

# PEARL HARBOR ATTACK

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## HEARINGS

BEFORE THE

### JOINT COMMITTEE ON THE INVESTIGATION OF THE PEARL HARBOR ATTACK

CONGRESS OF THE UNITED STATES

SEVENTY-NINTH CONGRESS

FIRST SESSION

PURSUANT TO

### **S. Con. Res. 27**

A CONCURRENT RESOLUTION AUTHORIZING AN  
INVESTIGATION OF THE ATTACK ON PEARL  
HARBOR ON DECEMBER 7, 1941, AND  
EVENTS AND CIRCUMSTANCES  
RELATING THERETO

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**PART 25**

**PROCEEDINGS OF ROBERTS COMMISSION**

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Printed for the use of the  
Joint Committee on the Investigation of the Pearl Harbor Attack



UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON : 1946

JOINT COMMITTEE ON THE INVESTIGATION OF THE PEARL  
HARBOR ATTACK

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## F ARINGS OF JOINT COMMITTEE

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Part No.	Pages	Transcript pages	Hearings
1	1- 399	1- 1058	Nov. 15, 16, 17, 19, 20, and 21, 1945.
2	401- 982	1059- 2586	Nov. 23, 24, 26 to 30, Dec. 3 and 4, 1945.
3	983-1583	2587- 4194	Dec. 5, 6, 7, 8, 10, 11, 12, and 13, 1945.
4	1585-2063	4195- 5460	Dec. 14, 15, 17, 18, 19, 20, and 21, 1945.
5	2065-2492	5461- 6646	Dec. 31, 1945, and Jan. 2, 3, 4, and 5, 1946.
6	2493-2920	6647- 7888	Jan. 15, 16, 17, 18, 19, and 21, 1946.
7	2921-3378	7889- 9107	Jan. 22, 23, 24, 25, 26, 28, and 29, 1946.
8	3379-3927	9108-10517	Jan. 30, 31, Feb. 1, 2, 4, 5, and 6, 1946.
9	3929-4599	10518-12277	Feb. 7, 8, 9, 11, 12, 13, and 14, 1946.
10	4601-5151	12278-13708	Feb. 15, 16, 18, 19, and 20, 1946.
11	5153-5560	13709-14765	Apr. 9 and 11, and May 23 and 31, 1946.

## EXHIBITS OF JOINT COMMITTEE

Part No	Exhibits Nos.
12	1 through 6.
13	7 and 8.
14	9 through 43.
15	44 through 87.
16	88 through 110.
17	111 through 128.
18	129 through 156.
19	157 through 172.
20	173 through 179.
21	180 through 183, and Exhibits-Illustrations.
22 through 25	Roberts Commission Proceedings.
26	Hart Inquiry Proceedings.
27 through 31	Army Pearl Harbor Board Proceedings.
32 through 33	Navy Court of Inquiry Proceedings.
34	Clarke Investigation Proceedings.
35	Clausen Investigation Proceedings.
36 through 38	Hewitt Inquiry Proceedings.
39	Reports of Roberts Commission, Army Pearl Harbor Board, Navy Court of Inquiry and Hewitt Inquiry, with endorsements.

## INDEX TO EXHIBITS-ILLUSTRATIONS ROBERTS COMMISSION

(The original Exhibit to which each illustration relates is indicated in parentheses following the description)

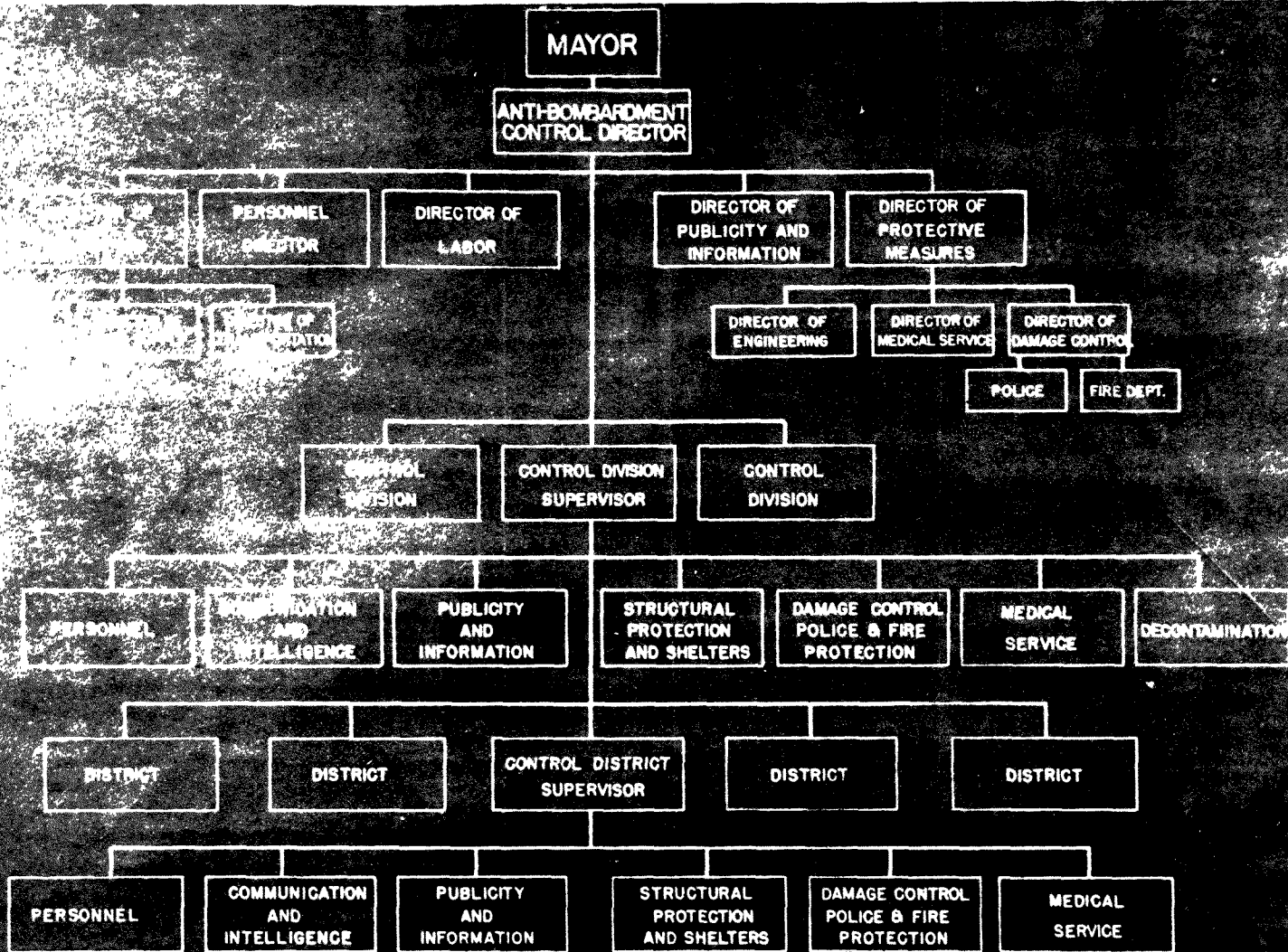
ITEM NO.	DESCRIPTION
1.	Organization chart, Anti-bombardment Control, City of Honolulu, October 10, 1940. (Exhibit No. 11, Navy Packet 1.)
2.	Map of the City of Honolulu, T. H., reflecting areas of the city to be evacuated and open areas available for trench and shelter construction. (Exhibit No. 11, Navy Packet 1.)
3.	Map of the Island of Oahu, T. H., reflecting division of the island into Control Districts. (Exhibit No. 11, Navy Packet 1.)
4-16.	Series of twelve architectural drawings, being plans for the construction of various types of air-raid shelters. (Exhibit No. 11, Navy Packet 1.)
17.	Sketch illustrating the required overhang to prevent effect of explosion from reacting on an underground structure. (Exhibit No. 11, Navy Packet 1.)
18.	Graph showing penetration of concrete slab by action of falling bombs. (Exhibit No. 11, Navy Packet 1.)
19.	Graph showing thickness of concrete slab perforated by explosion. (Exhibit No. 11, Navy Packet 1.)
20.	Graph showing depth penetrated by explosion on the surface of various materials. (Exhibit No. 11, Navy Packet 1.)
21.	Graph showing approximate depth of penetration for unit sectional density of bomb. (Exhibit No. 11, Navy Packet 1.)
22.	Graph showing racial composition of the Territory of Hawaii. (Exhibit No. 15, Navy Packet 1.)
23.	Graph showing Japanese activities in the Territory of Hawaii. (Exhibit No. 15, Navy Packet 1.)
24.	Graph showing Japanese Consular Organization in Hawaii. (Exhibit No. 15, Navy Packet 1.)
25.	Graph showing Japanese Language Schools in Hawaii. (Exhibit No. 15, Navy Packet 1.)
26.	Graph relating to United Japanese Society of Honolulu. (Exhibit No. 15, Navy Packet 1.)
27.	Graph showing major Foreign Controlled Japanese Corporations. (Exhibit No. 15, Navy Packet 1.)
28.	Graph showing Alien Japanese Controlled Corporations in Hawaii. (Exhibit No. 15, Navy Packet 1.)
29.	Graph relating to HOMPA HONEWANJI organization in Territory of Hawaii. (Exhibit No. 15, Navy Packet 1.)
30.	Graph relating to JODO-SHU organization in Territory of Hawaii. (Exhibit No. 15, Navy Packet 1.)
31.	Graph relating to Overseas Japanese Central Society. (Exhibit No. 15, Navy Packet 1.)
32.	Graph relating to Communist Activities in Territory of Hawaii. (Exhibit No. 15, Navy Packet 1.)
33.	Graph relating to German Activities in Territory of Hawaii. (Exhibit No. 15, Navy Packet 1.)
34.	Graph relating to Italian Activities in Territory of Hawaii. (Exhibit No. 15, Navy Packet 1.)
35.	Map of the Island of Oahu, T. H., showing main military and naval establishments. (Exhibit No. 1, Navy Packet 2.)
36.	U. S. Navy Aviation Chart of the Hawaiian Islands showing the location of Mobile Aircraft Warning Service Radar Stations as of 7 December 1941 with sectors showing coverage to the electrical horizon. (Exhibit No. 2, Navy Packet 2.)



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- 37-38. Mooring and Berthing Plan of Pearl Harbor, showing air defense sectors. The original exhibit contained two marked copies of this plan. (Exhibit No. 10, Navy Packet 2.)
39. Graph showing air patrols as ordered for protection of the Task Force. (Exhibit No. 19, Navy Packet 2.)
40. Diagram of Zigzag Plan No. 60. (Exhibit No. 19, Navy Packet 2.)
41. Diagram of Zigzag Plan No. 61. (Exhibit No. 19, Navy Packet 2.)
- 42-43. Photographs showing bomber formations and illustrating "shorts" in antiaircraft fire and the altitude of attacking planes at Pearl Harbor on 7 December 1941. (Exhibit No. 24, Navy Packet 2.)
44. Rough sketch map of Pearl Harbor showing a berthing plan for ships berthed inserted on the map. (Exhibit No. 33, Navy Packet 2.)
45. Diagram of Standard Anti-Submarine Patrol for Single Aircraft on Escort Duty. (Exhibit No. 33, Navy Packet 2.)
46. Diagram attached to communication dated 18 December 1941 at Pearl Harbor, captioned "Air patrol plan for sortie and entrance No. 1." (Exhibit No. 33, Navy Packet 2.)
47. Sketch showing location and number of sentries to man the Security Watch Posts. (Exhibit No. 33, Navy Packet 2.)
48. Military Map "BB", showing a gridded basic square superimposed on a map of the Island of Oahu for location of positions in that area. (Exhibit No. 32, Navy Packet 2.)
49. Two Figures explaining the unified grid system for location of positions. (Exhibit No. 33, Navy Packet 2.)
- 50-53. Copies of Radar Plots furnished the Roberts Commission by Admiral Bellinger. (Exhibit No. 43, Navy Packet 2.)
- 54-84. Photographs taken during the attack and thereafter at Kaneohe Bay indicating damage done at the field. (Exhibit No. 44, Navy Packet 2.)
85. Chart of Pearl Harbor showing location of various units of the Fleet. (Exhibit No. 48, Navy Packet 2.)
86. Vertical photograph of Wheeler Field. (Exhibit No. 1, Army.)
87. Vertical photograph of Haleiwa Field. (Exhibit No. 1, Army.)
88. Vertical photograph of Bellows Field. (Exhibit No. 1, Army.)
89. Progress map relating to bunker construction, Wheeler Field. (Exhibit No. 1, Army.)
90. Secret "OPN Map Annex 1 to accompany FOI Fixed Installations," Island of Oahu, T. H. (Exhibit No. 1, Army.)
91. Secret map of "Hawaiian Defense Project, 1941—Antiaircraft Dispositions." (Exhibit No. 1, Army.)
92. Map showing military reservations of the Island of Oahu, T. H. (Exhibit No. 1, Army.)
93. Special Military Map "AA" of the Hawaiian Islands. (Exhibit No. 1, Army.)
94. Map showing ground defenses at Hickam Field. (Exhibit No. 5, Army.)
95. Chart of Hickam Field showing the disposition of aircraft at the time of the attack. (Exhibit No. 5, Army.)
96. Map showing Communications Installations, Island of Oahu, T. H. (Exhibit No. 7, Army.)
97. Map showing Bridges, Police Districts and other important installations, Island of Oahu, T. H. (Exhibit No. 7, Army.)
98. Map showing electrical installations, Island of Oahu, T. H. (Exhibit No. 7, Army.)
99. Layout map showing general plan of Bellows Field. (Exhibit No. 12, Army.)
- 100-104. Maps and Overlays relating to landing and dispersal of aircraft, Bellows Field. (Exhibit No. 14, Army.)
105. Sketch showing location of aircraft in Hawaiian Air Depot Shops on 7 December 1941. (Exhibit No. 15, Army.)
106. Diagram showing the location of various aid stations. (Exhibit No. 16, Army.)
107. Sketch of a Japanese Navy Single Seat Pursuit Plane, 1941. (Exhibit No. 16, Army.)
108. Map of Island of Oahu, T. H., showing communications installations (Exhibit No. 28, Army.)
109. Map of Island of Oahu, T. H., showing various important installations. (Exhibit No. 28, Army.)

110. Map of Island of Oahu, T. H., showing electric power installations. (Exhibit No. 28, Army.)
111. Map of Island of Oahu, T. H., showing supply and evacuation installations. (Exhibit No. 28, Army.)
112. Partial Road Map, Schofield Barracks. (Exhibit No. 28, Army.)
113. Map of Island of Oahu, T. H., showing communications installations. (Exhibit No. 29, Army.)
114. Map of Island of Oahu, T. H., showing various important installations. (Exhibit No. 29, Army.)
115. Map of Island of Oahu, T. H., showing electrical installations. (Exhibit No. 29, Army.)
116. Map of Island of Oahu, T. H., showing communications installations. (Exhibit No. 30, Army.)
117. Map of Island of Oahu, T. H., showing various important installations. (Exhibit No. 30, Army.)
118. Map of Island of Oahu, T. H., showing electrical installations. (Exhibit No. 30, Army.)
119. Map of Island of Oahu, T. H., showing supply and evacuation installations. (Exhibit No. 30, Army.)
120. Map of Island of Oahu, T. H., showing communications installations. (Exhibit No. 32, Army.)
121. Map of Island of Oahu, T. H., showing various important installations. (Exhibit No. 32, Army.)
122. Map of Island of Oahu, T. H., showing electrical installations. (Exhibit No. 32, Army.)
123. Radar Chart, Opana station, 7 December 1941. (Exhibit No. 33, Army.)
124. Special Military Map "AA," of the Hawaiian Island. (Exhibit No. 33, Army.)
125. Chart showing a method of searching 5-degree sectors through 360 degrees to a radius of 833 miles from Oahu employing 72 B-17 airplanes. (Exhibit No. 35, Army.)
126. Graph showing relation of 25-mile visibility to distance. (Exhibit No. 35, Army.)
- 127-128. Charts showing the radius of action of B-17D airplane under various load conditions in relation to possible plans for a carrier group attacking Oahu. (Exhibit No. 35, Army.)

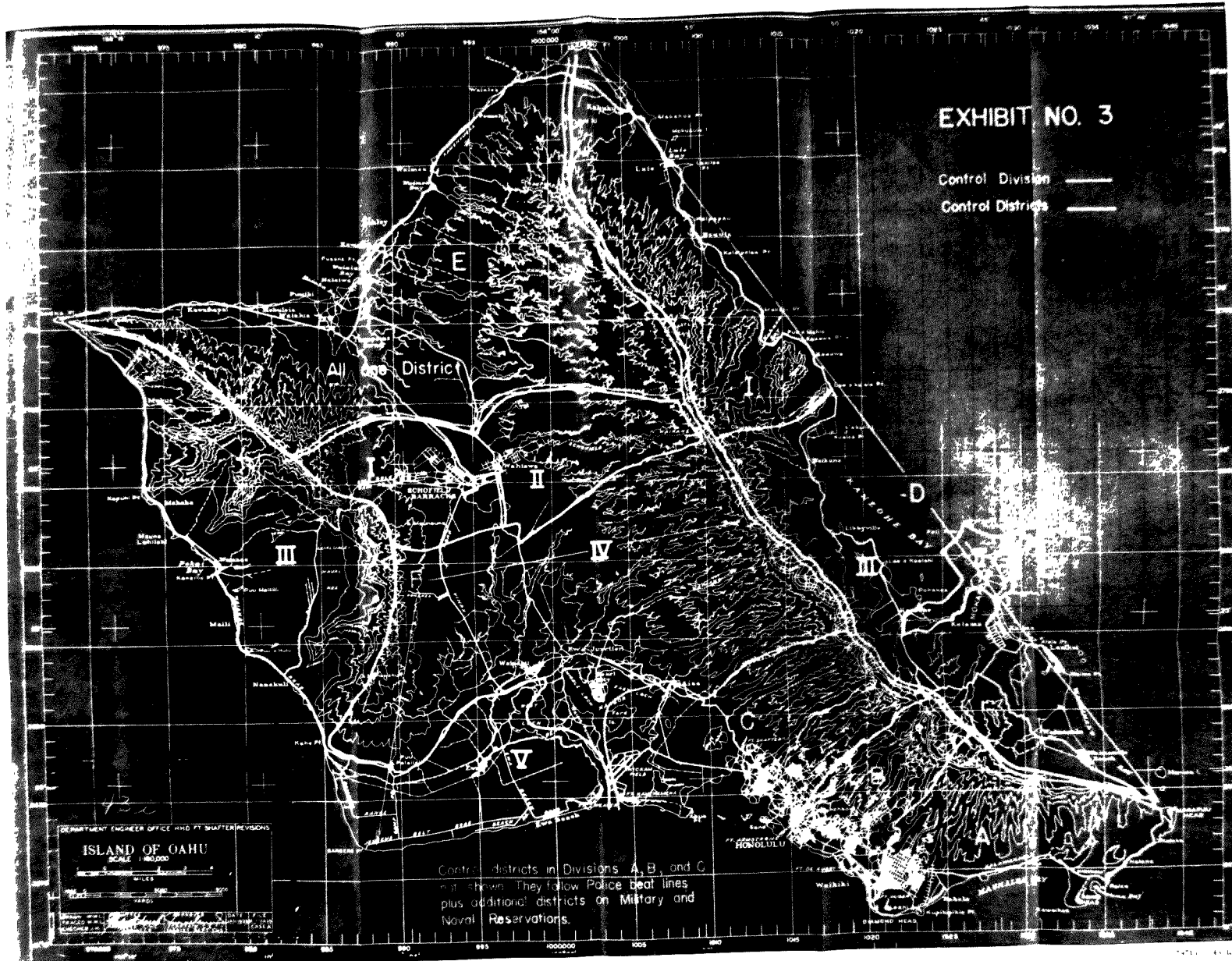


ORGANIZATION CHART  
 ANTI-BOMBARDMENT CONTROL  
 CITY OF HONOLULU  
 October 10, 1940



UNCLASSIFIED  
OPEN AREAS AVAILABLE FOR TRENCH  
AND SHELTER CONSTRUCTION.  
SCALE IN FEET

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46



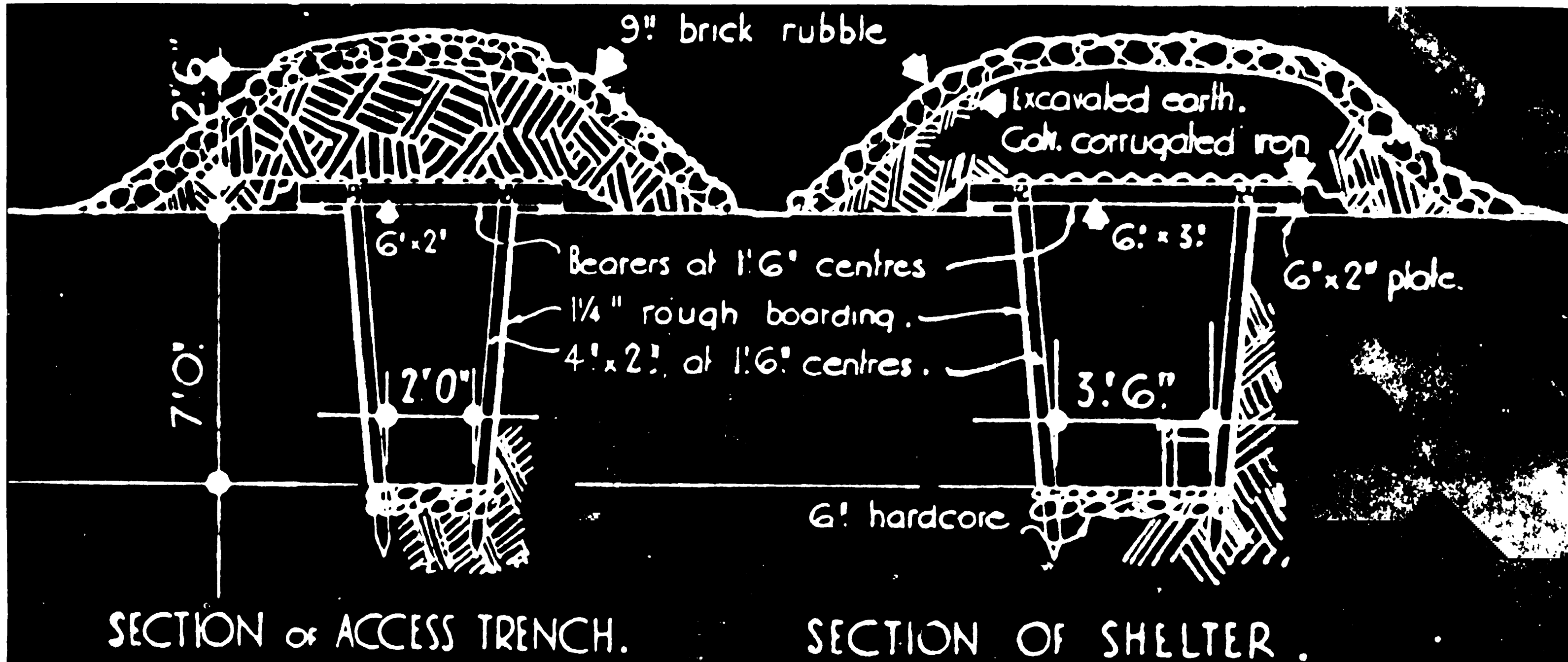
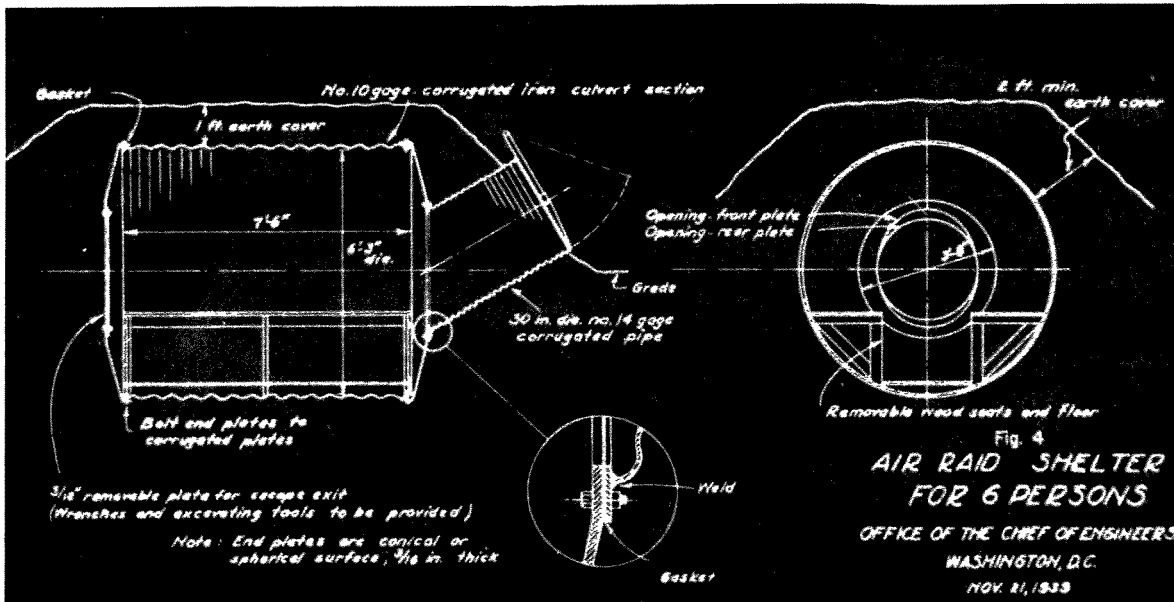


Fig. 3  
 "Covered trench shelters, recommended by the  
 British Home Office" - From the Architect's  
 Journal (London) July 7, 1938.

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ITEM NO. 4





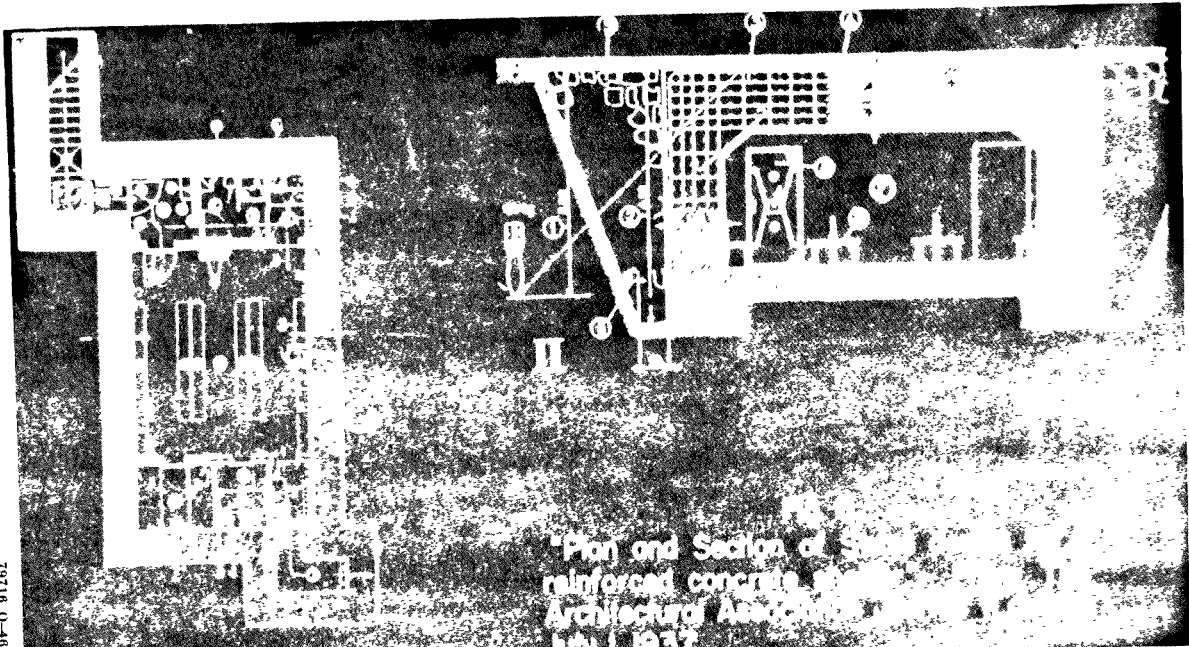
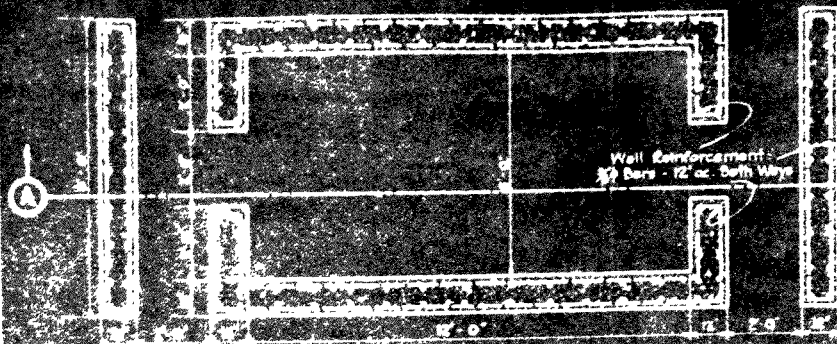


FIG. 1  
"Plan and Section of a  
reinforced concrete  
Architectural Association  
July 1, 1932

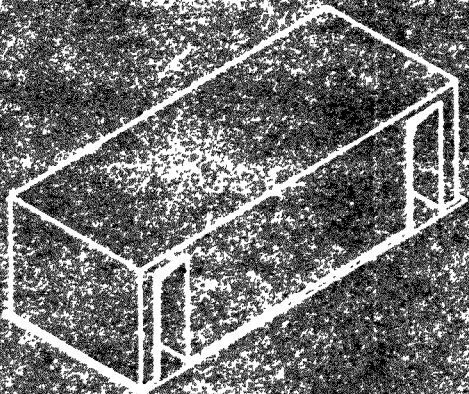




Plan View of Air Raid Shelter



Alternative Plan



Isometric View of Air Raid Shelter

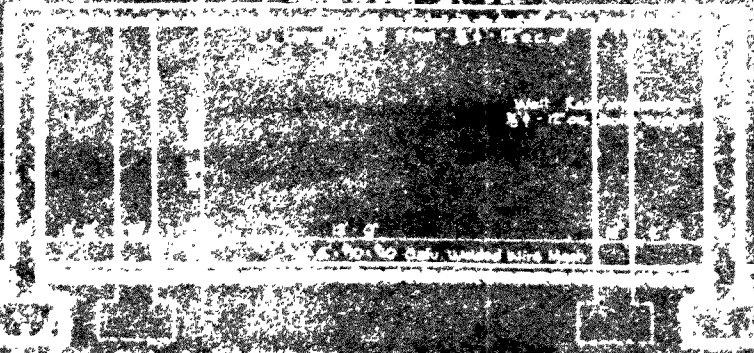
CONCRETE DOMESTIC SURFACE SHELTERS  
**PLANS**

PRINTED FROM 105 PERSONS  
SHELTER  
SHEET No. 1

TABLE 1

NO.	DESCRIPTION	QUANTITY	UNIT	AMOUNT
1	CONCRETE	100	CU YD	100
2	STEEL REINFORCEMENT	100	LB	100
3	FORMWORK	100	SQ YD	100
4	BRICK	100	1000'S	100
5	CEMENT	100	BALES	100
6	AGGREGATE	100	CU YD	100
7	PAINT	100	GALES	100
8	WATER	100	CU YD	100
9	ADDITIONAL	100	CU YD	100
10	REINFORCEMENT	100	LB	100
11	FORMWORK	100	SQ YD	100
12	BRICK	100	1000'S	100
13	CEMENT	100	BALES	100
14	AGGREGATE	100	CU YD	100
15	PAINT	100	GALES	100
16	WATER	100	CU YD	100
17	ADDITIONAL	100	CU YD	100
18	REINFORCEMENT	100	LB	100
19	FORMWORK	100	SQ YD	100
20	BRICK	100	1000'S	100
21	CEMENT	100	BALES	100
22	AGGREGATE	100	CU YD	100
23	PAINT	100	GALES	100
24	WATER	100	CU YD	100
25	ADDITIONAL	100	CU YD	100
26	REINFORCEMENT	100	LB	100
27	FORMWORK	100	SQ YD	100
28	BRICK	100	1000'S	100
29	CEMENT	100	BALES	100
30	AGGREGATE	100	CU YD	100
31	PAINT	100	GALES	100
32	WATER	100	CU YD	100
33	ADDITIONAL	100	CU YD	100
34	REINFORCEMENT	100	LB	100
35	FORMWORK	100	SQ YD	100
36	BRICK	100	1000'S	100
37	CEMENT	100	BALES	100
38	AGGREGATE	100	CU YD	100
39	PAINT	100	GALES	100
40	WATER	100	CU YD	100
41	ADDITIONAL	100	CU YD	100
42	REINFORCEMENT	100	LB	100
43	FORMWORK	100	SQ YD	100
44	BRICK	100	1000'S	100
45	CEMENT	100	BALES	100
46	AGGREGATE	100	CU YD	100
47	PAINT	100	GALES	100
48	WATER	100	CU YD	100
49	ADDITIONAL	100	CU YD	100
50	REINFORCEMENT	100	LB	100
51	FORMWORK	100	SQ YD	100
52	BRICK	100	1000'S	100
53	CEMENT	100	BALES	100
54	AGGREGATE	100	CU YD	100
55	PAINT	100	GALES	100
56	WATER	100	CU YD	100
57	ADDITIONAL	100	CU YD	100
58	REINFORCEMENT	100	LB	100
59	FORMWORK	100	SQ YD	100
60	BRICK	100	1000'S	100
61	CEMENT	100	BALES	100
62	AGGREGATE	100	CU YD	100
63	PAINT	100	GALES	100
64	WATER	100	CU YD	100
65	ADDITIONAL	100	CU YD	100
66	REINFORCEMENT	100	LB	100
67	FORMWORK	100	SQ YD	100
68	BRICK	100	1000'S	100
69	CEMENT	100	BALES	100
70	AGGREGATE	100	CU YD	100
71	PAINT	100	GALES	100
72	WATER	100	CU YD	100
73	ADDITIONAL	100	CU YD	100
74	REINFORCEMENT	100	LB	100
75	FORMWORK	100	SQ YD	100
76	BRICK	100	1000'S	100
77	CEMENT	100	BALES	100
78	AGGREGATE	100	CU YD	100
79	PAINT	100	GALES	100
80	WATER	100	CU YD	100
81	ADDITIONAL	100	CU YD	100
82	REINFORCEMENT	100	LB	100
83	FORMWORK	100	SQ YD	100
84	BRICK	100	1000'S	100
85	CEMENT	100	BALES	100
86	AGGREGATE	100	CU YD	100
87	PAINT	100	GALES	100
88	WATER	100	CU YD	100
89	ADDITIONAL	100	CU YD	100
90	REINFORCEMENT	100	LB	100
91	FORMWORK	100	SQ YD	100
92	BRICK	100	1000'S	100
93	CEMENT	100	BALES	100
94	AGGREGATE	100	CU YD	100
95	PAINT	100	GALES	100
96	WATER	100	CU YD	100
97	ADDITIONAL	100	CU YD	100
98	REINFORCEMENT	100	LB	100
99	FORMWORK	100	SQ YD	100
100	BRICK	100	1000'S	100

DETAIL OF REINFORCEMENT



SECTION A-A

CONCRETE DESIGN  
**SECTION A-A**  
SPRINTER PROOF  
IN 2 SHEETS

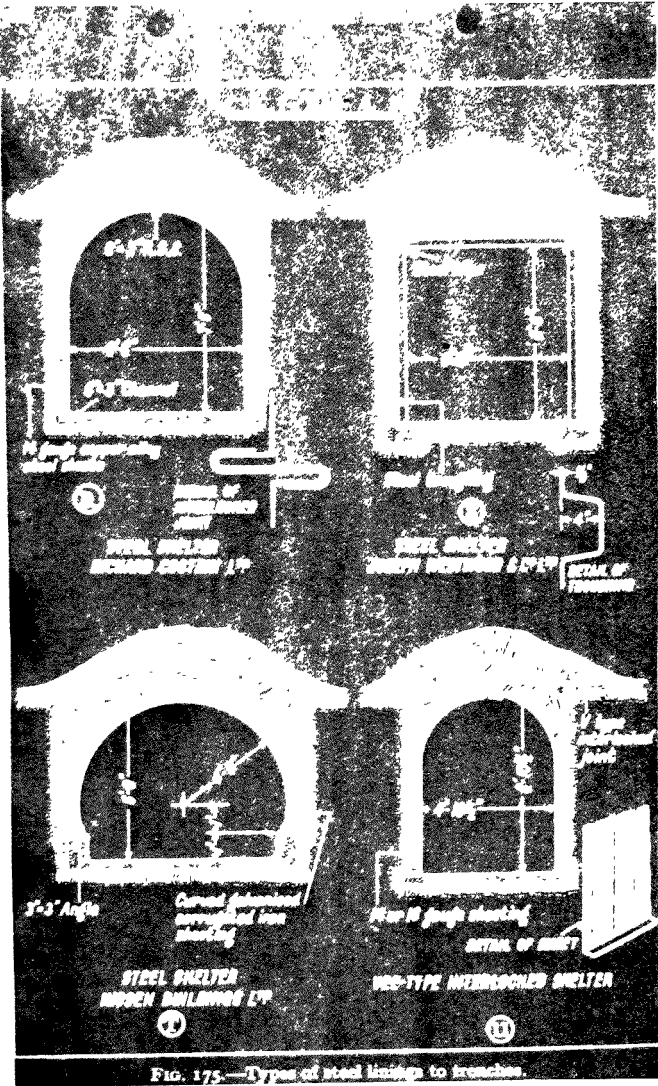


FIG. 175.—Types of steel linings to trenches.

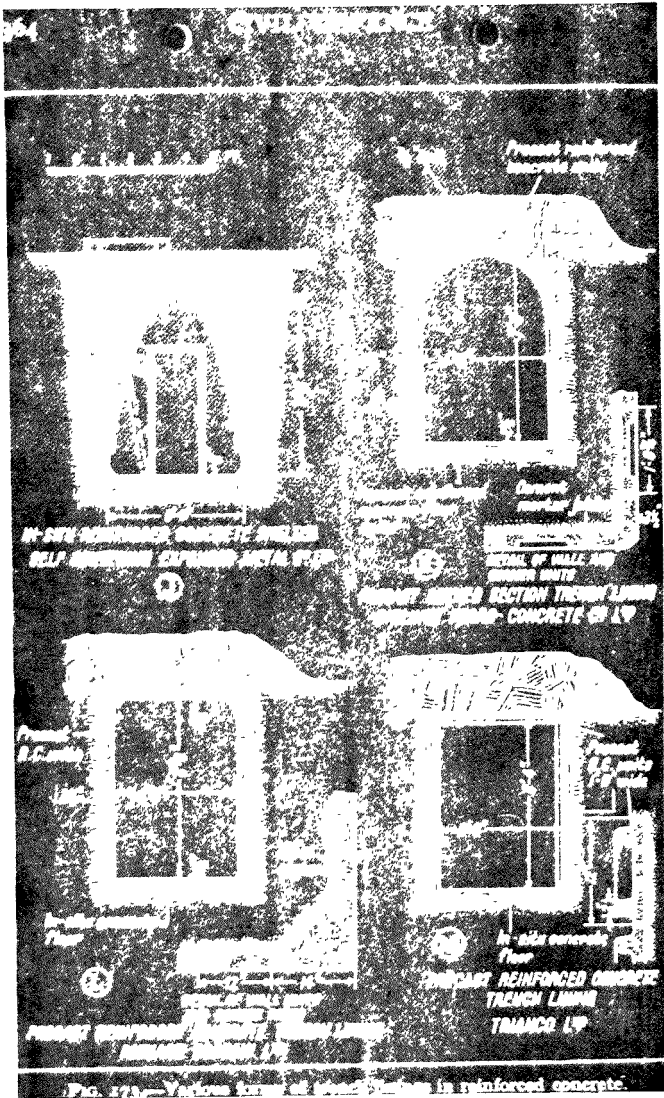
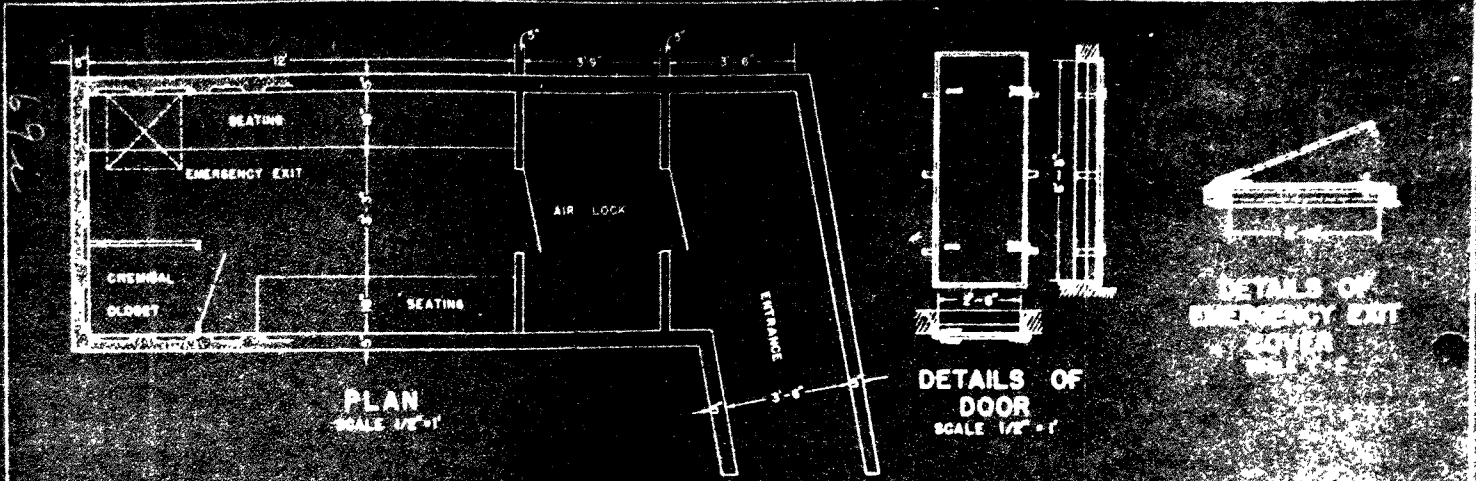


FIG. 17A—Various forms of steel trench in reinforced concrete.

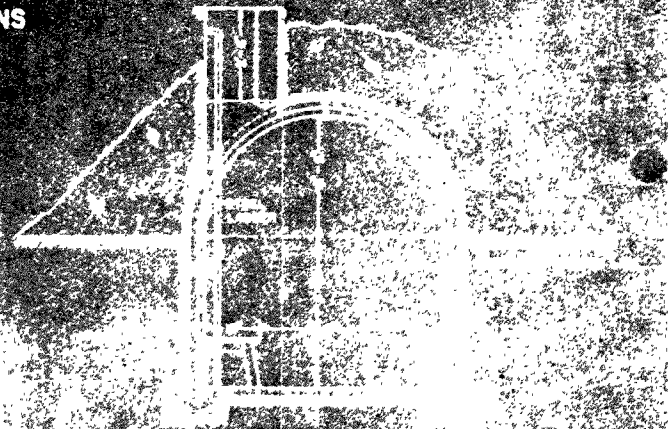
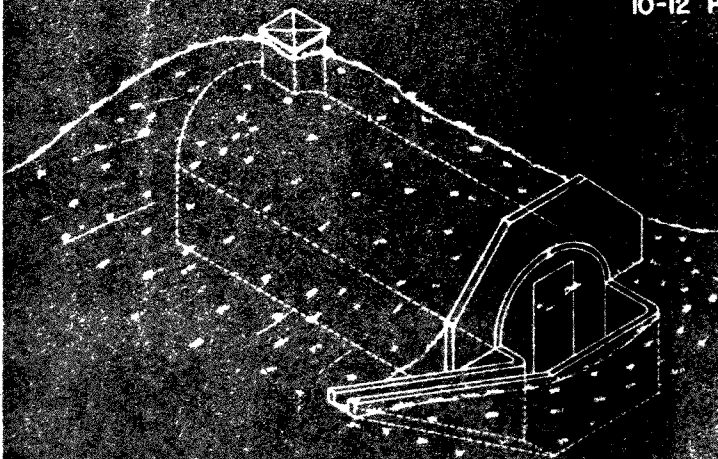


FIG. 184.—Outside's looking and section of building exterior as indicated; II, construction in view from the interior with concrete, masonry and rubble; C, construction in view from exterior and covered with earth and rubble; D and E, partly underground, and F, in view of building.





