

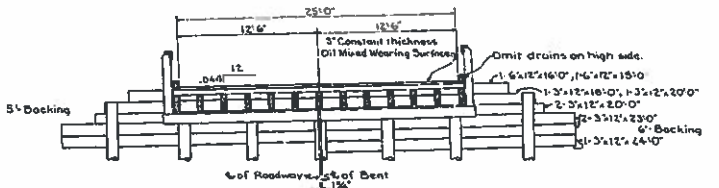
PROFILE
(On chord of a 4° Curve Left.)
Clean channel to 10' bottom and 1 1/2:1 side slopes, 100' each way from & or as much farther as the Engineer directs. 250 Cu. Yds. of excavation have been estimated for this channel cleanout.
1-23'0" Span - 25'0" Roadway - Wearing Surface - See General Note. Reference: Std. Drawg. 5-281 (25 sheets) and 5-295.

STREAM DATA
Discharge Area: 1.0 Sq. Mi.
Character of Stream: 2 ft. sandy loam on gravel, normally dry.
Quality: None.
Cause: Some temporary at maximum flood.
Slope of Stream: 0.013
Flow Velocity: 9.8 ft. per sec.
Elev. H.W.: 1806.0 (Theoretic) Higher than any observed.

TEST DATA
Drive No. 10' deep in stiff gravel at Sta. 16+00, practical refusal. 16" penetration estimated adequate for bearing.



BEVELED CAP DETAIL
Caps shall be beveled as shown at mill, before treatment.



SECTION SHOWING SUPERELEVATION
Looking towards Saratoga.

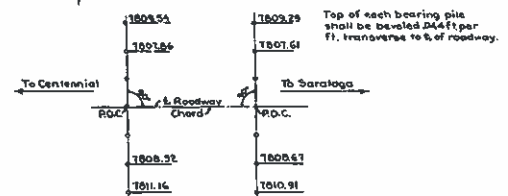


DIAGRAM SHOWING ELEVATIONS OF PILE CUT-OFFS ON PILE CAPS

GENERAL NOTE

Designations: Reference: Wyoming State Highway Specifications, 1938 Edition, the details and notes on Standard Drawings Nos. 5-281 (25 sheets) and 5-295, and the following notes. Where conflict occur, the details and notes on this drawing shall govern.
Timber: Grade and treatment shall conform to that shown on Std. Drawg. No. 5-281 (25 sheets) for the same or similar members. Mill cuts before treatment and field cuts are the same as designated on Std. Drawg. No. 5-281 for the same or similar members with additions or modifications shown on this drawing and Std. Drawg. No. 5-295.
Flooring for Full Hollow Bridge: Std. 4-32-10-67; Flooring pieces shall be 2x4's 13'-00", 2x4's 10'-3 1/2", 2x4's 10'-00" and 2x4's 10'-00". Pieces 13'-00" and 10'-3 1/2" shall be spliced on stringers marked "J", and pieces 10'-00" and 10'-00" shall be spliced on stringers marked "T". Splices to be made alternately on stringers "H" and "J". Change system of laying flooring pieces as near 1/4 of bents as possible, flooring shall overhang out faces of out stringers a minimum of 1/2". At locations of handrail posts, flooring shall be cut in field flush with out-face of stringers. Stringers on which flooring joints occur shall be adequately placed to make butt joints of flooring pieces fall on 1/4 of stringers, with no variations exceeding 1/4". Both ends of all flooring pieces shall be cut truly square and all pieces surfaced 3/16 to 2" hit or miss, before treatment.
Bumper Rails and Guard Posts: The Contractor shall furnish all materials for bumper rails at the four corners of the skewed bridge and shall erect same as shown. Guard posts used shall be paid for at the contract price per linear foot for "Treated Timber Piling".
Wearing Surface: The oil mixed wearing surface shown on Std. Drawg. 5-281 shall be temporarily omitted from both bridges. A temporary sand-asphalt wearing surface will be placed on bridges by State forces immediately after completion of contract work, which will serve until all mat is placed on road approaches, when the standard oil mixed wearing surface will be placed.
Riprap: All riprap shall be Class 1, 12" thick. Estimated Quantities shown are approximate only.

