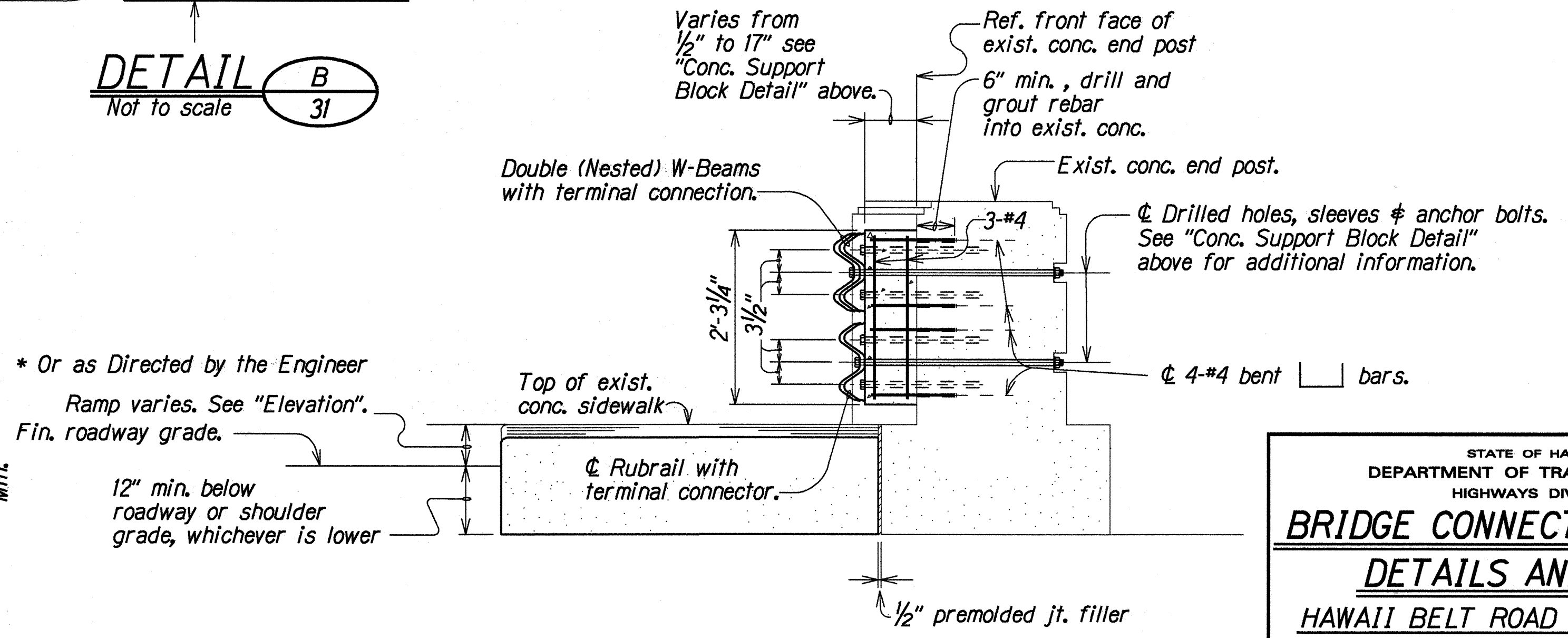
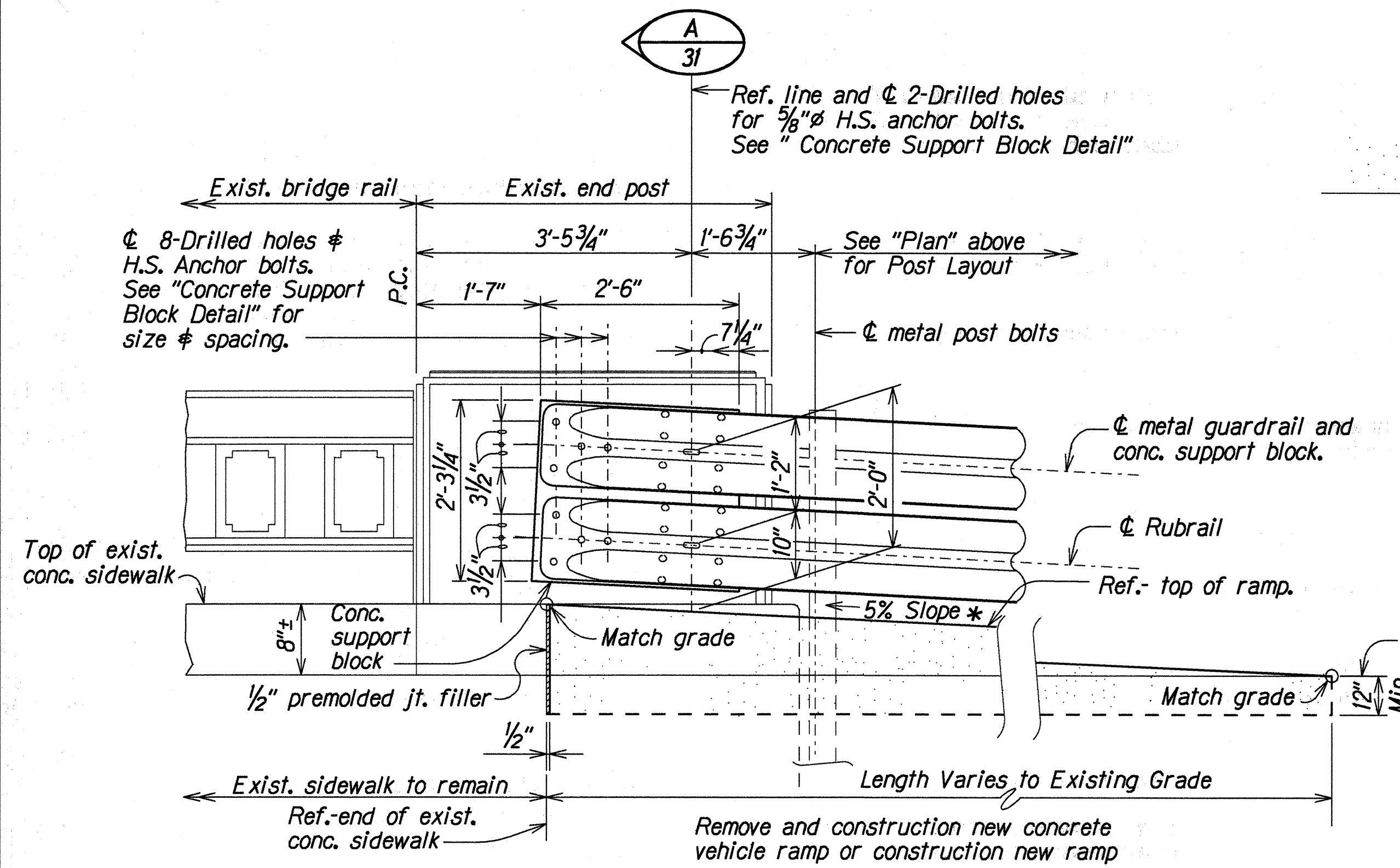
