


Solomon Islands
Coastal Fishery Development Study Report

August 1978

Japan International Cooperation Agency

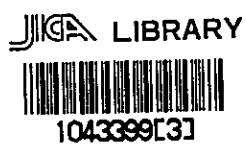
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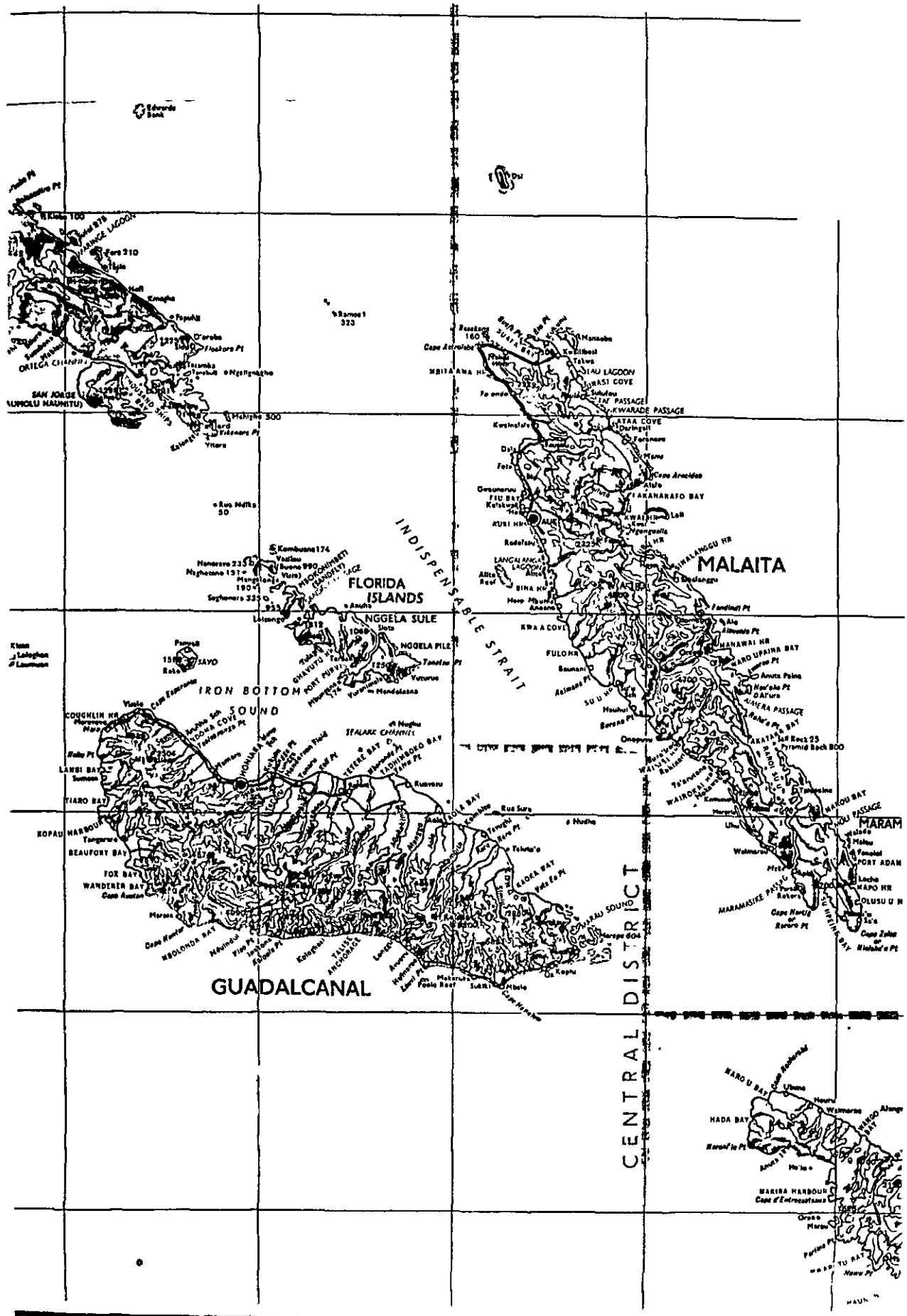


Japan International Cooperation Agency

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国際協力事業団

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Introduction

The purpose of the study is to make a basic plan of the Japanese Government Aid on non-reimbursable basis through discussions with Solomon Government and on-the-spot survey.

Prior to the departure of the team for Solomon Island, the basic line of the aid had been discussed and agreed each other through diplomatic channel, those are two catcher training vessels, one refrigerated fish carrier, and Fishery Training Center with necessary equipments and materials for building small boats.

In addition to the above, the possibility of technical cooperation by Japan Overseas Cooperation Volunteers in the coastal fishery development was studied as well.

The present report is the result of the study.

Chapter 1 Catcher Training Ships

1) OUTLINE SPECIFICATIONS
OF
100 FEET TYPE FISHERY TRAINING VESSEL
(DRAFT)

JUNE, 1978

FISHERY AGENCY
THE GOVERNMENT OF JAPAN

1 General Description

Purpose: Fishery training (skipjack pole and line fishing)

Type: Single decker with forecastle and deck house

Material of hull: Steel

Regulations to

- be applied:**
- 1) The Shipping Regulations, Chapter 98 Shipping, The Laws of the British Solomon Islands Protectorate in force on 31st December 1969 (as Outer Island Vessel)
 - 2) Rules and Regulations for export vessel from Japan
 - 3) International Regulations for Tonnage Measurement of Ship Concluded in Oslo
 - 4) International Load Line Convention Concluded in 1966
 - 5) Japanese Ship's Safety Rules and Regulations (the 3rd Class Fishing Vessel of the Special Rules)
 - 6) Japanese Regulations of Preventing Collision at Sea

Remark:

In spite of above Regulations of item 1), lifesaving appliances, fire fighting equipment, navigation lights, etc. to be furnished with Japanese products approved under Japanese Rules, and also freeboard to be ruled by above Convention of item 4).

Inspection and

Certificate:

- 1) In compliance with above Rules and Regulations of item 2), the vessel to be inspected and certified by Japanese Government
- 2) In compliance with above Regulations of item 3), the vessel to be surveyed and certified by Nippon Kaiji Kyokai (NK)
- 3) In compliance with above Convention of item 4), the vessel to be inspected and certified by NK
- 4) In compliance with the formal specifications approved by the Government of Owner, which is made in accordance with above Rules and Regulations, the vessel to be inspected by NK and certified with

following documents:

- a) Safety Equipment Certificate
- b) Safety Radio Telephony Certificate
- 5) Provisional Certificate of Nationality, Provisional Ship's Radio Station Licence, or substitutive document which is necessary for transportation from Japan to be furnished by the Government of Owner

2. Principal Particulars

1) Principa dimensions

Length (L.O.A.)	36.00 m
Length (Registered)	28.00 m
Length (L.B.P.)	27.50 m
Breadth (Moulded)	5.80 m
Depth (Moulded)	2.60 m
Designed full load draft	2.34 m

2) Gross tonnage about 100 tons

3) Capacity

Fish hold	8 holds, bale	total about	60	m ³
Each fish hold to be served as bait hold and brine freezing hold				
Fuel oil tank		about	40	m ³
Fresh water tank		about	15	m ³
Lubricating oil tank		about	1	m ³

4) Main engine 1 set

Type 4-cycle single acting diesel engine,
with turbo-charger and air cooler

Output about 600 PS

Propeller 4-brade fixed pitch propeller 1 set

5) Speed

Designed trial maximum speed about 10.0 knots

Service speed about 9.5 knots

6) Range of cruise about 2,500 miles

7) Complement 25 persons

8) Working launch	of GRP, about 6' m long, equipped with inboard engine (20PS) and generator (5KW)	1	set
9) Deck machinery			
Capstan	3.7KW, electric motor driven horizontal type	1	set
Capstan	2.2KW, electric motor driven	1	set
Steering gear	electro-hydraulic	1	set
Steering stand	for wheel house and flying bridge	2	sets
10) Fishing gear			
Sprinkler system		1	set
Bait hold	Forced circulation, with overflowing duct on hatch		
Belt conveyor	electric motor driven	1	set
Stick held dip net fishing gear	with net hauling winch, davits, luring lights	1	set
11) Life saving appliances and fire fighting equipment			
Life raft	inflatable type, for 15 persons	2	sets
Automatic distress transmitter		1	set
Life buoy		6	
Life jacket		25	
Self-igniting signal		2	
Self-smoking signal		2	
Parachute signal		12	
Rocket signal		2	
Hydrant and hose		2	sets
Fire extinguisher	in accommodation and engine room	5	
Other requirements by the Regulations			
12) Nautical equipment and communication equipment			
Magnetic compass	stand and reflection type	1	set
Radar		1	set
Fish finder		1	set
Main engine remote controller		1	set
Engine telegraph		1	set
Air horn		1	set
Clear view screen		2	sets

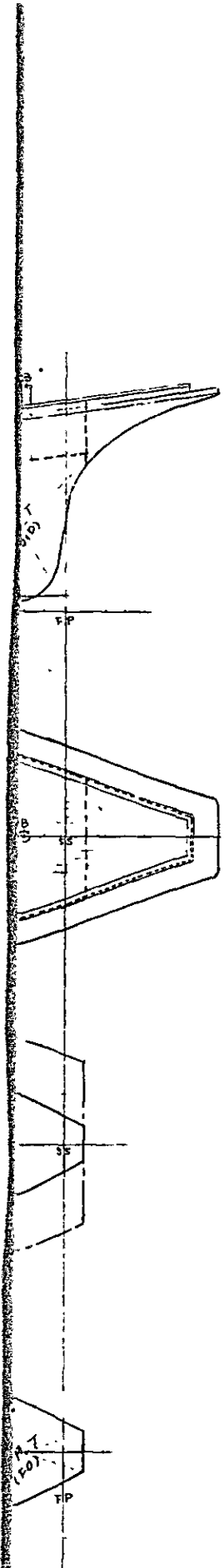
	SSB radio telephone	output 25 W	1	set
	Public addressor	output 20 W	1	set
	Other requirements by the Regulations			
13)	Ventilater			
	Electric motor fan	for accommodation and galley	2	sets
		for engine room	3	sets
	Electric room cooler	for accommodation	3	sets
14)	Generater engine	about 115 PS	2	sets
15)	Air compressor			
	Main air compressor		1	set
	Emergency air compressor		1	set
16)	Main engine remote control system			
	Main engine remote control stand	in flying bridge	1	set
17)	Pump			
	General service pump		1	set
	F. O. shift pump		1	set
	Auxiliary L.O. pump		1	set
	Sprinkler pump		1	set
	Bait hold circulation pump		3	sets
	Fresh water pump		1	set
	Condenser cooling pump		1	set
	Brine circulation pump		1	set
18)	Refrigerating plant			
	Refrigerating compressor	R-22, about 18.5 RT x 30 KW	1	set
	Refrigerating compressor	R-22, about 16.8 RT x 15 KW	1	set
19)	Electric source and transformer			
	Main generator	AC225V, about 80 KVA	2	sets
	Transformer	225V/105V, about 15 KVA	1	set
	Battery	24V 200AH	2	sets
	Main switch board	dead front type	1	set
20)	Lighting equipment			
	Navigation light		1	set
	Signaling light		1	set
	Fishing light		1	set
	Projector	500 W	4	sets

Search light	1 KW	2	sets
Fish luring light	2 KW	2	sets

Remark:

According to further minute designing, this OUTLINE specifications may be altered with consent of Owner so far as the performance is kept in reasonable condition.