**AIR RAID SHELTER**  
SPLINTER PROOF  
10-12 PERSONS



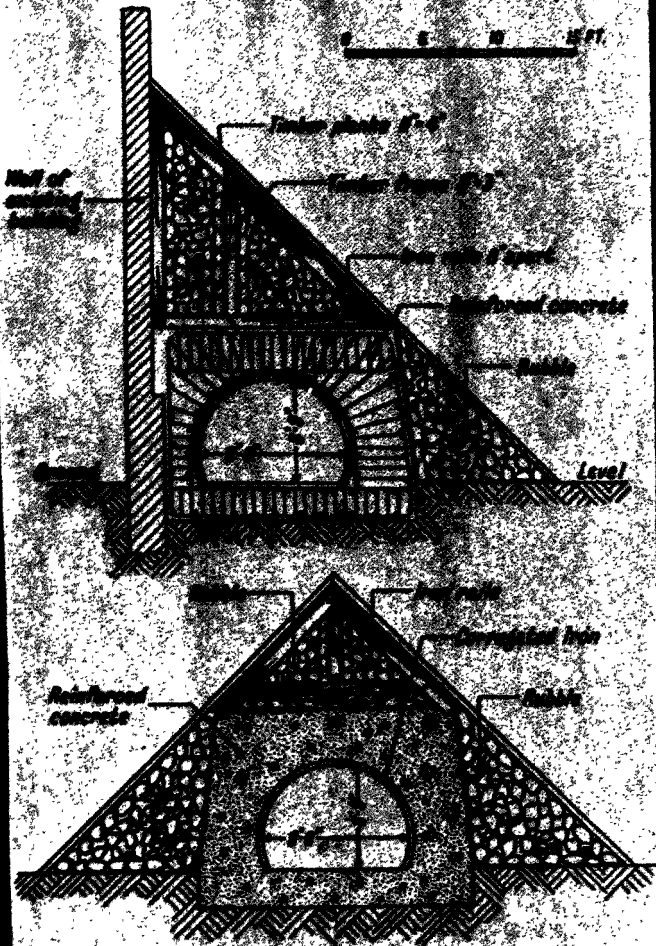
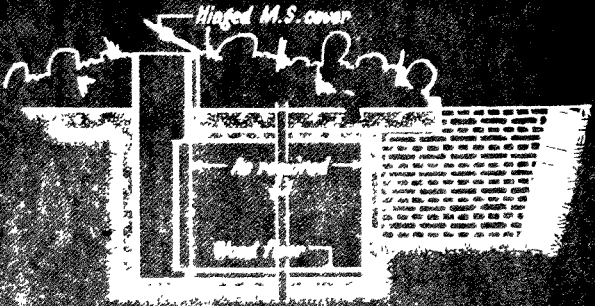


FIG. 210.—Types of above ground bomb-proof shelters as recommended by the French Government for protection against direct hits of medium weight high explosive bombs.

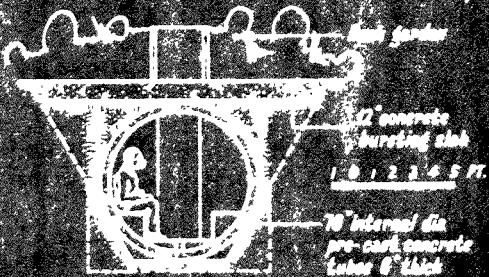
INDIVIDUAL SHELTER



LONGITUDINAL SECTION



SECTIONAL PLAN



CROSS SECTION

PRE-CAST CONCRETE TUBULAR SHELTERS

FIG. 119.—Details of a very strong and simple type of pre-cast concrete tubular shelter affording a high degree of protection and suitable for extension to accommodate fifty persons.



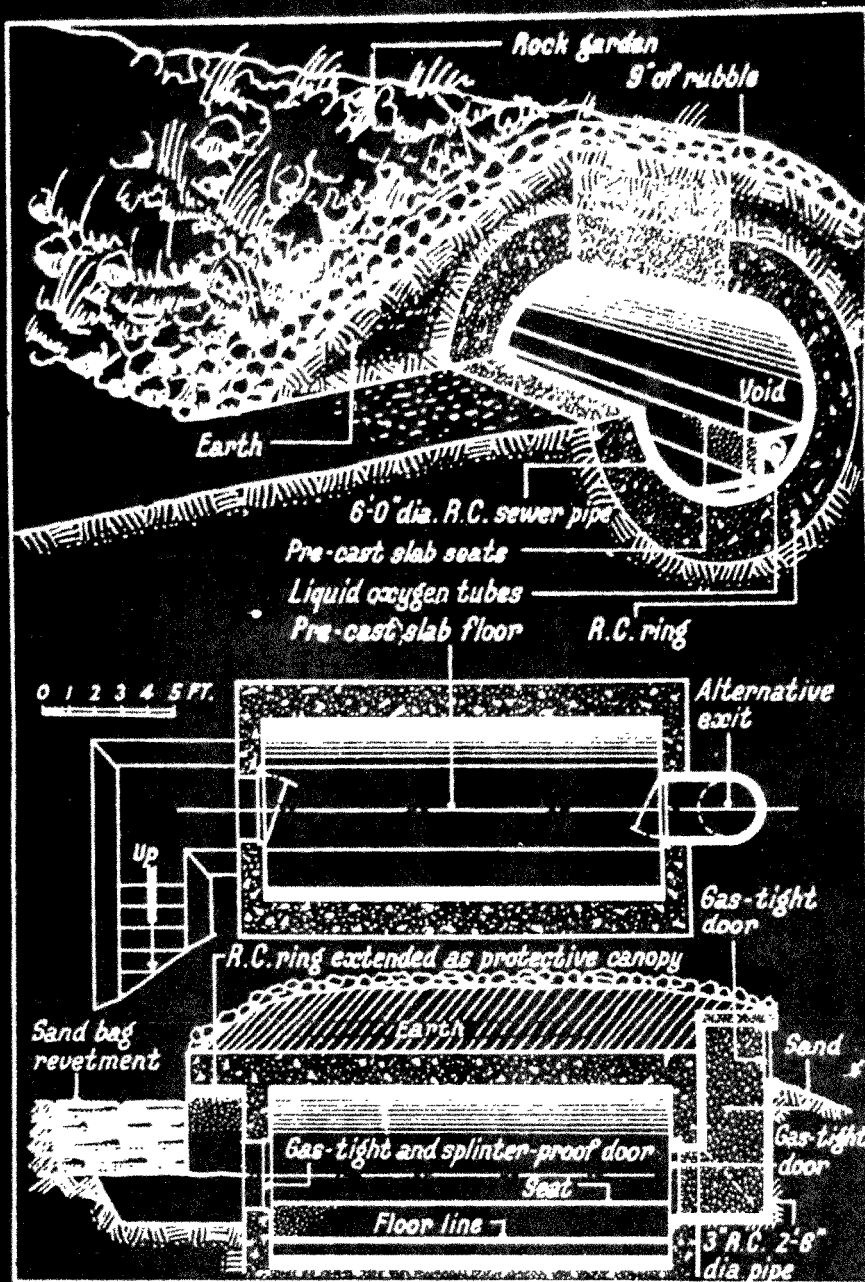


FIG. 123.—Improved tubular shelter affording a high degree of protection. Note the sand filling of the emergency exit as interior protection of the outlet (always somewhat vulnerable).

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CIVIL DEFENCE

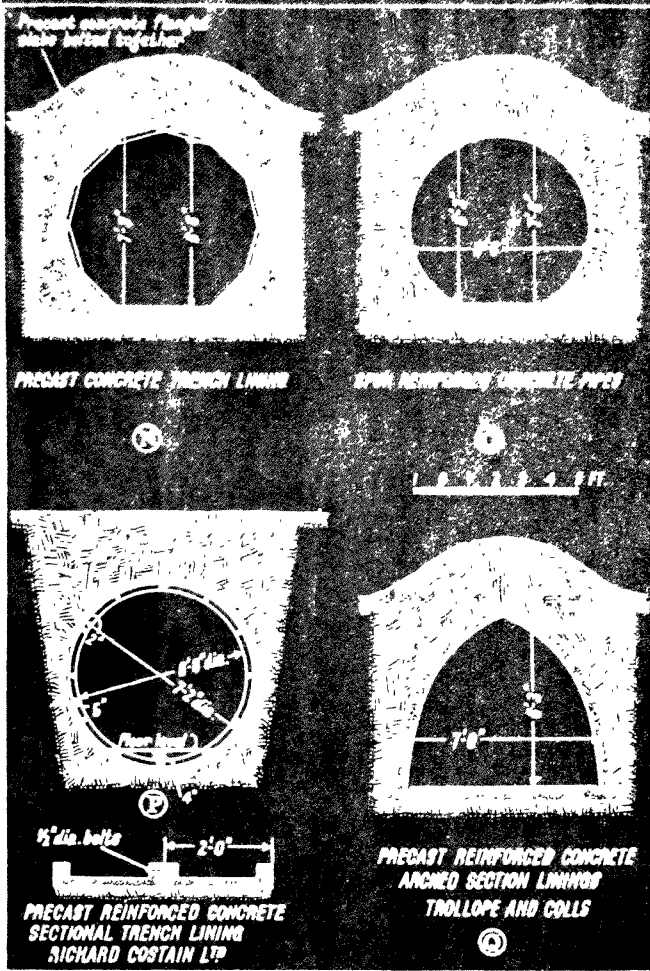


FIG. 174.—Pre-cast trench lining systems.

**ITEM NO. 17**



79716 0-46 RC

Height of Bomb (lbs)

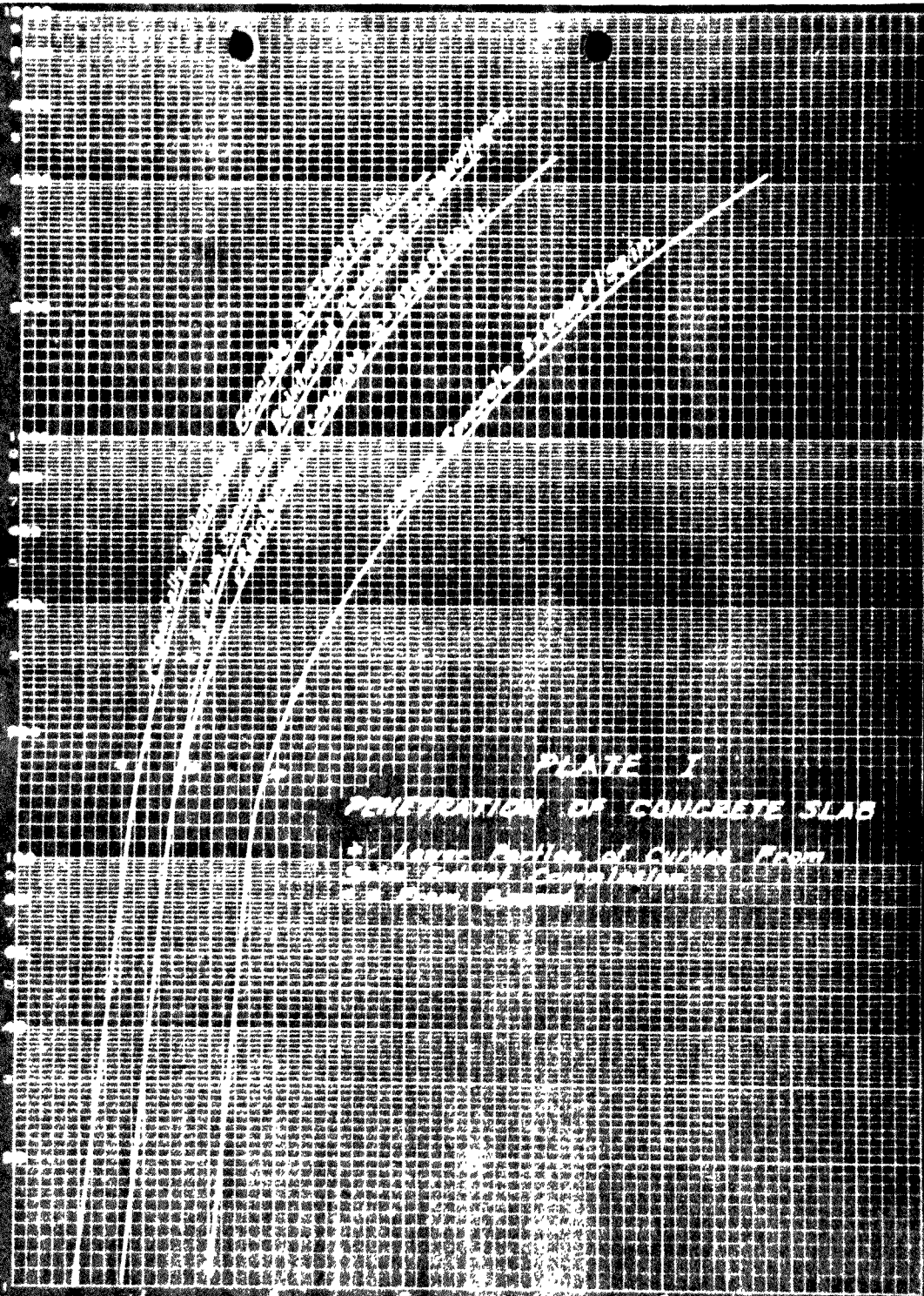
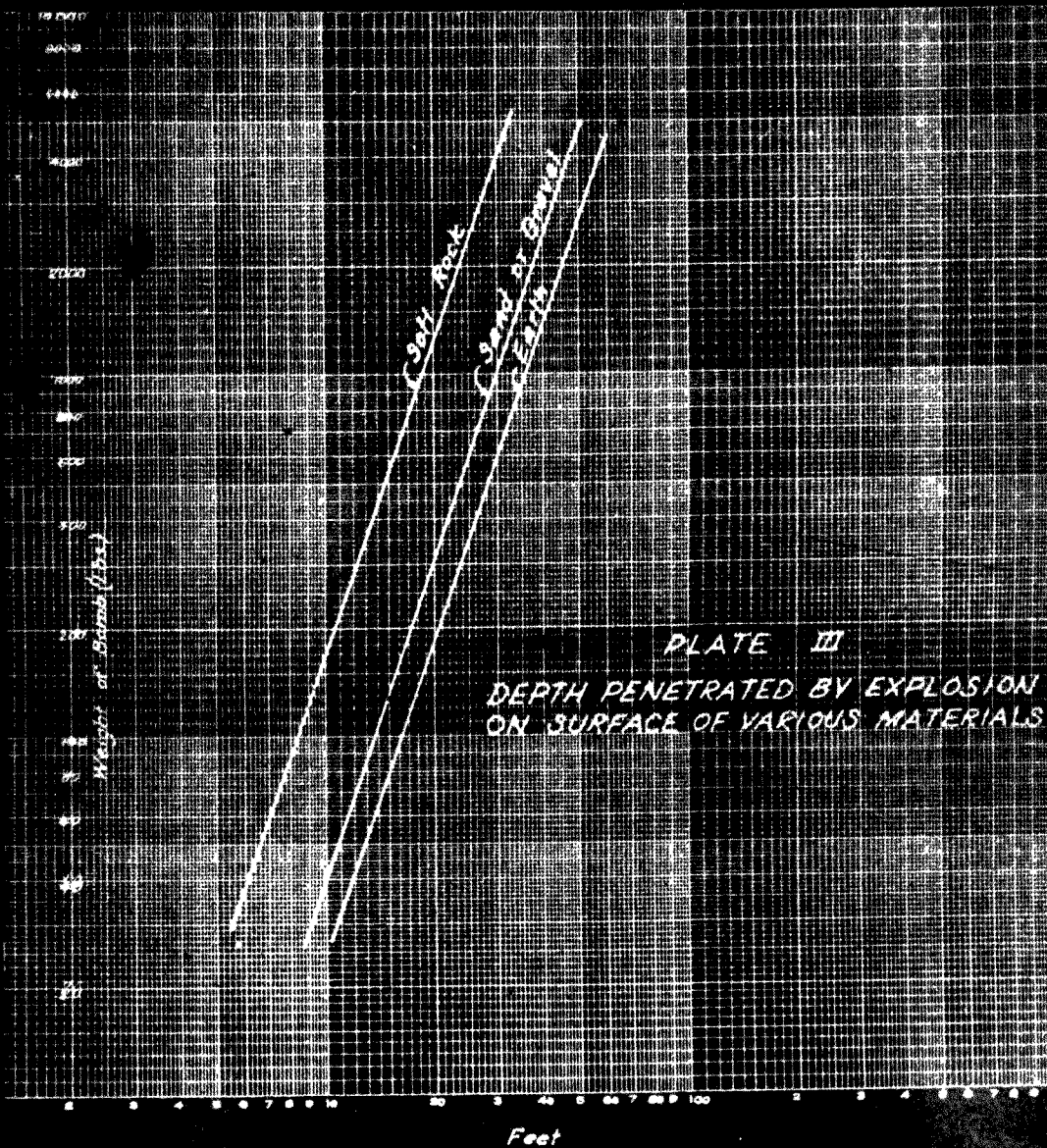


PLATE 1  
PENETRATION OF CONCRETE SLABS  
BY 100 LB. BOMBS OF VARIOUS HEIGHTS  
ON 100 LB. CONCRETE SLABS

[The main body of the document is almost entirely obscured by heavy black noise and artifacts, rendering the text illegible.]





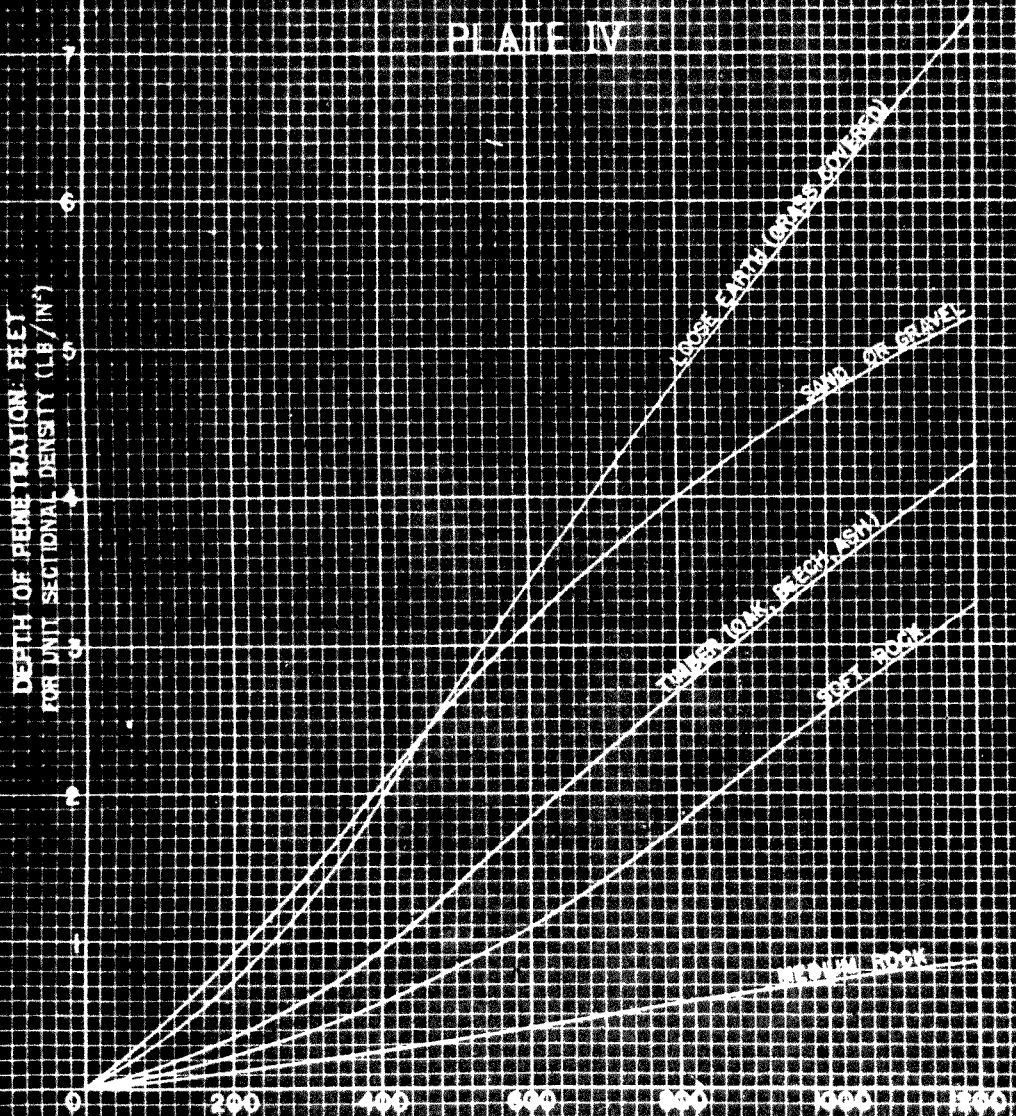
APPROXIMATE  
DEPTH OF PENETRATION  
FOR UNIT SECTIONAL DENSITY OF BOMB

PLATE IV

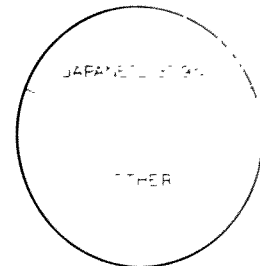
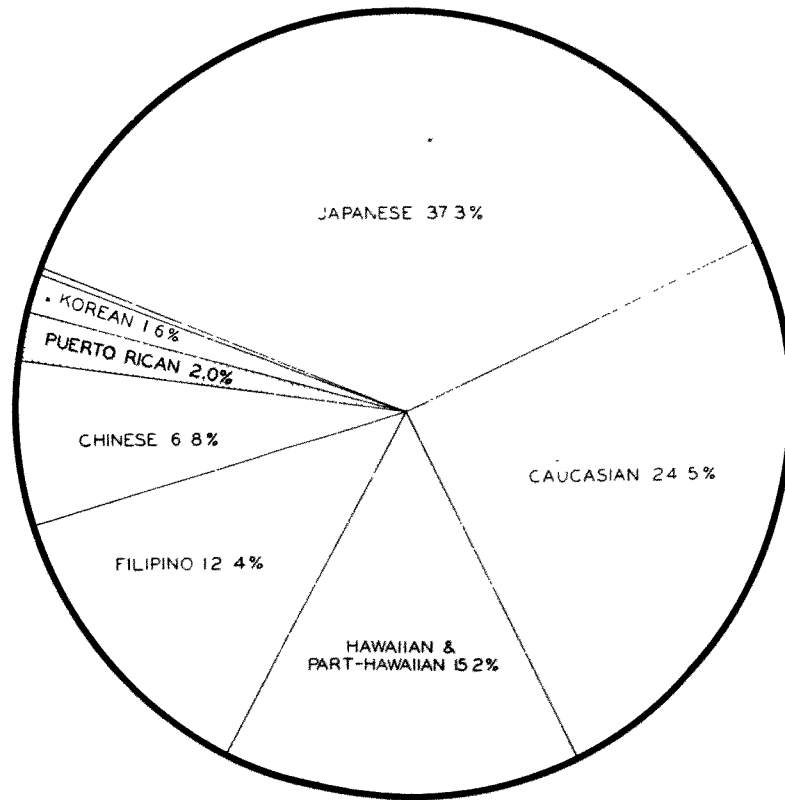
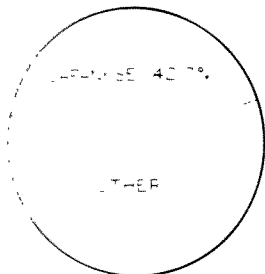
DEPTH OF PENETRATION: FEET  
FOR UNIT SECTIONAL DENSITY (LB/IN<sup>2</sup>)

STRIKING VELOCITY: FEET PER SECOND

1104



# RACIAL COMPOSITION OF THE TERRITORY OF HAWAII



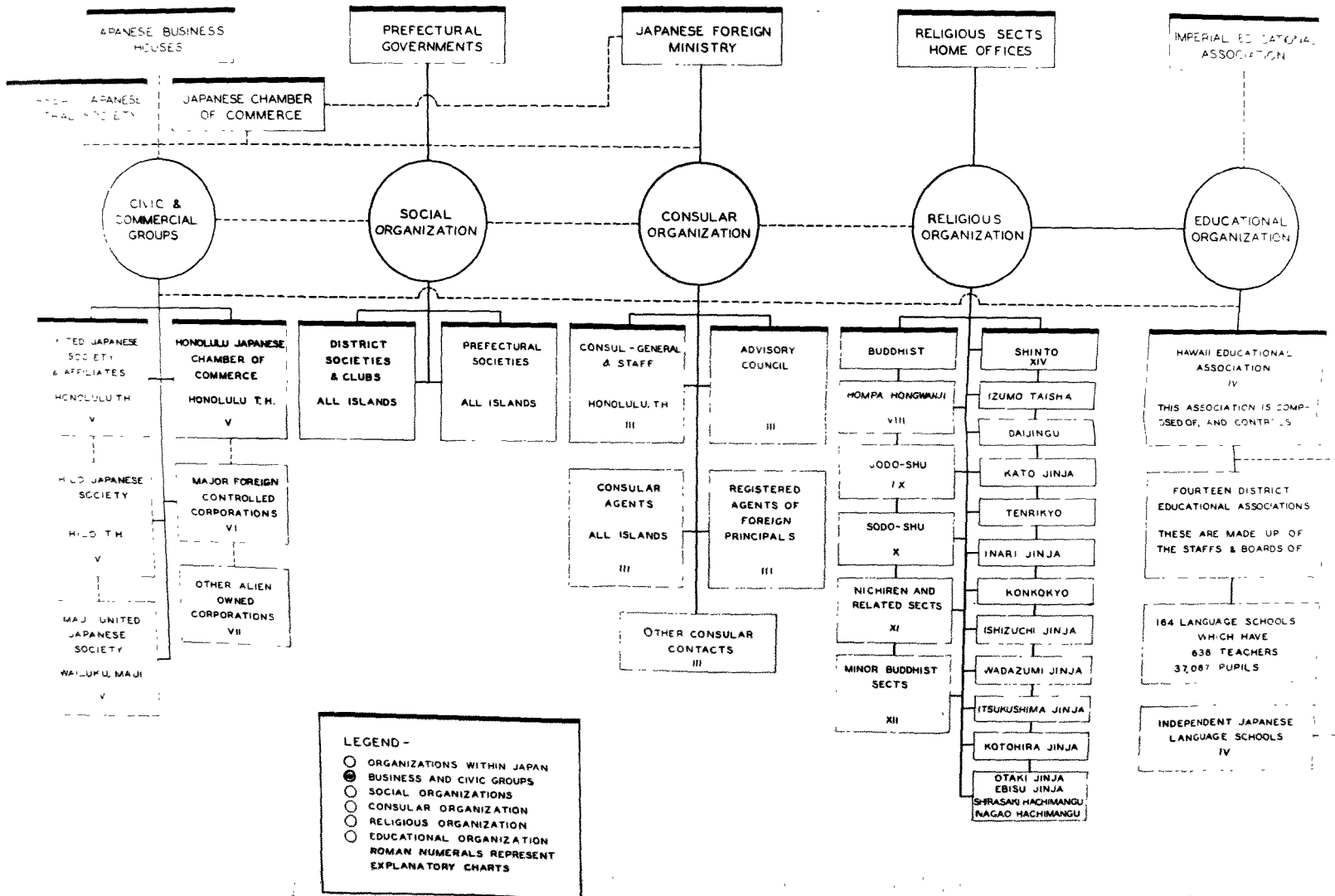
Year	Japanese	Caucasian	Hawaiian & Part-Hawaiian	Filipino	Chinese	Korean	Puerto Rican	Other
1920	40.7%							
1930	31%							
1940	37.3%	24.5%	15.2%	12.4%	6.8%	1.6%	2.0%	

Race	Number	Percent
JAPANESE	43,366	49.7%
CAUCASIAN	88	0.1%
HAWAIIAN & PART-HAWAIIAN	10,422	12.1%
FILIPINO	14,200	16.4%
CHINESE	7,800	9.0%
KOREAN	1,800	2.1%
PUERTO RICAN	2,300	2.7%
OTHER	1,000	1.2%
TOTAL	87,276	100.0%

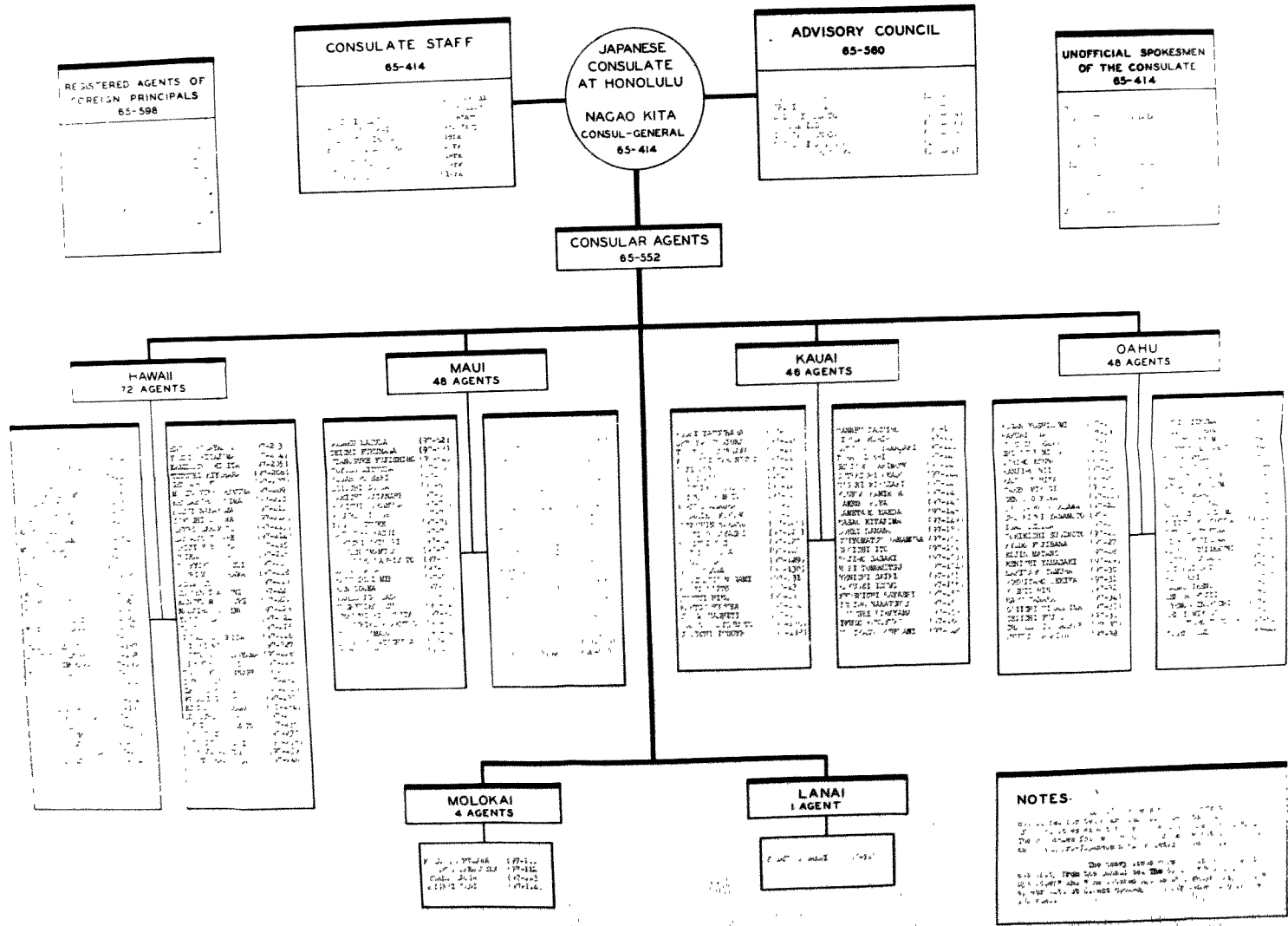
Year	Japanese	Caucasian	Hawaiian & Part-Hawaiian	Filipino	Chinese	Korean	Puerto Rican	Other
1920	40.7%							
1930	31%							
1940	37.3%	24.5%	15.2%	12.4%	6.8%	1.6%	2.0%	



# JAPANESE ACTIVITIES IN THE TERRITORY OF HAWAII



# JAPANESE CONSULAR ORGANIZATION IN HAWAII



# JAPANESE LANGUAGE SCHOOLS IN HAWAII

IMPERIAL EDUCATION  
\*ASSOCIATION

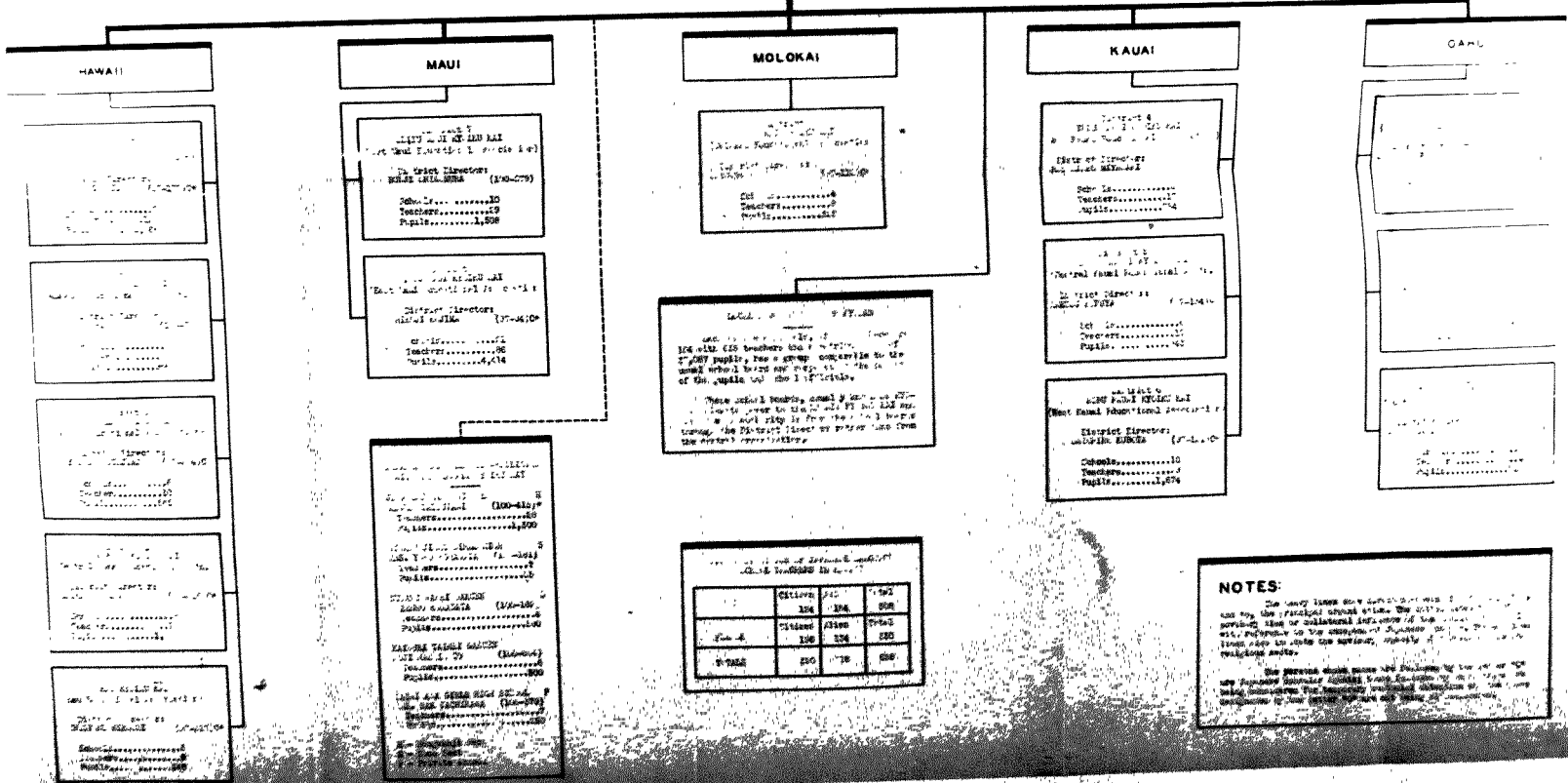
HAWAII KYOIKU KAI  
(HAWAII EDUCATIONAL ASSOCIATION)  
65-583

JAPANESE CONSULATE  
HONOLULU T.H.  
65-414

OVERSEAS JAPANESE  
CENTRAL SOCIETY  
65-584

JAPANESE FOREIGN  
MINISTRY

Bureau of  
WITH THE STATE DEPARTMENT



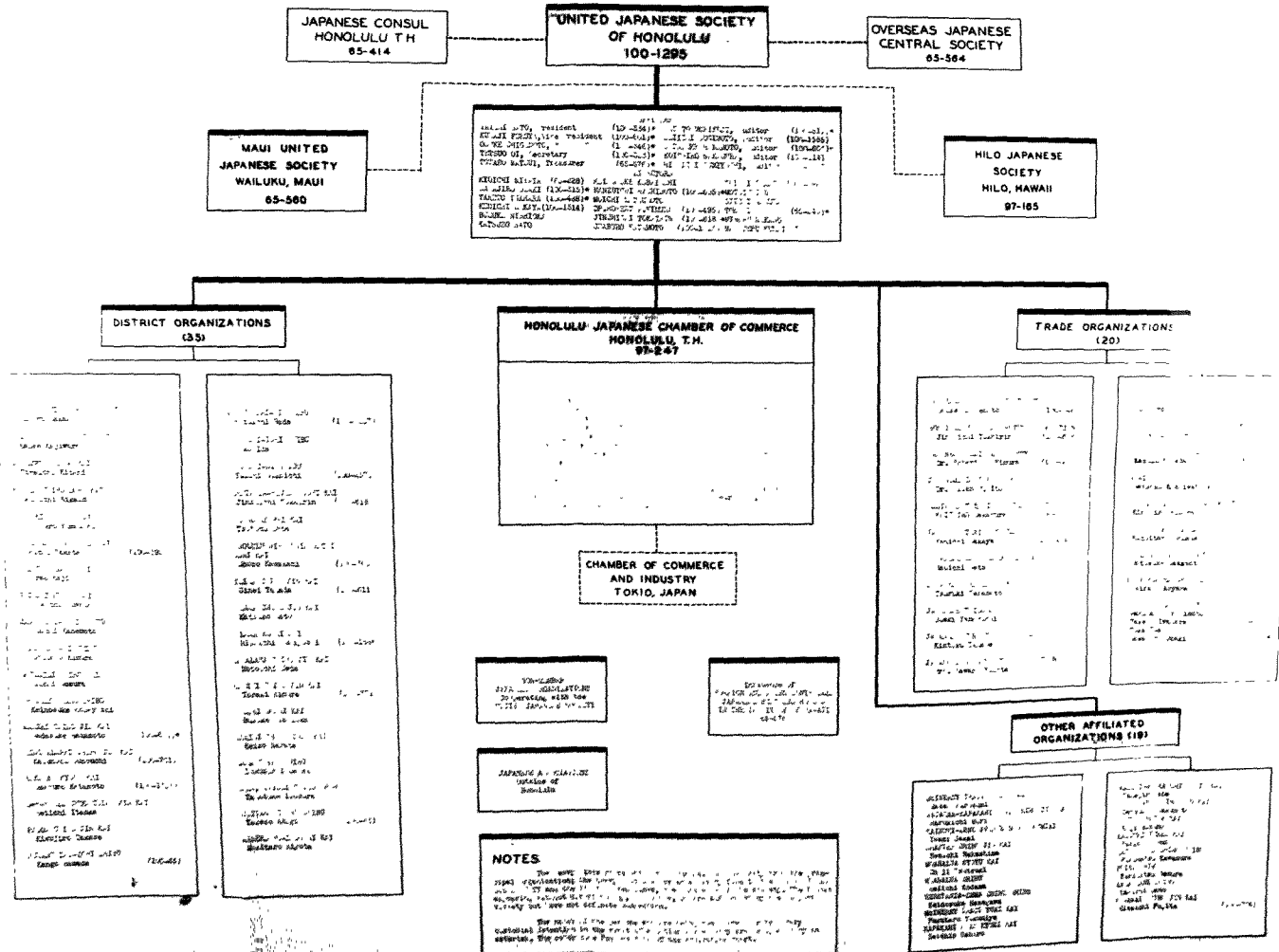
These school teachers, some of whom are 27-30 years of age, have a group comparable to the usual school teachers in the U.S. The majority of the pupils are the 1st graders.

Year	Males		Females	
	1950	1951	1950	1951
1st Grade	100	100	100	100
2nd Grade	100	100	100	100
3rd Grade	100	100	100	100
4th Grade	100	100	100	100
5th Grade	100	100	100	100
6th Grade	100	100	100	100
7th Grade	100	100	100	100
8th Grade	100	100	100	100
9th Grade	100	100	100	100
10th Grade	100	100	100	100

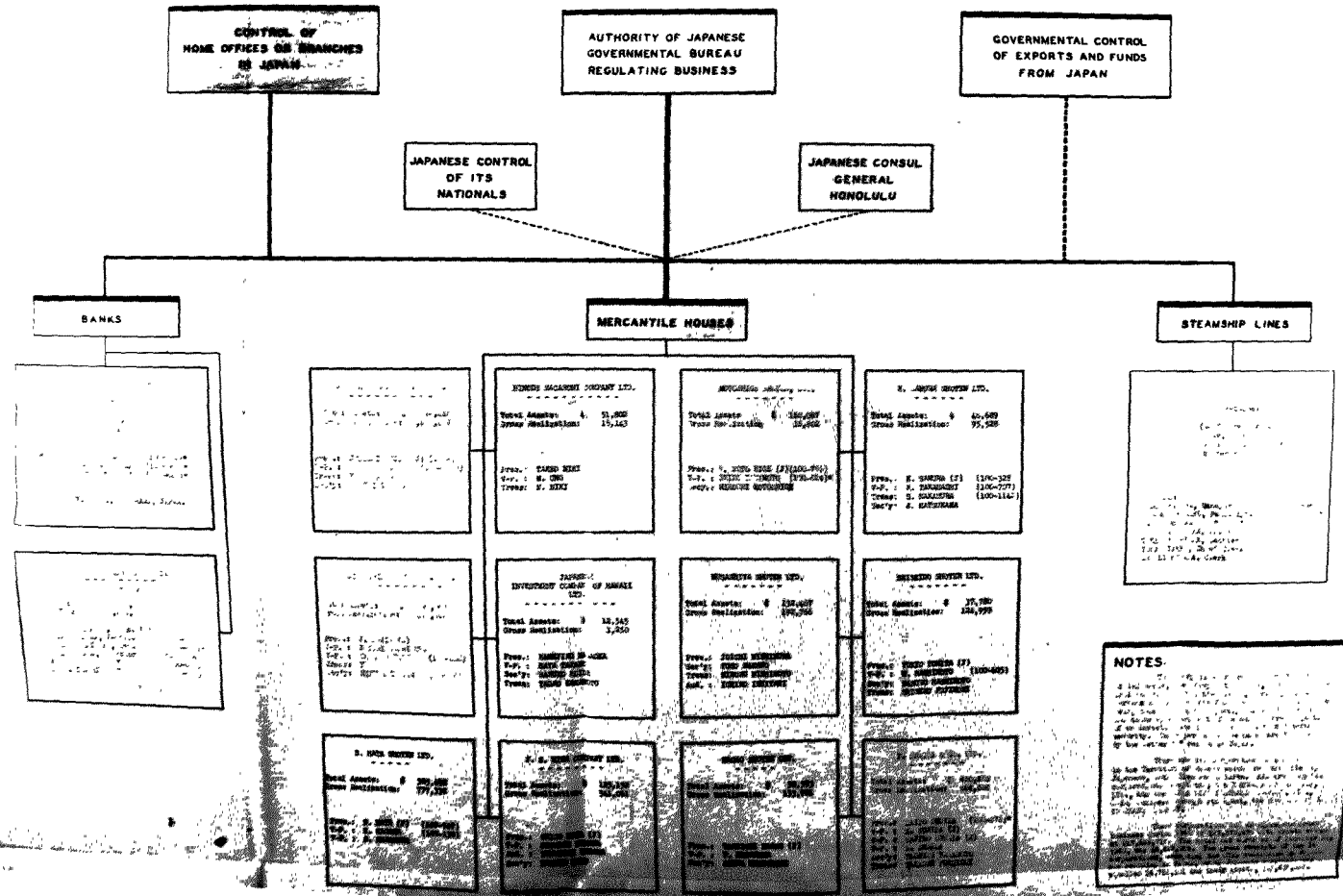
**NOTES:**

The data shown here is preliminary and is subject to change by the principal school officials. The data shown here is for the year 1950 and is not necessarily representative of the entire year. The data shown here is for the year 1950 and is not necessarily representative of the entire year.

