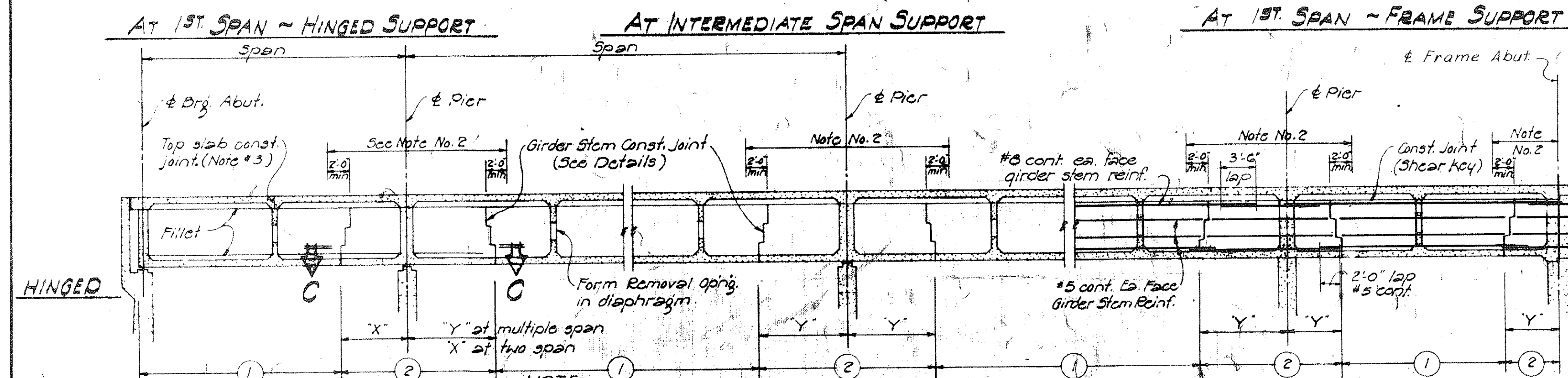


FED. ROAD DIST. No.	STATE	FED. AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
HAWAII	HAW	T-11-1(6) UNIT 2	1966	201R	203

May '59
Oct. '60
MAY '62
NOV. '62
MAY '65
DEC. '65
MAY '66



For Vert. Chamber det-see
Typ. Vert. Chamber detail

Edge of Deck

G-1

G-2

G-3

G-4

X'er-Y

Pier

Ref. Line

Const. Jt.

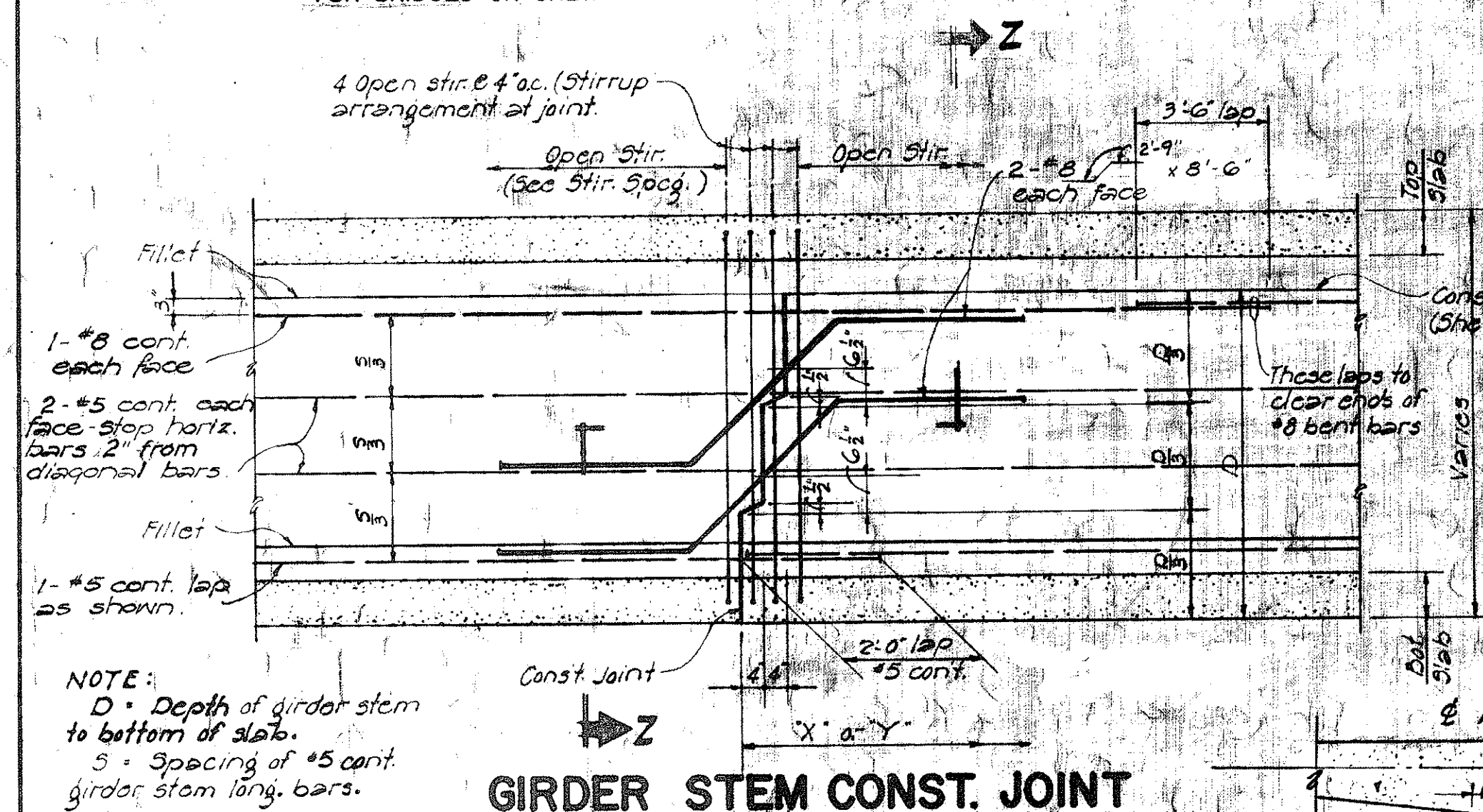
Intersection of Girders and Ref. Line

SECTION C - C

NOTE:

