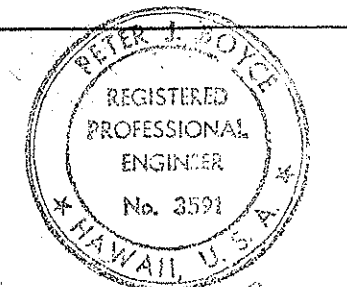


SHEET NO.	CONSTR. PHASE	DESCRIPTION
1	I, II, III	INDEX TO DRAWINGS
2	Do.	GENERAL LAYOUT PLAN & DETAILS - NORTHBOUND & SOUTHBOUND BRIDGES - @ STA. 81+12.24 TO STA. 84+87.24.
3	Do.	TYPICAL SECTIONS - NORTHBOUND & SOUTHBOUND BRIDGES - ESTIMATED QUANTITIES
4	Do.	LONGITUDINAL DECK SECTION ALONG GRADE CONTROLS - NORTHBOUND & SOUTHBOUND BRIDGES
5	Do.	GENERAL FOUNDATION PLAN & DETAILS - NB & SB BRIDGES @ STA. 81+12.24 TO STA. 84+87.24
6	Do.	PROFILE - NB BRIDGE - BOX GIRDER DEPTH & CURVED SOFFITS SUPERELEVATION DIAGRAM - @ STA. 81+13.57 TO STA. 82+50.00
6A	Do.	PROFILE - NORTHBOUND BRIDGE @ STA. 82+50.00 TO STA. 83+50.00 BOX GIRDER DEPTH & CURVED SOFFITS SUPERELEVATION DIAGRAM
7	Do.	PROFILE - NB BRIDGE - BOX GIRDER DEPTH & CURVED SOFFITS SUPERELEVATION DIAGRAM - @ STA. 83+50.00 TO STA. 84+85.91
8	Do.	PROFILE - SB BRIDGE - BOX GIRDER DEPTH & CURVED SOFFITS SUPERELEVATION DIAGRAM - @ STA. 81+13.57 TO STA. 82+50.00
8A	Do.	PROFILE - SOUTHBOUND BRIDGE @ STA. 82+50.00 TO STA. 83+50.00 BOX GIRDER DEPTH & CURVED SOFFITS SUPERELEVATION DIAGRAM
9	Do.	PROFILE - SB BRIDGE - BOX GIRDER DEPTH & CURVED SOFFITS SUPERELEVATION DIAGRAM - @ STA. 83+44.74 TO STA. 84+87.24
10	I, II, III	LOG BORINGS
11	I	PART DECK LAYOUT PLAN - @ STA. 81+12.24 TO STA. 84+87.24
12	I	ABUTMENT LINES ① & ② - PLANS & DETAILS
13	I	WING WALLS #1 & #2 - PLANS, ELEVATION & DETAILS
14	I	WING WALL #4 - ELEVATIONS & SECTIONS
15	I	PIER COLUMN ①B, ②B - FOUNDATION DETAILS
16	I	NORMAL DECK SECTIONS & DETAILS
17	I	DECK FRAMING PLAN - @ STA. 81+12.24 TO STA. 84+87.24
18	I	BEAMS "C4", "D4", "Fa" DETAILS
19, 20		OMITTED FROM PLANS
21	I	PIER CAP "Ga" SECTION & DETAILS
22	II	DECK LAYOUT PLAN - @ STA. 81+12.24 TO STA. 84+87.24
23	II	ABUTMENT LINES ① & ② - PLANS & DETAILS
24	II	ABUTMENT LINES ① & ② - SECTIONS & DETAILS
25	II	WING WALLS #3, #4 & #5 - ELEVATIONS & SECTIONS
26	II	PIER COLUMN ①A, ②A, ①B, ②B - FOUNDATION DETAILS
26A	II	PIER COLUMN ②A - FOUNDATION DETAILS ②A
27	II	NORMAL DECK SECTION & DETAILS
28	II	DECK FRAMING PLAN - @ STA. 81+12.24 TO STA. 84+87.24
29, 30, 31		OMITTED FROM PLANS
32	II	BEAM "Fc" DETAILS
33	II	PIER CAP "Gc" SECTIONS & DETAILS

SHEET NO.	CONSTR. PHASE	DESCRIPTION
34	II	HTCO. CONDUIT LAYOUT
35	II	HTCO. CONDUIT DETAILS
36	III	PART DECK & UTILITY TRENCH PLAN - @ STA. 81+12.24 TO STA. 84+87.24
37	III	ABUTMENT LINES ① & ② - PLANS & DETAILS
38	III	ABUTMENT LINES ① & ②, RETAINING WALLS #1 & #2 - DETAILS
39	III	NORMAL DECK SECTION & DETAILS
40	III	PART DECK FRAMING PLAN - @ STA. 81+12.24 TO STA. 84+87.24
41		OMITTED FROM PLANS
42		OMITTED FROM PLANS
43	III	PIER CAP "Gb", BEAM "Fb" - DETAILS
44	III	UTILITY TRENCH LAYOUT PLAN, W36 & W10 PIPE SUPPORT FRAME
45	III	UTILITY TRENCH PIPE SUPPORT FRAME DETAILS
46	III	UTILITY TRENCH & STEEL GRATE FRAMING & DETAILS
47	III	UTILITY TRENCH STEEL GRATE SECTIONS & DETAILS
T-1	I, II, III	TYPICAL DETAILS - GENERAL NOTES, SYMBOLS & ABBREVIATION
T-2	Do.	TYPICAL DETAILS - PIER COLUMN DETAILS & SECTIONS
T-3	Do.	TYPICAL DETAILS - PIER COLUMN DETAILS, SECTIONS & SCHEDULE
T-4	Do.	TYPICAL DETAILS - ABUTMENT SECTIONS & DETAILS
T-5	Do.	TYPICAL DETAILS - RETAINING WALL TYPE L-2
T-6	Do.	TYPICAL DETAILS - CONCRETE BOX GIRDER DECK SECTION & DETAILS
T-7	Do.	TYPICAL DETAILS - CONCRETE BOX GIRDER DECK SECTIONS & DETAILS
T-8		
T-9		
T-10		
T-11		OMITTED FROM PLANS
T-12		
T-13	Do.	TYPICAL DETAILS - BEAMS "Fa", "Fb" & "Fc" SECTIONS & DETAILS
T-14		OMITTED FROM PLANS
T-15	Do.	TYPICAL DETAILS - DECK EXPANSION JOINT SEALER & WATERPROOFING DETAILS
T-16		OMITTED FROM PLANS
T-17		OMITTED FROM PLANS

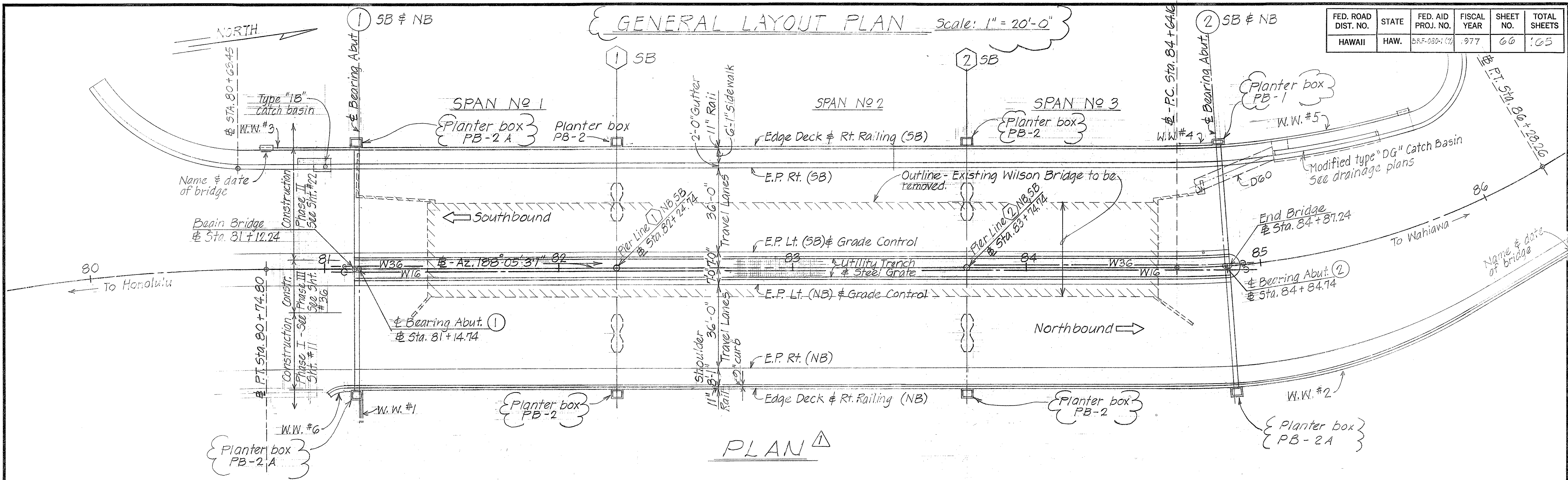
		FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
		HAWAII	HAW.	BRF-080-1(7)	1977	65	105
SHEET NO.	CONSTR. PHASE	DESCRIPTION					
T-18		OMITTED FROM PLANS					
T-19							
T-20							
T-21							
T-22							
T-23							
T-24							
T-25	Do.	TYPICAL DETAILS - CONCRETE RAILING & PLANTER BOX ON BRIDGE					
T-26	Do.	TYPICAL DETAILS - CONCRETE RAILING & PLANTER BOX ON BRIDGE					
T-27	Do.	TYPICAL DETAILS - CONCRETE RAILING & PLANTER BOX ON BRIDGE					
T-27A	Do.	TYPICAL DETAILS - CONCRETE RAILING & PLANTER BOX ON BRIDGE					
T-28	Do.	TYPICAL DETAILS - CONCRETE RAILING & END POST ON WINGWALLS					
T-29	I	TYPICAL DETAILS - TEMPORARY TIMBER RAILING & W10 DETAILS					
T-30	I	TYPICAL DETAILS - MISCELLANEOUS DETAILS					
DB-100	I, II, III	STANDARD DETAILS - NOTES & MISCELLANEOUS DETAILS					
DB-101-1	Do.	STANDARD DETAILS - CONCRETE BOX GIRDER					
DB-101-2	Do.	STANDARD DETAILS - CONCRETE BOX GIRDER					
DB-101-3	Do.	STANDARD DETAILS - CONCRETE BOX GIRDER					
DB-207-1	Do.	STANDARD DETAILS - RETAINING WALL TYPE T-1					
DB-207-2	Do.	STANDARD DETAILS - RETAINING WALL TYPE T-1					
DB-300-1	Do.	STANDARD DETAILS - PRESTRESSED CONCRETE PILES					
DB-300-2	Do.	STANDARD DETAILS - PRESTRESSED CONCRETE PILES					
		REFERENCE PLANS					
PLAN SHEET NO.	DESCRIPTION						
150 thru 157 Inclusive	EXISTING WILSON BRIDGE - (FOR INFORMATION ONLY)						
							
		STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>WILSON BRIDGE</b> INDEX TO DRAWINGS ESTIMATED QUANTITIES Proj. No.: BRF-080-1(7) Scale: No Scale Date: July 1976 SHEET NO. 1 OF 47 SHEETS					
		5/22/82	Revised Pier 2A Ftg. & Column				
		8-77	Revised to CIARS				

SURVEY PLOTTED BY: DATE: \_\_\_\_\_  
 DRAWN BY: LMA  
 TRACED BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 CHECKED BY: SKY  
 ORIGINAL PLAN NO. \_\_\_\_\_  
 NOTE BOOK NO. \_\_\_\_\_

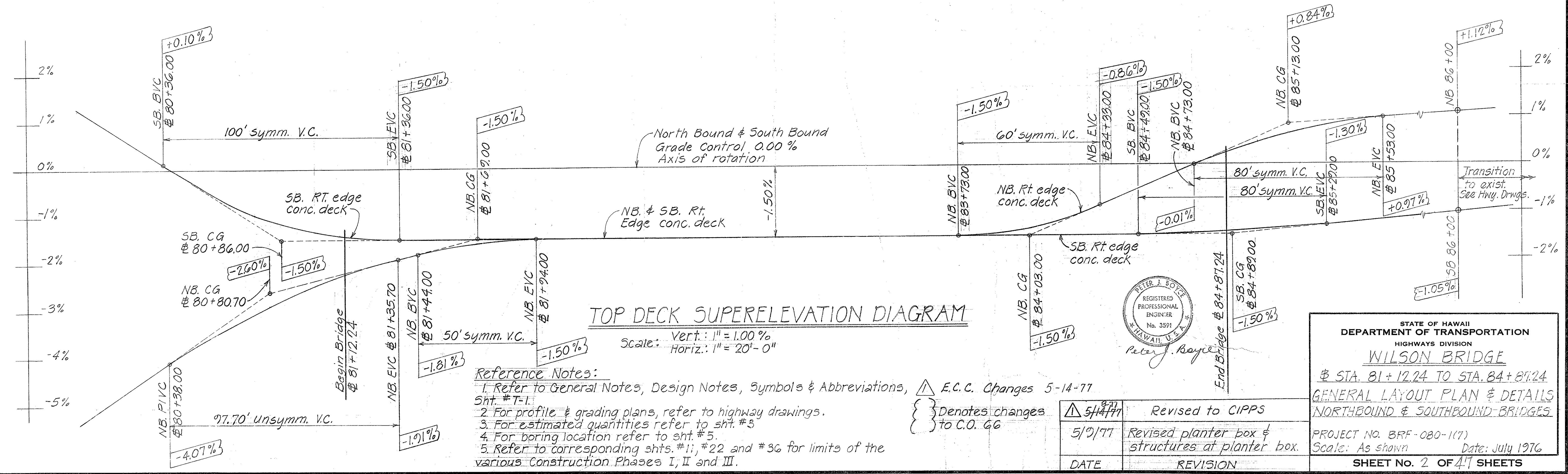


# GENERAL LAYOUT PLAN Scale: 1" = 20'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5B7-080-1(7)	1977	66	105



PLAN  $\Delta$



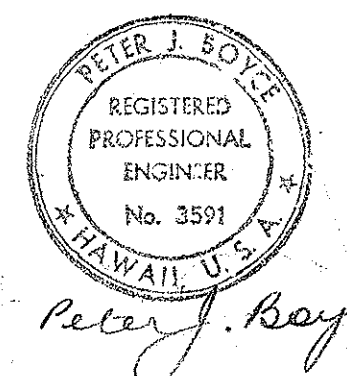
## TOP DECK SUPERELEVATION DIAGRAM

Scale: Vert: 1" = 1.00%  
Horiz: 1" = 20'-0"

### Reference Notes:

1. Refer to General Notes, Design Notes, Symbols & Abbreviations,  $\Delta$  E.C.C. Changes 5-14-77 Sht. #7-1.
2. For profile & grading plans, refer to highway drawings.
3. For estimated quantities refer to sht. #3.
4. For boring location refer to sht. #5.
5. Refer to corresponding shts. #11, #22 and #36 for limits of the various Construction Phases I, II and III.

DATE	REVISION
5/14/77	Revised to CIPPS
5/19/77	Revised planter box & structures at planter box.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

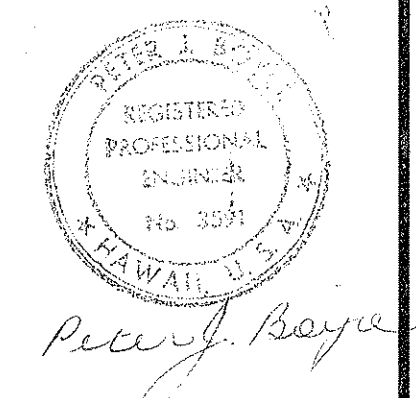
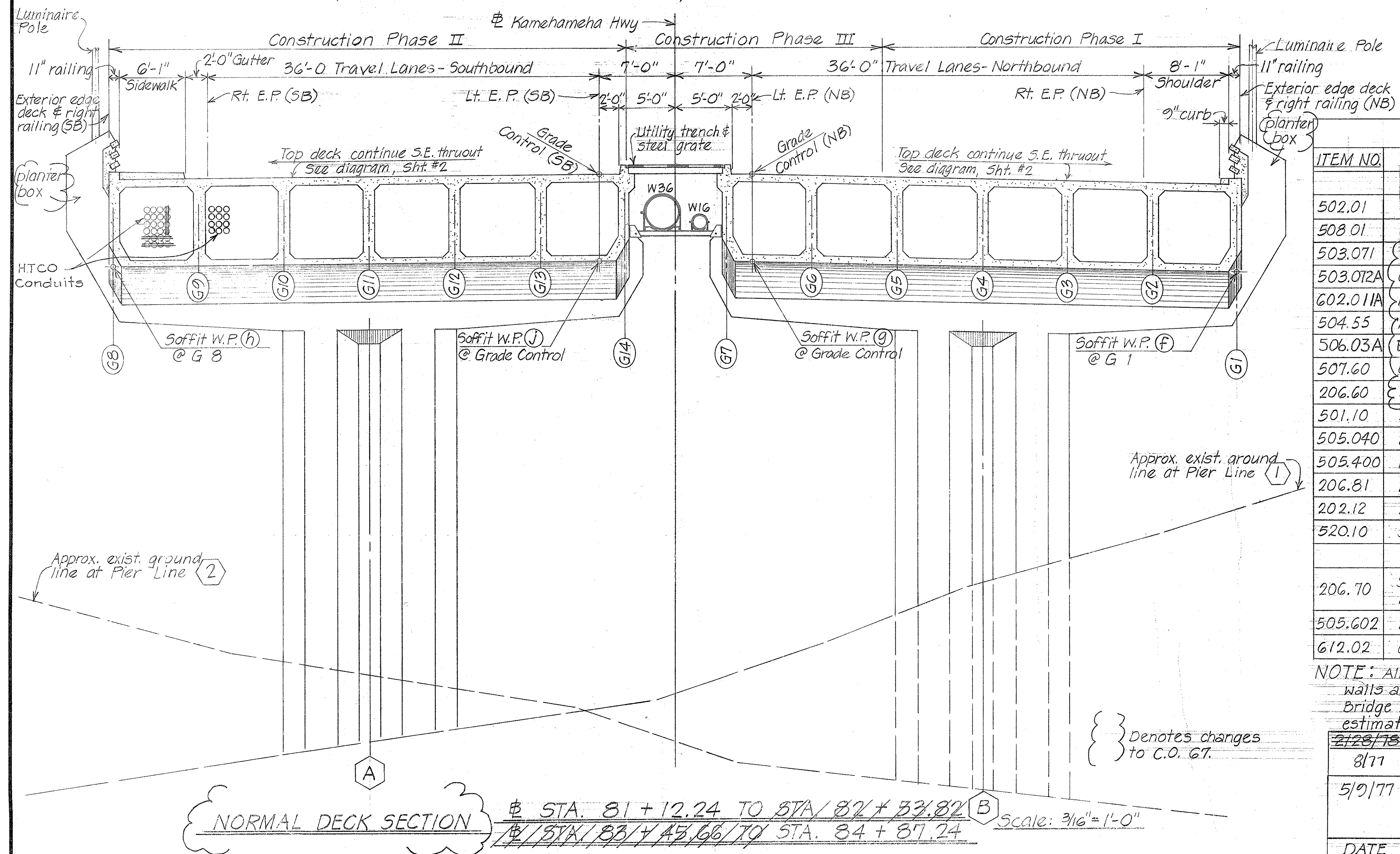
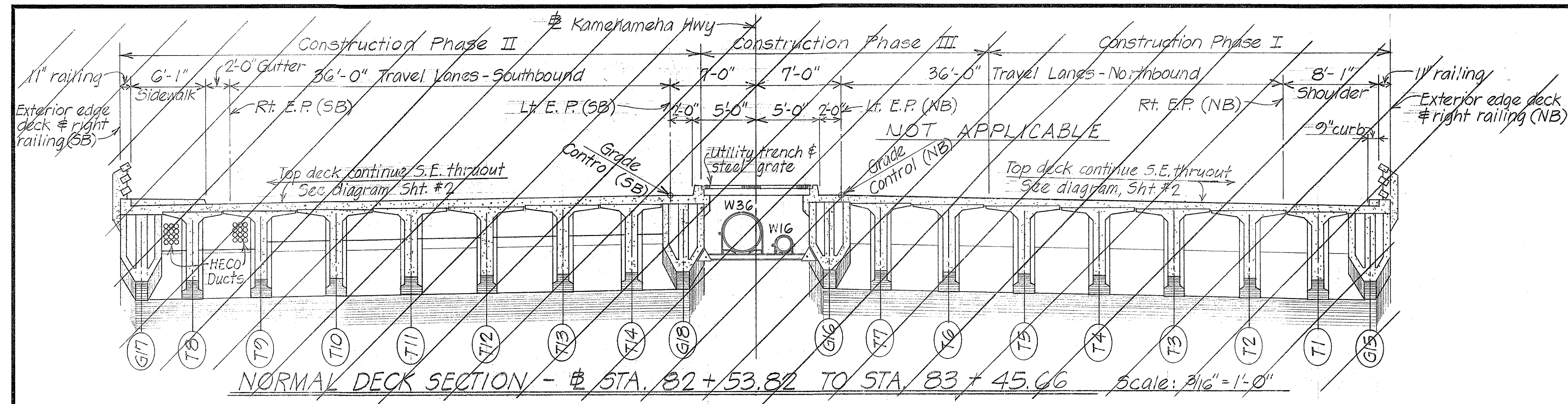
**WILSON BRIDGE**  
# STA. 81+12.24 TO STA. 84+87.24  
GENERAL LAYOUT PLAN & DETAILS  
NORTHBOUND & SOUTHBOUND BRIDGES

PROJECT NO. BRP-080-1(7)  
Scale: As shown Date: July 1976  
SHEET NO. 2 OF 47 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	67	165



ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITIES
502.01	Untreated timber (for railing)	MFBM	1.3 MFBM
508.01	Cement Rubble Masonry	Cu. Yd.	( 24 C.Y.)
503.071	Concrete in Bridge Footing (Includes Pedestal)	Lump Sum	( 1,669 C.Y.)
503.072A	Concrete in Bridge (Except Footing), Revised	Lump Sum	( 4,184 C.Y.)
602.011A	Reinforcing Steel in Bridge Structures, Revised	Lump Sum	(1,475,120 Lbs.)
504.55	Post-tensioning Operation for Structure	Lump Sum	(91,320 Lbs.)
506.03A	Elastomeric Structural Bearing Pad Assbly	Each	( 28 Ea.)
507.60	Concrete Railing (Includes Planter Box & End Posts)	Lin. Ft.	1,043 L.F.
206.60	Structure Excavation for Bridges	Cu. Yds.	7,345 C.Y.
501.10	Structural Steel	Lump Sum	( 48,610 Lbs.)
505.040	Precast, Prestressed Concrete Piles, Furnished	Lin. Ft.	23,940 L.F.
505.400	Precast, Prestressed Concrete Piles, Driven	Lin. Ft.	22,860 L.F.
206.81	Filter Material for Structures	Cu. Yds.	100 C.Y.
202.12	Removal of Existing Wilson Bridge	Lump Sum	( Lump Sum)
520.10	Steel Grid Decking for Median	Sq. Ft.	3,306 S.F.
206.70	Structure Backfill for Bridge Abutments, Retaining Walls & Wing Walls	Cu. Yds.	789 C.Y.
505.602	Extension or "Build Ups" for Piles	F.A.	—
612.02	Grouted Rubble Paving	Cu. Yds.	19 C.Y.

NOTE: All Wingwalls and Retaining walls are considered as part of Bridge Items, and included in estimated quantities.

DATE	REVISION
2/23/78	Deleted Ductline "B"
8/77	Revised to CIPPS
5/9/77	Revised estimated quantities Revised planter box and structures at planter box.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
TYPICAL SECTIONS

NORTHBOUND & SOUTHBOUND BRIDGES

PROJECT NO. BRF-080-1(7)  
Scale: As noted Date: July 1976

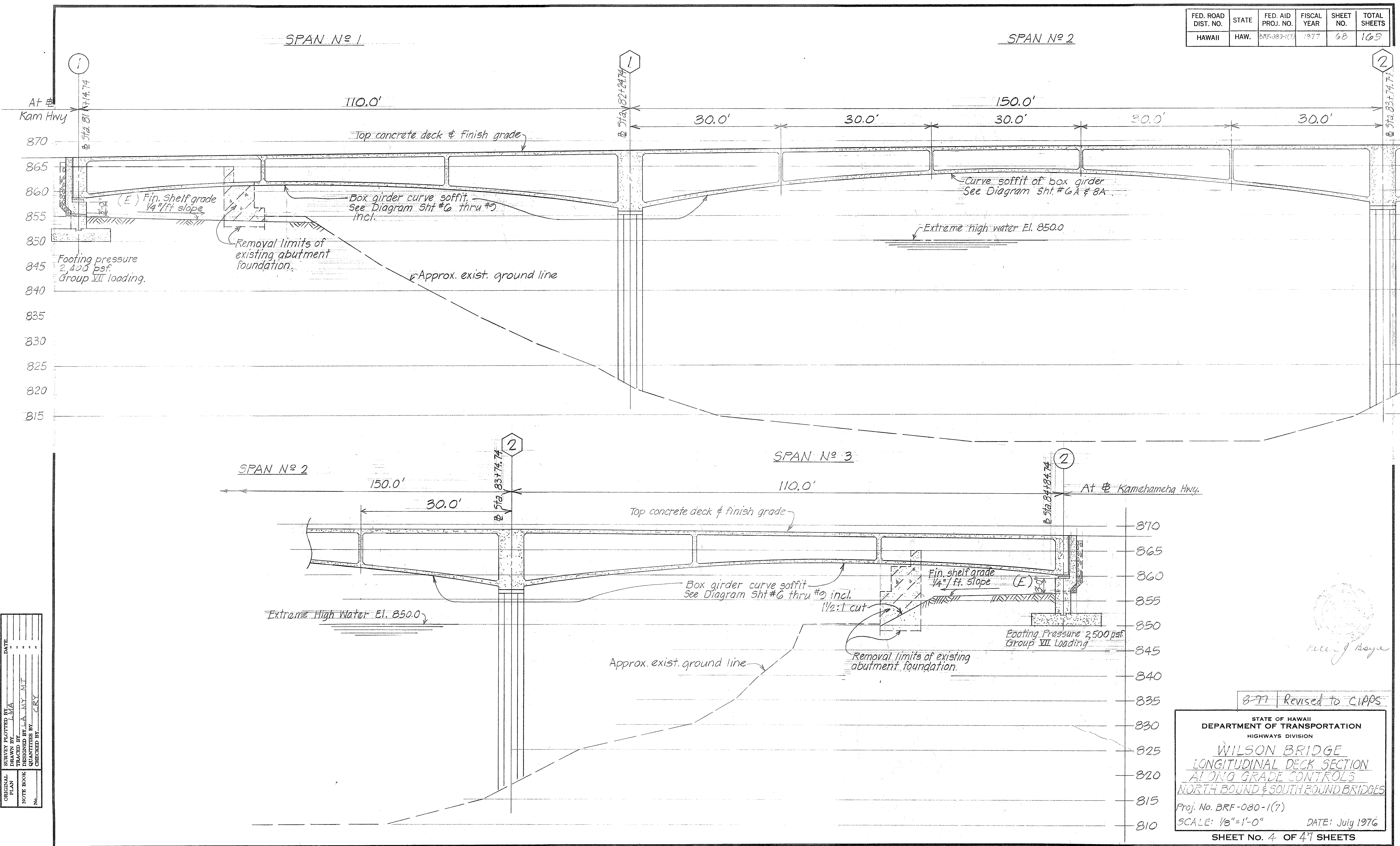
SHEET NO. 3 OF 47 SHEETS

SURVEY PLOTTED BY	DATE
DESIGNED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	

CO 67



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	68	105



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
No.	

8-77 Revised to CIPPS

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
LONGITUDINAL DECK SECTION  
ALONG GRADE CONTROLS  
NORTH BOUND & SOUTH BOUND BRIDGES

Proj. No. BRF-080-1(7)  
SCALE: 1/8" = 1'-0" DATE: July 1976

SHEET No. 4 OF 47 SHEETS

*W. J. Boye*

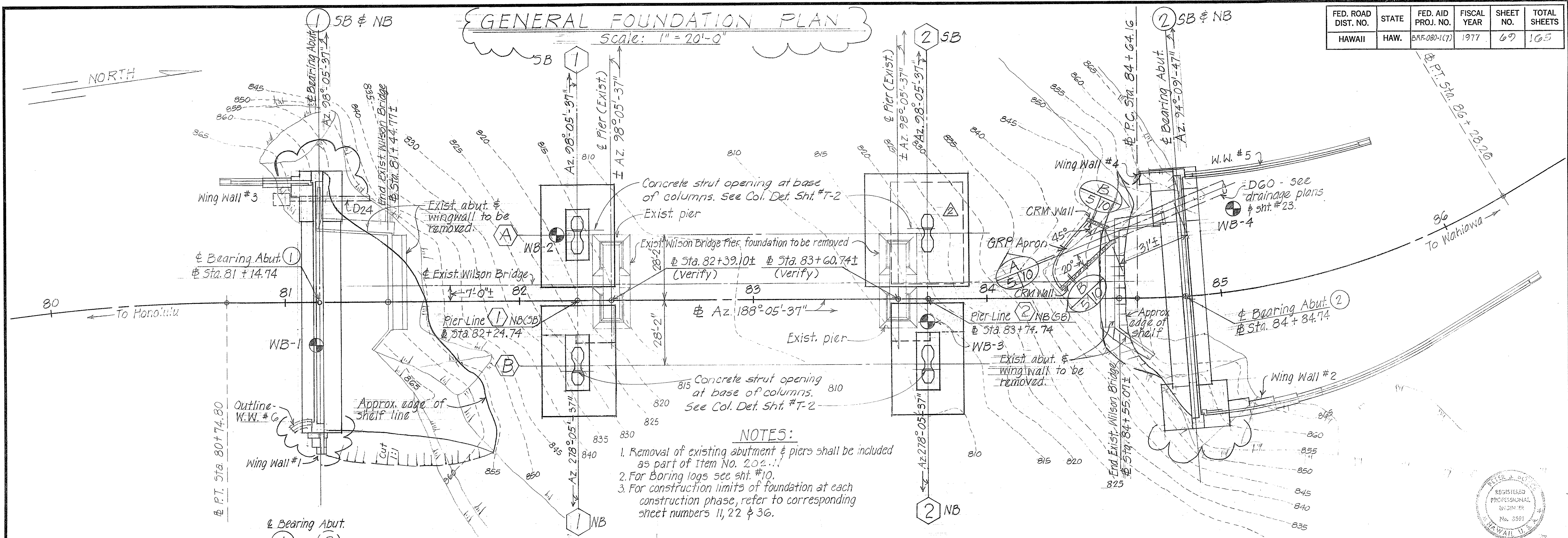
C O G S



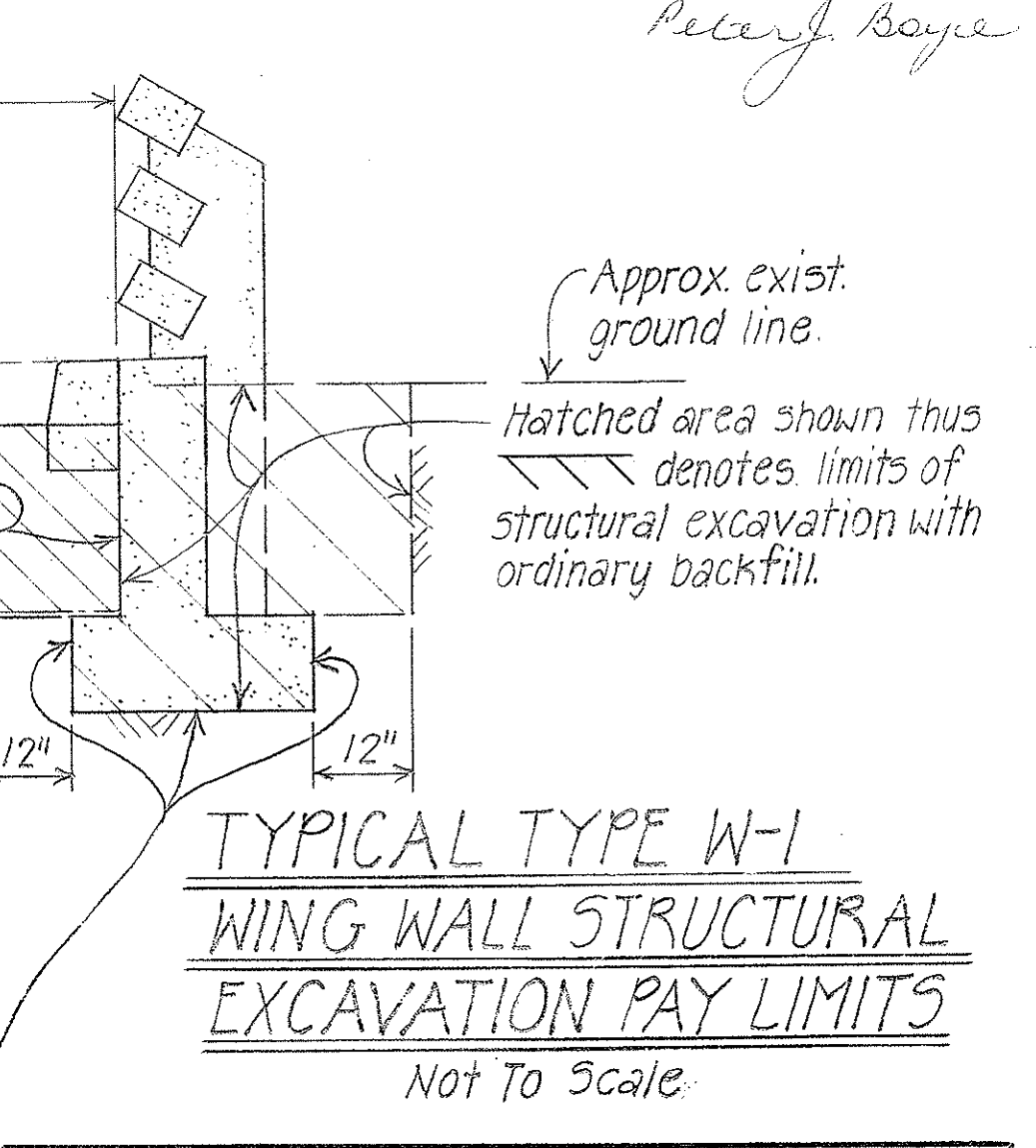
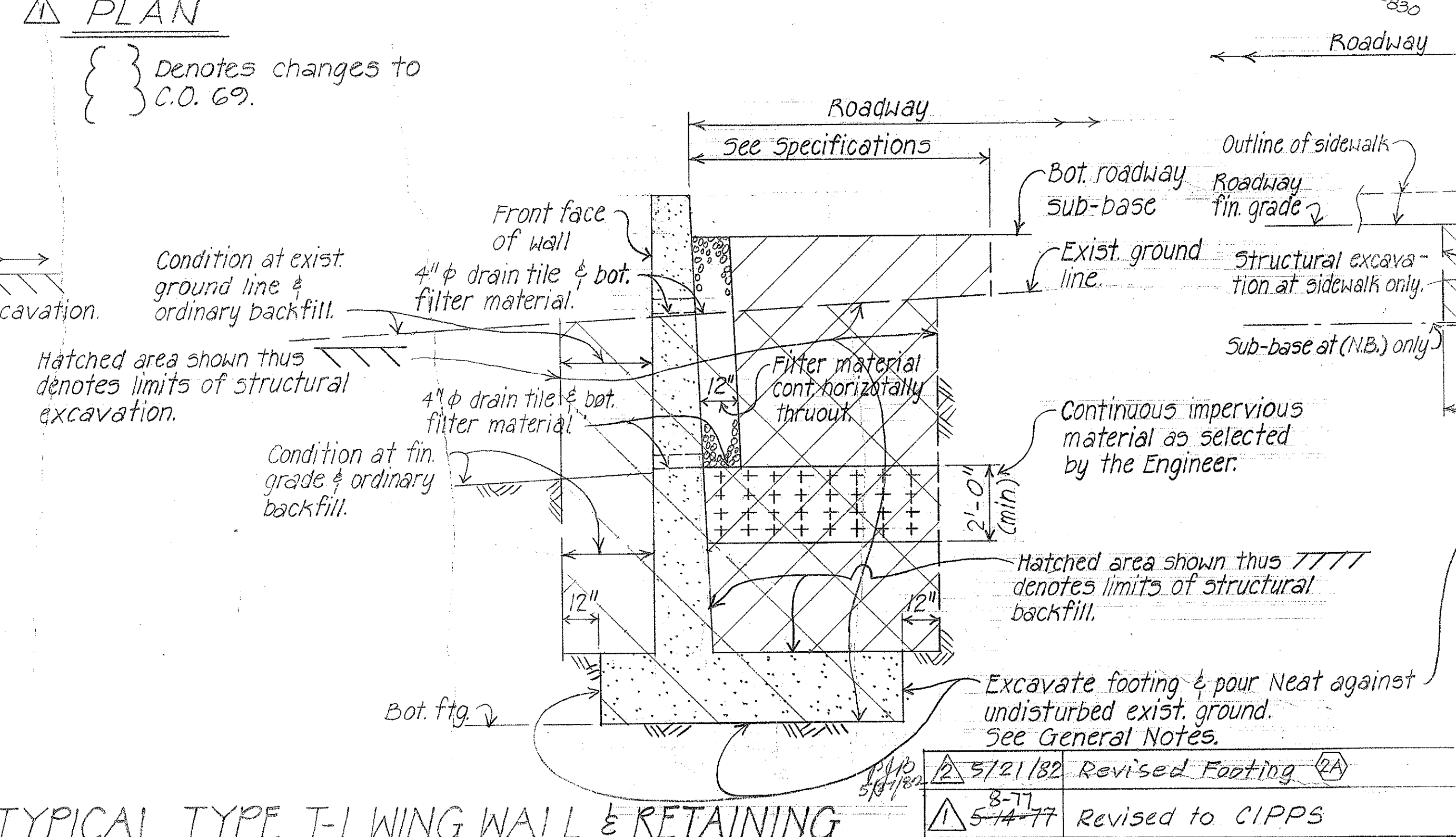
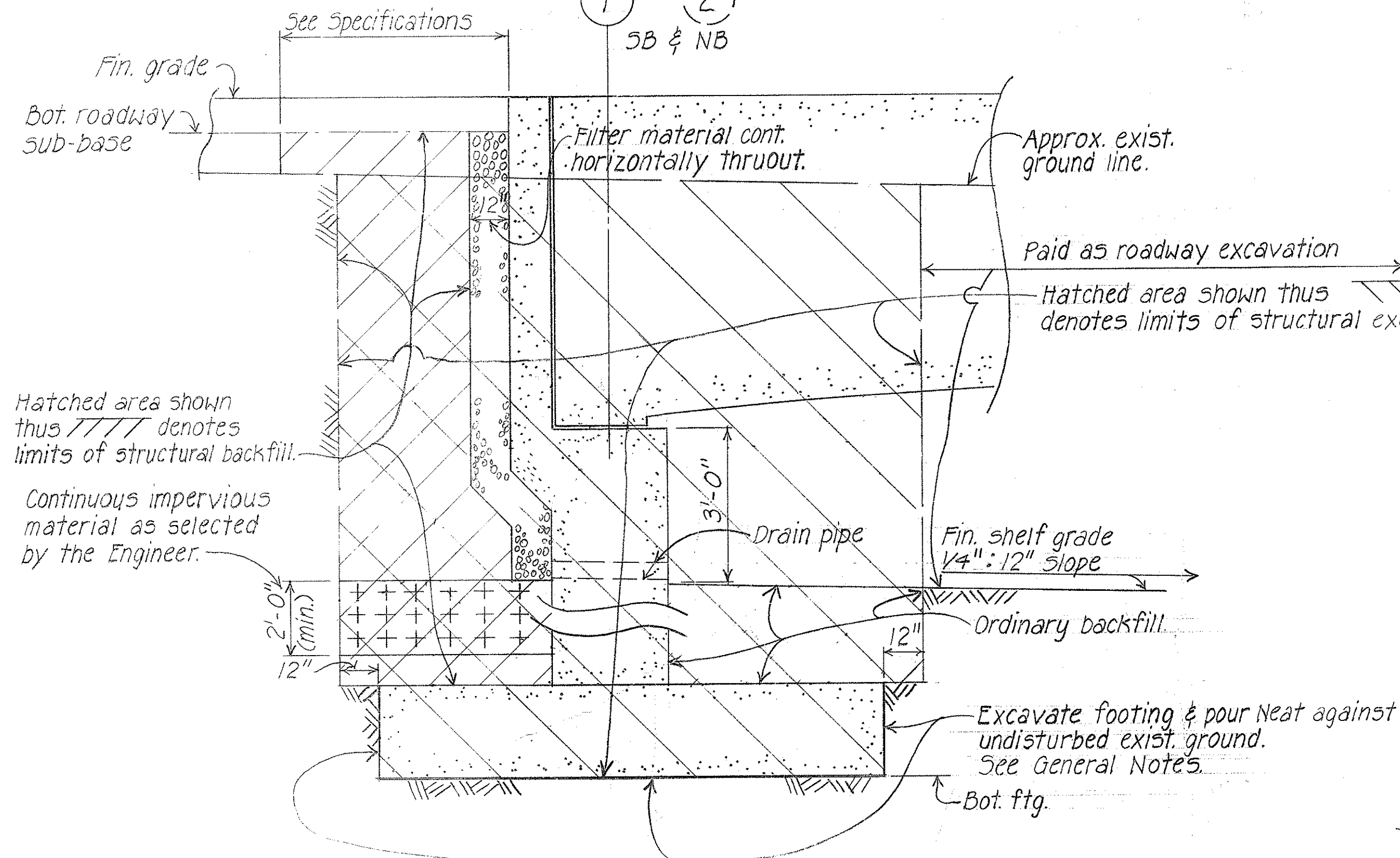
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	69	105

# GENERAL FOUNDATION PLAN

Scale: 1" = 20'-0"



REGISTERED PROFESSIONAL ENGINEER  
No. 3591  
HAWAII, U.S.A.  
*Peter J. Baye*



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

DATE	REVISION
5/21/82	Revised Footing (2A)
5-7-77	Revised to CIPPS
5/9/77	Revised abutment details at planter boxes.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
# STA. 81+12.74 TO STA. 84+87.74  
GENERAL FOUNDATION PLAN & DETAILS  
NORTHBOUND AND SOUTHBOUND BRIDGES

PROJECT No. BRF-080-1(7)  
Scale: As noted Date: July 1976

SHEET NO. 5 OF 47 SHEETS

**TYPICAL ABUTMENT STRUCTURAL EXCAVATION AND BACKFILL PAY LIMITS**  
Not To Scale

**TYPICAL TYPE T-1 WING WALL & RETAINING WALL STRUCTURAL EXCAVATION & BACKFILL PAY LIMITS**  
Not to Scale

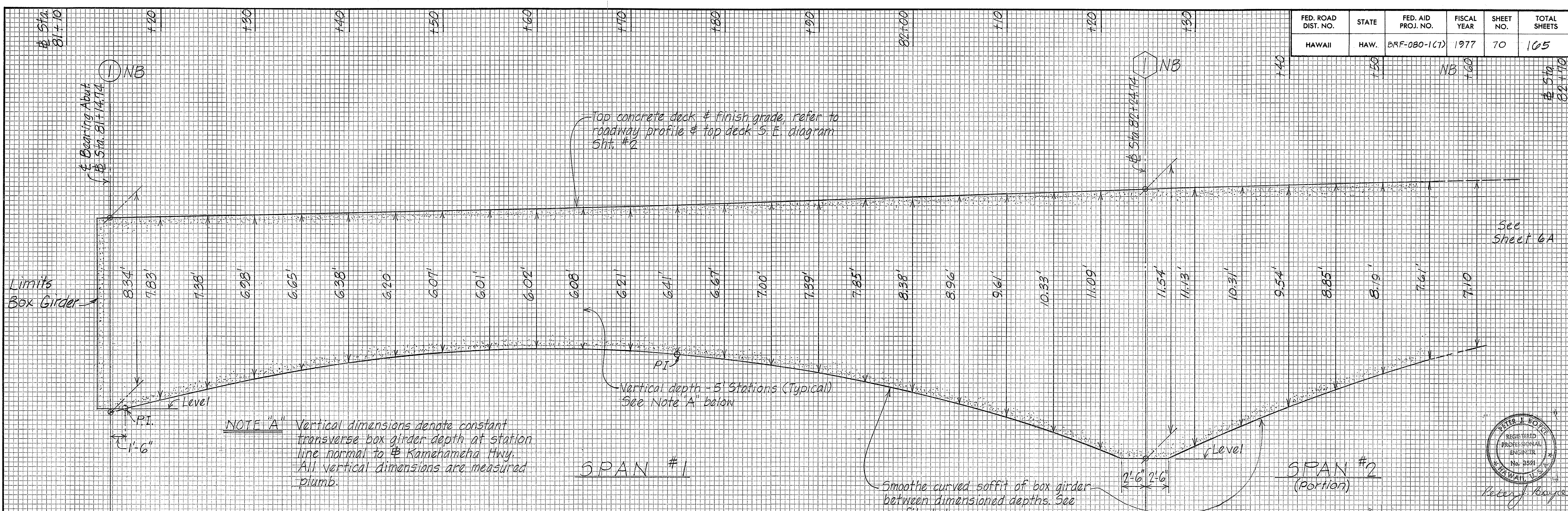
**TYPICAL TYPE W-1 WING WALL STRUCTURAL EXCAVATION PAY LIMITS**  
Not To Scale



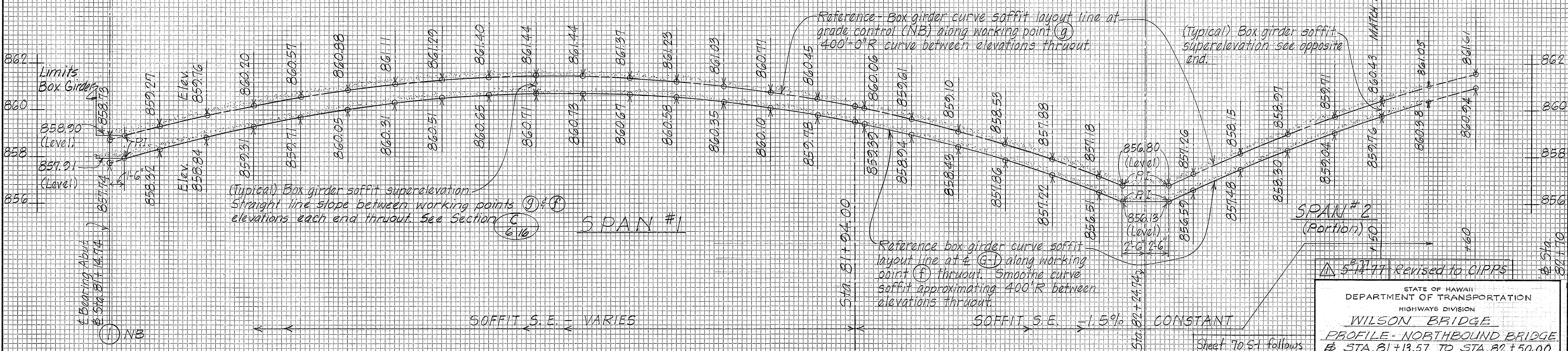
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	70	105

FINAL SURVEY	NO.
SURVEYED	DATE
PLOTTED	BY
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	

ORIGINAL SURVEY	NO.
SURVEYED	DATE
PLOTTED	BY
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	



PROFILE - TYPICAL DIMENSIONED DEPTH OF BOX GIRDER - NORTHBOUND BRIDGE



PROFILE - BOX GIRDER CURVE SOFFIT SUPERELEVATION DIAGRAM - NORTHBOUND BRIDGE

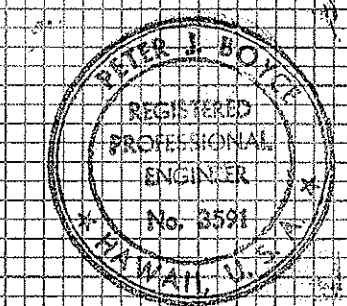
5-17-77 Revised to CIPPS

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
PROFILE - NORTHBOUND BRIDGE  
# STA 81+13.57 TO STA 82+50.00  
BOX GIRDER DEPTH & CURVED SOFFITS  
SUPERELEVATION DIAGRAM.

PROJECT No. BRF-080-1(7)  
Scale: HORIZ. 1"=50'  
VERT. 1"=2'0" Date: July 1976

SHEET NO. 6 OF 47 SHEETS

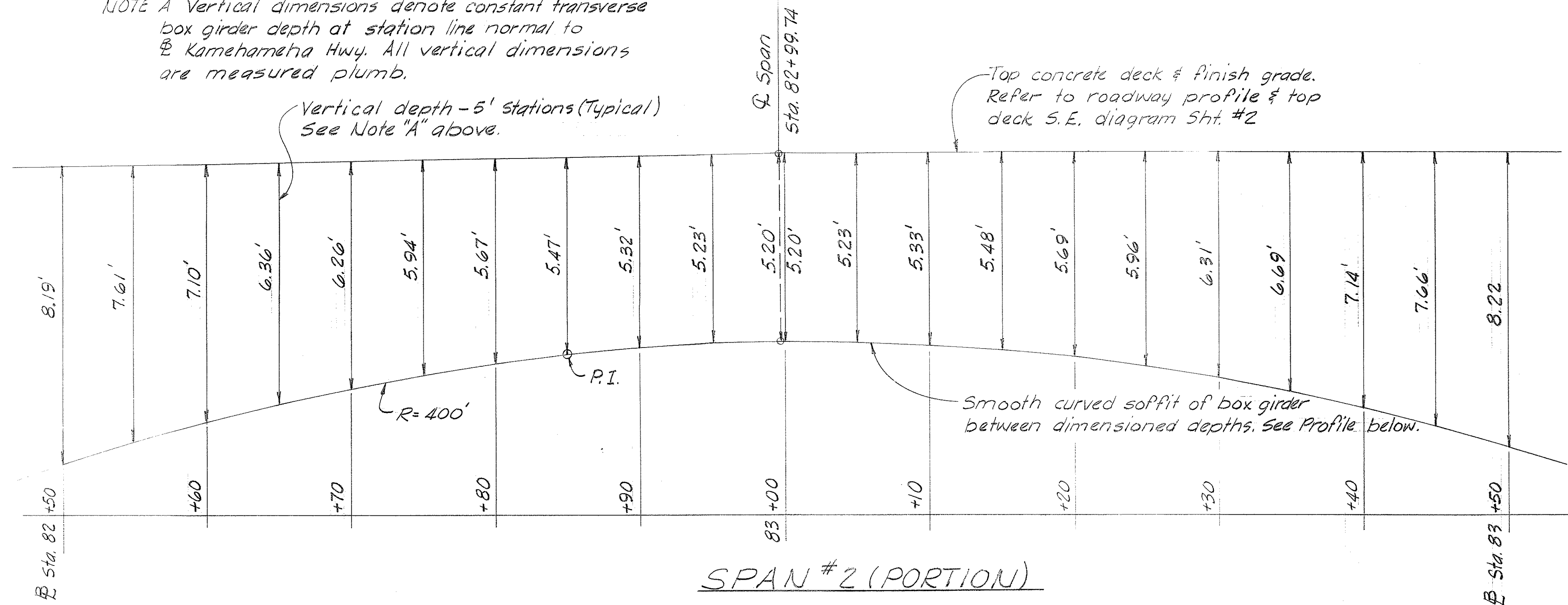


Peter J. Boyle



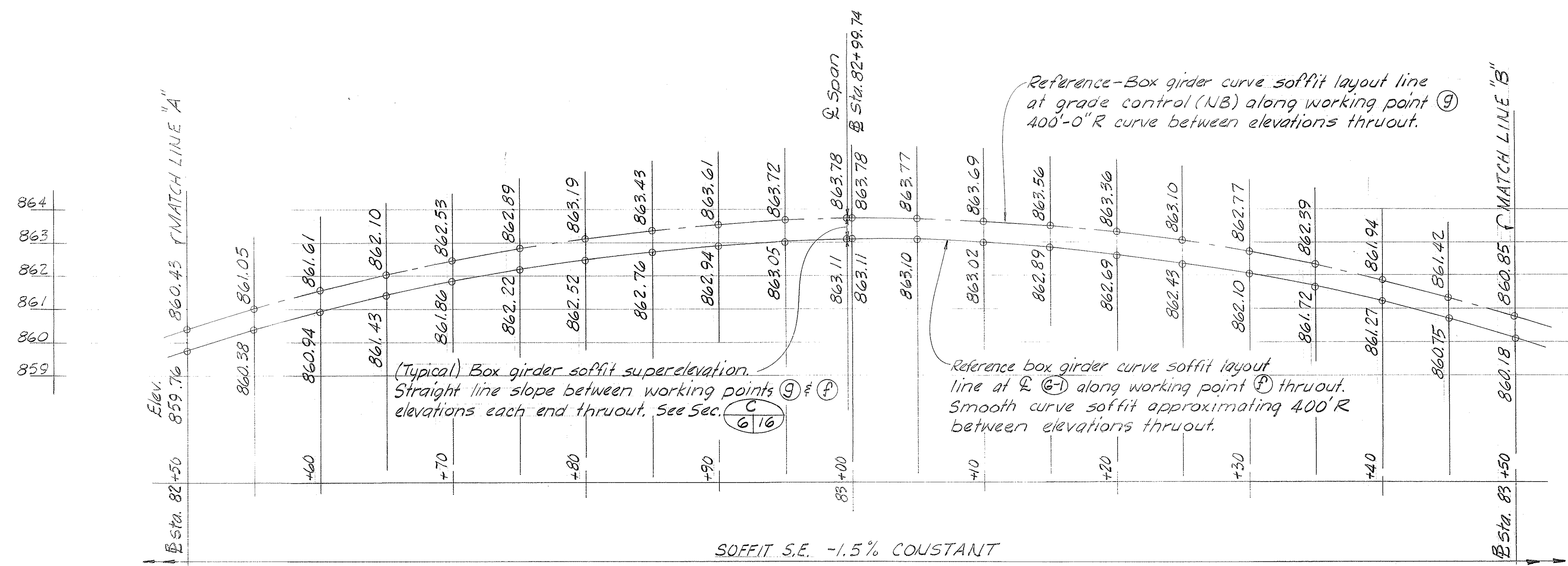
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-16	1977	70A	165

NOTE "A" Vertical dimensions denote constant transverse box girder depth at station line normal to Kamehameha Hwy. All vertical dimensions are measured plumb.



SPAN #2 (PORTION)  
 PROFILE-TYPICAL DIMENSIONED DEPTH OF BOX GIRDER-NORTHBOUND BRIDGE

Scale: Horiz. 1"=5'-0"  
 Vert. 1"=2'-0"



SPAN #2 (PORTION)  
 PROFILE-BOX GIRDER CURVE SOFFIT SUPERELEVATION DIAGRAM-NORTHBOUND BRIDGE

Scale: Horiz. 1"=5'-0"  
 Vert. 1"=2'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NO.	

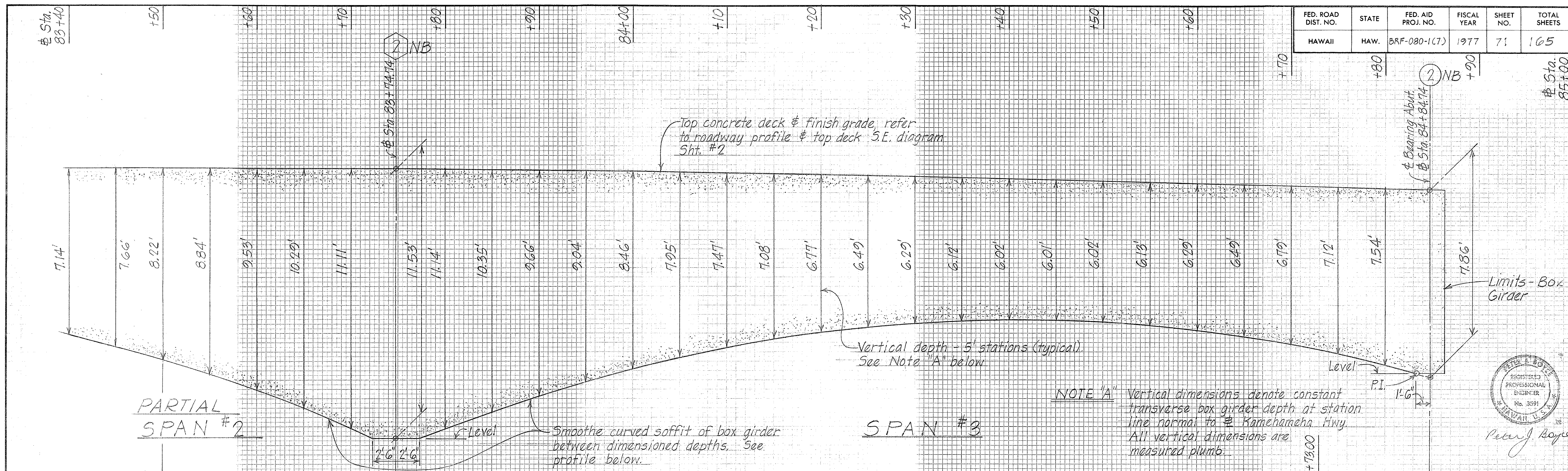
PETER J. BOYCE  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 3591  
 HAWAII, U.S.A.  
 Peter J. Boyce

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
 WILSON BRIDGE  
 PROFILE-NORTHBOUND BRIDGE  
 STA. 82+50.00 TO STA. 83+50.00  
 BOX GIRDER DEPTH & CURVED SOFFITS  
 SUPERELEVATION DIAGRAM  
 PROJECT NO. BRF-080-(7)  
 SCALE: AS SHOWN DATE  
 SHEET No. 6A OF 47 SHEETS

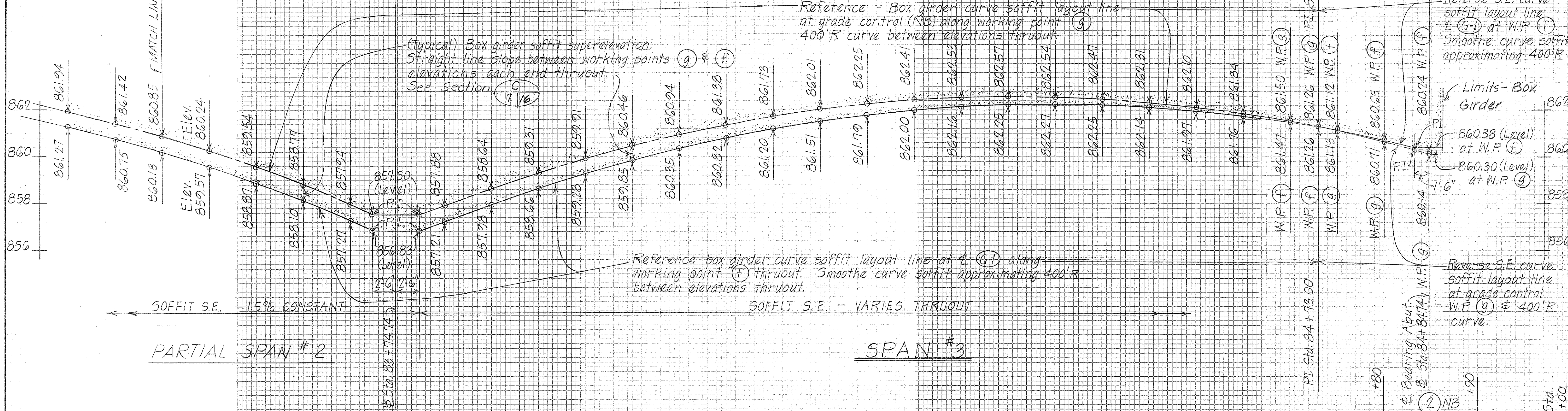
CO ADD TO S-1



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	71	165

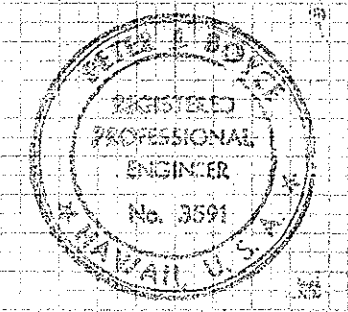


PROFILE - TYPICAL DIMENSIONED DEPTH OF BOX GIRDER - NORTHBOUND BRIDGE



PROFILE - BOX GIRDER CURVE SOFFIT SUPERELEVATION DIAGRAM - NORTHBOUND BRIDGE

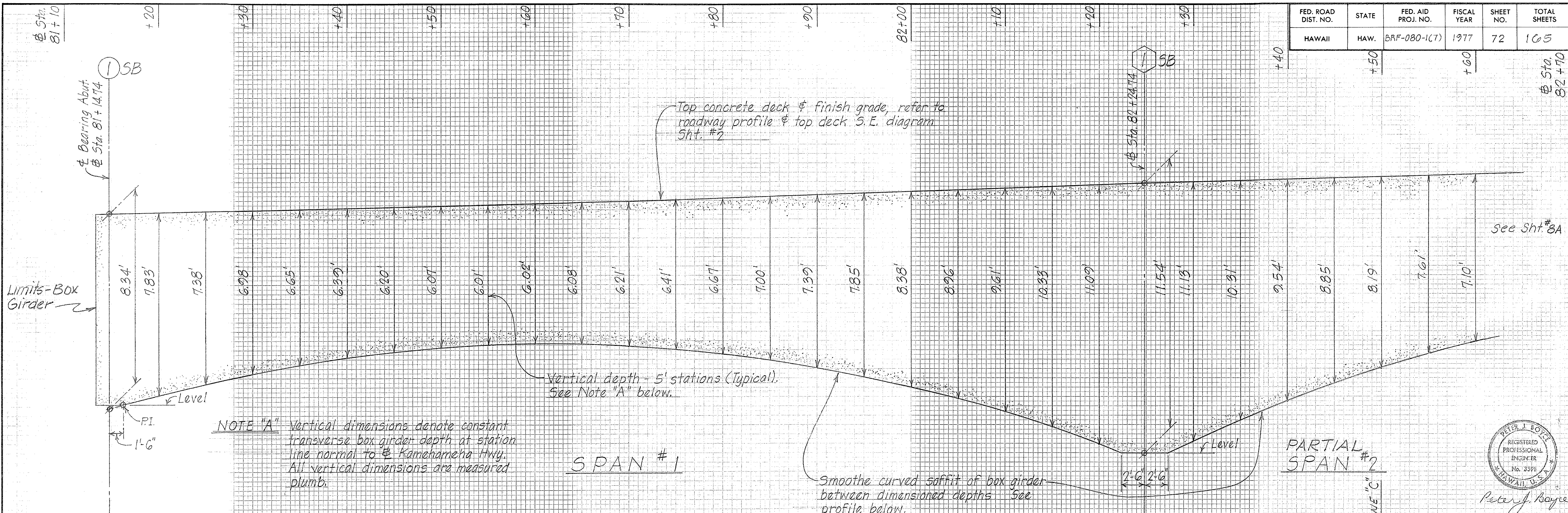
Revised to CIPPS
PROFILE - NORTHBOUND BRIDGE
Sta. 83 + 50.00 TO Sta. 84 + 85.91
SHEET NO. 7 OF 47 SHEETS



Peter J. Boyce

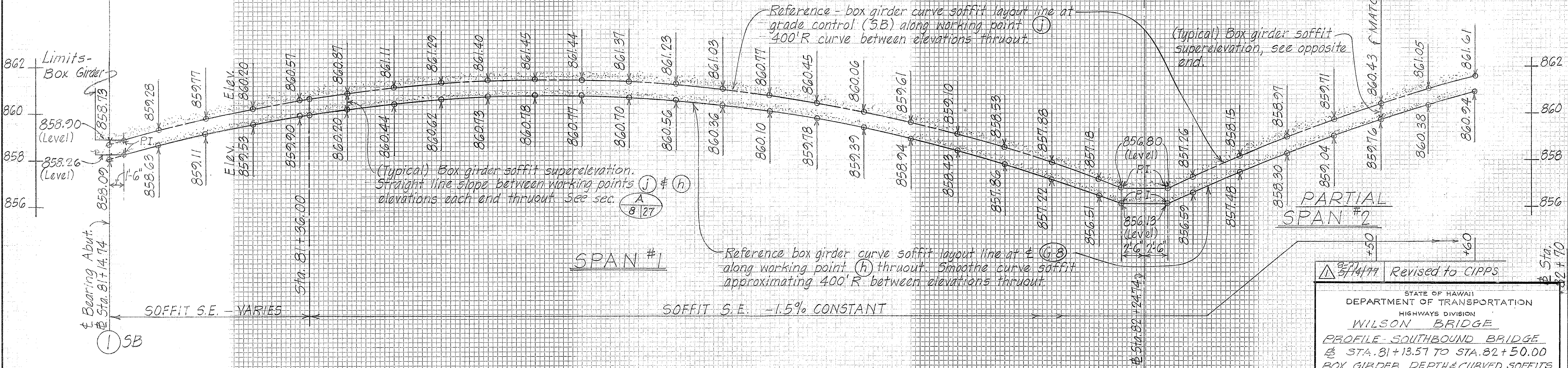


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	72	105



**NOTE "A"** Vertical dimensions denote constant transverse box girder depth at station line normal to Kamehameha Hwy. All vertical dimensions are measured plumb.

**PROFILE - TYPICAL DIMENSIONED DEPTH OF BOX GIRDER - SOUTHBOUND BRIDGE**



**PROFILE - BOX GIRDER CURVE SOFFIT SUPERELEVATION DIAGRAM - SOUTHBOUND BRIDGE**

Revised to CIPPS 5/14/77

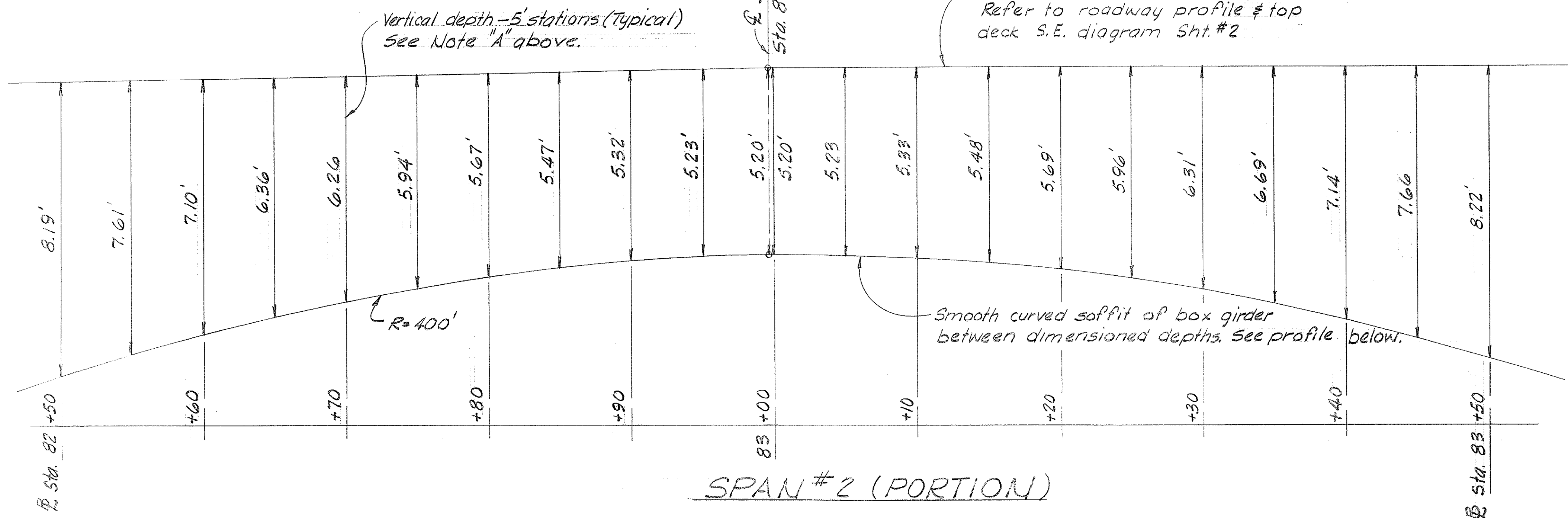
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
PROFILE - SOUTHBOUND BRIDGE  
Sta. 81+13.57 TO Sta. 82+50.00  
BOX GIRDER DEPTH & CURVED SOFFITS  
SUPERELEVATION DIAGRAM  
PROJECT NO. BRF-080-1(7)  
SCALE: HORIZ. 1"=50' DATE: July 1976  
SHEET NO. 8 OF 47 SHEETS

Peter J. Boyle  
REGISTERED PROFESSIONAL ENGINEER  
No. 3391  
HAWAII, U.S.A.



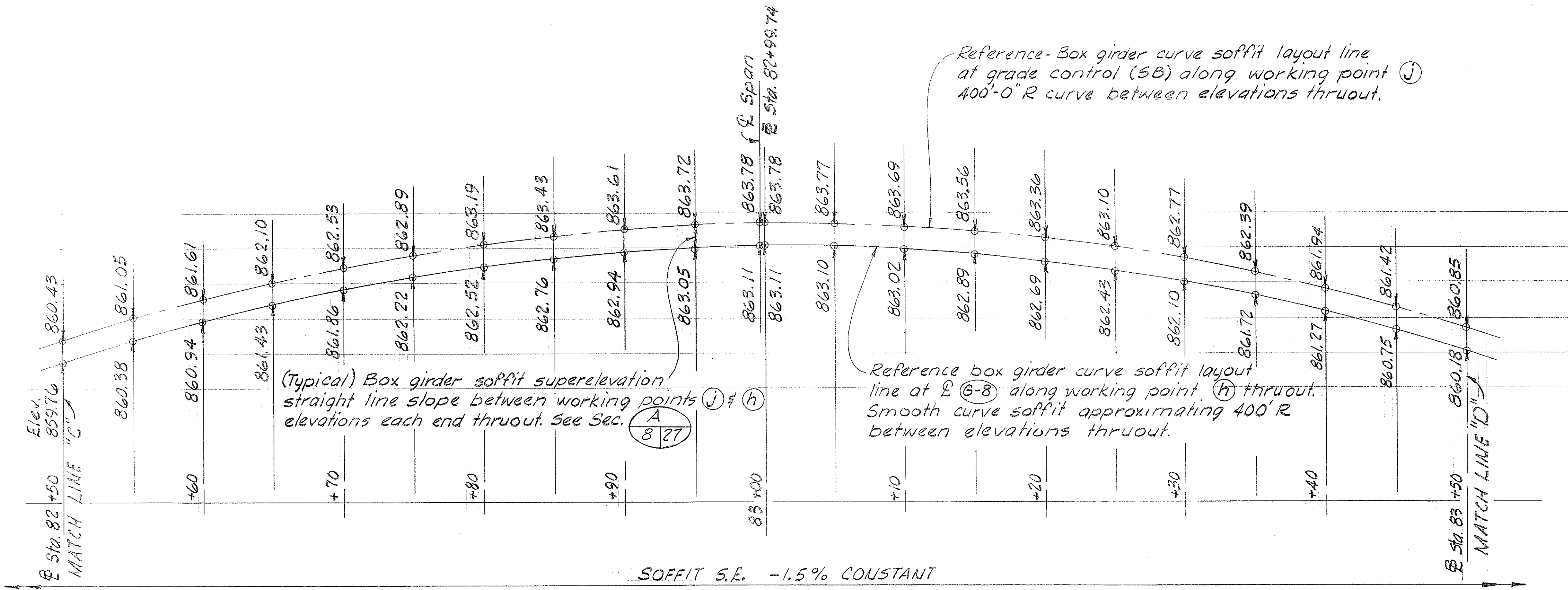
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	72A	165

Note "A" Vertical dimensions denote constant transverse box girder depth at station line normal to Kamehameha Hwy. All vertical dimensions are measured plumb.



PROFILE-TYPICAL DIMENSIONED DEPTH OF BOX GIRDER - SOUTHBOUND BRIDGE

Scale: Horiz. 1"=5'-0"  
Vert. 1"=2'-0"



PROFILE - BOX GIRDER CURVE SOFFIT SUPERELEVATION DIAGRAM - SOUTHBOUND BRIDGE

Scale: Horiz. 1"=5'-0"  
Vert. 1"=2'-0"

SURVEY PLOTTED BY	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

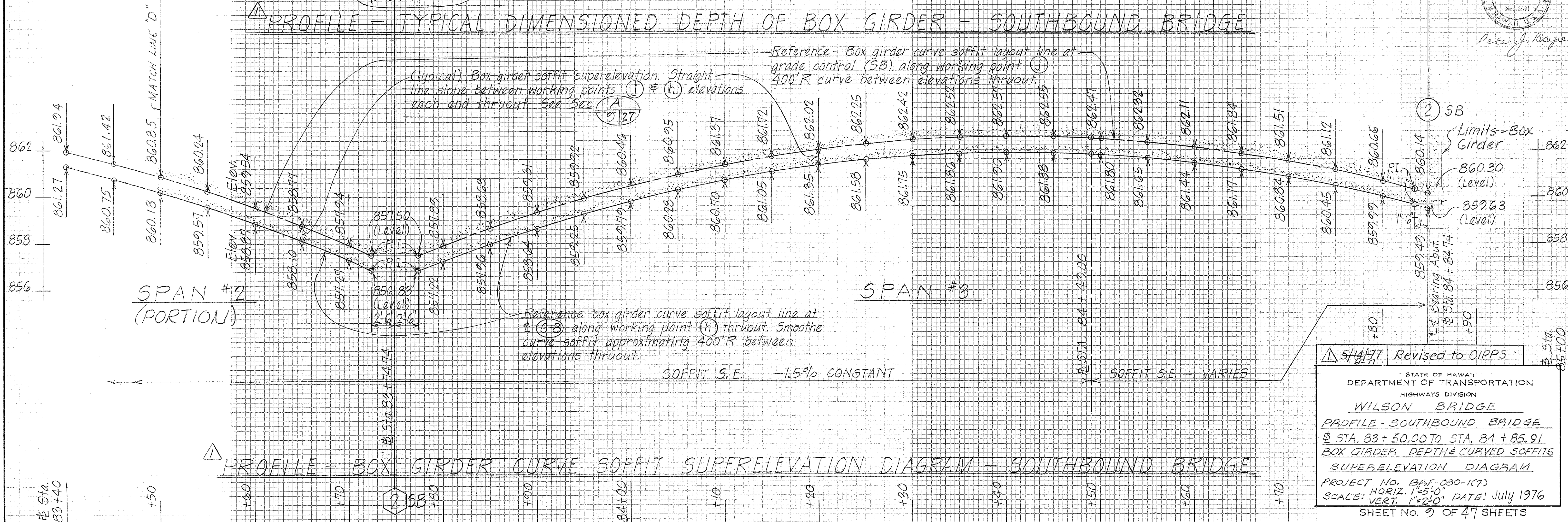
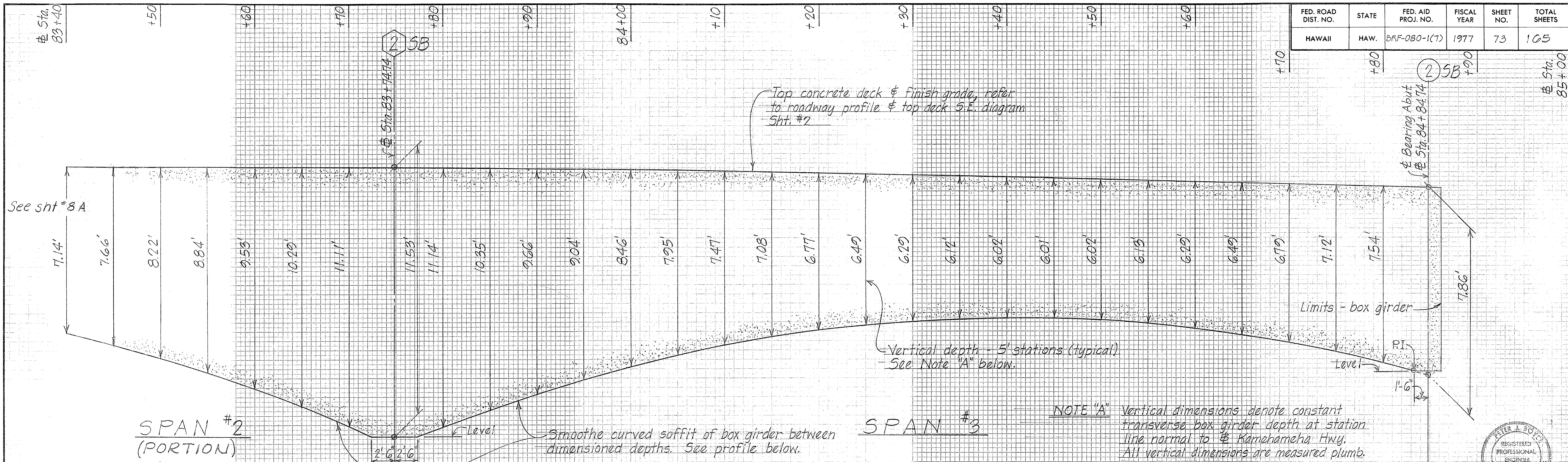
PETER J. BOYCE  
REGISTERED PROFESSIONAL ENGINEER  
No. 3591  
HAWAII, U.S.A.  
Peter J. Boyce

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
WILSON BRIDGE  
PROFILE-SOUTHBOUND BRIDGE  
STA. 82+50.00 TO STA. 83+50.00  
BOX GIRDER DEPTH & CURVED SOFFITS  
SUPERELEVATION DIAGRAM  
PROJECT NO. BRF-080-1(7)  
SCALE: AS SHOWN DATE JULY 1976  
SHEET NO. 8A OF SHEETS

CO ADD 72 S-1

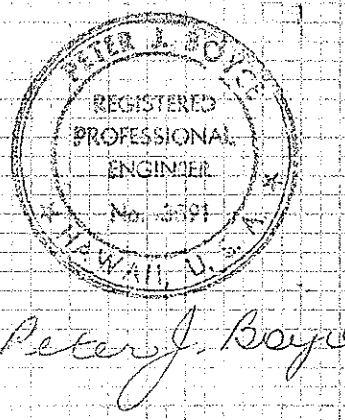


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BAF-080-1(7)	1977	73	105



5/11/77 Revised to CIPPS

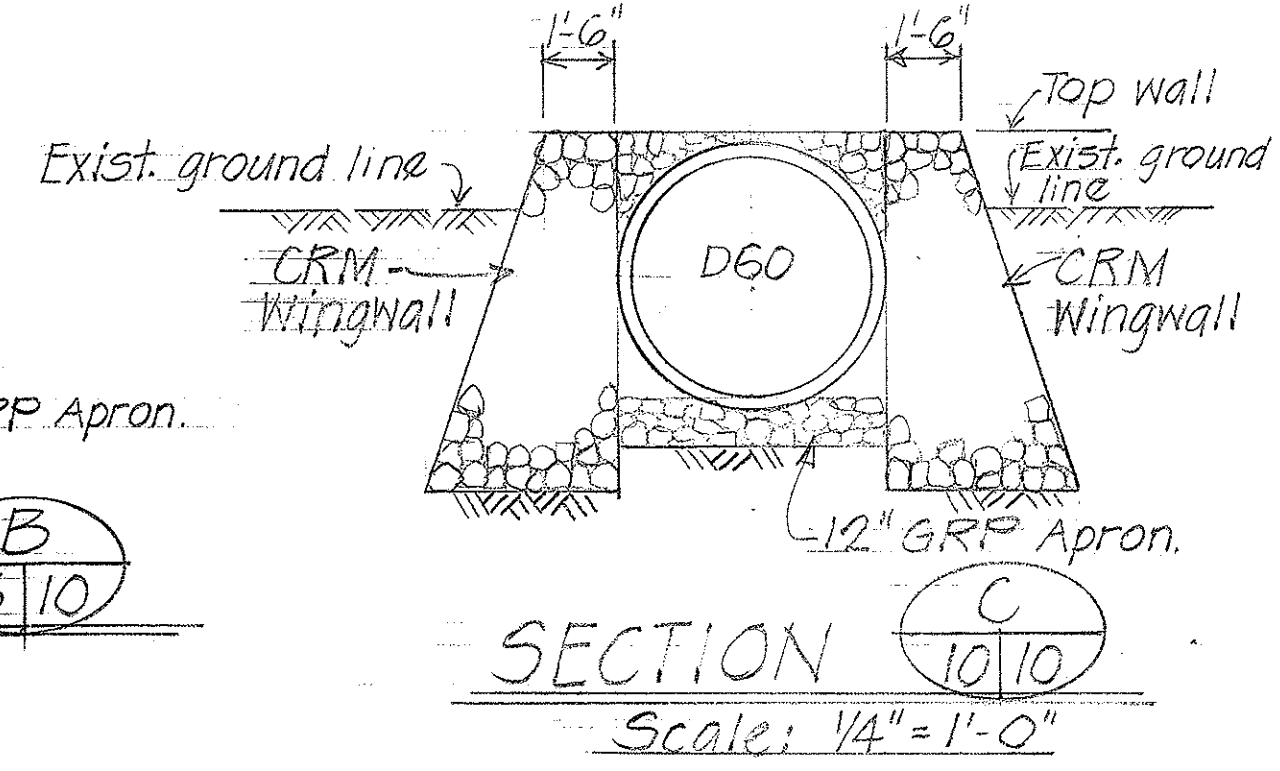
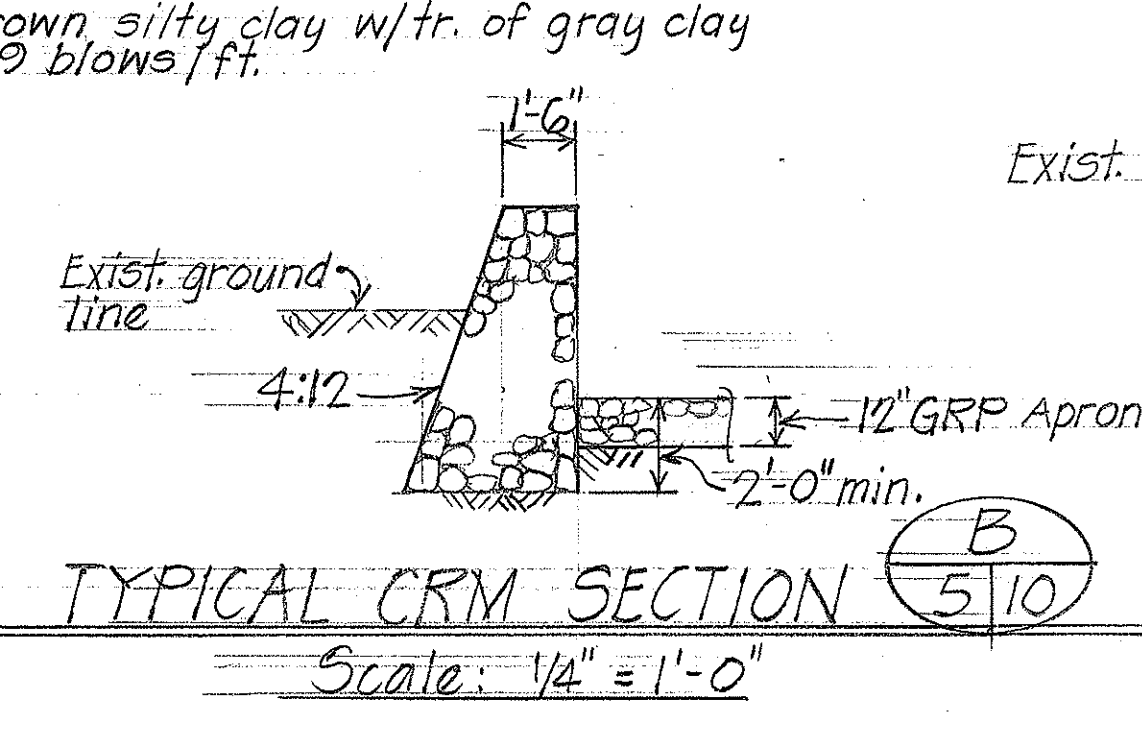
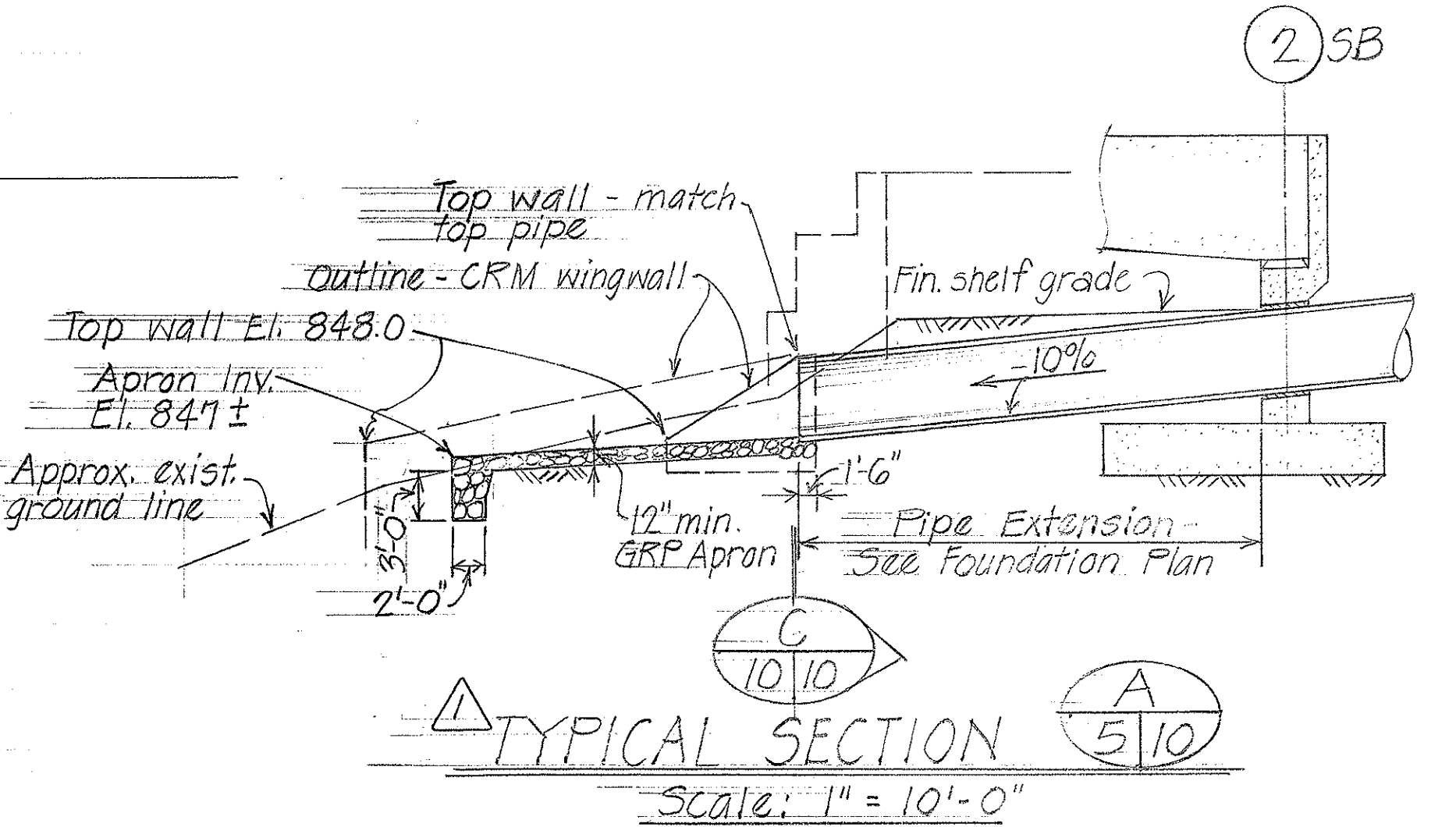
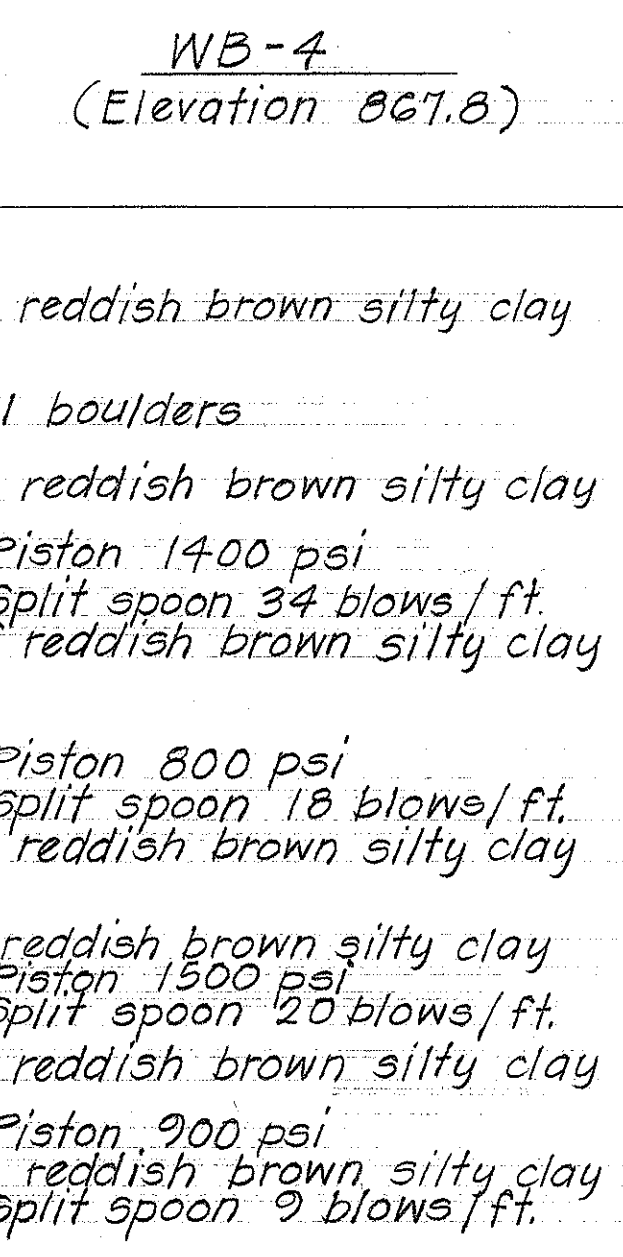
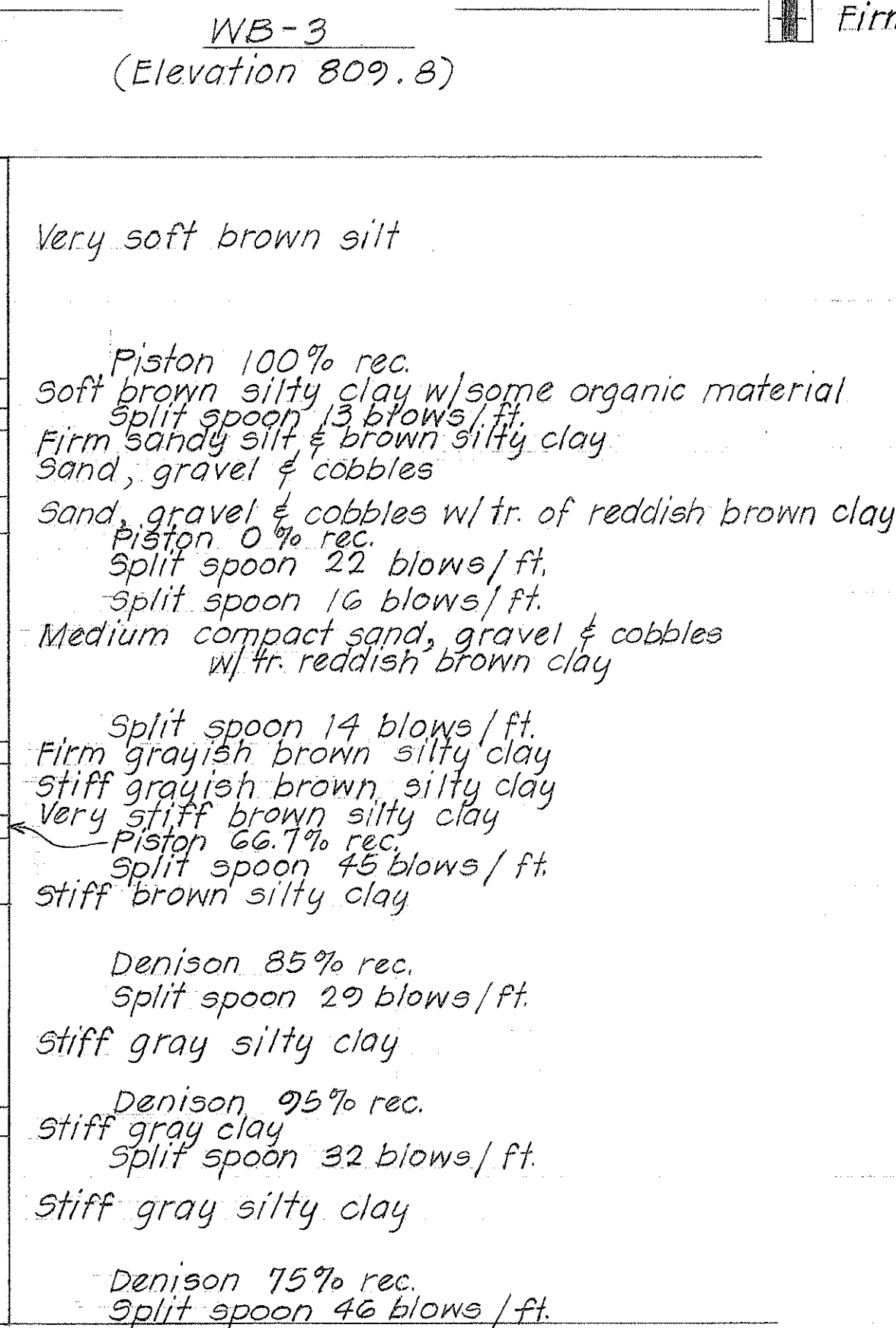
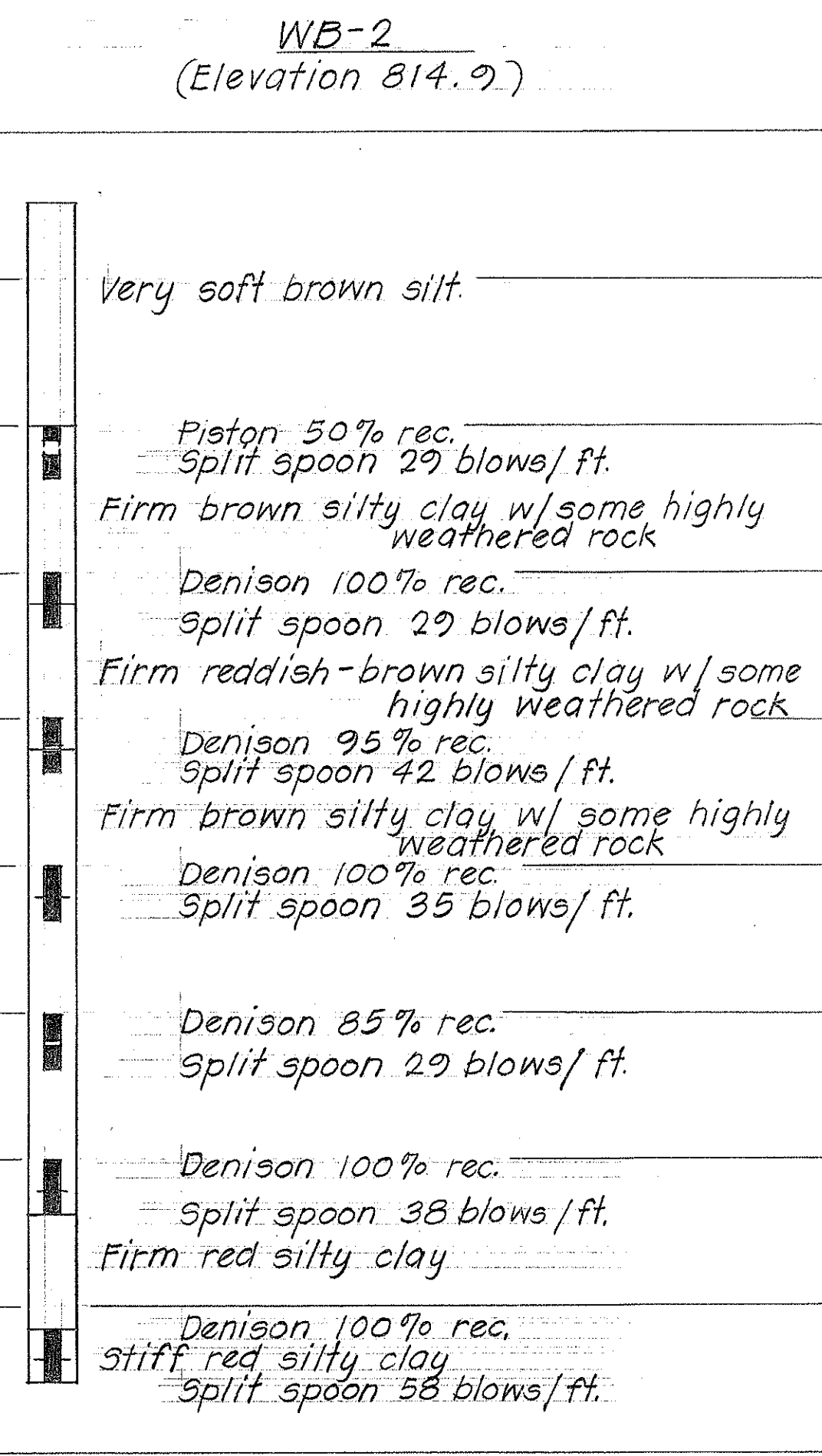
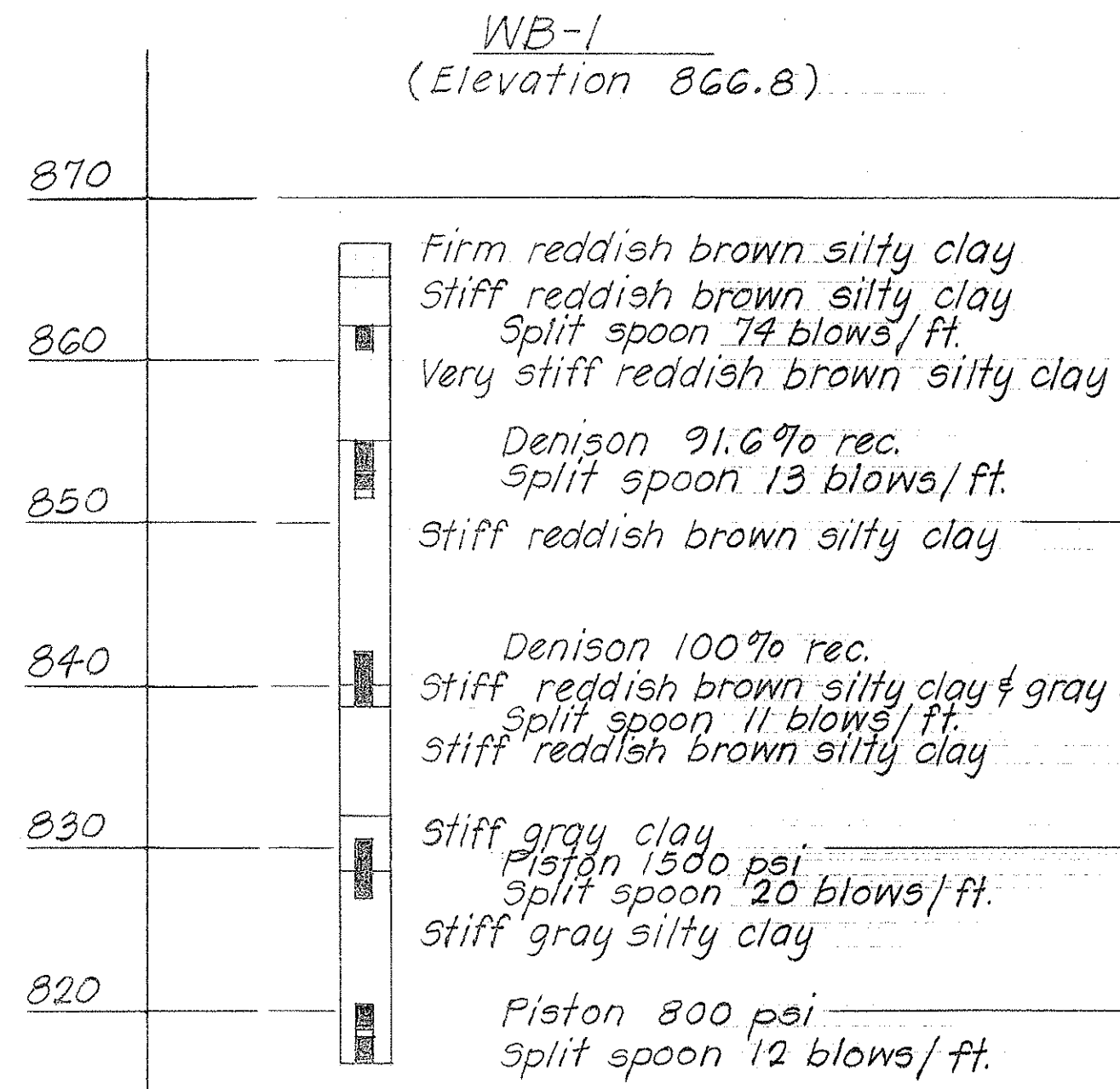
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
PROFILE - SOUTHBOUND BRIDGE  
@ STA. 83 + 50.00 TO STA. 84 + 85.91  
BOX GIRDER DEPTH & CURVED SOFFITS  
SUPERELEVATION DIAGRAM  
PROJECT NO. BAF-080-1(7)  
HORIZ. 1"=50'  
SCALE: VERT. 1"=2'-0" DATE: July 1976  
SHEET No. 7 OF 47 SHEETS





# BORING LOGS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	74	105



SURVEY PLOTTED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 DRAWN BY LMA  
 DESIGNED BY \_\_\_\_\_  
 QUANTITIES BY CRY  
 CHECKED BY \_\_\_\_\_  
 ORIGINAL PLAN  
 NOTE BOOK  
 No. \_\_\_\_\_

**NOTE:**  
The boring data furnished in these plans are the results of the facts gathered at the specific locations indicated to primarily aid in the design of the structure, and does not necessarily typify conditions at other locations. The Department assumes no responsibility for sufficiency of boring data or the prevalence of conditions similar to that indicated by the boring data.

5-28-77 Revised to CIPPS

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

WILSON BRIDGE  
LOG BORINGS

PROJECT No. BRF-080-1(7)  
No Scale Date July 1976

SHEET No. 10 OF 47 SHEETS

Peter J. Boyce

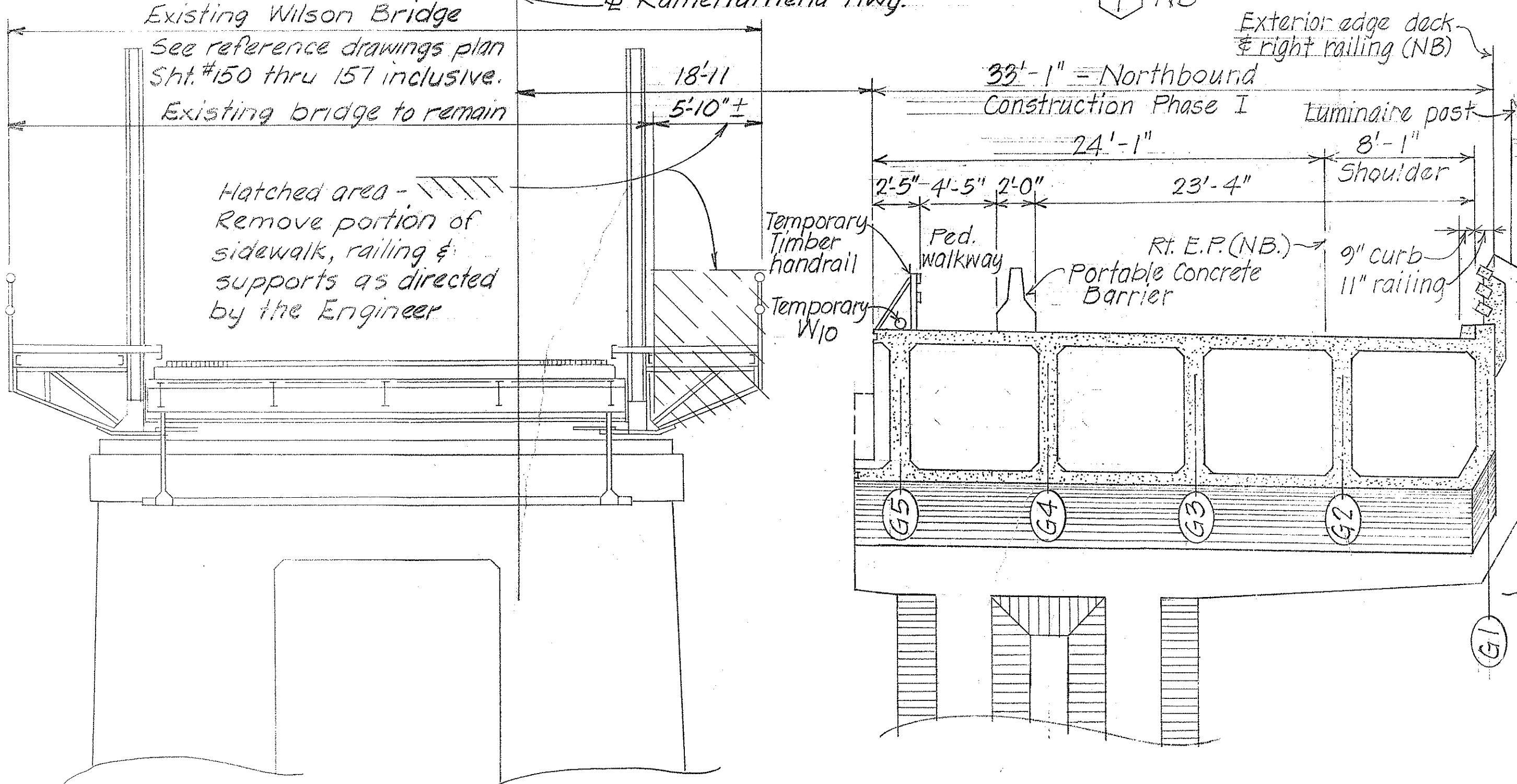
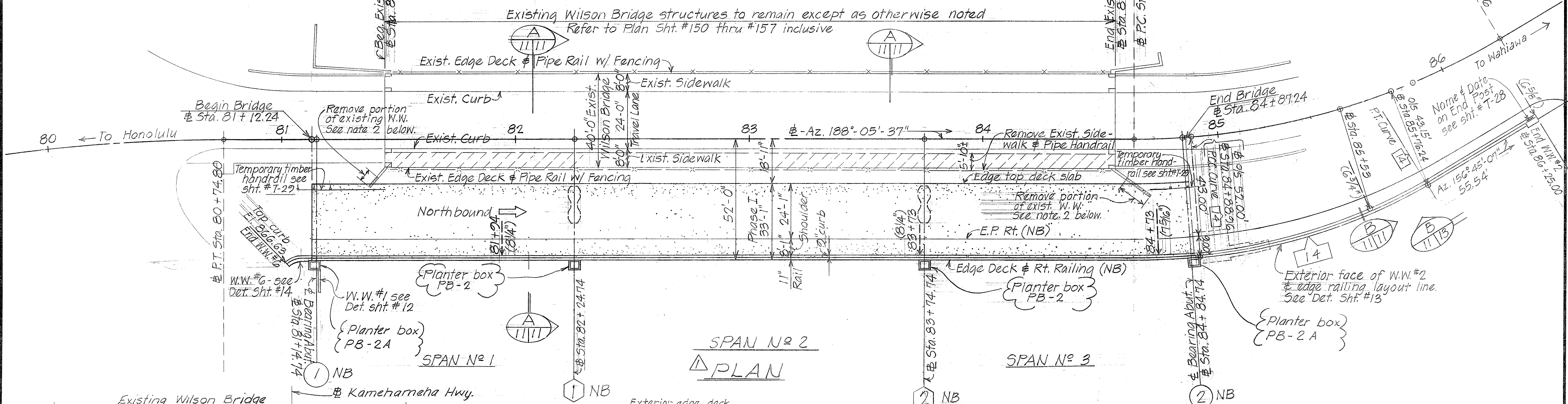
CO 7 4



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	75	105

# PART DECK LAYOUT PLAN (NORTHBOUND) - CONSTRUCTION PHASE I

Scale: 1" = 20'-0"



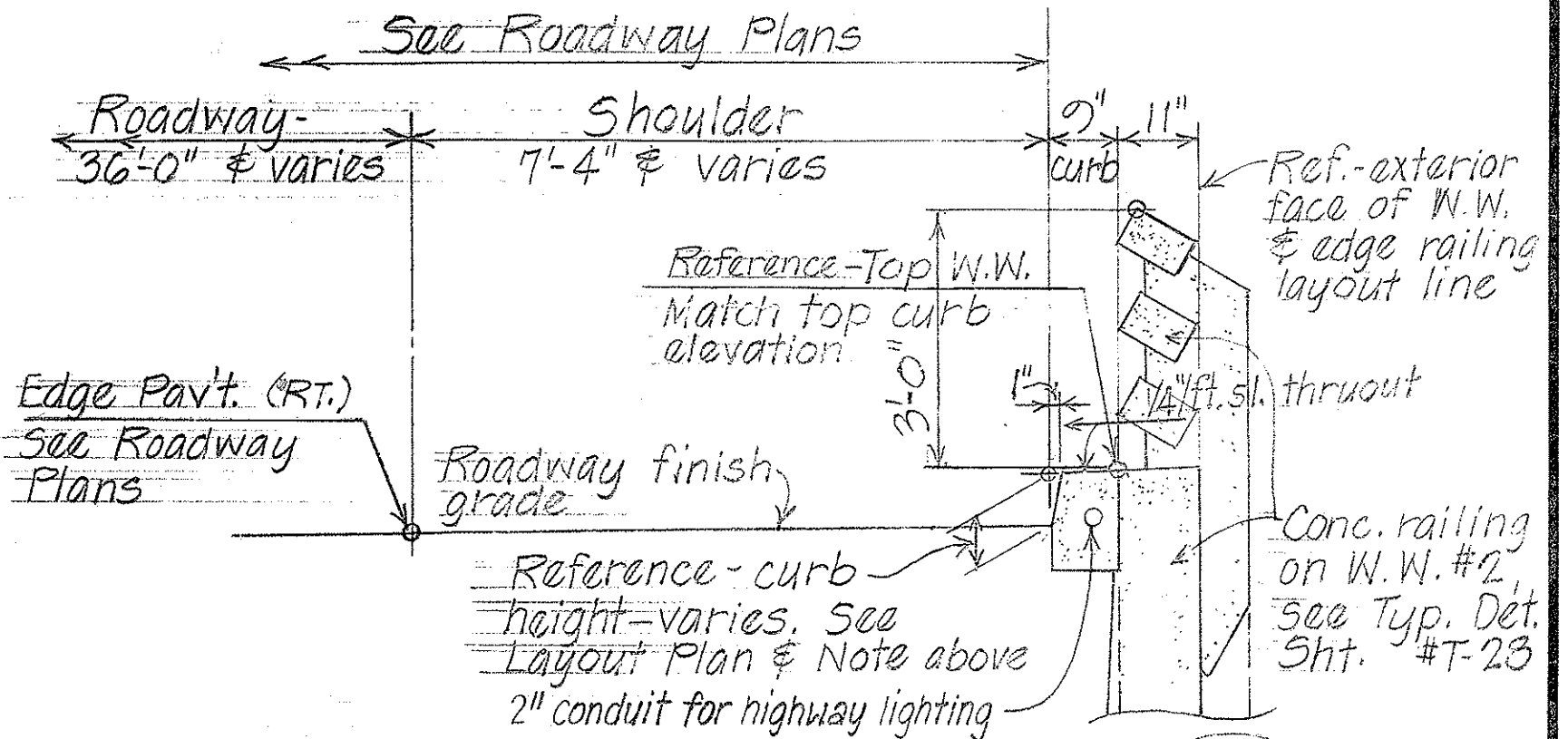
**TYPICAL SECTION A-A** Scale: 3/16" = 1'-0"

**NOTE:**

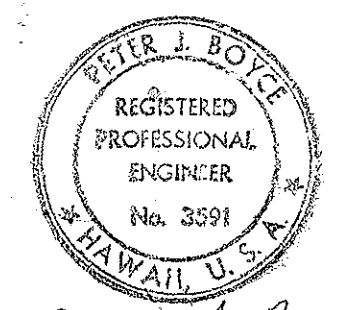
- (8 1/4") - Denotes (NB) curb height adjacent to railing, see Section B (11/17) and A (11/26). Between varied curb height points and top curb elevation, provide smooth line transition. Refer to Super-elevation Diagram Sht. #2.
- Remove top section of exist. wingwall as req'd for Phase I construction.

**Reference Notes:**

For curve data, refer to Roadway Plans.  
 Refer to Sht. #16 for Normal Deck Section & Details.  
 For pier columns (B) NB, (2B) NB, & Foundation Detail, refer to Sht. #5, #15, #T-2, #T-3.



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



Peter J. Boyce

DATE	
DESIGNED BY	LA MT MY
CHECKED BY	CRY
QUANTITIES BY	
NOTE BOOK	
ORIGINAL PLAN	

DATE	REVISION
5-14-77	Revised to CIPPS
5/9/77	Revised planter box and structures at planter box.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**

# STA. 81+12.24 TO STA. 84+87.24

PART DECK LAYOUT PLAN  
CONSTRUCTION PHASE I (NB)

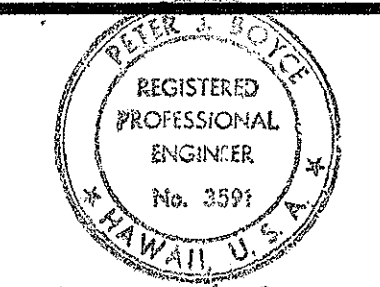
PROJECT NO. BRF-080-1(7)  
Scale: As shown Date: July 1976

SHEET NO. 11 OF 47 SHEETS

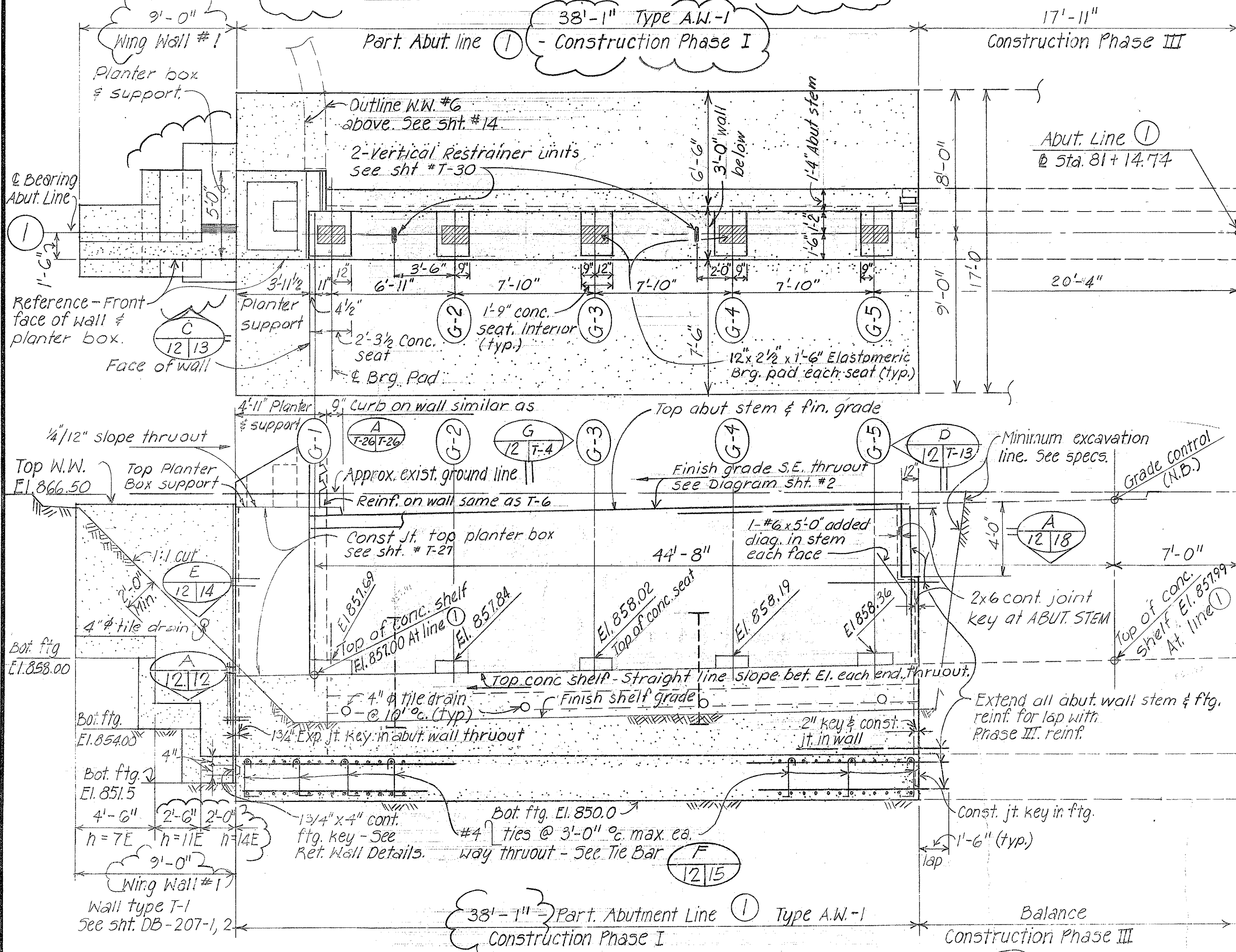
} Denotes changes to C.O. 75



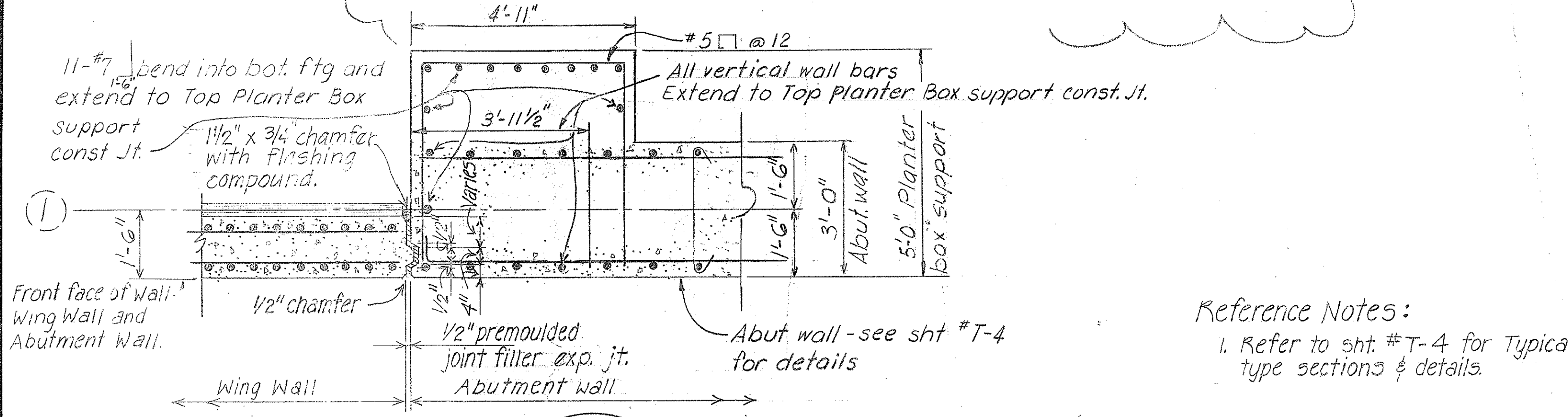
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	76	165



### PART. PLAN - ABUTMENT LINE ① (N.B.)

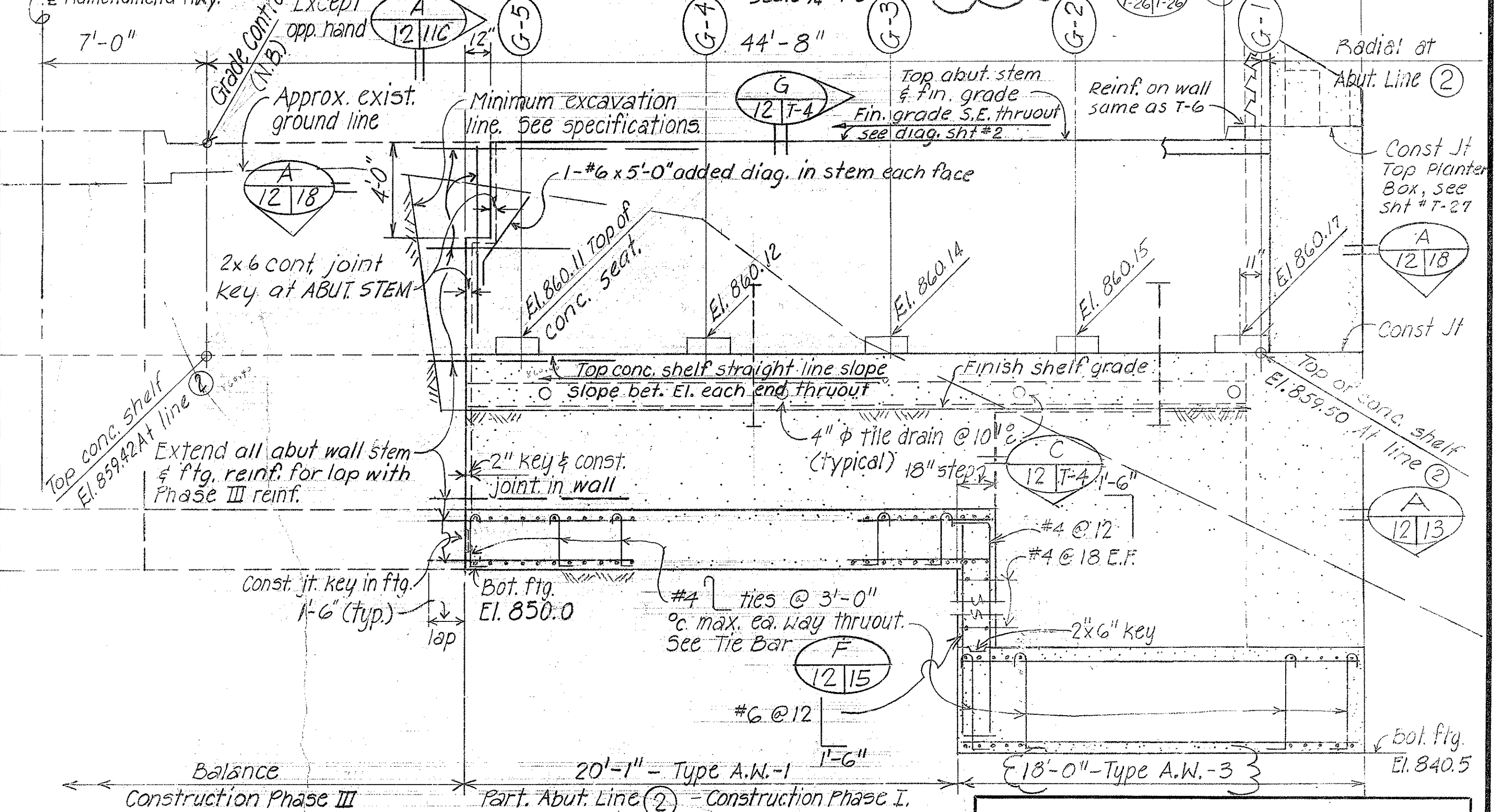


### PART. ELEVATION - ABUTMENT LINE ① (N.B.)

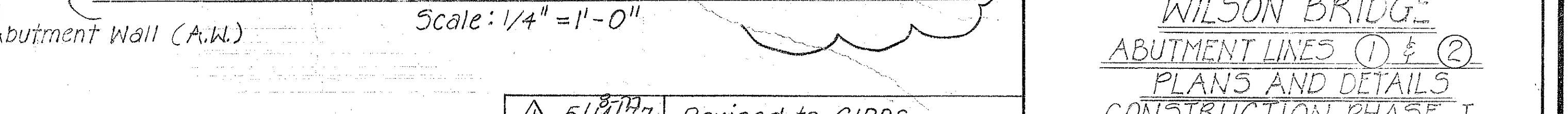


Reference Notes:  
 1. Refer to sht. #T-4 for Typical Abutment Wall (A.W.) type sections & details.

### PART. PLAN - ABUTMENT LINE ② (N.B.)



### PART. ELEVATION - ABUTMENT LINE ② (N.B.)



Reference Notes:  
 1. Refer to sht. #T-4 for Typical Abutment Wall (A.W.) type sections & details.

DATE	REVISION

5/17/77	Revised to CIPPS
5/9/77	Revised planter box and structures at planter box.
DATE	REVISION

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

WILSON BRIDGE  
 ABUTMENT LINES ① & ②  
 PLANS AND DETAILS  
 CONSTRUCTION PHASE I

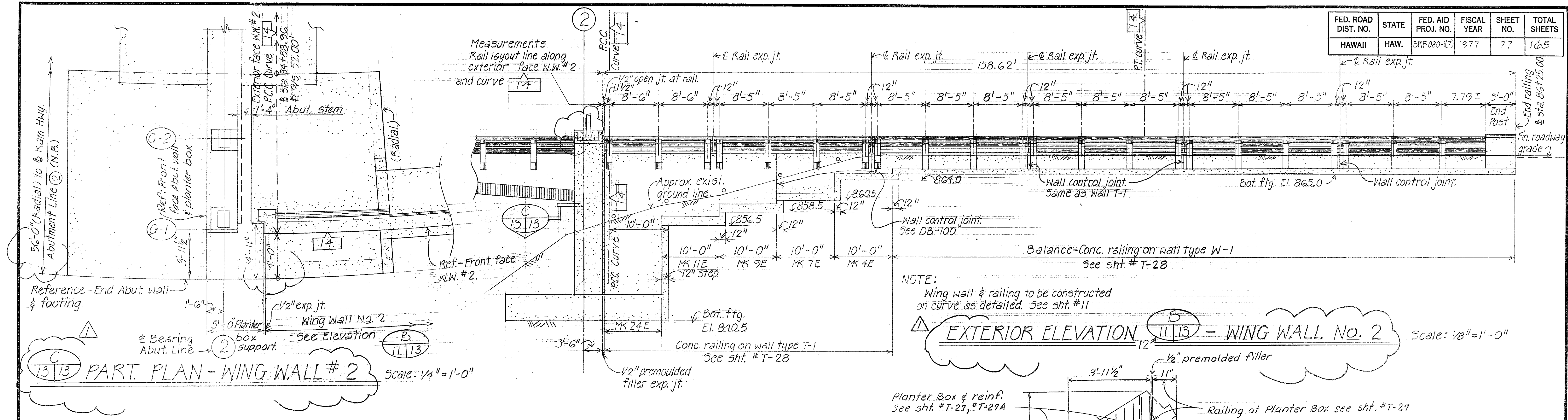
Proj. No. BRF-080-1(7)  
 Scale: As noted Date: July 1976

SHEET No. 12 OF 47 SHEETS

CO 7 6

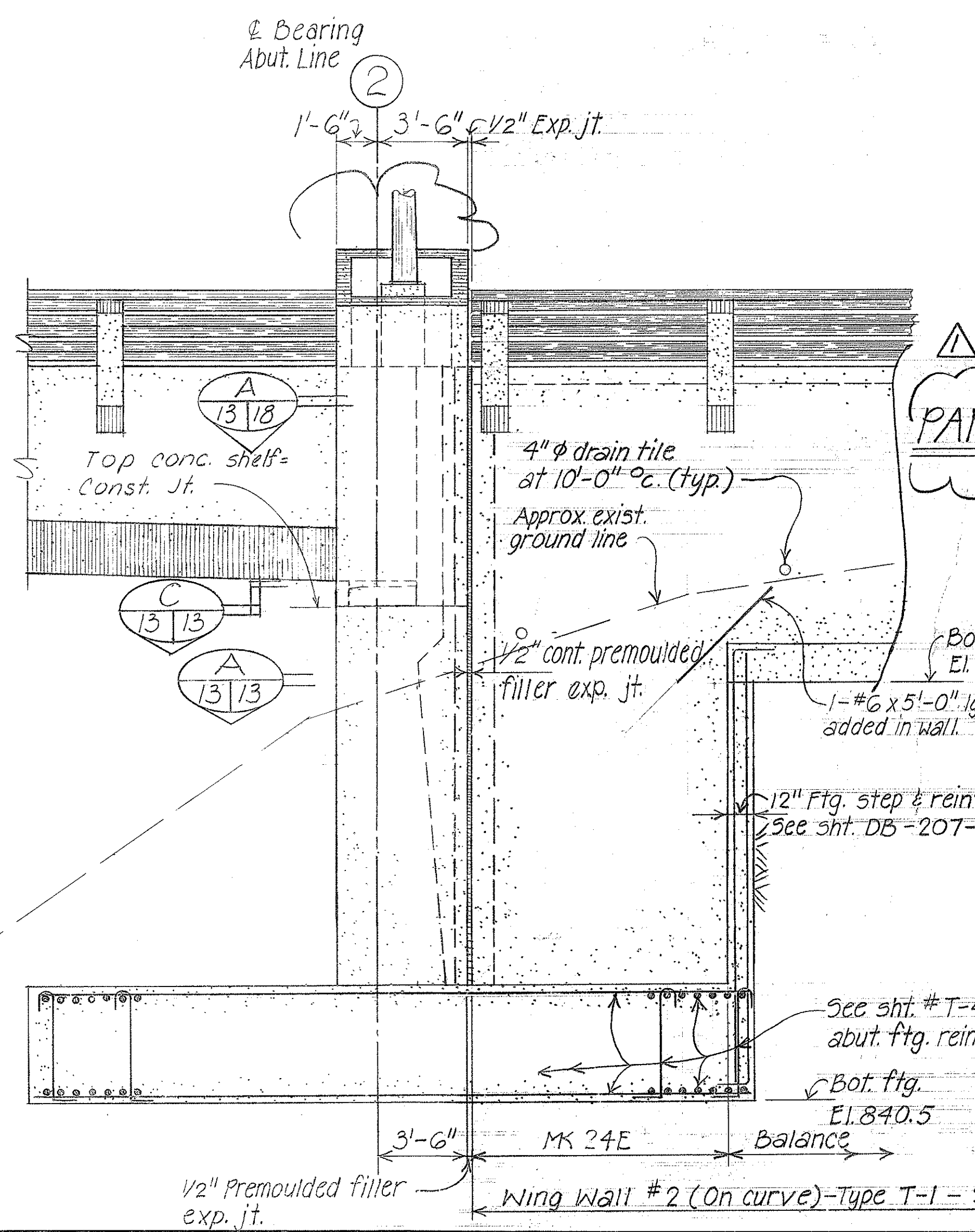


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BKF-080-1(7)	1977	77	165

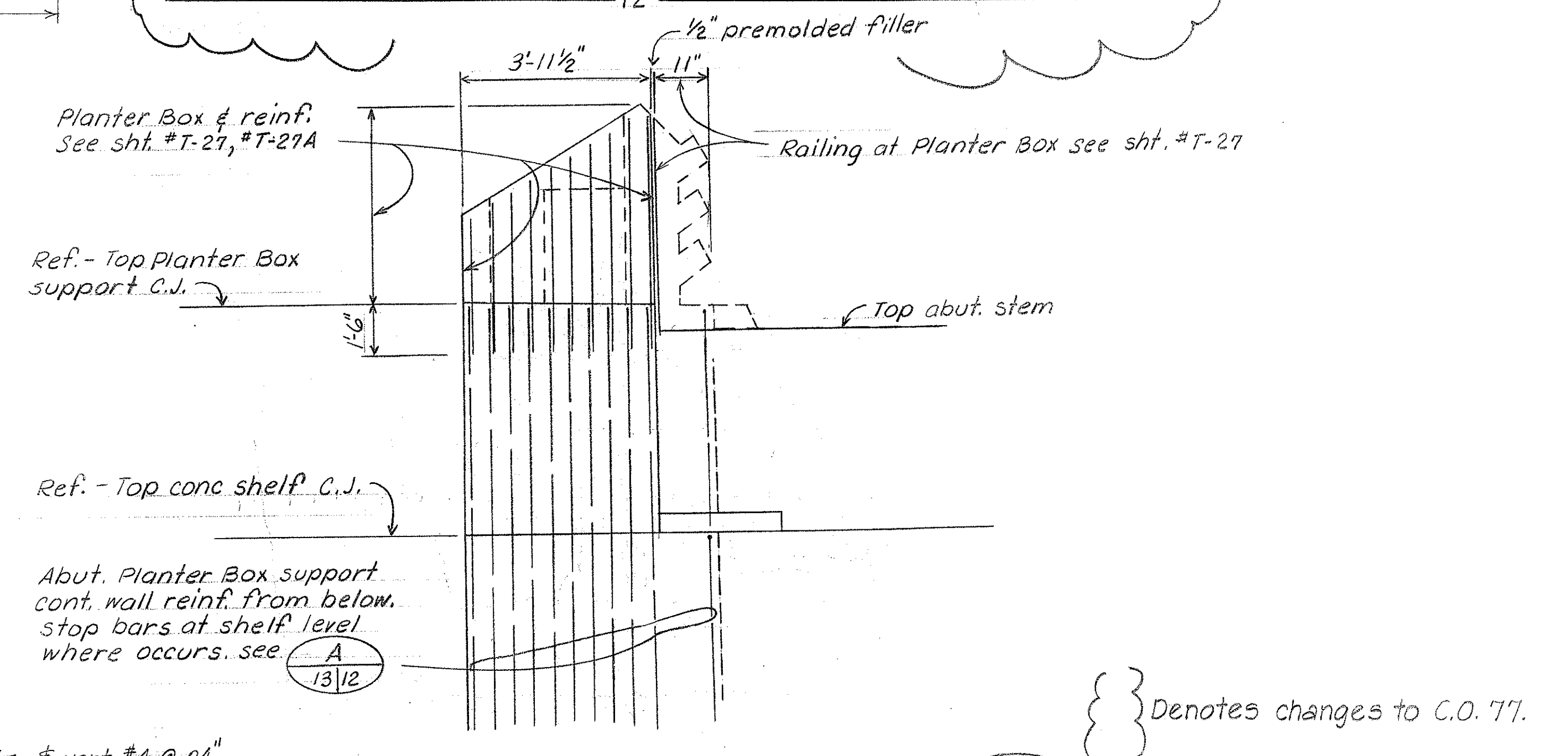


**PART. PLAN - WING WALL # 2**  
Scale: 1/4" = 1'-0"

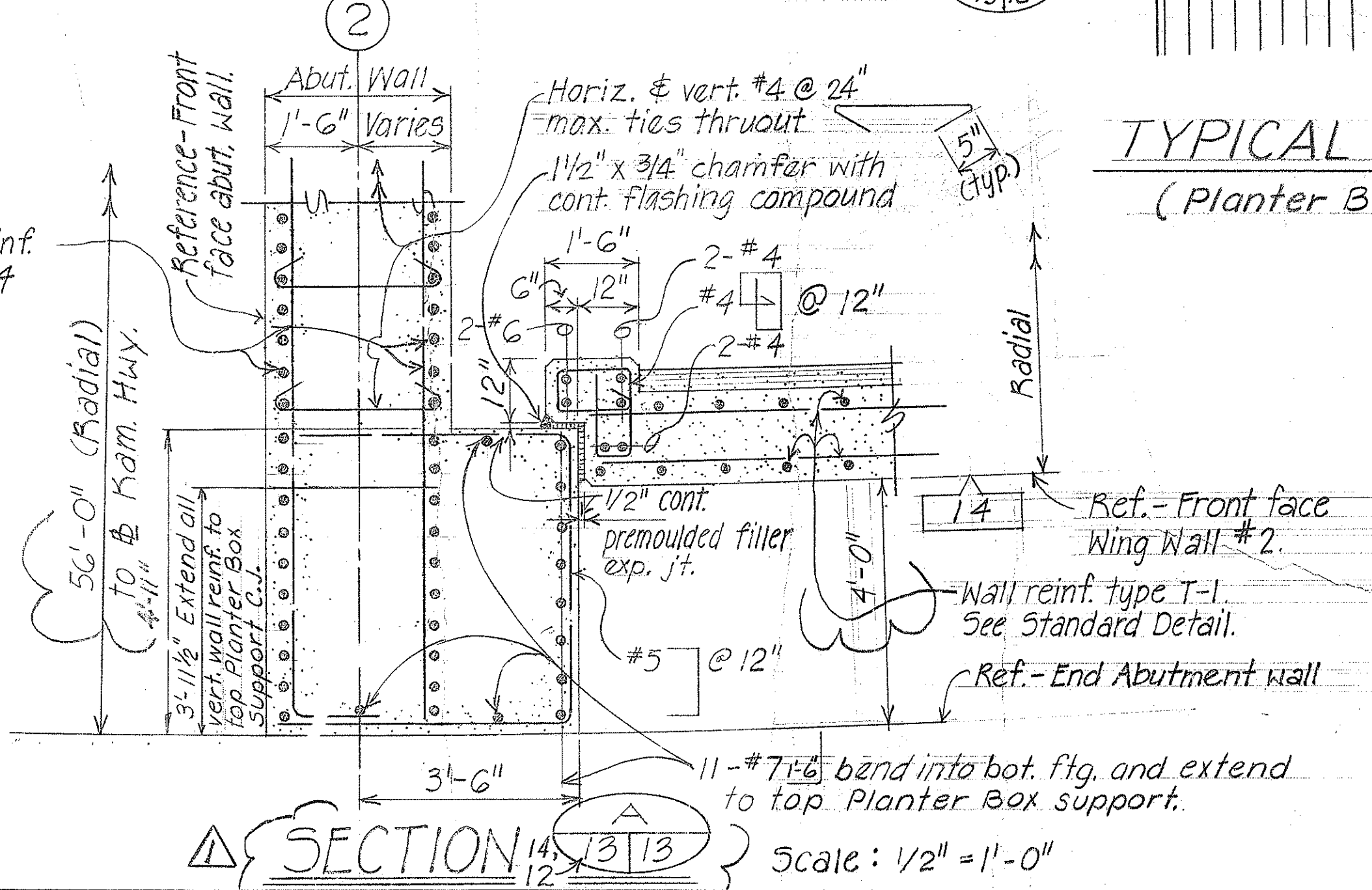
**EXTERIOR ELEVATION - WING WALL No. 2**  
Scale: 1/8" = 1'-0"



**PART. ELEV. - WING WALL # 2**  
Scale: 1/4" = 1'-0"



**TYPICAL ELEVATION (Planter Box support)**  
Scale: 1/4" = 1'-0"

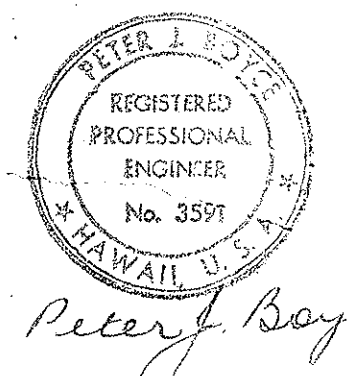


**SECTION - WING WALL # 2**  
Scale: 1/2" = 1'-0"

DATE	
DESIGNED BY	MT
CHECKED BY	CRV

DATE	REVISION
5-14-77	Revised to CIPPS
5/9/77	Revised planter box and structures at planter box.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
WING WALL # 2  
PLANS, ELEVATION & DETAILS  
CONSTRUCTION PHASE I  
Proj. No. BKF-080-1(7)  
Scale: As noted Date: July 1976  
SHEET No. 13 OF 47 SHEETS



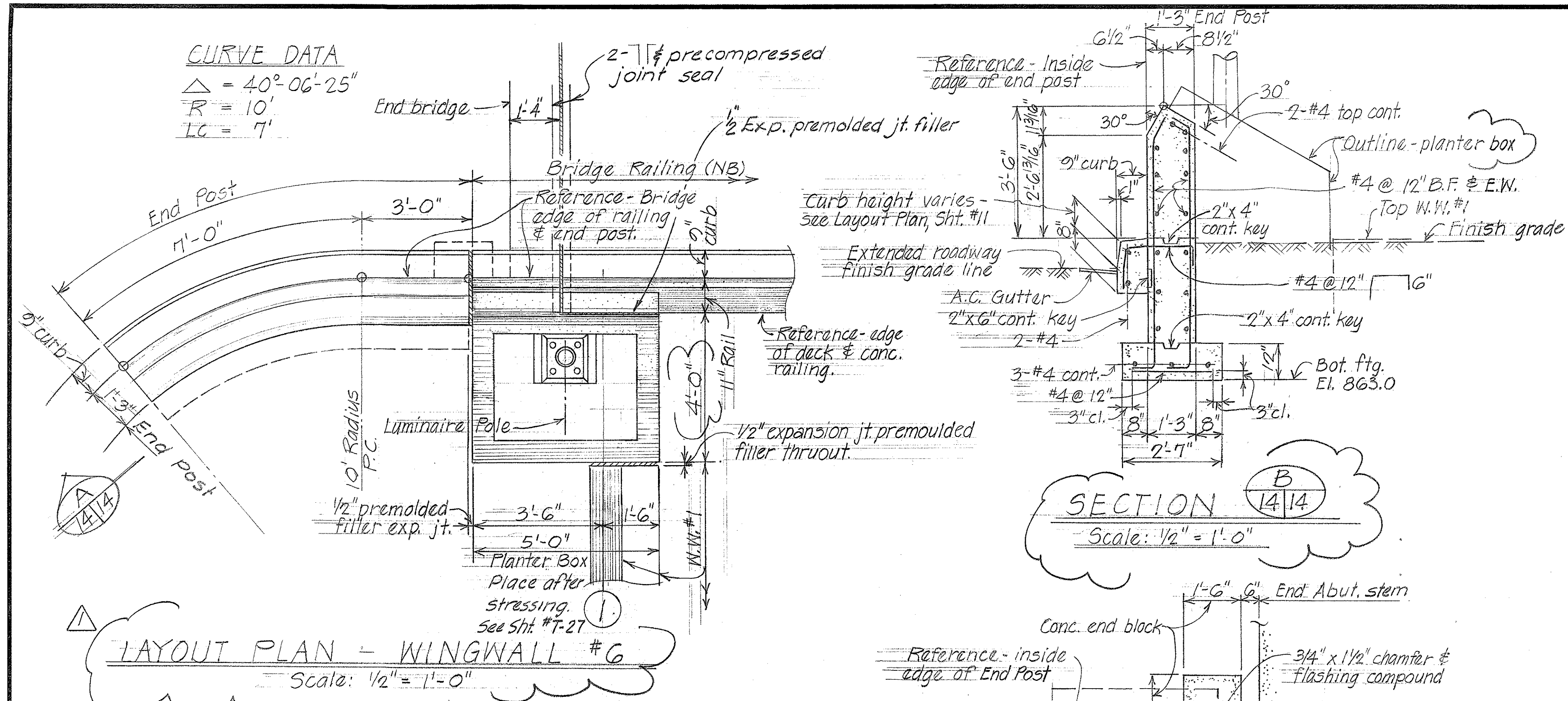
CO 88



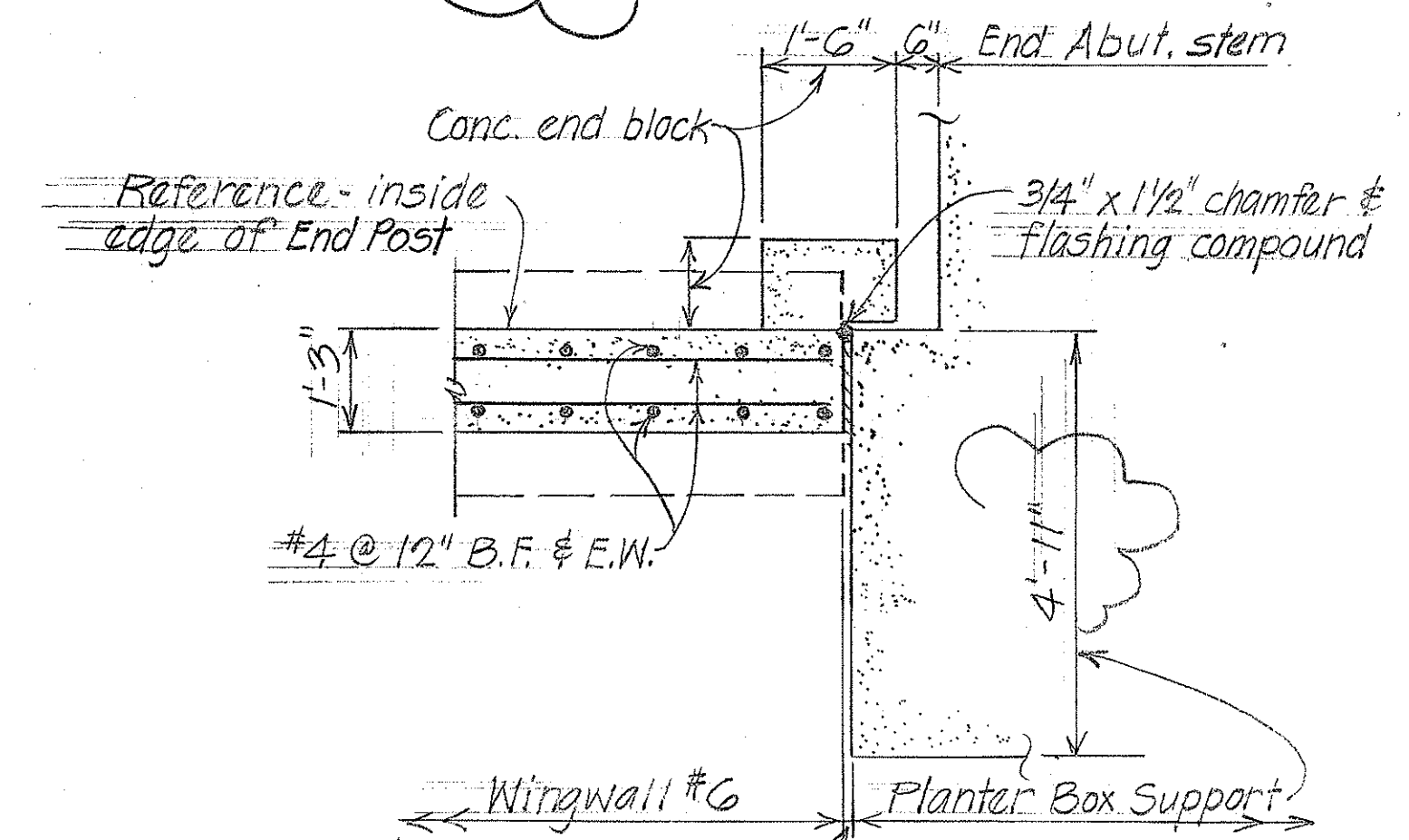
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(C)	1977	78	165

PETER J. BOYE  
REGISTERED PROFESSIONAL ENGINEER  
No. 5591  
HAWAII, U.S.A.

