

Hand-drawn diagram of a single spiral staircase layout. The diagram shows a horizontal line representing the spiral path, with various segments labeled with 'SP' followed by a number. Key dimensions include: 123'-6" for the first segment, 101'-4" for the second, 525'-0" for the third, 127'-4" for the fourth, 101'-4" for the fifth, and 63'-8" for the sixth. There are also vertical dimensions of 10", 8", and 8" indicating the height of the spiral at different points. The diagram is labeled 'SINGLE SPIRALS' and '2" Lap (Typ)'.

See sheet BD 104-64, Standard Details

Span about $\frac{1}{4}$ span

Top of Web Plate

Comber Diagram sym. about $\frac{1}{4}$ Span 3

Parallel to finished grade (-1.00%)

Span 1

Span 2

Span 3

Pier

Pier

Pier

Bearing - Abut.

Dimensions (feet): 15, 30, 45, 60, 75, 90, 105, 120, 125, 135, 150, 165, 15.33, 30.67, 46, 55, 61.33, 76.67, 92, 107, 93

Labels: 18", 2 1/2", 2 1/2", 3", 3 1/2", 4", 4 1/2", 5", 5 1/2", 6", 6 1/2", 7", 7 1/2", 8", 8 1/2", 9", 9 1/2", 10", 10 1/2", 11", 11 1/2", 12", 12 1/2", 13", 13 1/2", 14", 14 1/2", 15", 15 1/2", 16", 16 1/2", 17", 17 1/2", 18", 18 1/2", 19", 19 1/2", 20", 20 1/2", 21", 21 1/2", 22", 22 1/2", 23", 23 1/2", 24", 24 1/2", 25", 25 1/2", 26", 26 1/2", 27", 27 1/2", 28", 28 1/2", 29", 29 1/2", 30", 30 1/2", 31", 31 1/2", 32", 32 1/2", 33", 33 1/2", 34", 34 1/2", 35", 35 1/2", 36", 36 1/2", 37", 37 1/2", 38", 38 1/2", 39", 39 1/2", 40", 40 1/2", 41", 41 1/2", 42", 42 1/2", 43", 43 1/2", 44", 44 1/2", 45", 45 1/2", 46", 46 1/2", 47", 47 1/2", 48", 48 1/2", 49", 49 1/2", 50", 50 1/2", 51", 51 1/2", 52", 52 1/2", 53", 53 1/2", 54", 54 1/2", 55", 55 1/2", 56", 56 1/2", 57", 57 1/2", 58", 58 1/2", 59", 59 1/2", 60", 60 1/2", 61", 61 1/2", 62", 62 1/2", 63", 63 1/2", 64", 64 1/2", 65", 65 1/2", 66", 66 1/2", 67", 67 1/2", 68", 68 1/2", 69", 69 1/2", 70", 70 1/2", 71", 71 1/2", 72", 72 1/2", 73", 73 1/2", 74", 74 1/2", 75", 75 1/2", 76", 76 1/2", 77", 77 1/2", 78", 78 1/2", 79", 79 1/2", 80", 80 1/2", 81", 81 1/2", 82", 82 1/2", 83", 83 1/2", 84", 84 1/2", 85", 85 1/2", 86", 86 1/2", 87", 87 1/2", 88", 88 1/2", 89", 89 1/2", 90", 90 1/2", 91", 91 1/2", 92", 92 1/2", 93", 93 1/2", 94", 94 1/2", 95", 95 1/2", 96", 96 1/2", 97", 97 1/2", 98", 98 1/2", 99", 99 1/2", 100", 100 1/2", 101", 101 1/2", 102", 102 1/2", 103", 103 1/2", 104", 104 1/2", 105", 105 1/2", 106", 106 1/2", 107", 107 1/2", 108", 108 1/2", 109", 109 1/2", 110", 110 1/2", 111", 111 1/2", 112", 112 1/2", 113", 113 1/2", 114", 114 1/2", 115", 115 1/2", 116", 116 1/2", 117", 117 1/2", 118", 118 1/2", 119", 119 1/2", 120", 120 1/2", 121", 121 1/2", 122", 122 1/2", 123", 123 1/2", 124", 124 1/2", 125", 125 1/2", 126", 126 1/2", 127", 127 1/2", 128", 128 1/2", 129", 129 1/2", 130", 130 1/2", 131", 131 1/2", 132", 132 1/2", 133", 133 1/2", 134", 134 1/2", 135", 135 1/2", 136", 136 1/2", 137", 137 1/2", 138", 138 1/2", 139", 139 1/2", 140", 140 1/2", 141", 141 1/2", 142", 142 1/2", 143", 143 1/2", 144", 144 1/2", 145", 145 1/2", 146", 146 1/2", 147", 147 1/2", 148", 148 1/2", 149", 149 1/2", 150", 150 1/2", 151", 151 1/2", 152", 152 1/2", 153", 153 1/2", 154", 154 1/2", 155", 155 1/2", 156", 156 1/2", 157", 157 1/2", 158", 158 1/2", 159", 159 1/2", 160", 160 1/2", 161", 161 1/2", 162", 162 1/2", 163", 163 1/2", 164", 164 1/2", 165", 165 1/2", 166", 166 1/2", 167", 167 1/2", 168", 168 1/2", 169", 169 1/2", 170", 170 1/2", 171", 171 1/2", 172", 172 1/2", 173", 173 1/2", 174", 174 1/2", 175", 175 1/2", 176", 176 1/2", 177", 177 1/2", 178", 178 1/2", 179", 179 1/2", 180", 180 1/2", 181", 181 1/2", 182", 182 1/2", 183", 183 1/2", 184", 184 1/2", 185", 185 1/2", 186", 186 1/2", 187", 187 1/2", 188", 188 1/2", 189", 189 1/2", 190", 190 1/2", 191", 191 1/2", 192", 192 1/2", 193", 193 1/2", 194", 194 1/2", 195", 195 1/2", 196", 196 1/2", 197", 197 1/2", 198", 198 1/2", 199", 199 1/2", 200", 200 1/2", 201", 201 1/2", 202", 202 1/2", 203", 203 1/2", 204", 204 1/2", 205", 205 1/2", 206", 206 1/2", 207", 207 1/2", 208", 208 1/2", 209", 209 1/2", 210", 210 1/2", 211", 211 1/2", 212", 212 1/2", 213", 213 1/2", 214", 214 1/2", 215", 215 1/2", 216", 216 1/2", 217", 217 1/2", 218", 218 1/2", 219", 219 1/2", 220", 220 1/2", 221", 221 1/2", 222", 222 1/2", 223", 223 1/2", 224", 224 1/2", 225", 225 1/2", 226", 226 1/2", 227", 227 1/2", 228", 228 1/2", 229", 229 1/2", 230", 230 1/2", 231", 231 1/2", 232", 232 1/2", 233", 233 1/2", 234", 234 1/2", 235", 235 1/2", 236", 236 1/2", 237", 237 1/2", 238", 238 1/2", 239", 239 1/2", 240", 240 1/2", 241", 241 1/2", 242", 242 1/2", 243", 243 1/2", 244", 244 1/2", 245", 245 1/2", 246", 246 1/2", 247", 247 1/2", 248", 248 1/2", 249", 249 1/2", 250", 250 1/2", 251", 251 1/2", 252", 252 1/2", 253", 253 1/2", 254", 254 1/2", 255", 255 1/2", 256", 256 1/2", 257", 257 1/2", 258", 258 1/2", 259", 259 1/2", 260", 260 1/2", 261", 261 1/2", 262", 262 1/2", 263", 263 1/2", 264", 264 1/2", 265", 265 1/2", 266", 266 1/2", 267", 267 1/2", 268", 268 1/2", 269", 269 1/2", 270", 270 1/2", 271", 271 1/2", 272", 272 1/2", 273", 273 1/2", 274", 274 1/2", 275", 275 1/2", 276", 276 1/2", 277", 277 1/2", 278", 278 1/2", 279", 279 1/2", 280", 280 1/2", 281", 281 1/2", 282", 282 1/2", 283", 283 1/2", 284", 284 1/2", 285", 285 1/2", 286", 286 1/2", 287", 287 1/2", 288",

* Total number required N. B. & S. B

NOTE: For all Girders N.B. and S.B. Structures
Camber for Span 5, Rotate Span 1 180°
Camber for Spans 2, 3, & 4 is identical and
Symmetrical about $\frac{1}{2}$ of each span.

BOTTOM OF SLAB ELEVATIONS - CONT'D.																							
GIRDER	107.33'	122.67'	138'	153.33'	168.67'	184	199.33'	214.67'	2. PIER 3	15.33'	30.67'	46'	61.33'	76.67'	92'	107.33'	122.67'	138'	153.33'	168.67'	184	199.33'	214.
A	278.83	278.63	278.50	278.31	278.11	277.90	277.71	277.53	277.37	277.22	277.09	276.98	276.88	276.77	276.65	276.52	276.37	276.19	276.00	275.80	275.60	275.40	275.
B	279.02	278.86	278.69	278.50	278.30	278.09	277.90	277.72	277.55	277.41	277.23	277.17	277.06	276.96	276.84	276.71	276.55	276.38	276.19	275.99	275.79	275.59	275.4
C	279.99	278.84	278.66	278.47	278.27	278.06	277.87	277.69	277.53	277.39	277.25	277.14	277.04	276.93	276.81	276.68	276.53	276.35	276.16	275.96	275.76	275.56	275.3
D	279.75	278.59	278.42	278.23	278.03	277.82	277.63	277.45	277.28	277.14	277.01	276.90	276.79	276.69	276.57	276.44	276.28	276.11	275.92	275.72	275.52	275.32	275.1

GIRDER	107.33'	122.67'	138'	153.33'	168.67'	184	199.33'	214.67'	2. PIER 3	15.33'	30.67'	46'	61.33'	76.67'	92'	107.33'	122.67'	138'	153.33'	168.67'	184	199.33'	214.
A	278.83	278.68	278.50	278.31	278.11	277.90	277.71	277.53	277.37	277.22	277.09	276.98	276.88	276.77	276.65	276.52	276.37	276.19	276.00	275.80	275.60	275.40	275.
B	279.02	278.86	278.69	278.50	278.30	278.09	277.90	277.72	277.55	277.41	277.28	277.17	277.06	276.96	276.84	276.71	276.55	276.38	276.19	275.99	275.79	275.59	275.
C	278.99	278.84	278.66	278.47	278.27	278.06	277.87	277.69	277.53	277.38	277.25	277.14	277.04	276.93	276.81	276.68	276.53	276.35	276.16	275.96	275.76	275.56	275.
D	278.75	278.59	278.42	278.23	278.03	277.82	277.63	277.45	277.28	277.14	277.01	276.90	276.79	276.69	276.57	276.44	276.28	276.11	275.92	275.72	275.52	275.32	275.

GIRDER	2. PIER 4	15'	30'	45'	60'	75'	90'	105'	120'	135'	150'	165'	2. BEAR-HAVEN
A	275.07	274.93	274.80	274.69	274.59	274.49	274.37	274.24	274.08	273.91	273.71	273.49	273.26
B	275.25	275.11	274.99	274.88	274.78	274.68	274.56	274.43	274.27	274.09	273.90	273.68	273.45
C	275.23	275.09	274.96	274.85	274.75	274.65	274.53	274.40	274.24	274.07	273.87	273.65	273.42
D	274.98	274.84	274.72	274.61	274.51	274.41	274.29	274.16	274.00	273.82	273.63	273.41	273.18

Normal Blocking (Do not see for construction)

NOTE: For girder layout see s

Top of Web Pl.

Bot. of slab Elev.

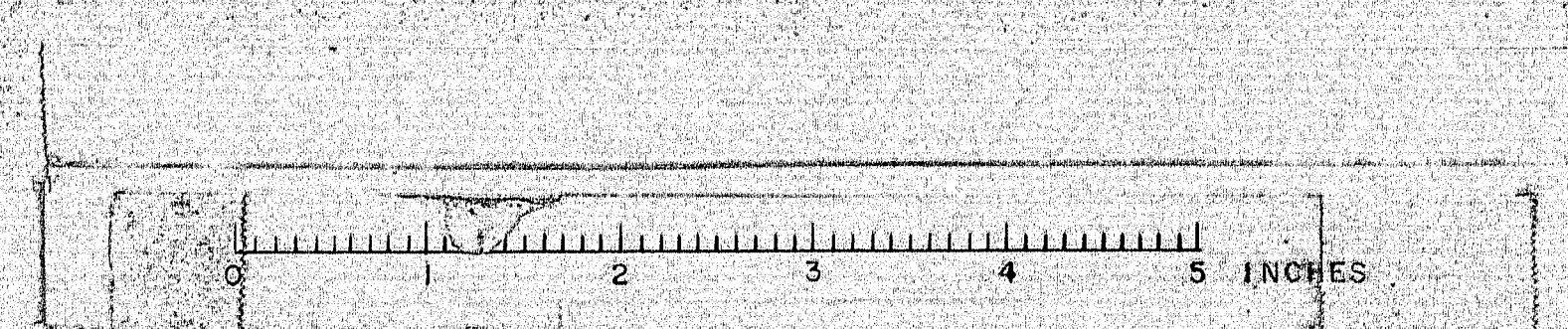
Girder

BLOCKING DETAIL

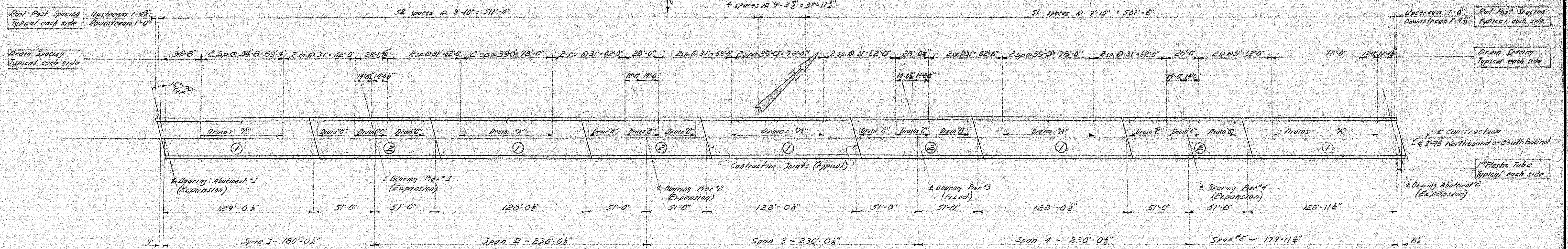
DESIGN—M.C.R. TRACE & DETAIL—G.W.C. CHECK—AHR	BRIDGE NO. SURVEY— PLOT—
STATE HIGHWAY COMMISSION BRIDGE DIVISION	
INTERSTATE 95	
OVER	
PENOBSCOT RIVER	

DESIGN—M. C. R. TRACE & DETAIL—G.W.C. CHECK—A.H.F.	BRIDGE NO. SURVEY— PLOT—
STATE HIGHWAY COMMISSION BRIDGE DIVISION INTERSTATE 95 OVER PENOBSCOT RIVER IN THE TOWN OF MEDWAY PENOBSCOT COUNTY SHEAR CONNECTORS & SLAB ELEVATIONS SHEET 81 OF 93 AUGUSTA, MAINE OCTOBER 1964	

99-86

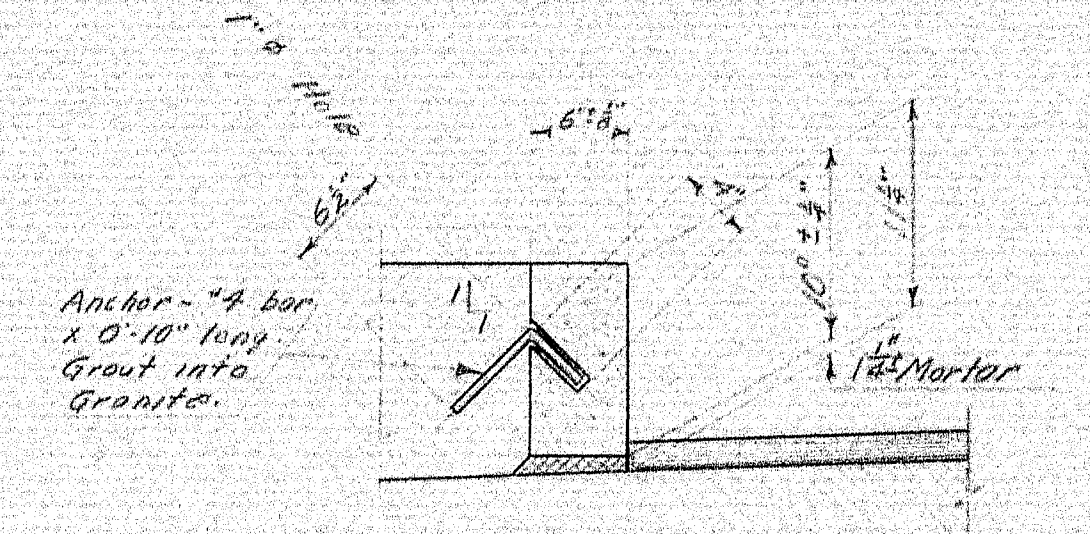
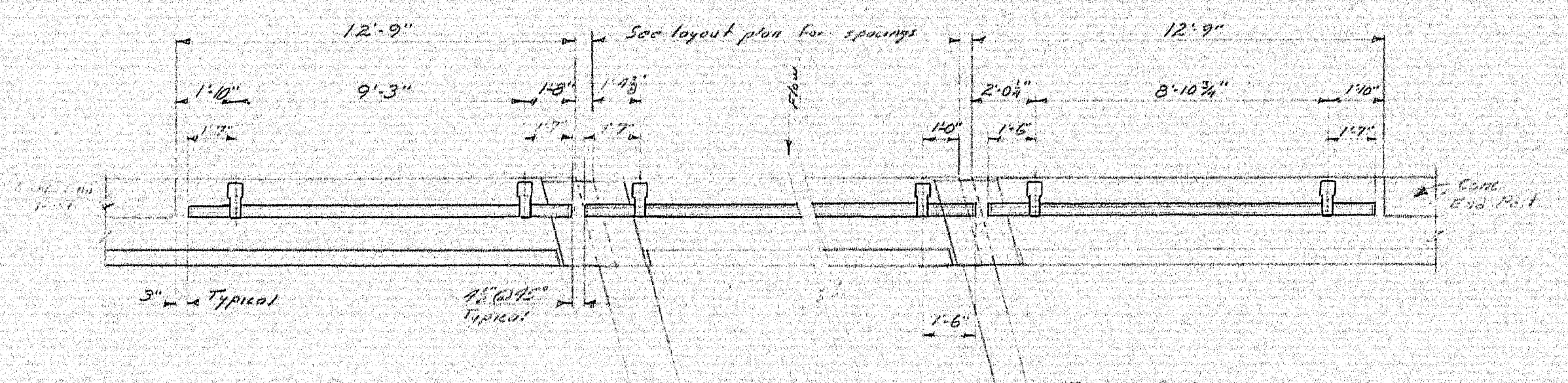


B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-9(29)	82	93

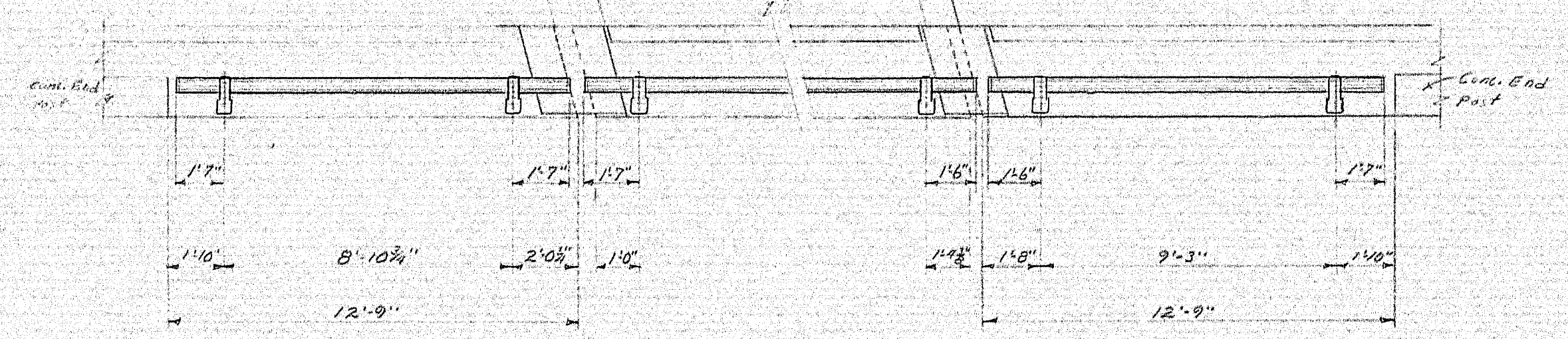


LAYOUT PLAN
 Northbound & Southbound Identical.
 Place all slabs marked (1) before placing
 slabs marked (2). After concrete has
 been placed in any slab no concrete
 shall be placed in an adjacent span
 until 24 hours has elapsed.
 All dimensions are along structural
 steel.

