

Technical Assistance to The Porpoise Predation
Project. By Eric Shiota, HCC - MOP April 1983.

PROJECT DESCRIPTION

My work involvement at the Kewalo Research Facility included the giving of my time and technical assistance to the porpoise predation control project, the skipjack tuna spawn project, and the facility in general.

The major project, to date, was a research office which would also double as sleeping quarters for the scientists on watch with an observation platform topside. I felt that this would be an excellent opportunity to apply my architectural drafting skills learned at H.C.C. towards the project.

Plans for the structure were done in consultation with Dr. A. Dizon and R. Chang. Cost was to be kept at a minimum. Material take-off was made (see enclosed copy), and materials were ordered and delivered. Treated lumber was used in an attempt to contend with the termite problem and humid environment. U.B.C. (Uniform Building Code) standards were applied to the best of my knowledge. Setbacks from boundaries were not followed due to the fact that the structure was built on government property and considered portable.

With my carpentry skills and the help of my fellow workers, the structure was completed in about two and a half months on a part-time basis, approximately 160 manhours of my time.

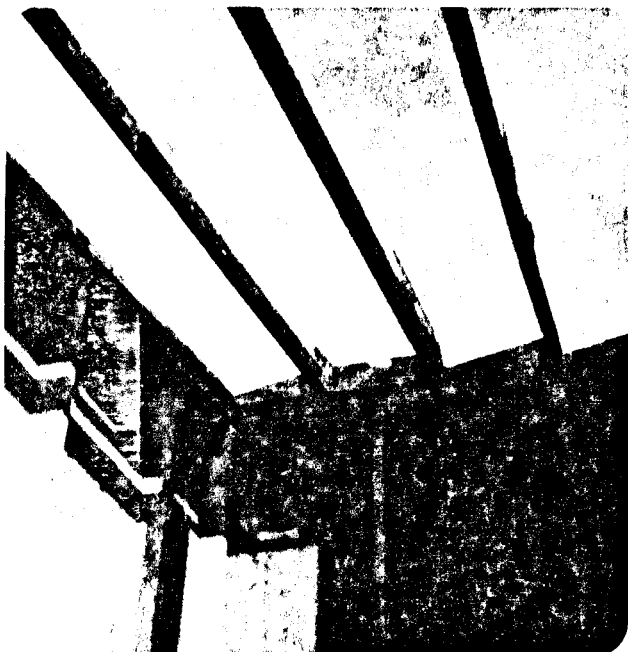
As far as the predation control project was concerned, the office structure and observation platform proved to be adequate; very well designed and constructed. (See enclosed photos). The structure was used as a research lab and doubled as sleeping quarters at night.

This was when the porpoise, which had just been captured, was in its initial transition stages from the wild and had to be babysat around the clock. The porpoise, named "Kuuipo", would not take food for several weeks and had to be force fed in order to insure her survival. Because of the feeding problem and a severe infection, the experiment was hampered and eventually the project had to be scrapped because of restricted funding and timesharing of the tank at Kewalo. Thus, "Kuuipo" was moved to Ocean Institute where it was learned that all that was wrong was that she was really lonesome; upon being put in a tank with some of her own kind, she immediately started feeding on her own. Thus the porpoise was given to Ocean Institute, where she now resides for further training and experimentation.

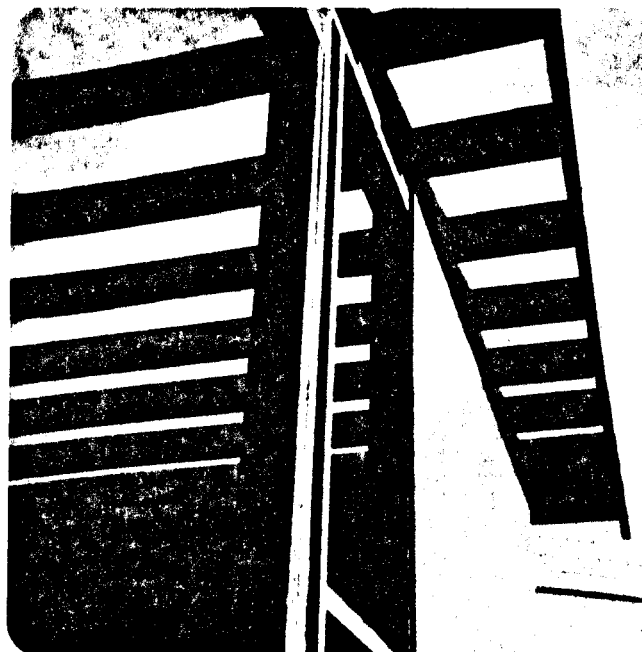
The project that followed the construction of the research office involved the splash tower; a tower that provides oxygenated water to the holding tanks. Said tower was esthetically unpleasant and in dire need of a coat of paint to improve its appearance and to protect it from the marine environment. The original lead base enamel paint was badly peeling due to the salt air and humid environment. Also, the structural members showed signs of surface deterioration. Since a coat of paint would only be as sound as the surface upon which it is put, I decided to use a coat of solid-body stain that would penetrate deeply into the wood and act as a waterproofing and protecting agent; one that would breathe with the high humidity. There was also much bare wood and new redwood paneling that would accept the stain much more readily. I felt that stain would be a more permanent type of coating for that type of environment. I chose leather brown, being that it is more of an earth tone and more in keeping with the color scheme of most of the surrounding area and buildings.

