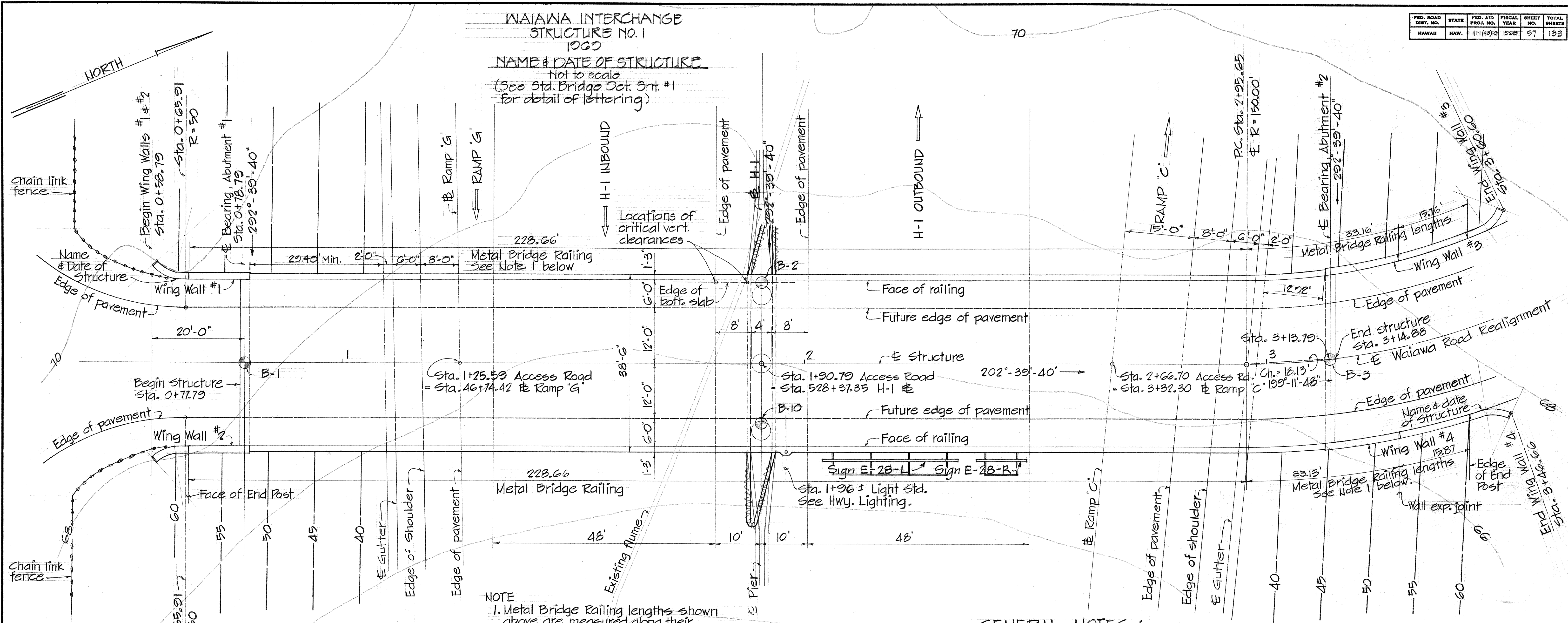


WAIAWA INTERCHANGE STRUCTURE NO. 1 1968

NAME & DATE OF STRUCTURE
Not to scale
(See Std. Bridge Det. Sht. #1
for detail of lettering)



- NOTE
1. Metal Bridge Railing lengths shown above are measured along their inside faces.
 2. For details of connections of metal guard rail to End Posts, see (E) & Std. Bridge Detail sht. #10.

LAYOUT PLAN

Scale: 1"=10'

LEGEND

- Existing contours
- New contours
- ⊕ Boring

TOP OF FINISH ROADWAY GRADE

DESCRIPTION	STATION	LEFT OFFSET FIN. ELEV.	ROAD & FIN. ELEV.	RIGHT OFFSET FIN. ELEV.
Begin W.W. #1	0+58.79	18.58 61.22	61.50	18.58 61.22
E Bearing, Abut. #1	0+78.79	18.00 61.63	61.90	18.00 61.63
Pts. on struct.	1+00.00	19.25 62.03	62.32	19.25 62.03
" " "	1+25.00	19.25 62.48	62.77	19.25 62.48
" " "	1+50.00	19.25 62.83	63.12	19.25 62.83
" " "	1+75.00	19.25 63.07	63.36	19.25 63.07
" " "	2+00.00	19.25 63.22	63.51	19.25 63.22
" " "	2+25.00	19.25 63.26	63.55	19.25 63.26
" " "	2+50.00	19.25 63.20	63.49	19.25 63.20
" " "	2+75.00	19.25 63.04	63.33	
" " "	3+00.00		63.33	19.25 63.24
" " "	3+00.00	19.25 62.78	63.07	

cont.

DESCRIPTION	STATION	LEFT OFFSET FIN. ELEV.	ROAD & FIN. ELEV.	RIGHT OFFSET FIN. ELEV.
Pts. on Struct.	3+00.00		63.07	
E Bearing, Abut. #2	3+16.28	18.00 62.60	62.87	19.25 63.17
" " "	3+13.79		62.90	
" " "	3+11.84		62.92	18.00 63.10
Wing Walls #3 & #4	3+25.00	18.00 62.49	62.76	
" " "	3+25.00		62.76	18.00 63.03
End W.W. #4	3+46.66		62.49	18.00 62.76
" " "	3+50.00	18.00 62.18	62.45	
End W.W. #3	3+60.60	18.00 62.04	62.31	

NOTE: For centerline & superelevation profiles, see sht. #8

GENERAL NOTES:

1. Design specs.: Standard Specs. for Highway Bridges, AASHTO, 9th Ed., 1965.
2. Design load: HS 20-44
3. Concrete classes:
 - a. Pier columns: E-1
 - b. All others: A-1
4. Reinforcing yield stress:
 - a. Pier columns: 60,000 psi
 - b. All others: 40,000 psi
5. Top of bridge shall conform with finish roadway geometrics & grades. Superstructure shall be raised an additional amount as shown on the "Camber Diagram"
6. Refer to Standard Bridge Detail Shts. #1 to #10 for additional details not shown on these drawings.
7. Concrete Design Stresses:

Class	A-1	E-1
f_c	3,000 psi	4,500 psi
f_t	1,200 psi	1,800 psi
n	10	8
8. Reinf. Design Stresses:

	fy	60,000 psi	40,000 psi
Tension	20,000 psi	20,000 psi	20,000 psi
Comp.	16,000 psi	24,000 psi	24,000 psi

ESTIMATED QUANTITIES

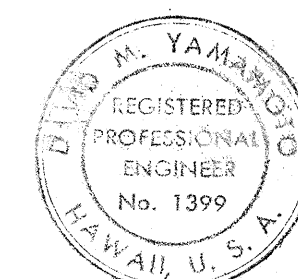
Concrete (Lump Sum)	1072 c.y.
Reinf. Steel (Lump Sum)	324,000 lb.
Structural Excavation	586.43 595 c.y.
Filter Material	51 60 c.y.
Metal Bridge Railing (3-Rail type)	557.50 555 l.f.

Note: Conc. jackets for H.T. Co. & H.E. Co. conduits are not included in the quantities listed above.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WAIAWA INTERCHANGE
UNIT I
STRUCTURE NO. 1
WAIAWA ROAD REALIGNMENT STA. 0+77.79 TO 3+14.88
LAYOUT PLAN
F.A.I. PROJ. NO. 1-HI-1(48)-9

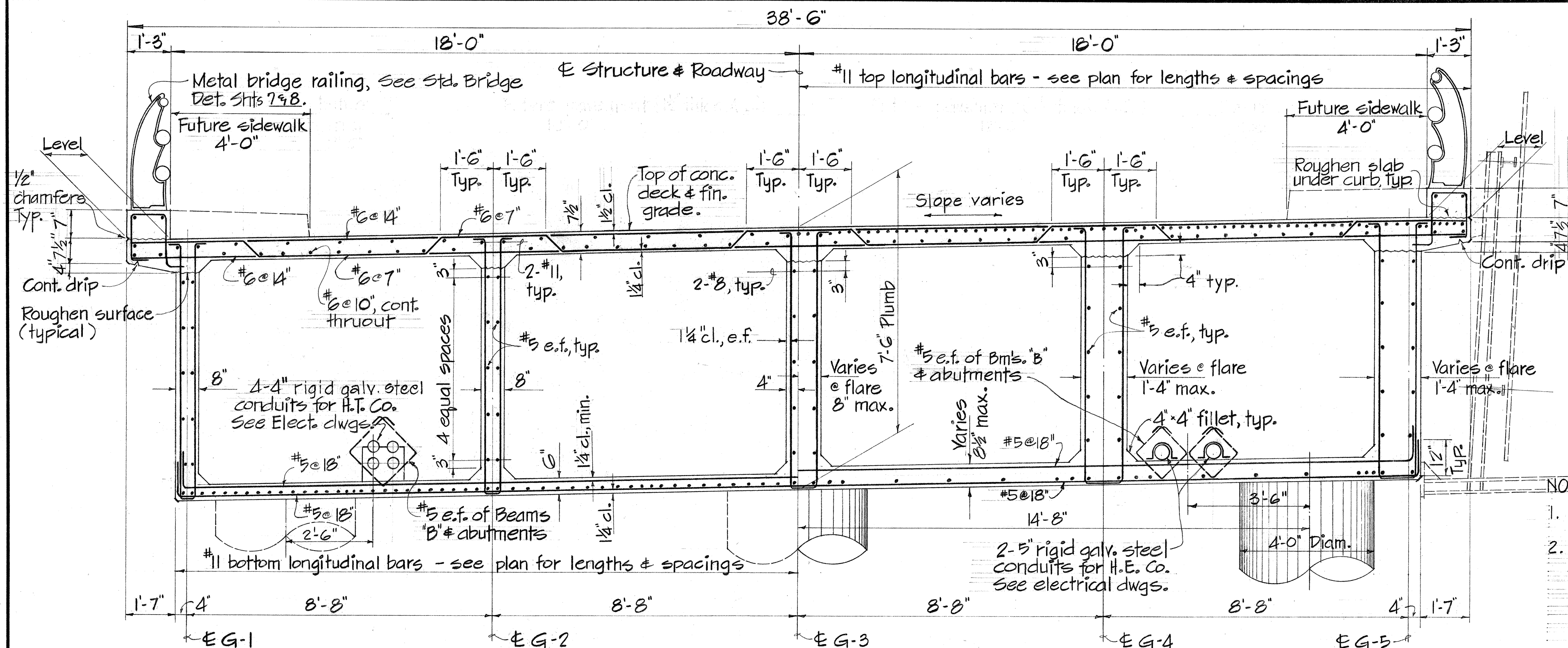
Scale: As shown Date: Aug. 1968
SHEET No. 1 OF 9 SHEETS



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David M. Yamamoto

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	111(48)3	1968	58	133



NEAR MIDSPAN

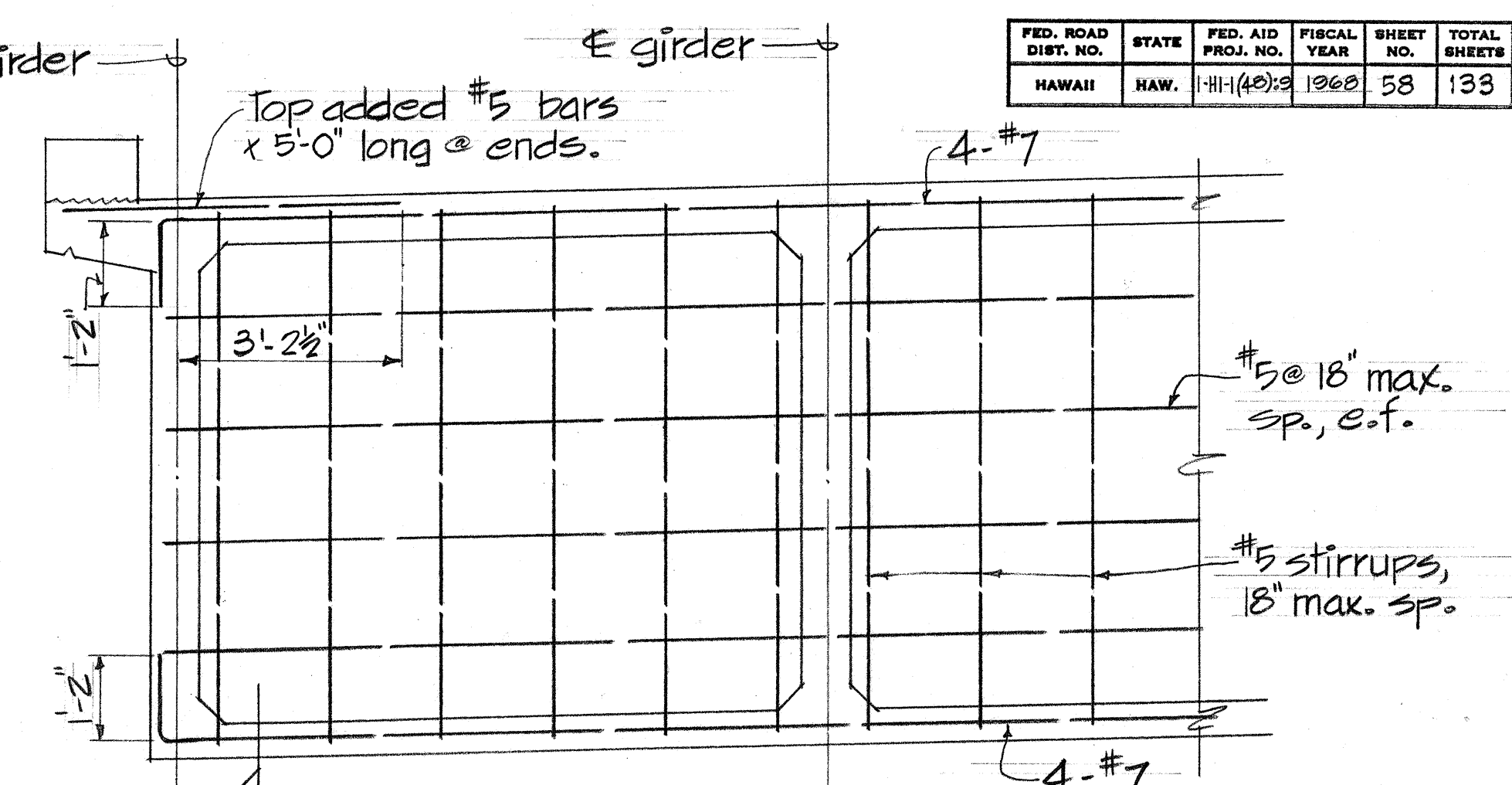
NEAR SUPPORT

TYPICAL SECTION

Scale: 1/2" = 1'-0"

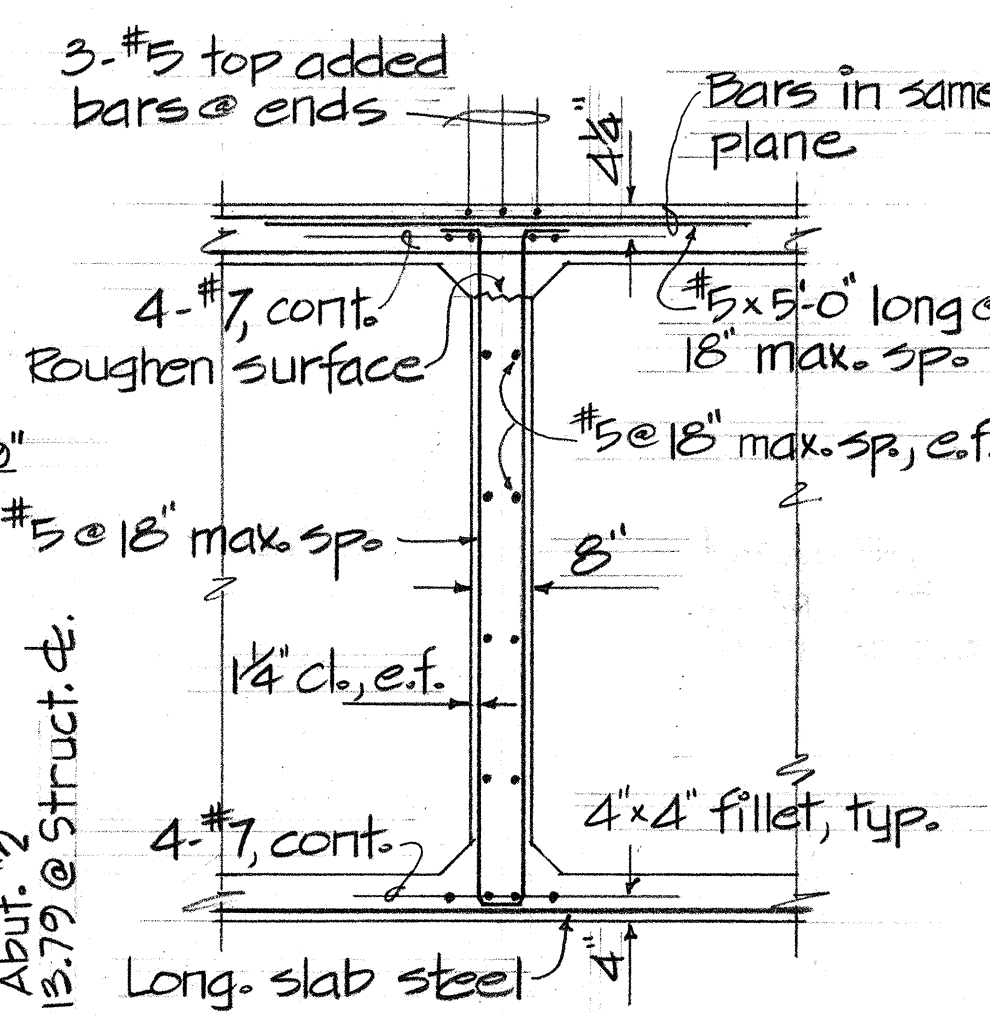
NOTES:

1. All deck reinforcing shall follow the curvatures & slopes of the finish grades.
2. Transverse slab reinf. shall be placed radially with the indicated spacing not to be exceeded.