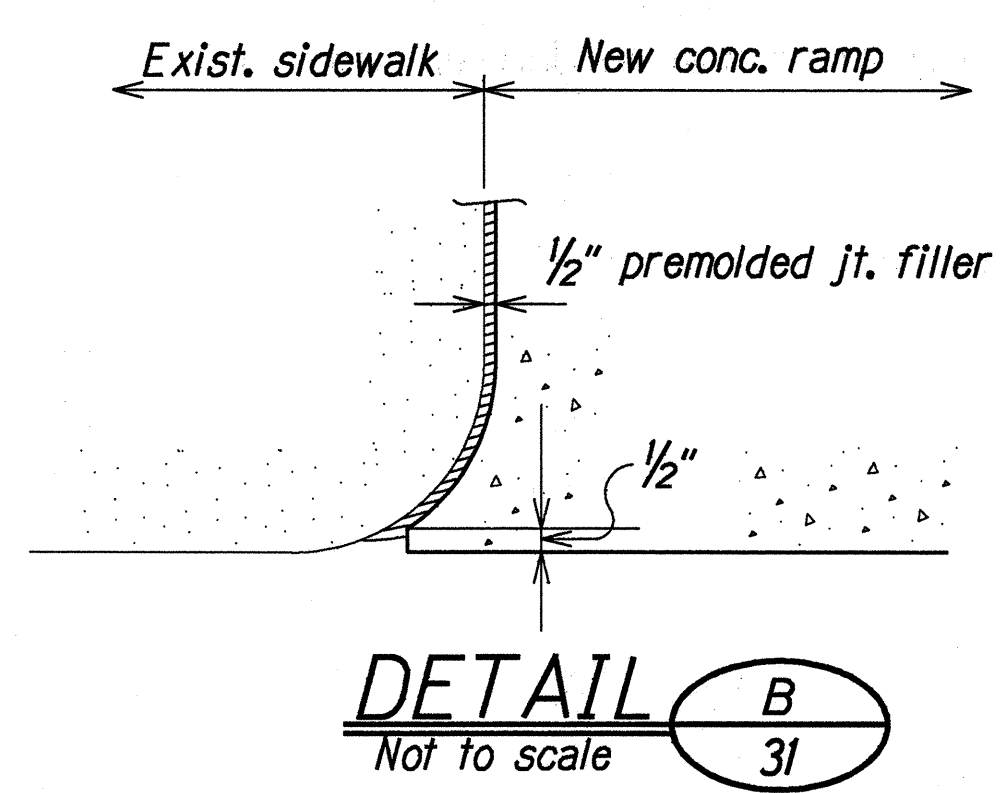
