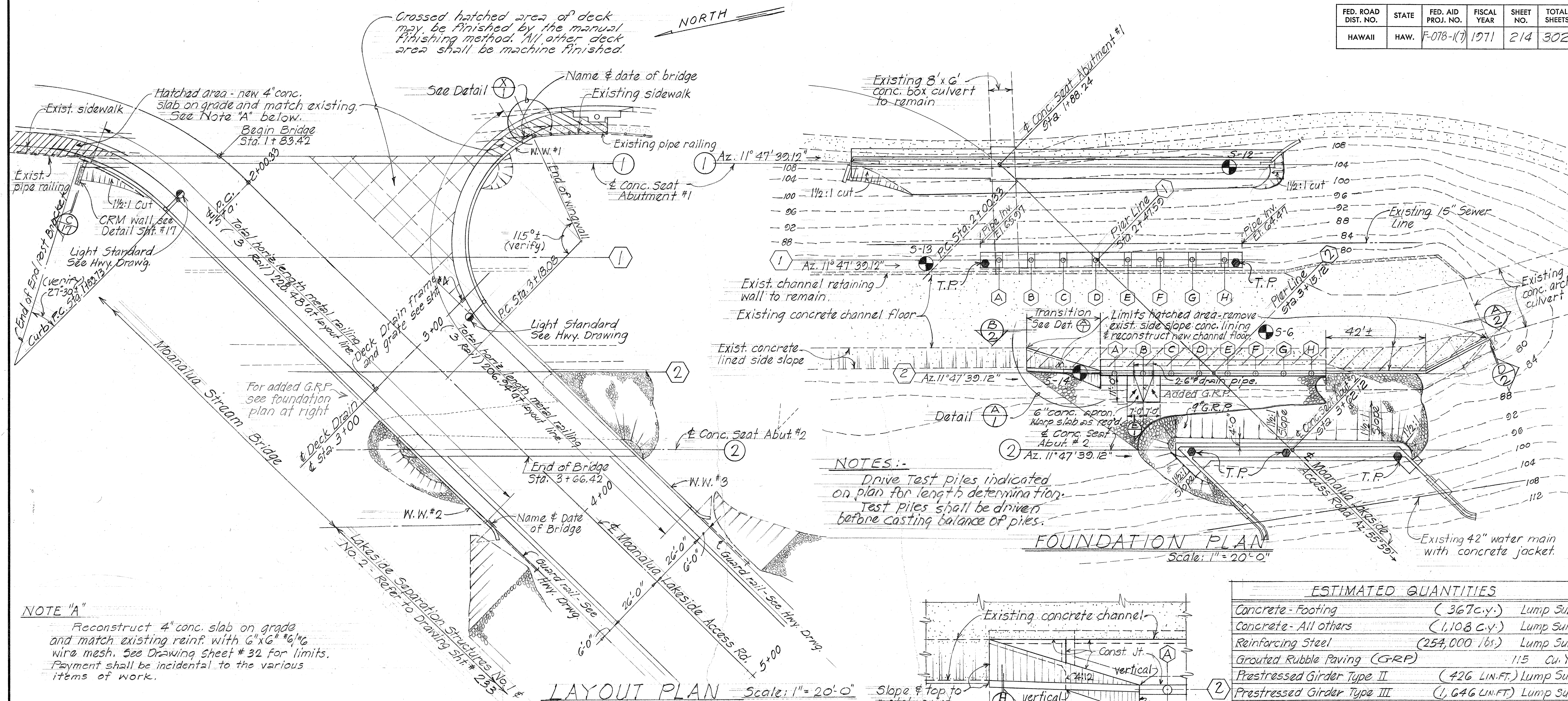
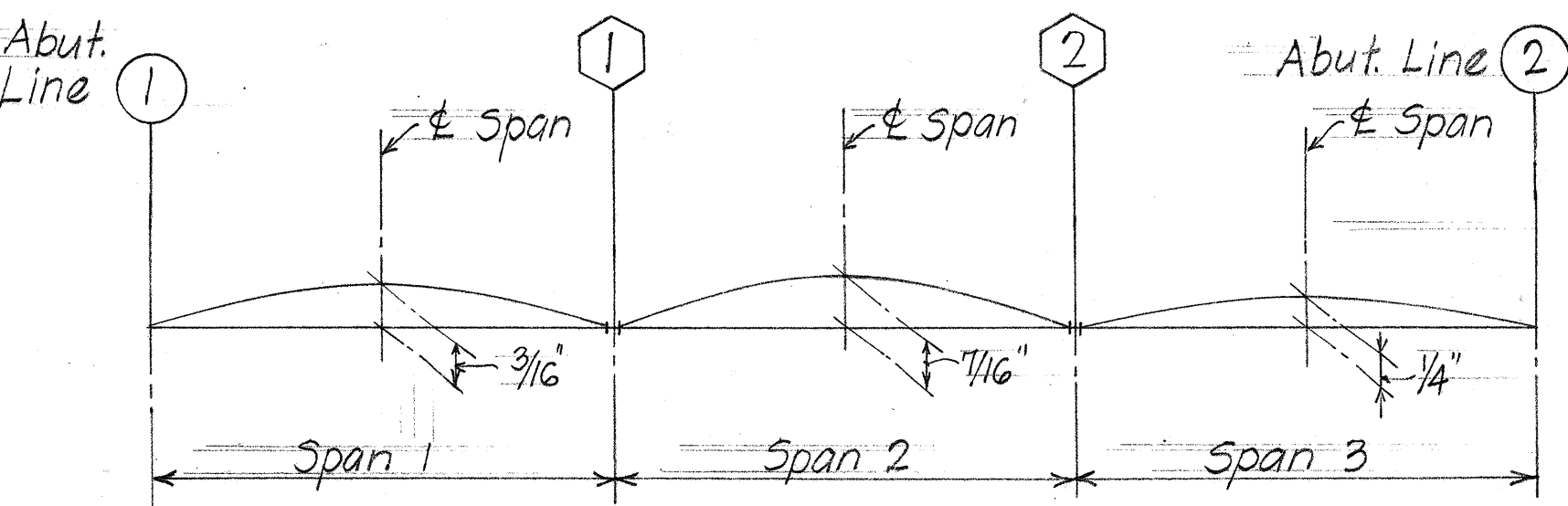


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 214       | 302          |



**NOTE "A"**  
 Reconstruct 4" conc. slab on grade and match existing reinf. with 6"x6" #6 wire mesh. See Drawing Sheet # 32 for limits. Payment shall be incidental to the various items of work.

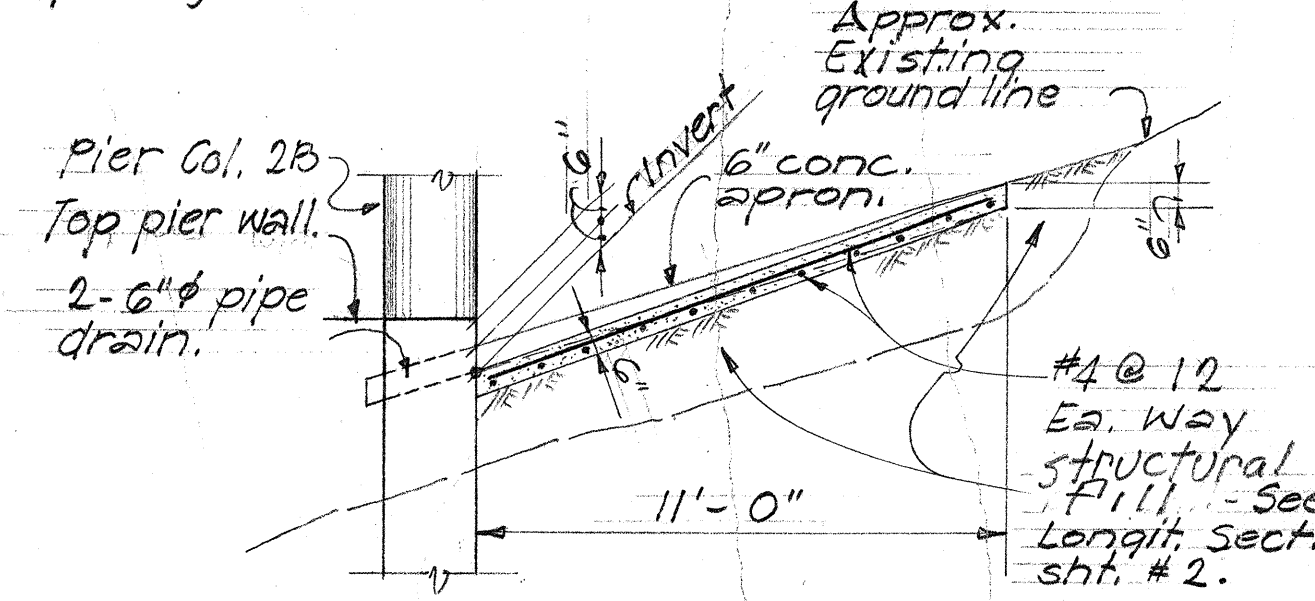


**SLAB CAMBER DIAGRAM**  
 No Scale

**LAYOUT PLAN** Scale: 1" = 20'-0"

**REFERENCE NOTES**

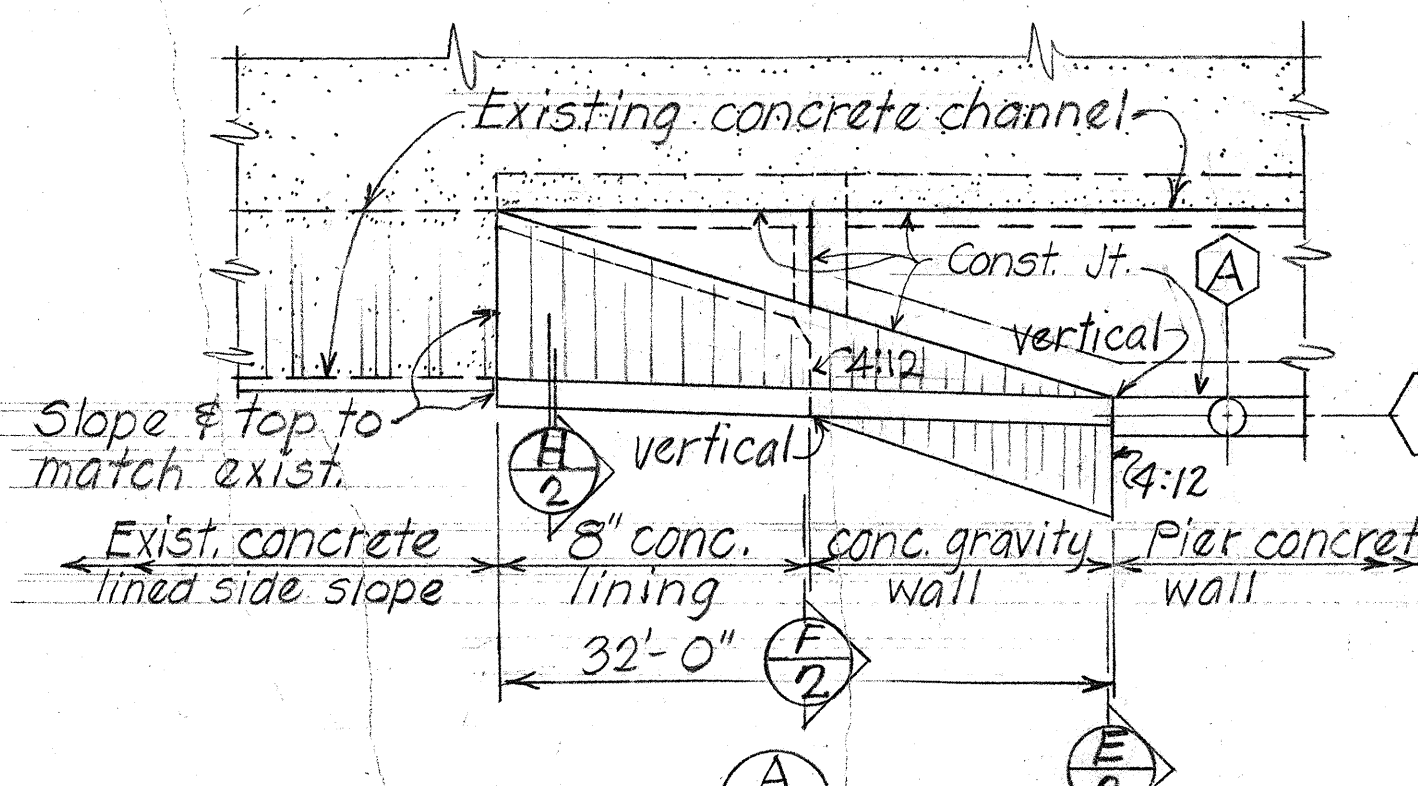
For design notes, general notes, symbols & abbreviations, refer to Sht. #1-1  
 Pile capacity - see Sht. #2



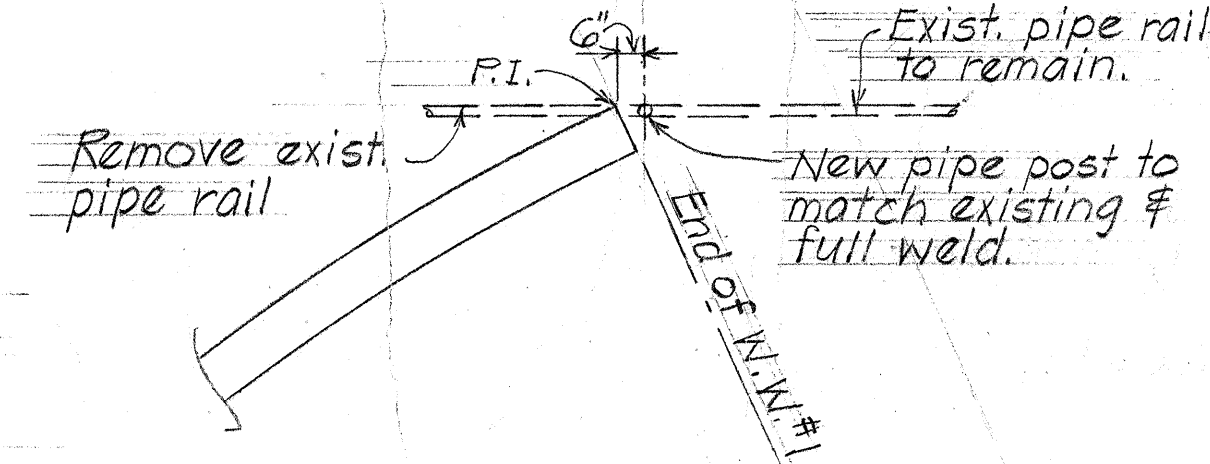
**SECTION (B)** Scale: 1/4" = 1'-0"

**NOTES:-**  
 Drive test piles indicated on plan for length determination. Test piles shall be driven before casting balance of piles.

**FOUNDATION PLAN**  
 Scale: 1" = 20'-0"



**DETAIL (A)**  
 Scale: 1" = 10'-0"



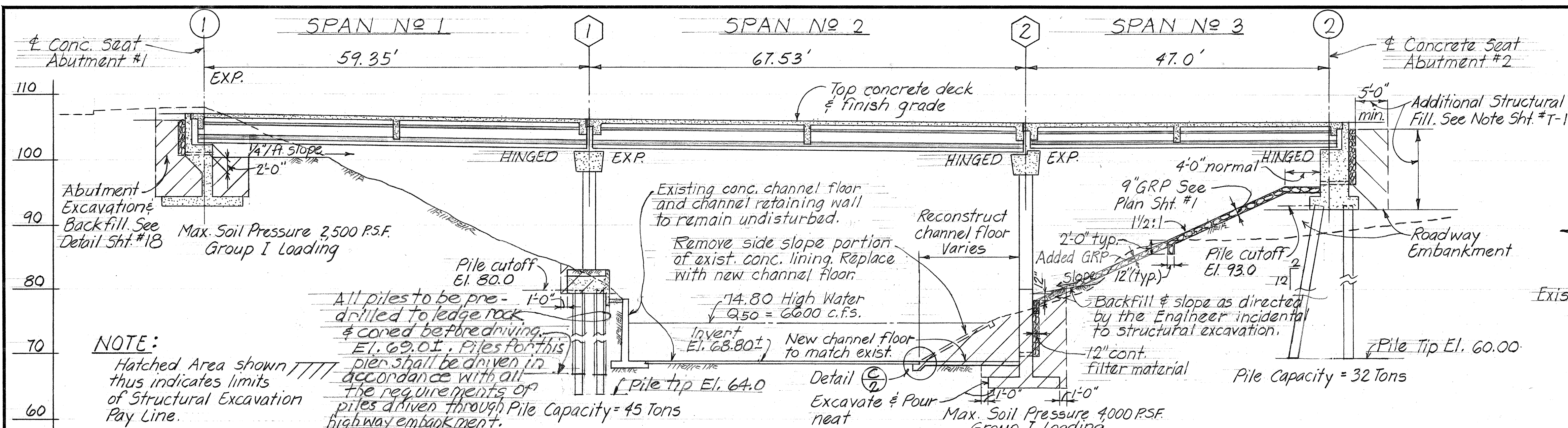
**DETAIL (X)** Scale: 1/4" = 1'-0"

| ESTIMATED QUANTITIES                           |                  |          |
|------------------------------------------------|------------------|----------|
| Concrete - Footing                             | (367 c.y.)       | Lump Sum |
| Concrete - All others                          | (1,108 c.y.)     | Lump Sum |
| Reinforcing Steel                              | (254,000 lbs.)   | Lump Sum |
| Grouted Rubble Paving (GRP)                    | 115              | Cu. Yd.  |
| Prestressed Girder Type II                     | (426 LIN. FT.)   | Lump Sum |
| Prestressed Girder Type III                    | (1,646 LIN. FT.) | Lump Sum |
| Furnishing - Type I Prestressed Conc. Piles    | 2,502            | Lin. Ft. |
| Driving Piles                                  | 1,827            | Lin. Ft. |
| Pre-drilled and cored for piles                | 336              | Lin. Ft. |
| Structural Excavation                          | 2,612            | Cu. Yd.  |
| Metal Bridge Railing (3 Rail Combination Type) | 436              | Lin. Ft. |
| Filter Material                                | 140              | Cu. Yd.  |
| CEMENT RUBBLE MASONRY (CRM)                    | 7                | Cu. Yd.  |
| DRIVING CONCRETE TEST PILES                    | 109              | Lin. Ft. |

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**MOANALUA STREAM BRIDGE**  
 STA. 1+83.42 TO STA. 3+66.42  
**LAYOUT & FOUNDATION PLAN**  
 Moanalua Rd. F-078-1(7)  
 Aug, 1970  
 SHEET No. 1 OF 19 SHEETS



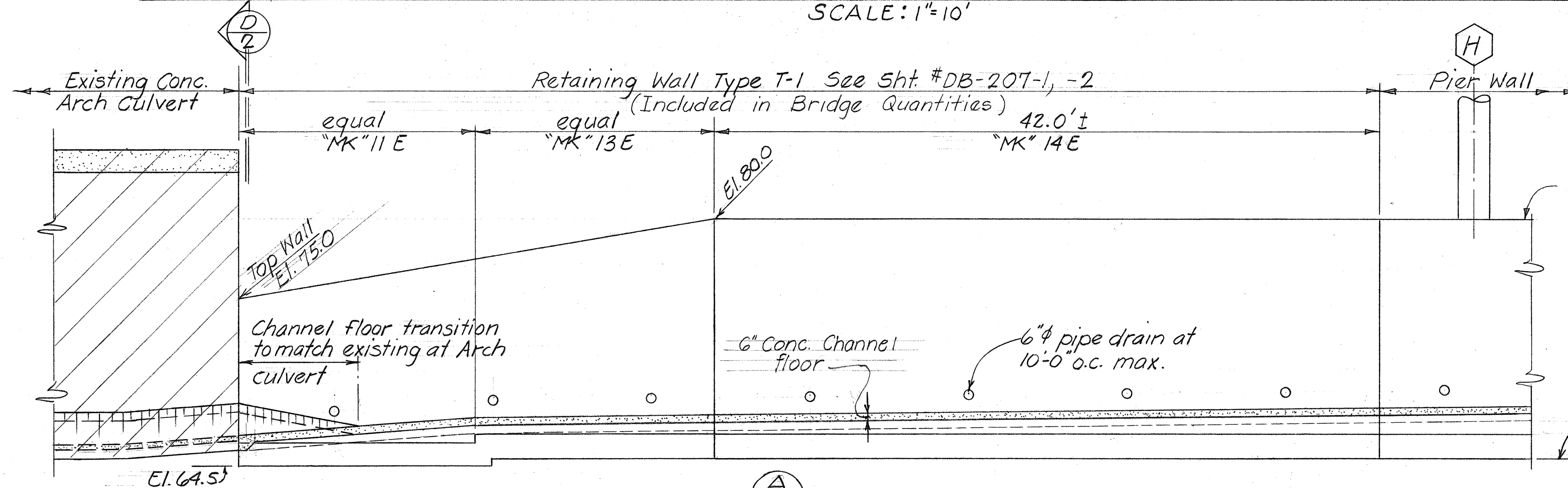
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 215       | 302          |



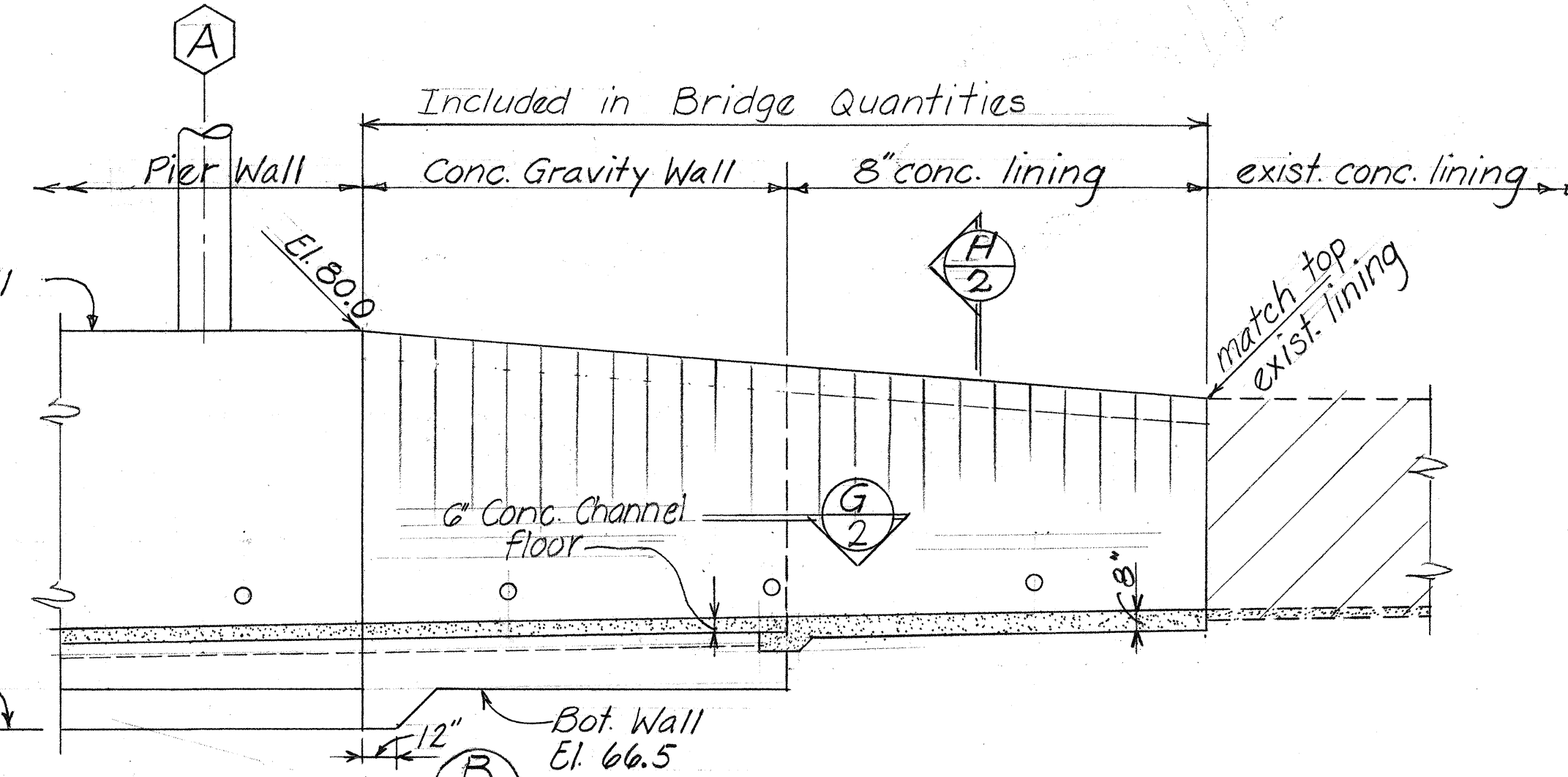
NOTE:  
Hatched Area shown thus indicates limits of Structural Excavation Pay Line.

