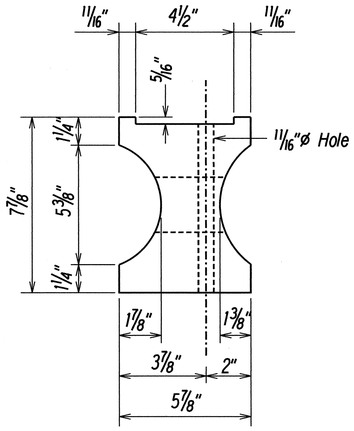
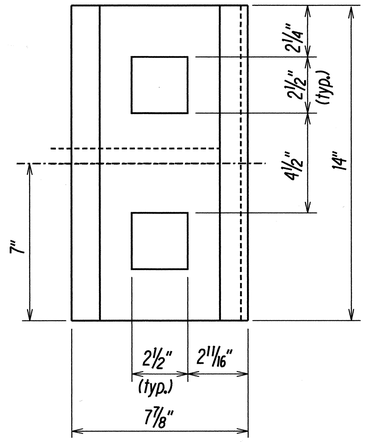
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-076-1(5)	2000	33	83

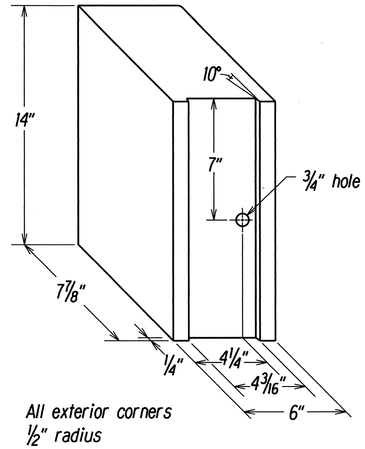


TOP

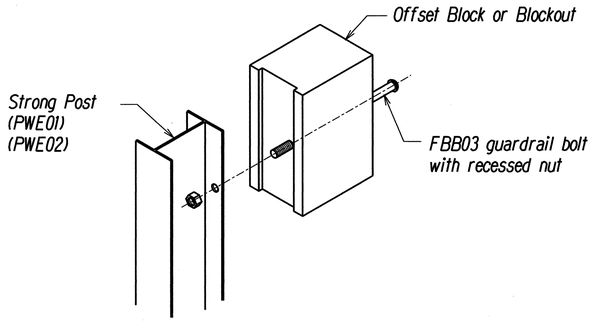


SIDE

RECYCLED PLASTIC BLOCKOUT (TYPE I)



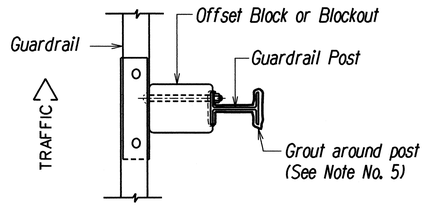
RECYCLED POLYETHYLENE OFFSET BLOCK (TYPE II)



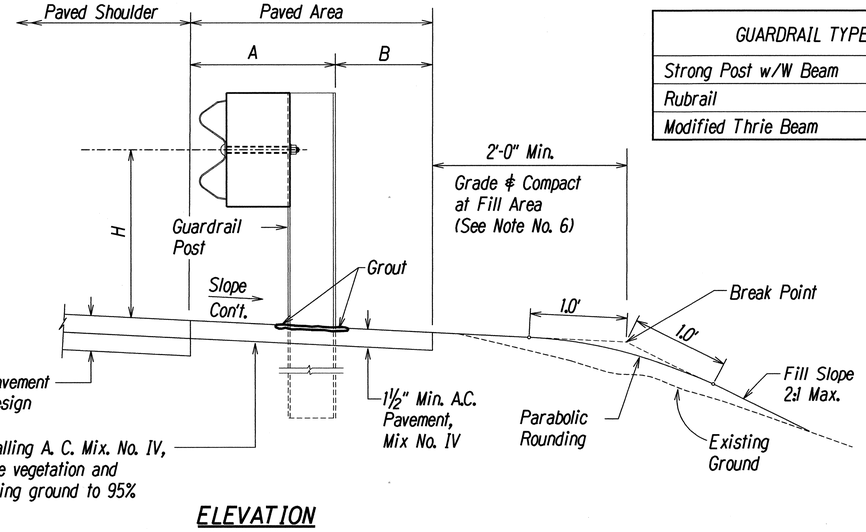
Exploded View

(Rail and washer not shown)

STEEL POST AND BLOCK DETAIL



PLAN



ELEVATION

TYPICAL GUARDRAIL INSTALLATION

GUARDRAIL TYPE	DIMENSION		
	H	A	B
Strong Post w/W Beam	1'-9 5/8"	1'-6"	1'-0"
Rubrail	2'-0"	1'-6"	2'-0"
Modified Thrie Beam	2'-0"	2'-0"	1'-0"

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. After the guardrail posts are installed in the paved area, the Contractor shall grout around the guardrail post and seal all cracks in the paved area that was 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 grouting. The cost for this work shall not be paid for separately, but shall be considered incidental to the various guardrail items.
6. When standards for the fill slope area cannot be met, a site specific, engineer approved design may be used.

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

r:3/01/99 tdl:/uby/guardrail/fe50revdgn (standard plan TE-50 (03/06/87))

ALAN Y. TOMITA
LICENSED PROFESSIONAL ENGINEER
NO. 4129-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

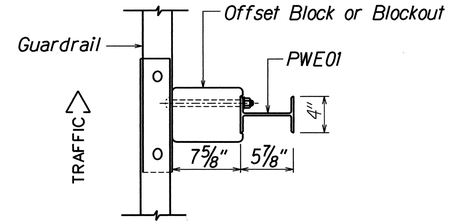
MISCELLANEOUS GUARDRAIL DETAILS-1

FORT WEAVER ROAD RESURFACING
N. of Laulaunui St. to the Vicinity of Hanakahi St.
F. A. Project No. STP-076-1(5)

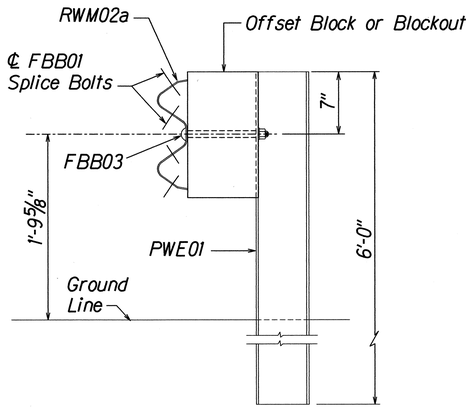
Scale: NTS Date: May, 1999

SHEET No. 1 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-076-1(5)	2000	34	83



PLAN

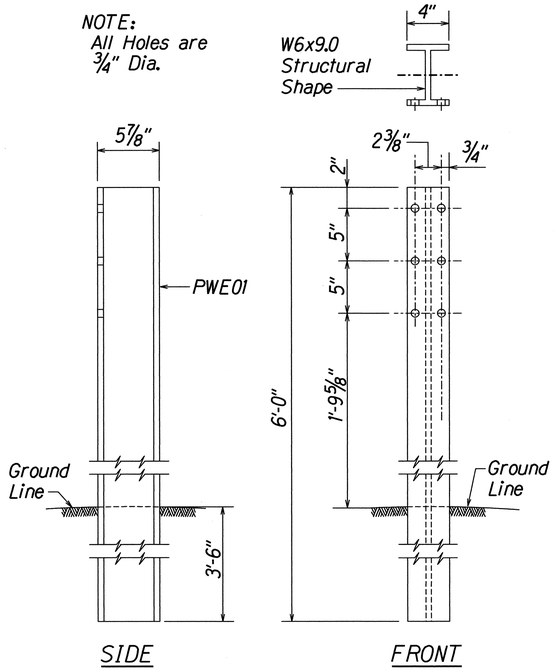


ELEVATION

STRONG POST W-BEAM GUARDRAIL

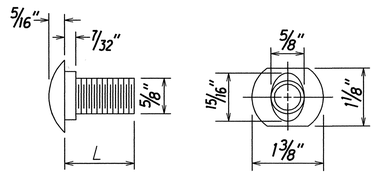
(SGR04a)

NOTE:
All Holes are
¾" Dia.

