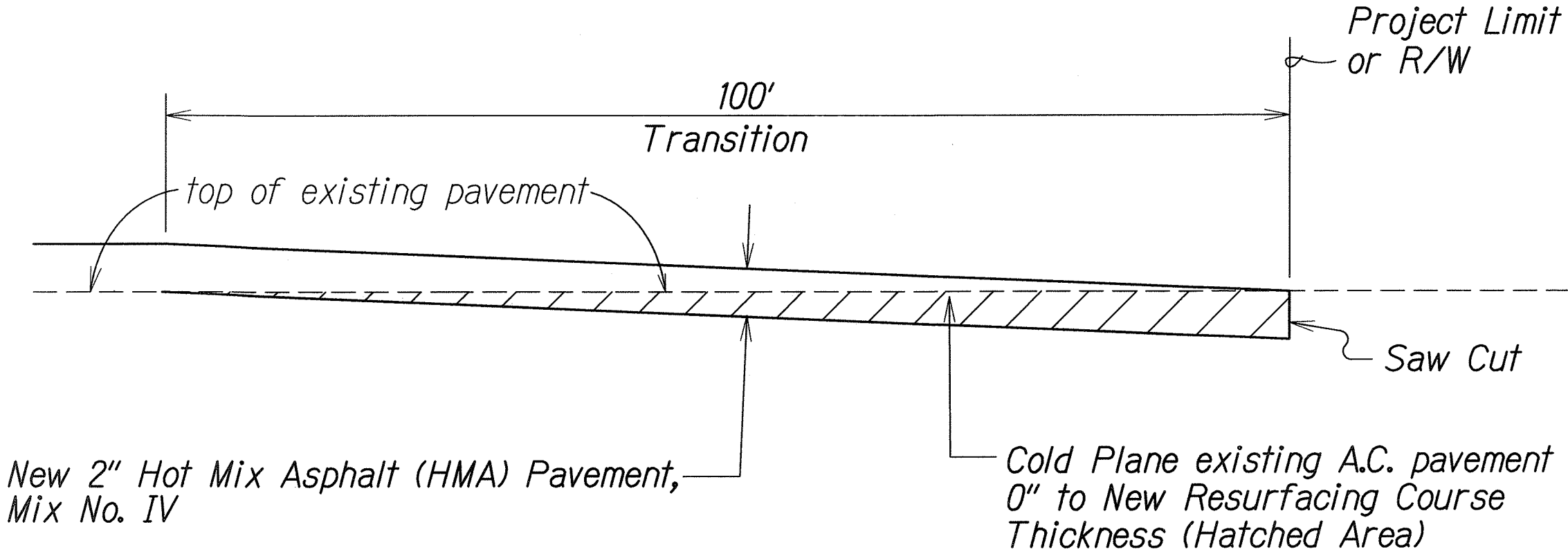
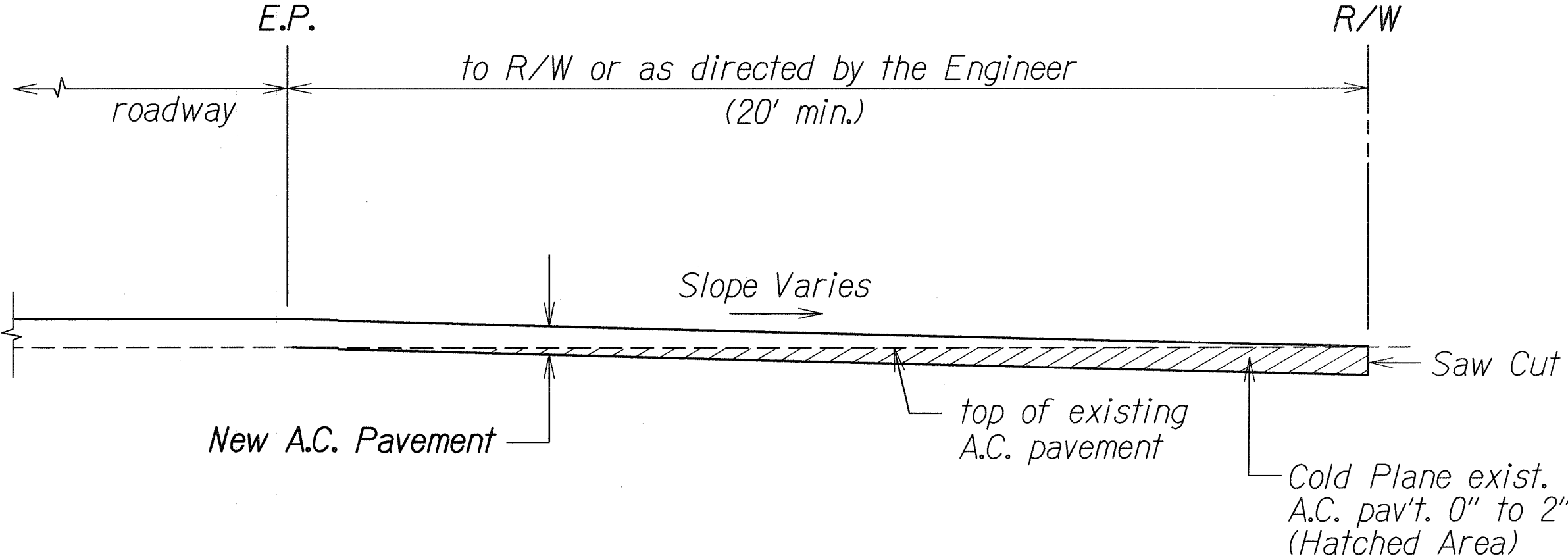