Reference Drawg. Nos. 5-281 (25 sheets) and 5-295.

STATE OF WYOMING
STATE HIGHWAY DEPARTMENT
TREATED TIMBER BRIDGES

SARATOGA-CENTENNIAL ROAD
P.A. 3.14A(1) 1940 C.B. 5

APPROVED: [Signature]
11-2-39
SHEET 1 OF 2 SHEETS DRAWING No. 1788

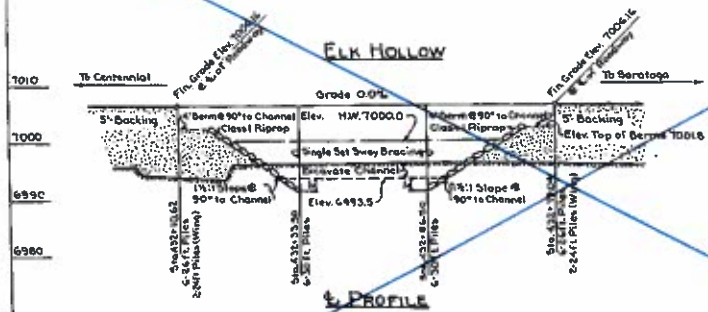
ESTIMATED QUANTITIES			
ITEM	UNIT	5m. 13+84	5m. 43+00
6" TREATED TIMBER	M.B.M.	7.43	20.980
8" TREATED TIMBER	M.B.M.	1.210	1.631
TOTAL TREATED TIMBER	M.B.M.	8.641	22.611
UNTREATED TIMBER	M.B.M.	2.52	7.725
TREATED TIMBER PILING	LN. FT.	325	824
CLASS 1 RIPRAP	Cu. Yds.	—	120
HANDWORK (Not a Contract Item)	Lbs.	650	1700

STREAM DATA

Discharge Area: 3 Sq. Mi.
Character of Stream: Sandy clay, normally dry.
Quality: Small amount, some sewage from sawmill above.
Cause: Some temporary at maximum flood.
Slope of Stream: 0.006
Flow Velocity: 10.1 ft. per sec.
Elev. H.W.: 1000.0 (Theoretic) Higher than any observed.

