

MATERIALS:

All concrete except in piles, Class A-1.
Concrete in piles, Class E-1.

CONSTR. METHODS:

Curb, sidewalk, railings and railing posts shall be poured after release of falsework.

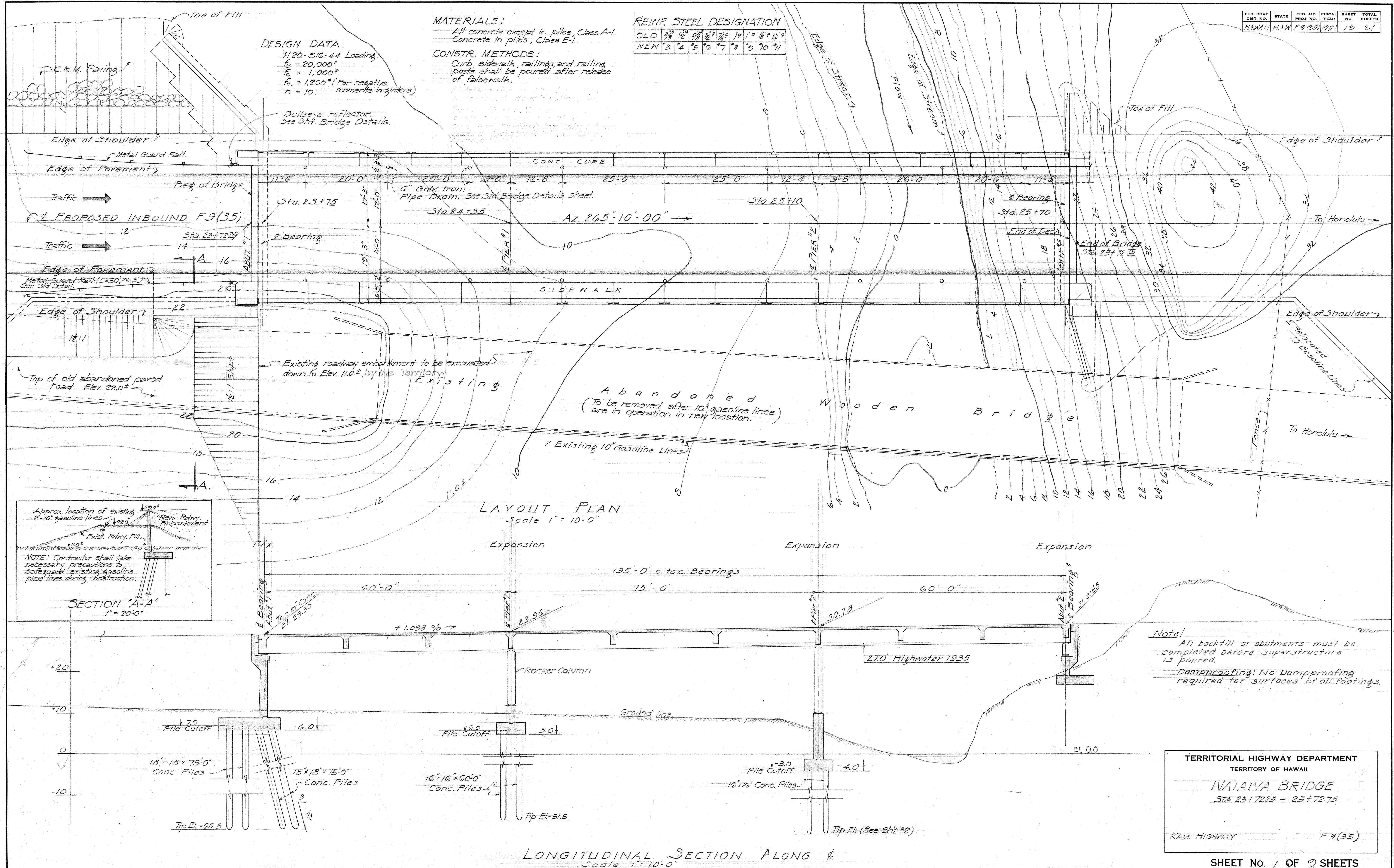
REINF. STEEL DESIGNATION

OLD	3/8"	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 1/2"	1 3/4"	2"
NEW	#3	#4	#5	#6	#7	#8	#9	#10	#11		

DESIGN DATA

H20-S16-44 Loading
 $L_s = 20,000'$
 $f_c = 1,000'$
 $f_s = 1,200'$ (For negative moments in girders)
 $n = 10$

Bullseye reflector.
See Std. Bridge Details.



TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

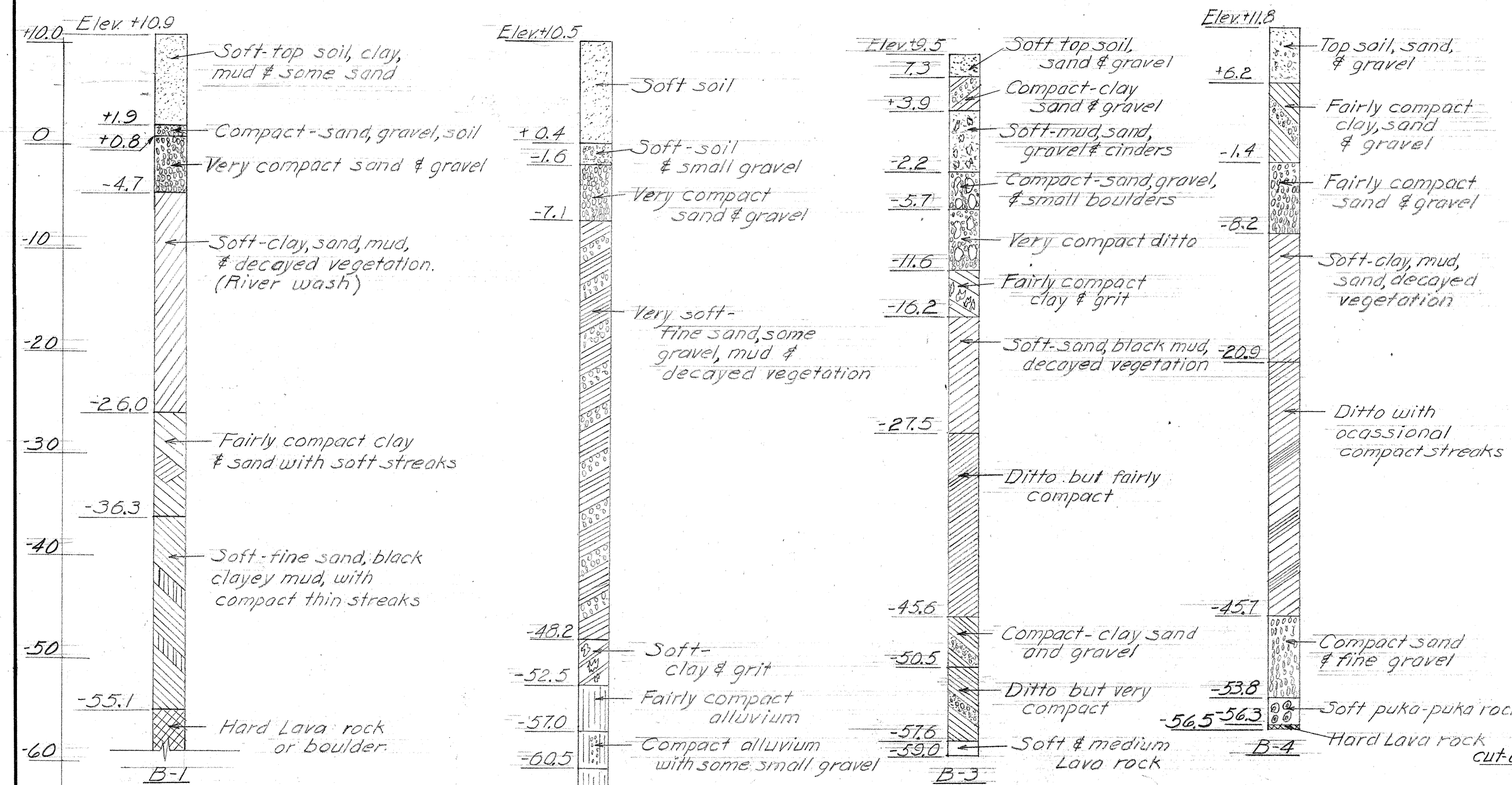
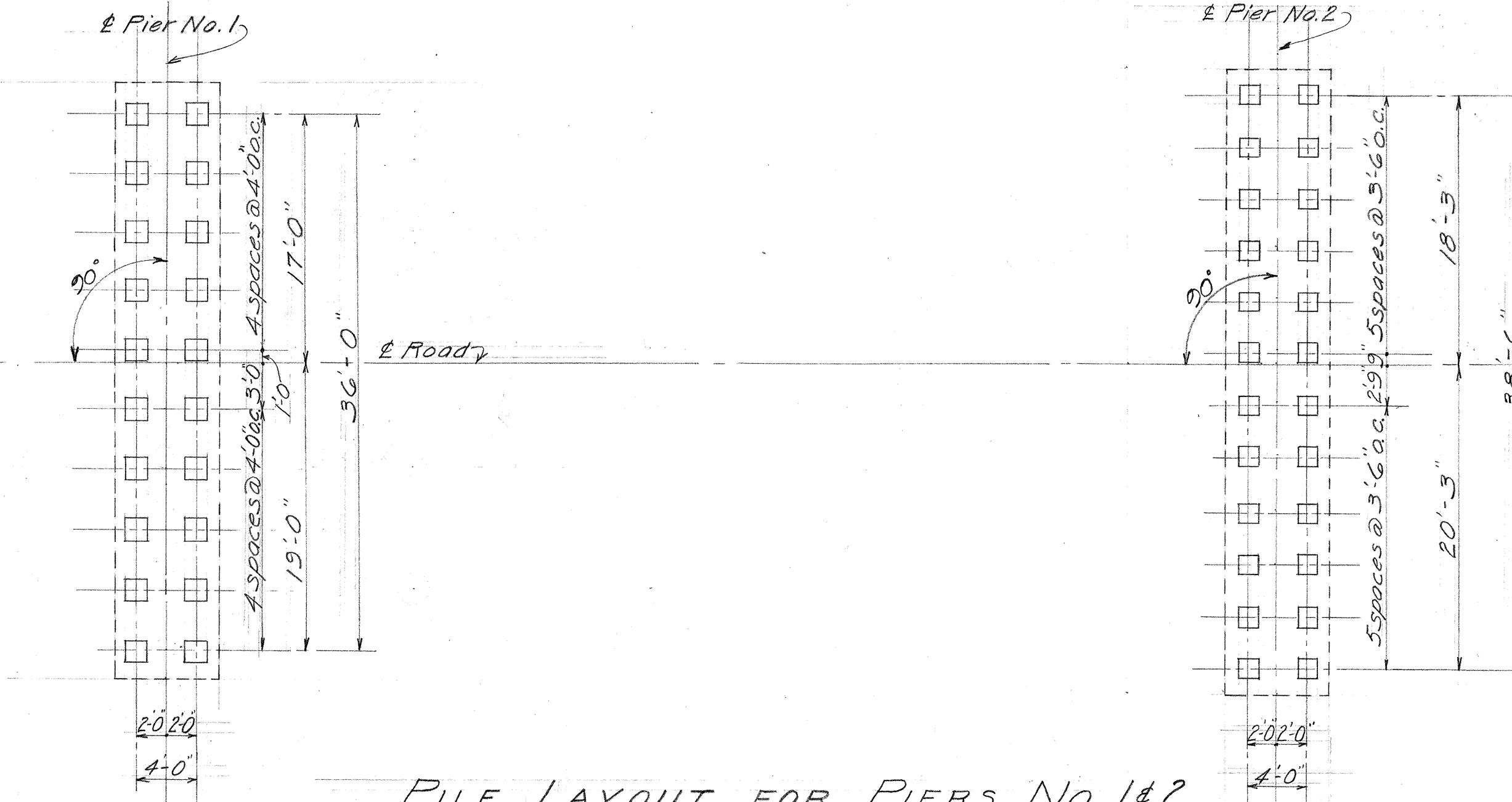
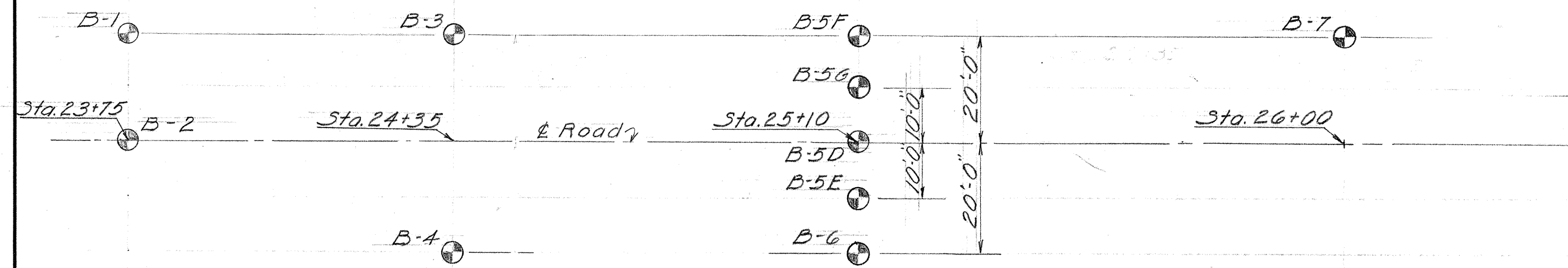
WAIAWA BRIDGE
Sta. 23+72.25 - 25+72.75