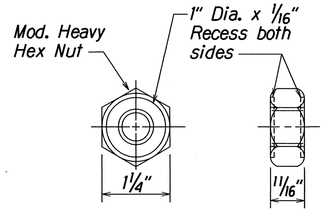


SIDE FRONT

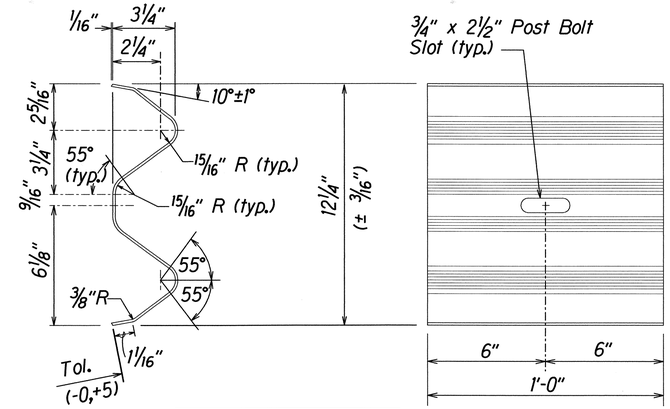
W-BEAM STRONG POST (PWE01)



DESIGNATOR	L
FBB01	1⅜"
FBB02	2"
FBB03	10"

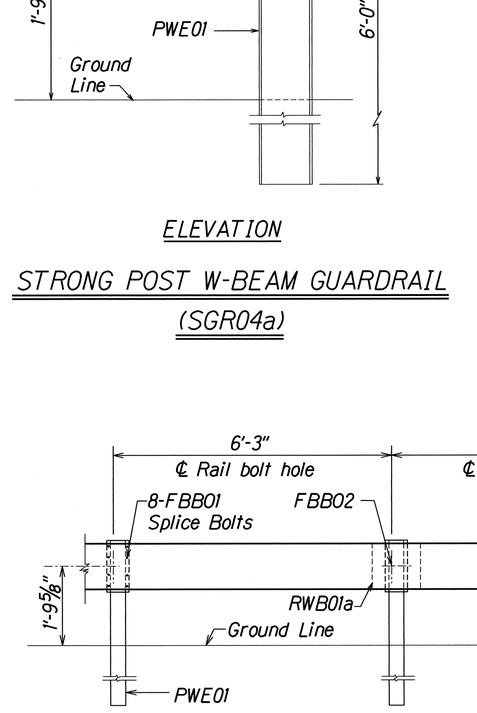


GUARDRAIL BOLTS AND RECESSED NUT



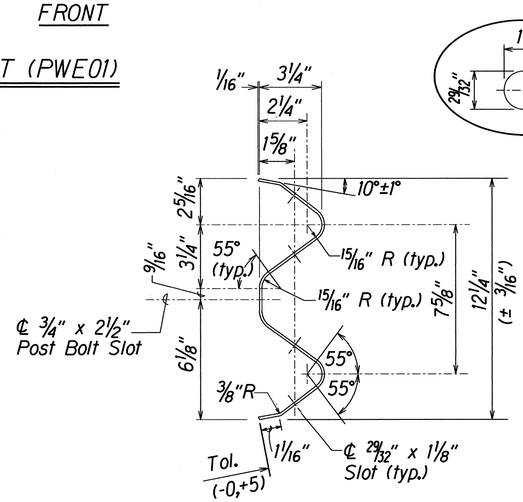
DESIGNATOR	BASE METAL THICKNESS
RWB01a	12 Gauge

W-BEAM BACK-UP-PLATE (RWB01a)



ELEVATION

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



DESIGNATOR	BASE METAL THICKNESS
RWM02a	12 Gauge

SURVEY PLOTTED BY
DRAWN BY
TRACED BY
DESIGNED BY
QUANTITIES BY
CHECKED BY
DATE

ORIGINAL PLAN
NOTE BOOK
No.

r1/31/2000 tdl:/uby/guardrail/wbeamspudgn (standard plan TE-50 103/06/87)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS GUARDRAIL DETAILS-2

FORT WEAVER ROAD RESURFACING
N. of Laulaunui St. to the Vicinity of Hanakahi St.
F. A. Project No. STP-076-1(5)
Scale: NTS Date: May, 1999

ALAN Y. TOMITA
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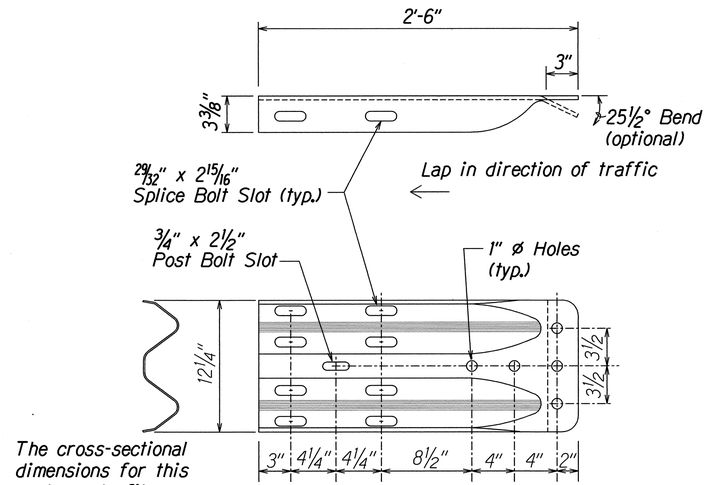
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

Alan Y. Tomita

SHEET No. 2 OF 9 SHEETS

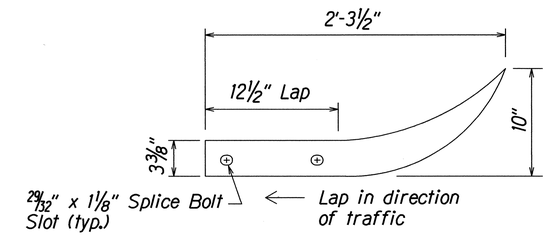
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-076-1(5)	2000	35	83

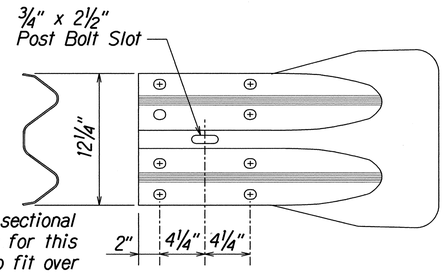


The cross-sectional dimensions for this part are to fit over part RWM02b on the approach end and under part RWM02b on the trailing end.