LONGITUDINAL SECTION ALONG MOANALUA LAKESIDE ACCESS ROAD  
SCALE: 1"=10'

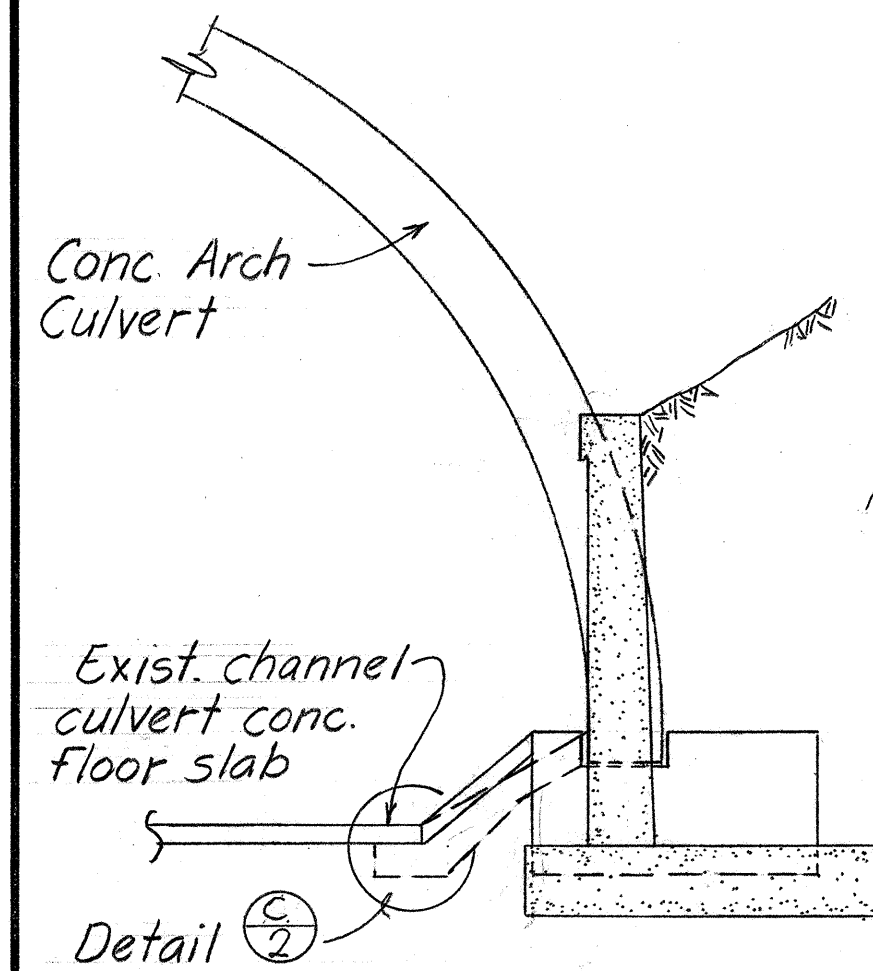
DETAIL C-2  
SCALE: 3/4"=1'-0"



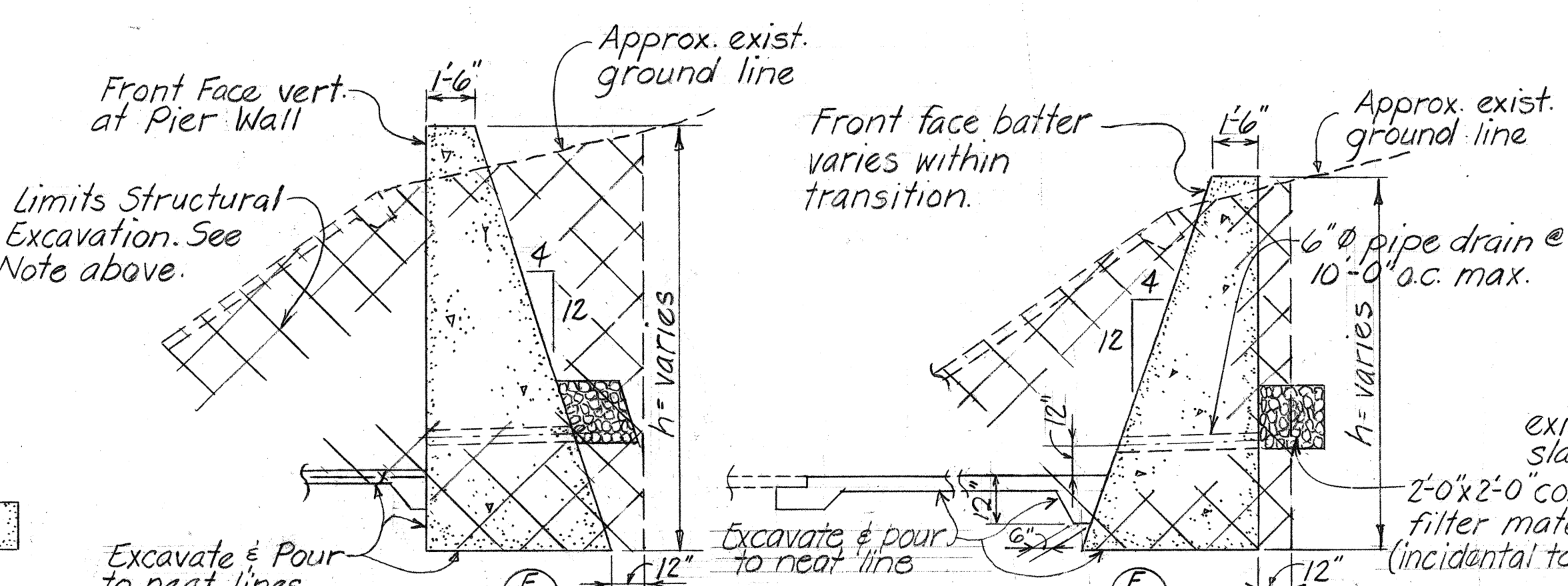
DEVELOPED ELEVATION CHANNEL LINING SCALE: 3/16"=1'-0"



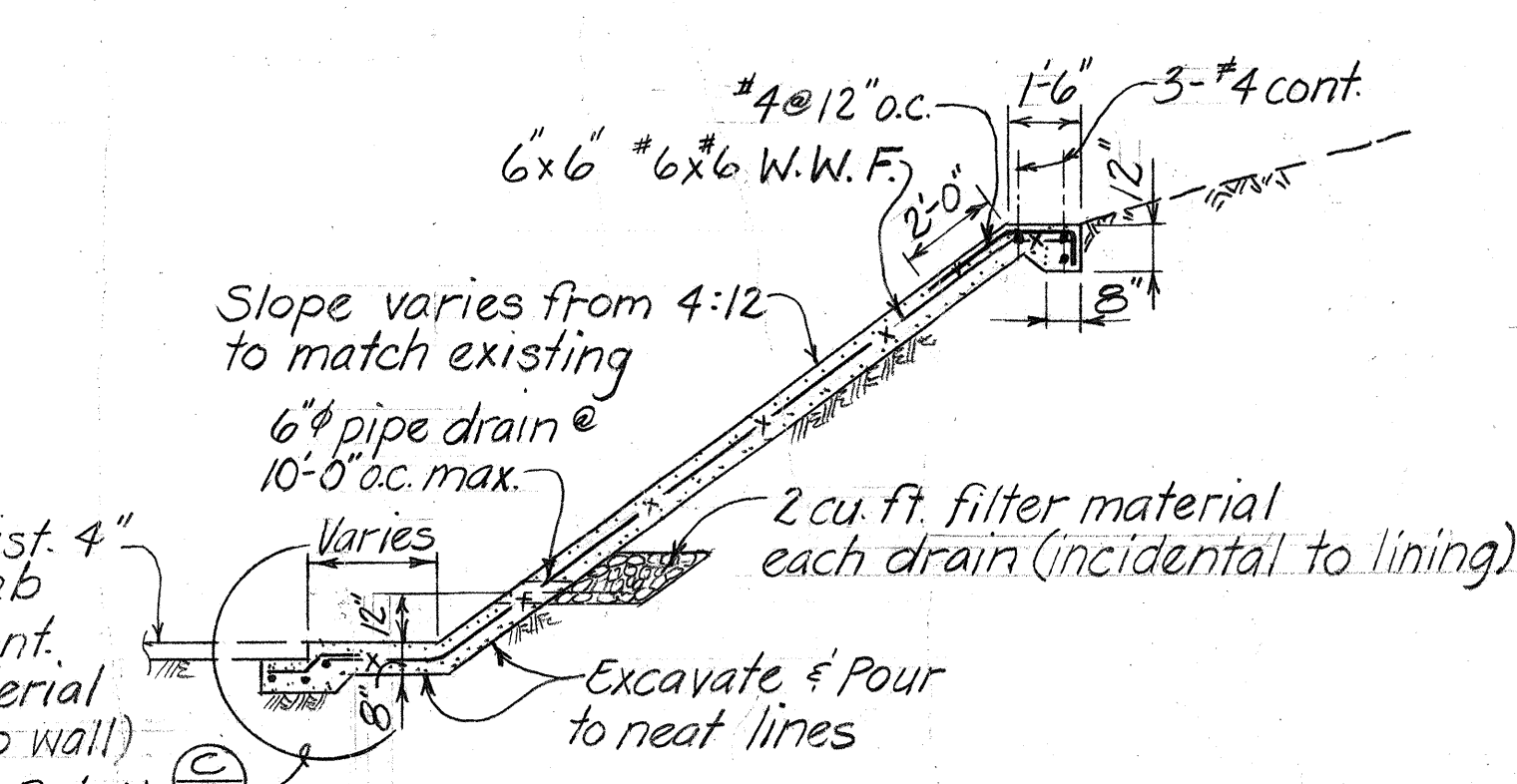
ELEVATION CHANNEL LINING SCALE: 3/16"=1'-0"



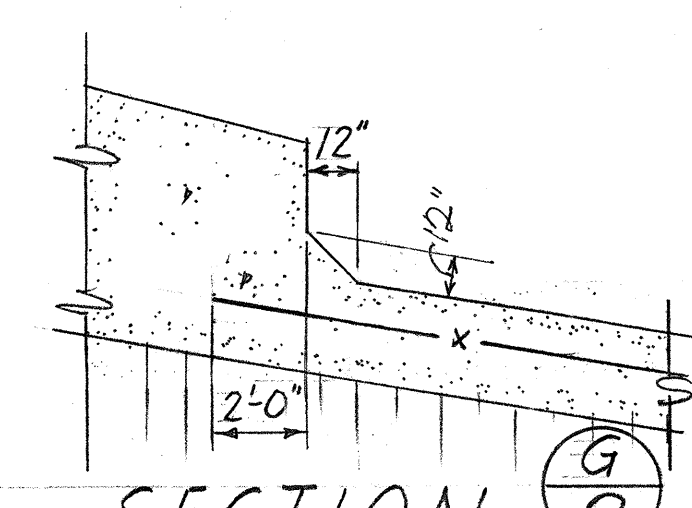
SECTION D-2  
SCALE: 1/4"=1'-0"



SECTION E-2  
CONCRETE GRAVITY WALL SECTIONS  
NO SCALE



SECTION F-2  
SCALE: 1/4"=1'-0"

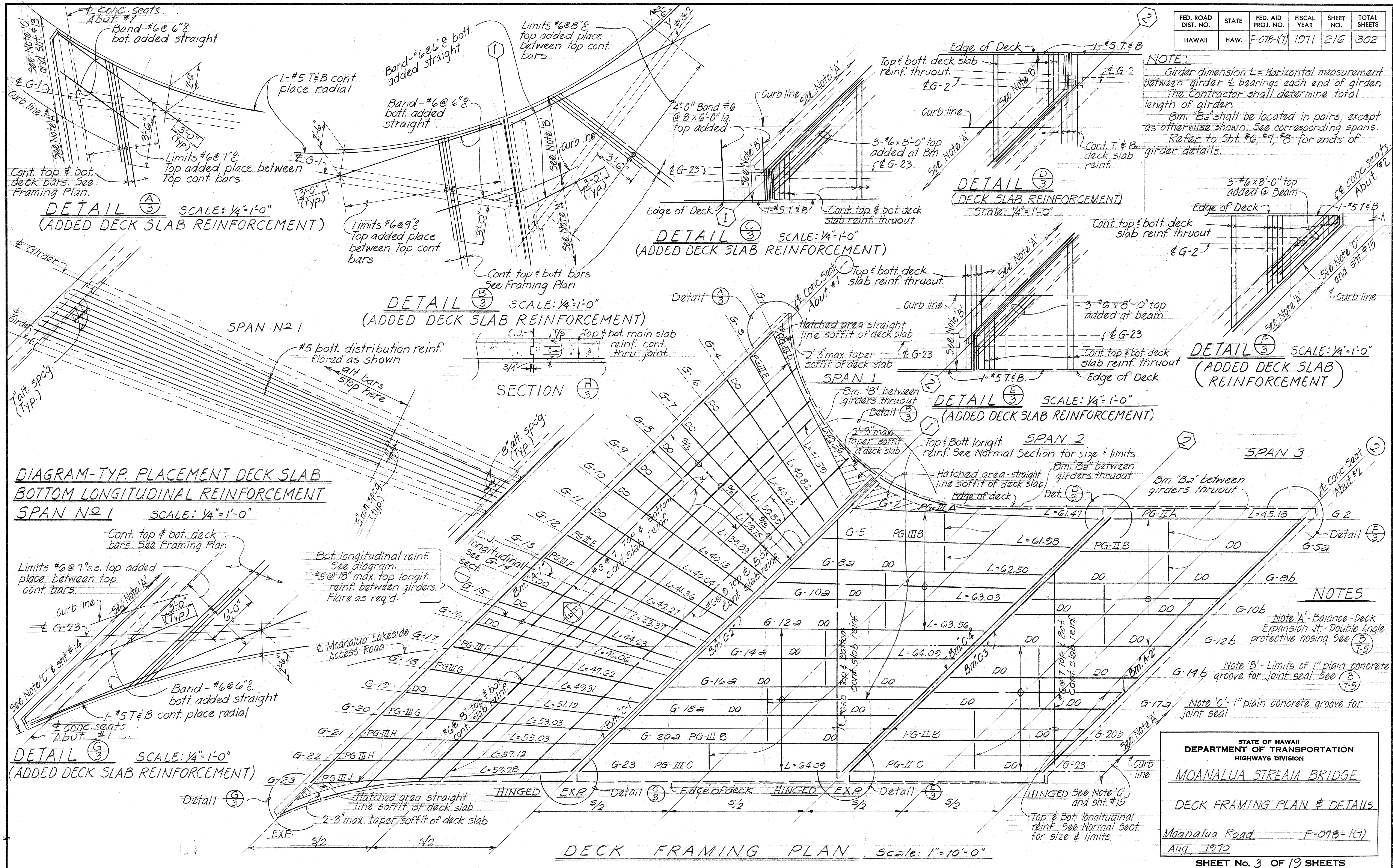


SECTION G-2  
SCALE: 1/4"=1'-0"

|                                                                      |            |
|----------------------------------------------------------------------|------------|
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION |            |
| MOANALUA STREAM BRIDGE                                               |            |
| SECTIONS & DETAILS                                                   |            |
| Moanalua Road                                                        | F-078-1(7) |
| Aug, 1970                                                            |            |
| SHEET No. 2 OF 19 SHEETS                                             |            |



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(1)         | 1971        | 216       | 302          |

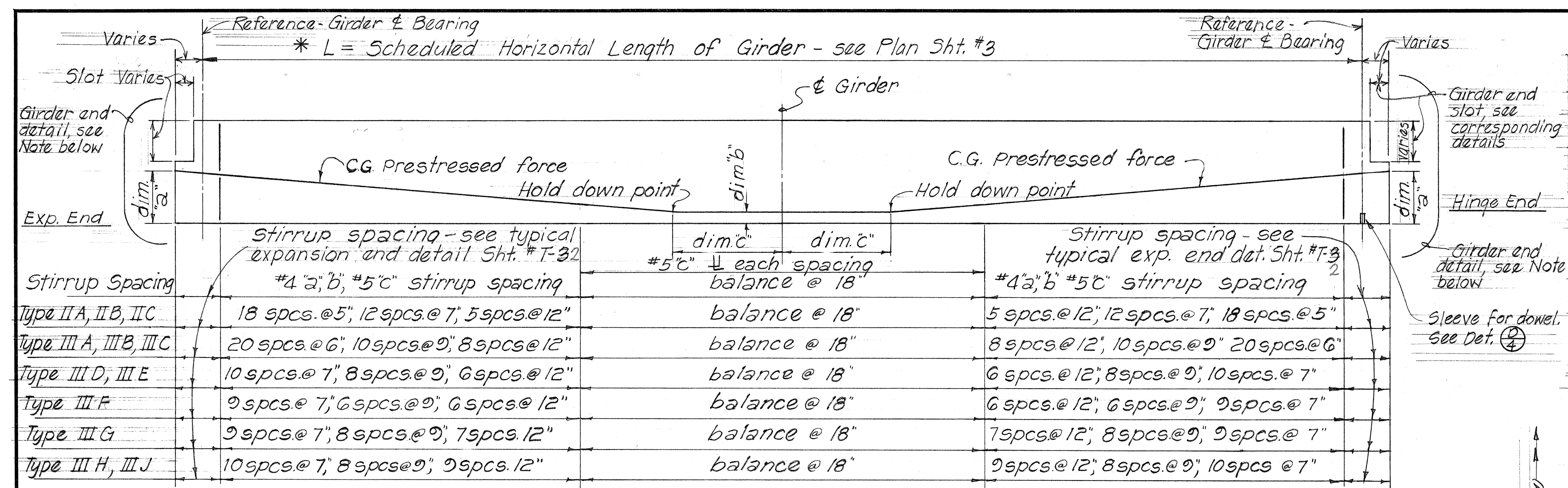


|                                                                      |
|----------------------------------------------------------------------|
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION |
| MOANALUA STREAM BRIDGE                                               |
| DECK FRAMING PLAN & DETAILS                                          |
| Moanalua Road F-078-1(1)<br>Aug., 1972                               |
| SHEET No. 3 OF 19 SHEETS                                             |



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 217       | 302          |

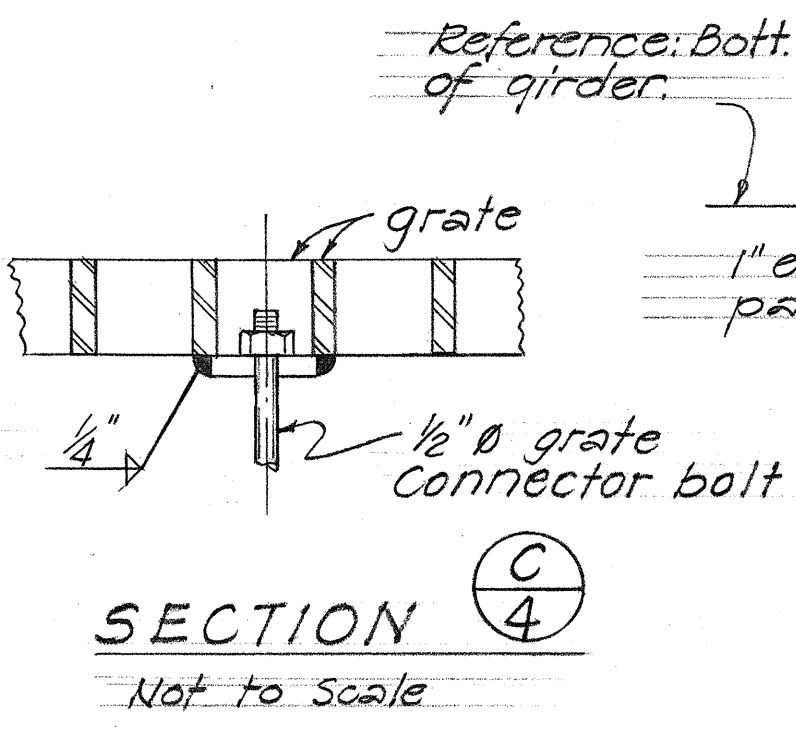
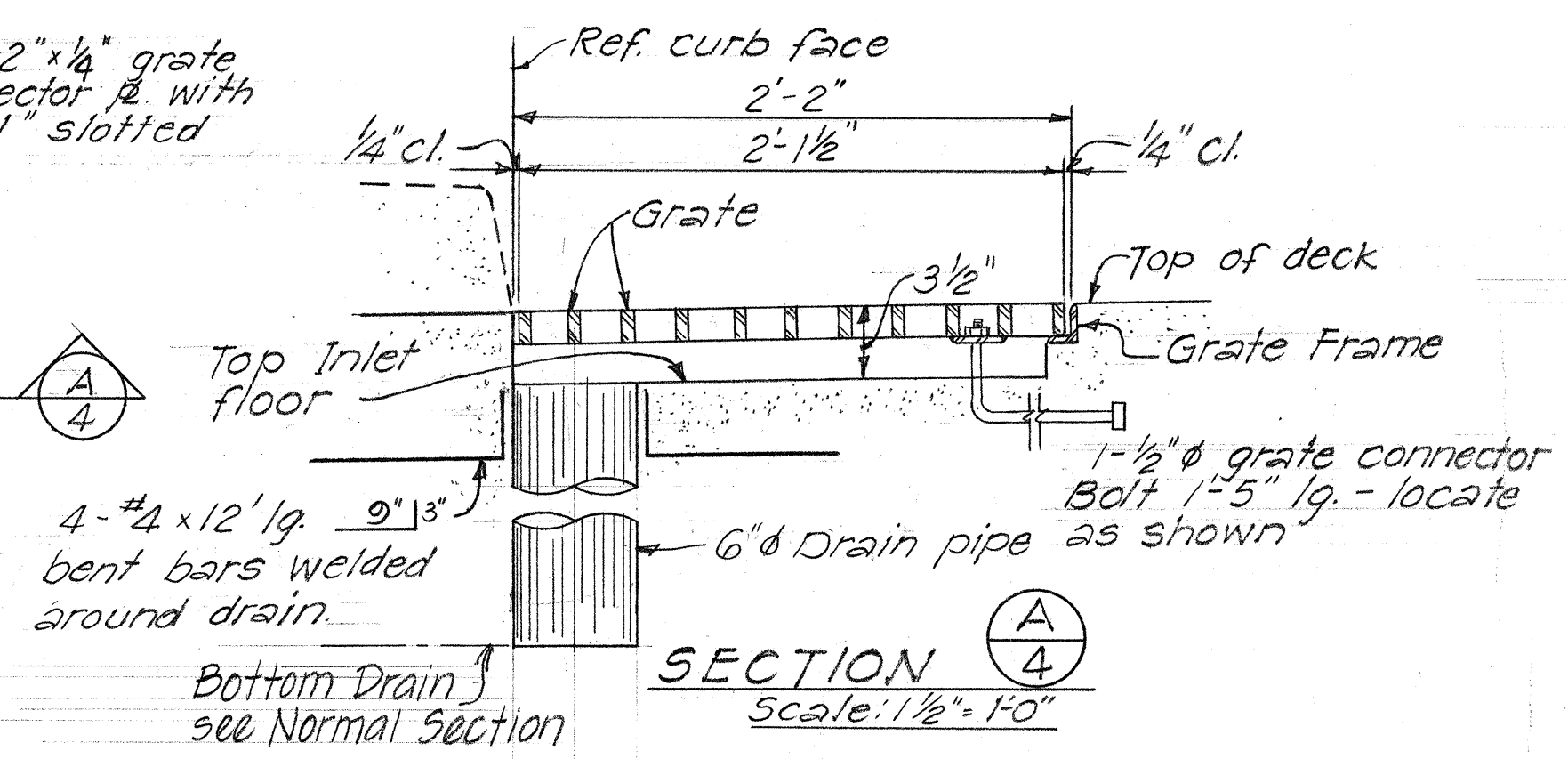
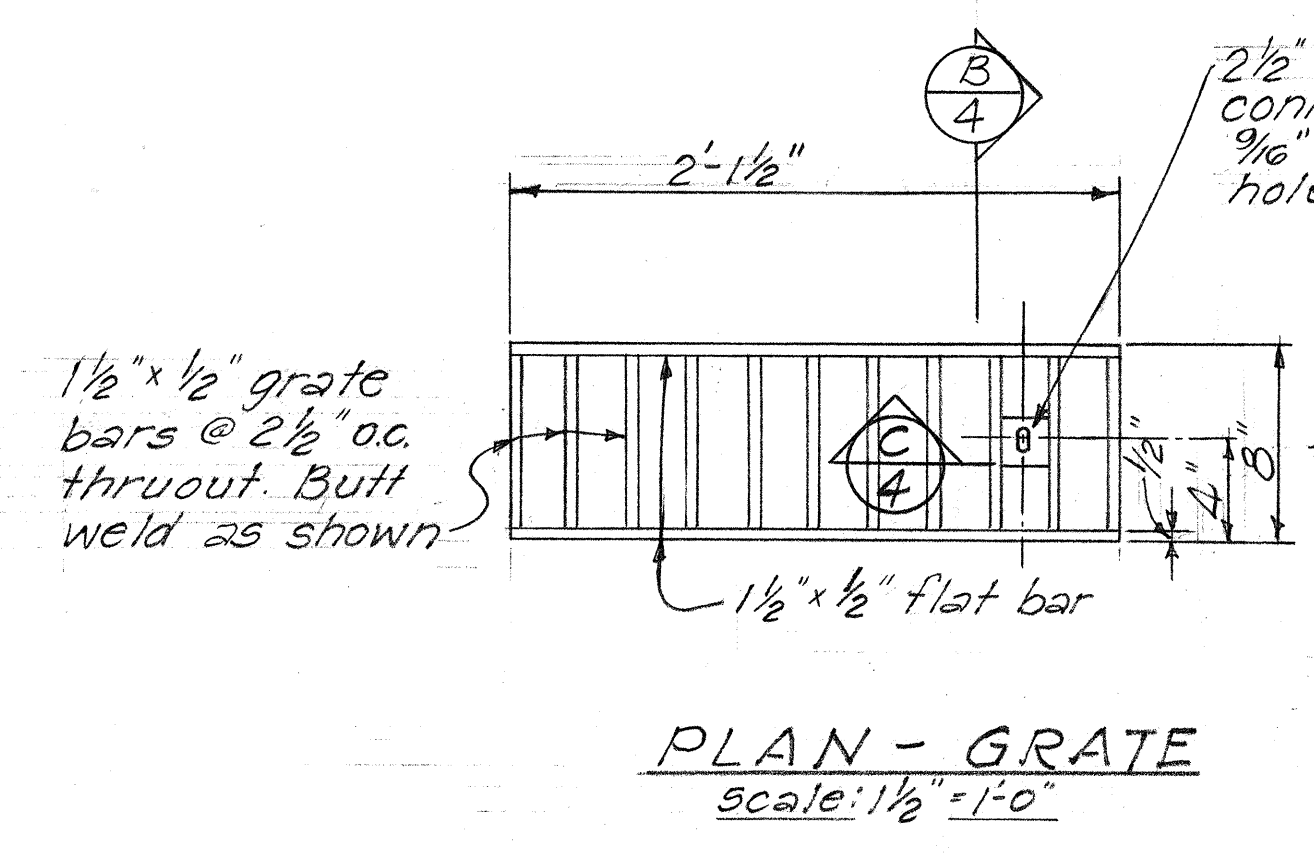
| PRESTRESSED GIRDER TABLE |          |          |          |                              |
|--------------------------|----------|----------|----------|------------------------------|
| Girder Type              | dim. "a" | dim. "b" | dim. "c" | Working Force P <sub>p</sub> |
| IIA, IIB, IIC            | 13 1/8"  | 6 9/16"  | 5'-0"    | 444 <sup>K</sup>             |
| IIIA, IIIB, IIIC         | 13 1/16" | 7 1/2"   | 7'-0"    | 645 <sup>K</sup>             |
| IIID, IIIE               | 17 3/8"  | 7 7/16"  | 5'-0"    | 403 <sup>K</sup>             |
| IIIF                     | 16 5/16" | 7 5/16"  | 5'-0"    | 444 <sup>K</sup>             |
| IIIG                     | 15 1/2"  | 7 1/4"   | 6'-0"    | 484 <sup>K</sup>             |
| IIIH, IIIJ               | 14 3/4"  | 7 1/8"   | 7'-0"    | 524 <sup>K</sup>             |



### TYPICAL PRESTRESSED GIRDER DETAIL

Not to scale

\* NOTE: The Contractor shall determine the total sloping length of each girder.

