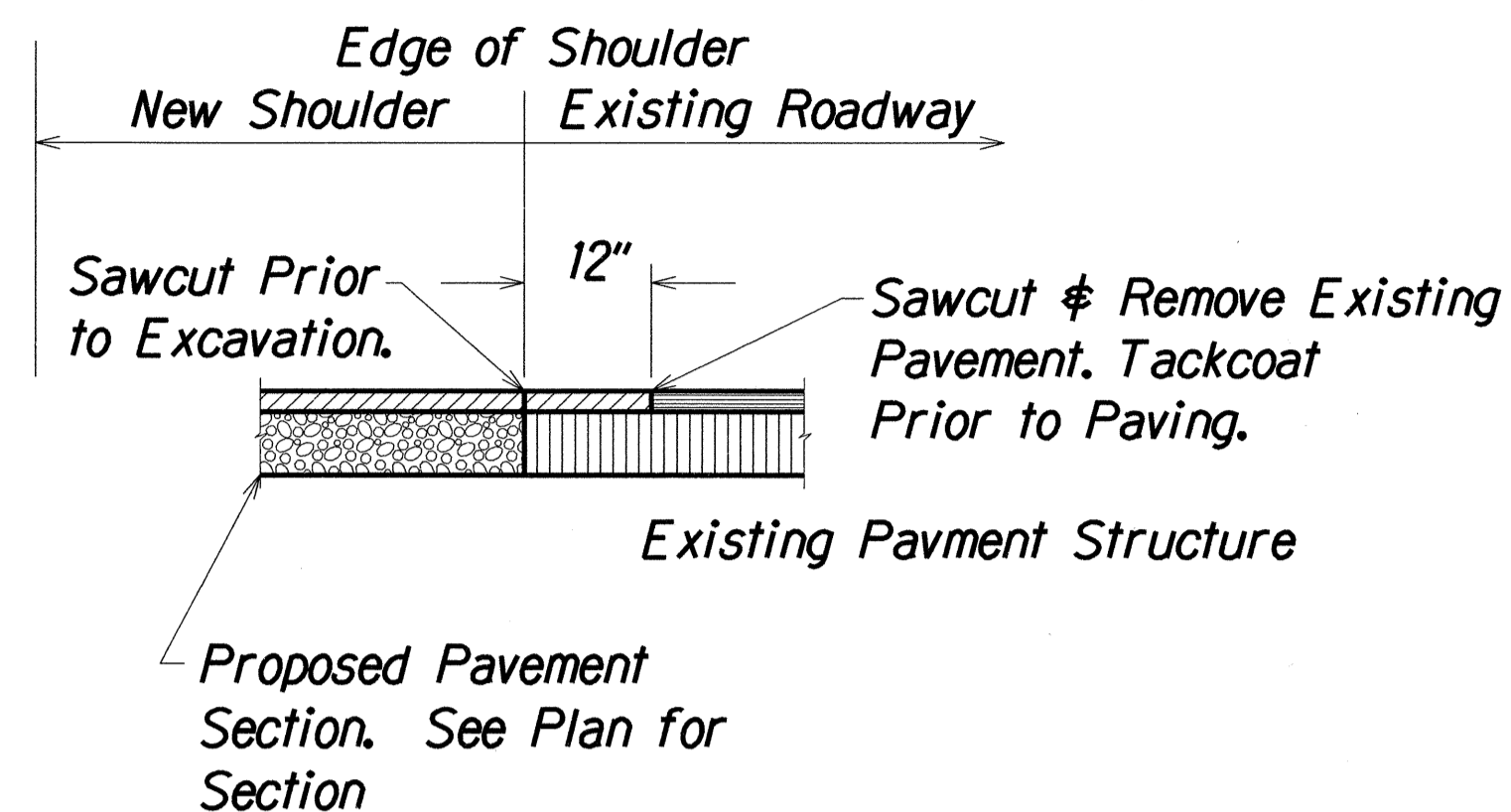
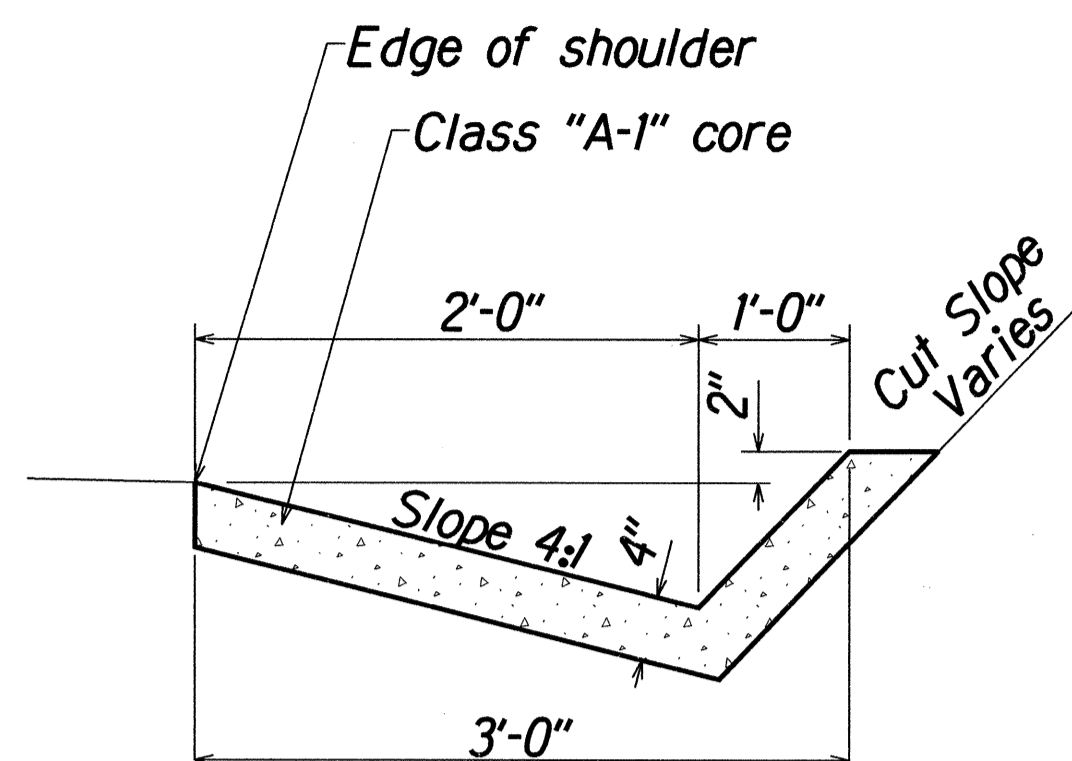