DESIGNATOR	BASE METAL THICKNESS
RWE02b	10 Gauge

W-BEAM TERMINAL CONNECTOR (RWE02b)

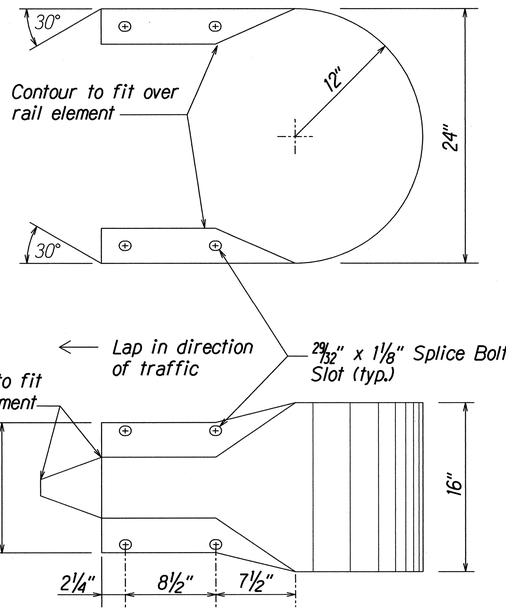




The cross-sectional dimensions for this part are to fit over part RWM02a on the approach end and under part RWM02a on the trailing end.

DESIGNATOR	BASE METAL THICKNESS
RWE01a	12 Gauge

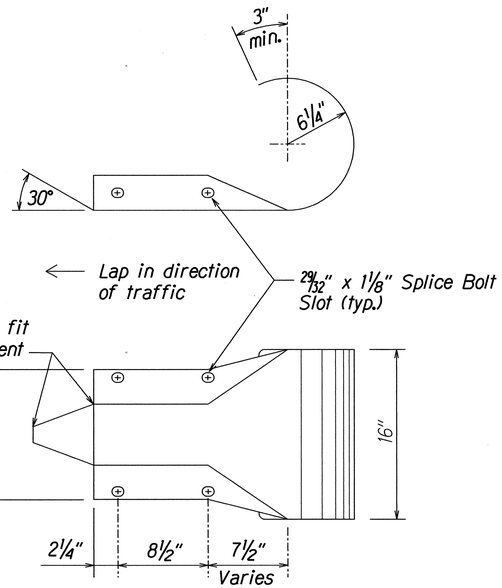
W-BEAM END SECTION (FLARED RWE01a)



The cross-sectional dimensions for this part are to fit over part RWM02a

DESIGNATOR	BASE METAL THICKNESS
RWE06a	12 Gauge

W-BEAM END SECTION (BUFFER RWE06a)



The cross-sectional dimensions for this part are to fit over part RWM02a

DESIGNATOR	BASE METAL THICKNESS
RWE03a	12 Gauge

W-BEAM END SECTION (ROUNDED RWE03a)

ORIGINAL PLAN | SURVEY PLOTTED BY | DRAWN BY | TRACED BY | DESIGNED BY | QUANTITIES BY | CHECKED BY | DATE | No.

r1/31/2000 td:/ruby/guardrail/re5rewdgn (standard plan TE-51 09/01/87)

ALAN Y. TOMITA LICENSED PROFESSIONAL ENGINEER NO. 4129-C HAWAII, U.S.A.

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

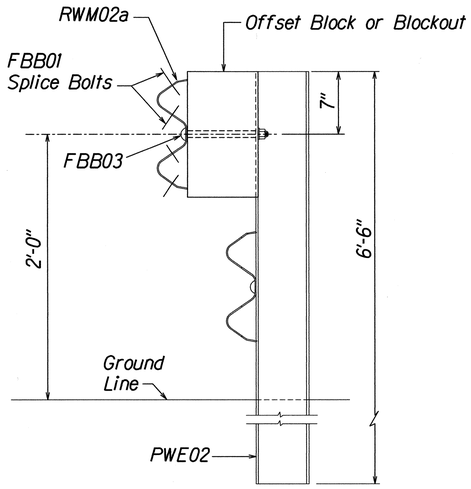
MISCELLANEOUS GUARDRAIL DETAILS-3

FORT WEAVER ROAD RESURFACING
N. of Laulaunui St. to the Vicinity of Hanakahi St.
F. A. Project No. STP-076-1(5)

Scale: As Shown Date: May, 1999

SHEET No. 3 OF 9 SHEETS

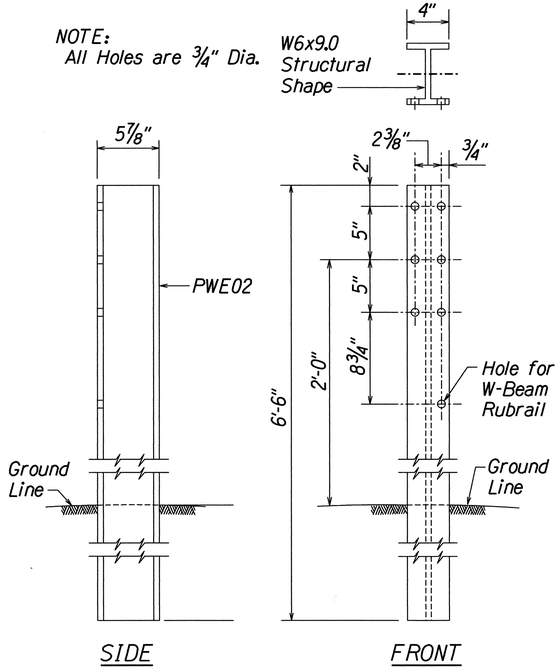
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-076-1(5)	2000	36	83



ELEVATION

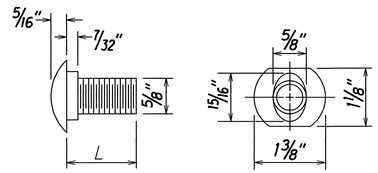
STRONG POST RUBRAIL (W-BEAM) GUARDRAIL

NOTE:
All Holes are ¾" Dia.

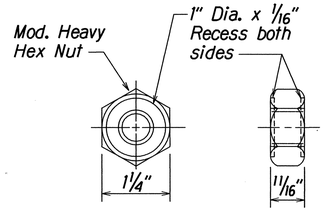


SIDE FRONT

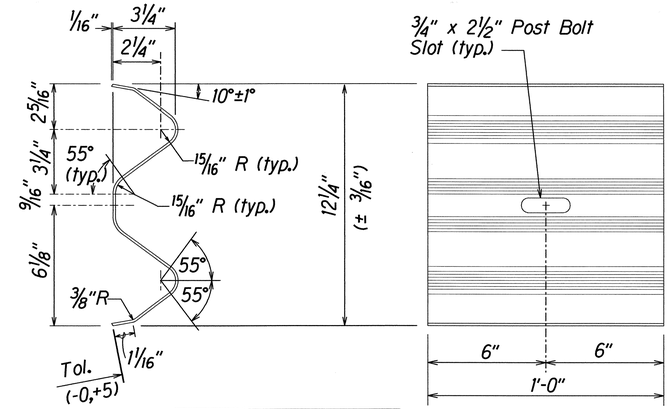
W-BEAM STRONG POST (PWE02)



DESIGNATOR	L
FBB01	1⅜"
FBB02	2"
FBB03	10"



GUARDRAIL BOLTS AND RECESSED NUT

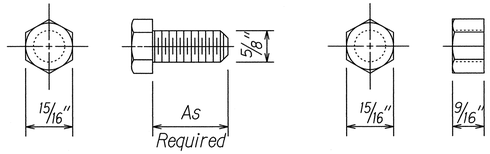


DESIGNATOR	BASE METAL THICKNESS
RWB01a	12 Gauge

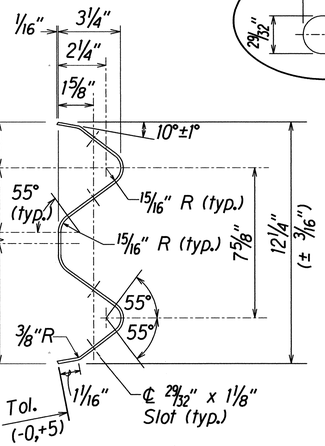
W-BEAM BACK-UP-PLATE (RWB01a)