Following the splash tower, lab facilities were desperately needed for support of the tuna spawn project. Plans for renovation of an abandoned existing machine shop were done in consultation with the project scientist. An enclosed lab and work area that could be both temperature and light controlled was needed. With a limited budget, a mezzanine was erected under which two labs were created by interior partitioning. An office and reception area was also added. With the help of fellow workers and research assistants, the lab was fully functional within two months. Insulation was added to help with temperature control of the lab. Both tuna and mahimahi have been successfully spawned, but beyond the 90-day period only the mahimahi have survived. It was learned that in the larval stages, baby skipjack tuna go through three critical stages; one of which is that stage when the egg or yolk sac is consumed and the fry must depend on outside sources of food for survival. If conditions aren't right, the tuna can't survive. A combination of light, temperature, salinity, and food source and supply in the right proportions seems to be the deciding factor in tuna spawn survival. Up to this point in time, they have been raised to fingerling size about 3 to 4 inches long, which in the scientific world is a terrific success. The project is still in its infancy. It can take many side avenues from here; such as tuna fingerlings for restocking, a cultured 40 lb. adult raised in captivity, or a study on metabolism. The possibilities are infinite.

In closing, I would like to note that technical support of a research facility is high priority and invaluable when it comes to project support and maintenance.

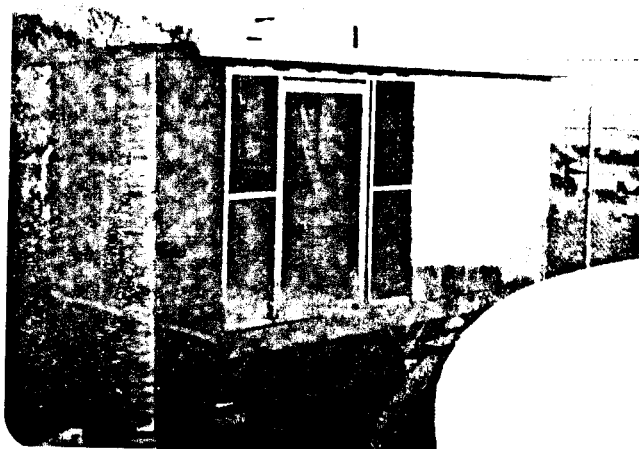


Interior view showing open
stud wall and roof framing

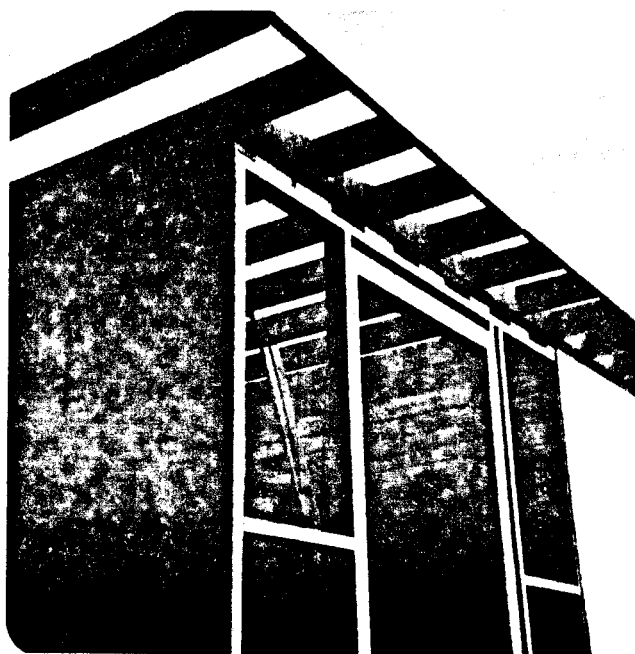


Roof framing- ceiling joists
sized for use as upper level
observation platform

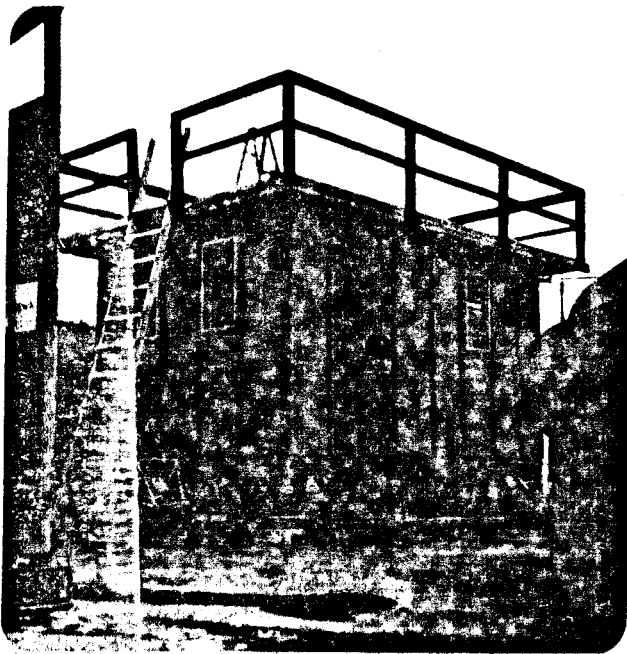
INITIAL CONSTRUCTION PHASE



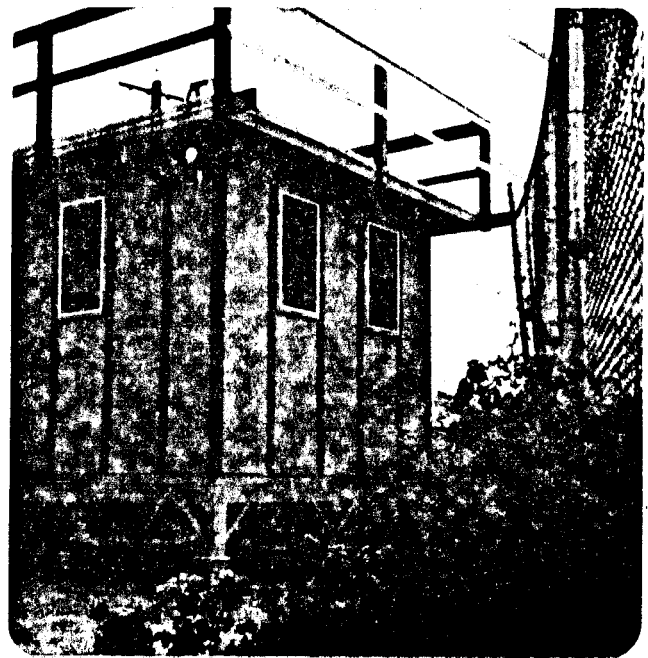
Exterior view showing paneling
and footing stone foundation



Front view showing doubled
top plate and rough framed
opening for door

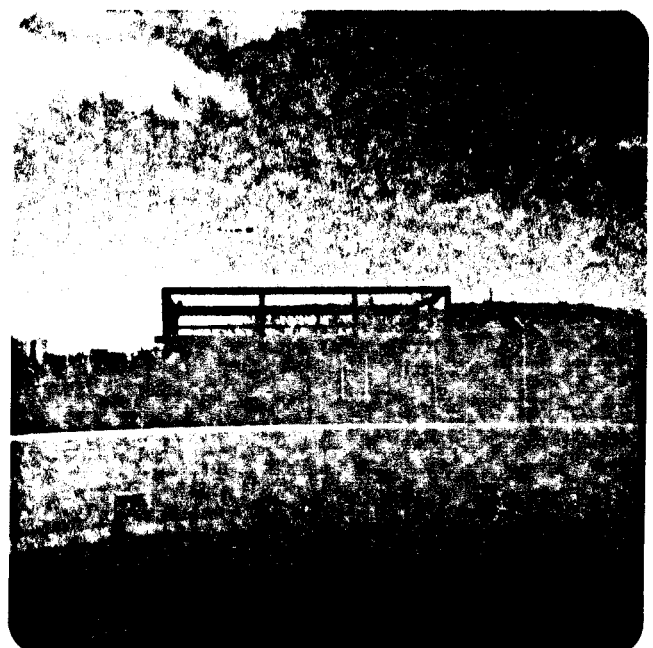
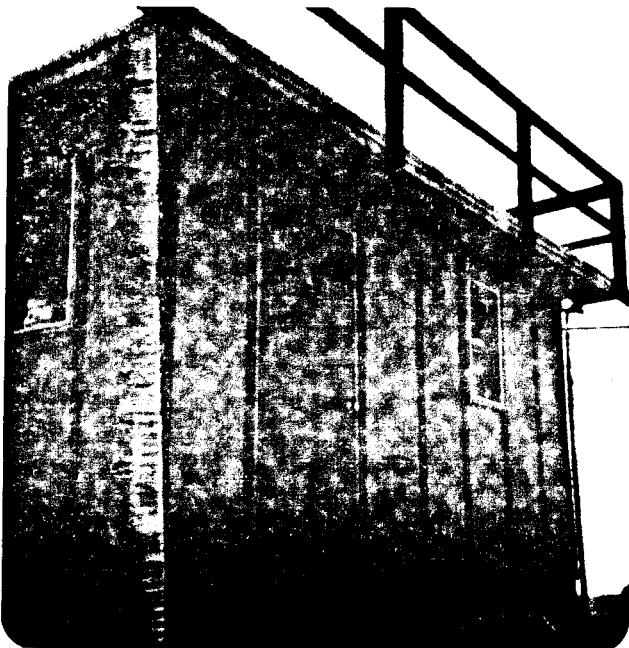