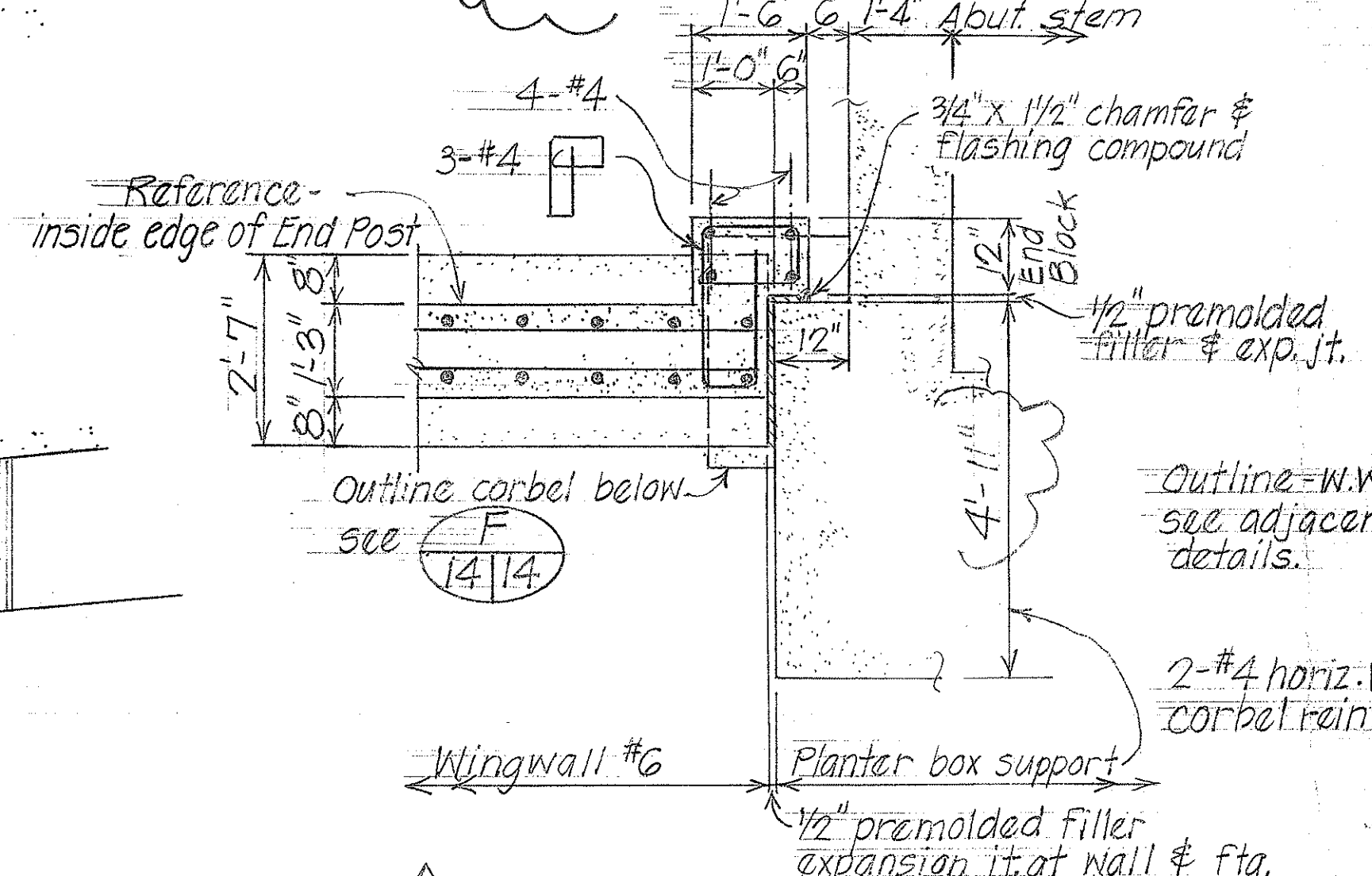
**CURVE DATA**  
 $\Delta = 40^{\circ}06'25''$   
 $R = 10'$   
 $Lc = 7'$



**SECTION B 14/14**  
Scale: 1/2" = 1'-0"

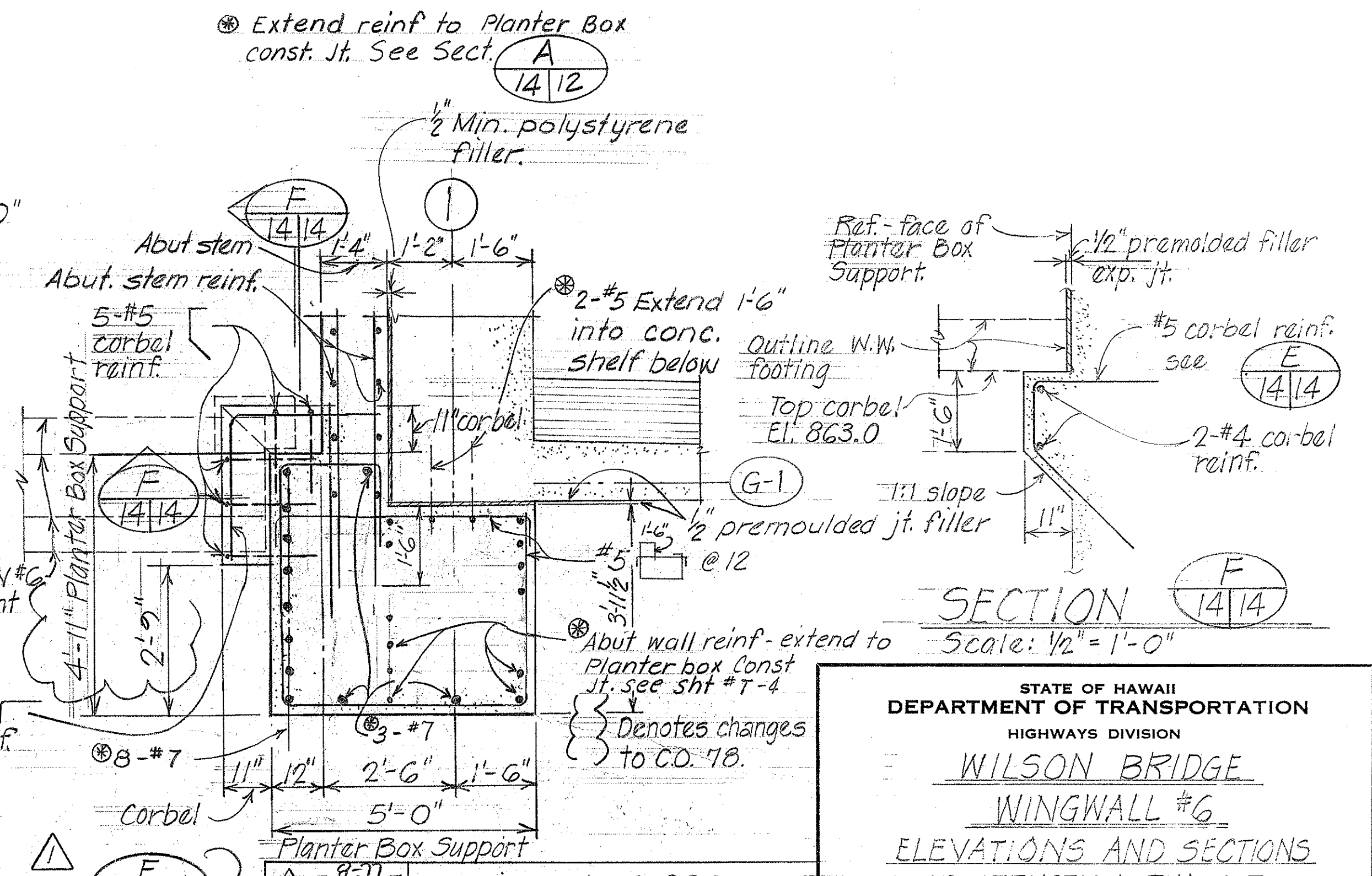


**SECTION C 14/14** Scale: 1/2" = 1'-0"

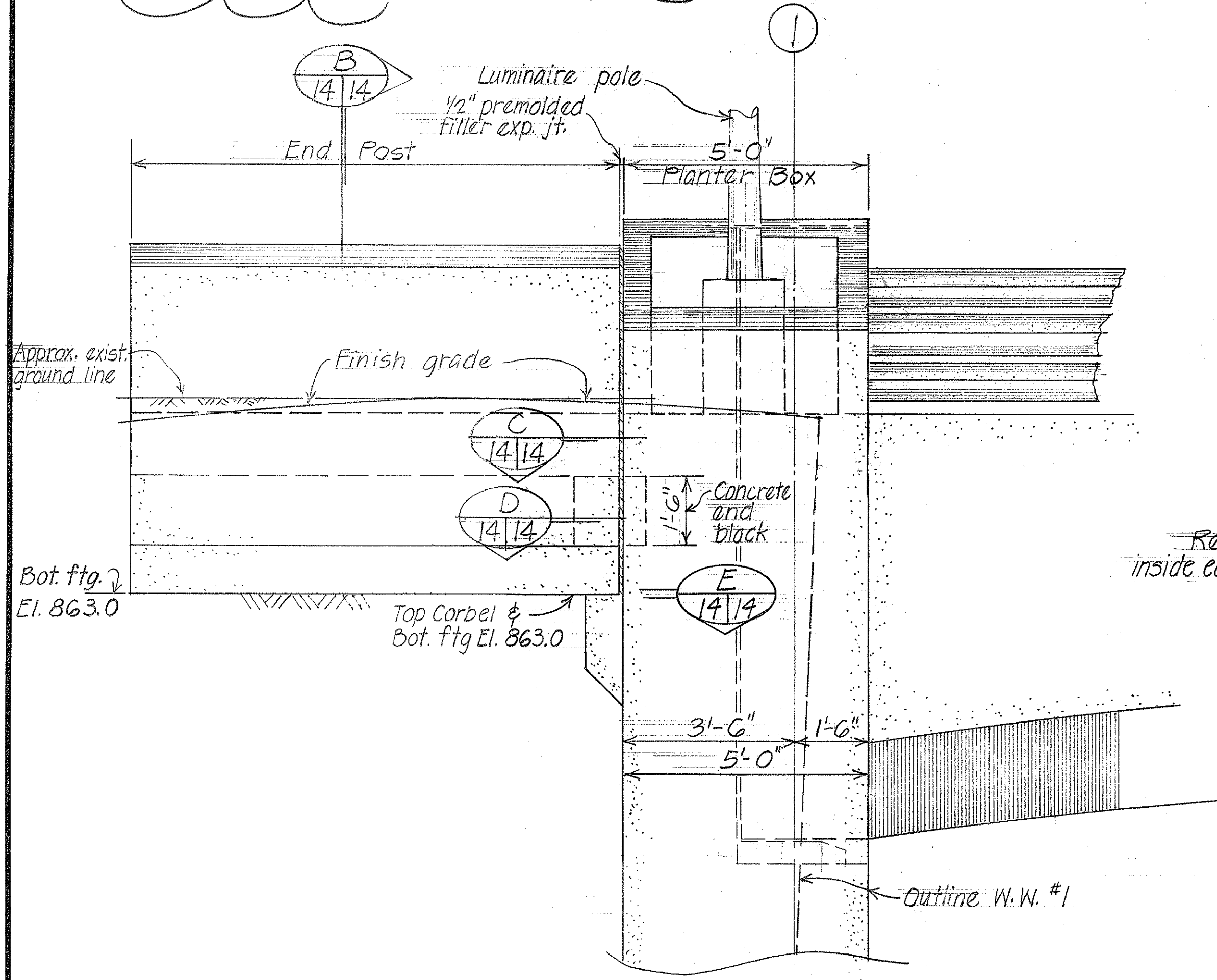


**SECTION D 14/14** Scale: 1/2" = 1'-0"

**SECTION E 14/14** Scale: 1/2" = 1'-0"



**SECTION F 14/14** Scale: 1/2" = 1'-0"



**DEVELOPED ELEVATION 14/14** Scale: 1/2" = 1'-0"

Extend reinf. to Planter Box const. jt. See Sect. A 14/12

DATE	REVISION
5-9-77	Revised to CIPPS
5/9/77	Revised planter box and structures at planter box

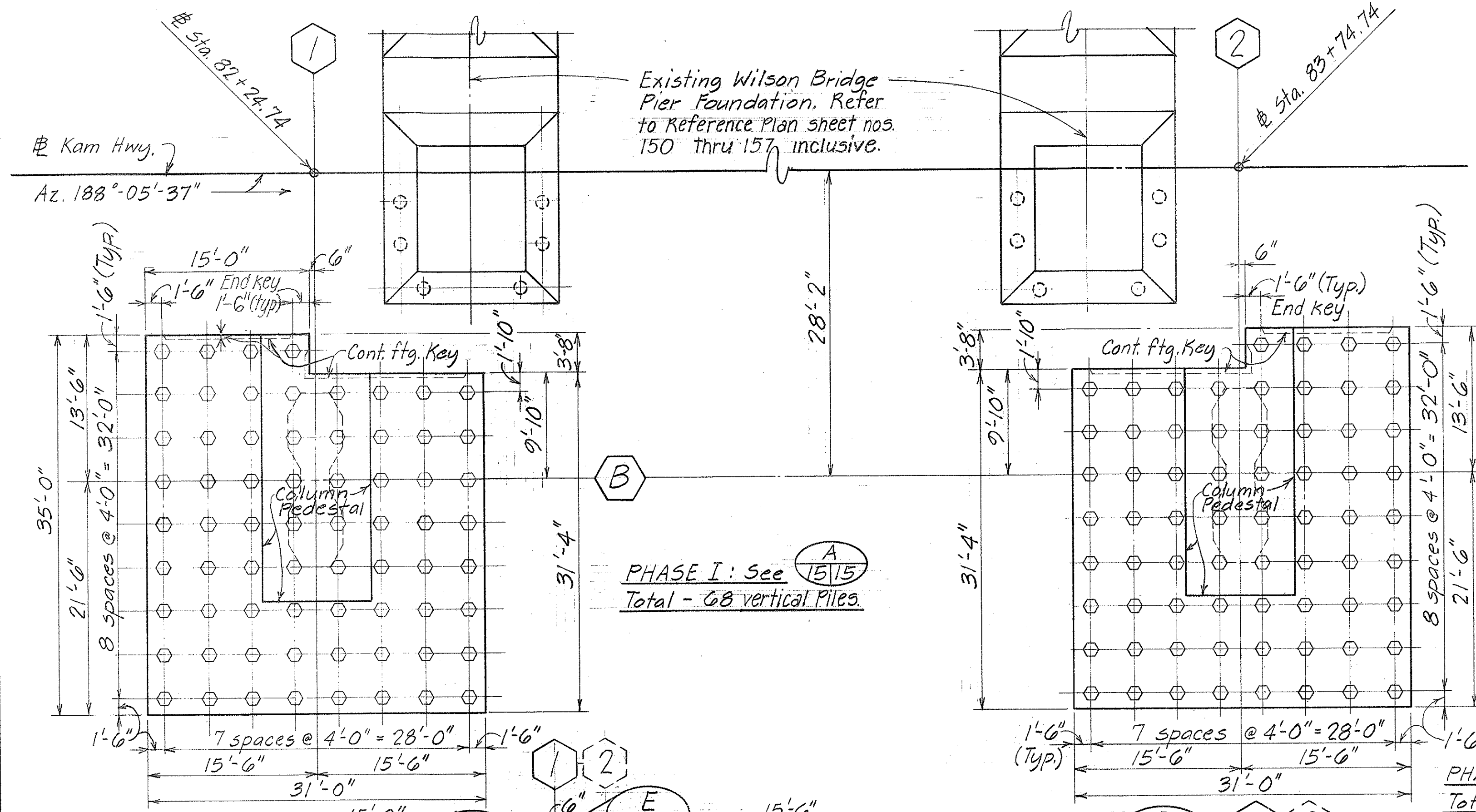
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
WINGWALL #6  
ELEVATIONS AND SECTIONS  
CONSTRUCTION PHASE I  
PROJ. No. BRF-080-1(C)  
Scale: As Noted Date: July 1976  
SHEET No. 14 OF 47 SHEETS

DATE: \_\_\_\_\_  
 SURVEY PLOTTED BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 DESIGNED BY: M.T.  
 NOTE BOOK: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_



PART FOUNDATION PLAN PIER LINE (1B), (2B) Scale: 1/8" = 1'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	79	105

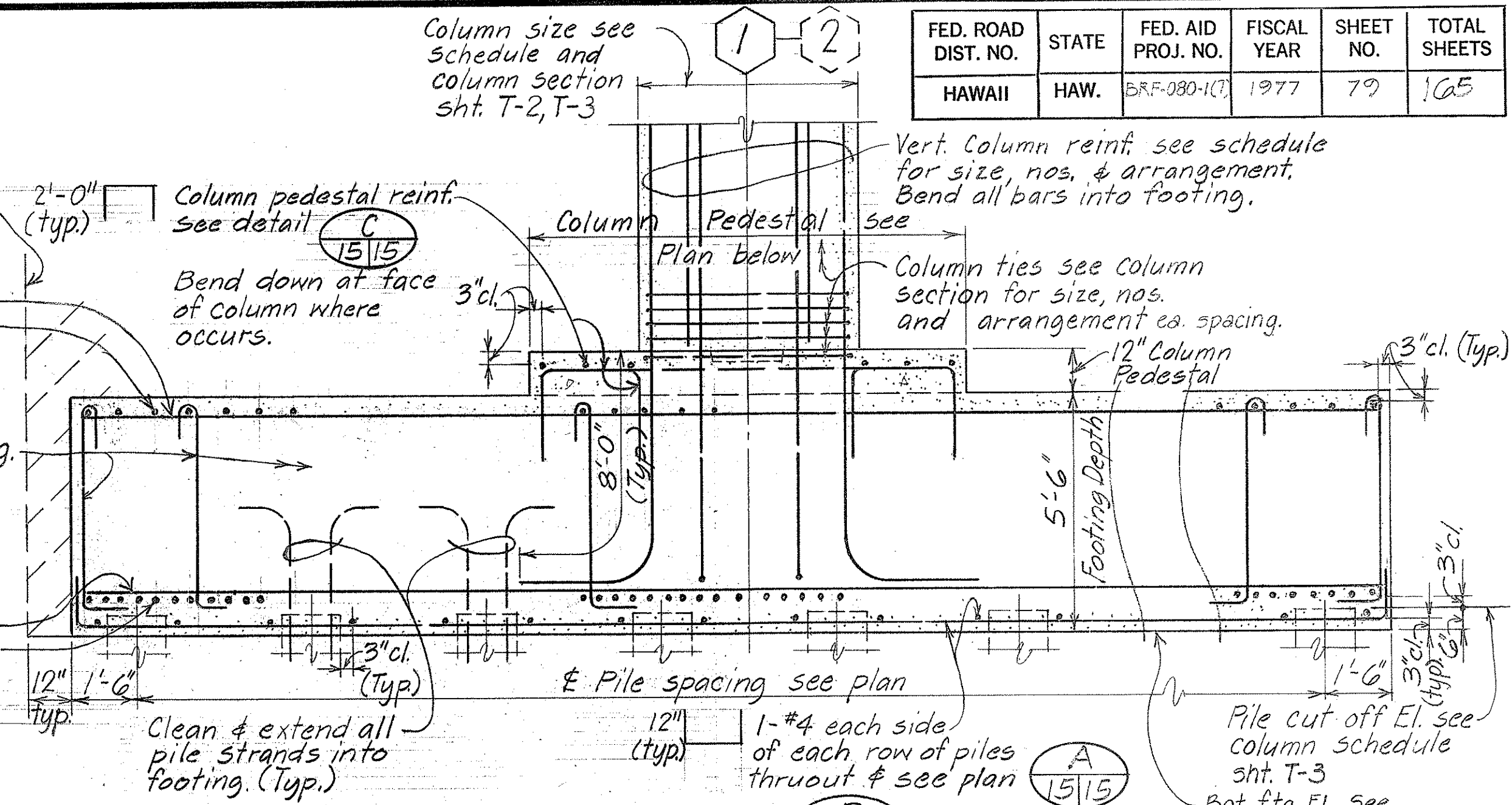


Limits of structural excavation payline (typ) around ftg. see Specs.

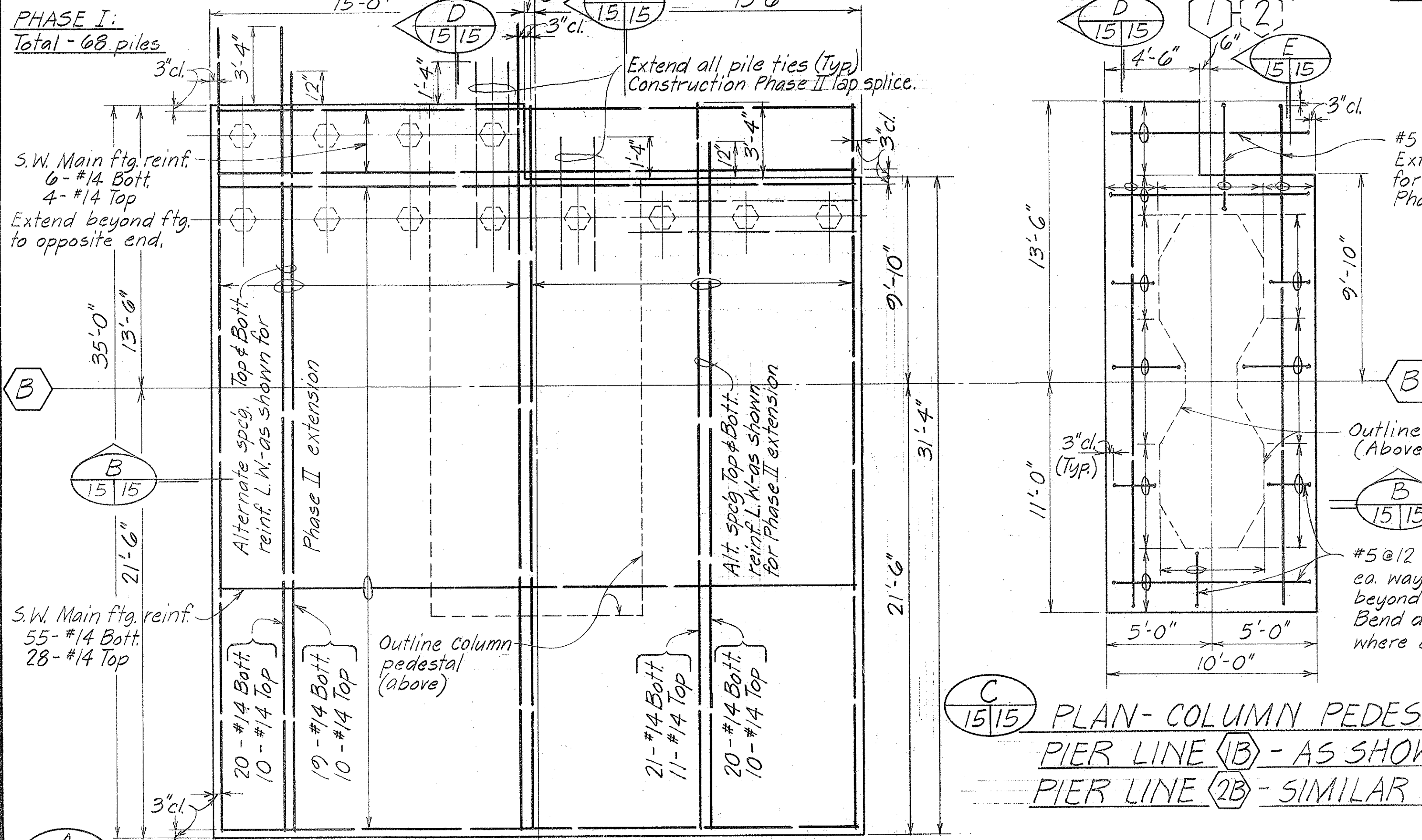
Top S.W. main ftg. reinf. Top L.W. main ftg. reinf. See corresponding details for size, location & nos.

#4 @ 3'-0" max. spcg. both ways thruout. Hook around top & bott. mfgs. See tie bar det.

Bott. S.W. main ftg. reinf. Bott. L.W. main ftg. reinf. See corresponding plan for size, location & nos.



TYPICAL SECTION (B) Scale: 3/8" = 1'-0"

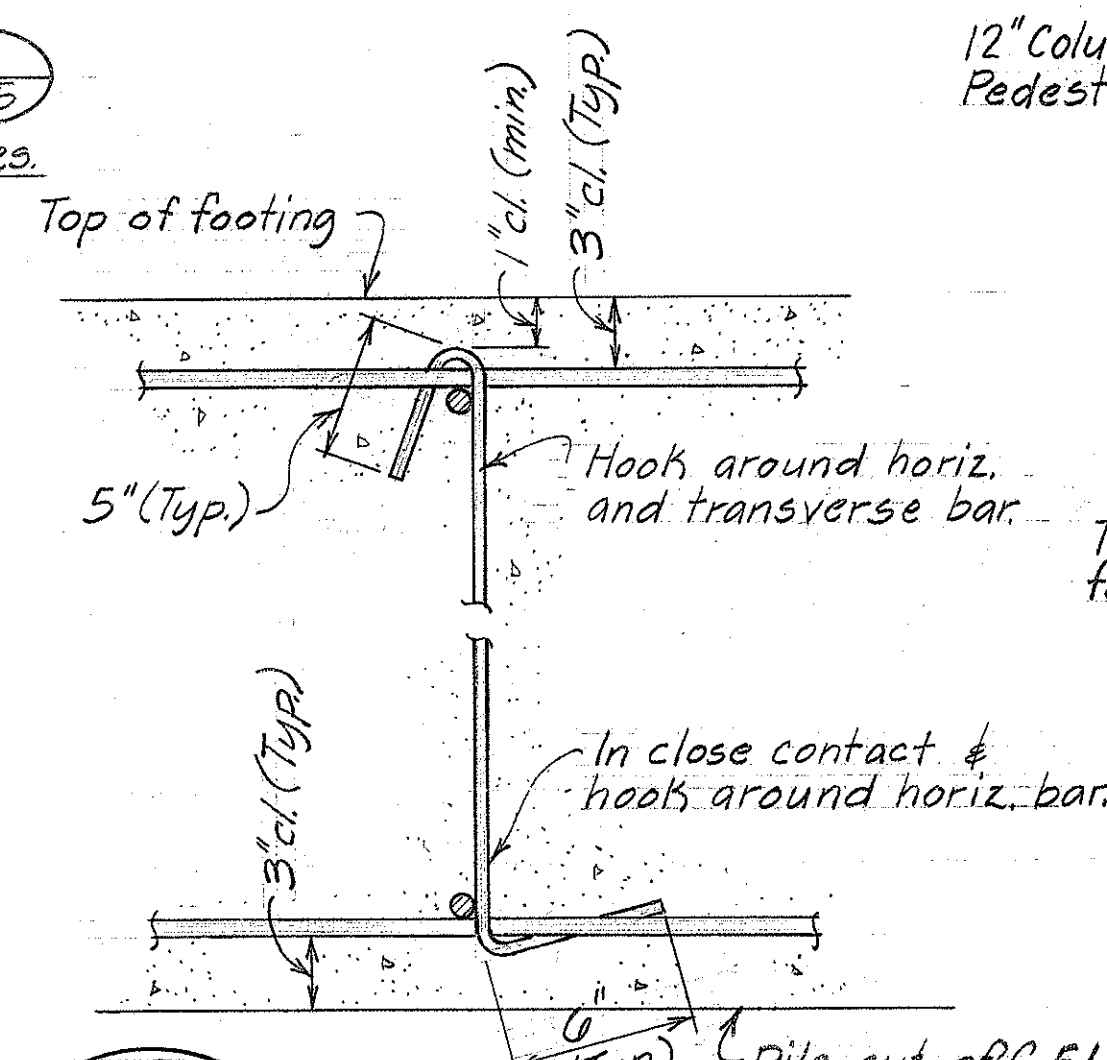


(A) PLAN - TOP & BOTTOM FOOTING REINFORCEMENT Scale: 1/8" = 1'-0" (PIER LINE (1B) AS SHOWN; PIER LINE (2B) SIMILAR EXCEPT OPP. HAND)

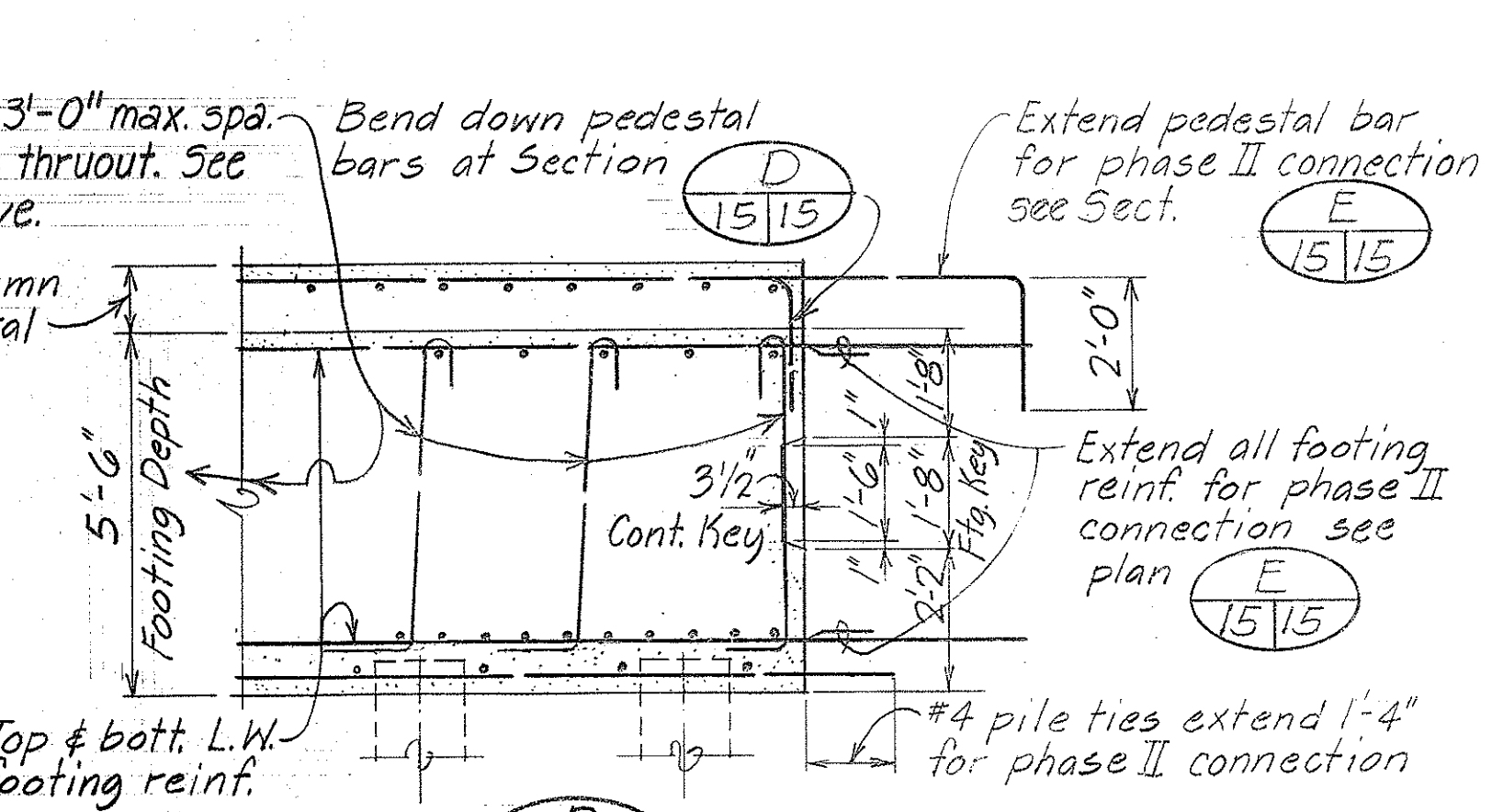
PHASE I: See (A) Total - 68 vertical piles.

#5 @ 12" 2'-0" Extend beyond ftg. for Construction Phase II

#5 @ 12" 2'-0" top ea. way extend cont. beyond column face. Bend down at column where occurs. (Typ)



(F) TIE BAR DETAIL Not to scale

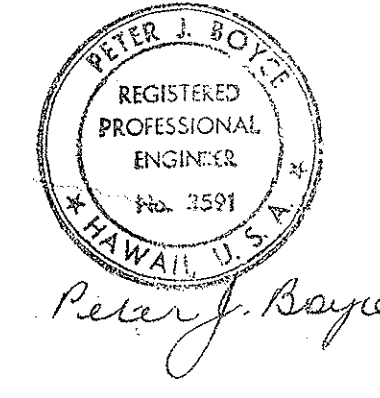


SECTION (D) AS SHOWN

SECTION (E) SIMILAR EXCEPT AS NOTED Scale: 3/8" = 1'-0"

- NOTES
- For additional foundation details refer to shts #5 & #T-3.
  - Column Pedestal to be poured monolithic with footing.

DATE	BY
DESIGNED BY	LM
CHECKED BY	LM
QUANTITIES BY	LM
NOTED BY	LM
ORIGINAL PLAN	LM



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
PIER COLUMN (1B), (2B)  
FOUNDATION DETAILS  
CONSTRUCTION PHASE I (NB)

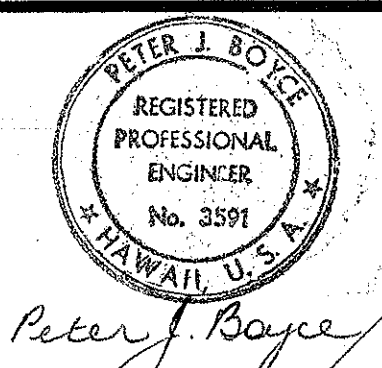
PROJ. NO. BRF-080-1(7)  
Scale: As shown  
Date: July 1976  
SHEET No. 15 OF 47 SHEETS

8-77 Revised to CIPPS

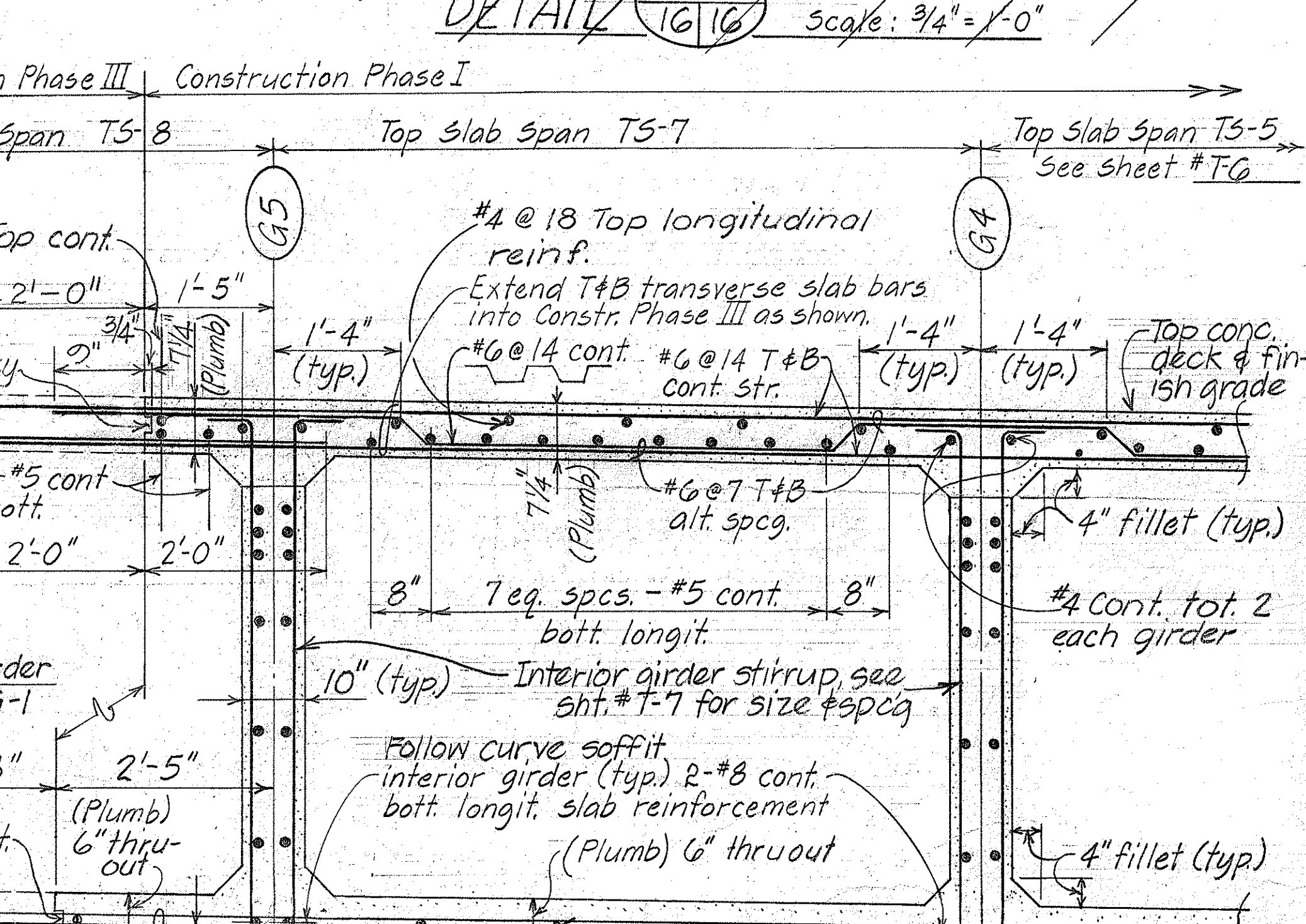
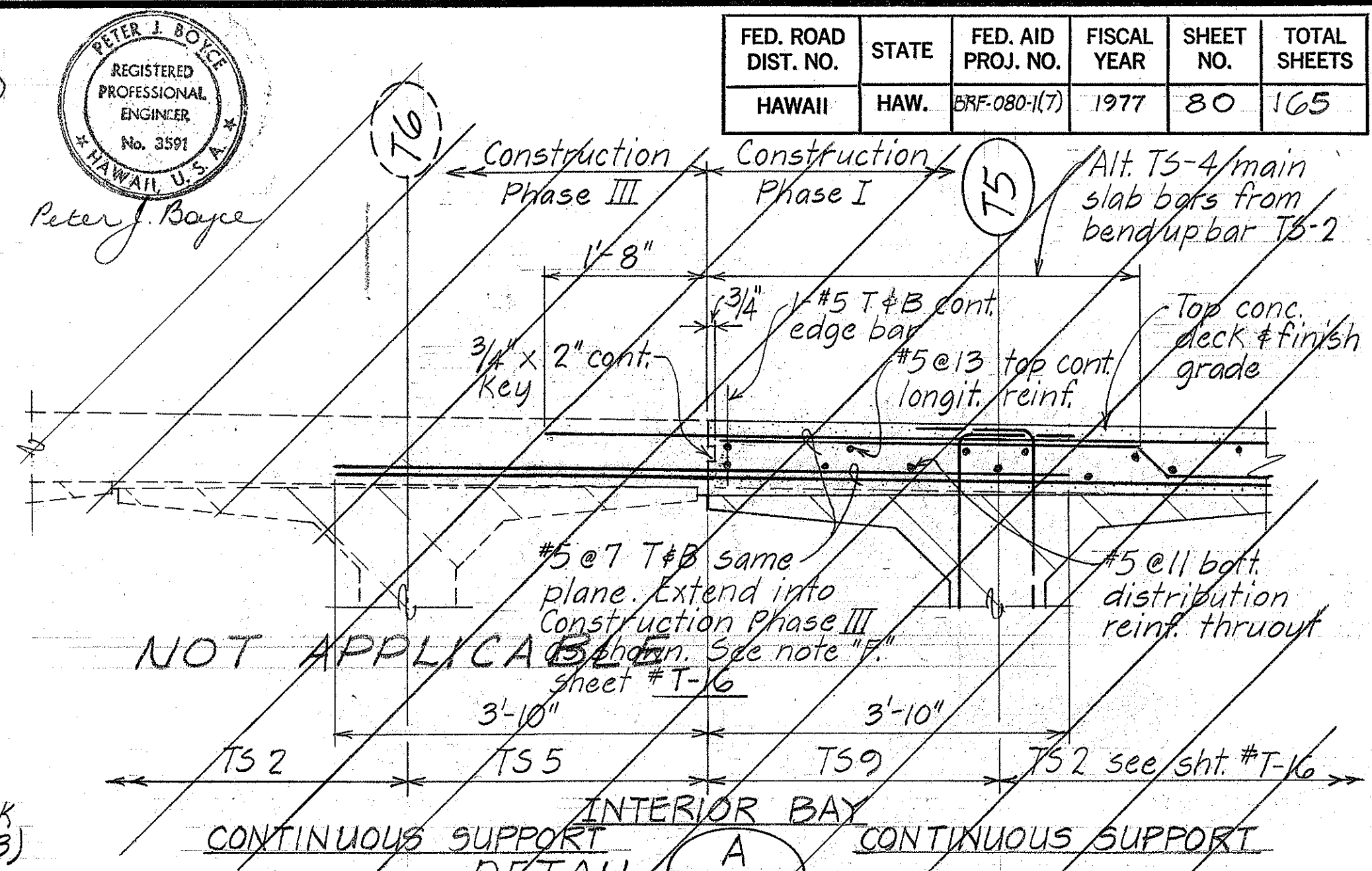
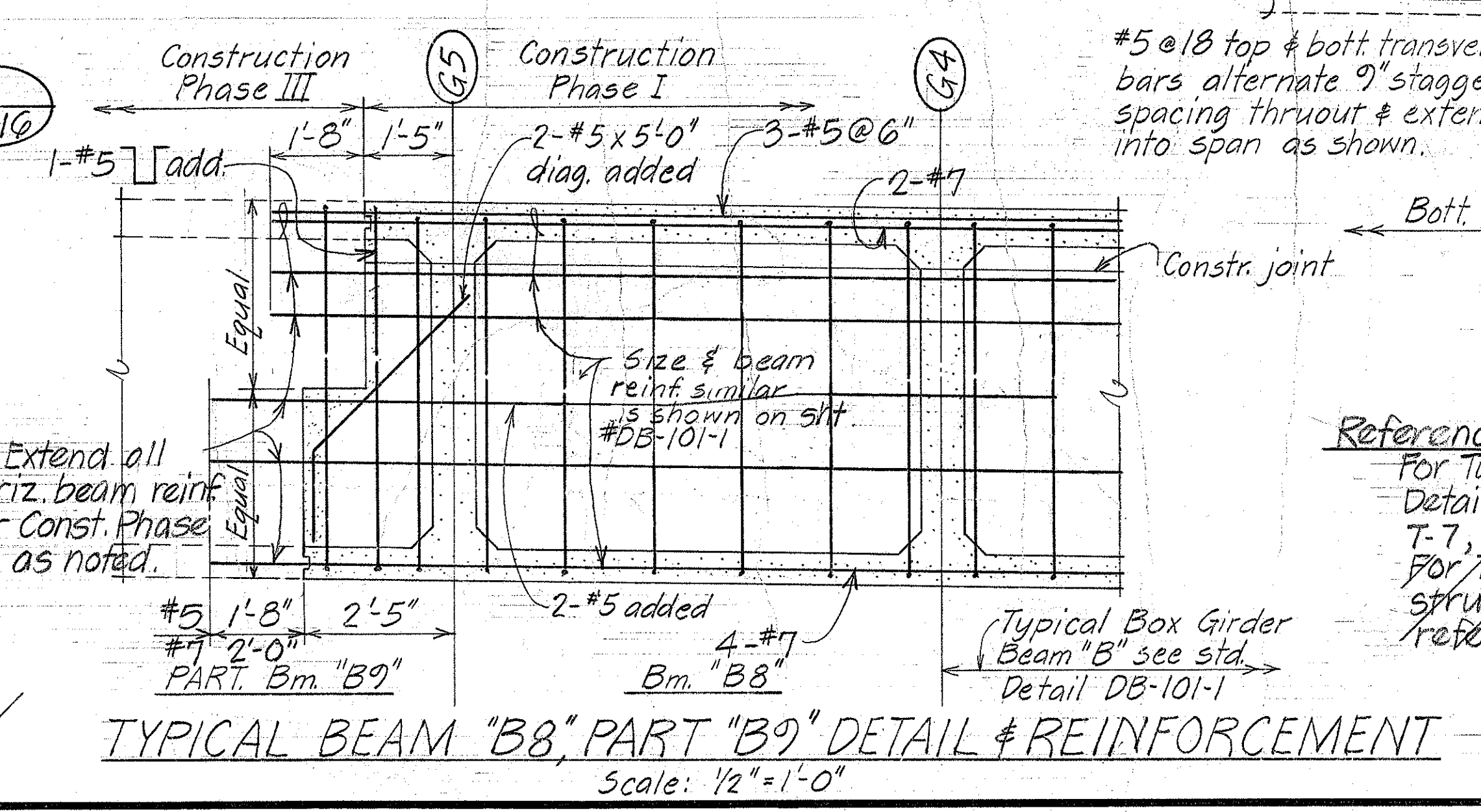
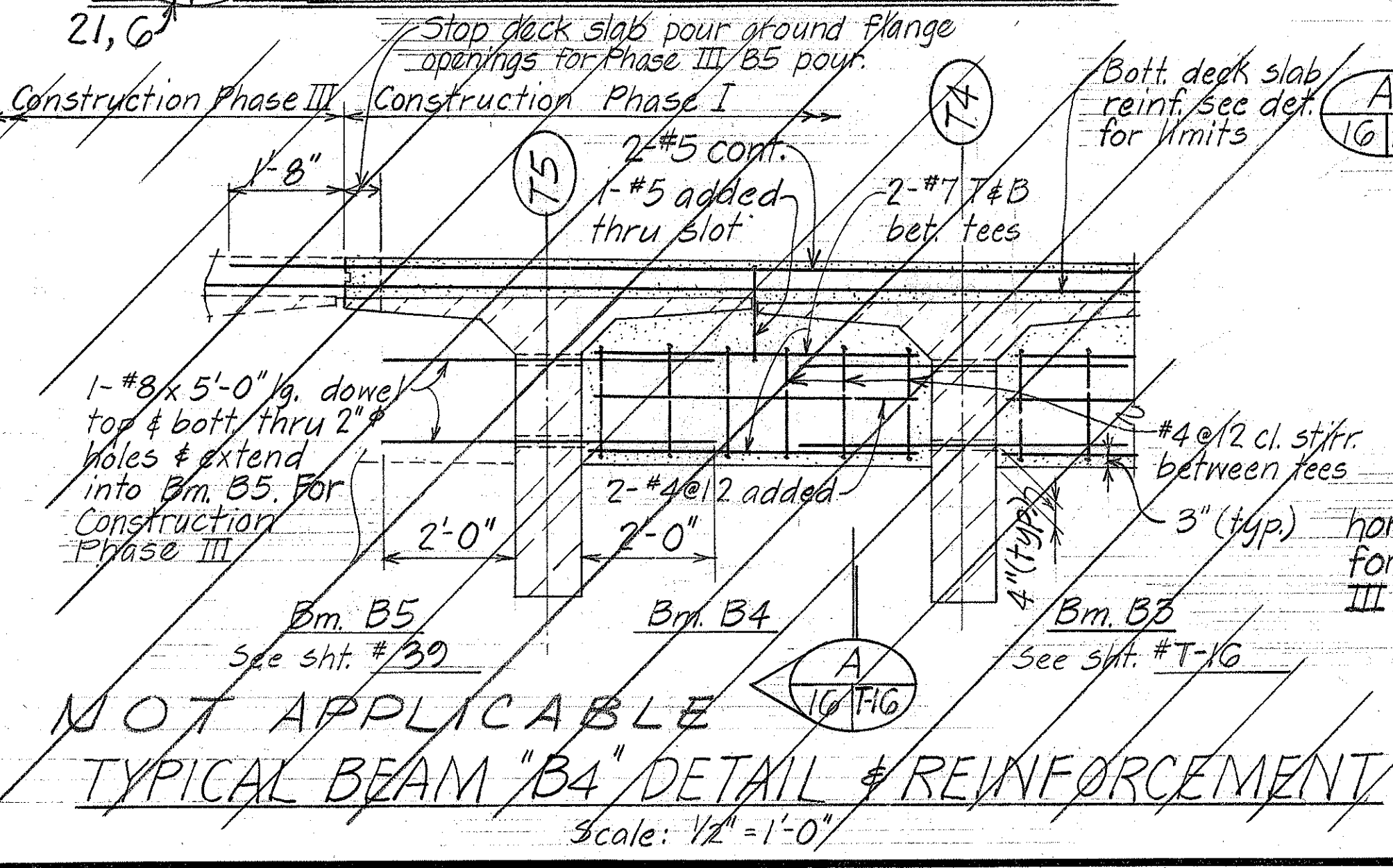
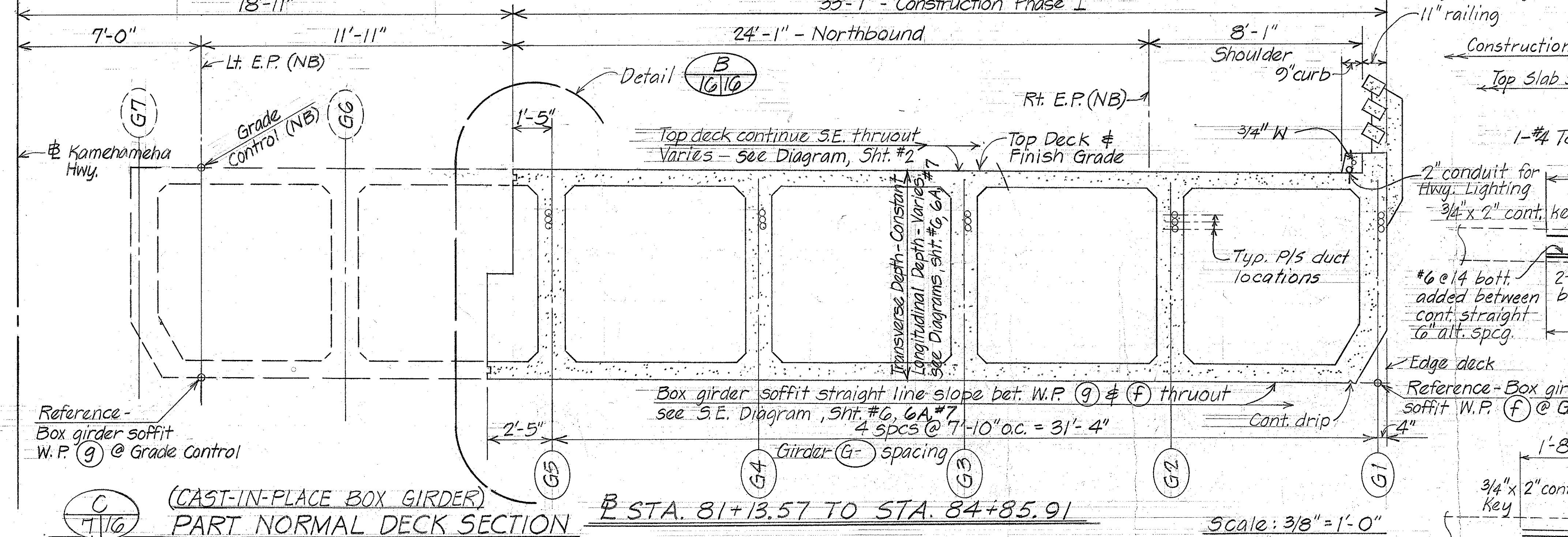
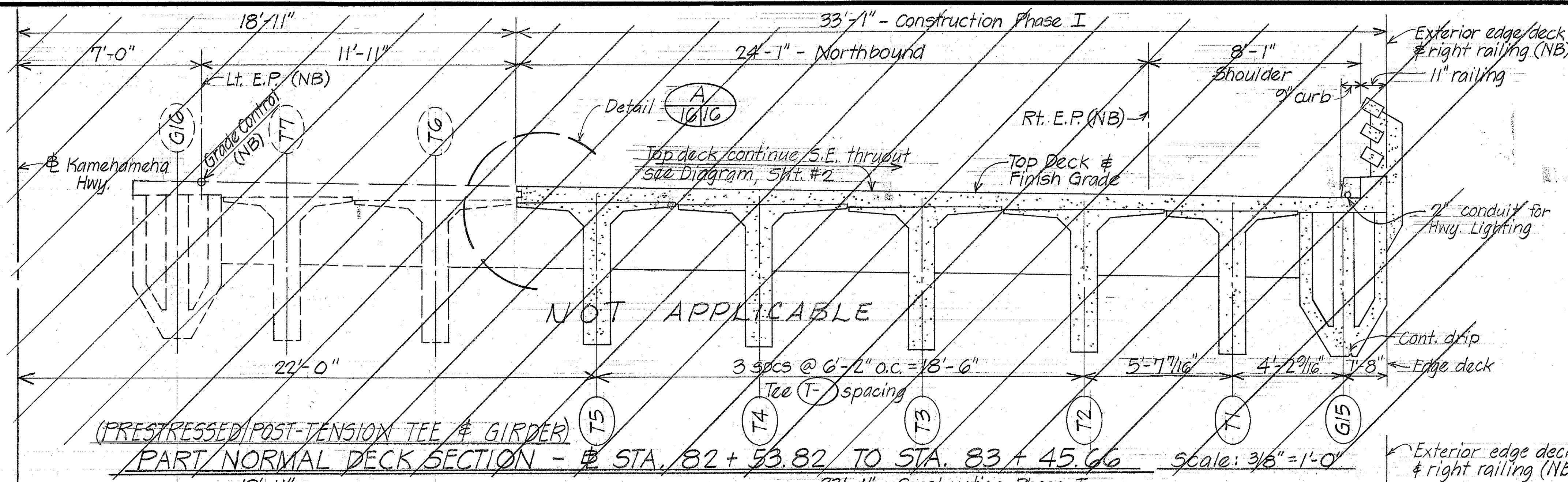
CO 79



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	80	165



Peter J. Boyce



**Reference Notes:**  
 For Typical Box Girder Superstructure Deck Details & Reinforcement refer to sht. nos. T-6, T-7, T-13.  
 For Typical Prestressed Girder & Tee Superstructure Deck Details & Reinforcement, refer to sht. nos. T-16 thru T-24 inclusive.

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 NORMAL DECK SECTIONS & DETAILS  
 CONSTRUCTION PHASE I (NB)  
 PROJECT NO. BRF-080-1(7)  
 Scale: \_\_\_\_\_ Date: July 1976  
**SHEET NO. 16 OF 47 SHEETS**

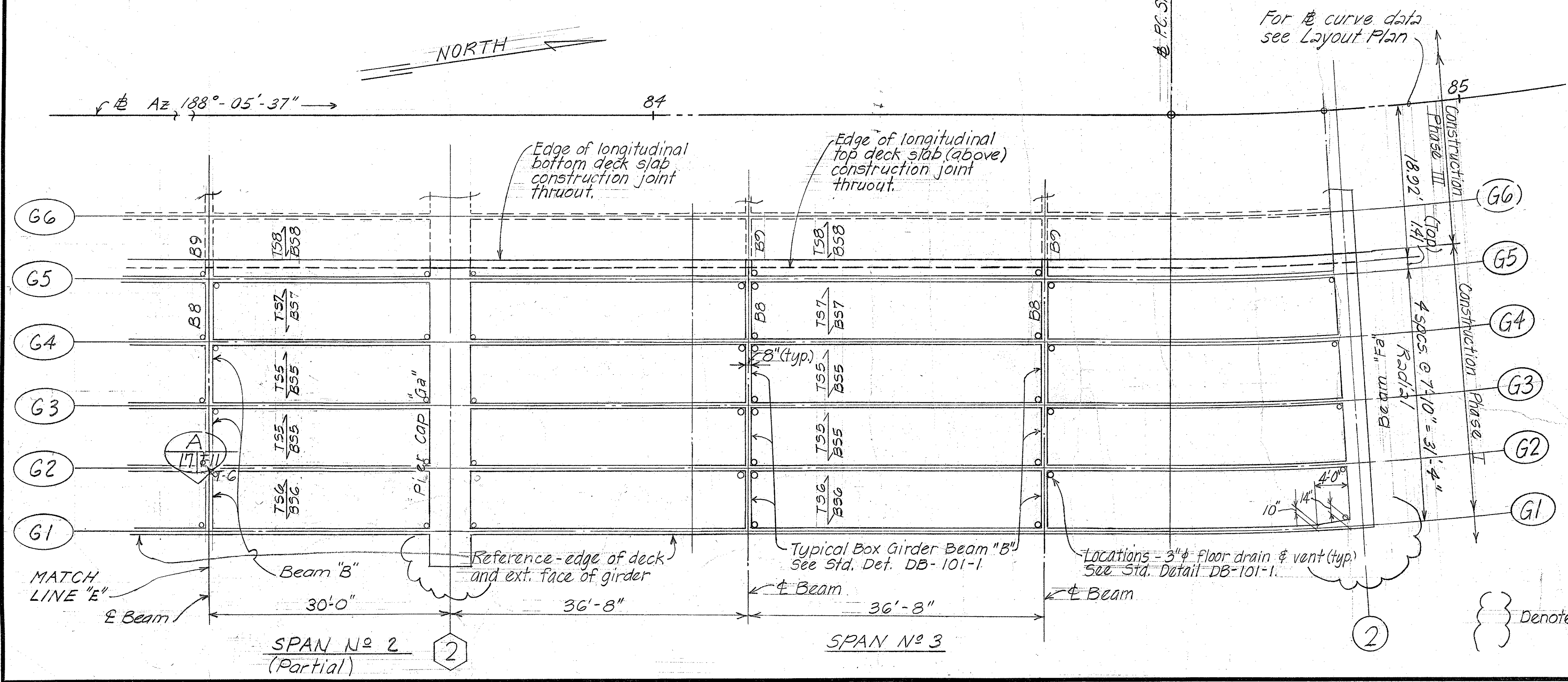
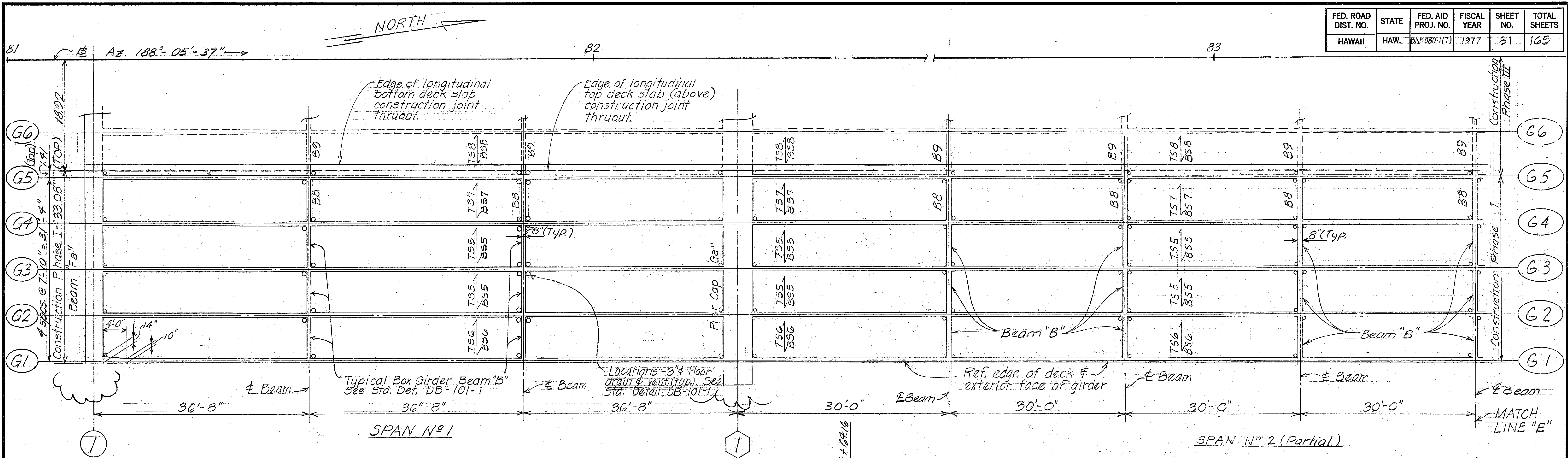
DESIGNED BY	LA
CHECKED BY	CR
DATE	

Revised to CIPPS  
 Scale: \_\_\_\_\_ Date: July 1976

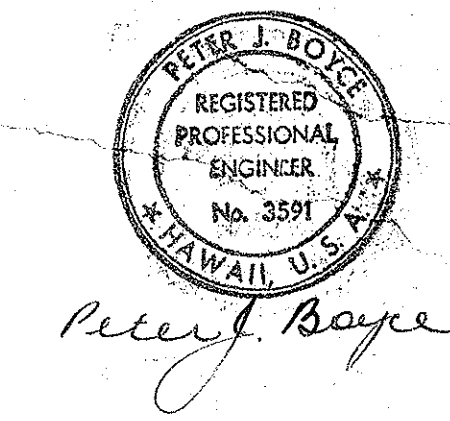
C O S O



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	81	165



- NOTES**
1.  $\overleftarrow{T5-}$  /  $\overrightarrow{B5-}$  Denotes direction of Typical Top Slab (TS-) and Bottom Slab (BS-) transverse main deck reinforcement each bay. Bar spacing of top & bottom slabs shall be located normal to  $\Phi$ . Or curve section of bridge structure, bars shall be located radially with the maximum bar spacing as indicated on Sht. #TG.
  2.  $\overleftarrow{T55-}$  /  $\overrightarrow{B55-}$  Denotes limits of typical Top Slab Strip (TSS-) and Bottom Slab Strip (BSS-) bet. girders each bay. Refer to Typical Deck Slab Section Sht. #T/G and corresponding bar placement diagram for size & nos.
- For Typical Box Girder Superstructure Deck Details and Reinforcements refer to Sht. Nos. T-6, T-7, T-13  
Refer to Standard Details DB 101-1, 2, 3, for additional details & reinforcement.  
For Typical Prestressed Girder & Tee Superstructure Deck Details and Reinforcements refer to Sht. Nos. T-16 thru T-24 inclusive.

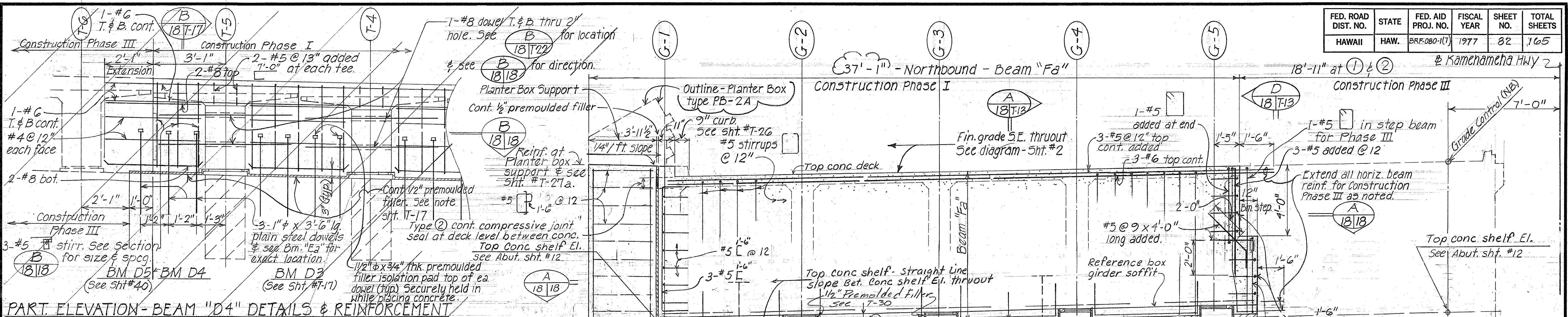


5/9/77	Revised planter box and structures at planter box.
8-77	
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION <b>WILSON BRIDGE</b> # STA. 81+12.24 TO STA. 84+87.24 PART DECK FRAMING PLAN CONSTRUCTION PHASE I (N.B.) PROJECT No. BRF-080-1(7) Scale: 1/8" = 1'-0" Date: July 1976 SHEET No. 17 OF 47 SHEETS	

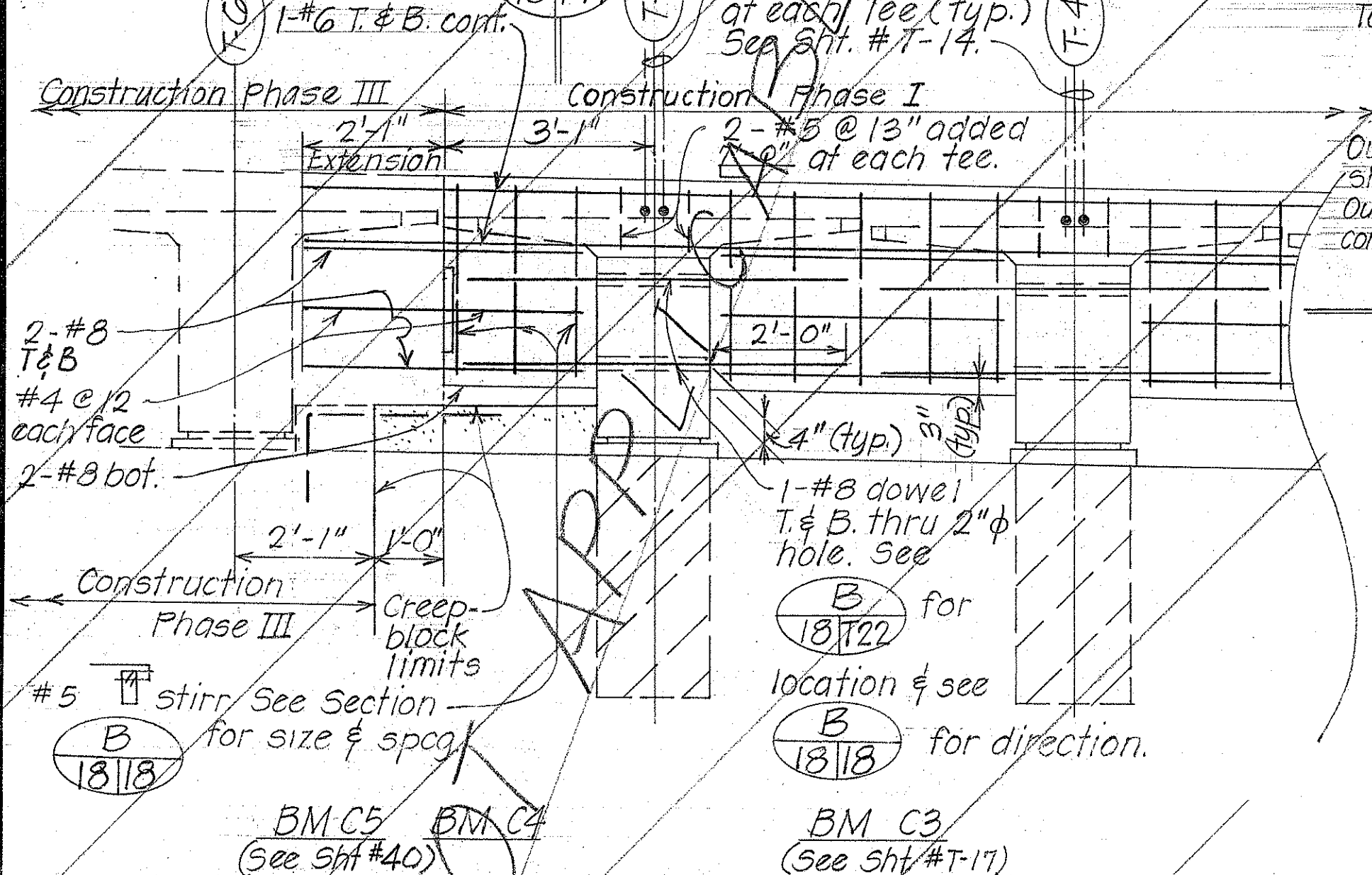
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	



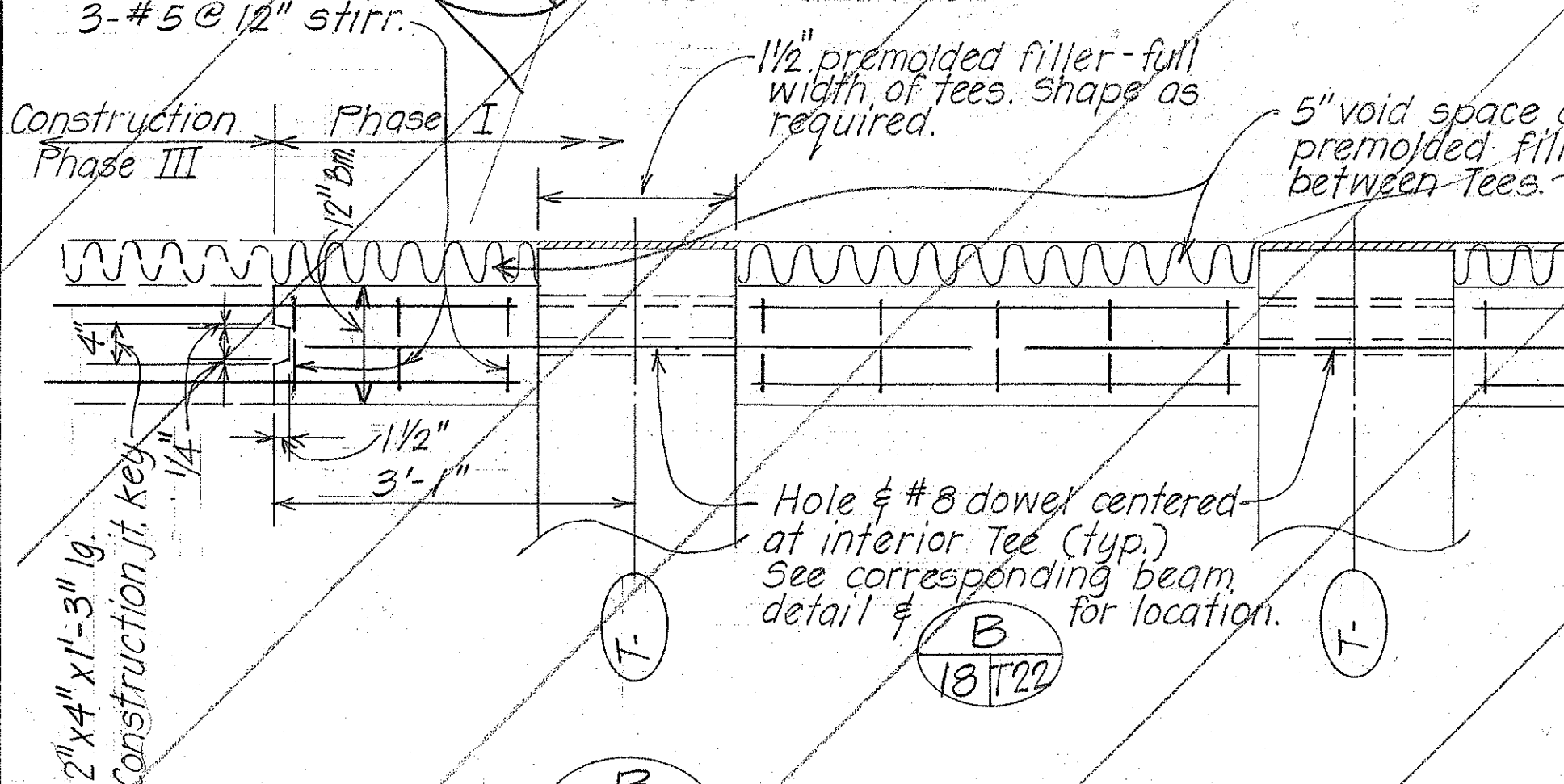
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	82	165



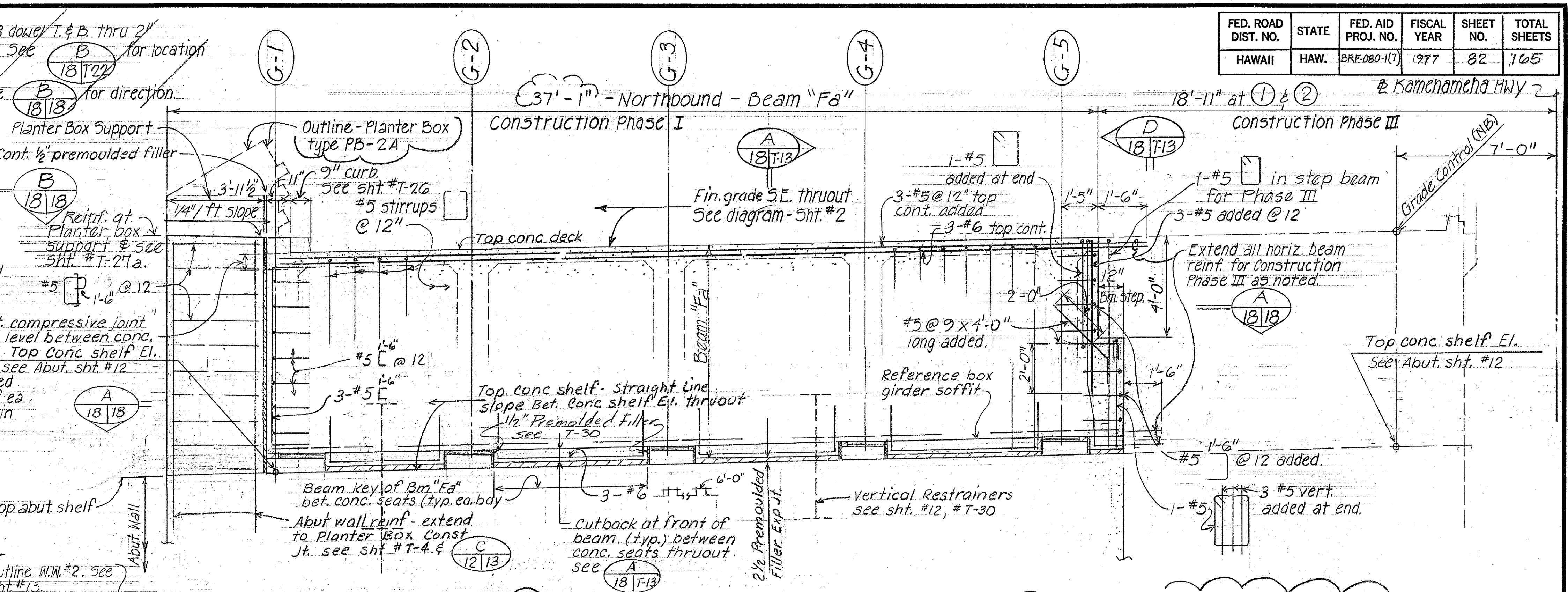
PART ELEVATION-BEAM "D4" DETAILS & REINFORCEMENT  
Scale: 1/2" = 1'-0"



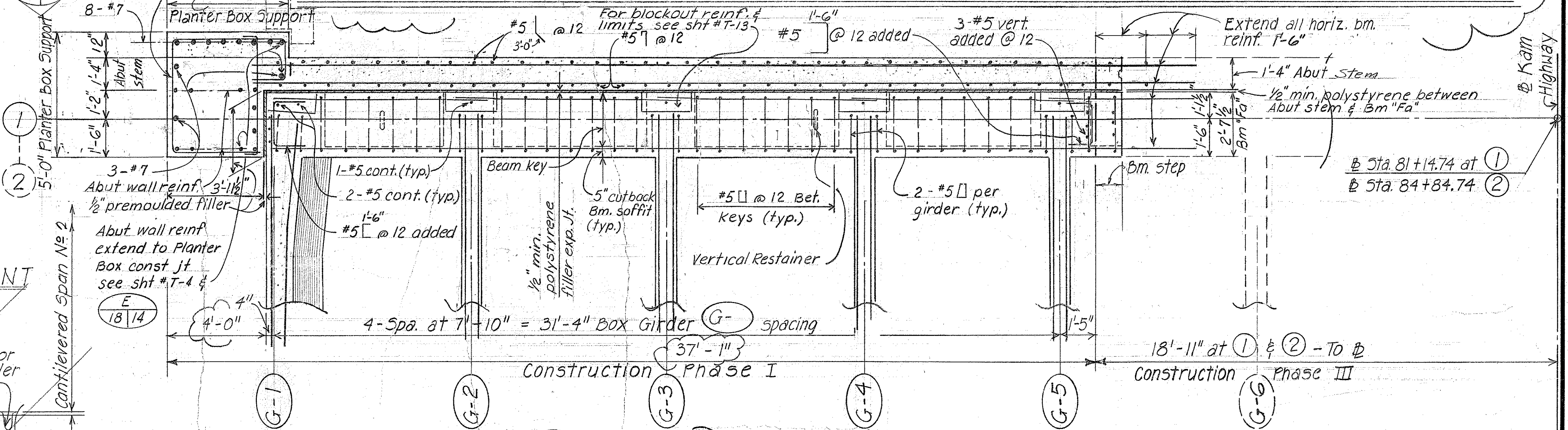
PART ELEVATION-BEAM "C4" DETAILS & REINFORCEMENT  
Scale: 1/2" = 1'-0"



SECTION B 18/18 - BEAM "C4" - AS SHOWN  
BEAM "D4" - OPPOSITE HAND  
Scale: 3/4" = 1'-0"

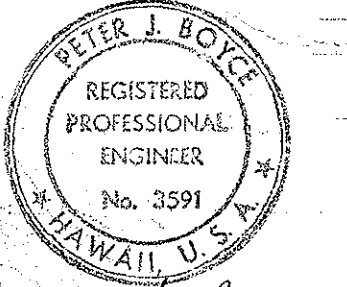


ELEVATION-BEAM "Fa" AT ABUTMENT LINE 1 AS SHOWN  
(ABUTMENT LINE AT 2 SIMILAR EXCEPT OPPOSITE HAND AND REVERSE DECK SLOPE)  
Scale: 3/8" = 1'-0"



SECTION A 18/13  
Scale: 3/8" = 1'-0"

NOTE:  
For additional reinf. at curb & planter box, refer to Sht. #T-26, #T-27, #T-27a.



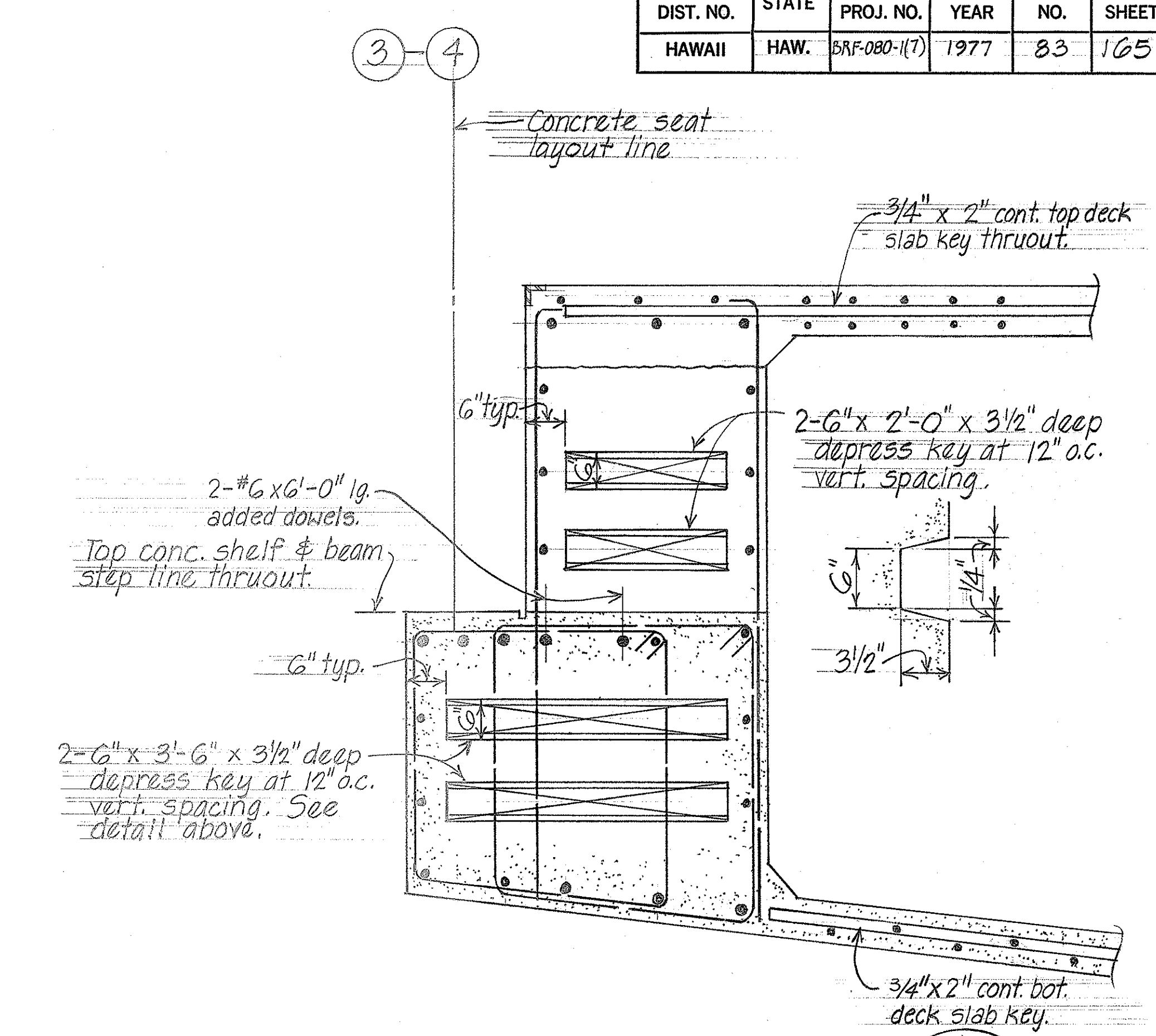
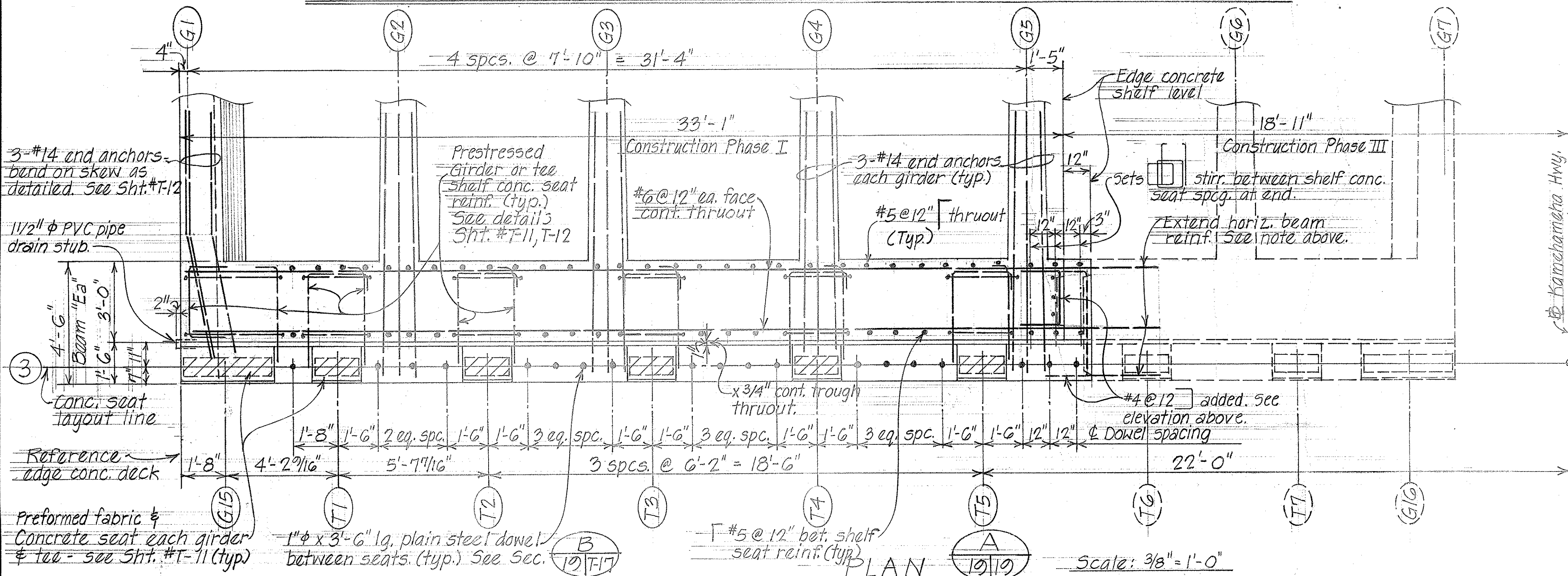
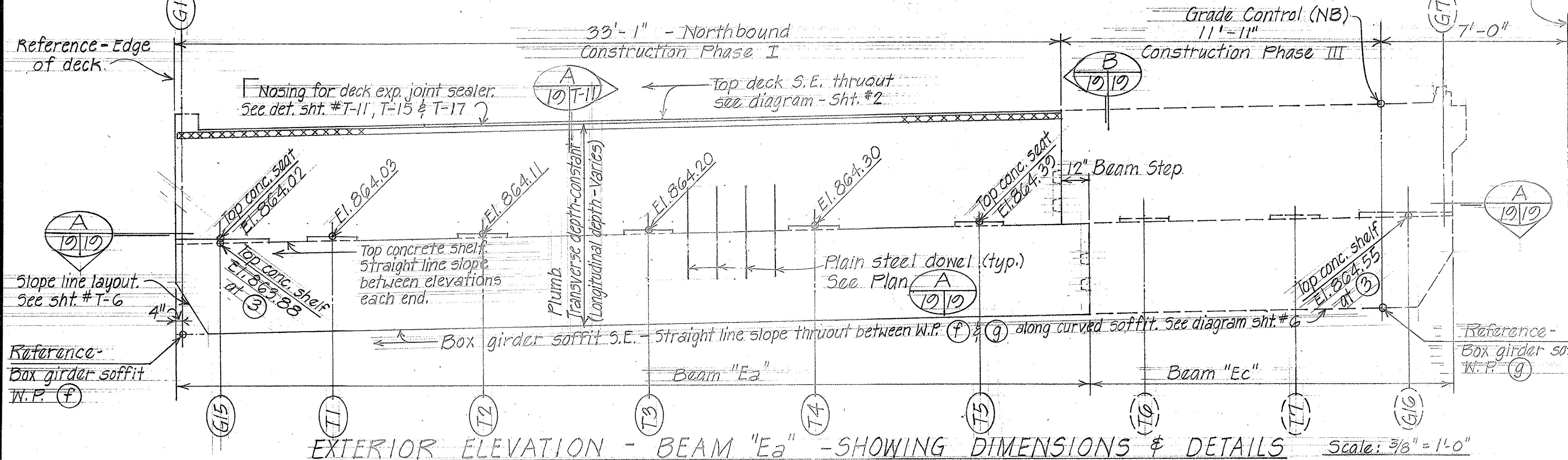
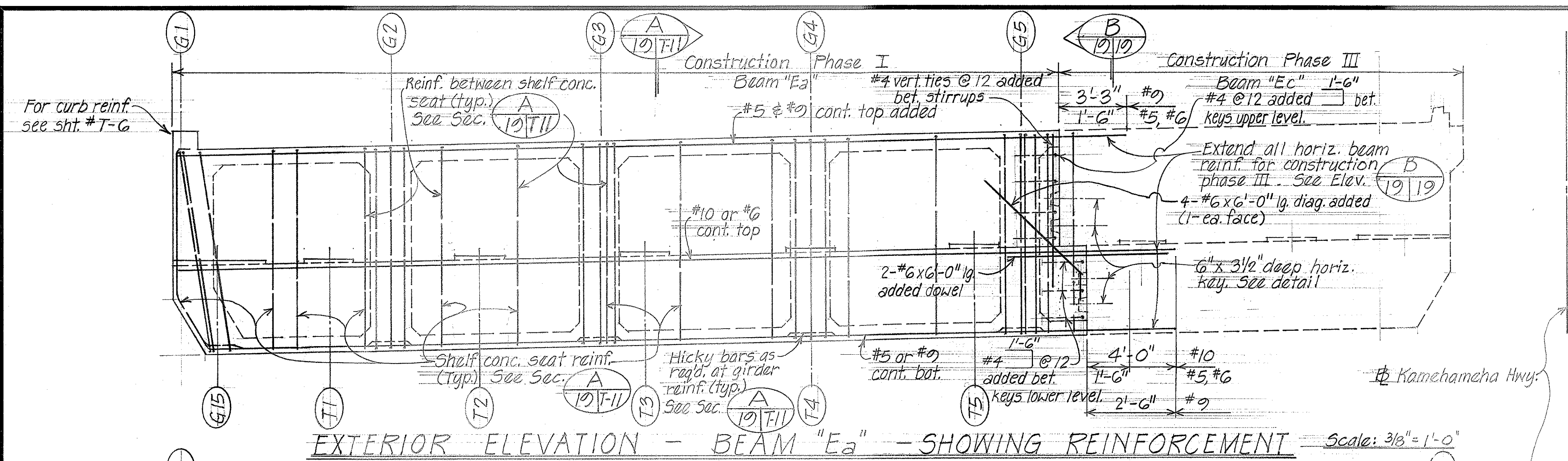
DATE	REVISION
5/10/77	Revised planter box and structures at planter box.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
BEAMS "C4", "D4", "Fa" DETAILS  
CONSTRUCTION PHASE I (N.B.)  
Proj. No. BRF-080-1(7)  
Scale: As noted  
Date: July 1976  
SHEET NO. 18 OF 47 SHEETS

DATE	REVISION
5/10/77	Revised planter box and structures at planter box.



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	83	165



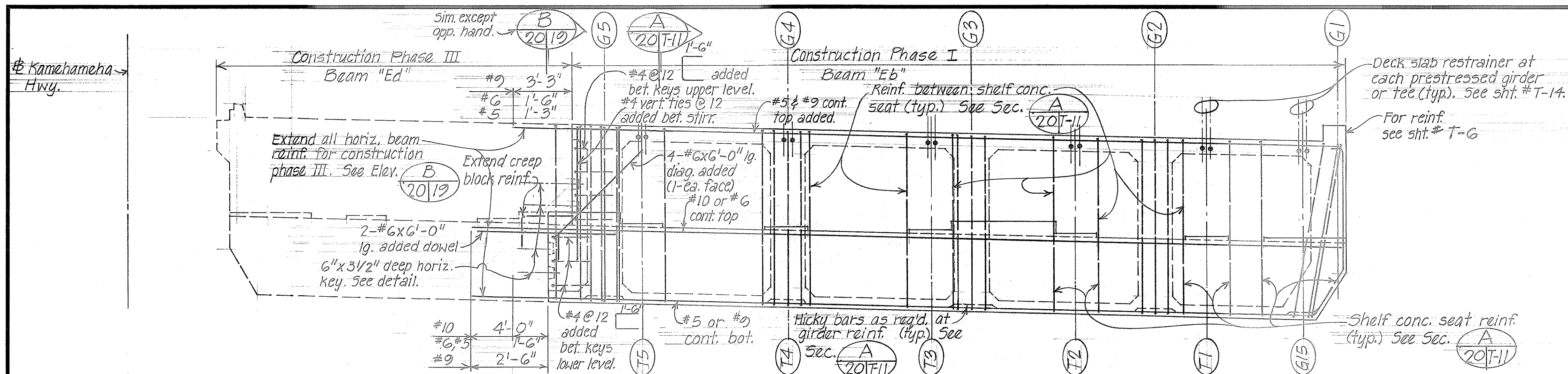
NOTE:  
 In general, extend all horiz. bm. "Ea", "Eb" deck slab reinforcement for Phase III lap splice connections. For limits, refer to corresponding beam elevation.  
 For Typical Beam "Ea" detail & reinforcement refer to sheet nos. T-11, T-12.

DESIGNED BY	DATE
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
NO.	

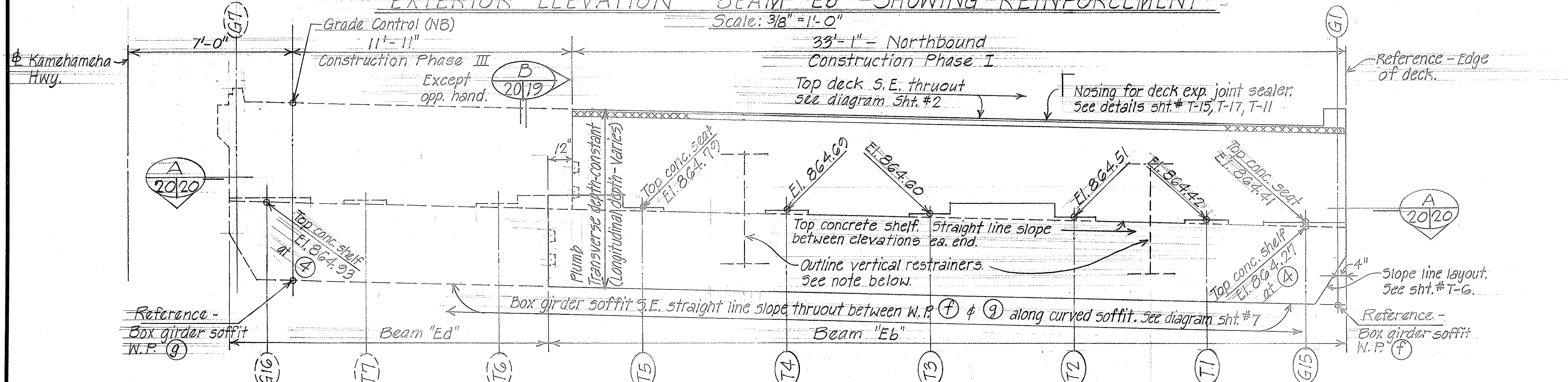
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 BEAM "Ea" DETAILS - LINE 3  
 CONSTRUCTION PHASE I (NB)  
 PROJECT NO. BRF-080-1(7)  
 Scale: \_\_\_\_\_ Date: July 1976  
 SHEET No. 19 OF 47 SHEETS



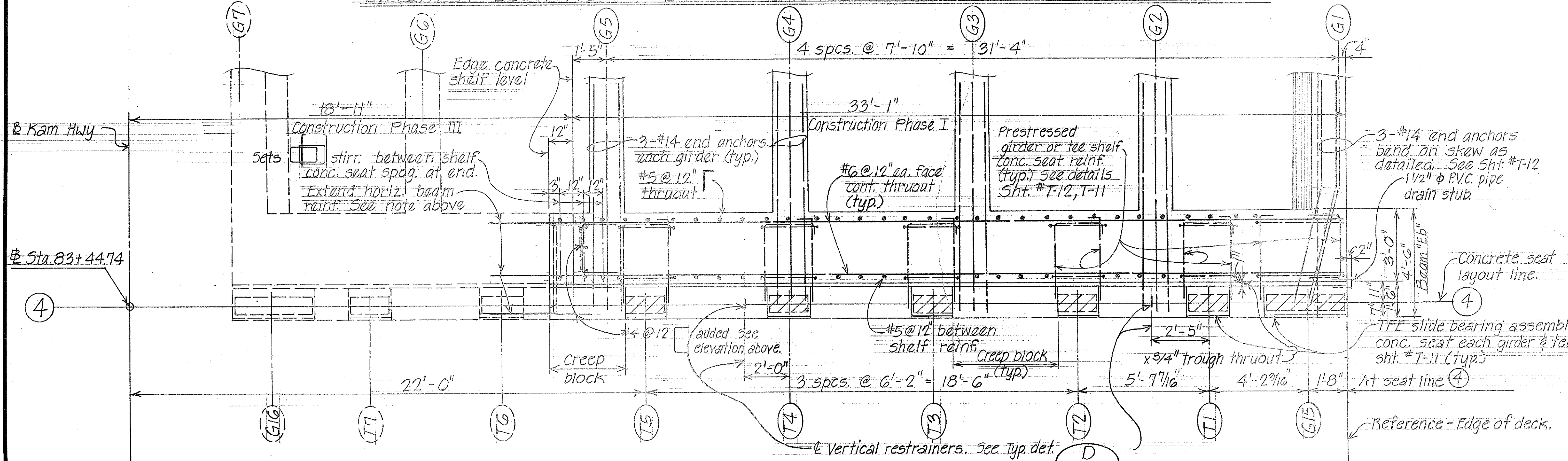
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	84	105



EXTERIOR ELEVATION - BEAM "Eb" - SHOWING REINFORCEMENT  
Scale: 3/8" = 1'-0"



EXTERIOR ELEVATION - BEAM "Eb" - SHOWING DIMENSIONS & DETAILS  
Scale: 3/8" = 1'-0"



PLAN  
Scale: 3/8" = 1'-0"

NOTE:  
For typical beam "Eb" detail & reinforcement refer to sht. nos. T-11, T-12.

SURVEY PLOTTED BY	DATE
DESIGNED BY	
CHECKED BY	
NOTE BOOK	
NO.	

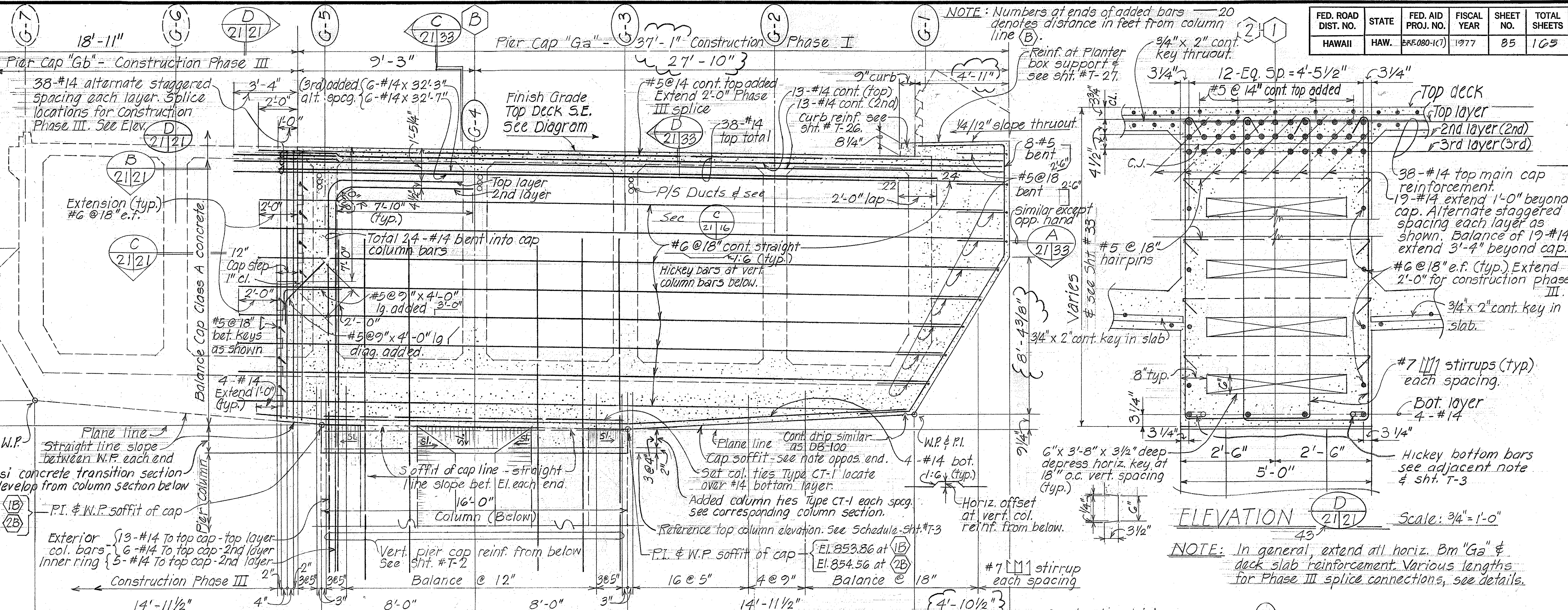
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
BEAM "Eb" DETAILS - LINE (4)  
CONSTRUCTION PHASE I (NB)

PROJECT NO. BRF-080-1(7)  
Scale: Date: July 1976  
SHEET No. 20 OF 47 SHEETS

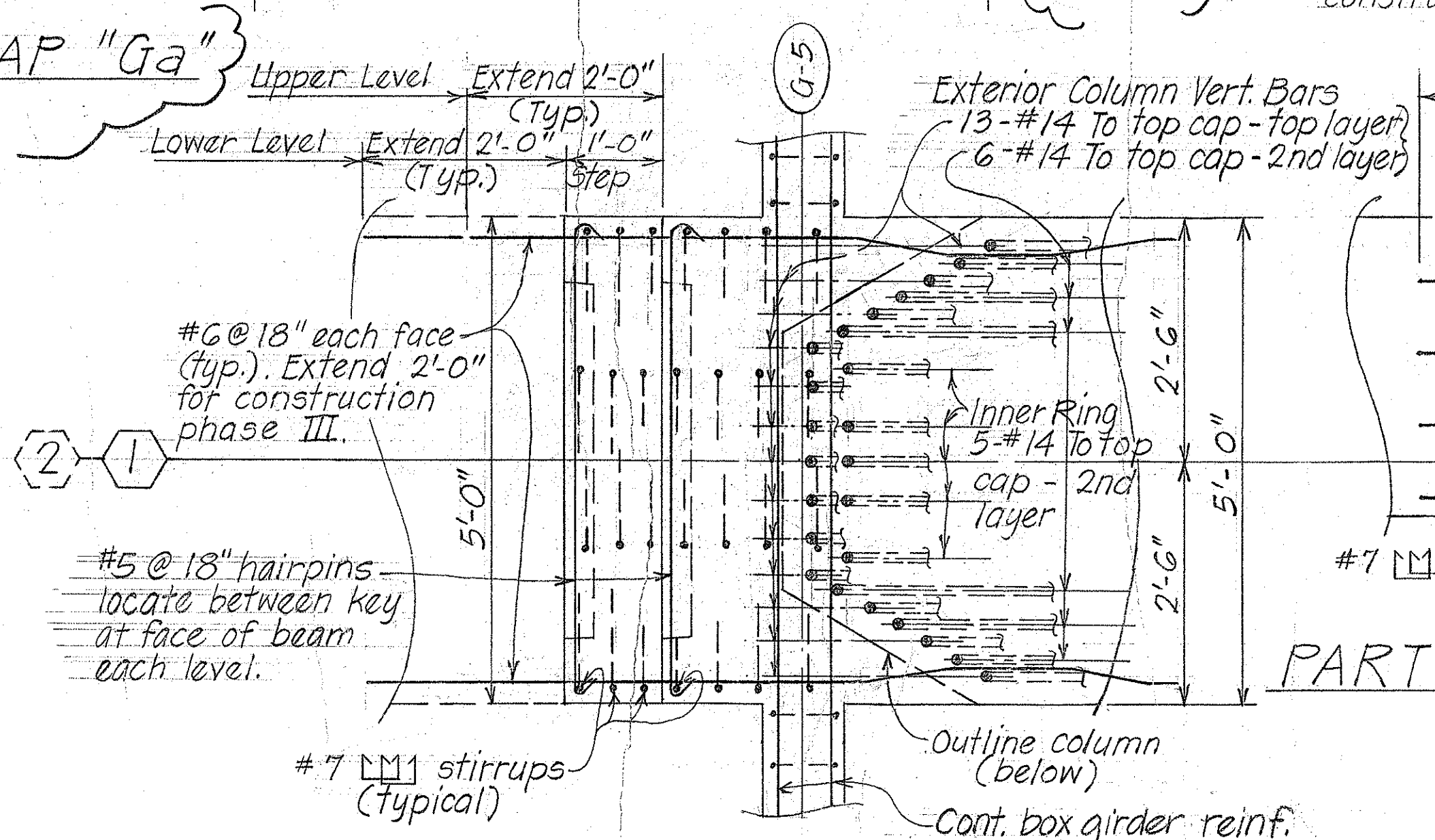


☉ Kamehameha Highway

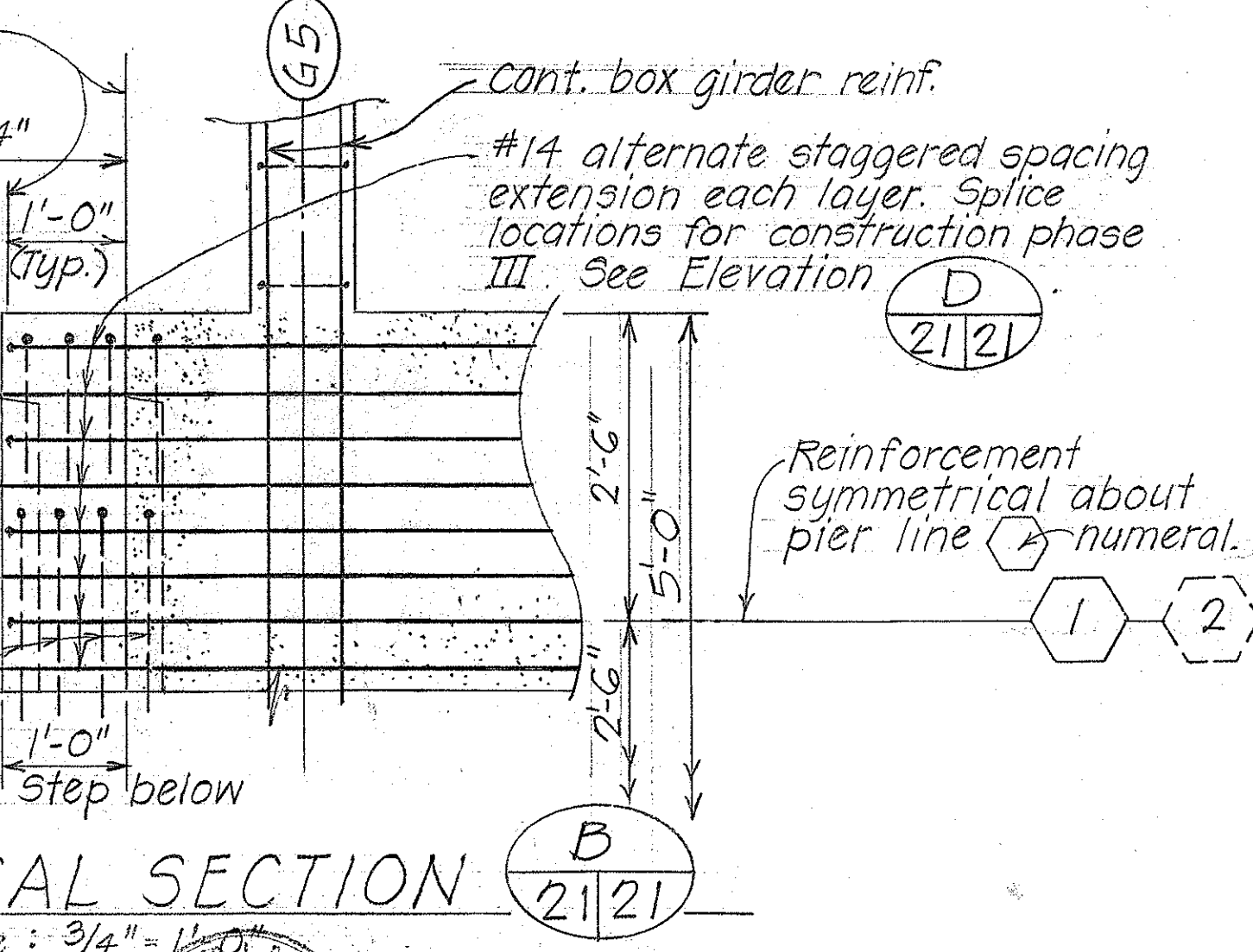


**ELEVATION - TYPICAL PIER CAP "Ga"**  
Scale: 3/8" = 1'-0"

Note:  
In general, extend all Pier Cap "Ga" deck slab reinforcements & stirrups. For Phase III splice connections see Pier Cap "Gb" Sht. #43.



**PART TYPICAL SECTION C**  
Scale: 3/4" = 1'-0"



**PART TYPICAL SECTION B**  
Scale: 3/4" = 1'-0"

DATE	
DESIGNED BY	LM
CHECKED BY	LM
DESIGNED BY	LM
CHECKED BY	LM
DATE	
DESIGNED BY	LM
CHECKED BY	LM
DESIGNED BY	LM
CHECKED BY	LM

{} Denotes changes to CO 85.

DATE	REVISION
5-14-77	Revised to CIPPS
5/9/77	Revised planter box and structures at planter box.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**

PIER CAP "Ga" SECTION & DETAILS  
CONSTRUCTION PHASE I (N.B.)

Proj. No. BRF-080-1(7)  
Scale: As noted  
Date: July 1976

SHEET NO. 21 OF 47 SHEETS

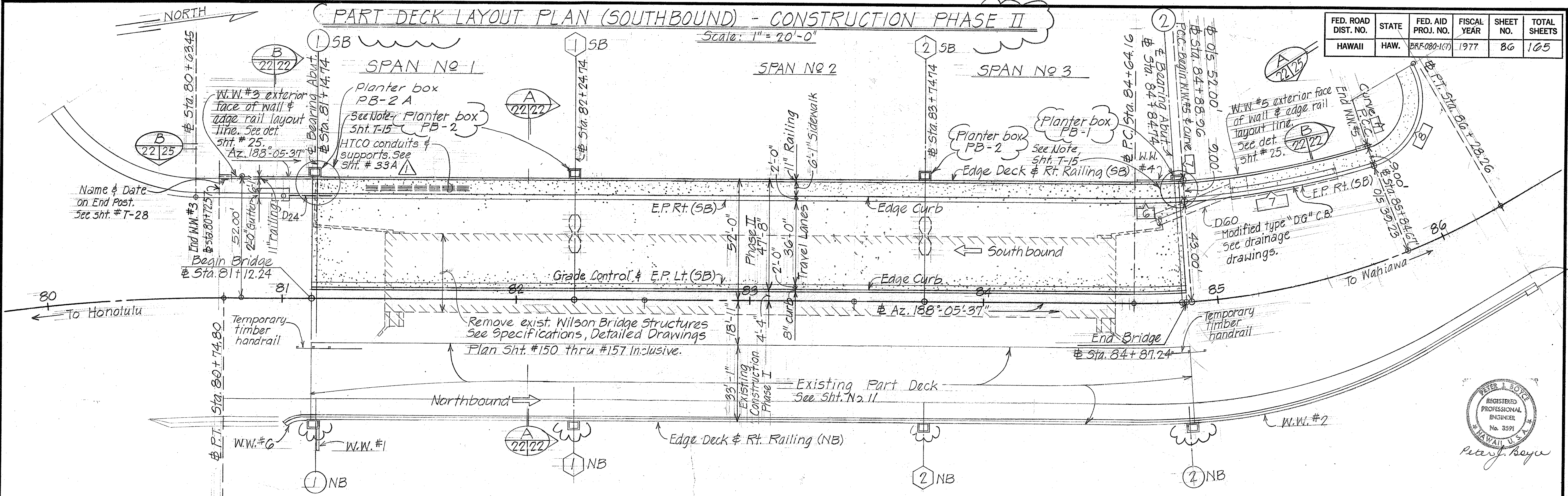
CO S 5



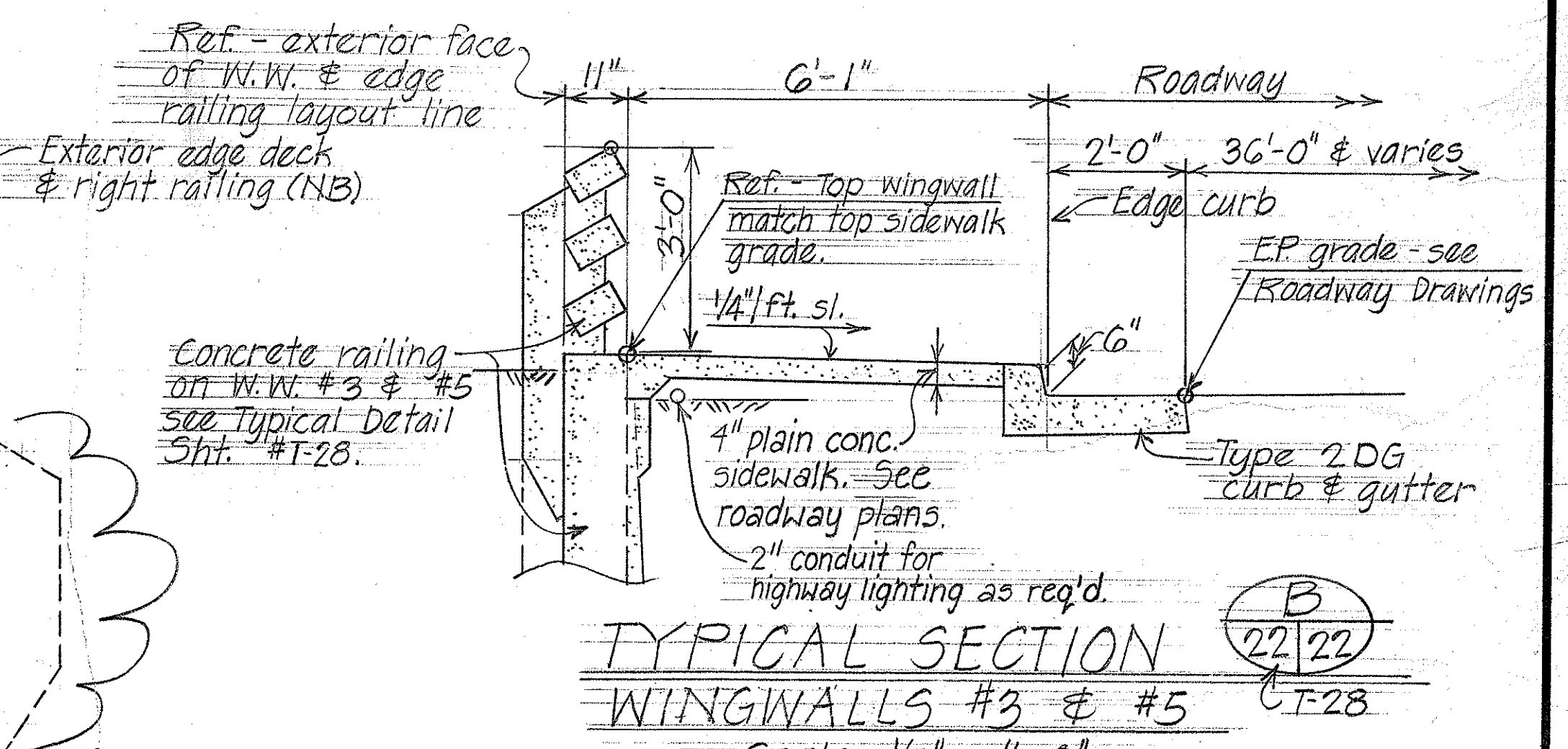
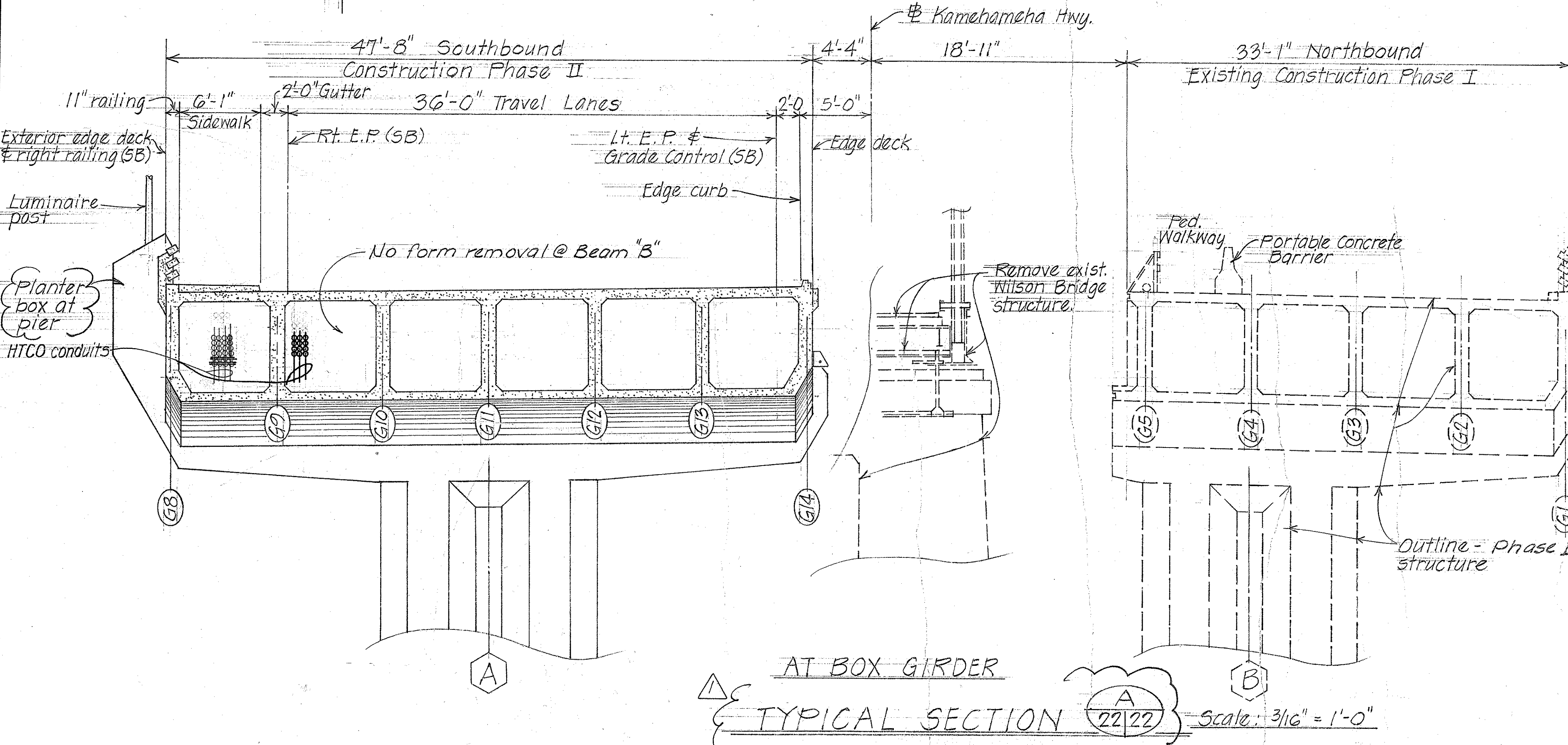
# PART DECK LAYOUT PLAN (SOUTHBOUND) - CONSTRUCTION PHASE II

Scale: 1" = 20'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	86	105



REGISTERED PROFESSIONAL ENGINEER  
No. 3591  
Peter J. Boyer  
HAWAII, U.S.A.



- Reference Notes:
1. For Curve Data, refer to Roadway Plans.
  2. Refer to sht. #27 for Normal Deck Sections and Details.
  3. For Pier Columns (1-A) SB, (2-A) SB & foundation details, refer to sht. Nos 5, 26, T-2 & T-3.

Denotes changes to C.O. 86.

DATE	
SURVEY PLOTTED BY	GU NT
DRAWN BY	FA MT NY
DESIGNED BY	FA MT NY
QUANTITIES BY	CSY
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

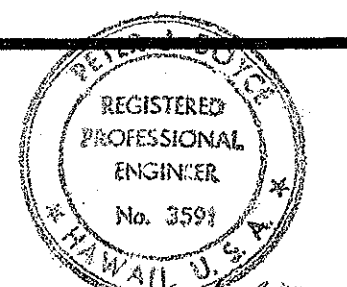
DATE	REVISION
5/19/77	Revised to CIPPS
5/19/77	Revised planter box and structures at planter box.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
# STA. 81+12.24 TO STA. 84+87.24  
**DECK LAYOUT PLAN**  
CONSTRUCTION PHASE II (SB)  
PROJECT NO. BRF-080-1(7)  
Scale: As shown Date: July 1976  
SHEET No. 22 OF 47 SHEETS

CO S G



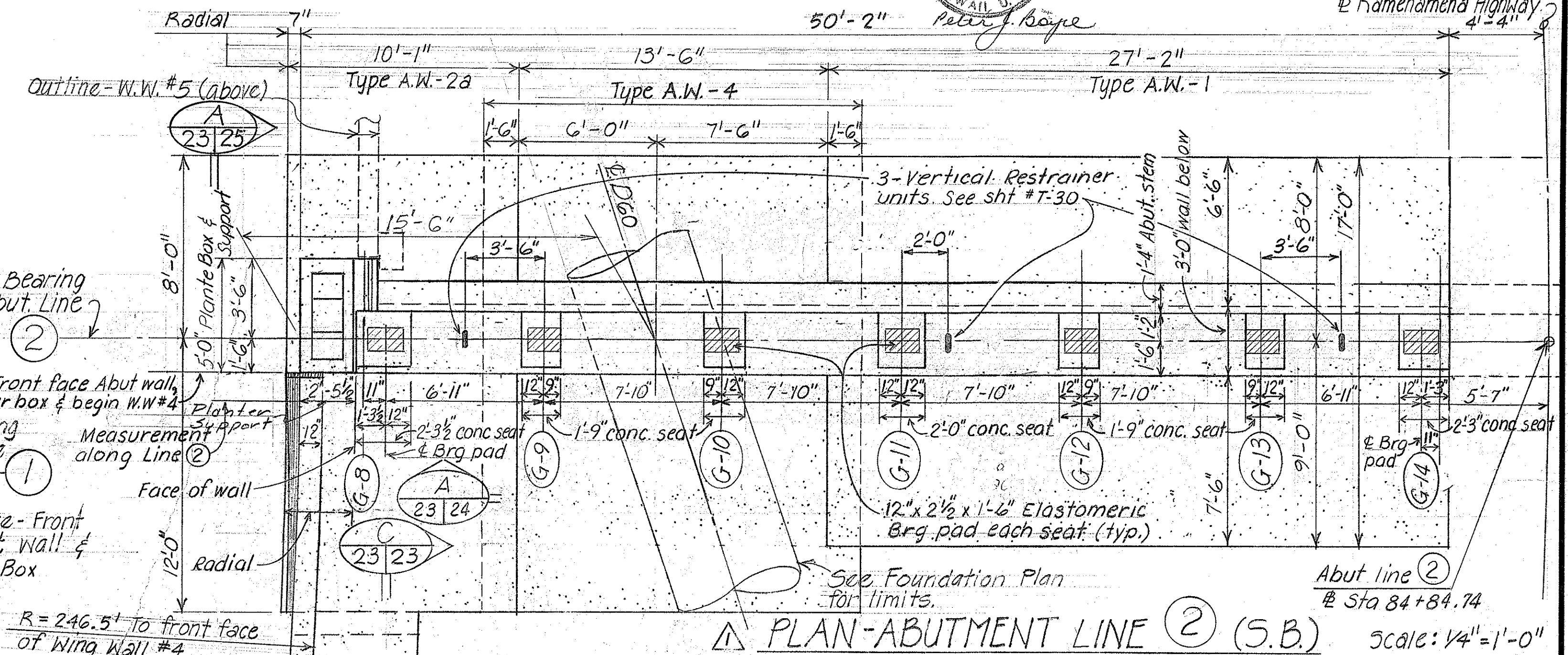
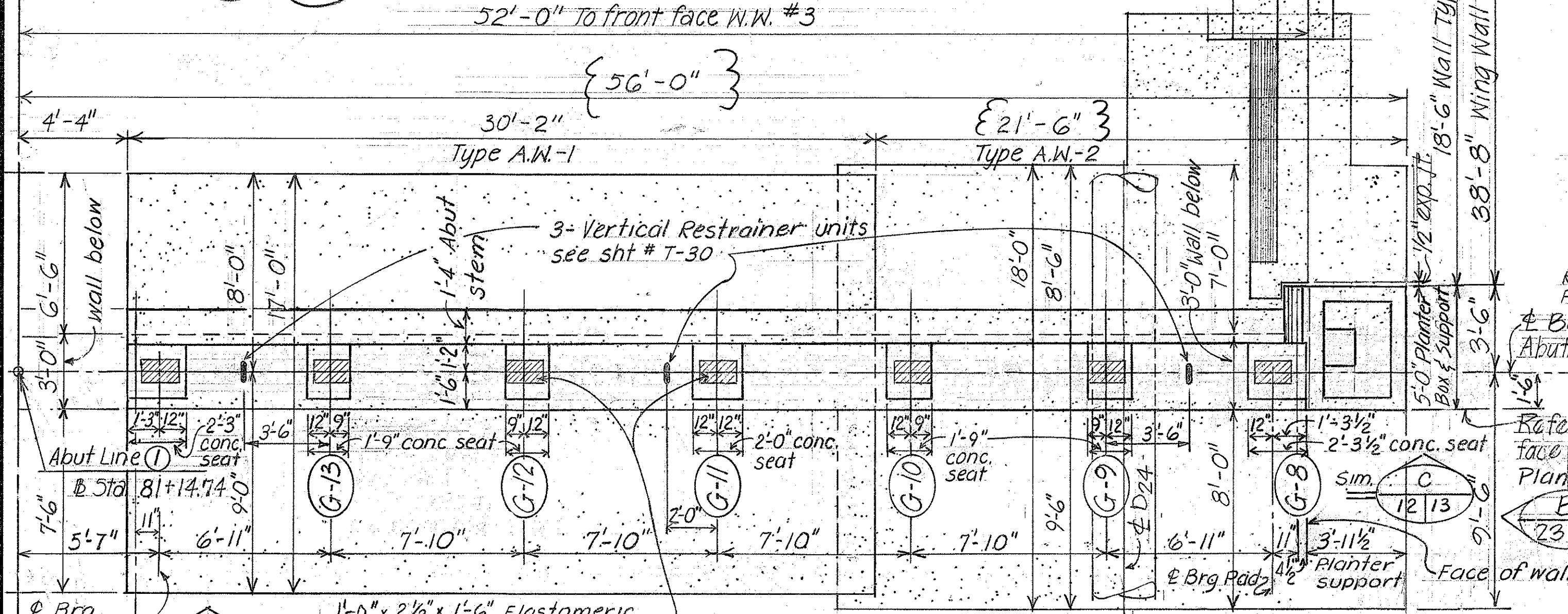
Kamehameha Highway



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	87	165

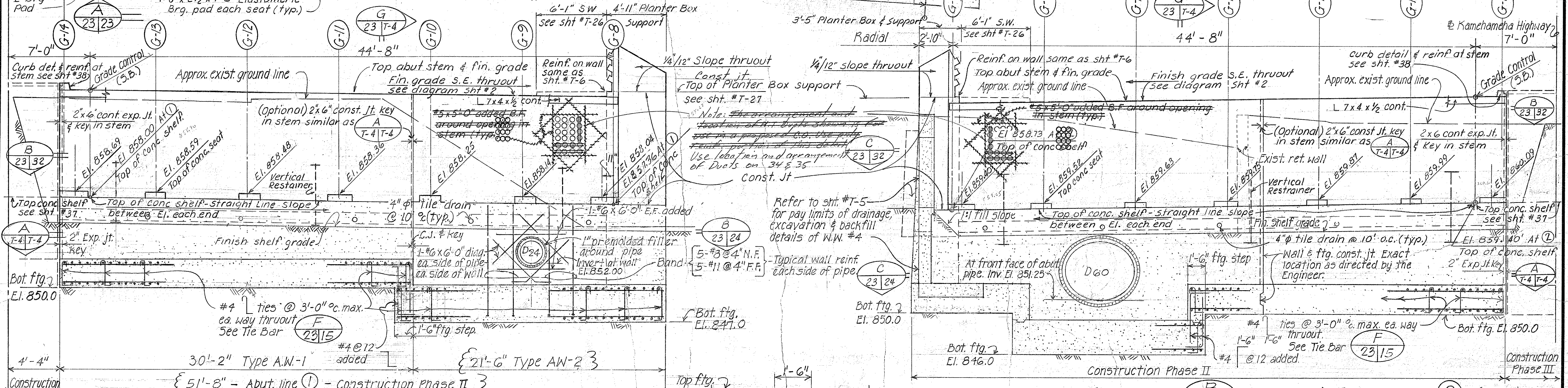
### PART. PLAN - ABUTMENT LINE ① (S.B.)

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



### PLAN - ABUTMENT LINE ② (S.B.)

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



### ELEVATION (B) - ABUTMENT LINE ② (S.B.)

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

Reference Notes:  
 1. Refer to sht. #T-4 for Typical Abutment Wall (A.W.-1) type, sections and details.  
 2. For pay limits of abutment structural excavation & backfill, refer to sht. #5.

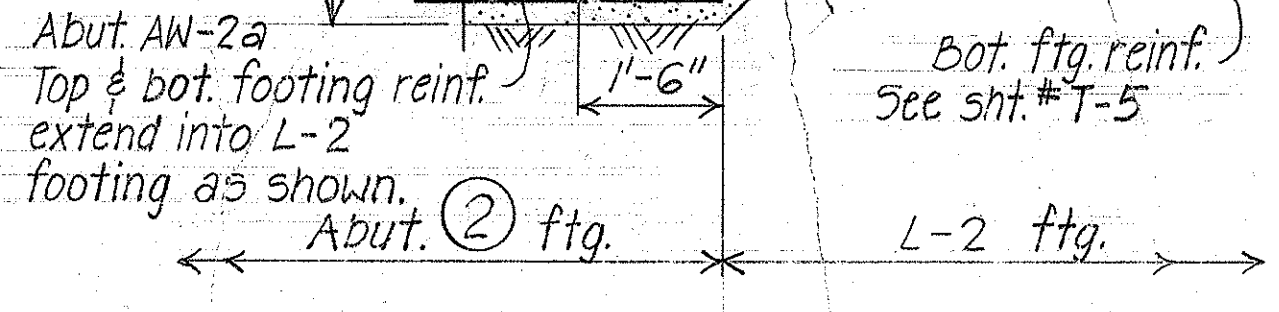
DATE	REVISION
5-14-77	Revised to CIPPS
5/9/77	Revised planter box and structures at planter box.

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 ABUTMENT LINES ① & ②  
 PLANS AND DETAILS  
 CONSTRUCTION PHASE II  
 Proj. No. BRF-080-1(7)  
 Scale: As noted Date: July 1976  
 SHEET NO. 23 OF 47 SHEETS

DATE	
SURVEY	
DRAWN BY	
DESIGNED BY	
CHECKED BY	

### SECTION (C) - ABUTMENT LINE ① (S.B.)

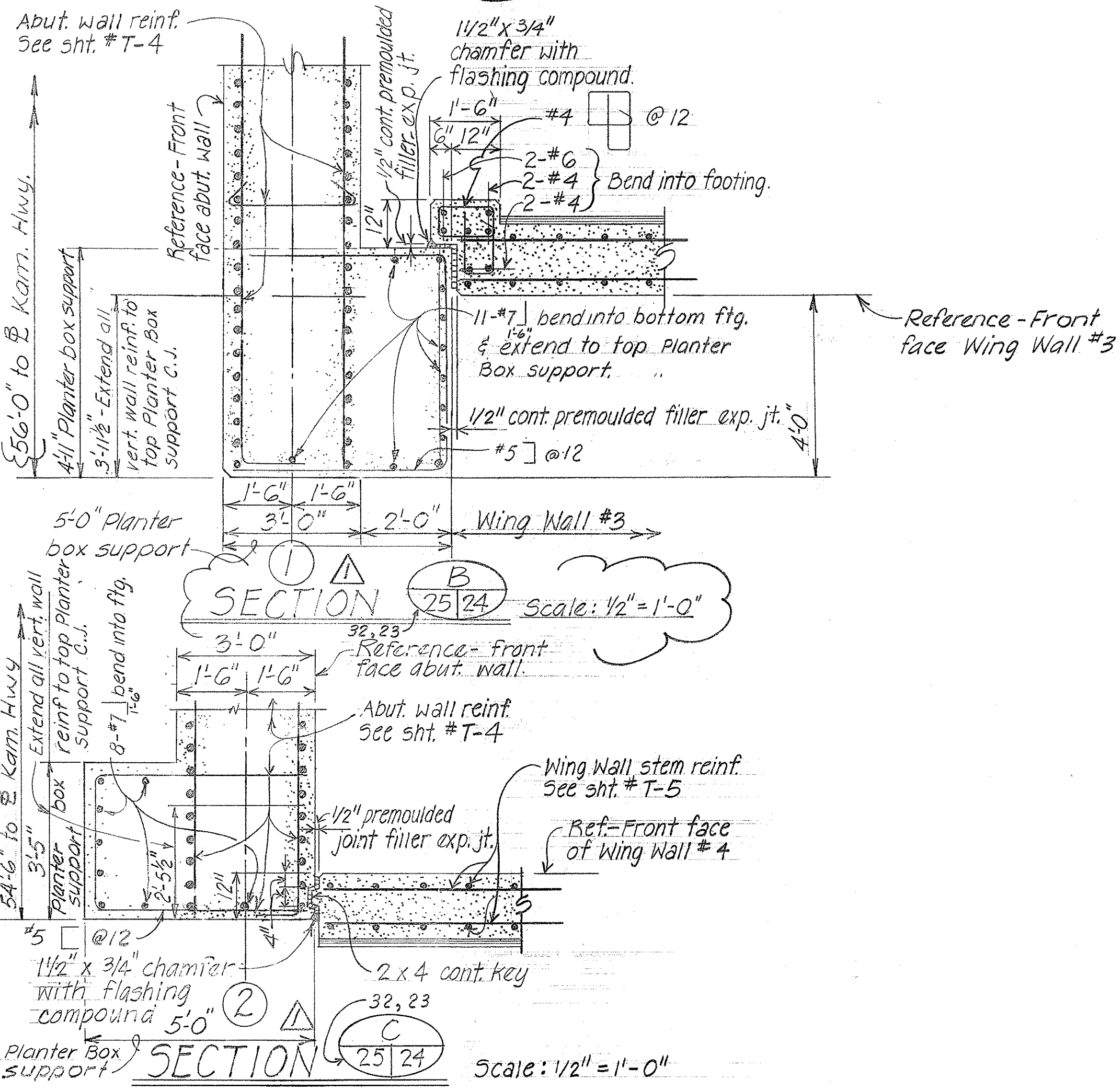
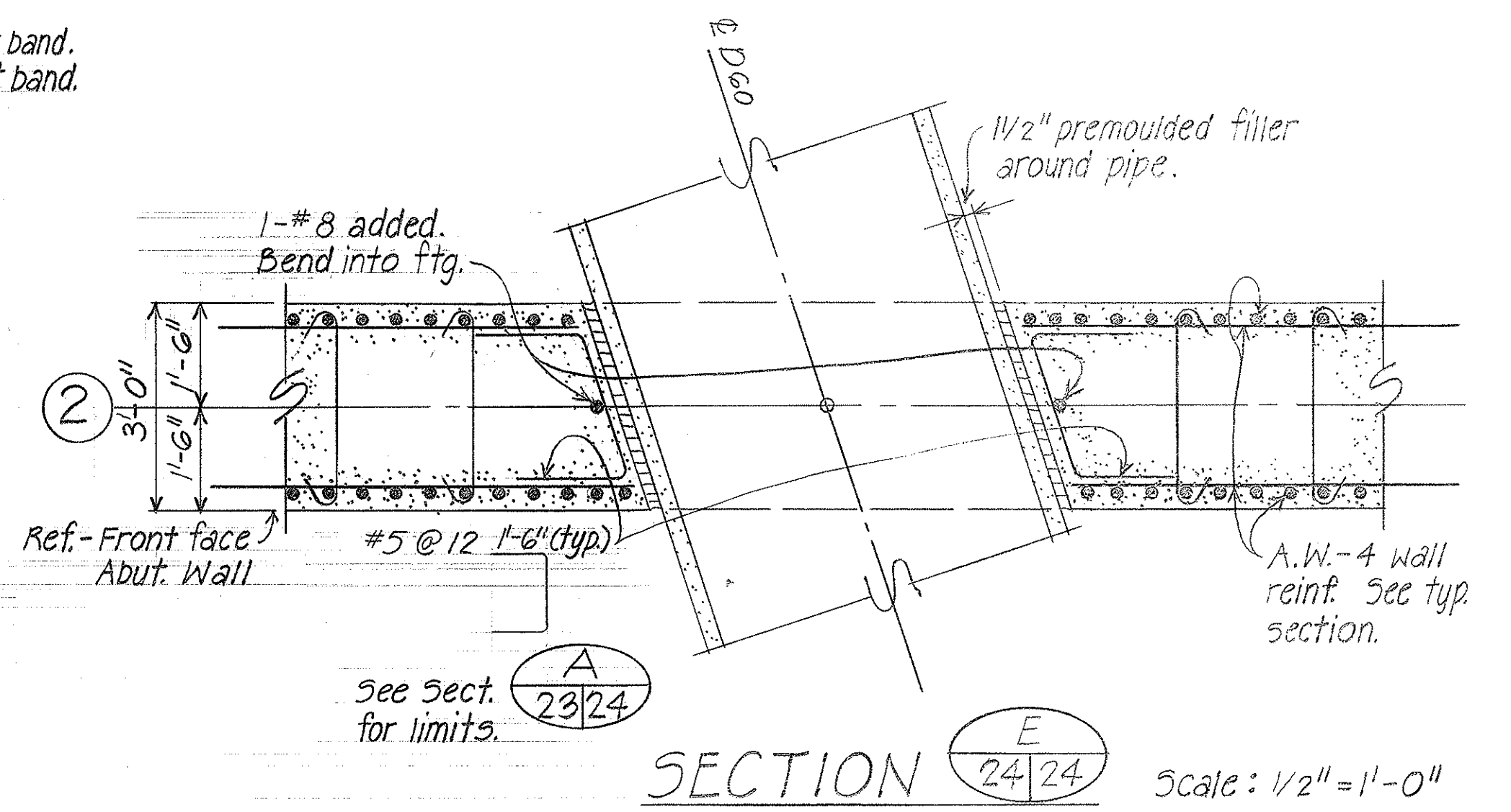
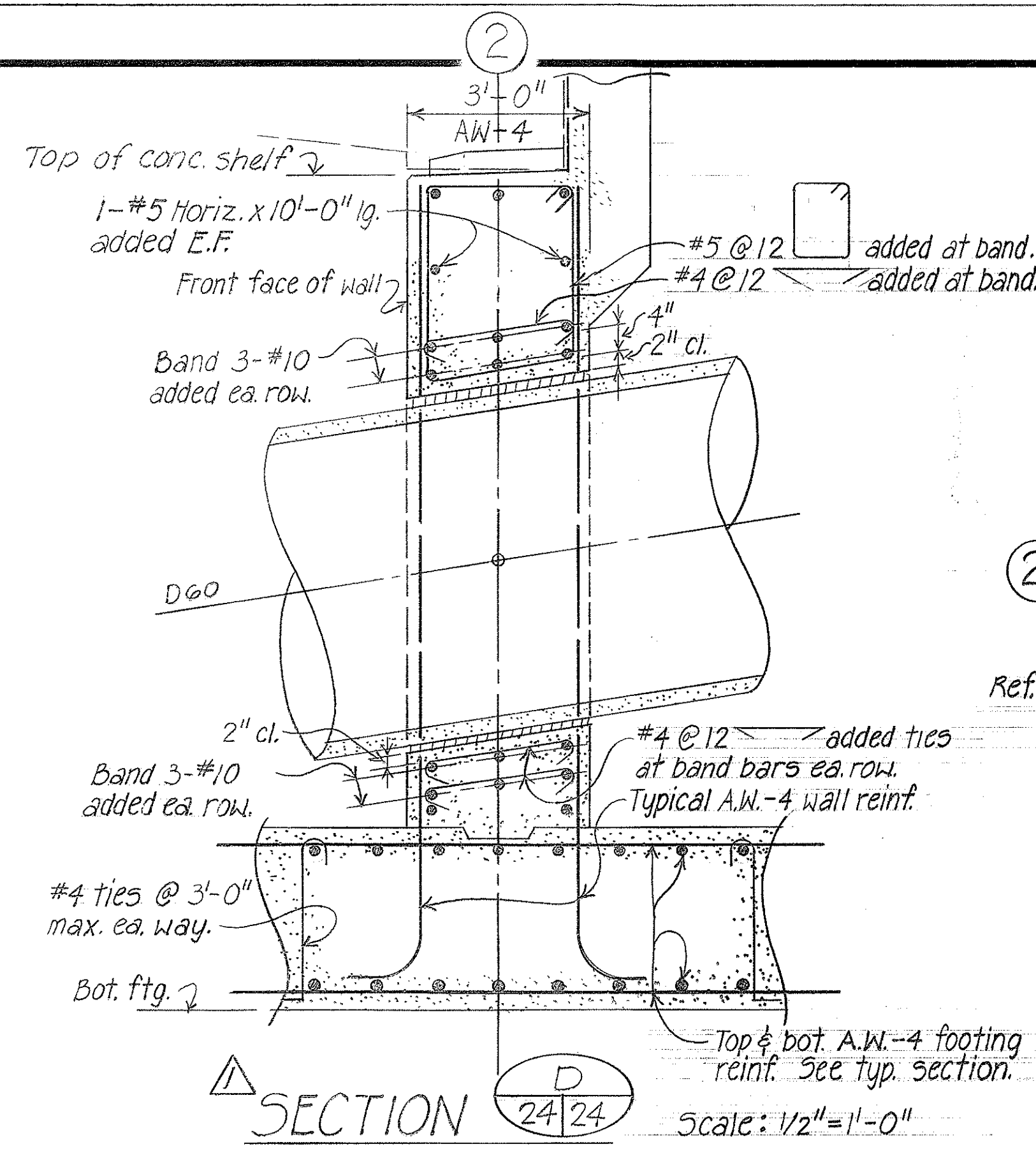
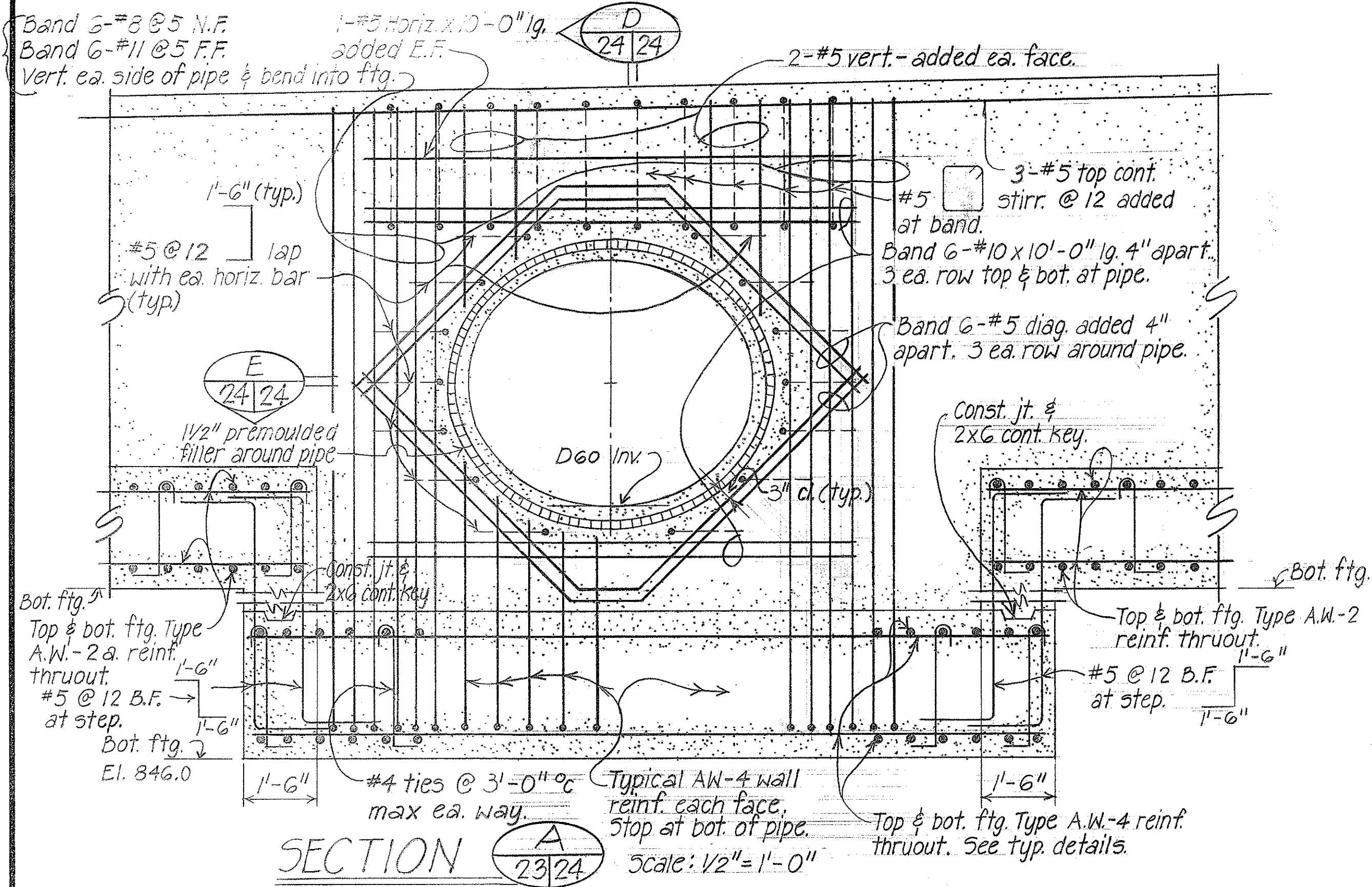
Scale: 1/2" = 1'-0"



COS

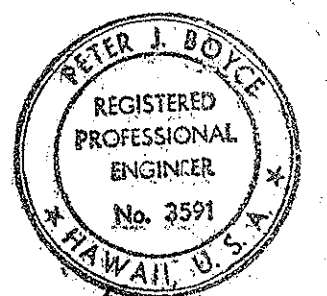


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	NO.	SHEETS
HAWAII	HAW.	BRF-080-1C7	1977	38	105



Denotes changes to C.O. 88.

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



5/14/77	Revised to CIPPS
5/9/77	Revised planter box and structures at planter box.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
ABUTMENT LINES ① & ②  
SECTIONS AND DETAILS  
CONSTRUCTION PHASE II

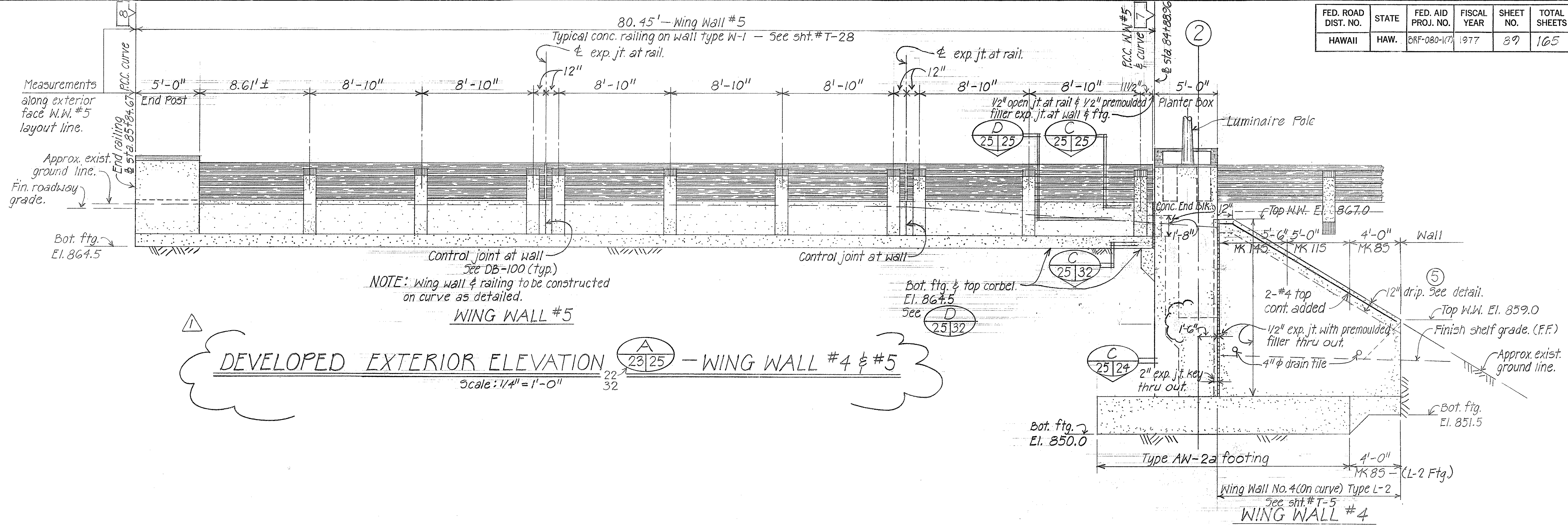
Proj. No. BRF-080-1C7  
Scale: As noted Date: July 1976

SHEET No. 24 OF 47 SHEETS

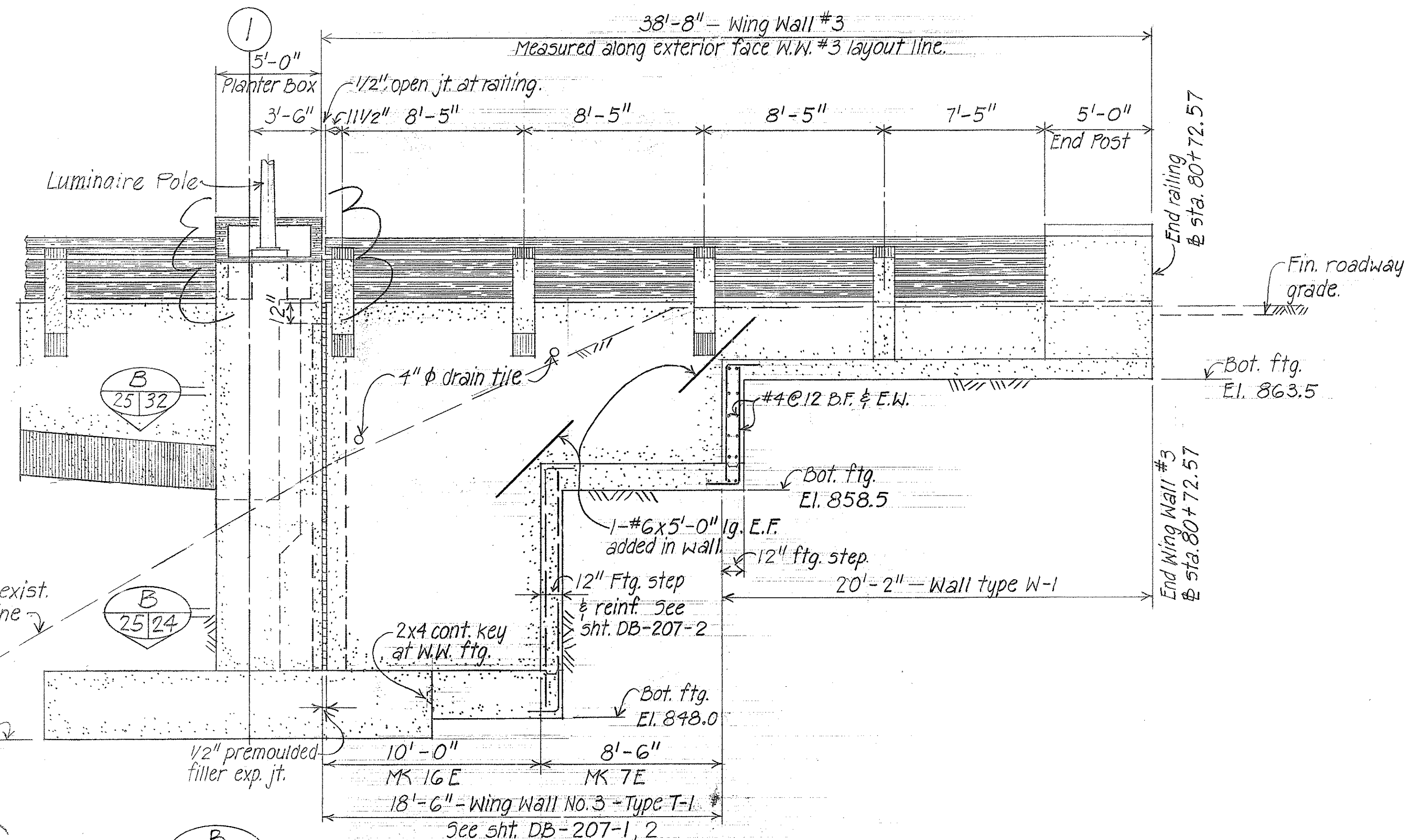
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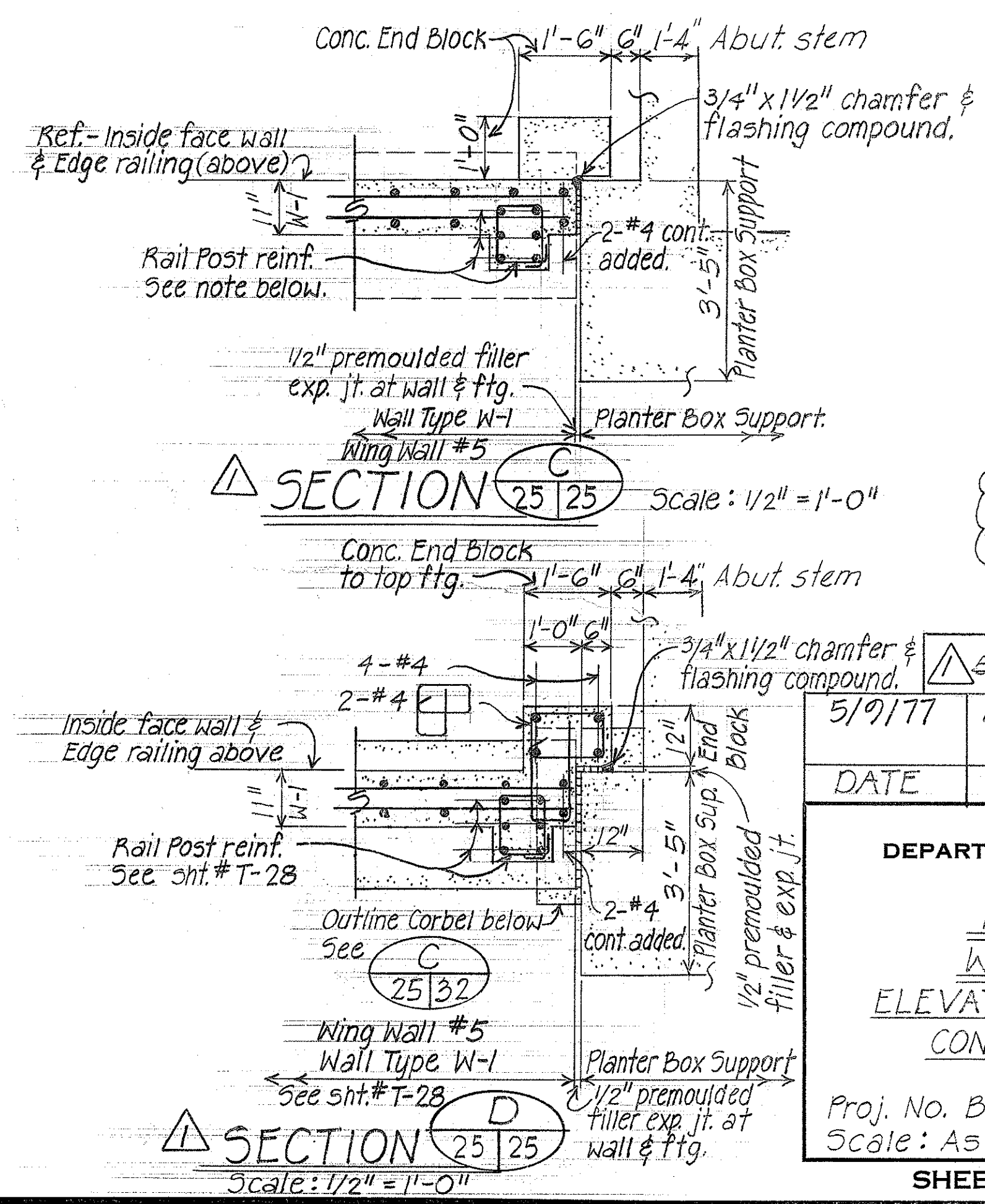
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	89	165



**DEVELOPED EXTERIOR ELEVATION** <sup>22</sup>/<sub>32</sub> - WING WALL #4 & #5  
 Scale: 1/4" = 1'-0"



**ELEVATION** <sup>32</sup>/<sub>22</sub> - WING WALL #3  
 Scale: 1/4" = 1'-0"



} Denotes changes to C.O. 89

DATE	REVISION
5/9/77	Revised planter box and structures at planter box.

