

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"



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Russell M. Arakawa
APRIL 30, 2014
LIC. EXP. DATE

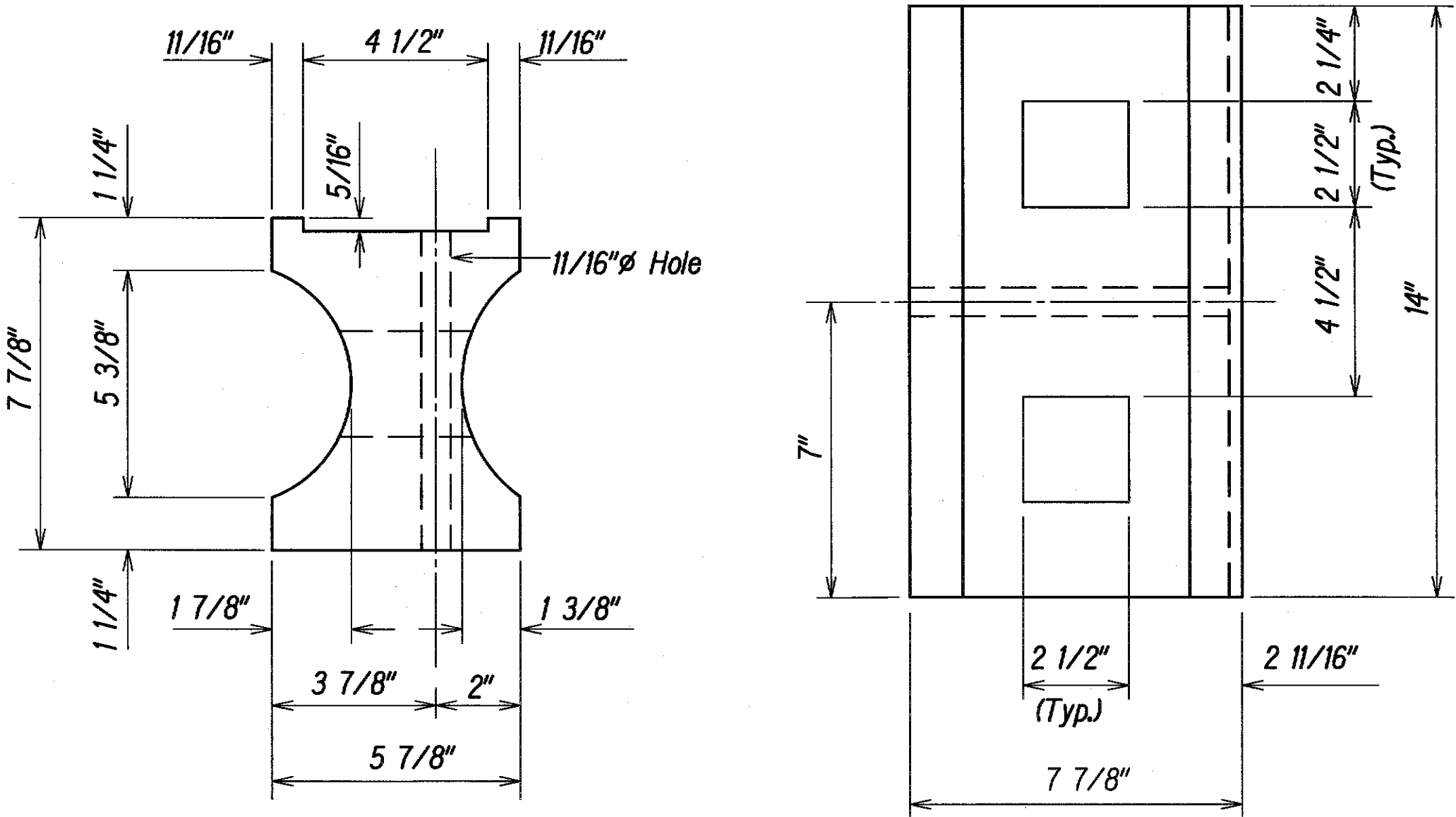
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL DETAILS AND NOTES

