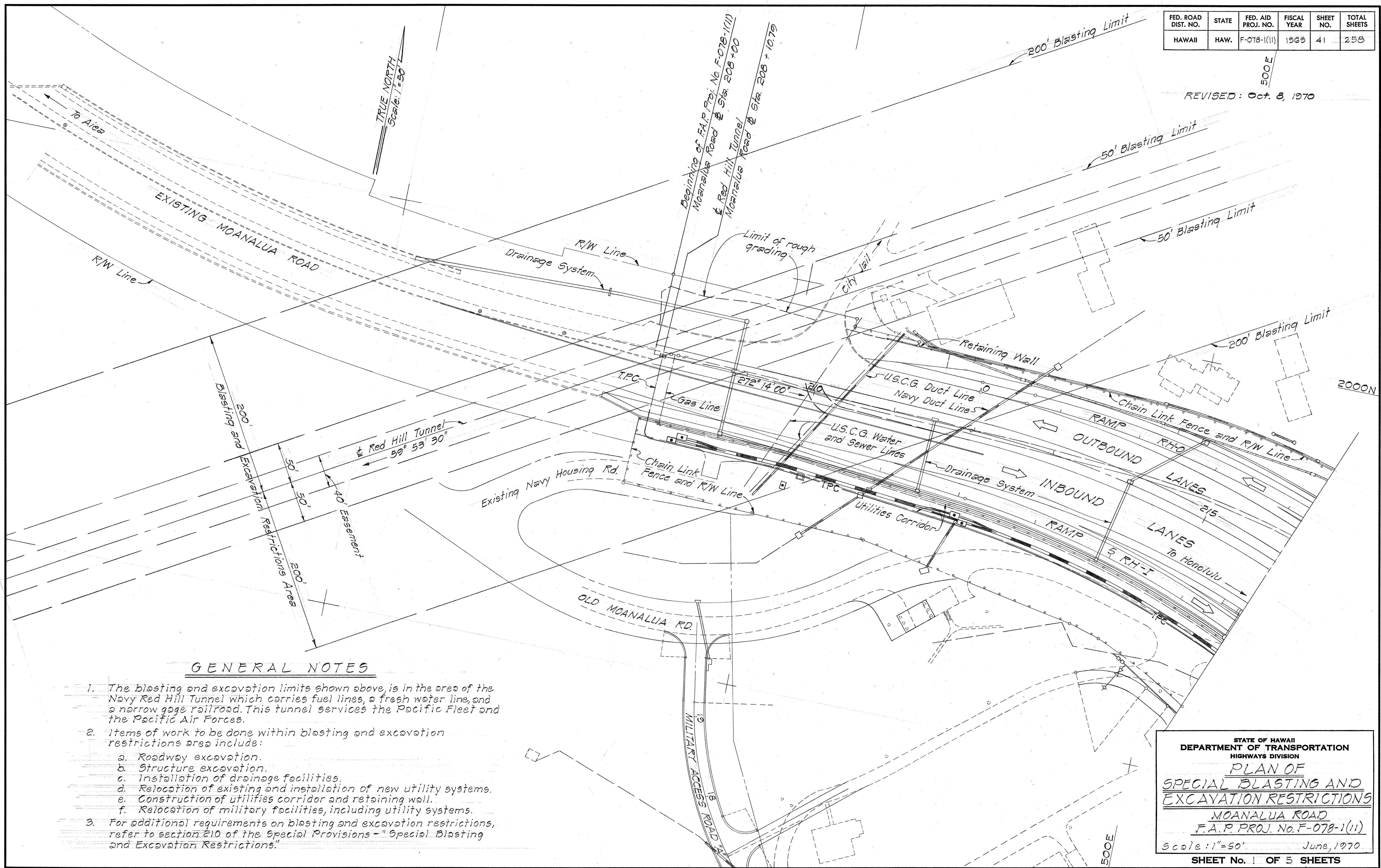


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-1(11)	1969	41	258

REVISED: Oct. 8, 1970



GENERAL NOTES

1. The blasting and excavation limits shown above, is in the area of the Navy Red Hill Tunnel which carries fuel lines, a fresh water line, and a narrow gage railroad. This tunnel services the Pacific Fleet and the Pacific Air Forces.
2. Items of work to be done within blasting and excavation restrictions area include:
 - a. Roadway excavation.
 - b. Structure excavation.
 - c. Installation of drainage facilities.
 - d. Relocation of existing and installation of new utility systems.
 - e. Construction of utilities corridor and retaining wall.
 - f. Relocation of military facilities, including utility systems.
3. For additional requirements on blasting and excavation restrictions, refer to section 210 of the Special Provisions - "Special Blasting and Excavation Restrictions."

