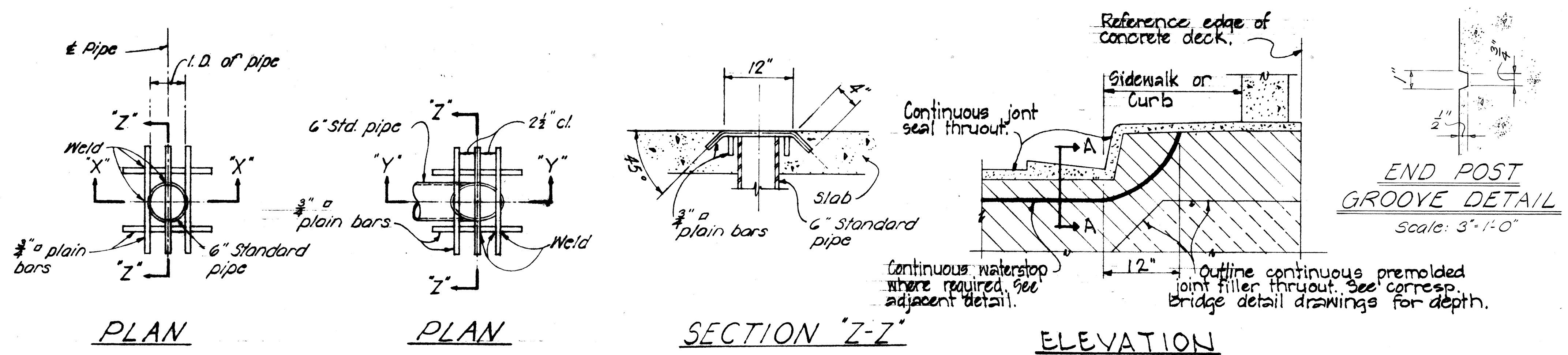
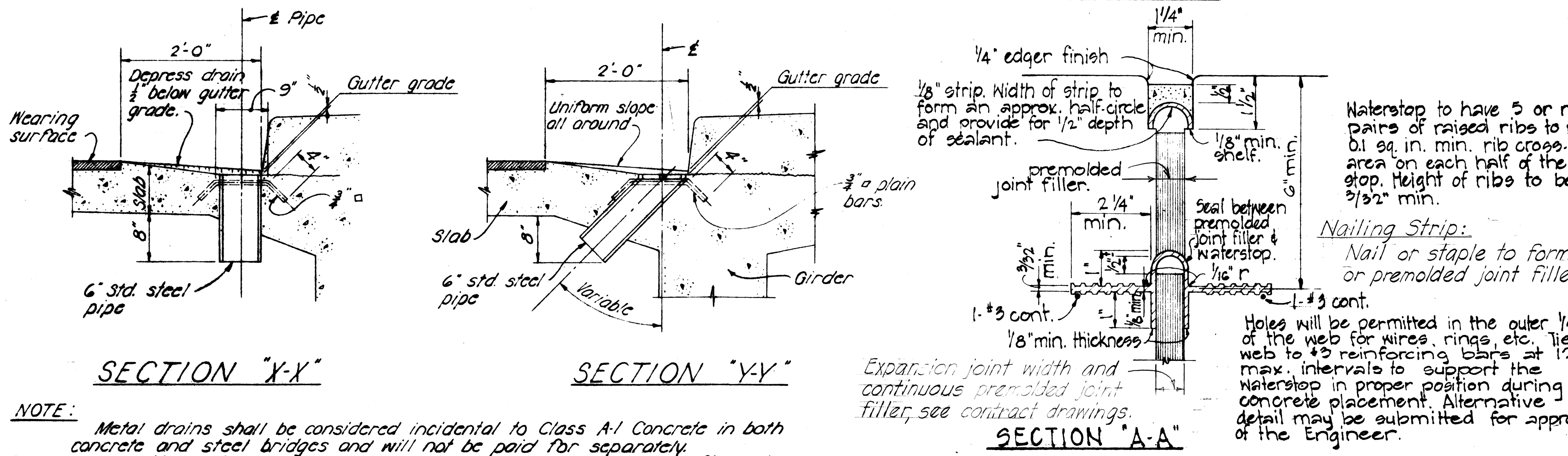