TEST DATA

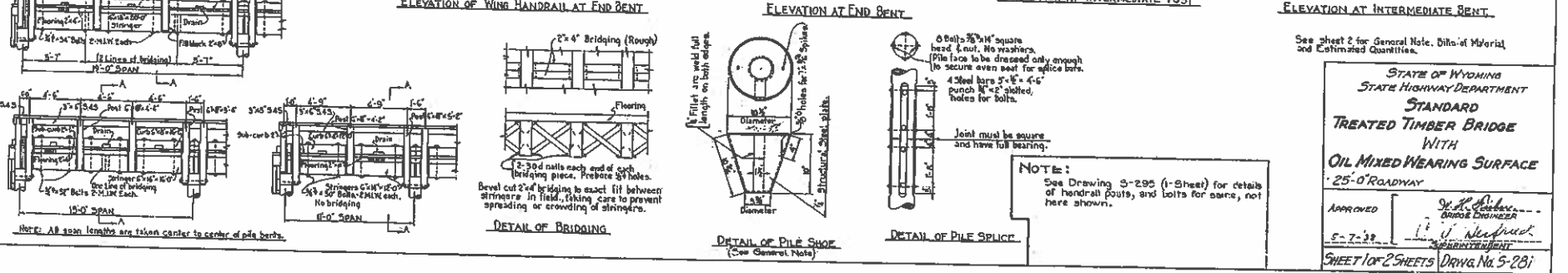
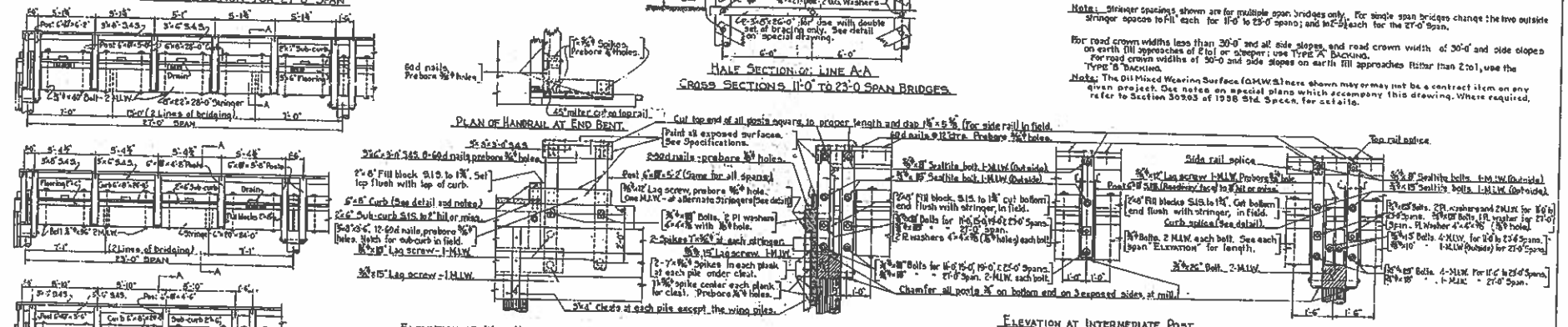
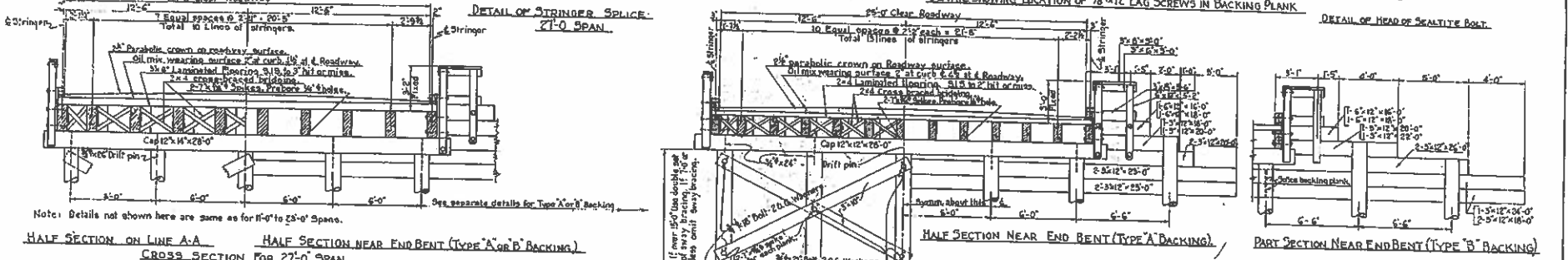
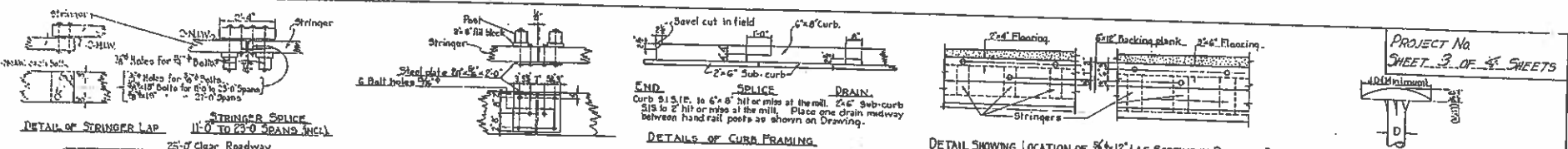
1/4" rod driven thru sand, clay and thin layers of gravel at Stab. 43+46, 42+00 and 42+45, fairly hard driving with practical refusal at bottom of test. 16" penetration estimated adequate for bearing.



PROFILE
3-23'0" (Nominal) Spans - 25'0" Roadway - 35' Shew Right.
Wearing Surface: See General Note.
Reference: Std. Drawg. 5-281 (25 sheets) and 5-295. For details see Sheet 2 of this drawing.

Riprap shall be Class 1, 12" thick, placed at least 40' each side of Roadway & extend at least two feet below streambed. Riprap quantities shown are approximate only. Channel change shall have a 25' bottom width with 1 1/2:1 side slopes at right angles to stream extending each side of bridge to intersect original channel, or as much farther as the Engineer may direct. 6000 Cu. Yds. of excavation have been estimated for this channel change. See Read Plans.

