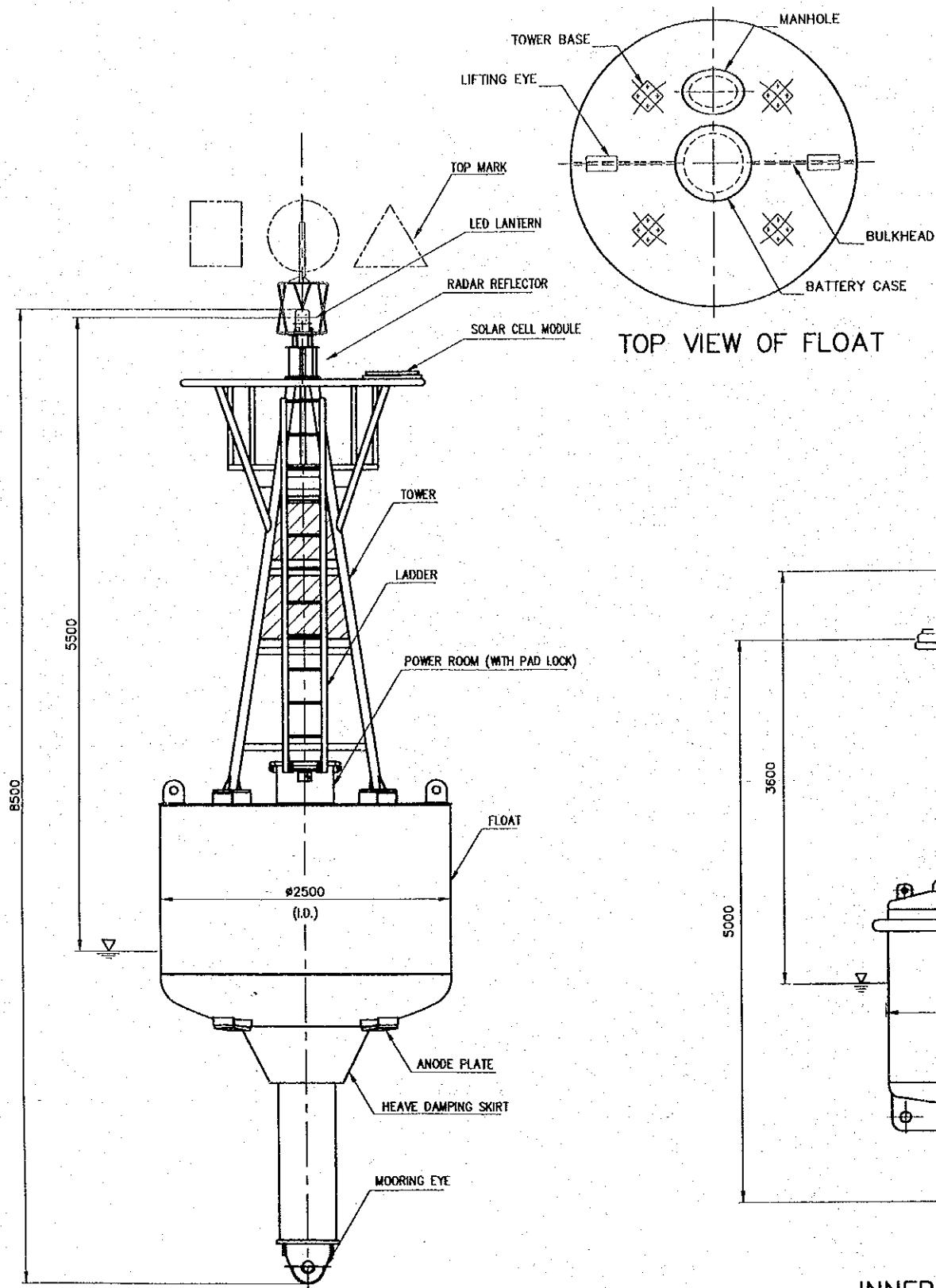
THE DETAILED DESIGN
ON PORT REACTIVATION PROJECT
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OF THE REPUBLIC OF EL SALVADOR

NK NIPPON KOEI CO., LTD.