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PLAN OF
SPECIAL BLASTING AND
EXCAVATION RESTRICTIONS**

MOANALUA ROAD
F.A.P. PROJ. No. F-078-1(11)

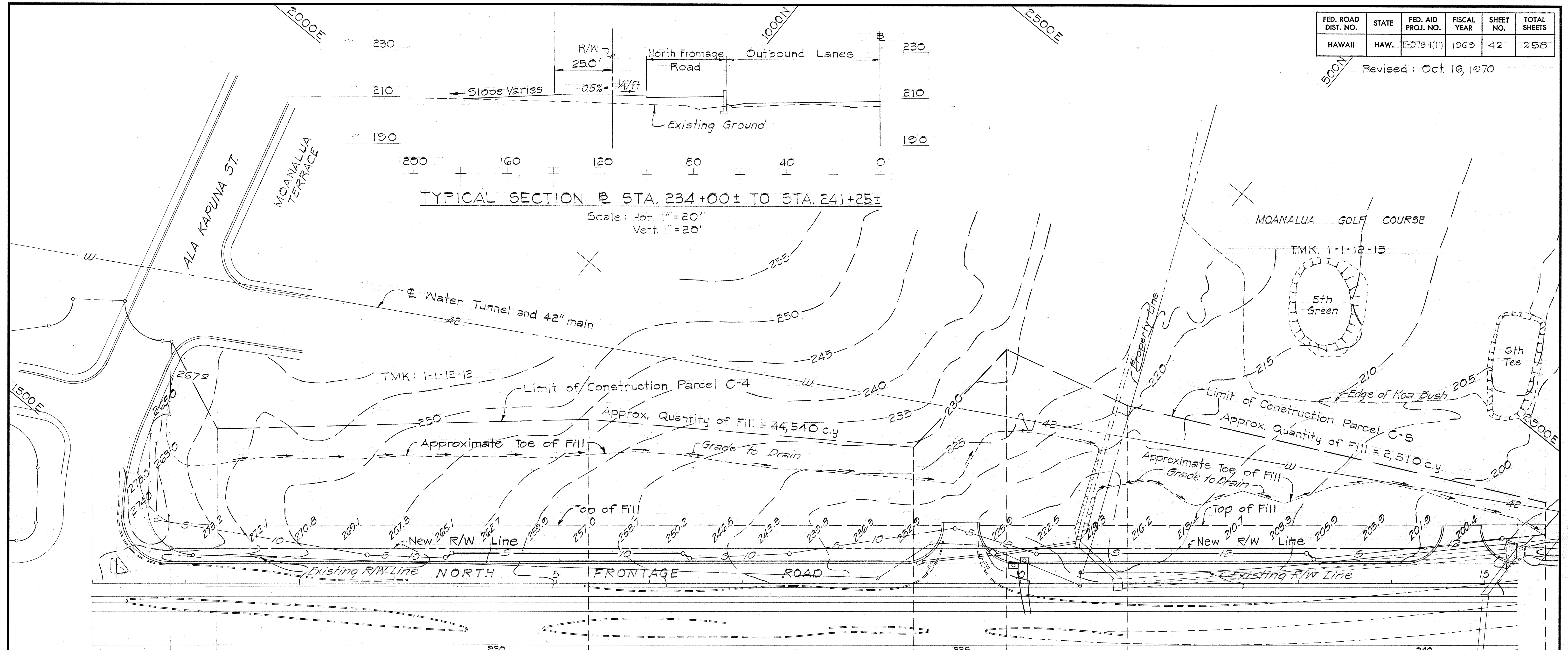
Scale: 1"=50' June, 1970

SHEET No. 1 OF 5 SHEETS

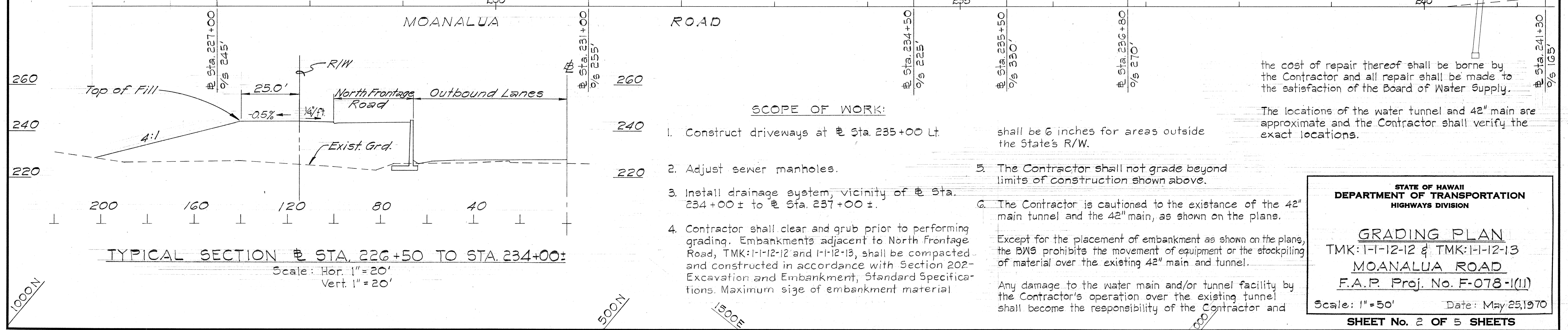
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-1(11)	1969	42	258

Revised: Oct. 16, 1970



TYPICAL SECTION @ STA. 234+00± TO STA. 241+25±
Scale: Hor. 1" = 20'
Vert. 1" = 20'



TYPICAL SECTION @ STA. 226+50 TO STA. 234+00±
Scale: Hor. 1" = 20'
Vert. 1" = 20'

SCOPE OF WORK:

- Construct driveways at Sta. 235+00 Lt. shall be 6 inches for areas outside the State's R/W.
- Adjust sewer manholes.
- Install drainage system, vicinity of Sta. 234+00± to Sta. 237+00±.
- Contractor shall clear and grub prior to performing grading. Embankments adjacent to North Frontage Road, TMK:1-1-12-12 and 1-1-12-13, shall be compacted and constructed in accordance with Section 202-Excavation and Embankment, Standard Specifications. Maximum size of embankment material
- The Contractor shall not grade beyond limits of construction shown above.
- The Contractor is cautioned to the existence of the 42" main tunnel and the 42" main, as shown on the plans. Except for the placement of embankment as shown on the plans, the BWS prohibits the movement of equipment or the stockpiling of material over the existing 42" main and tunnel. Any damage to the water main and/or tunnel facility by the Contractor's operation over the existing tunnel shall become the responsibility of the Contractor and

the cost of repair thereof shall be borne by the Contractor and all repair shall be made to the satisfaction of the Board of Water Supply.

The locations of the water tunnel and 42" main are approximate and the Contractor shall verify the exact locations.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GRADING PLAN
TMK: 1-1-12-12 & TMK: 1-1-12-13
MOANALUA ROAD
F.A.P. Proj. No. F-078-1(11)

