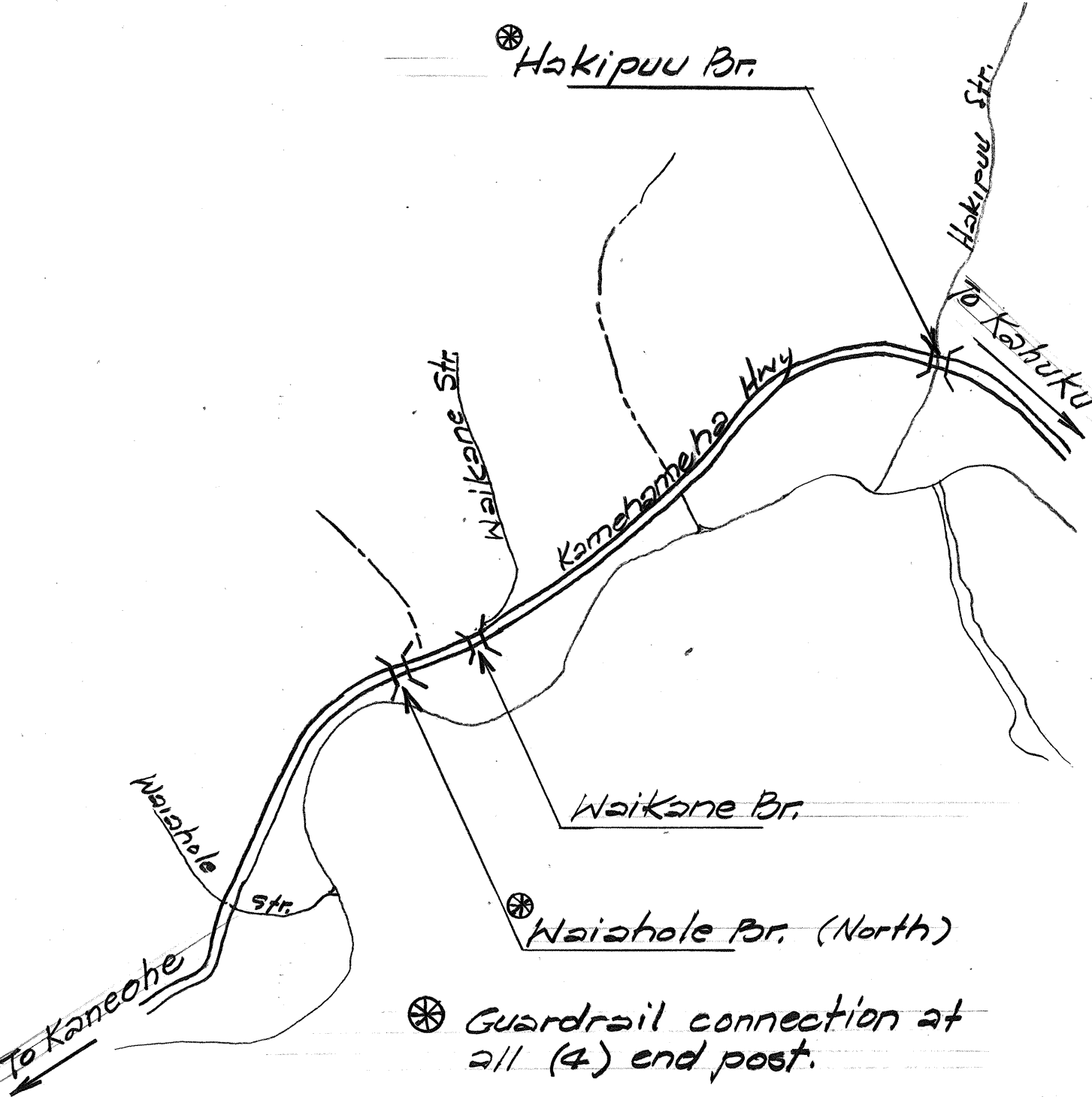


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83D-01-88M	1988	25	35

GENERAL NOTES

- See Standard Specifications for Road & Bridge Construction Hawaii 1985.
- For Metal Guardrail - See Standard Detail sht. #TE-50, TE-51 & TE-54.
- Concrete shall be Class A.
- Reinforcing steel shall be ASTM G15 Grade 40.
- All anchor bolts shall be high strength bolts conforming to the requirement of ASTM A325 and shall be hot-dipped galvanized.
- Embedment of anchor bolts shall be such that a snug fit of the rail elements within the grips, and full thread engagement plus 1/4 inch (max.) is attained, without any additional washers or fillers.
- All terminal connector shall be fabricated from 10 gage steel conforming to the requirements of AASHTO M180 & shall be galvanized.
- All structural steel shall be A36 steel and hot-dipped galvanized after fabrication.
- First 25'-0" of guardrail adjoining terminal connector shall be of galvanized steel with supports spaced at 1'-6 3/4" for the first 6'-3" and at 3'-1 1/2" for the balance.
- The face of the existing concrete surface to be epoxy bonded with the new concrete shall be thoroughly wetted with clean water and scrubbed with a solution of not more than one part hydrochloric (muriatic) acid to nine parts water followed immediately by thorough rinsing with clean water.
- Large impacting or vibratory type of equipment will not be permitted in the drilling of holes.
- Any damage to the existing structures due to the contractor's operation shall be repaired at his expense, to the satisfaction of the Engineer.
- The Contractor shall verify all dimensions in field before commencing with work.
- The Contractor shall verify the location of all existing utility lines near structures and notify their respective owners before commencing with work.
- The work necessary to connect the guardrails to the existing end posts shall include all labor, materials, tools, equipment and incidentals necessary to complete the work. This work will be measured and paid for in units of one of each guardrail to end post connection.



