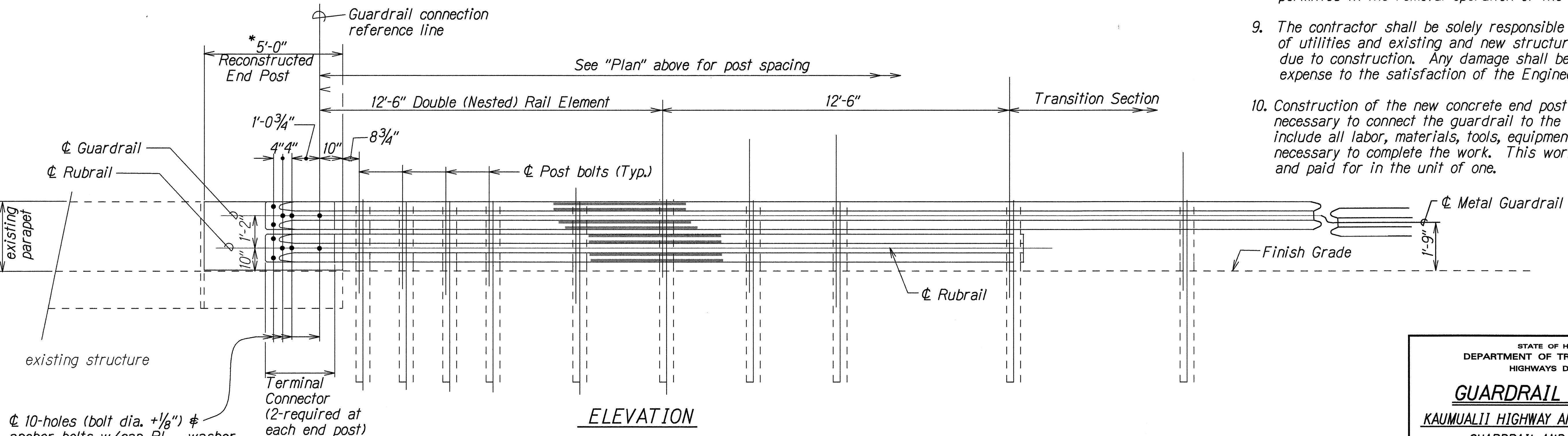
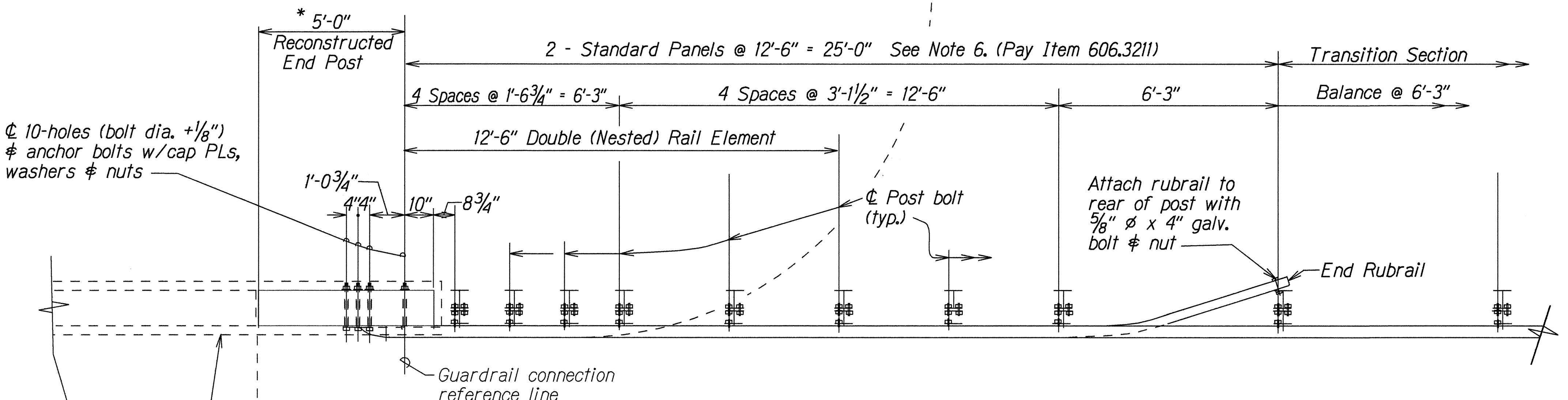


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0700(35)	1996	19	39

* At NW corner of Bridge No. 1, L= 8.33'±.
Remove damaged portions of existing parapet and reconstruct parapet per details on Sht. 20.