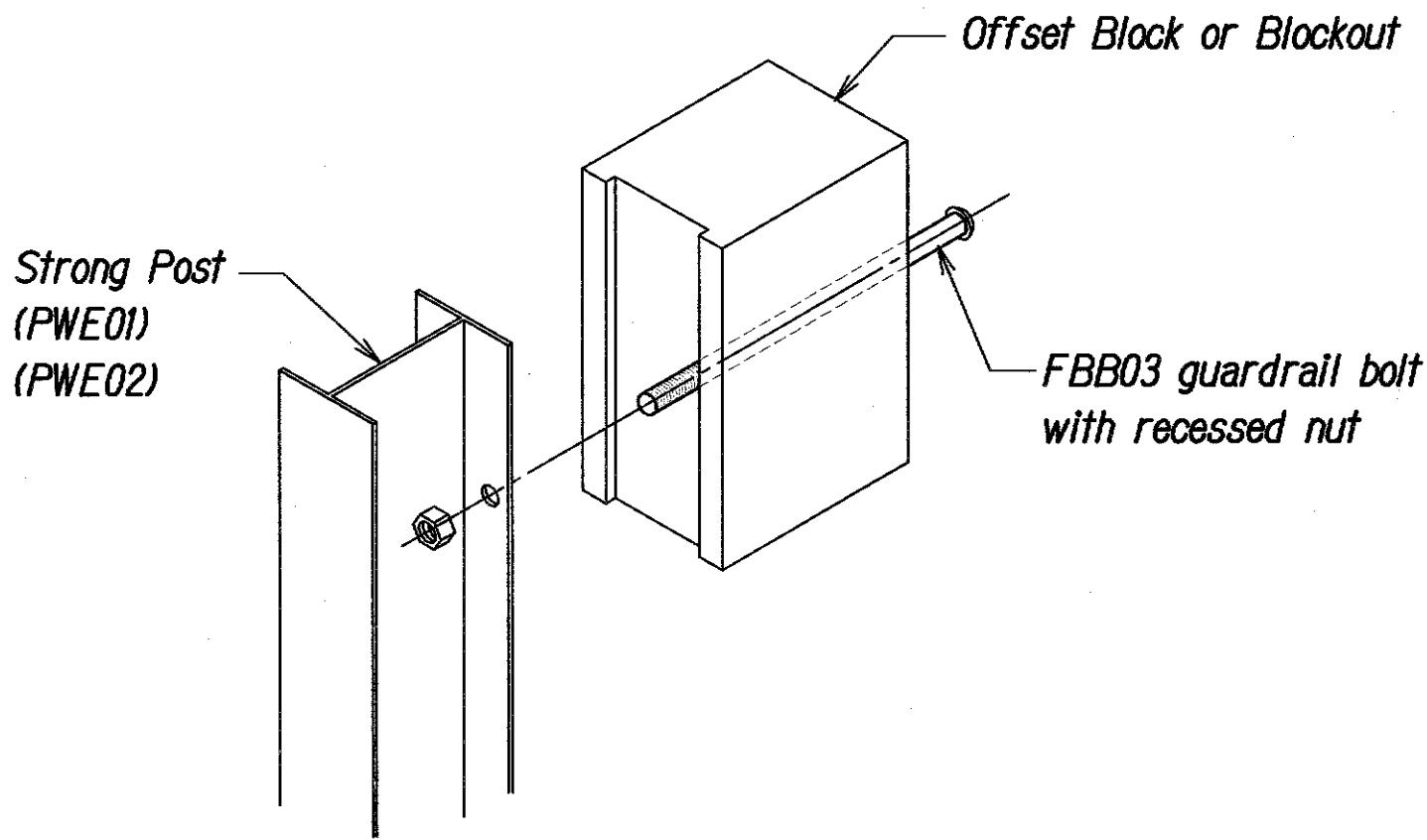
KEKAULIKE AVENUE
Drainage Improvements
Mile Post 7.6 to Mile Post 7.9
PROJECT NO. 377A-01-11