(THE END)



PRINCIPAL PARTICULARS

LENGTH (OVER ALL)	3600 ^M	118 10 ^{ft}
D _r (REGISTERED)	2800 ^M	92 00 ^{ft}
D _r (BET PP)	2750 ^M	90 20 ^{ft}
BREADTH (T _L)	580 ^M	19 00 ^{ft}
DEPTH (D _o)	260 ^M	8 50 ^{ft}
DESIGNED DRAFT	234 ^M	7 65 ^{ft}
GROSS TONNAGE (ABOUT)	100 ^T	
MAIN ENGINE	600 ^{HP}	
SPEED (MAX)	10 ^{KT}	
CAPACITY		
HOLD CAPACITY (ABOUT)	60 ^{M³}	
F O T	D _o 40 ^{M³}	
F W T	D _o 15 ^{M³}	
L O T	D _o 1 ^{M³}	
COMPLEMENT	25 ^P	

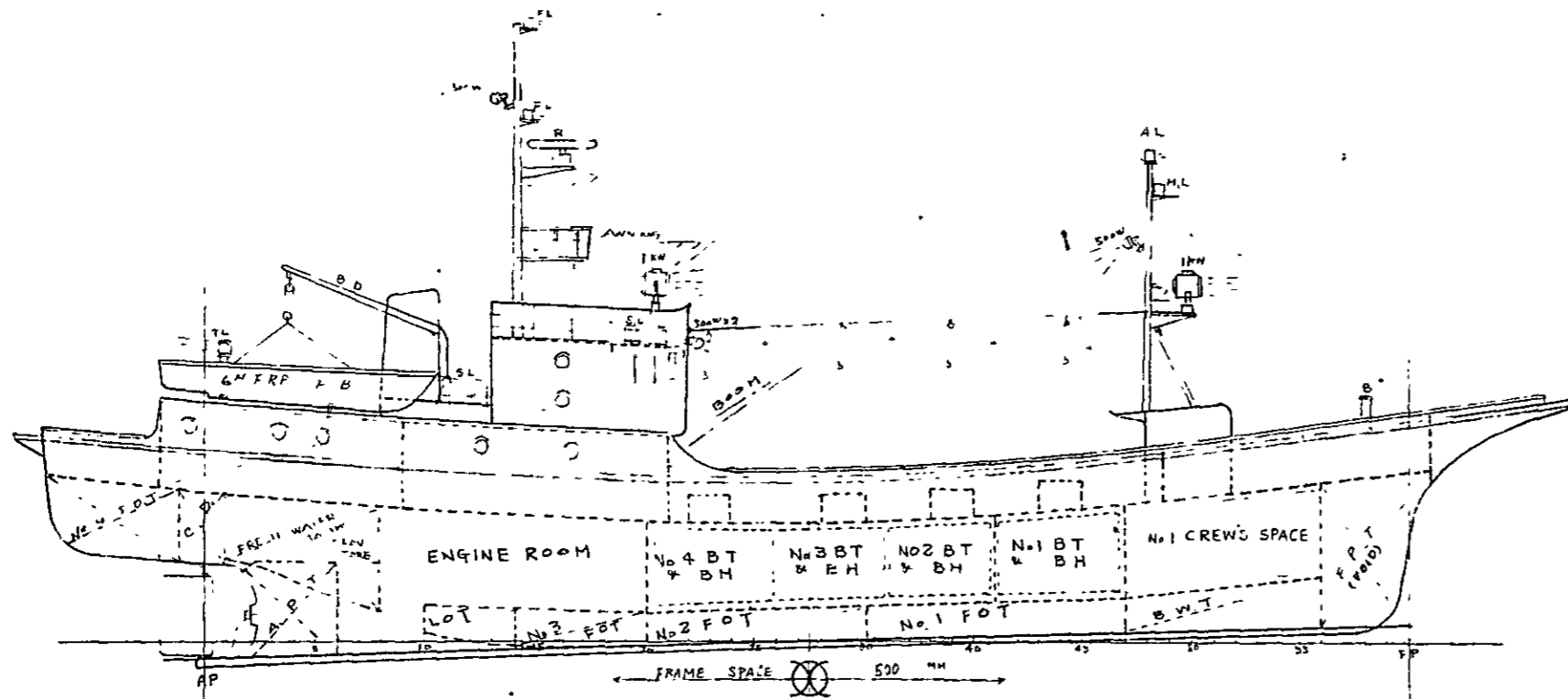
Remark: -

To increase fish hold capacity to about 70M³ above breadth & depth to be increased as follows:

Breadth (Houldel) 5.90 M
 Depth (D_o) 2.75 M

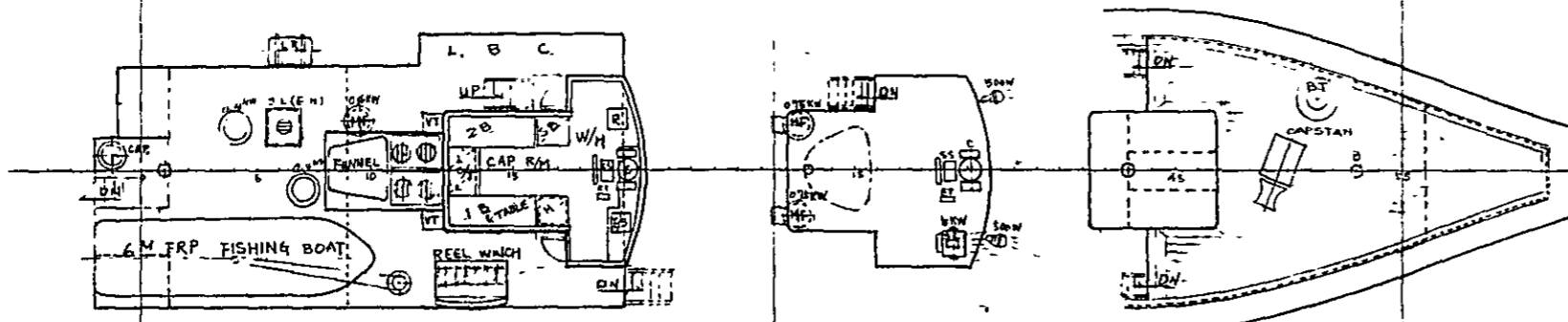
PLAN FOR REFERENCE

100 ft TYPE			
FISHERY TRAINING VESSEL			
GENERAL ARRANGEMENT			
SCALE	1/100	DRAW No	DATE JUN, 1978
FISHERY AGENCY			
THE GOVERNMENT OF SAUDI			



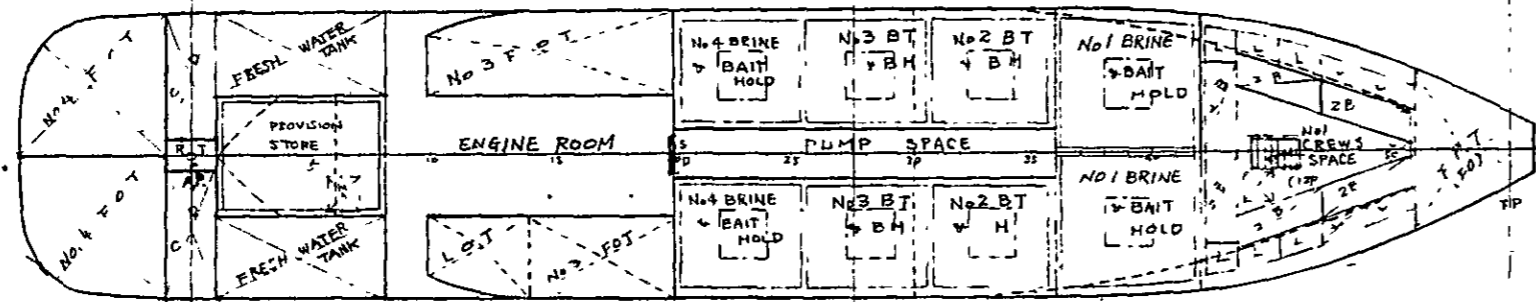
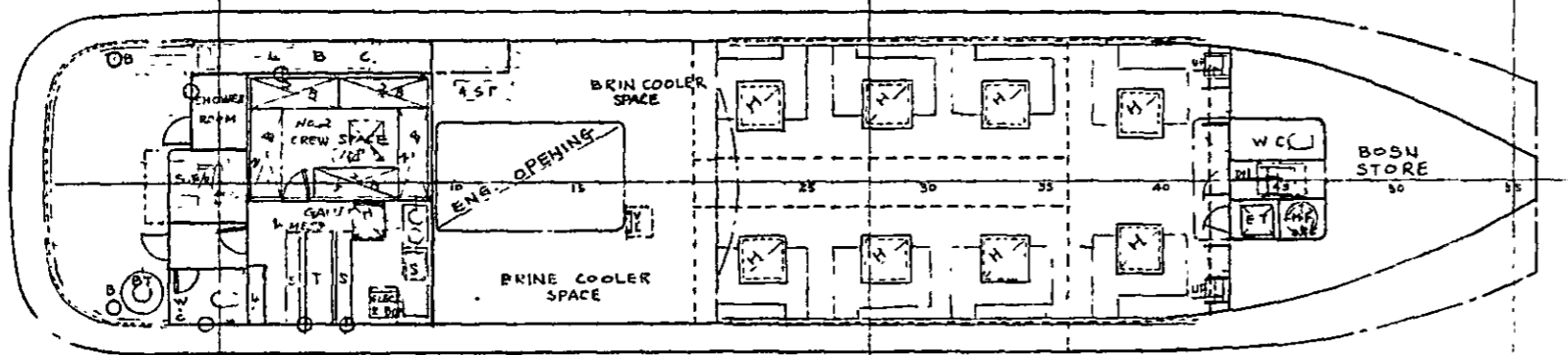
PRINCIPAL PARTICULARS

LENGTH (OVER ALL)	36.00 ^M	118 10"
D _o (REGISTERED)	28.00 ^M	92 00"
D _o (BET PP)	27.50 ^M	90 20"
BREADTH (M _o)	5.80 ^M	19 05"
DEPTH (D _o)	2.60 ^M	8 00"
DESIGNED DRAFT	2.4 ^M	7 65"
GROSS TONNAGE (ABOUT)	100 ^T	
MAIN ENGINE	60 ^{HP}	
SPEED (MAX)	10 ^{KT}	
CAPACITY		
HOLD (FISH (AEDLT))	60 ^{M³}	
F.O.T.	D _o 40 ^{M²}	
F.W.T.	D _o 15 ^{M²}	
L.O.T.	D _o 1 ^{M²}	
COMPLEMENT	25 ^P	



Remark: -
 To increase fish hold capacity to about 70M³
 above breadth & depth to be increased as
 follows:
 Breadth (M_o) 5.90 M
 Depth (D_o) 2.75 M

PLAN FOR REFERENCE



100 ft TYPE			
FISHERY TRAINING VESSEL			
GENERAL ARRANGEMENT			
SCALE	1/100	DRAW' No	DATE JUN, 1975
DESIGNED BY			
THE GOVERNMENT OF MALAYA			

2) OUTLINE SPECIFICATIONS
OF
80 FEET TYPE FISHERY TRAINING VESSEL
(DRAFT)

JUNE, 1978

FISHERY AGENCY
THE GOVERNMENT OF JAPAN

1. General Description

Purpose: Fishery training (skipjack pole and line fishing)

Type: Single decker with forecastle and deck house

Material of hull: GRP

Regulations to

- be applied:
- 1) The Shipping Regulations, Chapter 98 Shipping, The Laws of the British Solomon Islands Protectorate in force on 31st December 1969 (as Inner Island Vessel)
 - 2) Rules and Regulations for export vessel from Japan
 - 3) International Regulations for Tonnage Measurement of Ship Concluded in Oslo
 - 4) Japanese Ship's Safety Rules and Regulations (the 3rd Class Fishing Vessel of the Special Rules)
 - 5) Japanese Regulations of Preventing Collision at Sea

Remark:

In spite of above Regulations of item 1), lifesaving appliances, fire fighting equipment, navigation lights, etc. to be furnished with Japanese products approved under Japanese Rules, and also freeboard to be based on above Regulations of item 4).

Inspection and

- Certificate:
- 1) In compliance with above Rules and Regulations of item 2), the vessel to be inspected and certified by Japanese Government
 - 2) In compliance with above Regulations of item 3), the vessel to be surveyed and certified by Nippon Kaiji Kyokai (NK)
 - 3) Provisional Certificate of Nationality, Provisional Ship's Radio Station Licence, or substitutive document which is necessary for transportation from Japan to be furnished by the Government of Owner

2. Principa Particulars

1)	Principal dimensions			
	Length (L.O.A.)		28.50	m
	Length (Registered)		21.70	m
	Length (L.B.P.)		21.70	m
	Breadth (moulded)		4.80	m
	Depth (moulded)		2.25	m
	Designed full load draft		2.00	m
2)	Gross tonnage	about	55	tons
3)	Capacity			
	Fish hold	9 holds, grain	total about	38 m ³
	Fish hold (Ice hold)	6 holds, grain	about	20 m ³
	Bait hold	3 holds, grain	about	18 m ³
	Fuel oil tank		about	32 m ³
	Fresh water tank		about	8 m ³
	Lubricating oil tank		about	0.4 m ³
4)	Main engine			1 set
	Type	4-cycle single acting diesel engine		
	Output	about 320 PS		
	Propeller	4-brade fixed pitch propeller		1 set
5)	Speed			
	Designed trial maximum speed	about	9.0	knots
	Service speed	about	8.5	knots
6)	Range of cruise	about	2,500	miles
7)	Complement		20	persons
8)	Working launch	of GRP, about 4 m long, equipped with inboard engine (15PS) and generator (3KW)		1 set
9)	Deck machinery			
	Capstan	2.2 KW electric motor driven horizontal type		1 set
	Capstan	1.5 KW electric motor driven		1 set
	Steering gear	electro-hydraulic		1 set
	Steering stand	for wheel house and flying bridge		2 sets
10)	Fishing gear			
	Sprinkler system		1	set

Bait hold	forced circulation, with overflowing duct on hatch		
Belt conveyor	electric motor driven	1	set
Stick held dip net fishing gear	with net hauling winch, davits, luring lights	1	set
11) Lifesaving appliances and fire fighting equipment			
Life raft	inflatable type, for 20 persons	1	set
Automatic distress transmitter		1	set
Life buoy		4	
Life jacket		20	
Self-igniting signal		2	
Self-smoking signal		2	
Parachute signal		4	
Rocket signal		2	
Hydrant and hose		2	sets
Fire extinguisher	in accommodation and engine room	5	
Other requirements by the Regulations			
12) Nautical equipment and communication equipment			
Magnetic compass	stand and reflection type	1	set
Radar		1	set
Fish finder		1	set
Main engine remote controller		1	set
Engine telegraph		1	set
Air horn		1	set
Clear view screen		2	sets
SSB radio telephone	output 25W	1	set
Public addressor	output 20W	1	set
Other requirements by the Regulations			
13) Ventilater			
Electric motor fan	for accommodation and galley	3	sets
	for engine room	2	sets
Electric room cooler	for accommodation	4	sets
14) Generater engine			
	about 86 PS	2	sets