REVISION
Jan. '67
Feb. '67
Apr. '67



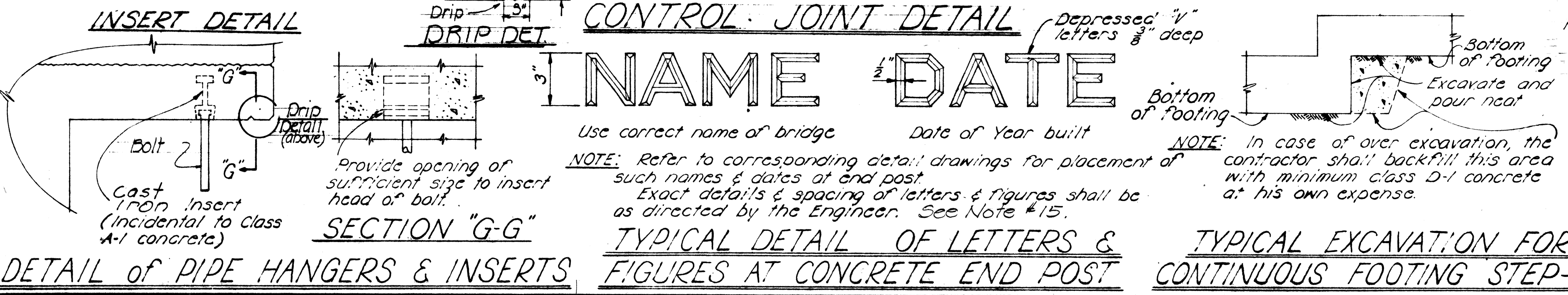
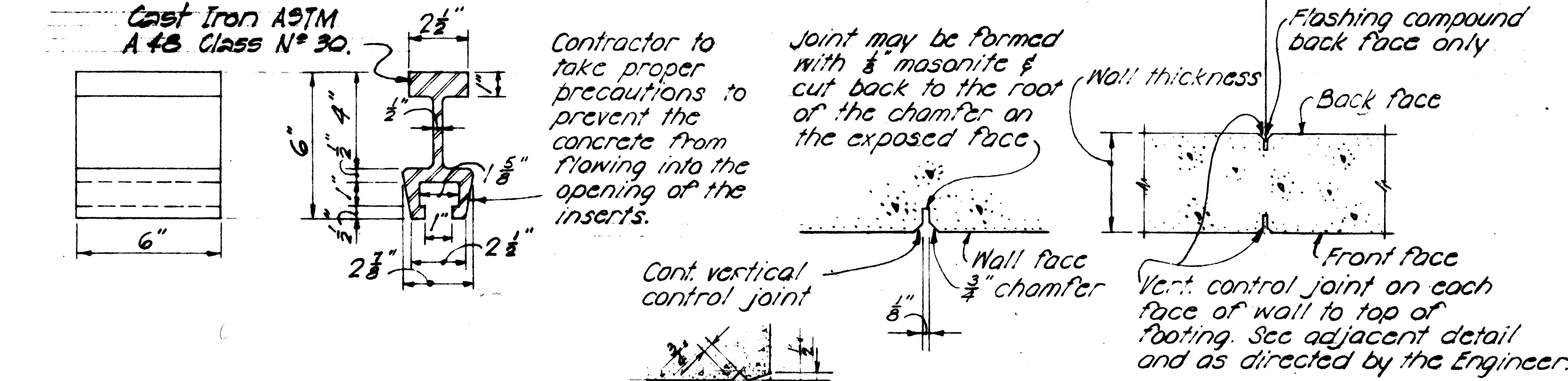
GENERAL NOTES

- Elastometric Pads: Top & 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.
- The Contractor shall verify the location of all existing utility lines and notify the respective owners before commencing work of excavation.
 - All concrete shall be Class A-1 unless otherwise noted.
 - Clearance for reinforcing bars shall be as follows, unless otherwise noted:
 - 1" For stirrups of beams & pier caps.
 - 2" For ties of columns.
 - 2" For formed walls.
 - 3" For footings.
 - Concrete seats receiving steel plates, lead plates or neoprene pads shall be poured monolithically with supporting structures & top surfaces of the concrete seats shall be finished with a steel trowel to a smooth level at the elevation shown on the plans.
 - Reinforcing shall be detailed in accordance with A.C.I. Manual of Standard Practice for Detailing Reinforced Concrete Highway Structures 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.
 - Splices of reinforcing - See Special Provisions.



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. Assembly of grillage and pipe shall be hot-dip galvanized after all welding is completed.