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 WING WALLS #3, #4 & #5  
 ELEVATIONS AND SECTIONS  
 CONSTRUCTION PHASE II

Proj. No. BRF-080-1(7)  
 Scale: As noted Date: July 1976  
 SHEET No. 25 OF 47 SHEETS

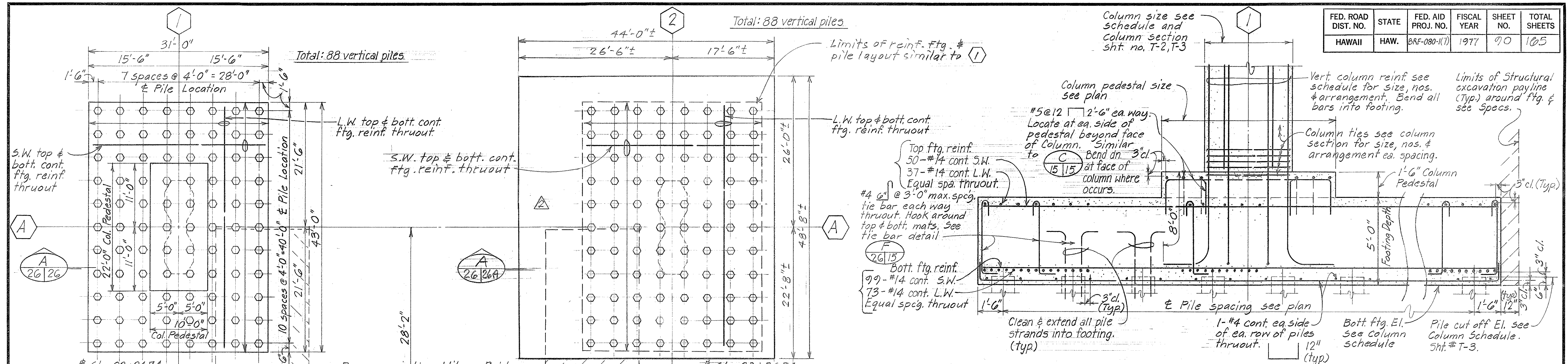
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	



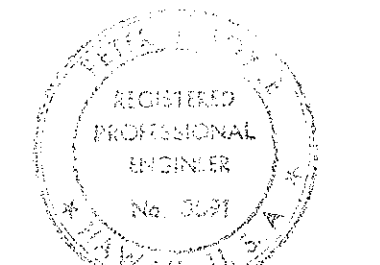
CO S D



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	90	105



DATE	BY
DESIGNED BY	LM
CHECKED BY	LM
TRACED BY	LM
QUANTITIES BY	LM
NOTE BOOK	LM
NO.	LM



Peter J. Baye

Sheets 91, 92, 93, 94, 95 & 96 deleted

5/21/82	Revised Footing (A)
5-14-77	Revised to CIPPS

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

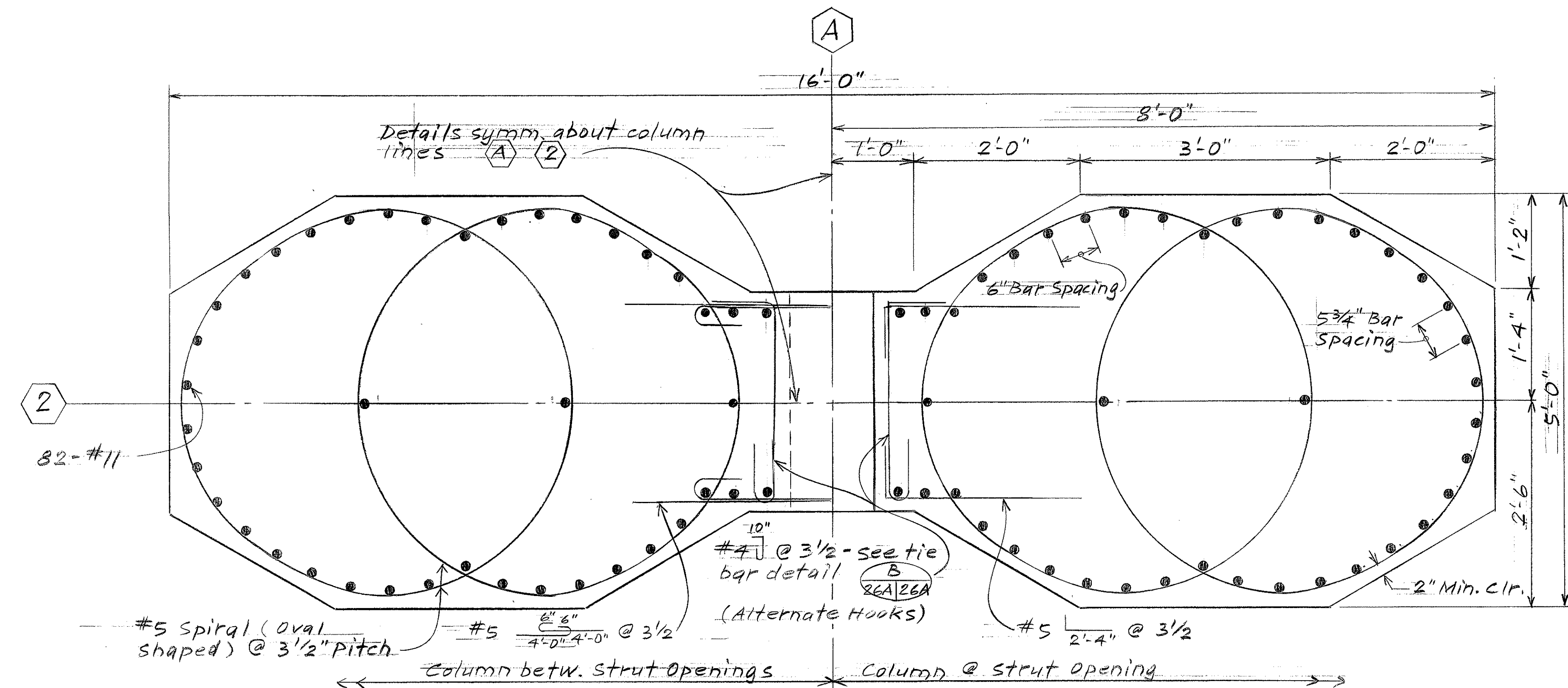
**WILSON BRIDGE**  
PIER COLUMN (A), (2A), (B), (2B)  
FOUNDATION DETAILS  
CONSTRUCTION PHASE II (SB) & (NB)

PROJ. NO. BRF-080-1(7)  
Scale: As Shown Date: July 1976  
SHEET NO. 26 OF 47 SHEETS

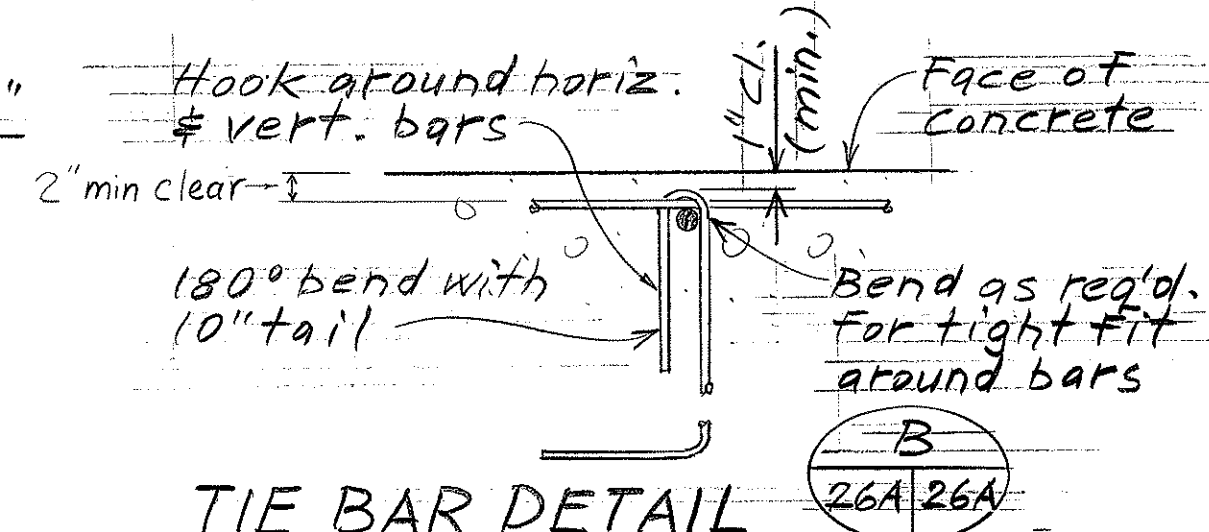
CO 90



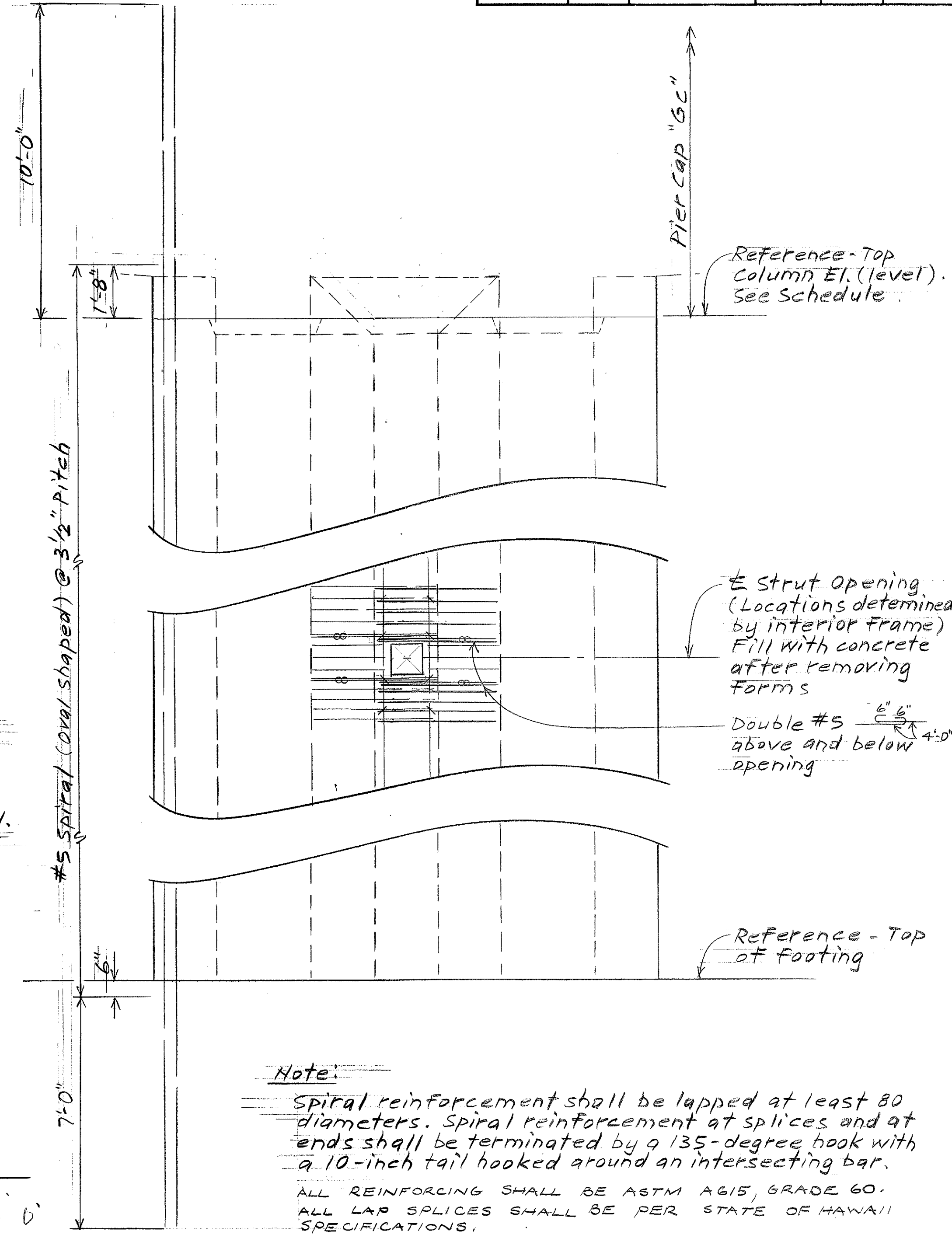
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	90A	165



PIER COLUMN SECTION scale: 1"=1'-0"

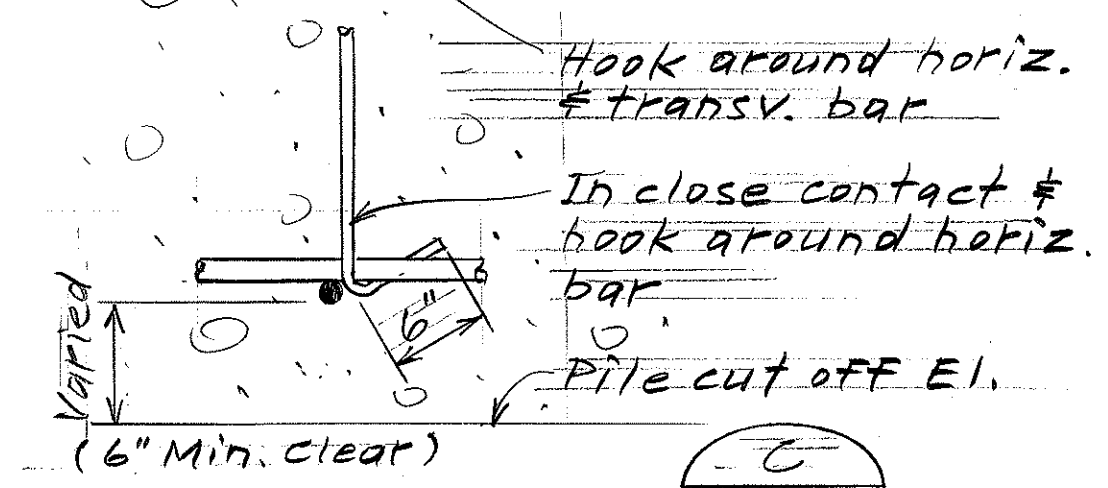


TIE BAR DETAIL B scale: Not to Scale

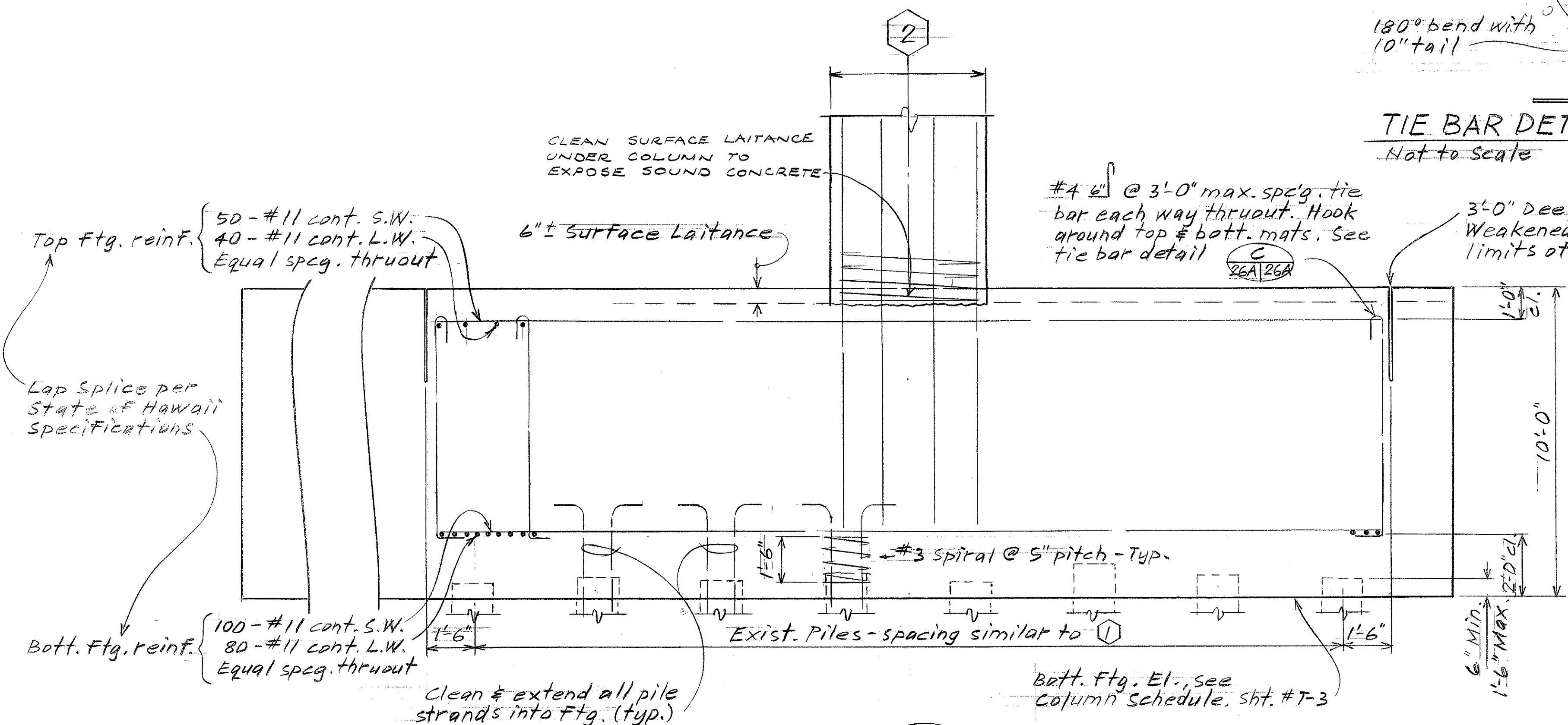


Note: Spiral reinforcement shall be lapped at least 80 diameters. Spiral reinforcement at splices and at ends shall be terminated by a 135-degree hook with a 10-inch tail hooked around an intersecting bar. ALL REINFORCING SHALL BE ASTM A615, GRADE 60. ALL LAP SPLICES SHALL BE PER STATE OF HAWAII SPECIFICATIONS.

PIER COLUMN DETAIL 2A SB scale: 3/8"=1'-0"



TIE BAR DETAIL C scale: Not to Scale



SECTION A scale: 3/8"=1'-0"

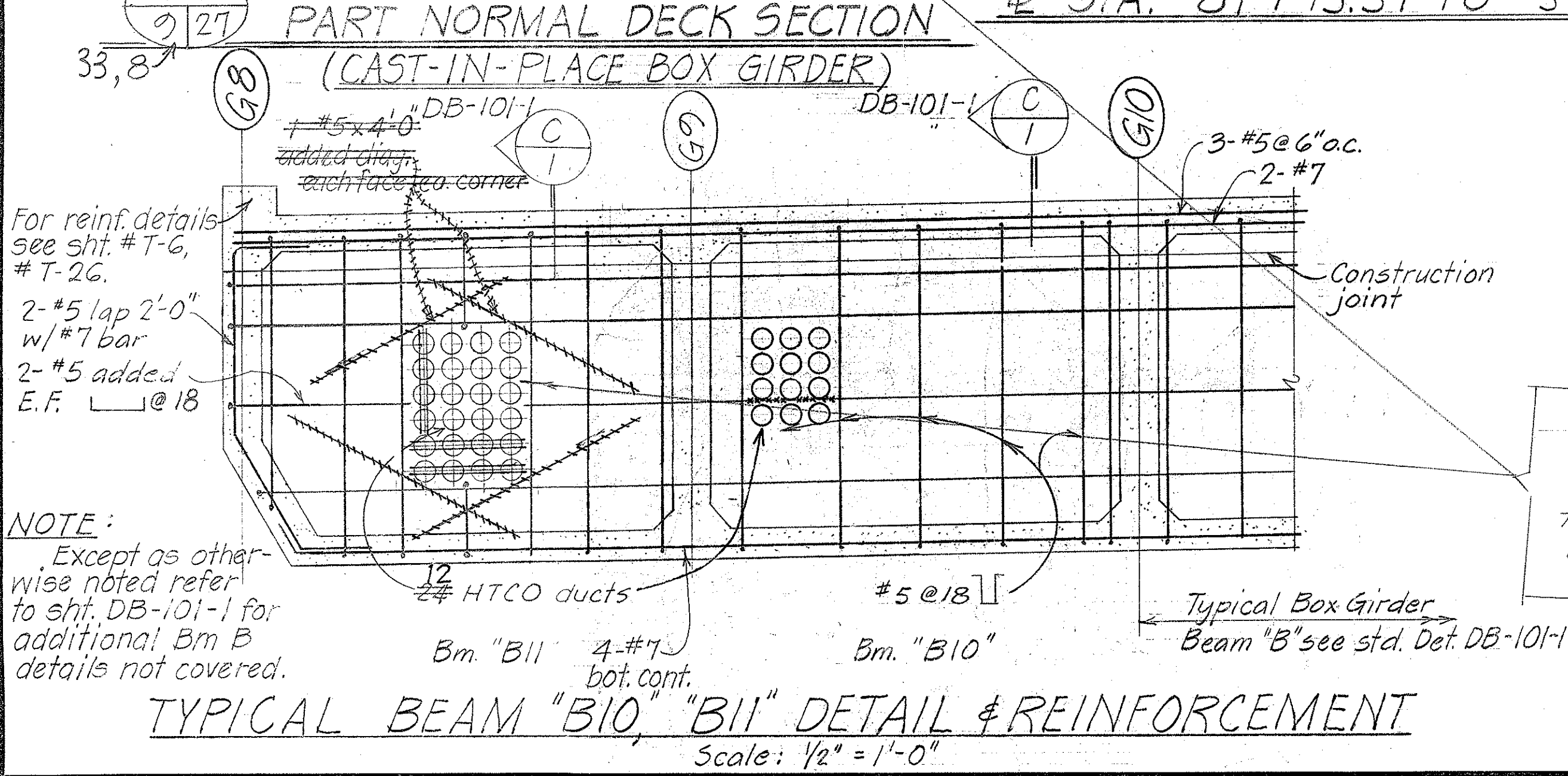
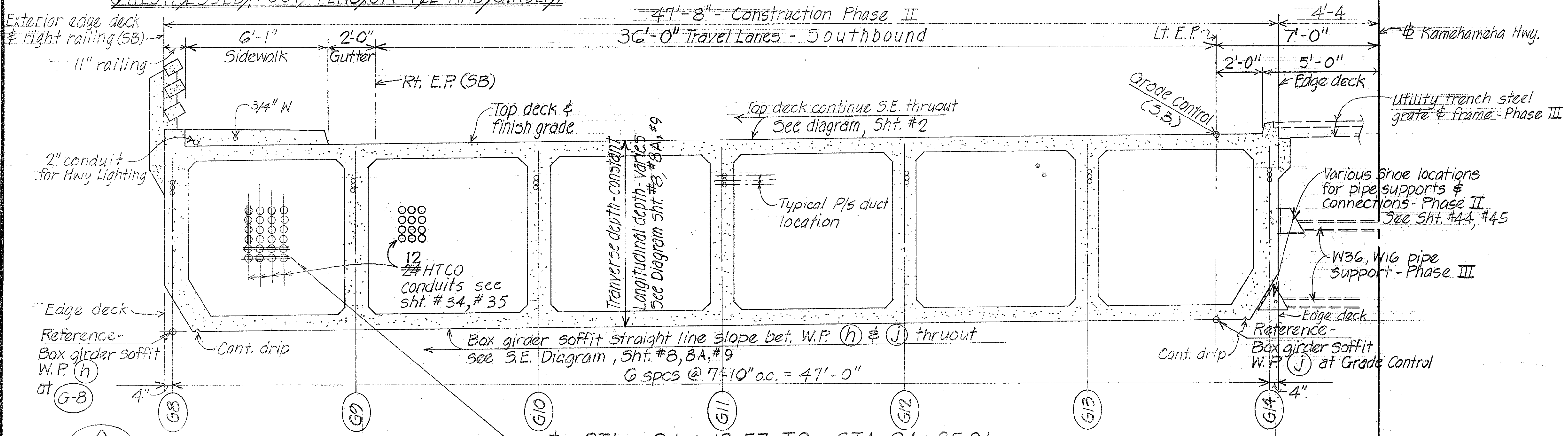
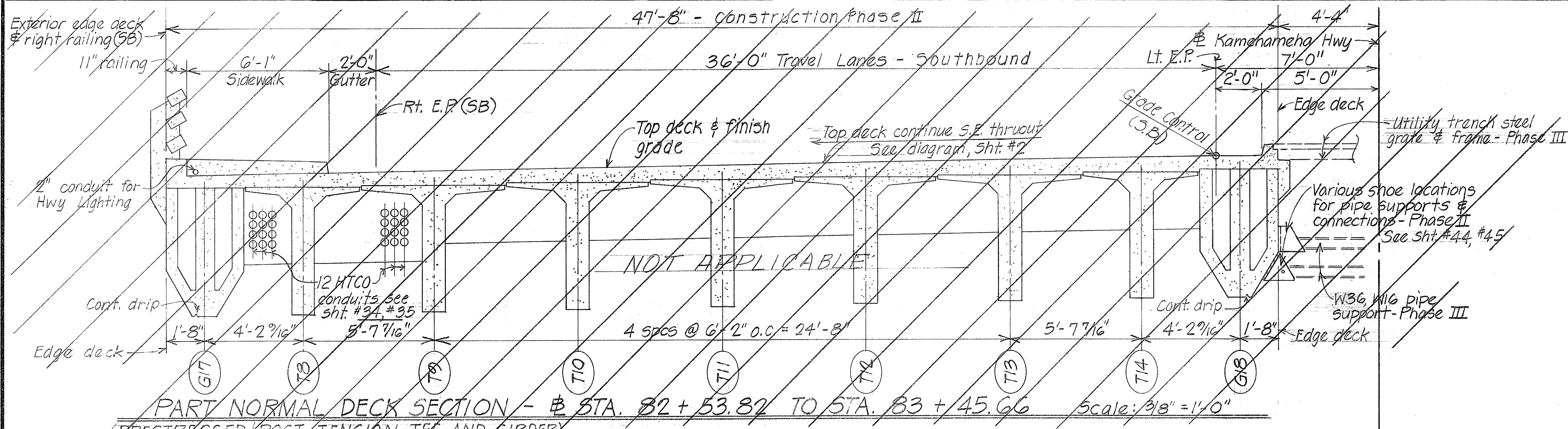
DATE	
ORIGINAL PLAN	
DRAWN BY	
TRACED BY	
DESIGNED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	
No.	

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 LAND TRANSPORTATION FACILITIES DIVISION  
**WILSON BRIDGE**  
 PIER COLUMN 2A &  
 FOUNDATION DETAILS  
 CONSTRUCTION PHASE II  
 PROJ. NO. BRF-080-1(7)  
 Scale: As shown Date: May 1982  
 SHEET NO. 26A OF 47 SHEETS

REGISTERED PROFESSIONAL ENGINEER  
 No. 3290  
 HAWAII, U.S.A.  
 Peter J. Boye  
 5-27-82



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	27	105



**REFERENCE NOTES**  
 For Typical Box Girder Superstructure Deck Details & Reinforcements refer to sheet nos. T-6, T-7, T-13  
 For Typical Prestressed/Girder & Tee Superstructure Deck Details & Reinforcement, refer to sheet nos. T-16 thru T-24, inclusive.

Note: The arrangement and location of HTCO Ducts shown here is for use in a proposed C.O. Use only the portion of this detail that shows typical added reinforcing at opening. Use the arrangement and location of HTCO Ducts shown on sheets 34 & 35

DATE	BY
DESIGNED BY	LM
DESIGNED BY	MT
QUANTITIES BY	LM
CHECKED BY	SKY
ORIGINAL PLAN	NO.

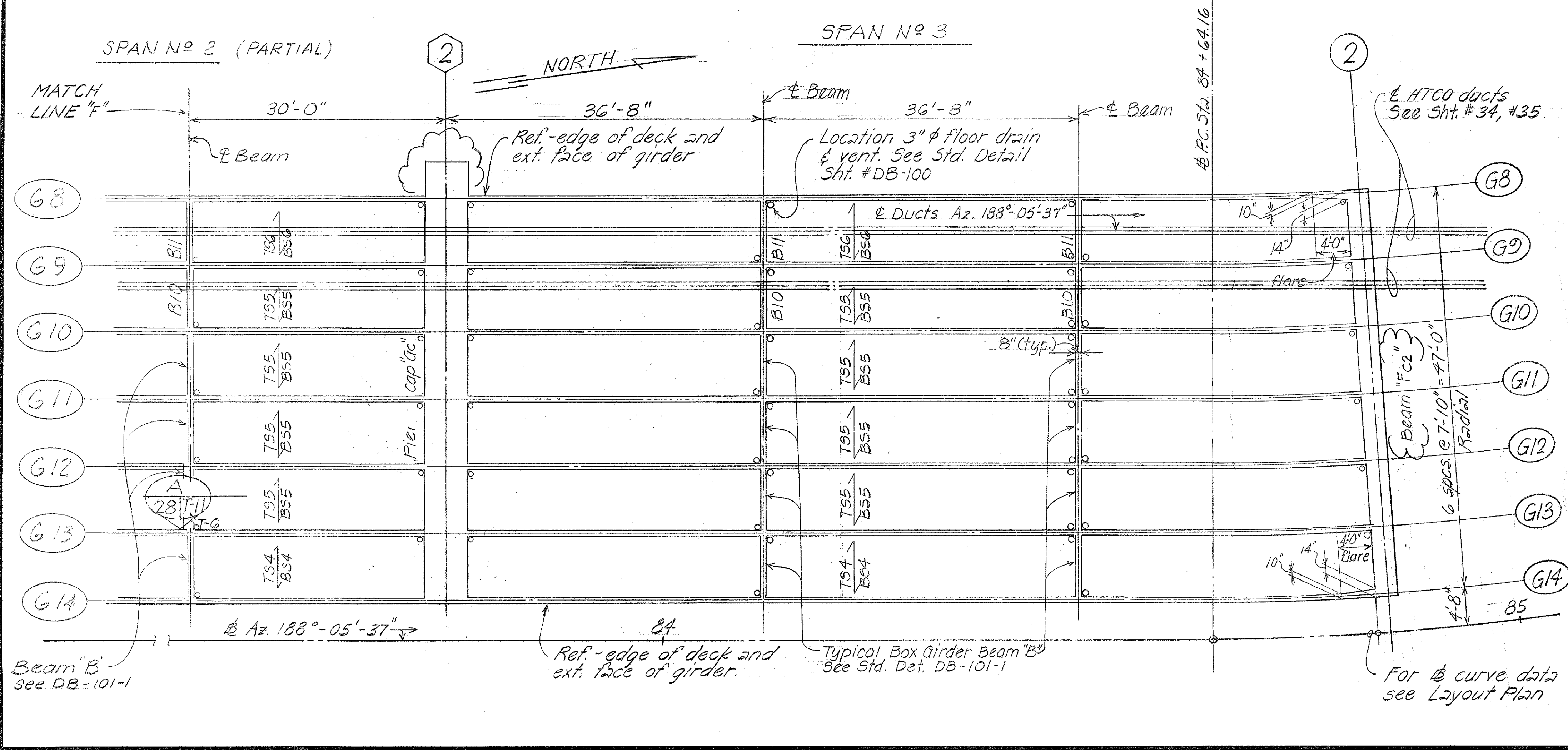
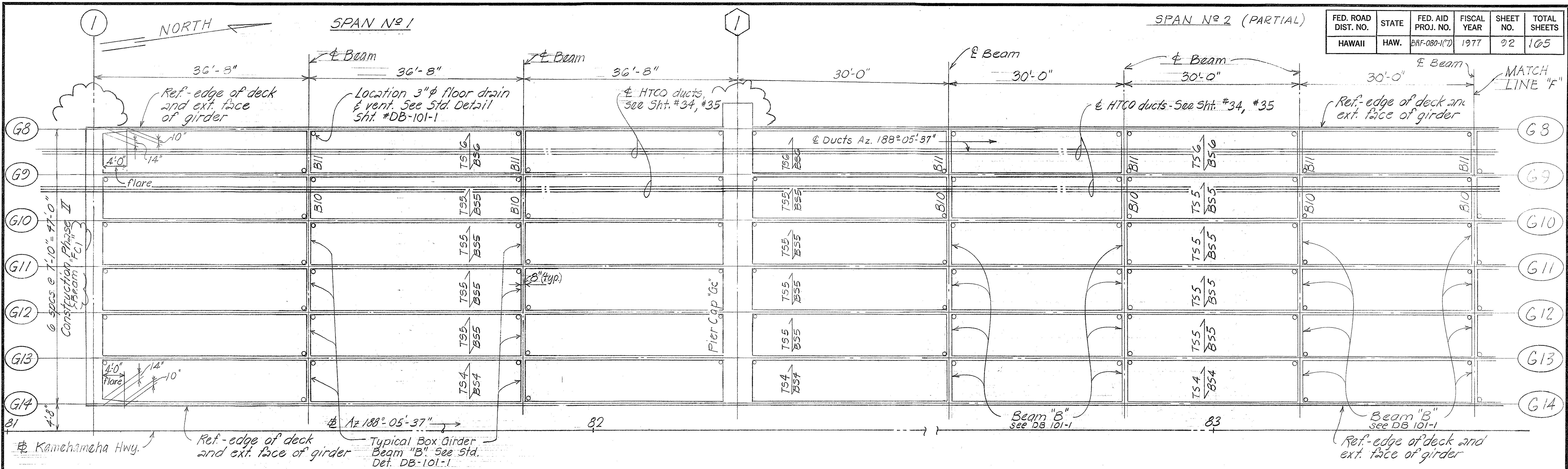


STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 NORMAL DECK SECTION & DETAILS  
 CONSTRUCTION PHASE II (S.B.)  
 PROJECT No. BRF-080-1(7)  
 SCALE: DATE: July 1976  
 SHEET No. 27 OF 47 SHEETS

8-77	Revised to CIPPS
DATE	REVISION



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	92	105

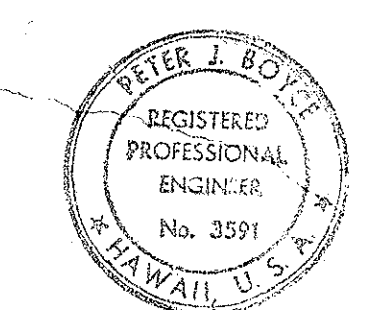


NOTE:  
 For additional notes refer to Sht. #17

} Denotes changes to CO. 92.

DATE	REVISION
3/3/78	Deleted ductline "b"
8-77	Revised to CIPRS
5/9/77	Revised planter box and structures at planter box. Change beam designations "Fc" to types "Fc1", "Fc2".

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 STA. 81+12.24 TO STA. 87+37.24  
 DECK FRAMING PLAN  
 CONSTRUCTION PHASE II (S.B.)  
 PROJECT No. BRF - 080 - 1(7)  
 Scale: 1/8" = 1'-0" Date: July 1976  
 SHEET NO. 28 OF 47 SHEETS

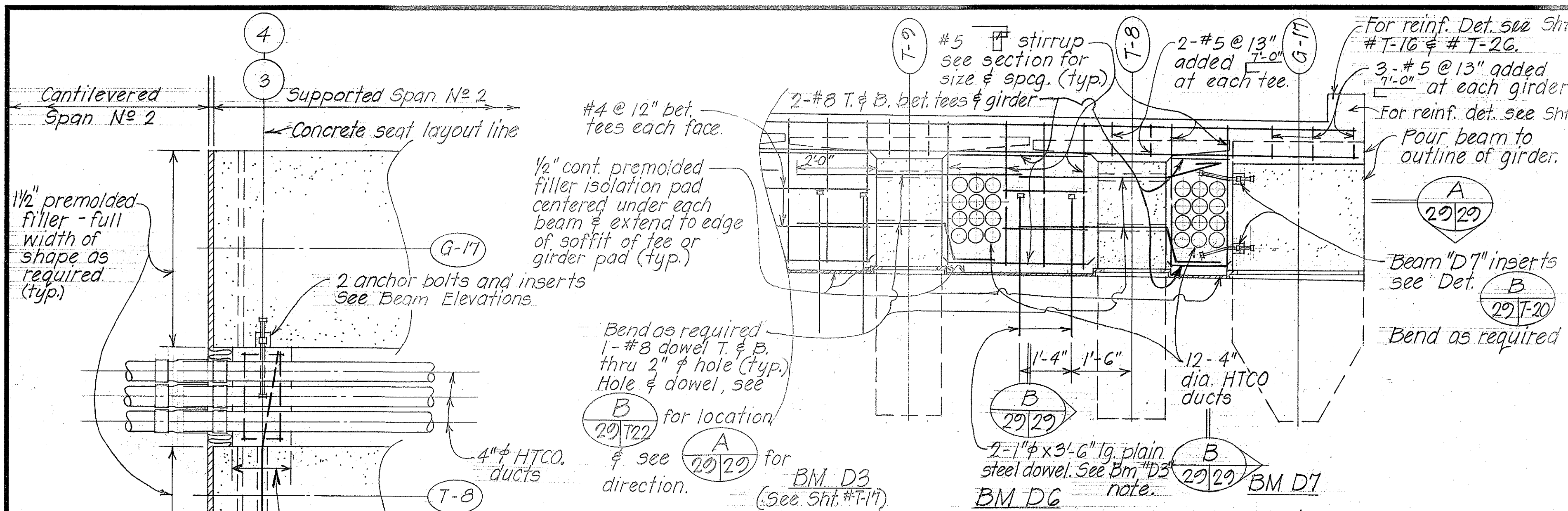


Peter J. Boyce

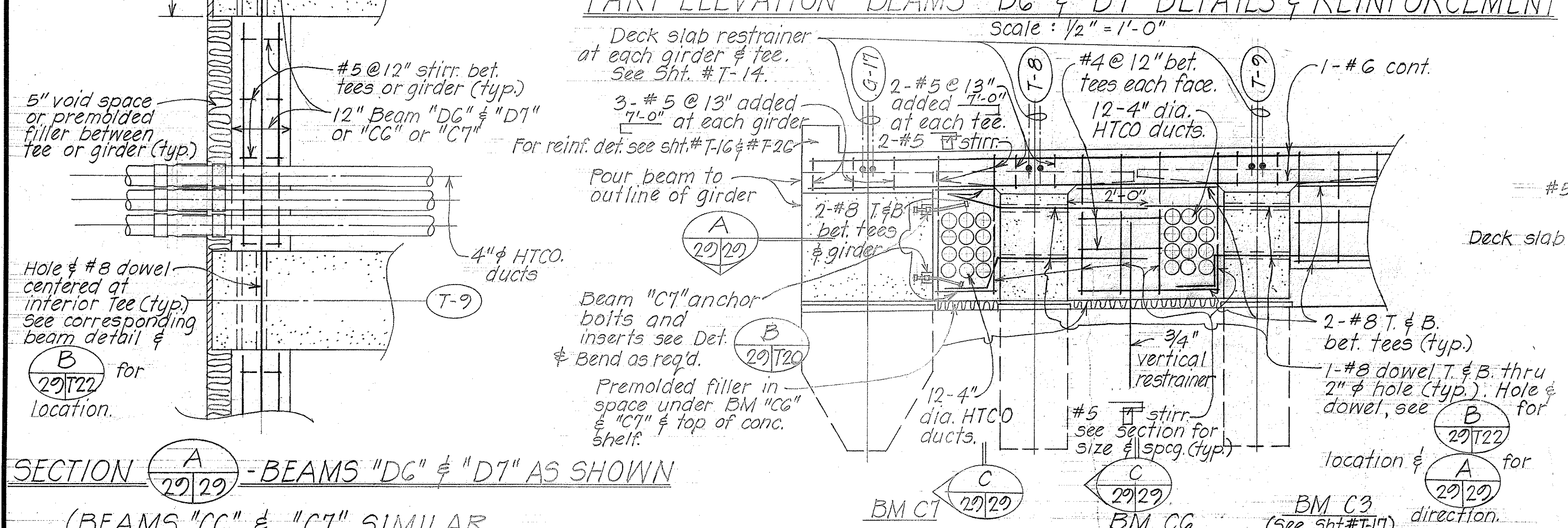
ORIGINAL PLAN	DATE
DRAWN BY: TSKM	
DESIGNED BY: MIMY	
QUANTITIES BY: TKM/GT	
CHECKED BY: CRY	



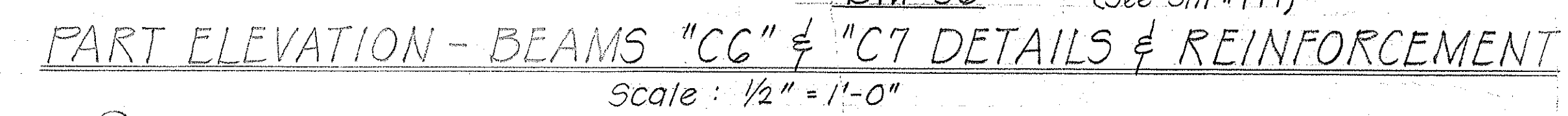
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	23	105



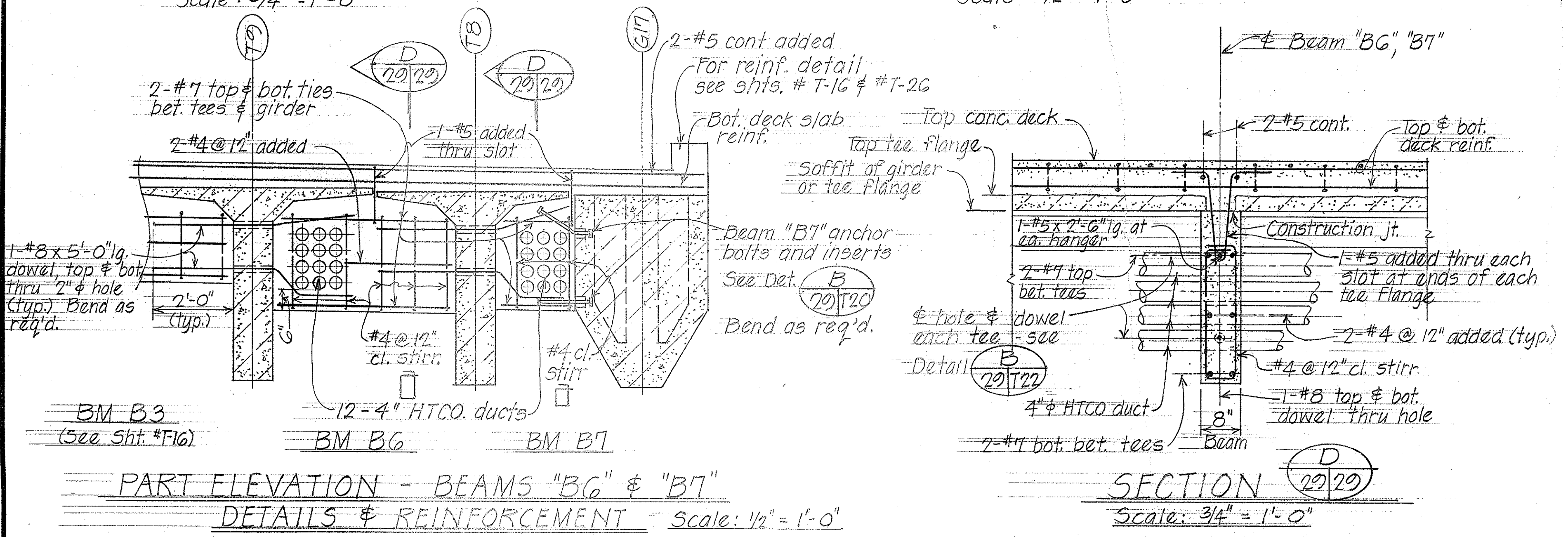
**PART ELEVATION - BEAMS "DG" & "D7" DETAILS & REINFORCEMENT**  
Scale: 1/2" = 1'-0"



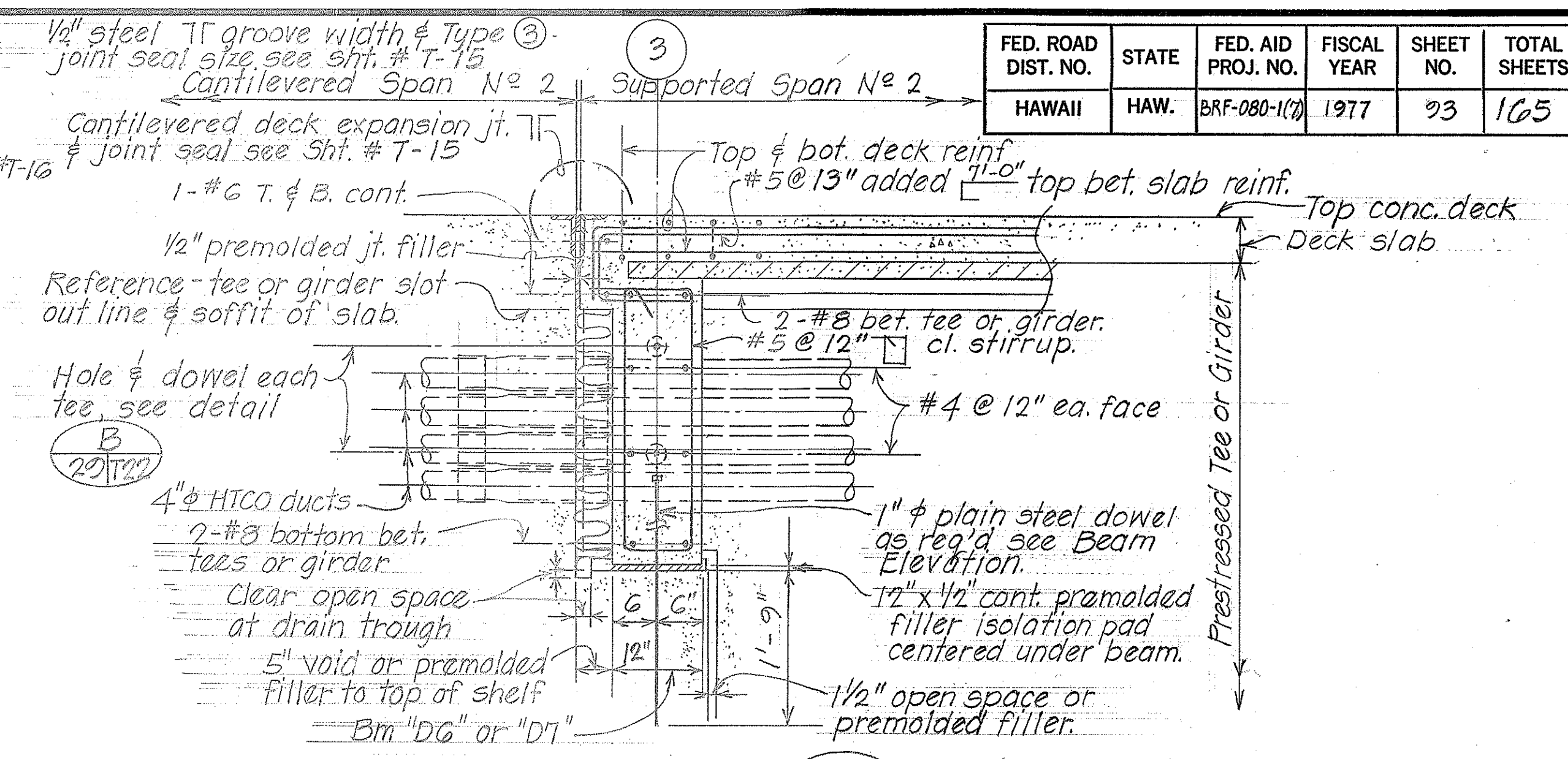
**SECTION A - BEAMS "DG" & "D7" AS SHOWN**  
(BEAMS "CG" & "C7" SIMILAR EXCEPT OPPOSITE HAND)  
Scale: 3/4" = 1'-0"



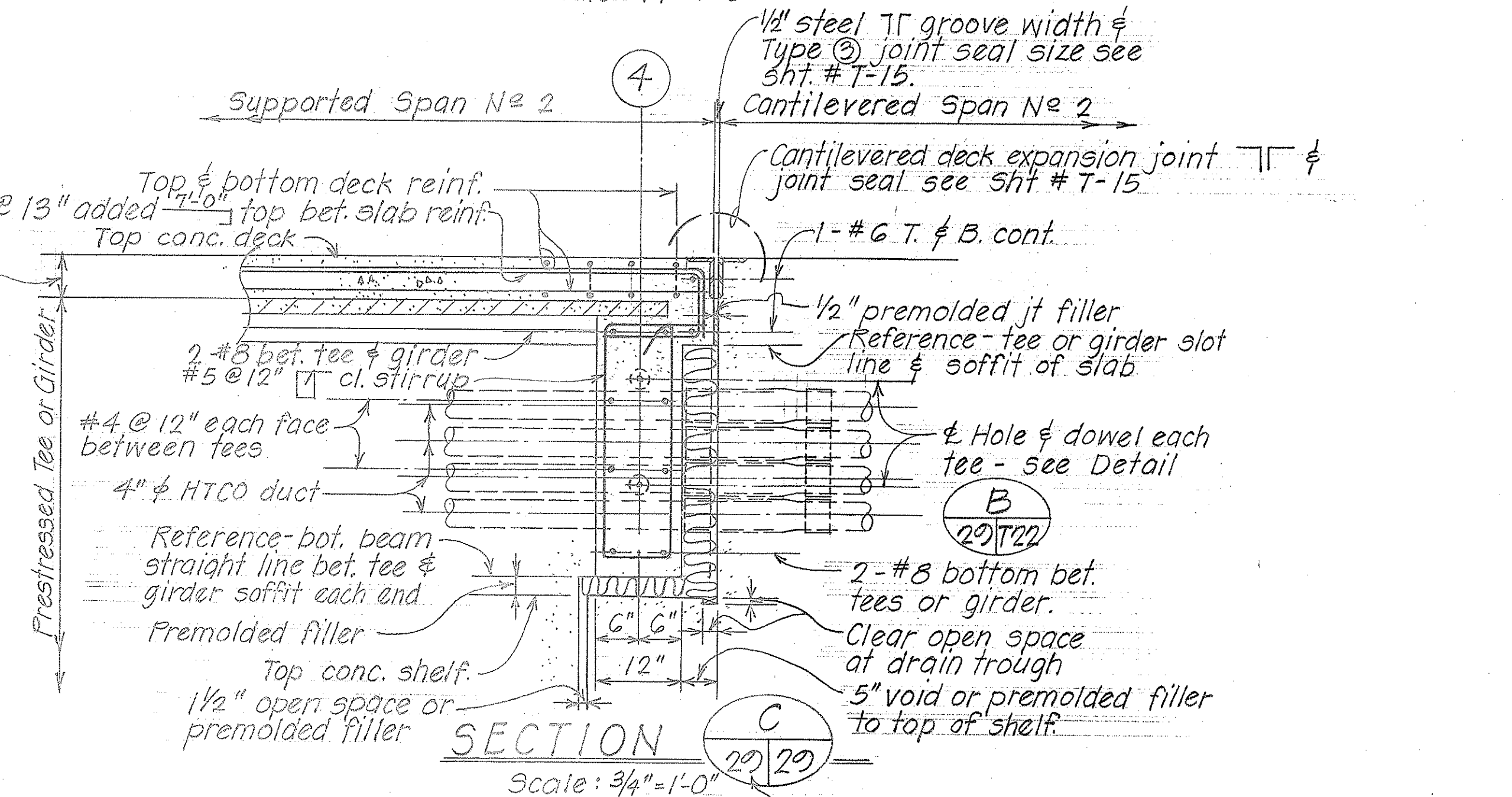
**PART ELEVATION - BEAMS "CG" & "C7" DETAILS & REINFORCEMENT**  
Scale: 1/2" = 1'-0"



**PART ELEVATION - BEAMS "BG" & "B7" DETAILS & REINFORCEMENT**  
Scale: 1/2" = 1'-0"



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



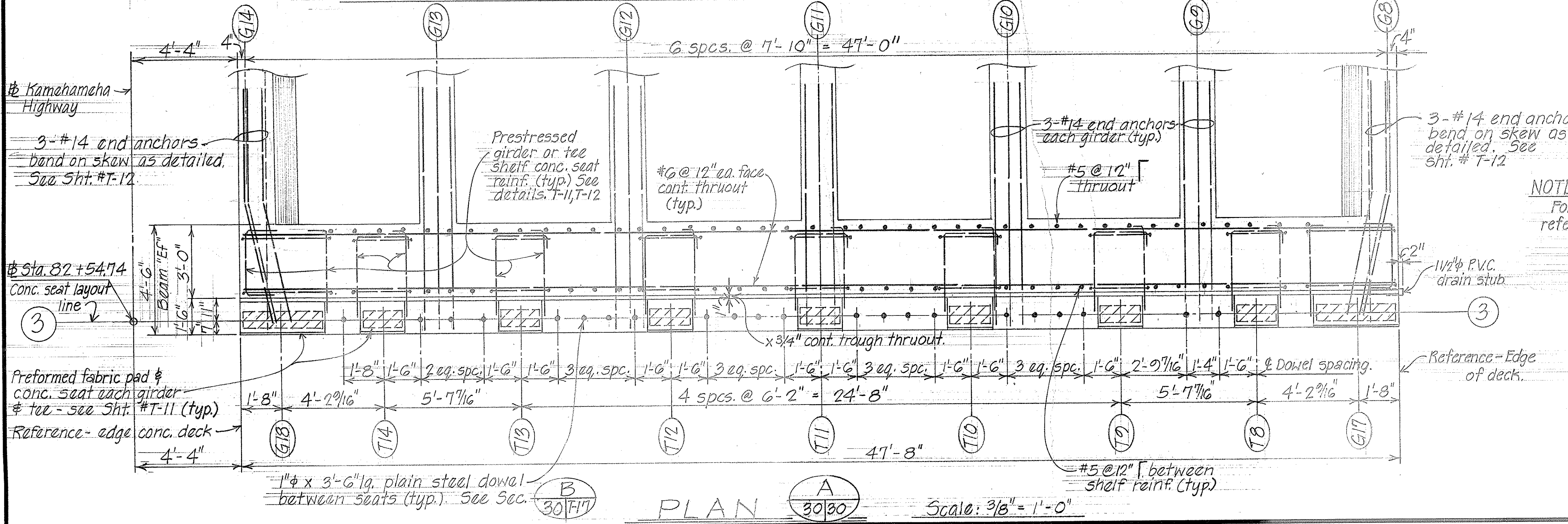
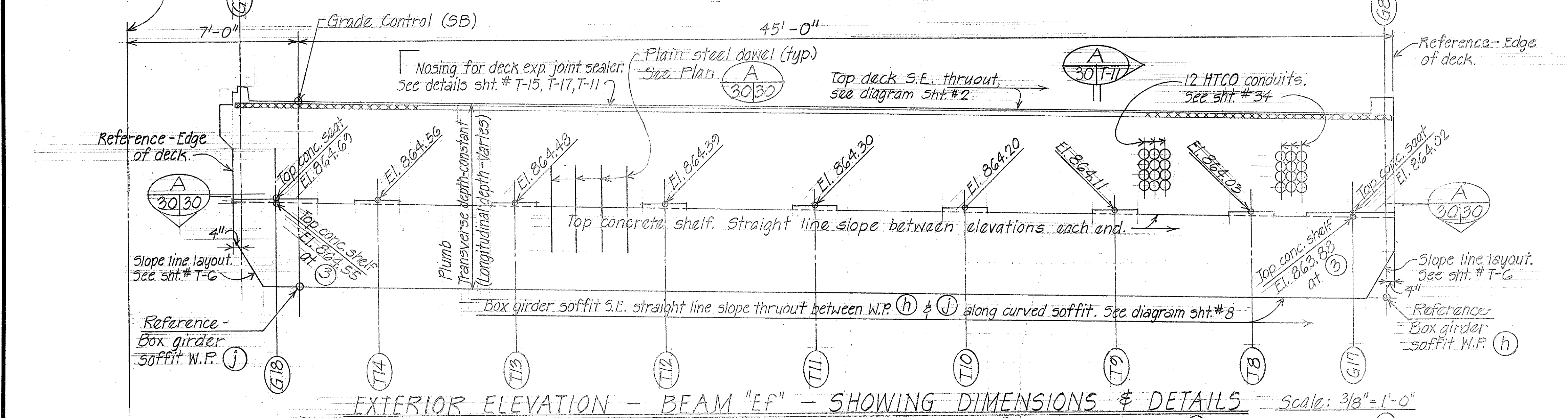
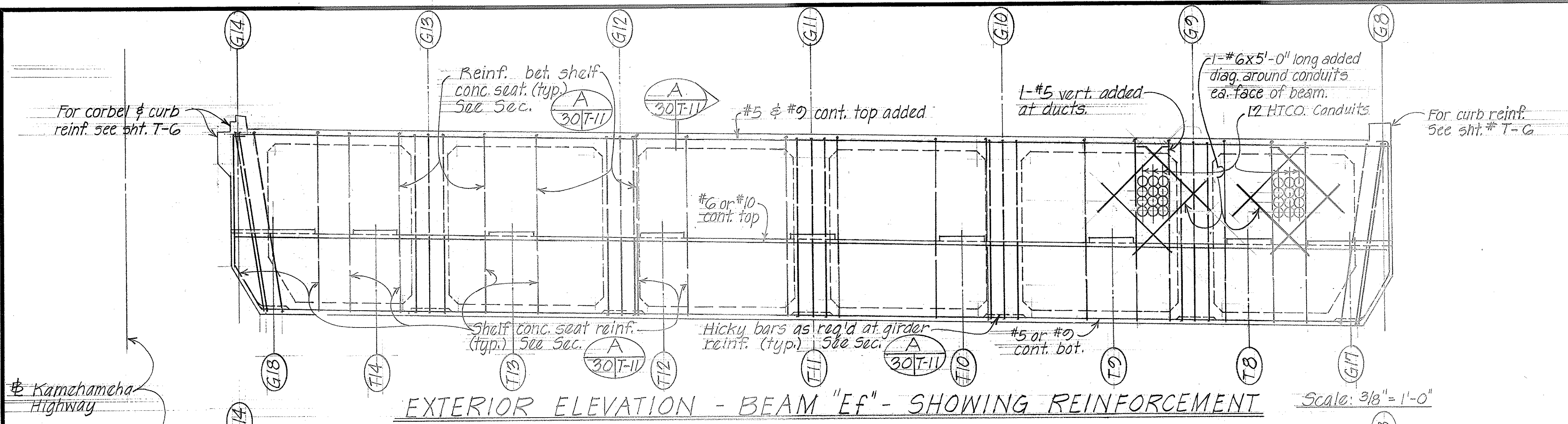
**SECTION C**  
Scale: 3/4" = 1'-0"

DATE	BY
REVISION	BY
QUANTITIES	BY
CHECKED BY	BY
NOTE BOOK	NO.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
BEAMS "BG", "B7"  
"DG", "D7" DETAILS  
CONSTRUCTION PHASE II (5B)  
PROJECT No. BRF-080-1(7)  
Scale: As shown Date: July 1976  
SHEET No. 23 OF 47 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1C7	1977	24	105



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

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

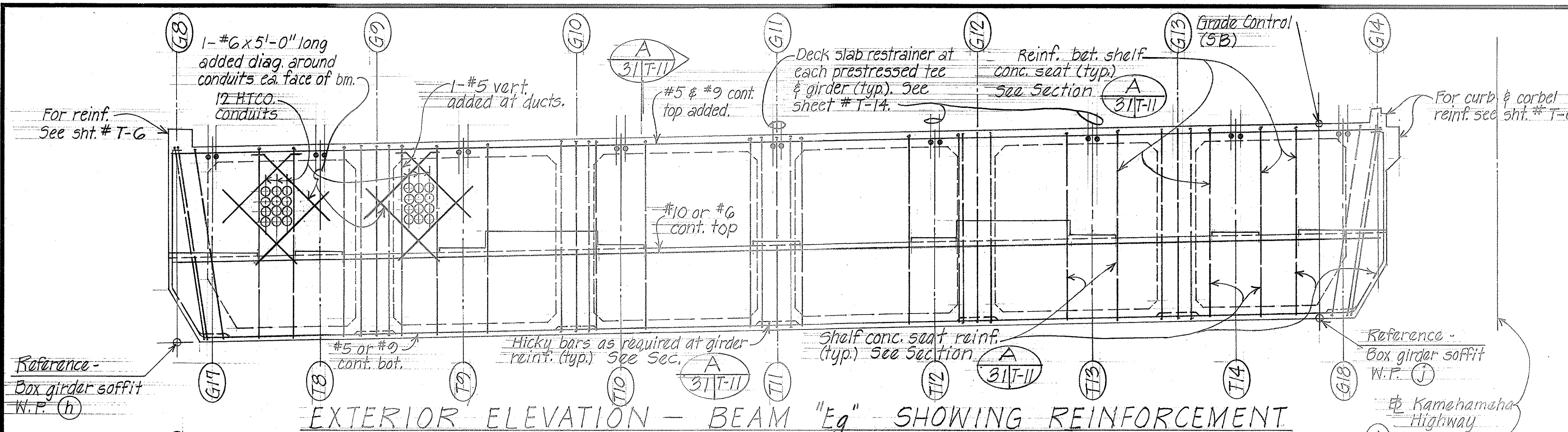
**WILSON BRIDGE**  
BEAM "Ef" DETAILS - LINE ③  
CONSTRUCTION PHASE II (SB)

PROJECT NO. BRF-080-1C7  
Scale: Date: July 1976

SHEET NO. 30 OF 47 SHEETS

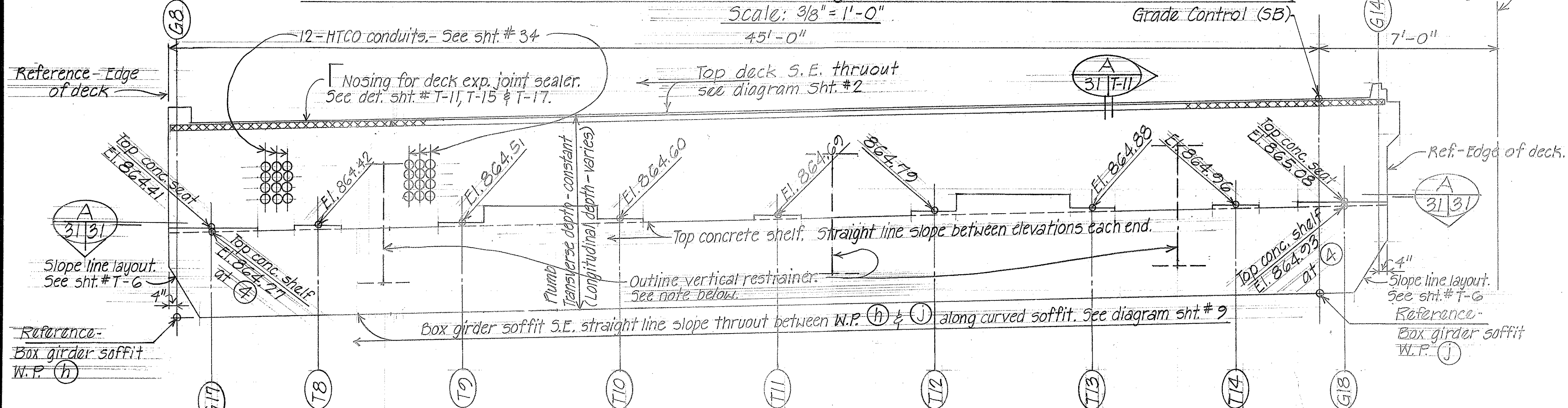


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	95	105



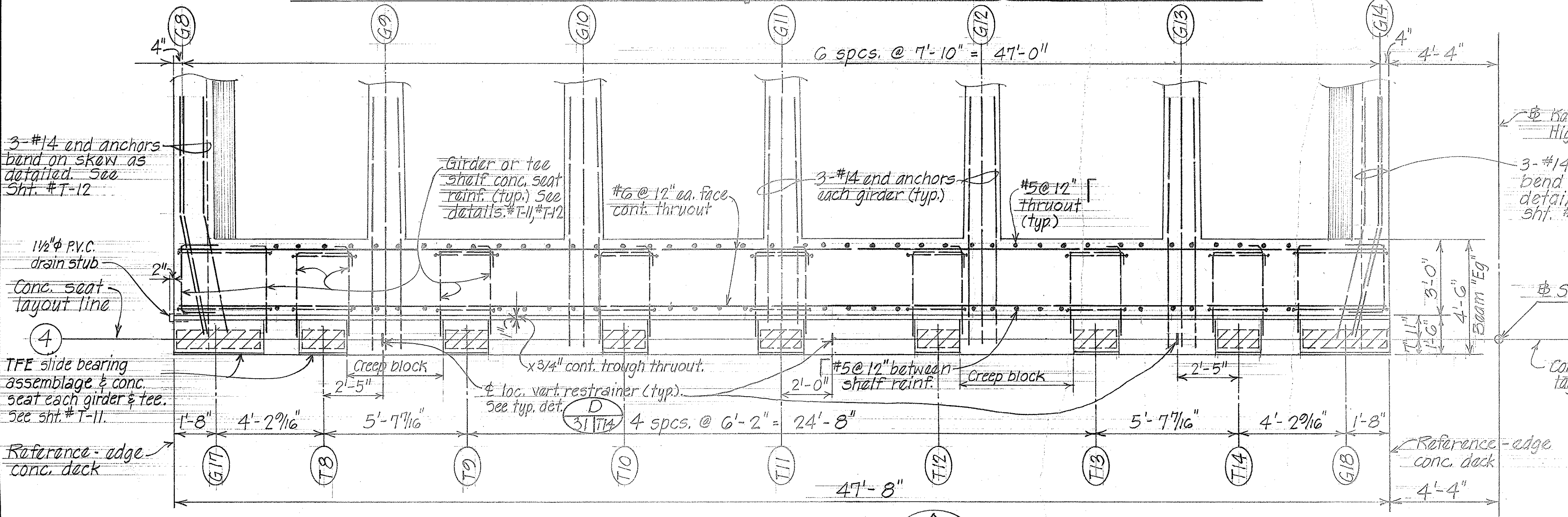
EXTERIOR ELEVATION - BEAM "Eg" - SHOWING REINFORCEMENT

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



EXTERIOR ELEVATION - BEAM "Eg" - SHOWING DIMENSIONS & DETAILS

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



PLAN 31/31

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

NOTE:  
For typical beam "Eg" details & reinforcement, refer to sheet nos. T-11, T-12 & T-24.

DATE	DESIGNED BY	CHECKED BY

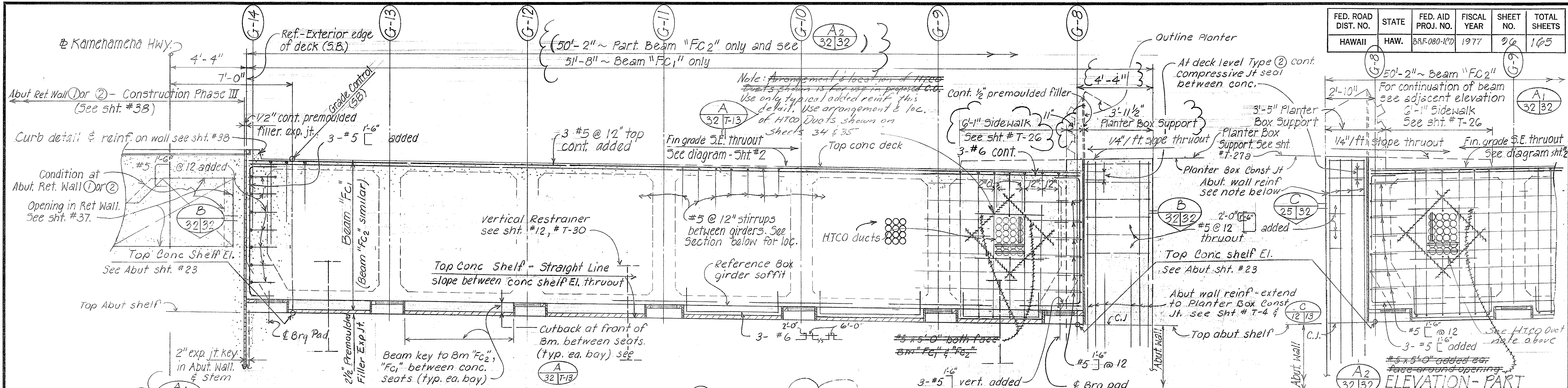
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
BEAM "Eg" DETAILS - LINE (4)  
CONSTRUCTION PHASE II (5B)

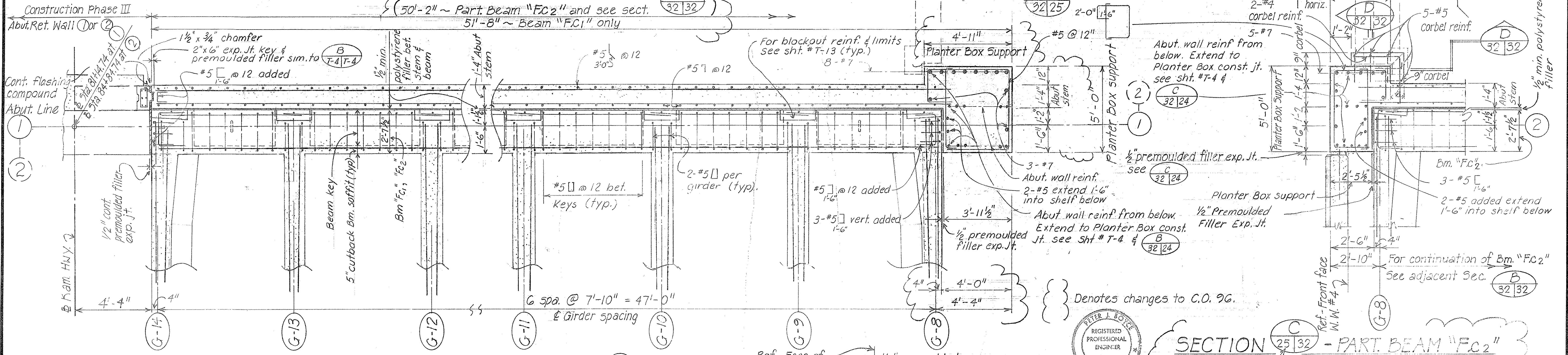
PROJECT NO. BRF-080-1(7)  
Scale: \_\_\_\_\_ Date: July 1976  
SHEET NO. 31 OF 47 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	26	125



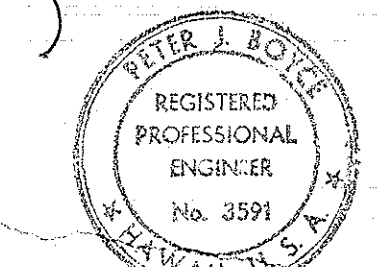
**ELEVATION - BEAM "FC1" AT ABUTMENT LINE ① - AS SHOWN**  
 (PART. BEAM "FC2" - ABUTMENT LINE ②) SIMILAR EXCEPT OPPOSITE HAND AND AS OTHERWISE NOTED) Scale: 3/8" = 1'-0"



**SECTION 25/32 - BEAM "FC1" - AS SHOWN**  
 (PART. BEAM "FC2" SIMILAR EXCEPT OPP. HAND AND AS OTHERWISE NOTED) Scale: 3/8" = 1'-0"

**NOTE:**  
 For additional reinf. at curb & planter box, refer to sht. # T-26, # T-27.

**SECTION 25/32 - PART. BEAM "FC2"**  
 Scale: 1/2" = 1'-0"



Peter J. Boyce

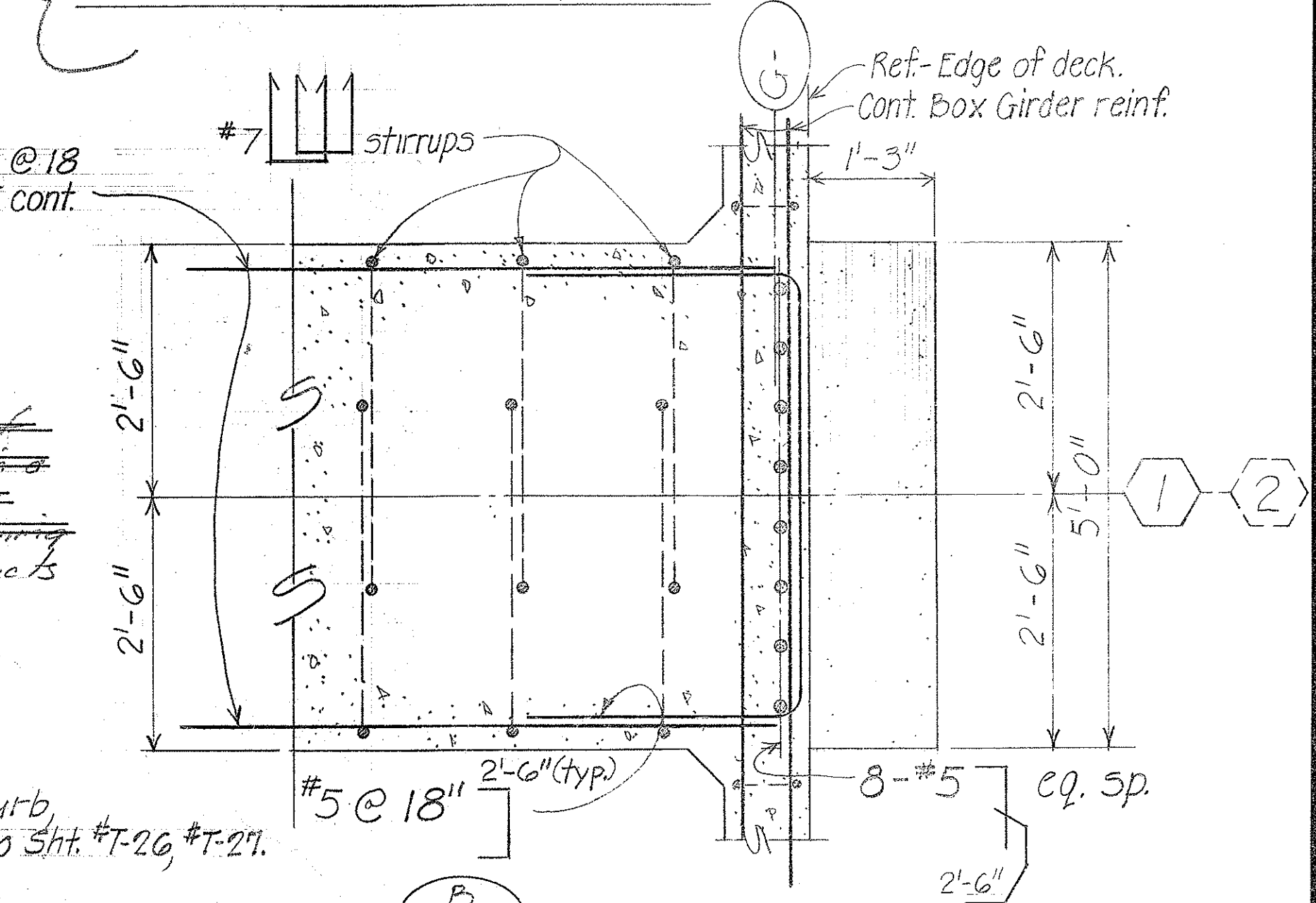
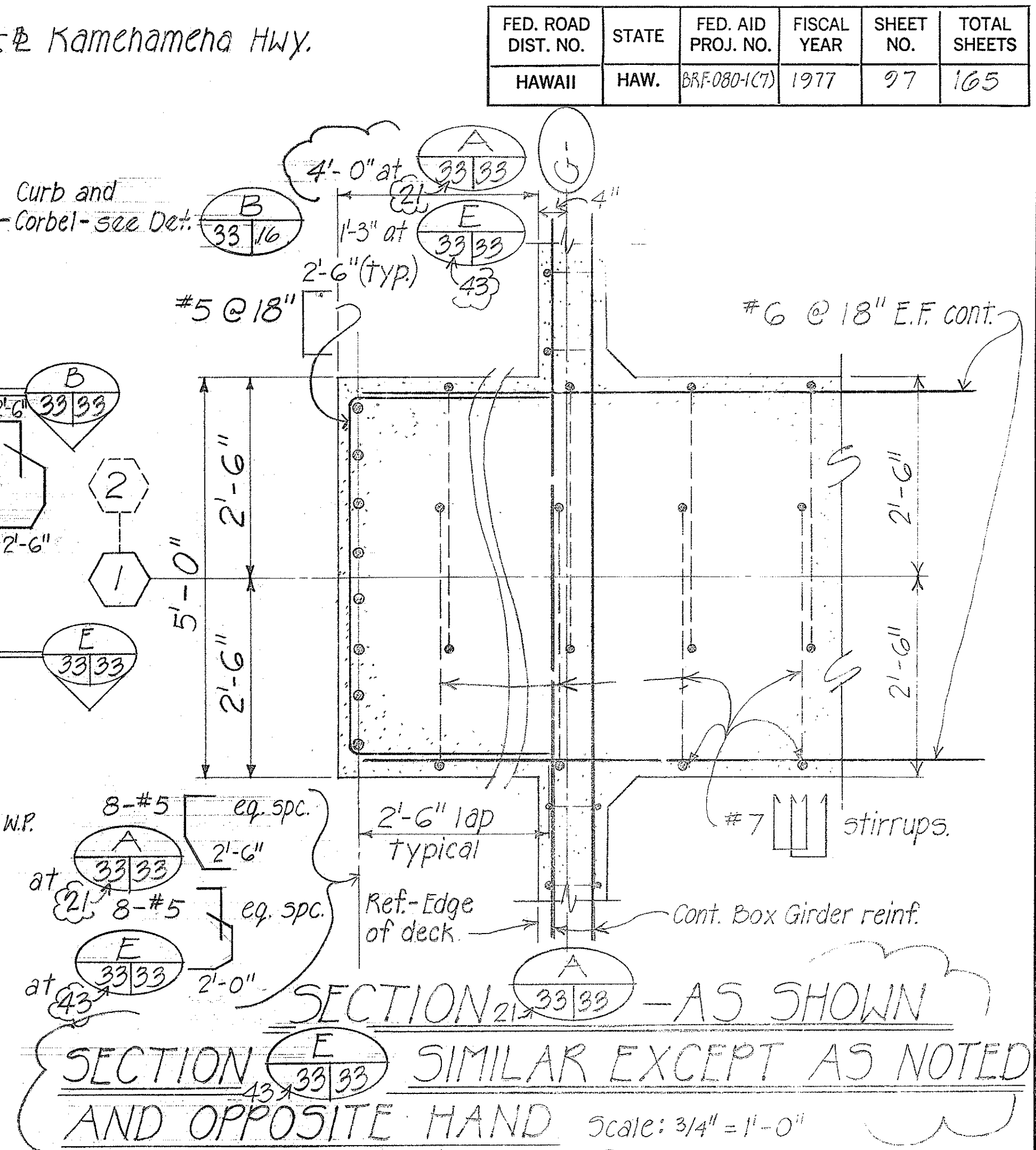
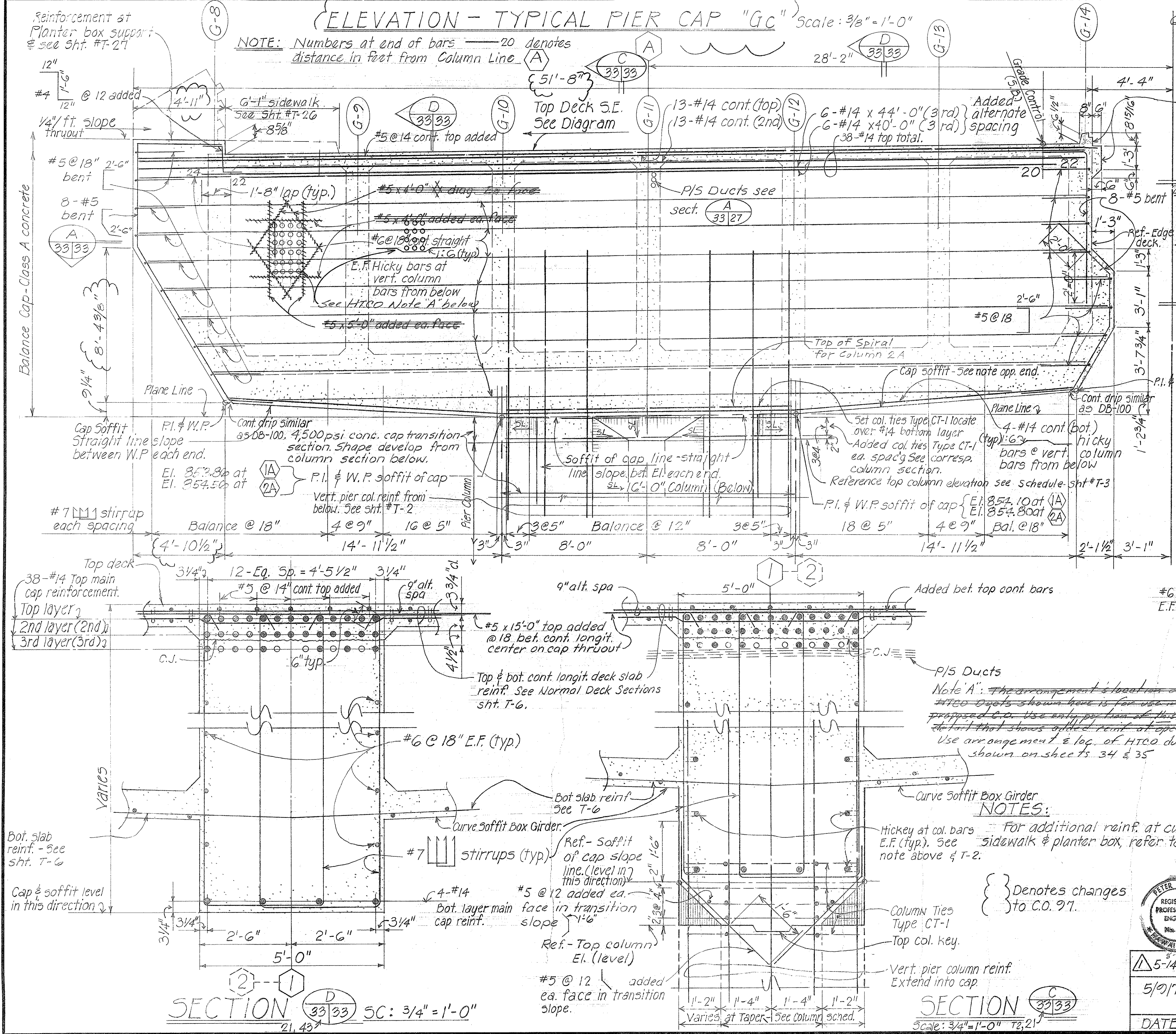
DATE	REVISION
3-77	Revised to CIPPS
5/9/77	Revised Planter Box & Structure at Planter Box. Change beam designation & details "Fc" to types "Fc1"; "Fc2".

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 BEAM "FC1", "FC2" DETAILS  
 CONSTRUCTION PHASE II (5B)  
 Proj. No. BRF-080-1(7)  
 Scale: As noted Date: July 1976  
 SHEET No. 32 OF 47 SHEETS

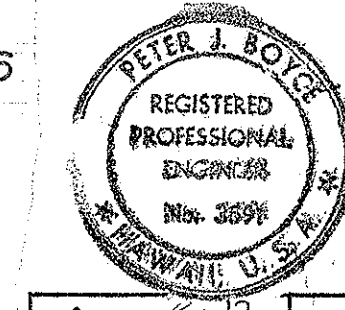
SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	97	165



SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	



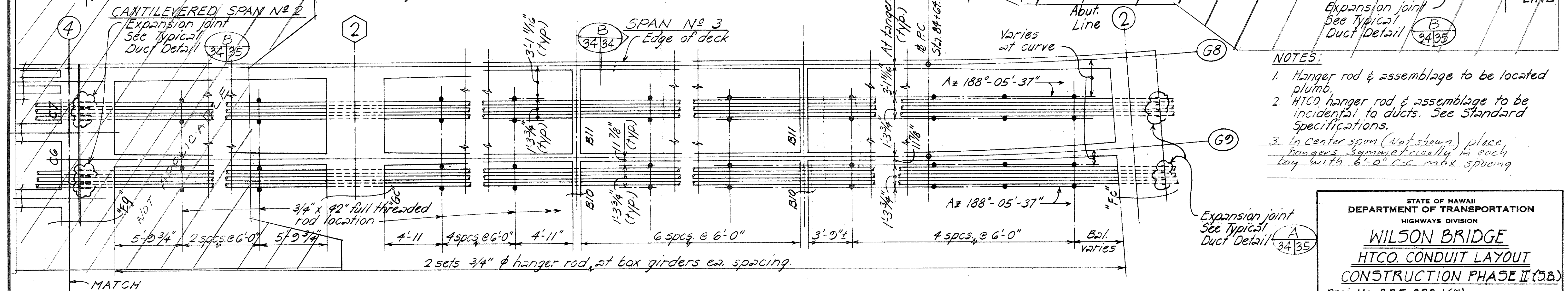
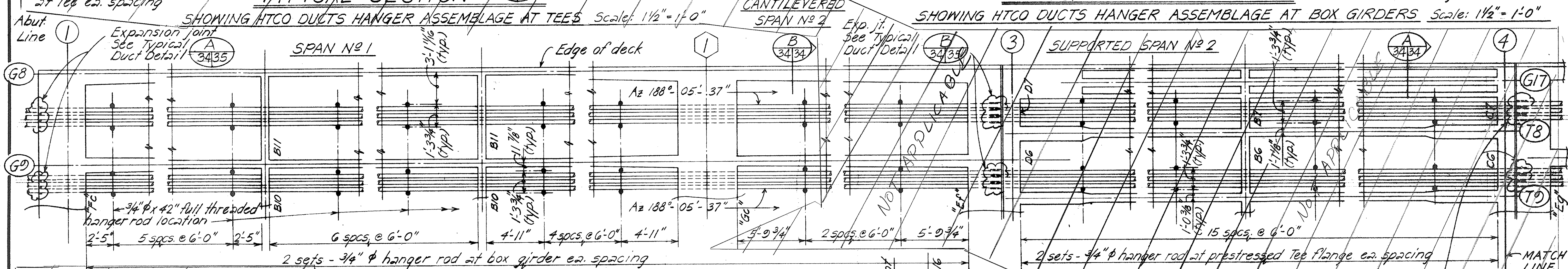
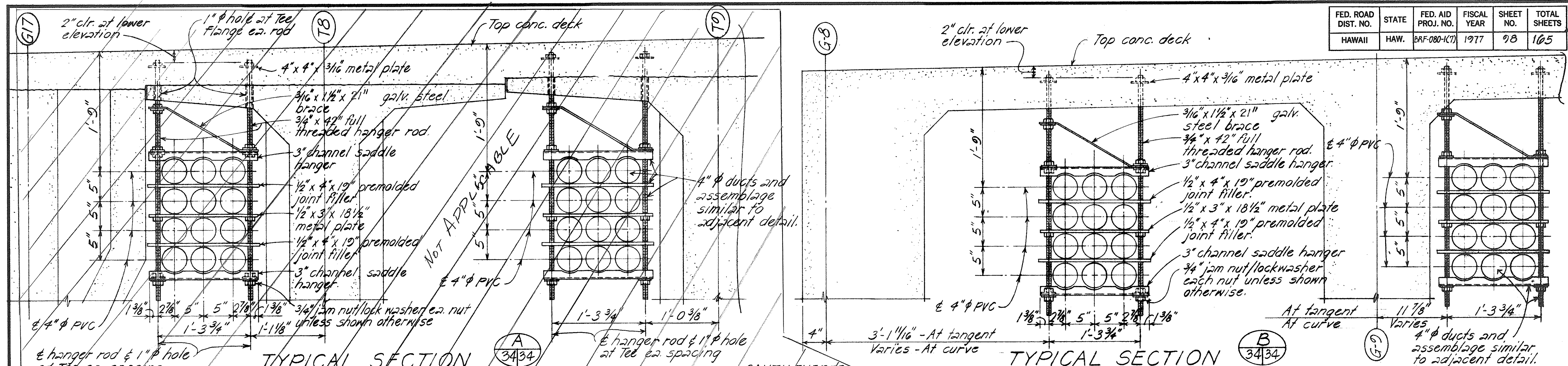
DATE	REVISION
5-14-77	Revised to CIPPS
5/2/77	Revised planter box and structures at planter box

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
PIER CAP "Gc" SECTION & DETAILS  
CONSTRUCTION PHASE II (S.B.)  
Proj. No. BRF-080-1(7)  
Scale: As noted Date: July 1976  
SHEET No. 33 OF 41 SHEETS

CO 9 8



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	98	165



LAYOUT PLAN - HTCO CONDUIT AND HANGER ROD LOCATIONS

Not to Scale

- NOTES:**
- Hanger rod & assemblage to be located plumb.
  - HTCO hanger rod & assemblage to be incidental to ducts. See Standard Specifications.
  - In center span (Not shown) place hangers symmetrically in each bay with 6'-0" c-c m.b.x spacing.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
HTCO. CONDUIT LAYOUT  
CONSTRUCTION PHASE II (5B)  
Proj. No. BRF-080-1(7)  
Scale: As noted Date: July 1976

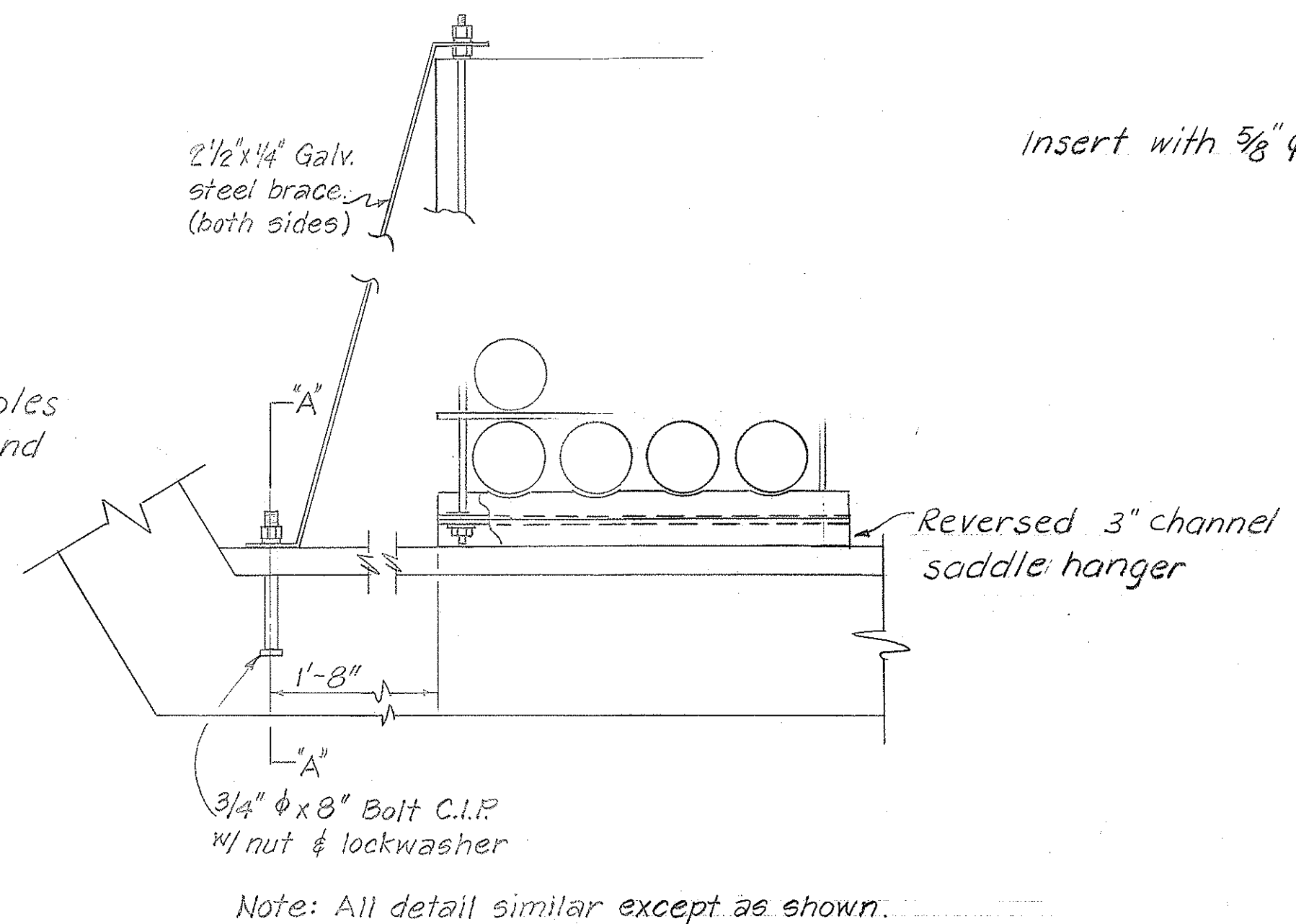
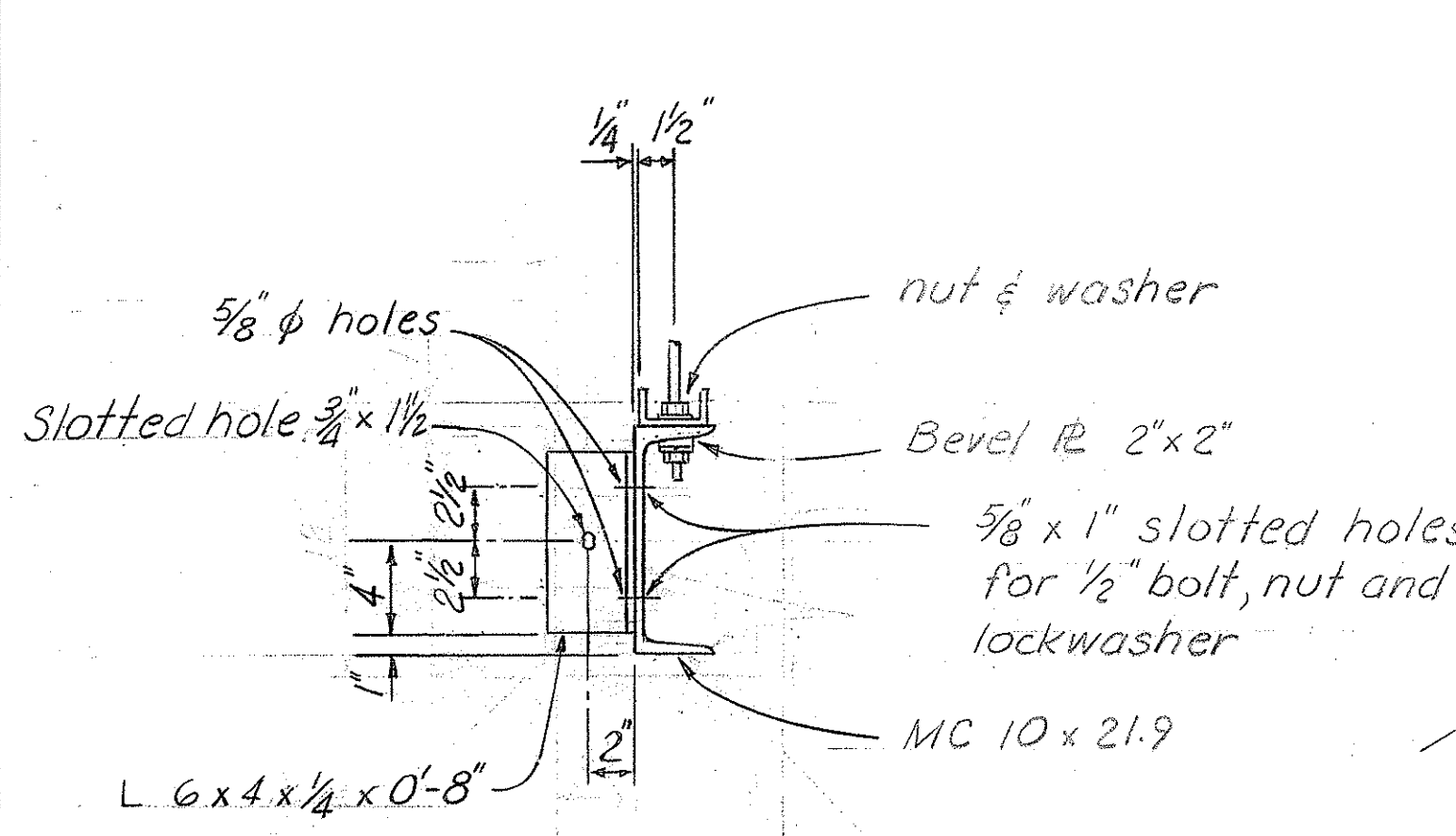
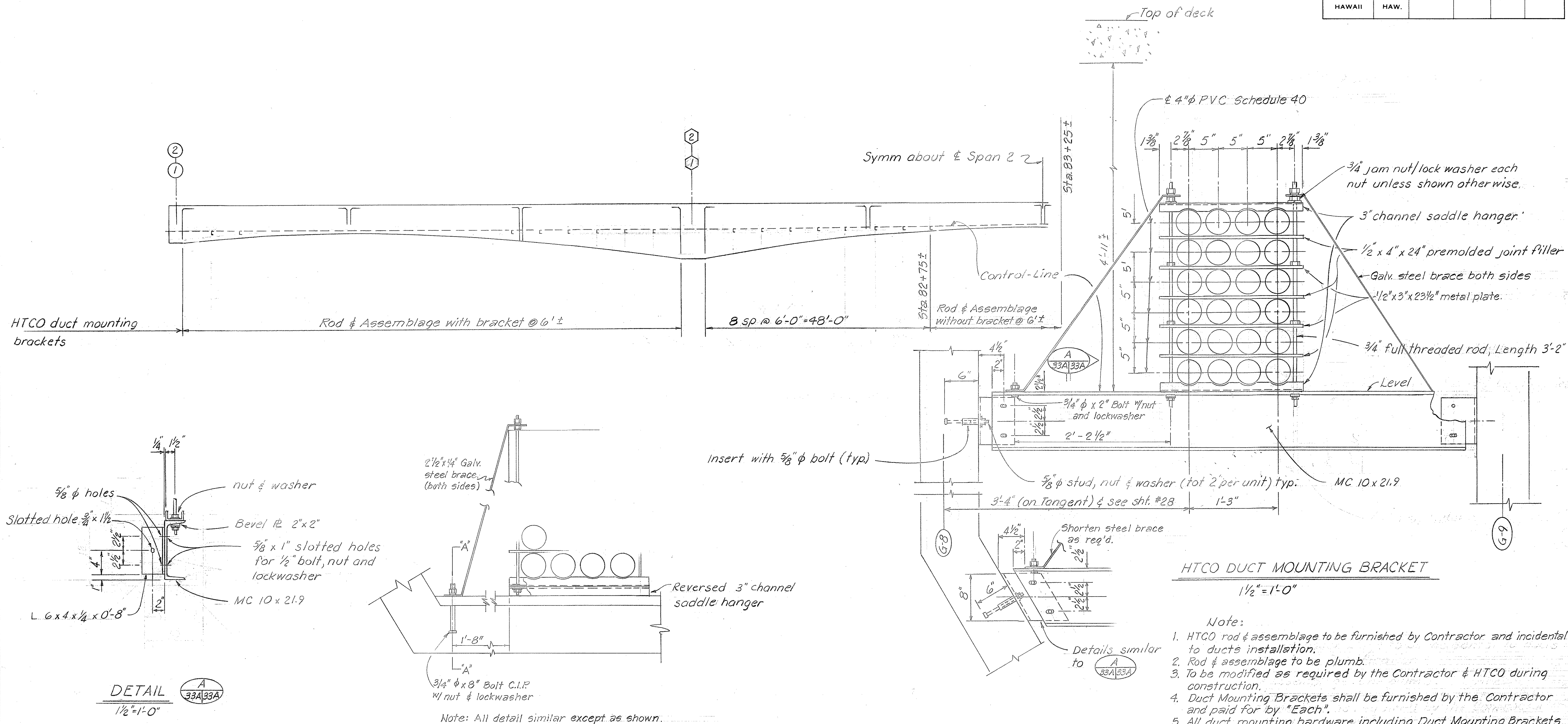
SHEET NO. 34 OF 47 SHEETS

DATE: \_\_\_\_\_  
SURVEY PLOTTED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
NOTE BOOK QUANTITIES BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_

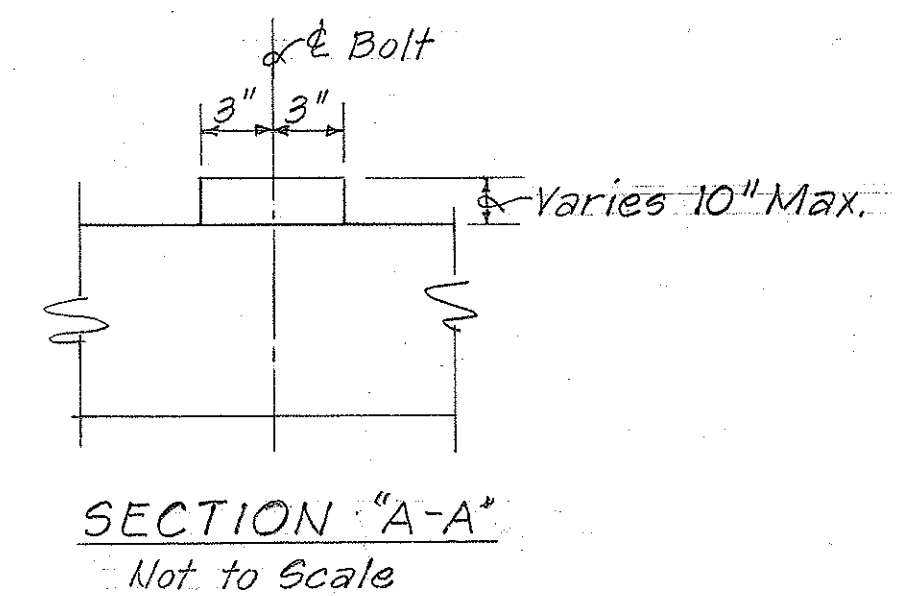
Superseded by Sheet No. CO-98-94



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				



HTCO DUCT ROD & ASSEMBLY WITHOUT BRACKET  
(Applicable Sta. 82+75 to 83+25 only) 1/2"=1'-0"

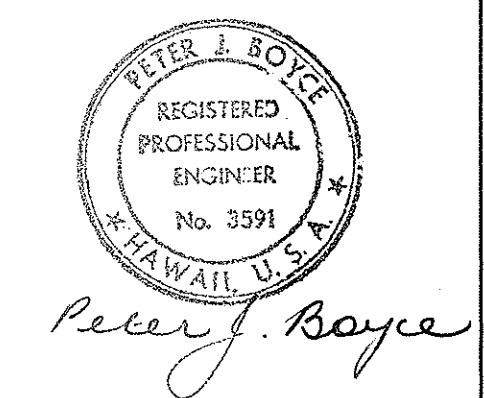


HTCO DUCT MOUNTING BRACKET  
1/2"=1'-0"

- Note:
- HTCO rod & assemblage to be furnished by Contractor and incidental to ducts installation.
  - Rod & assemblage to be plumb.
  - To be modified as required by the Contractor & HTCO during construction.
  - Duct Mounting Brackets shall be furnished by the Contractor and paid for by "Each".
  - All duct mounting hardware including Duct Mounting Brackets shall be galvanized.
  - Structural Steel shall meet requirements of ASTM A36. Bolts may be A307.

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

DATE	REVISION
6-78	Note #1 revised Note #4, #5 & #6 added
8-77	This sheet supersedes Sheet No. 98



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
STA 81+12.24 TO STA 84+87.24  
HTCO CONDUIT LAYOUT

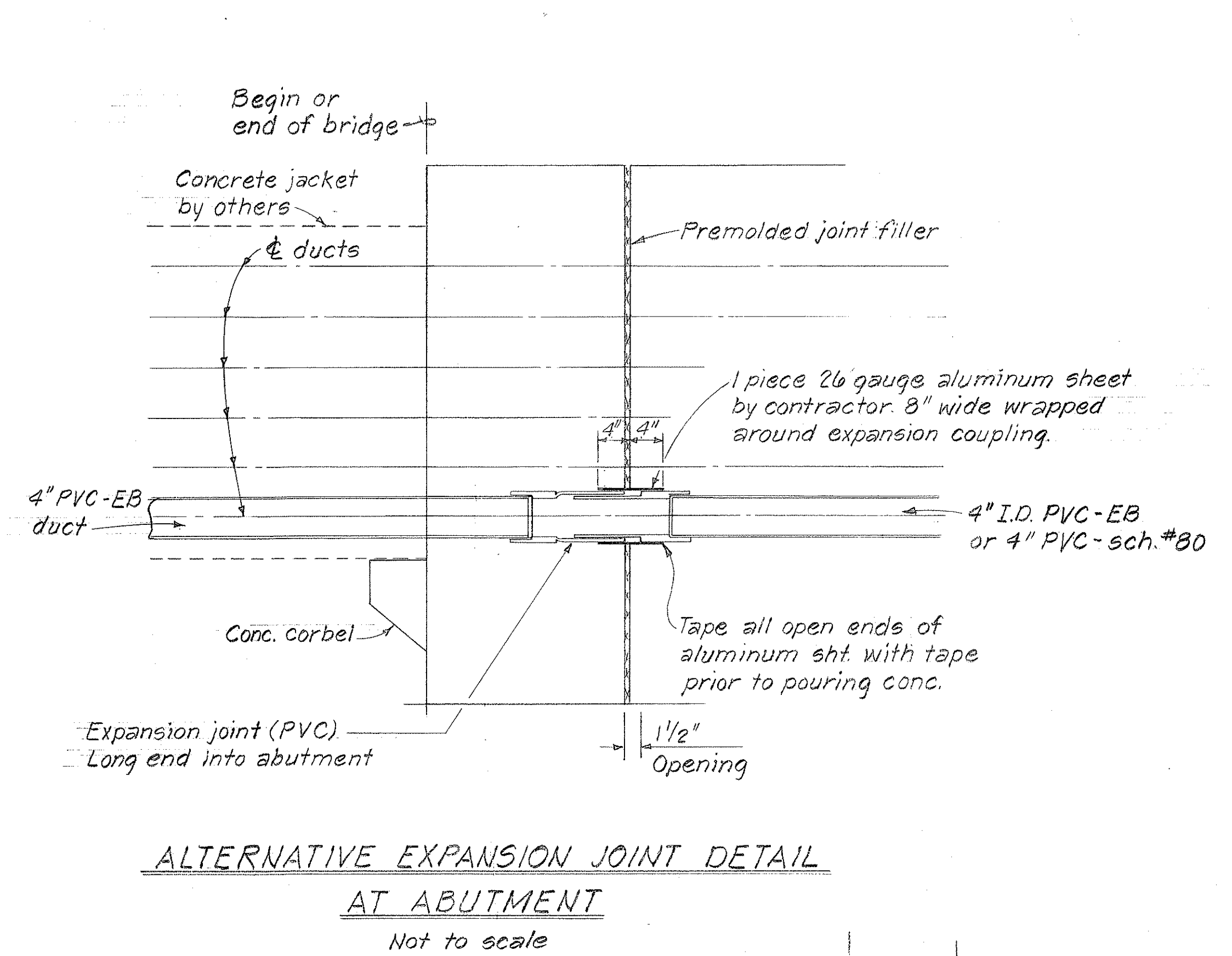
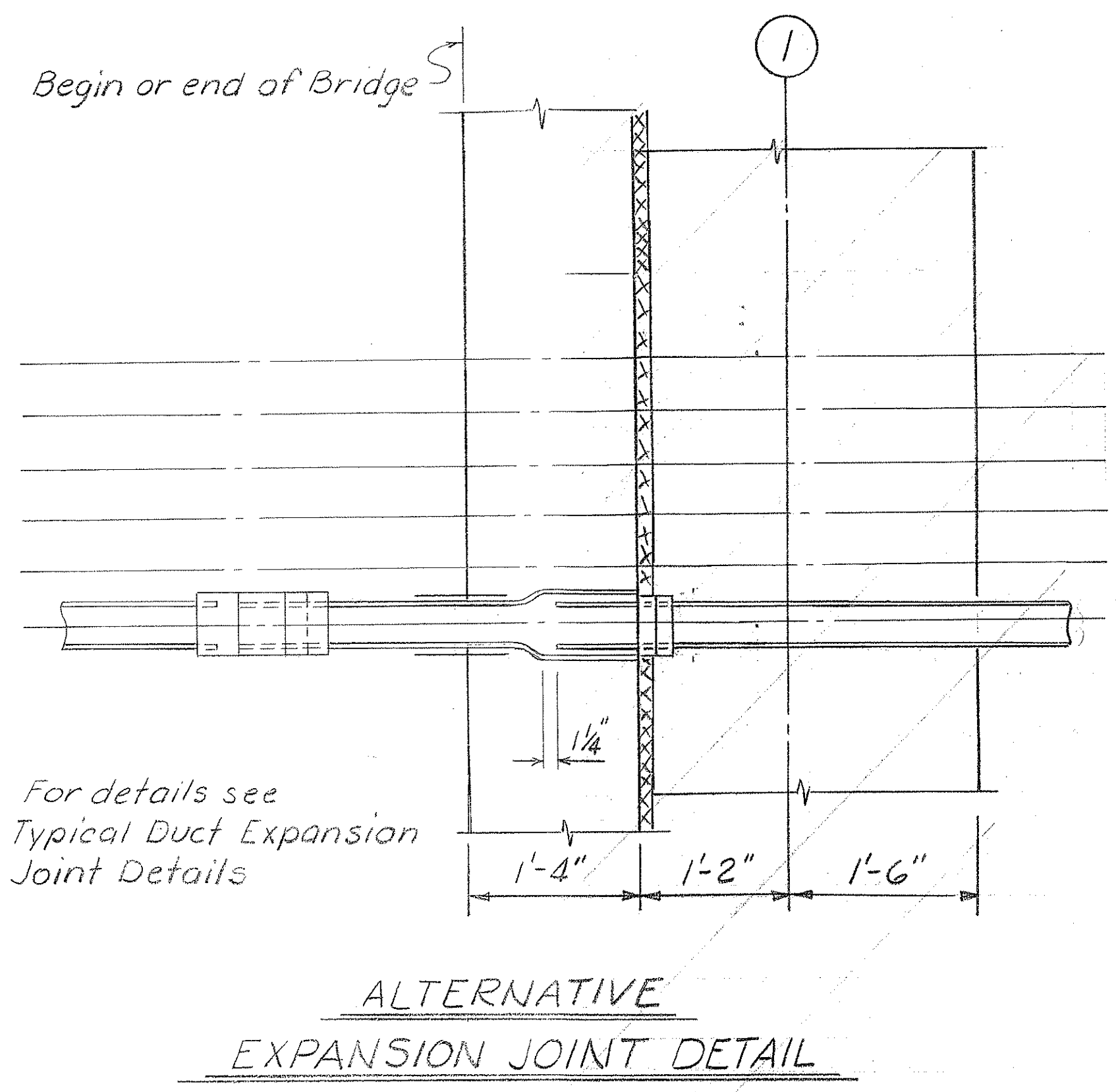
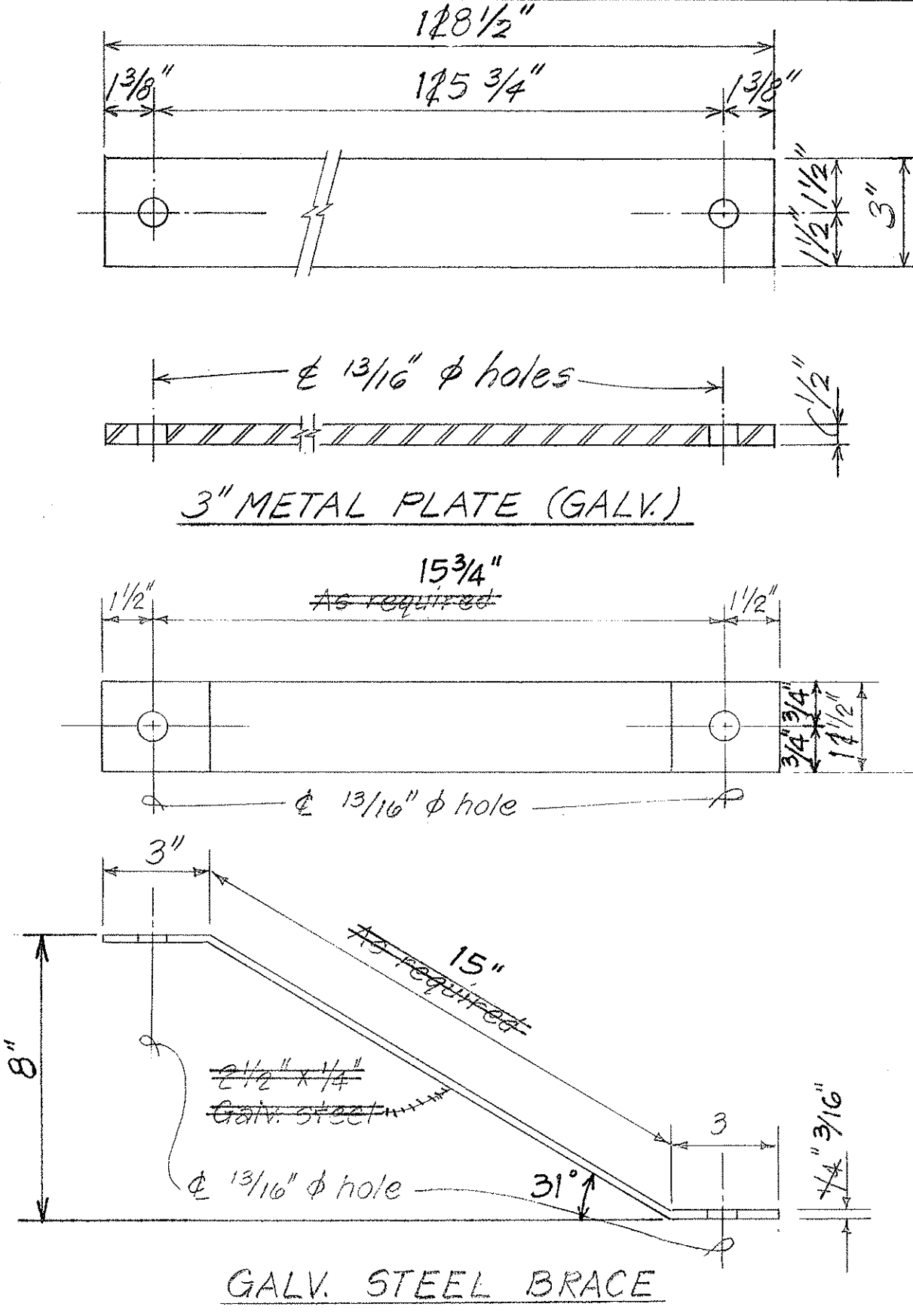
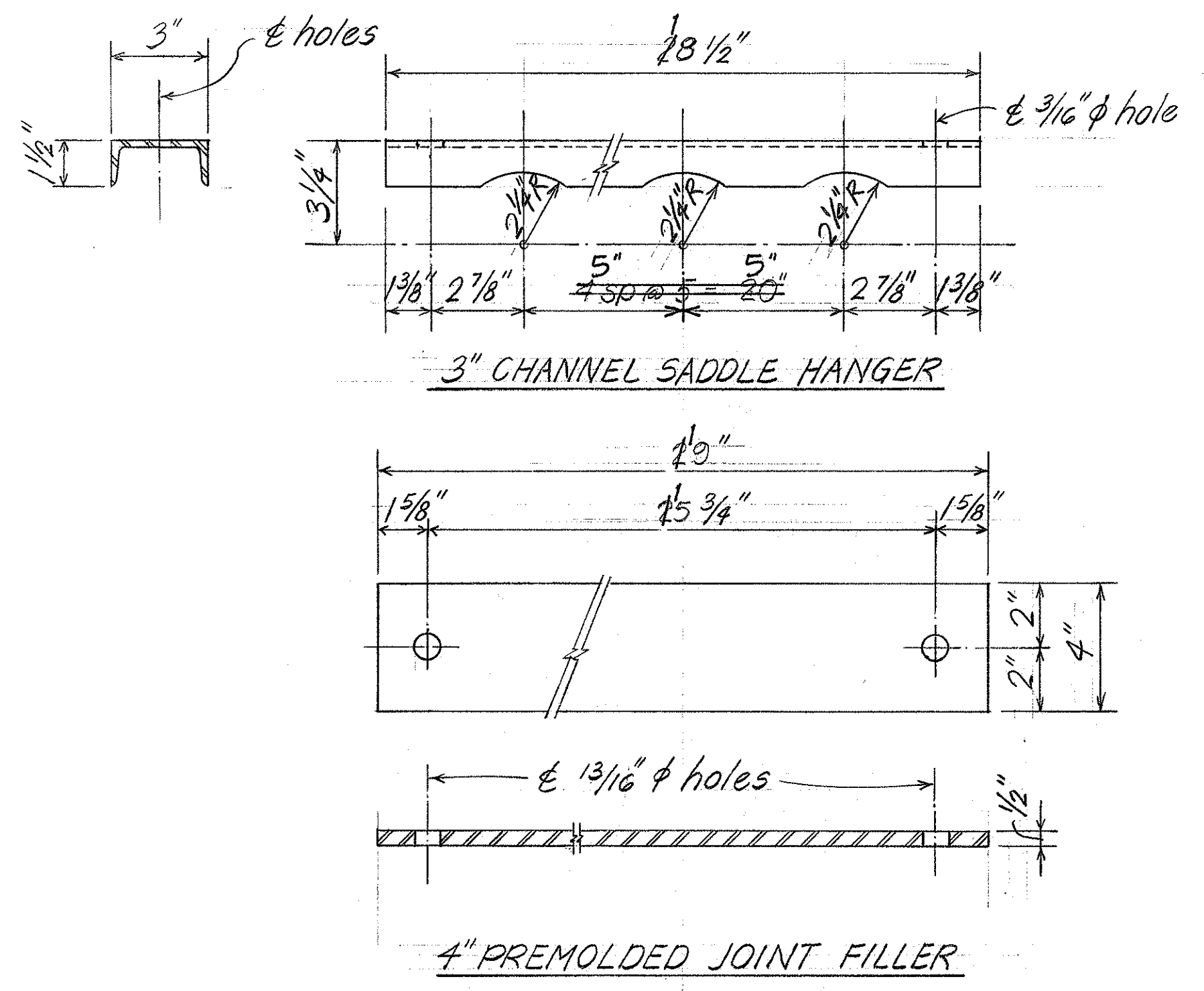
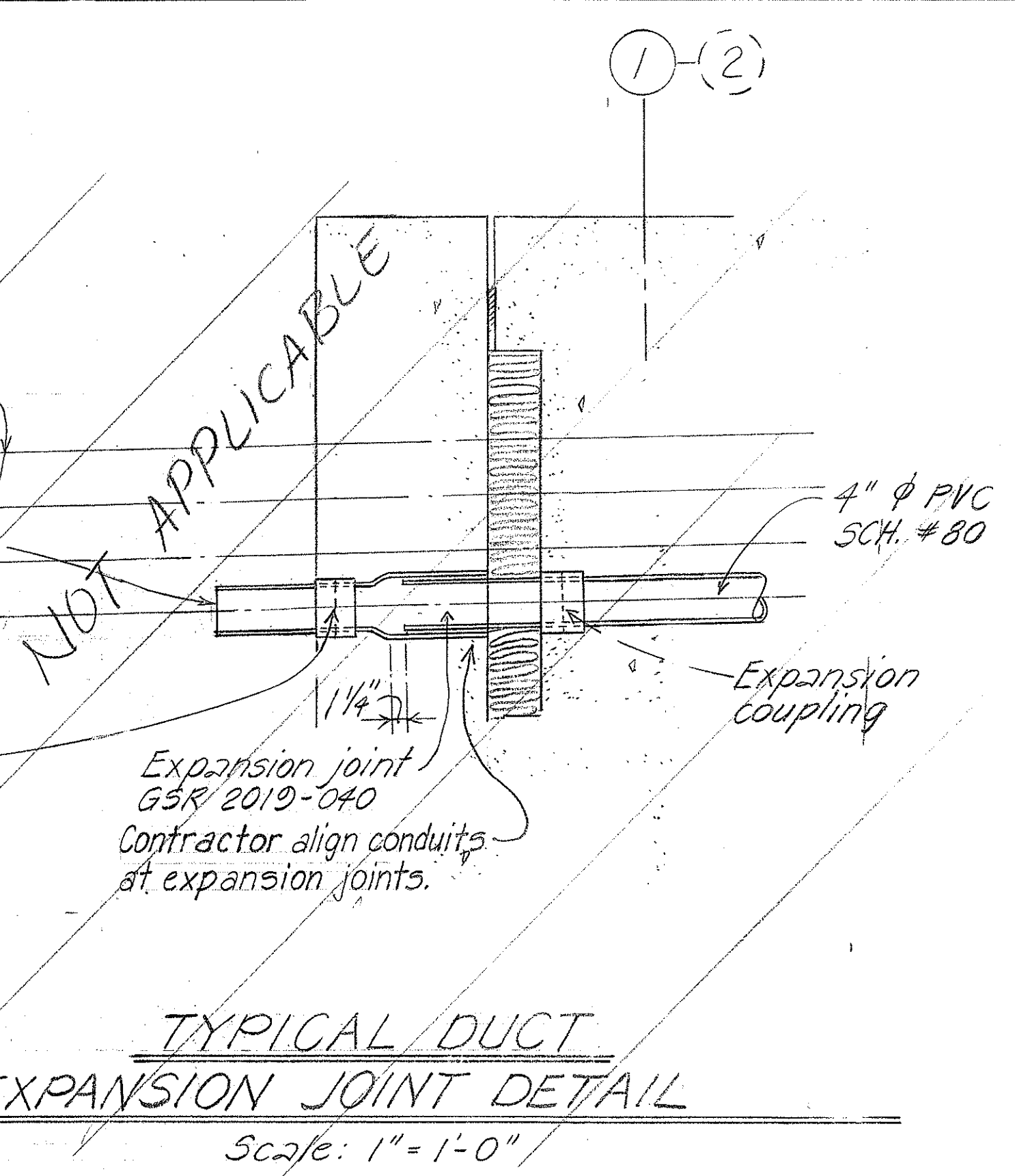
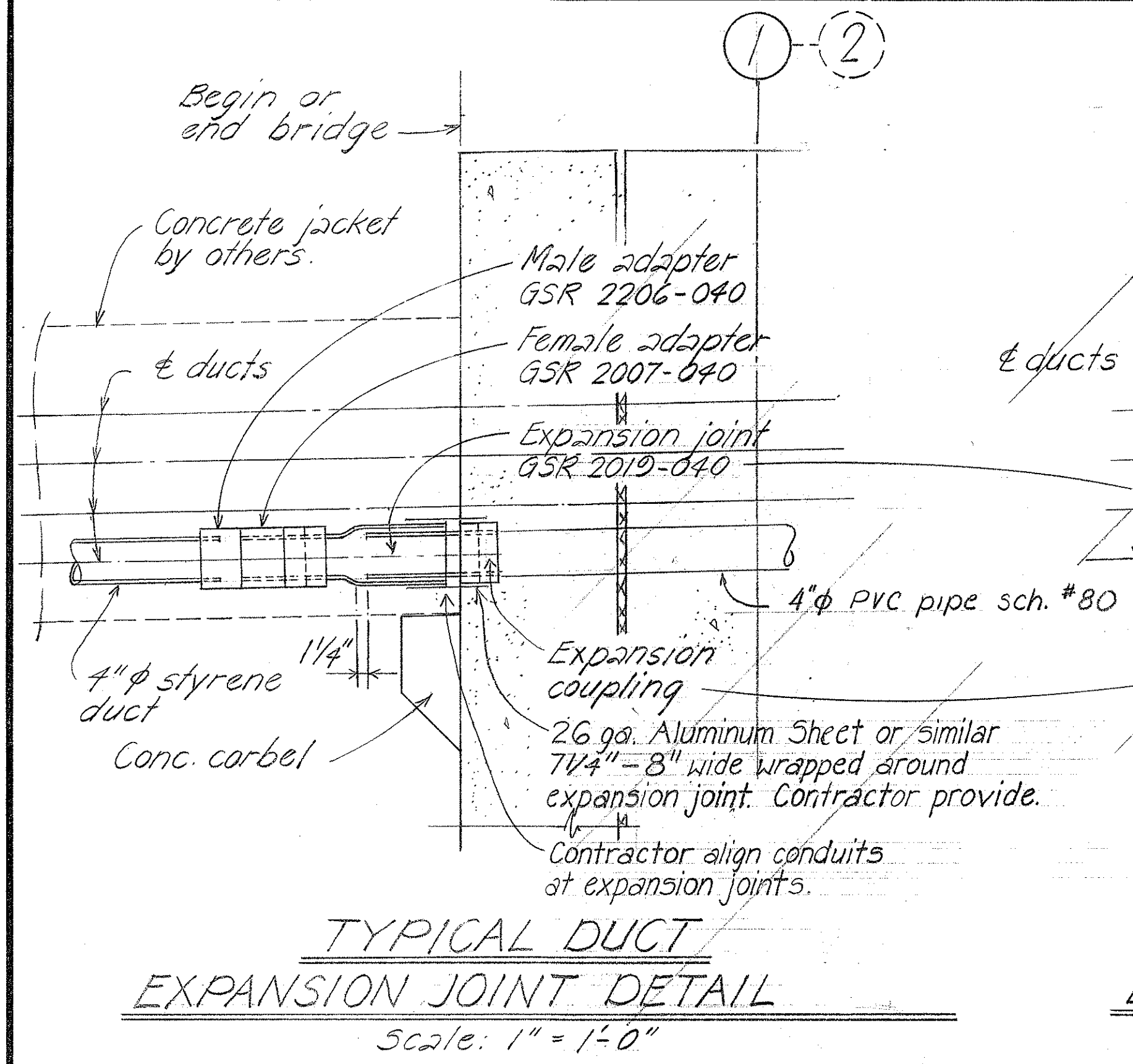
NORTHBOUND & SOUTHBOUND BRIDGES  
Project No BRF-D80-1(7)  
Scale: As shown Date May 1977

SHEET NO. 34 OF 17 SHEETS

C.O.D.S.S. = 1



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	99	165



**HANGER DETAILS**  
Scale: 3" = 1'-0"

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

PETER J. BOYCE  
REGISTERED PROFESSIONAL ENGINEER  
No. 3591  
HAWAII, U.S.A.  
Peter J. Boyce

DATE	REVISION
8-77	Revision to Expansion Joint Detail

APPROVED:  
S. Deai for Rep.  
HAWAIIAN TELEPHONE CO. DATE 7/20/76

5/17/77 Revised to CIPPS

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
**HTCO. CONDUIT DETAILS**  
**CONSTRUCTION PHASE II (S.B.)**

Proj. No. BRF-080-1(7)  
Scale: As noted Date: July 1976

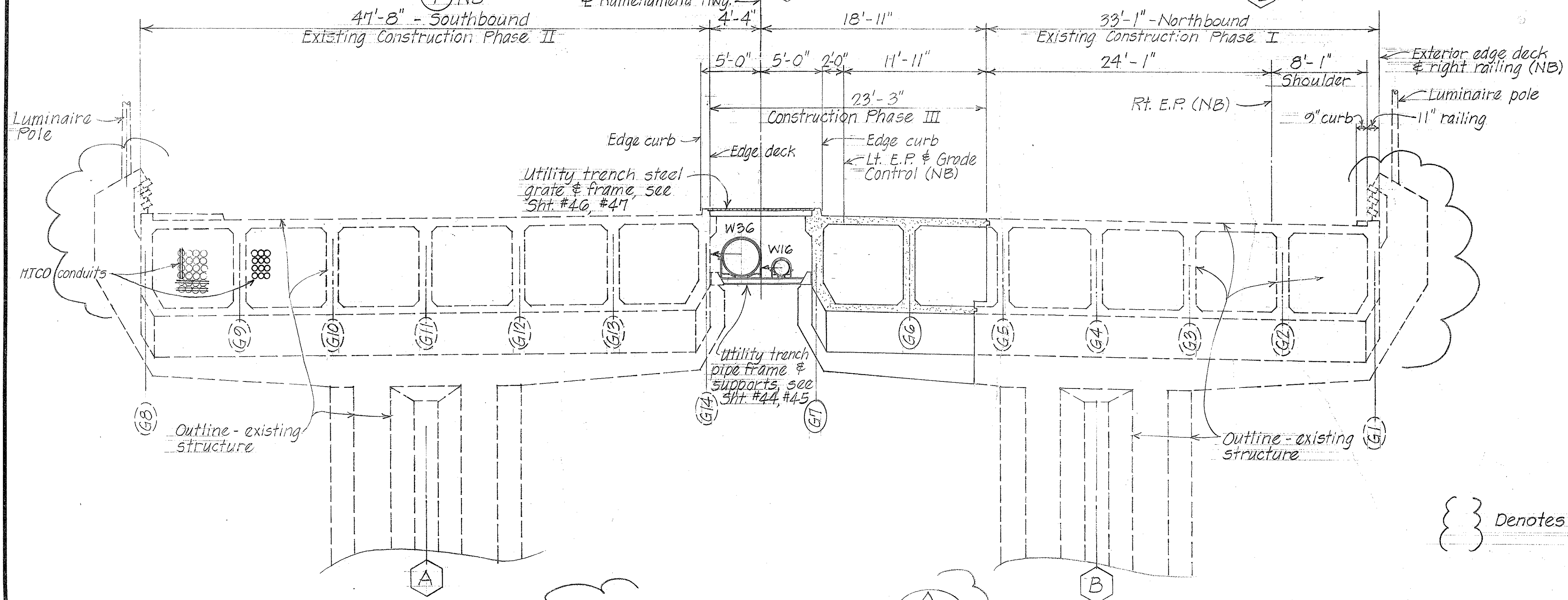
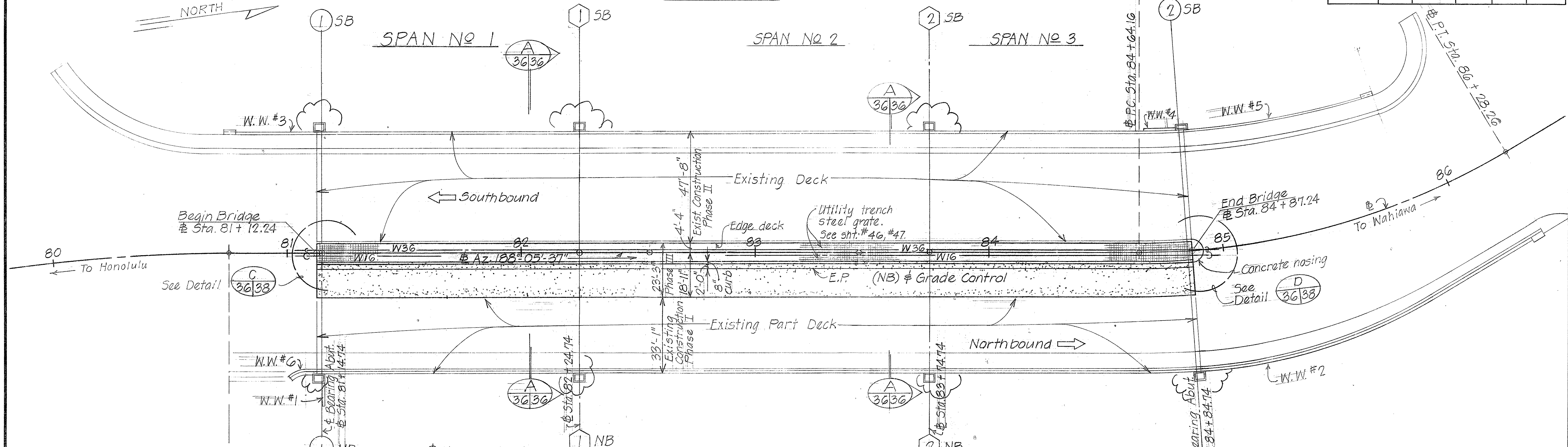
SHEET No. 35 OF 47 SHEETS



**PART DECK LAYOUT PLAN (NORTHBOUND & UTILITY TRENCH) - CONSTRUCTION PHASE III**

Scale: 1" = 20'-0"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	100	105



**TYPICAL SECTION** Scale: 3/16" = 1'-0"

- Reference Notes:**
1. For curve data, refer to Roadway Plans.
  2. Refer to sheet #39 for Normal Deck Sections and Details.
  3. Refer to Utility Plans for additional W36, W16 location & detail.

PETER J. BOICE  
REGISTERED PROFESSIONAL ENGINEER  
No. 3591  
HAWAII, U.S.A.  
Peter J. Boice

DATE	REVISION
2/28/78	Deleted Ductline "B"
8-77 5-4-77	Revised to CIPPS
5/9/77	Revised planter box and structures at planter box.

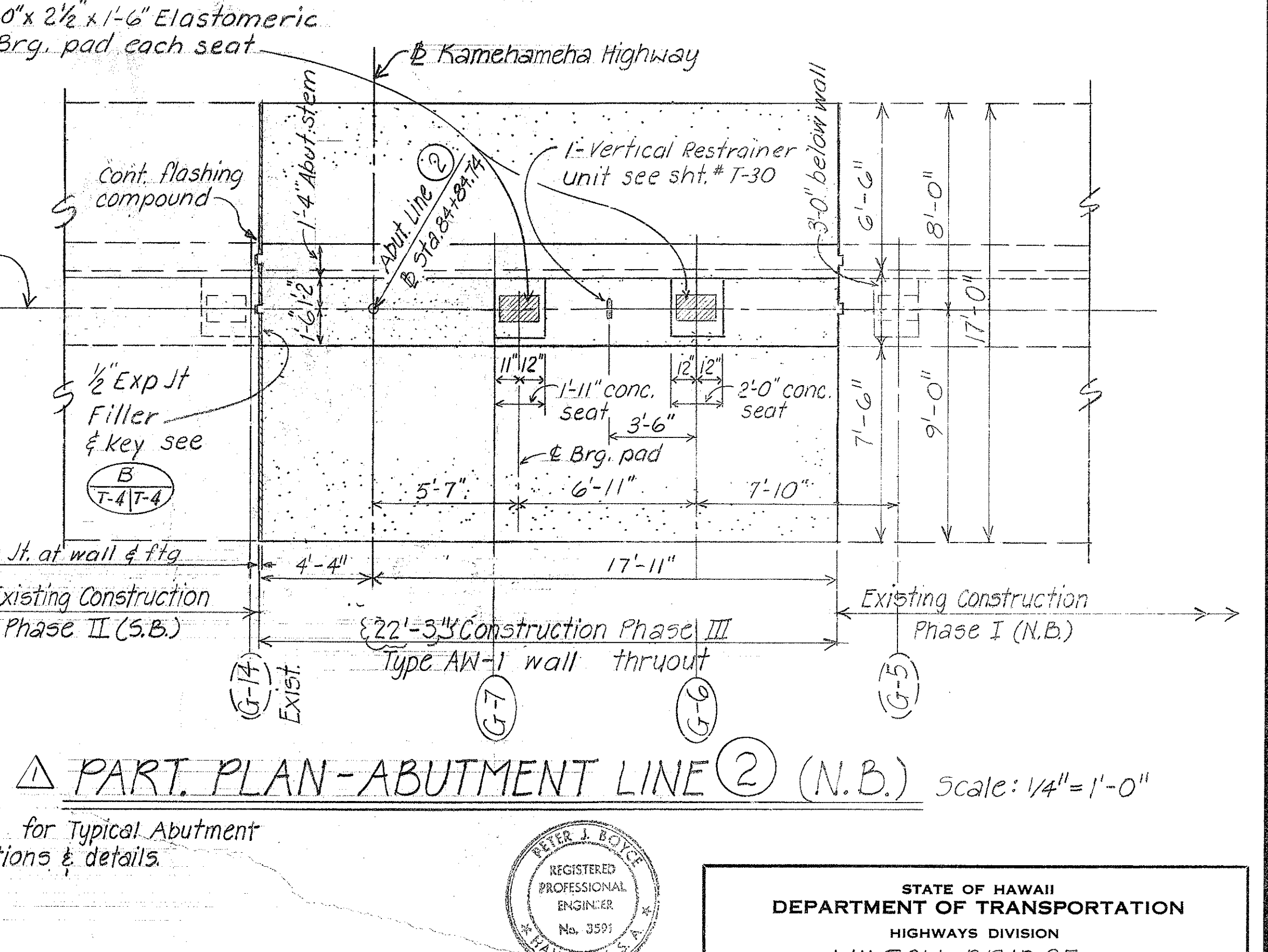
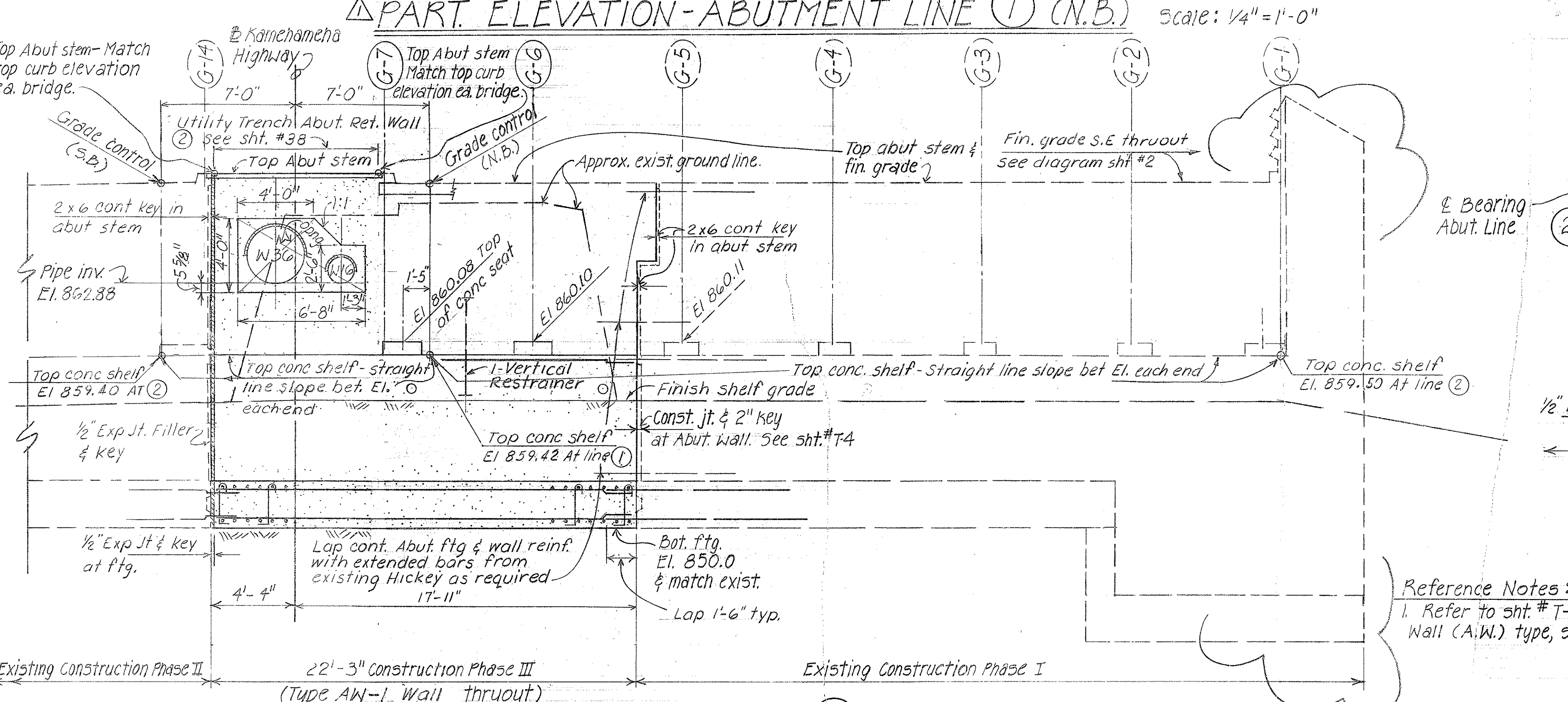
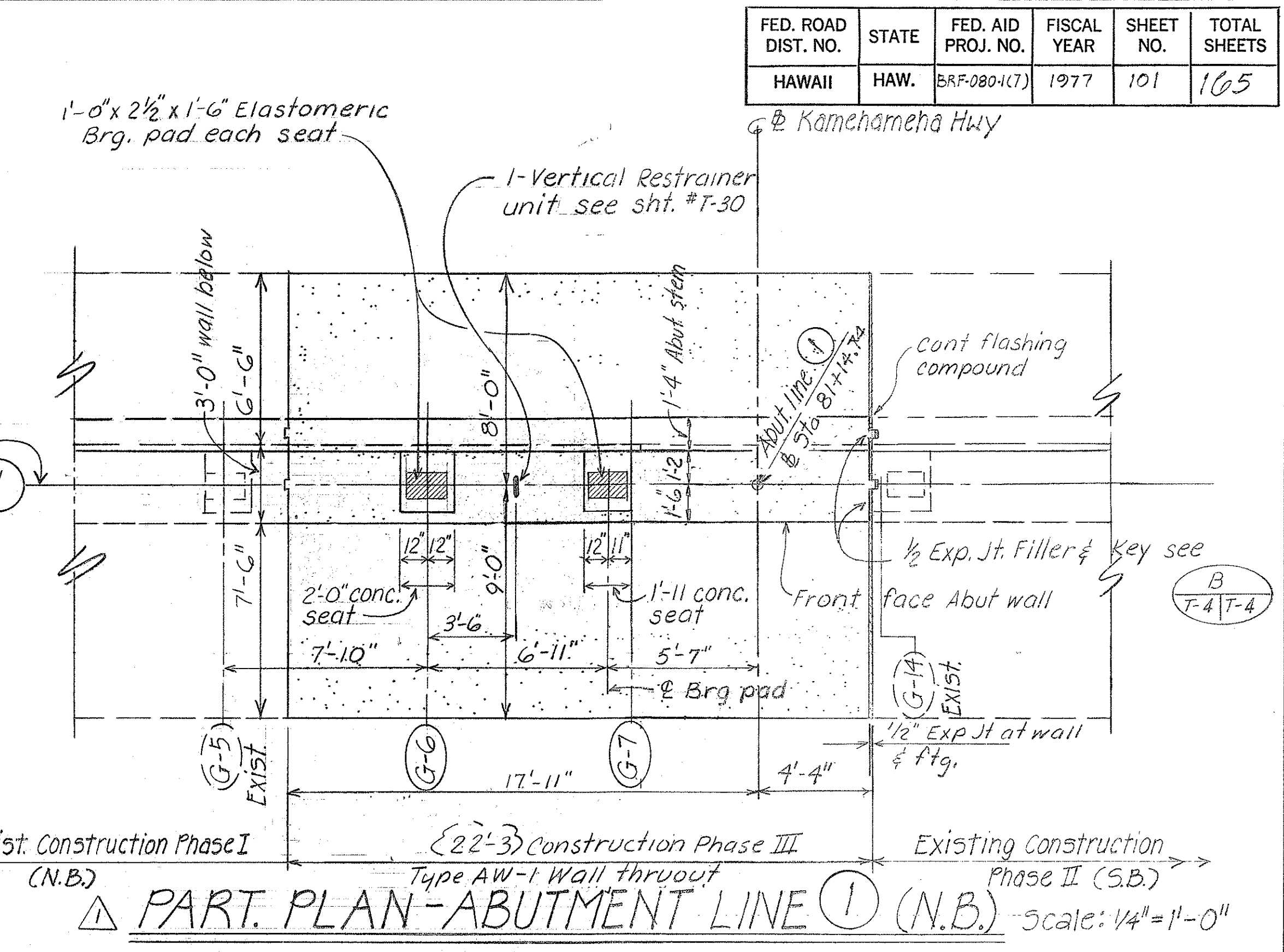
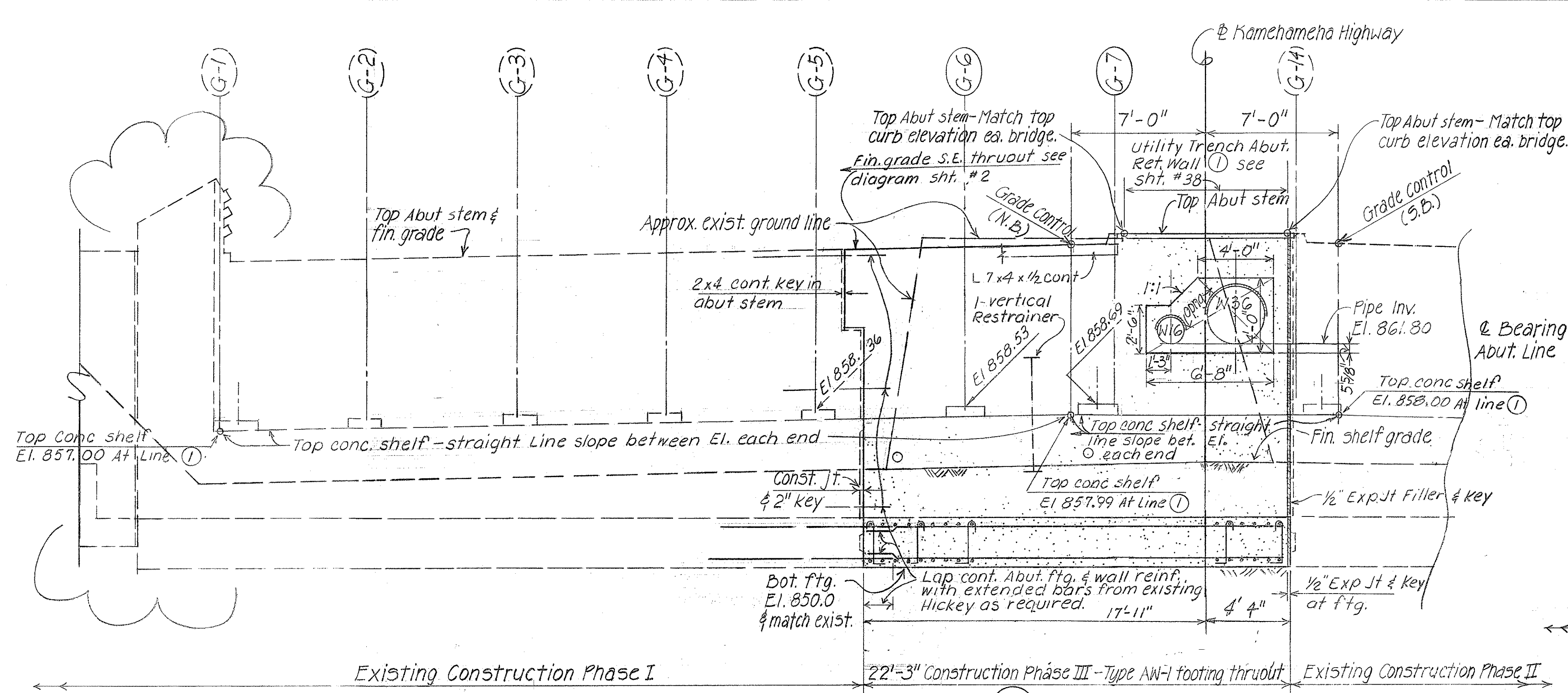
{ } Denotes changes to CO.100.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>WILSON BRIDGE</b>	
Sta. 81+12.24 TO STA. 84+87.24	
PART DECK & UTILITY TRENCH PLAN CONSTRUCTION PHASE III (NB)	
PROJECT NO. BRF-080-1(7)	Date: July 1976
Scale: As shown	
SHEET NO. 36 OF 47 SHEETS	

DATE	NY
SURVEY PLOTTED BY	GU
DRAWN BY	LA
DESIGNED BY	MT
NOTE BOOK	MY
QUANTITIES BY	CSY
CHECKED BY	



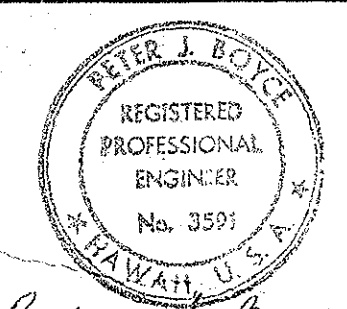
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	101	105



Reference Notes:  
 1. Refer to sht. #T-4 for Typical Abutment Wall (A.W.) type, sections & details.

} Denotes changes to c.o. 101.

DATE	BY
ORIGINAL PLAN	BY EK
TRACED BY	MT
REVISIONS	BY G-T
NOTED BY	CKY
CHECKED BY	



Peter J. Boyle

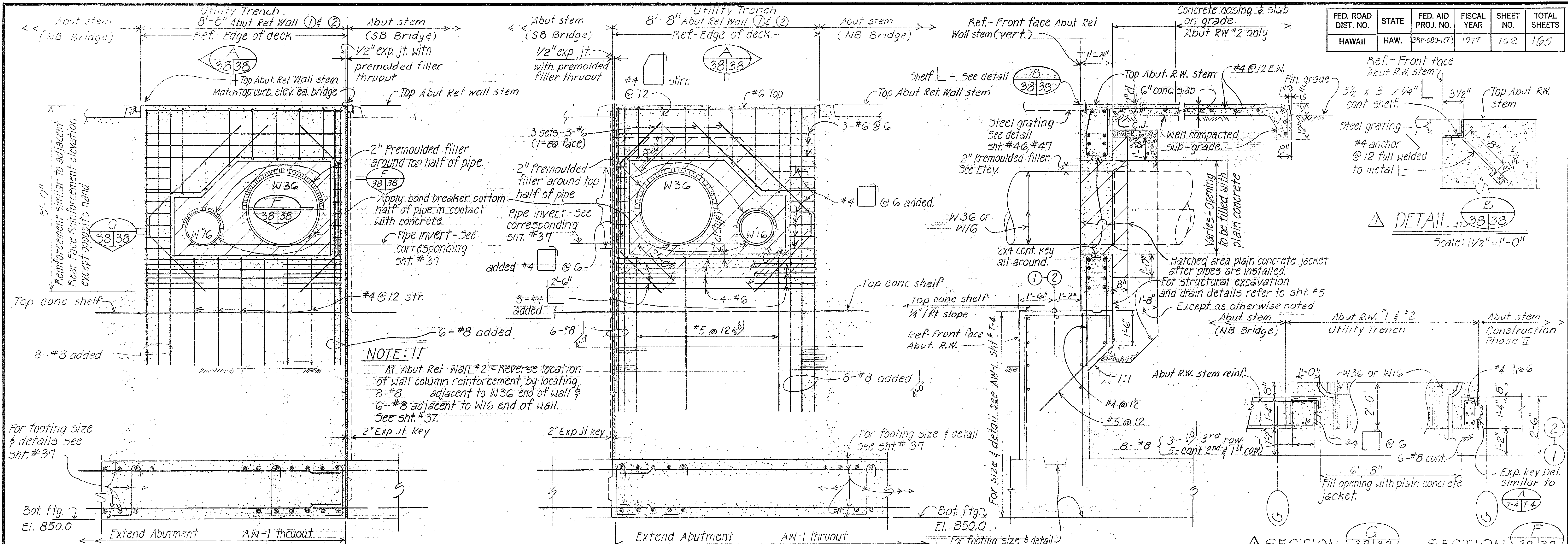
5-8-77	Revised to CIPPS
5/9/77	Corrected abutment dimension 23'-3" to read 22'-3"
	Revised planter box and structures at planter box.
DATE	REVISION

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 ABUTMENT LINES 1 & 2  
 PLANS AND DETAILS  
 CONSTRUCTION PHASE III  
 Proj. No. BRF-080-1(7)  
 Scale: As noted Date: July 1976  
**SHEET No. 37 OF 47 SHEETS**

CO 101



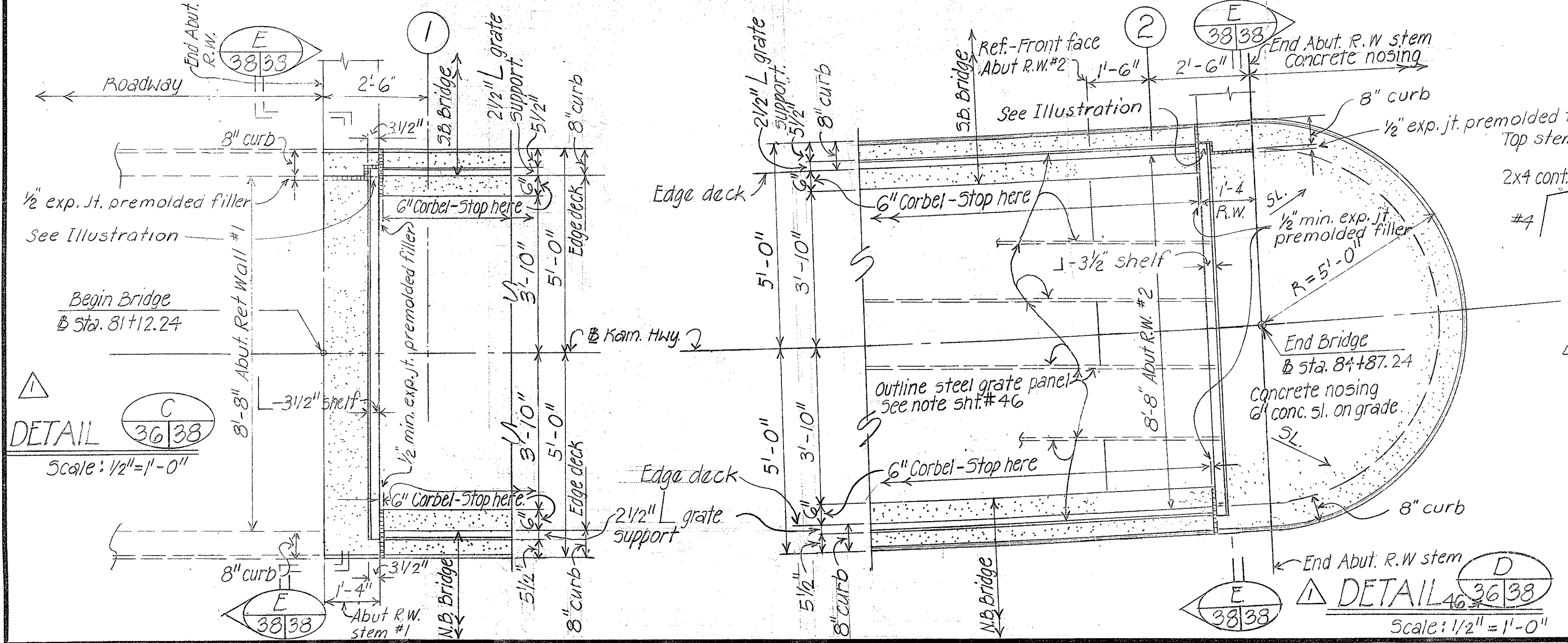
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	102	105



**NOTE: !!**  
 At Abut Ret Wall #2 - Reverse location of wall column reinforcement, by locating 8-#8 adjacent to W36 end of wall & 6-#8 adjacent to W16 end of wall. See sht. #37.

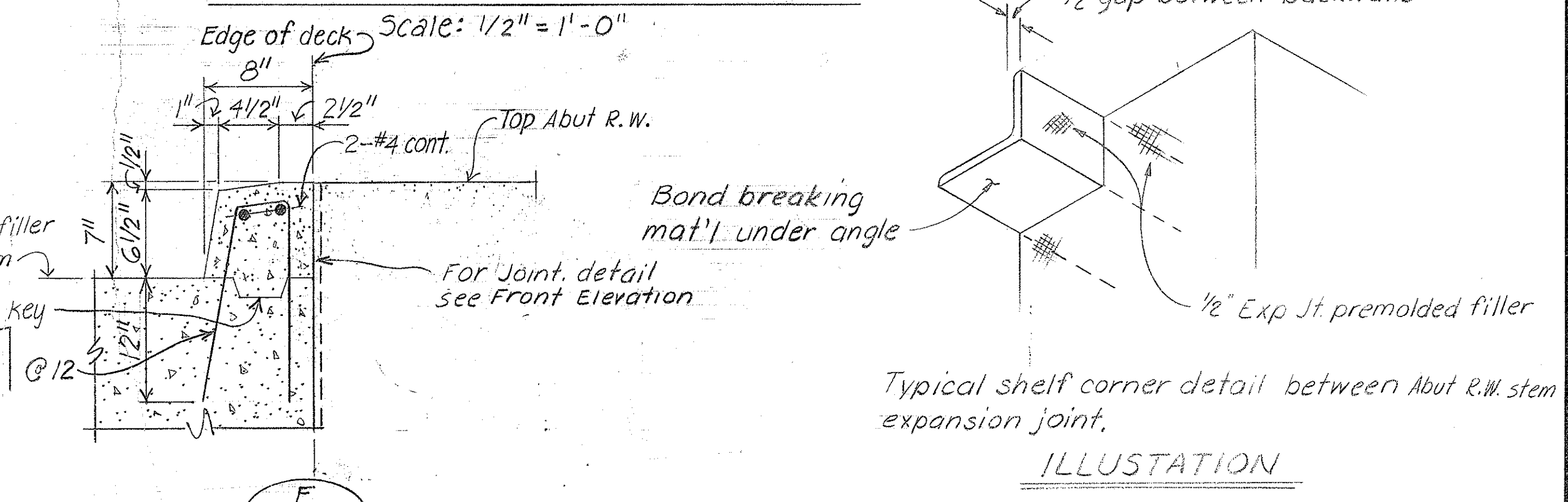
SHOWING FRONT FACE REINFORCEMENT  
 Δ FRONT ELEVATION - ABUT. RET. WALL ① (AS SHOWN) Scale: 1/2" = 1'-0"  
 (ABUT. RET. WALL ② SIMILAR EXCEPT OPPOSITE HAND AND AS OTHERWISE NOTED)

Δ TYPICAL SECTION Scale: 1/2" = 1'-0"  
 Δ SECTION 38/38 Scale: 1/2" = 1'-0"



DETAIL C 36/38 Scale: 1/2" = 1'-0"

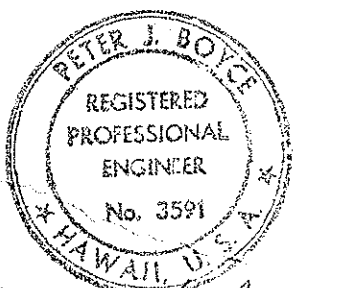
DETAIL D 36/38 Scale: 1/2" = 1'-0"



SECTION E 38/38 Scale: 1/2" = 1'-0"

ILLUSTRATION  
 Typical shelf corner detail between Abut. R.W. stem expansion joint.