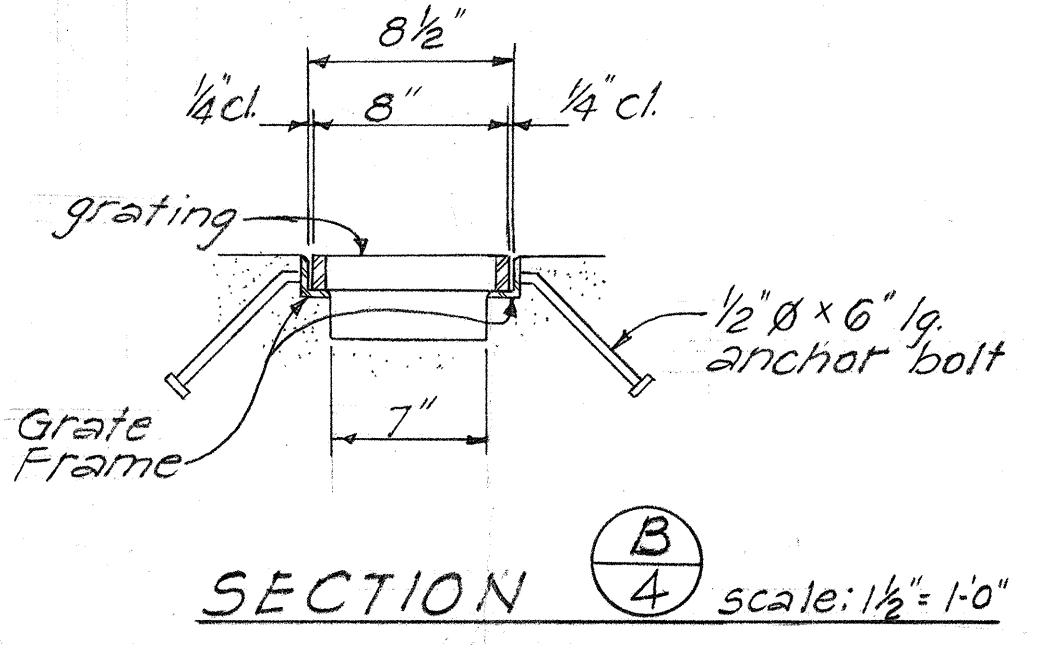
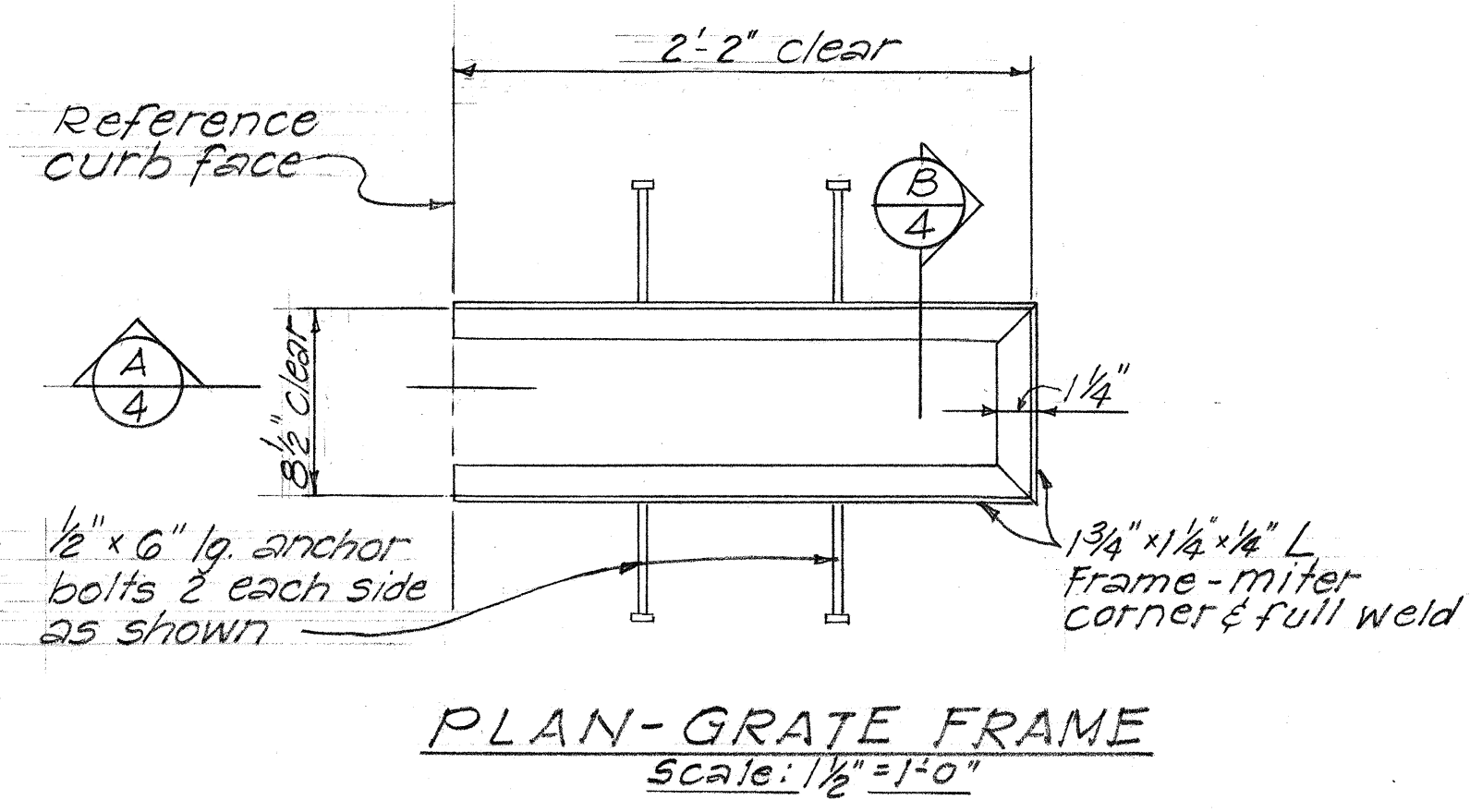


### TYPICAL HINGED END DETAIL

Scale: 1" = 1'-0"

### NOTE:

Refer to corresponding drawing Shts. #6, #7, #8 for girder end details & slots.  
For additional anchors in prestressed girder for beam connection, see Shts. #6, #7, #8 & T-3



### ASSEMBLAGE

### NOTES:

Steel frame and grating shall be designed to carry an H-520-44 loading.  
The Contractor may substitute a similar grating of an equivalent area, subject to the approval of the Engineer. See Special Provisions.  
Drain pipe frame and grating to be incidental to concrete and shall not be paid for separately.  
Entire grating assembly bolts and anchors to be hot dipped galvanized.

### TYPICAL DECK STORM DRAIN GRATE AND FRAME

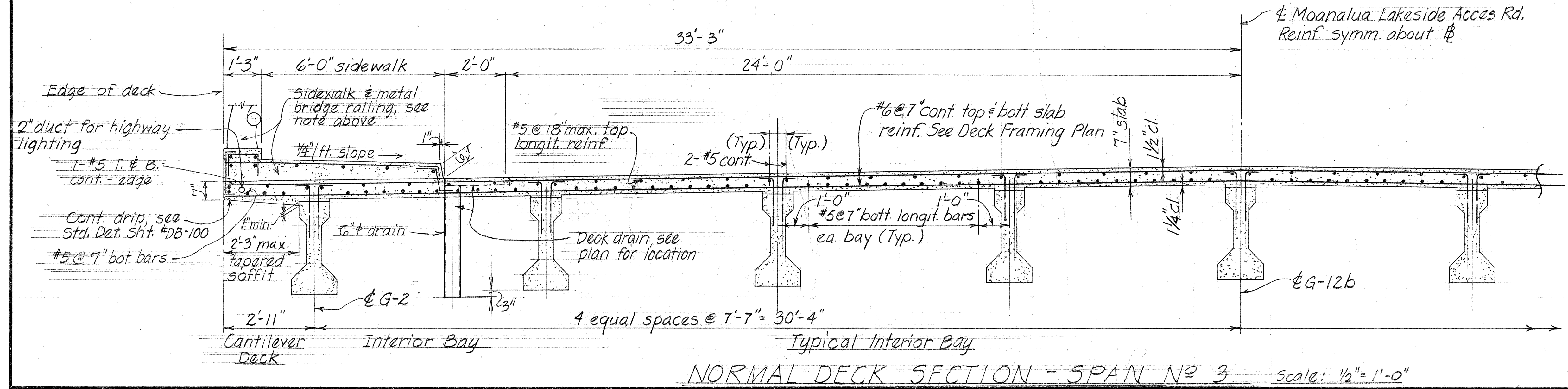
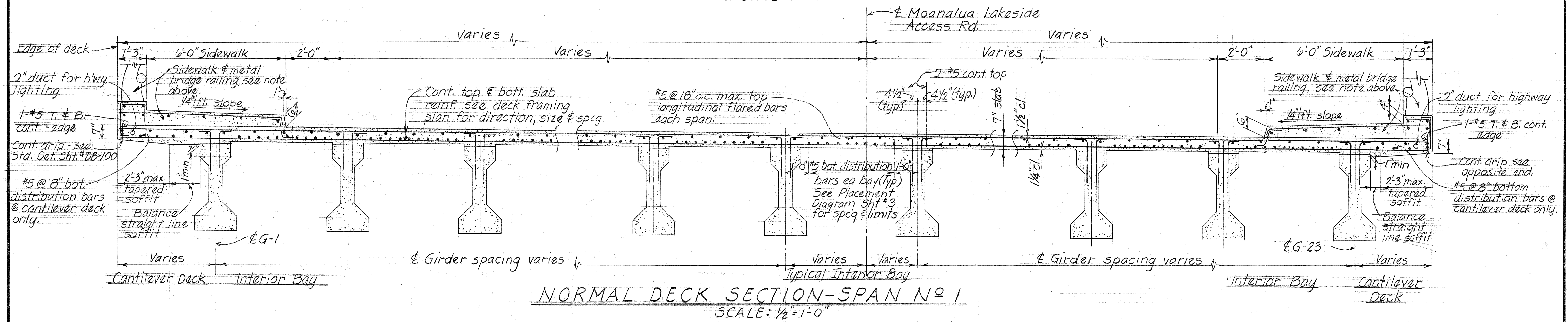
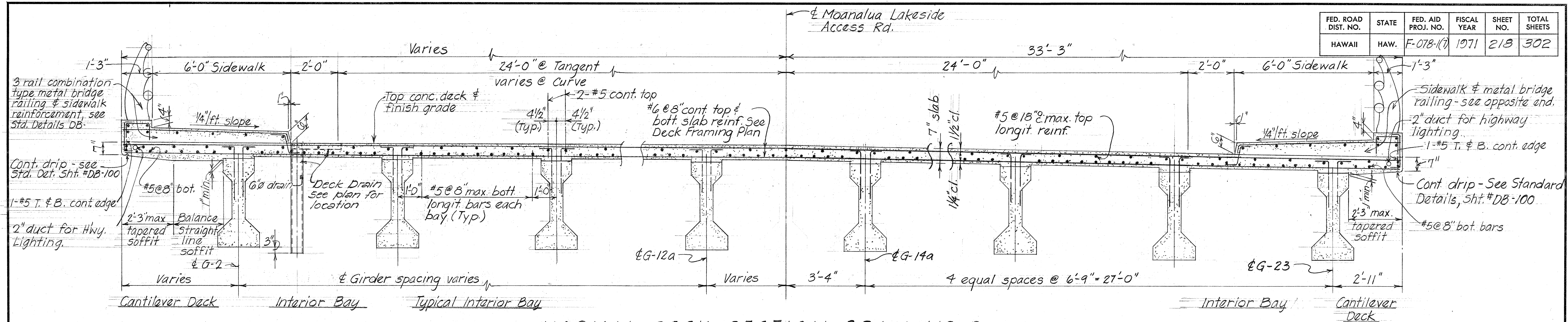
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

MOANALUA STREAM BRIDGE  
PRESTRESSED GIRDER DETAILS  
Moanalua Rd. F-078-1(7)  
Aug, 1970

SHEET No. 4 OF 19 SHEETS



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 218       | 302          |



REFERENCE NOTE:  
Concrete drop panel detail at prestressed girder. See Lakeside Separation Structure #2 sheet #5.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

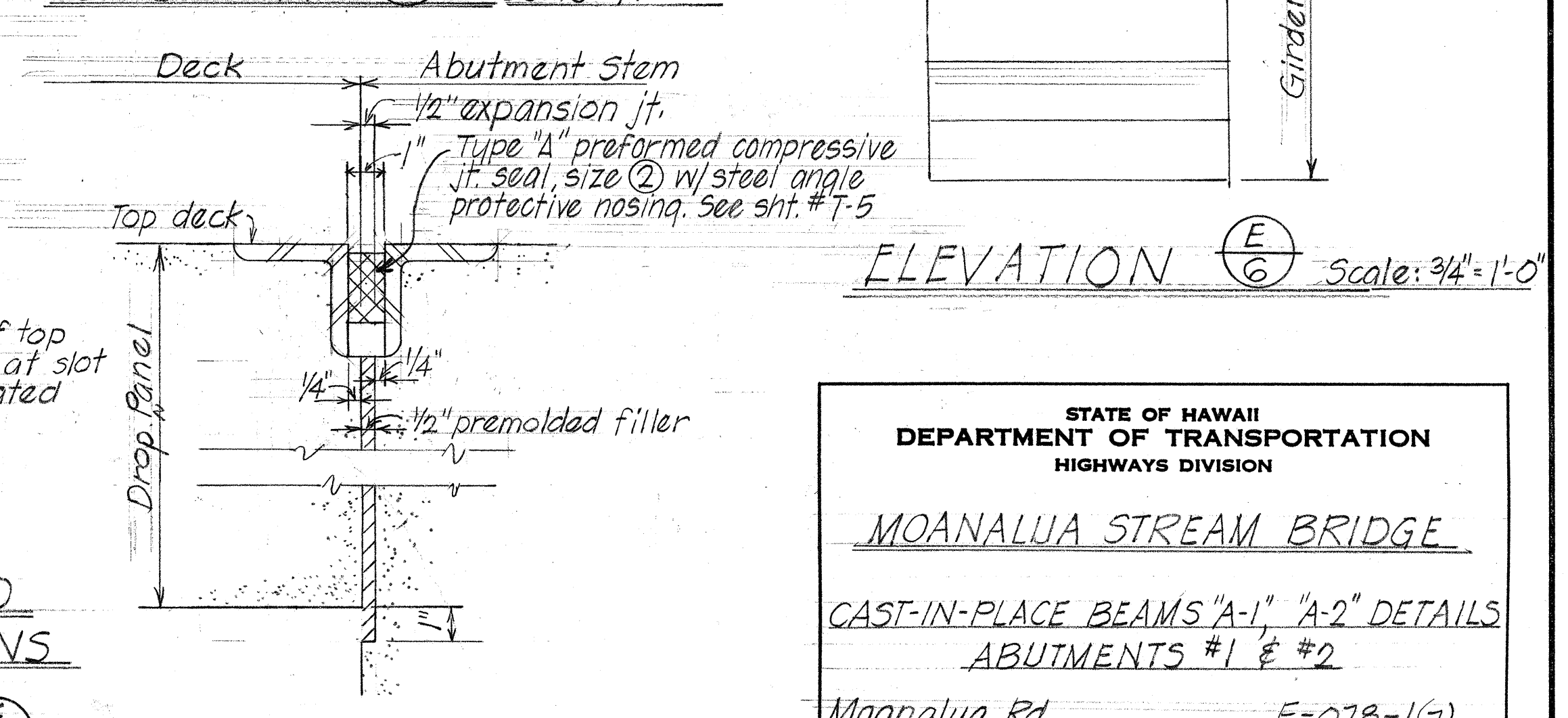
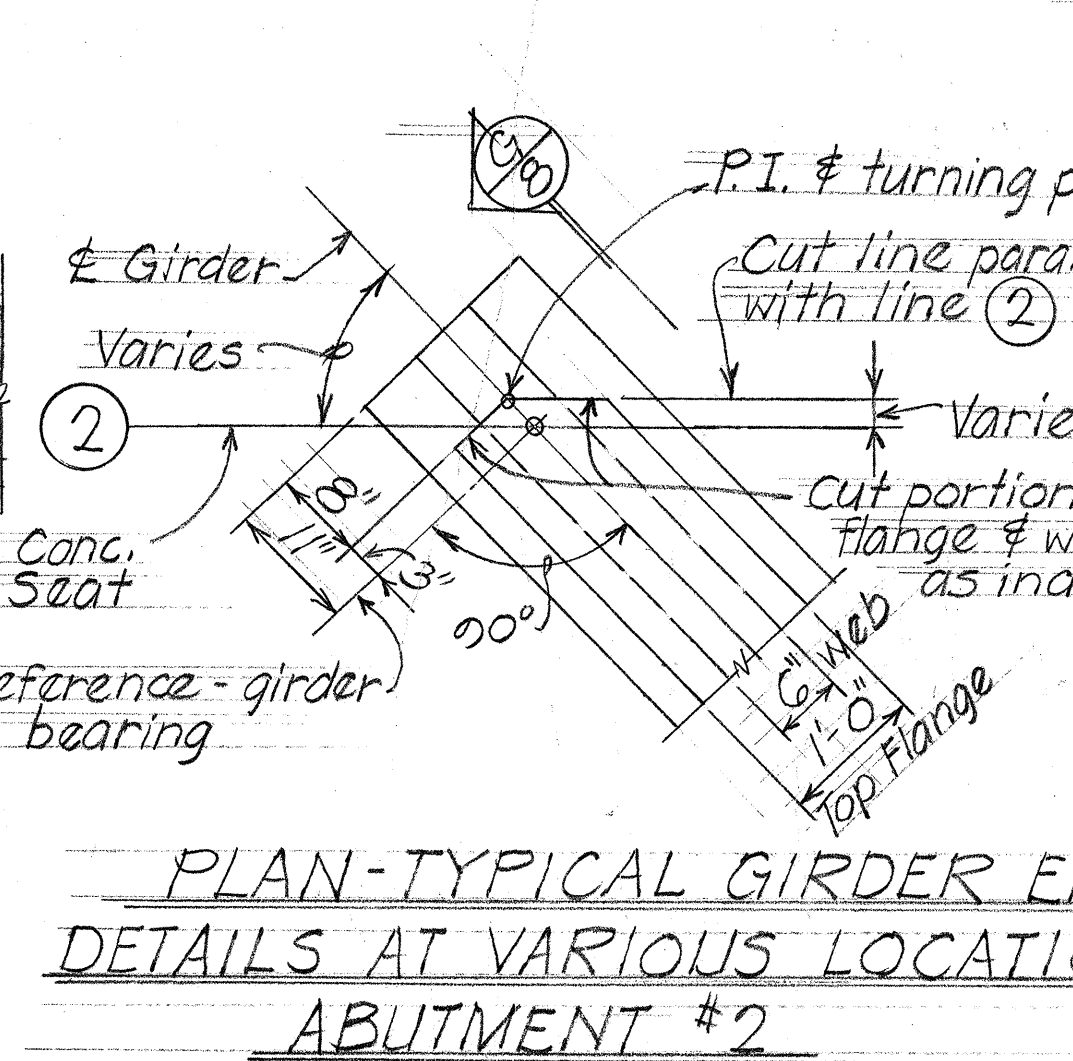
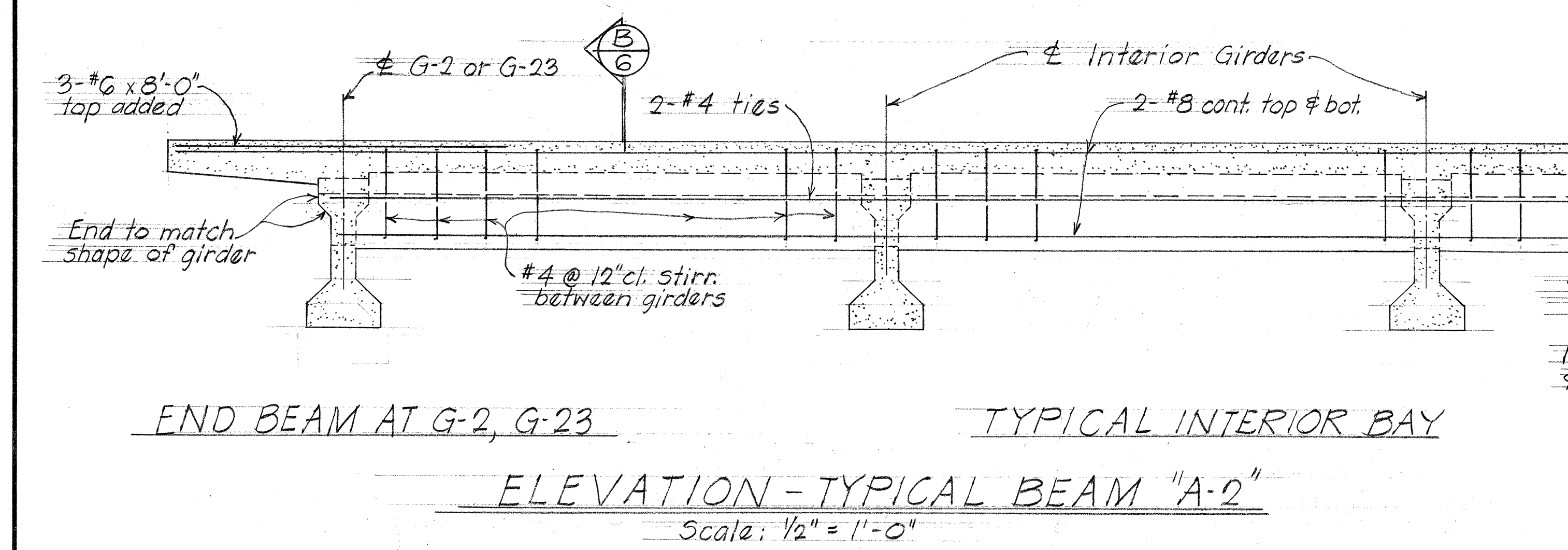
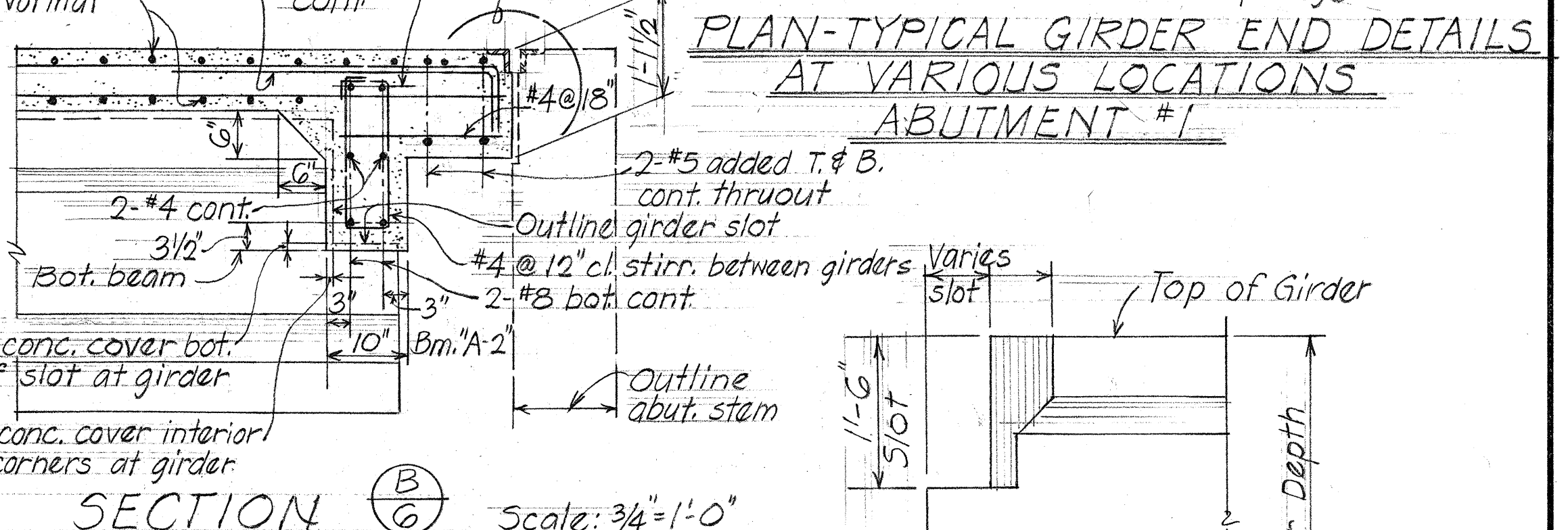
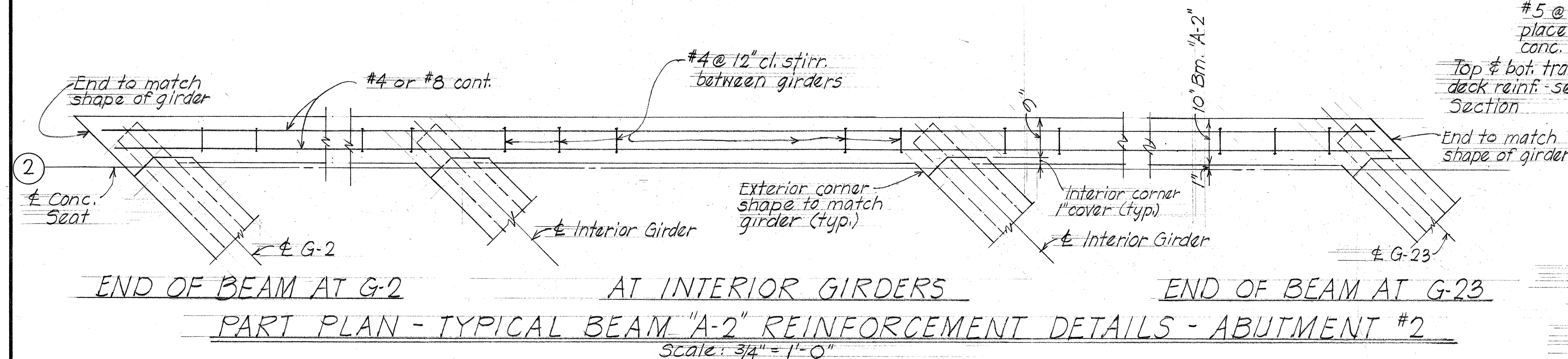
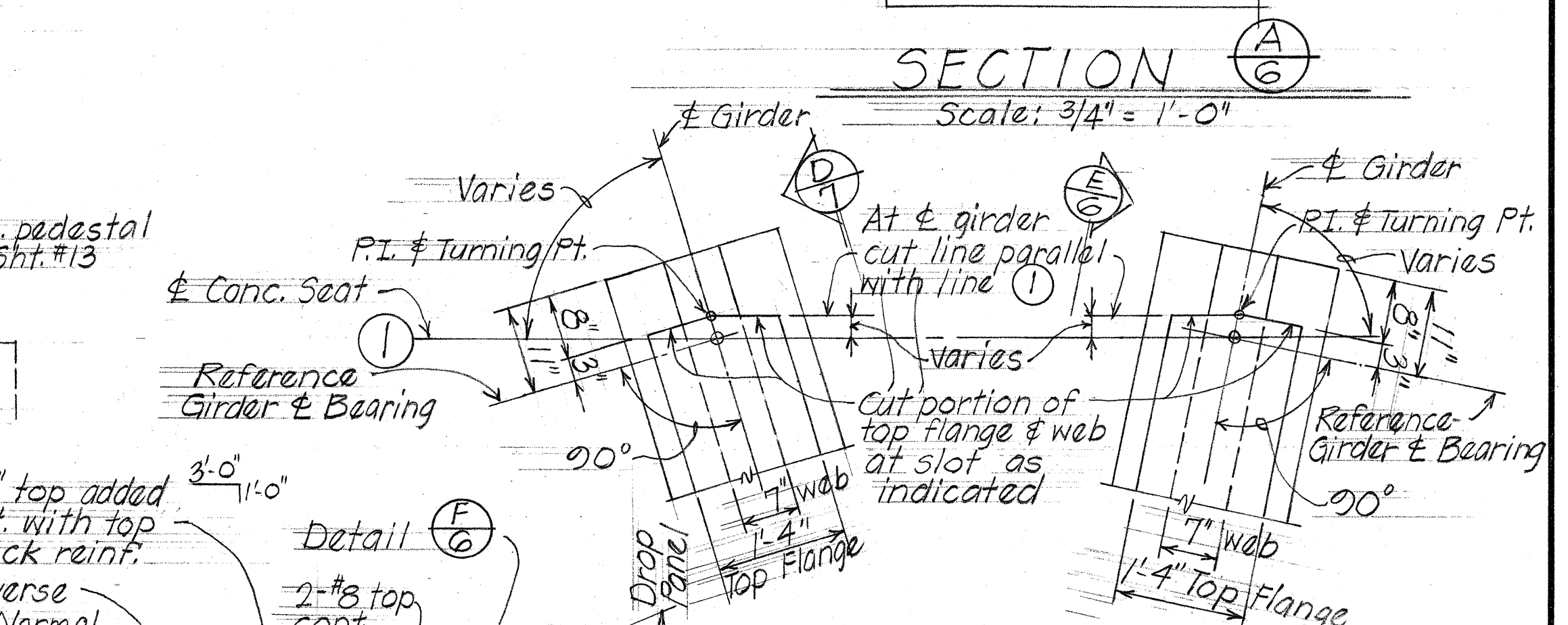
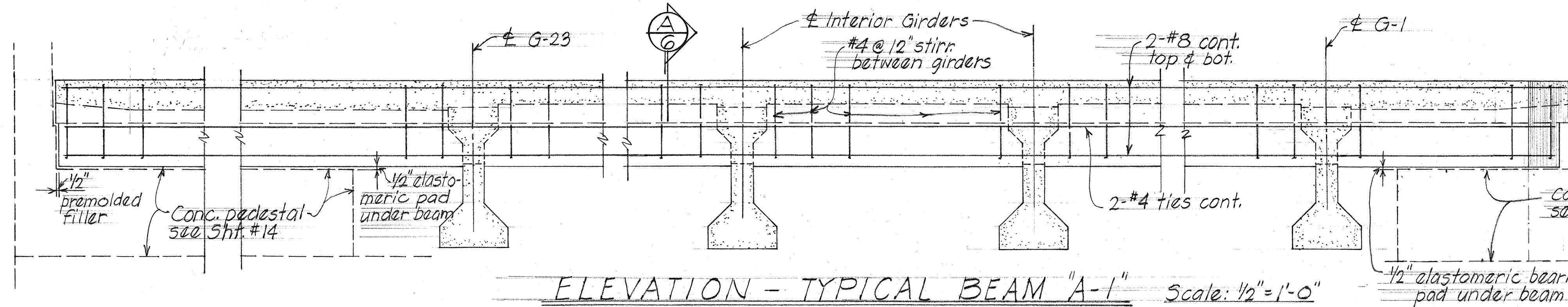
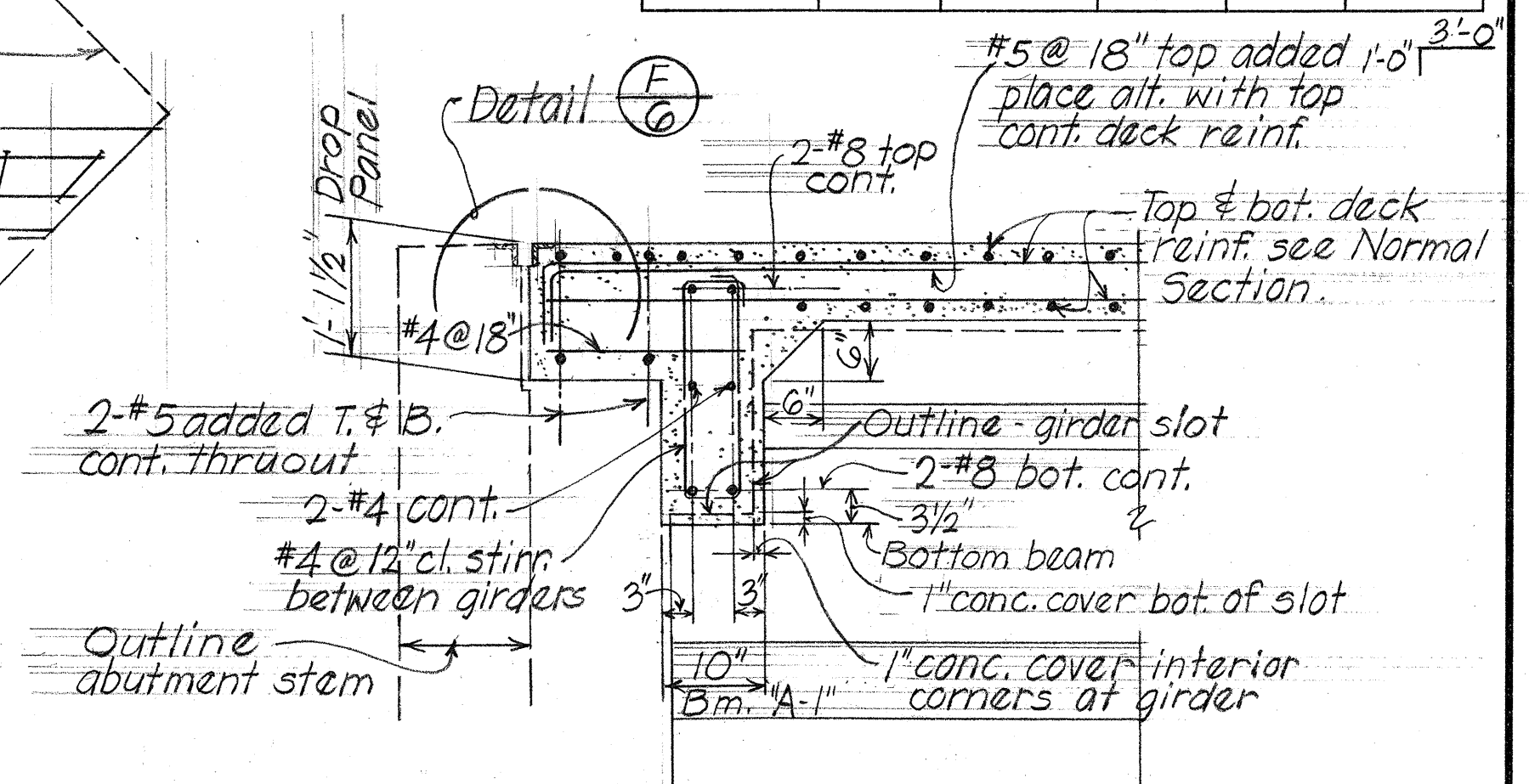
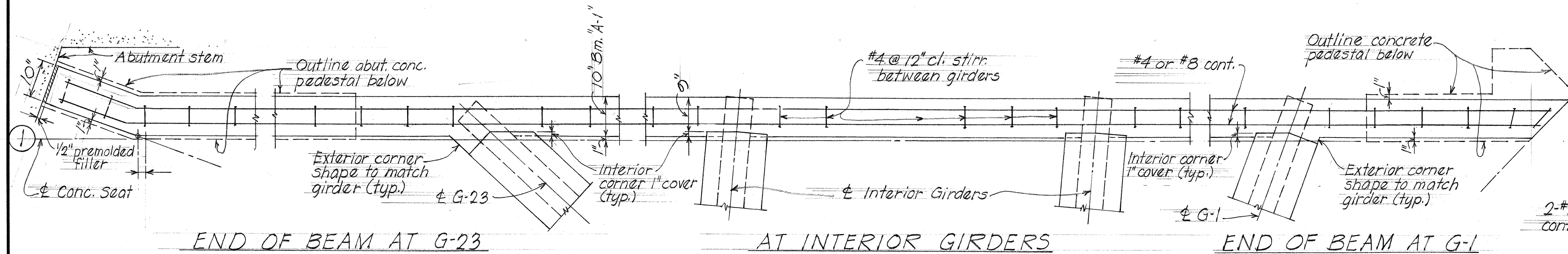
MOANALUA STREAM BRIDGE