Right Side

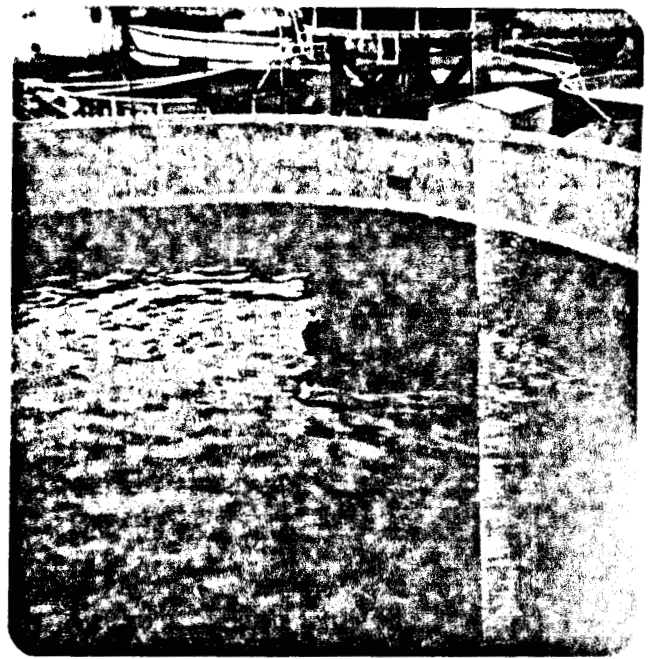
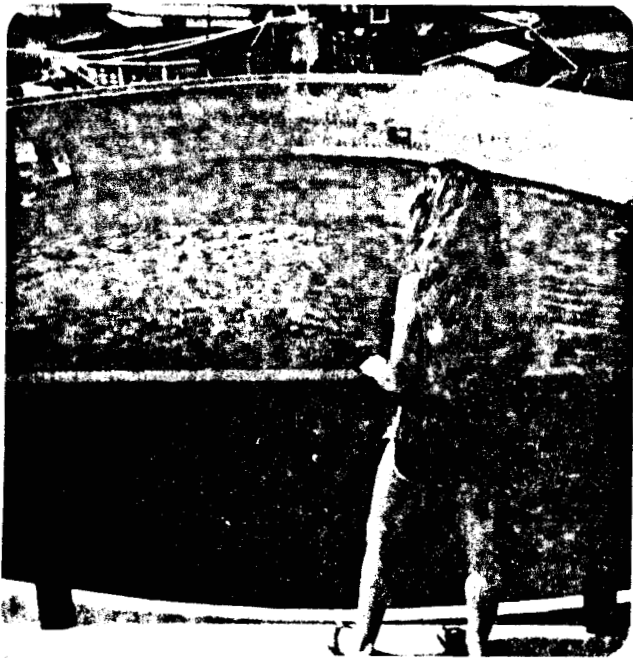


Left Side

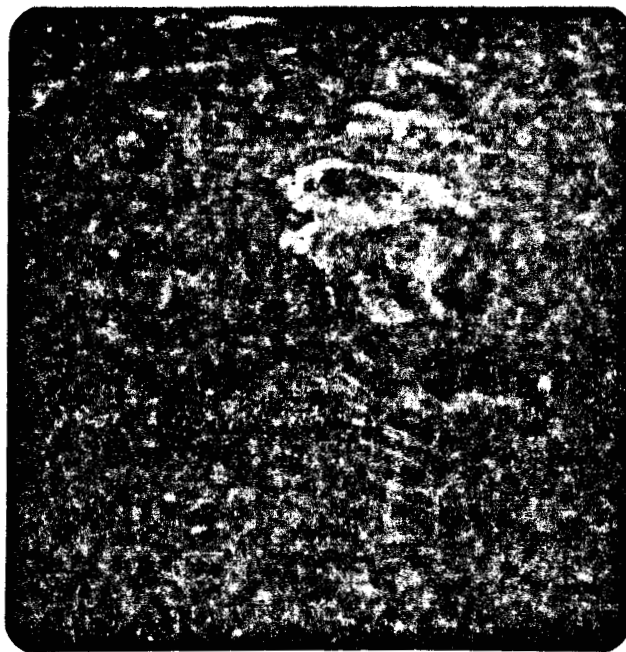
EXTERIOR VIEWS



Front Views



VIEWS FROM OBSERVATION PLATFORM

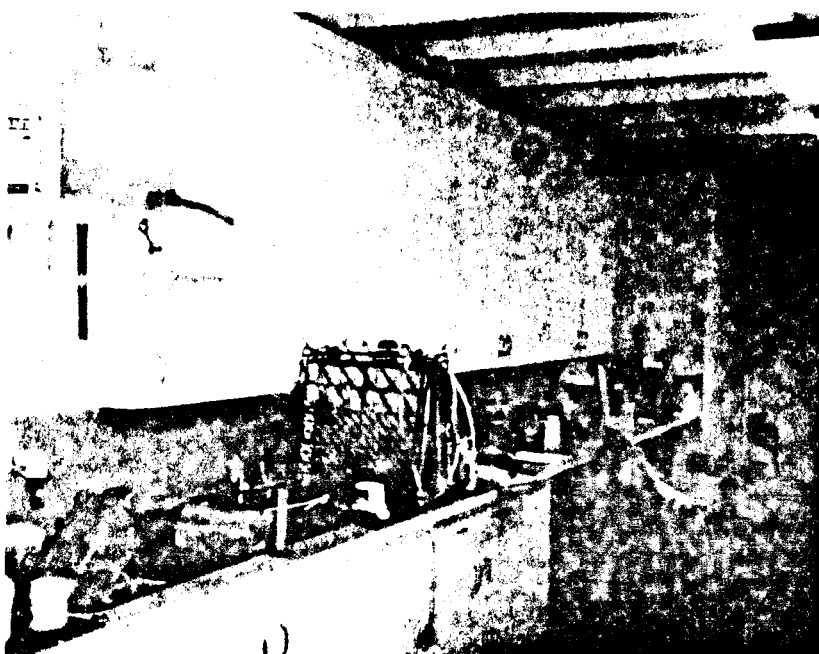


"Kuuiipo" the porpoise



Exterior view of lab showing new corrugated fiberglass panelled partition enclosing outside work area