TYPICAL DRAINAGE DETAILS

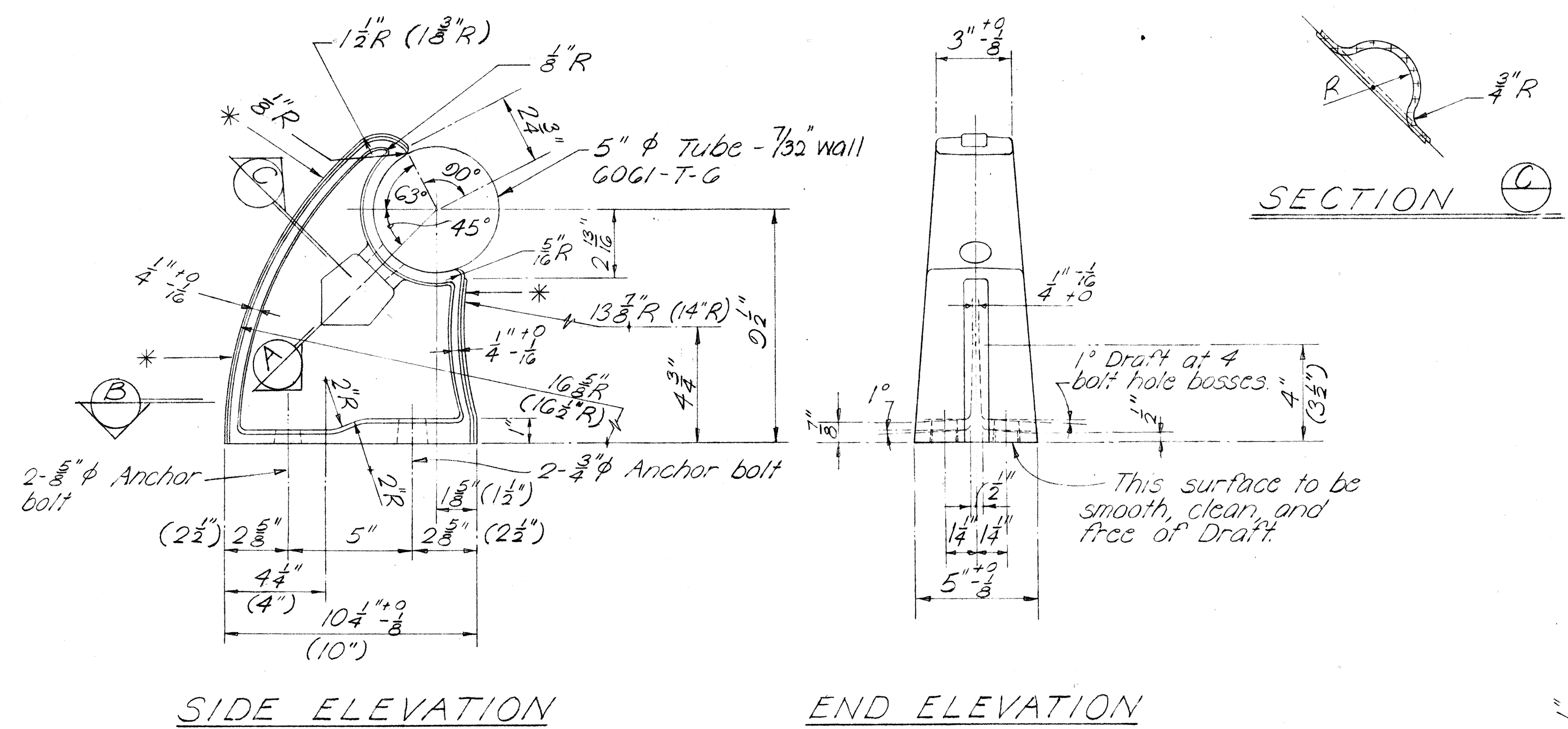


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD BRIDGE DETAILS

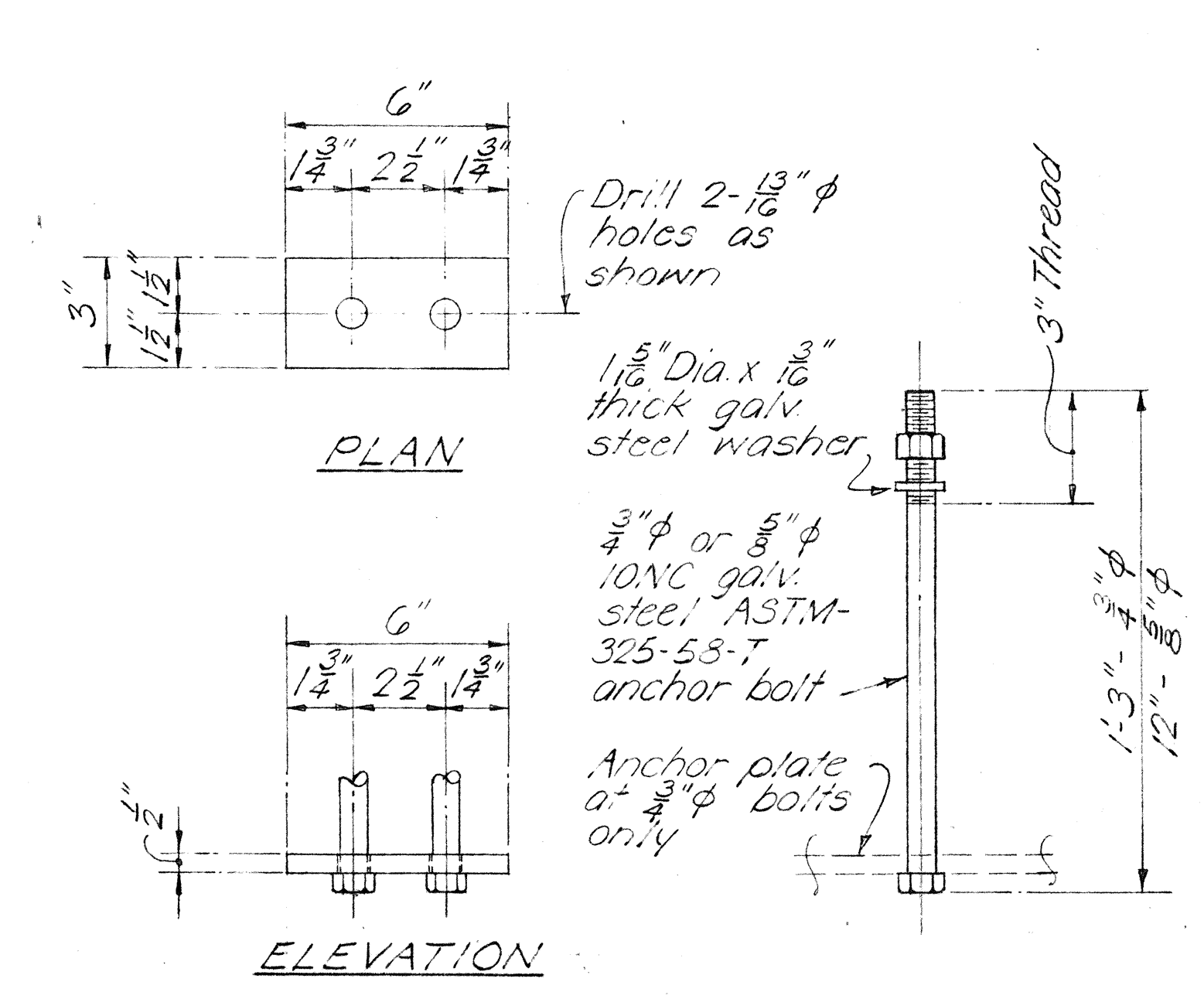
INTERSTATE ROUTE H-1
F.A.I. Proj. No. I-H-1(22)5, Unit 3
Scale as Noted Date: Dec. 1967
SHEET No. 51 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	101-100-101	1967	96	101