# UNITED JAPANESE SOCIETY OF HONOLULU



# MAJOR FOREIGN CONTROLLED JAPANESE CORPORATIONS IN HAWAII

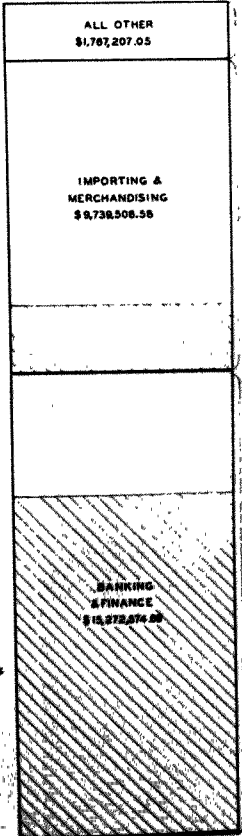


# ALIEN JAPANESE CONTROLLED CORPORATIONS IN HAWAII

CORPORATIONS CONTROLLED BY ALIENS IN HAWAII

Company Name	Value
ALL OTHER	\$1,767,207.05
IMPORTING & MERCHANDISING	\$8,738,508.58
BANKING & FINANCE	\$1,872,876.80
OTHER	\$1,872,876.80

\$26,779,308.32



CORPORATIONS CONTROLLED BY ALIENS IN HAWAII

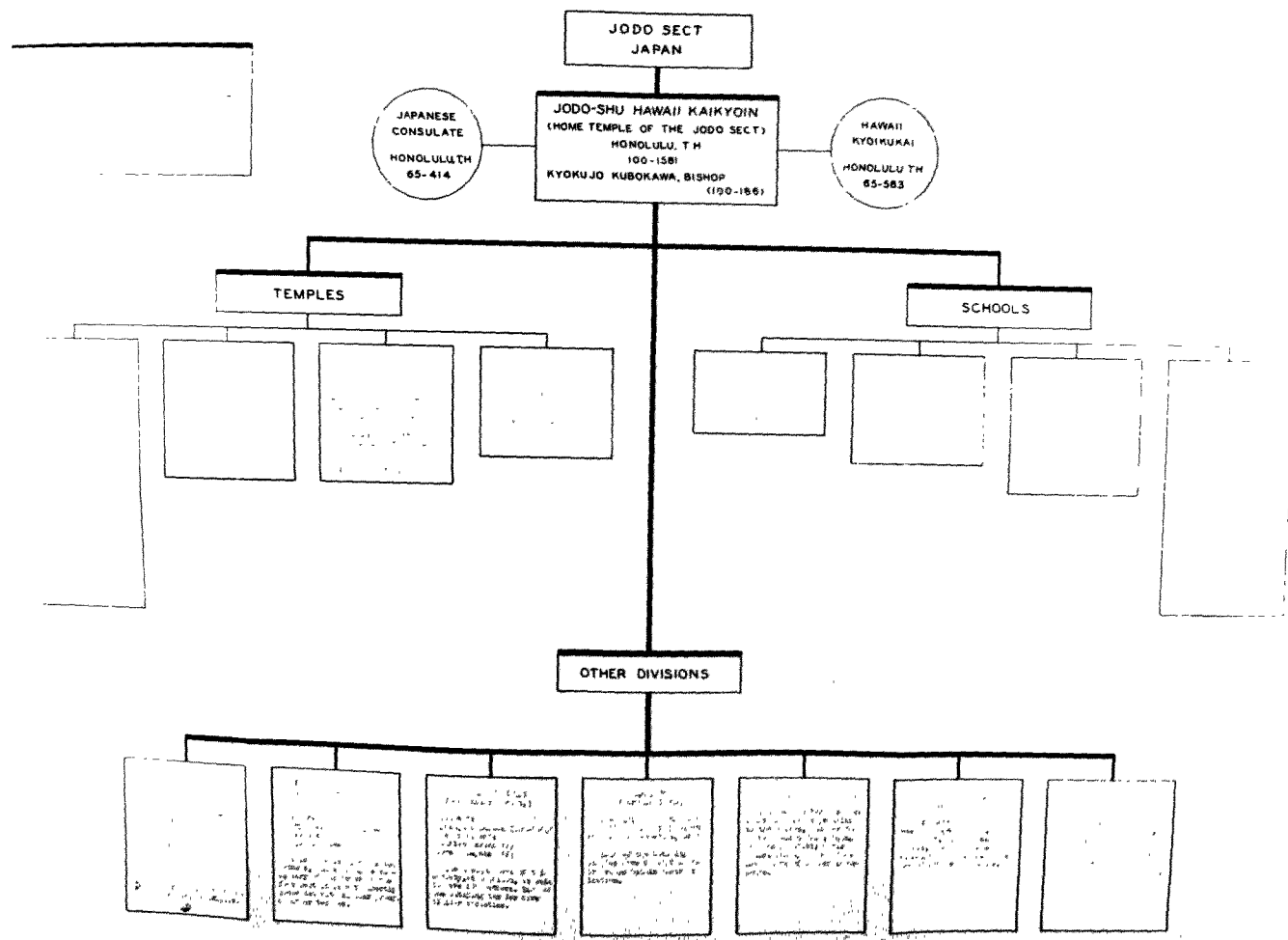
Company Name	Value
ALL OTHER	\$1,767,207.05
IMPORTING & MERCHANDISING	\$8,738,508.58
BANKING & FINANCE	\$1,872,876.80
OTHER	\$1,872,876.80

LEGEND -

Symbol	Description
□	ALL OTHER
▨	IMPORTING & MERCHANDISING
▩	BANKING & FINANCE
▧	OTHER

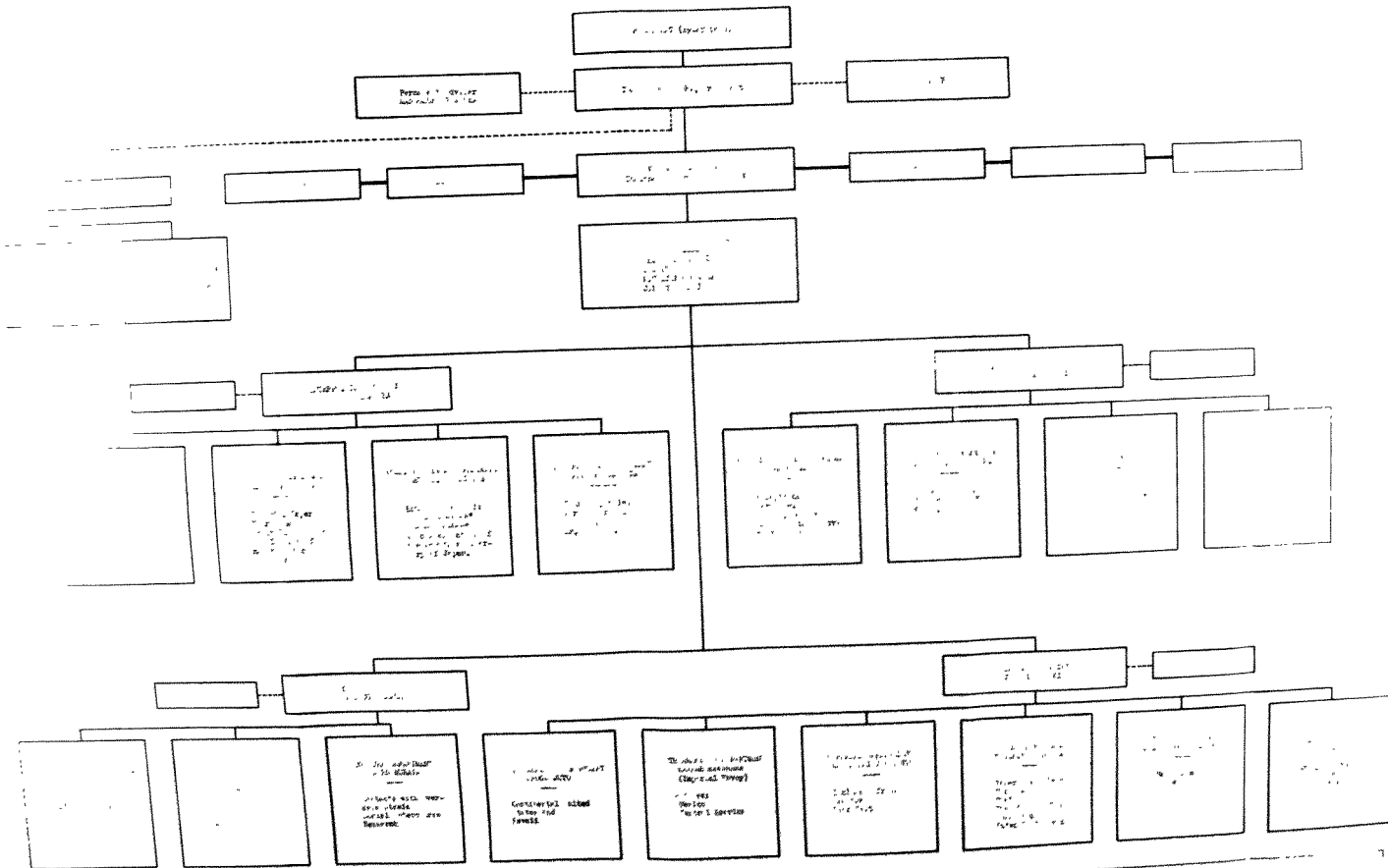


# JODO-SHU ORGANIZATION IN THE TERRITORY OF HAWAII



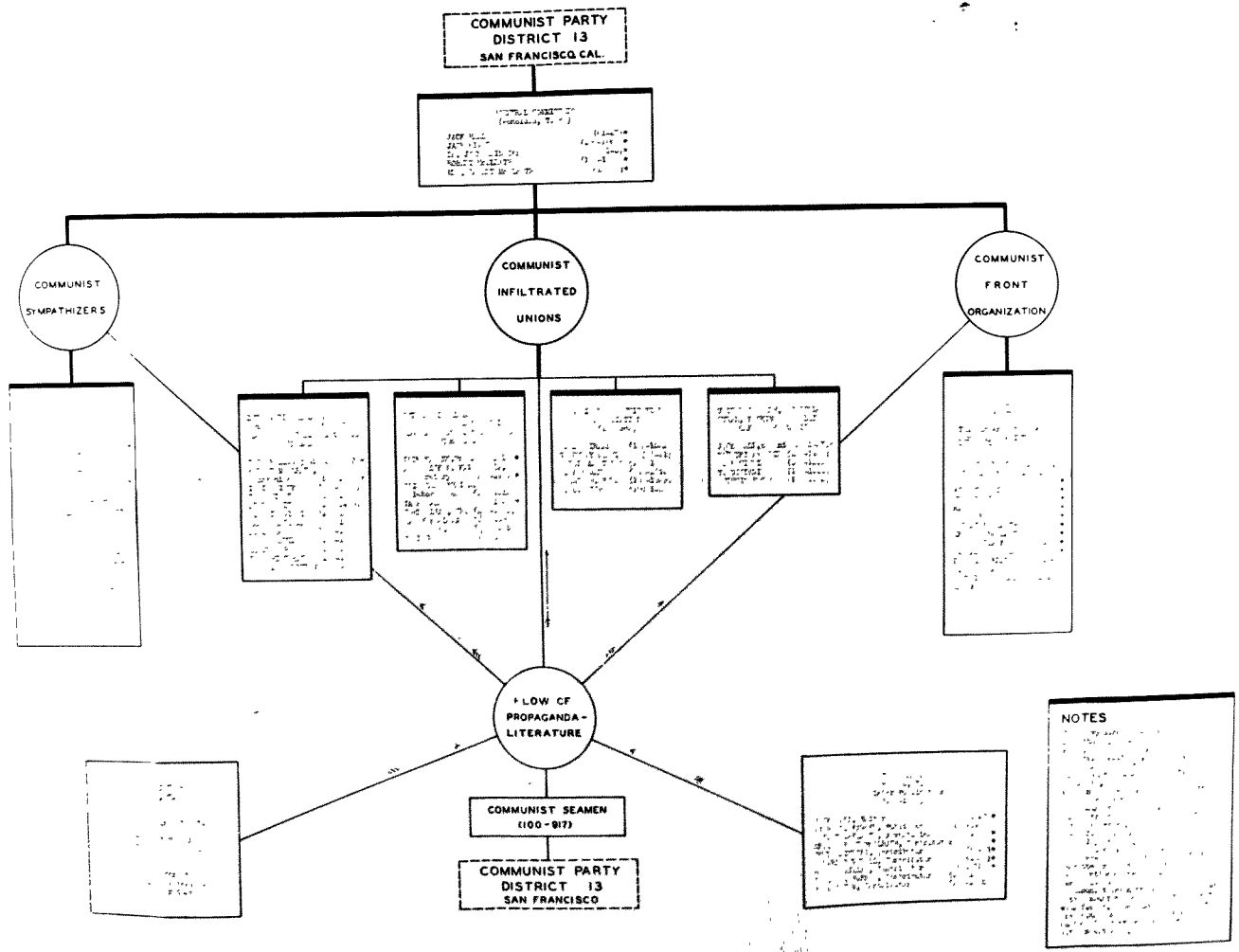


# OVERSEAS JAPANESE CENTRAL SOCIETY (KAIGAI DOHO TYUOKAI)

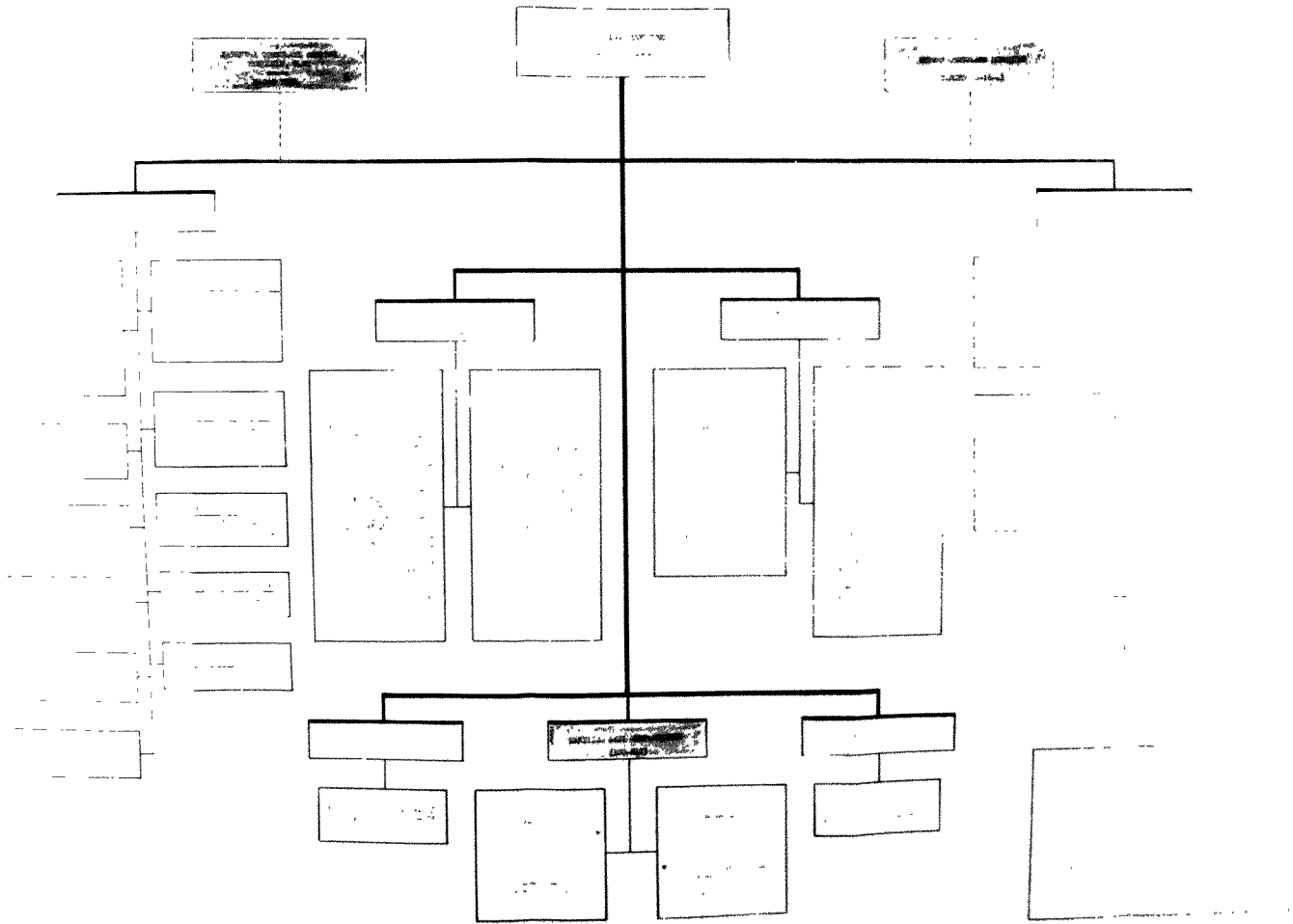


NOTE: The single line indicates that the individuals named are not necessarily active in the organization. The names are shown for information only. The names are shown for information only. The names are shown for information only.

# COMMUNIST ACTIVITIES IN THE TERRITORY OF HAWAII

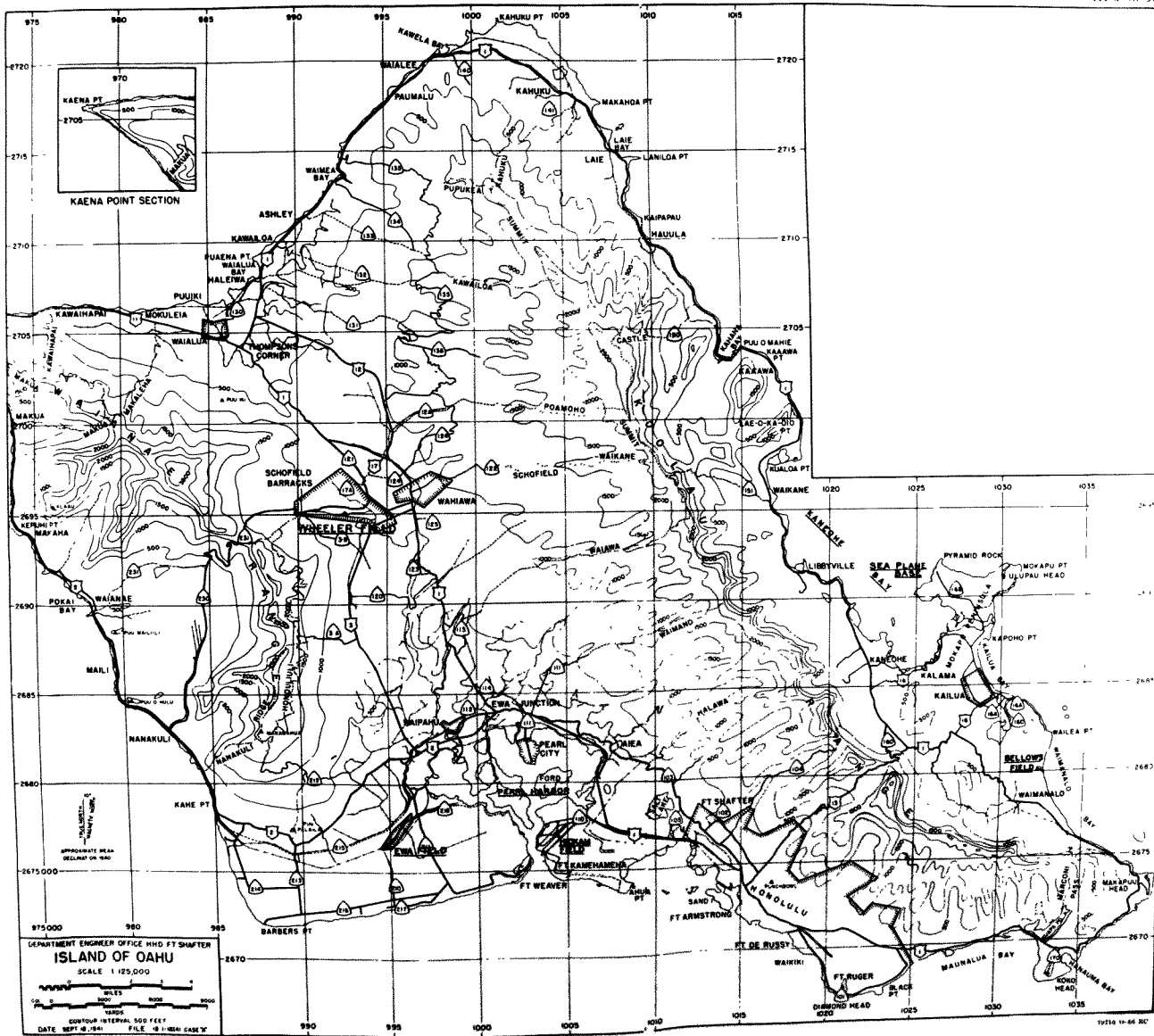


# GERMAN ACTIVITIES IN THE TERRITORY OF HAWAII



U.S. GOVERNMENT PRINTING OFFICE: 1954 O-44-80







SECRET

Location of Mark 485 Station  
on Dec. 7, 1946, is to be kept strictly confidential  
to the minimum number of personnel.

NOTE:  
1. This station is to be used only for the purpose of  
the Mark 485 program and is not to be used for  
any other purpose.  
2. This station is to be used only for the purpose of  
the Mark 485 program and is not to be used for  
any other purpose.



NAVY  
NAVY  
NAVY

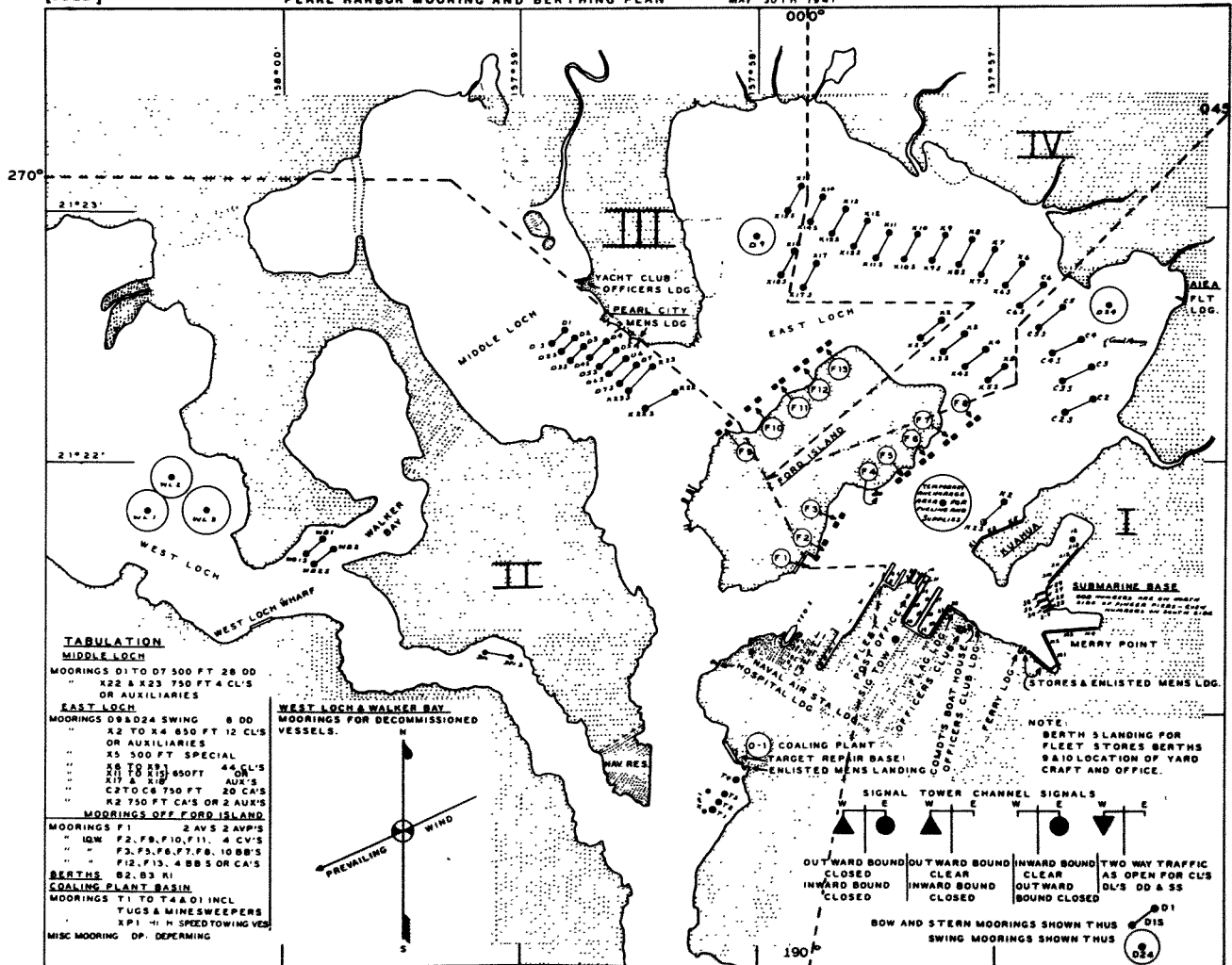
CO-11304

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

[552F]

PEARL HARBOR MOORING AND BERTHING PLAN

MAY 30TH 1941



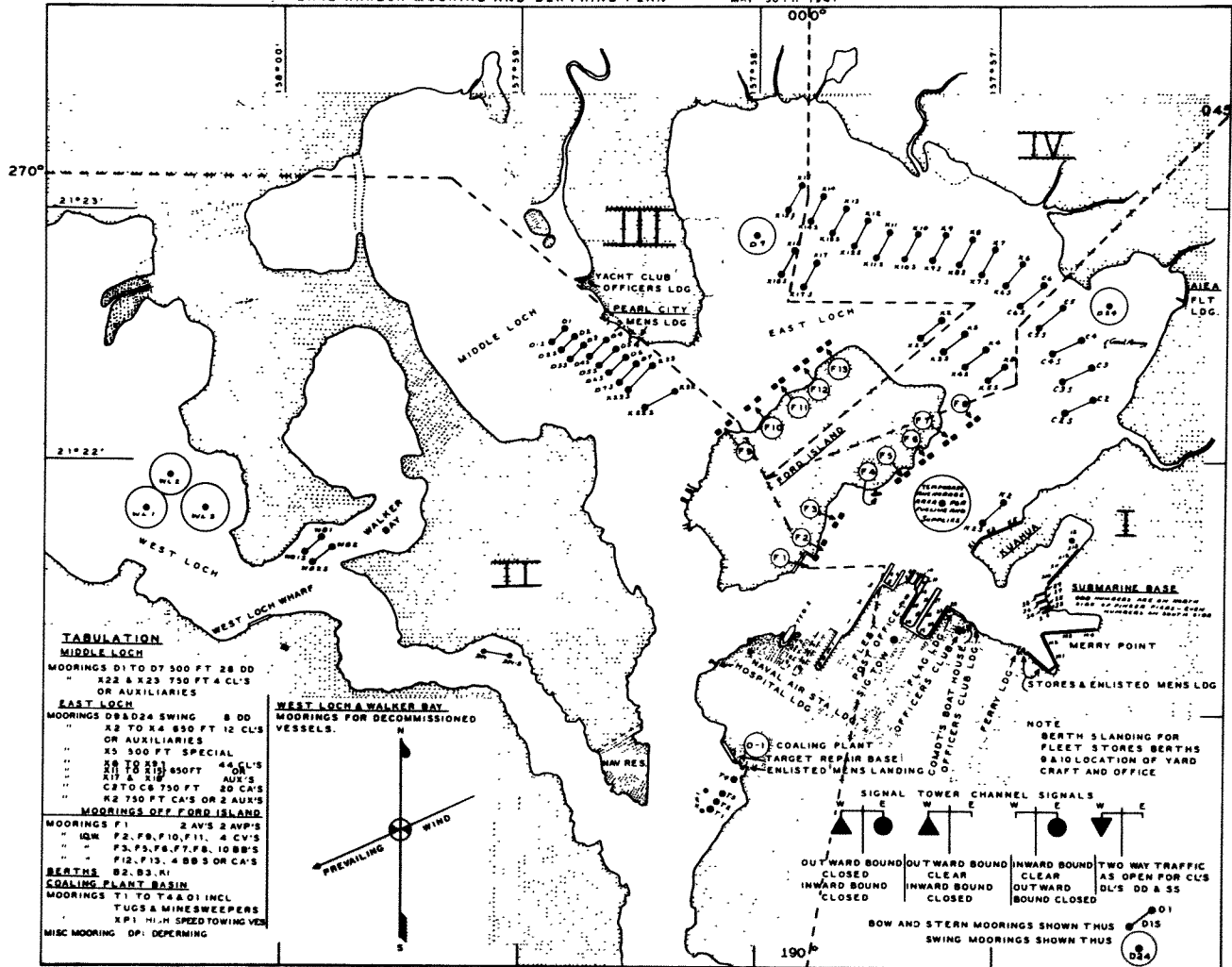
78716 O-46 RC



[S-A8]

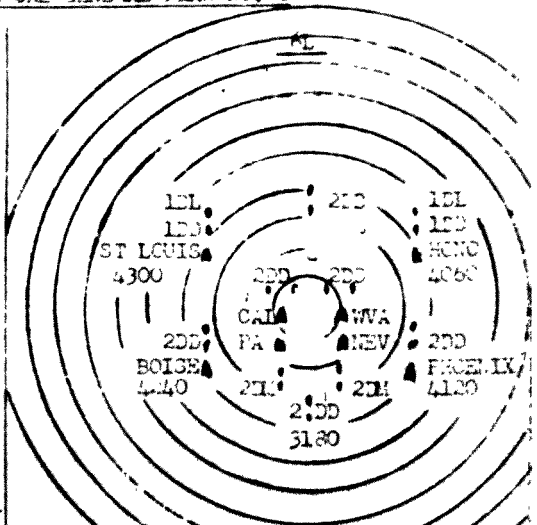
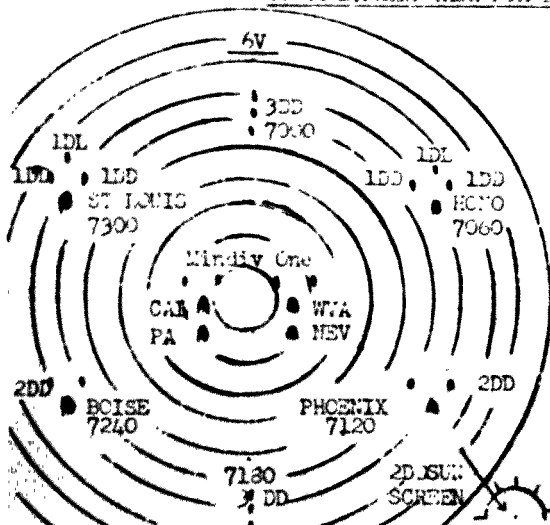
## PEARL HARBOR MOORING AND BERTHING PLAN

MAY 30TH 1941



79716 O-46 RC

ANNEX "HP"  
NO. ONE ANKRA TASK FORCE ONE GENERAL PLAN NO. 6

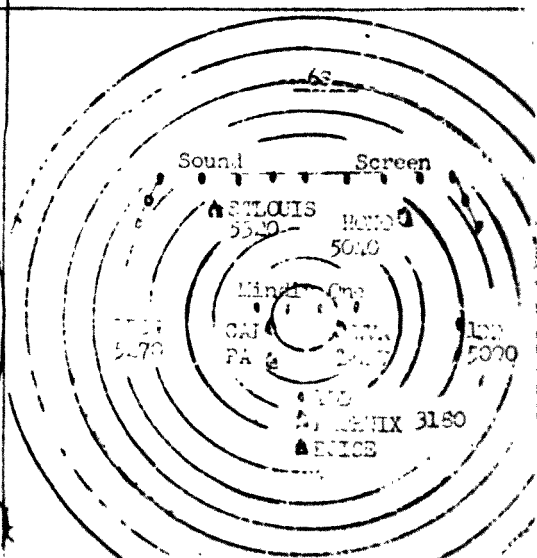
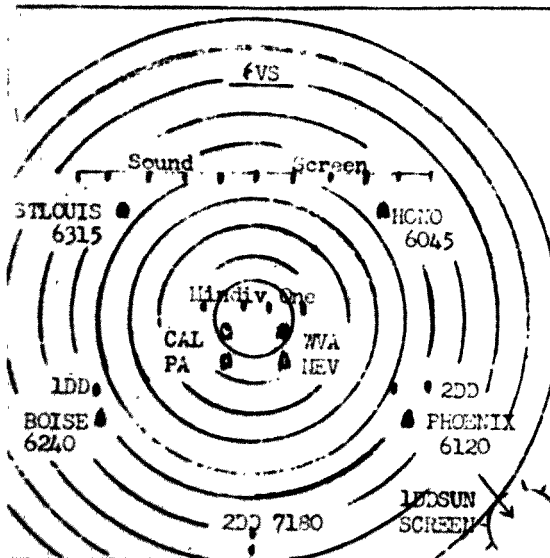


AIR PATROLS (AS ORDERED)

AT EVENING TWILIGHT ALL STATION UNITS TAKE NIGHT CRUISING STATIONS IN 6L, RETIRING WITH THE LOWERING VISIBILITY WITHOUT ADDITIONAL ORDERS.

DD'S TAKE STATION AHEAD OF HEAVY SHIP WITHIN EASY VISIBILITY RANGE AND ILLUMINATE HEAVY UNITS FOR HEAVY SHIPS.

AT MORNING TWILIGHT STATION UNITS ON CIRCLE 7 IN CRUISING DISPOSITION 6V PROCEED TO STATIONS WITH EXPANDING VISIBILITY WITHOUT FURTHER ORDERS.



AIR PATROLS AS ORDERED

ITEM NO. 40

APPENDIX

U.S. AIR FORCE, 1950, NAVY, 1950, FEDERAL BUREAU OF INVESTIGATION

2. The test is a series of turns which uses changes of speed as well as changes of course. Changes of speed will be made by changing speed of one engine.

Z17247 FL-4 RC, 40.

Dr. Lat.	Amount and direction of change of course	Resultant deviation from bearing	Amount to change speed in ft.	Resultant deviations from standard speed in kts.
1 - 00	10 Left	0	-2	0
0 - 50	15 Right	10 Right + 2		2 Over
0 - 45	10 Right	15 Left + 2		0
0 - 30	20 Left	25 Left - 2		2 Under
0 - 33	20 Left	5 Left - 2		0
0 - 23	35 Right	15 Right + 2		2 Over
0 - 15	15 Left	20 Left + 2		0
0 - 10	15 Left	5 Left + 2		0
0 - 04	20 Right	20 Right - 2		2 Under
0 - 00	0	0	0	0



ITEM NO. 42

19

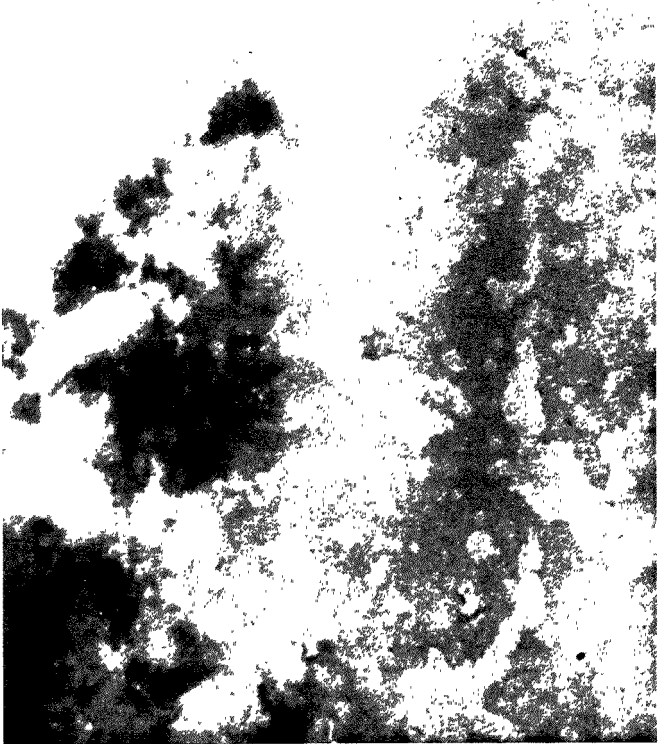


200

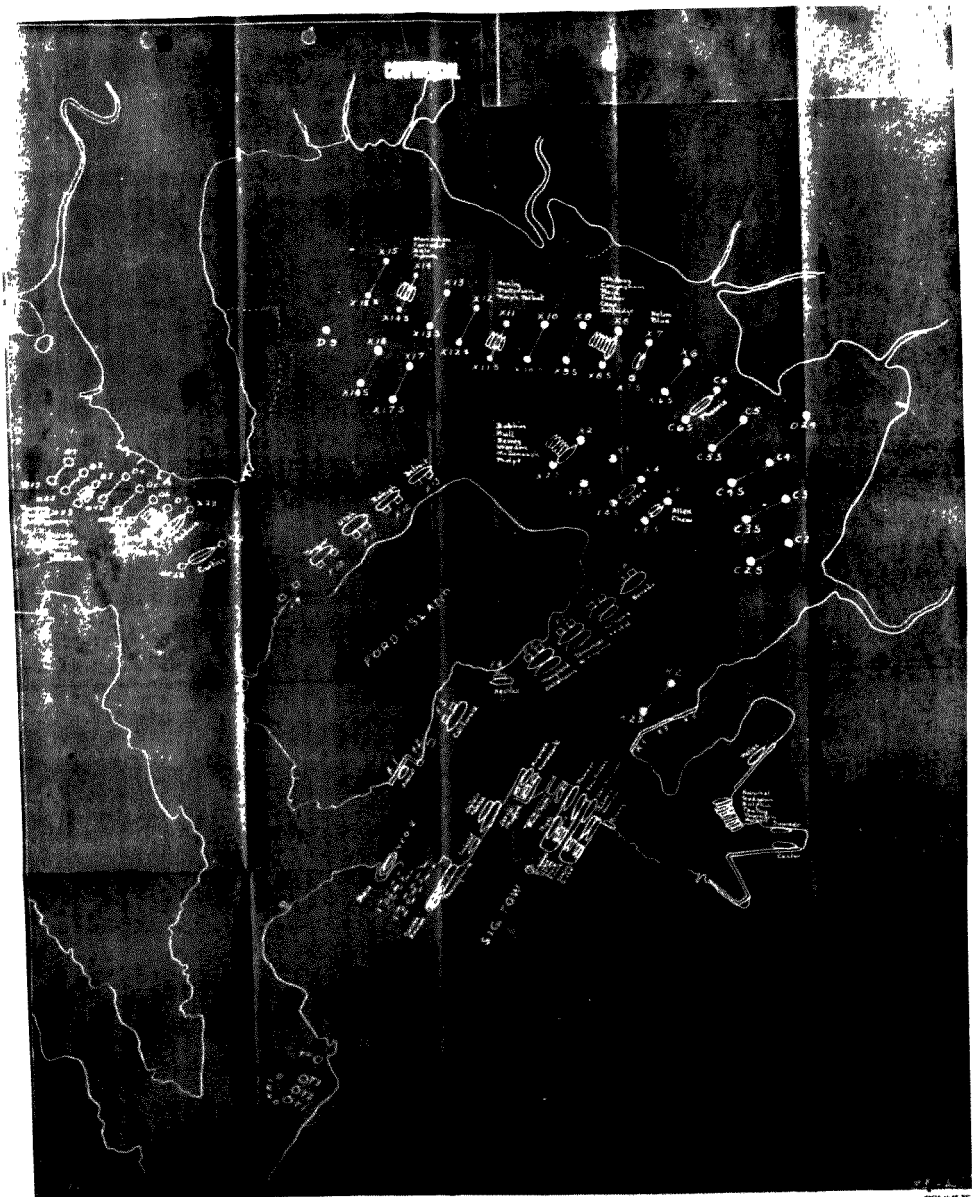
79716 0-46 RC

ITEM NO. 43

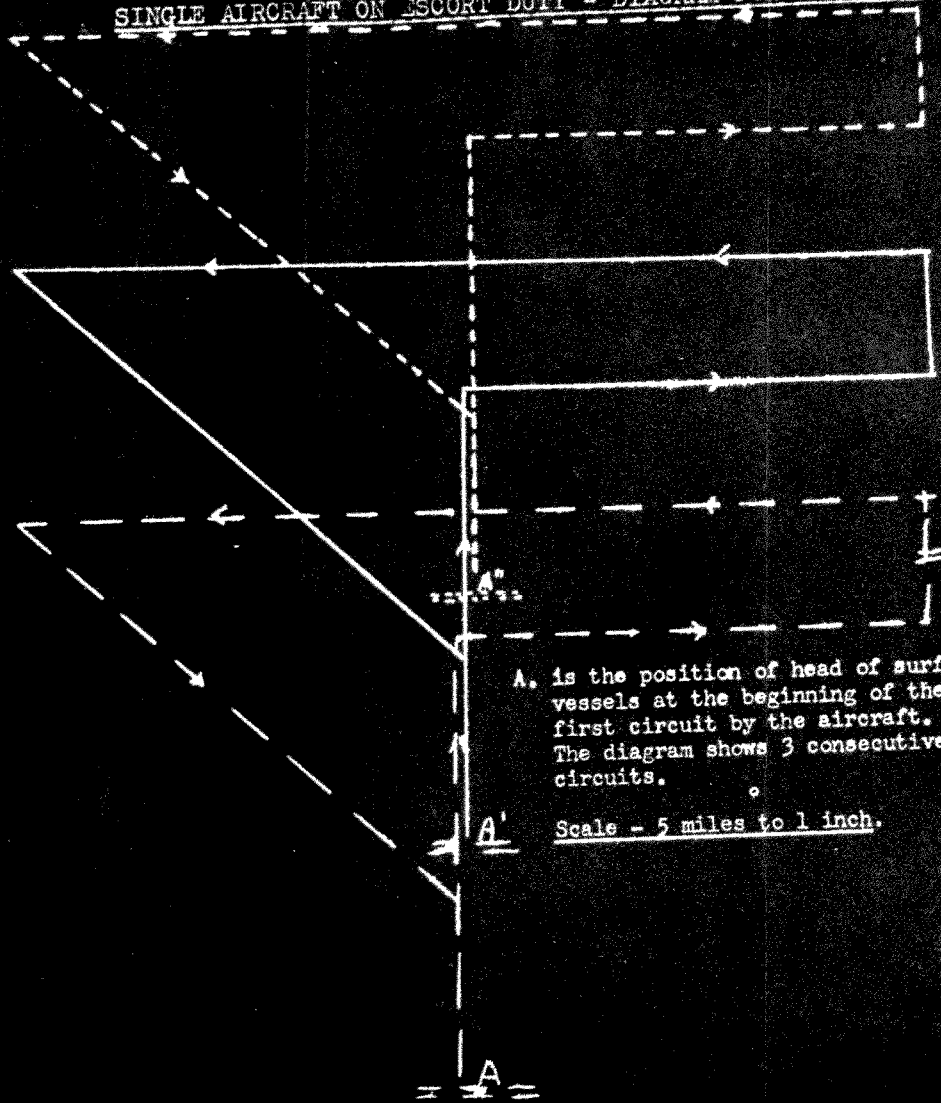
11



79716 O-46 RC



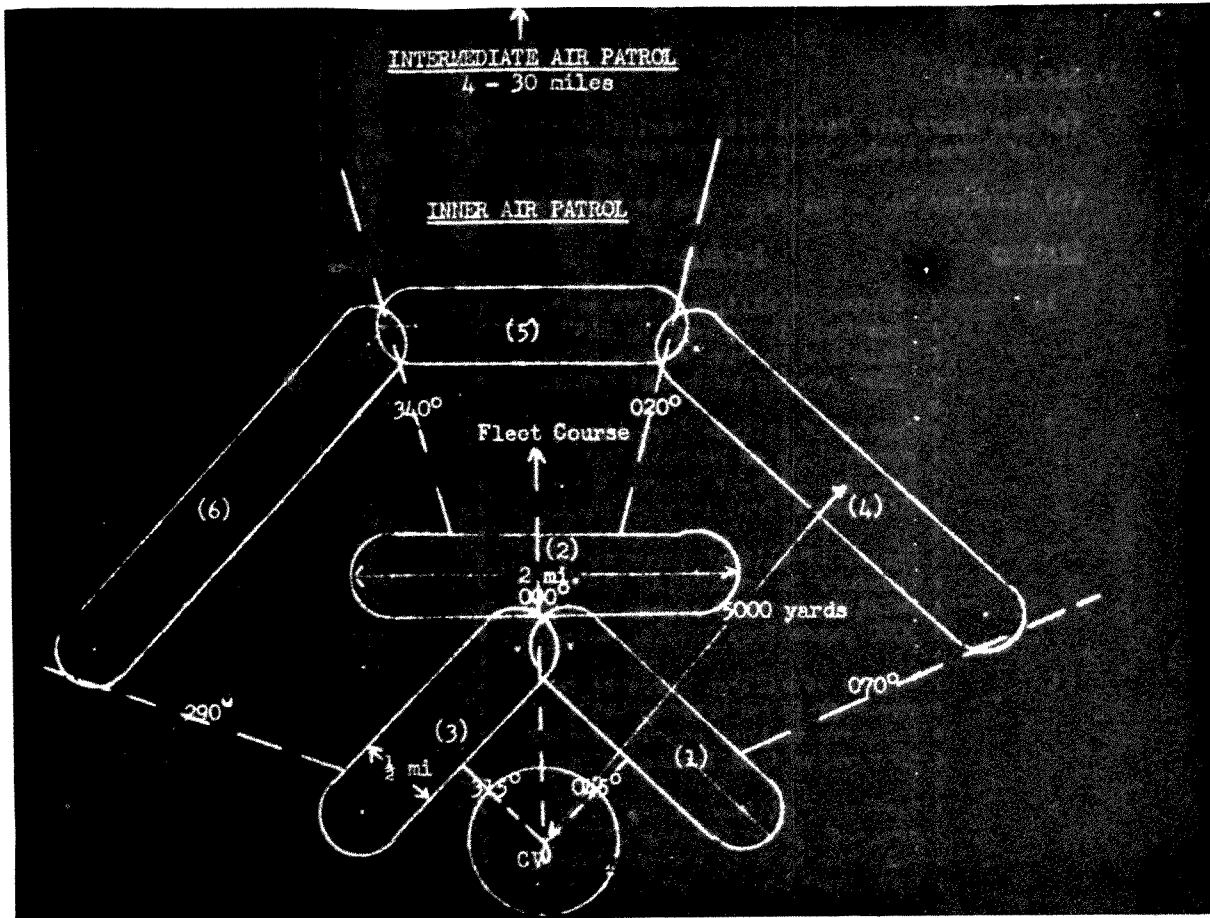
CONFIDENTIAL      DEPARTMENT OF STANDARD ANTI-SUBMARINE PATROL      01296  
 SINGLE AIRCRAFT ON ESCORT DUTY - DIAGRAM FOR 8 KNOT CONVOY