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	



Peter J. Boyce

5/14/77 Revised to CIPPS

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**WILSON BRIDGE**  
 ABUTMENT LINES ① & ②  
 DETAILS ABUT. RET. WALLS #1 & 2  
 CONSTRUCTION PHASE III

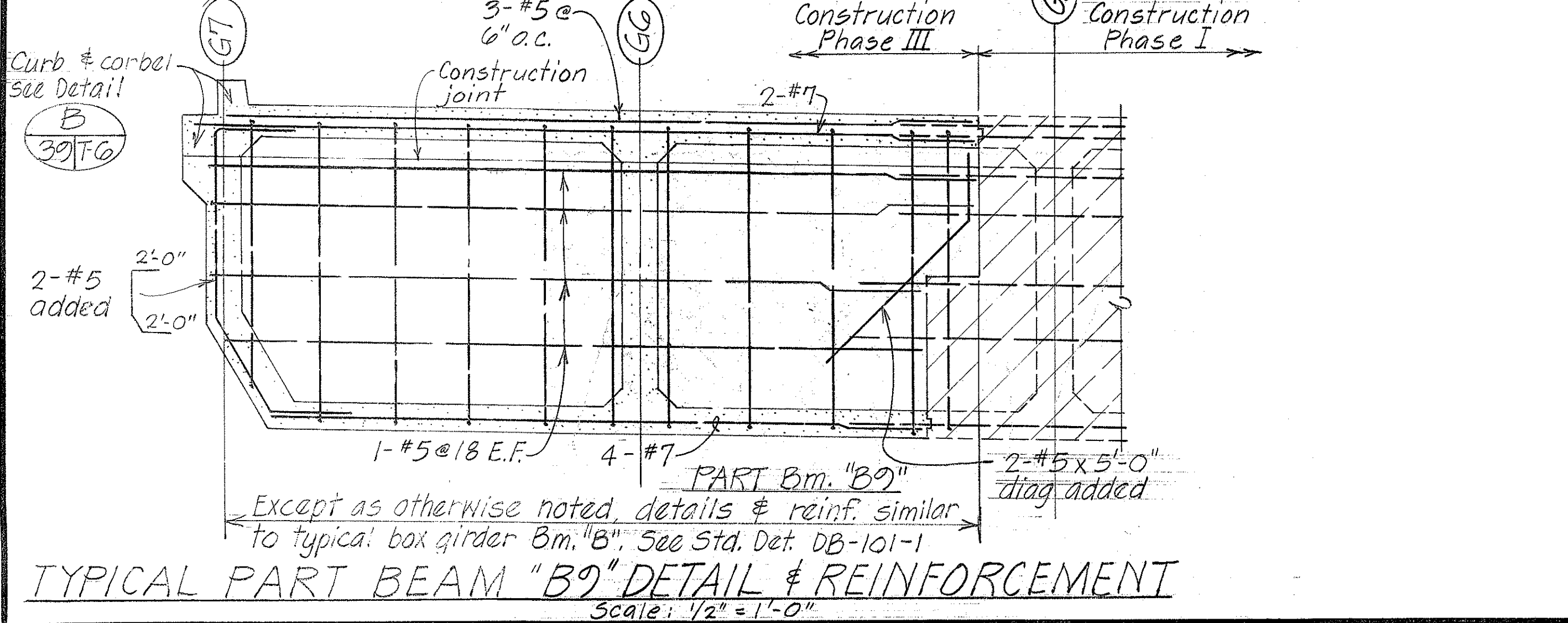
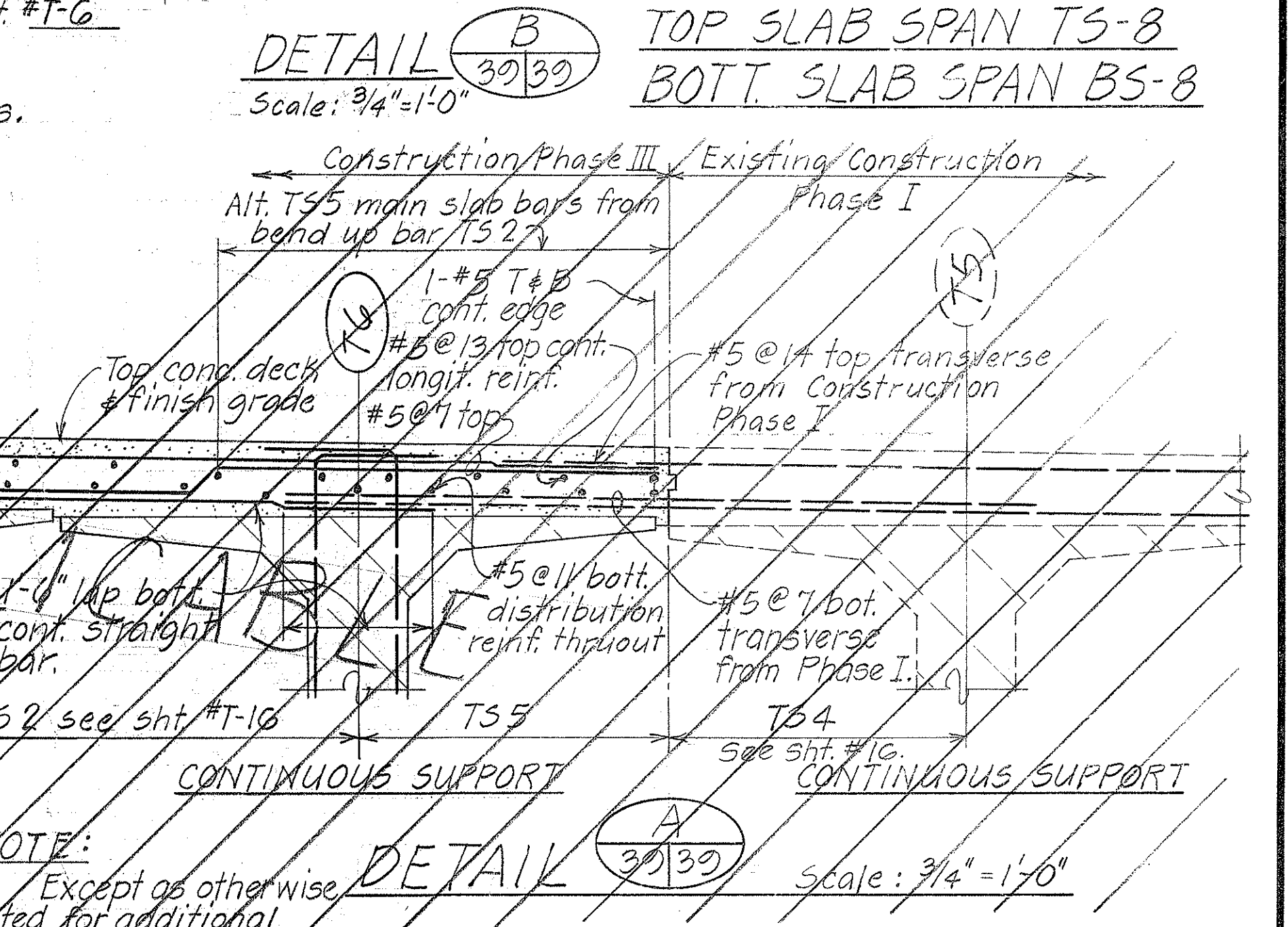
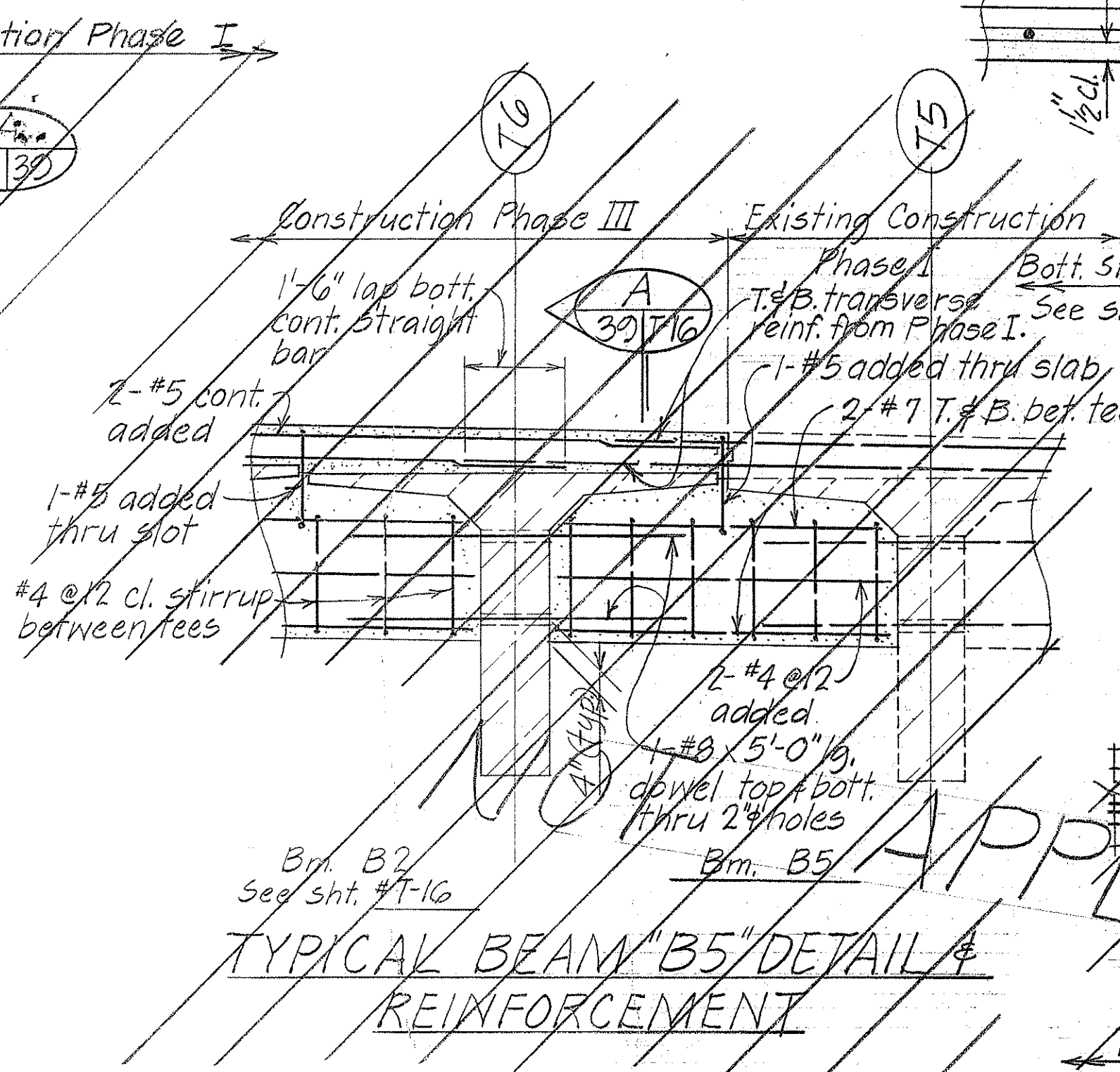
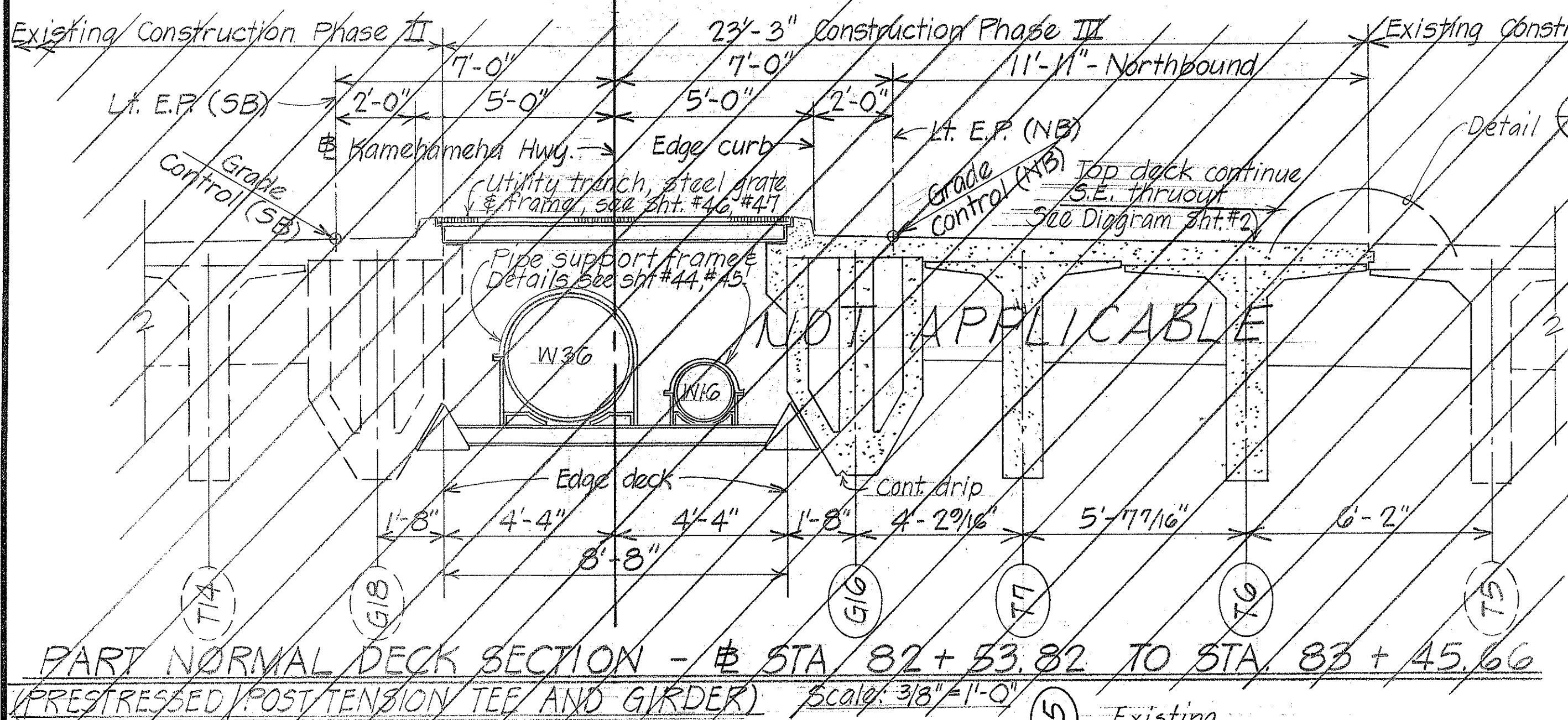
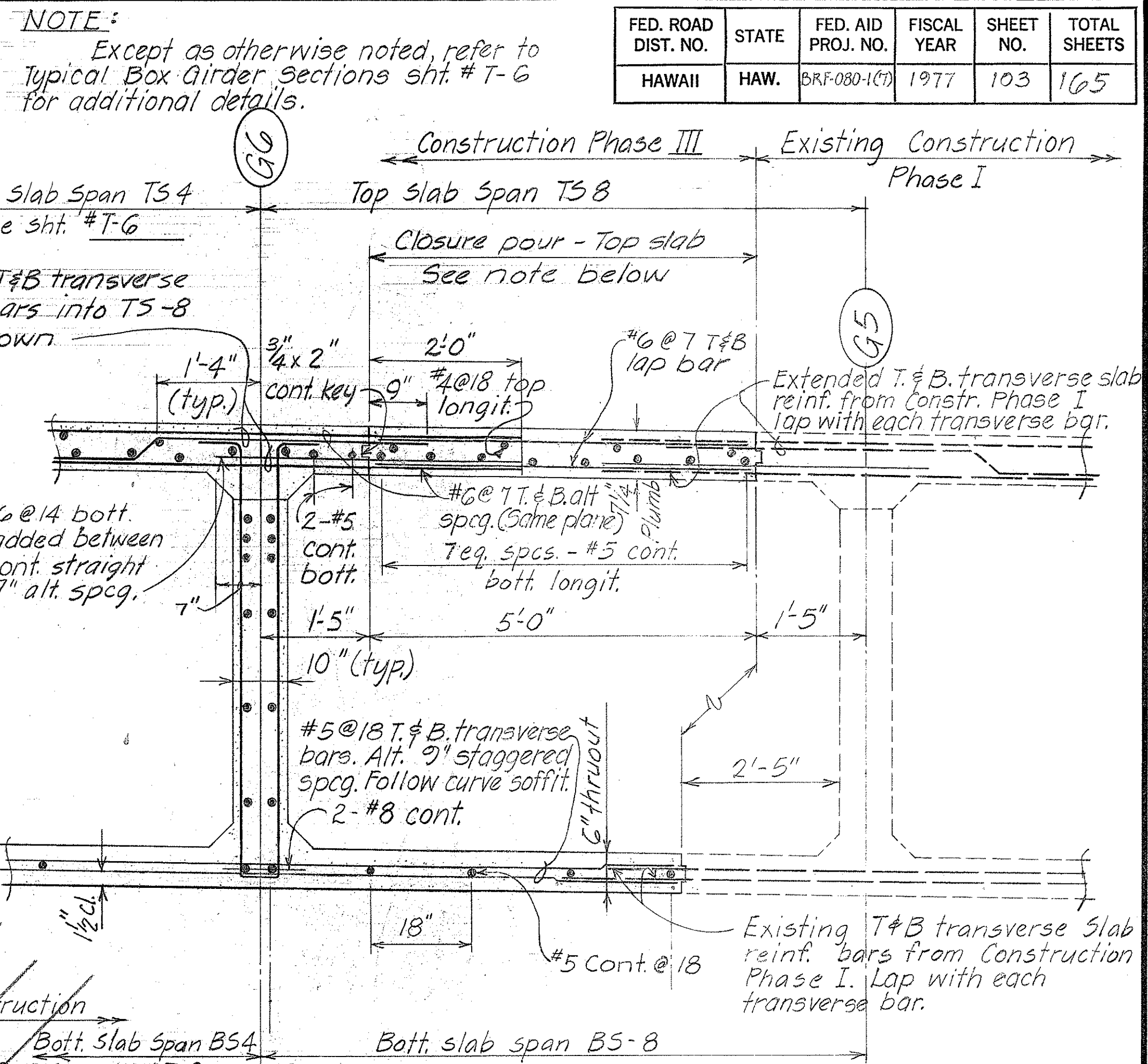
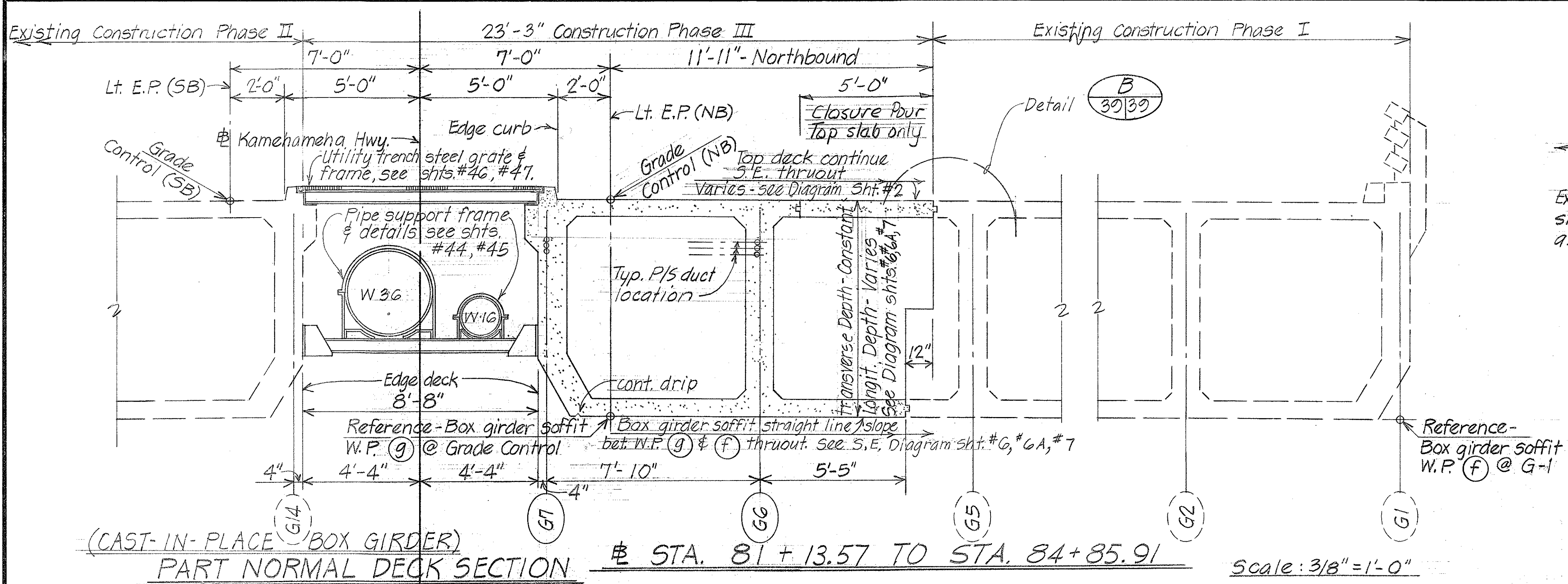
Proj. No. BRF-080-1(7)  
 Scale: As noted Date: July 1976

SHEET NO. 38 OF 47 SHEETS

Sheets 103, 104, 105 & 106 Deleted



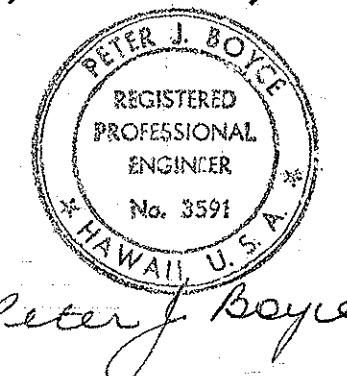
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	103	105



**REFERENCE NOTES:**  
 For Typical Box Girder Superstructure Deck Details & Reinforcement refer to sheet nos. T-6, T-7, T-13, T-15

Closure pour to be placed after stressing Phase III. Falsework for Phase III to remain in place until concrete in closure reaches 3500 psi.

**NOTE:**  
 Except as otherwise noted for additional details, refer to Typical Deck Section Sht. #T-16.



STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 NORMAL DECK SECTION & DETAILS  
 CONSTRUCTION PHASE III (N.B.)

PROJECT NO. BRF-080-1(7)  
 SCALE: DATE: July 1976

SHEET NO. 39 OF 47 SHEETS

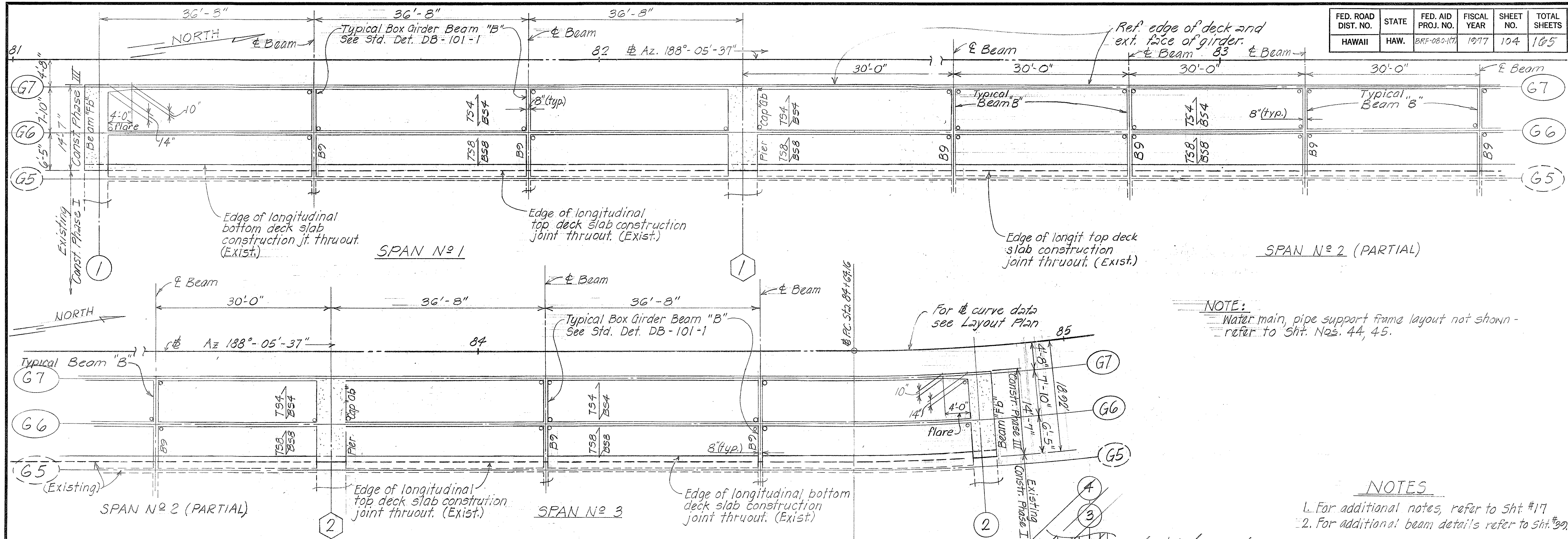
SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
QUANTITIES BY	
NOTE BOOK	
CHECKED BY	

Revised to CIPAS

CO 1103



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	104	105



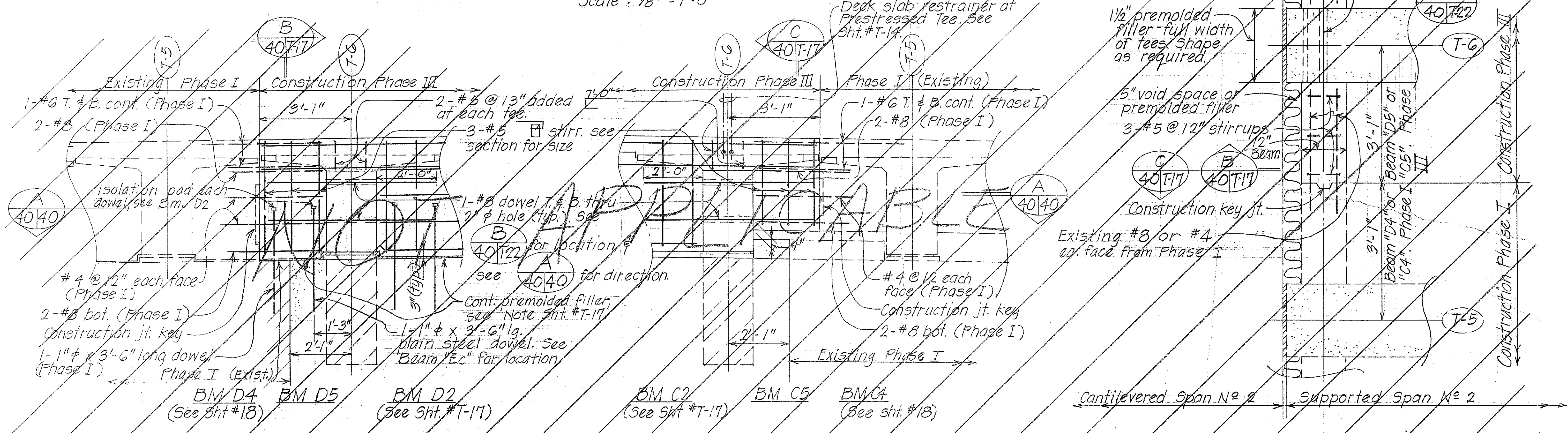
NOTE:  
Water main, pipe support frame layout not shown - refer to Sht. Nos. 44, 45.

**NOTES**

- For additional notes, refer to Sht. #17
- For additional beam details refer to Sht. #39

**PART DECK FRAMING PLAN - CONSTRUCTION PHASE III (NB)**

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



**PART ELEVATION-BEAM "D5" DETAILS & REINFORCEMENT**

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

**PART ELEVATION-BEAM "C5" DETAILS & REINFORCEMENT**

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

**SECTION A BEAM "D5" - AS SHOWN**

Scale: 3/4" = 1'-0"

BEAM "C5" - OPPOSITE HAND



Peter J. Boyce

8-77 Revised to CIPPS

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

± STA. 81 + 12.24 TO STA. 81 + 87.24

PART DECK FRAMING PLAN  
CONSTRUCTION PHASE III (N.B.)

PROJECT No. BRF-080-1(7)  
Scale: As shown Date: July 1976

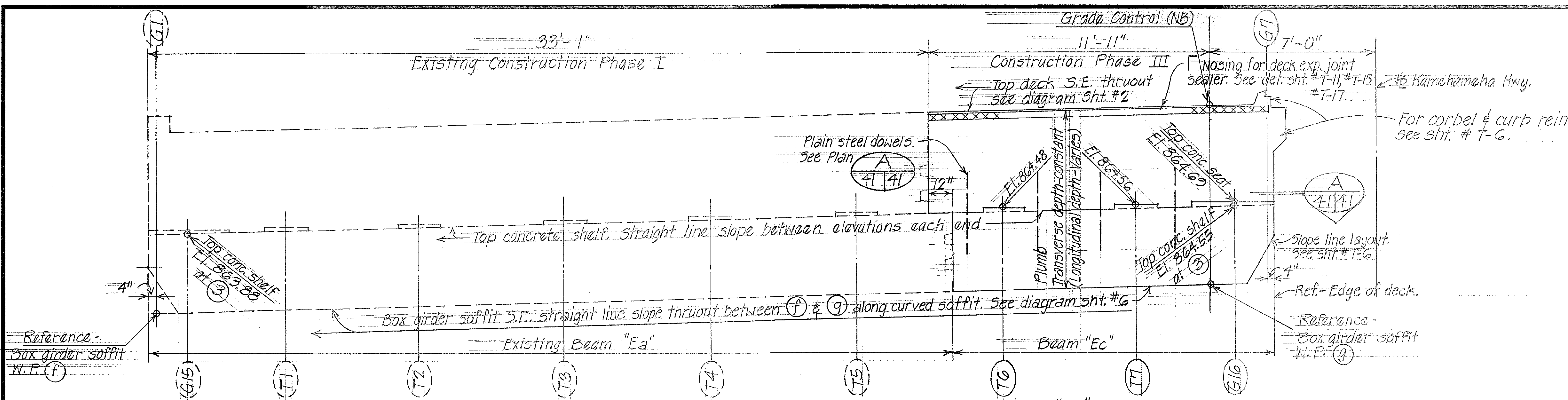
SHEET No. 40 OF 47 SHEETS

C O 1 ( ) 4

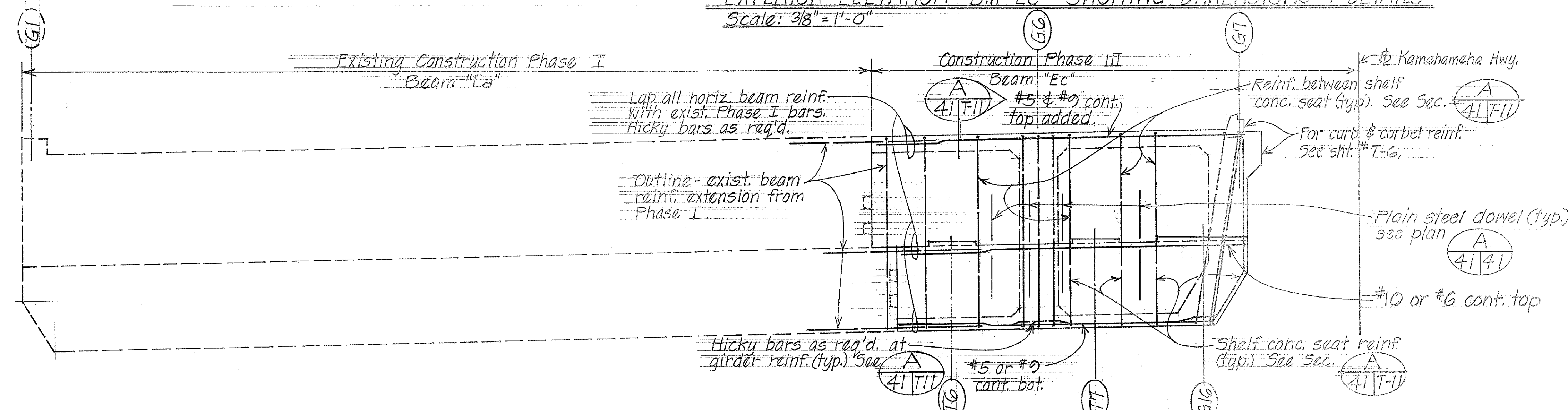
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DRAWN BY: LMA	
TRACED BY: M.F.	
DESIGNED BY: G.F.	
QUANTITIES BY: G.F.	
CHECKED BY: G.F.	



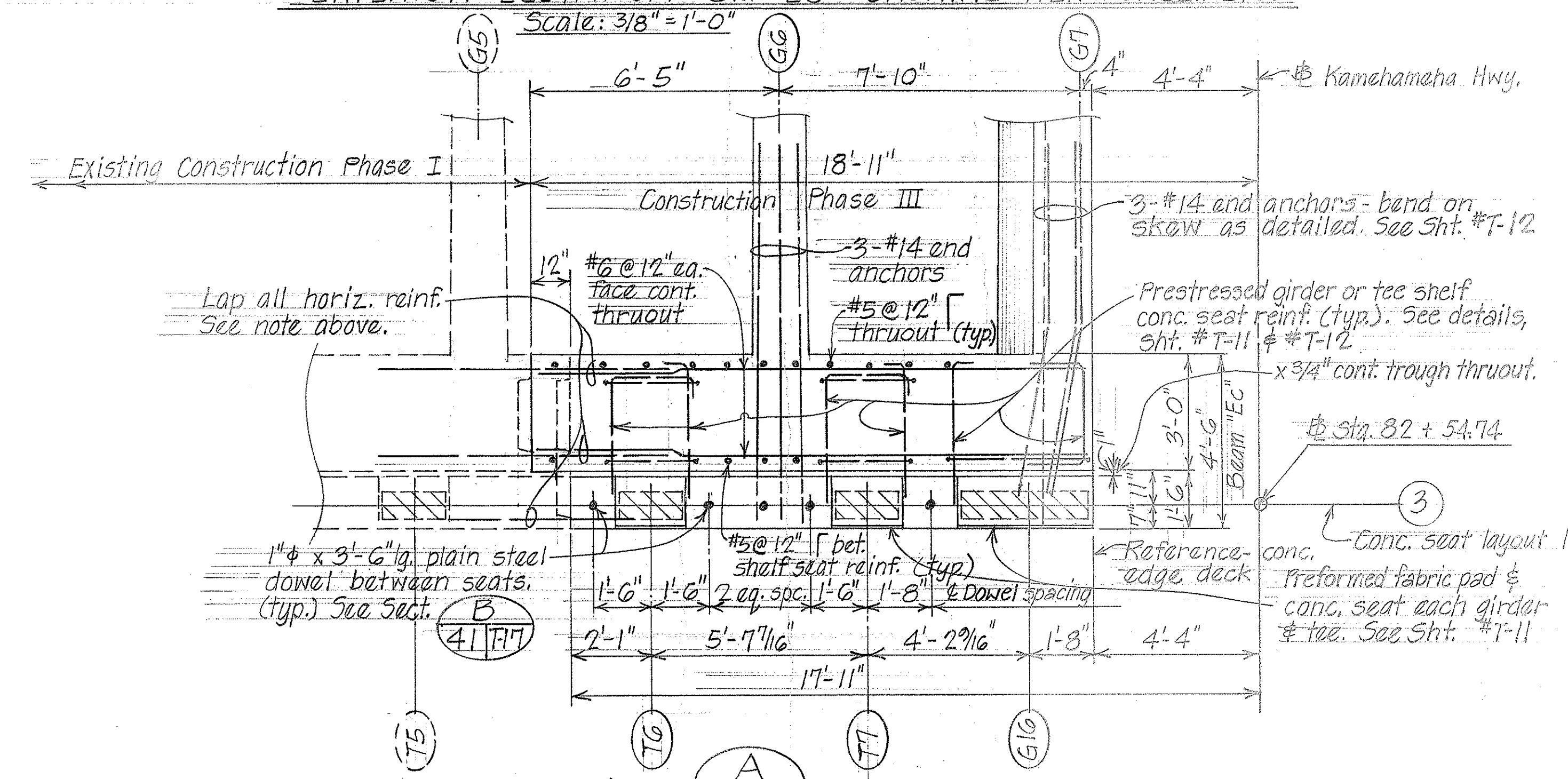
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	105	165



EXTERIOR ELEVATION - BM "Ec" - SHOWING DIMENSIONS & DETAILS  
Scale: 3/8" = 1'-0"



EXTERIOR ELEVATION - BM "Ec" - SHOWING REINFORCEMENT  
Scale: 3/8" = 1'-0"



PLAN A41/41 Scale: 3/8" = 1'-0"

REFERENCE NOTES  
For typical beam "Ec" details & reinforcement refer to sheet nos. T-11, T-12.

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

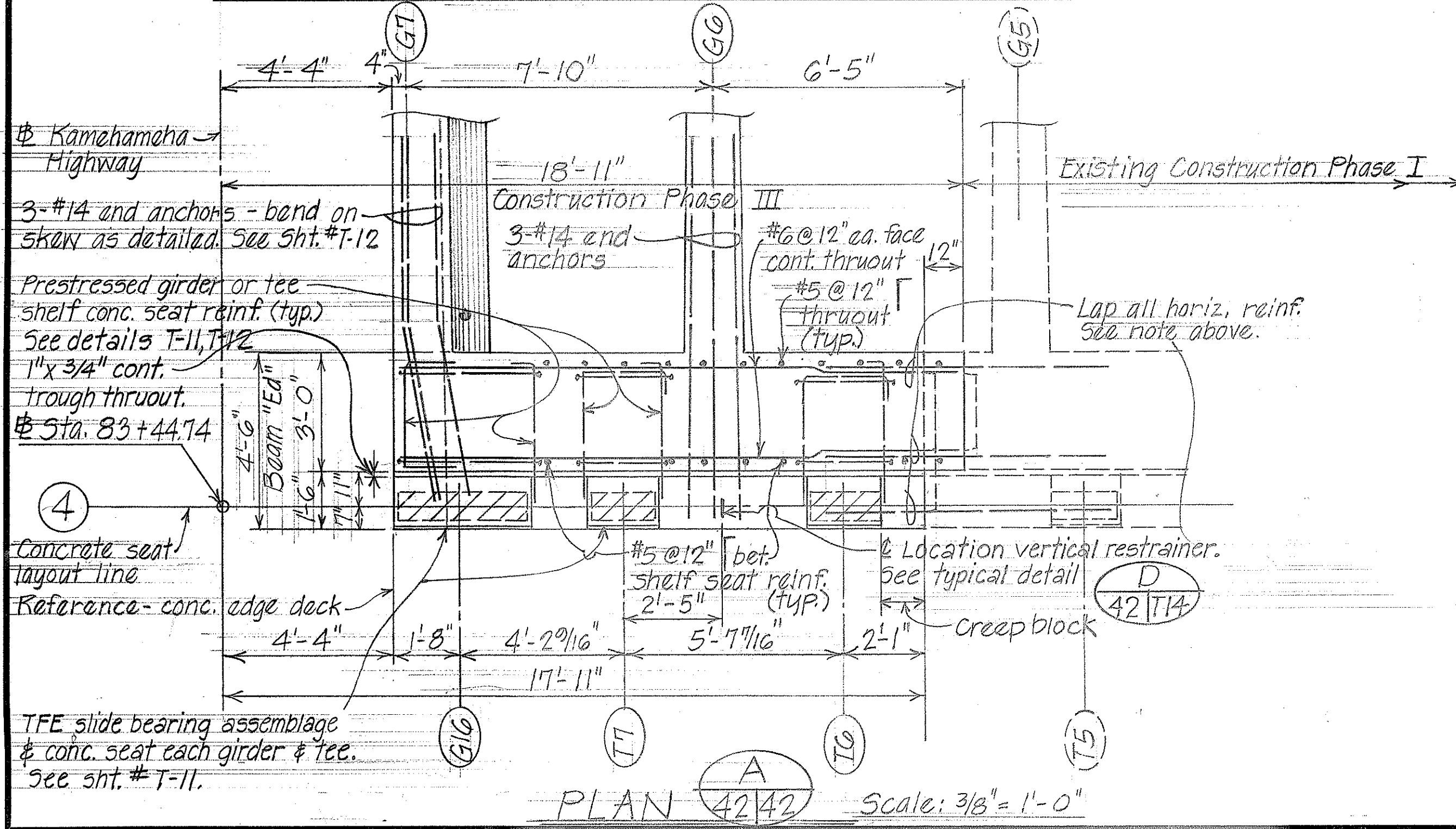
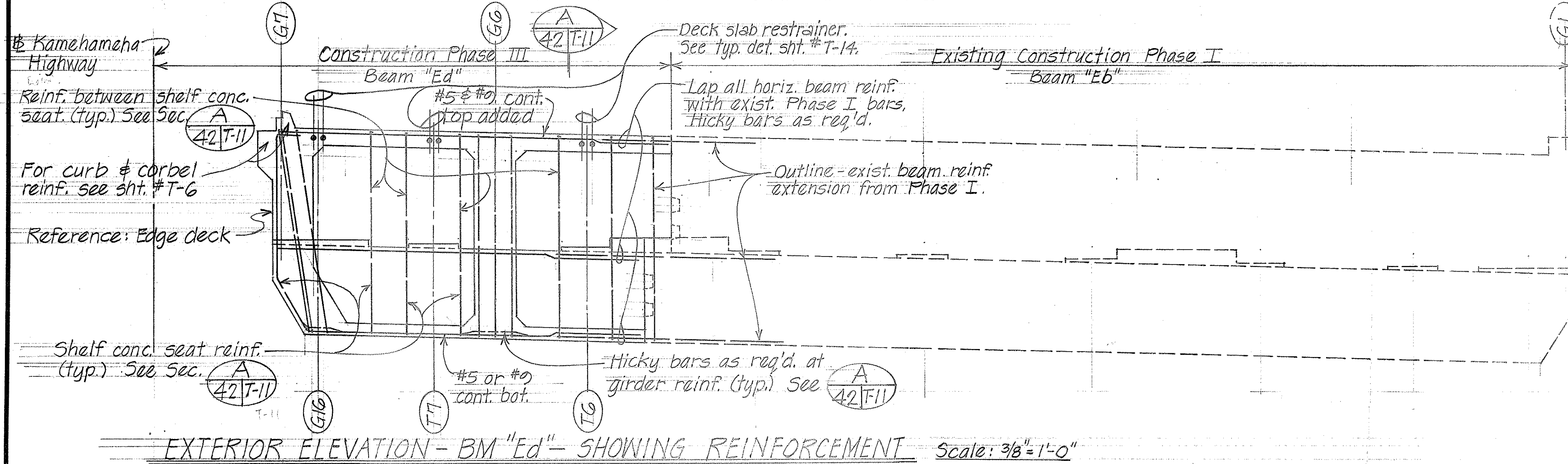
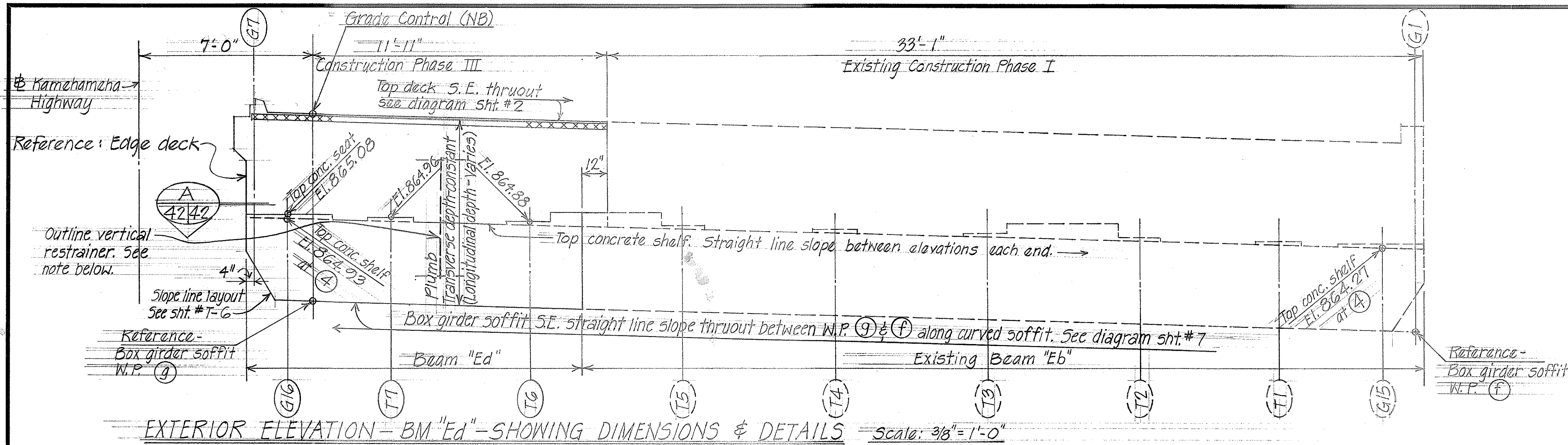
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
BEAM "Ec" DETAILS - LINE ③  
CONSTRUCTION PHASE III (NB)

PROJECT NO. BRF-080-1(7)  
Scale: Date: July 1976  
SHEET No. 41 OF 47 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	106	105



**NOTE:**  
For typical beam "Ed" details & reinforcement, refer to sheet nos. T-11, T-12 & T-24.

DATE	BY
DESIGNED BY	MT
QUANTITIES BY	GT
CHECKED BY	CRY
ORIGINAL PLAN	
NOTE BOOK	
No.	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

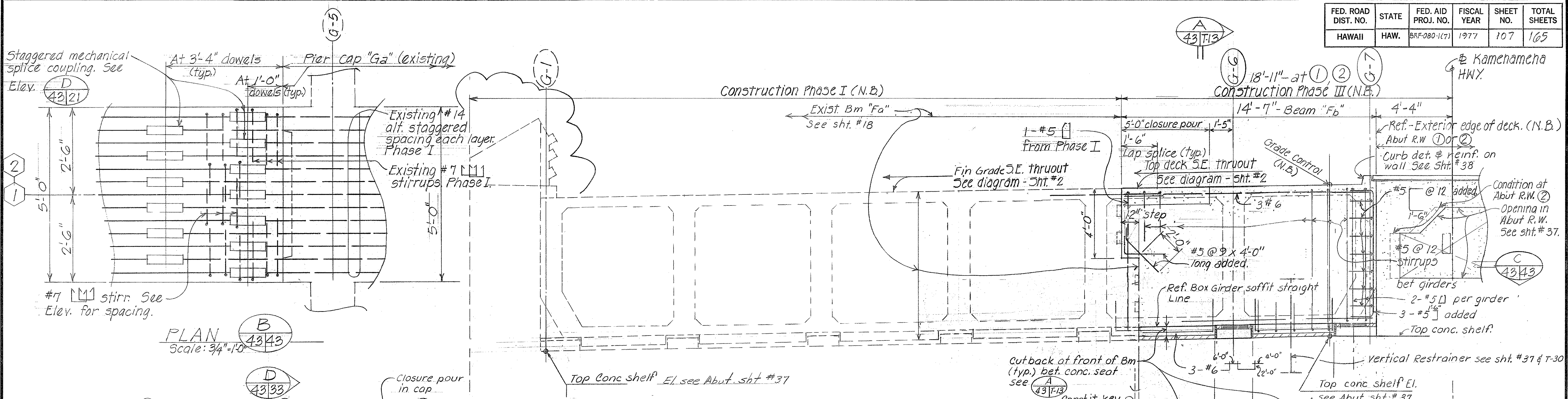
**WILSON BRIDGE**  
BEAM "Ed" DETAILS - LINE (4)  
CONSTRUCTION PHASE III (NB)

PROJECT No. BRF-080-1(7)  
Scale: Date: July 1976

**SHEET No. 42 OF 47 SHEETS**



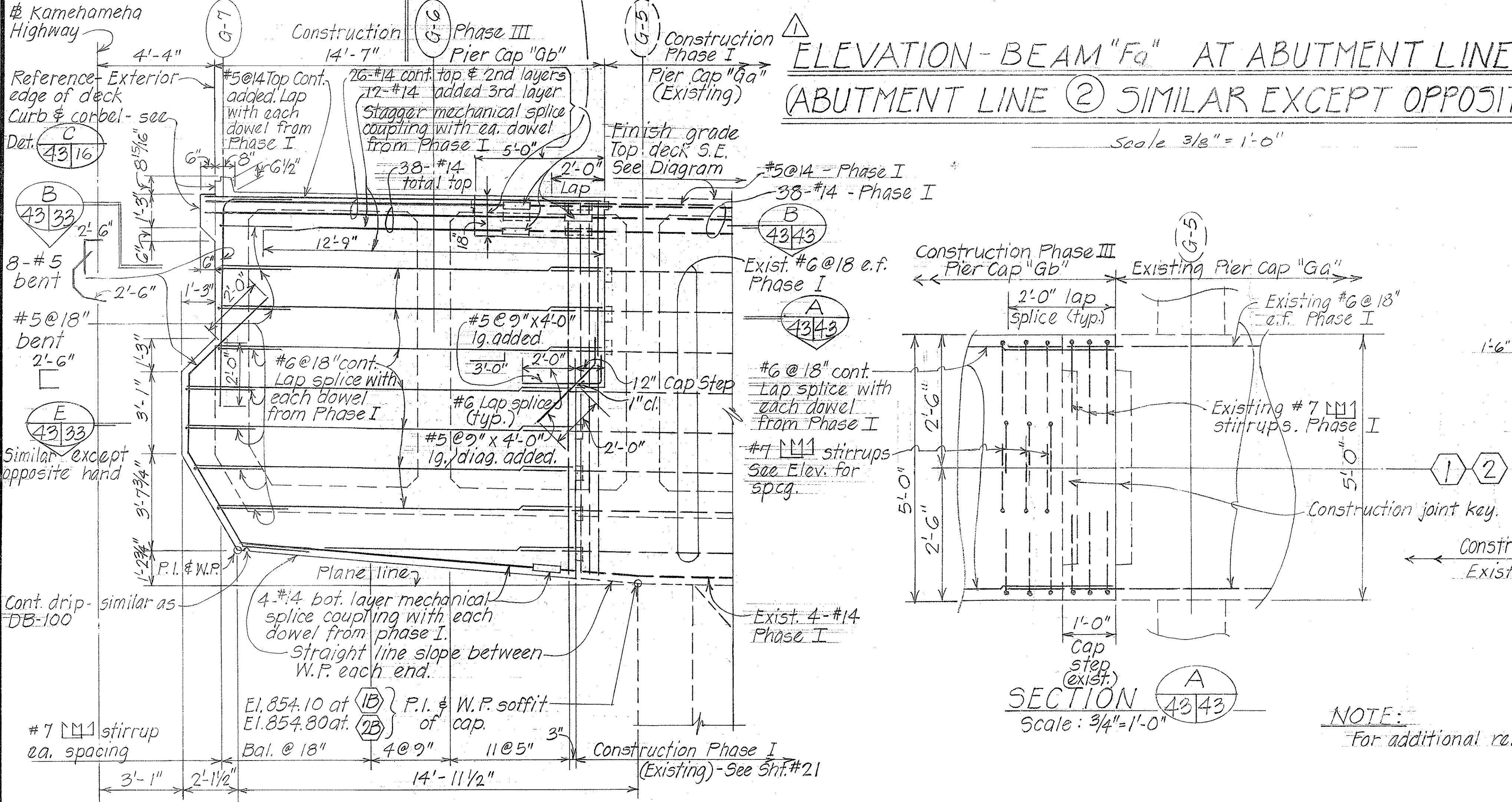
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	107	165



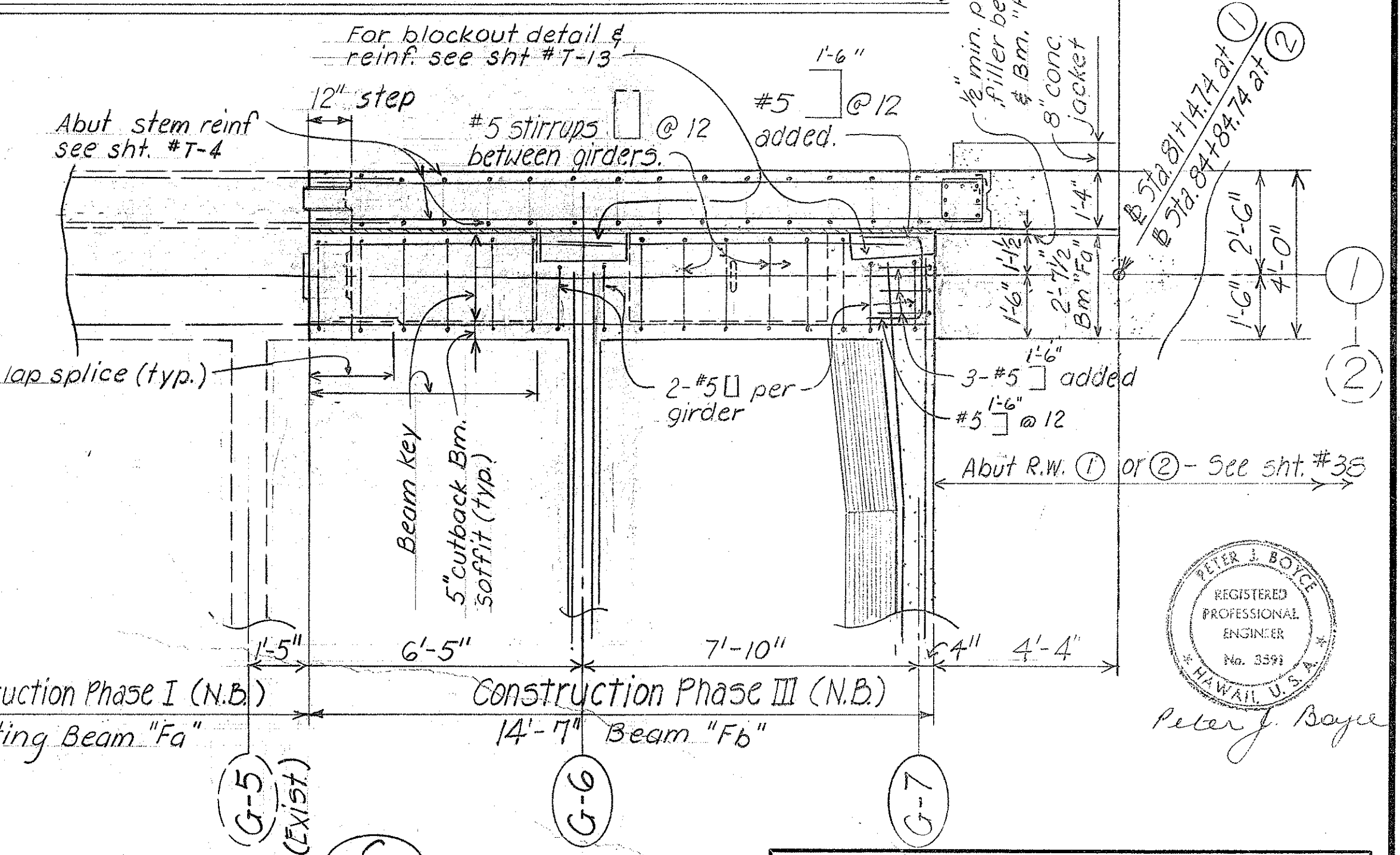
PLAN Scale: 3/4" = 1'-0"

ELEVATION - BEAM "Fa" AT ABUTMENT LINE ①  
(ABUTMENT LINE ② SIMILAR EXCEPT OPPOSITE HAND AND REVERSE DECK SLOPE)

Scale 3/8" = 1'-0"



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



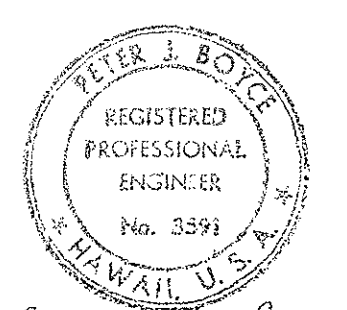
SECTION C Scale: 3/8" = 1'-0"

NOTE: For additional reinf. at curb, refer to Sht. #T-26, #T-27.

} Denotes changes to C.O. 107.

ELEVATION - TYPICAL PIER CAP "Gb" Scale: 3/8" = 1'-0"

DATE	BY
DESIGNED BY	CK
DESIGNED BY	MI
QUANTITIES BY	ST
CHECKED BY	CK



Peter J. Boyce

DATE	REVISION
5/12/77	Revised to CIPPS
5/20/77	Revised planter box and structures at planter

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**

PIER CAP "Gb" DETAILS  
BEAM "Fa" DETAILS  
CONSTRUCTION PHASE III (N.B.)

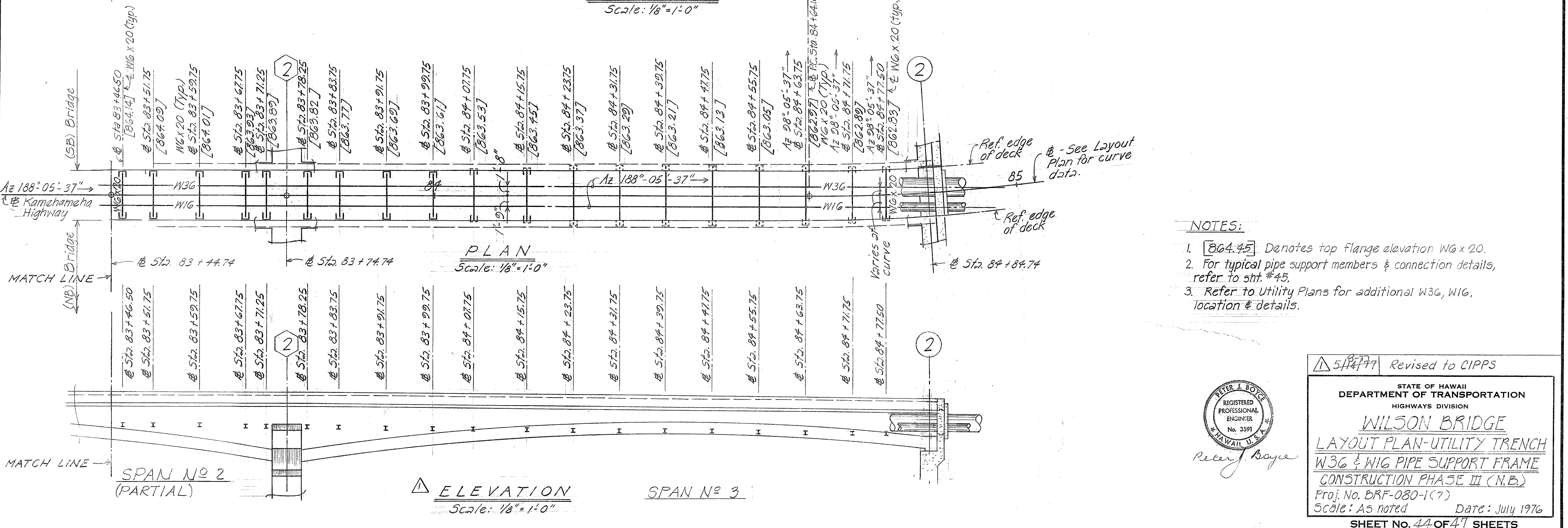
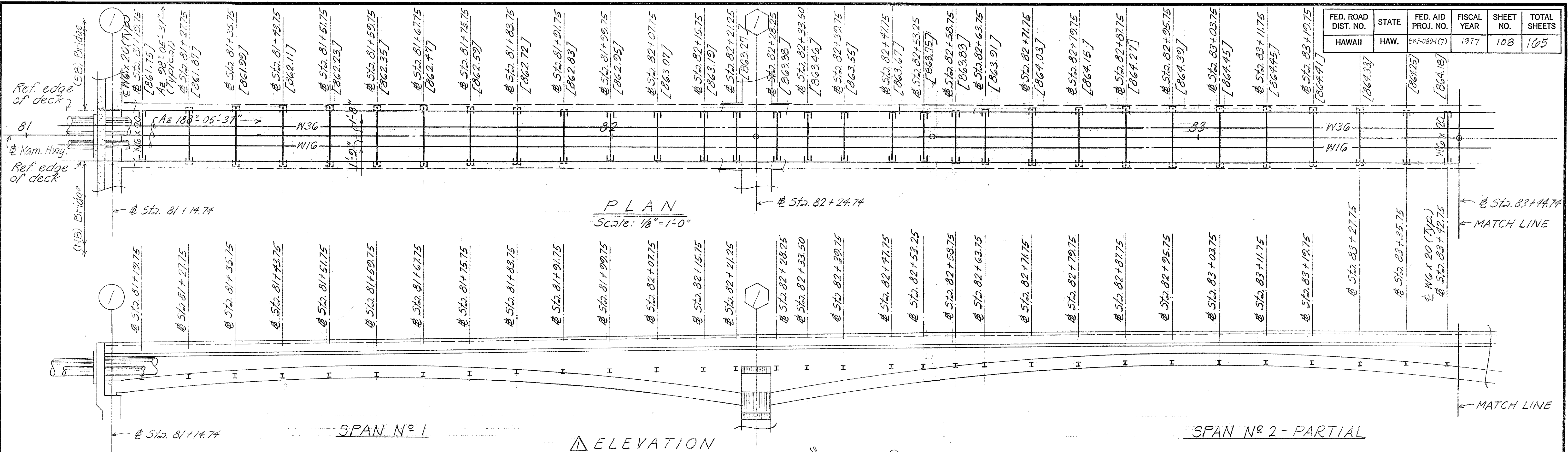
Proj. No. BRF-080-1(7)  
Scale: As noted Date: July 1976

SHEET No. 43 OF 47 SHEETS

CO 1107

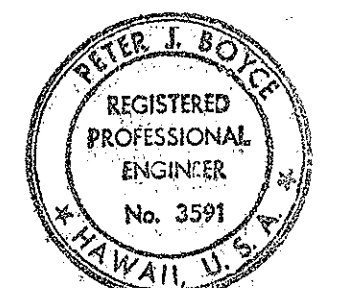


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	58F-080-1(7)	1977	108	105



- NOTES:
- [864.45] Denotes top flange elevation W6 x 20.
  - For typical pipe support members & connection details, refer to sht. #45.
  - Refer to Utility Plans for additional W36, W16, location & details.

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

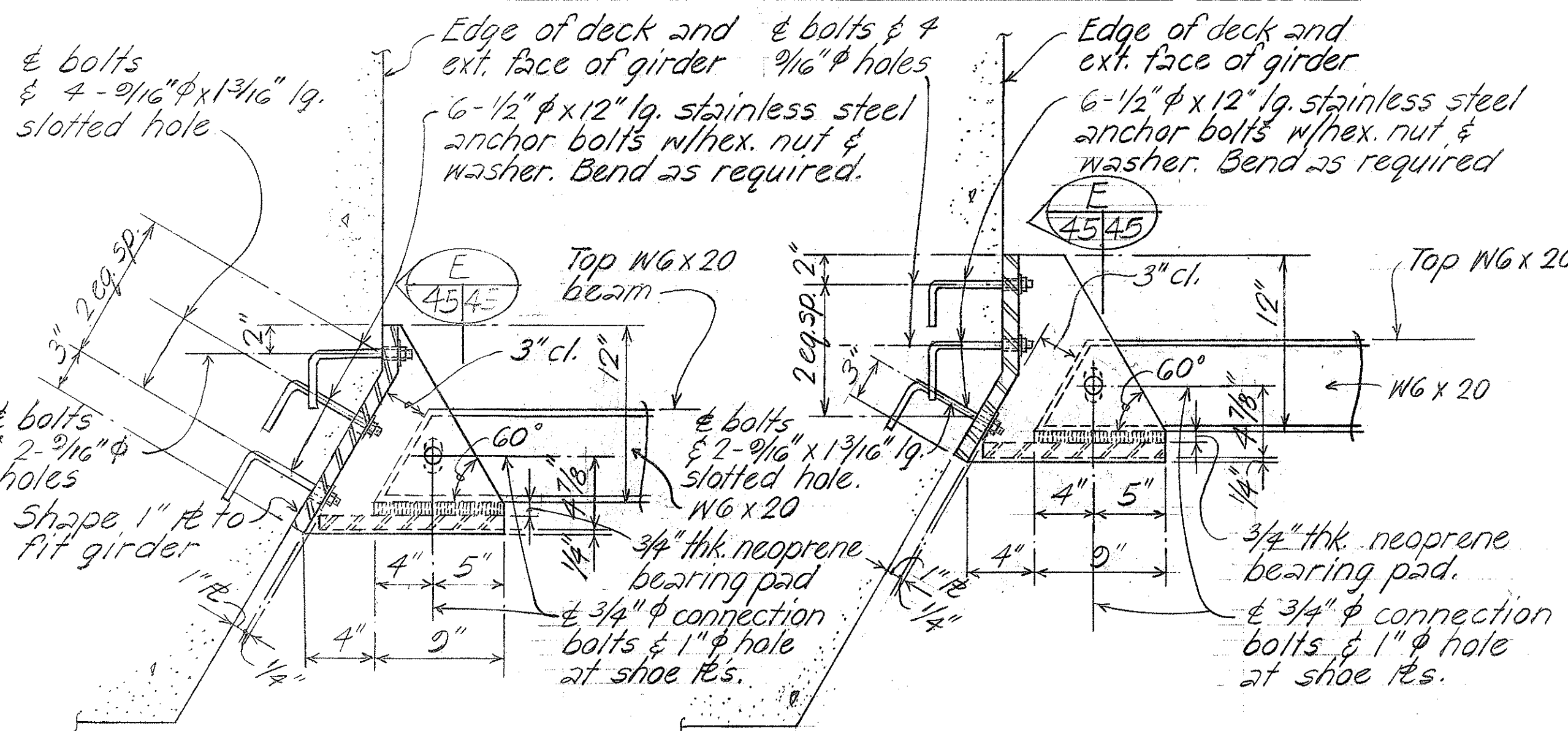


Peter J. Boyce

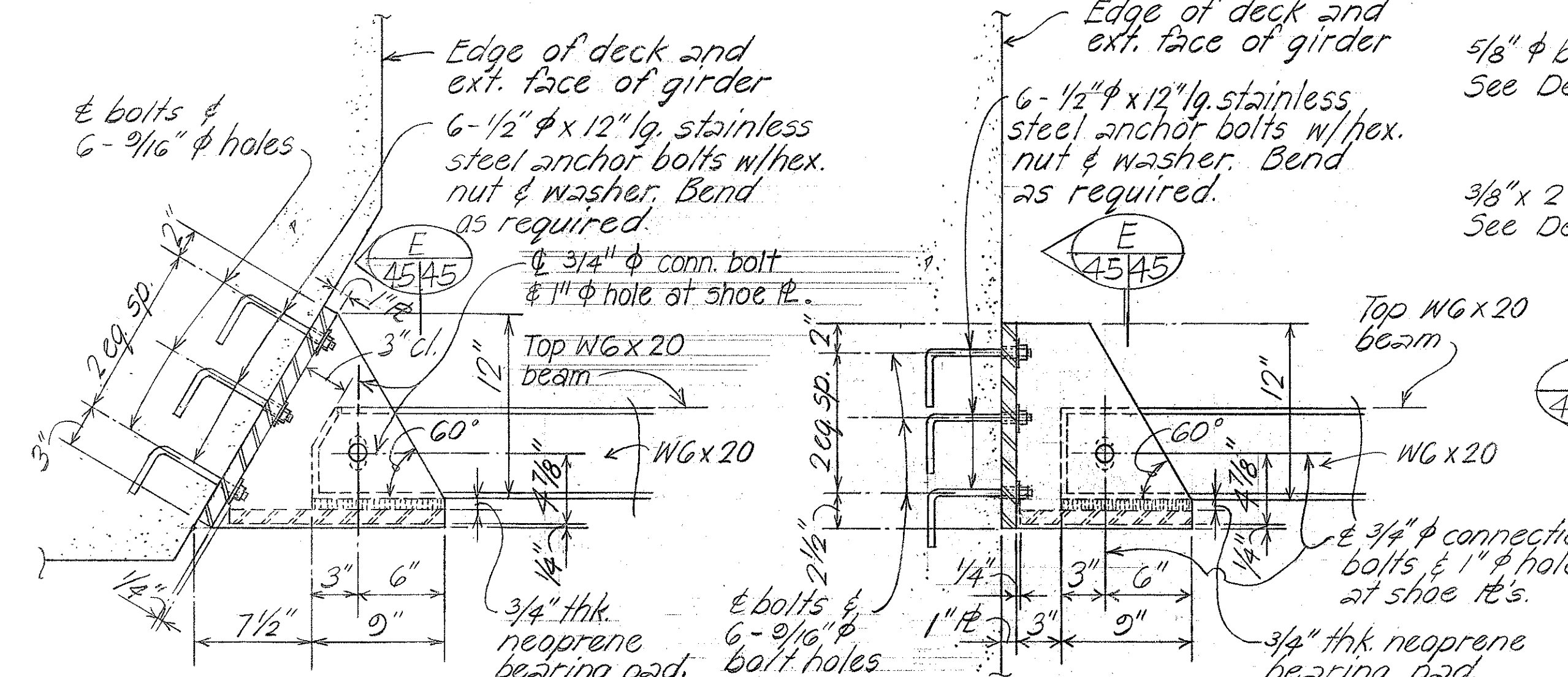
Revised to CIPPS  
 STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 LAYOUT PLAN-UTILITY TRENCH  
 W36 & W16 PIPE SUPPORT FRAME  
 CONSTRUCTION PHASE III (N.B.)  
 Proj. No. BRP-080-1(7)  
 Scale: As noted Date: July 1976  
 SHEET NO. 44 OF 47 SHEETS



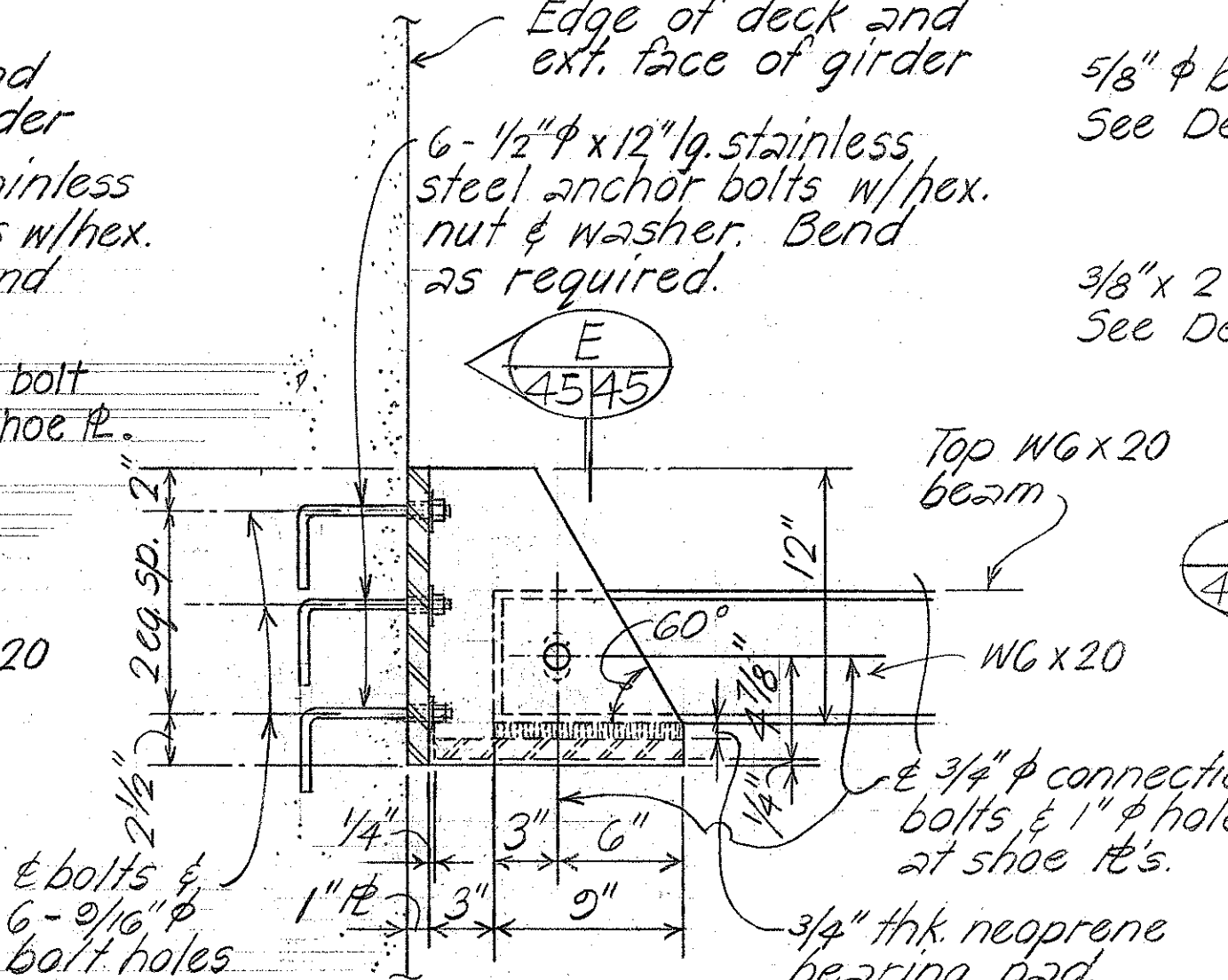
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	109	165



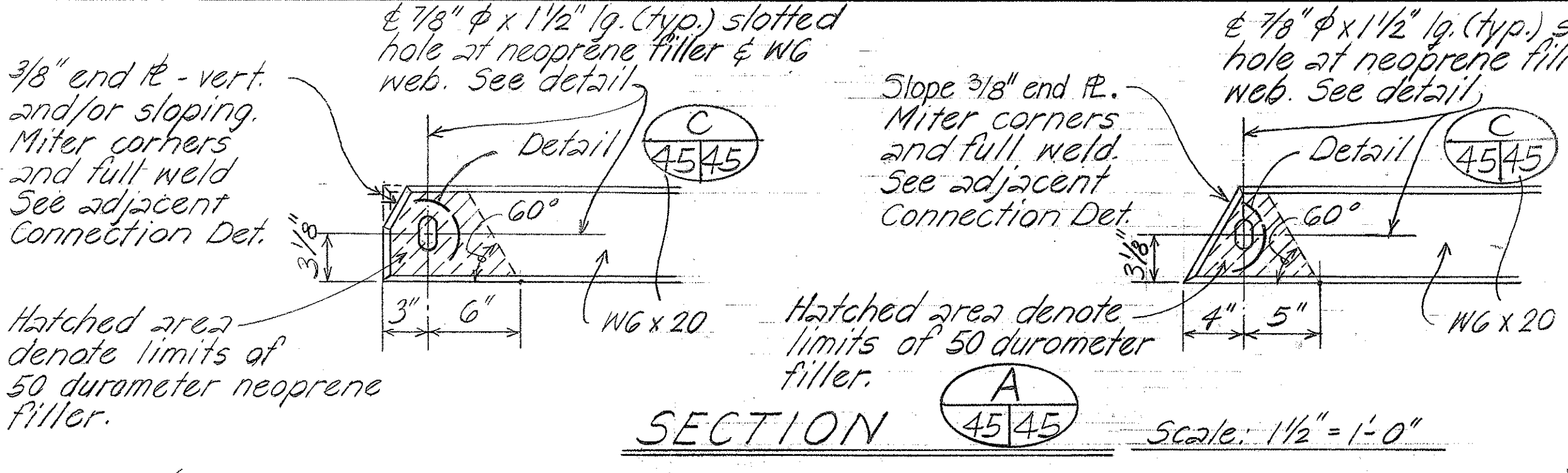
AT EXTERIOR ANGLE OF CONCRETE FACE



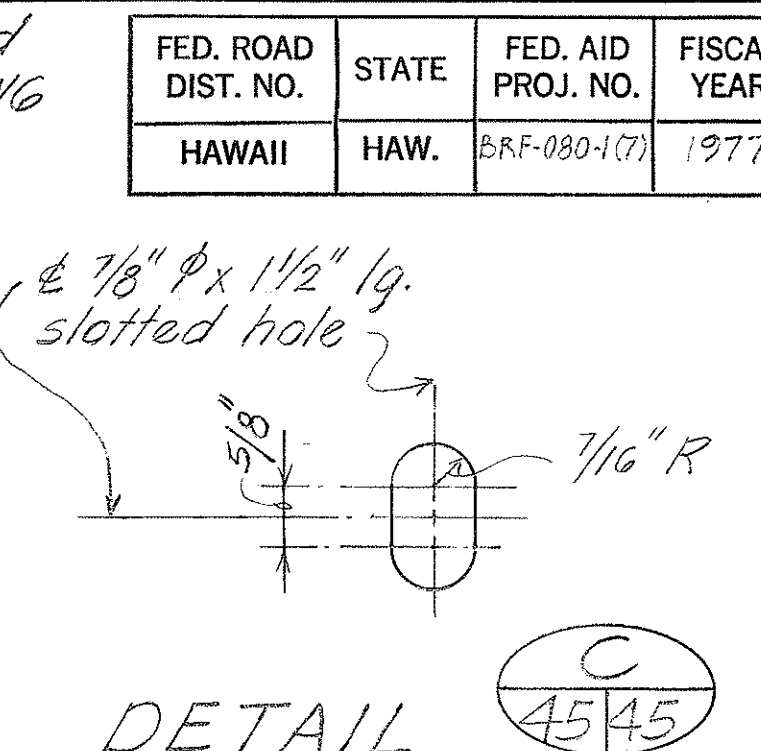
AT SLOPING CONCRETE FACE



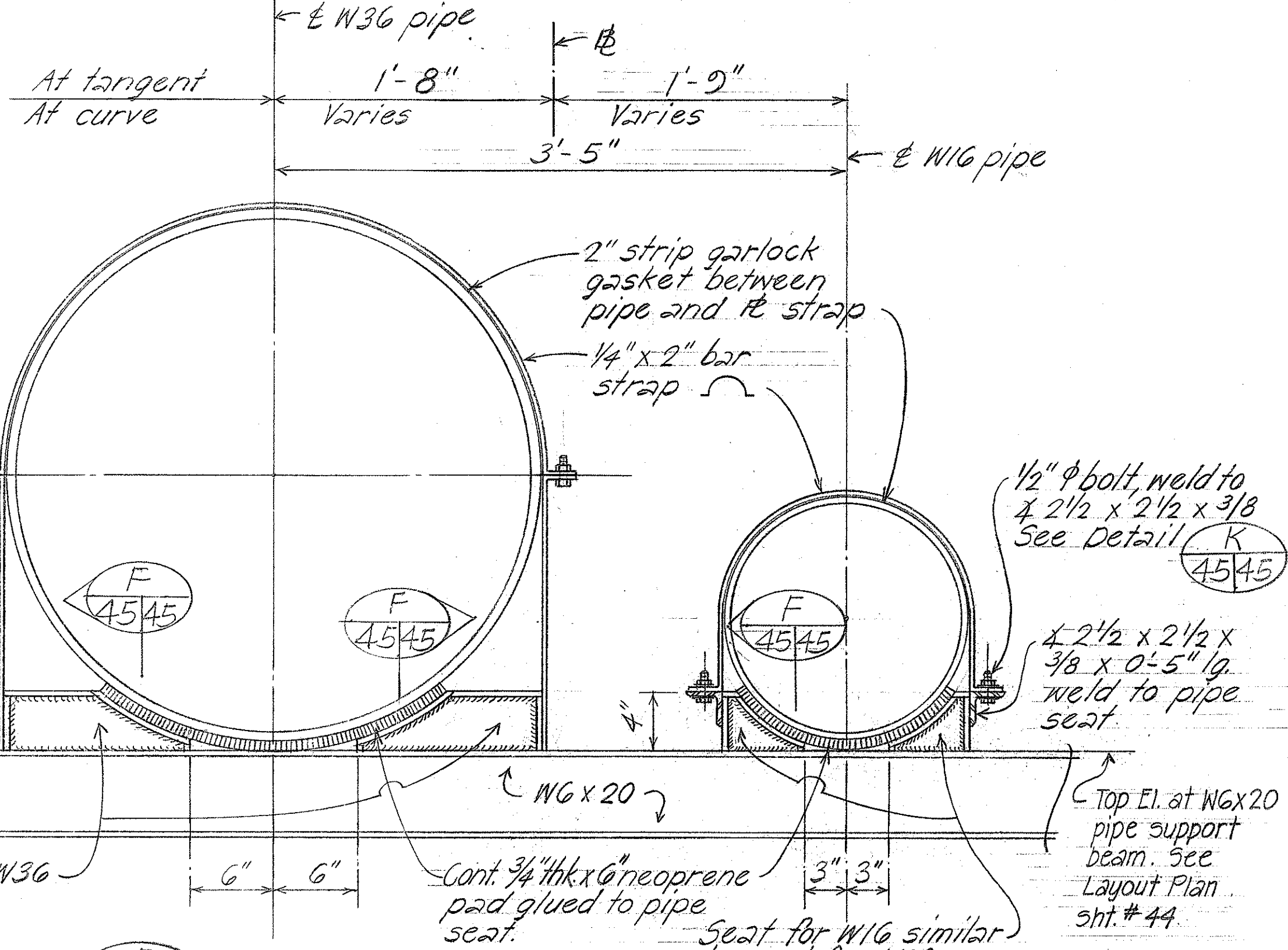
AT VERTICAL CONCRETE FACE



SECTION C 4545 Scale: 1/2" = 1'-0"

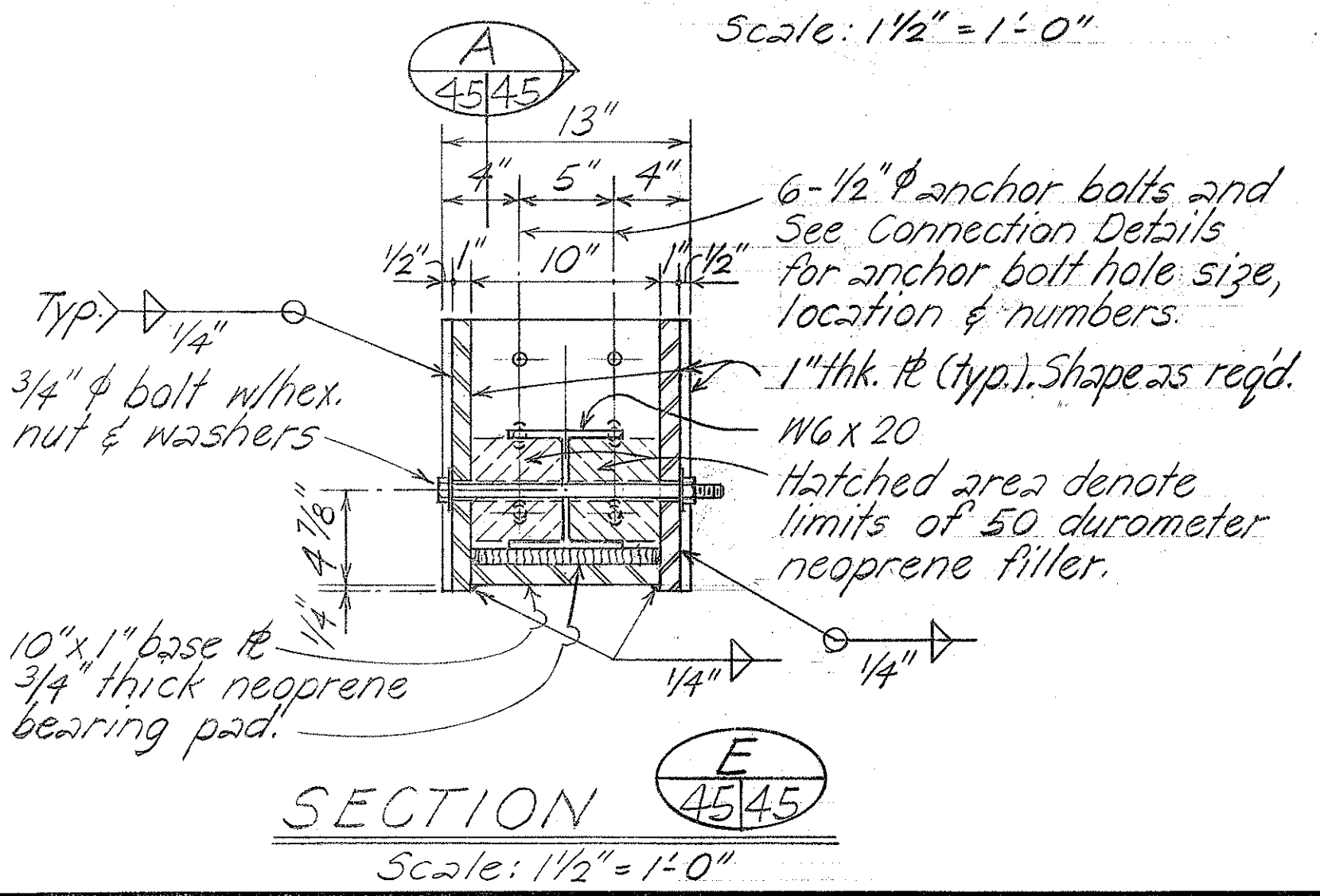


DETAIL C 4545 Scale: 6" = 1'-0"

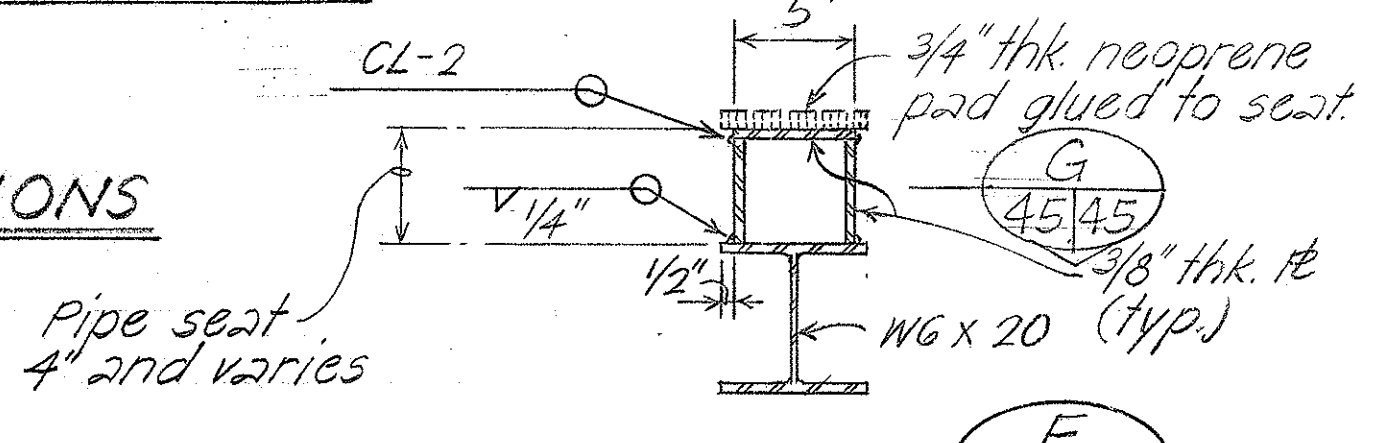


TYPICAL W36, 16 PIPE SUPPORT & CONNECTIONS Scale: 1/2" = 1'-0"

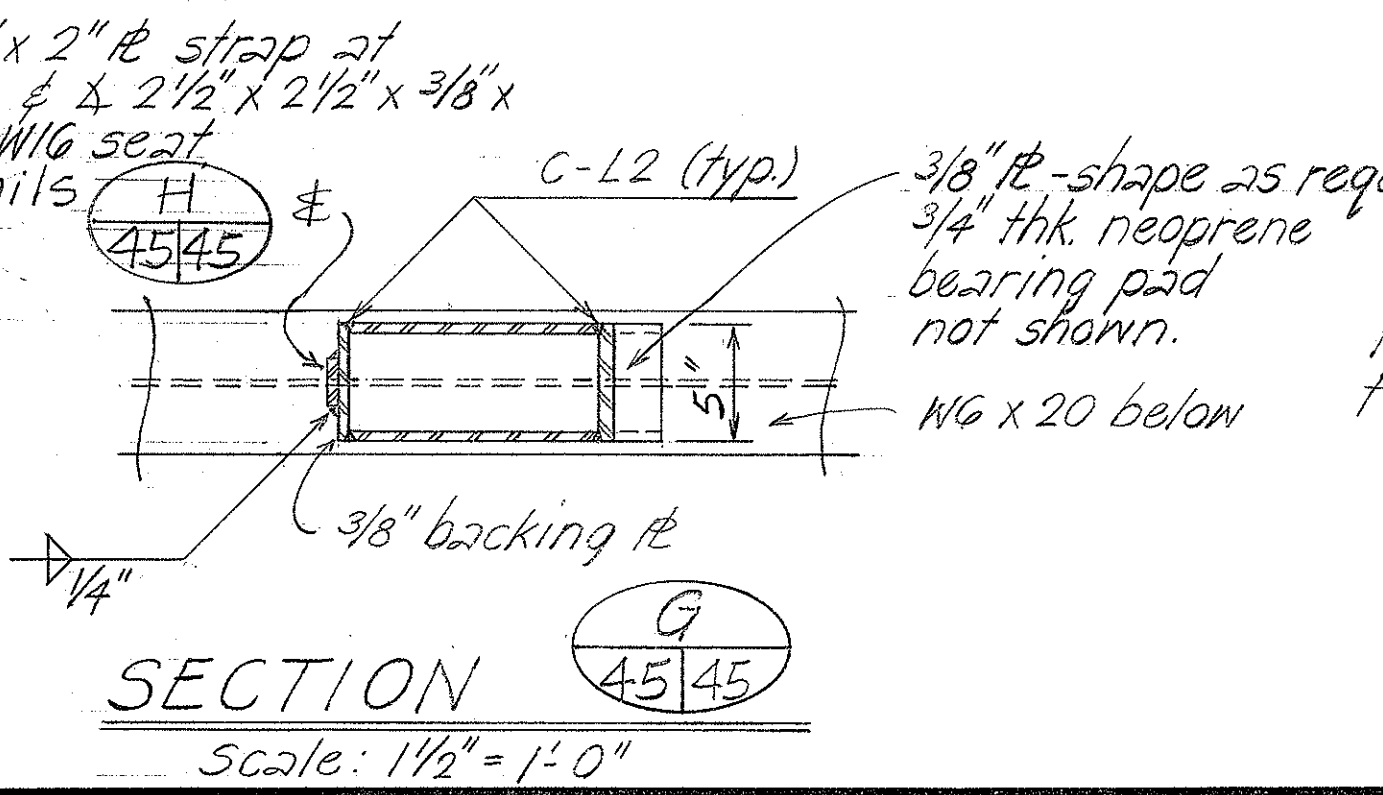
TYPICAL W36, 16 PIPE SUPPORT SHOE AND CONNECTION DETAILS AT VARIOUS LOCATIONS Scale: 1/2" = 1'-0"



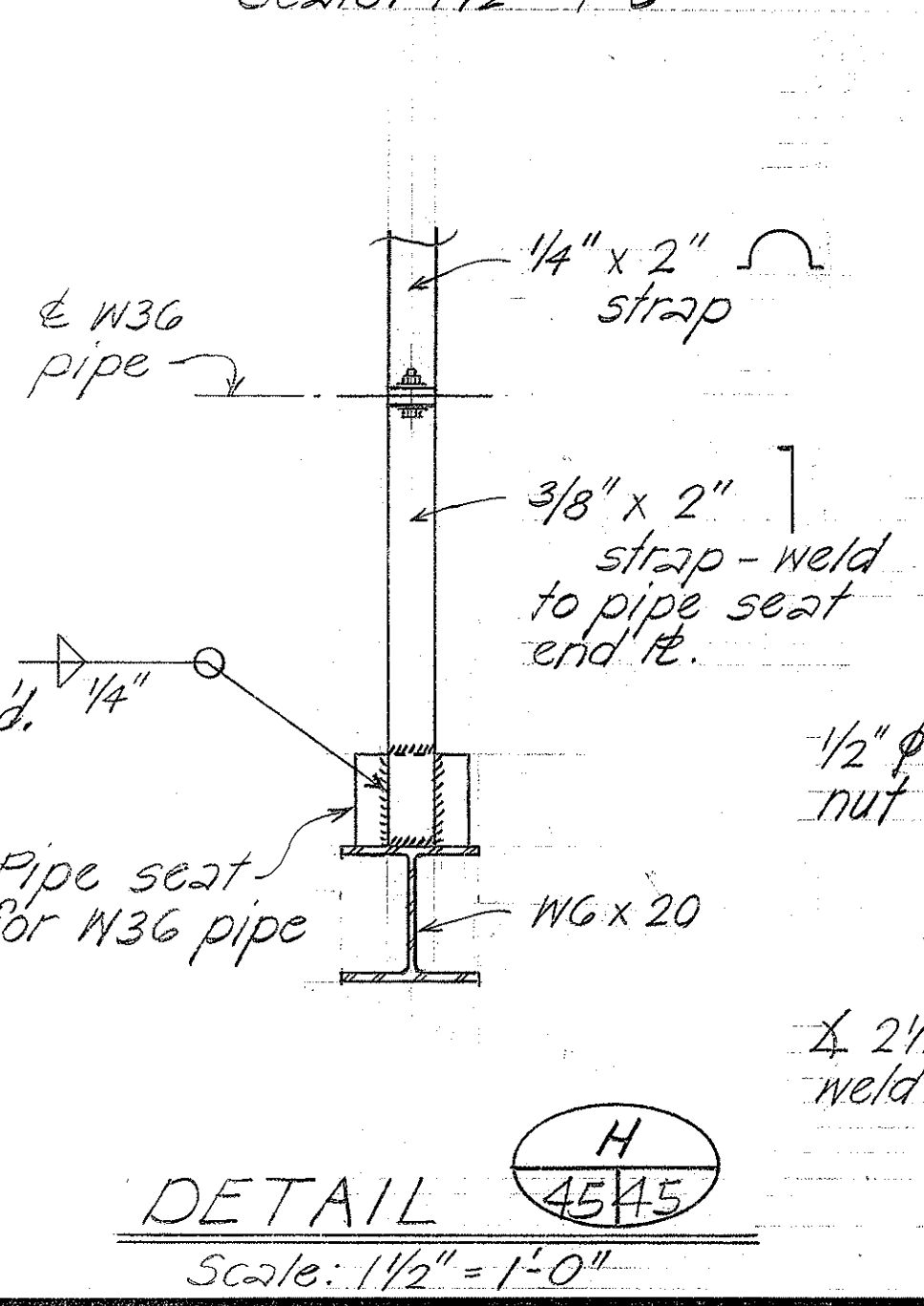
SECTION A 4545 Scale: 1/2" = 1'-0"



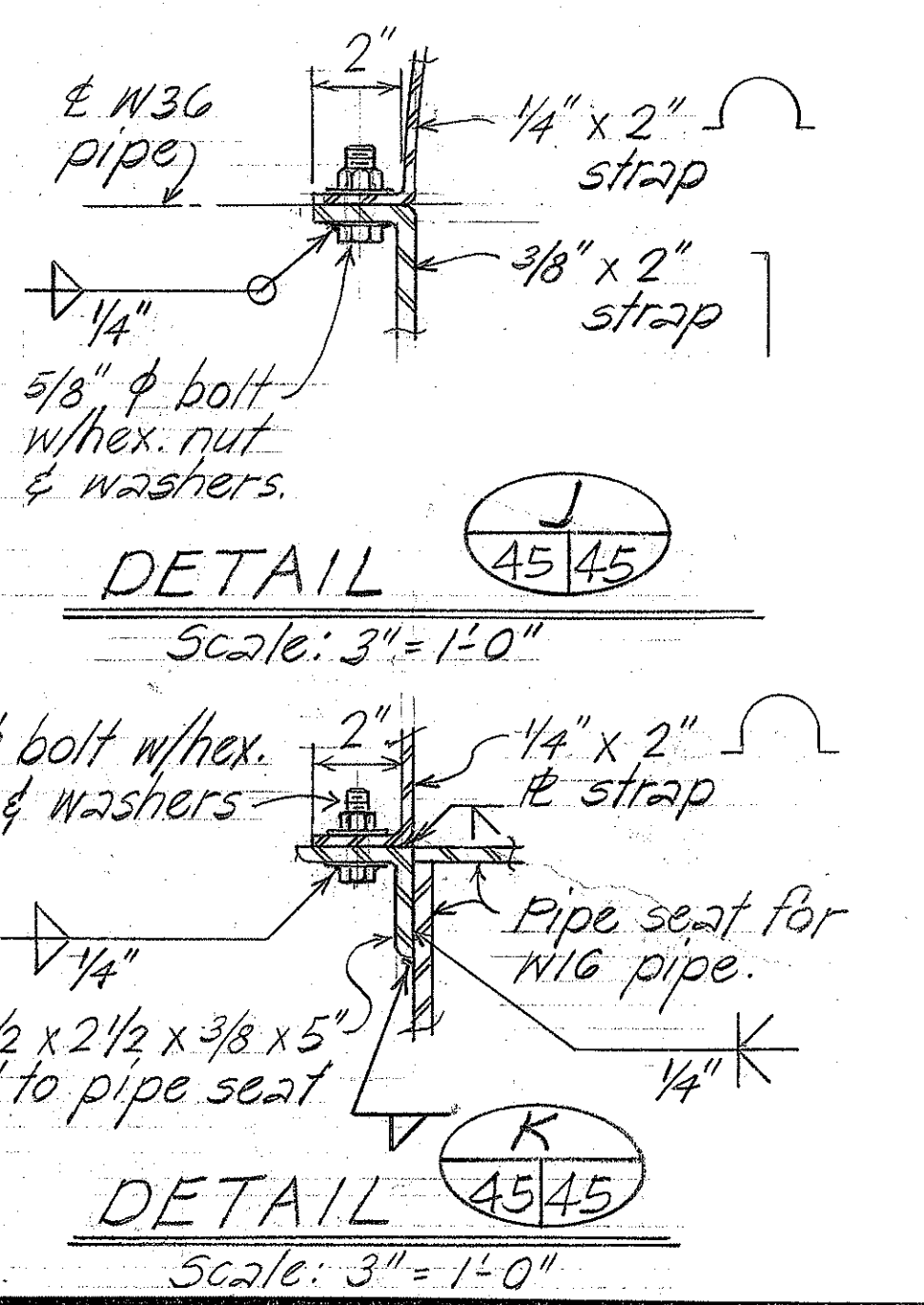
TYPICAL SECTION G 4545



SECTION H 4545 Scale: 1/2" = 1'-0"



DETAIL J 4545 Scale: 1/2" = 1'-0"



DETAIL K 4545 Scale: 3" = 1'-0"

- NOTES:
- Except as otherwise noted, pipe support members, tees, connection bolts & nuts to be structural steel. Shapes & bars to conform to ASTM A-36, nuts & bolts ASTM-307. All surfaces shall be hot dipped galvanized after fabrication prior to painting. All galvanized surfaces shall be painted w/Keeler Long 1 prime coat #4278 epoxy-acite primer 2 Mil. DFT & 1 coat Vista Green #6474 Kolonah 2 Mil. DFT. Surface preparation shall be as recommended by the paint supplier.
  - All stainless steel bolts & nuts to conform to ASTM A582 Type 302 and shall be incidental to structural steel.
  - The Contractor shall submit a minimum of 10 sets of detailed shop & fabrication drawings to the Engineer for approval prior to fabrication of steel supports & connections. Six sets of such shop drawings shall be forwarded to the Board of Water Supply for approval.
  - Pipe support assemblage to be paid as structural steel.
  - All welding to be continuous welds except as otherwise noted on Plan.
  - All bolts, nuts, washers & welding shall be incidental to structural steel.



Peter J. Beye

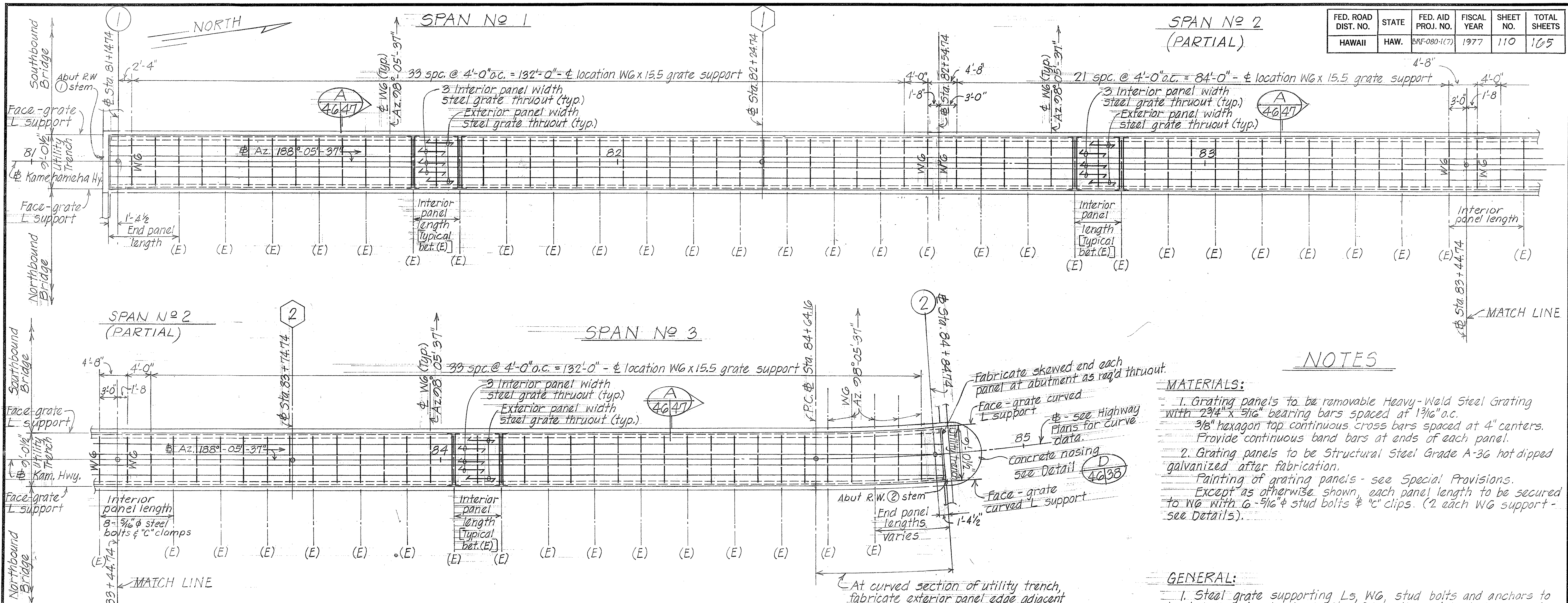
APPROVED:  
*[Signature]* 8/17/76  
 ASSISTANT CHIEF ENGINEER DATE  
 BOARD OF WATER SUPPLY

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 UTILITY TRENCH  
 PIPE SUPPORT FRAME DETAILS  
 CONSTRUCTION PHASE III (N.B.)  
 Proj. No. BRF-080-1(7)  
 Scale: As noted Date: July 1976  
 SHEET No. 45 OF 47 SHEETS

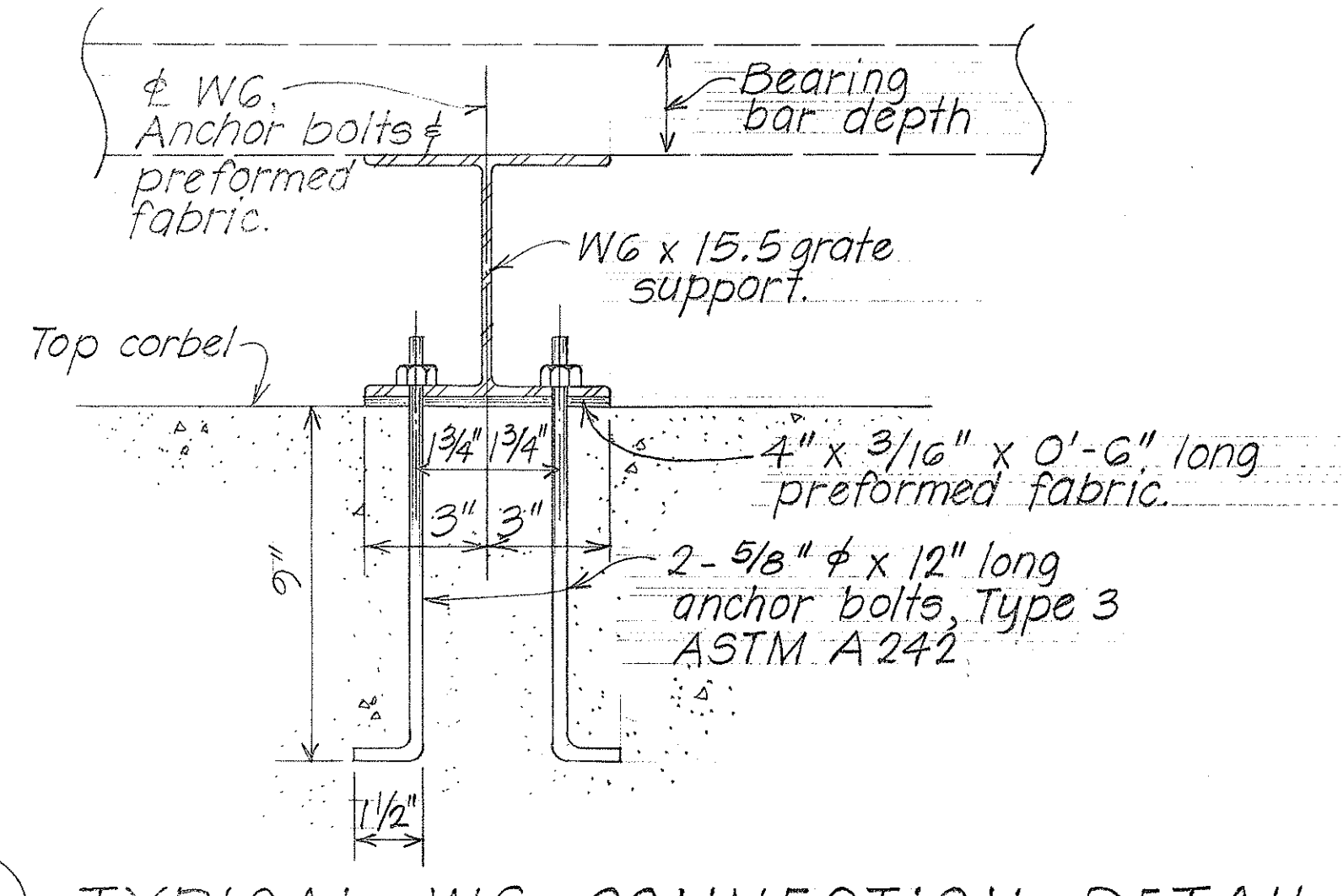
DATE: \_\_\_\_\_  
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 DRAWN BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 ORIGINAL PLAN NO. \_\_\_\_\_  
 NOTE BOOK NO. \_\_\_\_\_



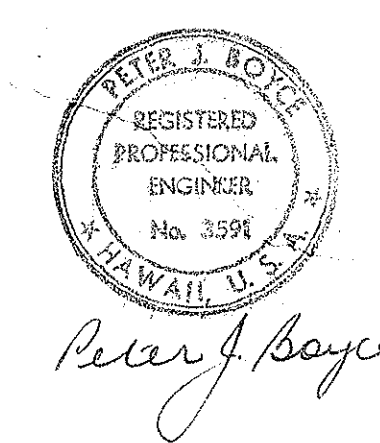
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	110	105



**FRAMING PLAN - UTILITY TRENCH STEEL GRATING & SUPPORTS**  
 Scale: 1/8" = 1'-0"



SURVEY PLOTTED BY	DATE
DRAWN BY LWA	
TRACED BY NT	
QUANTITIES BY GT, TKM	
CHECKED BY CSY	
ORIGINAL PLAN	No.
NOTE BOOK	



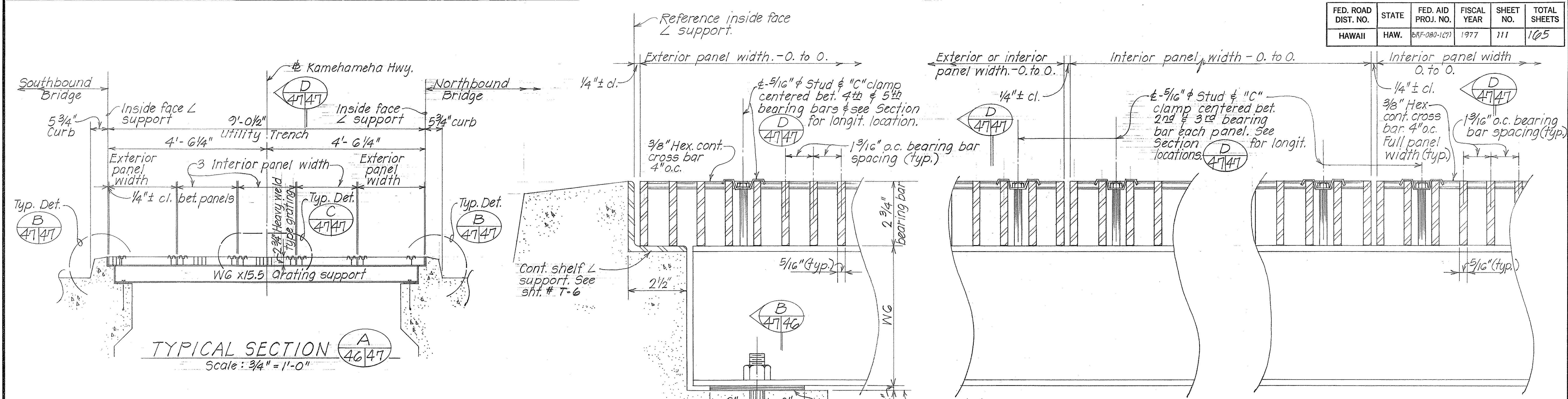
Revised to CIPPS

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 UTILITY TRENCH & STEEL GRATE  
 FRAMING & DETAILS  
 CONSTRUCTION PHASE III

Proj. No. BRF-080-1(7)  
 Scale: As shown Date: July 1976  
 SHEET No. 46 OF 47 SHEETS



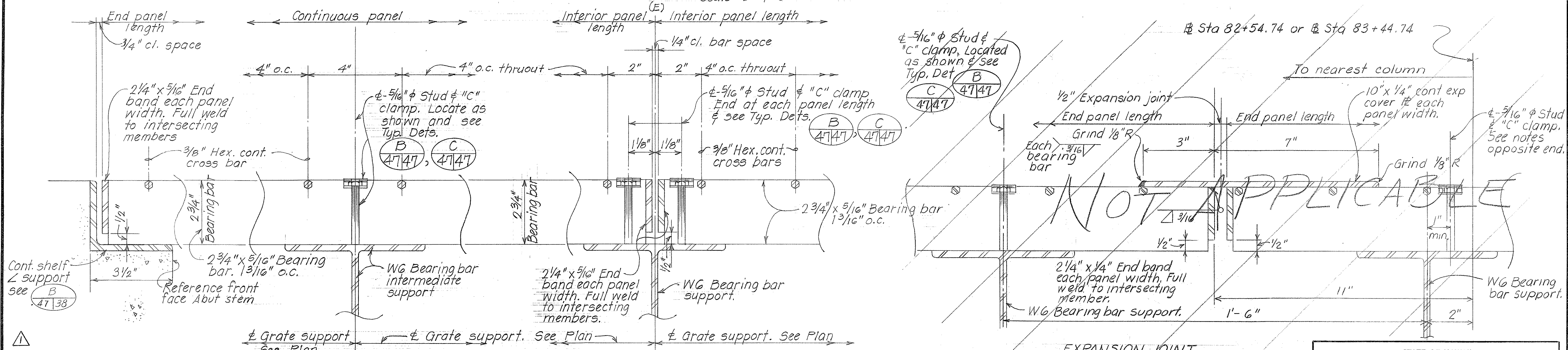
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	111	105



**TYPICAL SECTION**  
Scale: 3/4" = 1'-0"

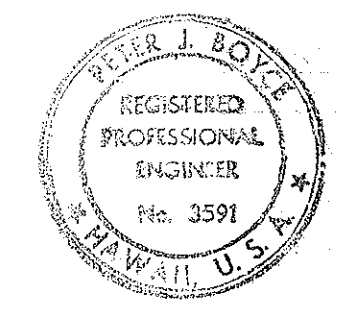
**TYPICAL DETAIL B**  
Scale: 6" = 1'-0"

**TYPICAL DETAILS C**  
Scale: 6" = 1'-0"



**TYPICAL PANEL BEARING BAR CONNECTION DETAILS**  
Scale: 6" = 1'-0"

**TYPICAL SECTION E**  
Scale: 6" = 1'-0"



Peter J. Boyce

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
UTILITY TRENCH STEEL GRATE  
SECTIONS & DETAILS  
CONSTRUCTION PHASE III  
Proj. No.: BRF-080-1(7)  
Scale: Scale as noted Date: July 1976  
SHEET NO. 47 OF 47 SHEETS

5/14/77 Revised to CIPPS

DATE: \_\_\_\_\_  
SURVEY PLOTTED BY: \_\_\_\_\_  
DRAWN BY: LMA  
CHECKED BY: M.T.  
NOTE BOOK: \_\_\_\_\_  
QUANTITIES BY: CSY  
CHECKED BY: \_\_\_\_\_



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	112	105

## GENERAL NOTES

### DESIGN SPECIFICATIONS AASHTO

Standard Specifications for Highway Bridges (11th Edition) with subsequent interim Specifications.

DESIGN LOADS: HS-20-44 or Interstate loading.

### DESIGN STRESSES:

1. Reinforced concrete - See AASHTO Specifications and Special Provisions except as otherwise noted.

Class A	All Others
$f'c = 3,000$ psi	4,500 psi
$f_c = 1,200$ psi	1,800 psi
$f_s =$ ASTM A615, Grade 40	

### 2. Prestressed Girders

$f'c = 6,000$  psi     $\frac{1}{2}$ " dia. 7 wire strands  
 $f'ci =$  See Schedules    Tensioning load = 31,000 lbs. per strand.  
 Design load = 22,000 lbs. per strand.  
 Initial tensioning values are based on pulling 270 K strands to .75 fy & the design load is based on a projected loss of 45,000 psi from initial pull.  
 Forms must be removed and the beams inspected before the strands are cut.

### Post Tension Box Girder Superstructure

Refer to Sht. No. T-7 for design stress.

3. All structural steel f's & members shall conform to ASTM A36 & hot dipped galvanized after fabrication.

4. Pile capacity 50 tons

### MATERIALS

1. Except as otherwise noted on plans:
  - a. Cast-in-place concrete for the various parts of the structure are:
    - Class A- Concrete - Railing, planter box, abutments, wingwall, retaining walls & footings.
    - 3,500 psi - Box girder superstructure. Pier columns as noted on plans.
  - b. Reinforcing steel for cast-in-place concrete are Grade 40.
  - c. Concrete for post tension Box girder superstructure Standard Specifications and as noted under Design Stresses.

3. All neoprene pads, elastomeric bearing pads, preformed fabric bearing pads, premoulded joint filler, incidental to concrete and will not be paid for separately.

4. See Specifications for admixture in concrete.

5. All piles to be prestressed concrete piles Type I - see Standard Det. Sht. Nos. DB-300-1, DB-300-2.

6. All welding shall be incidental to structural steel.

### CONSTRUCTION METHODS

1. See Standard Specification for Road & Bridge Construction, 1976 Edition and Special Provisions.

### CONSTRUCTION METHODS (CONT.)

2. In general top of concrete deck of superstructure shall be constructed to follow the finish roadway vertical and horizontal curves and grades.

3. For concrete finish see Special Provisions. Box girder concrete seats and creep blocks to be poured monolithically with the supporting structures. Top surfaces of concrete seats to have steel hard trowel finish.

4. Except as otherwise noted, all vertical dimensions are measured plumb.

5. Abutment, wingwall & retaining wall ftg. shall be excavated & poured neat against undisturbed ground. In case of over excavation, space between footing and ground shall be filled with concrete at the Contractor's expense and as directed by the Engineer. The minimum quality of the fill concrete shall be Class D.

6. Backfill for both abutments to be placed simultaneously at each abutment after the superstructure is cured.

7. Pile shorter than 100' shall not be spliced. For longer piles, one splice per pile will be permitted. For any spliced pile, the in-place length above the splice shall be at least 50% of the total length and as directed by the Engineer.

8. At abutment wing walls, modify top of standard retaining wall type T-1 DB-207-1 to accommodate railing detail. Omit continuous drip. See plans.

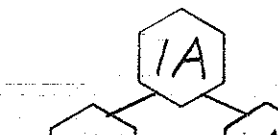


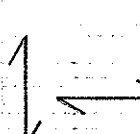
### REFERENCE

1. Typical Details drawing sheet Nos. T-1 thru T-30 inclusive refers to the bridge structure in general except for modification as may be required by special conditions. For such modifications see corresponding detailed plans.
2. Refer to Plan sheet Nos. 150 thru 157 inclusive for Existing Wilson Bridge. These drawings are to be used for general information & guidance only, and the State will not be responsible for the accuracy of the information on such plans.
3. Refer to Standard Detailed Drawings for additional details not covered by detailed and Typical Drawings.

### GENERAL

1. All items noted incidental will not be paid for separately.
2. The Contractor shall verify the locations of all existing utility lines and notify their respective owners before commencing with work.
3. The Contractor shall provide shop placement and detailed drawings of the following items at each construction phase for approval by the Engineer:
  - a. All pier columns & pier cap reinforcement
  - b. All reinforcing steel locations of required mechanical splice couplings.
  - c. All structural steel works including frame & grating assemblage at utility trench.
4. All preformed elastomeric bearing pads and preformed fabric bearing pads shall be secured against displacement with adhesives approved by the Engineer.
5. Refer to utility plans for various additional conduits; junction boxes, etc. in deck and pier cap.
6. Except as otherwise noted on plans, all exposed exterior corner 90° or less shall be chamfered  $\frac{3}{4}$ " x  $\frac{3}{4}$ ". All exposed exterior corner greater than 90° shall not be chamfered.

## SYMBOLS AND ABBREVIATIONS

<p>Location pier line numeral </p> <p>Detail or section designation </p> <p>Sht. no. sect. ion is cut or detail location. </p> <p>①, ② - Location concrete seat line number</p> <p>⊗ - Boring no. &amp; designation</p> <p>ⓐ - Prestressed box girder number.</p> <p>F-G - Footing Type (Individual Column)</p> <p> Deck slab main reinforcement direction between supports</p> <p>(E) - Expansion</p> <p>(F) - Fixed</p> <p>⬡ - Vertical pile</p> <p>AW-1 - Abutment Wall section type</p> <p style="text-align: center;">A</p> <p>Adj. - Adjacent</p> <p>Alt. - Alternate</p> <p>Az. - Azimuth</p> <p style="text-align: center;">B</p> <p>Bal. - Balance</p> <p>B.F. - Both faces</p> <p>Bot., Bott. - Bottom</p> <p>B - Baseline</p> <p>BSS-1 - Bottom slab strip reinf. type</p> <p>BS-5 - Bottom slab reinforcement type</p> <p>Bet. - Between</p> <p>Bm. - Beam</p> <p>Brg. - Bearing</p> <p style="text-align: center;">C</p> <p>Cl. - Clear</p> <p>Col. - Column</p> <p>Cont. - Continuous</p> <p>C.J. - Construction Joint</p> <p>¢ - Center Line</p> <p>CRM - Cement Rubble Masonry</p> <p>Const. - Construction</p>	<p style="text-align: center;">E</p> <p>Ea. - Each</p> <p>Eq. - Equal</p> <p>(E), Exp. - Expansion</p> <p>E.F. - Each Face</p> <p>El., Elev. - Elevation</p> <p>E.P. - Edge Pavement</p> <p>E.W. - Each Way</p> <p>Exist. - Existing</p> <p>E.J. - Expansion joint</p> <p style="text-align: center;">F</p> <p>Ftg. - Footing</p> <p>F.F. - Far Face</p> <p style="text-align: center;">G</p> <p>GRP - Grouted Rubble Paving</p> <p style="text-align: center;">H</p> <p>Hwy - Highway</p> <p style="text-align: center;">I</p> <p>Inv. - Invert</p> <p>Int. - Interior</p> <p style="text-align: center;">J</p> <p>Jt. - Joint</p> <p>J.B. - Junction Box</p> <p style="text-align: center;">L</p> <p>Lg. - Long</p> <p>Longit. - Longitudinal</p> <p>Lt. - Left</p> <p style="text-align: center;">M</p> <p>Max. - Maximum</p> <p>Min. - Minimum</p> <p style="text-align: center;">N</p> <p>No., # - Number</p> <p>N.F. - Near Face</p> <p>NB - North Bound</p> <p style="text-align: center;">O</p> <p>Op'ng - Opening</p> <p>O.C. - On Centers</p> <p>o/s - Offset</p> <p>o. to o. - out to out</p> <p style="text-align: center;">P</p> <p>Pt. - Point</p> <p>P.I. - Point of Intersection</p> <p>PG-1, PG-2 - Prestressed Girder Type</p> <p>PT-1, PT-2 - Prestressed Tee Type</p>	<p style="text-align: center;">R</p> <p>R - Radius</p> <p>Ref. - Reference</p> <p>Reinf. - Reinforcement</p> <p>Req'd - Required</p> <p>Rt. - Right</p> <p>R.W. - Retaining Wall</p> <p style="text-align: center;">S</p> <p>Sht. - Sheet</p> <p>Sta. - Station</p> <p>Stirr. - Stirrup</p> <p>Str. - straight</p> <p>Symm. - Symmetrical</p> <p>S.E. - Super Elevation</p> <p>9/2, 3 - Span divided into 2 or 3 equal parts</p> <p>SB - South Bound</p> <p>Sim. - Similar</p> <p style="text-align: center;">T</p> <p>Typ. - Typical</p> <p>T, (T) - Top</p> <p>T.P. - Turning Point</p> <p>TS-2 - Top Slab Reinforcement Type</p> <p>TSS-5 - Top Slab Strip Reinforcement Type</p> <p style="text-align: center;">V</p> <p>Vert. - Vertical</p> <p>Var. - Varies</p> <p style="text-align: center;">W</p> <p>W.P. - Working Point</p>
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ORIGINAL PLAN	DATE
DESIGNED BY	DRAWN BY
CHECKED BY	DATE
NOTE BOOK	NO.



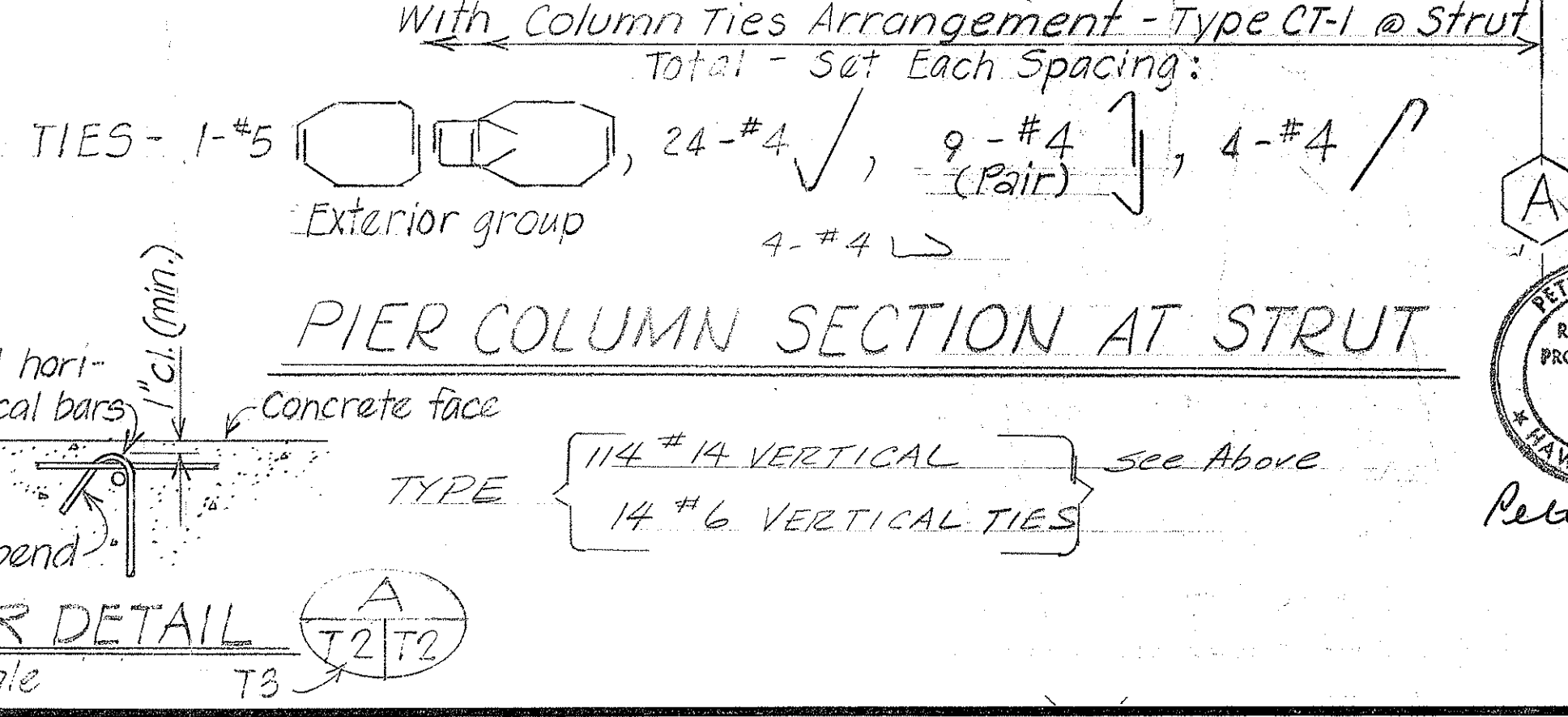
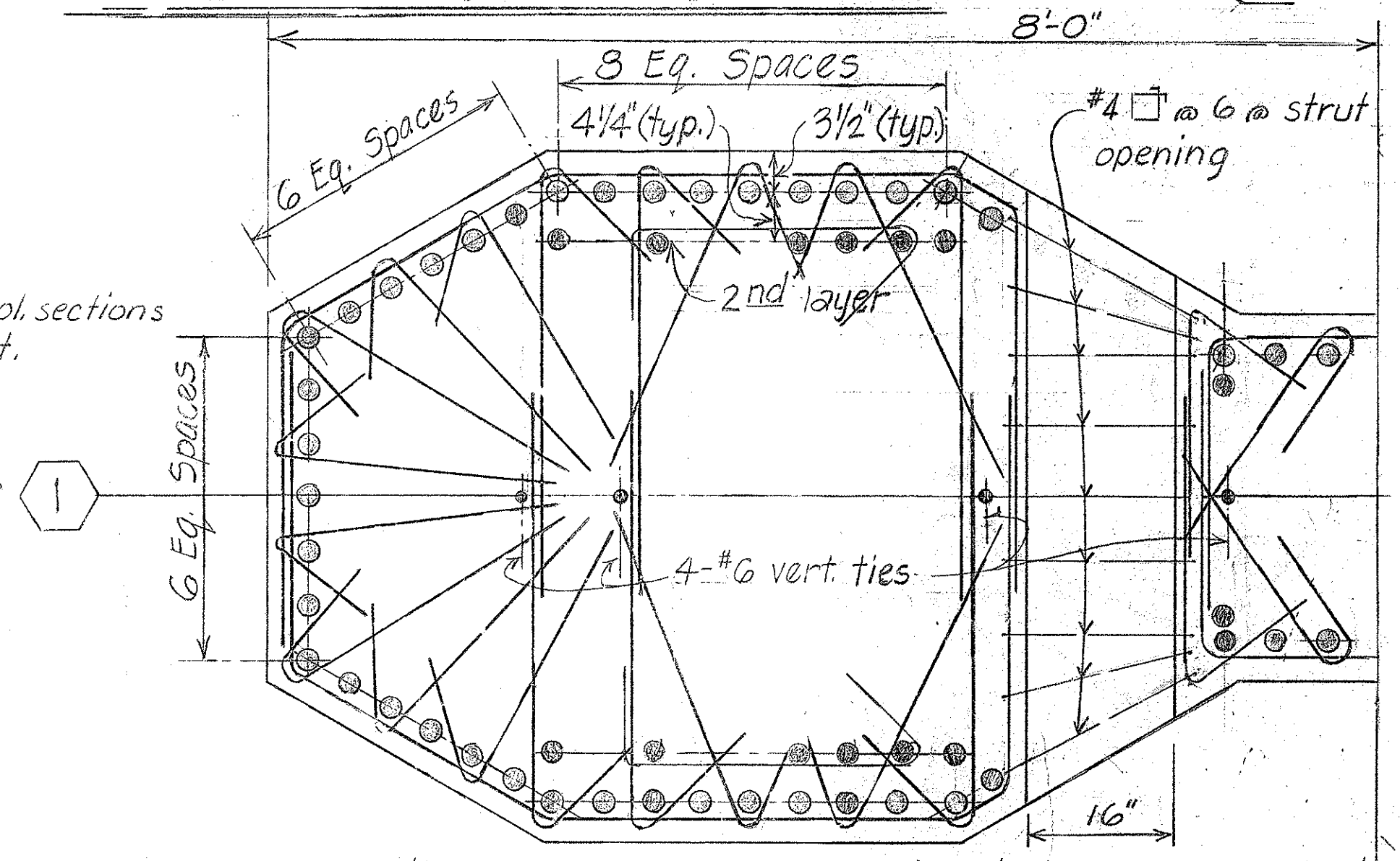
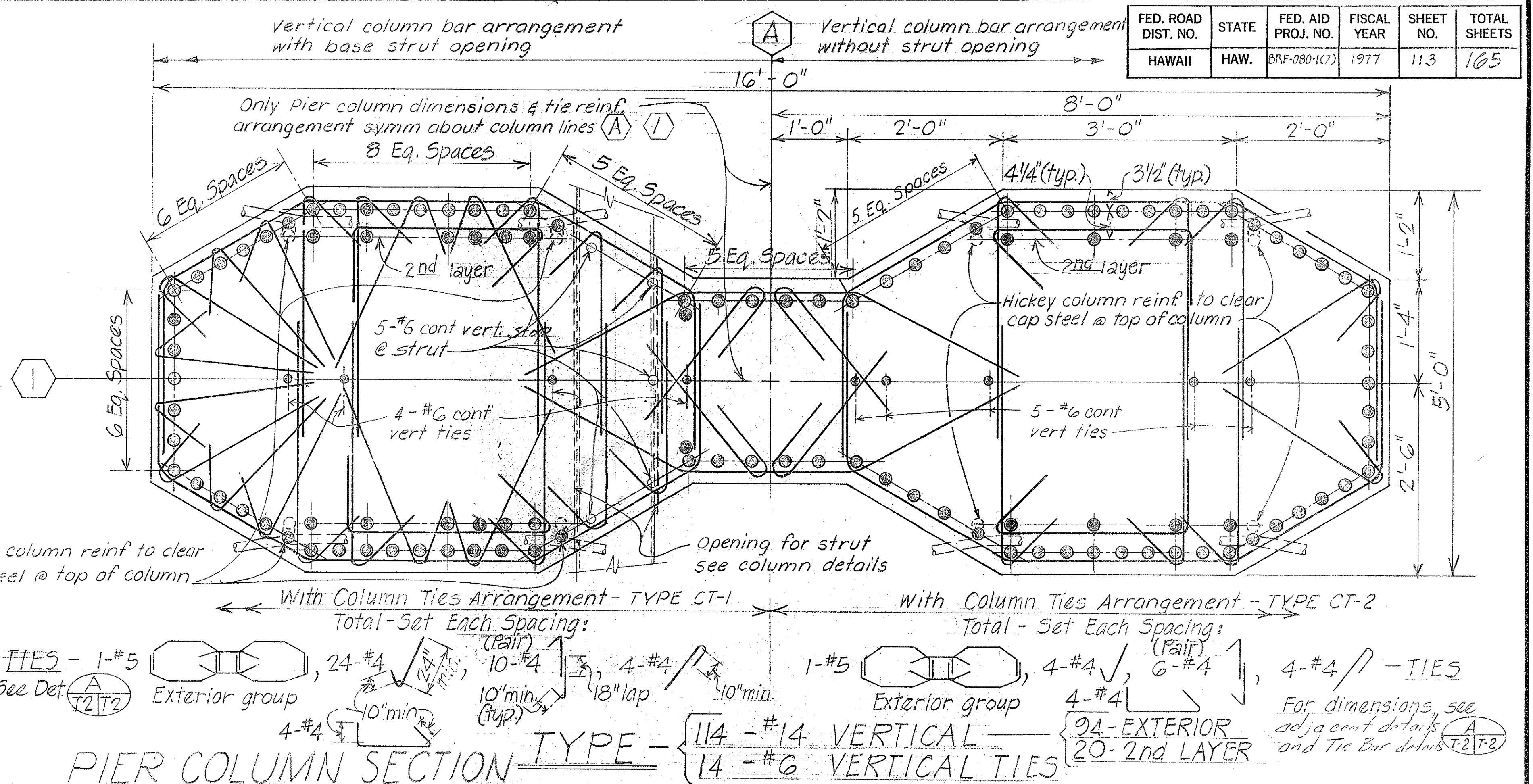
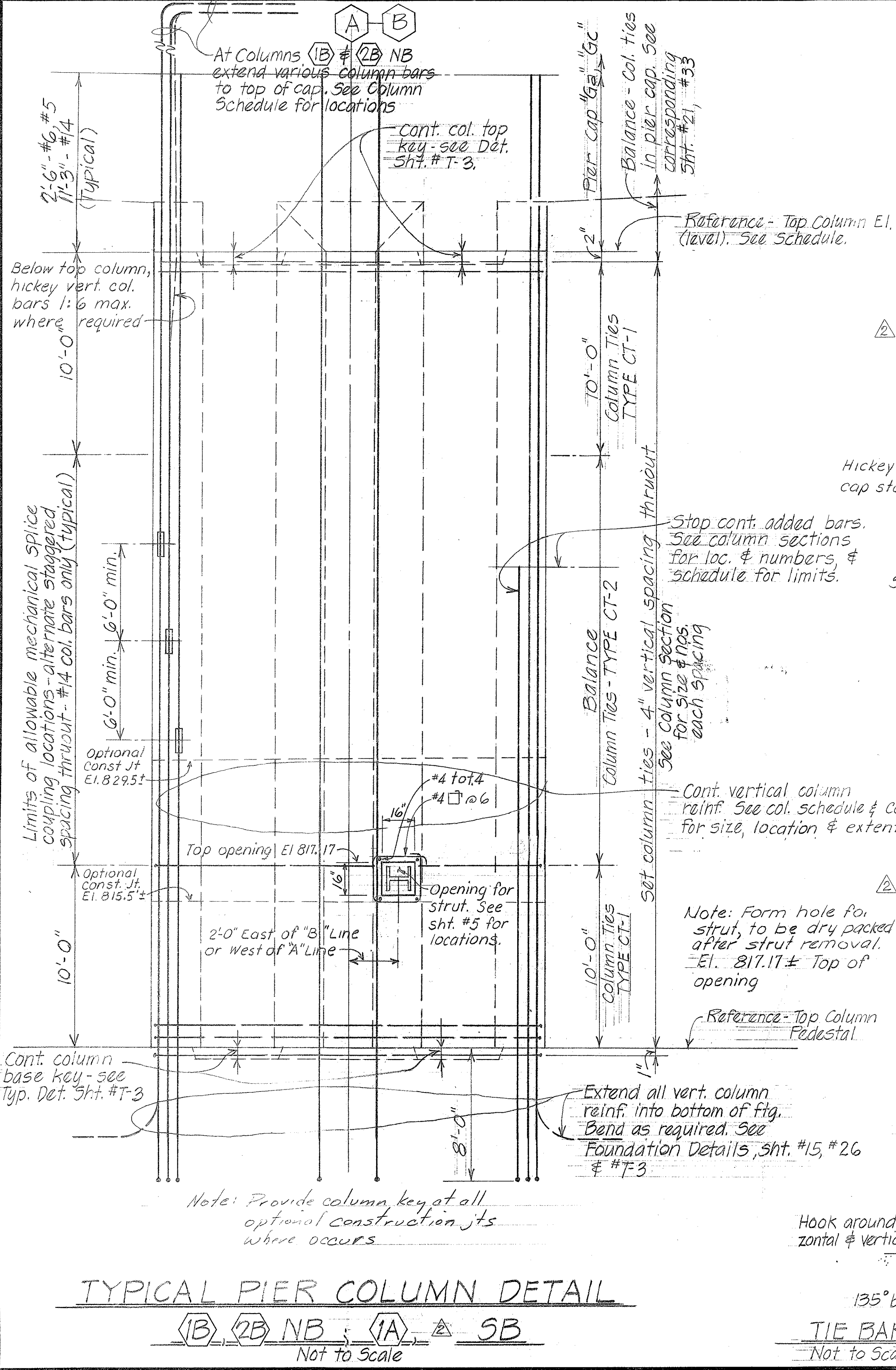
Revised to CIPPS 5/14/77

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 TYPICAL DETAILS  
 GENERAL NOTES, SYMBOLS  
 & ABBREVIATIONS

Proj. No. BRF-080-1(7)  
 Scale: No Scale    Date: July 1976  
 SHEET NO. 71 OF 30 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	113	165



Peter J. Boye  
REGISTERED PROFESSIONAL ENGINEER  
No. 3591  
HAWAII, U.S.A.

OPENING

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
WILSON BRIDGE  
TYPICAL DETAILS  
PIER COLUMN DETAILS & SECTIONS

PROJ. NO. BRF-080-1(7)  
Scale: As noted. Date: July 1976  
SHEET NO. T-2 OF 30 SHEETS

5/22/35 Revised Column (A)  
5/14/77 Revised to CIPRS

CO 113

DATE	BY
DESIGNED BY	MT
QUANTITIES BY	MT
CHECKED BY	GRY

TYPICAL PIER COLUMN DETAIL

1B, 2B, NB, 1A, SB

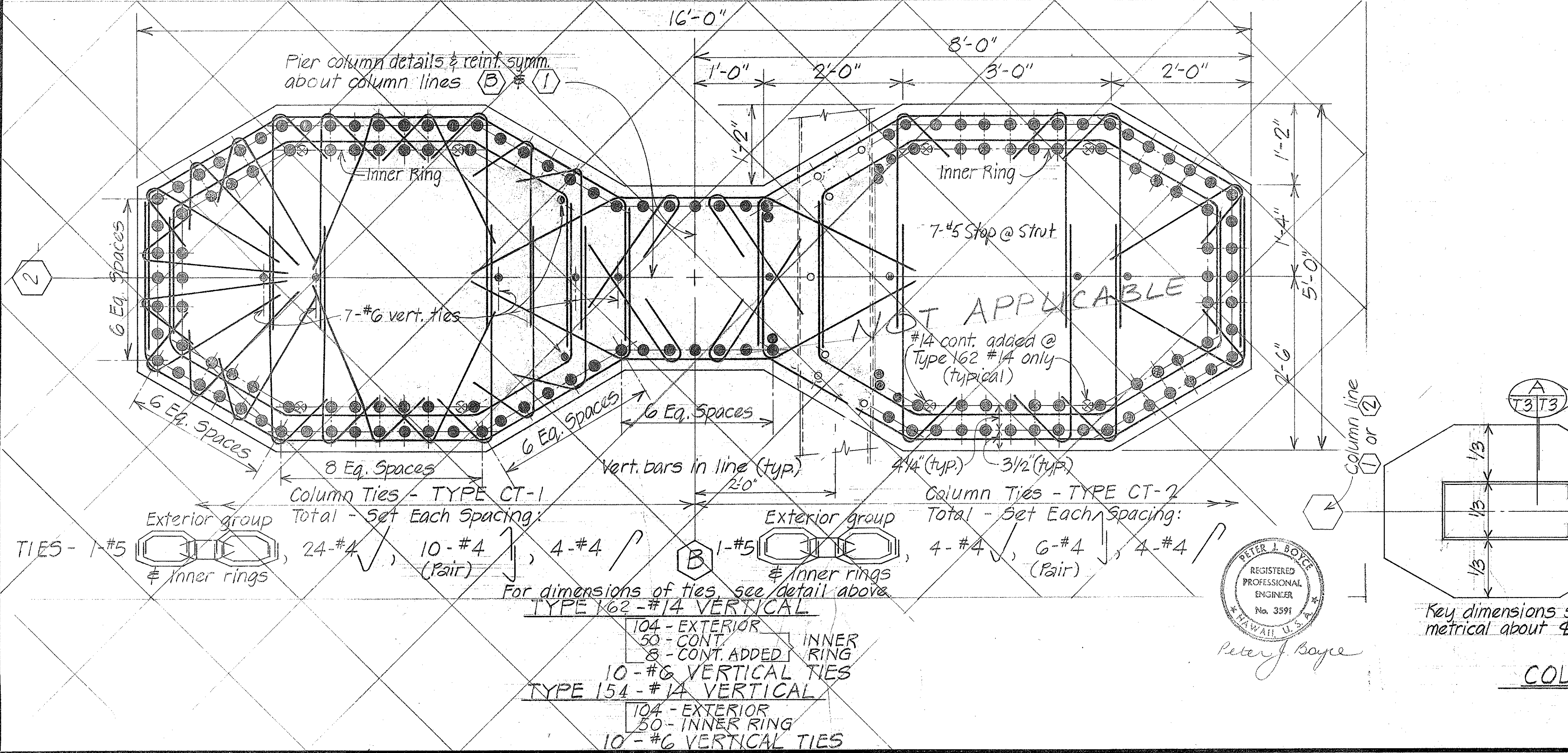
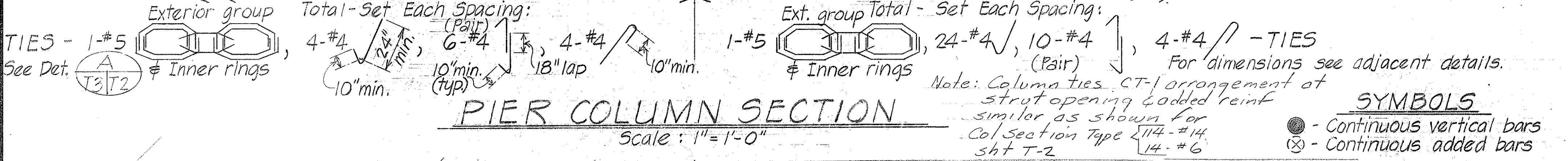
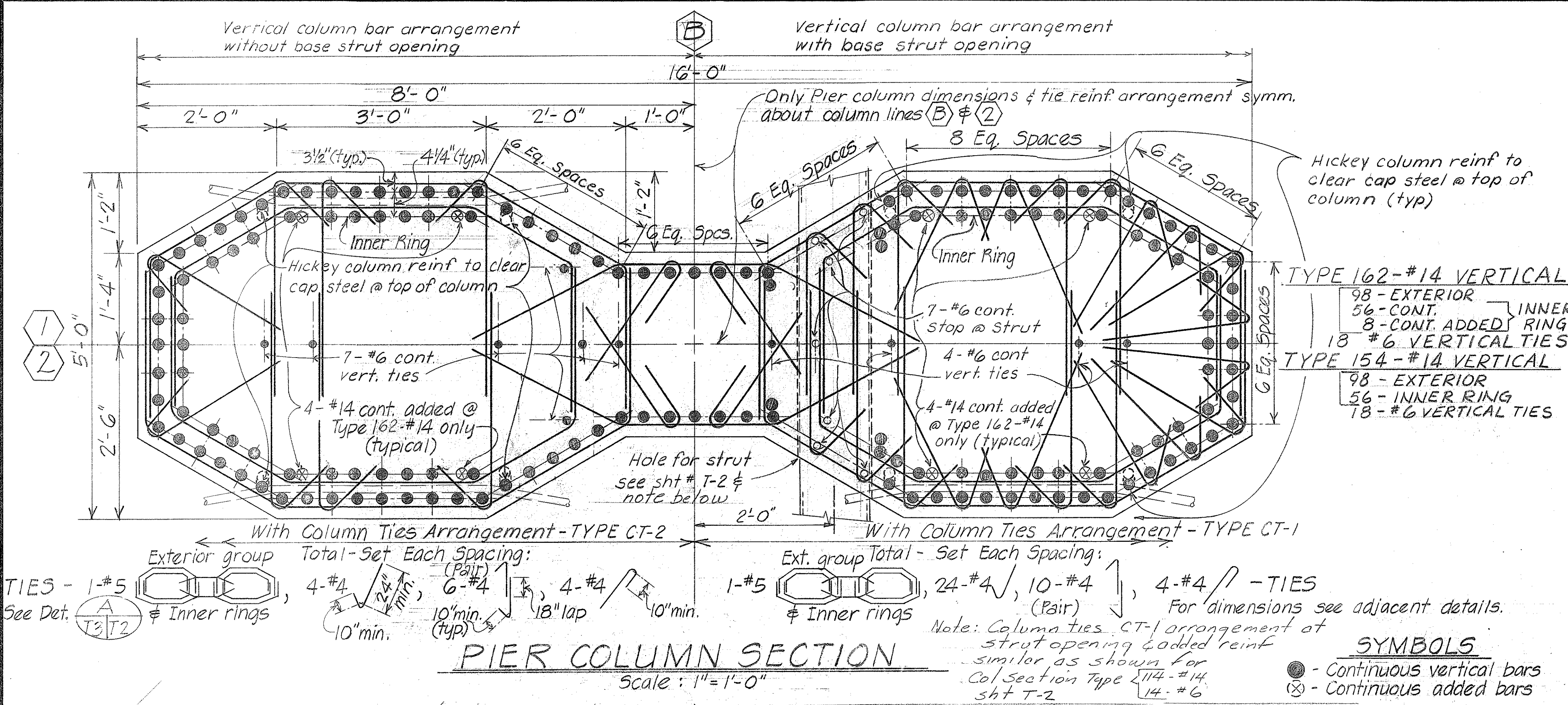
Not to Scale

TIE BAR DETAIL

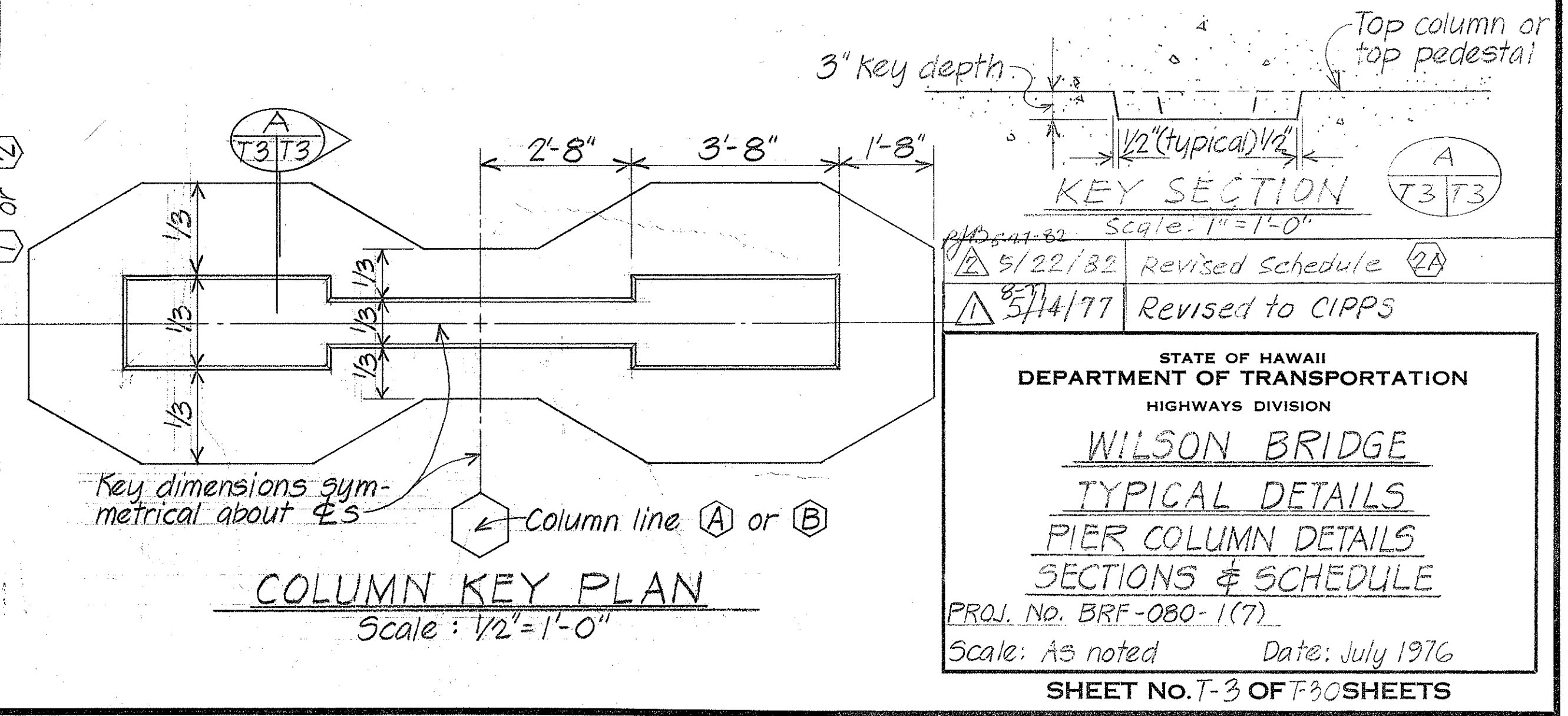
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FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	114	105



COLUMN LINE NO.	CONSTRUCTION PHASE I	CONSTRUCTION PHASE II	
LOCATION	(1B) NB (2B)	(1A) SB	(2A) SB (A)
TOP PIER CAP	Extend # bend 24-#14 into top-cap. For location see detail (T3/T2)		
TOP COLUMN ELEVATION	852.77	852.77	853.47
REFERENCE TOP COLUMN	16'-0" x Varies (5'-0" / 2'-8") Type - 154-#14 - Vert. - 18-#6 ties Type - 162-#14 - Vert. - 18-#6 ties Extend 24-#14 bend into top of cap. See note above. 130-#14, 11-3 above top of col.	16'-0" x Varies (5'-0" / 2'-8") Type - 114-#14 - Vert. thruout Type - 14-#6 ties - See Typ. column Det.	16'-0" x Varies (5'-0" / 2'-8") Type - 80-#11 - Vert. thruout Type - #5 spiral (Local Shaped) - See Column Det.
TOP COLUMN PEDESTAL			
COLUMN PEDESTAL	See Foundation Details Sht. #15 & #5, #26	See Found. Defs. Sht. #5 & #26	
PILE FOOTING TYPE	See Foundation Details Sht. #15, #26	See Foundation Details Sht. #26 &	
BOTTOM FOOTING ELEVATION	801.0	801.0	801.0
PILE CUT-OFF ELEVATION	-801.5	801.5	801.5 - 802.5
PILE TIP ELEVATION	735.0	740.0	740.0



DATE: \_\_\_\_\_  
SURVEY PLOTTED BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_