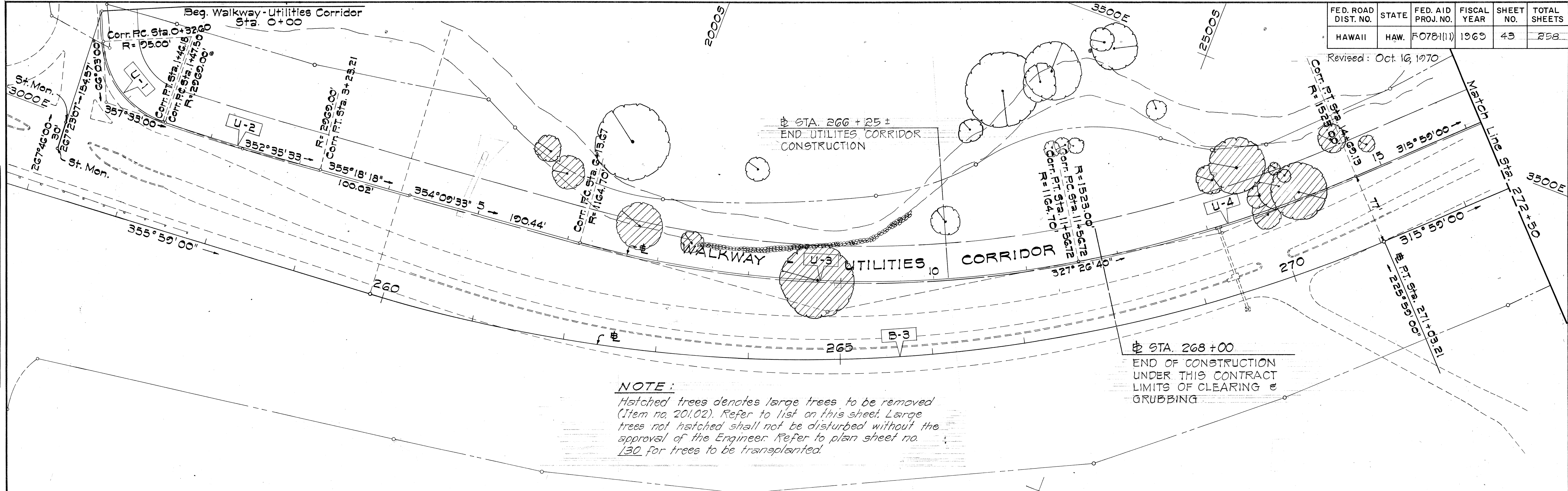
Scale: 1" = 50' Date: May 25, 1970

SHEET No. 2 OF 5 SHEETS

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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F0781(1)	1969	43	258

Revised: Oct. 16, 1970



NOTE:
 Hatched trees denotes large trees to be removed (Item no. 201.02). Refer to list on this sheet. Large trees not hatched shall not be disturbed without the approval of the Engineer. Refer to plan sheet no. 130 for trees to be transplanted.

LIST OF LARGE TREES TO BE REMOVED (ITEM NO. 201.02)

TREE NO.	STATION	% FROM #	DESCRIPTION	NO. OF TREES	TREE NO.	STATION	% FROM #	DESCRIPTION	NO. OF TREES
1	230 + 00 ±	87' Lt.	Monkey Pod	1	26	270 + 30 ±	145' Lt.	Mango	1
2	232 + 50 ±	80' "	Shower	1	27	270 + 40 ±	165' "	Mango	1
3	261 + 50 ±	195' "	"	1	28	270 + 40 ±	127' "	Monkey Pod	1
4	261 + 75 ±	175' "	"	1	29	270 + 80 ±	120' "	Monkey Pod	1
5	262 + 60 ±	130' "	"	1	30	280 + 10 ±	115' "	Plum	1
6	263 + 25 ±	120' "	"	1	31	280 + 15 ±	156' "	Coconut	1
7	264 + 75 ±	85' "	Opiuma	1	32	280 + 25 ±	130' "	Mango	1
8	266 + 25 ±	140' "	Monkey Pod	1	33	280 + 25 ±	125' "	Plum	1
9	269 + 50 ±	125' "	"	1	34	280 + 35 ±	113' "	Mango	1
10	269 + 75 ±	130' "	"	1	35	280 + 40 ±	112' "	Date	1
11	270 + 00 ±	80' "	"	2	36	280 + 70 ±	105' "	Monkey Pod	1
12	270 + 25 ±	95' "	"	3	37	280 + 75 ±	110' "	Date	1
13	270 + 40 ±	85' "	"	1	38	281 + 00 ±	140' "	Monkey Pod	1
14	271 + 00 ±	122' "	"	1	39	281 + 10 ±	135' "	Plum	1
15	271 + 25 ±	104' "	African Tulip	1	40	281 + 35 ±	100' "	Monkey Pod	1
16	273 + 75 ±	125' "	Opiuma	2	41	281 + 50 ±	100' "	Monkey Pod	1
17	276 + 75 ±	145' "	Shower	1	42	282 + 20 ±	75' "	Monkey Pod	1
18	277 + 00 ±	124' "	Monkey Pod	3	43	282 + 20 ±	95' "	Mango	1
19	277 + 50 ±	133' "	"	1	44	282 + 20 ±	135' "	Mango	1
20	277 + 75 ±	130' "	"	1	45	282 + 25 ±	72' "	Monkey Pod	1
21	278 + 20 ±	137' "	"	1					
22	278 + 40 ±	155' "	"	1					
23	278 + 60 ±	143' "	"	1					
24	278 + 90 ±	160' "	Mango	1					
25	279 + 15 ±	140' "	Monkey Pod	1					

