

INDEX TO DRAWINGS	
SHEET	DESCRIPTION
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Q2	PLAN AND ELEVATION
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Q4	METAL GUARDRAIL TYPE 3 THRIE BEAM AND APPURTENANCES DETAILS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-036-1(16)	2006	29	36

GENERAL NOTES

DESIGN SPECIFICATIONS - AASHTO:

1. AASHTO LRFD Bridge Design Specifications, 3rd Edition, 2004, with all interim revisions.

MATERIALS:

1. Reinforced concrete: Class A, unless otherwise noted.  
2. Reinforcing steel: ASTM A 615, Grade 60.  
3. Admixture in concrete: See Special Provisions

CONSTRUCTION METHODS:

1. Refer to Hawaii Standard Specifications for Road, Bridge and Public Works Construction, 1994 Edition and Special Provisions.  
2. Except as noted otherwise, all dimensions are measured plumb.

REFERENCE:

1. Refer to Standard Plans for additional details and notes not covered by details and typical drawings.

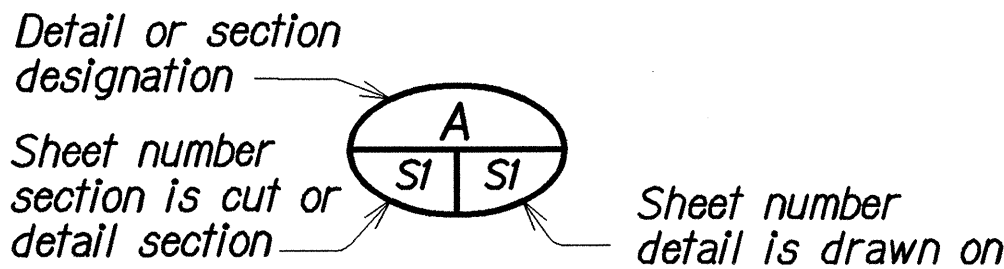
GENERAL:

1. All items noted incidental will not be paid for separately.  
2. The Contractor shall verify the locations of all existing utility lines and notify their respective owners before commencing with any work.  
3. The Contractor shall verify all grades and dimensions in the field before commencing with any work.  
4. The Contractor shall be solely responsible for the protection of adjacent property, utilities and existing and new structures from damage due to construction. Repairing any damage shall be at the Contractor's own expense, to the satisfaction of the Engineer. He shall conduct his work in such a manner and provide such temporary shoring or other measures as may be necessary to insure the safety of all concerned and to protect existing structures.

ABBREVIATIONS

Bm.	Beam	Ftg.	Footing
Br.	Bridge	Jt.	Joint
CL	Center line	No.	Number
Cl.	Clear	Rdwy.	Roadway
Conc.	Concrete	Ref.	Reference
Cont.	Continuous	Sht.	Sheet
Exist.	Existing	Term.	Terminal
Exp.	Expansion	Typ.	Typical
FF	Front Face	w/	with

SYMBOLS



SURVEY PLOTTED BY	DATE
DRAWN BY	MAR 2006
DESIGNED BY	
NOTED BY	MAR 2006
QUANTITIES BY	MAR 2006
CHECKED BY	MAR 2006
ORIGINAL PLAN	
NOTE BOOK	
No. XXXXX	

