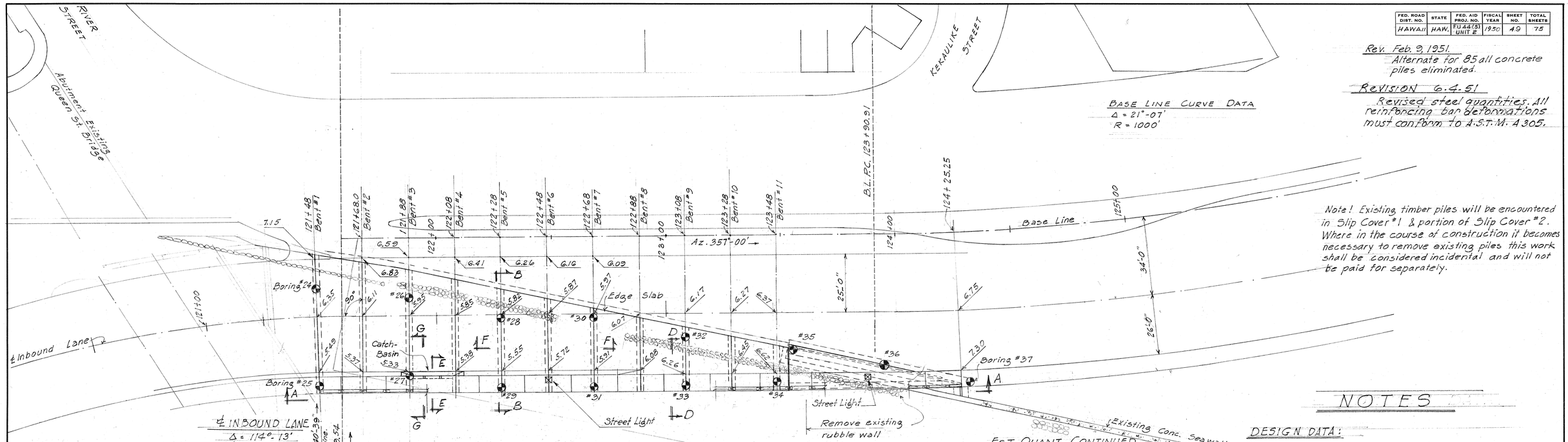
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FU 44(5) UNIT 2	1950	4.9	75

Rev. Feb. 9, 1951.
Alternate for 85 all concrete piles eliminated.

REVISION 6.4.51
Revised steel quantities. All reinforcing bar deformations must conform to A.S.T.M. A305.



BASE LINE CURVE DATA
Δ = 21°-07'
R = 1000'

Note! Existing timber piles will be encountered in Slip Cover #1 & portion of Slip Cover #2. Where in the course of construction it becomes necessary to remove existing piles this work shall be considered incidental and will not be paid for separately.

℄ INBOUND LANE
Δ = 114°-13'
R = 500'
L = 996.73'

Note! Elev. shown on this sheet are finished pavement elevations. Concrete elevations are 1½" lower. For details of borings see sht. #21.

LAYOUT PLAN SLIP COVER #1.
1" = 20'-0"

EST. QUANT. CONTINUED.
PILE SUMMARY FOR SLIP COVERS #1, 2, 3 & 4

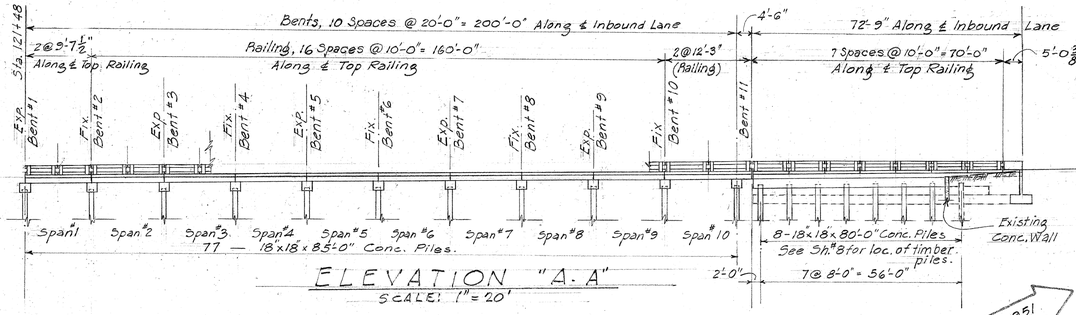
No. Pieces.	Length-18"x18" Precast Conc. Pile, Ft.
46	30'-0"
4	32'-0"
4	36'-0"
11	38'-0"
11	40'-0"
22	44'-0"
8	48'-0"
38	50'-0"
6	54'-0"
14	56'-0"
37	60'-0"
36	64'-0"
8	80'-0"
85	85'-0"

1540 Lin. Ft.	Untreated Timber Piles 22 pc. 70'-0" long each

~~Alternate for 85 all conc. piles.~~
128 Composite piles composed of the following:
128-16x16 Conc. socket piles ~~40'-0"~~ long each.
128-Untreated timber piles 50'-0" long each.
See Std. Br. Details for conc. socket.

PICK-UP SCHEDULE
FOR 18"x18" PRECAST CONC. PILE

Length 18"x18" Precast Conc. Piles, Ft.	Type of Pick-Up.
0 - 60	L; 0.207L, 0.586L, 0.207L
Over 60 ft.	L; 0.138L, 0.362L, 0.362L, 0.138L



ELEVATION "A-A"
SCALE: 1" = 20'

Rev. Feb. 9, 1951

NOTES

DESIGN DATA:
H20 S16.44 Loading.
f_s = 20,000
f_c = 1,000#
n = 10

MATERIALS
Concrete in piles class E-1, all other concrete class A-1.
All lumber to be select structural Douglas Fir treated timber (rough.)
All piles shall be made with Type V cement.

CONSTRUCTION METHOD:
All concrete in piles, substructure & superstructure shall have an admixture of "Triplasal-Normal" in accordance with the requirements of the special provisions.
Railing must be poured after release of false work.

All surfaces of railings, railing posts and end posts above the top of sidewalk level shall receive class 1 surface finish.
Brush coat waterproofing required. See specifications, pamphlet N Section 34.

REFERENCE:
For details of sections "B-B", "D-D", "E-E", F-F, & G-G, see sheet #5.

Note! Contractor's attention is called to the specification requirements concerning relation between the weight of the piles and the power of the hammer. See Std. Specifications pamphlet "M-1."

In all cases where layers of soft, medium or hard coral are encountered during driving operations, and where the length of pile permits, it shall penetrate at least 10 feet into these materials. If this cannot be accomplished by ordinary driving methods jetting, or drilling will have to be resorted to.

ESTIMATED QUANTITIES

ITEM \ LOCATION	SLIP COVER No 1						SLIP COVER No 2					SLIP COVER No 3					SLIP COVER No 4					GRAND TOTAL	
	SUPERSTRUCTURE DECK	SUPERSTRUCTURE SIDE WALK	SUBSTRUCTURE RET. WALLS	SUBSTRUCTURE PILE CAPS	RAILING & RAIL POSTS	TOTAL	SUPERSTRUCTURE DECK & FRAMING	SUBSTRUCTURE	RAILING & RAIL POST	TOTAL		SUPERSTRUCTURE DECK & FRAMING	NON-MONOLITHIC SIDE WALK	SUBSTRUCTURE (PILE CAPS)	RAILING & RAIL POSTS	TOTAL		SUPERSTRUCTURE DECK & FRAMING	SUBSTRUCTURE PILE CAPS	BUILD-UP WALL	RAILING & RAIL POSTS	TOTAL		
CLASS A CONC.	391.	49	62.	139	18	659 c.y.	499		172.	12.	683 c.y.	521.0	1.	180.	15.	717 c.y.		45.5	23.5	5	4	78.	2137.	c.y.
REINFORCING STEEL	~~62,350~~ 54,354		~~5,940~~ 5,405	~~15,181~~ 13,992	~~4,041~~ 3,708	~~87,512~~ 78,962#	~~77,028~~ 69,308		~~21,000~~ 20,614	~~3,520~~ 3,520.	~~101,548~~ 89,562#	~~99,068~~ 78,693.		~~21,640~~ 21,380.	~~3,037~~ 3,037	~~101,745~~ 99,040#		6,342. ~~6,753~~	2,947 ~~3,214~~	191	829. ~~834~~	10,309 ~~10,792~~	~~277,875~~ ~~294,868~~ 277,875.	lbs.
STRUCTURAL EXCAVATION			230	15		245 c.y.			23		23			20.		20.							288.	c.y.
TREATED TIMBER — FENDER SYSTEM.											9.1					12.5						3.4	25.	M.B.M.
TREATED TIMBER — REBUILDING PIER 12 DECK																1.5							1.5	M.F.B.M.

REV. 6-4-51

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
SLIP COVER No. 1
Sta. 121+48 to Sta. 124+25.25
HONOLULU-PEARL HARBOR RD.
QUEEN STREET SECTION FU44(5)
March, 1950

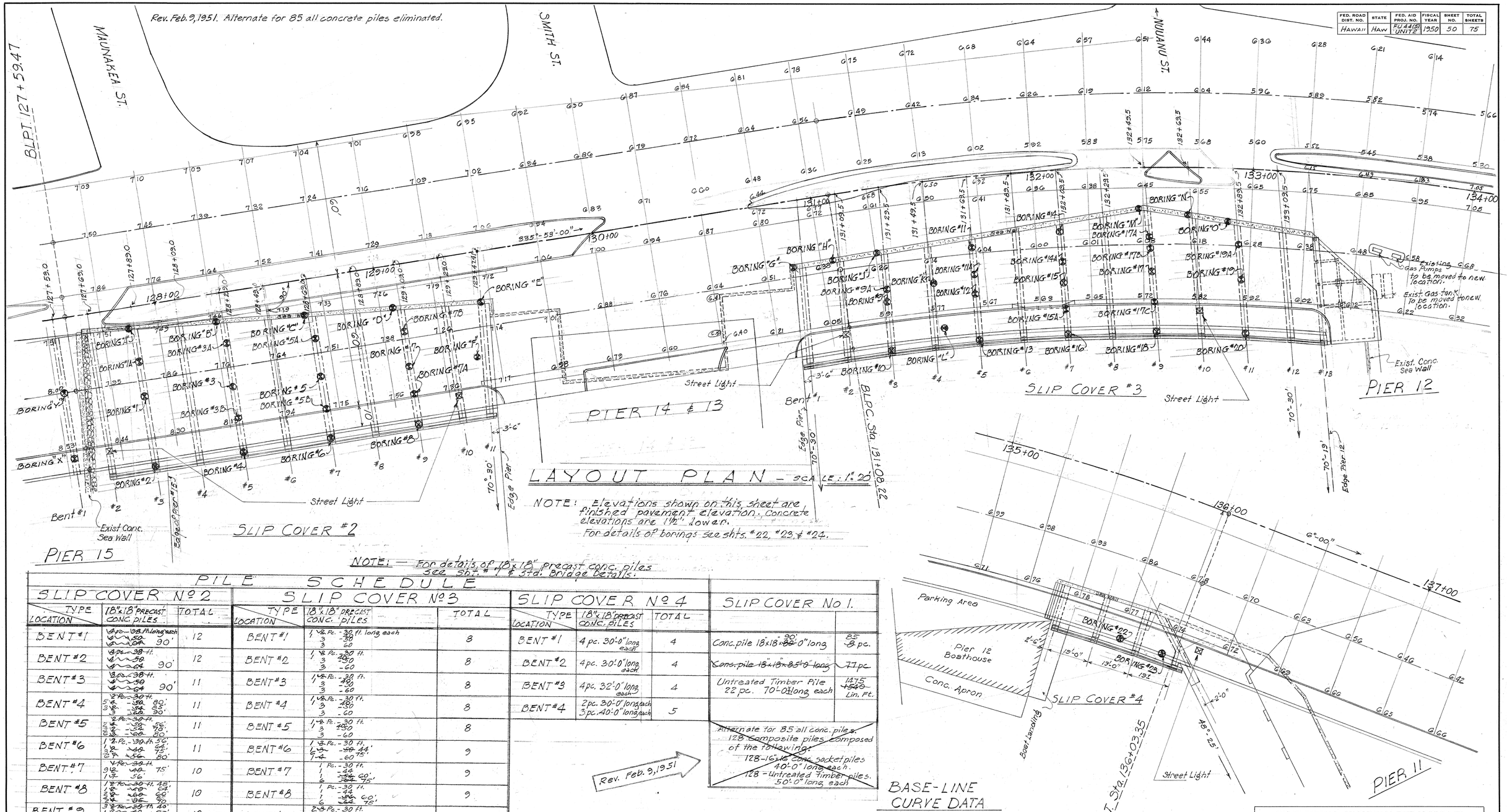
SHEET No. 1 OF 27 SHEETS

ORIGINAL PLAN	NOTE BOOK No.		DATE
		SURVEY PLOTTED BY	3-1-50
		DRAWN BY	3-1-50
		TRACED BY	3-1-50
		QUANTITIES CHECKED BY	3-1-50
		CHECKED BY	6-1-50

5483.49

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU 44(5) UNIT 2	1950	30	75

Rev. Feb. 9, 1951. Alternate for 85 all concrete piles eliminated.



LAYOUT PLAN — SCALE: 1" = 20'

NOTE: Elevations shown on this sheet are finished pavement elevation. Concrete elevations are 1½" lower.
For details of borings see shts. #22, #23, & #24.

NOTE: — For details of 18" x 18" precast conc. piles see Sht. # 1 & Std. Bridge Details.

PILE SCHEDULE

SLIP COVER No 2

LOCATION	TYPE 18"x18" PRECAST CONC. PILES	TOTAL
BENT #1	4 pc. 38 ft. long each 30'-50 90'	12
BENT #2	4 pc. 38 ft. 30'-50 90'	12
BENT #3	3 pc. 38 ft. 30'-50 90'	11
BENT #4	2 Pc. 30 ft. 30'-50 80' 30'-60 90'	11
BENT #5	2 Pc. 30 ft. 30'-50 60', 30'-60 90'	11
BENT #6	1½ Pc. 30 ft. 30'-40 64', 30'-50 80'	11
BENT #7	1½ Pc. 30 ft. 30'-40 75', 30'-50 56'	10
BENT #8	1 Pc. 30 ft. 40', 2 Pc. 30 ft. 30'-40 60', 30'-50 80'	10
BENT #9	1½ Pc. 30 ft. 30'-40 50', 30'-50 60', 30'-60 80'	10
BENT #10	2 Pc. 36 ft. 30'-48 60', 30'-60 90'	9
BENT #11	2 Pc. 36 ft. 30'-48 60', 30'-60 75'	9

SLIP COVER No 3

LOCATION	TYPE 18"x18" PRECAST CONC. PILES	TOTAL
BENT #1	1½ Pc. - 30 ft. long each 3 - 30 3 - 60	8
BENT #2	1½ Pc. - 30 ft. 3 - 30 3 - 60	8
BENT #3	1½ Pc. - 30 ft. 3 - 30 3 - 60	8
BENT #4	1½ Pc. - 30 ft. 3 - 30 3 - 60	8
BENT #5	1½ Pc. - 30 ft. 3 - 30 3 - 60	8
BENT #6	1½ Pc. - 30 ft. 1½ - 30 44', 1½ - 60 75'	9
BENT #7	1 Pc. - 30 ft. 1 - 30 44' 6 - 30 60', 75'	9
BENT #8	1 Pc. - 30 ft. 1 - 30 44 6 - 30 60', 75'	9
BENT #9	2 Pc. - 30 ft. 8 - 30 - 64	10
BENT #10	2 Pc. - 30 ft. 7 - 30 - 64	9
BENT #11	2 Pc. - 30 ft. 1 - 30 6 - 44 64	9
BENT #12	2 Pc. - 30 ft. 1 - 30 6 - 44 56'	9
BENTS 13, 14 SPAN 13 EXIST. PIER DECK	56 8 Pc. - 44 ft.	8

SLIP COVER No 4

LOCATION	TYPE 18"x18" PRECAST CONC. PILES	TOTAL
BENT #1	4 pc. 30'-0" long each	4
BENT #2	4 pc. 30'-0" long each	4
BENT #3	4 pc. 32'-0" long each	4
BENT #4	2 pc. 30'-0" long each 3 pc. 40'-0" long each	5

SLIP COVER No 1.

Conc. pile 18"x18" 30'-0" long	85 - 8 pc.
~~Conc. pile 18"x18" 85'-0" long~~	~~77 pc.~~
Untreated Timber Pile 22 pc. 70'-0" long each	1475 ~~1540~~ Lin. Ft.

~~Alternate for 85 all conc. piles. 128 Composite piles composed of the following: 128 - 16"x16" Conc. Socket piles 40'-0" long each. 128 - Untreated Timber piles. 50'-0" long each~~

Rev. Feb. 9, 1951

Note! Pile length, increase from inshore out.

BASE-LINE CURVE DATA

Δ = 30-07-00
½ = 15-03-30
R = 941.97
T = 253.43
L = 495.13
P.C. Sta. 131+08.22
P.T. Sta 136+03.35

ORIGINAL PLAN		DATE
	SURVEY PLOTTED BY	
	DESIGN BY	
	DRAWN BY	
	TRACED BY	
	QUANTITIES BY	
	QUANTITIES CHECKED BY	
NOTE BOOK No.	CHECKED BY	

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVERS 2, 3 & 4
LAYOUT PLAN

HONOLULU-PEARL HARBOR ROAD
QUEEN STREET SECTION FU 44(5)

March, 1950.

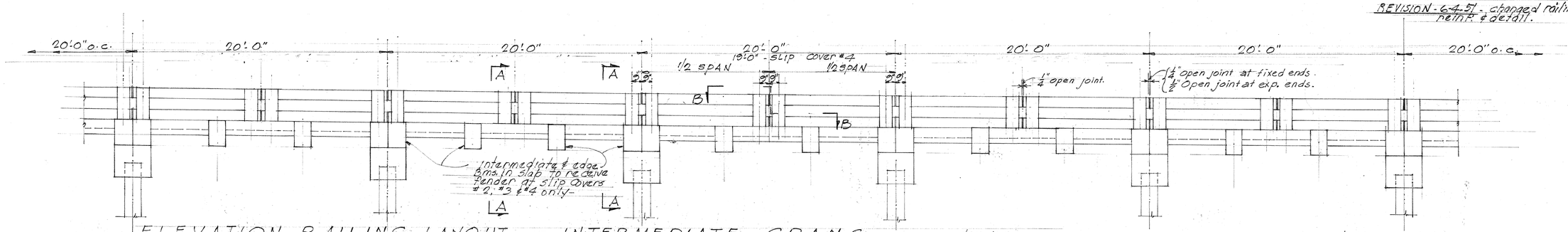
SHEET No. 2 OF 27 SHEETS

5483.50

E. No. 1087 A.S.C.E. CO., N.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU 44(10) UNIT 2	1950	51	75

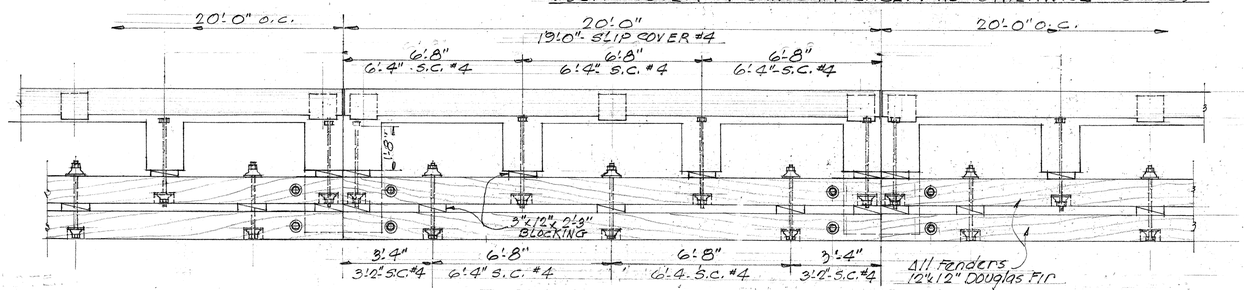
REVISION - 6-4-51 - changed railing reinf. & detail.



ELEVATION - RAILING LAYOUT AT INTERMEDIATE SPANS SCALE: 1/4" = 1'0"

SLIP COVERS #2, #3, #4 INCL.

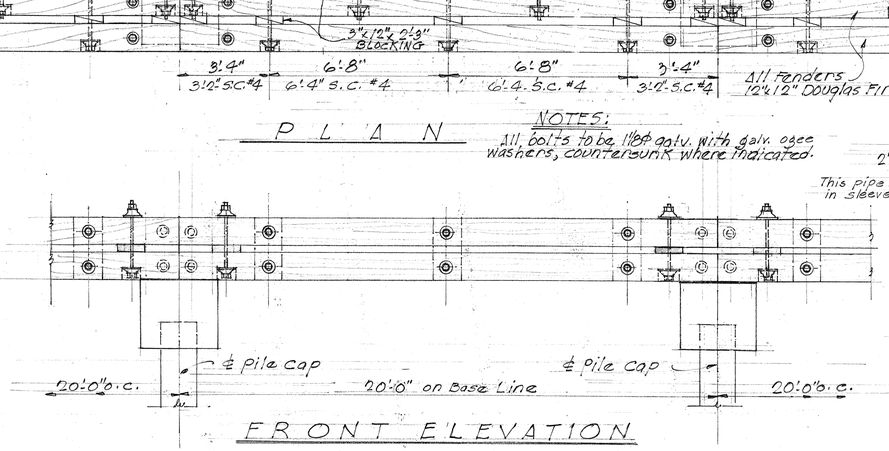
(SLIP COVER #1 SIMILAR EXCEPT AS OTHERWISE NOTED)



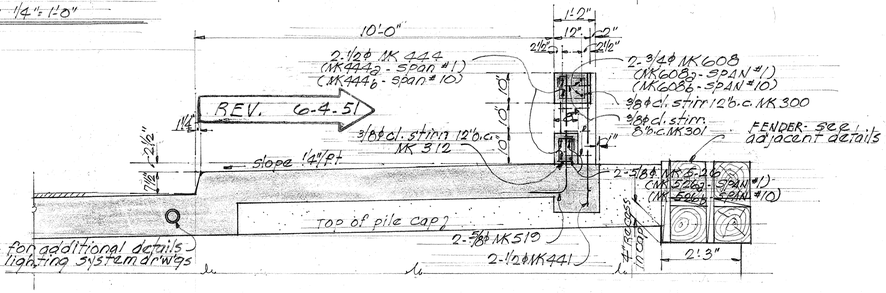
PLAN

NOTES:

All bolts to be 1" ϕ galv. with galv. cgee washers, countersunk where indicated.

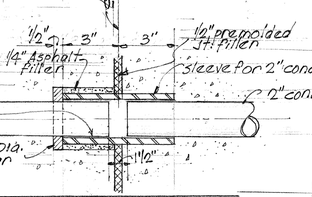


FRONT ELEVATION

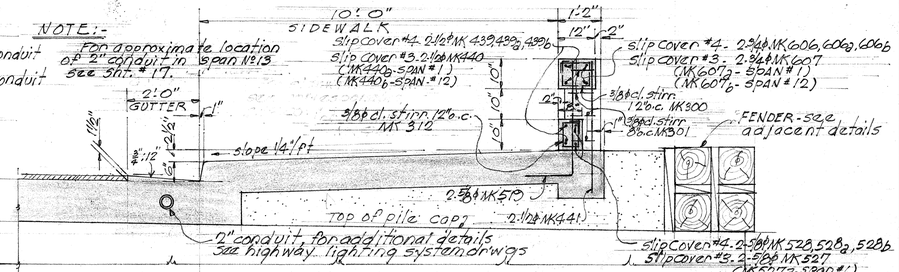


SECTION "A-A" - AT SLIP COVER #2

2" conduit for additional details see highway lighting system drwgs



EXPANSION SLEEVE FOR HIGHWAY LIGHTING SYSTEM IN ALL EXPANSION JT. OF ALL SLIP COVERS.



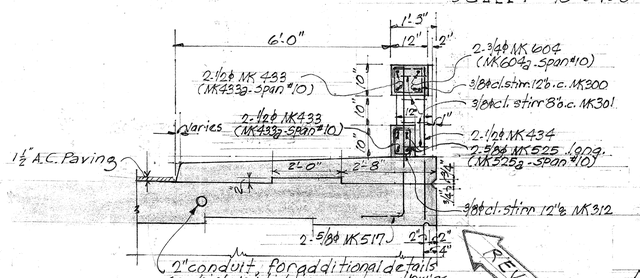
SECTION "A-A" - AT SLIP COVER #3 & #4

REV. 6-4-51

TYPICAL FENDER DETAILS AT INTERMEDIATE SPANS

(SLIP COVERS #2, #3, #4 ONLY)

SCALE: 3/8" = 1'0"

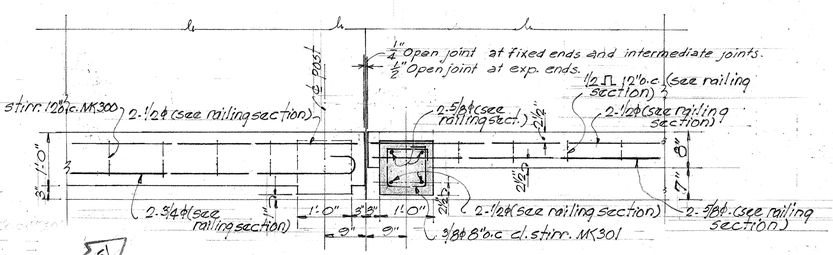


SECTION "A-A" AT SLIP COVER #1

SCALE: 1/2" = 1'0"

REV. 6-4-51

Note! 2" Electric conduit shall be installed and paid for under Item No. 2227.