BRIDGE LOCATION PLAN

Not To Scale

ESTIMATED QUANTITIES

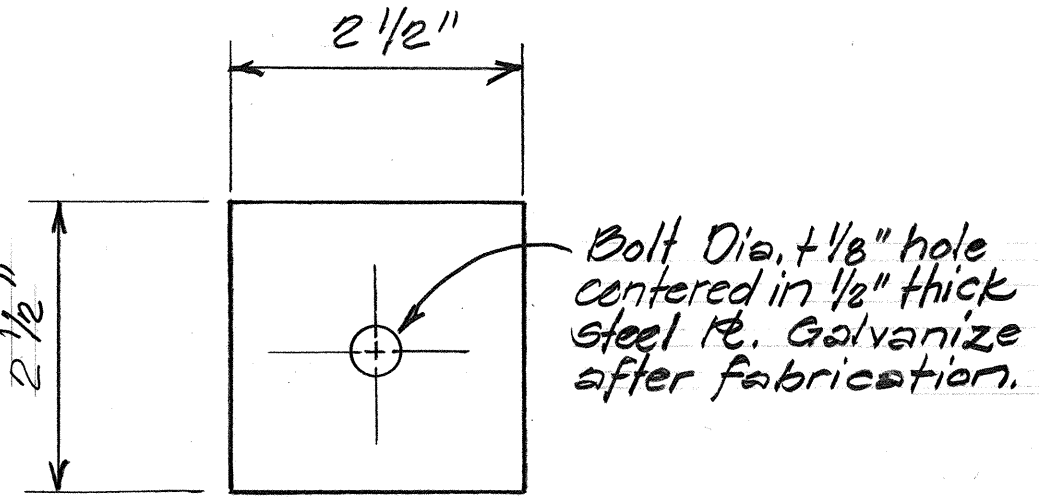
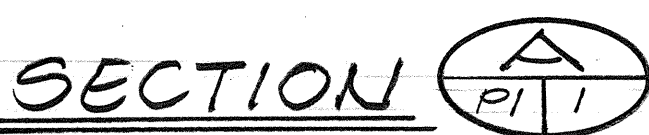
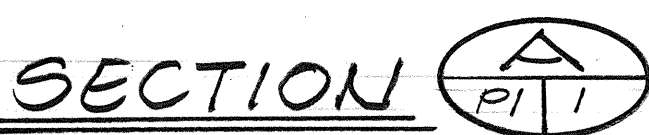
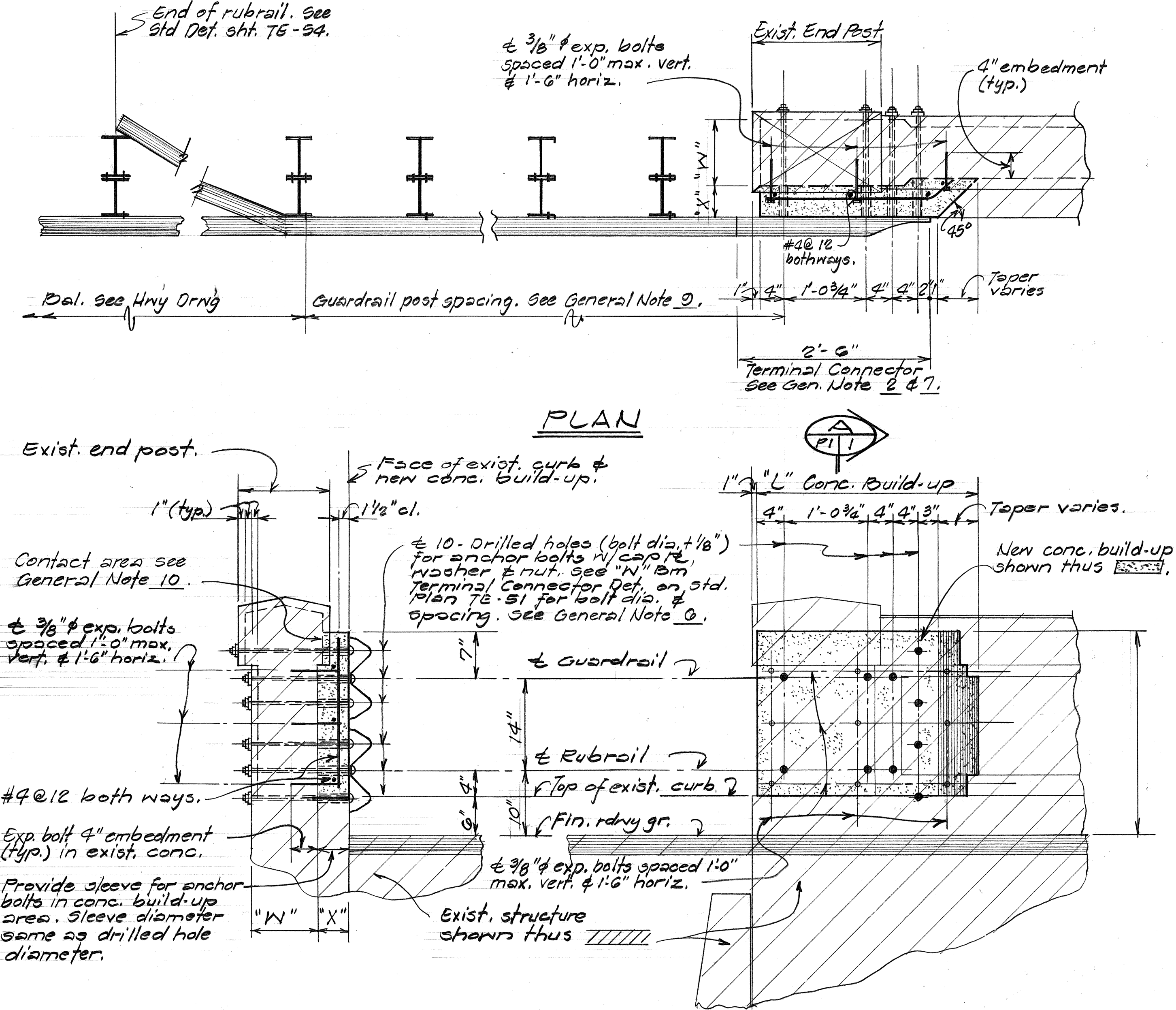
ITEM NO.	ITEM	UNIT	QUANTITY
606.8500	Type "DM" Connection	Each	11

END POST BUILD-UP SCHEDULE

STRUCTURE	"N"	"X"	"L"
WAIHOLE (NORTH)	10"	5"	2'-0 3/4"
WAIKANE	10"	5"	2'-0 3/4"
HAKIPUU	9"	3"	2'-7 1/2"

SECTION

ELEVATION



TYPICAL CAP & DETAIL

Not To Scale

TYPE "DM" GUARDRAIL CONNECTION AND END POST BUILD-UP DETAILS FOR WAIHOLE (NORTH), WAIKANE AND HAKIPUU BRIDGES

Scale: 1" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TYPE "DM" GUARDRAIL CONNECTION DETAILS
FOR NORTH WAIHOLE, WAIKANE, AND HAKIPUU BRIDGES
KAMEHAMEHA HIGHWAY RESURFACING
WAIHOLE VALLEY ROAD TO KUALOA
Project No. 83D-01-88M
Scale: As Noted Date: Nov 1987
SHEET No. P1 OF 1 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
CHECKED BY	
QUANTITIES BY	
NO.	