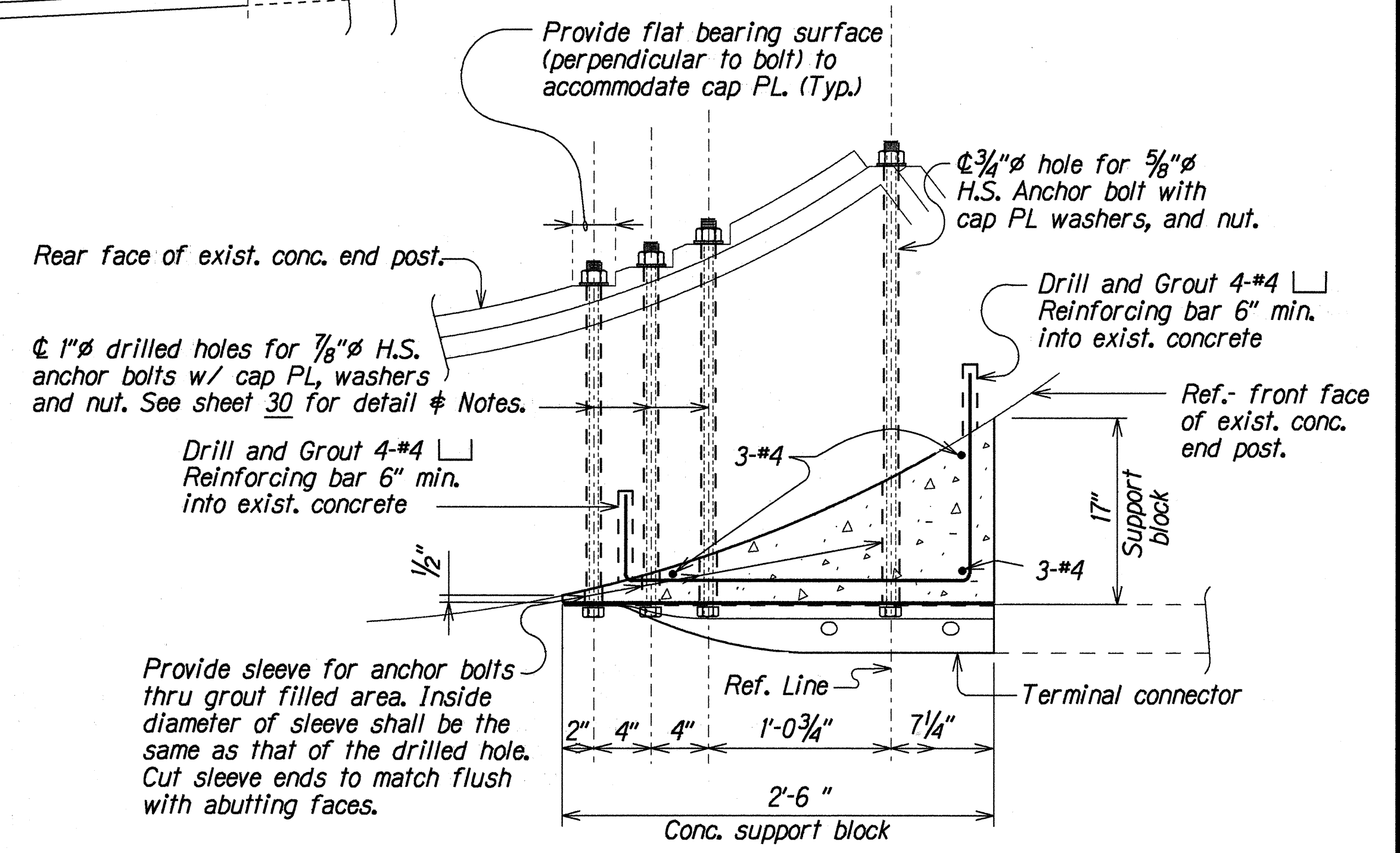
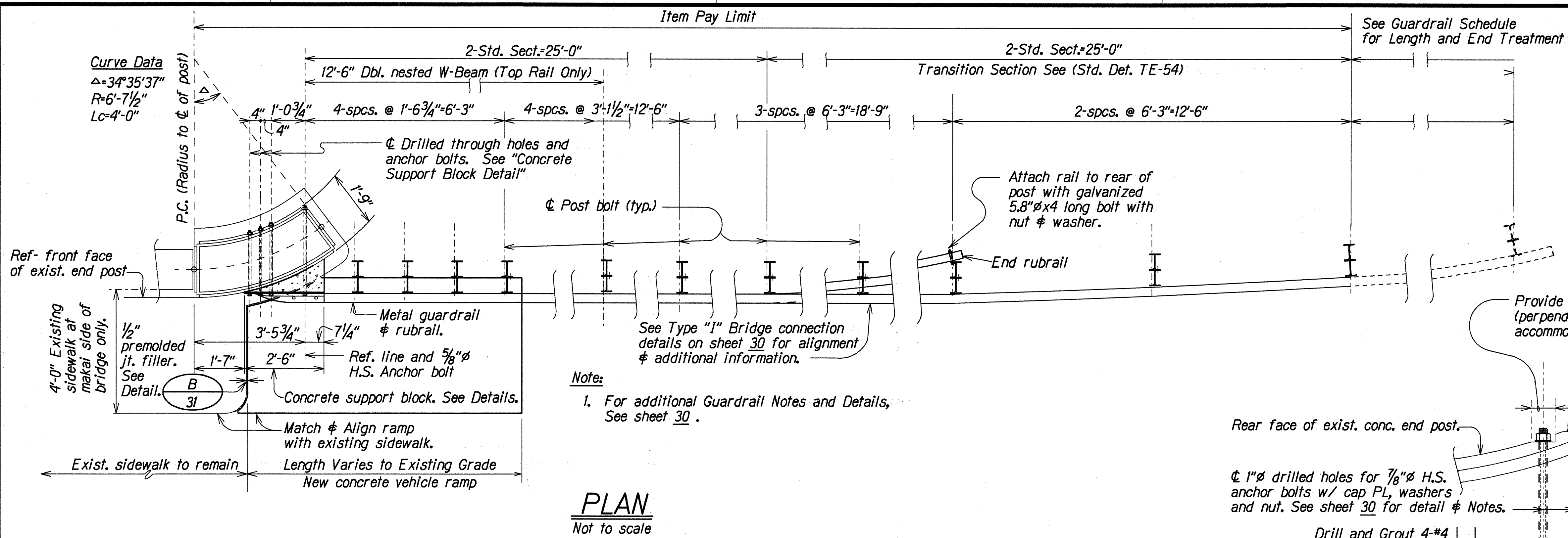