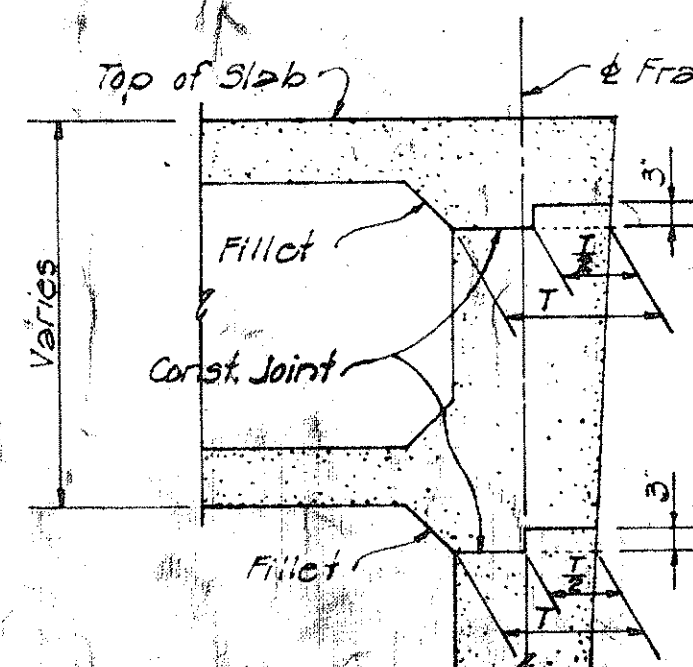
- No. 1 - Numbers (1) & (2) indicate sequence of placing bottom slab & girder stem concrete. (2) may be placed simultaneously with (1) when approved by the Engr., and provided that the (1) sections are placed in adjoining spans. For any deviation from the above the contractor shall submit a diagram to the Engineer for approval.
- No. 2 - No top slab construction joint or form removal jacking shall be located in the region over the piers as noted.
- No. 3 - When top slab forms are not removed, const. joint in top slab shall be located over an intermediate diaphragm.
- No. 4 - Dimension "X" = $\frac{1}{4}$ span "Y" = $\frac{1}{2}$ span
- No. 5 - No lapping of main girder bars shall be permitted at construction joints.

PLACING DIAGRAM FOR SUPERSTRUCTURE CONCRETE

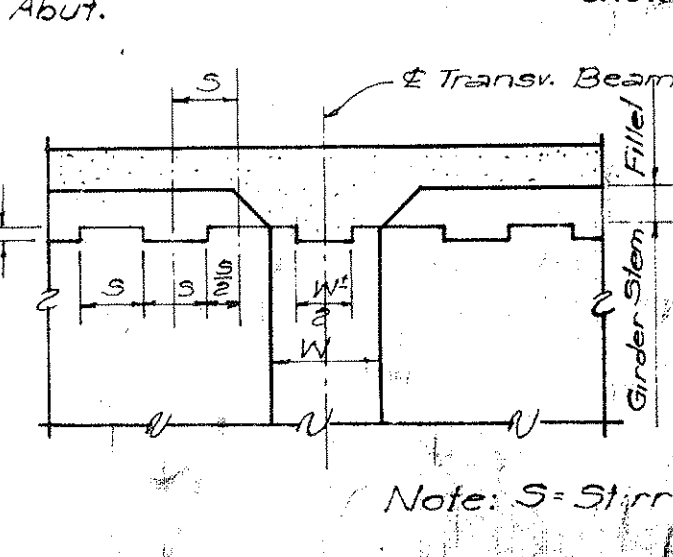


NOTE:
D = Depth of girder stem
to bottom of slab.
S = Spacing of #5 conf.
girder stem long. bars.

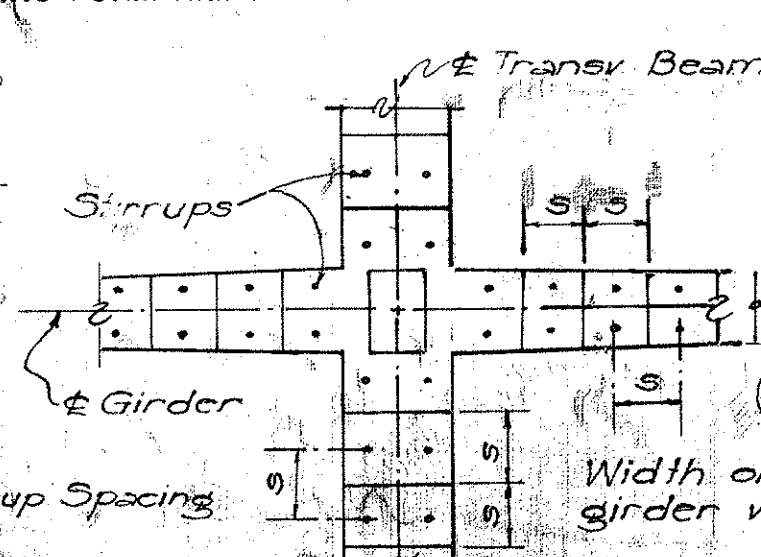
GIRDER STEM CONST. JOINT



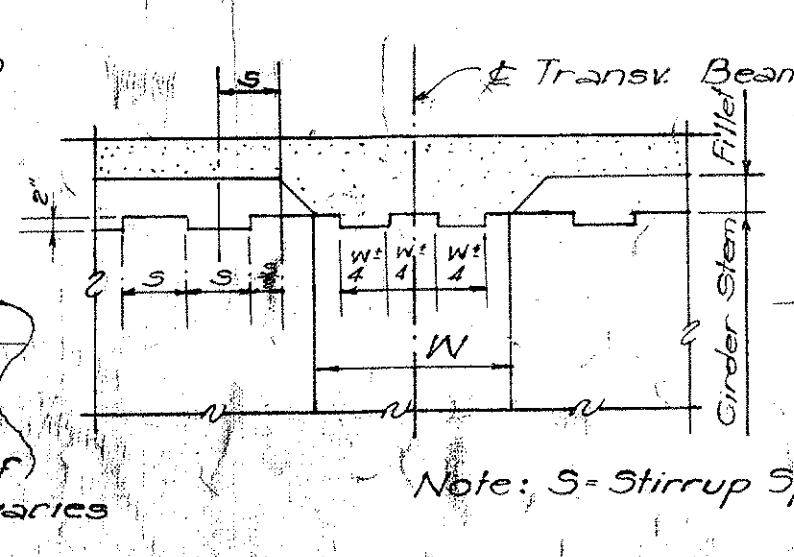
DETAIL - A



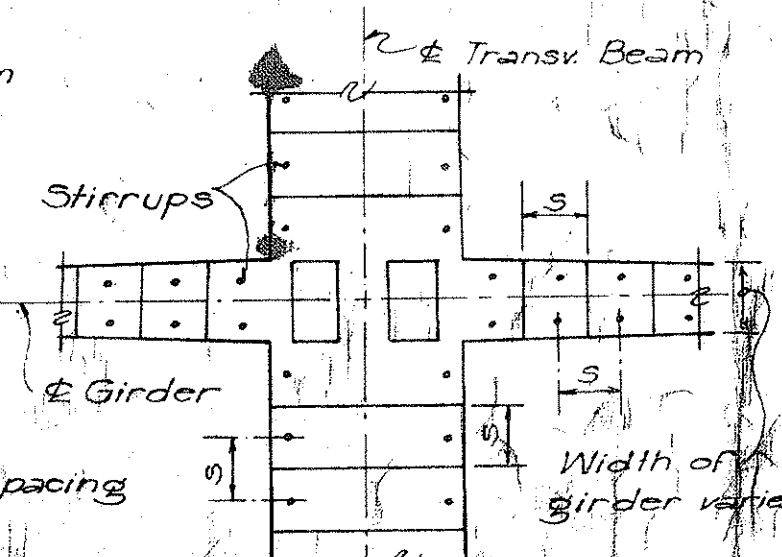
SECTION - BEAM WIDTH
LESS THAN 2'-0"



