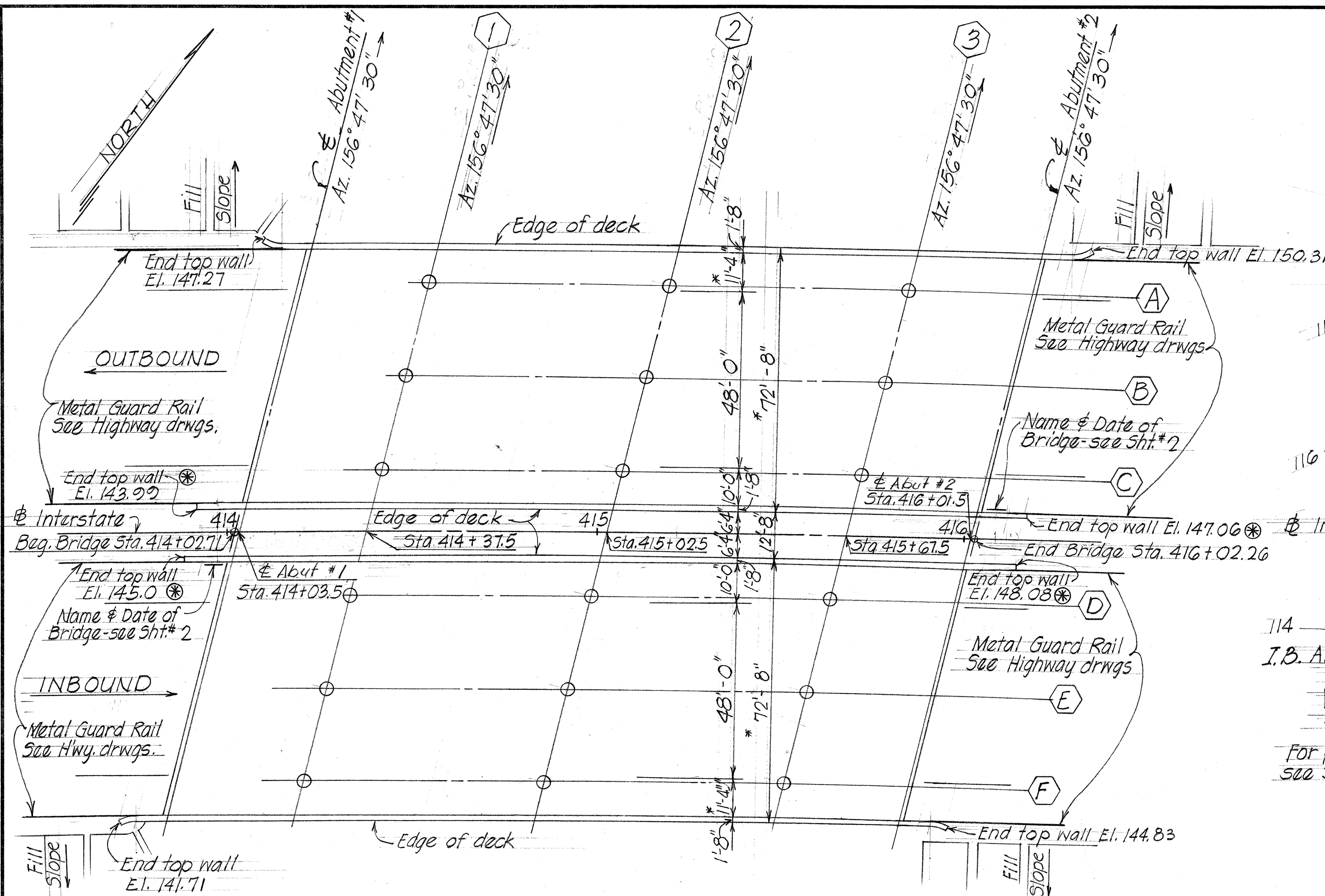


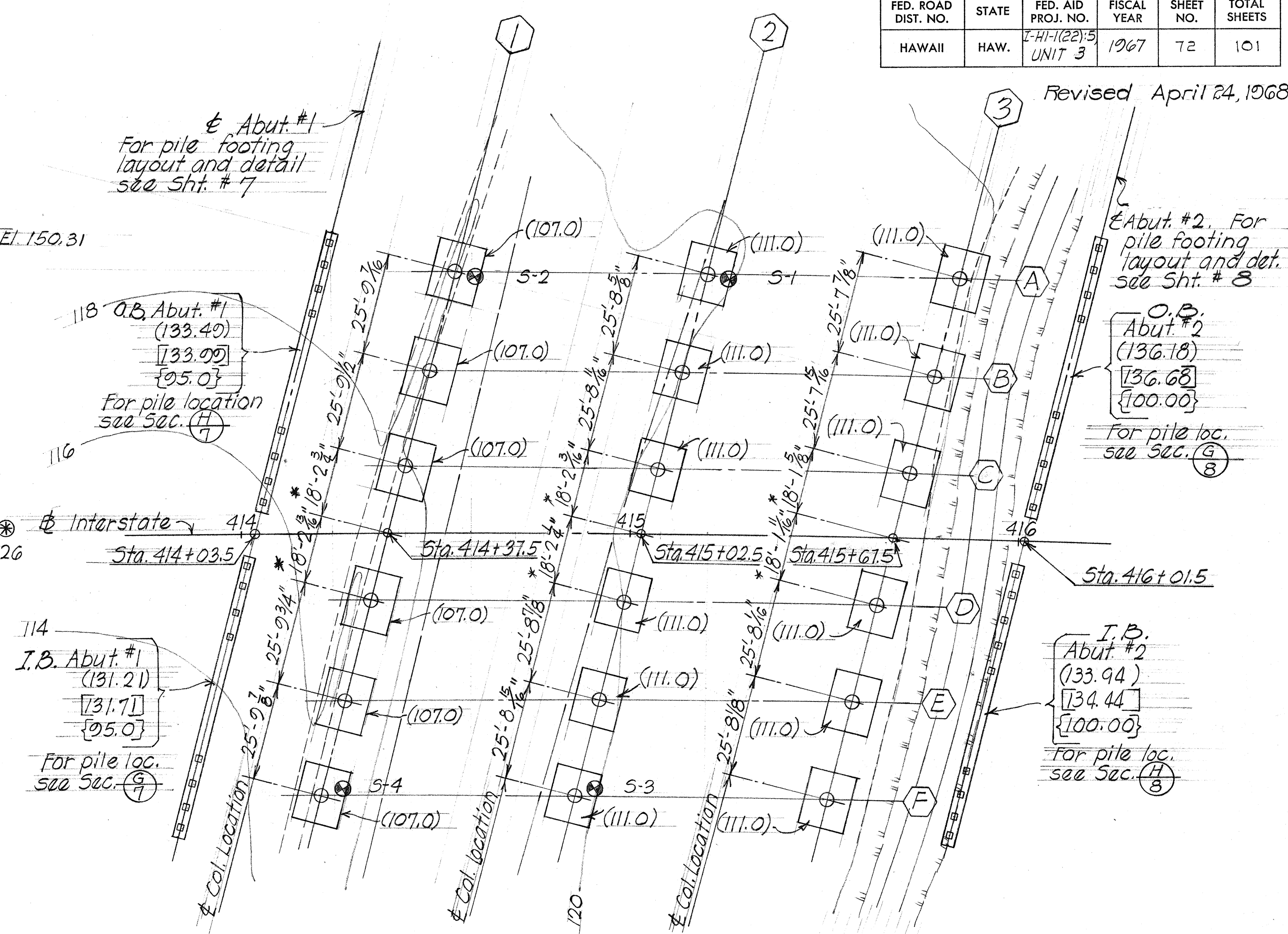
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-41-1(22)5 UNIT 3	1967	72	101

Revised April 24, 1968



LAYOUT PLAN

Scale: 1" = 20'-0"



FOUNDATION PLAN

Scale: 1" = 20'-0"

REFERENCE NOTES:

- For Logs of Borings & General Notes see sht. #2
- For End Details of Median End Post, see Plan Sheet Nos. CO 25.5(1) and CO 25.5(3). Slot for Metal Guard Rail not required.
- See Plan Sheet Nos. 73 and 94 for other End Post Details.

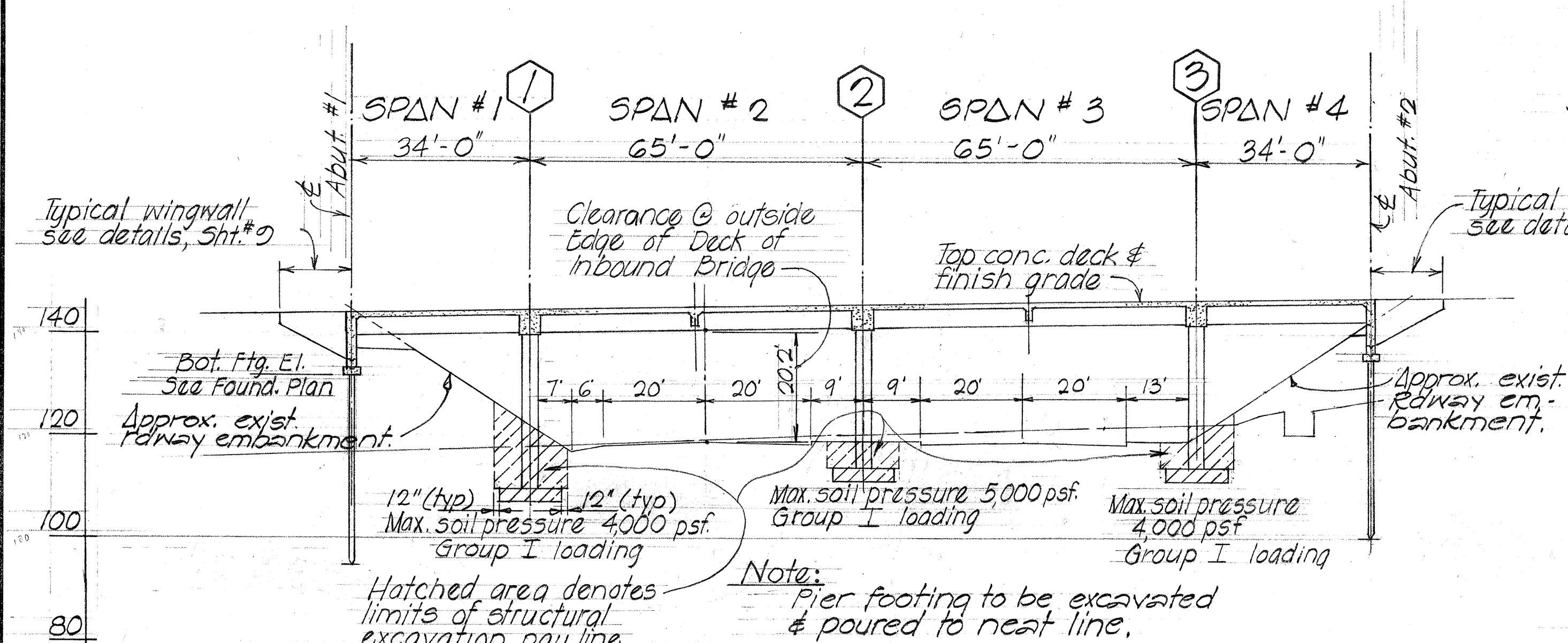
DESIGN NOTES

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges (9th Edition) with subsequent additions & modifications.
DESIGN LOADS: HS-20-44 OR INTERSTATE LOADING.
DESIGN STRESSES:
I.R.C. Beams & Slabs
See AASHTO specifications except as otherwise noted and see special provisions. Class A1 Class E-1
f'c = 3,000 psi 4,500 psi
f'c = 1,200 psi 1,800 psi
n = 10 8
fs = 20,000 psi tension

2. Pile Capacity : 32 tons

ESTIMATED QUANTITIES

Concrete	- Lump Sum	(2,516 cu. yd.)
Reinforcing Steel	- Lump Sum	(605,500 lbs)
Prestressed Concrete Piles Type I		1,882 lin. ft.
Metal Bridge Railing (I-Rail Traffic Type)		903 lin. ft.
Concrete Bridge Railing (I-Rail Traffic Type)		908 lin. ft.
Structural Excavation		2,732 cu. yd.
Filter Material		57 cu. yd.



TYPICAL LONGITUDINAL SECTION ALONG INBOUND OR OUTBOUND BRIDGES

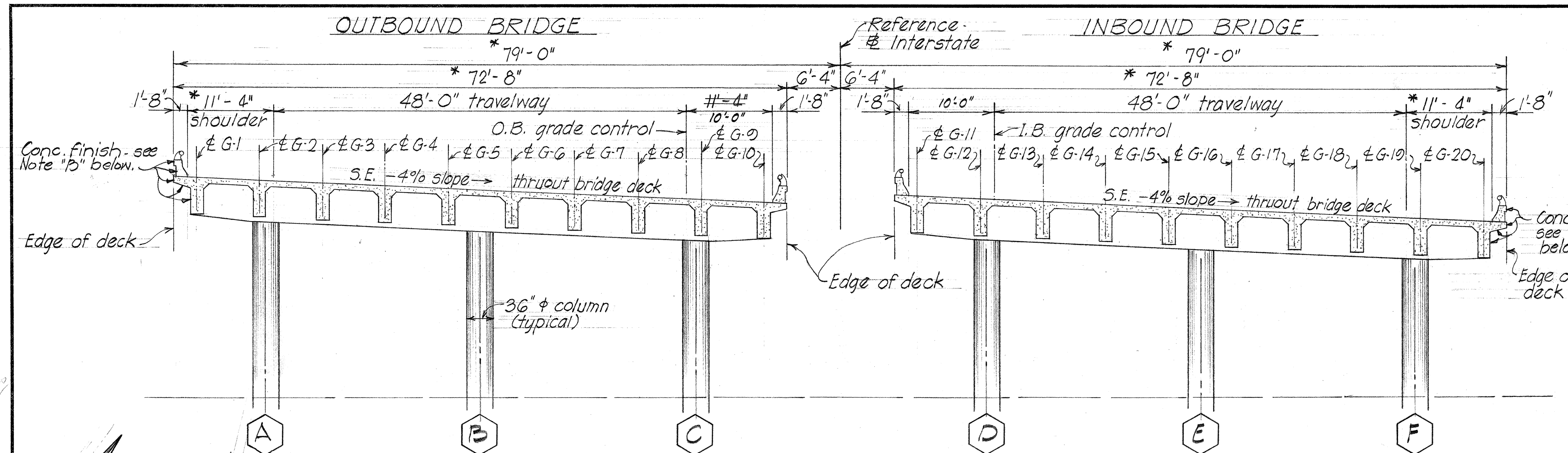
Scale: 1" = 20'-0"

THIS SHEET SUPERSEDES SHEET NO. 72

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURE NO. 414
LAYOUT PLAN
Sta. 414+02.71 TO Sta. 416+02.26
INTERSTATE ROUTE H-1
F.A.I. Proj. No. I-41-1(22)5, Unit 3
Date: Dec. 1967
SHEET No. 7 OF 9 SHEETS