ELEVATION OF BEAM "B"

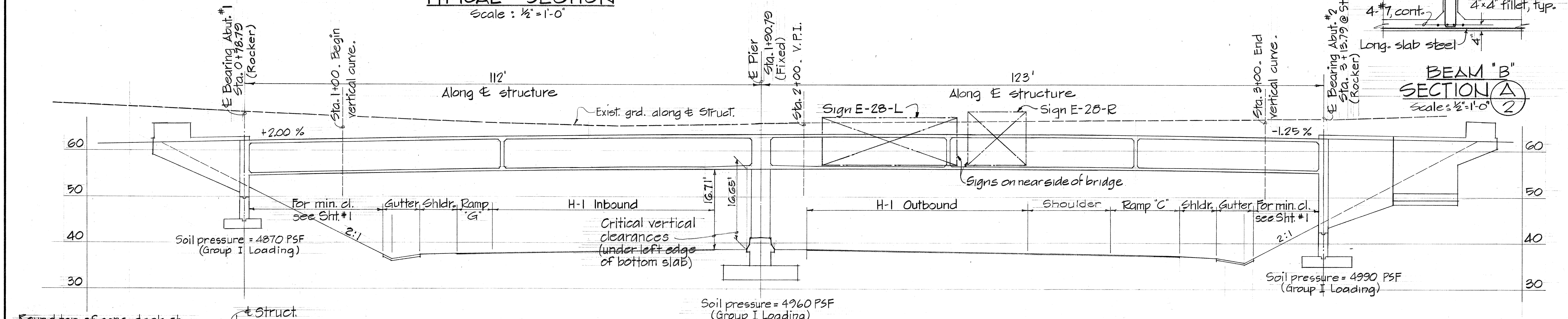
Scale: 1/2" = 1'-0"



BEAM "B" SECTION A-A

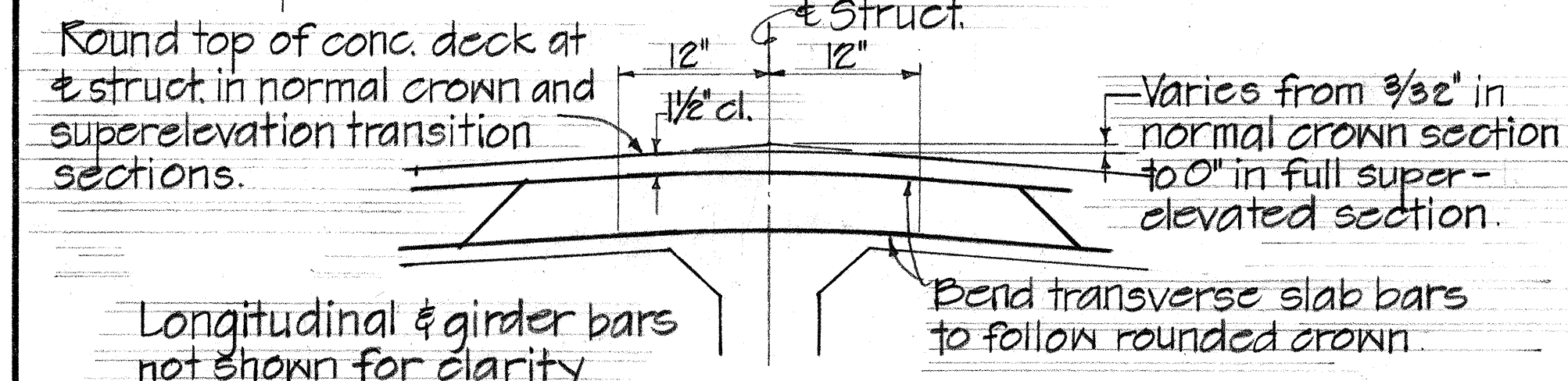
Scale: 1/2" = 1'-0"

Note: For form removal opening details, see Std. Bridge Det. Sht. #4.



LONGITUDINAL SECTION ALONG E STRUCTURE

Scale: 1" = 10'-0"



CROWN ROUNDING DETAIL

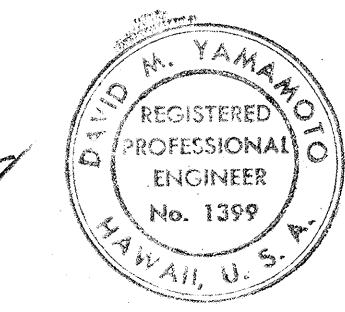
Scale: 1" = 1'-0"

(Cross slope exaggerated)

APPROVED:

AD Henderson 8-14-68
HAWAIIAN ELECTRIC Co. Inc. DATE

J. R. Ridd 6-14-68
HAWAIIAN TELEPHONE CO. DATE



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David M. Yamamoto

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

WAIAWA INTERCHANGE
UNIT I

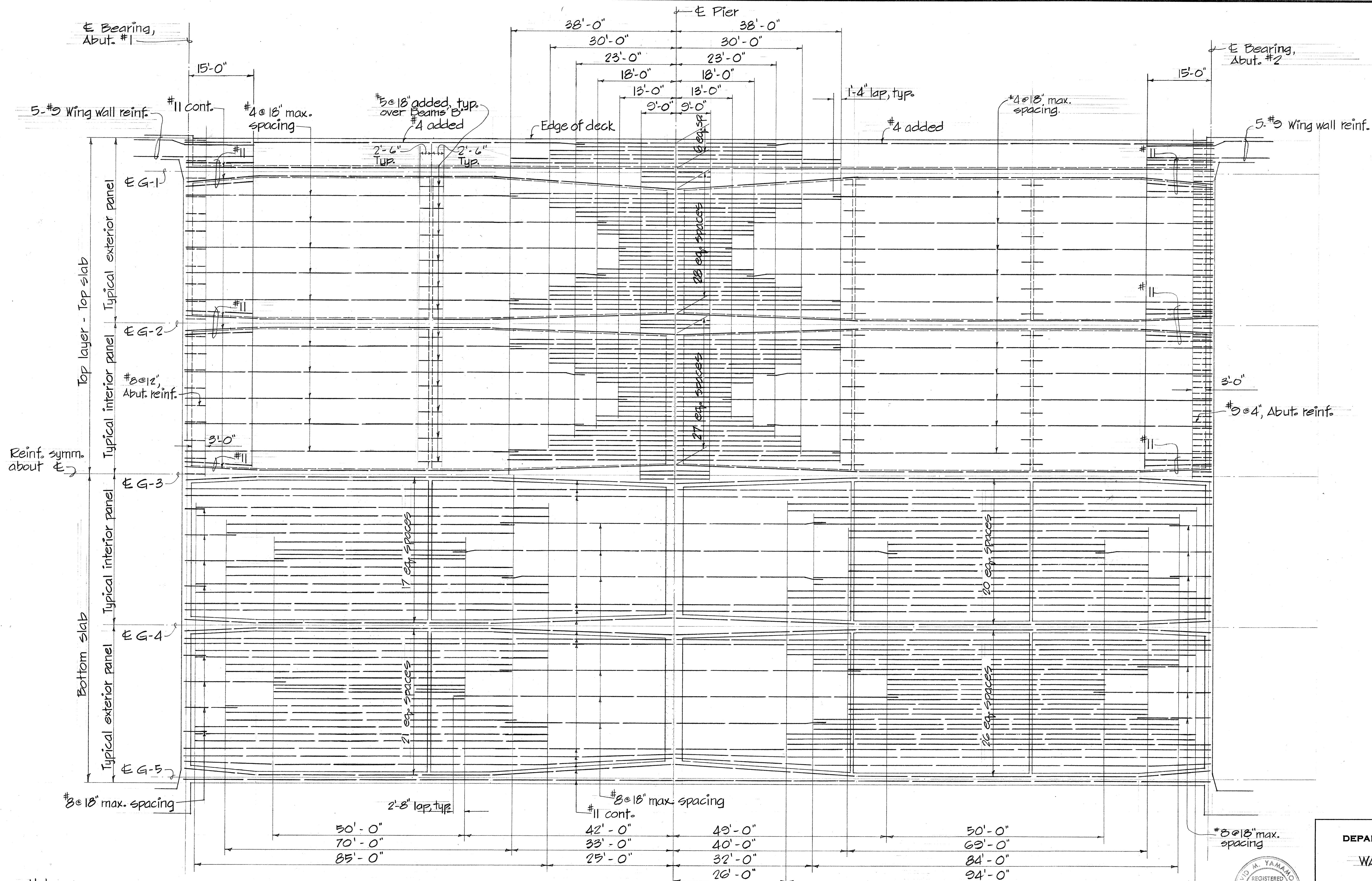
STRUCTURE NO. 1
STRUCTURE SECTIONS
& BEAM DETAILS

F.A.I. PROJ. NO. I-HI-1(48):3

Scale: As shown Date: Aug. 1968

SHEET No. 2 OF 3 SHEETS

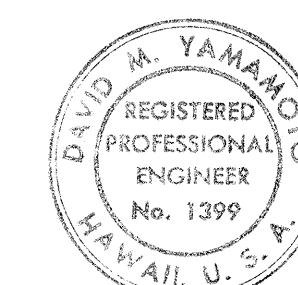
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1(49):3	1968	59	133



- Notes:
1. Unless otherwise indicated, all longitudinal slab bars shall be #11.
 2. This drawing is schematic only. Curvature of structure is not shown. Reinf. shall follow the curvature.

PLAN OF LONGITUDINAL SLAB REINFORCEMENT

Not to scale

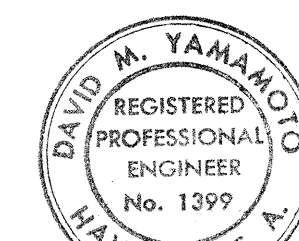
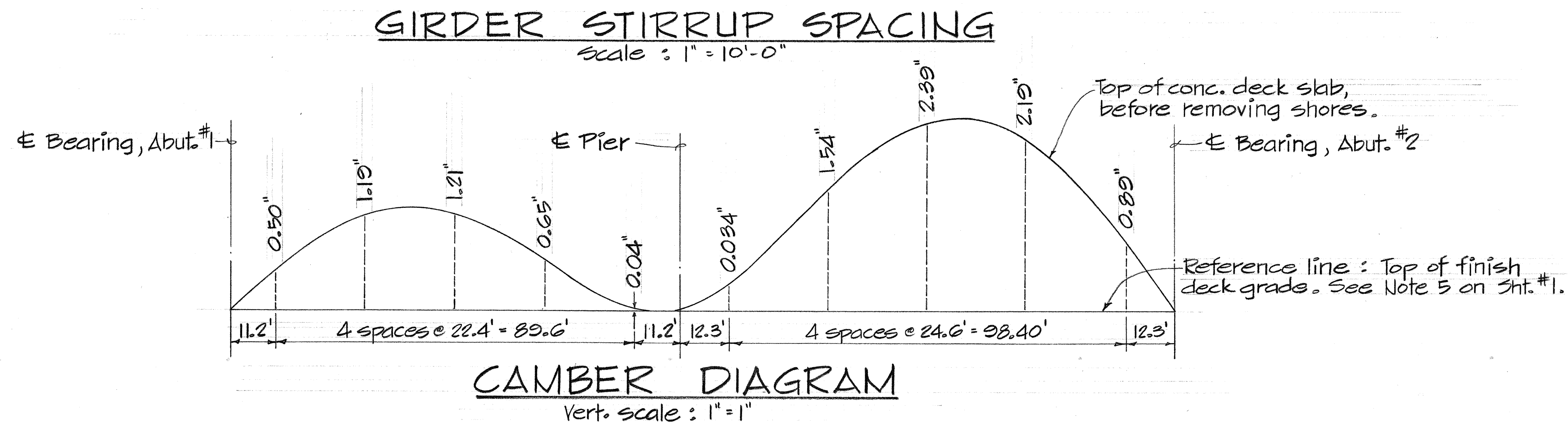
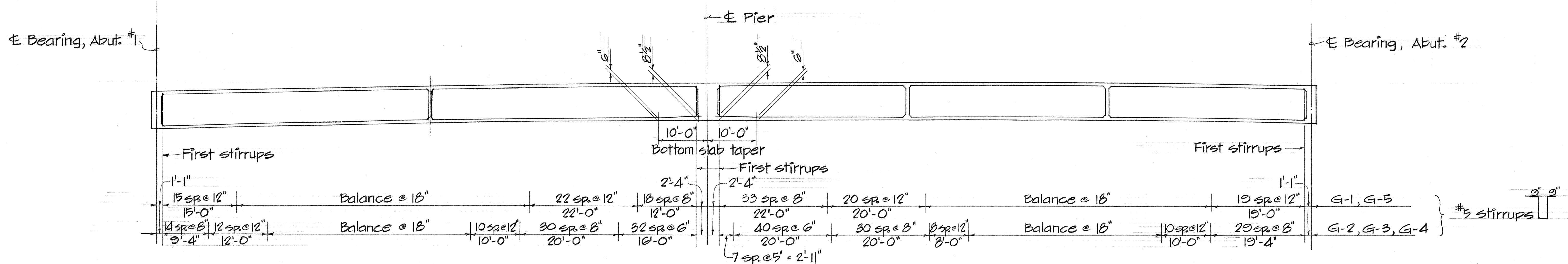
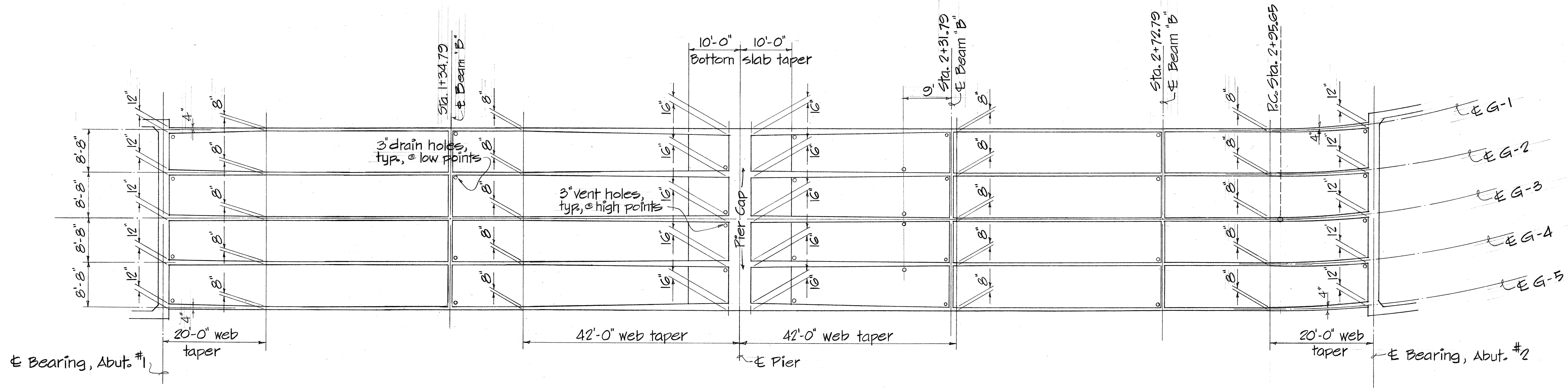


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STATE OF HAWAII	
DEPARTMENT OF TRANSPORTATION	
HIGHWAYS DIVISION	
WAIAWA INTERCHANGE	
UNIT I	
STRUCTURE NO. 1	
LONGITUDINAL REINFORCEMENT	
PLAN	
F.A.I. PROJ. NO. 1-HI-1(49):3	
Scale: As shown	Date: Aug. 1968
SHEET No. 3 OF 3 SHEETS	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1(48):3	1968	60	133