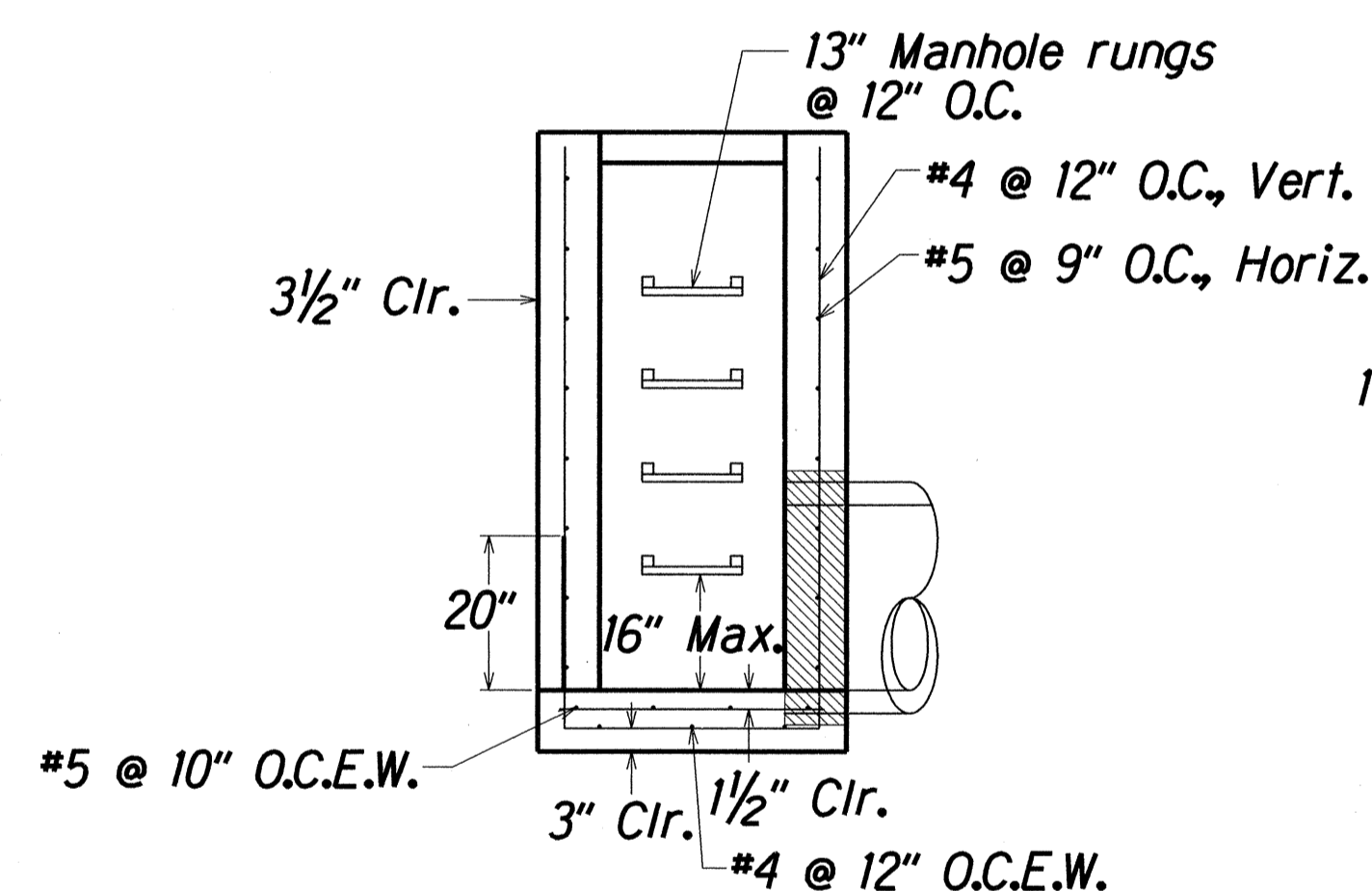
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	360AB-01-02M	2002	39	41