Drawn: J.W.C.
Checked: J.W.C.
Reviewed: J.W.C.
Date: 11-2-39



STATE OF WYOMING
STATE HIGHWAY DEPARTMENT
STANDARD
TREATED TIMBER BRIDGE
WITH
OIL MIXED WEARING SURFACE
25'-0" ROADWAY

APPROVED
5-7-39
SHEET 1 OF 2 SHEETS DRAWING No. S-281

SPECIFICATIONS:

Contract 1511 Wyoming State Highway Department Standard Specifications, 1938 Edition, to cover unless otherwise noted in plans or in special provisions. For Oil Mixed Wearing Surface (OMWS) see Section 509.03, or Specifications, Division 1, A.A.S.H.O. 1935, Division V, H-19 Loading, Two lanes, Impact omitted.

GENERAL: All timber used, both treated and untreated, shall comply with section 406 of the above named specifications. Grade of timber shall conform to the paragraph references of the 1934 W.C.L.A. Rules shown in the Bill of Material. The State will inspect all timber and piling for grade and treatment, and reserves the right to reject any timber or piling which, in its opinion, does not comply with specifications. Where allowed bridges are involved, the Bills of Material here shown will not apply. The State will issue Bills of Material and piling required for any given project, but the Contractor will be held liable if said Bills do not meet the requirements of contract plans and specifications. The Contractor shall also bear the costs for correcting any mis-cut or mis-framed materials, or for replacing materials rejected by the Engineer.

PRELIMINARY: All pile pieces shall be dry, well seasoned timber 5-4S. Before shipment they shall receive a primary coat of preservative (M.C.C. 335) of Wyoming State Highway Department Standard Specifications, 1938 Edition. After rails are delivered on the job, the Contractor shall remove any creosote or other stains, and after erection shall apply two (2) coats of "Foil Coat" white lead paint described in specifications Section 406.04.

FINISH: All piles shall receive an 8th creosote treatment and shall conform to Section 407 of Wyoming State Highway Department Standard Specifications, 1938 Edition. Length of piles shall be shown on the plans. All bearing piles shall be driven to a bearing capacity of at least twelve tons per pile.

SPICE CUTS BEFORE TREATMENT: (a) All caps and sub-caps shall be 3/4" x 1 1/2" or 2" x 4" or 2" x 4" hit or miss, as noted. (b) End bearings of all stringers shall be dressed 18' long to an even depth of 1/8" less than nominal depth. (c) All flooring shall be 3/4" x 3" x 8" later than as shown, and both ends cut square. (d) Curbs shall be dressed as noted with drains and top joints framed. (e) Handrail posts shall be 3/4" x 3" x 8" with bottom ends square cut and chamfered as shown and noted. (f) Handrail shall be 3/4" x 3" x 8" to approximate dimensions shown. (g) 2" x 8" floor blocks shall be 3/4" x 3" x 8" as noted. (h) 2" x 6" sub-caps shall be 3/4" x 3" x 8" or 2" x 4" hit or miss. (i) Duplicate blocks shall be 3/4" x 3" x 8" to same depth as stringers applied. (j) Any other framing noted on special drawings to be done as mill.

FIELD CUTS: The erection Contractor shall make the following field cuts: (a) Top of piles to secure exact elevation. (b) Cut all outside stringers to proper length to fit. (c) Bore all holes for bolts, log screws, drift pins or nails as required. (d) At bridge ends cut curb to proper length and bevel corners as shown. (e) Cut top of handrail posts square to proper lengths and dip to receive stringer. (f) Dress all fillers between handrail posts and stringers if necessary to secure straight alignment of handrail, and cut off bottom as shown. (g) Cut and fit sub-caps. (h) Cut all handrail pieces to proper lengths to fit, including the short pieces at the ends of the bridge. (i) Cut and fit backing planks as noted. (j) Any other special cuts shown or noted on special drawings used in connection with this drawing. All field cuts of treated timber shall be treated as per Section 406.03(1) of Wyo. S.H.D. Standard Specifications, 1938 Edition. All field cuts of untreated timber handrail pieces of joints shall be given a heavy priming coat of white lead paint.