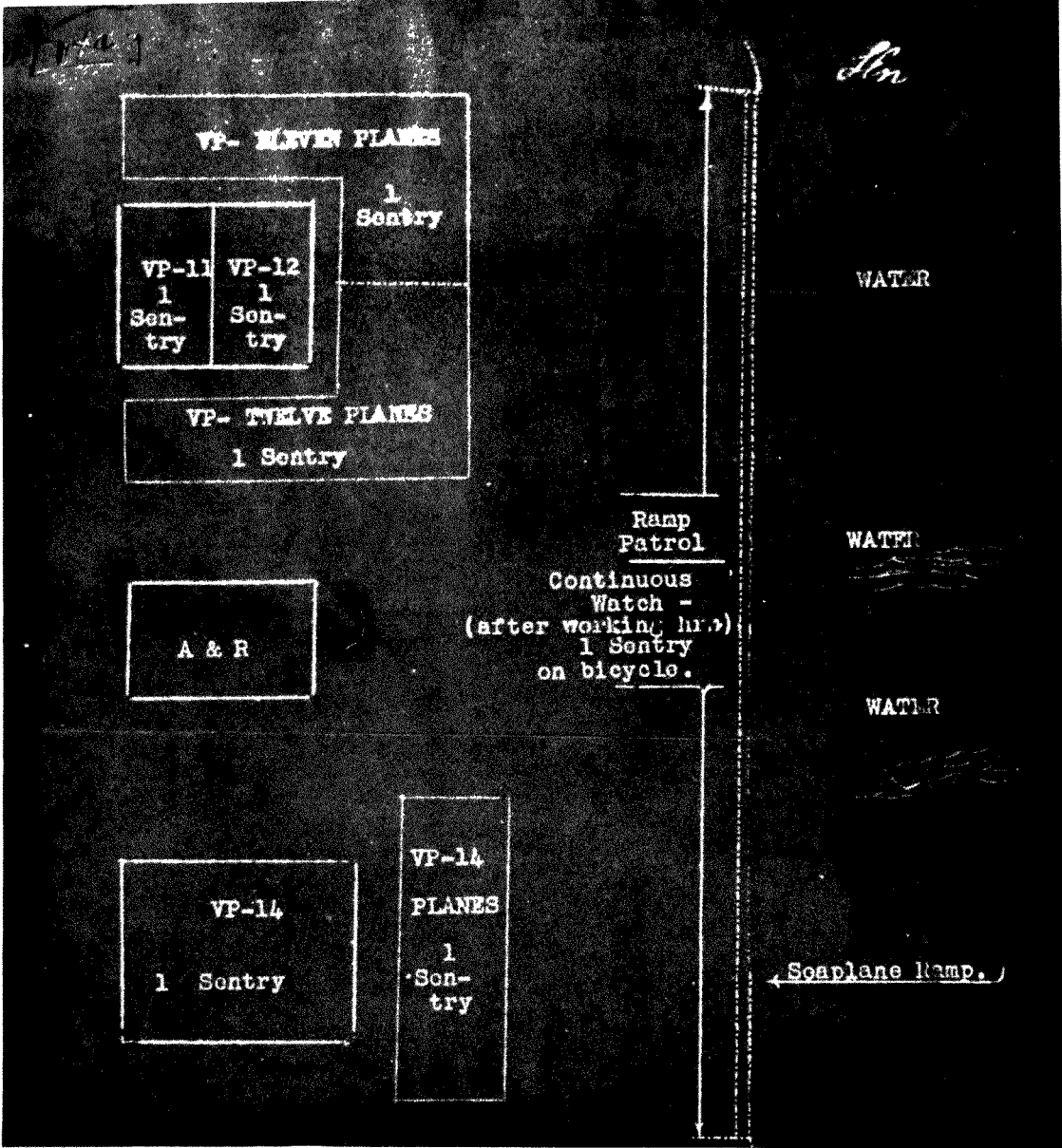


A. is the position of head of surface vessels at the beginning of the first circuit by the aircraft. The diagram shows 3 consecutive circuits.

Scale - 5 miles to 1 inch.







*Sn*

VP- ELEVEN PLANES

VP-11 1 Sentry	VP-12 1 Sentry
----------------------	----------------------

1  
Sentry

VP- TWELVE PLANES

1 Sentry

A & R

Ramp  
Patrol

Continuous  
Watch -  
(after working hrs)  
1 Sentry  
on bicycle.

WATER

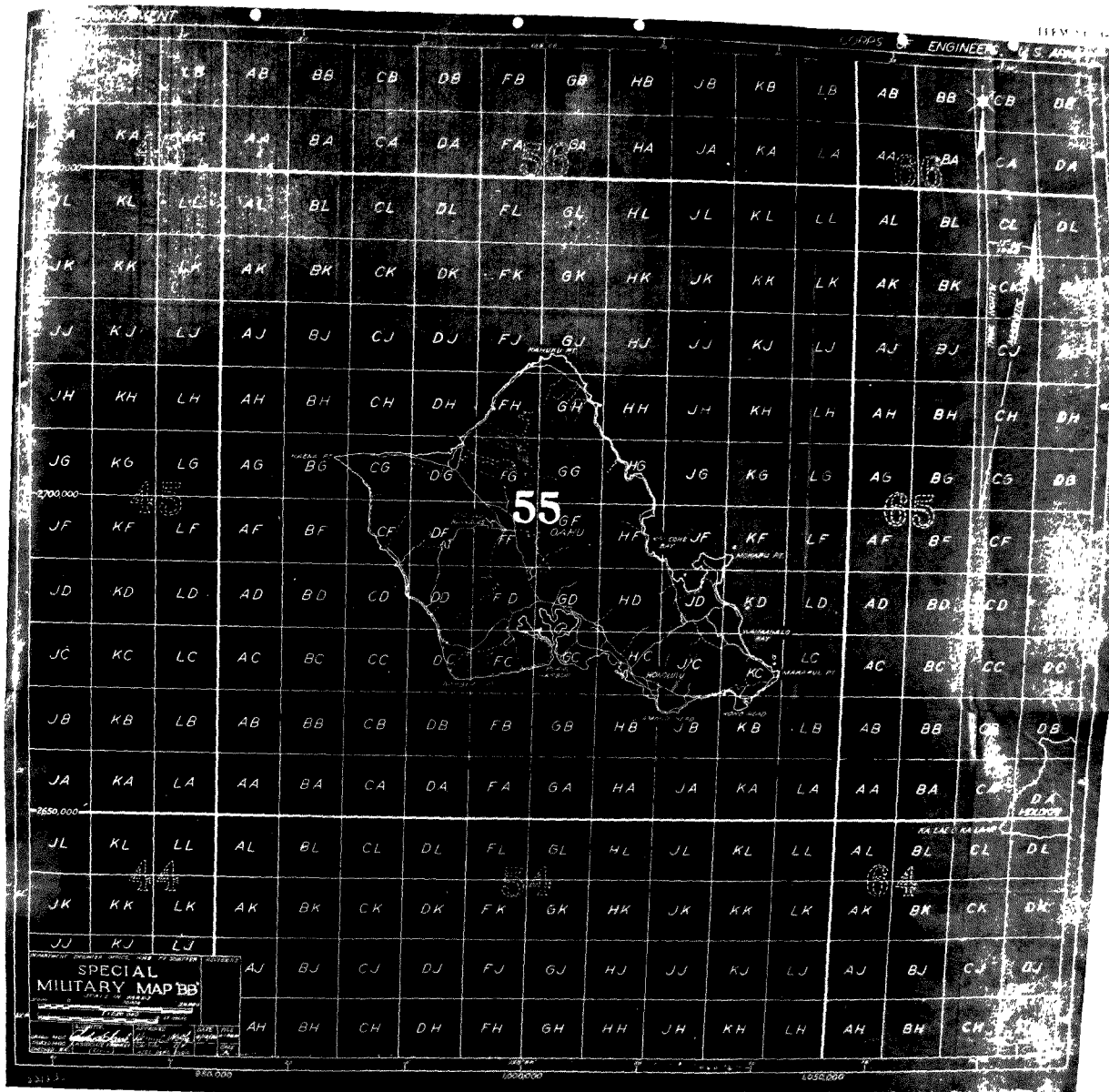
WATER

WATER

VP-14  
1 Sentry

VP-14  
PLANES  
1  
Sentry

← Seaplane Ramp.



2512

2500,000

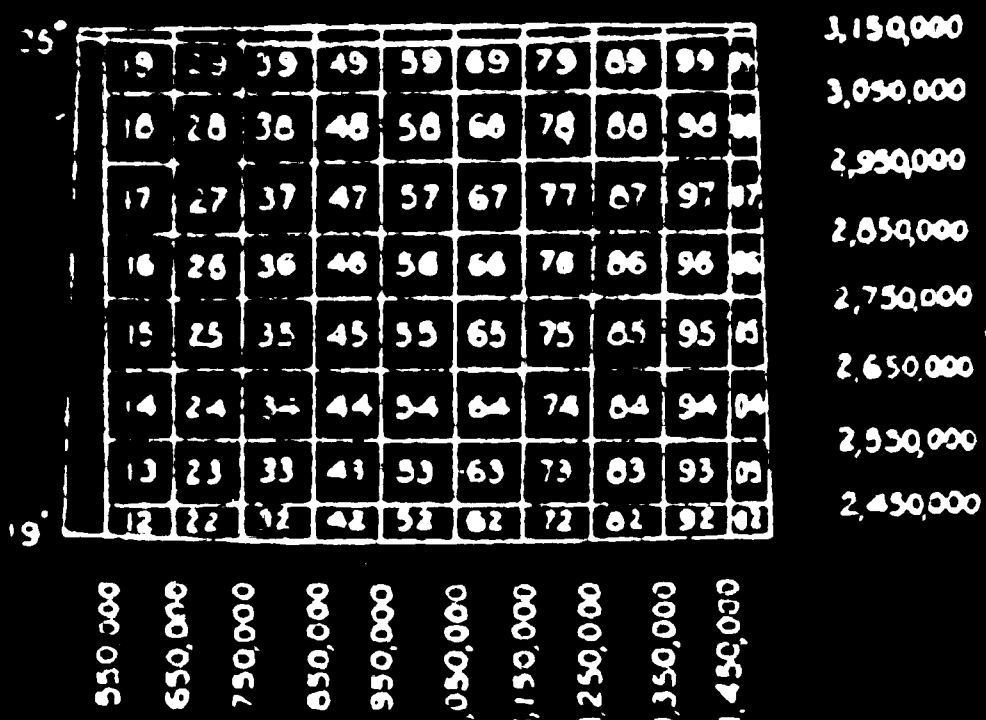
2500,000

2500,000

# HAWAIIAN ISLANDS

## BASIC SQUARE

FIG 1



## ANY REGION

Any Odd Multiple of 50,000 yds

FIG 2

Any Odd Multiple of 50,000 yds

140,000	AL	BL	CL	DL	FL	GL	HL	JL	KL	LL
130,000	AK	BK	CK	DK	FK	GK	HK	JK	KK	LK
120,000	AJ	BJ	CJ	DJ	FJ	GJ	HJ	JJ	KJ	LJ
110,000	AH	BH	CH	DH	FH	GH	HH	JH	KH	LH
100,000	AG	BG	CG	DG	FG	GG	HG	JG	KG	LG
90,000	AF	BF	CF	DF	FF	GF	HF	JF	KF	LF
80,000	AD	BD	CD	DD	FD	GD	HD	JD	KD	LD
70,000	AC	BC	CC	DC	FC	GC	HC	JC	KC	LC
60,000	AB	BB	CB	DB	FB	GB	HB	JB	KB	LB
	AA	BA	CA	DA	FA	GA	HA	JA	KA	LA

Any Odd Multiple of 50,000 yds

60,000 70,000 80,000 90,000 100,000 110,000 120,000 130,000 140,000

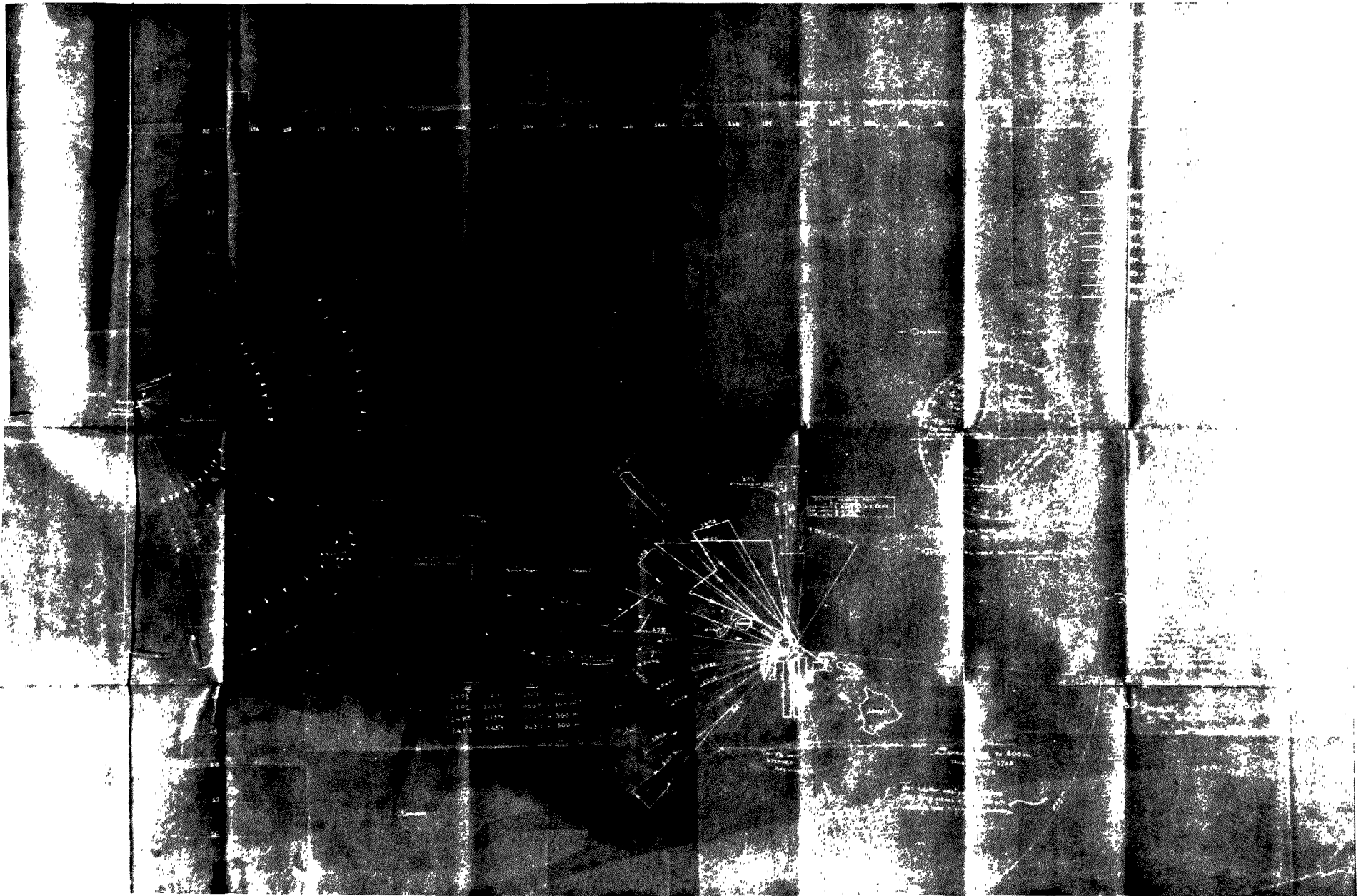
Any Odd Multiple of 50,000 yds

Each Region 100,000 yards to a side  
Each Area 10,000 yards

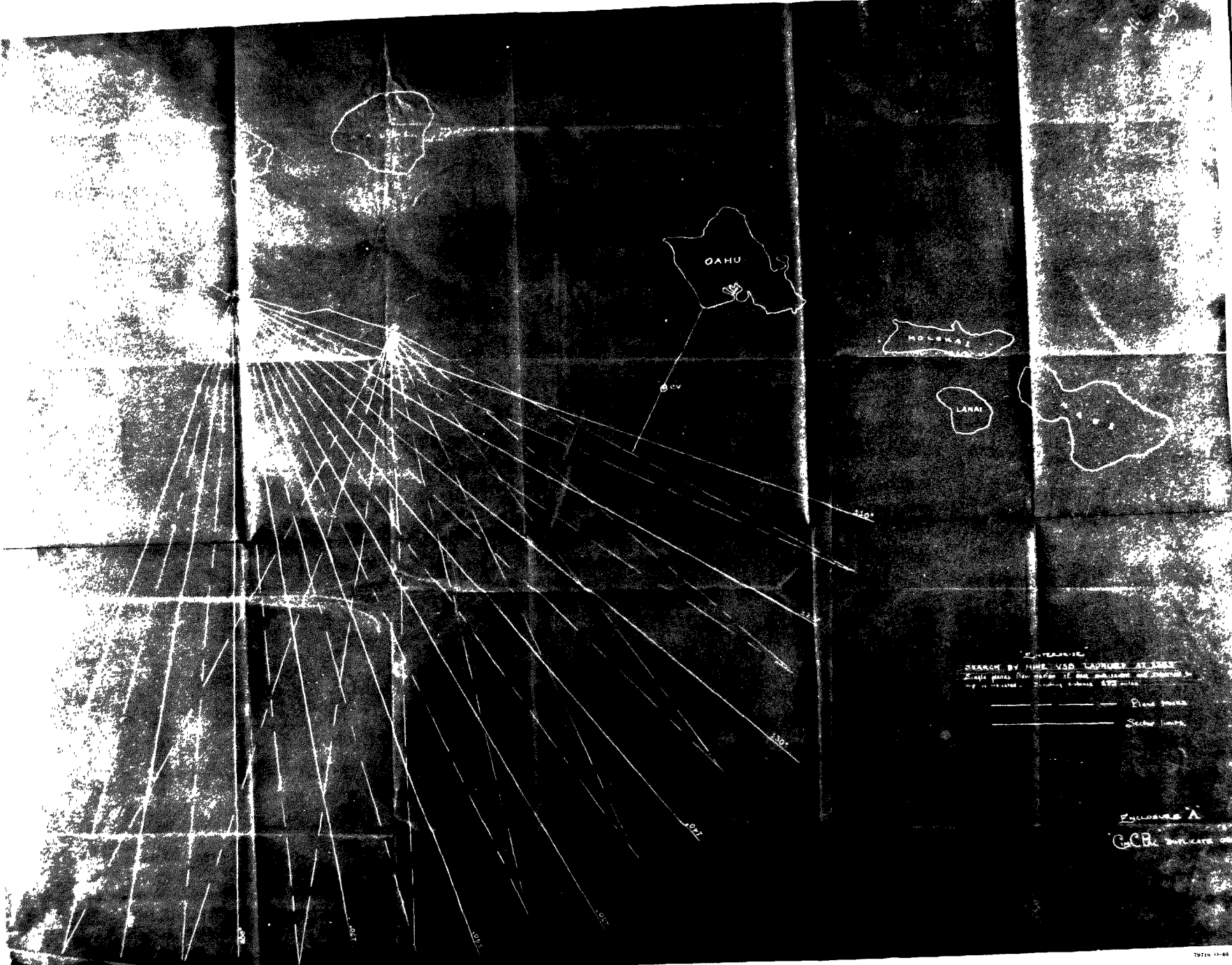
*Handwritten notes in the top right corner.*



*with the Jure Corp*







OAHU  
 MOLOKAI  
 LANAI

SEARCH BY NAME AND ADDRESS AT THE  
 State of Hawaii, Department of Public Safety  
 and is hereby certified to be a true and correct copy of the original.

