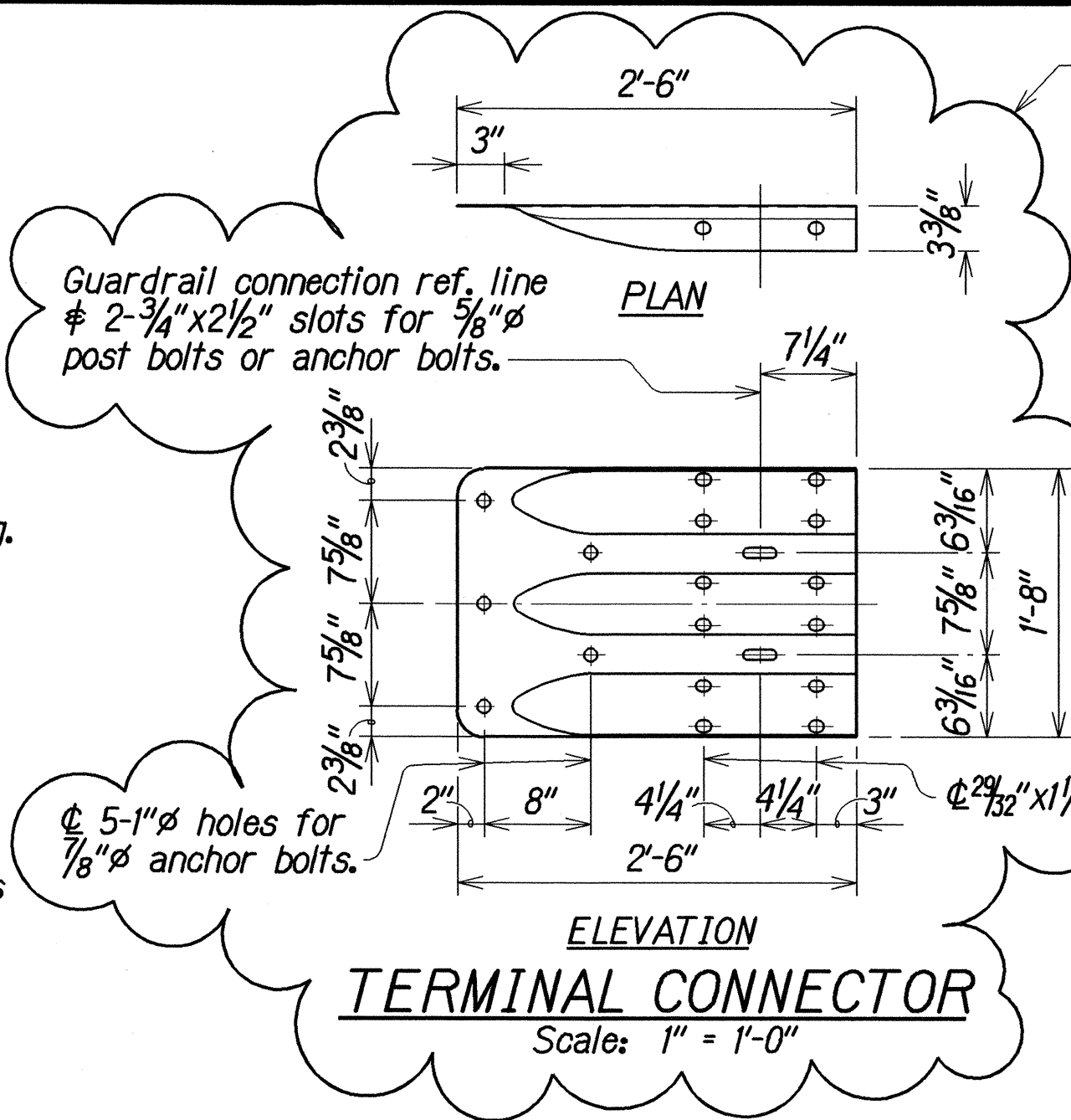


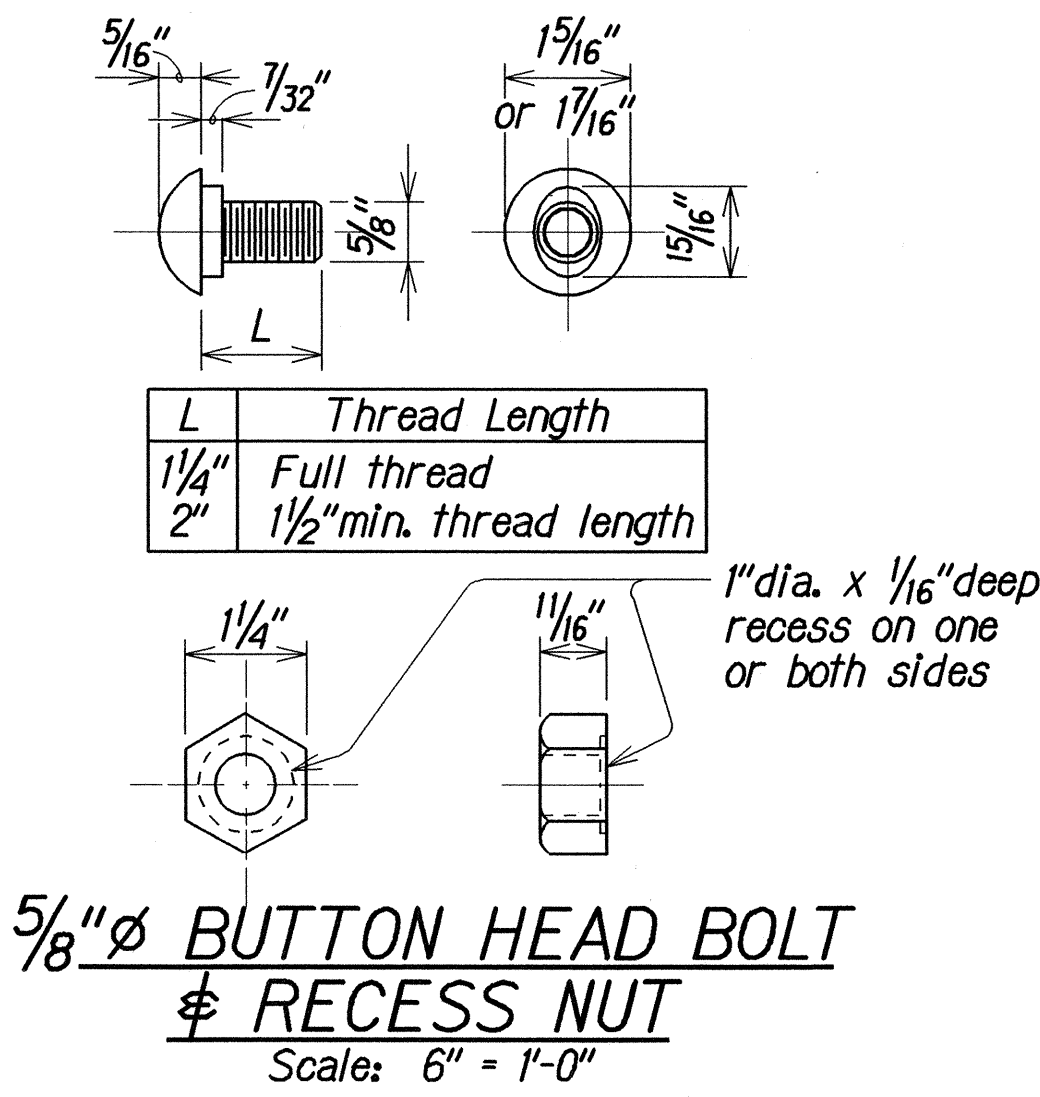
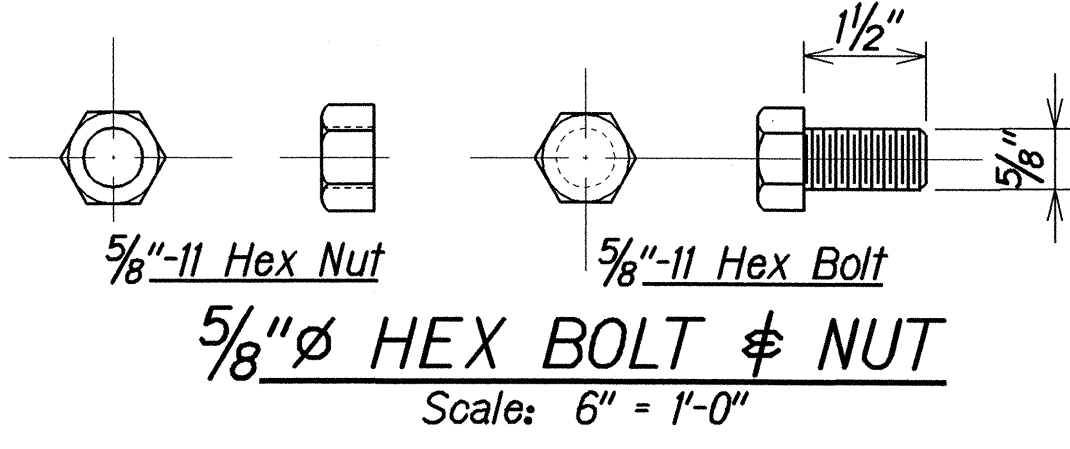
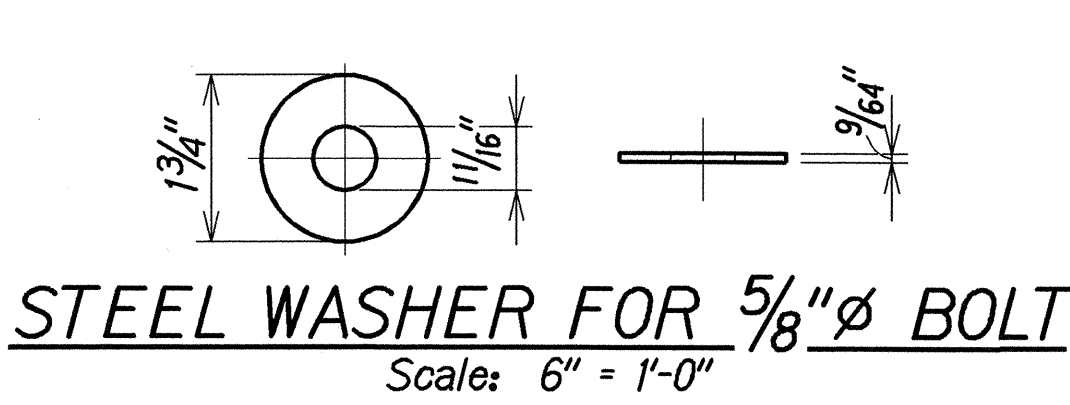
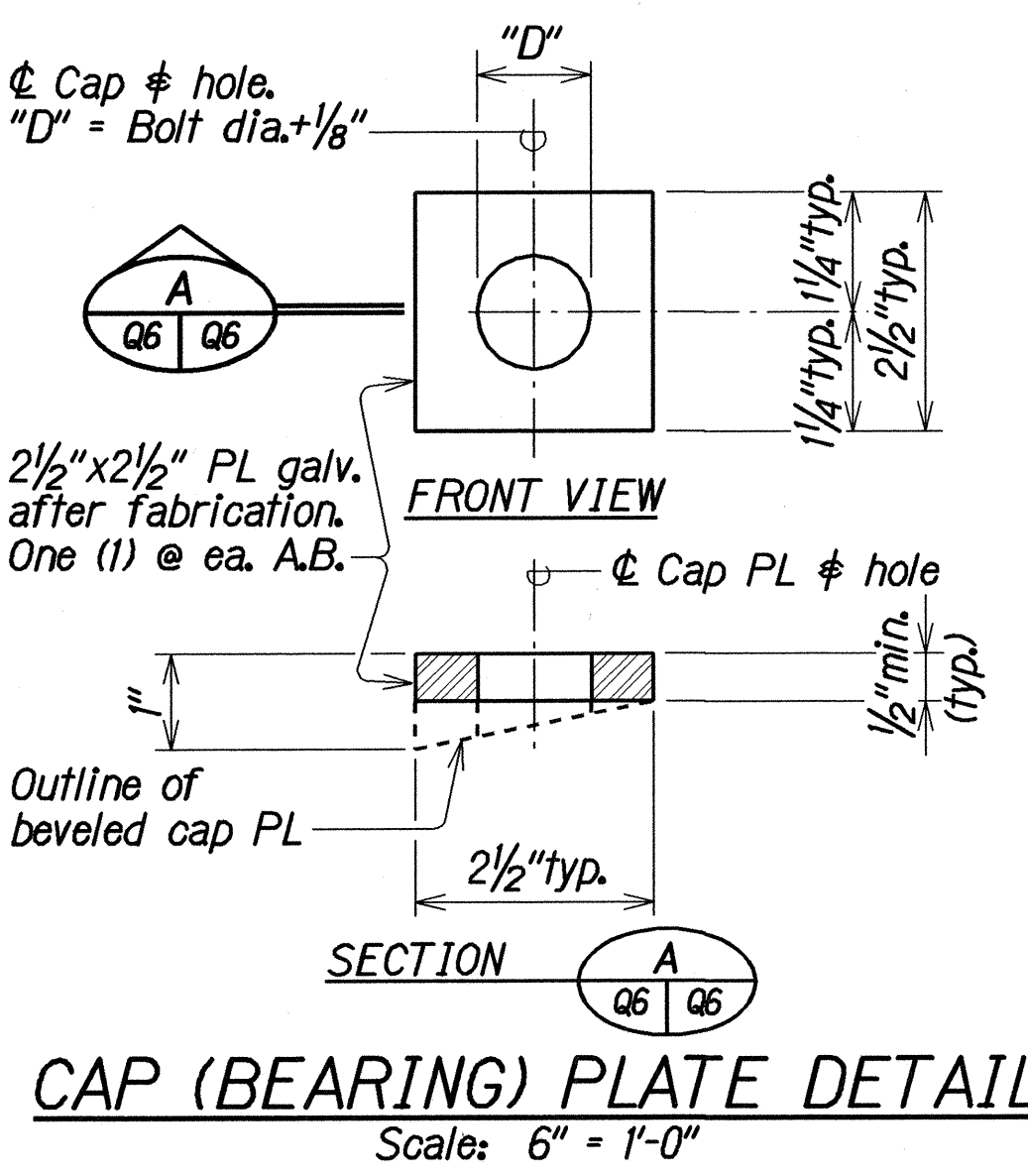
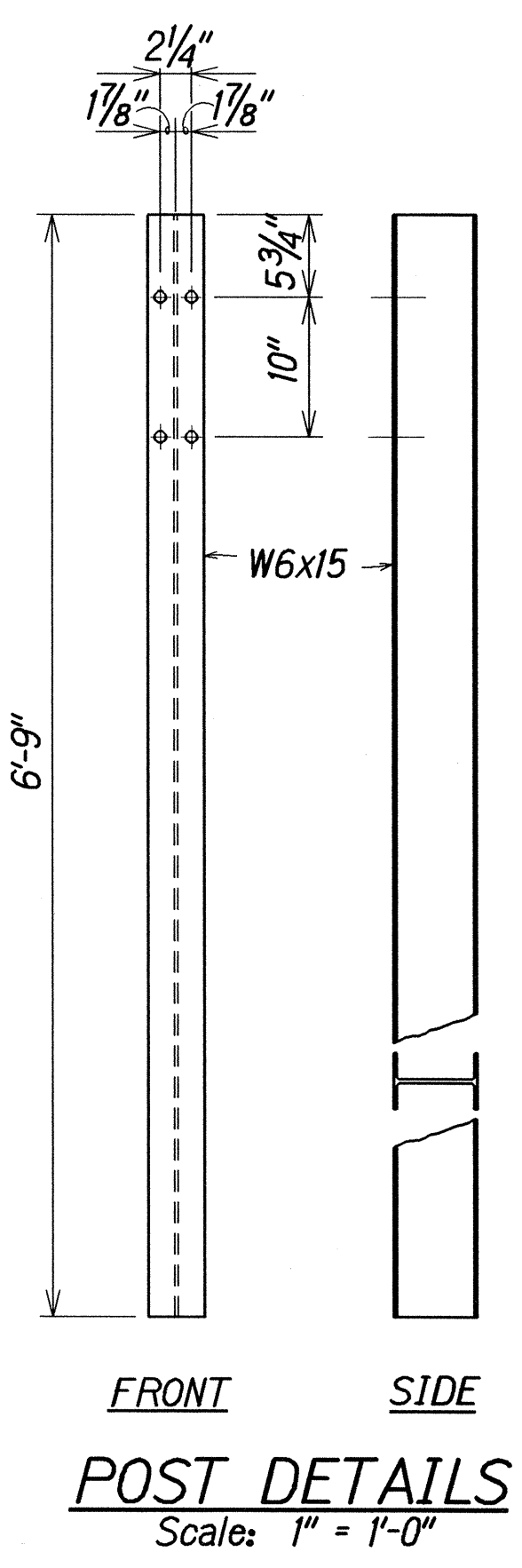
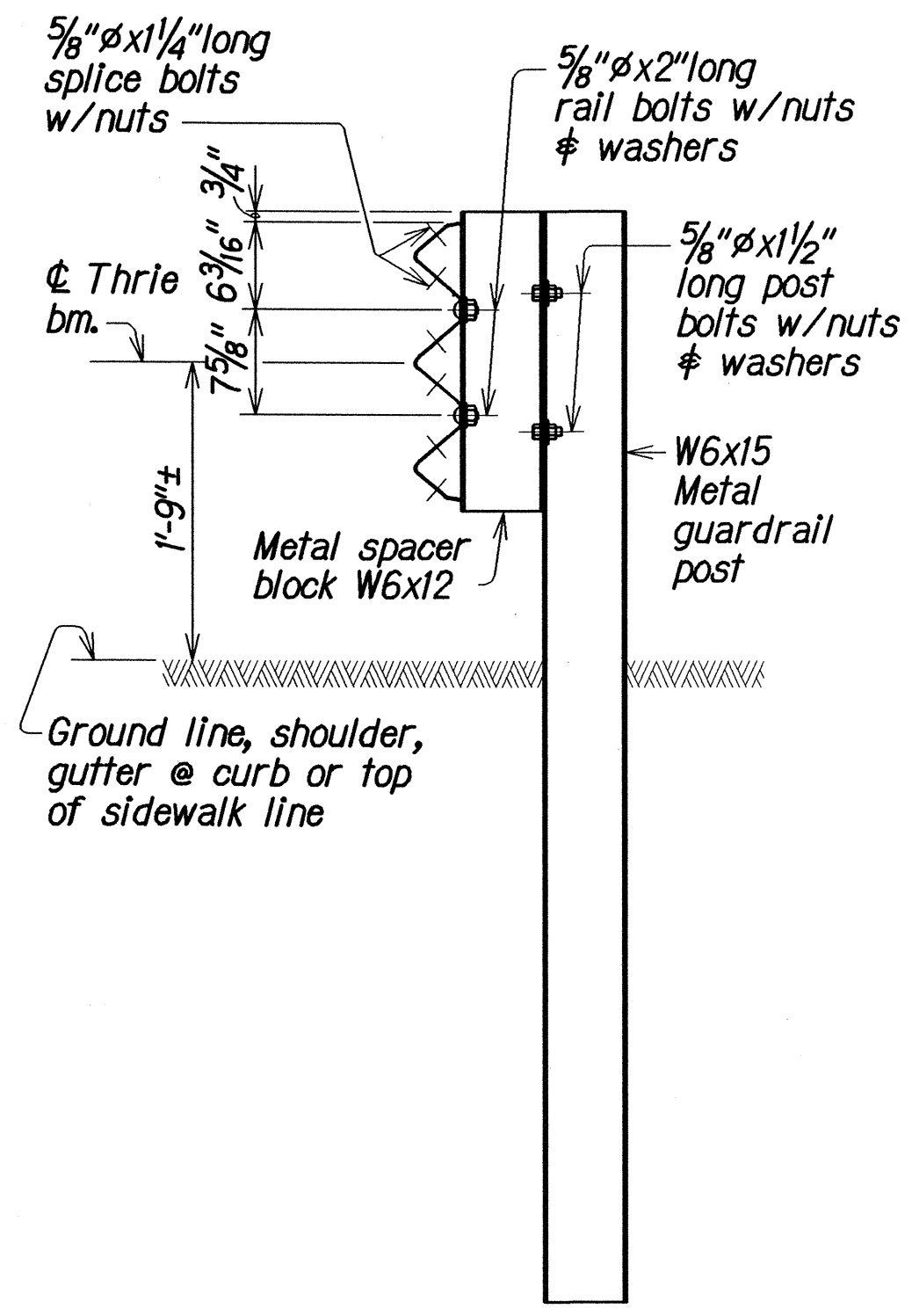
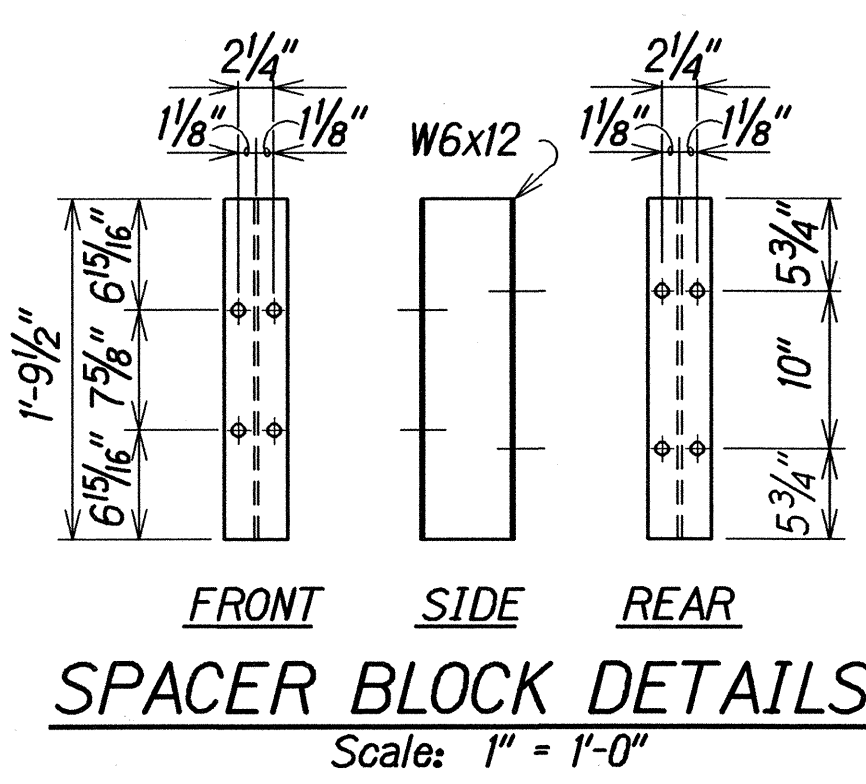