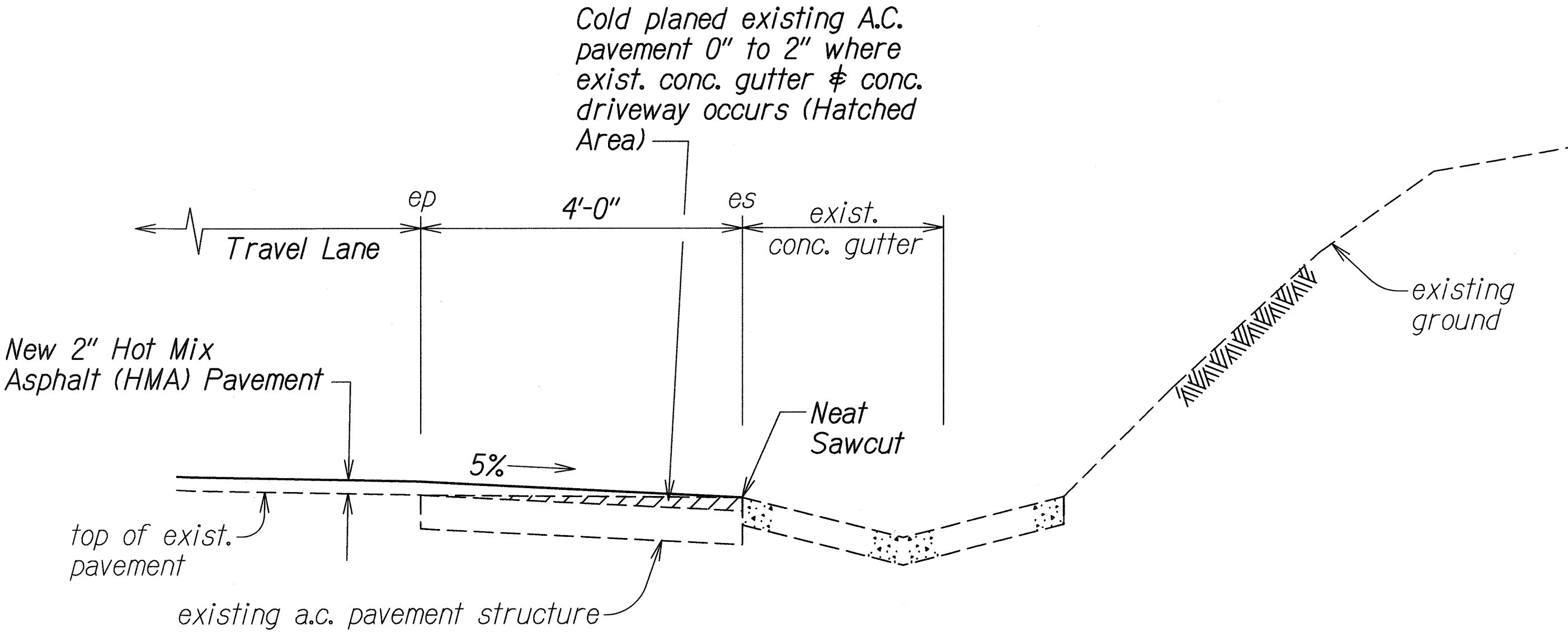
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 460A-01-11M | 2011 | ADD.7 | 28 |