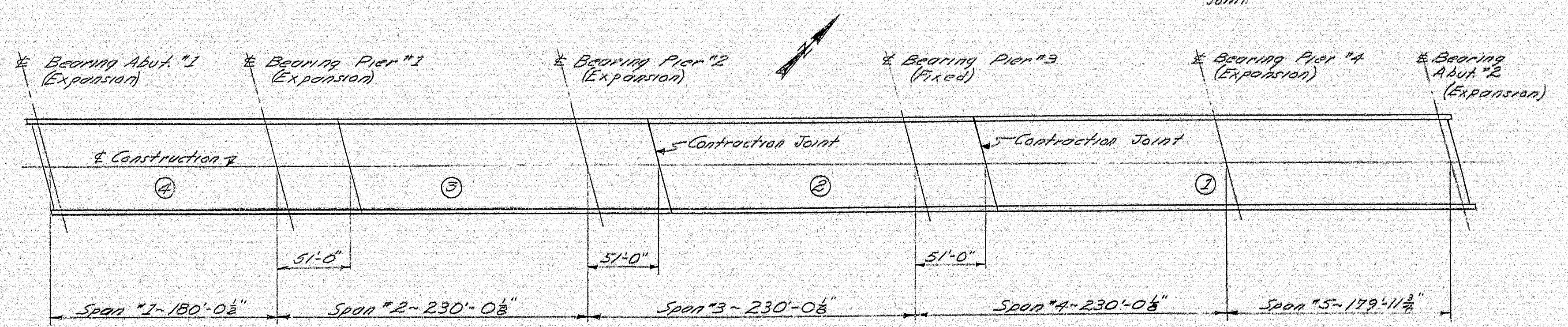
1" Plastic drain tubes through slab
 and extended 2" below bottom of slab.
 Do not cover with membrane
 waterproofing. Payment to be incidental
 to Item 701-40, Portland Cement Concrete
 Roadway and sidewalk slabs on Steel
 Bridges. Place in order for drip to
 clear bridge seat.



DETAIL
VERTICAL BRIDGE CURB TYPE 1
 Details in Vertical Bridge Curb shall be
 located at every Concrete Curb Construction
 Joint.



PLAN
RAIL DETAILS AT ABUTMENTS



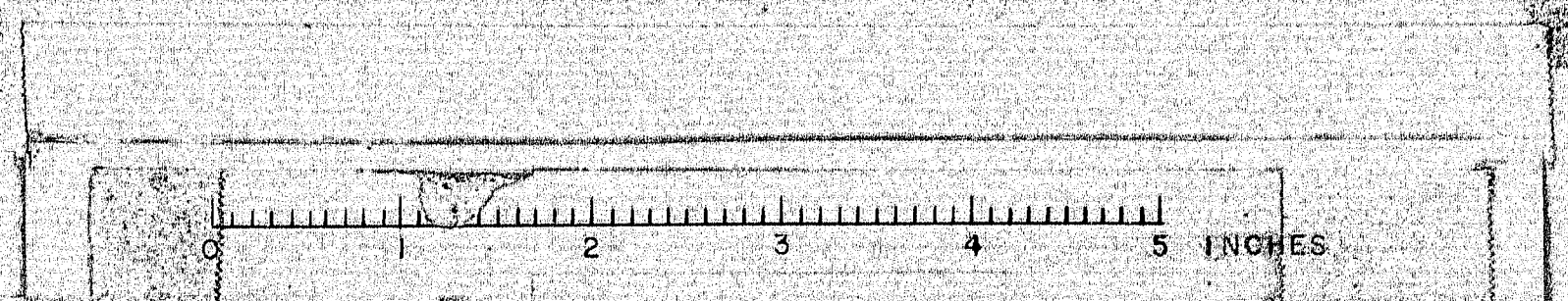
ALTERNATE CONCRETE PLACING SEQUENCE

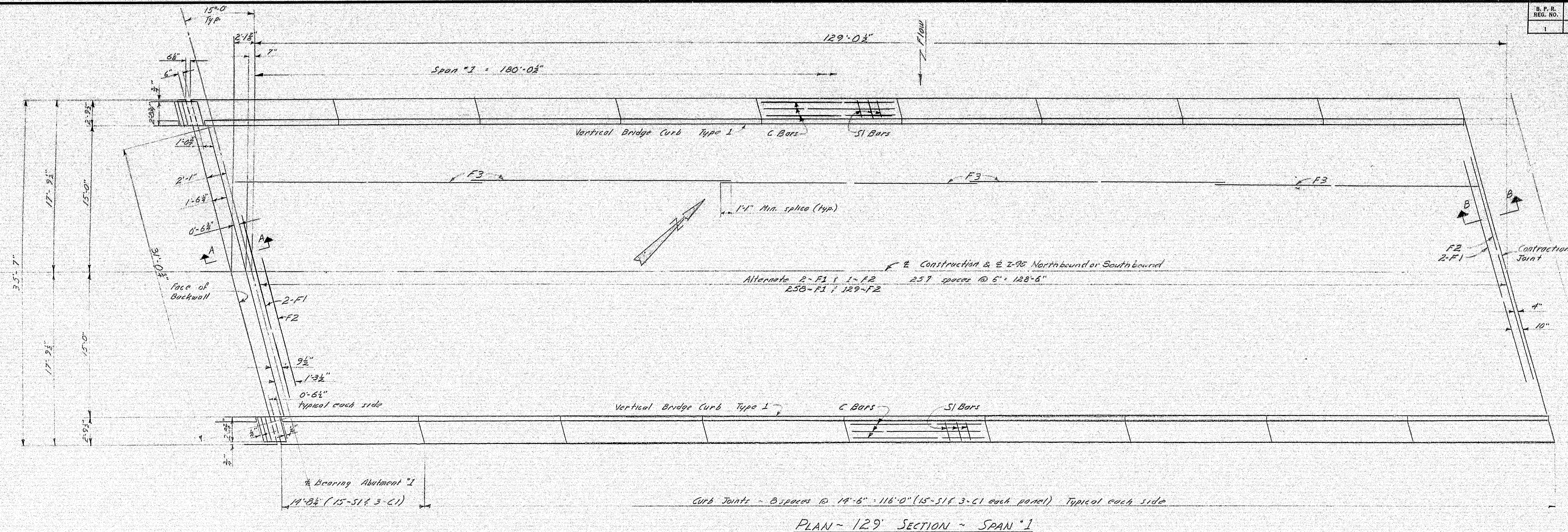
- NOTES:**
1. Northbound and Southbound are identical.
 2. All dimensions are along structural steel.
 3. Place concrete panels in numerical sequence ①, ②, then ③.
 4. After concrete has been placed in any panel and has set, at least 48 hours must elapse before placing the next panel.
 5. End stiffening of concrete slab may be omitted where contraction joints are eliminated. Longitudinal Reinforcing Steel must be continuous with 1'-0" minimum laps where contraction joints are eliminated.

Revised April 15, 1966
 Concrete Placements changed from 3 to 4
 Revised April 6, 1966
 Alternate Concrete Placing Sequence - Added

DESIGN - M.C.R. TRACE - D.T.A. CHECK - A.H.T.	BRIDGE NO. SURVEY - PLOT -
STATE HIGHWAY COMMISSION BRIDGE DIVISION	
INTERSTATE 95 OVER	
PENOBSCOT RIVER IN THE TOWN OF	
MEDWAY PENOBSCOT COUNTY	
SLAB LAYOUT	
SHEET 82 OF 93 AUGUSTA, MAINE OCTOBER 1964	

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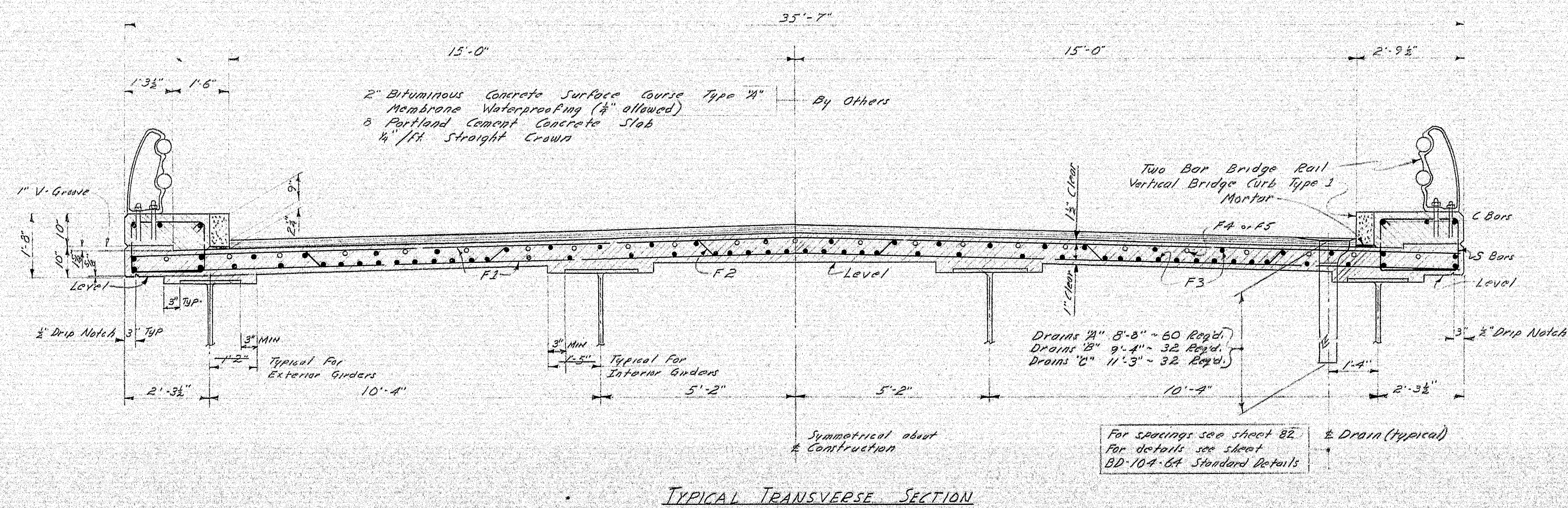




GENERAL SUPERSTRUCTURE NOTES:

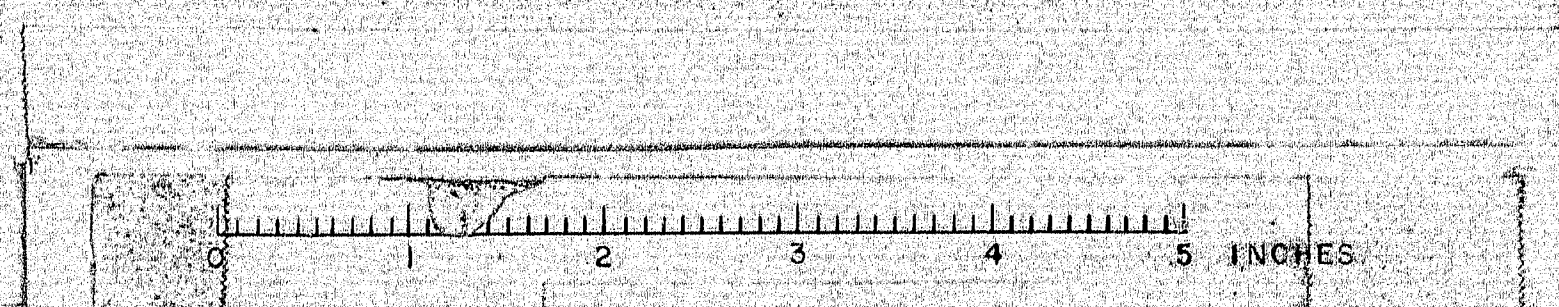
1. All dimensions are along structural steel.
2. Concrete for curb shall not be placed until concrete in superstructure has been in place a minimum period of 7 days. During the 7 day period form work may be performed and granite curb placed, but hand equipment only shall be permitted on the slab.
3. Curb stirrups (S2) to be placed approximately 2' from curb on curb sections. Intermediate stirrups may be secured to transverse slab steel.
4. At contraction joints over piers provide 4" preformed expansion joint filler between contact surfaces of top of curb and vertical bridge curb. At all other contracting joints in concrete curb, break band between the concrete surfaces by a coating of a suitable grade of asphalt paint.
5. Form a 1" V-Groove on outside face of curb and slab at each contraction joint.
6. Provide a joint in the Vertical Bridge Curb at each contraction joint in the concrete curb.
7. Two Bar Bridge Rail details are shown on Standard Sheets BD-107-64 and BD-108-64.

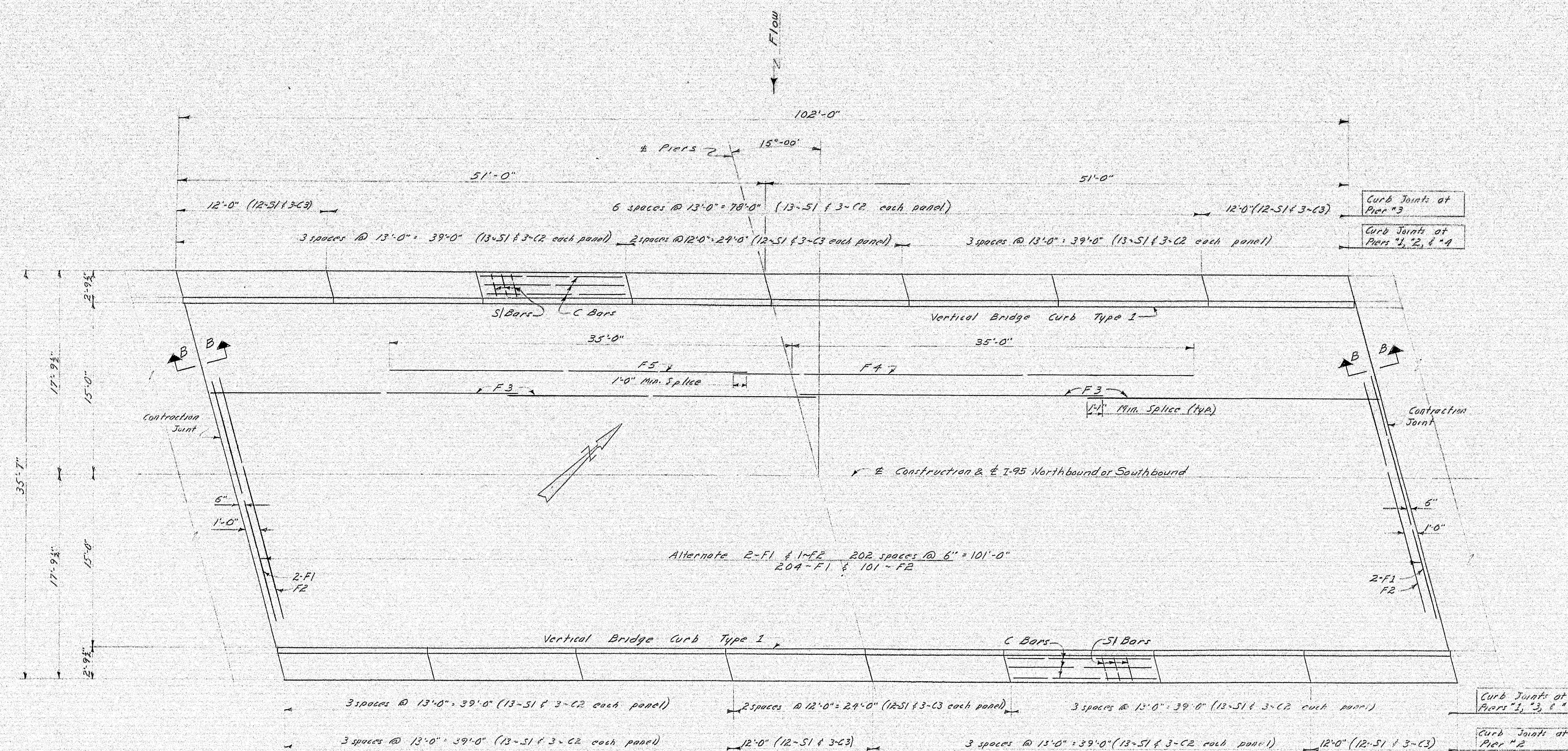
See Sheet #84 for Sections A-A and B-B.



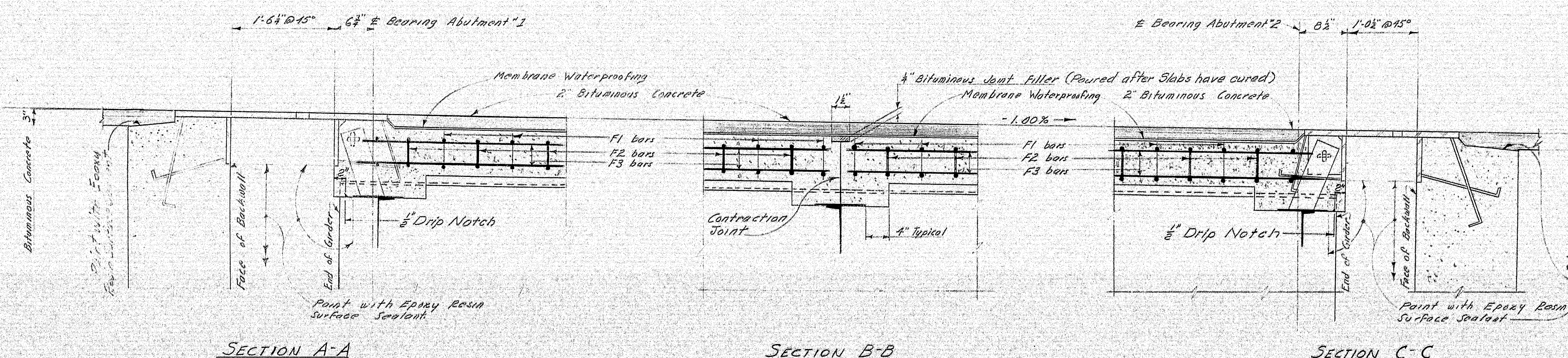
DESIGN - J.C.B.	BRIDGE NO. SURVEY - PLOT -
TRACE - DETAIL - B.T.A.	
CHECK - A.H.F.	
STATE HIGHWAY COMMISSION BRIDGE DIVISION	
INTERSTATE 95	
OVER	
PENOBSCOT RIVER	
IN THE TOWN OF	
MEDWAY	
PENOBSCOT COUNTY	
SLAB - SPAN 1	
SHEET 83 OF 93 AUGUSTA, MAINE OCTOBER 1964	

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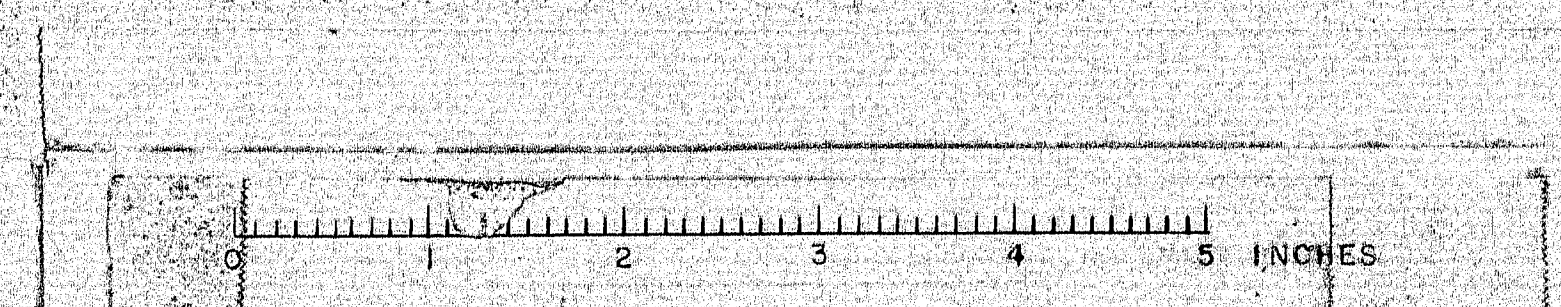
PLAN - 102' SECTION at PIERS



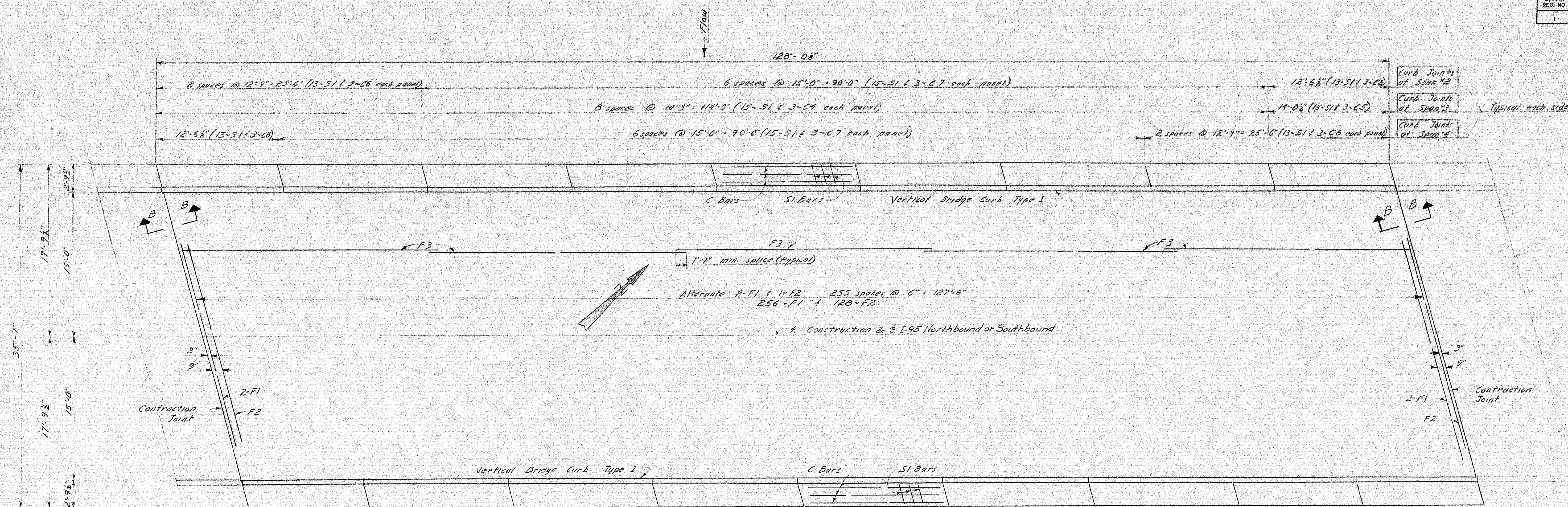
NOTE:
Membrane Waterproofing and
2" Bituminous Concrete Surface
Course by others.