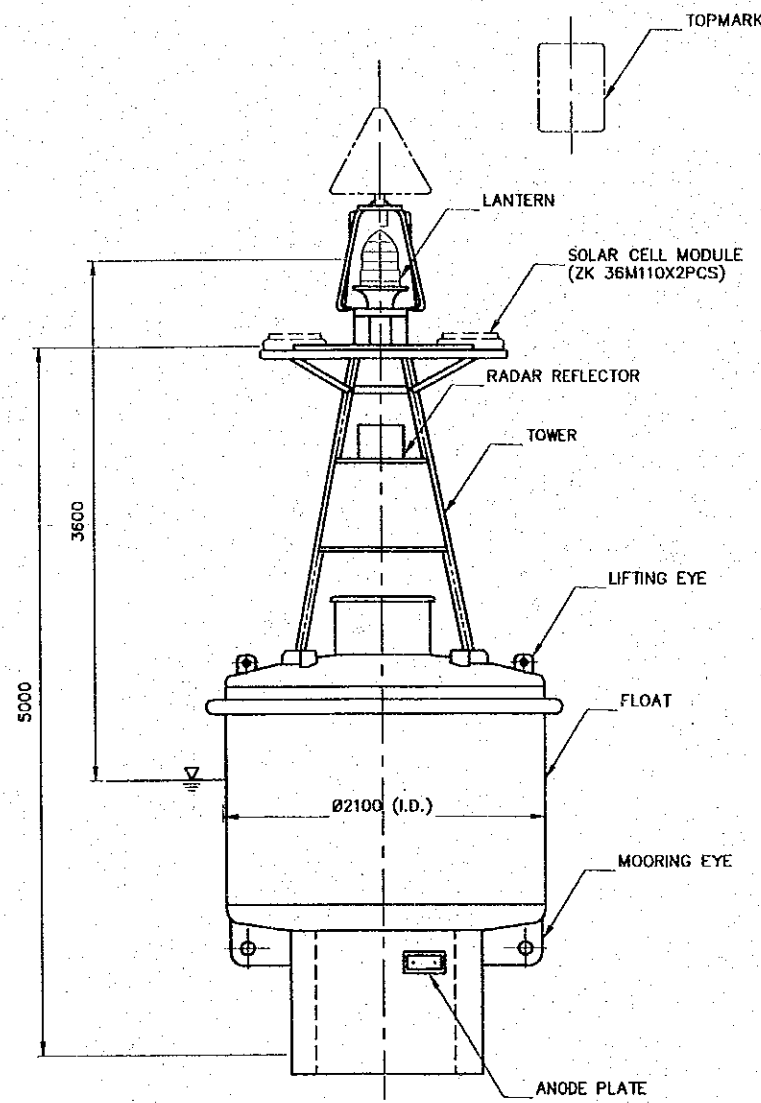
DESIGNED BY :
CHECKED BY :
APPROVED BY :

