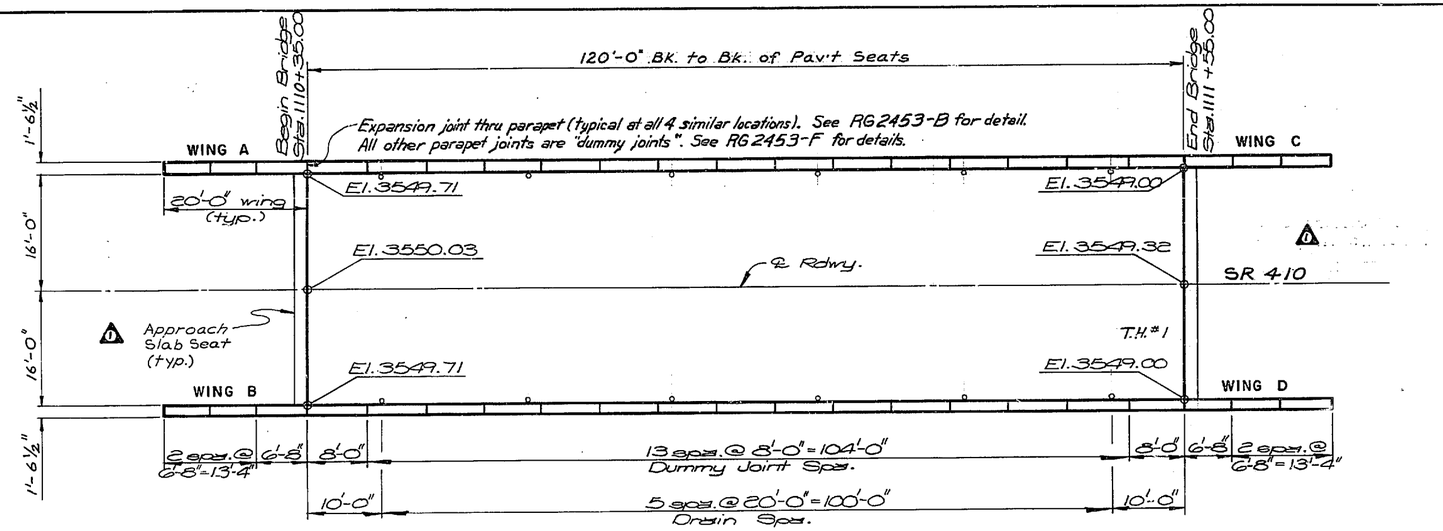
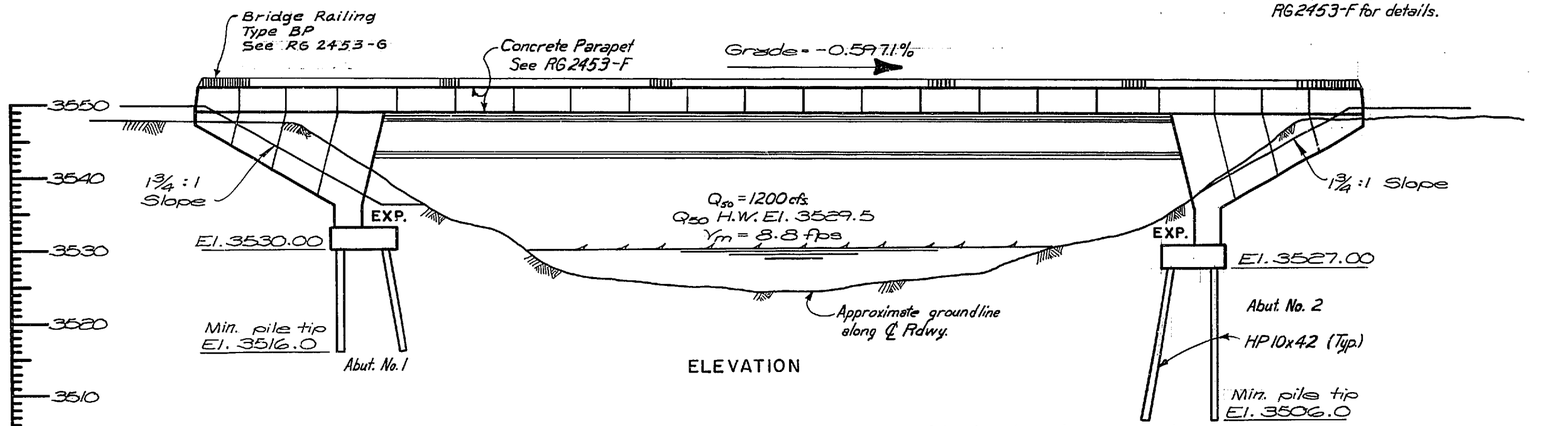


PLAN

For drain details see RG2453-C.