	B-3	U-1	U-2	U-3	U-4
Δ	40°00'00"	68°30'00"	3°23'27"	26°42'53"	11°45'11"
R	1600.00'	95.00'	2969.00'	1164.70'	1523.00'
T	582.35'	64.68'	87.88'	276.55'	156.76'
L	1117.01'	113.58'	175.71'	543.05'	312.41'

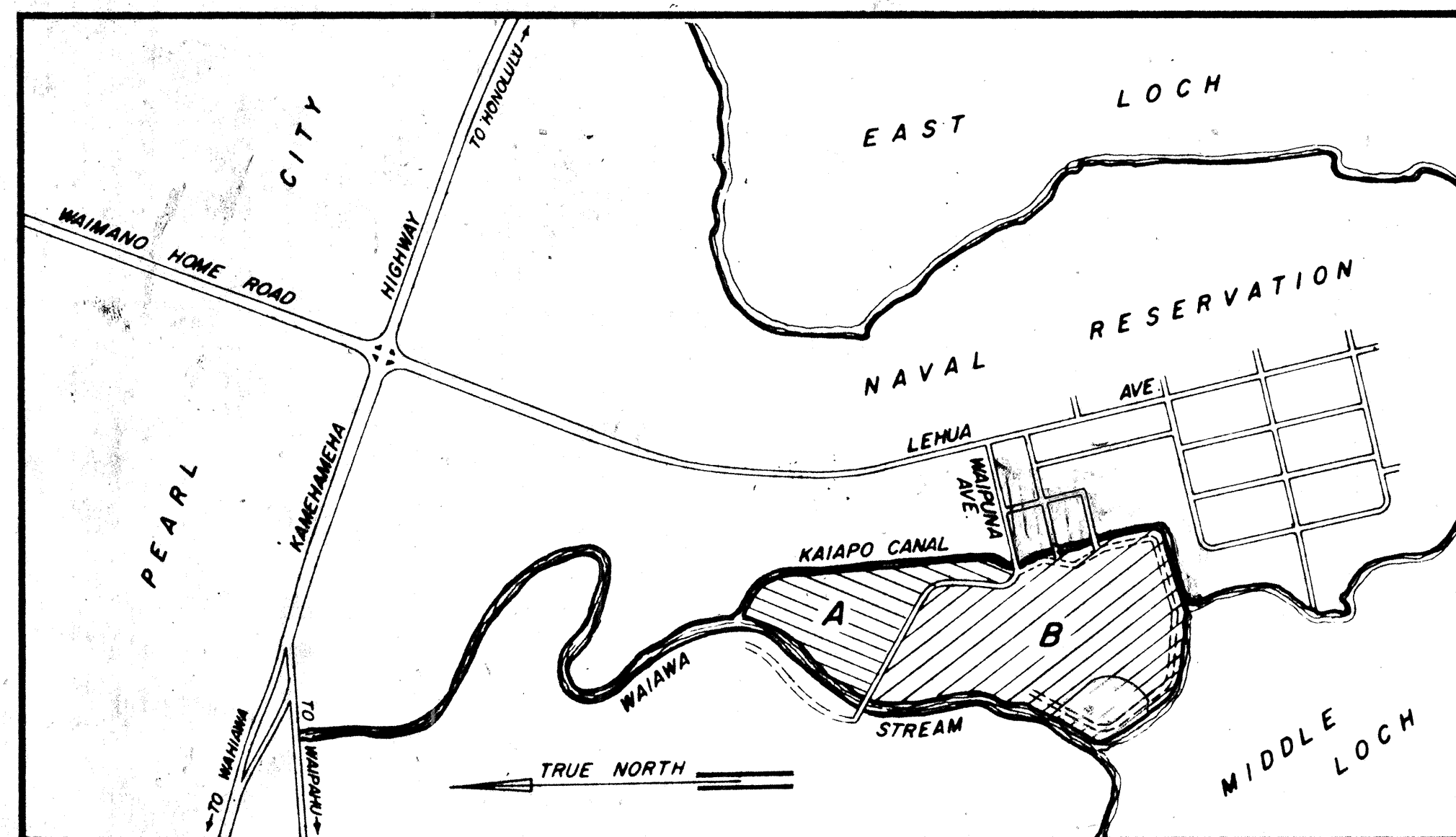