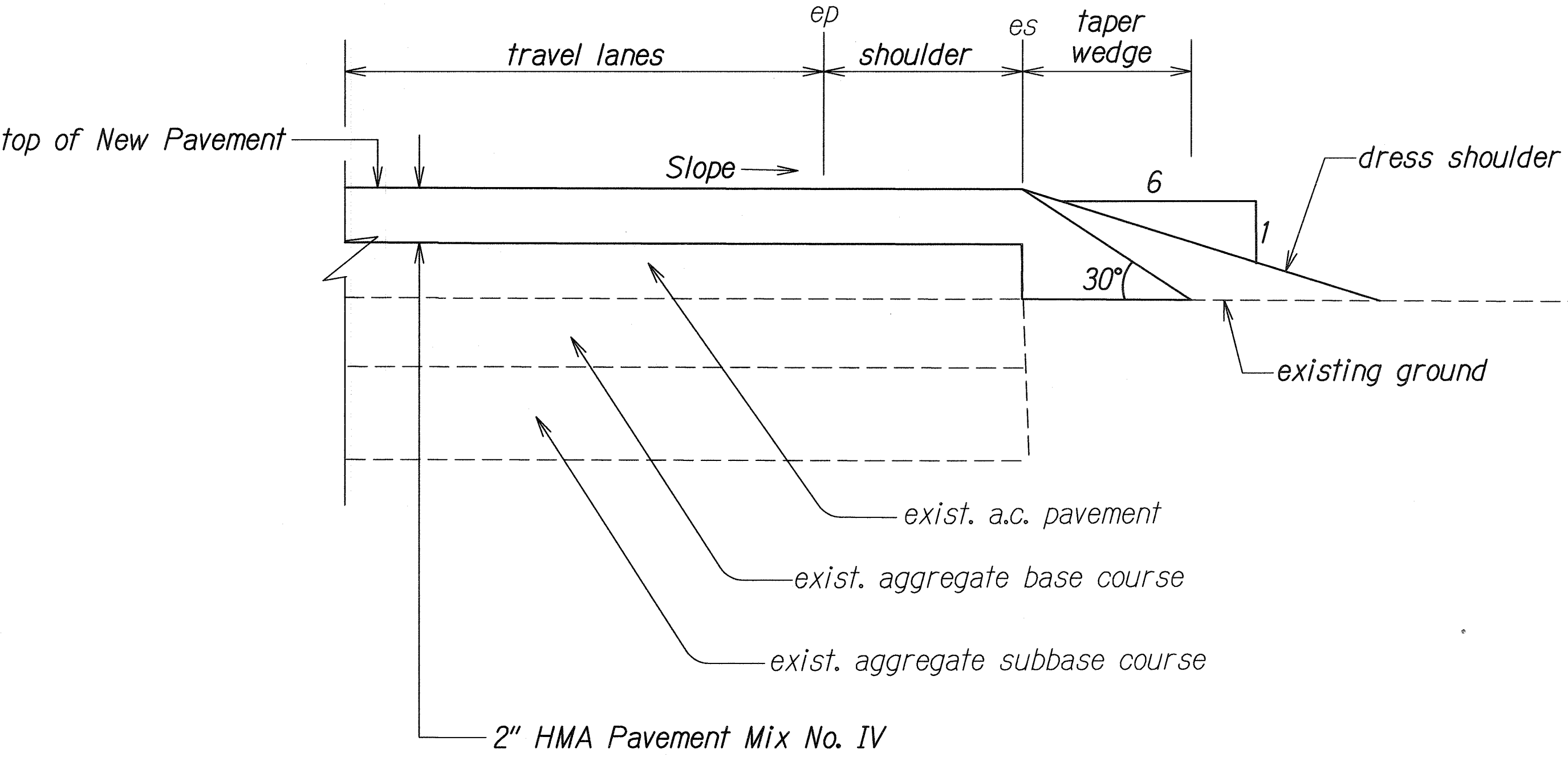
**COLD PLANED TRANSITION TO EXISTING A.C. PAVEMENT DETAIL
BEGIN AND END OF PROJECT**
Not To Scale



**COLD PLANED TRANSITION TO EXISTING
PAVED SIDE ROAD DETAIL**
Not To Scale



**DETAIL FOR COLD PLANE AT THE
FACE OF EXISTING CONCRETE GUTTER**
Scale: 3/4" = 1'-0"



Note: Contractor shall mount a device directly on the paver screed extension to provide a 30° beveled shoulder edge.

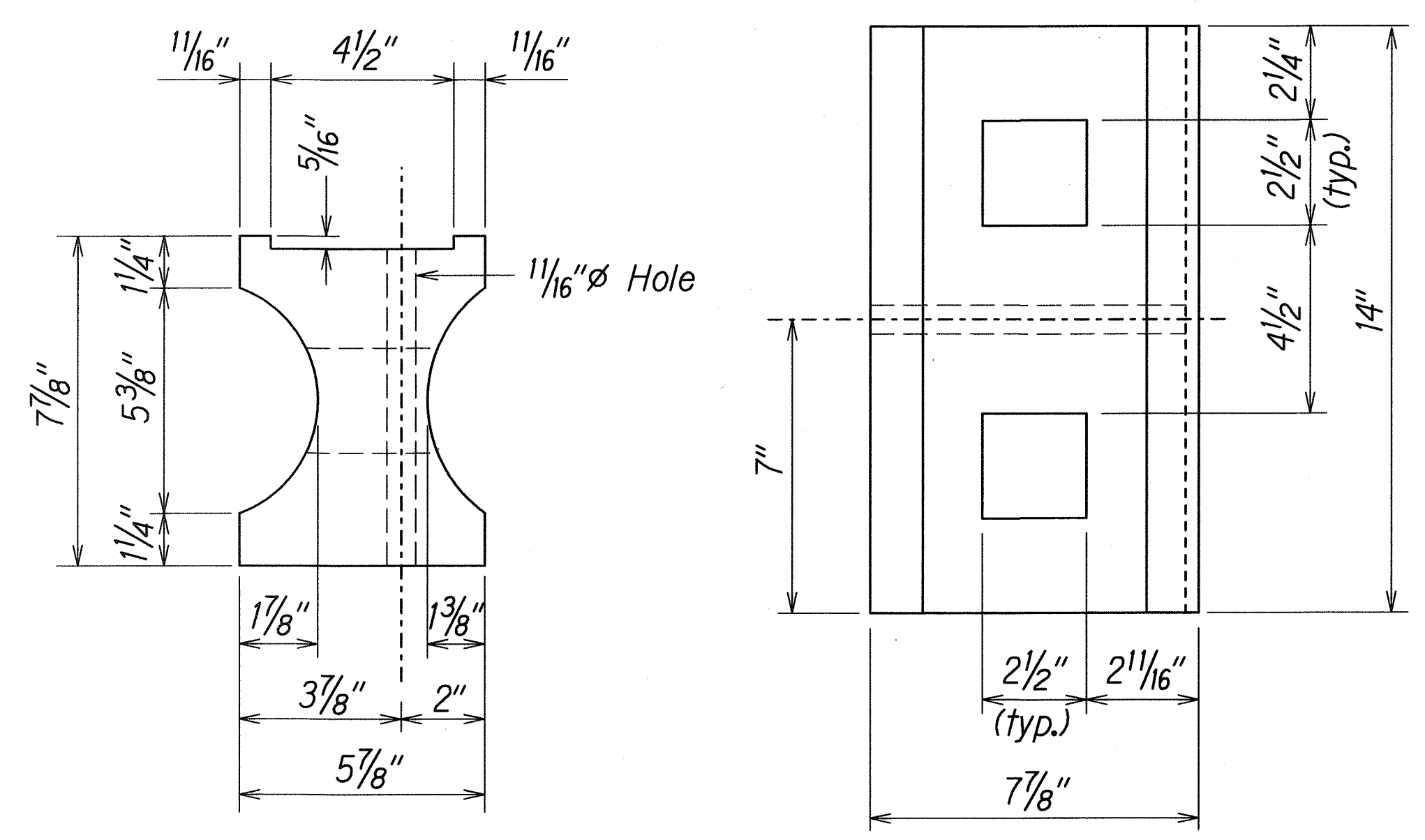
**TYPICAL PAVEMENT EDGE DETAIL
(FOR OVERLAYING PROJECT)**
Not To Scale