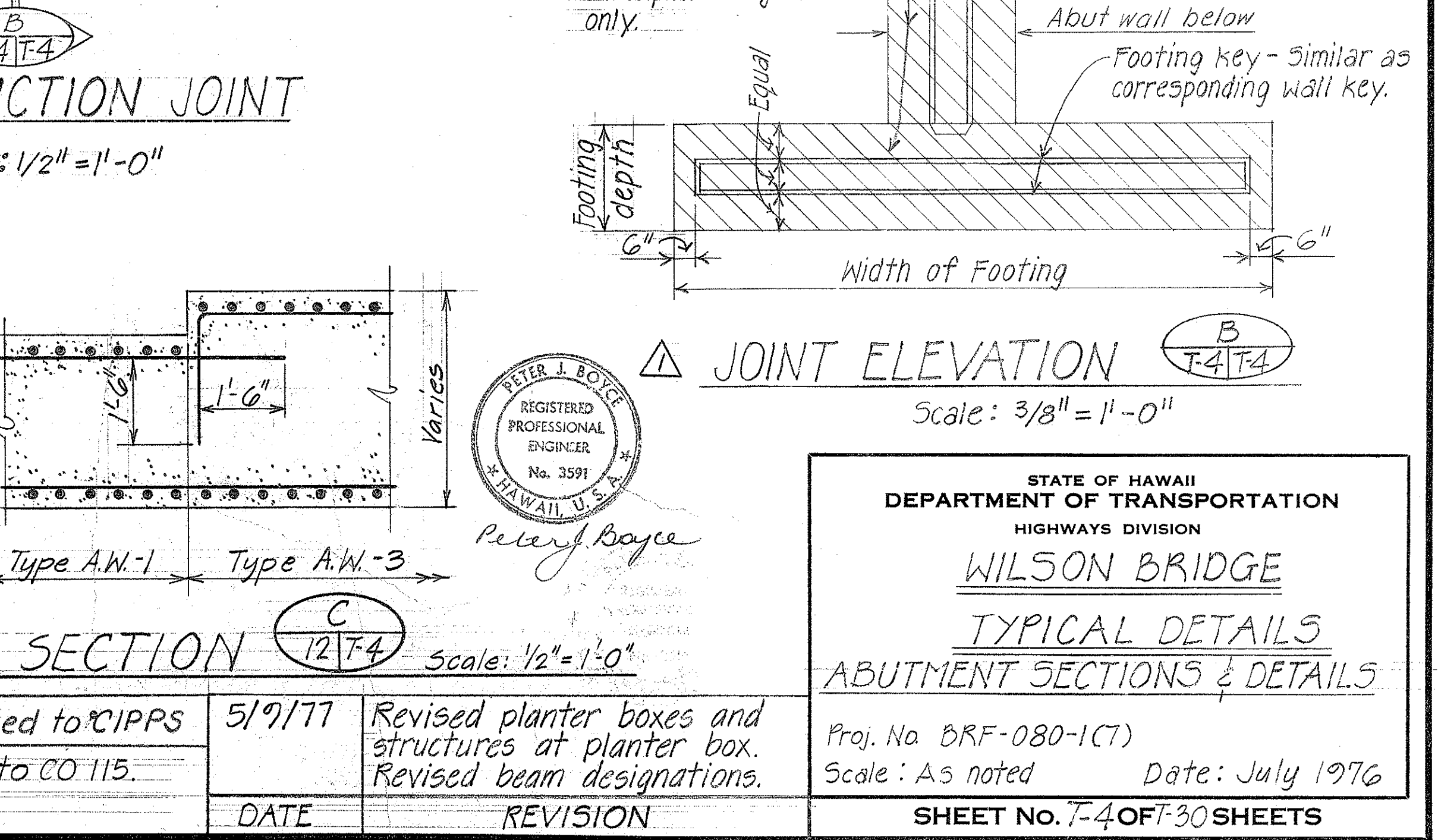
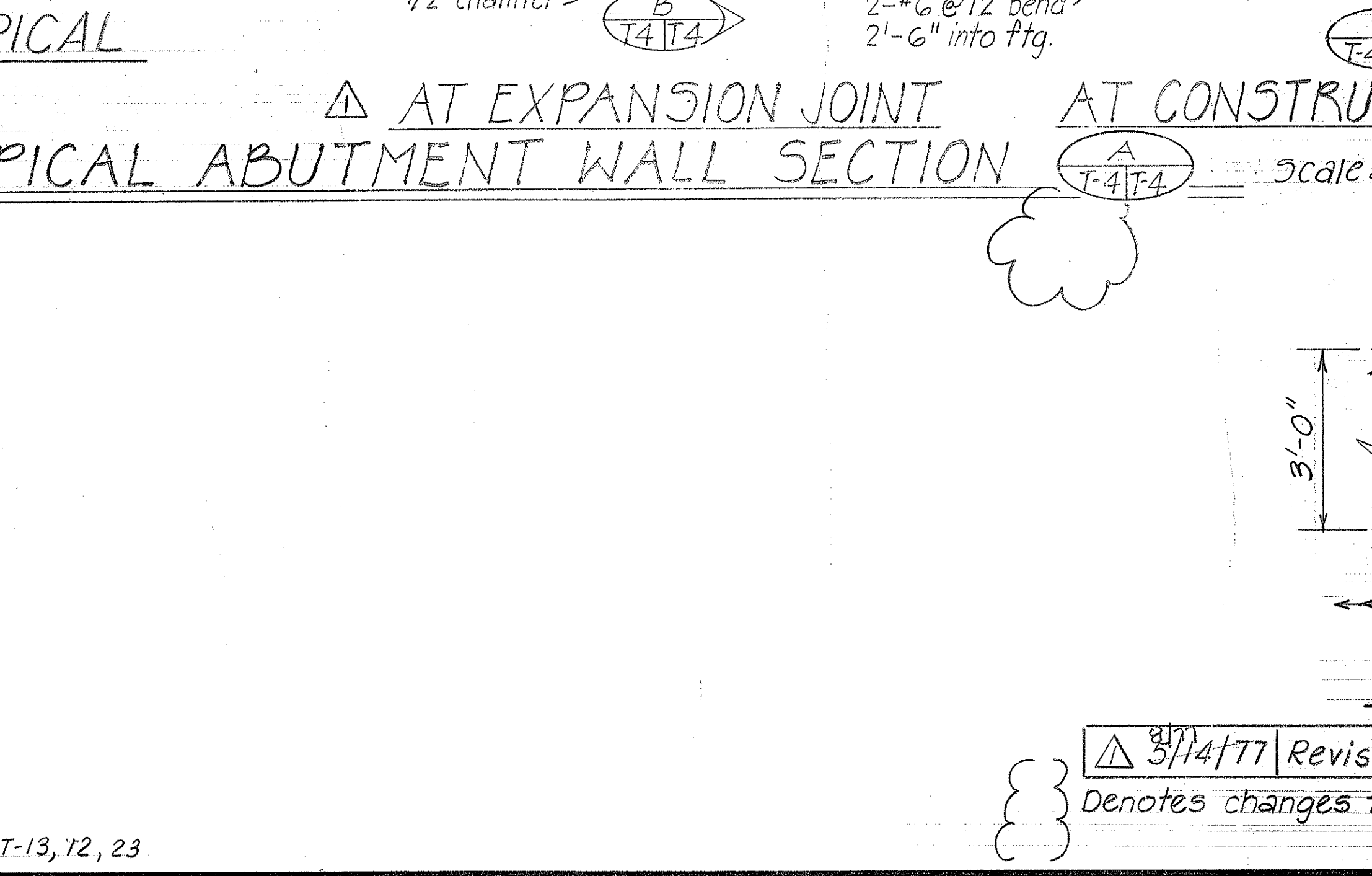
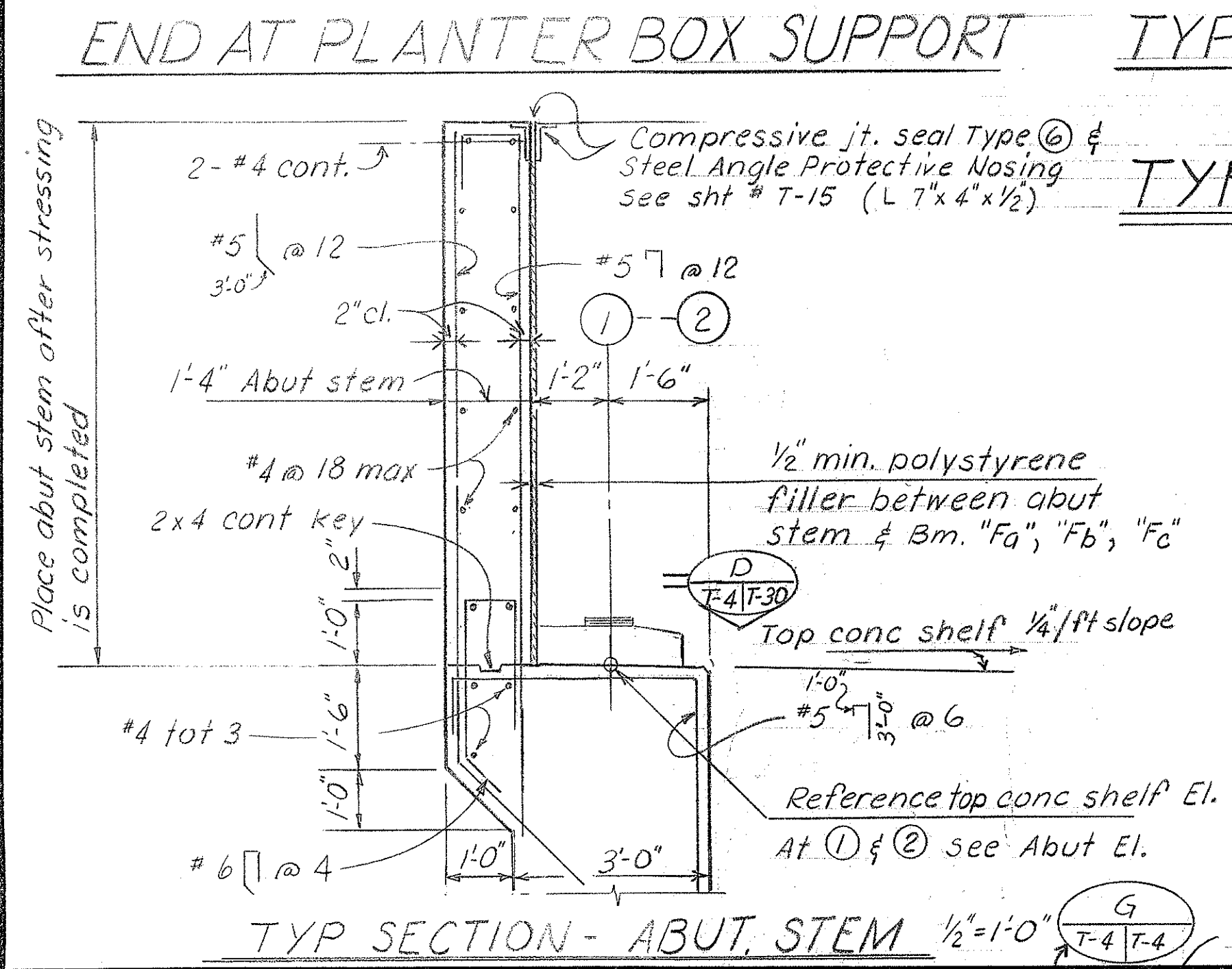
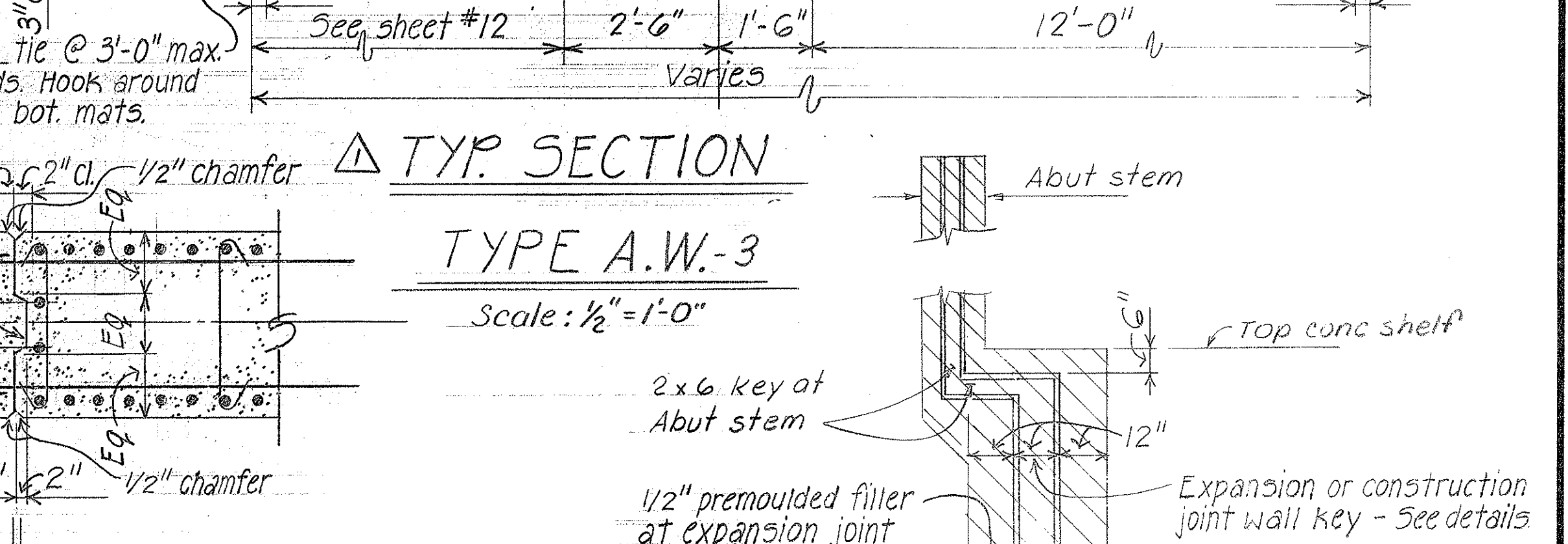
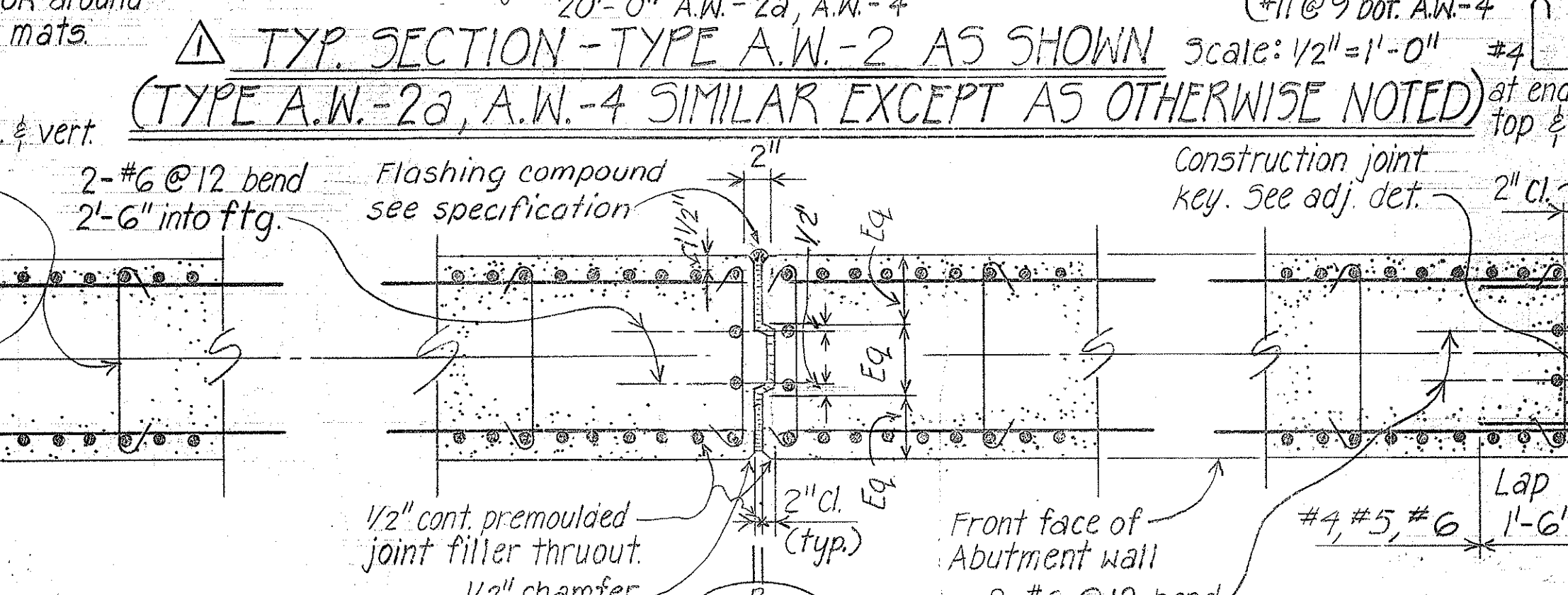
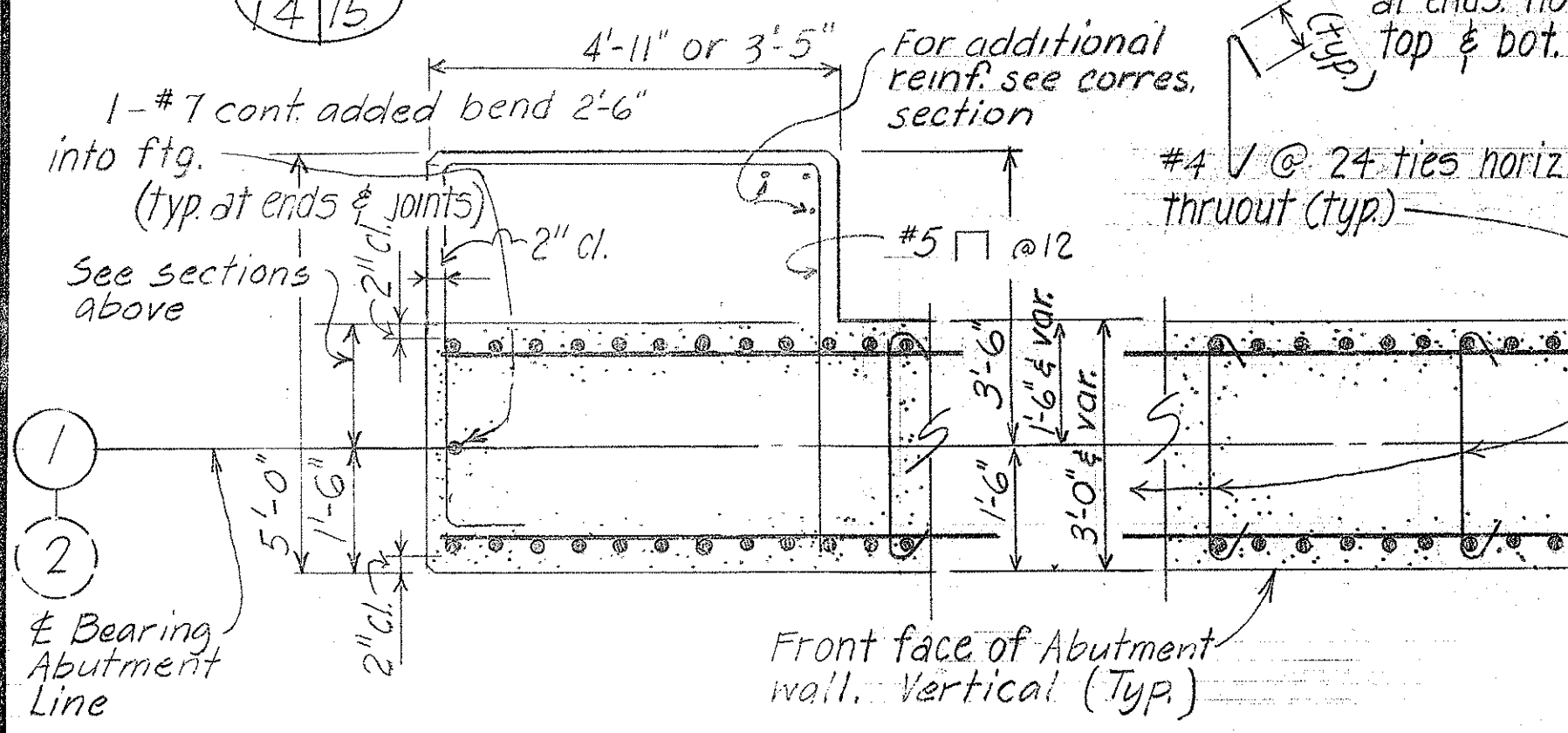
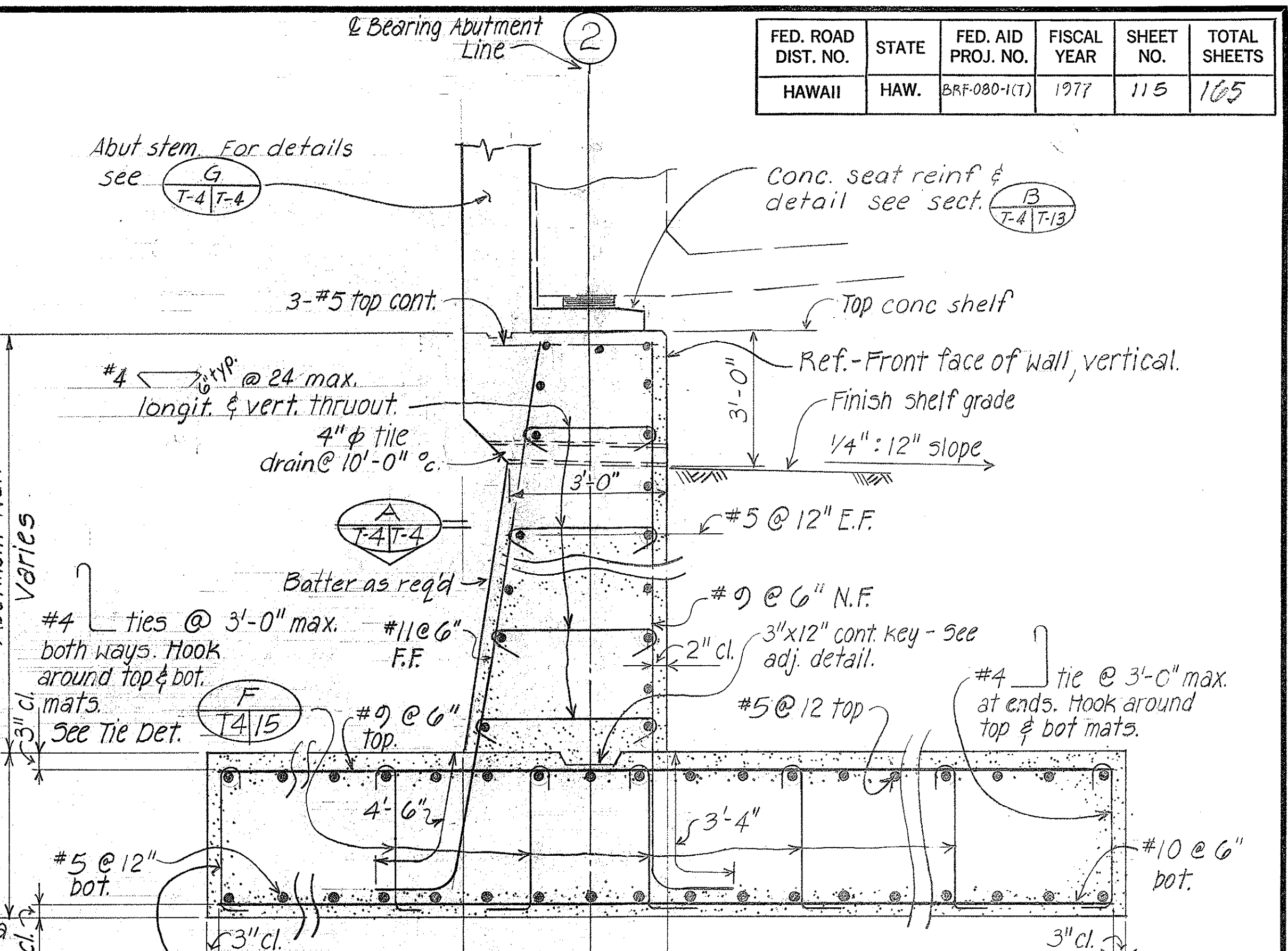
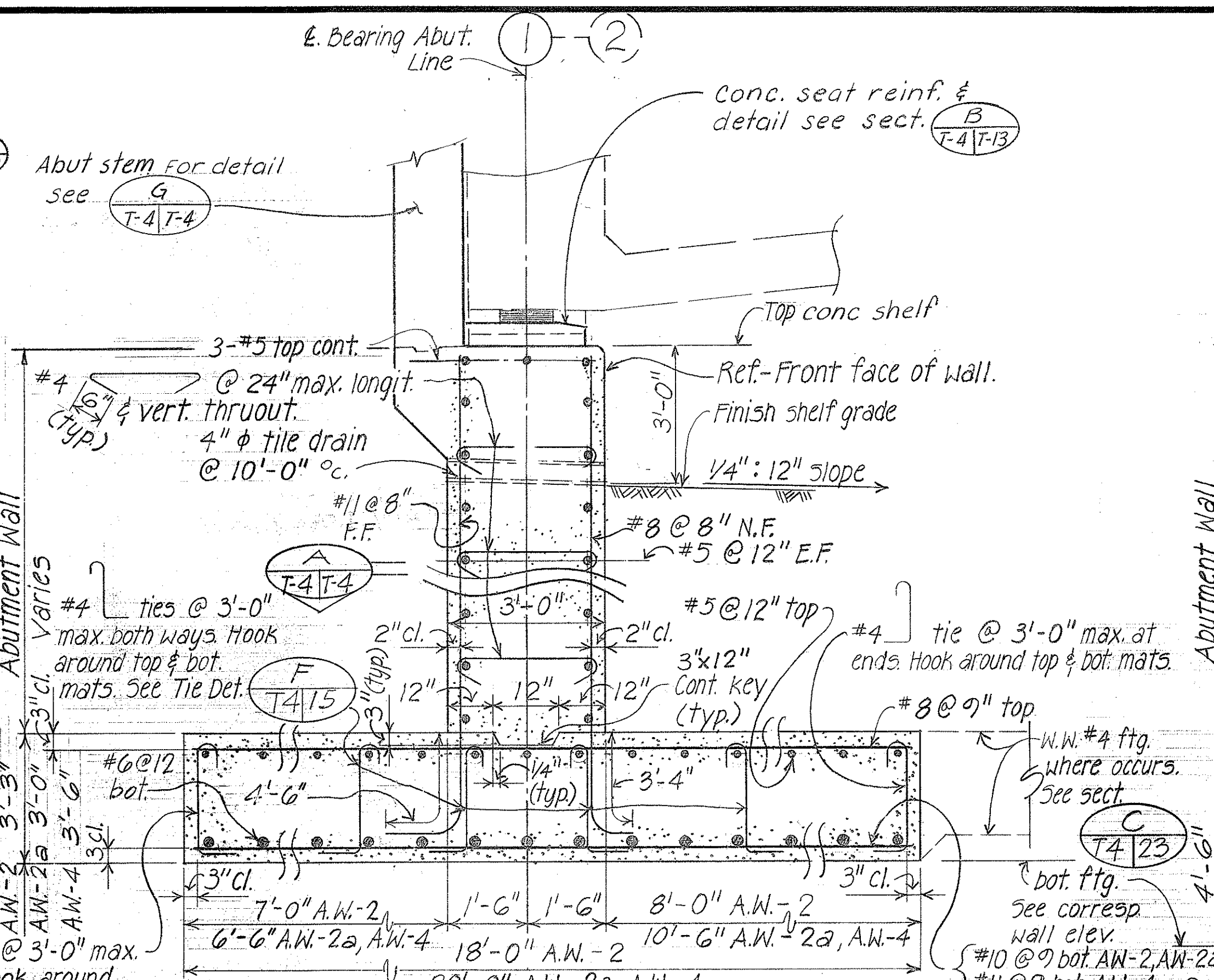
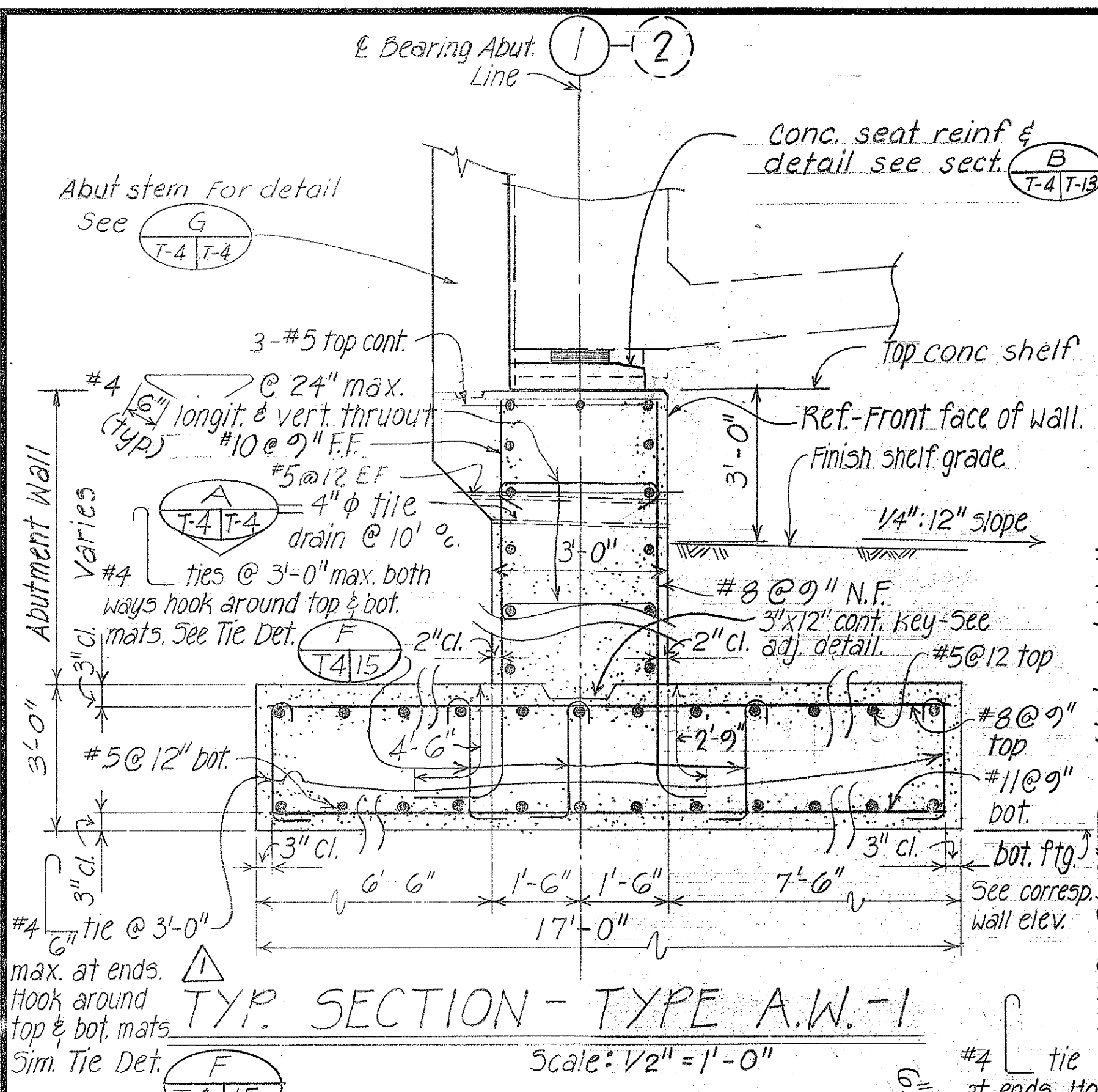
PETER J. BOYCE  
REGISTERED PROFESSIONAL ENGINEER  
No. 3391  
HAWAII, U.S.A.  
Peter J. Boyce

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
WILSON BRIDGE  
TYPICAL DETAILS  
PIER COLUMN DETAILS  
SECTIONS & SCHEDULE  
PROJ. NO. BRF-080-1(7)  
Scale: As noted Date: July 1976  
SHEET NO. T-3 OF 30 SHEETS

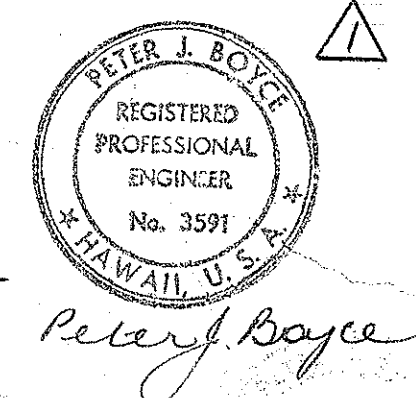
CO 114



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1CT	1977	115	165



DATE	DESIGNED BY	CHECKED BY
PLANNED BY	NOTED BY	
QUANTITIES BY		
NOTE BOOK		
ORIGINAL		



DATE	REVISION
5/14/77	Revised to CIPPS
5/9/77	Revised planter boxes and structures at planter box. Revised beam designations.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
ABUTMENT SECTIONS & DETAILS

Proj. No. BRF-080-1CT  
Scale: As noted  
Date: July 1976  
SHEET NO. 7-4 OF 30 SHEETS

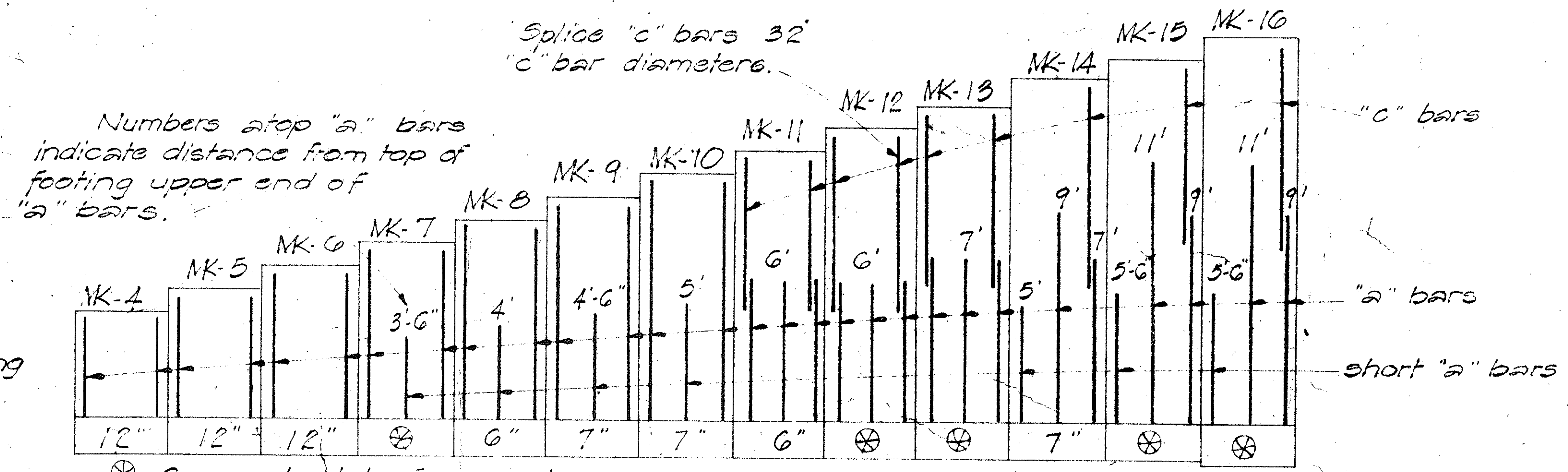
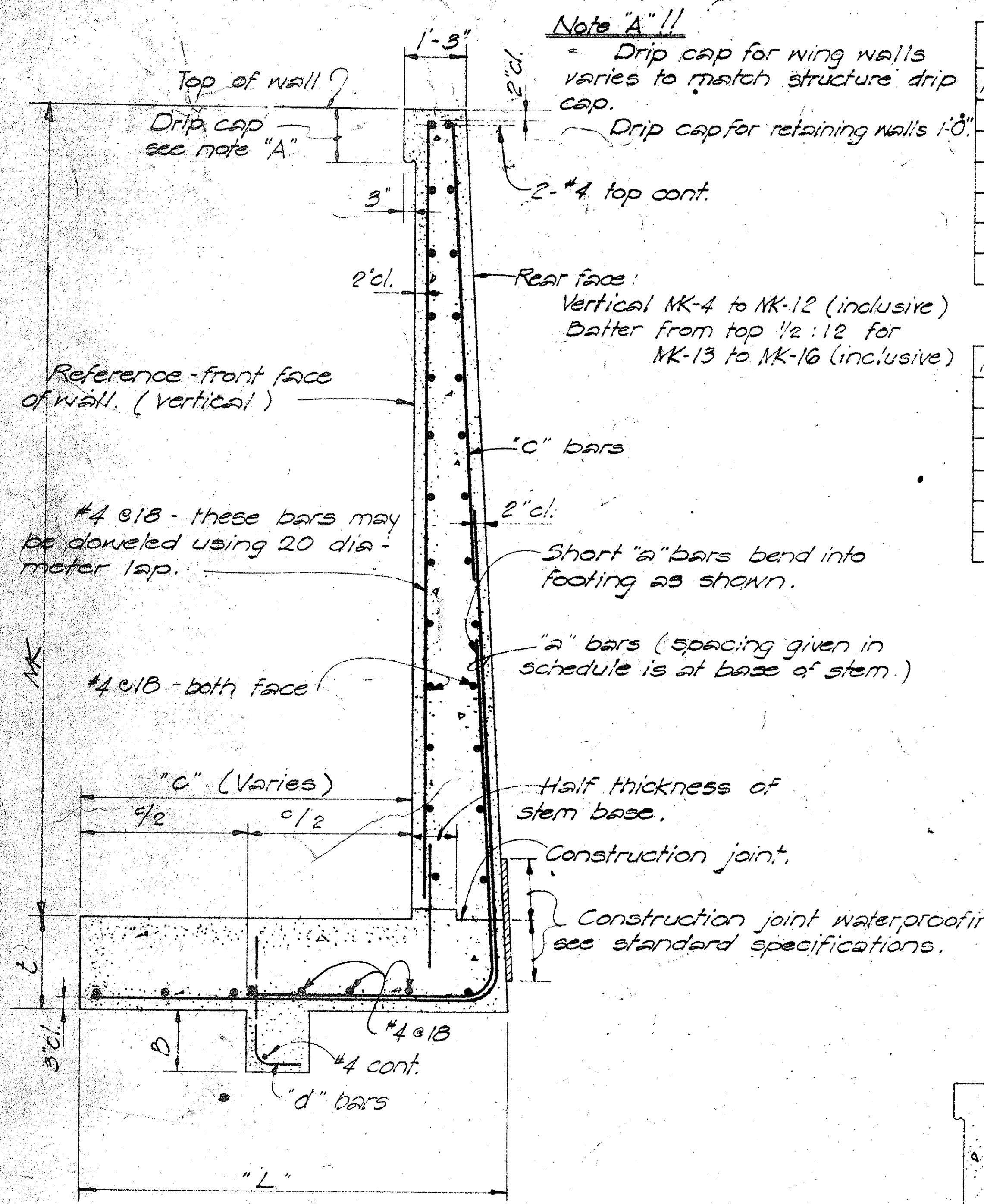
CO 1115



### TYPE L-2 WALL SCHEDULE OF DIMENSIONS AND REINFORCING STEEL

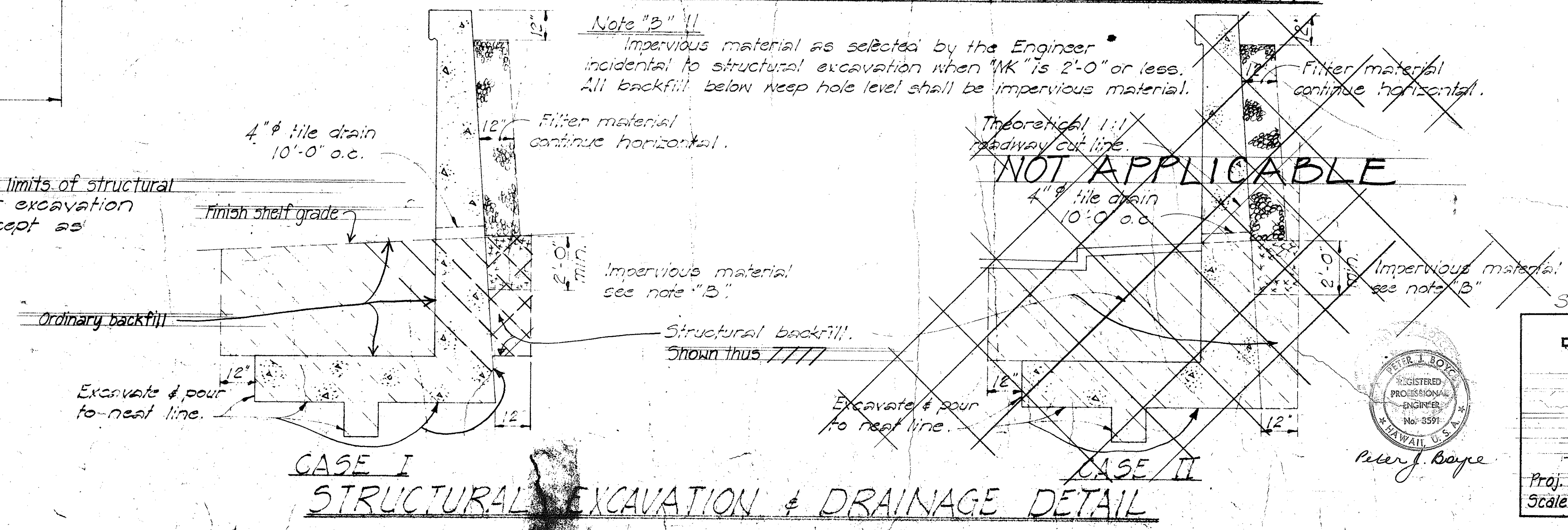
Maximum "MK"	45	55	65	75	85	95	105	115	125	135	145	155	165
L	2.5'	3.0'	3.75'	4.5'	5.75'	6.5'	8.0'	8.75'	10.0'	11.5'	12.5'	13.75'	15.0'
t	14"	14"	15"	15"	18"	18"	21"	24"	24"	27"	30"	33"	
"a"	#3@12	#3@12	#4@12	#4@9	#4@6	#5@7	#6@7	#6@6	#7@6	#6@6	#7@7	#7@6	#8@7
"c"							#4	#4	#4	#4	#4	#4	#5
B	See Wall Elevation												
"d"	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@10	#4@10	#4@10

Maximum "MK"	4N	5N	6N	7N	8N	9N	10N	11N	12N	13N	14N	15N	16N
L	2.5'	3.0'	3.5'	4.25'	5.0'	5.75'	6.5'	7.5'	8.75'	9.0'	9.75'	10.75'	11.75'
t	14"	14"	14"	14"	14"	14"	14"	14"	18"	18"	21"	24"	27"
"a"	#3@12	#3@12	#4@12	#4@7	#4@6	#5@7	#6@7	#6@6	#7@7	#7@7	#7@7	#7@7	#7@6
"c"								#4	#4	#4	#4	#4	#5
"B"	See Wall Elevation												
"d"	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@12	#4@10	#4@10	#4@10



### VERTICAL REINFORCING STEEL ARRANGEMENT

**Note "B" 11**  
 Impervious material as selected by the Engineer incidental to structural excavation when "MK" is 2'-0" or less. All backfill below neat hole level shall be impervious material.



**Note II**  
 Hatched areas thus denotes limits of structural excavation pay line. All other excavation shall be roadway excavation except as otherwise noted.

**NOT APPLICABLE**

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**WILSON BRIDGE**

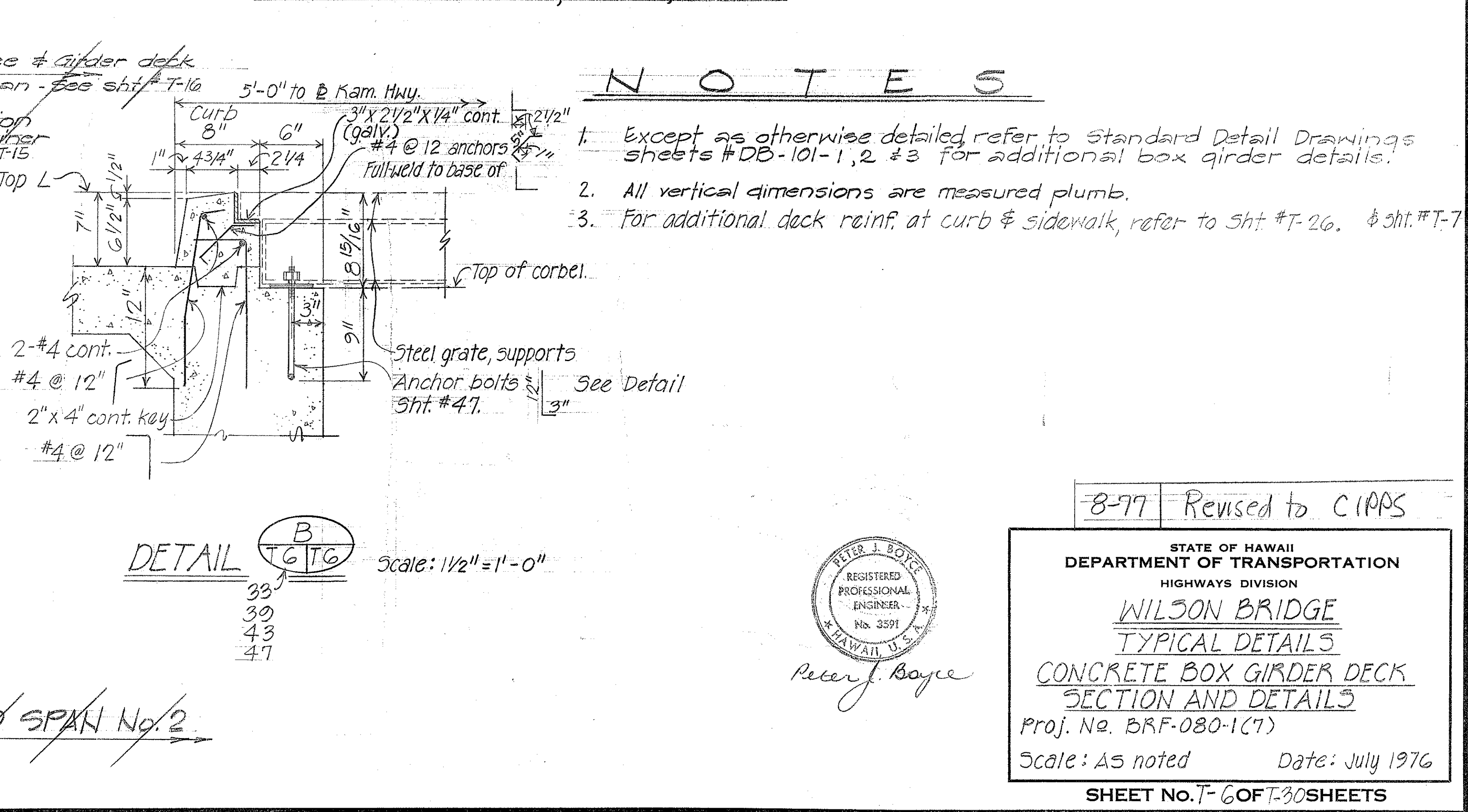
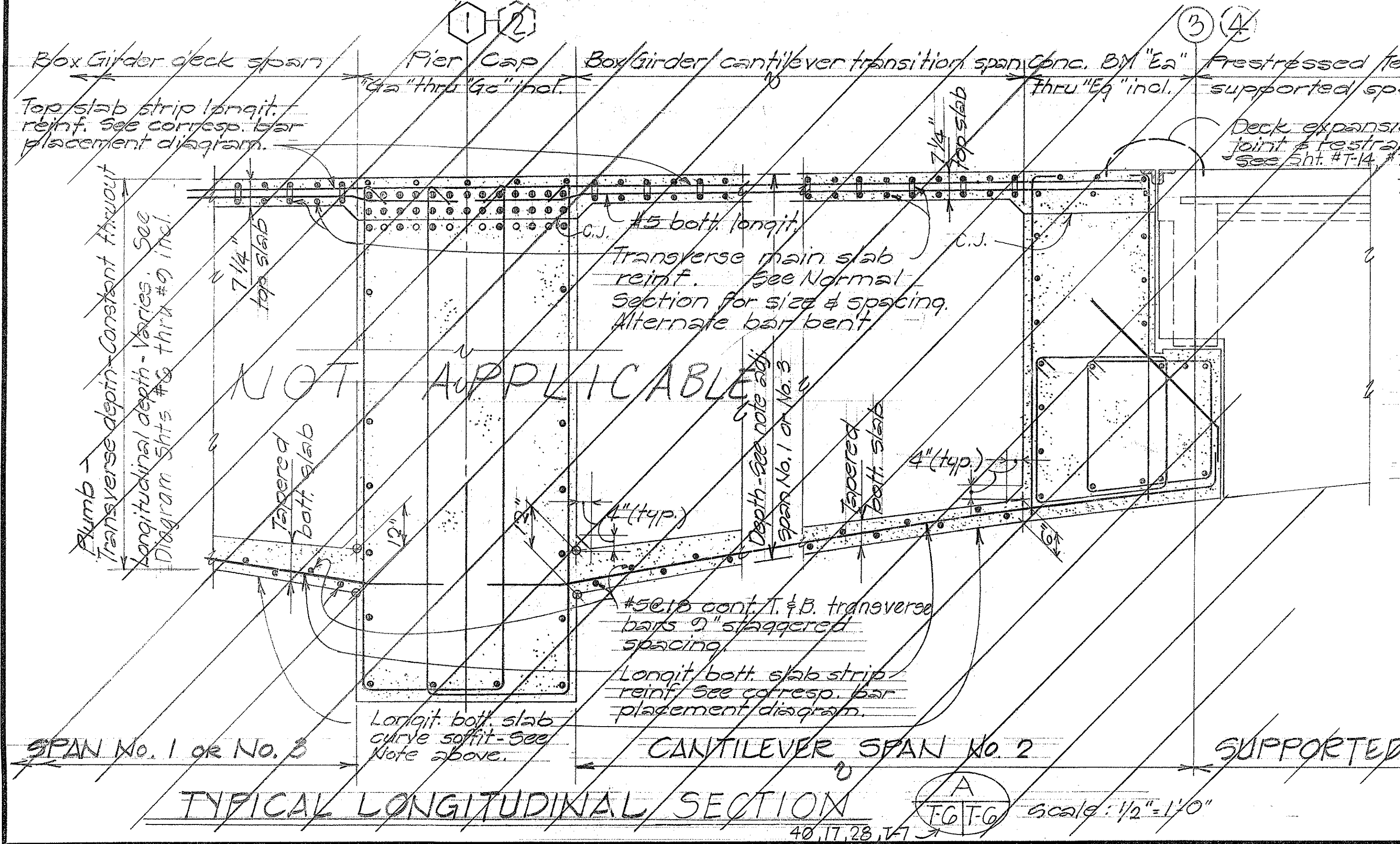
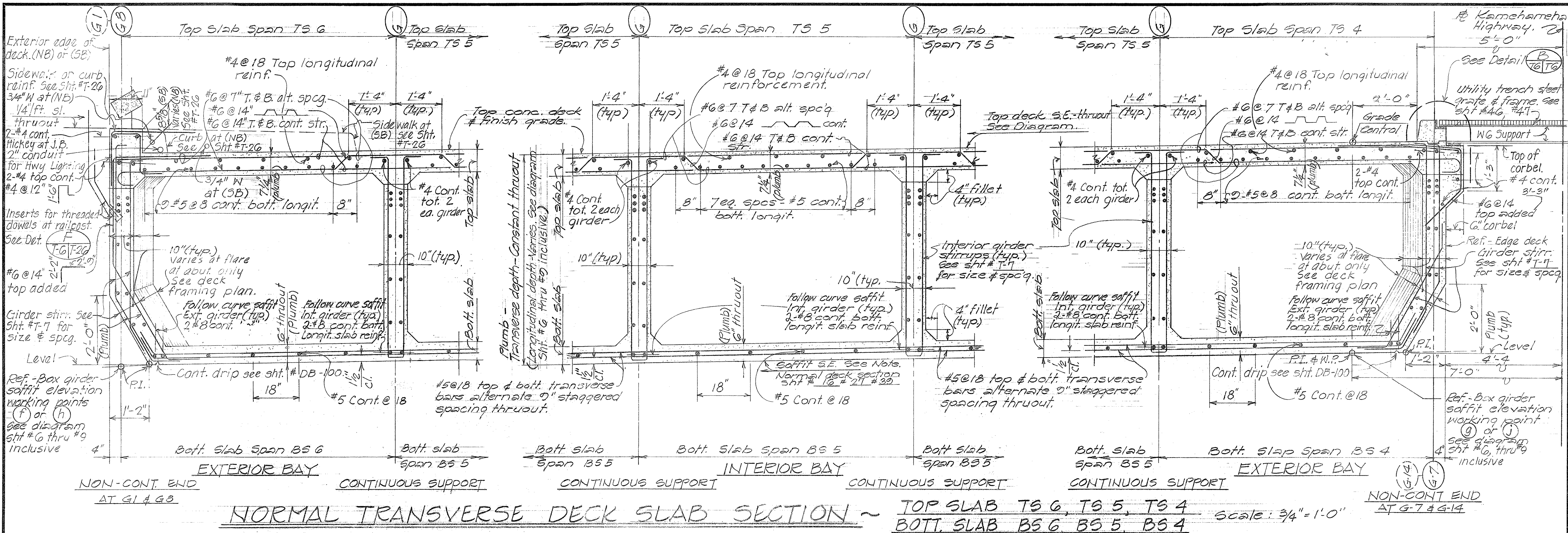
TYPICAL DETAILS  
 RETAINING WALL TYPE L-2

Proj. No. BRF-080-1(7)  
 Scale: As noted Date: July 1976

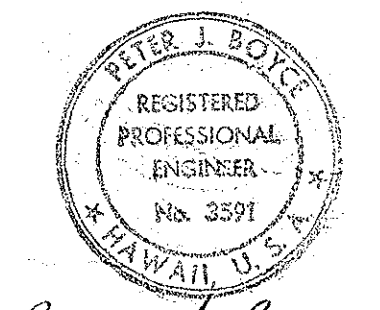
SHEET No. 7-5 OF 30 SHEETS

DATE  
 SURVEY PLANNED BY  
 DRAWN BY  
 DESIGNED BY  
 QUANTITIES BY  
 CHECKED BY  
 CRY





DATE	SY
SURVEY PLOTTED BY	SY
DRAWN BY	MT
TRACED BY	MT
NOTE BOOK	SY
QUANTITIES BY	LM
CHECKED BY	CSY



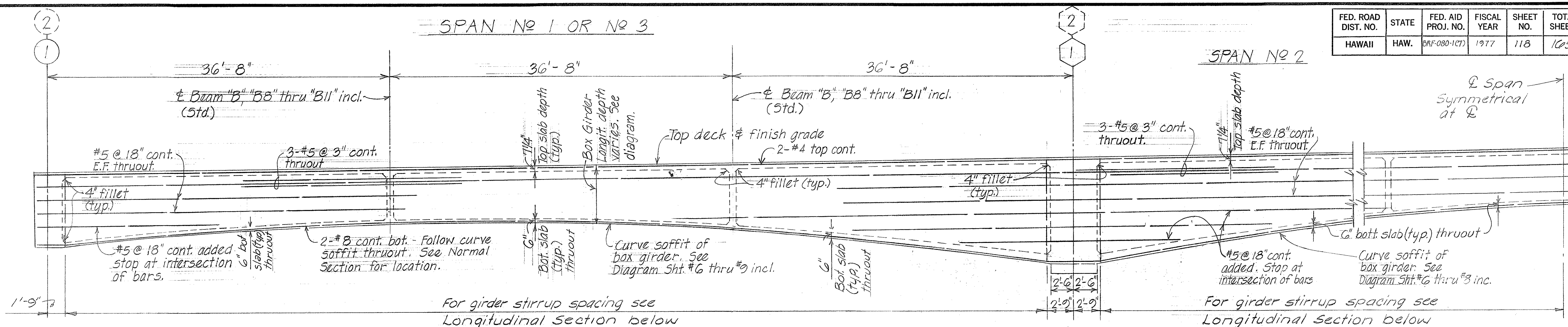
8-77 Revised to CIPAS

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
CONCRETE BOX GIRDER DECK  
SECTION AND DETAILS  
Proj. No. BRP-080-1(7)  
Scale: As noted Date: July 1976  
SHEET No. T-6 OF T-30 SHEETS

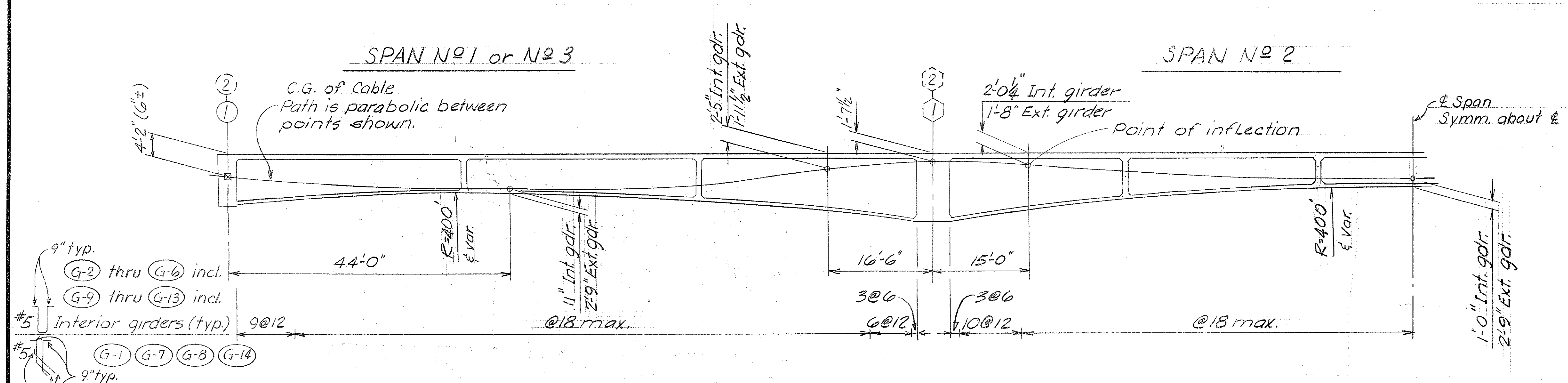
01118



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	118	105



**TYPICAL BOX GIRDER (G-1) - DETAILS AND STIRRUP SPACING** Scale: 3/16" = 1'-0"



**NOTES:**

1. Stirrups to be placed plumb.
2. Girder depths measured plumb & see Diagrams, Sht. #6 thru #9 incl.

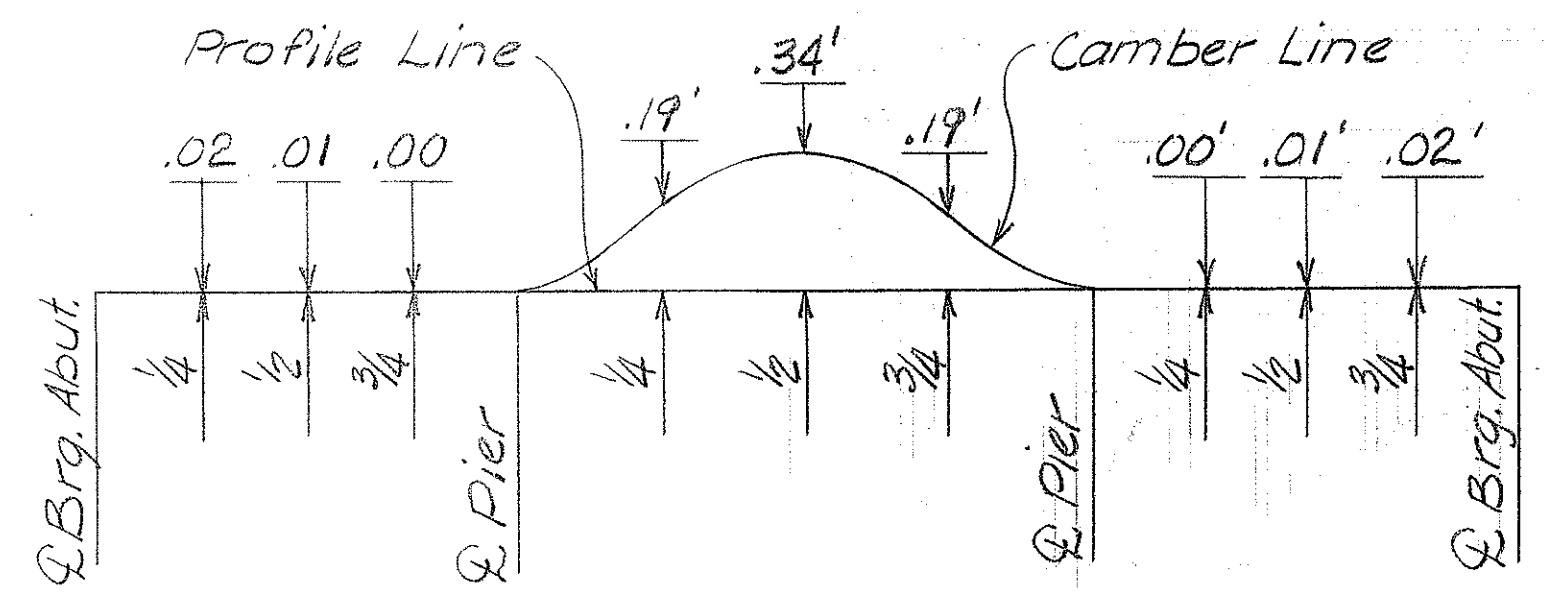
**PRESTRESSING NOTES**

- Pjack = 7280 kips total at jacking ends of each bridge  
 $A_s = P_j / 0.75 f_s$  (See note 4.)  
 Each bridge has 7 girders with 36 strands each in 3-12 strands ducts.  
 Concrete:  $f'_c = 3500$  psi @ 28 days  
 $f_{ci} = 3500$  psi @ time of stressing.  
 General: 1. Design is based on  $\mu = 0.75$  and  $K = 0.0002$   
 Pjack specified at the jacking ends includes friction losses and provisions for 32,000 psi loss in stress.  
 2. Tendons to be jacked to  $0.75 f_s$  and anchored to an equivalent anchor set = 3/8"  
 3. Elongation and jacking calculations are based on initial stress at  $\square = 0.89$  times jacking stress.  
 4. Friction test required on each cable path. See Standard Specifications. Ducts and anchorages to be sized on basis of  $A_s = P_j / 0.70 f_s$

**PART LONGITUDINAL SECTION TYPICAL AT GIRDER (G-1) THRU (G-14)**

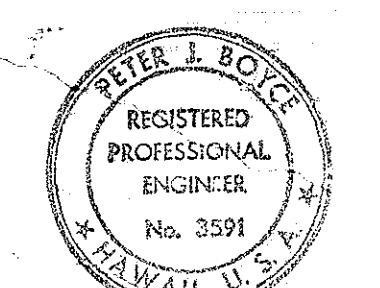
**INCLUSIVE**

Scale 1" = 1'-0"



**CAMBER DIAGRAM**

(Does not include allowance for falsework settlement)



Peter J. Boyce

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 TYPICAL DETAILS  
 CONCRETE BOX GIRDER DECK  
 SECTIONS & DETAILS

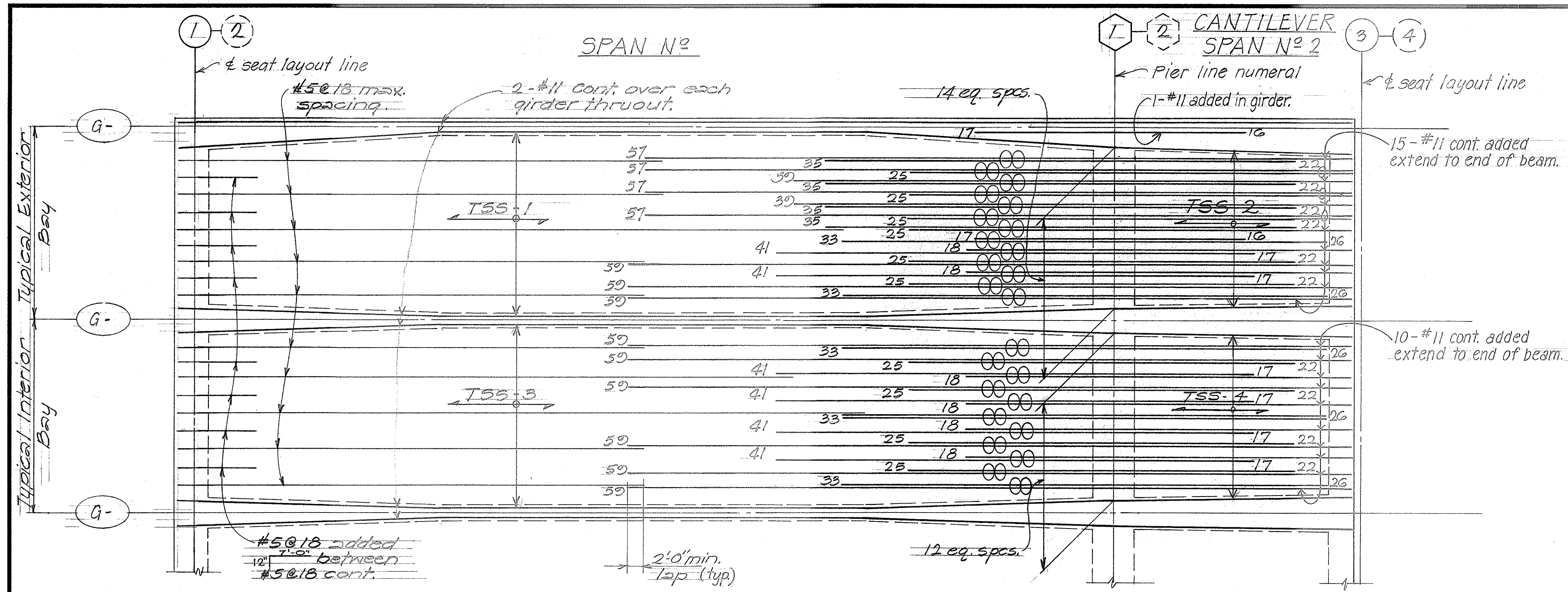
PROJECT No. BRF-080-1(7)  
 Scale: As Shown Date: July 1976  
 SHEET NO. T-7 OF 30 SHEETS

Revised to CIPAS

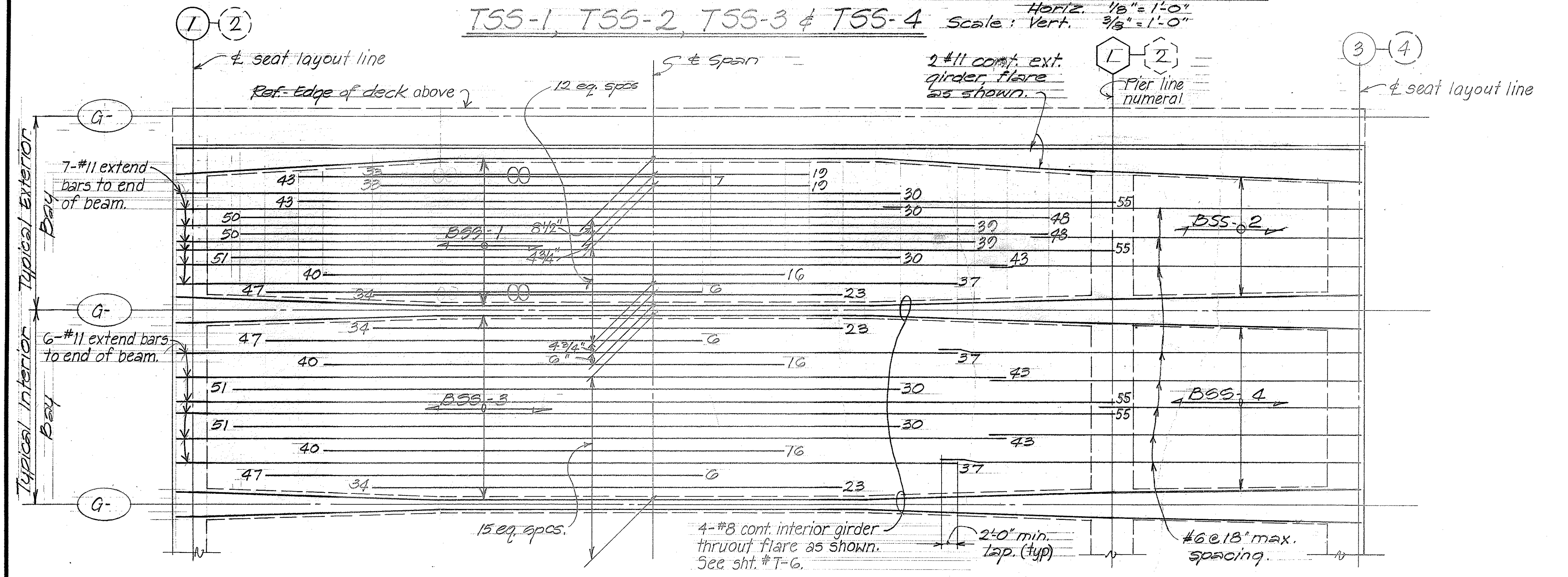
DATE	
SURVEY PLOTTED BY	EH
DRAWN BY	EH
DESIGNED BY	MM
NOTED BY	TKA
CHECKED BY	LM
ORIGINAL PLAN	
NOTE BOOK	
No.	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	119	165



**TYPICAL ARRANGEMENT OF REINFORCEMENT - TOP SLAB STRIPS**



**TYPICAL ARRANGEMENT OF REINFORCEMENT - BOTTOM SLAB STRIPS**

**Notes**

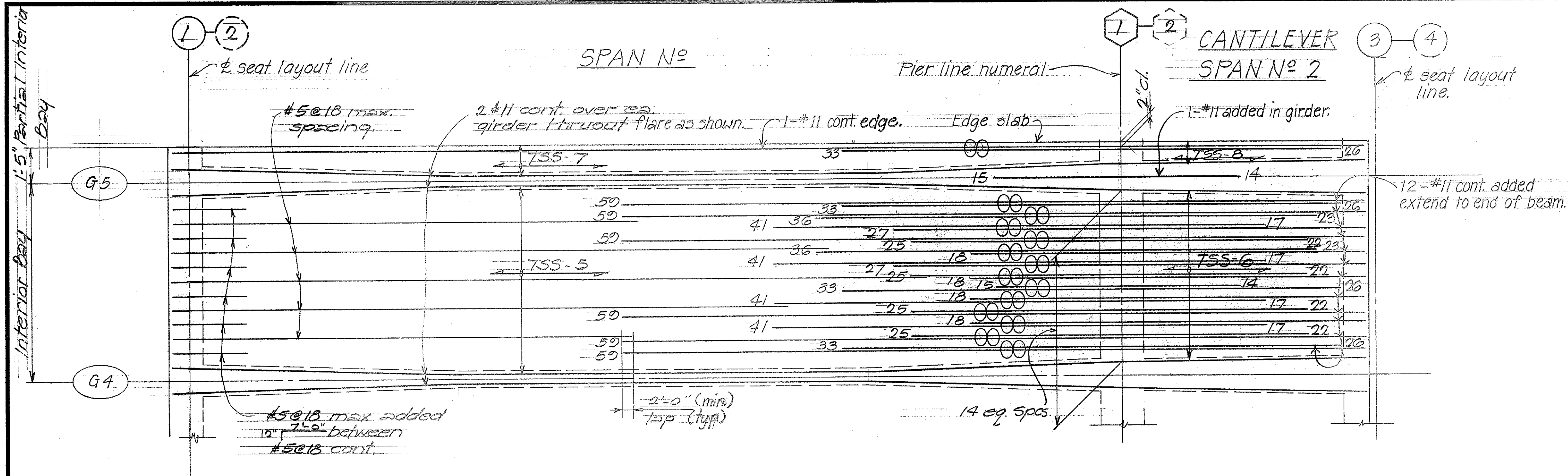
1. All reinforcement #11 unless otherwise noted.
2. Numbers at ends of bars indicate distance in feet from adjacent pier lines (1) or (2) for top slab strip reinforcement and & span for bottom slab strip reinforcement.
3. Continuous added are continuous bars from one span extended partially into the adjacent span.
4. (Two circles) Indicates bundle bars in groups of two.
5. All #5 or #6 bars shall be extended and lapped with the adjacent #11 bars as shown.
6. All bars to follow curvature of girder where occurs.
7. At splices for all bundled bar groups, minimum spacing shall be maintained between groups. In event minimum clearance cannot be maintained because of splices, bars shall be welded.

ORIGINAL PLAN	DATE
DRAWN BY SY	
DESIGNED BY M.T.	
QUANTITIES BY J.V.	
CHECKED BY J.V.	
NO.	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
**TYPICAL DETAILS - BOX GIRDER**  
**BAR PLACEMENT DIAGRAMS**  
TSS-1, TSS-2, TSS-3, TSS-4  
BSS-1, BSS-2, BSS-3, BSS-4  
Proj. No. BRF-080-1(7)  
Scale: As noted Date: July 1976  
**SHEET NO. T-8 OF 30 SHEETS**

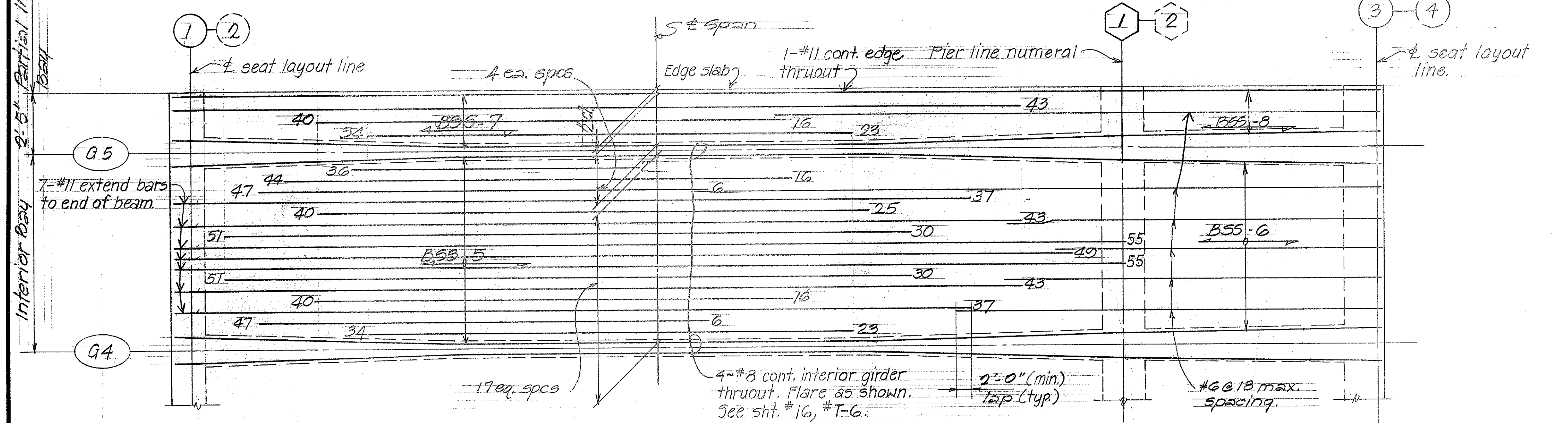


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BKF-080-1(7)	1977	120	125



**TYPICAL ARRANGEMENT OF REINFORCEMENT - TOP SLAB STRIPS**

TSS-5, TSS-6, TSS-7 & TSS-8  
 Horiz. 1/8" = 1'-0"  
 Scale: Vert. 3/8" = 1'-0"



**TYPICAL ARRANGEMENT OF REINFORCEMENT - BOTTOM SLAB STRIPS**

BSS-5, BSS-6, BSS-7 & BSS-8  
 Horiz. 1/8" = 1'-0"  
 Scale: Vert. 3/8" = 1'-0"

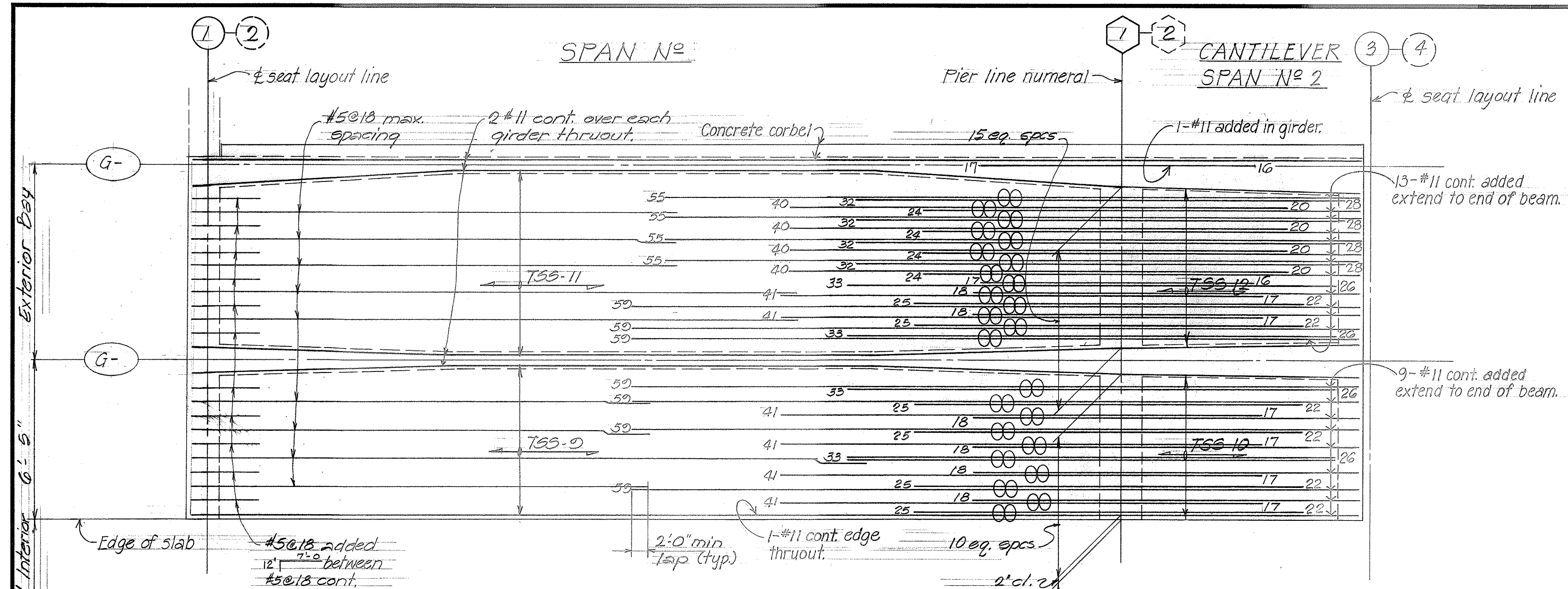
- Notes**
- All reinforcement #11 unless otherwise noted.
  - Numbers at ends of bars indicate distance in feet from adjacent pier lines (1) or (2) for top slab strip reinforcement and 1/2 span for bottom slab strip reinforcement.
  - Continuous added are continuous bars from one span extended partially into the adjacent span.
  - ⊗ Indicates bundle bars in groups of two.
  - All #5 or #6 bars shall be extended and lapped with the adjacent #11 bars as shown.
  - All bars to follow curvature of girder where occurs.
  - At splices for all bundled bar groups, minimum spacing shall be maintained between groups. In event minimum clearance cannot be maintained because of splices, bars shall be welded.

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

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 TYPICAL DETAILS-BOX GIRDERS  
 BAR PLACEMENT DIAGRAM  
 TSS-5, TSS-6, TSS-7, TSS-8  
 BSS-5, BSS-6, BSS-7, BSS-8  
 Proj. No. BKF-080-1(7)  
 Scale: As noted Date: July 1976  
 SHEET No. 7-9 OF 730 SHEETS

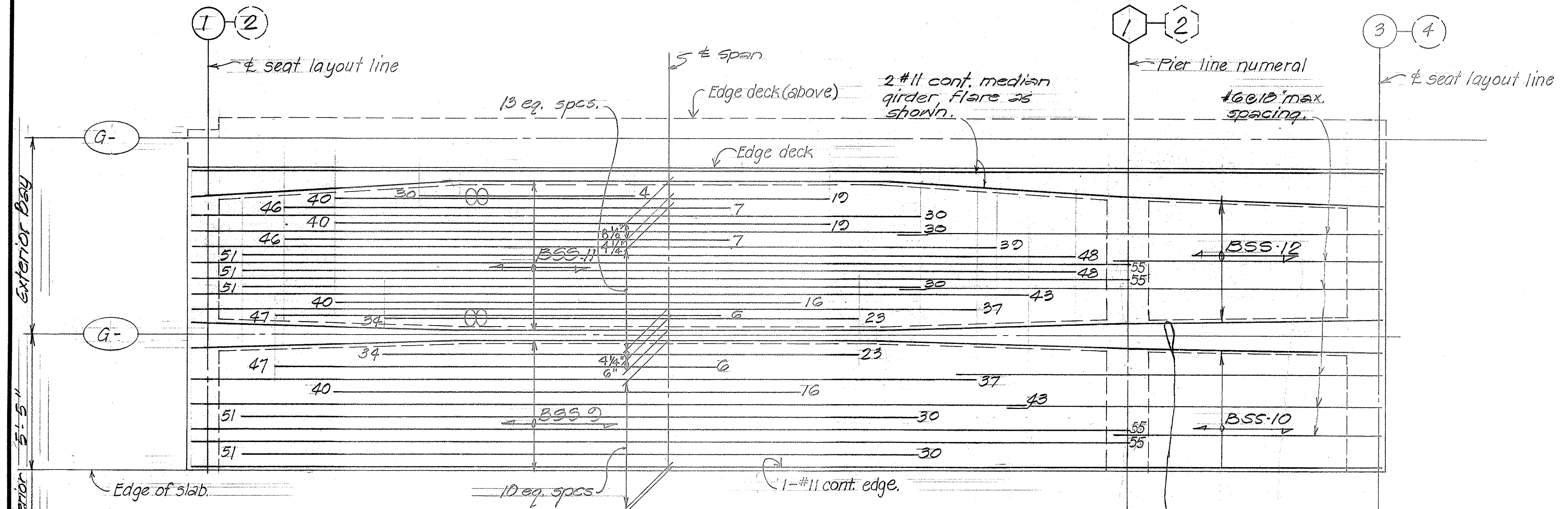


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	121	125



**TYPICAL ARRANGEMENT OF REINFORCEMENT - TOP SLAB STRIPS**

TSS-9, TSS-10, TSS-11 & TSS-12  
 Horiz. 1/8" = 1'-0"  
 Scale: Vert. 3/8" = 1'-0"



**TYPICAL ARRANGEMENT OF REINFORCEMENT - BOTTOM SLAB STRIPS**

BSS-9, BSS-10, BSS-11 & BSS-12  
 Horiz. 1/8" = 1'-0"  
 Scale: Vert. 3/8" = 1'-0"

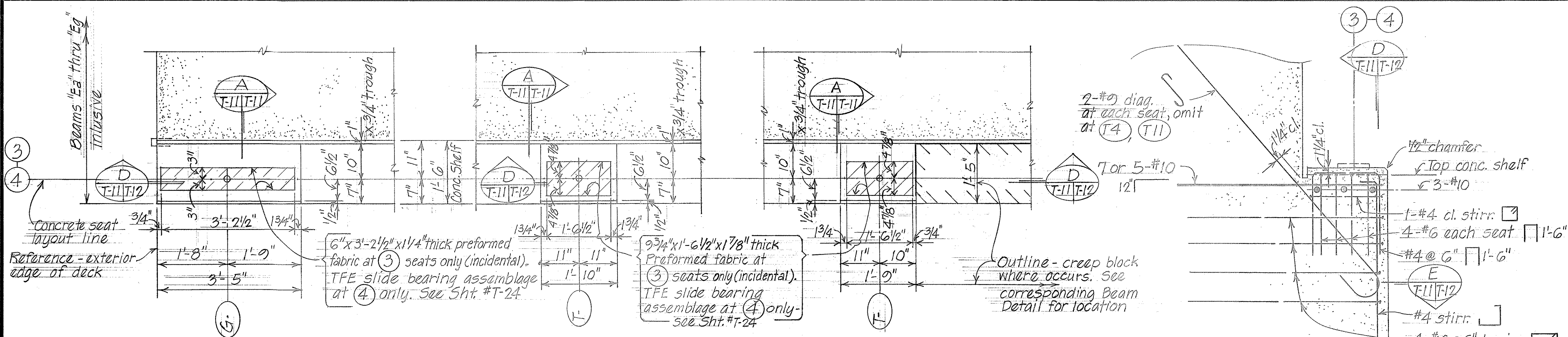
- Notes**
1. All reinforcement #11 unless otherwise noted.
  2. Numbers at ends of bars indicate distance in feet from adjacent pier lines (1) or (2) for top slab strip reinforcement and 1/2 span for bottom slab strip reinforcement.
  3. Continuous added are continuous bars from one span extended partially into the adjacent span.
  4. ⊕ Indicates bundle bars in groups of two.
  5. All #5 or #6 bars shall be extended and lapped with the adjacent #11 bars as shown.
  6. All bars to follow curvature of girder where occurs.
  7. At splices for all bundled bar groups, minimum spacing shall be maintained between groups. In event minimum clearance cannot be maintained because of splices, bars shall be welded.

DATE	SY
SURVEY PLOTTED BY	SY
DRAWN BY	MT
DESIGNED BY	SY
QUANTITIES BY	LM
CHECKED BY	GRV
ORIGINAL PLAN	
NOTE BOOK	
No.	

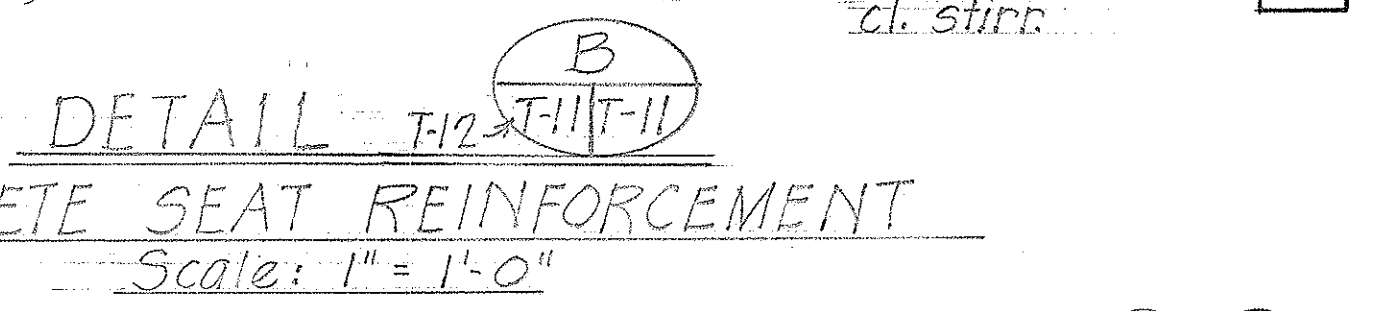
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 TYPICAL DETAILS - BOX GIRDER  
 BAR PLACEMENT DIAGRAMS  
 TSS-9, TSS-10, TSS-11, TSS-12  
 BSS-9, BSS-10, BSS-11, BSS-12  
 Proj. No. BRF-080-1(7)  
 Scale: AS NOTED Date: July 1976  
 SHEET NO. T-10 OF T-30 SHEETS



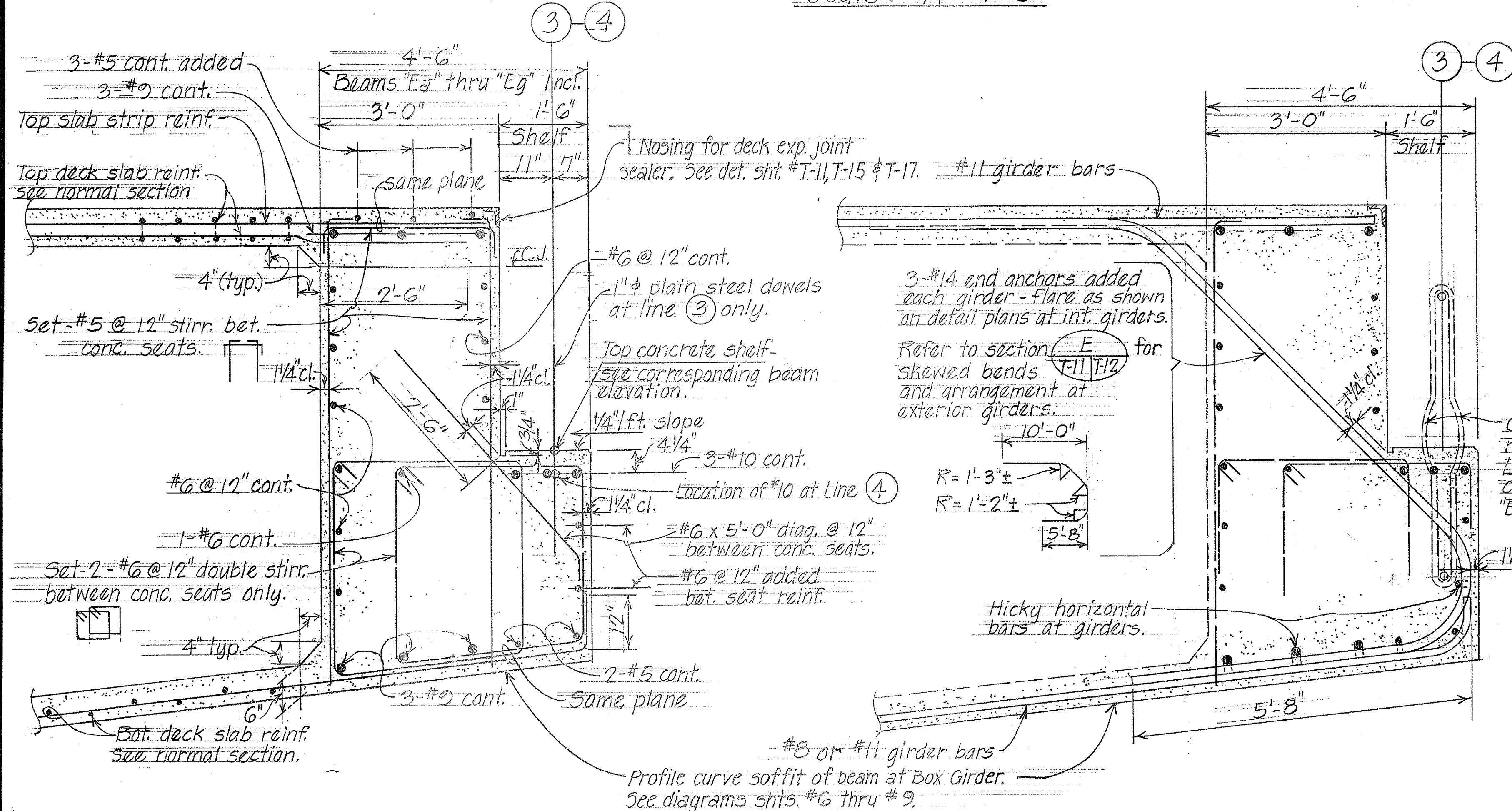
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	122	105



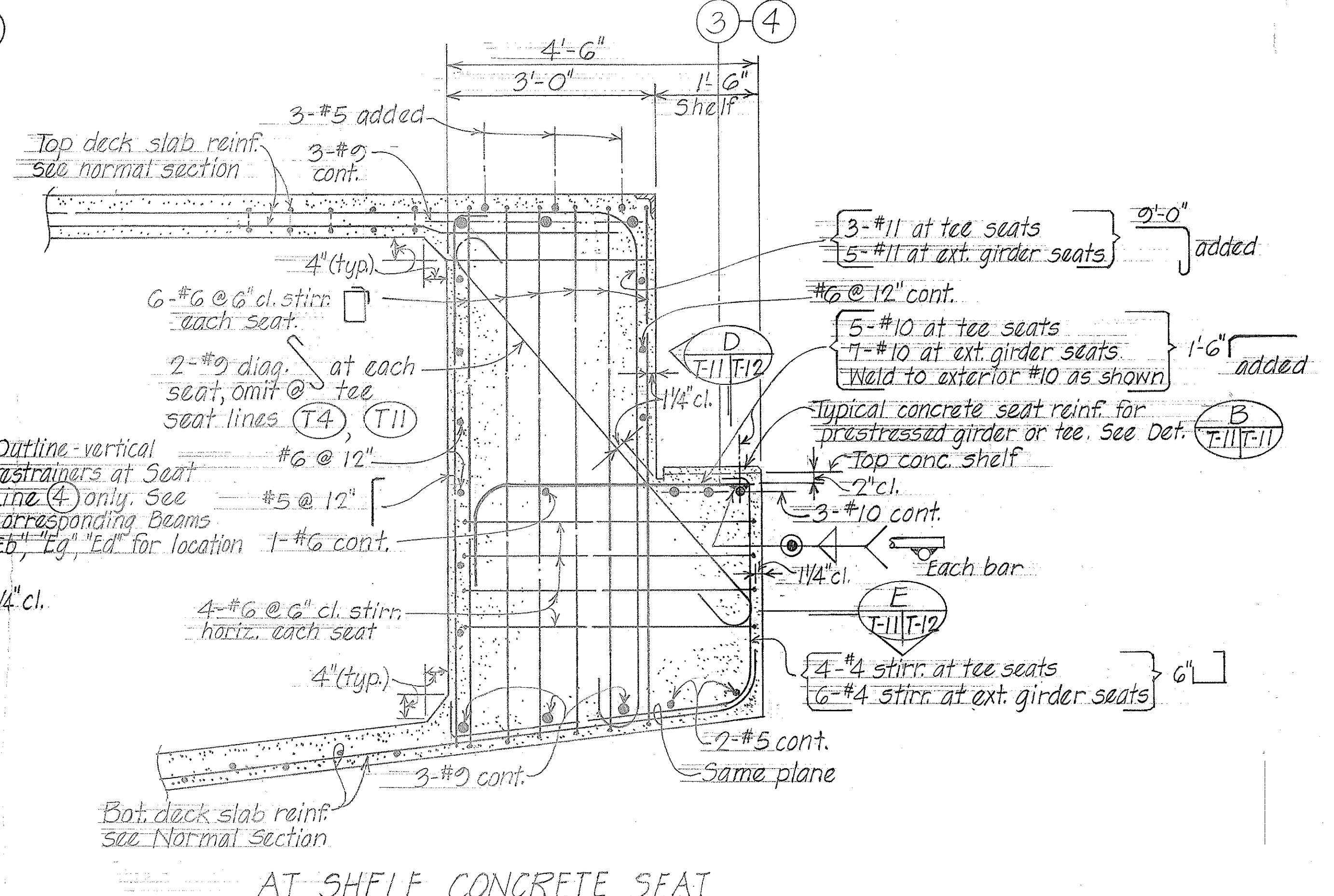
AT EXTERIOR GIRDERS TYPICAL AT TEE TEE AT CREEP BLOCK  
 TYPICAL PRESTRESSED GIRDER AND TEE - CONCRETE SEAT DETAILS  
 Scale: 3/4" = 1'-0"



DETAIL T12-T11-T11  
 CONCRETE SEAT REINFORCEMENT  
 Scale: 1" = 1'-0"



BETWEEN SHELF CONCRETE SEATS AT EACH GIRDER  
 TYPICAL SECTION  
 Scale: 3/4" = 1'-0"



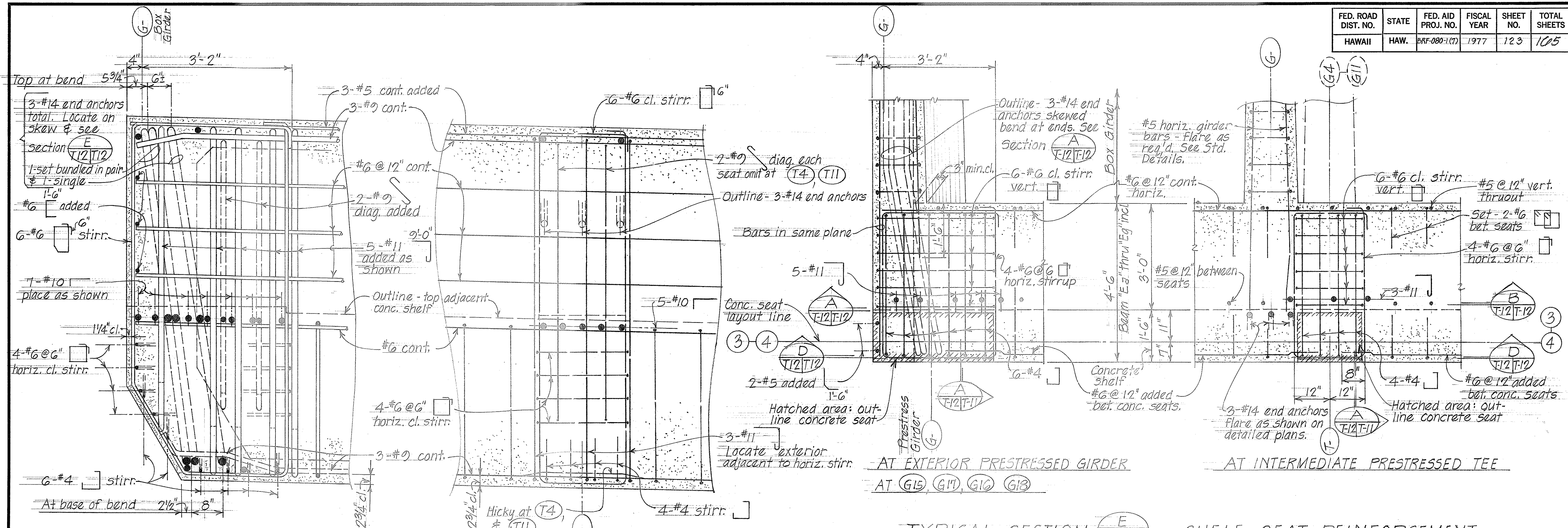
AT SHELF CONCRETE SEAT FOR PRESTRESSED GIRDER OR TEE  
 (SHOWING SEAT SHELF REINFORCEMENT AT EACH SEAT)  
 REFERENCE NOTES:  
 1. Refer to corresponding Beams "Ea" thru "Eg" elevations & details for limits & arrangements of various reinforcements.

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 TYPICAL DETAILS  
 BOX GIRDER BEAMS "Ea" THRU "Eg" INCL  
 SECTIONS AND CONCRETE SEAT DETAILS  
 PROJ. NO. BRF-080-1(7)  
 Scale: As Shown Date: July 1976  
 SHEET No. T-11/OF 30 SHEETS

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



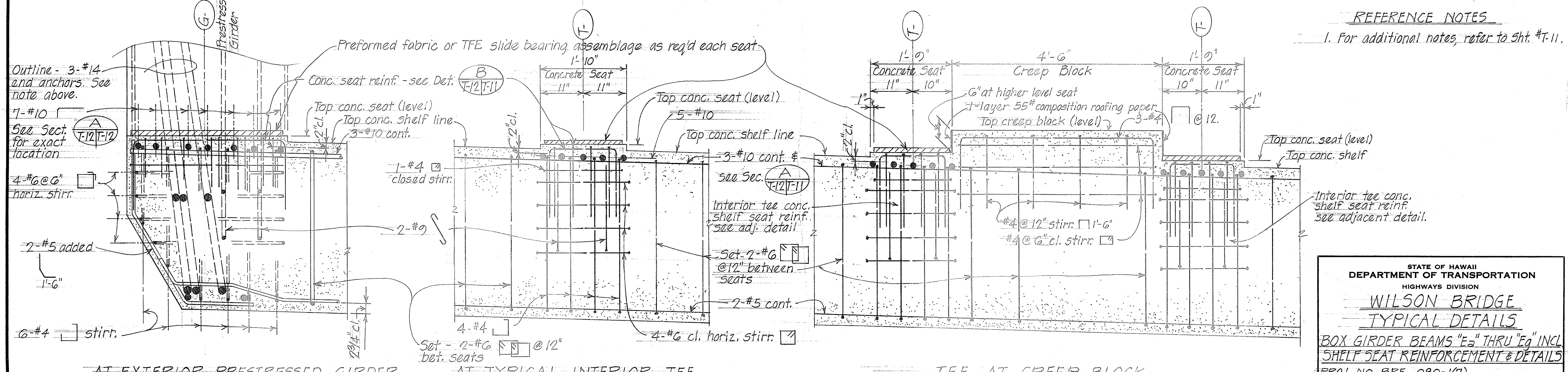
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	123	105



TYPICAL SECTION A (T-12/T-12) Scale: 1" = 1'-0" TYPICAL SECTION B (T-12/T-12) Scale: 1" = 1'-0" TYPICAL SECTION E (T-12/T-12) - SHELF SEAT REINFORCEMENT Scale: 3/4" = 1'-0"

**REFERENCE NOTES**

1. For additional notes, refer to Sht. #T-11.



AT EXTERIOR PRESTRESSED GIRDER AT TYPICAL INTERIOR TEE TEE AT CREEP BLOCK TYPICAL SECTION D (T-12/T-12) (CONCRETE SEAT LEVEL) Scale: 1" = 1'-0"

DATE	.....
DESIGNED BY	MT, MY, LA
TRACED BY	LVI, LKM
QUANTITIES BY	.....
CHECKED BY	.....
NO.	.....

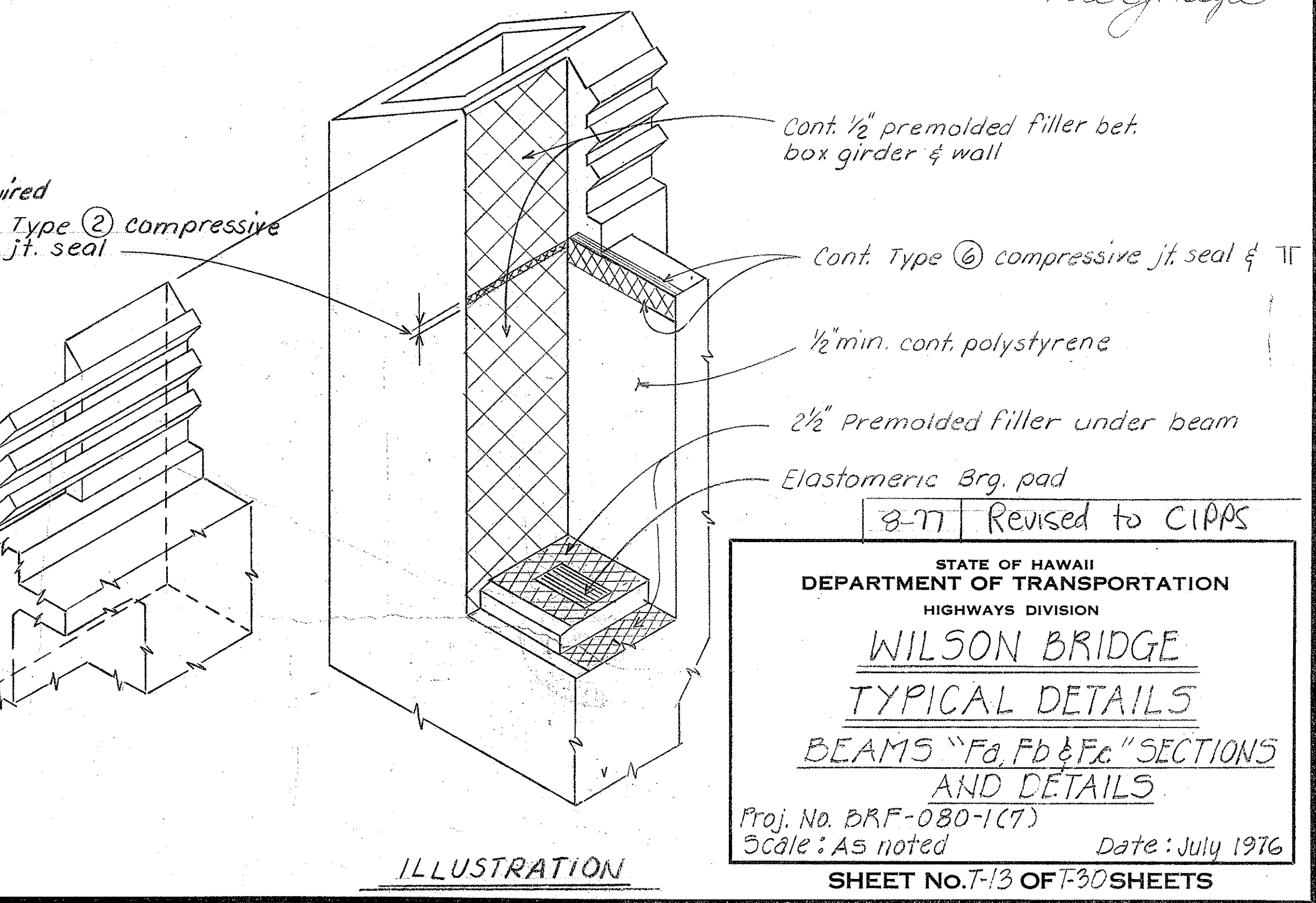
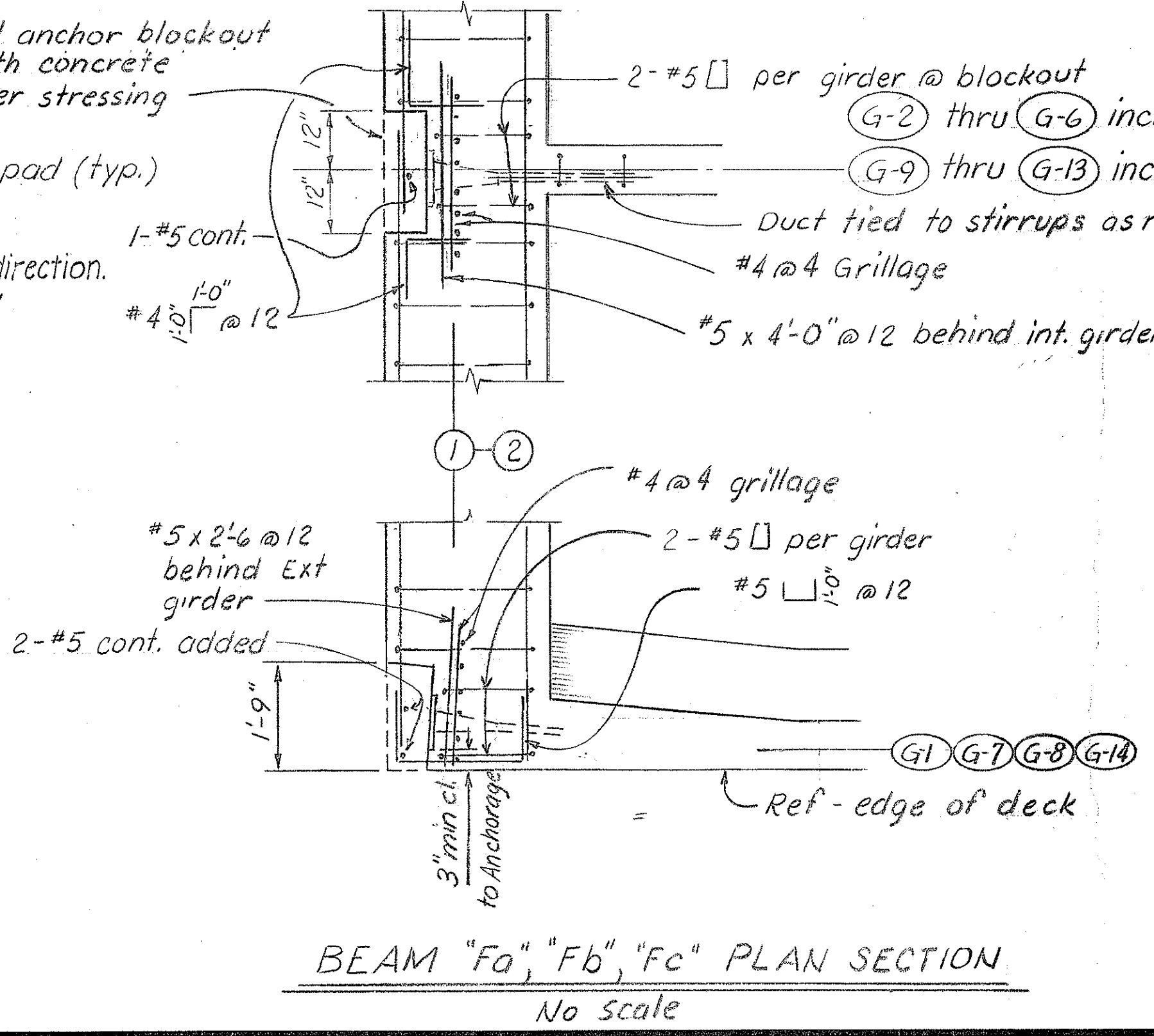
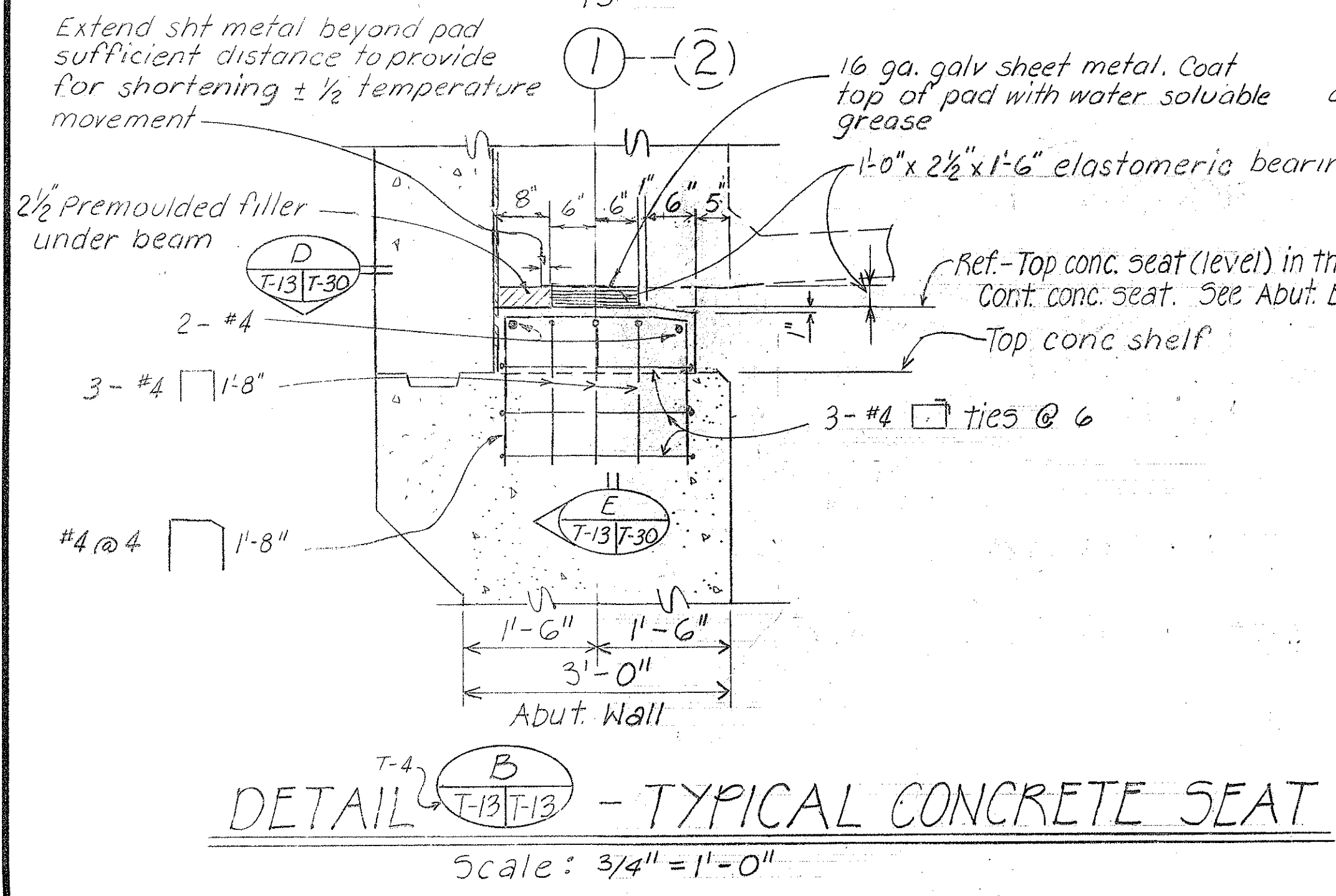
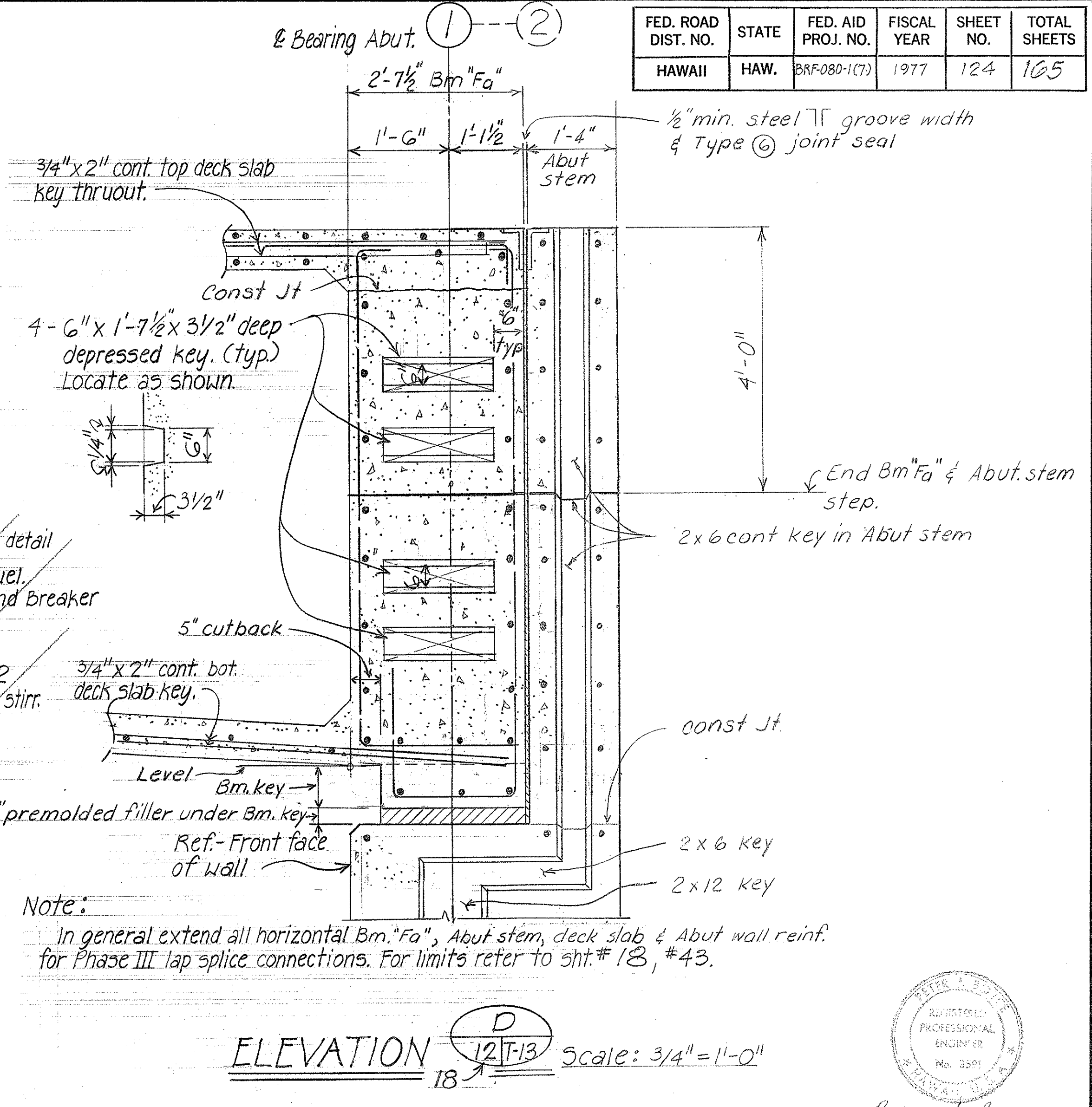
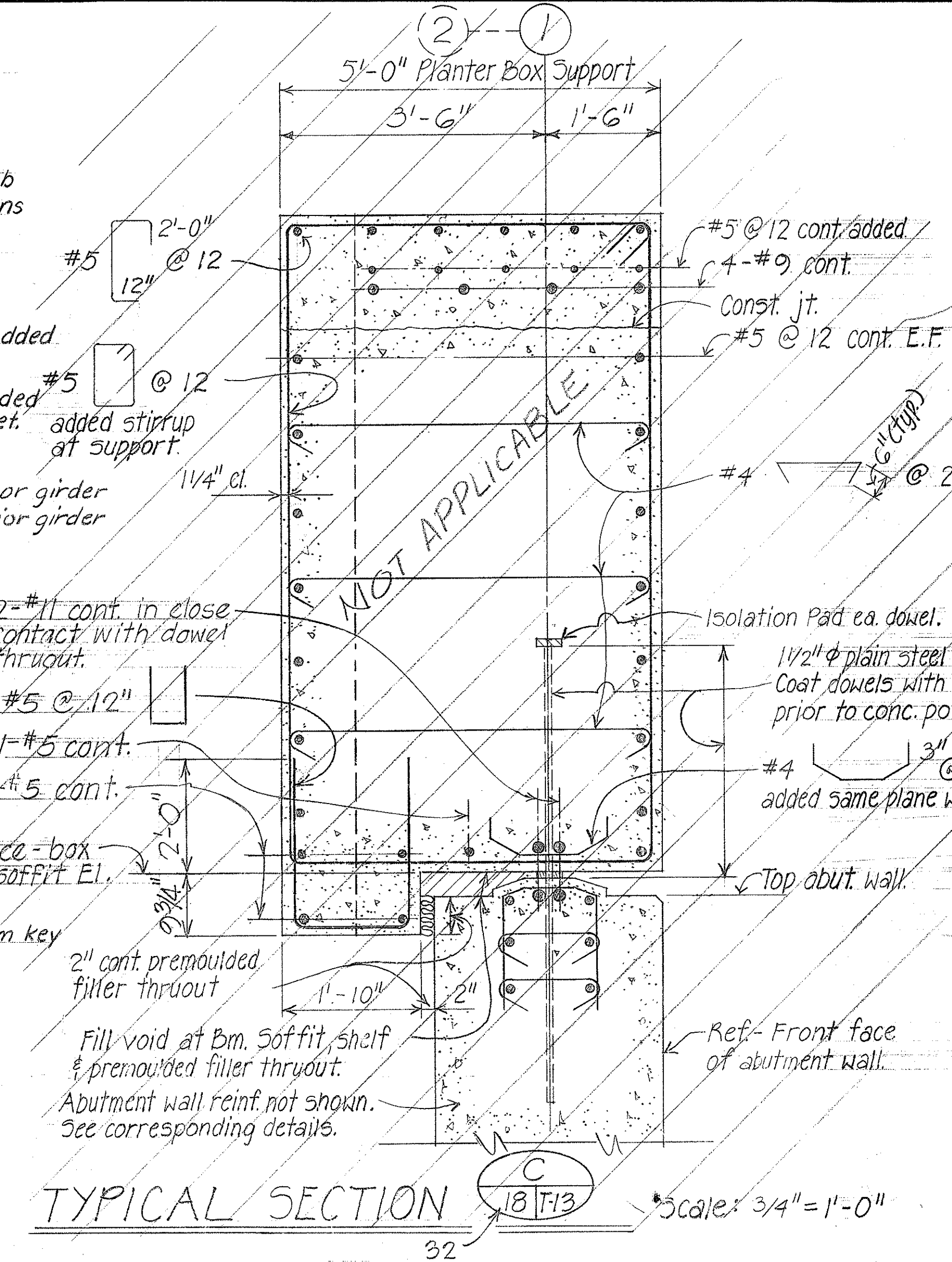
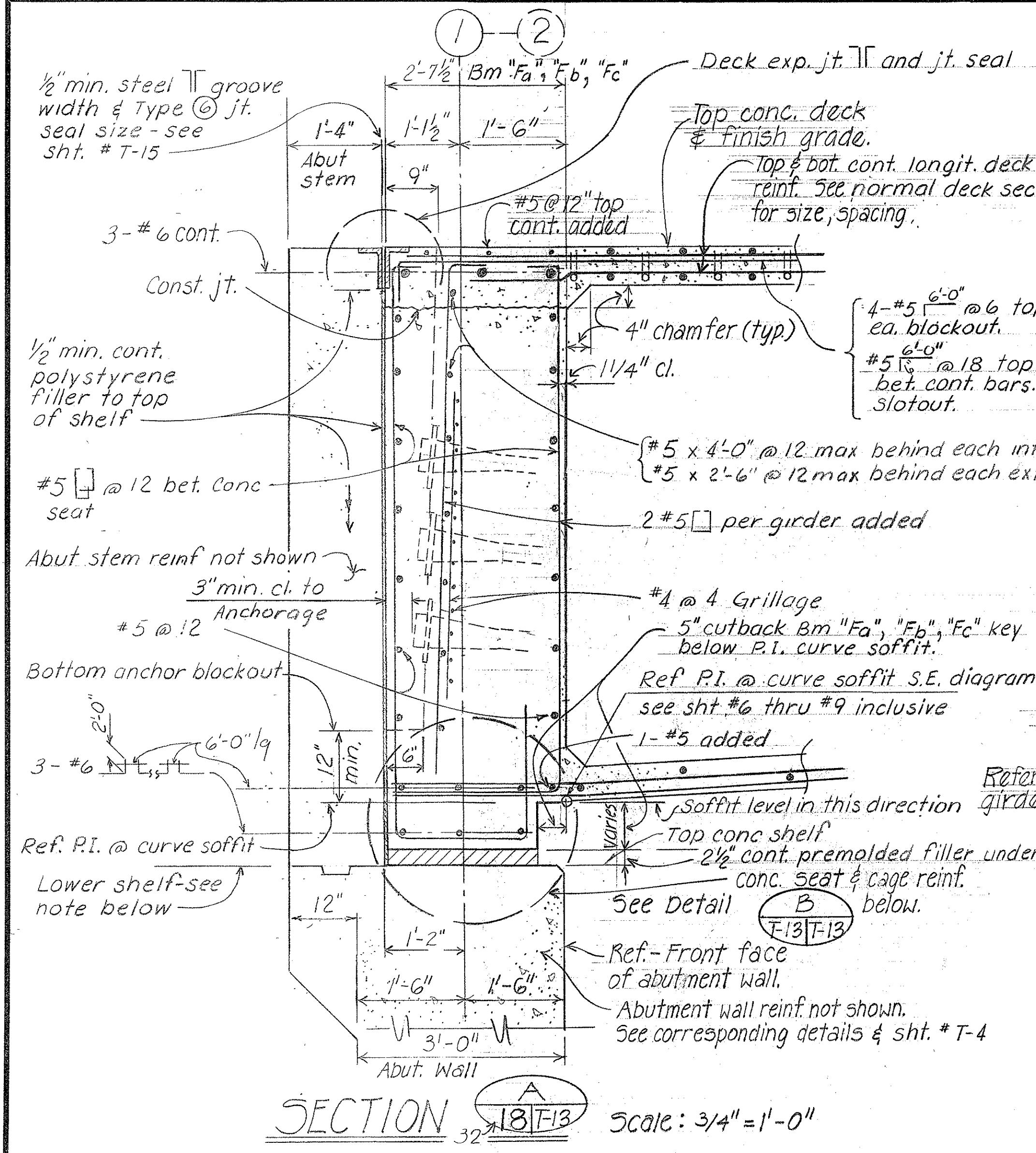
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
**TYPICAL DETAILS**

BOX GIRDER BEAMS "Ea" THRU "Eg" INCL  
SHELF SEAT REINFORCEMENT & DETAILS  
PROJ. NO. BRF-080-1(7)  
Scale: As Shown Date: July 1976  
SHEET No. 7-12 OF 7-30 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	124	125



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
TYPICAL DETAILS  
BEAMS "Fa, Fb & Fc" SECTIONS  
AND DETAILS

Proj. No. BRF-080-1(7)  
Scale: As noted Date: July 1976

SHEET No. T-13 OF 30 SHEETS

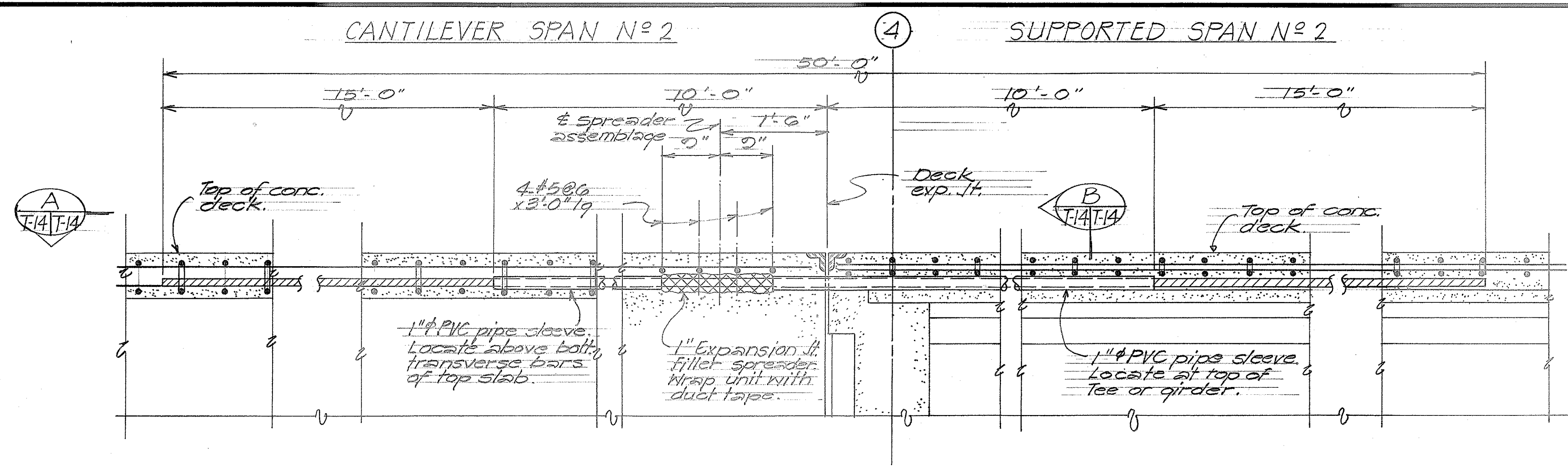
DATE	.....
SURVEY PLOTTED BY	.....
ORIGINAL PLAN	.....
TRACED BY	.....
NOTE BOOK	.....
QUANTITIES BY	.....
CHECKED BY	.....

REGISTERED PROFESSIONAL ENGINEER  
No. 3381  
Peter J. Boye

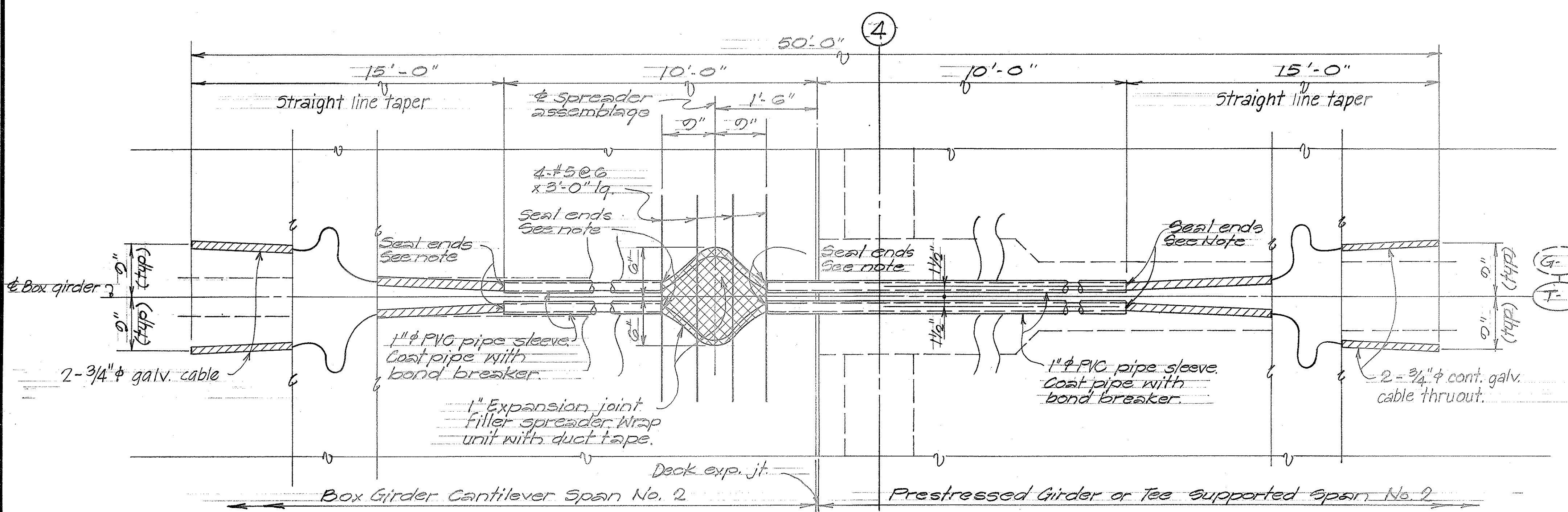
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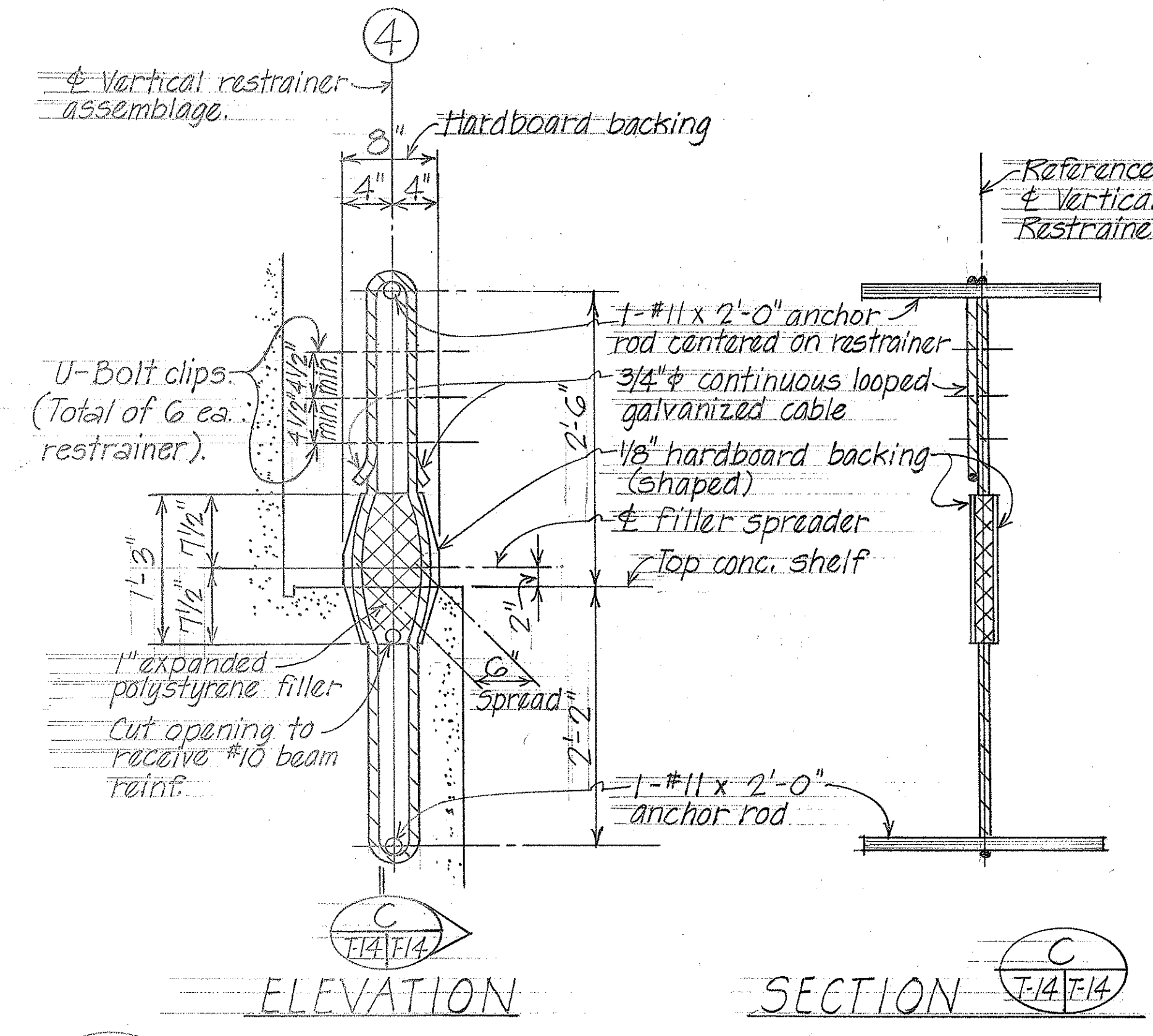
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	125	105



ELEVATION Scale: 1" = 1'-0"



PLAN Scale: 1" = 1'-0"

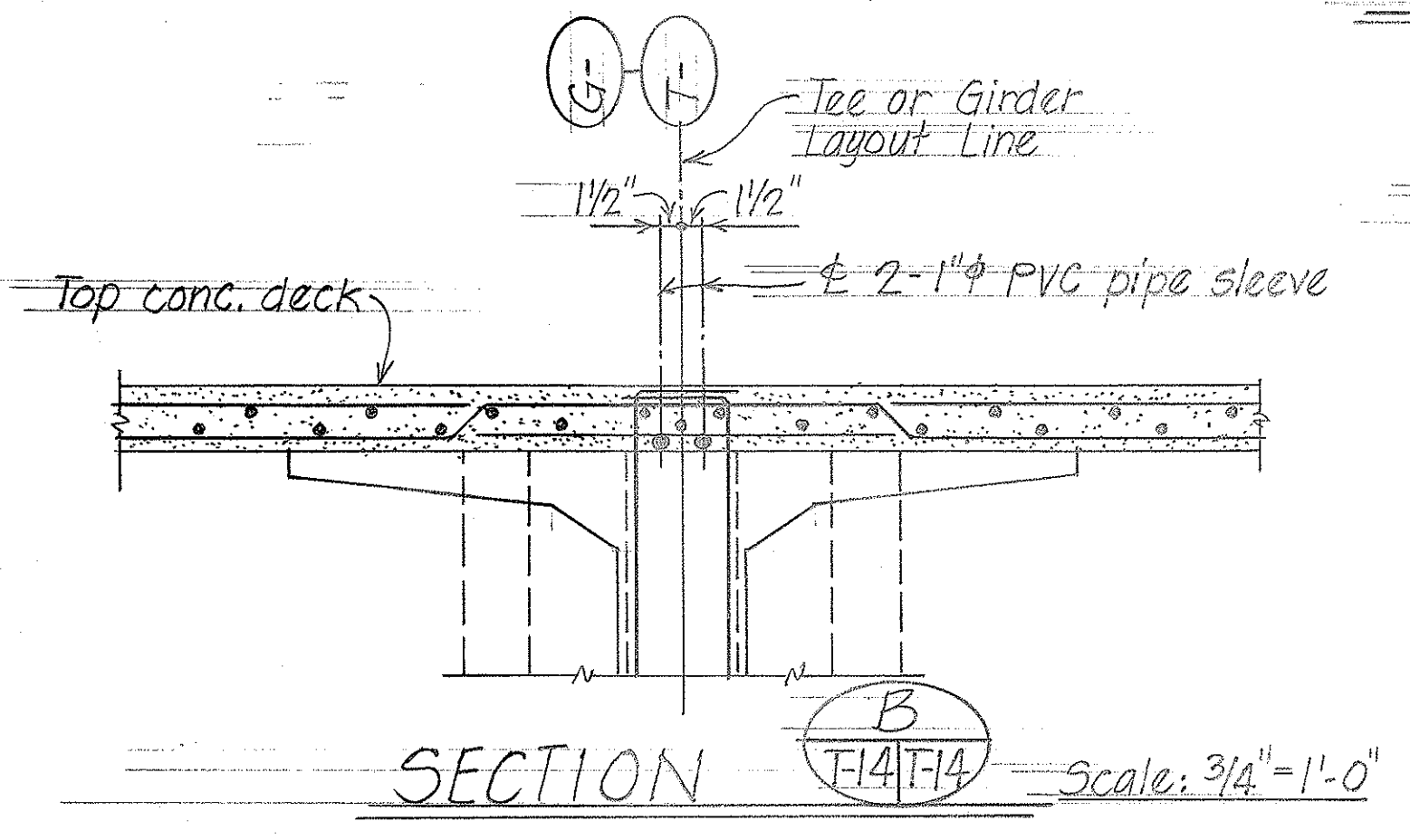


TYPICAL VERTICAL RESTRAINER DETAILS AT EXPANSION JOINT LINE 4 Scale: 1" = 1'-0"

NOTE:  
1. Vertical restainer assemblage shall be located at beams "Eb", "Eg" & "Ed". See beam details for exact location.

REFERENCE NOTES:  
1. Restrainer assemblage incidental to concrete & will not be paid for separately.  
2. Restrainer assemblage shall be securely held in place while placing concrete.

NOTE:  
1. Horizontal restrainer assemblage shall be located over each prestressed tee and girder, extended into box girder cantilever span no. 2 as detailed.  
2. Seal ends of PVC pipe sleeve. Seals to be of sufficient strength to withstand concrete pressure.



TYPICAL DETAILS - HORIZONTAL RESTRAINER ASSEMBLY IN DECK SLAB. Scale: 3/4" = 1'-0"

DATE	BY
DESIGNED BY	MT
TRACED BY	MT
NOTE BOOK	BY
QUANTITIES BY	TKM
CHECKED BY	ST
NO.	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

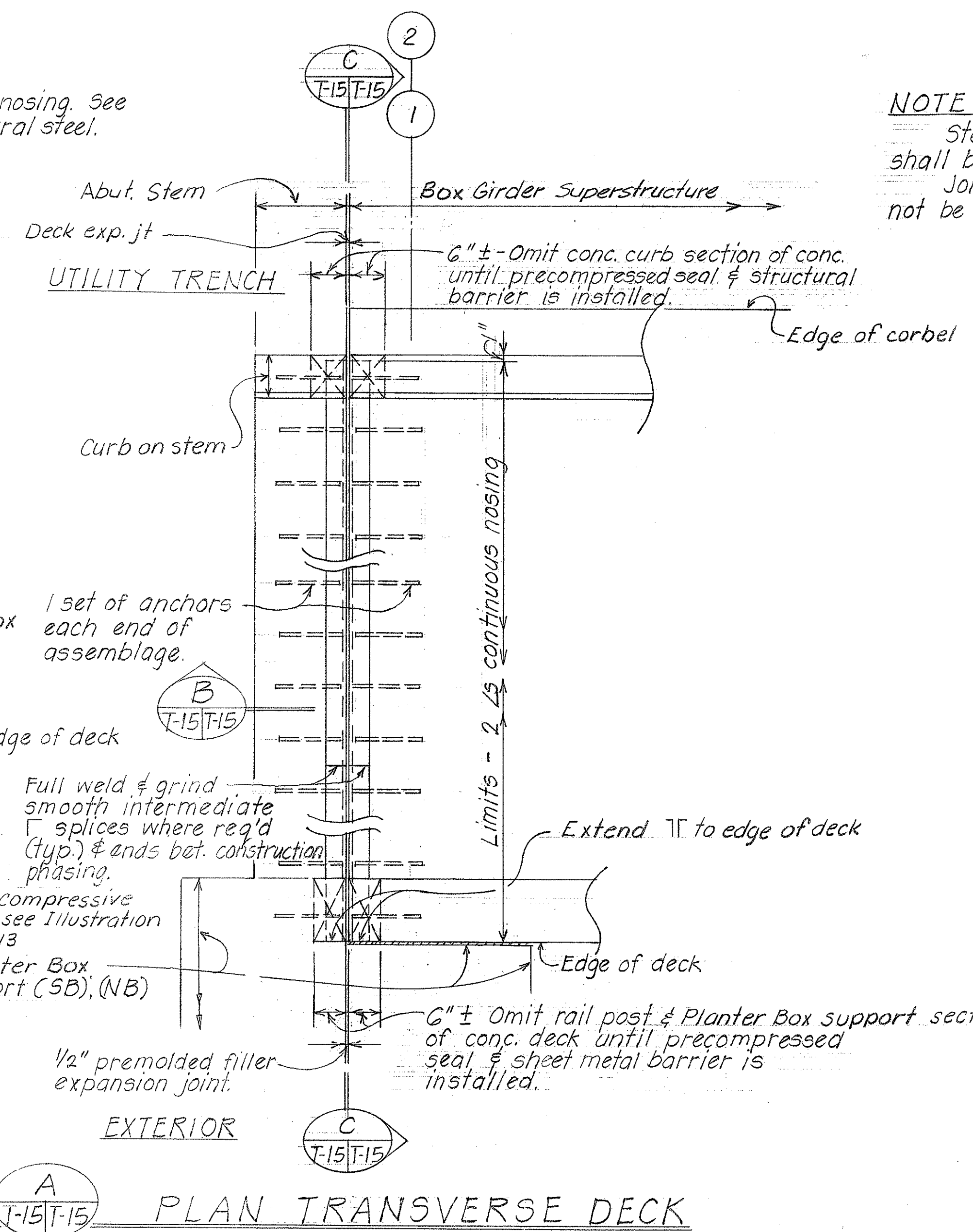
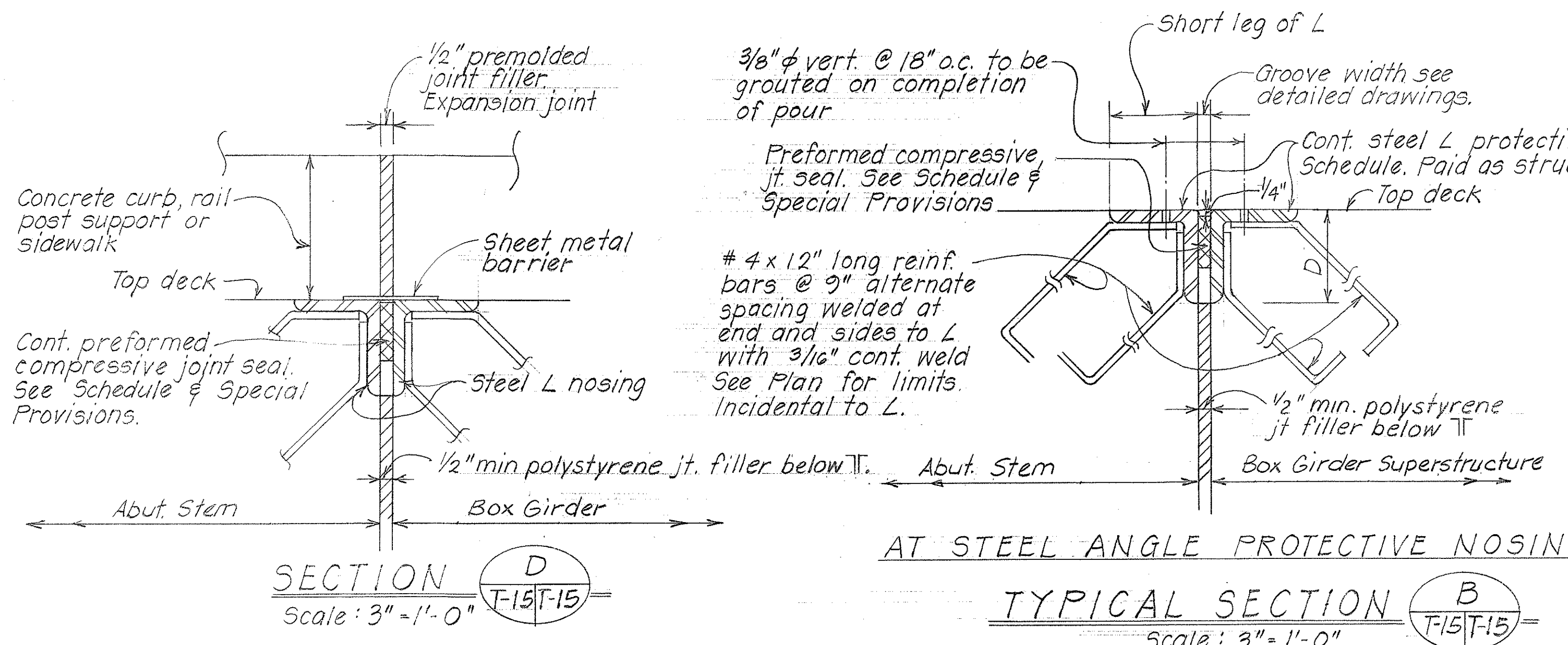
**WILSON BRIDGE**  
TYPICAL DETAILS

DECK HORIZONTAL & VERTICAL RESTRAINER ASSEMBLAGES - SEAT LINE 4

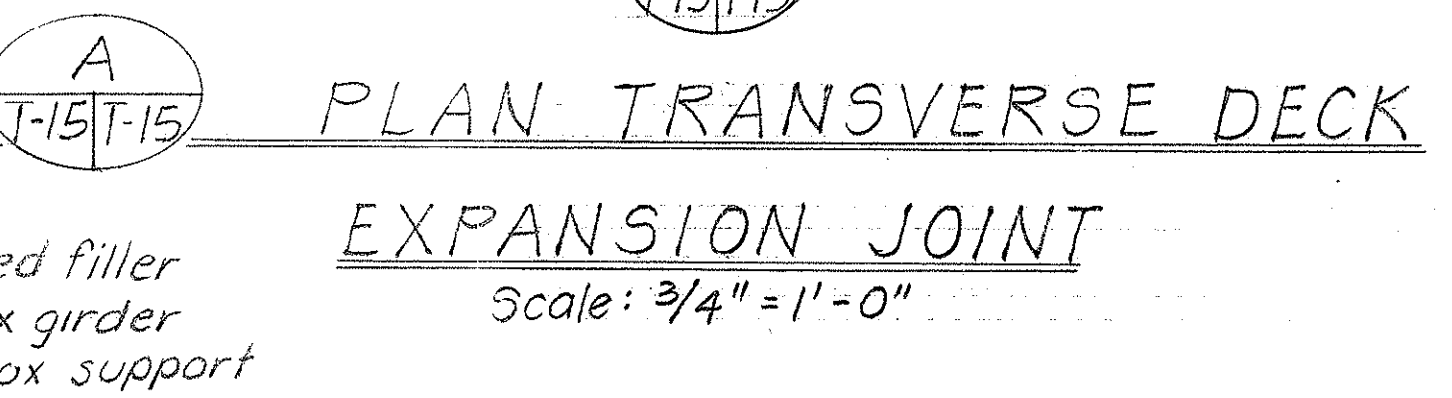
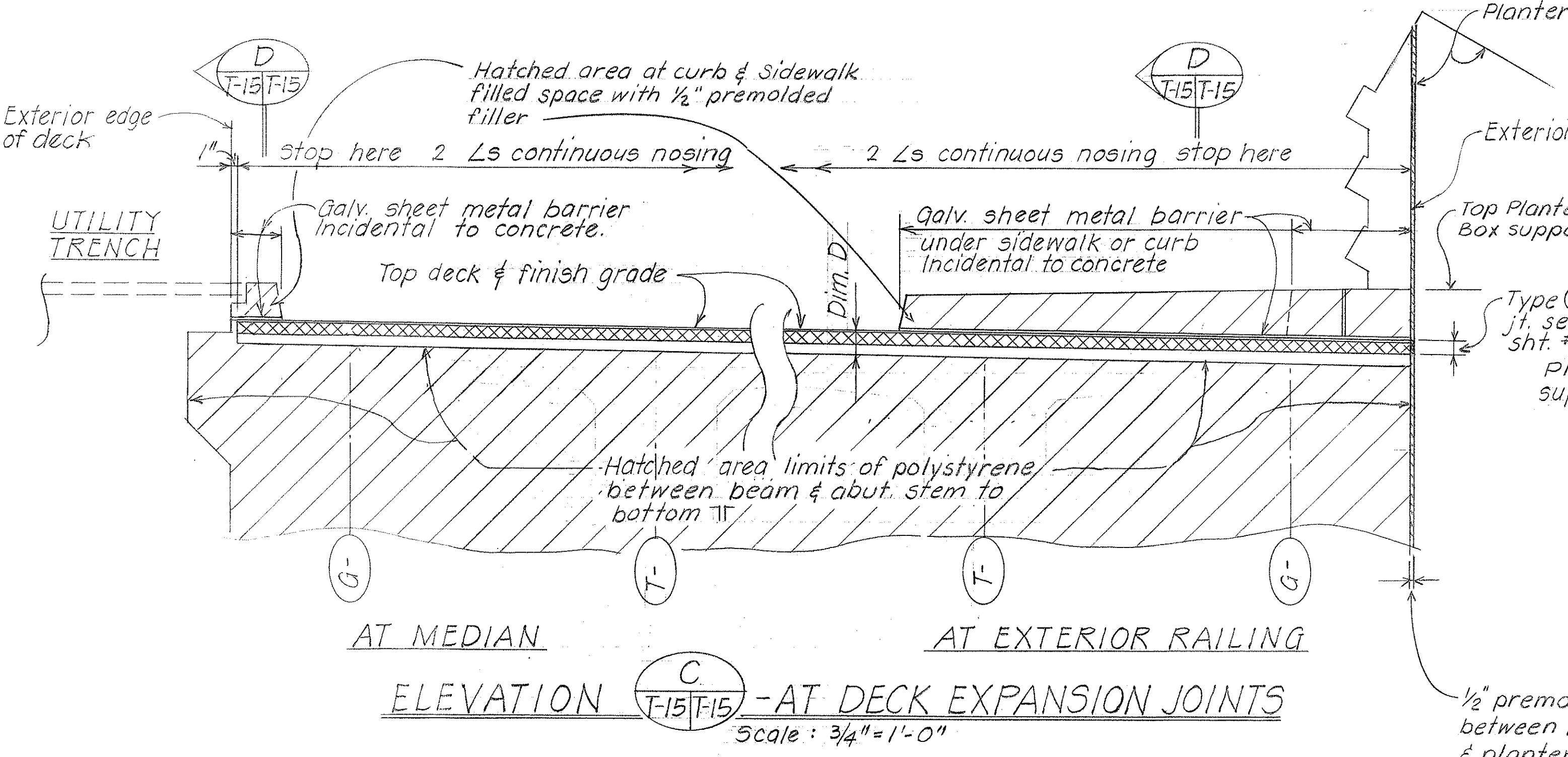
Proj. No. BRF-080-1(7)  
Scale: As Noted Date: July 1976

SHEET No. 7.14 OF 30 SHEETS

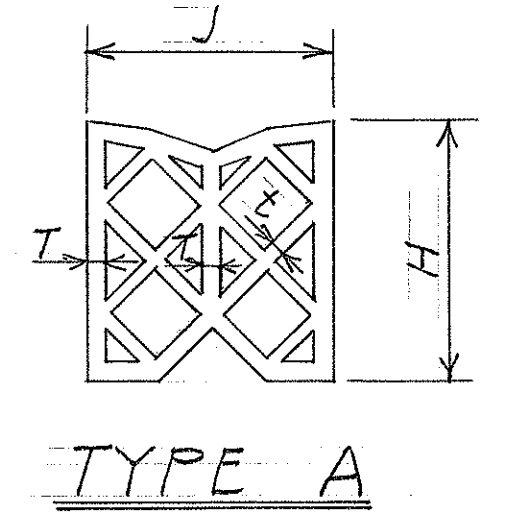




**NOTE:**  
Steel angle protective nosing assemblage shall be hot-dipped galvanized after fabrication. Joint sealer incidental to concrete & will not be paid separately.

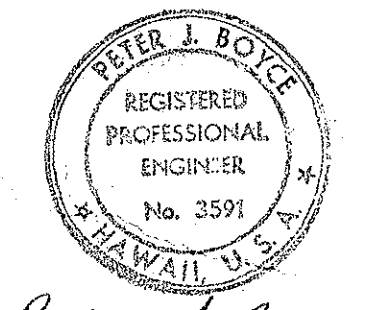


EXPANSION JOINT SEALER SCHEDULE						
Joint Seal Size	Type A - Joint Sealer (Dimensions and Tolerances)		Thickness		Steel Angle Protective Nosing	Groove Dim. D
	J	H	T	t		
2	1 3/16	1 5/32	As per Manufacturer's recommendation for 1/2" groove width			
3	2 + 3/16 - 0	2 1/16 ± 1/8	1/8 + 1/32 - 1/64	3/32 + 1/32 - 1/64	6" x 3 1/2" x 1/2"	6"
5	3 + 1/4 - 0	3 1/32 ± 3/16	3/16 + 3/64 - 1/64	1/8 + 3/64 - 1/64	6" x 3 1/2" x 1/2"	6"
6	4 + 5/16 - 0	4 2/32 ± 1/4	1/4 + 3/64 - 1/32	3/16 + 3/64 - 1/64	7" x 4" x 1/2"	7"



8-77 Revised to CIPPS

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
DECK EXPANSION JOINT SEALER  
& WATERPROOFING DETAILS  
PROJECT No. BRF-080-1(7)  
Scale: As Shown Date: July 1976  
SHEET NO. T-15 OF T-30 SHEETS

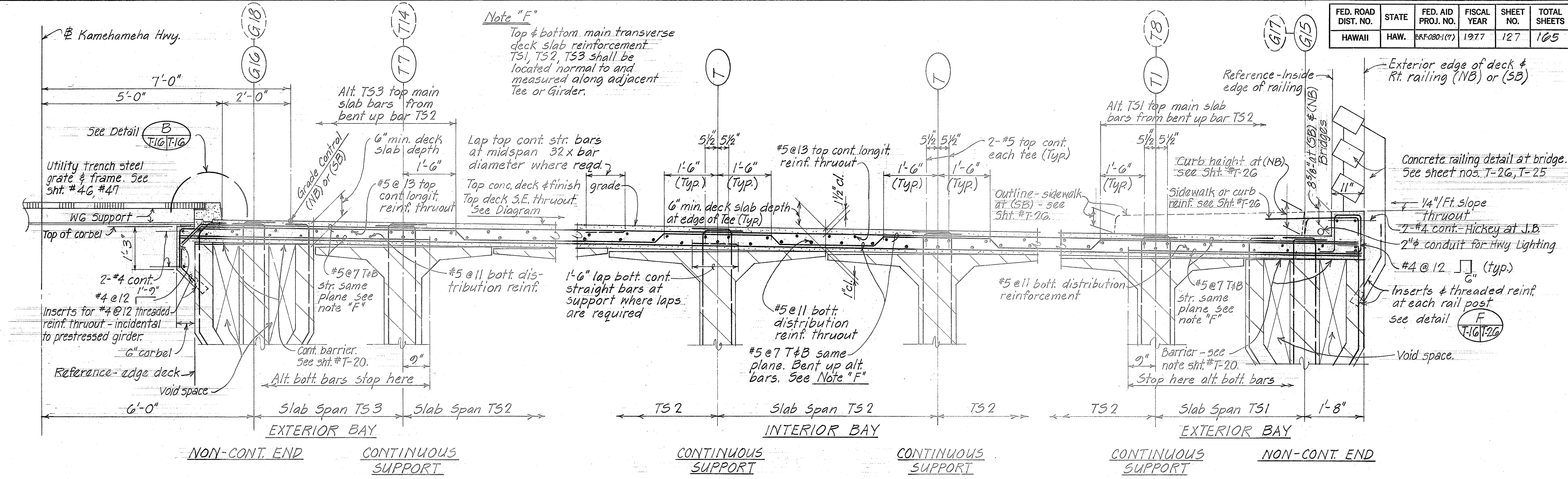


Peter J. Boyce

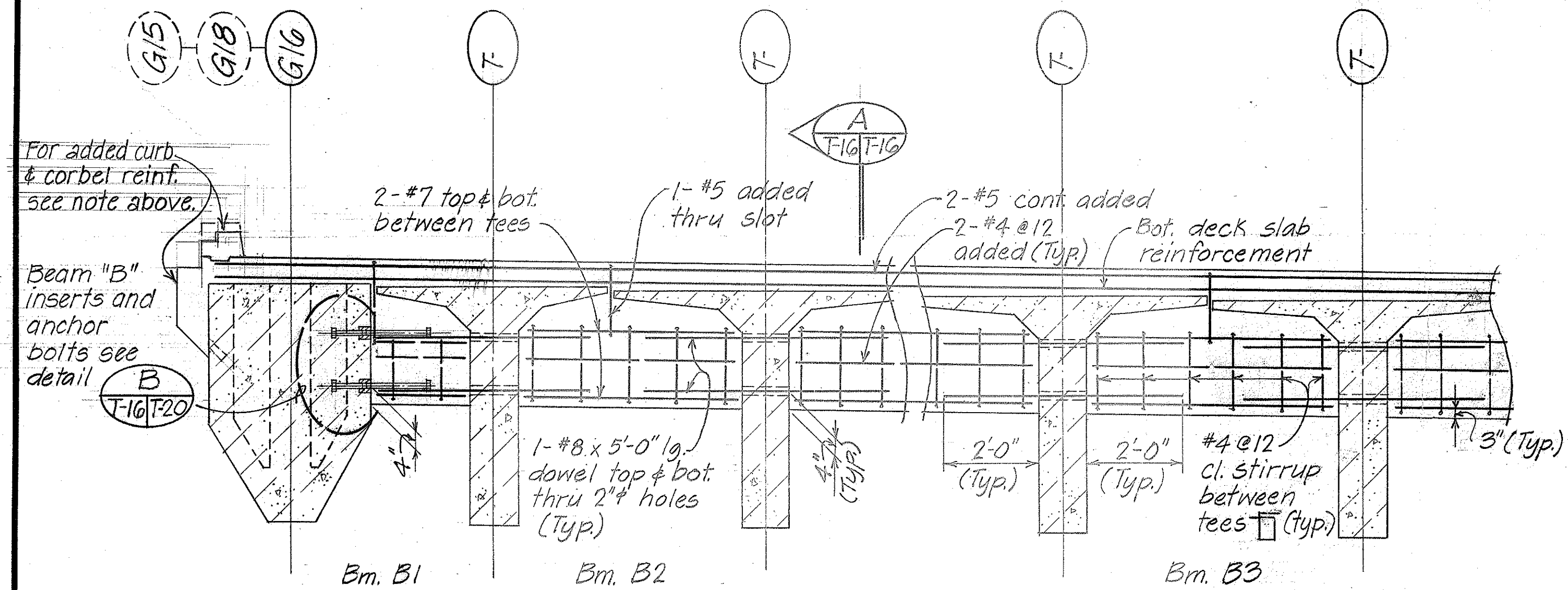
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DRAWN BY LMA  
TRACED BY M I  
DESIGNED BY M I  
QUANTITIES BY CEY  
CHECKED BY



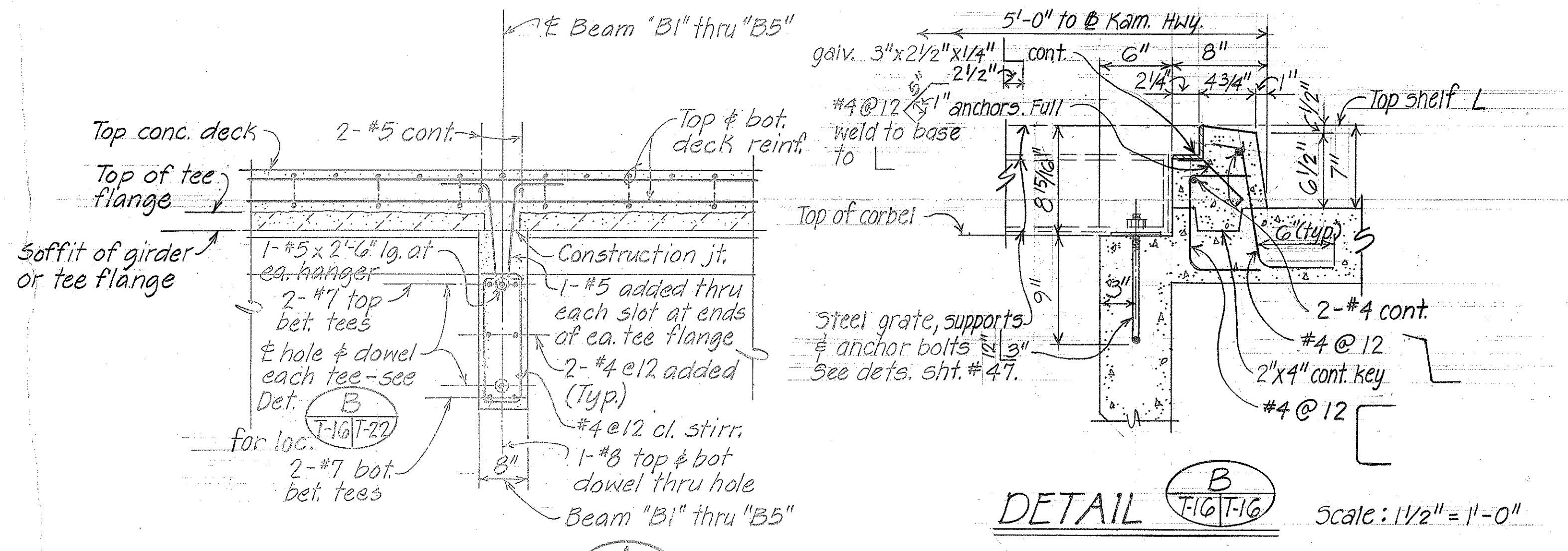
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	127	165



NORMAL TRANSVERSE DECK SLAB SECTION - TSI, TS2, TS3 Scale: 3/4" = 1'-0"



PART. ELEVATION - TYPICAL BEAM "B1", "B2", "B3" DETAILS & REINF. Scale: 1/2" = 1'-0"



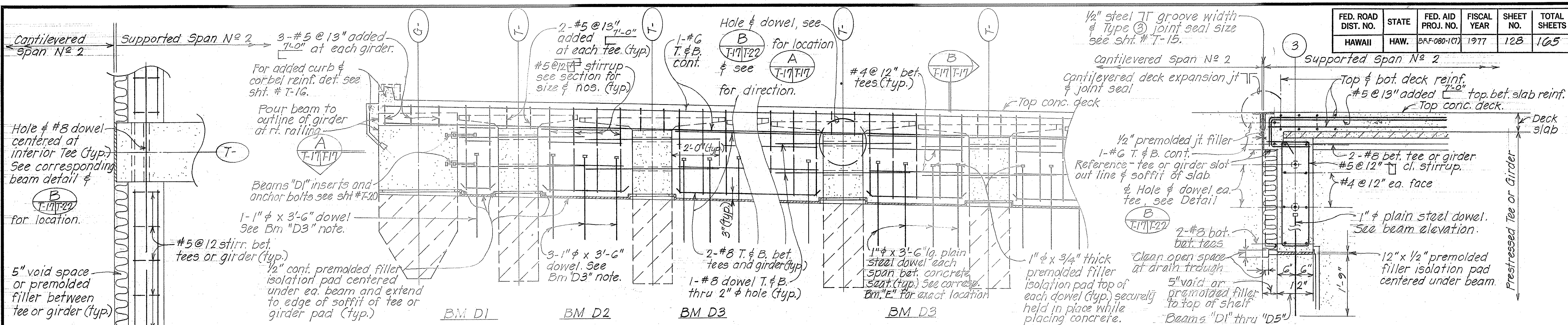
SECTION A FIG. 1-6 Scale: 3/4" = 1'-0"

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
PRESTRESSED TEE AND GIRDER,  
NORMAL DECK SECTION & DETAILS  
PROJECT NO. BRF-080-1(7)  
Scale: \_\_\_\_\_ Date: July 1976  
SHEET NO. T-16 OF T-30 SHEETS

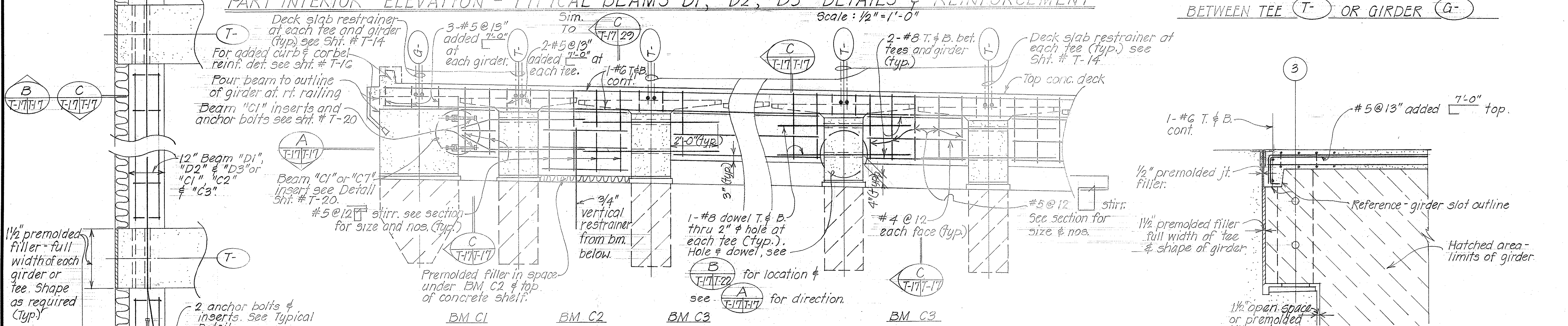
DATE	BY
DESIGNED BY	MY
CHECKED BY	SV
QUANTITIES BY	CM
NOTED BY	GR
ORIGINAL PLAN	No.