DESIGN - M.C.B. TRACE - D.E.T. - E.T.A. CHECK - A.H.H.	BRIDGE NO. SURVEY - PLOT -
STATE HIGHWAY COMMISSION BRIDGE DIVISION	
INTERSTATE 95 OVER	
PENOBSCOT RIVER IN THE TOWN OF	
MEDWAY PENOBSCOT COUNTY	
SLAB - AT PIERS	
SHEET 84 OF 93 AUGUSTA, MAINE OCTOBER 1964	

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B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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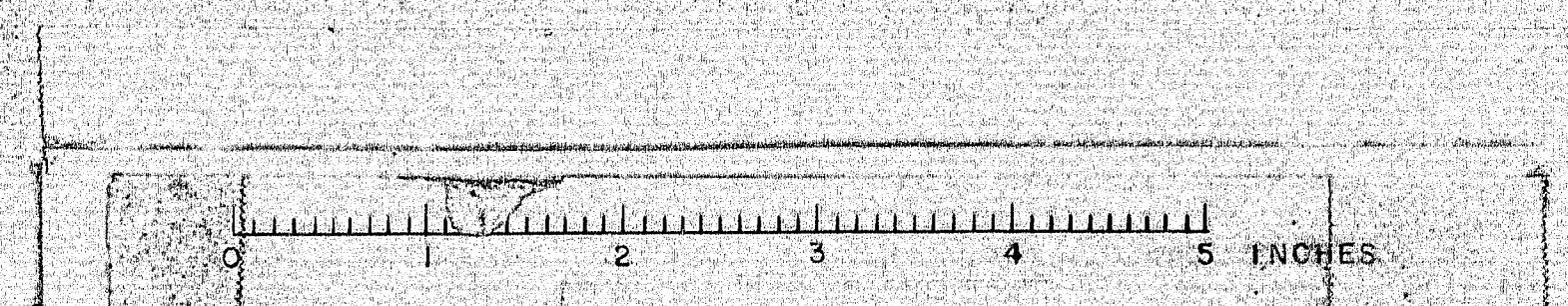


PLAN - 120' SECTION of SPANS 2, 3 & 4

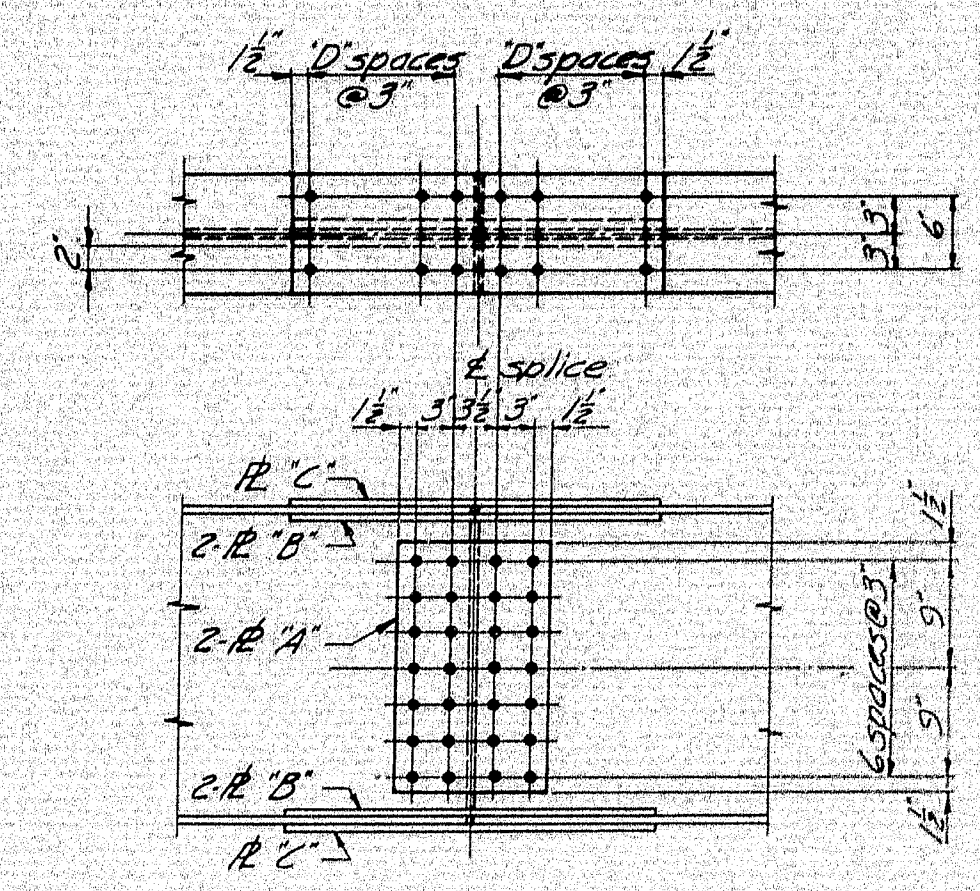
See Sheet #34 for Section B-B

DESIGN - M.C.B. TRACE - D.E.T. - A.P.A. CHECK - A.H.F.	BRIDGE NO. SURVEY PLOT -
STATE HIGHWAY COMMISSION BRIDGE DIVISION	
INTERSTATE 95	
OVER	
PENOBSCOT RIVER	
IN THE TOWN OF	
MEDWAY	
PENOBSCOT COUNTY	
SLAB - SPANS 2, 3 & 4	
SHEET 85 OF 93 AUGUSTA, MAINE OCTOBER 1964	

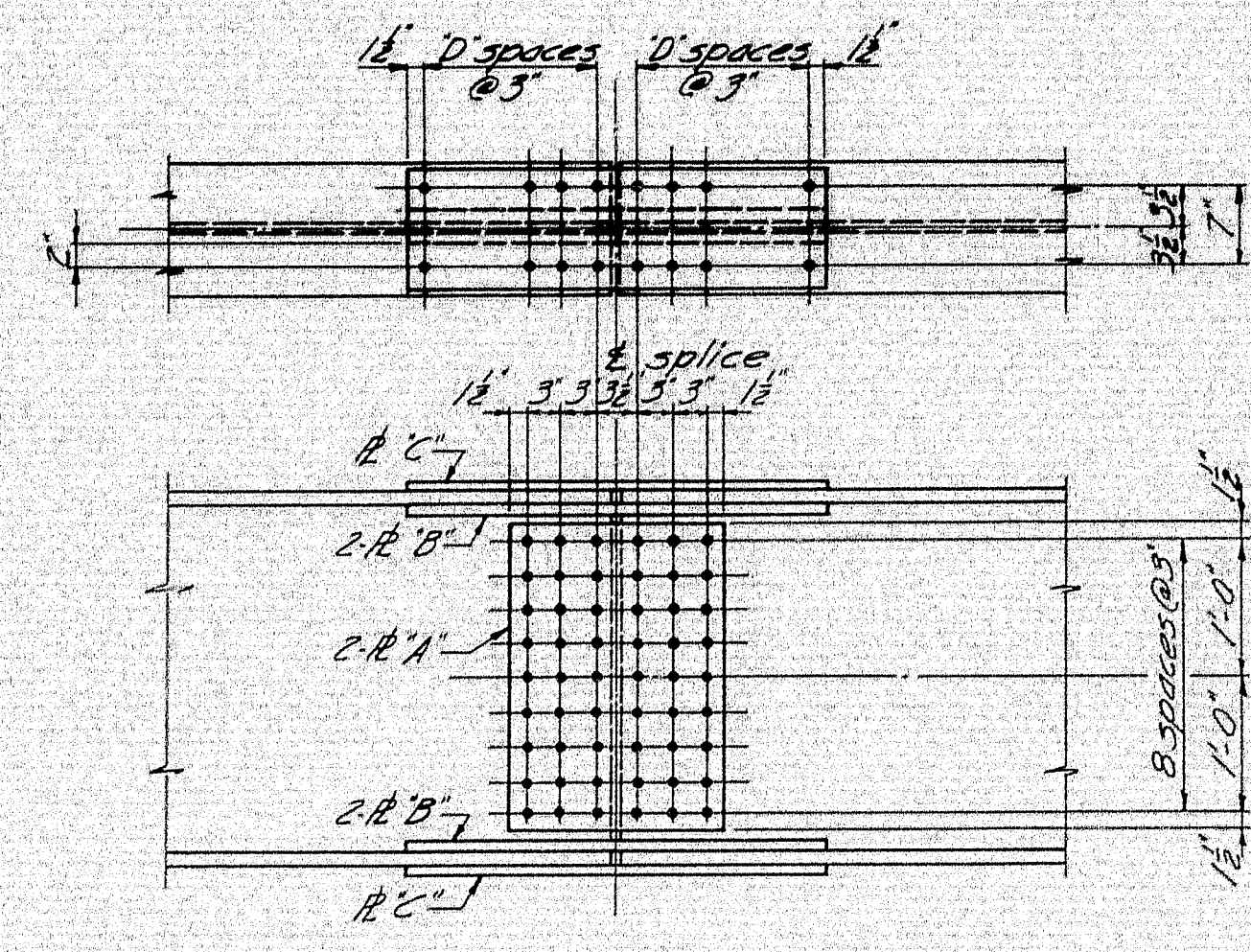
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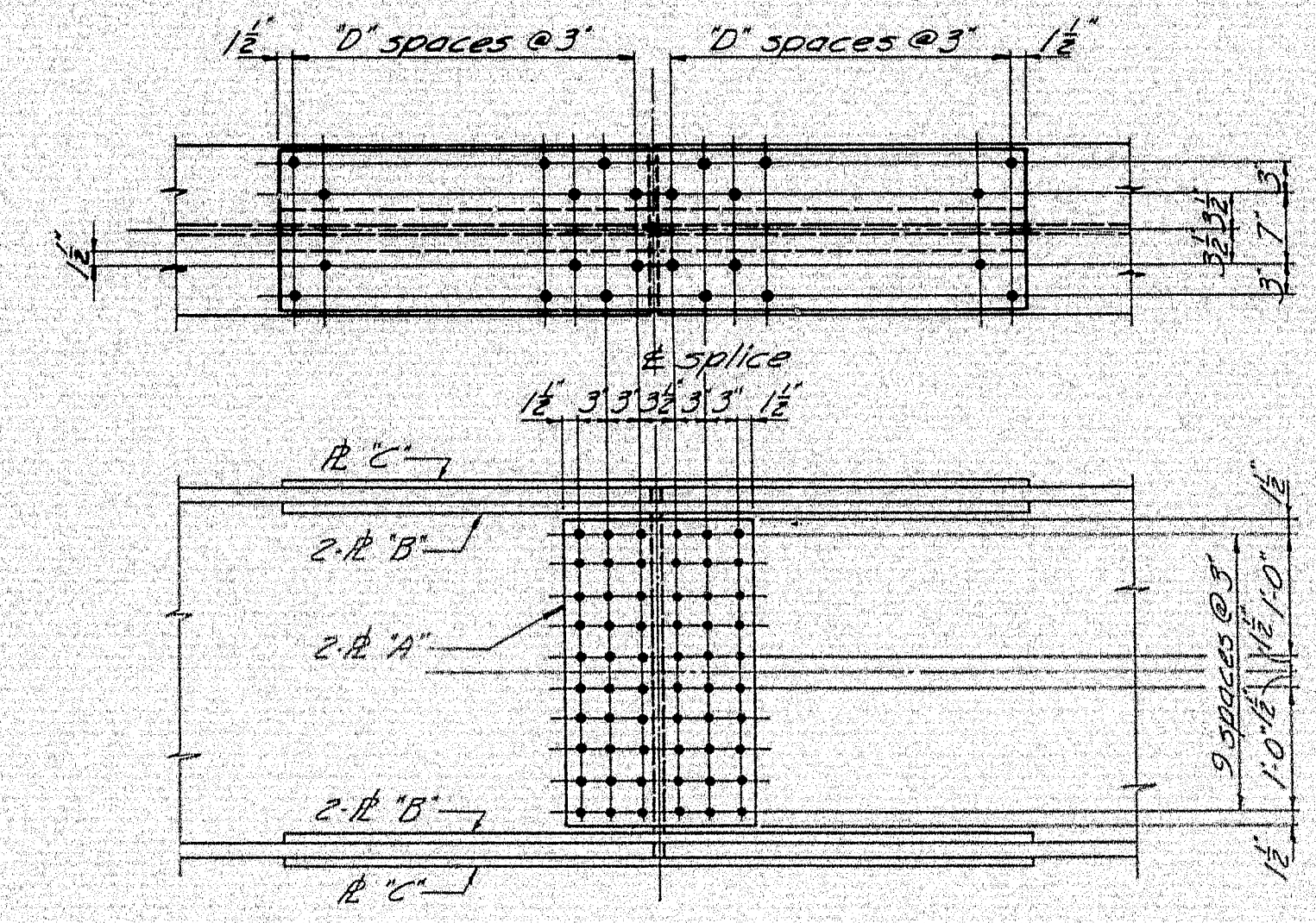
99-92