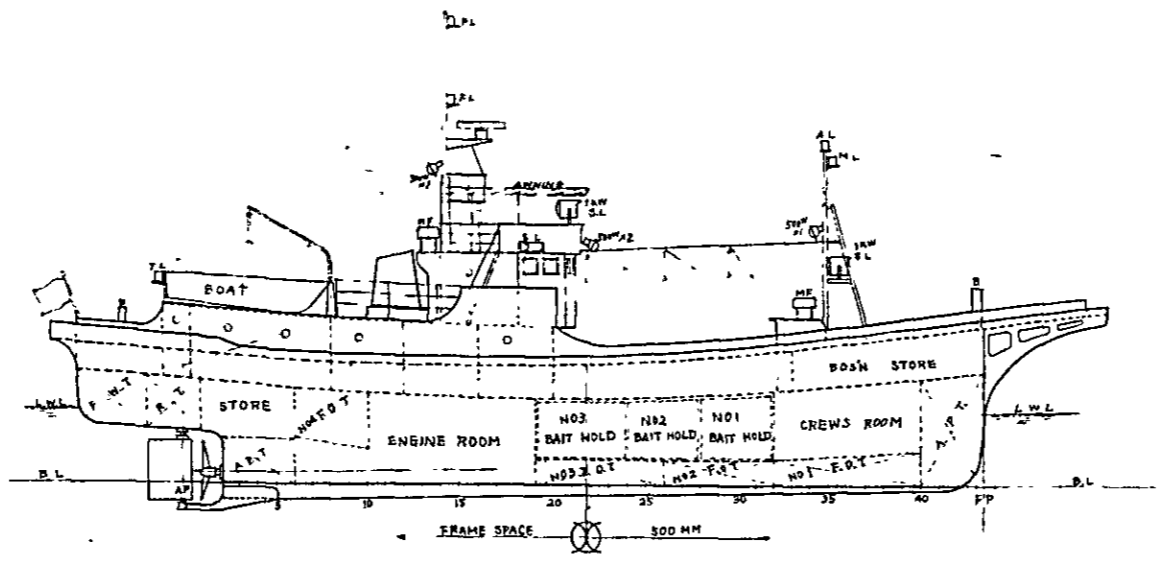
15) Air compressor			
Main air compressor		1	set
Emergency air compressor		1	set
16) Main engine remote control system			
Main engine remote control stand	in flying bridge	1	set
17) Pump			
General service pump		1	set
F.O. shift pump		1	set
Auxiliary L.O. pump		1	set
Sprinkler pump		1	set
Bait hold circulation pump		3	sets
Fresh water pump		1	set
Condenser cooling pump		1	set
Brine circulation pump		1	set
18) Refrigerating plant			
Refrigerating compressor	R-22, about 8.95 RT x 10 KW	1	set
19) Electric source and transformer			
Main generator	AC 225V, about 60 KVA	2	sets
Transformer	225V /105V, about 15 KVA	1	set
Battery	24V 200AH	2	sets
Main switch board	dead front type	1	set
20) Lighting equipment			
Navigation light		1	set
Signaling light		1	set
Fishing light		1	set
Projector	500W	3	sets
Search light	1 KW	2	sets
Fish luring light	2 KW	2	sets

Remark:

According to further minute designing, this OUTLINE specifications may be altered with consent of Owner so far as the performance is kept in reasonable condition.

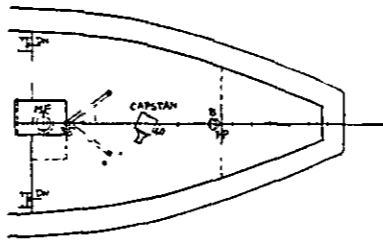
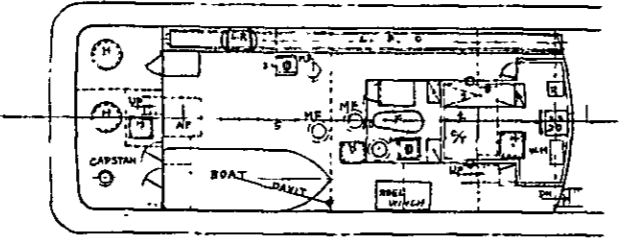
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PRINCIPAL DIMENSIONS			
LENGTH	OVER ALL	28 ^m 50	93.50 ft
	BY REG	21 ^m 70	71.20 ft
	BET - P.P.	21 ^m 70	71.20 ft
BREADTH	BY REG	4 ^m 80	15.75 ft
DEPTH	BY REG	2 ^m 25	7.38 ft
DRAFT		2 ^m 00	6.56 ft
GROSS TONNAGE	ABOUT	55 ^T	
MAIN ENGINE		320 ^{PS} x 1	
SPEED SERVICE		8.5 ^{KT}	
COMPLEMENT		20 ^P	

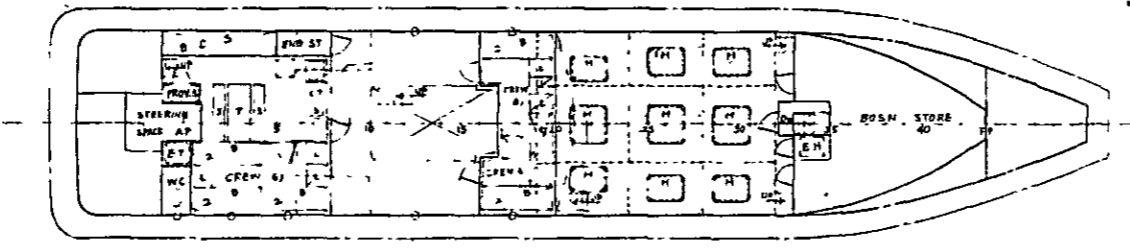


POOP DECK PLAN

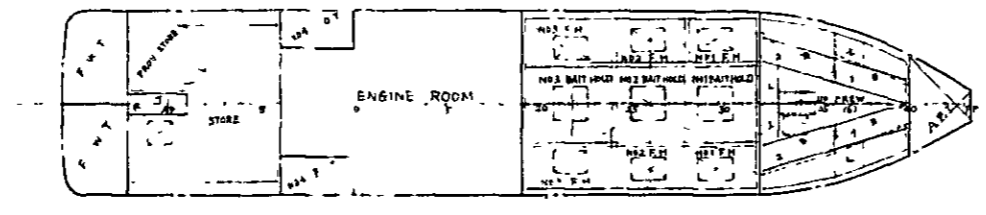
FO'CLE DECK PLAN



UPPER DECK PLAN



HULL & BOTTOM PLAN



PLAN FOR REFERENCE

80 ft TYPE			
FISHERY TRAINING VESSEL			
GENERAL ARRANGEMENT			
SCALE	1/100	DRAW NO	JUN 1978
FISHERY AGENCY			
THE GOVERNMENT OF JAPAN			

3) OUTLINE SPECIFICATIONS
OF
60 FEET TYPE REFRIGERATED FISH CARRIER
(DRAFT)

JUNE, 1978

FISHERY AGENCY
THE GOVERNMENT OF JAPAN

1. General Description

Purpose: Carrying frozen fish

Type: Single decker with forecastle and deck house

Material of hull: GRP

Regulations to

- be applied:
- 1) The Shipping Regulations, Chapter 98 Shipping, The Laws of the British Solomon Islands Protectorate in force on 31st December 1969 (as Inner Island Vessel)
 - 2) Rules and Regulations for export vessel from Japan
 - 3) International Regulations for Tonnage Measurement of Ship Concluded in Oslo
 - 4) Japanese Ship's Safety Rules and Regulations (the 3rd Class Fishing Vessel of the Special Rules)
 - 5) Japanese Regulations of Preventing Collision at Sea

Remark:

In spite of above Regulations of item 1), lifesaving appliances, fire fighting equipment, navigation lights, etc. to be furnished with Japanese products approved under Japanese Rules, and also freeboard to be based on above Regulations of item 4).

Inspection and

- Certificate:
- 1) In compliance with above Rules and Regulations of item 2), the vessel to be inspected and certified by Japanese Government
 - 2) In compliance with above Regulations of item 3), the vessel to be surveyed and certified by Nippon Kaiji Kyokai (NK)
 - 3) Provisional Certificate of Nationality, Provisional Ship's Radio Station Licence, or substitutive document which is necessary for transportation from Japan to be furnished by the Government of Owner

2. Principal Particulars			
1) Principal dimensions			
Length (L.O.A.)			20.85 m
Length (Registered)			18.50 m
Length (L.B.P.)			18.50 m
Breadth (moulded)			3.70 m
Depth (moulded)			1.85 m
Designed full load draft			1.62 m
2) Gross tonnage	about	30	tons
3) Capacity			
Fish hold	3 holds, bale	total about	25 m ³
Fuel oil tank		about	12 m ³
Fresh water tank		about	1 m ³
Lubricating oil tank		about	0.5 m ³
4) Main engine			
Type	4-cycle single acting diesel engine		
Output	about 200 PS		
Propeller	3-brades fixed pitch propeller	1	set
5) Speed			
Designed trial maximum speed	about	9.0	knots
Service speed	about	8.0	knots
6) Range of cruise	about	2,000	miles
7) Complement		6	persons
8) Deck machinery			
Capstan	1.5 KW, electric motor driven	1	set
	horizontal type		
Steering gear	manual hydraulic	1	set
Steering stand	in wheel house	1	set
9) Cargo handling gear			
Cargo boom	for 0.5 ton	1	set
Electric hoist	for 0.5 ton	1	set
Wire span with carge blocks		1	set
10) Lifesaving applicances and fire fighting equipment			
Life raft	inflatable type, for 10 persons	1	set

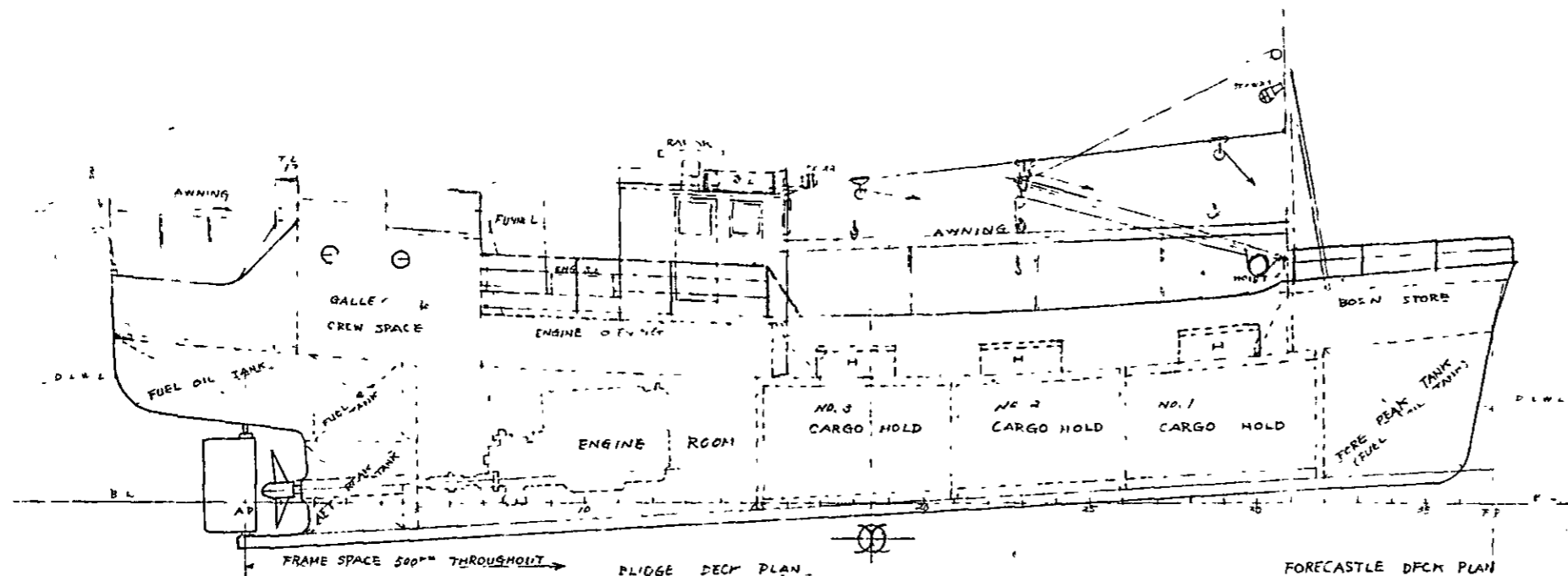
Automatic distress transmitter		1	set
Life buoy		4	
Life jacket		6	
Self-igniting signal		2	
Self-smoking signal		2	
Parachute signal		4	
Rocket signal		2	
Hydrant and hose		2	sets
Fire extinguisher	in accommodation and engine room	5	
Other requirements by the Regulations			
11) Nautical equipment and communication equipment			
Magnetic compass	stand and reflection type	1	set
Radar		1	set
Echo sounder		1	set
Engine telegraph		1	set
Motor siren		1	set
Clear view screen		1	set
SSB radio telephone	output 25 W	1	set
Public addressor	output 20 W	1	set
Other requirements by the Regulations			
12) Ventilater			
Electric motor fan	for accommodation and galley	2	sets
Electric motor fan	for engine room	2	sets
Electric room cooler	for accommodation	2	sets
13) Generator engine			
	4-cycle single acting diesel engine	1	set
	about 38 PS		
14) Pump			
General service pump		1	set
F. O. shift pump		1	set
Auxiliary L. O. pump		1	set
Fresh water pump		1	set
Condenser cooling pump		1	set
15) Refrigerating plant			
Refrigerating compressor	for cooling fish holds, temperature about -15°C	1	set

