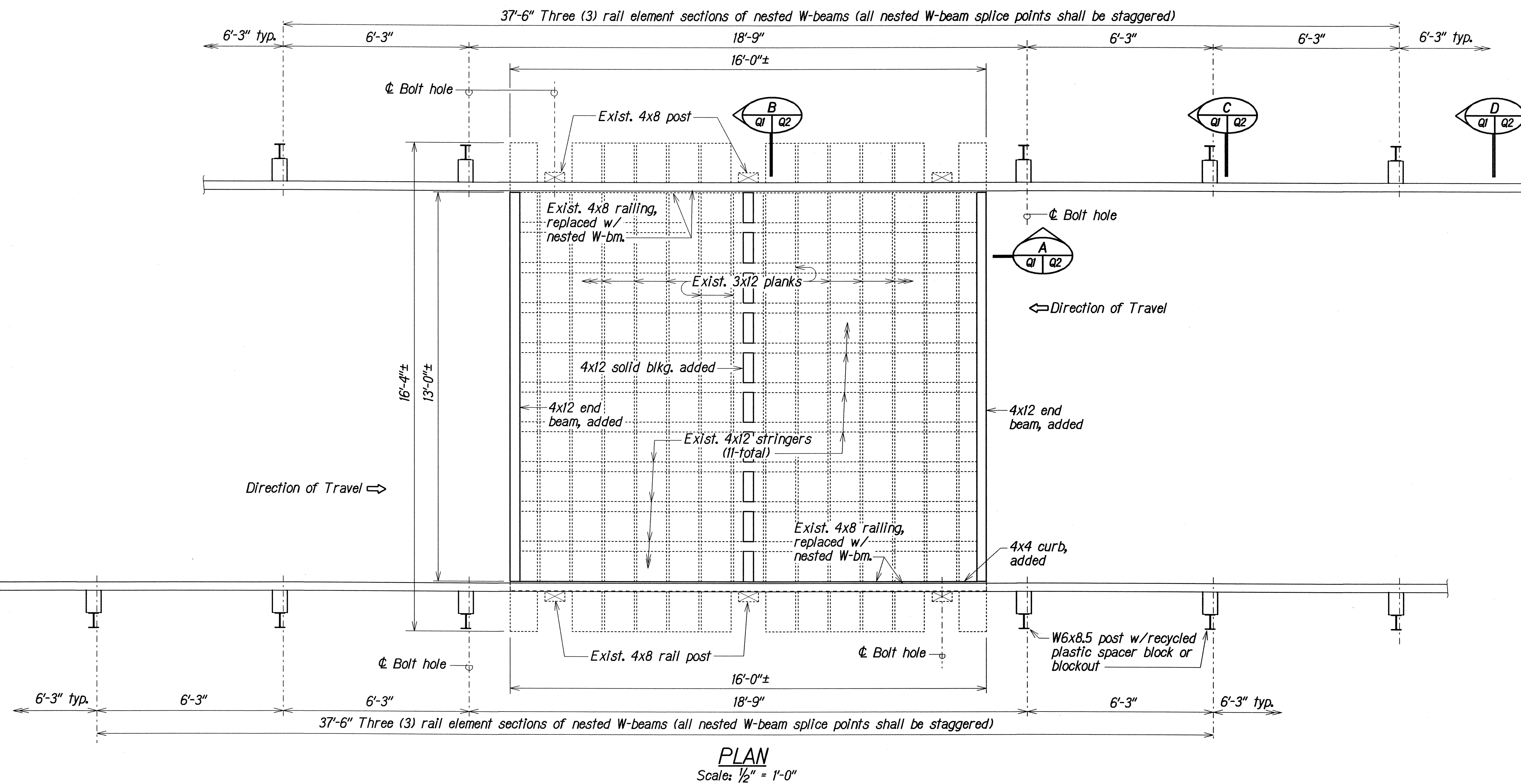


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	450B-01-05M	2005	9	35



NOTES:

- The Contractor shall verify existing conditions prior to bidding. The existing bridge is intended to be replaced similar to the original construction except as specified in these construction documents. Existing member sizes including details shall be verified.
- These drawings are provided to show minimum size and detail requirements and shall be used for bidding purposes only. The Contractor shall retain a structural engineer licensed in Hawaii to be responsible for providing construction drawings subject to review by the Engineer. Connection details for all members shall be provided and shall not be less than the existing or specified on these construction documents.
- The Structural Engineer for the contractor shall calculate the load capacity ratings for the replacement bridge using both the LRFR and LF methods in accordance with the AASHTO "Manual for Condition Evaluation and Load and Resistance Factor Rating (LRFR) of Highway Bridges", October 2003. The calculations shall be submitted for review and approval by the HDOT Bridge Design Section.
- Construction shall be in accordance with Standard Specifications Section 502, Timber Structures, except as otherwise noted herein.
- To minimize closure time of the road, the Contractor may consider prefabrication of the bridge off-site and lifting into place after the existing bridge is removed.
- Stringer to end beam connection shall be with heavy duty hot-dipped galvanized metal clips (Simpson or equivalent) on each side of each stringer.
- Stringer to ledger beam connection shall be with heavy duty hot-dipped galvanized metal "hold-down" connectors (Simpson or equivalent) on each side of each stringer.
- Install 30# roofing paper on the top of each stringer and end beam including all interface where wood is in contact with concrete, masonry, asphalt concrete or earth.
- Stringers shall bear on the masonry abutment. Bearing surface shall be levelled with non-shrink grout as may be required.
- The ledgers shall be 4x12 minimum with 3/4"Ø anchor bolts spaced at 18"o.c. maximum. Anchor bolts shall conform to ASTM A307 and be hot-dip galvanized. Bolts shall be provided with compatible nuts and washers hot-dipped galvanized. The anchor bolts shall be drilled and embedded with epoxy into the existing masonry or concrete a minimum of 12".
- All timber for the bridge shall be Douglas Fir-Larch, Grade No. 1 or better.