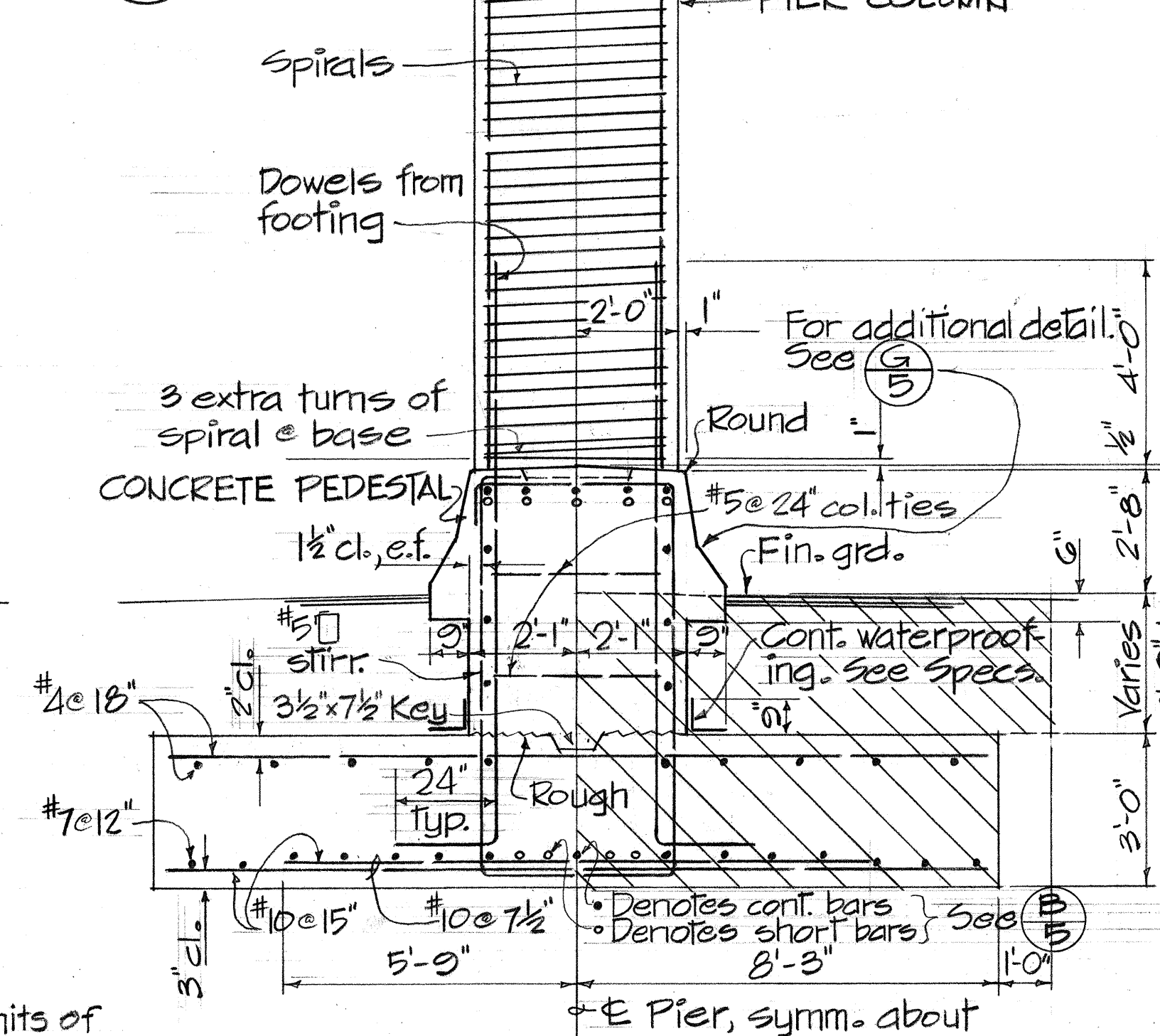
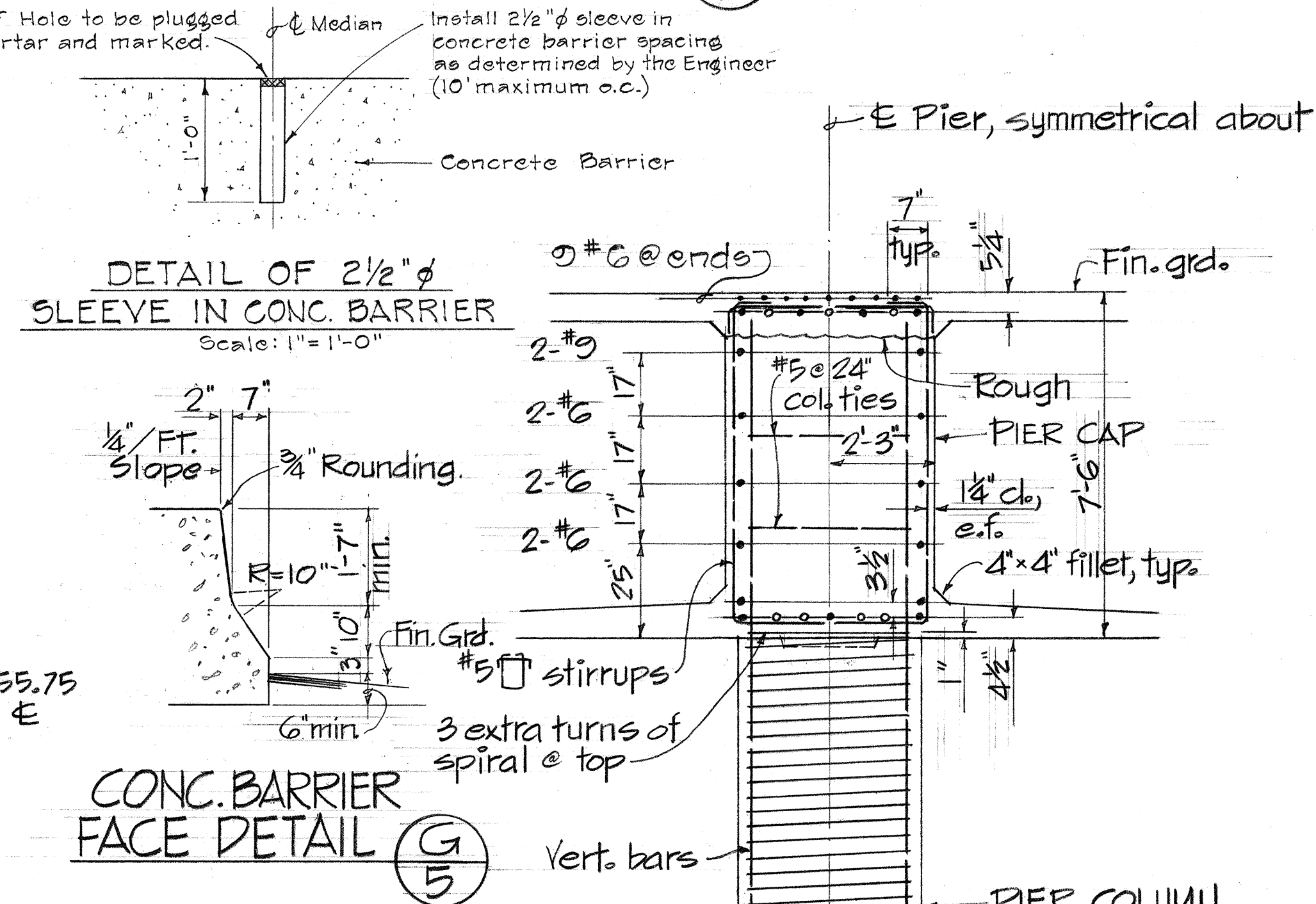
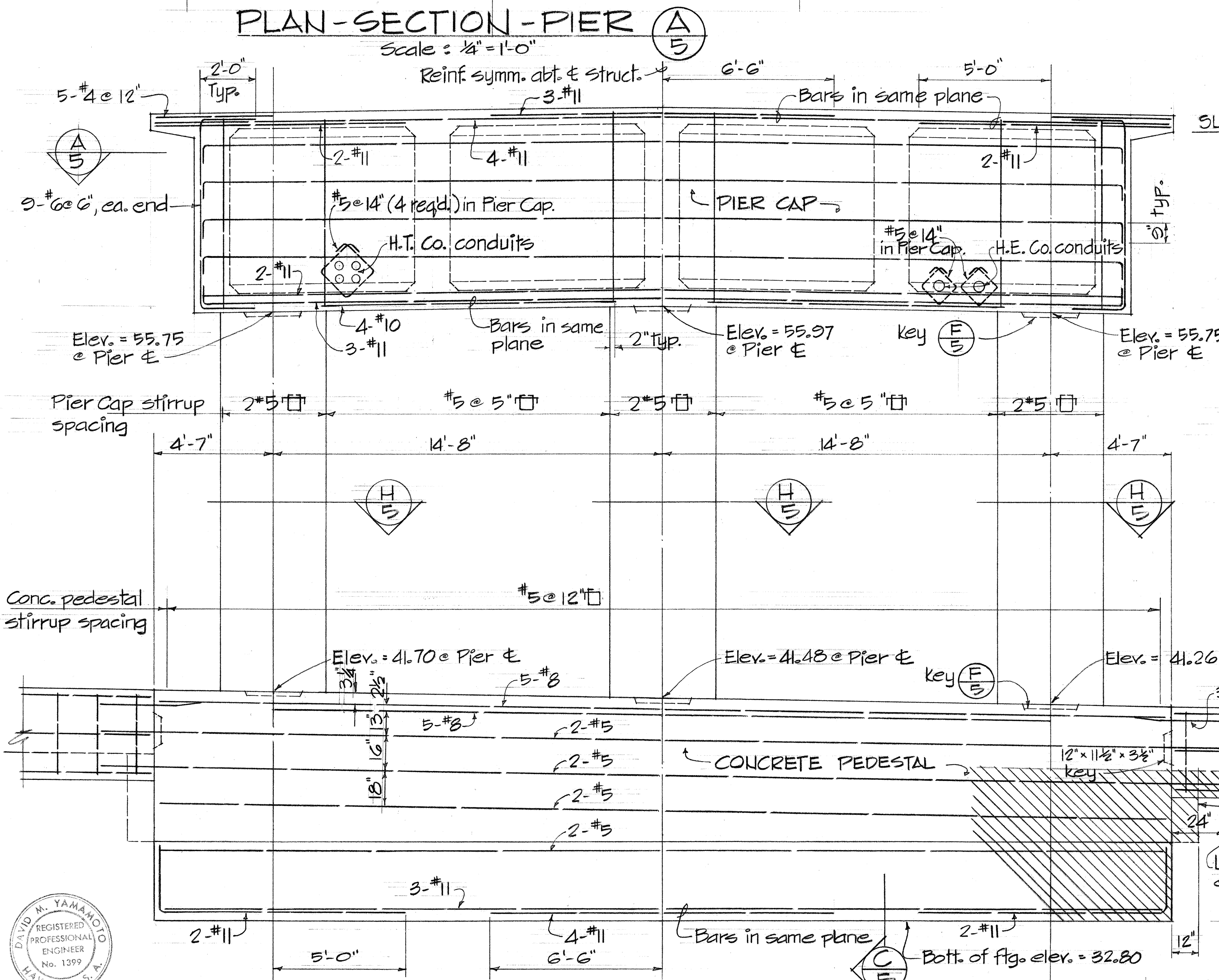
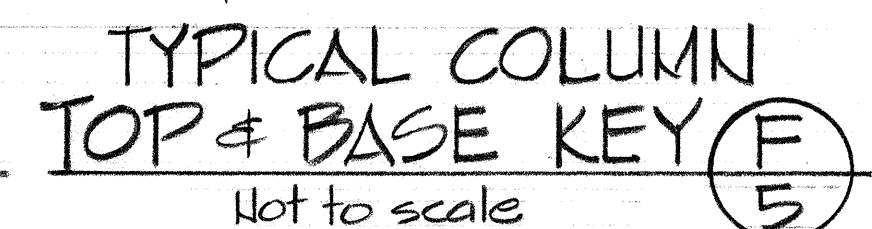
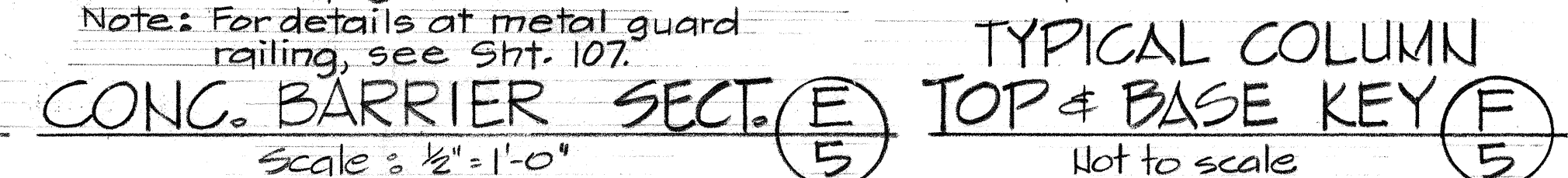
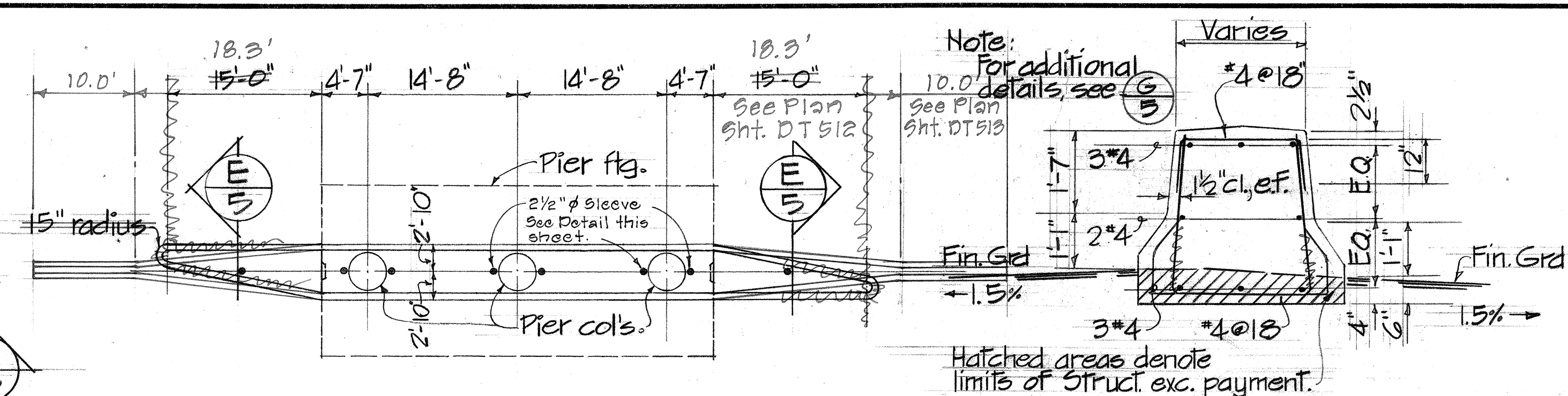
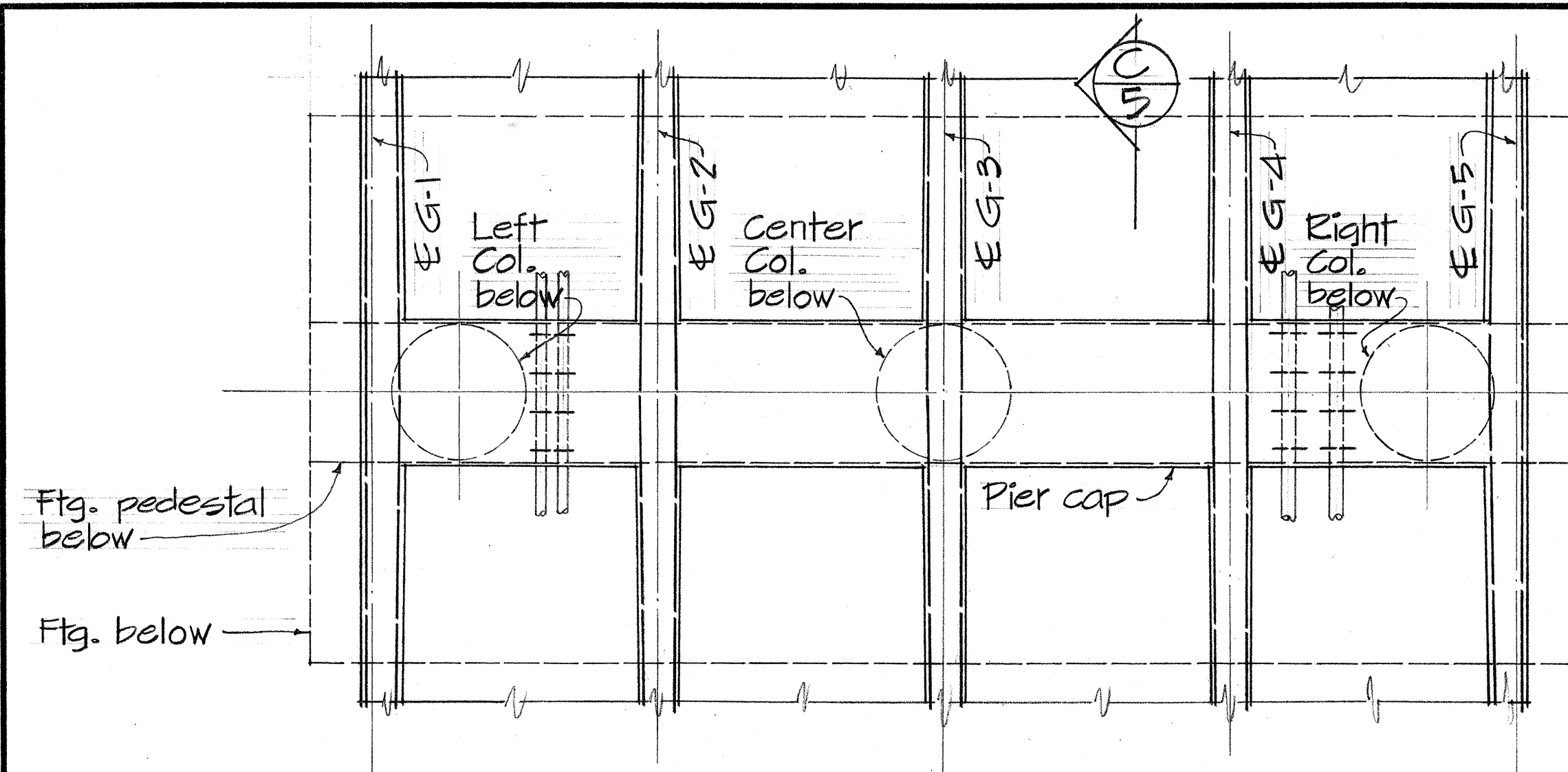


