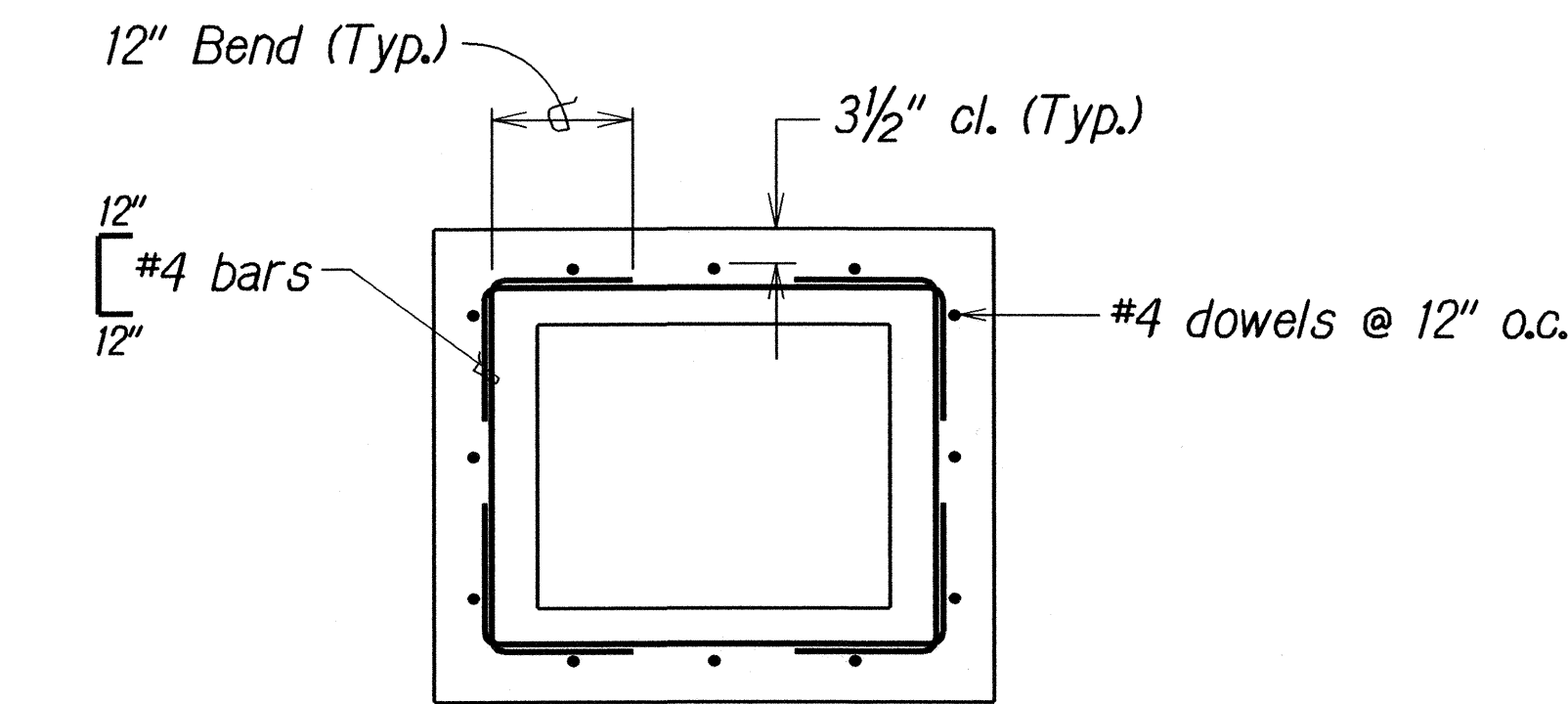
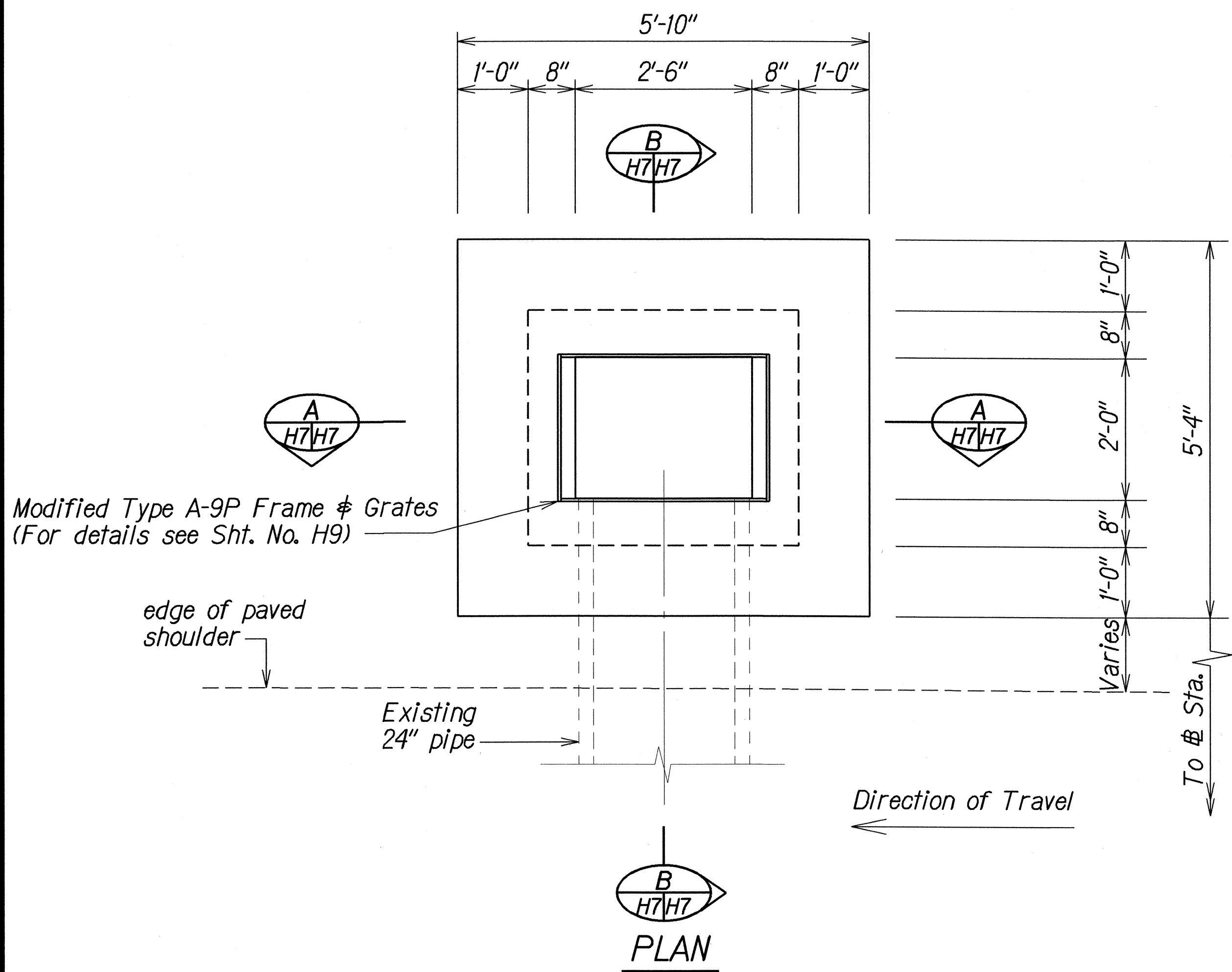


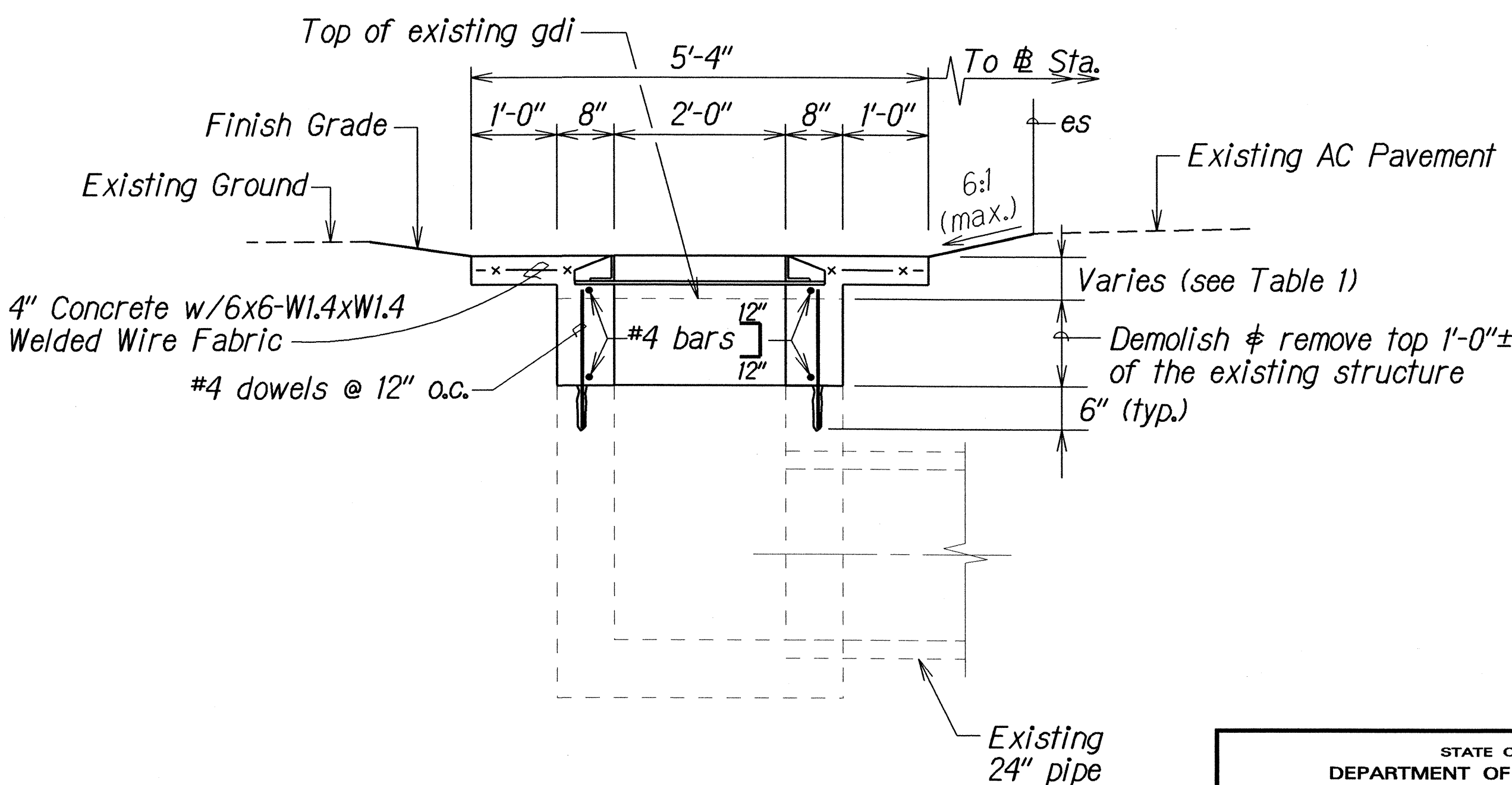
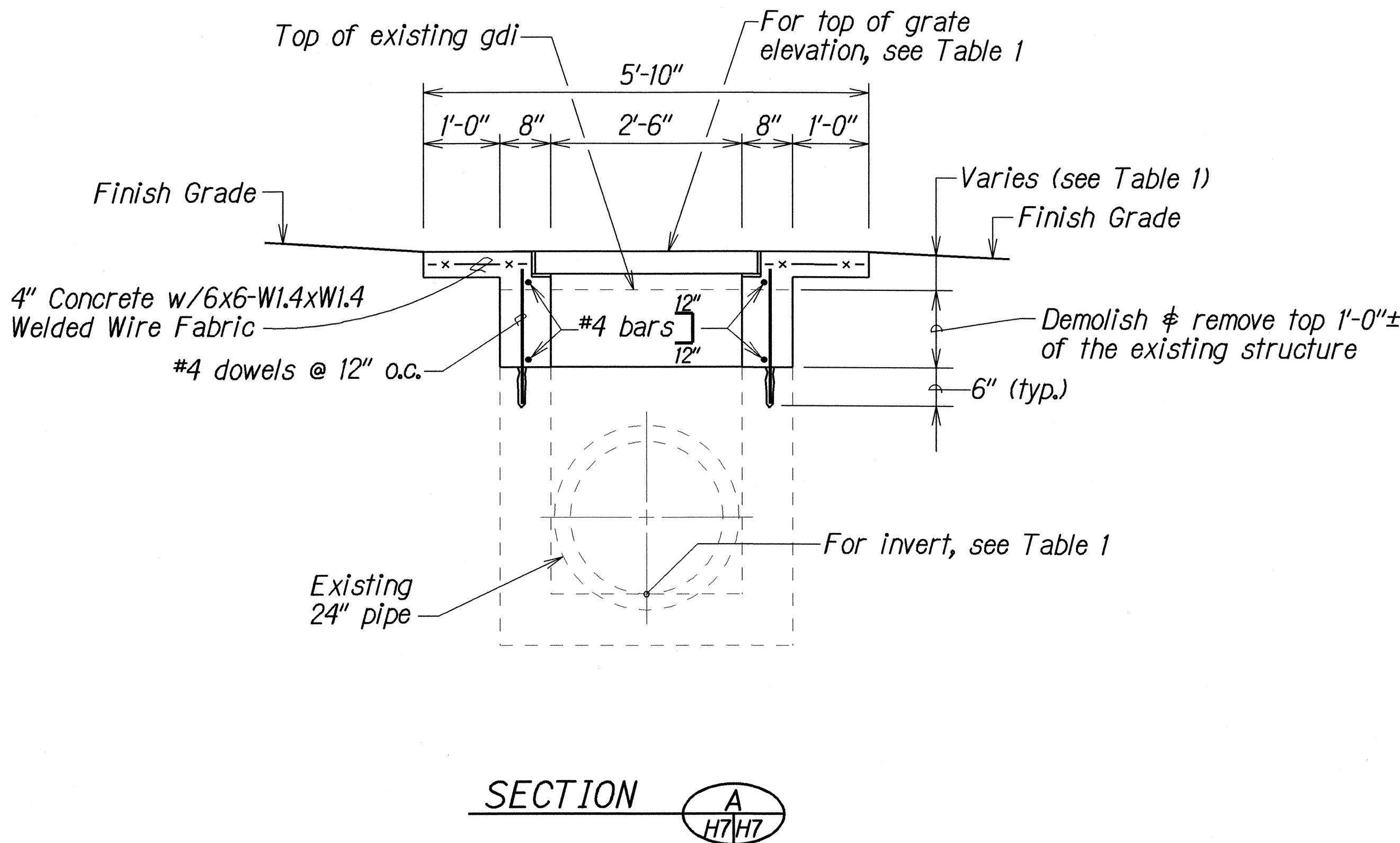