SECTION "B-B" - SCALE: 3/4" = 1'-0"

REV. 6-4-51

Note! Conc. deck shall be swept clean and given an application of 0.2 gals per sq. yd. of emulsified asphalt prior to the laying of A.C. paving

ORIGINAL PLAN		DATE
	SURVEY PLOTTED BY	
	DESIGN BY	
	DRAWN BY	
	TRACED BY	
	QUANTITIES COMPUTED BY	
NOTE BOOK No.	QUANTITIES CHECKED BY	
	CHECKED BY	

TERRITORIAL HIGHWAY DEPARTMENT

TERRITORY OF HAWAII

SLIP COVERS No. 1, 2, 3, 4

TYPICAL DETAILS

HONOLULU PEARL HARBOR ROAD

QUEEN STREET SECTION FU 44(5)

MARCH 1950

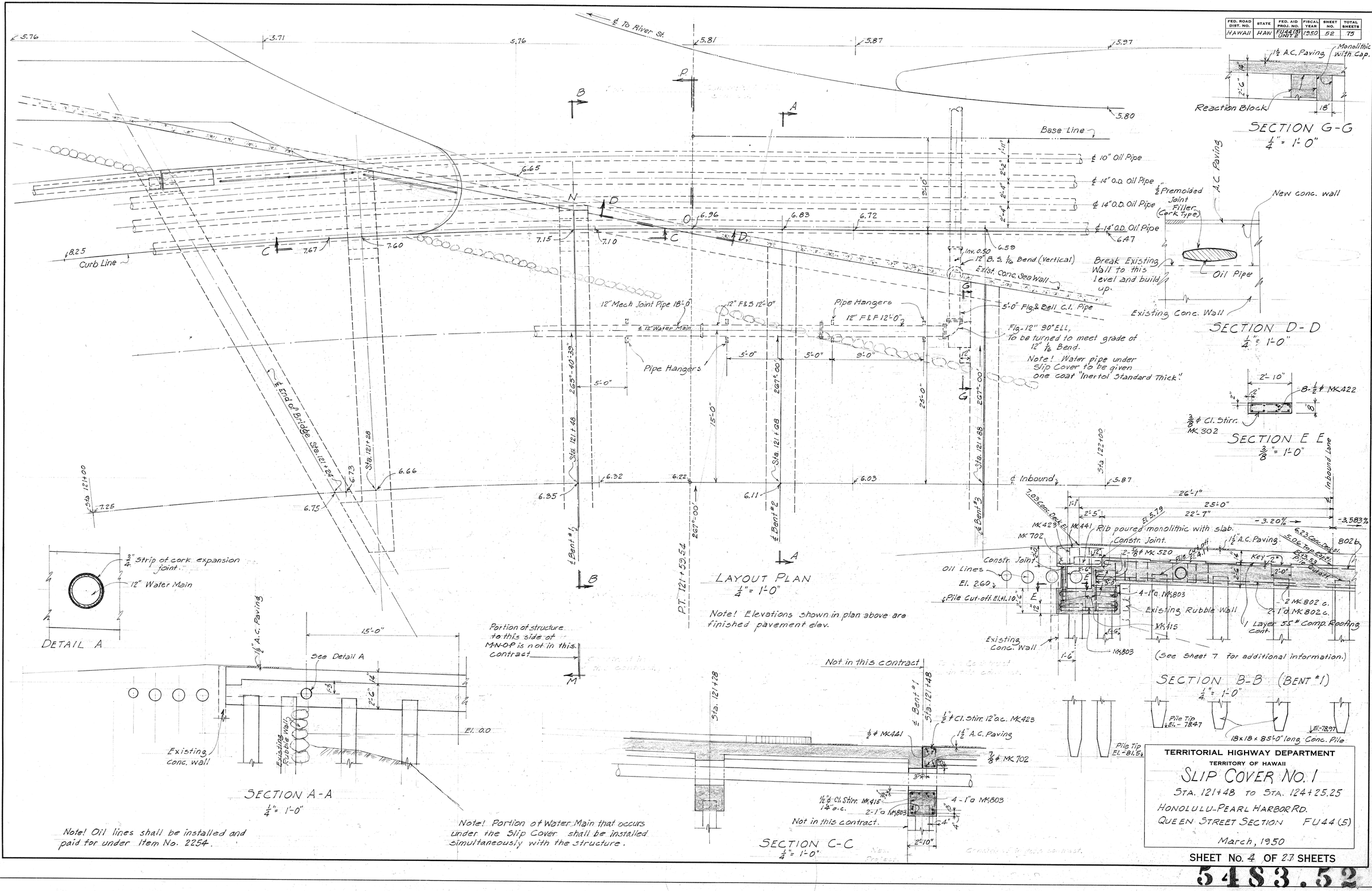
SHEET No. 3 OF 27 SHEETS

5483.51

18" No. 196T KAECO., N.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU44(5) UNIT 2	1950	52	75

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE 3/20
	DESIGNED BY W.K. Bartels	3/50
	DRAWN BY T. Okamoto	
	TRACED BY	
NOTE BOOK No.	QUANTITIES BY A. Yee	4/50
	QUANTITIES CHECKED BY L.O.	4/50
	CHECKED BY K.S.	4/50



Note! Oil lines shall be installed and paid for under Item No. 2254.

Note! Portion of Water Main that occurs under the Slip Cover shall be installed simultaneously with the structure.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER NO. 1

STA. 121+48 TO STA. 124+25.25

HONOLULU-PEARL HARBOR RD.

QUEEN STREET SECTION FU44(5)

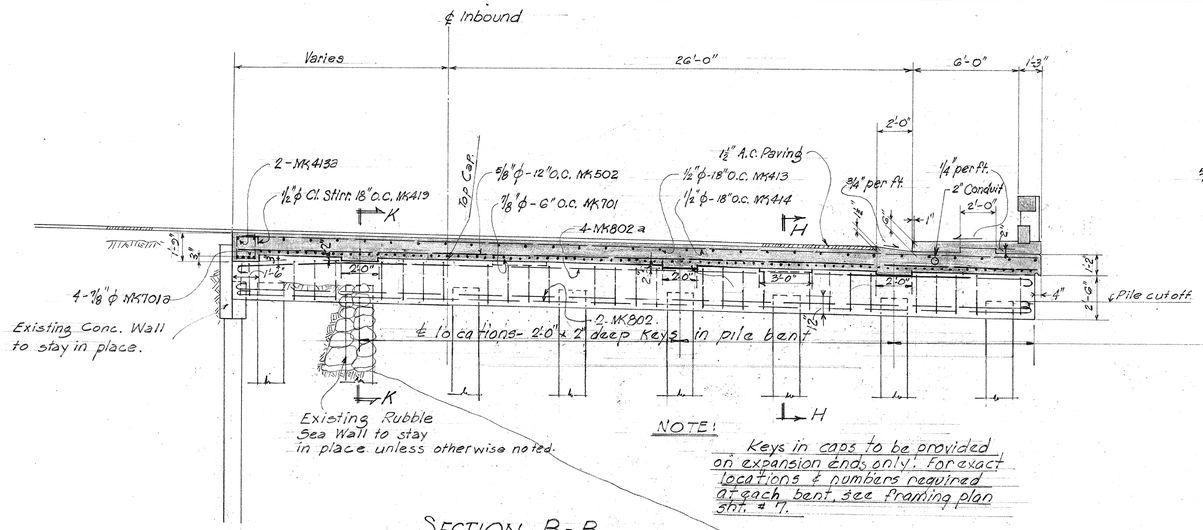
March, 1950

SHEET No. 4 OF 27 SHEETS

5483.52

No. 1007 K & E CO., N. Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FU44(5) UNIT E	1950	53	75

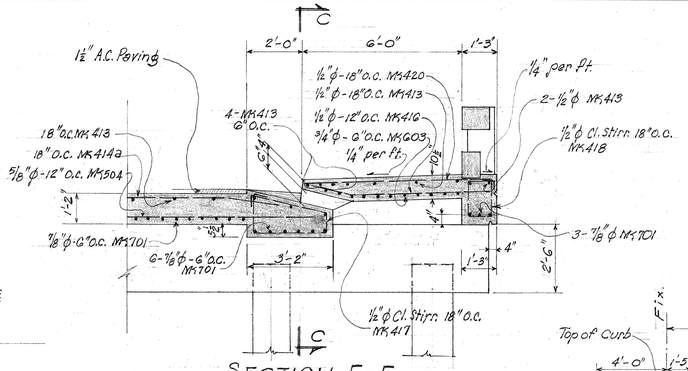


SECTION B-B

¼" = 1'-0"

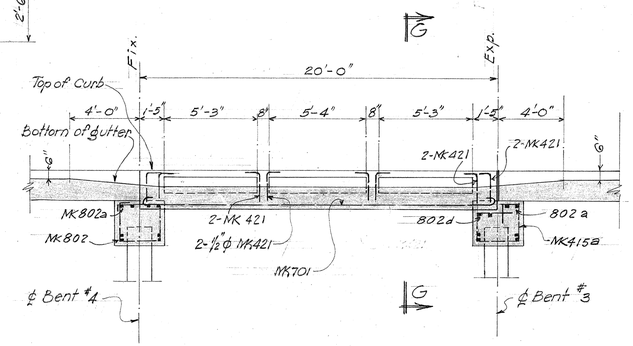
NOTE!

Keys in caps to be provided on expansion ends only! For exact locations & numbers required at each bent, see Framing plan Sht. # 11.



SECTION E-E

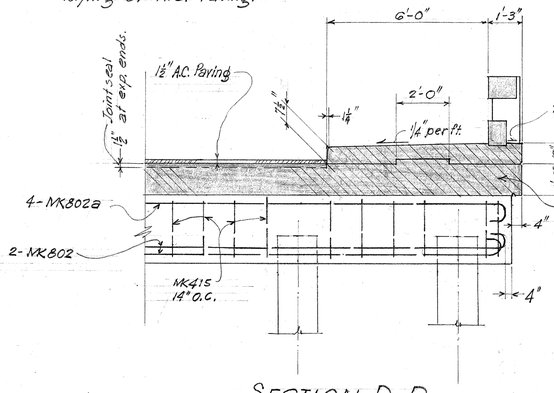
⅜" = 1'-0"



SECTION C-C

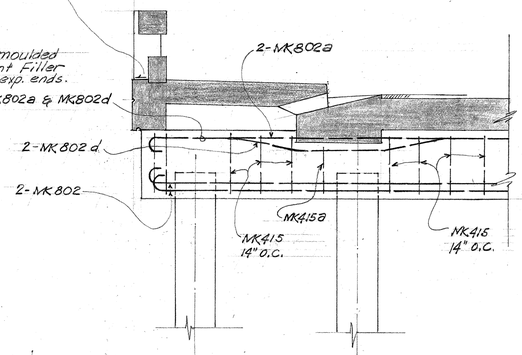
¼" = 1'-0"

Note! Conc. deck shall be swept clean and given an application of 0.2 gals per sq. yd. of emulsified asphalt prior to the laying of A.C. Paving.



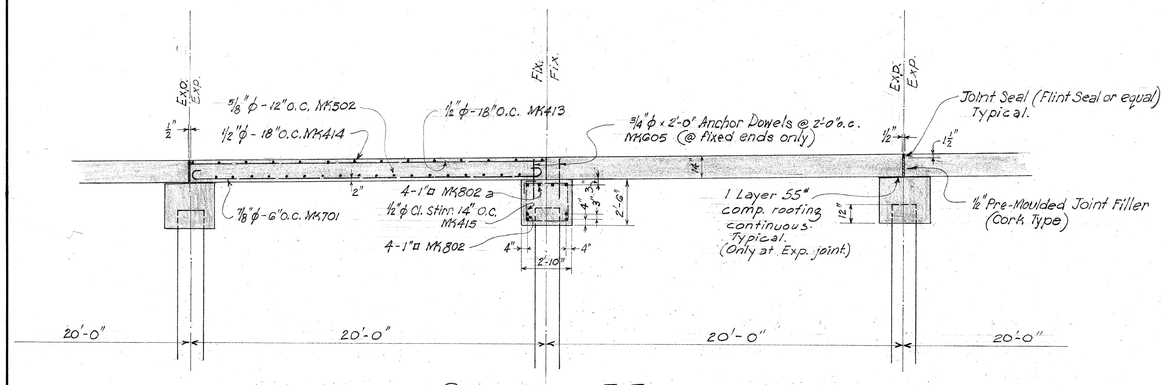
SECTION D-D

⅜" = 1'-0"



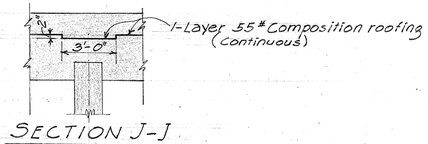
SECTION G-G

⅜" = 1'-0"



SECTION F-F

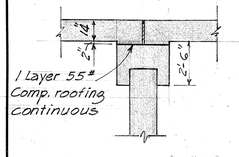
Scale: ¼"=1'-0"



SECTION J-J

TYPICAL

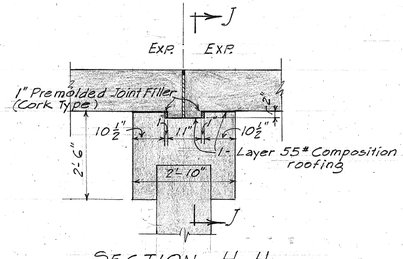
¼" = 1'-0"



SECTION K-K

TYPICAL

¼" = 1'-0"

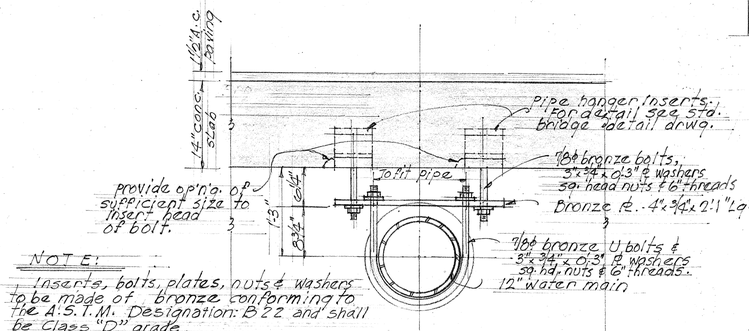


SECTION H-H

TYPICAL

½" = 1'-0"

Note! All inserts, hangers and piping for the water main shall be installed and paid for under Item 2245.



NOTE:

Inserts, bolts, plates, nuts & washers to be made of bronze conforming to the A.S.T.M. Designation: B 22 and shall be Class "D" grade.

Note: Hangers to be placed close to flange of pipe. Spacing shall not exceed 10' o.c.

DETAIL OF PIPE HANGER FOR WATER MAIN

SCALE: 1" = 1'-0"

NOTE:

See Sht. #1 for location of Sections "B-B", "D-D", "E-E", "F-F", "G-G".

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY T. Yee	
	TRACED BY A. Yee	
NOTE BOOK No.	QUANTITIES CHECKED BY J. Okamoto	6/50
	CHECKED BY J.O.	6/50

TERRITORIAL HIGHWAY DEPARTMENT

TERRITORY OF HAWAII

SLIP COVER NO. 1

STA. 121+48 TO STA. 124+25.25

HONOLULU-PEARL HARBOR ROAD

QUEEN STREET SECTION FU44(5)

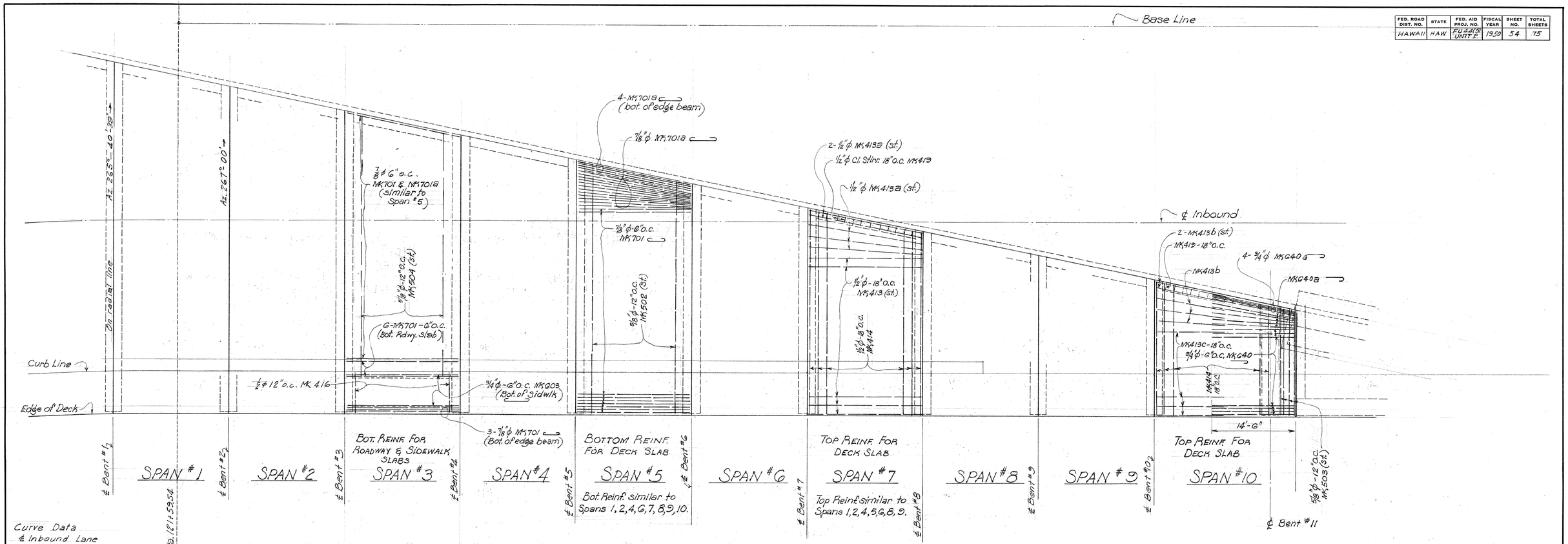
March, 1950

SHEET No. 5 OF 27 SHEETS

5483.53

LITHO. No. 1987 A & CO., N.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU 44(5) UNIT E	1950	54	75

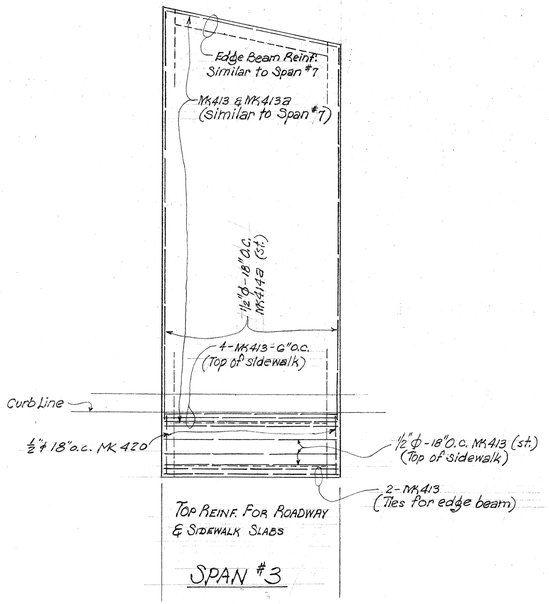


Curve Data
℄ Inbound Lane
Δ = 114° 13'
R = 500'

P.T. Sta. 121+59.54

Deck Reinforcing

1/8" = 1'-0"



ORIGINAL PLAN		DATE
	SURVEY PLOTTED BY	
	DESIGN BY	
	DRAWN BY	
	TRACED BY	
NOTE BOOK No.	QUANTITIES BY	
	QUANTITIES CHECKED BY	
	CHECKED BY	

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
SLIP COVER NO. 1
Sta. 121+48 To Sta. 124+25.25
HONOLULU-PEARL HARBOR ROAD
QUEEN ST. SECTION FU44(5)
March 1950

SHEET No. 6 OF 27 SHEETS

5483.54

No. 1007 K & E CO., N. Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU 44(5) UNIT 2	1950	55	75

Base Line

Az. 357°-00'

Exist. Conc. Sea Wall

Edge Deck Slab

Curb Line

Street Light

Edge of Guttering above

Φ Inbound

Φ Inbound

SPAN 1 | SPAN 2 | SPAN 3 | SPAN 4 | SPAN 5 | SPAN 6 | SPAN 7 | SPAN 8 | SPAN 9 | SPAN 10

BENT #1 | #2 | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11

P.T. STA. 121+59.54

On Radial

NOTE

All piles shown are 18"x18"x85'-0" long conc. piles

Elevations shown in: [____]- denote top of pile cap elevation.
" " " (____)- denote pile cutoff elevations.
Pile tip elev. vary from approx. -78.0 to -80.0 unless otherwise shown.

FRAMING PLAN

1/8" = 1'-0"

BENT #1 | BENT #2 | BENT #3 | BENT #4 | BENT #5 | BENT #6 | BENT #7 | BENT #8 | BENT #9 | BENT #10 | BENT #11

NOTE: Sections "H-H" & "J-J" refer to typical sections thru each 3'-0"x 1'-1"x 2" deep Key. For details see sht. #5.
Section "K-K" refers to typ. section thru each 2'-0"x 2" Key. For detail see sht. #5.

Anchor bolts for street light base. For details see Highway Lighting system.