CO 72

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(22)-5 UNIT 3	1967	73	101

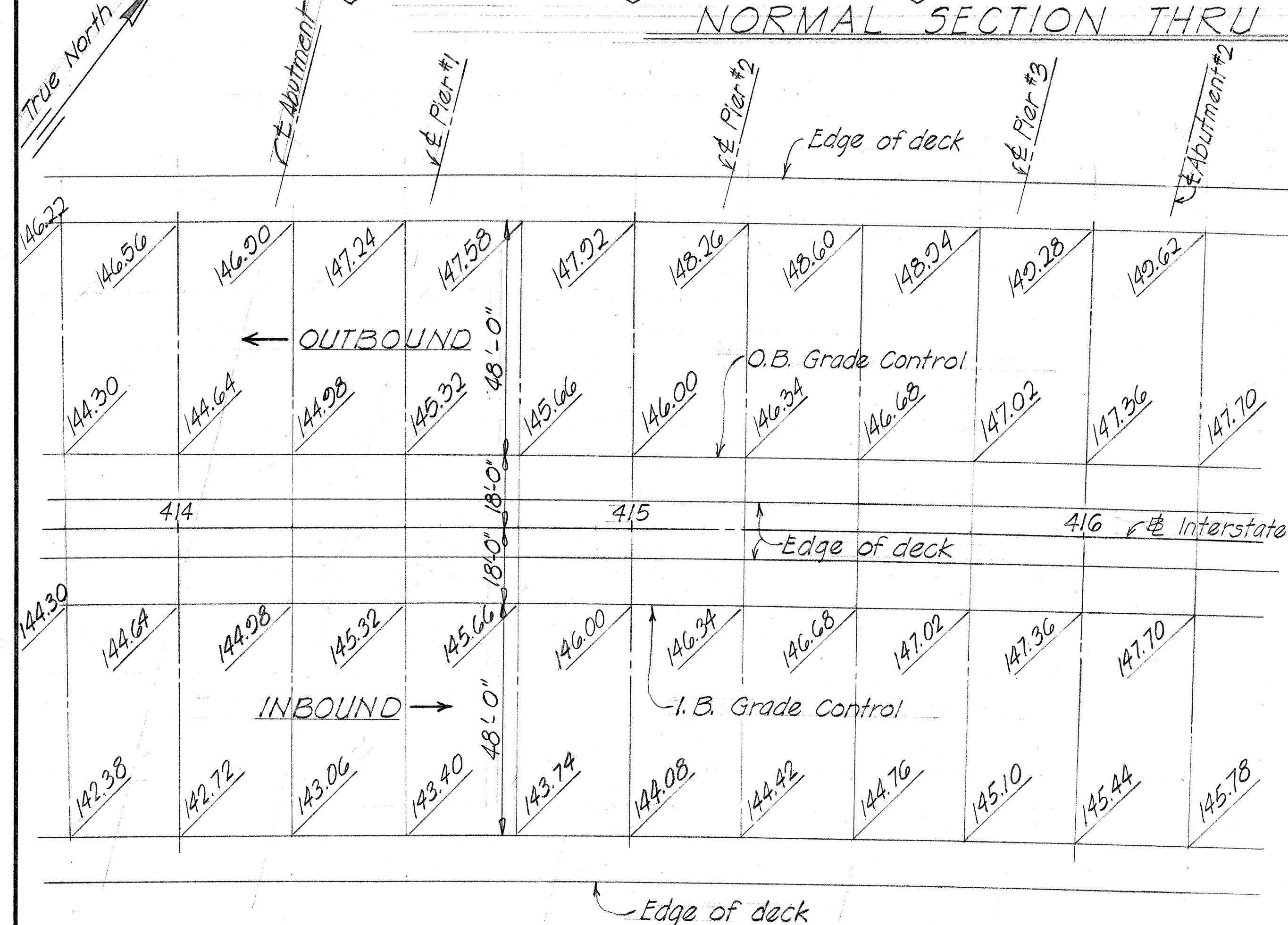


NORMAL SECTION THRU VIADUCT Scale: 1/8" = 1'-0"

Note "B": Class I surface finish see Sect. 46.3(0) (2) of Special Provisions.

GENERAL NOTES

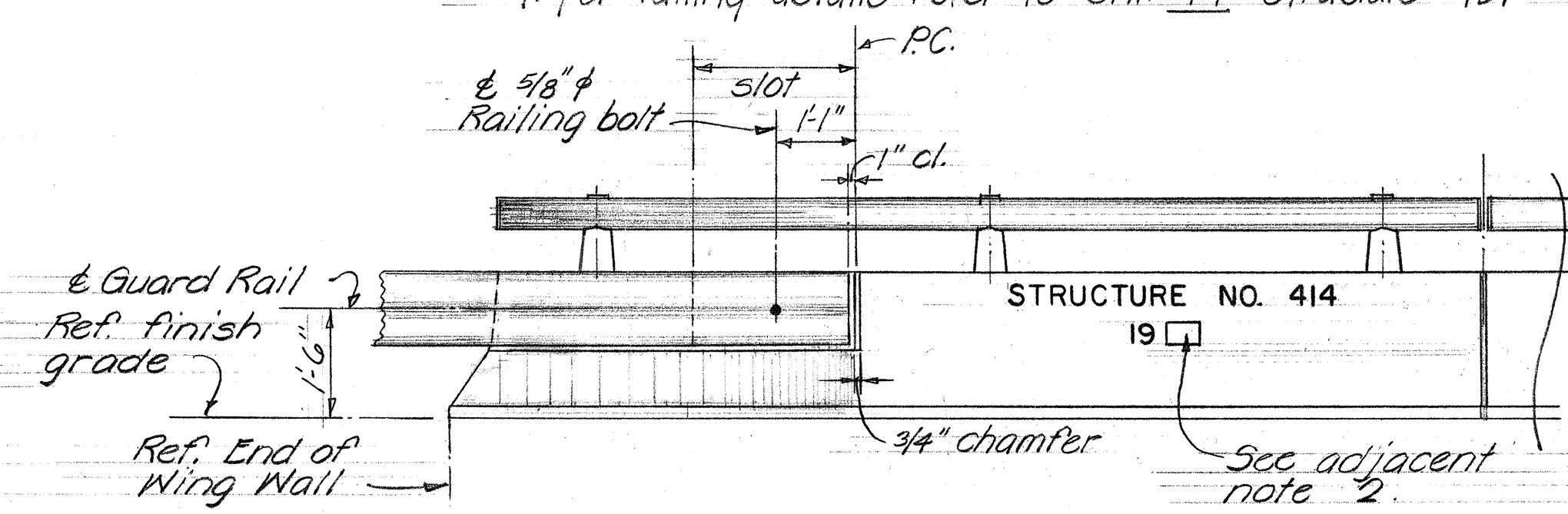
- MATERIALS:**
- All concrete shall be Class A-1 except as otherwise noted on plans.
 - See Special Provisions for admixture in concrete.
 - All piles to be prestressed concrete piles Type I-see Standard Details, sht. 53.
 - All reinforcing steel to be ASTM Designation A-15 Billet Steel, intermediate grade except as otherwise noted.
- CONSTRUCTION METHODS:**
- See Standard Specifications and Special Provisions.
 - The Contractor shall verify the location of all existing utility lines and notify the respective owners before commencing work of excavation or pile driving.
 - For concrete finish see Special Provisions & as noted.
 - Concrete deck girders & beams to be poured monolithically.
 - In general, top & edge of concrete deck & girder of superstructure shall be constructed to follow the finish roadway vertical & horizontal curves & grades.
- REFERENCES:**
- Refer to Standard Detailed Drawing Shts. 5.1 thru 5.3 inclusive, for details not covered by these drawings.
 - For deck slab camber diagram refer to sht. #4.
 - For symbols and abbreviations refer to sht. #3 Structure #451.
 - For railing details refer to Sht. #14 Structure #451.



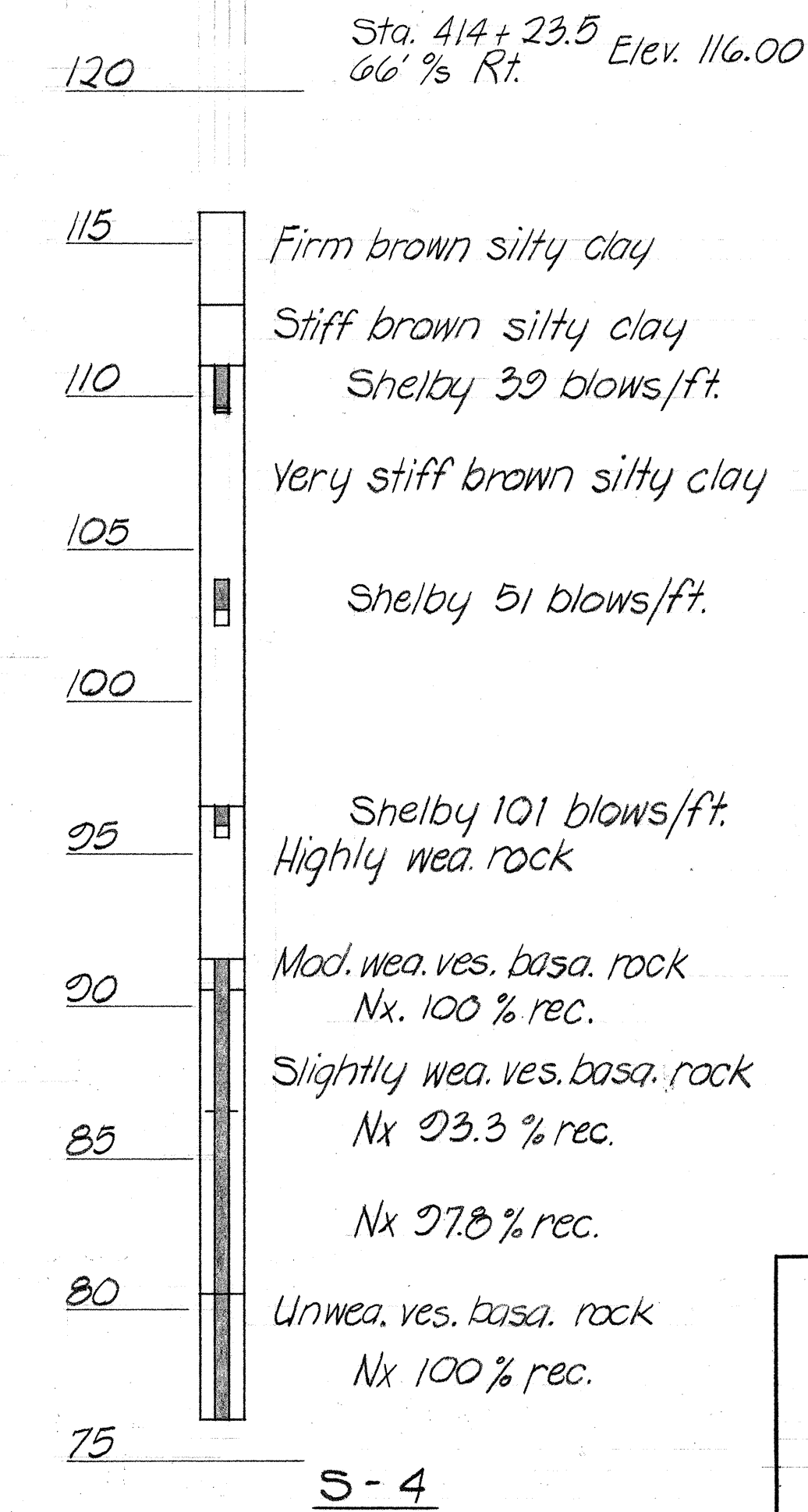
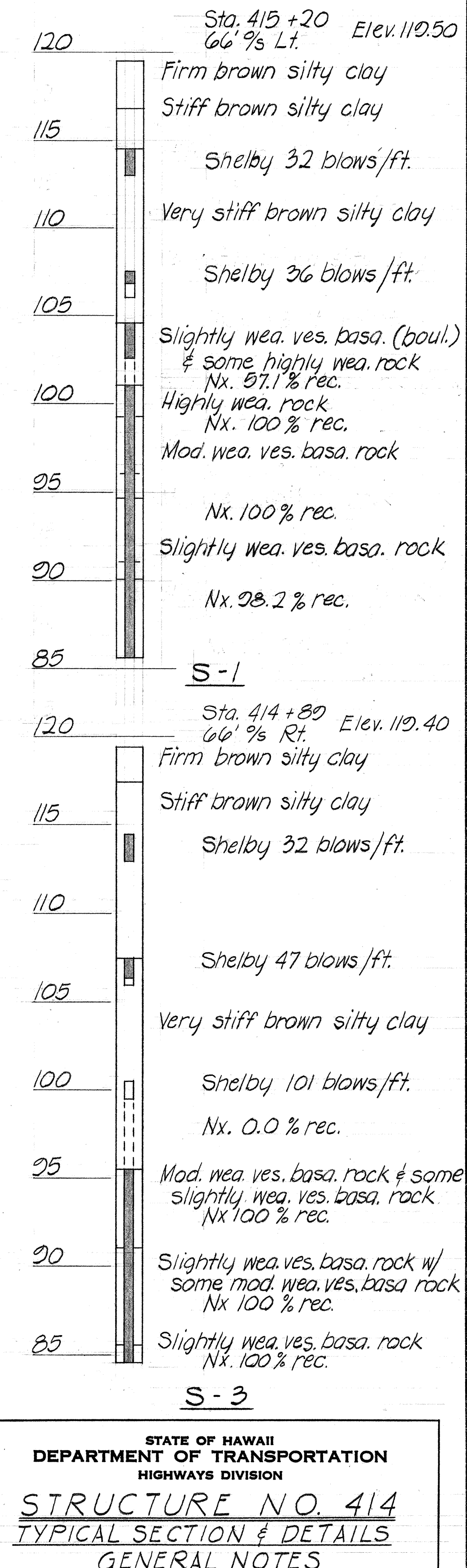
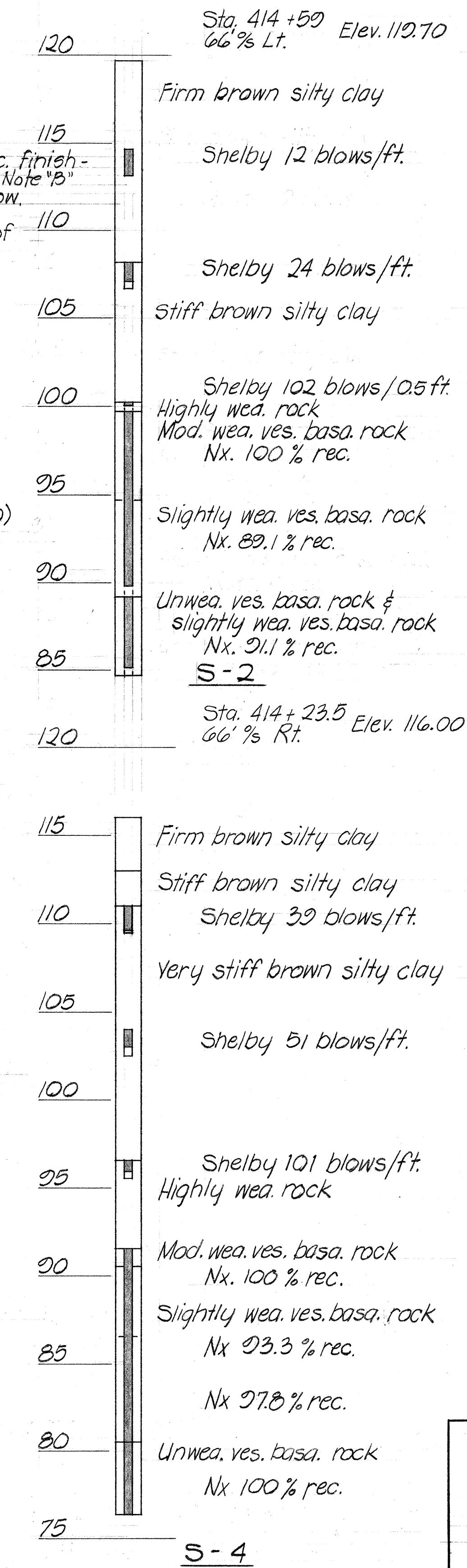
DECK FINISH GRID GRADES

Scale: 1" = 20'-0"

- NOTE:**
- Place name of structure as shown. For location see Plan Abut. #1 & #2, sht. #1.
 - Year shown will be year structure is completed.
 - Letter size and detail, see Standard Bridge Details, sht. #5-1.