12	13	14	15	16
12	13	14	15	16

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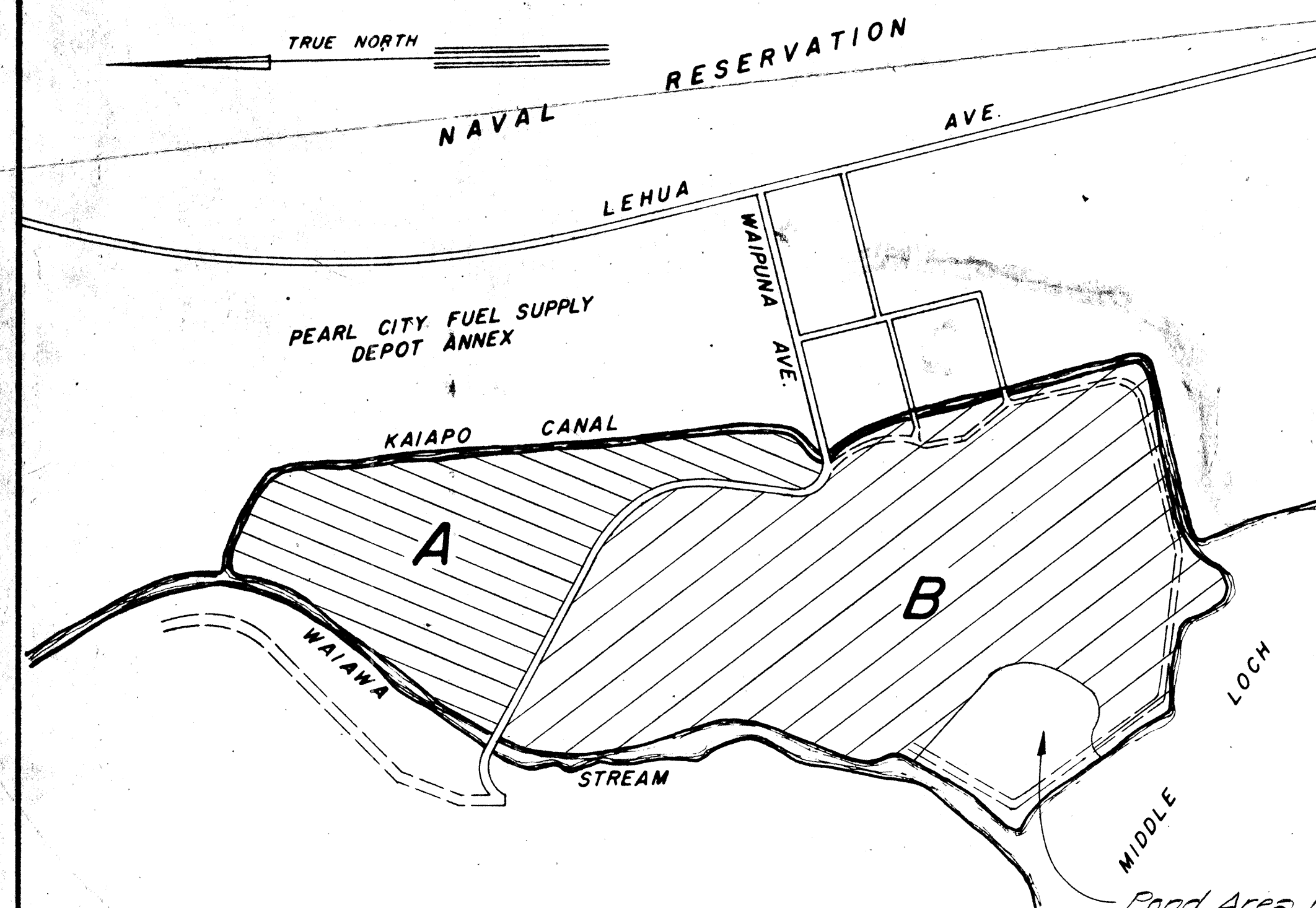
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-078-1(11)	1969	45	258

