

GENERAL NOTES

Specifications: AASHO
Standard specifications for Highway Bridges (8th Edition) with subsequent additions and modifications.

Design Loads:
H 20 - S16-44 as defined in design specifications

Design Stresses; R.C. Beams & Slabs:
See AASHO specification except as otherwise noted and see Special Provisions
 $f'_c = 3,000$ psi
 $f'_c = 1,200$ psi
 $n = 10$
 $f_s = 20,000$ psi

Materials:
 1. All concrete shall be Class A-1 except as otherwise noted on plans. Concrete for prestressed concrete girders and planks see Special Provisions & as noted below.
 2. Neoprene pads are incidental to prestressed conc. girders and will not be paid for separately.
 3. See Special Provisions for admixture in concrete.

Construction Methods:
 1. See Standard Specifications and Special Provisions.
 2. Except as otherwise noted, all footings shall be excavated & poured to neat lines. In case of over excavation, space between footing & ground shall be filled with concrete at the Contractor's expense. The fill concrete shall have a minimum quality of Class D-1.
 3. The Contractor shall verify the location of all existing utility lines and notify the respective owners before commencing work of excavation.
 4. All fill behind abutments & wingwalls shall be complete in place before placing superstructure prestressed girders or planks.
 5. For concrete finish see Special Provisions. Concrete seats & creep blocks to be poured monolithically with pier or abutment sections, and receive a hard trowel finish. Seats shall be finished level & true to Elevations.
 6. Neoprene pad: The neoprene pads shall be secured against displacement by adhesives. The adhesive shall be approved by the Engineer.

General Notes:
1. Symbols

(No.) - Denotes column numbers	P.I. - Point of intersection
(A) - Alphabet section no. description	M.P. - Working point
(No.) - Sheet no. detail is drawn on	TSS - Top slab strip
→ - Direction in which main reinforcing bars extend	⊗ - Boring

For additional details & general notes not covered by these drawings, refer to Standard Drawings S-1, S-2, S-3, S-4.

Design Stresses
Prestressed Beams & Slabs
 $f'_c = 5,500$ psi
 $f'_ci = 4,000$ psi
 $\frac{1}{8}$ " dia. 7 wire strands
 Tensioning load = 25,200 lb. per strand
 Design Load = 20,160 lb. per strand
 Forms must be removed and the beam inspected before the strands are cut.

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HIGHWAYS DIVISION

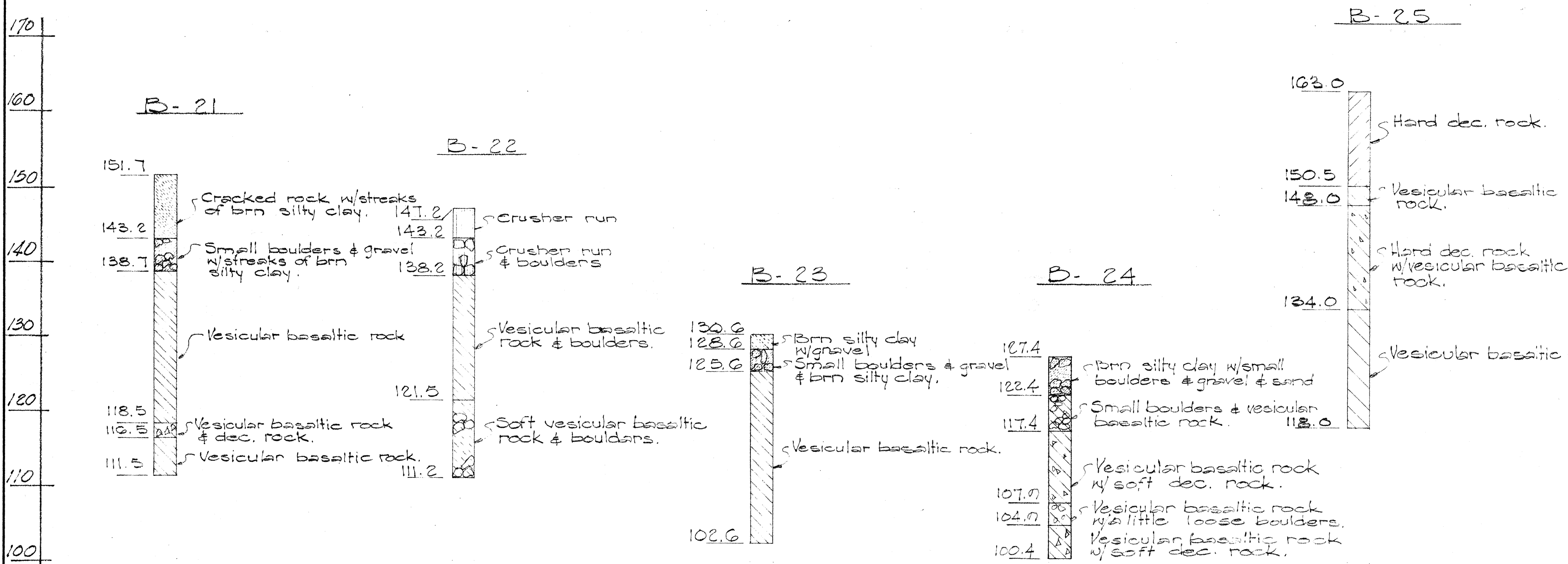
BORING LOGS - GENERAL NOTES

PALEHUA BRIDGE

HONOULIULI BRIDGE

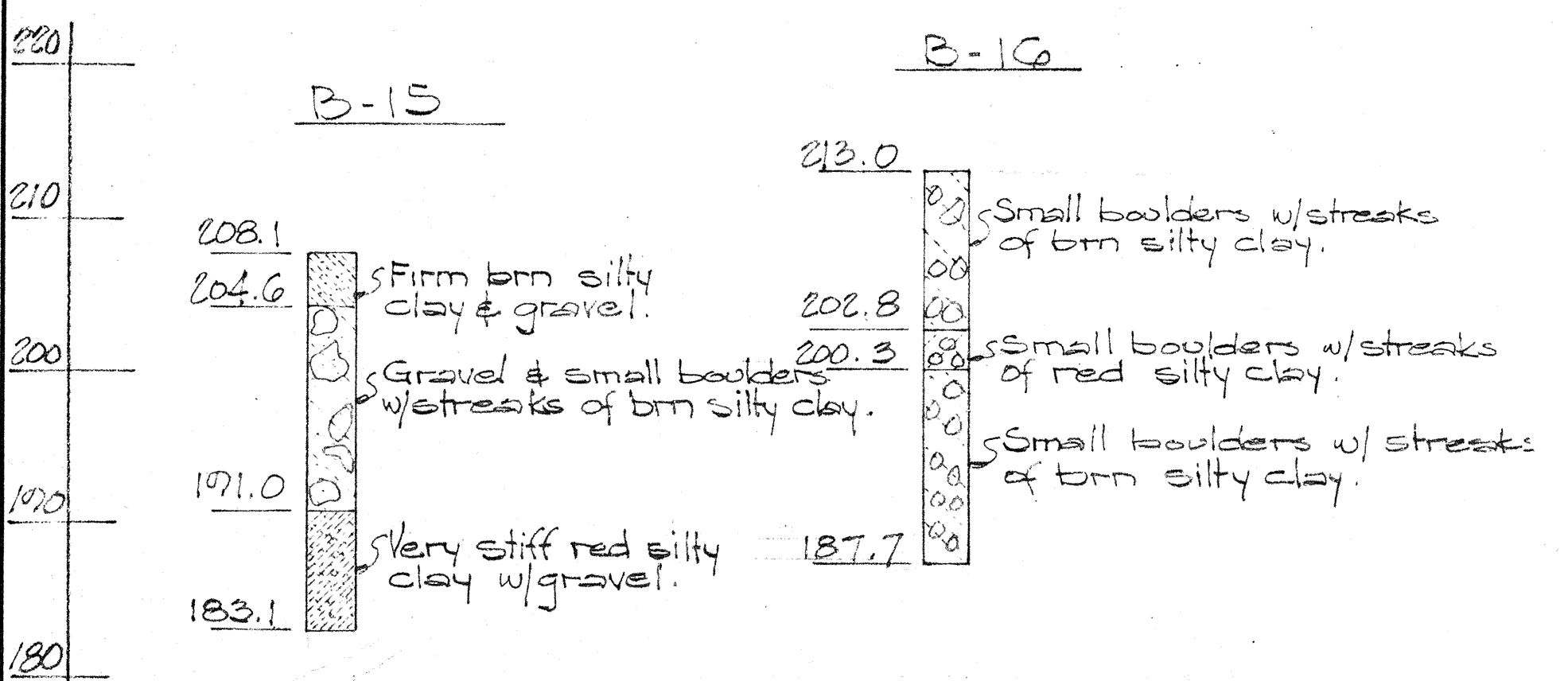
F.A.I. Proj. I-HI-118) PALEHUA RD. TO KUNIA RD.
Nov. 1964