| | |
|--|-------------------|
| STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION | |
| TYPICAL SECTIONS & DETAILS | |
| MAUNALOA HIGHWAY RESURFACING Vicinity of Keonelele Avenue to Mahana Project No. 460A-01-11M | |
| Scale: As Shown | Date: April, 2010 |
| SHEET No. 2 OF 2 SHEETS | |

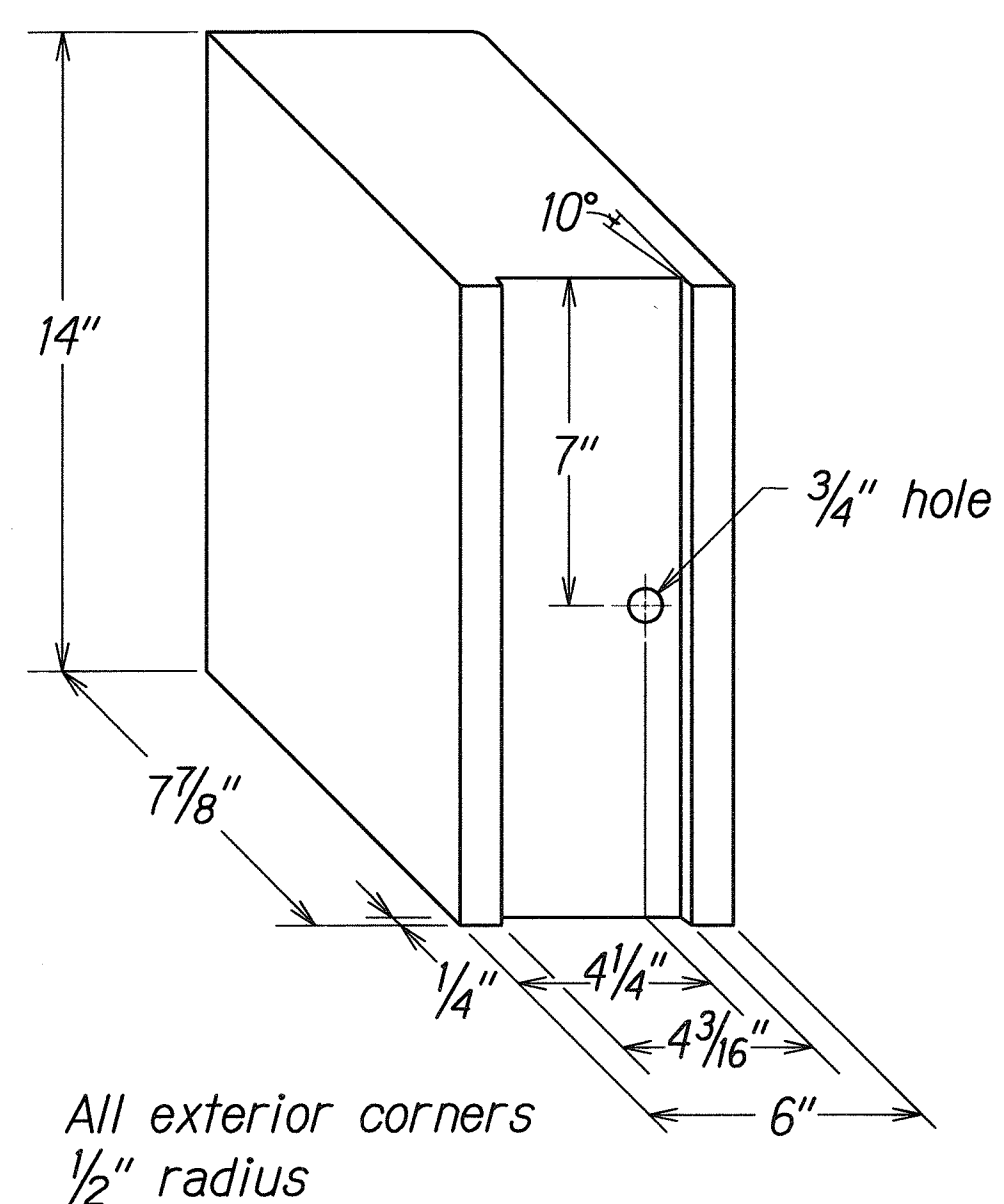
| | |
|----------|-------------------------------------|
| 11-29-10 | Added Typical Pavement Edge Detail. |
| DATE | REVISION |

| | |
|-------------------|-------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | 11/06 |
| TRACED BY | |
| CHECKED BY | |
| NOTED BY | |
| QUANTITIES BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| MEASUREMENTS | |
| CHECKED BY | |