Revised: June 17, 1970
July 27, 1970



LOCATION MAP
SCALE 1" = 1000'



SITE PLAN
PEARL CITY PENINSULA DISPOSAL SITE
SCALE 1" = 400'

NOTES

- The material shall be deposited in Area "B". The fill shall be constructed to an approximate maximum elevation 14 feet above mean low low water in the center of the area in accordance with the requirements of Section 203, Excavation and Embankment, and compacted to a relative compaction of 90 percent. The finished surface shall be graded smooth and sloping toward the edge of the fill area to an elevation not less than 10 feet above mean low low water. The fill shall be started adjacent to Kaiapo Canal and continued westward. If more material is available than is required to fill Area "B", the excess material shall be deposited in Area "A" adjacent to Area "B" to an approximate elevation of 14 feet in the center of the area and sloping toward the edge of the fill area to an elevation not less than 10 feet above mean low low water. The edge of the fill, where adjacent to waterways, shall be built with granular material and the fill slope shall be 3:1.
- The Contractors hauling equipment and loads shall conform to the State of Hawaii's vehicle weight and loading limitations.
- The State has obtained from the Navy a permit to enter Navy property for the purpose of depositing material at the disposal site. The Contractor will not be required to obtain a separate permit to enter into Navy land.
- During construction of the embankment, the Contractor shall apply water to abate dust nuisance as specified in Section 620, Watering, of the Standard Specifications and Special Provisions.
- The areas shown have been designated as the disposal site of other highway projects currently under construction. The Contractor's attention is, therefore, directed to the provisions of Sub-Section 105.06, Cooperation Between Contractors, of the Standard Specifications. The Engineer further reserves the right to limit the disposal of material under this contract to specific sections of the areas shown.
- Clearing, grubbing, and filling shall proceed in an orderly manner to insure usable filled land should the work be delayed or terminated. Once filling is started in an area, it shall be completed before starting fill operations in another area unless a change is authorized by the Engineer in writing. However, Area "A" should be cleared in advance while filling operations in Area "B" is in progress in order that low areas may be exposed and made available for the disposal of boulders which are too large to be properly buried in Area "B" as directed in Note No. 9.
- In constructing the embankment, existing drainage shall be maintained to insure the protection of both Navy-owned and private adjacent properties. Any interference with land drainage shall be immediately corrected.
- Burning of grubbed material at the site will not be permitted. Grubbed materials shall be removed from the premises. It may be wasted at the adjacent Navy land fill area, provided the rules and regulations of the Navy Public Works Center which manages the land fill are complied with. If the Contractor elects to dispose of the grubbed material in the Navy land fill area, he shall make the necessary arrangements with the Navy Public Works Center.
- Boulders in excess of three feet (3') in their largest dimension shall be wasted in marshy areas as directed by the Engineer. Boulders not larger than three feet (3') in their greatest dimension shall be buried at a depth of not less than three feet (3') below finish grade. The top three feet (3') of fill shall not contain rocks larger than six inches (6") in their greatest dimensions and shall be placed in lifts not exceeding eight inches (8") before compaction.
- The Contractor's attention is directed to Section 209 of the Special Provisions for additional requirements on disposal of excess excavation at the Pearl City Peninsula Disposal Site.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

**PEARL CITY PENINSULA
DISPOSAL SITE**

MOANALUA ROAD
F.A.P. Proj. No. F-078-1(11)

Date: May, 1970

SHEET No. 5 OF 5 SHEETS