SHEET No. 7 / OF / SHEETS



BORING LOG FOR HONOULIULI STREAM BRIDGE

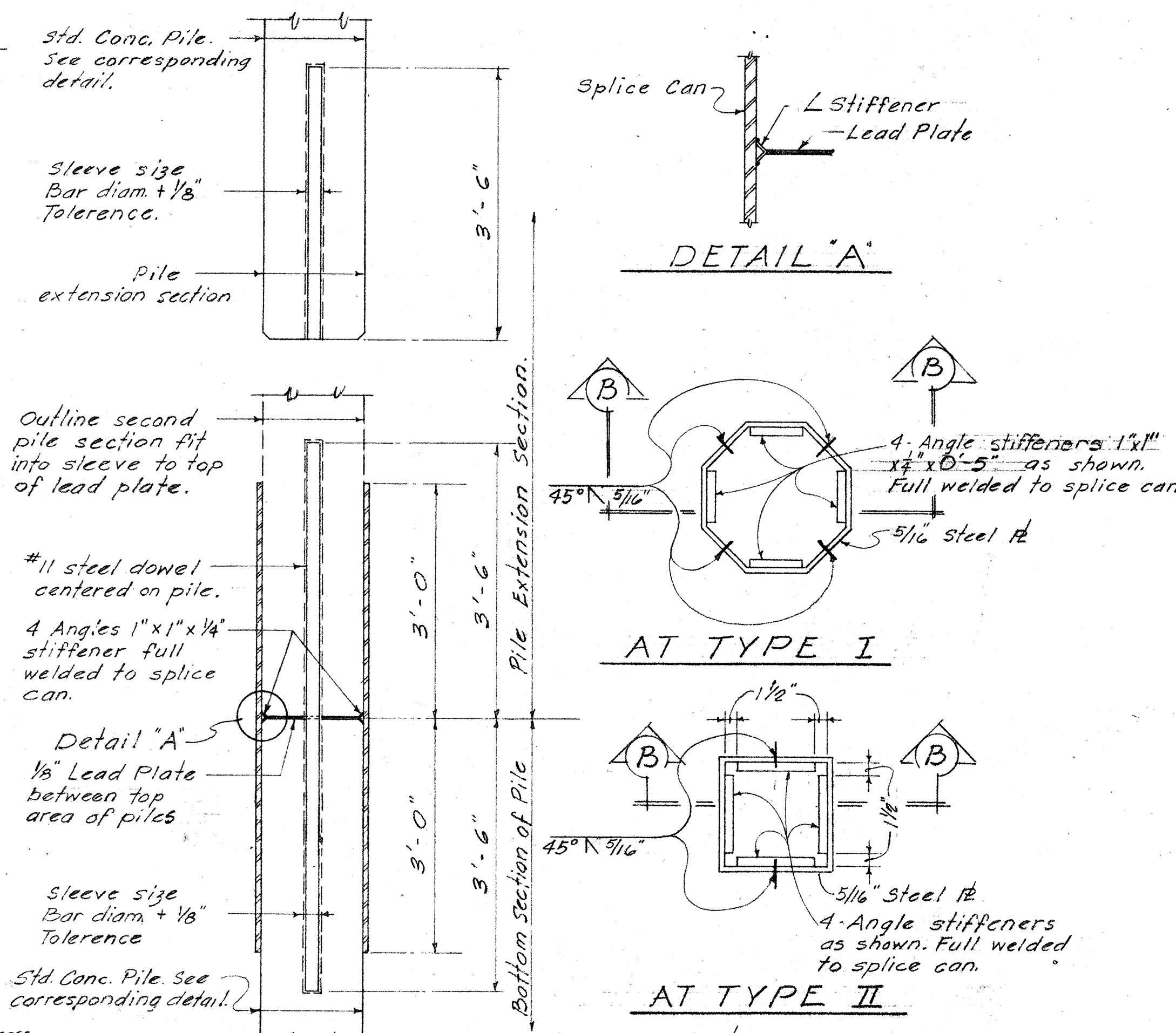
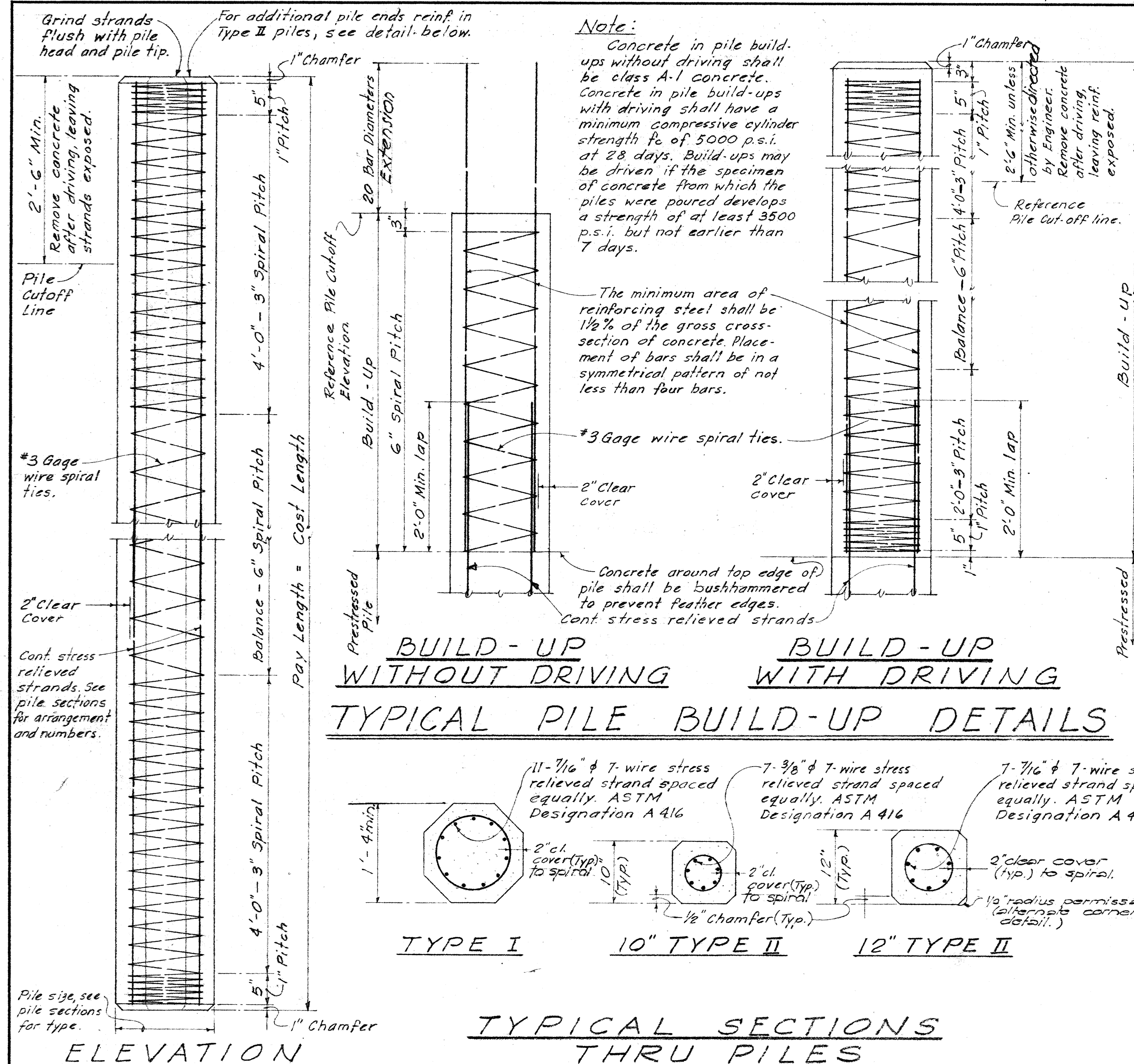
Scale: 1" = 10'-0"



BORING LOG FOR PALEHUA SEPARATION

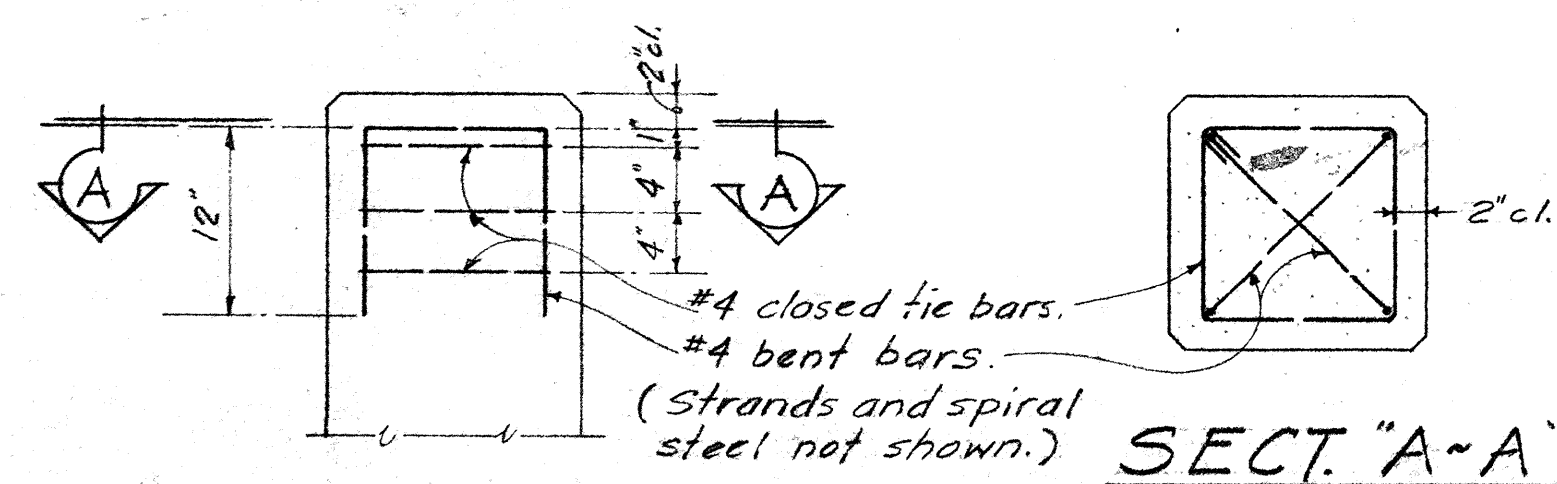
SCALE 1" = 10'-0"

SURVEY PLOTTED BY: DATE: Nov. 64
 DRAWN BY: DESIGNED BY: L.A. J.O.
 NOTE BOOK: QUANTITIES BY: CHECKED BY: L.A. J.O.
 ORIGINAL PLAN: No.



Note: Spiral reinforcement shall be cold-drawn steel wire ASTM A-82.