KAM. HIGHWAY F9(35)

SHEET No. 10 OF 21 SHEETS

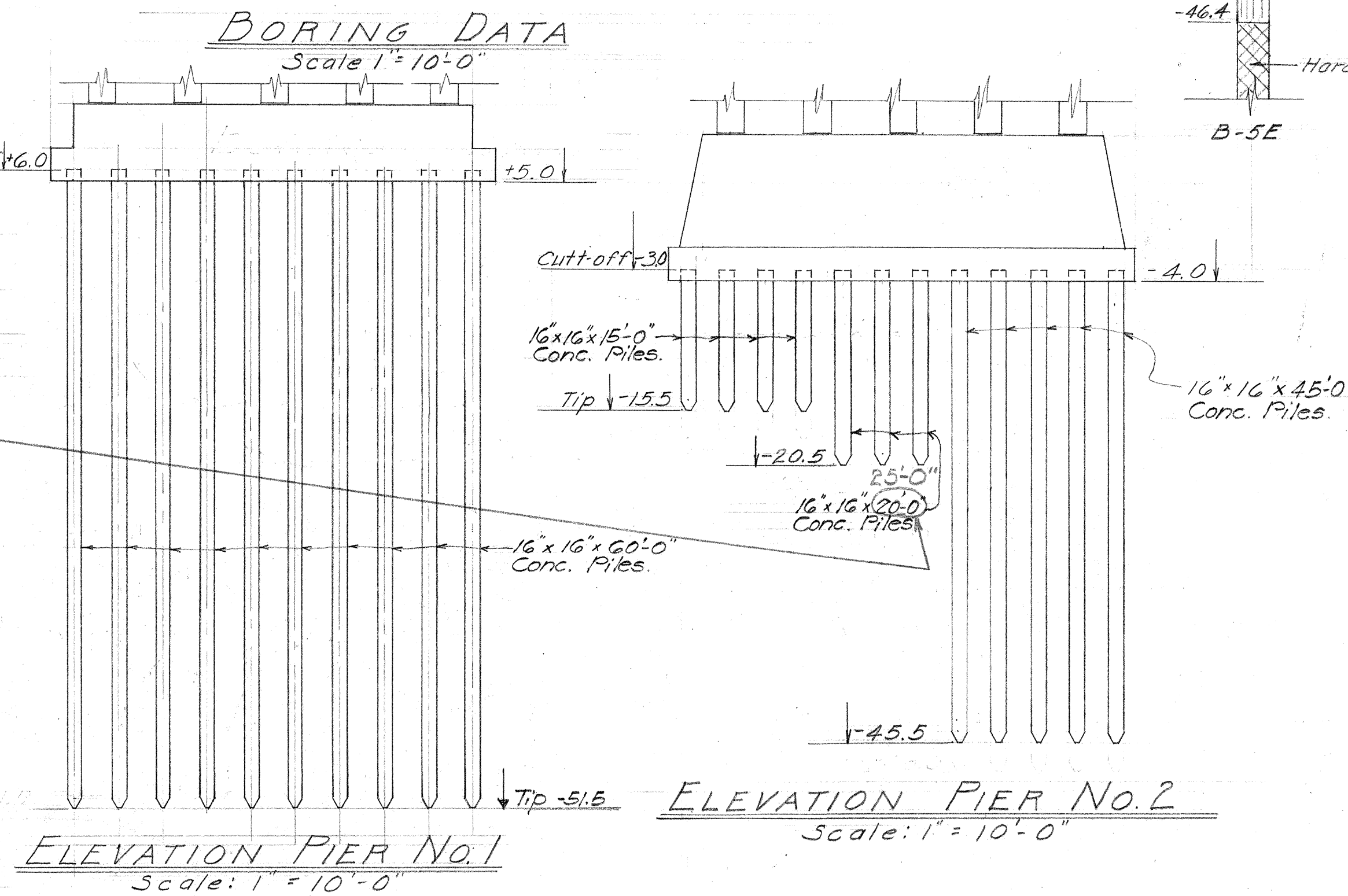
5478.13

DATE: 12-10-50
DESIGNED BY: J. K. KIMURA
DRAWN BY: J. K. KIMURA
CHECKED BY: J. K. KIMURA
ORIGINAL PLAN NO. 10
NOTE BOOK NO. 10



ITEMIZED CONC. PILE LIST				
TYPE	NUMBER IN Pcs.	PIER #1	PIER #2	LIN. FT.
16"x16"x15'-0"	8			120
16"x16"x25'-0"	6			150
18"x18"x75'-0"	67			5025
16"x16"x60'-0"	20			1200
16"x16"x45'-0"	10			450