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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
WAIAWA INTERCHANGE
UNIT I
STRUCTURE NO. 1
FRAMING & STIRRUP
LAYOUTS
F.A.I. PROJ. NO. I-HI-1(48):3
Scale: As shown Date: Aug. 1968
SHEET No. 4 OF 9 SHEETS



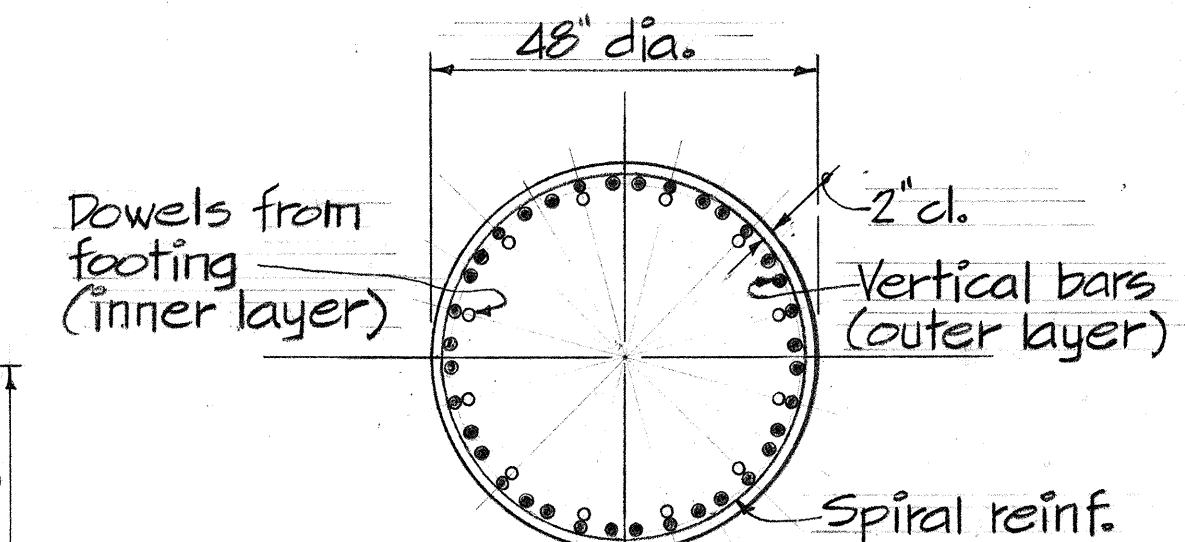


COLUMN REINFORCING SCHEDULE

COLUMN	LEFT	CENTER	RIGHT
Dowels from footings	12-#11	12-#11	12-#11
Vertical bars	36-#11	36-#11	36-#11
Spirals	#5 @ 3 5/8"	#5 @ 3 5/8"	#5 @ 3 5/8"

NOTES FOR PIER COLUMNS :

1. Concrete for pier columns shall be Class E-1.
2. Dowels from footing, vertical bars, & spirals shall be high strength bars, ASTM A432.



Note: See Column Reinf. Sched. above for number & size of reinf.

COLUMN SECTION $\begin{pmatrix} H \\ 5 \end{pmatrix}$
Not to scale

**STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION**

WAIANA INTERCHANGE
UNIT I

STRUCTURE NO.

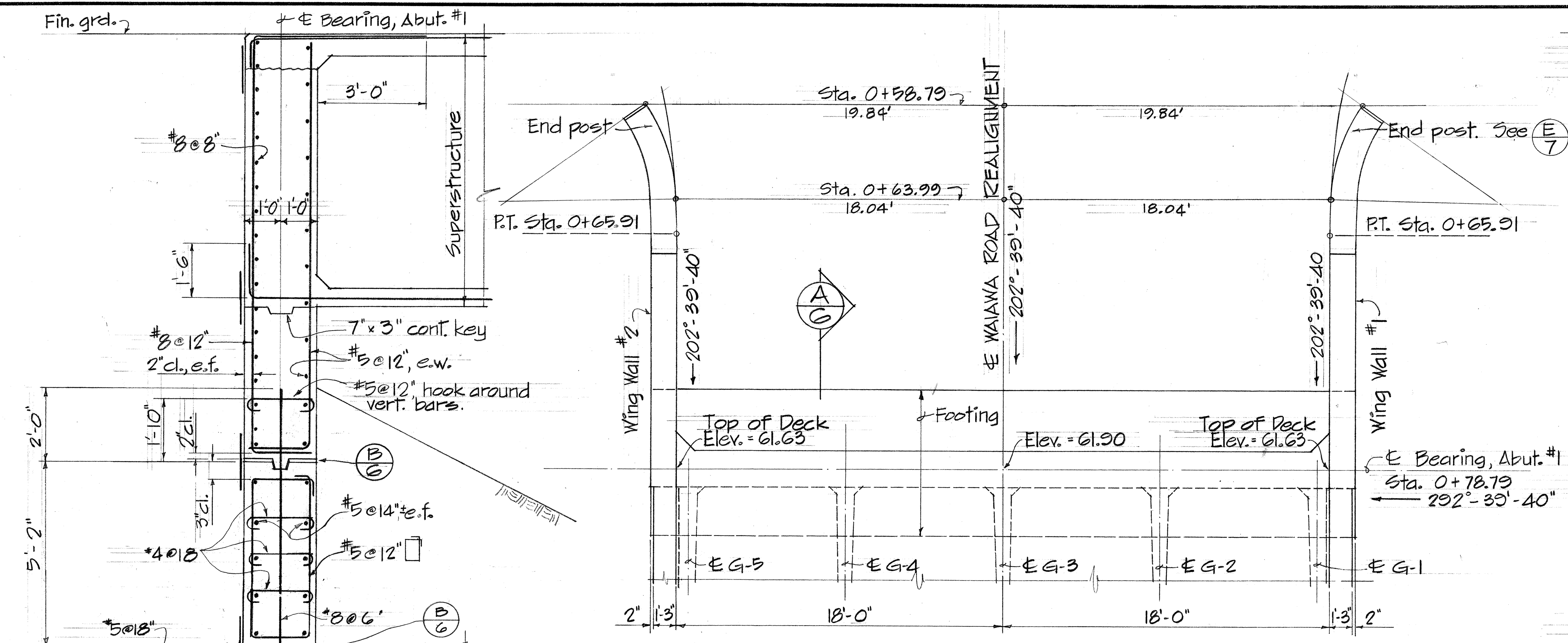
PIER

F.A.I. PROJ. NO. I-HI-1(48):9

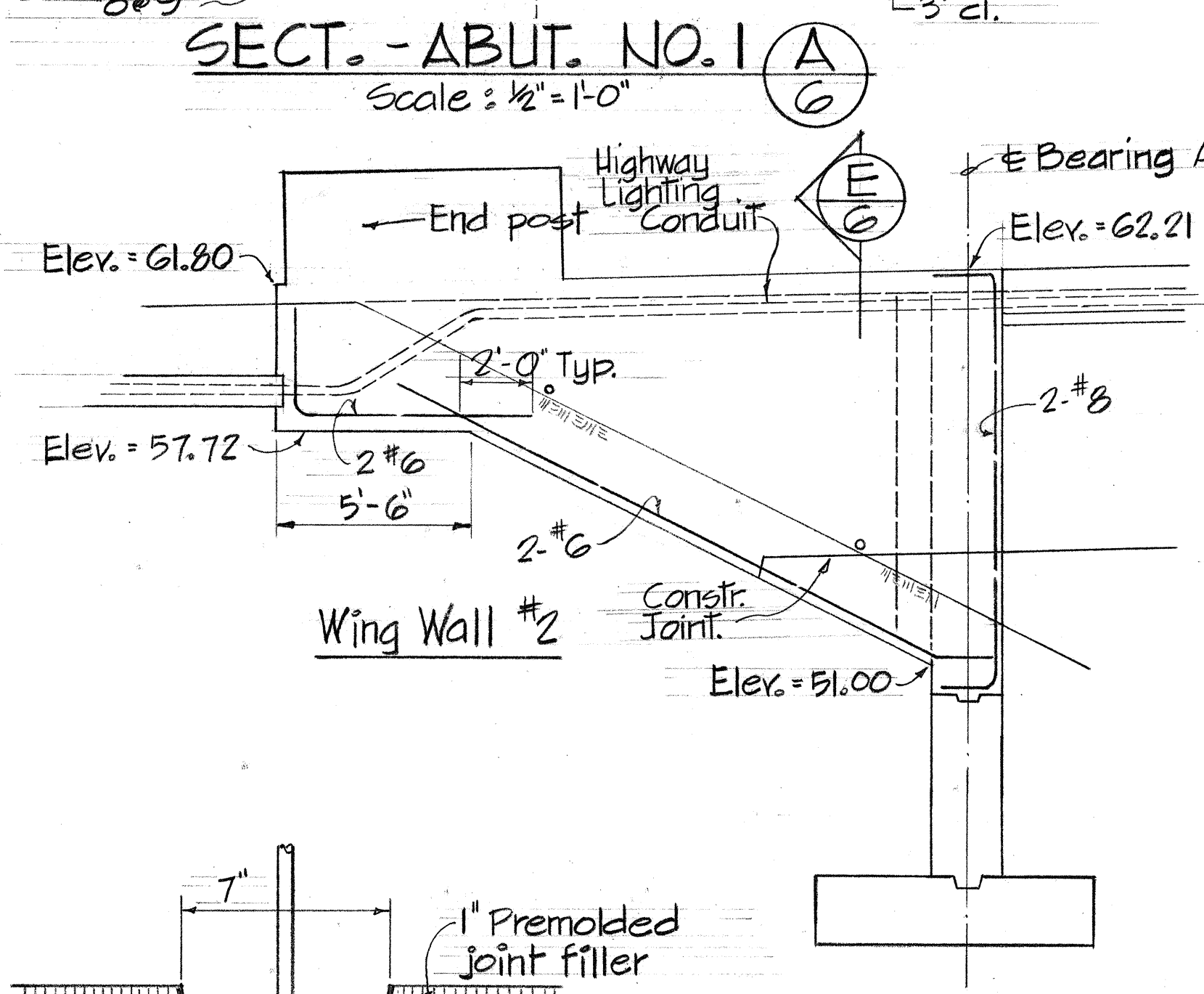
Scale: As shown Date: Aug. 1968

SHEET No. 5 OF 9 SHEETS

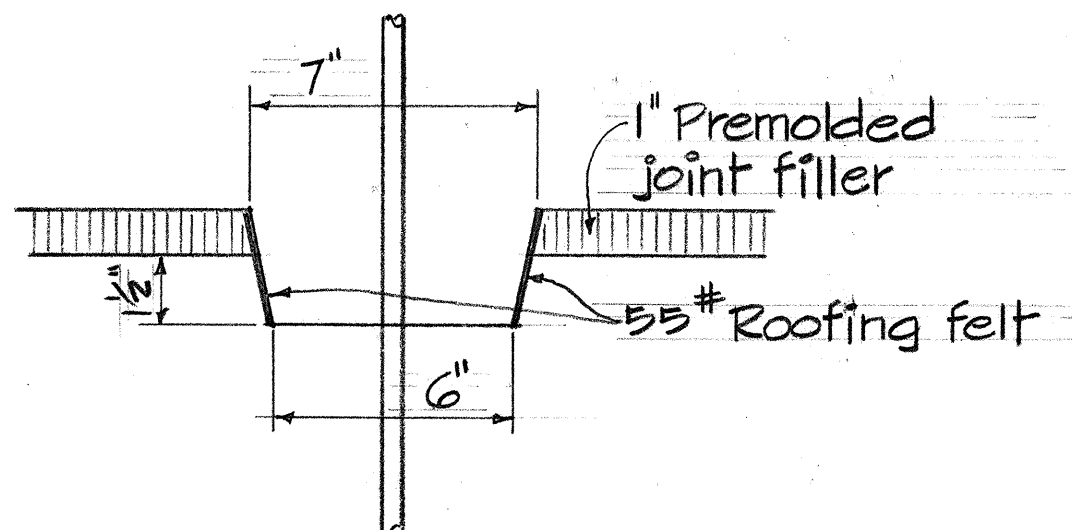
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1(48)2	1968	62	133



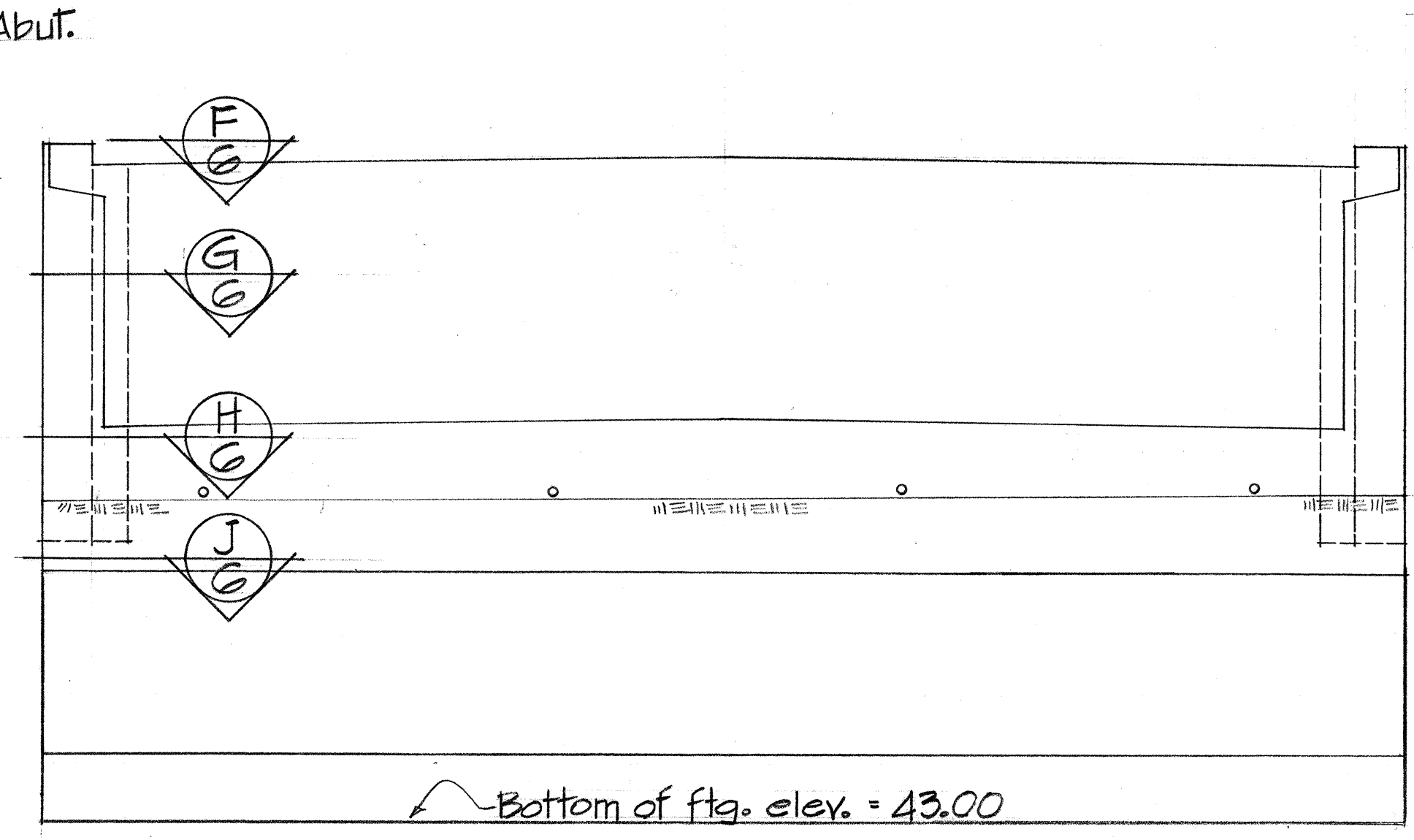
PLAN - ABUTMENT NO. 1 (C)
Scale: 1/4" = 1'-0"