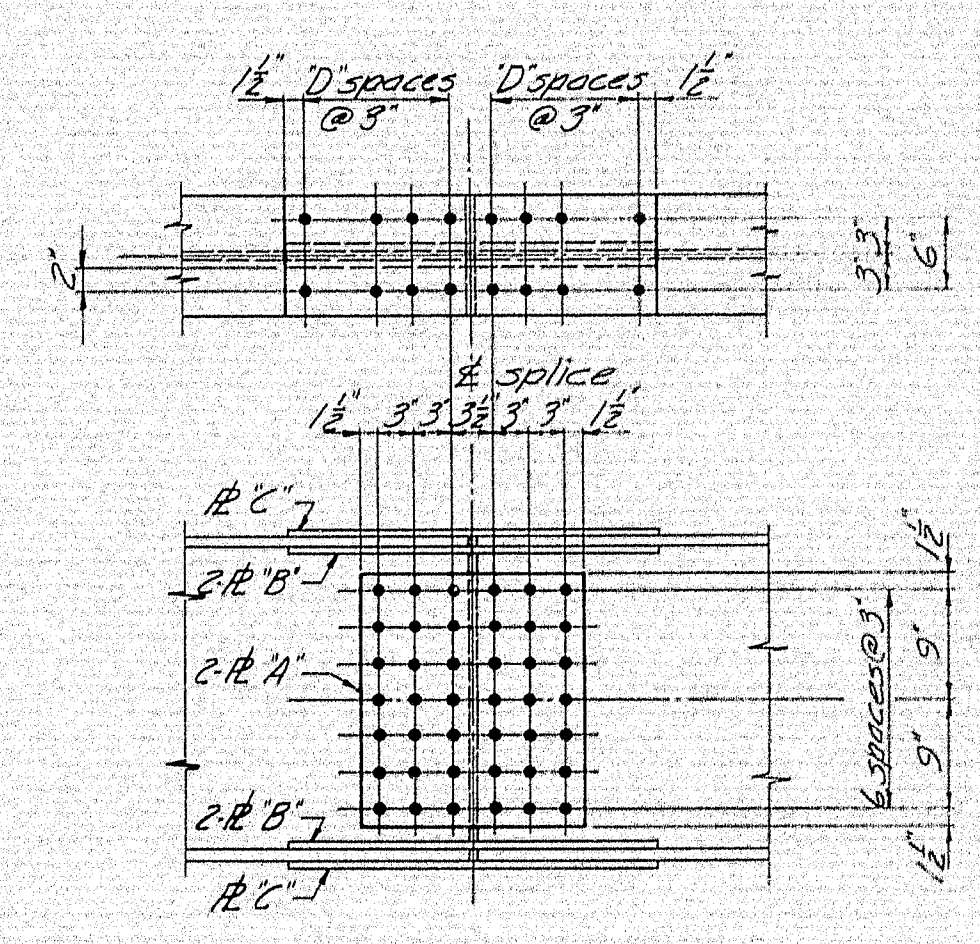
27 WF 84



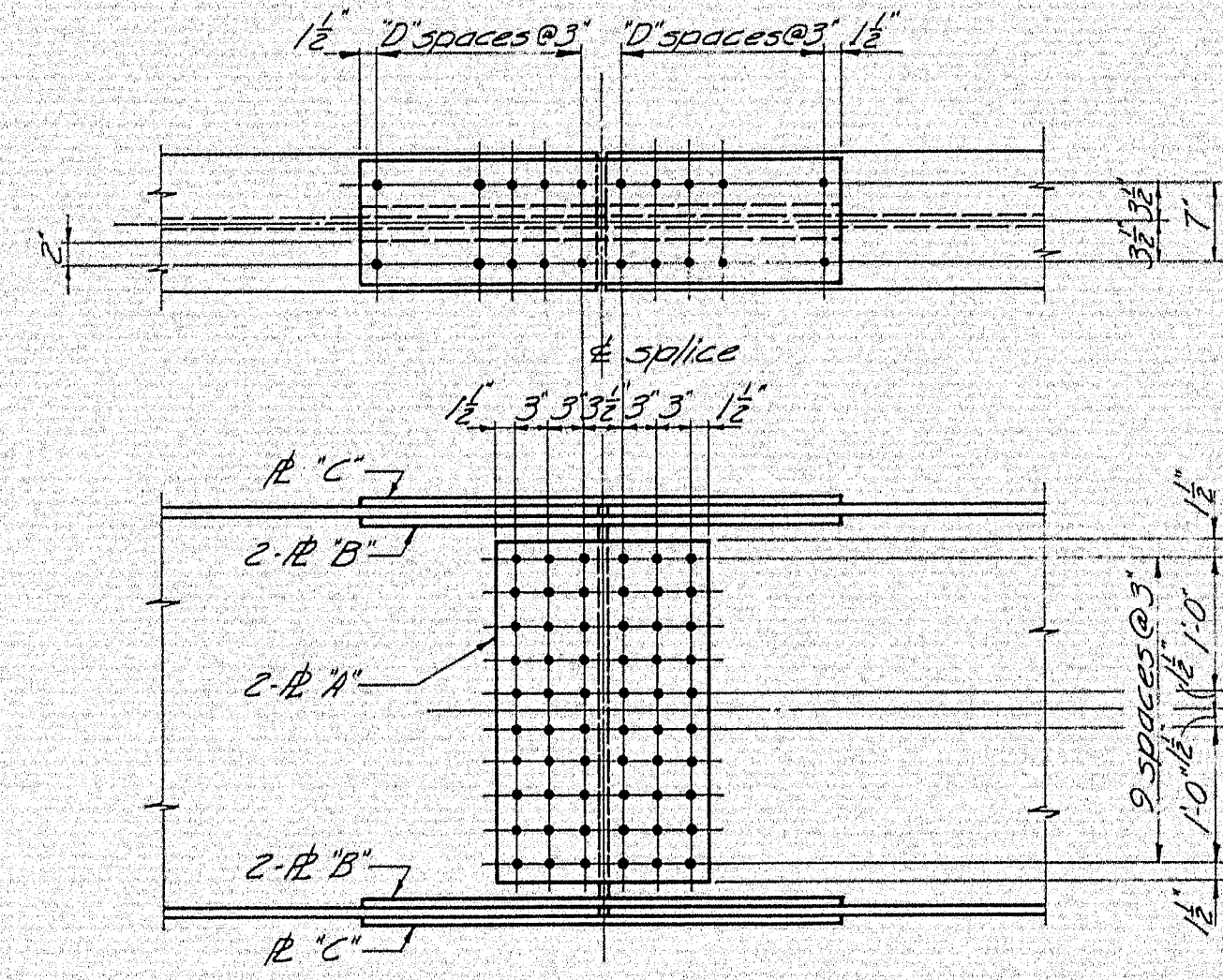
33 WF 118, 130, 141, 152



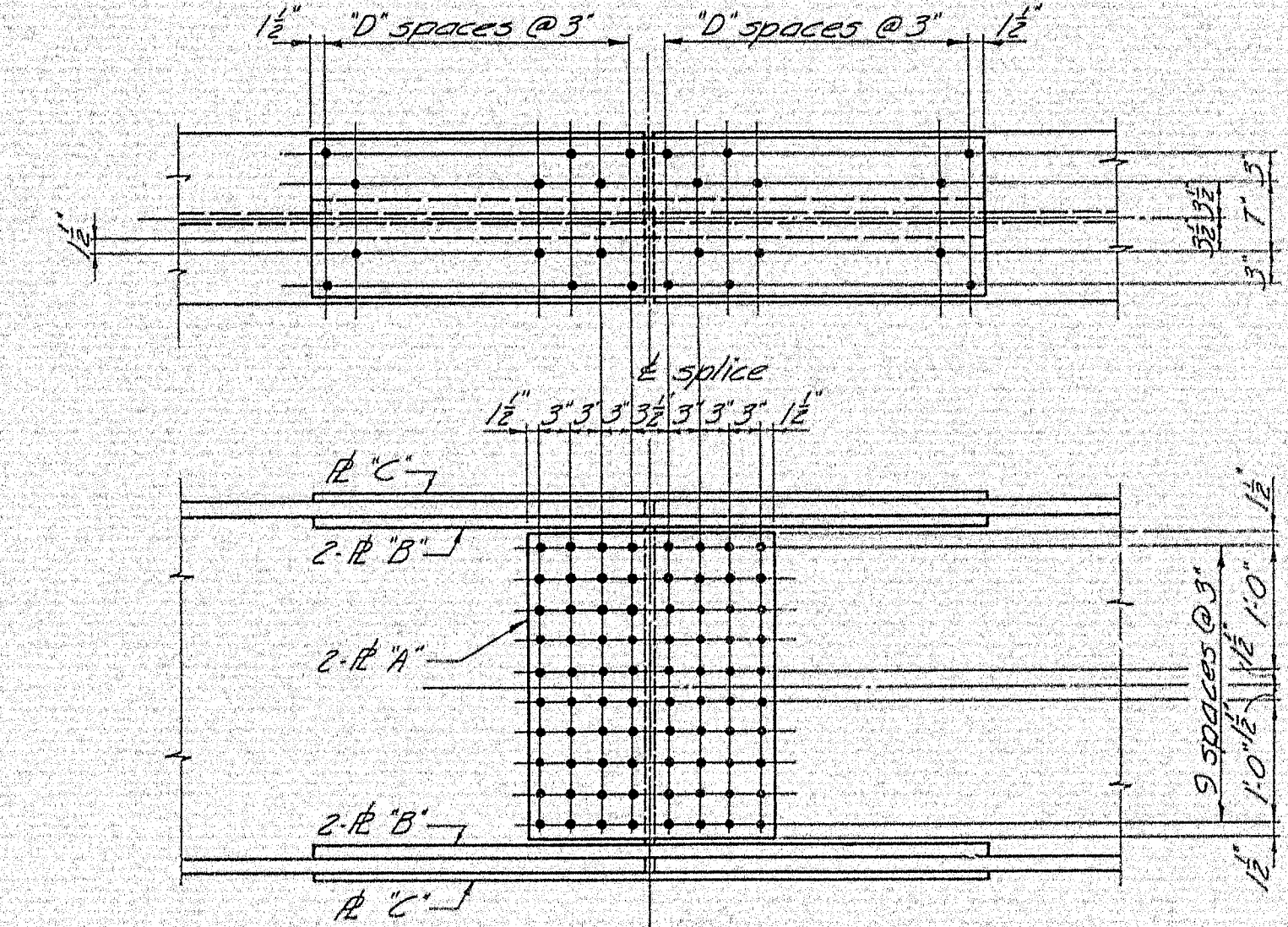
36 WF 245, 280



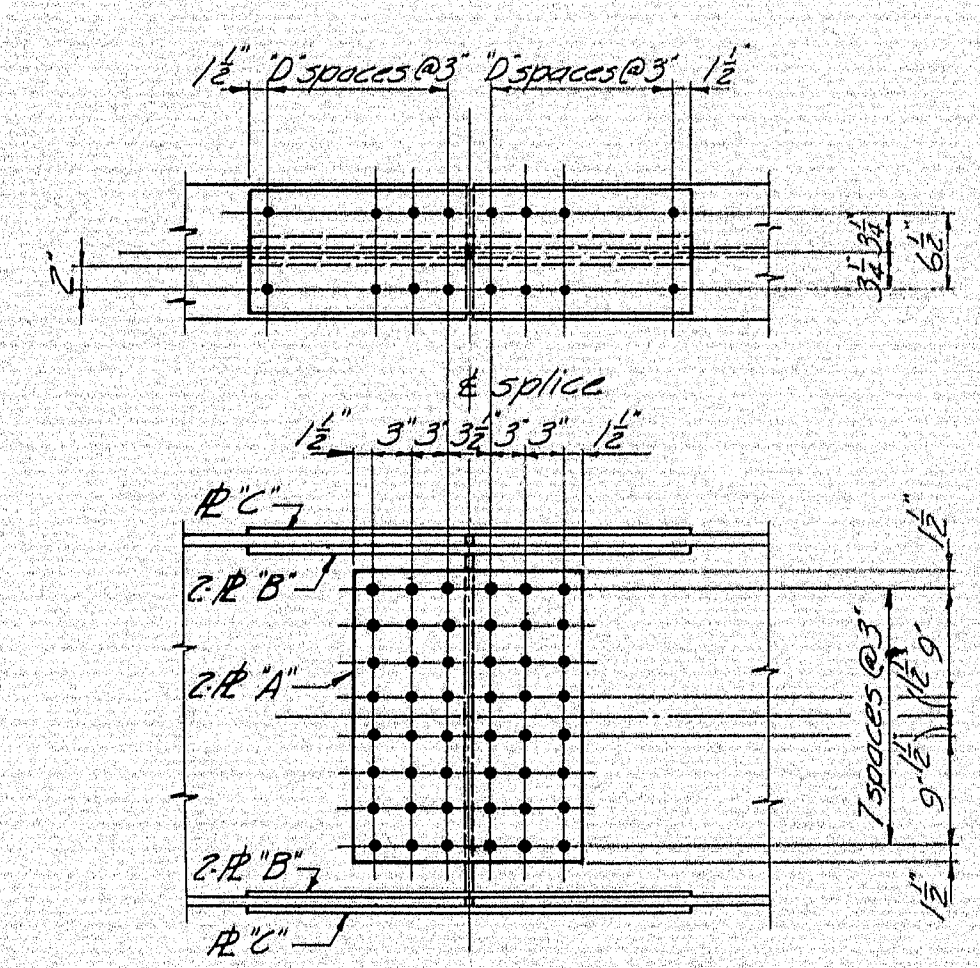
27 WF 94, 102, 114



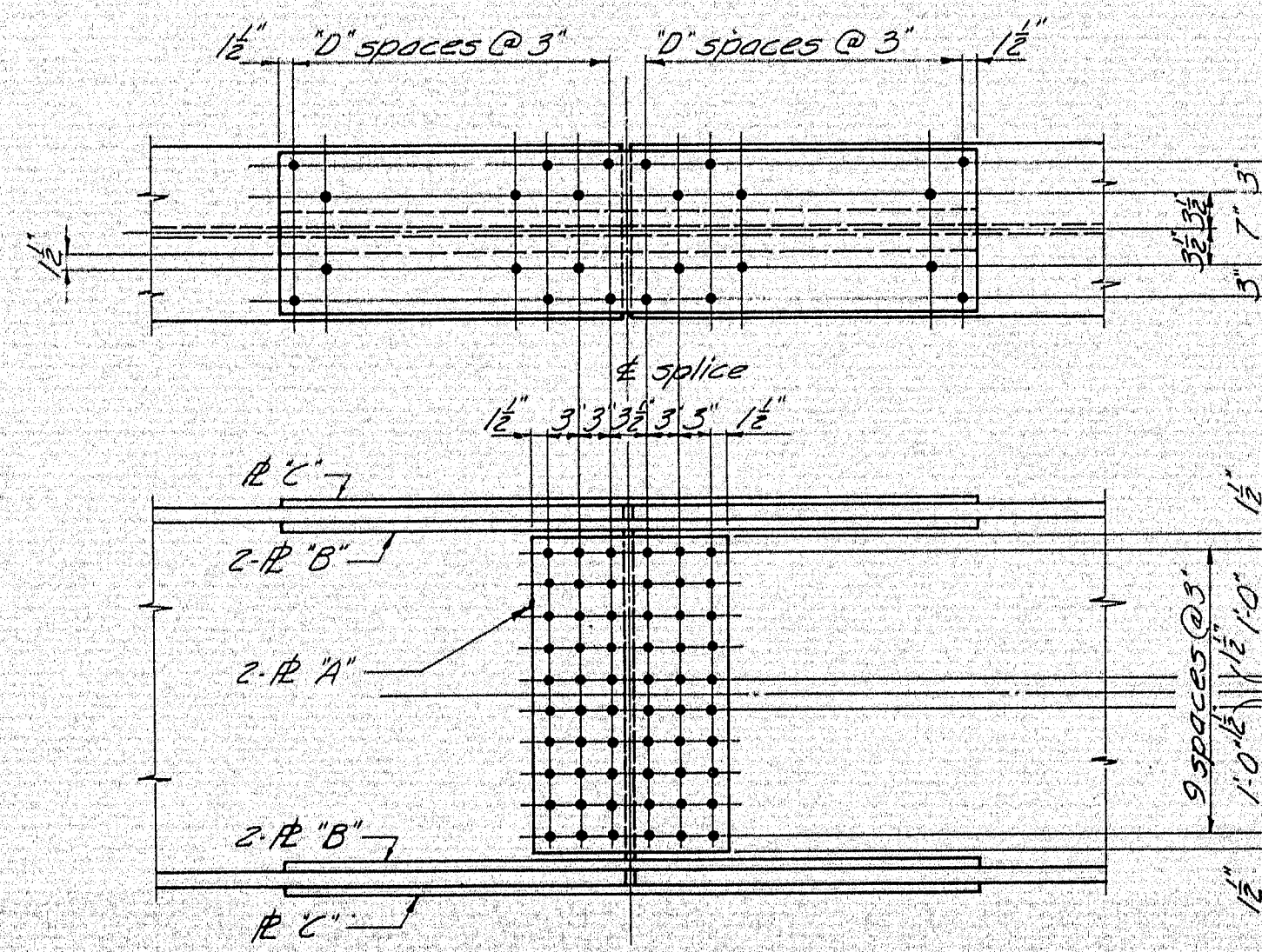
36 WF 135, 150, 160, 170, 182, 194



36 WF 300



30 WF 99, 108, 116, 124, 132



36 WF 230, 260

SPlice DESIGN, PLATES AND FLANGE HOLES						
BEAM	BEND. M.	SHEAR	PLATE "A"	PLATE "B"	PLATE "C"	"D"
27 WF 84	3070 ^k	111 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	10 x 1/2	3
27 WF 94	3520 ^k	119 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	10 x 1/2	3
27 WF 102	3862 ^k	126 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	10 x 1/2	4
27 WF 114	4341 ^k	140 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	10 x 1/2	4
30 WF 99	3921 ^k	139 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	10 x 1/2	3
30 WF 108	4360 ^k	147 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	10 x 1/2	4
30 WF 116	4780 ^k	152 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	10 x 1/2	4
30 WF 124	5170 ^k	159 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	10 x 1/2	4
30 WF 132	5530 ^k	168 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	10 x 1/2	5
33 WF 118	5287 ^k	164 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	11 x 1/2	4
33 WF 130	5978 ^k	173 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	11 x 1/2	5
33 WF 141	6604 ^k	181 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	11 x 1/2	5
33 WF 152	7193 ^k	191 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	11 x 1/2	6
36 WF 135	6473 ^k	191 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	11 x 1/2	4
36 WF 150	7436 ^k	202 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	11 x 1/2	5
36 WF 160	8005 ^k	212 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	11 x 1/2	6
36 WF 170	8574 ^k	221 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	11 x 1/2	6
36 WF 182	9204 ^k	237 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	11 x 1/2	7
36 WF 194	9838 ^k	253 ^k	12 ¹ / ₂ x 1/2	4 x 1/2	11 x 1/2	8
36 WF 230	12574 ^k	247 ^k	12 ¹ / ₂ x 1/2	6 x 1/2	16 x 1/2	10
36 WF 245	13441 ^k	260 ^k	12 ¹ / ₂ x 1/2	6 x 1/2	16 x 1/2	11
36 WF 260	14330 ^k	276 ^k	12 ¹ / ₂ x 1/2	6 x 1/2	16 x 1/2	12
36 WF 280	15551 ^k	291 ^k	12 ¹ / ₂ x 1/2	6 x 1/2	16 x 1/2	13
36 WF 300	16676 ^k	312 ^k	12 ¹ / ₂ x 1/2	6 x 1/2	16 x 1/2	14

GENERAL NOTES

1. Splice connections to be made with 5/8" high tensile strength bolts. Holes to be 1/8" dia.
2. The design bending moment is 90% of the net resisting moment of the beam with an allowable stress of 20,000 p.s.i. The design shear is 75% of the shear strength of the gross section of the web with an allowable stress of 12,000 p.s.i.
3. If beams of different sizes are to be spliced, use splice details shown for the smaller of the beams being spliced unless otherwise directed by design details. See design details for filler thickness. Place fillers to limits of splice plates only, with no extensions.
4. See design details for slopes of beams in order to correctly fabricate bevels of the splices.

A.S.T.M. STEEL CLASSIFICATION

High Tensile Strength Bolts..... A-325
Splice Plates..... A-36

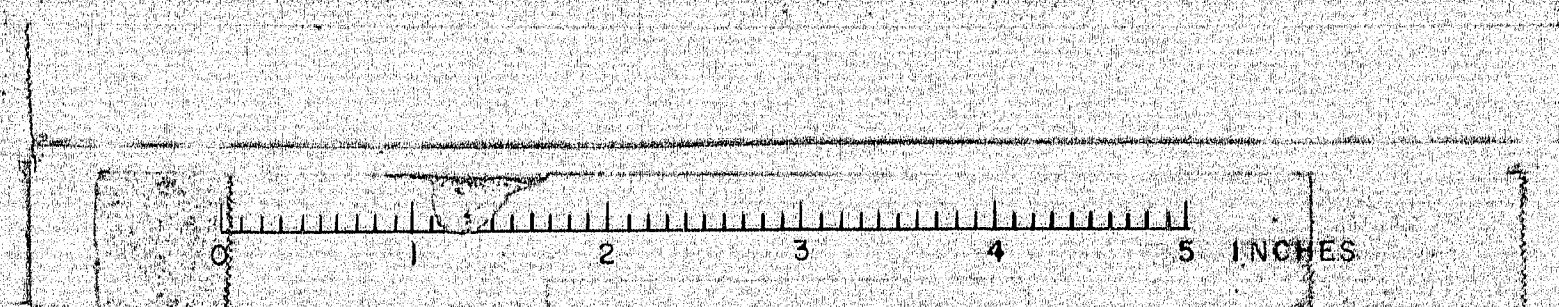
DESIGN SPECIFICATIONS

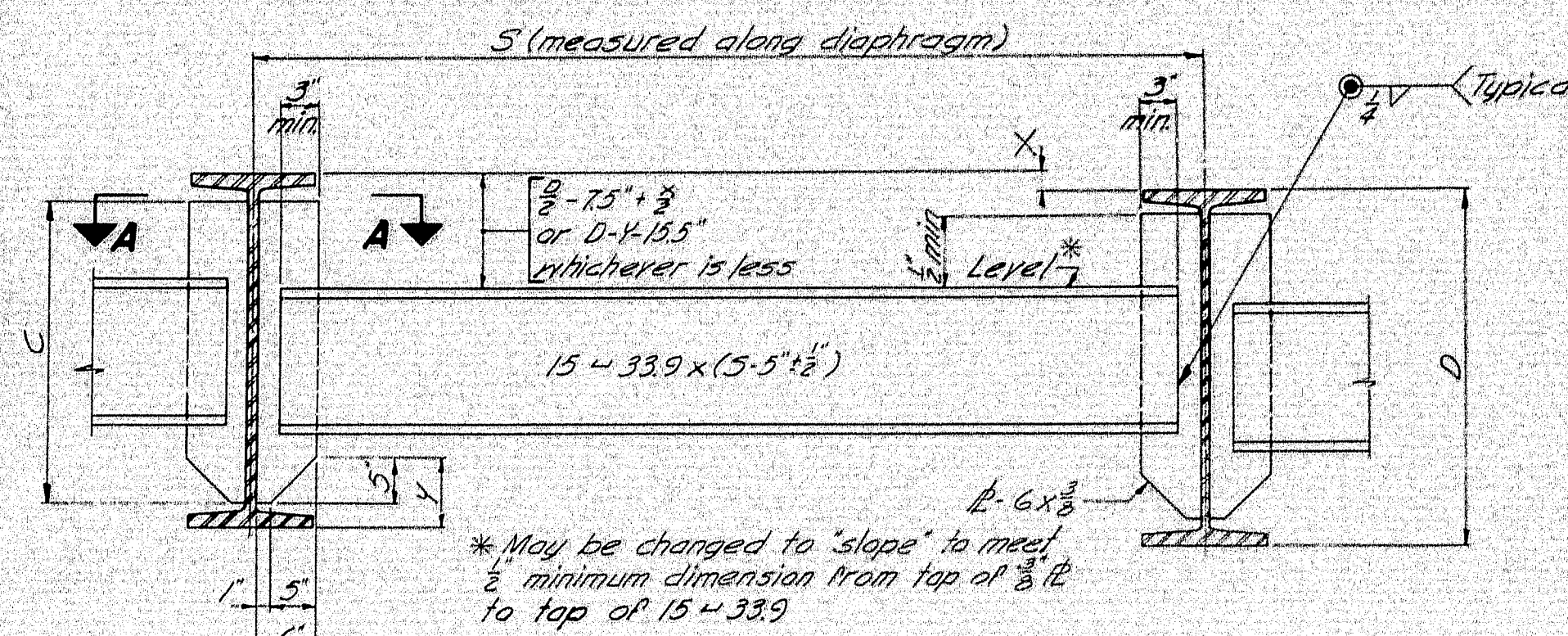
AASHTO Standard Specifications for Highway Bridges, 1961 with Interim Specifications, 1961 & 1962