For guardrail on curve, post spacings shall be similar to linear guardrail post spacings.



ORIGINAL PLAN	DATE	10-17-95
SURVEY PLOTTED BY		
DRAWN BY		
DESIGNED BY		
CHECKED BY		

ϕ 10-holes (bolt dia. +1/8") ϕ anchor bolts w/cap PL., washer & nut. See "Terminal Connector" detail in Standard Plan TE-51 for bolt sizes and spacings

NOTES

1. End post reconstruction and guardrail connections are typical for all four corners of bridges.
2. "Terminal Connector" shall be fabricated from 10 gauge steel conforming to the requirement of AASHTO M 180.
3. All anchor bolts shall be high strength bolts conforming to requirements of ASTM 325.
4. Anchor bolt length shall be such that a snug fit of the elements and full thread engagement plus 1/4" is attained.
5. Terminal Connector and standard spacer, including, all anchor bolts, cap plate, nuts and washers, shall be hot-dip galvanized after fabrication.
6. First 25'-0" of guardrail adjoining "Terminal Connector" shall be of galvanized steel and supports spaced as shown on the detail drawings.

This section of rail to 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.
7. Where double (nested) rail element occur, 12" "Backup Plate" is not required.
8. Large impacting or vibratory type of equipment will not be permitted in the removal operation of the designated items.
9. The contractor shall be solely responsible for the protection of utilities and existing and new structures from damages due to construction. Any damage shall be repaired at his expense to the satisfaction of the Engineer.
10. Construction of the new concrete end post and the work necessary to connect the guardrail to the end post, shall include all labor, materials, tools, equipments and incidentals necessary to complete the work. This work will be measured and paid for in the unit of one.

GUARDRAIL INSTALLATION AT BRIDGES (MANA)
Scale: 1/2" = 1'-0"