TYPICAL BRIDGE NAME AND YEAR LOCATION AT END POST Scale: 1/2" = 1'-0"



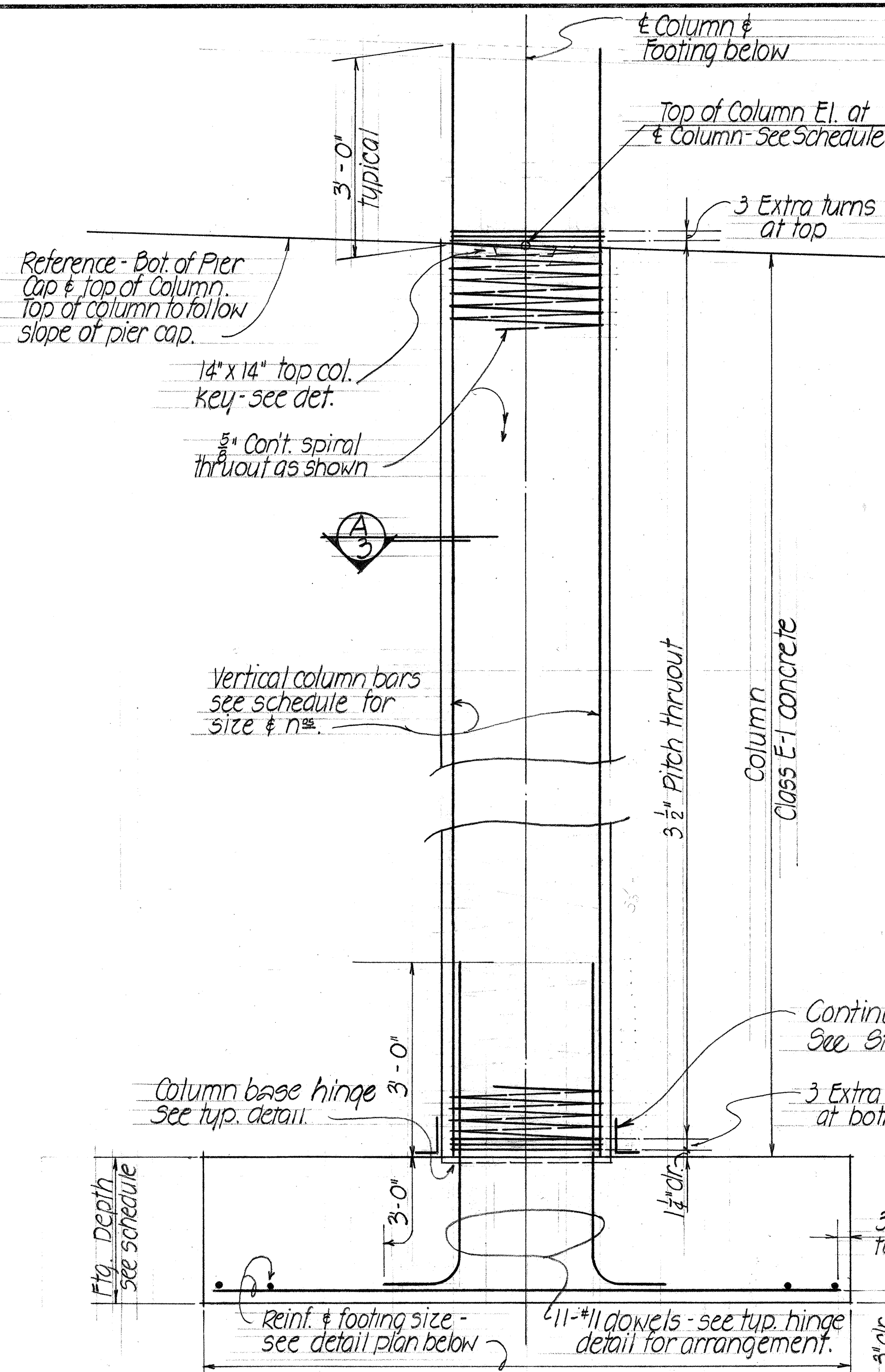
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE NO. 414
TYPICAL SECTION & DETAILS
GENERAL NOTES

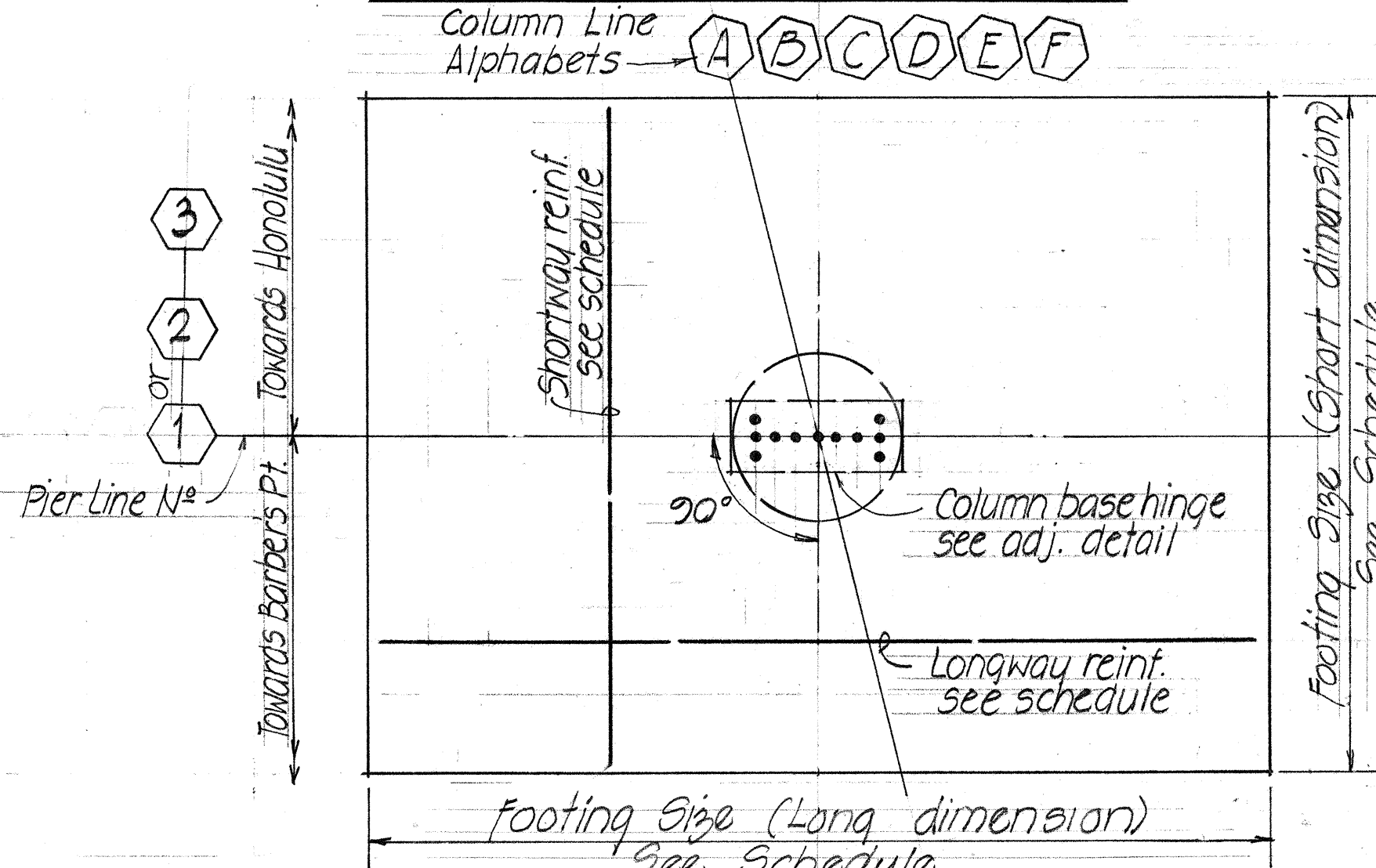
STA. 414+02.71 TO STA. 416+02.26
INTERSTATE ROUTE H-1
F.A.I. Proj. No. I-HI-1(22)-5, Unit 3
Date: Dec. 1967

SHEET No. 2 OF 3 SHEETS

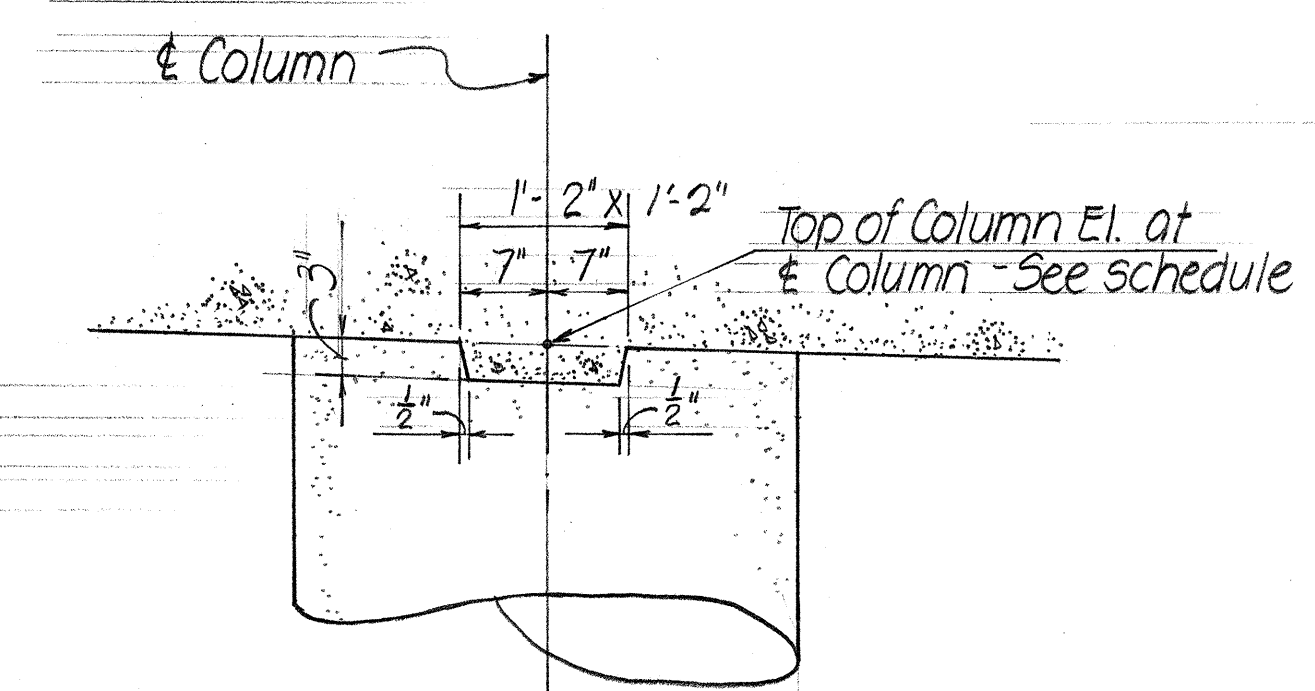
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(22)-5 UNIT 3	1967	74	101



