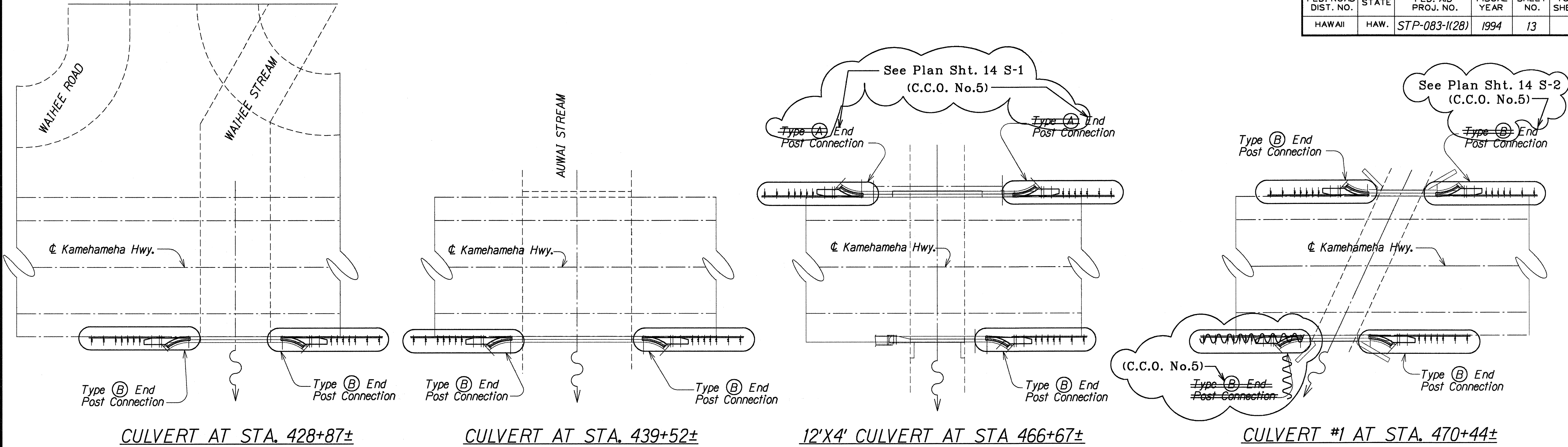
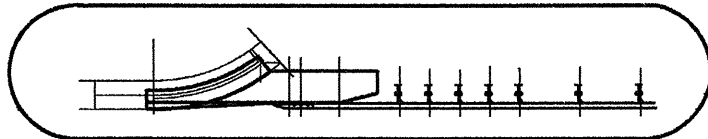


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(28)	1994	13	21



LOCATION PLANS
Not to Scale

LEGEND



"Type (B) Concrete End Post and "Guardrail Type 3TG"
See "Location Plan" for "Type (B) Concrete End Post"
location and details on Sht# Q2.

GENERAL NOTES

1. See Standard Specifications for Road & Bridge Construction, (Hawaii,1985) & Special Provisions.
2. See State of Hawaii, D.O.T. Standard Plan Sht.# TE-57 for Metal Guardrail and "Terminal Connector" Details.
3. All anchor bolts shall be high strength bolts conforming to the requirements of ASTM A325.
4. "Terminal Connector" shall be fabricated from 10 gauge steel conforming to the requirements of AASHTO M 180.
5. "Terminal Connector", including all anchor bolts, cap PL's, nuts and washers, shall be hot-dip galvanized after fabrication.
6. Anchor bolt length shall be such that a snug fit of the elements and full thread engagement plus 1/4" (max) is attained.
7. Existing end post shown by hatched area.
8. Large impacting or vibratory type of equipment will not be permitted in the removal operation of the designated items nor for drilling of holes.
9. Any damage to the existing end post due to the Contractor's operation shall be repaired at his expense, to the satisfaction of the Engineer.
10. The Contractor shall verify all dimensions in the field before commencing with work.
11. The Contractor shall verify the location of all existing utility lines near structures and notify their respective owner before commencing with work.
12. The work necessary to connect guardrail to concrete and post shall include all labor, materials, tools, equipment and in incidentals necessary to complete the work and shall be incidental to the metal guardrail and will not be paid for seperately.
13. Contract items will be paid for in units indicated in the Estimated Quantities.

Note: This tracing prepared during "As-Built" posting.

LEGEND FOR AS-BUILT POSTINGS	
	Squiggly line for as-built deletion
	Double line for as-built deletion
Roadway	Text for as-built posting

