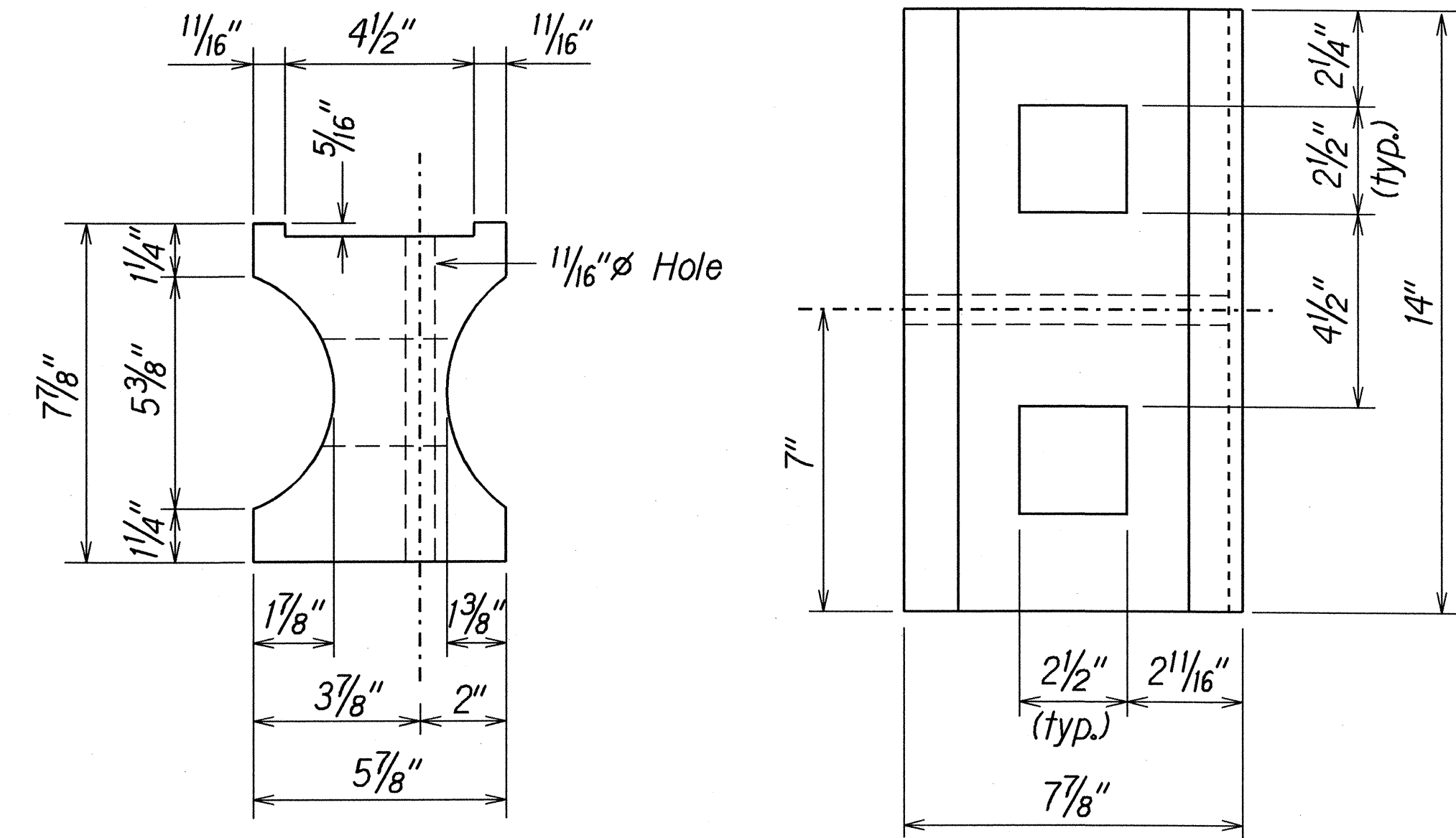


| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 36AB-01-04M | 2004 | 6 | 54 |

