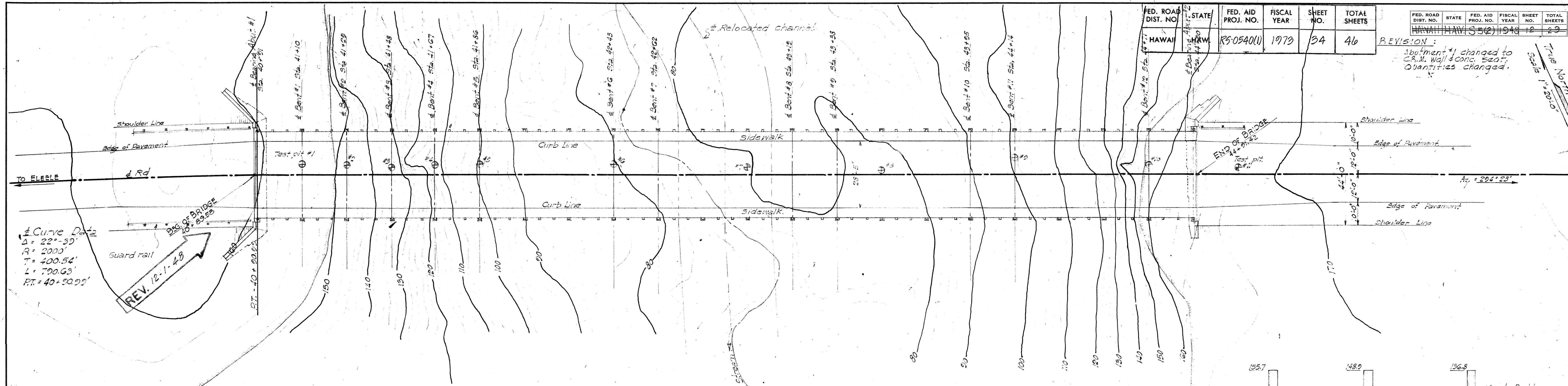


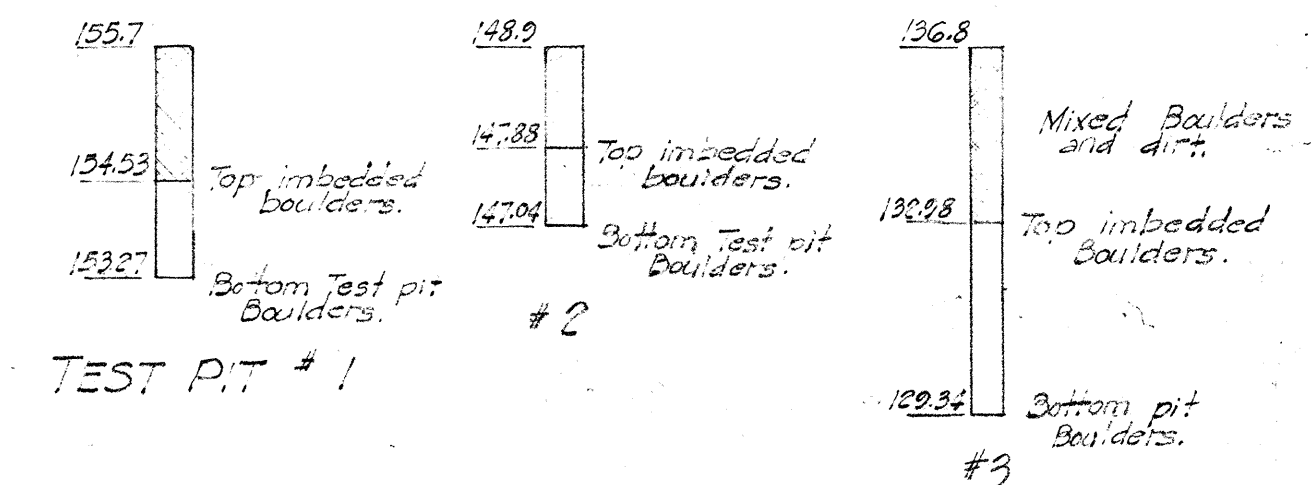
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	R5-0540(1)	1973	34	46

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	R5-0540(1)	1973	34	46

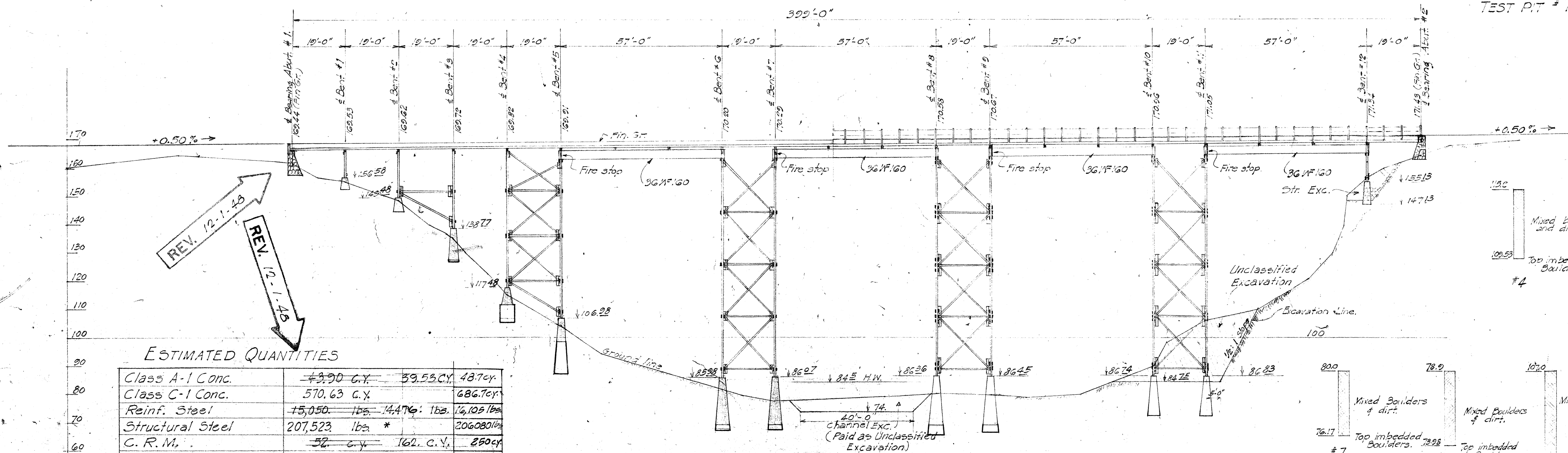
REVISION:
 Abutment #1 changed to
 C.R.M. Wall & conc. base.
 Quantities changed.



LAYOUT PLAN
 Scale 1" = 20'-0"



TEST PIT DATA



ESTIMATED QUANTITIES

Class A-1 Conc.	43.90 c.y.	39.53 c.y.	48.7 c.y.
Class C-1 Conc.	570.63 c.y.		686.7 c.y.
Reinf. Steel	15,050 lbs.	14,476 lbs.	16,109 lbs.
Structural Steel	207,523 lbs.	*	206,080 lbs.
C. R. M.	52 c.y.	162 c.y.	250 c.y.
Hand-Laid Riprap	19 c.y.		0 c.y.
Hand-Placed Rockfill	29.5 c.y.		0 c.y.
Str. Excavation	1,250 c.y.	1290 c.y.	1652 c.y.
Unclassified Excavation	1,800 c.y.		1900 c.y.
Coarse Rock	148.6 c.y.		142 c.y.
Keystone	12.7 c.y.		20 c.y.
Chips	7.0 c.y.		3 c.y.
Rock Sand	5.1 c.y.		5 c.y.
Binder	10.64 Tons		12 ton
Treated Timber	290.34 M.F.B.M.	289.053	282.058

SECTION ALONG & BRIDGE

DOWNSTREAM ELEVATION

Scale 1" = 20'-0"

THIS DRAWING IS IN PART ORIGINAL
 CONTRACT PLANS OF EXISTING TIMBER
 BRIDGE FOR INFORMATION & GUIDANCE
 TO DEMOLITION OF STRUCTURE

TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
WAHIAWA BRIDGE
 STA. 40+89.59-44+91.42
 McBryde Mill Rd.
 Feb. 1943

* - Includes 1% for over run and 1/2% for shop paint.