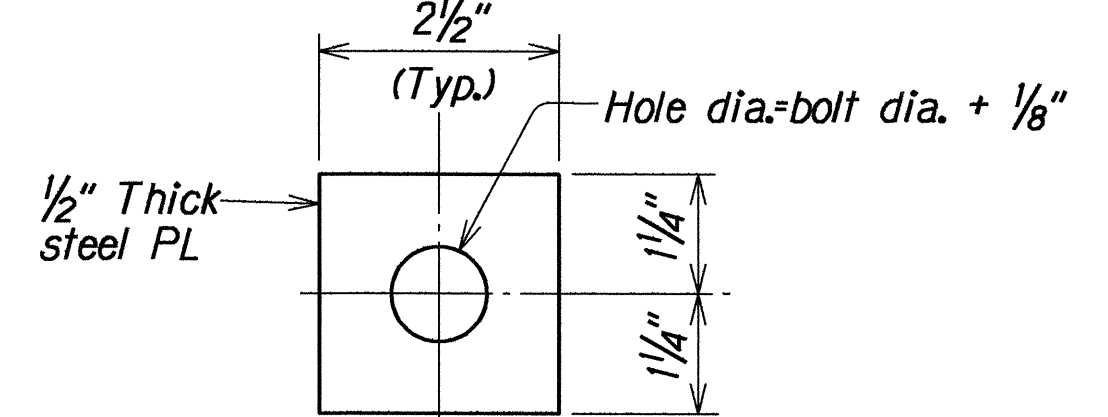
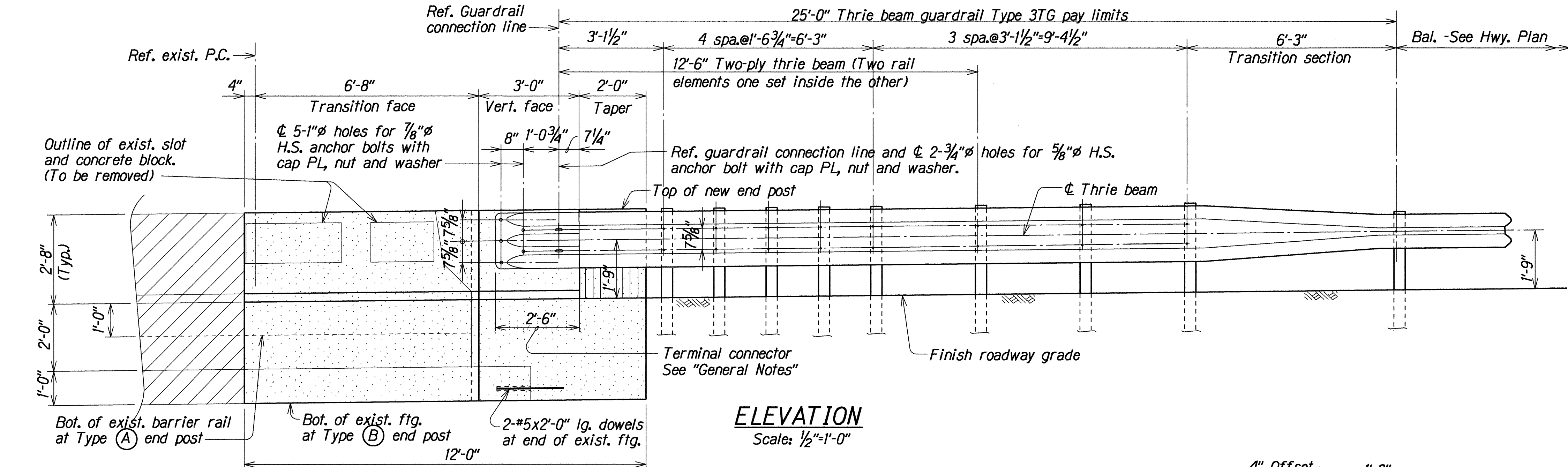
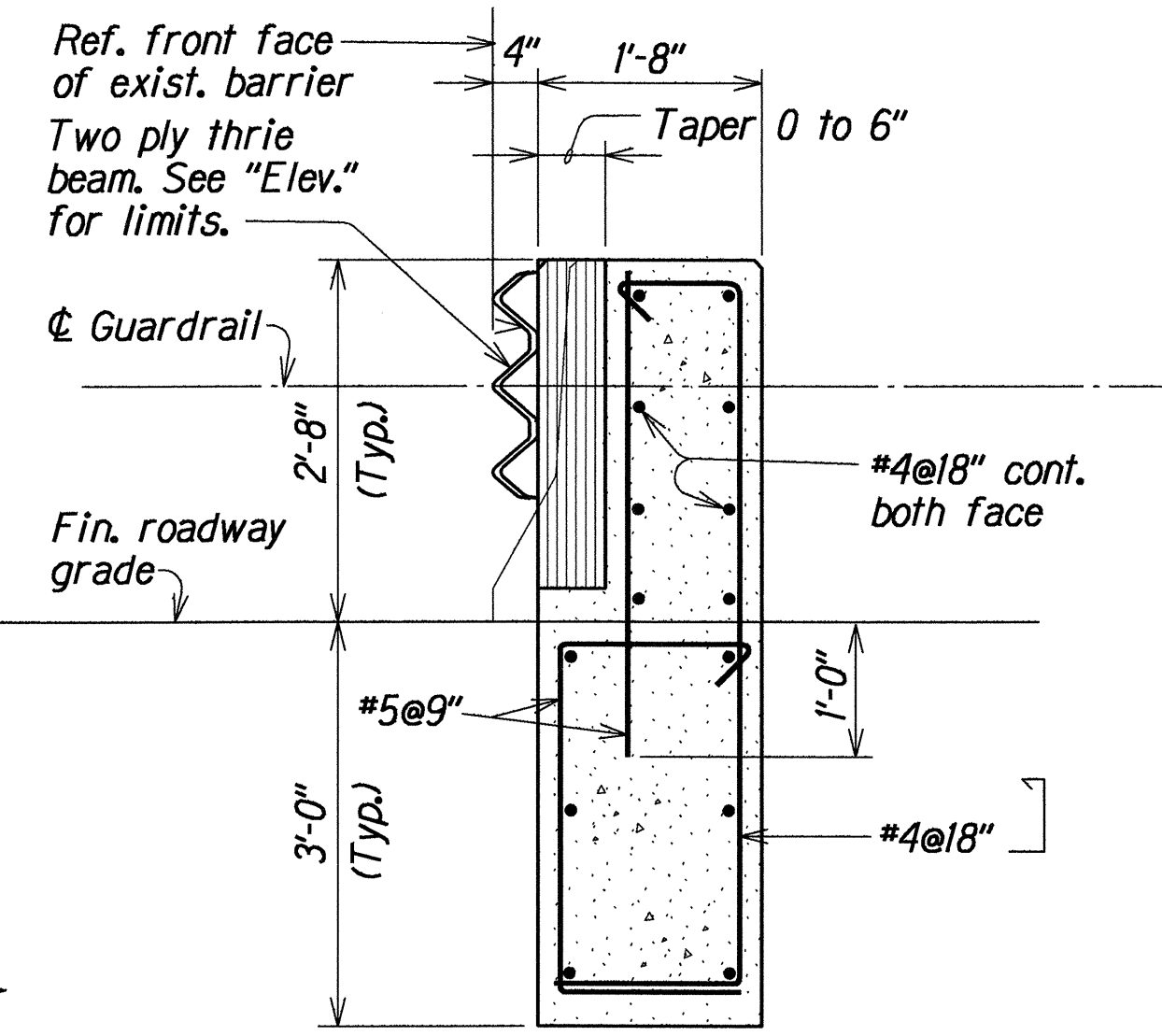
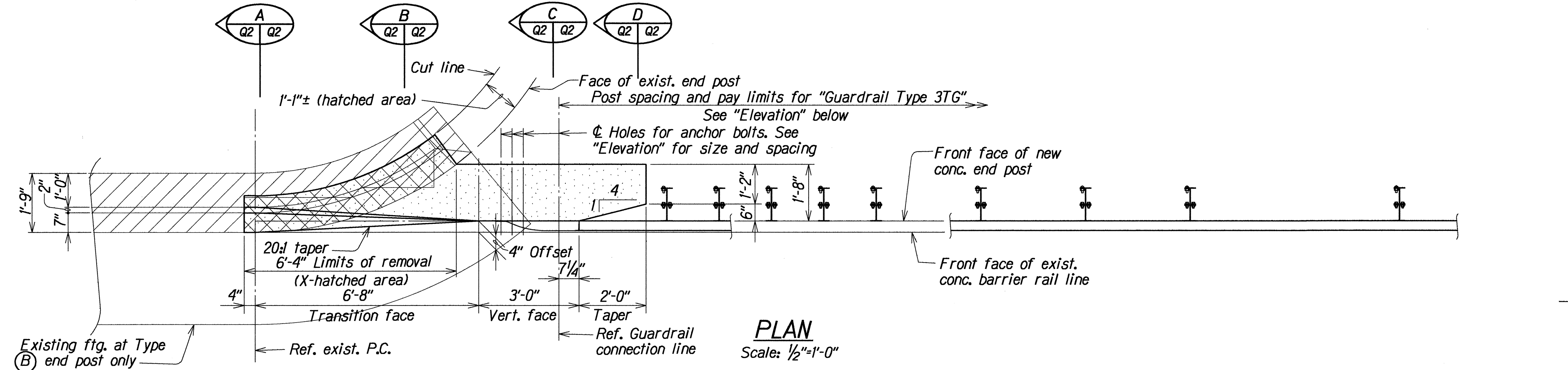
ESTIMATED QUANTITIES							
ITEM NO.	ITEM Type as shown on (C.C.O. No.5)	UNIT	QUANTITIES				TOTAL
			CULVERT AT STA. 428+87±	CULVERT AT STA. 439+52±	CULVERT AT STA. 466+67±	CULVERT AT STA. 470+44±	
507.7619	Type (A) Concrete End Post	Ea.	-	-	2	2	4
507.7620	Type (B) Concrete End Post	Ea.	2	2	2	2	7
606.3112	Guardrail Type 3TG	Lin. Ft.	50	50	75	100	275