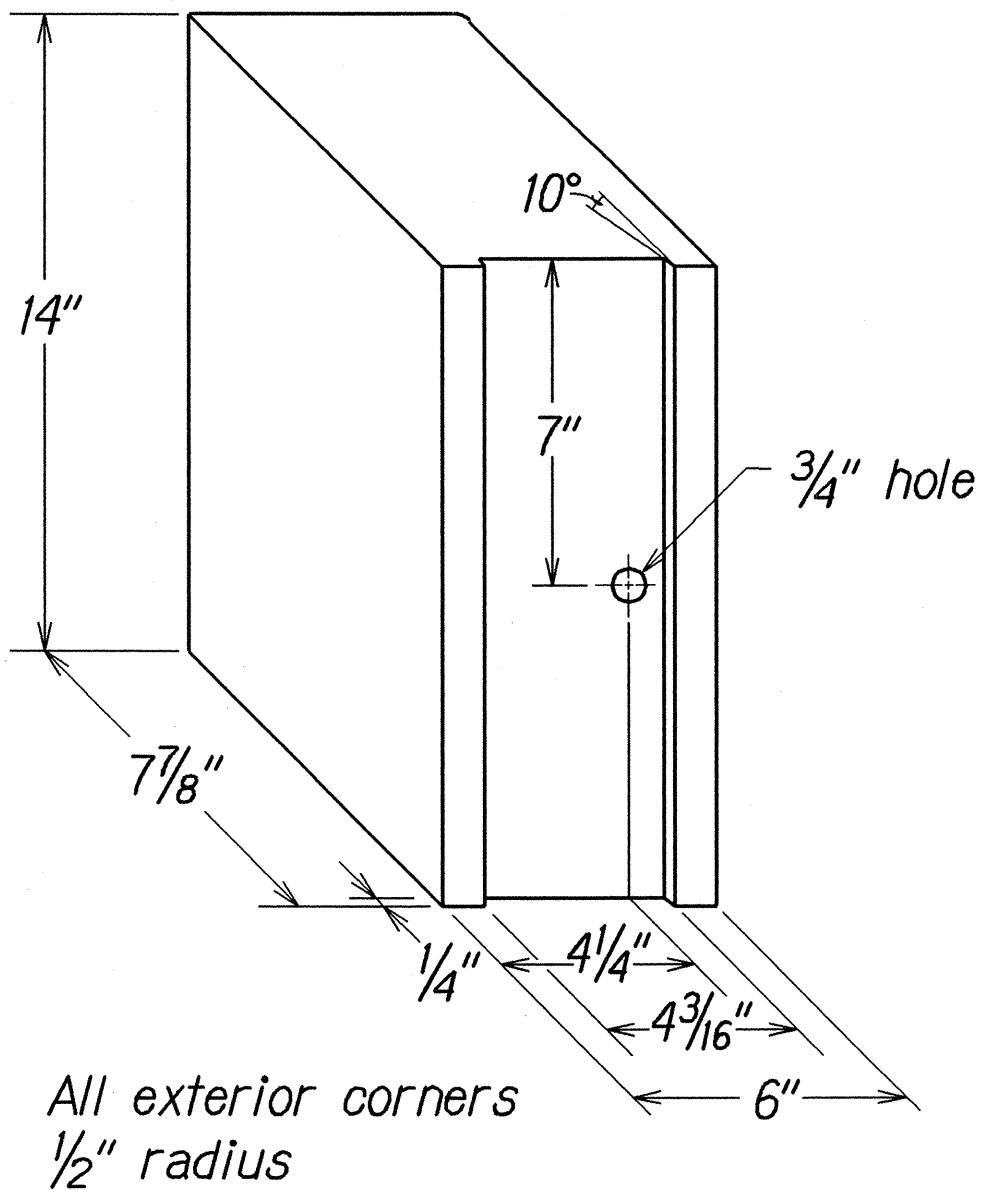
GENERAL NOTES

- All hardware, posts and fasteners shall be hot-dip zinc coated galvanized after fabrication. No punching, drilling or cutting will be permitted after galvanizing.
- Where conditions require, special post lengths in increments of 6 inches may be specified.
- All fasteners, posts, and rail elements (i.e. FBB03, PWE01, RWM02b, etc.) shall conform to the latest edition and amendments of "A Guide to Standardized Highway Barrier Rail Hardware", a report prepared and approved by the AASHTO-AGC-ARTBA Joint Cooperative Committee, Subcommittee On New Highway Materials, Task Force 13 Report. Dimensions of fastners, posts and rail elements have been converted from metric units into their present form.
- The Recycled Plastic Block or Offset Block shall be approved by the State.
- All new guardrail systems (system consists of total length of guardrail including both end treatments) shall include the Additional Paved Area.