PLAN



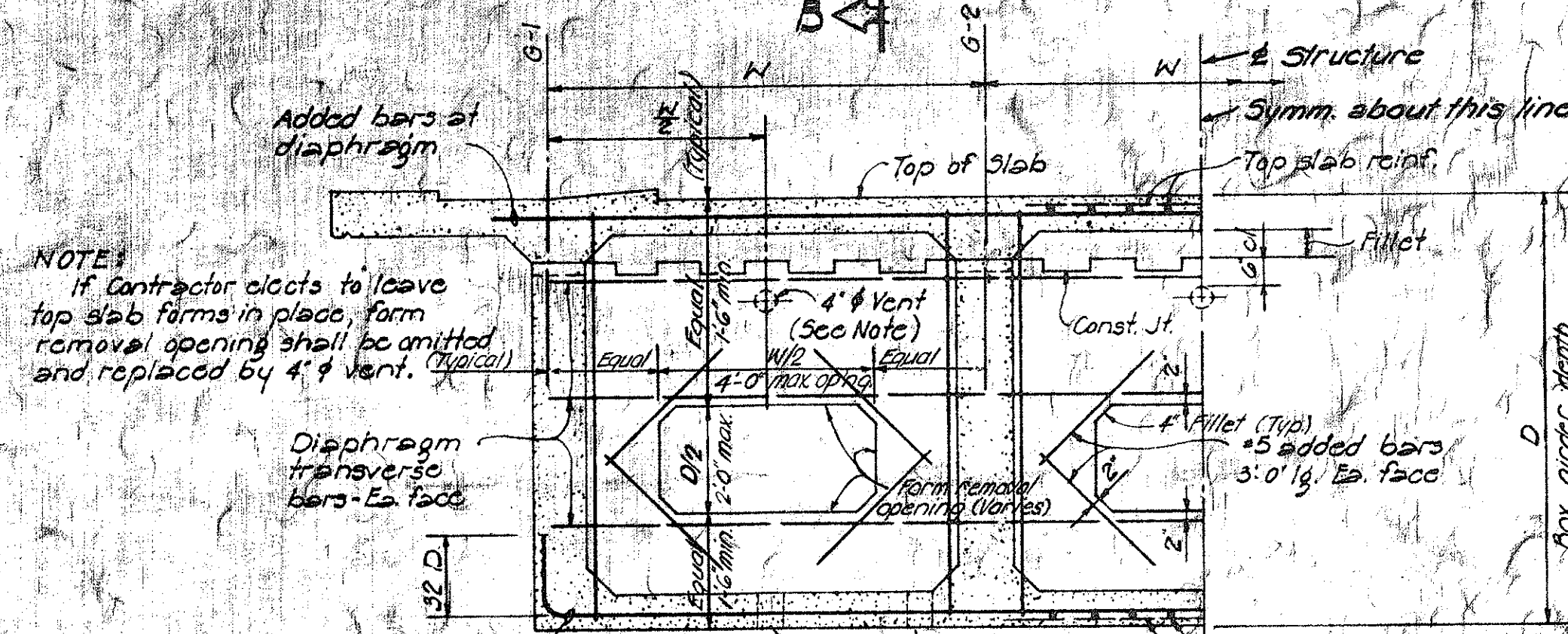
SECTION - BEAM WIDTH
MORE THAN 2'-0"



PLAN

Note: Shear keys for box girders may be eliminated if the entire surface of the joint is thoroughly cleaned of surface laitance/curing compound and other materials foreign to the concrete, and clean aggregate is exposed by abrasive blast cleaning after the curing period or immediately before placing concrete at the joint.

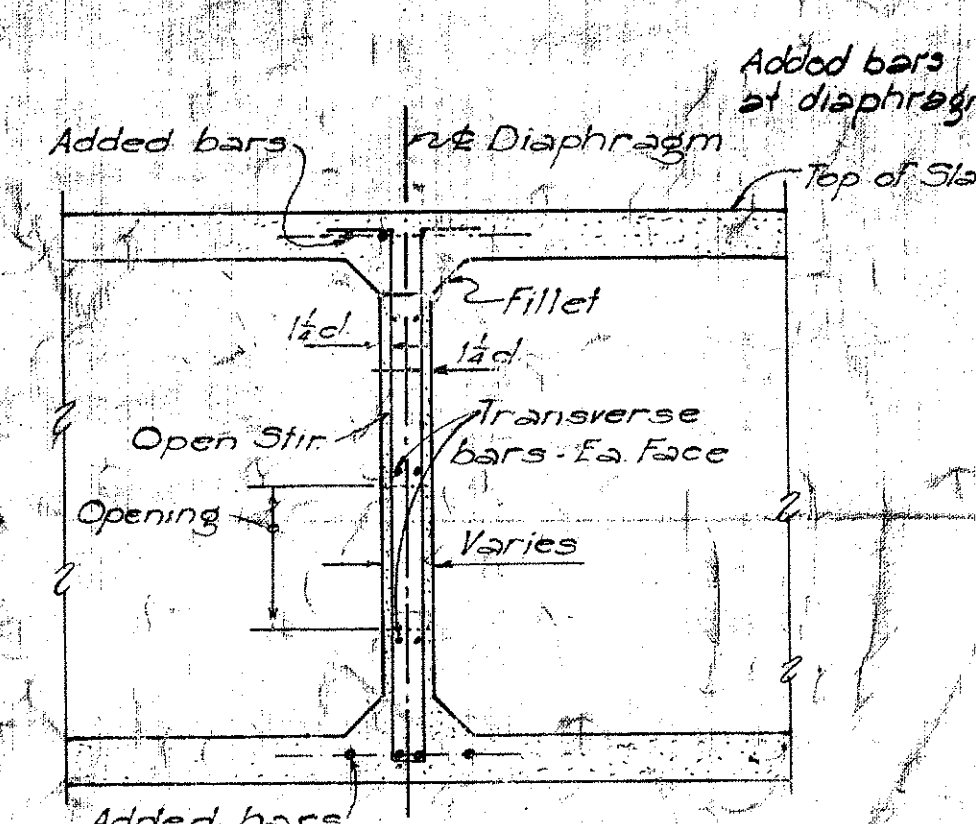
SHEAR KEY DETAIL



NOTE:
If Contractor elects to leave
top slab forms in place, form
removal opening shall be made
and replaced by 4" x vent.