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50CD-01-02	2003	12	21



PLAN VIEW OF WALL REINFORCING

TABLE 1					
STRUCTURE LOCATION	EXISTING TOP OF GRATE ELEVATION	NEW TOP OF GRATE ELEVATION*	STRUCTURE TO BE RAISED	EDGE OF SHOULDER ELEVATION*	EXISTING INVERT
Sta. 119+38 o/s Lt.	449.65	450.33	0.68'±	450.61	446.05
Sta. 131+38 o/s Lt.	420.42	421.18	0.76'±	421.26	417.32
Sta. 158+38 o/s Lt.	320.46	321.04	0.58'±	321.21	316.96

* Contractor to verify in the field that the new top of grate elevation is not higher than the edge of shoulder elevation.



TYPICAL DETAIL OF TYPE 1 GRATED DROP INLETS

ORIGINAL PLAN	DATE	5/24/02
SURVEY PLOTTED BY		
DRAWN BY		
TRACED BY		
NOTED BY		
CHECKED BY		

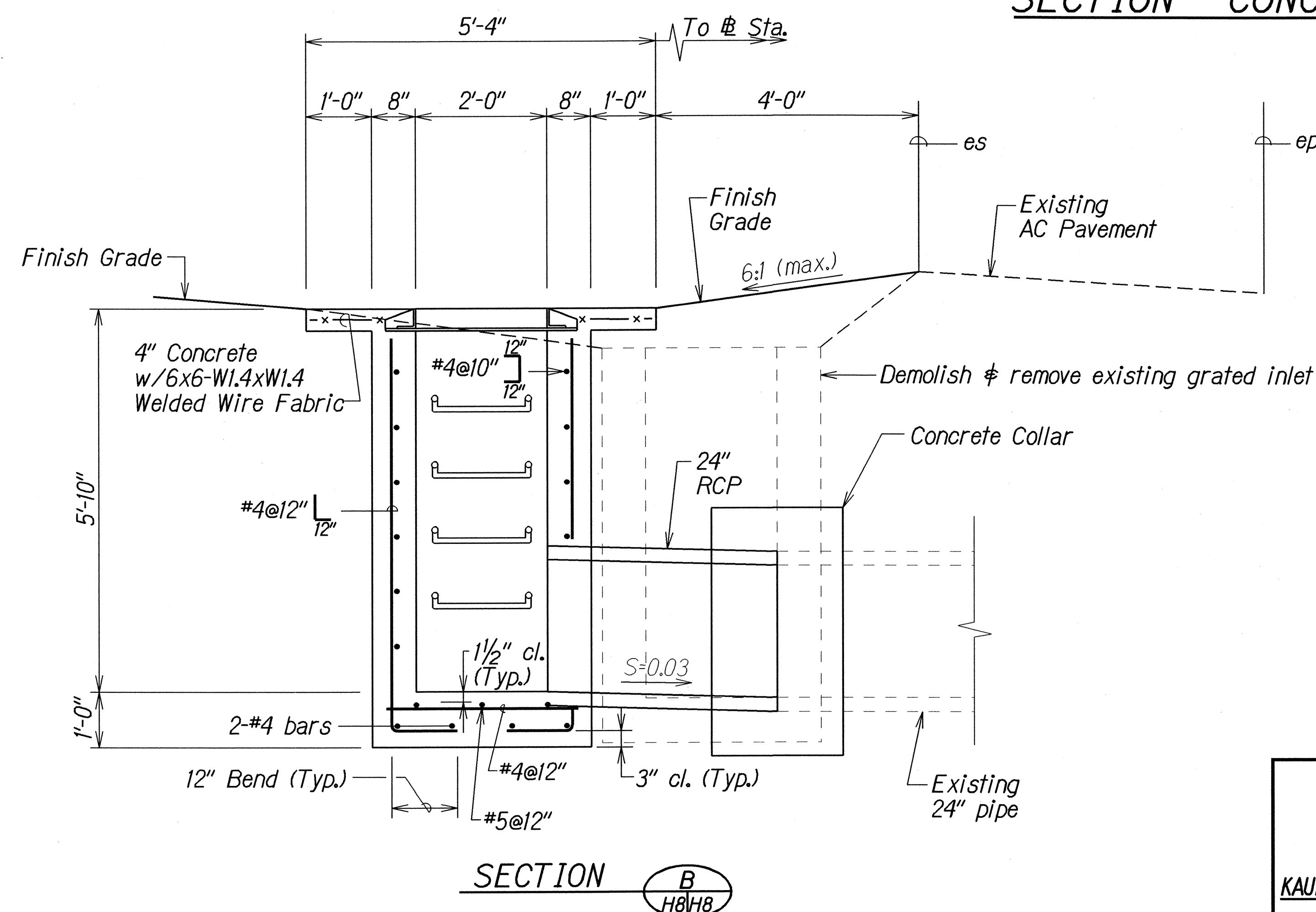
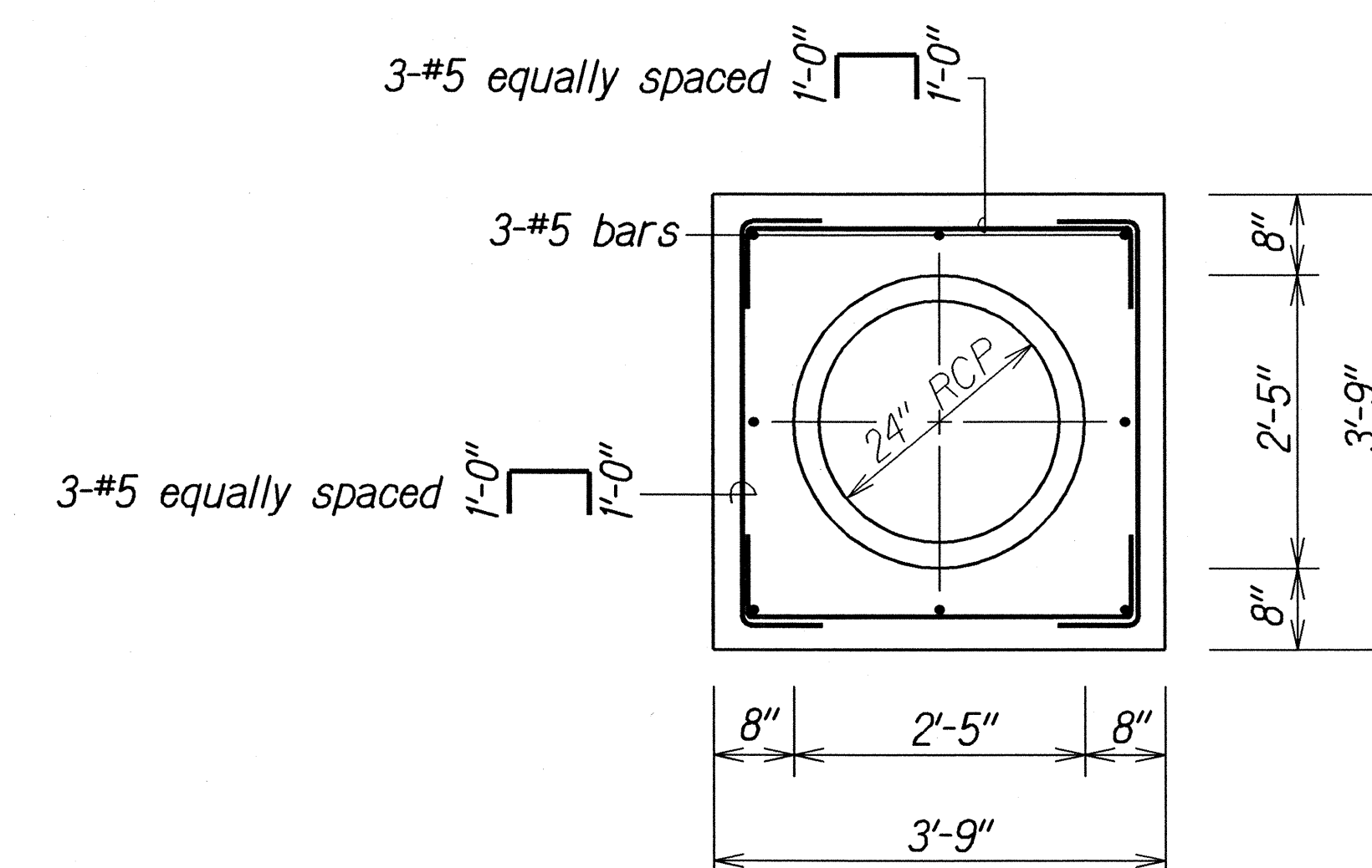
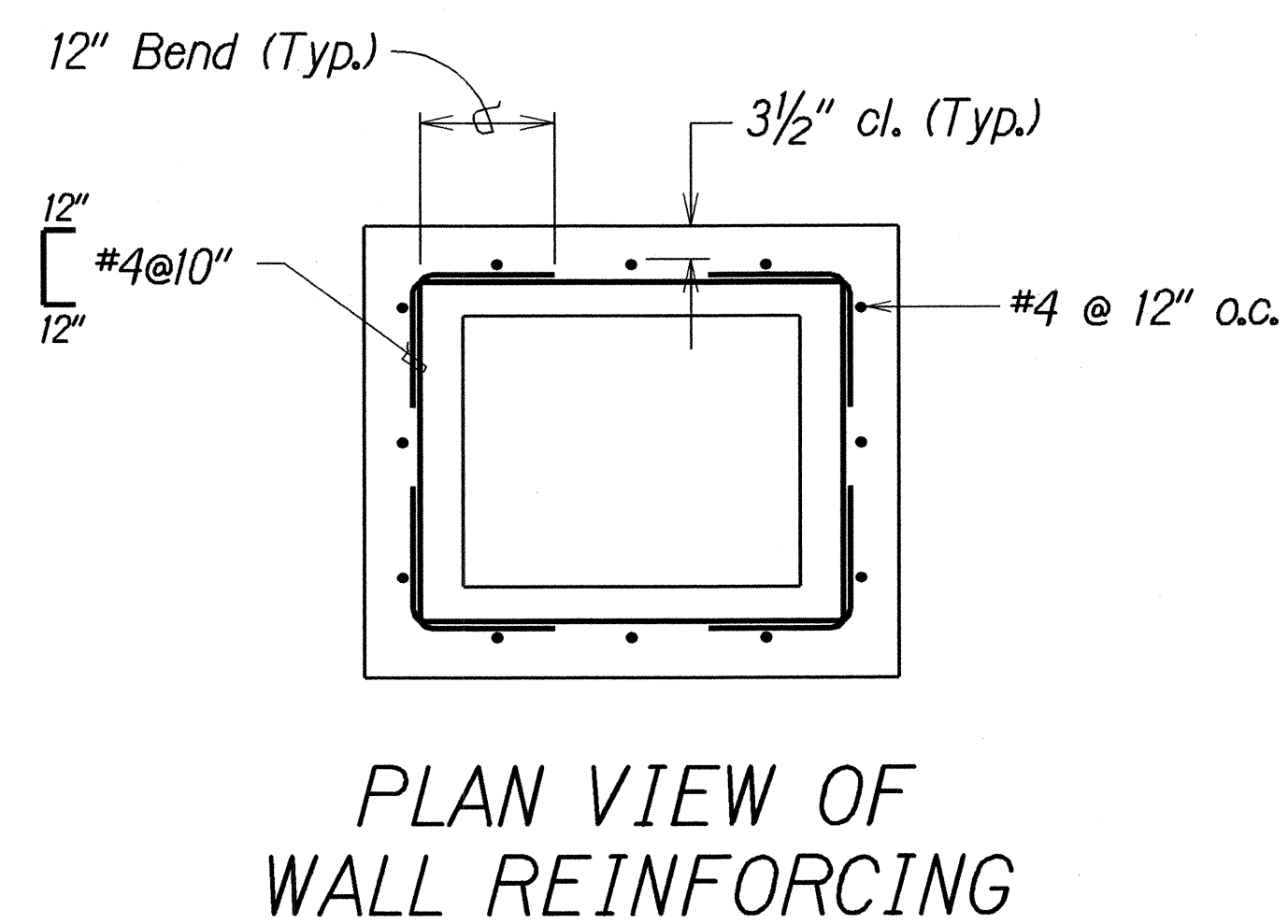
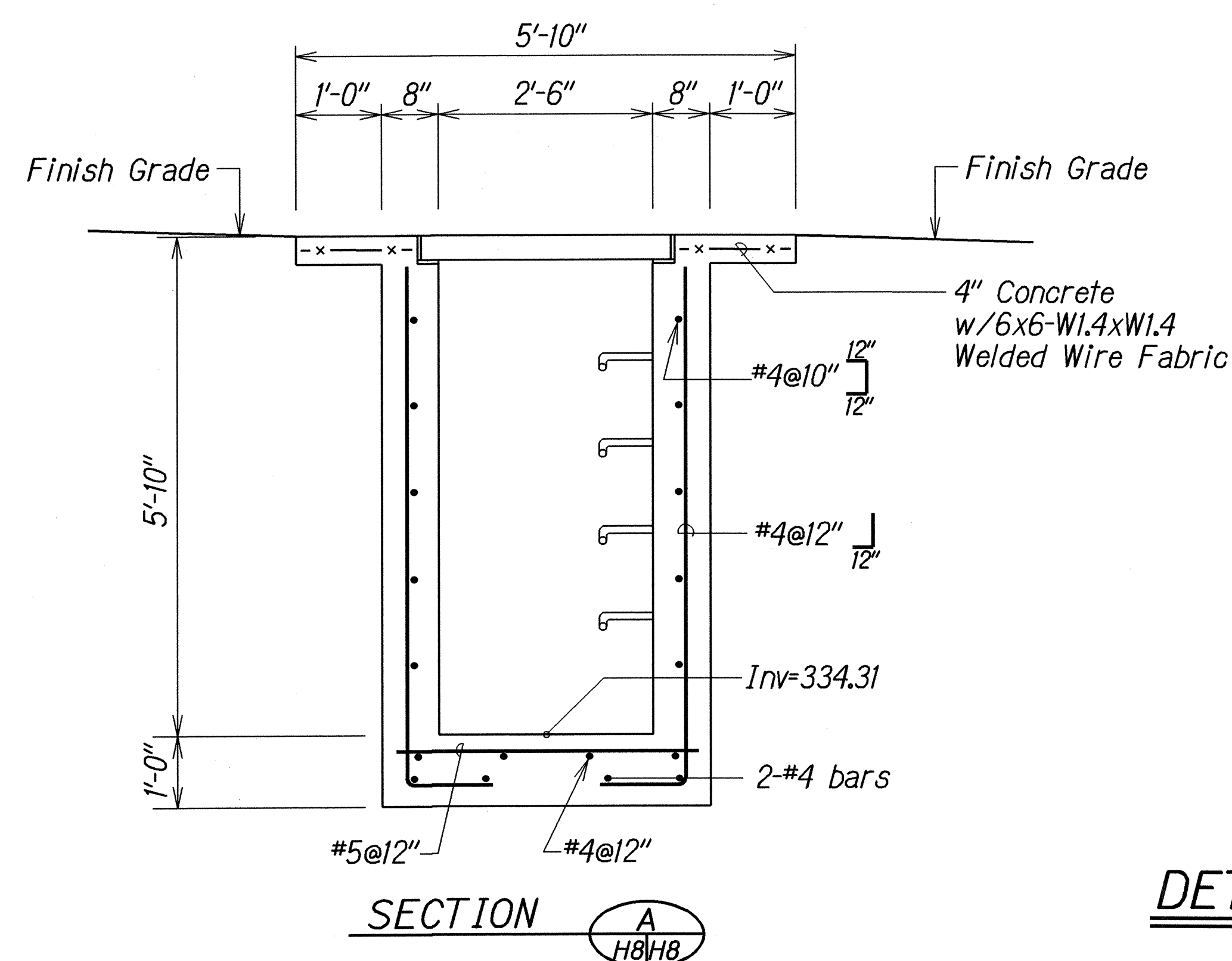