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS
(BD 103-64)
BEAM SPLICES

99-94





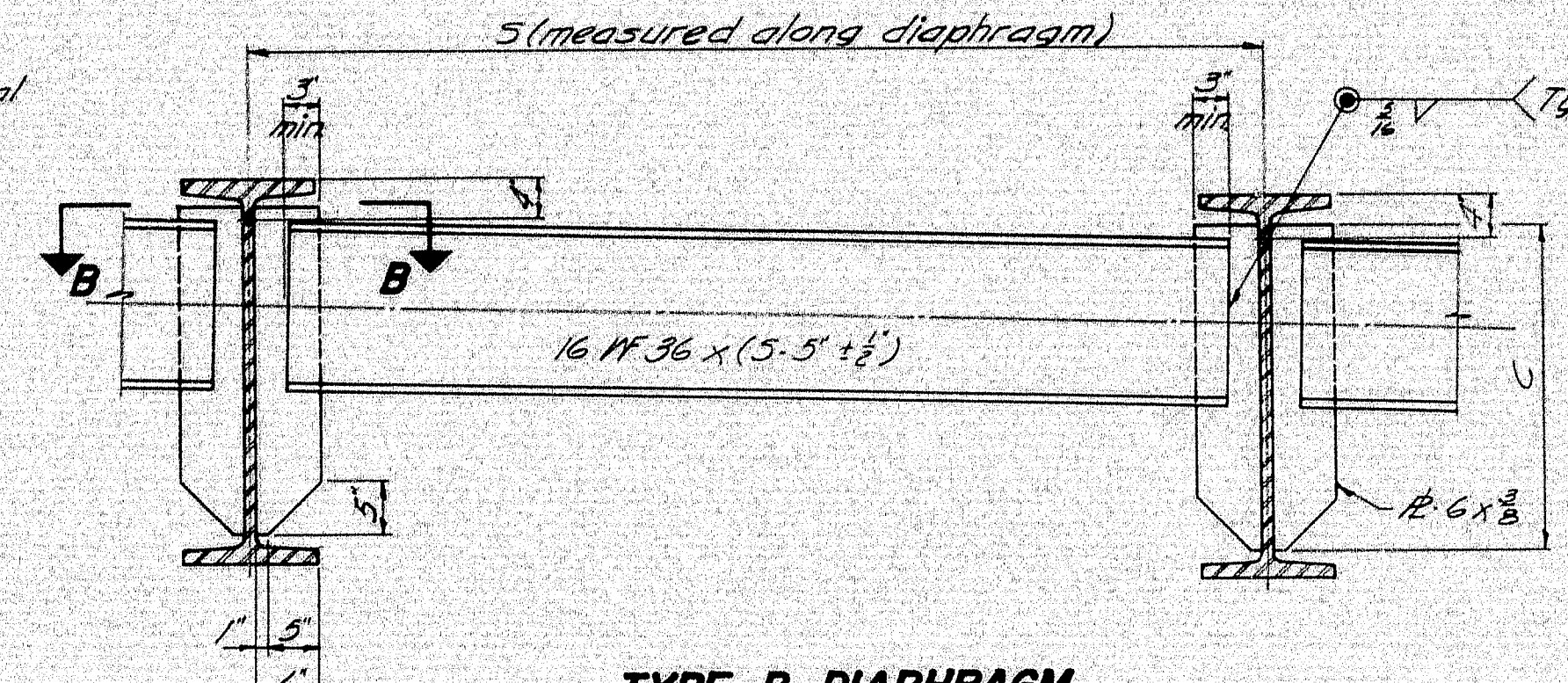
TYPE A DIAPHRAGM

SECTION A-A
 Skew Angle 0° to 15° 30'

SECTION A-A
 Skew Angle over 15° 30' to 30° 00'

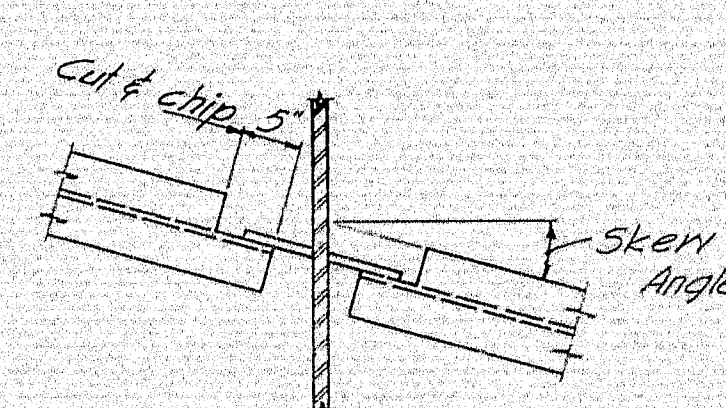
SECTION A-A
 Skew Angle over 30° 00'

FILLET WELD SIZE "N" & DIMENSION "C" FOR DIAPHRAGM PLATES		
BEAM	C	N
27 WF 84 to 114 incl.	1-11"	1/2"
30 WF 95 to 132 incl.	2-2"	1/2"
33 WF 118 to 152 incl.	2-5"	1/2"
36 WF 135 to 194 incl.	2-7"	1/2"
36 WF 230 to 300 incl.	2-6"	1/2"



TYPE B DIAPHRAGM

Welding 6 x 1/2 plates to web same as for Type A Diaphragm.

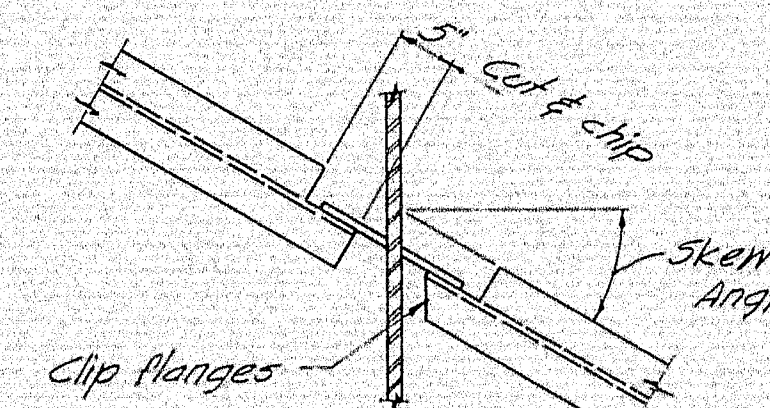


SECTION B-B

Skew Angle 0° to 25° 00'

NOTE

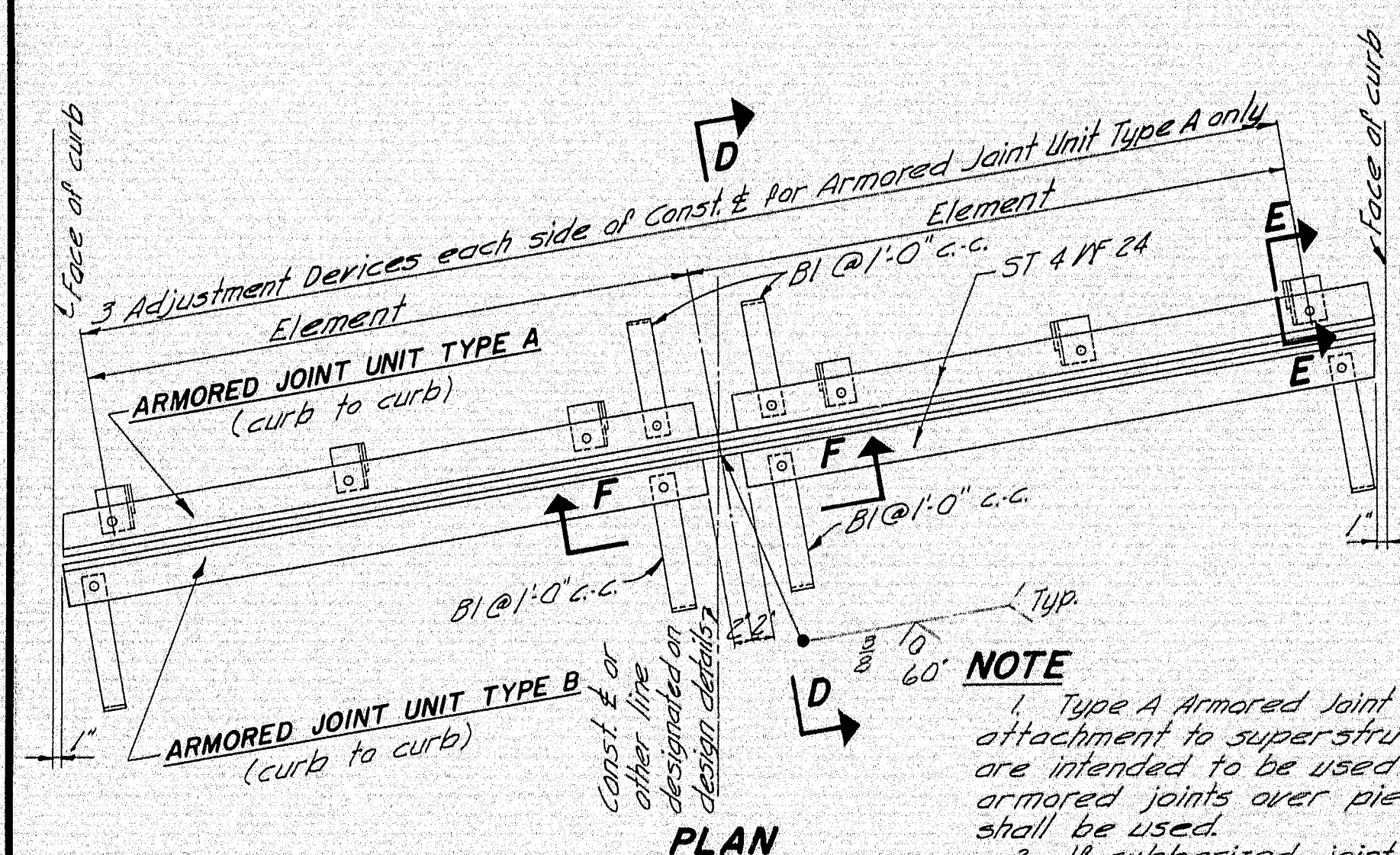
See design details for diaphragm type, location and skew.



SECTION B-B

Skew Angle over 25° 00'

DIAPHRAGMS



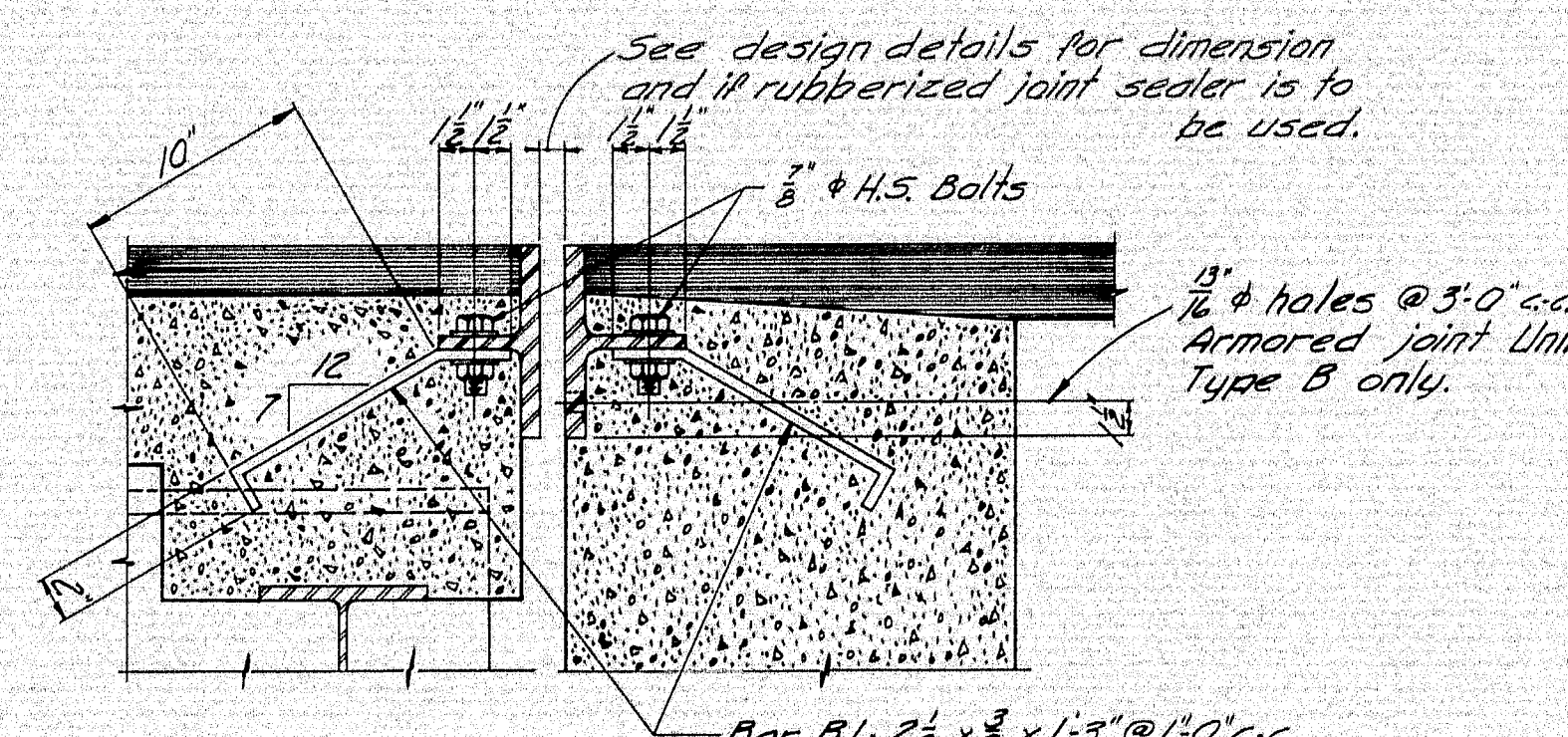
PLAN

NOTE

1. Type A Armored Joint Units are intended to be used for attachment to superstructures. Type B Armored Joint Units are intended to be used for attachment to abutments. At armored joints over piers, two Type A Armored Joint Units shall be used.
2. If rubberized joint sealer is called for on the design details the area to which it is to be banded shall not be painted and it shall be supported on non-bituminous material. At the Contractor's option the supporting material may be left in place or be removed. If the supporting material is left in place, it shall be compressible in accordance with specification AA540 M 153-54. In either case band between the supporting material and the rubberized joint sealer shall be prevented by a 1" minimum thickness of Poly-urethane foam.
3. If more elements than the two shown in the "Plan" are required by the design details, there shall be three adjustment devices for each element for Armored Joint Unit Type A and the elements of both units shall be field welded together in the same manner as shown in the "Plan".
4. Armored Joints to be paid for as Structural Steel.

ARMORED JOINT

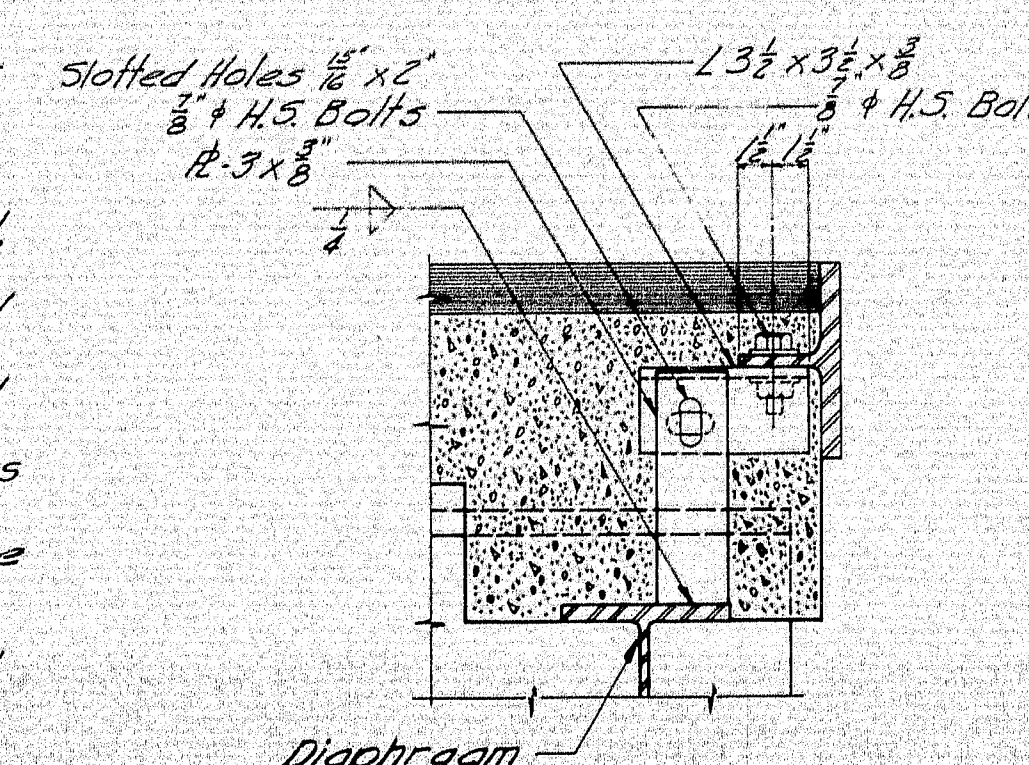
An armored joint consists of two armored joint units. See note 1.