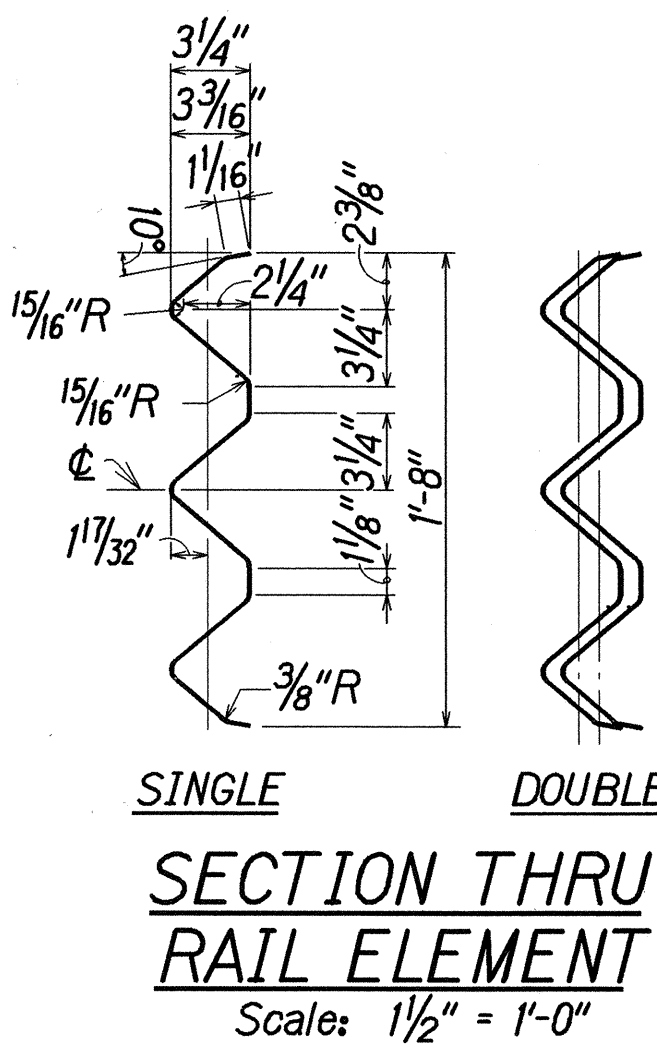
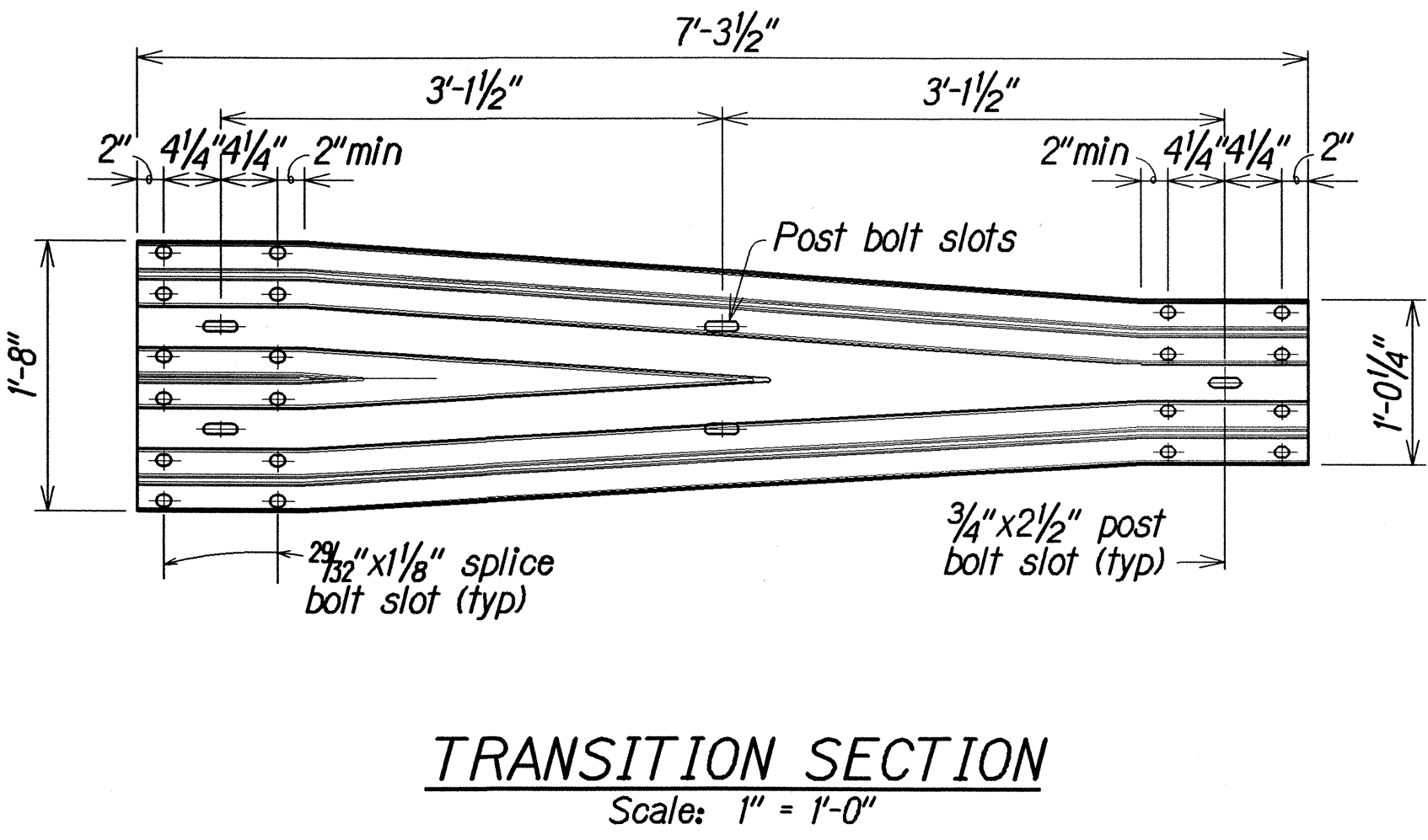
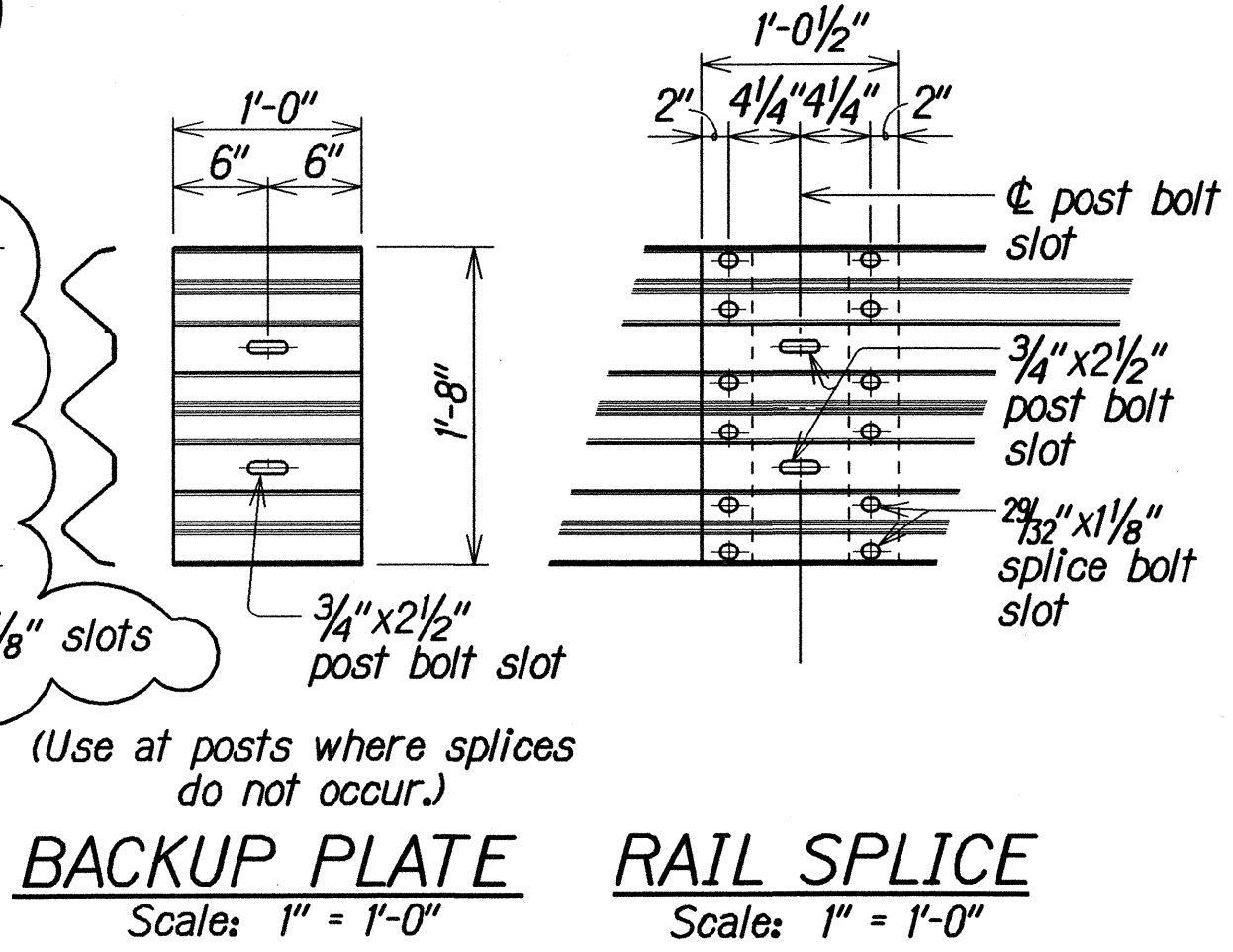
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83G-01-03M	2005	30	47

NOTES:

- The work necessary to connect guardrail to concrete end post shall include all labor, materials, tools, equipment and incidentals necessary