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-019-2(37)	1995	31	36



STATE OF HAWAII
 DEPARTMENT OF TRANSPORTATION
 HIGHWAYS DIVISION

BRIDGE CONNECTION-TYPE II

DETAILS AND NOTES

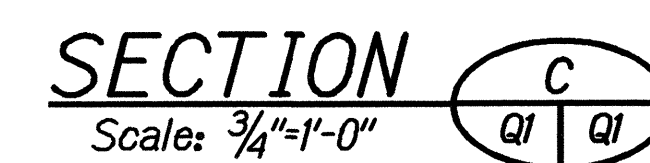
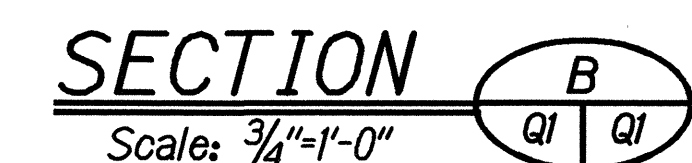
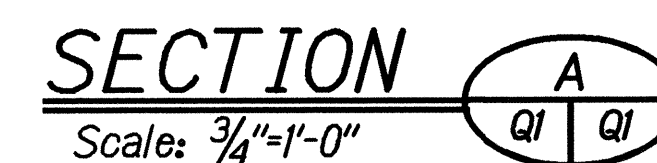
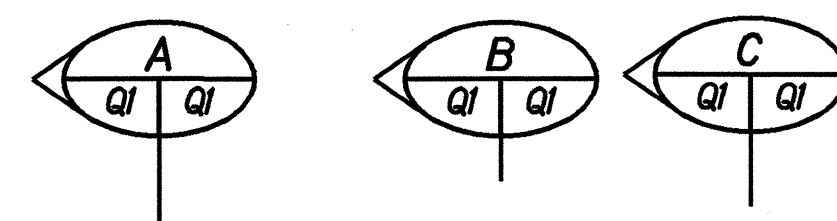
HAWAII BELT ROAD RESURFACING
 Kaala Bridge to Kaawalii Gulch
 F.A. PROJECT NO. STP-019-2(37)

Scale: As shown Date: Nov., 1994

SHEET No. 1 OF 1 SHEETS

SURVEY DICTATED BY	DATE	Mar. 1993
DRAWN BY	LM	
DESIGNED BY	TS	Mar. 1993
CHECKED BY	US	Mar. 1993
ORIGINAL PLAN		
NOTE BOOK		
NO. BROCON2		

C.O. 31S-1
3-#4 cont EF



11/9/98	This sheet is added to the contract.
DATE	REVISION

HAWAII BELT ROAD RESURFACING
TYPE "A" END POST DETAILS
HAWAII BELT ROAD
Kaala Bridge To Kaawali Gulch
Project No. STP-019-2(37)