ESTIMATED QUANTITIES									
Item	Super Struct Deck	Signs & Curbs	Rocker	Abut. #1	Abut. #2	Pier #1 Footing	Pier #1 Rocker Column	Pier #2 Footing	Pier #2 Rocker Column
Class A-1 Conc.	447.2	47.3	1.2	222.3	10.7	43.2	12.4	70.6	13.8
Reinf. Steel	100,732	27	403	16,452	1,264	2,264	2,264	2,036	3,264
Struct. Exc.				521	12.2	94	172	172	303
Railing & End Posts	50			420	70	77		415	44.7
A.C. Pavement	46.9							50	46.9
Conc. Piles								6,246	4.5
Dampproofing								462	475
CHANNEL EXC.								0	250



NOTE:
All piles must be driven into the bottom layers of hard material to the required bearing capacity even if all requirements for bearing and penetration are fulfilled in the upper layers of hard material.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
WAIKAWA BRIDGE
Sta. 23+72.25 to 25+72.75
HAM. HIGHWAY F9(35)
Aug. 1950

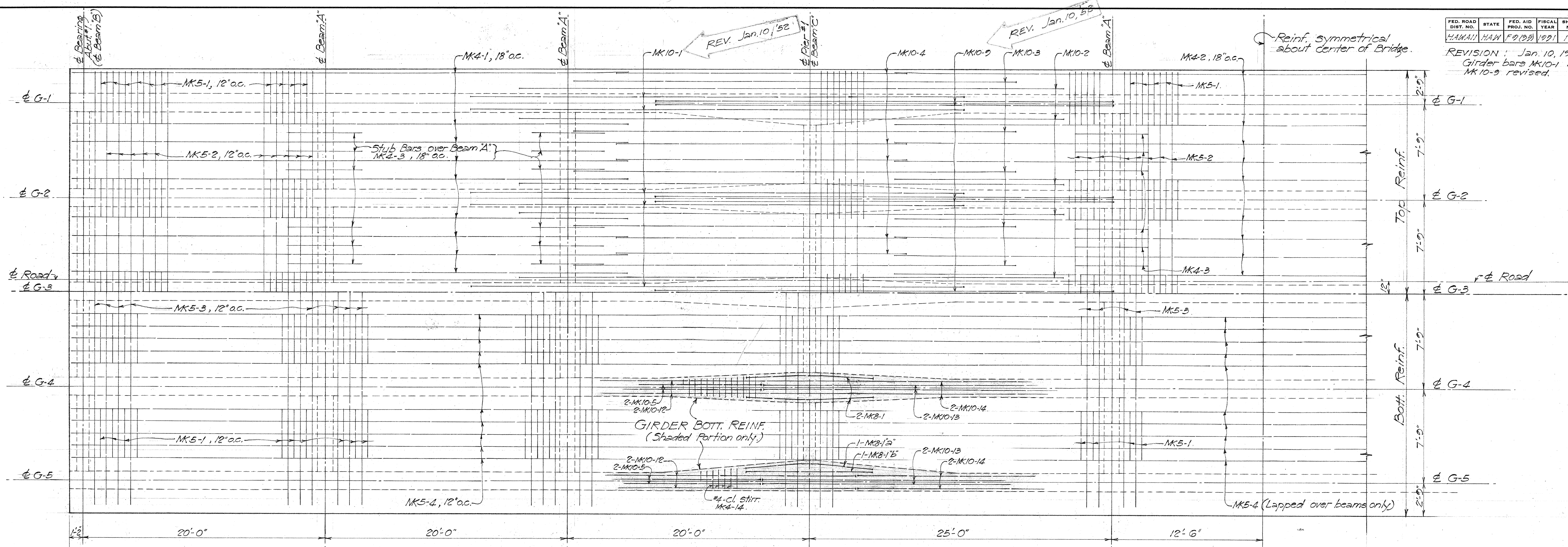
SHEET No. 2 OF 2 SHEETS

5478.14

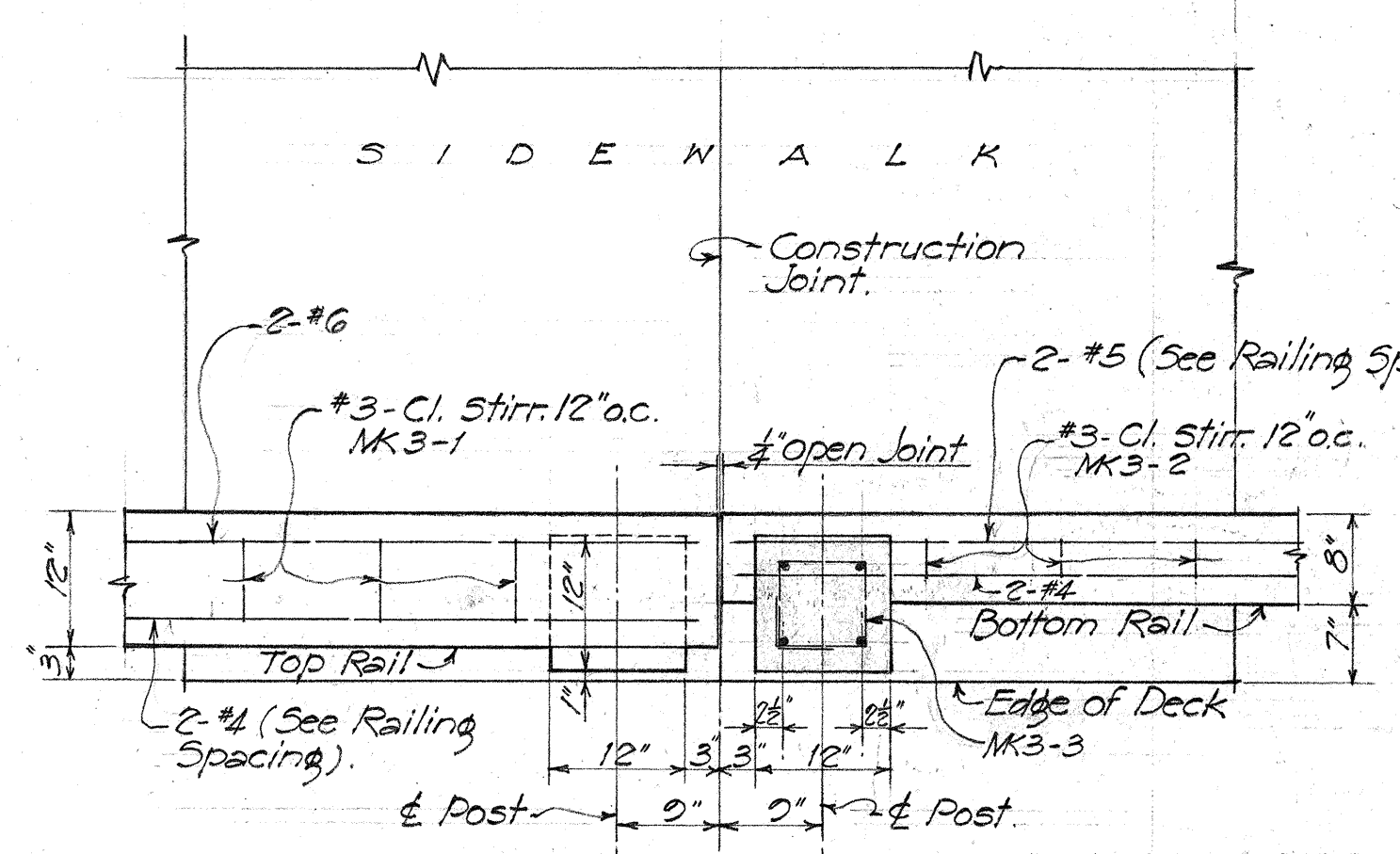
DATE: Dec 50
DESIGNED BY: J. H. HARRIS
DRAWN BY: J. H. HARRIS
CHECKED BY: J. H. HARRIS
NOTE BOOK
QUANTITIES CHECKED BY: J. H. HARRIS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	F9(28)	1951	15	31