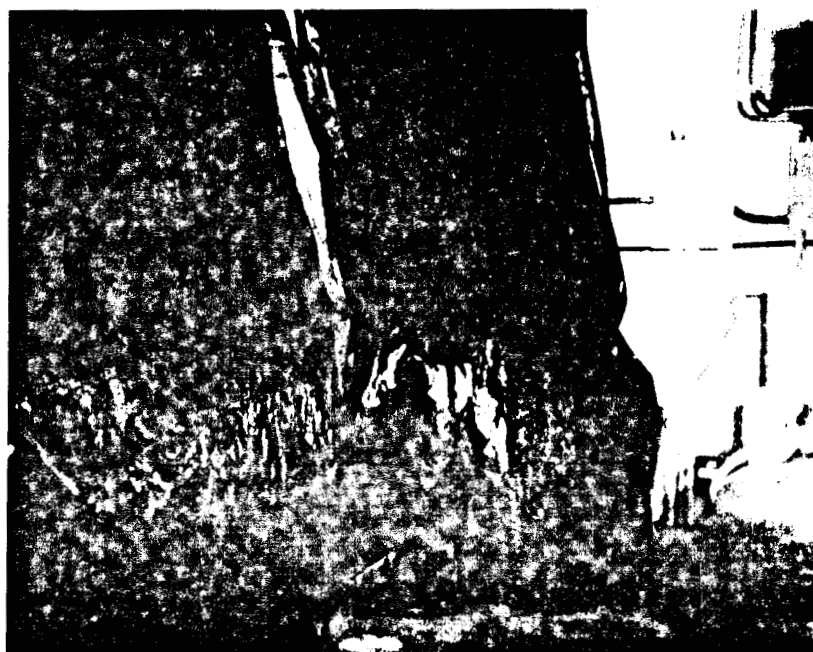
LAB RENOVATION



Interior view of lab, showing partial new mezzanine floor joists from beneath, sink counter and work area.



Interior view showing rotifer culture tanks against new wall partition enclosing spawn hatching tanks.



Interior view of hatching room showing hooded spawn tanks, under controlled light & temperature conditions.

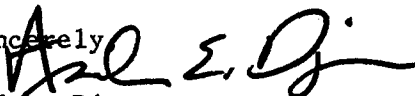


U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center
Honolulu Laboratory
P. O. Box 3830
Honolulu, Hawaii 96812

Dear Dr. Gopalarishnan,

I have read Eric Shito's report and it is an accurate description of the work performed for us. I would like to add that the work, in fact all of Eric's work, is performed to very high standards. We are quite fortunate to have his services. I only hope that the tasks performed for us are of value to his continuing education.

Sincerely


Andrew Dizon
Fishery Biologist

January 21, 1981

Dear Dr. Gopalakrishnan,

Thank you for the opportunity to detail my involvement with the Kewalo Basin Marine Mammal Facility in connection with the Ocean Special Studies course during the Fall 1980 Semester.

In September, I inquired at the Kewalo Facility and was informed of the Dolphin Predation Control by Aversion Conditioning Program. Hawaiian commercial fishermen have become increasingly concerned with the loss of bait and catches to dolphins. The problem has developed to the point where it is adversely affecting the economics of Hawaiian fishing.

Different approaches have been made in an attempt to control the problem including underwater distress signals and wire rigged baits thought to interfere with dolphin sonar. These techniques may have temporarily deterred the dolphins but have not eliminated the problem. Since any solution to this problem must conform to the Marine Mammal Act, which protects all marine mammals, it was suggested that the predation of bait and catch lost by dolphins could be diminished by a learned taste aversion and, consequently, resulted in the adoption of the project.

The Kewalo Facility included an existing marine mammal tank, but lacked adequate support facilities. Construction of a small building to house research offices with sleeping quarters and an observation deck was deemed necessary. As I have had both carpentry and architectural training, I volunteered my services.

Necessary appropriations were obtained and construction of the building under my direction and supervision commenced in October. Completion was delayed until January, due to my illness.

Attached are plans, progress photos, and pertinent information regarding the above mentioned project and satellite projects.

Thank you for your time and kind consideration.

Yours sincerely,



Eric A. Shiota

Eric A. Shiota
354 Paliku Street
Honolulu, Hawaii 96825
Phone: (808)395-3529

Personal Data

Born in Honolulu, HI - May 25, 1951
Single; in good health.