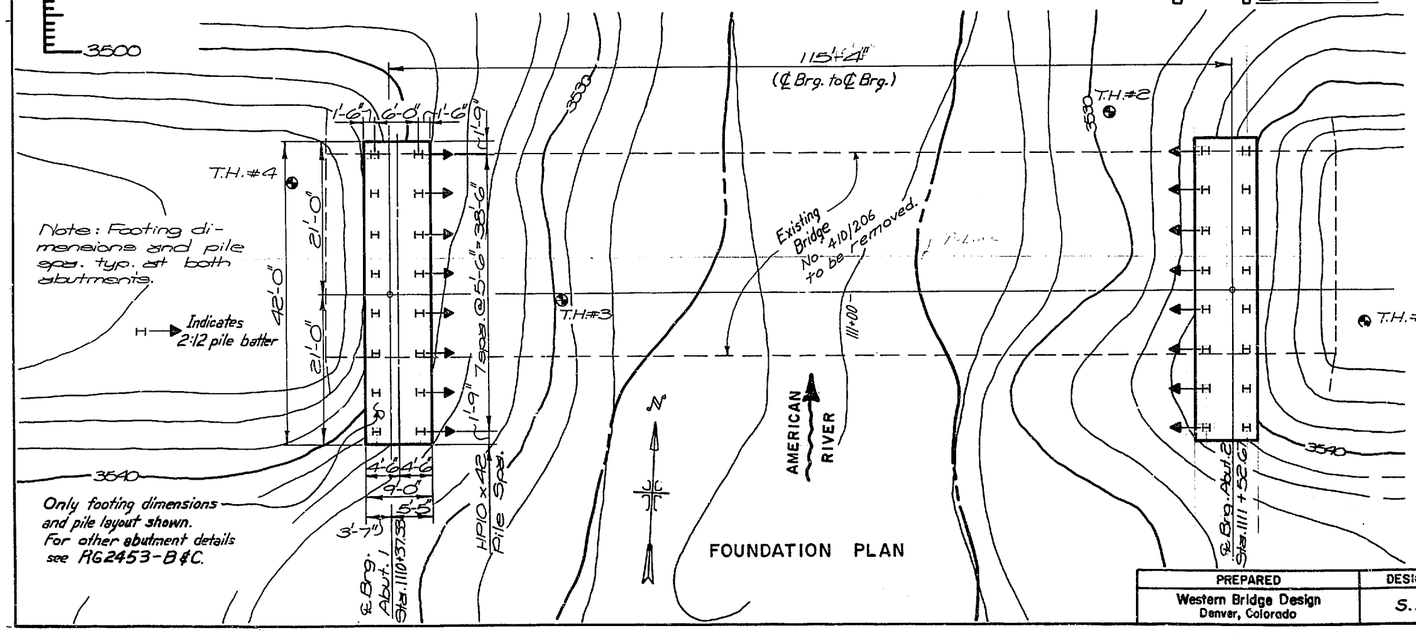
* Not included in Bridge Quantities.

* Approach guardrail attached to concrete parapet at all 4 corners. See RG2453-F for details.



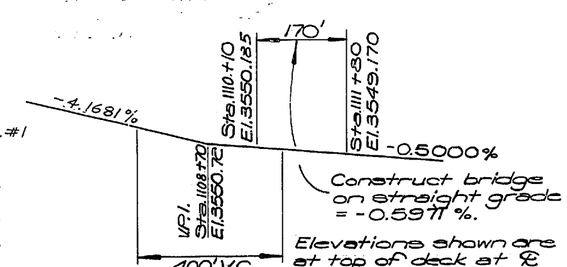
ELEVATION

Maximum Applied Structural Load at abutments is 54 Tons per pile.



Only footing dimensions and pile layout shown. For other abutment details see RG2453-B&C.

FOUNDATION PLAN



GRADE LINE DIAGRAM

GENERAL NOTES

SPECIFICATIONS: DESIGN, AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1983. CONSTRUCTION, STATE OF WASHINGTON STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE AND MUNICIPAL CONSTRUCTION, CURRENT EDITION.

DEAD LOAD: CONCRETE 150 LBS. PER CU. FT. PAVING ALLOWANCE 25 LBS. PER SQ. FT. OF ROADWAY SURFACE. EARTH PRESSURE EQUIVALENT TO A FLUID WEIGHING 36 LBS. PER CU. FT.