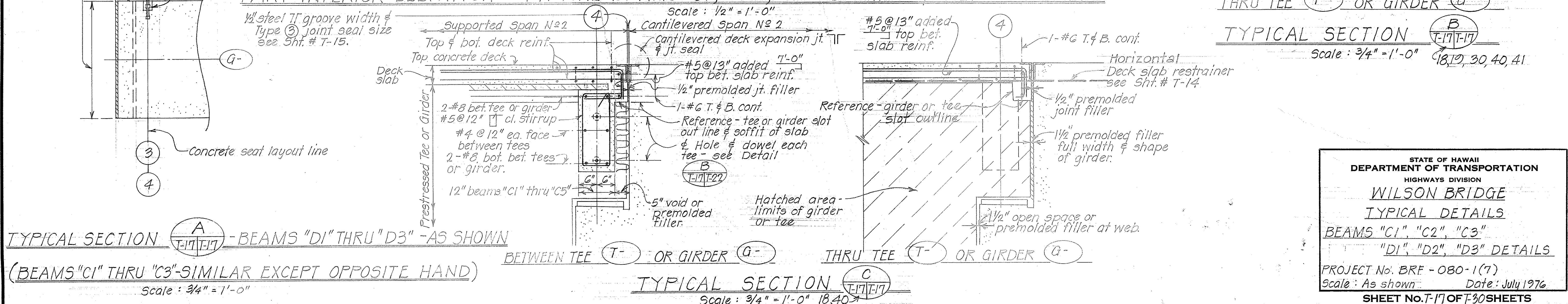
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	128	165



**PART INTERIOR ELEVATION - TYPICAL BEAMS "D1", "D2", "D3" DETAILS & REINFORCEMENT**  
Scale: 1/2" = 1'-0"



**PART INTERIOR ELEVATION - TYPICAL BEAMS "C1", "C2", "C3" DETAILS & REINFORCEMENT**  
Scale: 1/2" = 1'-0"



**TYPICAL SECTION A - BEAMS "D1" THRU "D3" - AS SHOWN**  
Scale: 3/4" = 1'-0"

(BEAMS "C1" THRU "C3" - SIMILAR EXCEPT OPPOSITE HAND)

**TYPICAL SECTION B**  
Scale: 3/4" = 1'-0"

DATE	_____
SURVEY PLOTTED BY	LMA
DRAWN BY	LMA
CHECKED BY	LMA
NOTE BOOK NO.	_____

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
BEAMS "C1", "C2", "C3"  
"D1", "D2", "D3" DETAILS  
PROJECT No. BRF - 080 - 1(7)  
Scale: As shown Date: July 1976  
SHEET No. T-17 OF T-30 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	B.R.F.-080-1(7)	1977	129	165

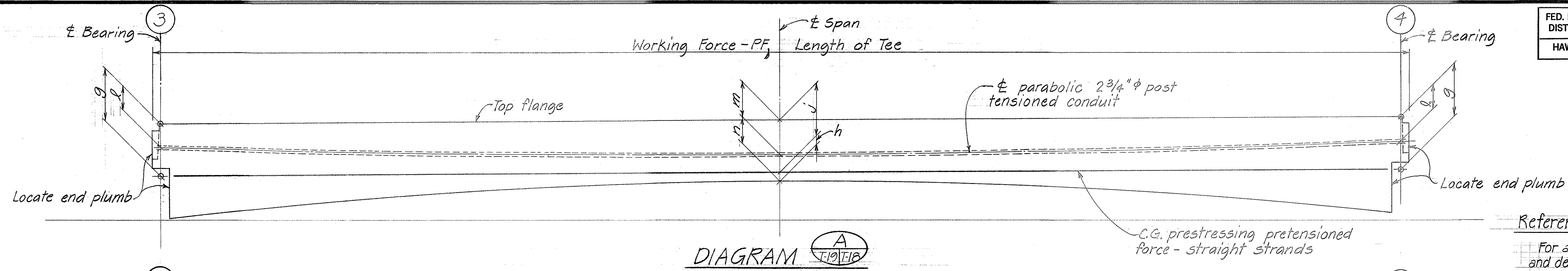


DIAGRAM A  
T10/T18

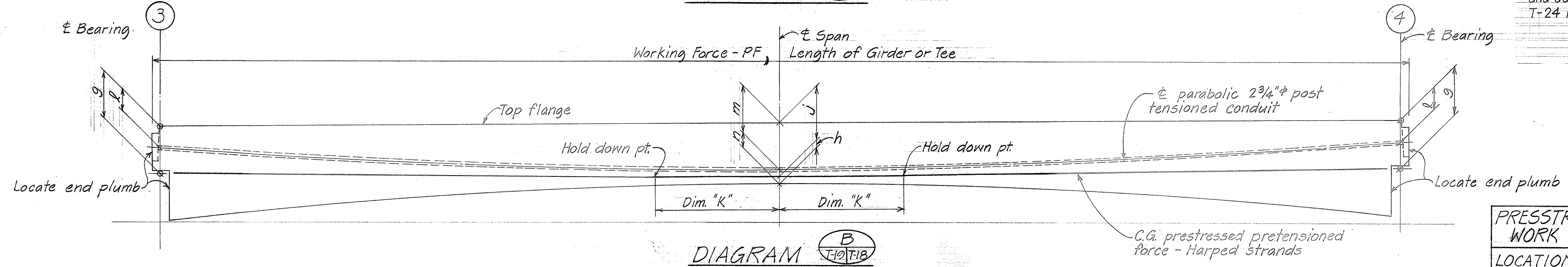


DIAGRAM B  
T10/T18

Reference Notes:  
For additional Tee & Girder reinforcement and details, refer to sht. # T-19 thru T-24 inclusive.

TYPICAL PRESTRESSED PRETENSIONED & POST TENSIONED GIRDER (PG-) OR TEE (PT-) Scale: 1/4" = 1'-0"

- POST TENSION NOTES:
- See Standard Specification for other post tension requirements.
  - 1/2" φ 270<sup>K</sup> strands shall be used for post tensioning.
  - Load shall not be applied to the concrete until girder has attained strength of 6000 psi
  - The design load is based on a projected loss of 33,000 psi from initial pull.

PRESSTRESSED GIRDER OR TEE WORK POINT (W.P.) ELEVATION			
LOCATION	AT (3)	AT (4)	
SOUTH BOUND	G17	860.37	860.80
	T-8	860.44	860.86
	T-9	860.52	860.95
	T-10	860.61	861.04
	T-11	860.71	861.13
	T-12	860.80	861.23
	T-13	860.89	861.32
	T-14	860.97	861.40
G18	861.04	861.47	
NORTH BOUND	G16	861.04	861.47
	T-7	860.97	861.40
	T-6	860.89	861.32
	T-5	860.80	861.23
	T-4	860.71	861.13
	T-3	860.61	861.04
	T-2	860.52	860.95
	T-1	860.44	860.86
G15	860.37	860.80	

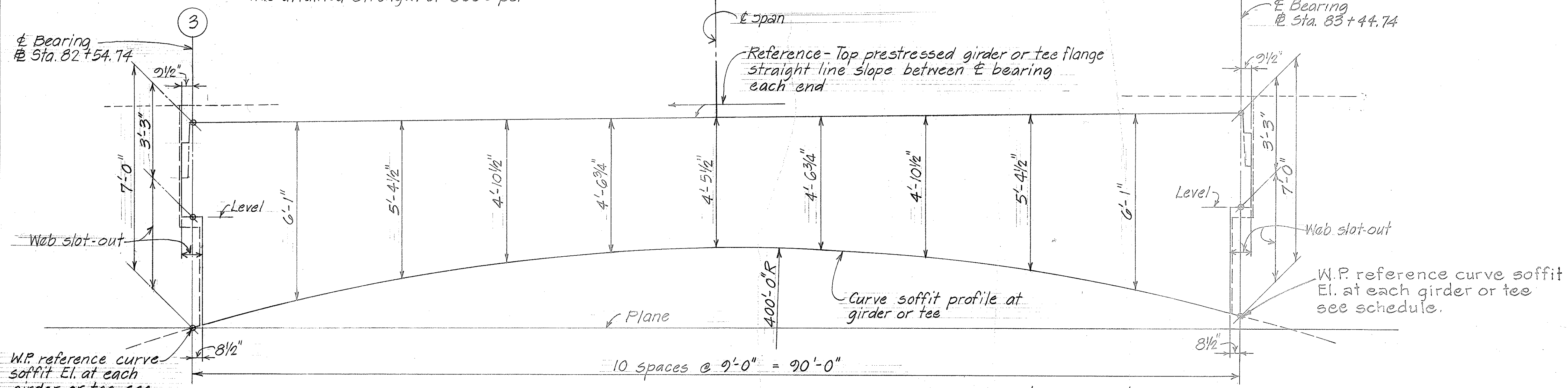


DIAGRAM - TYPICAL PRESTRESSED GIRDER (PG-) OR TEE (PT-) DIMENSIONS

Scale: Horiz. 1" = 5'-0"  
Vert. 1" = 2'-0"

NOTE: All dimensions & elevations are located plumb along & prestressed girder or tee.

DATE	REVISION
11/1/76	Notes #3 & #4 corrected Note #5 deleted

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**WILSON BRIDGE**  
TYPICAL DETAILS

PRESTRESSED & POST-TENSION  
GIRDERS & TEE DETAILS

Proj. No. BRF-080-1(7)  
Scale: AS noted Date: July 1976

SHEET NO. T-18 OF 30 SHEETS

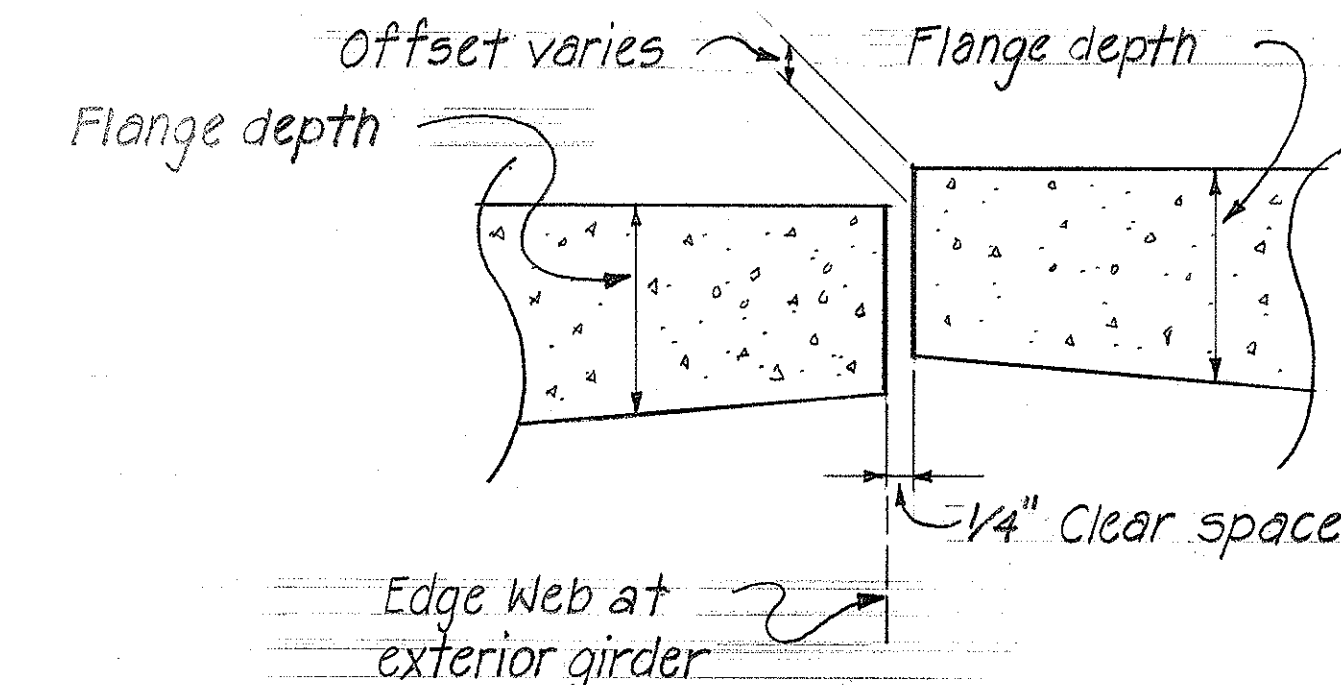
DATE: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_



# PRESTRESSED PRE-TENSION & POST-TENSION TEE & GIRDER TYPE SCHEDULE (PT-, PG-)

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	59F-080-1(7)	1977	130	105

TYPE	SCHEDULED TOP FLANGE WIDTH	REFERENCE DIAGRAM No.	WORKING FORCES Pf (Kips)		CENTER OF GRAVITY WORKING FORCES - DIMENSIONS						STIRRUP SIZE	STIRRUP TYPE	STIRRUP SPACING EACH END (MEASURED FROM END SUPPORTS TOWARDS CENTER). SEE DIAGRAM	POST-TENSION f'ci (Psi)	REMARKS	
			PRE-TENSION STRANDS	POST-TENSION STRANDS	PRE-TENSION STRANDS			POST-TENSION STRANDS								
					"g"	"h"	"j"	"k"	"l"	"m"						"n"
PG-1	3'-4 1/4"	(B) F10/F18	793	286	3'-2 1/4"	5 3/4"	3'-11 3/4"	9'-0"	1'-0"	3'-4"	1'-1 1/2"	#5	Triple	10@12"; Bal @ 18"	4,000	
PG-2	3'-4 1/4"	(B) F10/F18	969	286	3'-3 3/8"	5 7/16"	4'-0 1/16"	9'-0"	1'-0"	3'-4 1/4"	1'-1 1/4"	#5	Triple	10@12"; Bal @ 18"	5,120	
PT-1a			Same as PT-1 below													Provide enlarge flange cut-out at seat line (3)-(4). See detail below.
PT-1	6'-2"	(A) F10/F18	705	286	3'-9 3/16"	7 1/16"	3'-9 3/16"	X	1'-9"	3'-0 1/8"	1'-5 3/8"	#5		15@9"; 12@12"; Bal @ 18"	6,000	
PT-2	5'-0 7/8"	(A) F10/F18	661	286	3'-10 1/4"	7 1/4"	3'-10 1/4"	X	1'-9"	2'-6"	1'-11 1/2"	#5		12@12"; Bal @ 18"	5,270	



TYPICAL SECTION (C) F10/F19  
SC: 6" = 1'-0"

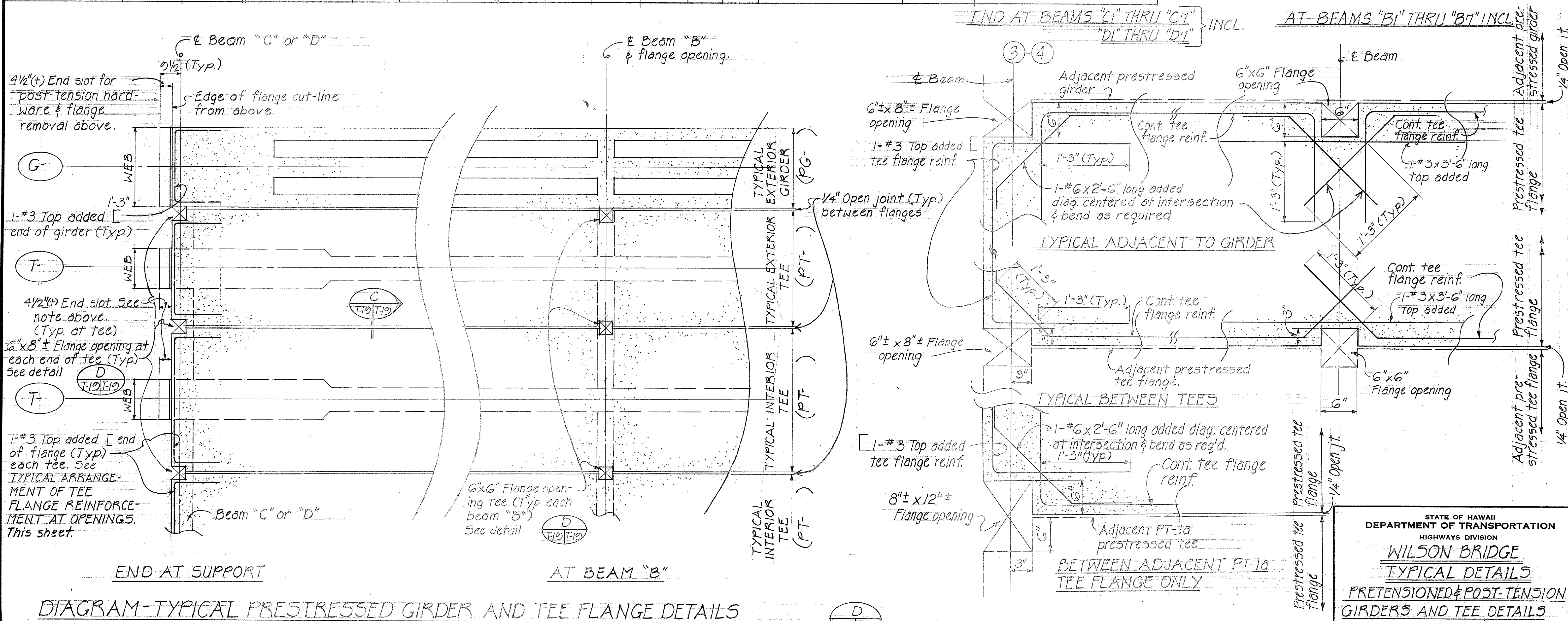


DIAGRAM-TYPICAL PRESTRESSED GIRDER AND TEE FLANGE DETAILS  
SC: 1/2" = 1'-0"

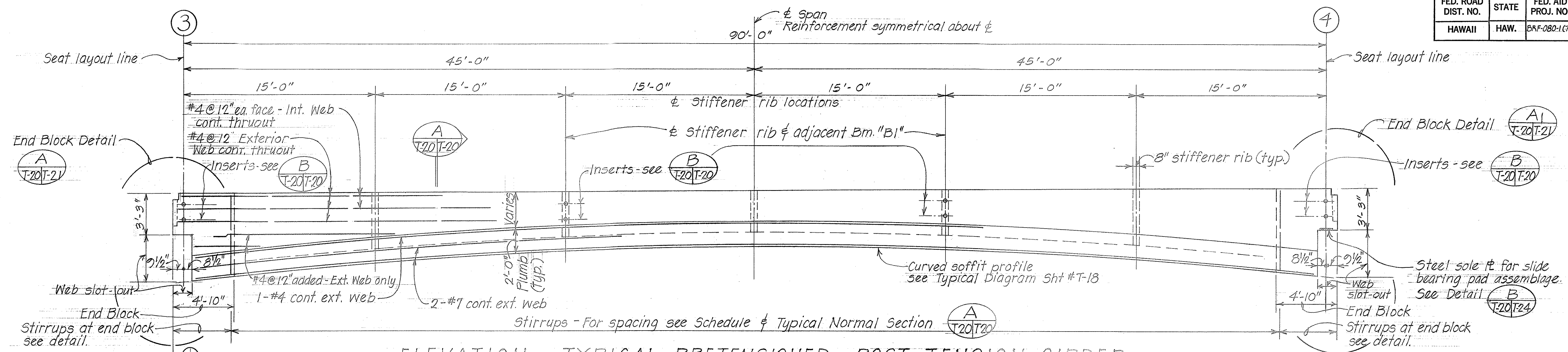
(D) F10/F19 TYPICAL ARRANGMENT OF TEE FLANGE REINFORCEMENT AT OPENINGS  
SC: 1/2" = 1'-0"

DATE	_____
SURVEY PLOTTED BY	FK
DRAWN BY	FK
CHECKED BY	MT
NOTE BOOK	MT
QUANTITIES BY	MT
CHECKED BY	CK
No.	_____

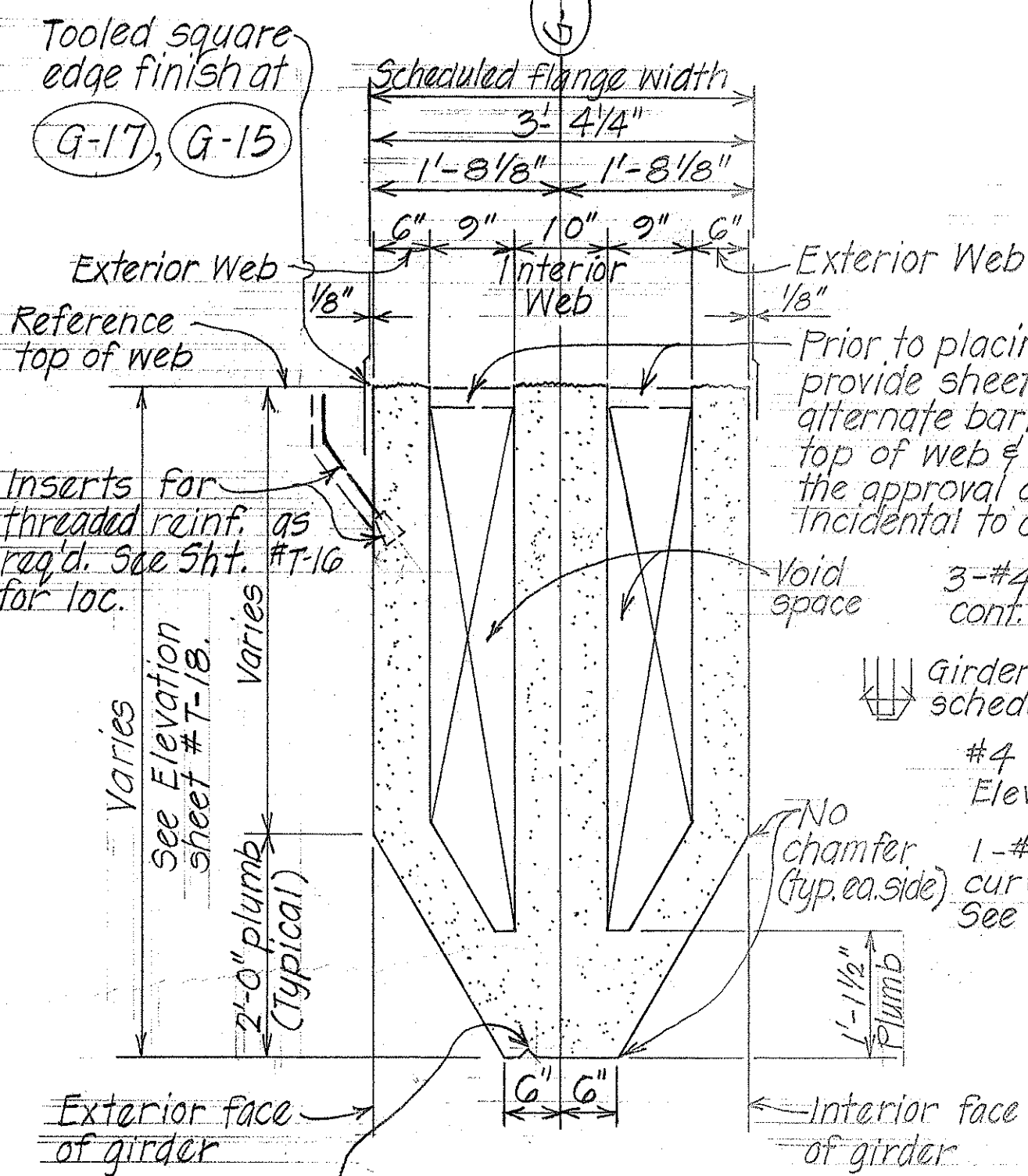
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
PRE-TENSIONED & POST-TENSION  
GIRDERS AND TEE DETAILS  
Proj. No. DRF-080-1(7)  
Scale: AS NOTED Date: July 1976  
SHEET NO. 7-10 OF 7-30 SHEETS



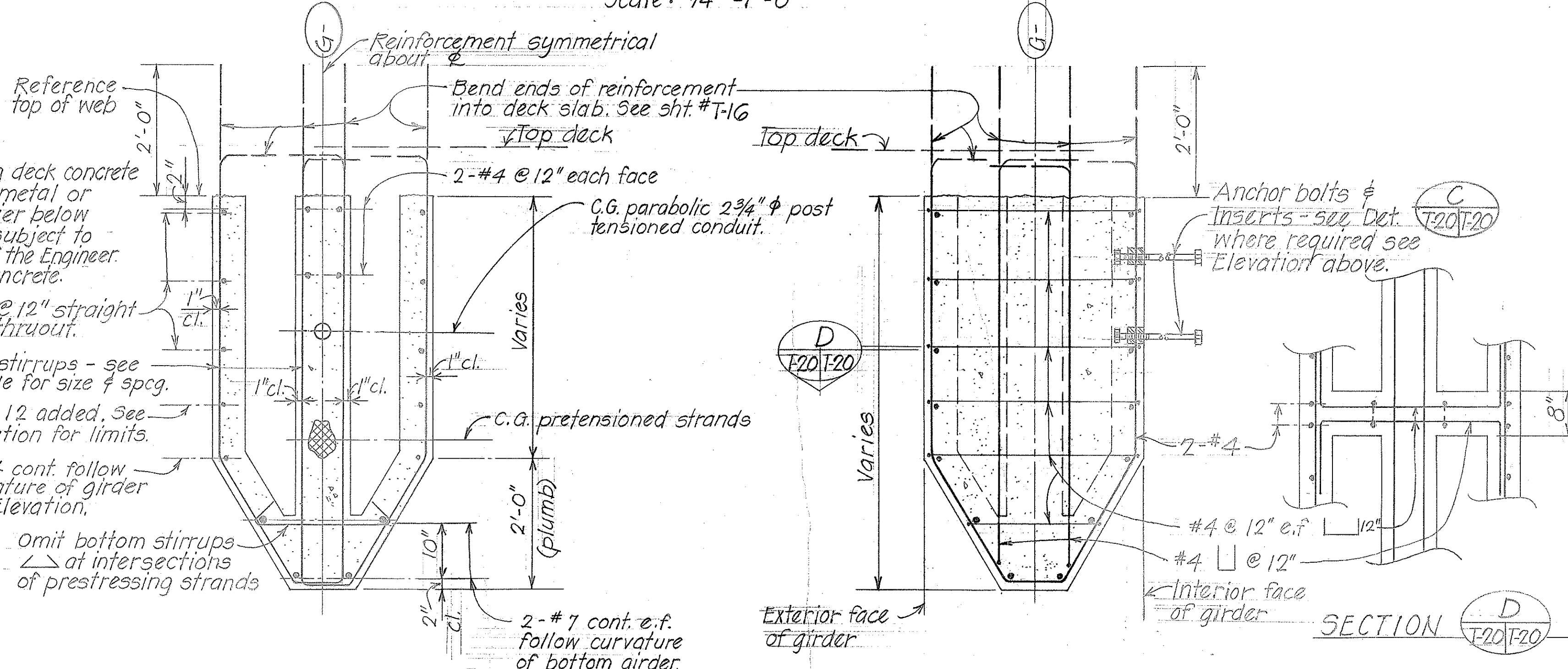
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	131	165



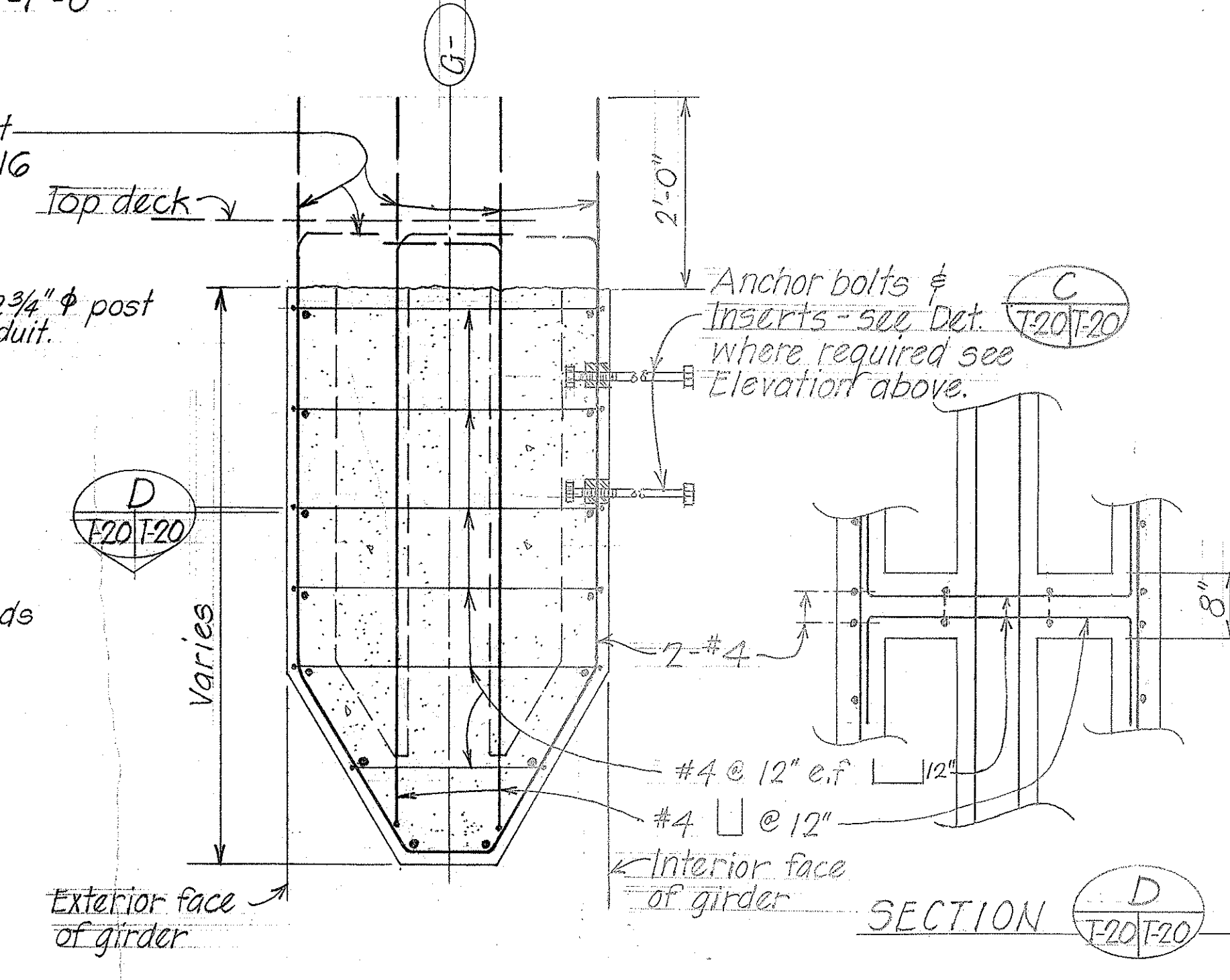
**ELEVATION - TYPICAL PRETENSIONED - POST TENSION GIRDER**  
Scale: 1/4" = 1'-0"



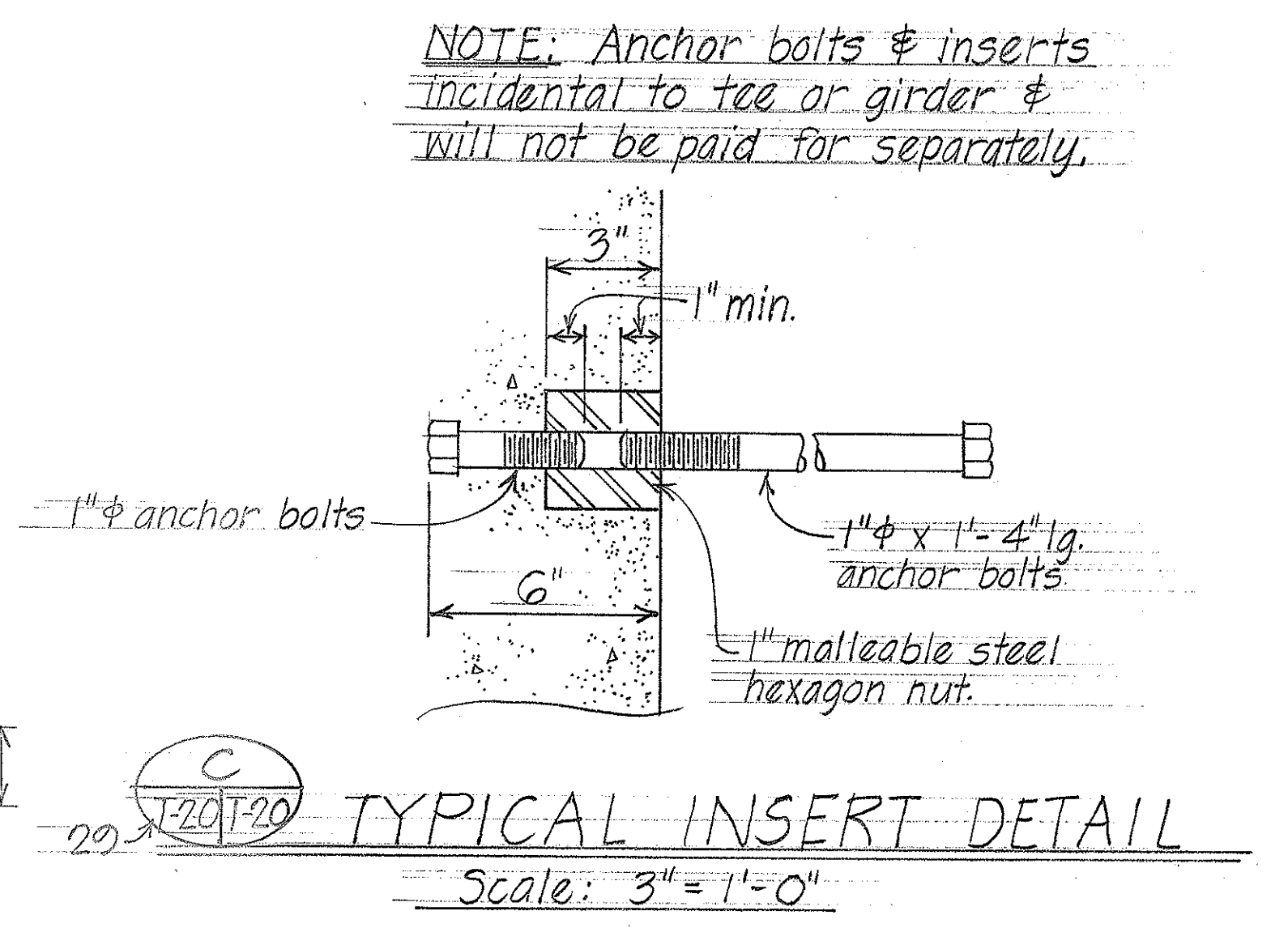
**GIRDER DIMENSIONS**  
Scale: 1/4" = 1'-0"



**SHOWING GIRDER REINFORCEMENT**  
Scale: 3/4" = 1'-0"



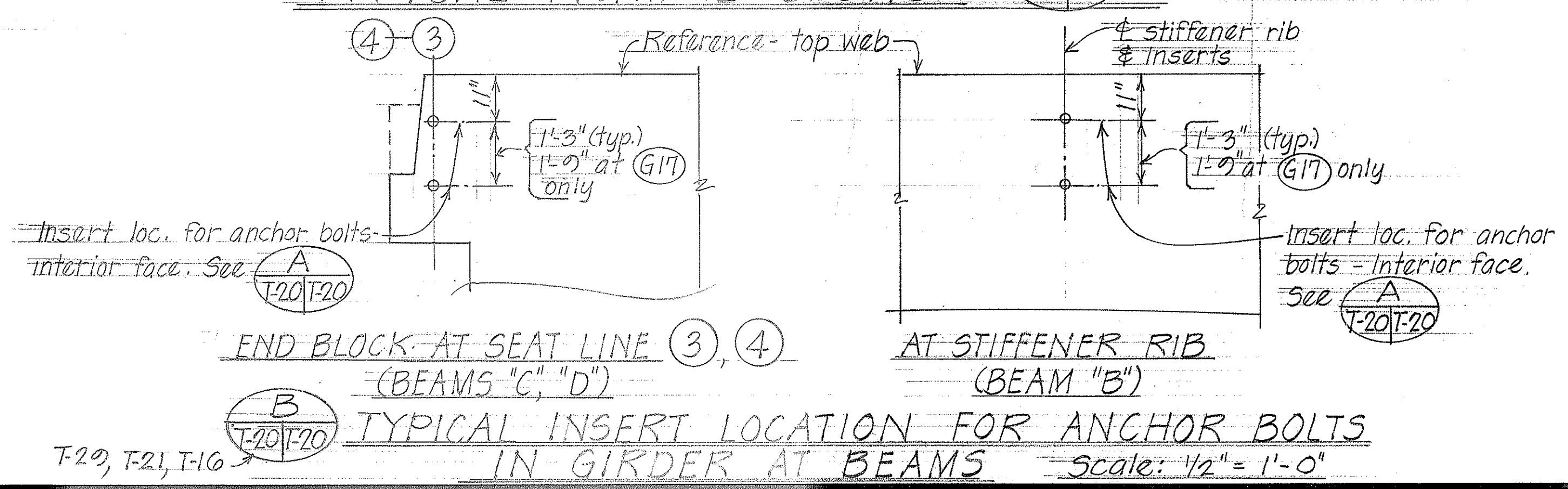
**SHOWING STIFFENER RIB REINFORCEMENT**  
Scale: 3/4" = 1'-0"



**TYPICAL INSERT DETAIL**  
Scale: 3" = 1'-0"

**REFERENCE NOTES:**  
For additional Details refer to sheets #T-18, #T-19.  
All exposed exterior corners greater than 90° shall not be chamfered. All exposed exterior corners less than 90° shall be chamfered 1/2" x 1/2".

DATE	
SURVEY PLOTTED BY	LMA
DRAWN BY	MT
CHECKED BY	TKM
NOTE BOOK	
NO.	

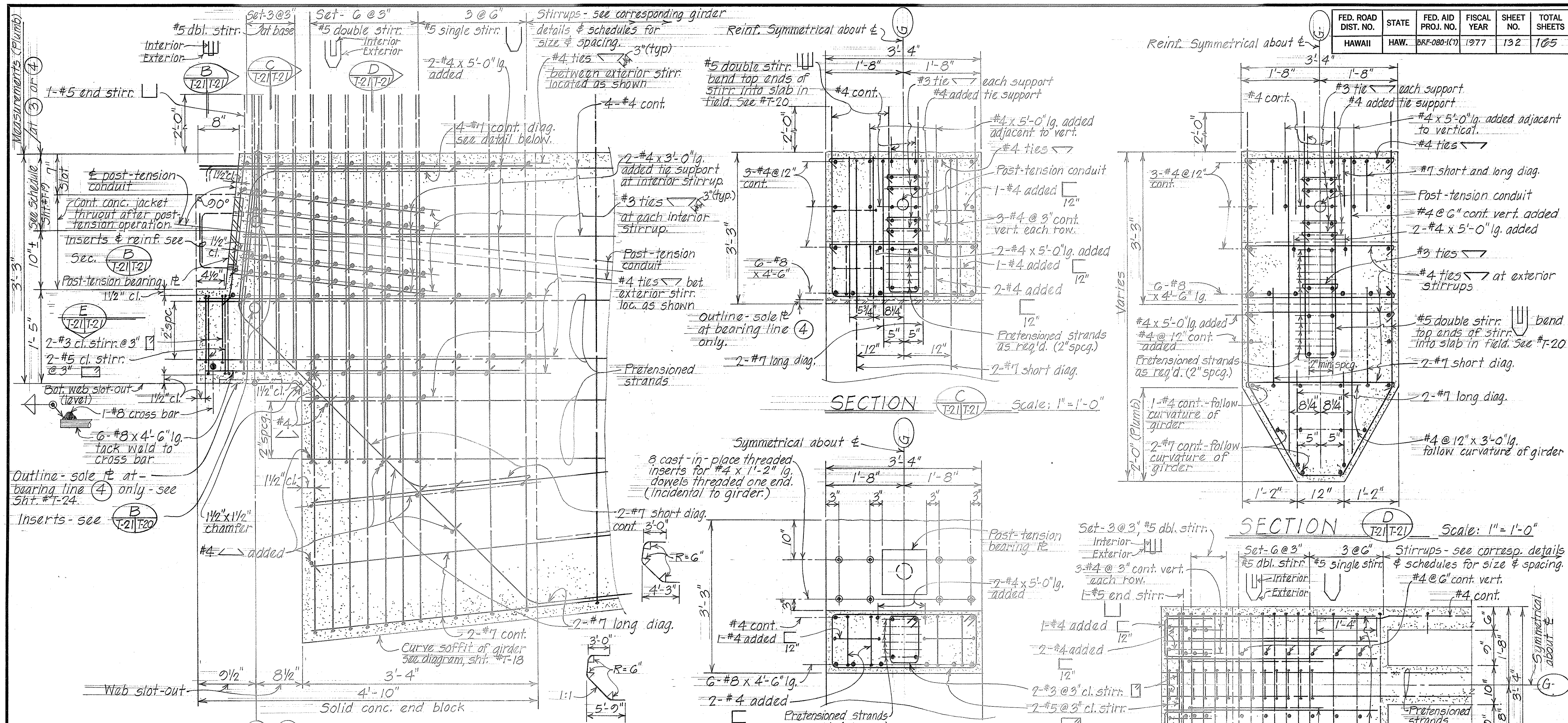


**TYPICAL NORMAL SECTION**  
Scale: 1/2" = 1'-0"

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
PRETENSIONED - POST-TENSION  
GIRDER DETAILS  
Proj. No. BRF-080-1(7)  
Scale: AS NOTED Date: JULY 1976  
SHEET No. T-20 OF T-30 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	132	165



**TYPICAL END BLOCK DETAIL** Scale: 1 1/2" = 1'-0"

END BLOCK DETAIL SIMILAR EXCEPT OPPOSITE HAND & AS OTHERWISE NOTED

**SECTION C** Scale: 1" = 1'-0"

**SECTION D** Scale: 1" = 1'-0"

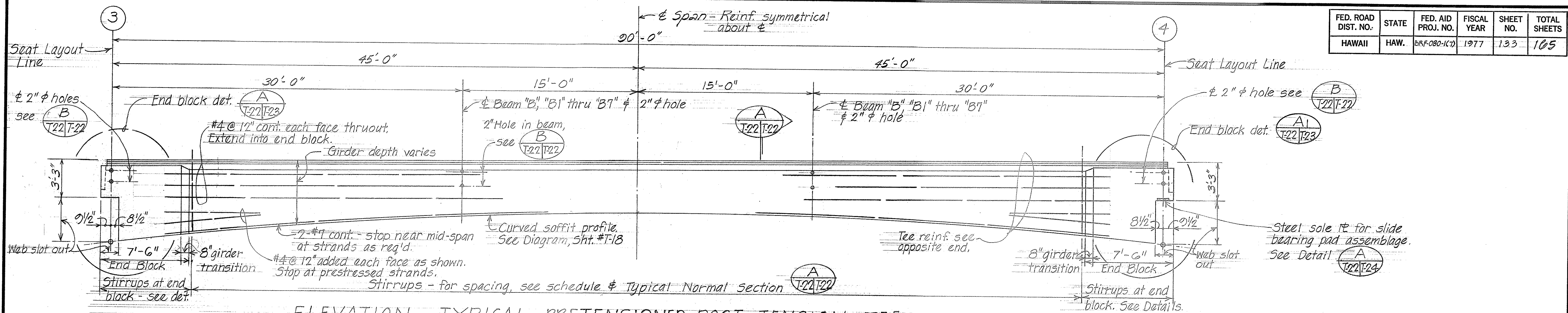
**SECTION E** Scale: 1" = 1'-0"

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 TYPICAL DETAILS  
 PRETENSIONED-POST-TENSION  
 GIRDER DETAILS  
 PROJ. NO BRF-080-1(7)  
 Scale: As noted Date: July 1976

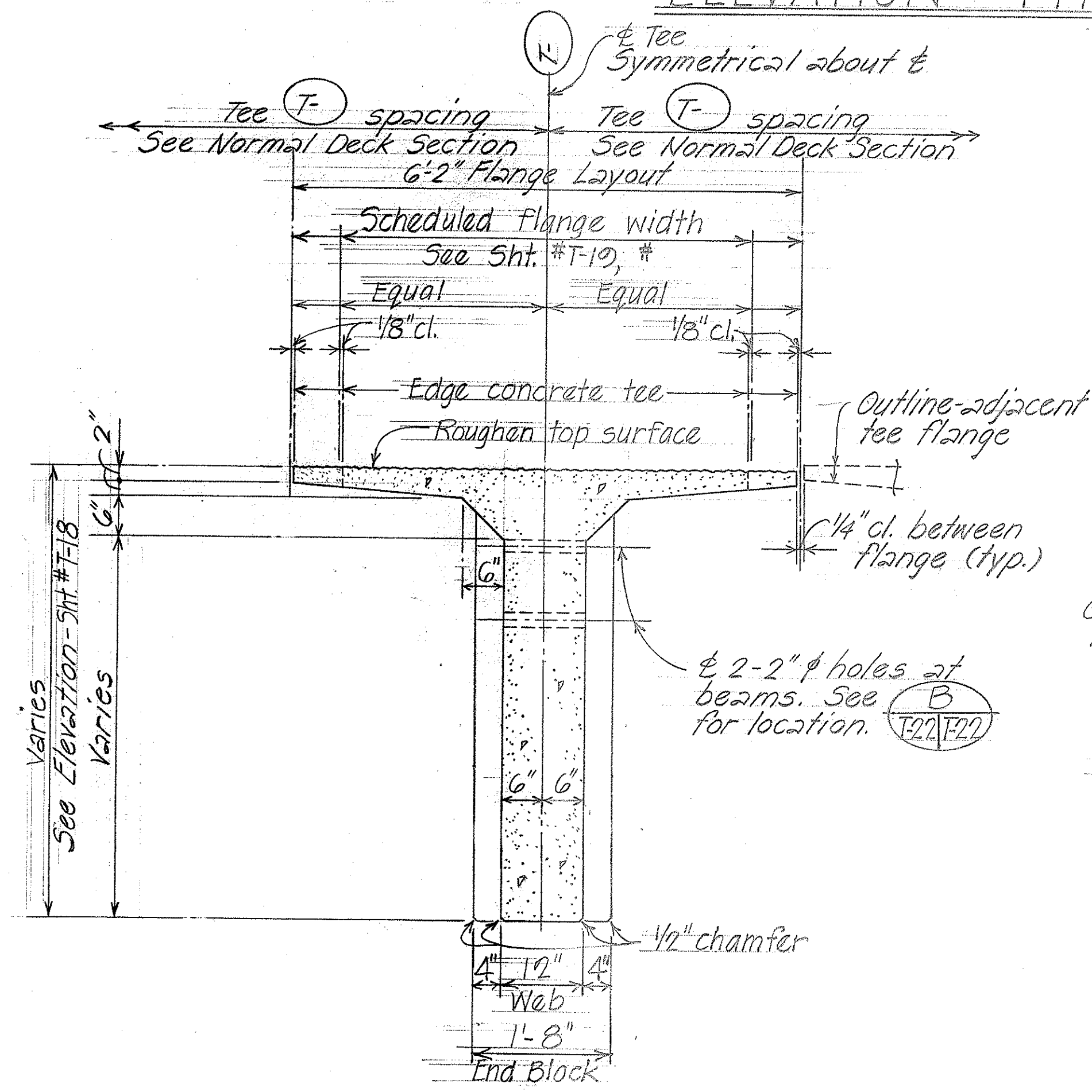
DATE	BY
DESIGNED BY	CHKD BY
TRACED BY	GT
QUANTITIES BY	GT
CHECKED BY	GT
NO.	



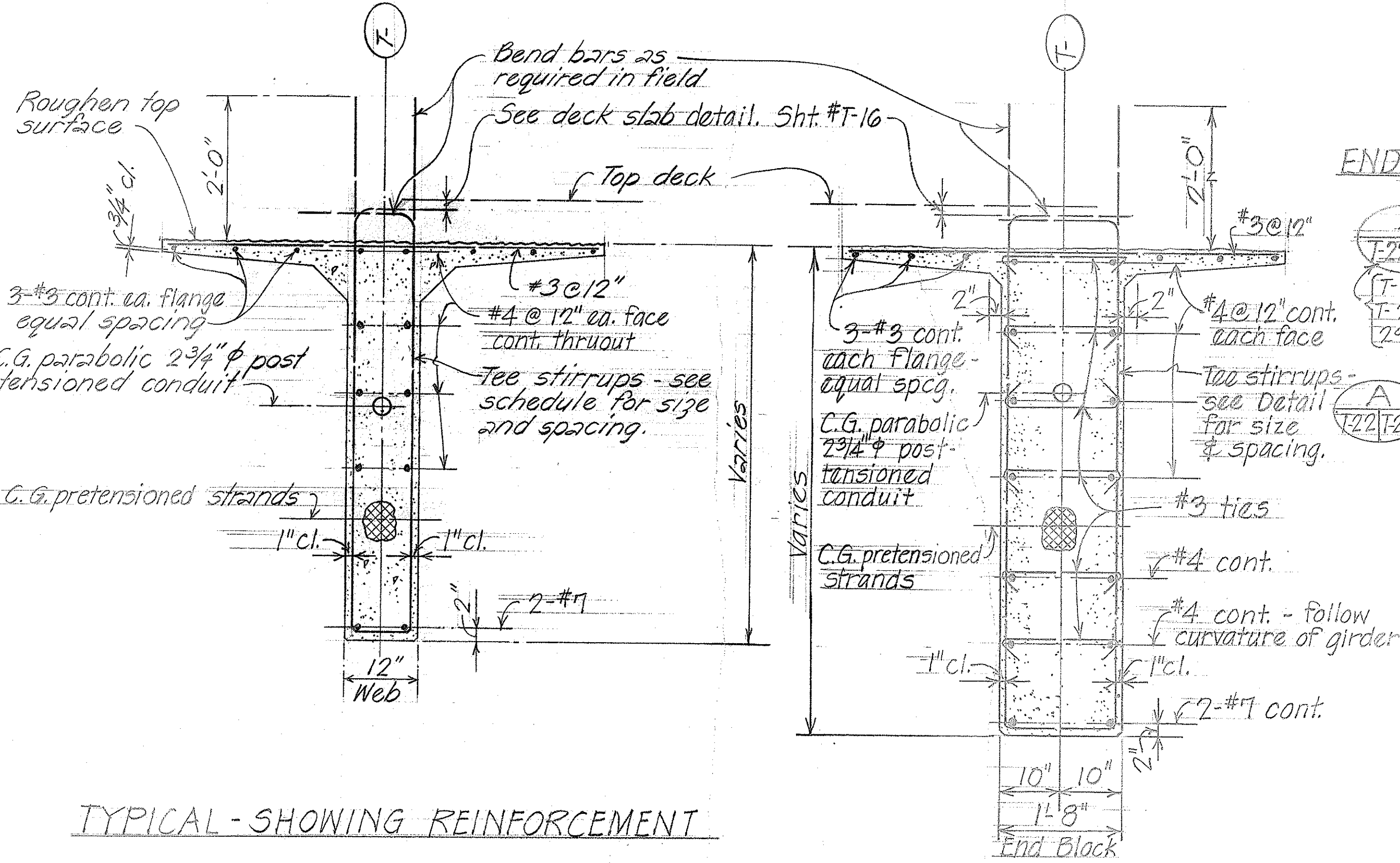
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	133	105



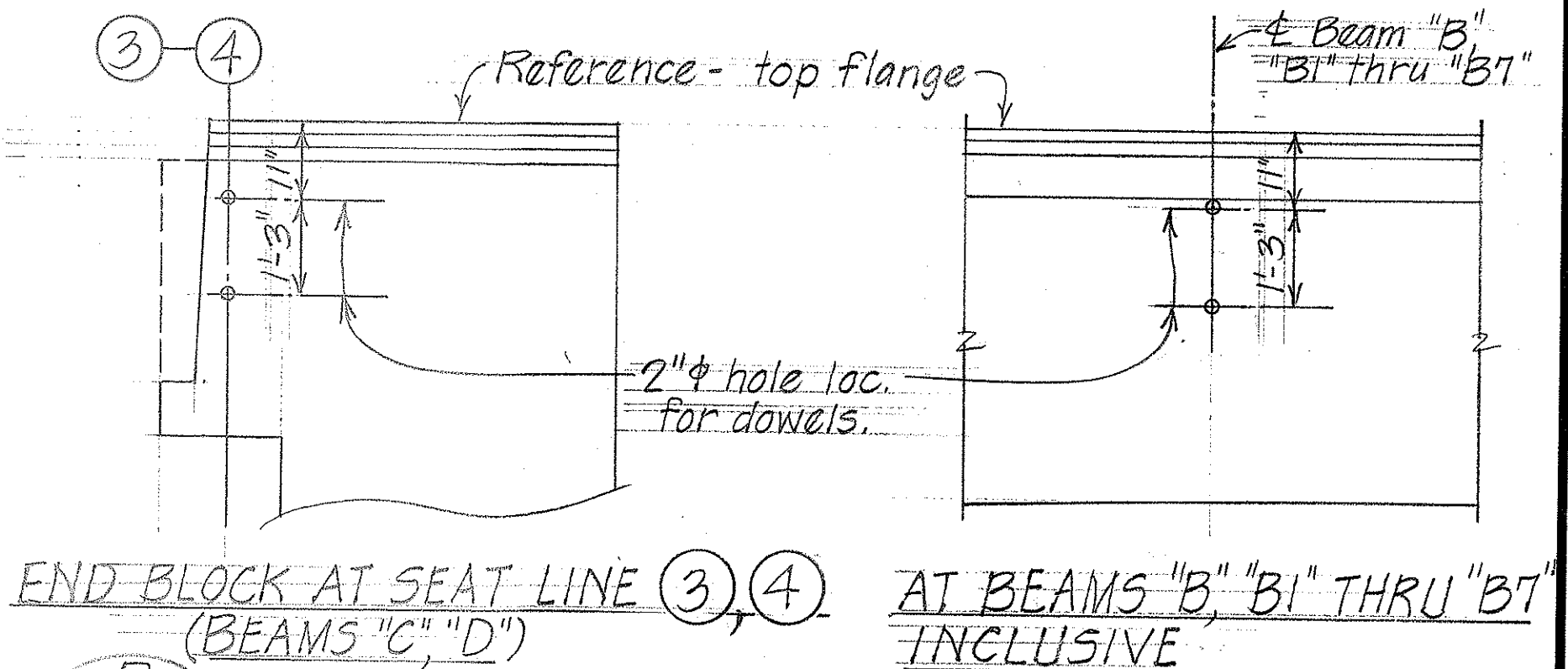
**ELEVATION - TYPICAL PRETENSIONED-POST-TENSION TEE**  
Scale: 1/4" = 1'-0"



**DIMENSIONS**



**TYPICAL - SHOWING REINFORCEMENT**



**END BLOCK AT SEAT LINE (3), (4) AT BEAMS "B", "B1" THRU "B7" INCLUSIVE**  
**TYPICAL HOLE LOCATION FOR DOWELS IN TEE AT CONCRETE BEAMS**  
Scale: 1/2" = 1'-0"

- NOTES:**
1. Provide 2" diameter holes in top flange of corresponding tee flanges to receive each H.T.C.O. hanger rod. For exact locations refer to Sht. #T-28, #T-29.
  2. All exposed corners of prestressed tee shall be chamfered 1/2" x 1/2".
  3. For additional details, refer to sht. #T-18, T-19.

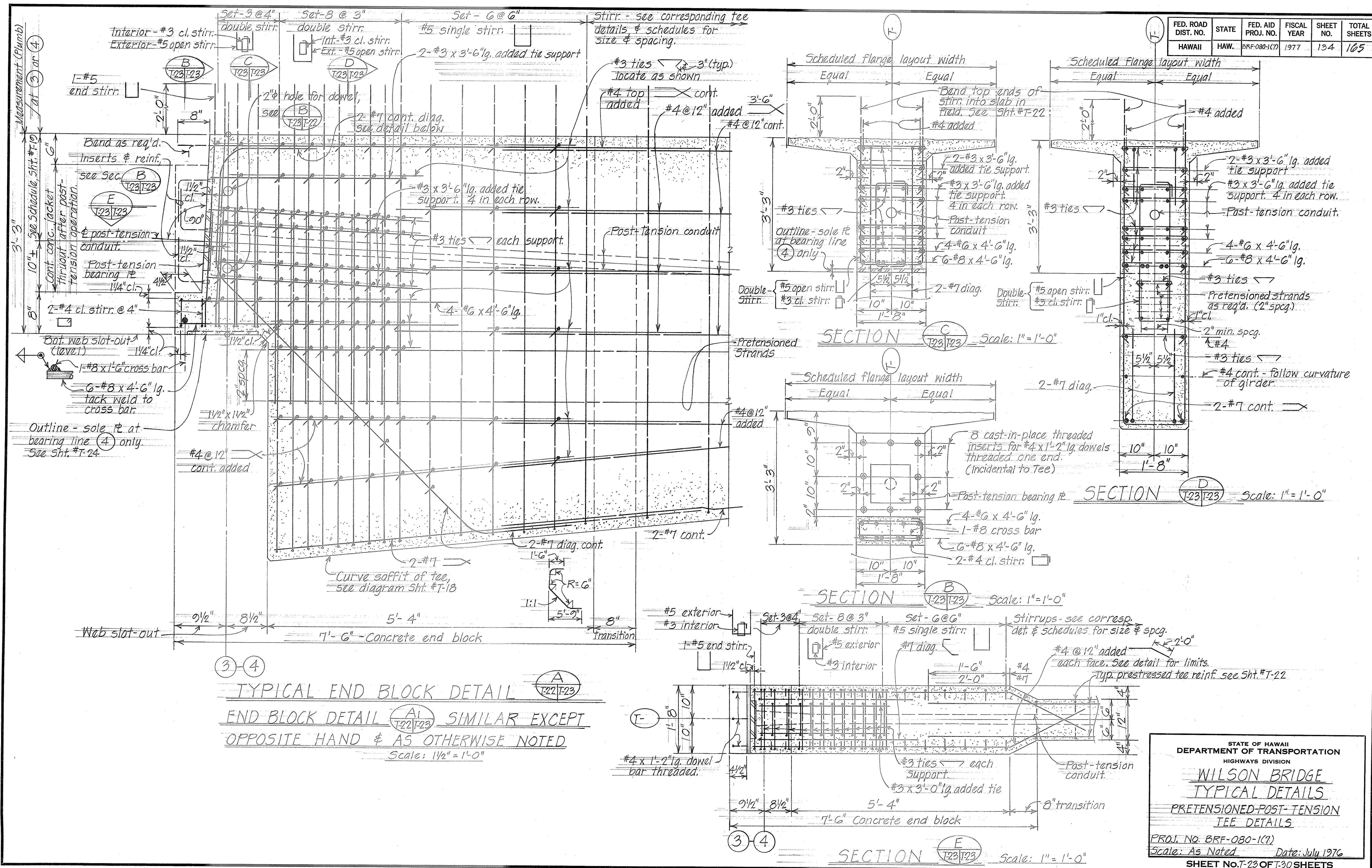
**TYPICAL NORMAL SECTION THRU PRESTRESSED TEE (PT-)**  
Scale: 3/4" = 1'-0"

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

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
PRETENSIONED-POST-TENSION  
TEE DETAILS  
Proj. No. BRF-080-1(7)  
Scale: AS NOTED Date: July 1976  
SHEET No. T-22 OF T-30 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	134	165



**TYPICAL END BLOCK DETAIL** (A) (T22/T23)  
**END BLOCK DETAIL (A1)** (T22/T23) SIMILAR EXCEPT OPPOSITE HAND & AS OTHERWISE NOTED  
 Scale: 1/2" = 1'-0"

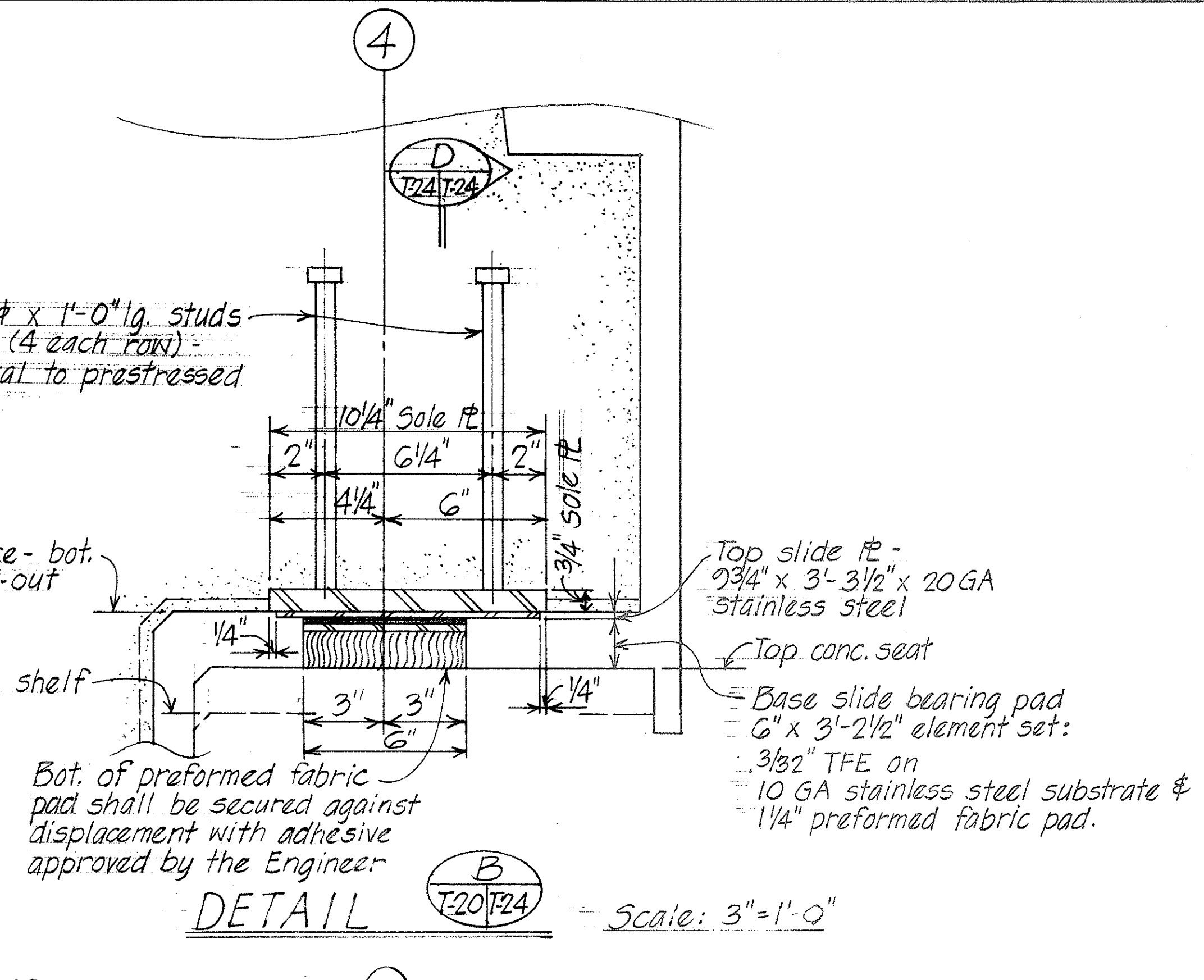
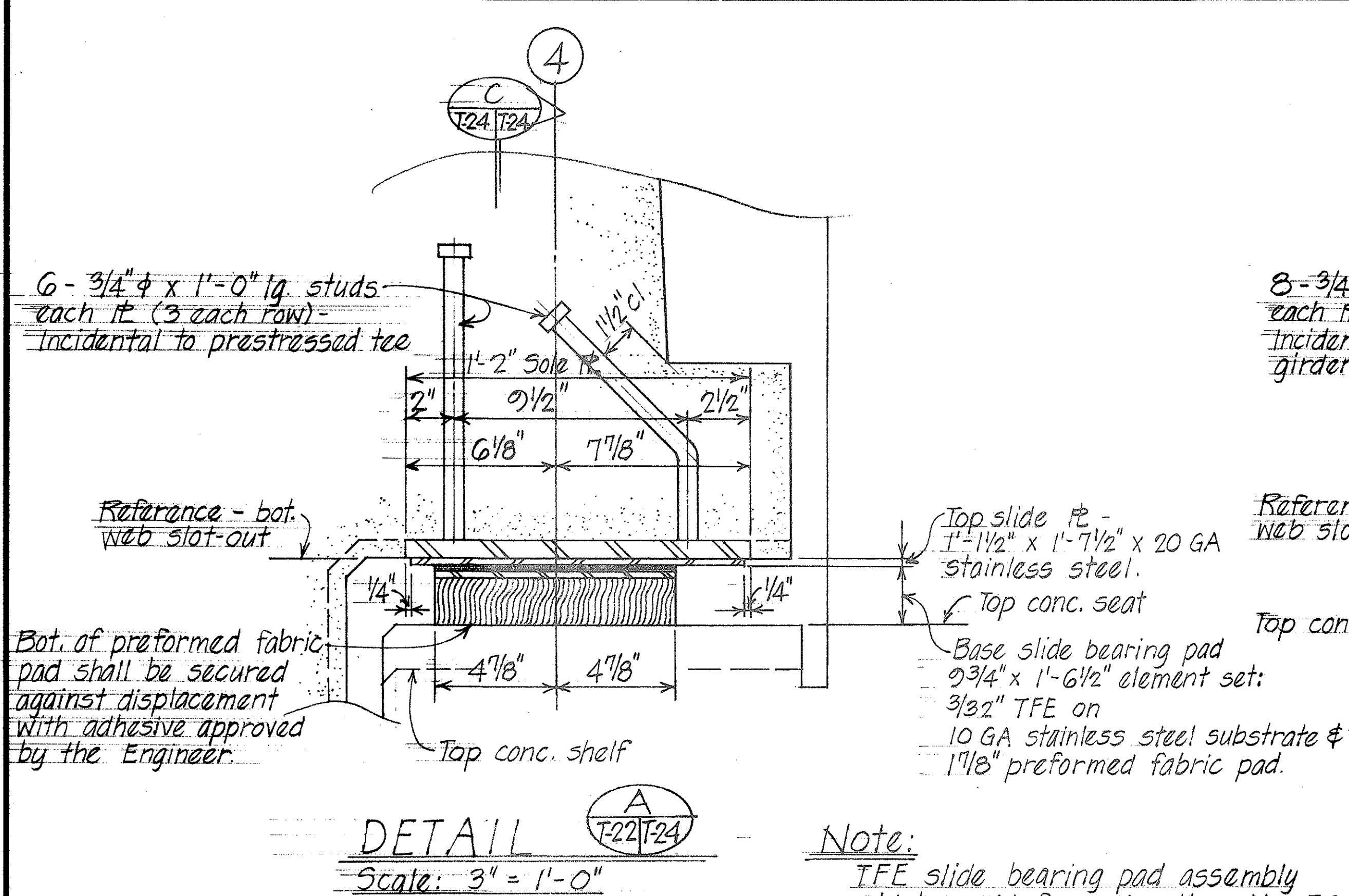
**SECTION C** (T23/T23) Scale: 1" = 1'-0"  
**SECTION D** (T23/T23) Scale: 1" = 1'-0"  
**SECTION B** (T23/T23) Scale: 1" = 1'-0"  
**SECTION E** (T23/T23) Scale: 1" = 1'-0"

SURVEY PLOTTED BY	DATE
DRAWN BY	
TRACED BY	
DESIGNED BY	
CHECKED BY	
NO.	

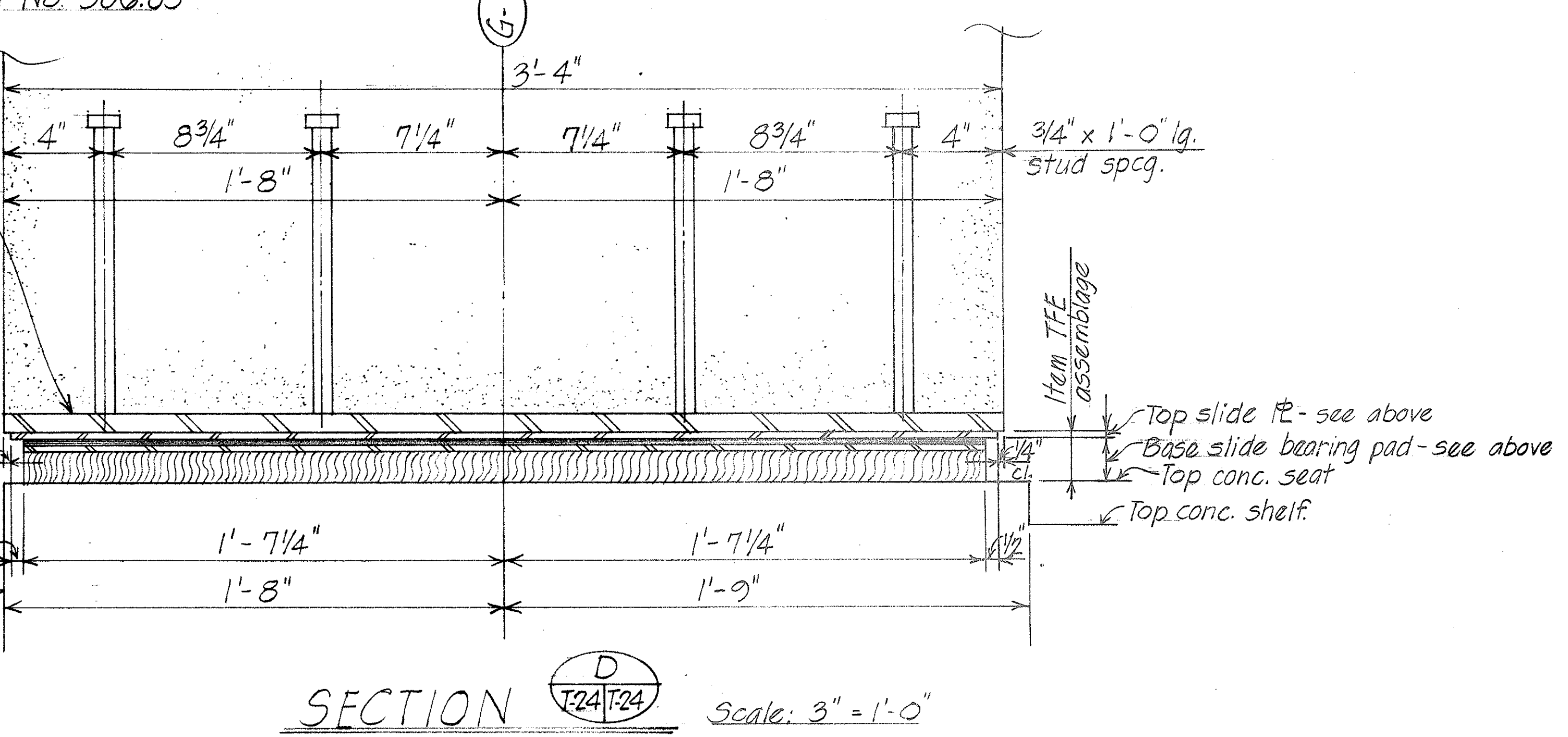
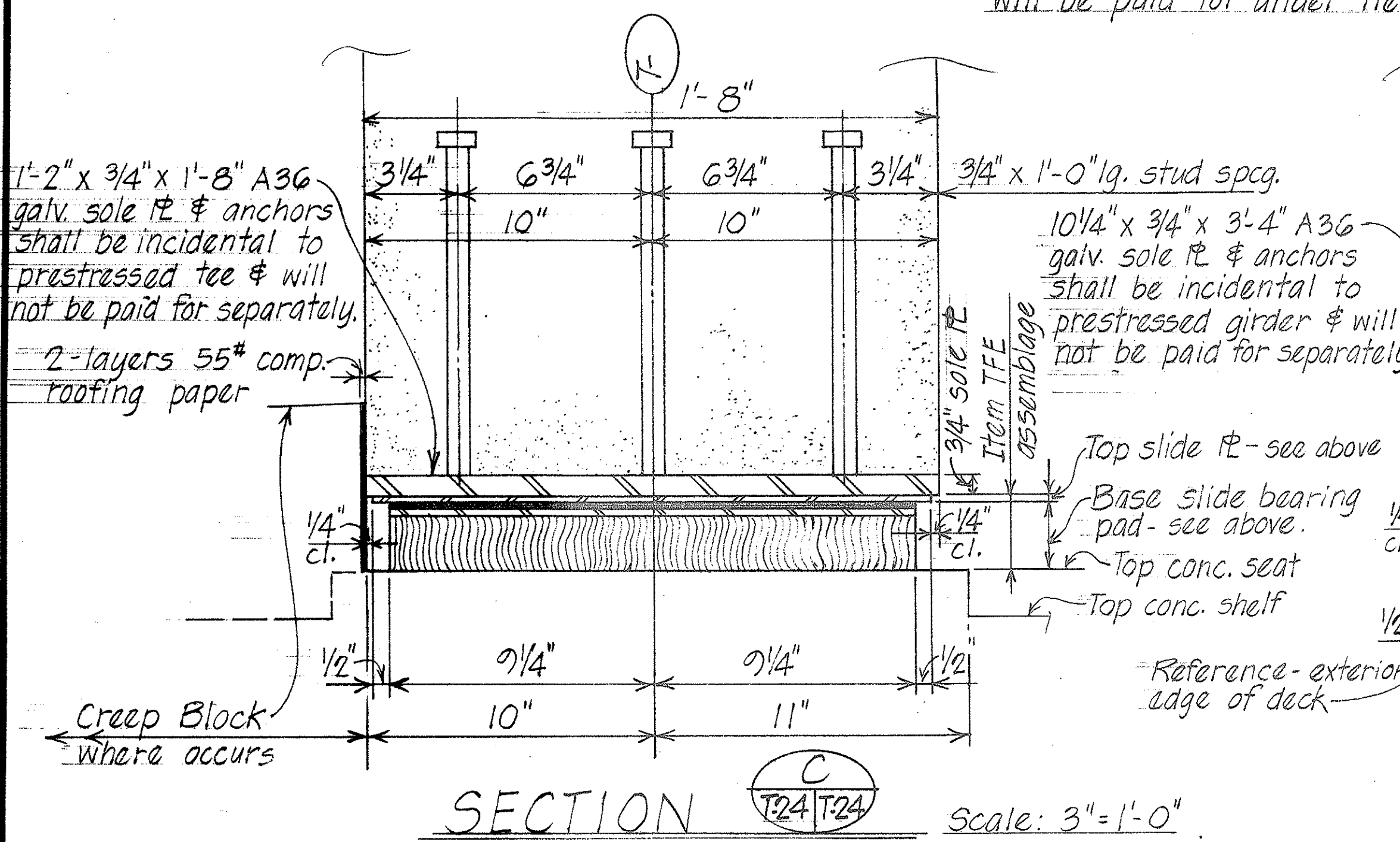
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 TYPICAL DETAILS  
 PRETENSIONED-POST-TENSION  
 TEE DETAILS  
 PROJ. NO. BRF-080-1(7)  
 Scale: As Noted Date: July 1976  
 SHEET No. 7-23 OF 30 SHEETS



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	135	165



**Note:**  
TFE slide bearing pad assembly will be paid for under Item No. 506.03



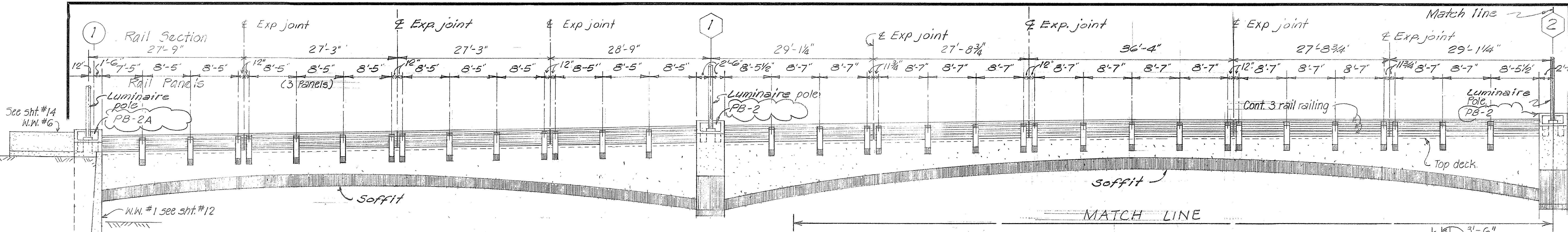
**TYPICAL PRESTRESSED POST-TENSION TEE TFE SLIDE BEARING DETAILS AT BEARING LINE 4**

**TYPICAL PRESTRESSED POST-TENSION GIRDER TFE SLIDE BEARING DETAILS AT BEARING LINE 4**

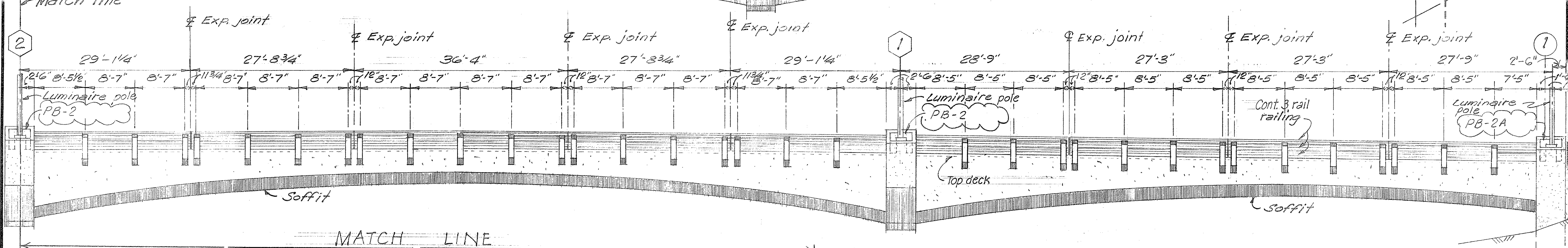
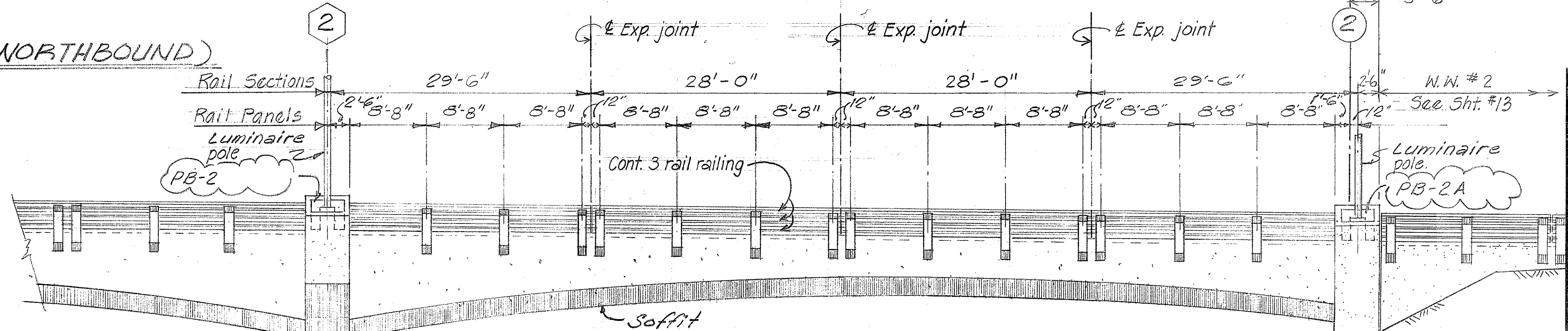
SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
PRETENSIONED & POST-TENSION  
GIRDER & TEE TFE BEARING DETAILS  
PROJECT NO. BRF-080-1(7)  
Scale: As Shown Date: July 1976  
SHEET No. T-24 OF 7-30 SHEETS





**EXTERIOR ELEVATION: RIGHT RAILING (NORTHBOUND)**  
Scale: 1/8" = 1'-0"



**EXTERIOR ELEVATION - RIGHT RAILING (SOUTHBOUND)**  
Scale: 1/8" = 1'-0"

**NOTE:**  
Continuous 3 rail conc. railing to be located on grade. Rail post & planter boxes to be located plumb. Rail expansion joints to be located plumb.

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

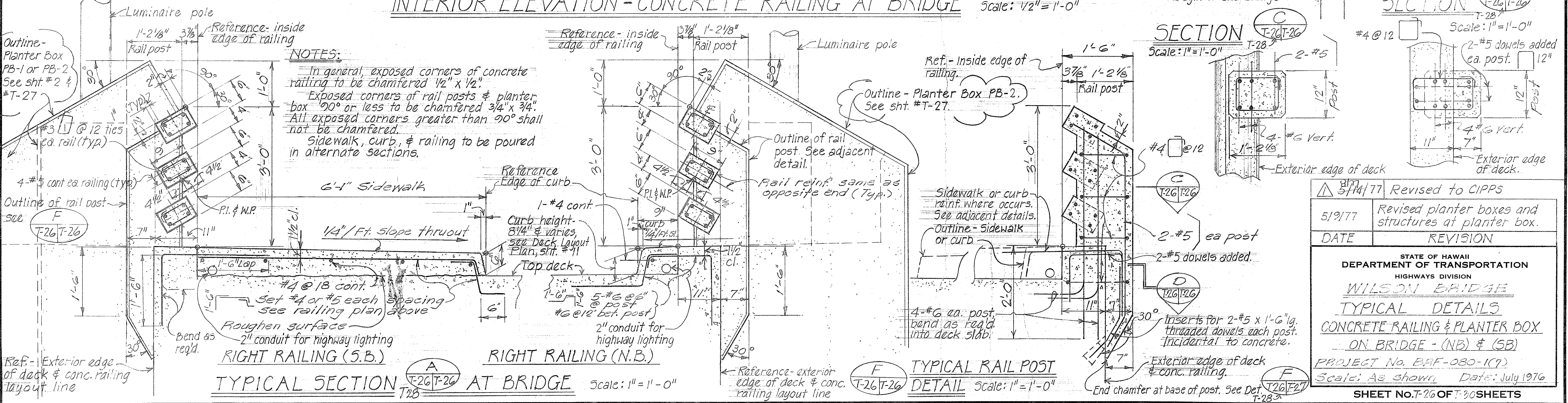
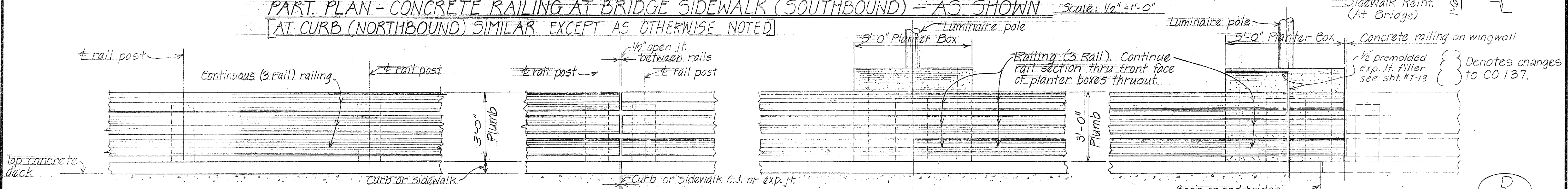
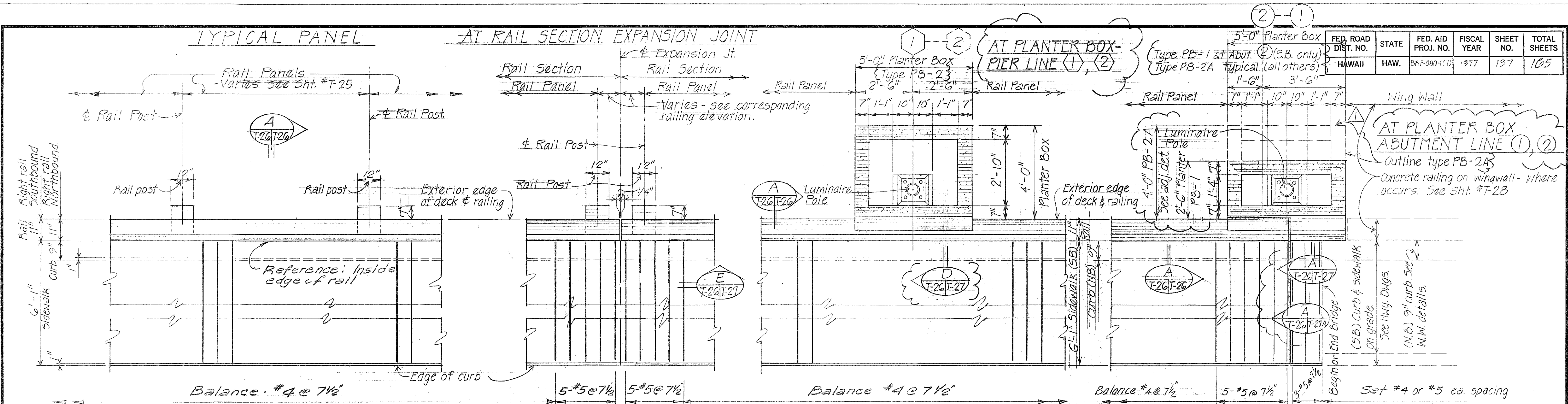
DATE	REVISION
5-14-77	Revised to CIPPS
5/9/77	Revised planter box and structures at planter box.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
CONCRETE RAILING & PLANTER BOX  
- AT BRIDGE -  
PROJECT No. BRF-050-1(1)  
Scale: As shown Date: July 1976  
SHEET No. T-25 OF T-90 SHEETS

} Denotes changes to C.O. 136.



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BHF-080-1(7)	1977	137	165



**NOTES:**  
 In general, exposed corners of concrete railing to be chamfered 1/2" x 1/2".  
 Exposed corners of rail posts & planter box 90° or less to be chamfered 3/4" x 3/4".  
 All exposed corners greater than 90° shall not be chamfered.  
 Sidewalk, curb, & railing to be poured in alternate sections.

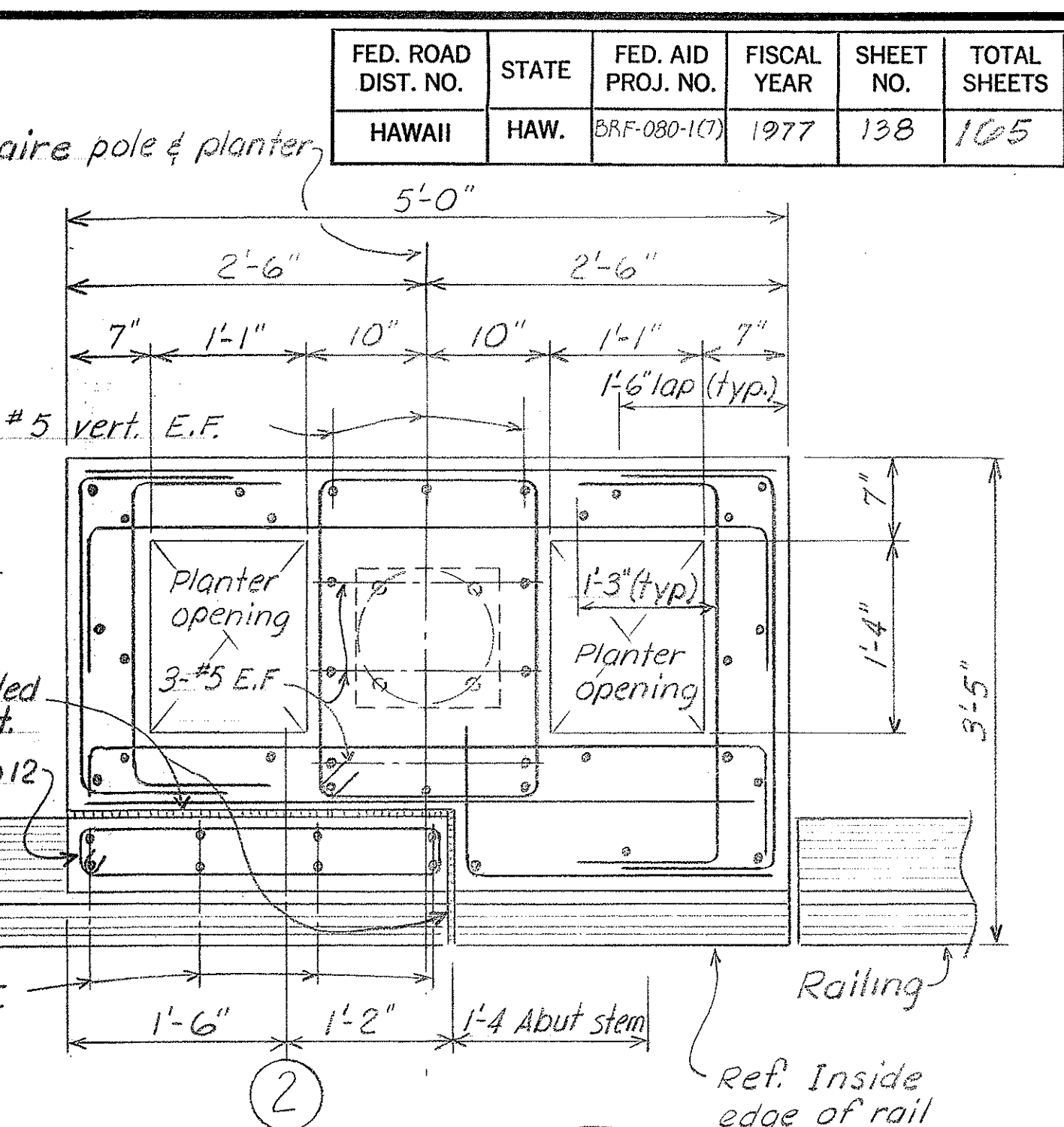
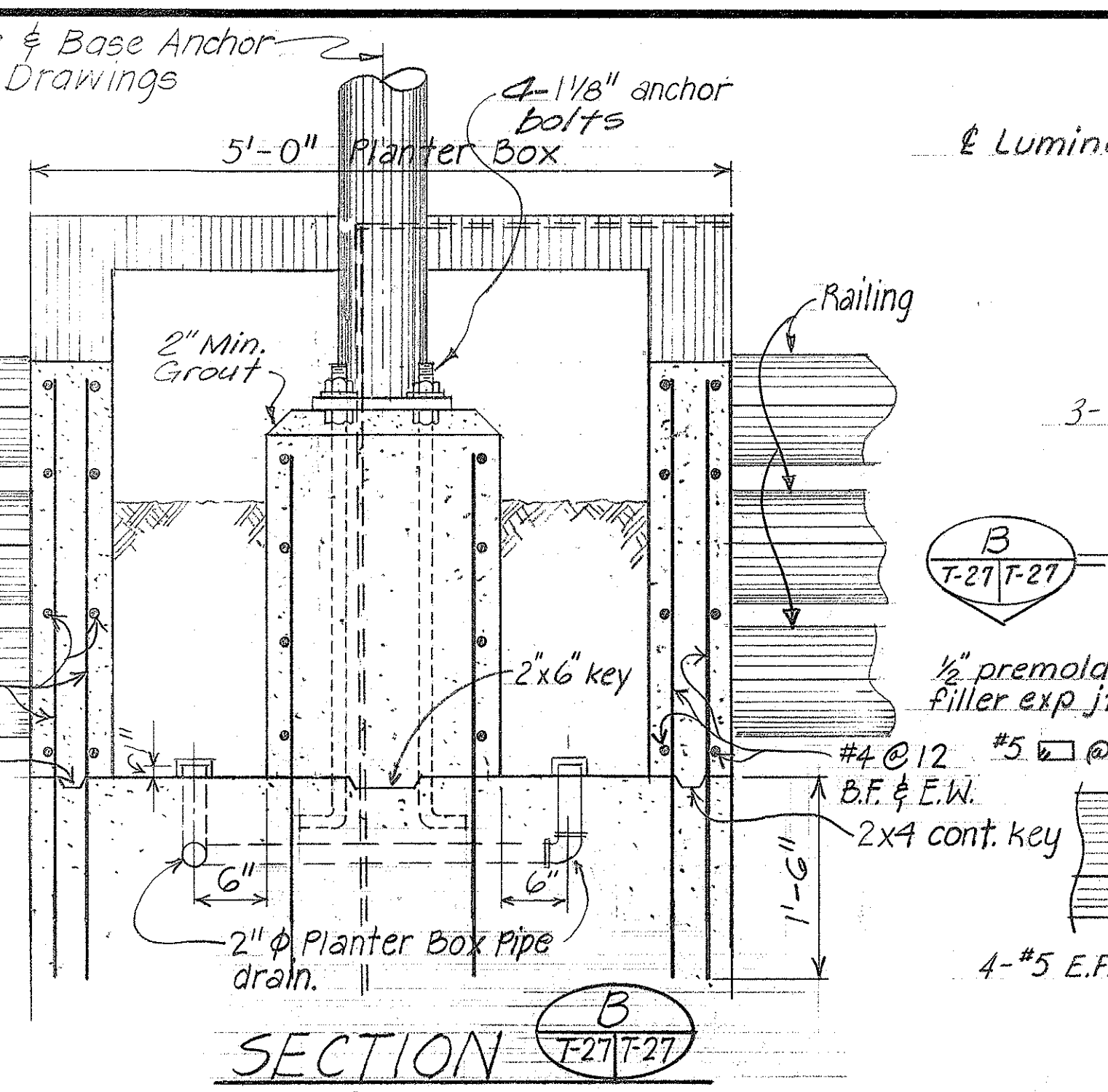
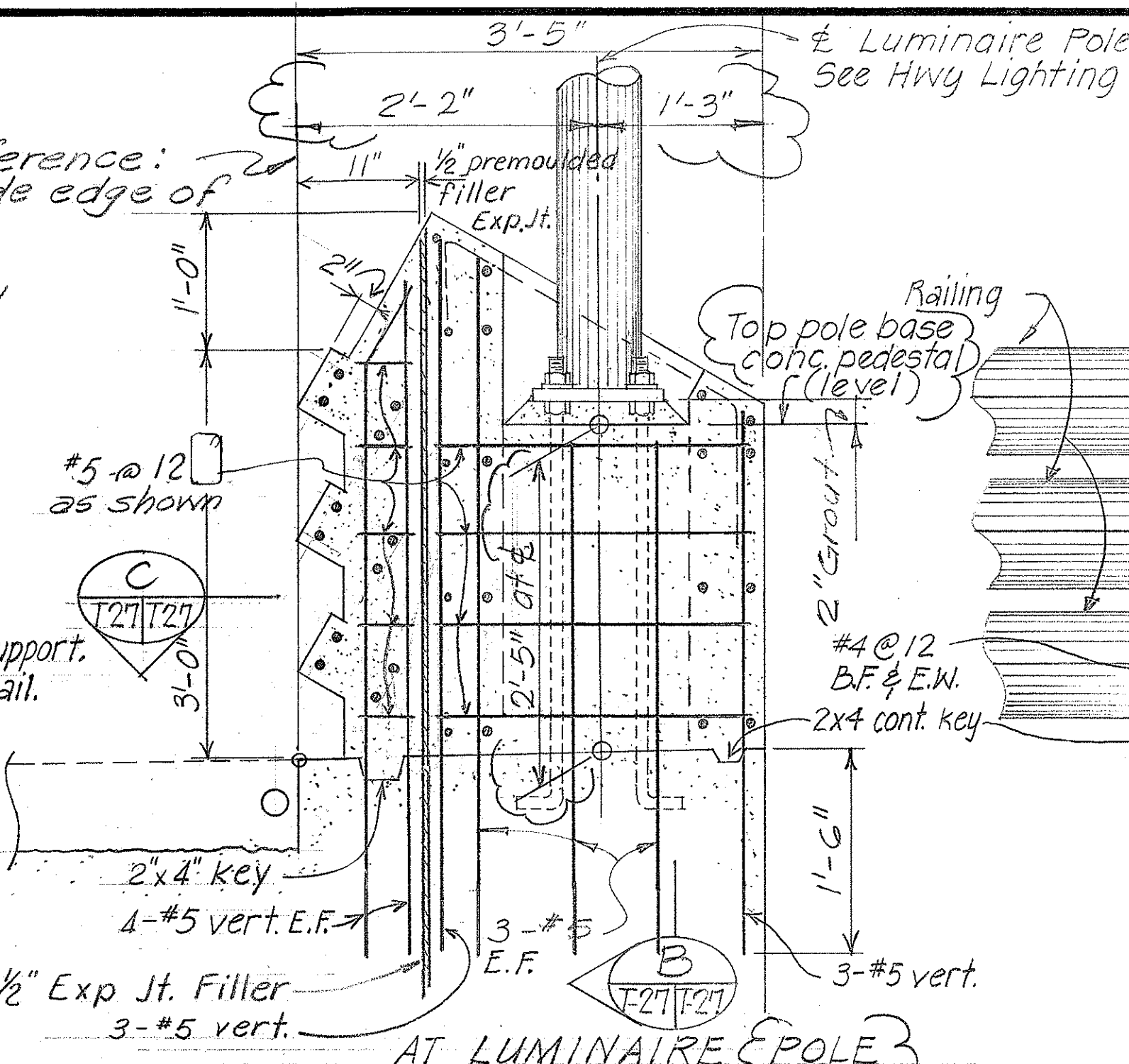
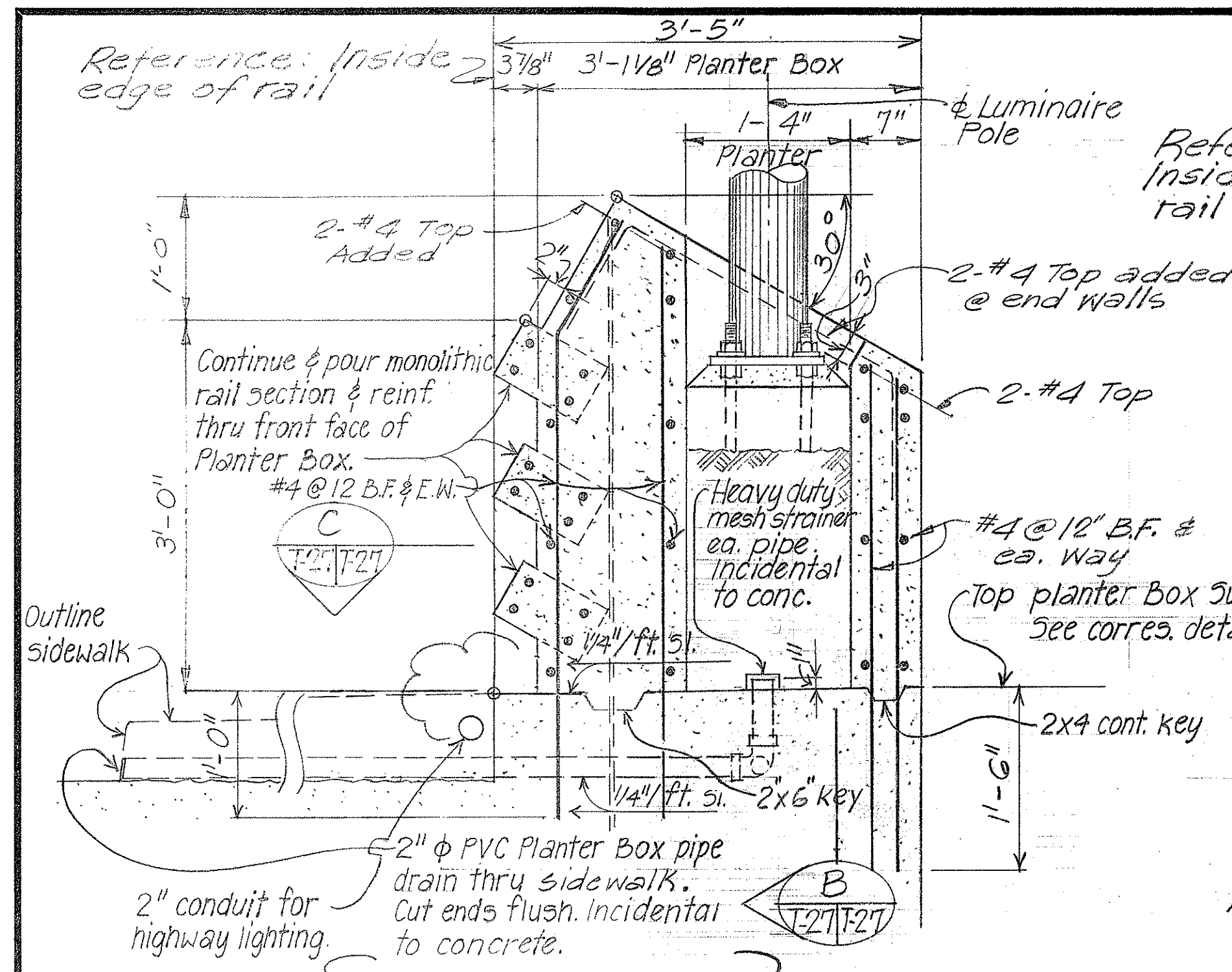
5/14/77	Revised to CIPPS
5/9/77	Revised planter boxes and structures at planter box.
DATE	REVISION

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 TYPICAL DETAILS  
 CONCRETE RAILING & PLANTER BOX  
 ON BRIDGE - (NB) & (SB)  
 PROJECT No. BHF-080-1(7)  
 Scale: As shown Date: July 1976  
 SHEET NO. T-26 OF T-30 SHEETS

DATE: \_\_\_\_\_  
 SURVEY PLOTTED BY: \_\_\_\_\_  
 DRAWN BY: C. S. EH  
 DESIGNED BY: M. T.  
 QUANTITIES BY: M. T.  
 CHECKED BY: C. RY.  
 ORIGINAL PLAN NO. \_\_\_\_\_  
 NOTE BOOK NO. \_\_\_\_\_



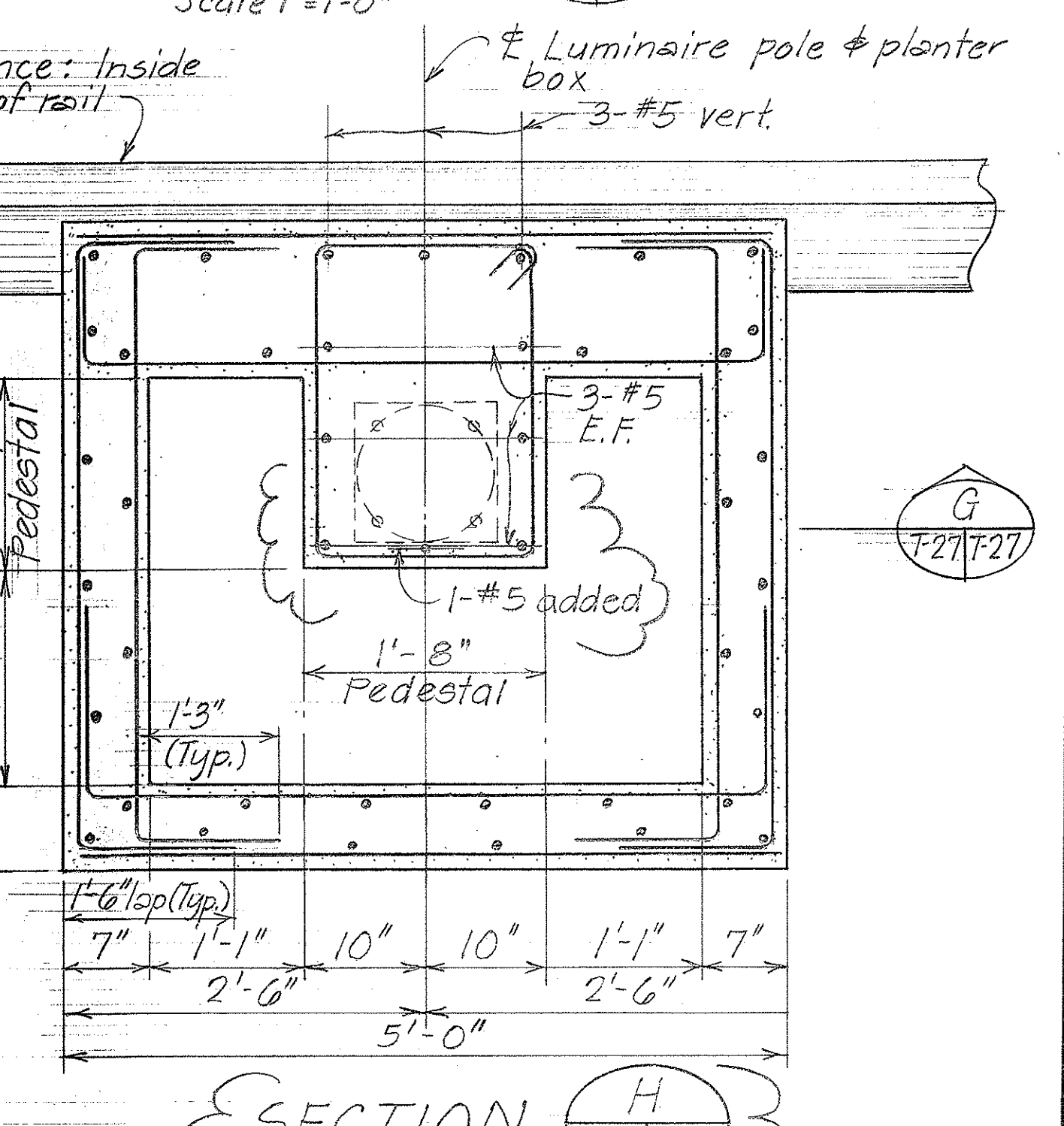
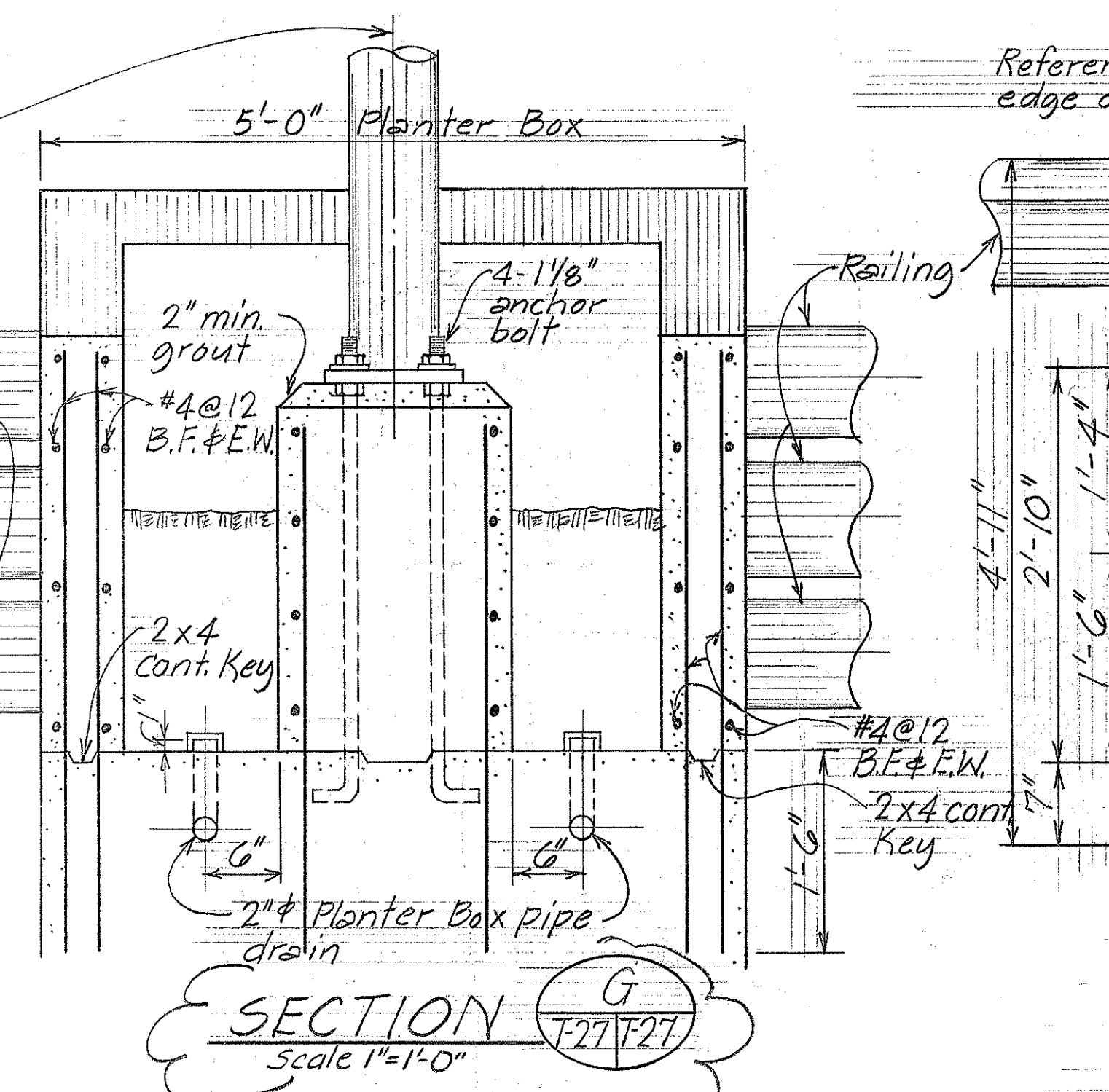
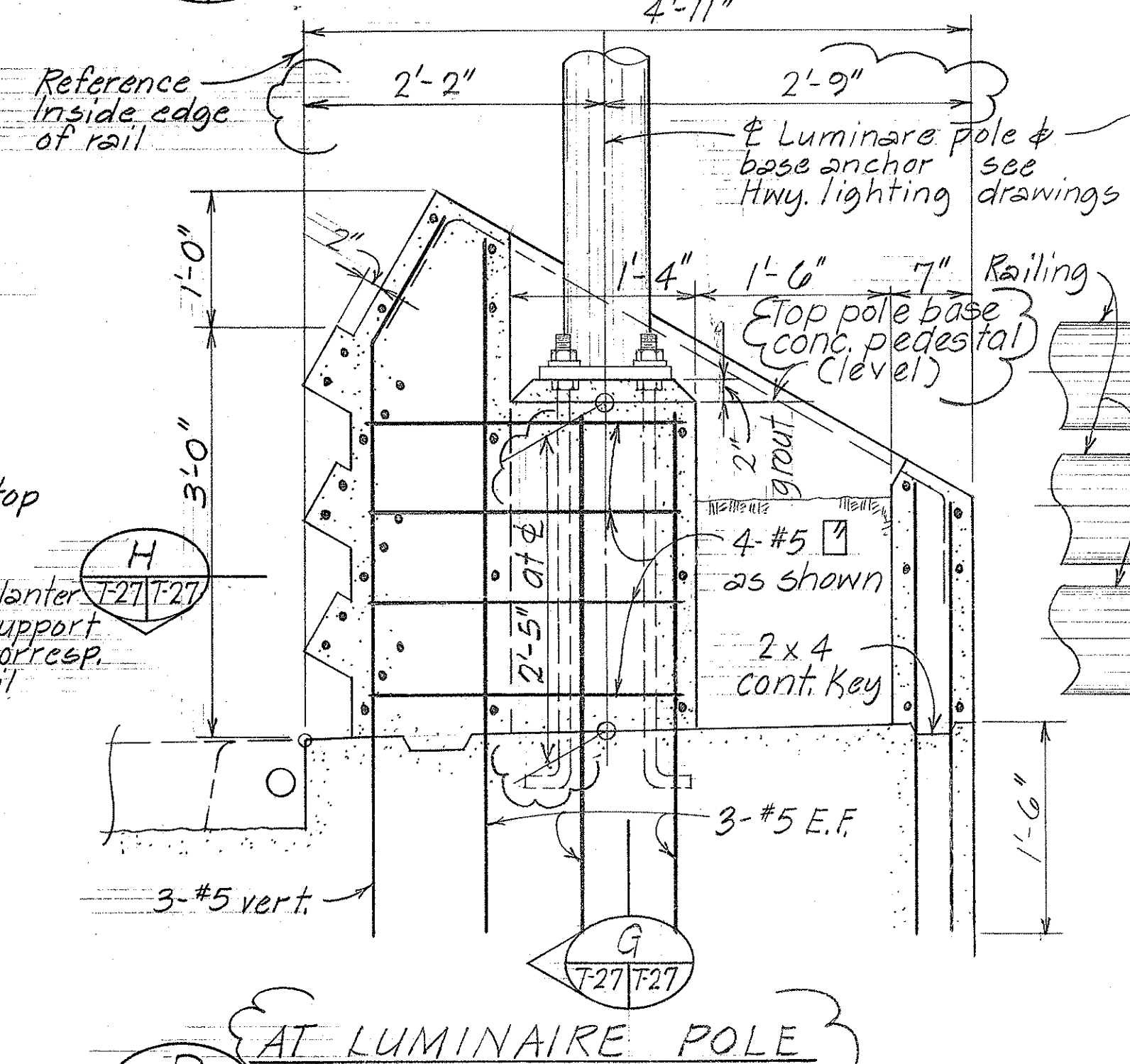
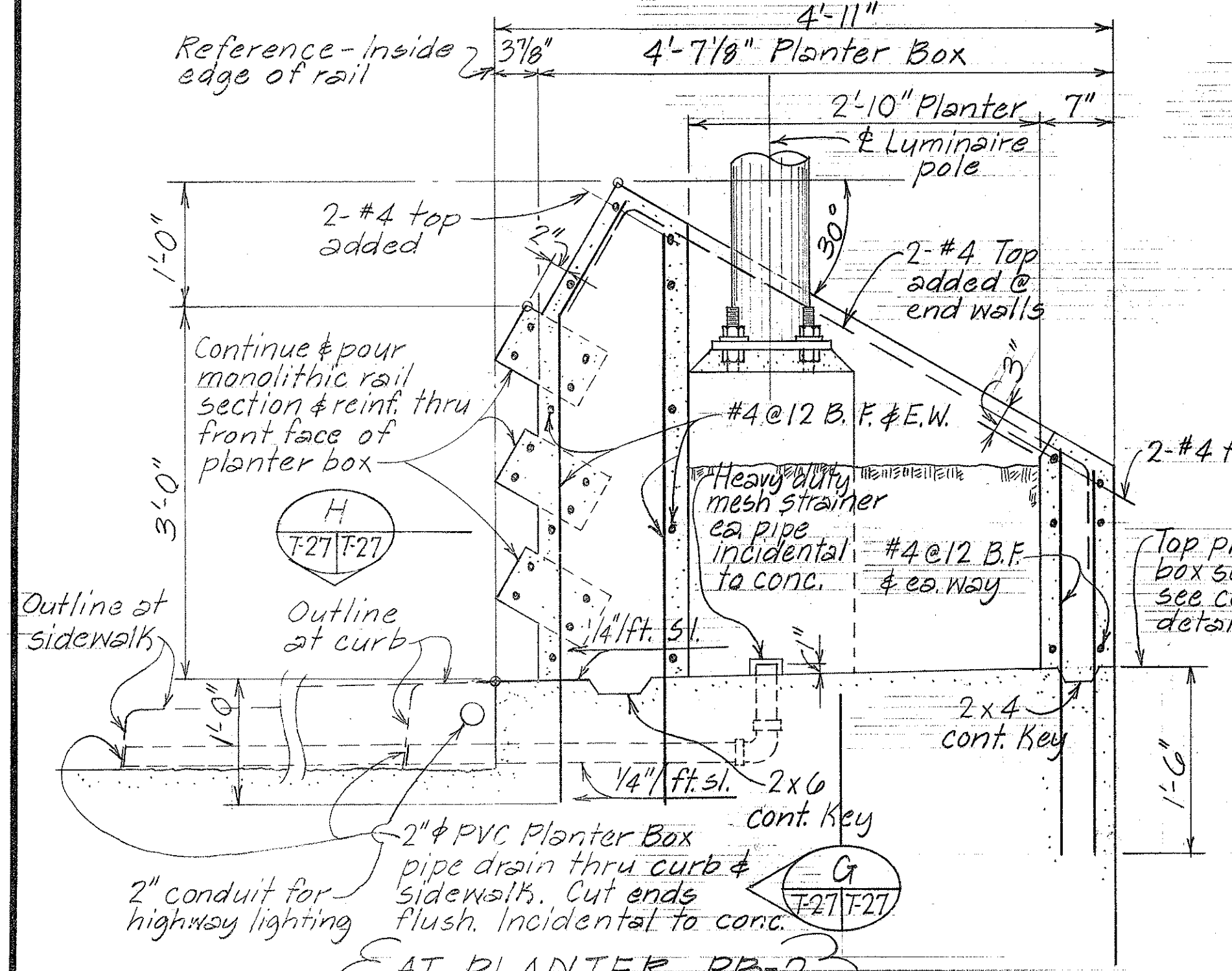
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	138	105



SECTION A TYPICAL SECTION AT PLANTER PB-1 Scale: 1"=1'-0"

SECTION B TYPICAL SECTION AT LUMINAIRE POLE Scale: 1"=1'-0"

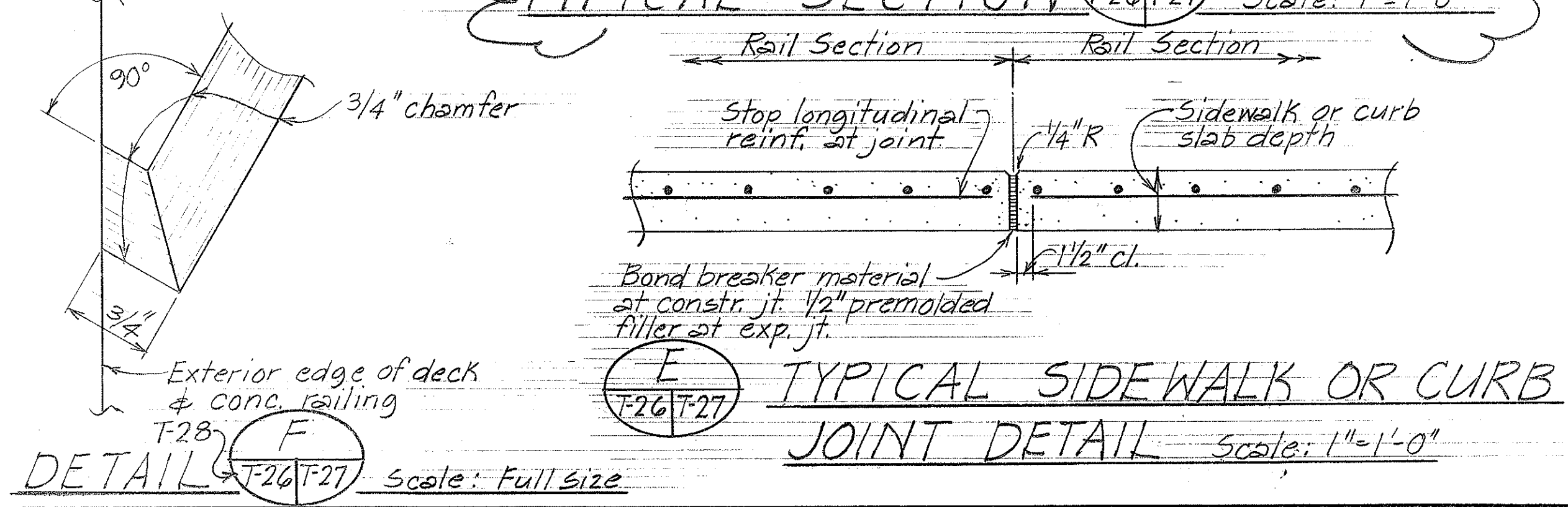
SECTION C TYPICAL SECTION AT LUMINAIRE POLE Scale: 1"=1'-0"



SECTION E TYPICAL SECTION AT PLANTER PB-2 Scale: 1"=1'-0"

SECTION F TYPICAL SECTION AT LUMINAIRE POLE Scale: 1"=1'-0"

SECTION G TYPICAL SECTION AT LUMINAIRE POLE Scale: 1"=1'-0"



SECTION I TYPICAL SIDEWALK OR CURB JOINT DETAIL Scale: 1"=1'-0"

- Reference Drawings:
1. Refer to corresponding sht. #18, #21, #32, #33 for additional details of Planter Box supports.
  2. Planter Box to be poured monolithic with intersecting concrete railings.
  3. Refer to sheet nos. 2, T-26, for location of planter box types PB-1, PB-2.

{ } Denotes changes to CO 138.

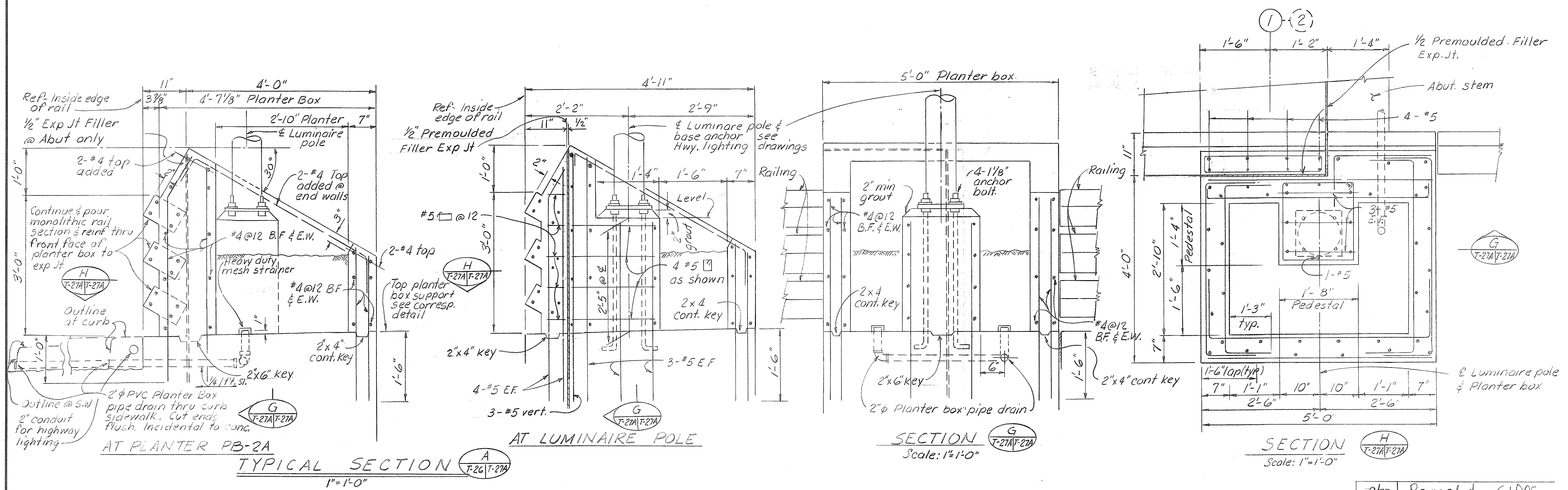
DATE	REVISION
8/14/77	Revised to CIPPS
5/9/77	Revised planter boxes & structures at planter box.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
CONCRETE RAILING & PLANTER BOX  
- AT BRIDGE -  
PROJECT No. BRF-080-1(7)  
Scale: As shown Date: July 1976  
SHEET No. T-27 OF T-30 SHEETS

DATE: \_\_\_\_\_  
SURVEY PLOTTED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
ORIGINAL PLAN: \_\_\_\_\_  
NOTE BOOK: \_\_\_\_\_  
NO. \_\_\_\_\_



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.				



DATE  
 SURVEY PLOTTED BY  
 PLAN  
 TRACED BY  
 DESIGNED BY  
 QUANTITIES BY  
 CHECKED BY  
 NO.

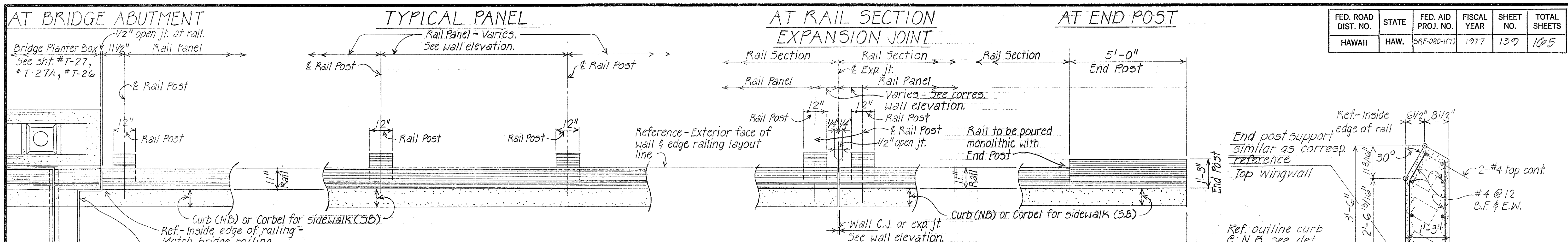
817 Revised to CIPPS

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
 WILSON BRIDGE  
 TYPICAL DETAILS  
 CONCRETE RAILING & PLANTER BOX  
 ON BRIDGE  
 Project No. BRF-080-1(7)  
 Scale: as shown May 1977  
 SHEET NO. T-27A OF T-30 SHEETS

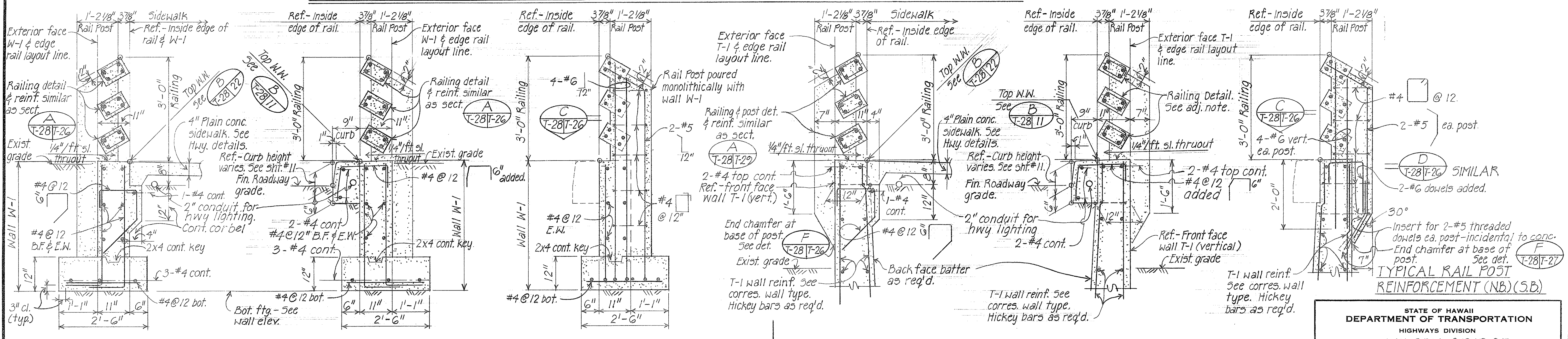
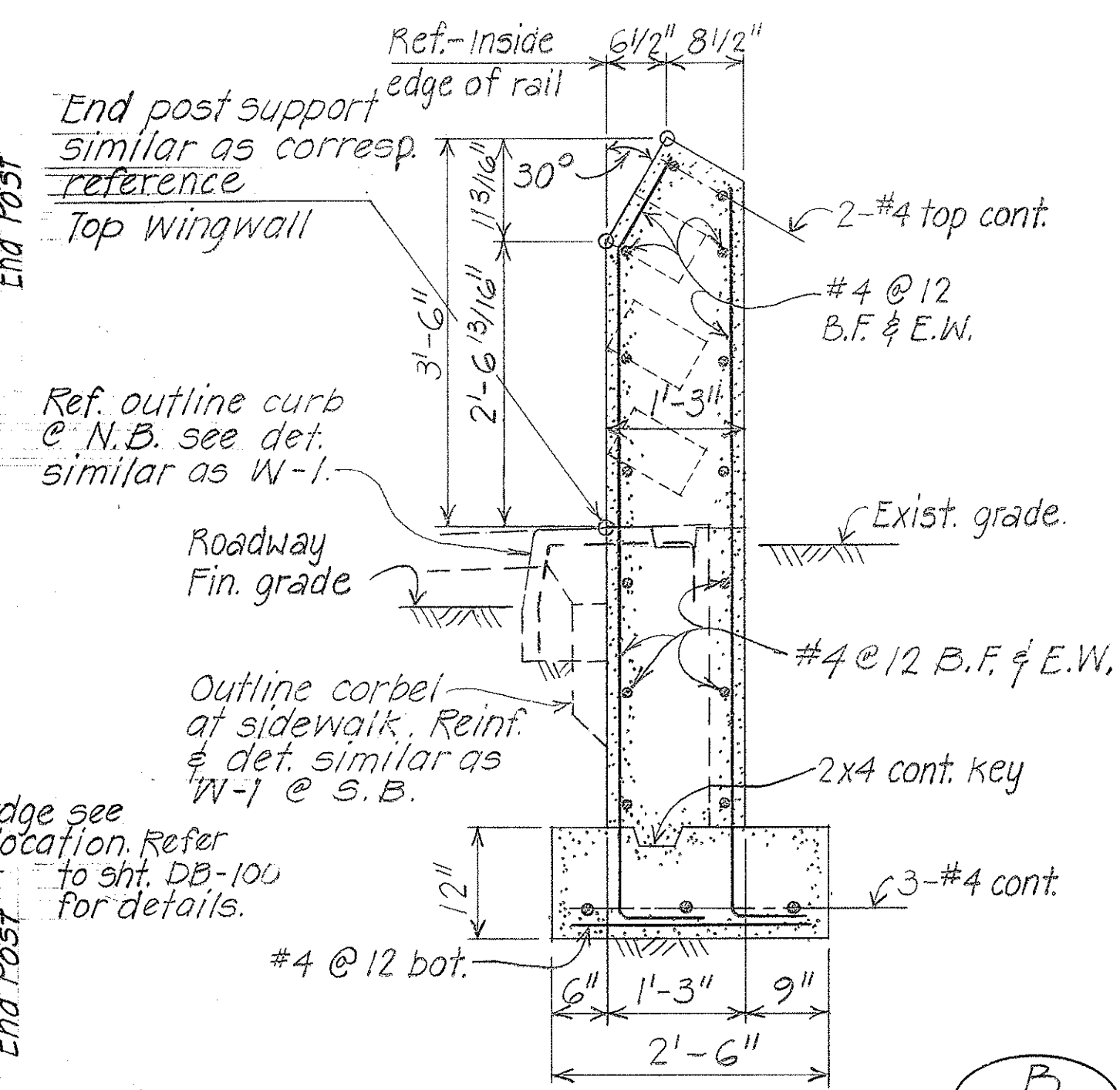
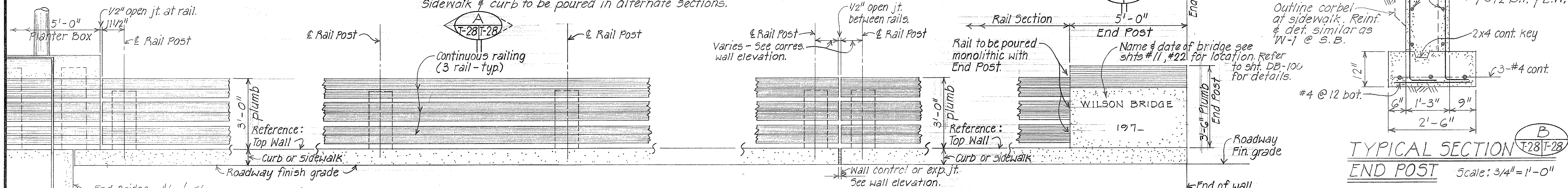
CO ADD 138 S-1



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	139	165



**NOTES:** Continuous 3 rail railing to be located on grade.  
 Rail posts & end post to be located plumb.  
 Rail expansion joints to be located plumb.  
 Sidewalk & curb to be poured in alternate sections.



STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 TYPICAL DETAILS  
 CONCRETE RAILING AND END POST  
 ON WING WALLS - (N.B.) & (S.B.)  
 Proj. No. BRF-080-1(7)  
 Scale: As noted Date: July 1976  
 SHEET No. T-28 OF T-30 SHEETS

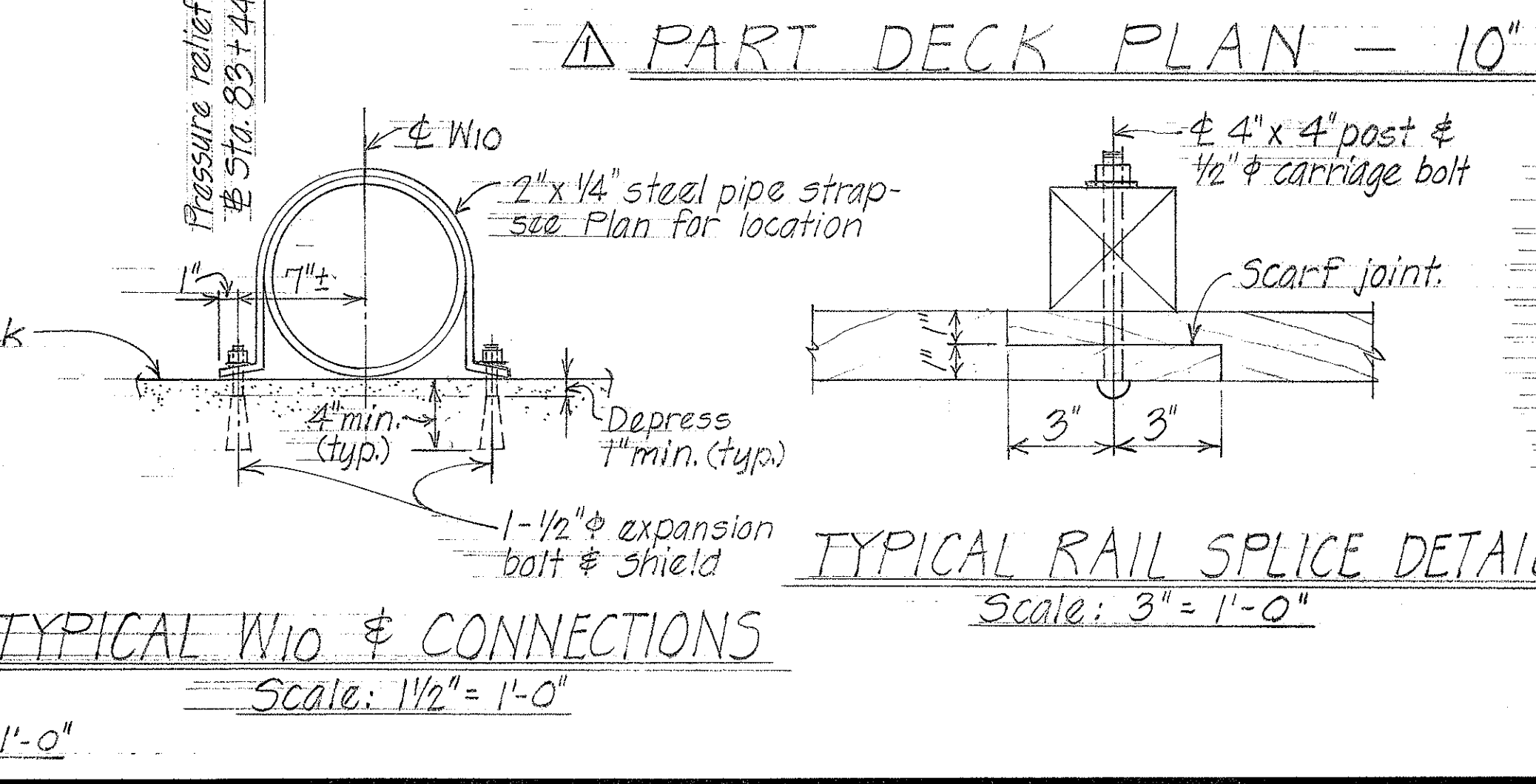
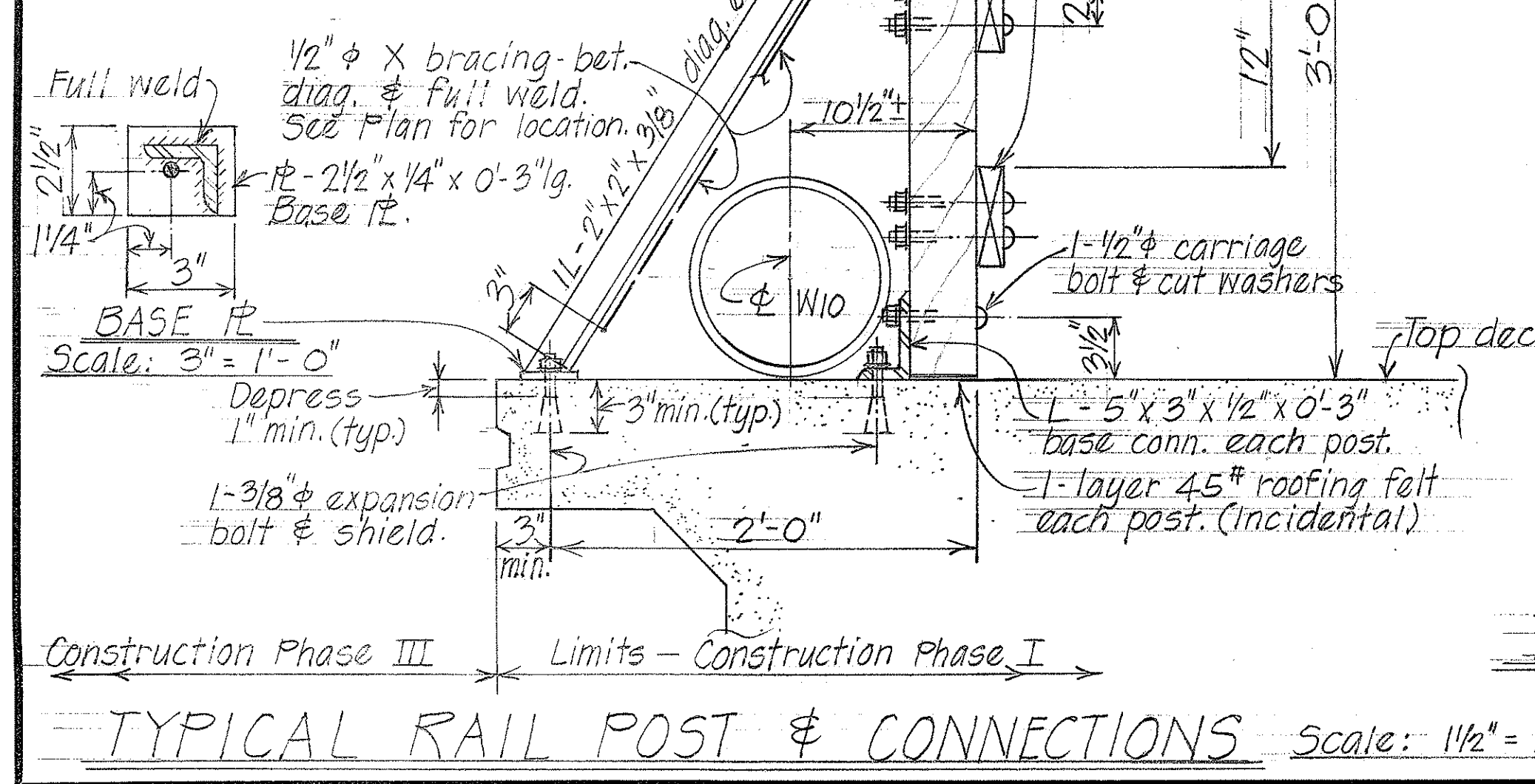
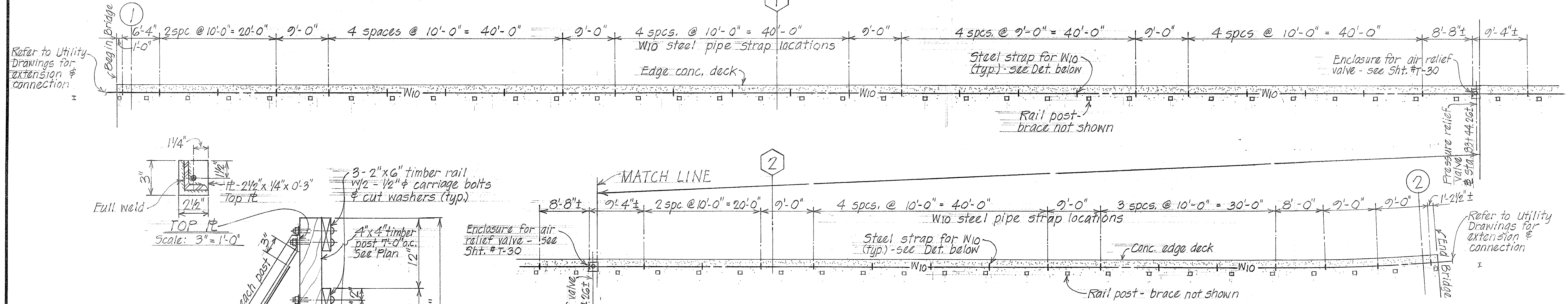
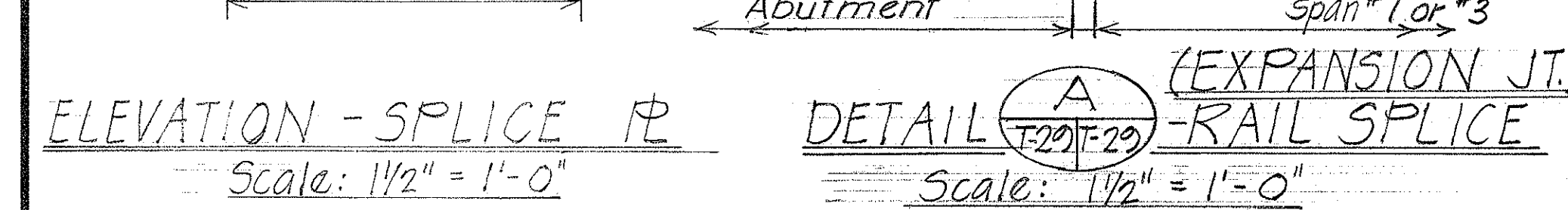
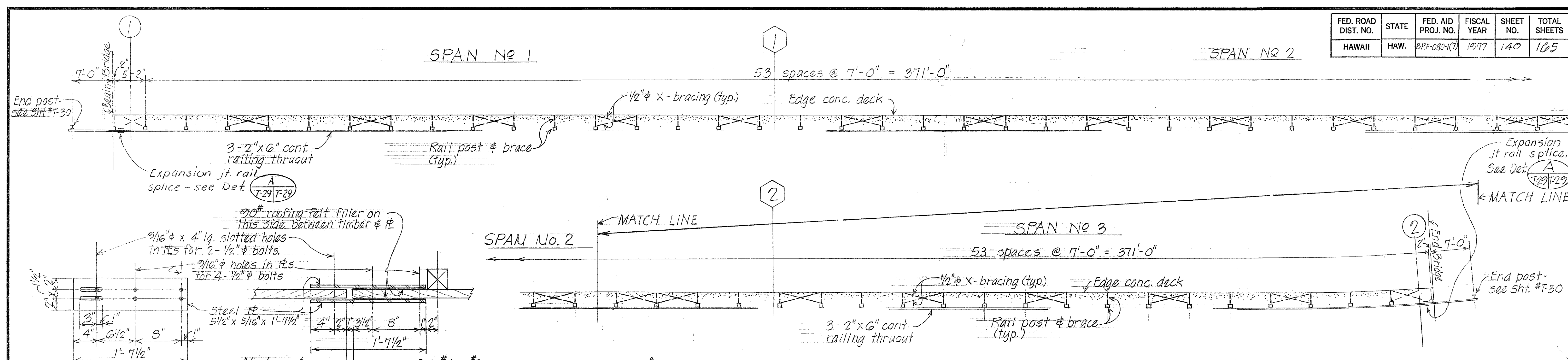
DATE: \_\_\_\_\_  
 SURVEY PLOTTED BY: \_\_\_\_\_  
 ORIGINAL PLAN: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_

Revised to CIPPS

CO 1 3 9



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-1(7)	1977	140	165



NOTES:

- All timber shall be untreated Douglas Fir Select Structural Grade 54S & see Specifications.
- All bolts, nuts, washers, expansion bolts & shields, shapes, bars & plates to be galvanized after fabrication.
- Carriage bolts, nuts and washers shall be incidental to timber railing. All other bolts, nuts, washers, shields, shapes, bars & plates to be paid under Item - Structural Steel.

APPROVED: *[Signature]* DATE: 7/17/76  
 ASSIST. CHIEF ENGINEER  
 BWS

5-14-77 Revised to CIPPS

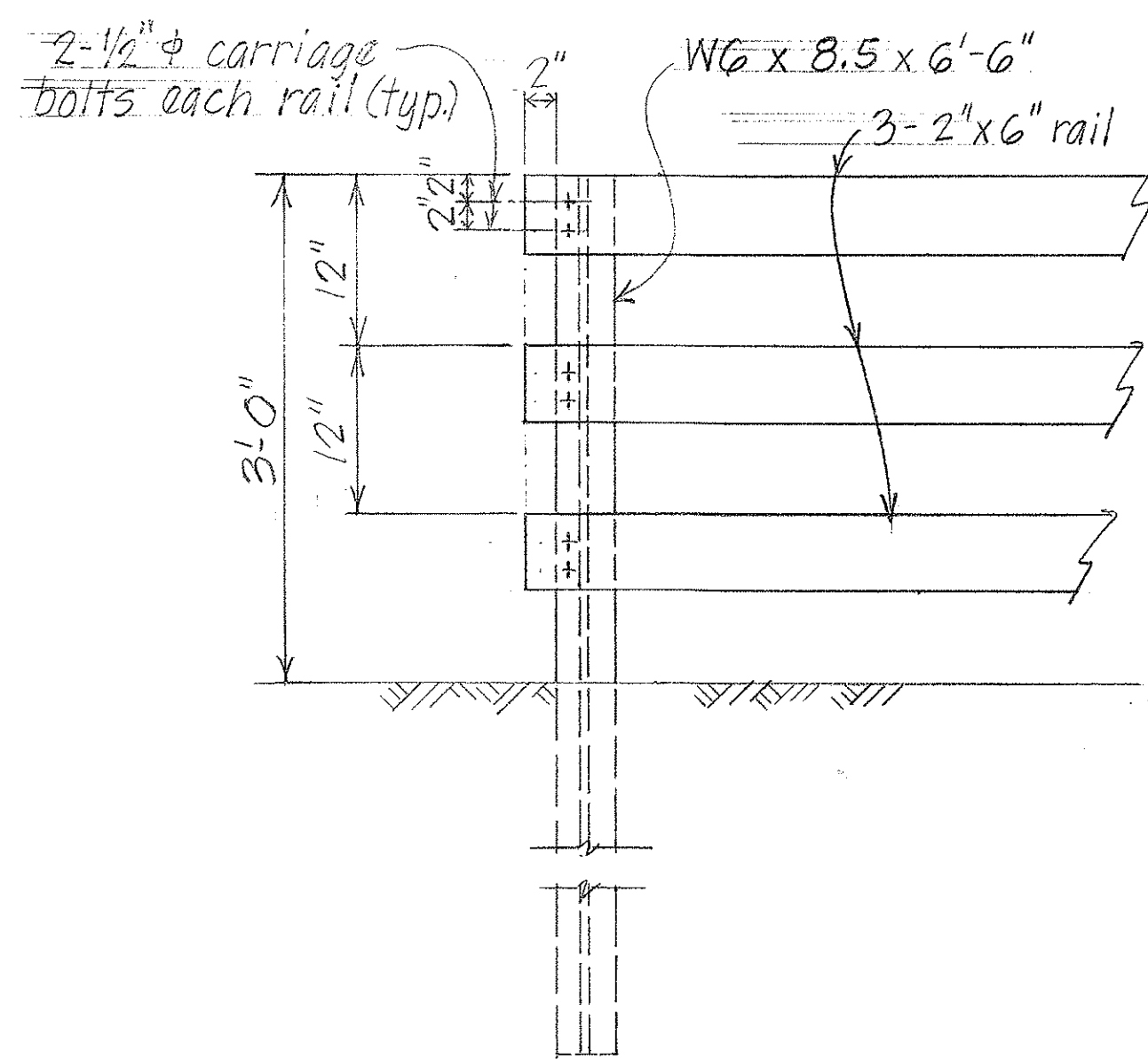
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**WILSON BRIDGE**  
 TYPICAL DETAILS  
 TEMPORARY TIMBER RAILING & W10 DETAILS  
 CONSTRUCTION PHASE I

PROJ. NO. BRF-080-1(6)  
 SCALE: As Noted DATE: JULY 1976  
 SHEET No. T-29 OFF 30 SHEETS

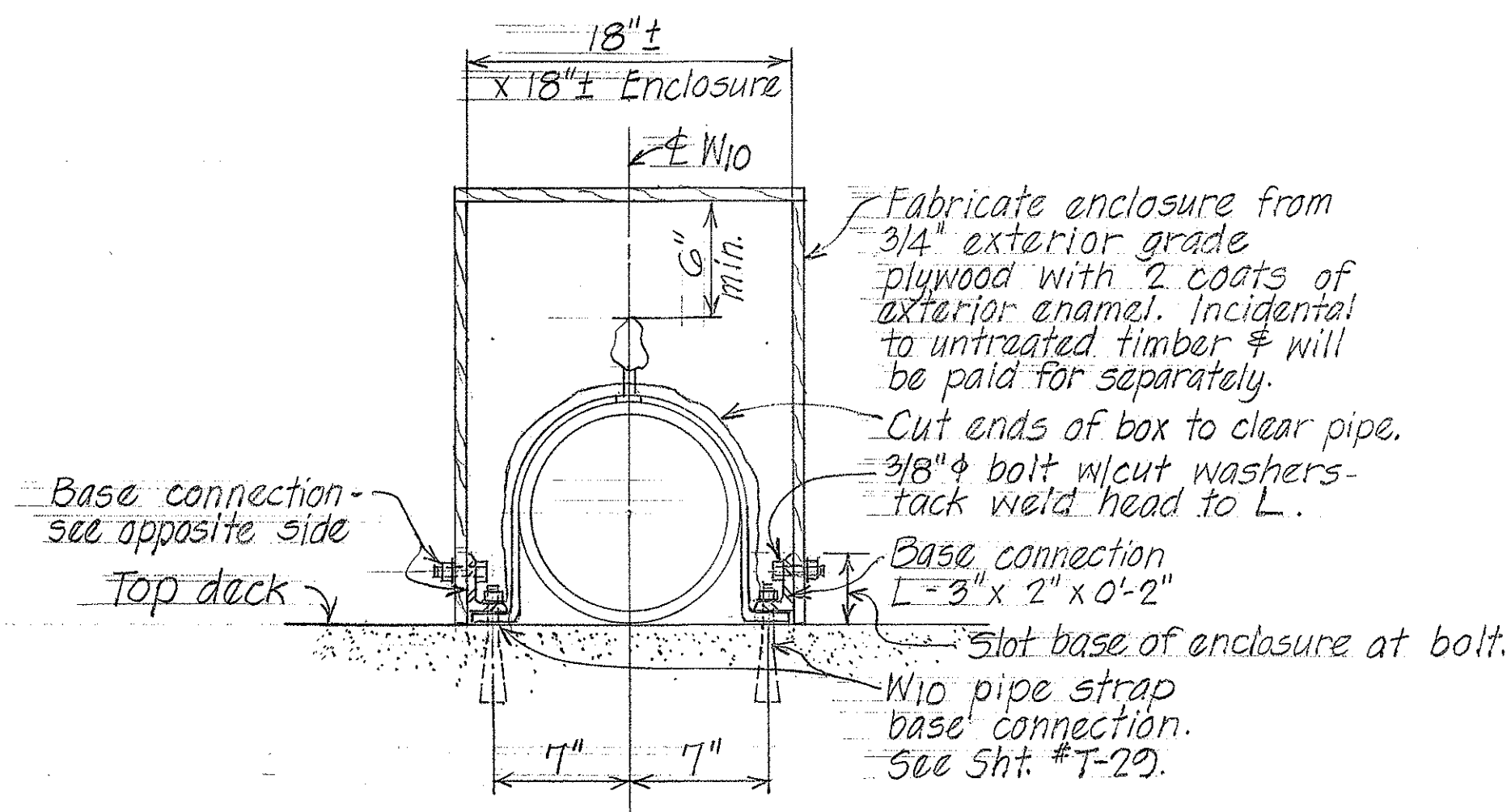
DATE	.....
SURVEY PLOTTED BY	NY
DRAWN BY	.....
DESIGNED BY	G. EN
CHECKED BY	G. EN
ORIGINAL PLAN	.....
NOTE BOOK	.....
No.	.....