Moanalua Rd. Aug. 1970 F-078-1(7)

SHEET No. 5 OF 19 SHEETS



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 219       | 302          |



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

MOANALUA STREAM BRIDGE

CAST-IN-PLACE BEAMS 'A-1', 'A-2' DETAILS  
ABUTMENTS #1 & #2

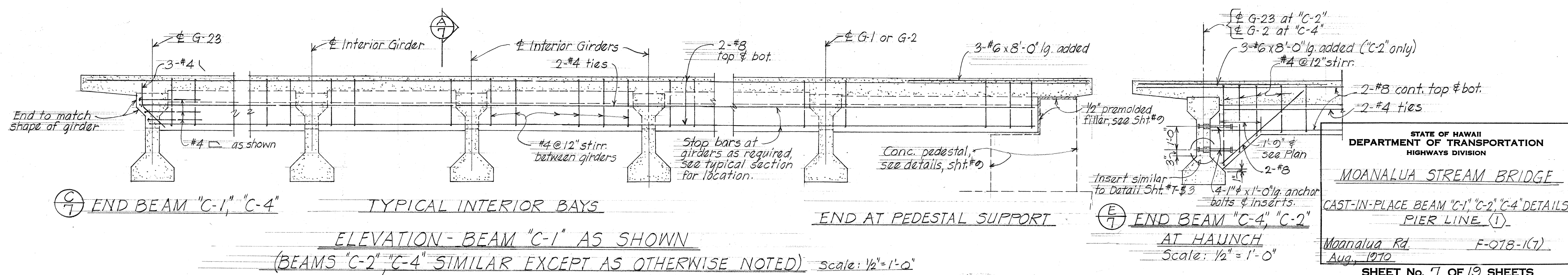
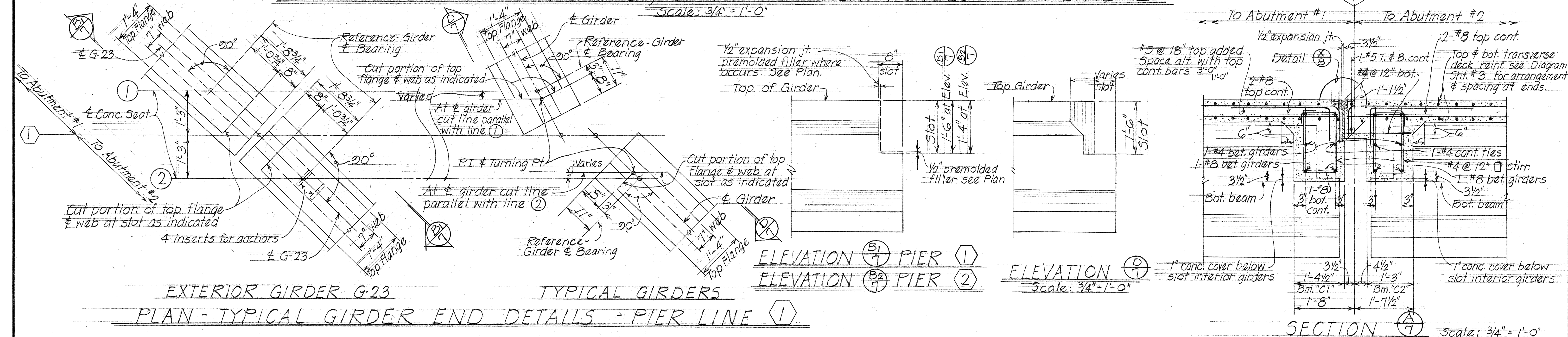
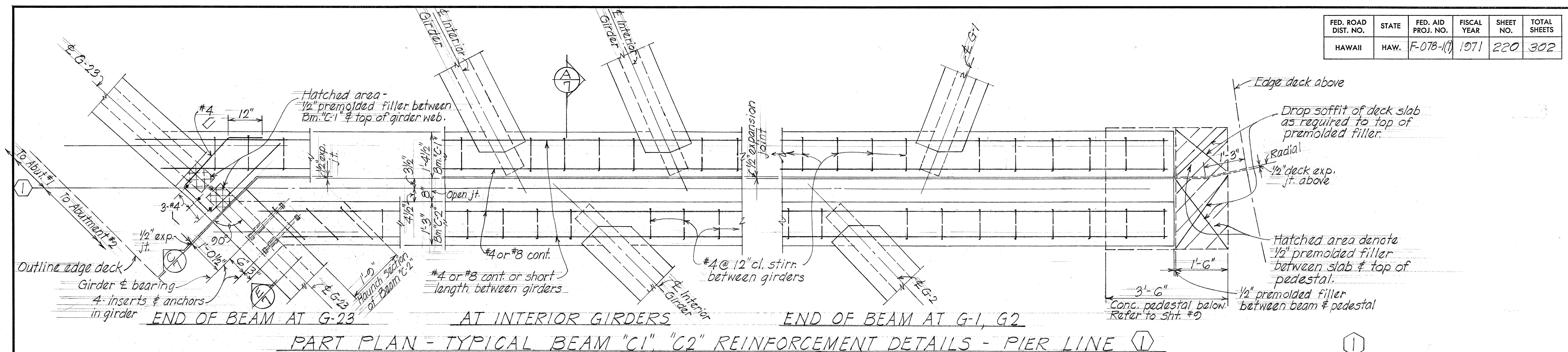
Moanalua Rd. F-078-1(7)  
Aug. 1970

SHEET No. 6 OF 19 SHEETS

DATE: Aug 75  
SURVEY PLOTTED BY: NY  
DRAWN BY: NY  
CHECKED BY: NY  
NOTE BOOK: NY  
QUANTITIES BY: NY  
BY: NY

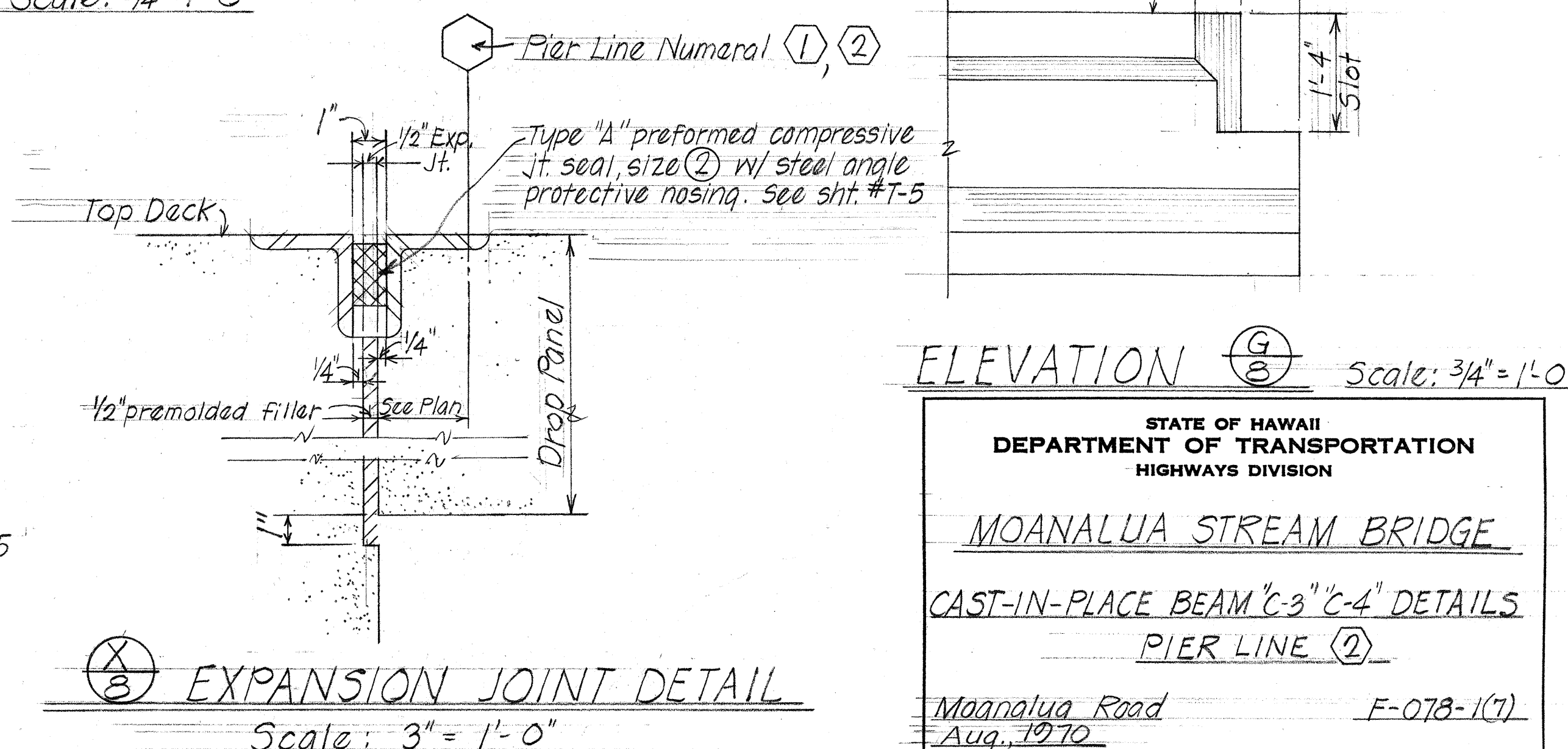
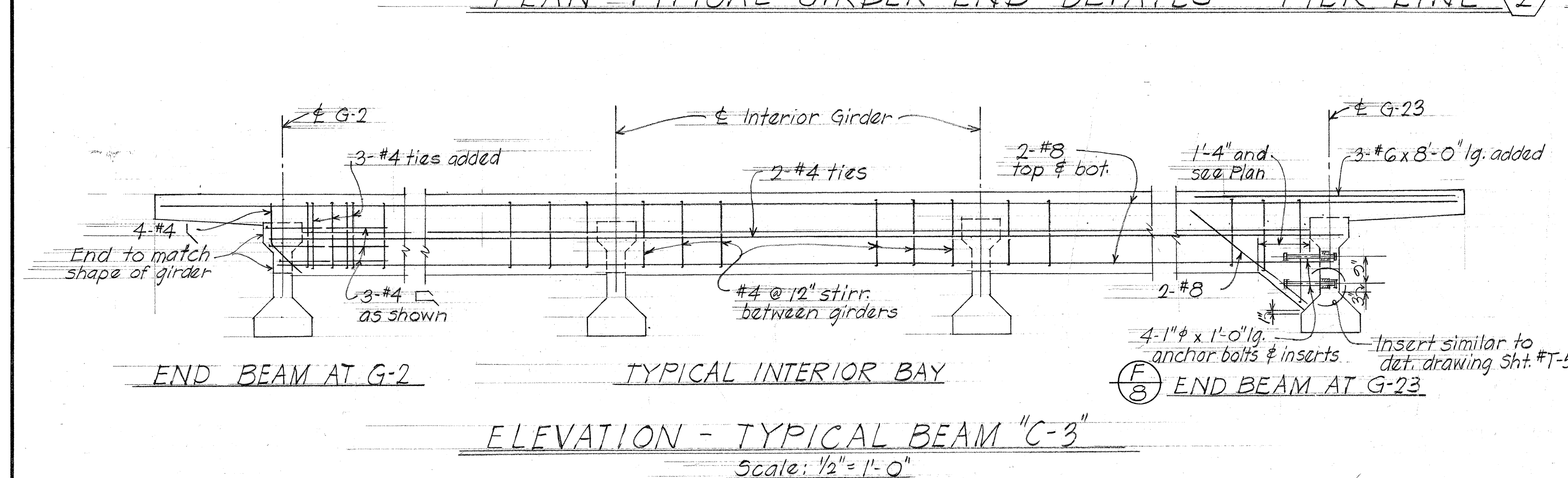
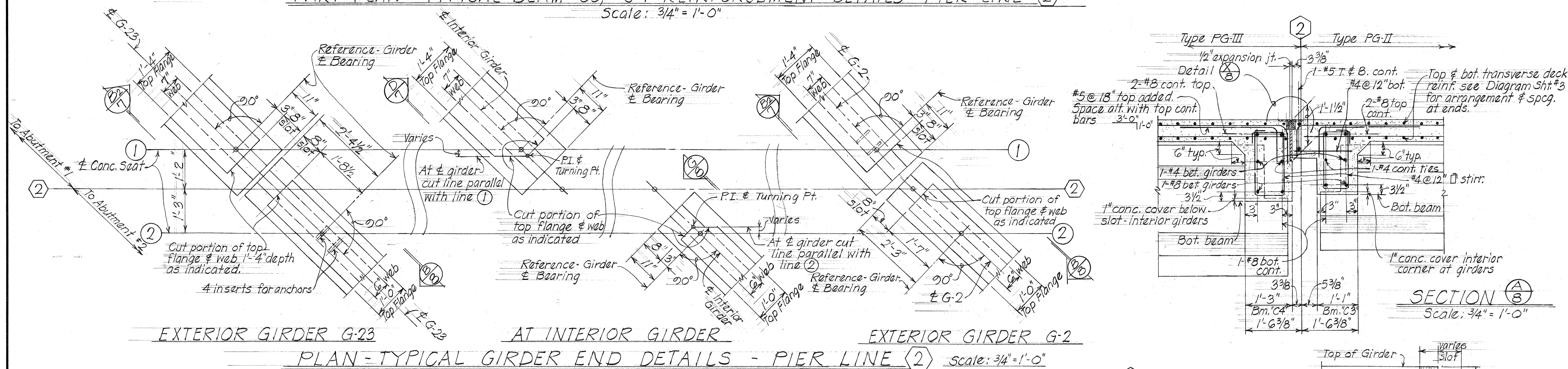
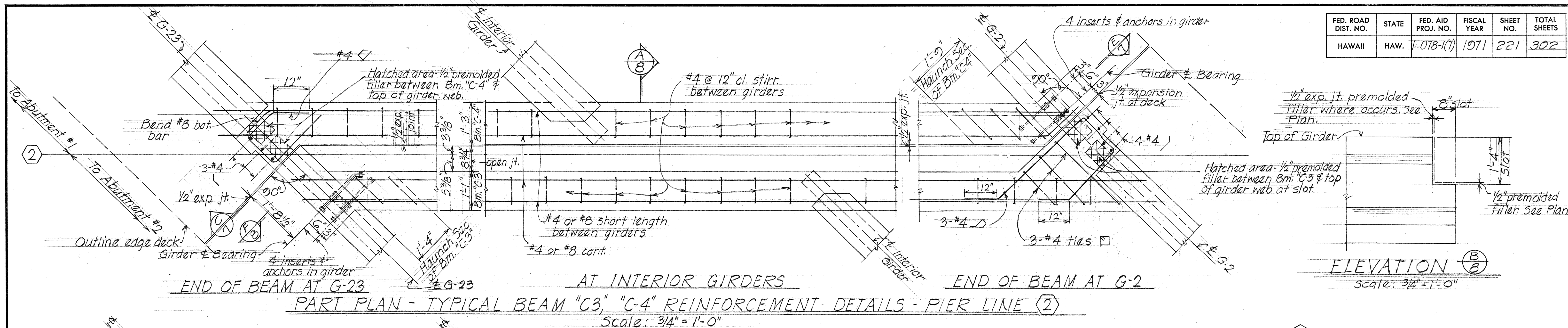


| FED. ROAD<br>DIST. NO. | STATE | FED. AID<br>PROJ. NO. | FISCAL<br>YEAR | SHEET<br>NO. | TOTAL<br>SHEET |
|------------------------|-------|-----------------------|----------------|--------------|----------------|
| HAWAII                 | HAW.  | F-078-1(1)            | 1971           | 220          | 302            |





| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 221       | 302          |