to complete the work and will not be paid for separately.
- Lap terminal connector and rail element in direction of traffic to prevent snagging.
- All anchor bolts shall be high strength bolts conforming to the requirements of ASTM 325 and Standard Specification, Section 713.04.
- Anchor bolt length shall be such that a snug fit of the elements and full thread engagement plus 1/4" (max) is attained.
- "Terminal Connector", "Transition Section" and thrie beam shall be fabricated from 10 gauge steel conforming to the requirements of AASHTO M 180, Type II, Class B.
- "Terminal Connector" and standard spacer, including all anchor bolts, cap PL, nuts and washers, shall be hot-dip galvanized after fabrication.
- Cap PL shall be fabricated from ASTM A 36.
- First 25'-0" of guardrail adjoining "Terminal Connector" shall be galvanized steel and supports spaced as shown on the detail drawings. This section of rail shall be placed on tangent to end post or parallel to roadway, unless conditions at site renders it impossible to do so. Flare point to be determined in field.
- Double (nest 1st panel) thrie beam elements at all end post connections, except on highways with one-way traffic pattern, use single thrie beam elements at end post on trailing end only.
- Where double (nested) beam occur, 12" "Back-up Plate" not required.
- Heads of through anchor bolts shall be placed on the traffic side of the rail.
- All steel shapes, rails and plates shall conform to ASTM A 36 specifications.



For Information Only. At Kamooalii Stream Bridge Metal Guardrail Transition Upgrades at End Post Nos. 1, 3 and 4, re-use existing terminal connectors. See Sht.# Q3, Q4 and Q5.



METAL GUARDRAIL TYPE 3 THRIE BEAM AND APPURTENANCES DETAILS KAMOOALII STREAM BRIDGE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
METAL GUARDRAIL TYPE 3 THRIE BEAM and APPURTENANCES DETAILS
KAMEHAMEHA HIGHWAY RESURFACING
Kahiko Street to Pali Highway
Project No. 83G-01-03M
Scale: As Noted
Date: Feb. 2005
SHEET No. Q6 OF 10 SHEETS