ate: Nov. 1998

SHEET No. 01 OF 3 SHEETS

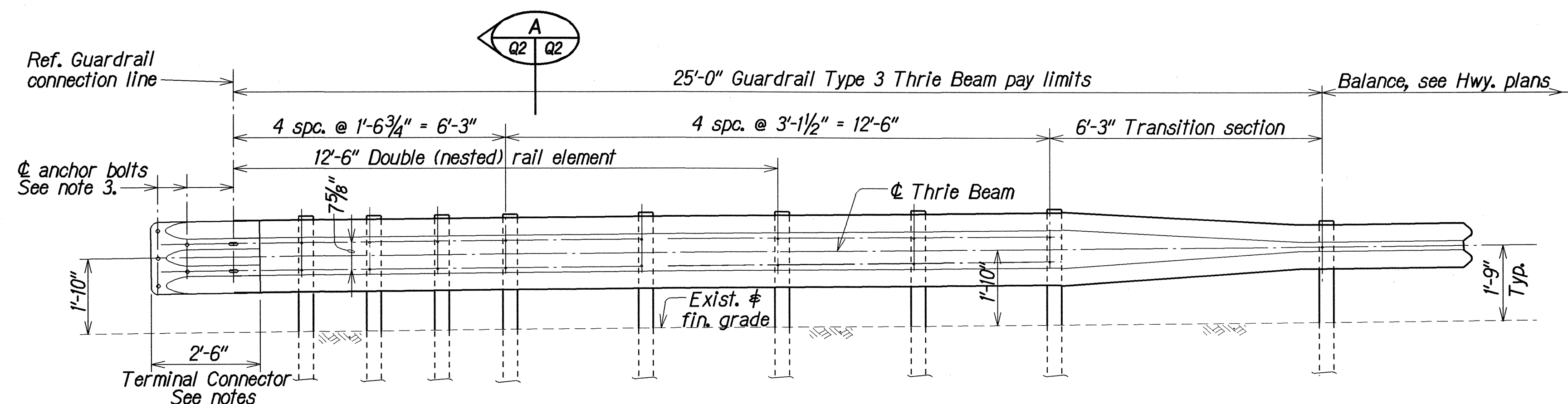
"AS-BUILT"

C.O. 31S-1 ~~C.O. 36S-1~~

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	
	TRACED BY	
NOTE BOOK	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	
S. hblbrdg1	KML LMA	NOV 1998
	JFL	NOV 1998
	JFL	NOV 1998
	DCO	NOV 1998

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-019-2(37)	1999	C.O. 36S-2	36

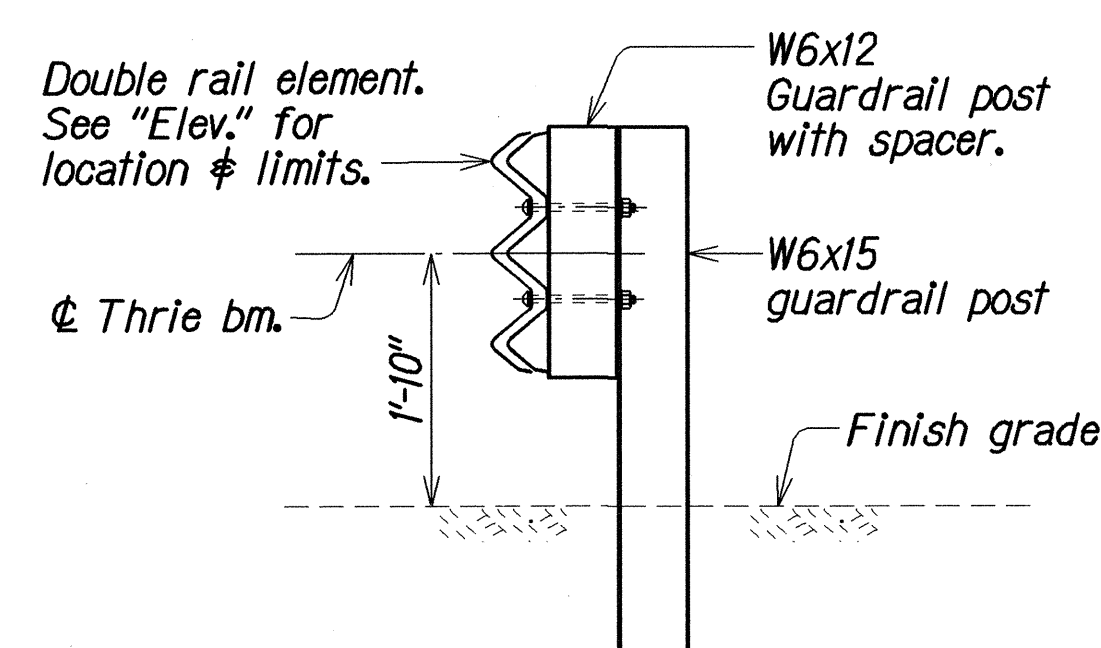
C.O. 31S-2



ELEVATION

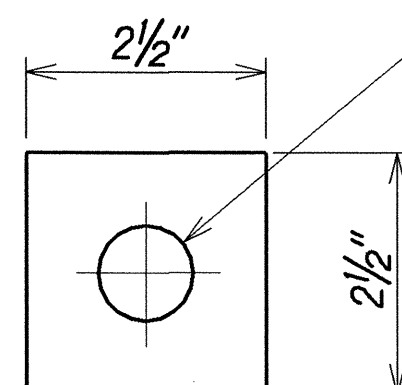
TYPICAL TYPE 3 THRIE BEAM METAL GUARDRAIL UPGRADE FOR END POST UPGRADE

Scale: 1/2" = 1'-0"