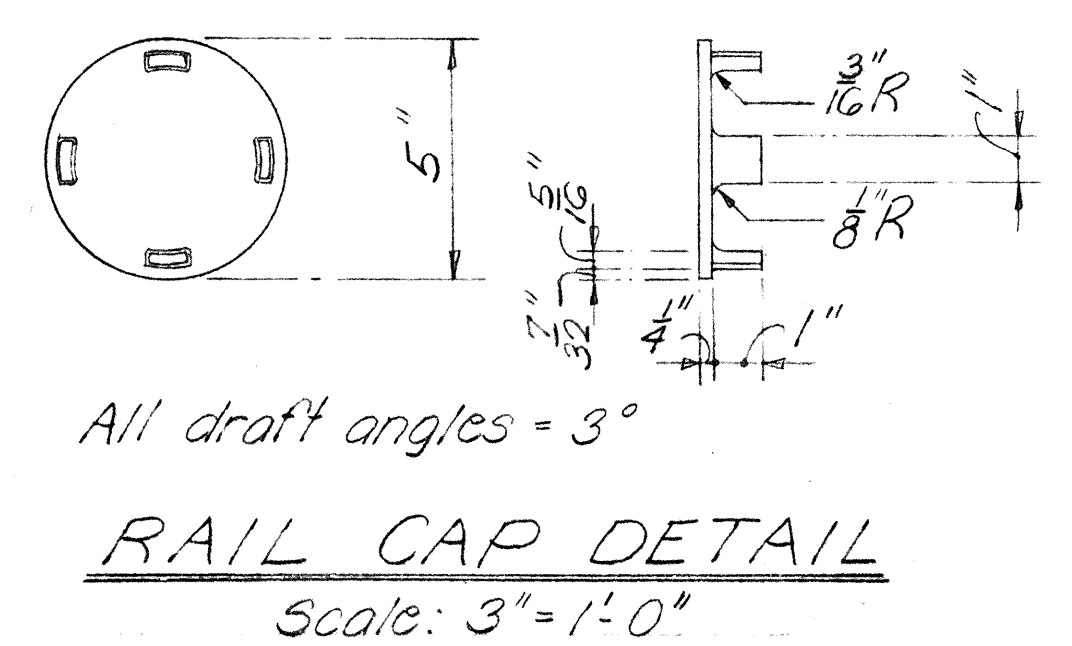


NOTE:
 * Casting to be supplied with a standard scratch brush finish on entire gating rib surface and as indicated by an asterisk (*). Finish shall be approved by the Engineer.
 Casting to be neatly trimmed and any protruding flash to be broken off.
 For cast post specifications, see Special Provisions.
 Unless otherwise specified, draft angles to be 3°, corner radii to be 3/32 inch, fillet radii to be 3/32 inch, casting tol to be ±1/16 inch, wall thickness to be ±1/32 inch.
 Dimensions may be as shown or as shown in parenthesis ().

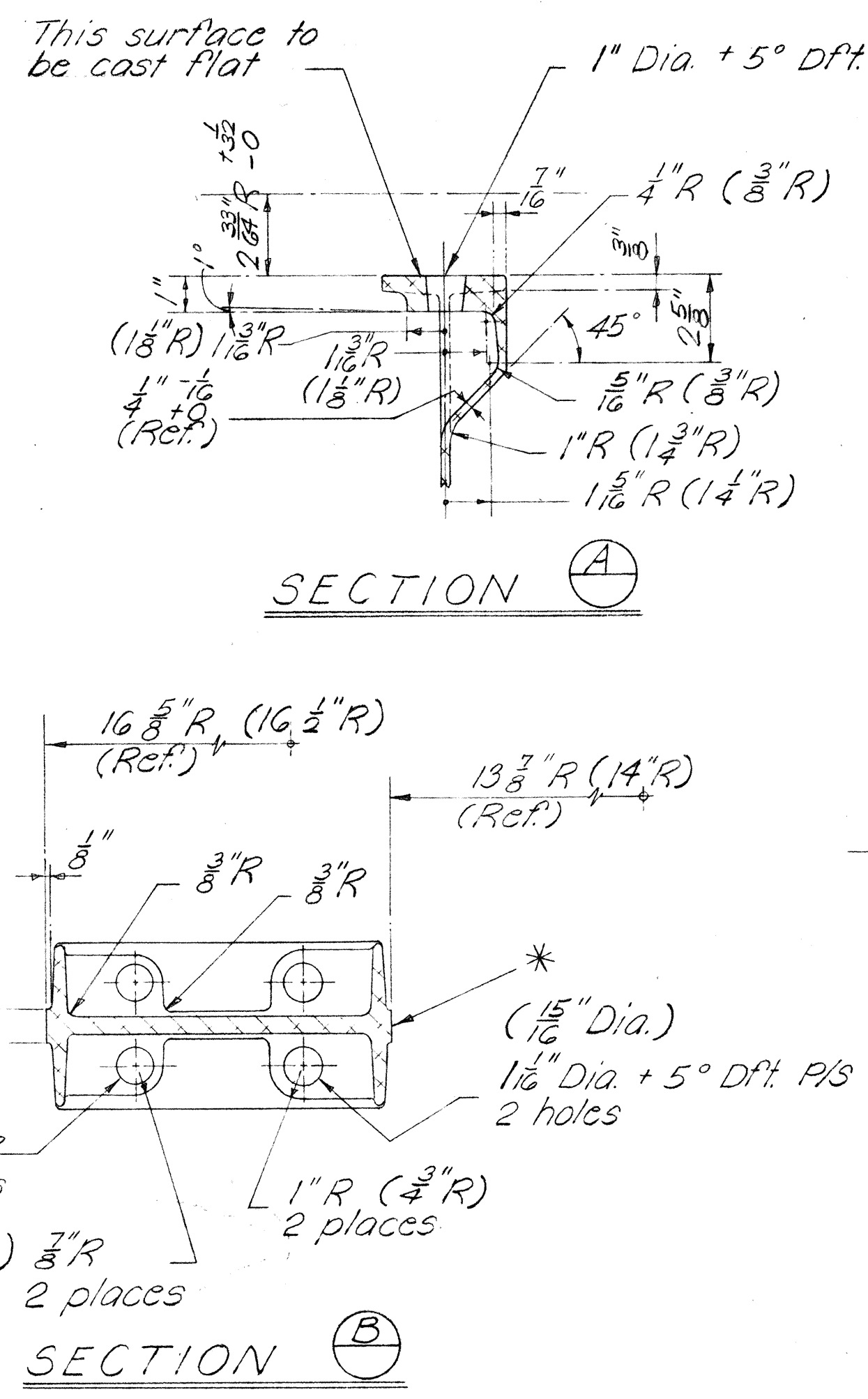
TYPICAL RAIL POST DETAILS
 Scale: 3" = 1'-0"