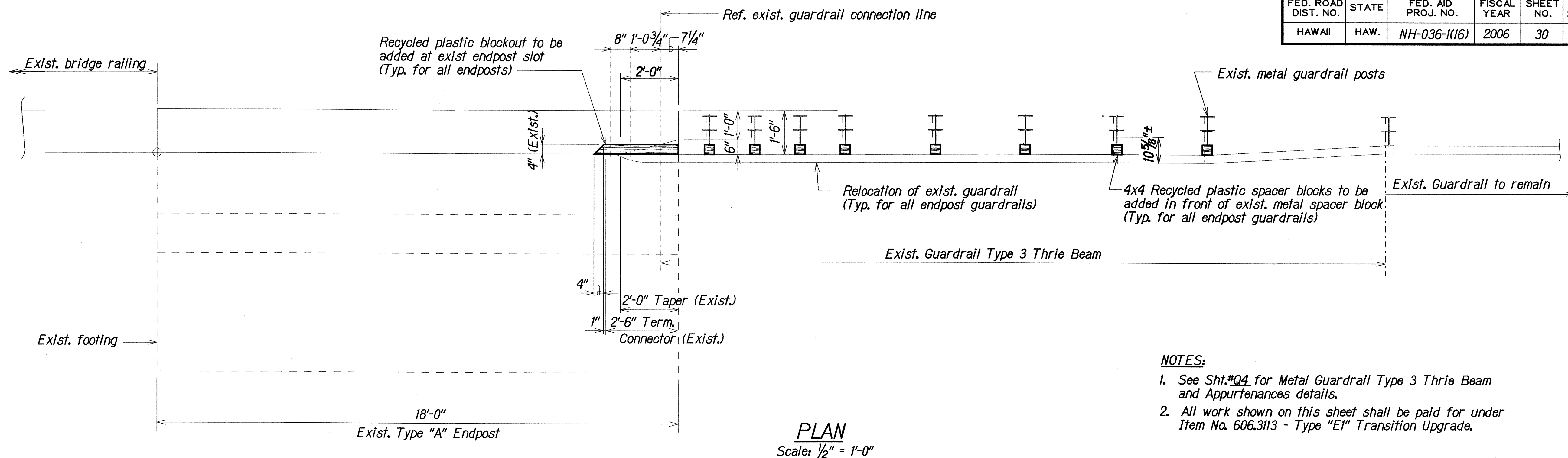
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

KALIAPINUI BRIDGE  
INDEX, GENERAL NOTES,  
ABBREVIATIONS AND SYMBOLS  
HANA HIGHWAY RESURFACING  
Dairy Road to Haleakala Hwy.  
Fed. Aid Project No. NH-036-1(16)

Scale: As Noted      Date: Mar. 2006

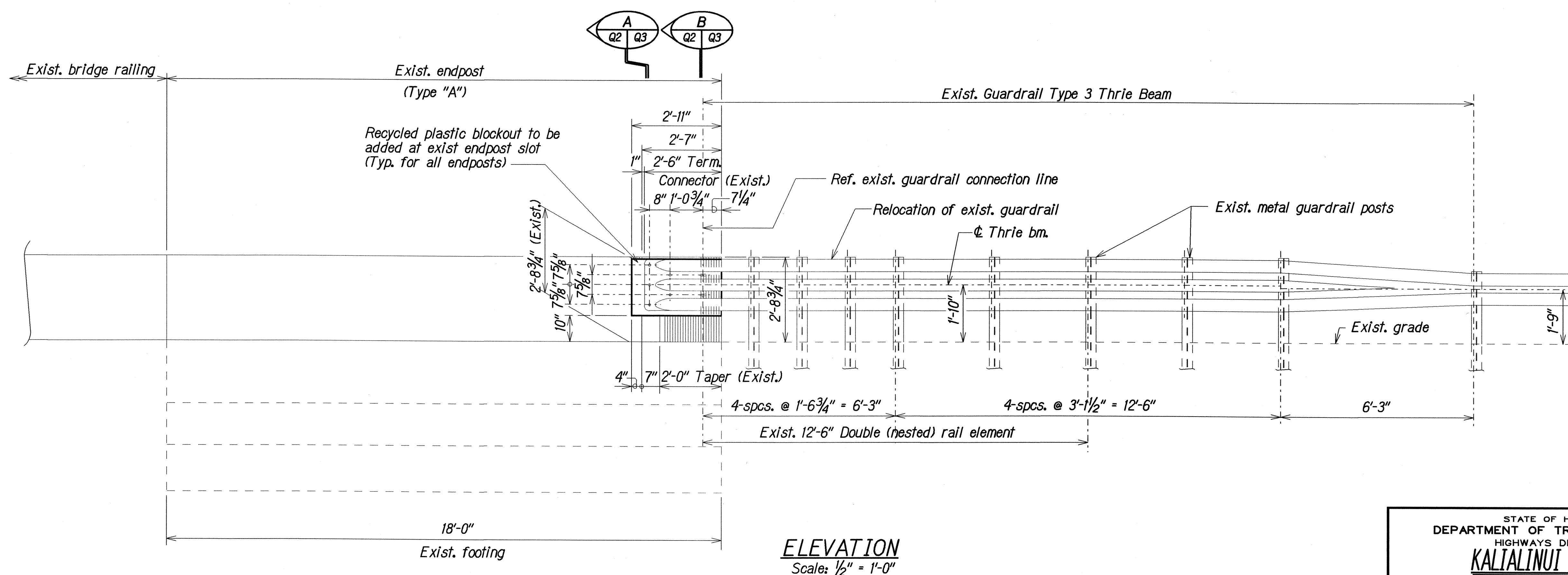
SHEET No. Q1 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-036-1(16)	2006	30	36



**NOTES:**

- See Sht.#04 for Metal Guardrail Type 3 Thrie Beam and Appurtenances details.
- All work shown on this sheet shall be paid for under Item No. 606.3113 - Type "E1" Transition Upgrade.