FORM REMOVAL OPENING DETAIL
IN DIAPHRAGM

GENERAL NOTE
Except where detailed otherwise on the
plans, all details on this sheet



SECTION B-B

APPROVED:  DATE: Aug. 26, 195

STATE HIGHWAY ENGINEER

HAWAII STATE HIGHWAY DEPARTMENT
STATE OF HAWAII

STANDARD DETAILS

BOX GIRDER

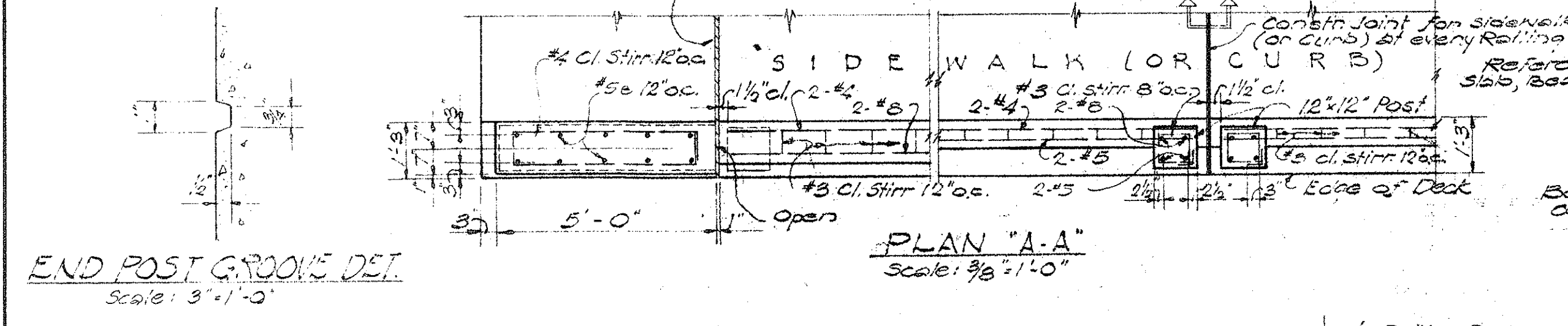
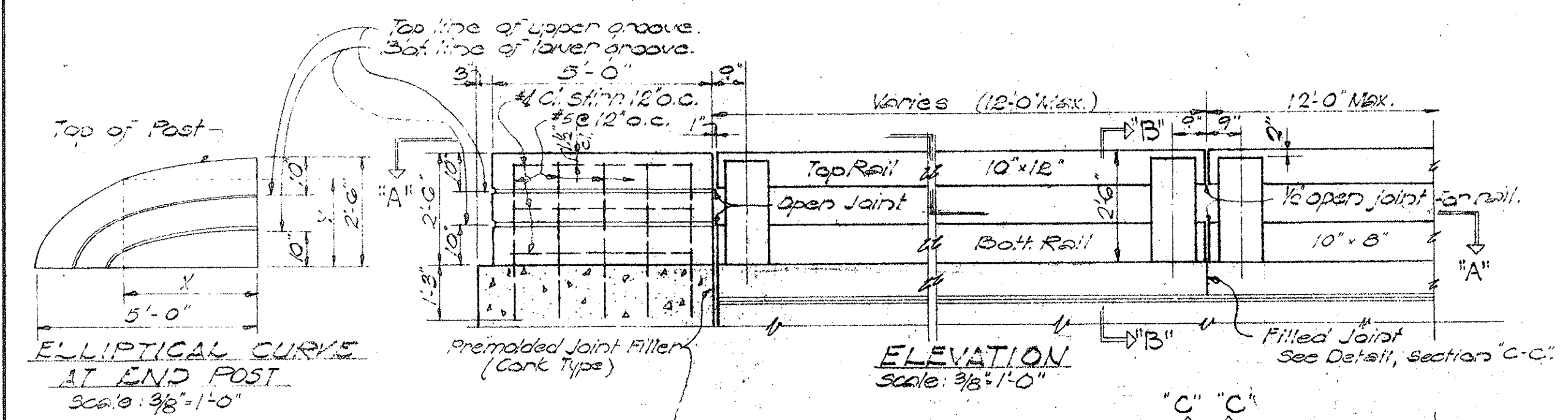
SCALES AS NOTED