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

Hole centered in 1/2" thick steel PL (bolt size + 1/8")
Galvanize after fabrication



CAP PLATE DETAIL

Scale: 6" = 1'-0"

NOTES:

- See "General Notes" on Sht. 30 for additional guardrail and drilling information.
- All anchor bolts shall be high strength bolts conforming to the requirements of AASHTO M 164. See Special Provisions.
- Terminal connector, Thrie Beam Metal Guardrail and Transition Section shall be fabricated from 10 gauge steel conforming to the requirements of AASHTO M 180, Class B, Type II and shall be hot-dip galvanized after fabrication.
- Guardrail post and spacer block including all anchor bolts, cap PL, bolts, nuts, and washers shall be hot-dip galvanized after fabrication.
- Cap PL shall be fabricated from ASTM A 36.
- First 25'-0" of guardrail adjoining "Terminal Connector" shall be galvanized steel and supports spaced as shown on the detail drawings. This section of rail shall be placed on tangent to end post or parallel to roadway, unless conditions at site renders it impossible to do so. Flare point to be determined in field.
- Double (nest 1st panel) thrie beam elements at all end post connections.
- Where double (nested) beam occur, 12" "Back-up Plate" not required.
- Heads of through anchor bolts shall be placed on the traffic side of the rail.
- Drilling of through holes shall be done in such a manner as to prevent cone puncturing of the daylighting end.

ORIGINAL PLAN	DATE
NOV 1992	
SURVEY PLOTTED BY	DATE
NOV 1992	
DESIGNED BY	DATE
NOV 1992	
QUANTITIES BY	DATE
NOV 1992	
CHECKED BY	DATE
NOV 1992	