SECTION : NAVIGATION AID
SUB-SECTION : LIGHT HOUSE
TITLE :
LIGHT HOUSE AND BEACON

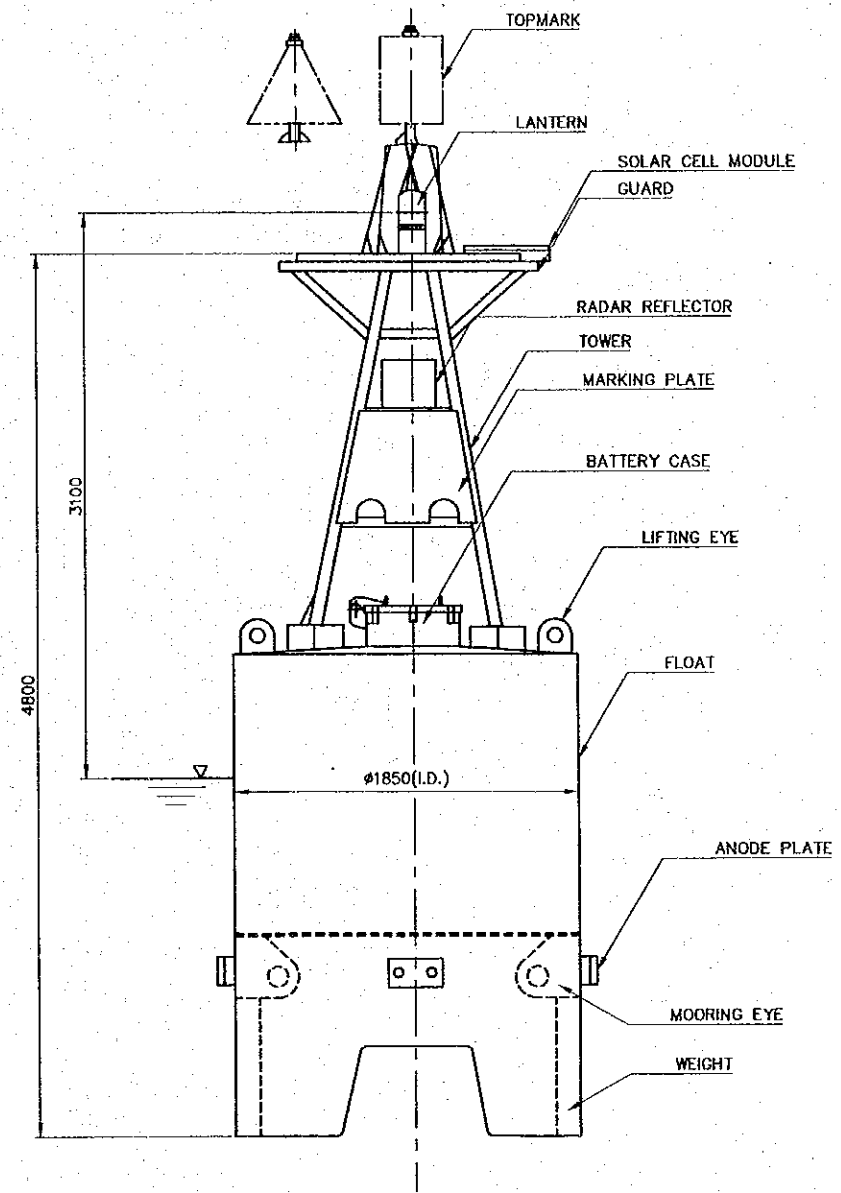
DATE : OCTOBER/2002
SCALE : NOT TO SCALE
DRAWING NO : NA-01-001



OUTER CHANNEL ENTRANCE MARKER BUOY




INNER CHANNEL MARKER BUOY



TURNING BASIN MARKER BUOY

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE

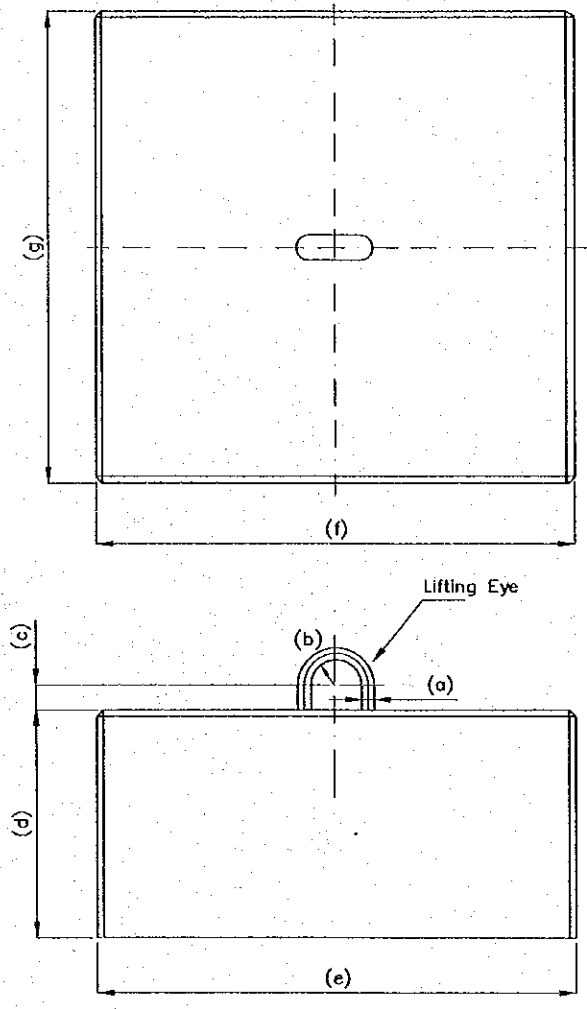
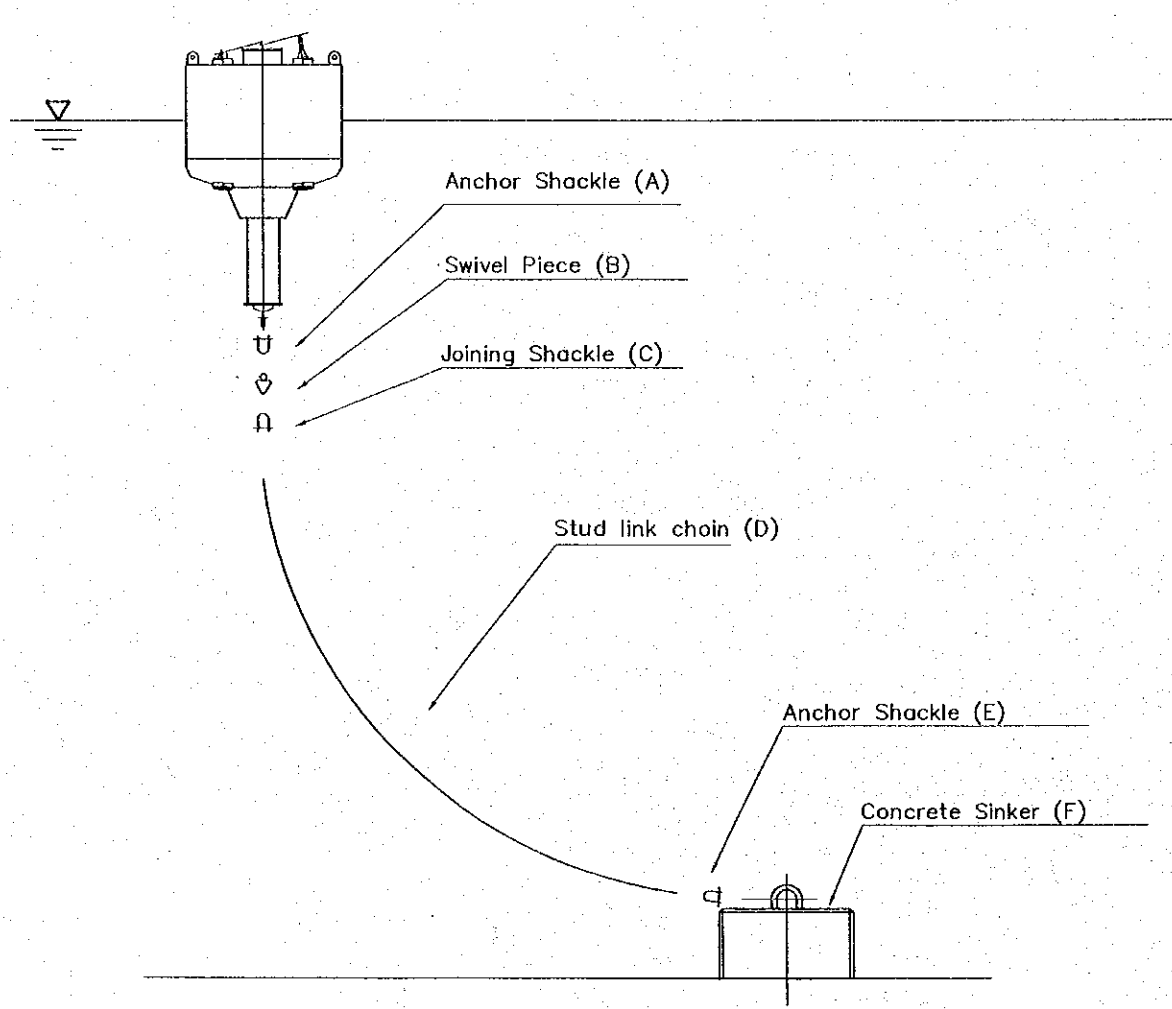
 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
 COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

THE DETAILED DESIGN
 ON PORT REACTIVATION PROJECT
 IN LA UNION PROVINCE
 OF THE REPUBLIC OF EL SALVADOR
 NIPPON KOEI CO., LTD.

DESIGNED BY :
 CHECKED BY :
 APPROVED BY :

SECTION : NAVIGATION AID
 SUB-SECTION : MARKER BUOY