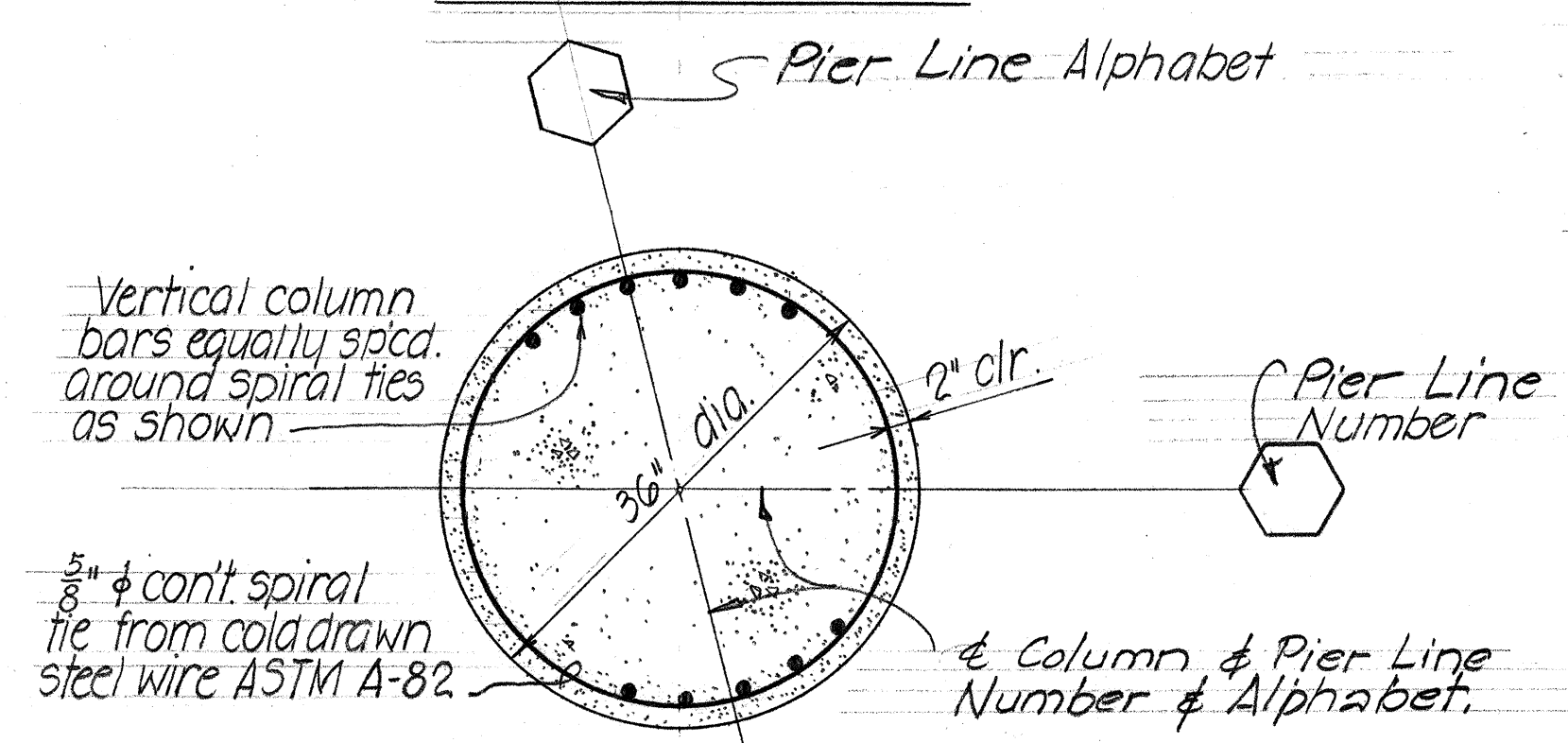
TYPICAL PIER DETAIL NOT TO SCALE



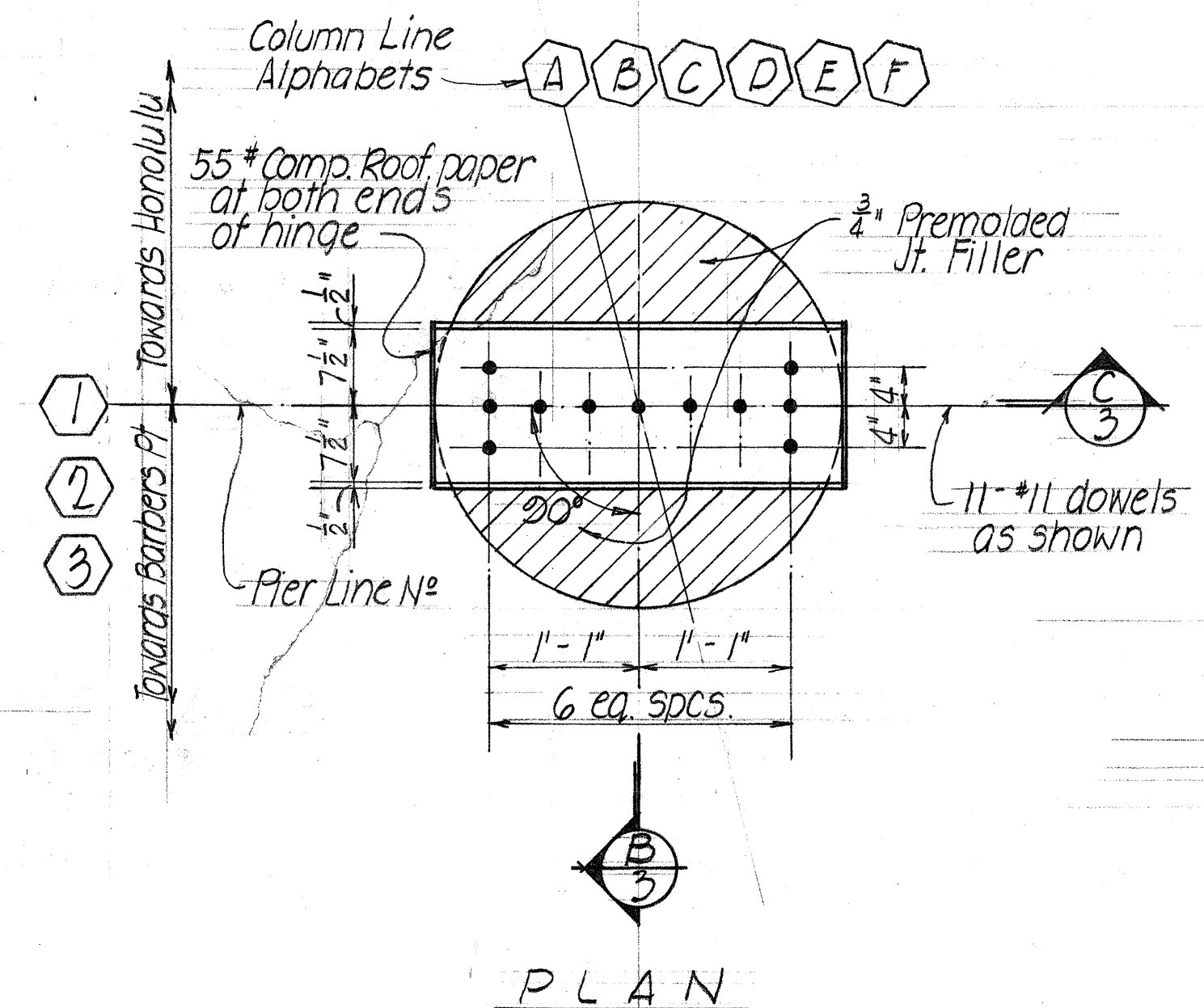
TYPICAL PIER FOOTING DETAIL PLAN



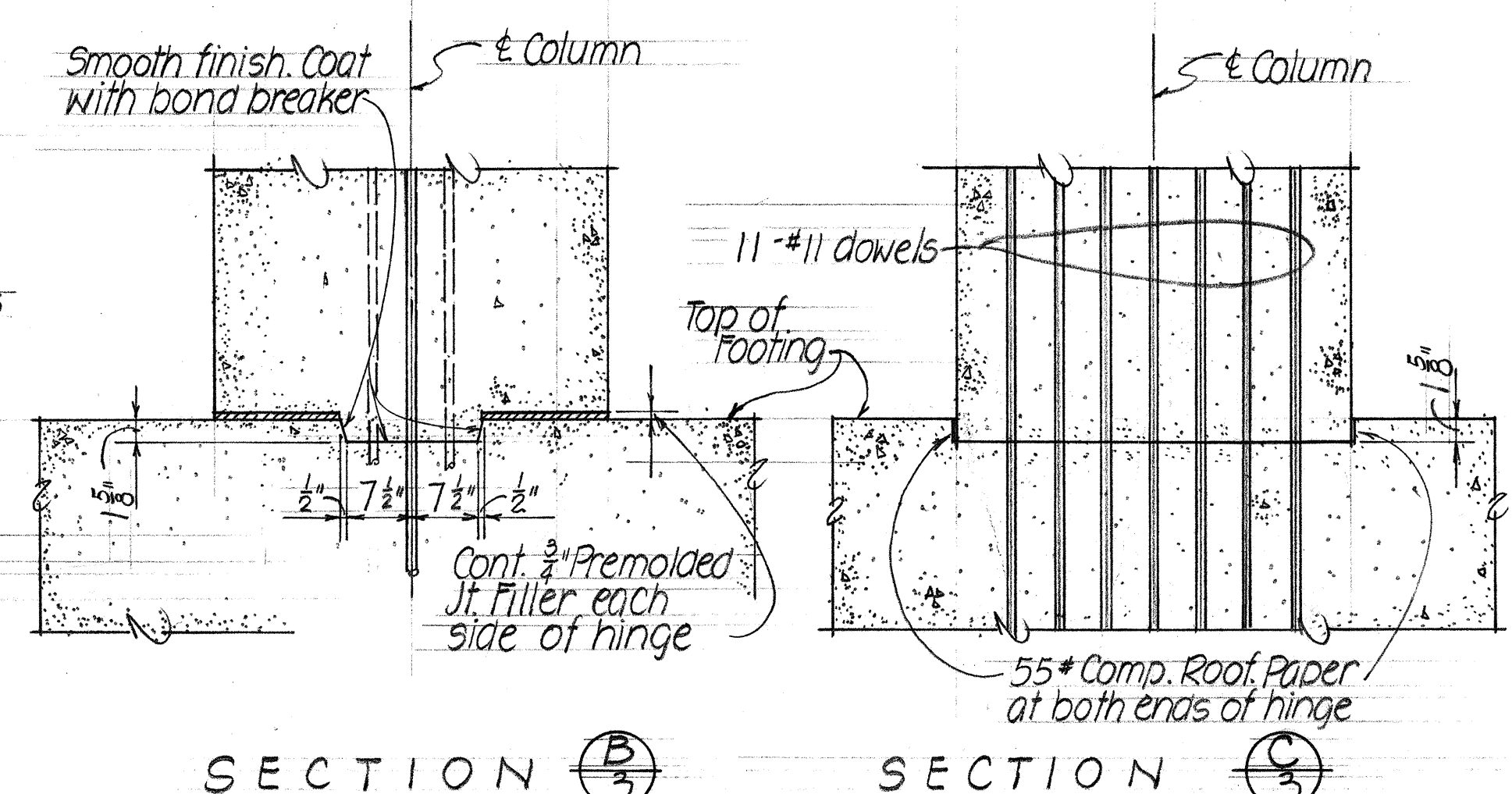
TYPICAL TOP COLUMN KEY DETAIL



TYPICAL COLUMN SECTION



TYPICAL COLUMN BASE HINGE DETAIL



TOP PIER COLUMN ELEVATION SCHEDULE (AT & COLUMN)

COLUMN LINE PIER LINE N°	OUTBOUND BRIDGE			INBOUND BRIDGE		
	A	B	C	D	E	F
①	142.62	141.54	140.45	140.35	139.26	138.17
②	143.50	142.41	141.33	141.24	140.15	139.07
③	144.37	143.29	142.21	142.12	141.04	139.96

PIER COLUMN SCHEDULE

PIER COLUMN N°	A	B	C
	① ② ③ ④ ⑤ ⑥	⑦ ⑧ ⑨	⑩ ⑪ ⑫
LOCATION	② ③ ④ ⑤ ⑥	⑦ ⑧ ⑨	⑩ ⑪ ⑫
COLUMN CLASS E-1 CONCRETE	SIZE 36" DIA.	36" DIA.	36" DIA.
VERT. REINF.	25-#9	23-#9	11-#9
COLUMN BASE HINGE	SEE DETAIL		
SPREAD FOOTING TYPE - CLASS A1	SF-1	SF-1	SF-2

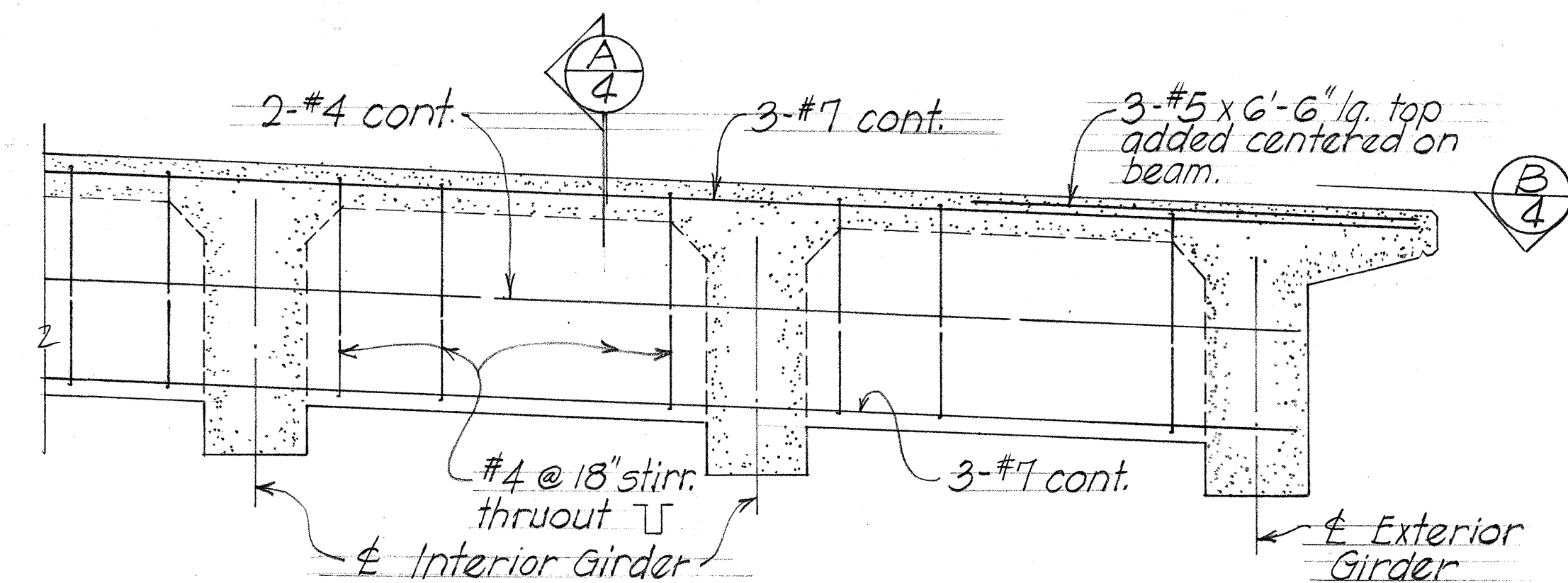
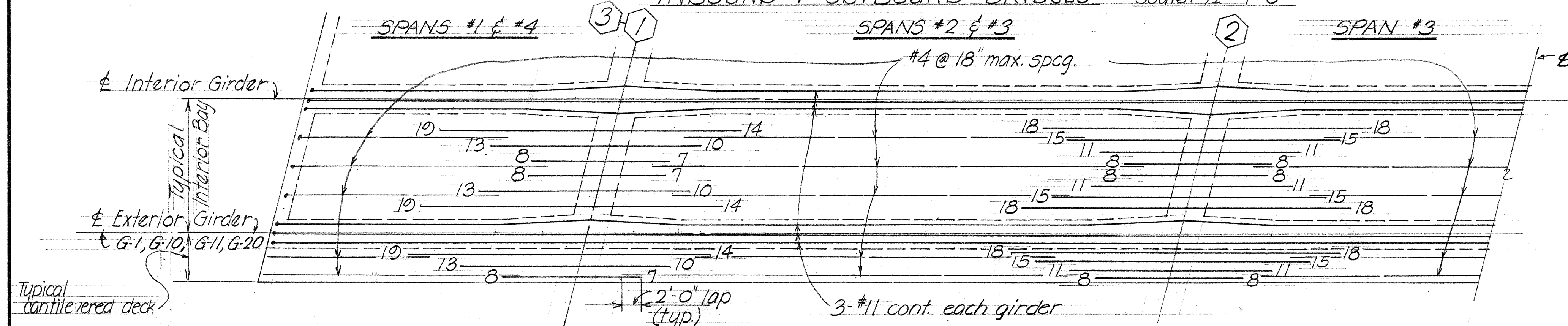
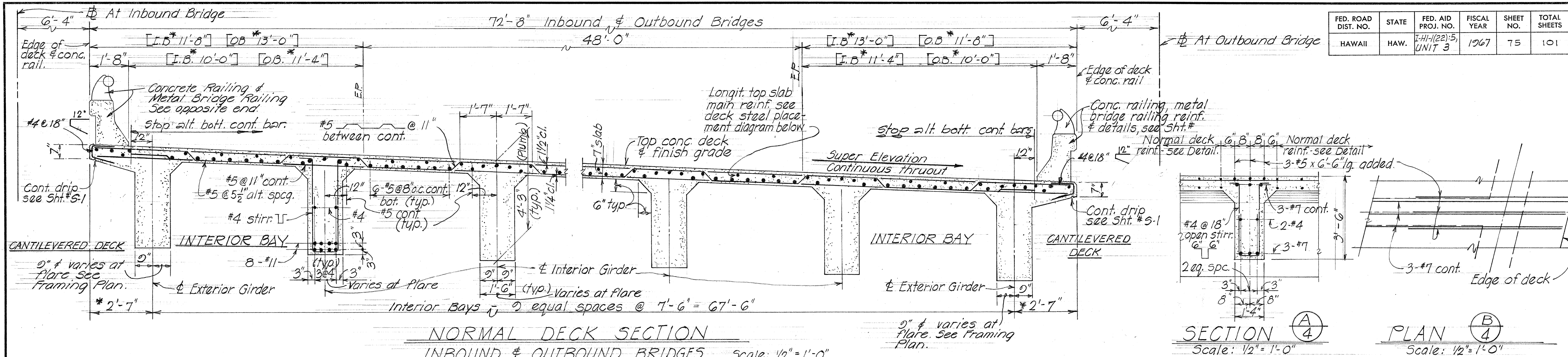
SPREAD FOOTING SCHEDULE

TYPE	SIZE	DEPTH	BOTTOM REINF.	
			LONG WAY	SHORT WAY
SF-1	13'-0" x 16'-0"	2'-9"	29-#9	22-#9
SF-2	13'-0" x 15'-0"	2'-9"	30-#9	25-#9