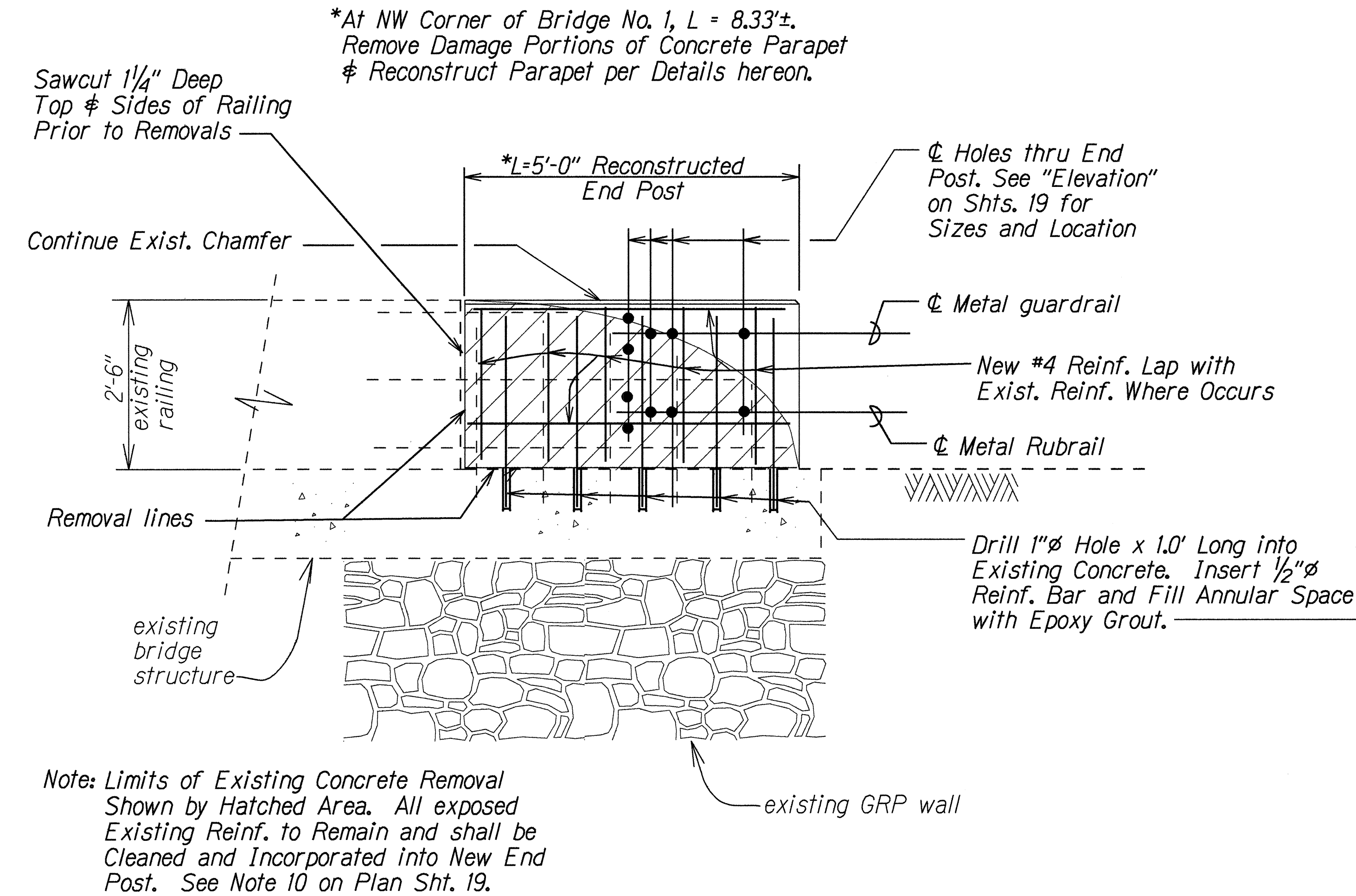
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL DETAILS

