

UNSKILLED LABOR

Class 1—\$9.50 per hour.
Shovelers
Material Handlers
Water Key

SEMI-SKILLED LABOR

Class 2—\$10.65 per hour.
Carpenter Helpers
Class 3—\$10.75 per hour.
Truck Drivers
Jackhammer men
Powder men

SKILLED LABOR

Class 4—\$11.00 per hour.
Carpenters
Concrete Finishers
Class 5—\$11.50 per hour.
General Foreman

ARMY PEARL HARBOR BOARD EXHIBIT No. 4J

Summary
CBR/dw

WAR DEPARTMENT,
UNITED STATES ENGINEER OFFICE,
Honolulu, T. H., March 18, 1941.

Contract No. W-414-eng-602

Diamond Head, Oahu, T. H.

Job Order No. 15.0.

Construct—reinforced concrete fire control station, together with necessary access trail.

Est. Cost: \$5,785.00.

Commencement Date: March 22, 1941.

Est. Date for Completion: April 22, 1941.

Supervision by J. J. Kestley, Area Engr., 3rd Field Area.

WAR DEPARTMENT,
UNITED STATES ENGINEER OFFICE,
Honolulu, T. H., March 18, 1941.

JOB ORDER NO. 15.0.

Contract No. W-414-eng-602.

To: Hawaiian Constructors, Honolulu, T. H.

You are hereby directed to proceed with the following work:

1. PROJECT TITLE: Fire Control Station at Diamond Head.
2. LOCATION: Honolulu, T. H.
3. OFFICE FILE REFERENCE: 2013.3.
4. WORK TO BE DONE: Construct and complete reinforced concrete fire control station, together with necessary access trail.
5. WORK REQUESTED BY: Commanding General—Hawaiian Department.
6. DRAWINGS AND REFERENCES: See paragraph 1-04 of Specifications.
7. APPROPRIATION CHARGEABLE: CAC 131 p99 A-1210-N.
8. ESTIMATED COST: \$5,785.00.
9. COMMENCEMENT DATE: March 22, 1941.
10. ESTIMATED DATE FOR COMPLETION: April 22, 1941.
11. ESTIMATED LABOR AT SITE: 2,910 man hours.
12. PLANT REQUIRED: See detailed estimate attached.
13. MATERIALS: See detailed estimate attached.
14. SUPERVISION BY: J. J. KESTLEY, Area Engineer, Third Field Area.

(Signed) Theodore Wyman, Jr.,
THEODORE WYMAN, Jr.,
Lt. Col., Corps of Engineers,
District Engineer.

Approved: April 3, 1941.

(Signed) Warren T. Hannum,
WARREN T. HANNUM,
Colonel, Corps of Engineers,
Division Engineer

ESTIMATE OF COST

To Accompany Job Order No. 15.0.

Contract No. W-414-eng-602

ESTIMATE OF COST: Fire Control Station Diamond Head.
DISTRICT: Honolulu District, Honolulu, T. H.

The work to be done is at Diamond Head, on the Island of Oahu, and includes the furnishing of all necessary labor, materials, equipment and supplies, and the performing of all work necessary to construct a reinforced concrete fire control station, complete with all utilities and fixtures, together with the construction of an access trail. All of the work to be done shall conform to the provisions of Specifications, "The Construction of a Fire Control Station at Diamond Head and Appurtenant Work to Accompany Job Order No. 15.0 to Contract No. W-414-eng-602," and the details shown on the drawings enumerated in paragraph 1-03 of the Specifications. The estimated cost of the work to be done is as follows:

1. *Materials to be purchased:*

Item	Designation	Quantity	Unit	Unit prices	Amount
1	Reinforcing steel.....	3,340	lbs.....	\$0.045	\$150.30
2	Cement.....	45	bbls.....	3.04	136.80
3	Fine Aggregate.....	20	cu. yd.....	2.70	54.00
4	Coarse Aggregate.....	21	cu. yd.....	3.00	63.00
5	Structural Steel.....	1,648	lbs.....	0.10	164.80
6	3/4" Ø x 8" Anchor bolts.....	8	pcs.....	0.12	0.96
7	1/2" Ø x 8" Galv. bolts.....	6	pcs.....	0.09	0.54
8	2" Galv. pipe.....	6	ft.....	0.23	1.38
9	2" Pipe caps.....	2	pcs.....	0.26	0.52
10	3/4" Conduits.....	2	ft.....	0.10	0.20
11	3" Rock.....	7	cu. yd.....	3.00	21.00
12	Form lumber.....	3,750	b. m.....	55.00M	206.25
13	Electrical Fixtures, etc.....		lump sum.....		75.00
14	Paint.....	1	gal.....	2.75	2.75
15	Nails.....	200	lbs.....	0.065	13.00
16	Curing Compound.....	4	gal.....	0.52	2.00
17	8" x 6"—#10 Ga. Wire Mesh.....	288	sq. ft.....	0.014	4.03
18	#10 Ga. Wire.....	88	lbs.....	0.10	8.80
19	#14 Ga. Wire.....	37	lbs.....	0.10	3.70
20	Dynamite.....	200	lbs.....	0.125	25.00
	Total Cost of Material.....				934.11

2. *Day Labor:*(a) *Handling and Hauling:*

48 man hours.....	@	\$1.50	\$72.00
48 man hours.....	@	1.00	48.00
16 man hours.....	@	.75	12.00
16 man hours.....	@	.65	10.40
1,024 man hours.....	@	.50	512.00

(b) *Excavation for Structures:*

48 man hours.....	@	1.50	72.00
96 man hours.....	@	.75	72.00
480 man hours.....	@	.50	240.00

(c) *Grubbing, Excavation for Trail:*

24 man hours.....	@	1.50	36.00
48 man hours.....	@	1.00	48.00
144 man hours.....	@	.50	72.00

(d) *Concrete Forms and Stripping:*

32 man hours.....	@	1.50	48.00
80 man hours.....	@	1.00	80.00
80 man hours.....	@	.65	52.00

(e) *Placing Reinforcing Steel:*

14 man hours.....	@	1.50	21.00
48 man hours.....	@	1.00	48.00
48 man hours.....	@	.75	36.00

(f) <i>Mixing, Placing, and Curing Concrete:</i>			
32 man hours	----- @	\$1.50	\$48.00
32 man hours	----- @	1.00	32.00
160 man hours	----- @	.50	80.00
(g) <i>Backfill for Structure:</i>			
16 man hours	----- @	1.50	24.00
240 man hours	----- @	.50	120.00
(h) <i>Erecting Shutters and Door:</i>			
24 man hours	----- @	1.50	36.00
24 man hours	----- @	1.25	30.00
24 man hours	----- @	.70	16.80
(i) <i>Cleaning and Painting.</i>			
16 man hours	----- @	1.00	16.00
(j) <i>Electrical Installation.</i>			
24 man hours	----- @	1.00	24.00
24 man hours	----- @	.65	15.60

Total Day Labor Cost----- 1,921.80

3. *Plant Operation:*

(a) <i>Rental of Equipment.</i>			
1—5-ton truck, dump	----- 2 da. @	\$11.00	22.00
1—2-ton truck	----- 2 da. @	5.20	10.40
2—Jackhammers—Barco Gasoline	----- 10 da. @	2.50	50.00
6—Pack Mules	----- 16 da. @	5.00	480.00
2—Automobiles	----- 30 da. @	5.00	300.00
1— $\frac{3}{4}$ " ϕ Rubber hose	----- 250 ft.		27.50
Small Tools and Equipment—Lump Sum	-----		100.00

Total Plant Rental Cost----- 989.90

(b) Fuel, Oil Forage, Supplies----- 150.00

Total Plant Operation Cost----- 1,139.90

4. *Total Plant Operation Cost to Job:*

Cost of Material	-----	934.11
Cost of Day Labor	-----	1,921.80
Cost of Plant Rental	-----	1,139.90