GENERAL NOTES

Specification: All phases of construction & all materials are subject to the Specifications of the Territorial Highway Department.

Dead Load: 5 lbs per sq. ft. of roadway.

Live Load: 10 tons loading. No impact.

Impact: 25% for steel girders; 15% for any.

Timber: All timber to be Coast Region Douglas Fir & to be graded according to the Standard Grading and Dressing rules of the West Coast Lumbermen's Association. Stringers to be sized to uniform depth of 1 1/2" at points of bearing and each piece to be nailed to each with 4" solid nails. The outside rows of stringers to have butt joints with ends cut on taper; all other stringers to have lapped joints, lapped ends to have 1/2" C.I. Separators, 4" solid bridging over caps and at ends of bridge. 2" x 4" cross bridging at center of span entire width, to be securely nailed to each end. All bolts to be 3/4" diameter with C.I. Ogee washers unless otherwise noted.

Treatment of Timbers: See Special Provisions.

Painting: All railings, railing posts above top of sidewalk stringer level, exposed timber faces as shown in Sections C-C and E-E and roadway faces of sidewalk plank and wheel guard shall be painted with 3 coats of specified white lead paint. Railing posts below top of sidewalk stringer level shall be painted with 3 coats of specified black paint. All painting shall be done after the paving on the bridge has been completed. During paving operations effective precautions shall be taken to prevent all surfaces to be painted from stains by asphalt, oil or other similar ingredients used in the pavement.

Hardware: All bolts, drift pins, spikes, nuts, separators, washers, split ring connectors, anchors and other metal parts shall be hot-dipped galvanized.

Treatment of Bolt Holes: All bolt holes bored after treatment shall be treated by means of the approved pressure bolt hole treatment. The preservative to be used for this purpose shall be the same as that used for the timber framing and cutting. All timber shall be cut, framed and bored before treating.