SHEET No. 1 OF 1 SHEETS

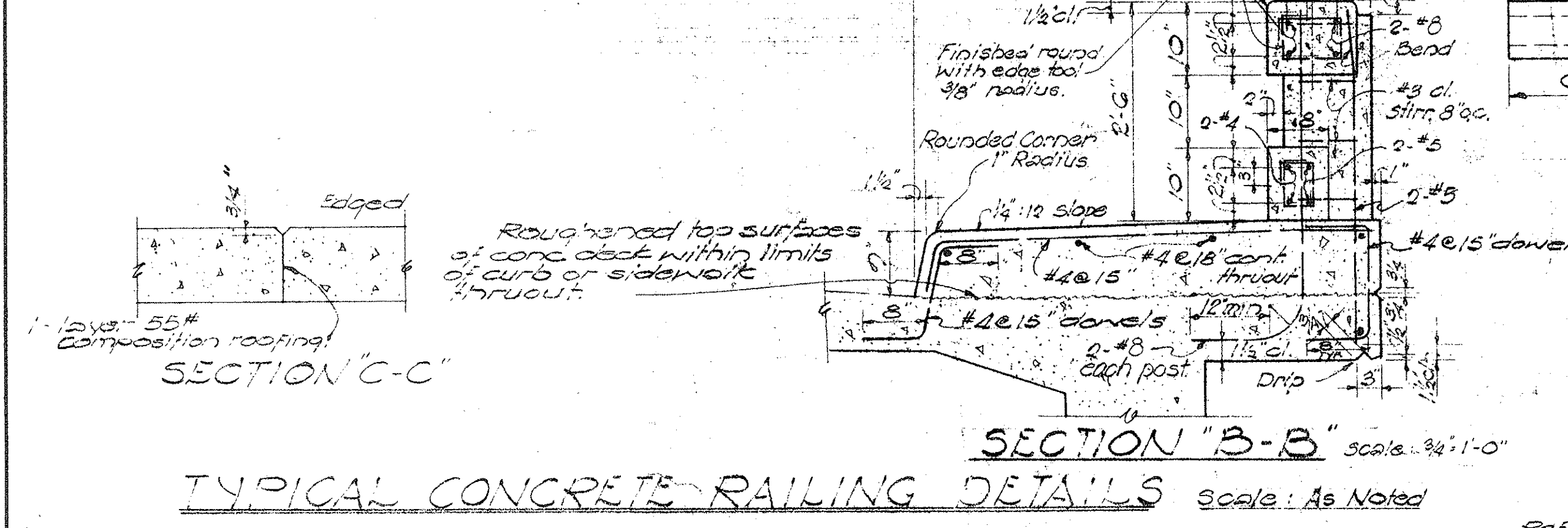
TOP AND BOTTOM SLAB CONST. JOINT

2011

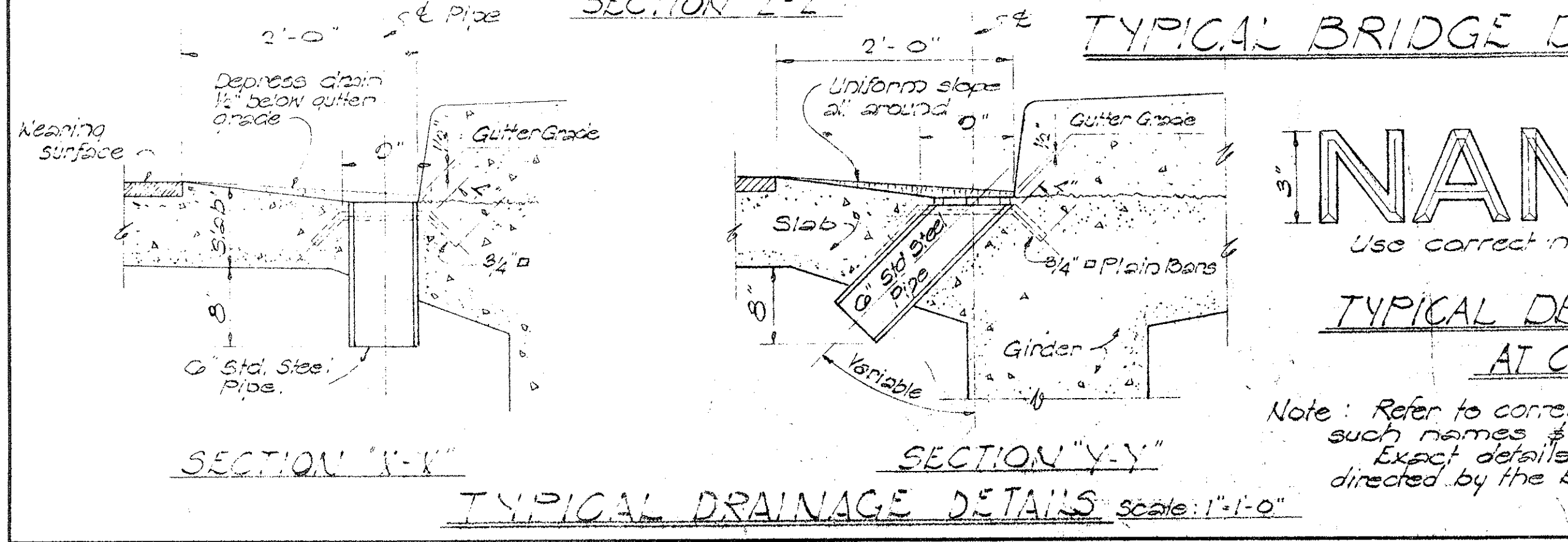
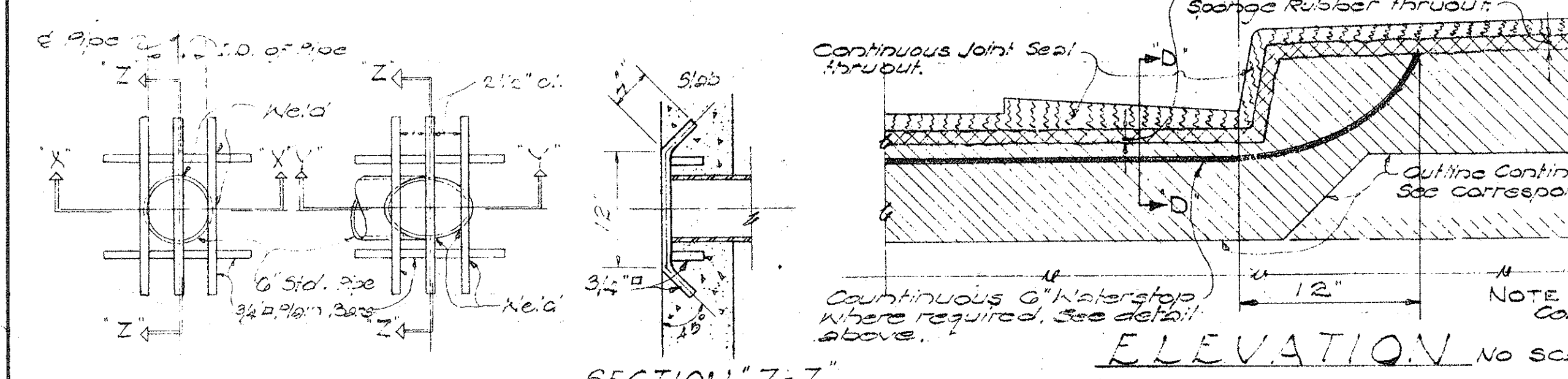
Revised
June 64
April 65
March 66



NOTE: Sidewalk, Curb and Railing to be poured after release of falsework. Forms for railing and endpost 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 bridge and will not be paid for separately. Assembly of railing and pipe shall be hot-dip galvanized after all welding is completed.