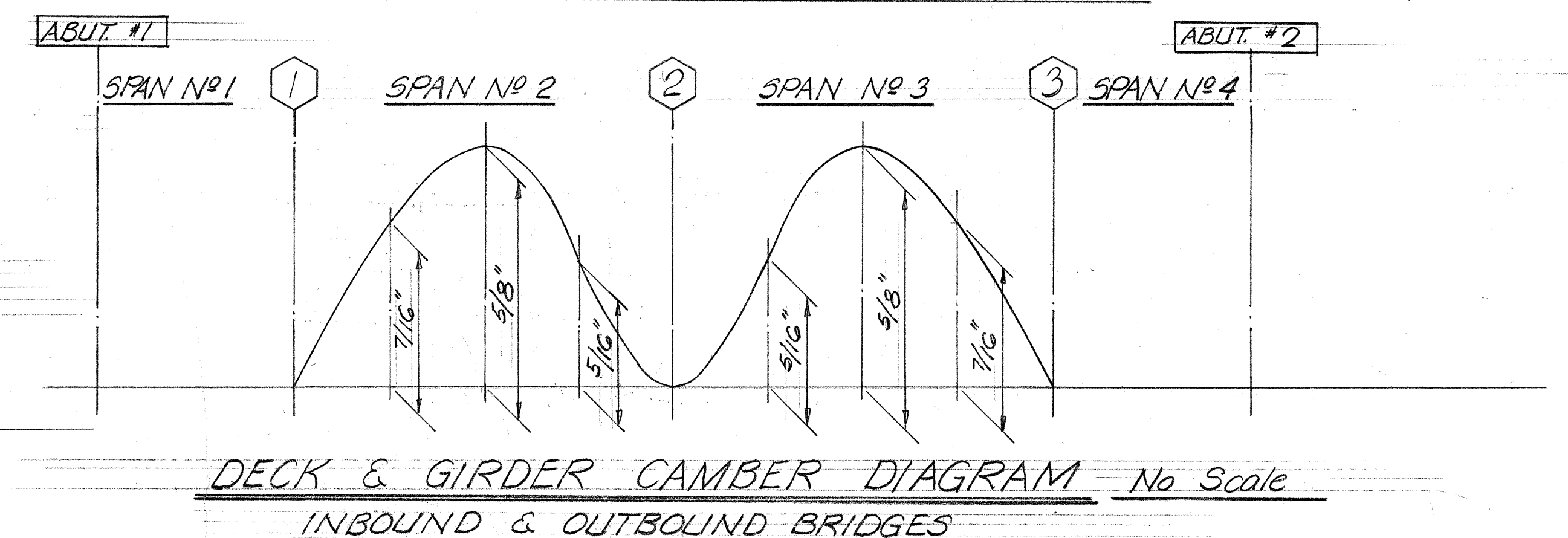
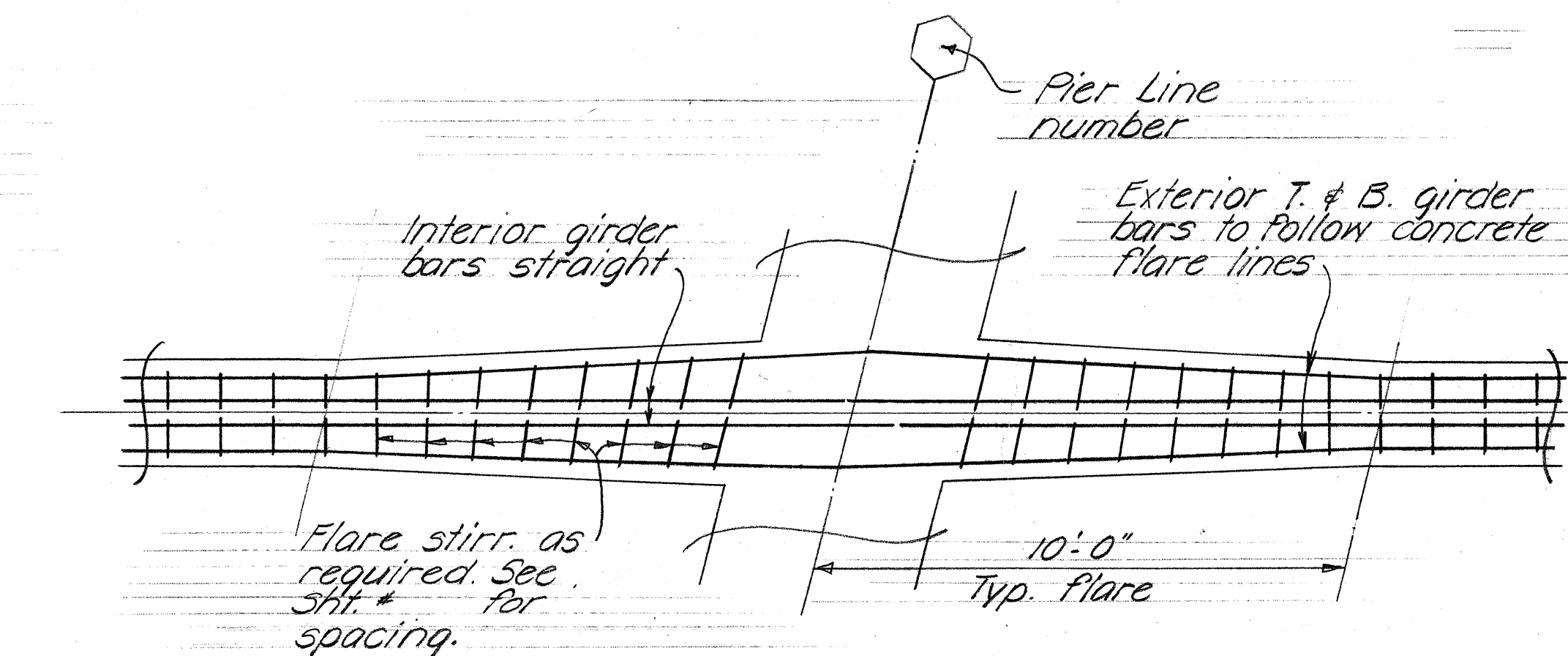
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURE NO. 414
PIER COLUMN
DETAILS & SCHEDULES
INTERSTATE ROUTE H-1
F.A.I. Proj. No. I-HI-1(22)-5, Unit 3
Date: Dec. 1967
SHEET No. 3 OF 3 SHEETS

8 41

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(22)-5, UNIT 3	1967	75	101



- NOTE!**
1. All reinforcing bars to be placed on curve.
 2. All reinforcing #11 except as otherwise noted.
 3. Number at ends of bars indicate distance in feet from Pier Line No.
 4. For additional slab reinforcement details see Normal Section.
 5. All #4 @ 18" max. bars shall be extended & lapped 2'-0" min. with the adjacent #11.
 6. For additional top reinf. see Normal Deck Section.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE NO. 414

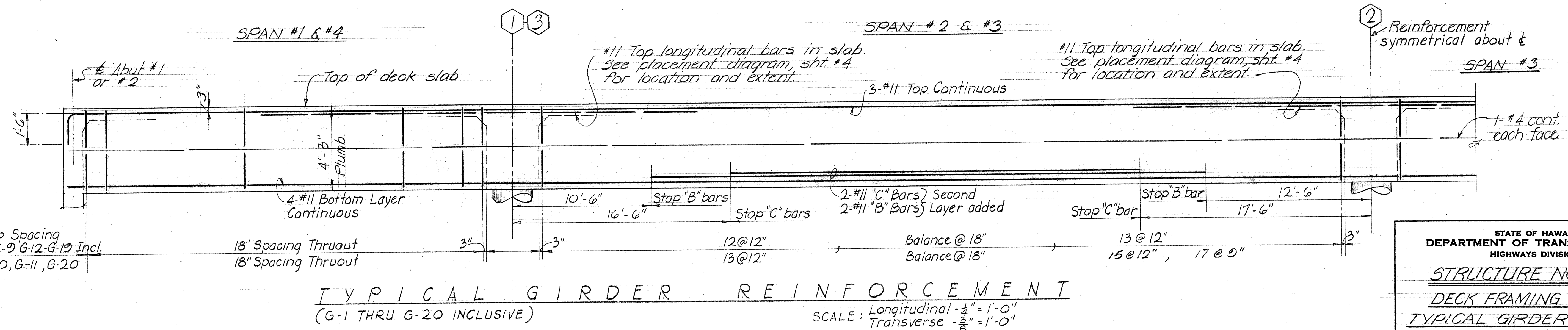
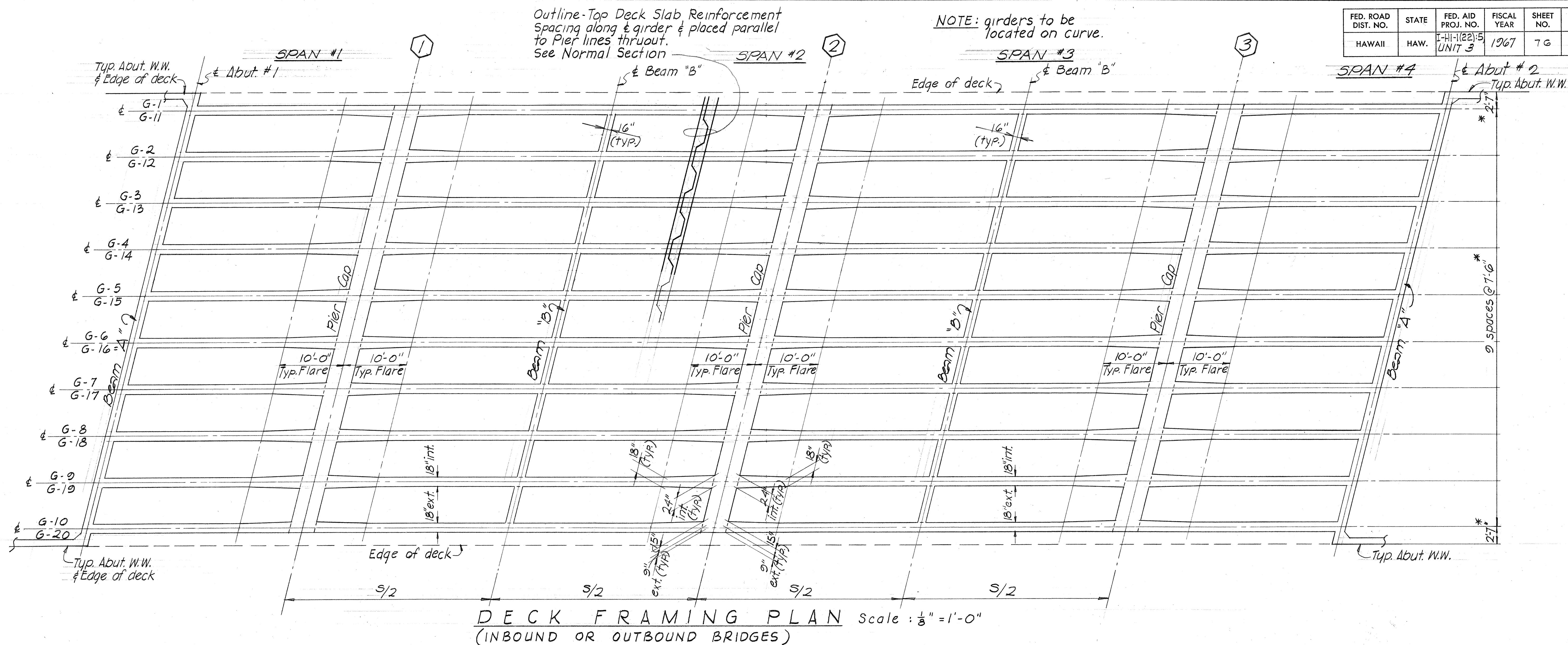
NORMAL DECK SECTION & DETAILS

INTERSTATE ROUTE H-1
F.A.I. Proj. No. I-HI-1(22)-5, Unit 3
Date: Dec. 1967

SHEET No. 4 OF 9 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(22):5 UNIT 3	1967	76	101