**TYPE "E1" TRANSITION UPGRADE PLAN AND ELEVATION**

SURVEY PLOTTED BY	DATE
DRAWN BY	MAR 2006
DESIGNED BY	MAR 2006
QUANTITIES BY	MAR 2006
CHECKED BY	MAR 2006

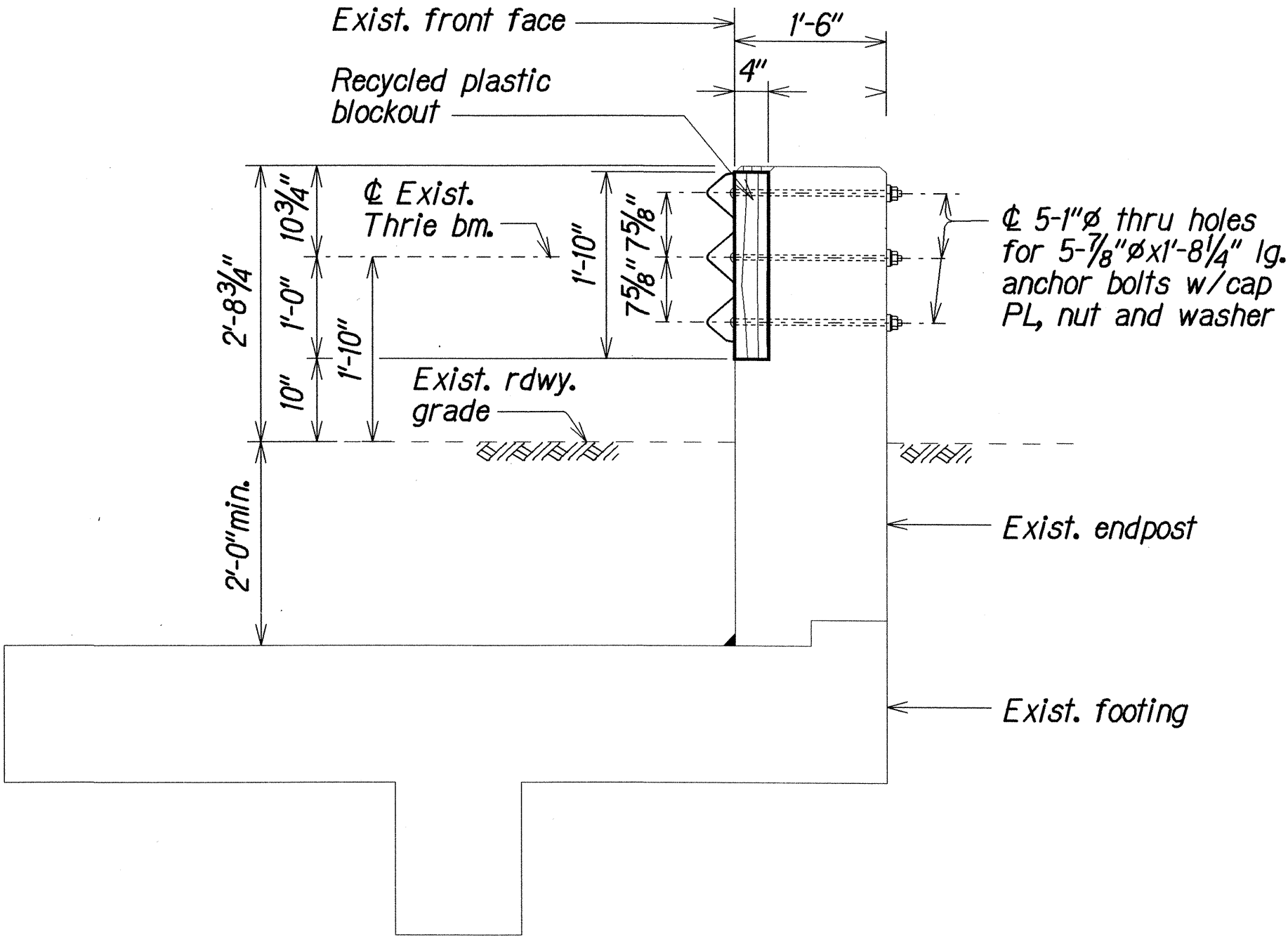
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**KALIALINUI BRIDGE**  
**TYPE "E1" TRANSITION UPGRADE**  
**PLAN AND ELEVATION**  
HANA HIGHWAY RESURFACING  
Dairy Road to Haleakala Hwy.  
Fed. Aid Project No. NH-036-1(16)