- After the guardrail posts are installed in the paved area, the Contractor shall fill/seal around each guardrail post and all cracks in the paved area caused during the guardrail post installation. If required by the inspector/engineer, the Contractor shall tamper the paved area around the guardrail post prior to filling/sealing. All costs associated with this work shall not be paid for separately, but shall be considered incidental to the various guardrail items.
- When standards for the fill slope area cannot be met, a site specific, engineer approved design may be used.
- New A.C. pavement at guardrails shall extend 6 feet longitudinally beyond terminal ends.
- Reflector Markers (RM-5) mounted on guardrails shall be spaced every 25 feet. Spacing of RM-5's on Horizontal Curves shall comply with Table III-1 of the MUTCD. RM-5's shall not be installed on Terminal Sections.

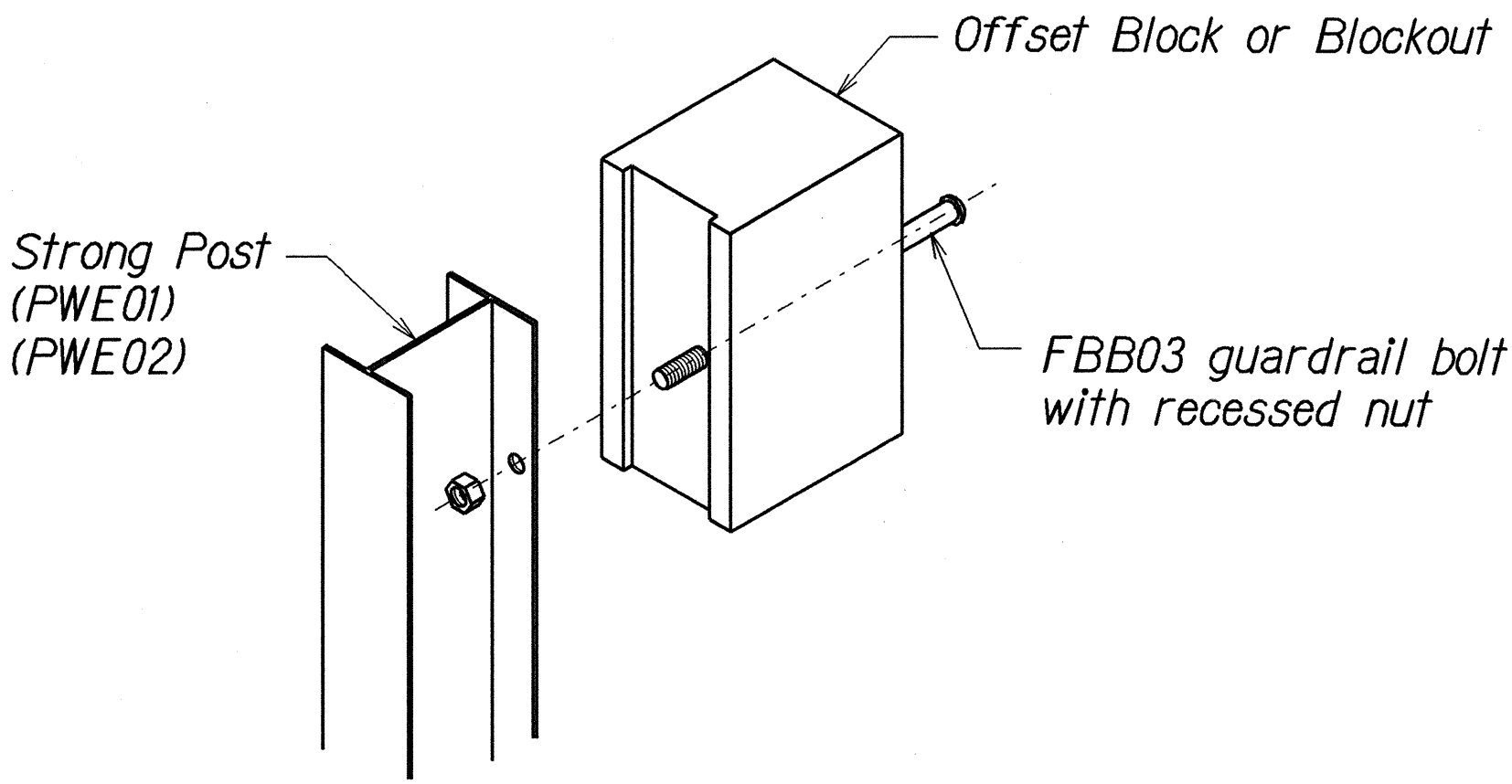
| GUARDRAIL TYPE | DIMENSION | |
|------------------------------------|------------------------------------|-------|
| | H | A |
| Strong Post W-Beam | 1'-9 ⁵ / ₈ " | 1'-6" |
| Strong Post Rubrail (W-Beam) | 2'-0" | 1'-6" |
| Modified or Strong Post Thrie Beam | 2'-0" | 2'-0" |