FRAMING PLAN - SHOWING CONSTRUCTION KEYS ON PILE BENTS - SCALE: 1/8"=1'-0"

18"x 18" Butt

8-1"φ bars

No. 3 Wire Wrapping See Std. Br. Details for spacing

SECTION | TIP

18"x 18" PRECAST CONC. PILE

Scale 3/4" = 1'-0"

Note. 18x18 conc. pile similar to 16x16 conc. pile. See Std. Bridge Details.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER NO. 1

Sta. 121+48 To Sta. 124+25.25

HONOLULU-PEARL HARBOR ROAD

QUEEN ST. SECTION FU44(5)

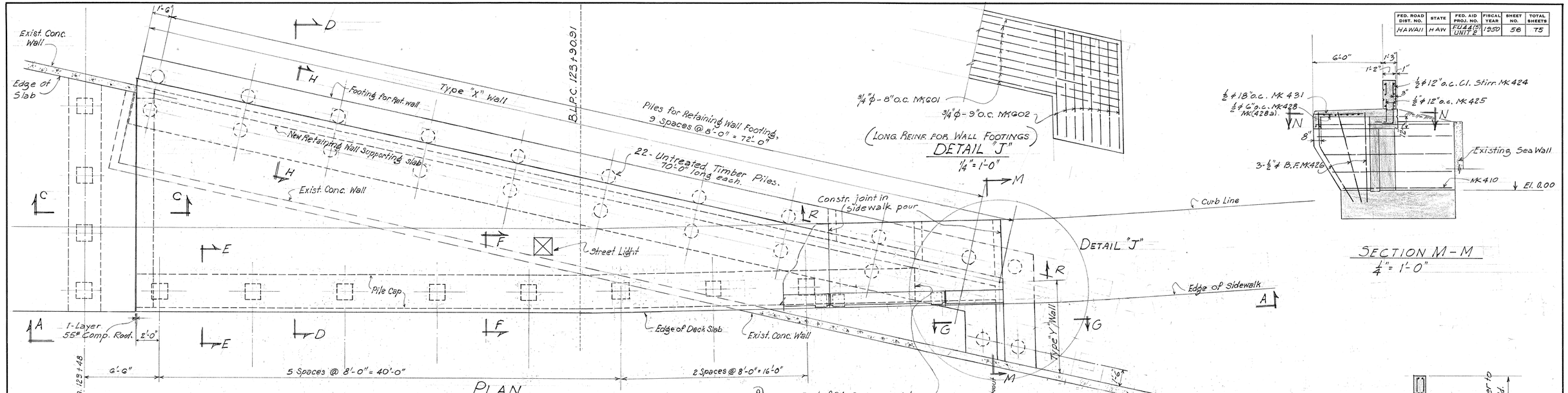
March 1950

SHEET No. 7 OF 27 SHEETS

5483.55

ORIGINAL PLAN		
	SURVEY PLOTTED BY	DATE 1/50
	FIELD CHECKED BY K. Bertels	3/50
	DRAWN BY A. Lee	4-50
	TRACED BY	4-50
	TABULATIONS BY A.Y.C.E.	6-50
NOTE BOOK No.	QUANTITIES CHECKED BY	6-50
	CHECKED BY	6-50

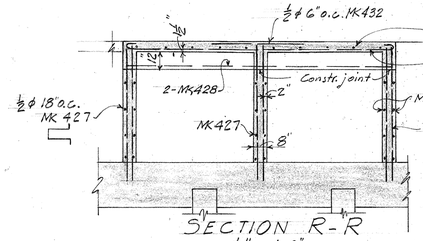
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU44(5) UNIT 2	1950	56	75



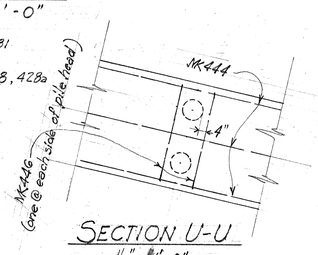
PLAN
1/4" = 1'-0"

(LONG. REINF. FOR WALL FOOTINGS)
DETAIL "J"
1/4" = 1'-0"

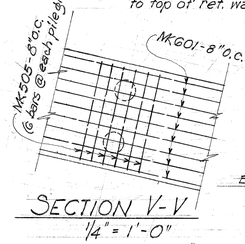
SECTION M-M
1/4" = 1'-0"



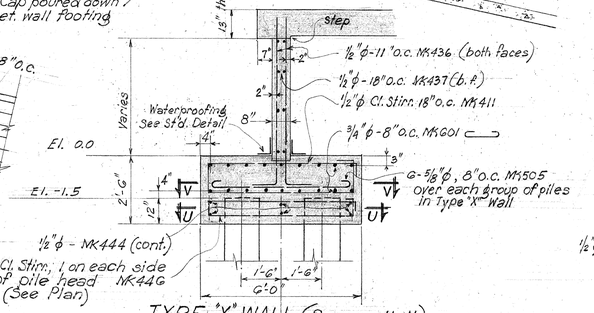
SECTION R-R
1/4" = 1'-0"



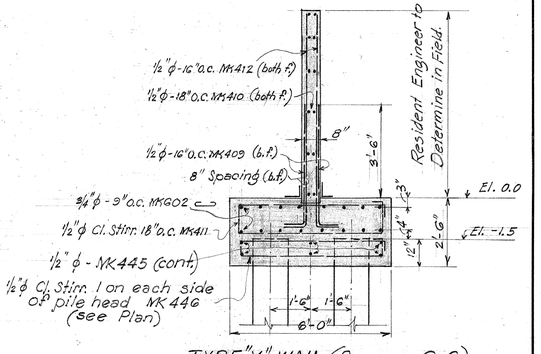
SECTION U-U
1/4" = 1'-0"



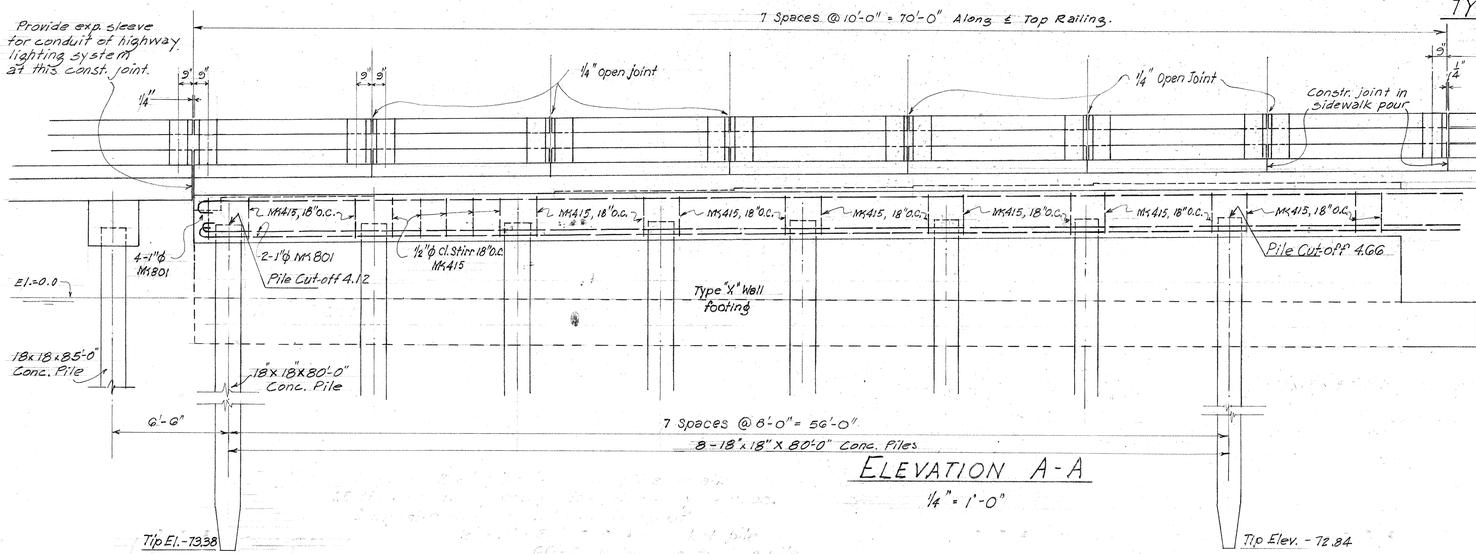
SECTION V-V
1/4" = 1'-0"



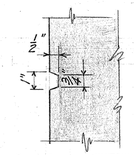
TYPE "X" WALL (SECTION H-H)
3/8" = 1'-0"



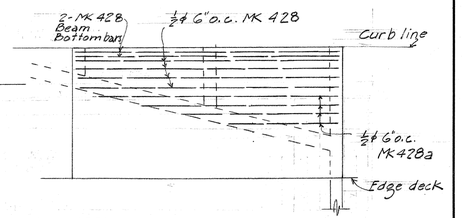
TYPE "Y" WALL (SECTION G-G)
3/8" = 1'-0"



ELEVATION A-A
1/4" = 1'-0"



GROOVE DETAIL AT END POST



SECTION N-N
1/4" = 1'-0"

Note! See Sheet 9 for Sections C-C, D-D, E-E & F-F.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE 2/50
	DESIGN BY K. R. Bartels	
	DRAWN BY A. Lee	
	TRACED BY	
	QUANTITIES BY	
NOTE BOOK	QUANTITIES CHECKED BY	
No.	CHECKED BY	

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

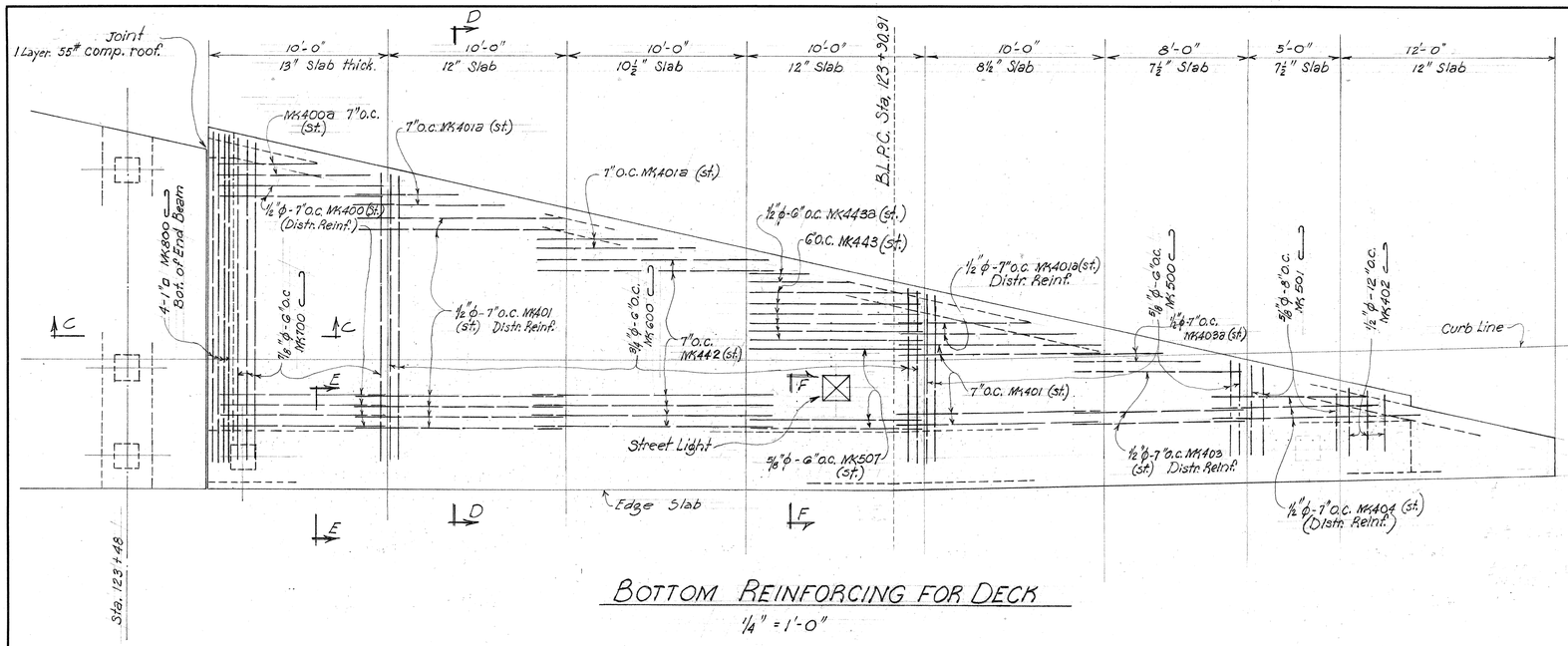
SLIP COVER NO. 1
STA. 121+48 TO STA. 124+25.25
HONOLULU-PEARL HARBOR ROAD
QUEEN STREET SECTION FU44(5)
March, 1950

SHEET No. 8 OF 27 SHEETS

5483.56

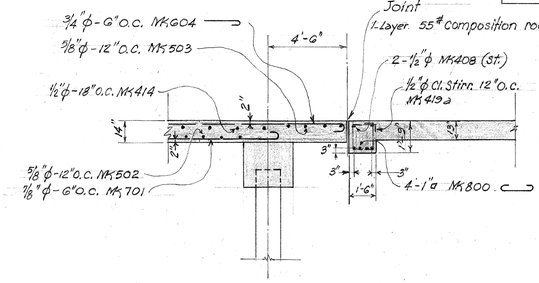
K&E No. 1007 K & E CO., N. Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU44(2) UNIT 2	1950	57	75



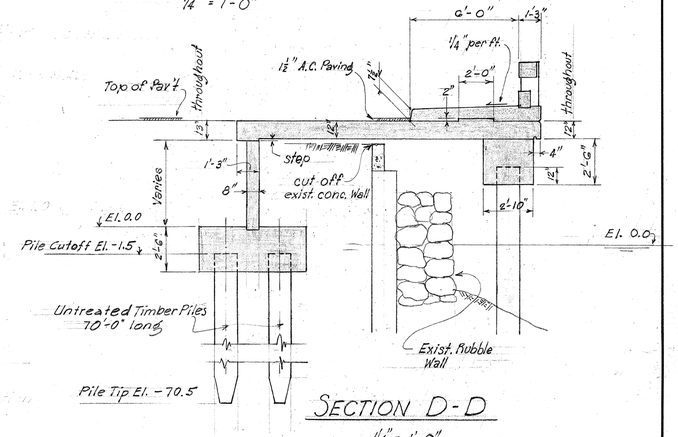
BOTTOM REINFORCING FOR DECK

1/4" = 1'-0"



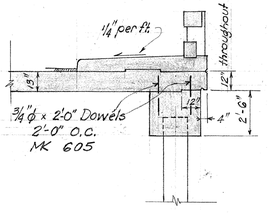
SECTION C-C

1/4" = 1'-0"



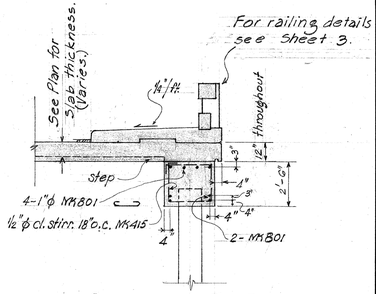
SECTION D-D

1/4" = 1'-0"



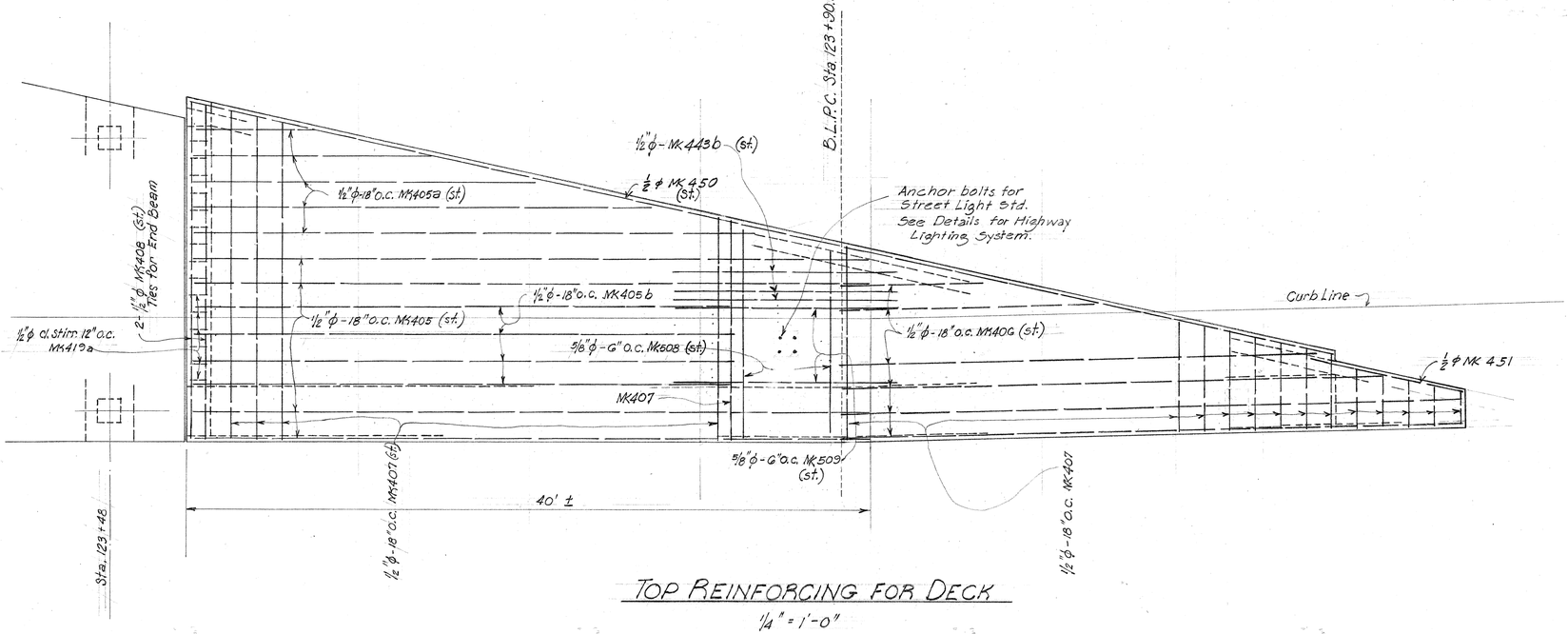
SECTION E-E

1/4" = 1'-0"



SECTION F-F

1/4" = 1'-0"



TOP REINFORCING FOR DECK

1/4" = 1'-0"

ORIGINAL PLAN	NOTE BOOK No.	SURVEY PLOTTED BY	DATE 2/50
		REVISED BY	DATE
		DRAWN BY A. Yee	DATE
		TRACED BY A. Yee	DATE 4/50
		QUANTITIES BY A. Yee	DATE 4/50
		QUANTITIES CHECKED BY T. Okamoto	DATE 4/50
		CHECKED BY S.O.	DATE

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

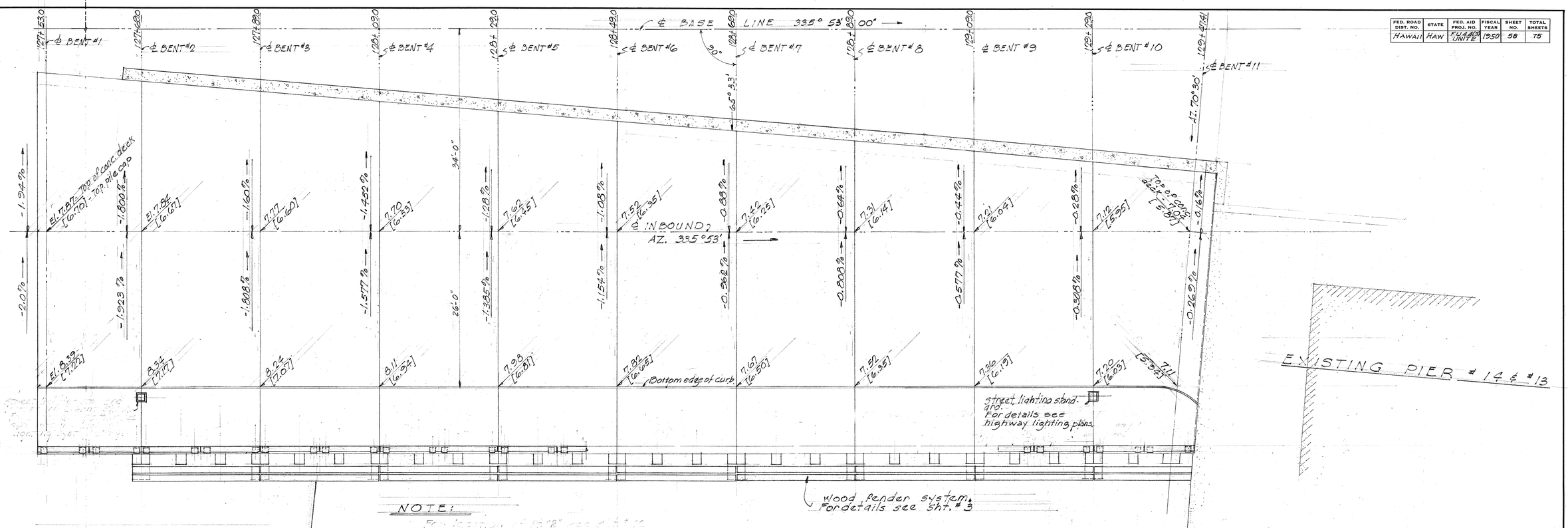
SLIP COVER NO. 1
Sta. 121+48 To Sta. 124+25.25
HONOLULU - PEARL HARBOR R.D.
QUEEN ST. SECTION FU44(5)
March 1950

SHEET No. 3 OF 27 SHEETS

5483.57

LEITZ No. 1987 K & E CO., N.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU 44(5) UNIT 2	1950	58	75



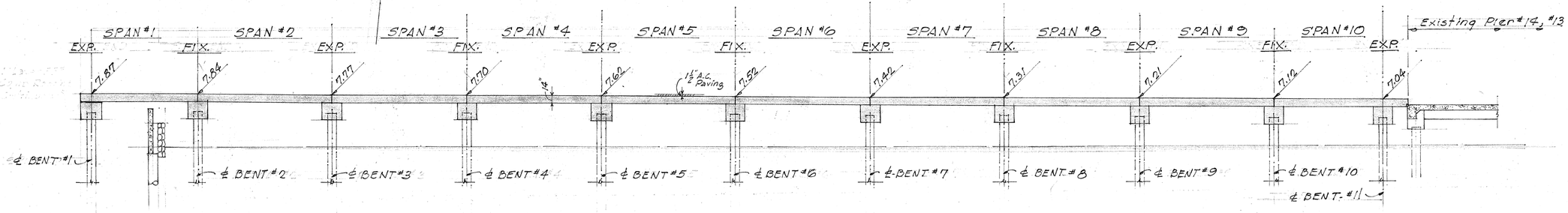
NOTE:

Elevations shown in [ ] denote top of cap elevations, other elev. are concrete deck elev.

EXISTING PIER Nº 15

Edge of existing pier

LAYOUT PLAN - SLIP COVER Nº 2 - SCALE: 1/8"=1'0"



LONGITUDINAL SECTION ALONG ℄ INBOUND LANE - SCALE: 1/8"= 1'0"

NOTES

REFERENCE:

For Rail & railing post & sidewalk details, see sht. # 3
For Fixed & Expansion Slab connection details see sht. # 12

GENERAL:

Provide expansion sleeve for conduit of highway lighting system at all expansion jt. For details see sht. #3.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY R. BARNES	6-50
	TRACED BY	" "
NOTE BOOK	QUANTITIES BY	" "
No.	QUANTITIES CHECKED BY	" "
	CHECKED BY	" "

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER Nº 2
STA. 127+51.58 to STA. 129+50.91
HONOLULU - PEARL HARBOR ROAD
QUEEN STREET SECTION FU 44(5)

MARCH 1950

SHEET No. 10 OF 27 SHEETS

5483.58

E. No. 1307 K & E CO., N. Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU44(5) UNIT 2	1950	59	75

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE 6-20
	REVISED BY	6-30
	DRAWN BY	6-30
	TRACED BY	6-30
NOTE BOOK No.	QUANTITIES BY	6-30
	QUANTITIES CHECKED BY	6-30
	CHECKED BY	

PLAN - DECK REINFORCING. SCALE: 1/8" = 1'-0"

PLAN - PILE AND CAP LOCATIONS - SCALE: 1/8" = 1'-0"

NOTES

REFERENCE:

For details of Sections "A-A", "B-B", "C-C", "E-E" "G-G" & "H-H", see Sht. No 2 Slip Cover Sheet # 12

Sections "H-H" & "J-J" refer to typical sections thru each 3'0" x 1'-1" x 2" deep key. For details see sht. #5

Section "K-K" refers to typ. section thru ea. 2'0" x 2" Key. For detail see sht. #5.

For length of piles see pile sched. Sht. # 2.

NOTE:- Elevations shown in (---) are pile cutoff elevations.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER No 2

STA. 127+51.58 TO STA. 129+50.91

HONOLULU-PEARL HARBOR ROAD

QUEEN STREET SECTION FU44(5)

MARCH 1950

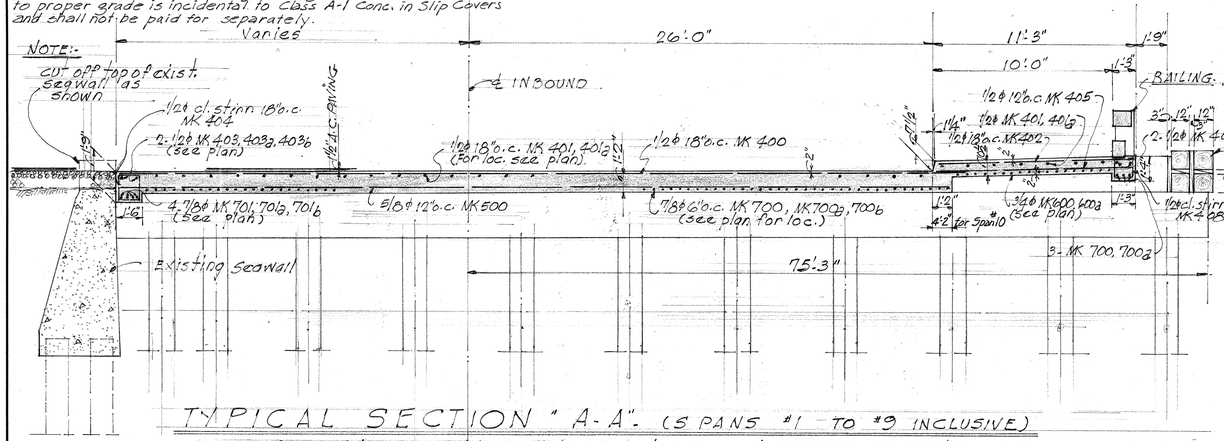
SHEET No. 11 OF 27 SHEETS

5483.59

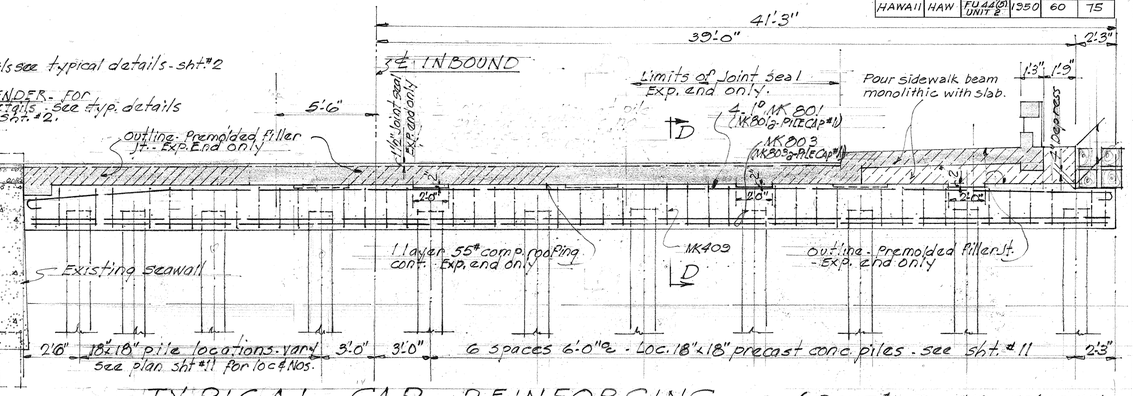
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU 44(5) UNIT 8	1950	60	75

Note! Work involved in cutting existing conc. seawall to proper grade is incidental to Class A-1 Conc. in Slip Covers and shall not be paid for separately.