ELEVATION

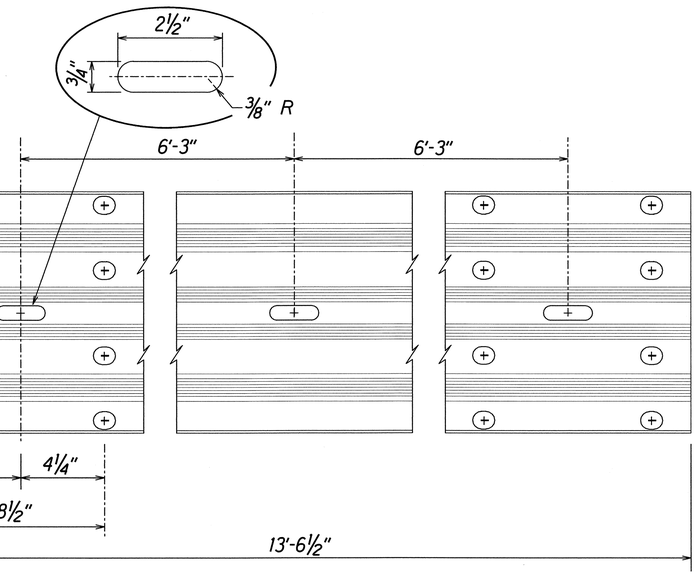
STRONG POST RUBRAIL (W-BEAM) GUARDRAIL WITH RECYCLED OFFSET BLOCK OR PLASTIC BLOCKOUT



HEX BOLT & NUT (FBX16a)



DESIGNATOR	BASE METAL THICKNESS
RWM02a	12 Gauge



2 SPACE W-BEAM GUARDRAIL (RWM02a)

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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MISCELLANEOUS GUARDRAIL DETAILS-4

FORT WEAVER ROAD RESURFACING
N. of Laulaunui St. to the Vicinity of Hanakahi St.
F. A. Project No. STP-076-1(5)
Scale: NTS Date: May, 1999

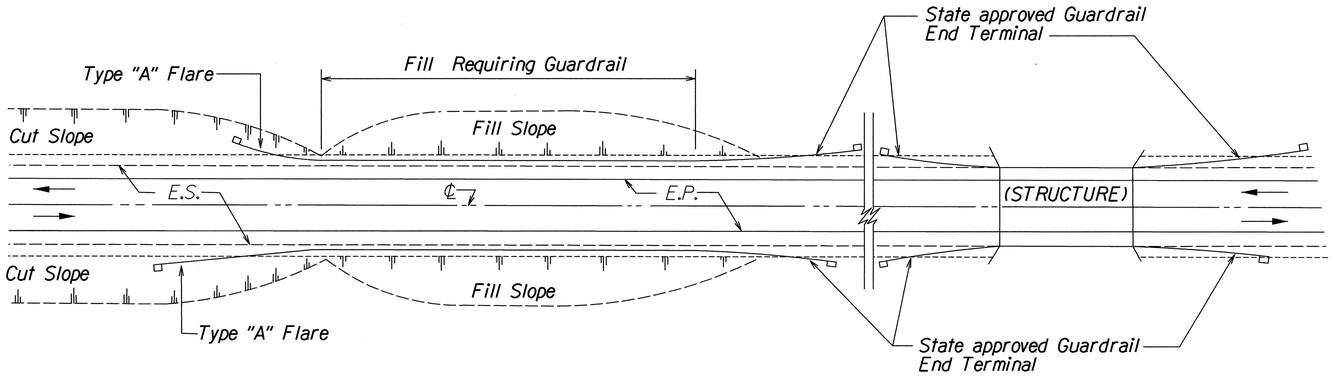
SHEET No. 4 OF 9 SHEETS

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

(standard plan TE-52 rl1/03/89)

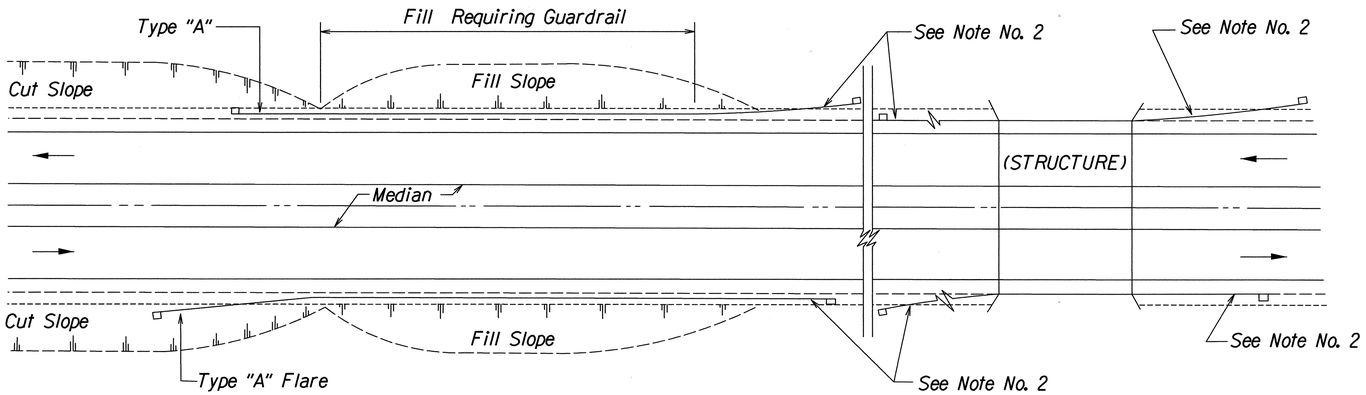
rl/31/2000 fd:/ruby/guardrail/rubrail.dgn

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-076-1(5)	2000	37	83



PLAN

TWO WAY ROADWAY



PLAN

ONE WAY ROADWAY (DIVIDED HIGHWAY)

NOTES:

1. Metal Guardrail connection to concrete structures requires End Post Connection. See Structure Plans.
2. Depending on the existing field conditions, the Engineer shall determine which guardrail end terminal should be installed.
3. Refer to State's most current approved Product List for NCHRP 350 approved Guardrail End Terminals.

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

3/01/99 tdl:/uby/guardrail/hb58rev.dgn (standard plan TE-58 rd7 01/86)

ALAN Y. TOMITA LICENSED PROFESSIONAL ENGINEER NO. 4129-C HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

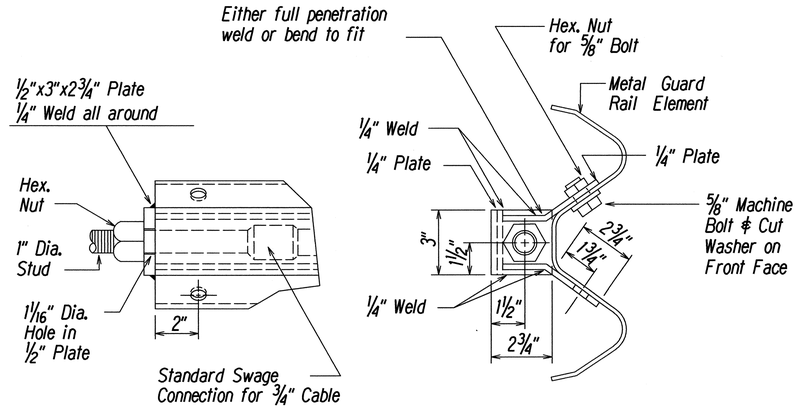
MISCELLANEOUS GUARDRAIL DETAILS-5

FORT WEAVER ROAD RESURFACING
N. of Laulaunui St. to the Vicinity of Hanakahi St.
F. A. Project No. STP-076-1(5)