Scale: As Shown Date: September 2013

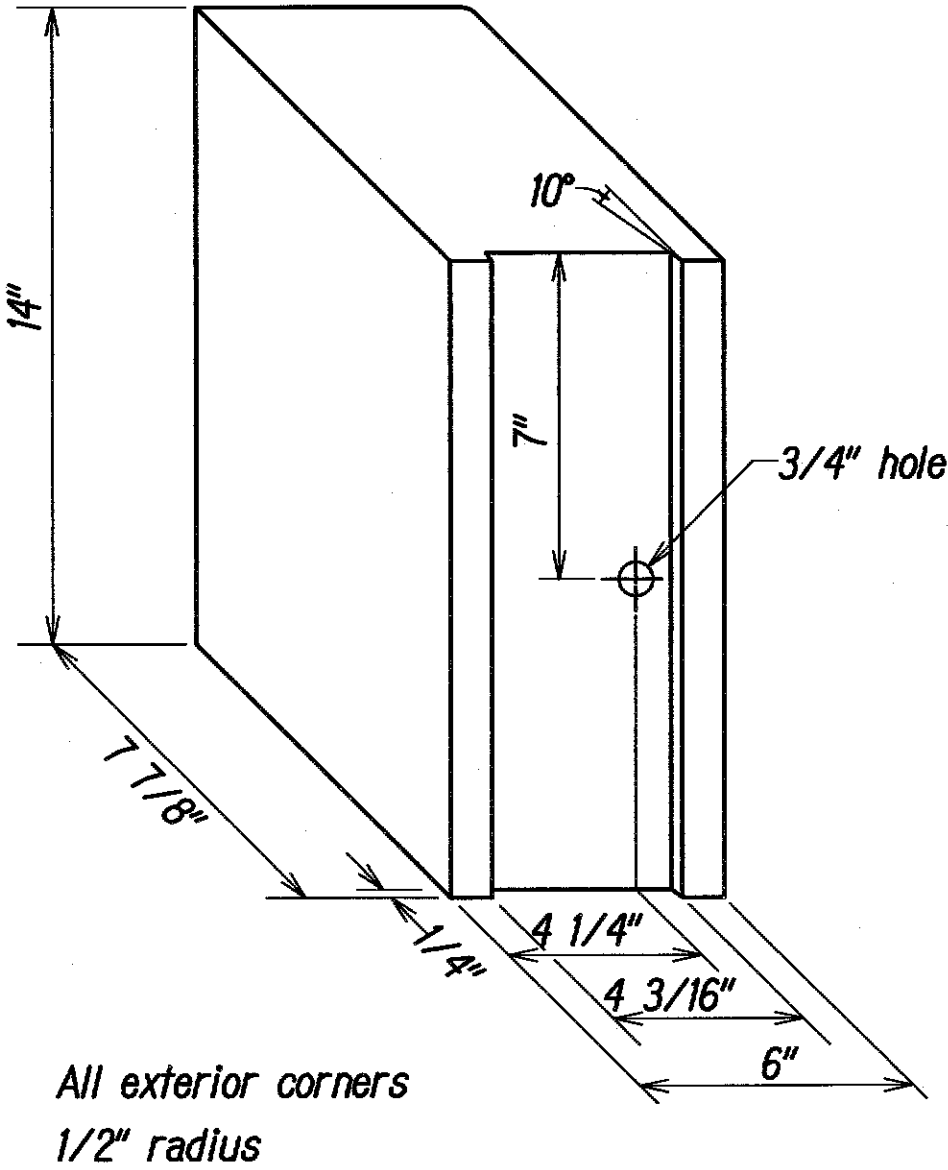
SHEET No. GR3 OF GR4 SHEETS