NOTE:-
CUT OFF TOP OF EXIST. SEAWALL AS SHOWN

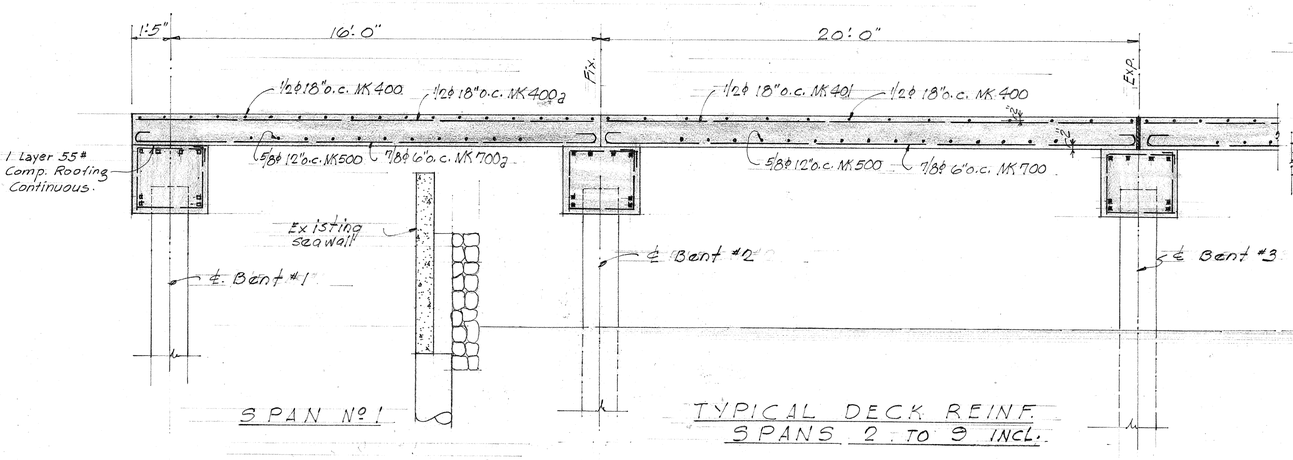


TYPICAL SECTION "A-A" (5 SPANS #1 TO #9 INCLUSIVE)
(SPAN #10 SIMILAR EXCEPT AS OTHERWISE SHOWN ON DECK REINF. SHT. #11)
SCALE: 1/4" = 1'-0"



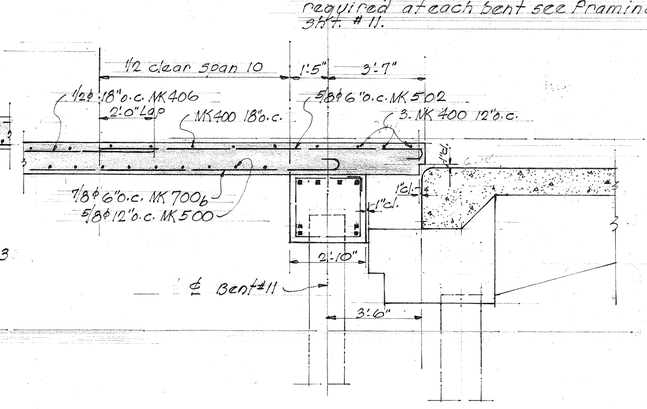
TYPICAL CAP REINFORCING - (BENTS #1 TO #12 INCLUSIVE)
SCALE: 1/4" = 1'-0"

NOTE:
Keys in caps to be provided on expansion ends only. For exact locations & numbers required at each bent see Framing plan. Sht. #11.



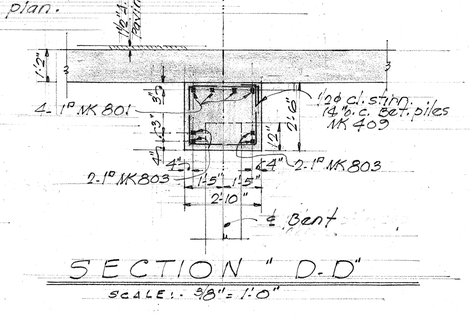
SPAN No. 1 — TYPICAL DECK REINF. SPANS 2 TO 9 INCL.

SECTION "B-B"
SCALE: 3/8" = 1'-0"

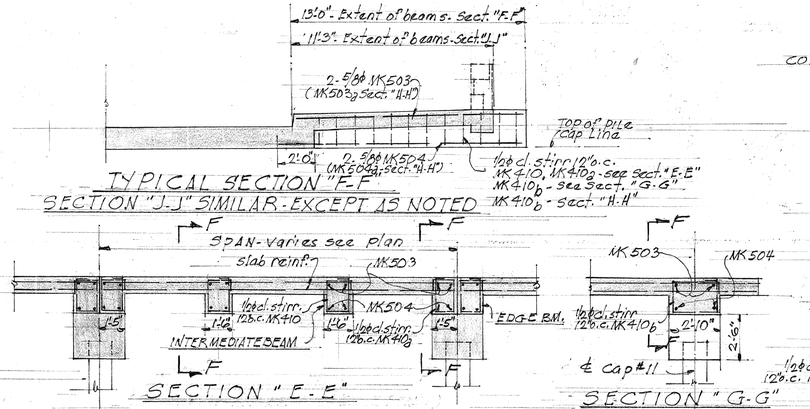


SPAN No. 10

SECTION "C-C"
SCALE: 3/8" = 1'-0"



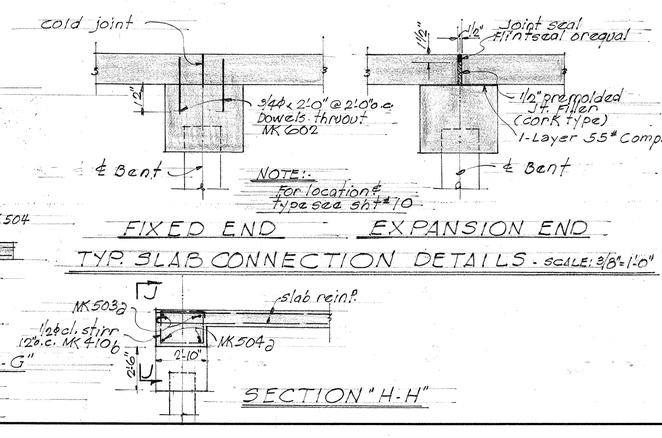
SECTION "D-D"
SCALE: 3/8" = 1'-0"



TYPICAL SECTION "F-F"
SECTION "J-J" SIMILAR - EXCEPT AS NOTED

SECTION "E-E"
SECTION "G-G"

TYPICAL SIDEWALK INTEMEDIATE & EDGE BEAM DETAILS
(THRU SPANS # 2 THRU # 10 INCLUSIVE) - SCALE: 1/4" = 1'-0"



SECTION "H-H"

NOTES

REFERENCE:
For location of Sections "A-A" "B-B" "C-C", "E-E" & "G-G", see Slip Cover No. 2 Sheet # 11.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY	6-50
	DRAWN BY	6-50
	TRACED BY	6-50
NOTE BOOK	QUANTITIES BY	6-50
	QUANTITIES CHECKED BY	6-50
No.	CHECKED BY	6-50

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER No. 2
STA. 127+51.58 TO STA. 129+50.91
HONOLULU-PEARL HARBOR ROAD
QUEEN STREET SECTION FU 44(5)
MARCH 1950

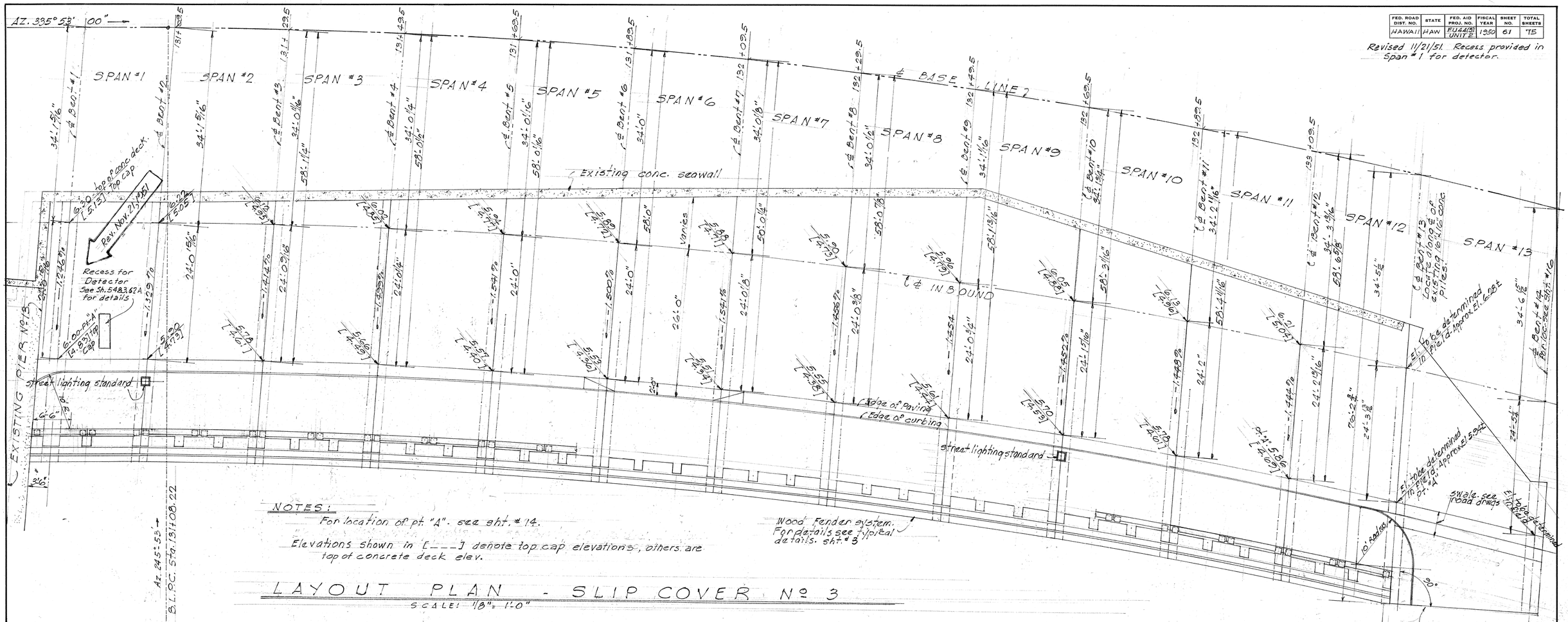
SHEET No. 12 OF 27 SHEETS

5483.60

No. 1007 KAECO, N.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU(44(5) UNITE	1950	61	75

Revised 11/21/51. Recess provided in Span #1 for detector.



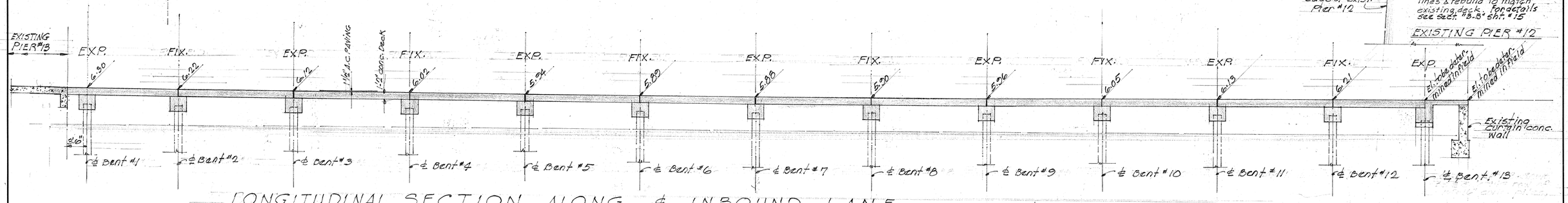
NOTES:

For location of pt "A". see sht. # 14.

Elevations shown in [---] denote top cap elevations, others are top of concrete deck elev.

LAYOUT PLAN - SLIP COVER Nº 3

SCALE: 1/8" = 1'-0"



LONGITUDINAL SECTION ALONG ℄ INBOUND LANE - SCALE: 1/8" = 1'-0"

GENERAL NOTES

Provide expansion sleeve for conduit of highway lighting system at all expansion jt. For details See Sht. # 3.

DEMOLITION:-

Remove existing concrete deck in span # 13 & rebuild as shown.

No explosives shall be used when removing existing concrete, & proper care shall be taken not to damage any portions of the existing structure which are to be incorporated into the new work.

This work shall be incidental to Class A-1 Concrete in Slip Covers and shall not be paid for separately.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY K.A. BARTELL	6-50
	DRAWN BY " "	6-50
	TRACED BY F. CHING	6-50
NOTE BOOK No.	QUANTITIES CHECKED BY T. KAMATA	6-50
	CHECKED BY J. OKAMOTO	6-50

TERRITORIAL HIGHWAY DEPARTMENT

TERRITORY OF HAWAII

SLIP COVER Nº 3

STA. 130+30.37 ± to STA. 133+57.0 ±

HONOLULU PEARL HARBOR ROAD

QUEEN STREET SECTION FU 44(6)

MARCH 1950

SHEET No. 13 OF 27 SHEETS

5483.61

16" No. 1907 K&E CO., N.Y. USA

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU44(5) UNIT 2	1950	62	75

Rev. Nov. 21, 1951, Deck revised to accommodate recess for detector. Ribs added in sidewalk of span 6.

PLAN - DECK REINFORCING - SCALE: 1/8" = 1'-0"

TYP. SLAB CONNECTION DETAILS - SCALE: 3/8" = 1'-0"

TYPICAL SECTION "A-A" SPANS #2 TO #5 INCL. AND #7 TO #12 INCL.

SCALE: 1/4" = 1'-0" SPAN #1 SIMILAR except as otherwise noted. See Sheet 5483.62A for Details around recess.

SECTION "B-B" - SPAN #6 - SCALE: 3/8" = 1'-0"

SECTION "C-C" - SCALE: 1/4" = 1'-0"

SECTION "E-E"

SCALE: 1/4" = 1'-0"

SECTION "F-F" - SCALE: 3/8" = 1'-0"

SECTION "G-G"

SECTION "D-D"

TYPICAL THRU SPANS #1 THRU #5 & SPANS #7 THRU #12 SCALE: 1/4" = 1'-0"

TYP. TOP REINF. SPANS #2 TO #5 INCL. & #7 TO #12 INCL. (SPAN #6 SIMILAR EXCEPT AS OTHERWISE NOTED)

TYP. BOT. REINF. SPANS #1 TO #5 INCL. & #7 THRU #12 INCL. (SPAN #6 SIMILAR EXCEPT AS OTHERWISE NOTED)

TYPICAL DECK REINF. SPANS #2 TO #12 incl.

SPAN No. 1

TOP REINF. ONLY

BOT. REINF. SIMILAR AS SHOWN ON SPAN #8 except at Recess for Detector, See Sh. 5483.62A for Reinf. Details around Recess.

Note: For location & type see Sh. #13

FIXED END EXPANSION END

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY	
	DRAWN BY	
	TRACED BY	
NOTE BOOK No.	QUANTITIES CHECKED BY	
	CHECKED BY	

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER No. 3

STA. 130 + 90.37 ℄ TO STA. 133 + 57.0 ℄

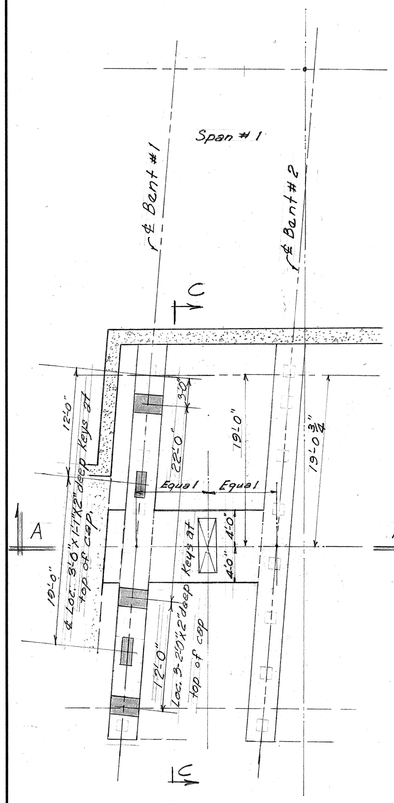
HONOLULU PEARL HARBOR ROAD
QUEEN STREET SECTION FU44(5)

MARCH 1950

SHEET No. 14 OF 27 SHEETS

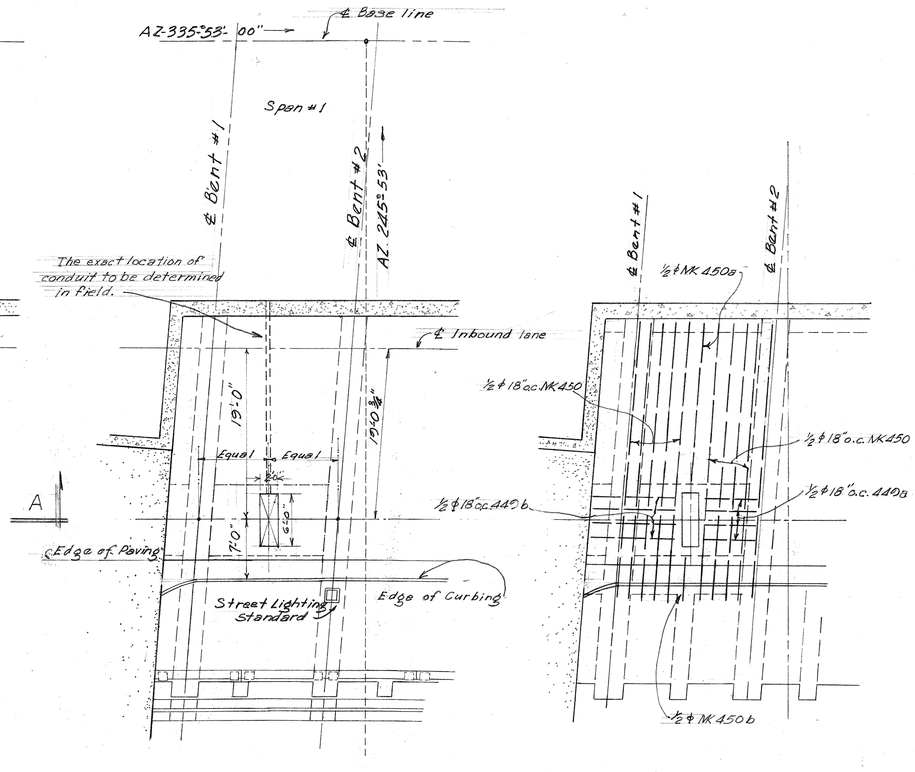
5483.62

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU44(5) UNIT 2	1950	62A	75



PLAN: WITH DECK REMOVED

Scale ⅛"=1'-0"



LAYOUT PLAN OF RECESS FOR MAGNETIC DETECTOR

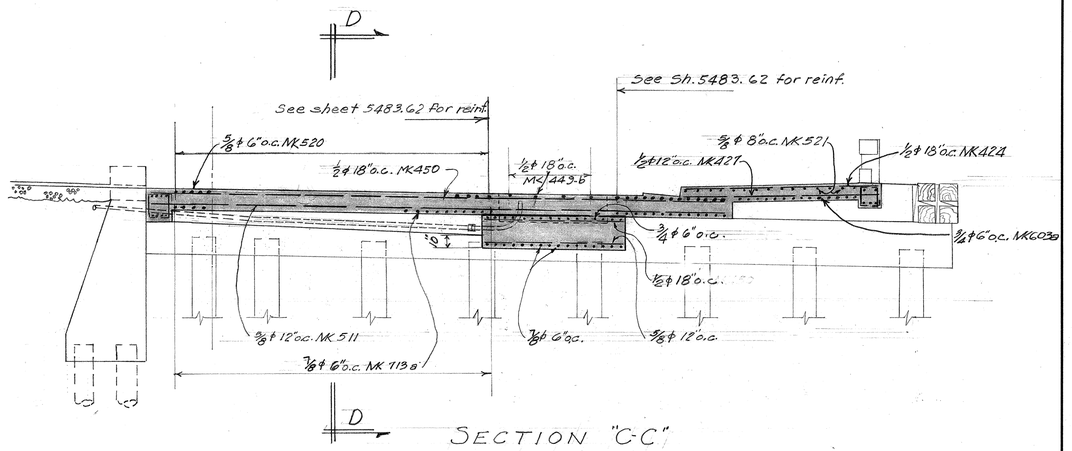
Scale ⅛"=1'-0"

TOP REINF. OF DECK AROUND RECESS ONLY

See sheet 5483.62 for other top reinf.

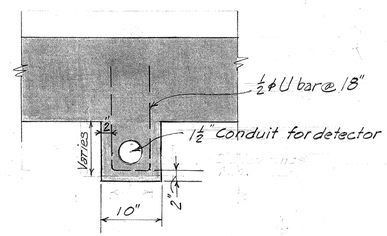
Scale: ⅛"=1'-0"

Note: Fill recess with concrete after installation of detector.



SECTION "C-C"

Scale ½"=1'-0"



SECTION "D-D"

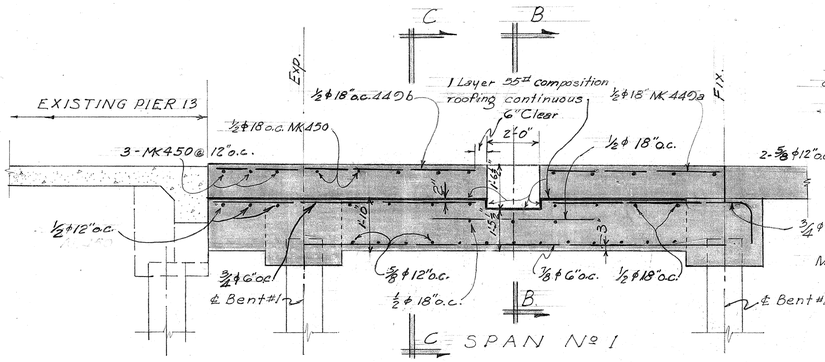
Scale 1"=1'-0"

Note! This sheet shows revision in Span #1 to accommodate magnetic detector.

ADDITIONAL ESTIMATED QUANTITIES

(Due to recess for detector)

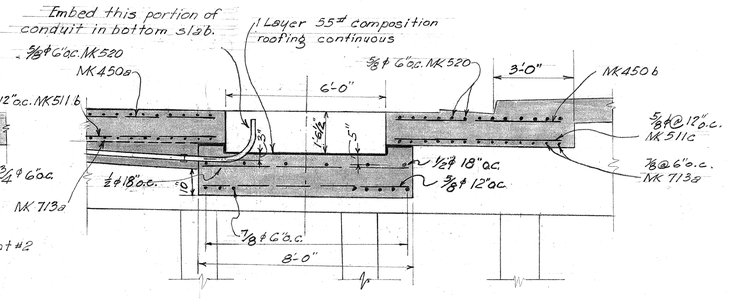
Class A-1 Concrete	8.6 cu. yd.
Reinf. Steel	625 lbs.



See sheet 5483.63 for cap reinf.

SECTION "A-A"

Scale ⅜"=1'-0"



SECTION "B-B"

Scale ⅜"=1'-0"

Note: The contractor shall notify Traffic Lights Division of the Territorial Highway Department and obtain their approval before pouring concrete.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY	
	DRAWN BY	
	TRACED BY	
	QUANTITIES BY	
NOTE BOOK No.	QUANTITIES CHECKED BY	
	CHECKED BY	

TERRITORIAL HIGHWAY DEPARTMENT

TERRITORY OF HAWAII

SLIP COVER Nº 3

STA. 130+00.37± TO STA. 133+57.0±

HONOLULU PEARL HARBOR ROAD

QUEEN STREET SECTION FU44(5)

NOV. 21, 1951

SHEET No. OF SHEETS

5483.62A

No. 1987 KAECO, N.Y. ®

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU 44(5) UNIT 2	1950	63	75

Rev. Nov 21, 1951. Cap revised to accommodate support for detector.

Rev. Nov. 21, 1951

PLAN · PILE AND CAP LOCATIONS · SCALE: 1/8" = 1'-0"

NOTE: Elevations shown on plan thus: (___) are pile cutoff elevations.
Sections "H-H" & "J-J" refer to typical sections thru each 3'-0" x 1'-1" x 2" deep Key. For details see sht. #5.
Section "K-K" refers to typ. Section thru each 2'-0" x 2" deep Key. For detail, see sht. #5.

Rev. Nov. 21, 1951

TYPICAL CAP REINFORCING

(FOR DETAILS OF CAPS #13 & #14 SEE SHT. #17)

SCALE: 1/4" = 1'-0"

BENTS 3 TO 5 INCL.
BENTS #8 TO #12 INCL.

BENTS 1 & 2 similar except as shown on Sheet 5483.62 A.

(Bents 6 & 7 similar except as noted in Sec. B-B & C-C Sheet 14.)

Rev. Nov. 21, 1951

SECTION "A-A"

SCALE: 3/8" = 1'-0"

SECTION C-C. 1/4" = 1'-0"

SECTION "B-B". SCALE: 1/4" = 1'-0"

NOTES

REFERENCE
For pile lengths & schedule, see Sheet # 2.