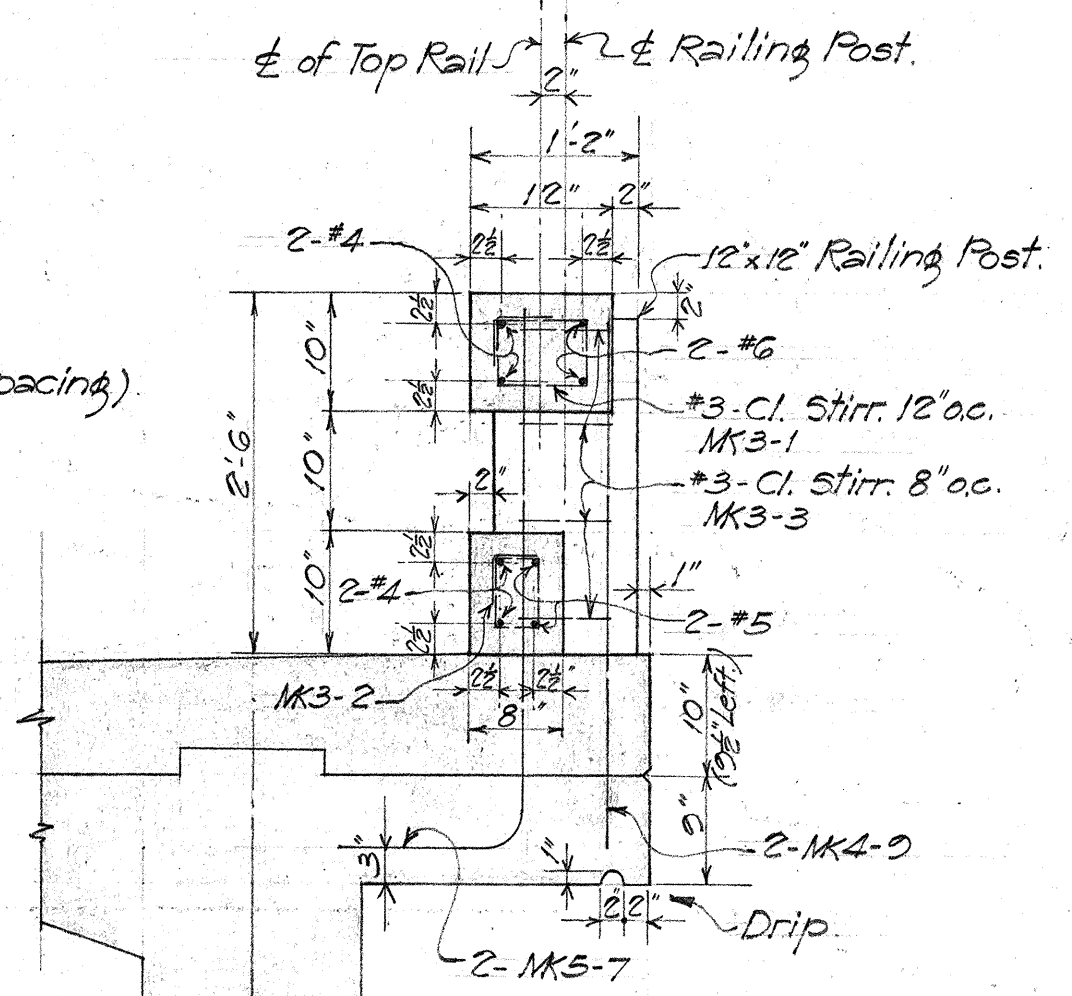
REVISION: Jan. 10, 1952
Girder bars MK10-1 and MK10-9 revised.



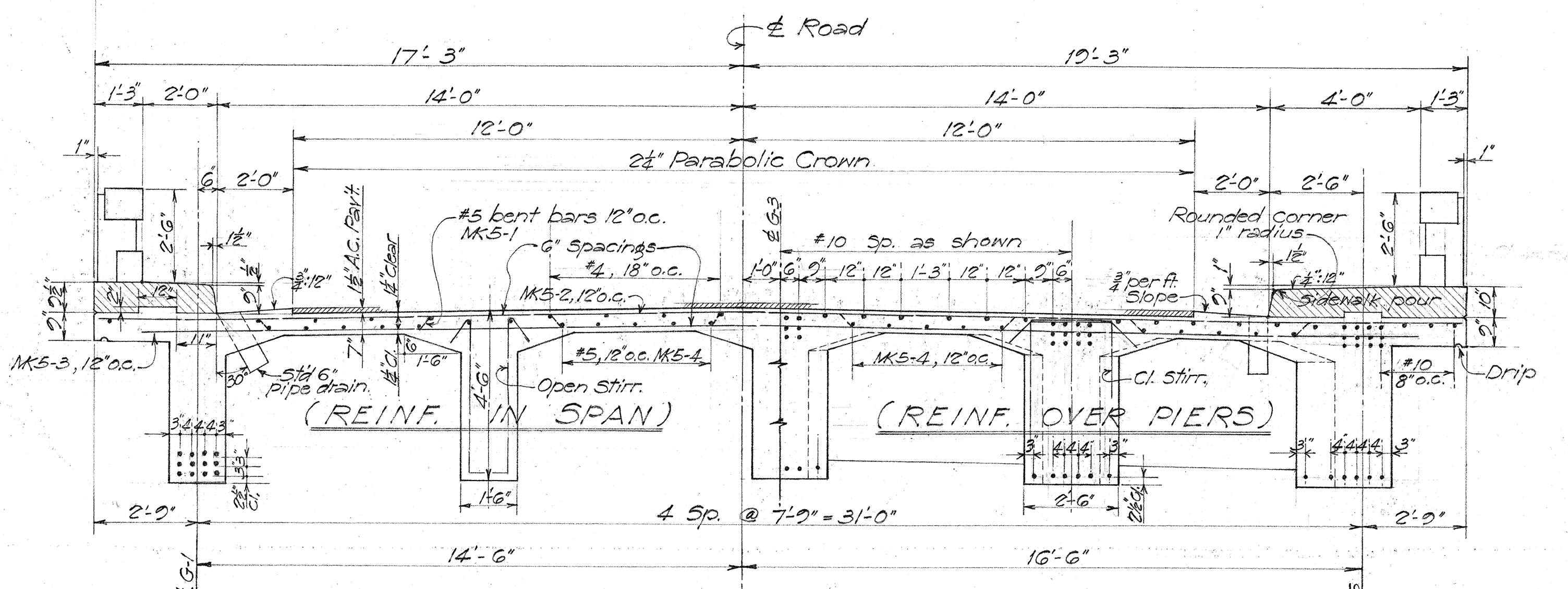
PLAN - DECK REINFORCING
1/4" = 1'-0"



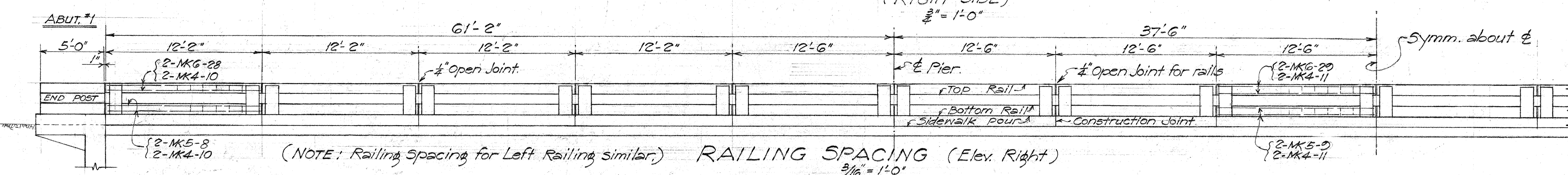
RAILING DETAIL - TYPICAL PLAN
1/4" = 1'-0"



RAILING DETAIL (RIGHT SIDE)
1/4" = 1'-0"



NORMAL SECTION
3/8" = 1'-0"



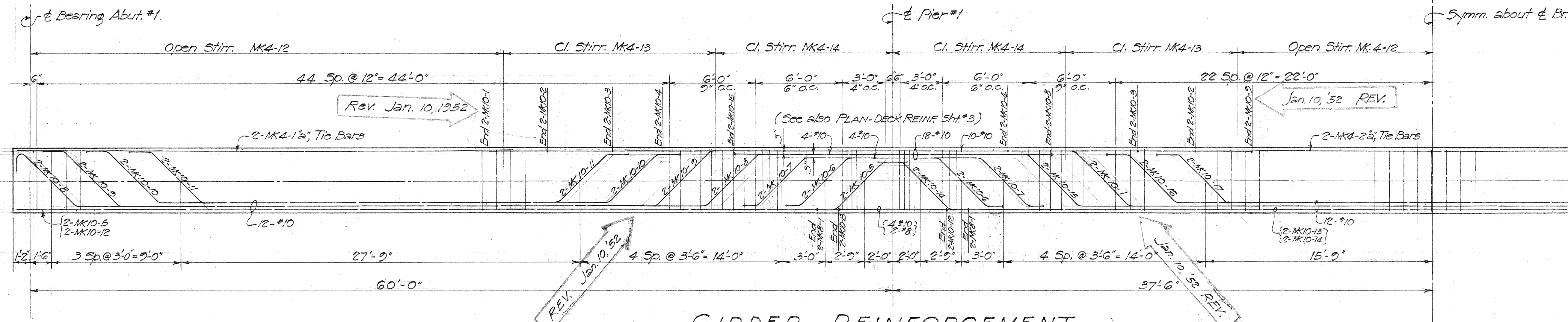
RAILING SPACING (Elev. Right)
3/16" = 1'-0"

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
WAIAWA BRIDGE
Sta. 23+72.25 to Sta. 25+72.25
KAMEHAMEHA HWY. F9 (35)
Jan. 1951

DATE: Dec. 1950
DESIGNED BY: A. R. B. B. B.
DRAWN BY: R. K. K. K.
CHECKED BY: R. K. K. K.
QUANTITIES CHECKED BY: R. K. K. K.
ORIGINAL PLAN NO. 1
NOTE BOOK NO. 1