ARMORED JOINT UNIT TYPE A

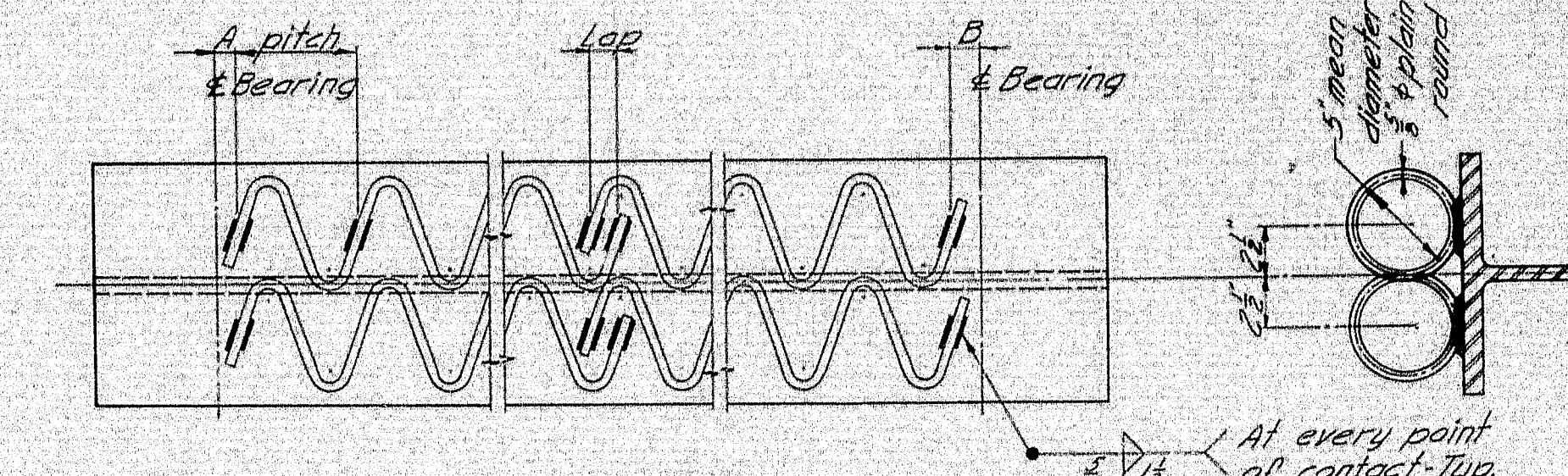
ARMORED JOINT UNIT TYPE B

SECTION D-D

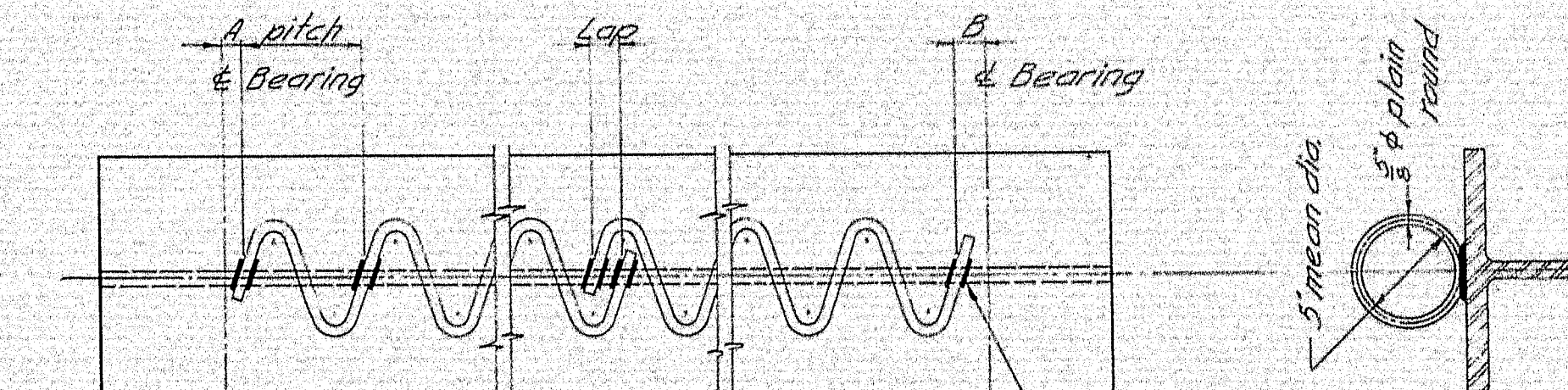


SECTION E-E

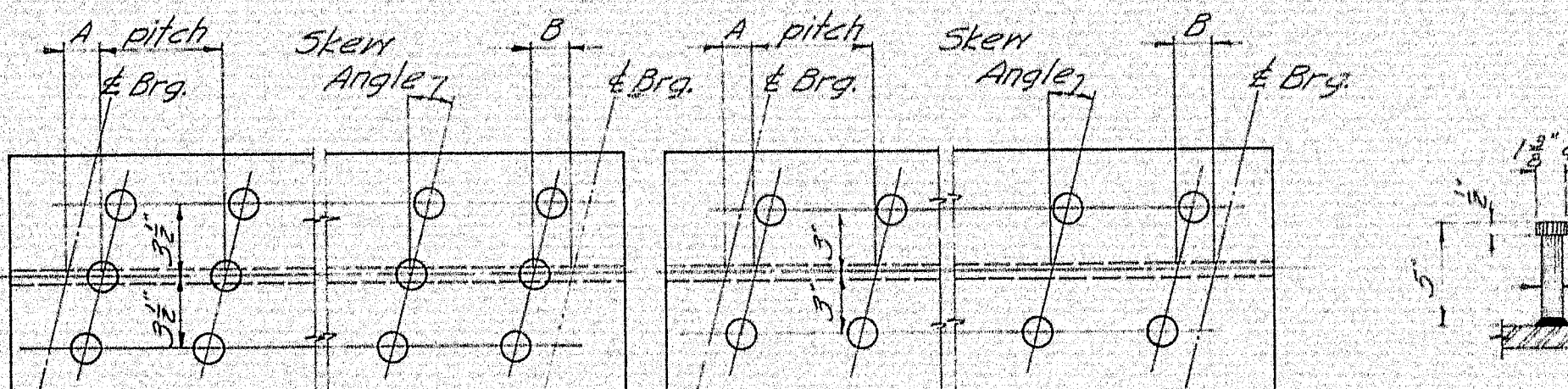
Showing Adjustment Device Armored Joint Unit Type A only - After Unit is in final position weld 3/8 inch to angle with 1/2 inch fillet



DOUBLE SPIRAL



SINGLE SPIRAL



TRIPLE STUDS

DOUBLE STUDS

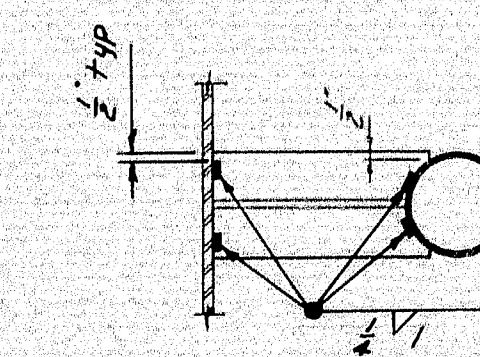
STUD DETAIL

NOTE

1. Spiral reinforcing or studs may be used at the option of the Contractor.
2. If studs are used they shall be granular or solid flux filled and automatically end welded to the top flange in the shop or field.
3. Studs are a patented product. If the Contractor elects to use them, he shall pay the royalty and payment to the contractor will be included in the lump sum price for Shear Connectors.
4. See the design details for Dimensions "A" and "B", spiral and stud pitch and Skew Angle for Studs.

SHEAR CONNECTORS

Cut 4 holes 1/2" x 2", 1/8" from top. Do not cover with concrete or waterproofing.



SECTION C-C

NOTE

1. Drain may be rotated 180°. See design details.
2. See design details for location and number of drains and beam size to which it is connected.
3. Drains to be paid for as structural steel.

DRAIN

Revised Nov. 1964, Welding Drain Support

GENERAL NOTE

Use only those items called for on design details. In case of conflict between these Standard Details and the design details, the requirements of the design details shall be followed.

MAINE STATE HIGHWAY COMMISSION
 AUGUSTA, MAINE

STANDARD DETAILS

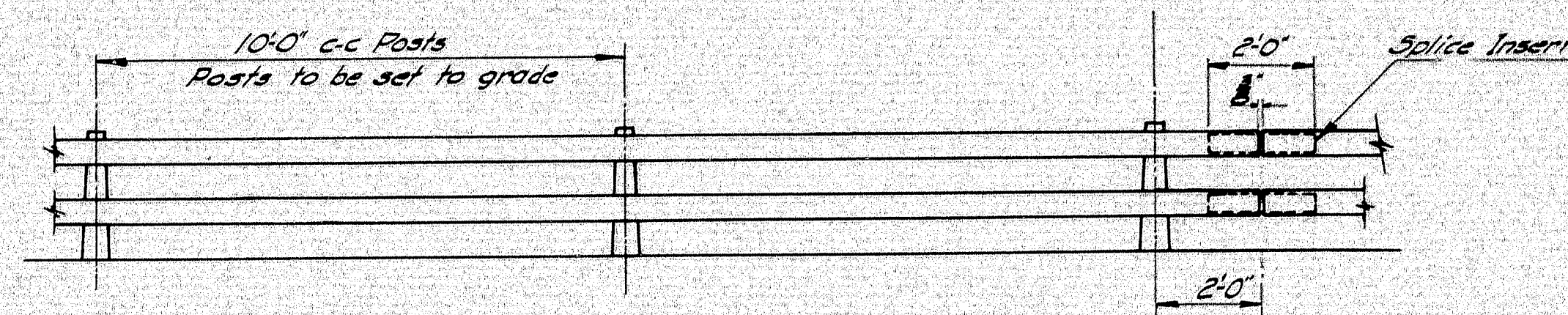
(BD 104-64)

DIAPHRAGMS, ARMORED JOINT,
 SHEAR CONNECTORS, DRAIN

JANUARY 1964

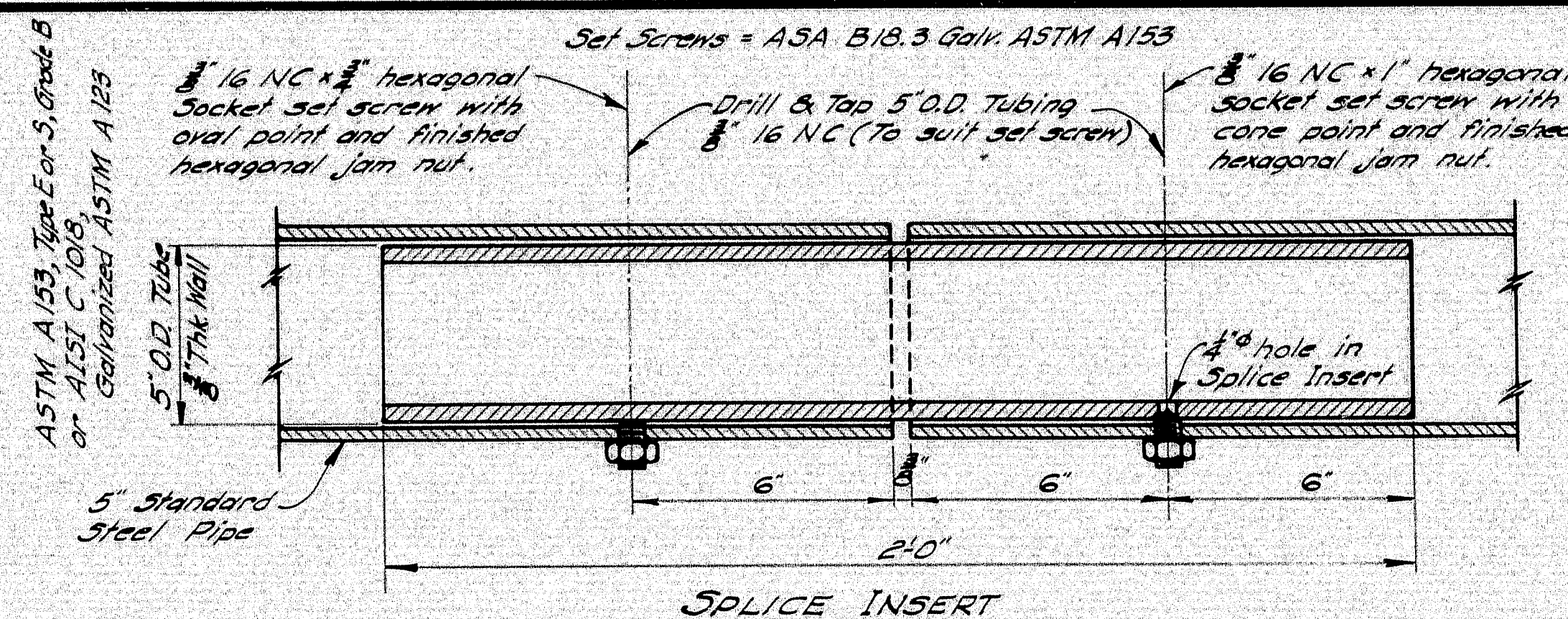
99-95

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	1-95-8 (62) 1-95-9 (29)	92	93

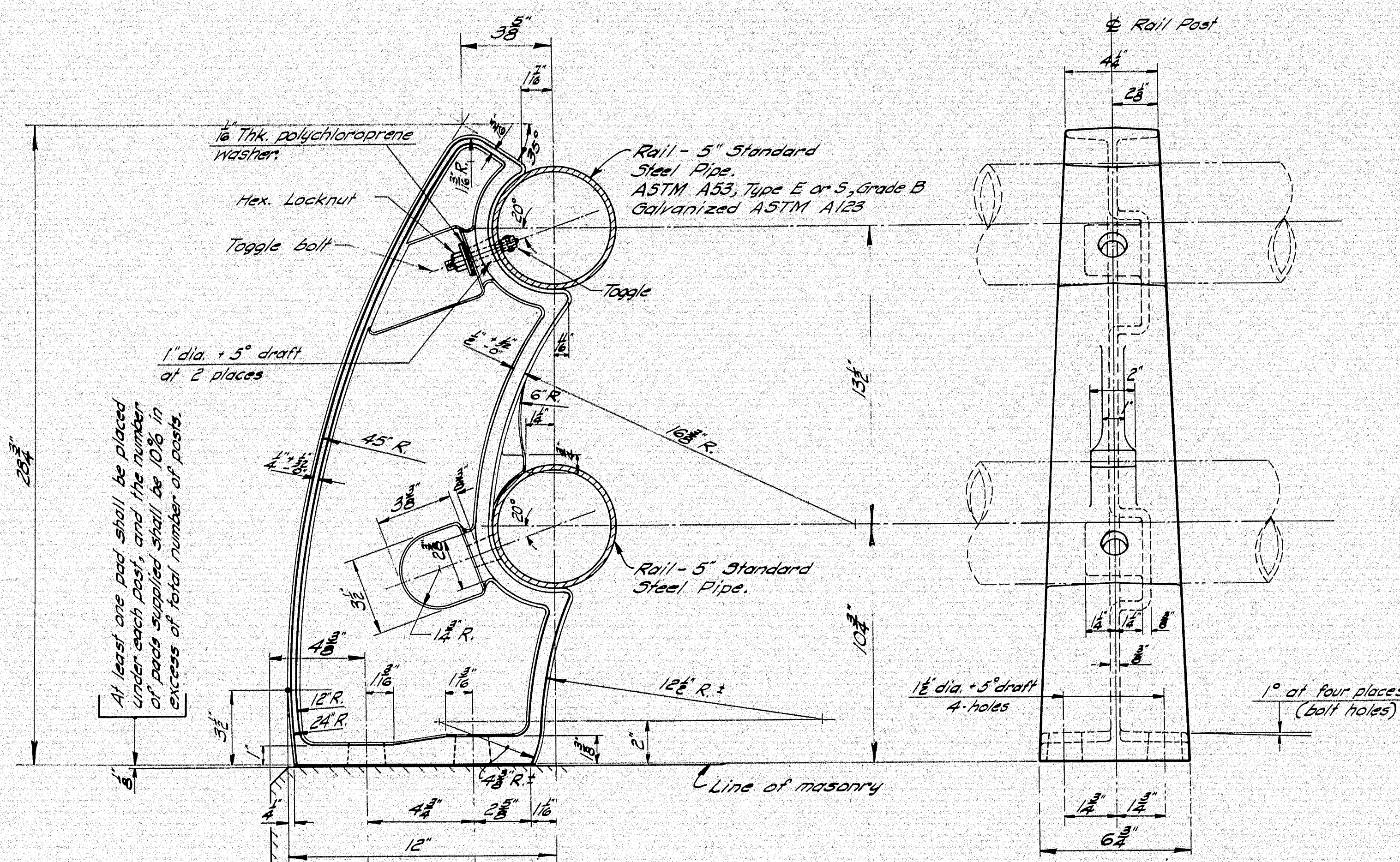


RAIL ELEVATION

Lengths of rail shall be attached to a minimum of (4) four rail posts, wherever possible, and in any case never less than (2) two.