- 16) Electric source and transformer
- | | | | |
|---------------------|---|---|------|
| Main generator | AC 225V, about 30 KVA | 1 | set |
| Auxiliary generator | AC 225V, about 25 KVA
main engine driven | 1 | set |
| Transformer | 225V/105V, about 5 KVA | 1 | set |
| Battery | 24V 200AH | 1 | set |
| Battery | 24V 300AH for starting engines | 2 | sets |
| Main switch board | dead front type | 1 | set |
- 17) Lighting equipment
- | | | | |
|------------------|-------|---|------|
| Navigation light | | 1 | set |
| Signaling light | | 1 | set |
| Projector | 500 W | 3 | sets |
- 18) Working launch
- | | | | |
|--|---|---|-----|
| | of GRP, about 3.5 m long, with
outboard engine (5PS) | 1 | set |
|--|---|---|-----|

Remark:

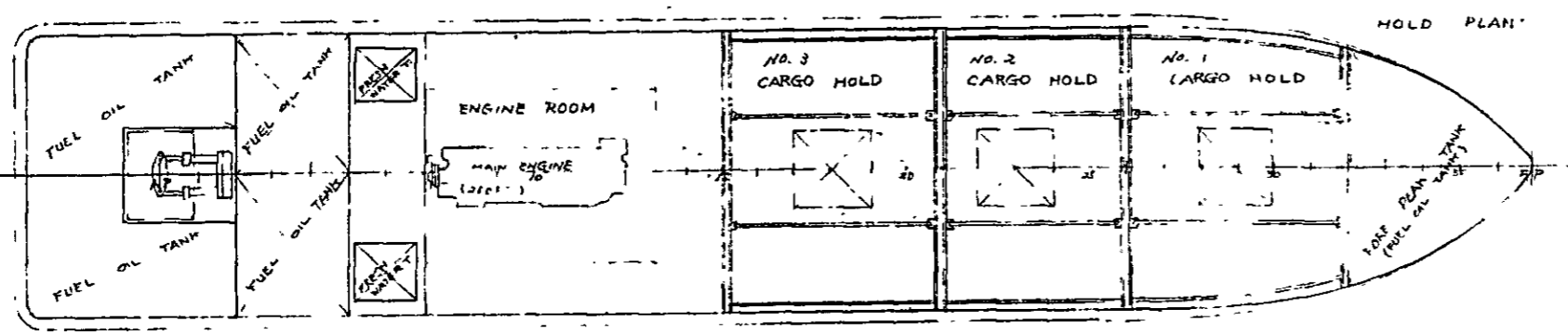
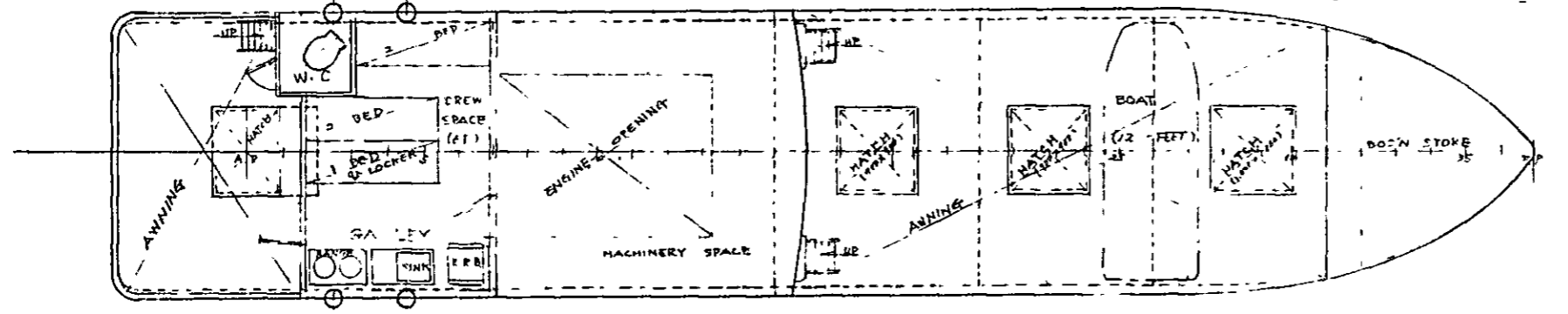
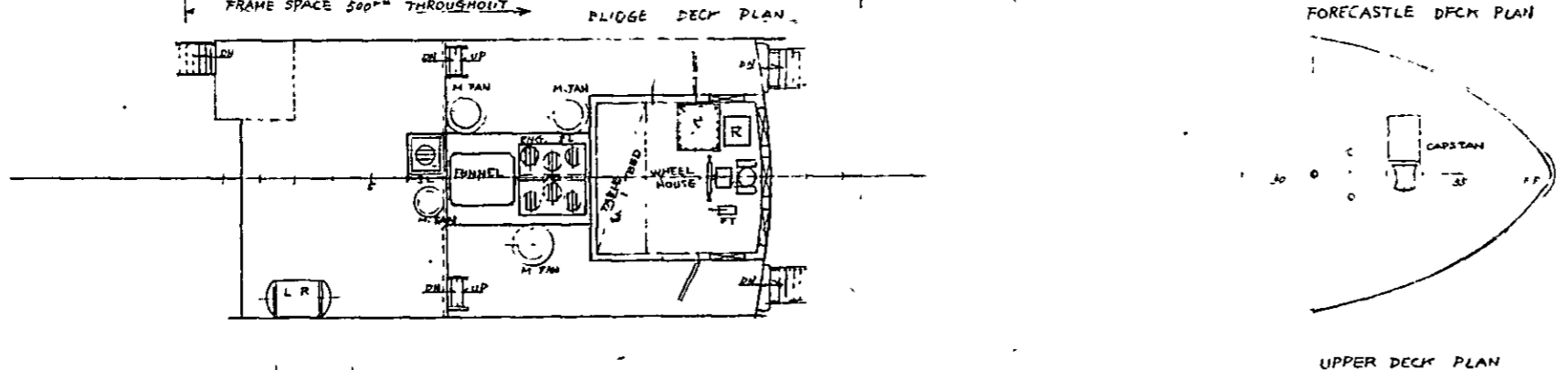
According to further minute designing, this OUTLINE specifications may be altered with consent of Owner so far as the performance is kept in reasonable condition.

(THE END)



PRINCIPAL PARTICULARS

LENGTH (OVER ALL)	20.85 ^M	68.40 ^{ft}
D ₀ (REGISTERED)	18.50 ^M	60.70 ^{ft}
BREADTH (MOULDED)	3.70 ^M	12.10 ^{ft}
DEPTH (MOULDED)	1.85 ^M	6.07 ^{ft}
DESIGNED DRAFT	1.62 ^M	5.30 ^{ft}
GROSS TONNAGE (ABOUT)	30 ^{TON}	
MAIN ENGINE	200 ^{HP}	
SPEED (MAX.)	9 ^{KT}	
CAPACITY		
HOLD (BALE) (ABOUT)	25 ^{M³}	
F.O.T.	(ABOUT) 12 ^{M³}	
F.W.T.	(ABOUT) 1 ^{M³}	
L.O.T.	(ABOUT) 25 ^{M³}	
COMPLEMENT	6 ^P	



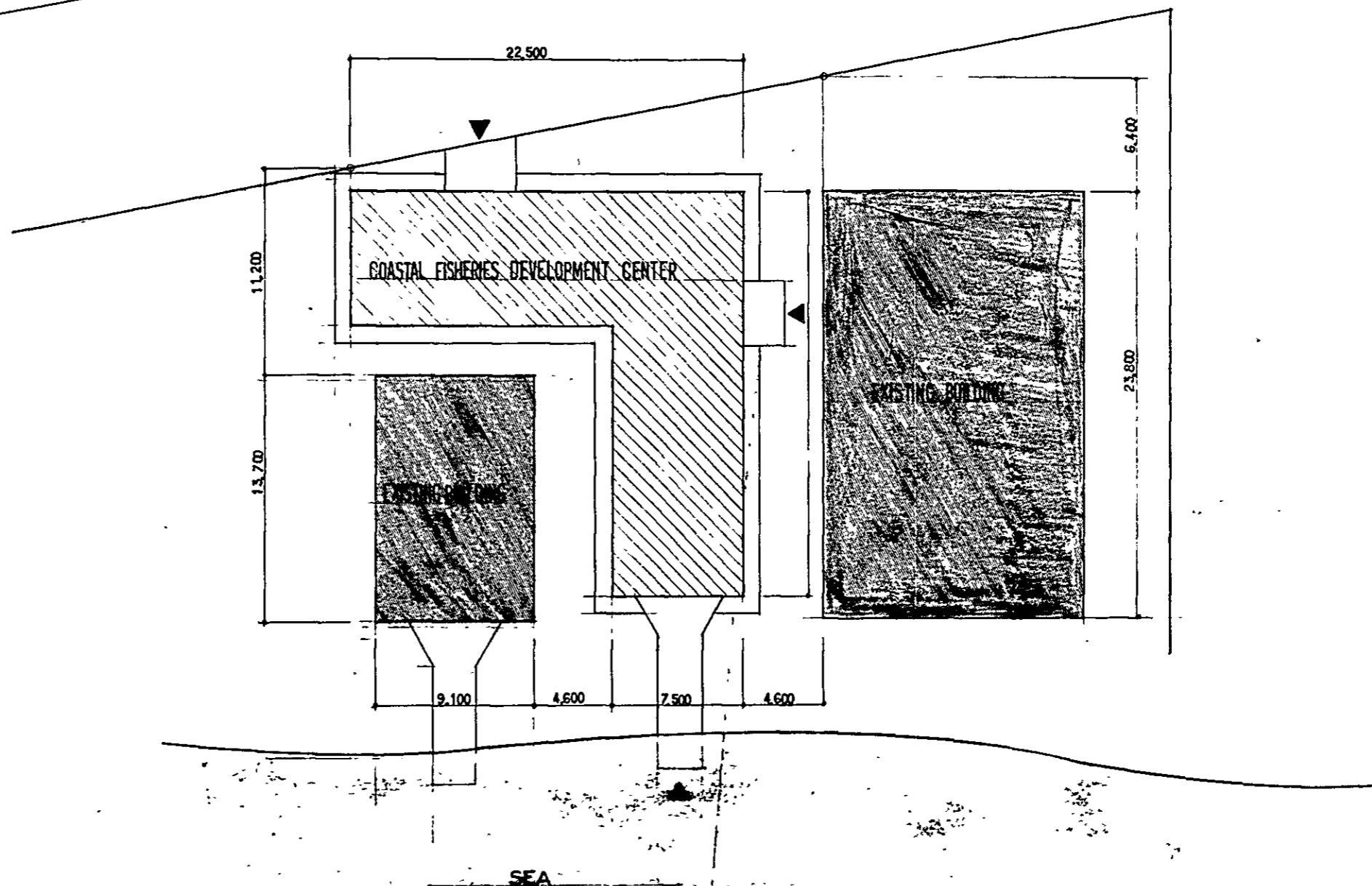
PLAN FOR REFERENCE

60 ft TYPE			
REFRIGERATED FISH CARRIER			
GENERAL ARRANGEMENT			
SCALE	1/4"	DRAWING NO.	DATE
FISHERY AGENCY		THE GOVERNMENT OF JAPAN	