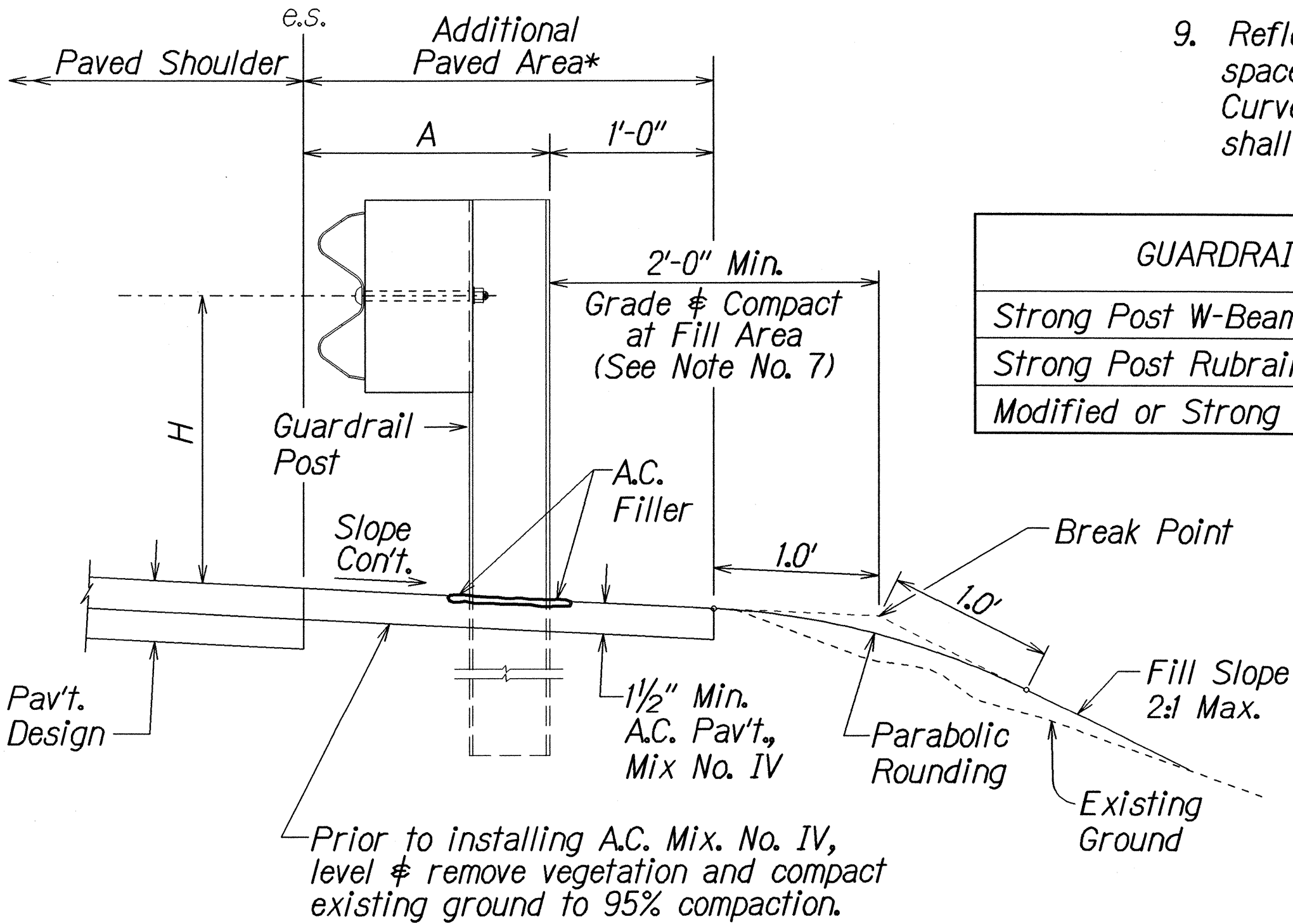