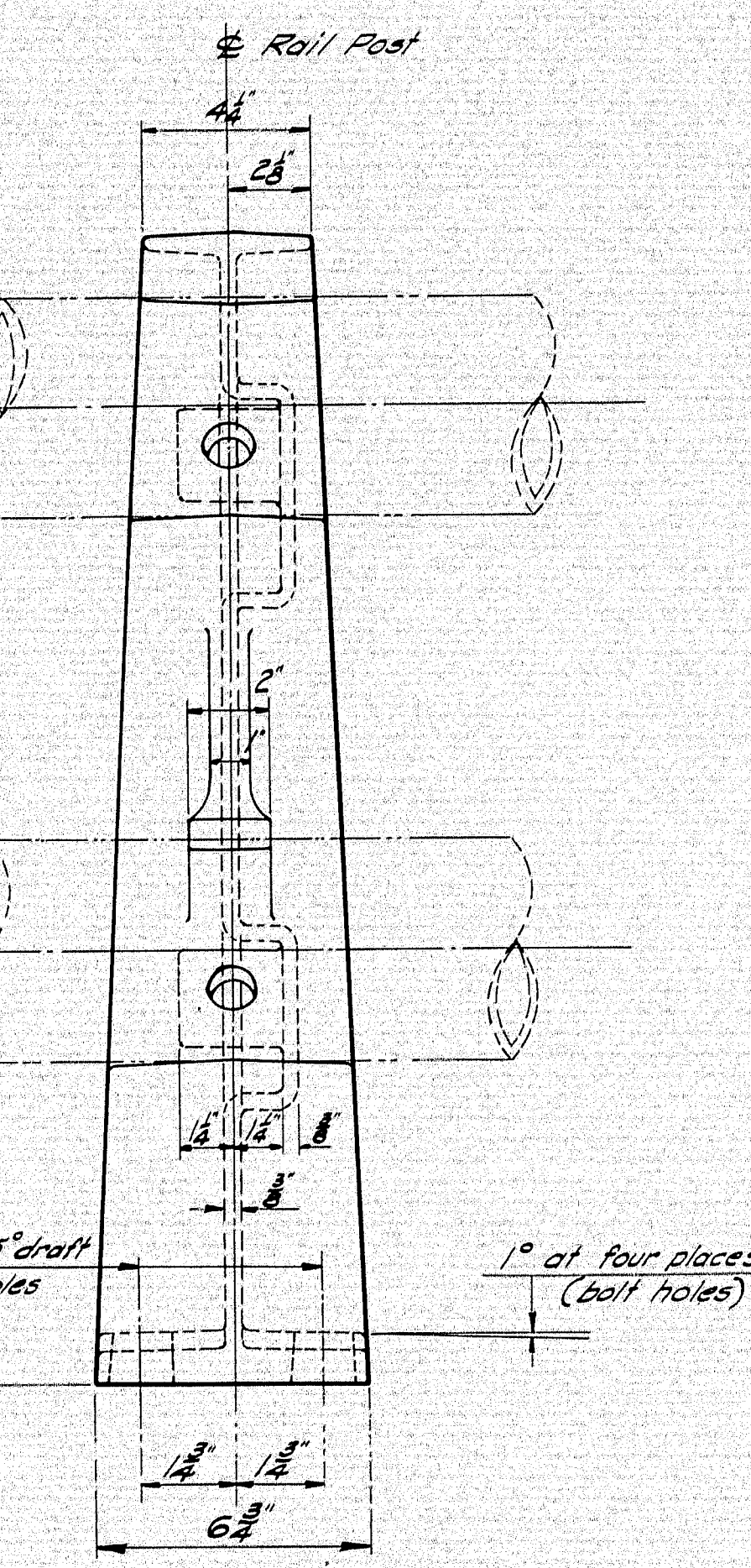


SPlice INSERT

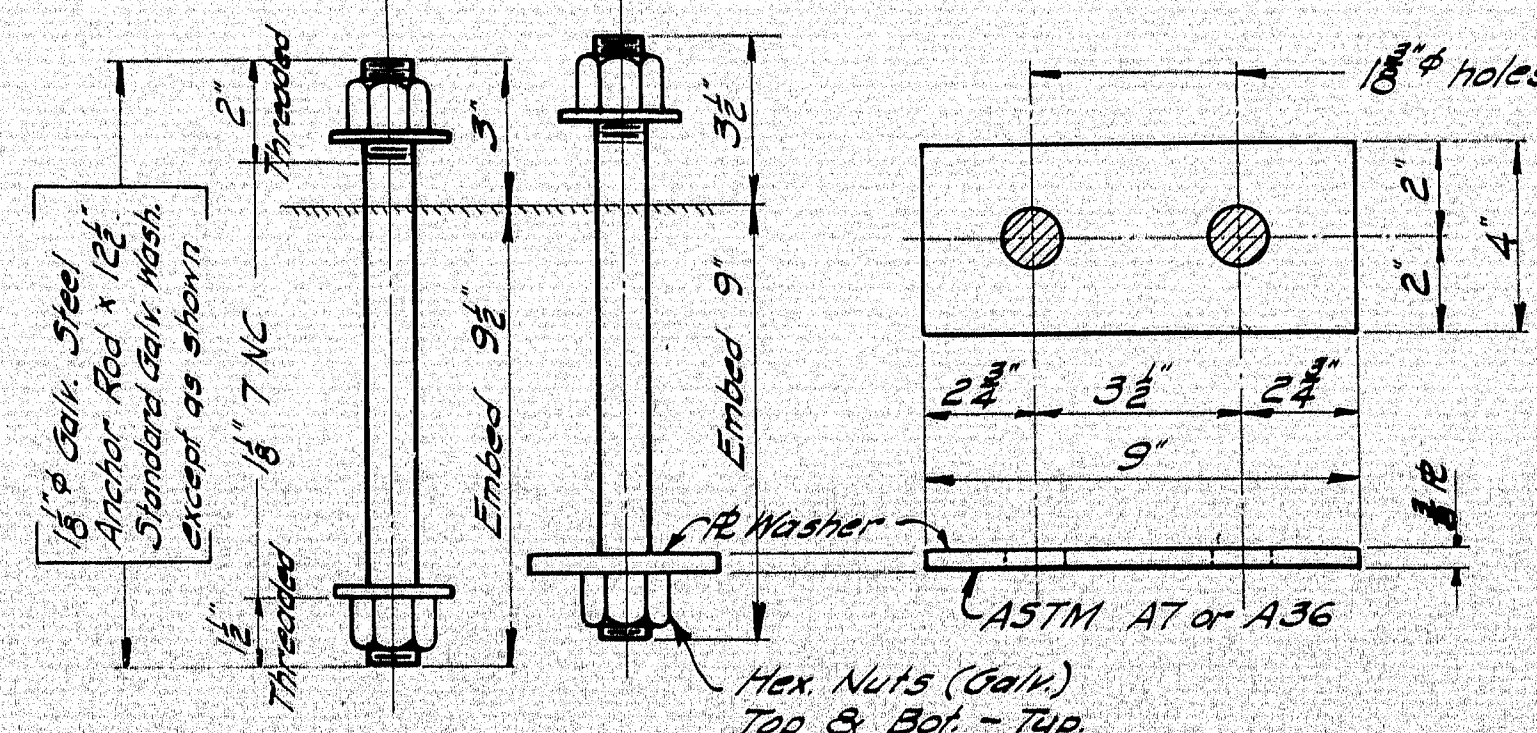


RAIL POST

ASTM A27, Grade 65-35, Galvanized ASTM A153

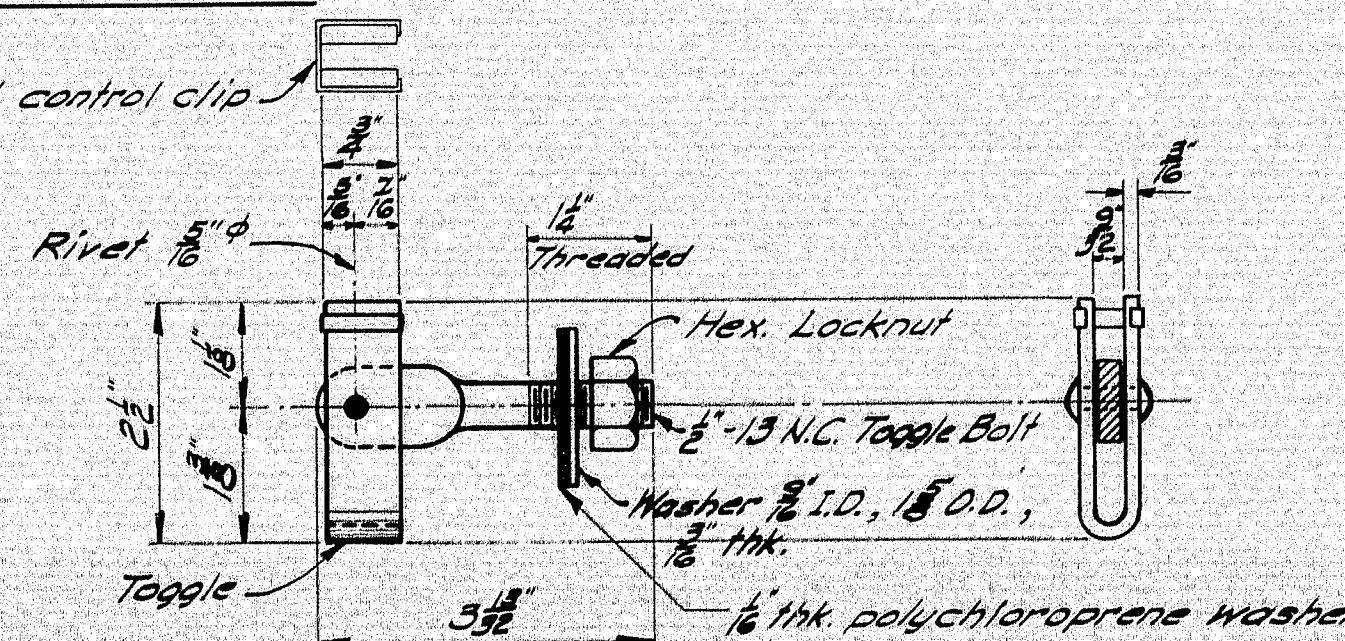


FRONT ELEVATION



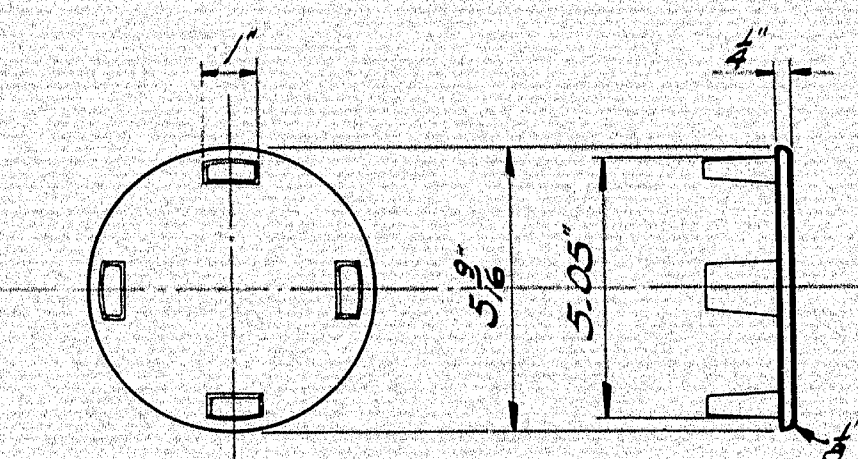
RAIL POST ANCHORAGE

Bolts, Nuts, & Std. Washers = ASTM A325 Galvanized ASTM A153



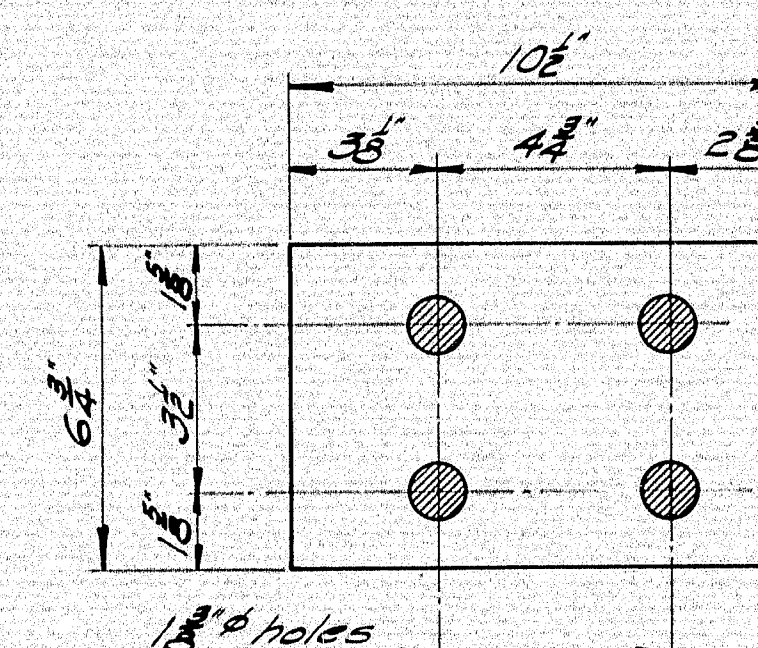
TOGGLE BOLT DETAIL

Cadmium Plate metal parts ASTM A165-35, Type N5, .0005" thick



RAIL CAP

ASTM A27, Grade 65-35, Galv. ASTM A153



PAD

At each rail post
See Article 702-80 Supplemental Specifications of Feb. 1960.

DESIGN SPECIFICATIONS

A.A.S.H.O. Interim Specifications
Int. 1 (64)

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

(BD 107 - 64)

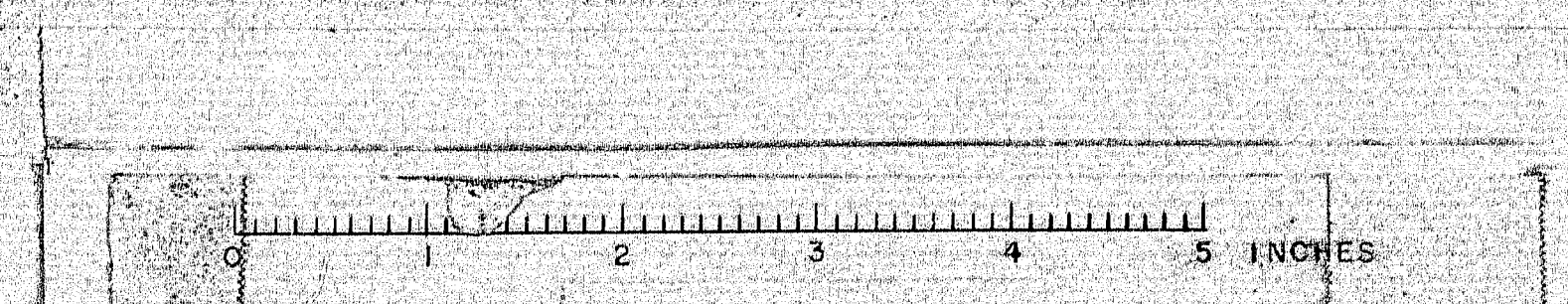
STEEL RAIL

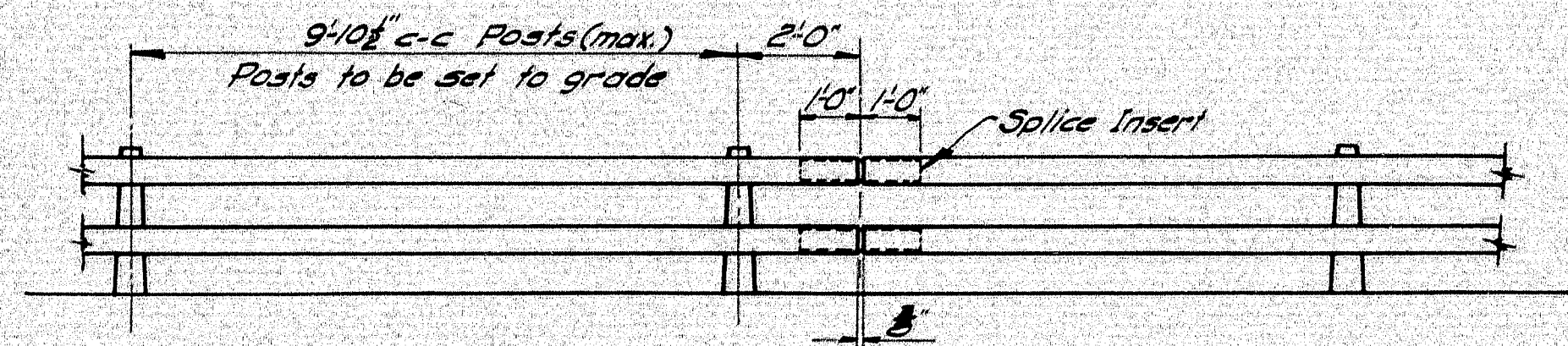
(2-BAR PIPE RAIL)

CAST POST

OCT. 1964

99.97



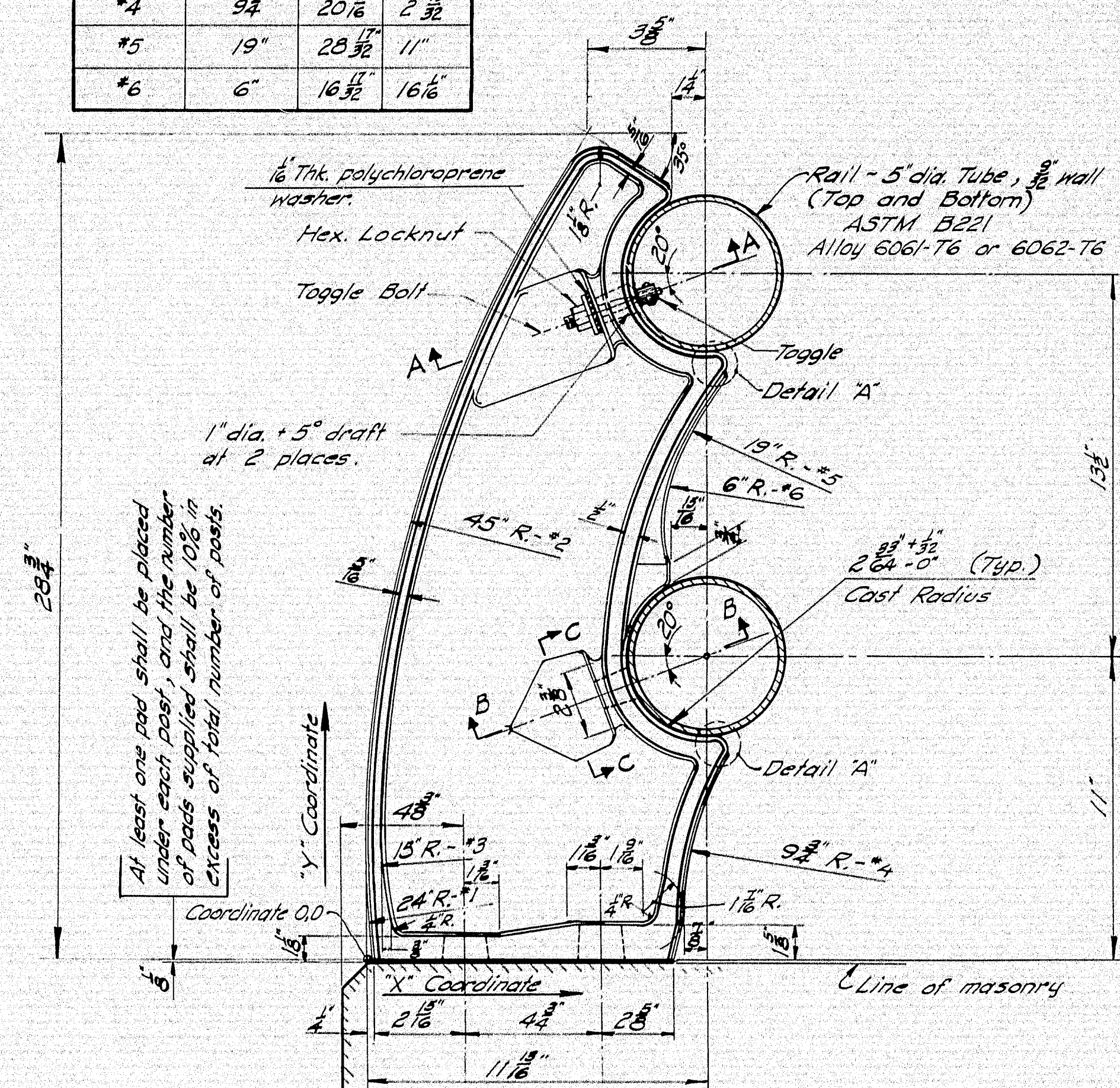


RAIL ELEVATION

ORIGIN LOCATION-PRINCIPAL CURVES

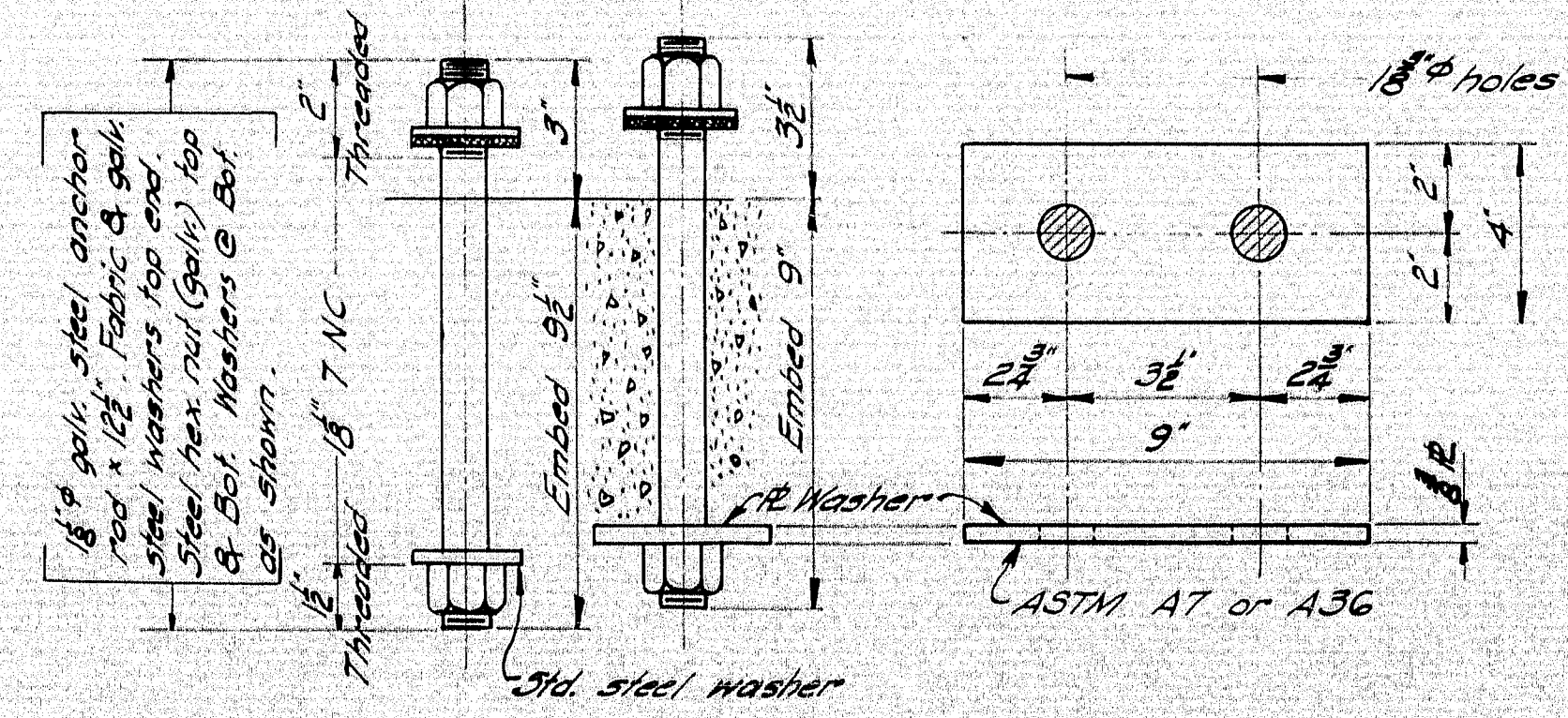
Curve	Radius	"X"	"Y"
*1	24"	24"	3 1/2"
*2	45"	45"	2 3/2"
*3	15"	15 1/6"	4 3/2"
*4	9 1/2"	20 1/6"	2 3/2"
*5	19"	28 3/2"	11"
*6	6"	16 3/2"	16 1/6"

Lengths of rail shall be attached to a minimum of (4) four rail posts, wherever possible, and in any case never less than (2) two.