COASTAL FISHERIES DEVELOPMENT CENTER

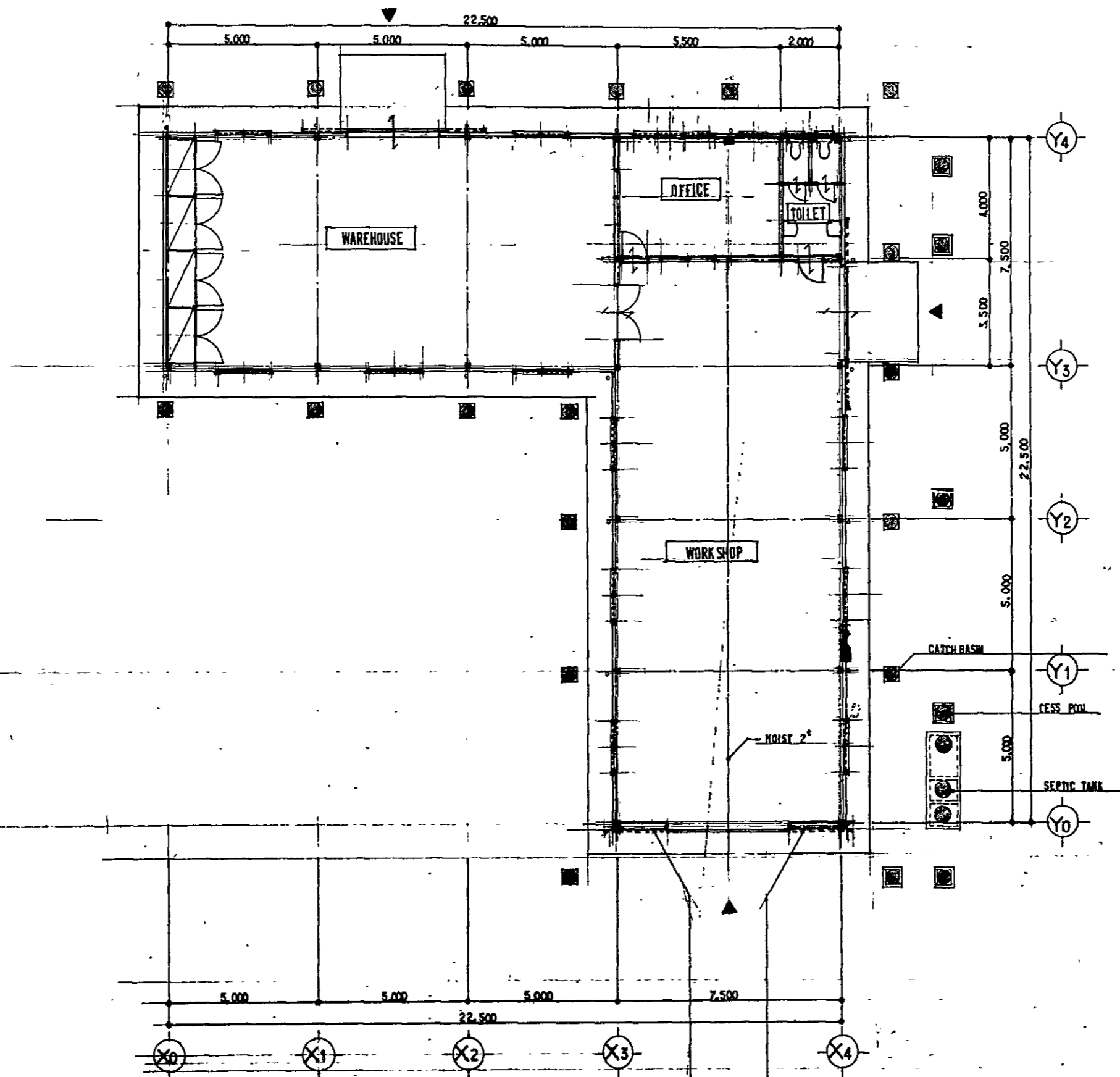
UNIVERSAL MARINE CONSULTANT CO., LTD.

COASTAL FISHERIES DEVELOPMENT CENTER																											
BUILDING OUTLINE	BUILDING SITE		AUKI, MALAITA ISLAND.																								
	TYPE OF CONSTRUCTION		STEEL FRAMES STRUCTURE 1-STORY																								
	FLOOR AREA		281.25m ²																								
EXTERIOR FINISH SCHEDULE																											
BASEBOARD	MORTAR BRUSHING H=500 ^{MM}																										
EXTERIOR WALL	SMALL CORRUGATED ASBESTOS CEMENT SLATE																										
ROOF	LARGE CORRUGATED ASBESTOS CEMENT SLATE																										
BERM	MORTAR BRUSHING																										
WINDOWS	ALUMINIUM FRAME JALOUSIE WINDOWS (GLASS PANELS, ROTORGEAR CRANK, FIXED SCREEN)																										
DOORS	STEEL OVERHUNG DOOR.																										
EAVES CUTTER	P.V.C																										
DOWNSPOUT	P.V.C ø 50 ^{MM}																										
REMARK	WATER SUPPLY EQUIPMENT, DRAINAGE EQUIPMENT, SEPTIC TANK, ELECTRIC EQUIPMENT																										
INTERIOR FINISH SCHEDULE																											
ROOMS	FLOOR AREA	FLOOR	BASEBOARD	WALLS	CEILING	REMARK																					
WAREHOUSE	112.5 ^{m²}	FLOOR SLAB CONCRETE	MORTAR STEEL TROWEL H=200 ^{MM}	STEEL FRAMES O.P	STEEL FRAMES Q.P																						
OFFICE	22 ^{m²}	MORTAR STEEL TROWEL (JOINTING)	DITTO H=100 ^{MM}	ASBESTOS CEMENT BOARD Q.P T=6 ^{MM}	ASBESTOS CEMENT BOARD Q.P T=6 ^{MM} H=3.000 ^{MM}	BLIND, HEAD BOX, STEEL DESK x2, SWIVEL CHAIR x2 STEEL LOCKER x2																					
TOILET	8 ^{m²}	DITTO	DITTO H=100 ^{MM}	DITTO	DITTO	CLOSET, WASHBASIN.																					
WORKSHOP	138.75 ^{m²}	FLOOR SLAB CONCRETE	DITTO H=200 ^{MM}	STEEL FRAMES Q.P PLYWOOD H=1.000	STEEL FRAMES Q.P	ROOF VENTILATOR x2, HOIST 2 ^t .																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">PROJECT TITLE</td> <td style="width: 20%;">APPROVED</td> <td style="width: 20%;"></td> </tr> <tr> <td>COASTAL FISHERIES DEVELOPMENT CENTER</td> <td>CHIEF</td> <td></td> </tr> <tr> <td>DRAWING TITLE</td> <td>DESIGN</td> <td></td> </tr> <tr> <td>BUILDING OUTLINE, EXTERIOR FINISH SCHEDULE INTERIOR FINISH SCHEDULE</td> <td></td> <td></td> </tr> <tr> <td>SCALE</td> <td>DATE</td> <td>DRAWING</td> </tr> <tr> <td></td> <td>19 JUNE 1978</td> <td></td> </tr> <tr> <td>UNIVERSAL MARINE CONSULTANT CO., LTD.</td> <td>SHEET NO</td> <td>1</td> </tr> </table>							PROJECT TITLE	APPROVED		COASTAL FISHERIES DEVELOPMENT CENTER	CHIEF		DRAWING TITLE	DESIGN		BUILDING OUTLINE, EXTERIOR FINISH SCHEDULE INTERIOR FINISH SCHEDULE			SCALE	DATE	DRAWING		19 JUNE 1978		UNIVERSAL MARINE CONSULTANT CO., LTD.	SHEET NO	1
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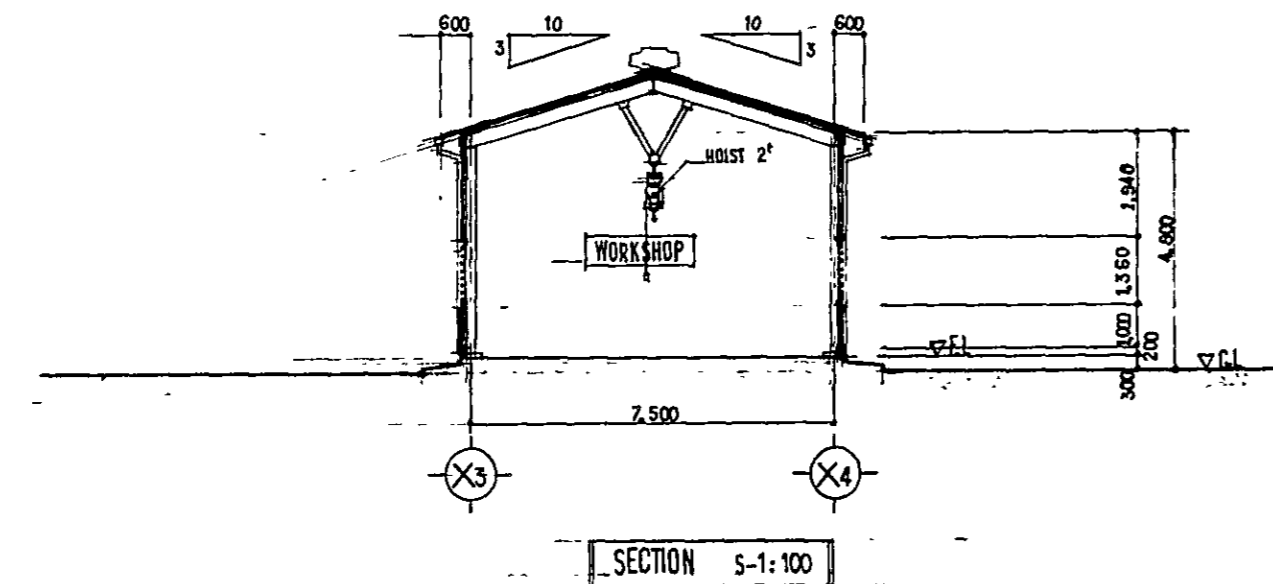
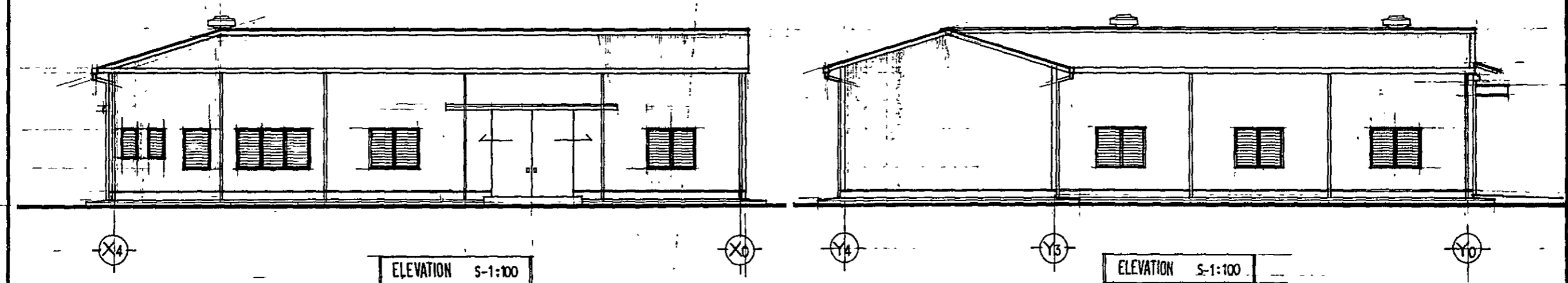
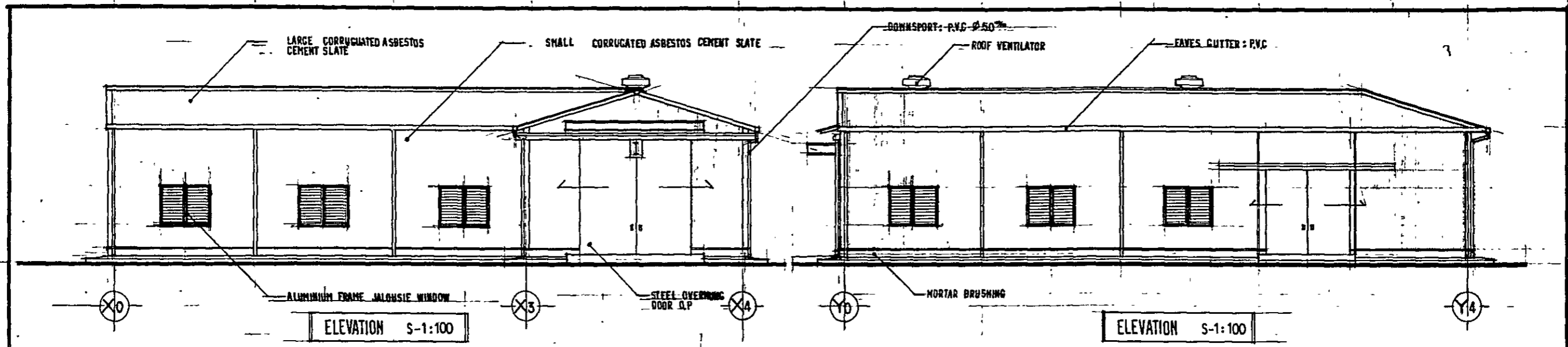
SITE PLAN S-1:200

PROJECT TITLE		APPROVED
COASTAL FISHERIES DEVELOPMENT CENTER		CHIEF
DRAWING TITLE SITE PLAN		DESIGN <i>[Signature]</i>
SCALE 1:200	DATE 19 JUNE 1978	DRAWING <i>[Signature]</i>
UNIVERSAL MARINE CONSULTANT CO., LTD.		SHEET NO. 2