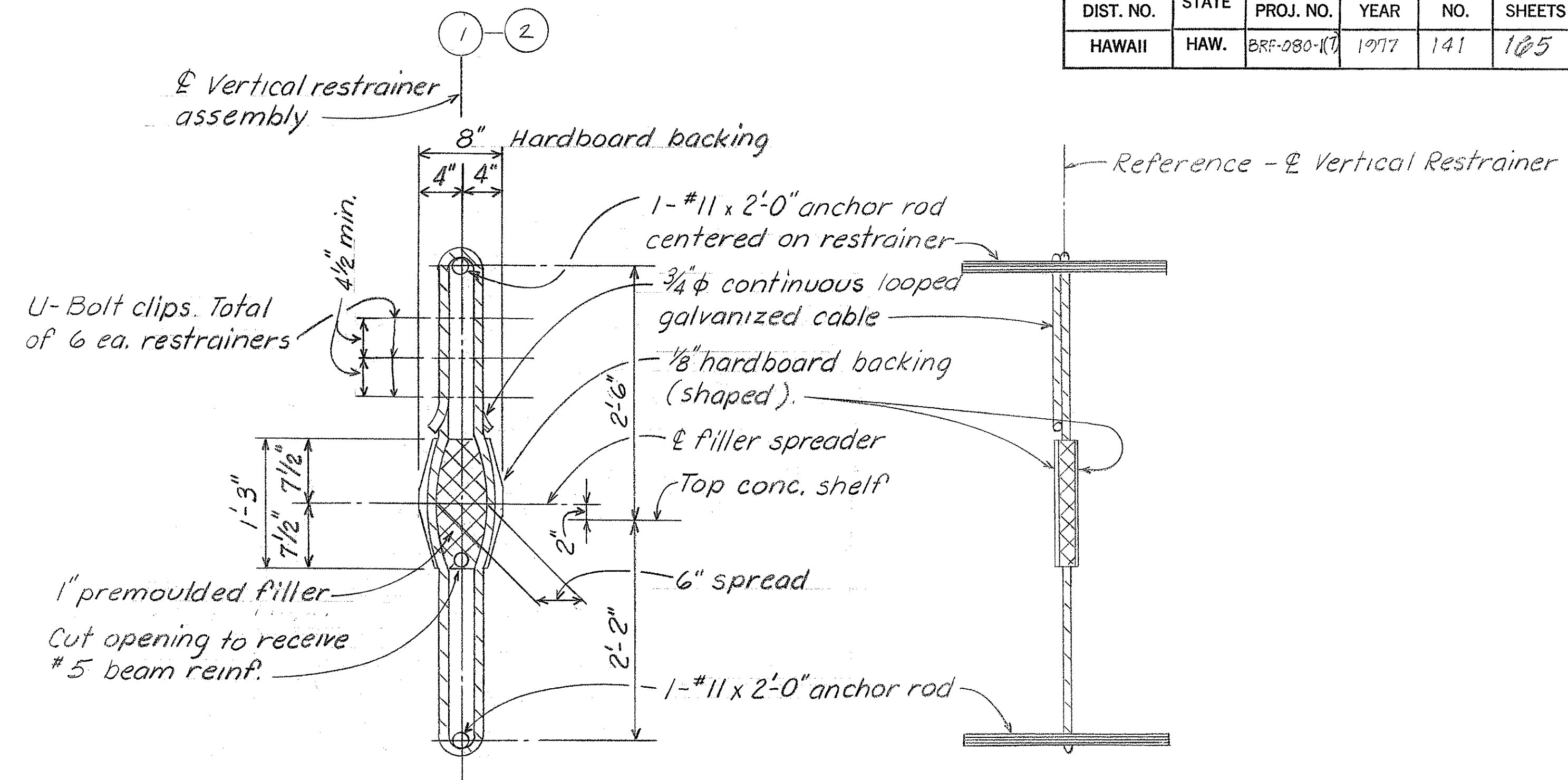
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-17	1977	141	185



**END POST DETAIL**  
Scale: 1" = 1'-0"

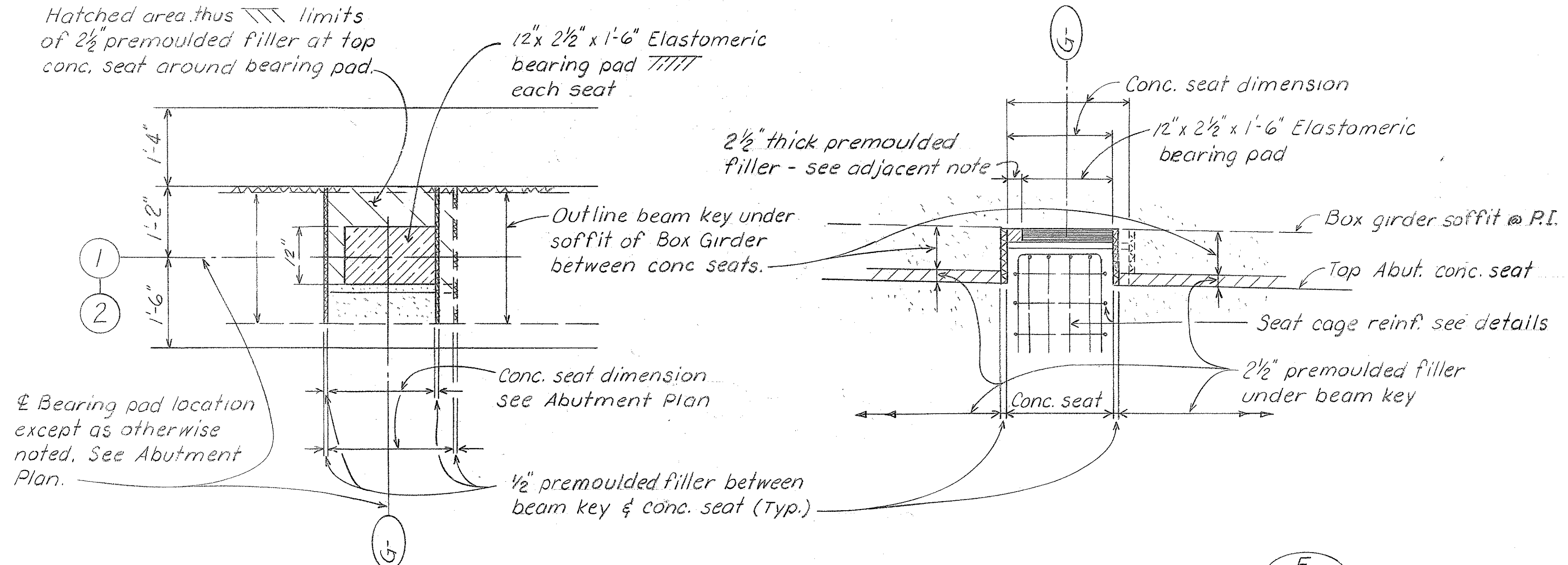


**ENCLOSURE FOR AIR RELIEF VALVE**  
Scale: 1 1/2" = 1'-0"



**VERTICAL RESTRAINER UNIT AT ABUTMENT**

Note: Vertical Restrainer Assemblage including anchor rods shall be incidental to concrete and will not be paid for separately.




**TYPICAL SECTION**  
Scale 3/4" = 1'-0"

**TYPICAL SEAT PLAN**  
Scale 3/4" = 1'-0"

Peter J. Boyle  
REGISTERED PROFESSIONAL ENGINEER  
No. 3591  
HAWAII, U.S.A.

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

8-77 Revised to C100S

APPROVED:  8/11/76  
ASSIST. CHIEF ENGINEER DATE  
BWS

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**WILSON BRIDGE**  
TYPICAL DETAILS  
MISCELLANEOUS DETAILS  
PROJ. NO. BRF-080-176  
SCALE: As Noted DATE: JULY 1976  
SHEET No. T-30 OF T-30 SHEETS

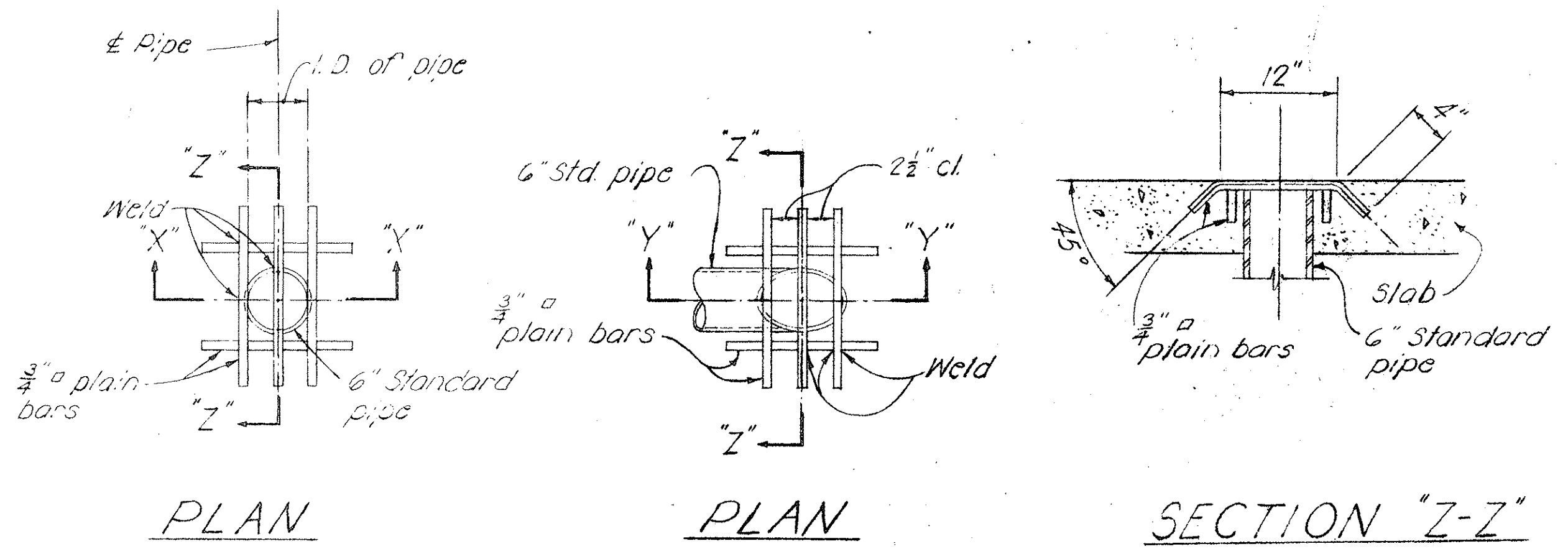
CO 11 4 11



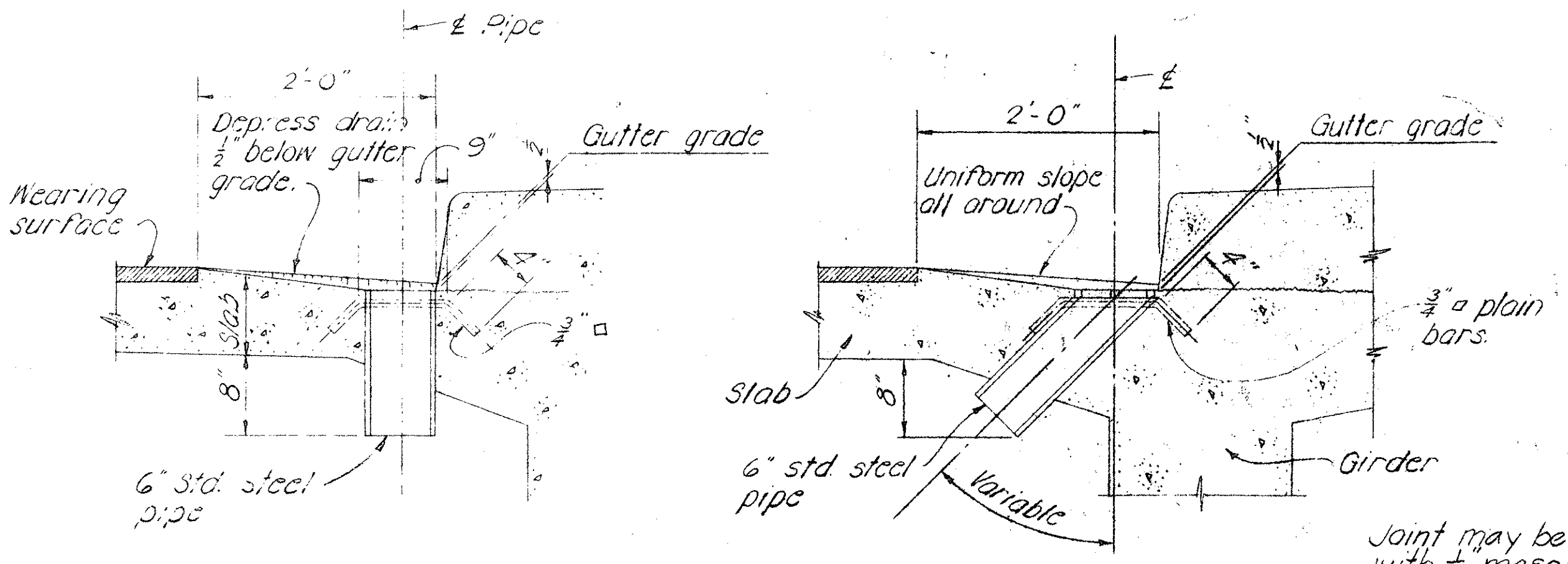
### GENERAL NOTES

- All concrete shall be Class A unless otherwise noted.
- Reinforcing shall be detailed in accordance with A.C.I. Manual of Standard Practice for Detailing Reinforced Concrete Highway Structures unless otherwise noted.
- Clearance for reinforcing bars shall be as follows, unless otherwise noted.
  - a - 1/2" For stirrups of beams & pier caps.
  - b - 2" For ties of columns.
  - c - 2" For formed walls.
  - d - 3" For footings.
- Minimum spacing between parallel bars shall be 2 1/2 times the diameter of bars, but in no case shall the clear distance between the bars be less than 1 1/2 times the maximum size of the coarse aggregate.
- All dimensions relating to reinforcing are to centers of bars unless otherwise noted.
- Reinforcing bars shall be securely tied at all intersections & lap splices & shall be held in place during pouring to maintain their proper locations as shown on plans.
- Vertical column bars shall be arranged in such a manner as to miss pier cap bars above as directed by the Engineer.
- Except as otherwise noted on drawings, all exterior corners & re-entrant angles in concrete work shall be chamfered 3/4" x 3/4".
- Concrete seats receiving steel plates, leadplates or neoprene pads shall be poured monolithically with supporting structures & top of concrete seats shall be finished with a steel trowel to a smooth level, surface at the elevation shown on the plans.
- Elastomeric Pads: Bottom of bridge bearing pads shall be secured against displacement with adhesives approved by the Engineer. Pads shall be incidental to concrete and will not be paid for separately.
- Forms for all exposed surfaces of separation structures and surfaces of retaining walls visible from a traveled way or from a populated area shall be plywood except that metal forms may be permitted provided a surface finish satisfactory to the Engineer can be obtained and the use of such forms is approved in writing by the Engineer. Forms for round columns shall be made of materials that will give a smooth finish and true dimensions as given in the plans. Forms for prestressed concrete members shall be either metal or plywood.
- Gothic letters and figures approximating dimensions shown will be acceptable if approved by the Engineer.
- The contractor shall verify the location of all existing utility lines and notify the respective owners before commencing work of excavation or driving of piles.
- Standard Detail Drawings refer to all structures in general, except for modifications as may be required for special conditions. For such modifications refer to the corresponding detailed drawings.

### TYPICAL CONCRETE GROOVE DETAIL

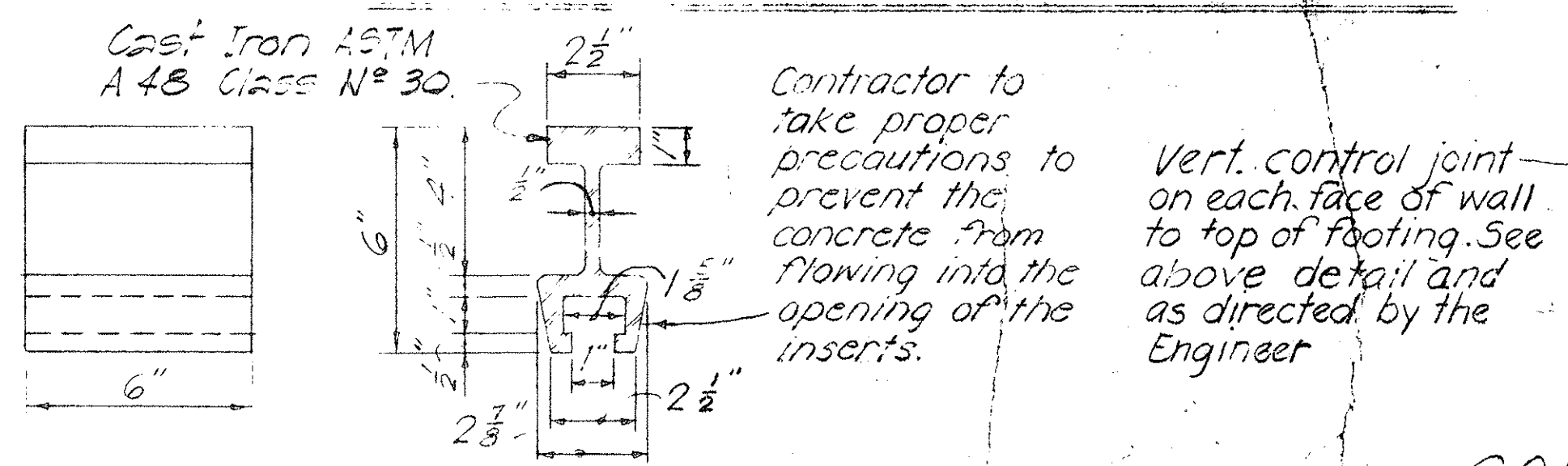


### DRIP DETAIL

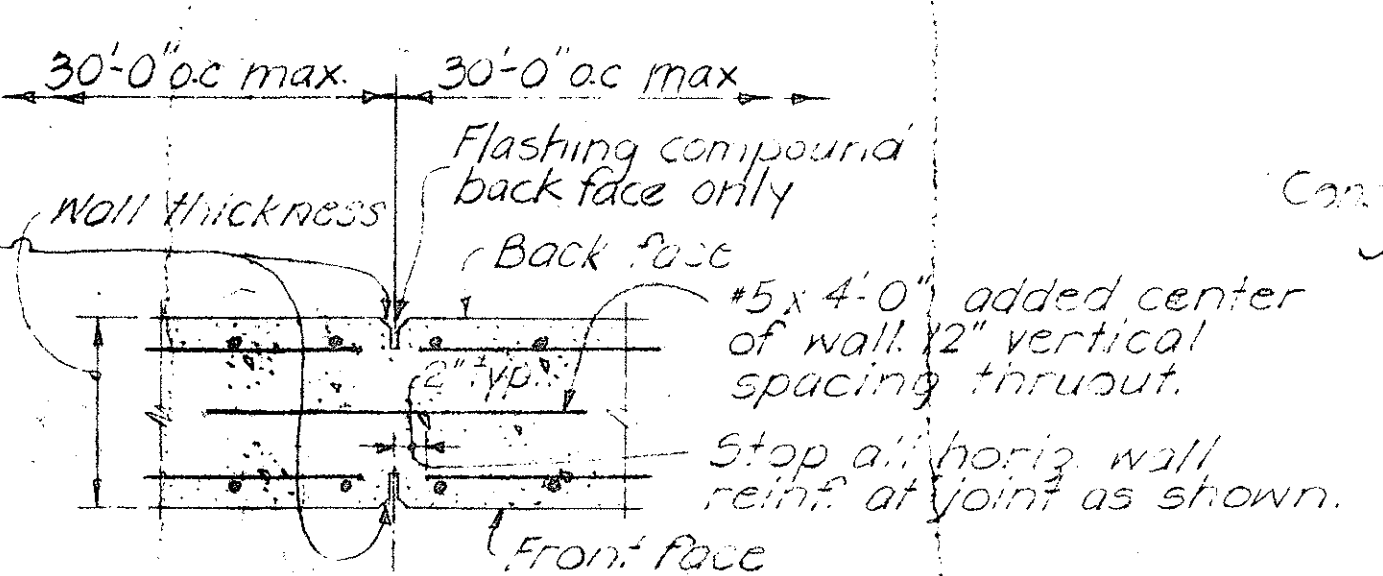


**NOTE:** Metal drains shall be considered incidental to Class A Concrete in both concrete and steel bridges and will not be paid for separately. Assembly of grillage and pipe shall be hot-dip galvanized after all welding is completed.

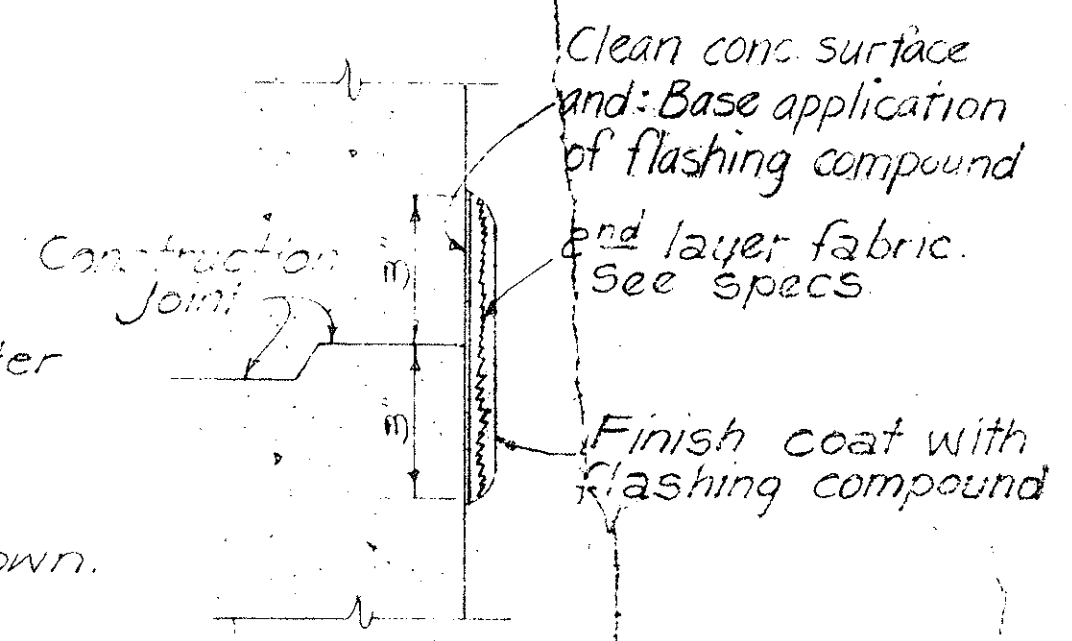
### TYPICAL DRAINAGE DETAILS



### CONTROL JOINT DETAILS



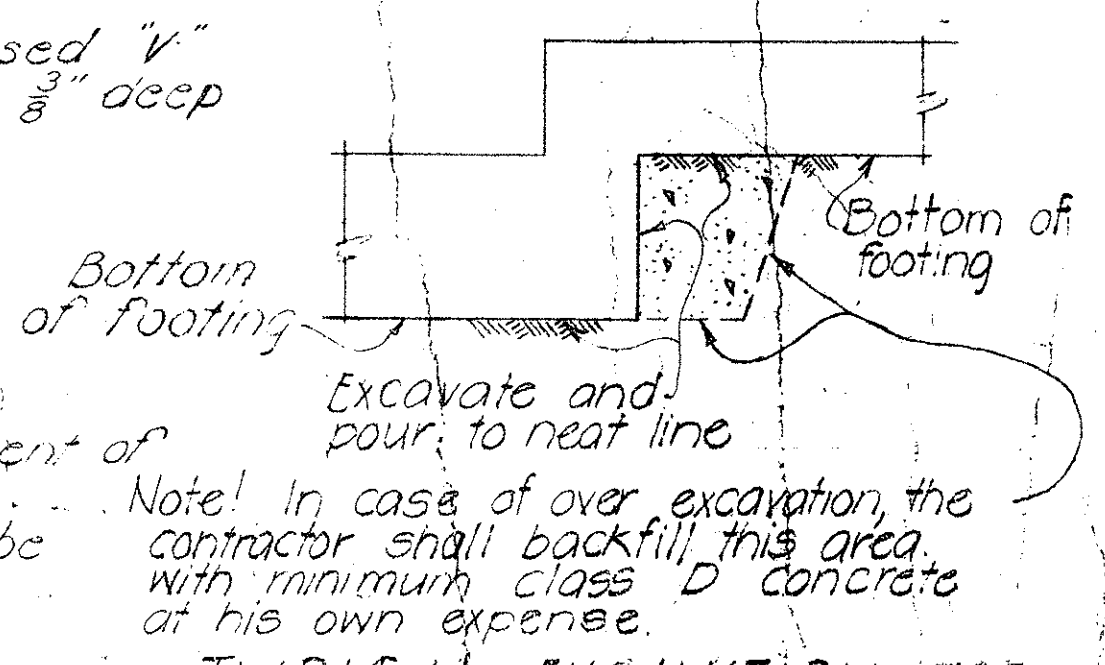
### TYP FLASHING COMPOUND WATERPROOFING DETAIL



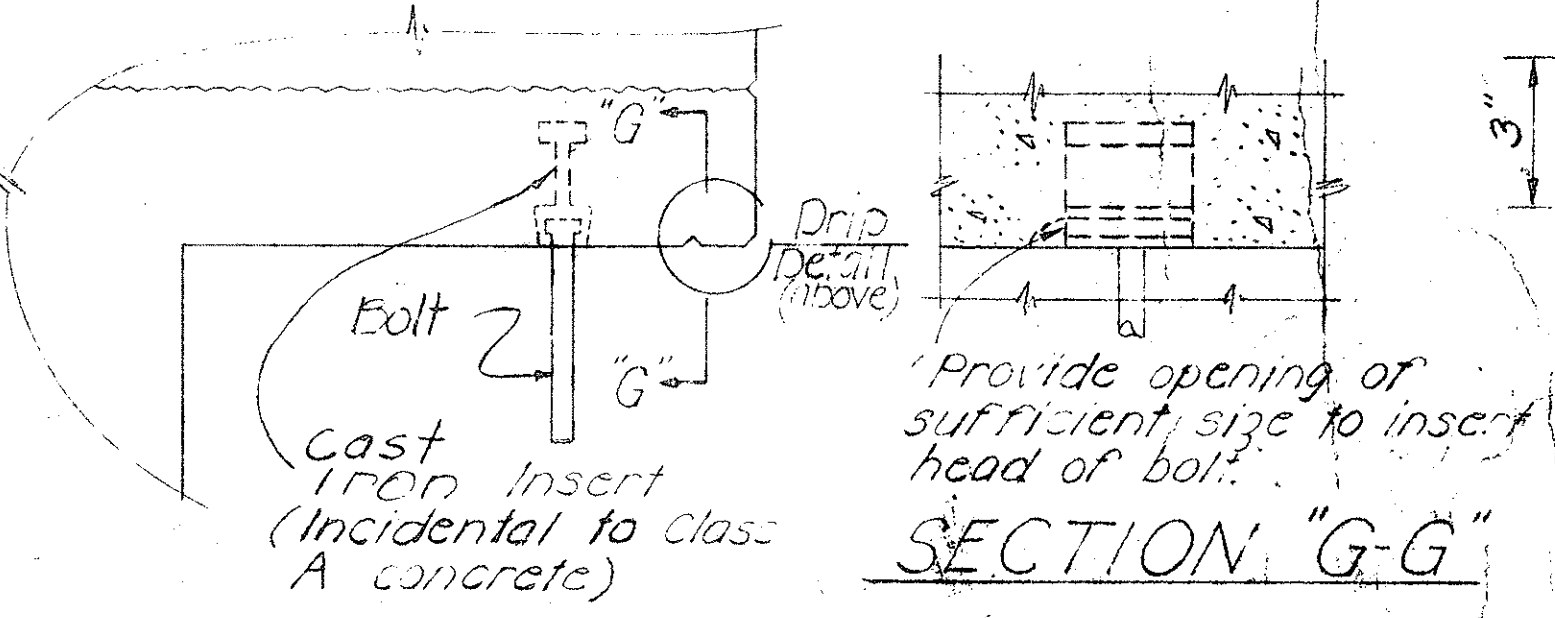
### NAME DATE

Use correct name of bridge Date of Year built  
**NOTE:** Refer to corresponding detail drawings for placement of such names & dates at end post. Exact details & spacing of letters & figures shall be as directed by the Engineer. See Note #12.

### TYPICAL DETAIL OF LETTERS & FIGURES AT CONCRETE END POST



### TYPICAL EXCAVATION FOR CONTINUOUS FOOTING STEP-UP



### DETAIL of PIPE HANGERS & INSERTS

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:  
*Paul T. Yamashita* 1-23-70  
 BRIDGE DESIGN ENGINEER DATE

APPROVED  
*Paul T. Yamashita* 1-28-70  
 ASSISTANT CHIEF, ENGINEERING DATE

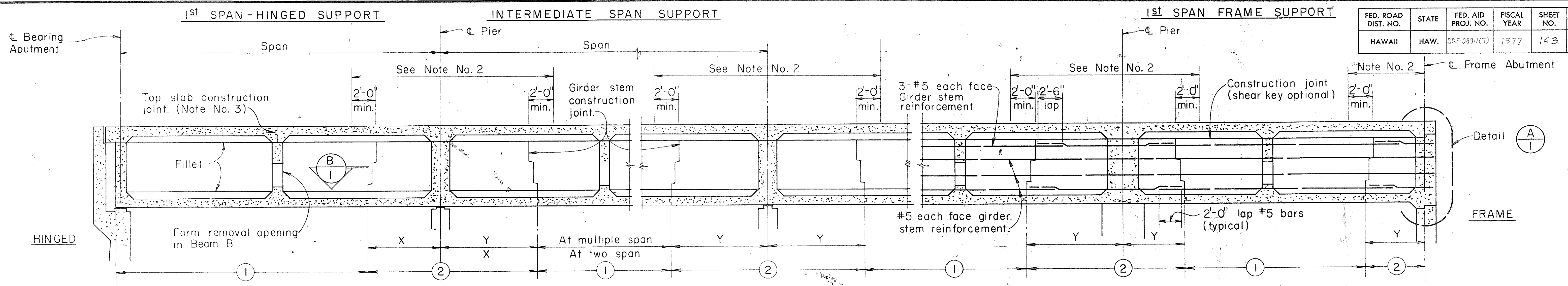
STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**STANDARD DETAILS**  
 NOTES AND MISCELLANEOUS  
 DETAILS

Date: October, 1969

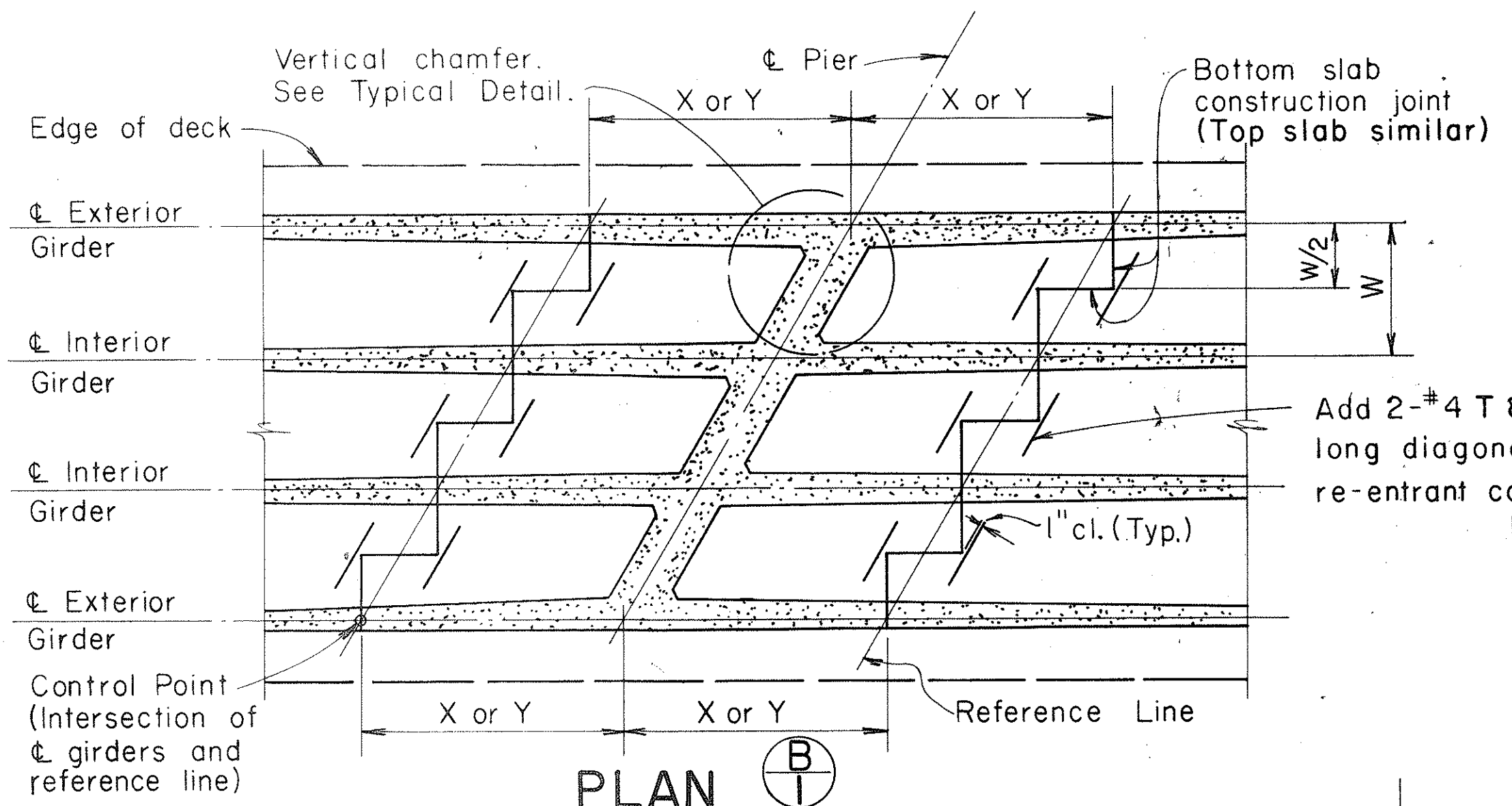
DATE  
 SURVEY PLOTTED BY  
 DRAWN BY  
 DESIGNED BY  
 QUANTITIES BY  
 CHECKED BY



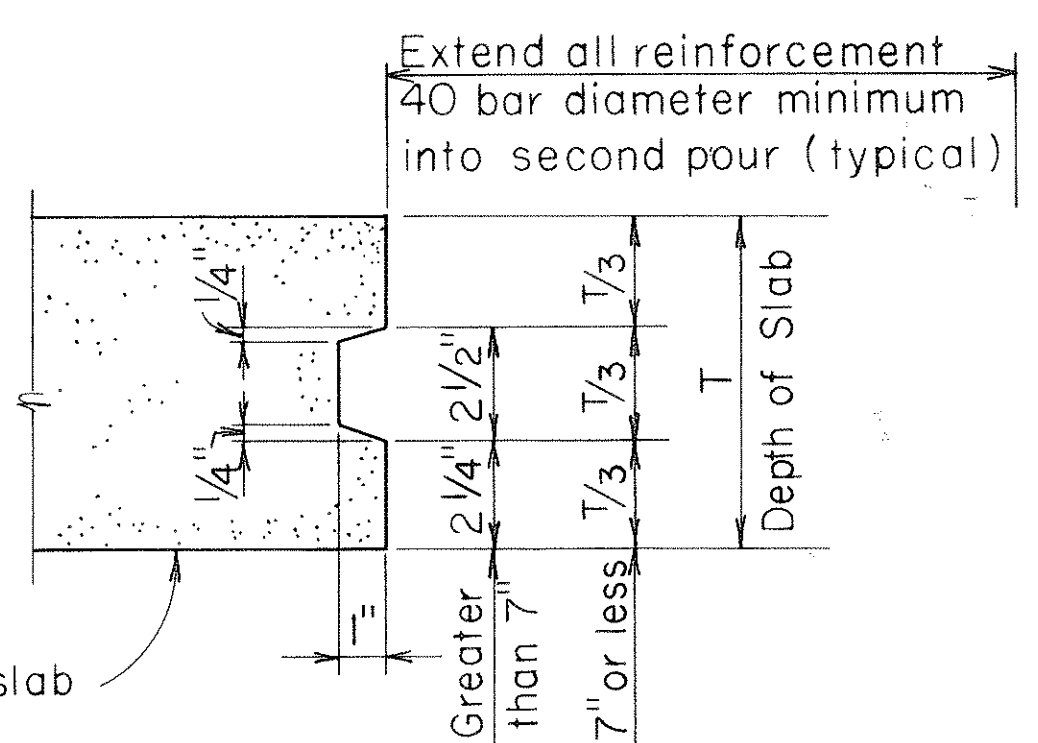
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	82F-030-1(7)	1977	143	165



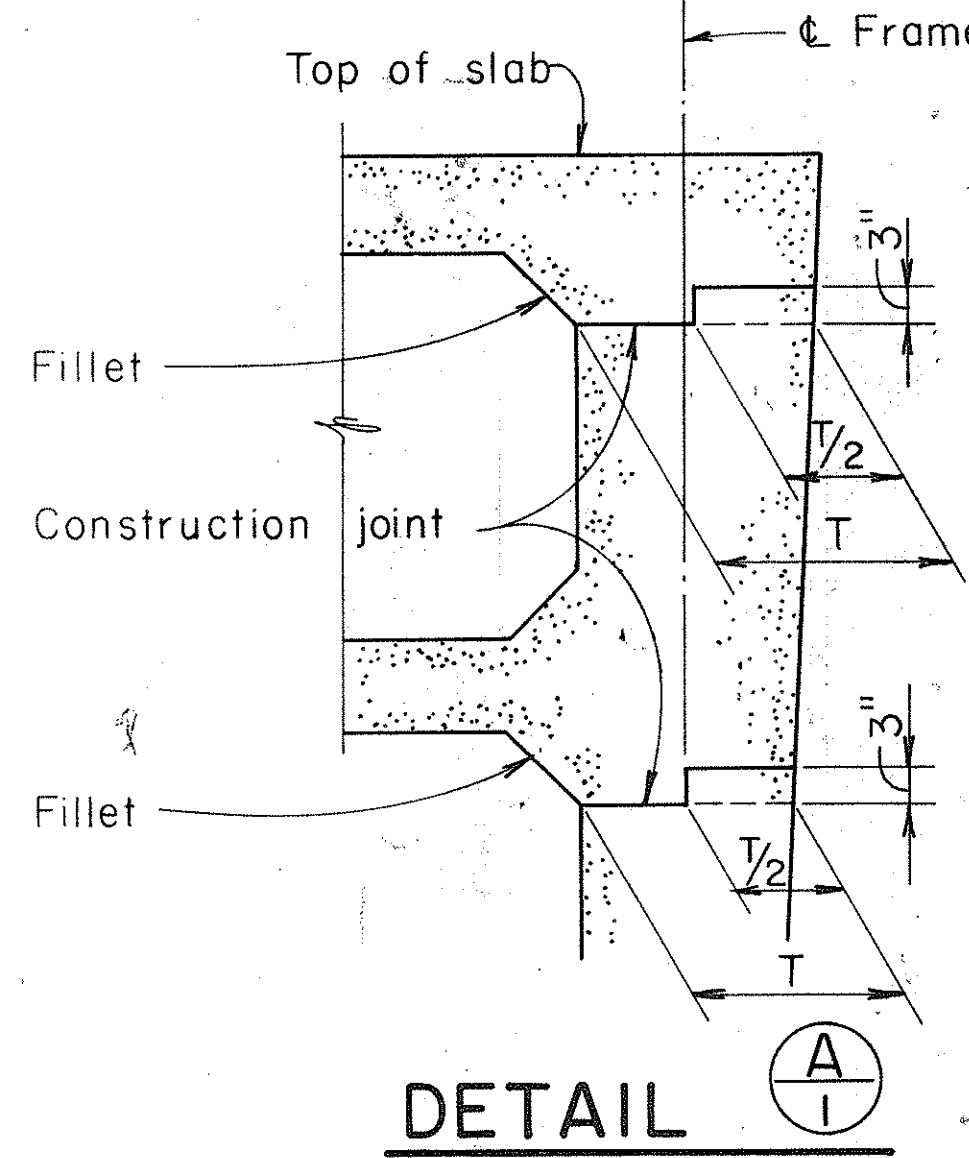
**PLACING DIAGRAM**



**CONSTRUCTION JOINT - BRIDGES ON SKEW**



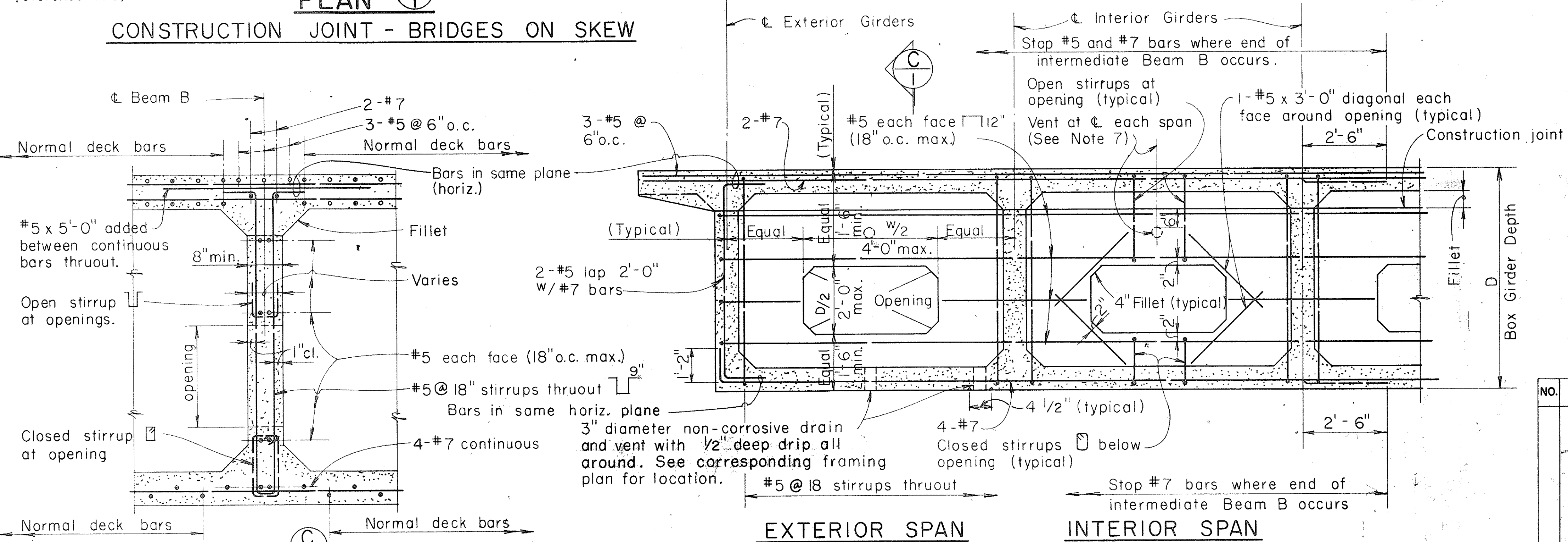
**TYPICAL SLAB CONSTRUCTION JOINT DETAIL**



**DETAIL A-I**

**NOTES:**

- Numbers ① and ② indicate sequence of placing bottom slab and girder stem concrete. ② may be placed with ① when approved by the Engineer provided that the ① sections adjoining the ② sections are placed in this pour. For any deviation from the above, the contractor shall submit a diagram to the Engineer for approval.
- No top slab construction joint or form removal opening shall be located in the region over the piers as noted, nor in the supporting section of a hinged span.
- When top slab is not poured continuously, and top slab forms are not removed, construction joint in top slab shall be located over an intermediate diaphragm.
- Top slab concrete shall be placed separately from the stem. Top slab concrete may be placed continuously or in parts as approved by the Engineer, providing pour is not in conflict with the above notes.
- Dimension X = 1/4 span. Y = 1/5 span.
- No lapping of main bars shall be permitted at construction joints.
- If the Contractor elects to leave top slab forms in place, form removal opening shall be omitted and replaced by 3" vent. Vertical shorings left in place for the top slab formwork, shall not be located within the center half of each top slab span.



**TYPICAL BEAM B DETAILS**

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

APPROVAL RECOMMENDED:  
*Barbara K. Hamanets* 6-1-76  
 BRIDGE DESIGN ENGINEER DATE

APPROVED  
*Hubert Balzalis* 6-2-76  
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STANDARD DETAILS**  
**CONCRETE BOX GIRDER**

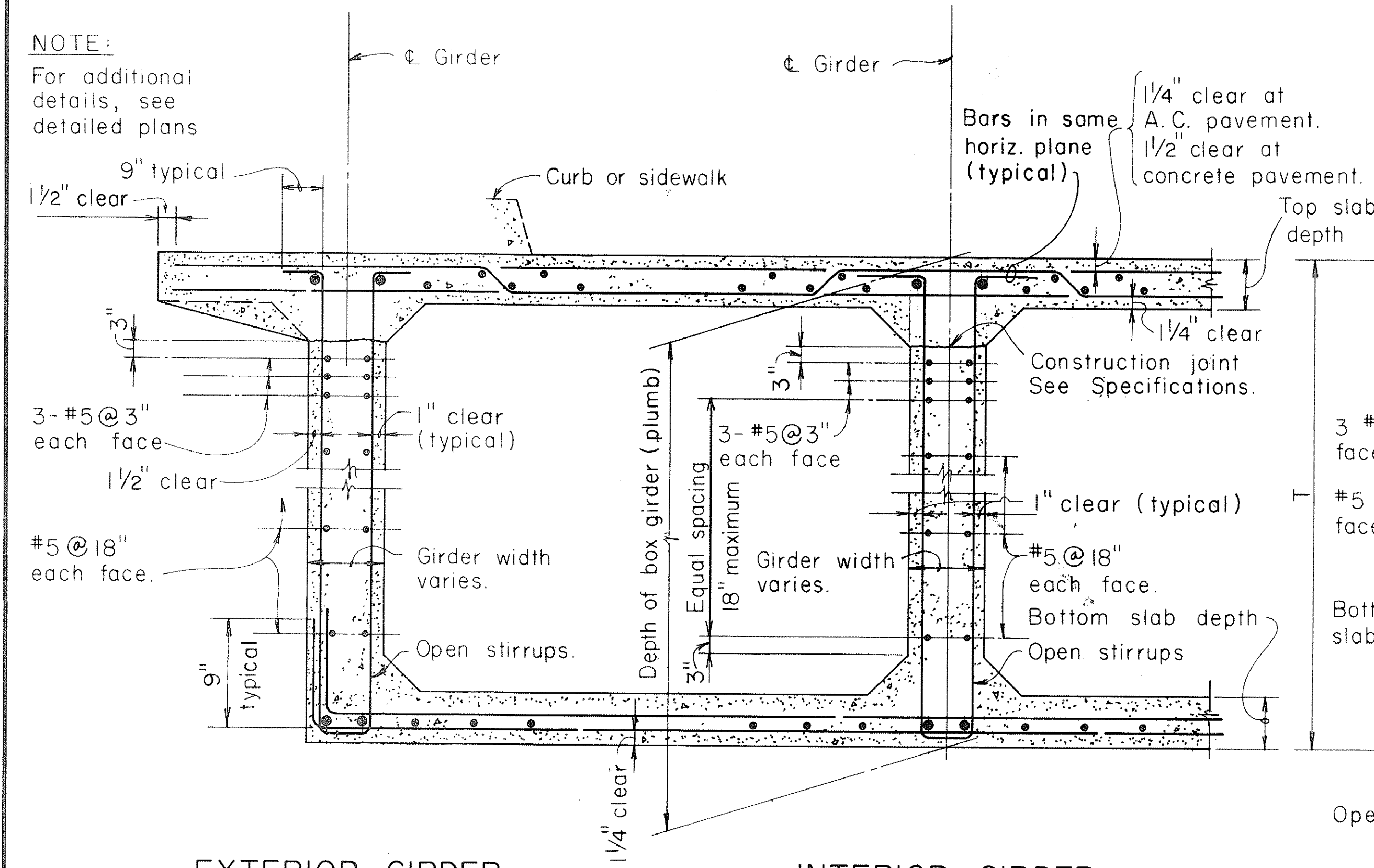
Not To Scale Date: May 1976

SHEET No. 1 OF 3 SHEETS DB-101-I

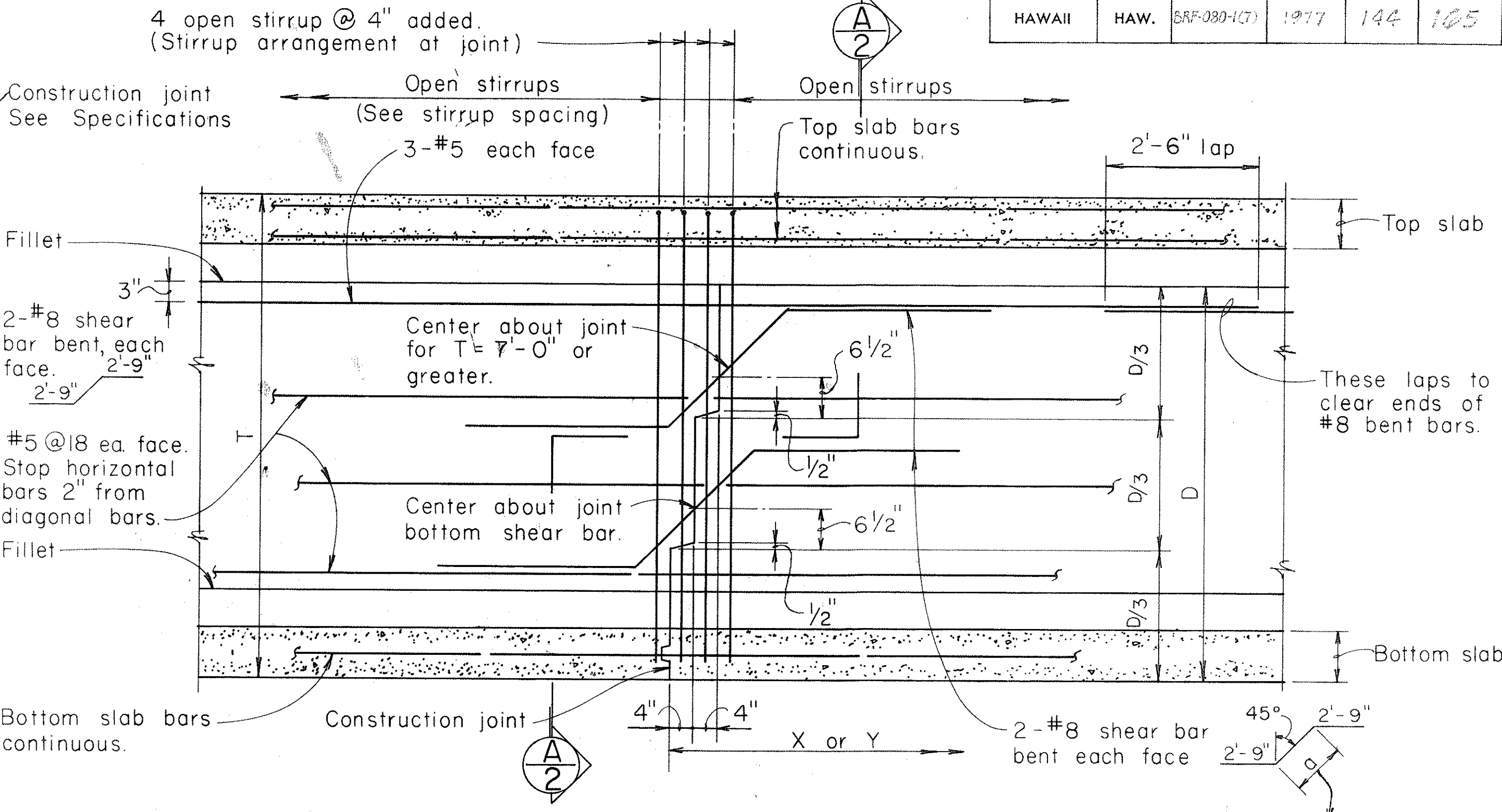
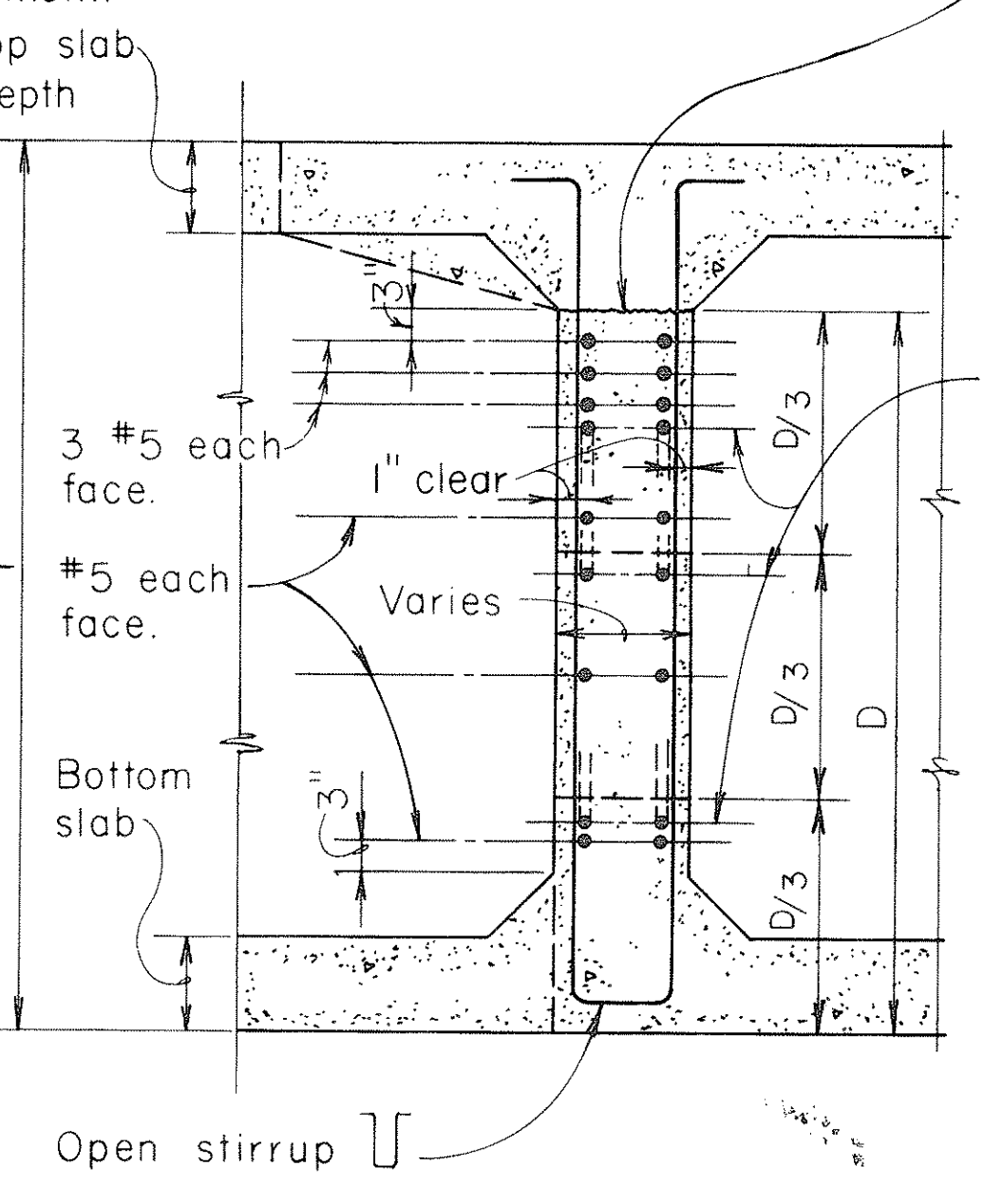


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	5AF-080-1C7	1977	144	105

NOTE:  
For additional details, see detailed plans



NOTE:  
D = Depth of girder stem to bottom of slab.  
For additional details see Normal Section of the Plans.

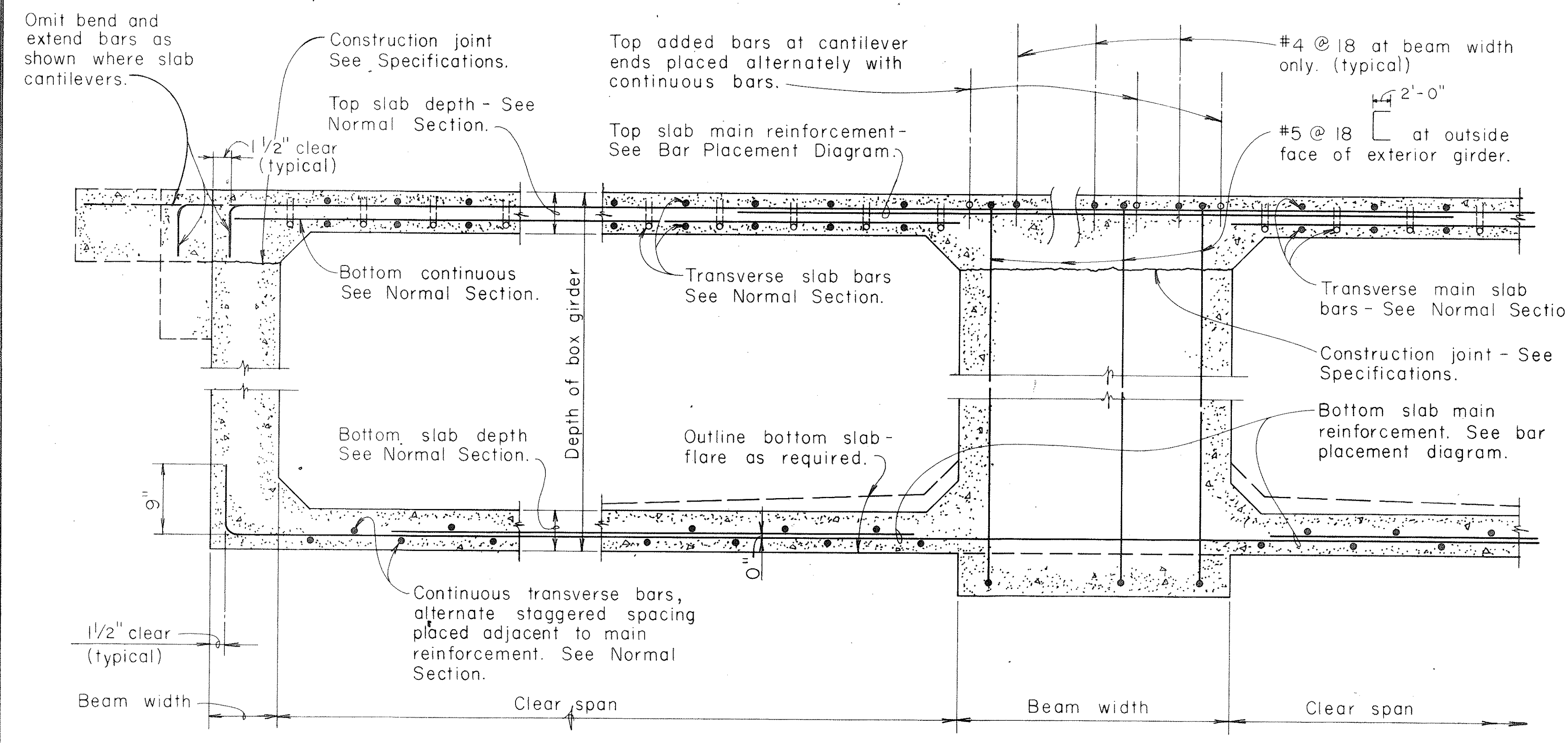


EXTERIOR GIRDER  
INTERIOR GIRDER  
**TYPICAL NORMAL BOX GIRDER SECTION**

SECTION A-2

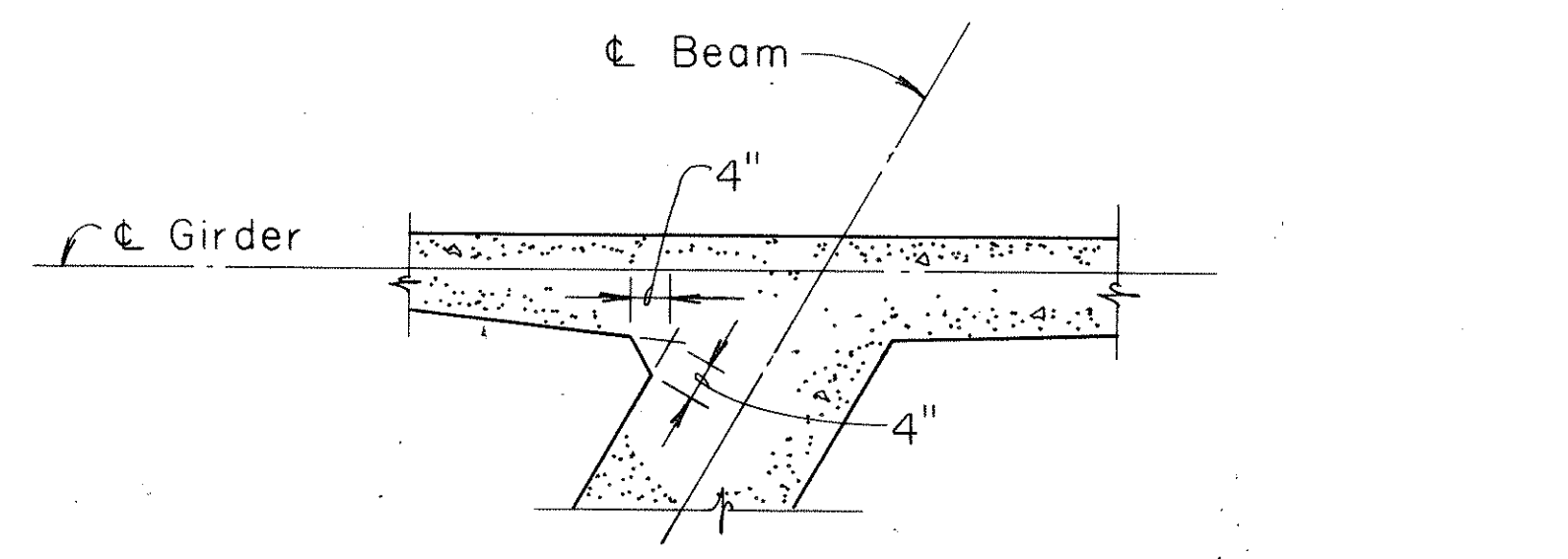
**GIRDER STEM CONSTRUCTION JOINT**

Depth T	a
4'-11" and smaller	1'-9"
5'-0" to 5'-11"	2'-0"
6'-0" to 6'-11"	2'-3"
7'-0" and greater	3'-0"



AT NON-CONTINUOUS END  
AT CONTINUOUS SUPPORT

**TYPICAL LONGITUDINAL DECK SECTION  
ALONG GIRDER AT NORMAL OR RADIAL SUPPORTS**



**TYPICAL DETAIL OF VERTICAL CHAMFER AT ACUTE INTERSECTION OF SKEWED CONCRETE MEMBER**

SURVEY PLOTTED BY	DATE
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN NO.	
NOTE BOOK NO.	

APPROVAL RECOMMENDED:  
*William K. Yamamoto* 6-1-76  
BRIDGE DESIGN ENGINEER DATE

APPROVED  
*Harbert Satoishi* 6-2-76  
ASSISTANT CHIEF, ENGINEERING DATE

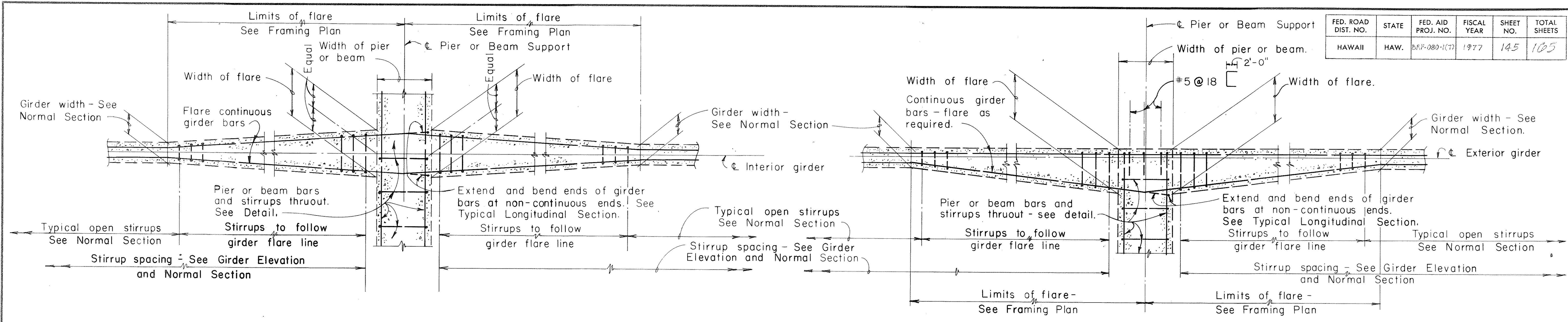
NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**STANDARD DETAILS**  
CONCRETE BOX GIRDER

Not To Scale Date: May 1976

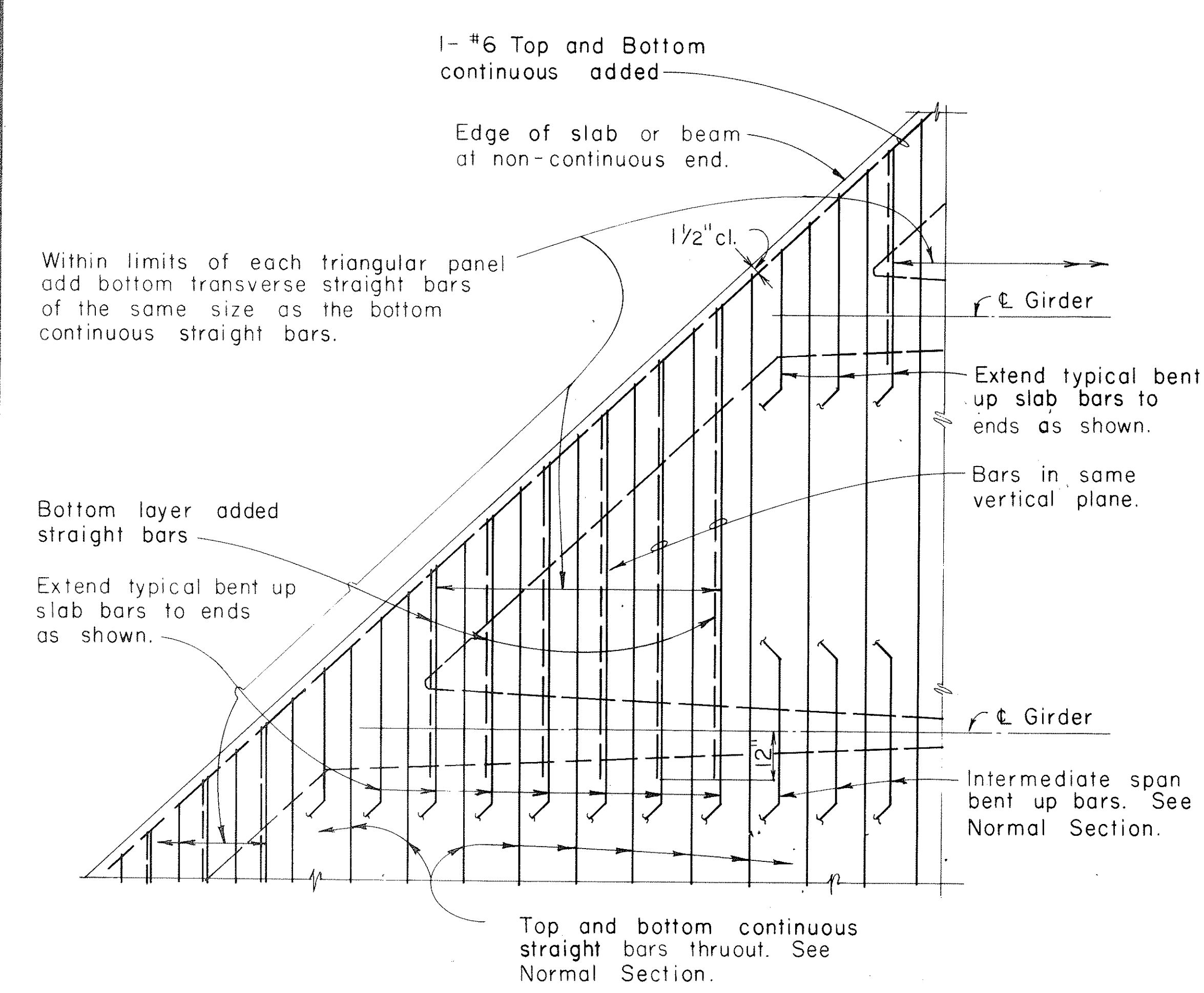


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	54.F-080-1(T)	1977	145	165

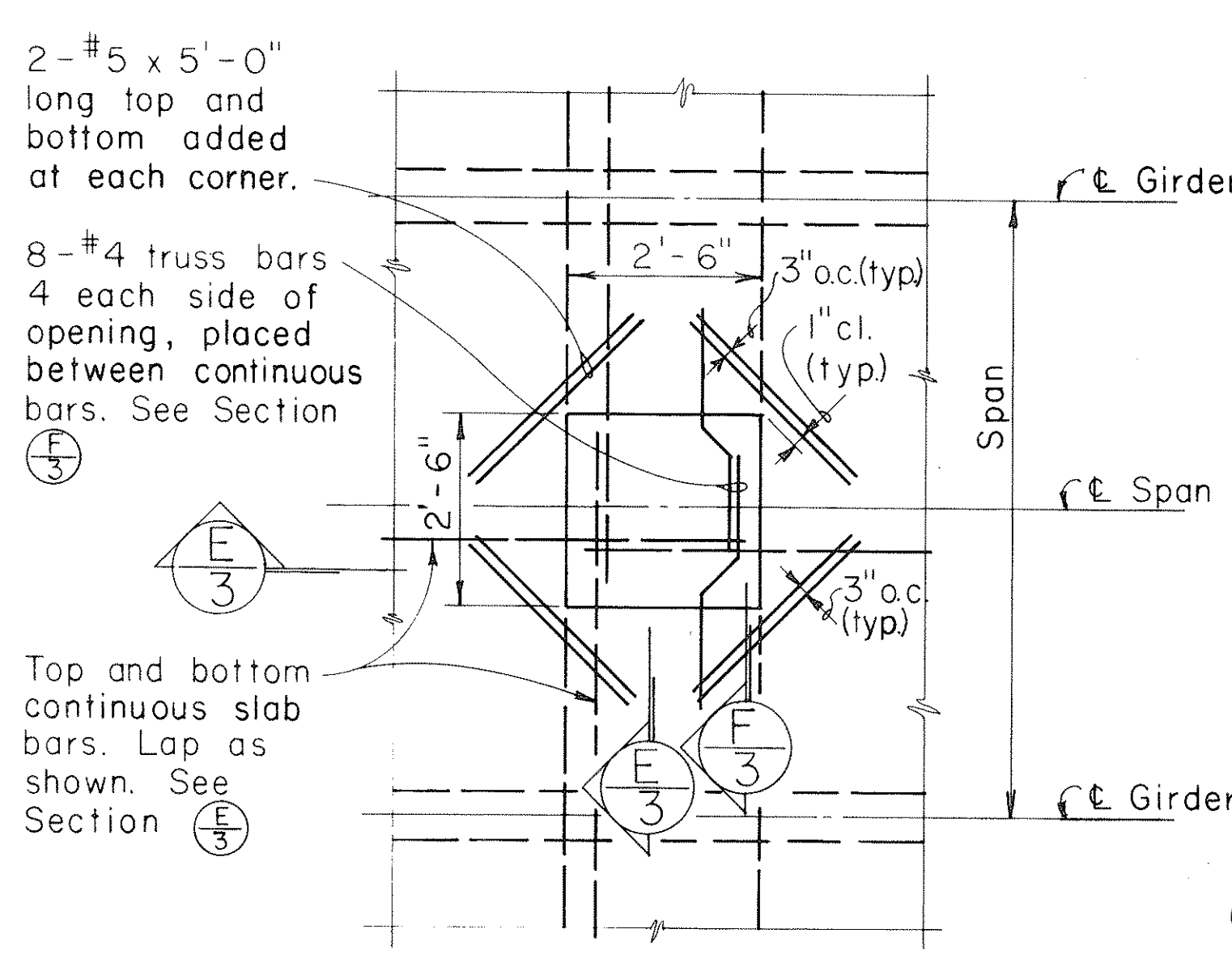


**INTERIOR GIRDER** **EXTERIOR GIRDER**

**TYPICAL DETAILS OF GIRDER FLARE AT NORMAL OR RADIAL SUPPORTS - CONTINUOUS ENDS AS SHOWN  
(NON-CONTINUOUS ENDS SIMILAR EXCEPT AS OTHERWISE NOTED)**

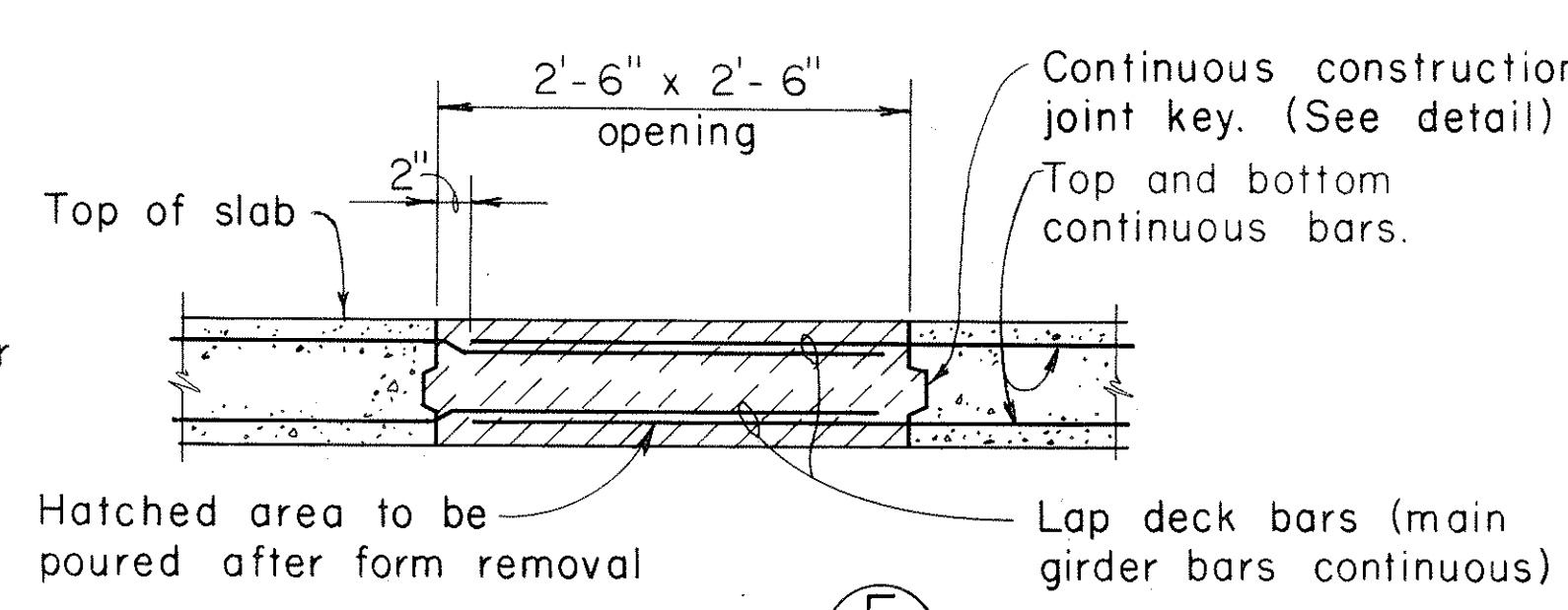


**PART PLAN - TYPICAL ARRANGEMENT OF TOP SLAB REINFORCEMENT AT SKEWED ENDS**

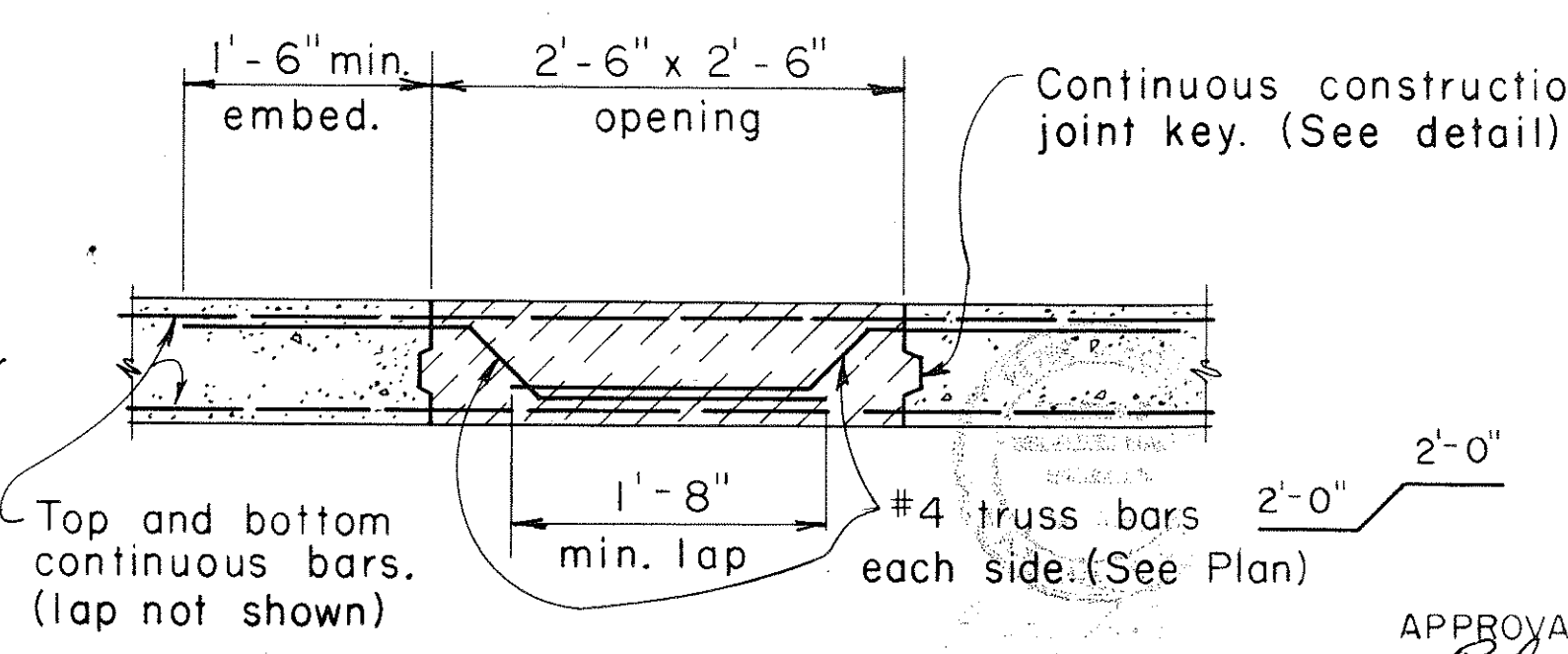


- NOTES**
- Final location of opening shall be determined by the Engineer.
  - Form removal opening at top slab shall not be located where main girder bars occur.
  - Form removal opening may extend from edge of deck.

**PART PLAN - DECK SHOWING FORM REMOVAL OPENING**



**SECTION E/3**



**SECTION F/3**

APPROVAL RECOMMENDED  
*Colman R. Yamant* BRIDGE DESIGN ENGINEER C-1-76 DATE  
 APPROVED  
*Harbert Zaleski* ASSISTANT CHIEF, ENGINEERING C-2-76 DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

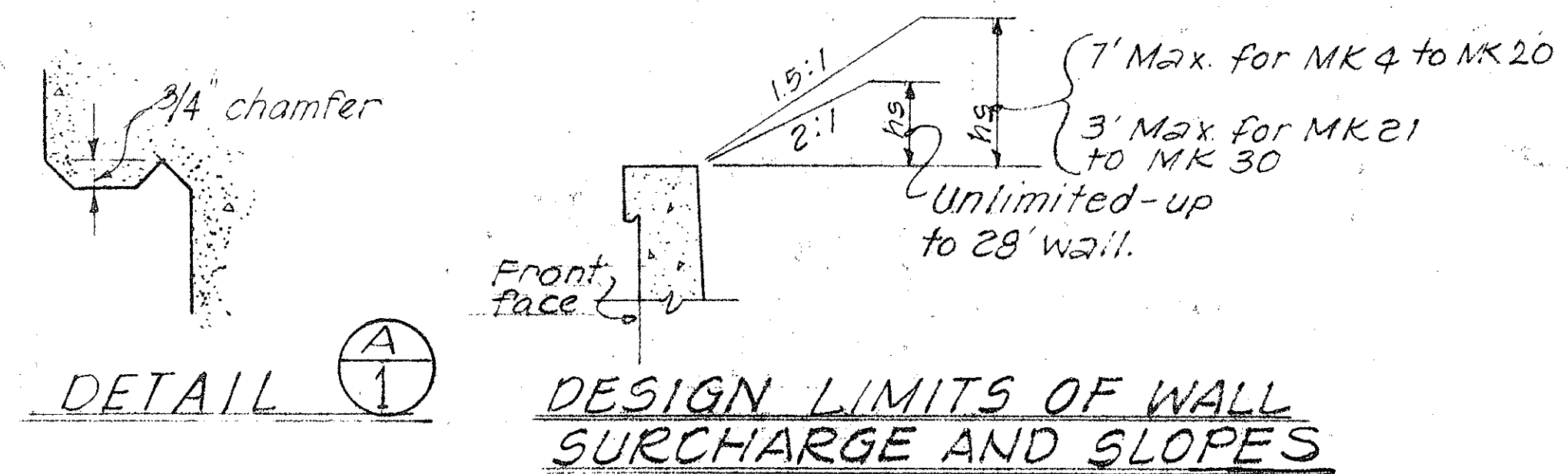
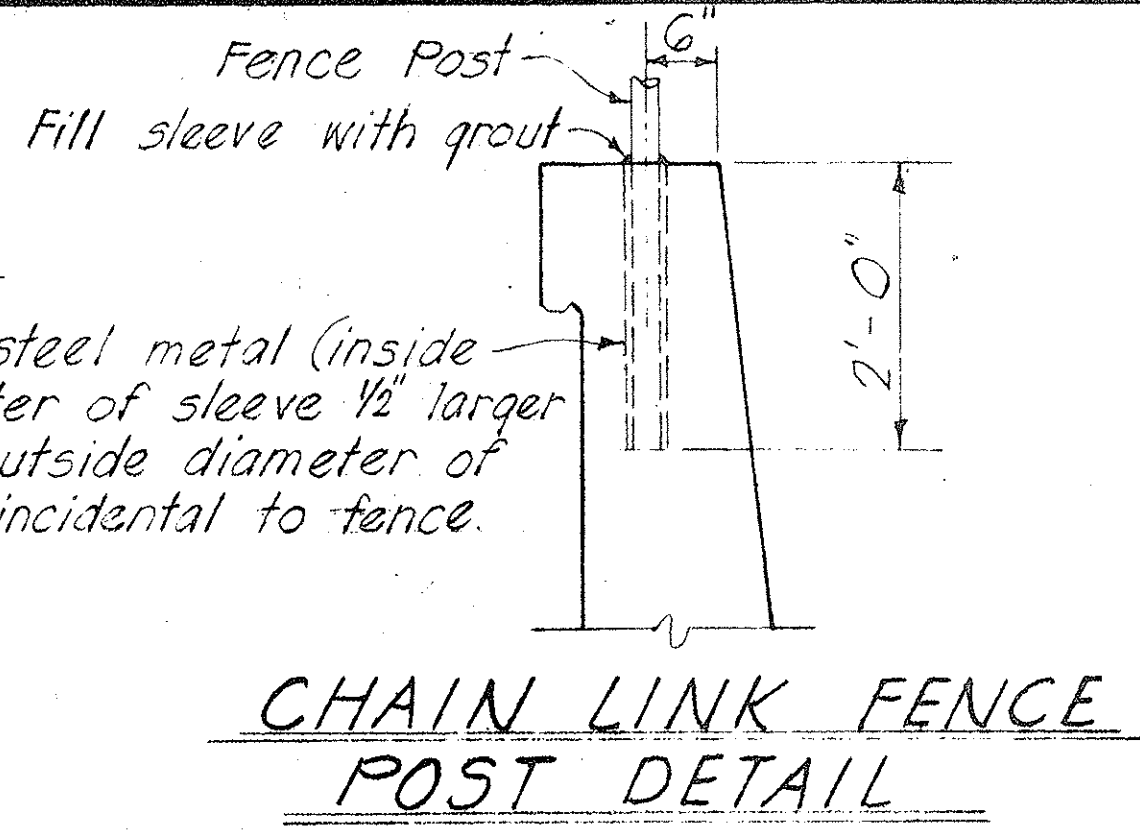
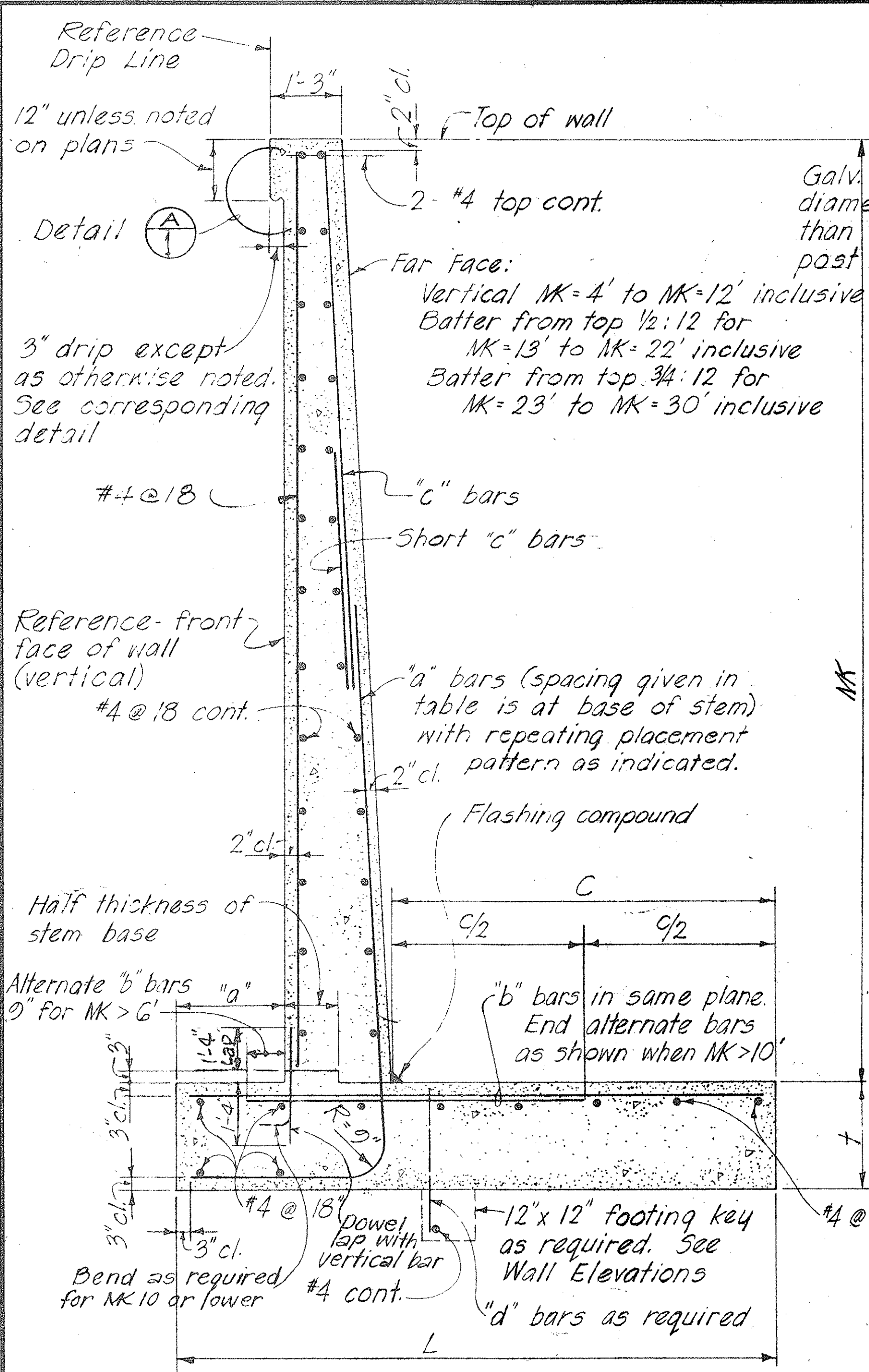
**STANDARD DETAILS**  
**CONCRETE BOX GIRDER**

Not To Scale: Date: May 1976

SHEET No. 3 OF 3 SHEETS DB-10-3

SURVEY PLOTTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 ORIGINAL PLAN: \_\_\_\_\_  
 NO. \_\_\_\_\_



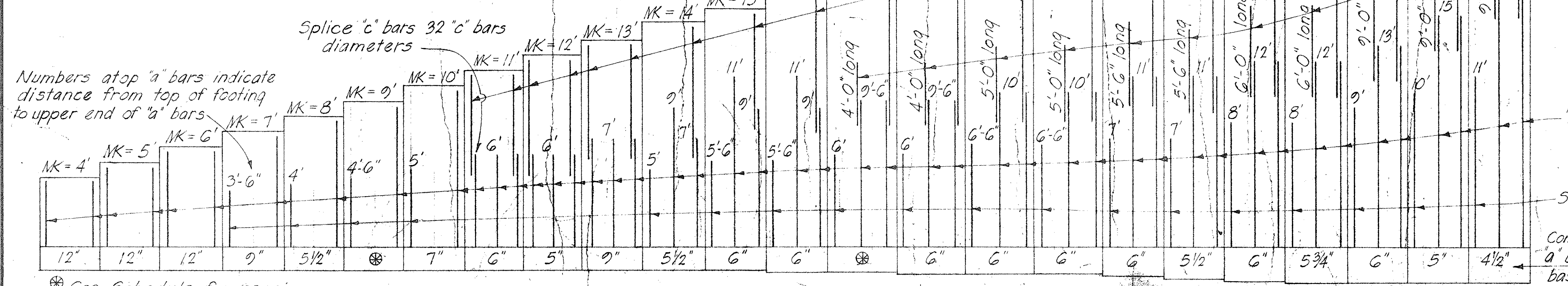


**SCHEDULE OF DIMENSIONS AND REINFORCING STEEL**

Maximum "MK"	4E	5E	6E	7E	8E	9E	10E	11E	12E	13E	14E	15E	16E	17E	18E	19E	20E	21E	22E	23E	24E	26E	28E	30E
a	6"	6"	6"	12"	12"	12"	12"	12"	12"	12"	15"	18"	21"	24"	24"	24"	27"	30"	33"	36"	39"	54"	60"	72"
t	14"	14"	14"	14"	14"	14"	14"	18"	18"	18"	18"	18"	21"	21"	24"	24"	24"	27"	30"	31"	33"	36"	39"	42"
L	2.5'	3.0'	3.5'	4.0'	4.5'	5.0'	5.5'	6.0'	6.5'	7.0'	7.75'	8.25'	9.0'	9.75'	10.5'	11.5'	12.5'	13.5'	14.5'	15.25'	16.0'	18.0'	20.0'	21.0'
"a" bars	#3@12"	#3@12"	#4@12"	#4@9"	#4@5 1/2"	#5@7"	#6@7"	#6@6"	#6@5"	#7@9"	#6@5 1/2"	#7@6"	#8@6"	#8@5 3/4"	#9@6"	#9@6"	#10@6"	#10@6"	#10@5 1/2"	#10@6"	#10@5 3/4"	#11@6"	#11@5"	#11@4 1/2"
"b" bars	#3@12"	#3@12"	#3@12"	#3@9"	#4@11"	#4@7"	#5@7"	#5@6"	#5@5"	#7@9"	#6@5 1/2"	#7@6"	#8@6"	#10@5 3/4"	#8@6"	#9@6"	#10@6"	#10@6"	#10@5 1/2"	#10@6"	#10@5 3/4"	#11@6"	#11@5"	#11@4 1/2"
"c" bars								#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#6	#7	#7	#7	#7	#7	#7
"d" bars	#3@12"	#3@12"	#3@12"	#3@12"	#4@18"	#4@15"	#4@15"	#4@12"	#4@11"	#4@9"	#5@12"	#5@12"	#5@10"	#5@9"	#5@9"	#5@8"	#6@10"	#6@9"	#7@12"	#7@11"	#7@10"	#7@	#7@	#7@6"

Maximum "MK"	4R	5R	6R	7R	8R	9R	10R	11R	12R	13R	14R	15R	16R	17R	18R	19R	20R	21R	22R	23R	24R	26R	28R	30R
a	6"	6"	6"	12"	12"	12"	12"	12"	12"	12"	15"	18"	21"	21"	21"	21"	24"	24"	27"	30"	33"	39"	39"	51"
t	14"	14"	14"	14"	14"	14"	14"	18"	18"	18"	18"	18"	18"	18"	18"	21"	21"	21"	21"	24"	24"	27"	30"	36"
L	2.5'	3.0'	3.5'	4.0'	4.5'	5.0'	5.5'	6.0'	6.5'	7.25'	7.75'	8.25'	8.75'	9.25'	9.75'	10.25'	10.5'	11.0'	11.5'	12.0'	13.0'	14.0'	15.0'	
"a" bars	#3@12"	#3@12"	#4@12"	#4@9"	#4@5 1/2"	#5@6"	#6@7"	#6@6"	#6@5"	#7@9"	#6@5 1/2"	#7@6"	#8@6"	#8@6"	#9@6"	#9@6"	#10@6"	#10@6"	#10@5 1/2"	#10@6"	#10@5 3/4"	#11@6"	#11@5"	#11@4 1/2"
"b" bars	#3@12"	#3@12"	#3@12"	#3@9"	#4@11"	#4@6"	#5@7"	#5@6"	#5@5"	#7@9"	#6@5 1/2"	#7@6"	#8@6"	#10@5 3/4"	#8@6"	#9@6"	#10@6"	#10@6"	#10@5 1/2"	#10@6"	#10@5 3/4"	#10@6"	#10@5"	#10@4 1/2"
"c" bars								#4	#4	#4	#4	#4	#5	#5	#5	#6	#6	#6	#7	#7	#7	#7	#7	#7
"d" bars	#3@12"	#3@12"	#3@12"	#3@12"	#4@18"	#4@15"	#4@15"	#4@12"	#4@11"	#4@9"	#5@12"	#5@12"	#5@10"	#5@9"	#5@9"	#5@8"	#6@10"	#6@9"	#7@12"	#7@11"	#7@10"	#7@	#7@	#7@6"

**WALL SECTION**



NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED  
*Paul T. Yamashita*  
BRIDGE DESIGN ENGINEER  
1-23-76  
DATE

APPROVED  
*Paul T. Yamashita*  
FOR ASSISTANT CHIEF, ENGINEERING  
1-28-76  
DATE

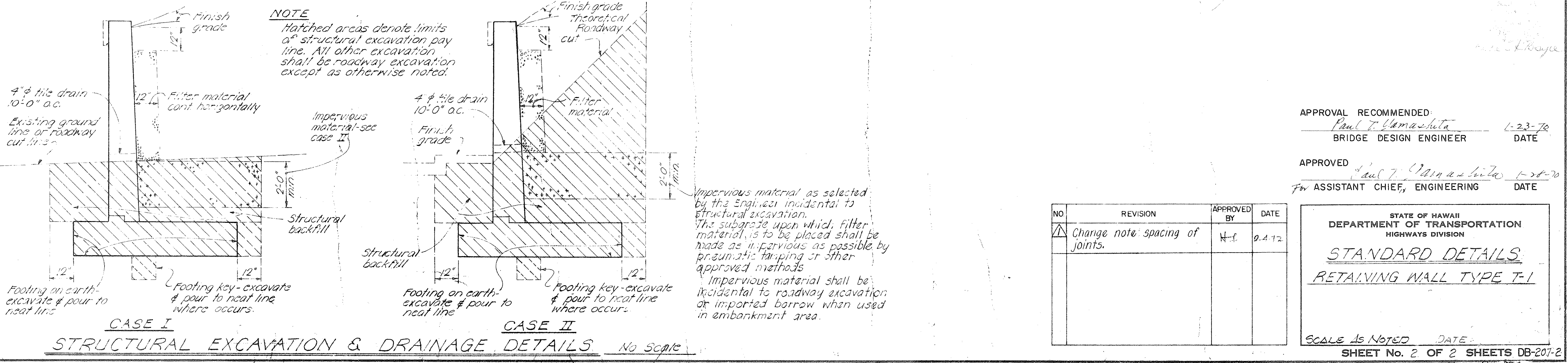
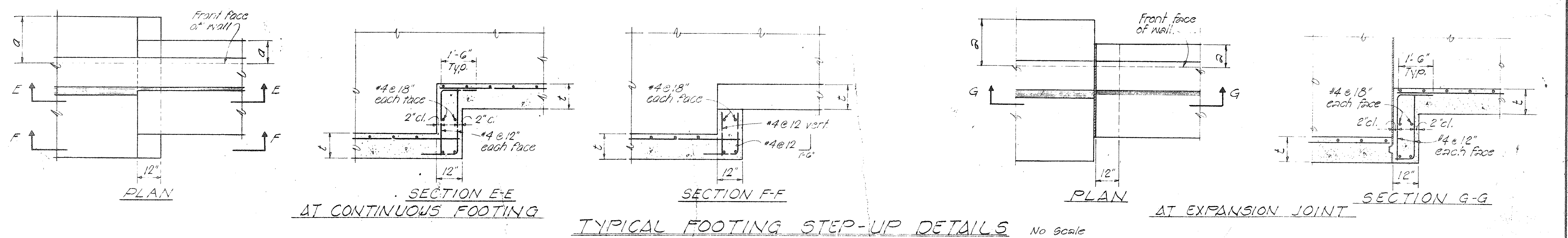
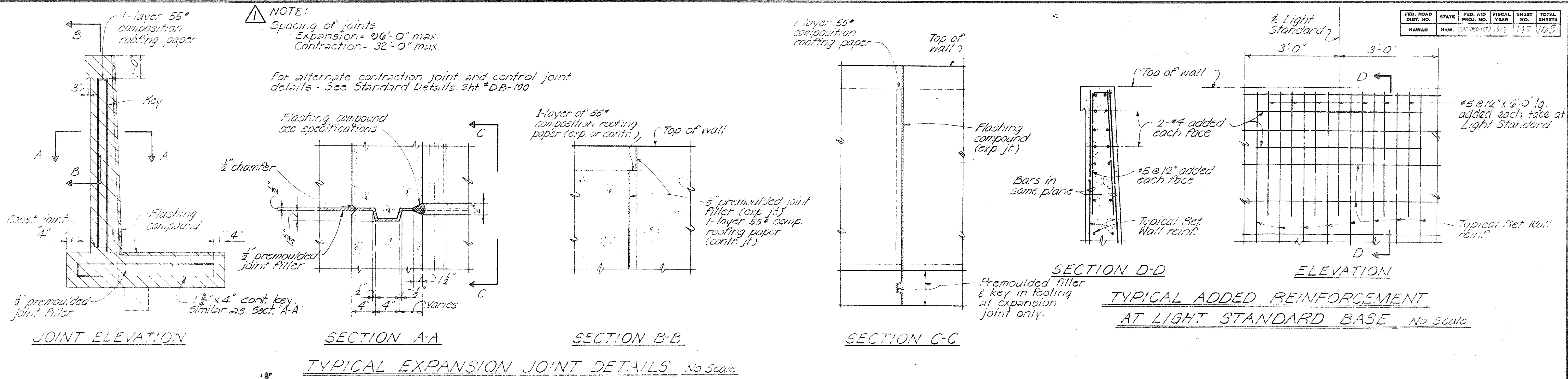
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**  
RETAINING WALL TYPE T-1

SCALE As NOTED DATE  
SHEET No. 1 OF 2 SHEETS DB-207-1

DATE  
SURVEY PLOTTED BY  
DRAWN BY  
CHECKED BY  
NOTE BOOK  
QUANTITIES BY





DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
NO.	_____

APPROVAL RECOMMENDED:  
 Paul T. Yamashita 1-23-70  
 BRIDGE DESIGN ENGINEER DATE

APPROVED:  
 Paul T. Yamashita 1-28-70  
 ASSISTANT CHIEF, ENGINEERING DATE

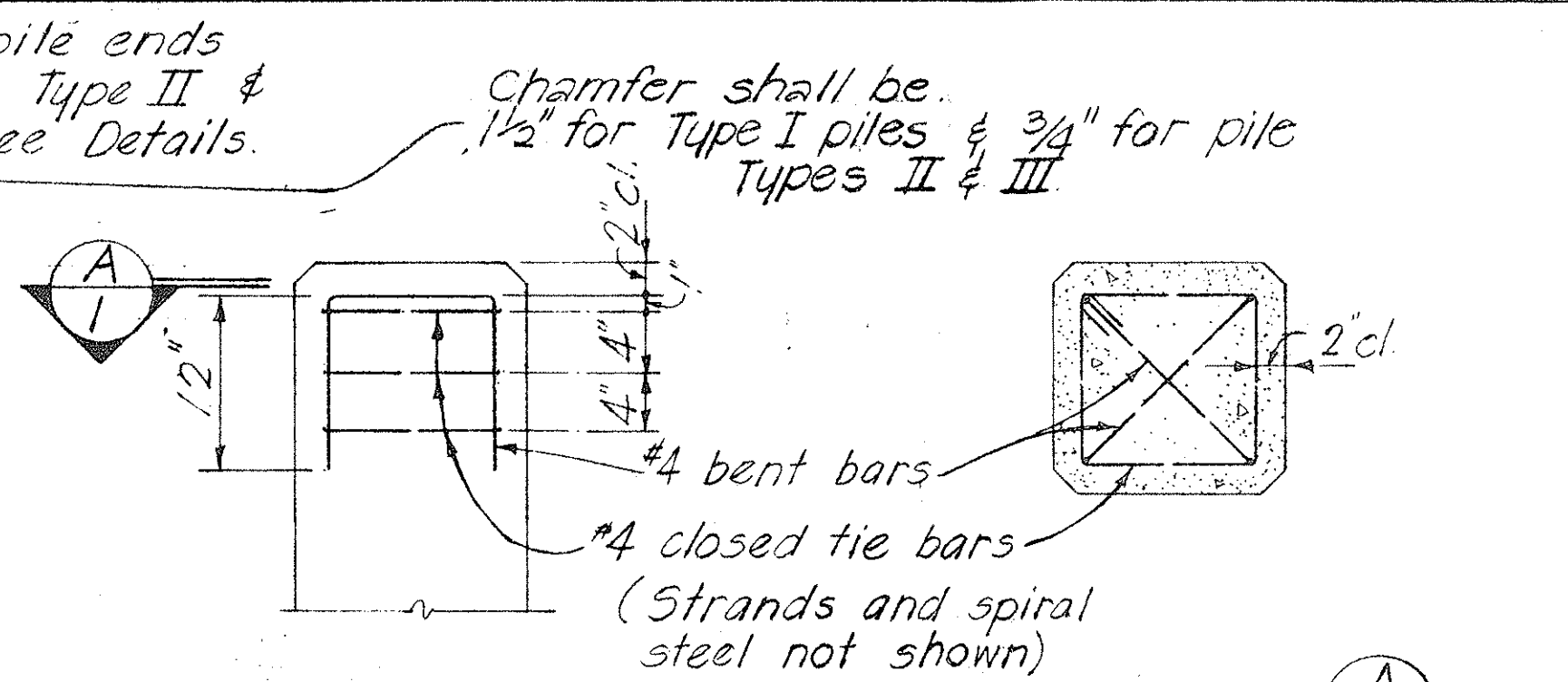
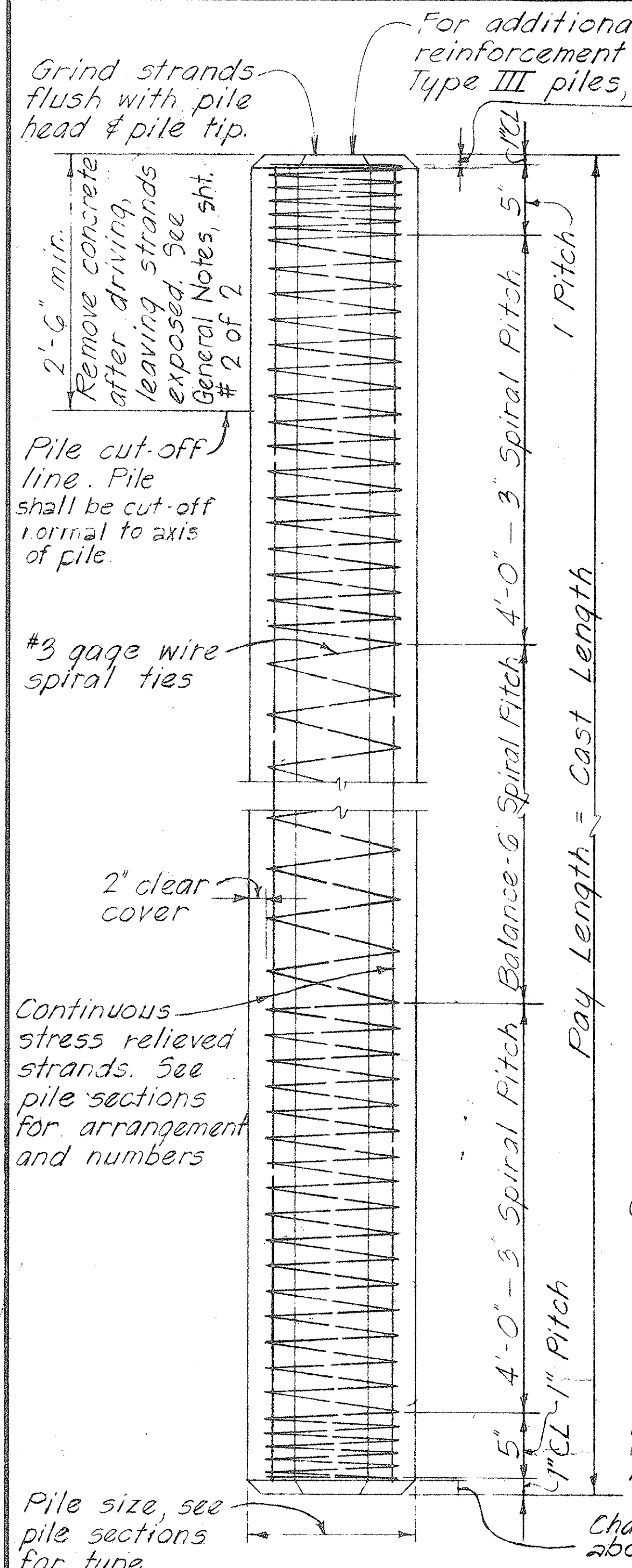
NO.	REVISION	APPROVED BY	DATE
1	Change note: spacing of joints.	H.F.	9.4.72

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

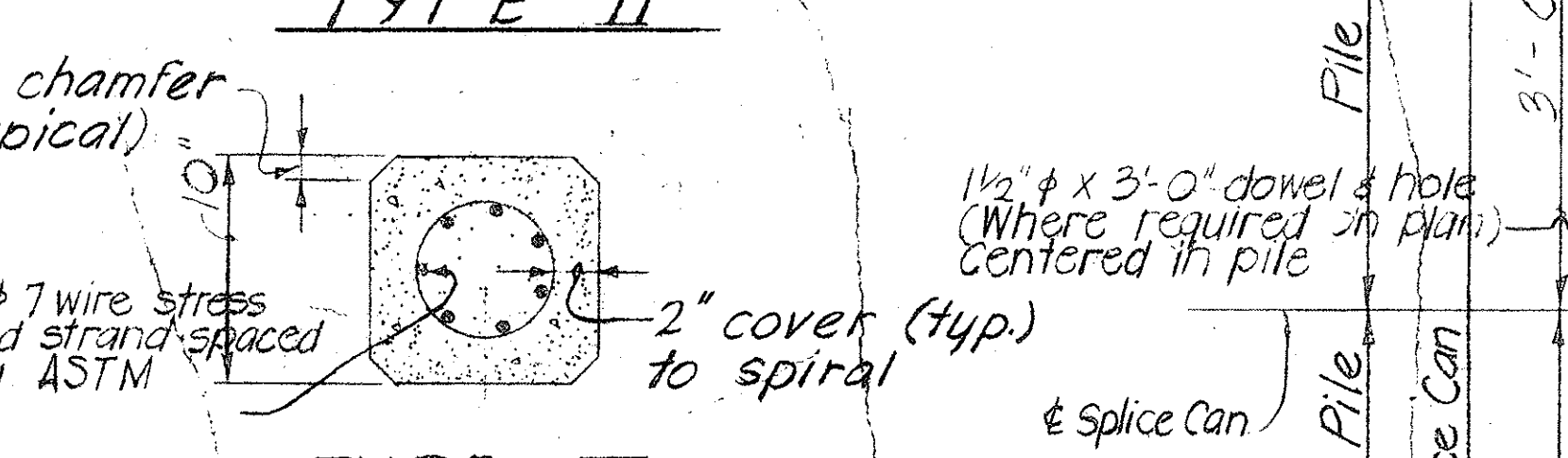
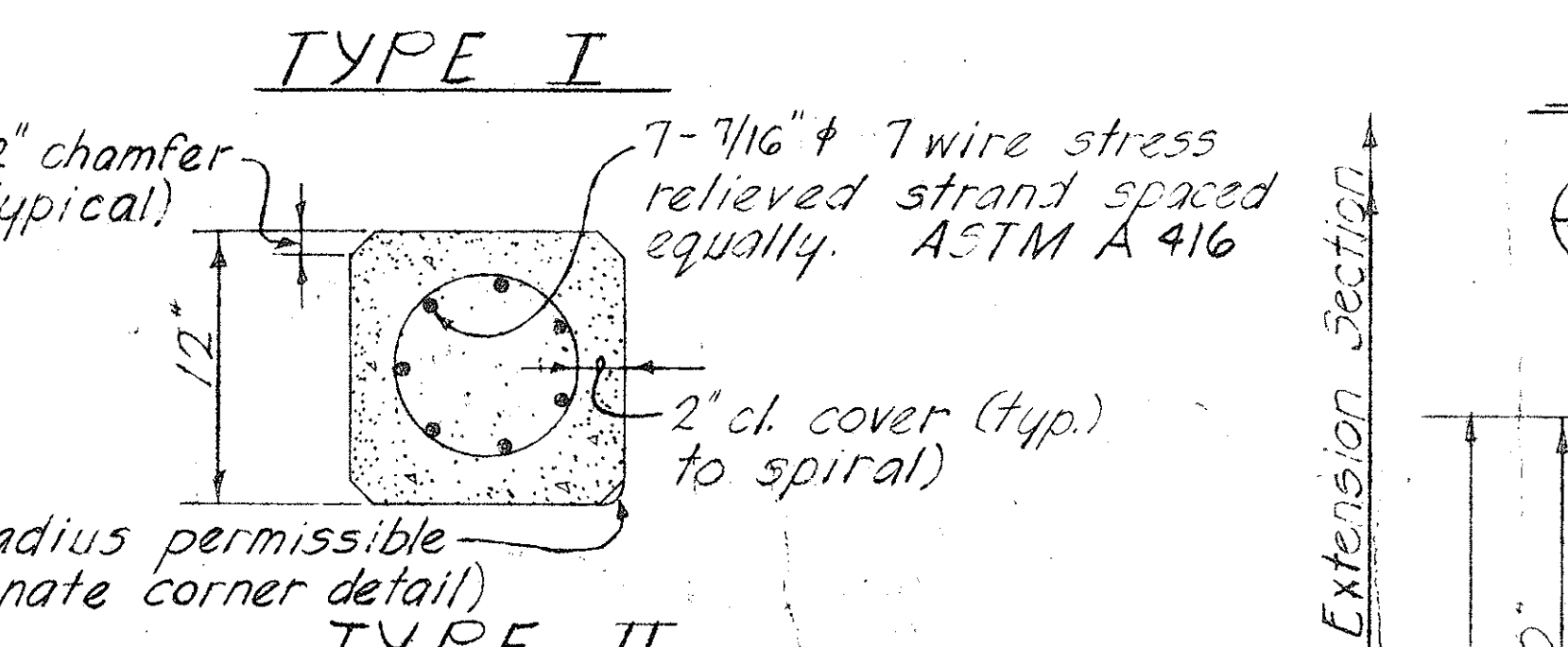
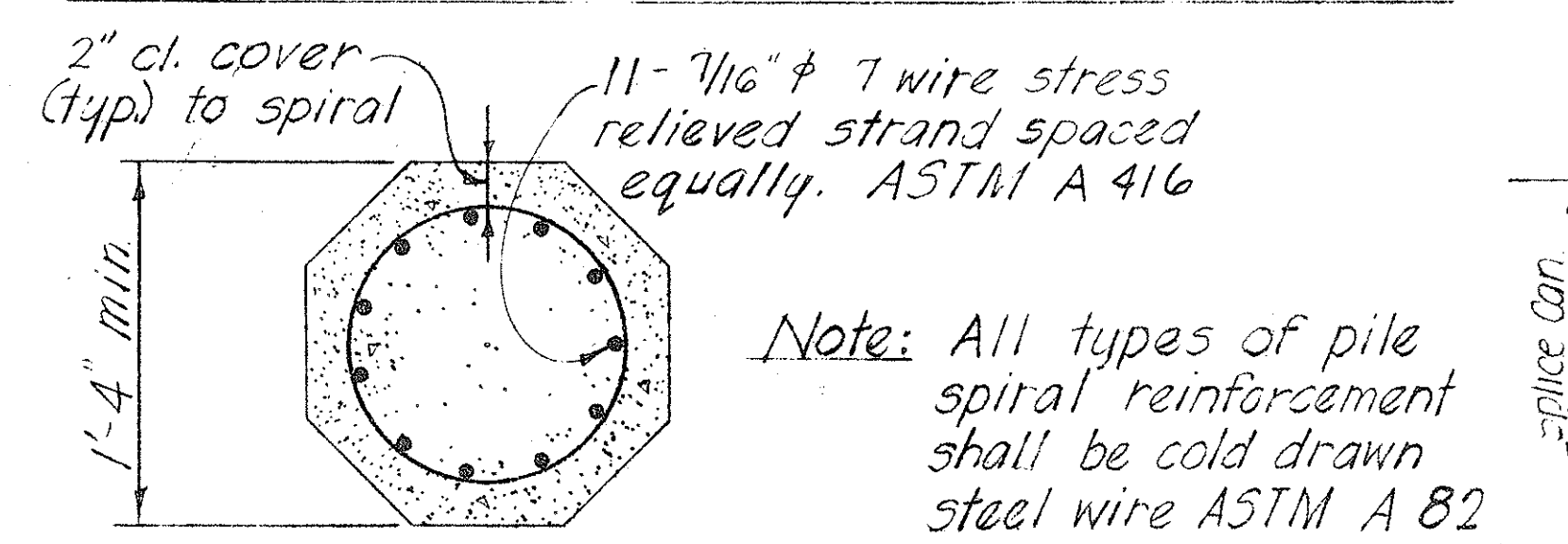
**STANDARD DETAILS**  
 RETAINING WALL TYPE T-1

SCALE AS NOTED DATE: \_\_\_\_\_  
 SHEET No. 2 OF 2 SHEETS DB-207-2



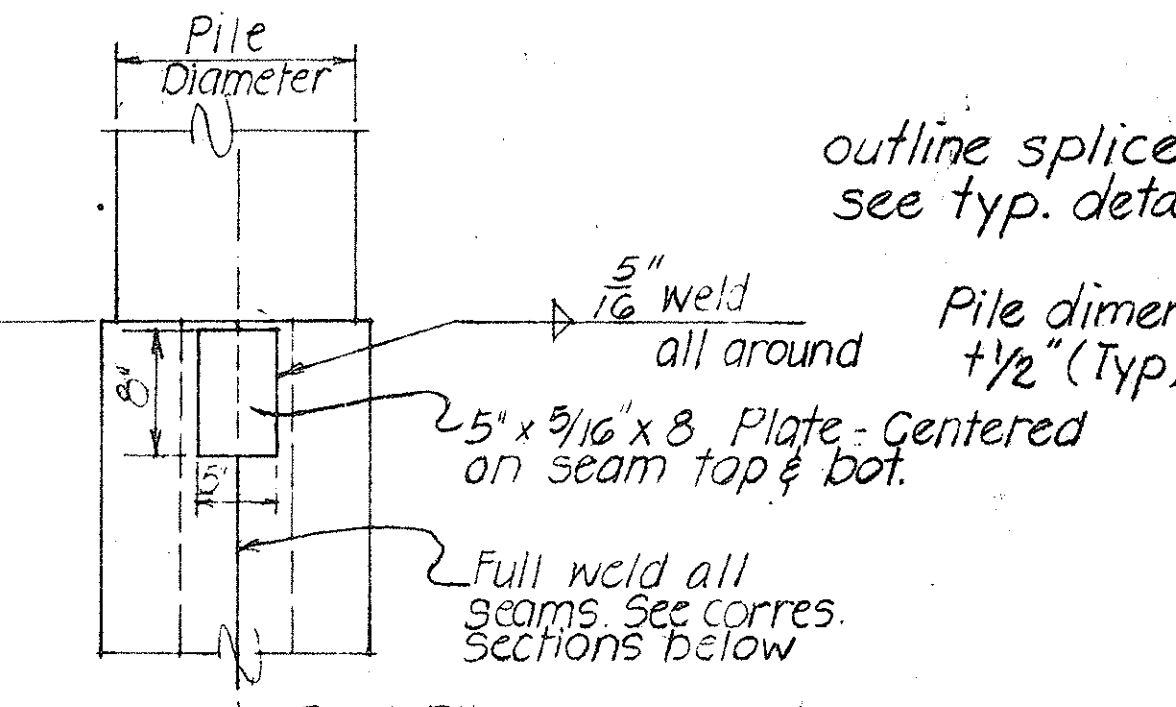


**TYPICAL ADDED REINFORCEMENT PILE ENDS - TYPE II & III ONLY**

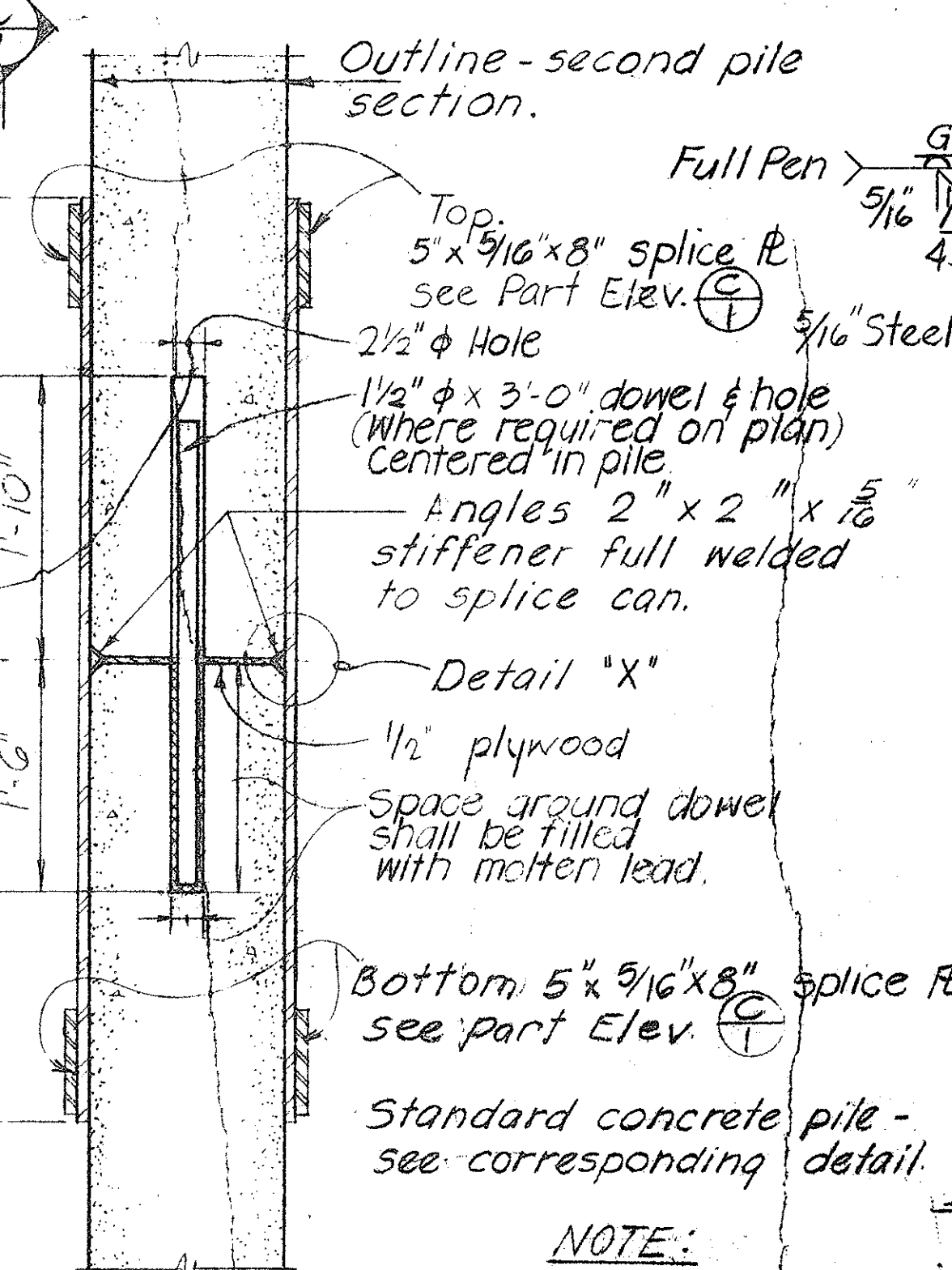


**TYPICAL SECTIONS THRU PILES**

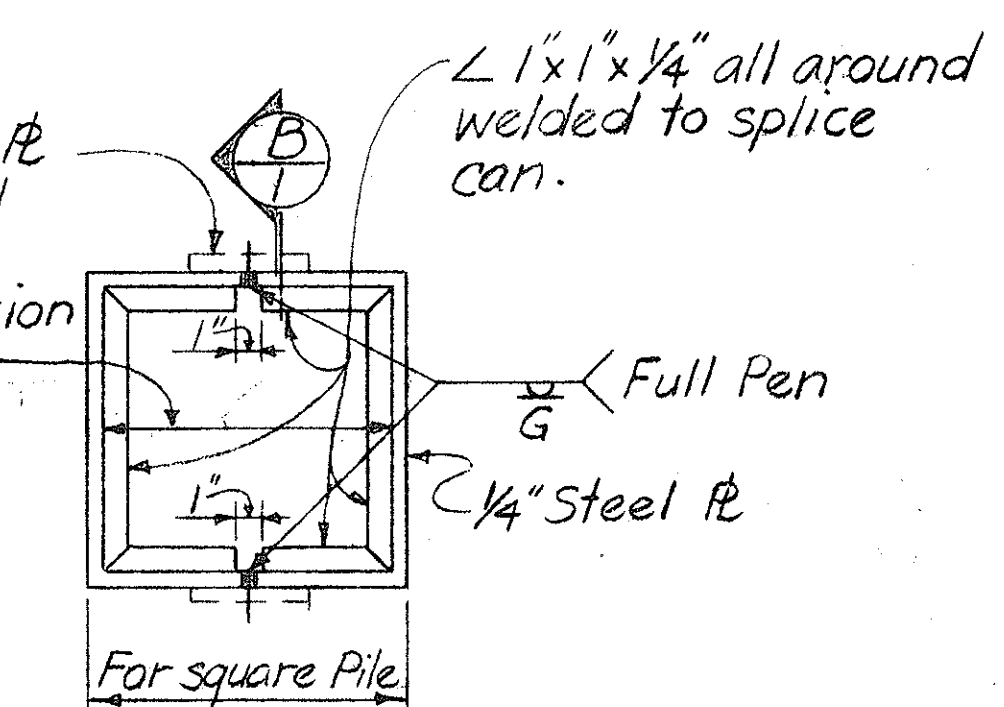
**NOTE:**  
Concrete in pile build-ups without driving shall be Class A Concrete. Concrete in pile build-ups with driving shall have a minimum compressive cylinder strength  $f'_c$  of 5000 p.s.i. at 28 days. Build-ups may be driven if the specimen of concrete from which the piles were poured develops a strength of at least 3500 p.s.i. but not earlier than 7 days.



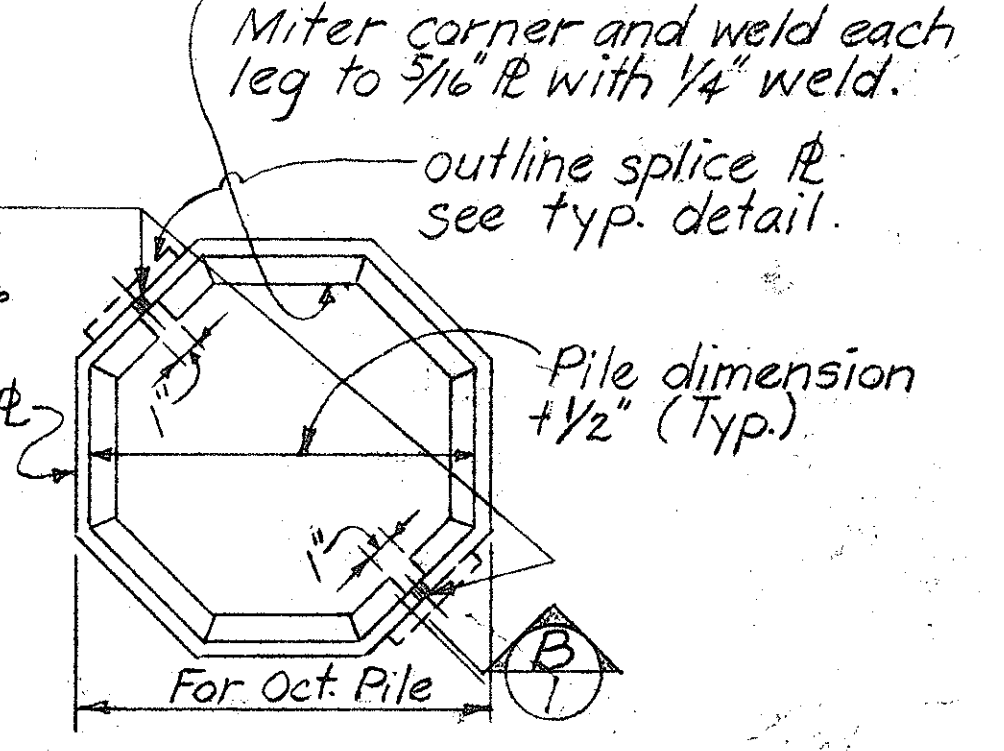
**PART ELEVATION C (TYP CAN SPLICE #)**



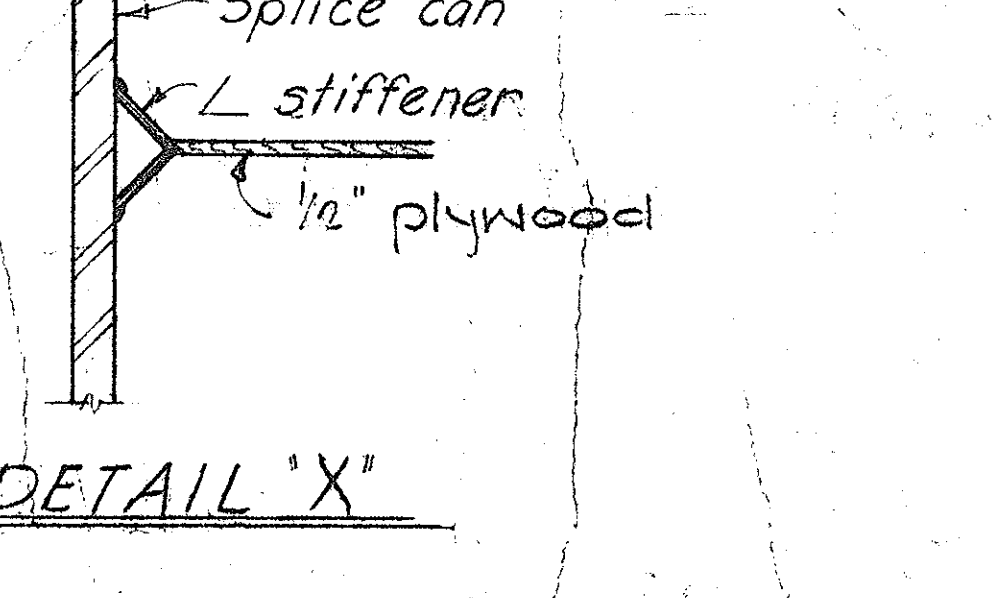
**SECTION B**



**TYPE II & III**



**TYPE I**



**DETAIL "X"**

**TYPICAL PILE SPLICE DETAILS (FOR PRESTRESSED CONCRETE PILES WHEN CAST IN TWO OR MORE SECTIONS)**

**NOTE:** All welding shall conform to the specifications for "Welded Highway and Railway Bridges" of the American Welding Society.

Max. Length "L" *	Max. Length "L" *	Length "L" *
Type I "L" = 53'-0"	Type I "L" = 75'-0"	Type I "L" over 75'-0"
12" Type II "L" = 50'-0"	12" Type II "L" = 72'-0"	12" Type II "L" over 72'-0"
10" Type III "L" = 46'-0"	10" Type III "L" = 66'-0"	10" Type III "L" over 66'-0"
0.30L    0.70L	0.21L    0.58L    0.21L	0.15L    0.35L    0.35L    0.15L

\* The length "L" is the distance end to end of pile.

**L POINT PICK-UP    2 POINT PICK-UP    3 POINT PICK-UP**

**NOTE:** Unless special lifting devices are attached for pick-up points, pick-up points shall be plainly marked on all piles after removal of the forms and all lifting shall be done at these points. The use of special embedded or attached lifting devices, the employment of other pick-up points or any other method of pick-up shall be subject to approval by the Engineer.

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:  
Paul T. Yamashita  
BRIDGE DESIGN ENGINEER    1-23-76    DATE

APPROVED  
Paul T. Yamashita  
ASSISTANT CHIEF, ENGINEERING    1-28-76    DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**  
PRESTRESSED CONCRETE PILES

SHEET No. 1 OF 2 SHEETS DB-300-1

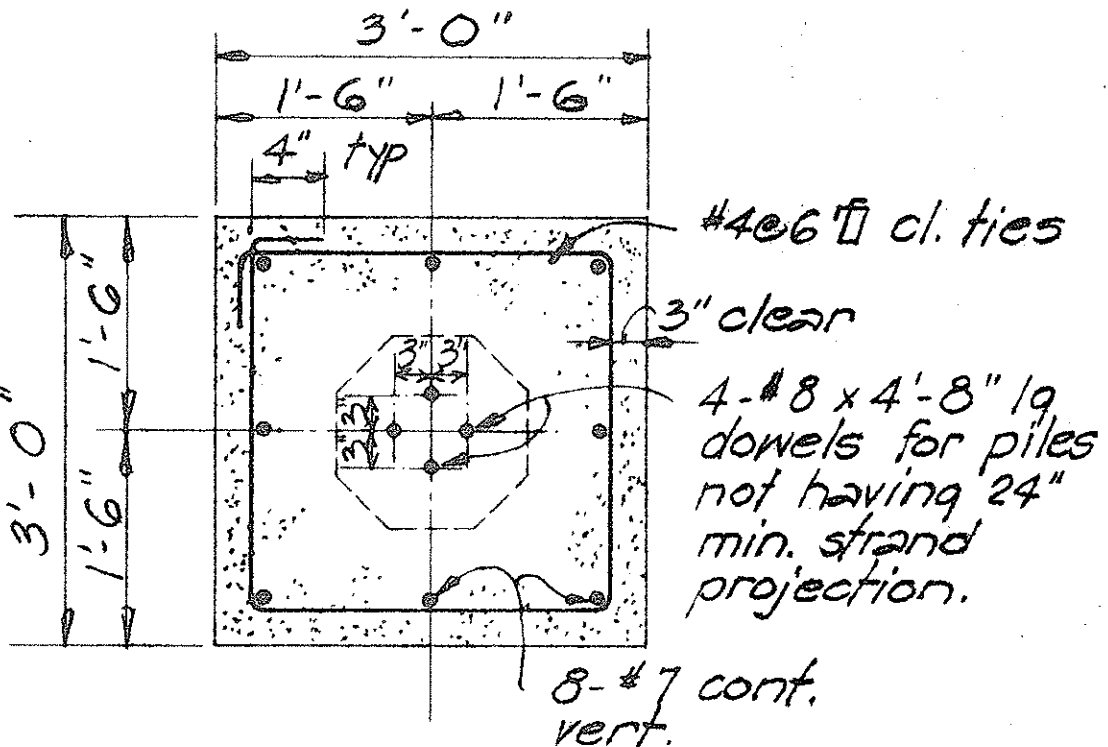
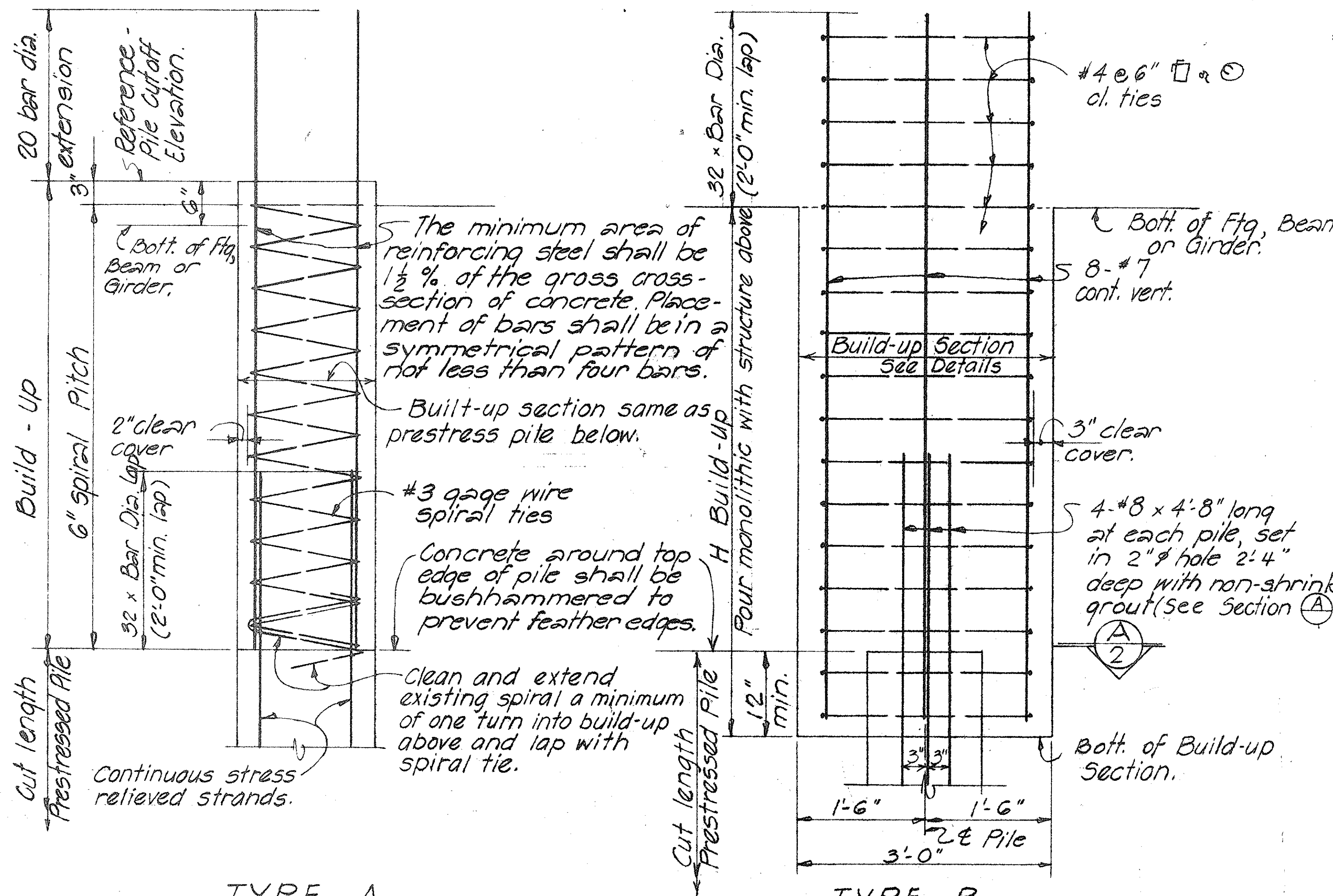
DATE: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
QUANTITIES BY: \_\_\_\_\_  
NOTE BOOK: \_\_\_\_\_



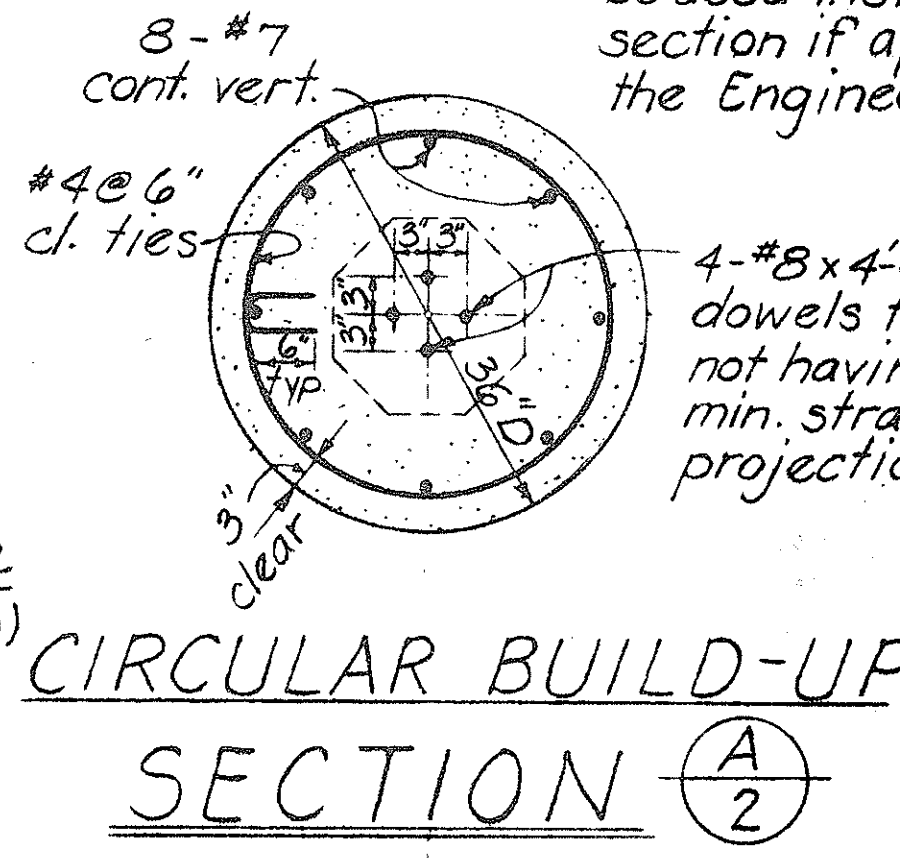
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	55F-080-1(7)	1977	140	165

2'-6" min. unless otherwise directed by the Engineer. Remove concrete after driving, leaving reinf. exposed

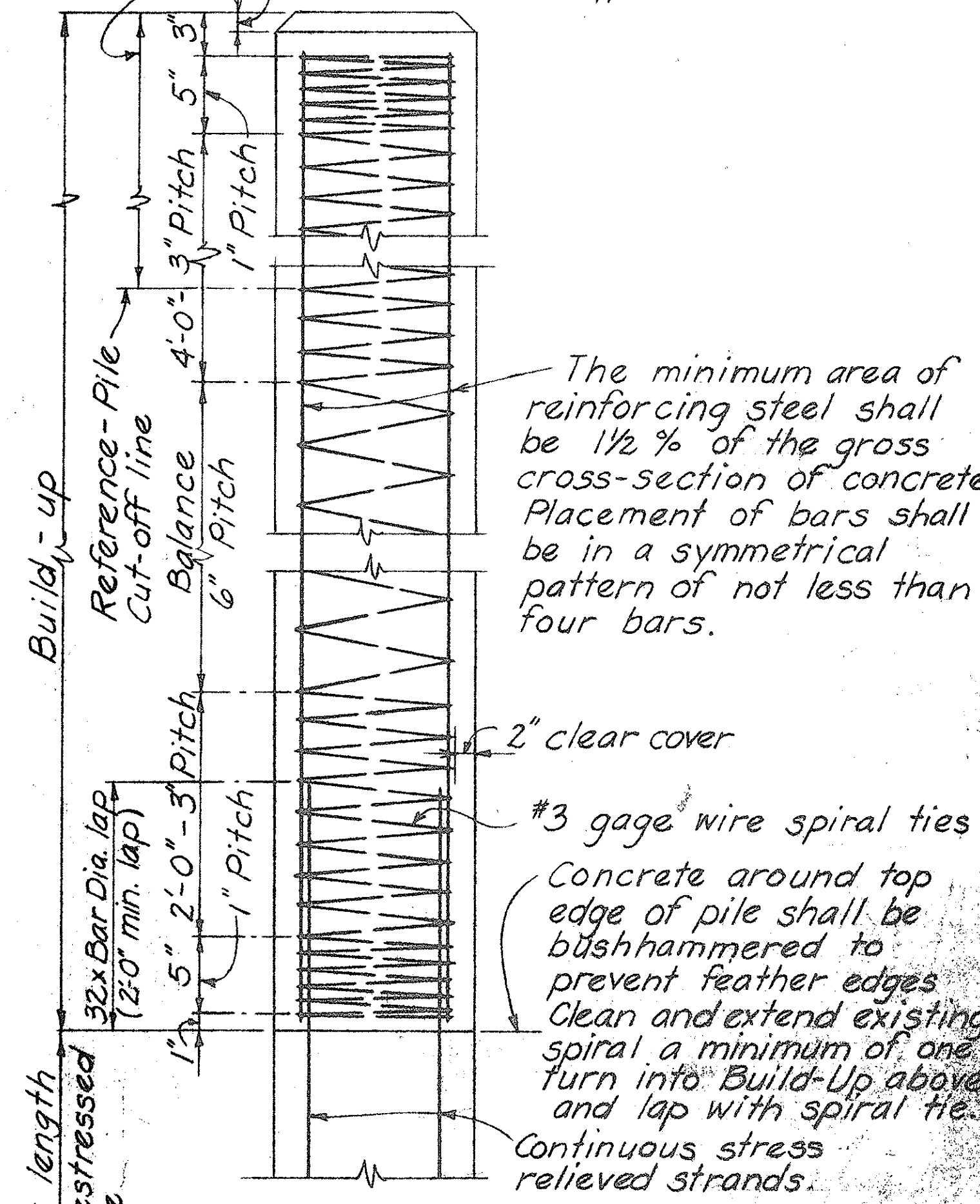
Chamfer - See Typical Pile Detail.



SQUARE BUILD-UP



CIRCULAR BUILD-UP SECTION (A/2)



WITH DRIVING  
TYPICAL PILE BUILD-UP DETAIL

TYPE A

TYPE B

Notes:  
Selection of pile build-up type without driving to be determined by the Engineer.  
When height of depressed portion of footing (H) exceeds 4", the depressed section shall be poured separately from the main body of the footing.  
Depressed portion of footing may be omitted for pile heads embedded at least 4" into footing provided at least 90% of the piles in each footing have the minimum embedment into footing as shown in contract plans.

WITHOUT DRIVING  
TYPICAL PILE BUILD-UP DETAILS

GENERAL NOTES

1. Work of cutting off prestressed conc. piles or concrete build-ups shall be performed in such a manner as to avoid spalling or damaging the pile below cut-off. In case of such damage, the pile shall be replaced or repaired by the Contractor at his expense as directed by the Engineer.
2. Portion of pile embedded into footing shall be of sound concrete. Damaged portions shall be removed and pile cut-off elevation lowered as required by the Engineer.

NO.	REVISION	APPROVED BY	DATE

APPROVAL RECOMMENDED:  
*Paul T. Yamashita* 1-23-70  
BRIDGE DESIGN ENGINEER DATE

APPROVED  
*Paul T. Yamashita* 1-28-70  
ASSTANT CHIEF, ENGINEERING DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

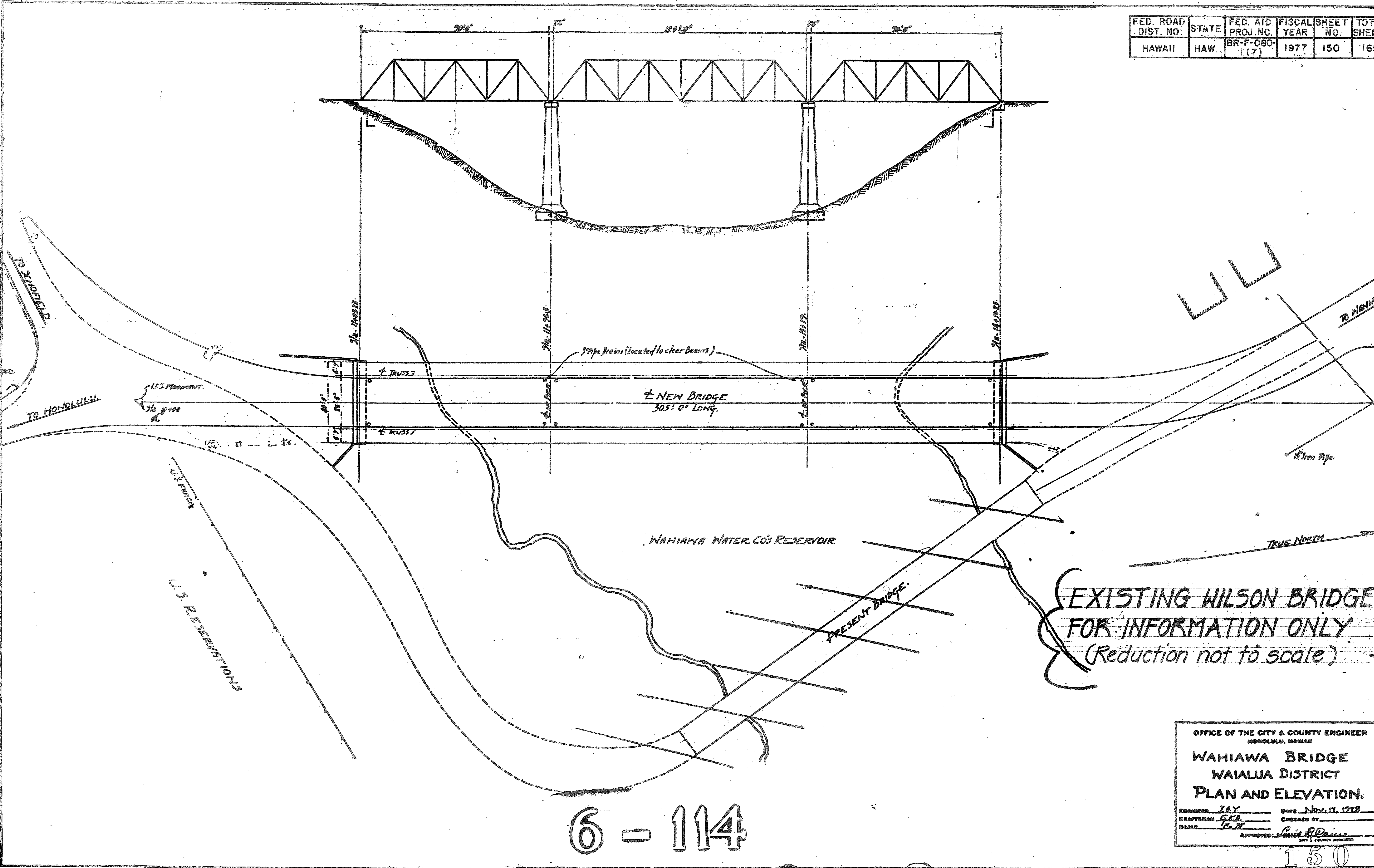
**STANDARD DETAILS**  
PRESTRESSED CONCRETE PILES

Date: Oct. 1968

DATE	
SURVEY PLOTTED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOT. SHEETS
HAWAII	HAW.	BR-F-080-1(7)	1977	150	168



EXISTING WILSON BRIDGE  
 FOR INFORMATION ONLY  
 (Reduction not to scale)

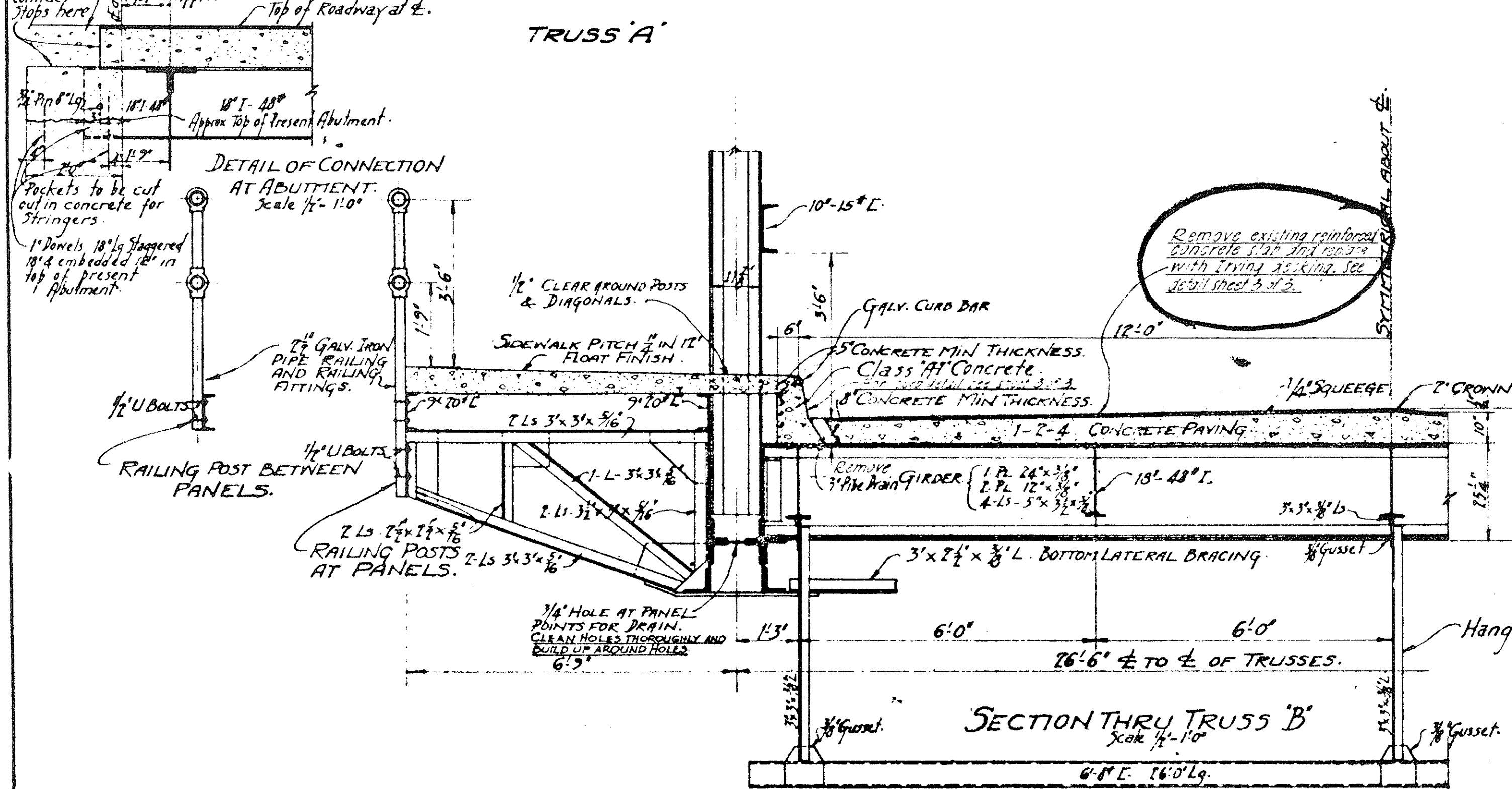
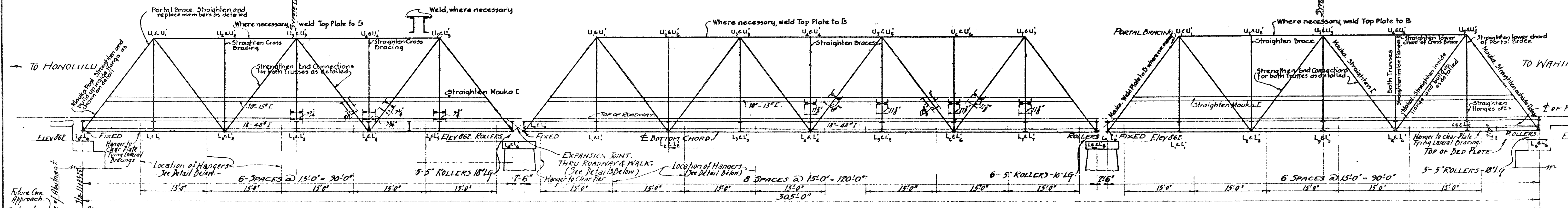
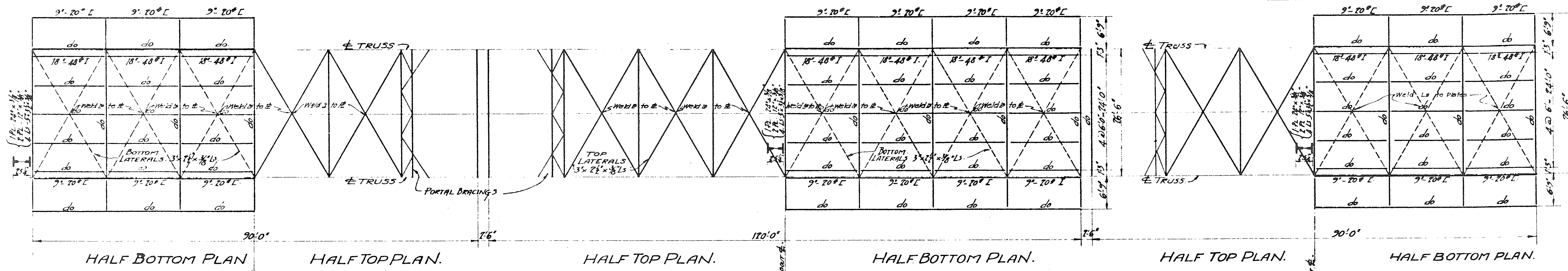
OFFICE OF THE CITY & COUNTY ENGINEER  
 HONOLULU, HAWAII  
**WAHIAWA BRIDGE**  
 WAIALUA DISTRICT  
**PLAN AND ELEVATION.**  
 ENGINEER: JAY DATE: Nov. 17, 1975  
 DRAFTER: G.K. CHECKED BY:  
 SCALE: 1" = 10'  
 APPROVED: Louis P. Davis  
 CITY & COUNTY ENGINEER

6 - 114

150  
 7-27-77

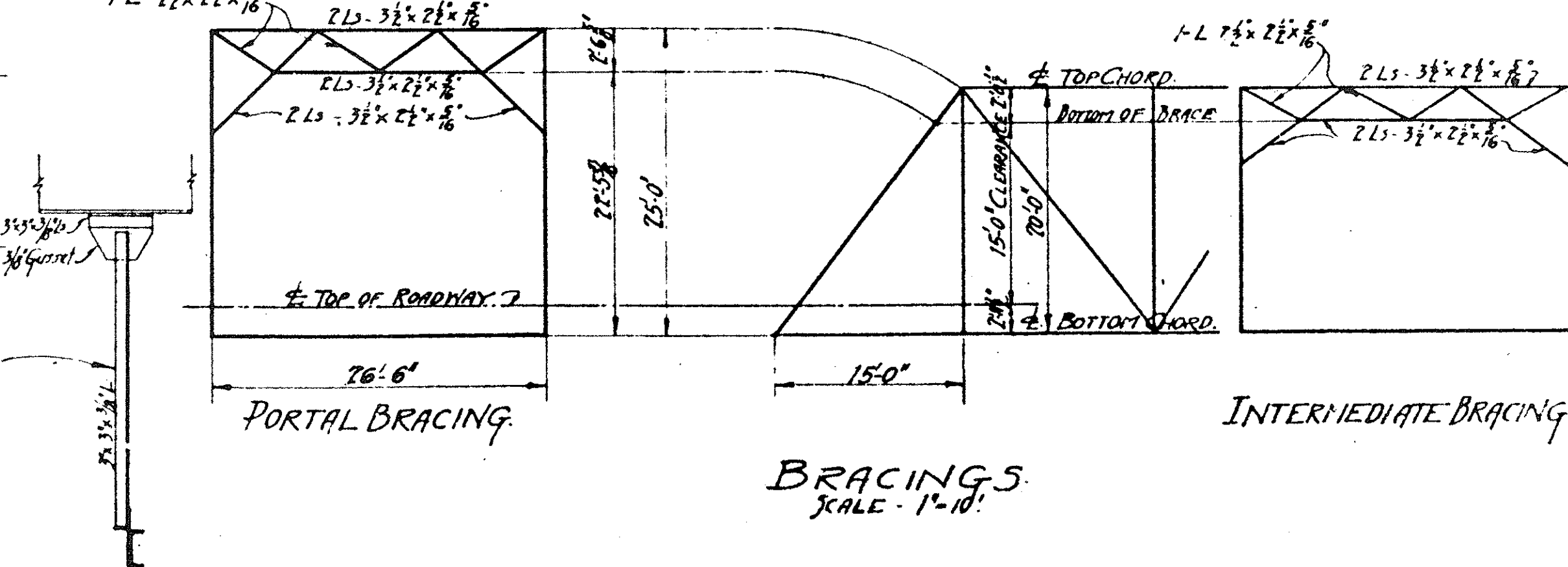


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-F-080-1(7)	1977	151	165



**TRUSS B**  
SCALE 1" = 10'-0"  
-NOTES-  
3/8" GUSSET PLATES  
3/4" RIVETS  
SHOP PAINT.

**(EXISTING WILSON BRIDGE)**  
**(FOR INFORMATION ONLY)**  
**(Reduction not to scale)**



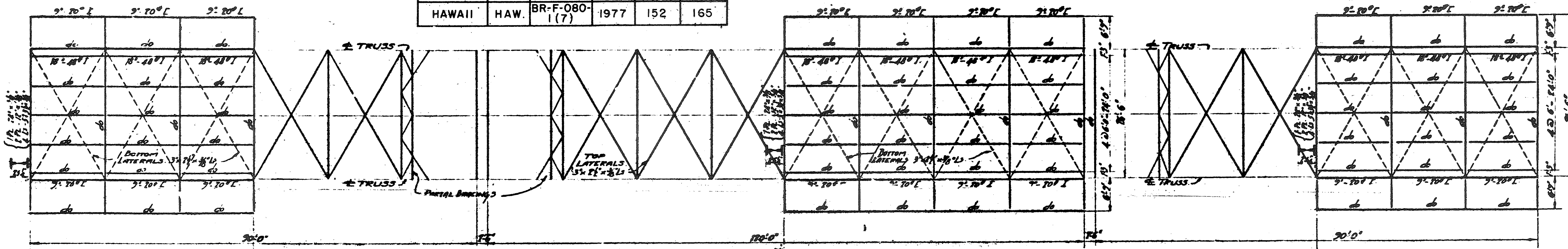
NOTE: TRUSS A & C ARE SAME IN GENERAL.  
STRENGTHEN ALL FLOOR BEAM SEAT ANGLES AS DETAILED.  
CLEAN AND GREASE ALL EXPANSION JOINTS, INCLUDING ROLLERS, DAMS, FRAMES, ETC.