Scale: As Noted

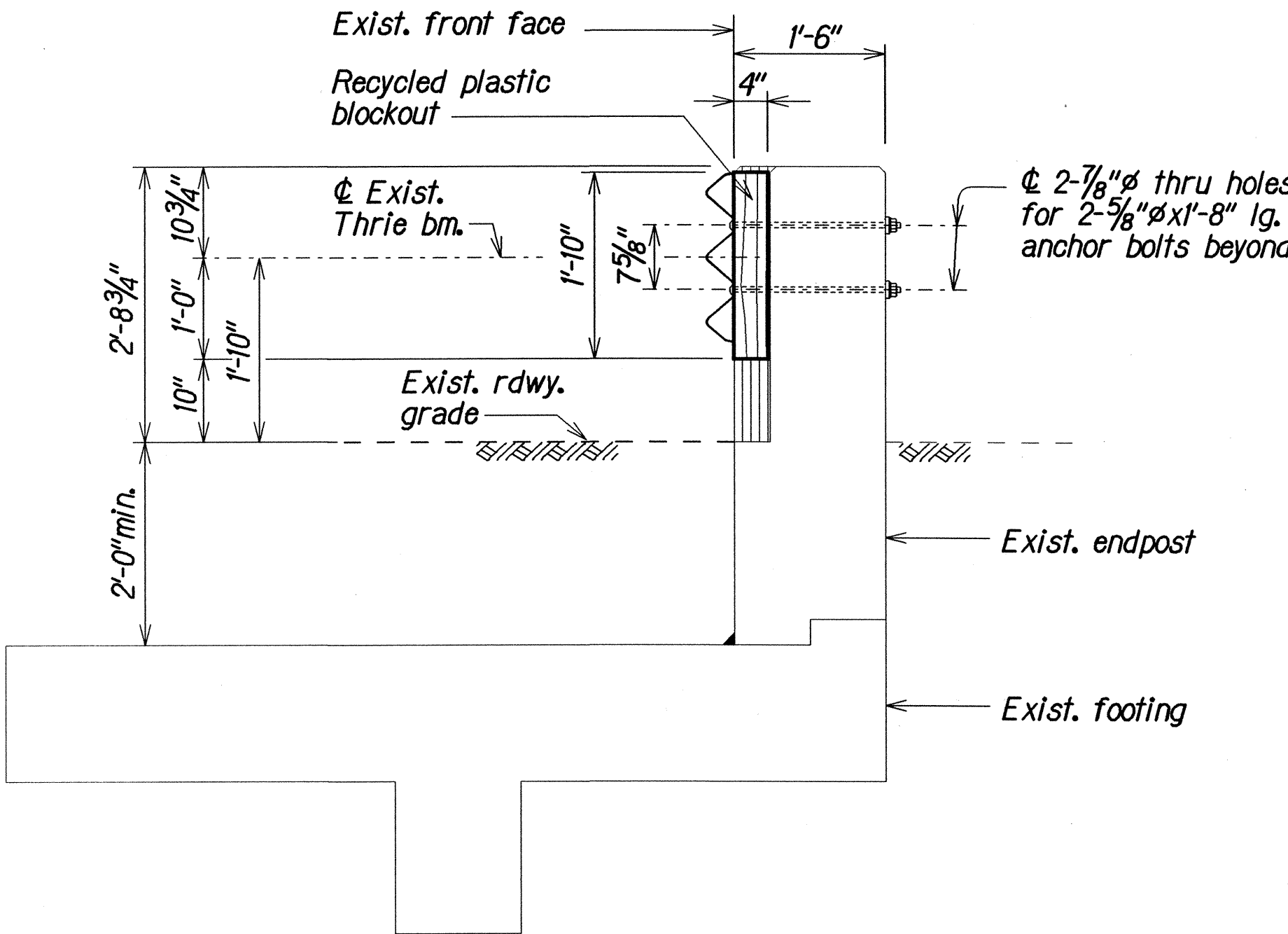
Date: Mar. 2006

SHEET No. Q2 OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-036-1(16)	2006	31	36