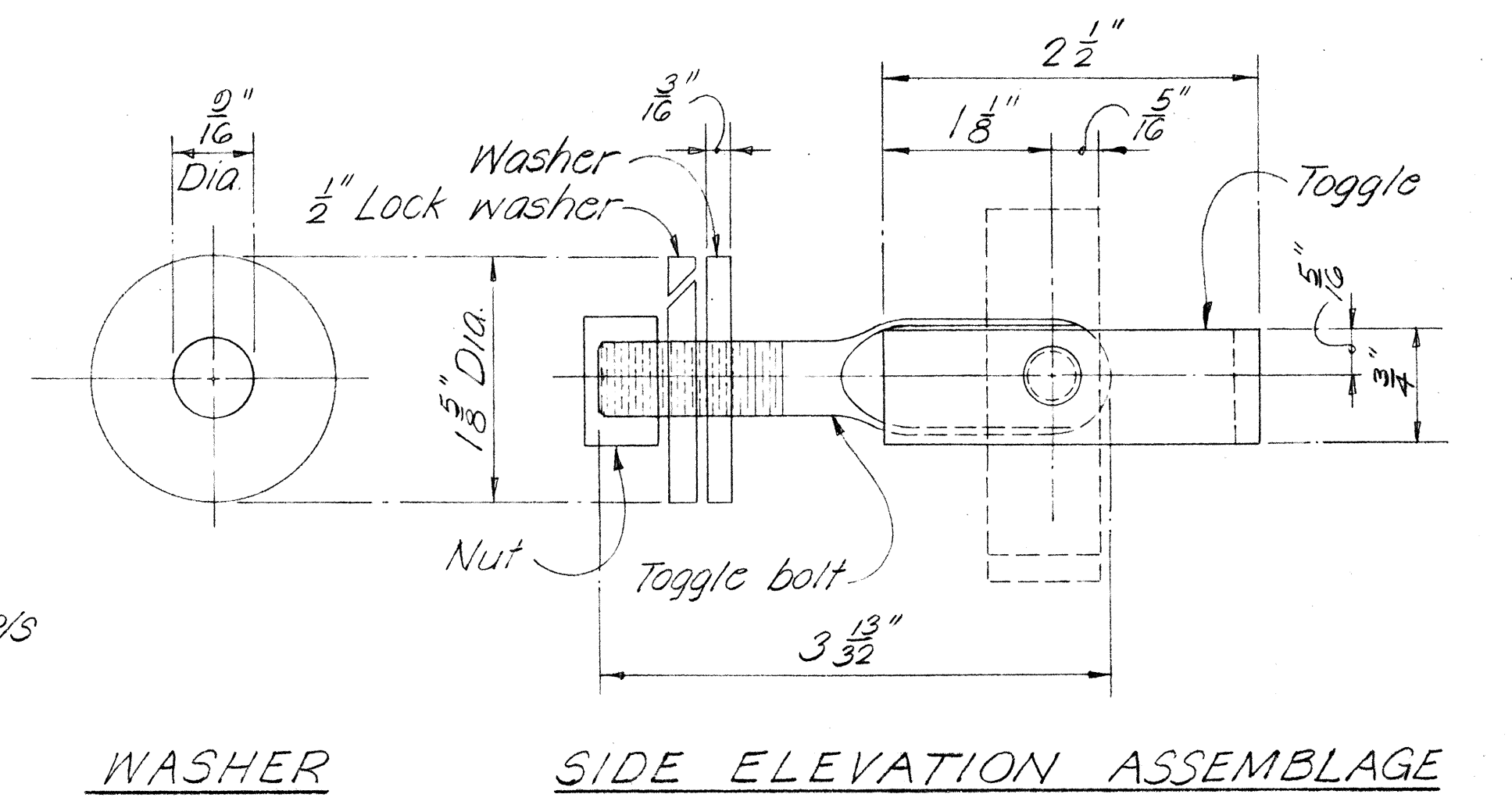
ANCHOR BOLT DETAIL ANCHOR BOLT
TYPICAL RAIL POST ANCHOR BOLT ASSEMBLY
 Scale: 3" = 1'-0"