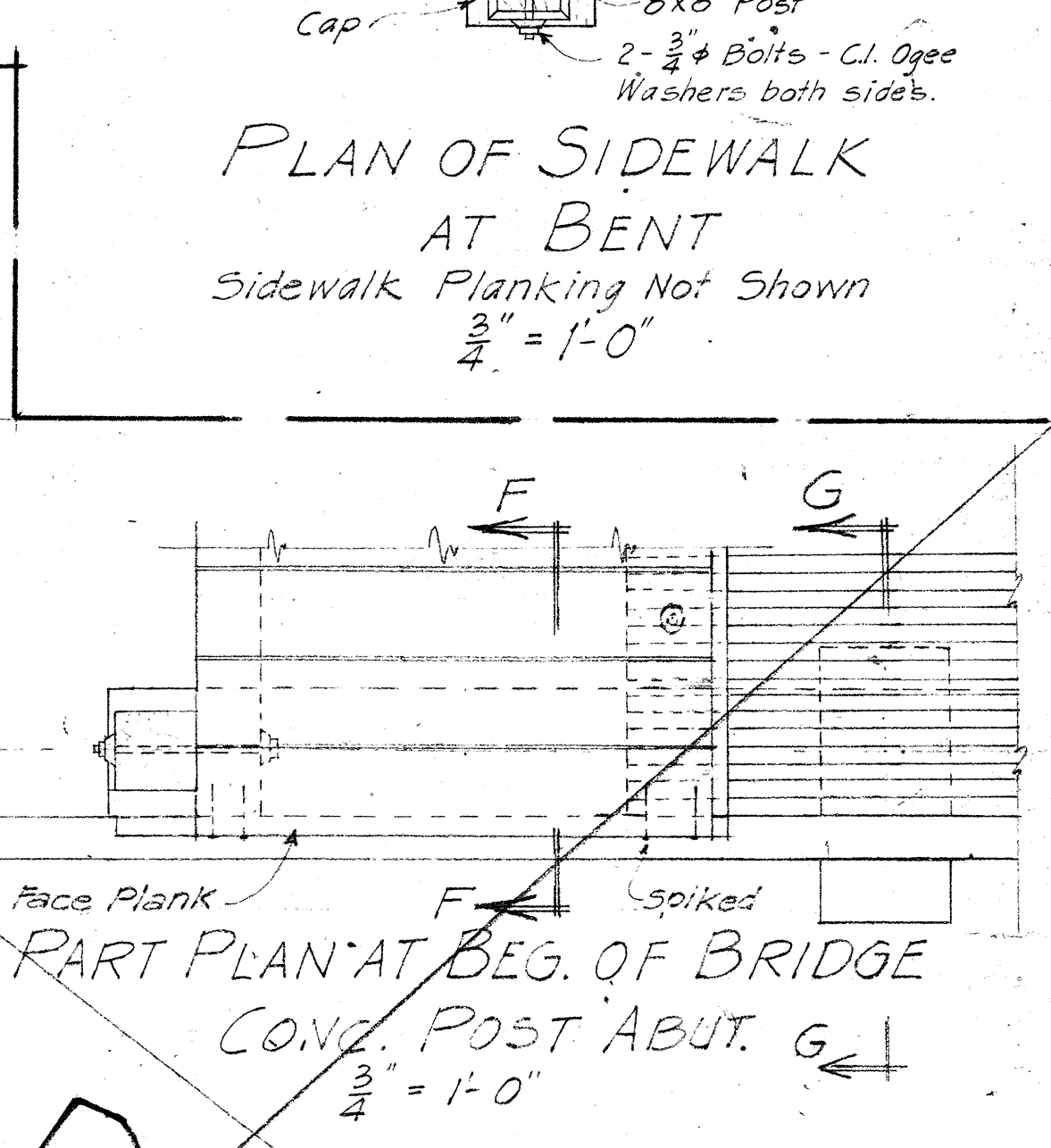
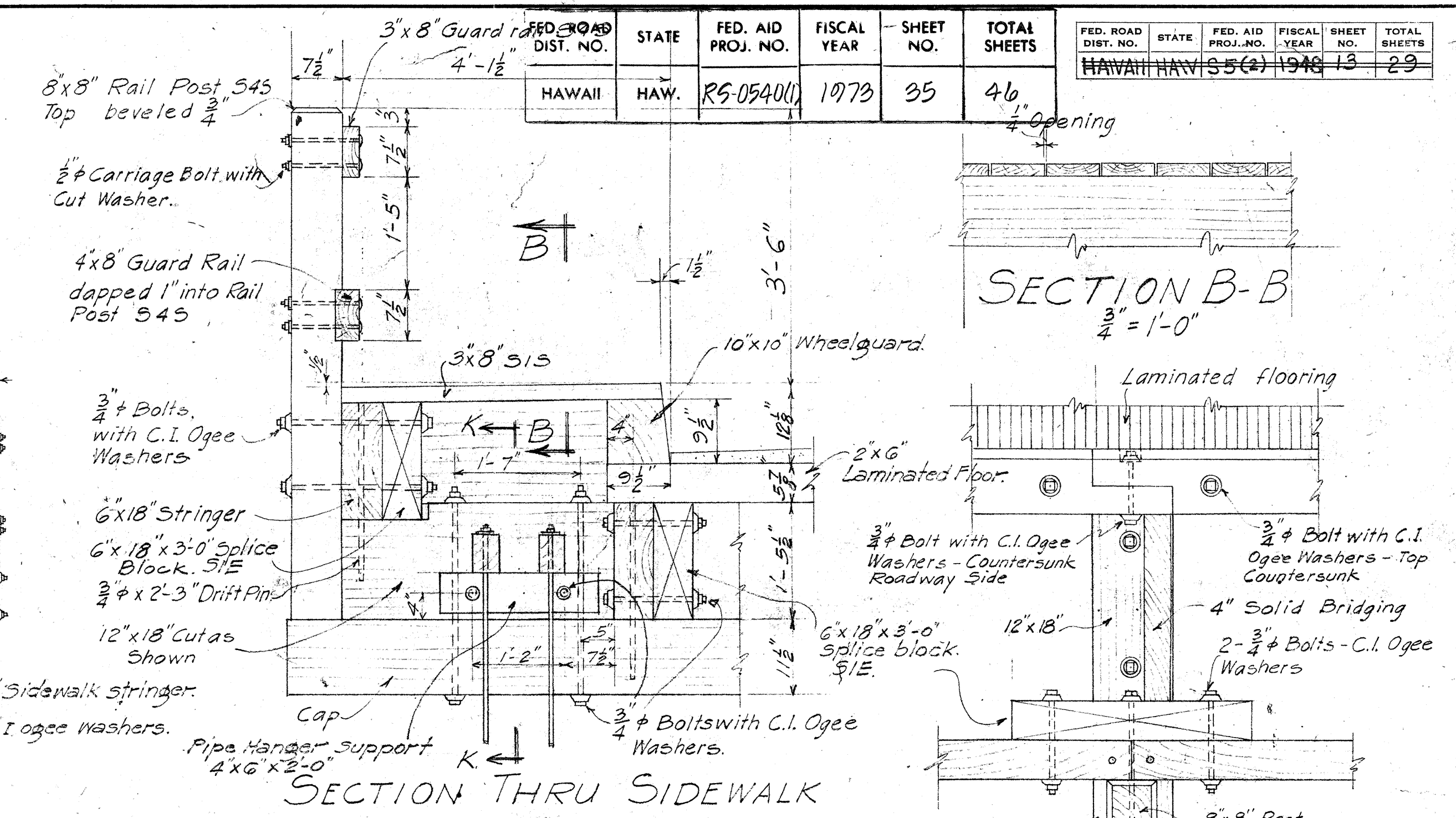
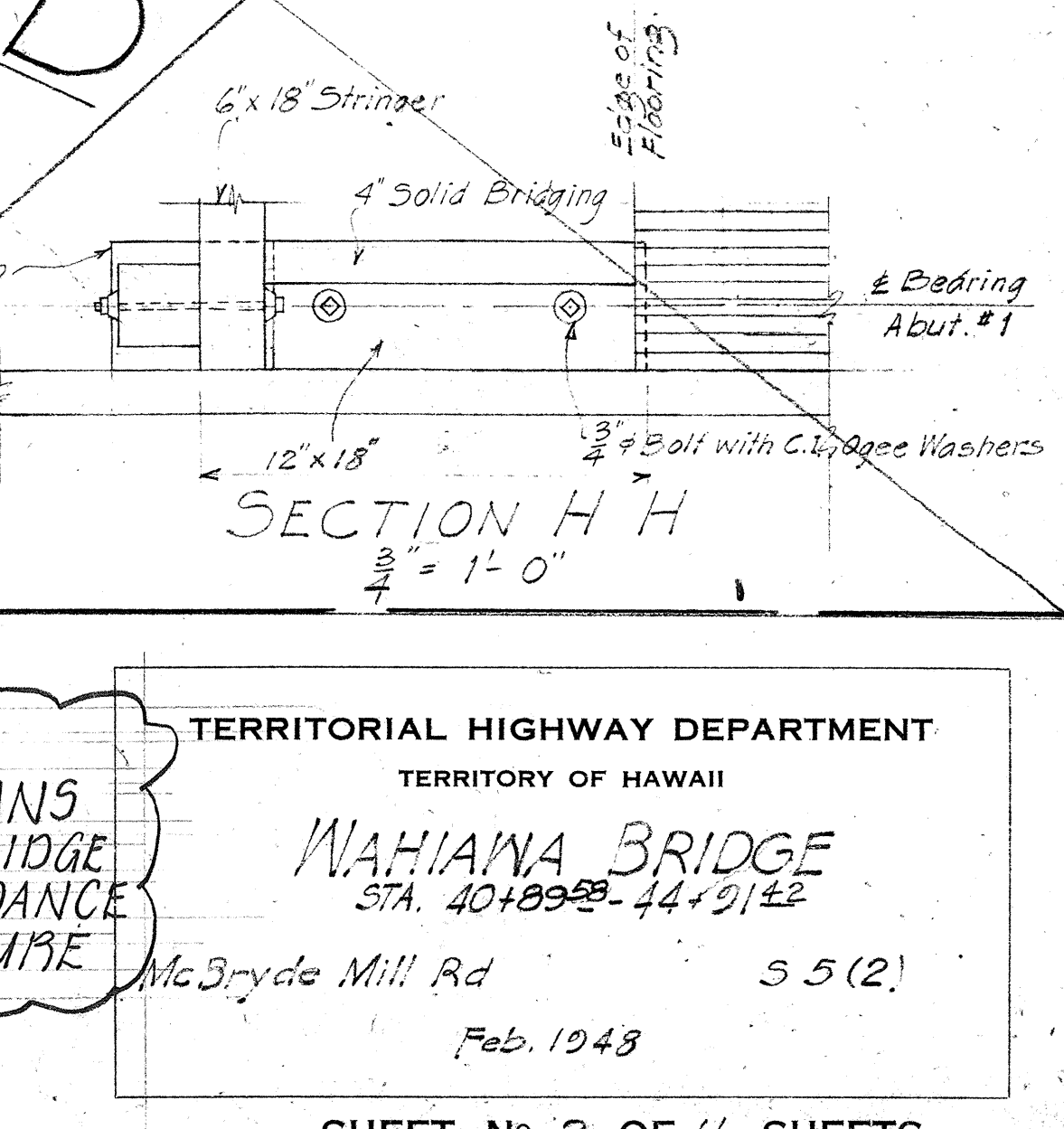