LEGEND FOR AS-BUILT POSTINGS

~~~~~	Squiggly line for as-built deletion
==	Double line for as-built deletion
Roadway	Text for as-built posting

11/9/98	This sheet is added to the contract.
DATE	REVISION

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

### HAWAII BELT ROAD RESURFACING METAL GUARDRAIL DETAILS

HAWAII BELT ROAD  
Kaala Bridge To Kaawali Gulch  
Federal Aid Project No. STP-019-2(37)

Scale: As Noted

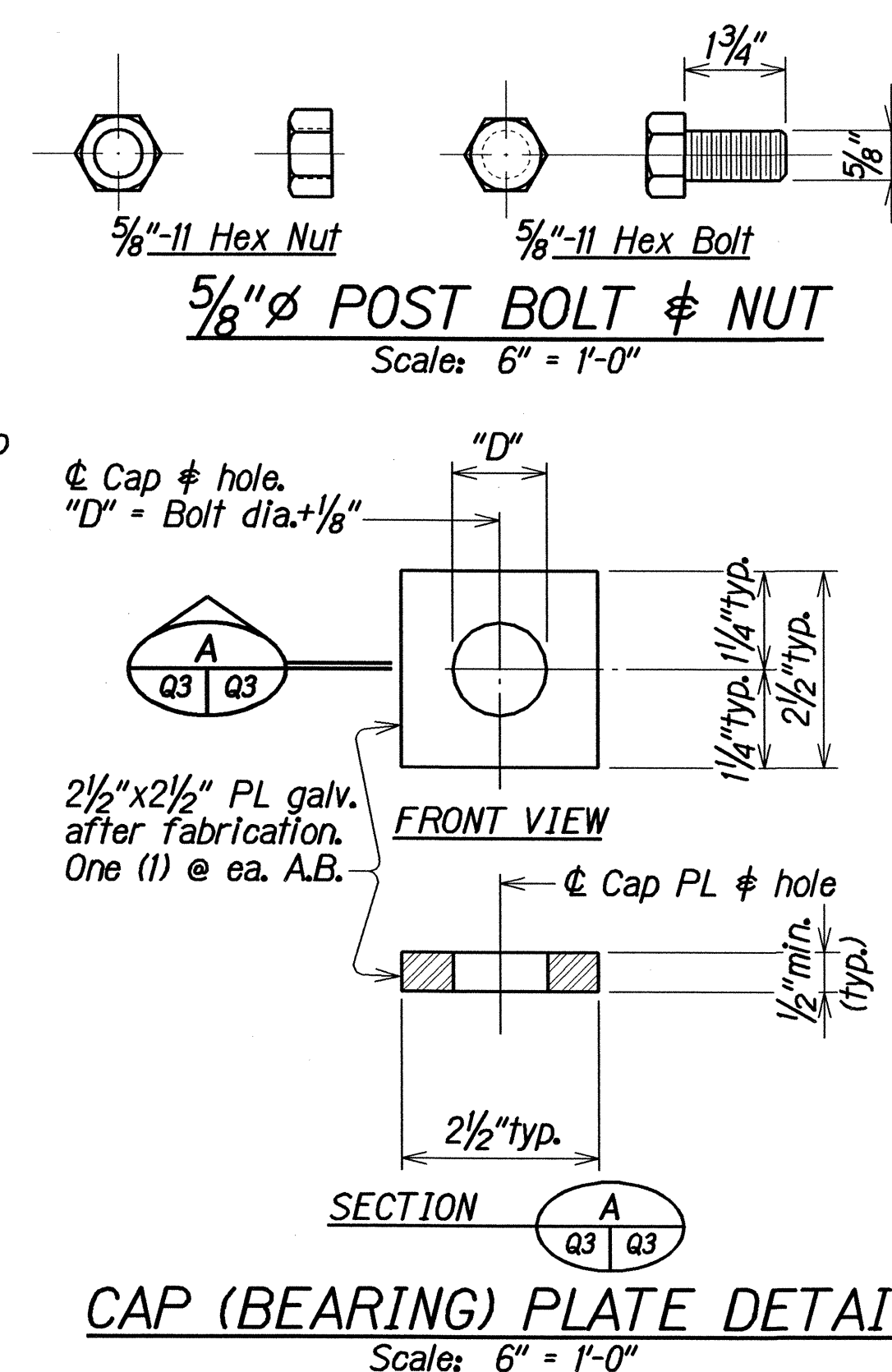
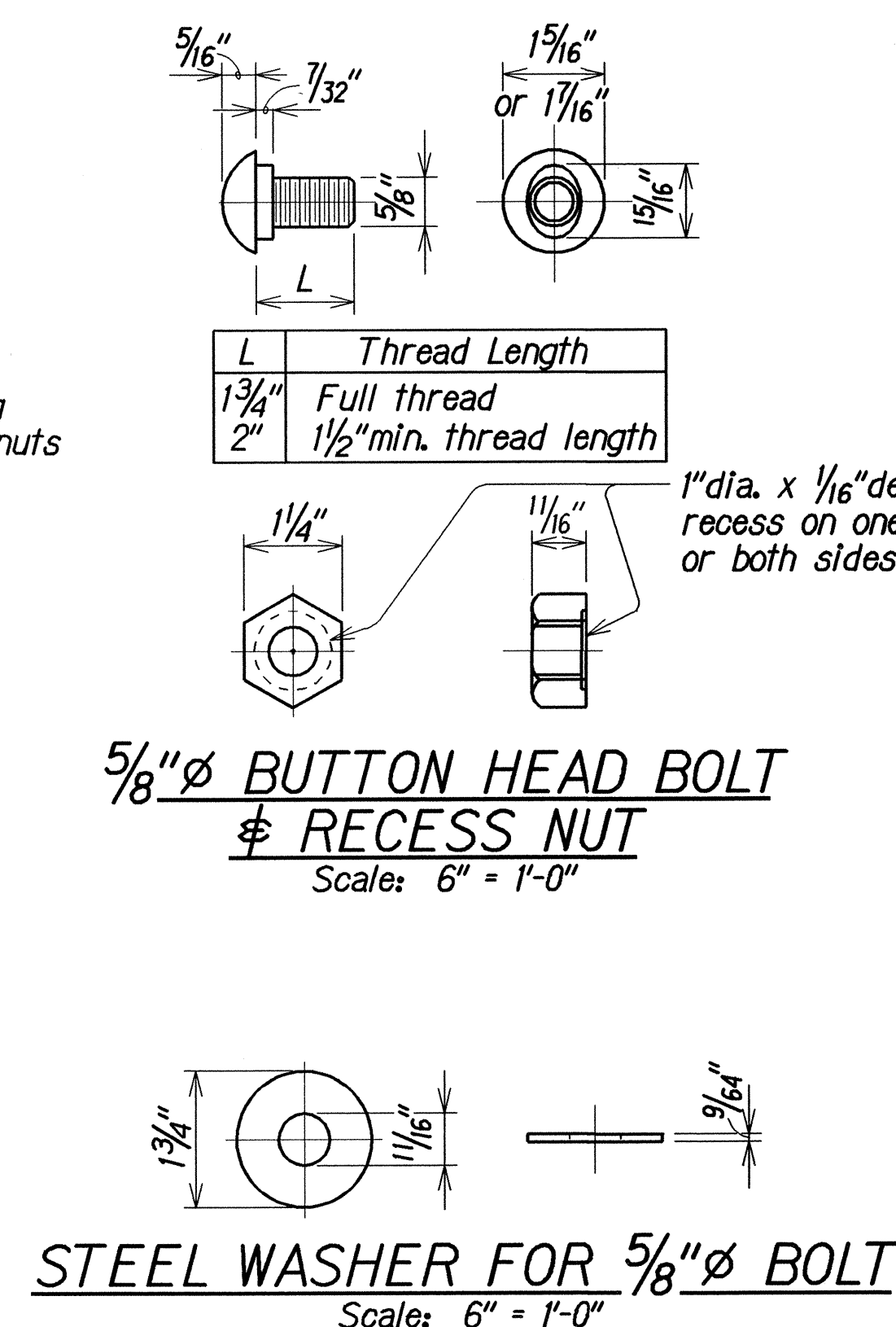
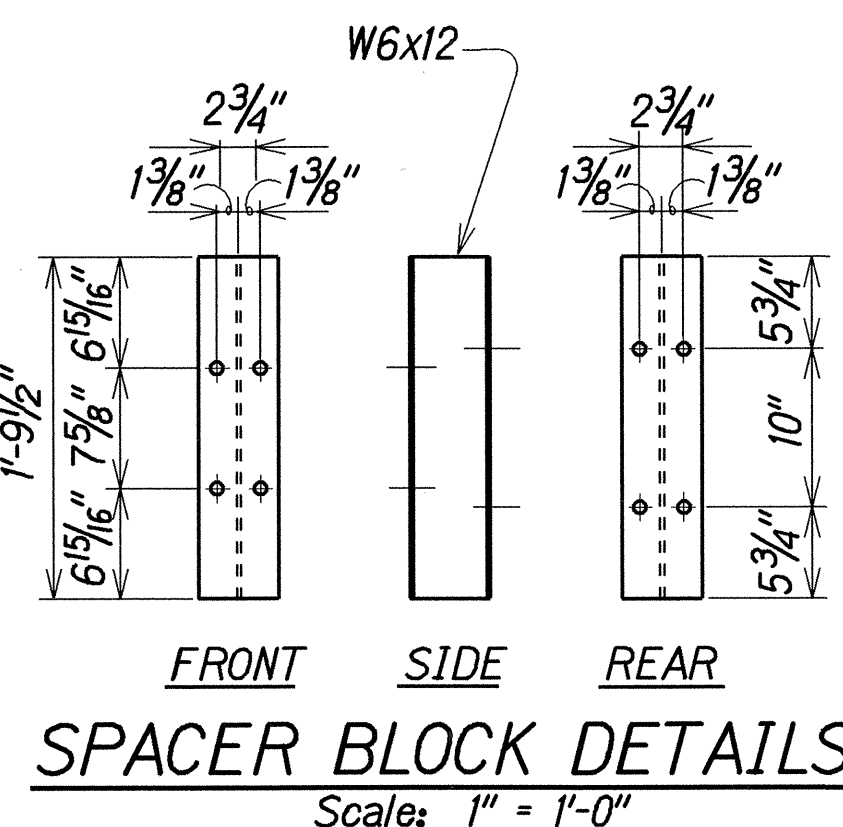
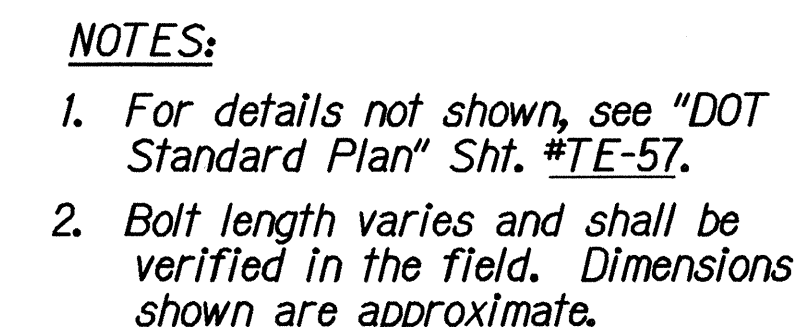
Date: Nov. 1998

SHEET NO. Q2 OF 3 SHEETS

"AS-BUILT"

C.O. 31S-2 ~~C.O. 36S-2~~

C.O. 31S-3



ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
	DRAWN BY _____	KSG
	TRACED BY _____	
NOTE BOOK	DESIGNED BY _____	NOV 1998
	QUANTITIES BY _____	NOV 1998
	CHECKED BY _____	NOV 1998
		DCO

11/9/98	<i>This sheet is added to the contract.</i>
DATE	REVISION
<p>STATE OF HAWAII          DEPARTMENT OF TRANSPORTATION          HIGHWAYS DIVISION</p> <p><b><u>HAWAII BELT ROAD RESURFACING</u></b>  <b><u>METAL GUARDRAIL TYPE 3 THRIE BEAM</u></b>  <b><u>AND APPURTENANCES DETAILS</u></b>  <u>HAWAII BELT ROAD</u>  <i>Kaala Bridge To Kaawali Gulch</i>  <i>Federal Aid Project No. STP-019-2(37)</i></p> <p><i>Scale: As Noted</i> <span style="float: right;"><i>Date: Nov. 1998</i></span></p> <p>SHEET No. 03 OF 3 SHEETS</p>	