NOTE:
Re build portion of present deck to adjacent existing timber cap.
Provide 1.5 Dia x 1'-6" drift bolt at each stringer over 12"x12" pile caps

SYMBOLS

- Existing conc. piles
- New 18x18 conc. piles to be driven.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY	
	DRAWN BY	
	TRACED BY	
NOTE BOOK No.	QUANTITIES COMPUTED BY	
	QUANTITIES CHECKED BY	
	CHECKED BY	

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

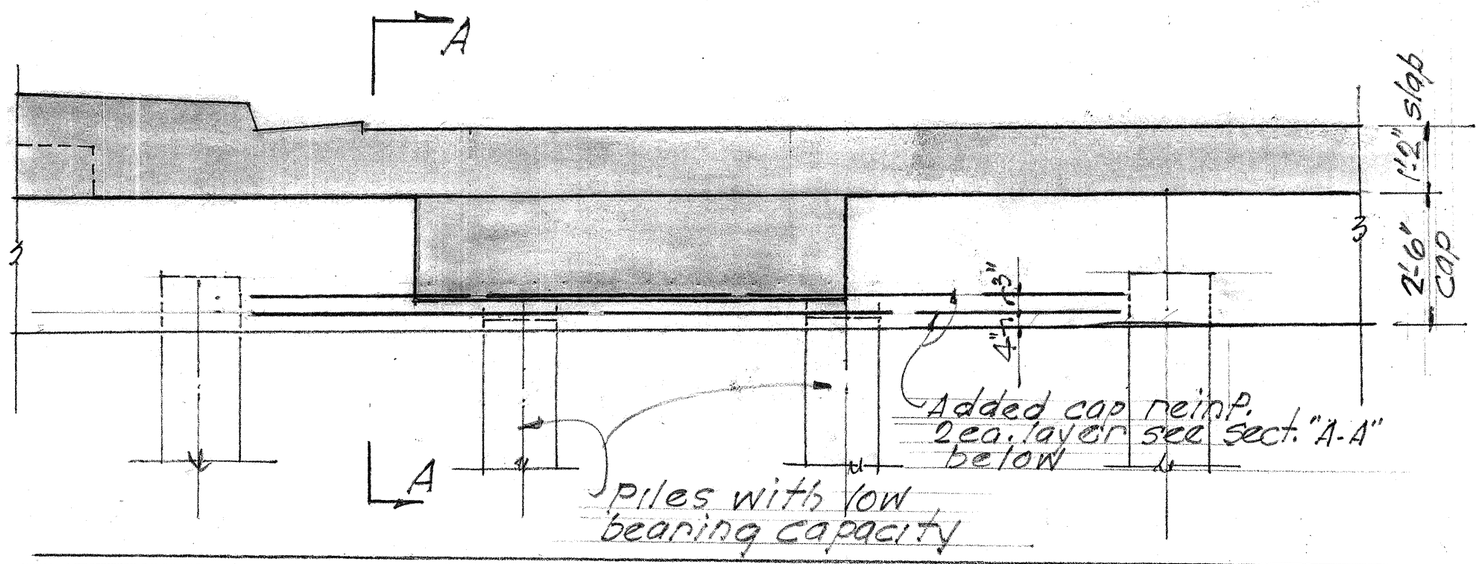
SLIP COVER No. 3

STA. 130 + 90.37 ± TO STA. 133 + 57.0 ±
HONOLULU-PEARL HARBOR ROAD
QUEEN STREET SECTION FU 44(5)

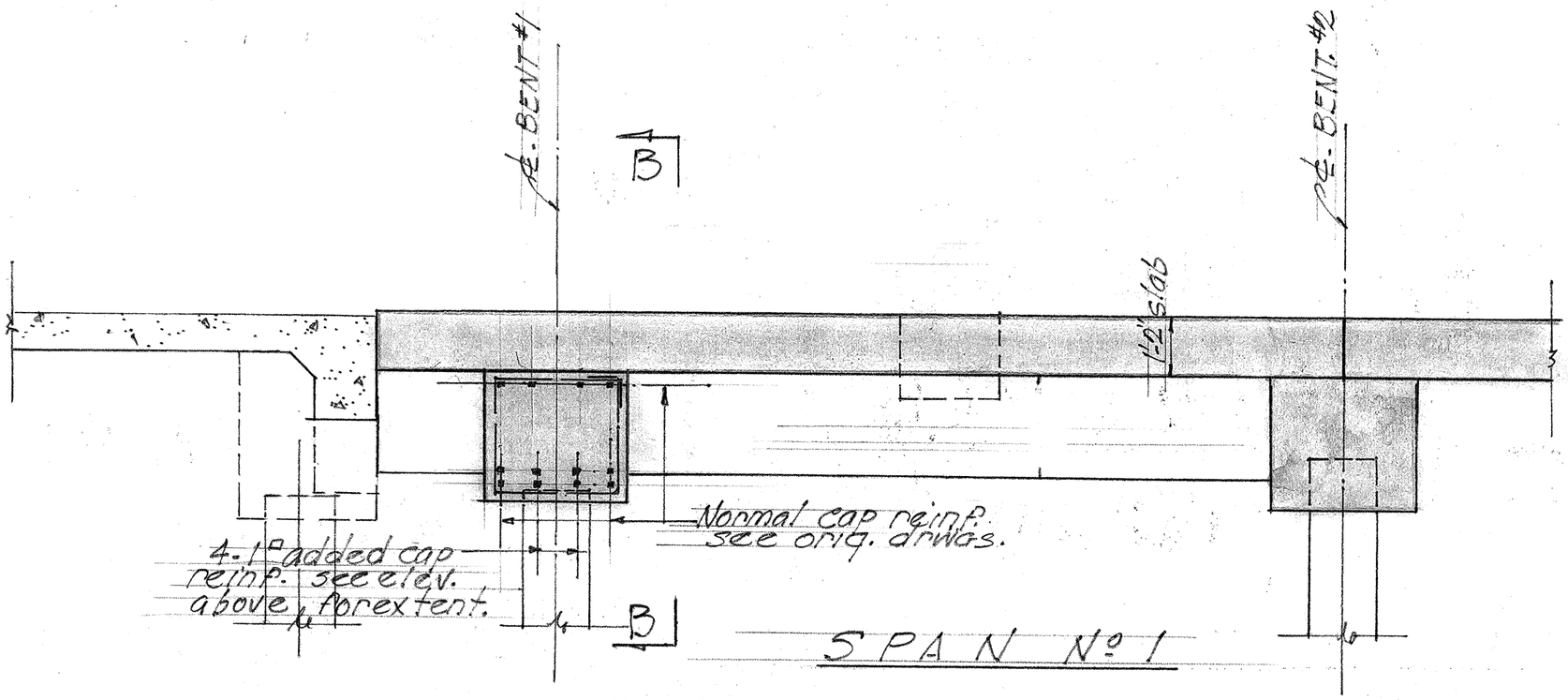
MARCH 1950

SHEET No. 15 OF 27 SHEETS

5483.63



ELEVATION "B-B" - BENT Nº 1 SHOWING ADDED CAP REINF.



SPAN Nº 1

SECTION "A-A"

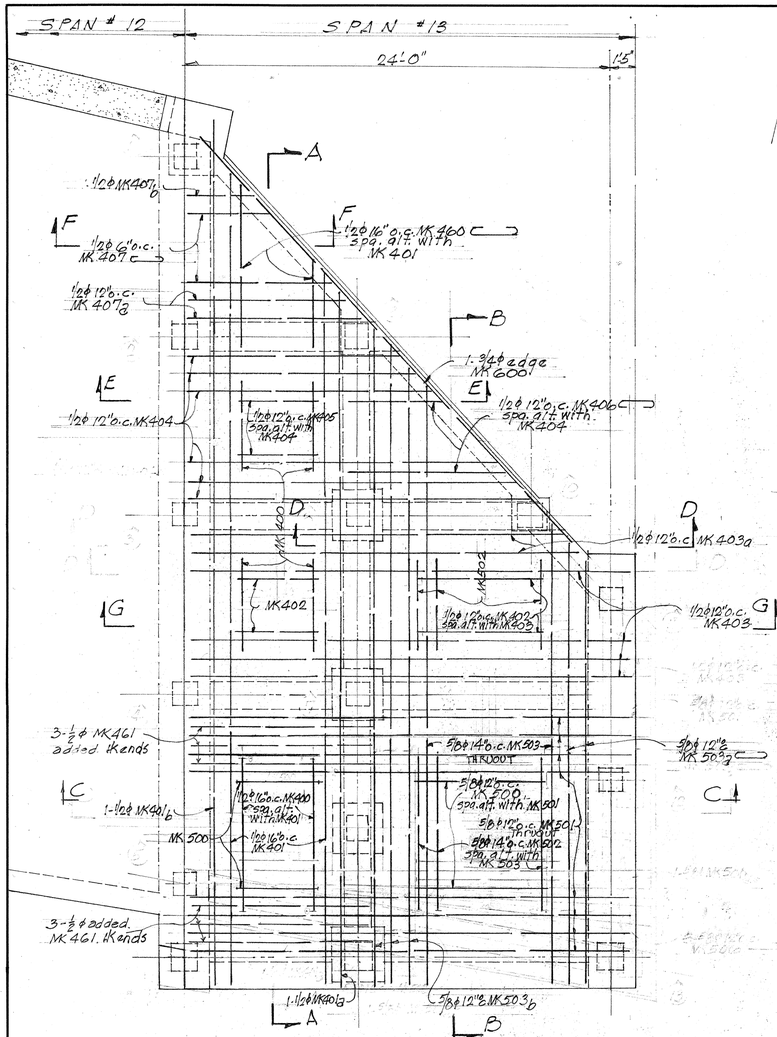
ADDED CAP REINF. - BENT #1. SLIP COVER #3

SCALE 3/8" = 1'-0"

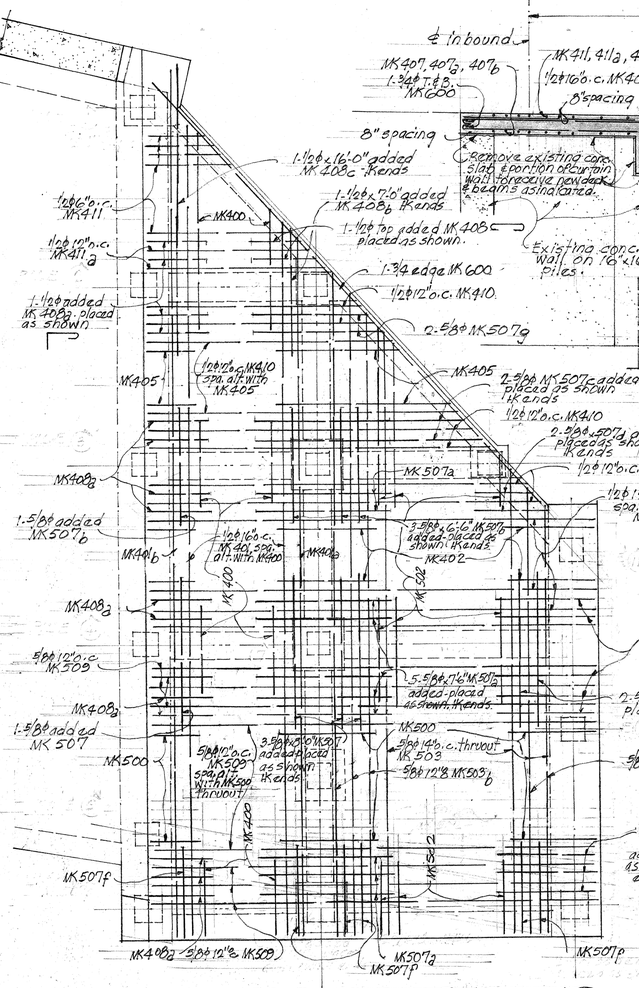
HONOLULU PEARL HARBOR ROAD · QUEEN STREET SECTION 00 FU 44(5)

5483.63A

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU-4405 UNIT 2	1950	64	75

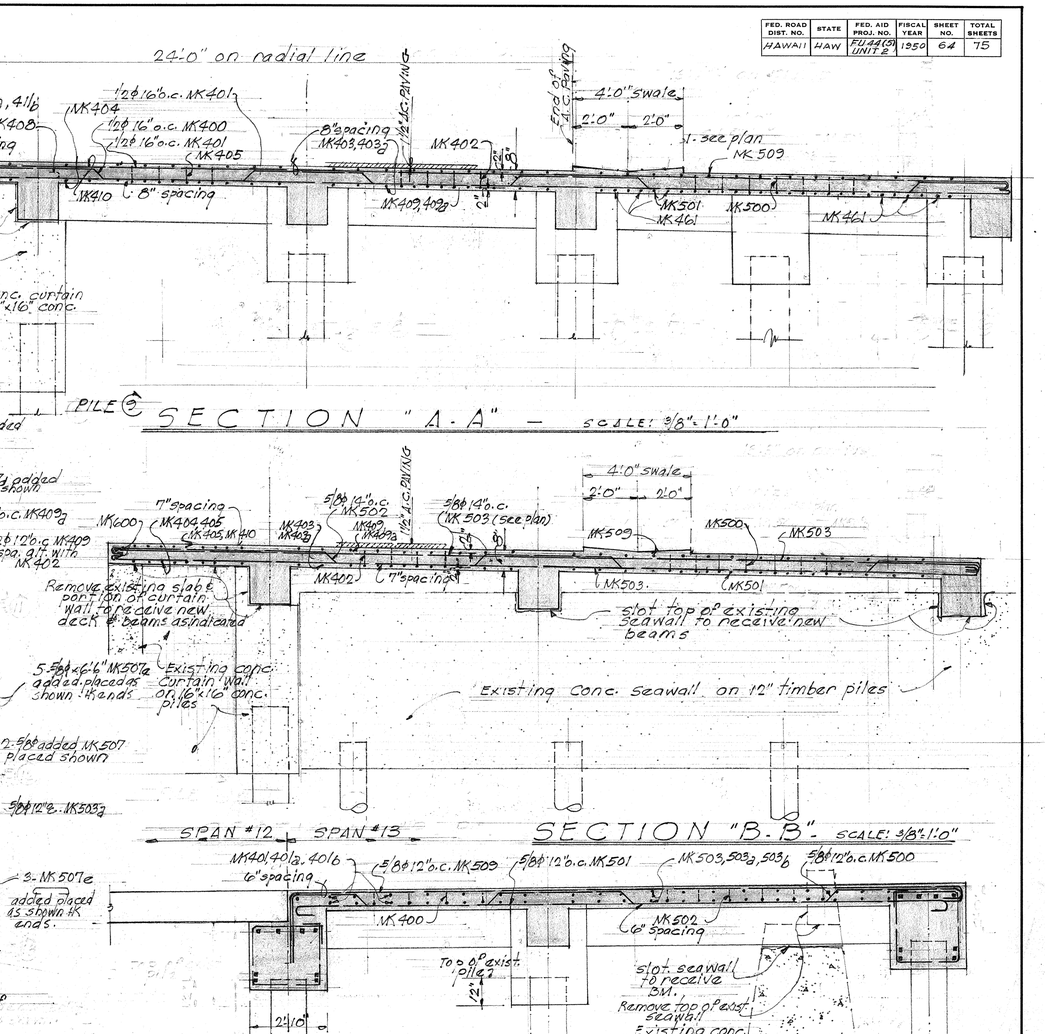


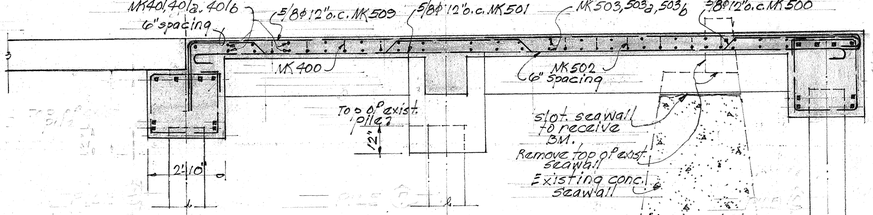
BOTTOM REINFORCING



TOP REINFORCING

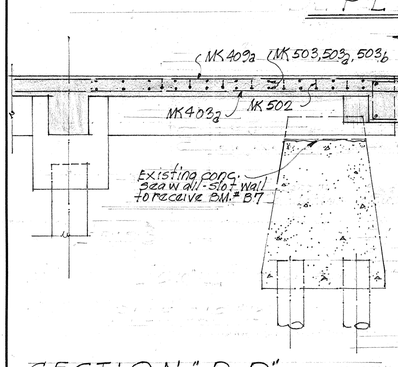
PLAN - SLAB REINFORCING - SPAN Nº 13 - SCALE: 1/4" = 1'-0"



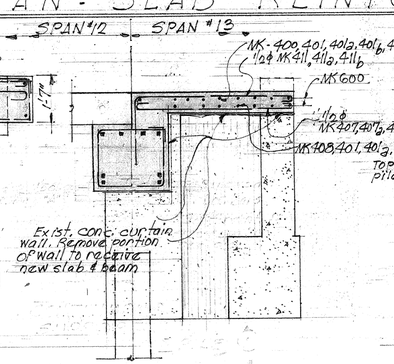


SECTION "B-B" - SCALE: 3/8" = 1'-0"

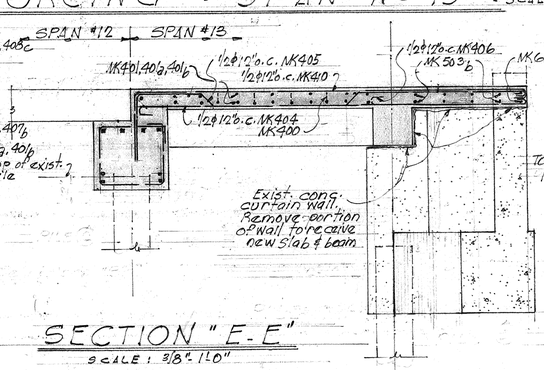
SECTION "C-C" - SCALE: 3/8" = 1'-0"



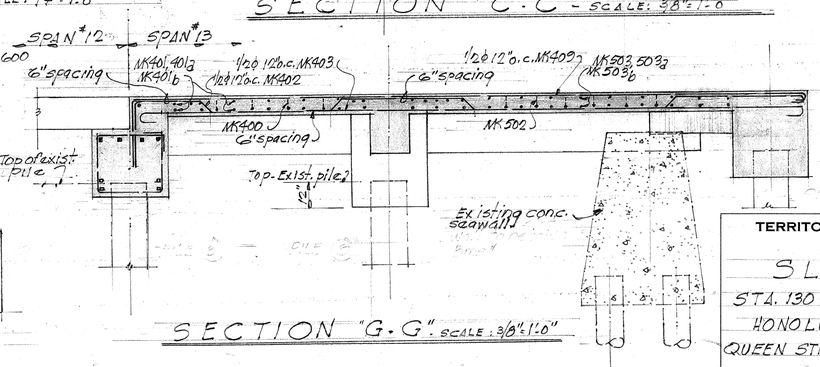
SECTION "D-D"
SCALE: 3/8" = 1'-0"



SECTION "F-F"
SCALE: 3/8" = 1'-0"



SECTION "E-E"
SCALE: 3/8" = 1'-0"



SECTION "G-G" SCALE: 3/8" = 1'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY	
	DRAWN BY	
	TRACED BY	
	CHECKED BY	
NOTE BOOK No.	QUANTITIES CHECKED BY	
	CHECKED BY	

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER Nº 3

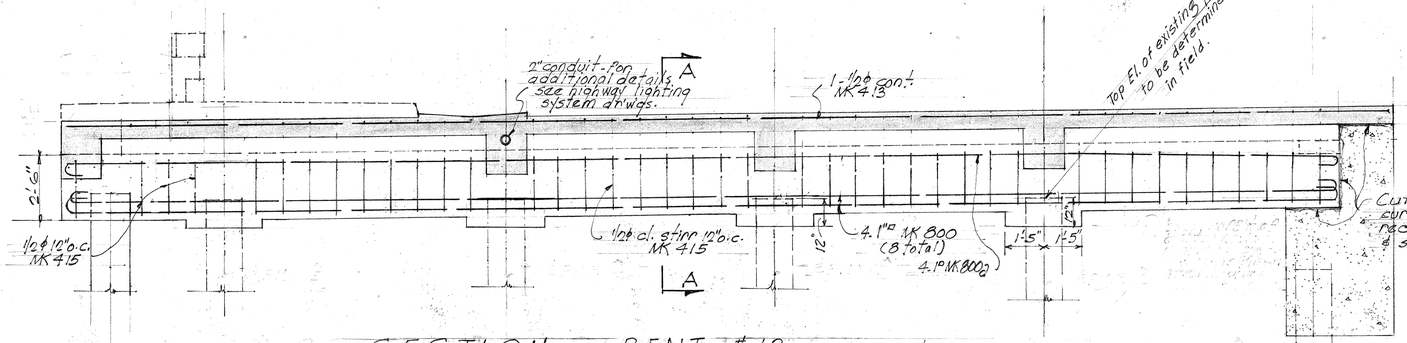
STA. 130+90.37± TO STA. 133+57.01±
HONOLULU PEARL HARBOR ROAD
QUEEN STREET SECTION FU44(5)
MARCH 1950

SHEET No. 16 OF 27 SHEETS

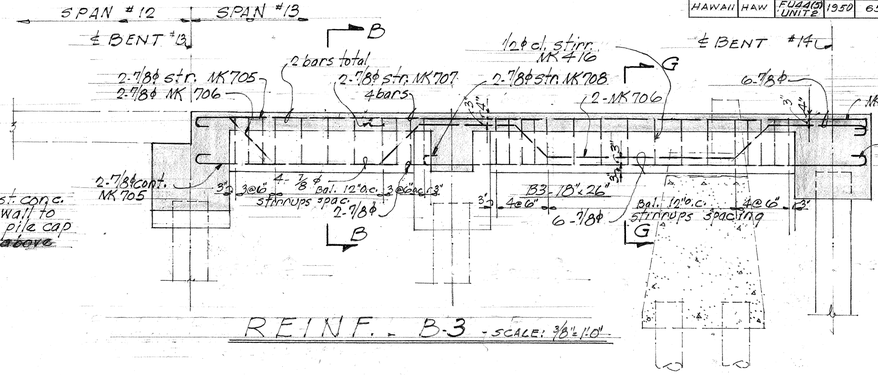
5483.64

16" No. 1987 K&E CO., N.Y. USA

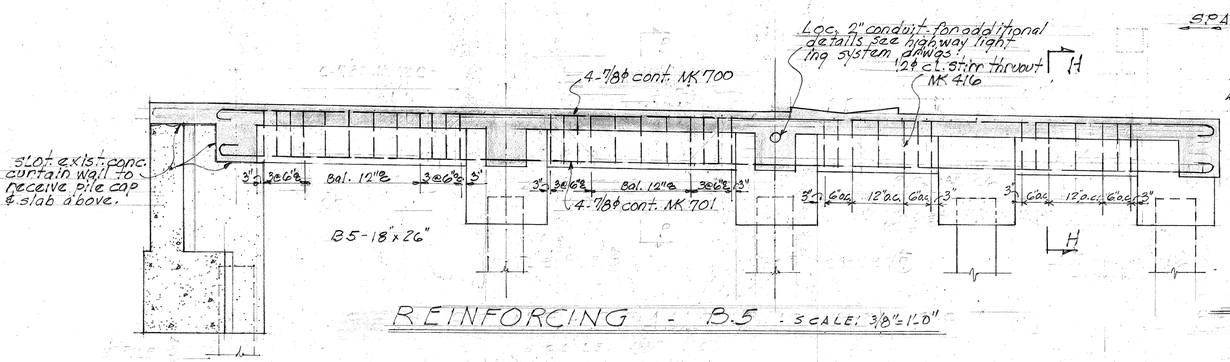
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU44(5) UNITE	1950	65	75



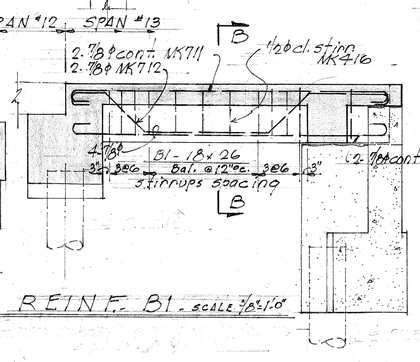
SECTION AT BENT #13. SCALE: 3/8"=1'-0"



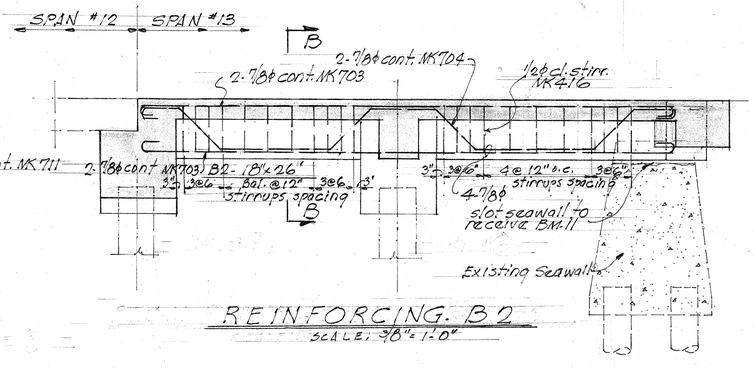
REINF. - B3 - SCALE: 3/8"=1'-0"