SECTION A  
Scale: 3/4" = 1'-0"



SECTION B  
Scale: 3/4" = 1'-0"

TYPICAL SECTIONS - TYPE "E1" TRANSITION UPGRADE DETAILS

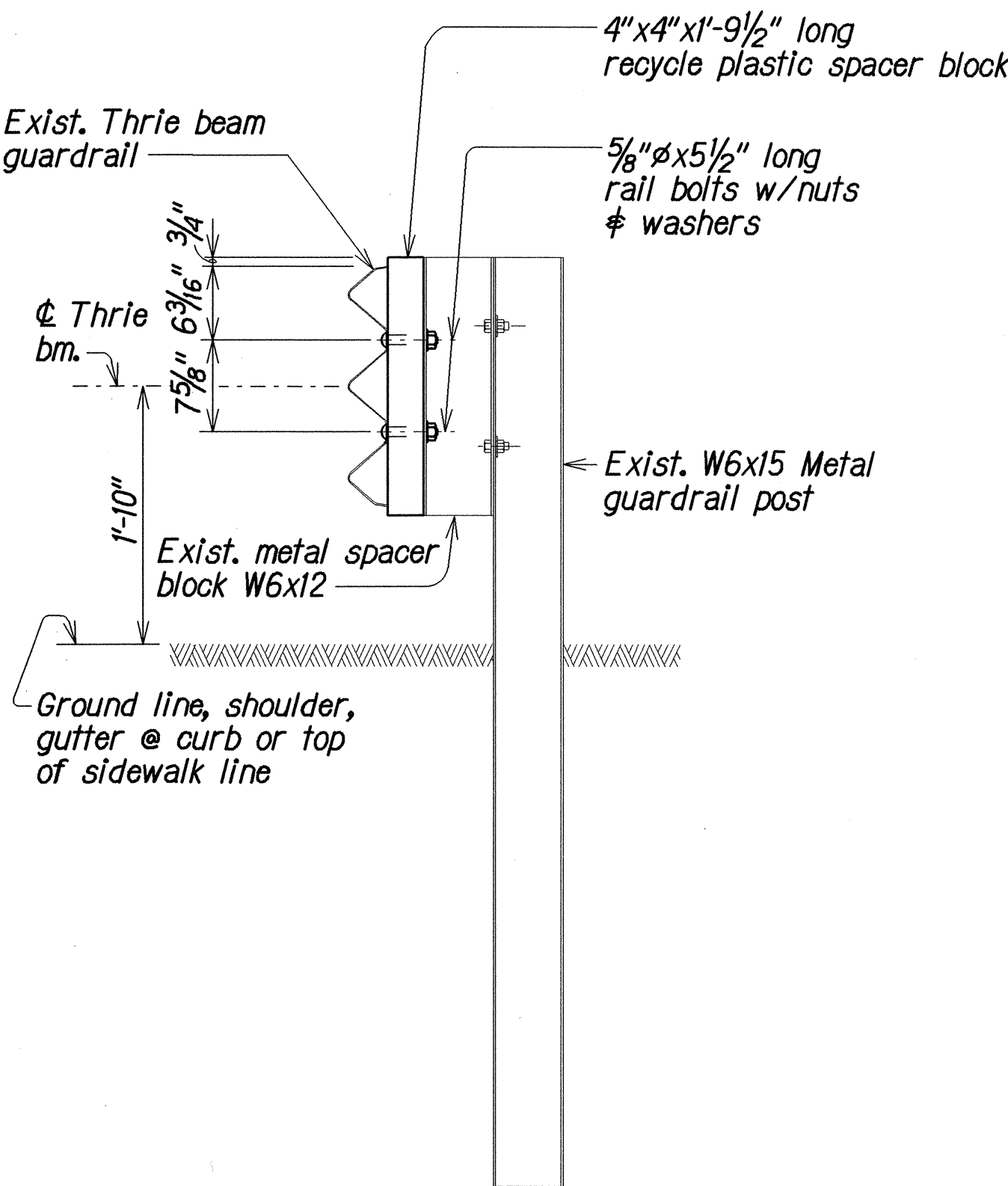
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DRAWN BY: KMN	MAR 2006
DESIGNED BY: PW	MAR 2006
QUANTITIES BY: PW	MAR 2006
CHECKED BY: PLS	MAR 2006
NOTE BOOK	
NO. XXXX	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