Total Plant Operation Cost----- 3,995.81

5. *Total Cost of Work:*

(a) <i>Direct Cost.</i>	
Total Plant Operation Cost	----- 3,995.81
Contingencies—15%	----- 599.37

Total Direct Cost----- 4,595.18

(b) <i>Indirect Cost.</i>	
Mobilization and Demobilization	----- \$300.00
Surveys, Engr. and Insp. 10%	----- 459.52
Total Indirect Cost	----- 759.52

Total Field Cost of Job----- 5,354.70

General Officer Overhead—8%----- 430.30

ESTIMATED GRAND TOTAL COST By

Hired Labor and Government Plant----- 5,785.00

(Signed) Theodore Wyman, Jr.,
 THEODORE WYMAN, JR.,
 Lt. Col., Corps of Engineers,
 District Engineer.

UNSKILLED LABOR

Class 1—\$0.50 per hour.
Shovelers
Material Handlers

SEMI-SKILLED LABOR

Class 2—\$0.65 per hour.
Carpenters' Helpers
Truck Driver—2 Ton
Riggers' Helpers
Class 3—\$0.70 per hour.
Structural Steel Helper.
Class 4—\$0.75 per hour.
Jackhammer man
Truck Drivers—5 Ton

SKILLED LABOR

Class 5—\$1.00 per hour.
Carpenters
Reinf. Rodsetters
Electricians
Painters
Mule Skinner
Cement Finishers
Riggers
Class 6—\$1.25 per hour.
Structural Iron Worker
Class 7—\$1.50 per hour.
General Foreman.

ARMY PEARL HARBOR DRAWING EXHIBIT NO. 4K

Navyburg

WAR DEPARTMENT,
UNITED STATES ENGINEER OFFICE,
Honolulu, T. H., March 22, 1941.

Contract W411-cng-602

Kaunaloa Camp, Oahu, T. H.
Job Order #13.0

Construct and equip a reinforced concrete powerhouse and a reinforced concrete fire control station complete with all utilities and fixtures.

Est Cost: \$43285.00.

Commencement Date: March 15, 1941.

Est date for completion: April 20, 1941.

Supervision by J. J. Kestly, Area Engr, 3rd Field Area.

WAR DEPARTMENT,
UNITED STATES ENGINEER OFFICE,
Honolulu, T. H., March 22, 1941.

JOB ORDER NO. 13.0

Contract No. W-411-cng-602

To: Hawaiian Constructors, Honolulu, T. H.

You are hereby directed to proceed with the following work:

1. PROJECT TITLE: Fire Control Station at Kaunaloa Camp.
2. Location: Kaunaloa Camp, Oahu, T. H.
3. OFFICE FILE REFERENCE: 2013.2F.
4. WORK TO BE DONE: Construct and equip a reinforced concrete powerhouse, and a reinforced concrete fire control station complete with all utilities and fixtures.
5. WORK REQUESTED BY: Commanding General—Hawaiian Department.
6. DRAWINGS AND REFERENCES: See paragraph 1-G, attached Specifications.
7. APPROPRIATION CHARGEABLE: Seacoast Defense, Insular Department, 1941, CAG 126 P&B A1210-01.
8. ESTIMATED COST: \$43285.00.
9. COMMENCEMENT DATE: March 15, 1941.
10. ESTIMATED DATE FOR COMPLETION: April 20, 1941.
11. ESTIMATED LABOR AT SITE: 2,196 man hours.
12. PLANT REQUIREMENTS: See detailed estimate attached.
13. MATERIALS: See detailed estimate attached.
14. SUPERVISION BY: J. J. Kestly, Area Engineer, Third Field Area.

(Signed) Theodore Wyma, Jr.,
THEODORE WYMA, Jr.,
Lt. Col., Corps of Engineers,
District Engineer.

Approved: Apr. 8, 1941.

WARREN T. HANDUM,
Colonel, Corps of Engineers,
Division Engineer.