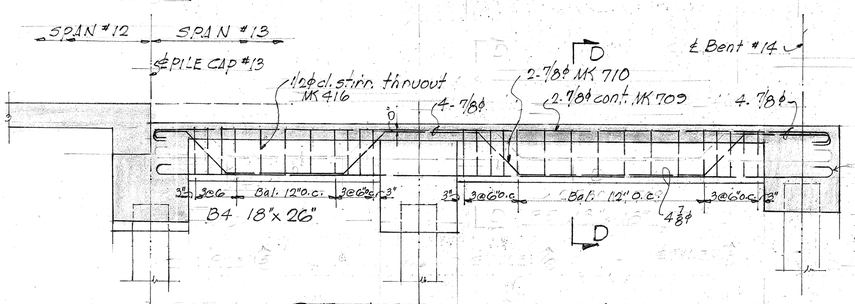
REINFORCING - B.5 - SCALE: 3/8"=1'-0"



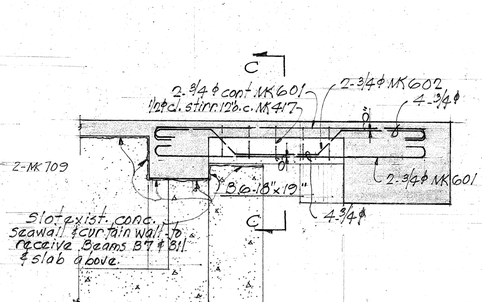
REINF. B1 - SCALE: 3/8"=1'-0"



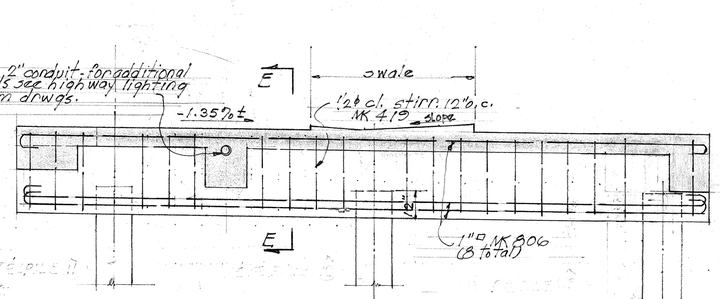
REINFORCING B2
SCALE: 3/8"=1'-0"



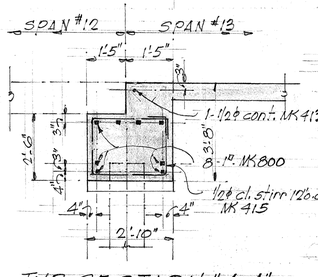
REINFORCING - B4
SCALE: 3/8"=1'-0"



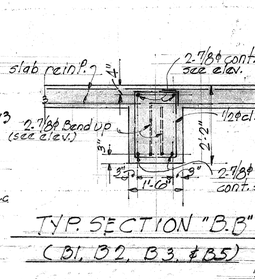
REINF. B6 - SCALE: 3/8"=1'-0"



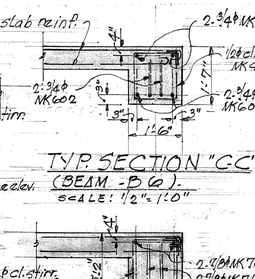
SECTION AT BENT #14. SCALE: 3/8"=1'-0"



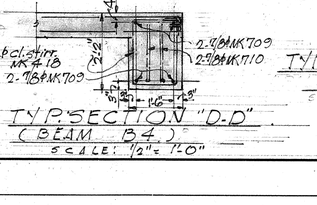
TYP. SECTION "A-A" (BENT #13)
SCALE: 3/8"=1'-0"



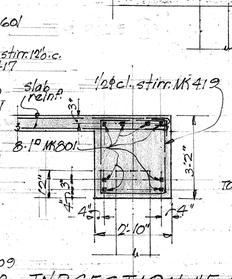
TYP. SECTION "B-B" (B1, B2, B3, & B5)



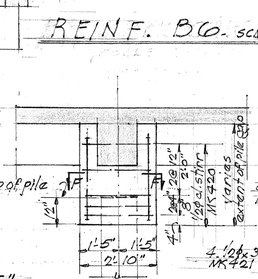
TYP. SECTION "C-C" (BEAM - B6)
SCALE: 1/2"=1'-0"



TYP. SECTION "D-D" (BEAM B4)
SCALE: 1/2"=1'-0"



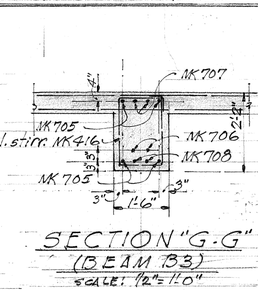
TYP. SECTION "E-E" (BENT #14)



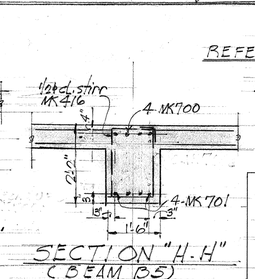
ELEVATION

SECTION F-F

TYP. CAP DETAILS FOR PILES (B5)
SCALE: 3/8"=1'-0"



SECTION "G-G" (BEAM 133)
SCALE: 1/2"=1'-0"



SECTION "H-H" (BEAM B5)
SCALE: 1/2"=1'-0"

NOTES

REFERENCE:
For Beam locations see sht. 14. Span # 13

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY: A. BARTELL	6-49
	DRAWN BY: F. CHUNG	6-50
	TRACED BY: F. CHUNG	5-50
NOTE BOOK No.	QUANTITIES CHECKED BY:	6-50
	CHECKED BY: JOHN MOTTE	6-50

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER No 3

STA. 130+30.37± TO STA. 133+57.0±
HONOLULU PEARL HARBOR ROAD
QUEEN STREET SECTION FU44(5)
MARCH 1950

SHEET No. 17 OF 27 SHEETS

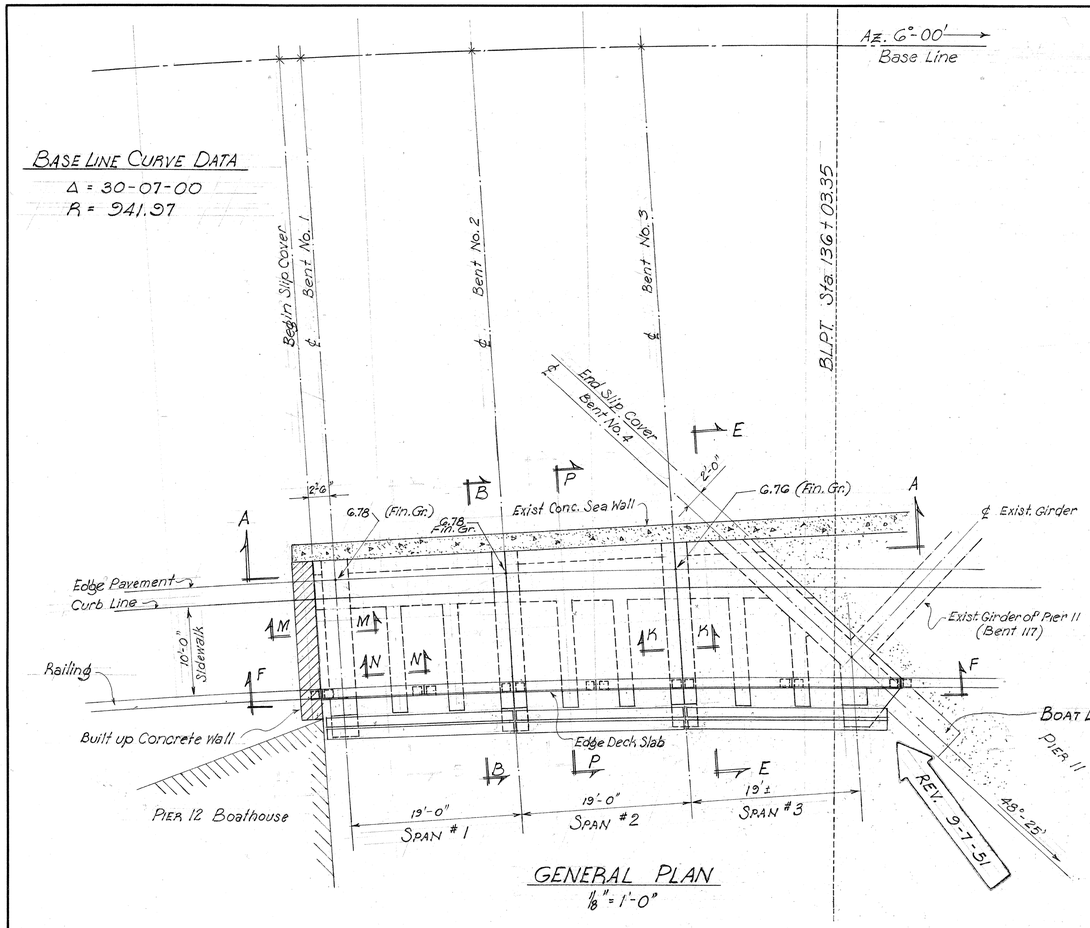
5483.65

E. No. 1957 A.E.C.CO., N.Y.

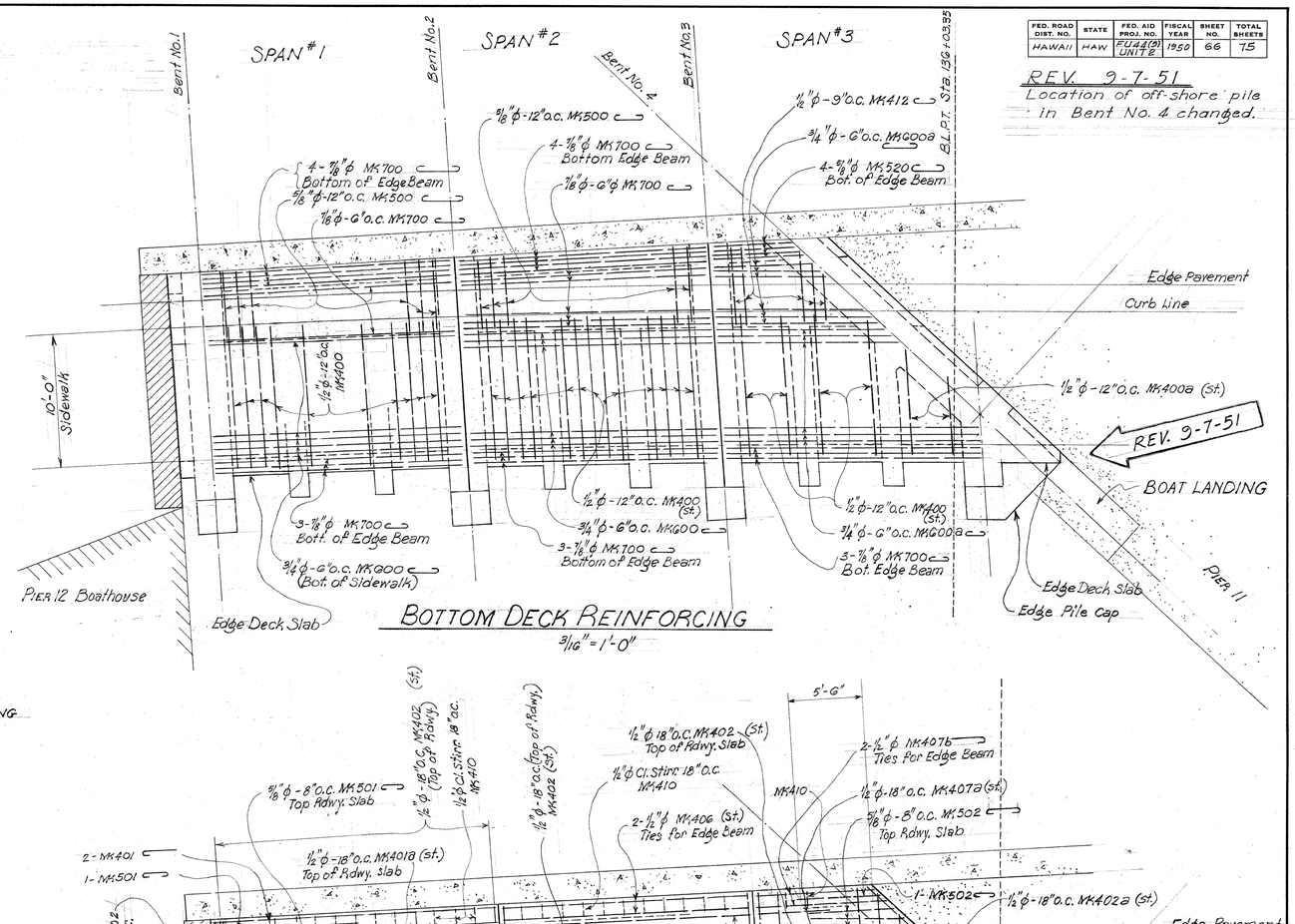
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU-44(5) UNIT E	1950	66	75

REV 9-7-51
Location of off-shore pile in Bent No. 4 changed.

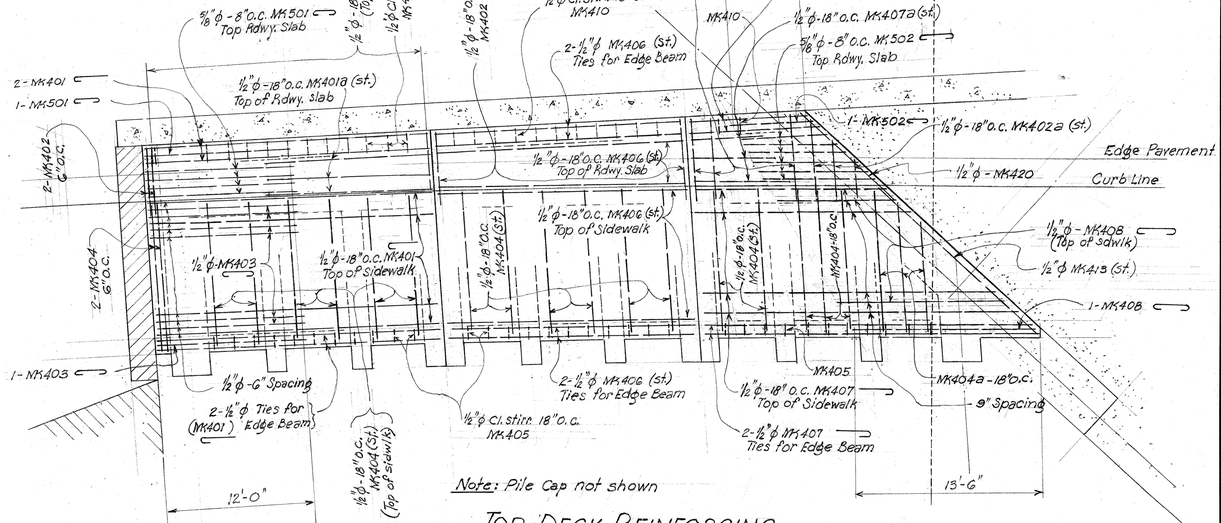
BASE LINE CURVE DATA
Δ = 30-07-00
R = 941.97



GENERAL PLAN
1/8" = 1'-0"

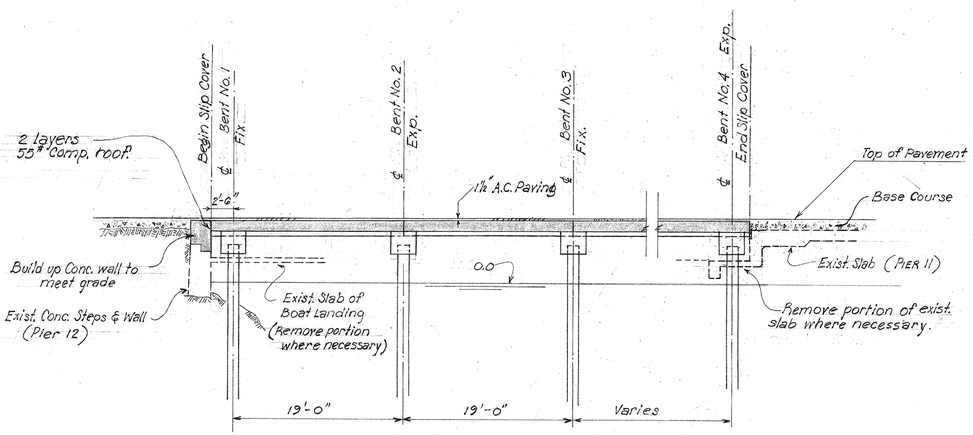


BOTTOM DECK REINFORCING
3/16" = 1'-0"



Note: Pile Cap not shown

TOP DECK REINFORCING
3/16" = 1'-0"



LONGITUDINAL SECTION A-A
⅛" = 1'-0"

NOTE: For Fender Details, see Sheet No. 3

Note! See Sheet #19 for Sections B-B, E-E & F-F
See Sheet #20 for Sections K-K, M-M, N-N & P-P.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
SLIP COVER NO. 4
Sta. 135+40± To Sta. 136+15 ±
HONOLULU-PEARL HARBOR ROAD
QUEEN ST. SECTION FU44 (5)
February 1950

SHEET No. 18 OF 27 SHEETS

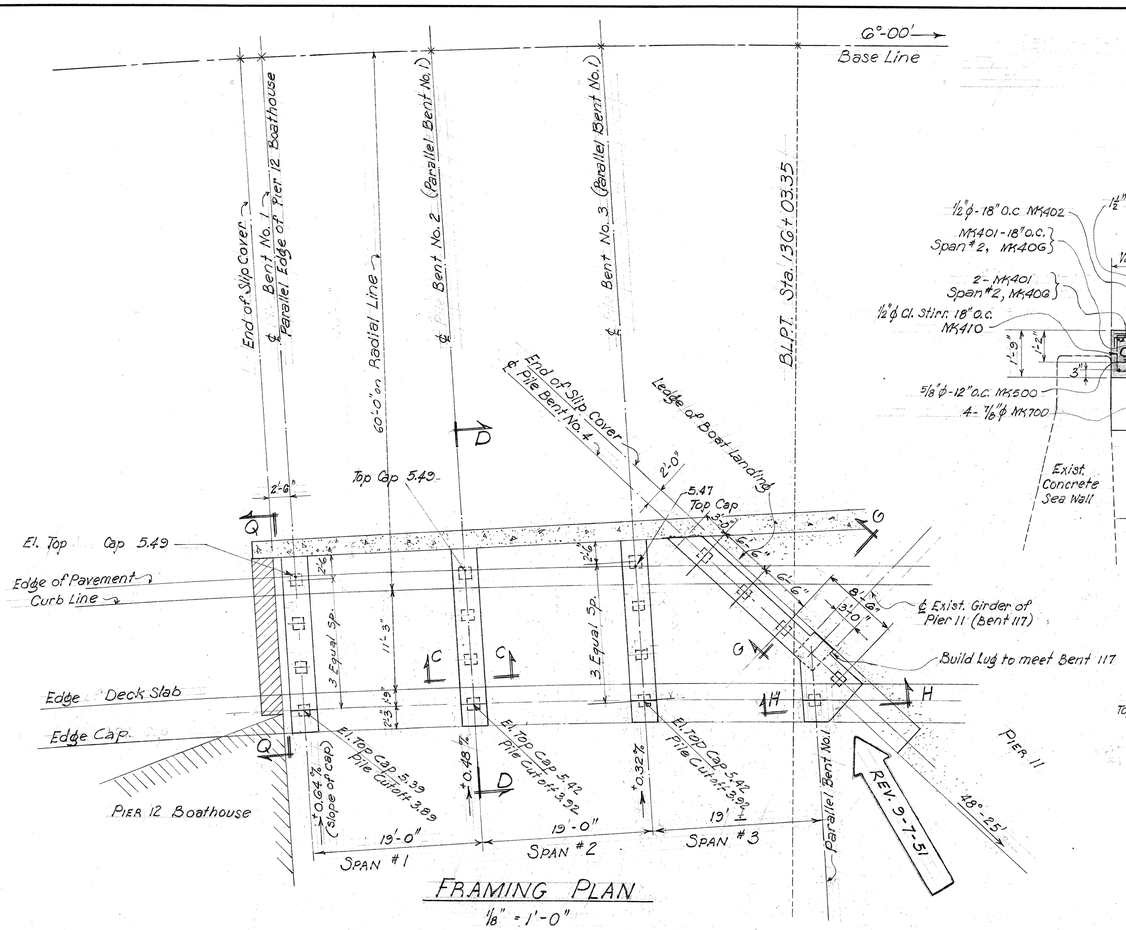
5483.66

ORIGINAL PLAN		DATE
	SURVEY PLOTTED BY	
	DESIGNED BY	
	DRAWN BY	
	TRACED BY	
NOTE BOOK	QUANTITIES BY	
	QUANTITIES CHECKED BY	
No.	CHECKED BY	

NEW No. 1007 KAESO., K.Y.

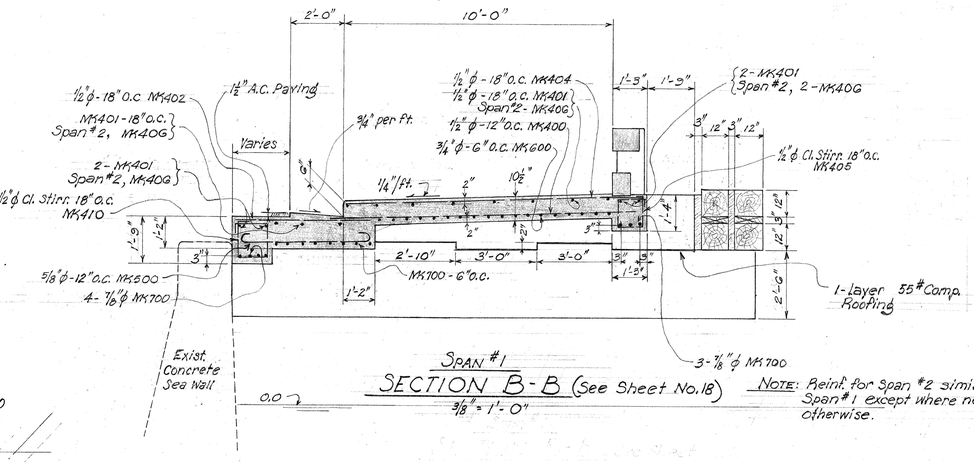
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU44(5) UNIT 2	1950	67	75

REV. 9-7-51
See Revision Note on Sheet 18.



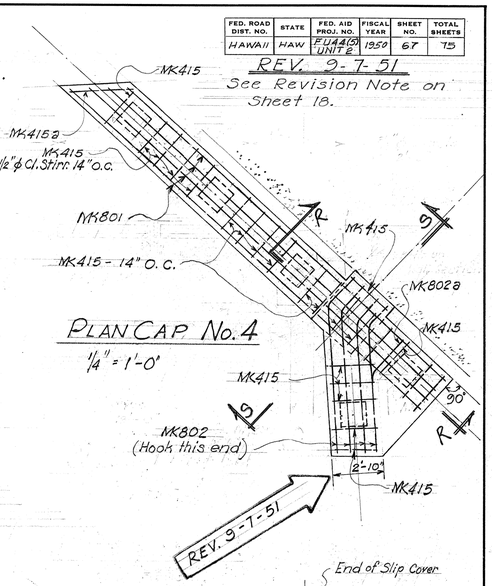
FRAMING PLAN
1/8" = 1'-0"

NOTE: For railing & fender details, see Sheet No. 3

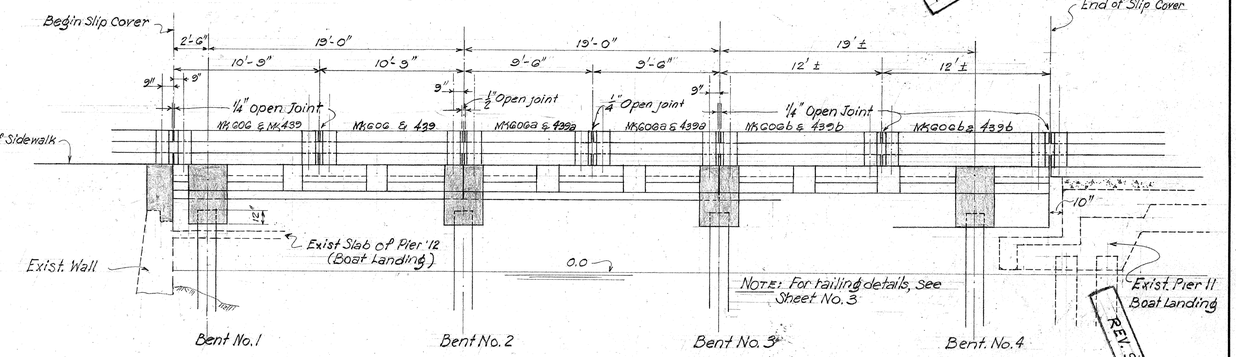


SPAN #1
SECTION B-B (See Sheet No. 18)
3/8" = 1'-0"

NOTE: Reinf. for Span #2 similar to Span #1 except where noted otherwise.