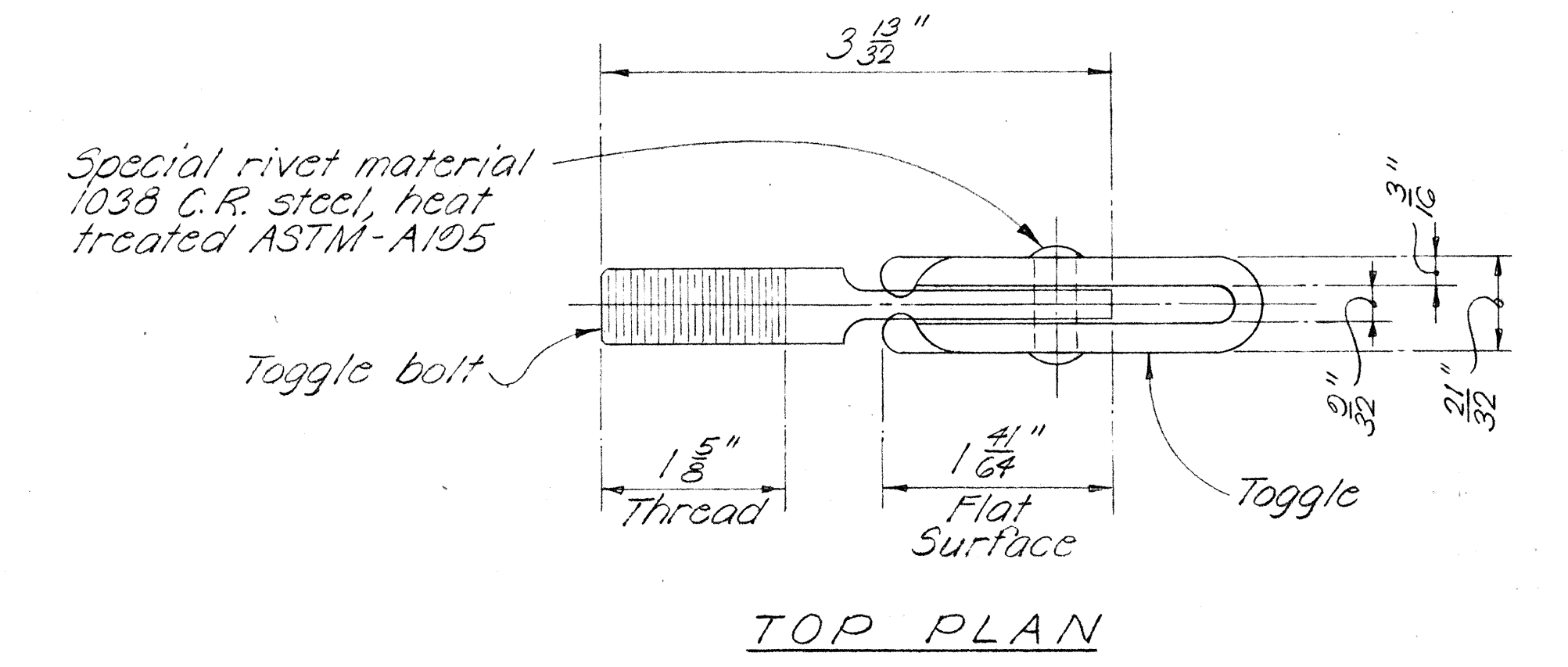
All draft angles = 3°
RAIL CAP DETAIL
 Scale: 3" = 1'-0"



NOTE:
 Toggle Bolt Material - 1/2 inch - 13 N.C. 1335 C.R. - Steel heat treated R.C. 32-38 ASTM-A354
 Toggle Material - 1015 H.R. steel pickled and oiled. Round edges ASTM-A303.
 Washer Material - SAE 1020 H.R. steel plates. ASTM-A-7. Break sharp edges.
 Nut - 1/2 inch - 13 American hex. nut - Heavy Material 1035 C.R. - Steel heat treated ASTM A325 Grade 2H.
 Cadmium plating on steel - Type N.S. .0005 inch thick ASTM-A165. (all parts).
 For cast post specifications, see Special Provisions.