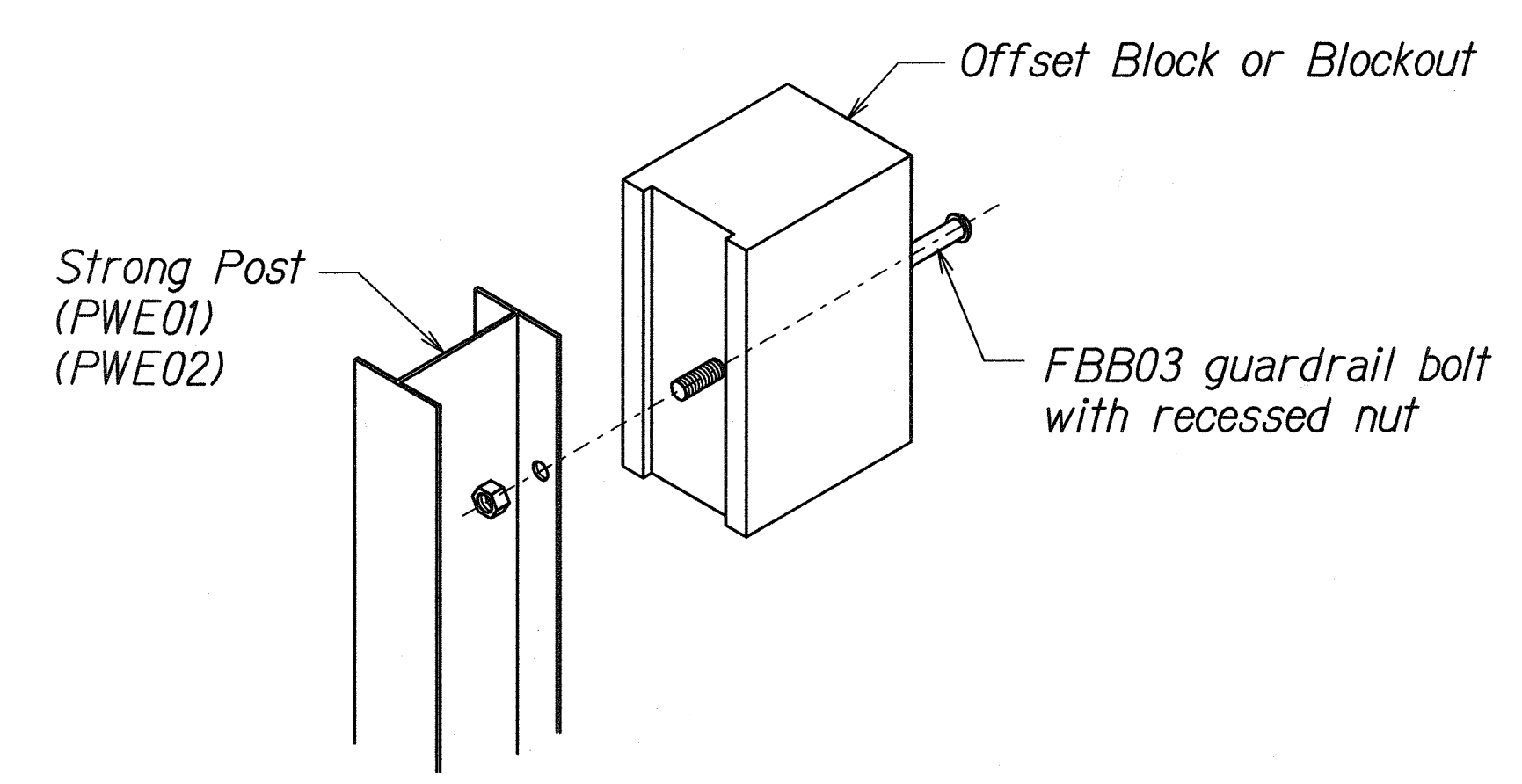
| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 460A-01-11M | 2011 | ADD.11S-1 | 28 |