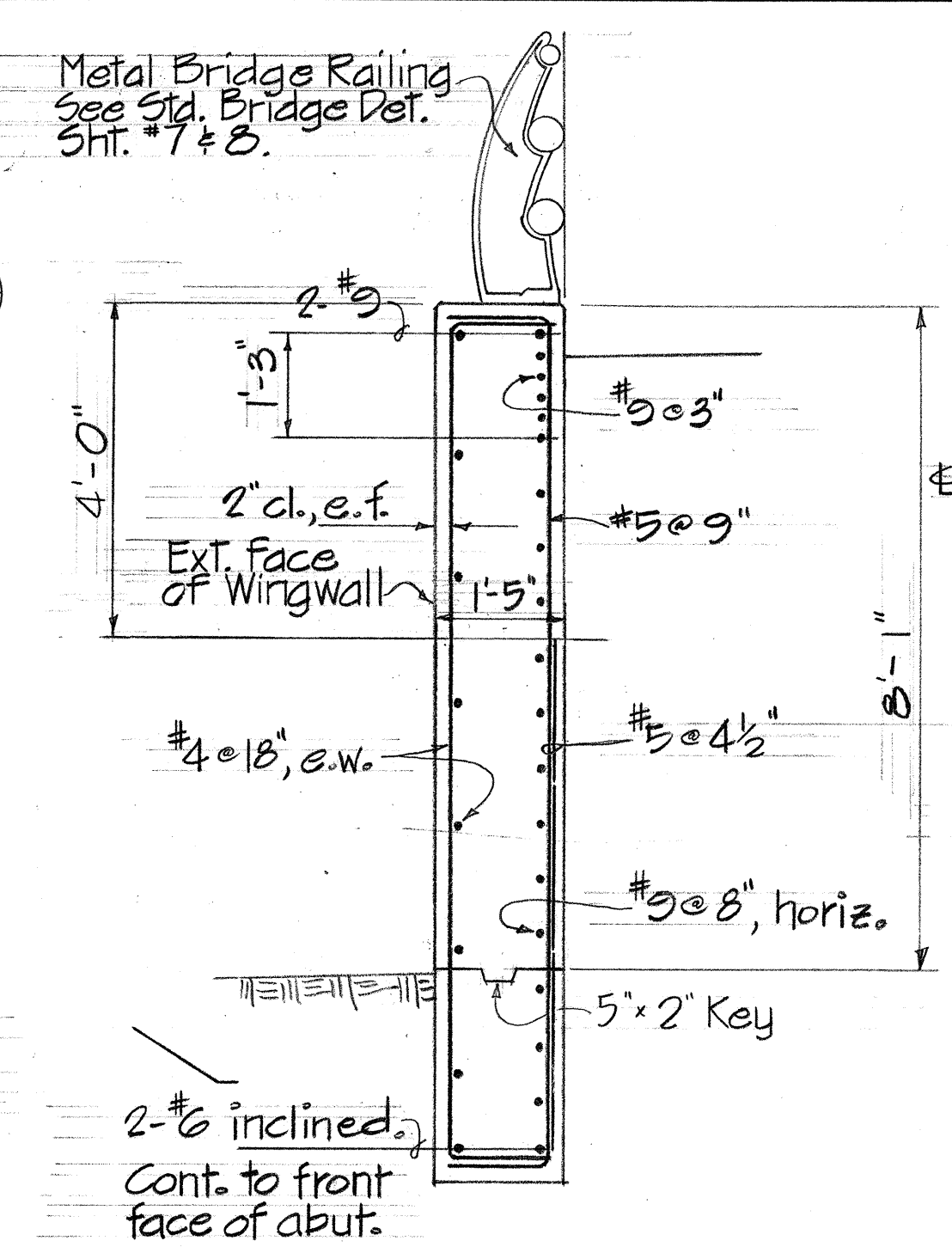
SECT. - ABUT. NO. 1 (A)
Scale: 1/2" = 1'-0"



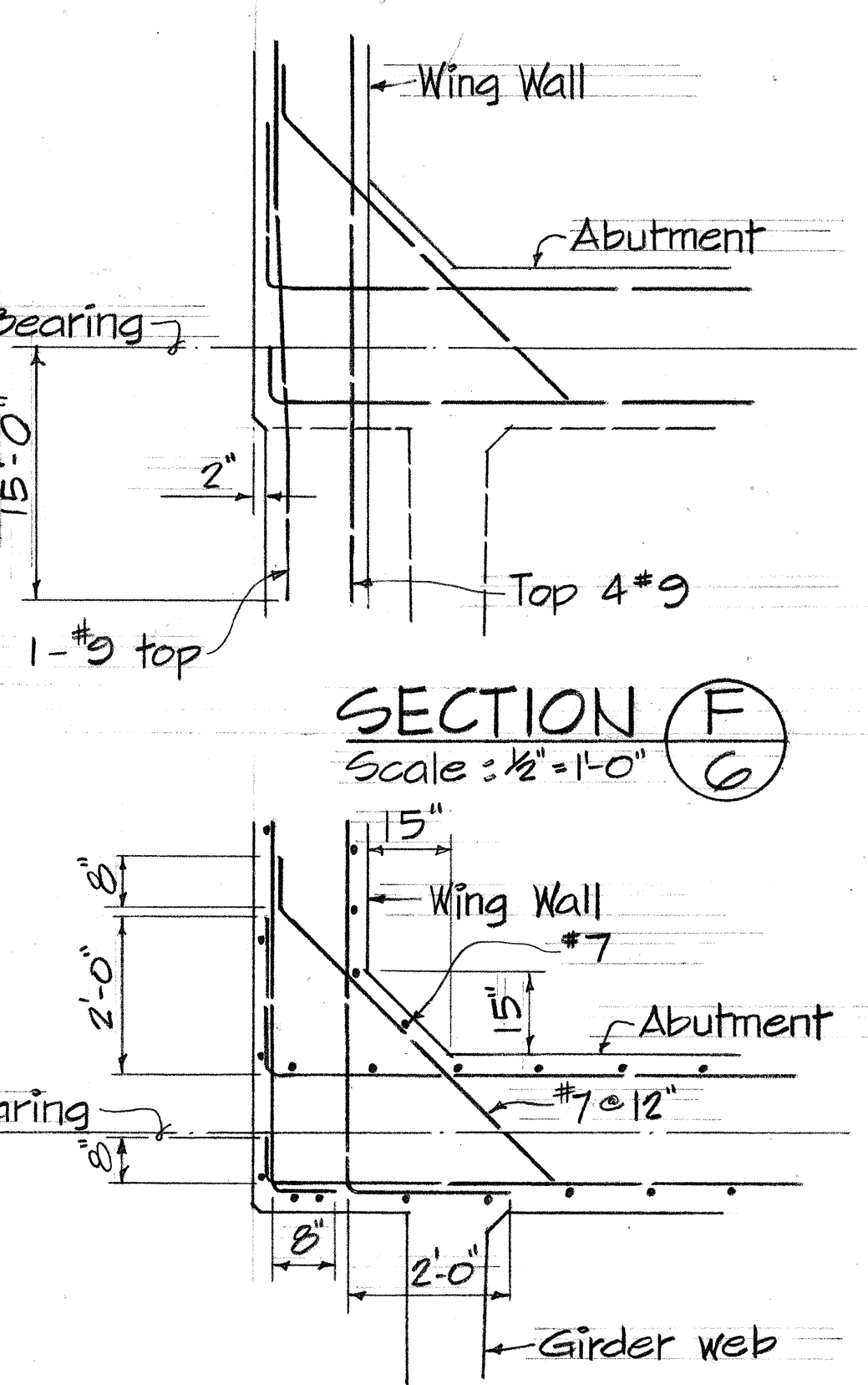
DETAIL (B)
Scale: 3" = 1'-0"



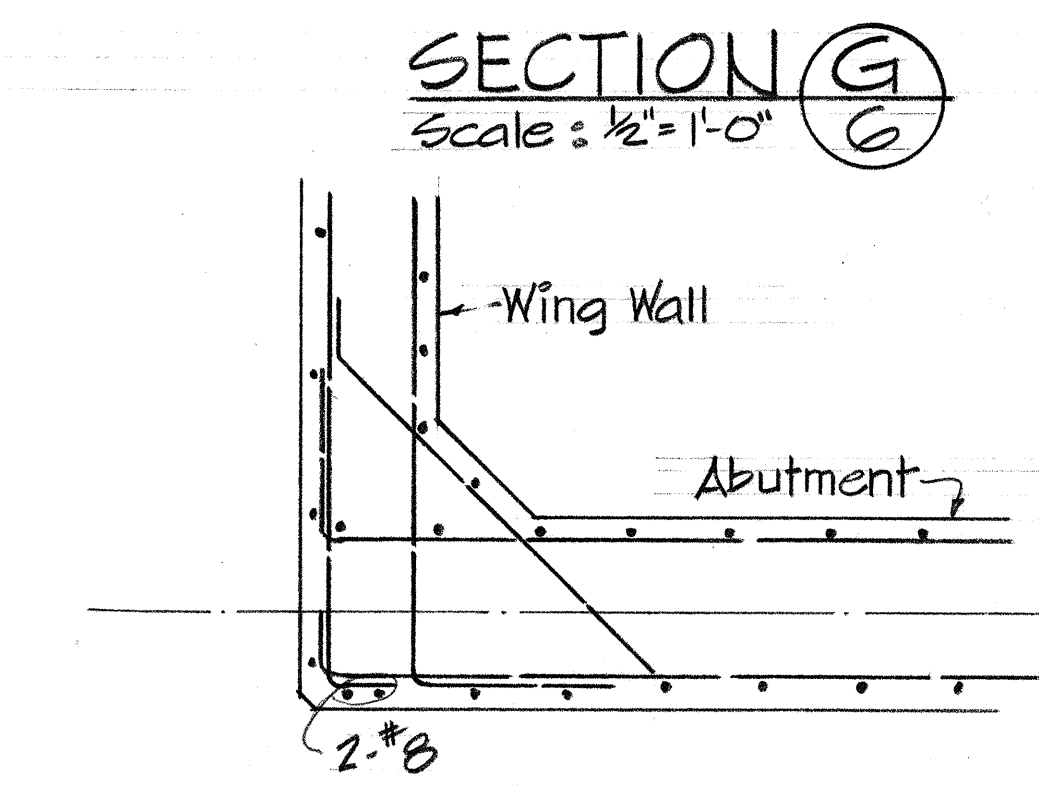
ELEVATION - ABUTMENT NO. 1 (D)
Scale: 1/4" = 1'-0"



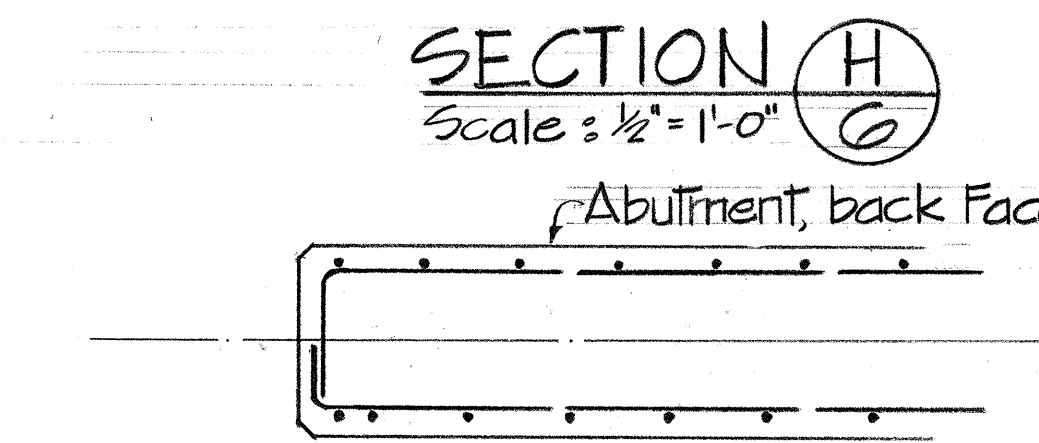
SECTION - WING WALLS #1 & #2 (E)
Scale: 1/2" = 1'-0"



SECTION (F)
Scale: 1/2" = 1'-0"



SECTION (G)
Scale: 1/2" = 1'-0"

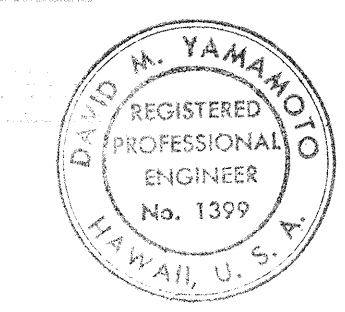


SECTION (H)
Scale: 1/2" = 1'-0"



SECTION (J)
Scale: 1/2" = 1'-0"