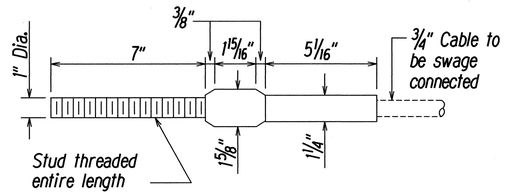
Scale: NTS Date: May, 1999

SHEET No. 5 OF 9 SHEETS

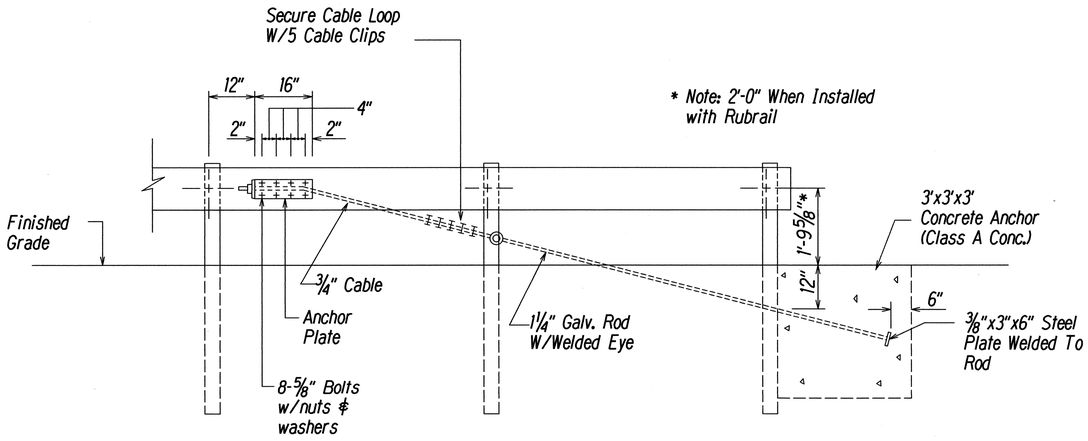
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-076-1(5)	2000	38	83



ANCHOR PLATE DETAILS

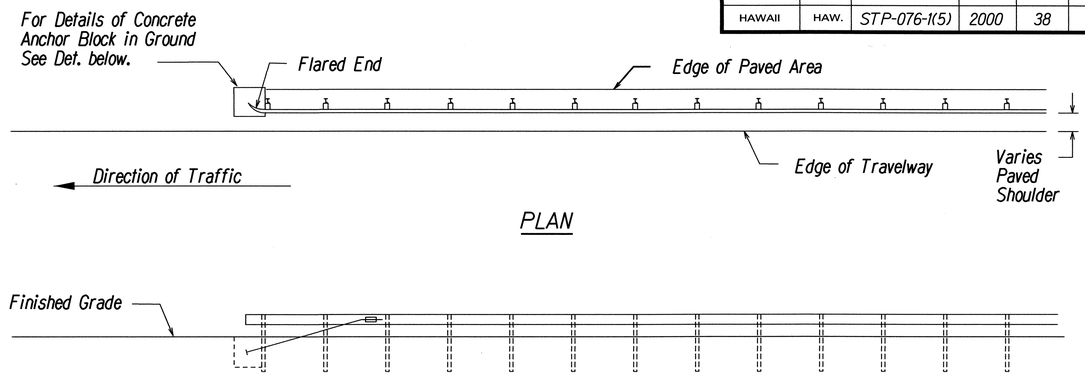


STANDARD SWAGED FITTING AND STUD



ANCHOR BLOCK DETAIL

1. Concrete, G.R.P., excavation, anchor rod and miscellaneous appurtenances necessary to anchor the guardrail ends shall be incidental to metal guardrail.



TYPE "G" FLARE END TERMINAL

NOTE:

Type "G" Modified End Terminal is a site specific end terminal with a taper and radial termini. A site specific detailed drawing is required for all Type "G" Modified End Terminal and must receive Engineer's approval.

The taper (flare rate) of the guardrail shall follow the latest edition of AASHTO'S Roadside Design Guide (currently, Table 5.6 - Suggested Flare Rate for Barrier Design, page 5-21, Jan. 1996 edition).

The radius of the radial termini is an Engineer's judgement based on the site evaluation. The Engineer shall consider safety (minimize the spearing & blunt end situation); degree and potential seriousness of the hazard; bicycle and pedestrian accessibility; maintenance equipment accessibility; Right-of-Way availability; the smallest radii the metal w-beam/thrie-beam railing can be constructed (check with supplier/contractor); posted speed limit; angle of vehicle impact; and aesthetics when designing the Type "G" Modified End Terminal.

During construction, the Contractor shall layout the proposed Type "G" Modified End Terminal and receive approval from the Construction Engineer prior to installation.

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

3/01/99 tdz-ruby/guardrail/te59rew.dgn (standard plan TE-59 rll/03/89)

ALAN Y. TOMITA
LICENSED PROFESSIONAL ENGINEER
No. 4129-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

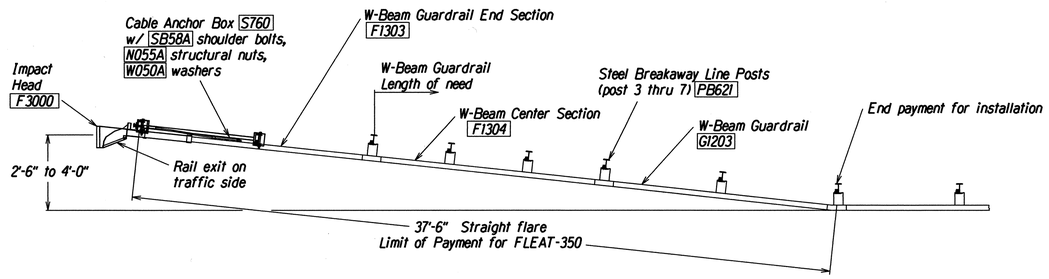
MISCELLANEOUS GUARDRAIL DETAILS-6

FORT WEAVER ROAD RESURFACING
N. of Laulaunui St. to the Vicinity of Hanakahi St.
F. A. Project No. STP-076-1(5)

Scale: NTS Date: May, 1999

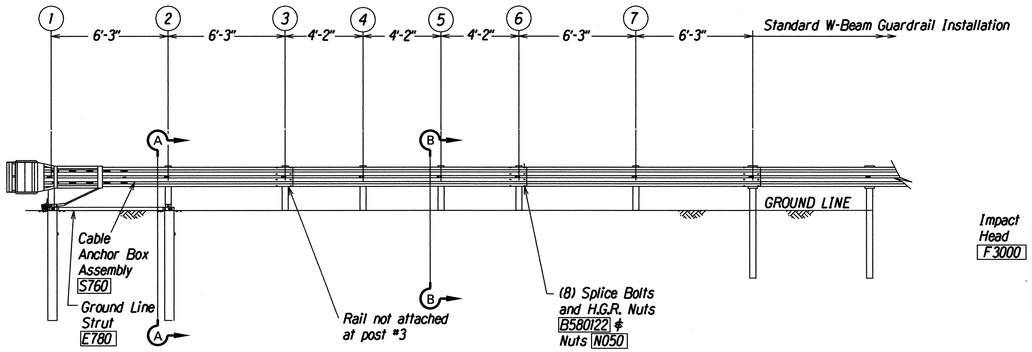
SHEET No. 6 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-076-1(5)	2000	39	83