Education

Honolulu Community College, Honolulu, HI
Architectural Drafting Technology major
Graduated with honors
A.S. Degree - May 14, 1982

Work Experience

10/82 Hawaiian Dredging and Construction Company
Power and Industrial Construction Division
Honolulu, HI

Project Engineering Technician, Mechanical

7/82 Master Plumbers, Inc.
Honolulu, HI

Design Engineer

10/79 Ferris & Hamig, Inc., Consulting Engineers
Honolulu, HI

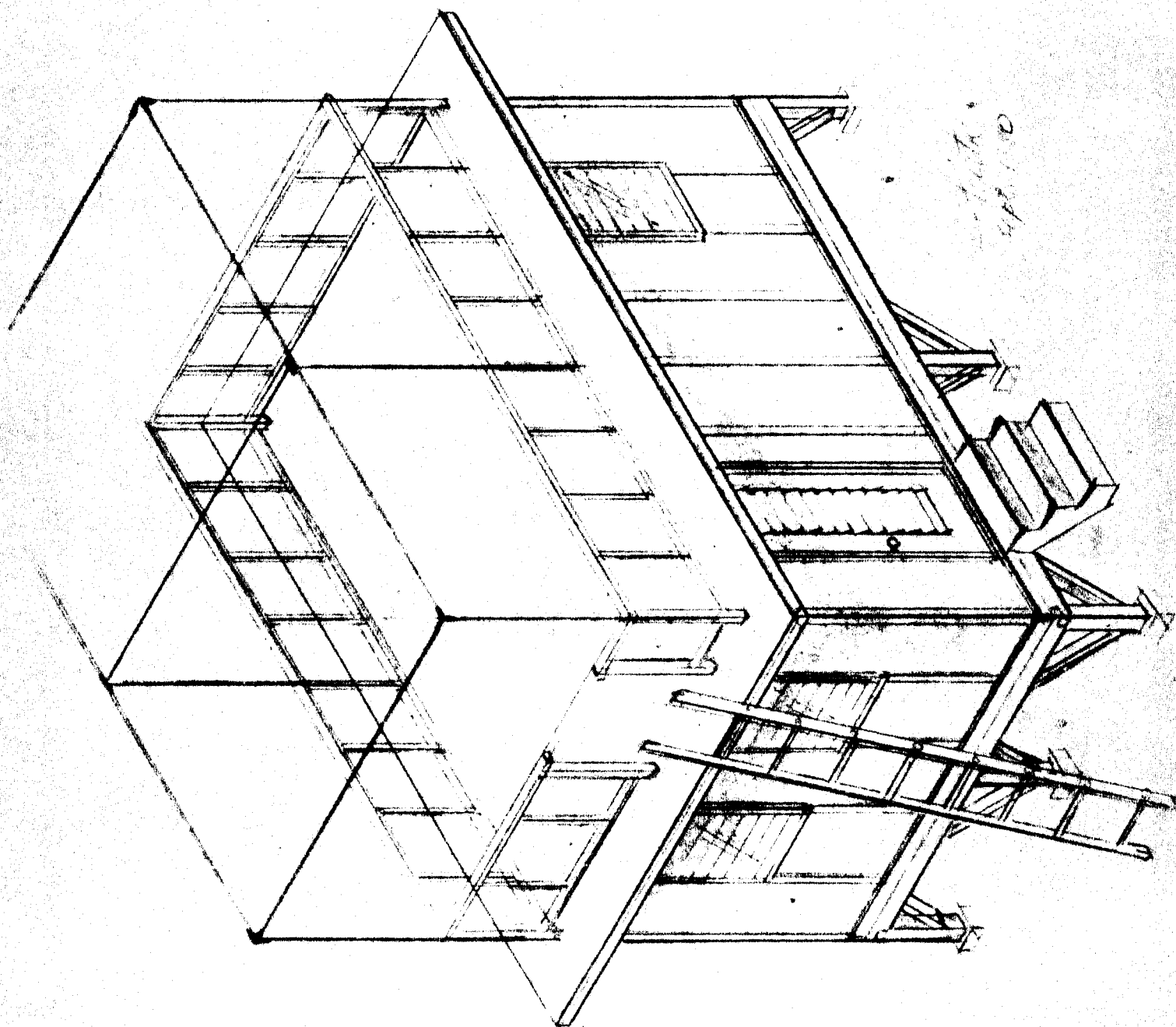
Mechanical Draftsman

11/73 HC & D Concrete Engineering Department
Honolulu, HI

Carpenter

Related Interests

Aquaculture, Marine Studies, Commercial Fishing,
Marine Piping Design



4th floor

FORM CD-45
(REV. 3-76)

U. S. DEPARTMENT OF COMMERCE

2.

CHECK APPROPRIATE BLOCK

SUPPLY, EQUIPMENT OR SERVICE ORDER

☐ PROCUREMENT☐ OTHER (Specify)

FOR: National Marine Fisheries Service

1. THE NUMBER SHOWN IN BLOCK 5 MUST APPEAR ON ALL SHIPMENTS AND/OR DOCUMENTS RELATING TO THIS ORDER ↓

3. REQUISITIONER DOCUMENT NO.

4. BUREAU CONTROL NO.

5. PURCHASE ORDER NO.

30-JJA-00388

6. ISSUED TO:

Mr. Eric Shiota
354 Paliku Street
Honolulu, Hawaii 96825

7. DESTINATION

S
H
I
P
T
ONational Marine Fisheries Service
P.O. Box 3830
Honolulu, Hawaii 96812

8. ACCOUNTING CODE

PT2000/88A3HH01/2517

9. QUOTATION REF. OR CONTRACT NO.

open market

10. DISCOUNT TERMS

11. DELIVERY
F.O.B.

12. GOVT. B/L NO.

13. DELIVERY DATE

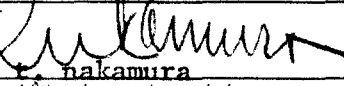
14. FUNDS AVAILABLE (Budget Office)