\_\_\_\_\_ Place  
 \_\_\_\_\_ State

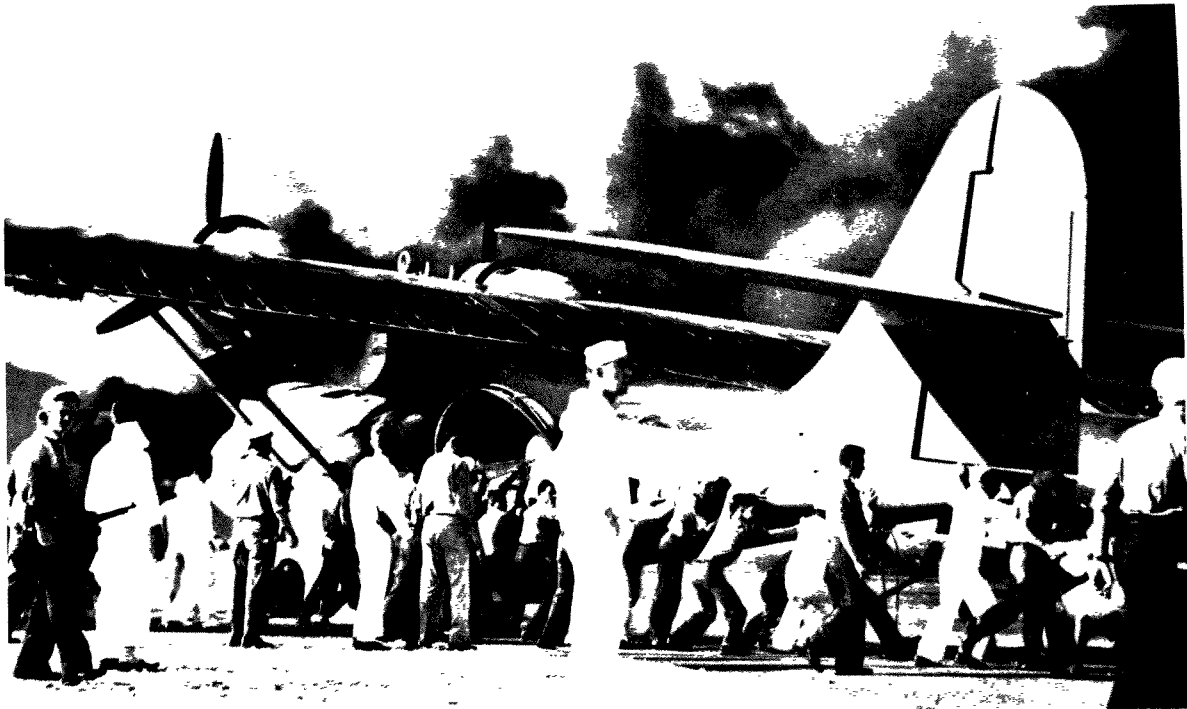
ENCLOSURE A  
 C.C.P. BUREAU OF INVESTIGATION



DEFECTIVE ORIGINAL COPY

DEFECTIVE ORIGINAL COPY





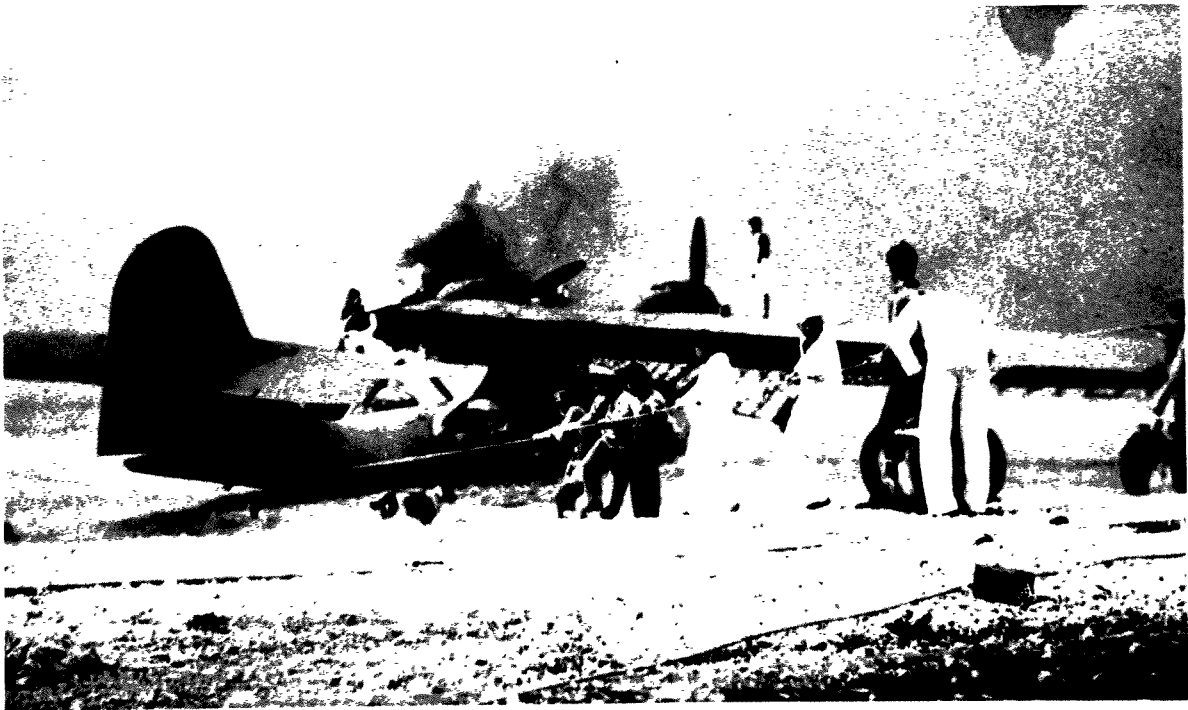
79716 O-46 HC

ITEM NO. 54



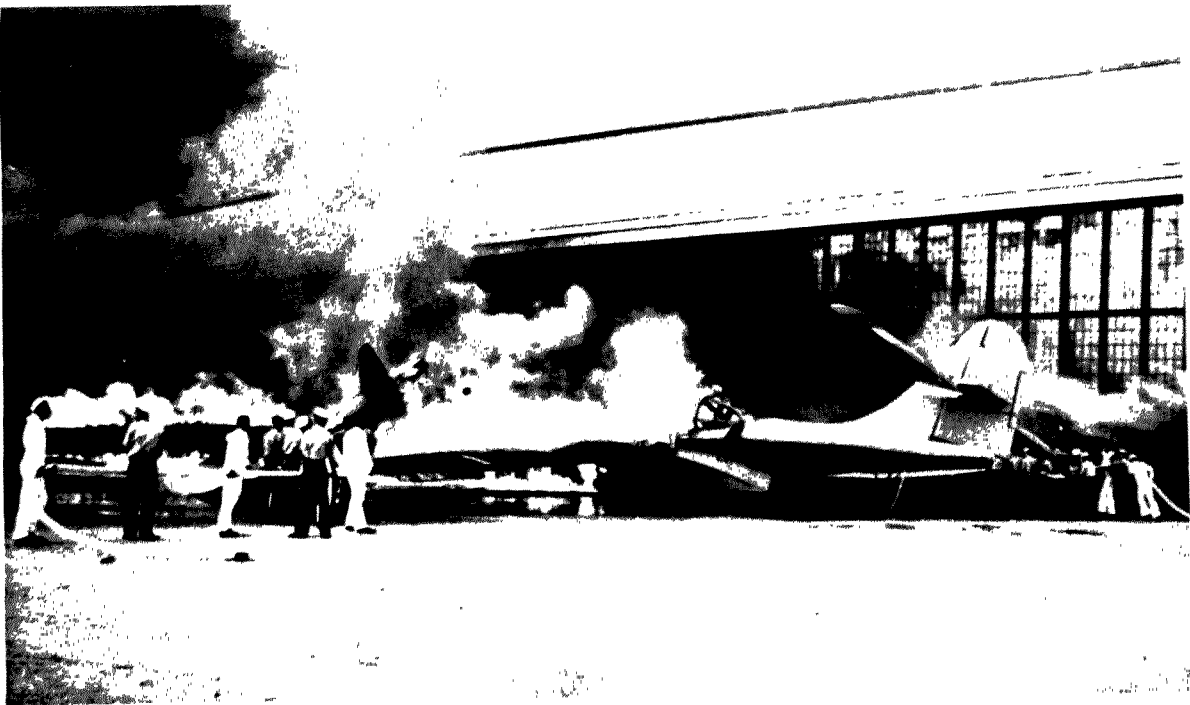
79718 0-46 RC

ITEM NO. 55



79718 O-48 BC

ITEM NO. 56



ITEM NO. 57

79716 O-46 RC



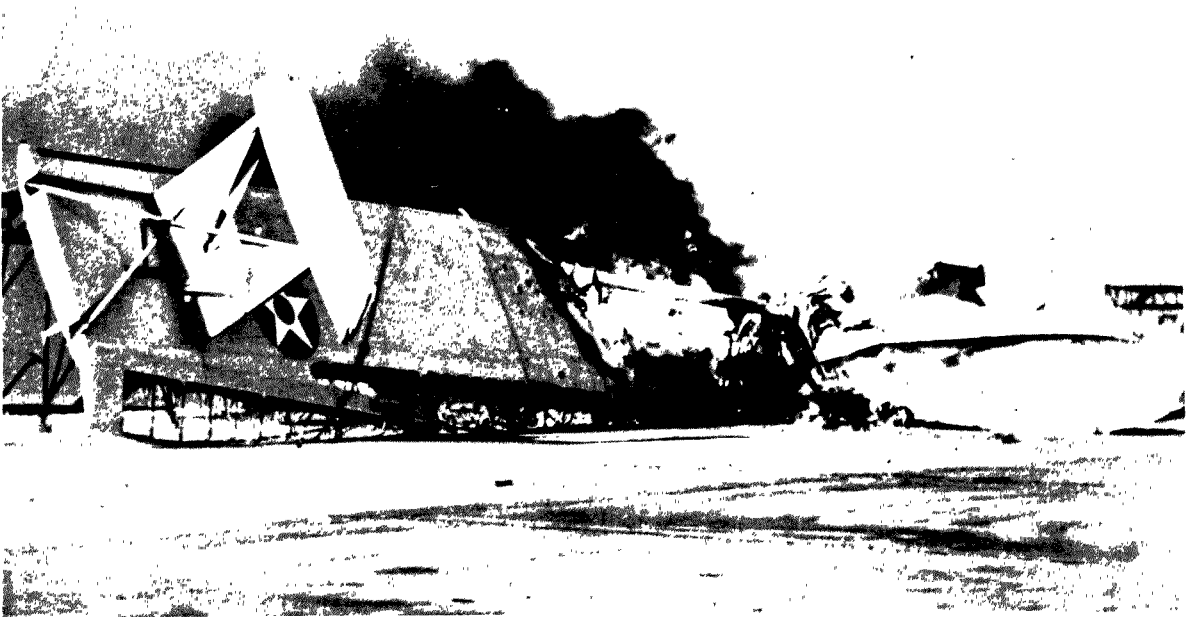
79716 O-46 RC

ITEM NO. 58



79716 O-46 RC

ITEM NO. 59



79716 O-48 RC

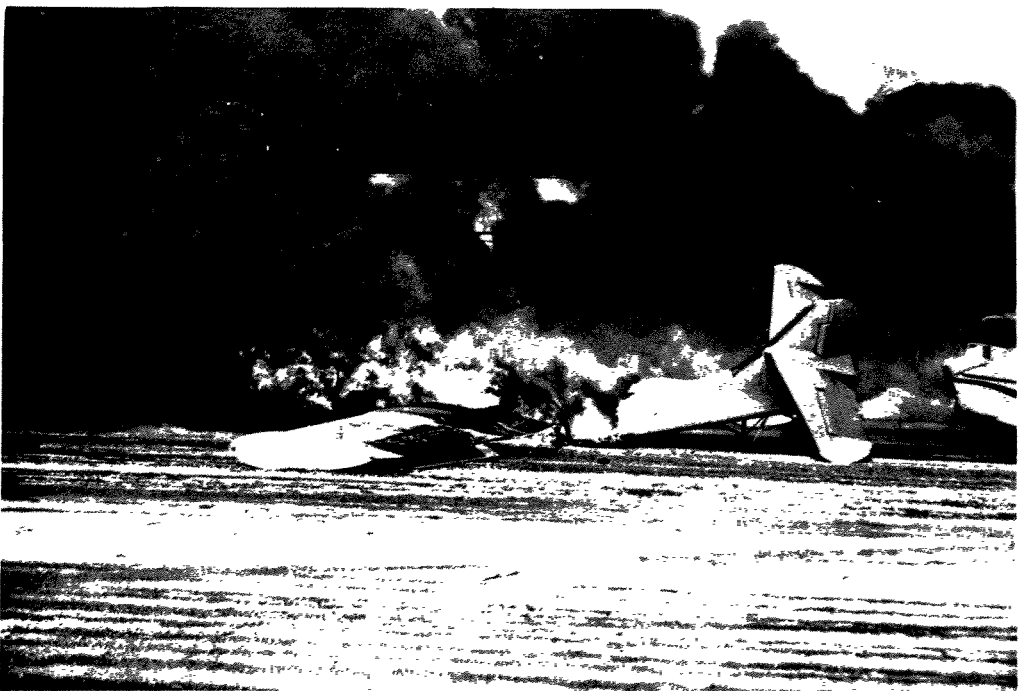
ITEM NO. 60

79116 O 48 RC



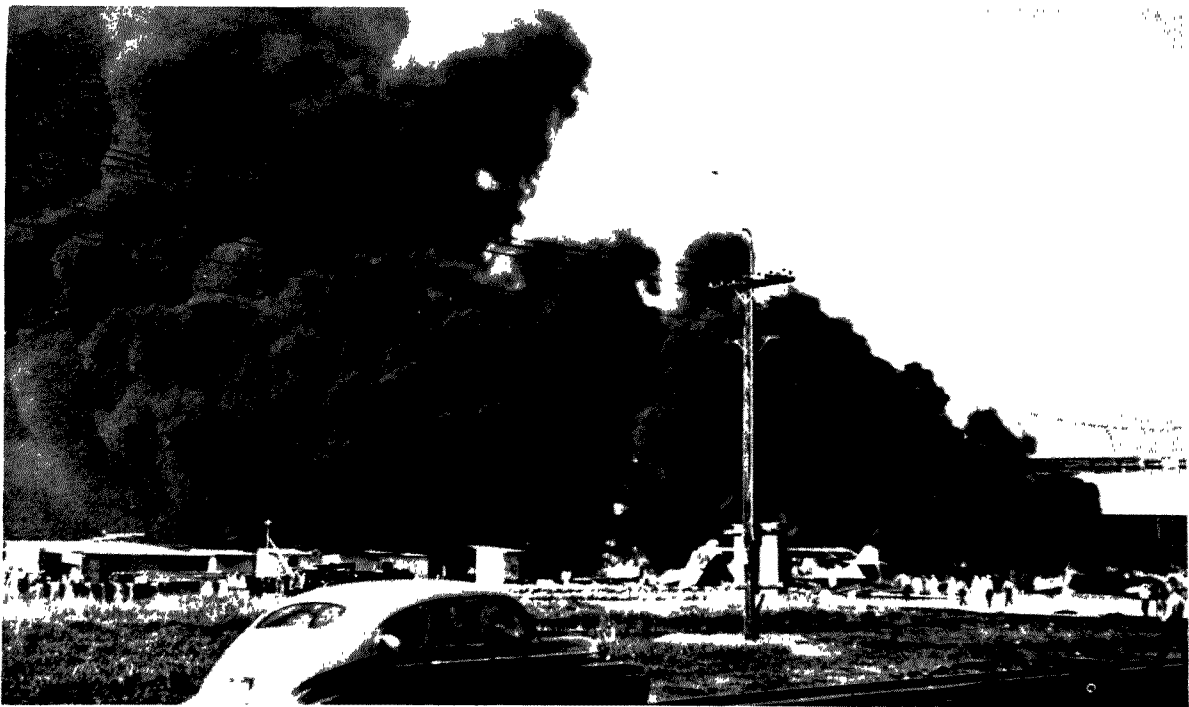
ITEM NO. 61





79716 O-46 RC

ITEM NO. 62



70716 0-46 RC

ITEM NO. 63



79716 O-46 HC

ITEM NO. 64



79718 O-48 RC

ITEM NO. 65



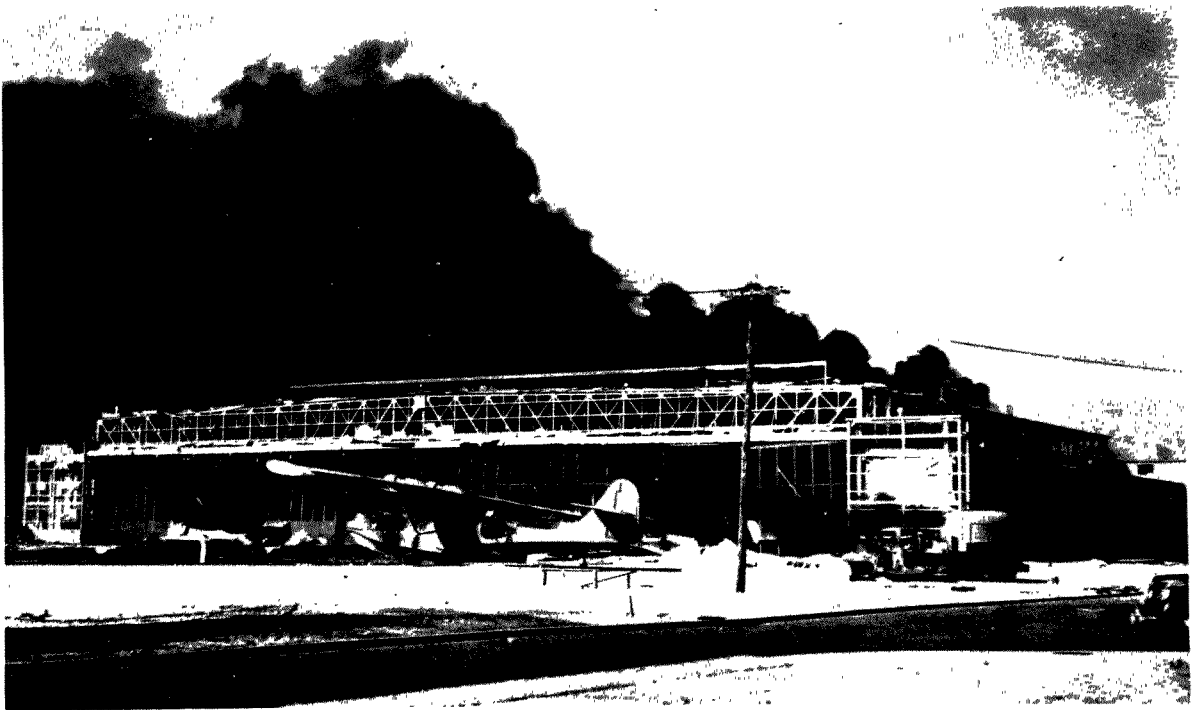
78716 O-48 RC

ITEM NO. 66



79710 O-46 RC

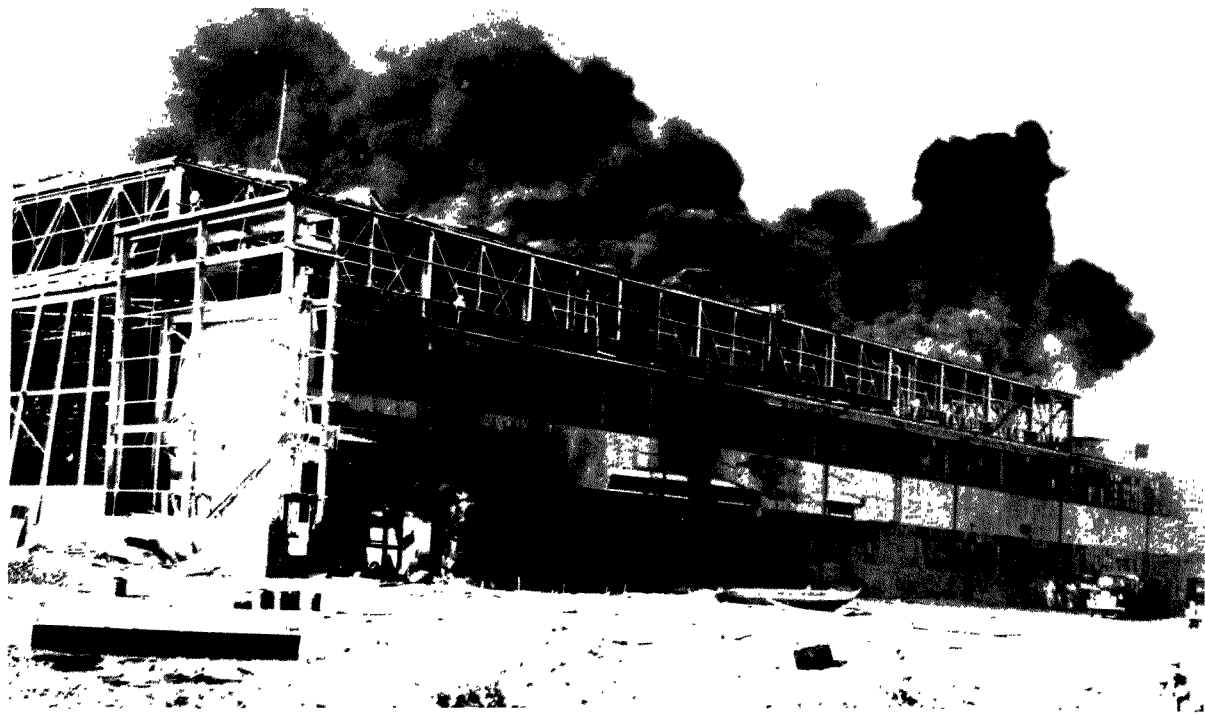
ITEM NO. 67



79716 O-46 RC

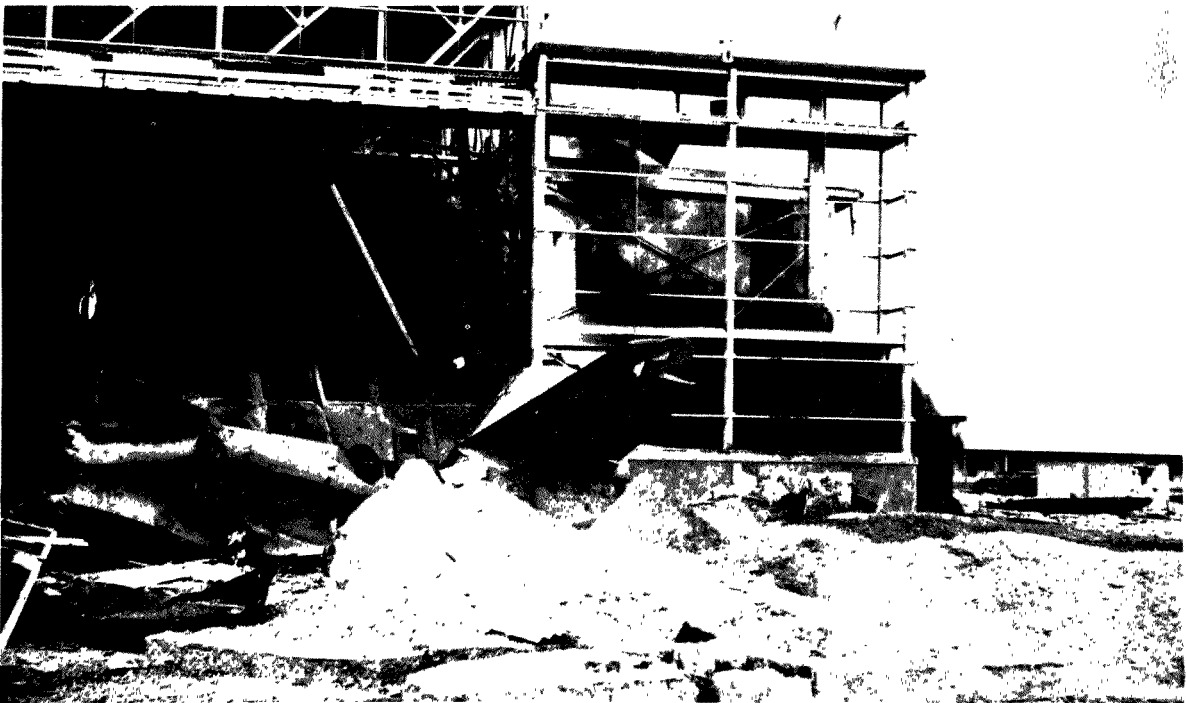
ITEM NO. 68

79716 O-16 RC



ITEM NO. 69





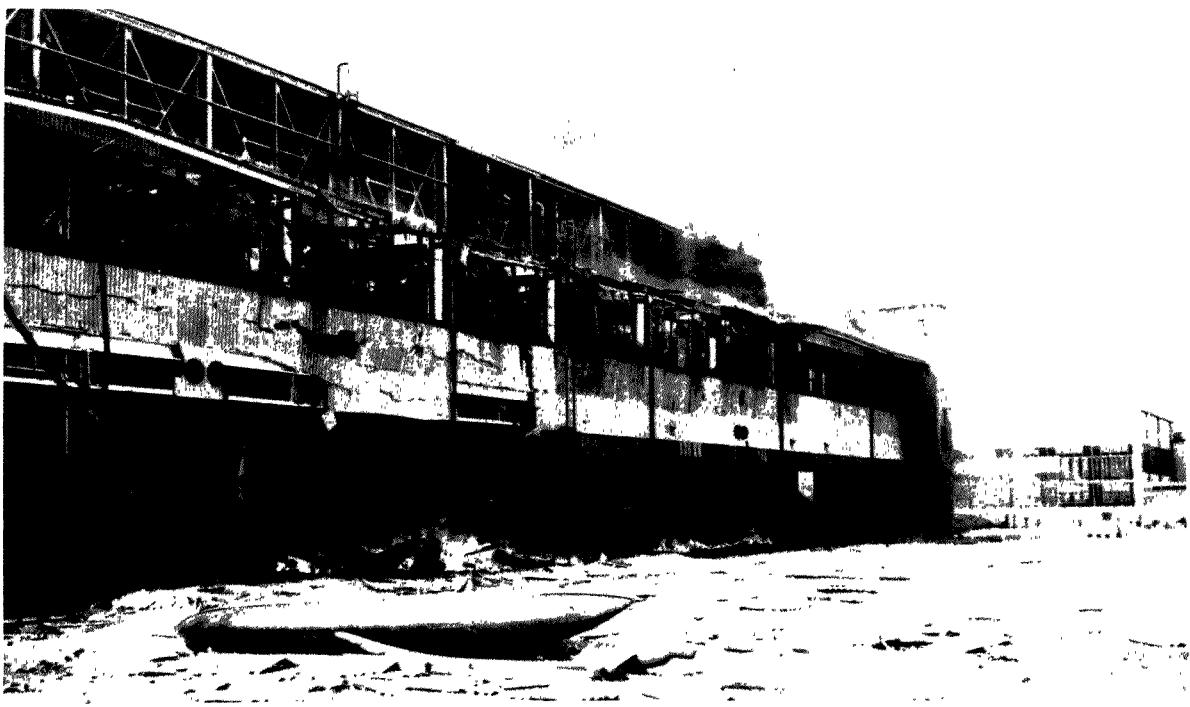
79716 O-46 KC

ITEM NO. 70

79718 O-46 RC



ITEM NO. 71



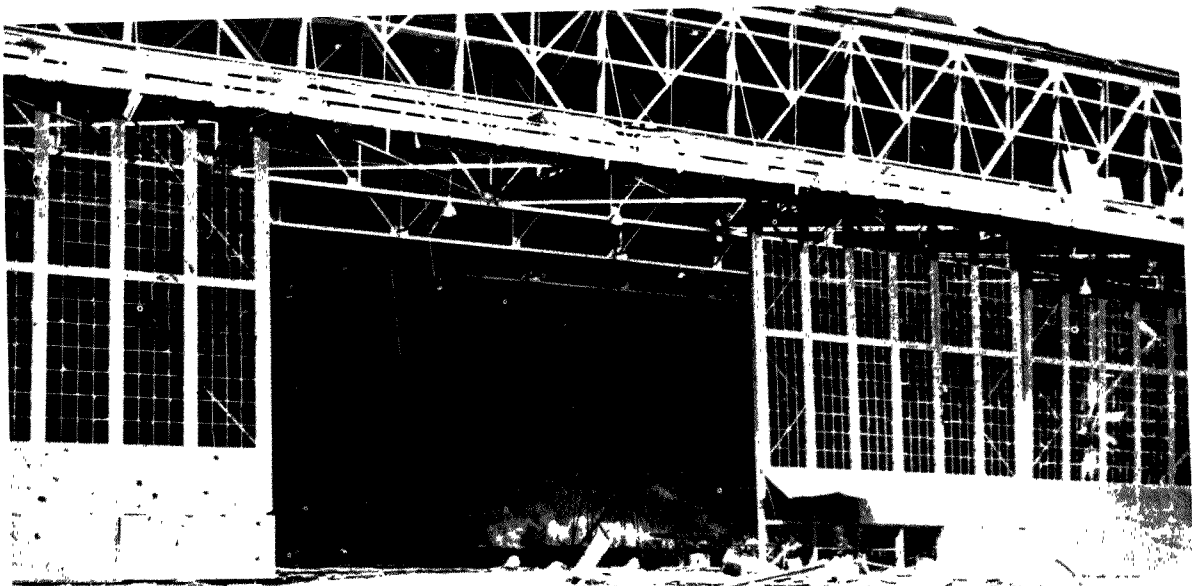
79716 O-46 RC

ITEM NO. 72



79716 O-18 HC

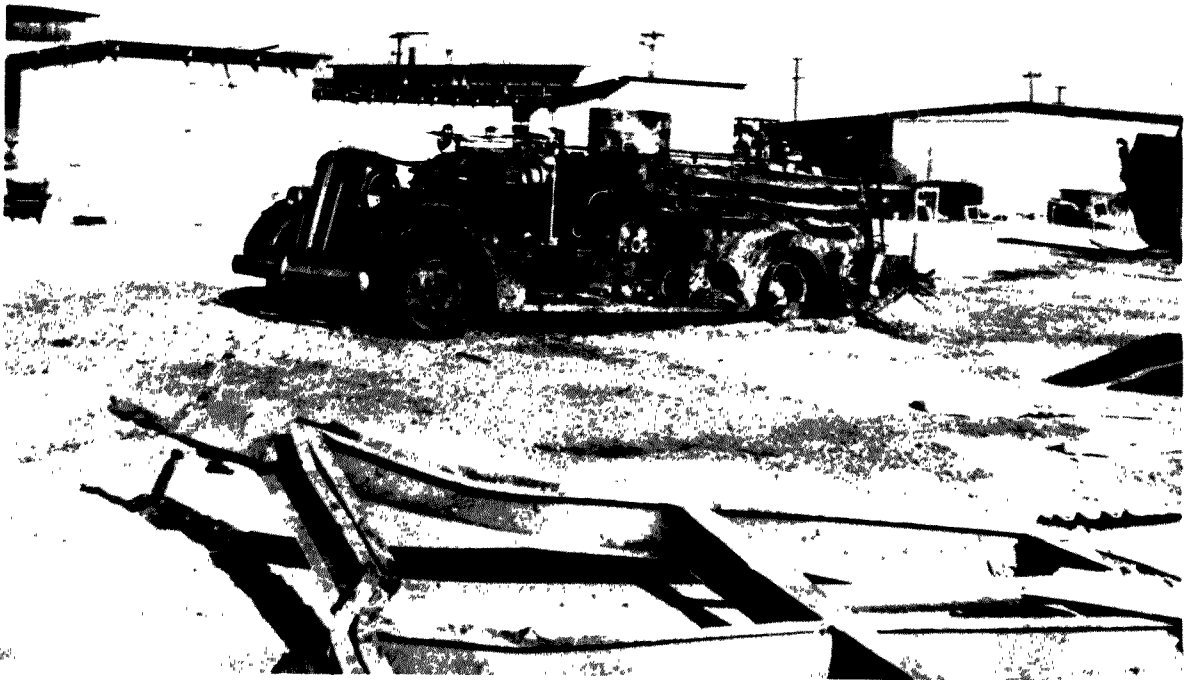
ITEM NO. 73



79716 O-48 RC

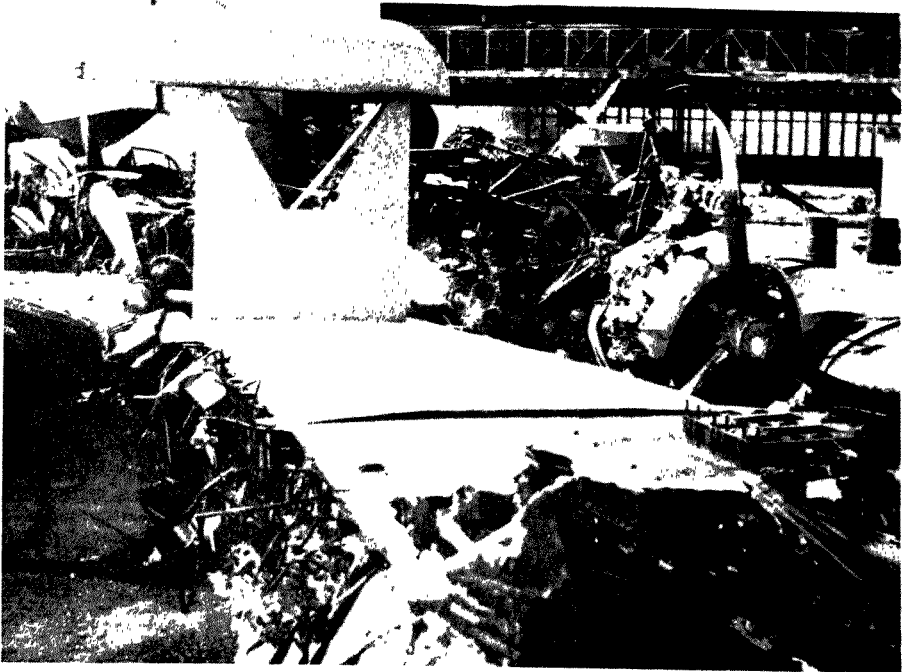
ITEM NO. 74

1957-1-14



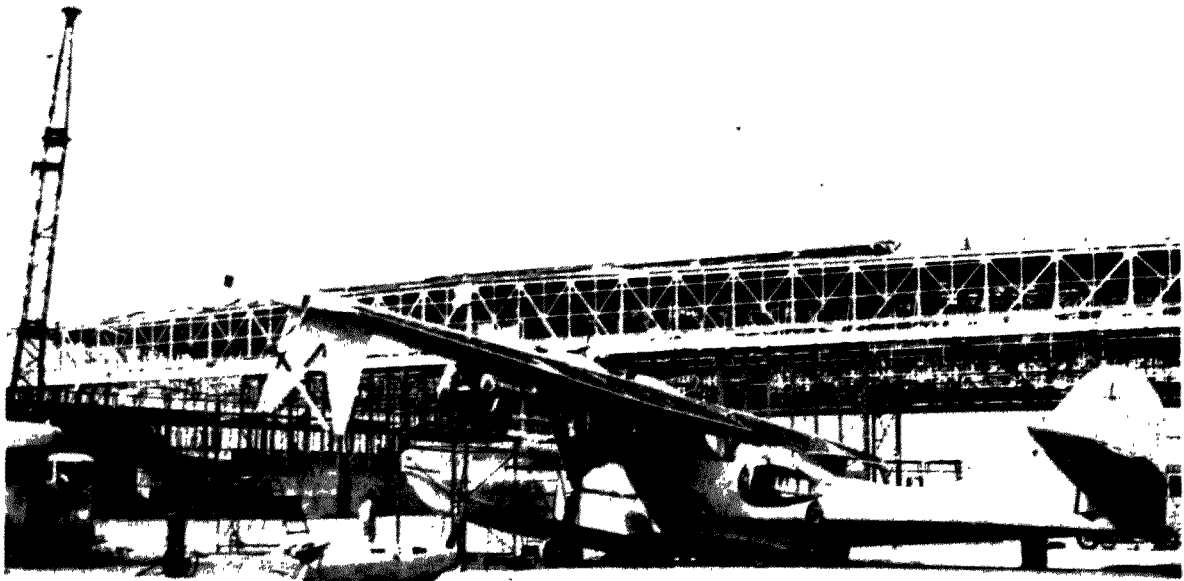
79716 O-46 RC

ITEM NO. 75



79716 O-46 RC

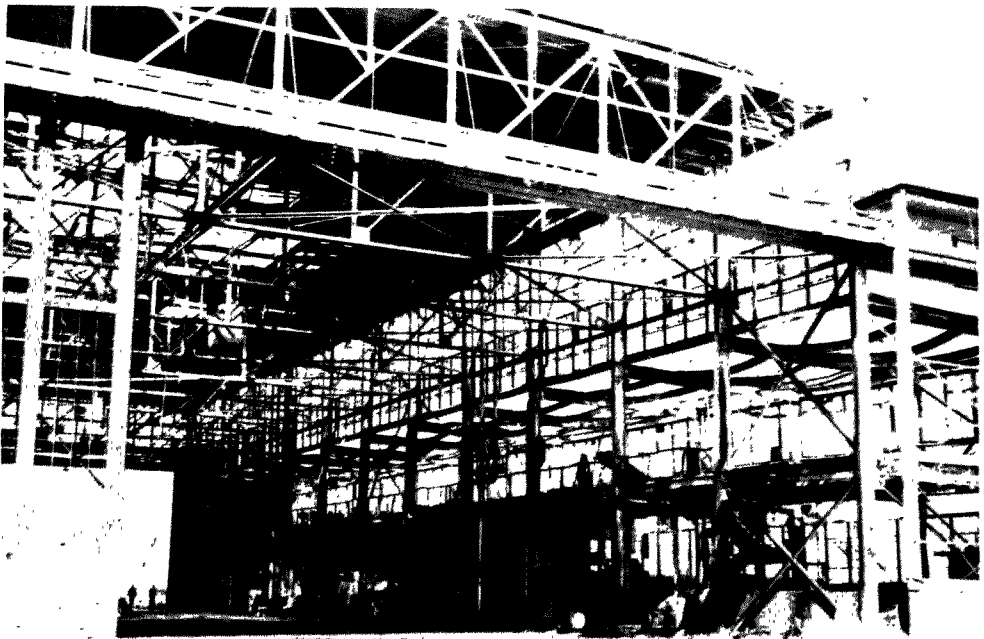
ITEM NO. 76



70716 O-48 RC

ITEM NO. 77





70716 Q-40 RC

ITEM NO. 78



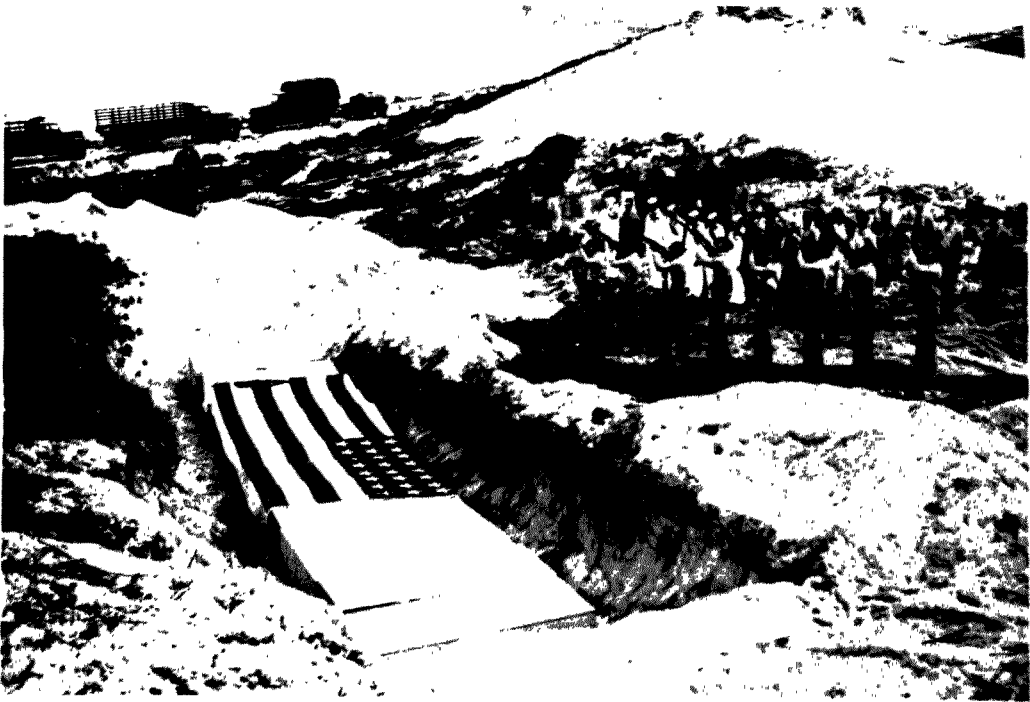
79716 O-48 EC

ITEM NO. 79



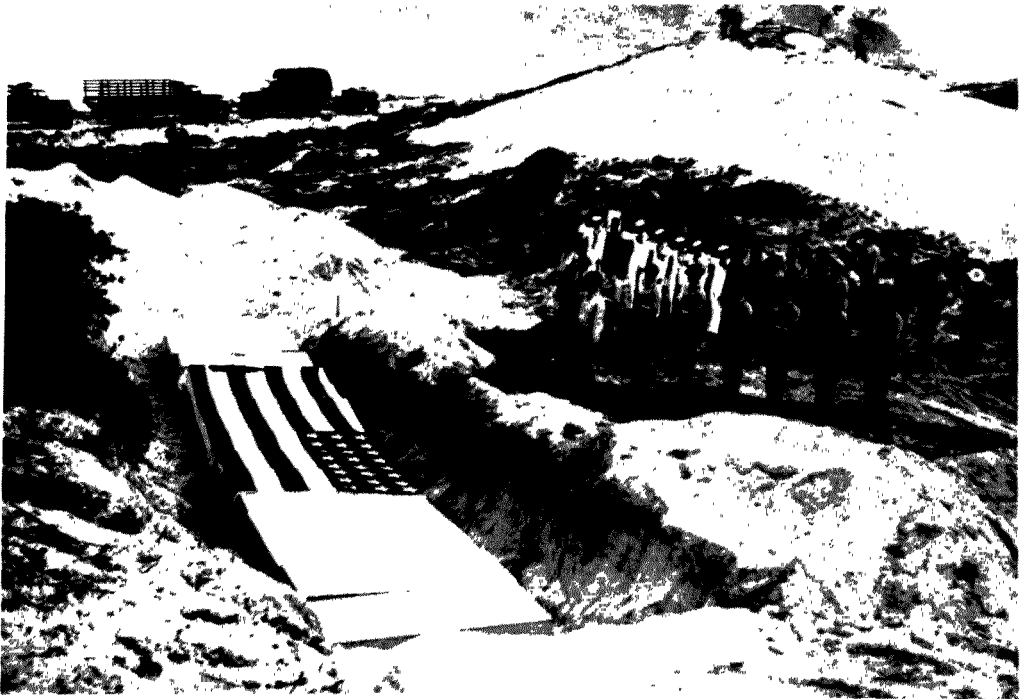
79716 0-46 RC

ITEM NO. 80



79716 0-46 RC

ITEM NO. 81



79716 O-46 RC

ITEM NO. 82



79716 U-48 RC

ITEM NO. 83



79716 O-46 RC

ITEM NO. 84

CONFIDENTIAL

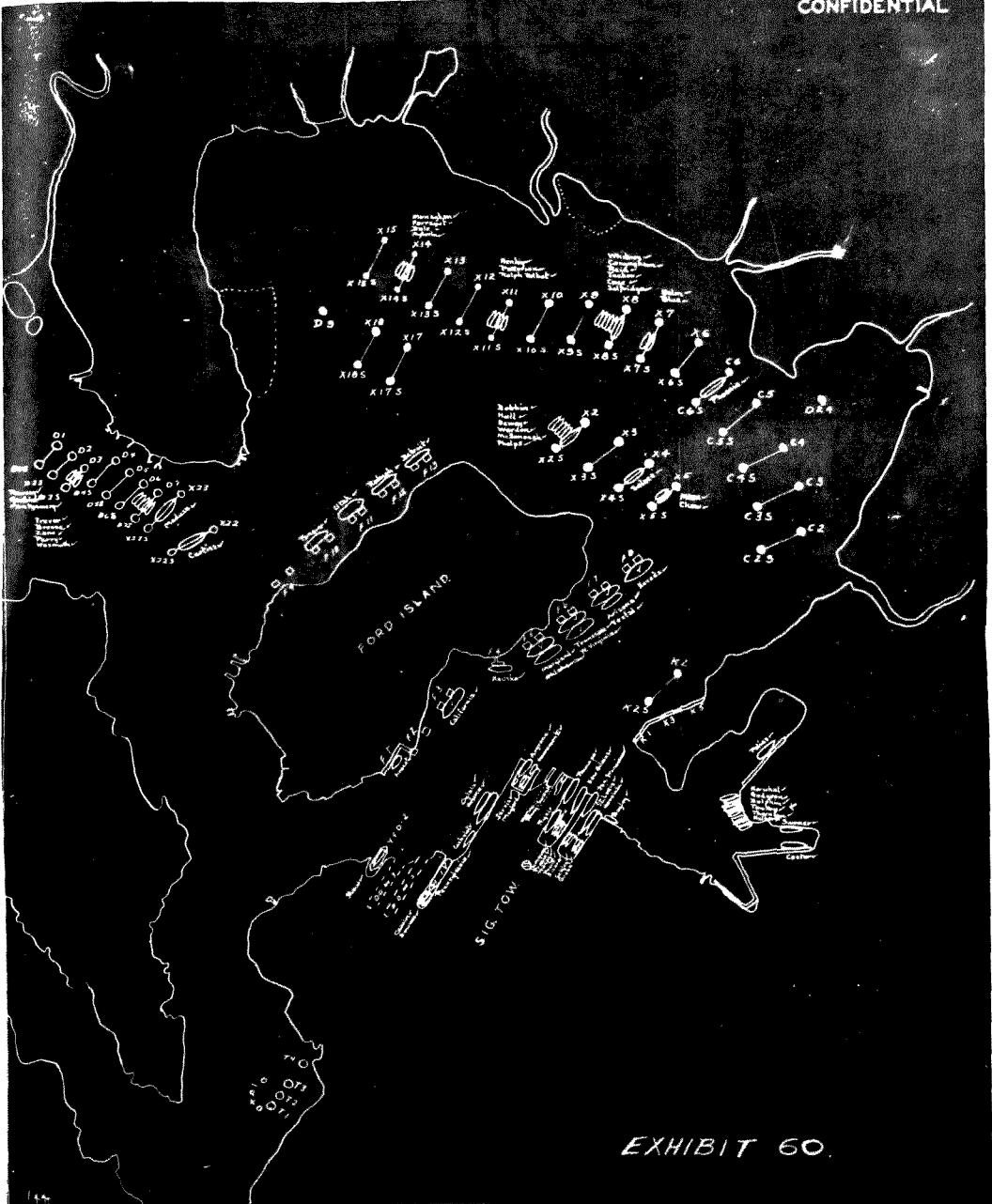
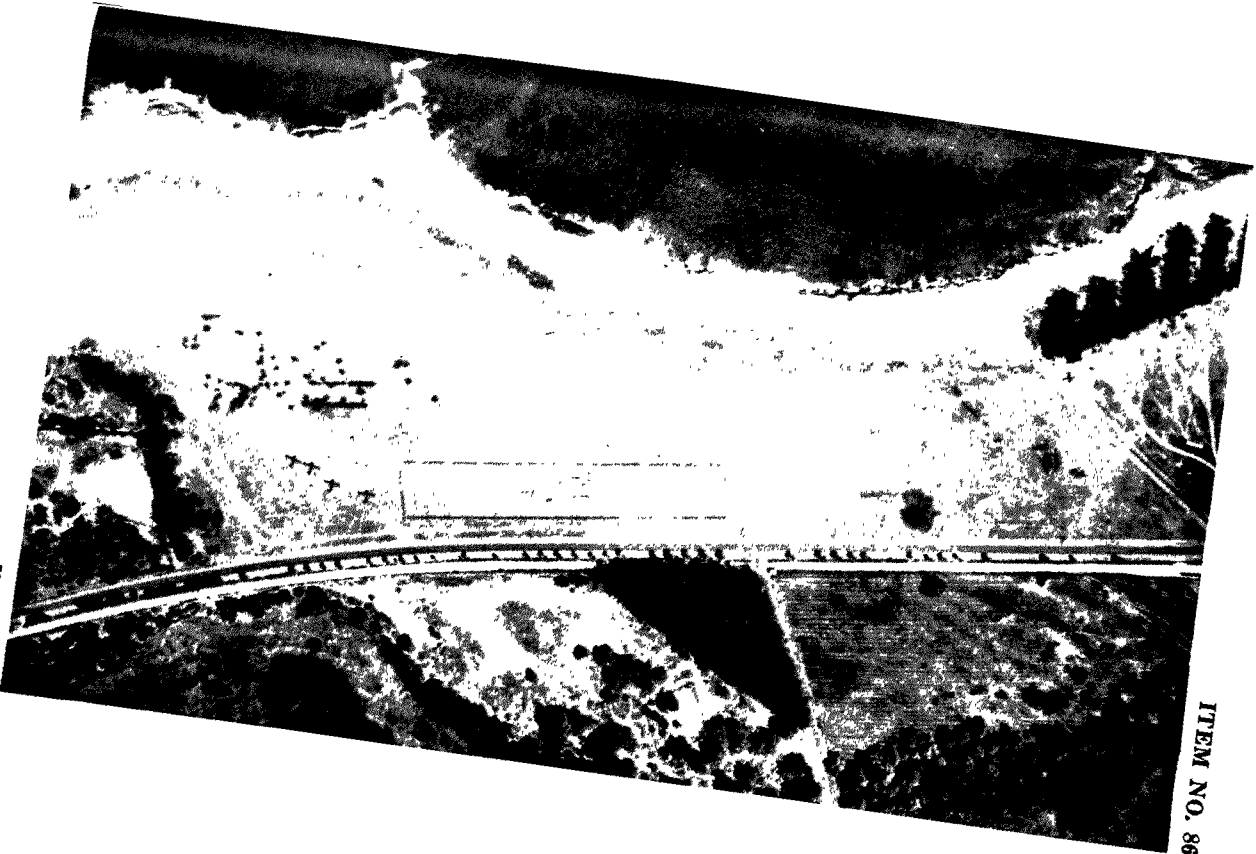


EXHIBIT 60.



79716 O-48 HC



ITEM NO. 86



MOSAIC MAP  
OF  
**BELLOWS FIELD, OAHU, T.H.**

DATE: 6-17-40  
SCALE: 1-5,000



SECRET  
C-190



CONFIDENTIAL

(1-6)



2 ft. concrete  
 1 ft. concrete

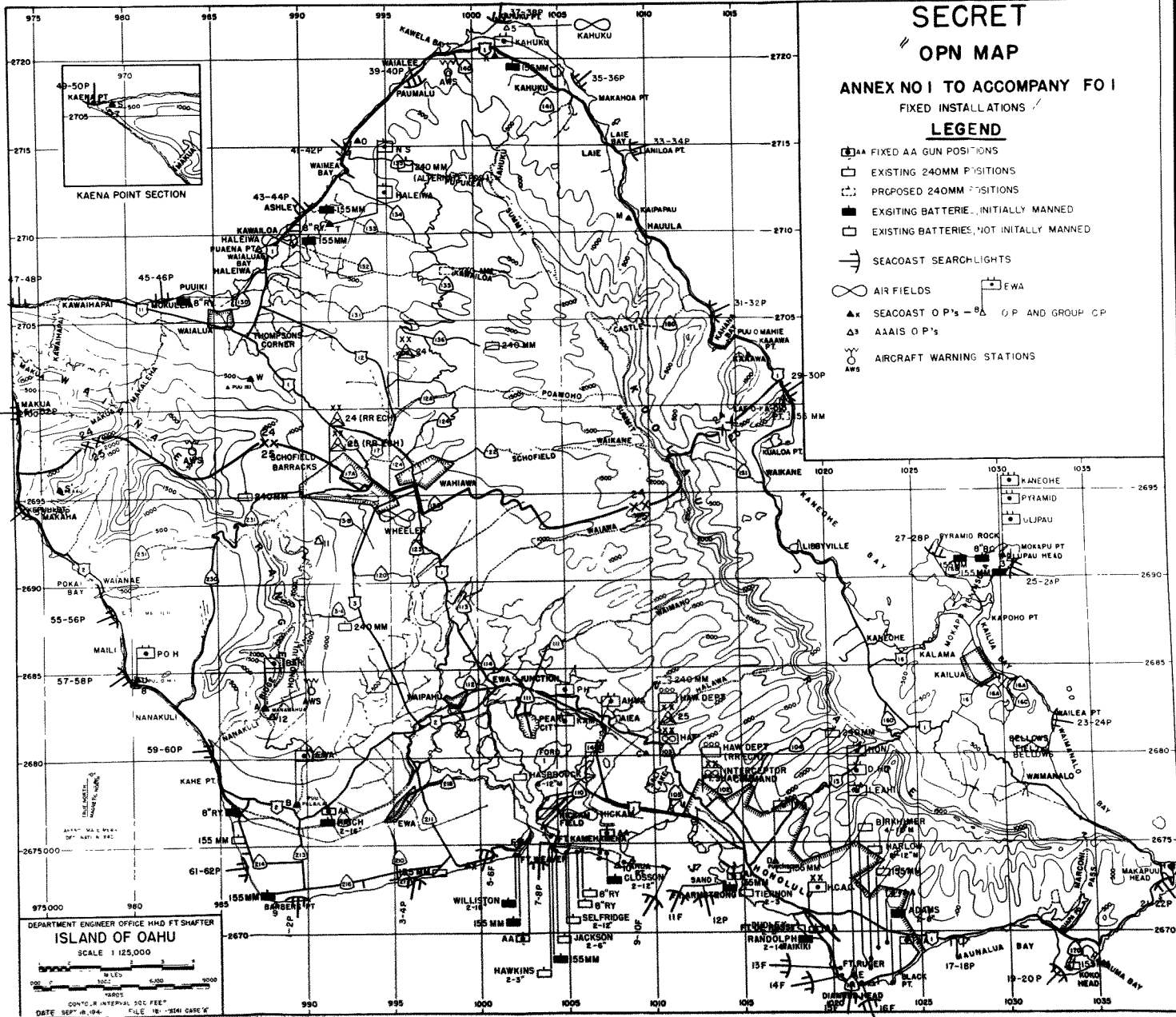
**PROGRESS MAP 21 Aug 41**  
 BUNKER CONST WHEELER FIELD  
 8000' EAGLES AVENUE FILE NO. 1702  
 SCALE 1" = 100' FILE NO. 1702/100

Usable E.K.  
 0945 7 Dec 41



1. BUNKER - CONCRETE WALL 6 FT. THICK  
 2. BUNKER - CONCRETE FLOOR 4 IN. THICK  
 3. BUNKER - CONCRETE CEILING 4 IN. THICK





**SECRET**

**OPN MAP**

**ANNEX NO 1 TO ACCOMPANY FO I  
FIXED INSTALLATIONS**

**LEGEND**

- ☐ 3.44 FIXED AA GUN POSITIONS
- ☐ EXISTING 240MM POSITIONS
- ☐ PROPOSED 240MM POSITIONS
- ☐ EXISTING BATTERIES, INITIALLY MANNED
- ☐ EXISTING BATTERIES, NOT INITIALLY MANNED
- ☐ SEACOAST SEARCHLIGHTS
- ∞ AIR FIELDS
- ☐ EWA
- ▲ SEACOAST O P's - 8' O P AND GROUP CP
- △ AAIS O P's
- AWS AIRCRAFT WARNING STATIONS

DEPARTMENT ENGINEER OFFICE HEAD FT SHAFTER  
**ISLAND OF OAHU**  
SCALE 1:125,000

DATE SEP 18, 1944

**SECRET**




**HAWAIIAN DEFENSE PROJECT-1941**  
**ANTI-AIRCRAFT DISPOSITIONS**

A.A. GUNS AND AAAIS OPS

SEE PAR. DOCUMENT

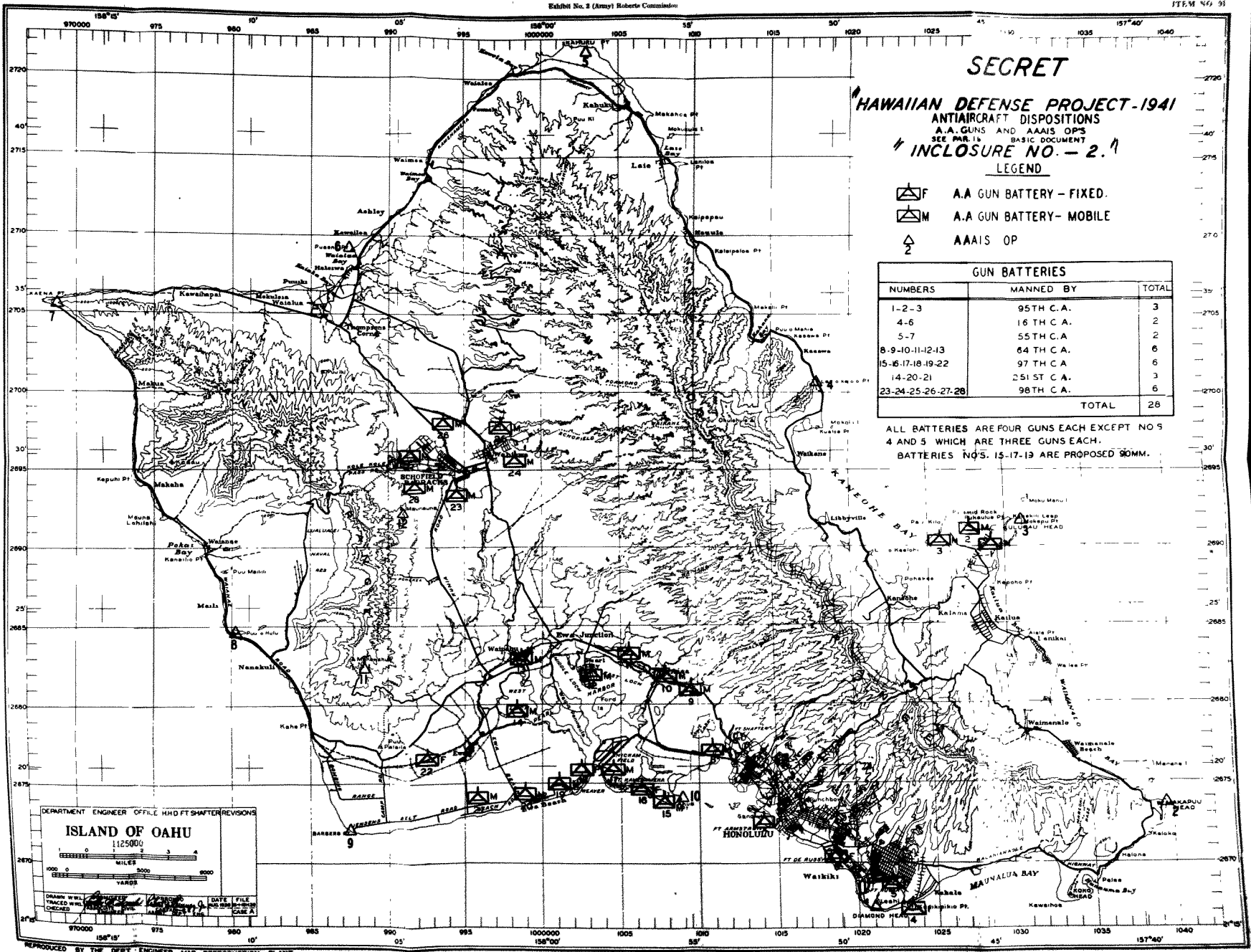
**INCLOSURE NO. - 2.**

**LEGEND**

-  **AA GUN BATTERY - FIXED.**
-  **AA GUN BATTERY - MOBILE**
-  **AAAIS OP**

GUN BATTERIES		
NUMBERS	MANNED BY	TOTAL
1-2-3	95TH C.A.	3
4-6	16 TH C.A.	2
5-7	55TH C.A.	2
8-9-10-11-12-13	64 TH C.A.	6
15-16-17-18-19-22	97 TH C.A.	6
14-20-21	251 ST C.A.	3
23-24-25-26-27-28	98TH C.A.	6
<b>TOTAL</b>		<b>28</b>

ALL BATTERIES ARE FOUR GUNS EACH EXCEPT NO'S 4 AND 5 WHICH ARE THREE GUNS EACH.  
 BATTERIES NO'S. 15-17-19 ARE PROPOSED 90MM.