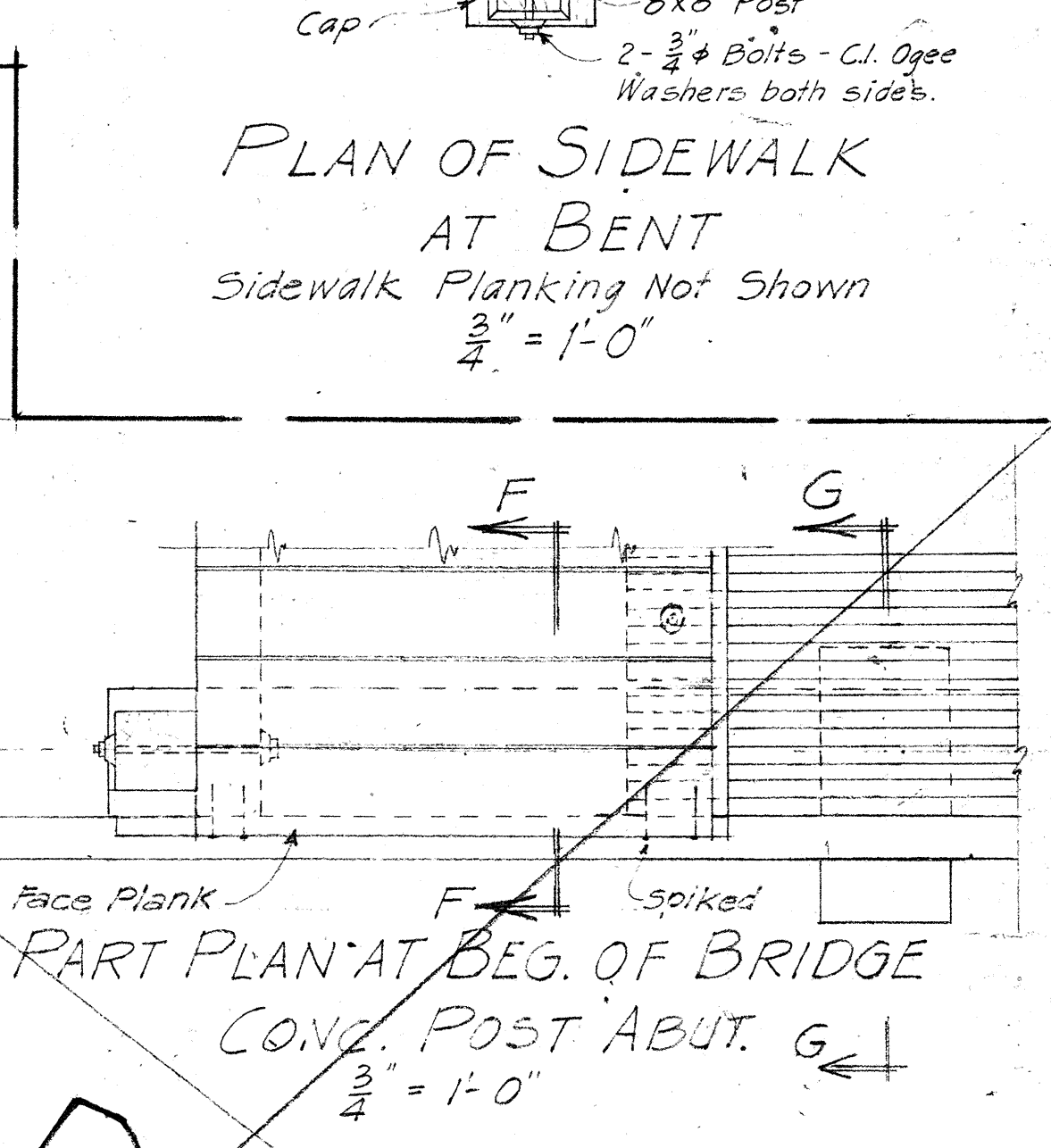
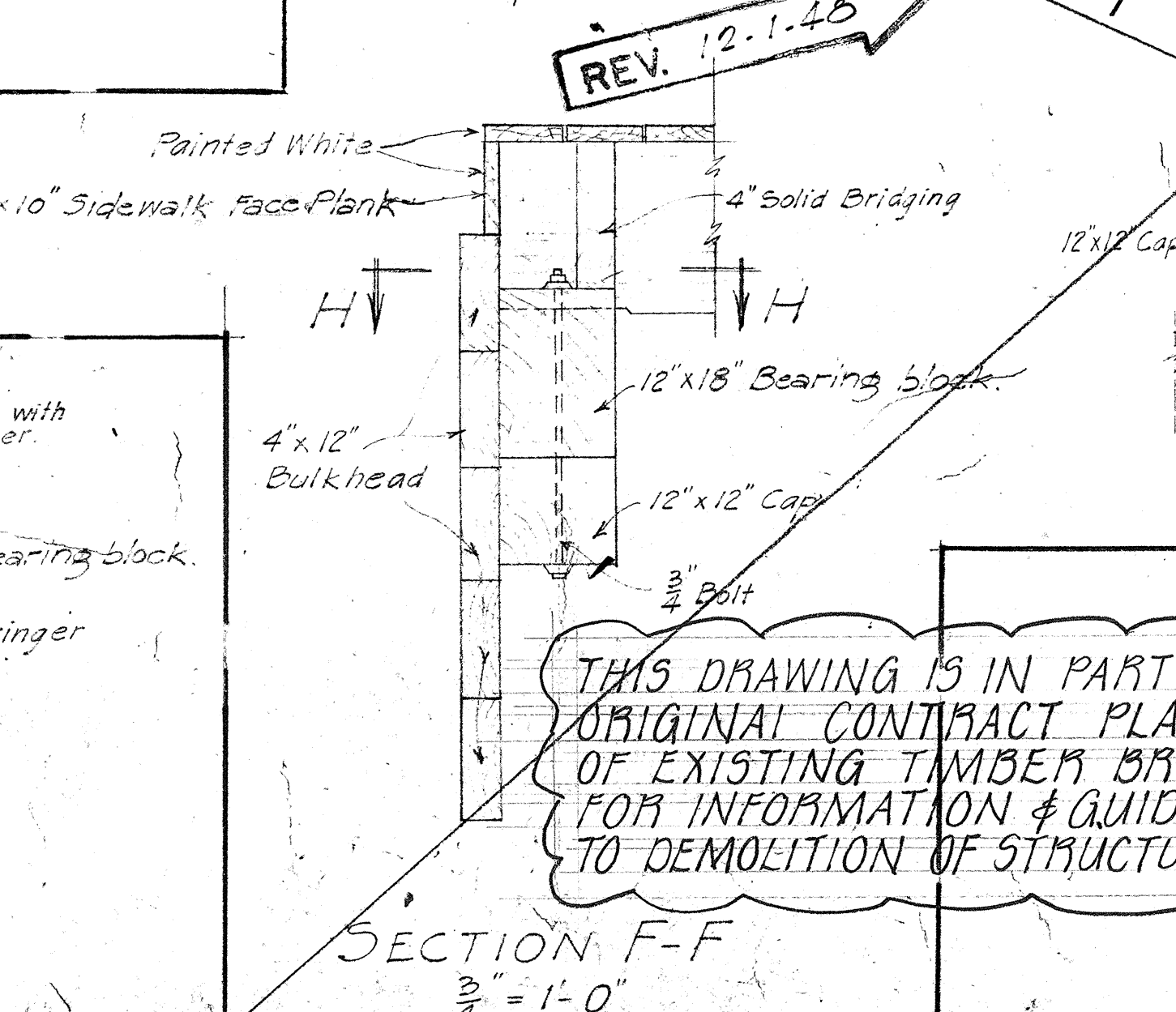
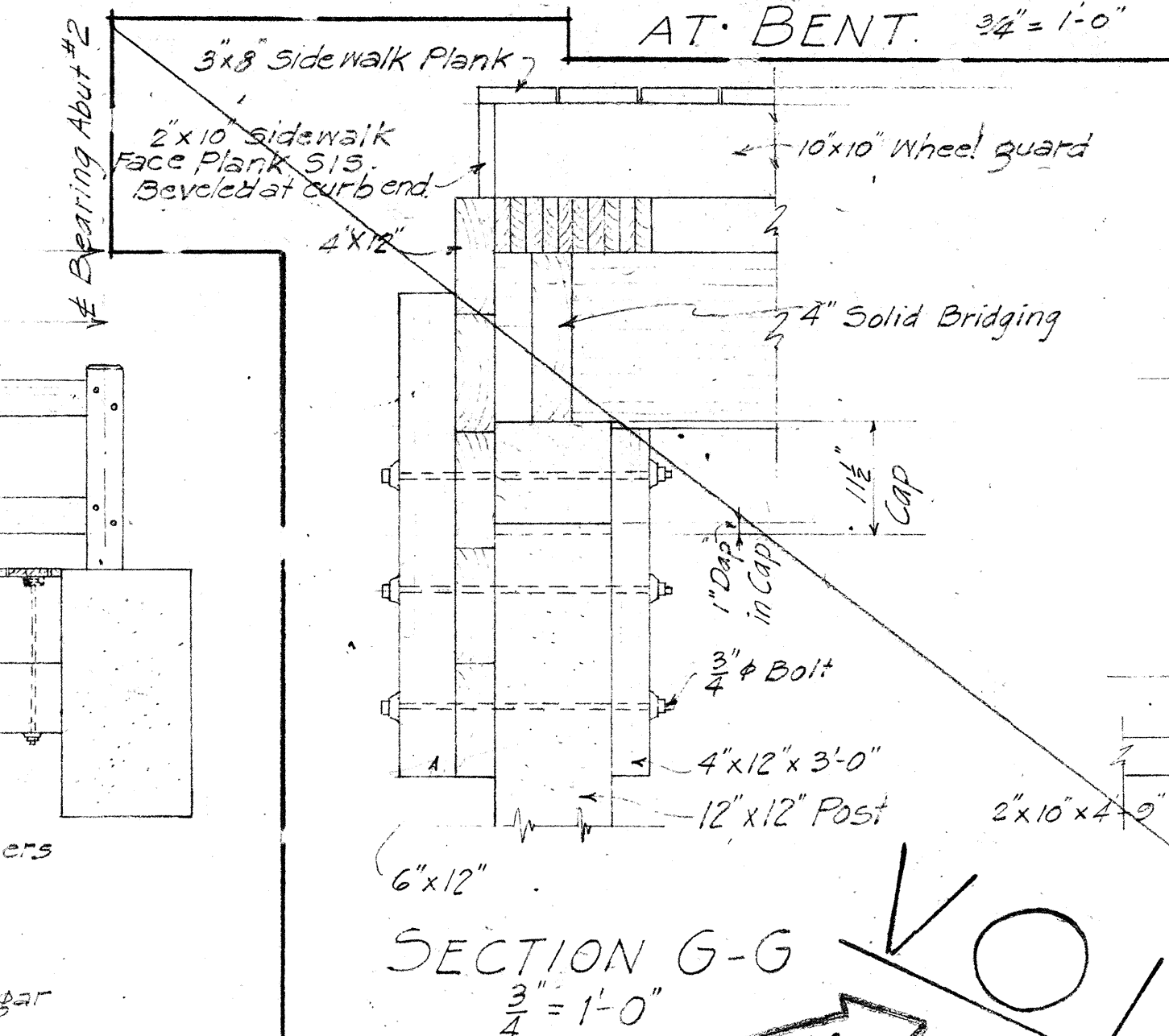