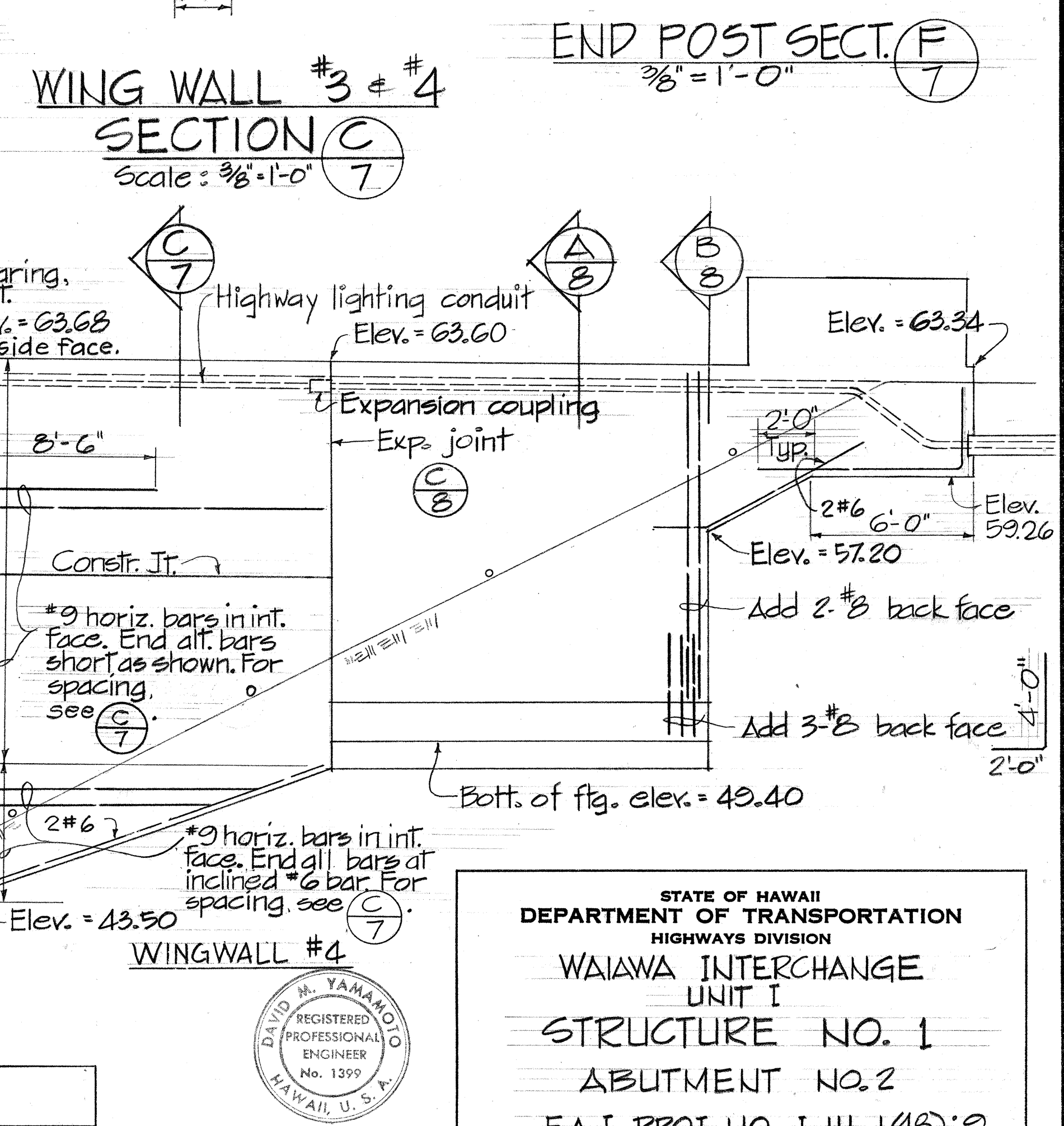
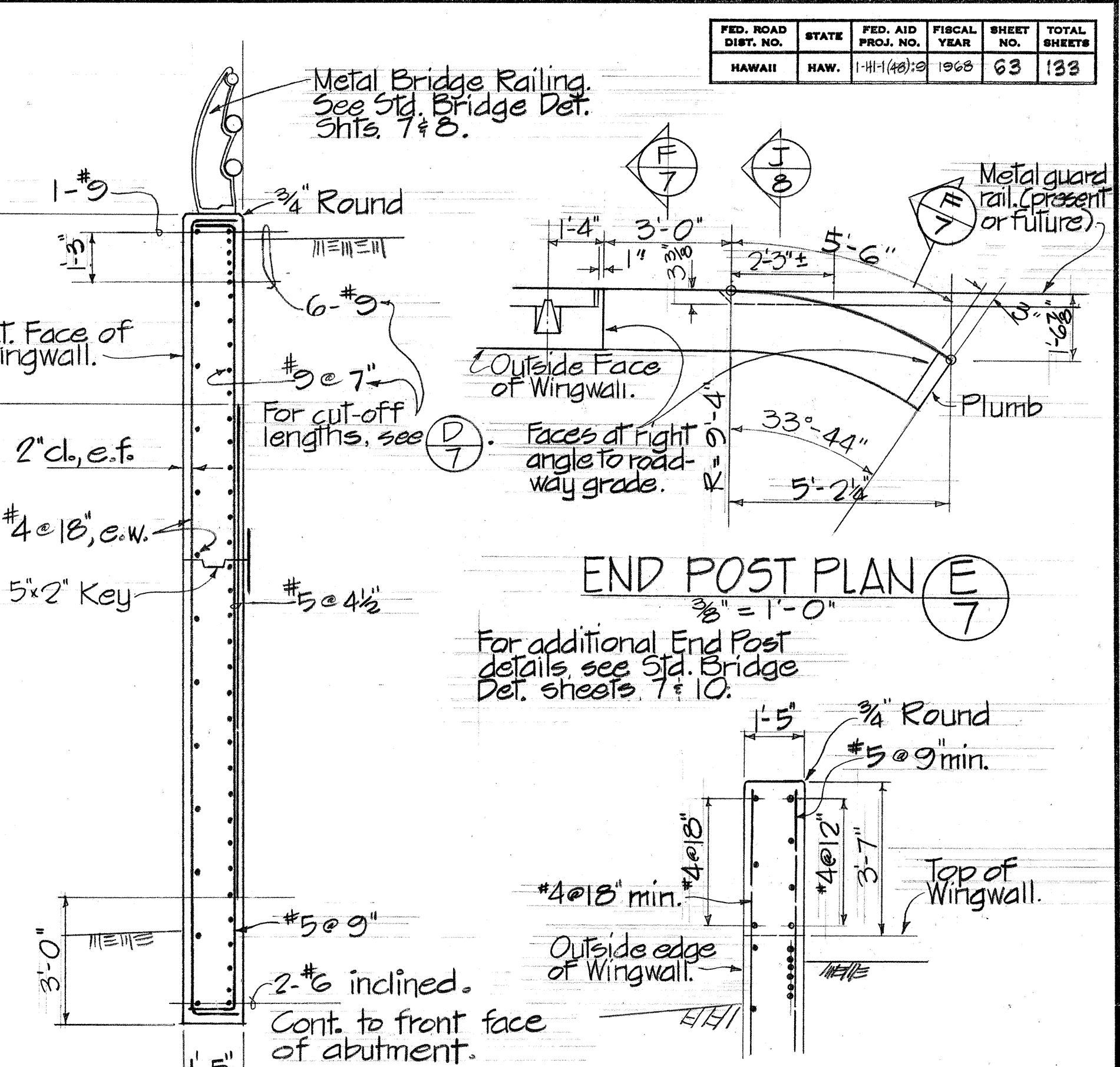
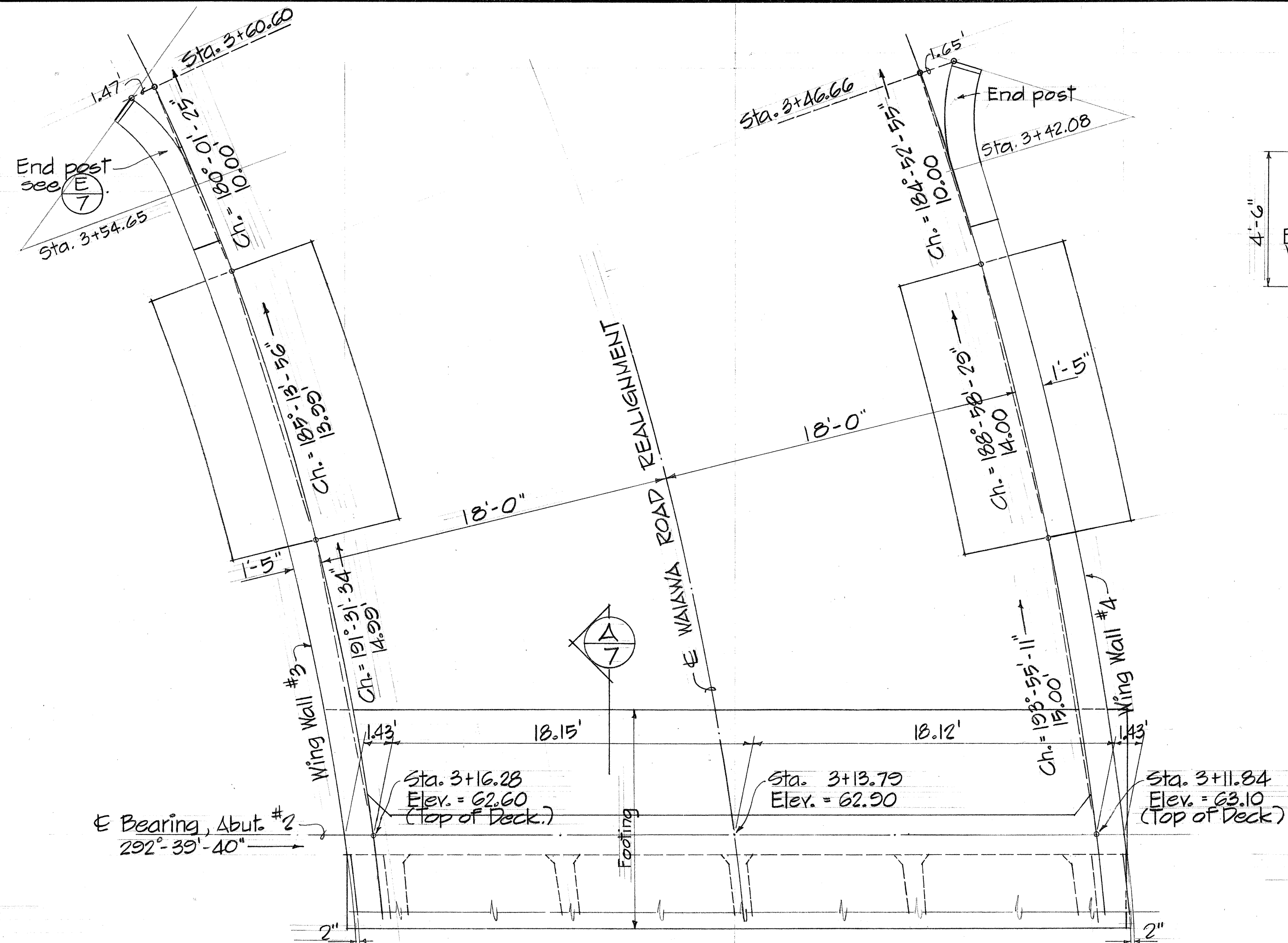
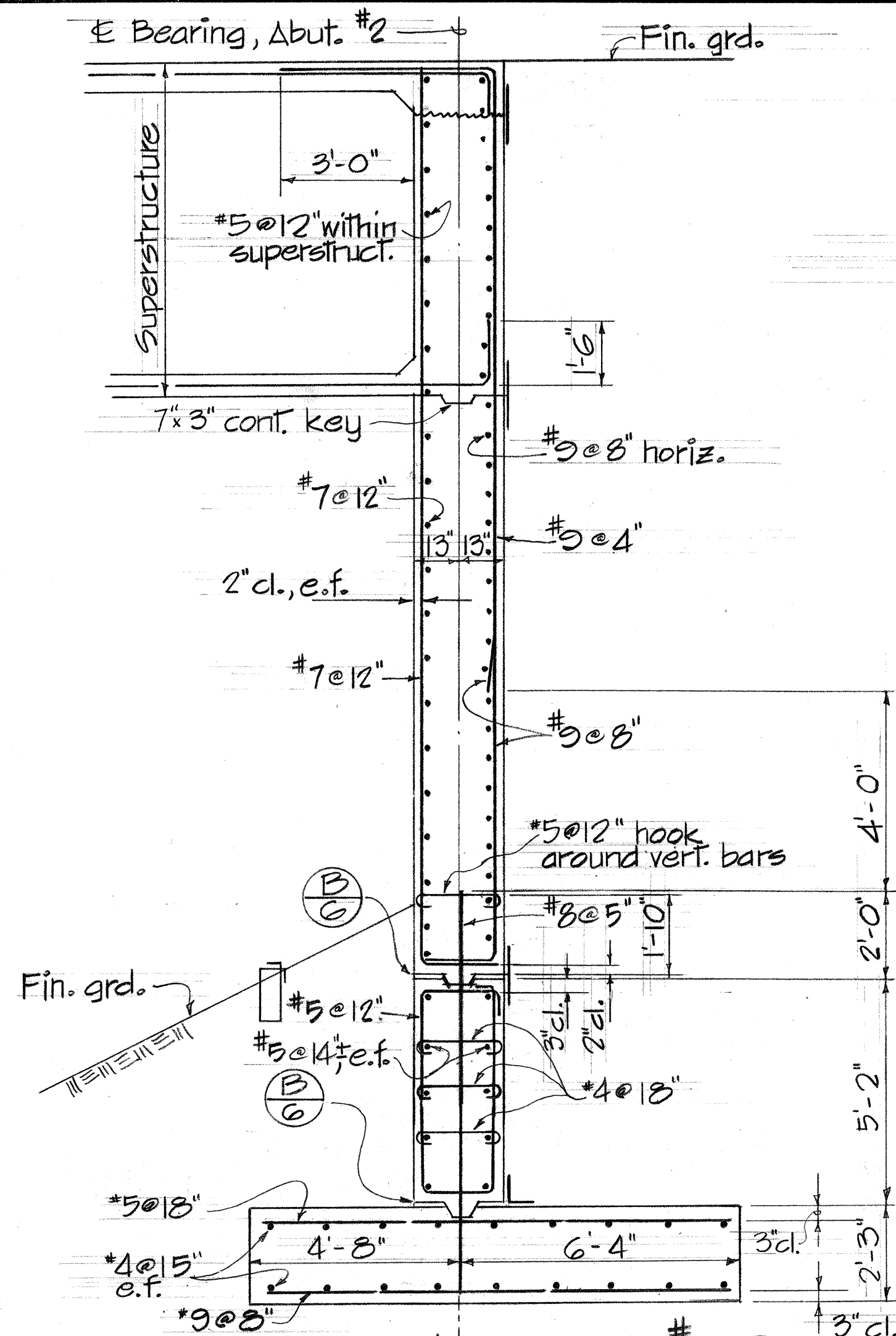
Notes:
1. Abutments shall be braced until backfilling is completed. Backfilling shall be done after the superstructure is completed.
Backfill for Abut's.
#1 & #2 shall be brought up simultaneously to prevent unbalanced earth pressures on the bridge. Check abutments for plumbness.



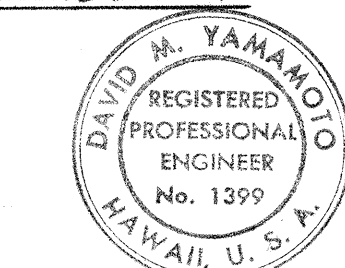
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
WAIWAIA INTERCHANGE
UNIT I
STRUCTURE NO. 1
ABUTMENT NO. 1
F.A.I. PROJ. NO. 1-HI-1(48)2
Scale: As shown Date: Aug. 1968
SHEET No. 6 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-HI-1(48):2	1968	63	133

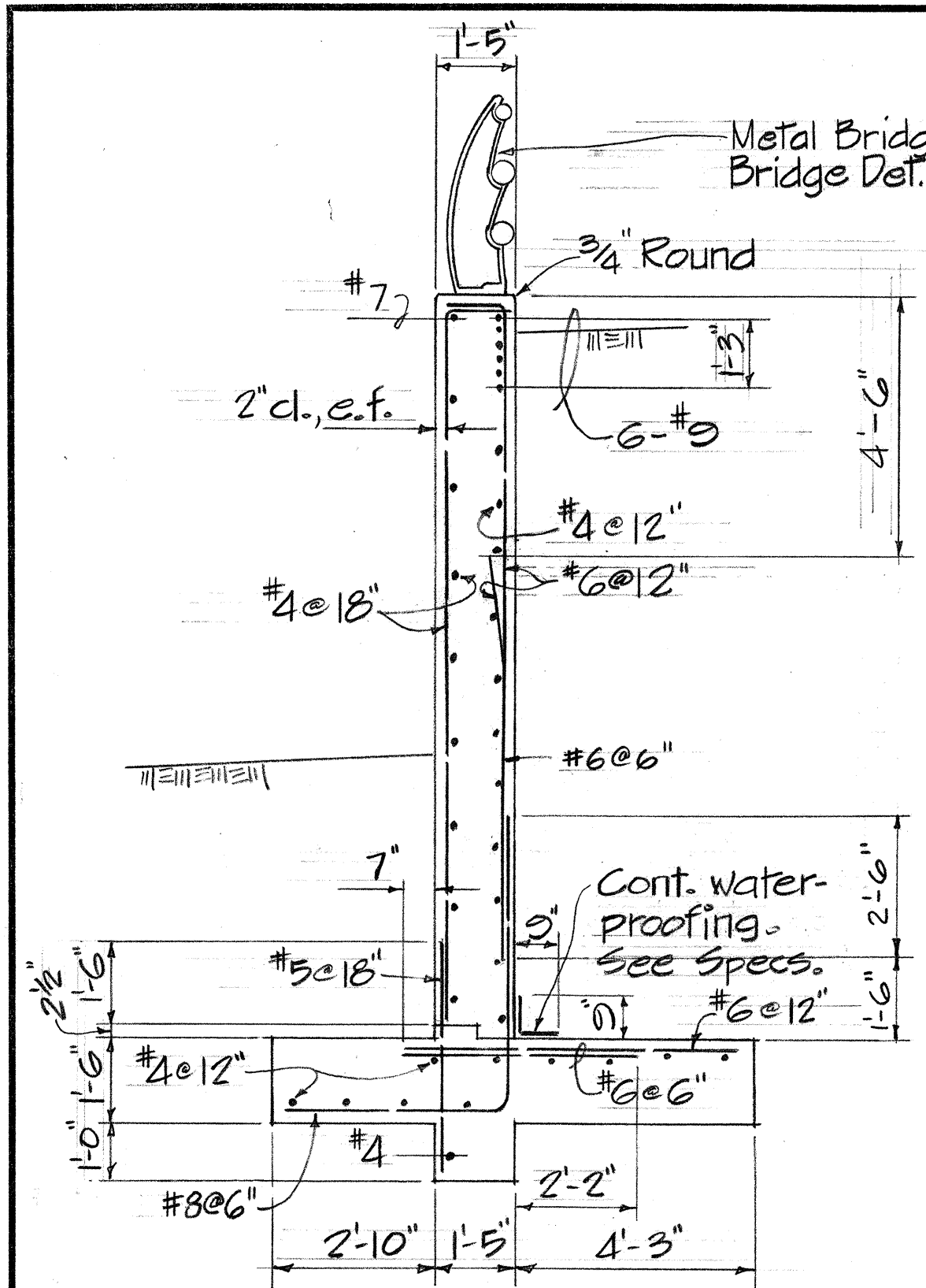


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
WAIANA INTERCHANGE
UNIT I
STRUCTURE NO. 1
ABUTMENT NO. 2
F.A.I. PROJ. NO. I-HI-1(48):2
Scale: As shown Date: Aug. 1968
SHEET No. 7 OF 9 SHEETS