**ELEVATION (G) Scale: 3/4" = 1'-0"**

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**MOANALUA STREAM BRIDGE**

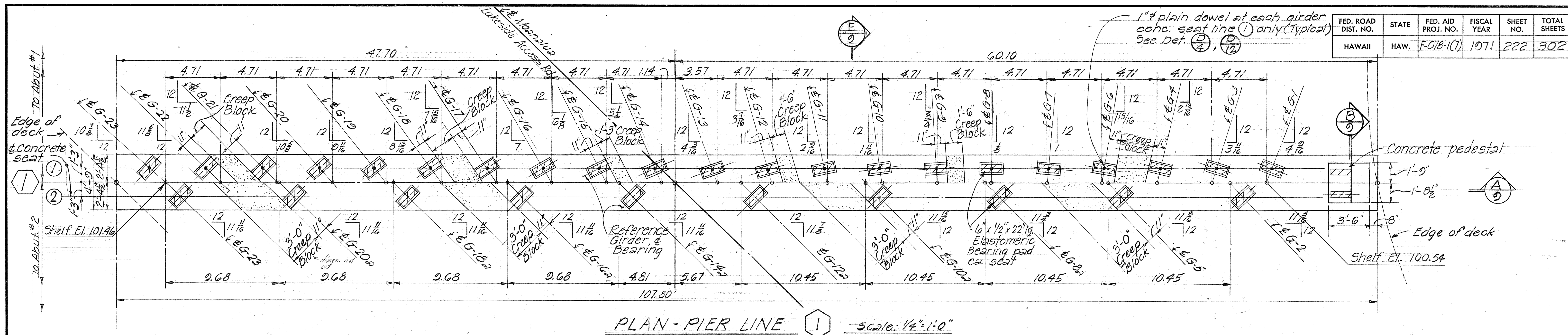
**CAST-IN-PLACE BEAM "C-3" "C-4" DETAILS**  
PIER LINE (2)

Moanalua Road Aug. 1970 F-078-1(7)

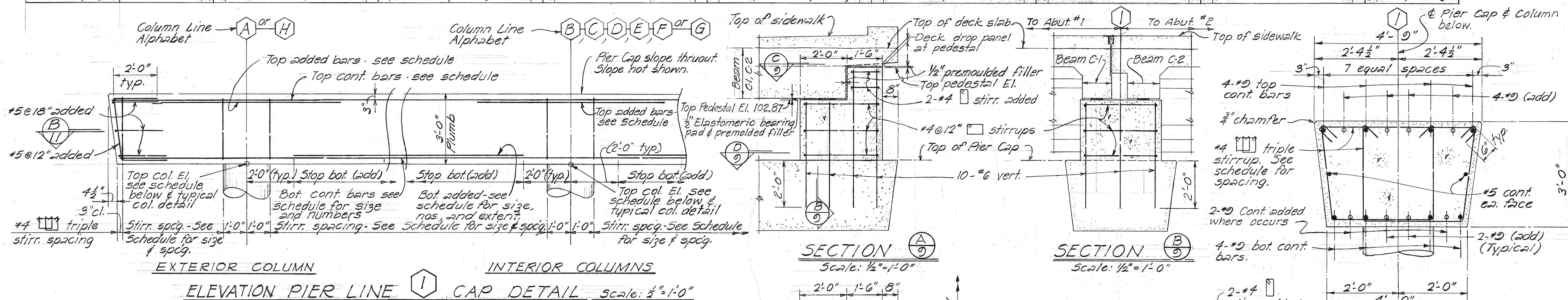
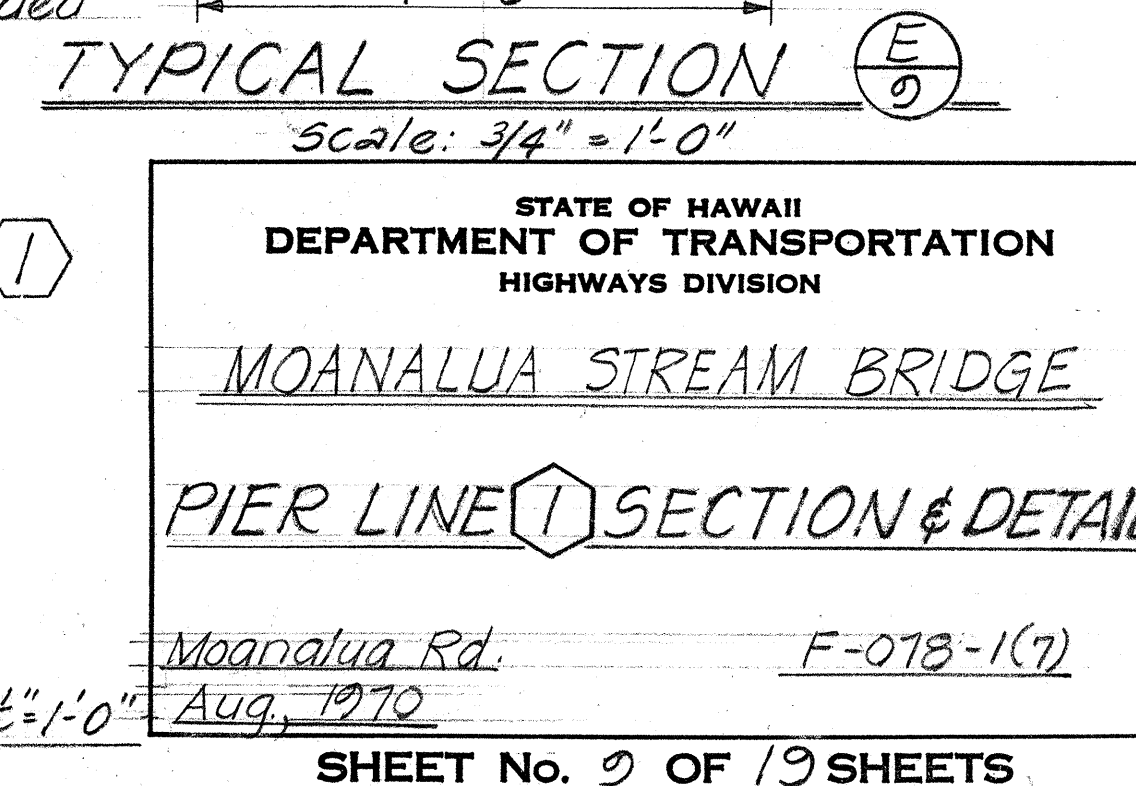
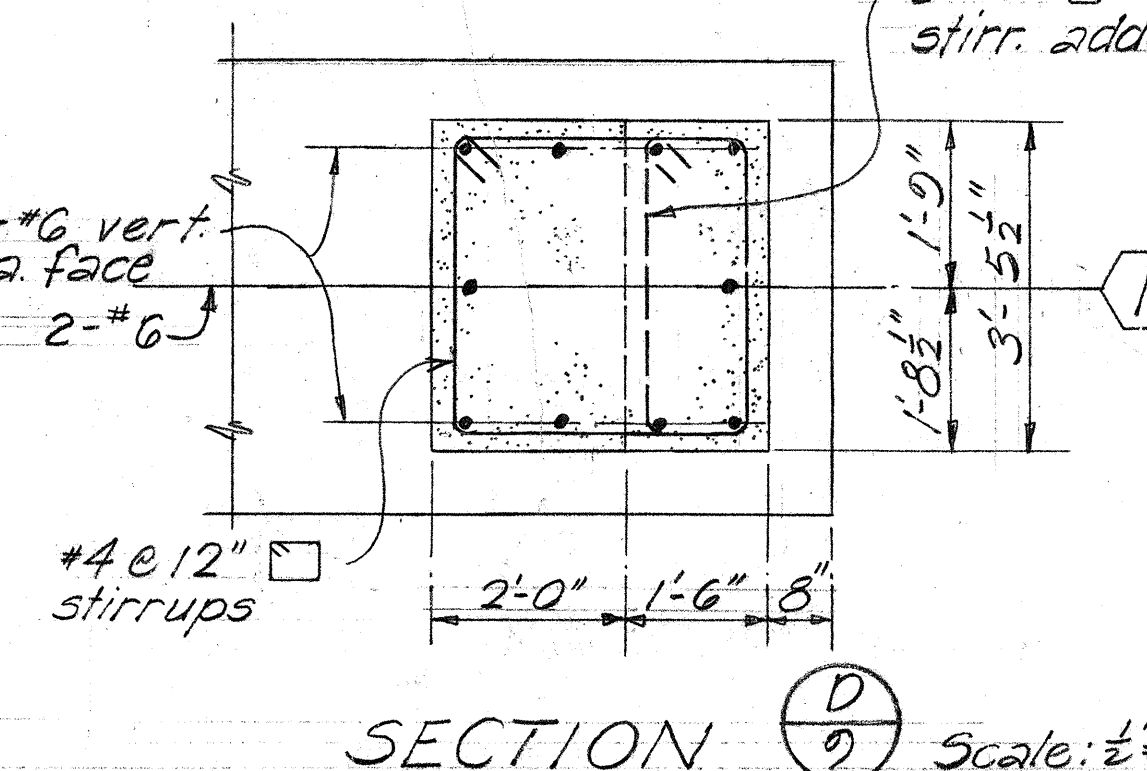
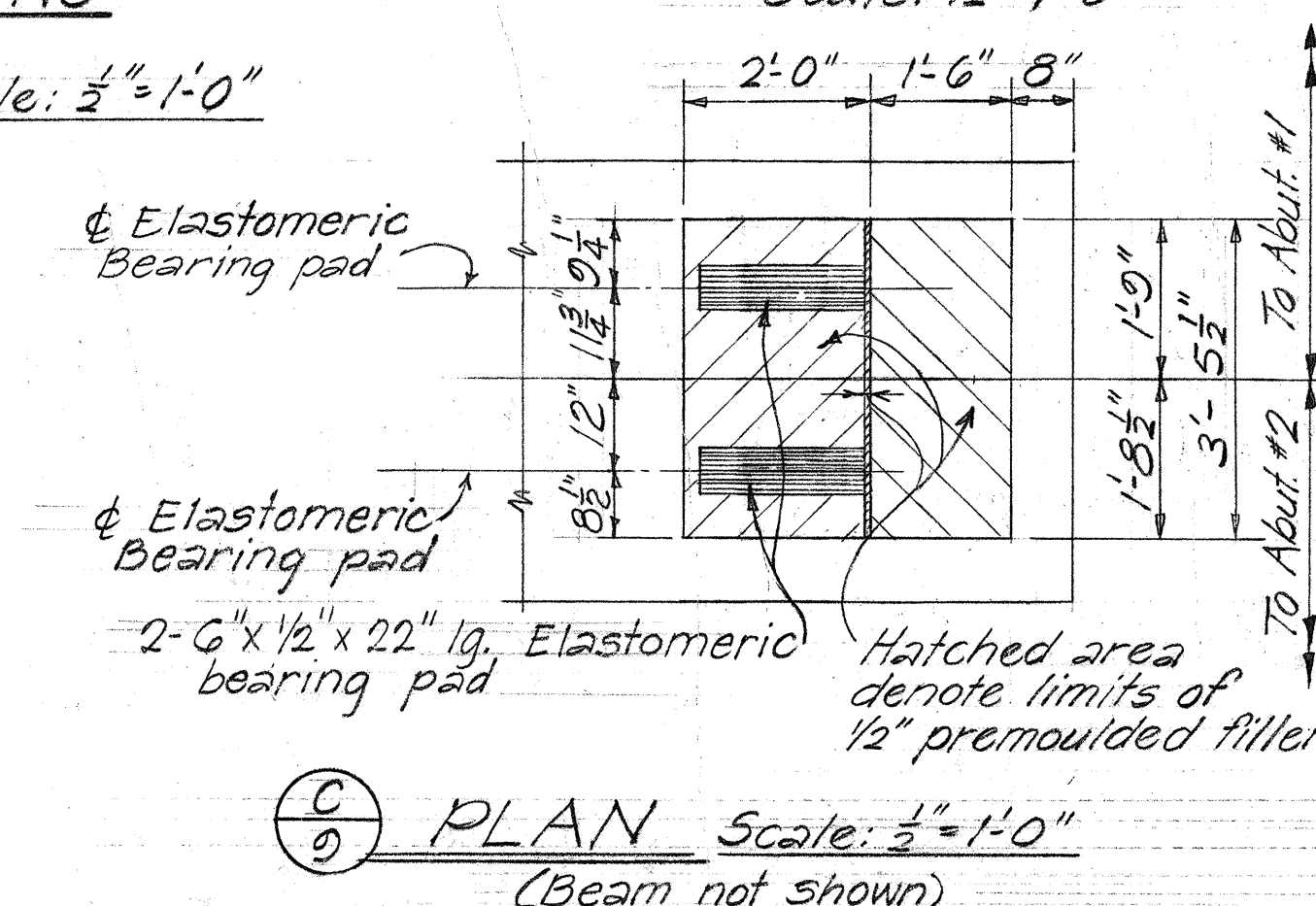
**SHEET No. 8 OF 19 SHEETS**

|               |             |
|---------------|-------------|
| DATE          | Aug. 70     |
| DESIGNED BY   | W. T. T. 11 |
| CHECKED BY    | W. T. T. 11 |
| NOTED BY      | W. T. T. 11 |
| ORIGINAL PLAN | W. T. T. 11 |
| NOTE BOOK     | W. T. T. 11 |
| NO.           | W. T. T. 11 |



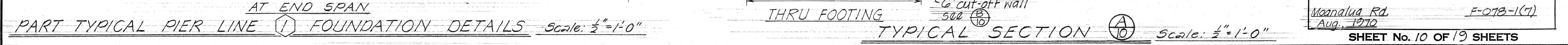
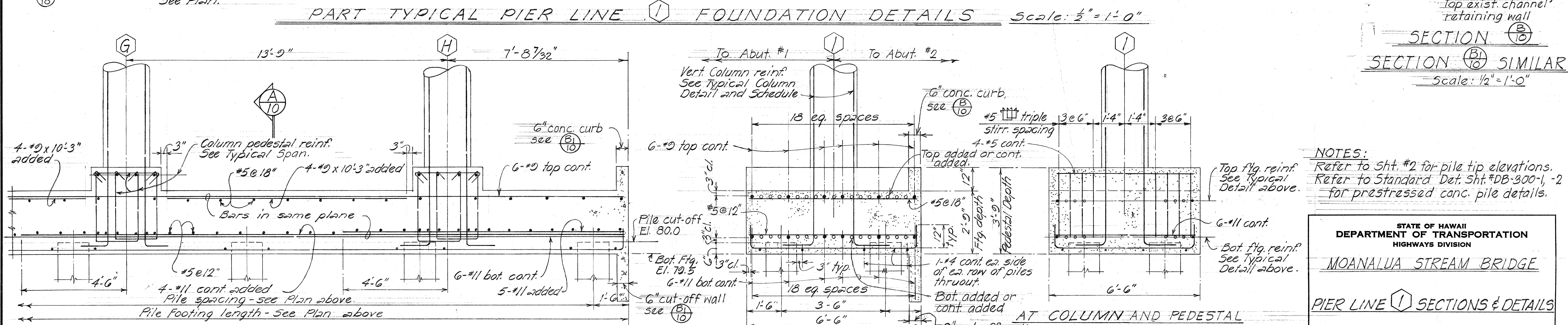
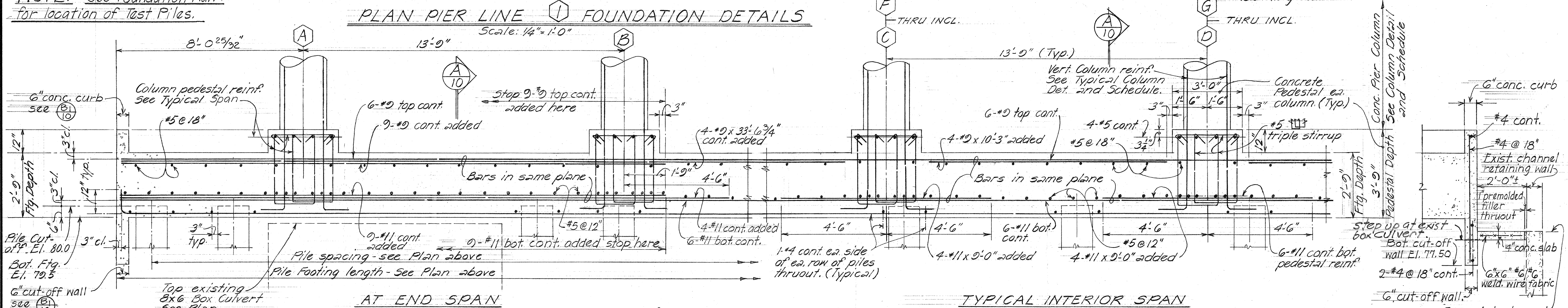
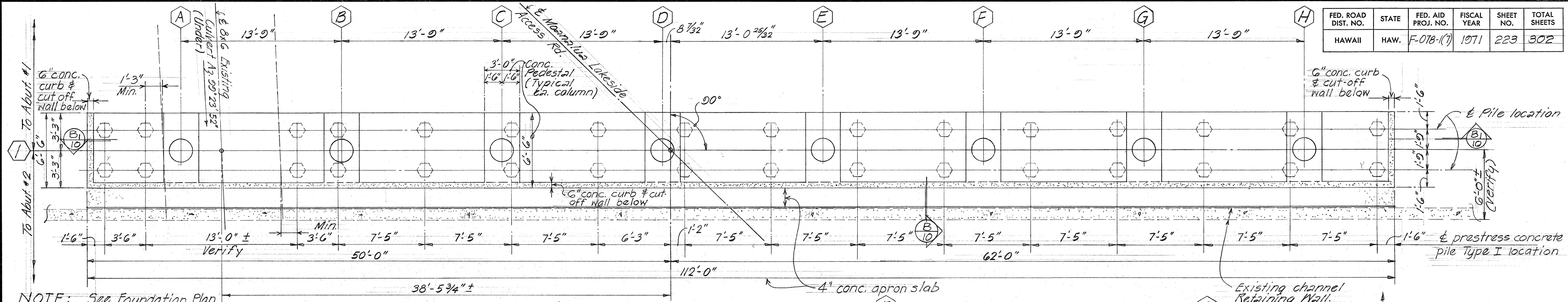


| PIER LINE 1 CAP REINFORCEMENT SCHEDULE |                               |   |                                      |   |                          |             |             |                         |                   |
|----------------------------------------|-------------------------------|---|--------------------------------------|---|--------------------------|-------------|-------------|-------------------------|-------------------|
| COLUMN LINE ALPHABET                   | A                             | B | C                                    | D | E                        | F           | G           | H                       |                   |
| REINFORCEMENT                          |                               |   |                                      |   |                          |             |             |                         |                   |
| Top Reinf.                             | 4-#2 (add)                    |   | (Typ.) 4'-0" 4'-0" (Typ.) 4-#2 (add) |   | 4-#2 cont.               | 4-#2 (add)  | 4-#2 (add)  | 5'-0" 4'-0" 4-#2 (add)  | 4-#2 (add)        |
| Bot. Reinf.                            | 2-#2 (add)                    |   | 2'-0" (Typ.) 2-#2 (add)              |   | 4-#2 cont.               | 2-#2 (add)  | 2-#2 (add)  | 2'-0" (Typ.) 2-#2 (add) | 2-#2 (add)        |
| #4 Stirr. spac'g.                      | 12" spacing Bal. e 12", 4e 6" |   | 12" spacing 4e 6", Bal. e 12", 4e 6" |   | 1'-0" (Typ.) 12" spacing | 12" spacing | 12" spacing | Bal. e 12", 4e 6"       | 4e 6", Bal. e 12" |

[illegible]



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-(7)          | 1971        | 223       | 302          |



NOTES:  
Refer to Sht. #2 for pile tip elevations.  
Refer to Standard Det. Sht. #DB-300-1, -2  
for prestressed conc. pile details.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

MOANALUA STREAM BRIDGE

PIER LINE 1 SECTIONS & DETAILS

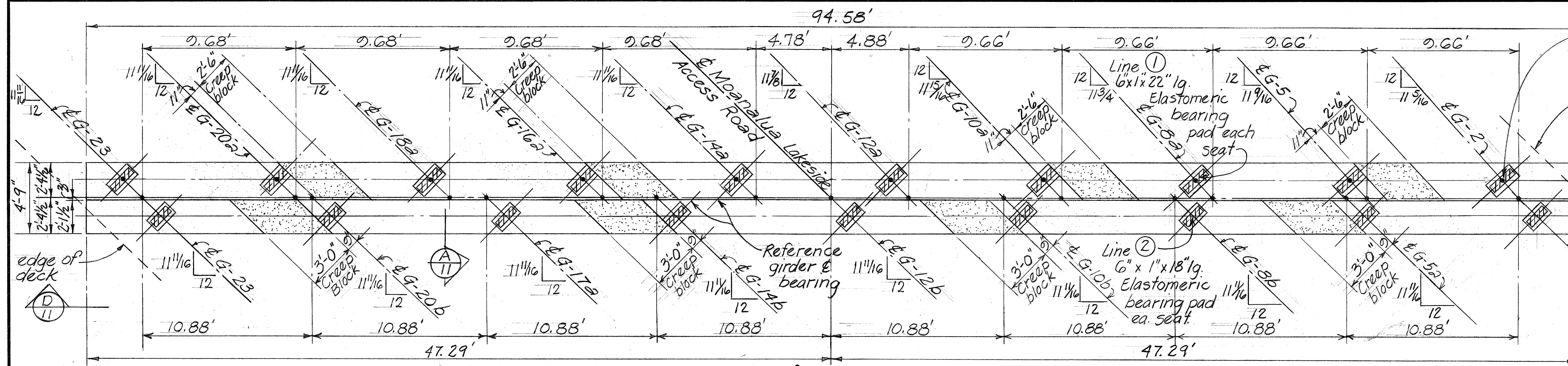
Moanalua Rd. Aug. 1970 F-078-1(7)

SHEET No. 10 OF 19 SHEETS

|               |         |
|---------------|---------|
| DATE          | Aug. 70 |
| DESIGNED BY   | TM      |
| DRAWN BY      | DO      |
| CHECKED BY    | TM      |
| NOTED BY      | TM      |
| ORIGINAL PLAN | No.     |

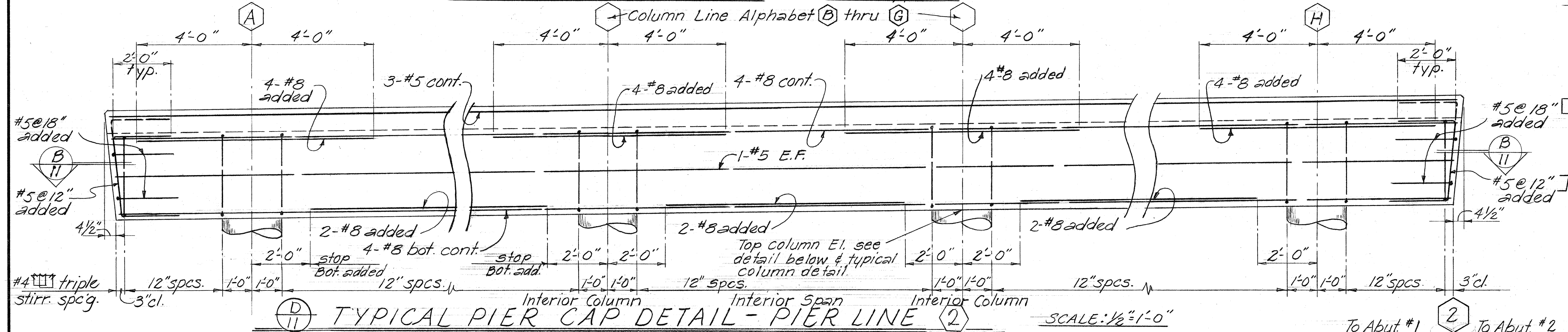


| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 224       | 302          |