 TITLE :
MARKER BUOY

DATE : OCTOBER/2002
 SCALE : NOT TO SCALE
 DRAWING NO : NA-02-001



INFORMATION OF ANCHOR, CHAIN AND SINKER

ITEM	A (mm)	B (mm)	C (mm)	D (mm)	WEIGHT OF CONCRETE SINKER (F)
OUTER CHANNEL ENTRANCE MARKER BUOY	φ42	φ42	φ42	φ42	40 TON
INNER CHANNEL MARKER BUOY	φ38	φ38	φ38	φ38	7.3 TON
TURNING BASIN MARKER BUOY	φ38	φ38	φ38	φ38	7.3 TON

NOTE:

1. THE CHAIN IS MADE IN ACCORDANCE WITH JIS (JAPANESE INDUSTRIAL STANDARD), GADE 2, OR EQUIVALENT.
2. END LINKS, WICH ARE EQUIPED TO SWIVEL ENDS AND CHAIN ENDS, SHALL BE SO PROCESSED AS TO CLEAR BODY OF ANCHOR SHACKLE OF THE SAME NOMINAL DIAMETER.
3. ALL THE SHACKLE SHALL BE FIXED BY STAINLESS STEEL. IT SHALL BE BENDED, AND SHACKLE PIN SHALL BE WELDED TO THE SHACKLE BODY.