**REPAIRING & PAINTING**  
ENGINEER: Y. E. TOSU DATE: APRIL, 1948  
APPROVED: [Signature] APPROVED: [Signature]  
BUREAU ENGINEER CHIEF ENGINEER

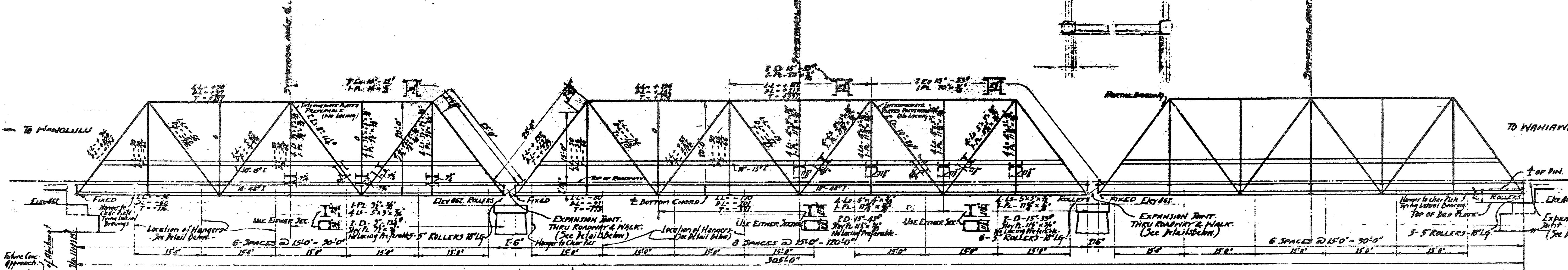
**REPAIRING & PAINTING**  
OFFICE OF THE CITY & COUNTY ENGINEER  
HONOLULU, HAWAII  
**WILSON BRIDGE**  
WAIALUA DISTRICT.  
**STRUCTURAL STEEL DESIGN**  
ENGINEER: JOY DATE: NOV 17, 1925  
DRAFTSMAN: G. K. D. CHECKED BY:  
SCALE: AS SHOWN. APPROVED: Louis P. [Signature]  
CITY & COUNTY ENGINEER



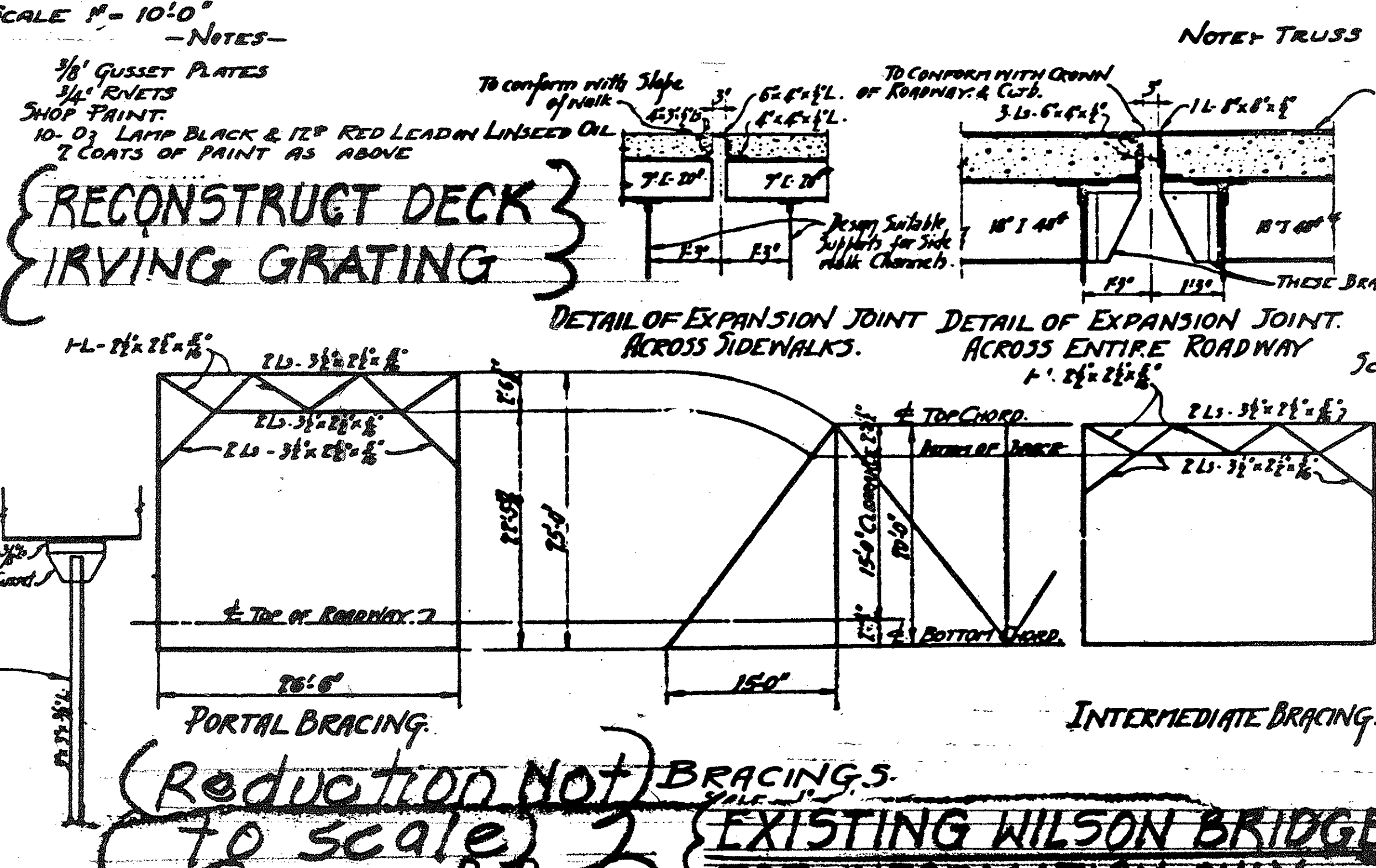
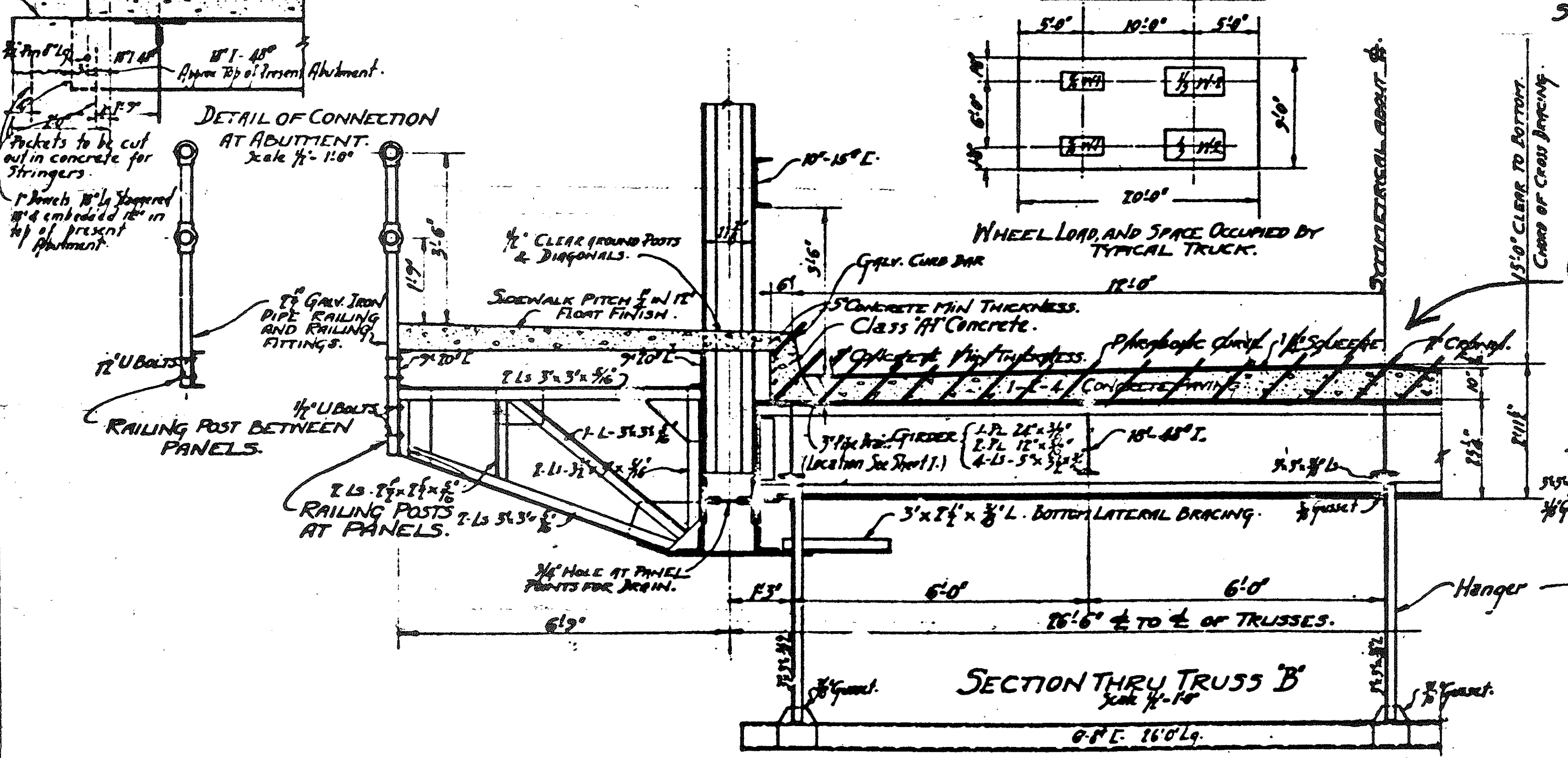
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-F-080-1(7)	1977	152	165



HALF BOTTOM PLAN      HALF TOP PLAN      HALF TOP PLAN      HALF BOTTOM PLAN      HALF TOP PLAN      HALF BOTTOM PLAN



TRUSS A      TRUSS B      TRUSS C



NOTE: TRUSS A & C ARE SAME IN GENERAL.

DESIGNED FOR A LIVE LOAD OF 2.20 TON TRUCKS AHEADST. OF FOLLOWING EQUIVALENT UNIFORM LOAD 100'ps INCLUDING TRAFFIC

OFFICE OF THE CITY & COUNTY ENGINEER  
HONOLULU, HAWAII

**WAIHAWA BRIDGE.**  
WAIALUA DISTRICT.  
**STRUCTURAL STEEL DESIGN.**

ENGINEER: J.O.Y.      DATE: Nov. 17, 1925  
DRAFTER: G.K.D.      CHECKED BY:  
SCALE: AS SHOWN      APPROVED: Louis P. O'Connell  
CITY & COUNTY ENGINEER

SECTION THRU TRUSS B  
Scale 1/4" = 1'-0"

RECONSTRUCT DECK  
IRVING GRATING

WHEEL LOAD AND SPACE OCCUPIED BY TYPICAL TRUCK.

DETAIL OF CONNECTION AT ABUTMENT. Scale 1/2" = 1'-0"

DETAIL OF EXPANSION JOINT ACROSS SIDEWALKS. Scale 1/2" = 1'-0"

DETAIL OF EXPANSION JOINT ACROSS ENTIRE ROADWAY. Scale 1/2" = 1'-0"

DETAIL OF EXPANSION JOINT ACROSS ROADWAY AT ABUTMENT. Scale 1/2" = 1'-0"

PORTAL BRACING.

INTERMEDIATE BRACING.

(Reduction Not) BRACINGS  
(To scale) (EXISTING WILSON BRIDGE)  
(6) = 113 FOR INFORMATION ONLY

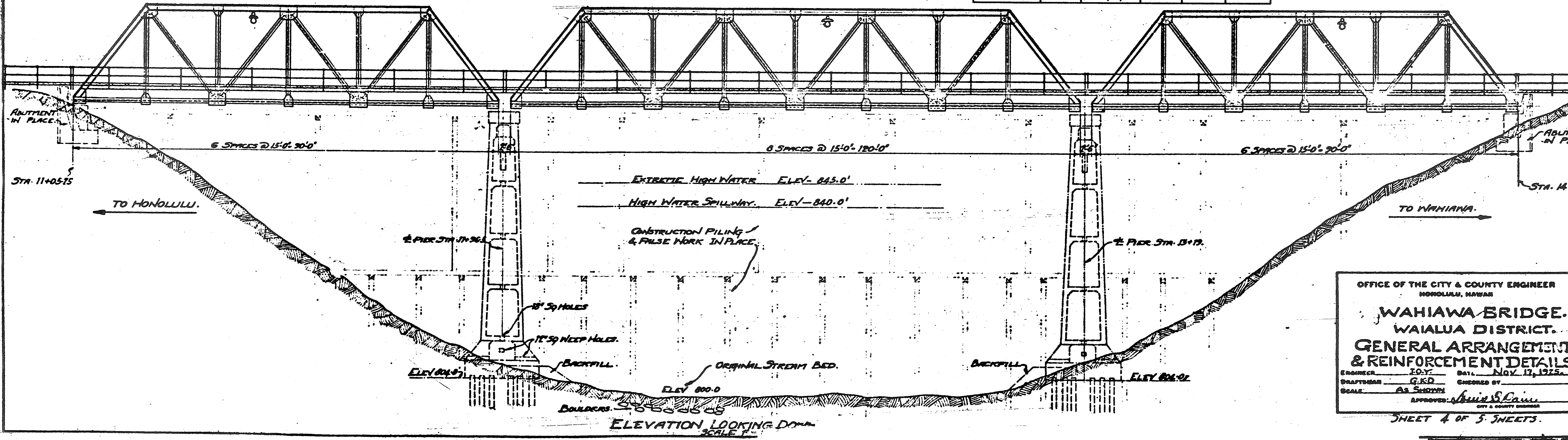


**RECONSTRUCT DECK  
CURVING GRATING**

1/2 PLAN SHOWING SLAB REINFORCING  
SCALE - 1/2" = 1 FOOT.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-F-080-1(7)	1977	153	165

PIECE	SIZE	LENGTH	AREA	TOTAL LENGTH	TOTAL AREA	
100	1" x 12"	224	224	224	224	
101	1" x 12"	200	200	424	424	
102	1" x 12"	244	244	668	668	
103	1" x 12"	200	200	868	868	
104	1" x 12"	100	100	968	968	
TOTAL					1600	1600



OFFICE OF THE CITY & COUNTY ENGINEER  
HONOLULU, HAWAII

**WAHIAWA BRIDGE.**  
WAILUA DISTRICT.

**GENERAL ARRANGEMENT  
& REINFORCEMENT DETAILS**

ENGINEER: IDY. DATE: Nov. 17, 1975  
 DRAFTSMAN: G.K.D. CHECKED BY:  
 SCALE: AS SHOWN

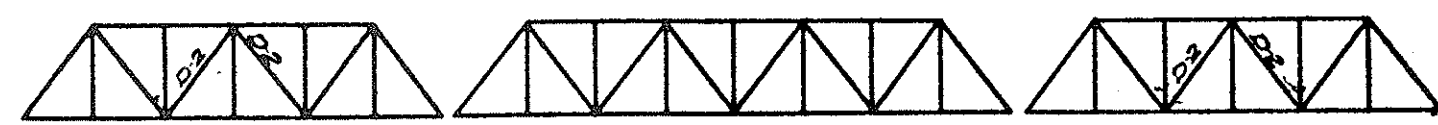
APPROVED: *Shirley S. Lane*  
CITY & COUNTY ENGINEER

SHEET 4 OF 5 SHEETS.

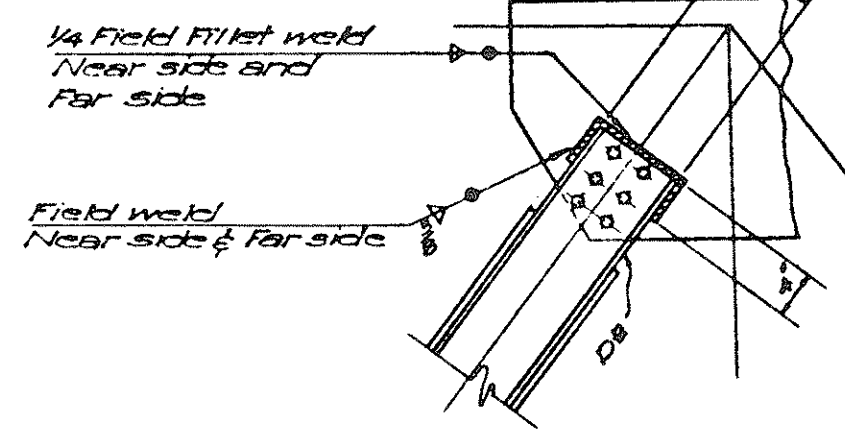
6 - 115  
 2 - 8 - 2 - 15 } (EXISTING WILSON BRIDGE  
 (FOR INFORMATION ONLY)  
 (Reduction not to scale)



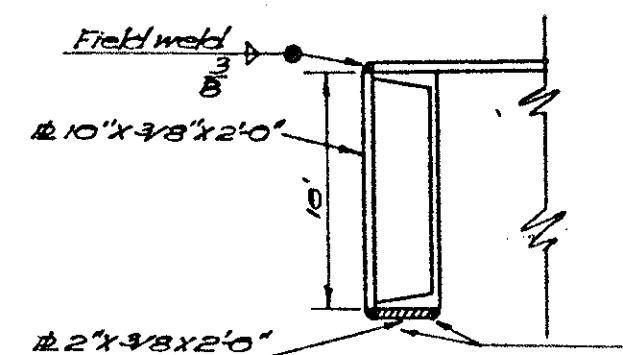
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-F-080-1(7)	1977	154	165



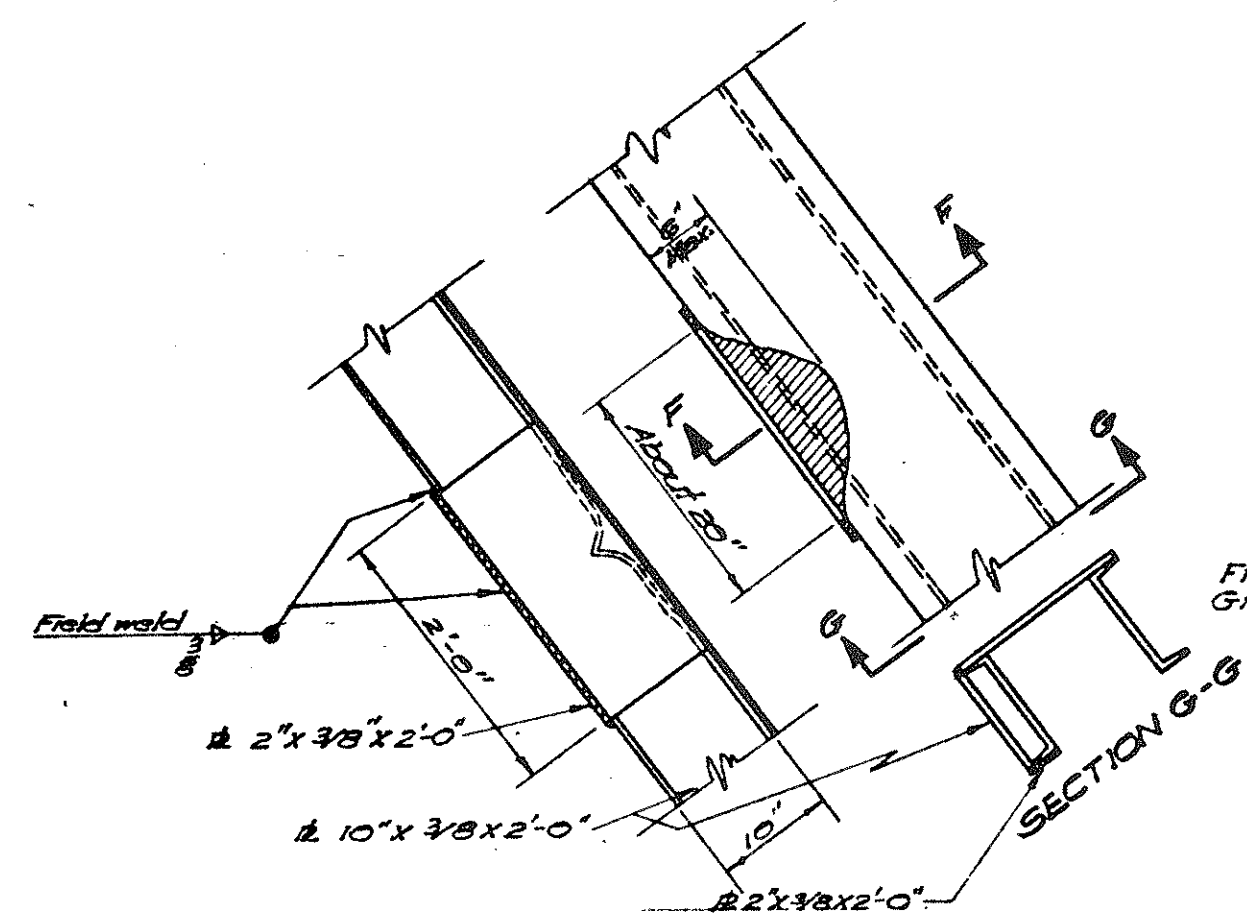
End connections of D2 to be strengthened by welding. See detail.



D-2 TOP CHORD END

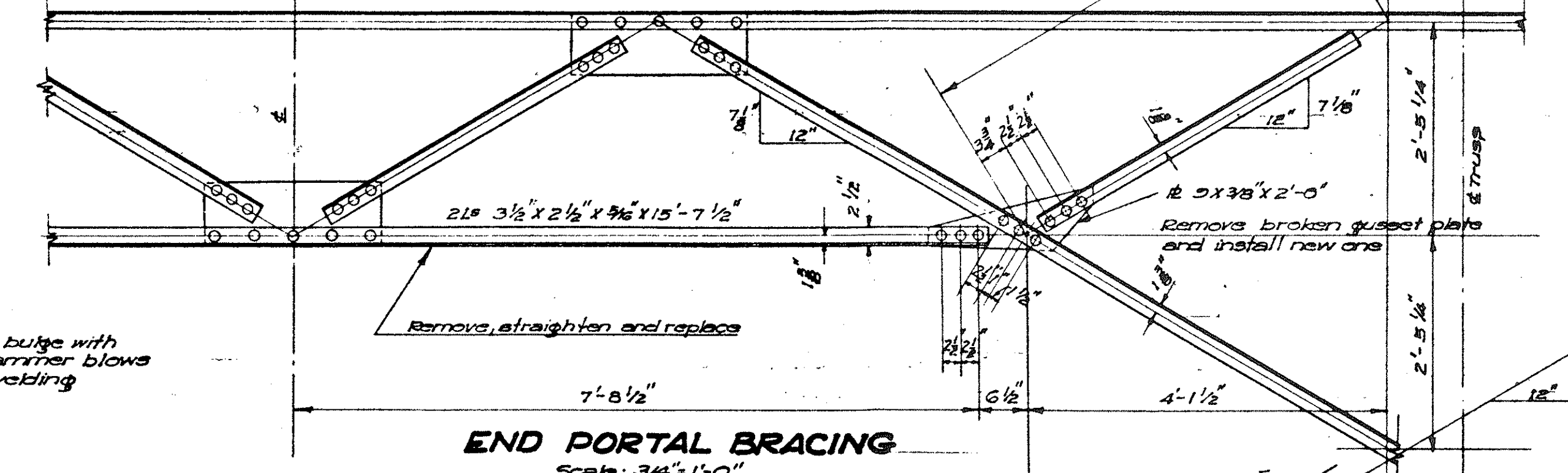


SECTION G-G  
Scale: 1/2"=1'-0"

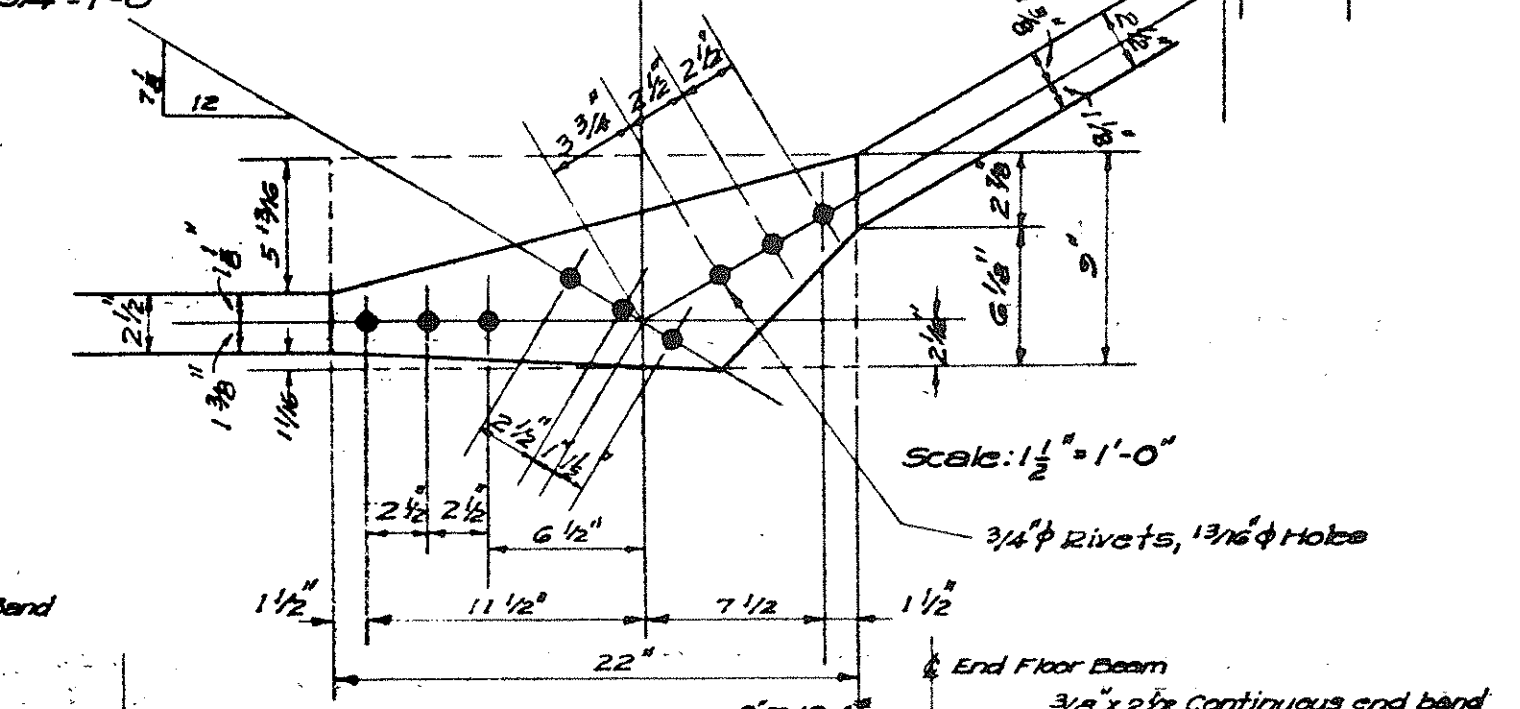


SECTION F-F  
Scale: 3/4"=1'-0"

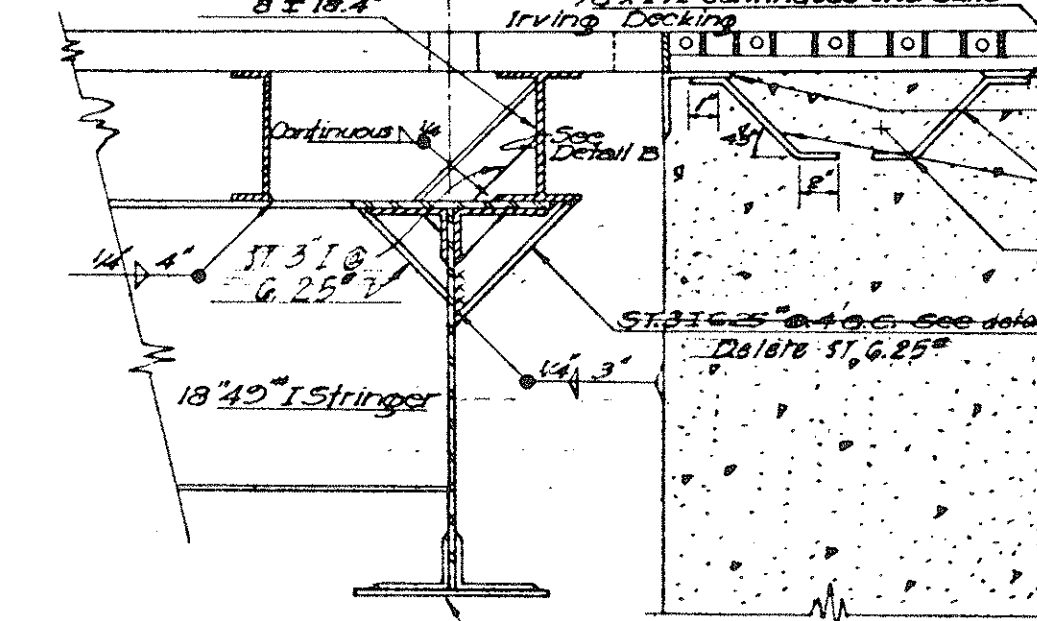
REPAIR OF END POST DAMAGE



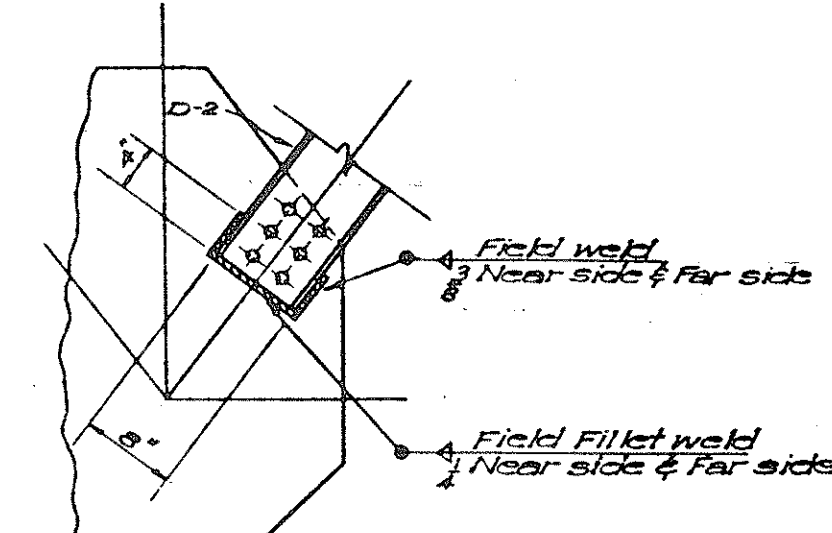
END PORTAL BRACING  
Scale: 3/4"=1'-0"



SECTIONAL ELEVATION OF S. ABUTMENT  
Scale: 1"=1'-0"

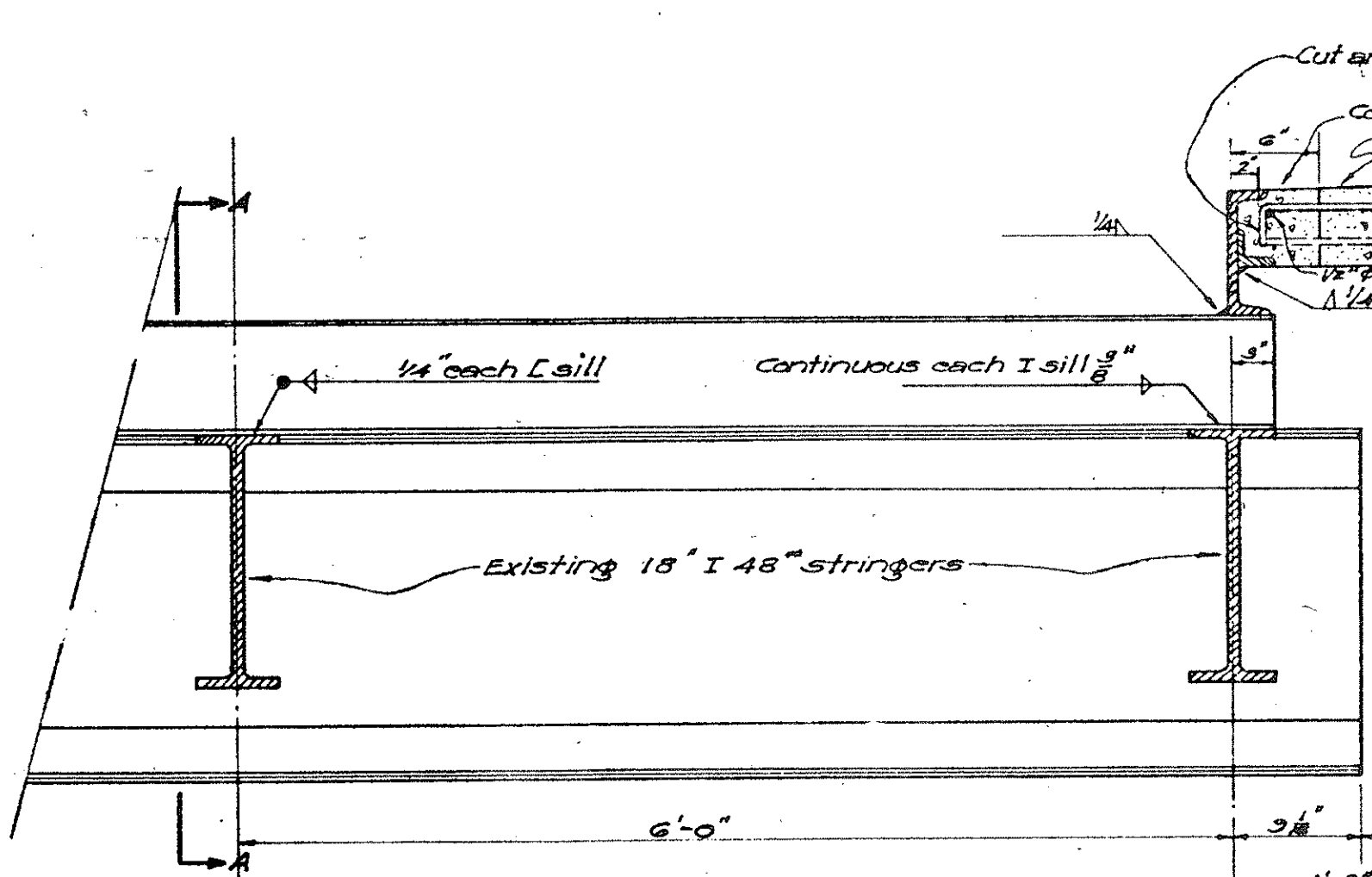


SECTION THRU NORTH ABUTMENT  
Scale: 1"=1'-0"

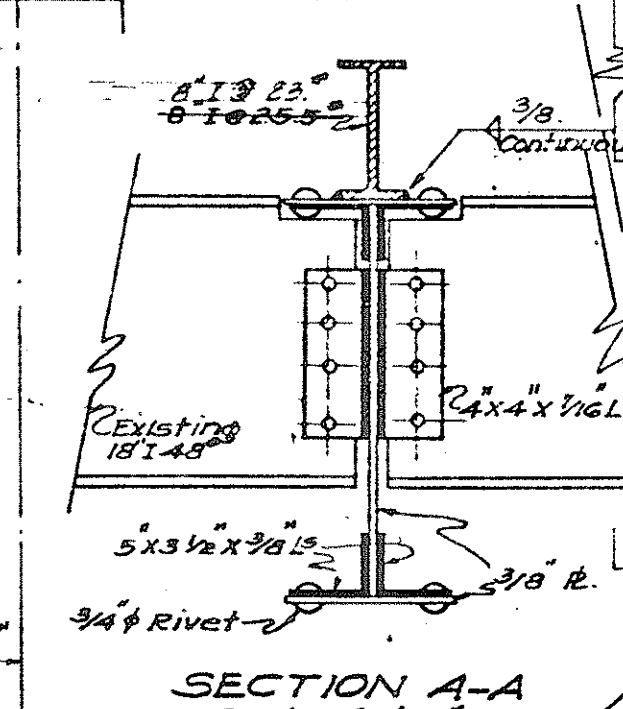


D-2 BOTTOM CHORD END

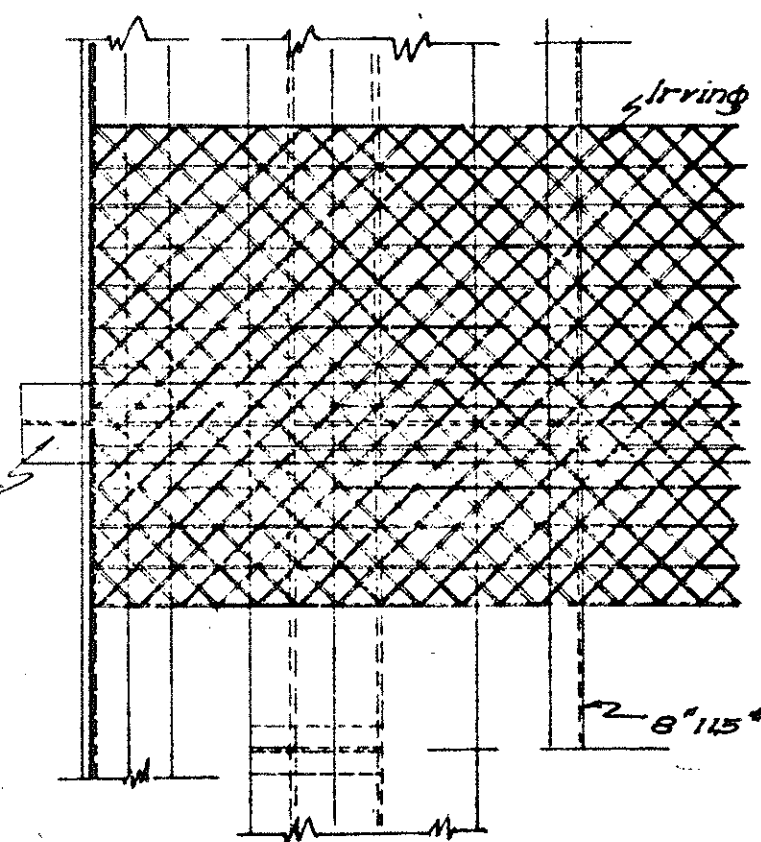
STRENGTHENING OF END CONNECTION D-2  
Scale: 3/4"=1'-0"



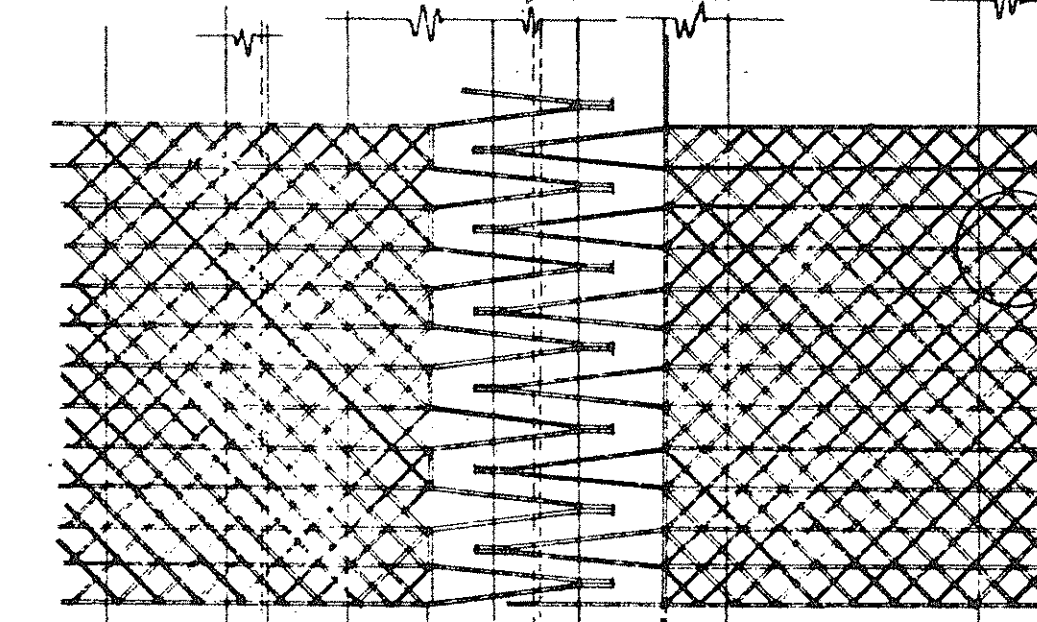
DETAIL OF SILL OVER FLOOR BEAM  
Scale: 1"=1'-0"



END FLOOR BEAM DETAILS NORTH ABUTMENT  
Scale: 1"=1'-0"

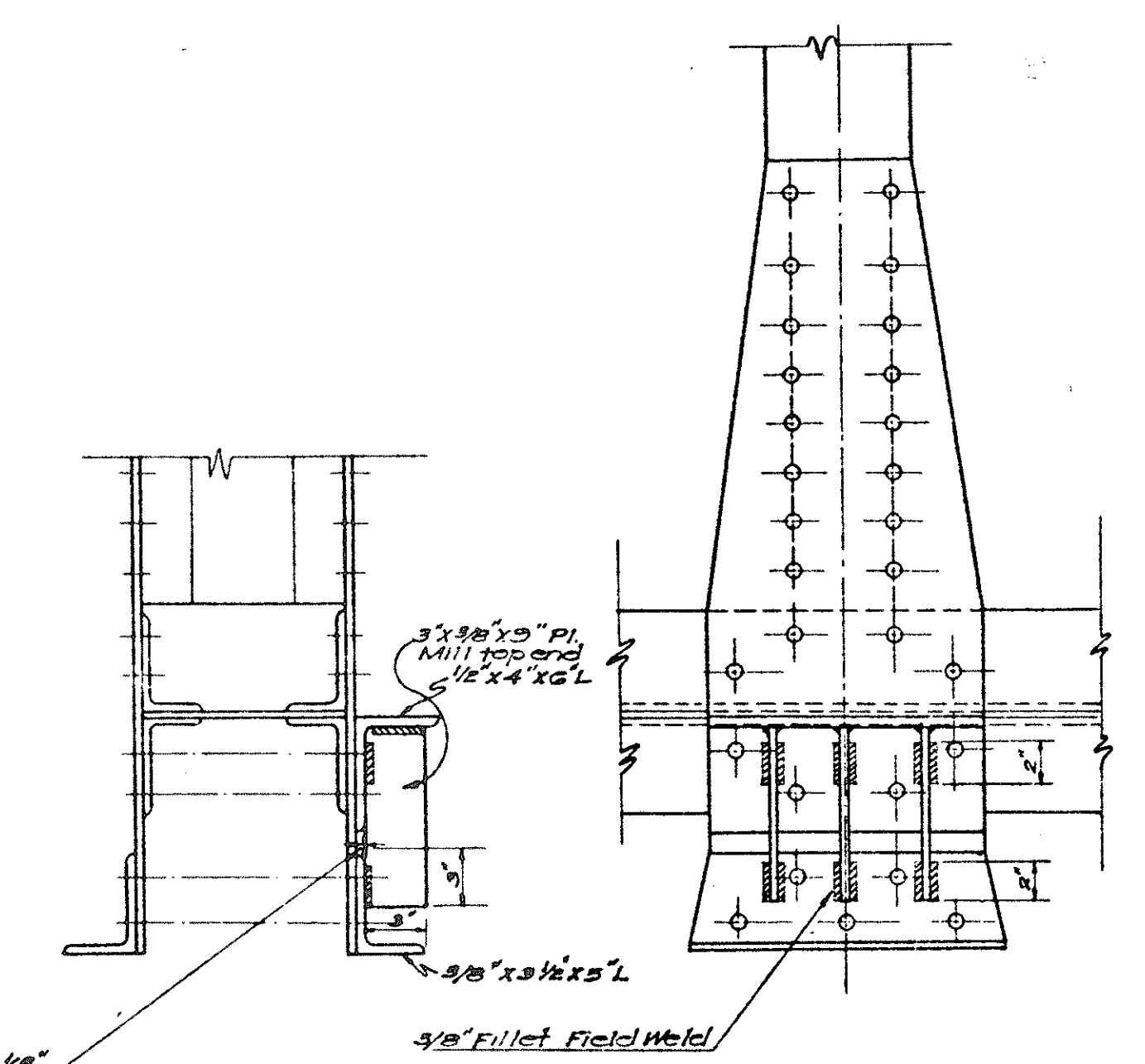


PLAN S. ABUTMENT  
Scale: 1"=1'-0"

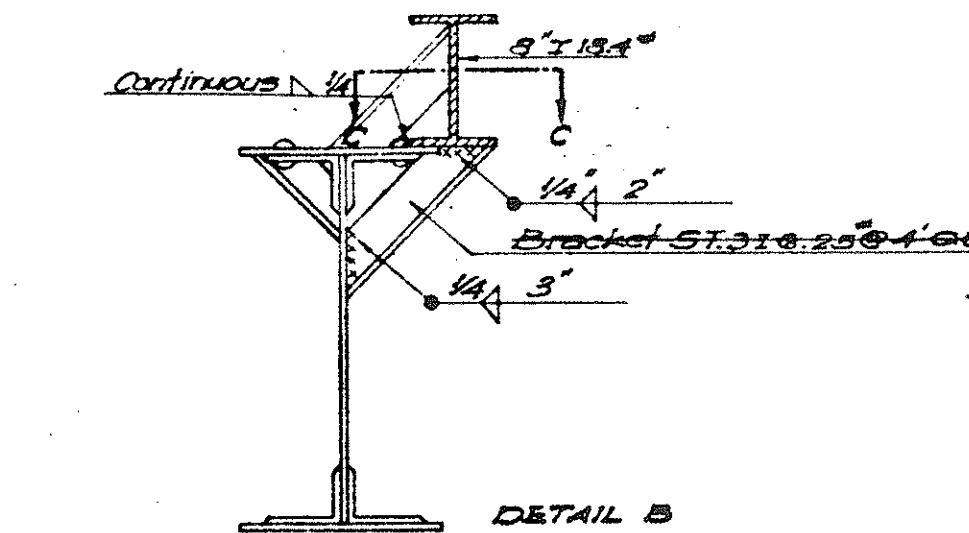
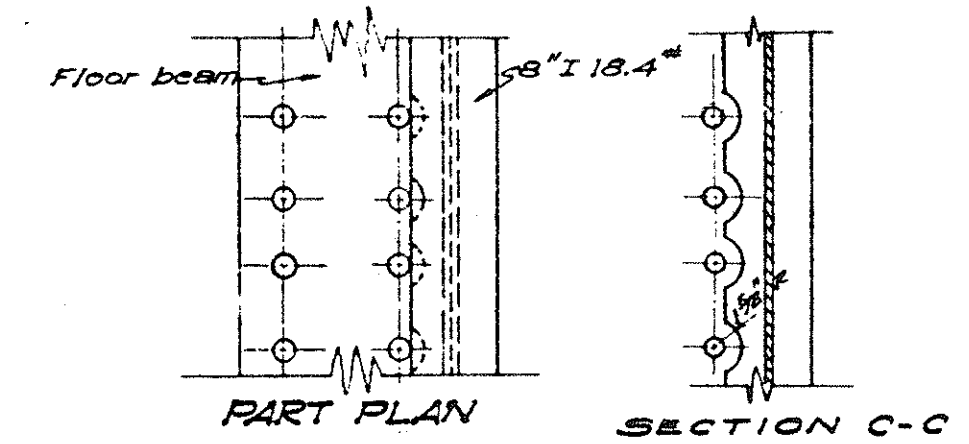


DETAILS

PLAN IRVING EXPANSION JOINT AT N. ABUTMENT  
Scale: 1"=1'-0"



STRENGTHENING OF FLOOR BEAM SEAT ANGLES  
Scale: 1/2"=1'-0"



WELDING DETAIL  
Scale: 3"=1'-0"

EXISTING WILSON BRIDGE  
FOR INFORMATION ONLY  
(Reduction not to scale)

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU  
BUREAU OF PLANS  
**WILSON BRIDGE**  
WAHIAWA, OAHU, T.H.  
STRENGTHENING, REPAIRING, AND PAINTING

W. E. Bartels Terr. D.P.W.

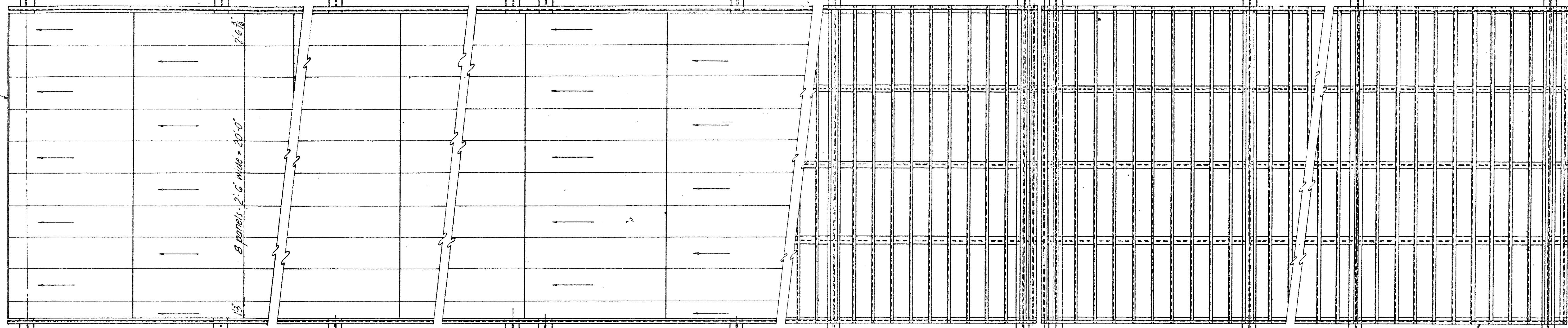
ENGINEER: Y. E. [Signature] DATE: July, 1977  
DRAFTSMAN: Y. E. [Signature] CHECKED BY: Y. E. [Signature]  
SCALE: AS SHOWN TRACER: M. L. [Signature]  
APPROVED: [Signature] APPROVED: [Signature]  
CHIEF ENGINEER BUREAU ENGINEER

W. E.	PROFILE	C. P.
CR. SEC.	F. S.	S. P.
W. M. BY:	F. W. BY:	S. BY:



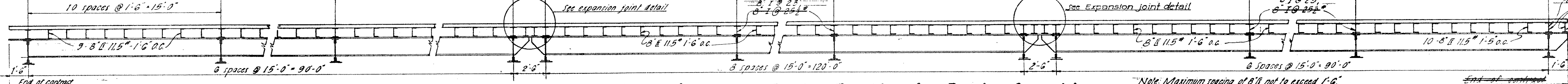
3 x 2 1/2 Concl bands. Supplied by Irving  
Welded in place by contractor

305'-0"



**PART BOTTOM PLAN**  
Scale: 1/4" = 1'-0"

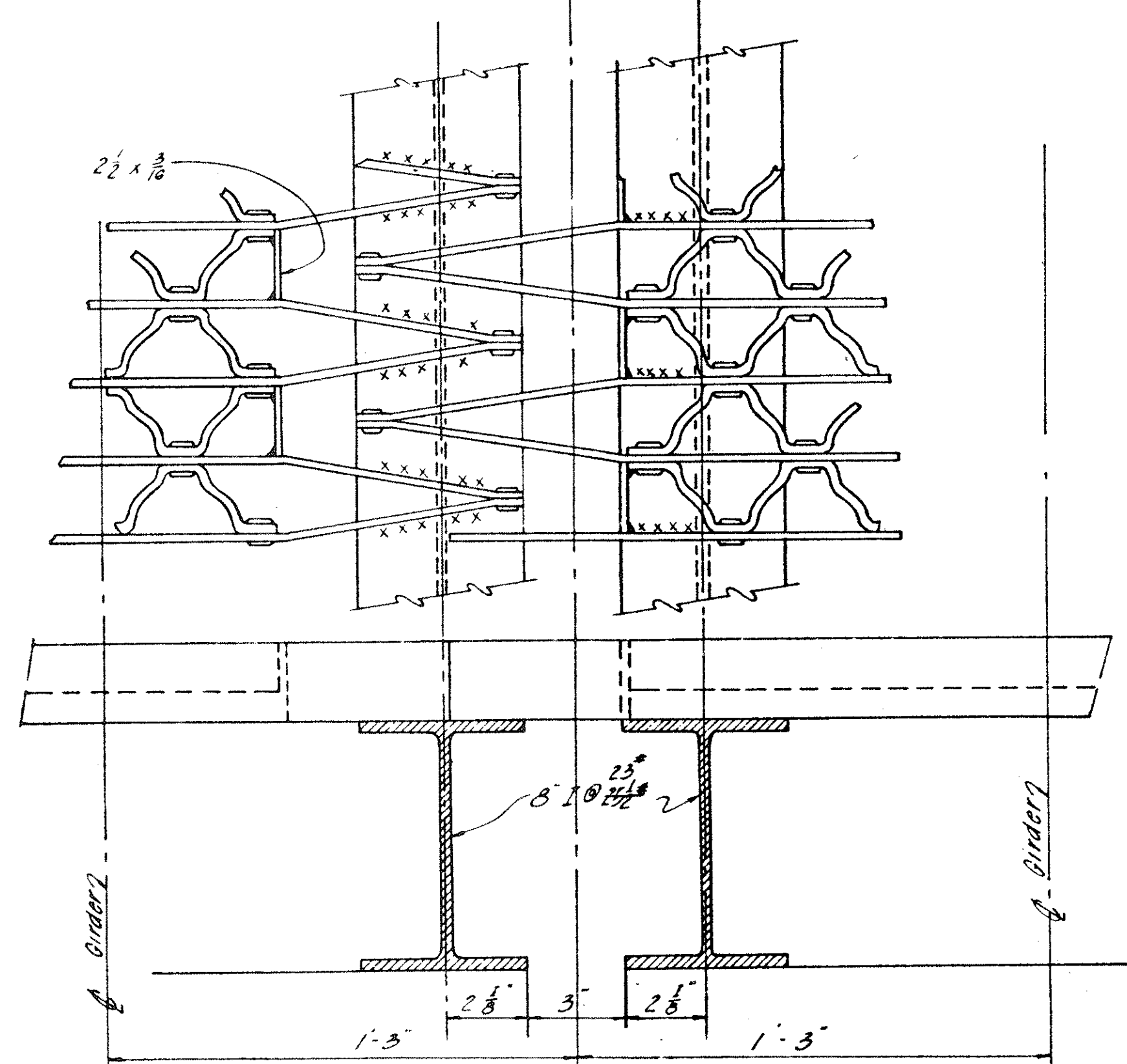
**PART BOTTOM FRAMING PLAN**  
Scale: 1/4" = 1'-0"



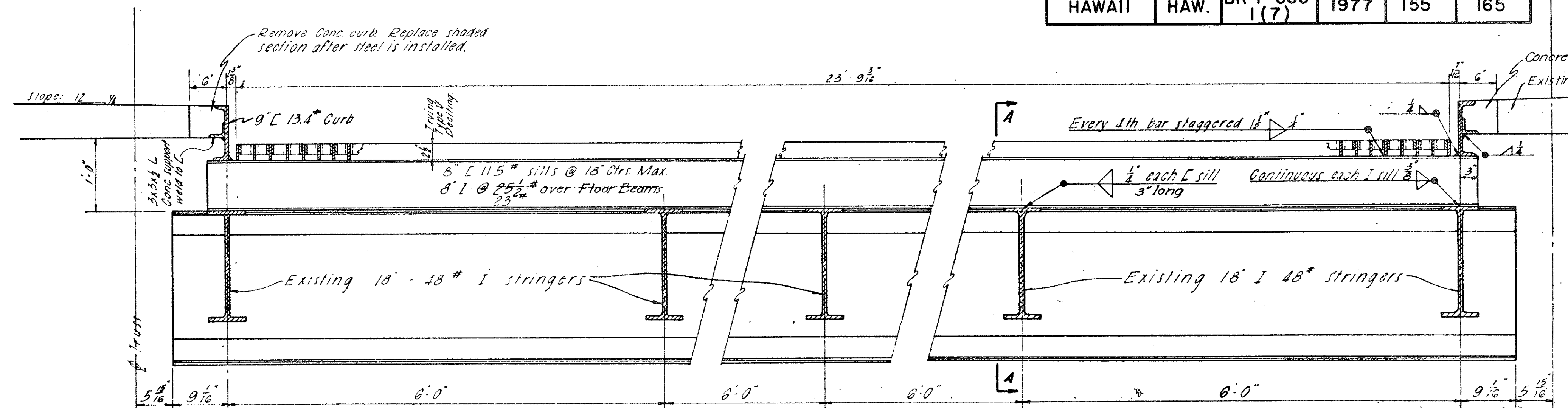
**SECTIONAL ELEVATION**  
Scale: 1/4" = 1'-0"

Note: Maximum spacing of 8" not to exceed 1'-6"

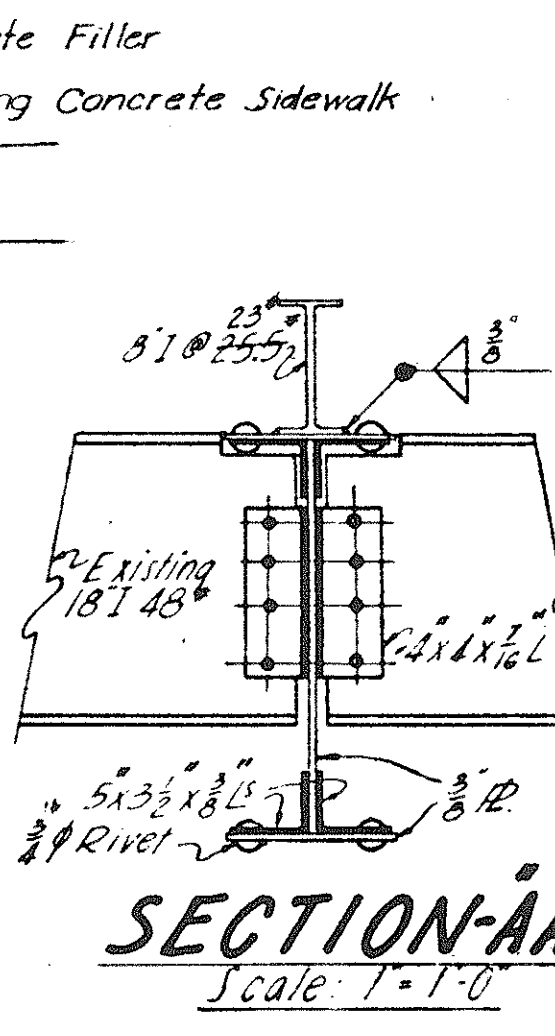
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-F-080-1(7)	1977	155	165



**IRVING TYPE EXPANSION JOINT**  
Scale: 1/2" = 1'-0"



**TYPICAL CROSS SECTION**  
Scale: 1" = 1'-0"



**SECTION-AA**  
Scale: 1" = 1'-0"

**{ EXISTING WILSON BRIDGE }**  
**{ FOR INFORMATION ONLY }**  
**{ (Reduction not to scale) }**

**SPECIFICATIONS - TYPE V DECITING:**  
Straight bars - 2 1/2 x 1/2  
Reticuline bars - 1 1/2 x 1/2  
Rivets 3/8 @ 5 O.C.  
Weight - 15.25\* per Sq. ft.

**IRVING HIGHWAY DECKING**

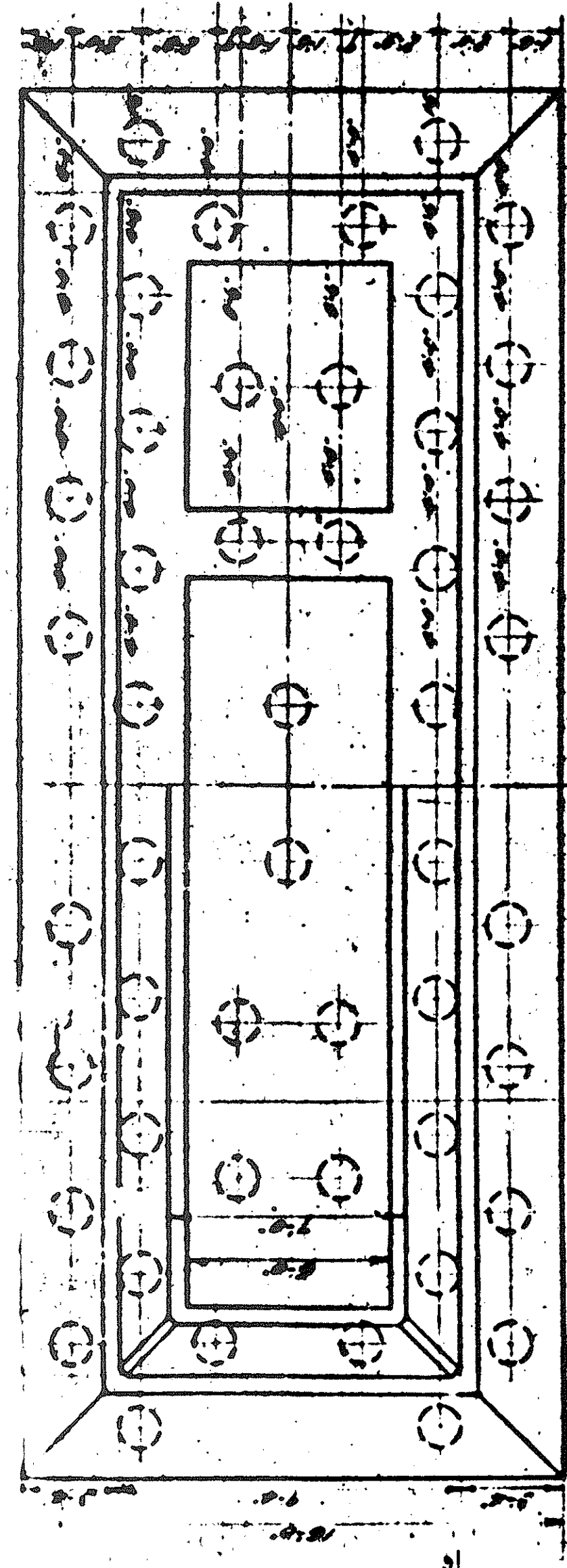
DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU  
BUREAU OF PLANS  
**WILSON BRIDGE**  
WAIHAWA, OAHU, T.H.  
**STRENGTHENING, REPAIRING, AND PAINTING**

ENGINEER: Y. E. TSOU  
DATE: July, 1948  
CHECKED BY: Y. E. T.  
SCALE: AS SHOWN  
TRACE: J. P.  
APPROVED: [Signature]  
CHIEF ENGINEER

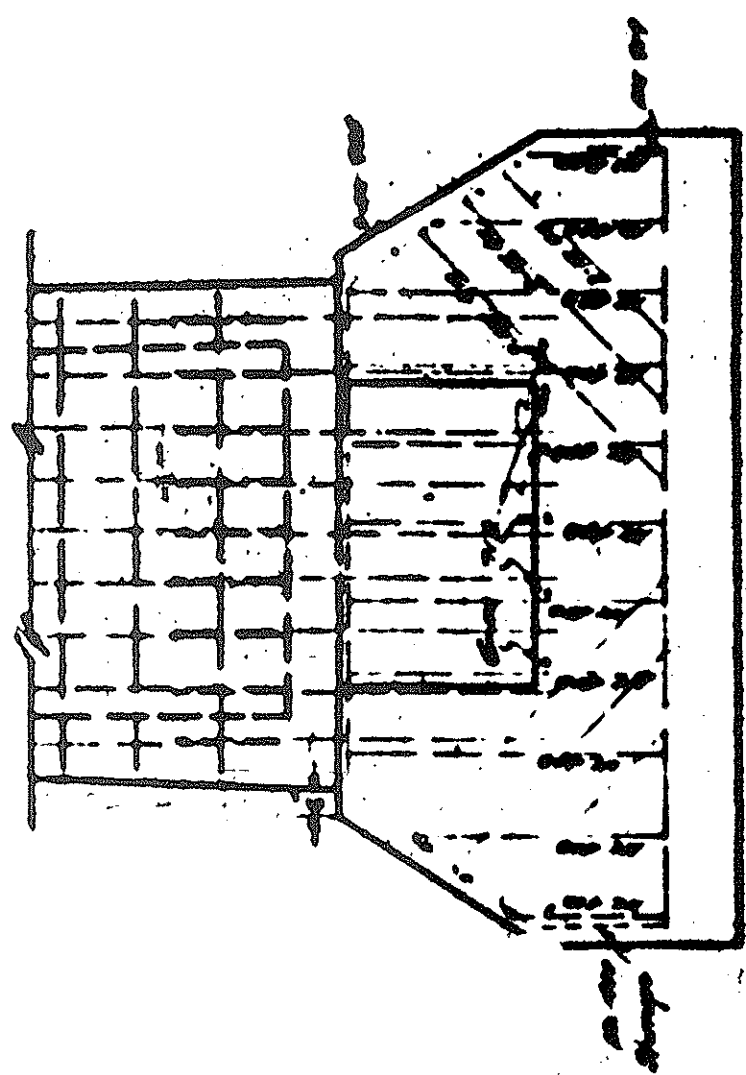
DATE: July, 1948  
CHECKED BY: Y. E. T.  
TRACE: J. P.  
APPROVED: [Signature]  
BUREAU ENGINEER

W. E.	Y. E. T.	C. B.
C. E. P.	J. P.	S. B.
W. M. B.	W. M. B.	S. B.

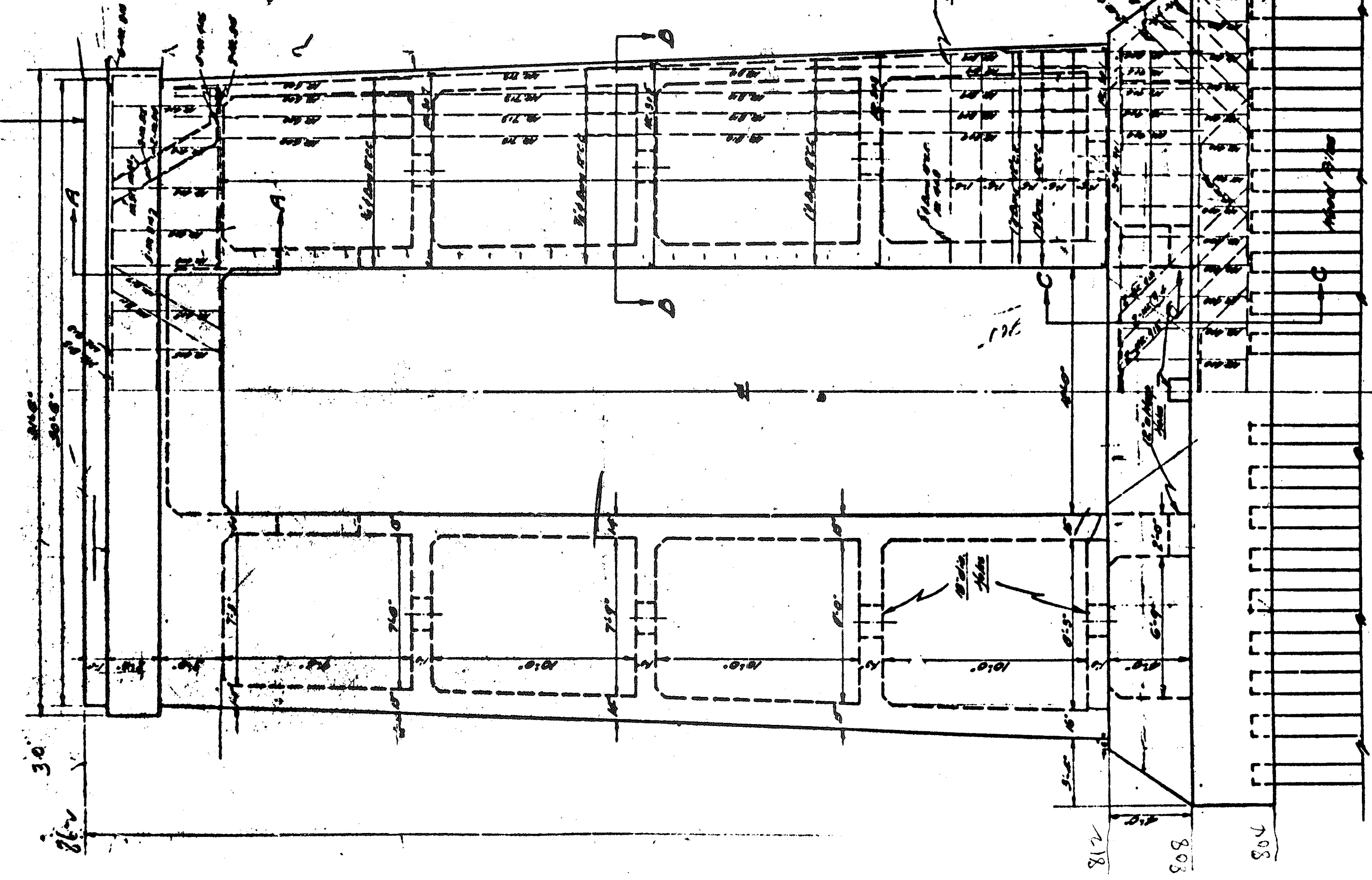




HALF PLAN OF INTERMEDIATE PIER  
SYMMETRICAL ABOUT E



SECTION C-C

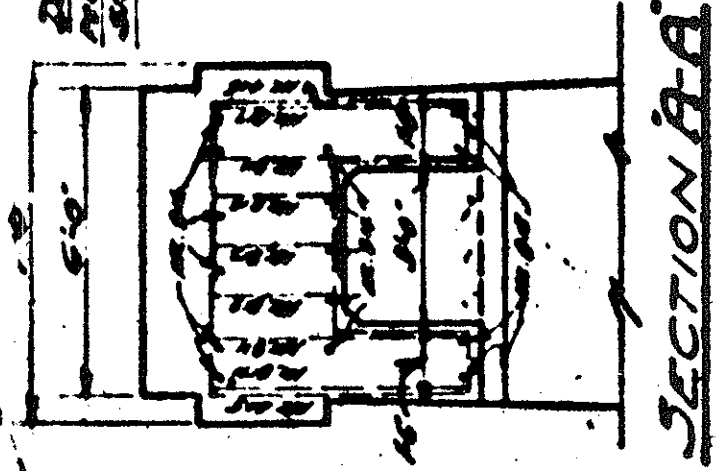


HALF FRONT ELEVATION  
SYMMETRICAL ABOUT E

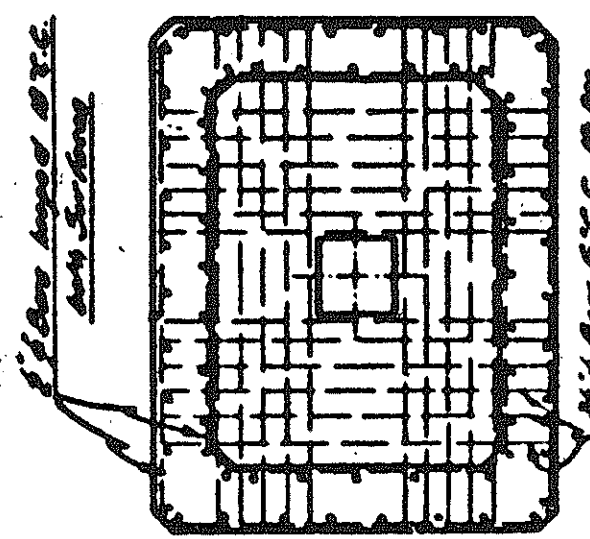
HALF ELEVATION SHOWING REINFORCING

SYMMETRICAL ABOUT E

HALF END ELEVATION  
SYMMETRICAL ABOUT E



SECTION A-A



TYPICAL SECTION D-D

NOTE:  
All pier walls, steel & other  
splices are 3/8 diameter

These horizontal lines are  
concentric with the  
3/8 dia. I.C.C. supports

Area in Sq. Feet

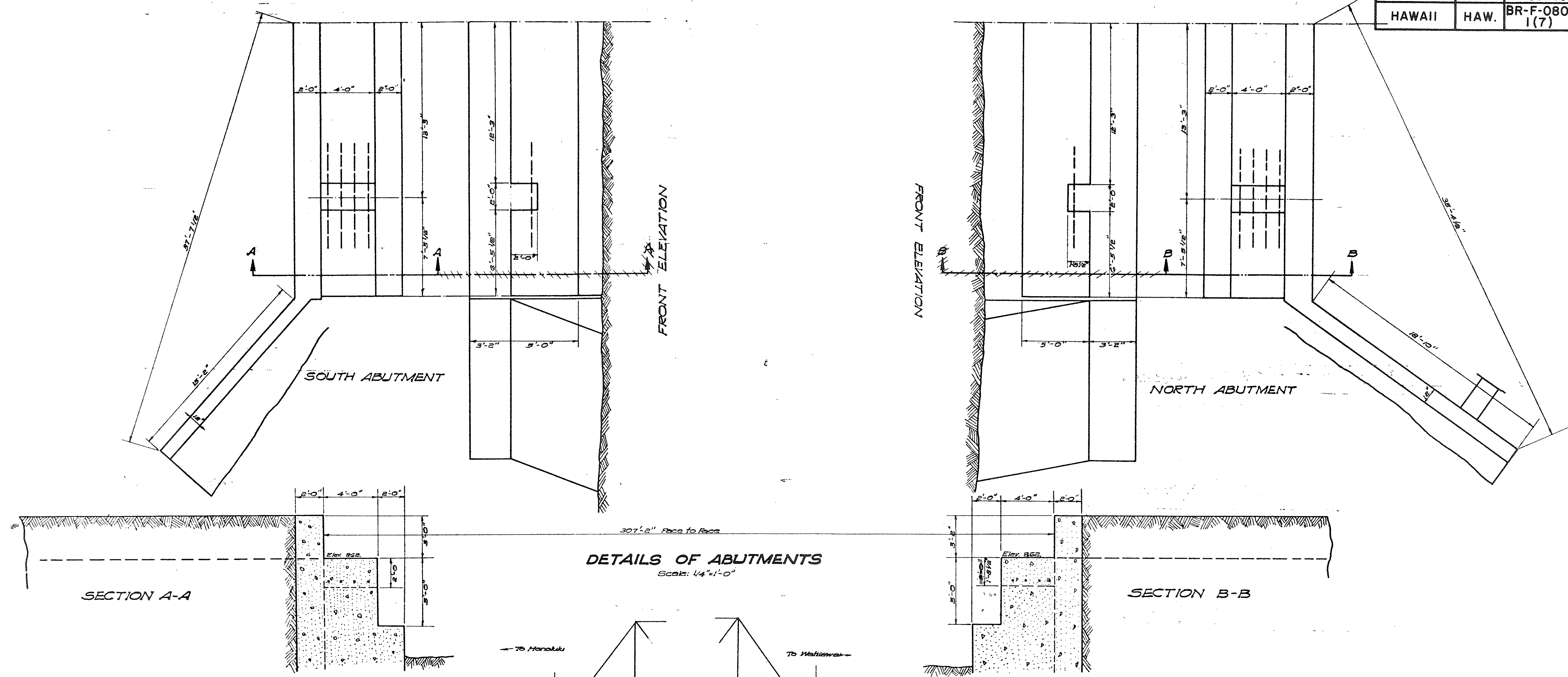
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701	0	17	0.17
702	0	17	0.17
703	0	17	0.17
704	0	17	0.17
705	0	17	0.17
706	0	17	0.17
707	0	17	0.17
708	0	17	0.17
709	0	17	0.17
710	0	17	0.17
711	0	17	0.17
712	0	17	0.17
713	0	17	0.17
714	0	17	0.17
715	0	17	0.17
716	0	17	0.17
717	0	17	0.17
718	0	17	0.17
719	0	17	0.17
720	0	17	0.17
721	0	17	0.17
722	0	17	0.17
723	0	17	0.17
724	0	17	0.17
725	0	17	0.17
726	0	17	0.17
727	0	17	0.17
728	0	17	0.17
729	0	17	0.17
730	0	17	0.17
731	0	17	0.17
732	0	17	0.17
733	0	17	0.17
734	0	17	0.17
735	0	17	0.17
736	0	17	0.17
737	0	17	0.17
738	0	17	0.17
739	0	17	0.17
740	0	17	0.17
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743	0	17	0.17
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749	0	17	0.17
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769	0	17	0.17
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797	0	17	0.17
798	0	17	0.17
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800	0	17	0.17

(EXISTING WILSON  
BRIDGE FOR  
INFORMATION ONLY  
(Reduction not to  
scale))

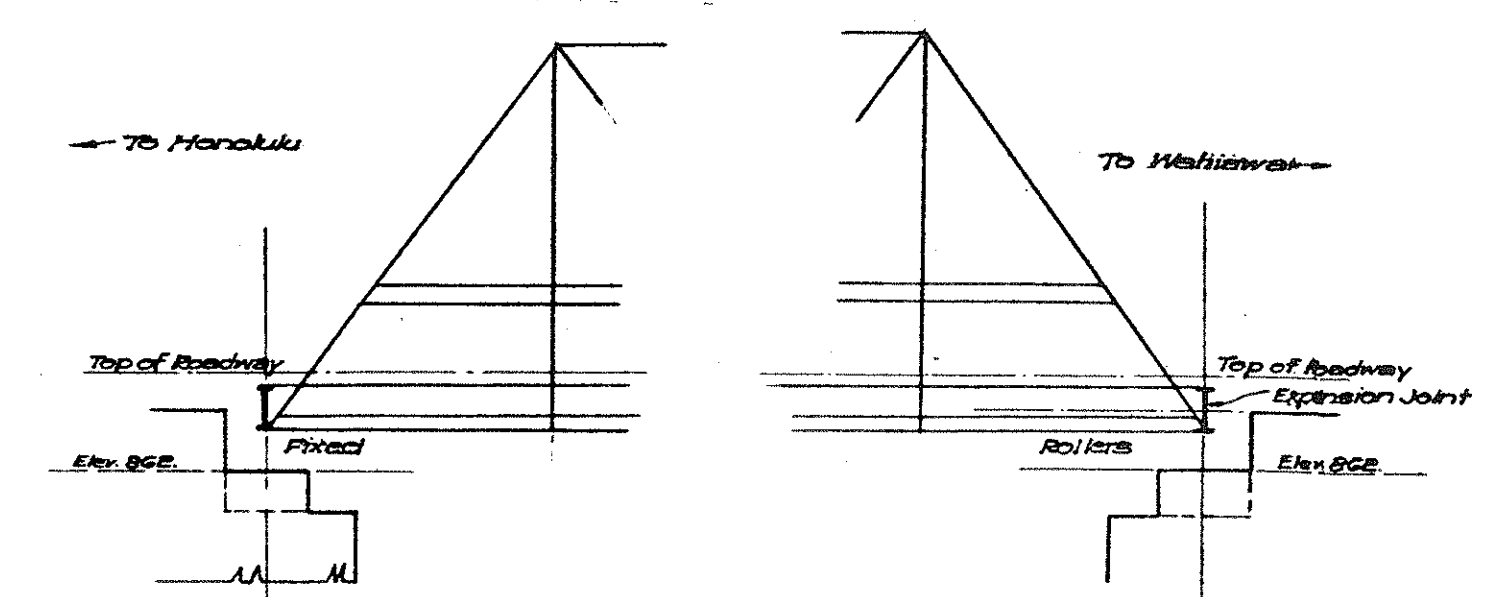
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	88-F-080-(7)	1977	156	165



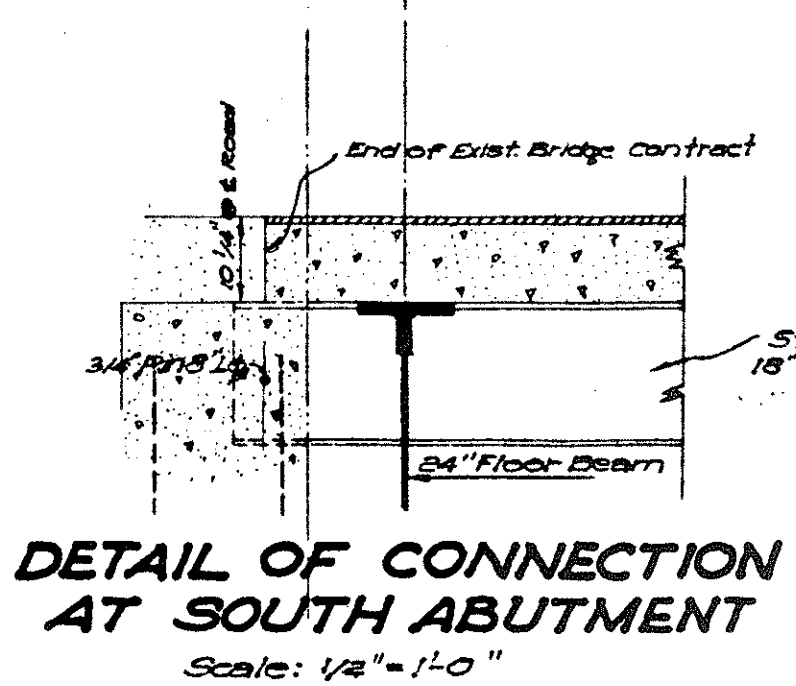
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BR-F-080-1(7)	1977	157	165



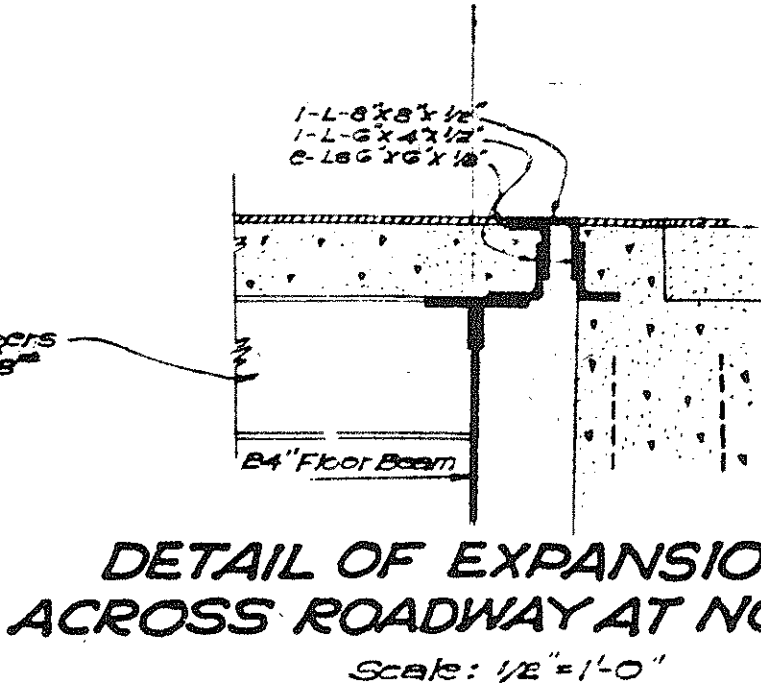
**DETAILS OF ABUTMENTS**  
Scale: 1/4" = 1'-0"



**EXISTING WILSON BRIDGE**  
**FOR INFORMATION ONLY**  
(Reduction not to scale)



**DETAIL OF CONNECTION AT SOUTH ABUTMENT**  
Scale: 1/2" = 1'-0"



**DETAIL OF EXPANSION JOINT ACROSS ROADWAY AT NORTH ABUTMENT**  
Scale: 1/2" = 1'-0"

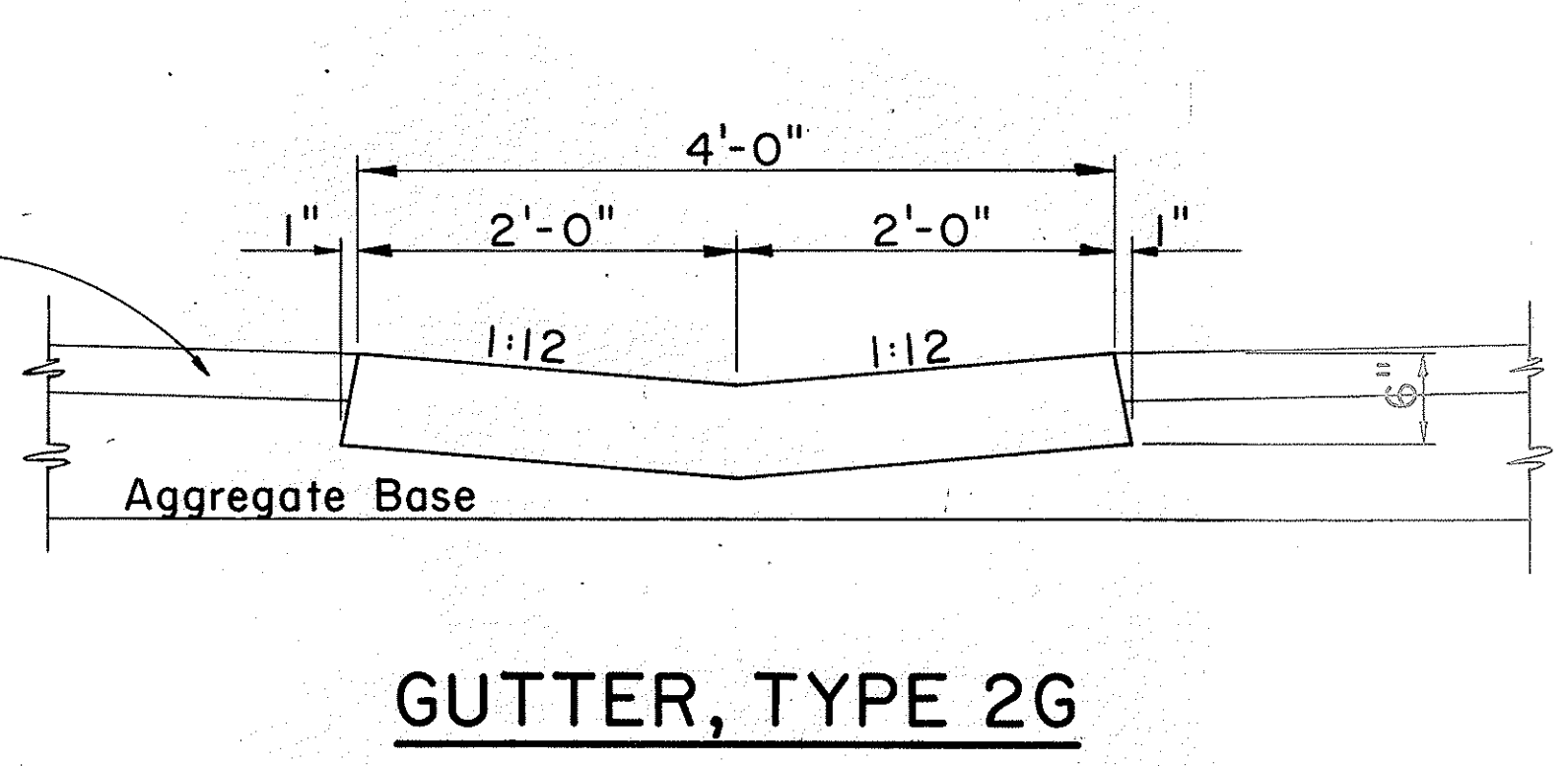
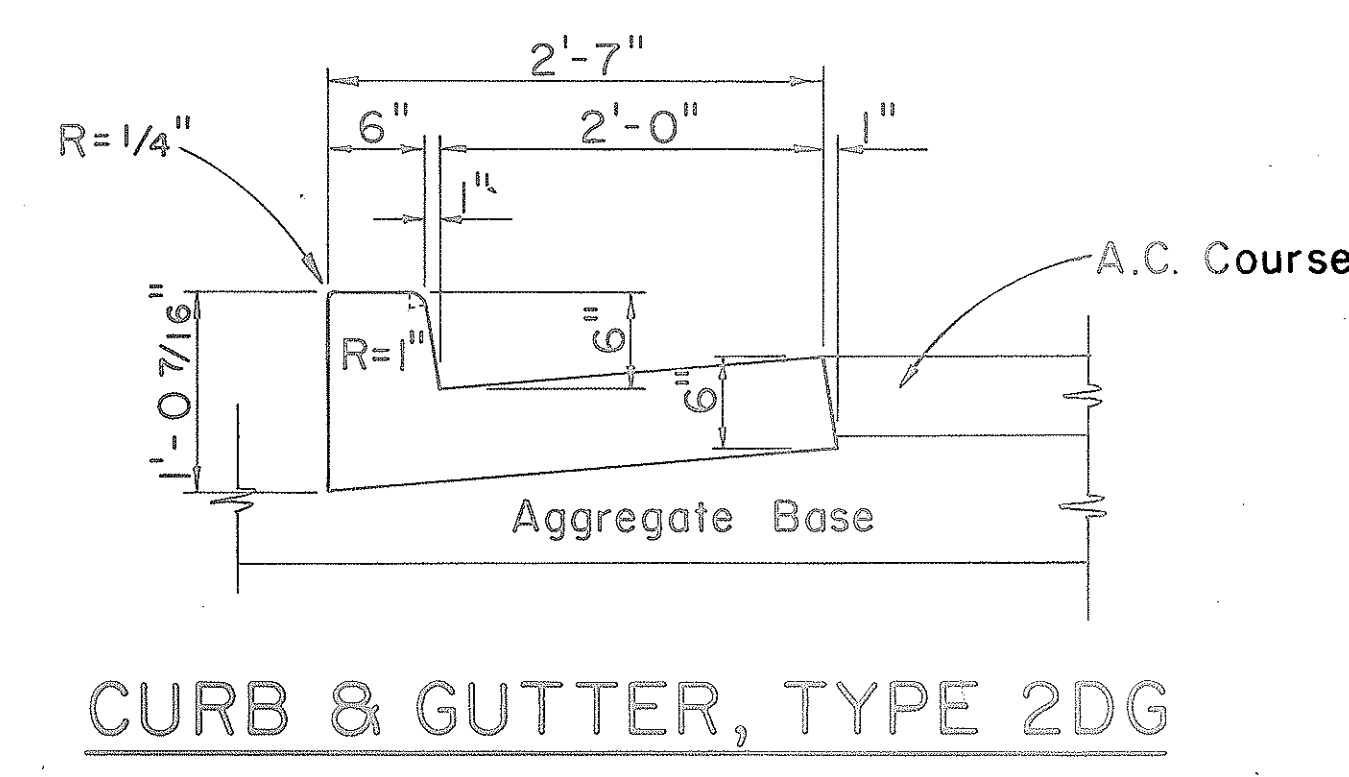
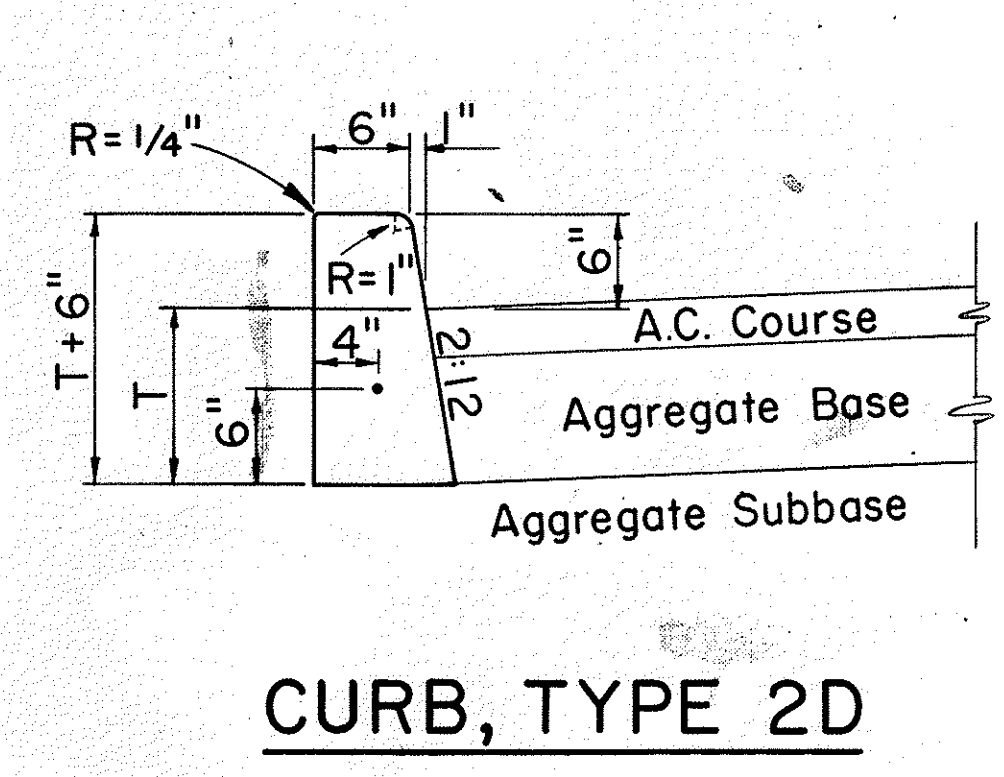
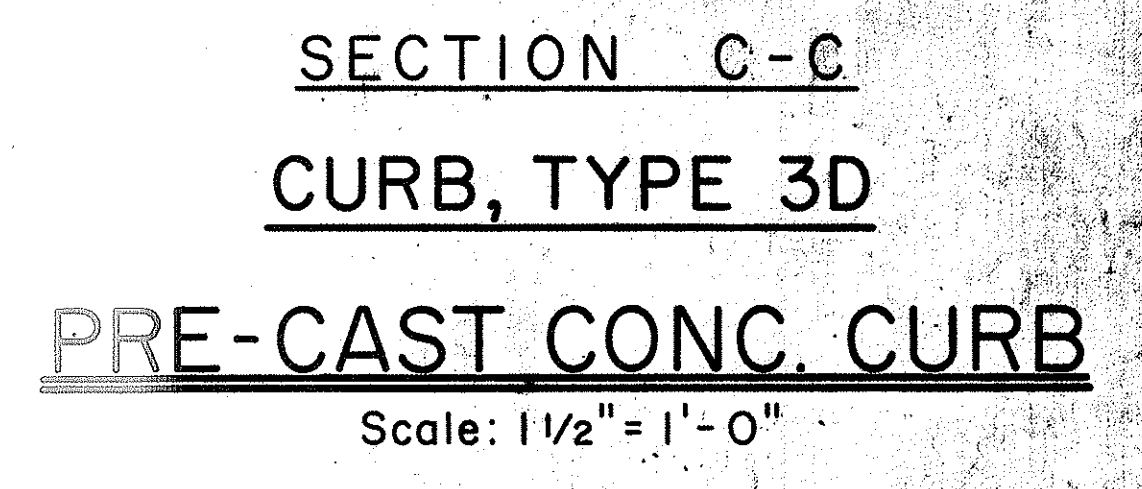
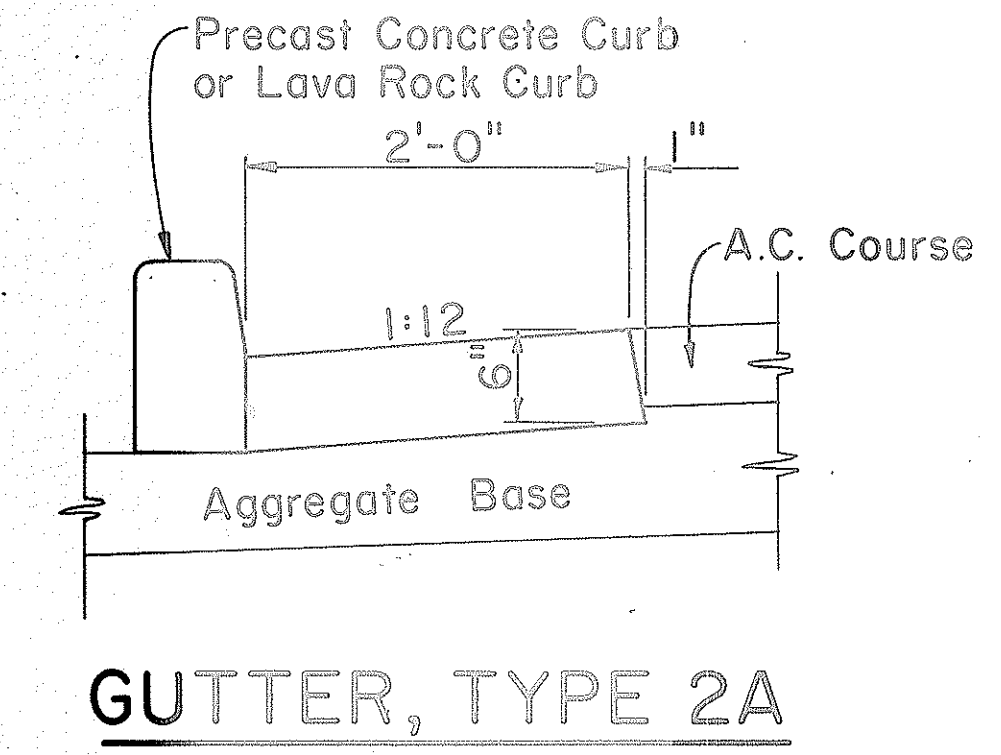
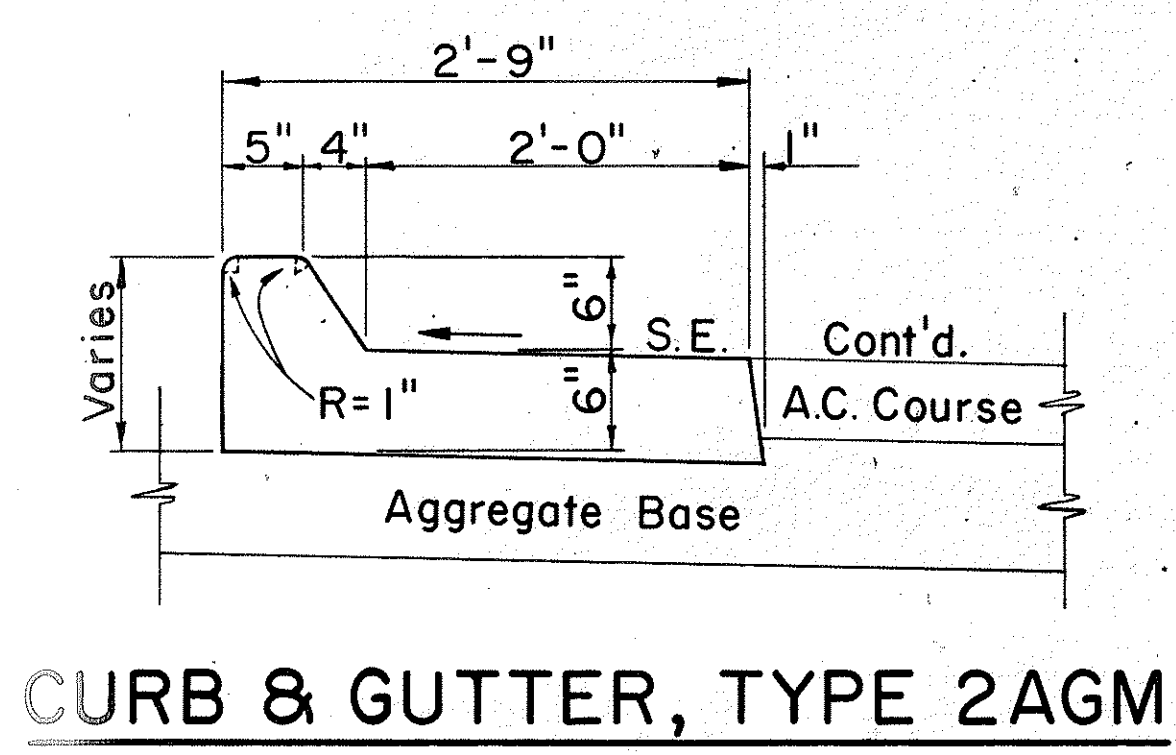
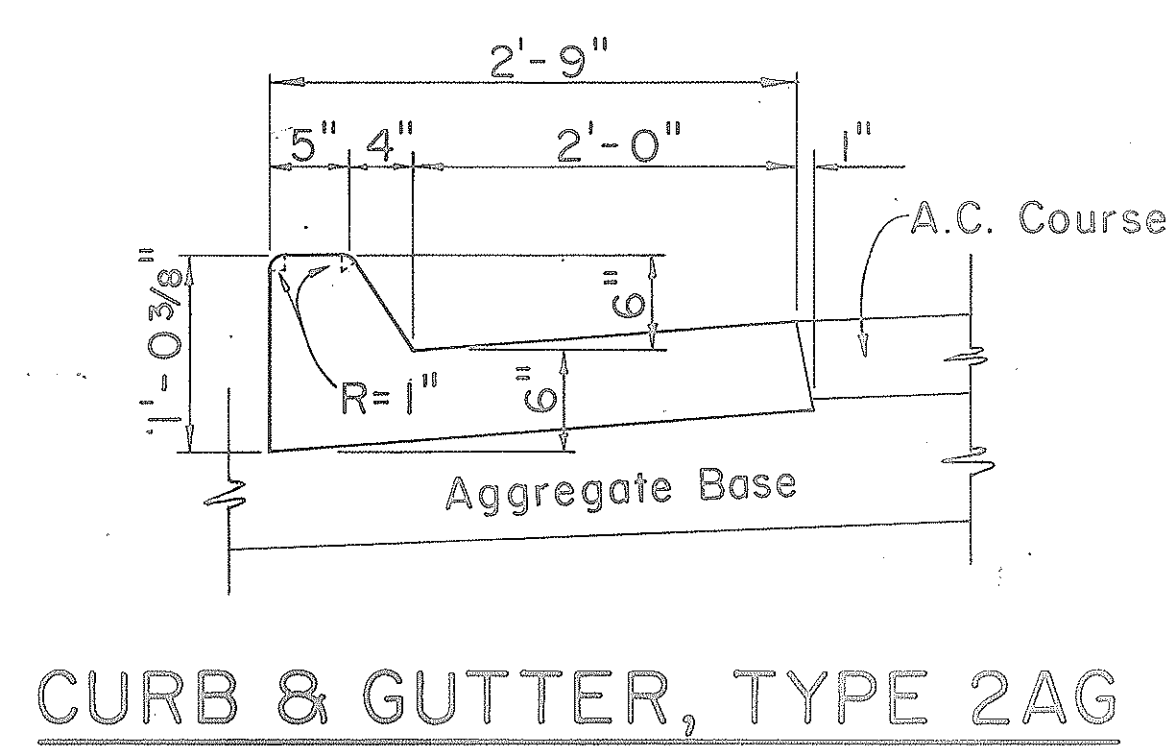
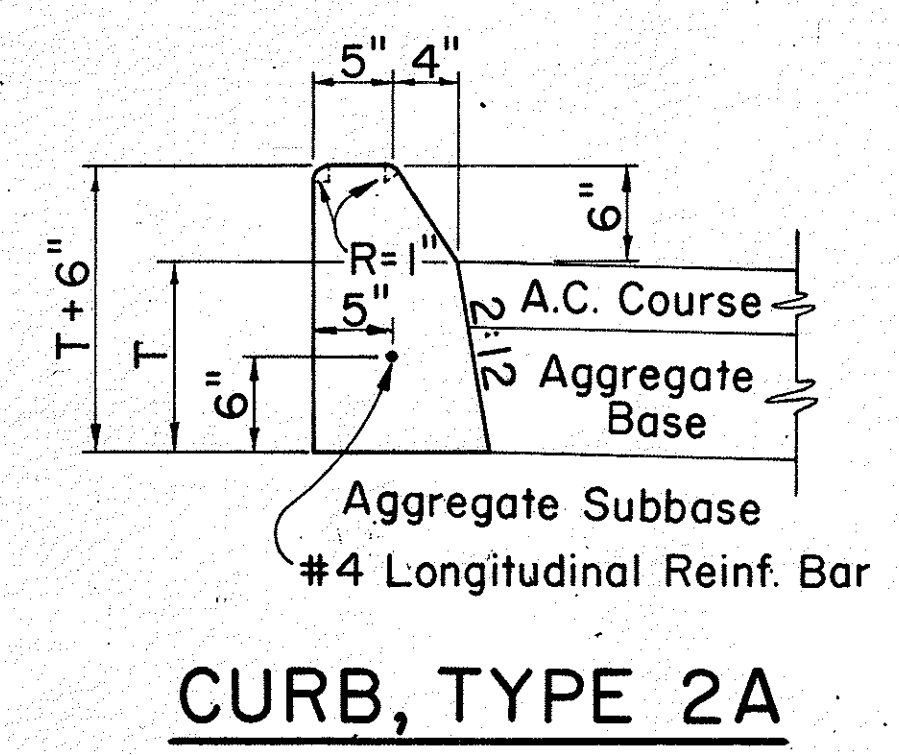
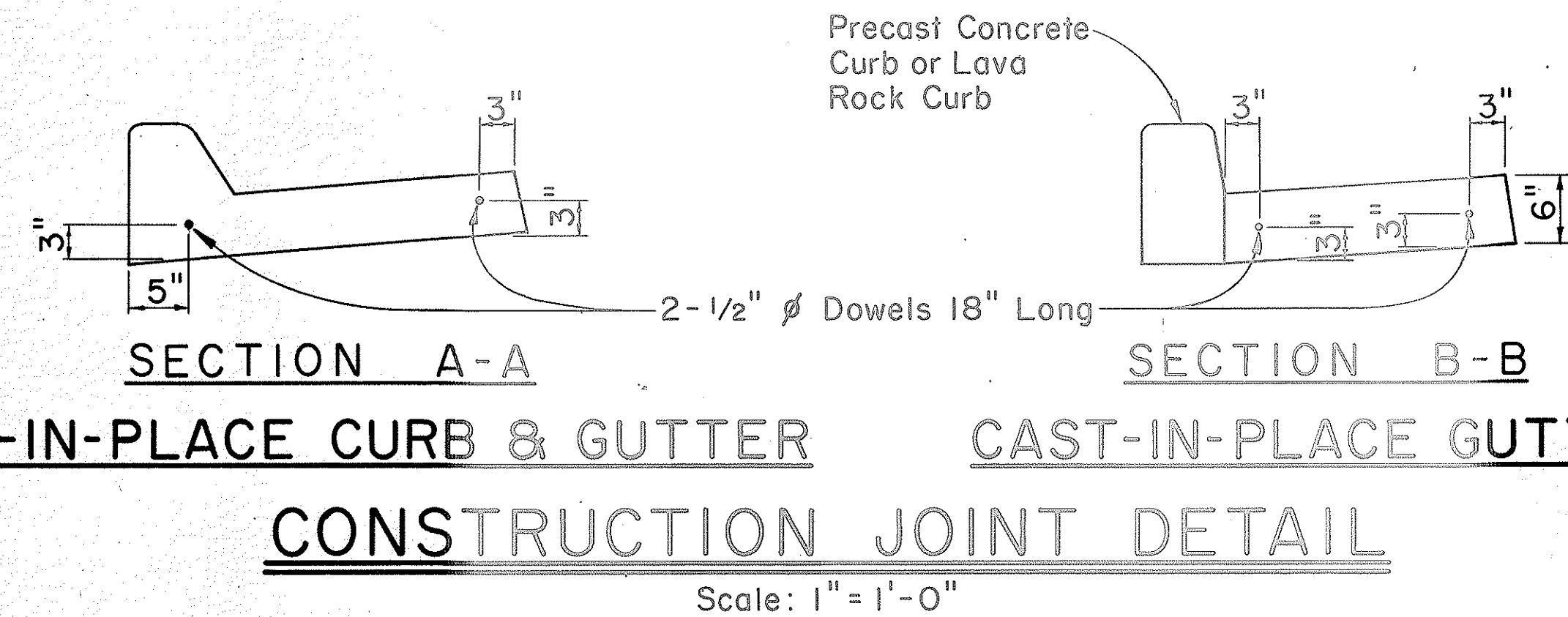
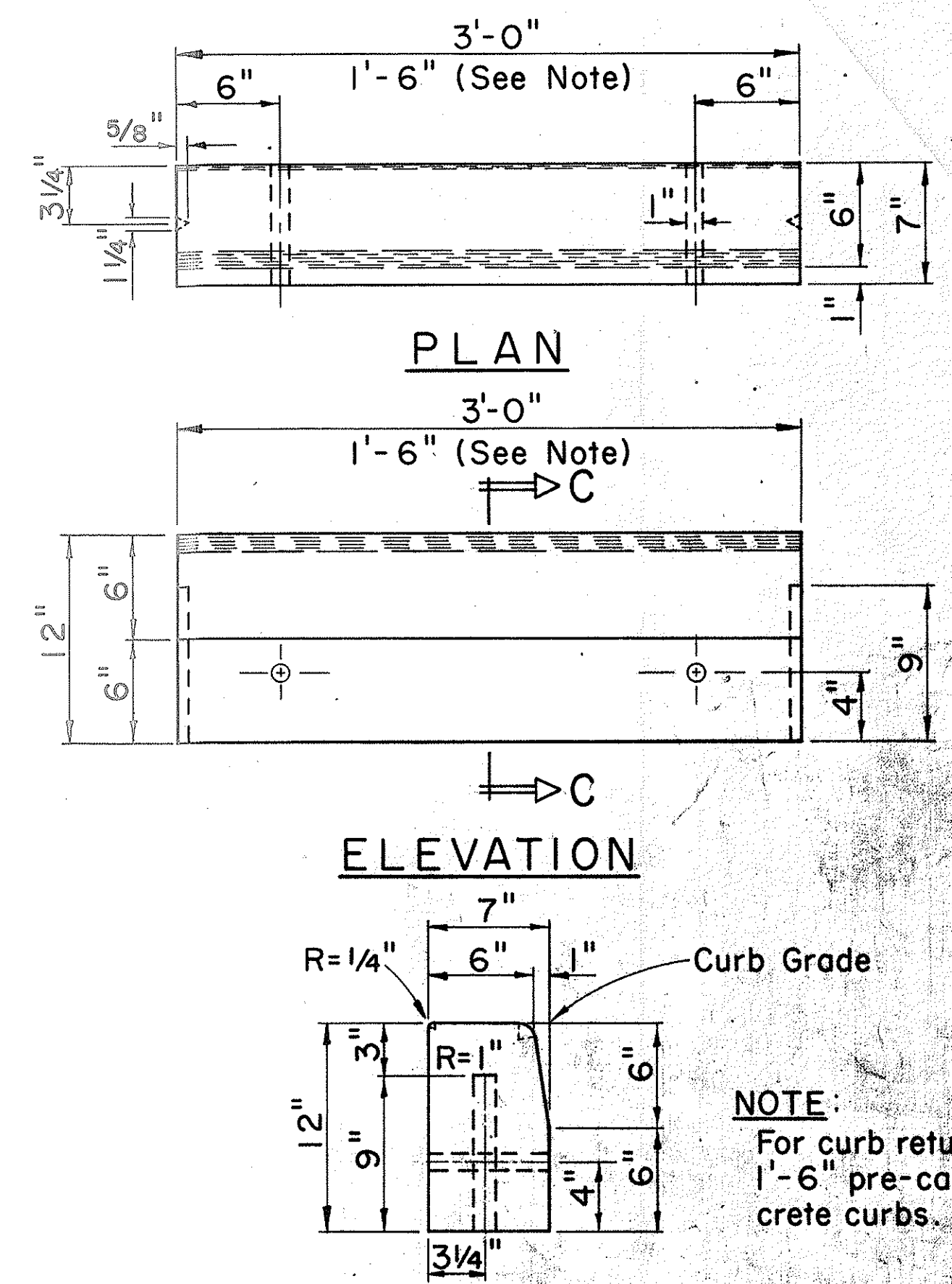
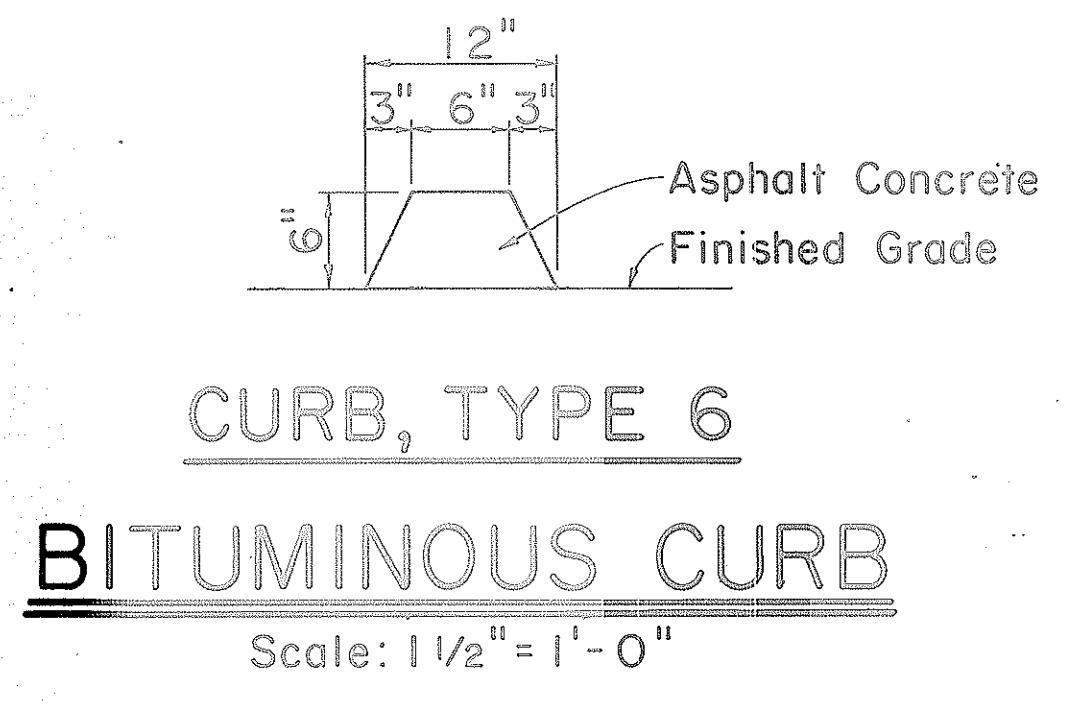
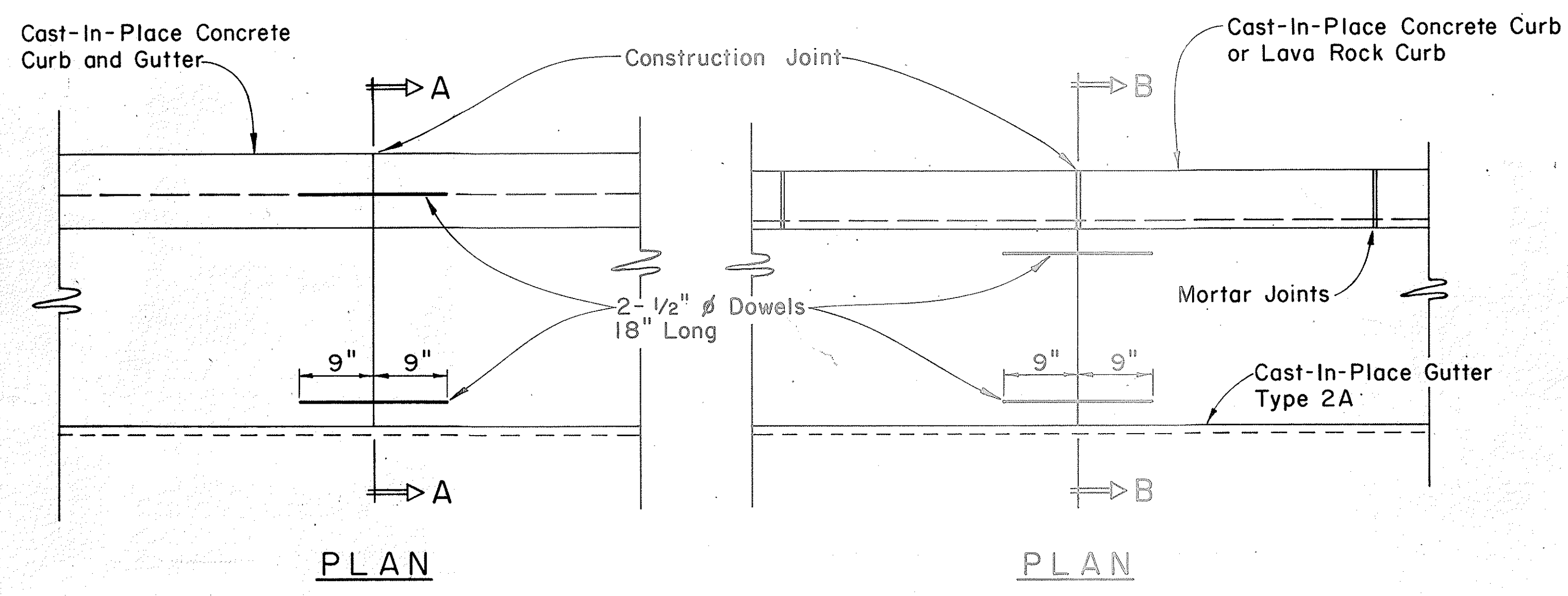
DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU  
BUREAU OF PLANS  
**WILSON BRIDGE**  
WAIALUA DISTRICT  
**DETAILS AT ABUTMENTS**

ENGINEER: J. O. Y. DATE: \_\_\_\_\_  
DRAFTSMAN: P. K. D. CHECKED BY: \_\_\_\_\_  
SCALE: 1/4" = 1'-0" TRACER: M. L. S. APPROVED: \_\_\_\_\_  
APPROVED: [Signature] BUREAU ENGINEER

C.S.	PROF.	C.B.
C.F. SUC.	P.B.	S.B.
P.W. BY	P.W. BY	P.W. BY



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-17	1977	62	165



**CAST-IN-PLACE CONCRETE CURBS AND/OR GUTTERS**

Scale: 1" = 1'-0"

APPROVAL RECOMMENDED:  
*M. S. ...* 12-4-69  
 HIGHWAY DESIGN ENGINEER DATE

APPROVED:  
*Robert S. ...* 12-10-69  
 ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

**STANDARD DETAILS**  
**TYPICAL DETAILS OF CURB**  
**AND/OR GUTTERS**

Scale: As Shown

SHEET No. 1 OF 1 SHEETS DD 6091

DATE: \_\_\_\_\_

SYNOPSIS: \_\_\_\_\_

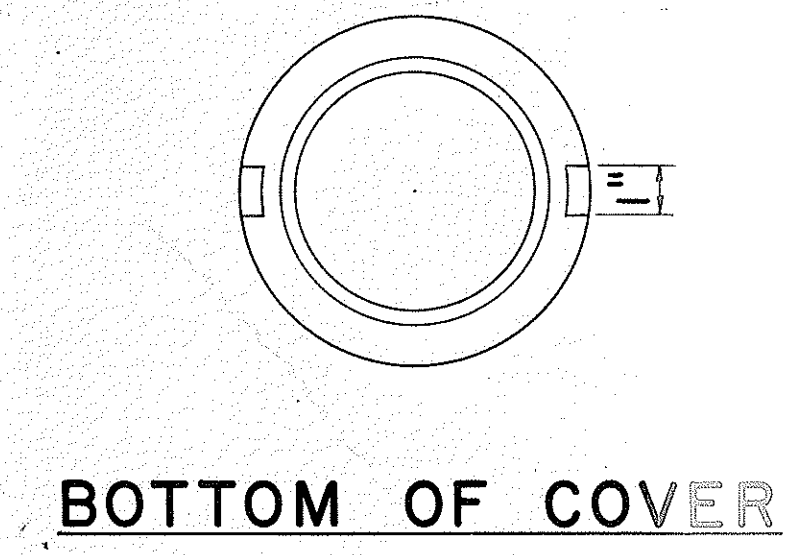
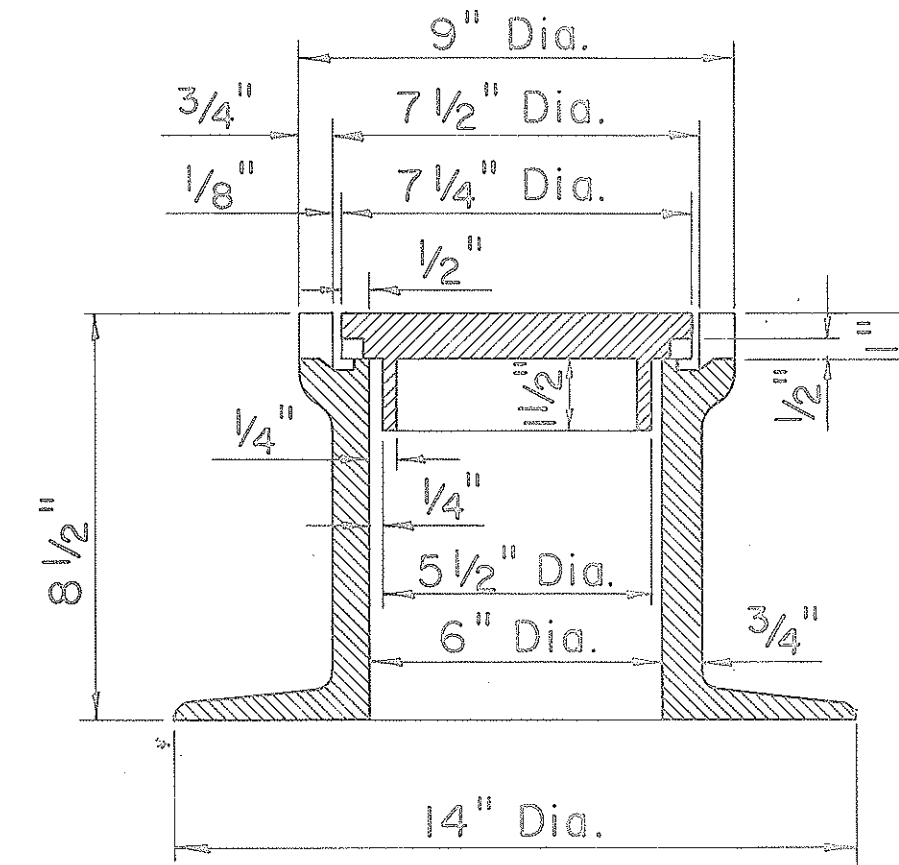
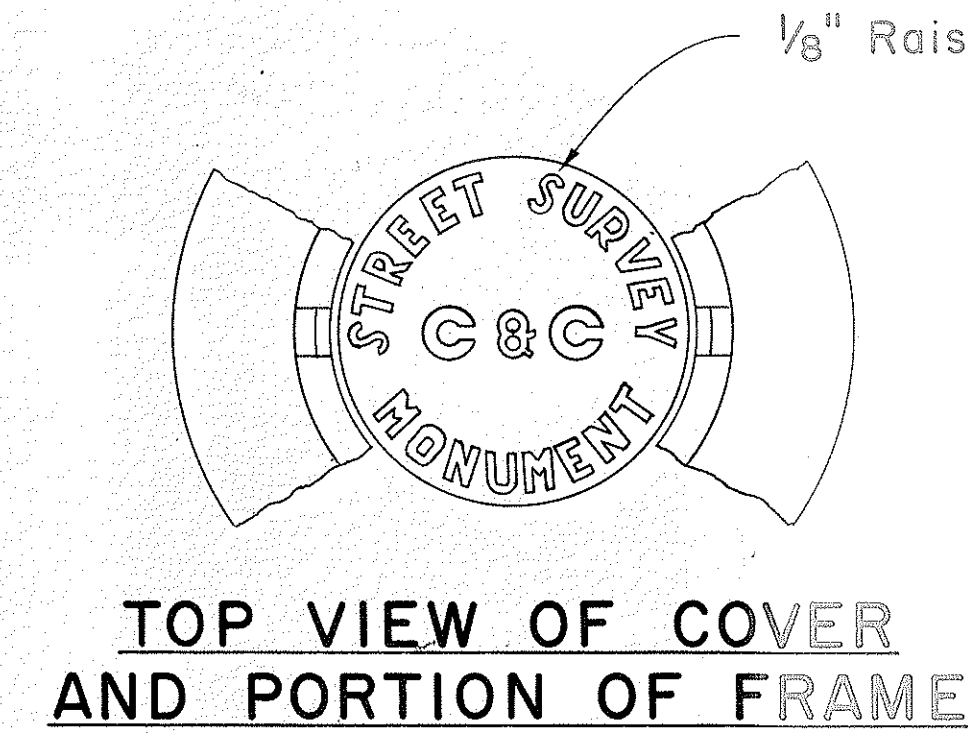
DESIGNED BY: \_\_\_\_\_

CHECKED BY: \_\_\_\_\_

NO. \_\_\_\_\_



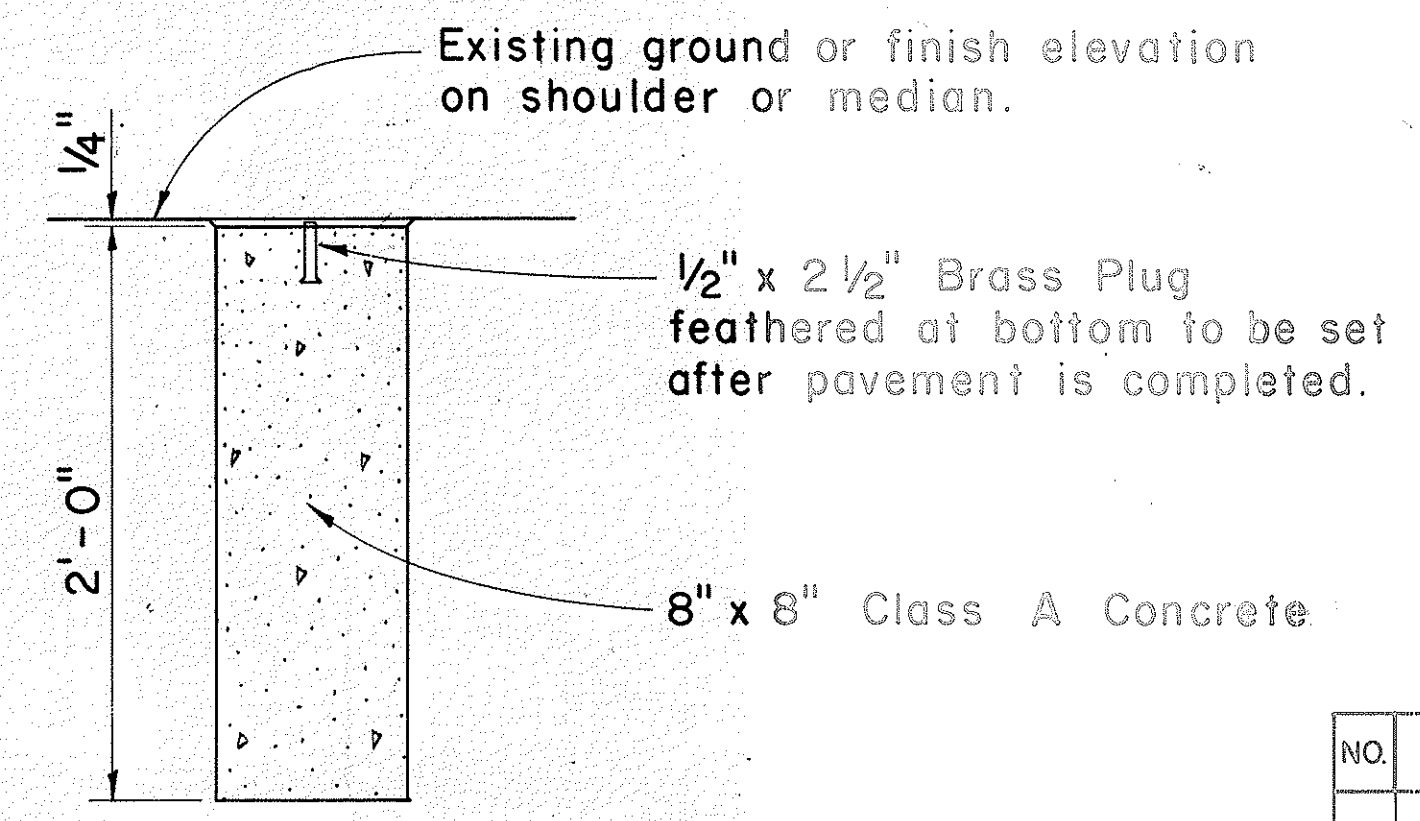
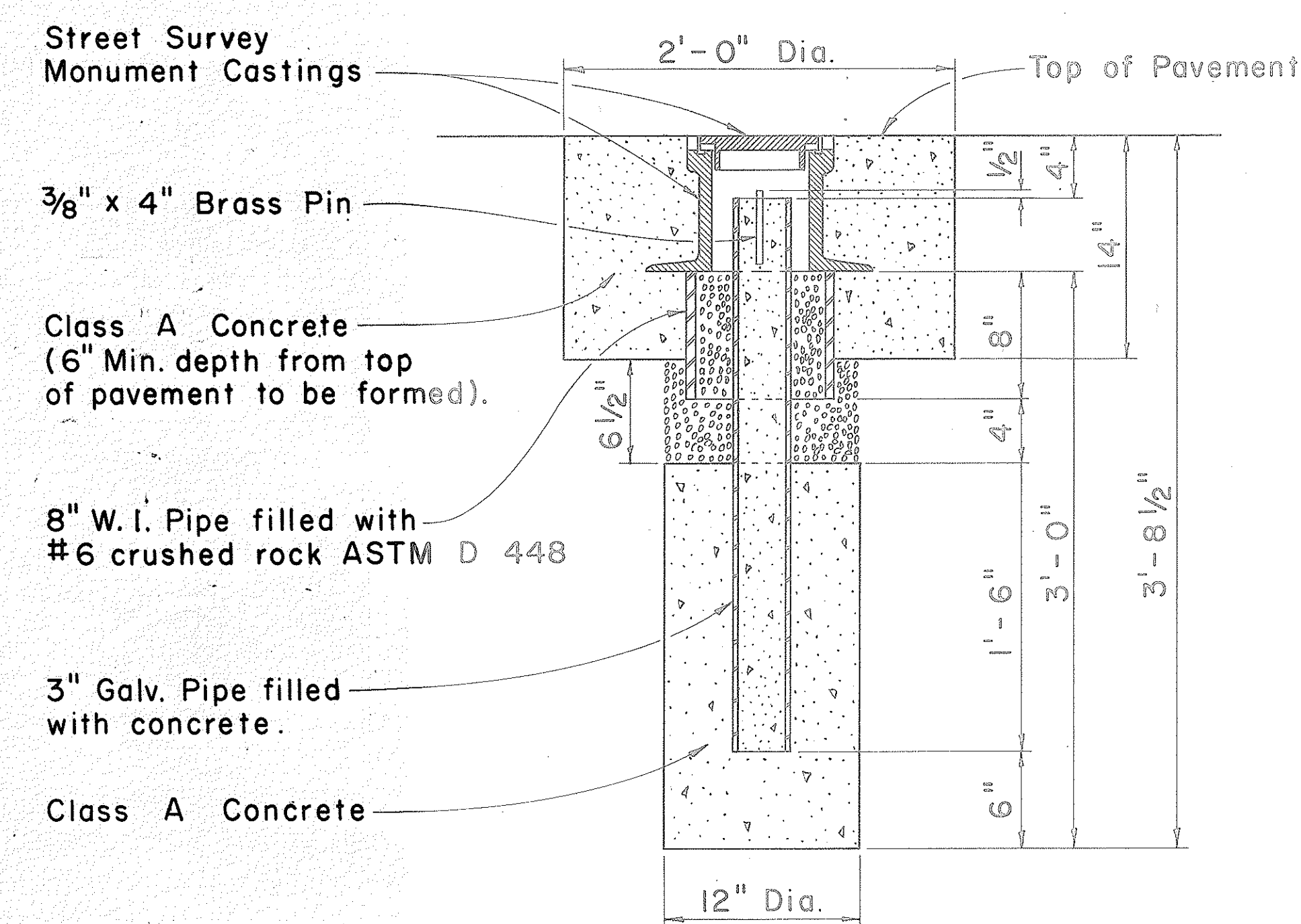
FED.-ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	BRF-080-17	1977	63	105



SECTIONAL VIEW OF FRAME AND COVER

**STREET SURVEY MONUMENT CASTINGS**

Scale: 3" = 1'-0"



**DETAIL FOR AND REFERENCE SURVEY MONUMENT**

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

DATE	.....
SURVEY PLOTTED BY	.....
DRAWN BY	.....
TRACED BY	.....
NOTE BOOK	.....
CHECKED BY	.....
No.	.....

NOTE: Where the excavation extends into solid rock the depth may be decreased if approved by the Engineer.

**STREET SURVEY MONUMENT**

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

APPROVAL RECOMMENDED:  
*M. Hirozawa* 12-4-69  
HIGHWAY DESIGN ENGINEER DATE

APPROVED:  
*W. S. S. S.* 12-10-69  
ASSISTANT CHIEF, ENGINEERING DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**STANDARD DETAILS**

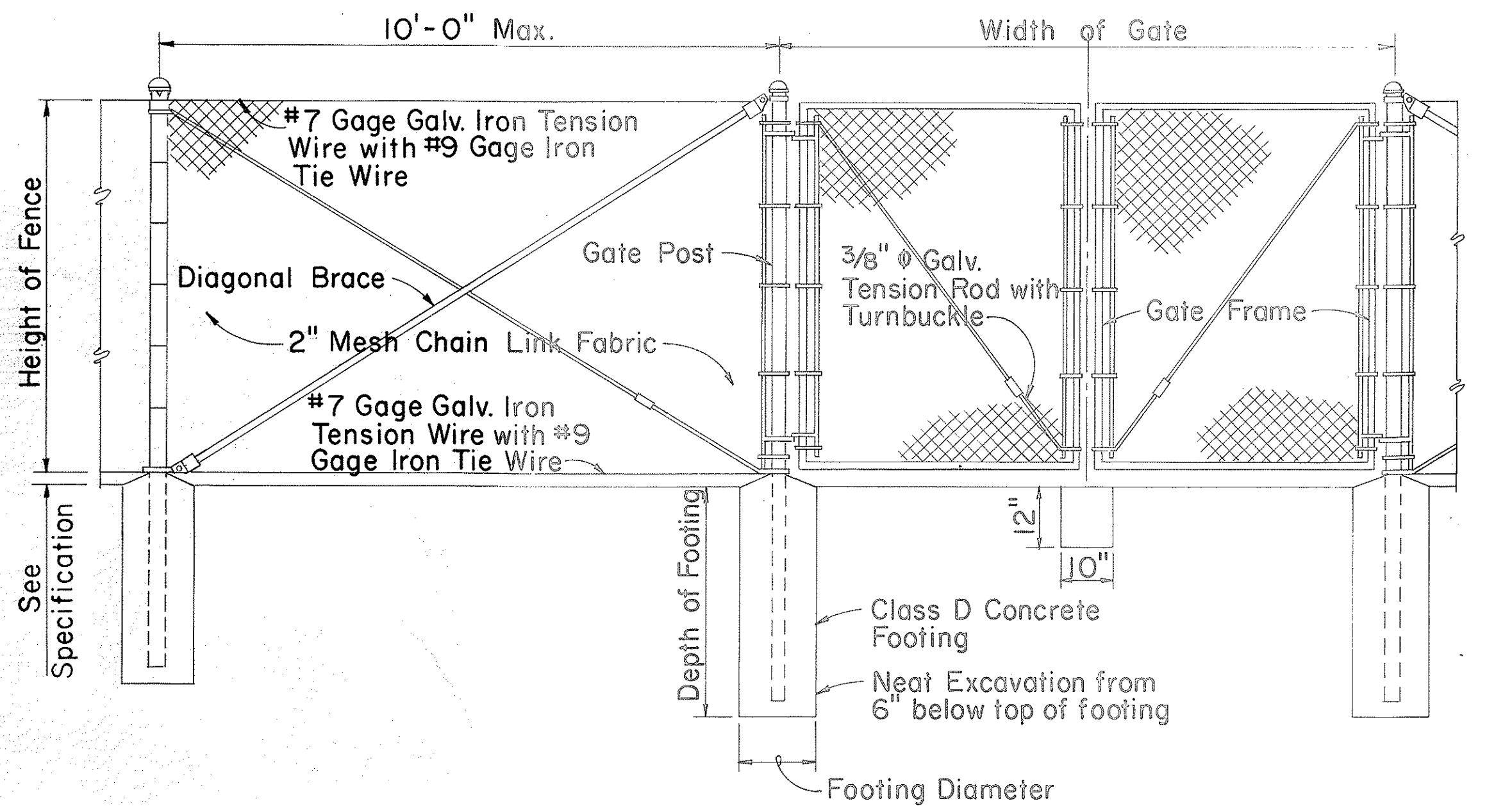
CENTERLINE, REFERENCE SURVEY  
AND C & C STREET SURVEY  
MONUMENTS

Scale: As Shown

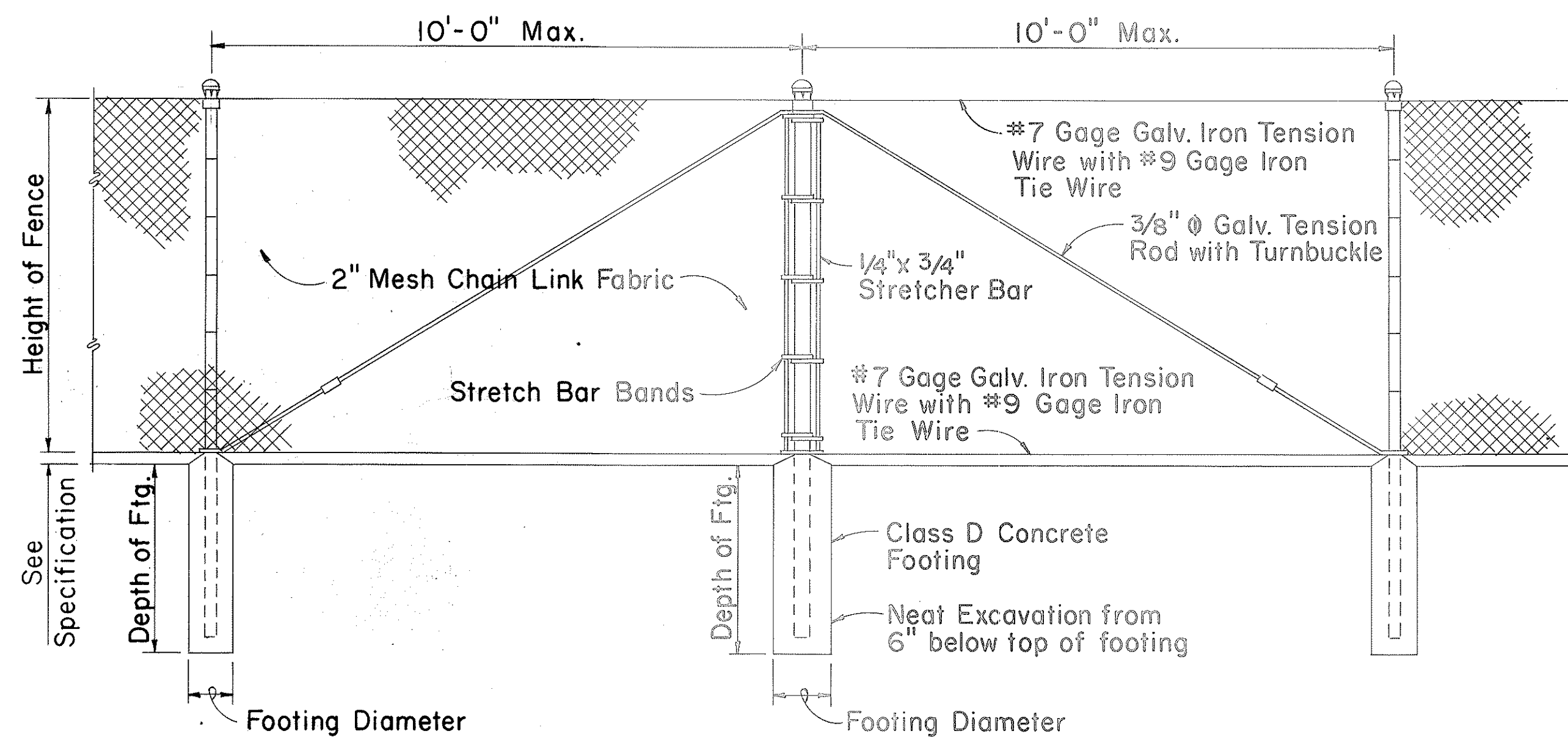
SHEET No. 1 OF 1 SHEETS DD 613.1



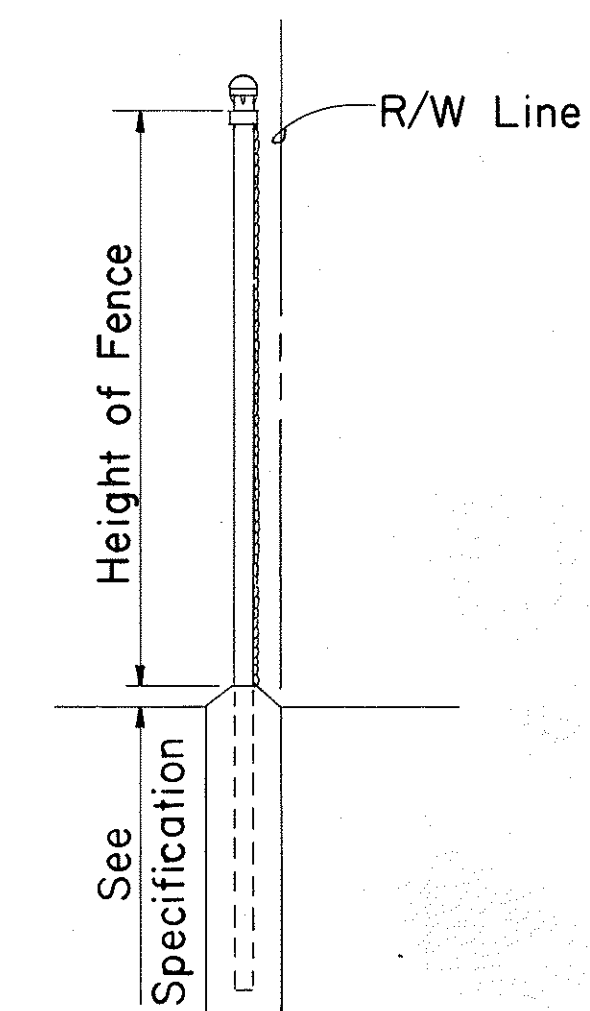
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	SR-F 080-1(7)	1977	64	105



LINE POST                      GATE POST                      GATE POST



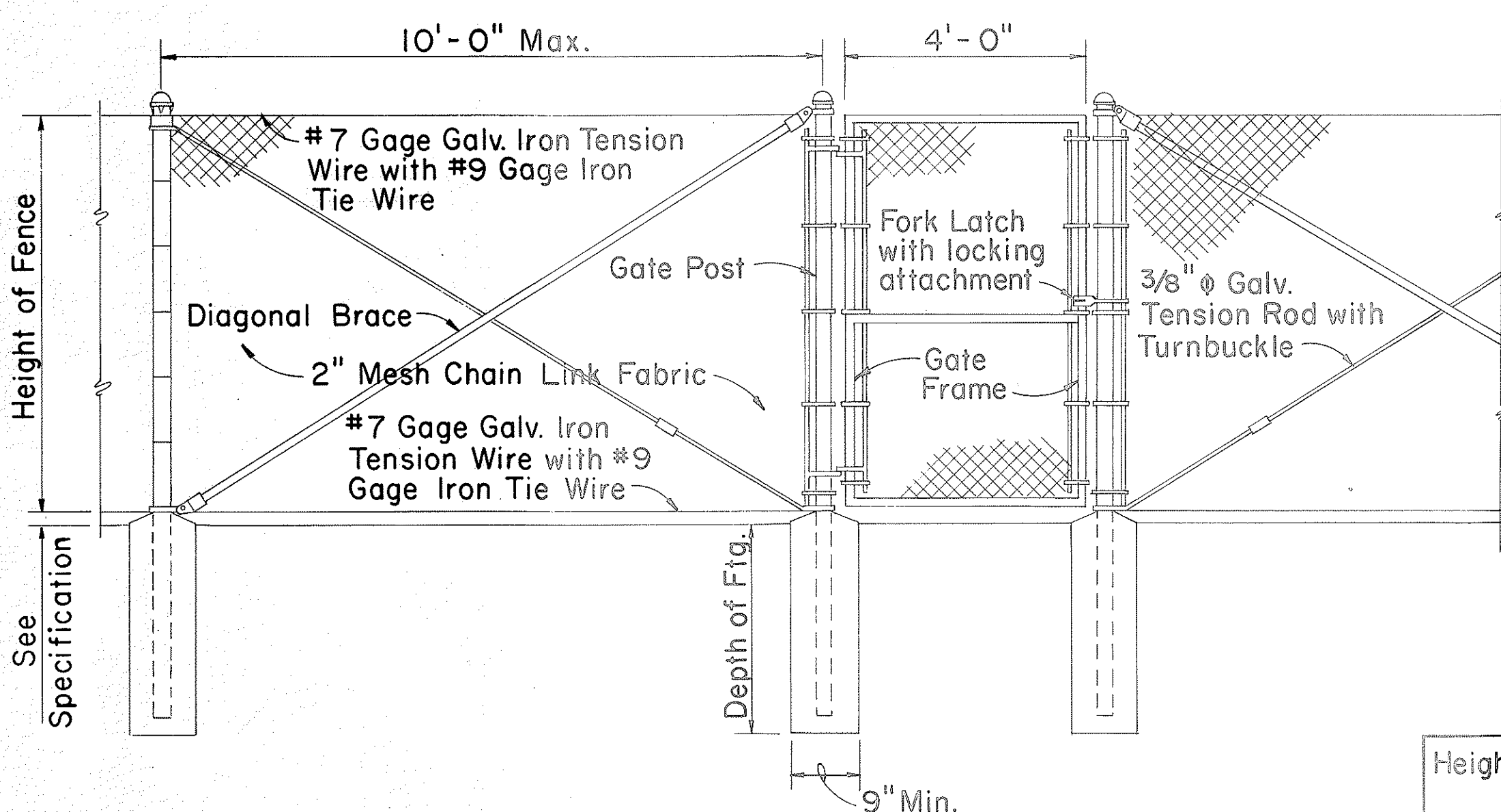
LINE POST                      PULL POST                      LINE POST



TYPICAL SECTION (WITH CONCRETE FOOTING)

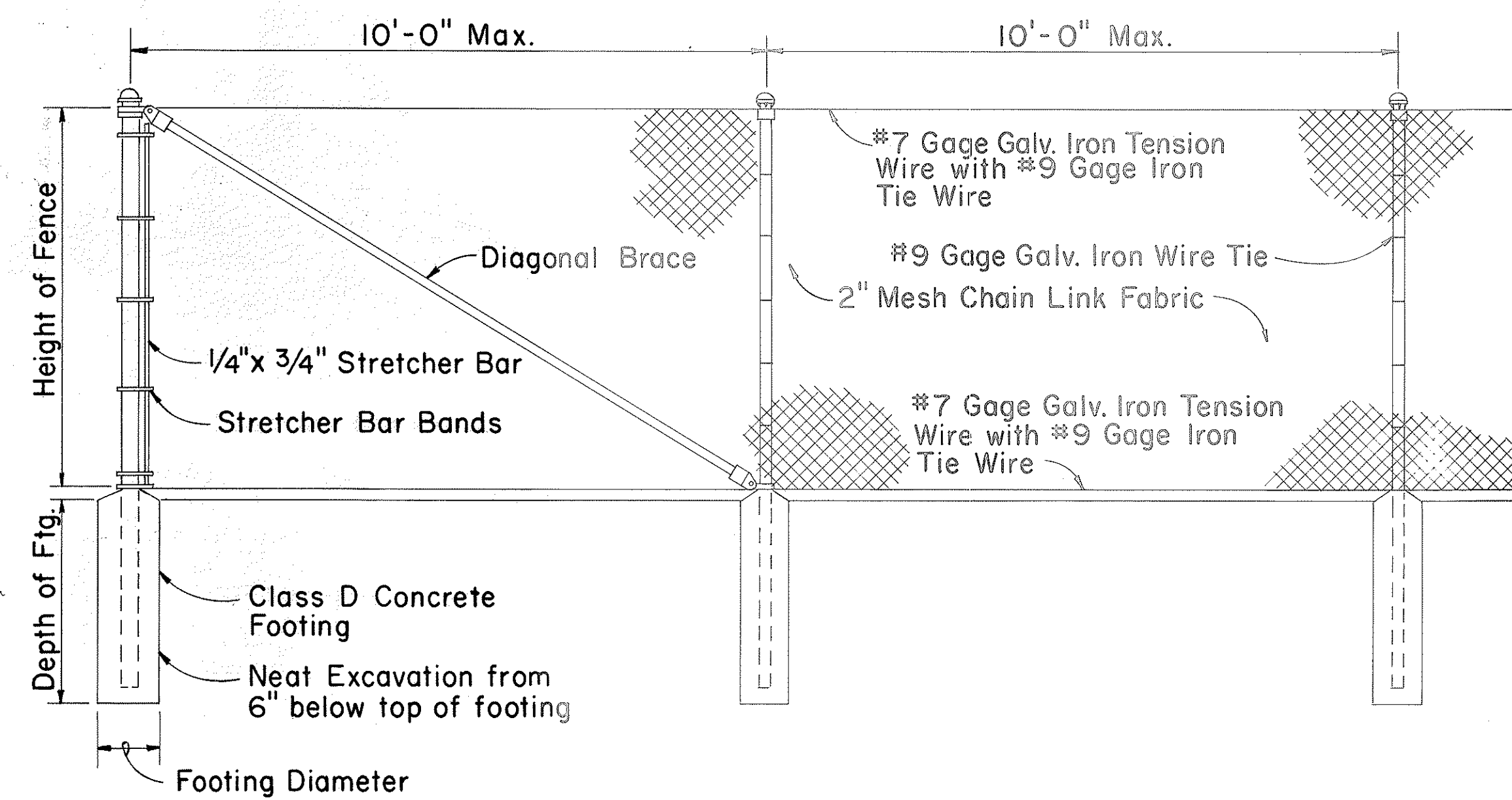
**DETAIL OF CHAIN LINK GATE**

- NOTE: 1. Gate fork latch and lock, flush plate and anchor, and plunger shall be installed with Gates, and shall be considered as incidental to Chain Link Fence Gate.  
 2. Gate frames shall be mitered and welded at corners.  
 3. Fence detail not shown shall be in accordance with the Standard Specifications.



LINE POST                      GATE POST                      GATE POST

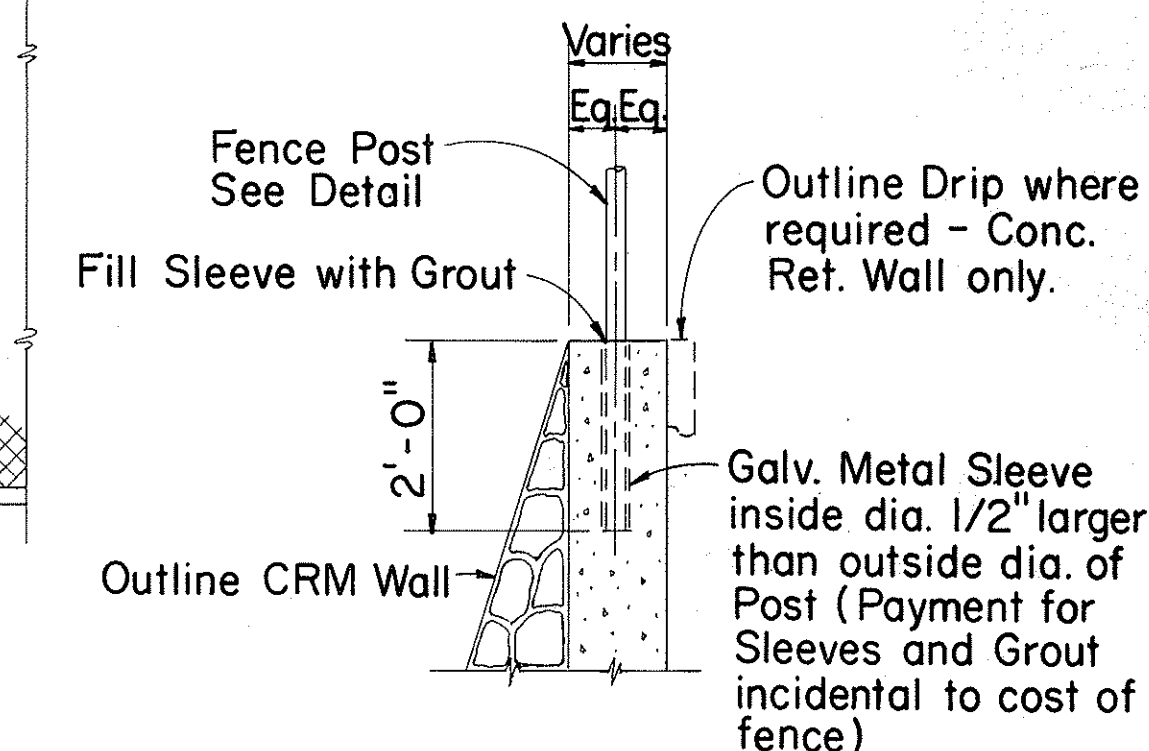
**DETAIL OF 4 FT. CHAIN LINK GATE**



END POST                      LINE POST                      LINE POST

**CHAIN LINK FENCE DETAILS**

Height of Fence	Minimum Depth of Footing		Minimum Footing Diameter	
	Line Post	Corner, Pull, End and Gate Posts	Line Post	Corner, Pull and End Posts
3'	2'-0"	2'-6"	8"	8"
4'	2'-6"	2'-6"	8"	8"
5'	3'-0"	3'-0"	8"	8"
6'	3'-0"	3'-0"	8"	9"



TYPICAL SECTION (ON CRM & CONC. RET. WALL)

APPROVAL RECOMMENDED:  
 HIGHWAY DESIGN ENGINEER                      12-4-69 DATE  
 APPROVED:  
 ASSISTANT CHIEF, ENGINEERING                      12-10-69 DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**STANDARD DETAILS**  
**CHAIN LINK FENCE**  
**(WITHOUT TOPRAIL)**  
 Scale: 1/2" = 1'-0"                      Date:

DATE: \_\_\_\_\_  
 QUANTITIES BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 CHECKED BY: \_\_\_\_\_  
 ORIGINAL PLAN NOTE BOOK No. \_\_\_\_\_