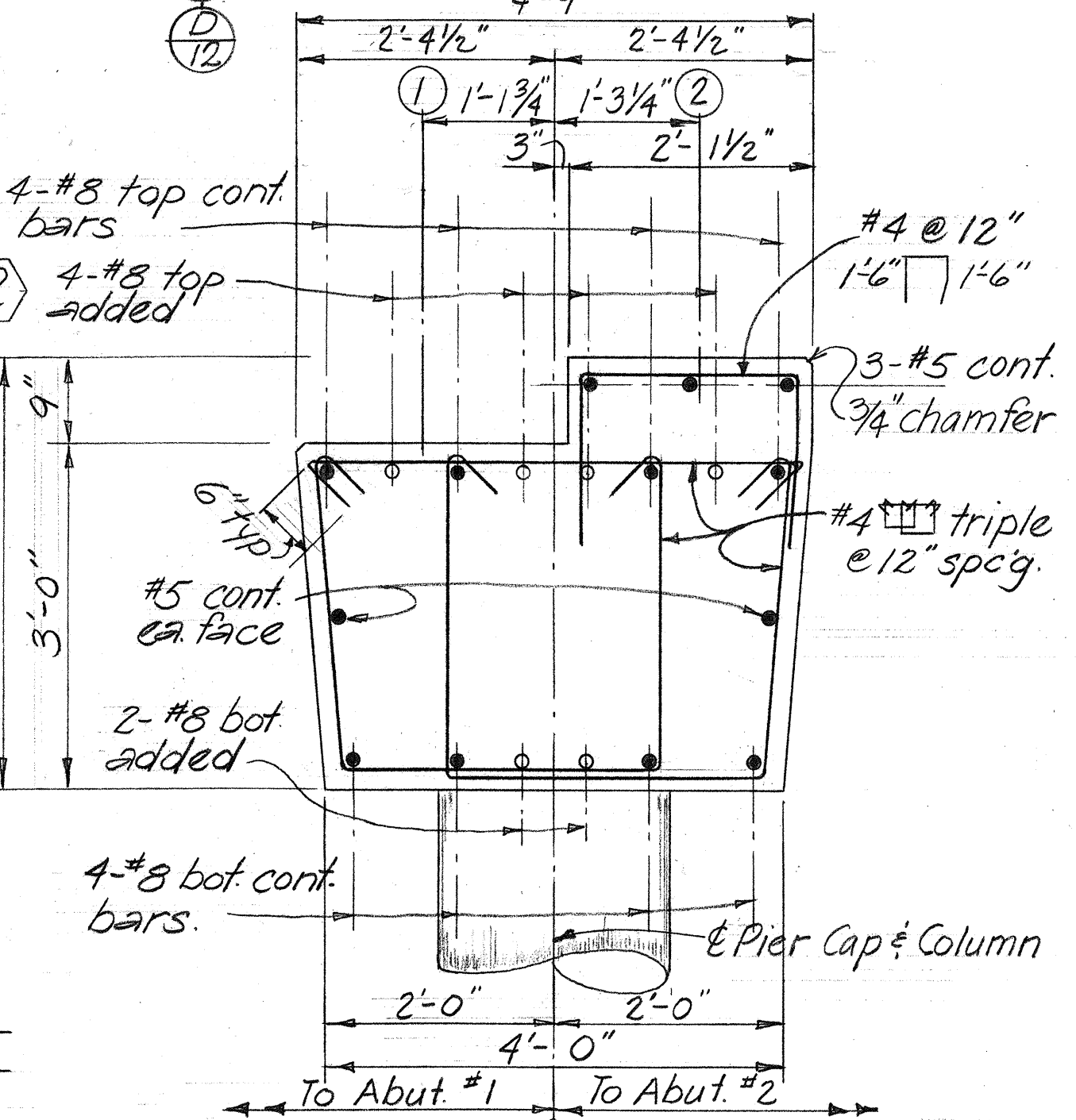
PLAN-PIER LINE 2

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



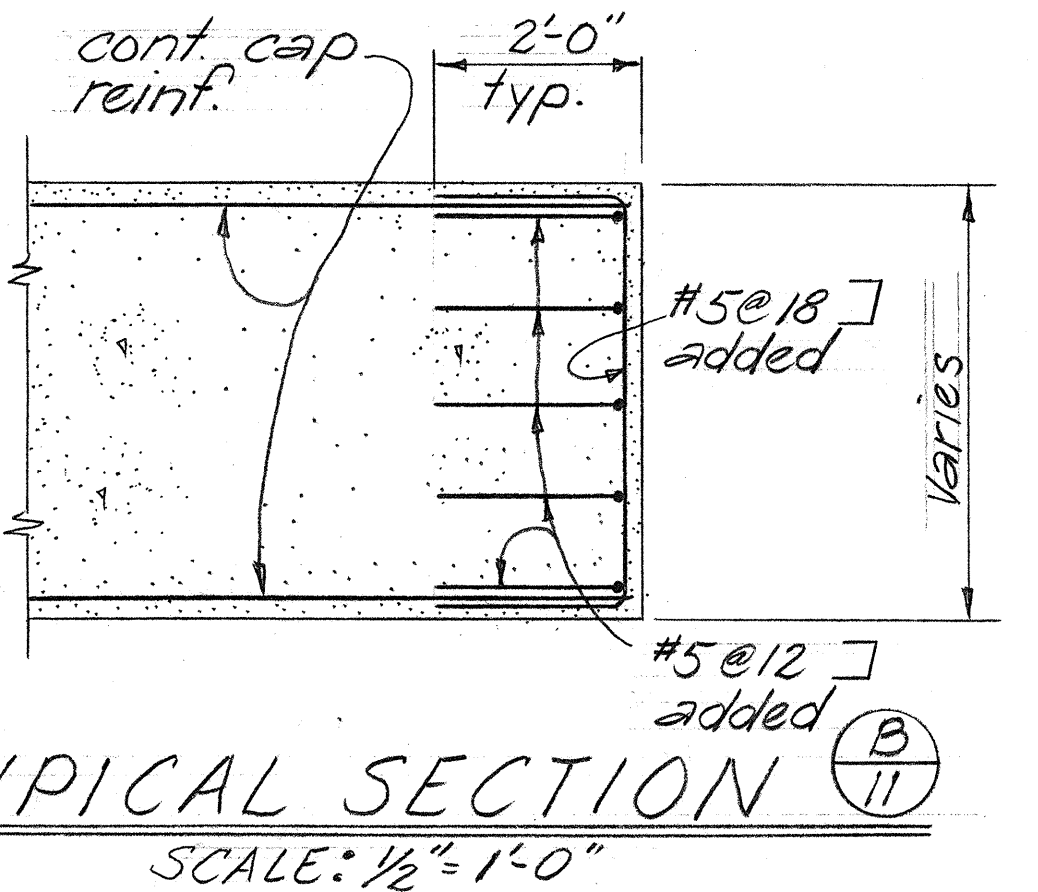
TYPICAL PIER CAP DETAIL - PIER LINE 2

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



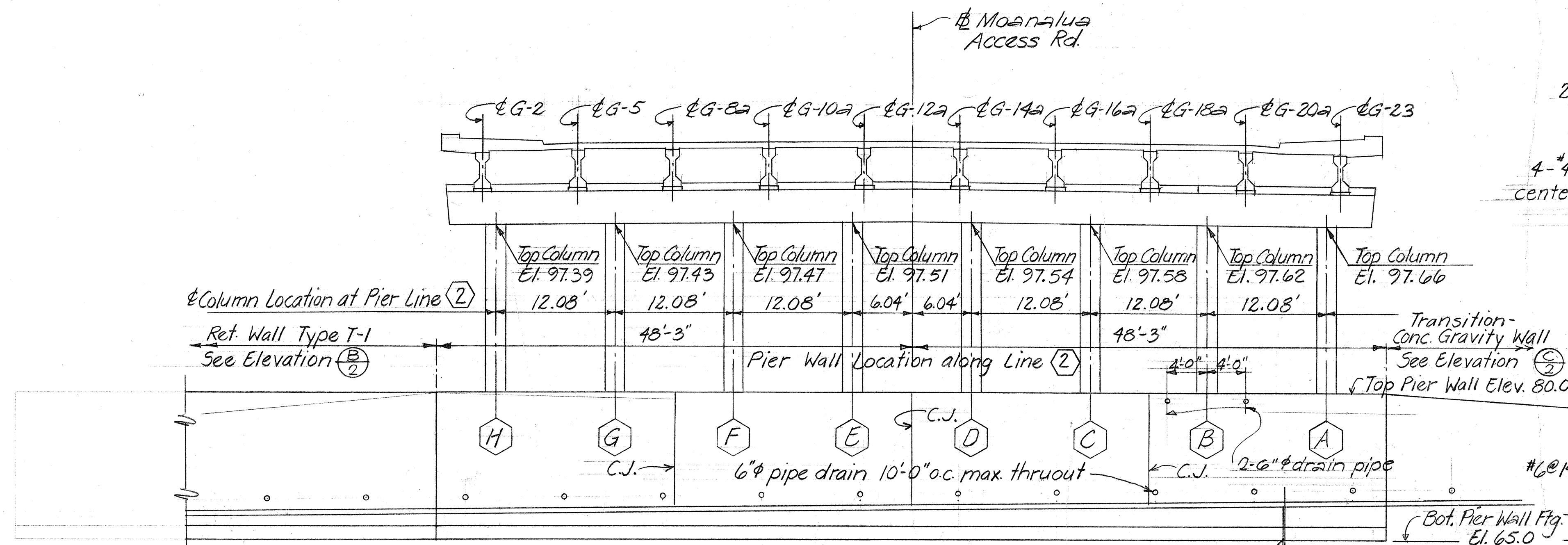
TYPICAL SECTION 2

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



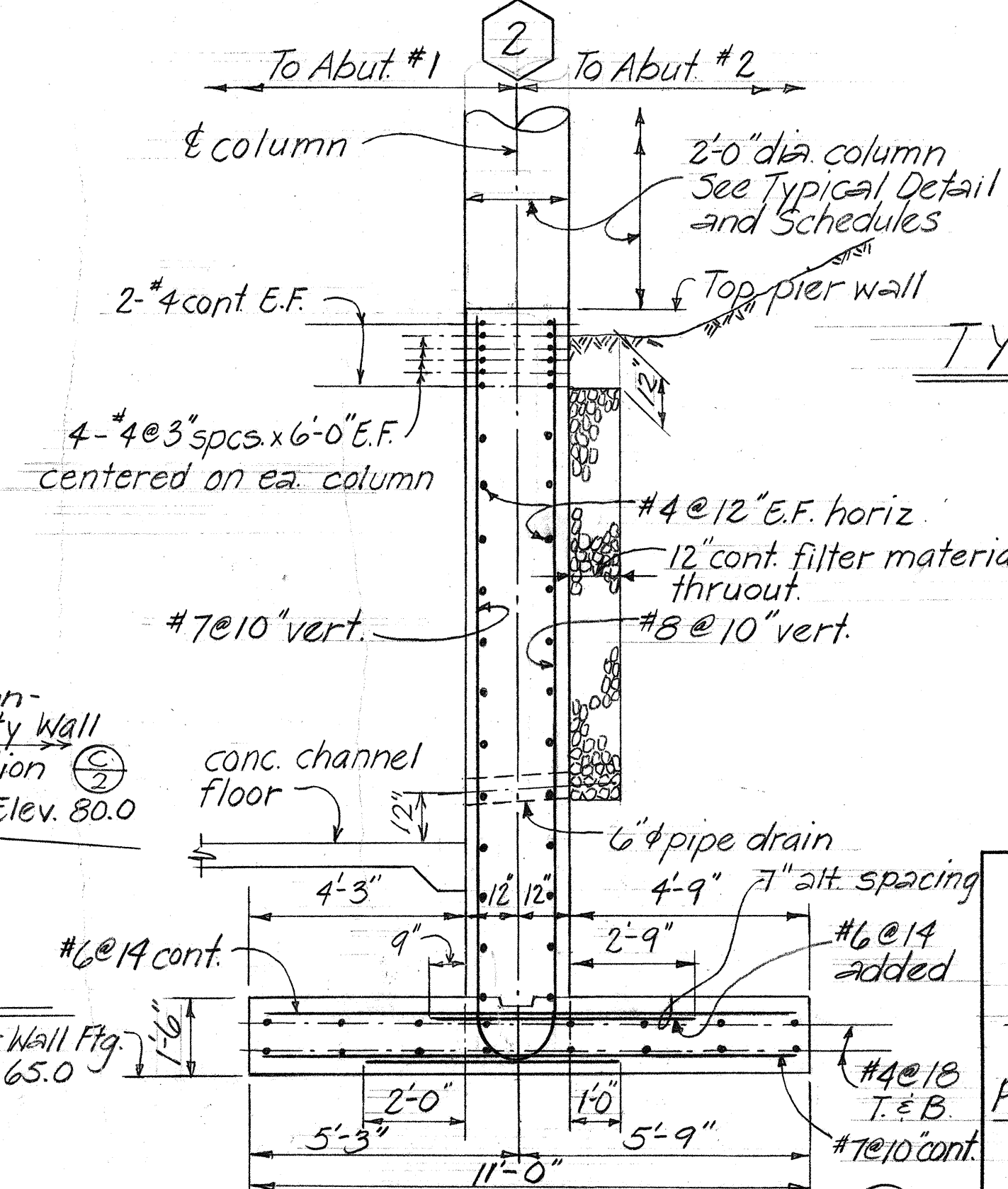
TYPICAL SECTION 11

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



ELEVATION-PIER LINE 2

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



TYPICAL PIER WALL SECTION 11

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

|                                                                      |                         |
|----------------------------------------------------------------------|-------------------------|
| STATE OF HAWAII<br>DEPARTMENT OF TRANSPORTATION<br>HIGHWAYS DIVISION |                         |
| MOANALUA STREAM BRIDGE                                               |                         |
| PIER LINE 2 SECTIONS & DETAILS                                       |                         |
| Moanalua Rd.<br>Aug. 1970                                            | F-078-1(7)<br>Aug. 1970 |
| SHEET No. 11 OF 19 SHEETS                                            |                         |







| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 226       | 302          |

**PART PLAN - ABUTMENT NO. 1** Scale: 1/4" = 1'-0"

**PART ELEVATION - ABUTMENT NO. 1** SCALE: 1/4" = 1'-0"

**ELEVATION (E) 13** SCALE: 1/2" = 1'-0"

**SECTION (F) 13** SCALE: 1/2" = 1'-0"

**SECTION (C) 13** SCALE: 1/2" = 1'-0"

**SECTION (B) 13** SCALE: 1/2" = 1'-0"

**SECTION (D) 13** SCALE: 1/2" = 1'-0"

**PLAN (A) 13** SCALE: 1/2" = 1'-0"

**Reference Notes:**

- Refer to Sht. #12 for concrete seat & creep block details.

**MOANALUA STREAM BRIDGE**  
**ABUTMENT NO. 1 SECTIONS & DETAILS**

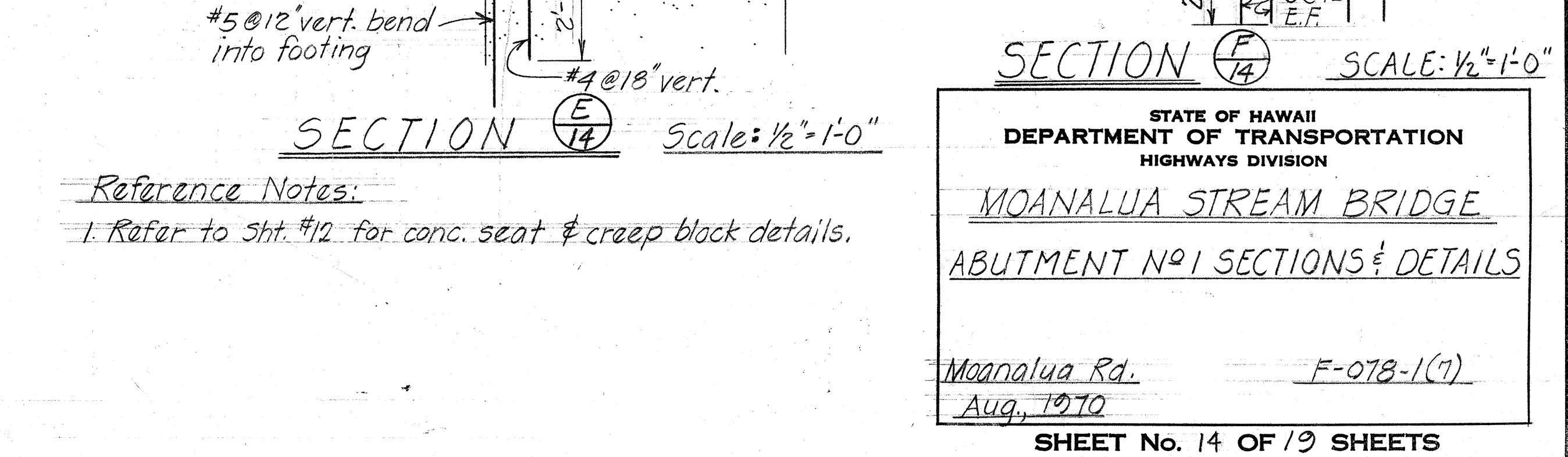
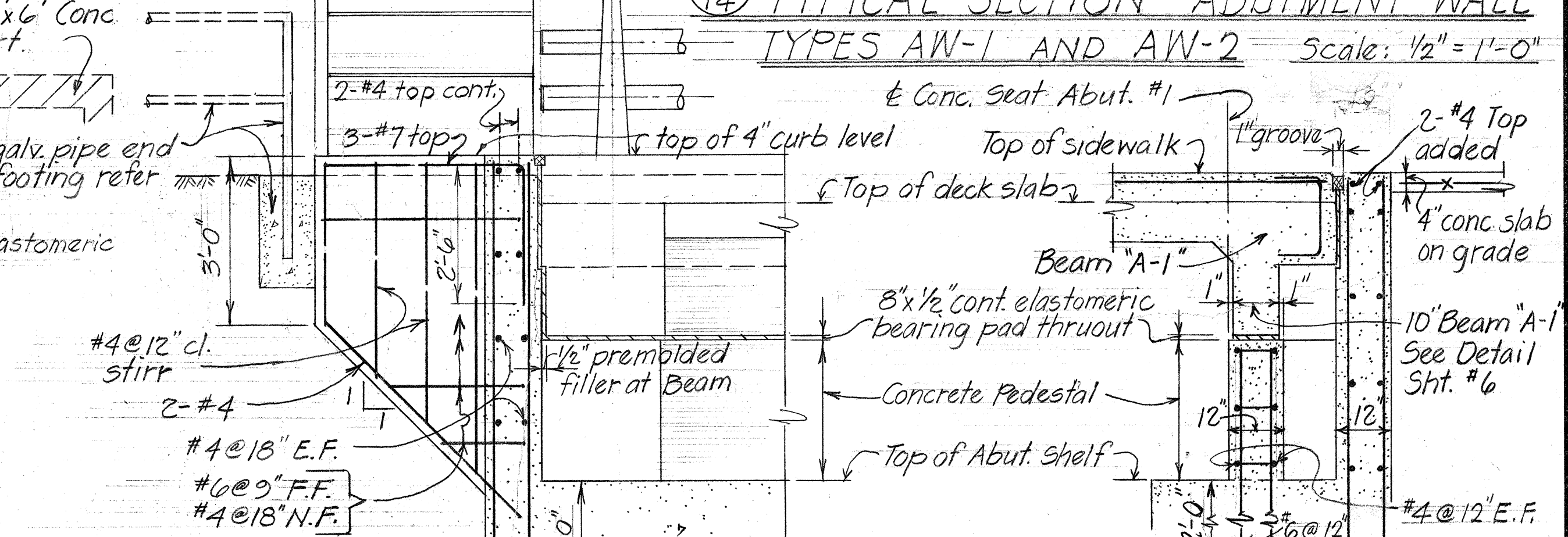
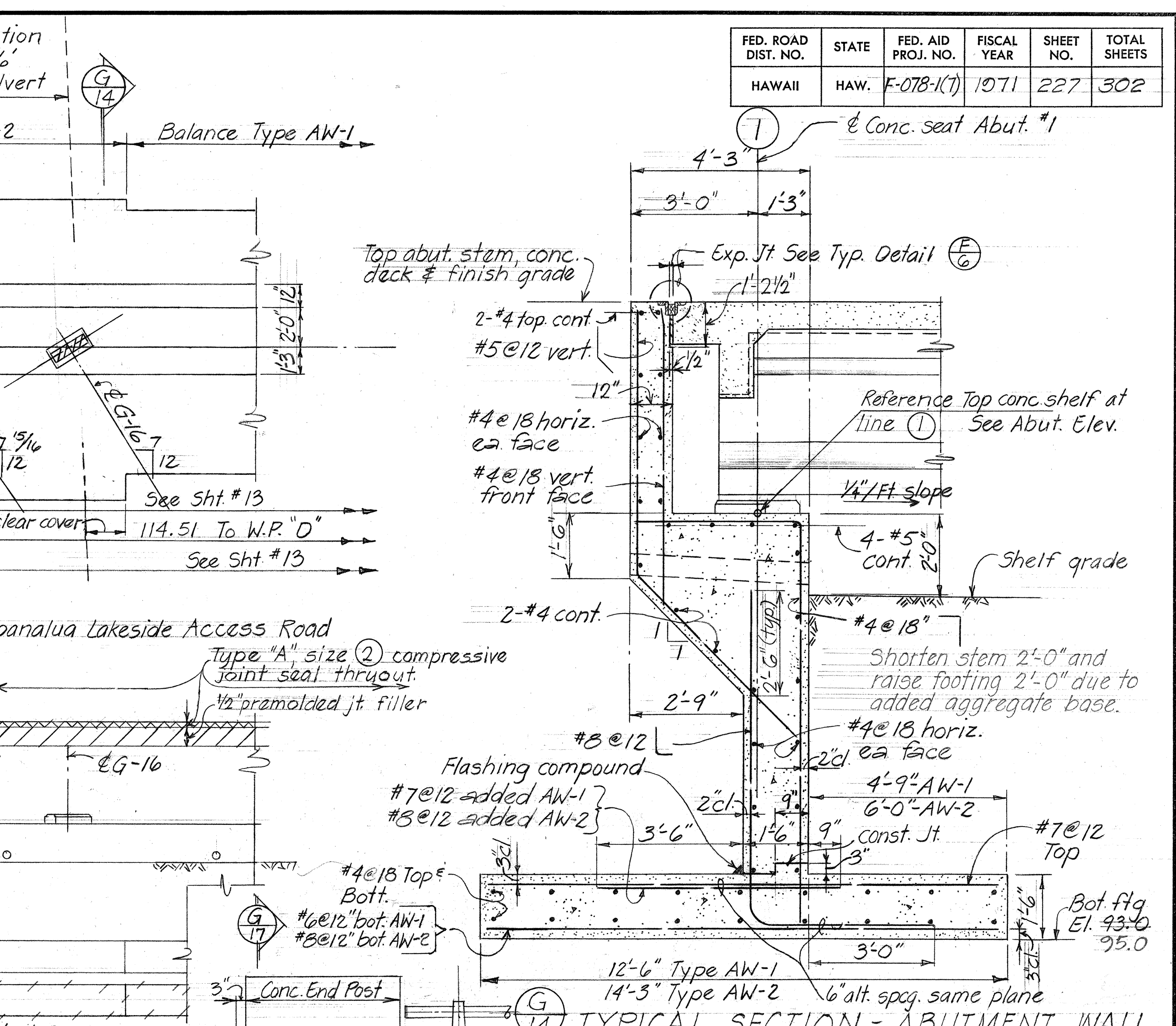
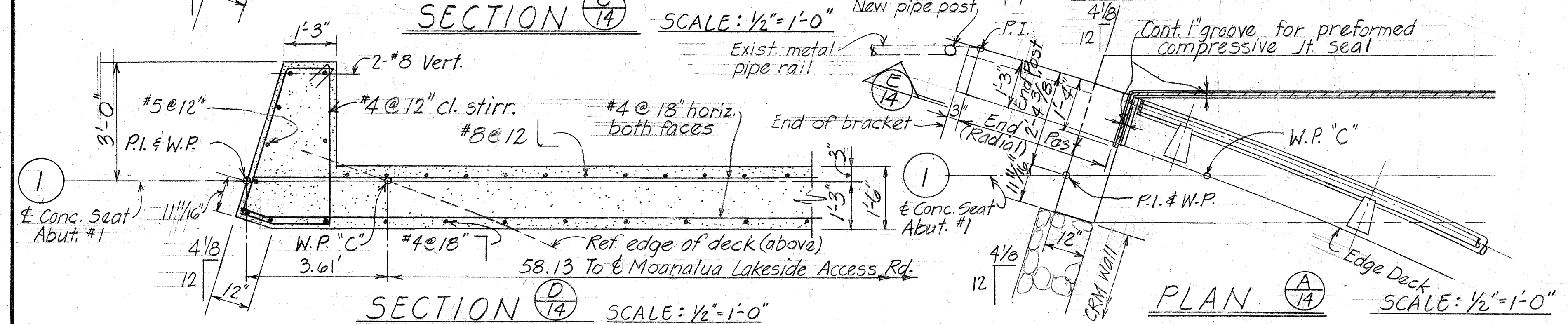
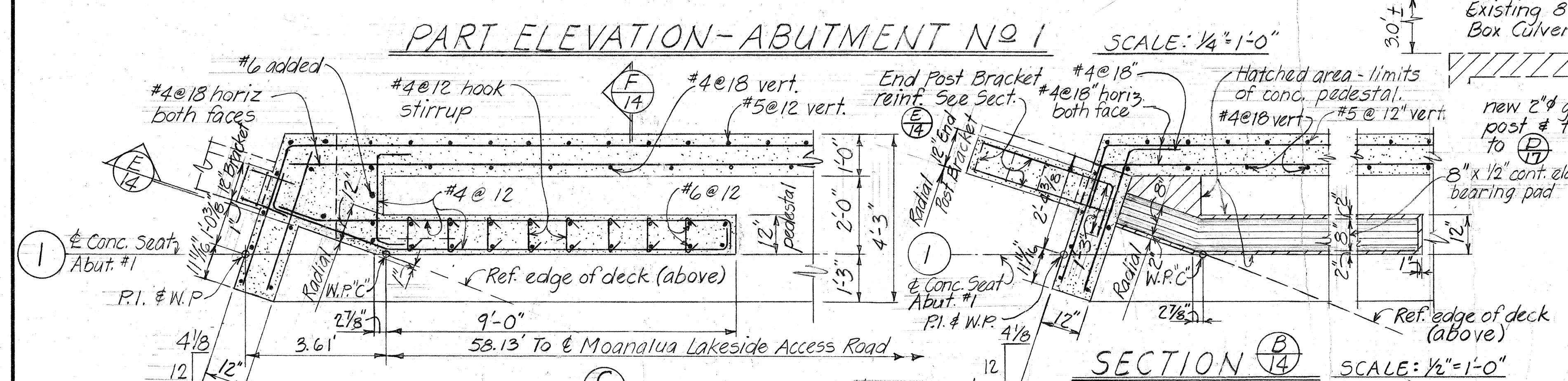
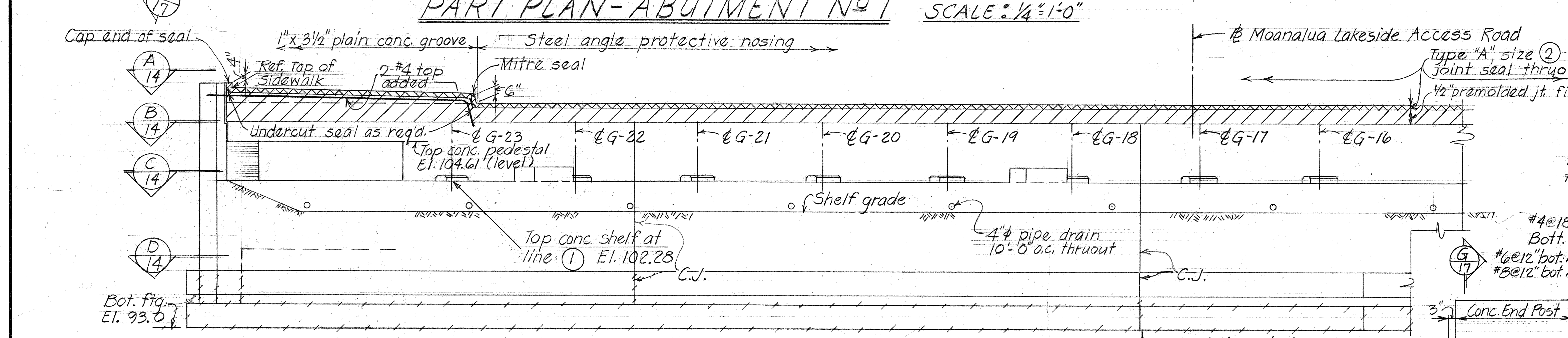
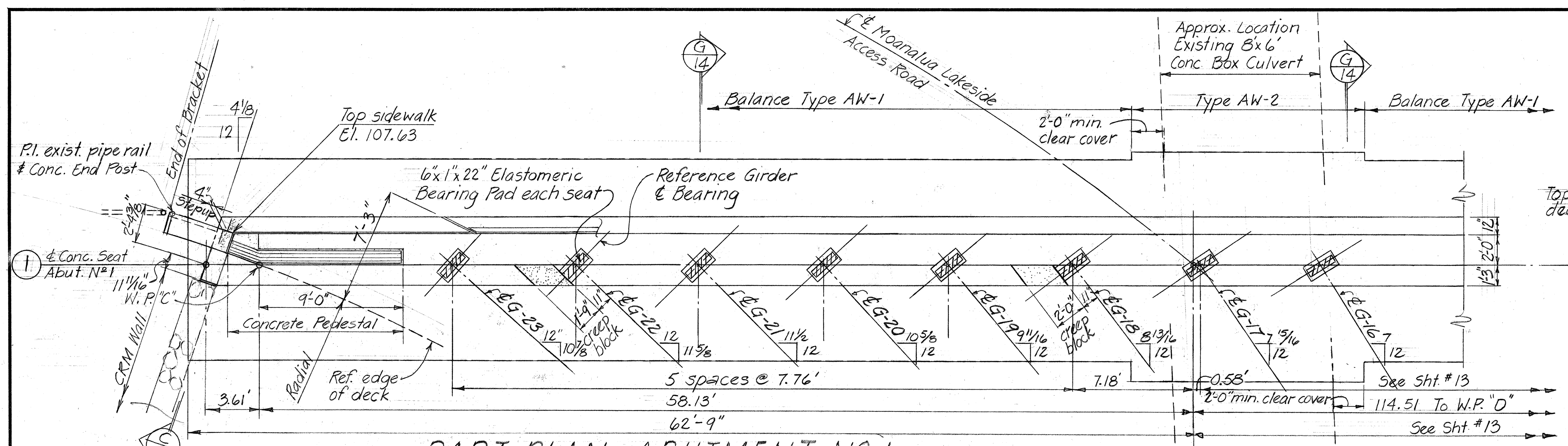
Moanalua Rd.  
Aug. 1970