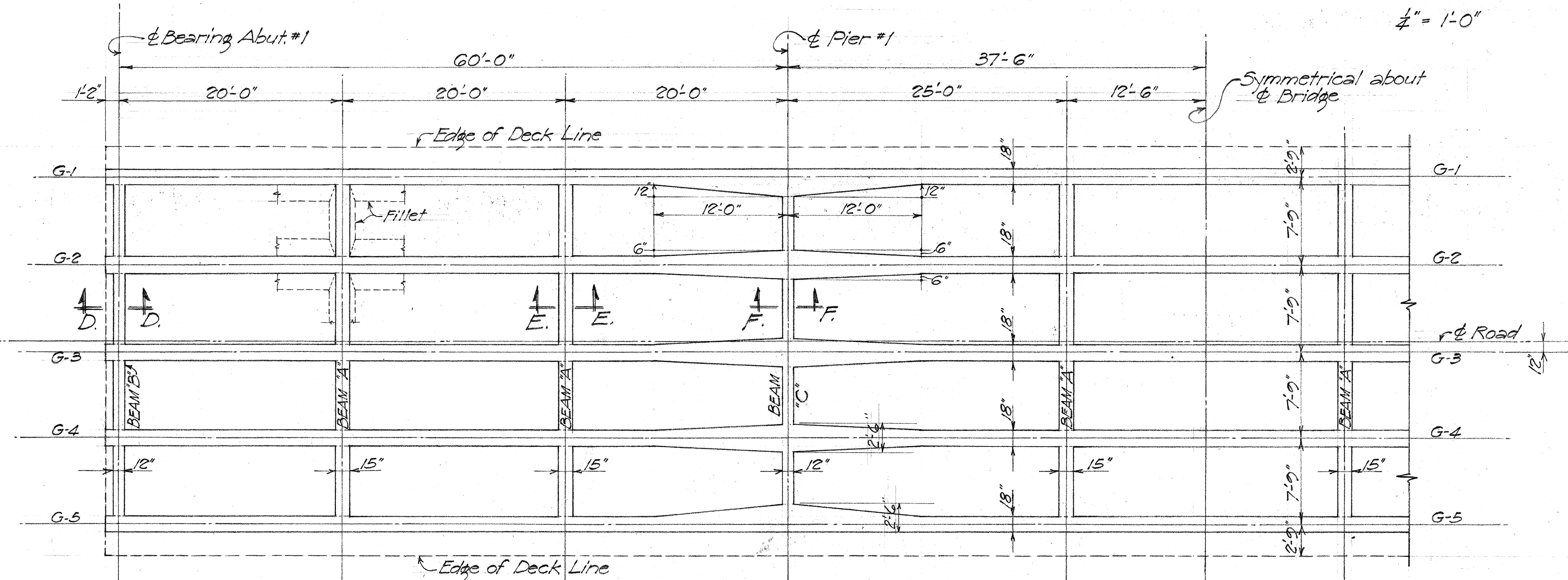
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
141	HAWAII	F 9 (35)	1952	16	31

REVISION: Jan. 10, 1952.
Girder bars MK10-1 and MK10-2 revised.



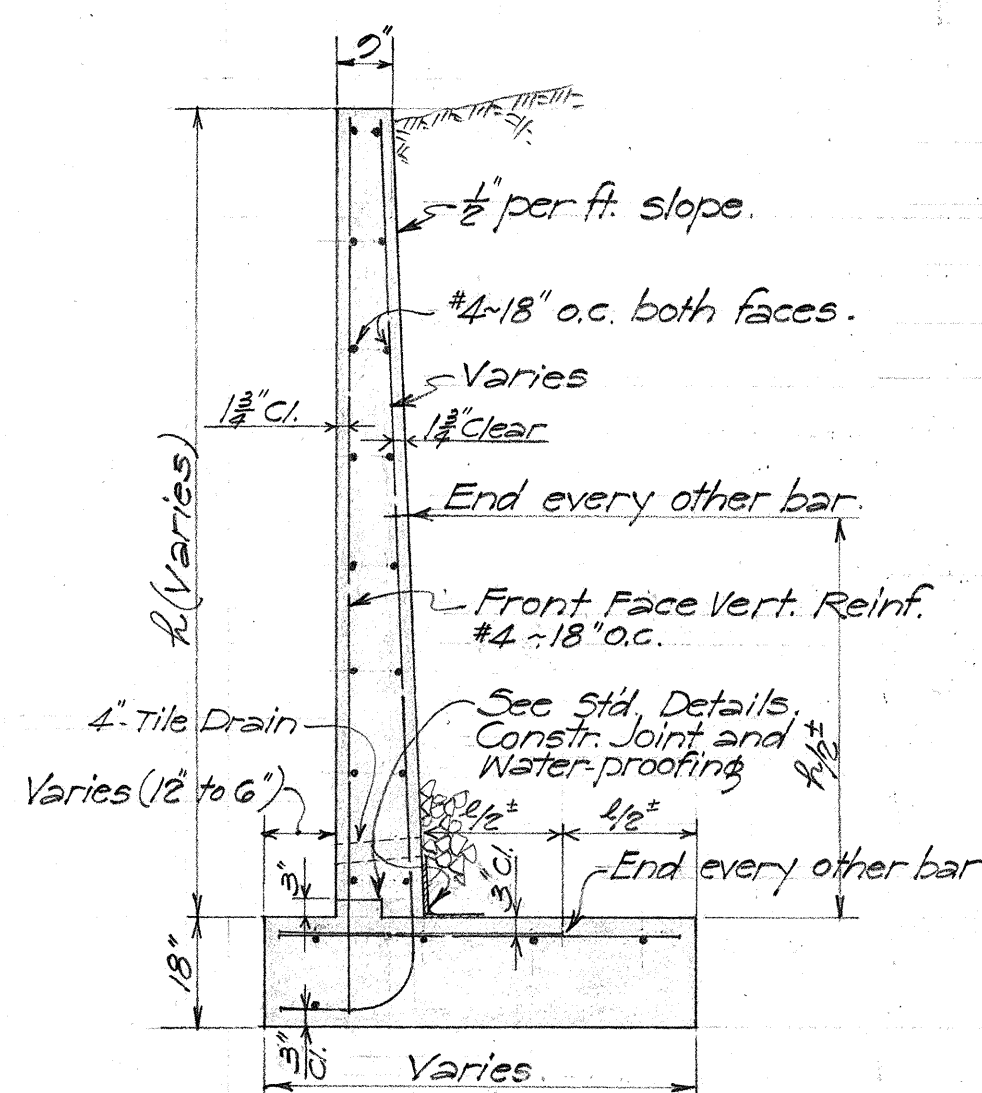
GIRDER REINFORCEMENT

1/4" = 1'-0"

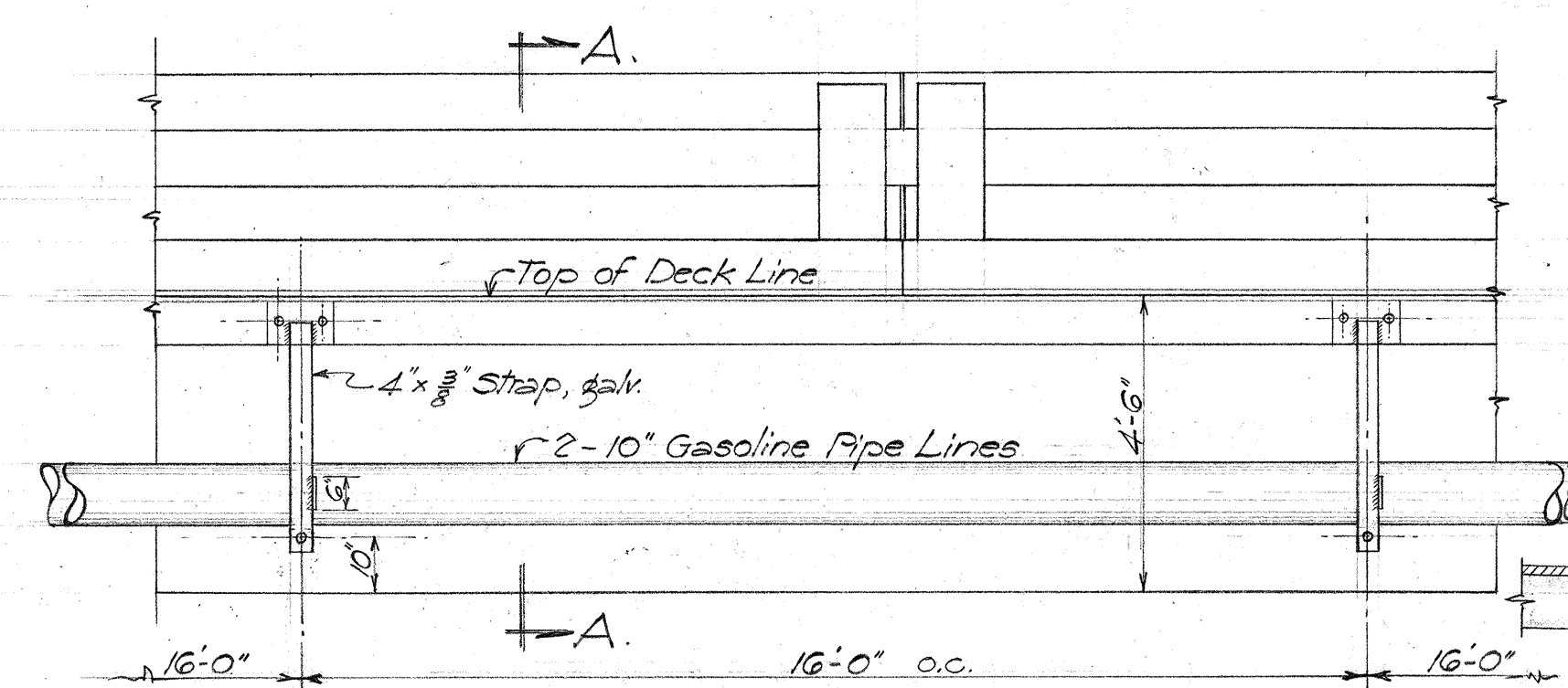


FRAMING PLAN

1/8" = 1'-0"