14a. STATION

ITEM NUMBER		17. DESCRIPTION	18. QUANTITY	19. UNIT	20. ESTIMATED TOTAL COST	21. ACTUAL	
15. LINE NO.	16. DO NOT USE					UNIT PRICE	TOTAL COST
		Labor to construct 10' x 16' detached office structure at Kewalo Basin facility. Please note attached plan. Note: Supplier is a qualified non-union carpenter. A carpenter's strike in Honolulu makes customary procedure of obtaining estimates unworkable at this time. CONFIRMATION. SUPPLIER HAS BEEN CONTACTED.	1	JOB			\$2000.00

29. PURCHASING AGENT

DATE


 T. Nakamura

9/19/80

30. RECEIPT ACTION - Quantities shown in Column 18 above have been received and accepted, except as follows: (If additional space is needed, use reverse side.)

31. SIGNATURE-RECEIVING OFFICER

DATE

32. PROPERTY CONTROL NO.

☐ TRADE-IN☐ RECEIVING REPORT33. SEND INVOICES
IN DUPLICATE
TO: →

MEMO REQUEST FOR
SUPPLIES, EQUIPMENT AND/OR SERVICEDATE OF REQUEST
September 10, 1980

DELIVERY DATE

DESIRED

REQUIRED

REQUESTING OFFICE

National Marine Fisheries Service
P. O. Box 3830
Honolulu, Hawaii 96812

DELIVER TO:

Kewalo Research Facility
National Marine Fisheries Service

ATTN: A. Dizon, R. Chang,

Ph 533-4118

NAME

STREET

CITY, STATE, ZIP

PHONE NUMBER

PRICE QUOTED BY

COPY OF ORDER TO:

JOB NO.

EST. SHIPPING WT.

USE SHIPPING STAMP YES ☐ NO ☐USE TAX STAMP YES ☐ NO ☐

ACCOUNTING CODES

GOVERNMENT CONTRACT NO.

DISCOUNT TERMS

FOB POINT

DELIVERY DATE

ITEM NO.	DESCRIPTION	QUAN- TITY	UNIT	UNIT PRICE	AMOUNT
1.	Roofing paper				
	90-lb mineral roll	120	ft		
	30-60 feet sealant/tar	120	ft		
2.	Lumber				
	Plywood A/C exterior, wolmanized				
	4 x 8 x 3/4 subflooring T&G under layment	22	ea.		
	4 x 8 x 3/8 can be masonite	17	"		
	Construction grade, wolmanized				
	2 x 4 x 16	19	"		
	2 x 4 x 10	26	"		
	2 x 4 x 8 Can be stand. common stud length	36	"		
	2 x 6 x 14	21	"		
	2 x 6 x 16	2	"		
		ESTIMATED TOTAL COST			\$

JUSTIFICATION

THE APPROVING OFFICER CERTIFIES THAT FUNDS ARE AVAILABLE TO COVER THE ESTIMATED TOTAL COST.

REQUISITIONER

APPROVAL

NAME	DATE	NAME	DATE	NAME	DATE
------	------	------	------	------	------

SUPERSEDES NOAA FORM 36-17 (11-73) WHICH MAY BE USED.

No.	Description	Quantity	Unit	Unit price	Amount
	Construction grade, wolmanized--continued				
	1 x 8 x 10	4	ea.		
	4 x 6 x 16 Must be straight (sill)	5	"		
	4 x 4 x 8	1	"		
	Railing/Ladder				
	4 x 4 x 16	2	"		
	2 x 4 x 16	4	"		
	2 x 4 x 10	4	"		
	2 x 3 x 6	14	" "		
	2 x 4 x 14	2	"		
	Windows, pre-hung, with screens				
	Jalousie, surround type (obscure glass), opening 3 ft high x 2 ft wide	7	"		
	<u>versus</u>				
	Standard hardware (above preferred)				
	Door, pre-hung, right hinged, opens out, louvered type, 6'8" x 32-36"	1	"		
	Nail				
	Common, No. 16	20	lb		
	10	10	"		
	8	15	"		
	6	10	"		
	Roof nails, 5/8 in.	8	"		
	Termite pans	8	each		
	Concrete footing blocks, 4 x 7 x 7 in.	8	"		
	Paint, exterior, acrylic latex	4	gal.		
	Pads (or rollers)	3	each		
	Paint brushes	3	"		
	Pans	3	"		

<u>Item No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit price</u>	<u>Amount</u>
13	Primer (if using paint)	4	gal.		
14.	STain, brown or white	4	"		

EIVING

READY



MIDPAC LUMBER
HONOLULU, HI. 96806

TELEPHONE: 535-9111

National Marine

Fisheries Service

Party clary pl-533-4110

81-JJA 00197

CUSTOMER NO:

JOB NO.

WILL
☐ CALL
☐

DELIVER TO: *1125 B Ala moana Blvd.*

JOB

ORDER DATE
3/27/81

TAX
— %

SALESMAN
6E

DELIVERY TAG NO.
168110

DELIVERY PAGE
1 OF *3*

CREDIT APPROVAL

ISSUED TO
OUT IN

DEPT. MGR. APPROVAL

COMMENTS

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7 8 9 10 11 12 13

SHIP VIA

COLLECT ☐

PREPAID \$
TAG NO.