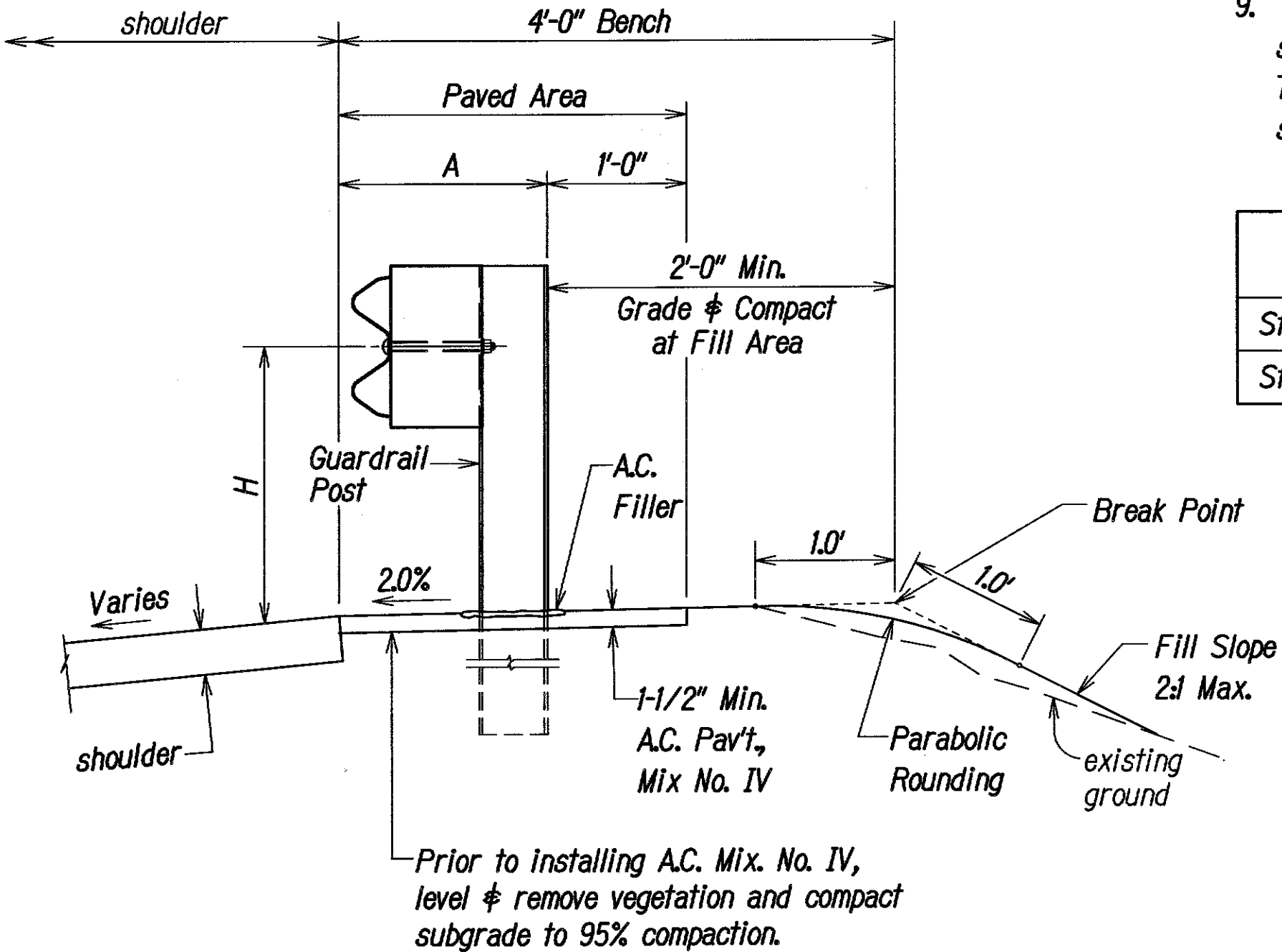
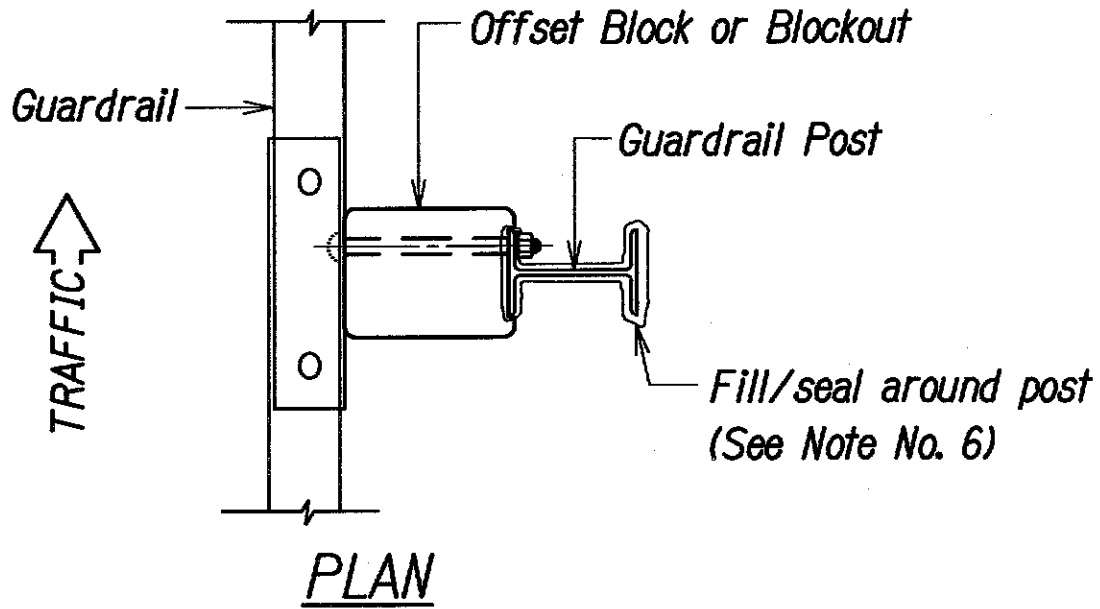
TOP
SIDE
RECYCLED PLASTIC BLOCKOUT (TYPE I)
Not to Scale