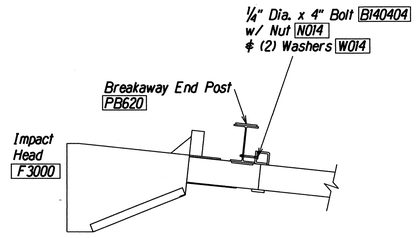


PLAN

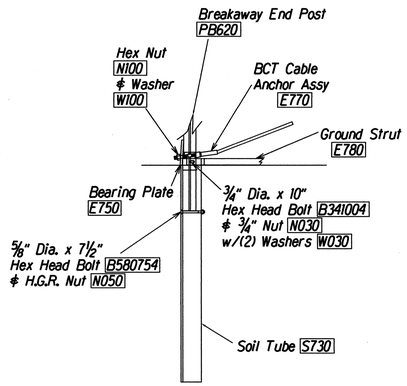
TRAFFIC



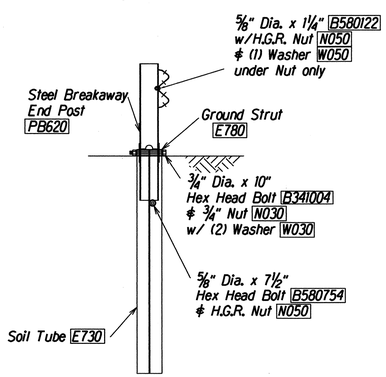
ELEVATION



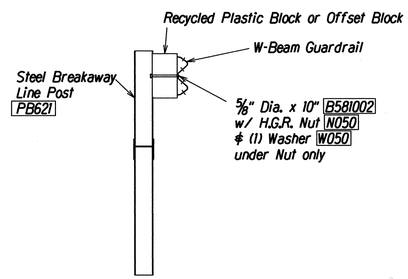
IMPACT HEAD CONNECTING DETAIL



PARTIAL VIEW OF POST 1



SECTION A-A
(@ Post #2)



SECTION B-B
(Typical @ Post 3 - 7)
NOTE: RAIL NOT BOLTED @ POST #3

GENERAL NOTES

1. Breakaway posts are required with the FLEAT Terminal.
2. All bolts, nuts, cable assemblies, cable anchors and bearing plates shall be galvanized.
3. The soil tubes shall not protrude more than 4" above ground (measured along a 5' cord). Site grading may be necessary to meet this requirement.
4. The soil tubes may be driven with an approved driving head. Soil tubes should not be driven with the post in the tube. If the tubes are placed in drilled holes, the backfill material must be satisfactorily compacted to prevent settlement.
5. When rock is encountered during excavation, a 12" Dia. post hole, 20" deep may be used if approved by the engineer. Granular material will be placed in the bottom of the hole approx. 2 1/2" deep to provide drainage. The soil tubes will be field cut to length, placed in the hole and backfilled with adequately compacted material excavated from the hole.
6. The breakaway cable assembly must be taut. A locking device, (vice grips or channel lock pliers) should be used to prevent the cable from twisting when tightening nuts.

ITEM NO.	QTY	BILL OF MATERIALS
F3000	1	IMPACT HEAD
F1303	1	W-BEAM GUARDRAIL END SECTION, 12 GA.
F1304	1	W-BEAM GUARDRAIL CENTER SECTION, 12 GA.
G1203	1	W-BEAM GUARDRAIL, 12 GA.
S730	2	*FOUNDATION SOIL TUBE, 6" x 8" x 72"
E750	1	BEARING PLATE
S760	1	CABLE ANCHOR BOX
E770	1	BCT CABLE ANCHOR ASSEMBLY
E780	1	GROUND STRUT
PB620	2	STEEL BREAKAWAY END POST
PB621	5	STEEL BREAKAWAY LINE POST
	5	RECYCLED PLASTIC BLOCKOUT OR OFFSET BLOCK
		HARDWARE
B580122	25	5/8" Dia. x 1 1/4" SPLICE BOLT, POST #2
B580754	2	5/8" Dia. x 7 1/2" HEX BOLT
B341004	2	3/4" Dia. x 10" HEX BOLT
B581002	5	5/8" Dia. x 10" H.G.R. BOLT (POST 3 THRU 7)
N050	32	5/8" Dia. H.G.R. NUT (SPLICE 24, SOIL TUBES 2, POST 2 THRU 7, 6)
N030	2	3/4" Dia. HEX NUT
W050	6	H.G.R. WASHER
W030	4	3/4" ID WASHER
N100	2	1" ANCHOR CABLE HEX NUT
W100	2	1" ANCHOR CABLE WASHER
B140404	2	1/4" x 4" HEX BOLT
N014	2	1/4" HEX NUT
W014	4	1/4" WASHER
SB58A	8	CABLE ANCHOR BOX SHOULDER BOLT
N055A	8	1/2" A325 STRUCTURAL NUT
W050A	16	1 1/16" OD x 9/16" ID A325 STR. WASHER

Foundation Tube Options For Posts 1 ⊄ 2

*6'-0" Split Foundation Tubes S730
*6'-0" Solid Foundation Tubes E731
*5'-0" Foundation Tubes S735 W/Soil Plates SP600
*4'-6" Foundation Tubes E735 W/Soil Plates SP600

ALAN Y. TOMITA
LICENSED PROFESSIONAL ENGINEER
NO. 4129-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

FLEAT-350

FLARED ENERGY ABSORBING TERMINAL

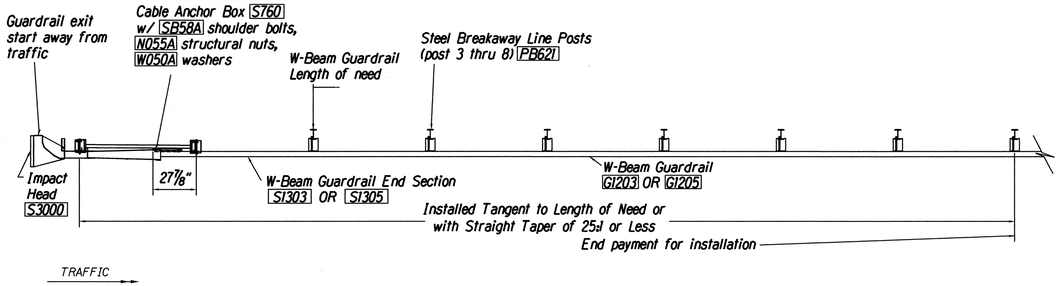
FORT WEAVER ROAD RESURFACING
N. of Laulaunui St. to the Vicinity of Hanakahi St.
F. A. Project No. STP-076-1(5)

Scale: NTS Date: May, 1999

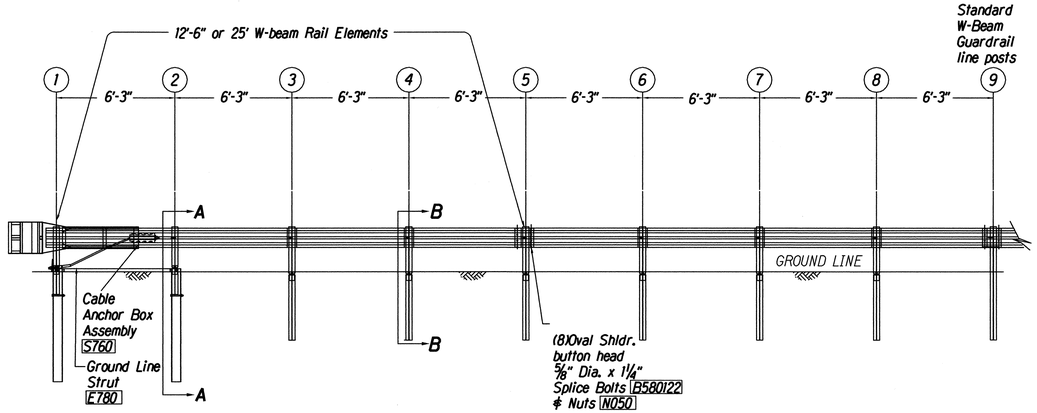
SHEET No. 7 OF 9 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
NOTE BOOK	TRACED BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