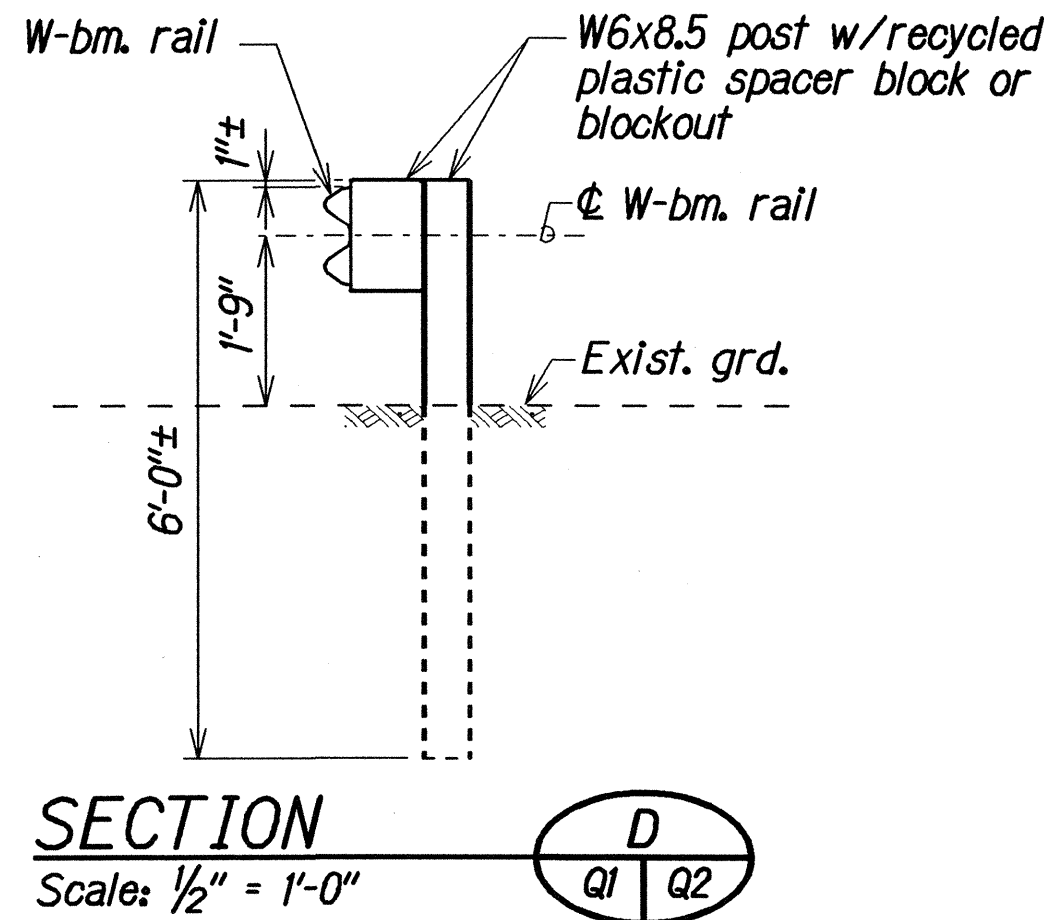
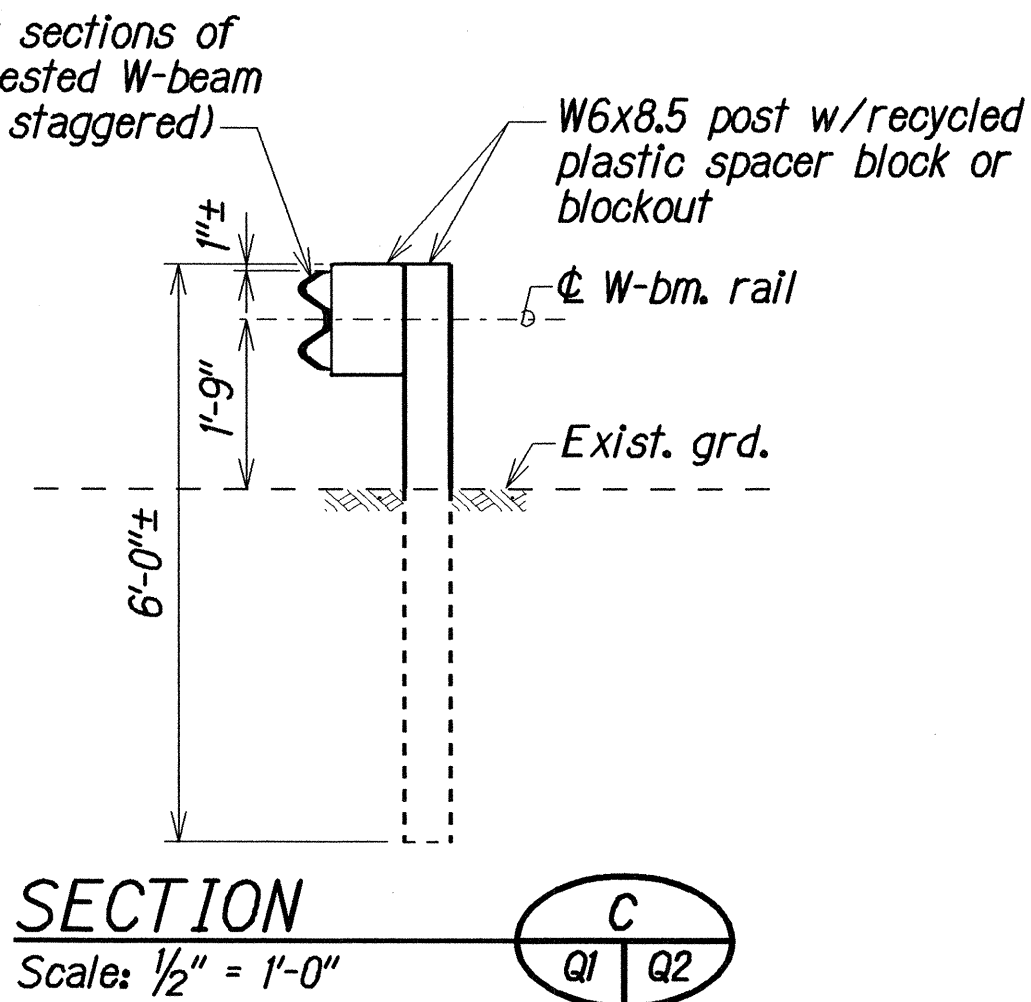
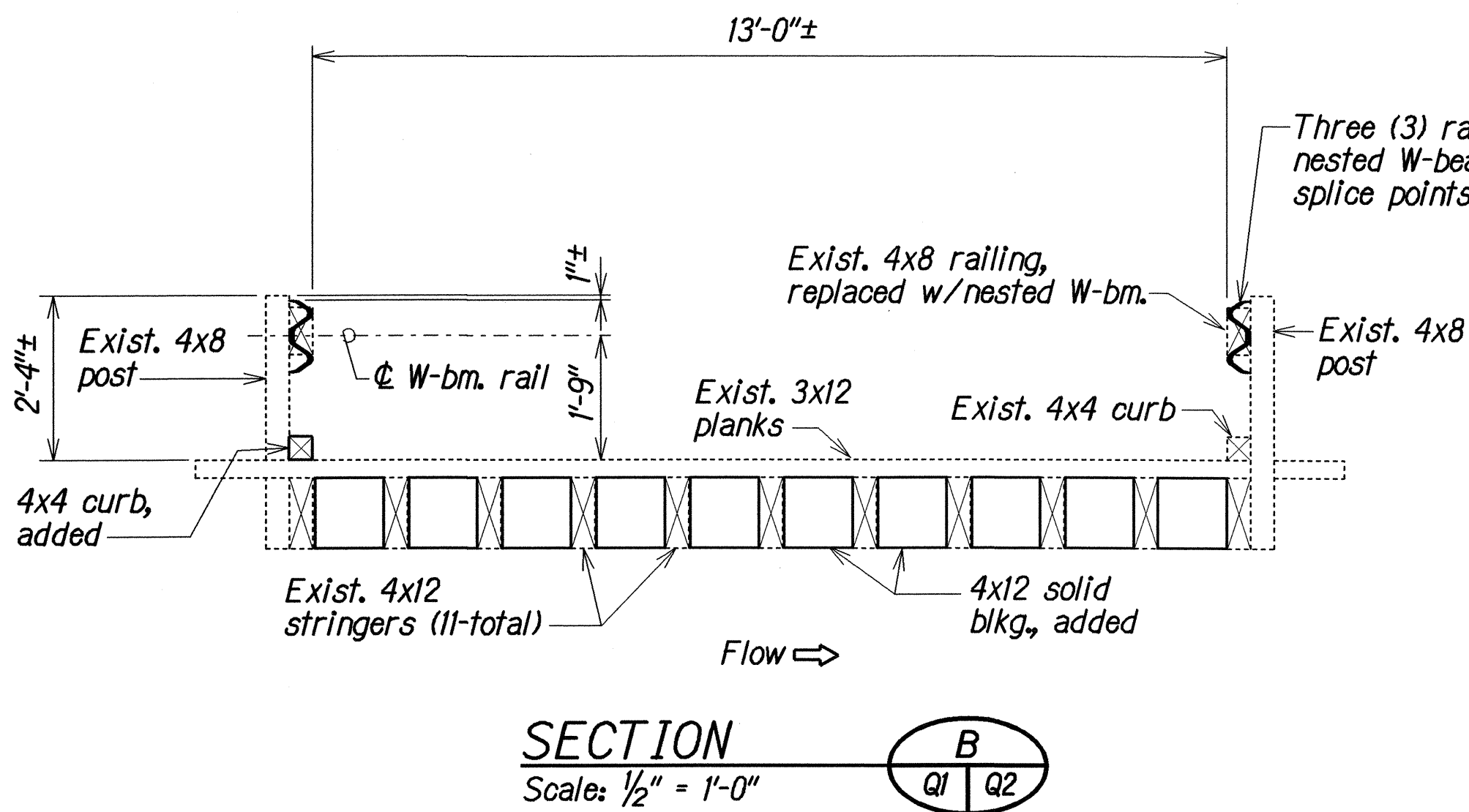
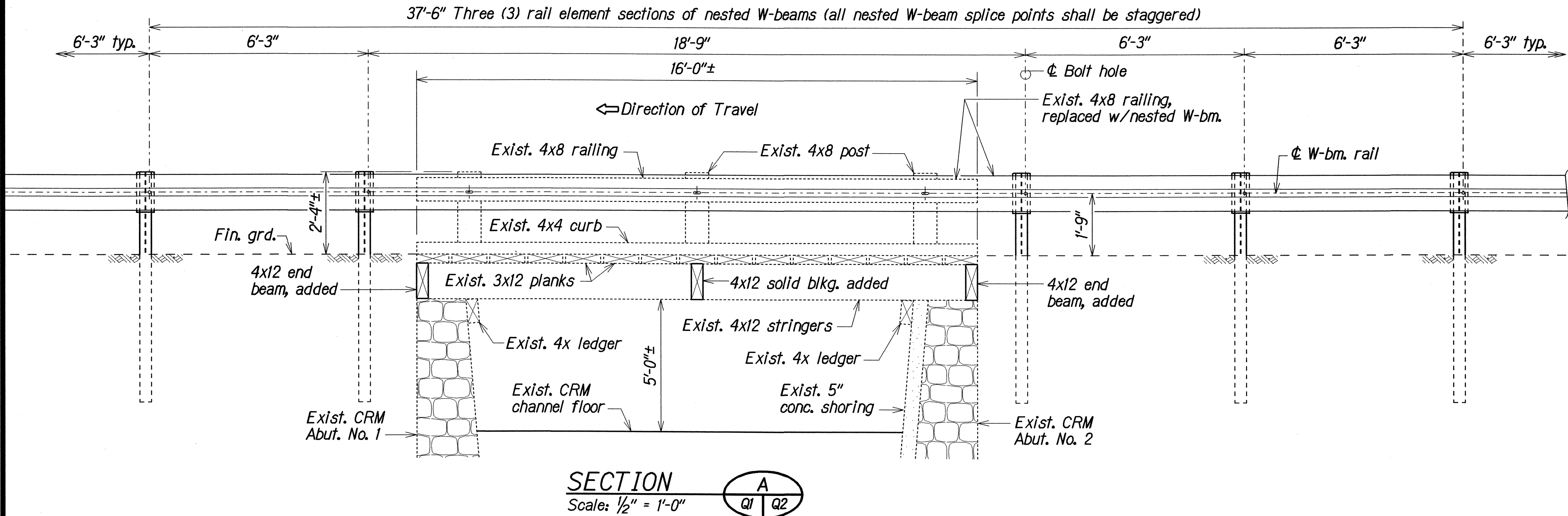
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN and GENERAL NOTES
REPLACEMENT OF HONOLULU (WOODEN) BRIDGE
Kamehameha V Highway Resurfacing
Waialua to Halawa Bay
Project No. 450B-01-05M

Scale: As Noted Date: May, 2005

SHEET No. 9 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	450B-01-05M	2005	10	35



ORIGINAL PLAN	DATE	DESIGNED BY	CHECKED BY
honoimlao.q2.dgn	MAY 2005	PTS	PTS
db4/ist2/ksj/pts/honoimlao/			

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SECTIONS and DETAILS

REPLACEMENT OF HONOLIMALOO (WOODEN) BRIDGE
Kamehameha V Highway Resurfacing
Waialua to Halawa Bay
Project No. 450B-01-05M

Scale: As Noted
Date: May, 2005

SHEET No. Q2 OF 2 SHEETS