STANDARD PRESTRESSED CONCRETE PILES



PART ELEV. PILE ENDS REINFORCING IN TYPE II PILES

Note: Unless special lifting devices are attached for pick-up, 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.

Max. Length: "L" *

Type I "L" = 53'-0"

10" Type II "L" = 46'-0"

12" Type II "L" = 50'-0"

0.30 L 0.70 L

Max. Length "L" *

Type I "L" = 75'-0"		
10" Type II "L" = 66'-0"		
12" Type II "L" = 72'-0"		
0.21 L	0.58 L	0.21 L

Length "L" *

Type I "L" Over 75'-0"			
10" Type II "L" Over 66'-0"			
12" Type II "L" Over 72'-0"			
0.15 L	0.35 L	0.35 L	0.15 L

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

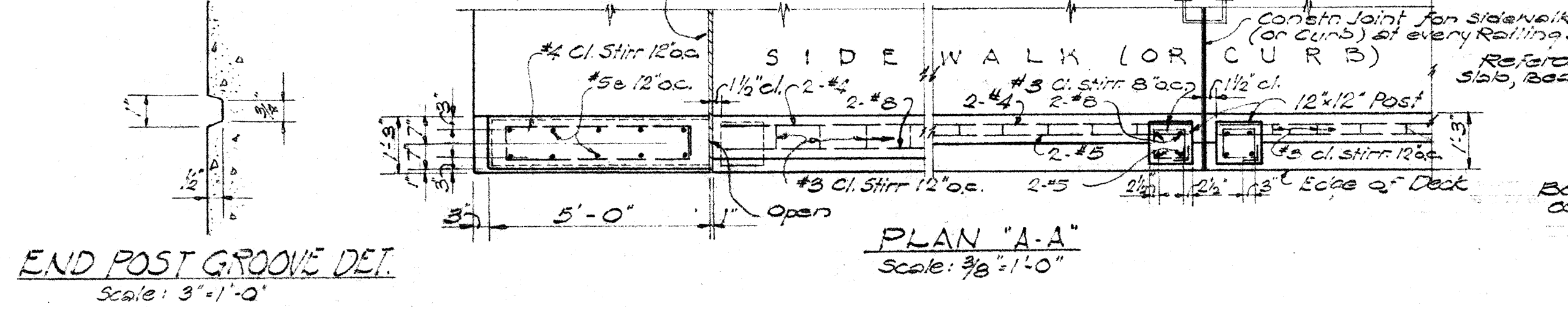
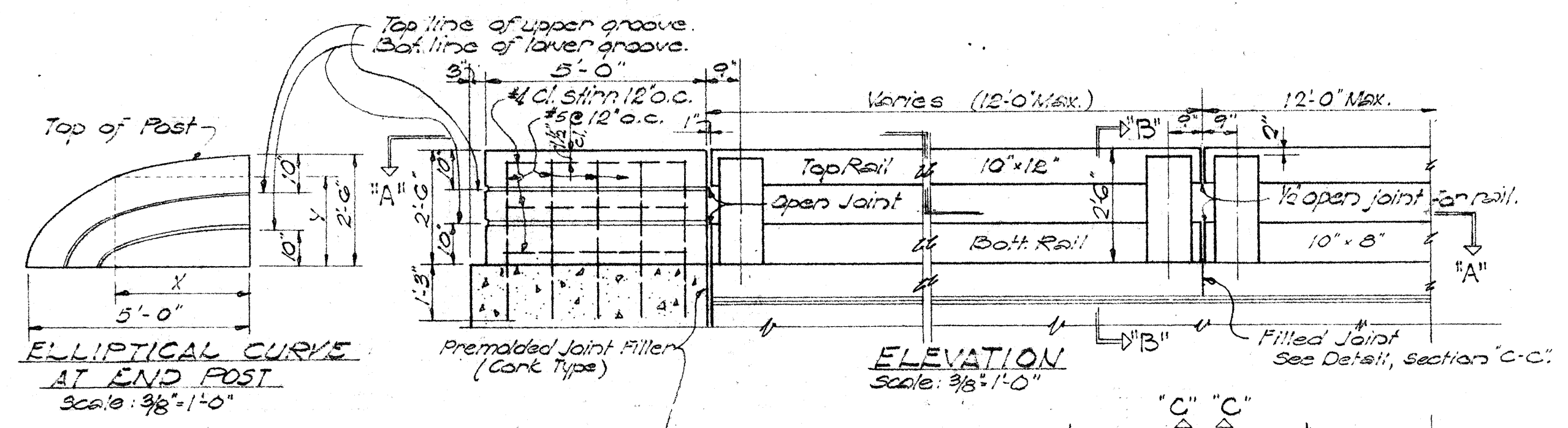
1 POINT PICK-UP 2 POINT PICK-UP 3 POINT PICK-UP

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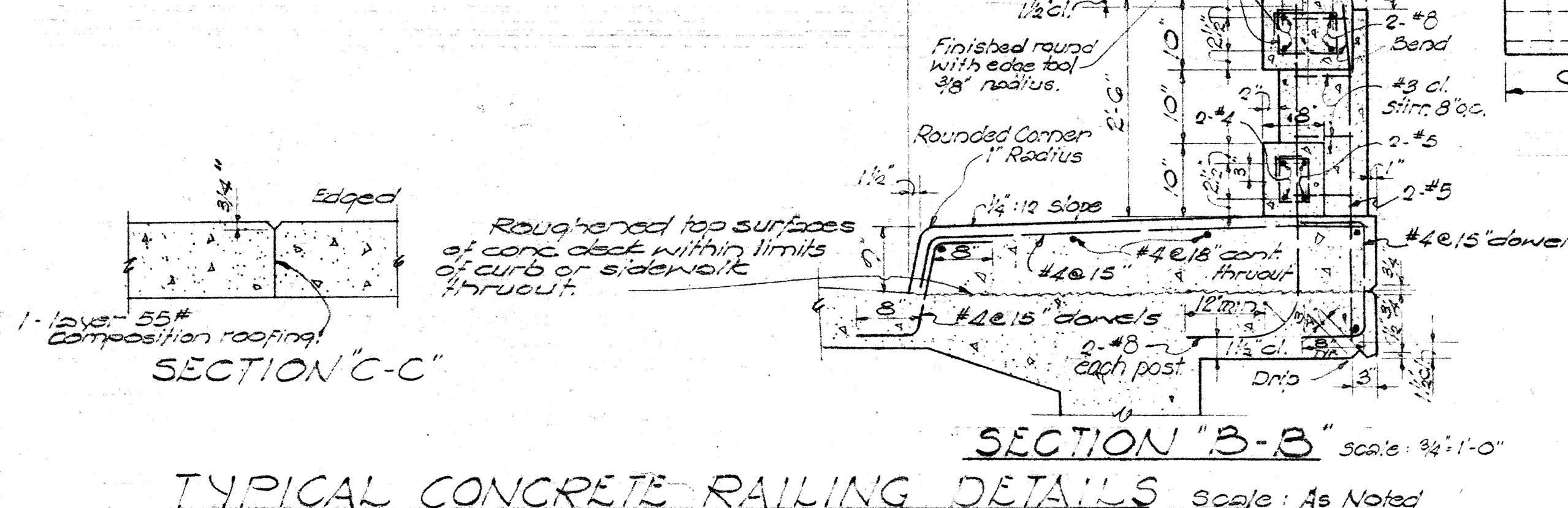
STANDARD PRESTRESSED CONCRETE PILES

Date: March 12, 1964

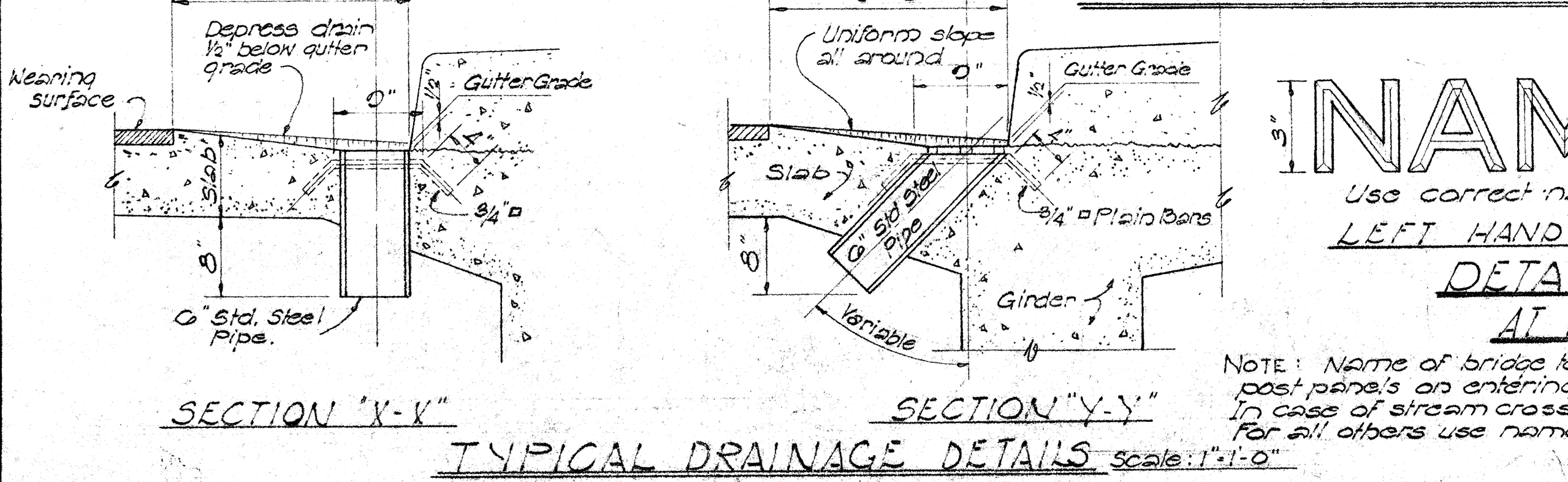
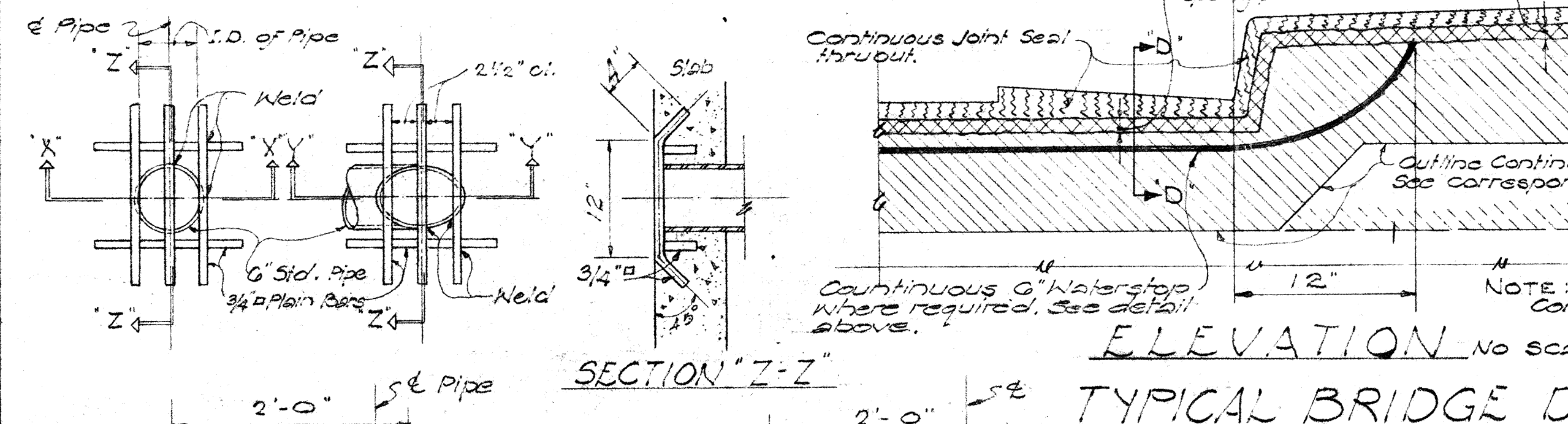
SHEET No. 91 OF 4 SHEETS