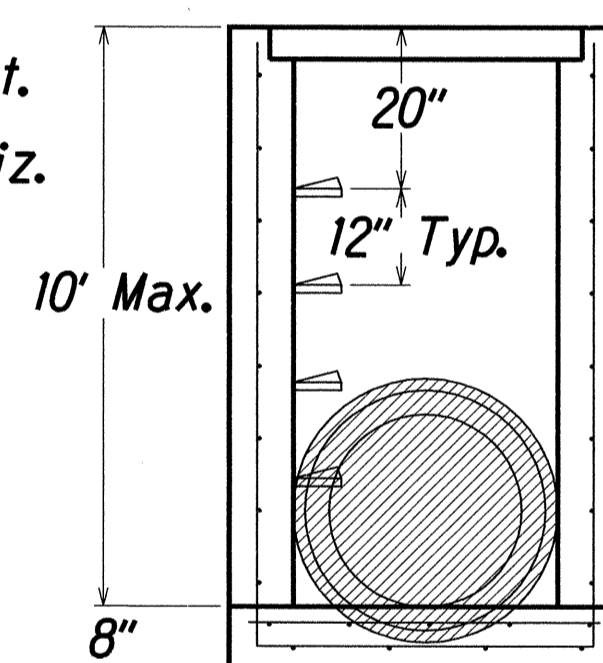
SAWCUT DETAIL



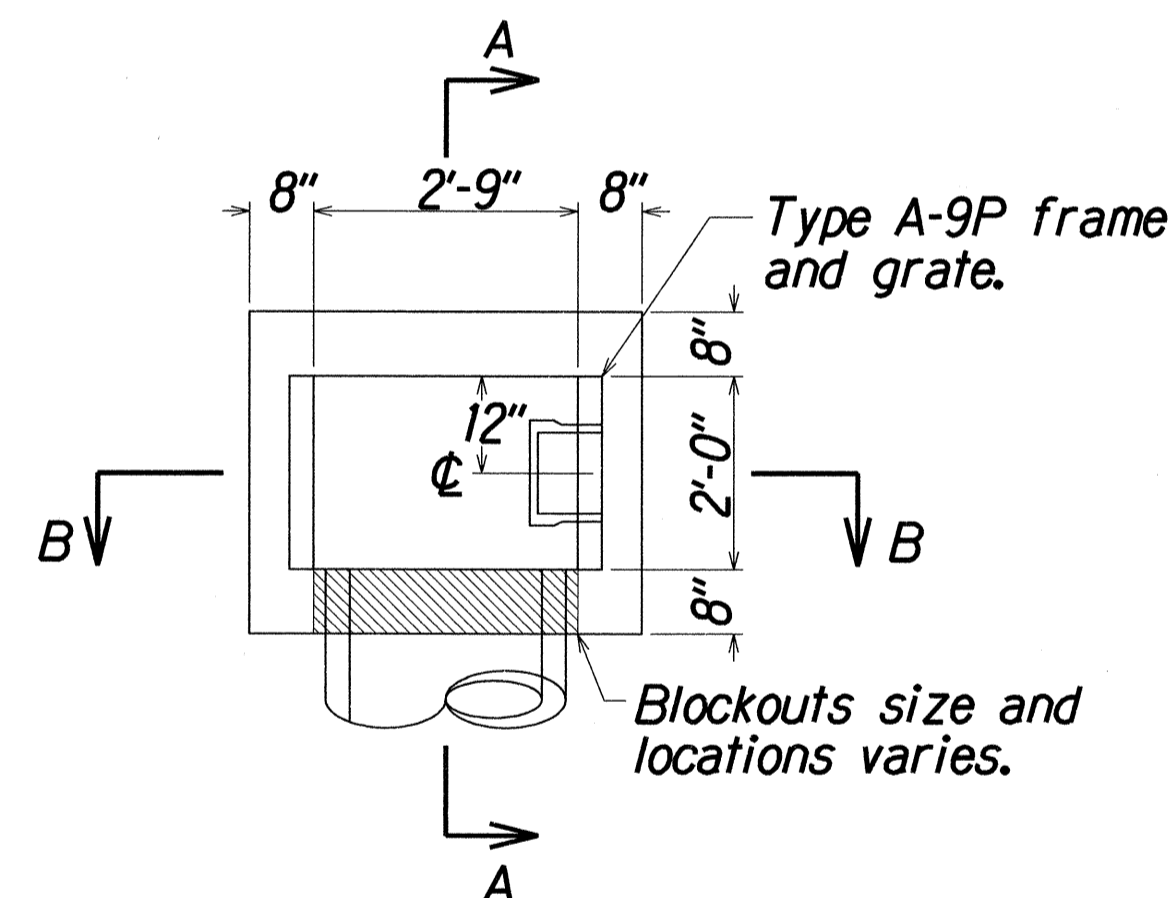
DETAIL OF TYPE "H"  
CAST-IN-PLACE  
CONCRETE GUTTER



SECTION A



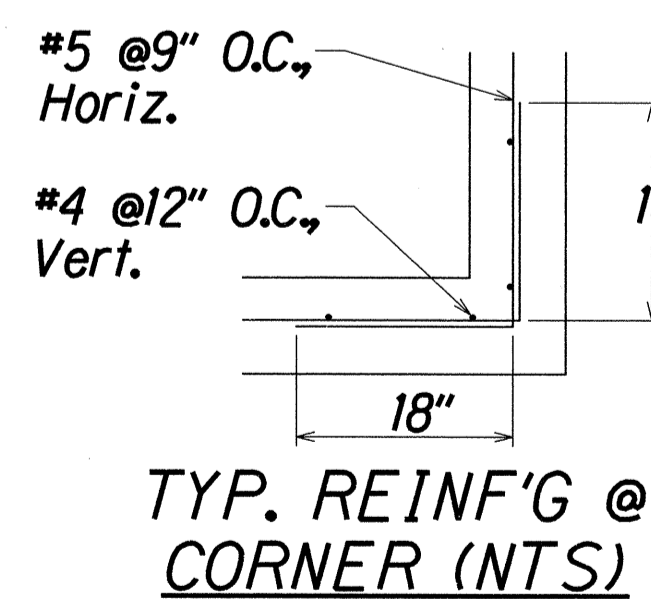
SECTION B



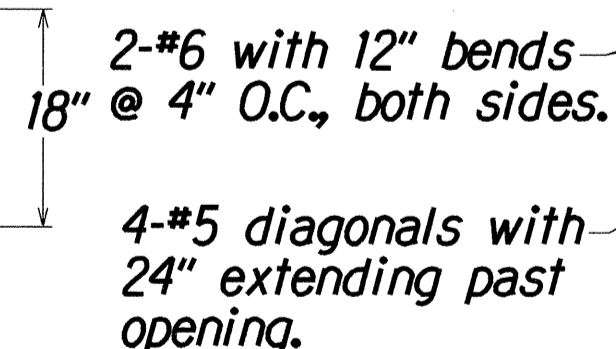
PLAN VIEW

NOTES:

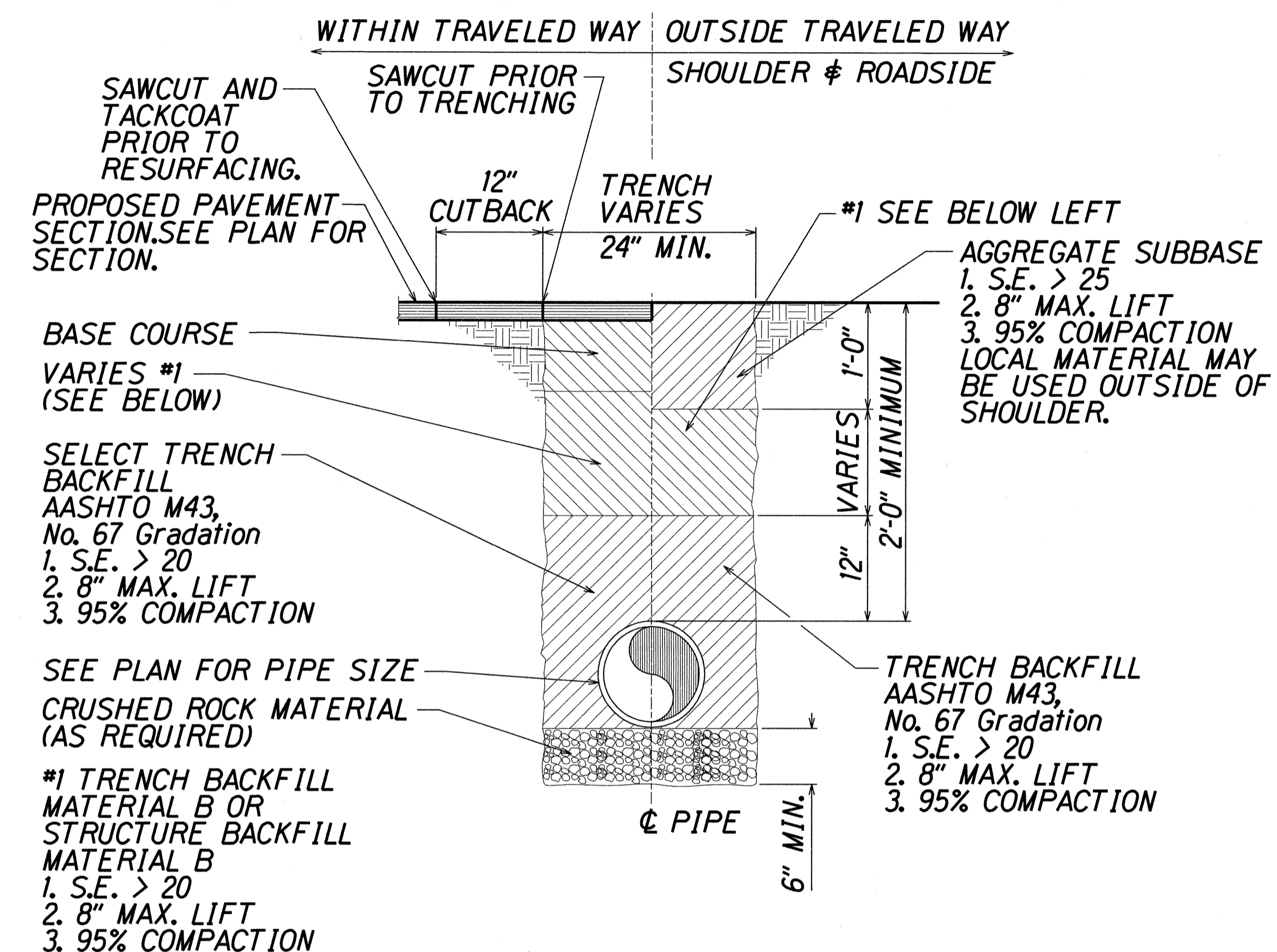
- Concrete shall have a compressive strength of 4,000 p.s.i. at 28 days.
- All reinforcing steel shall be new stock deformed bars conforming to astm A706W grade 60 unless otherwise noted. Placement of rebar shall be in accordance with ACI-315 & ACI-318. All bars shall be clean of rust, grease or other materials likely to impair bond. All bends shall be made cold.
- All reinforcing bars shall be accurately & securely placed. All reinforcing shall be lapped 30 bar diameters or eighteen (18) inches, whichever is greater at splices. All splices shall be made away from point of maximum stress.
- Concrete cover to reinforcing steel shall be 1-1/2" minimum.