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRUCTURE NO. 414

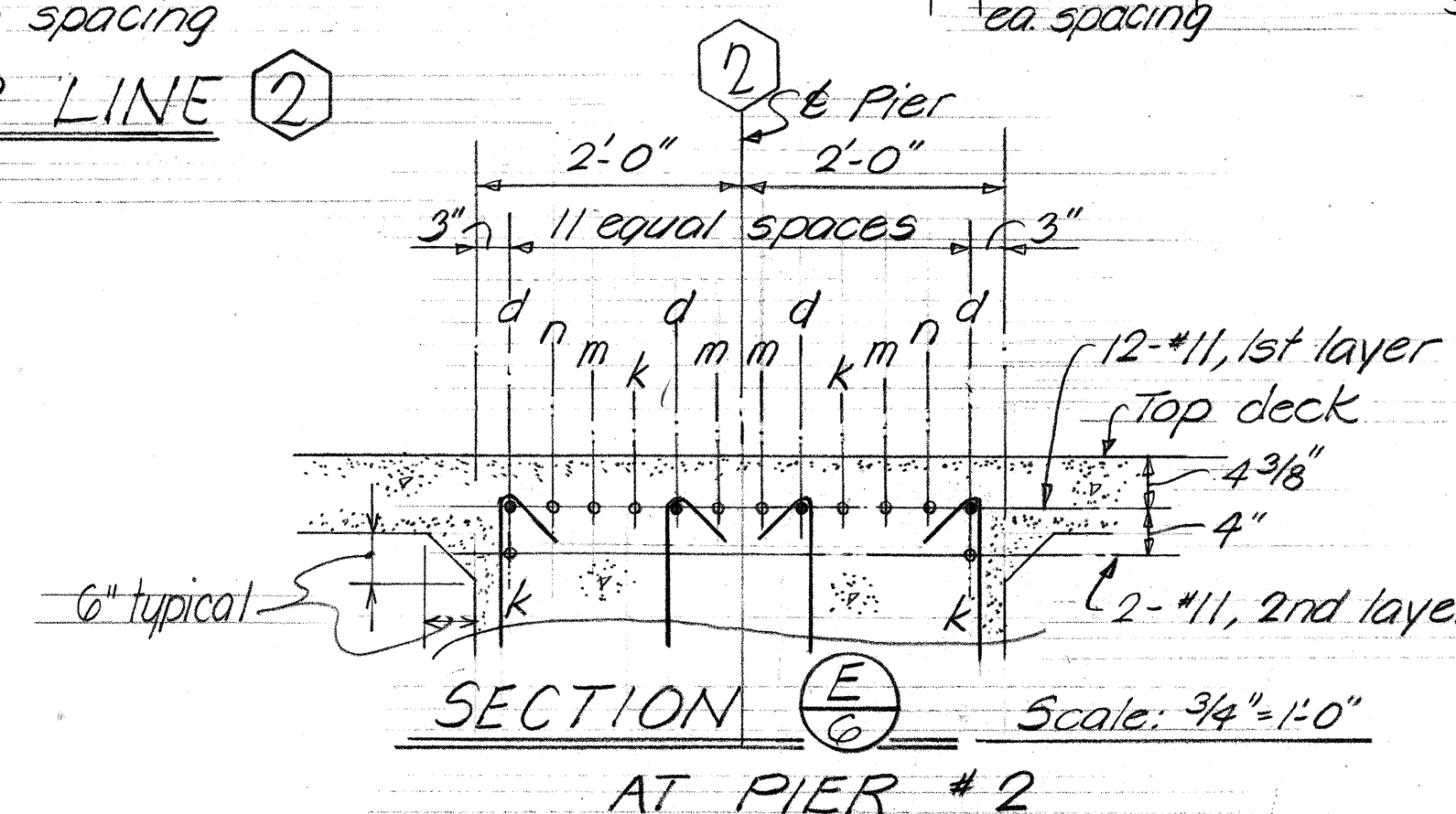
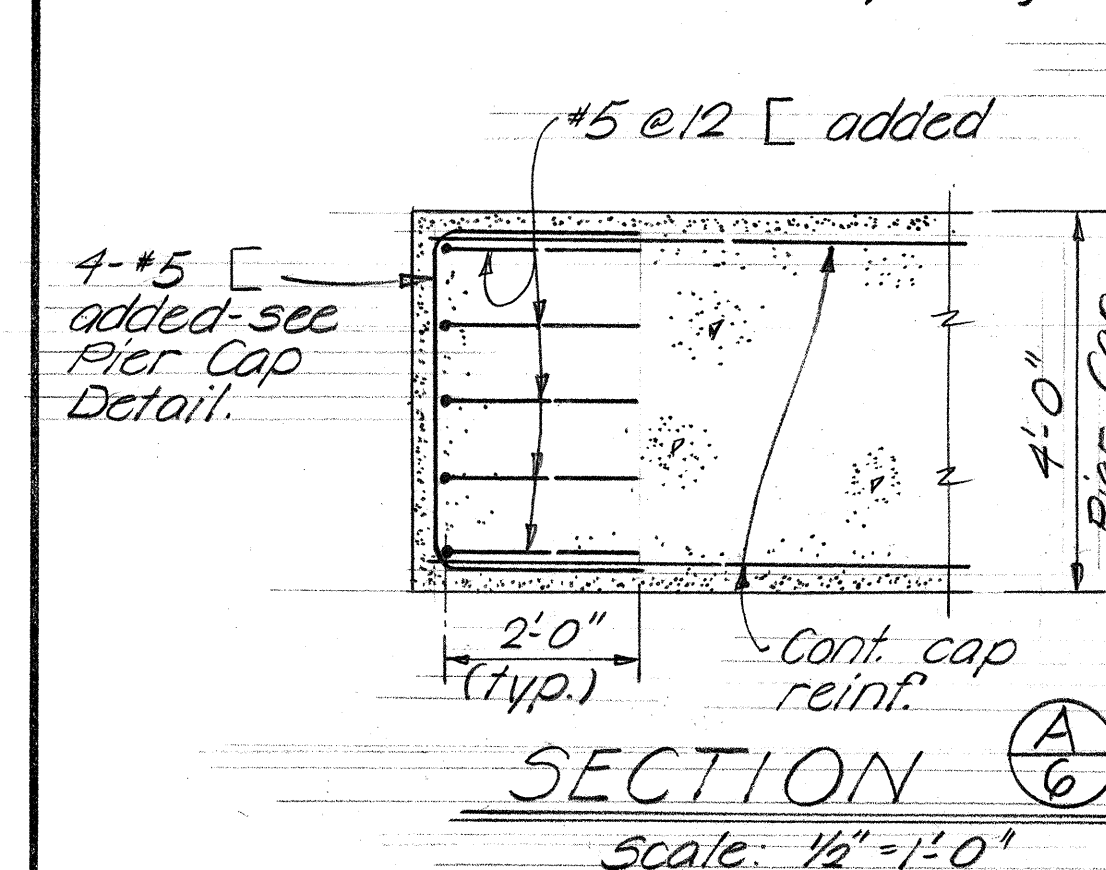
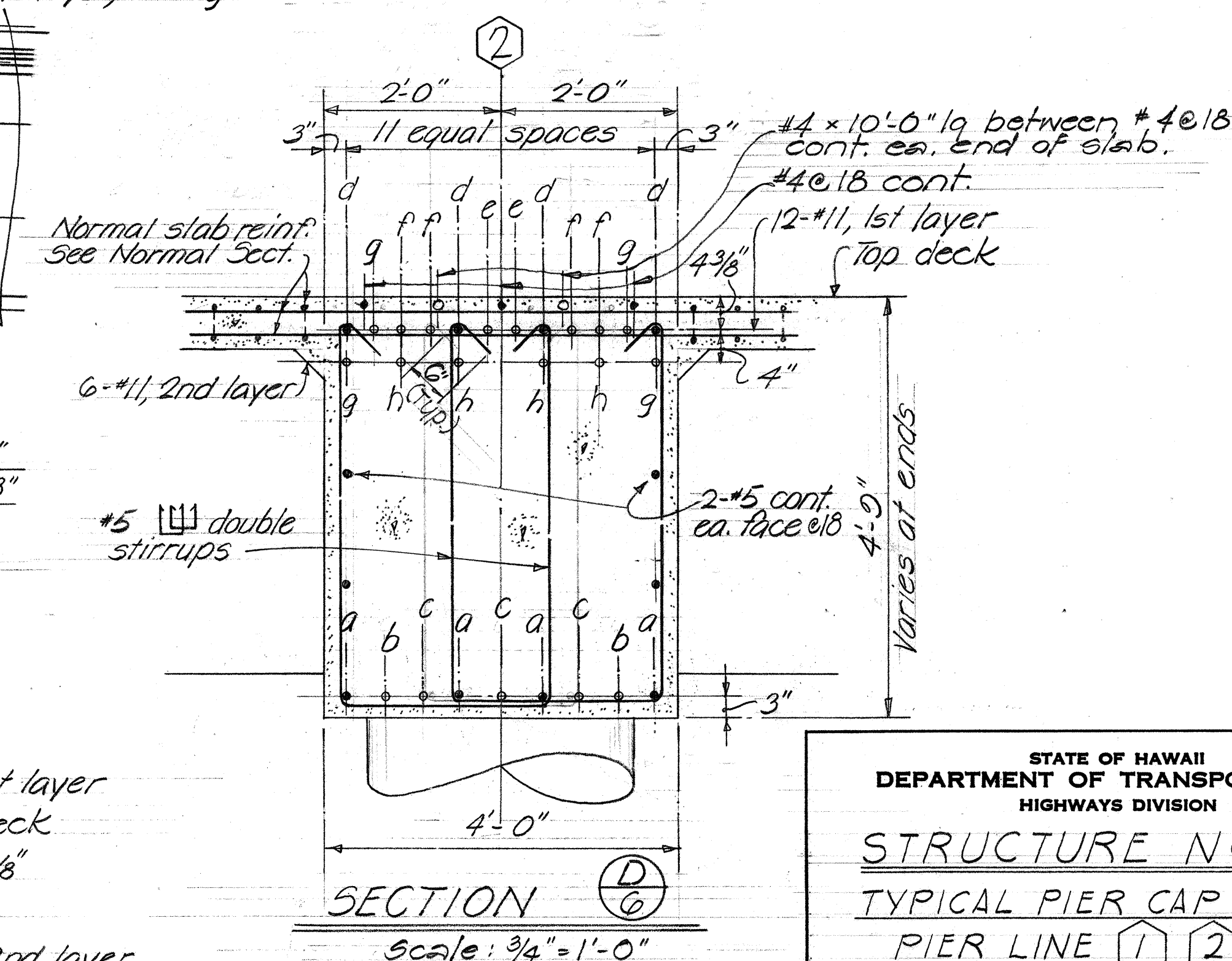
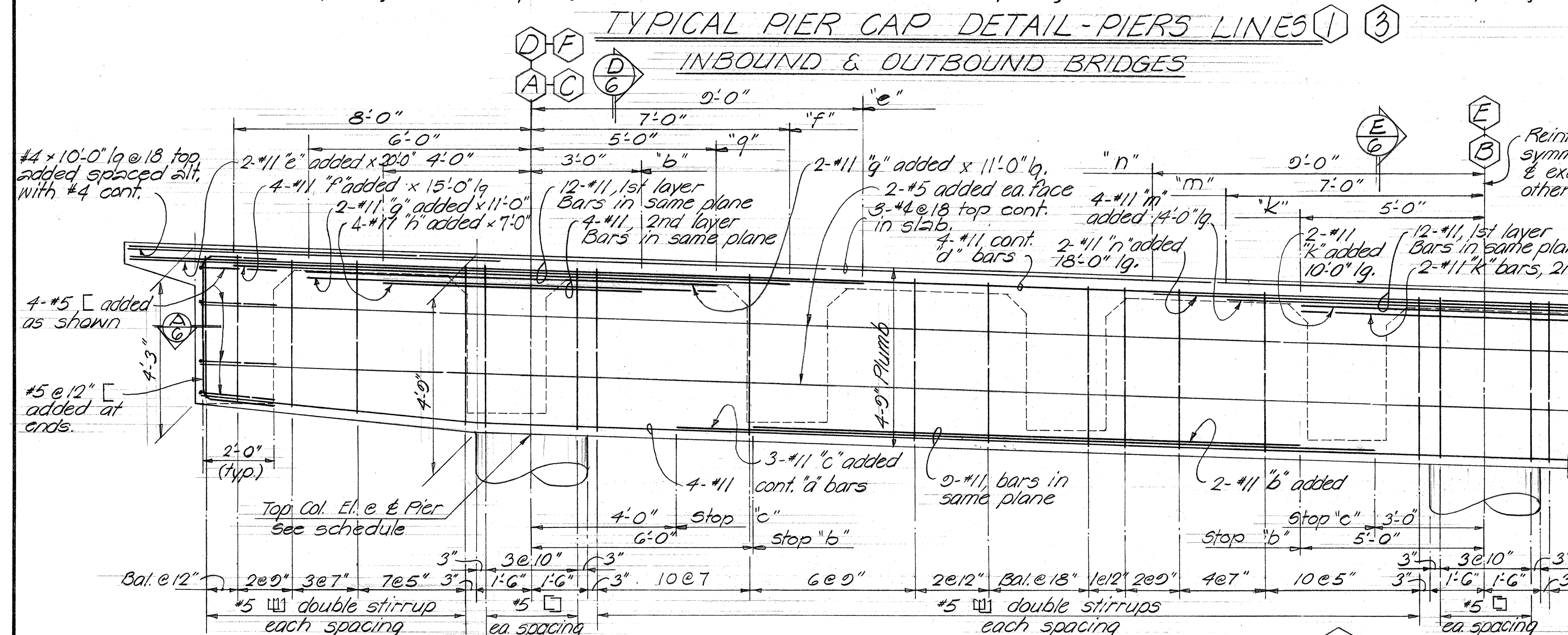
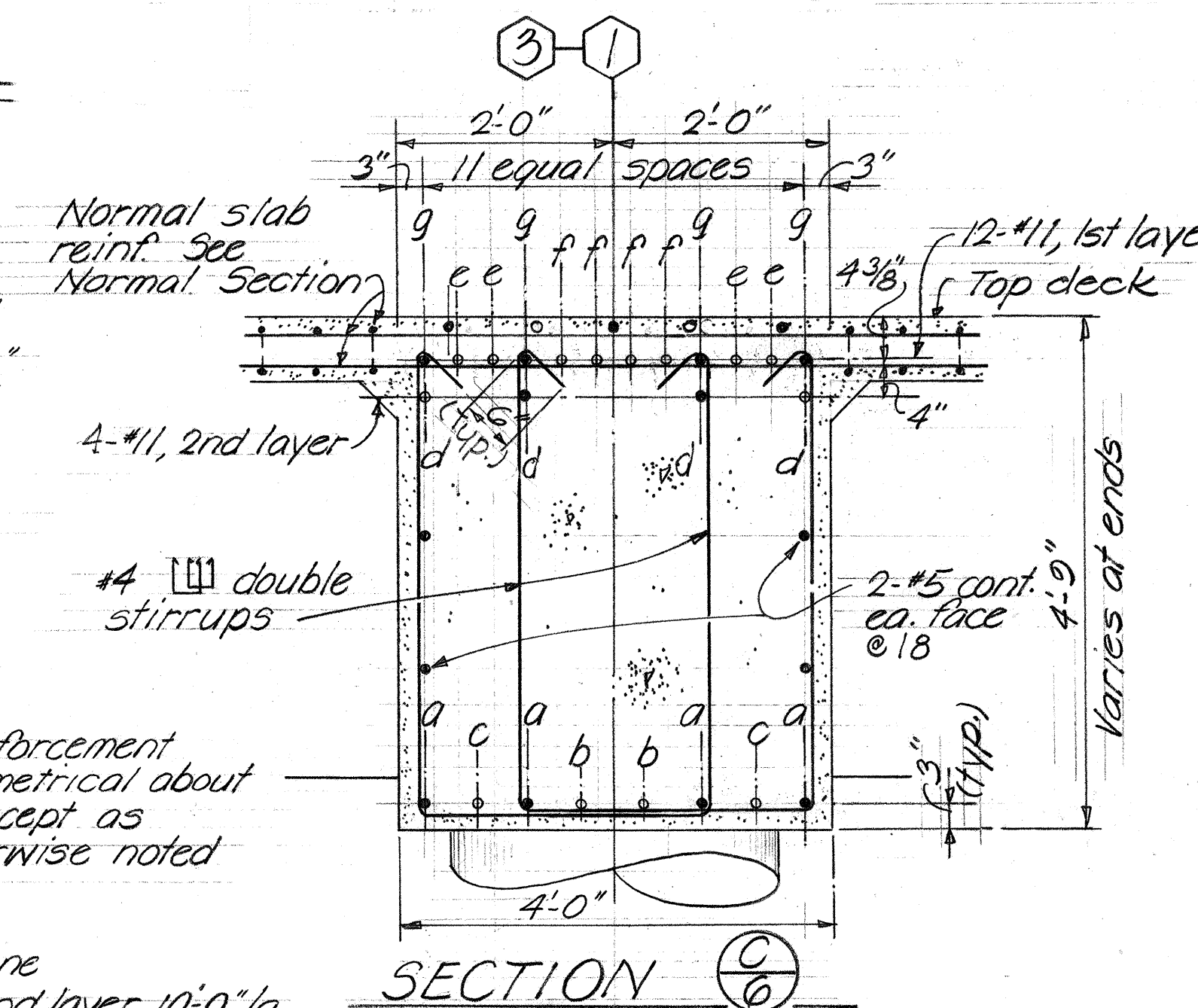
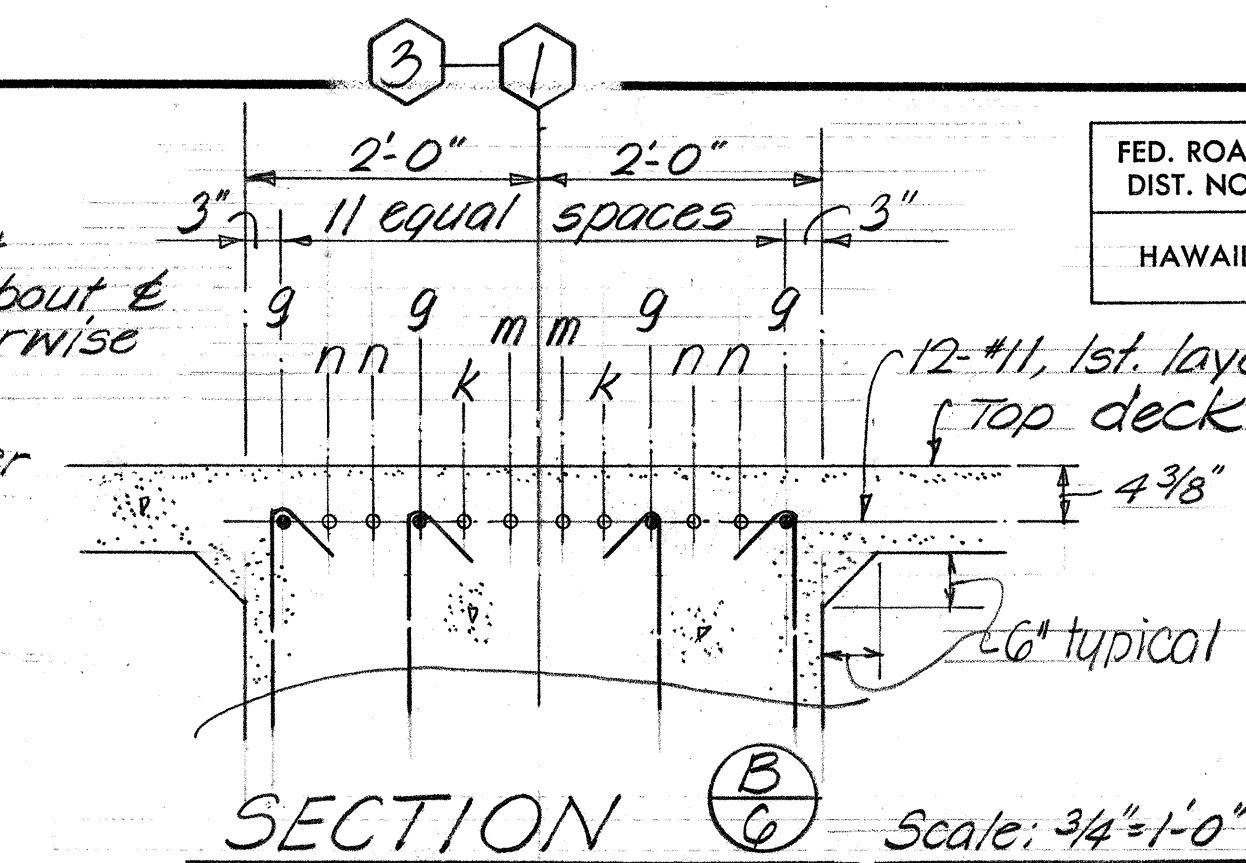
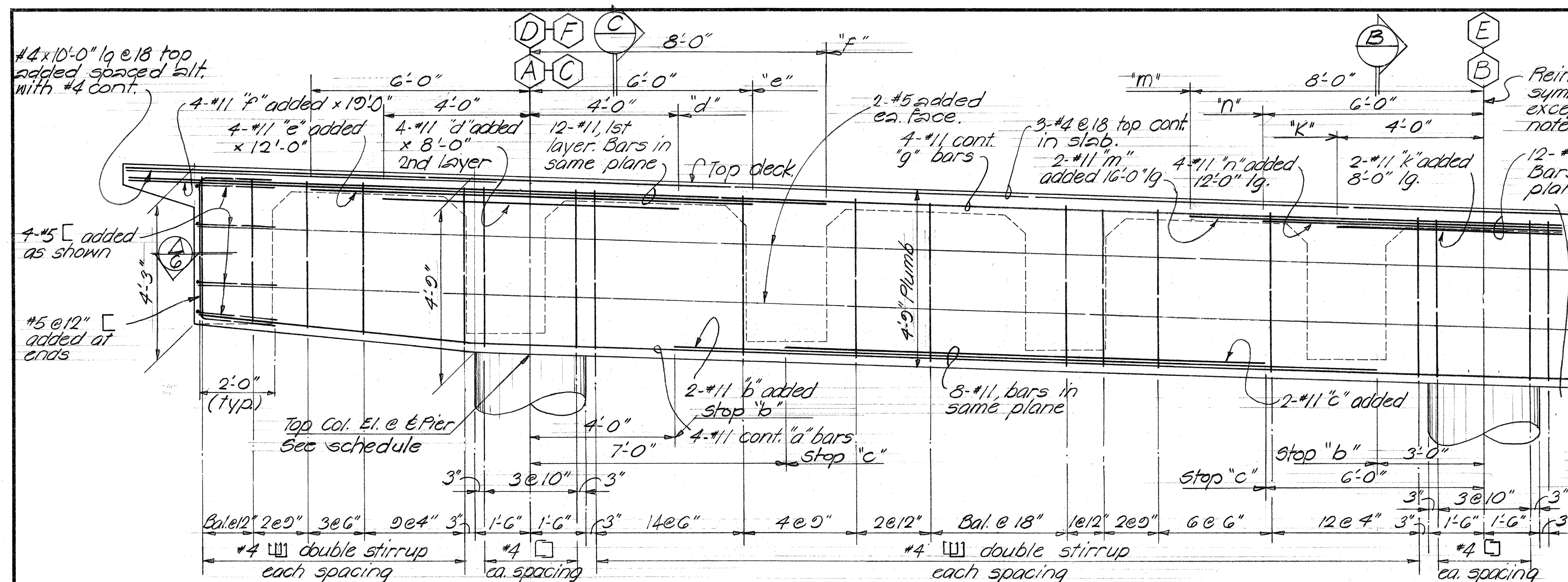
DECK FRAMING PLAN & TYPICAL GIRDER DETAILS