INFORMATION OF CONCRETE SINKER

ITEM	a (mm)	b (mm)	c (mm)	d (mm)	e (mm)	f (mm)	g (mm)	MATERIAL OF LIFTING EYE	SUITABLE SHACKLE
OUTER CHANNEL ENTRANCE MARKER BUOY	100	180	180	1600	3300	3300	3300	S45C	AS46~70
INNER CHANNEL MARKER BUOY	90	160	160	900	1900	1900	1900	S45C	AS40~64
TURNING BASIN MARKER BUOY	90	160	160	900	1900	1900	1900	S45C	AS40~64

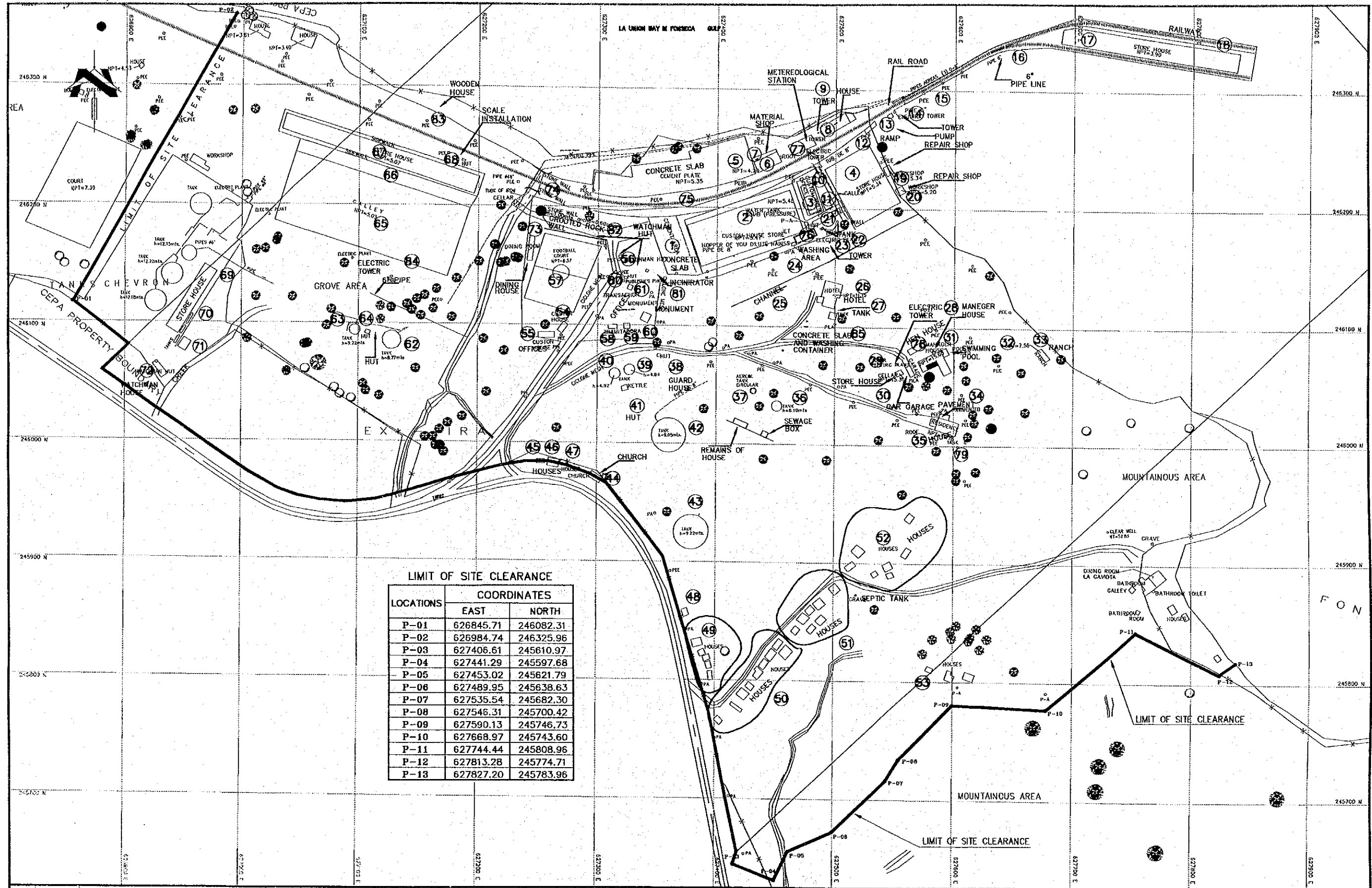
Designed average strength after elapsed 28 days