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

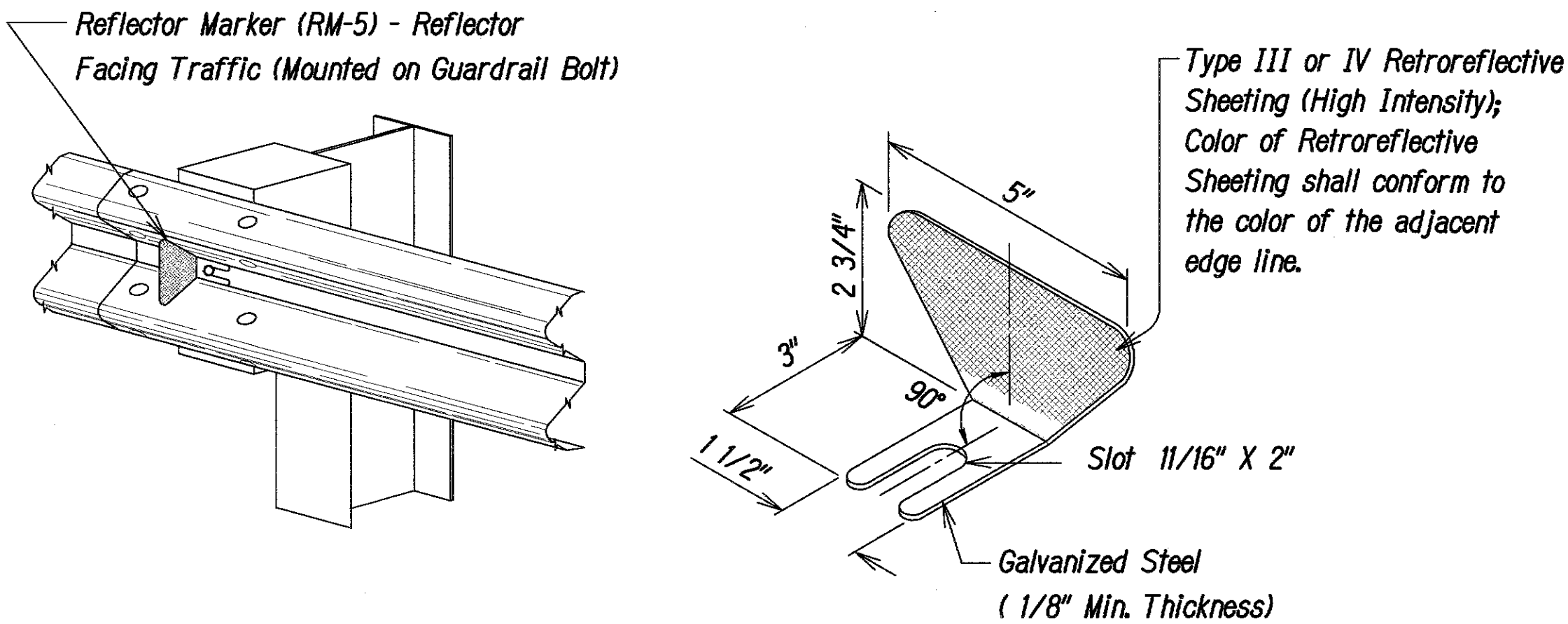


**RECYCLED POLYETHYLENE
OFFSET BLOCK (TYPE II)**
Not to Scale



ELEVATION

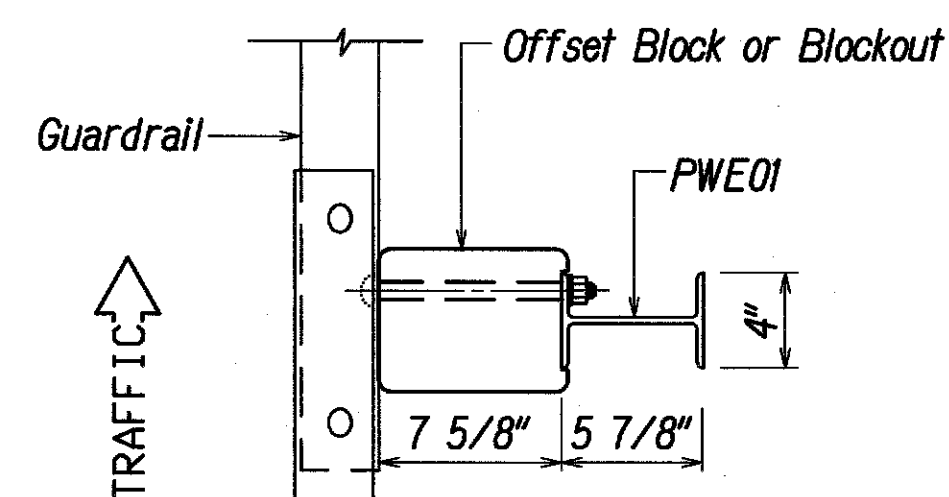
TYPICAL GUARDRAIL INSTALLATION
Not to Scale



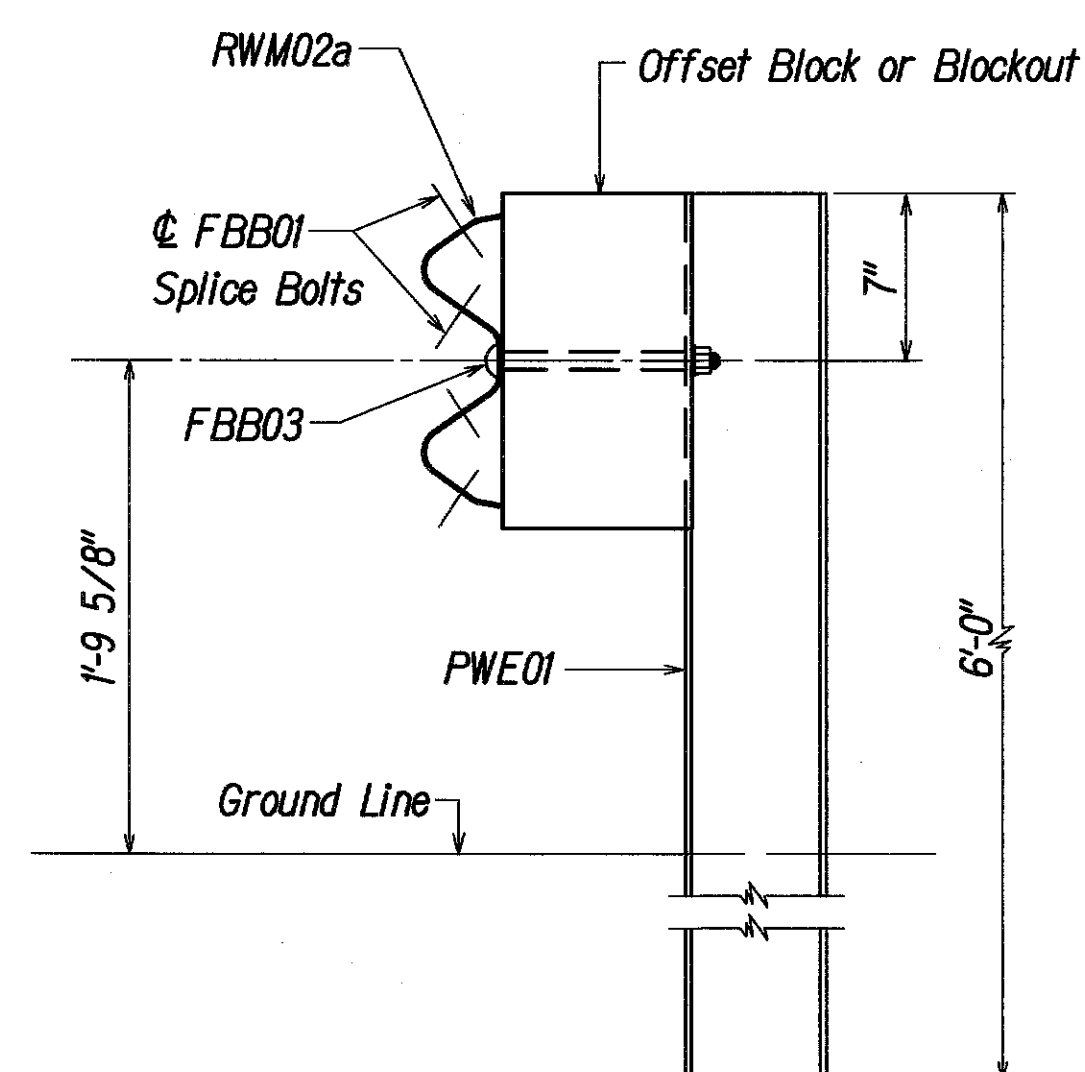
REFLECTOR MARKER (RM-5) DETAIL AND TYPICAL INSTALLATION
Not to Scale