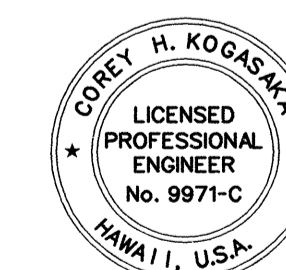
TYPE A-9P GRATED DROP INLET



TYP. REINF'G @  
CULVERT OPENING (NTS)



TYPICAL TRENCH DETAIL



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WAS BE UNDER MY OBSERVATION.  
DATE: 4/30/02

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

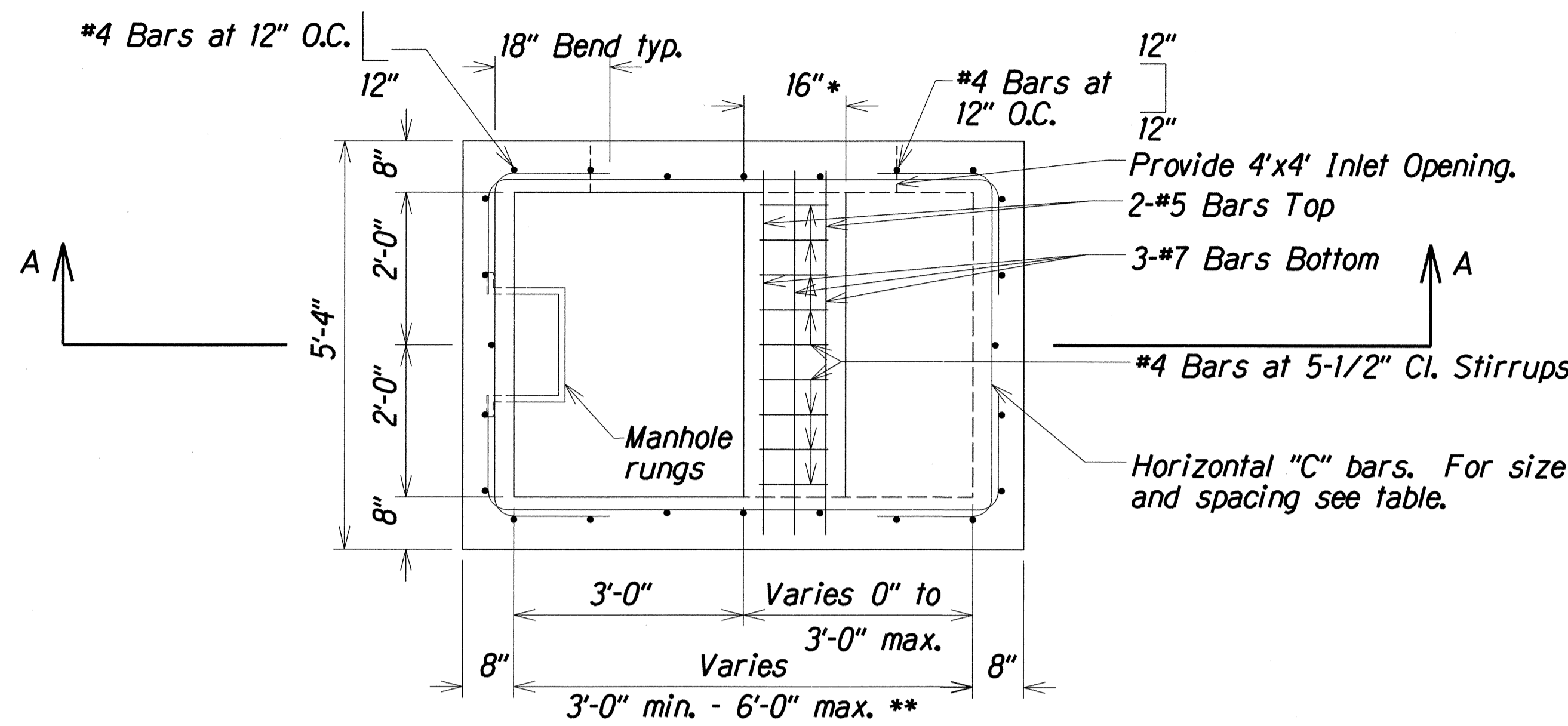
**MISCELLANEOUS DETAILS**

HANA HIGHWAY  
REPAIRS AND MAINTENANCE  
PROJECT NO. 360AB-01-02M

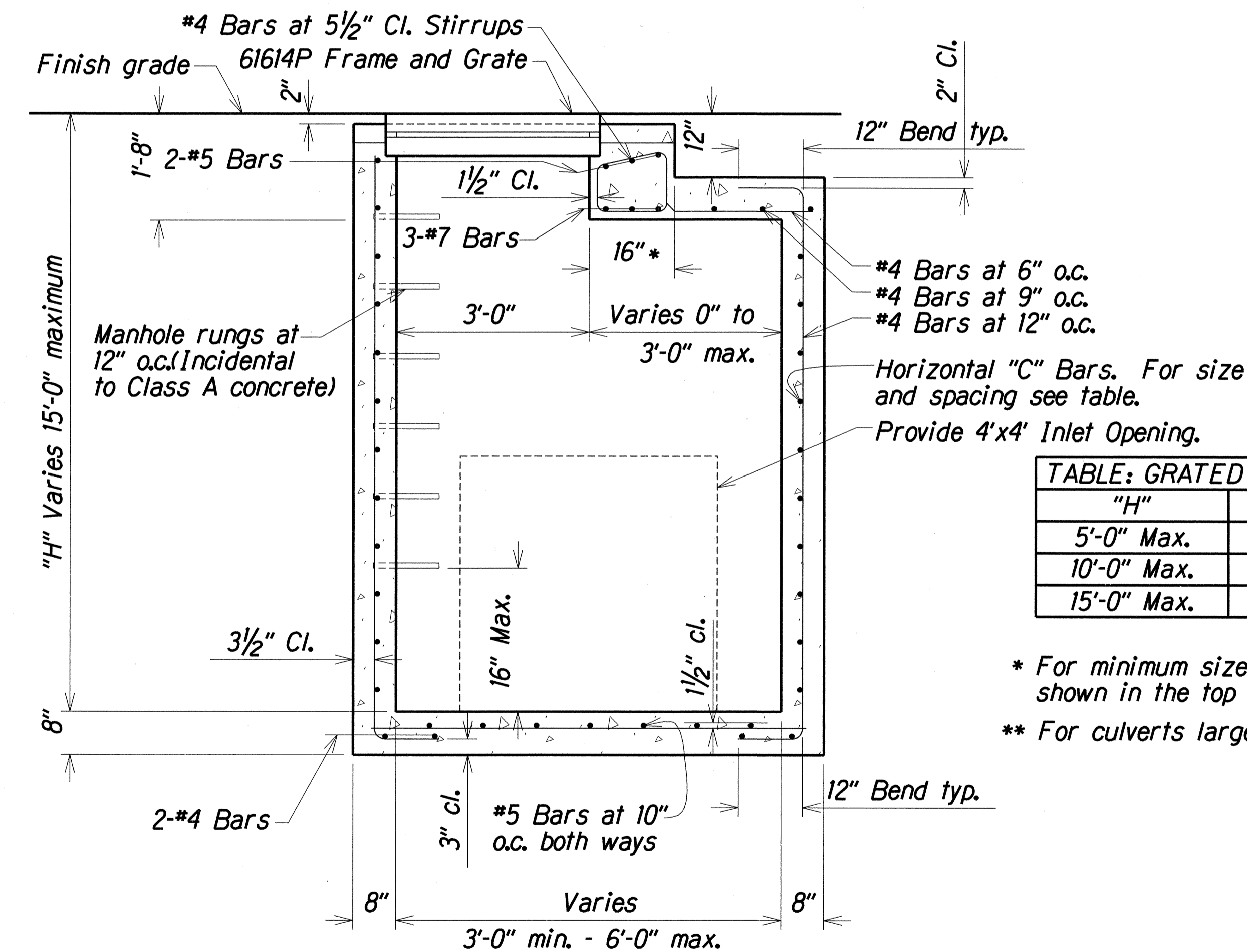
Scale: NTS Date: March, 2001

SHEET No. 1 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	360AB-01-02M	2002	40	41