NOTE: Sidewalk, Curb and Railing to be poured after release of falsework. Forms for railing and end post to be made of plywood. Bottom forms for top rails shall be kept in place a minimum of 14 days from date of pour.



NOTE: Metal drains shall be considered incidental to Class A-1 Concrete in both concrete and steel bridges and will not be paid for separately. Assemblies of drains and pipe shall be hot-dip galvanized after all welding is completed.



Top of Post

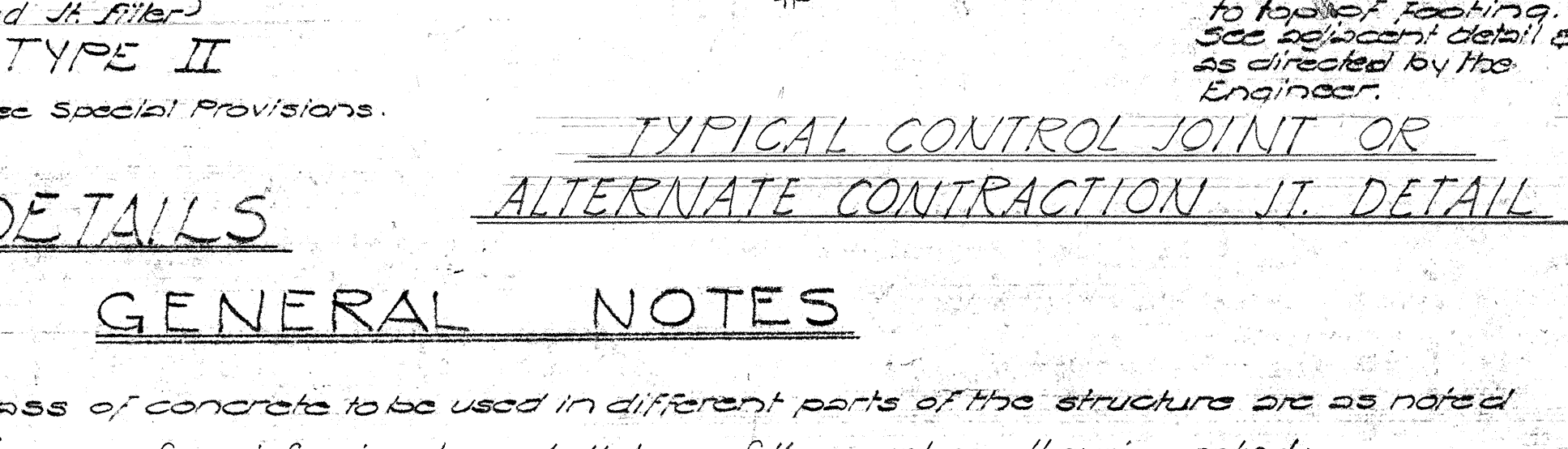
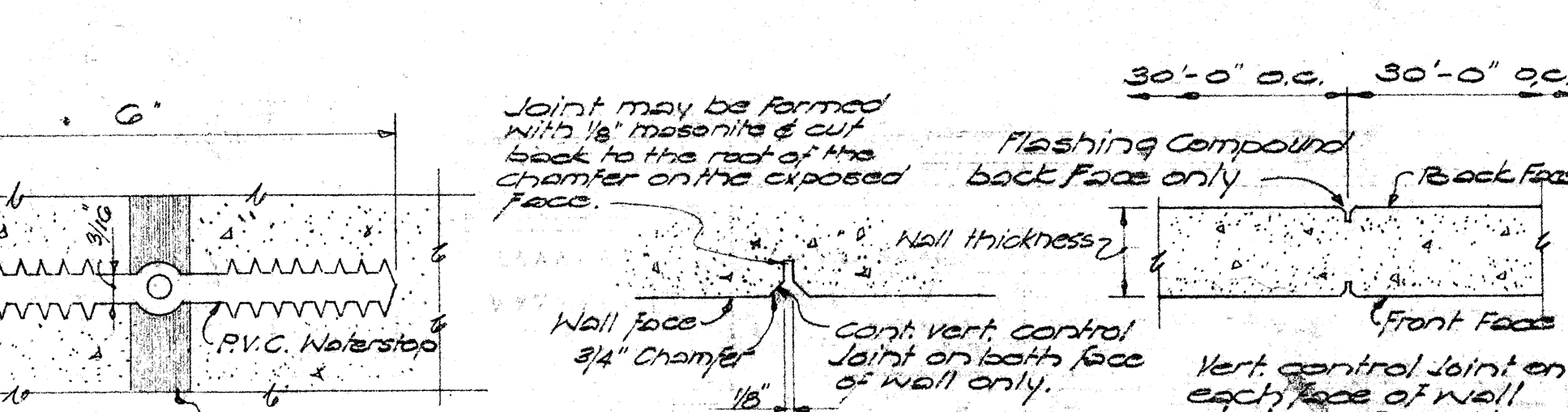
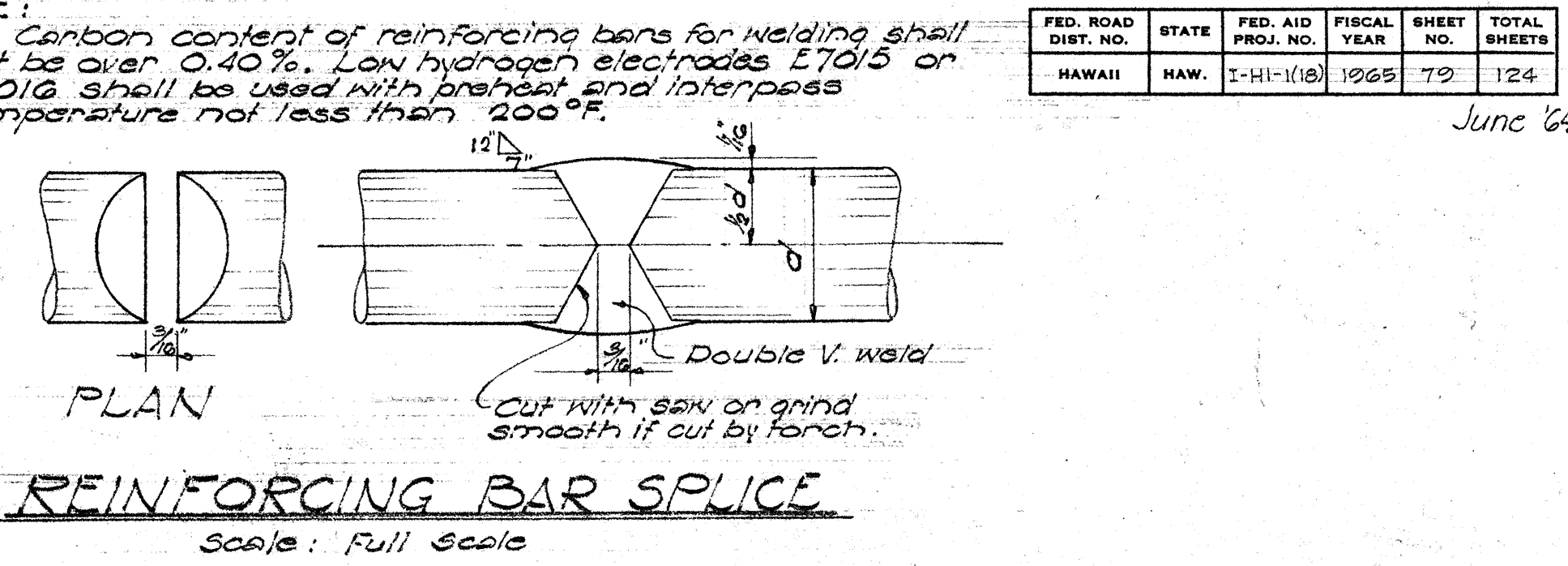
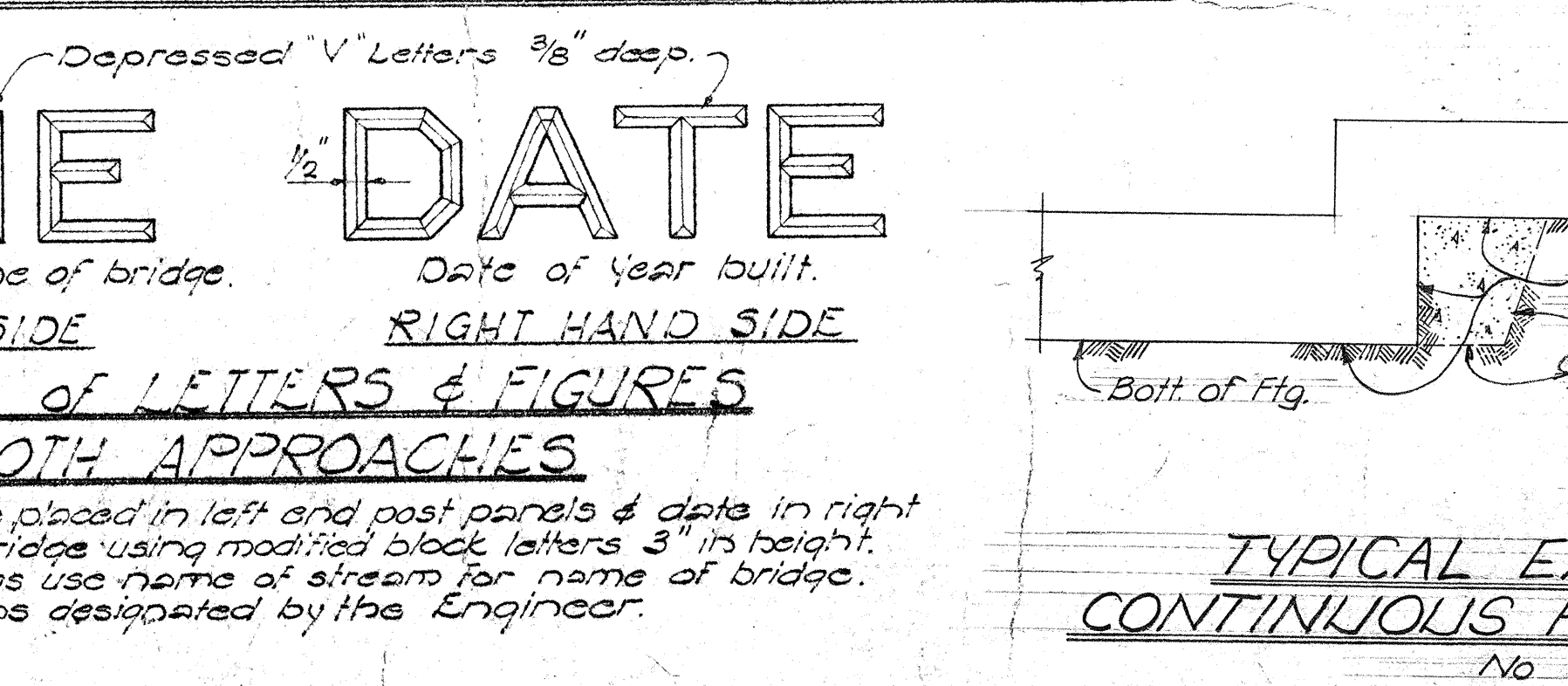
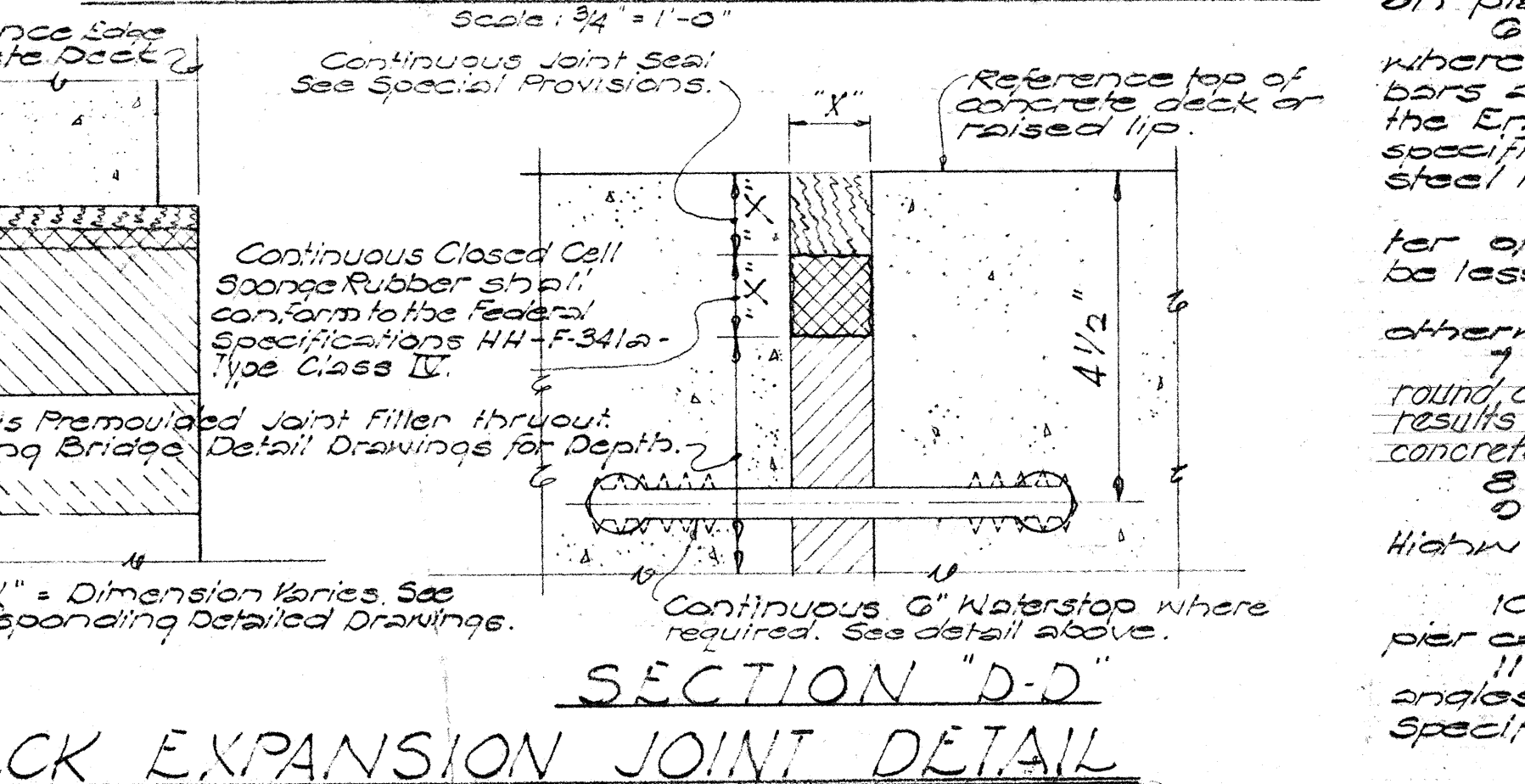
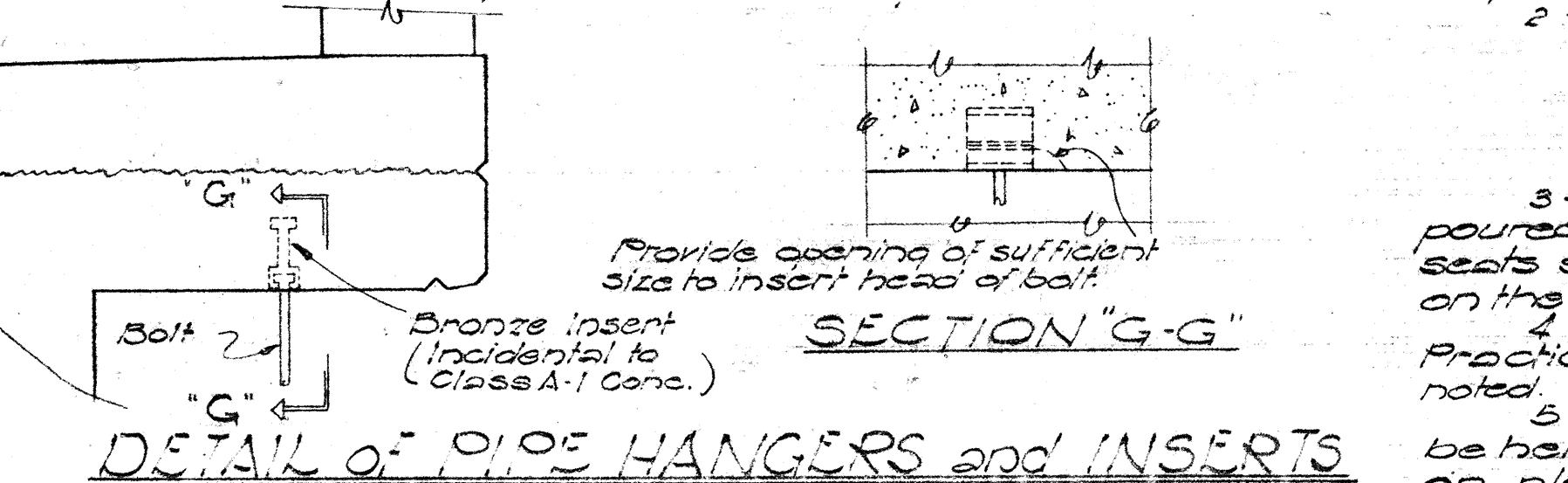
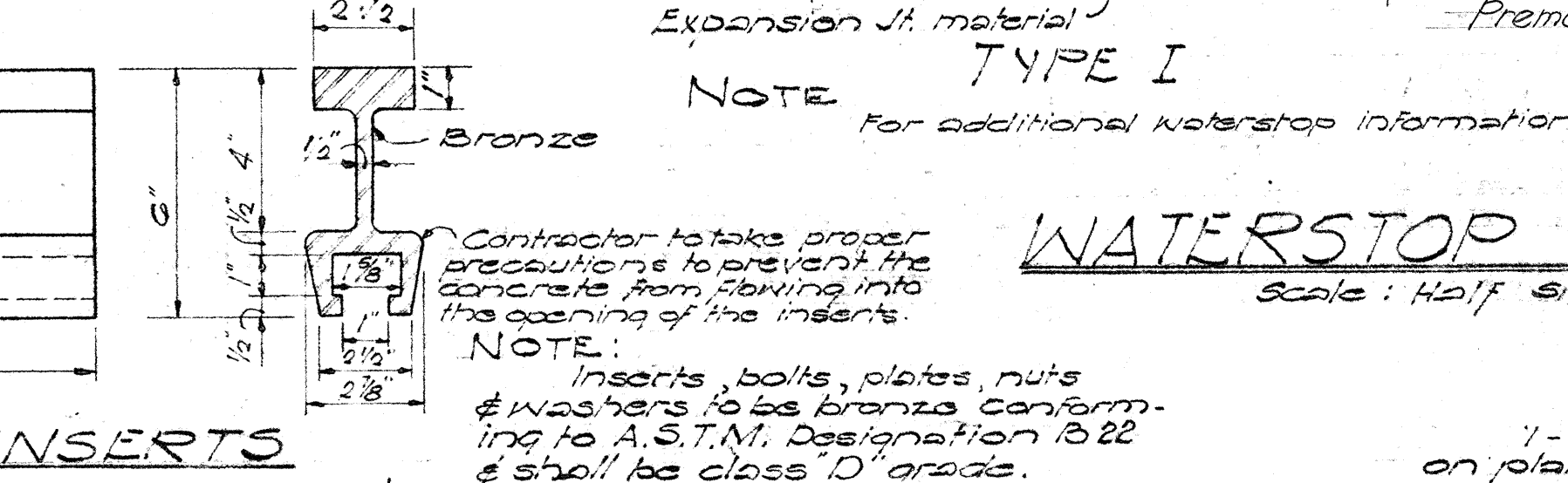
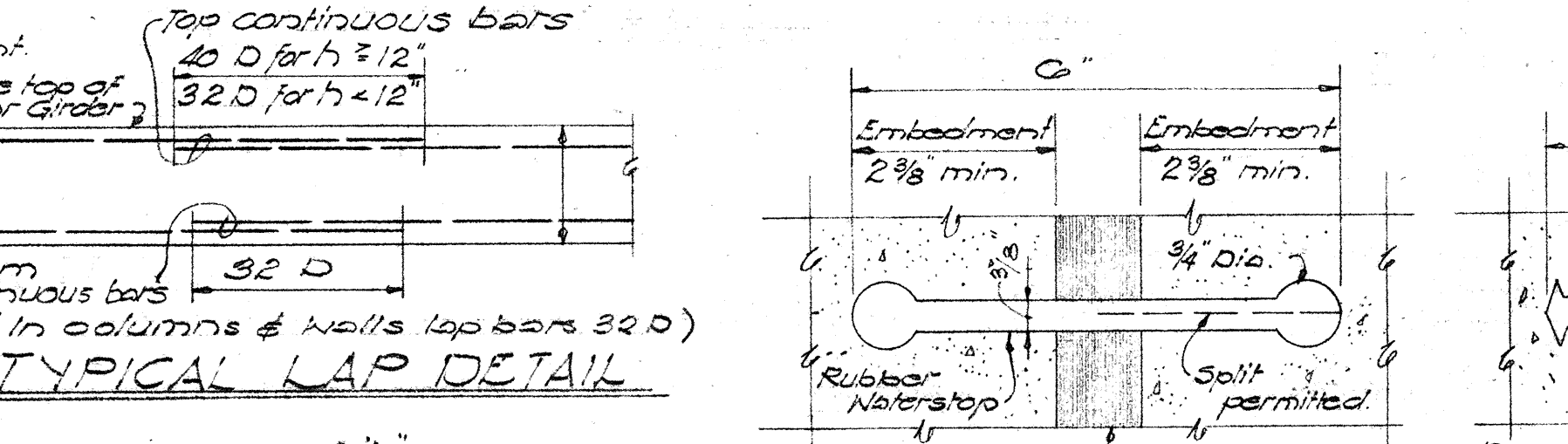
X	0	1'-0"	1'-0"	2'-0"	2'-0"	3'-0"	3'-0"	4'-0"	4'-0"	4'-0"	4'-0"	5'-0"
Y	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"