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	377A-01-11	2014	24	28



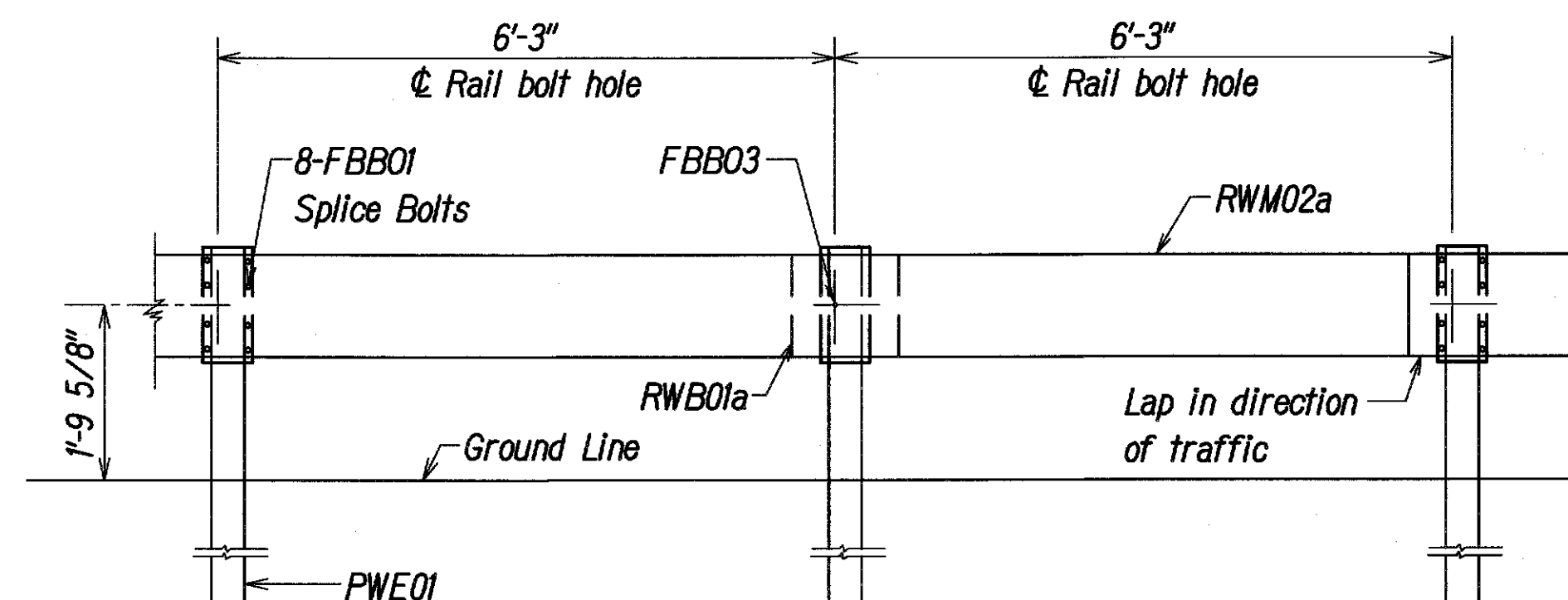
PLAN

ELEVATION

STRONG POST W-BEAM GUARDRAIL

(SGR04a)