INTERSTATE ROUTE H-1
F.A.I. Proj. No. I-HI-1(22):5, Unit 3
Date: Dec. 1967

SHEET No. 5 OF 9 SHEETS

SURVEY PLOTTED BY: _____
DATE: _____
DRAWN BY: _____
DESIGNED BY: _____
QUANTITIES BY: _____
CHECKED BY: _____
No. _____

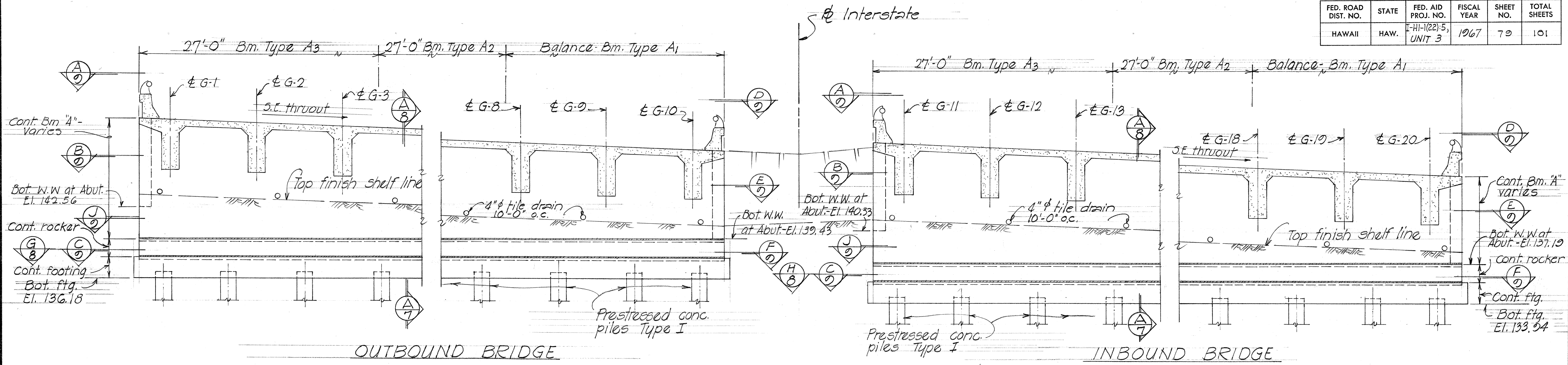
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(22)-5 UNIT 3	1967	77	101



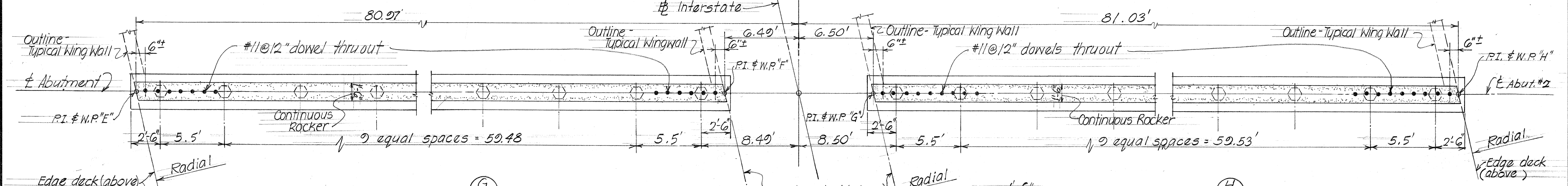
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURE NO. 414
TYPICAL PIER CAP DETAIL
PIER LINE 1 2 & 3
INTERSTATE ROUTE H-1
F.A.I. Proj. No. I-H-1(22)-5, Unit 3
Date: Dec. 1967
SHEET No. 6 OF 9 SHEETS

ABUT #2

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-H-1(22)5, UNIT 3	1967	79	101

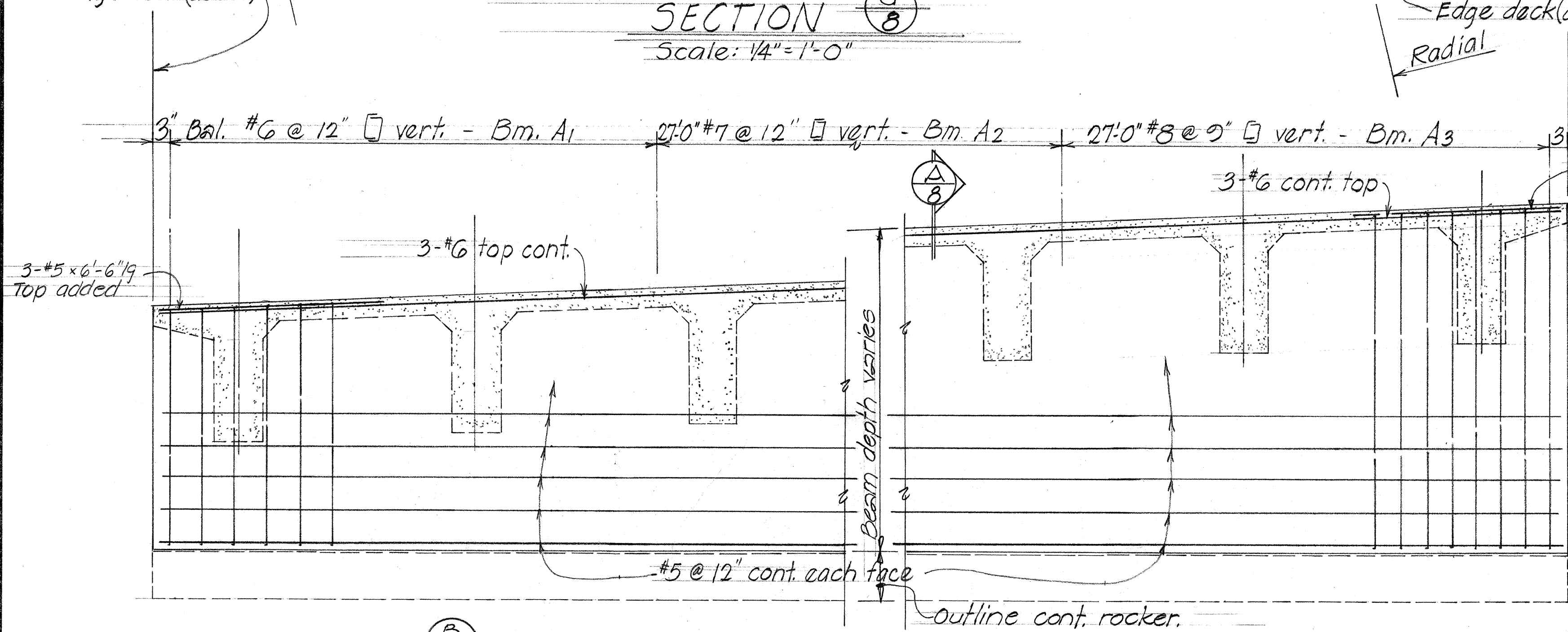


ELEVATION - ABUTMENT #2
Scale: 1/4" = 1'-0"

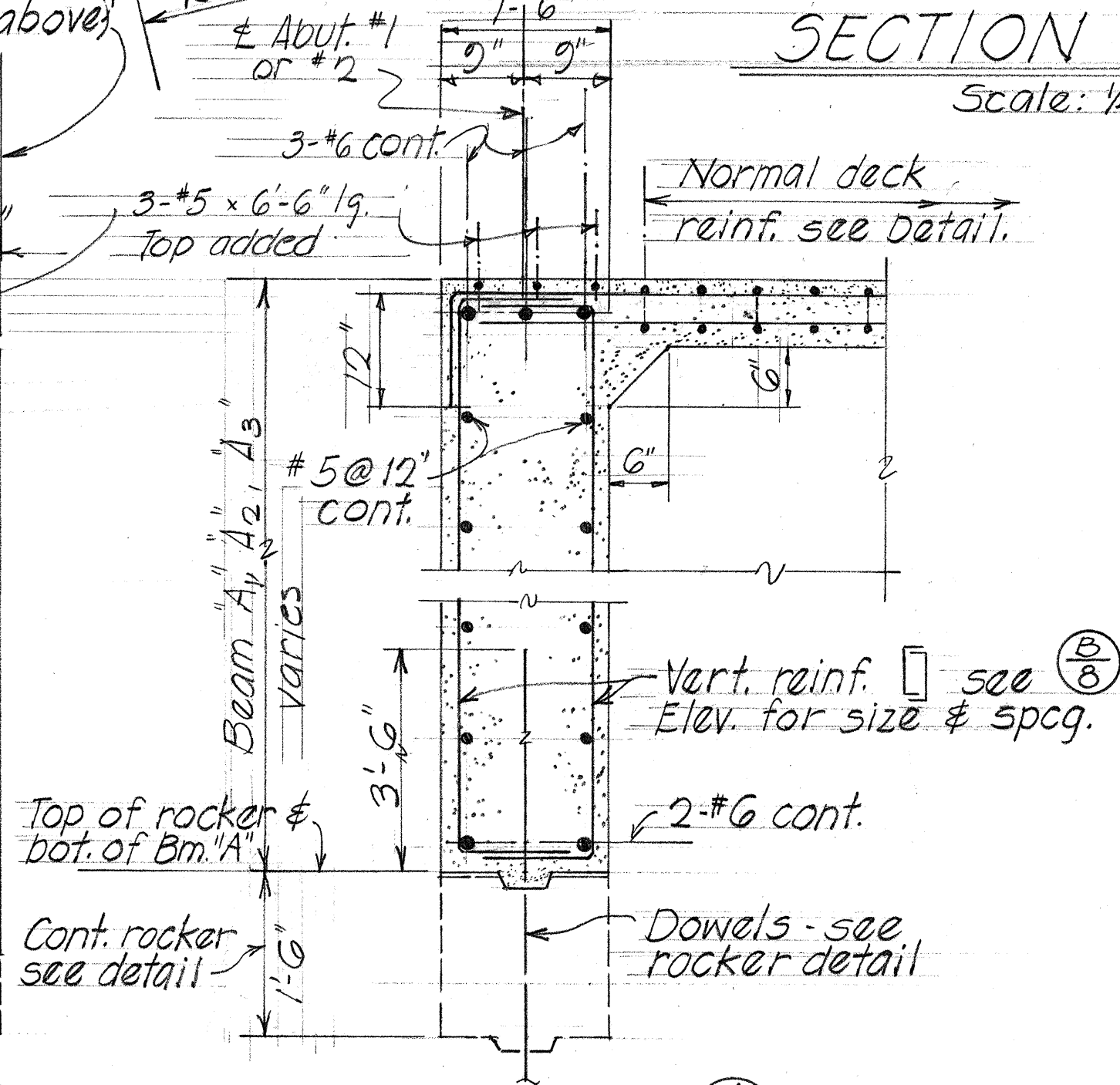


SECTION (G)
Scale: 1/4" = 1'-0"

SECTION (H)
Scale: 1/4" = 1'-0"



ELEVATION - TYPICAL BEAM "A"
Scale: 3/8" = 1'-0"