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

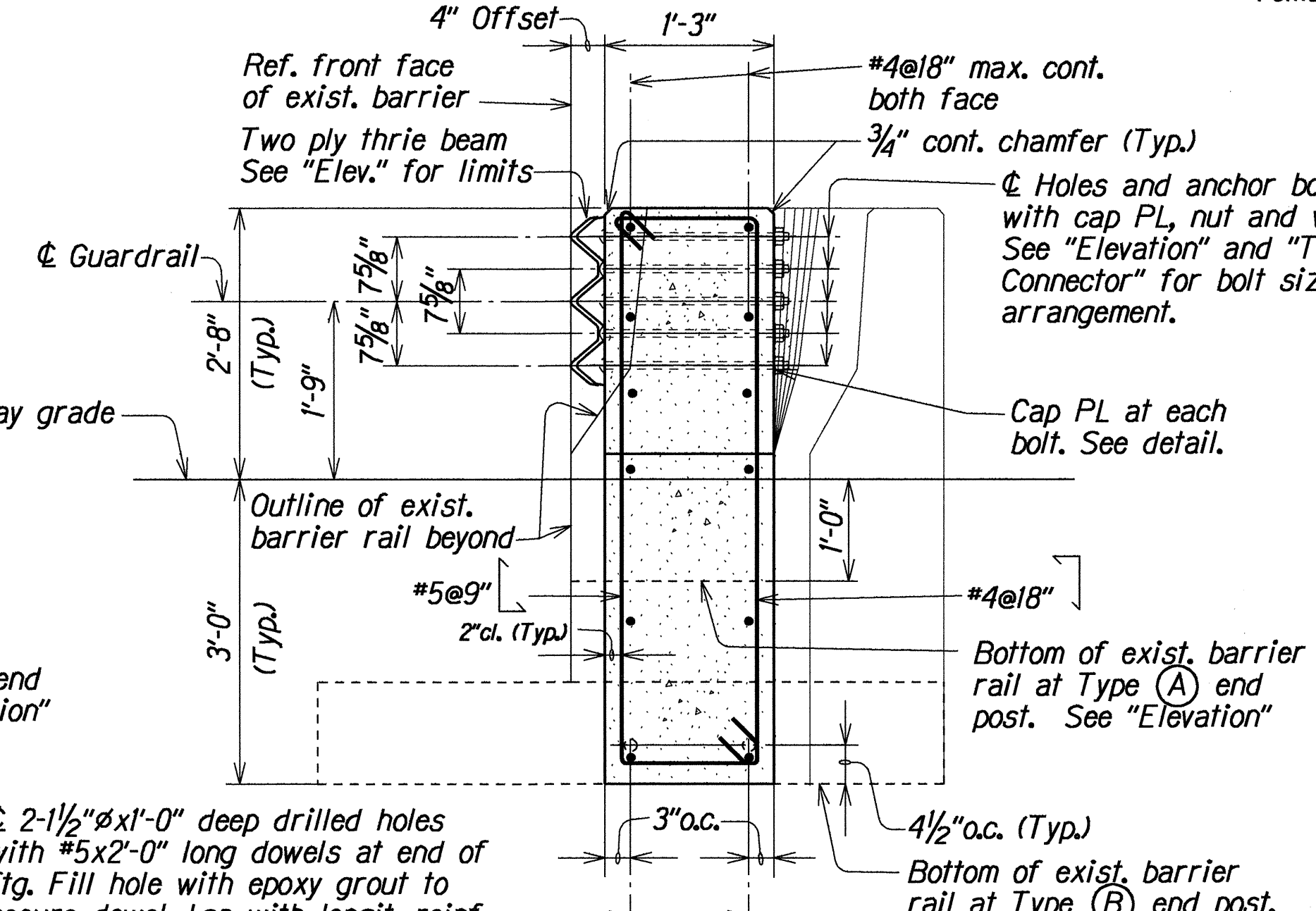
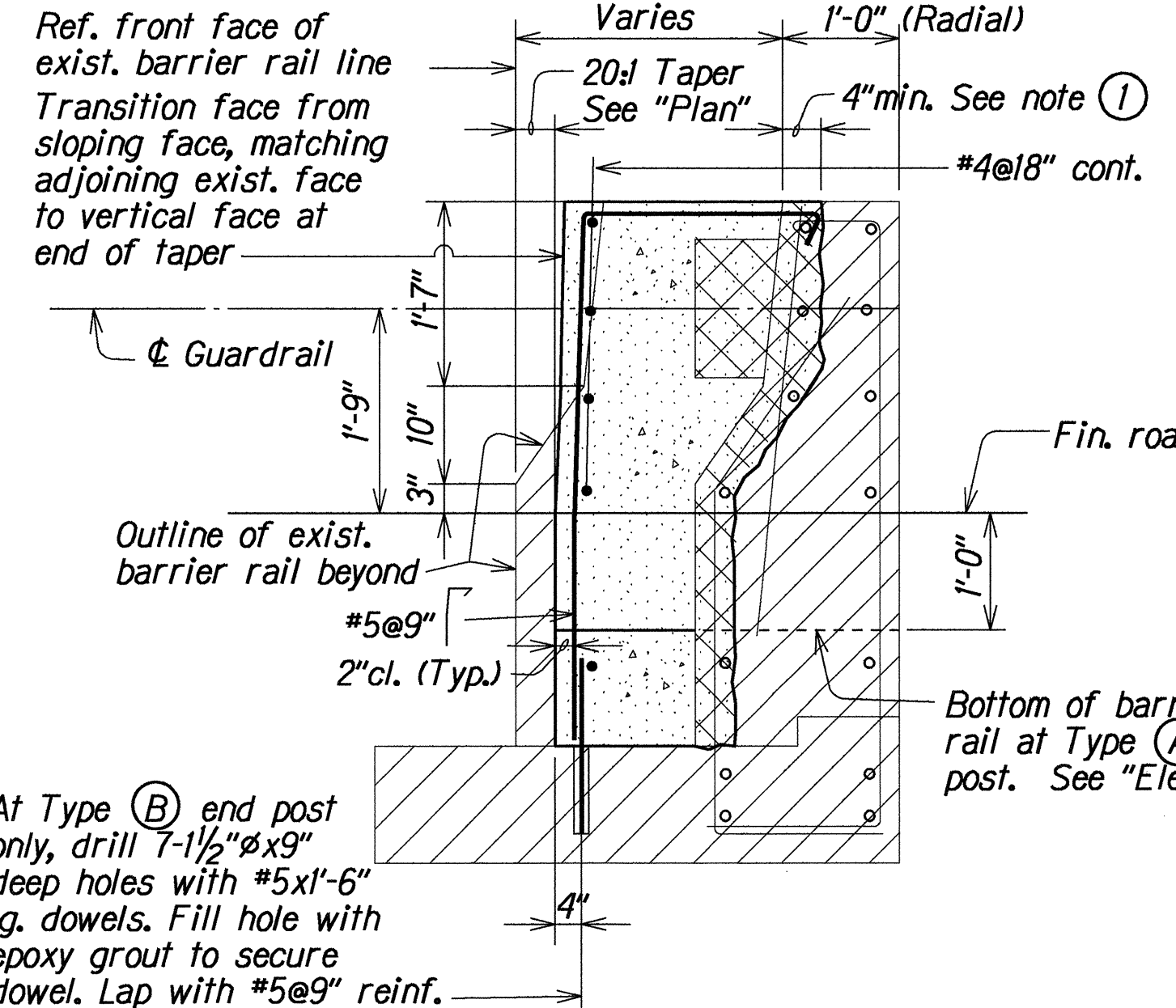
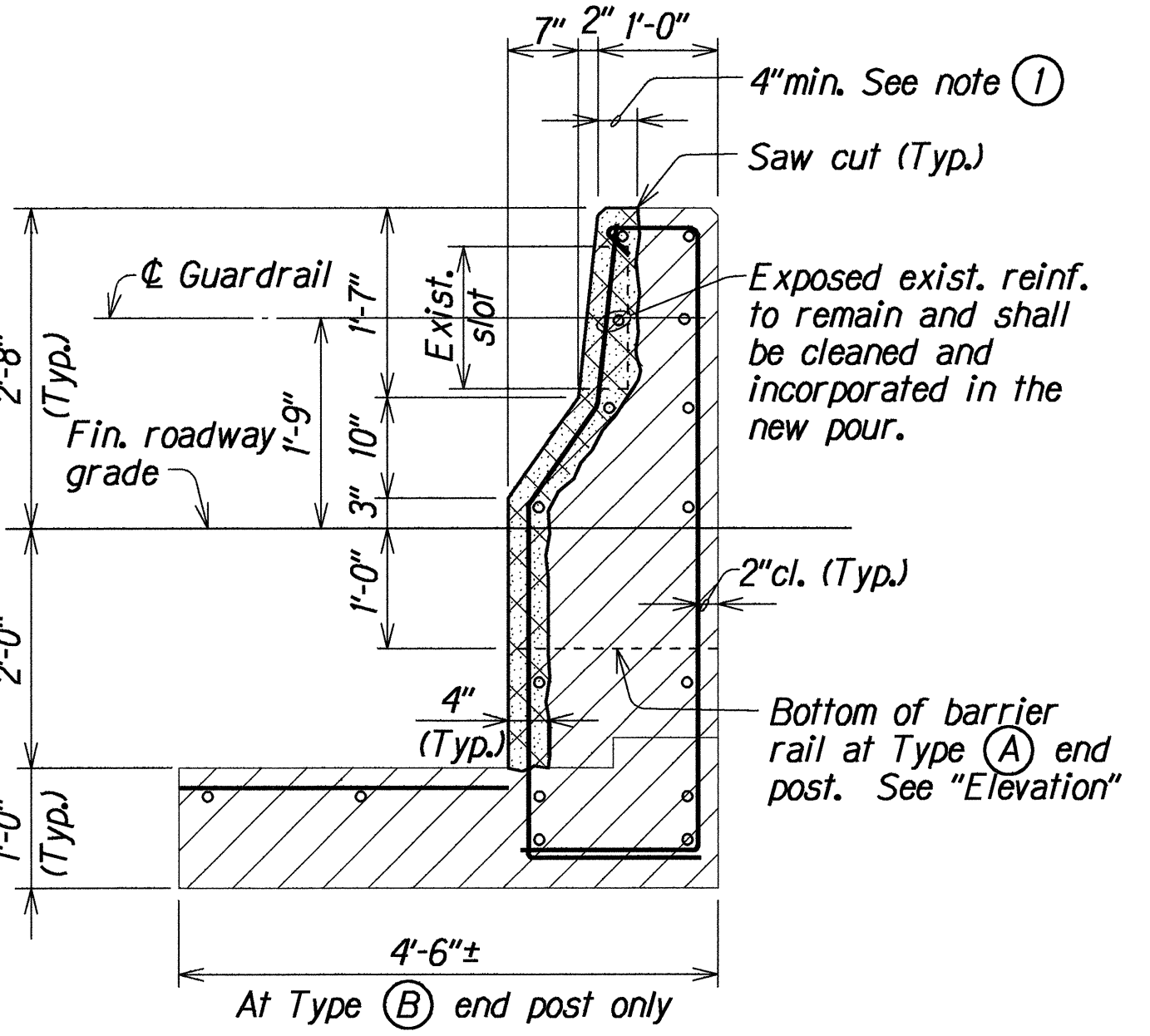
SAFETY IMPROVEMENTS AT CULVERTS
LAYOUT PLANS, GENERAL NOTES AND
ESTIMATED QUANTITIES
KAMEHAMEHA HIGHWAY RESURFACING
Fed. Aid Project No. STP-083-1(28)