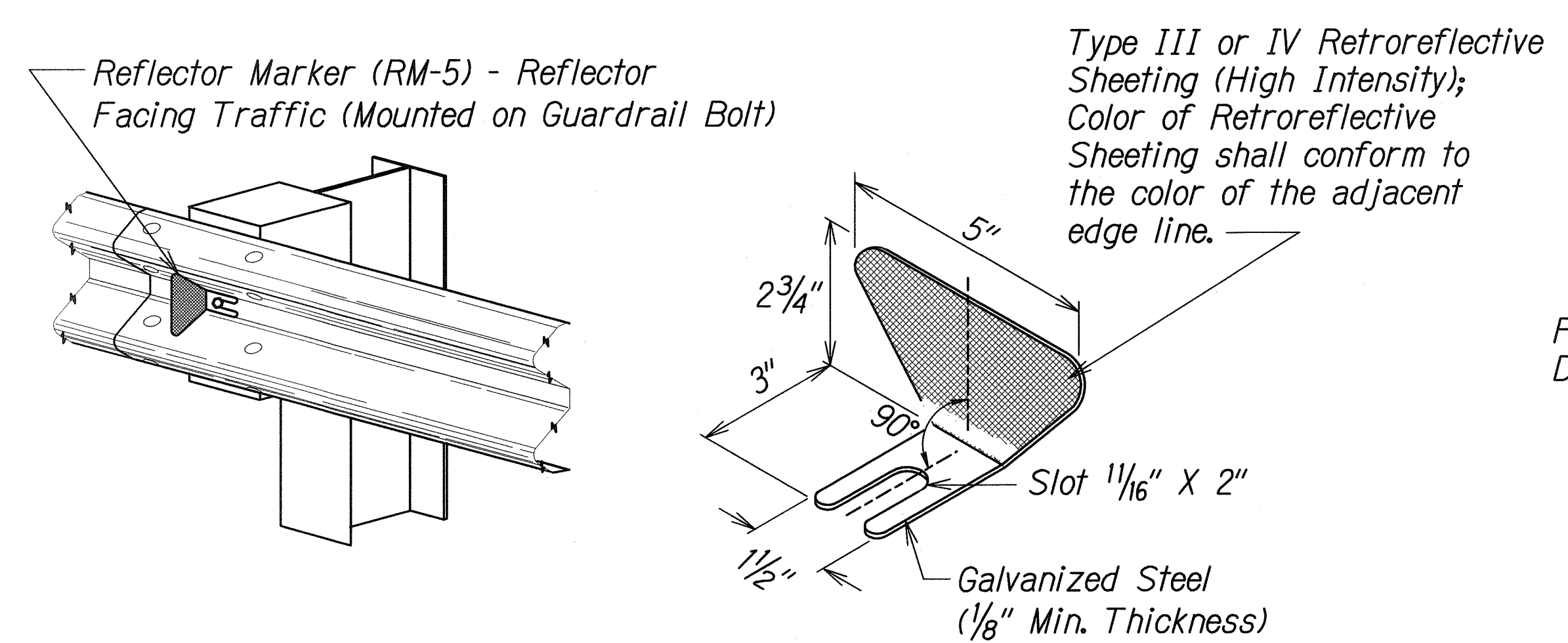
TOP
SIDE
RECYCLED PLASTIC BLOCKOUT (TYPE I)