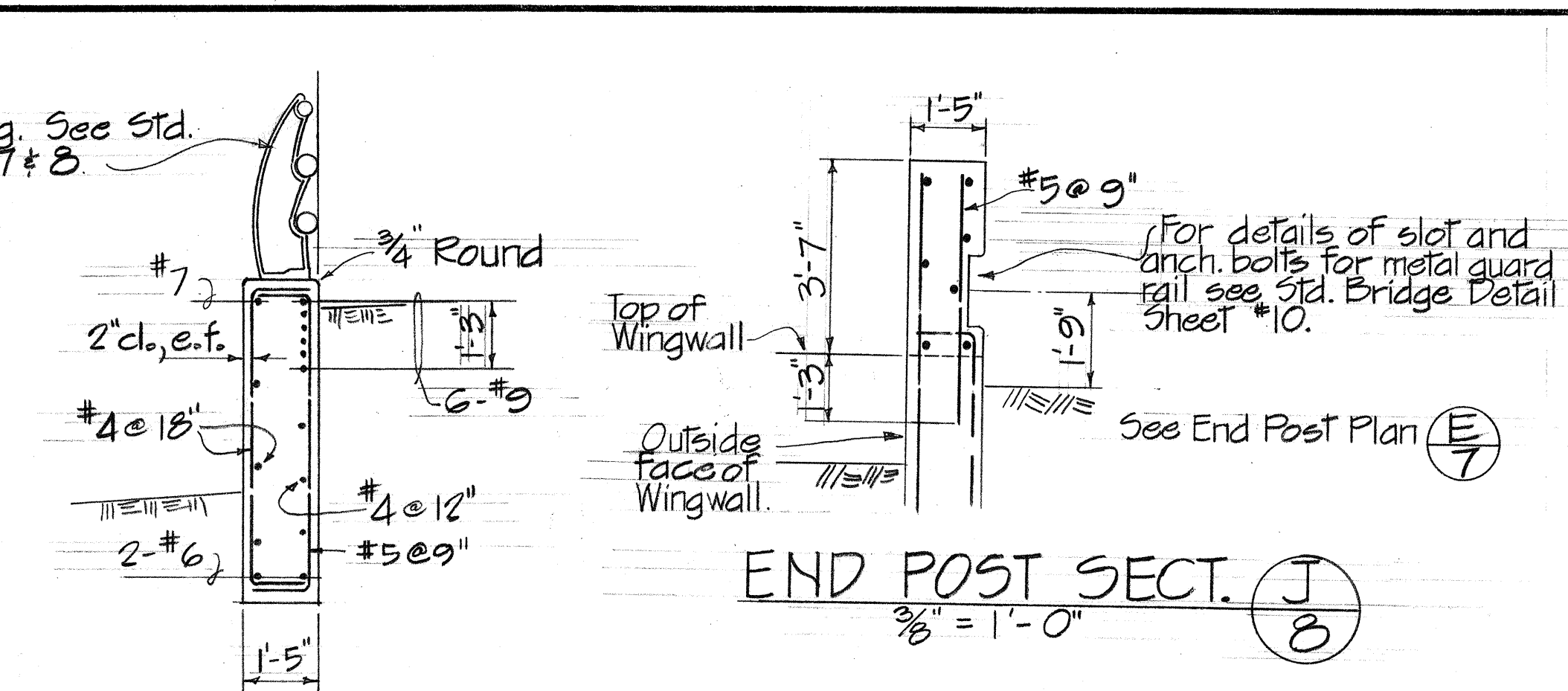


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David M. Yamamoto

ORIGINAL PLAN	DATE
DESIGNED BY	
TRACED BY	
NOTED BY	
CHECKED BY	

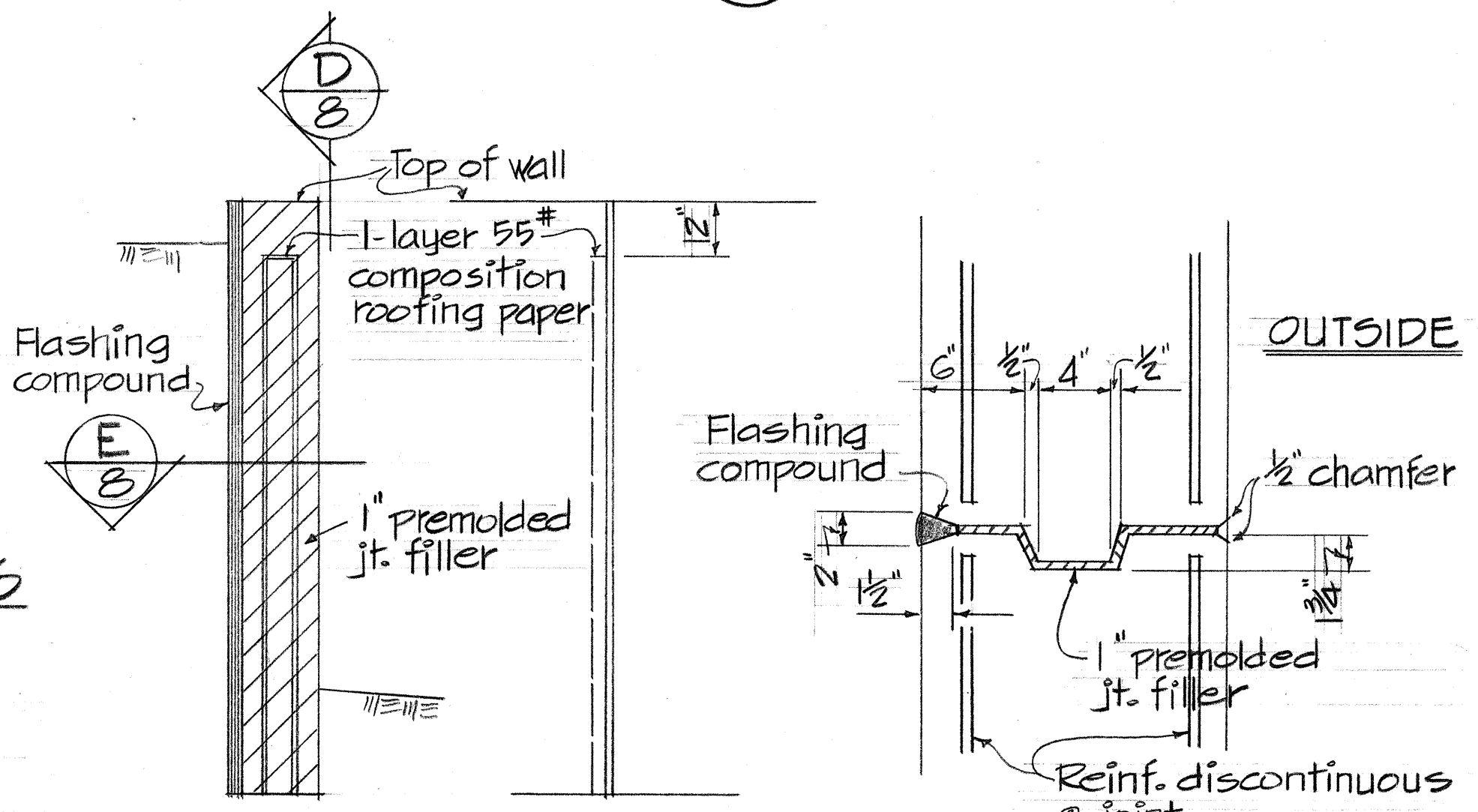


WING WALL #3 & #4 SECT. (A)
Scale: 3/8" = 1'-0"

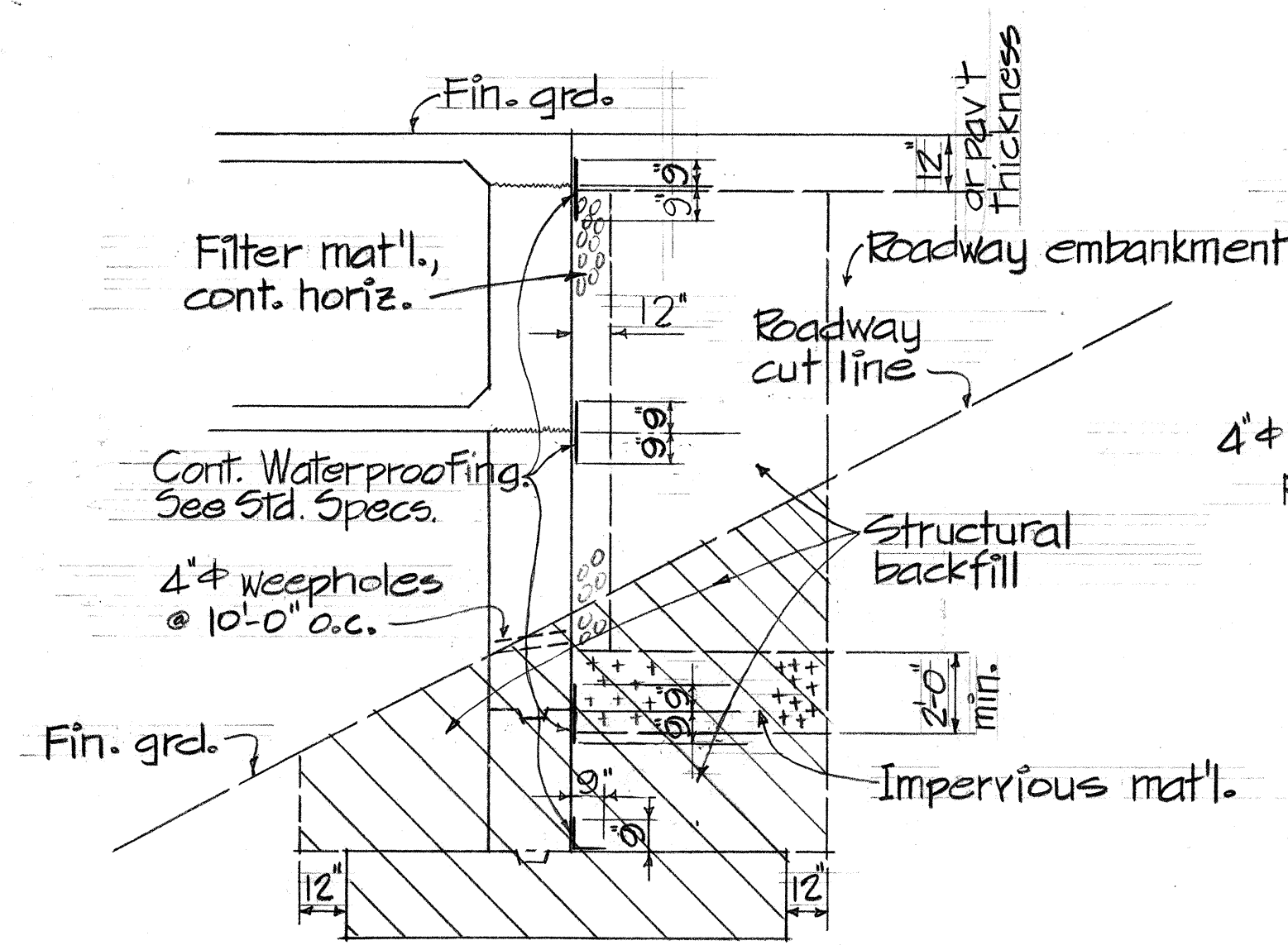


WING WALL #3 & #4 SECT. (B)
Scale: 3/8" = 1'-0"

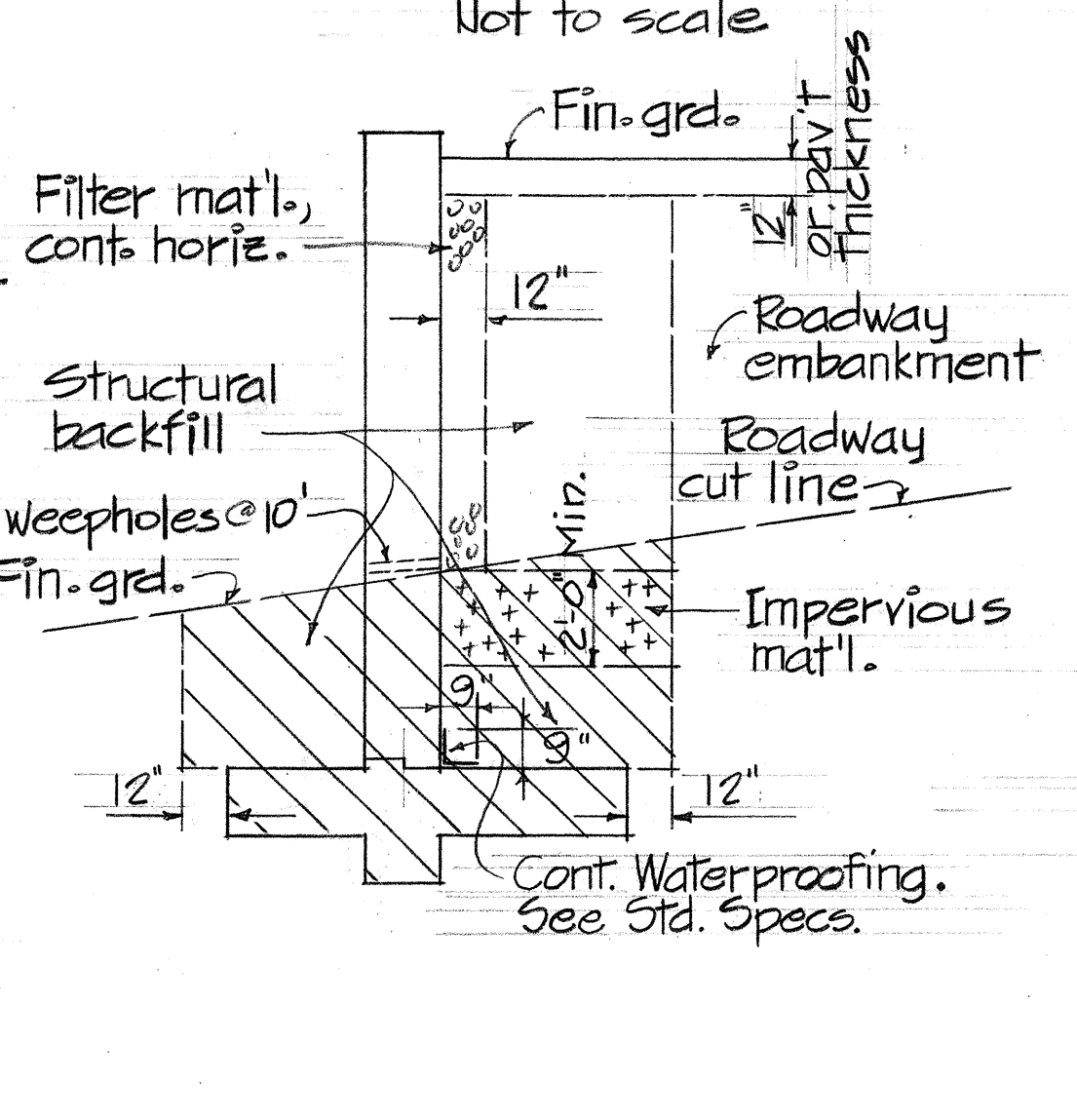
END POST SECT. (J)
3/8" = 1'-0"



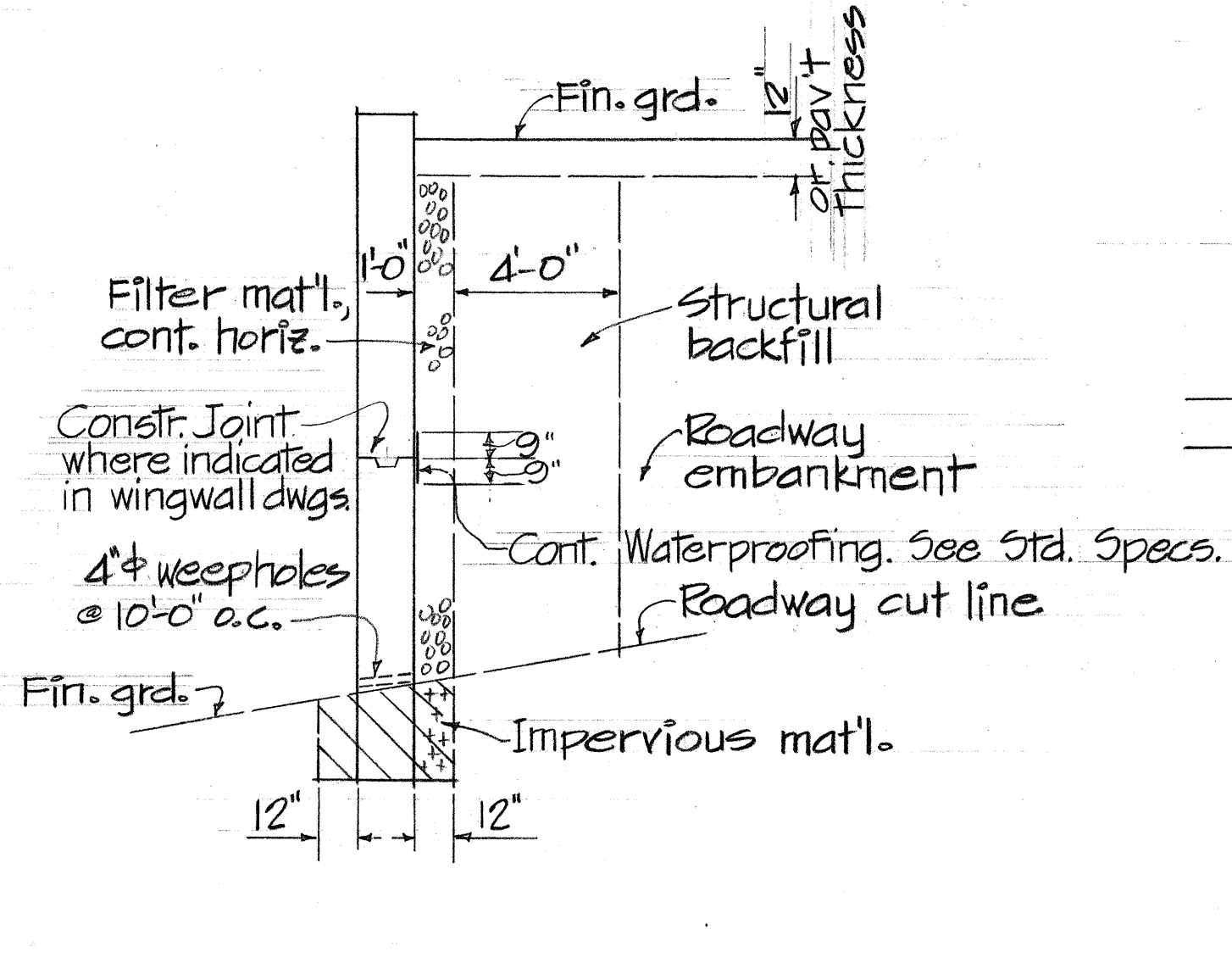
ELEVATION (C) SECT. (D) SECTION (E)
WING WALL EXPANSION JOINT DETAILS
Not to scale



ABUTMENT (F)