Scale: As Noted
Date: May, 1994

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(28)	1994	14	21



NOTE:
① Exist. conc barrier rail shown by hatched area and removal of exist. conc. shown by X-hatched area.



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SAFETY IMPROVEMENTS AT CULVERTS

TYPE (A) AND TYPE (B) END POST AND GUARDRAIL TYPE 3TG

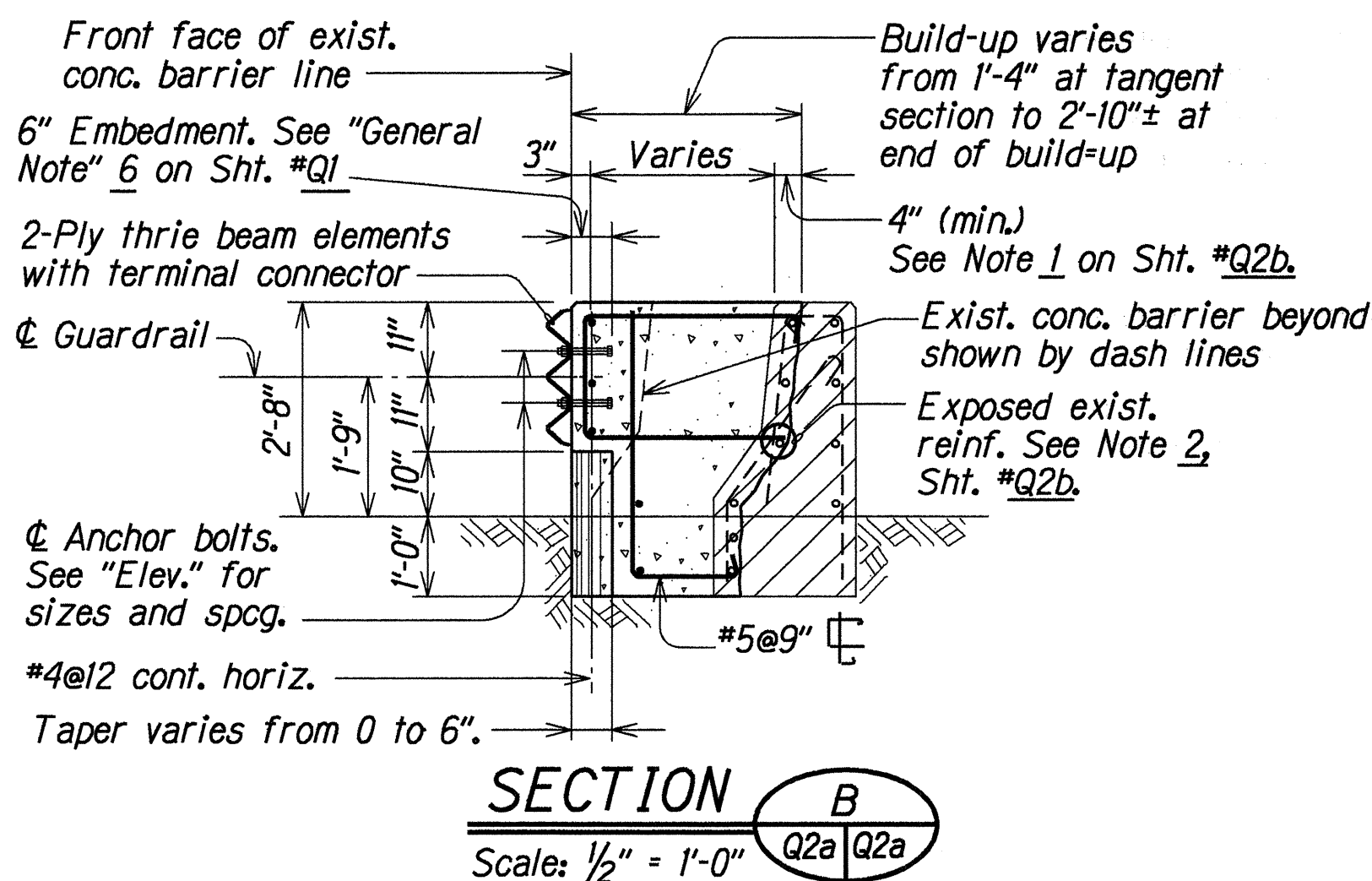
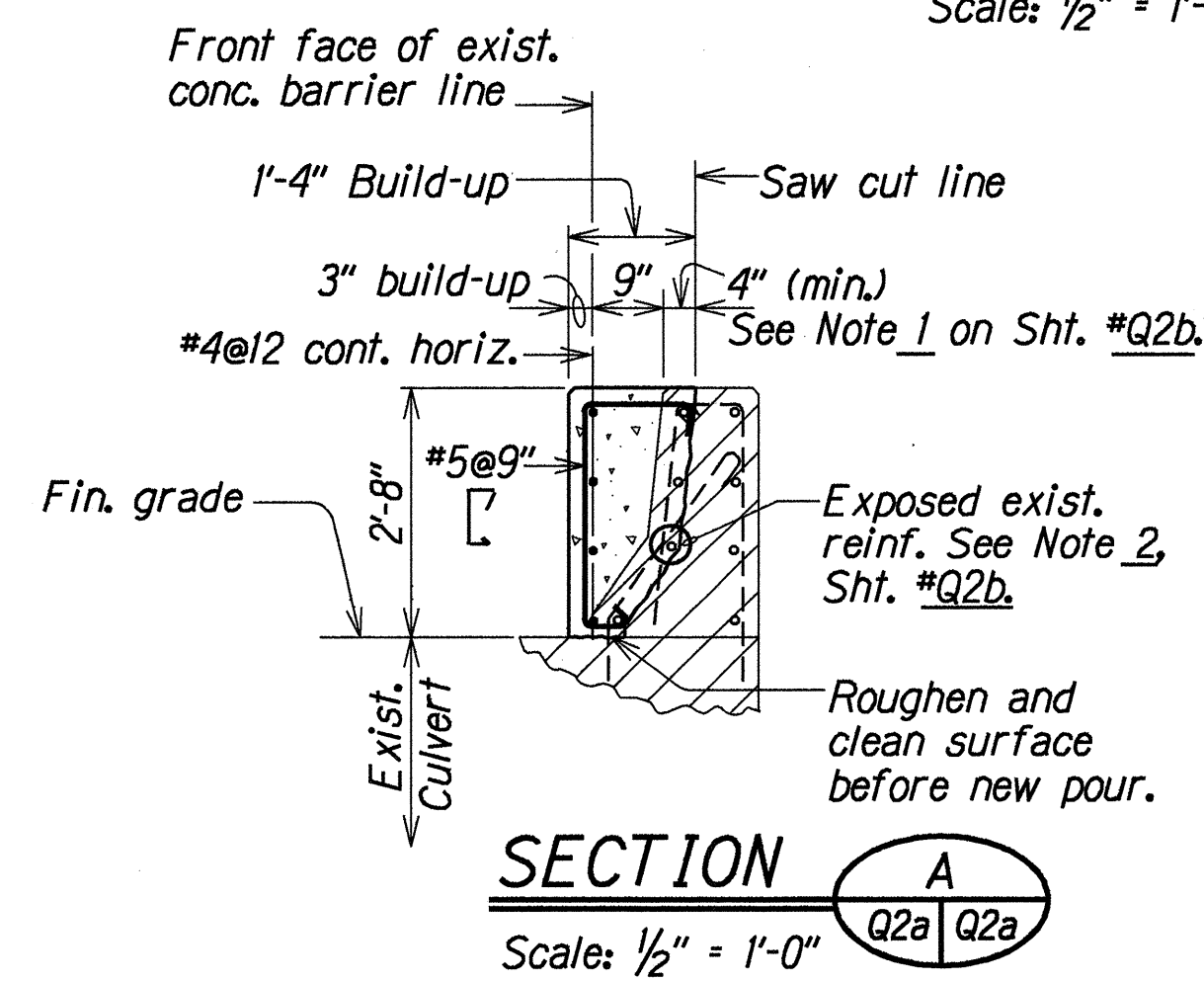
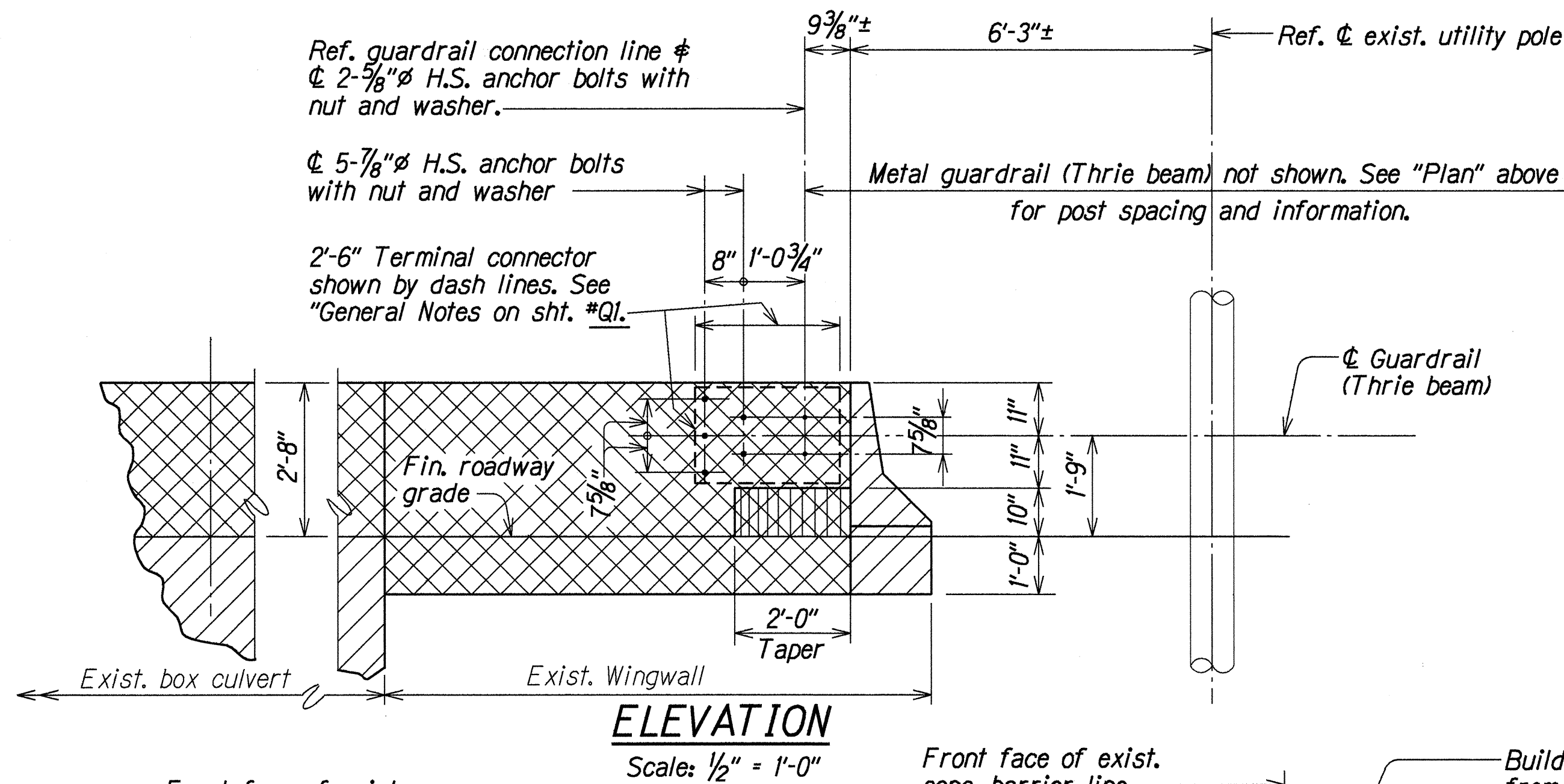
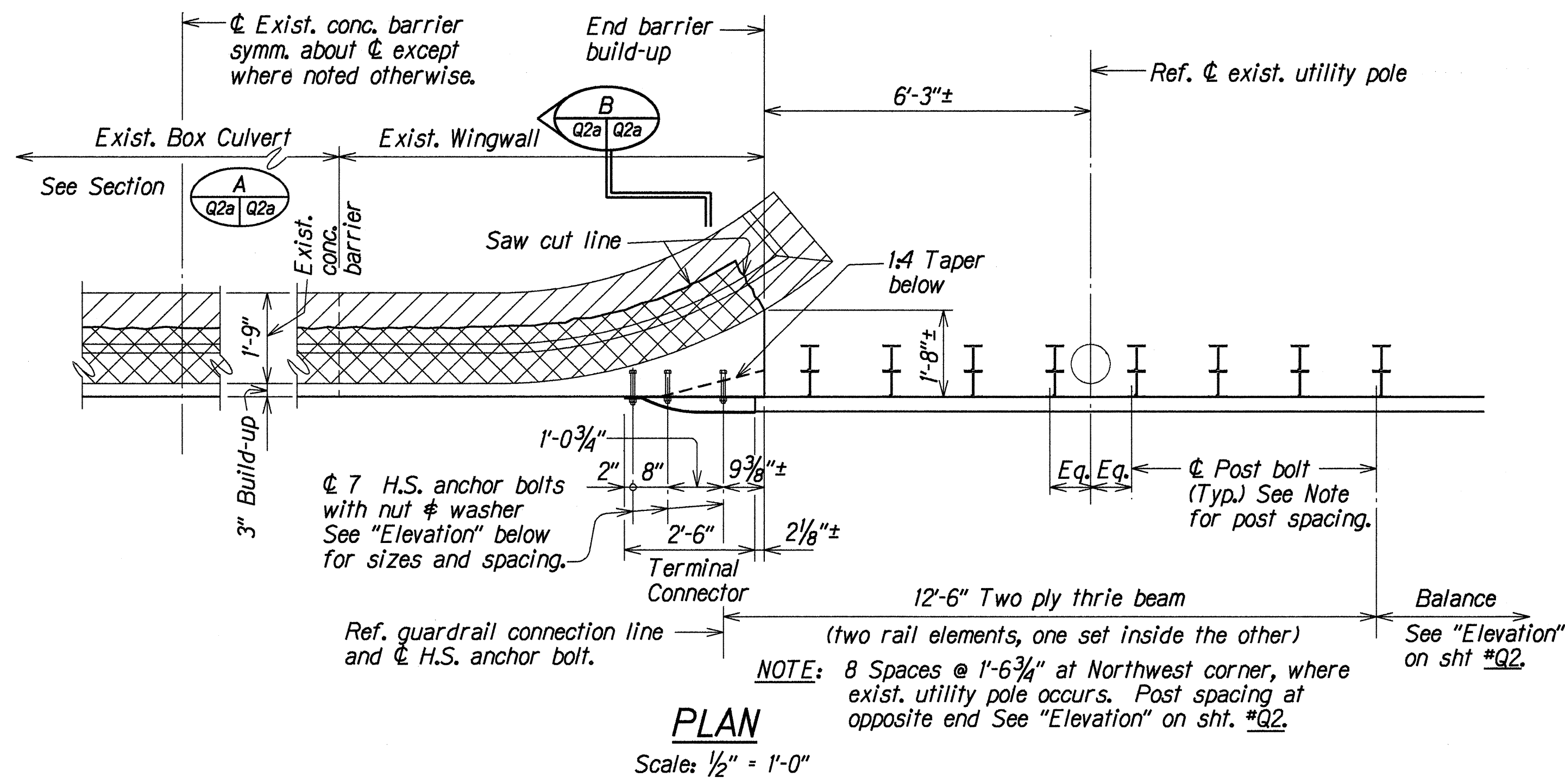
KAMEHAMEHA HIGHWAY RESURFACING
Fed. Aid Project No. STP-083-1(28)