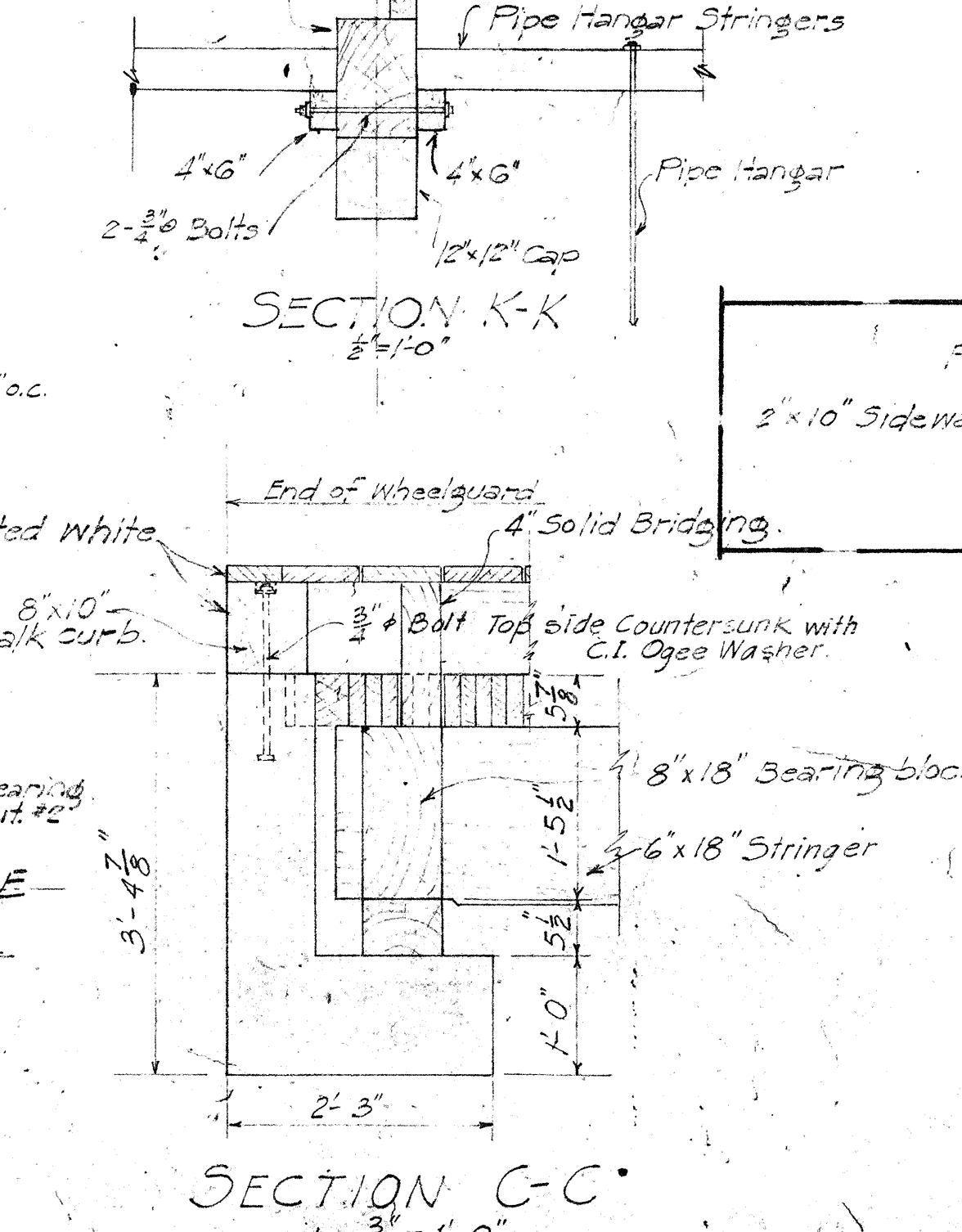
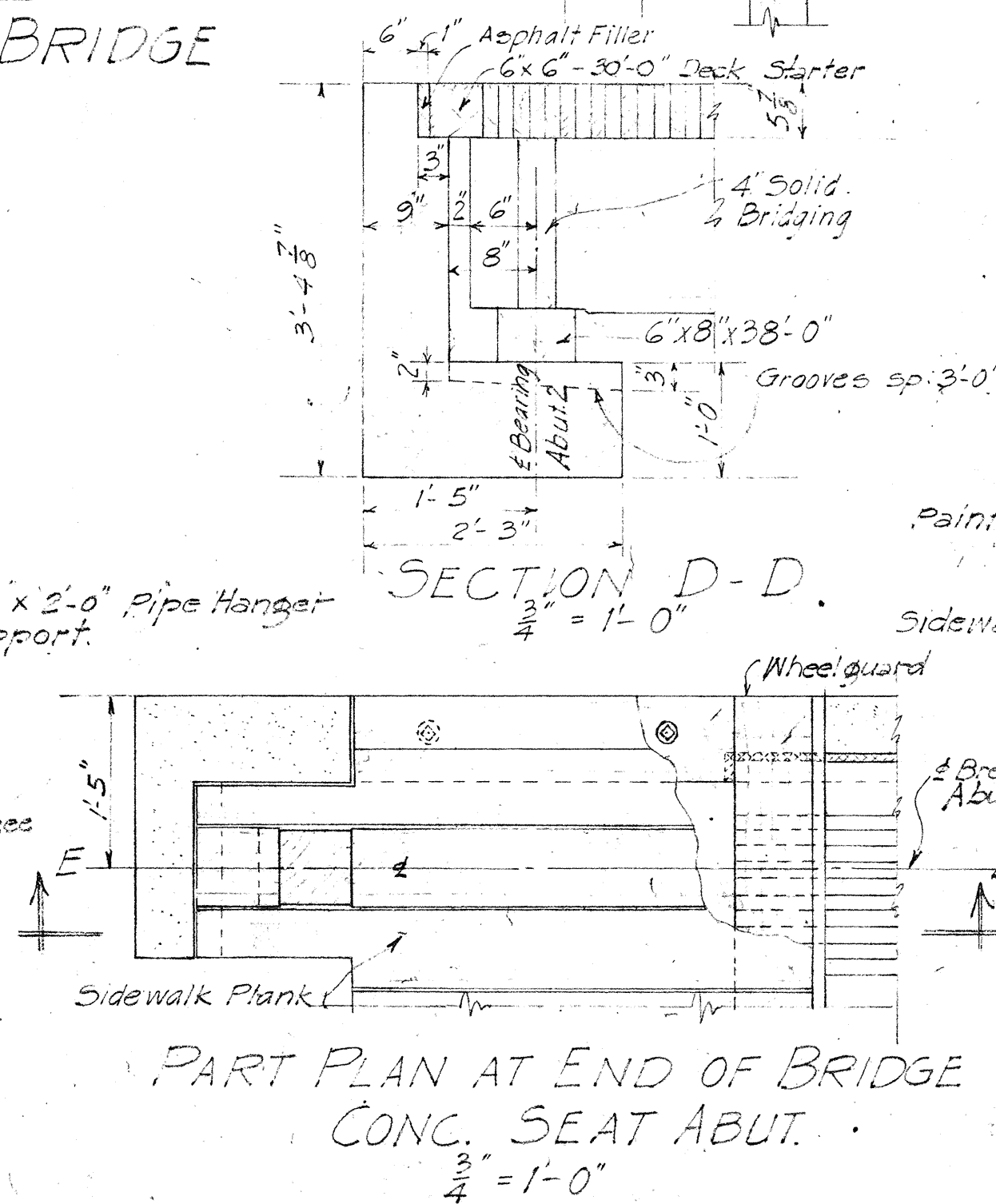
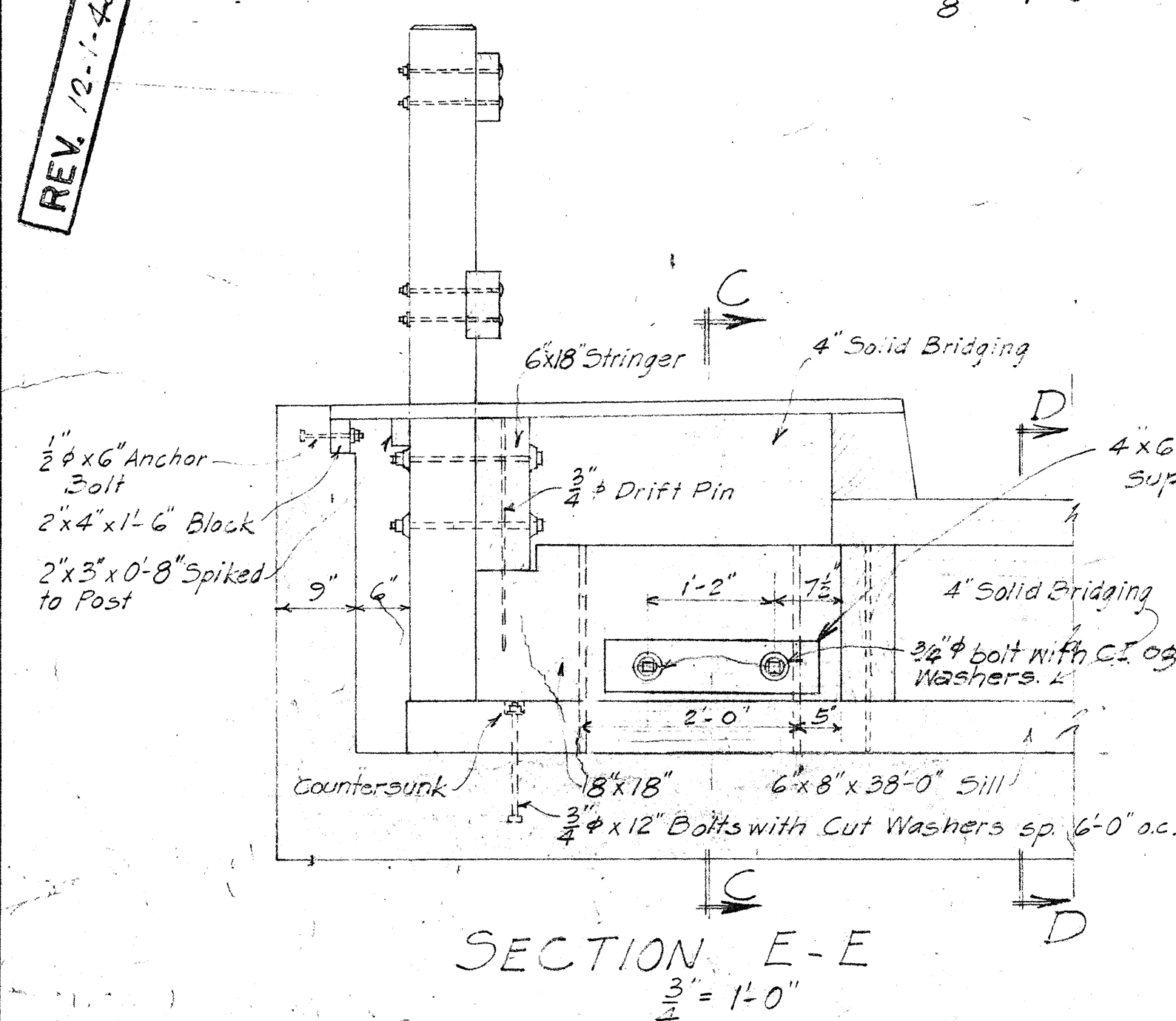