FLOORING: Each flooring piece shall be toenailed to each stringer, using 1-5/8" nail for 2" x 4" flooring and 1-1/2" nail for 3" x 6" flooring and nailed to each other horizontally 6" to 8" on, and staggered 9" in adjacent places, using 3/4" nails for 2" x 4" flooring and 6/8" nails for 3" x 6" flooring. There shall be one nail near each end of each flooring piece, and in addition to miss the bolts and not interfere with boring holes for curb bolts. See note below on payment for flooring.

PAINT: Holes for bolts shall be bored the same diameter as the bolt, unless otherwise noted. Prepare for nails as noted. Prepare for log screws same diameter as root of thread. Counter-bore for head of Sealrite bolt in coped seal in coped seal as noted.

HARDWARE: Except where otherwise specified on plans, all hardware shall be plain standard material. All sealite bolts (see detail of bolt head) shall be equal to those manufactured by the Lewis Bolt & Nut Co. No direct payment shall be made for any hardware furnished and installed as per plans and specifications.

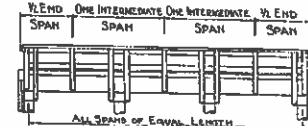
SWAY BRACING: Detail of sway bracing on this drawing covers set of single bracing only, with scheme for double bracing indicated. In all cases where double bracing is required, full details for same will be shown on Special Drawings.

PILE SHOES: A malleable iron casting of the size, shape and thickness shown in the detail may, alternately, be used in which case the 1/2" lip will be omitted. The malleable iron casting shall conform to A.S.T.M. steel designation A-47-33, and shall be true to pattern in form and dimension, free from porosity, sponginess, cracks, blow holes or other defects.

PILE SPLICES: Whenever it becomes necessary to splice a pile and such splice is authorized, use the splice as shown in detail. Care must be taken to secure a secure butt joint, and full main bearing between the sections of the pile. If splice occurs above ground and on upstream end of an intermediate bent, the joint shall be bored lengthwise in the plane of the bent. End bent piles shall not be spliced. Pile splices not specified on original plans shall be installed under "Extra Work Order." See Section 401.03(1) of Wyo. S.H.D. 1938 Standard Specifications.

PAINT FOR PROTECTION: The number of pieces of laminated flooring pile for shall in no case exceed the theoretical number required over the bridge length called for on plans, assuming each 2" x 4" flooring piece to be exactly 7' thick and each 3" x 6" flooring piece to be exactly 7' thick, with no allowance made for cracks.

GENERAL NOTE



PROJECT NO. SHEET 2 OF 4 SHEETS

Table: BILL OF MATERIAL - SUPER-STRUCTURE. Columns: ITEM, SIZE, QUANTITY, REMARKS. Rows include Hardware, Galvanized Common, Sealrite Bolts, etc.

Table: BILL OF MATERIAL - SUPER-STRUCTURE. Columns: TREATED TIMBER, ONE INTERMEDIATE SPAN, TWO 1/2 END SPANS, STANDARD GRADING AND DRESSING RULES W.C.L.A. JULY 1, 1934 TREATMENT. Rows include Stringer, Splice Block, Flooring, Curb, Sub-curb, etc.

Table: BILL OF MATERIAL - SUB-STRUCTURE. Columns: TWO TYPE 'A' END BENTS, TWO TYPE 'B' END BENTS. Rows include 10 Chisels, 10 Piles, etc.

Table: BILL OF MATERIAL - SUB-STRUCTURE. Columns: TWO TYPE 'A' END BENTS, TWO TYPE 'B' END BENTS. Rows include 10 Chisels, 10 Piles, etc.

Table: BILL OF MATERIAL - SUB-STRUCTURE. Columns: ONE INTERMEDIATE BENT, TWO 1/2 END SPANS. Rows include 1 Cap, 5 Piles, 5 Drift Pins, etc.

Table: ESTIMATED QUANTITIES - SUB-STRUCTURE. Columns: MATERIAL, QUANTITIES. Rows include Treated Timber, Untreated Timber, Hardware, etc.

Table: ESTIMATED QUANTITIES - SUPER-STRUCTURE. Columns: ONE INTERMEDIATE SPAN, TWO 1/2 END SPANS. Rows include 10' span, 12' span, 14' span, etc.