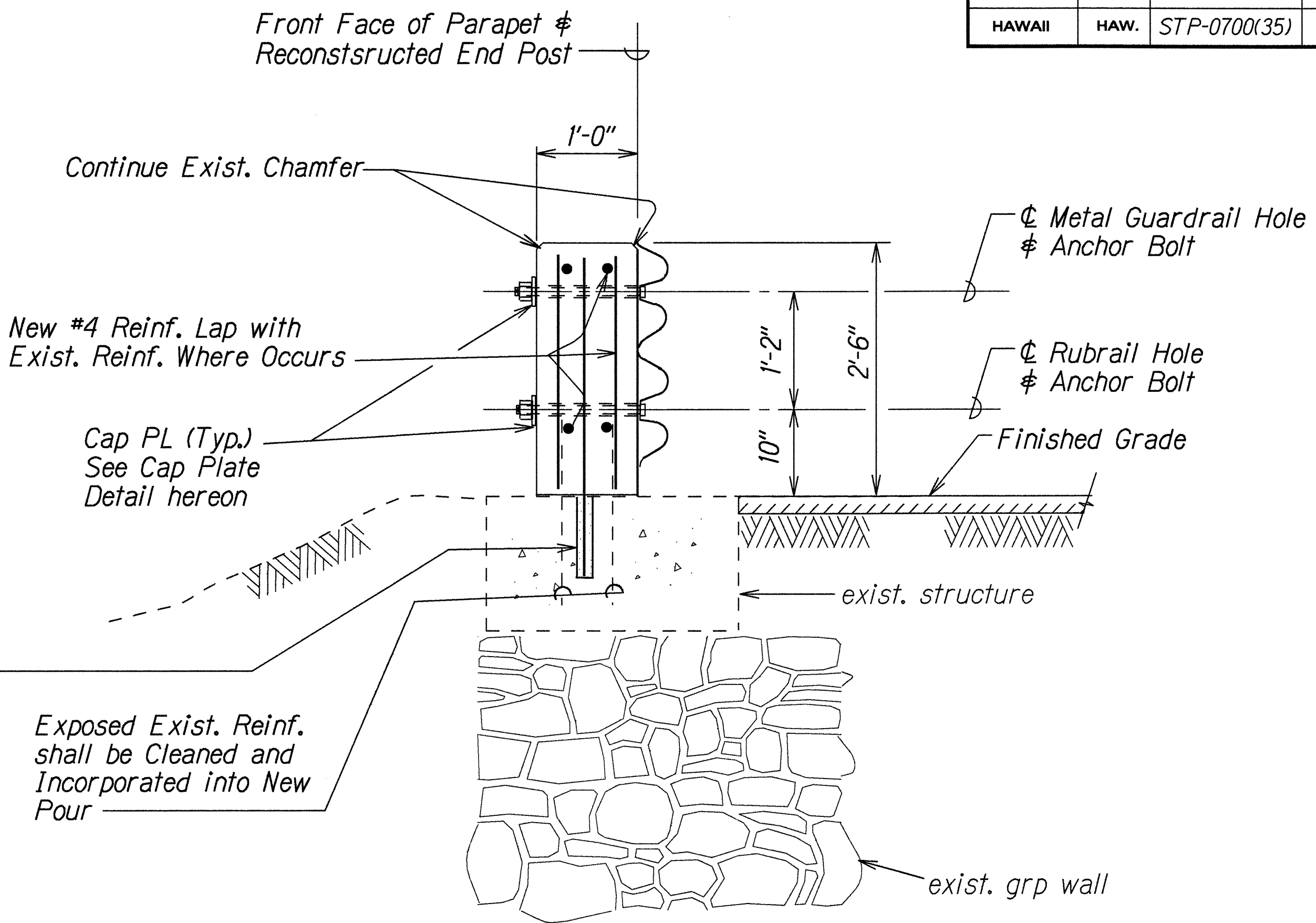
KAUMUALII HIGHWAY AND HALEWILI ROAD
GUARDRAIL AND SHOULDER
IMPROVEMENTS AT VARIOUS LOCATIONS
Federal Aid Project No. STP-0700(35)