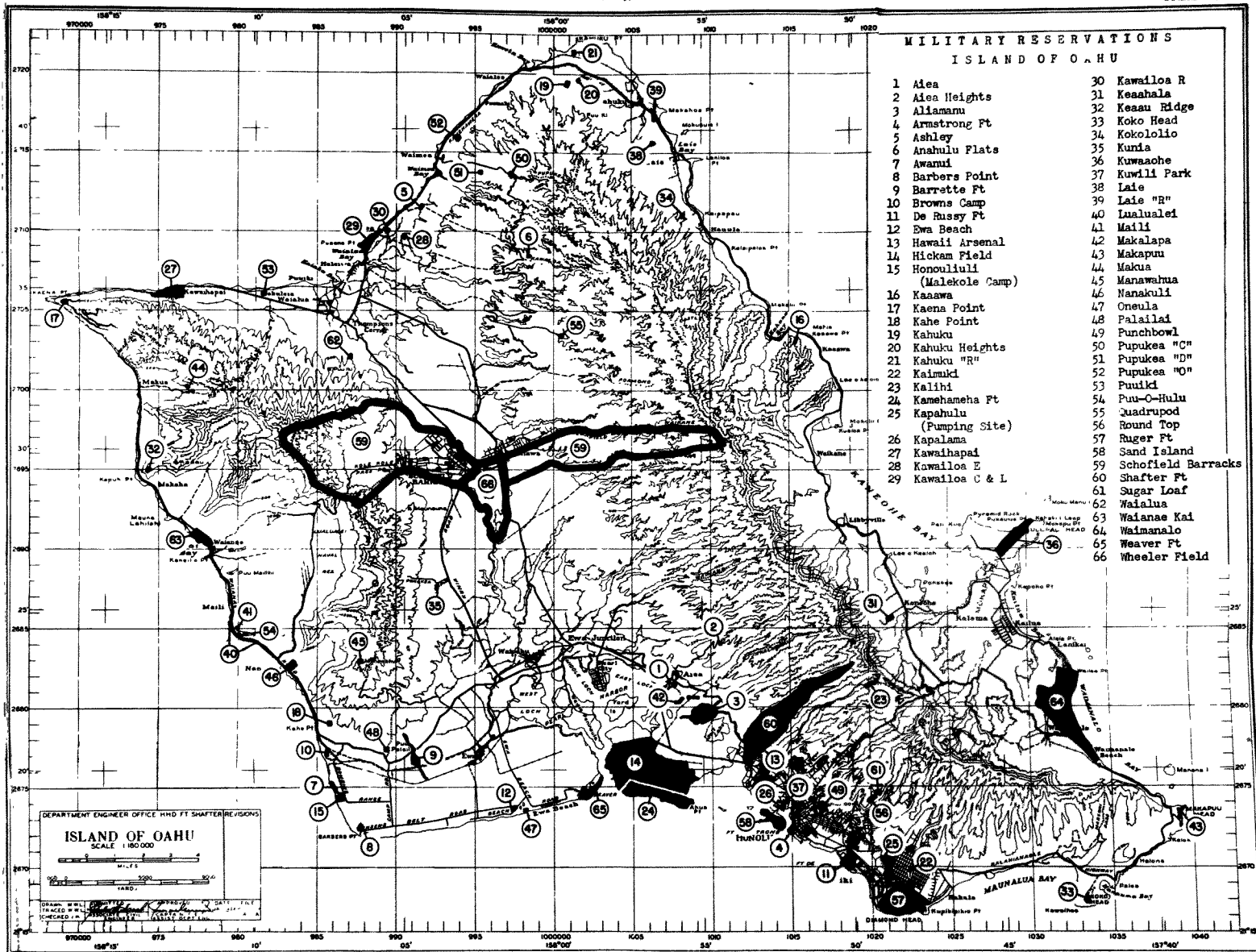


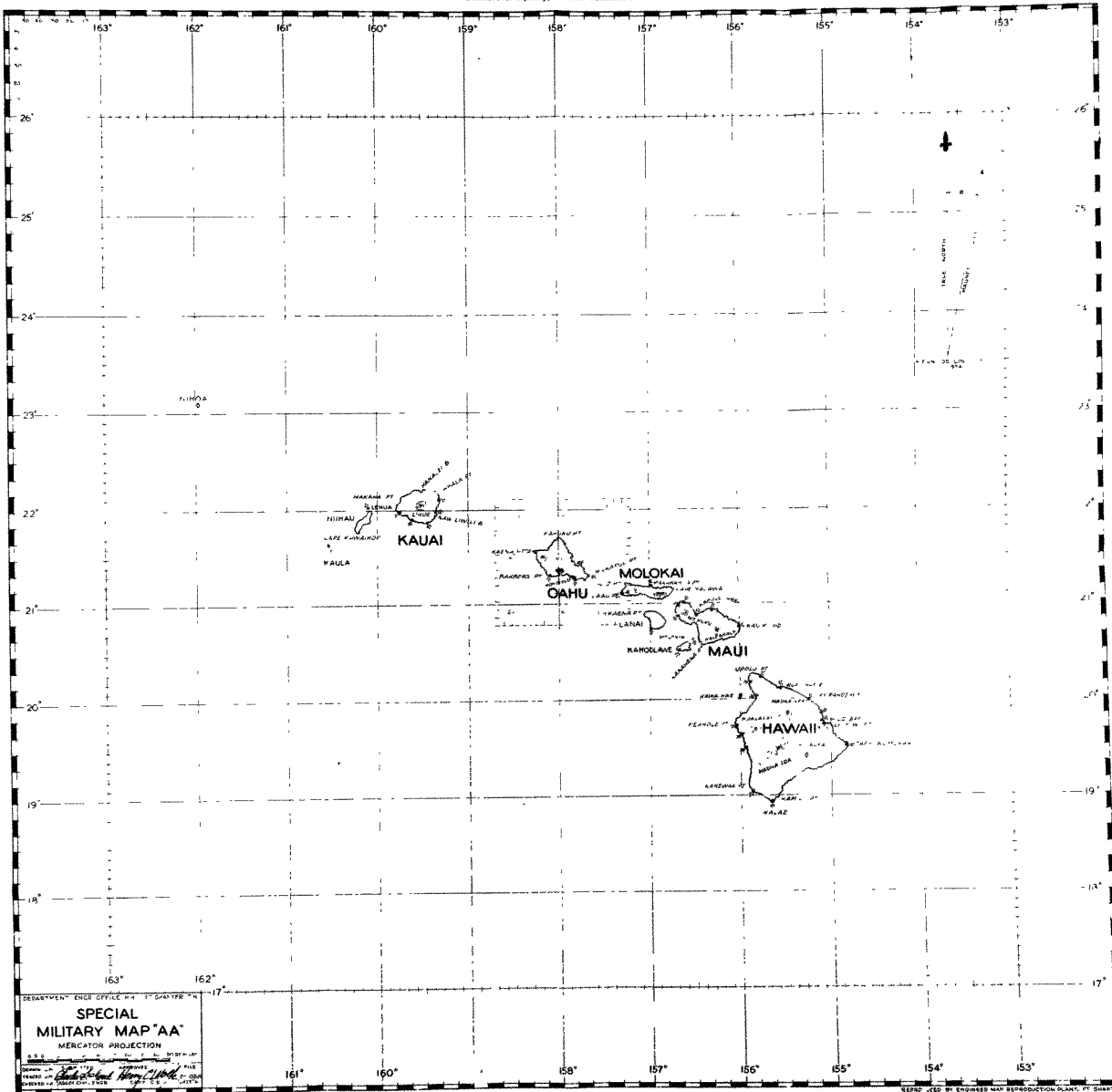
DEPARTMENT ENGINEER OFFICE HHD FT SHAFER REVISIONS

**ISLAND OF OAHU**  
 1:125,000

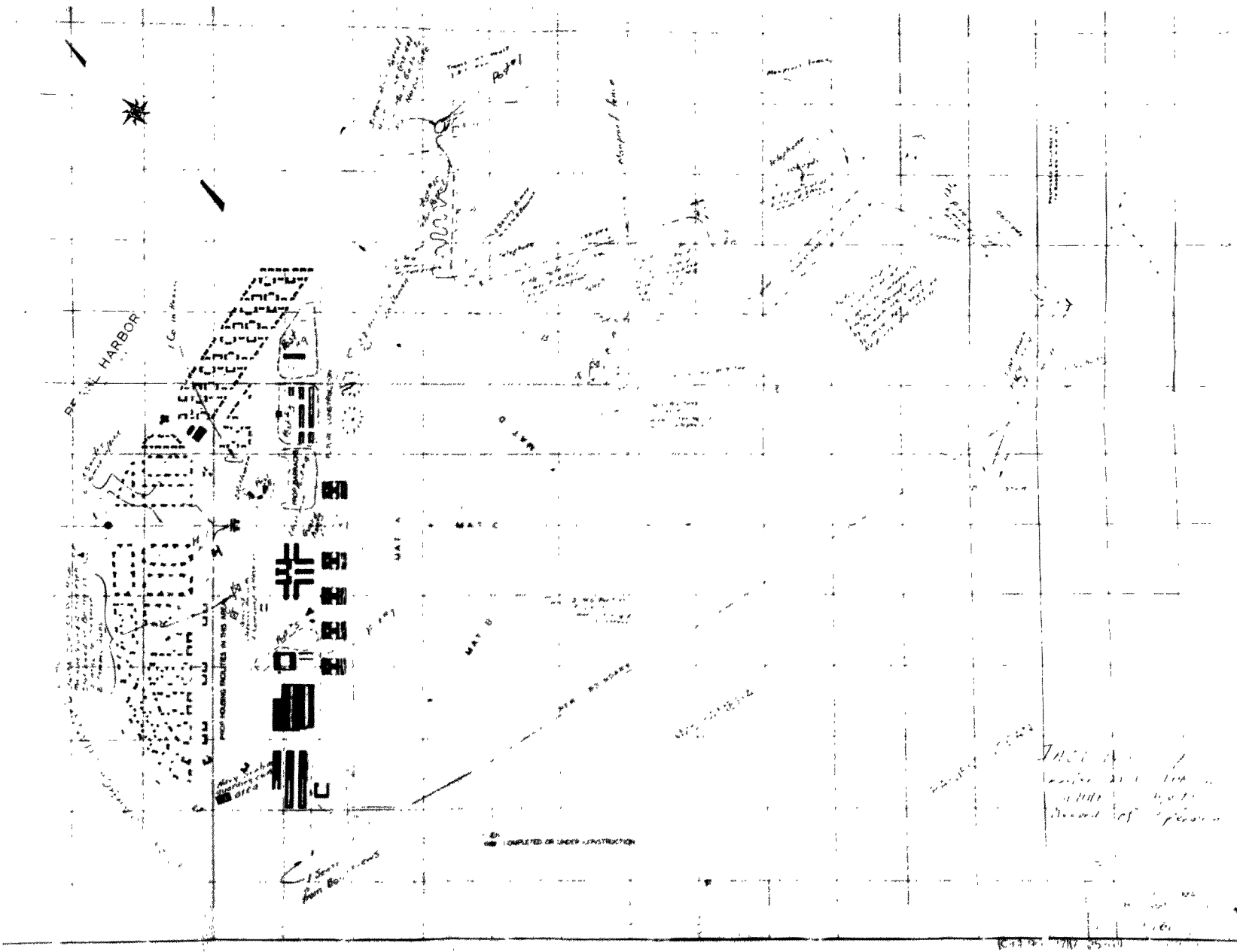
0 1000 2000 3000 4000  
 FEET  
 0 1 2 3 4  
 MILES

DATE FILE NO. REVISIONS  
 CHECKED CASE A



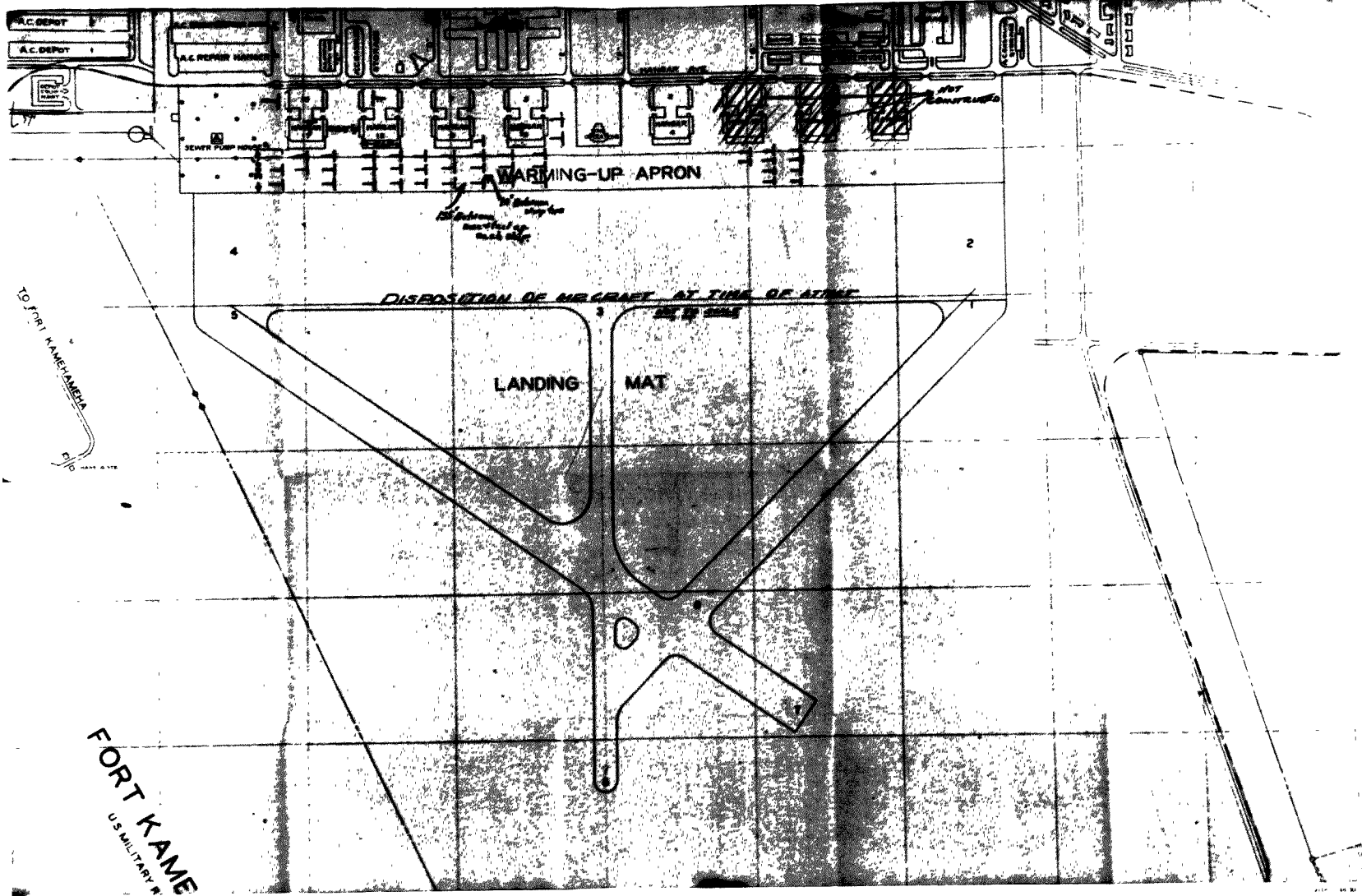






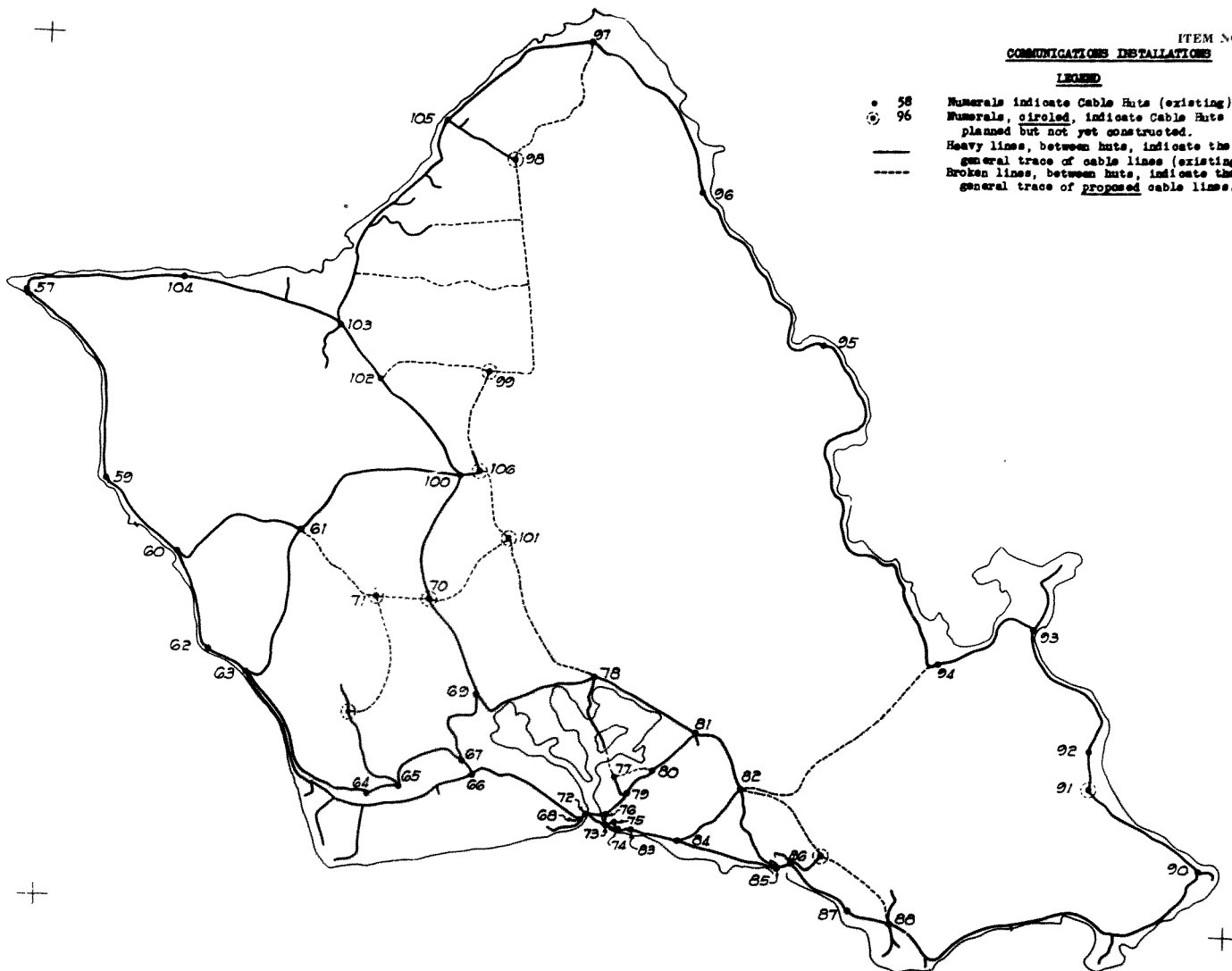
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 MAY 200

■ COMPLETED OR UNDER CONSTRUCTION  
 - - - PLANNED



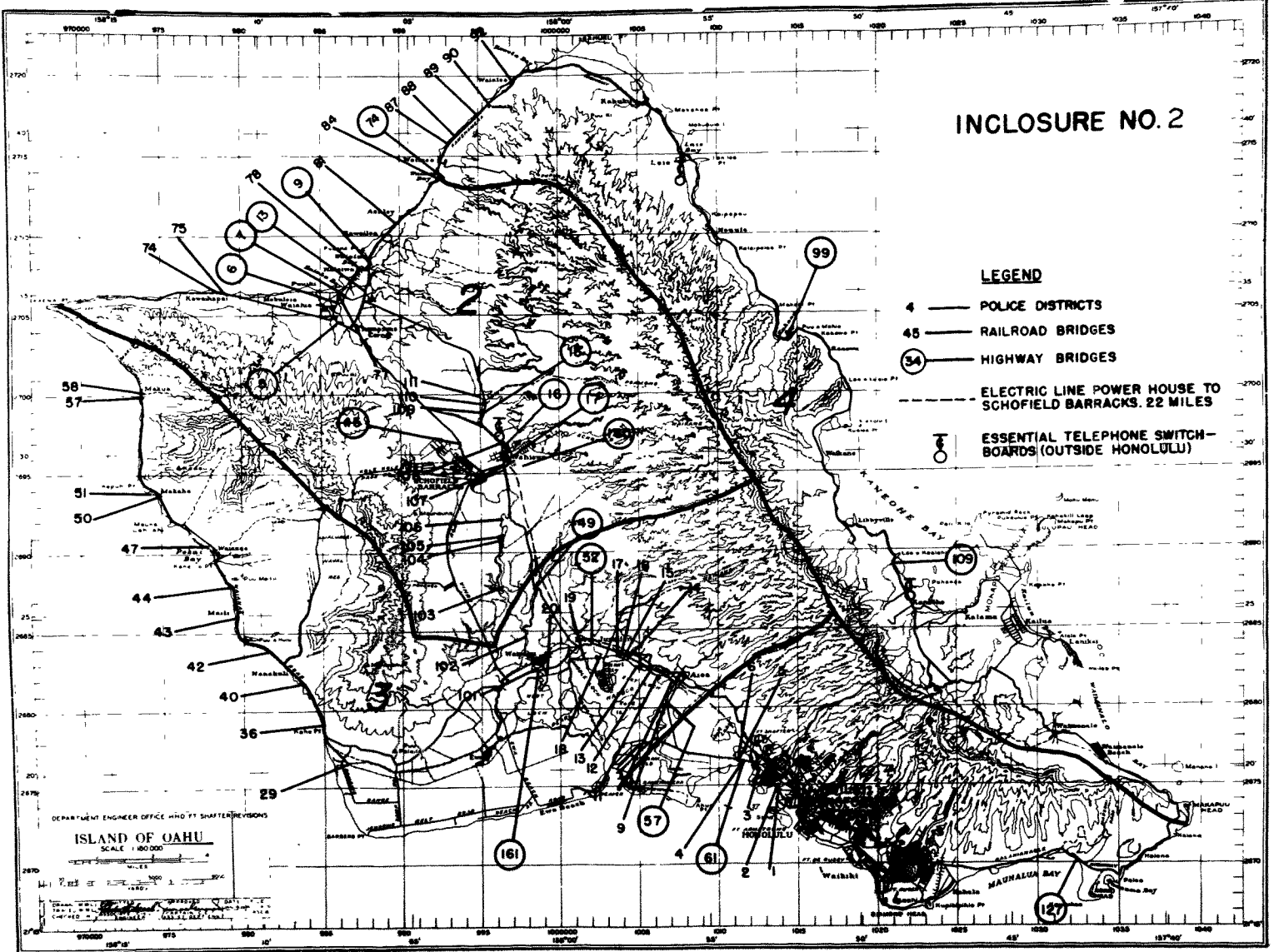
COMMUNICATIONS INSTALLATIONSLEGEND

- 58 Numerals indicate Cable Huts (existing).
- ⊙ 96 Numerals, circled, indicate Cable Huts planned but not yet constructed.
- Heavy lines, between huts, indicate the general trace of cable lines (existing).
- - - Broken lines, between huts, indicate the general trace of proposed cable lines.



11 INCLOSURE NO. 1  
Revised July 7, 1941

SECRET



INCLOSURE NO. 2

LEGEND

- 4 — POLICE DISTRICTS
- 45 — RAILROAD BRIDGES
- 54 — HIGHWAY BRIDGES
- ELECTRIC LINE POWER HOUSE TO SCHOFIELD BARRACKS. 22 MILES
- ⊕ ESSENTIAL TELEPHONE SWITCH-BOARDS (OUTSIDE HONOLULU)

DEPARTMENT ENGINEER OFFICE HHD 77 SHAFER DIVISION  
**ISLAND OF OAHU**  
 SCALE 1:60,000

**WFOLOGINE NO. 3**

**LEGEND**

- PLANT/STATION CONNECTED TO H. E. CO. SYSTEM
  - PLANT/STATION NOT CONNECTED TO H. E. CO. SYSTEM
  - POWERLINE — LINE TENSION LAW 100
  - POWERLINE — LINE TENSION LAW 50
- PLANT/STATION**
- 4000 KW. VOL. LINE
  - 1500 KW. VOL. LINE
  - 600 KW. VOL. LINE
  - 1000 KW. VOL. LINE
  - 1000 KW. VOL. LINE
  - 1000 KW. VOL. LINE
  - 1000 KW. VOL. LINE
  - 1000 KW. VOL. LINE
- LINE TENSION**
- 100 KV. 13.8 KV. 11.5 KV. 10 KV.

ITEM NO. 94

DESCRIPTION				
NO.	NAME	VOLTS	CHARACTER OF SUPPLY	LOCATION
1	FORT KANE AND WHEAT FIELD	6000	PHASED SUB-STA.	NEAR PHOENIX & U. S. STREET
2	FORT GREENVIEW	2500	POWER PLANT	WHEELERS AND WASHINGTON ST
3	FORT DE RUSSETT	1500	100 KW. SUB-STA.	WHEELERS AND WASHINGTON ST
4	FORT BUNDEY	2500	PHASED SUB-STA.	WHEELERS AND WASHINGTON ST
5	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
6	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
7	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
8	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
9	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
10	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
11	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
12	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
13	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
14	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
15	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
16	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
17	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
18	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
19	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST
20	FORT BUNDEY	2500	PHASED SUB-STA.	NEAR WHEELERS AND WASHINGTON ST

NOTE: ALL POWER TO CITIES A, B

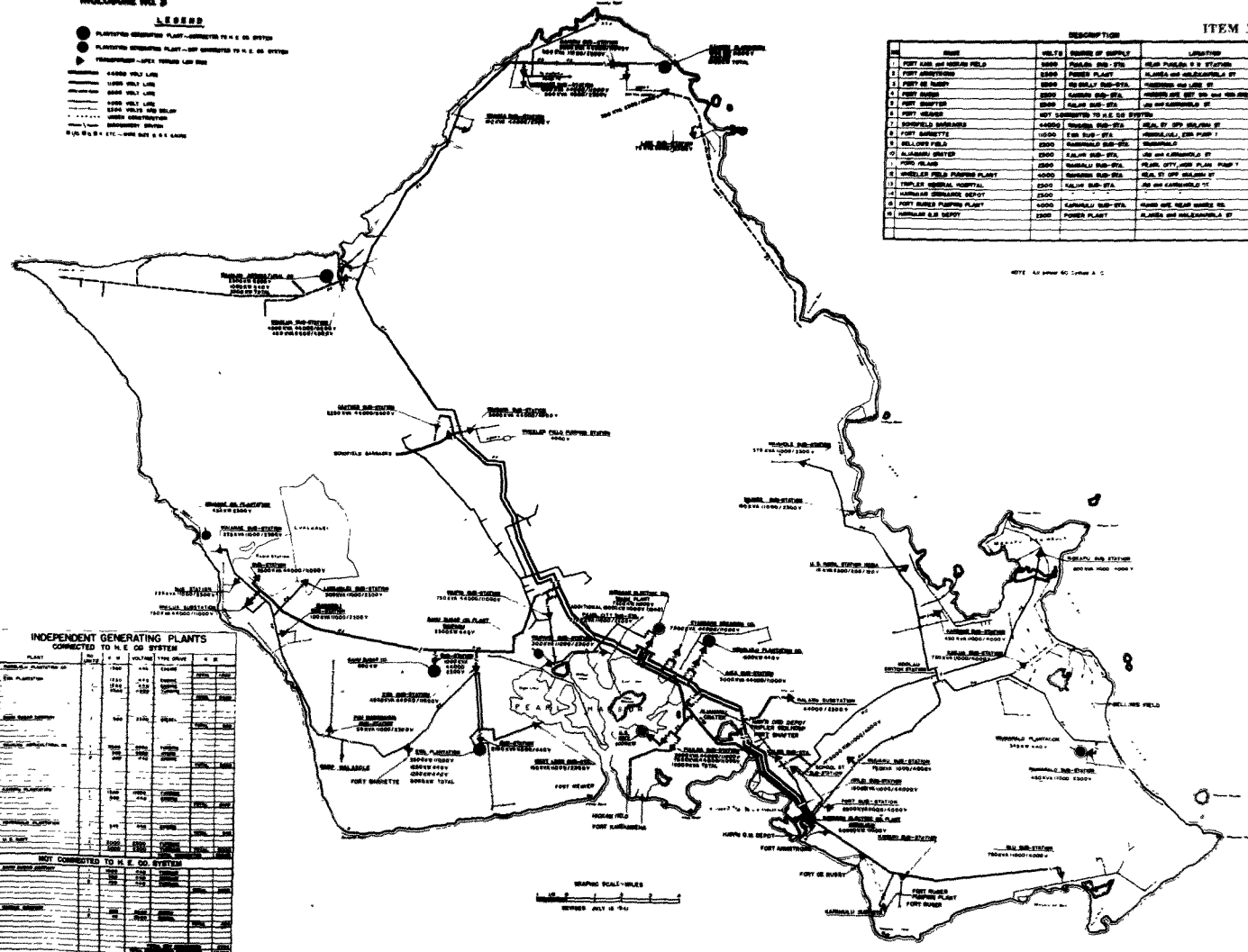
**INDEPENDENT GENERATING PLANTS CONNECTED TO H. E. CO. SYSTEM**

PLANT	NO.	KW.	VOLTS	TYPE	STATUS
Fort Wheeler	1	1500	11.5	PHASED	CONNECTED
Fort Greenview	2	2500	11.5	POWER PLANT	CONNECTED
Fort Bundey	3	2500	11.5	PHASED	CONNECTED
Fort Bundey	4	2500	11.5	PHASED	CONNECTED
Fort Bundey	5	2500	11.5	PHASED	CONNECTED
Fort Bundey	6	2500	11.5	PHASED	CONNECTED
Fort Bundey	7	2500	11.5	PHASED	CONNECTED
Fort Bundey	8	2500	11.5	PHASED	CONNECTED
Fort Bundey	9	2500	11.5	PHASED	CONNECTED
Fort Bundey	10	2500	11.5	PHASED	CONNECTED
Fort Bundey	11	2500	11.5	PHASED	CONNECTED
Fort Bundey	12	2500	11.5	PHASED	CONNECTED
Fort Bundey	13	2500	11.5	PHASED	CONNECTED
Fort Bundey	14	2500	11.5	PHASED	CONNECTED
Fort Bundey	15	2500	11.5	PHASED	CONNECTED
Fort Bundey	16	2500	11.5	PHASED	CONNECTED
Fort Bundey	17	2500	11.5	PHASED	CONNECTED
Fort Bundey	18	2500	11.5	PHASED	CONNECTED
Fort Bundey	19	2500	11.5	PHASED	CONNECTED
Fort Bundey	20	2500	11.5	PHASED	CONNECTED

**NOT CONNECTED TO H. E. CO. SYSTEM**

PLANT	NO.	KW.	VOLTS	TYPE	STATUS
Fort Wheeler	1	1500	11.5	PHASED	NOT CONNECTED
Fort Greenview	2	2500	11.5	POWER PLANT	NOT CONNECTED
Fort Bundey	3	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	4	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	5	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	6	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	7	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	8	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	9	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	10	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	11	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	12	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	13	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	14	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	15	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	16	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	17	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	18	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	19	2500	11.5	PHASED	NOT CONNECTED
Fort Bundey	20	2500	11.5	PHASED	NOT CONNECTED





AIRPORTS AND CAMPS  
BELLOWS FIELD OAHU, T.H.  
GENERAL PLAN

Overlay #1

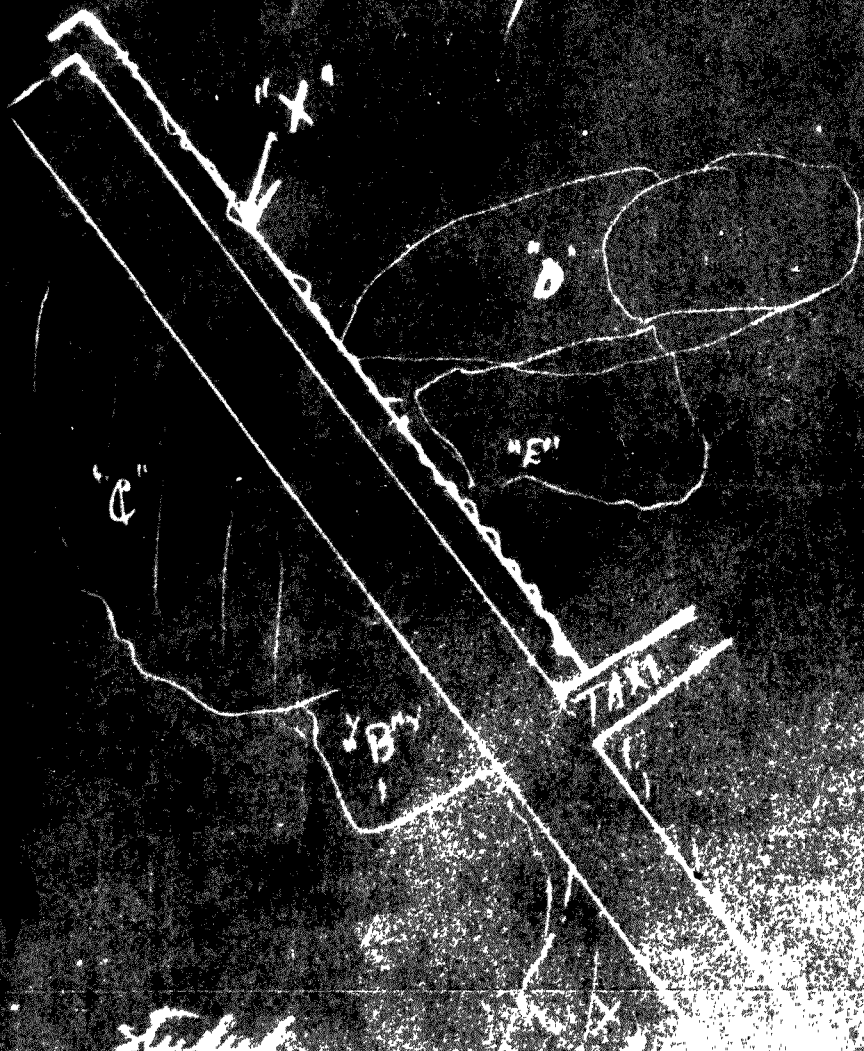
F

Parking for 10  
A-203 - 11, B-18  
6-047  
2-044

7-211  
7-231

Ready  
for

Overlay #3



Sketch  
Downtown - 1960



Overlay #3

4 B-18's parked on  
the base right of base  
to be but pulling  
the heavy  
load

0-475

0-475

0-475

0-475

Black

6 047, 2 049 before 1st attack

11 P40s

Red 6 047 + 3 049 after 1st attack  
and prior to 2nd attack11 P-40s were also dispersed in  
area included in Red  
prior to second attack

NO.	TYPE OF BUILDING	AREA
1	ADMIN. BLDG. (2nd FLOOR)	1100
2	ADMIN. BLDG. (1st FLOOR)	1100
3	OFFICE BLDG. (2nd FLOOR)	1100
4	OFFICE BLDG. (1st FLOOR)	1100
5	RECREATION BLDG.	1100
6	RECREATION BLDG.	1100
7	RECREATION BLDG.	1100
8	RECREATION BLDG.	1100
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95	RECREATION BLDG.	1100
96	RECREATION BLDG.	1100
97	RECREATION BLDG.	1100
98	RECREATION BLDG.	1100
99	RECREATION BLDG.	1100
100	RECREATION BLDG.	1100

1-2	Removed 1st story for and	1100	1100
1-3	removed 2nd story and	1100	1100
1-4	removed 3rd story and	1100	1100
1-5	removed 4th story and	1100	1100
1-6	removed 5th story and	1100	1100
1-7	removed 6th story and	1100	1100
1-8	removed 7th story and	1100	1100
1-9	removed 8th story and	1100	1100
1-10	removed 9th story and	1100	1100
1-11	removed 10th story and	1100	1100
1-12	removed 11th story and	1100	1100
1-13	removed 12th story and	1100	1100
1-14	removed 13th story and	1100	1100
1-15	removed 14th story and	1100	1100
1-16	removed 15th story and	1100	1100
1-17	removed 16th story and	1100	1100
1-18	removed 17th story and	1100	1100
1-19	removed 18th story and	1100	1100
1-20	removed 19th story and	1100	1100
1-21	removed 20th story and	1100	1100
1-22	removed 21st story and	1100	1100
1-23	removed 22nd story and	1100	1100
1-24	removed 23rd story and	1100	1100
1-25	removed 24th story and	1100	1100
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1-54	removed 53rd story and	1100	1100
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1-56	removed 55th story and	1100	1100
1-57	removed 56th story and	1100	1100
1-58	removed 57th story and	1100	1100
1-59	removed 58th story and	1100	1100
1-60	removed 59th story and	1100	1100
1-61	removed 60th story and	1100	1100
1-62	removed 61st story and	1100	1100
1-63	removed 62nd story and	1100	1100
1-64	removed 63rd story and	1100	1100
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1-67	removed 66th story and	1100	1100
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1-69	removed 68th story and	1100	1100
1-70	removed 69th story and	1100	1100
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1-72	removed 71st story and	1100	1100
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1-81	removed 80th story and	1100	1100
1-82	removed 81st story and	1100	1100
1-83	removed 82nd story and	1100	1100
1-84	removed 83rd story and	1100	1100
1-85	removed 84th story and	1100	1100
1-86	removed 85th story and	1100	1100
1-87	removed 86th story and	1100	1100
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1-90	removed 89th story and	1100	1100
1-91	removed 90th story and	1100	1100
1-92	removed 91st story and	1100	1100
1-93	removed 92nd story and	1100	1100
1-94	removed 93rd story and	1100	1100
1-95	removed 94th story and	1100	1100
1-96	removed 95th story and	1100	1100
1-97	removed 96th story and	1100	1100
1-98	removed 97th story and	1100	1100
1-99	removed 98th story and	1100	1100
1-100	removed 99th story and	1100	1100
1-101	removed 100th story and	1100	1100

AIR CORPS CONSTRUCTION MAINTENANCE DEPARTMENT  
AIRPORTS AND CAMPS  
BELLOW'S FIELD, OAHU, T.H.  
DEC 12 1944  
17 50 11  
GENERAL PLAN

SCALE 1 IN. = 500 FT.

1 IN. SHEET

NATIONAL MEAN SEA LEVEL

U.S. ENGINEER OFFICE, HONOLULU, T.H.

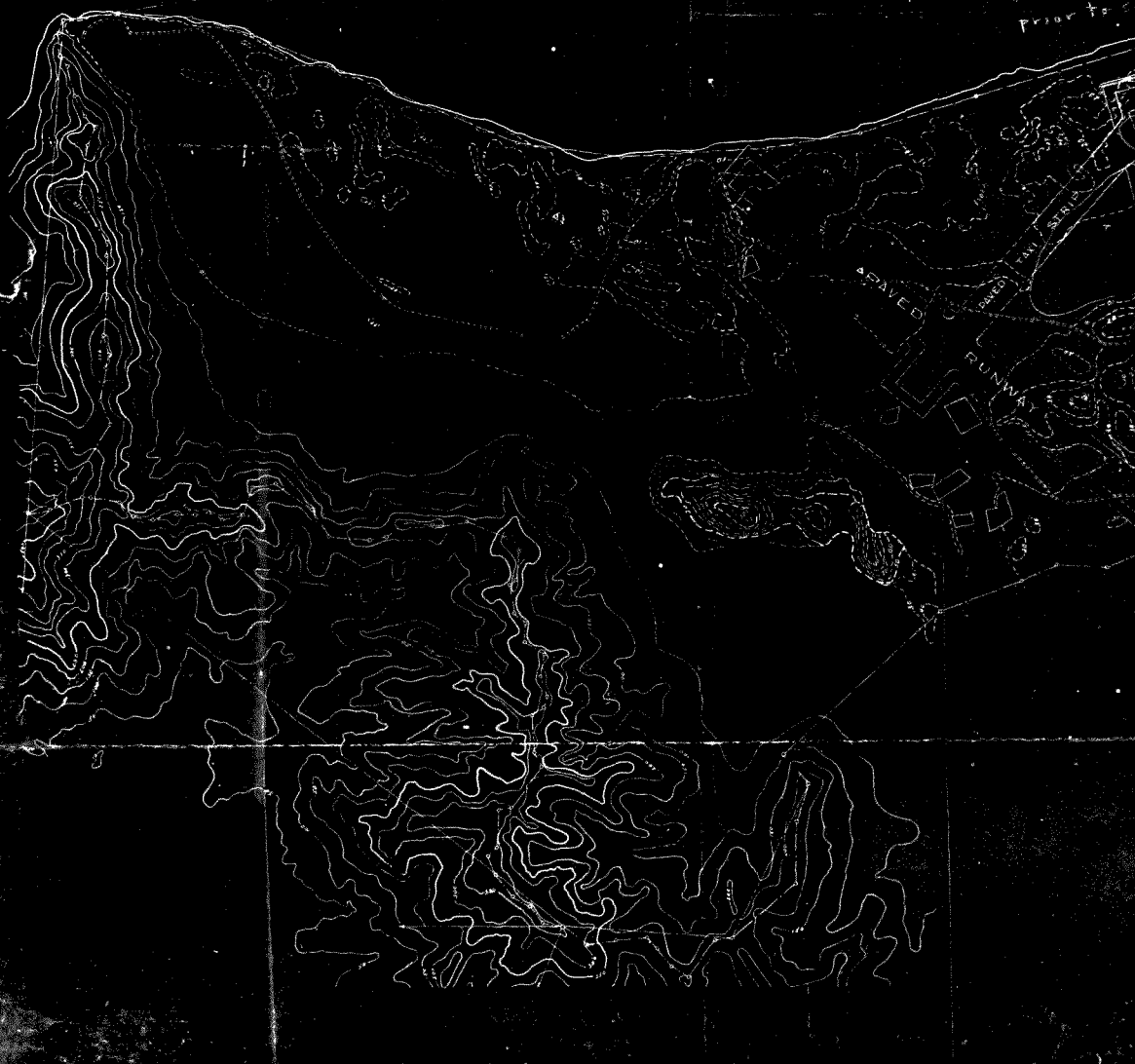
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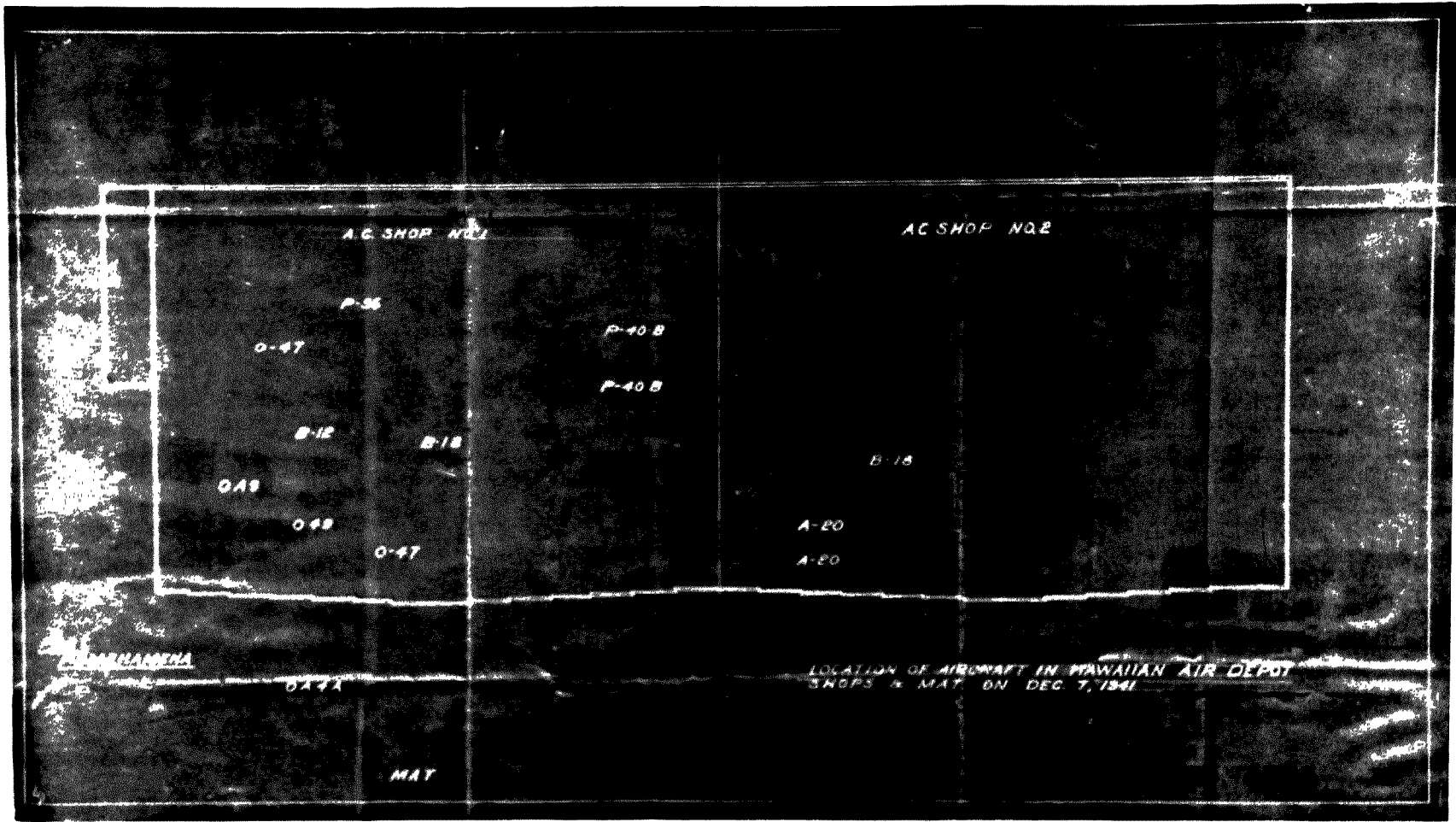
R. E. V.