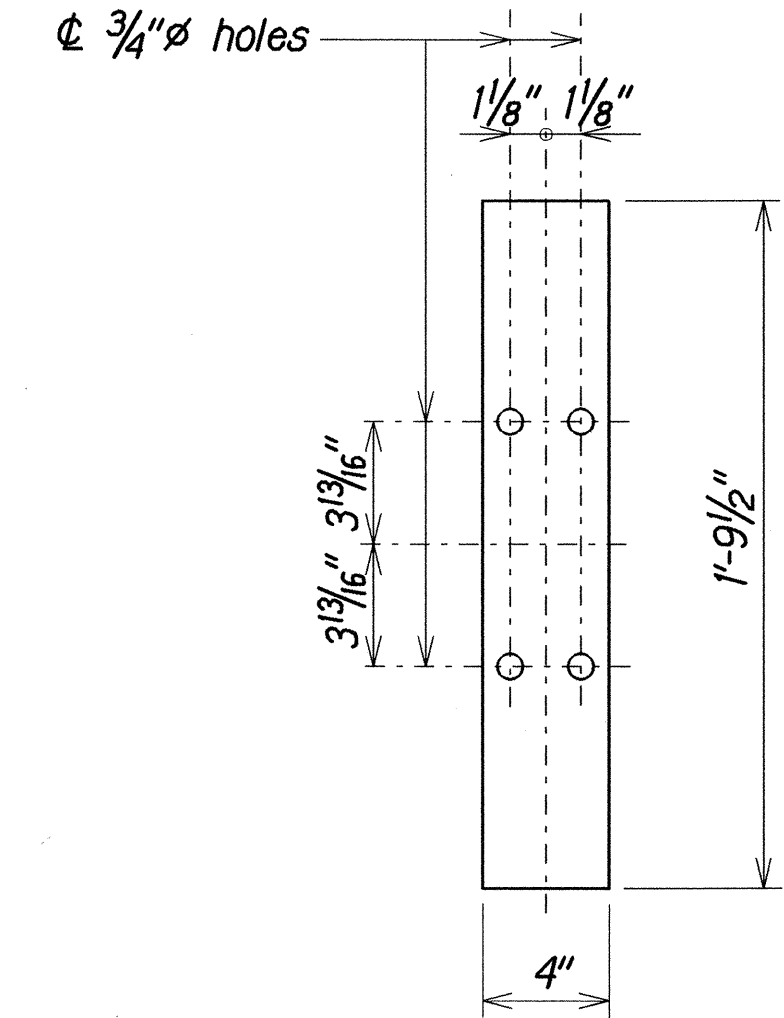
**KALIALINUI BRIDGE**  
**TYPE "E1" TRANSITION UPGRADE**  
**TYPICAL SECTIONS**  
HANA HIGHWAY RESURFACING  
Dairy Road to Haleakala Hwy.  
Fed. Aid Project No. NH-036-1(16)

Scale: As Noted  
Date: Mar. 2006

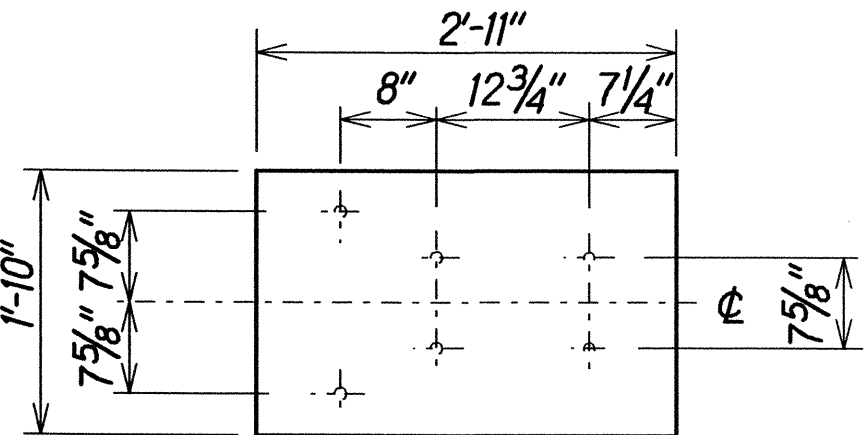
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-036-1(16)	2006	32	36