Not to Scale

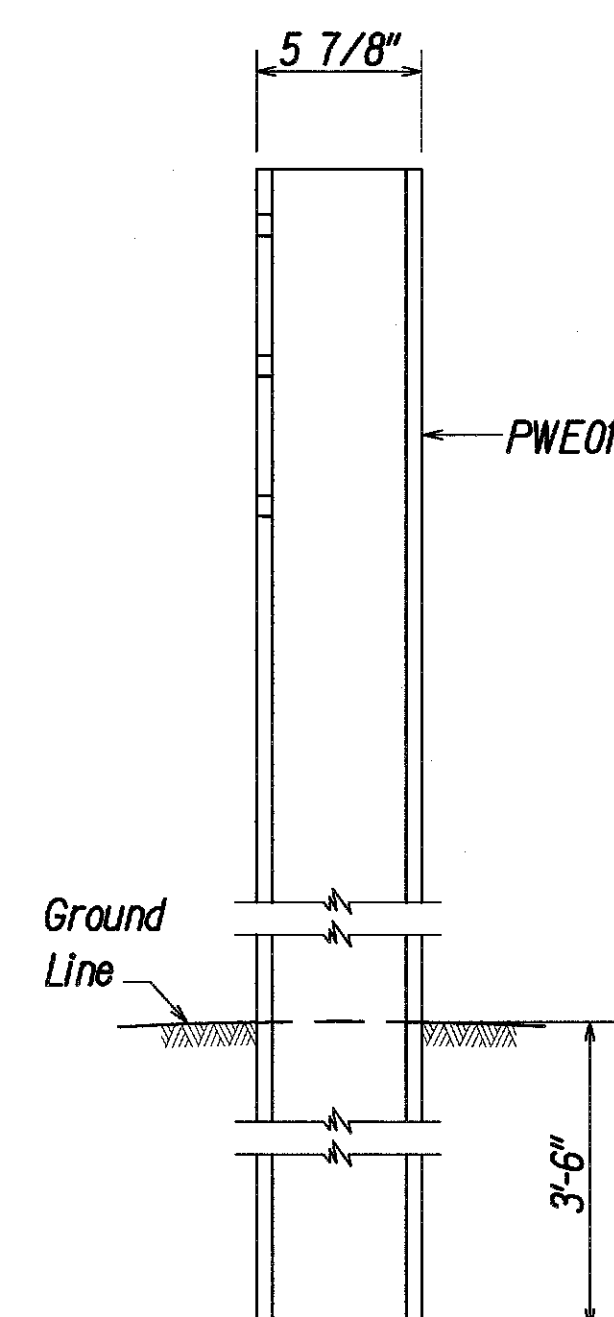


ELEVATION

STRONG POST W-BEAM GUARDRAIL WITH
RECYCLED OFFSET BLOCK OR PLASTIC BLOCKOUT

Not to Scale

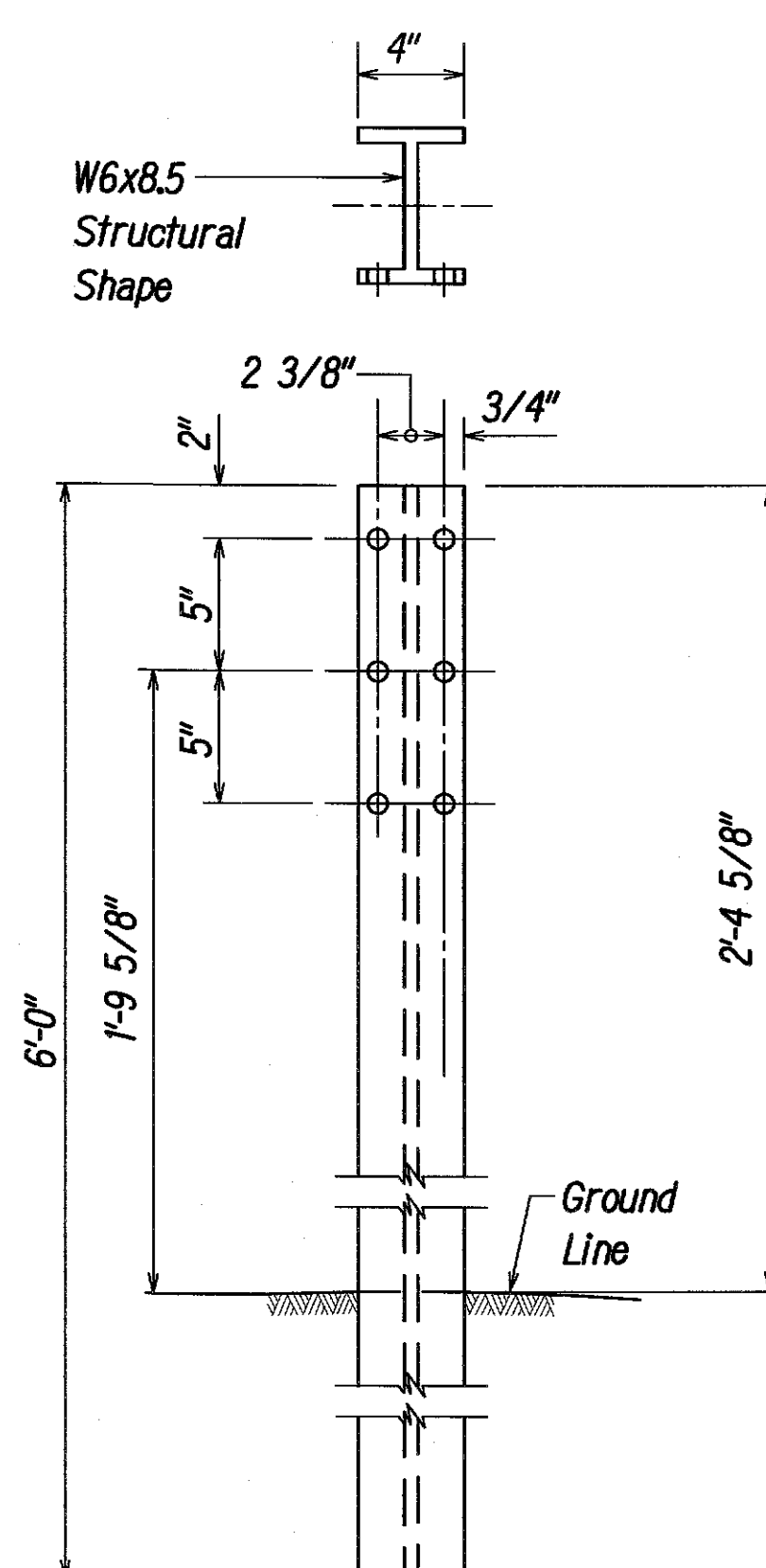
NOTE:
All Holes are
3/4" Dia.



SIDE

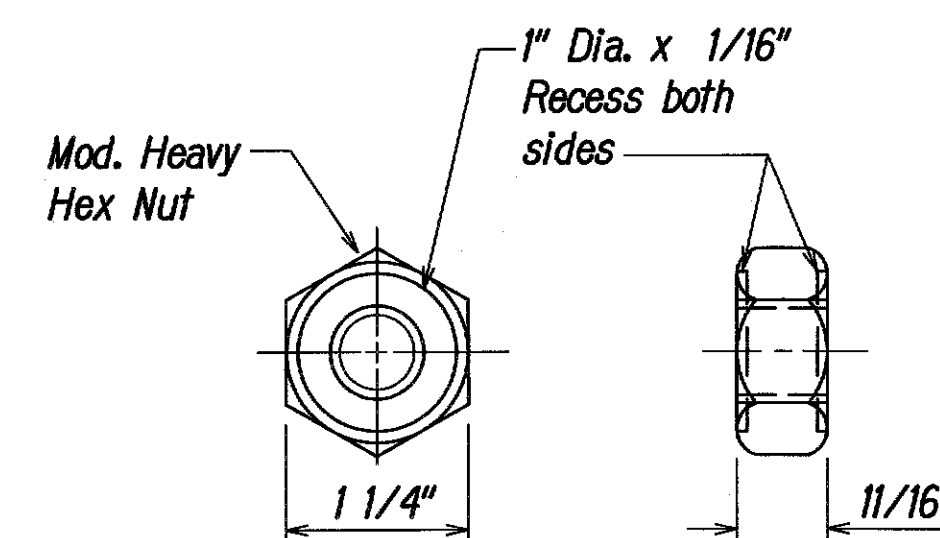
W-BEAM STRONG POST (PWE01)