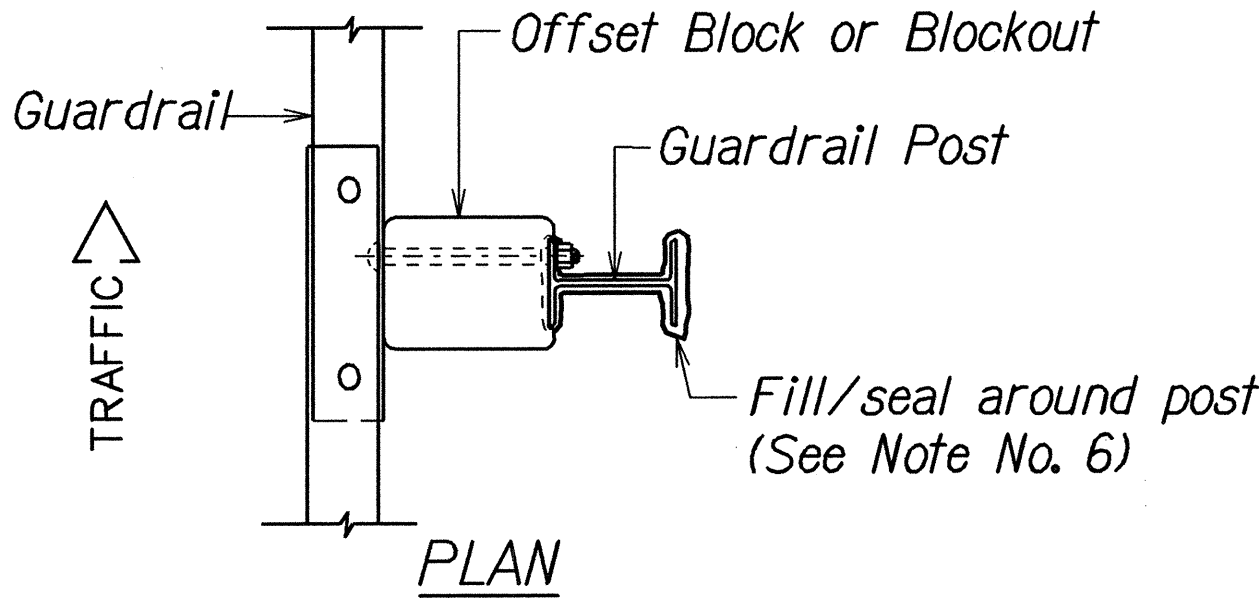
RECYCLED PLASTIC BLOCKOUT (TYPE I)