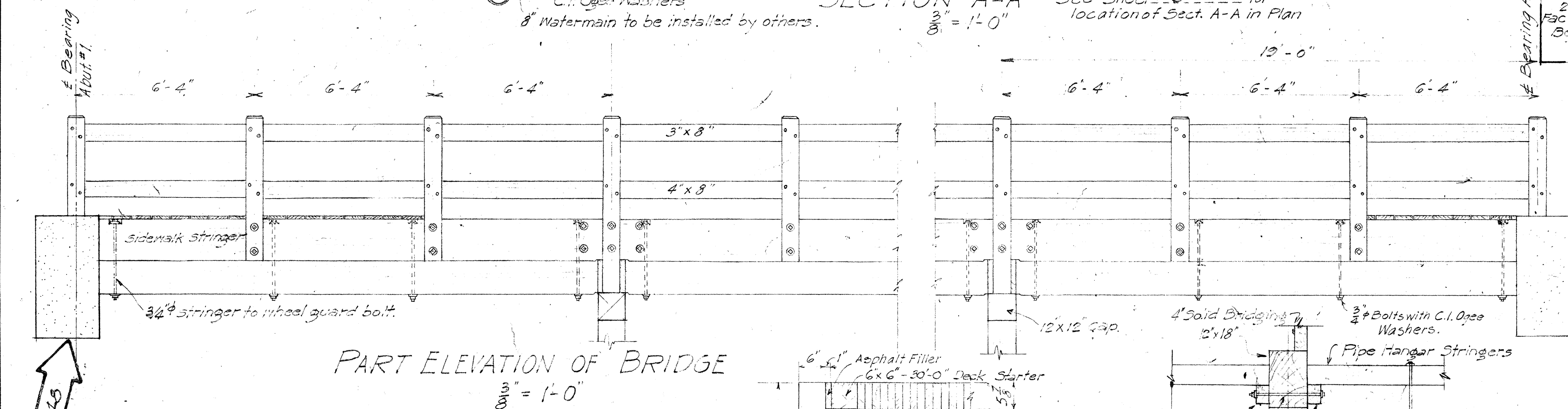
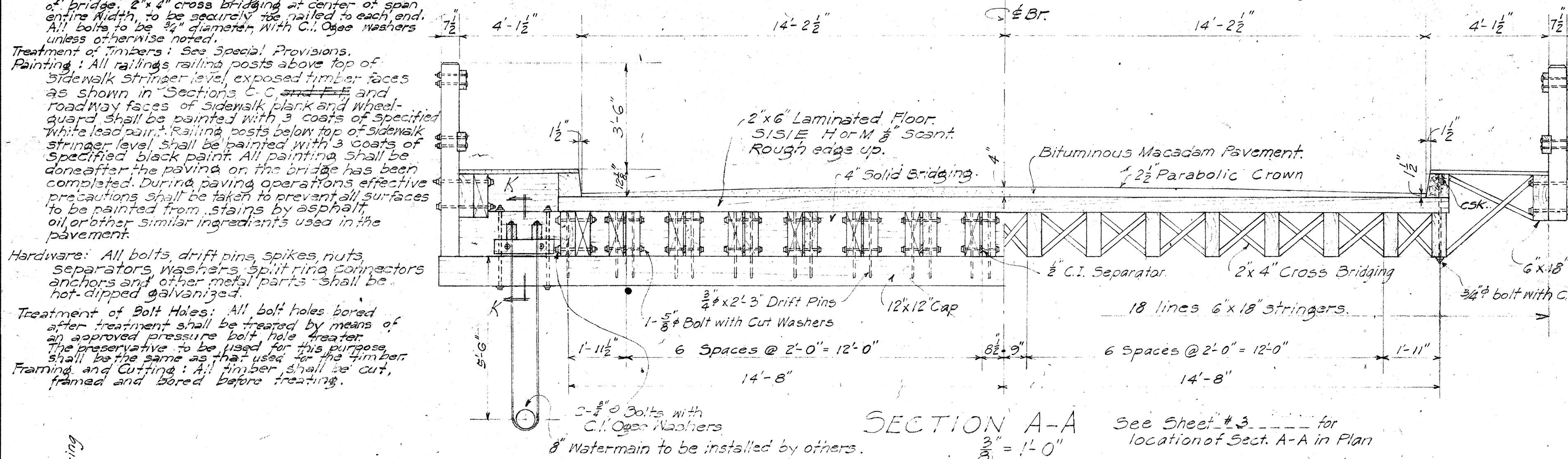
SPECIFICATION FOR ASPHALT FILLER