$$\sigma_{ck} = 18 \text{ N/mm}^2$$

Density : 2.3 t/m³

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	THE DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR NIPPON KOEI CO., LTD.	DESIGNED BY :	SECTION : NAVIGATION AID	DATE : OCTOBER/2002
								CHECKED BY :	SUB-SECTION : MARKER BOUY	SCALE : AS INDICATED
								APPROVED BY :	TITLE : DETAIL OF ANCHOR, CHAIN & SINKER	DRAWING NO. : NA-02-002

MISCELLANEOUS




LIMIT OF SITE CLEARANCE

LOCATIONS	COORDINATES	
	EAST	NORTH
P-01	626845.71	246082.31
P-02	626984.74	246325.96
P-03	627406.61	245610.97
P-04	627441.29	245597.68
P-05	627453.02	245621.79
P-06	627489.95	245638.63
P-07	627535.54	245682.30
P-08	627546.31	245700.42
P-09	627590.13	245746.73
P-10	627668.97	245743.60
P-11	627744.44	245808.96
P-12	627813.28	245774.71
P-13	627827.20	245783.96

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE


JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)

THE DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR

NIPPON KOEI CO., LTD.

DESIGNED BY :
 CHECKED BY :
 APPROVED BY :

SECTION : MISCELLANEOUS
 SUB-SECTION : GENERAL
 TITLE : **SITE CLEARANCE**

DATE : OCTOBER/2002
 SCALE : 1 : 3000
 DRAWING NO. : MS-00-001

List of Buildings and Facilities to be Demolished




Item	Description
1	Concrete slab
2	Metallic structure, metal roof, brick and concrete floor, half of the walls of concrete blocks
3	Building with concrete slab roof, some areas covered with metal roof, walls of brick
4	Metallic structure, metallic roof, concrete floor, walls of metal sheets
5	Concrete slab, on the borders stone masonry
6	Materials shop, walls of metal sheets and wood frame, metal roof, concrete floor
7	Corridor, metal roof with wood, natural ground floor
8	Port police, wood walls, concrete floor, metal roof
9	Metal tower, for electrical cables
10	Wooden hut
11	PNC eating installations, concrete floor, metal roof, half will concrete block walls
12	Ramp, concrete floor
13	Pump house, brick walls, asbestos roof, concrete floor
14	Metal tower, for electrical cables; one transformer
15	Rail road
16	Metal pipes; 4" and 8"
17	Store house, metal structure, metal roof, concrete floor (jetty)
18	Rail road
19	Carpentry shop
20	Carpentry shop
21	PNC, asbestos roof, wood ceiling, brick walls
22	Asbestos water tank, concrete bases
23	Metal tower, for electrical cables
24	Water tank (concrete) for washing, metal sheet walls, metal roof
25	Concrete channel for rain water
26	Hotel, concrete floor, wood walls, metal sheets roof
27	Water tank.