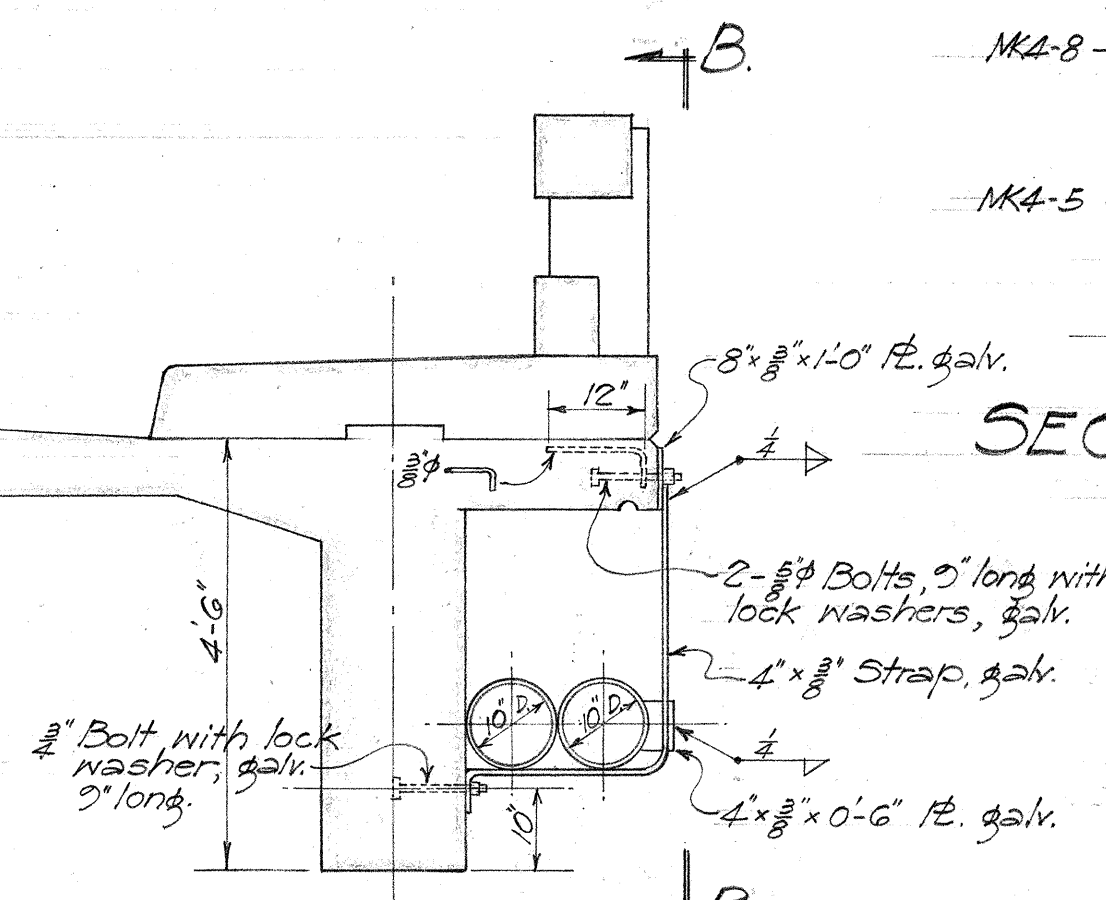
TYPICAL WINGWALL SECTION
(FOR ABUT. #2)



ELEVATION "B-B"

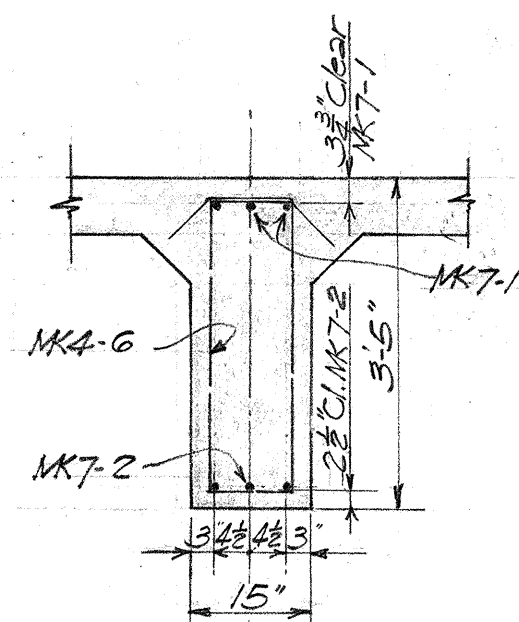
DETAIL OF GASOLINE LINE SUPPORT

1/8" = 1'-0"



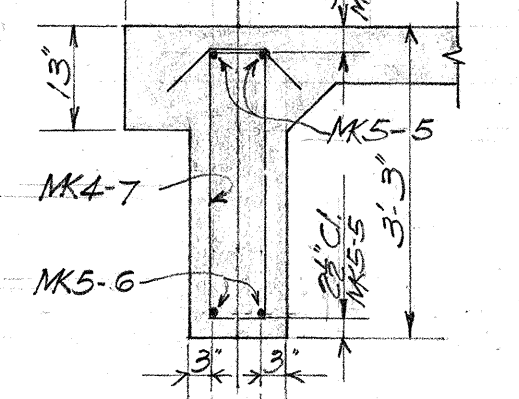
SECTION "A-A"

1/8" = 1'-0"



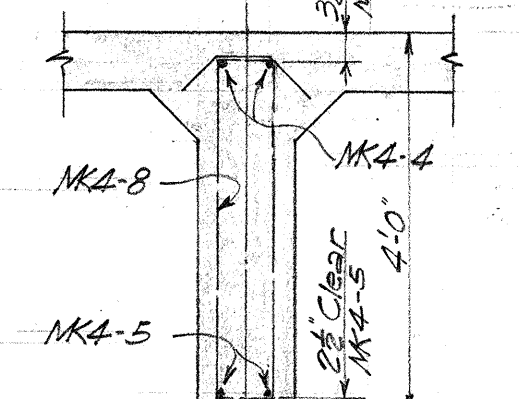
SECTION "E-E"

1/8" = 1'-0"



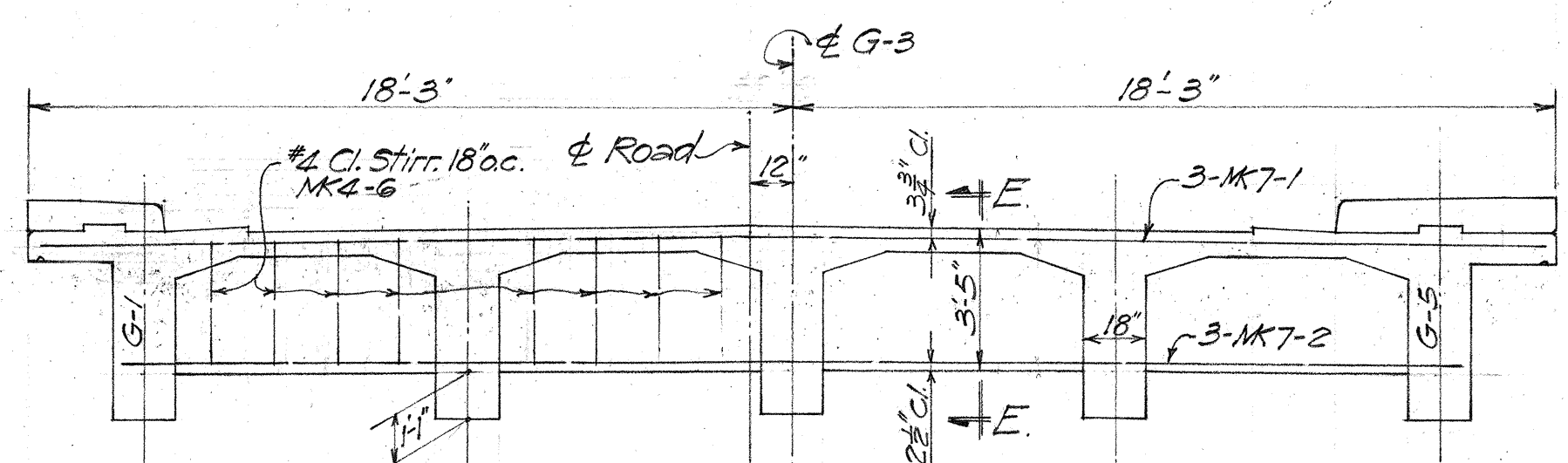
SECTION "D-D"

1/8" = 1'-0"