WAR DEPARTMENT

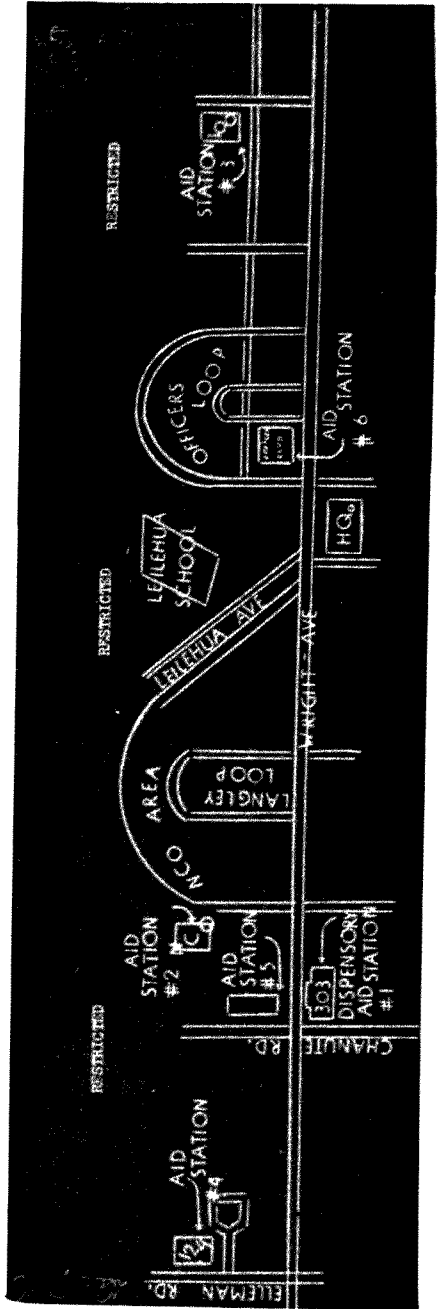
Black.  
 6 047, 2 049  
 11 P 40.  
 Ref 6.047+1 0

I P-40s were  
 AREA INCLUDES  
 Prior to



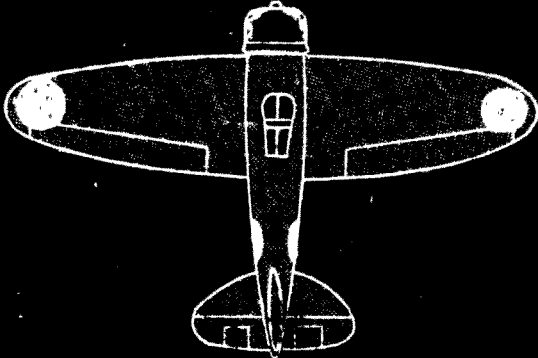


LOCATION OF AIRCRAFT IN HAWAIIAN AIR DEPOT SHOPS & MAT. ON DEC. 7, 1941

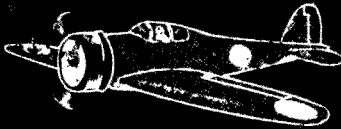


ITEM NO. 107

# JAPANESE NAVY SINGLE SEAT (PURSUIT PLANE) 1941 MODEL



TOP VIEW



SIDE VIEW



FRONT VIEW

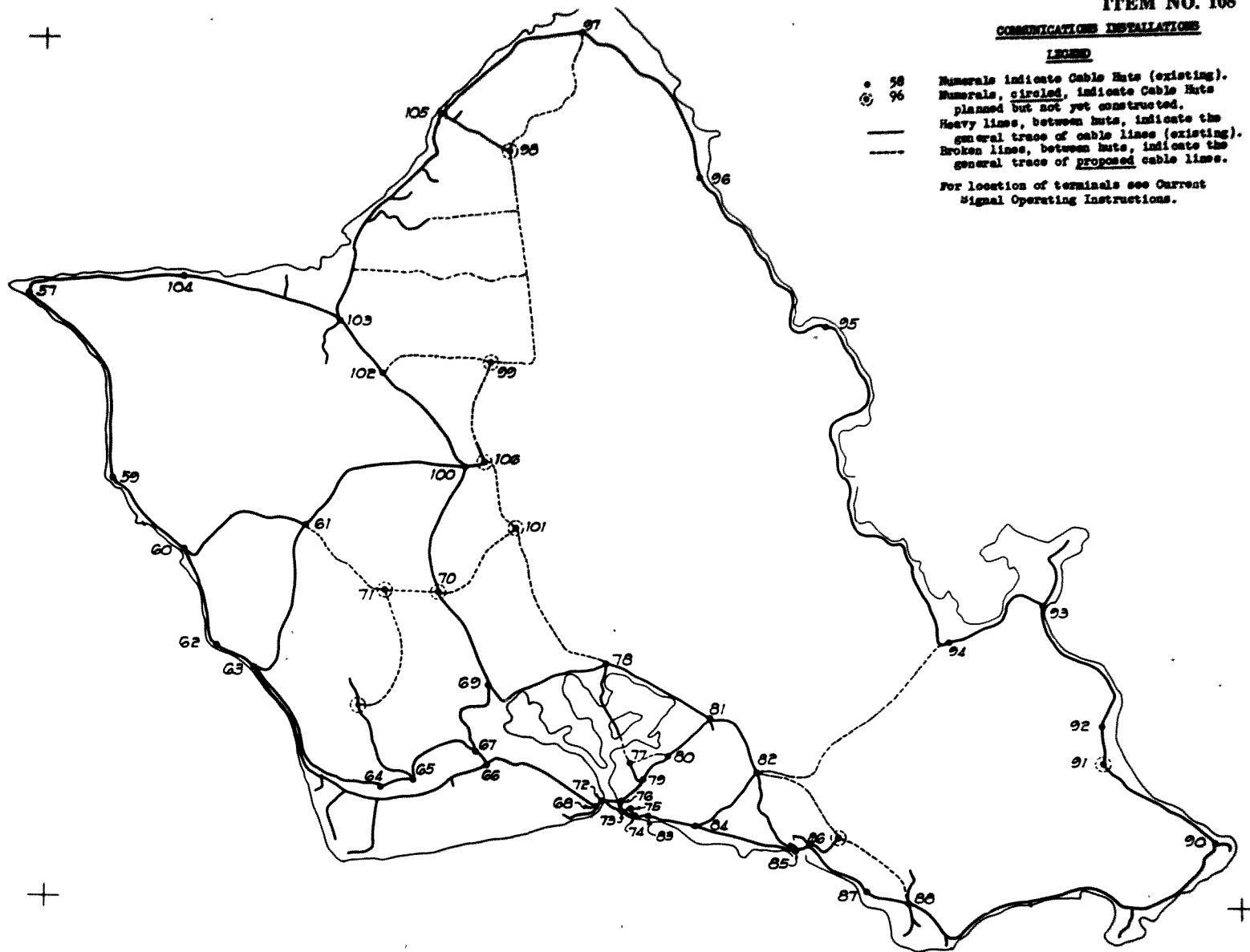
79716 0-46 RC

COMMUNICATIONS INSTALLATIONSLEGEND

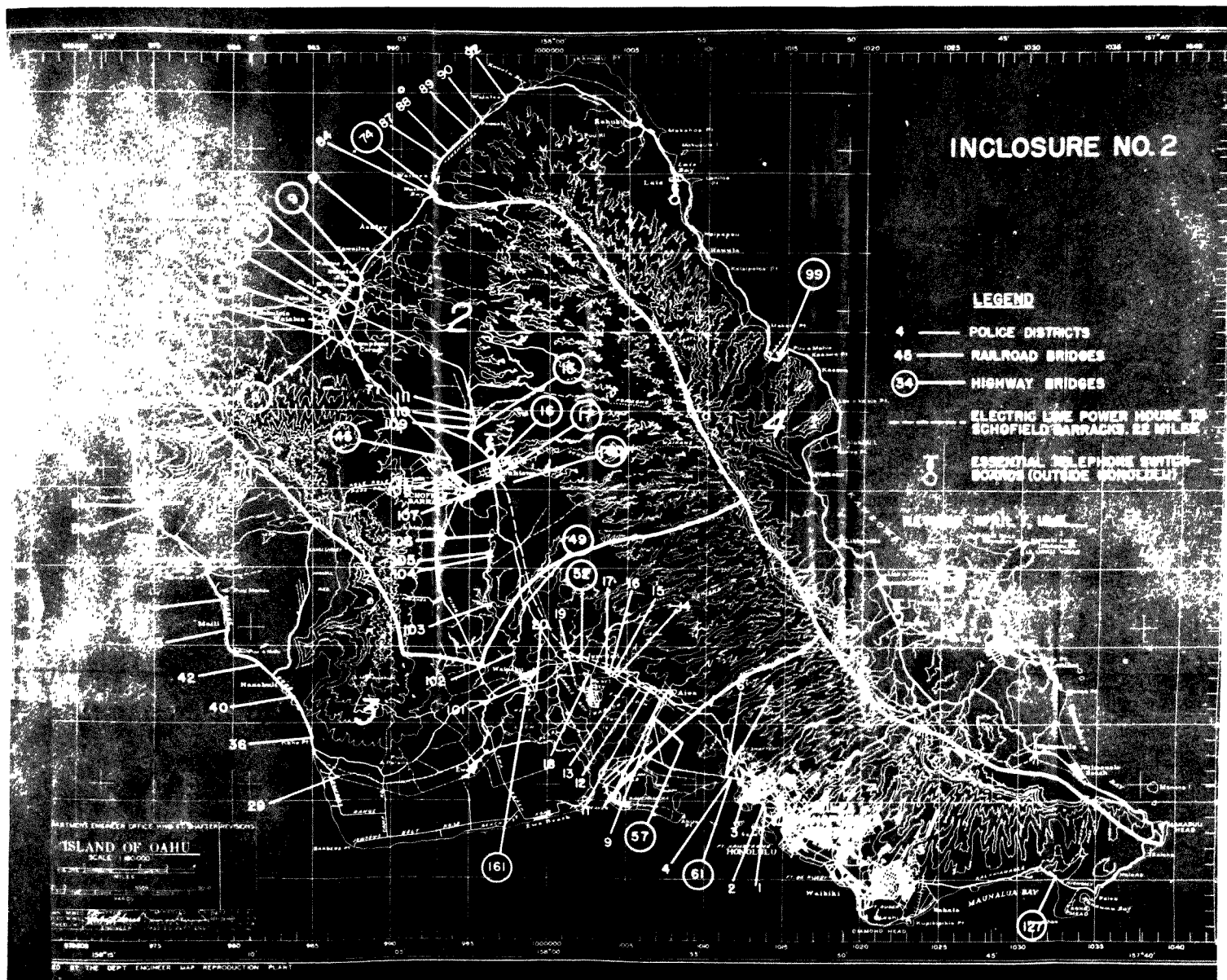
• 58  
 ⊙ 96

Minerals indicate Cable Huts (existing).  
 Minerals, circled, indicate Cable Huts  
 planned but not yet constructed.  
 Heavy lines, between huts, indicate the  
 general trace of cable lines (existing).  
 Broken lines, between huts, indicate the  
 general trace of proposed cable lines.

For location of terminals see Current  
 Signal Operating Instructions.



INCLOSURE NO. 1  
 Revised July 7, 1941





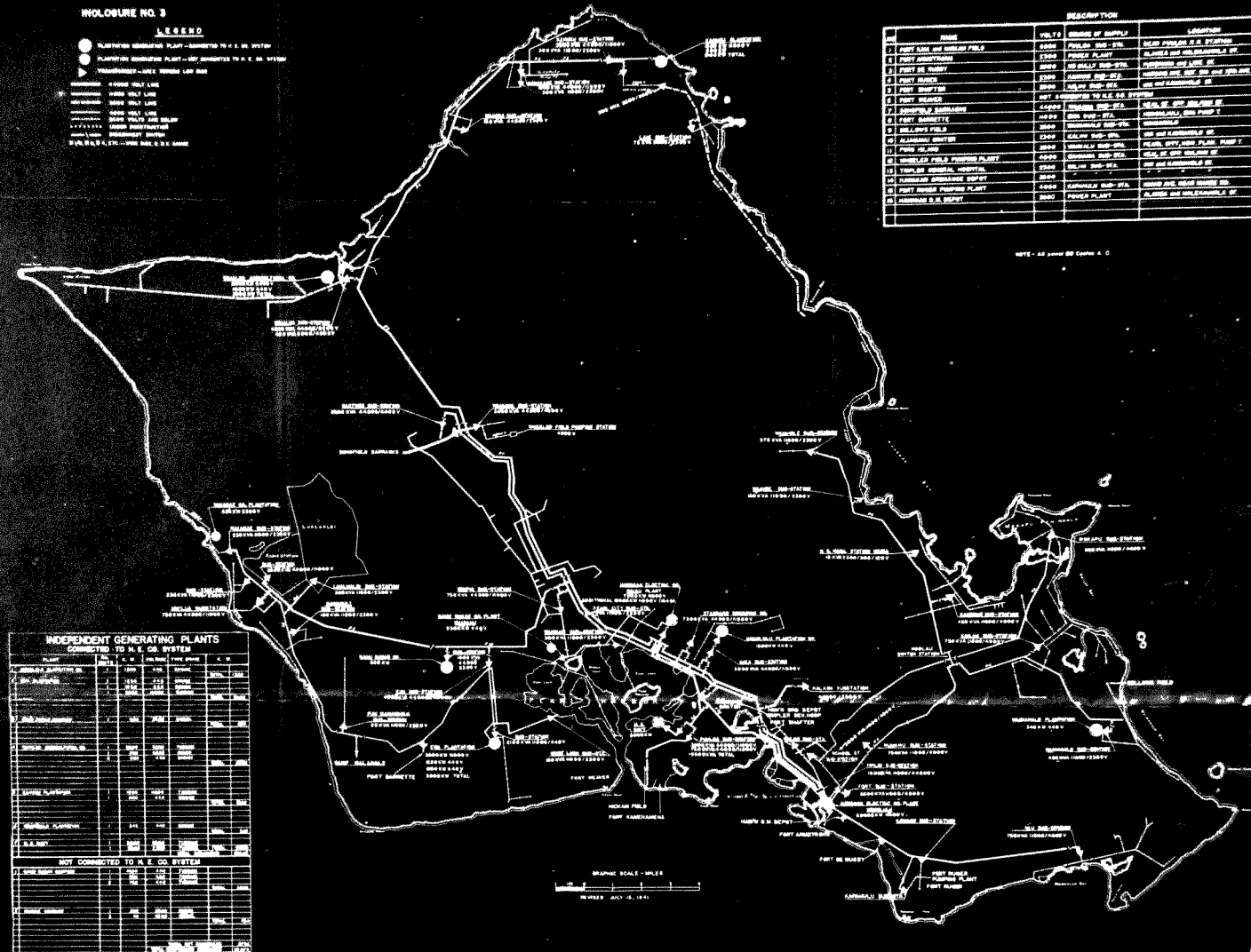
## ENCLOSURE NO. 3

## LEGEND

- PLANT AND ASSOCIATED PLANT—CONNECTED TO N. E. CO. SYSTEM  
 ○ PLANT AND ASSOCIATED PLANT—NOT CONNECTED TO N. E. CO. SYSTEM  
 — TRANSMISSION—LINE—GENERAL LAW LINE
- 4000 VOLT LINE  
 ----- 3000 VOLT LINE  
 ----- 2000 VOLT LINE  
 ----- 1500 VOLT LINE  
 ----- 1000 VOLT LINE  
 ----- 500 VOLT LINE  
 ----- 200 VOLT LINE  
 ----- 100 VOLT LINE  
 ----- 50 VOLT LINE
- PLAN 3053-1-70—THE N. E. CO. SYSTEM

NO.	NAME	VOLTS	ORIGIN OF SUPPLY	LOADS
1	FORT CANTON AND MOUNTAIN FIELD	3000	POWER SUP. SYS.	SEAR PROGRAM N. E. SYSTEM
2	FORT CANTON	2000	POWER PLANT	PLANTS AND UNCLASSIFIED BY
3	FORT DE RUYTER	2000	DE BALLY SUB-STA.	UNCLASSIFIED BY N. E. CO.
4	FORT MONROE	2000	DE BALLY SUB-STA.	UNCLASSIFIED BY N. E. CO.
5	FORT MONROE	2000	DE BALLY SUB-STA.	UNCLASSIFIED BY N. E. CO.
6	FORT MONROE	2000	DE BALLY SUB-STA.	UNCLASSIFIED BY N. E. CO.
7	JOHNSON'S BARBERSHOP	10000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
8	FORT MONROE	10000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
9	DE BALLY FIELD	3000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
10	ALABAMA BRITISH	1500	CALAM SUB-STA.	UNCLASSIFIED BY N. E. CO. SYSTEM
11	FORT MONROE	2000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
12	UNCLASSIFIED BY N. E. CO. SYSTEM	2000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
13	TROOP BRIGADE HOSPITAL	2000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
14	UNCLASSIFIED BY N. E. CO. SYSTEM	2000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
15	UNCLASSIFIED BY N. E. CO. SYSTEM	2000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
16	UNCLASSIFIED BY N. E. CO. SYSTEM	2000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
17	UNCLASSIFIED BY N. E. CO. SYSTEM	2000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
18	UNCLASSIFIED BY N. E. CO. SYSTEM	2000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
19	UNCLASSIFIED BY N. E. CO. SYSTEM	2000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM
20	UNCLASSIFIED BY N. E. CO. SYSTEM	2000	UNCLASSIFIED BY N. E. CO. SYSTEM	UNCLASSIFIED BY N. E. CO. SYSTEM

NOTE: AS ISSUED BY GEORGE A. C.

INDEPENDENT GENERATING PLANTS  
CONNECTED TO N. E. CO. SYSTEM

PLANT	NO.	V.	W.	H.	C.	T.	P.	D.
1. FORT MONROE	1	2000	1500	1000	500	200	100	50
2. FORT MONROE	2	2000	1500	1000	500	200	100	50
3. FORT MONROE	3	2000	1500	1000	500	200	100	50
4. FORT MONROE	4	2000	1500	1000	500	200	100	50
5. FORT MONROE	5	2000	1500	1000	500	200	100	50
6. FORT MONROE	6	2000	1500	1000	500	200	100	50
7. FORT MONROE	7	2000	1500	1000	500	200	100	50
8. FORT MONROE	8	2000	1500	1000	500	200	100	50
9. FORT MONROE	9	2000	1500	1000	500	200	100	50
10. FORT MONROE	10	2000	1500	1000	500	200	100	50
11. FORT MONROE	11	2000	1500	1000	500	200	100	50
12. FORT MONROE	12	2000	1500	1000	500	200	100	50
13. FORT MONROE	13	2000	1500	1000	500	200	100	50
14. FORT MONROE	14	2000	1500	1000	500	200	100	50
15. FORT MONROE	15	2000	1500	1000	500	200	100	50
16. FORT MONROE	16	2000	1500	1000	500	200	100	50
17. FORT MONROE	17	2000	1500	1000	500	200	100	50
18. FORT MONROE	18	2000	1500	1000	500	200	100	50
19. FORT MONROE	19	2000	1500	1000	500	200	100	50
20. FORT MONROE	20	2000	1500	1000	500	200	100	50

NOT CONNECTED TO N. E. CO. SYSTEM

1. FORT MONROE	1	2000	1500	1000	500	200	100	50
2. FORT MONROE	2	2000	1500	1000	500	200	100	50
3. FORT MONROE	3	2000	1500	1000	500	200	100	50
4. FORT MONROE	4	2000	1500	1000	500	200	100	50
5. FORT MONROE	5	2000	1500	1000	500	200	100	50
6. FORT MONROE	6	2000	1500	1000	500	200	100	50
7. FORT MONROE	7	2000	1500	1000	500	200	100	50
8. FORT MONROE	8	2000	1500	1000	500	200	100	50
9. FORT MONROE	9	2000	1500	1000	500	200	100	50
10. FORT MONROE	10	2000	1500	1000	500	200	100	50
11. FORT MONROE	11	2000	1500	1000	500	200	100	50
12. FORT MONROE	12	2000	1500	1000	500	200	100	50
13. FORT MONROE	13	2000	1500	1000	500	200	100	50
14. FORT MONROE	14	2000	1500	1000	500	200	100	50
15. FORT MONROE	15	2000	1500	1000	500	200	100	50
16. FORT MONROE	16	2000	1500	1000	500	200	100	50
17. FORT MONROE	17	2000	1500	1000	500	200	100	50
18. FORT MONROE	18	2000	1500	1000	500	200	100	50
19. FORT MONROE	19	2000	1500	1000	500	200	100	50
20. FORT MONROE	20	2000	1500	1000	500	200	100	50

MAPING SCALE—MILES

MARCH 1954

RESTRICTED

ANNEX NO. \_\_\_\_\_

S O P, \_\_\_\_\_ Infantry Division

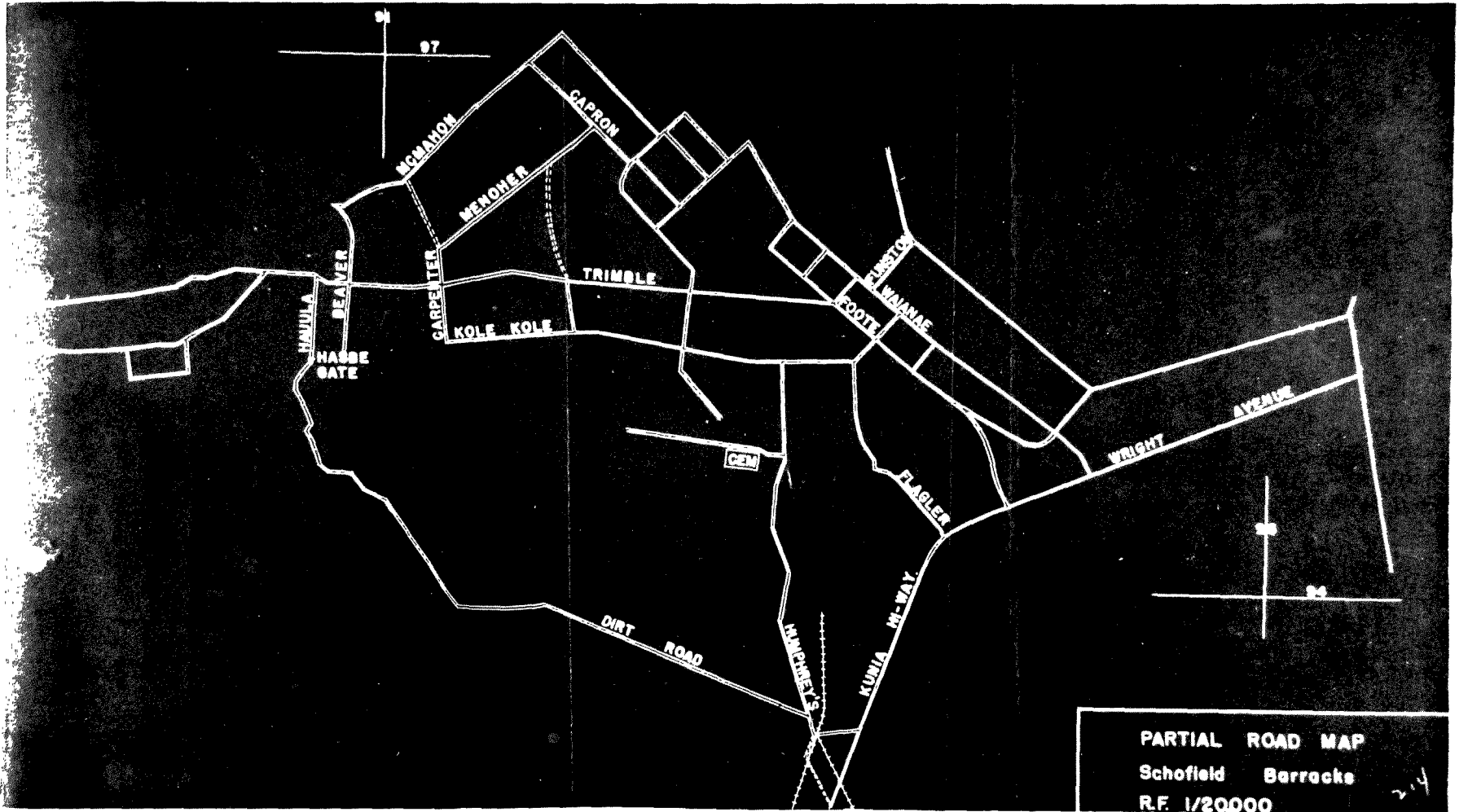
SUPPLY & EVACUATION  
INSTALLATIONS

## LEGEND

- |      |                  |   |               |
|------|------------------|---|---------------|
| ✱    | GENERAL HOSPITAL | ☾ | MOON POSITION |
| ▽    | AMBUCLAR UNIT    | ▽ | AMBUCLAR UNIT |
| P.W. | PRISONERS OF WAR | Q | QUARTERS      |
| ○    | POST             | E | ENTRANCE      |
| ○    | AMBUCLAR UNIT    | S | STORAGE       |
| ○    | AMBUCLAR UNIT    | A | AMBUCLAR UNIT |
| ○    | AMBUCLAR UNIT    | △ | AMBUCLAR UNIT |



RESTRICTED

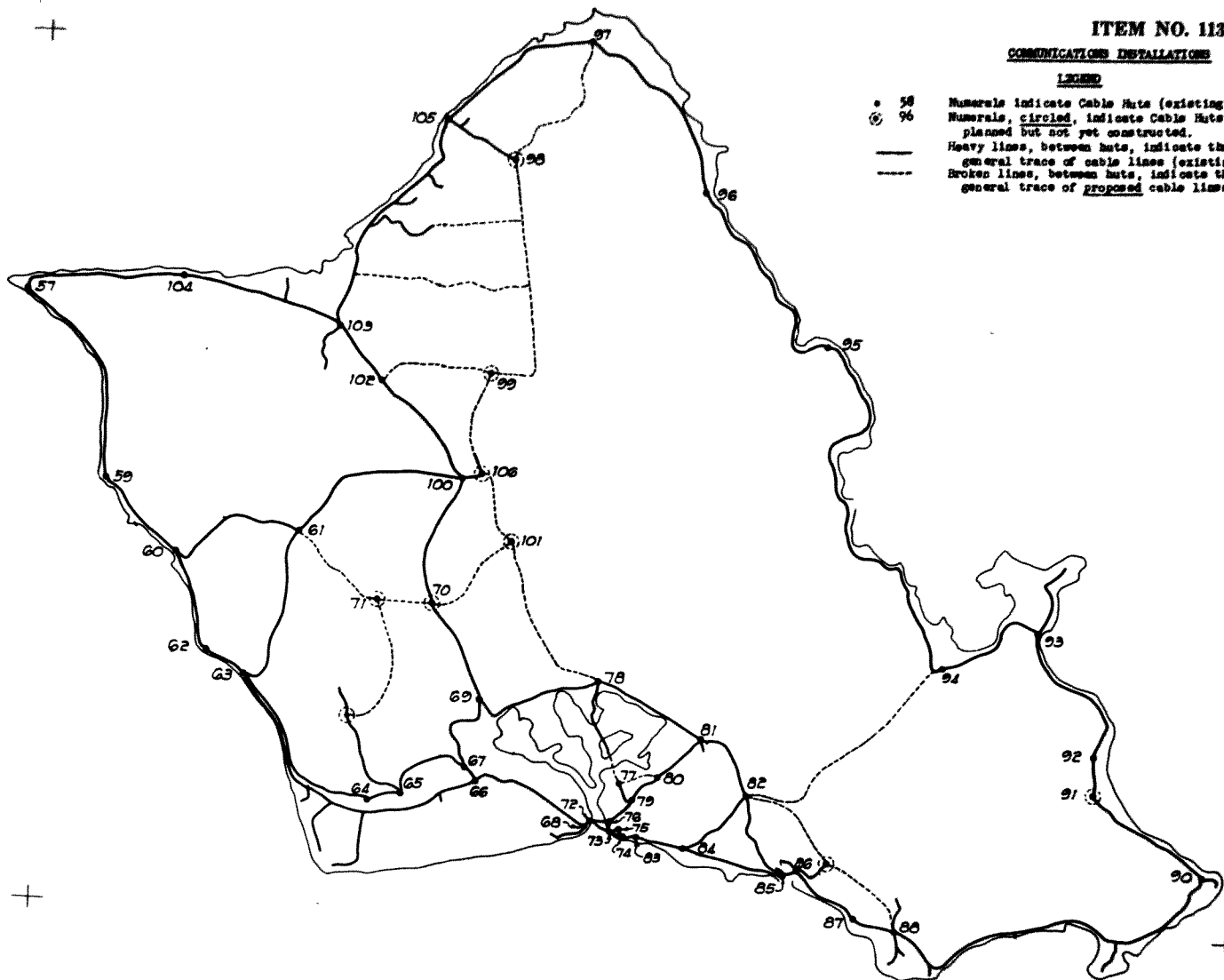


ITEM NO. 113

COMMUNICATIONS INSTALLATION

LEGEND

- 58 Numerals indicate Cable Huts (existing).
- ⊙ 96 Numerals, circled, indicate Cable Huts planned but not yet constructed.
- Heavy lines, between huts, indicate the general trace of cable lines (existing).
- - - Broken lines, between huts, indicate the general trace of proposed cable lines.



INCLOSURE NO. 1  
Revised July 7, 1941

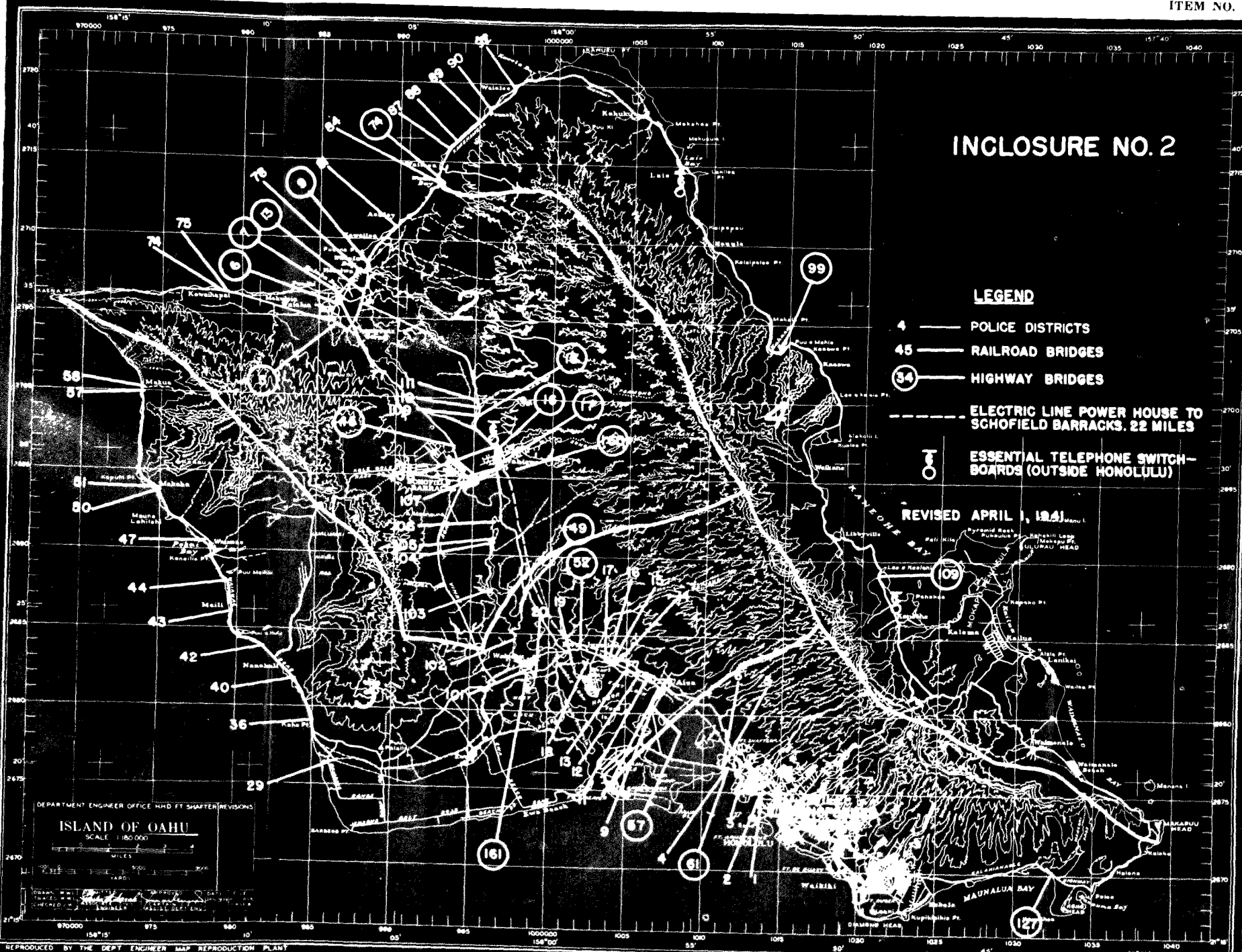
19716 0-46 RC

# INCLOSURE NO. 2

## LEGEND

- 4 — POLICE DISTRICTS
- 45 — RAILROAD BRIDGES
- 34 — HIGHWAY BRIDGES
- ELECTRIC LINE POWER HOUSE TO SCHOFIELD BARRACKS. 22 MILES
- ⊕ ESSENTIAL TELEPHONE SWITCHBOARDS (OUTSIDE HONOLULU)

REVISED APRIL 1, 1941



DEPARTMENT ENGINEER OFFICE HHD FT SHAFER REVISIONS

ISLAND OF OAHU  
SCALE 1:180,000

MILES

100000 150' 15" 975 980 985 990 995 1000000 1005 1010 1015 1020 1025 1030 1035 1040  
 2720 40' 2715 2710 2705 2700 2695 2690 2685 2680 2675 2670 2665 2660 2655 2650 2645 2640 2635 2630 2625 2620 2615 2610 2605 2600 2595 2590 2585 2580 2575 2570 2565 2560 2555 2550 2545 2540 2535 2530 2525 2520 2515 2510 2505 2500 2495 2490 2485 2480 2475 2470 2465 2460 2455 2450 2445 2440 2435 2430 2425 2420 2415 2410 2405 2400 2395 2390 2385 2380 2375 2370 2365 2360 2355 2350 2345 2340 2335 2330 2325 2320 2315 2310 2305 2300 2295 2290 2285 2280 2275 2270 2265 2260 2255 2250 2245 2240 2235 2230 2225 2220 2215 2210 2205 2200 2195 2190 2185 2180 2175 2170 2165 2160 2155 2150 2145 2140 2135 2130 2125 2120 2115 2110 2105 2100 2095 2090 2085 2080 2075 2070 2065 2060 2055 2050 2045 2040 2035 2030 2025 2020 2015 2010 2005 2000 1995 1990 1985 1980 1975 1970 1965 1960 1955 1950 1945 1940 1935 1930 1925 1920 1915 1910 1905 1900 1895 1890 1885 1880 1875 1870 1865 1860 1855 1850 1845 1840 1835 1830 1825 1820 1815 1810 1805 1800 1795 1790 1785 1780 1775 1770 1765 1760 1755 1750 1745 1740 1735 1730 1725 1720 1715 1710 1705 1700 1695 1690 1685 1680 1675 1670 1665 1660 1655 1650 1645 1640 1635 1630 1625 1620 1615 1610 1605 1600 1595 1590 1585 1580 1575 1570 1565 1560 1555 1550 1545 1540 1535 1530 1525 1520 1515 1510 1505 1500 1495 1490 1485 1480 1475 1470 1465 1460 1455 1450 1445 1440 1435 1430 1425 1420 1415 1410 1405 1400 1395 1390 1385 1380 1375 1370 1365 1360 1355 1350 1345 1340 1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240 1235 1230 1225 1220 1215 1210 1205 1200 1195 1190 1185 1180 1175 1170 1165 1160 1155 1150 1145 1140 1135 1130 1125 1120 1115 1110 1105 1100 1095 1090 1085 1080 1075 1070 1065 1060 1055 1050 1045 1040 1035 1030 1025 1020 1015 1010 1005 1000 995 990 985 980 975 970 965 960 955 950 945 940 935 930 925 920 915 910 905 900 895 890 885 880 875 870 865 860 855 850 845 840 835 830 825 820 815 810 805 800 795 790 785 780 775 770 765 760 755 750 745 740 735 730 725 720 715 710 705 700 695 690 685 680 675 670 665 660 655 650 645 640 635 630 625 620 615 610 605 600 595 590 585 580 575 570 565 560 555 550 545 540 535 530 525 520 515 510 505 500 495 490 485 480 475 470 465 460 455 450 445 440 435 430 425 420 415 410 405 400 395 390 385 380 375 370 365 360 355 350 345 340 335 330 325 320 315 310 305 300 295 290 285 280 275 270 265 260 255 250 245 240 235 230 225 220 215 210 205 200 195 190 185 180 175 170 165 160 155 150 145 140 135 130 125 120 115 110 105 100 95 90 85 80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5' 10' 15' 20' 25' 30' 35' 40' 45' 50' 55' 60' 65' 70' 75' 80' 85' 90' 95' 100' 105' 110' 115' 120' 125' 130' 135' 140' 145' 150' 155' 160' 165' 170' 175' 180' 185' 190' 195' 200'

REPRODUCED BY THE DEPT ENGINEER MAP REPRODUCTION PLANT





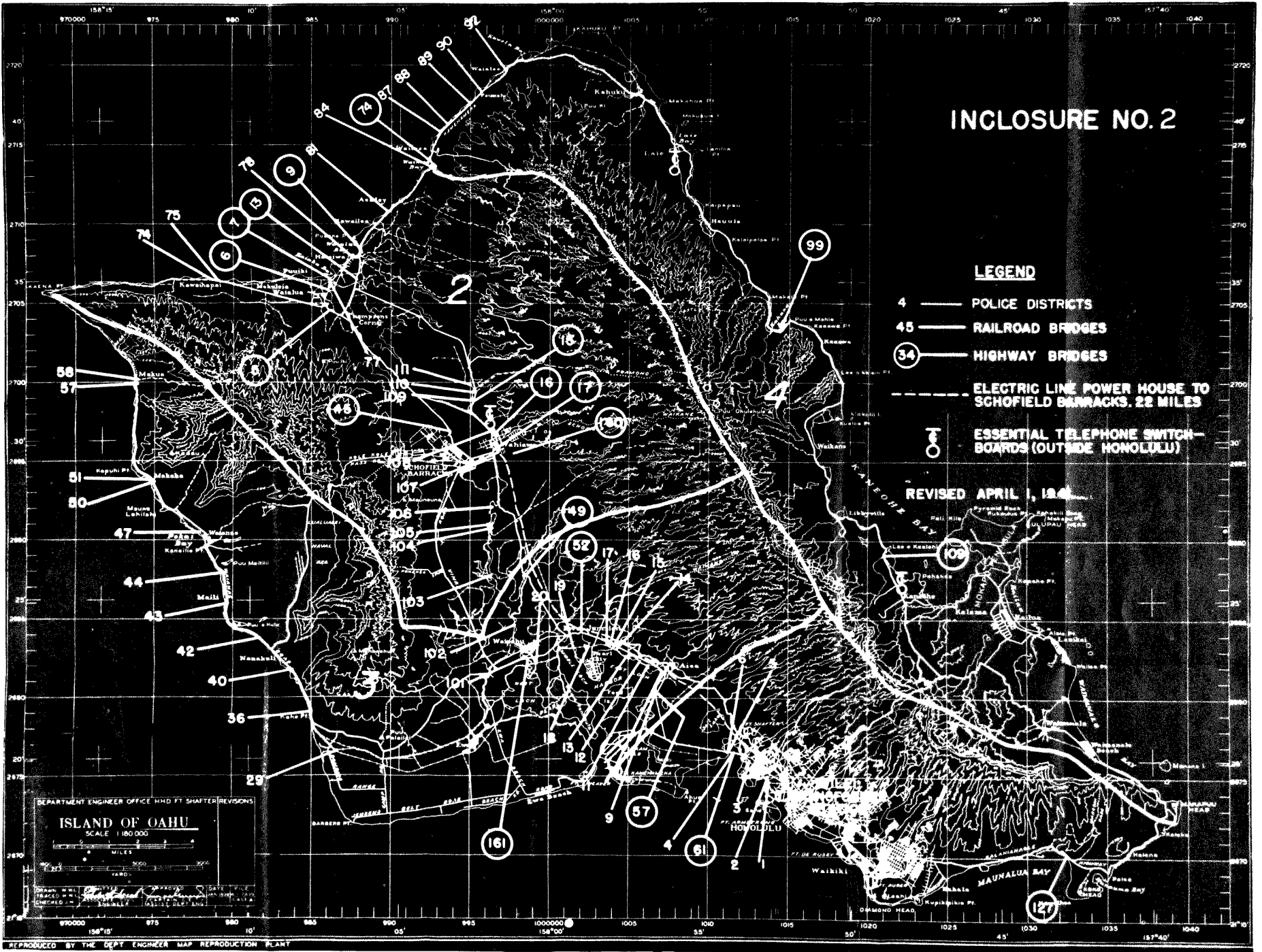
ENCLOSURE NO. 1  
Revised July 7, 1941

# INCLOSURE NO. 2

## LEGEND

- 4 — POLICE DISTRICTS
- 45 — RAILROAD BRIDGES
- 34 — HIGHWAY BRIDGES
- ELECTRIC LINE POWER HOUSE TO SCHOFIELD BARRACKS. 22 MILES
- ⊕ ESSENTIAL TELEPHONE SWITCH-BOARDS (OUTSIDE HONOLULU)

REVISED APRIL 1, 1941



DEPARTMENT ENGINEER OFFICE HHD FT SHAFTER REVISIONS  
**ISLAND OF OAHU**  
 SCALE 1:180,000  
 0 5000 10000 15000 20000  
 FEET  
 0 1 2 3 4 5  
 MILES  
 CHECKED BY: [Signature] ASSIST. DEPT. ENG.



INCLOSURE NO. 3

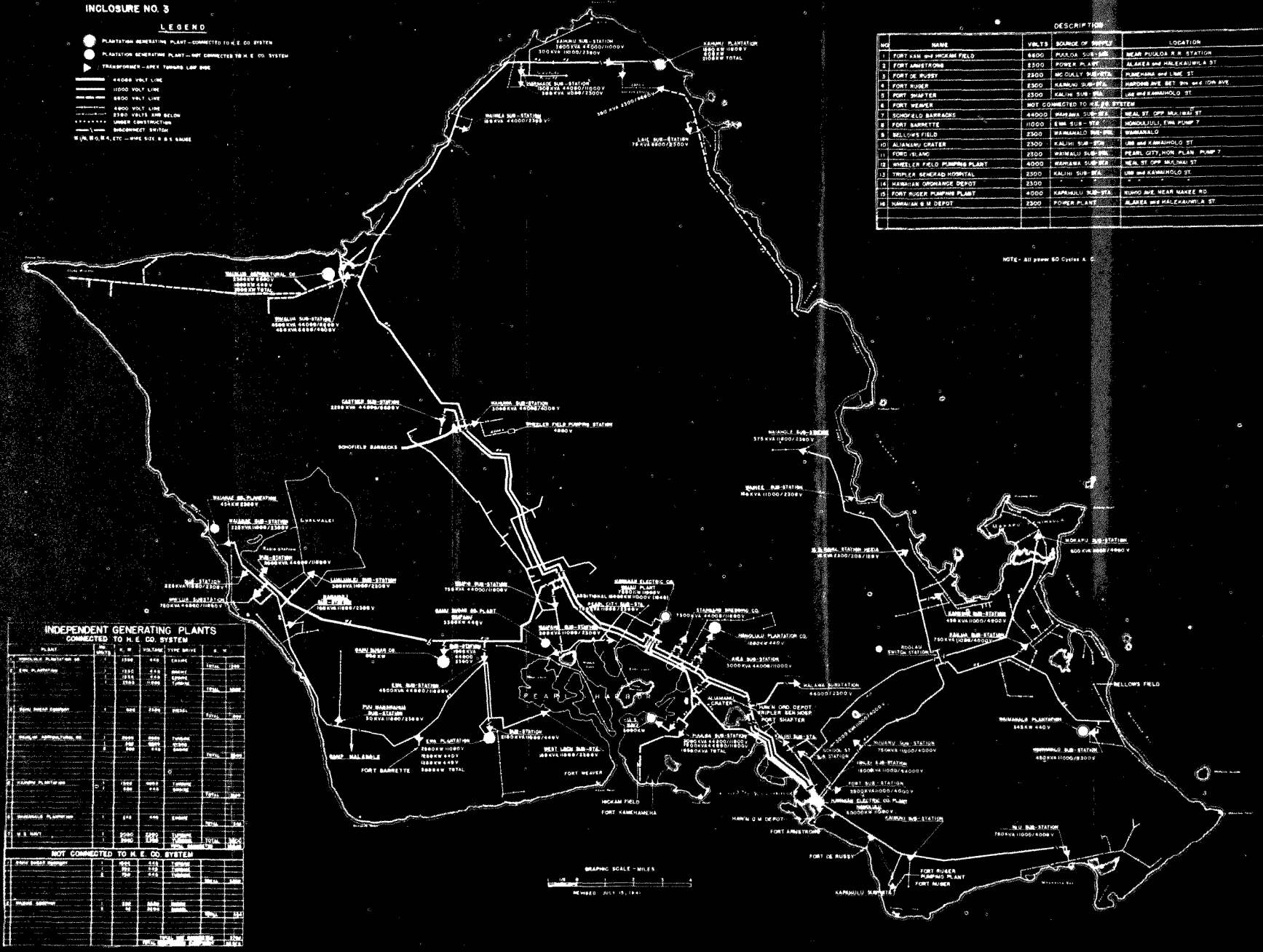
LEGEND

- PLANTATION GENERATING PLANT - CONNECTED TO H. E. CO. SYSTEM
- PLANTATION GENERATING PLANT - NOT CONNECTED TO H. E. CO. SYSTEM
- TRANSFORMERS - CORE TOWARD LOW VOLT
- 4000 VOLT LINE
- 11000 VOLT LINE
- 6500 VOLT LINE
- 4800 VOLT LINE
- 2300 VOLT 2ND BELOW
- UNDER CONSTRUCTION
- DISCONNECT SWITCH
- W, V, B, O, R, E, etc. - WME SIZE W & S GAUGE

DESCRIPTION

NO.	NAME	VOLTS	SOURCE OF POWER	LOCATION
1	FORT OAK AND PINEAPPLE FIELD	4800	PEACOCK SUB-STA.	NEAR PULOUA R. R. STATION
2	FORT ARMSTRONG	2300	POWER PLANT	ALAEWA AND HALEKAUWILA ST
3	FORT OF RUSSET	2300	MC GULLY SUB-STA.	PLUMMER AND LIME ST
4	FORT RUSSET	2300	KALAH SUB-STA.	HAWAIIAN AVE. BET. 3RD AND 10TH AVE
5	FORT WEAVER	2300	KALAH SUB-STA.	LIME AND KAMAHOLO ST
6	FORT WEAVER	NOT CONNECTED TO H. E. CO. SYSTEM		
7	WHEELER FIELD	4000	WAIHALA SUB-STA.	NEAL ST. OPP. MALINAU ST
8	FORT BARRETTE	11000	LIME SUB-STA.	HONOLULU, EME PLUMP 7
9	MELLOW'S FIELD	2300	WAIMAKALO SUB-STA.	WAIMAKALO
10	ALANAKU CRATER	2300	KALAH SUB-STA.	LIME AND KAMAHOLO ST
11	FORD ISLAND	2300	WAIMAKALO SUB-STA.	PEARL CITY, HON. PLAN. PUMP 7
12	WHEELER FIELD PUMPING PLANT	4000	WAIHALA SUB-STA.	NEAL ST. OPP. MALINAU ST
13	TRIPLEK SEALERAD HOSPITAL	2300	KALAH SUB-STA.	LIME AND KAMAHOLO ST
14	HAWAIIAN COMMAND DEPOT	2300	"	"
15	FORT RUSSET PUMPING PLANT	4000	HAWAIIAN SUB-STA.	HUNO AVE. NEAR MAKEE RD
16	HAWAIIAN S. B. DEPOT	2300	POWER PLANT	ALAEWA AND HALEKAUWILA ST

NOTE: All power 60 Cycles A. C.