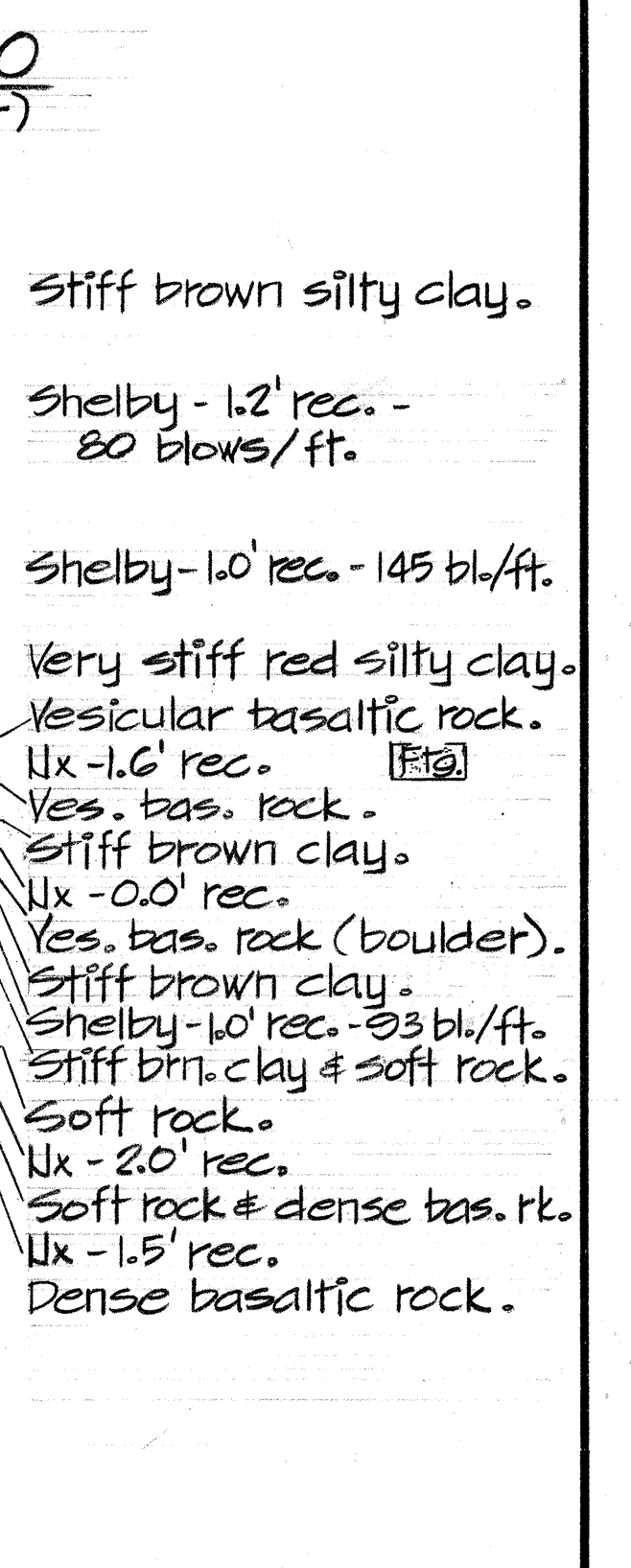
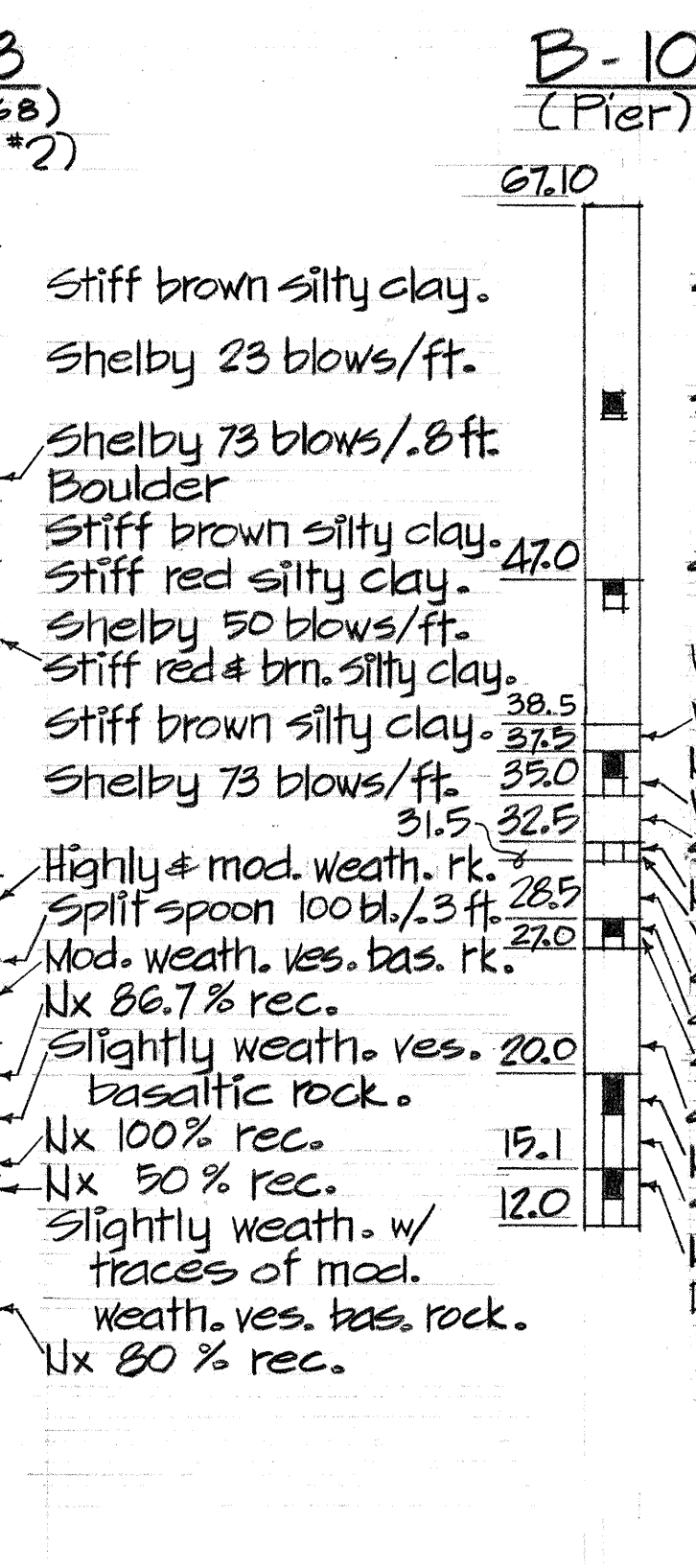
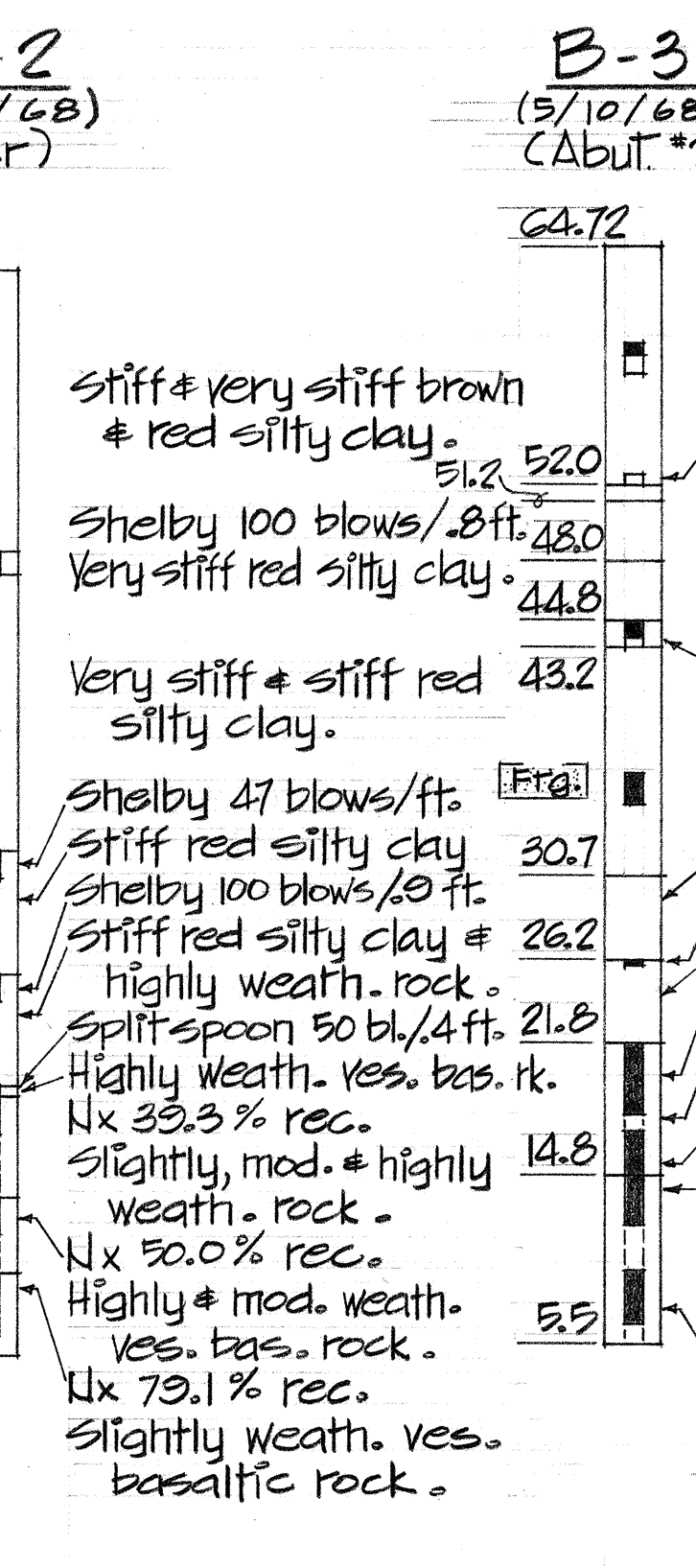
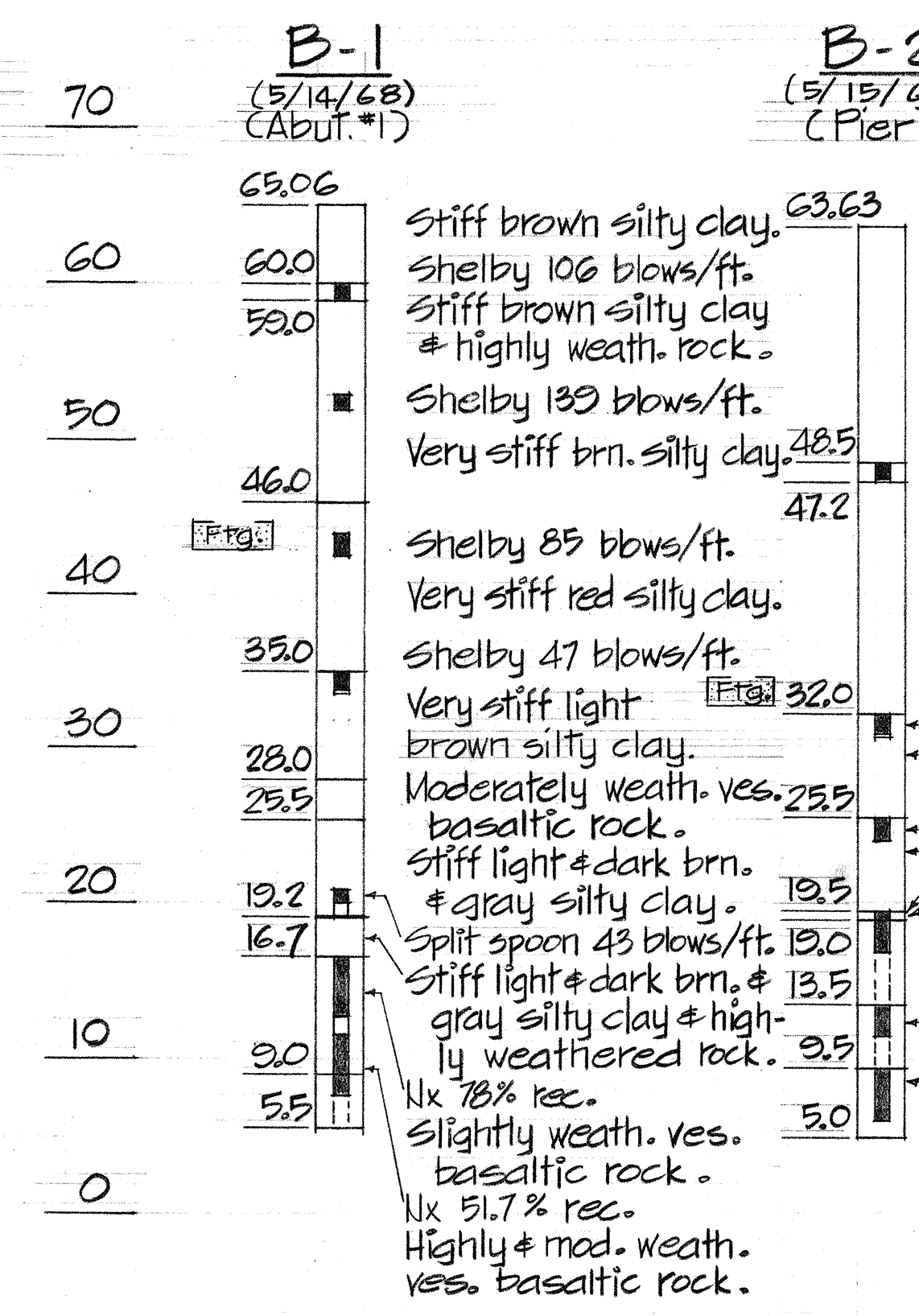


RETAINING WALL (G)

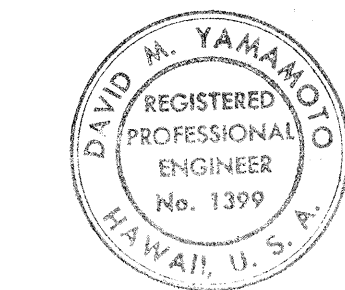
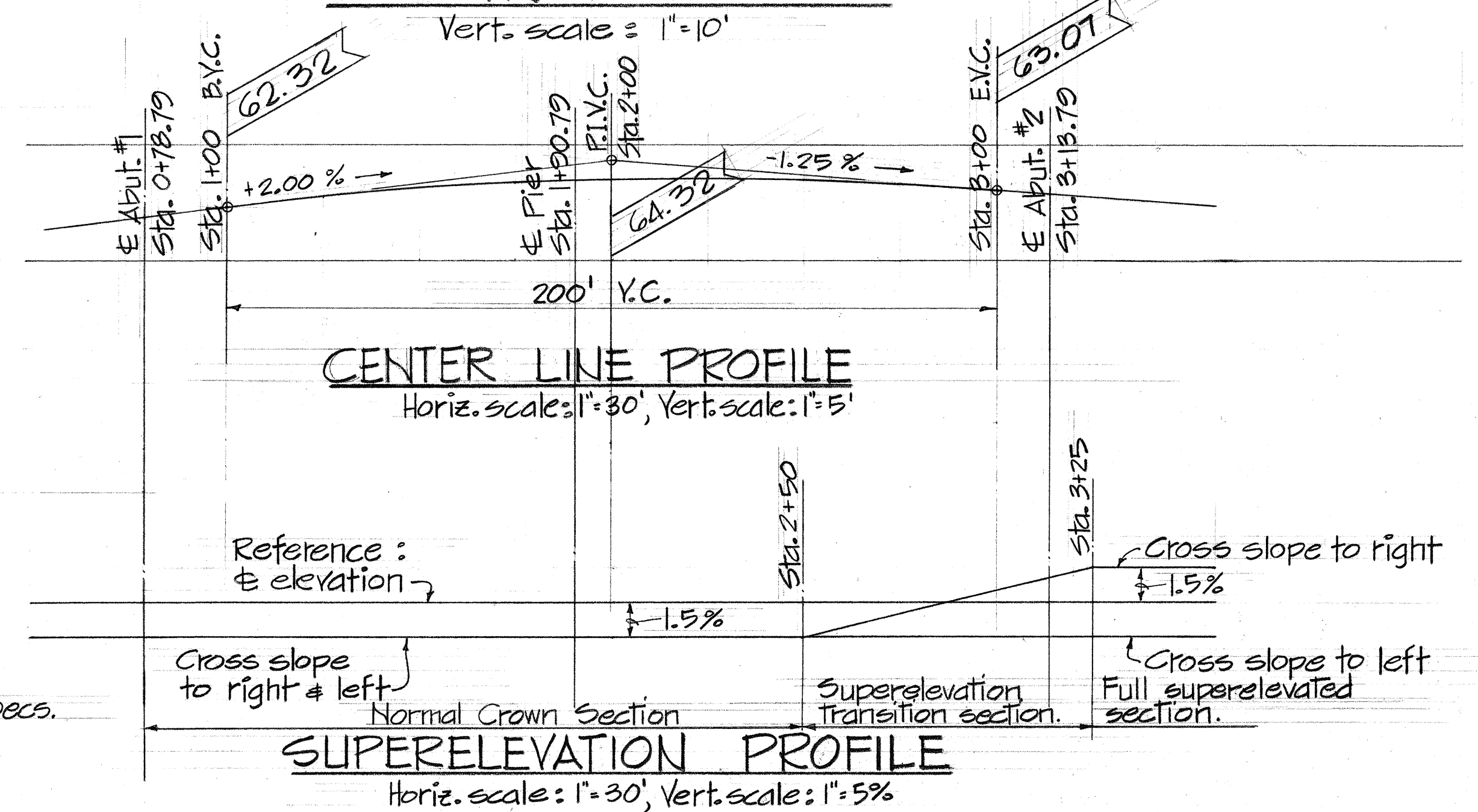


WING WALL (H)

STRUCTURAL EXCAVATION & DRAINAGE DETAILS
Not to scale



BORING LOGS



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
WAIKAWA INTERCHANGE
UNIT I
STRUCTURE NO. 1
ABUTMENT DETAILS, BORING LOGS,
& MISCELLANEOUS DETAILS
F.A.I. PROJ. NO. I-HI-1(48):9
Scale: As shown Date: Aug. 1968
SHEET No. 8 OF 9 SHEETS

DATE: 8-1-68
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
DRAWN BY: [Signature]
ORIGINAL PLAN: [Signature]
NOTE BOOK: [Signature]

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