WASHER SIDE ELEVATION ASSEMBLY



1/2 inch TOGGLE BOLT DETAILS
 Full Scale

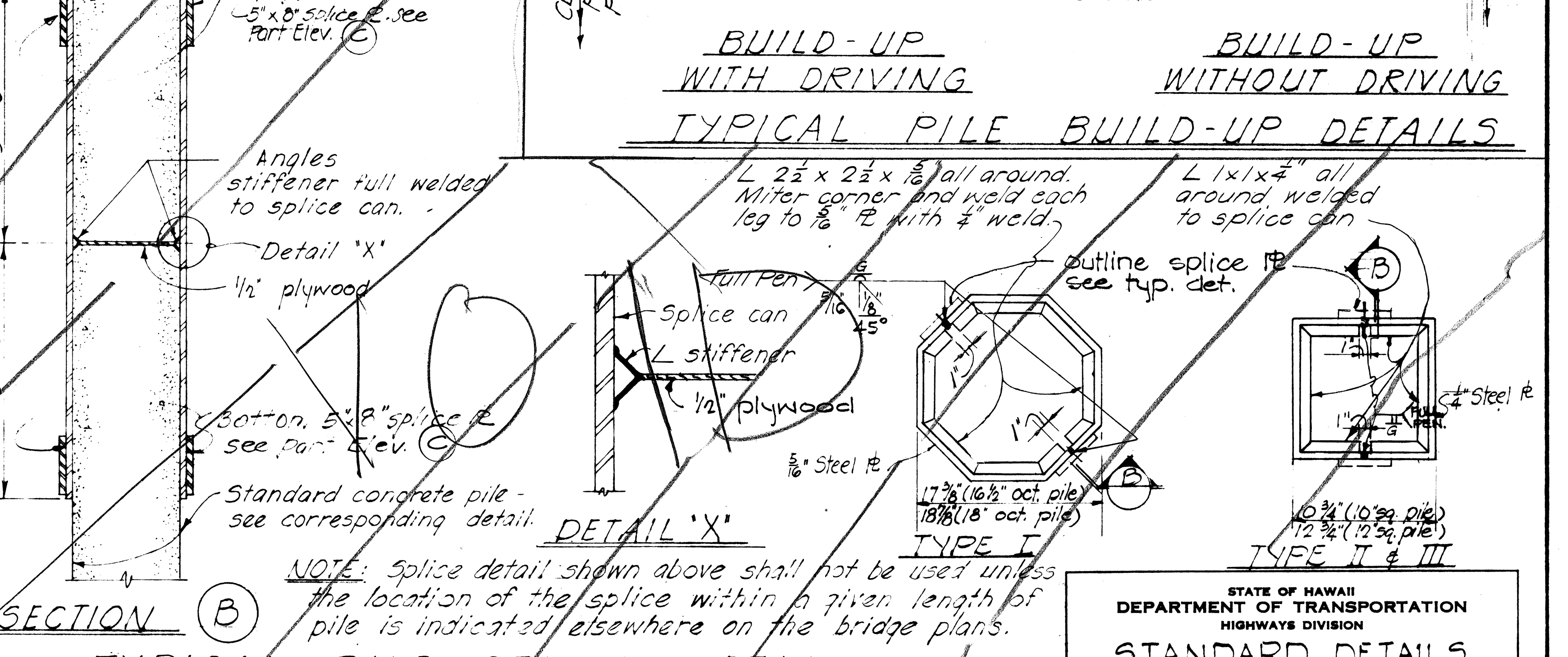
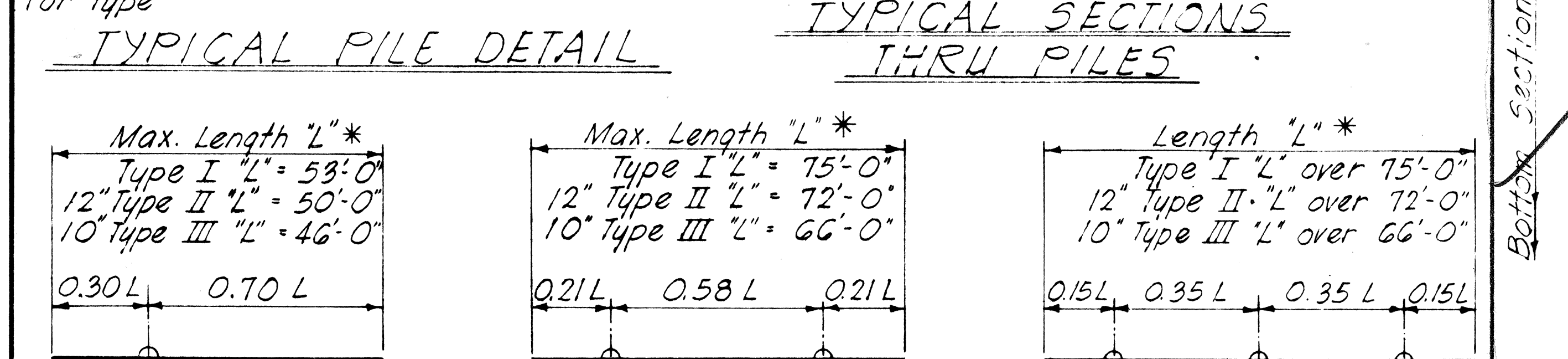
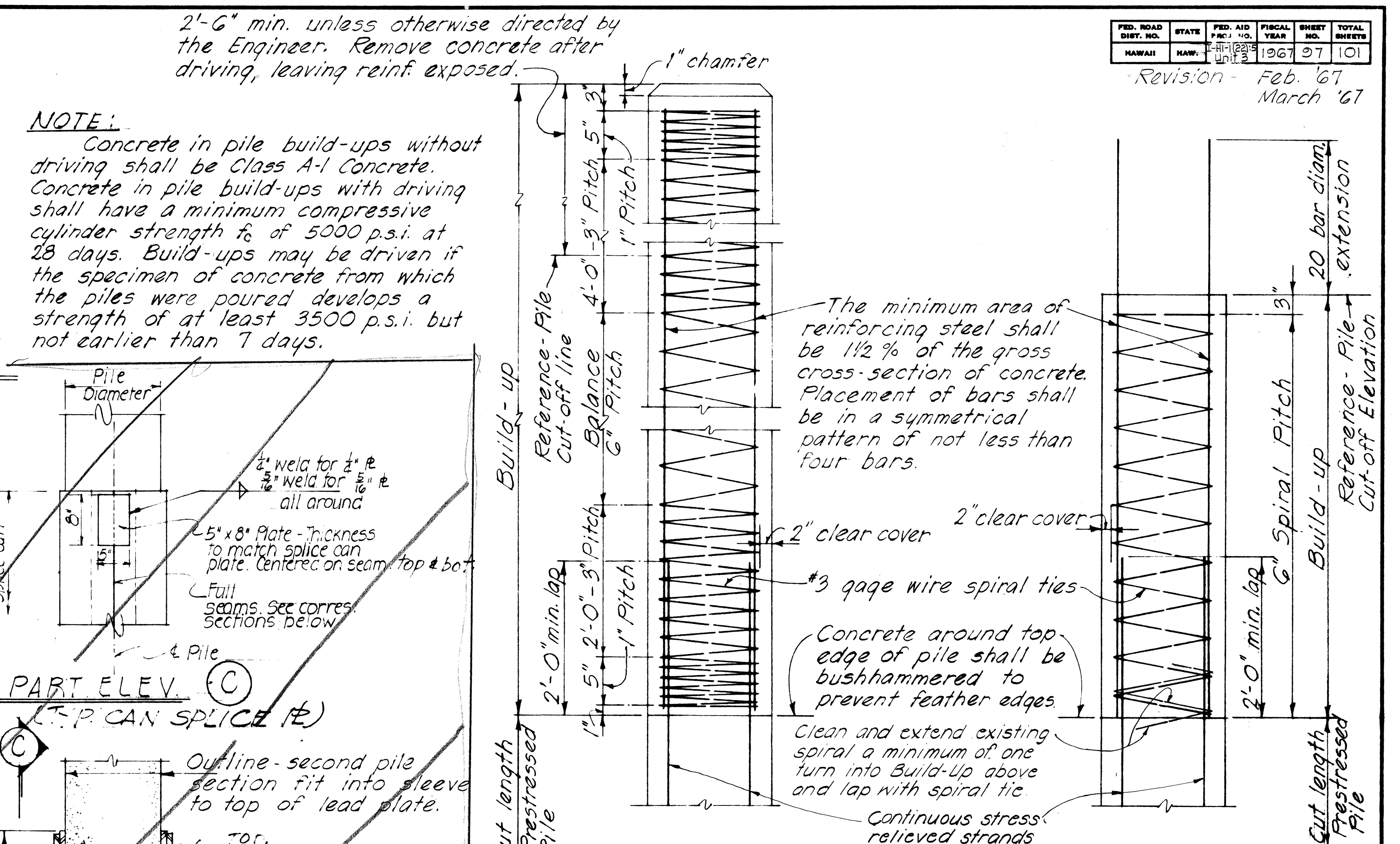
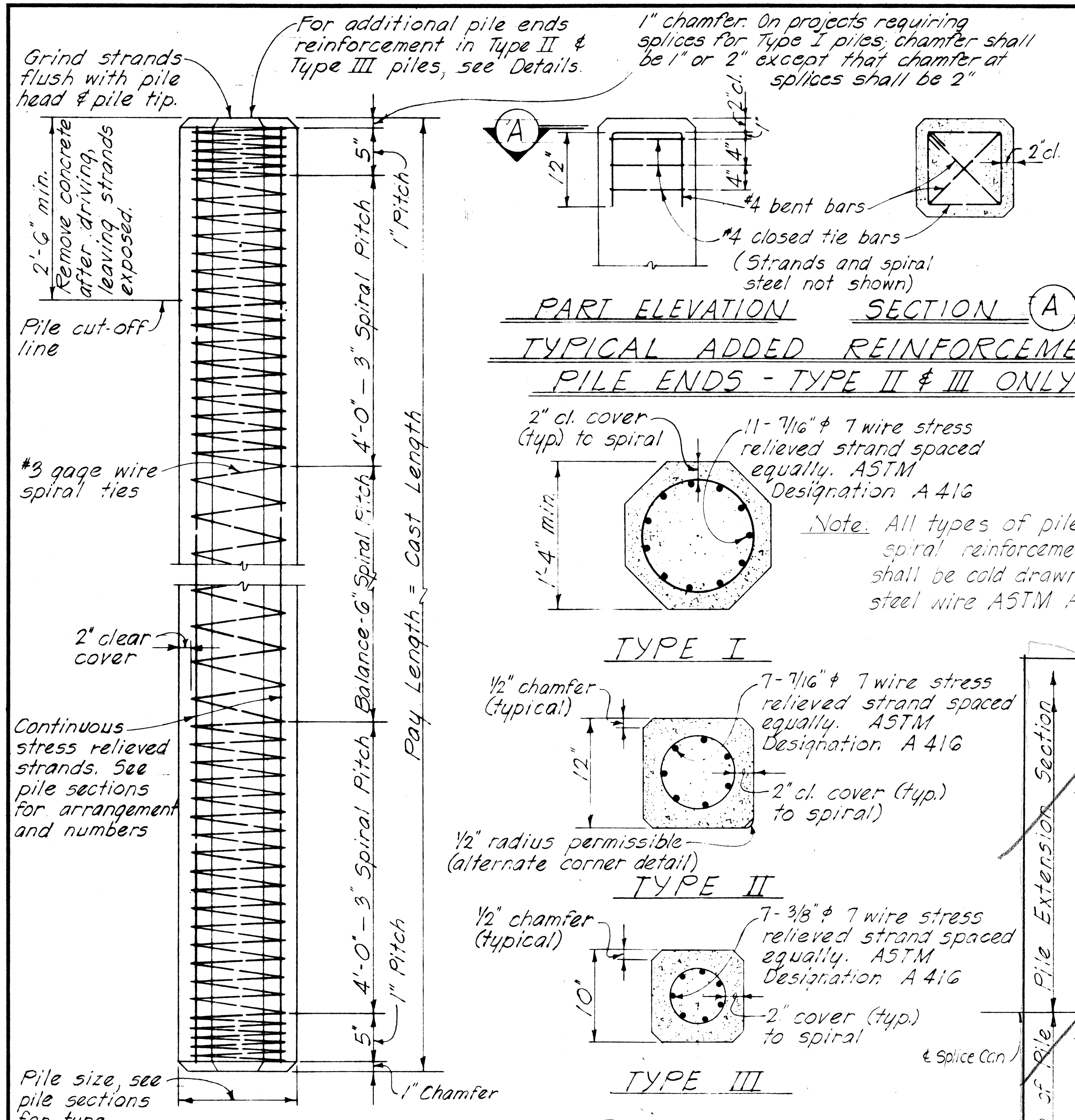
GENERAL NOTES
 Metal bridge railing shown is for Aluminum bridge railing. See Special Provisions for alternate railing in steel.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
METAL BRIDGE RAILINGS
SINGLE RAIL
INTERSTATE ROUTE H-1
F.A.I. Proj. No. I-HI-1(22):5, Unit 3
Scale as noted Date: Dec. 1967

SHEET No. 52 OF 3 SHEETS

Revision - Feb. '67
March '67



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.

NOTE: All welding shall conform to the latest Specifications for Welded Highway & Railway Bridge of the American Welding Society.