Scale: As Shown Date: June, 1995
SHEET No. 1 OF 3 SHEETS

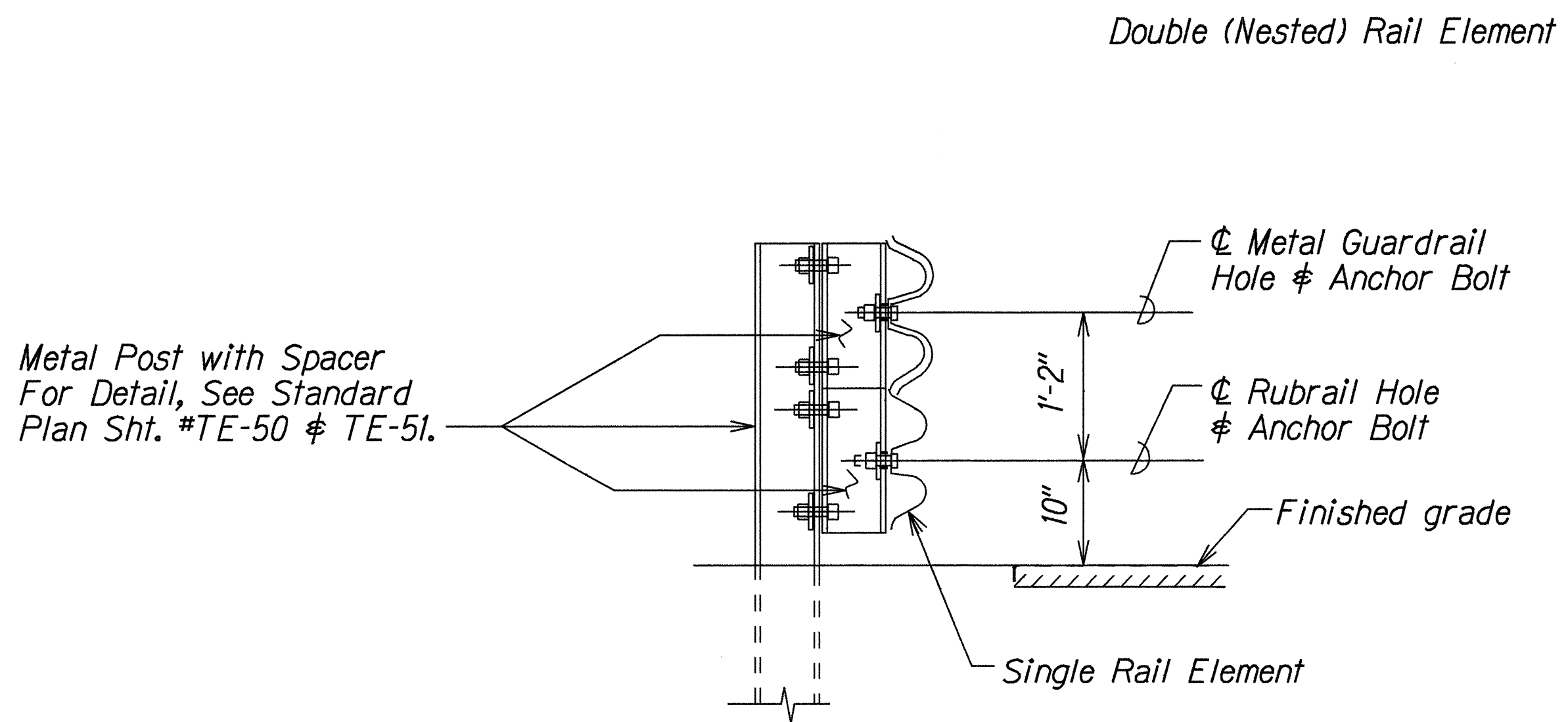
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0700(35)	1996	20	39



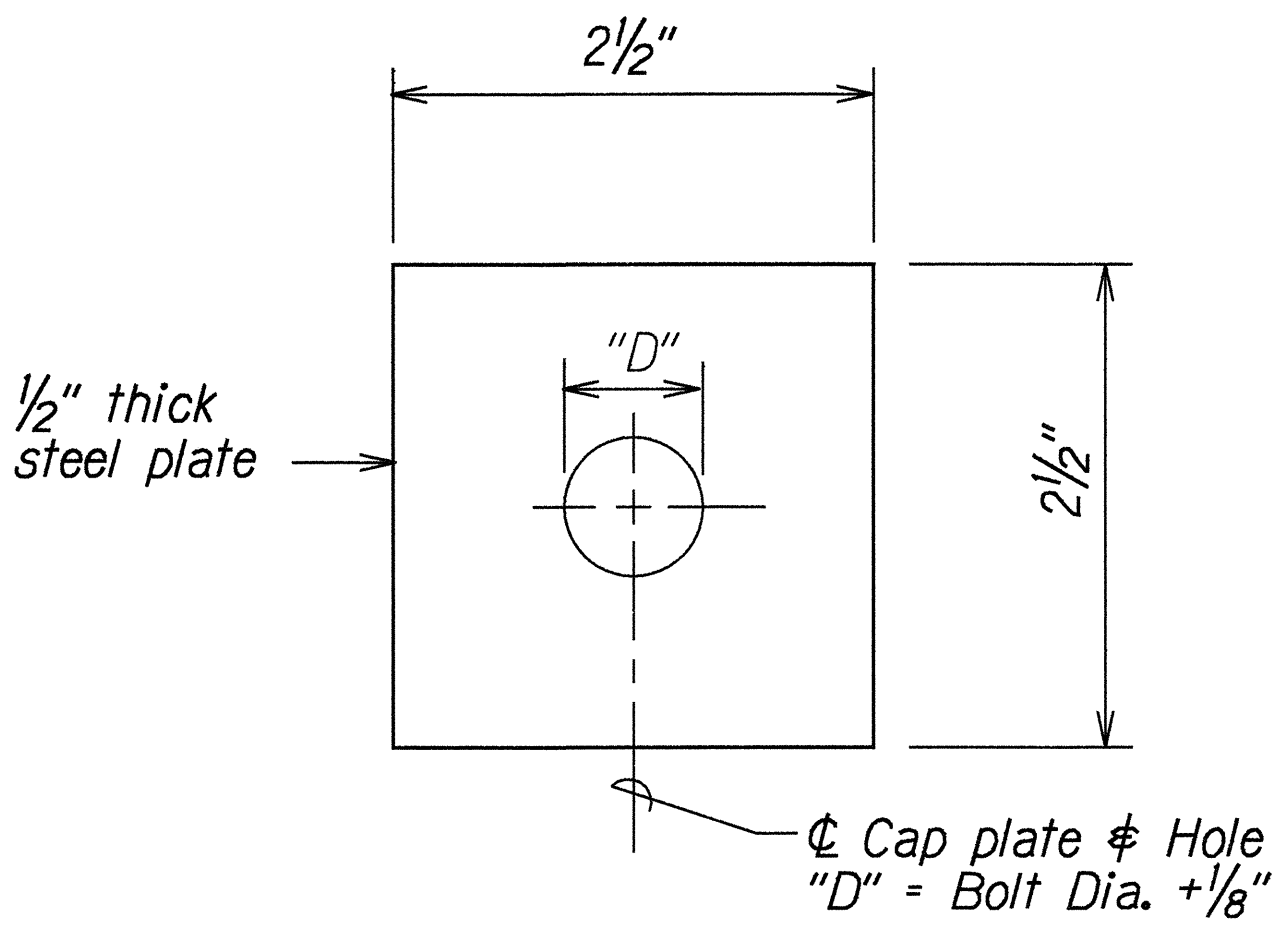
END POST ELEVATION
Scale: 3/4" = 1'-0"