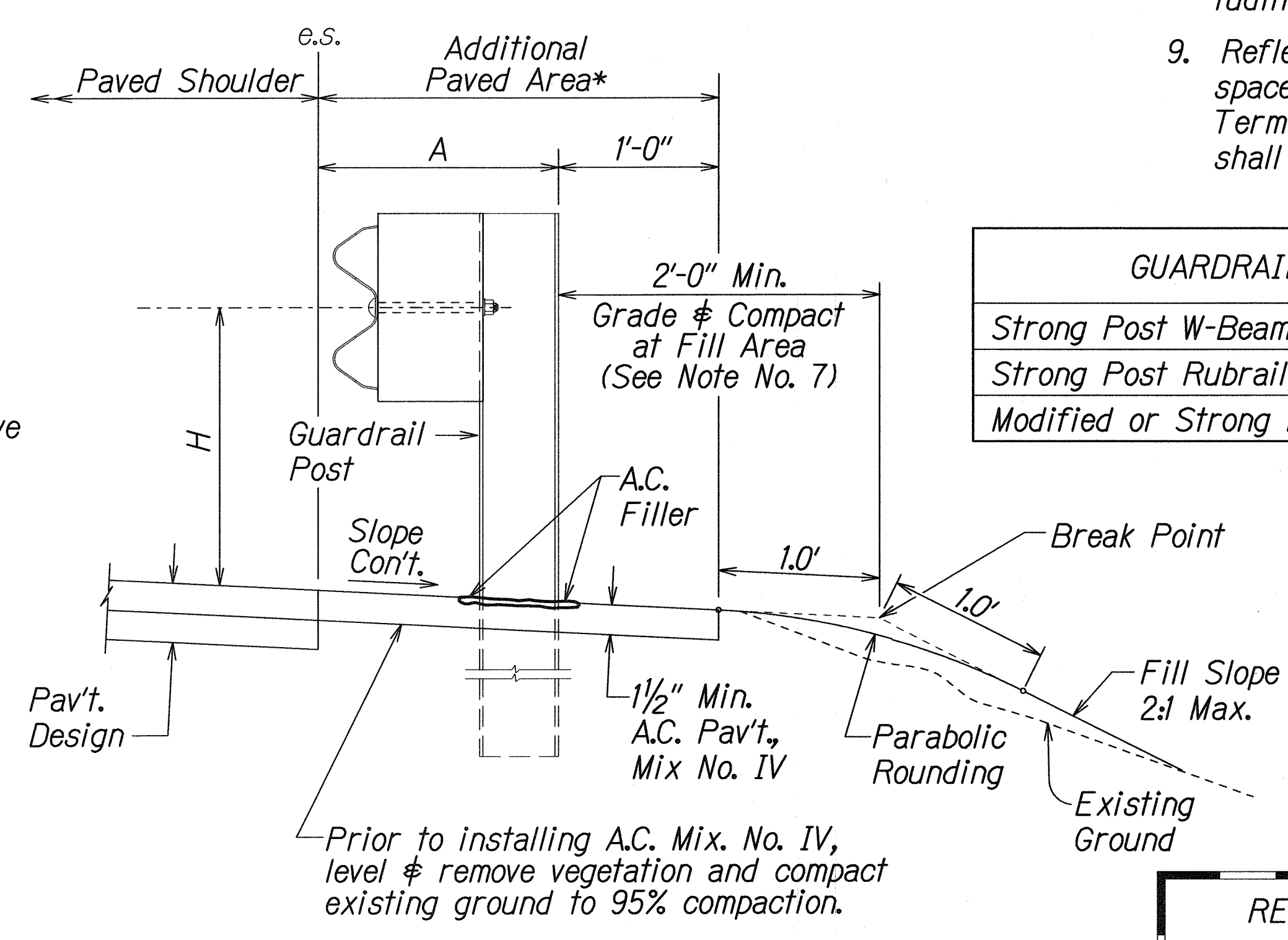
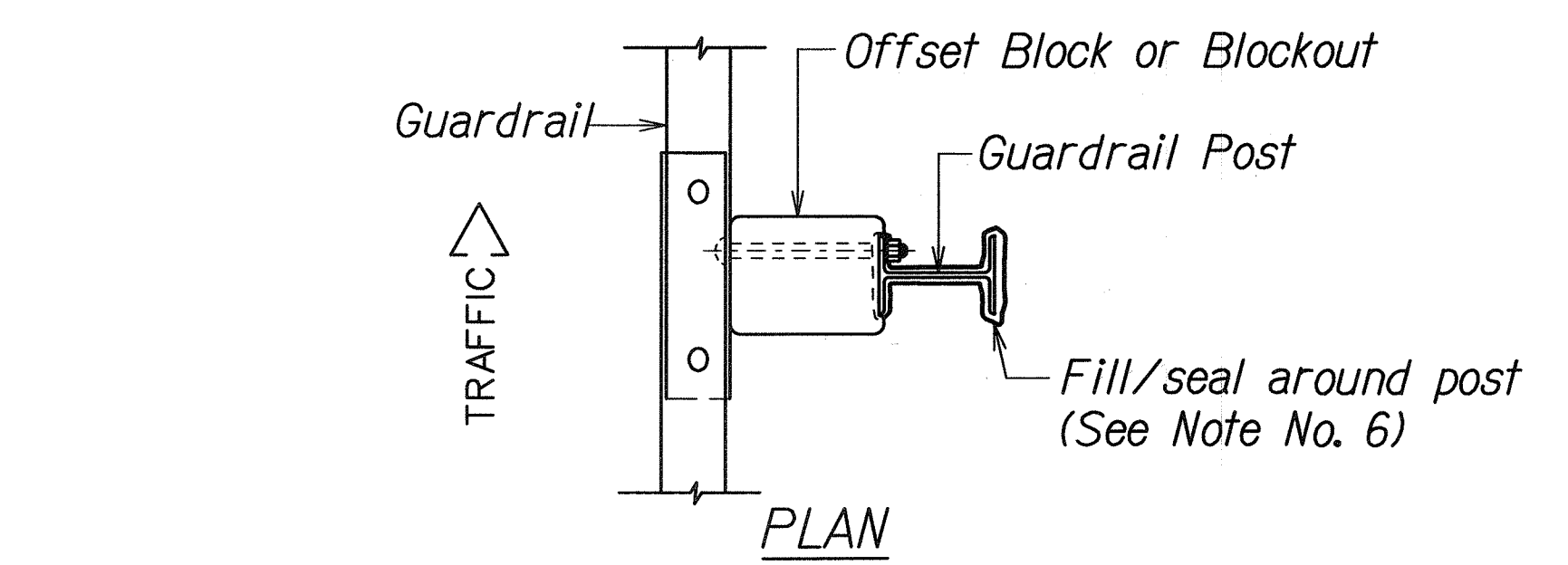
RECYCLED POLYETHYLENE
OFFSET BLOCK (TYPE II)