Top Line of Upper Groove

X	0	0"	1'-0"	1'-0"	2'-0"	2'-0"	3'-0"	3'-0"	3'-0"	4'-0"	4'-0"	4'-2"
Y	1'-8"	1'-7 1/2"	1'-7 1/2"	1'-6 1/2"	1'-5 1/2"	1'-4 1/2"	1'-3 1/2"	1'-2 1/2"	1'-1 1/2"	0"	0"	0"

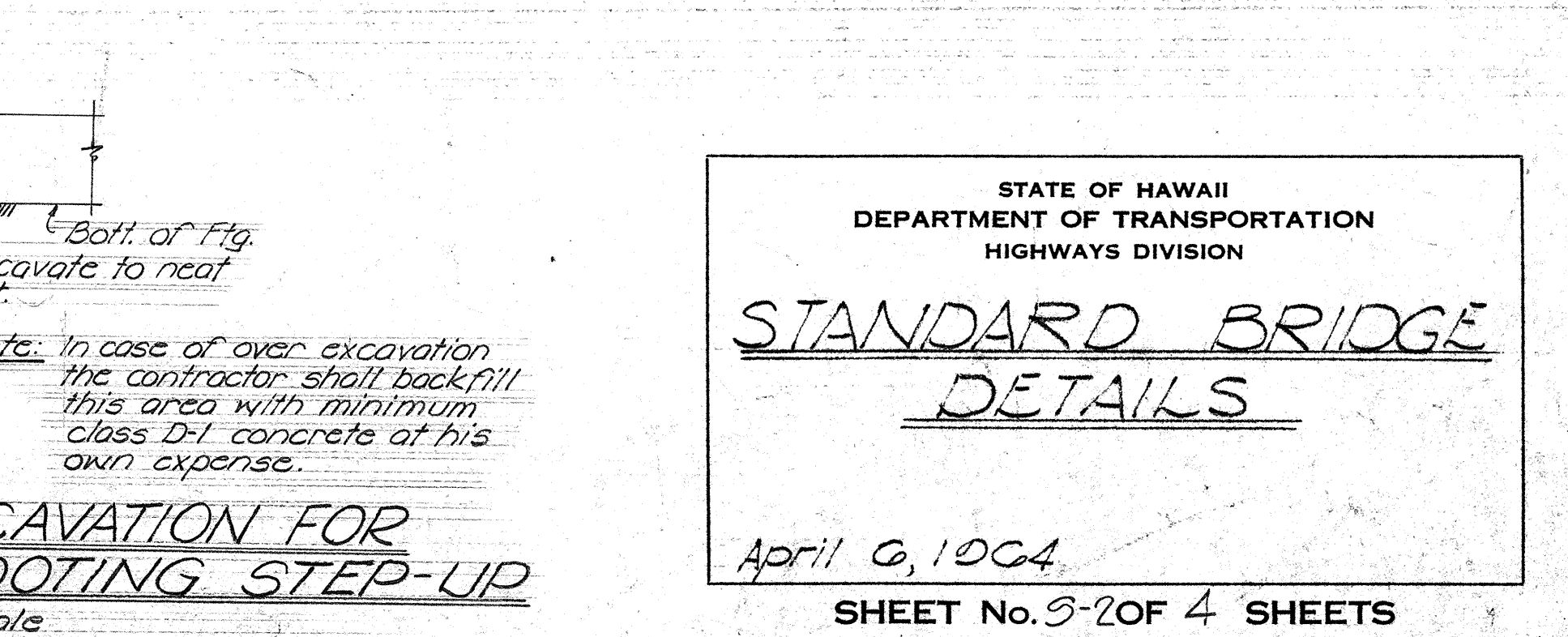
Bottom Line of Lower Groove

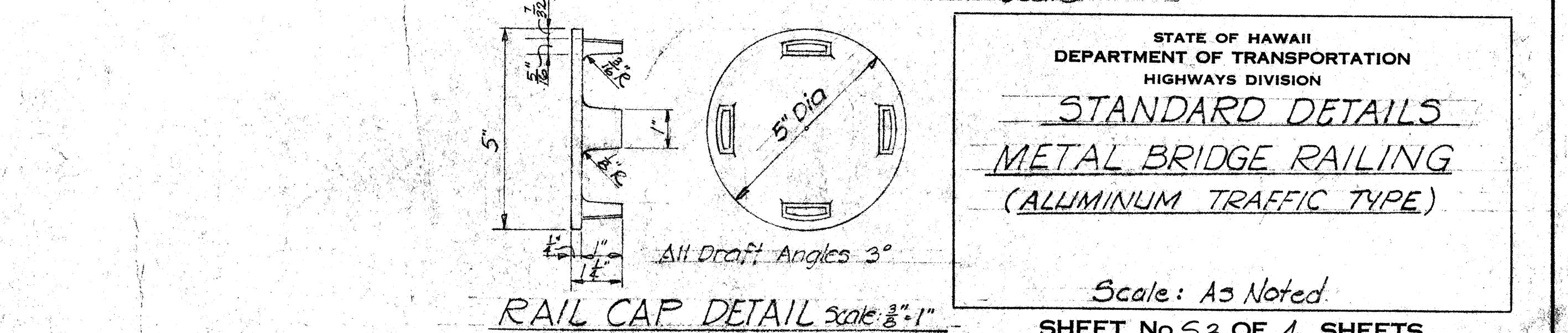
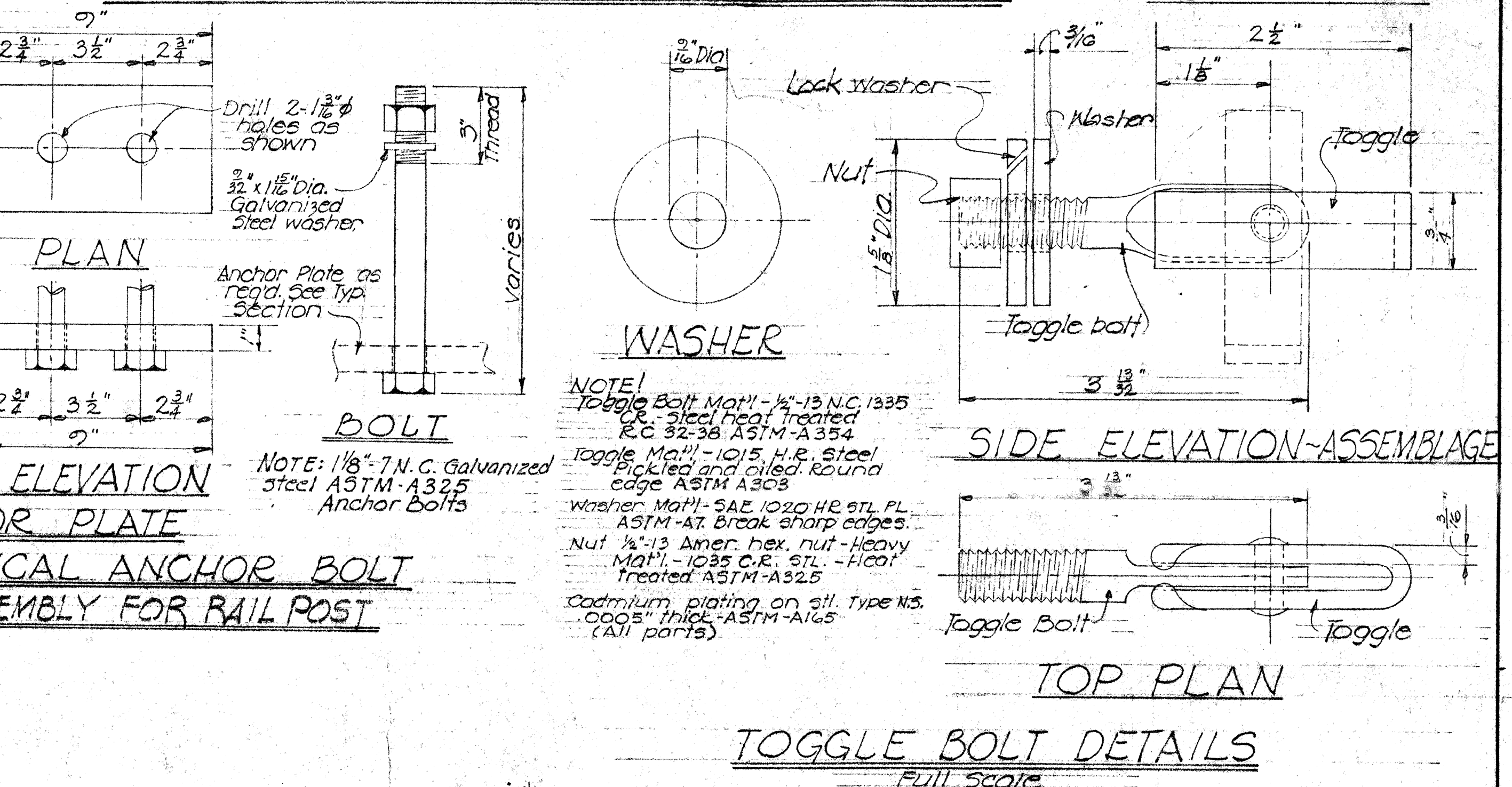