F-078-1(7)

**SHEET No. 13 OF 19 SHEETS**



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 227       | 302          |



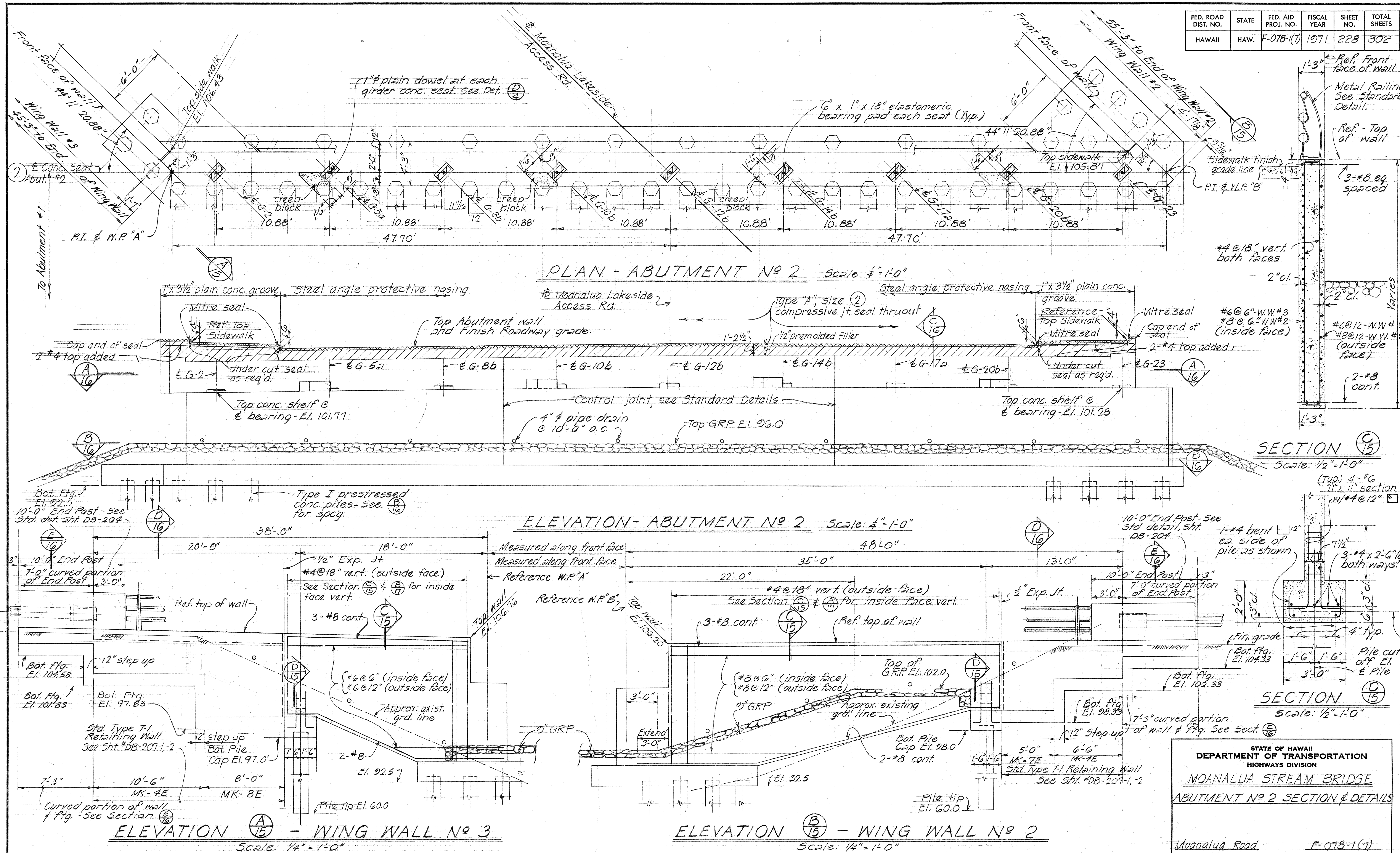
Reference Notes:  
1. Refer to Sht. #12 for conc. seat & creep block details.

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
MOANALUA STREAM BRIDGE  
ABUTMENT NO 1 SECTIONS & DETAILS  
Moanalua Rd. F-078-1(7)  
Aug, 1970  
SHEET No. 14 OF 19 SHEETS

PRINTED ON NO. 10000 CLEARPRINT

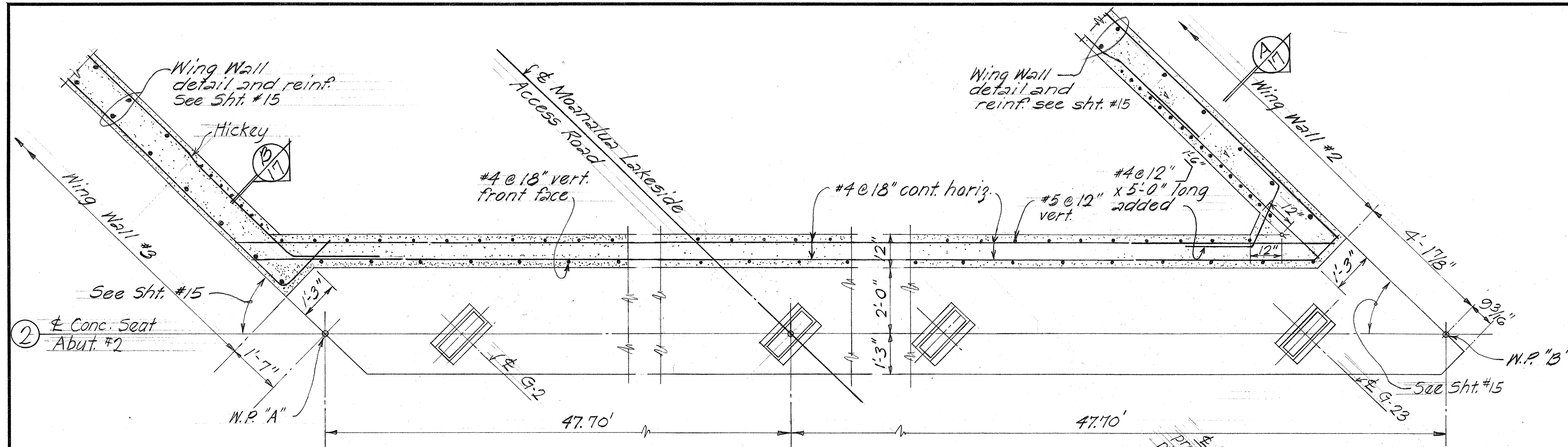


| FED. ROAD<br>DIST. NO. | STATE | FED. AID<br>PROJ. NO. | FISCAL<br>YEAR | SHEET<br>NO. | TOTAL<br>SHEETS |
|------------------------|-------|-----------------------|----------------|--------------|-----------------|
| HAWAII                 | HAW.  | F-078-1(7)            | 1971           | 228          | 302             |

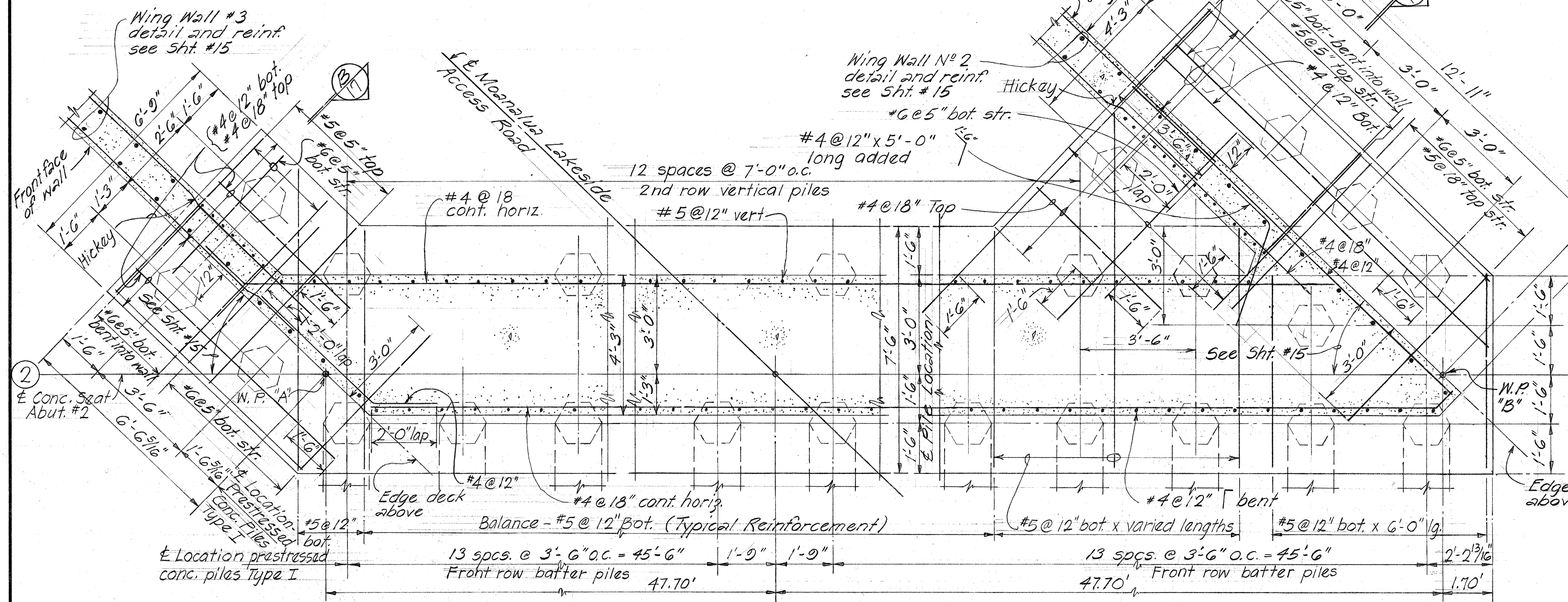




| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 229       | 302          |



SECTION A-16  
Scale: 1/2" = 1'-0"

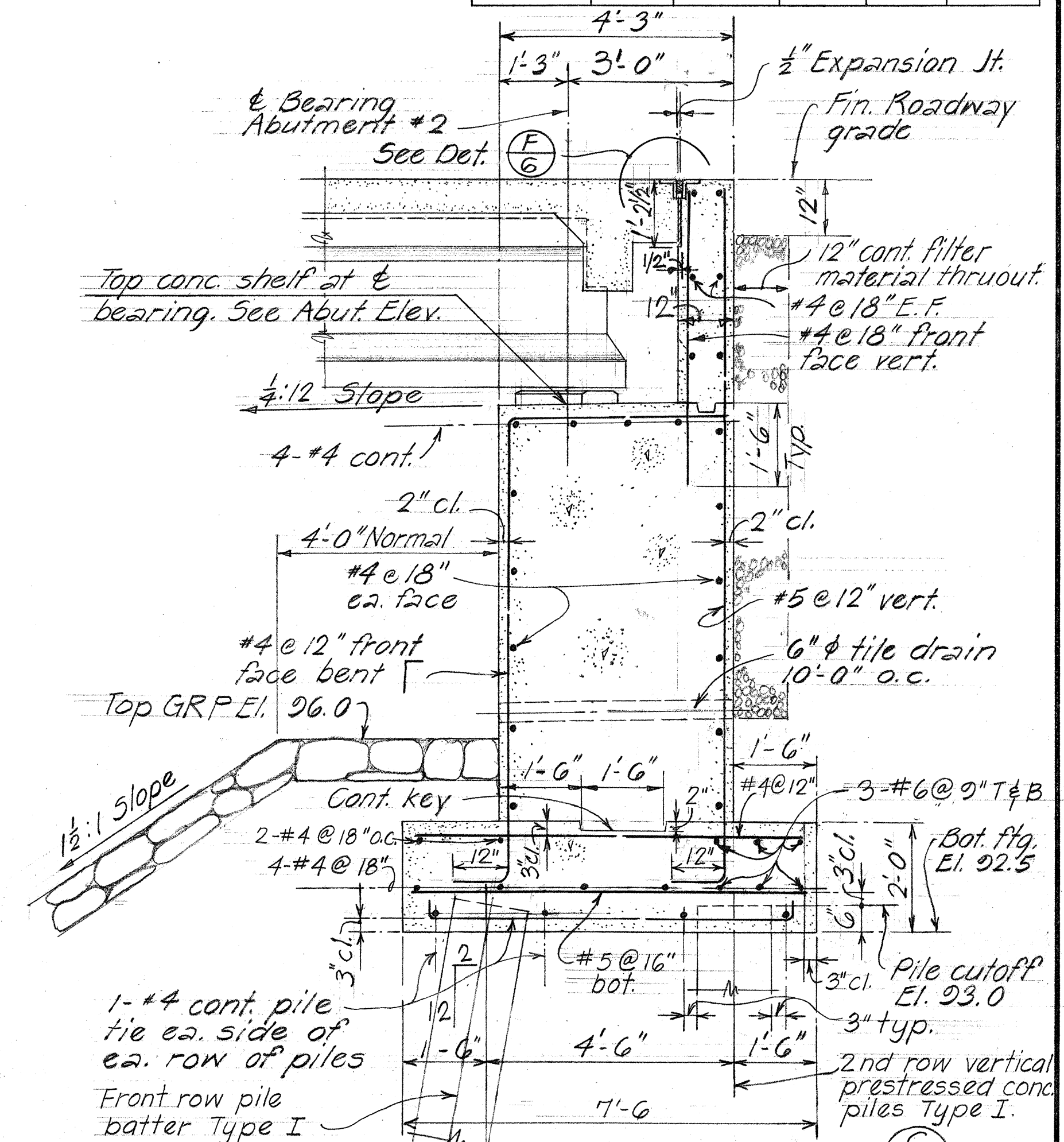


FOUNDATION SECTION B-16  
Scale: 1/2" = 1'-0"

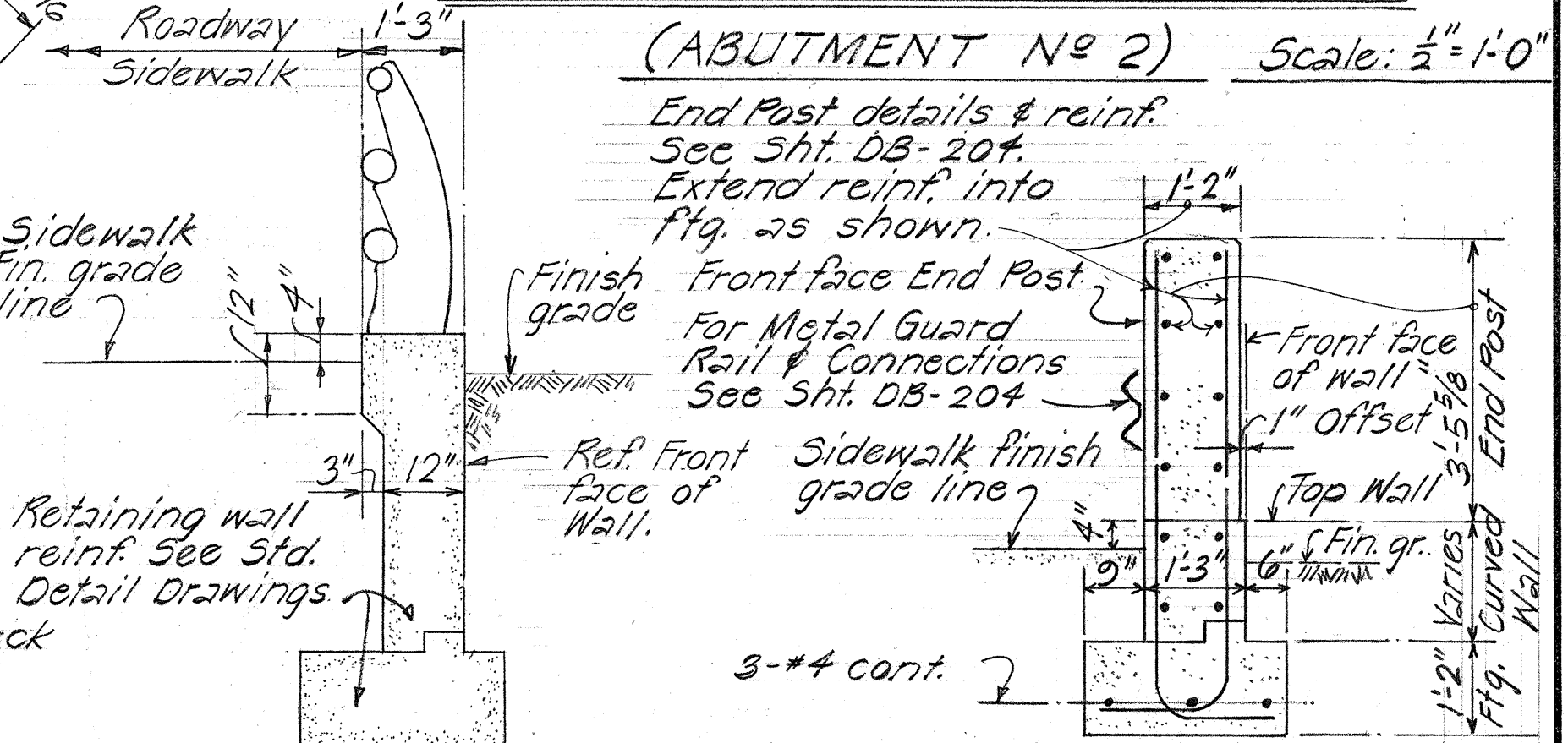
NOTE: See Foundation Plan for location of Test Piles

TOTAL - 51 PILES  
28 BATTER PILES  
23 VERTICAL PILES  
(PILES AT WINGWALL SEE SHT. # 15)

NOTES:  
Refer to Sht. #2 for pile tip elevations.  
Refer to Standard Details Sht. #DB-300-1, -2 for prestressed concrete piles details.



TYPICAL SECTION C-16  
(ABUTMENT #2) Scale: 1/2" = 1'-0"