Scale: As Noted Date: May, 1994

SHEET No. Q2 OF 2 SHEETS

DESIGNED BY	DATE
DRAWN BY	MAY 1994
CHECKED BY	
APPROVED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(28)	1995	145-1	21

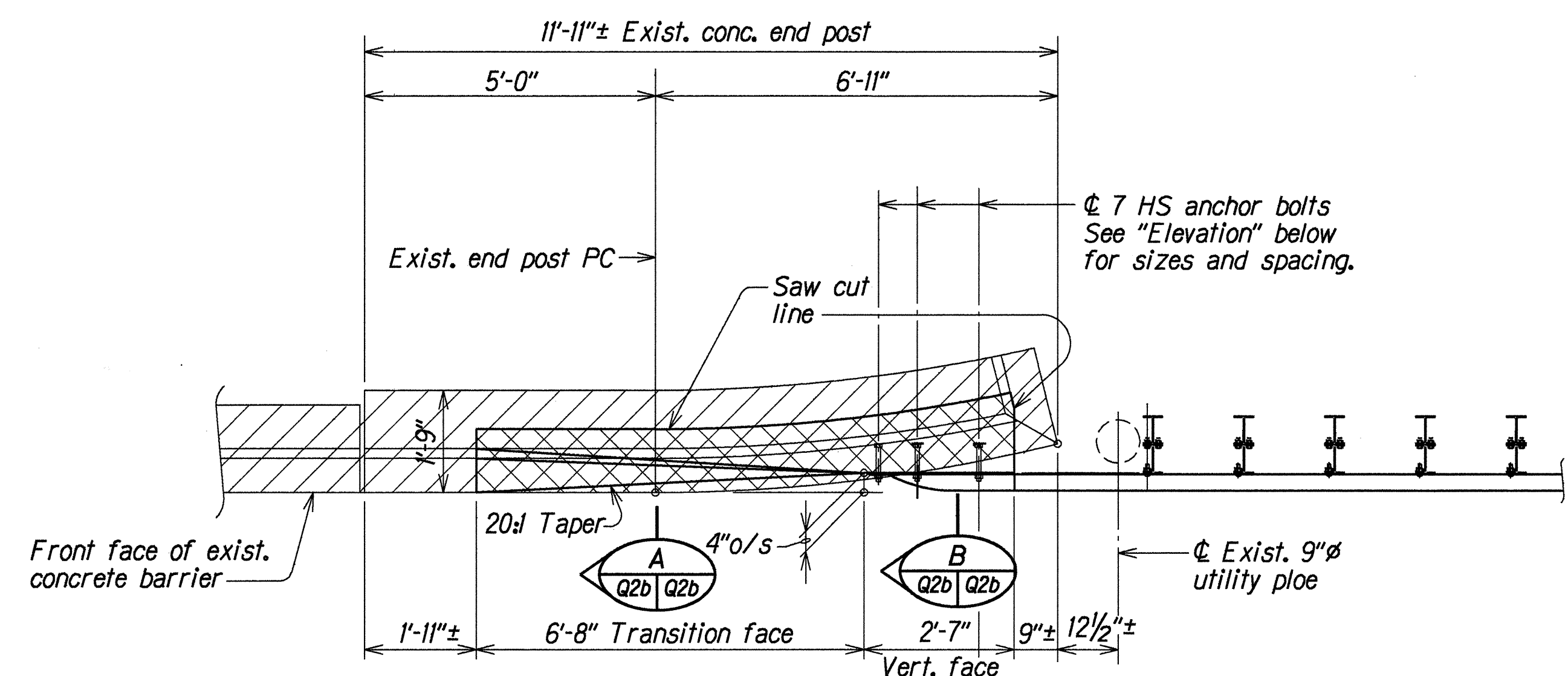


REVISED, UPSTREAM, CONCRETE RAILING AND METAL GUARDRAIL CONNECTION DETAILS

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
SAFETY IMPROVEMENTS AT CULVERTS
REVISED, UPSTREAM, CONCRETE RAILING
FOR 12' X 4' CULVERT AT STA. 466+67±
AND METAL GUARDRAIL CONNECTION
KAMEHAMEHA HIGHWAY RESURFACING
Fed. Aid Project No. STP-083-1(28)
Scale: As Noted Date: Nov. 1994

SHEET No. Q2a OF 4 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-083-1(28)	1995	145-2	21



NOTES:

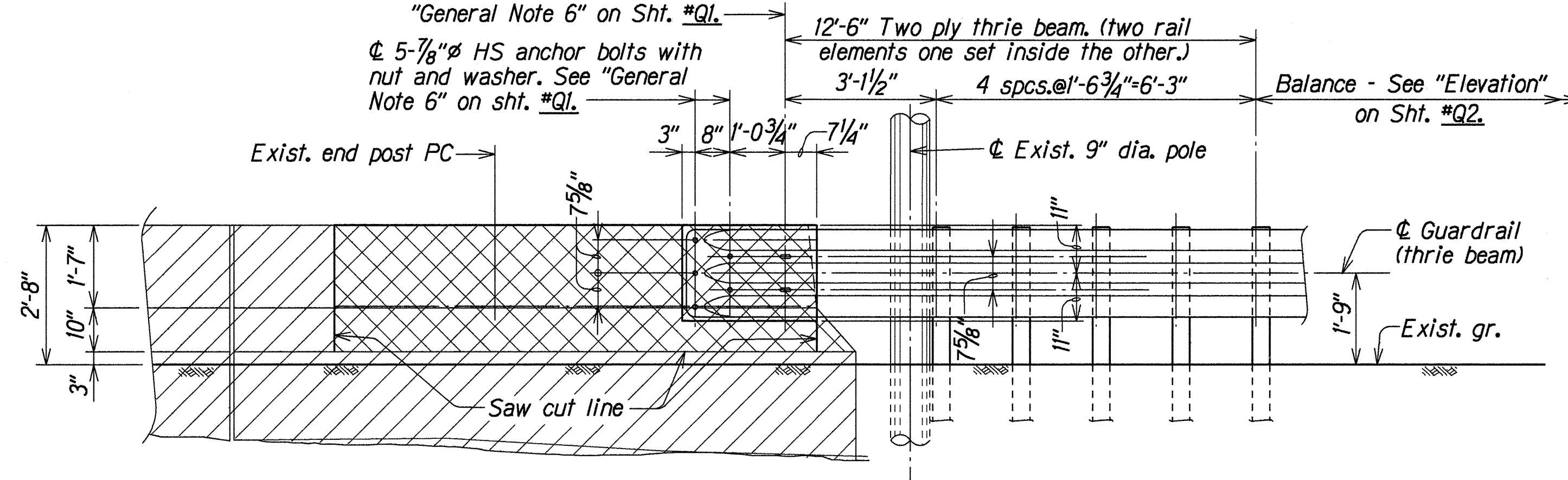
- Exist. conc. barrier rail shown by hatched area and removal of exst. conc. shown by hatched area.
- All exposed exist. reinf. to remain and shall be cleaned and incorporated in the new pour.