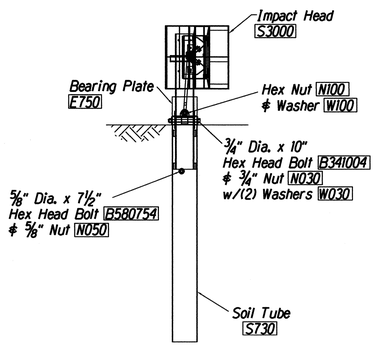
rl/31/2000 tdl:/uby/guardrail/fleat350.dgn (standard plan TE-61 rll/03/89 ⊄ TE-62 r09/01/87)



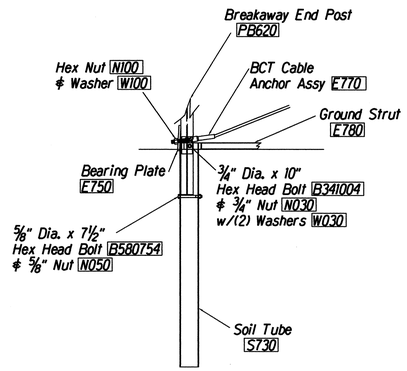
PLAN



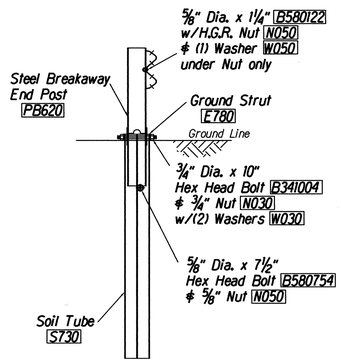
ELEVATION



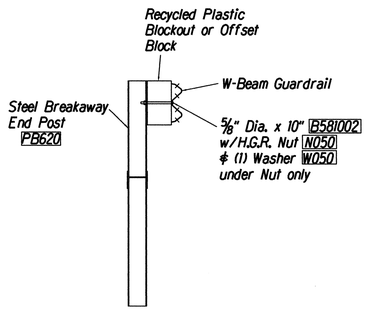
FRONT VIEW OF POST 1



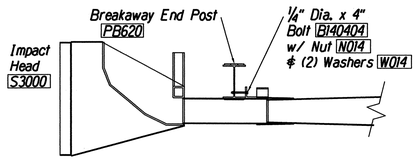
PARTIAL VIEW OF POST 1



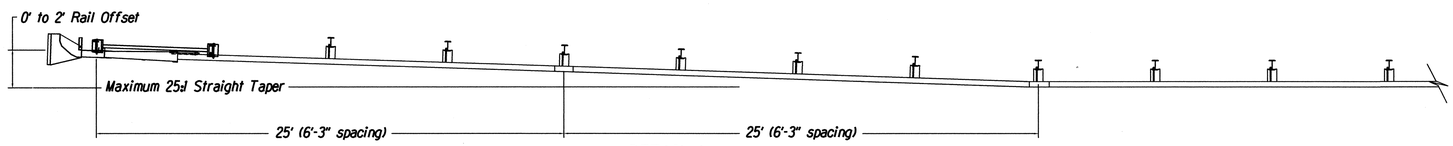
SECTION A-A
at Post #2



SECTION B-B
typical @ Post 3 thru 8



IMPACT HEAD CONNECTION DETAIL



DETAIL A
optional flared installation, 25:1 maximum flare rate

GENERAL NOTES:

1. Breakaway posts are required with the Sequential Kinking Terminal.
2. All bolts, nuts, cable assemblies, cable anchors and bearing plates shall be galvanized.
3. When the Sequential Kinking Terminal is selected as the end treatment for W-Beam Guardrail installation, the W-Beam Guardrail can be flared at a rate of 25:1 to prevent the impact head from encroaching on the shoulder. The flare is not required and may be decreased or eliminated for specific installations.
4. The soil tube shall not protrude more than 4" above ground (measured) along a 5' cord). Site grading may be necessary to meet this requirement.
5. The soil tubes may be driven with an approved driving head. They shall not be driven with the post in the tube. If the soil tubes are placed in drilled holes, the backfill material must be satisfactorily compacted to prevent settlement.
6. When rock is encountered during excavation, a 12" dia. post hole, 20" deep may be used if approved by the engineer. Granular material will be placed in the bottom of the hole approx. 2½" deep to provide drainage. The soil tubes will be field cut to length, placed in the hole and backfilled with adequately compacted material excavated from the hole.
7. The breakaway cable assembly must be taut. A locking device, (vice grips or channel lock pliers) should be used to prevent the cable from twisting when tightening nuts.
8. A special site evaluation should be considered prior to using the Sequential Kinking Terminal where there is less than 25' between the outlet side of the Sequential Kinking Terminal and any adjacent driving lane.

ITEM NO.	QTY	BILL OF MATERIALS
S3000	1	IMPACT HEAD
S1303/S1305	1	W-BEAM GUARDRAIL END SECTION (12 GA, 12.5' or 25')
G1203/G1205	3/1	W-BEAM GUARDRAIL, 12 GA., 12.5' or 25'
S730	2	*FOUNDATION SOIL TUBE, 6" x 8" x 72"
E750	1	BEARING PLATE
S760	1	CABLE ANCHOR BOX
E770	1	BCT CABLE ANCHOR ASSEMBLY
E780	1	GROUND STRUT
PB620	2	STEEL BREAKAWAY END POSTS
PB621	6	STEEL BREAKAWAY LINE POSTS
	6	RECYCLED PLASTIC BLOCKOUTS OR OFFSET BLOCK
		HARDWARE
B580122	17/33	⅝" Dia. x 1 ¼" SPLICE BOLTS, POST #2
B580754	2	⅝" Dia. x 7 ½" HEX BOLTS
B341004	2	¾" Dia. x 10" HEX BOLTS
B341002	6	⅝" Dia. x 10" H.G.R. BOLT (POST 2 ONLY)
B581802	6	⅝" Dia. x 18" H.G.R. BOLT (POST 3 THRU 8)
N050	26/42	⅝" Dia. H.G.R. NUT (SPLICE 17/33, SOIL TUBES 2, POST 2 THRU 8)
N030	2	¾" Dia. HEX NUTS
W050	7	H.G.R. WASHER
W030	4	¾" ID WASHER
N100	2	1" ANCHOR CABLE HEX NUT
W100	2	1" ANCHOR CABLE WASHER
BI40404	2	¼" x 4" HEX BOLT
N014	2	¼" HEX NUT
W014	4	¼" WASHER
SB58A	8	CABLE ANCHOR BOX SHOULDER BOLTS
N055A	8	½" A325 STRUCTURAL NUTS
W050A	16	1 1/16" OD x 9/16" ID A325 STR. WASHER

Foundation Tube Options For Posts 1 ⊄ 2
*6'-0" Split Foundation Tubes S730
*6'-0" Solid Foundation Tubes E731
*5'-0" Foundation Tubes S735 W/Soil Plates SP600
*4'-6" Foundation Tubes E735 W/Soil Plates SP600

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-076-1(5)	2000	40	83

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

r1/31/2000 tdl:ruby/guardrail/skt350.dgn (Stand Plan TE-61 r11/03/99 ⊄ TE-62 r09/01/87)

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

ALAN Y. TOMITA LICENSED PROFESSIONAL ENGINEER NO. 4129-C HAWAII, U.S.A.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SKT-350