PLAN

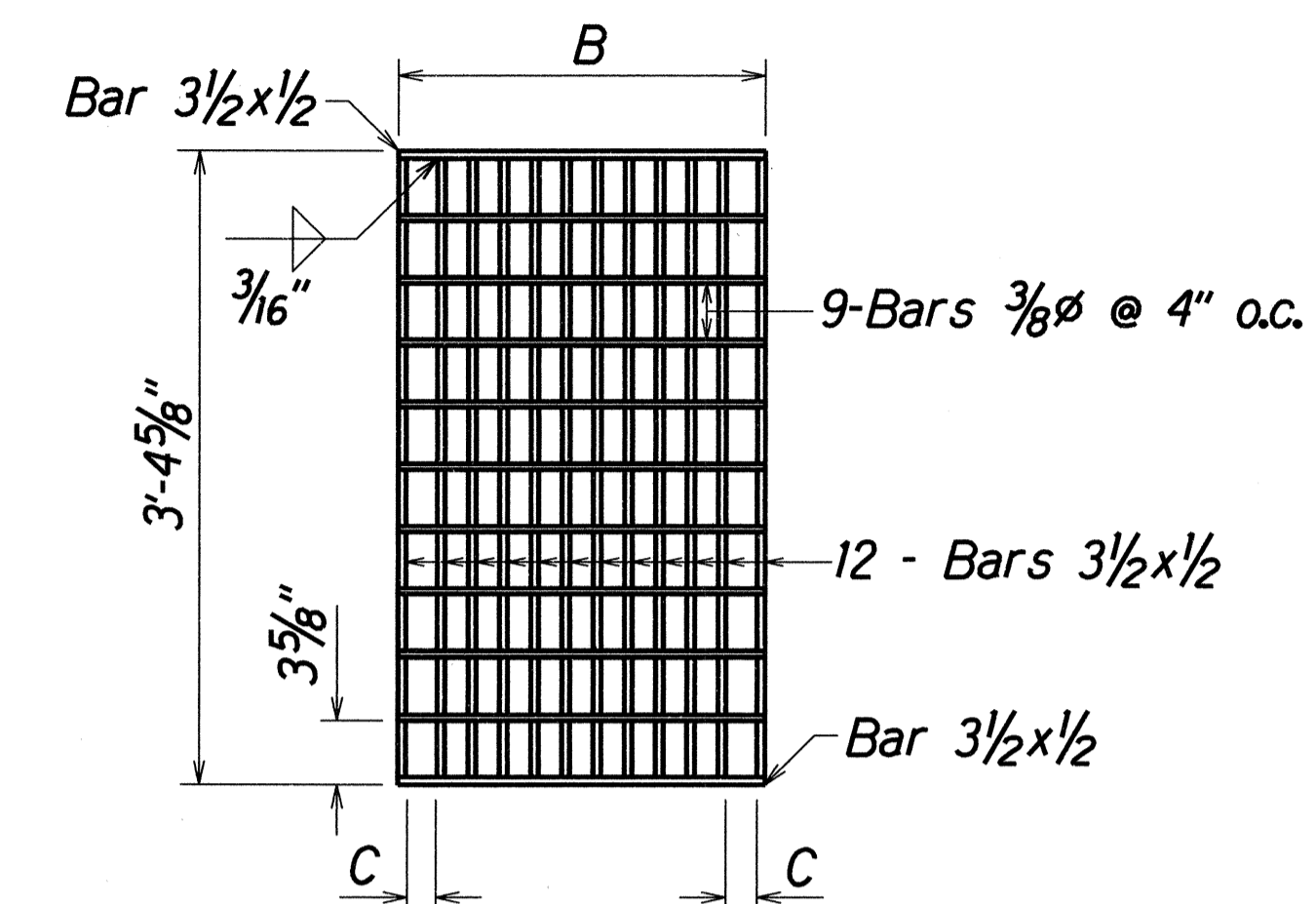


SECTION A-A

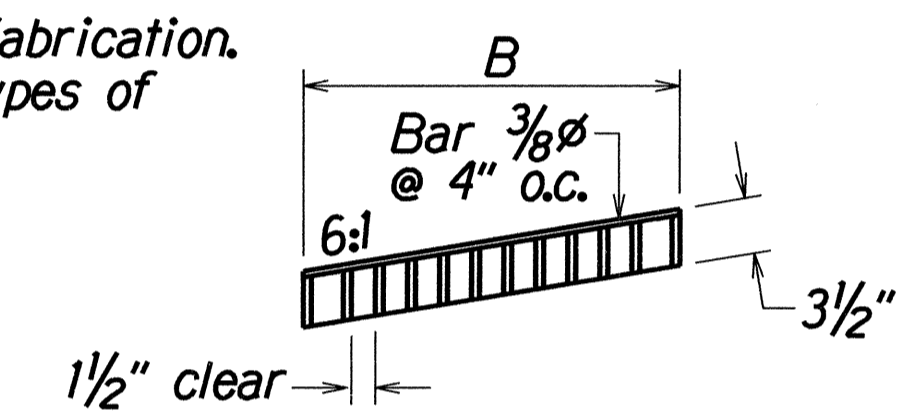
MODIFIED TYPE 61614P GRATED DROP INLET

TABLE: GRATED DROP INLET	
"H"	"C" BARS
5'-0" Max.	#4 at 10" o.c.
10'-0" Max.	#5 at 9" o.c.
15'-0" Max.	#5 at 6" o.c.

- \* For minimum size box, eliminate beam and use typical wall and wall reinforcing shown in the top portion.
- \*\* For culverts larger than 30", the minimum dimension shall be D.



PLAN

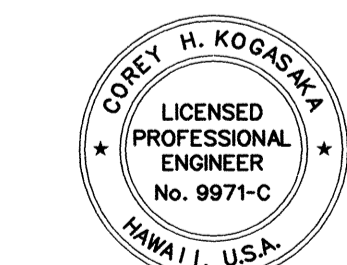


SECTION

DIMENSIONS					
TYPE	NO. BARS	A	B	C	D
61614P	12		1'-11 1/2"	2"	