Not to Scale



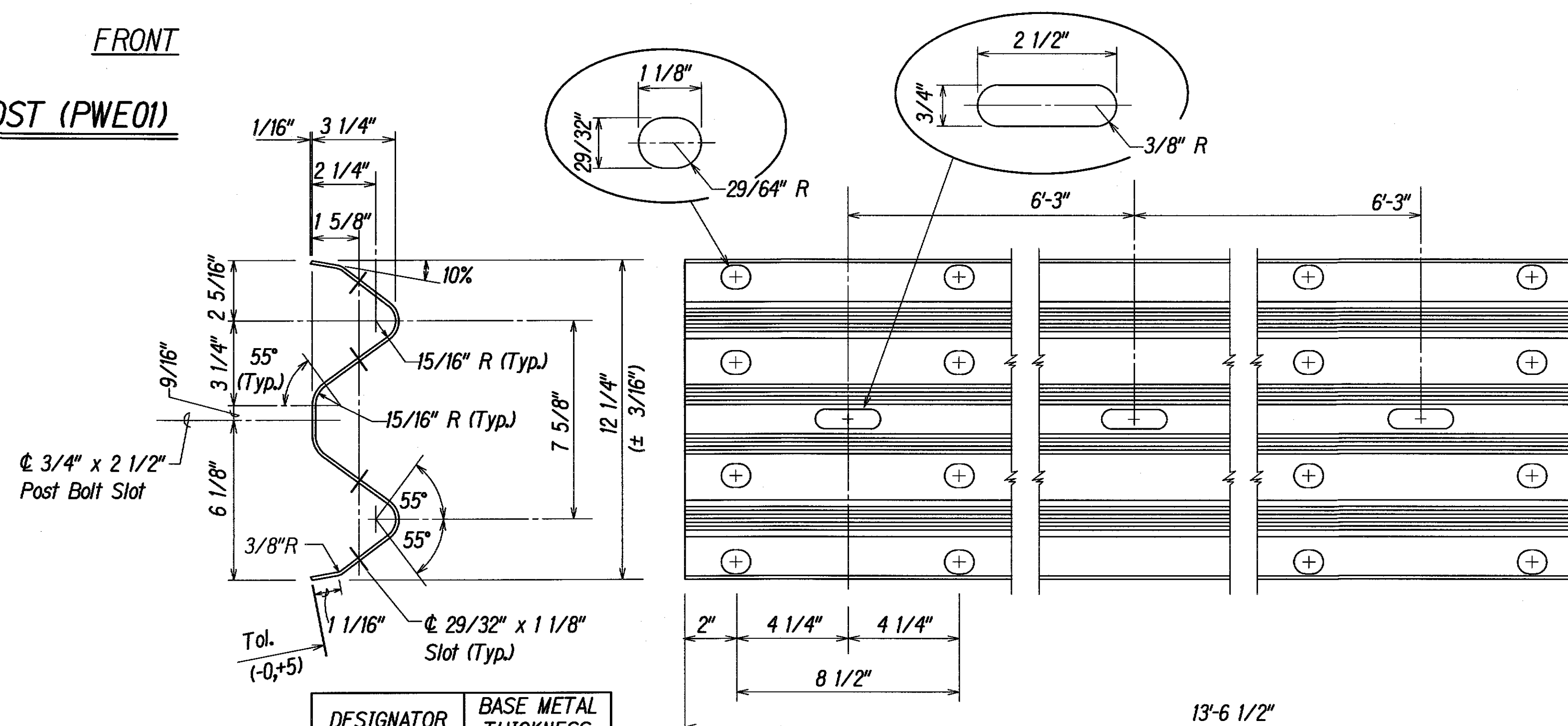
FRONT

DESIGNATOR	L
FBB01	1 3/8"
FBB02	2"
FBB03	10"



GUARDRAIL BOLTS AND RECESSED NUT

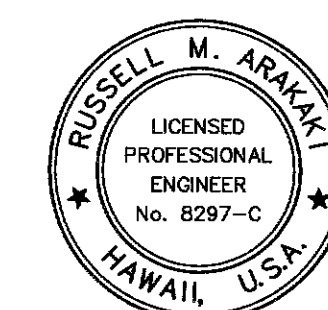
Not to Scale



DESIGNATOR	BASE METAL THICKNESS
RWM02a	12 Gauge

2 SPACE W-BEAM GUARDRAIL (RWM02a)

Not to Scale



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION.

Renell M. Avello APRIL 30, 2011
ParEn, Inc. LIC. EXP. DAT
dba PARK ENGINEERING

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL DETAILS

KEKAULIKE AVENUE
Drainage Improvements

Mile Post 7.6 to Mile Post 7.9

PROJECT NO. 377A-01-11

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SHEET No. *GR4* OF *GR4* SHEETS