DELIVER ON
4/1 AM PM

WILL
☐ CALL
☐

QUANTITY ORDERED	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT	DEPT.	PRODUCT	STOCK NUMBER	A
1	Pc	2x4x8 Con DF S&B <i>Qm</i>	<i>546</i>	<i>2 73</i>				
24	Pcs	2x4x10	<i>100</i>	<i>87</i>				
50	Pcs	2x4x12	<i>400</i>	<i>218</i>				
1	Pc	2x4x14	<i>9</i>	<i>4 92</i>				
3	Pcs	2x4x16	<i>30</i>	<i>18 97</i>				
1	Pc	2x4x20	<i>13</i>	<i>7 71</i>				
2	Pcs	2x3x20	<i>20</i>	<i>10 55</i>				

AG NO.	REQUIRED DATE	CHECKED BY	PKG./CTN.	HELPER	DRIVER	DELIVERY DATE	LEFT MATERIALS/LICENSE NUMBER
TAG NO.	REQUIRED DATE	LOCATION	SAG/SOLE				
ORDER	REF INVOICE	SETUP NO.	CRT/SKIP				
SUB TOTAL				351			
TAX				—			
TOTAL AMOUNT				351			

FORM 34

Subject to approval and handling charges must be made within 30 days after delivery and must be accompanied by a copy of this tag. THIS SALE IS SUBJECT TO PURCHASER'S CREDIT AGREEMENT ON FILE WITH MIDPAC LUMBER CO., LTD.

6 PART FORM PRESS HARD WHEN WRITING 168110

TEIVING

EADY



MIDPAC (M) LUMBER

P. O. BOX 1311
HONOLULU, HI. 96806

THE

ORDER DATE

3/27/81

TAX

— % 66

DELIVERY TAG NO. 168112

DELIVERY PAGE 2 OF 3

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HAVE READY	AM	☐
BY	PM	
		☐

District *Alameda*

DELIVER ON 4/1 AM PM

SHIP VIA ☐ AIR ☒ COLLECT ☐

PREPAID ☐ TAG NO. _____

CREDIT APPROVAL	ISSUED TO	
	OUT	IN
DEPT. MGR APPROVAL	COMMENTS	

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7	8	9	10	11	12	13

SHIP VIA ☐ COLLECT ☐

PREPAID ☐ TAG NO. _____ \$ _____

QUANTITY ORDERED	QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT	DEPT.	PRODUCT	STOCK NUMBER	A
19	3/4	4x8x 1/4 AC X DF PLY	15	293	55			
25	3/4	4x8x 3/4	30	750	75			
2	3/4	3/4 x 7/8 - 1 3/4 HC Maly	40	80	38			

TAG NO.	REQUIRED DATE	CHECKED BY	PKG./CTN.	HELPER	DRIVER	ABOVE QUANTITY VERIFIED AND THE MERCHANDISE RECEIVED IN GOOD CONDITION X LEFT MATERIALS/LICENSE NUMBER	SUB-TOTAL TAX TOTAL	68 1124 68	ACCOUNTING OFFICE USE ONLY
TAG NO.	REQUIRED DATE	LOCATION	SAG/BDLE	DELIVERY DATE					
ORDER	REF. INVOICE	SETUP NO.	CST/SKIP						
Subject to approval and a handling charge, must be made within 30 days after delivery and must be accompanied by a copy of this tag This sale is SUBJECT TO PURCHASER'S CREDIT AGREEMENT ON FILE WITH MIDPAC LUMBER CO. LTD.							TOTAL AMOUNT	FORM 34	

subject to approval and a handling charge must be made within 30 days after delivery and must be accompanied by a copy of this tag.

15 MACOS

ISSUED TO
OUT IN
COMMENTS

CREDIT APPROVAL
DEPT. MGR APPROVAL

DELIVERY PAGE 3 OF 3
LOAD NO.
OF

DELIVERY TAG NO. 1681113
TAX % 6E

ORDER DATE 3/27/81
SALESMAN
% 6E

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7 8 9 10 11 12 13

HAVE READY AM PM
BY
WILL NOTIFY DELIVERY

DELIVER ON 4/1 AM PM

WILL CALL

SHIP VIA
PREPAID
TAG NO.

SHIP VIA
PREPAID
TAG NO.

DELIVER ON 4/1 AM PM

WILL CALL

WILL CALL

WILL CALL

QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	AMOUNT	DEPT.	PRODUCT	STOCK NUMBER	A
5	CPs	60 Com Galn. Trail	101	505				
5	CPs	80	96	480				
5	CPs	100	97	485				
5	CPs	160	93	465				

ACCOUNTING OFFICE USE ONLY

SUB-TOTAL 1930
TAX
TOTAL AMOUNT 1930

ABOVE QUANTITY VERIFIED AND THE MERCHANDISE RECEIVED IN GOOD CONDITION

LEFT MATERIALS/LICENSE NUMBER

DELIVERY DATE

ORDER NO. REQUIRED DATE LOCATION BAG/BDLE SET/NO. SET/SKIP

REF INVOICE

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