TYPE 61614P STEEL GRATES

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



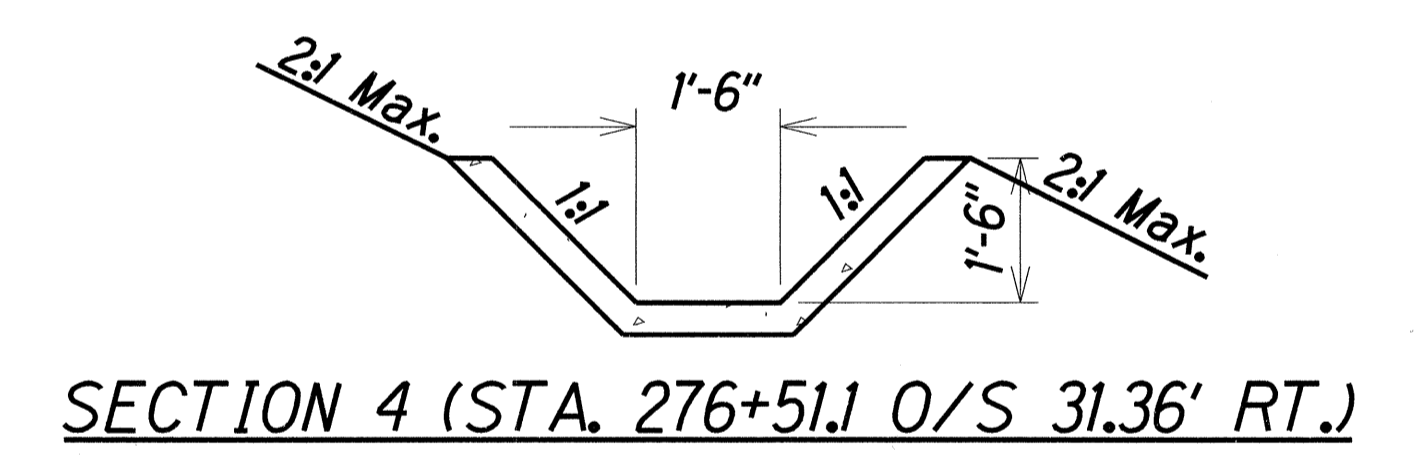
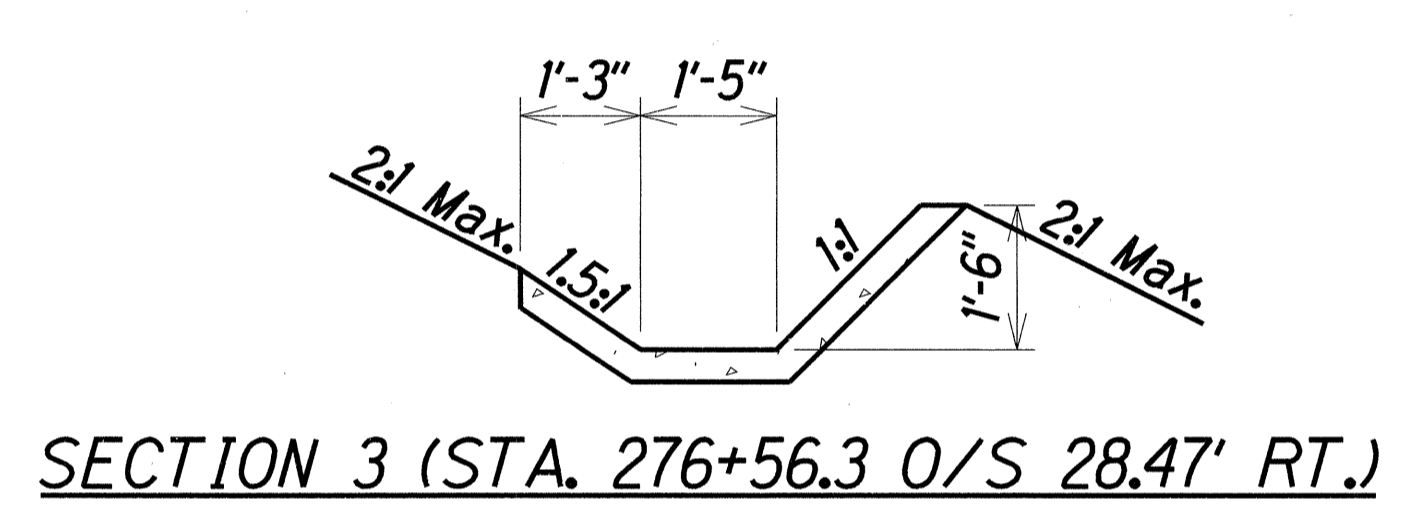
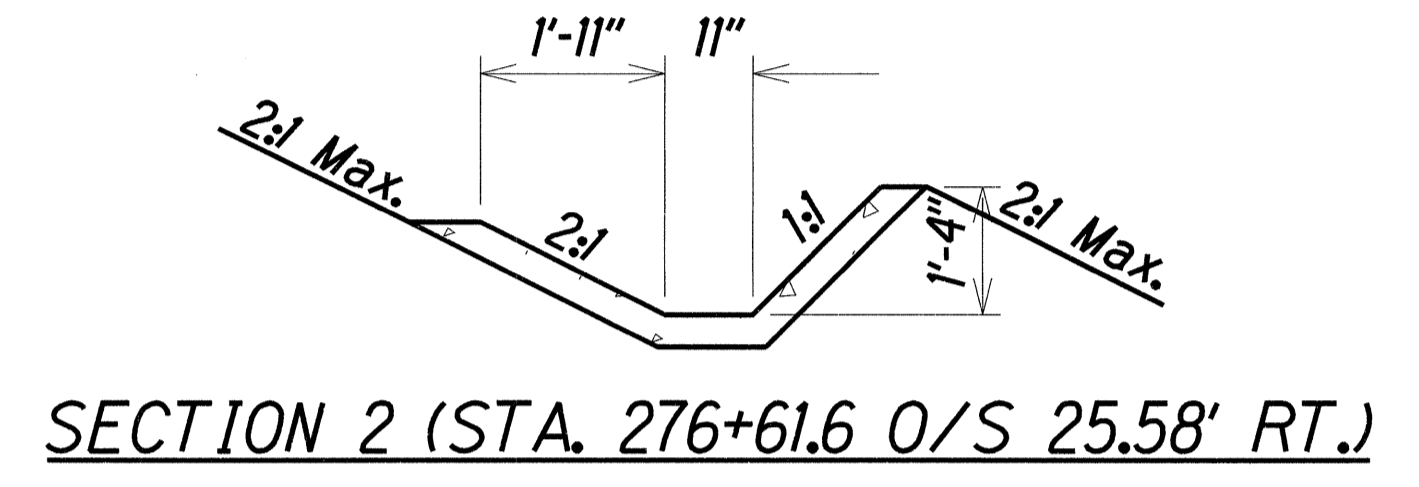