Melting Point 190-200 (A.S.T.M. D36-26)
Penetration 30-40 (A.S.T.M. D5-25)
Flash Point Min. 400 (A.S.T.M. D293-22)

The following lumber shall be treated with either chromated zinc chloride or Wolman salts as specified.

- 10" x 10" Wheel guard.
- 8" x 8" Rail posts.
- 1 1/2" x 8" Fire Walls.
- 3" x 12" T&G Fire Walls.
- 2" x 10" Siding face plank.
- 8" x 10" Siding curb.
- 3" x 8" Siding plank.

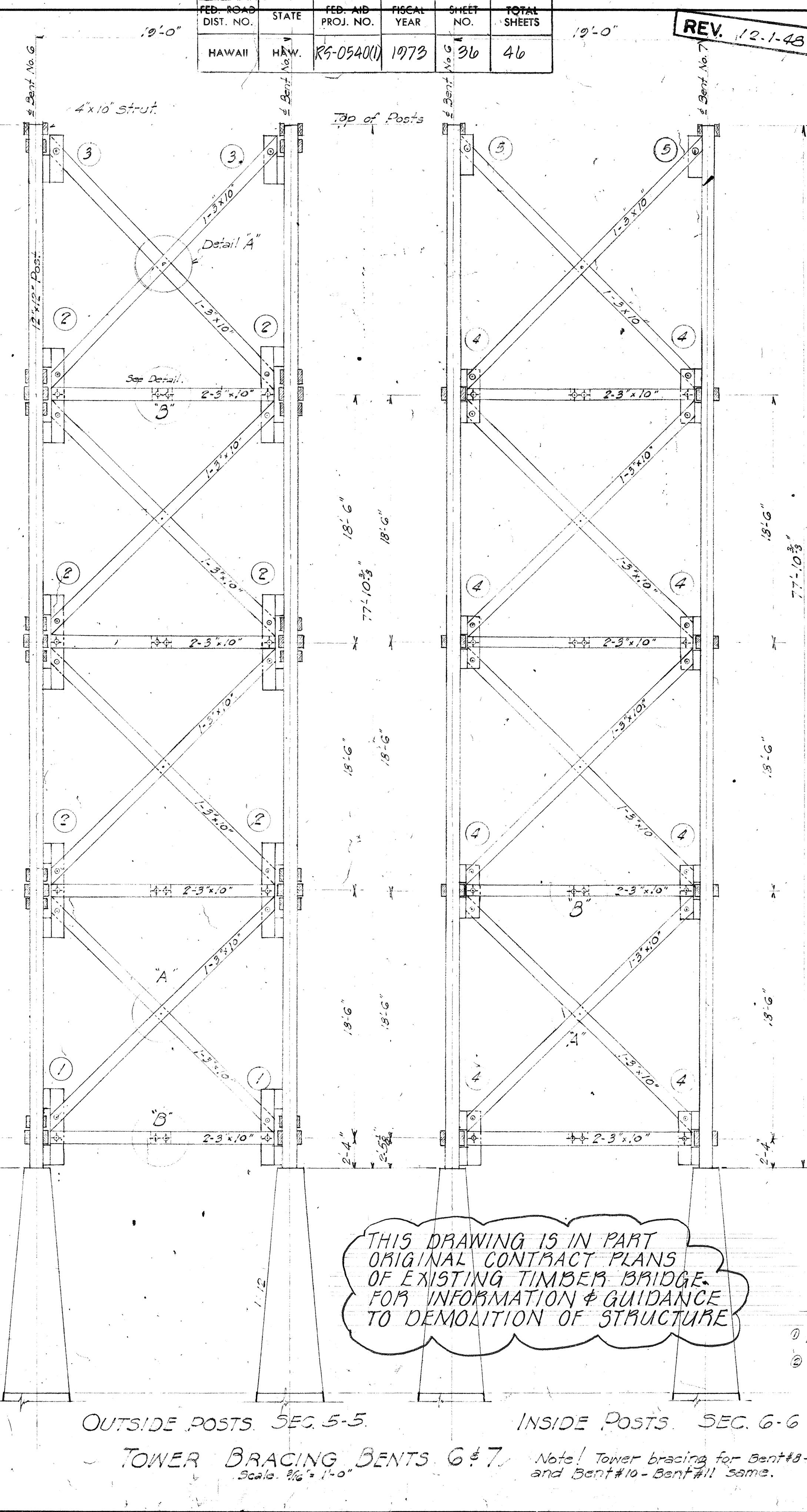
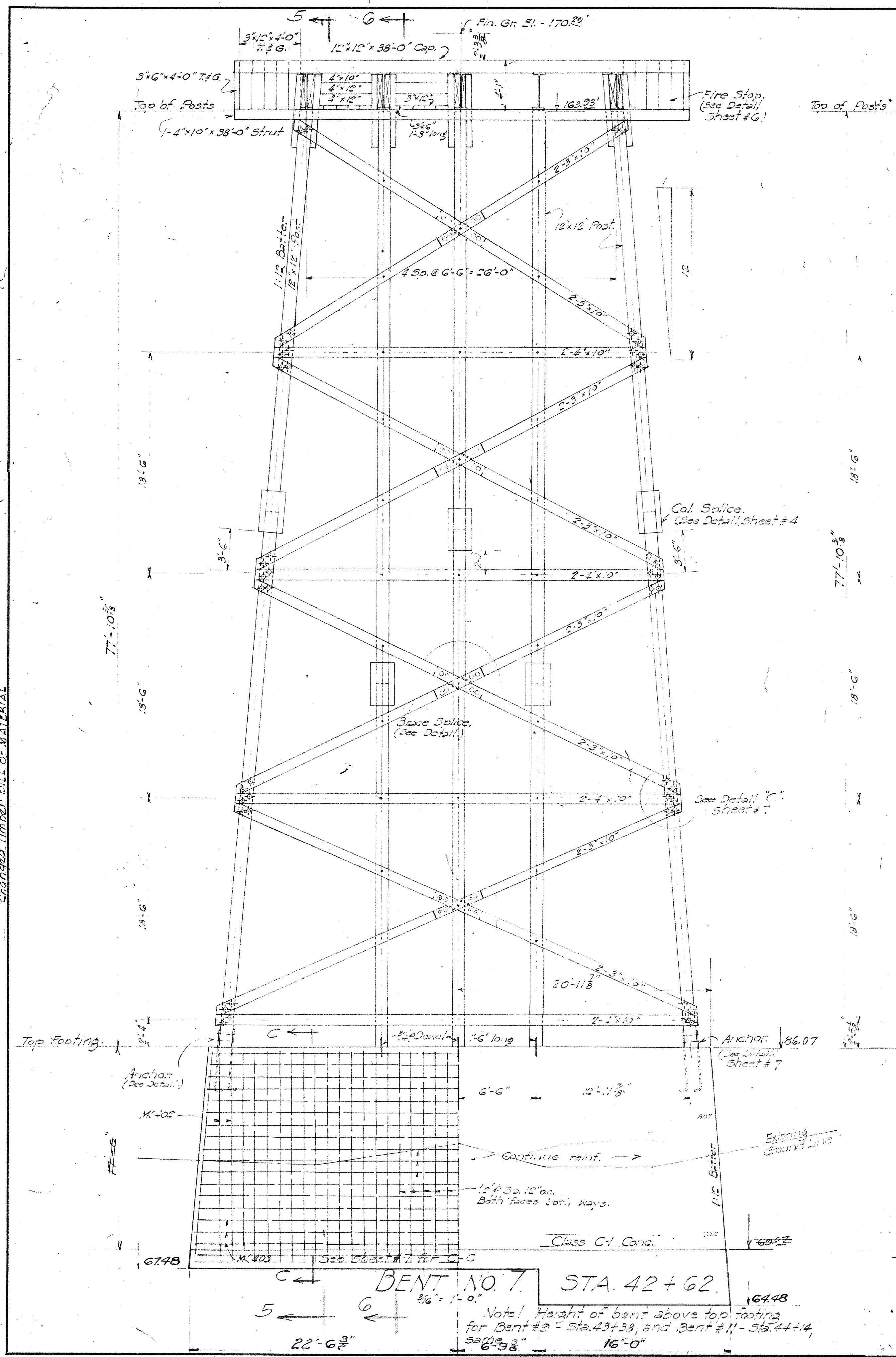
Watermain: 8" Watermain including pipe hangers and pipe hanger stringers shall be furnished and installed by others. Pipe hanger supports shall be furnished and installed by the contractor.