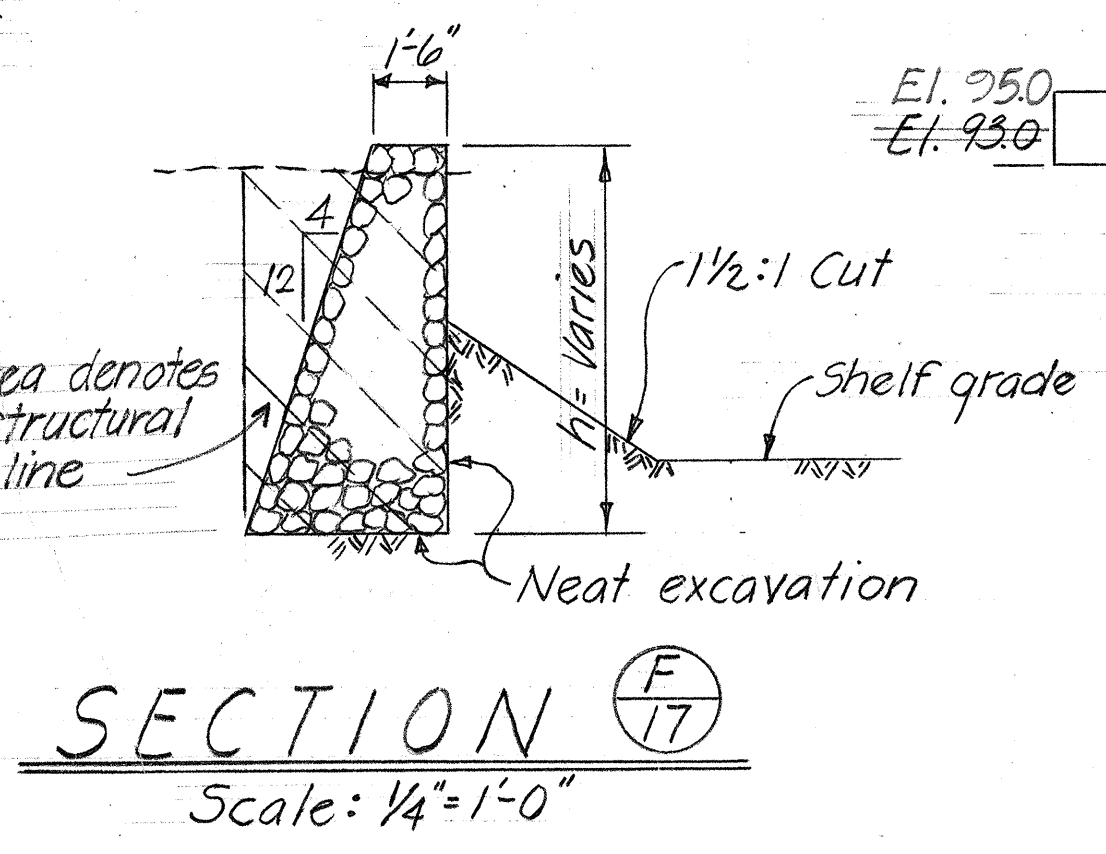
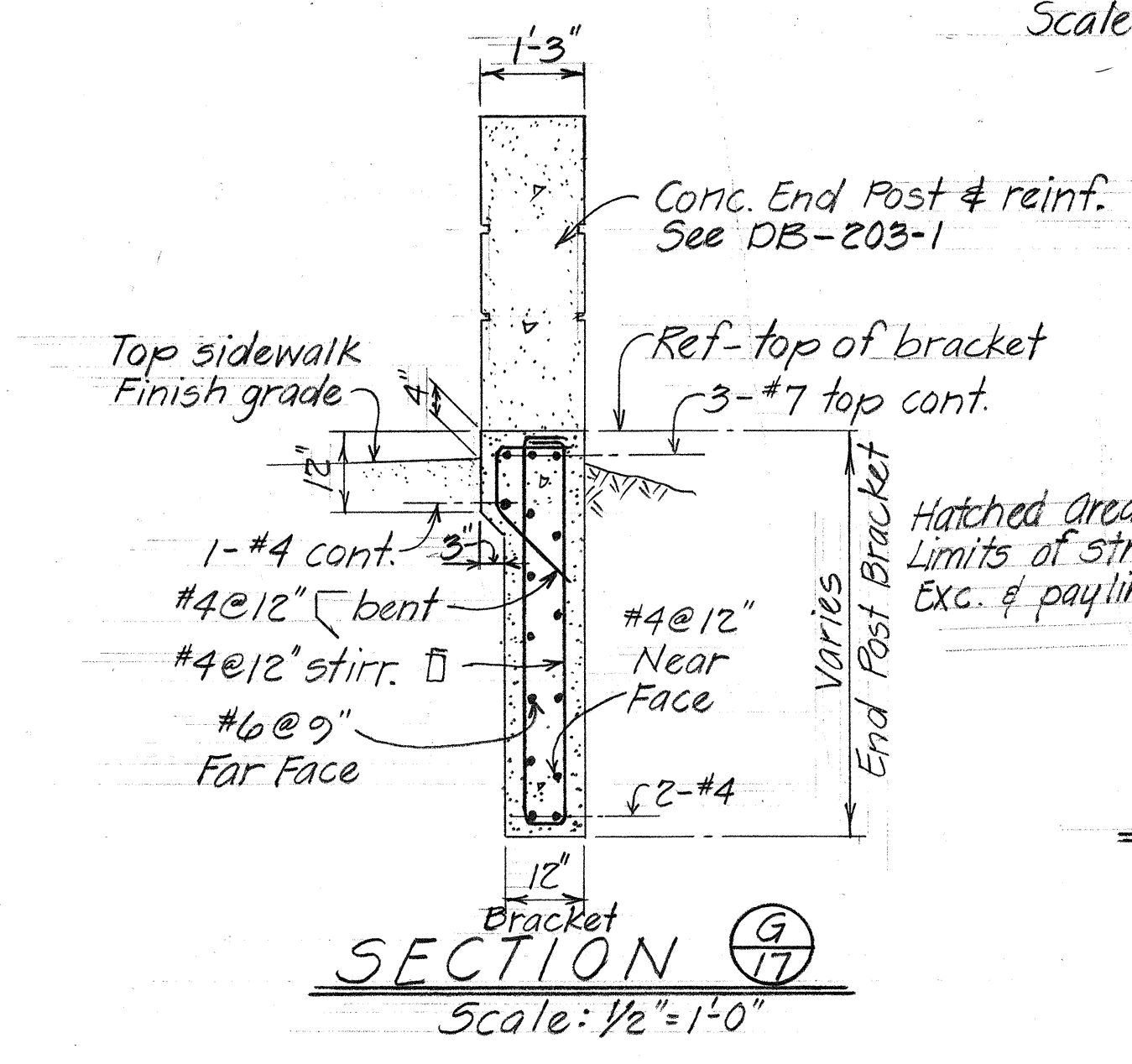
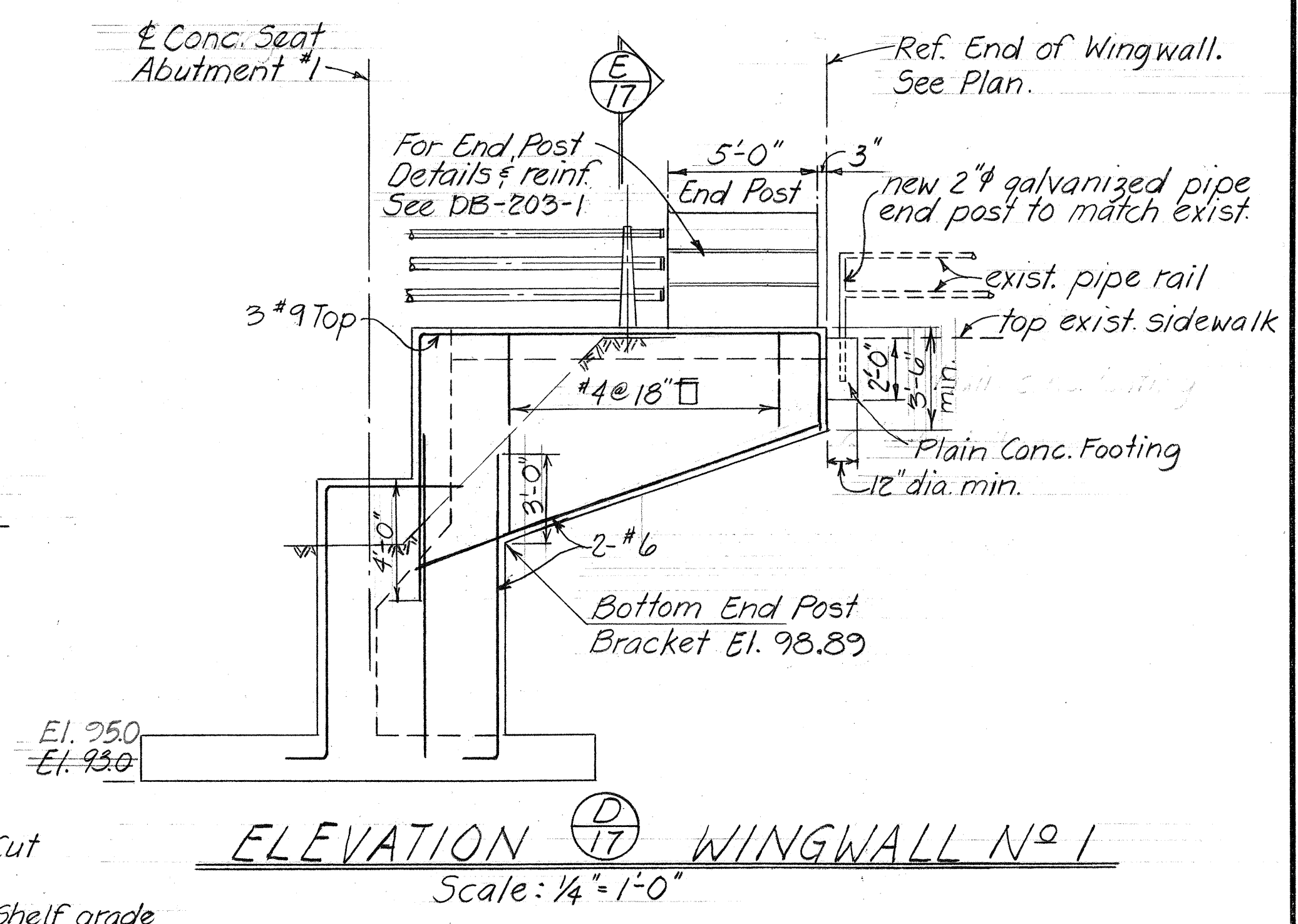
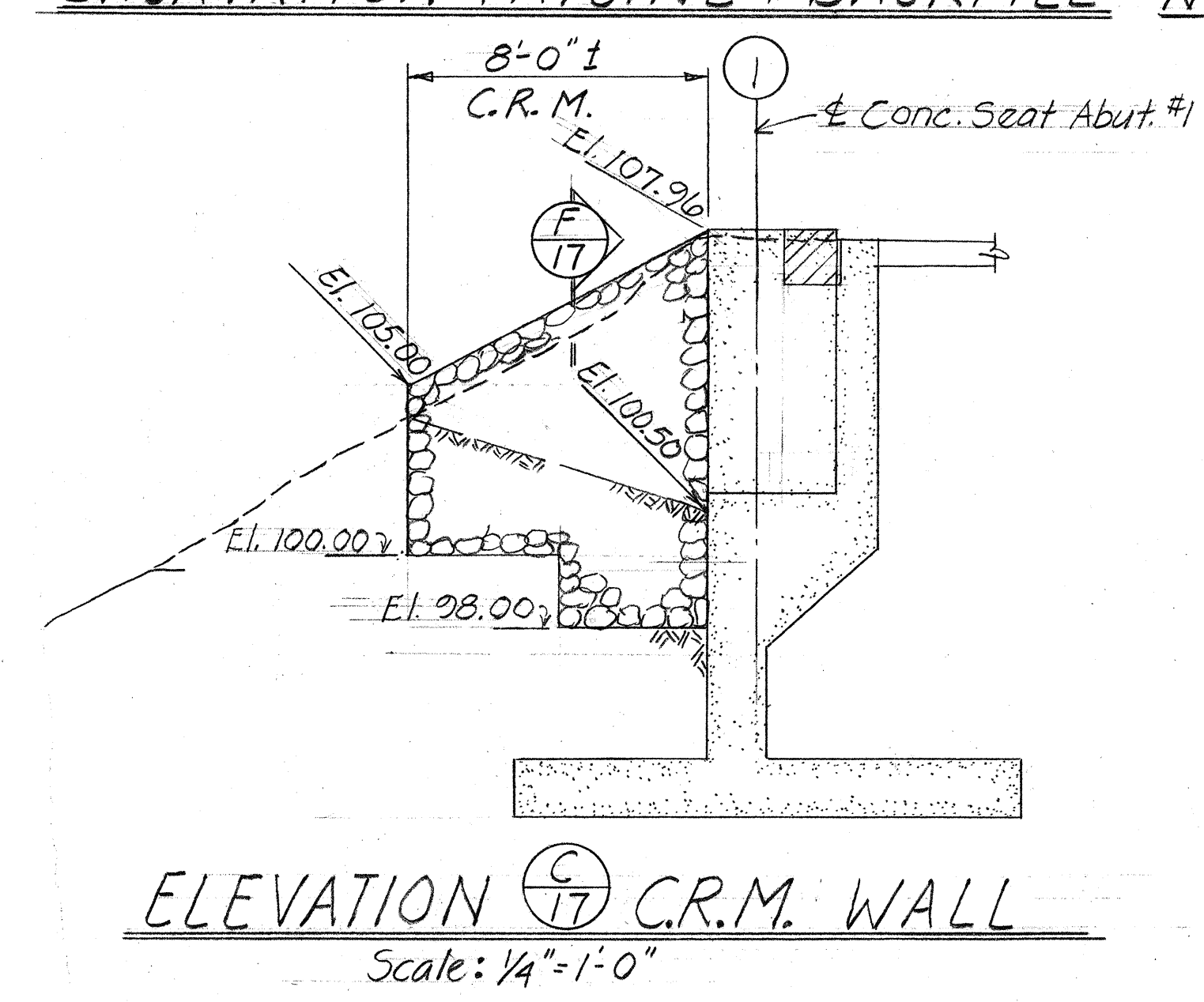
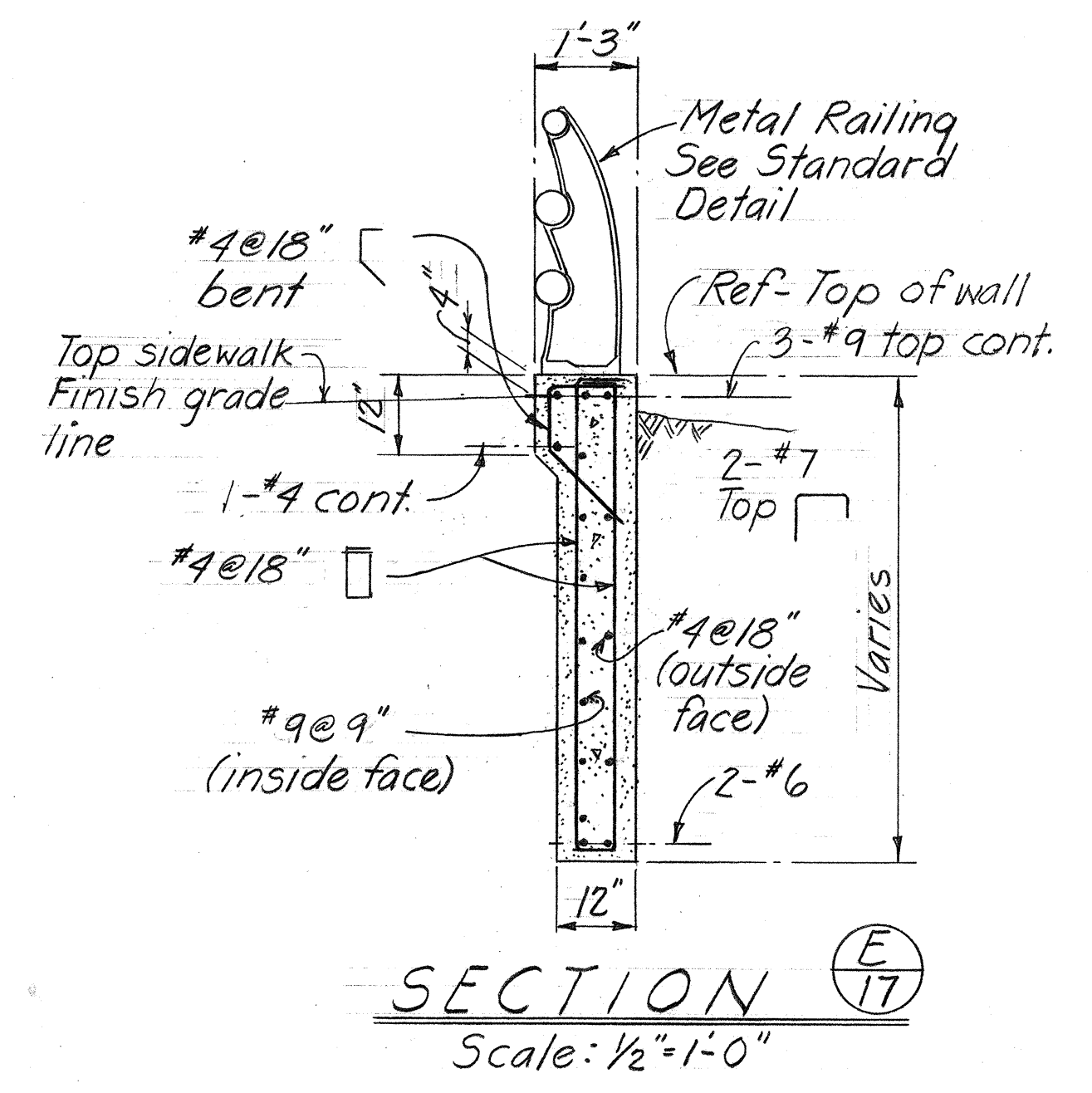
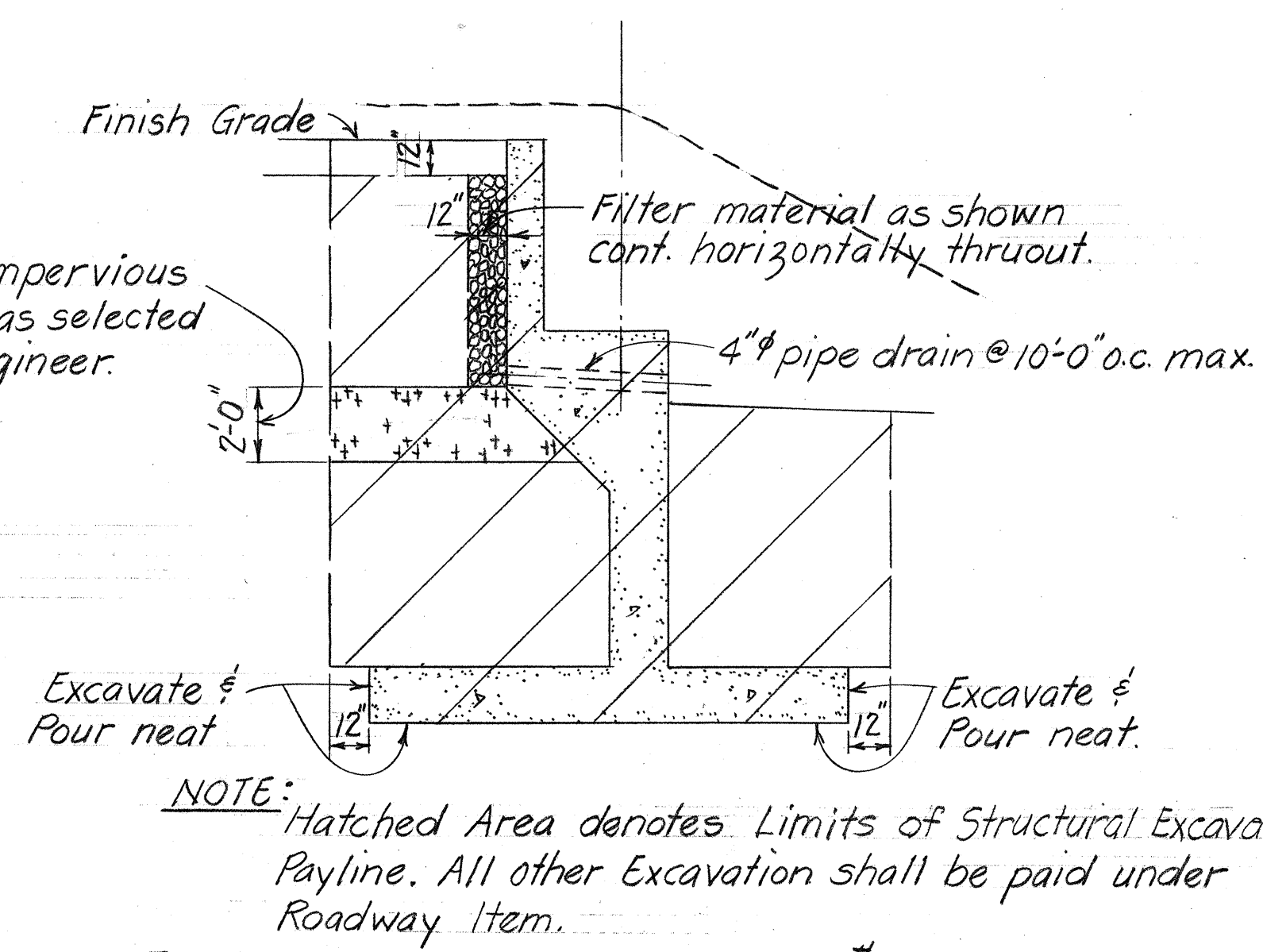
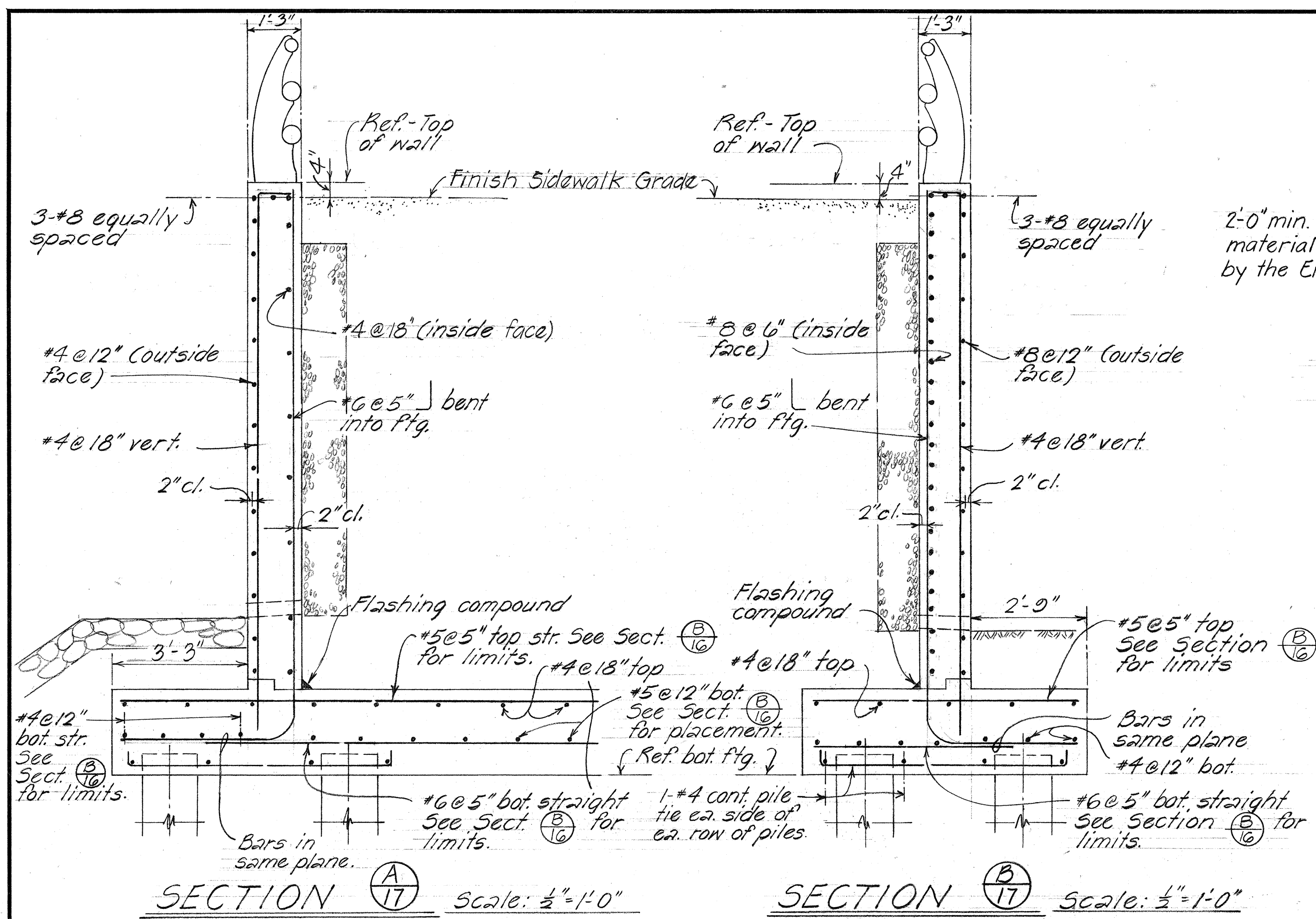
TYPICAL SECTION D-16  
Scale: 1/2" = 1'-0"

SECTION E-16  
Scale: 1/2" = 1'-0"

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
MOANALUA STREAM BRIDGE  
ABUTMENT #2 SECTION & DETAILS  
Moanalua Road F-078-1(7)  
Aug, 1970  
SHEET No. 16 OF 19 SHEETS



| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 230       | 302          |



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
MOANALUA STREAM BRIDGE  
MISCELLANEOUS DETAILS  
ABUTMENTS No 1 & No 2  
Moanalua Road Aug. 1970 F-078-1(7)  
SHEET No. 17 OF 19 SHEETS



GIRDER CONCRETE SEAT ELEVATION SCHEDULE (AT GIRDER & BEARING)

|                     |       |                    |             |           |              |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 231       | 302          |

| ABUTMENT #1 |        | DIRECTION      |         | 1   |        | 2              |     | DIRECTION      |     | 1      |        | 2              |         | DIRECTION      |     | ABUTMENT #2 |  |
|-------------|--------|----------------|---------|-----|--------|----------------|-----|----------------|-----|--------|--------|----------------|---------|----------------|-----|-------------|--|
| AT #        |        | Top Seat Slope |         | 1   | 2      | Top Seat Slope |     | Top Seat Slope |     | 1      | 2      | Top Seat Slope |         | Top Seat Slope |     | AT #        |  |
| G-1         | 102.06 | (-)            | 3/8:12  | (-) | 100.71 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-2         |        |                |         |     |        | 100.83         | (-) | 1/16:12        | (-) | 100.56 | 101.51 | (+)            | 1/8:12  | (+)            |     | 101.94      |  |
| G-3         | 102.23 | (-)            | 1/16:12 | (-) | 100.86 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-4         | 102.35 | (-)            | 3/8:12  | (-) | 101.10 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-5         |        |                |         |     |        | 101.02         | (-) | 1/16:12        | (-) | 100.63 |        |                |         |                |     |             |  |
| G-5a        |        |                |         |     |        |                |     |                |     |        |        | 101.59         | (+)     | 3/32:12        | (+) | 101.95      |  |
| G-6         | 102.39 | (-)            | 5/16:12 | (-) | 101.27 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-7         | 102.47 | (-)            | 5/16:12 | (-) | 101.50 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-8         | 102.49 | (-)            | 1/4:12  | (-) | 101.63 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-8a        |        |                |         |     |        | 101.34         | (-) | 1/8:12         | (-) | 100.72 |        |                |         |                |     |             |  |
| G-8b        |        |                |         |     |        |                |     |                |     |        |        | 101.68         | (+)     | 1/16:12        | (+) | 101.97      |  |
| G-9         | 102.49 | (-)            | 1/4:12  | (-) | 101.69 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-10        | 102.49 | (-)            | 1/32:12 | (-) | 101.75 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-10a       |        |                |         |     |        | 101.47         | (-) | 1/8:12         | (-) | 100.81 |        |                |         |                |     |             |  |
| G-10b       |        |                |         |     |        |                |     |                |     |        |        | 101.78         | (+)     | 1/16:12        | (+) | 102.01      |  |
| G-11        | 102.50 | (-)            | 1/4:12  | (-) | 101.70 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-12        | 102.50 | (-)            | 1/32:12 | (-) | 101.70 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-12a       |        |                |         |     |        | 101.55         | (-) | 3/32:12        | (-) | 100.99 |        |                |         |                |     |             |  |
| G-12b       |        |                |         |     |        |                |     |                |     |        |        | 101.90         | (+)     | 1/32:12        | (+) | 102.05      |  |
| G-13        | 102.50 | (-)            | 1/32:12 | (-) | 101.71 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-14        | 102.50 | (-)            | 1/32:12 | (-) | 101.72 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-14a       |        |                |         |     |        | 101.65         | (-) | 3/32:12        | (-) | 101.10 |        |                |         |                |     |             |  |
| G-14b       |        |                |         |     |        |                |     |                |     |        |        | 101.80         | (+)     | 1/32:12        | (+) | 101.89      |  |
| G-15        | 102.51 | (-)            | 1/32:12 | (-) | 101.72 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-16        | 102.52 | (-)            | 1/32:12 | (-) | 101.72 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-16a       |        |                |         |     |        | 101.64         | (-) | 1/8:12         | (-) | 101.02 |        |                |         |                |     |             |  |
| G-17        | 102.53 | (-)            | 1/32:12 | (-) | 101.71 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-17a       |        |                |         |     |        |                |     |                |     |        |        | 101.72         | LEVEL   |                |     | 101.73      |  |
| G-18        | 102.54 | (-)            | 3/16:12 | (-) | 101.71 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-18a       |        |                |         |     |        | 101.64         | (-) | 1/8:12         | (-) | 100.94 |        |                |         |                |     |             |  |
| G-19        | 102.52 | (-)            | 3/16:12 | (-) | 101.71 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-20        | 102.50 | (-)            | 3/16:12 | (-) | 101.71 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-20a       |        |                |         |     |        | 101.63         | (-) | 1/8:12         | (-) | 100.88 |        |                |         |                |     |             |  |
| G-20b       |        |                |         |     |        |                |     |                |     |        |        | 101.64         | (-)     | 1/32:12        | (-) | 101.58      |  |
| G-21        | 102.49 | (-)            | 3/16:12 | (-) | 101.70 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-22        | 102.48 | (-)            | 5/32:12 | (-) | 101.70 |                |     |                |     |        |        |                |         |                |     |             |  |
| G-23        | 102.45 | (-)            | 5/32:12 | (-) | 101.70 | 101.63         | (-) | 5/32:12        | (-) | 100.83 | 101.57 | (-)            | 1/32:12 | (-)            |     | 101.45      |  |

|                   |        |
|-------------------|--------|
| SURVEY PLOTTED BY | DATE   |
| DESIGNED BY       | Aug 70 |
| DESIGNED BY       | DT     |
| QUANTITIES BY     | DT     |
| CHECKED BY        | DT     |

|               |           |
|---------------|-----------|
| ORIGINAL PLAN | NOTE BOOK |
| No.           | No.       |

|                              |            |
|------------------------------|------------|
| STATE OF HAWAII              |            |
| DEPARTMENT OF TRANSPORTATION |            |
| HIGHWAYS DIVISION            |            |
| MOANALUA STREAM BRIDGE       |            |
| CONCRETE SEAT SCHEDULES      |            |
| Moanalua Road                | F-078-1(7) |
| Aug. 1970                    |            |
| SHEET No. 18 OF 19 SHEETS    |            |



| FED. ROAD DIST. No. | STATE | FED. AID PROJ. No. | FISCAL YEAR | SHEET No. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | F-078-1(7)         | 1971        | 232       | 302          |