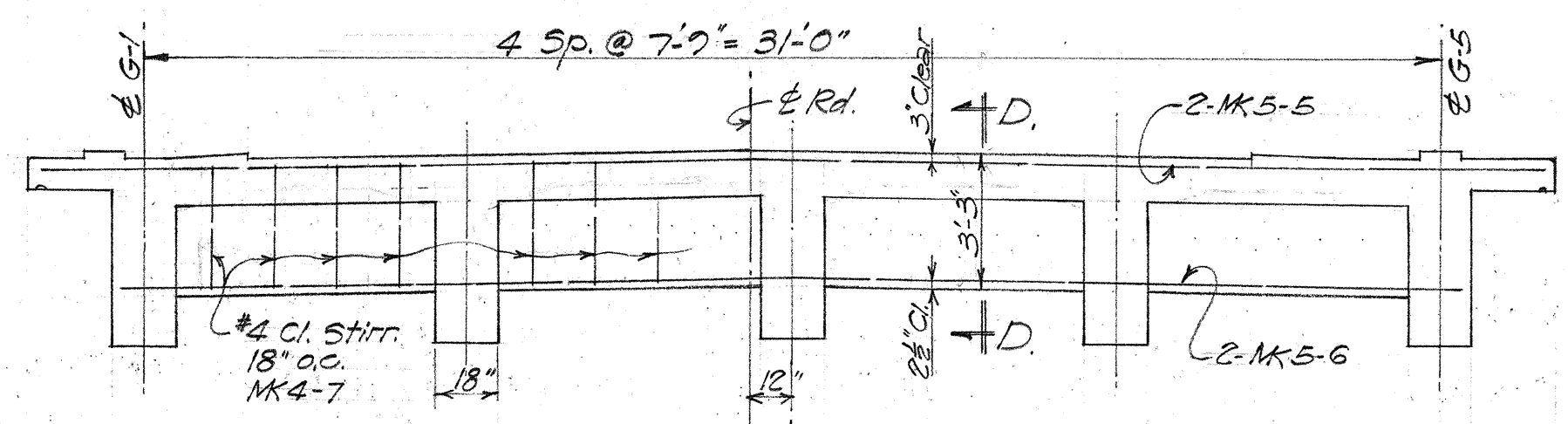
SECTION "F-F"

1/8" = 1'-0"



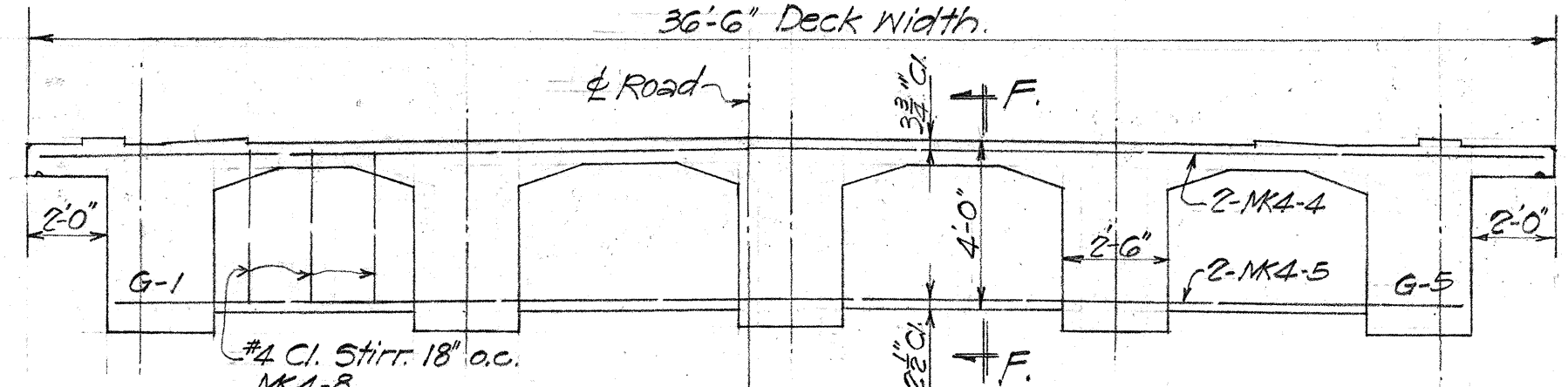
DETAIL BEAM "A"

1/8" = 1'-0"



DETAIL BEAM "B"

1/8" = 1'-0"



DETAIL BEAM "C"

1/8" = 1'-0"

NOTES ON GASOLINE LINE

The contractor shall furnish and install the galvanized bolts, and shall also install the gasoline lines within the limits of the bridge. The owner (1500th Air Transport Wing, Military Air Transport Service, A.P.O. 953) of the latter lines shall furnish all other materials including pipes and hangers. Connection and installation of the lines beyond the limits of the bridge shall remain the responsibility of the owner. The contractor shall inform the owner when he is ready to start operations.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

WAIANA BRIDGE

Sta. 23+72.25 to Sta. 25+72.25

KAMEHAMEHA HWY.

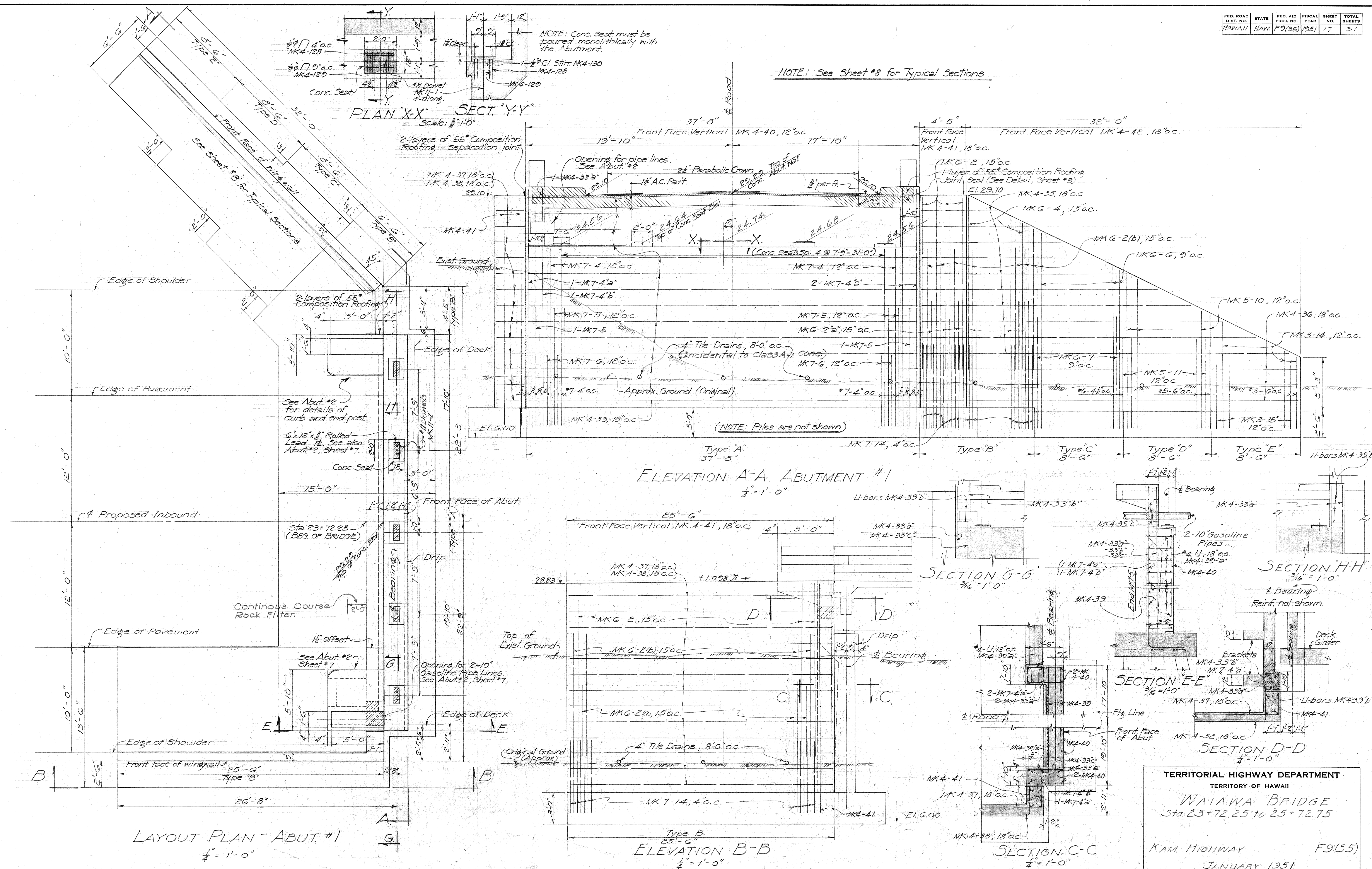
F 9 (35)