PLANT	NO. OF UNITS	KW	VOLTS	TYPE	W	S	TOTAL
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000

PLANT	NO. OF UNITS	KW	VOLTS	TYPE	W	S	TOTAL
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000
Peapack Plantation Co.	1	1000	4800	Steam	1000	0	1000



RESTRICTED

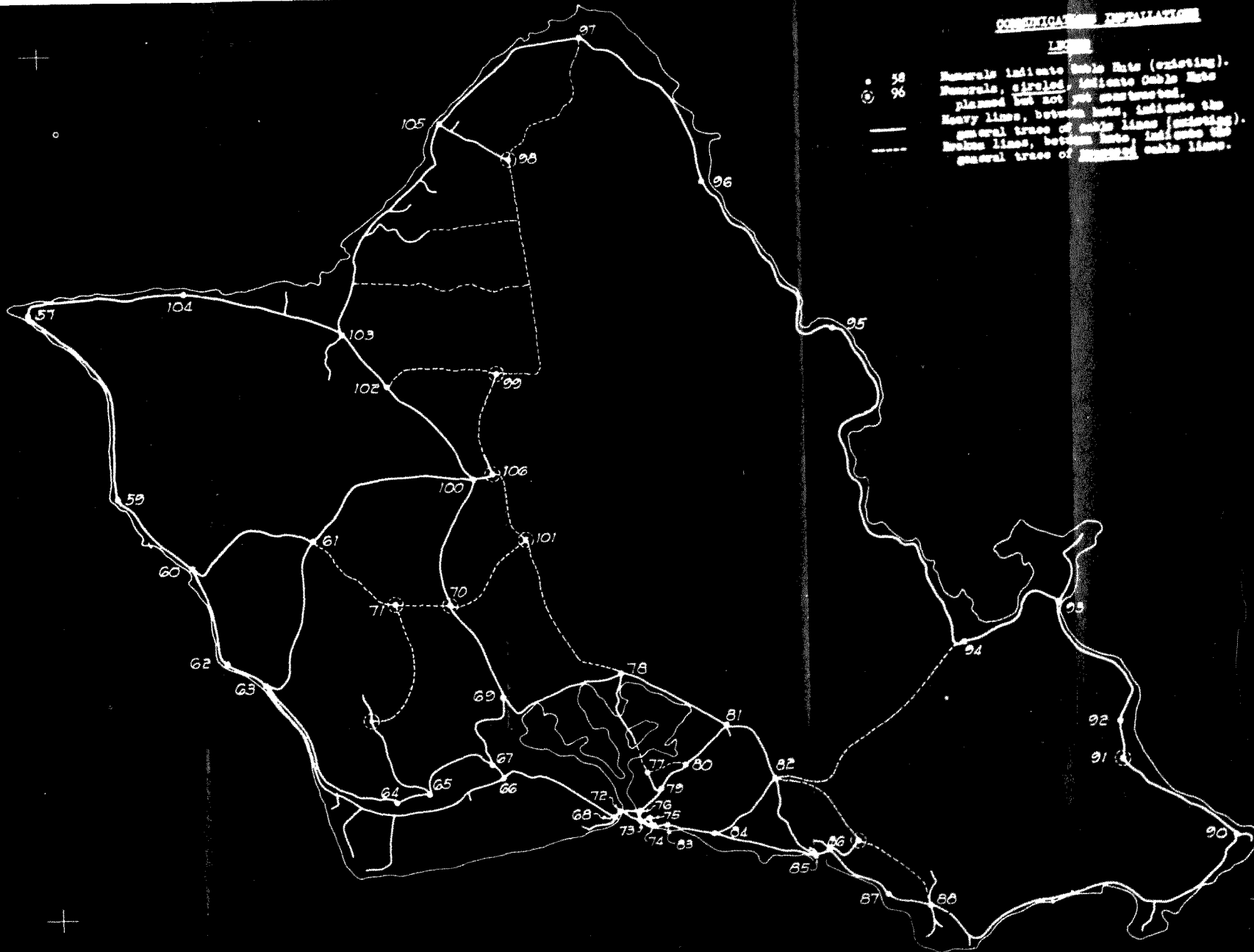
ENCLOSURE NO. 4

24TH

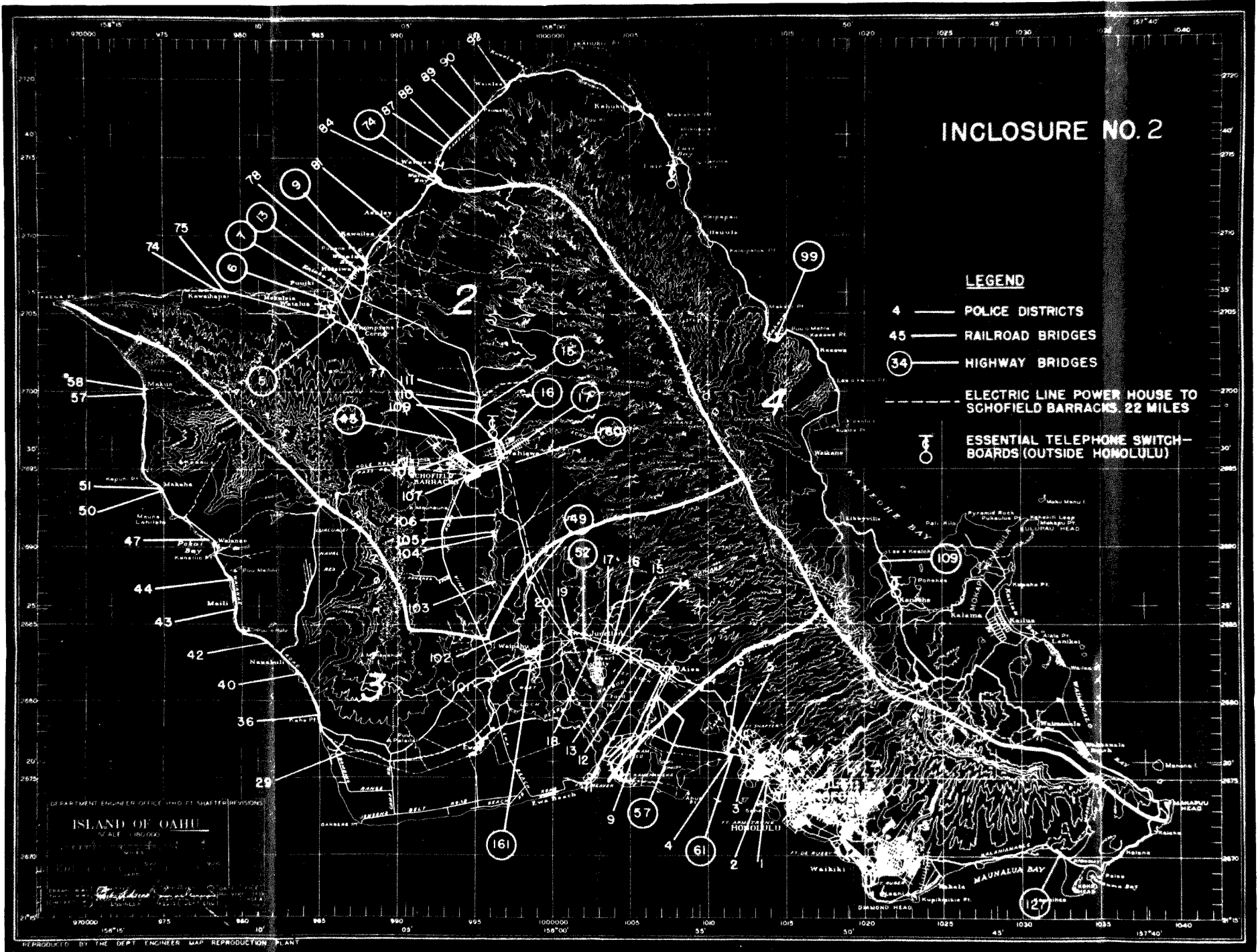
## COMMUNICATIONS INSTALLATION

## LEGEND

- 59 Numerals indicate Cable Rate (existing).
- ⊙ 96 Numerals, circled, indicate Cable Rate planned but not yet constructed.
- Heavy lines, between dots, indicate the general trace of cable lines (existing).
- - - - - Broken lines, between dots, indicate the general trace of proposed cable lines.



INCLOSURE NO. 1  
Revised July 7, 1941



INCLOSURE NO. 2

LEGEND

- 4 — POLICE DISTRICTS
- 45 — RAILROAD BRIDGES
- 34 — HIGHWAY BRIDGES
- ELECTRIC LINE POWER HOUSE TO SCHOFIELD BARRACKS. 22 MILES
- ⊗ ESSENTIAL TELEPHONE SWITCH-BOARDS (OUTSIDE HONOLULU)

DEPARTMENT ENGINEER OFFICE AND 21 SHARPER DIVISIONS

ISLAND OF OAHU

SCALE 1:100,000

1 MILE

1:100,000

1:100,000

1:100,000

1:100,000

1:100,000

1:100,000

1:100,000

1:100,000

1:100,000

REPRODUCED BY THE DEPT ENGINEER MAP REPRODUCTION PLANT

INCLOSURE NO. 3

LEGEND

- PLANTATION GENERATING PLANT - CONNECTED TO H.E. CO SYSTEM
- PLANTATION GENERATING PLANT - NOT CONNECTED TO H.E. CO SYSTEM
- ◀ TRANSFORMER - 500 KVA TAPPING LOW VOLT

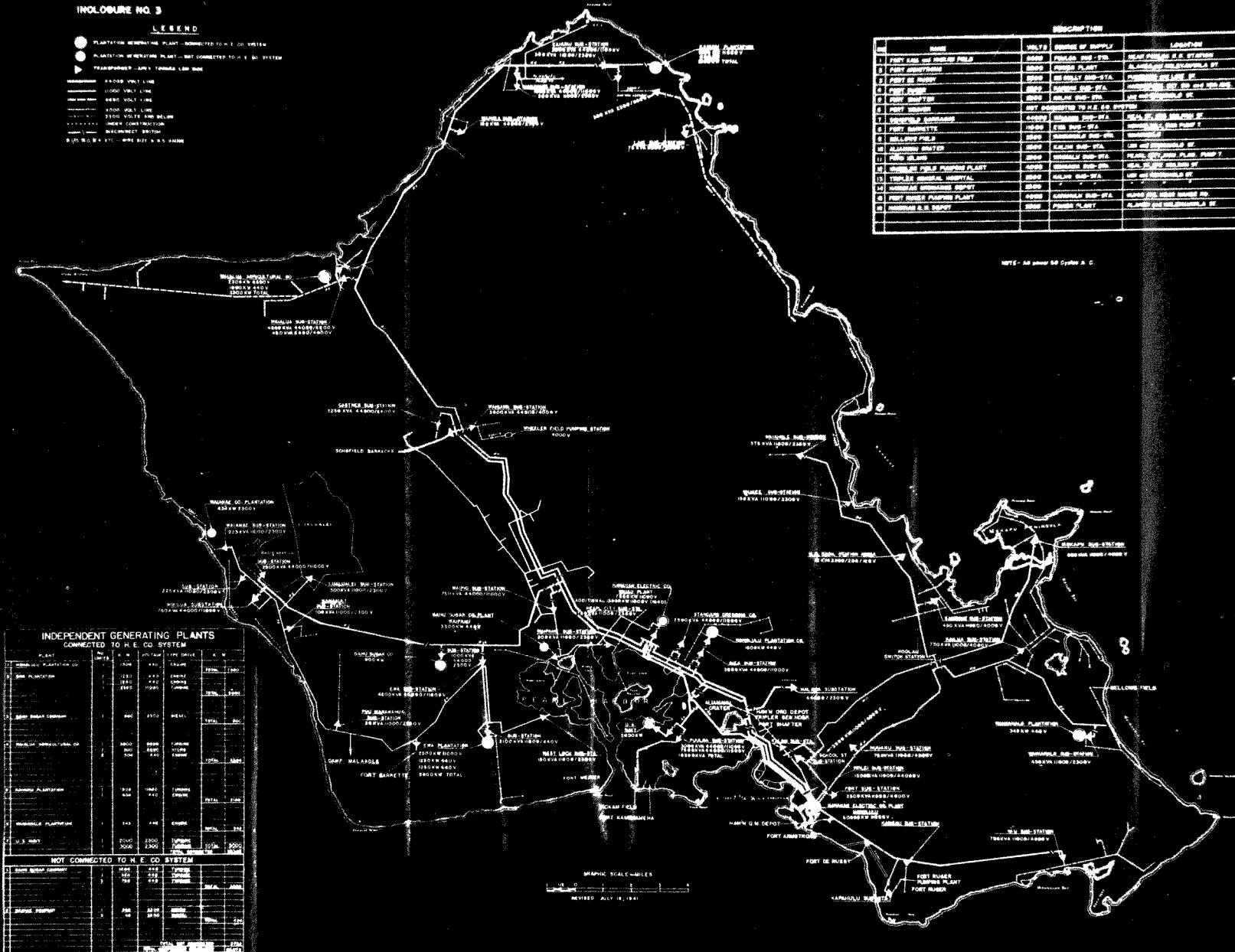
- 13800 VOLT LINE
- 17000 VOLT LINE
- 2400 VOLT LINE
- 3300 VOLT LINE
- 3300 VOLT SWM BELAY
- - - - UNDER CONSTRUCTION
- TRANSMISSION BRIDGE

8 (5) R.O. 84 571 - WPE 807 8 3 5 42486

DESCRIPTION

ID	NAME	VOLTS	PHASES OF SUPPLY	LOCATION
1	FORT GIBBS AND MARSH FIELDS	8000	PHASES A AND C	NEAR FORT GIBBS S.E. STATION
2	FORT BRIDGMAN	8000	PHASES B AND C	ALONGSIDE SUBSTATION 4 BY
3	FORT MONTGOMERY	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
4	FORT STANLEY	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
5	FORT COOK	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
6	FORT GIBBS	807	PHASES A AND C	ALONGSIDE MARSH FIELDS
7	CANTONMENT BRIDGMAN	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
8	FORT BRIDGMAN	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
9	FORT STANLEY	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
10	FORT COOK	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
11	FORT GIBBS	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
12	WINDMILL FIELDS PUMPING PLANT	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
13	TRIPLE GENERAL HOSPITAL	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
14	WINDMILL FIELDS PUMPING PLANT	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
15	FORT BRIDGMAN PUMPING PLANT	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
16	FORT BRIDGMAN PUMPING PLANT	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
17	WINDMILL FIELDS PUMPING PLANT	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
18	FORT BRIDGMAN PUMPING PLANT	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
19	FORT BRIDGMAN PUMPING PLANT	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS
20	FORT BRIDGMAN PUMPING PLANT	8000	PHASES A AND C	ALONGSIDE MARSH FIELDS

NOTE - All power 60 Cycle A.C.



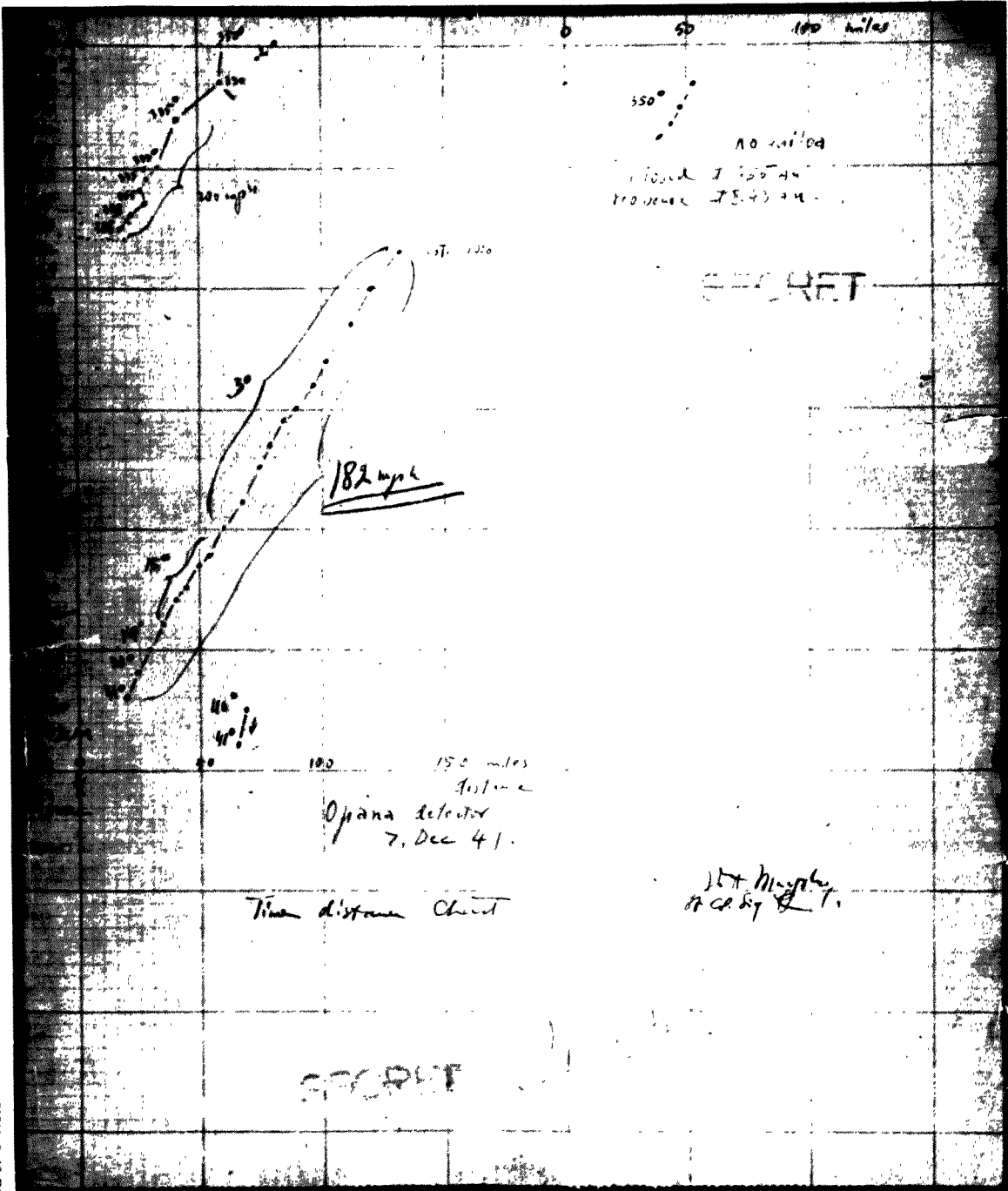
INDEPENDENT GENERATING PLANTS

PLANT	NO. UNITS	NET CAPACITY (KW)	TYPE	STATUS	REMARKS
WINDMILL FIELDS PUMPING PLANT	1	1100	WIND	OPERATING	
FORT BRIDGMAN PUMPING PLANT	1	1100	WIND	OPERATING	
FORT STANLEY PUMPING PLANT	1	1100	WIND	OPERATING	
FORT COOK PUMPING PLANT	1	1100	WIND	OPERATING	
FORT GIBBS PUMPING PLANT	1	1100	WIND	OPERATING	
WINDMILL FIELDS PUMPING PLANT	1	1100	WIND	OPERATING	
U.S. ARMY	1	1100	WIND	OPERATING	
FORT BRIDGMAN PUMPING PLANT	1	1100	WIND	OPERATING	
FORT STANLEY PUMPING PLANT	1	1100	WIND	OPERATING	
FORT COOK PUMPING PLANT	1	1100	WIND	OPERATING	
FORT GIBBS PUMPING PLANT	1	1100	WIND	OPERATING	

NOT CONNECTED TO H.E. CO SYSTEM

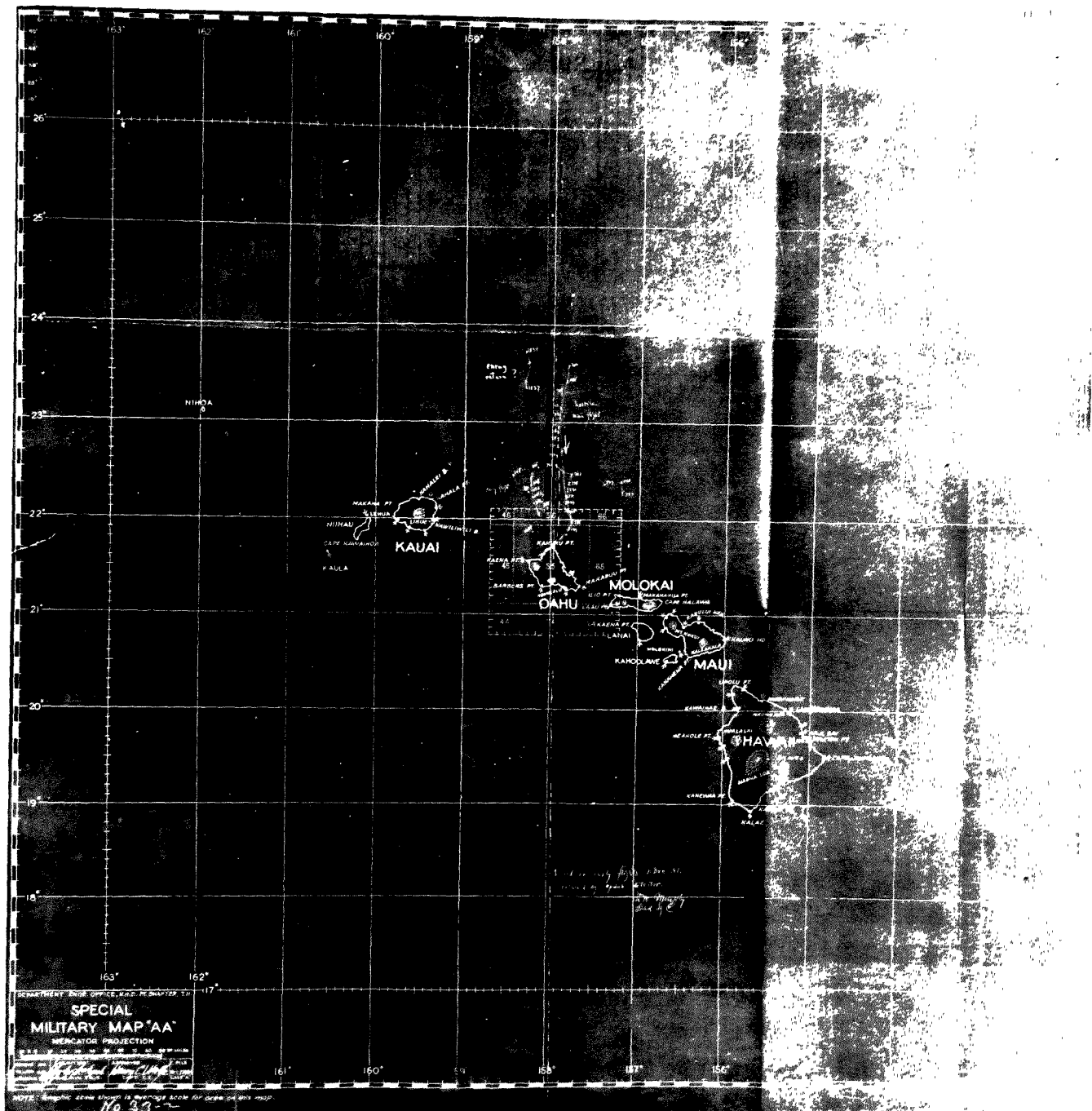
PLANT	NO. UNITS	NET CAPACITY (KW)	TYPE	STATUS	REMARKS
FORT BRIDGMAN PUMPING PLANT	1	1100	WIND	OPERATING	
FORT STANLEY PUMPING PLANT	1	1100	WIND	OPERATING	
FORT COOK PUMPING PLANT	1	1100	WIND	OPERATING	
FORT GIBBS PUMPING PLANT	1	1100	WIND	OPERATING	

GRAPHIC SCALE - MILES  
REVISED JULY 16, 1941



NO called  
 11000 J 100-44  
 1000000 7543 24

1st M...  
 at 4:00 P.M.



METHOD OF SEARCHING 5° SECTORS  
 THROUGH 360° TO A RADIUS OF 833  
 MILES FROM OAHU EMPLOYING 72 B-17D  
 AIRPLANES.

1. VELOCITY ASSUMED TO BE 25 MILES
2. ALL MILES NAUTICAL
3. CROSS-HATCHED AREAS INDICATE COVERAGE  
 ON SEARCH OUT
4. SHADED AREAS INDICATE OVERLAP

(10-344-372)(1-3-4)  
 Confidential

+

MIDWAY

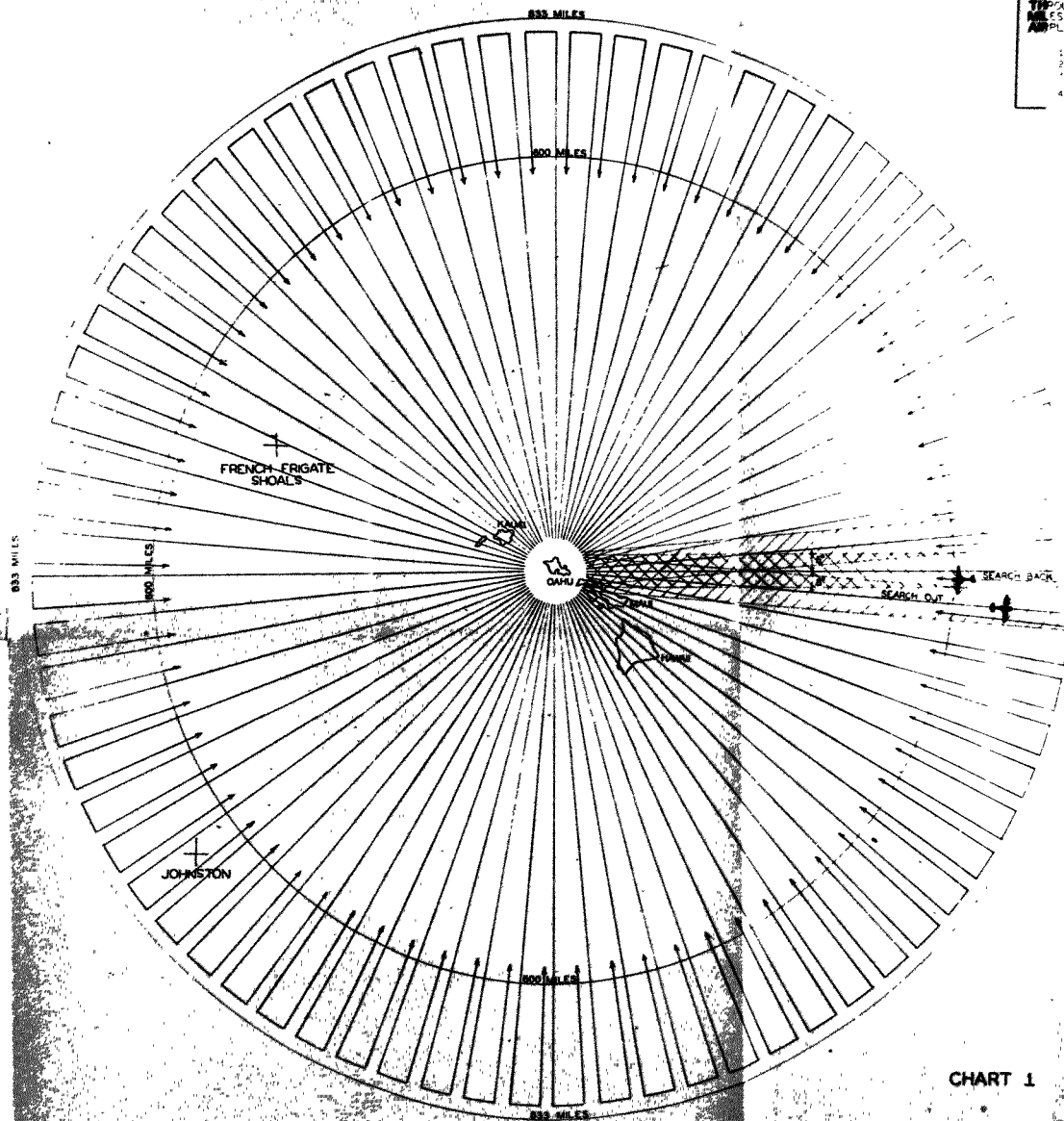


CHART 1



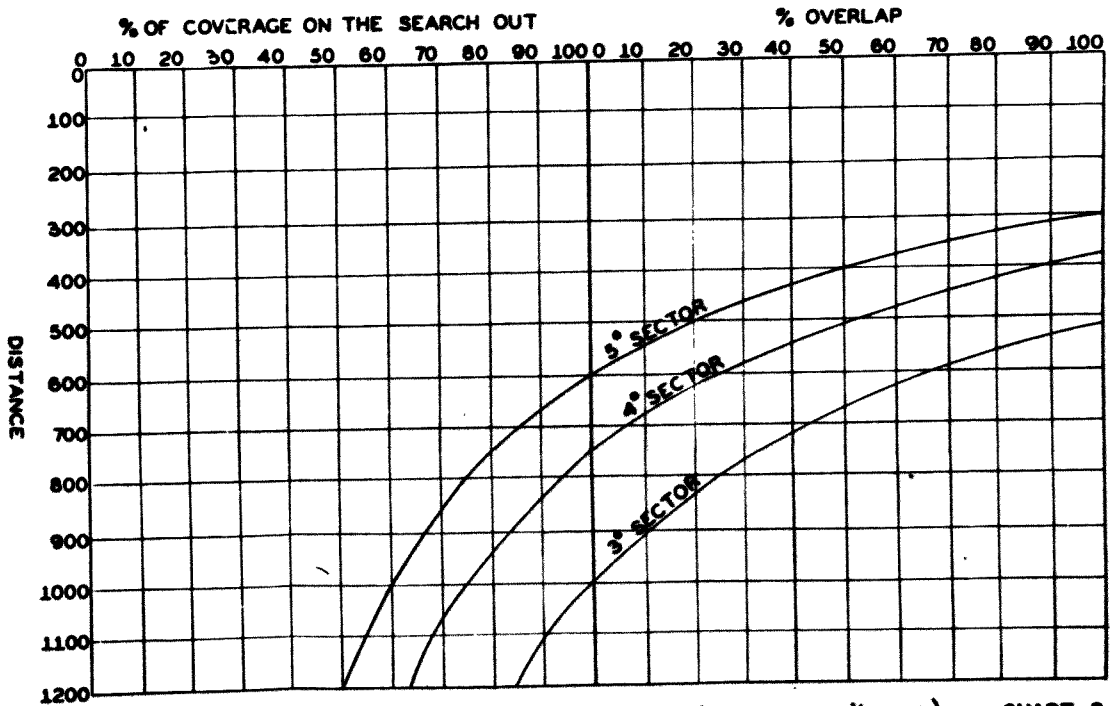
**CONFIDENTIAL**

**RELATION OF 25 MILE VISIBILITY TO DISTANCE**

- EXPLANATION OF CURVES
1. These curves apply to the search out only.
  2. This explanation is based on the 60° search sector. The principal employed in constructing the 60° curve is that in the construction of the curves for the 30° and 45° search sectors.
  3. At sixty (60) nautical miles, 1° equals one (1) mile. In 1200 nautical miles of equals 120 miles. Since the area that can be searched by one plane at any time with 25 miles visibility is 25 miles to either side, the area that can be searched by two search out between two planes is 50 nautical miles. Therefore at 1200 miles, 60% coverage is obtained.
  4. From the solution above the following working formula can be applied to plot the curves:  

$$\frac{60 \text{ nautical miles}}{\text{Search radius in nautical miles}} \times \frac{50 \text{ nautical miles}}{\text{Degree of search sector}}$$
 If the answer is greater than one, it indicates coverage in excess of 100% and, therefore, overlap.  
 For example at 300 miles:

$$\frac{10}{300} \times \frac{50}{60} = 2 \text{ or, } 100\% \text{ overlap.}$$



(C-242-917C-17)(p-9-41) - CHART 2

SECTION  
2

4. PERFORMANCE OF B-17G AIRPLANE
- A. RANGE: RADIUS OF ACTION, ALLOWANCE FOR 10% LOSS OF FUEL IN EMERGENCY OPERATIONS 1240 STATUTE MILES
  - B. RADIUS OF SEARCH: 1800 MILES  
2500 GAL FUEL, 10 BOMBS  
45° DOWN, 20° UP AND BACK  
5000 FEET ALTITUDE 143 KNOTS
  - C. RADIUS OF ATTACK FORCE: 775 MILES  
2093 GAL FUEL, 4-8000 BOMBS  
65° DOWN, 20° UP  
15,000 FEET ALTITUDE 193 KNOTS OUT
  - D. RADIUS WITH MAXIMUM BOMB WEIGHT: 689 MILES  
1770 GAL FUEL, 4-8000 BOMBS  
65° DOWN, 20° UP, 5000 FEET  
ALTITUDE 93 KNOTS OUT
5. EXEMPTIONS
- A. DURATION: 3 HOURS
  - B. DURATION OF PERFORMANCE: 1 HOUR
  - C. DURATION OF DARKNESS: 1 HOUR
  - D. RADIUS OF DARKNESS: 10 HOURS
  - E. ALTITUDE: 10,000 FEET

(0-212-977-C-12)(8-9-40)

Confidential

D

C

SECTION

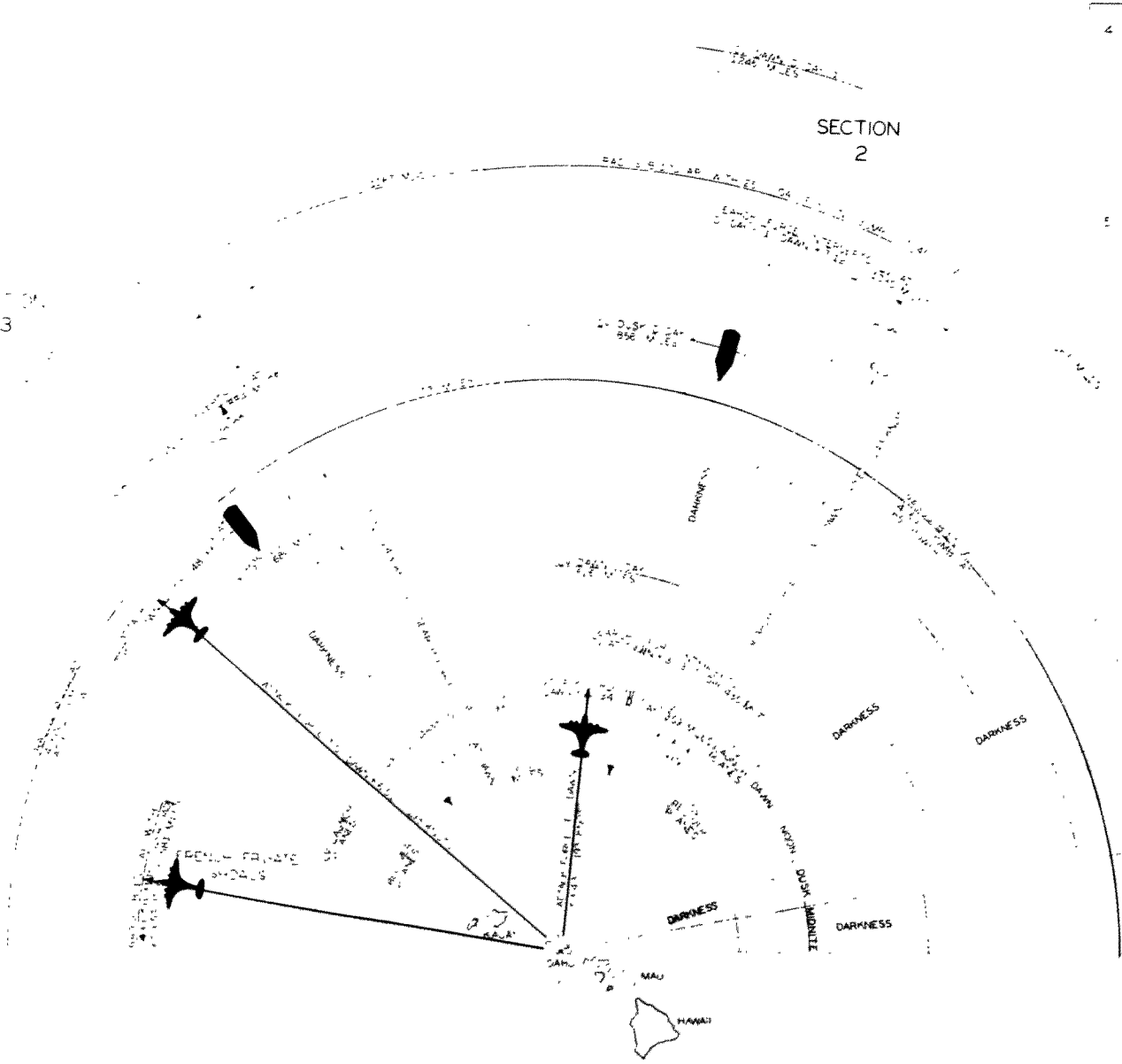
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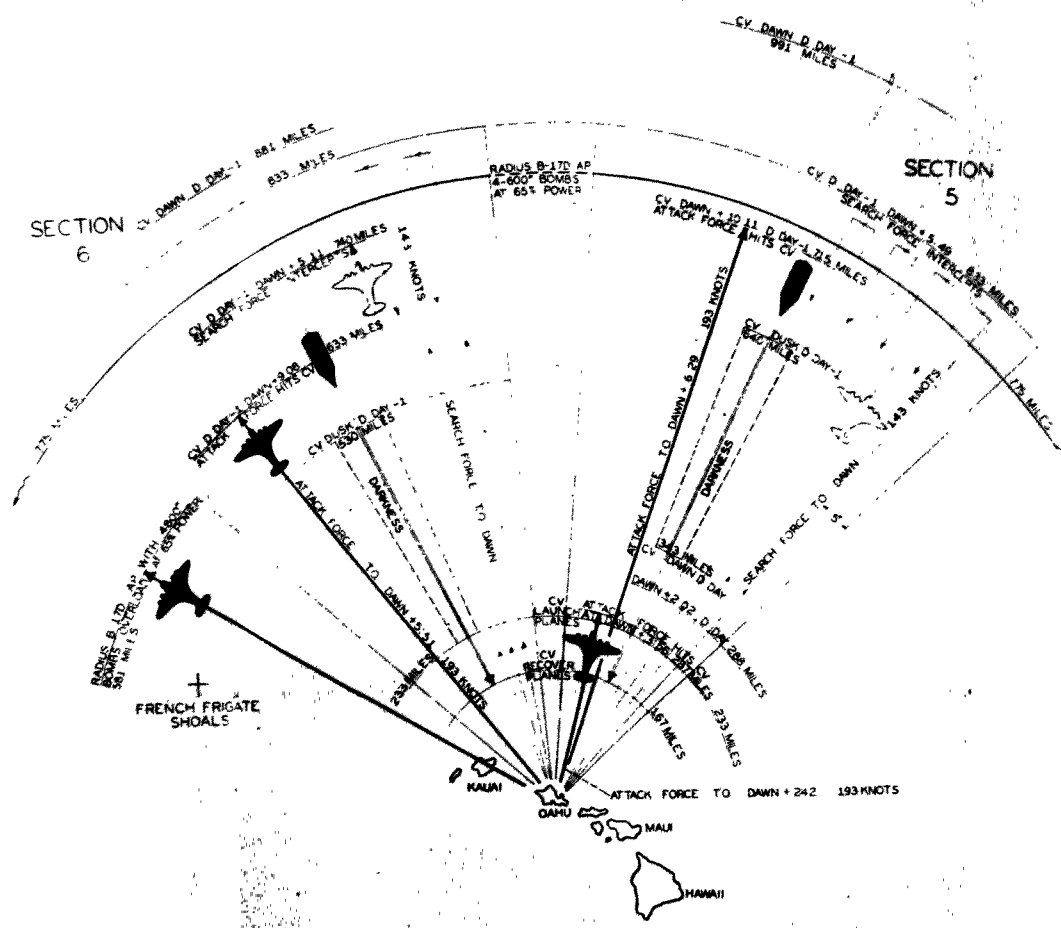
A

CHART 3

SECTION  
3

SECTION  
4





1. RADIUS OF ACTION OF B-17D AP IN RELATION TO POSSIBLE PLANS OF ACTION OF A CARRIER GROUP ATTACKING OAHU
  2. MILES SHOWN ARE NAUTICAL MILES
  3. SECTIONS 5 & 6 INDICATE ONLY TWO OF MANY CONDITIONS THAT MIGHT OCCUR DURING A 360° SEARCH
  4. PERFORMANCE OF B-17D AP BASED UPON EACH RADIUS OF ACTION ALLOWANCE IS MADE FOR 1 HR FULL PROXIMITY OPERATION AND 2 HR RESERVE
    - A. RADIUS OF SEARCH 100 MILES  
2500 GAL FUEL NO BOMBS  
45% POWER UP AND BACK  
1000
    - B. RADIUS OF SEARCH 170 MILES  
2093 GAL FUEL 4-5000 BOMBS  
65% POWER UP AND BACK  
15000 FEET ALTITUDE 193 KNOTS
    - C. RADIUS WITH MAXIMUM BOMB LOAD 100 MILES  
1700 GAL FUEL 8-5000 BOMBS  
65% POWER UP AND BACK  
15000 FEET ALTITUDE 193 KNOTS
  5. ASSUMPTIONS
    - A. CARRIER SPEED 27 KNOTS
    - B. CARRIER PLANE'S PERFORMANCE
    - C. B-17D AP PERFORMANCE 17 KNOTS
    - D. BOMBS 1000 LBS
    - E. SEARCH 100 MILES
- (C-242-974-17) (E-2-4)

Confidential!

CHART 4

M DWA