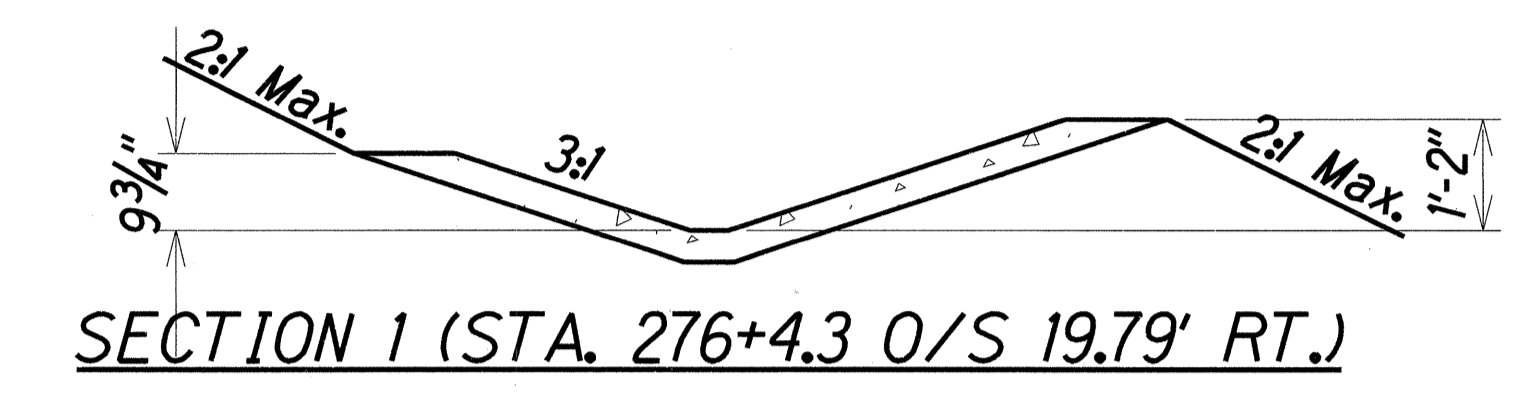
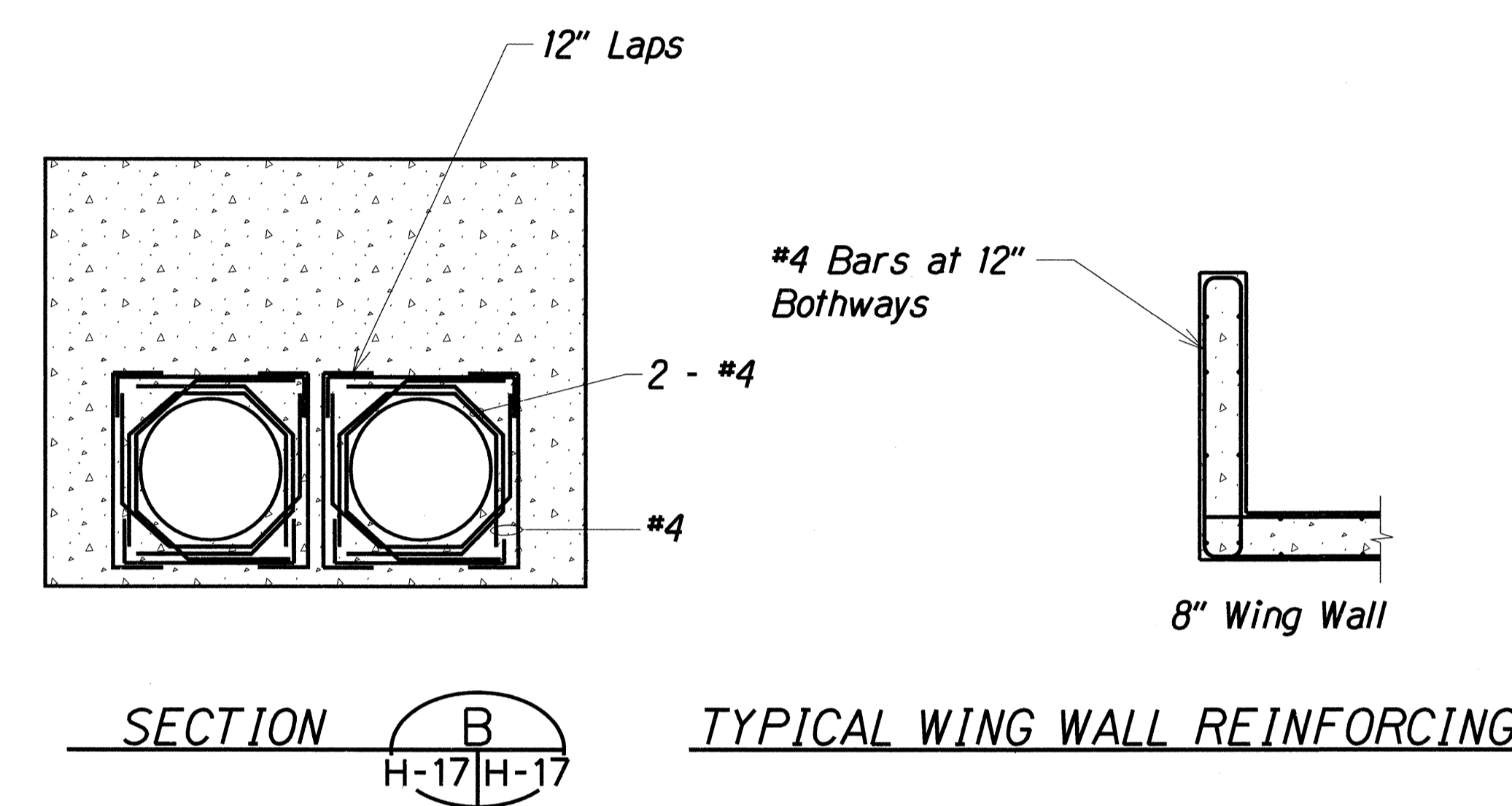
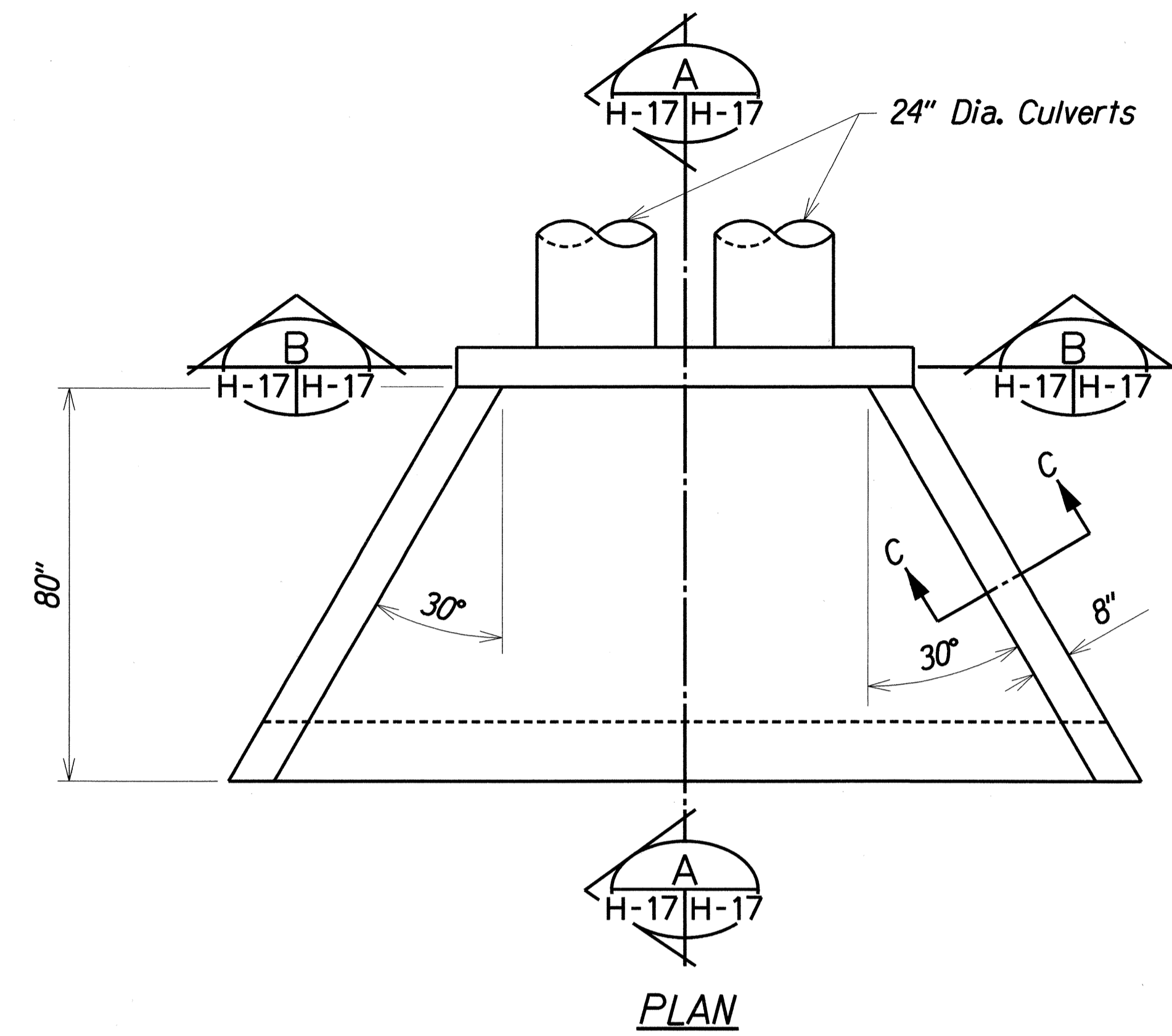
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 Cory H. Kogalak  
 DATE: 4/30/02