Jan. 1951

SHEET No. 4 OF 7 SHEETS

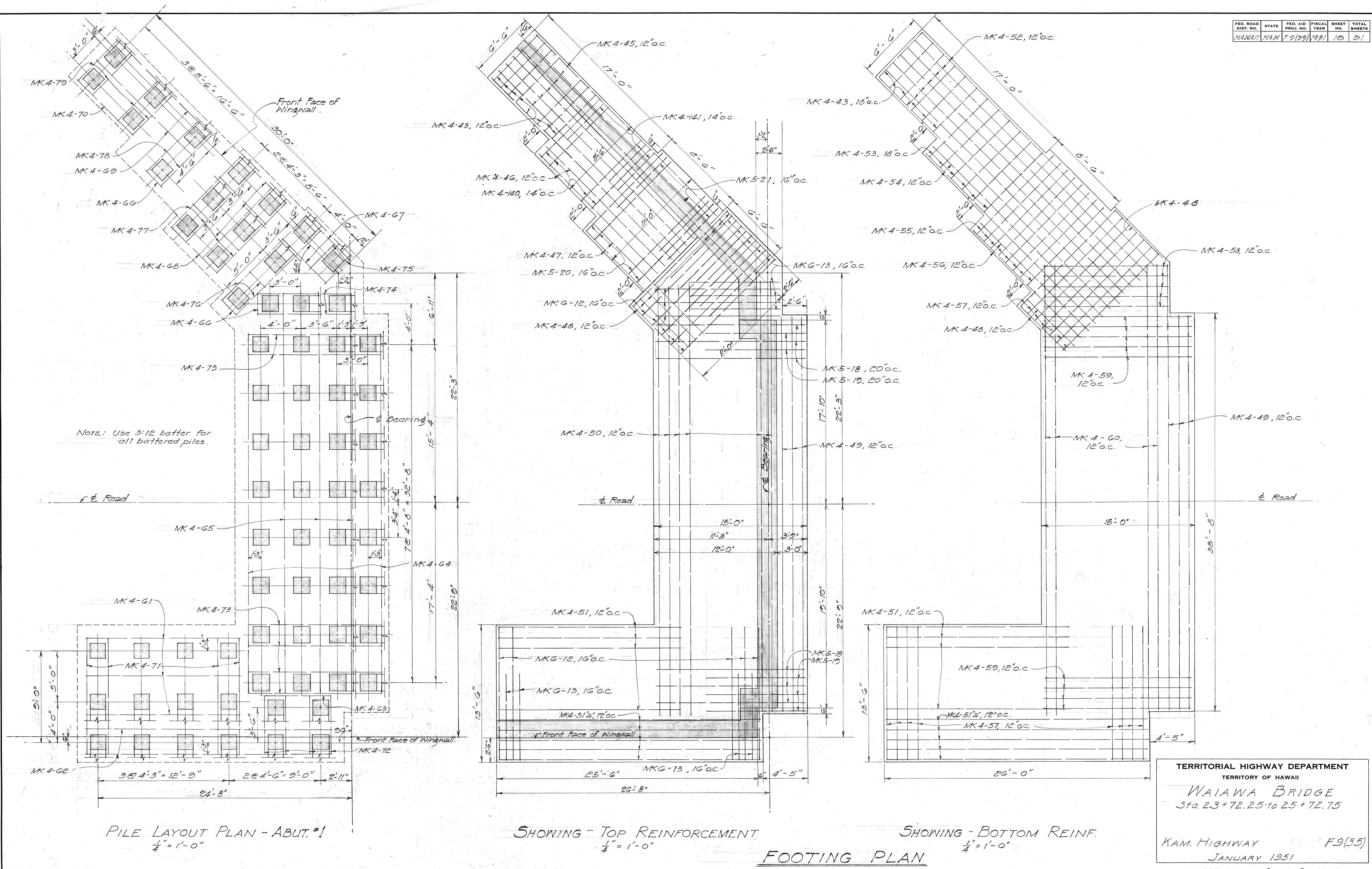
5478.16

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
HAWAII	HAW.	F9(35)	1951	17	31



TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
WAIAWA BRIDGE
Sta. 23+72.25 to 25+72.75
KAM. HIGHWAY F9(35)
JANUARY 1951

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	F9(35)	1951	18	31

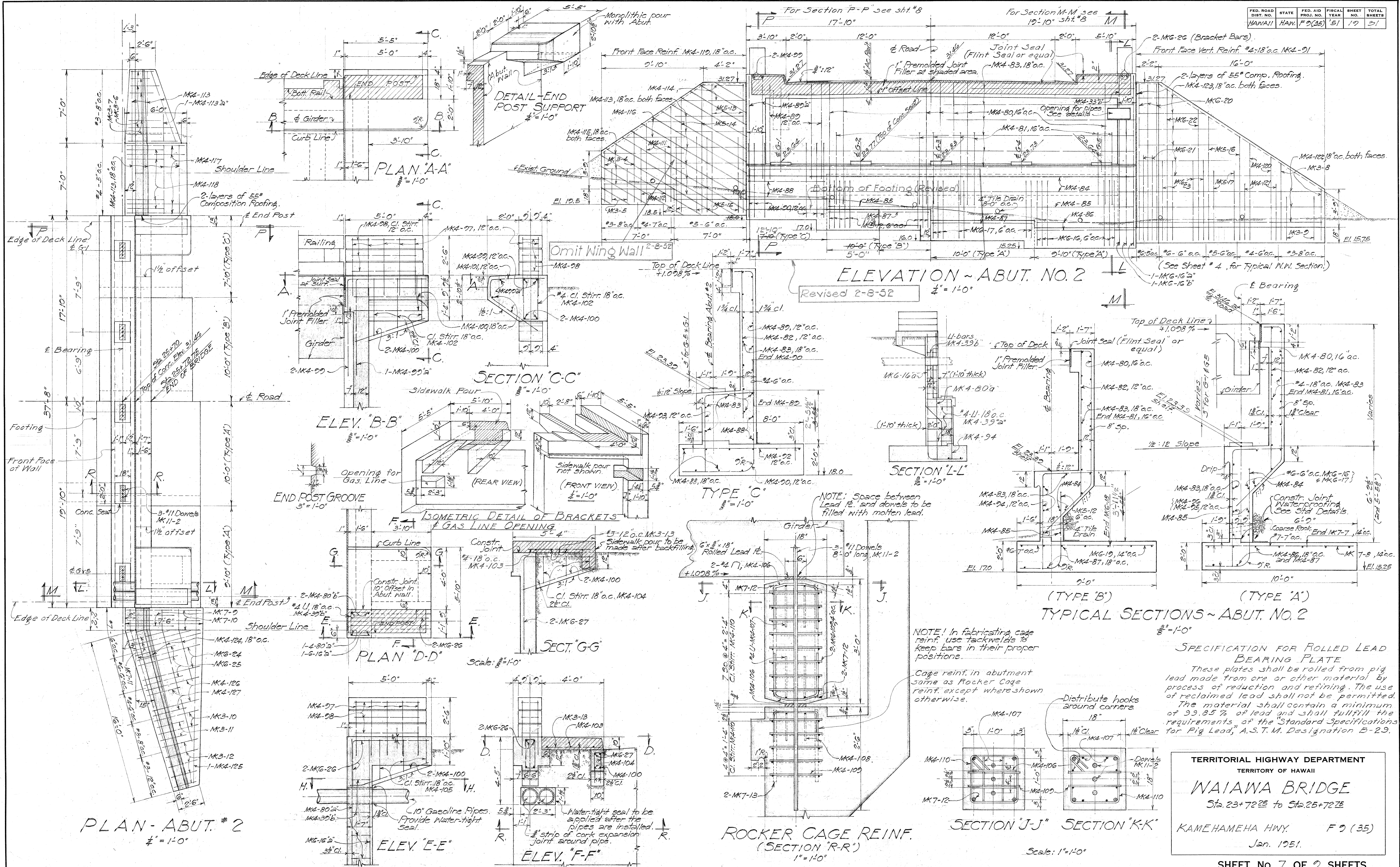


DATE
 SURVEYED BY
 PLAN
 DRAWN BY
 TRACED BY
 NOTE BOOK
 QUANTITIES CHECKED BY
 NO.

TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
 WAIAWA BRIDGE
 Sta. 23+72.25 to 25+72.75
 KAM. HIGHWAY F9(35)
 JANUARY 1951
 SHEET NO. 6 OF 7 SHEETS

5478.18

FED. ROAD DIST. NO.	STATE	FED. AID YEAR	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F 9 (35)	51	19	31



DATE	DESIGNED BY	TRACED BY	QUANTITIES BY	NOTES CHECKED BY	CREATED BY
1/15/51	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.
1/15/51	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.
1/15/51	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.
1/15/51	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.
1/15/51	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.
1/15/51	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.
1/15/51	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.
1/15/51	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.
1/15/51	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.	M. A. B. S.

SPECIFICATION FOR ROLLED LEAD BEARING PLATE

These plates shall be rolled from pig lead made from ore or other material by process of reduction and refining. The use of reclaimed lead shall not be permitted. The material shall contain a minimum of 99.85 % of lead and shall fulfill the requirements of the "Standard Specifications for Pig Lead," A.S.T.M. Designation B-29.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
WAIAWA BRIDGE
 Sta. 23+72.25 to Sta. 25+72.25
 KAMEHAMEHA HWY. F 9 (35)
 Jan. 1951.

ORIGINAL PLAN	SURVEY PLOTTED BY DESIGNED BY DRAWN BY TRACED BY QUANTITIES BY QUANTITIES CHECKED BY CHECKED BY	DATE
	MAK. 3/13/55 S. YOUNG, I. FURTINATA	DEC 50 " JAN 1951 " " "

ORIGINAL PLAN	SURVEY PLOTTED BY DESIGNED BY <i>A.R. Bartels</i> DRAWN BY <i>UJINAMA</i> TRACED BY QUANTITIES BY <i>E. C. R. K.</i> QUANTITIES CHECKED BY CHECKED BY	DATE <i>Dec 50</i> <i>JAN 51</i> " " " " " "
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