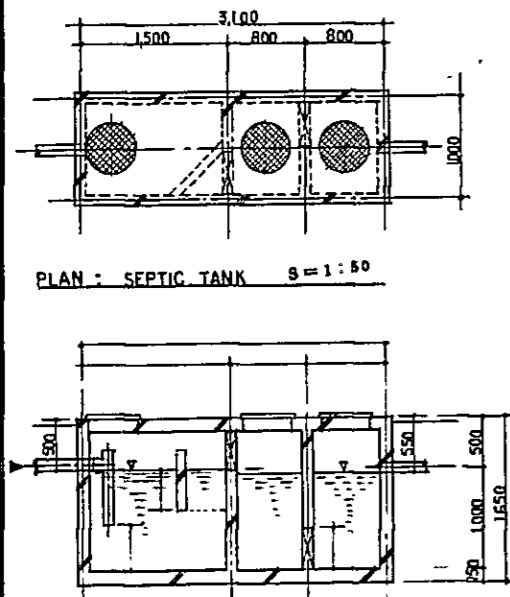
FLOOR PLAN 5-1:100

PROJECT TITLE COASTAL FISHERIES DEVELOPMENT CENTER		APPROVED CHIEF
DRAWING TITLE FLOOR PLAN		DESIGN <i>[Signature]</i>
SCALE 1:100	DATE 19. JUNE. 1978	DRAWING <i>[Signature]</i>
UNIVERSAL MARINE CONSULTANT CO., LTD.		SHEET NO. 3



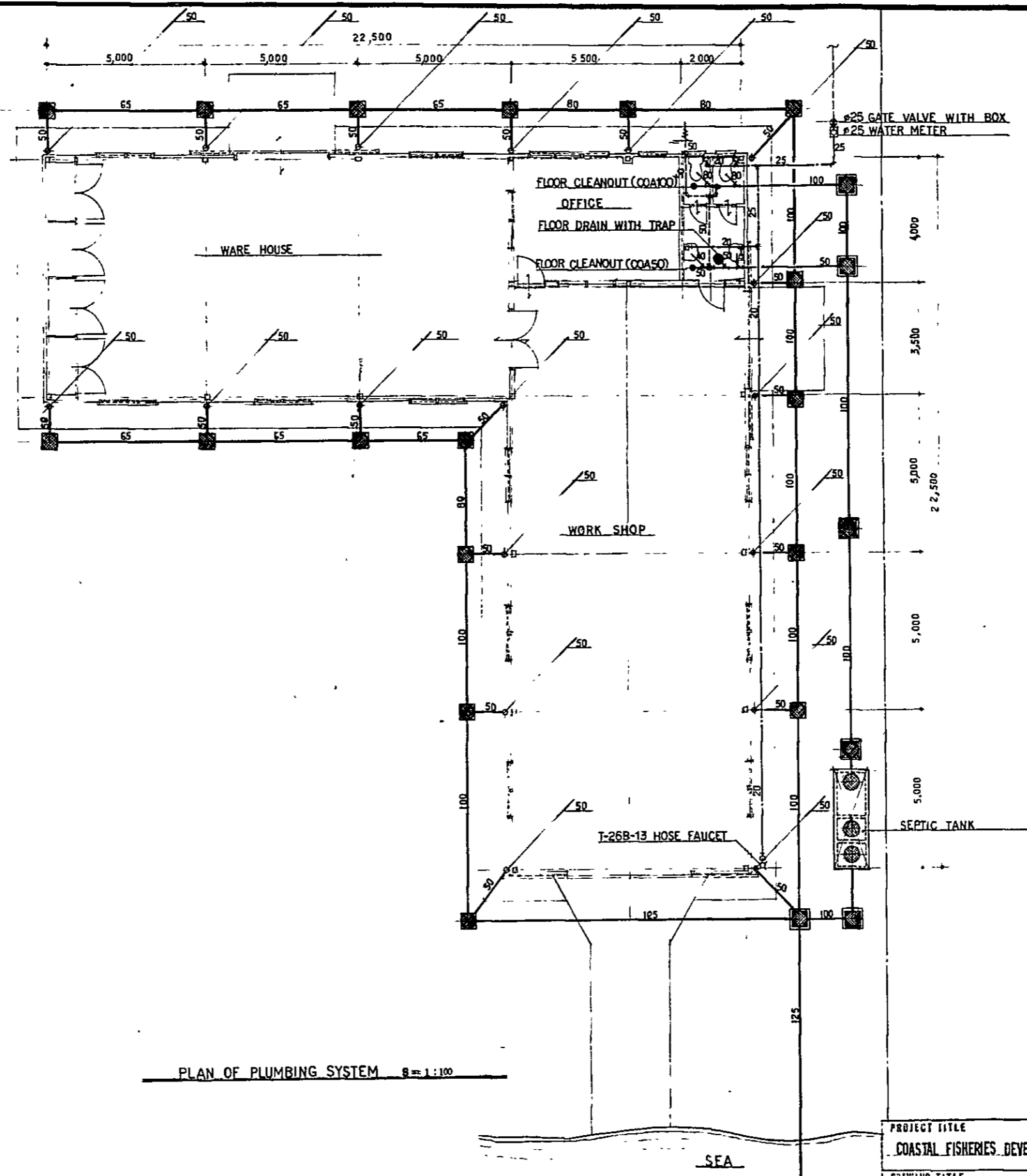
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COASTAL FISHERIES DEVELOPMENT CENTER		CHIEF
DRAWING TITLE ELEVATION SECTION		DESIGN
SCALE 1:100	DATE 19 JUNE, 1978	DRAWING
UNIVERSAL MARINE CONSULTANT CO., LTD.		SHEET NO. 4

SYMBOL	DESCRIPTION	SPECIFICATION
—	FEED WATER PIPE	HI TYPE VINYL PIPE
—	DRAIN PIPE	VP TYPE VINYL PIPE
- - -	VENT PIPE	- ditto -
■	CESSPOOL	500x500 #500 CAST IRON MANHOLE
■	CATCH BASIN	- ditto -
□	WATER CLOSET	C-420 with S-516B
□	WASH BASIN	L-237
	TOILET MIRROR	TS119AS-3
	TOILET SHELF	S-3



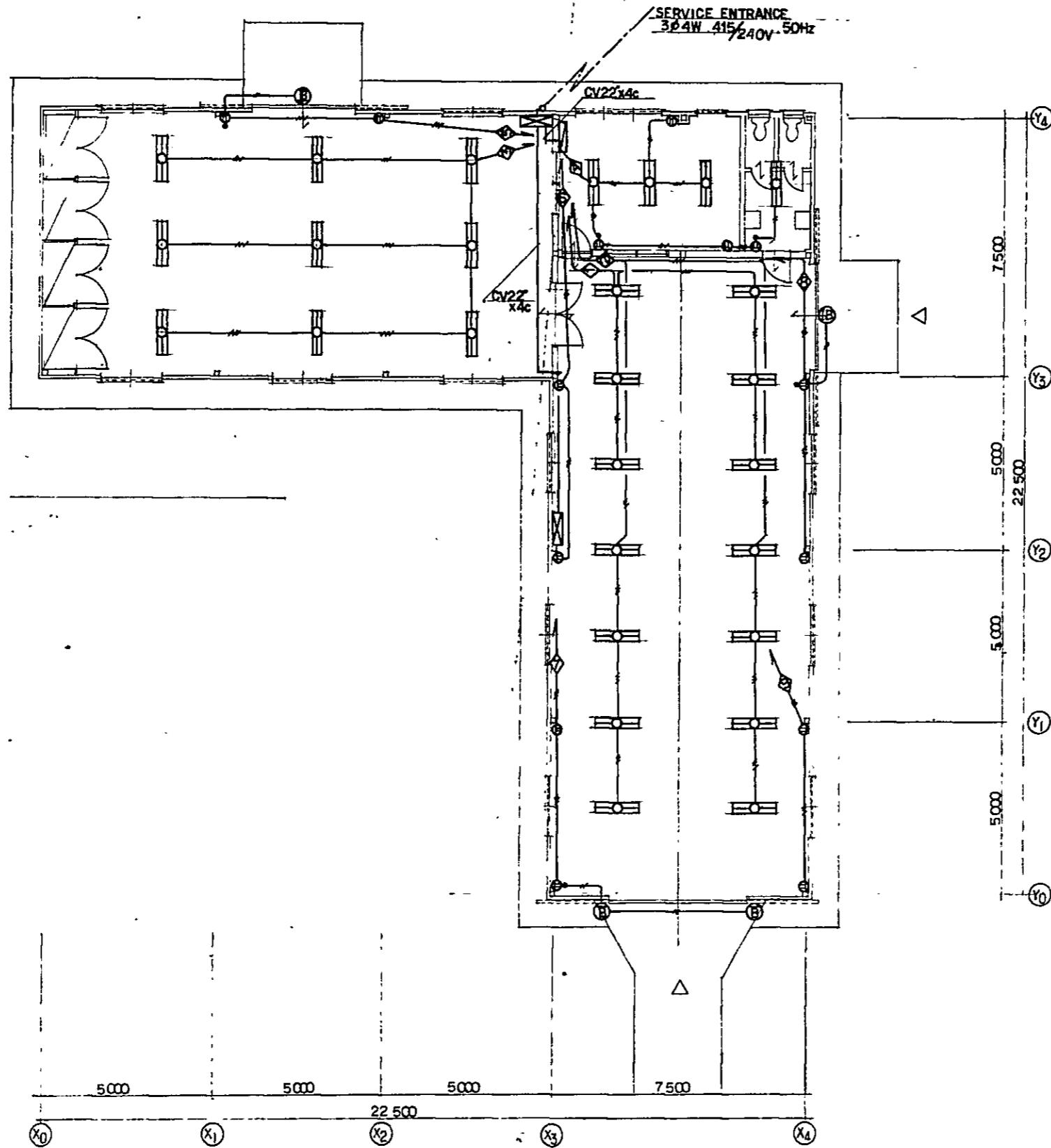
PLAN : SEPTIC TANK S = 1 : 50

SECTION : SEPTIK TANK S = 1 : 50

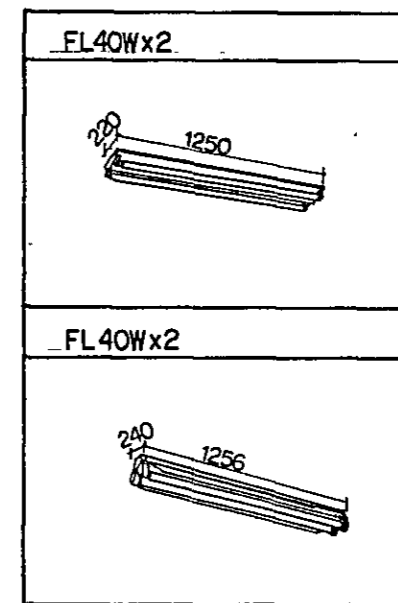


PLAN OF PLUMBING SYSTEM S = 1 : 100

PROJECT TITLE		APPROVED
COASTAL FISHERIES DEVELOPMENT CENTER		CHIEF
DRAWING TITLE		DESIGN
PLAN OF PLUMBING SYSTEM		DRAWING
SCALE 1:100	DATE 19 JUNE 1978	SHEET NO.
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	DISTRIBUTION PANEL
	LIGHTING PANEL
	FLUORESCENT LIGHTING FIXTURE 40Wx2
	OUTDOOR LIGHTING FIXTURE
	SOCKET - OUTLET
	SINGLE POLE SWITCH
	EXPOSED WIRING (CV CABLES)



PROJECT TITLE		APPROVED
COASTAL FISHERIES DEVELOPMENT CENTER		CHIEF
DRAWING TITLE ELECTRIC SYSTEM		DESIGN <i>J. Jansz</i>
SCALE 1:100	DATE 19 JUNE 1978	DRAWING <i>J. Jansz</i>
UNIVERSAL MARINE CONSULTANT CO., LTD.		SHEET NO. 6

Chapter II Fishery Training Centre and Technical Cooperation

1) Results of discussions and on the spot survey

This report contains the findings of a preliminary survey conducted in the Solomon Islands for the Fisheries Training Centre and Training Boat Construction Project to be implemented under Japanese aid.

The survey was intended primarily to collect basic data and information indispensable for preparation of a Master Plan of the project which is aimed at constructing a Fisheries Training Centre in Auki, Malaita Island, and providing materials and technical guidance needed in the construction of fisheries training boats.

The first discussion meeting on the project, held on June 2, 1978 at Ministry of Natural Resources, opened with an elucidation of the system of Japan's overseas cooperation on a grant basis and the outline and schedule of the survey and introduction of the participants from both countries. The meeting was divided into two sectors, the shipbuilding sector and the construction sector. In the construction sector, it was agreed that the final conclusion would be framed by unifying the opinions of both parties on the basis of the survey, preliminary arrangements, final discussion meeting, etc. itemized below.

- 1) Preliminary arrangements for construction of the Fisheries Training Centre
- 2) Field survey of proposed construction site, etc.
- 3) Final discussion meeting on the construction of the Fisheries Training Centre
- 4) Arrangements for construction of small training boats

1. Preliminary Arrangements for Construction of Fisheries Training Centre

The meeting for preliminary arrangements for the construction of the Training Centre was attended by the following Solomon officials and Japanese experts.

Japanese Experts

Mr. Kanai
Mr. Hirata

Solomon Officials

Mr. James (Chief Fisheries Officer)
Mr. Gibson (Senior Fisheries Officer)
Mr. Ston (Fisheries Officer)

The original master plan was formulated according to the budgetary appropriation based on the total amount of budget which was determined at the outset in compliance with the request of the Solomon government. As changes were effected to the original design several times during the interim period, a new design smaller in scale than initially planned for the Centre was prepared for the meeting.