Top of Post

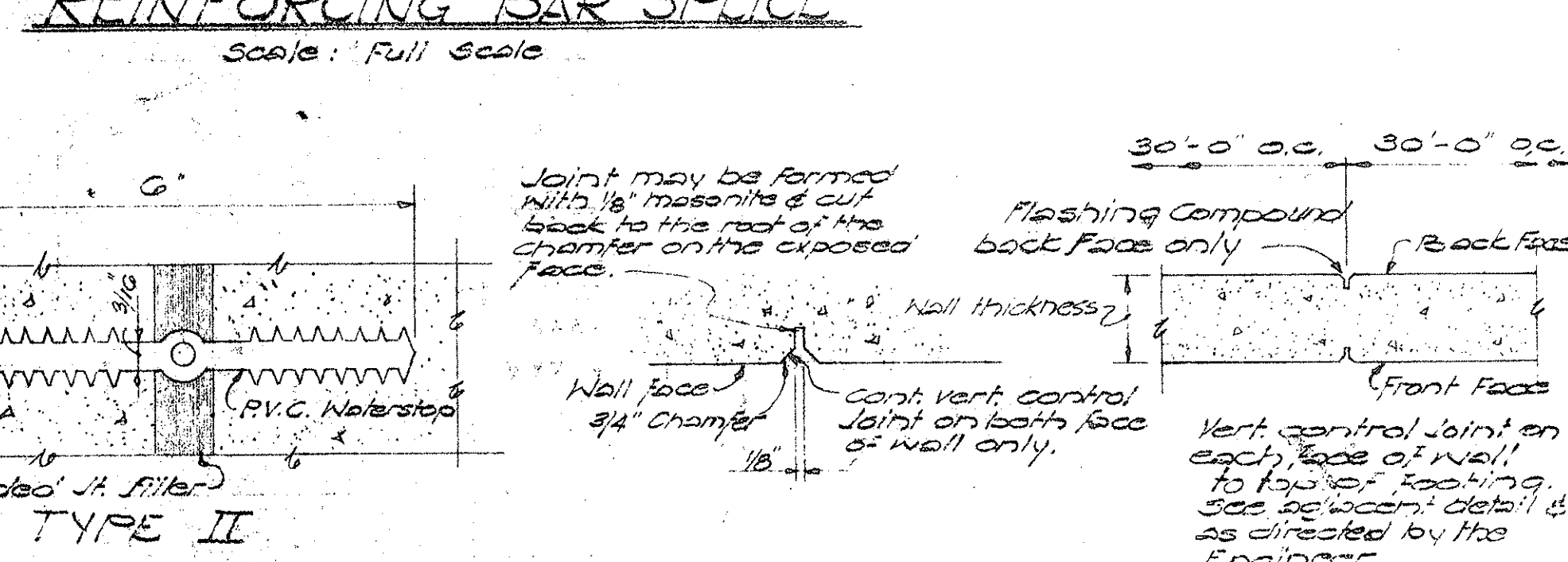
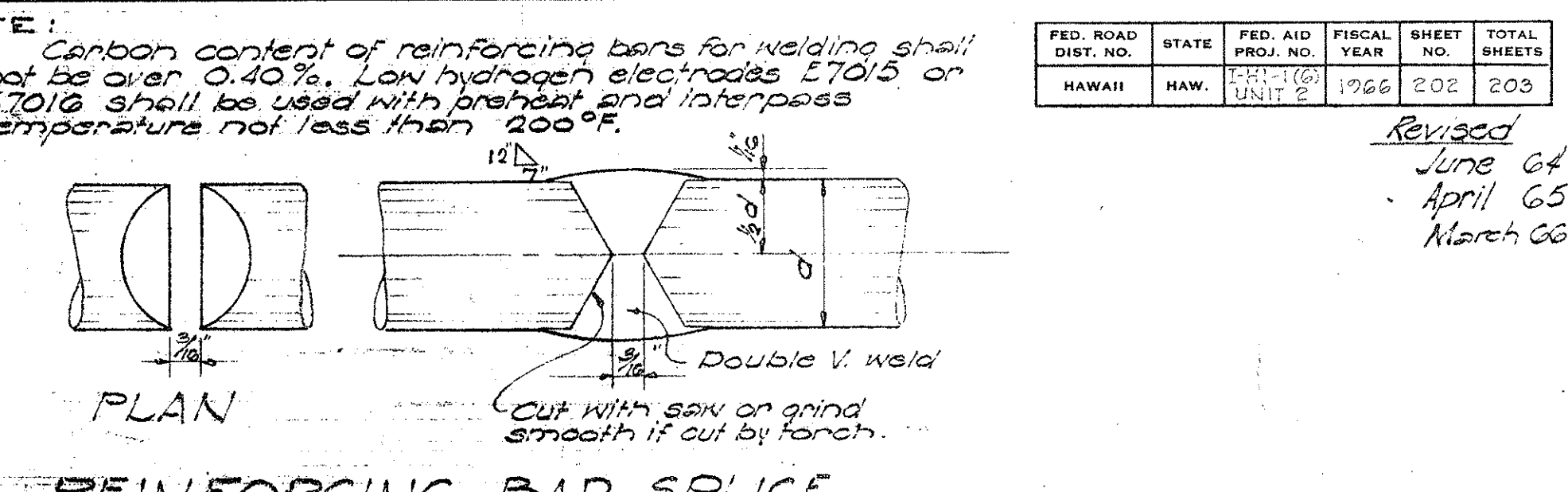
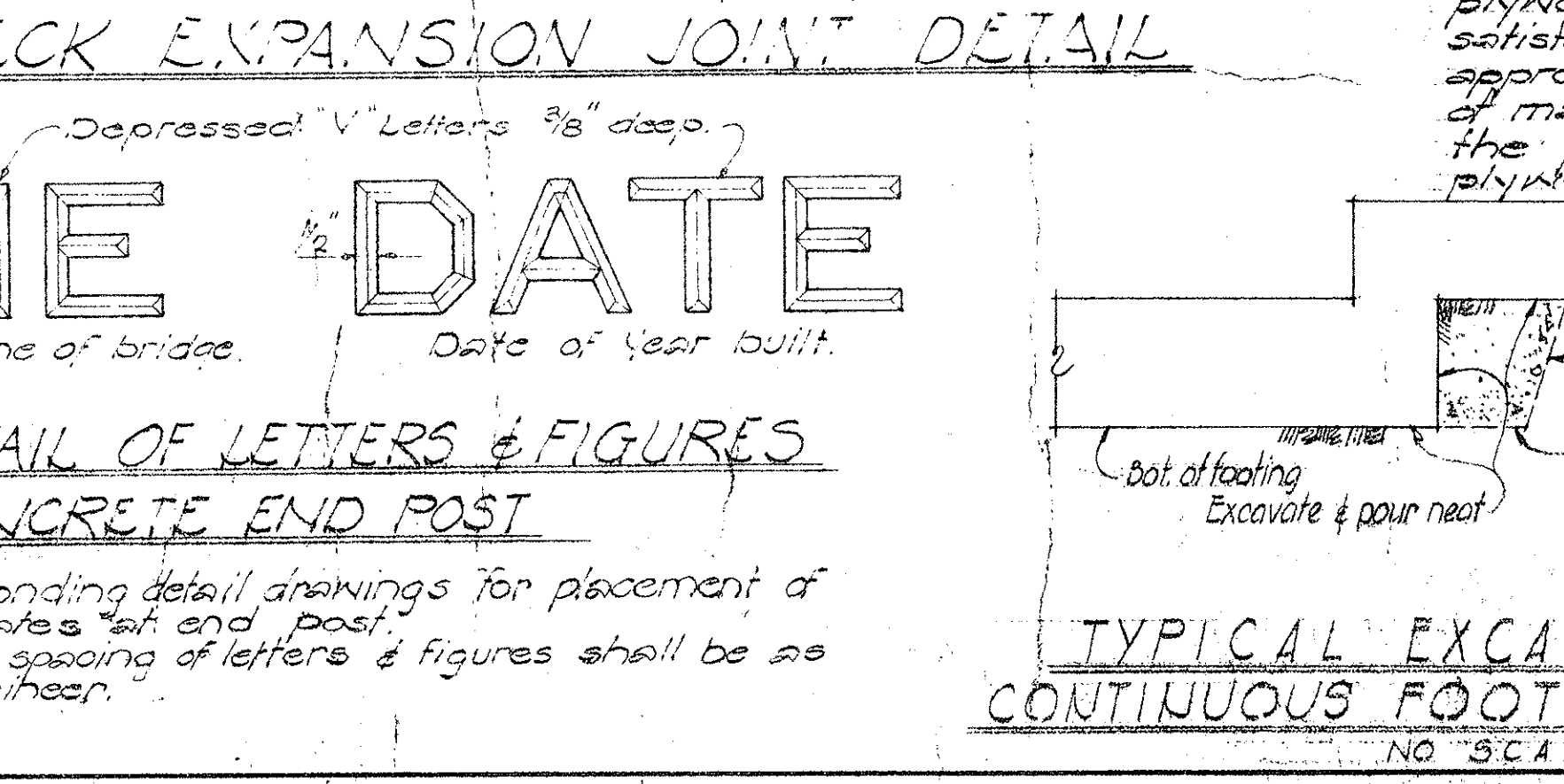
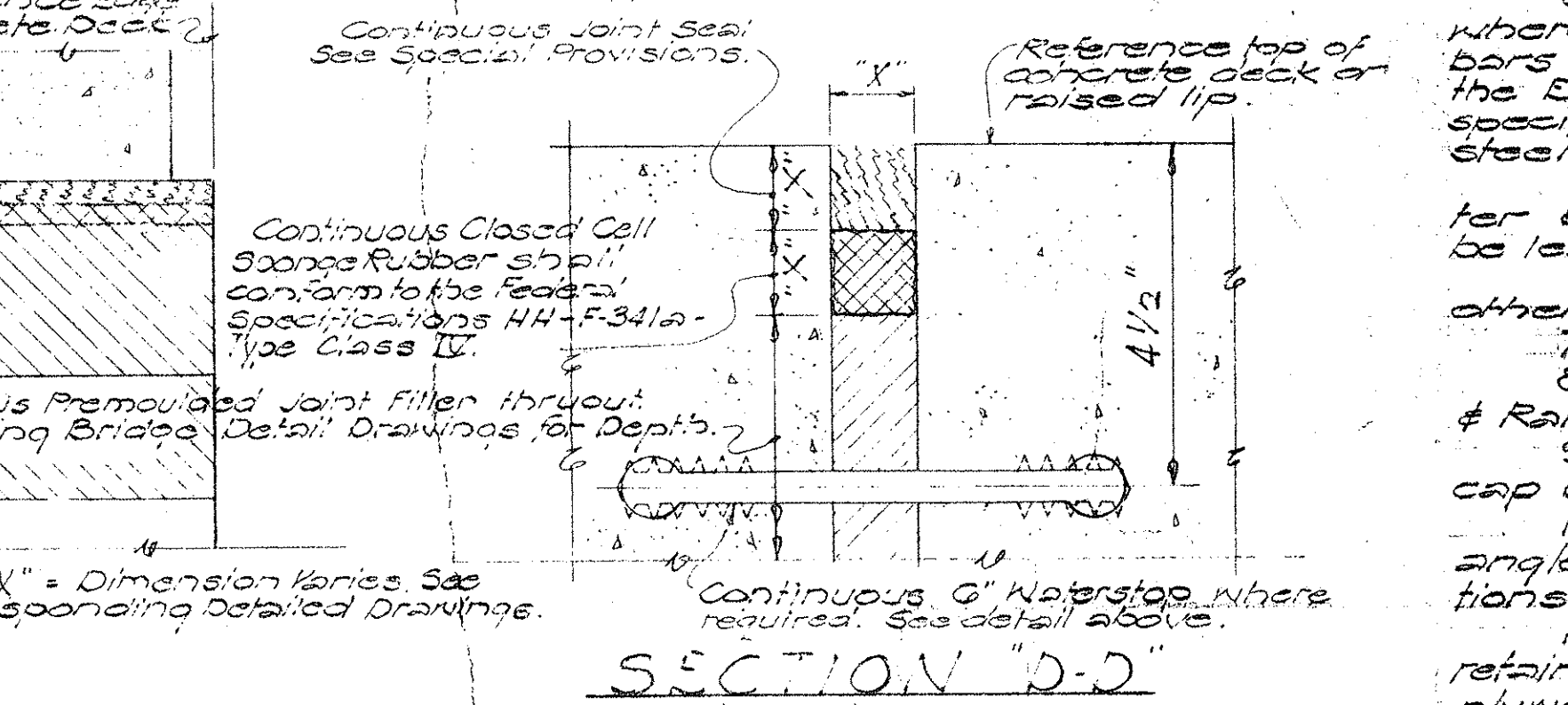
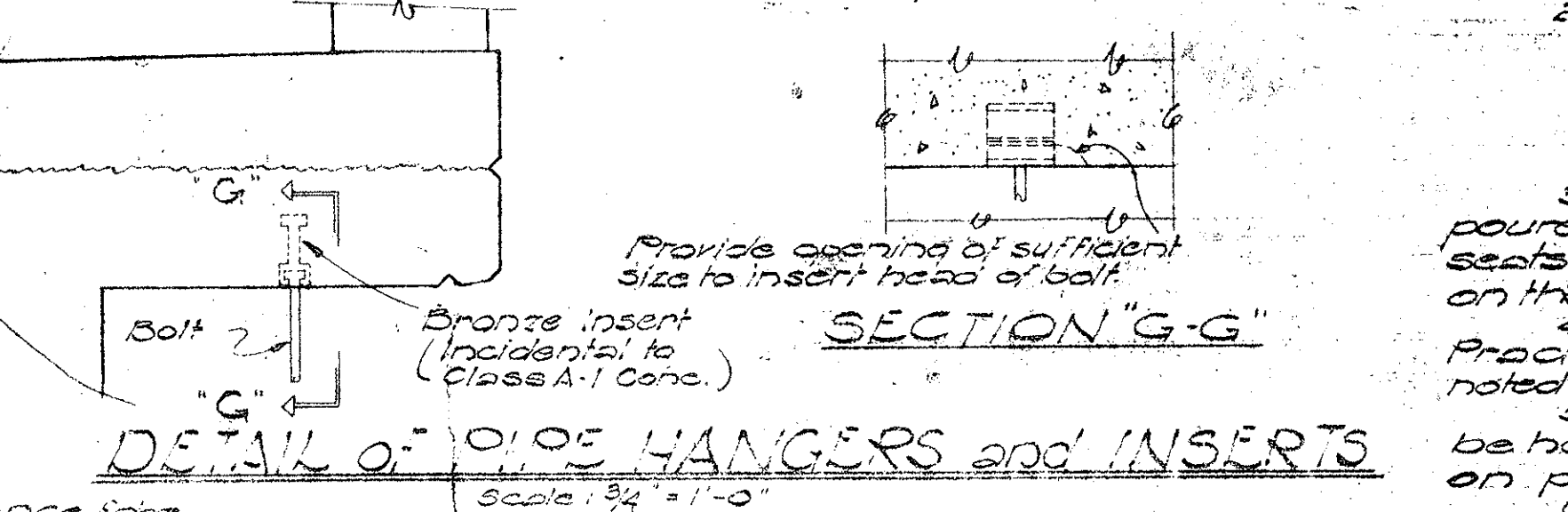
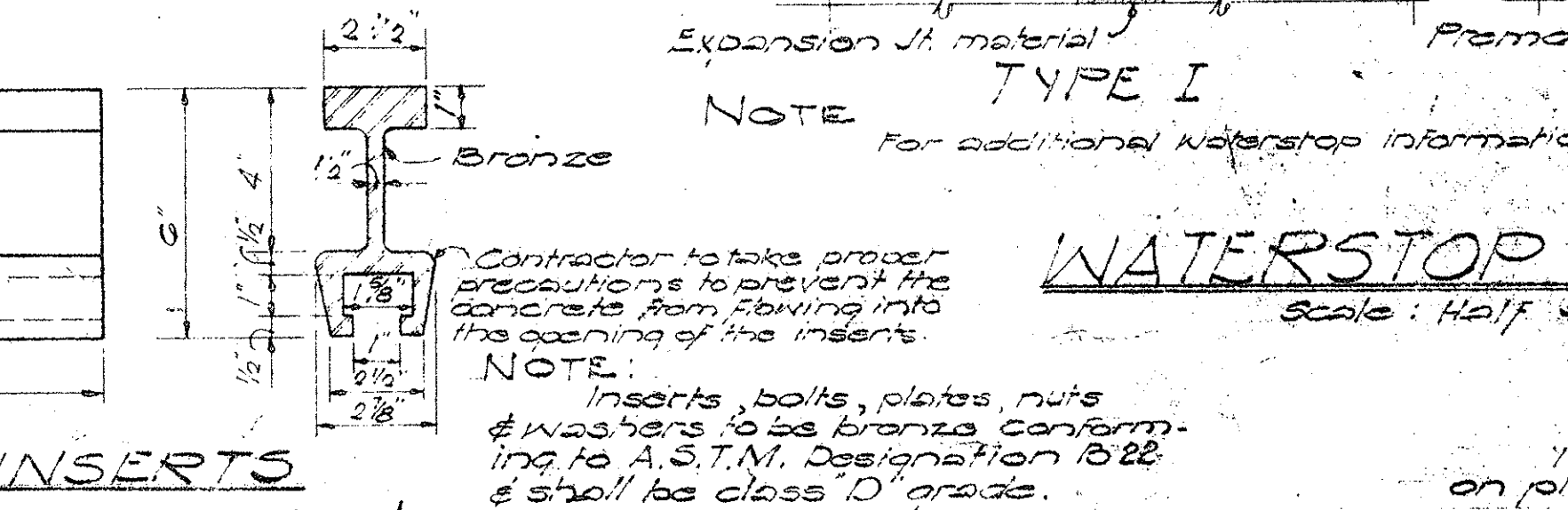
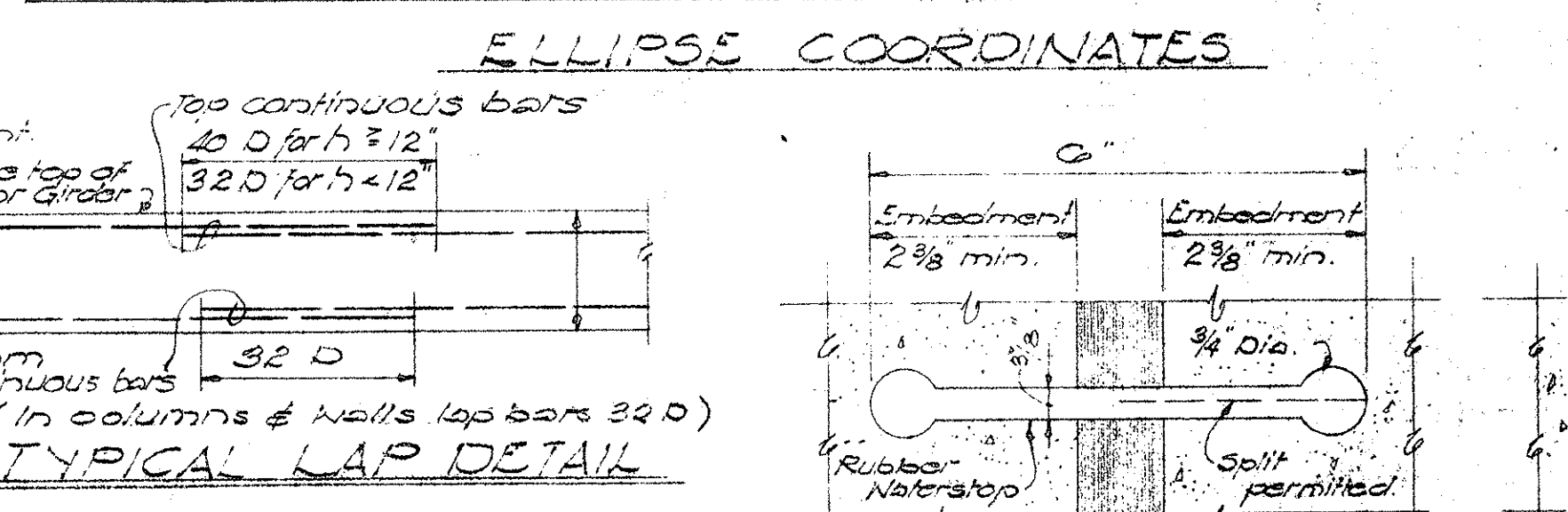
X	0	1'-0"	1'-0"	2'-0"	2'-0"	3'-0"	3'-0"	4'-0"	4'-0"	4'-0"	5'-0"
Y	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"	2'-0"

Top Line of Upper Groove

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

Bottom Line of Lower Groove

X	0	6"	1'-0"	1'-0"	2'-0"	2'-0"	2'-0"	3'-0"	3'-0"	3'-0"	4'-0"
Y	10"	0 1/2"	0 1/2"	8 1/2"	8"	6 3/8"	5 3/8"	4 3/8"	3 3/8"	2 1/4"	0"



GENERAL NOTES

- 1 - 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 at 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 4/5 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 - Concrete Finish - See Special Provisions.
- 10 - All welding shall conform to the latest specifications for Welded Highway & Railway Bridge of the American Welding Society.
- 11 - Vertical column bars shall be arranged in such a manner as to miss pier cap bars above as directed by the Engineer.
- 12 - 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.
- 13 - 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.