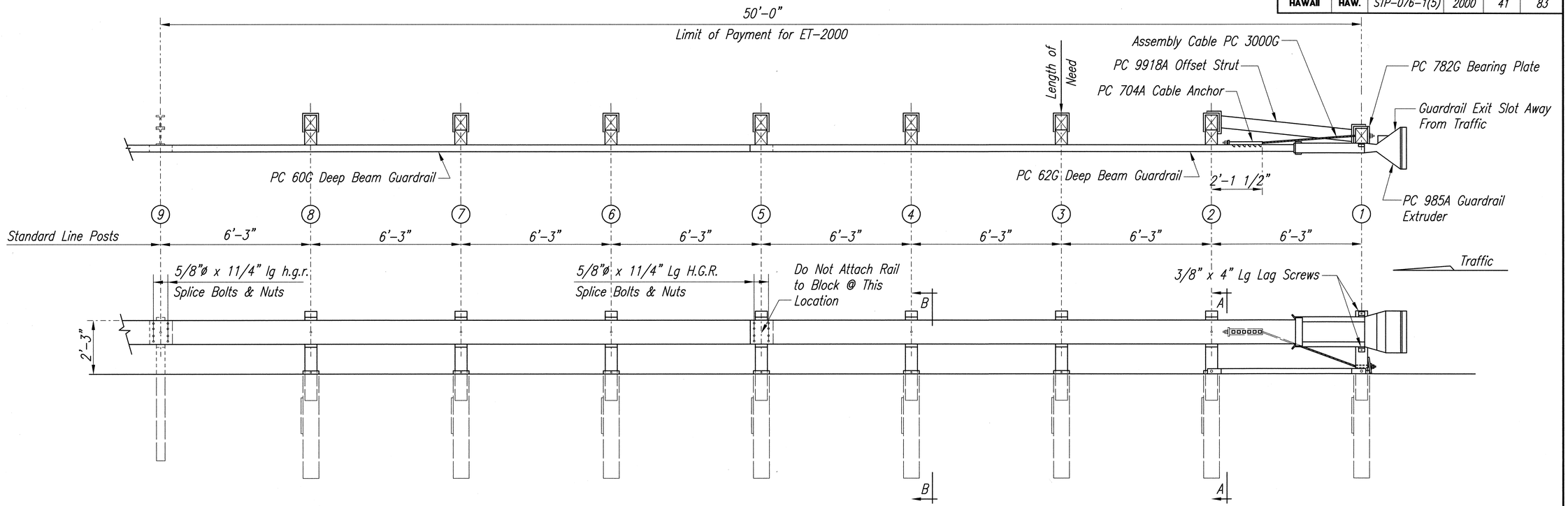
SEQUENTIAL KINKING TERMINAL

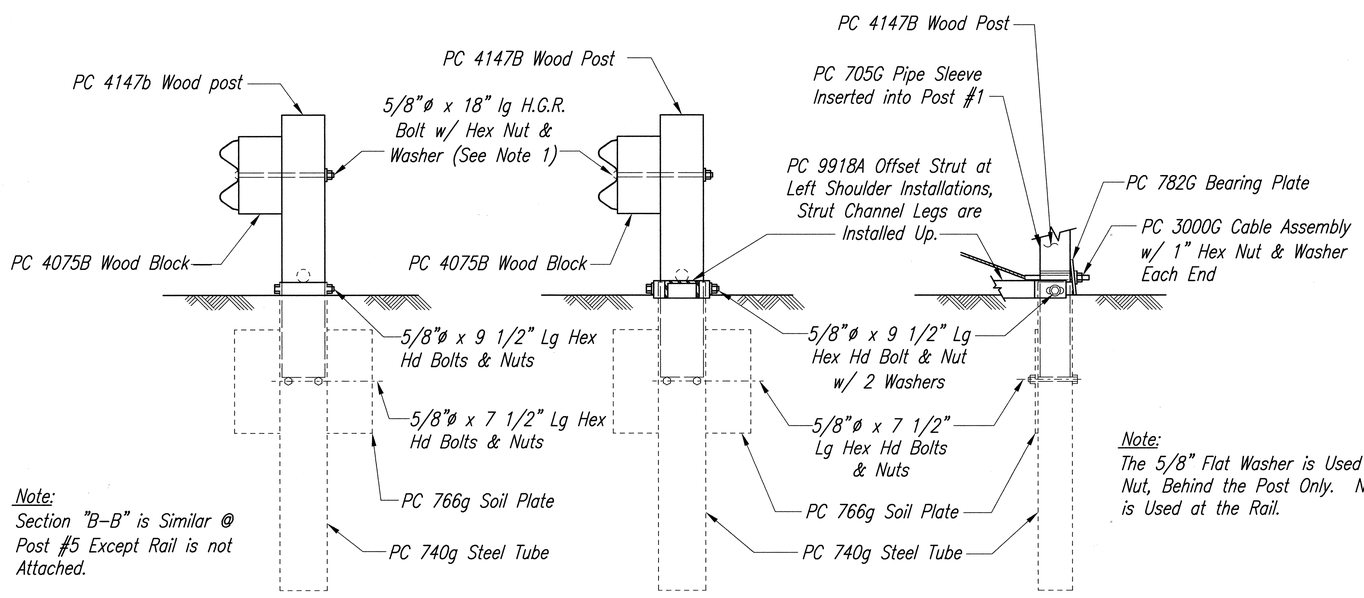
FORT WEAVER ROAD RESURFACING
N. of Laulaunui St. to the Vicinity of Hanakahi St.
F. A. Project No. STP-076-1(5)

Scale: NTS Date: May, 1999

SHEET No. 8 OF 9 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-076-1(5)	2000	41	83





Note:
Section "B-B" is Similar @ Post #5 Except Rail is not Attached.

Note:
The 5/8" Flat Washer is Used Under the Nut, Behind the Post Only. No Washer is Used at the Rail.

BILL OF MATERIAL

PC	QTY	DESCRIPTION	PC	QTY	DESCRIPTION
60G	1	12/25/6'3/s (Guardrail)	3340G	47	5/8" Hex Nut
62G	1	12/25/6'3/s ANC (Guardrail)	3360G	16	5/8"ø x 11/4" Splice Bolt
704A	1	Cable Anchor Bracket	3478G	16	5/8"ø x 7 1/2" Hex Hd Bolt
705G	1	2" x 5 1/2" Pipe	3497G	8	5/8"ø x 9 1/2" Hex Hd Bolt
740G	8	4'6 Tube Sleeve	3580G	7	5/8"ø x 18" Post Bolt
766G	8	1/4" x 18" x 24" Soil Plate	3900G	2	1" Washer
782G	1	5/8" x 8" x 8" Bearing Plate	3910G	2	1" Hex nut
985A	1	ET-2000 Extruder	4075B	7	WD Block 1'2 6" x 8" DR
3000G	1	Cable 3/4" x 6'6	4147B	8	WD 3'9 Post 5 1/2 x 7 1/2"
3300G	11	5/8" Washer	4228G	2	3/8"ø x 4" Lag Screw
3340G	47	5/8" Hex nut	9918A	1	6'3 Strut

SECTION "B-B"
(TYP @ POSTS #3, 4, 6, 7, & 8)

SECTION "A-A"
(@ POST #2)

PARTIAL VIEW @ POST #1

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

ALAN Y. TOMITA
LICENSED PROFESSIONAL ENGINEER
NO. 4129-C
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

RAIL TERMINAL DETAILS
ET-2000 OPTION "A"

FORT WEAVER ROAD RESURFACING
N. of Laulaunui St. to the Vicinity of Hanakahi St.
F. A. Project No. STP-076-1(5)

Scale: Not to Scale Date: July, 1999

SHEET No. 9 OF 9 SHEETS

November 4, 1999 11:07AM
plotcmp Sheet1.dwg