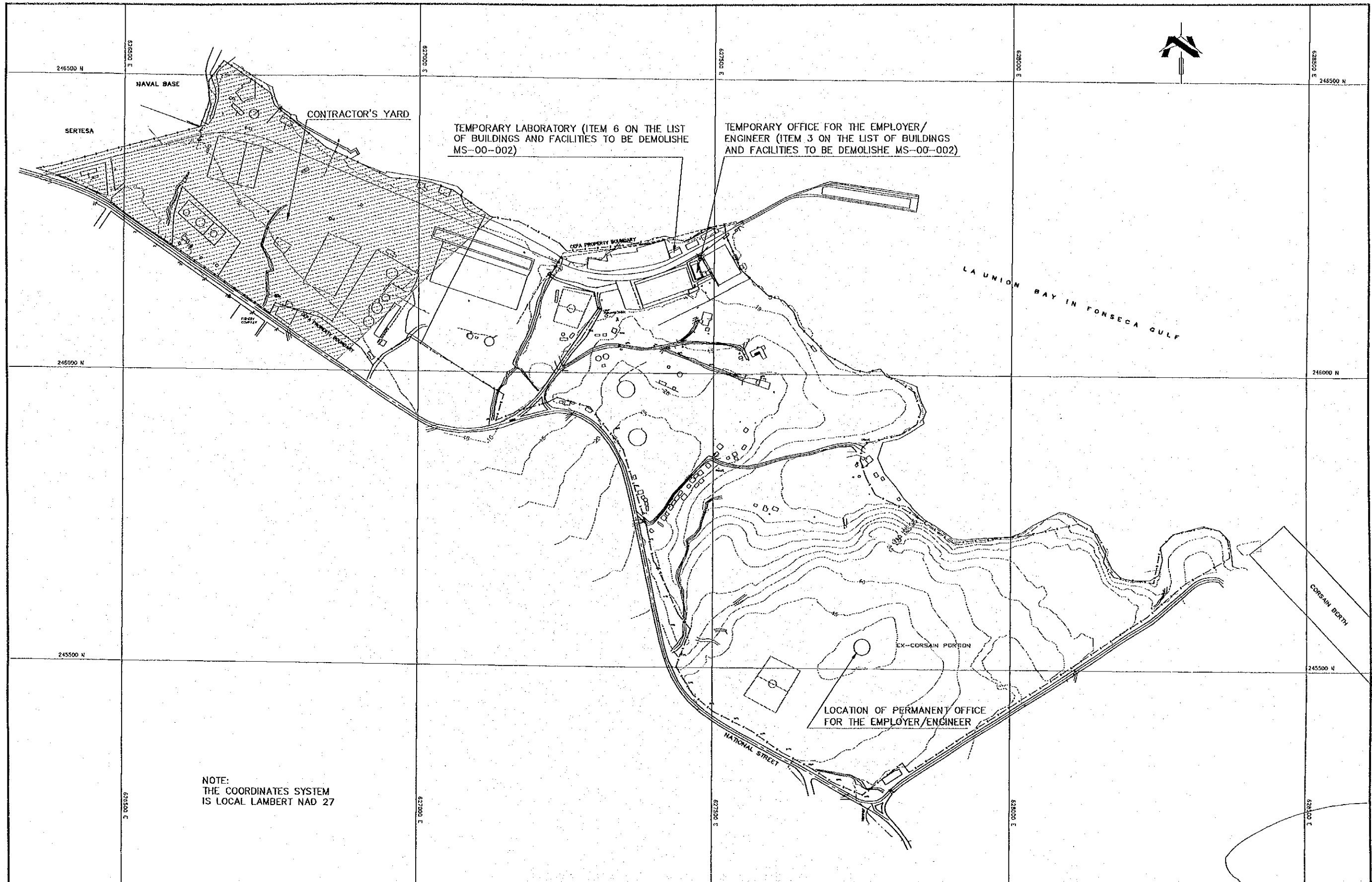
Item	Description
28	Metal tower, for electrical cables
29	Small warehouse
30	Garage for car
31	Manager house, brick walls, metal sheet roof, brick floor
32	Small swimming pool, concrete
33	Wooden hut
34	Concrete and brick area
35	House, brick walls, metal sheet roof, brick floor
36	Metal tank, ground
37	Metal tank, elevated
38	Guard house, brick walls, asbestos roof, concrete floor
39	Metal tank, ground
40	Metal tank, ground
41	Hut, brick walls, metal sheet roof, concrete floor
42	Metal tank, ground
43	Metal tank, ground
44	Church building, brick walls, no roof, brick floor
45	House, walls of (adobe) ground soil, tile roof and wood, brick floor
46	House, concrete block walls, metal sheet roof combined with tile, brick floor
47	House, walls of (adobe) ground soil, tile roof and wood, brick floor
48	Demolished houses, only remains of walls and floor
49	Demolished houses, only remains of walls and floor
50	1 house metal sheet and remains, no floor, all the rest of houses already demolished, remains walls & floor
51	Demolished houses, only remains of walls and floor
52	Demolished houses, only remains of walls and floor
53	House metal sheet and remains, no floor
54	House, brick walls, asbestos roof, brick floor