THIS DRAWING IS IN PART ORIGINAL CONTRACT PLANS OF EXISTING TIMBER BRIDGE FOR INFORMATION & GUIDANCE TO DEMOLITION OF STRUCTURE

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
WAHIANA BRIDGE
STA. 40+89.8-44+91.8
McBryde Mill Rd
Feb. 1948
S 5 (2)

ORIGINAL
PLAN
No. 1
DESIGNED BY
CHECKED BY
DATE
REVISION: Changed Timber Bill of Material



THIS DRAWING IS IN PART
ORIGINAL CONTRACT PLANS
OF EXISTING TIMBER BRIDGE.
FOR INFORMATION & GUIDANCE
TO DEMOLITION OF STRUCTURE

TIMBER BILL OF MATERIAL
COAST REGION-DOUGLAS FIR

MEMBER	SIZE	NO.	LENGTH	GRADING	MILLWORK	FT. B. M.
Posts	12x12	10	10'-0"	No. 1 Post + Timbers	Rough	1200
	12x12	5	18'-0"	"	"	1080
	12x12	2	22'-0"	"	"	528
	12x12	8	24'-0"	"	"	2304
	12x12	2	26'-0"	"	"	624
	12x12	8	28'-0"	"	"	2688
	12x12	12	32'-0"	"	"	4608
	12x12	13	34'-0"	"	"	5304
	12x12	10	36'-0"	"	"	4320
	12x12	6	44'-0"	"	"	3168
	12x12	12	46'-0"	"	"	6624
	12x12	12	48'-0"	"	"	6912
BRACING - BENTS	4x10	12	28'-0"	Dense No. 1 F. J. P. S. T.	"	1120
	4x10	6	30'-0"	"	"	600
	4x10	16	32'-0"	"	"	1707
	4x10	6	34'-0"	"	"	680
	4x10	20	36'-0"	"	"	2400
	4x10	24	38'-0"	"	"	3040
	4x10	12	42'-0"	"	"	1680
	3x10	24	18'-0"	"	"	1080
	3x10	36	20'-0"	"	"	1800
	3x10	36	22'-0"	"	"	1980
	3x10	8	30'-0"	"	"	600
	3x10	8	32'-0"	"	"	640
	3x10	12	36'-0"	"	"	1080
	3x10	15	38'-0"	"	"	1140
	3x10	12	40'-0"	"	"	1800
	3x10	12	44'-0"	"	"	1820
BRACING - TOWERS	3x10	160	18'-0"	"	"	7800
	3x10	22	20'-0"	"	"	1100
	3x10	3	22'-0"	"	"	165
	3x10	29	24'-0"	"	"	1740
	3x10	120	26'-0"	"	"	7800
	3x10	12	18'-0"	"	"	540
* SPICE BLOCKS - BENT BR.	4x12	102	4'-0"	"	"	1632
* TOWER BR. GUSSET PLATES	4x12	16	12'-0"	"	"	768
* TOWER BR. GUSSET PL. BLOCKS	6x12	20	2'-0"	Dense No. 1 B. & S.	"	1634
	6x12	85	6'-0"	"	"	3060
* Tower Bracing Blocks	4x10	20	6'-0"	Dense No. 1 F. J. P. S. T.	"	400
	4x10	3	8'-0"	"	"	80
	4x10	5	14'-0"	"	"	235
* POST SPICE SCABS	6x12	40	14'-0"	"	"	3360
	SCABS AT WT.	80	6'-0"	Dense No. 1 B. & S.	"	2880
* Blocks between stringers	4x10	32	2'-0"	No. 2 F. J. P. S. T.	"	213
* FILLER BLOCKS at WT.	10x12	4	12'-0"	Dense No. 1 B. & S.	Cut to fit	480
	6x12	16	12'-0"	"	"	1152
* BRIDGING between WF	4x12	26	12'-0"	No. 2 F. J. P. S. T.	Rough	1456
	4x12	1	10'-0"	"	"	40
	4x10	5	14'-0"	"	"	235
	4x10	1	6'-0"	"	"	20
* FIRE BLOCKS	3x12	8	14'-0"	"	"	336
	3x6	2	14'-0"	"	"	42
* FIRE WALL	3x12	40	4'-0"	"	"	480
	3x6	8	4'-0"	"	"	48
Floor Decking	2x6	640	8'-0"	No. 1 Com. & Better	S15E Hor. M. 1/8" scant	5120
	2x6	640	10'-0"	"	"	6400
	2x6	640	12'-0"	"	"	7680
	2x6	640	14'-0"	"	"	8960
	2x6	1280	18'-0"	"	"	23040
	2x6	1280	22'-0"	"	"	28160
* DECK STARTER	6x6	2	30'-0"	Dense No. 1 B. & S.	"	180
* BRIDGE RAILING	3x8	48	20'-0"	Dense No. 1 F. J. P. S. T.	S. & S.	1680
	3x8	48	20'-0"	"	"	2240
	3x8	28	16'-0"	No. 1 Post + Timbers	"	1648
* SIDEWALK - FACE PLANKS	2x12	10	10'-0"	No. 2 F. J. P. S. T.	Cut to fit	17
	CLUB BLOCK	3x8	3'-0"	No. 1 Post + Timbers	SIS	107
	FLANKS	3x8	15'-0"	No. 2 F. J. P. S. T.	SIS	9246
		3x8	12'-0"	"	"	144
* MINER. GRAPES	10x10	20	20'-0"	No. 1 Post + Timbers	S. & S. Develed	6647
	10x10	4	22'-0"	"	"	784
* BEAMING BLOCK for Sidewalk Stringers	12x12	10	12'-0"	"	"	2520
				"	"	144
		8x12	8'-0"	"	"	192
* ROAD BRIDGING Under Sidewalk	4x12	9	12'-0"	No. 2 F. J. P. S. T.	Cut to fit	576
	for Stringers	4x18	20	14'-0"	"	1680
	for Stringers	4x18	4	12'-0"	"	235
* CROSS BRIDGING	2x4	126	14'-0"	"	Rough	1176
* SPICE BLOCKS for Stringers	6x12	20	12'-0"	Dense No. 1 B. & S.	SIS	2160
* FILLER BLOCKS between Beams, Pl.	1x3	40	2'-0"	No. 2 F. J. P. S. T.	Rough	20
* NAILING BLOCKS for Sidewalk Planks	2x4	4	4'-0"	"	SIS	6
	2x3	112	2'-0"	"	Rough	2
* SILL	6x8	3x2	38'-0"	No. 1 Post + Timbers	SIS	304752
* BEAMING PLANKS	4x12	1	22'-0"	No. 2 F. J. P. S. T.	Rough	840
* SCABS (Abut. #1)	4x12	1	6'-0"	Dense No. 1 F. J. P. S. T.	"	40
	4x12	1	10'-0"	"	"	40
	6x12	1	10'-0"	Dense No. 1 B. & S.	"	60
	6x12	1	14'-0"	"	"	84
* STRINGERS	6x18	378	20'-0"	"	"	85040
* CAPS	12x12	8x100	38'-0"	No. 1 Post + Timbers	SIS	9100
* PIPE HANGER SUPPORT	4x6	42	2'-0"	Dense No. 1 F. J. P. S. T.	Rough	168

Note 1 * Short pieces of odd lengths were combined to a length commercial length.

NOTE! ABBREVIATIONS
① F. J. P. S. T. --- Framing Joists, Plank + Small Timbers.
② B. & S. --- Beams + Stringers.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII
WAIANA BRIDGE
STA. 40+20.7 - 44+0.12
McBryde Mill Rd.
Feb. 1923