DESIGN CRITERIA: REINFORCED CONCRETE DESIGNED BY LOAD FACTOR DESIGN WITH F'_C = 4,000 PSI. (CLASS AX CONCRETE) AND F'_C = 3,000 PSI. (CLASS B CONCRETE) AND REINFORCING STEEL F_Y = 60,000 PSI. TRANSVERSE DECK SLAB SERVICEABILITY STRESSES LIMITED TO F_C = 1,455 PSI AND F_S = 20,000 PSI, AND TO 1983 AASHTO SPECIFICATION VALUES FOR OTHER REINFORCED CONCRETE ELEMENTS. SEISMIC DESIGN IS PROVIDED IN ACCORDANCE WITH THE AASHTO 1983 GUIDE SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES. PRECAST, PRESTRESSED GIRDERS DESIGNED IN ACCORDANCE WITH 1983 AASHTO CRITERIA.

CONCRETE: CONCRETE IN PRECAST, PRESTRESSED GIRDERS SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS: F'_{CI} = 6,500 PSI AND F'_C = 7,000 PSI. ALL ABUTMENT FOOTING CONCRETE SHALL BE CLASS B, WITH F'_C = 3,000 PSI. ALL OTHER CAST-IN-PLACE CONCRETE SHALL BE CLASS AX, WITH F'_C = 4,000 PSI.

CONCRETE COVER: UNLESS OTHERWISE SHOWN ON THE PLANS THE MINIMUM CONCRETE COVER MEASURED FROM THE FACE OF THE CONCRETE TO THE FACE OF ANY REINFORCEMENT BAR SHALL BE 2 1/2" AT THE TOP OF THE ROADWAY SLAB, 1" AT THE BOTTOM OF THE ROADWAY SLAB, 3" AT THE BOTTOM OF THE FOOTINGS AND 1 1/2" AT ALL OTHER LOCATIONS.

REINFORCING STEEL: ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M31, GRADE 60 (ASTM A615, GRADE 60). THOSE REINFORCING BARS IN THE DECK SLAB DESIGNATED BY AN * ON RG 2453-1 SHALL BE EPOXY-COATED.

PRESTRESSING STEEL: PRETENSIONED, PRESTRESSING STEEL SHALL BE 270K, 1/2-INCH SEVEN-WIRE, BRIGHT, STRESS-RELIEVED PRESTRESSING STRAND CONFORMING TO AASHTO M203 (ASTM A416). EACH STRAND SHALL BE PRETENSIONED TO A TOTAL LOAD OF 28,910 LBS., AT WHICH LOAD, F'_{SI} = 0.70 (F'_S) = 189,000 PSI. THE FINAL EFFECTIVE PRESTRESS FORCE PER STRAND (AFTER ESTIMATED LOSSES = 63,500 PSI) IS 19,214 LBS.

STEEL H-PILES: STEEL FOR PILES SHALL CONFORM TO AASHTO M183 (ASTM A36). ALL PILES SHALL BE DRIVEN TO A MINIMUM BEARING OF 60 TONS PER PILE. EACH PILE SHALL HAVE A PILE TIP. EACH TIP SHALL BE AN "H-PILE" POINT BP75750, AS MANUFACTURED BY THE ASSOCIATED PILE AND FITTING CORPORATION, OR HPA1042, AS MANUFACTURED BY THE INTERNATIONAL CONSTRUCTION EQUIPMENT COMPANY, OR AN APPROVED EQUAL.

FOUNDATIONS: FOOTING ELEVATIONS AND, THEREFORE, SUBSTRUCTURE DETAILS, ARE SUBJECT TO CHANGE DEPENDING UPON FOUNDATION MATERIAL ENCOUNTERED. REINFORCING STEEL FOR PIERS AND WINGWALLS SHALL NOT BE CUT UNTIL FINAL FOOTING ELEVATIONS AND SUBSTRUCTURE DETAILS HAVE BEEN MODIFIED AS REQUIRED.

REVISION	BY	APP'D	DATE
General Revisions	CCR	AM	8-14-86
Editorial Changes	HSD	JWK	8-28-86

DONALD R. OLSON — STATE OF WASHINGTON — 6024 — REGISTERED ENGINEER — PROFESSIONAL ENGINEER

CONTRACT #3198

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

SR 410
PIERCE COUNTY LINE TO UNION CREEK
AMERICAN RIVER BRIDGE 410/206

LAYOUT 410/206

SHEET 75 OF 97 SHEETS

APPROVED: James D. Rollins
DIRECTOR, OFFICE OF WESTERN BRIDGE

PREPARED	DESIGNED BY	DRAWN BY	CHECKED BY	SCALE	BRIDGE DRAWING	DATE	DRAWING NO.
Western Bridge Design Denver, Colorado	S.S.B.	G.L.M.	JWK		1 of 9	NOV. 1985	RG 2453-A

SR 410/104

170/55