SECTION A
Scale: 1"=1'-0"



SECTION B
Scale: 1"=1'-0"



CAP PLATE DETAIL
Full Scale

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

GUARDRAIL DETAILS

KAUMUALII HIGHWAY AND HALEWILI ROAD

GUARDRAIL AND SHOULDER

IMPROVEMENTS AT VARIOUS LOCATIONS

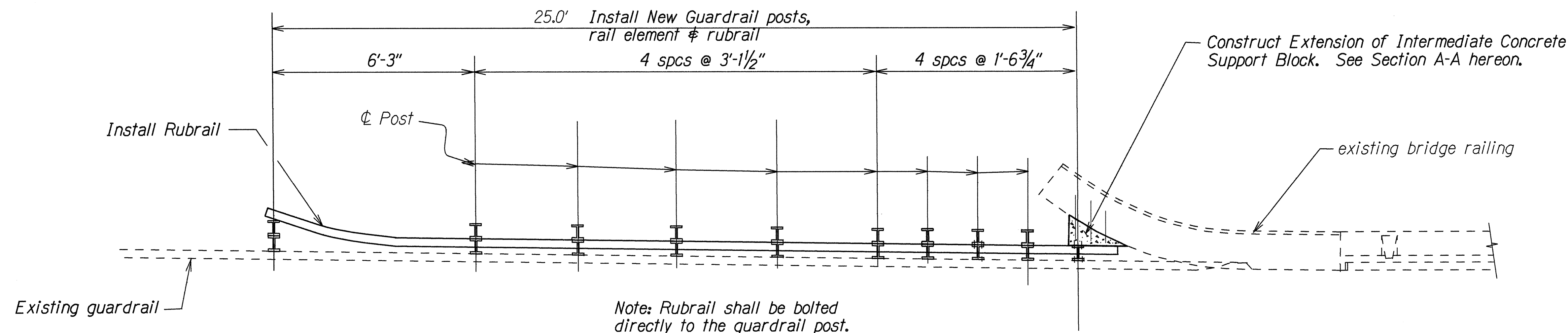
Federal Aid Project No. STP-0700(35)