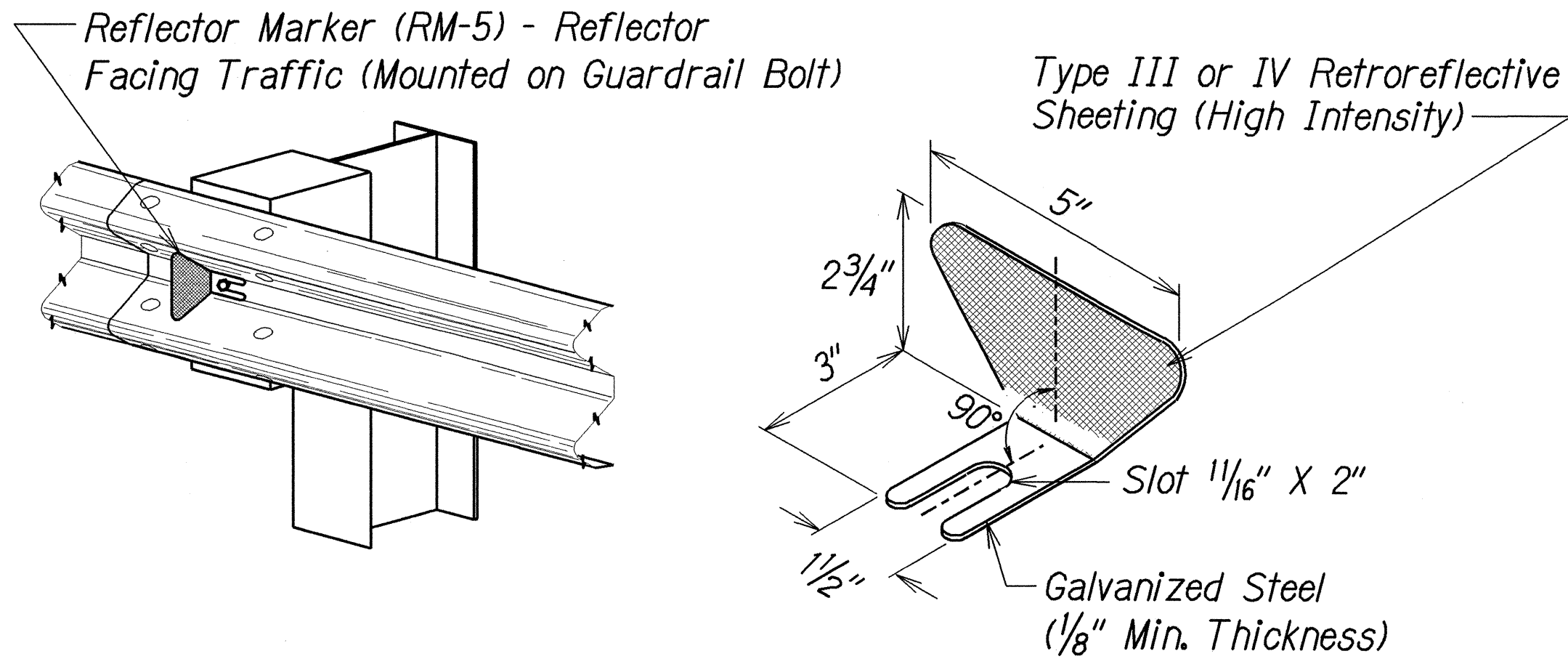
RECYCLED POLYETHYLENE OFFSET BLOCK (TYPE II)



STEEL POST AND BLOCK DETAIL



TYPICAL GUARDRAIL INSTALLATION



REFLECTOR MARKER (RM-5) DETAIL AND TYPICAL INSTALLATION

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

GUARDRAIL DETAILS & NOTES

HANA HIGHWAY RESURFACING

Haleakala Highway to Hookipa Park

Project No. 36AB-01-04M

Scale: NTS

Date: December, 2003

SHEET No. 1

OF 1

SHEETS