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION  
**MISCELLANEOUS DETAILS**

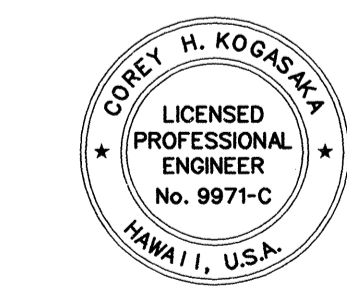
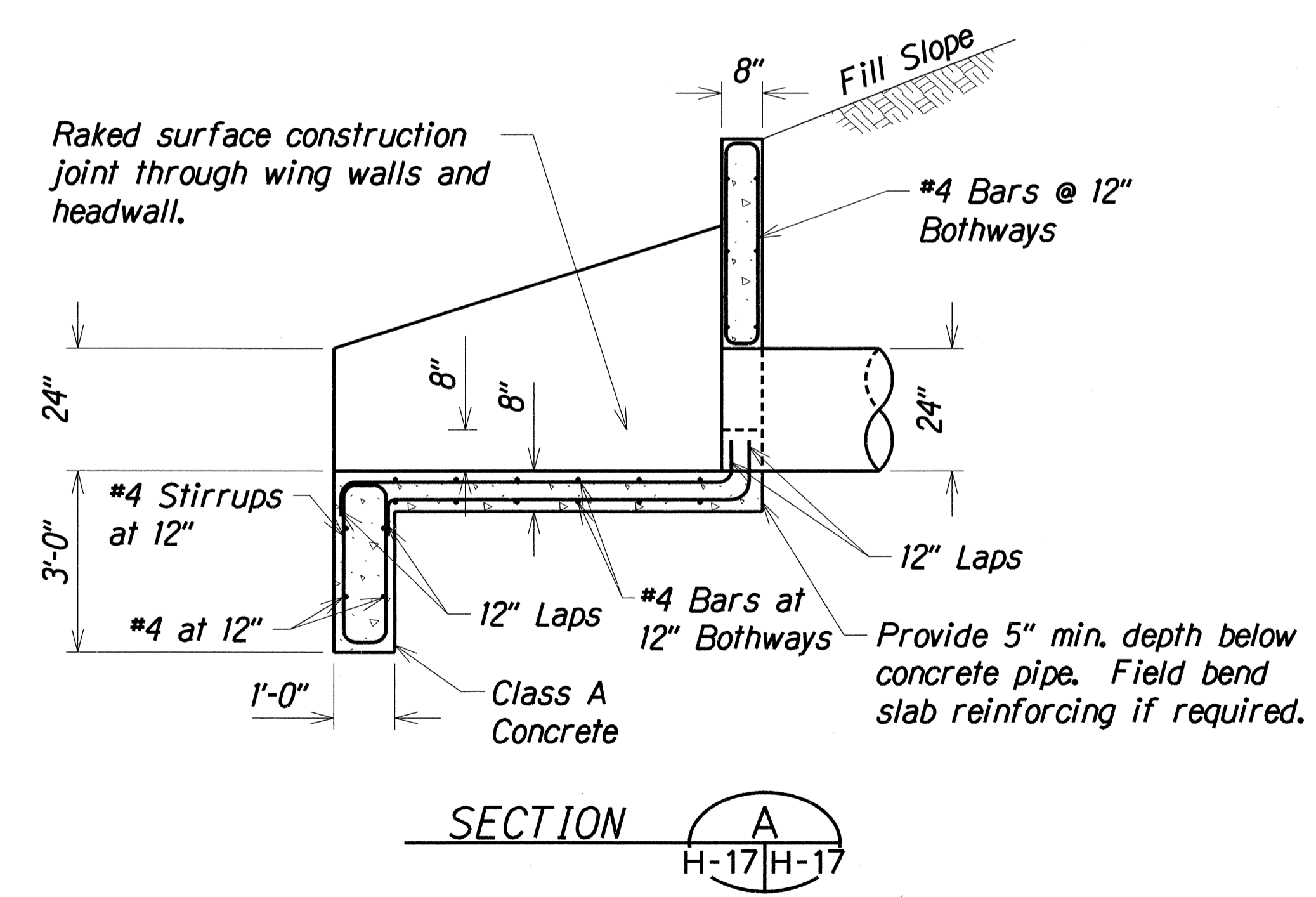
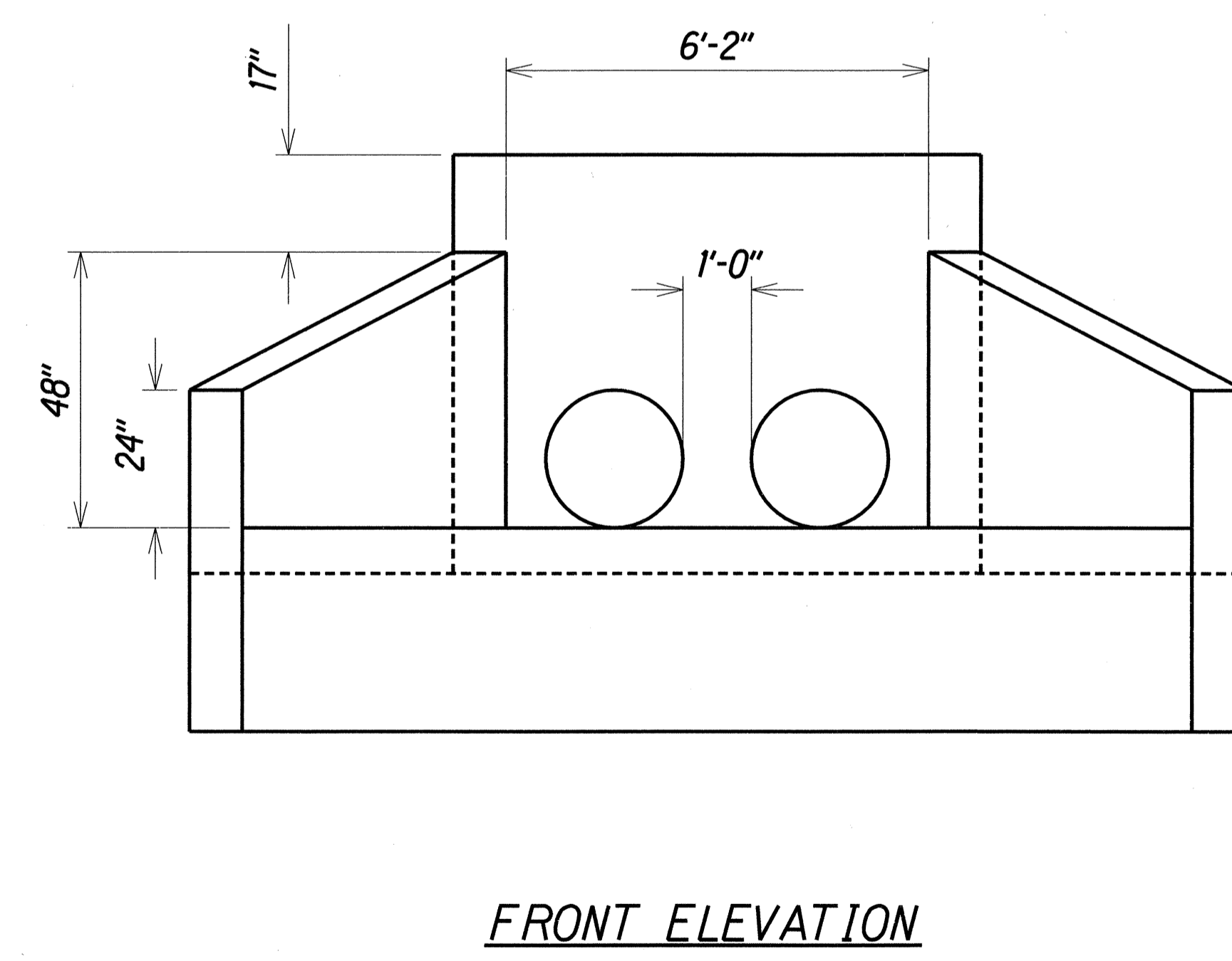
HANA HIGHWAY  
REPAIRS AND MAINTENANCE  
PROJECT NO. 360AB-01-02M  
Scale: NTS  
Date: March, 2001

SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	360AB-01-02M	2002	41	41



TRANSITION DETAIL



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 DATE: 4/30/02

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION  
**MISCELLANEOUS DETAILS**  
 HANA HIGHWAY  
 REPAIRS AND MAINTENANCE  
 PROJECT NO. 360AB-01-02M  
 Scale: NTS Date: March, 2001  
 SHEET No. 3 OF 3 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NOTED BY	
DATE	