Item	Description
55	House, brick walls, asbestos roof, brick floor
56	Guard house, brick walls, asbestos roof, brick floor
57	Soccer court
58	House, concrete block walls, cement tile roof, concrete floor
59	Small house, metal sheet walls, cement tile roof, concrete floor
60	Corridor with asbestos roof, concrete floor
61	Office, walls of metal sheets, tile roof, brick floor
62	Metal tank, ground, diameter 15 mt
63	Metal tank, ground, diameter 9 mt
64	Guard house, brick walls, no roof, concrete floor
65	Galley, metal structure, no walls, concrete floor, metal roof
66	Metal roof area, ground floor, no walls
67	Store house, metal structure, asbestos roof, concrete floor, concrete block walls
68	Scale house, brick walls, & metal sheet, concrete slab roof, concrete structure support scale
69	Store house, metal structure, metal sheet walls, metal roof, concrete floor
70	Three train tankers (metal)
71	Fuel pump station, metal roof, no walls, concrete floor
72	Guard house, brick walls, brick floor, asbestos roof
73	Dining house, brick walls, asbestos roof, brick floor
74	Stone masonry walls, 2 steel pipes in the middle
75	Rail way already removed
76	PNC, building, brick walls, concrete floor, concrete columns, asbestos roof second floor
77	Weather station, wire mesh around installations
78	Henhouse, wire mesh around it, metal roof
79	Water tank
80	Guard house, asbestos roof, concrete floor, brick walls
81	Incinerator parts, wire mesh protection, asbestos roof, concrete floor
82	Stone masonry wall




Item	Description
83	Wood house, metal roof, wood floor, very old
84	Steel pipe, 6" diameter
85	Concrete water tank; concrete slab

NOTE:
INFORMATION GIVEN IN THIS SHEET IS ONLY FOR REFERENCE

REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE	 JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	 COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	 NIPPON KOEI CO., LTD.	DESIGNED BY :	SECTION :	DATE :

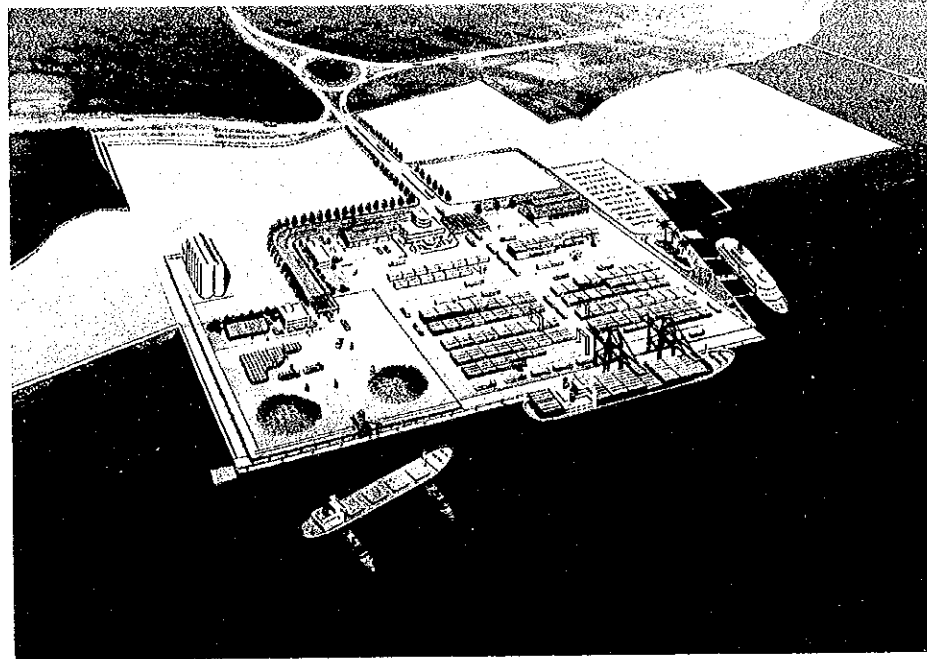


REV. NO.	DATE	COORDINATE	BY	APPROVED	DATE

 JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	 CEPA COMISION EJECUTIVA PORTUARIA AUTONOMA (CEPA)	 NIPPON KOEI CO., LTD.
		THE DETAILED DESIGN ON PORT REACTIVATION PROJECT IN LA UNION PROVINCE OF THE REPUBLIC OF EL SALVADOR

DESIGNED BY :	SECTION : MISCELLANEOUS
CHECKED BY :	SUB-SECTION : GENERAL
APPROVED BY :	TITLE :
	TEMPORARY FACILITIES

DATE :	OCTOBER/2002
SCALE :	1 : 5000
DRAWING NO.:	MS-00-003



JICA