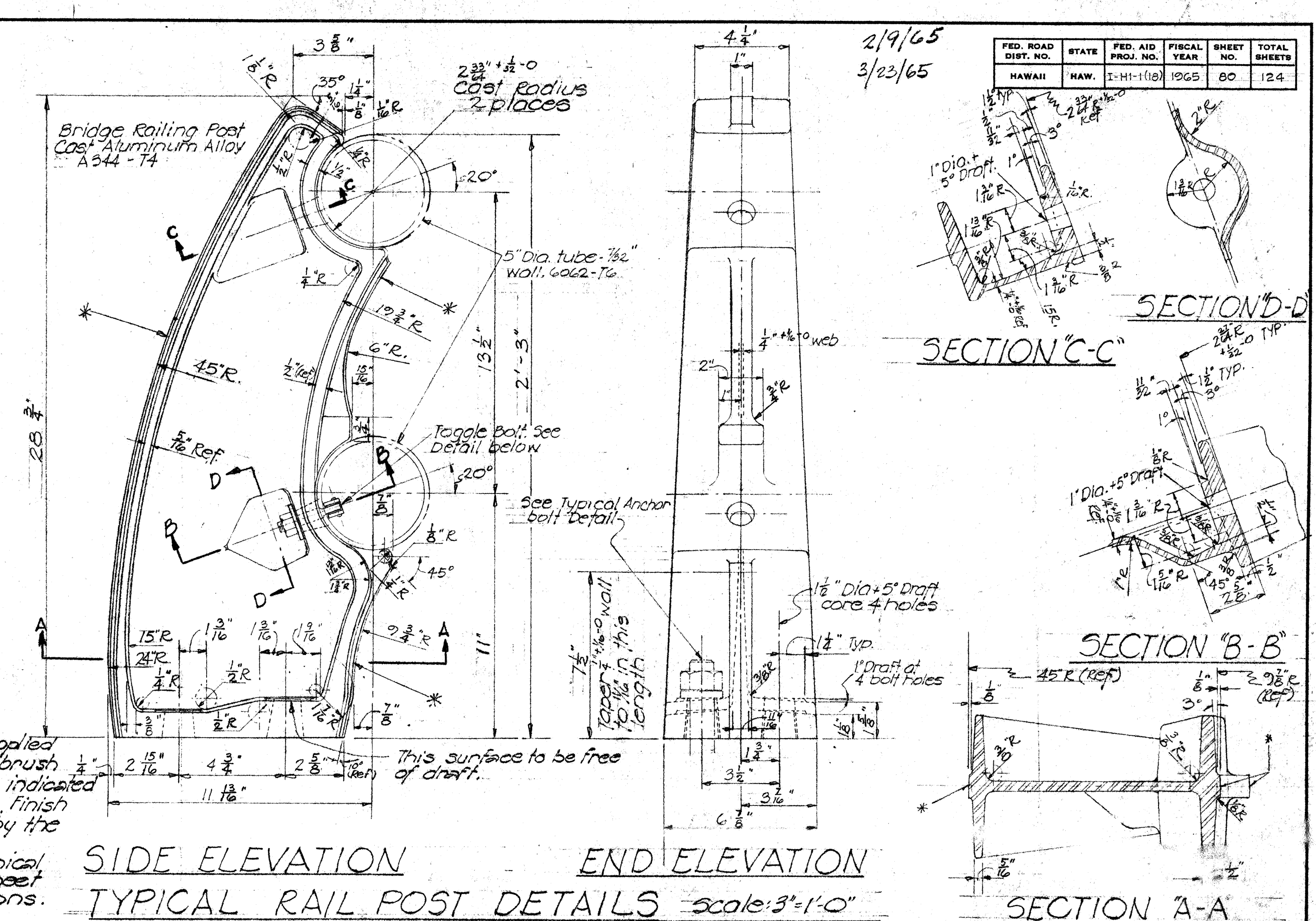
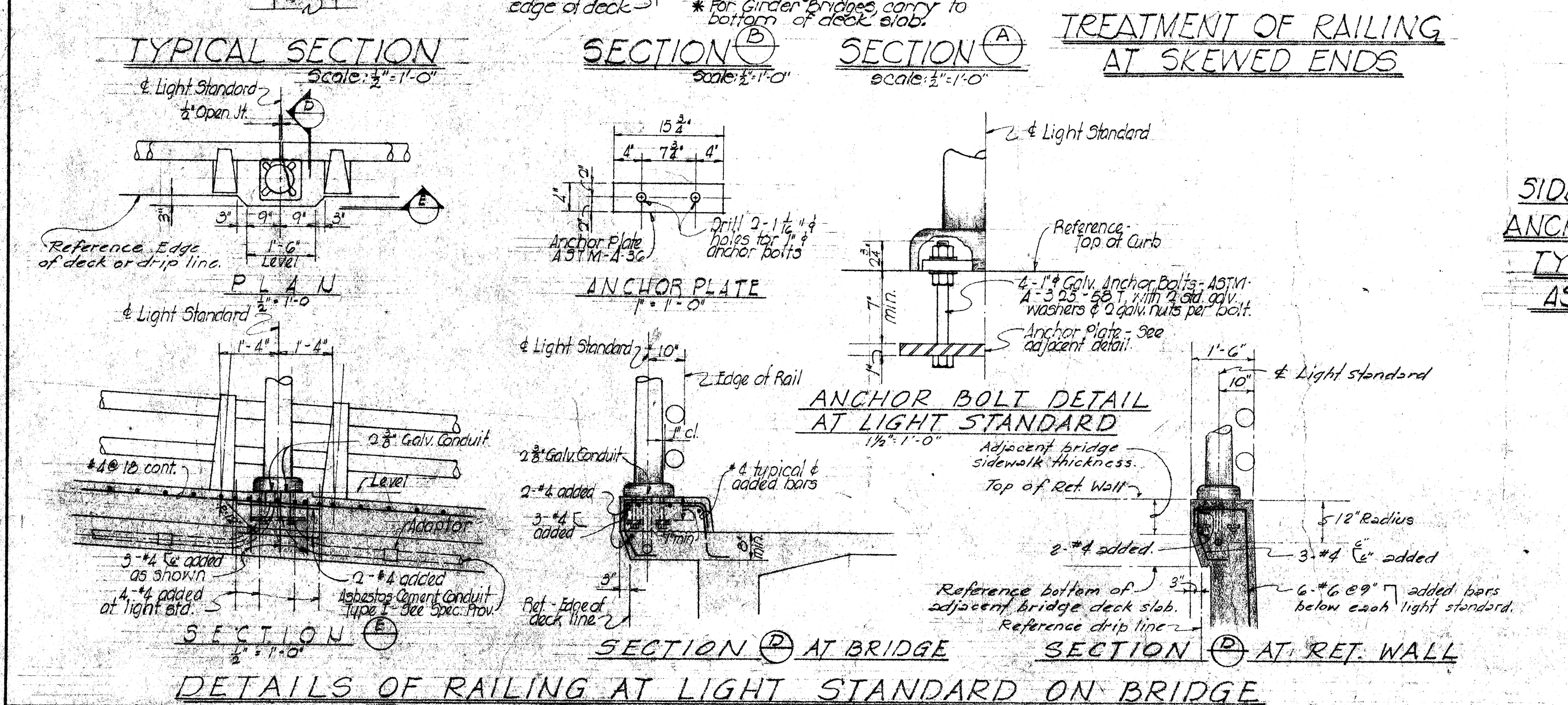
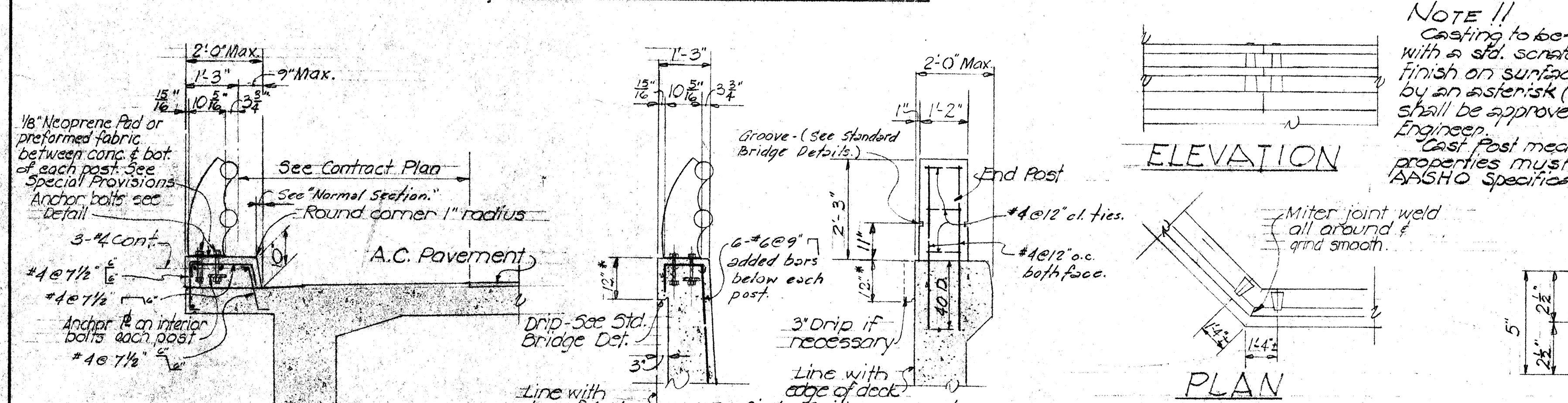
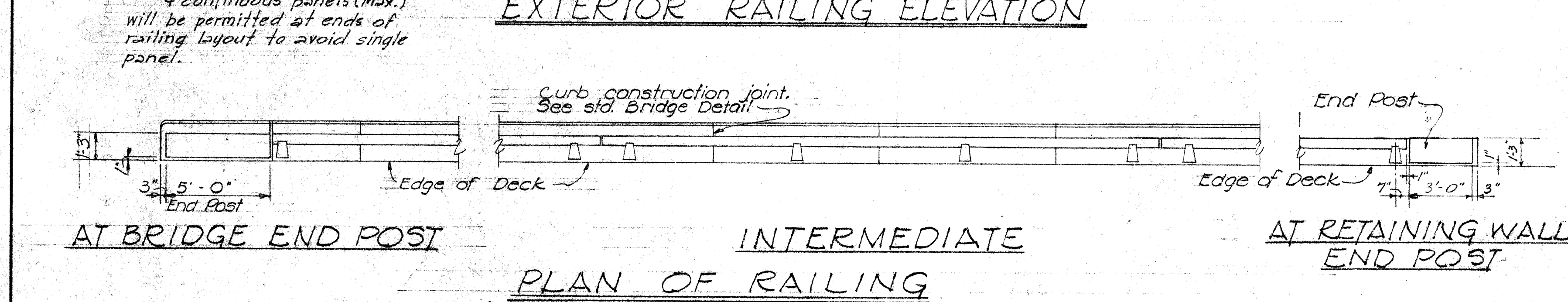
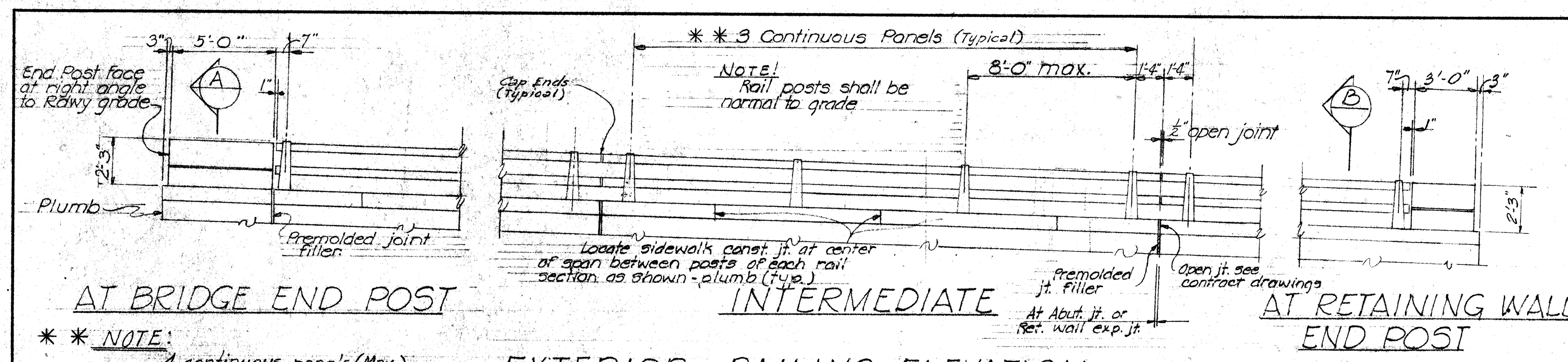
X	0	0"	1'-0"	1'-0"	2'-0"	2'-0"	3'-0"	3'-0"	3'-0"	4'-0"	4'-0"	4'-2"
Y	10"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"