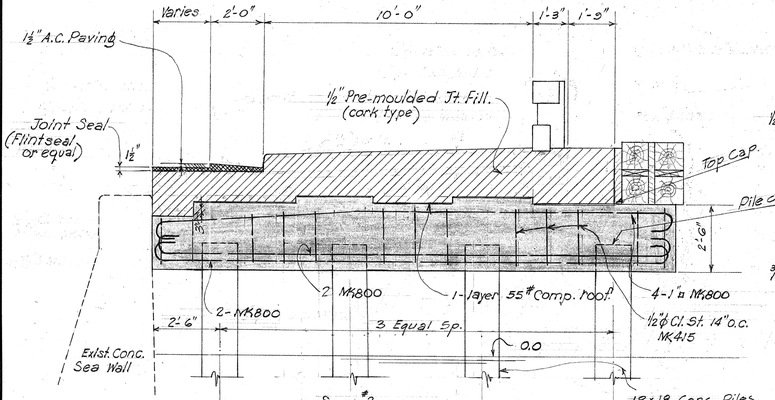


PLAN CAP No. 4
1/4" = 1'-0"

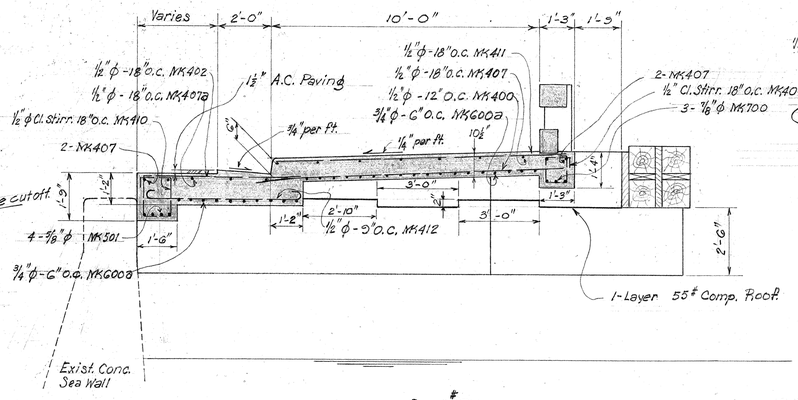


NOTE: For railing details, see Sheet No. 3

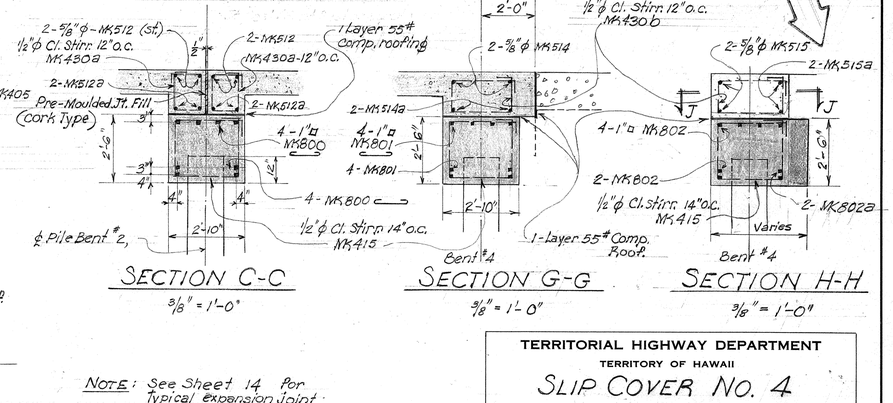
RAILING LAYOUT ELEVATION F-F (See Sheet No. 18)
3/16" = 1'-0"



Span #2
SECTION D-D
3/8" = 1'-0"



Span #3
SECTION E-E (See Sheet No. 18)
3/8" = 1'-0"



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

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

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

NOTE: See Sheet 14 for Typical expansion Joint at roadway.

See Sheet 20 for Sections J-J & Q-Q R-R & S-S

Rev: 9-7-51

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER NO. 4

Sta. 135+40 ± To Sta. 136+15 ±

HONOLULU - PEARL HARBOR ROAD
QUEEN ST. SECTION FU44(5)

February 1950

SHEET No. 19 OF 27 SHEETS

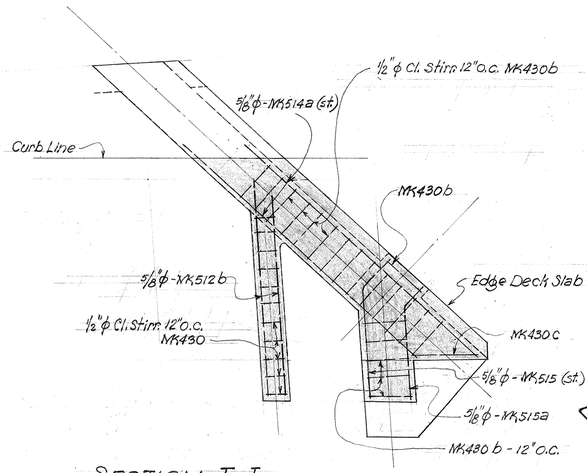
ORIGINAL PLAN	NOTE BOOK No.	SURVEY PLOTTED BY	DATE 2/50
		DESIGNED BY M. Barnes	" " 2/50
		DRAWN BY A. Lee	" " 4/50
		TRACED BY E. Chung	" " 6/50
		QUANTITIES BY A. Yee	" " 6/50
		QUANTITIES CHECKED BY A. Yee	" " 6/50
		CHECKED BY J. K. Masaru	" " 6/50

5483.67

E. No. 1307 H.B.C.O., N.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU(4)(5) UNITS	1950	68	75

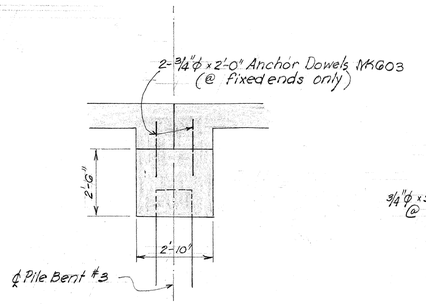
REV. 9-7-51
See Revision Note on Sheet 18.



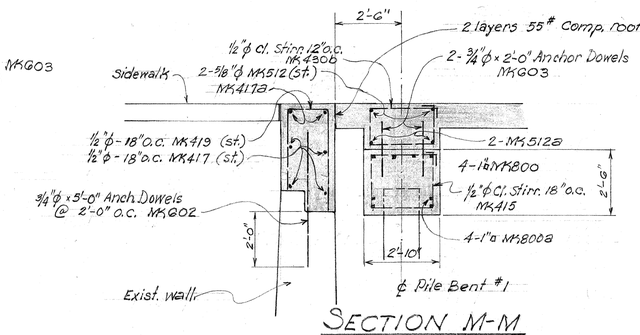
REV. 9-7-51

SECTION J-J
¼" = 1'-0"

NOTE: See Section H-H on Sheet 19.

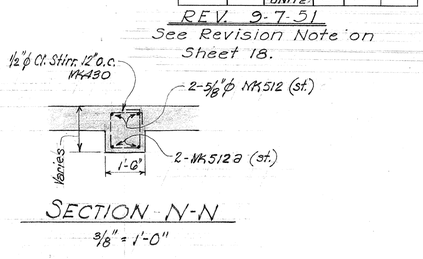


SECTION K-K
⅜" = 1'-0"

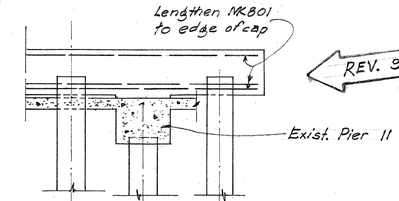


SECTION M-M
⅜" = 1'-0"

NOTE: Anchor dowels are to be grouted into 2½" dia holes 2'-0" deep.

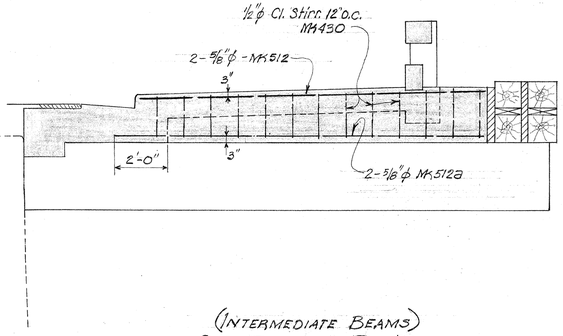


SECTION N-N
⅜" = 1'-0"

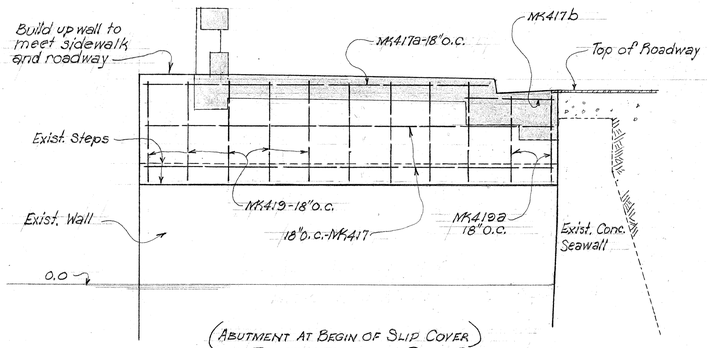


REV. 9-7-51

SECTION R-R (See Sheet 19)
¼" = 1'-0"

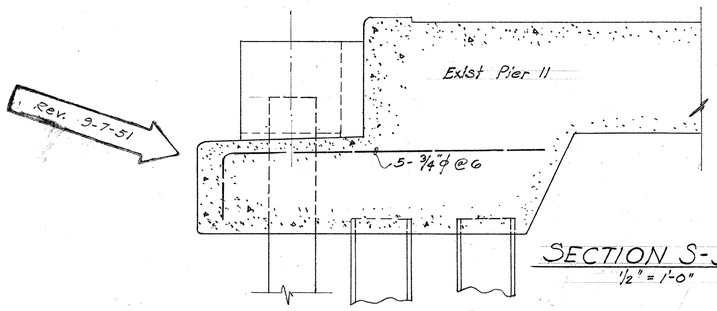


(INTERMEDIATE BEAMS)
SECTION P-P
⅜" = 1'-0"



(ABUTMENT AT BEGIN. OF SLIP COVER)
ELEVATION Q-Q
⅜" = 1'-0"

NOTE: For location of El. Q-Q, see Sheet 19.



SECTION S-S (See Sheet 19)
½" = 1'-0"

NOTE: For location of Sections K-K, M-M, N-N, & P-P, see Sheet 18.

ORIGINAL PLAN	NOTE BOOK No.		DATE
		SURVEY PLOTTED BY	
		DESIGNED BY	E.L.O.
		DRAWN BY	S.B.C.
		TRACED BY	
		QUANTITIES BY	
		QUANTITIES CHECKED BY	
		CHECKED BY	

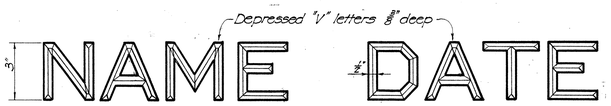
TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
SLIP COVER No. 4
Sta. 135+40± To Sta. 136+15±
HONOLULU - PEARL HARBOR ROAD
QUEEN ST. SECTION FU44(5)
February 1950

SHEET No. 20 OF 27 SHEETS

5483.68

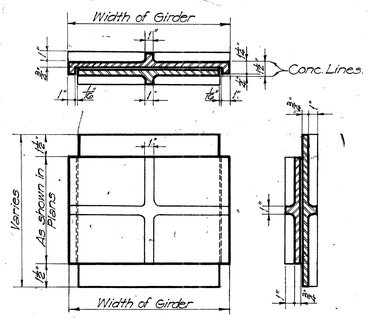
LEITZ No. 1987 K & E CO., N. Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FH 22(8) Unit 2	1950	68A	75



DETAIL OF LETTERS AND FIGURES AT BOTH APPROACHES

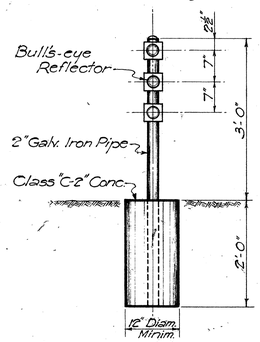
NOTE: Name of stream to be placed in left end post panels and date in right post panels on entering bridge using modified block letters 3" in height.



EXPANSION PLATES

Scale: 1½"=1'-0"

NOTE! Plates to be made of Bronze conforming to A.S.T.M., B22, Class C. Contact areas to have medium planed finish with finishing strokes parallel to longitudinal direction of bridge.



ST'D. REFLECTOR POST

Scale: ¾"=1'-0"

GENERAL NOTES

CONCRETE: Class of concrete to be used in different parts of the structure are as noted on the plans.

REINFORCING STEEL: Intermediate grade. A.S.T.M. A15, open hearth, and A.S.T.M. A 305.

All dimensions relating to reinforcing are to centers of bars unless otherwise noted.

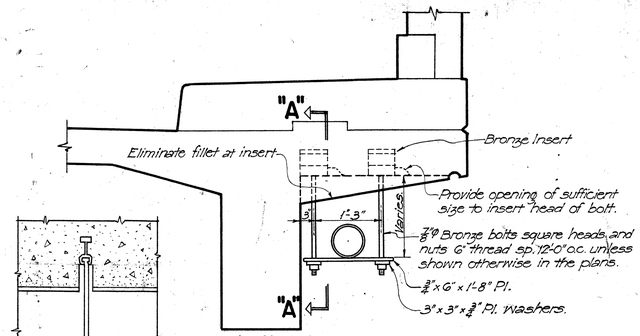
Splicing of reinforcing other than main deck slab, girder and frame bars shall be done by lapping 40 diameters. Splices are to be staggered. Splices in main girder and frame bars are permitted only in bars exceeding 60'-0" in length at points to be indicated by the Engineer. These splices to be electrically arc welded according to detail and specifications. No allowance will be made in the quantities for extra weight of steel required for splices not shown on the plans.

Minimum spacing between parallel bars shall be 2½ times the diameter of round or 3 times the side dimension of square bars, but in no case shall the clear distance between the bars be less than 1½ times the maximum size of the coarse aggregate.

Minimum covering, measured from the surface of the concrete to the face of any reinforcing bar, shall be not less than 2 inches except in slabs where the minimum covering shall be 1 inch. In the footings of abutments and retaining walls and in piers the minimum covering shall be 3 inches. In work exposed to the action of sea water the minimum covering shall be 4 inches except in precast concrete piles where a minimum of 3" may be used.

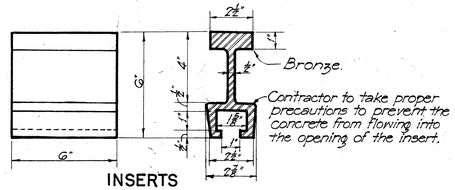
WATERPROOFING: Apply waterproofing as specified in section 34, Pamphlet "N" of the Specification, and as shown in the plans. Waterproofing is incidental to the concrete and will not be paid for separately.

CONSTRUCTION JOINTS: All construction joints to have surface roughened and 1:2 cement grout applied immediately before the second pour. Construction joints to be located at places indicated in the plans.



SECTION "A-A"

Scale: ¾"=1'-0"

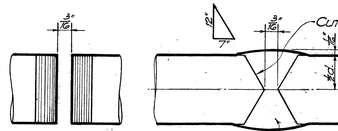


INSERTS

Scale: ¾"=1'-0".

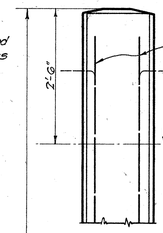
DETAIL OF PIPE HANGERS AND INSERTS

NOTE! Inserts, bolts, plates, nuts & washers to be Bronze conforming to A.S.T.M. Designation B 22 and shall be Class "D" grade.

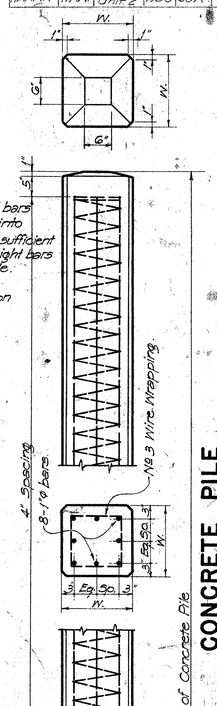


REINFORCING BAR SPLICE

Scale: Full Size

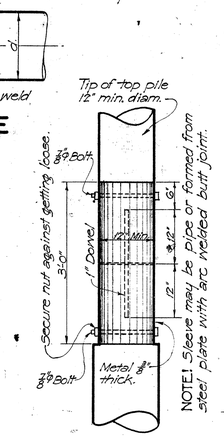


PILE CUTOFF



CONCRETE PILE

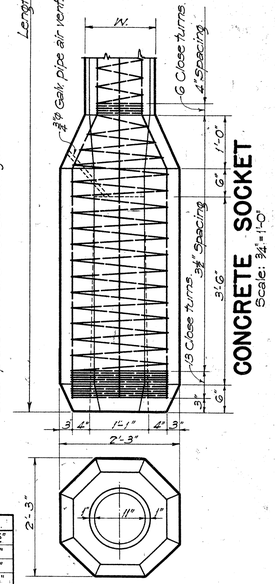
DETAIL OF



NOTE! Sleeve may be pipe or formed from steel plate with arc welded butt joint.

TIMBER PILE SPLICE

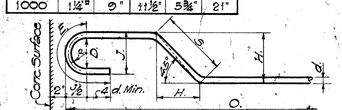
Scale: ¾"=1'-0"



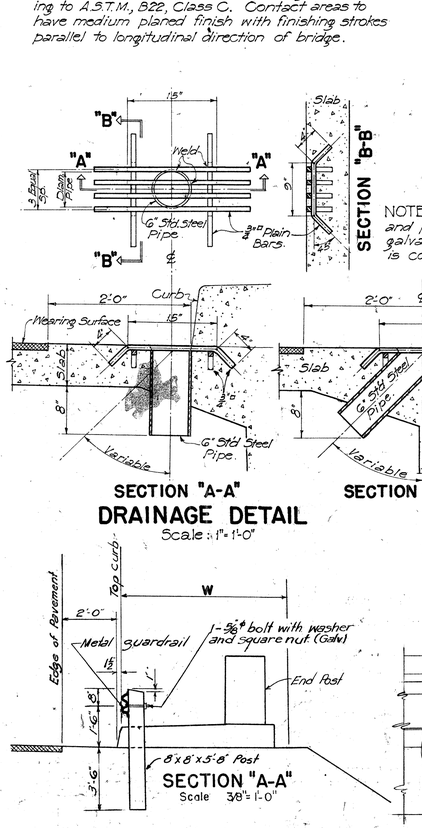
CONCRETE SOCKET

Scale: ¾"=1'-0"

MARK	SIZE	D.	J.	½	E.
300	⅜"ø	2"	2⅜"	1⅜	5½"
400	½"ø	2½"	3½"	1¾"	7"
500	⅝"ø	3⅛"	4⅜"	2⅜"	9"
600	¾"ø	3⅝"	7"	3½"	13"
700	⅞"ø	6⅛"	8¼"	4⅛"	15"
800	1"ø	7"	9"	4½"	17"
800	1"□	7"	9"	4½"	17"
900	1⅛"□	8"	10½"	5⅜"	19"
1000	1¼"□	9"	11⅛"	5⅝"	21"



HOOK AND BEND DETAIL



NOTE! Assemblage of grillage and pipe shall be hot-dip galvanized after all welding is completed.

SECTION "A-A" DRAINAGE DETAIL

Scale: 1"=1'-0"

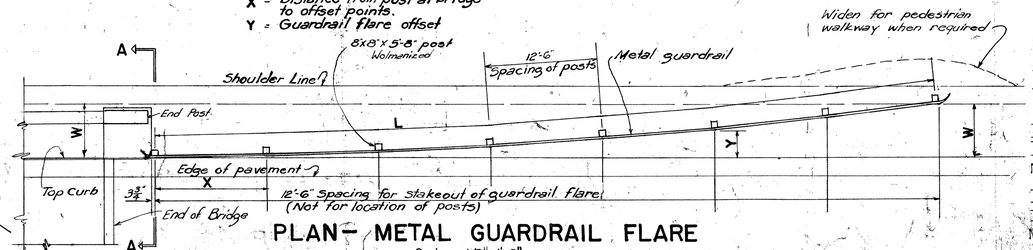
GUARDRAIL OFFSET

X	Y W=3'	W=4'	W=5'	W=6'	W=7'	W=8'
12.5	0.19'	0.16	0.14	0.12	0.09	0.08
25.0	0.75	0.64	0.55	0.49	0.35	0.32
37.5	1.69	1.44	1.25	1.10	0.78	0.72
50.0	3.00	2.56	2.22	1.96	1.38	1.28
62.5		4.00	3.47	3.06	2.16	2.00
75.0			5.00	4.41	3.11	2.88
87.5				6.00	4.23	3.92
100.0					5.53	5.12
112.5					7.00	6.48
125.0						8.00

W = Guardrail flare
X = Distance from post at bridge to offset points.
Y = Guardrail flare offset

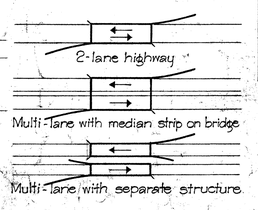
SECTION "A-A"

Scale 3/8"=1'-0"



PLAN — METAL GUARDRAIL FLARE

Scale 1/8"=1'-0"



TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

STANDARD BRIDGE DETAILS

Scales as Noted

APPROVED BY: _____
TERRITORIAL HIGHWAY ENGINEER.

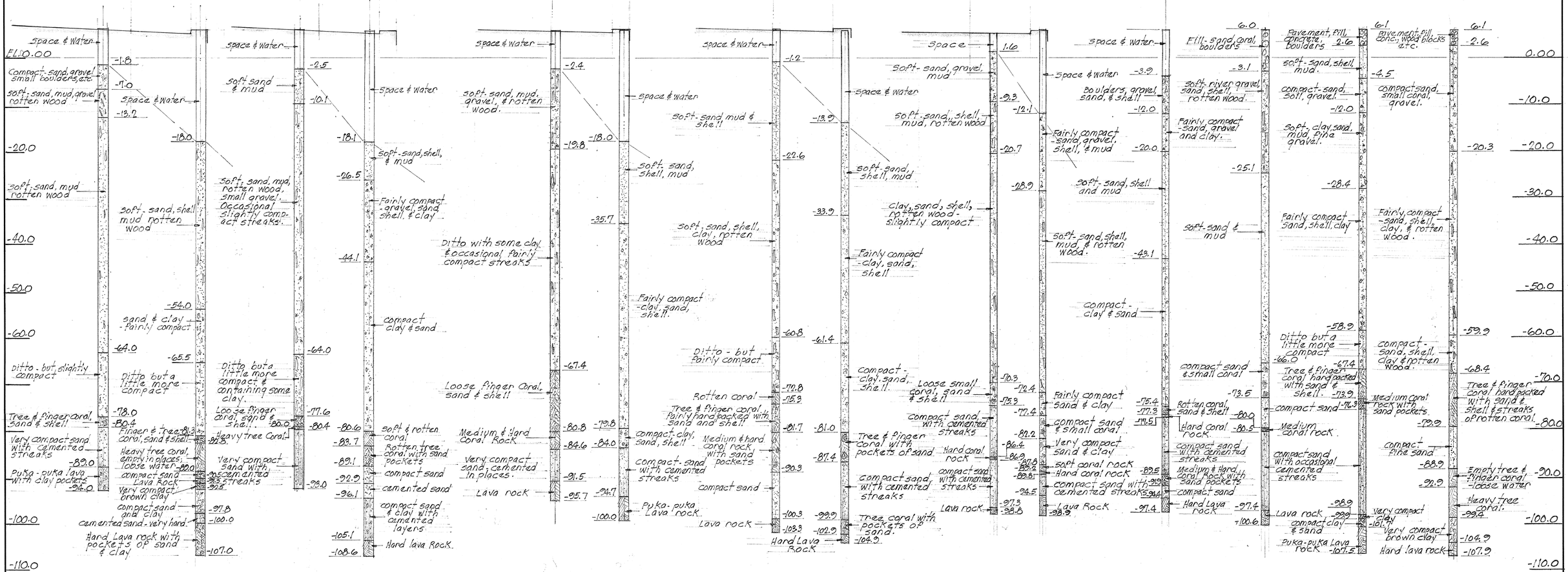
SHEET No. 20A OF 27 SHEETS

ORIGINAL PLAN	DATE
SURVEY PLOTTED BY	
DESIGNED BY H. K. Barnes	Mar. 1950
TRACED BY K. Kanemura	" " "
QUANTITIES COMPUTED BY	" " "
NOTE BOOK No.	QUANTITIES CHECKED BY
	CHECKED BY

5 4 8 3 . 6 S A

WEIGHT TRACING CLOTH
E CO., N. Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU44(5) UNITS	1950	69	75



NOTES

BORINGS

Borings #24 to #37 inclusive were supplied by Nat Whiton with his report dated April 1950.

For location of borings see Sht. #1.

NOTES ON BORING DATA

These boring data are for design purposes only and are included in the plans only as a convenience to the contractor. The Territory does not assume any responsibility, either expressed or implied, that the conditions indicated are representative of those actually existing throughout the job or any part of it, nor that unlooked for developments may not occur. The contractor's attention is directed to Article 2.3 of Pamphlet "D" of the specifications. He must satisfy himself through his own investigations as to the conditions to be encountered.