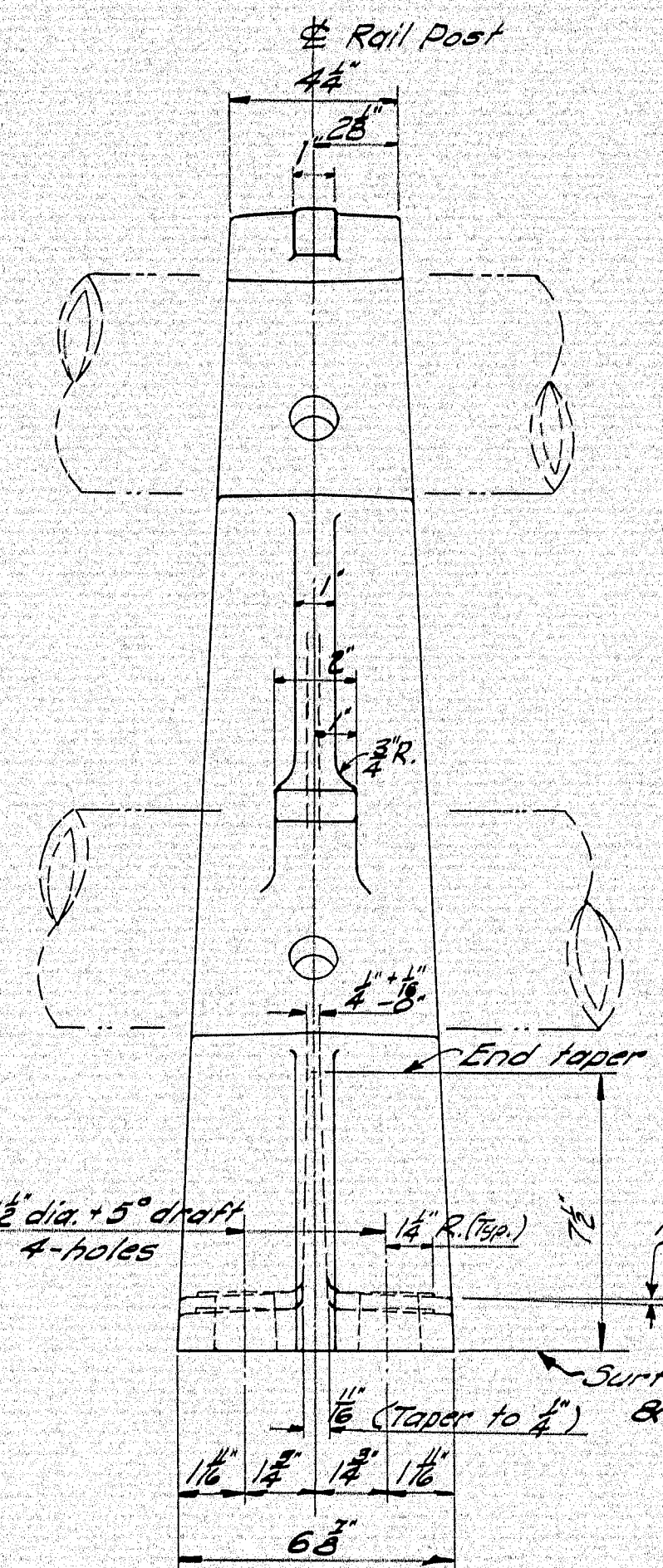
RAIL POST

Aluminum Association Alloy A344-T4

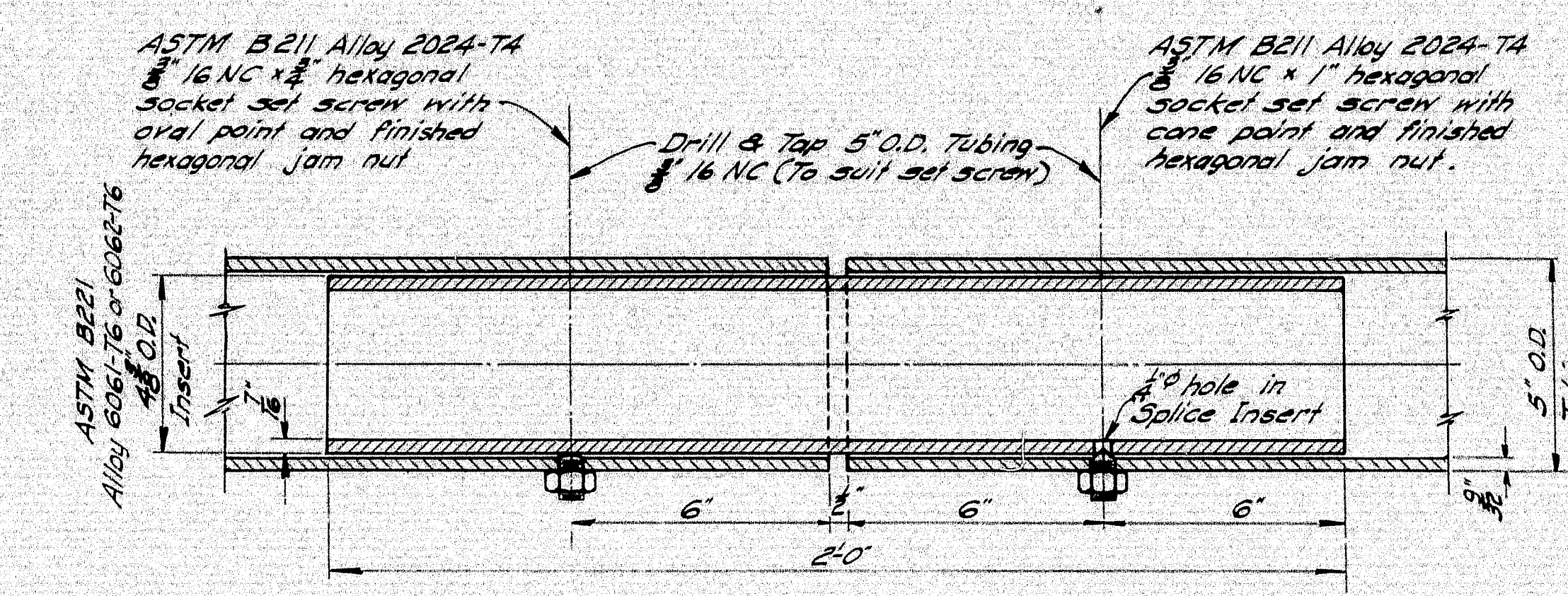


RAIL POST ANCHORAGE

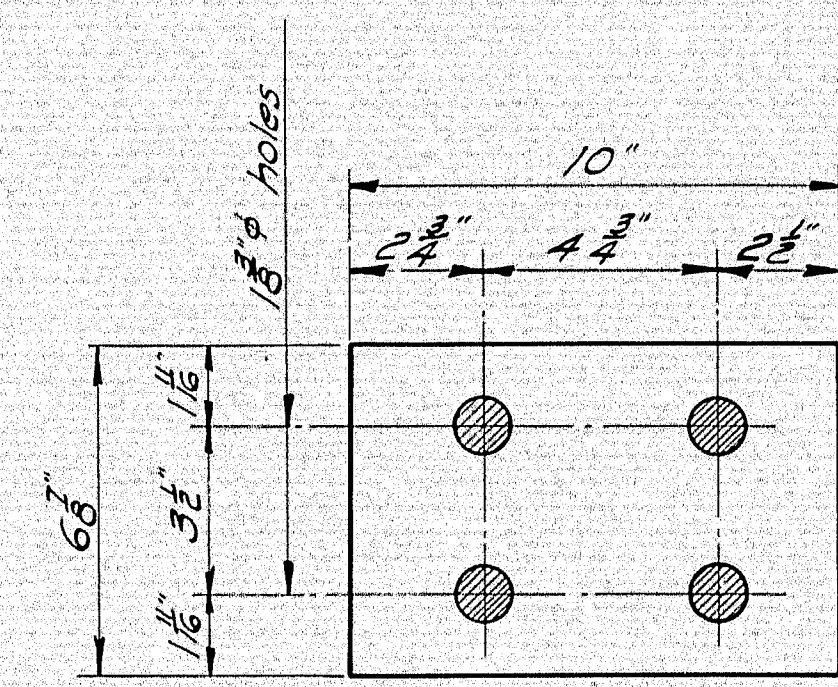
Bolts, Nuts & Std. Washers = ASTM A325 Galvanized ASTM A153



FRONT ELEVATION

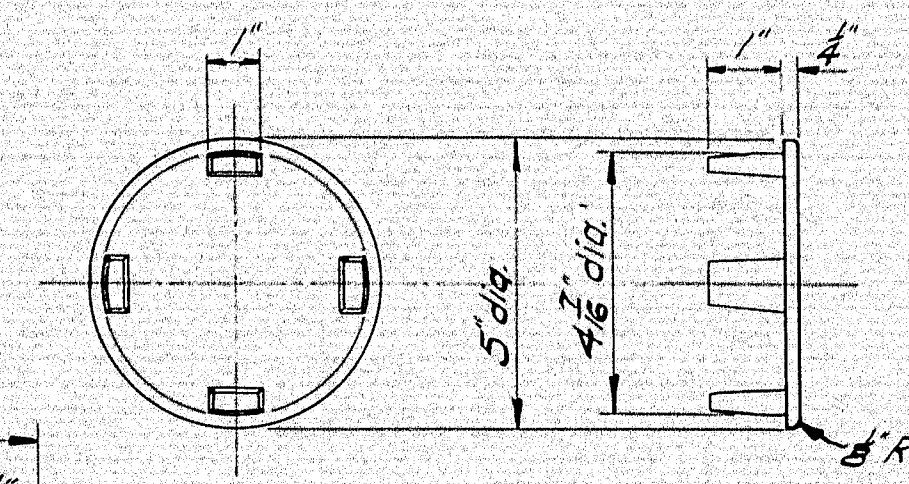


SPICE



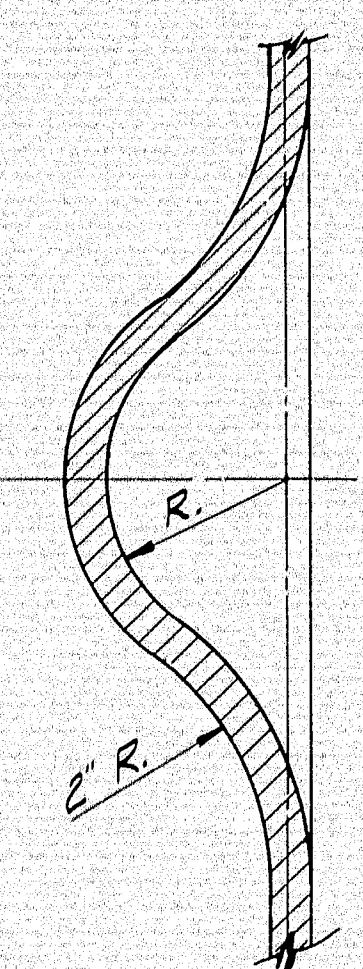
PAD

At each rail post See Article 702-30, Supplemental Specifications of Feb. 1960 for Pad & Fabric Washers.

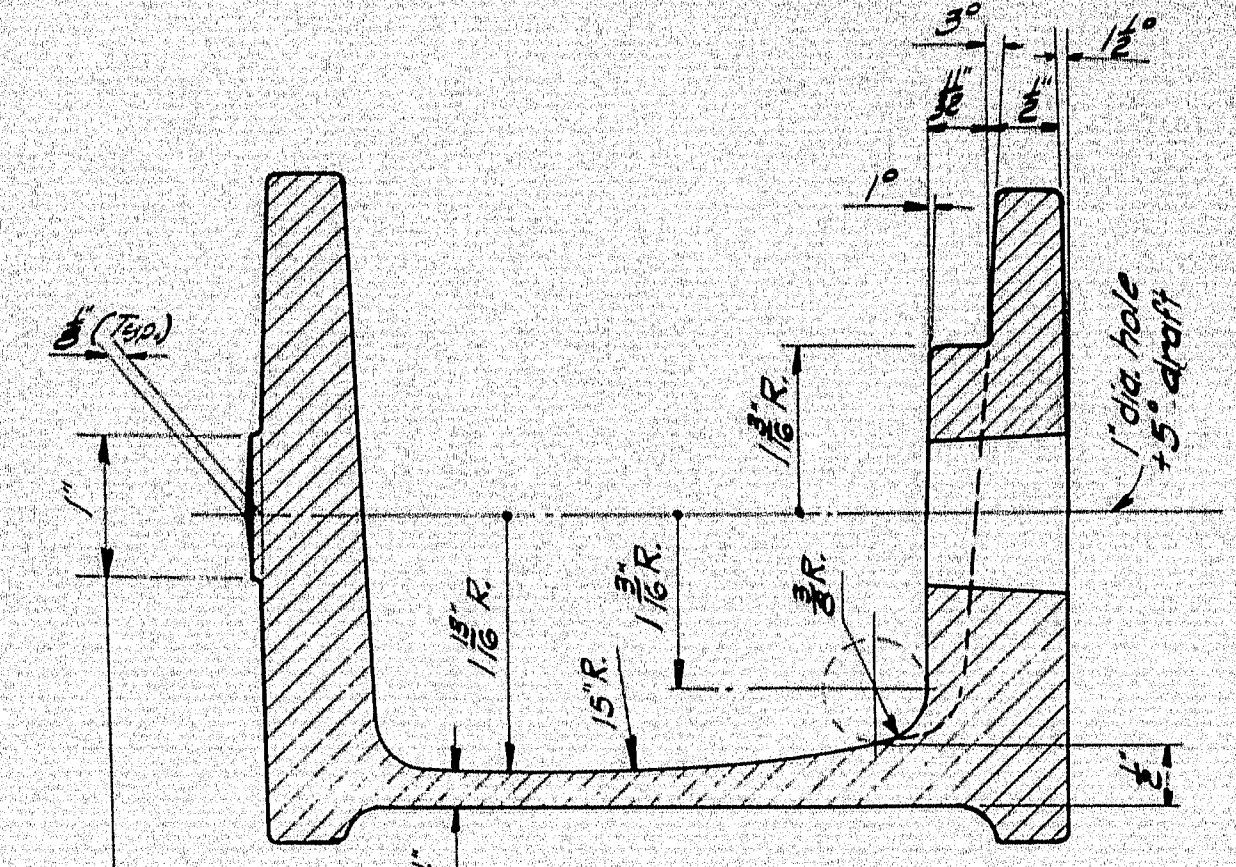


RAIL CAP

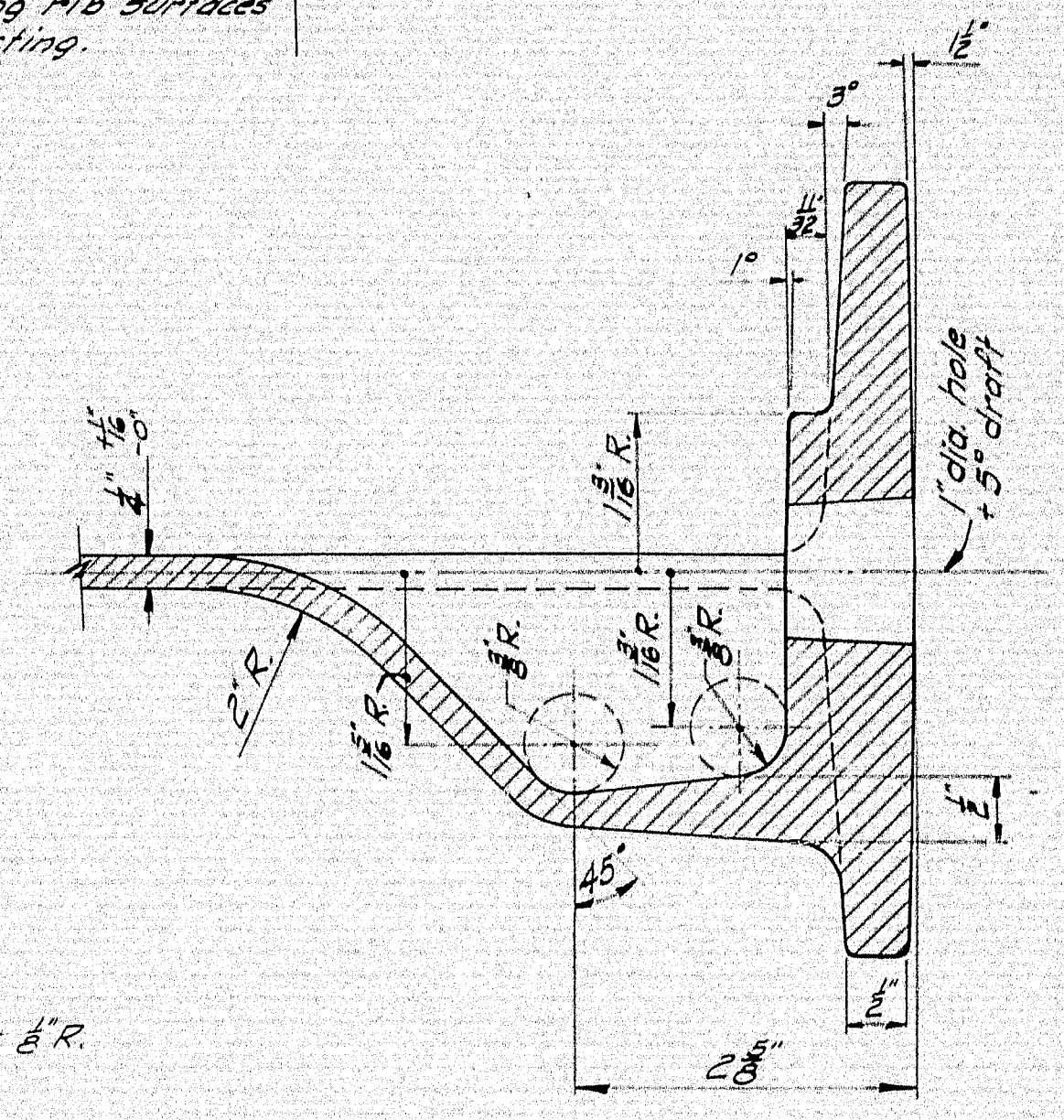
ASTM B26 Alloy 5670 A or 55 A



SECTION C-C



SECTION A-A



SECTION B-B

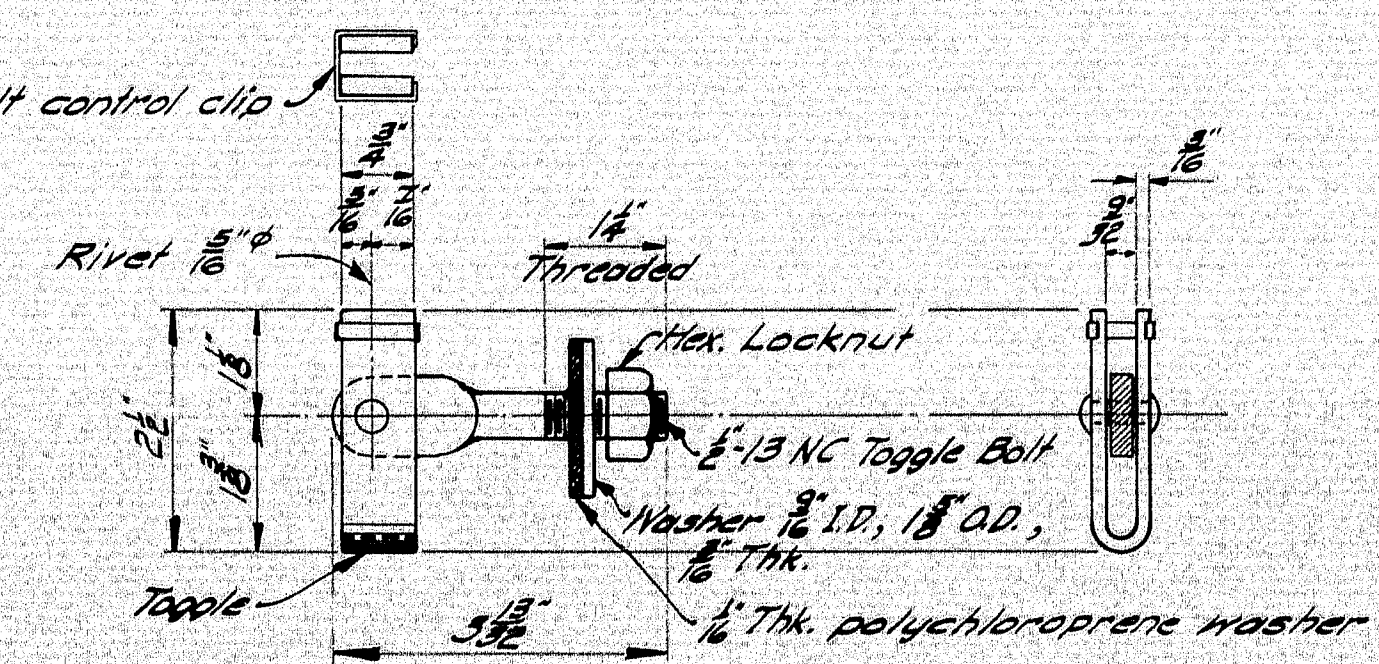
DETAIL "A"

DESIGN SPECIFICATIONS

A.A.S.H.O. Interim Specifications Int. 1 (64).

A344-T4 Alloy to meet the Specification outlined by Aluminum Association.

ALTERATION:
 Δ - Added Detail "A" and Origin Location-Principal Curves. Nov. 19, 1964.



TOGGLE BOLT DETAIL

Cast aluminum metal parts ASTM A165-55, Type N3, .0005" thick.

Toggle = ASTM A303, 1015 H.R. Steel.
 Rivet = ASTM A195, 1038 C.R. Steel, Heat Treated
 Toggle Bolt = ASTM A354, 1335 C.R. Steel, Heat Treated RC 32-33.
 Washer = ASTM A7, 1020 H.R. Steel.
 Hex Locknut = Finished Hexagon Locknut Prevailing Torque Type Steel Grade C or D, Industrial Fasteners Institute.

MAINE STATE HIGHWAY COMMISSION
 AUGUSTA, MAINE

STANDARD DETAILS
 (BD 108-64)
ALUMINUM RAIL
 2-BAR (TUBE RAIL)
 CAST POST

OCT. 1964

99.98