The new master plan was presented with an explanation of the following design criteria, which was followed by further elucidation of details.

- 1) Since the construction site had not been confirmed before the meeting, an assumptive plot was adopted in the preparation of the design. After completion of the site survey, therefore, some modifications may have to be made to the design, especially in the plan.
- 2) The building type, materials, and construction method were determined in careful consideration of the natural conditions and mode of life in Solomon Islands as well as the location of the Centre.
- 3) First consideration was given to constructing a building which would exhibit the functions of training centre to the full, and to creating a most comfortable and favorable training environment.

Explanation of the above fundamental design criteria was followed by an elucidation of the plan and elevation of the Centre's building, names of building materials, electric work, facilities, etc. On hearing this explanation, the Solomon officials expressed the following views and desires.

- 1) The design of the Centre needs to conform to the Solomon Construction Standards in every detail. Since the meeting is not attended by Solomon officials in charge of the Construction Standards, we would like to make only preliminary arrangements for the design.
- 2) We understand that the Japanese Construction Standards are stricter than the Solomon Standards which were established after the example of the Australian Standards. We therefore do not think that the design involves any problems if it fulfills the requirements of the Japanese Standards.
- 3) The field area will be increased after reviewal of design drawings.

If the total site area sets limits on such expansion of field area, we do not mind reducing the warehouse area to an extent.

- 4) Pre-fabricated materials and equipment will be imported from Japan for construction of the Centre. Actual site construction work will be commissioned to a Solomon contracting company.
- 5) We would like to have the electric work conducted according to the Australian standards. Japan will cover the secondary side work including power boards, indoor wiring work, switches, plug sockets, lamp circuits, etc., and the Solomon government will supply power from a nearby source.
- 6) Power rating for lamp circuit is 240 V, single phase. However, power supply at 415 V, three phase, will also be required for operation of sawing machines and other equipment.
- 7) We would like to determine the building layout and other details according to the condition of coastal area and adjacent structures after completion of the site survey.
- 8) We would like to be supplied with the following three kinds of sawing machine for indoor use.
 - (1) Circular sawing machine (300d)
 - (2) Band saw
 - (3) Planer

The Solomon officials also expressed the hope to have another discussion meeting after completion of the field survey for detailed arrangements with the officials in charge of construction.

2. Field Survey of Proposed Construction Site, Etc.

Japanese Experts

Mr. Kawasaki
Mr. Watanabe
Mr. Kanai
Mr. Omote
Mr. Hirata

Solomon Officials

Mr. Qoloni (Permanent Secretary for
Natural Resources)
Mr. Gibson
Mr. Stone
Mr. Cook (District Commissioner)

The field survey was conducted on June 6 in Auki area, Malaita island, with Mr. Gibson leading the way for the survey team. The survey

covered the proposed construction site, power supply facilities, water supply and drainage facilities, adjoining structures, ground condition, pier utilization, manpower availability, etc. and produced the findings given below.

1) Location of Proposed Construction Site

Auki is a small town with a population of about 850. It is the gateway to outside world Malaita island which is the second largest island after Guadalcanal in the whole of Solomon Islands. Communication with Honiara is maintained by the regular passenger liner making three return operations a week and by a small aircraft making a shuffle flight each day. The construction site is situated to the southwest of the centre of Auki, about 200 m from Auki port pier. It faces a coastal area with a width of about 16.7 m on the south and a road with a width of about 10 m on the north. On the east, it adjoins the building of steel structure of a shipping company (Coral Seas) which covers an area of about 124 m². On the west is found another building of steel construction which is a repair shop of small boats and covers an area of about 124 m². With the exception of these two, there are no conspicuous buildings in the neighbourhood of the site. There are two unused buildings within the site, but they will be demolished by the Solomon government.

2) General Condition of Construction Site

The site is trapezoidal in shape, and has a length of 36 m from north to south and 32 m from east to west. It is L-shaped as shown in the attached sheet. The southern side is slightly inclined towards the coastline, and high water line reaches to a distance of about 5 m before the existing building. The site as a whole is now an open space covered with weeds, although it embraces one each of warehouse (23 m²), water closet (2.2 m²), electric pole, and small clarification tank which is no longer in use. It descends mildly from the road on the north to the sea and there is a height difference of about 1 m between the road side and the coast side, but there is virtually no difference in height between the two adjoining sites. Hence, no specific difficulty is expected in the drainage of rainwater. The site

is thus suitable for the construction of the Centre, although it may be necessary to carry out land levelling and adjustment to a certain limited extent.

3) Water Supply Facilities

Auki area is already covered by a water supply network, and a government-owned service pipe runs through the site. There is no need to construct a water tank because the Centre's water requirement can be met amply by this pipe and the Solomon government has already approved of this water supply plan.

4) Drainage Facilities

A side ditch with a width of 200 mm runs along the northern boundary of the site, but it is not fully lined. Rainwater, miscellaneous waste water, and waste water from the clarification tank must be drained from the Centre, but this is not considered to entail any problems because the site is close to the sea.

5) Power Supply Facilities

In Auki area, power is supplied from government-operated generators, and electric poles are constructed along the road in front of the site. As for power supply to the Centre, it was agreed that the Solomon government would install a leading wire connecting the nearest leading-in pole and the power board. Power from main line is supplied by four-wire system. It is supplied at 415 V, three phase, to motor circuit, and 240 V, single phase, to lamp circuit, at a frequency of 60 Hz for both. The existing electric pole in the site will be relocated by the Solomon government.

6) Construction Materials

At present, Solomon Islands resorts to the import from Australia for the supply of the greater part of construction materials. No large buildings are found in the country excepting the banks, hotels and government offices in Honiara city, the highest of them being a three-storied reinforced concrete building. Cement, reinforcing bars, steel frame materials, and finished materials are all imported. The following are the main materials that can be procured in Solomon Islands for the construction of the Centre.

(1) Timber

By reason of its building type, steel framed construction will be adopted for the greater part of the Centre and the use of timber will be limited to wooden frames of the five entrances and scantlings to be used with steel frames or for manufacture of forms. Hence, no difficulty will be encountered in procuring necessary wooden materials. A saw mill producing timber from logs is operated in Honiara, and a small saw mill is also found in the neighbourhood of Auki.

(2) Sand and Gravel

Since no large rivers are found in the country, sea sand, sea gravel and coral are used mostly in Solomon Island in the construction of roads and other structures. In the construction of a new road now in progress near Auki, sand and gravel collected from rivers and sea of Malaita Island are used. In the course of negotiation with the Solomon government, the team was requested to use locally available sand and gravel in the concrete foundation work of the Centre and coral sand in the construction of earth floor. The locally available aggregate, priced at about ₦1,000/m³, is not standardized as in Japan as it is a mixture of sand and gravel.

(3) Nails, Steel Wires, and Miscellaneous Materials

All these materials are imported from Australia and sold at stores in Honiara, but they seem to be rather costly. Since none of them are required in any large quantity, the team felt that it would be better to use Japanese products shipped with other materials. It was noted that plywood was imported from Southeast Asian countries.

7) Manpower Availability

The visit to the Technical Institute in Honiara produced the impression that the technical level of Solomon engineers in different fields is improving year after year by the repletion of similar vocational training institutes. Nevertheless, it is a fact that the absolute number of skilled workers in each job category is far short of demand, and their technical level is still rather low so that not much can be expected

of the accuracy of their workmanship. In addition, construction period is generally longer by 1.5 - 2 times times than in Japan. Unskilled workers can be recruited from among farmers and fishermen, but their working efficiency is considerably lower than can be expected of Japanese laborers.

The daily working hours is from 7:00 to 16:00 hrs, and one-hour noon recess is generally taken. For any work performed outside this time zone, allowances must be paid according to the established rates. Most employed workers work half a day on Saturdays, and take a complete day off on Sundays and holidays.

Wages are based on those of carpenters and labourers, and job classification is established for carpenters, plasterers, painters, welders, electricians, equipment operators, and heavy machinery operators. The following table shows the standard wages of these workers.

(Unit:A\$/day)

	1st Class	2nd Class	3rd Class
Carpenter	8 - 8	5	3
Plasterer	8 - 9	5	3
Welder	10	8	
Electrician	9 - 10	6 - 7	
Equipment operator	9 - 10	6 - 7	
Heavy machinery operator	15		

8) Transportation of Construction Materials and Machinery

The greater part of construction materials and machinery will be imported from Japan because locally available materials are extremely limited.

The pier at Auki is capable of accommodating vessels with a maximum tonnage of about 500 tons only. Accordingly, the materials and machinery carried from Japan by cargo vessels will have to be landed at Honiara and then transported to Auki by sea. A shipping company called "Coral Seas" will meet this demand as it has a

branch office in Auki and provides regular freight transport service once a week between Honiara and Auki at a rate of about ¥3,600 per m³. The cargo boat operating on this line has a tonnage of about 250 tons and is equipped with a 2-ton crane.

3. Final Discussion Meeting on Fisheries Training Centre

Following the preliminary arrangements and field survey, the final discussion meeting was held on June 8, at which the team presented a plan of the Centre prepared on the basis of the field survey, configuration of the construction site, and other conditions, and the Solomon government made the following requests.

- 1) Interchange of the location of office and that of toilet and lavatory to make it easier to keep watch on the working yard and the warehouse.
- 2) Installation of toilet and lavatory in two places by increasing the space of office.
- 3) Installation of a clarification tank to discharge waste water to the sea.
- 4) Construction of a catch basin to discharge rainwater and miscellaneous waste water to the sea.
- 5) Concrete pavement from the working yard entrance to the coast.
- 6) Construction of a concrete base in three places for installation of sawing machines.
- 7) Installation of lockers in the warehouse for storage of small tools and equipment
- 8) The Solomon government will perform the following works as part of the project implementation.
 - a. Demolishing and removal of the existing two buildings from the construction site.
 - b. Weeding and land grading along downward inclination with the road on the north taken at ± 0 .
 - c. Relocation of the existing electric pole from the site.
 - d. Power supply to the power board.

In the course of discussion, neither the Japanese team nor the Solomon officials raised any specific problems, and both parties reached a complete

mutual agreement on the implementation of the project on condition that the above eight items be accepted by the Japanese government. The attached drawing is the final plan approved by both parties.

4. Arrangements for Construction of Small Training Boats

It was originally planned that the discussion meeting on the construction of small training boats would be held to make detailed arrangements for 20 HP Yanmar engines for 25 boats. On account of the modification effected by the Solomon government to its initial plan, arrangements were made for construction materials and outfits of small boats in addition to the said engines.

The Solomon officials stated that the 25 engines were essential to the construction of 4 to 5 boats a year as envisaged by their plan, but expressed the hope to be supplied with construction materials even if the number of engines had to be reduced. Hence, the subject of discussion was changed to the supply of engines and construction materials for 15 boats.

As a consequence of this change, the problem of material quality was brought to the fore and opinions were exchanged between the two parties for selection between wooden boat and FRP boat, which eventually led to the conclusive and unanimous agreement that wooden boat would be more advantageous for reasons itemized below.

- 1) Satisfactory storage of fibre-reinforced plastics in Solomon Islands is difficult due to high atmospheric temperature humidity.
- 2) Compared with wooden boat, FRP boat calls for a higher level of shipbuilding technology and a greater complexity of construction process.
- 3) FRP boat costs higher than wooden boat.
- 4) In case of failure or repair, FRP boat presents various problems including the difficulty of transportation.

The Solomon officials presented design drawings and technical instruction manual of wooden boat, which will be used in the calculation of quantities and costs of its construction materials.

They also indicated engines and other necessary outfits and materials which are listed below.

- 1) Main engine (Yanmar 2QM-20 HP)
Stern accessories (FO service tank, bilge tank, cooling water pump, etc.)
- 2) Outside planking
Water-proof plywood, 12 mm thick
- 3) Epoxide resin
- 4) Paint
- 5) Echo sounder
- 6) Reel

2) Technical Cooperation for Coastal Fisheries Promotion Centre

Technical guidance in the operation of the Coastal Fisheries Promotion Centre will be provided by Japan Overseas Cooperation Volunteers.

Specifically, three volunteers will be dispatched to the Centre to offer technical assistance and guidance in the construction of small boats, in the introduction of improved fishing gear and fishing method, and in the maintenance and operation of marine engines.

(Construction of Small Boats)

It is planned that small fishing boats of laminated wood, each having a length of 8.7 m and a tonnage of 1.2 tons and equipped with an inboard engine, will be built by local workers under the technical guidance of JOCV members using the construction materials and outfits supplied by the Japanese government.

The life span of boats built with laminated wood is known to be short. It ranges from 1 to 2 years generally, which could be extended to 4 or 5 years if prudent care is taken of their maintenance and landing condition at night. Such extension of life span is possible if fish catch is landed by taking advantage of tidal range and the facilities for such landing are concentrated in a single place, but this will be difficult if the boats are to be built for operation in different areas. Furthermore, if collision with coral reef or damage on the bottom during landing operation causes a large crack in FRP, then the corrosion of laminated wood would proceed at a rapid pace by the same collision or damage.