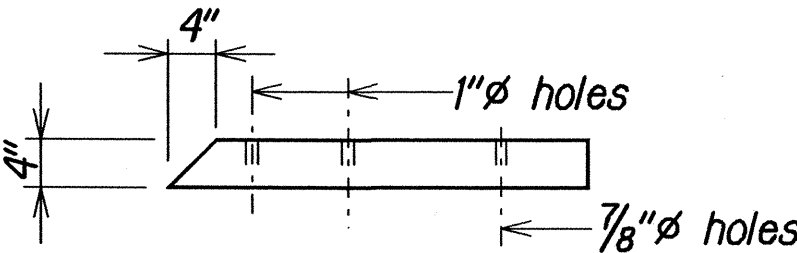
**TYPICAL SECTION**  
**METAL GUARDRAIL ON METAL POST**  
**WITH METAL SPACER BLOCK**  
**AND PLASTIC BLOCKOUT**  
 Scale: 1" = 1'-0"



**RECYCLED PLASTIC SPACER BLOCK**  
 Not to scale



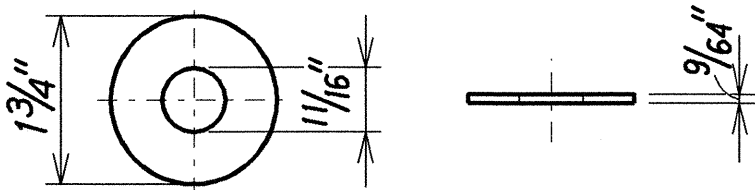
**ELEVATION**



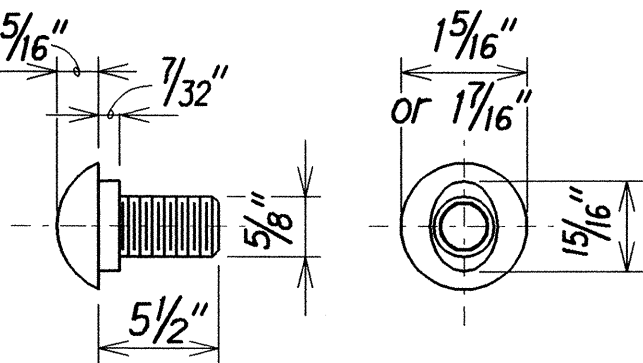
**PLAN**

**RECYCLED PLASTIC BLOCKOUT**

Scale: 3/4" = 1'-0"

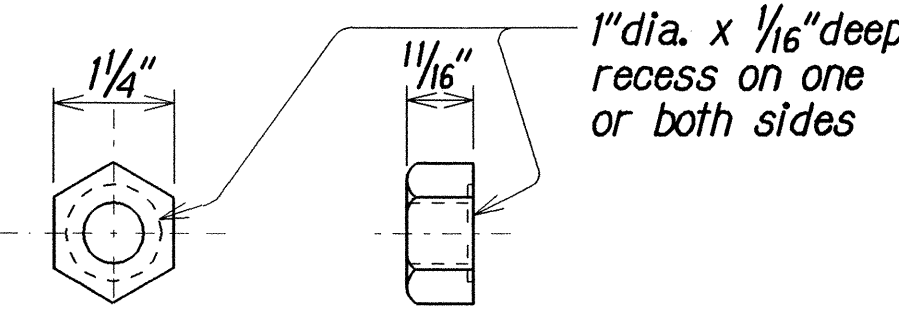


**STEEL WASHER FOR 5/8" BOLT**  
 Scale: 6" = 1'-0"



**5/8" BOLT**  
**RECESS NUT**

Scale: 6" = 1'-0"



# **METAL GUARDRAIL TYPE 3 THRIE BEAM AND APPURTENANCES DETAILS**

**NOTE:**  
 1. The work necessary to install plastic spacer blocks shall include all labor, materials, tools, equipment and incidentals necessary to complete the work and will not be paid for separately.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	MAR 2006
NO. 1000	DESIGNED BY	MAR 2006
	CHECKED BY	MAR 2006

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**KALIALINUI BRIDGE**  
TYPE "E1" TRANSITION UPGRADE  
METAL GUARDRAIL TYPE 3 THRIE BEAM  
AND APPURTENANCES DETAILS  
HANA HIGHWAY RESURFACING  
Dairy Road to Haleakala Hwy.  
Fed. Aid Project No. NH-036-1(16)

Scale: As Noted  
Date: Mar. 2006