PLAN

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

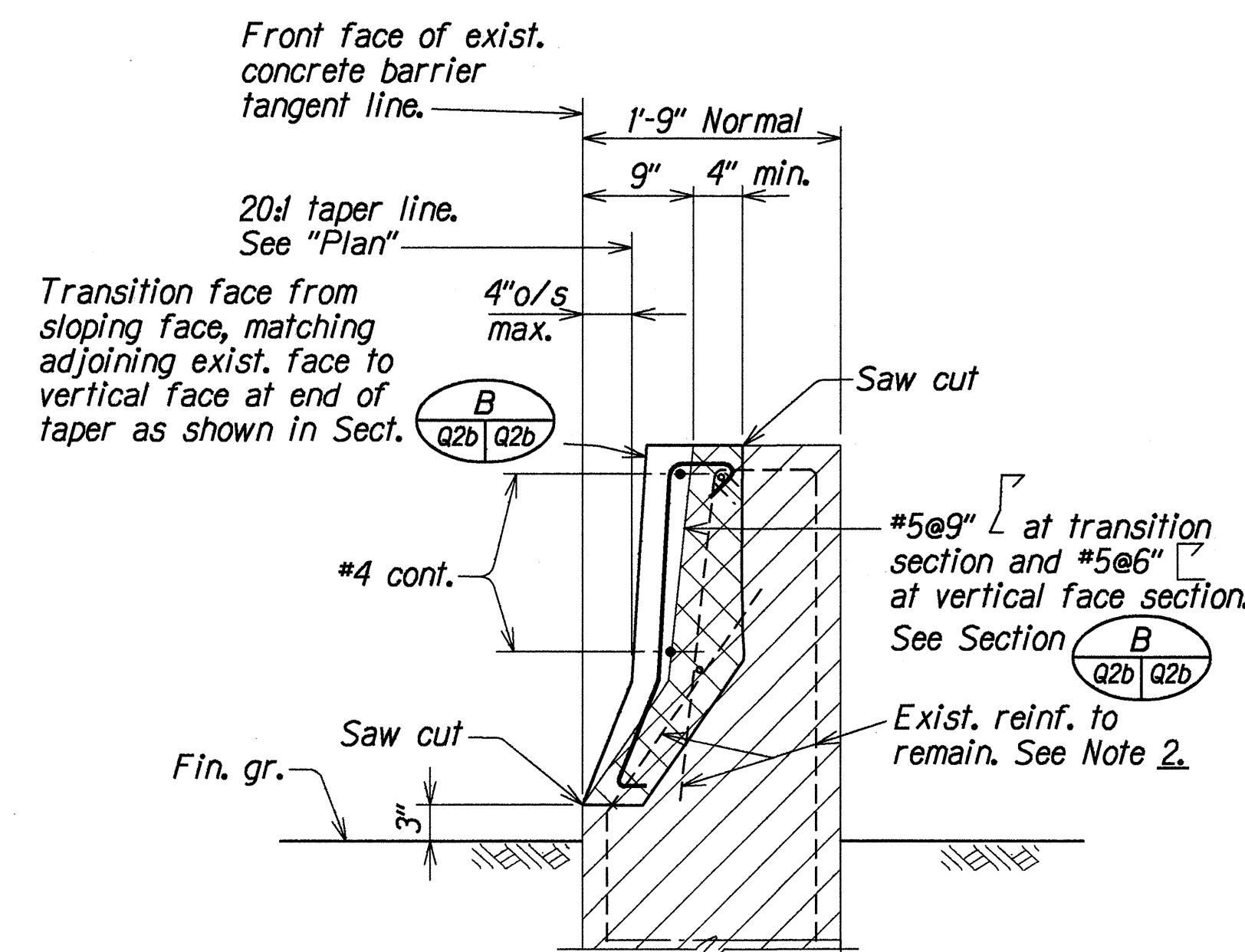
Ref. guardrail connection line and 2-5/8" HS anchor bolts with nut and washer. See "General Note 6" on Sht. #Q1.

5-7/8" HS anchor bolts with nut and washer. See "General Note 6" on Sht. #Q1.



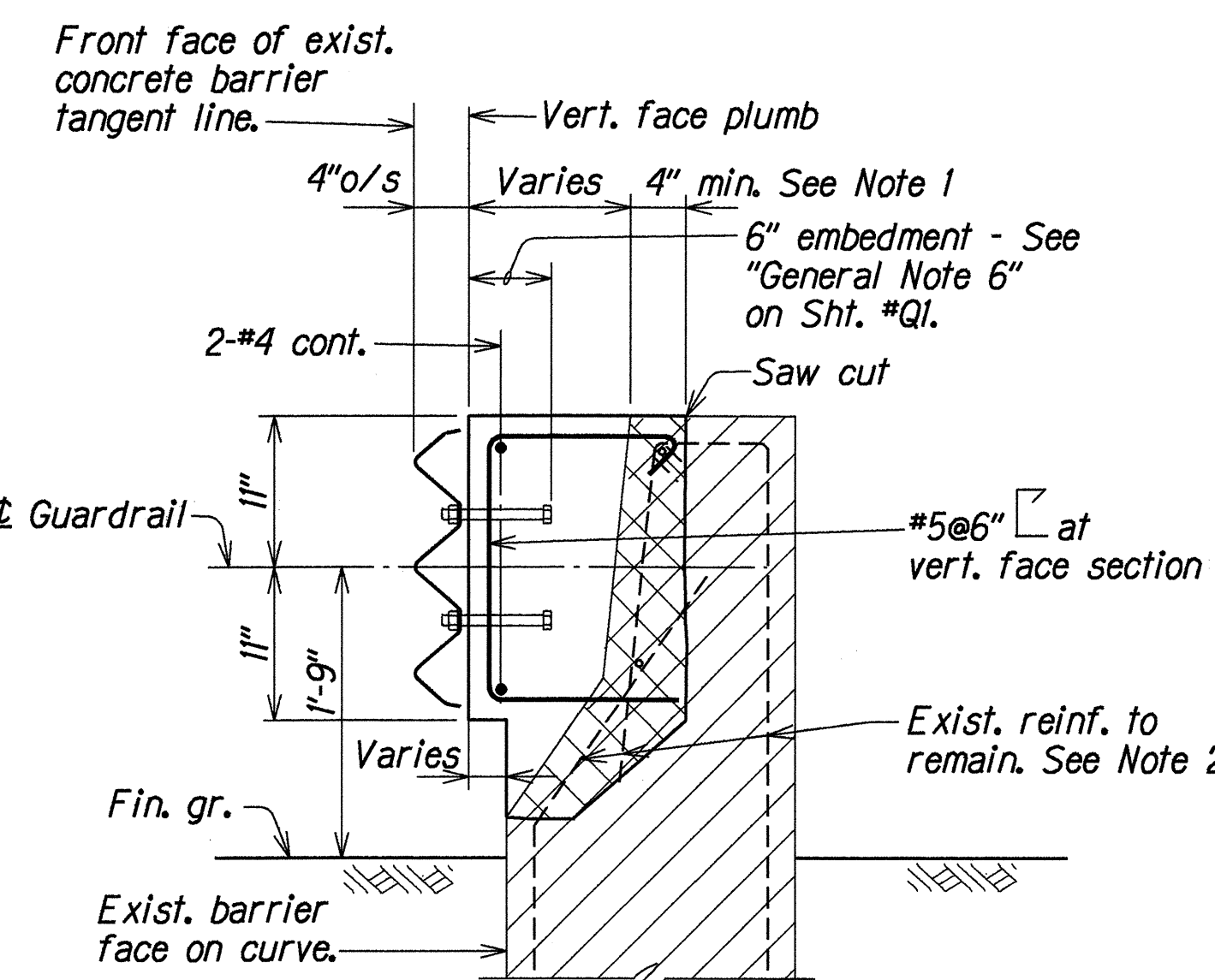
ELEVATION

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



SECTION A

Scale: 1'=1'-0"



SECTION B

Scale: 1'=1'-0"

REVISED UPSTREAM - KAHUKU CORNER

END POST DETAILS

Scale: As Shown

ORIGINAL PLAN	DESIGNED BY	DATE
NOTE BOOK	DESIGNED BY	DATE
CHECKED BY	CHECKED BY	DATE
CHECKED BY	CHECKED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

SAFETY IMPROVEMENTS AT CULVERTS
REVISED END POST DETAILS
AT CULVERT NO. 1, STA. 470+44
KAMEHAMEHA HIGHWAY RESURFACING
Fed. Aid Project No. STP-083-1(28)
Scale: As Noted Date: May, 1994

SHEET No. Q2b OF 4 SHEETS