Scale: As Shown Date: June, 1995

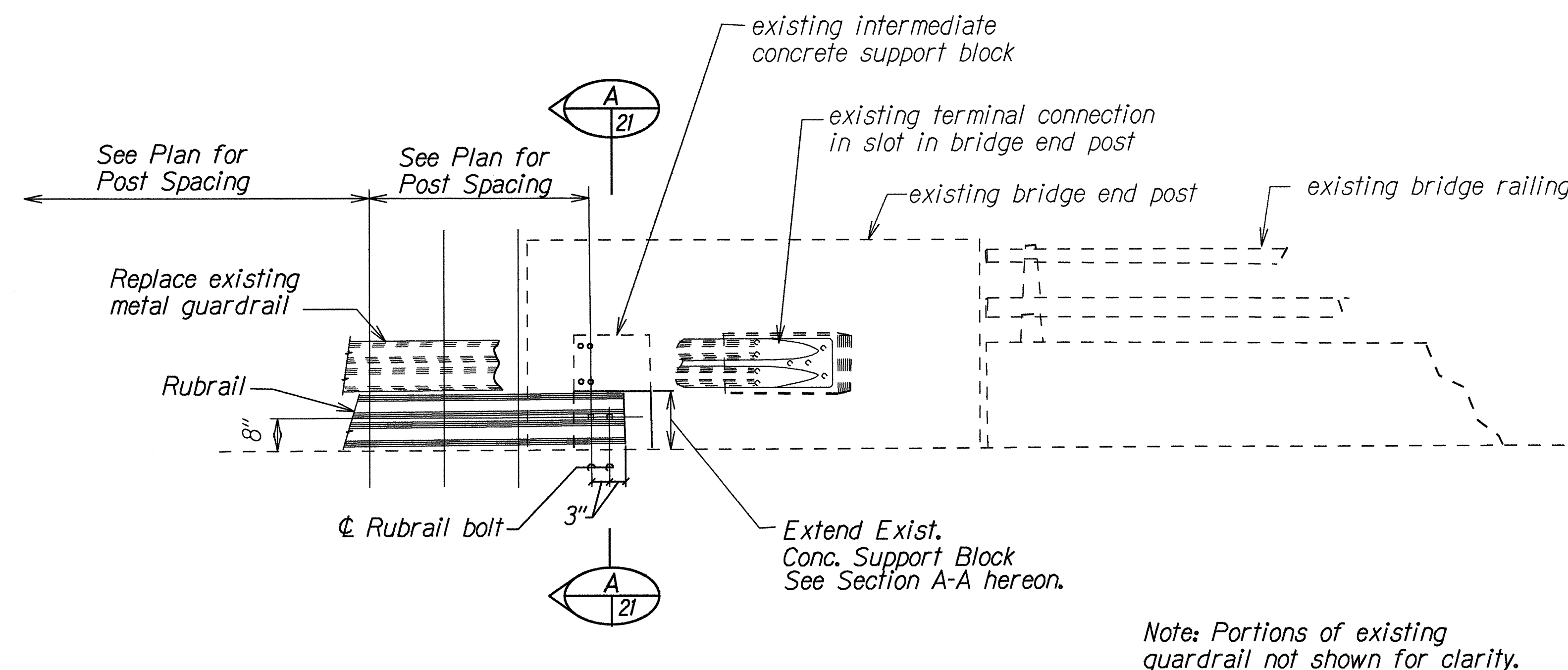
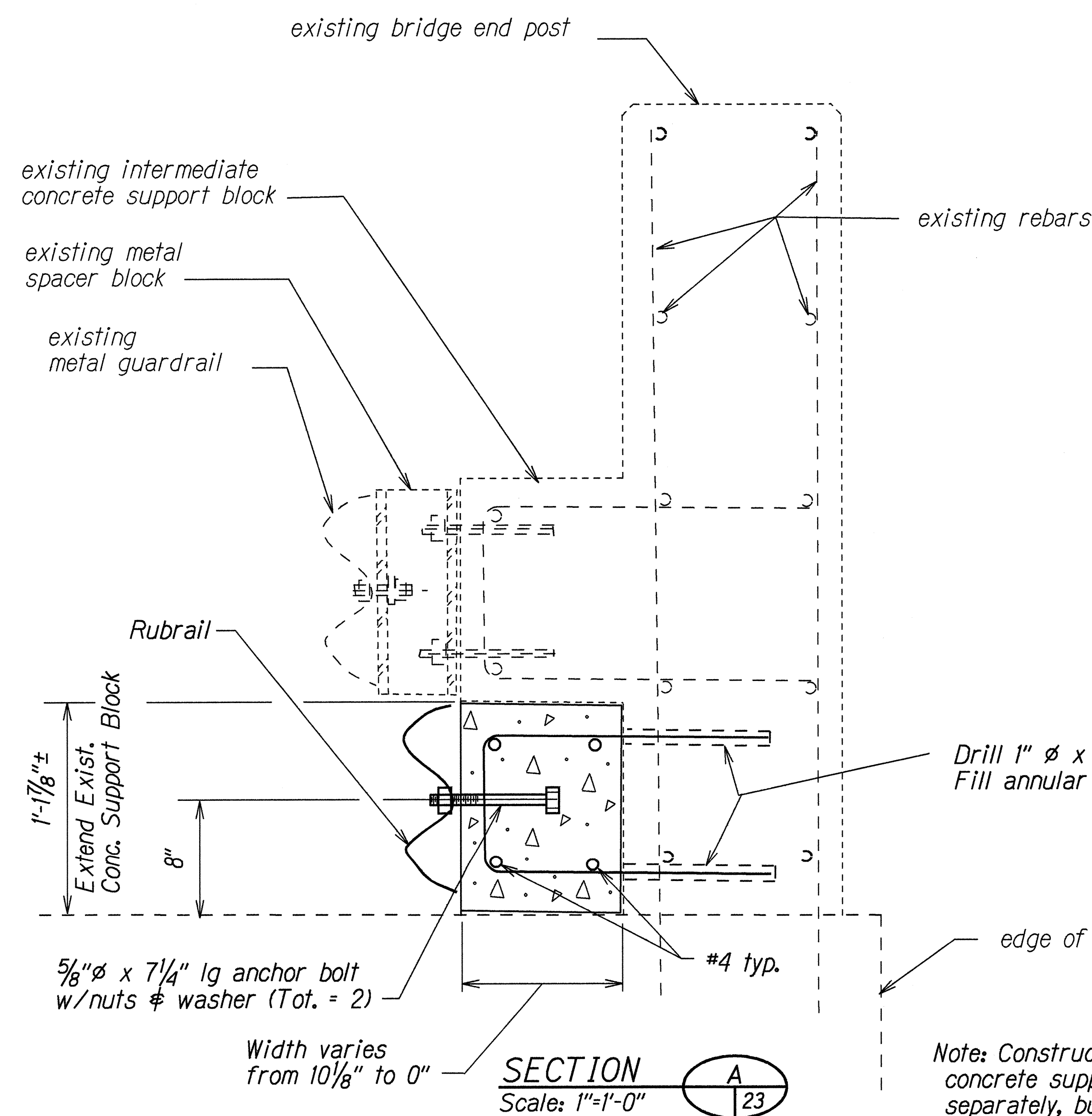
SHEET No. 2 OF 3 SHEETS

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	10/17/95
DESIGNED BY	CHECKED BY	
DATE		

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-0700(35)	1996	21	39



PLAN
Scale: 1"=1'-0"



ELEVATION
Scale: 1"=1'-0"

**DETAILS FOR RUBRAIL INSTALLATION
AT WAHIAWA BRIDGE
(TYP. @ FOUR CORNERS)**
Scale As Shown

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
GUARDRAIL DETAILS	
KAUMUALII HIGHWAY AND HALEWILI ROAD	
GUARDRAIL AND SHOULDER	
IMPROVEMENTS AT VARIOUS LOCATIONS	
Federal Aid Project No. STP-0700(35)	
Scale: As Shown	Date: June, 1995
SHEET No. 1 OF 1 SHEETS	