HORIZ. = 1" = 20'-0"
SCALE: VERT. = 1" = 10'-0"

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER No. 1
BORING DATA

HONOLULU PEARL HARBOR ROAD
QUEEN STREET SECTION FU44(5)

MAY 1950

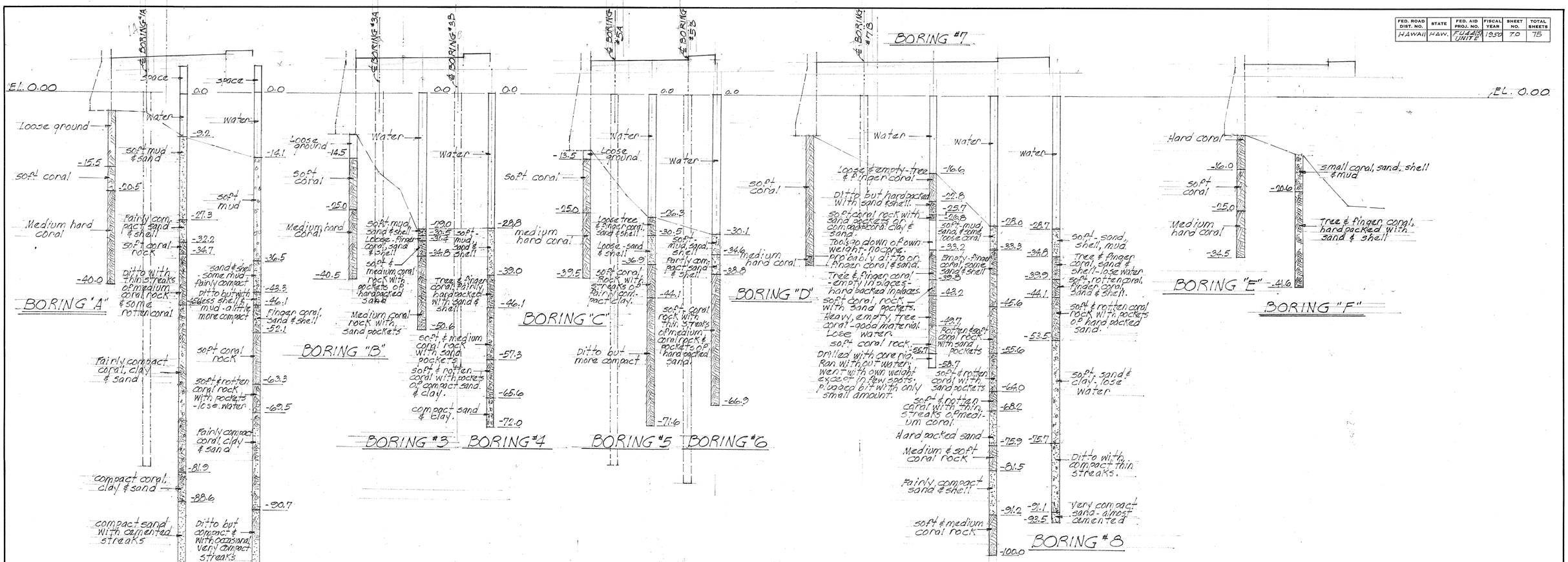
SHEET No. 21 OF 27 SHEETS

5483.69

ORIGINAL PLAN		DATE
	SURVEY PLOTTED BY	
	DESIGNED BY	
	DRAWN BY	S.30
	TRACED BY	F. CHING
NOTE BOOK	QUANTITIES BY	
	QUANTITIES CHECKED BY	
No.	CHECKED BY	J. OSAMOTO S.30

LITH. No. 1987 K & E CO., N. Y. U.S.A.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-033(4) UNIT E	1950	7.0	75



NOTES

BORING:-

Borings #1 to #8 inclusive were supplied by Nat Whiton, with his report dated May 1950.

Borings "A" to "E" inclusive were taken from old drawings for Queen Street seawall dated Jan. 1909.

Boring "F" was taken from old Harbor Comission drawings for pier #13 dated February 1930.

For location of Borings, see Sht. # 2.

Borings "X" & "Y" were supplied by Nat Whiton, with his report dated August 11, 1951.

SCALE:-

Vert: - 1" = 10'0" - All Borings.

Horiz: - 1" = 10'0" - At Borings "0", #1, #1A, #7, #7A, #7B, & #8 only.

Horiz: - 1" = 20'0" - Balance of Borings.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWING CHECKED BY	" " 6-50
	DRAWN BY F. CHING	" "
	TRACED BY	" "
NOTE BOOK No.	QUANTITIES BY	" "
	QUANTITIES CHECKED BY	" " 6-50
	CHECKED BY J. K. MOTO	

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER No. 2
BORING DATA

HONOLULU PEARL HARBOR ROAD
QUEEN STREET SECTION FU44(5)

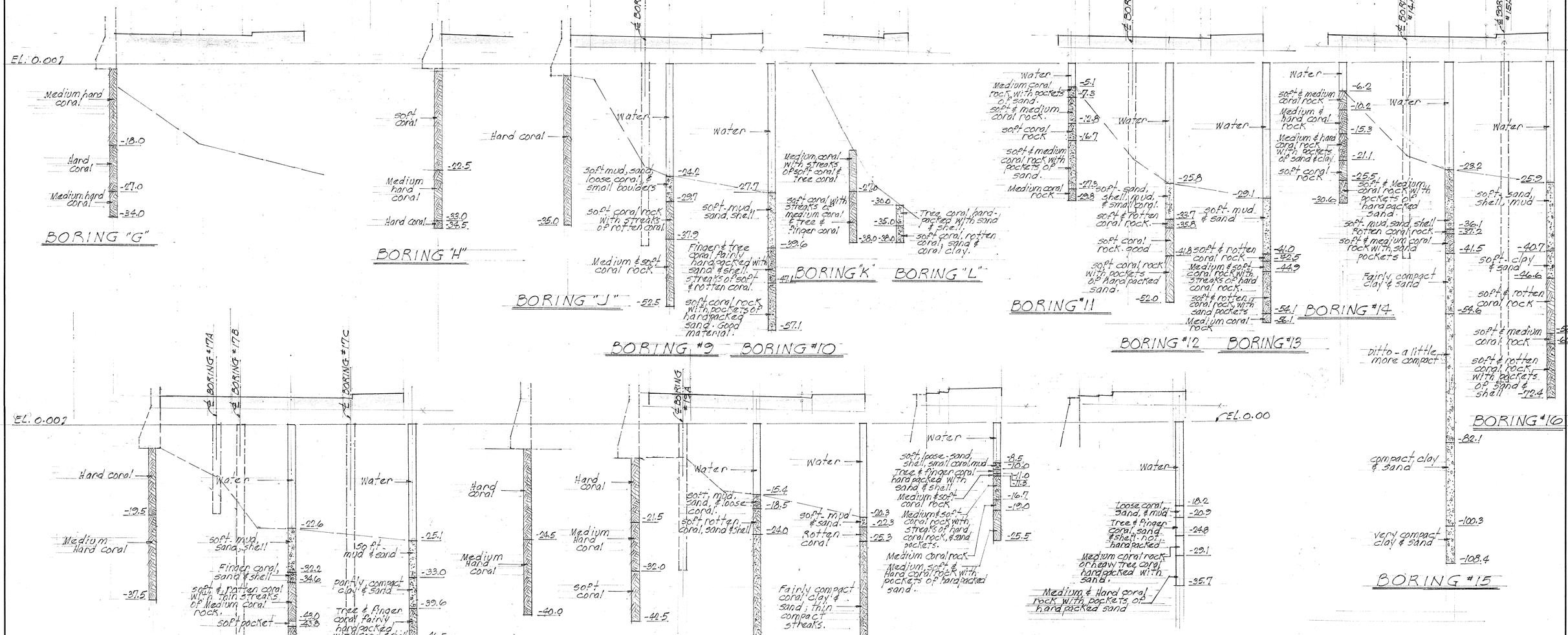
MAY 1950

SHEET No. 22 OF 27 SHEETS

5483.70

E. No. 1987 K & E CO., N. Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU44(5) UNIT 2	1950	71	75



NOTES

BORINGS:

Borings #2 to #23 inclusive were supplied by Nat Whitoh with his report dated May 1950.

Borings "G" "H" "J" "M" "N" "O" were taken from old drawings for Queen Street seawall dated Jan. 1909.

Borings "K" & "L" were taken from old Harbor Commission drawings for piers #13 & #14 dated February 1930.

For details of Borings #2A, #11A, #14A, #15A, #17A, #17B, #17C, #19A, See Sh't. No. 238.

For locations of Borings see Sh't. No. 2

SCALE: Vert.: 1" = 10'-0" - All borings.
Horiz.: 1" = 20'-0" - At borings "K" & "L".
Horiz.: 1" = 10'-0" - Balance of borings.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVERS No. 3 & No. 4
BORING DATA

HONOLULU PEARL HARBOR ROAD
QUEEN STREET SECTION FU 44(5)

MAY 1950

SHEET No. 23 OF 27 SHEETS

5483.71

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY	" " 6-50
	DRAWN BY E. CHING	" " " "
	TRACED BY	" " " "
NOTE BOOK No.	QUANTITIES BY	" " " "
	QUANTITIES CHECKED BY	" " 6-50
	CHECKED BY S. OKAMOTO	

E" No. 1987 K & E CO., N.Y. U.S.A.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	FU 44(5) UNITE	1950	72	75

BORING #9A

9A.

EL. 0.00?

Water

Loose coral, sand & shell — -22.1

Tree & finger coral, sand & shell — -23.0

soft coral rock with sand pockets — -27.0

Medium, soft, & hard coral rock with pockets of hard packed sand — -30.5

-39.0

BORING #11A

11A

Water

Loose coral sand & shell — -20.3

soft & medium coral rock with sand pockets — -23.6

-32.0

BORING #14A

14A.

Water

Tree & finger coral, sand & shell — -20.0

soft sand, shell & mud — -21.2

soft coral rock with sand pockets — -24.4

Medium coral rock — -27.4

soft coral rock. — -28.9

compact clay & sand. — -31.9

soft & medium coral rock — -34.9

-42.3

BORING #15A

15A.

Water

soft sand, shell mud & some small coral. — -25.0

compact sand, shell & small coral. — -38.0

compact clay & some small coral — -42.4

compact clay & sand. Fair — -52.7

-68.9

BORING #17A

17A.

Water

Broken coral rock — -10.9

Medium & soft coral rock with sand pockets. — -13.1

Hard coral rock. — -18.1

-19.2

BORING #17B

17B

Water

soft sand, shell, mud, & loose coral. — -20.5

Tree & finger coral, sand & shell, fairly hard packed — -25.2

soft coral rock with streaks of medium coral rock — -32.7

Fairly compact clay & sand — -39.9

Ditto but more compact. — -47.2

-63.8

BORING #17C

17C

Water

soft sand, shell, mud & some clay. — -24.3

compact clay, sand, shell, some small coral. — -34.4

compact clay & sand. — -41.6

-75.6

BORING #19A

19A.

EL. 0.00

Water

soft loose coral, sand, shell. — -7.0

Medium & soft coral rock. — -7.6

soft coral & clay — -11.4

Medium coral rock with streaks of hard & soft coral rock — -12.0

compact clay & sand — -17.5

-31.3

NOTES

BORINGS

For locations of above borings see Sht. # 22 & 23

TERRITORIAL HIGHWAY DEPARTMENT

TERRITORY OF HAWAII

SLIP COVER No. 3

BORING DATA

HONOLULU PEARL HARBOR ROAD

QUEEN STREET SECTION FU 44(5)

JULY 1950

SHEET No. 24 OF 27 SHEETS

5483.72

ORIGINAL PLAN

NOTE BOOK No.

SURVEY PLOTTED BY — DATE

DESIGN BY — " "

DRAWN BY R. BARTELS " "

TRACED BY K. CHING " "

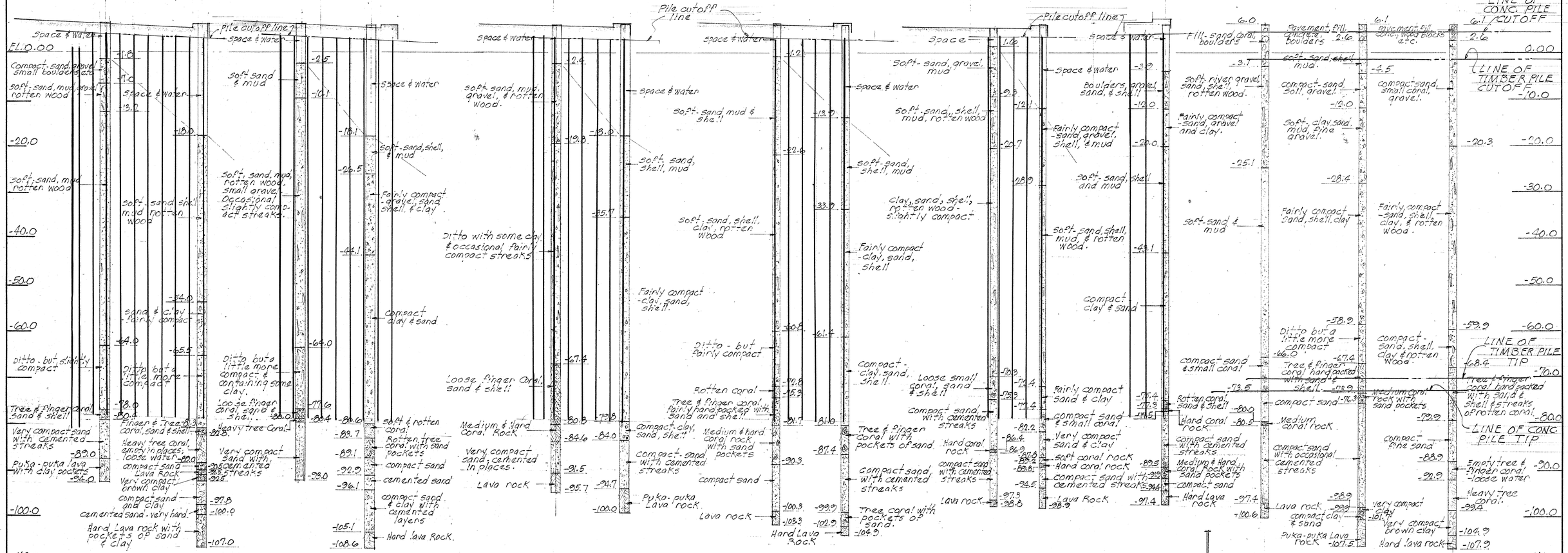
QUANTITIES BY — " "

QUANTITIES CHECKED BY — " "

CHECKED BY — " "

C. No. 1107 X & E CO., N.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	FU 44(5) UNIT 2	1950	73	75



BORING #24 BORING #25 BORING #26 BORING #27 BORING #28 BORING #29 BORING #30 BORING #31 BORING #32 BORING #33 BORING #34 BORING #35 BORING #36 BORING #37

BENT No 1 BENT No 3 BENT No 5 BENT No 7 BENT No 9 BENT No 11

AT STA. 123+52.5 TO STA. 124+25.25
(SEE LAYOUT PLAN)

NOTES

BORINGS

Borings # 24 to # 37 inclusive were supplied by Nat Whitton with his report dated April 1950.
For location of borings see sht. # 1.
For length of piles see pile schedule sht. # 2

HORIZ. : 1" = 20'-0"
SCALE: VERT. : 1" = 10'-0"

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE 6-50
	DESIGNED BY	6-50
	DRAWN BY W. C. BARRETT	
	TRACED BY F. CHING	
NOTE BOOK No.	QUANTITIES BY	6-50
	QUANTITIES CHECKED BY	
	CHECKED BY L. D. SHADOAN	

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER No 1
PILE LAYOUT

HONOLULU PEARL HARBOR ROAD
QUEEN STREET SECTION FU 44(5)

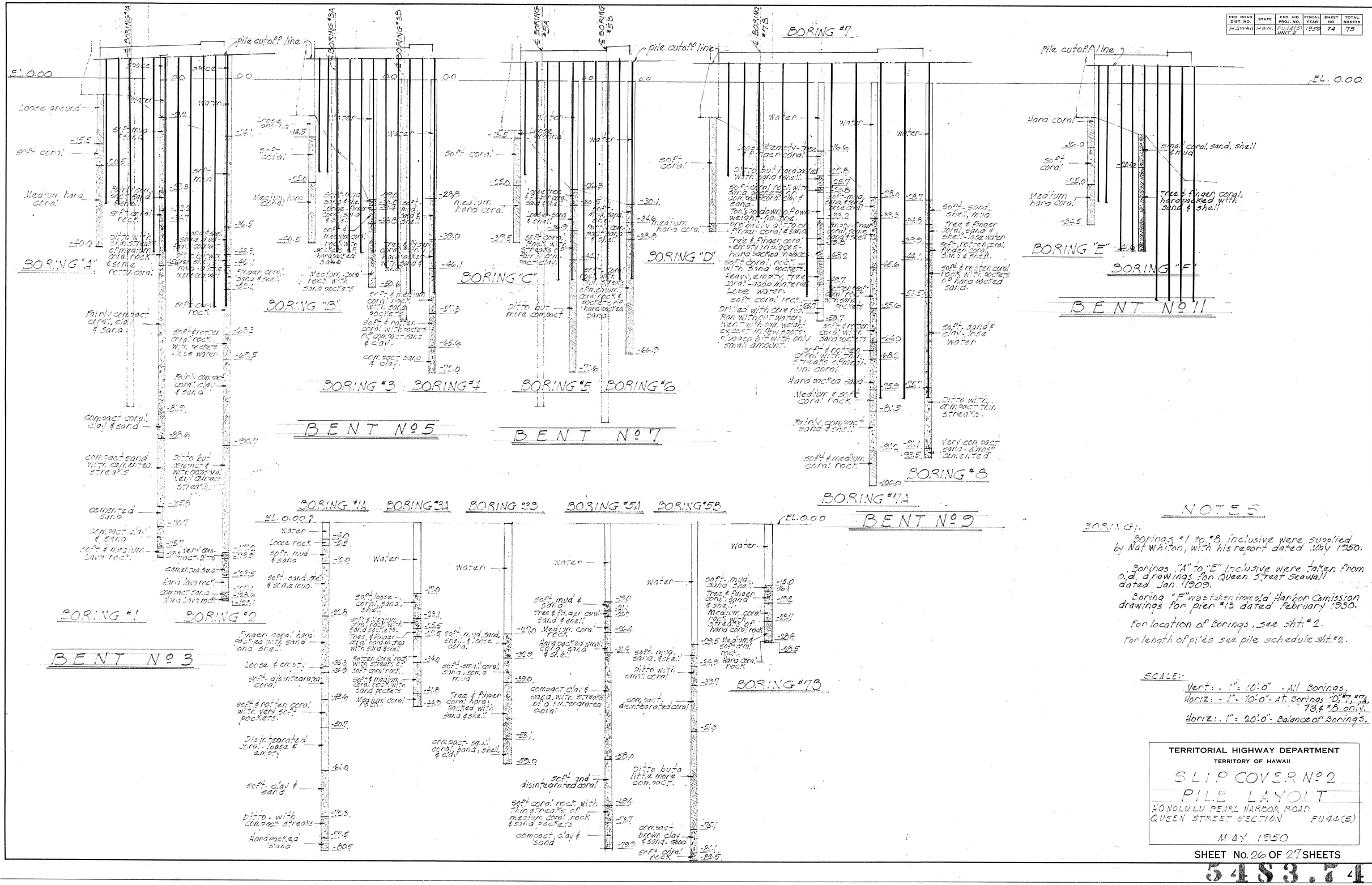
MAY 1950

SHEET No. 25 OF 27 SHEETS

5483.73

No. 1087 H & CO., N. Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	F-044(5) UNIT #	1950	74	75



NOTES

BORING:

Borings #1 to #8 inclusive were supplied by Nat Whiton, with his report dated May 1950.

Borings "A" to "E" inclusive were taken from old drawings for Queen Street Seawall dated Jan. 1909.

Boring "F" was taken from old Harbor Comission drawings for pier #13 dated February 1950.

For location of Borings, see sht. # 2.

For length of piles see pile schedule sht. #2.

SCALE:

Vert: - 1" = 10:0" - All Borings.

Horiz: - 1" = 10:0" - At Borings "D" #7, #7A, 7B, & #8 only.

Horiz: 1" = 20:0" - Balance of Borings.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE 6-50
	DRAWN BY	
	TRACED BY F. CHING	
NOTE BOOK No.	CHECKED BY	
	QUANTITIES CHECKED BY	
	CHECKED BY J.A.A. 6-50	

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVER No 2
PILE LAYOUT

HONOLULU PEARL HARBOR ROAD
QUEEN STREET SECTION FU44(5)

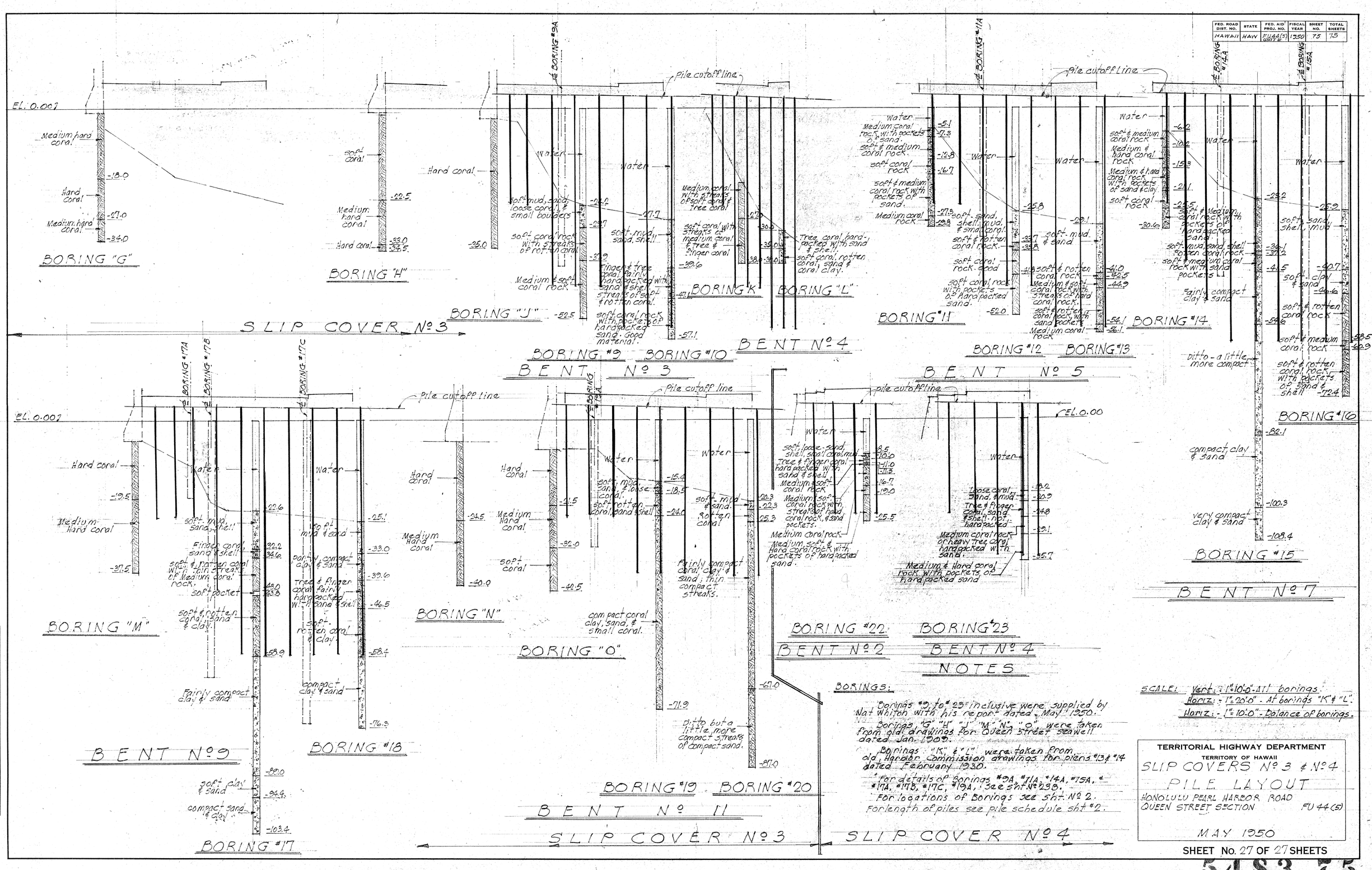
MAY 1950

SHEET No. 26 OF 27 SHEETS

5483.74

No. 1987 K&E CO., N.Y.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	F-144(5) UNIT 2	1950	75	75



NOTES

BORINGS:

Borings #9 to #23 inclusive were supplied by Nat Whiton with his report dated May 1950.

Borings "G" "H" "J" "M" "N" "O" were taken from old drawings for Queen Street Seawall dated Jan. 1900.

Borings "K" & "L" were taken from old Harold Commission drawings for plans #13 & #14 dated February 1930.

For details of borings #9A, #11A, #14A, #15A, #17A, #17B, #17C, #19A, see Sht No 238.

For locations of Borings see Sht No 2.

For length of piles see pile schedule sht #2.

SCALE: Vert: - 1" = 10'-0" - All borings.
Horiz: - 1" = 20'-0" - At borings "K" & "L".
Horiz: - 1" = 10'-0" - balance of borings.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

SLIP COVERS No 3 & No 4
PILE LAYOUT

HONOLULU PEARL HARBOR ROAD
QUEEN STREET SECTION FU 44(5)

MAY 1950

SHEET No. 27 OF 27 SHEETS

5483.75

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DESIGNED BY	
	DRAWN BY	6-50
	TRACED BY	
NOTE BOOK No.	QUANTITIES BY	
	QUANTITIES CHECKED BY	6-50
	CHECKED BY	J. O. K. 8-8-50

16" No. 1847 K & E CO., N. Y. MFG.