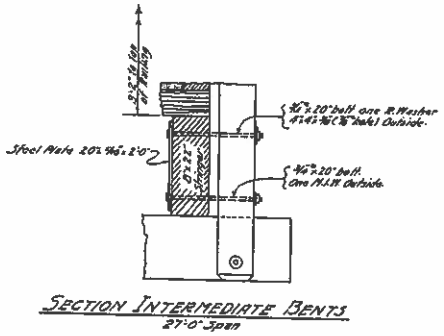
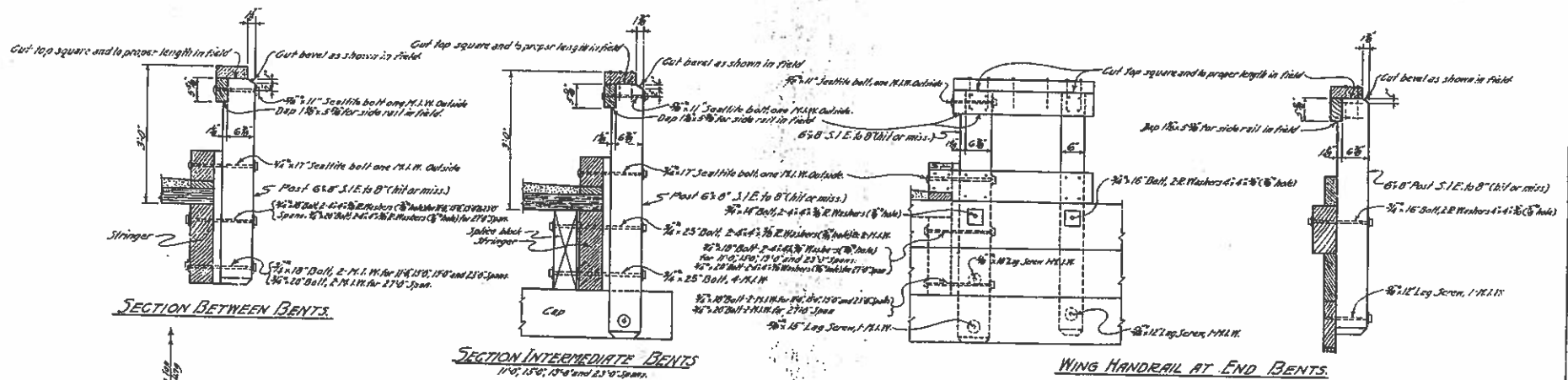
STATE OF WYOMING HIGHWAY DEPARTMENT STANDARD TREATED TIMBER BRIDGE WITH OIL MIXED WEARING SURFACE 25'-0" ROADWAY. Includes signature of Bridge Engineer and Superintendent.

Revised 11-15-35 Payment for flooring note added. Revised 11-15-35 Add note on creosote treatment of piles and detail of handrail. Revised 8-1-35 Surfacing splice block note added to General Note.

Design - S.C.B. Detail - S.C.B. Prepared - S.C.B. Date - 11-15-35

Revised 6-27-35 - 3/4" bolts thru handrail of lint bents increased in length.
Revised 4-15-35 - Changing Note on 6x8 Posts
3-28-35 - To include 2 1/2" Splice

Designs are modified
Traced 11/15/38
C.H. - Special Struts



Details not shown are same as for other spans.

Note: These details shall supersede details on Standard Drawings S-280 & S-281 wherever they differ from details on these Standard Drawings, and are intended to show corrections necessary to provide a 6x8 post where a 6x6 post is shown on the last named drawings. Notes and details on Standard Drawings S-280 & S-281 not herein changed shall govern. Bolt lengths here shown shall control where same conflict with lengths shown on S-280 and S-281. Estimated quantities on special drawings include revisions covered by this drawing.

STATE OF WYOMING
 STATE HIGHWAY DEPARTMENT
TREATED TIMBER BRIDGES
DETAILS
6x8 HANDRAIL POSTS

October 1938

Approved
 12/5/38
 ONE SHEET

H. B. Seidel
 Bridge Engineer
 DRAWN BY
 DREW. NO. 5295

See full details for connections.
 Rev. 6-27-35 (Rev. 6-27-35)