It is therefore advisable to consider the use of laminated wood only as a transitional measure, and provide guidance services for improvement of shipwrights' technical level inclusive of their repair techniques which will be greatly needed in the post-transitional period. The technical guidance will have to be provided with constant attention given to the local availability of high quality wood to the validity of building catamaran or sailing ship from the viewpoints of climatic condition, oceanographic phenomena, and fishermen's economics, and to the possibility of protecting the bottom of laminated wood by building a box-shaped boat. (Fishing Gear and Fishing Method)

The same promotional approach should be made to fishing gear and fishing method. Specifically, if the guidance service is to be started with the

improvement of the conventional canoe fishing method, effort should be made to find new products which would directly lead to increased cash income of fishermen without forcing them to excessive labour or expenditure. Such products could include sardine or other suitable fish as live bait for bonito fishing in Solomon Sea, fishpound made of mangrove material, dried or smoked fish for Islamic markets, and fish for preservation in Miso for the Japanese market. Fishermen in Solomon Islands are said to make an annual income of only about 160 thousand yen. Unless they are convinced of increased income, they cannot be induced to afford the high cost of outboard engine priced at more than 200 thousand yen per unit or the expenses incurred by fuel and fishing net. If bait fish is the only catch, fishing operation by powered boat will only impose a huge financial burden on fishermen.

(Marine Engine)

Extension of simple repair techniques required in the daily maintenance service will have to be given the greatest importance in the volunteers' guidance services. At the outset of their assignment, they will be required to raise mechanics capable of repairing the outboard engines which are an important means of transportation for government offices, and will then be commissioned to the maintenance of 20 HP inboard engines of newly built boats. Guidance in the repair of automobiles will also be included in the scope of their activities.

Rearing of fisheries cooperative associations and fishermen's survey are also important tasks imposed on the three volunteers.

3) The estimation of preliminary costings are as follows;

Training vessels		1,000 yens
100 feet type	180,000	
80 feet type	140,000	
Fish carrier		
60 feet type	90,000	
* Center facilities (including power tools)	57,000	
Boat building materials	33,000	
25 sets		
Engines (Yanmar 20QM -- 20HP)		
Plywoods for hull		
Fitting materials		
Fishing gears (deep water reels with electric power, mechanical line hauler)		
Hand tools		
Total		500,000

*Cost breakdown & Centre facilities

Item No	Description	Quantity	Unit Price	Amount
	Building Work	1 lot		23,560,000
	Plumbing System	1 lot		2,300,000
	Electric System	1 lot		5,190,000
	General Temporary	1 lot		8,790,000
	Ocean Freight	1 lot		14,160,000
	Engineering Fee	1 lot		3,000,000
	Total			57,000,000

APPENDIX

1) MINUTES OF MEETINGS HELD WITH THE JAPANESE AID MISSION ON FISHERIES MATTERS

Friday 2nd June (Morning)

Present: Mr. K. Kawasaki - team leader
Mr. Y. Watanabe
Mr. M. Hirata
Mr. S. Omote
Mr. S. Kanai
Mr. I. Qoloni
Mr. H. Hawkins
Mr. R. James
Mr. D. Gibson

After introductions, a general discussion was held to finalise the teams' itinerary for the visit. A revised programme was drawn up and circulated to all members of the delegation.

Mr. Watanabe distributed blue prints of the two catcher training vessels and the refrigerated fish carrier. Mr. Hirata produced his drawings of the proposed Auki Fisheries Training Centre.

Afternoon Mr. K. Kawasaki
Mr. Y. Watanabe
Mr. S. Omote
Mr. D. Gibson
Mr. G. Plummer

Subject - Training Vessel

This meeting discussed in detail the line drawings and specifications of the 100 ft freezer skipjack vessels.

Mr. Plummer commented that he was not sure at this time if N. K. (Nippon Kaiji Kyokai) classification regarding ship construction would be acceptable to the Solomon Islands Government.

Mr. Plummer offered to cable Lloyds to find out if it is internationally

accepted qualification.

Safety equipment to be as laid down _____ in Solomon Island Marine Regulations.

A major point of concern was the headroom height in the after accommodation and the proposed layout of the bunks. This point to be raised further on Thursday when the Chief Marine Officer is in attendance.

Afternoon Mr. Hirata
 Mr. Kanai
 Mr. James
 Mr. Stone

Subject - Boatbuilding Complex

It was stressed that the building must be made to the standards as laid down in S. I. planning and building regulations. Exact details of which could not be discussed at the time due to the Building Officer's inability to attend the meeting. It was hoped that the Japanese representatives would be able to meet the Building Officer at a later date.

This was agreed to by the representatives and as Japanese building standards are high, and conditions similar to S.I., no problems were envisaged, even though they must work within a set budget.

It was agreed that the preliminary building design will need to be altered. It was suggested that the size of the warehouse be reduced and the workshop enlarged.

No firm decision is to be made until the building site has been inspected as to size, shape and foreshore condition.

Japanese stated that the building contract would be given to a Japanese company. Basic construction would be pre-fabricated in Japan and shipped to S. I. It is most probable that the job of site clearance foundation laying and building erection would be sub-contracted to a S. I. concern.

Electrical Supply

To Australian electrical standard. Japanese to be responsible for all of the buildings wirings, switches, power points etc. a S. I. Government to supply power lines to the building from nearest available source.

Lighting and most power points to be 240V single phase. It was agreed that a number of 2/3 phase points may be required for the heavy electrical machinery.

Facility Installations

A building materials list had been prepared by the representatives, general requirements being adequately met. i. e. plumbing, lavatories, drains, ventilation system etc. The following extra fixed equipment was suggested.

- i) One circular saw
- ii) One combination thicknesser/planer
- iii) One band saw

Fishing Vessel Specifications

The representatives were informed that wood construction would be more practical than G.R.P. for the following reasons.

- i) Storage of basic G.R.P. materials is difficult due to temperature and humidity conditions in S.I.
- ii) Difficulty in obtaining a high standard of finished G.R.P. product due to complexity of the process.
- iii) High cost of G.R.P. product in comparison to wood.
- iv) Building in G.R.P. may infringe the government contract given to a local company.
- v) Difficulty of carrying out G.R.P. repairs in remote areas.

The following specifications were then given to the representatives.

- i) Vessel design - To be built closely to design and method laid down in F.A.O. Fisheries Technical Paper No. 134 (FIIM/T134) entitled "Fishing Boat Designs: 2 (V Bottom Boats)".
- ii) Construction - Sheet Marine Ply on hardwood frames, bronze screw and bolt fastenings.
- iii) Engines - YANMAR inboard diesel engines of approximately 25hp, electric starting.

The representatives stated that their costings allow for the purchase of 25 engine units, and agreed that they would consist of the following.

- i) engine
- ii) gearbox
- iii) shaft

- iv) stern tube
- v) propeller
- vi) electrics
- vii) fittings

No allowance has been made for fishing equipment. The representatives were informed that the following equipment was considered vital.

- i) Echo sounding equipment - one per boat.
- ii) Deep water reels - 2 per boat.
- iii) Electrical power for reels - one bank of 24v batteries per boat in addition to engine starting batteries.
- iv) Small mechanical line hauler - one per boat.

The representatives were made aware of the necessity to comply with Marine Division boat building standards and vessels safety equipment.

Boat Building Equipment

A list of necessary tools and other boat building equipment was given to the representatives.

Saturday

A visit was made by the aid mission and fisheries staff to the boatyard of Mr. H. Green (Western Solomons Trading Co.) to inspect the vessel under construction for the Fisheries Division. This vessel is identical to the vessels proposed to be constructed at Auki.

Monday

Time of Meeting - 1,000 hours on June 5th, 1978.

Place of Meeting - Honiara Technical Institute.

Object

To show Japanese representatives the premises and facilities at H.T.I. To explain the college curriculum and to give details of course contents, with particular reference to training of marine personnel.

Present were:-

- A. Hatfield - College Principal
- J. Herd - Central Planning Office
- N. Stone - Fisheries Division
- 5 Japanese representatives.

Proceedings

Existing marine training course was explained and details of the proposed new (N. F. D.) training was outlined.

The representatives were made aware of the fact that all examinations are set by Marine Division and legislation is laid down for minimum course content and examination procedures.

The representatives were shown the facilities of the Institute and Ranadi T.S.

Monday afternoon.

<u>Present were;-</u>	Mr. Kawasaki	Mr. Kanai
	Mr. Watanake	Mr. Stone
	Mr. Hirata	Mr. Gibson
	Mr. Omote	

General discussions on all projects were held and briefing prior to outer island trips.

Tuesday (all day)

The Japanese delegation accompanied by Messrs. Qoloni, Gibson and Stone visited Auki to inspect the proposed site of the boatbuilding complex. The party was met by Mr. D. Cook, Clerk to Malaita Council. At the site it was apparent that the design submitted by Mr. Hirata would not fit the land area allocated by the Council. This necessitated the building being redesigned with the workshop being end on to the beach and the warehouse/office attached to the inland end forming an L shape.

All parties agreed that this would be acceptable.

Wednesday (all day)

Mr. Kawasaki
Mr. Watanake

ew

The above party visited Tulagi to view the slipway facilities at the Government Dockyard. The party also visited Sasape Marina (National Fisheries Development) and the Solomon Taiyo fish cannery and freezer complex. The party returned to Honiara at 1600 hours.

Mr. Kanai
Mr. Hirata
Mr. Omote

Mr. Pitikaka

Mr. Gibson

This party visited the small boat fisheries site at Gizo in the Western District. On the flight to Gizo the aircraft flew low over Morova Lagoon, the area where the refrigerated fish carrier will be operating.

At Gizo the party inspected the Fisheries Complex and one of the vessels discharging its catch of 250 kgs. of reef fish.

Thursday morning.

<u>Present were:-</u>	Mr. D.H. Gibson	Mr. Kawasaki
	Mr. N. Stone	Mr. Y. Watanabe
	Mr. T. H. Turner	Mr. M. Hirata
	Mr. R. Irvin	Mr. S. Omoto
	Mr. S. Evans	Mr. S. Kanai
	Mr. H. Hawkins	

Proceedings

Specifications for the training pole and line vessels and the fish carrying vessels were discussed. Mr. R. Irvin asked that the vessels meet S. I. marine standards regulations and that a clause be added to the final agreement to this effect.

It was agreed that Japanese standards of shipbuilding would adequately cover the requirements and that only minor plan alterations were necessary.

The major alteration concerned the standards of crew accommodation, minimum head room, ventilation and lighting. It was agreed by the Japanese representatives that all final vessel specifications would meet with the S. I. legal requirements. It was agreed that the rules as laid down by the International Load Line Convention regarding free board would be acceptable for the 100 feet vessel and Japanese safety regulations for the other two vessels.

The proposed refrigeration equipment for the fish-carrying vessel was discussed and the Japanese representatives stated that it would be of a capacity to fulfil work requirements.

It was decided that the vessels cargo space should be altered from two compartments to a three compartment hold.

Meeting adjourned at 1130 hours.

Thursday afternoon

A revised plan of the proposed boat-building and training complex was produced.

The general layout of the building was agreed to be satisfactory.

It was agreed that items of heavy electrical machinery (circular saw, bandsaw, and planer) would be included with the building and also hand tools as listed in F.A.O. publication.

The need for extra fishing equipment was again raised and the representatives were informed that all fishing equipment, boat-building materials and echo sounders would be required from Japan, with the exception of heavy boat timbers (keel, frames, etc.) which were available locally.

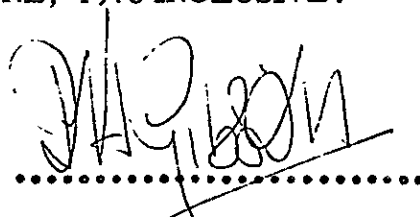
The representatives stated that provision had been made for the supply of the engines only and suggested that the number of engines be reduced to provide funds for extra materials and fittings.

This suggestion was accepted as the only solution. H. Hawkins, however, stated that as many vessels as possible were needed so as to give a balance between the aid given to both commercial and artisinal sections of the fishing industry.

WE, THE UNDERSIGNED, CERTIFY THESE MINUTES AS A TRUE AND CORRECT RECORD OF MEETINGS BETWEEN MEMBERS OF THE JAPANESE AID MISSION AND SOLOMON ISLANDS GOVERNMENT REPRESENTATIVES, HELD FROM 2ND JUNE, 1978 TO 8TH JUNE, 1978 INCLUSIVE.



K. Kawasaki
(Mission Leader)



D. H. Gibson
(On behalf of Solomon
Islands Government)

2) Team Member

Team Leader Kimio Kawasaki
Deputy Director, International Cooperation Divi.
Oceanic Fishery Department, Fishery Agency.

Member (Fishing Boad) Yoshitusna Watanabe
Fishing Boat Divi. Oceanic Fishery Department
Fishery Agency.

Member (Archtect) Mitsuo Hirata
Universal Marine Consultant

Member (Technical Cooperation) Shinichiro Omote
Japan Overseas Cooperation Volunteers

Member (Coordinator) Seiichi Kanai
Japan International Cooperation Agency

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