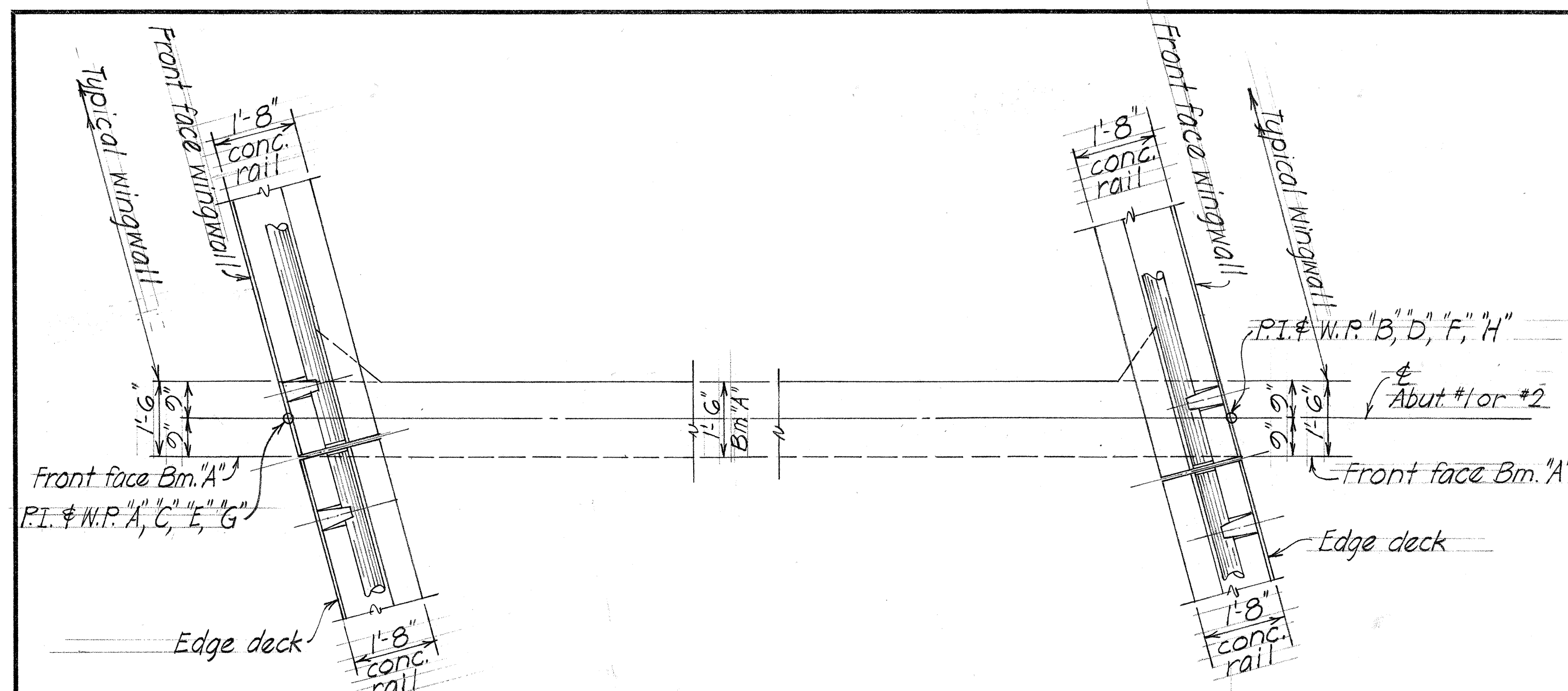


SECTION (A)
Scale: 3/4" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURE NO. 414
ABUTMENT #2 -
ELEVATION & DETAILS
INTERSTATE ROUTE H-1
F.A.I. Proj. No. I-H-1(22)5, Unit 3
Date: Dec. 1967
SHEET No. 8 OF 9 SHEETS

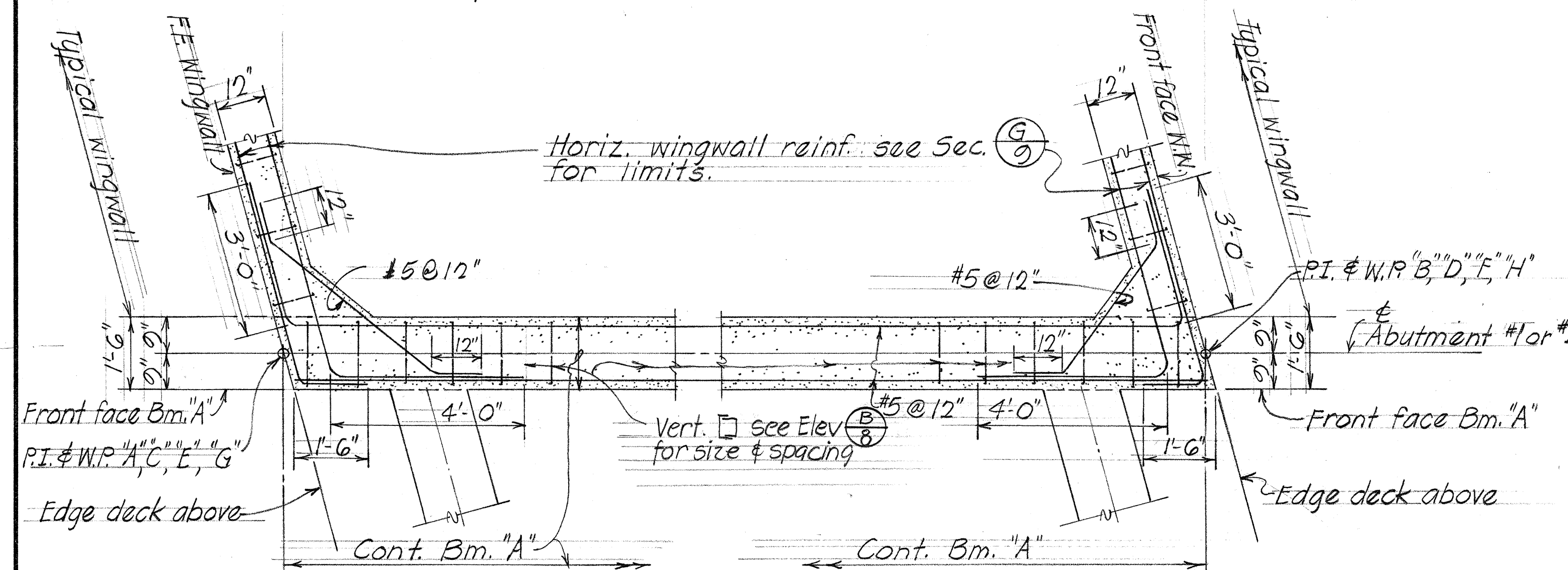
DATE: 10-67
DRAWN BY: J. M. J. W. G. G.
DESIGNED BY: J. M. J. W. G. G.
CHECKED BY: E. Y. R. K.
NOTE BOOK
No.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	I-HI-1(22)5 UNIT 3	1967	80	101



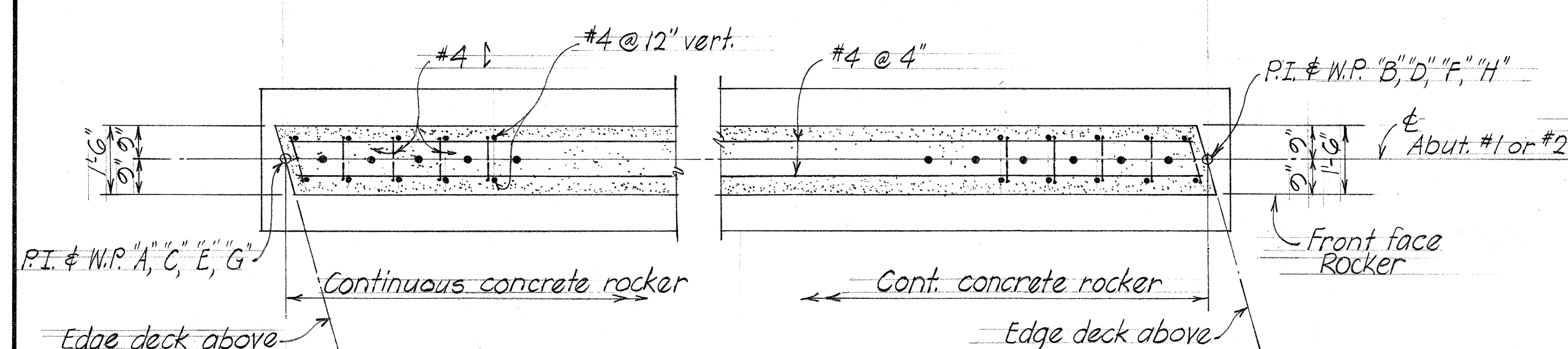
TYPICAL PLAN (A)
Scale: 1/2" = 1'-0"

TYPICAL PLAN (D)
Scale: 1/2" = 1'-0"



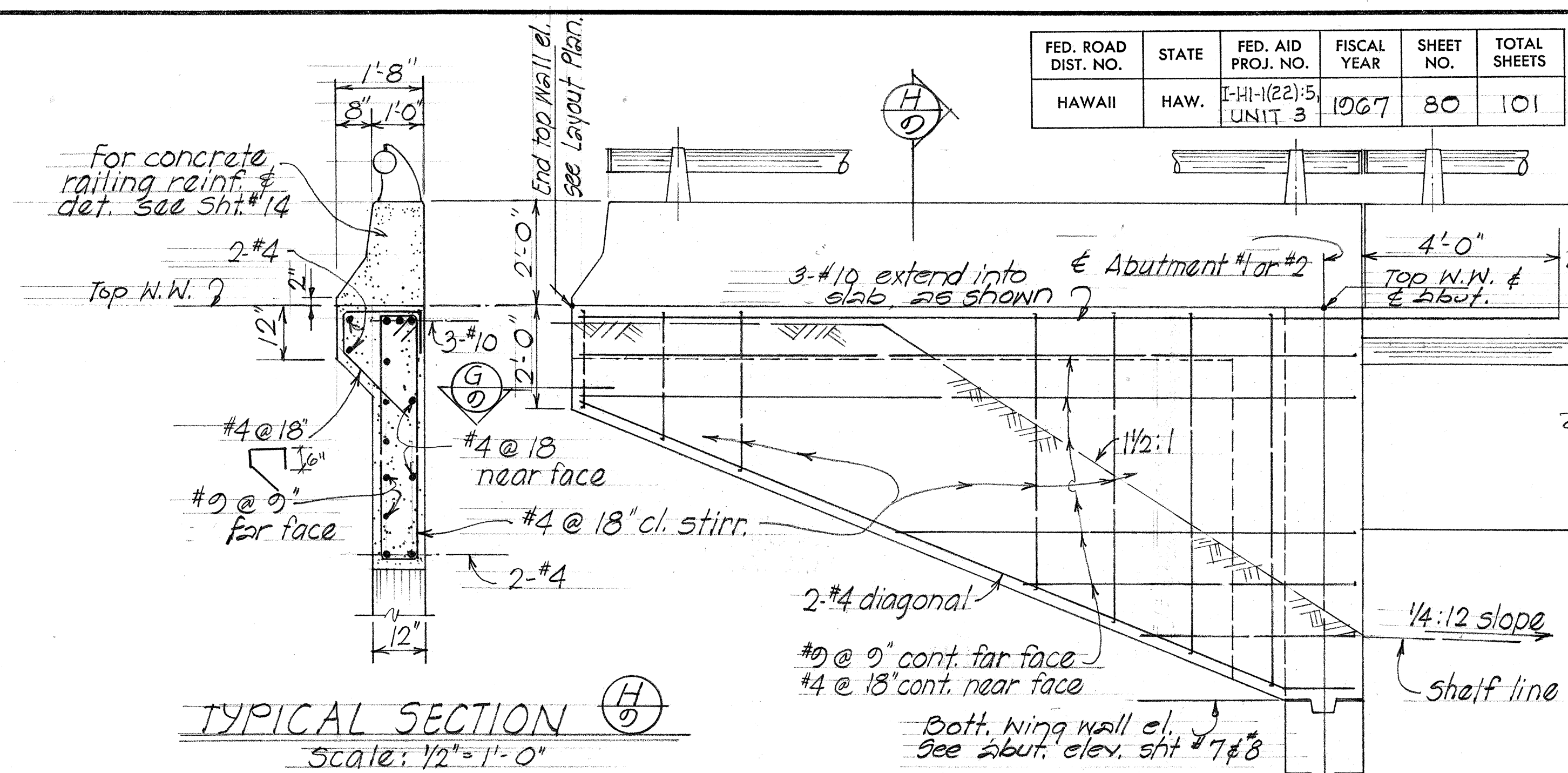
TYPICAL SECTION (B)
Scale: 1/2" = 1'-0"

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



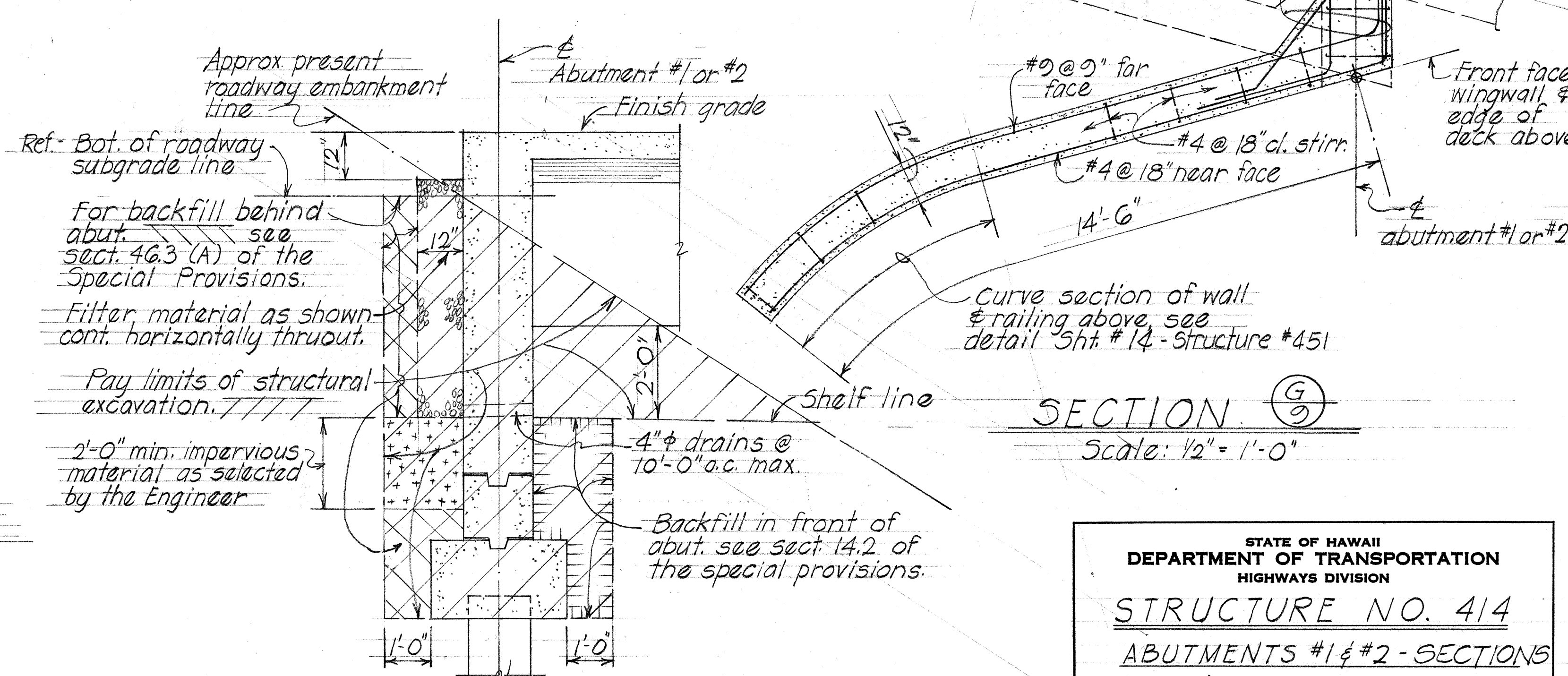
TYPICAL SECTION (C)
Scale: 1/2" = 1'-0"

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



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

ELEVATION TYPICAL WINGWALL
Scale: 1/2" = 1'-0"



TYPICAL ABUTMENT STRUCTURAL EXCAVATION PAY LINE & BACKFILL DETAIL
Not to Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURE NO. 414
ABUTMENTS #1 & #2 - SECTIONS & DETAILS
INTERSTATE ROUTE H-1
F.A.I. Proj. No. I-HI-1(22)5, Unit 3
Date: Dec. 1967
SHEET No. 9 OF 9 SHEETS