NOTE: Carbon content of reinforcing bars for welding shall not be over 0.40%. Low hydrogen electrodes E7015 or E7016 shall be used with preheat and interpass temperature not less than 200°F.

NOTE: Class of concrete to be used in different parts of the structure are as noted on plans.
2 - Clearance for reinforcing bars shall be as follows unless otherwise noted:
a - 1 1/2" for stirrups of beams & pier caps.
b - 2" for ties of columns.
c - 2" for formed walls.
d - 3" for footings.
3 - Concrete seals receiving steel plates, lead plates or neoprene pads shall be poured monolithically with supporting structures & top surfaces of the concrete seals shall be finished with a steel trowel to a smooth level at the elevation shown on the plans.
4 - Reinforcing shall be detailed in accordance with A.C.I. Manual of Standard Practice for Detailing Reinforced Concrete Highway Structures unless otherwise noted.
5 - 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.
6 - Splicing of reinforcing shall be done as shown in above sketch except where shown otherwise. Splices are to be staggered. Splices in main bridge bars are permitted only in bars exceeding 60'-0" in length of points indicated by the Engineer. Splices to be electrically welded shall be according to detail & specifications. No allowance will be made in the quantities for extra weight of steel required for splices not shown on the plans.
7 - Minimum spacing between parallel bars shall be 1 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.
8 - All dimensions relating to reinforcing are to centers of bars unless otherwise noted.
9 - Forms for all exposed surfaces of separation structures including retaining walls (except round columns) shall be plywood. Forms for round columns shall be made of a material that results in smooth finishes & true dimensions as shown on the plans. Forms for prestressed concrete members shall be either metal or plywood.
10 - Concrete finish - See Special Provisions.
11 - All welding shall conform to the latest Specifications for Welded Highway & Railway Bridges of the American Welding Society.
12 - Vertical column bars shall be arranged in such a manner as to miss pier cap bars above as directed by the Engineer.
13 - Except as otherwise noted on drawings, all exterior corners & re-entrant angles in concrete work shall be chamfered 3/4" x 3/4". See Standard Specifications.





2/9/65
3/23/65

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	1-H1-1(10)	1965	80	124

SECTION 'D-D'

SECTION 'C-C'

SECTION 'B-B'

SECTION 'A-A'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL BRIDGE RAILING
(ALUMINUM TRAFFIC TYPE)

Scale: As Noted

SHEET No. 53 OF 4 SHEETS