Exploded View
(Rail and washer not shown)
STEEL POST AND BLOCK DETAIL



REFLECTOR MARKER (RM-5) DETAIL AND TYPICAL INSTALLATION



TYPICAL GUARDRAIL INSTALLATION

GENERAL NOTES

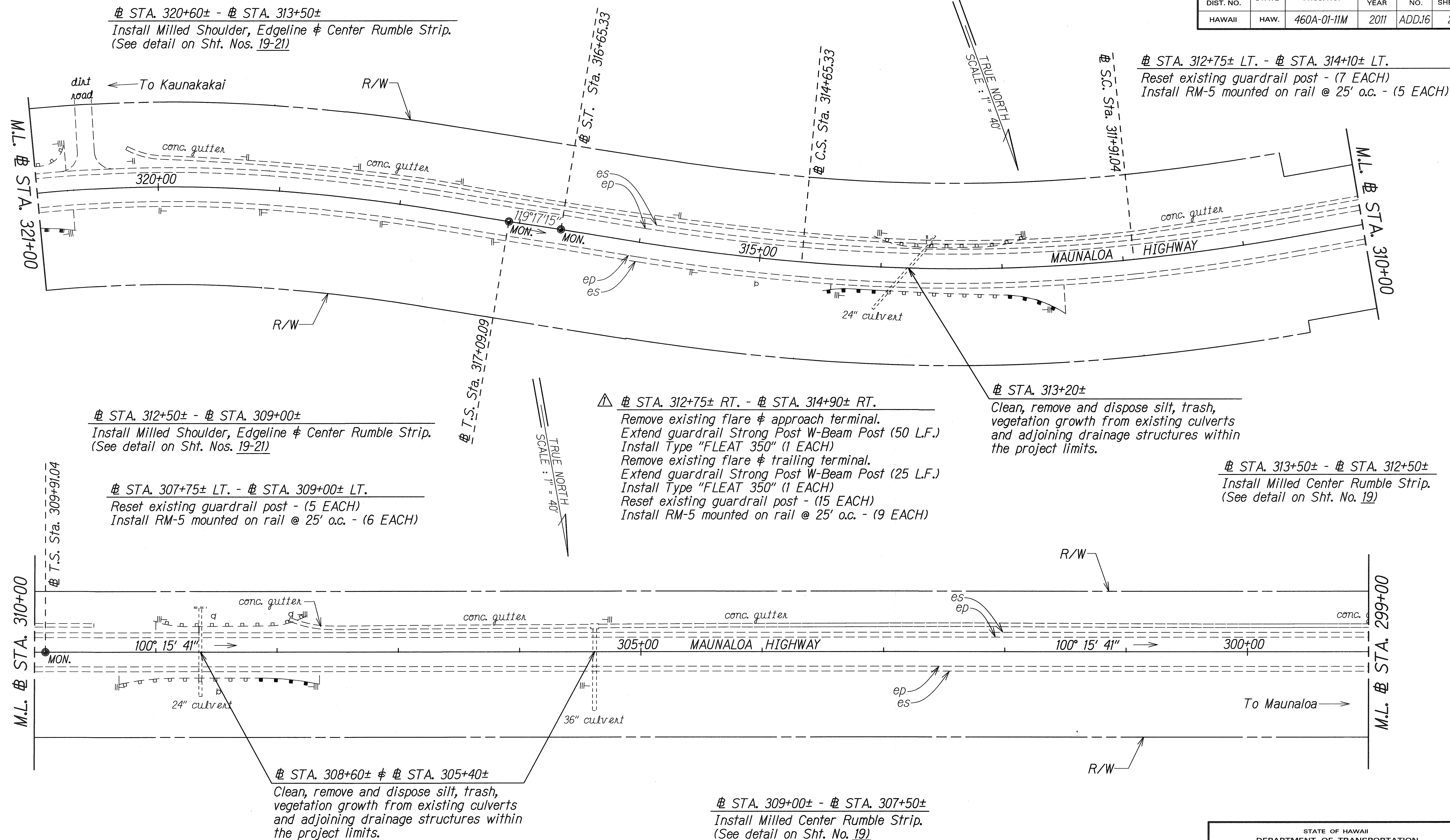
1. All hardware, posts and fasteners shall be hot-dip zinc coated galvanized after fabrication. No punching, drilling or cutting will be permitted after galvanizing.
2. Where conditions require, special post lengths in increments of 6 inches may be specified.
3. All fasteners, posts, and rail elements (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.
4. The Recycled Plastic Block or Offset Block shall be approved by the State.
5. All new guardrail systems (system consists of total length of guardrail including both end treatments) shall include the Additional Paved Area.
6. 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.
7. When standards for the fill slope area cannot be met, a site specific, engineer approved design may be used.
8. New A.C. pavement at guardrails shall extend 6 feet longitudinally beyond terminal ends.
9. Reflector Markers (RM-5) mounted on guardrails shall be spaced every 25 feet. RM-5's shall not be installed on Terminal Sections. Furnishing and installing of each RM-5 shall be considered incidental to the adjacent guardrail system.

| 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" |



| 11-24-10 | Additional Guardrail Details & Notes. |
|--|---------------------------------------|
| DATE | REVISION |
| STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION GUARDRAIL DETAILS & NOTES MAUNALOA HIGHWAY RESURFACING Vicinity of Keonelele Avenue to Mahana Project No. 460A-01-11M Scale: NTS Date: November, 2010 SHEET No. 1 OF 1 SHEETS | |

| FED. ROAD DIST. NO. | STATE | PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|-------------|-------------|-----------|--------------|
| HAWAII | HAW. | 460A-01-11M | 2011 | ADD.16 | 28 |



| | |
|-------------------|------|
| SURVEY PLOTTED BY | DATE |
| DRAWN BY | |
| TRACED BY | |
| CHECKED BY | |
| NOTED BY | |
| DESIGNED BY | |
| CHECKED BY | |
| ORIGINAL PLAN | |
| NOTE BOOK | |
| DATE | |
| BY | |

| | |
|----------|---|
| 11-24-10 | Revised stationing @ Sta. 312+50± Rt. - Sta. 314+40± Rt. to Sta. 312+75± Rt. - Sta. 314+90± Rt. and comments. |
| DATE | REVISION |

| |
|--|
| STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION |
| ROADWAY PLAN |
| MAUNALOA HIGHWAY RESURFACING |
| Vicinity of Keonelele Avenue to Mahana |
| Project No. 460A-01-11M |
| Scale: 1" = 40' Date: August, 2010 |
| SHEET No. 5 OF 6 SHEETS |

ADD.16