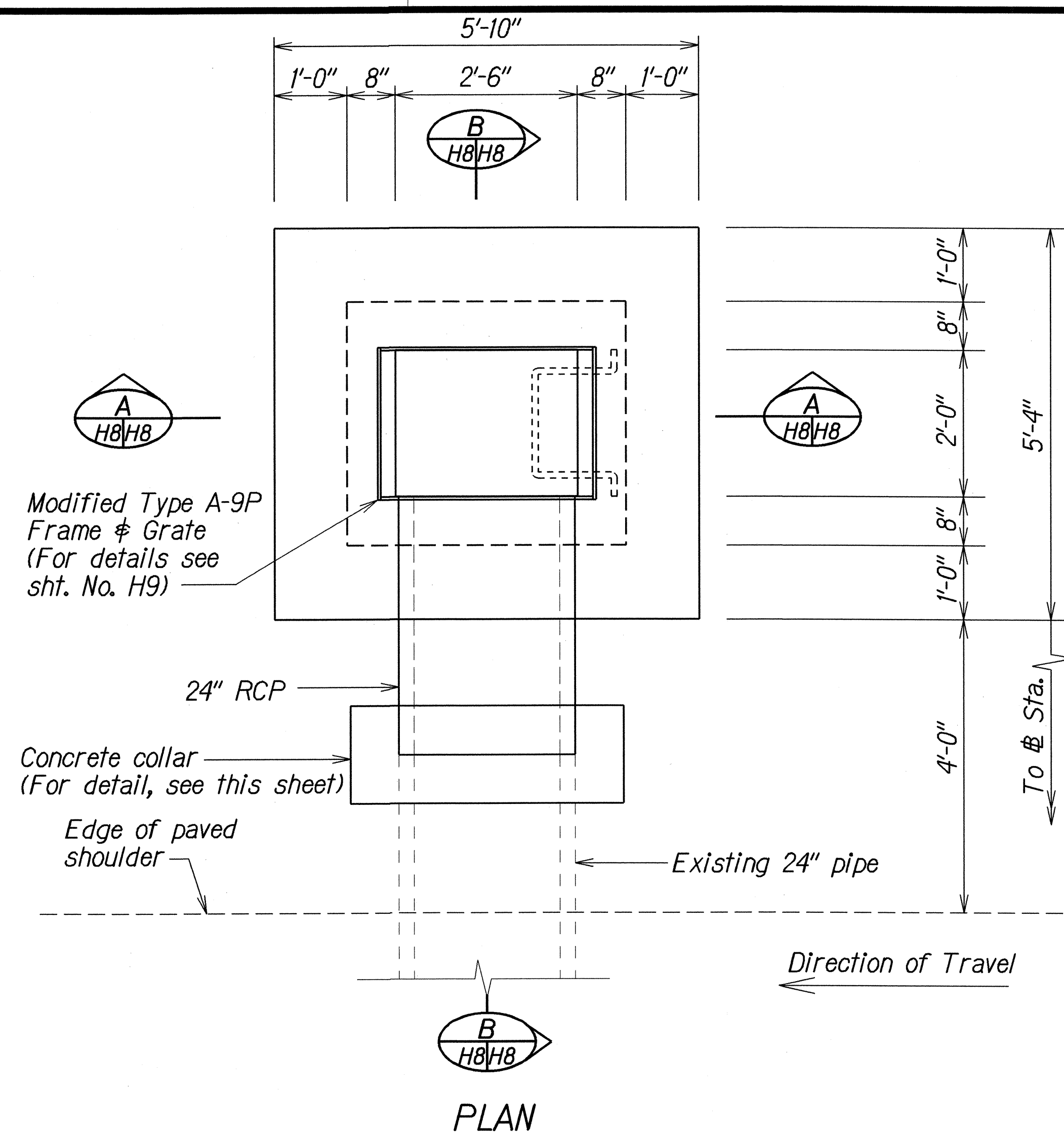
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

KAUMUALII HIGHWAY DRAINAGE IMPROVEMENTS
Vicinity of Huleia Stream Bridge
and Hanapepe Valley Scenic Lookout
Project No. 50CD-01-02
Scale: 3/4" = 1'-0" Date: May 2002

SHEET No. H7 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50CD-01-02	2003	13	21



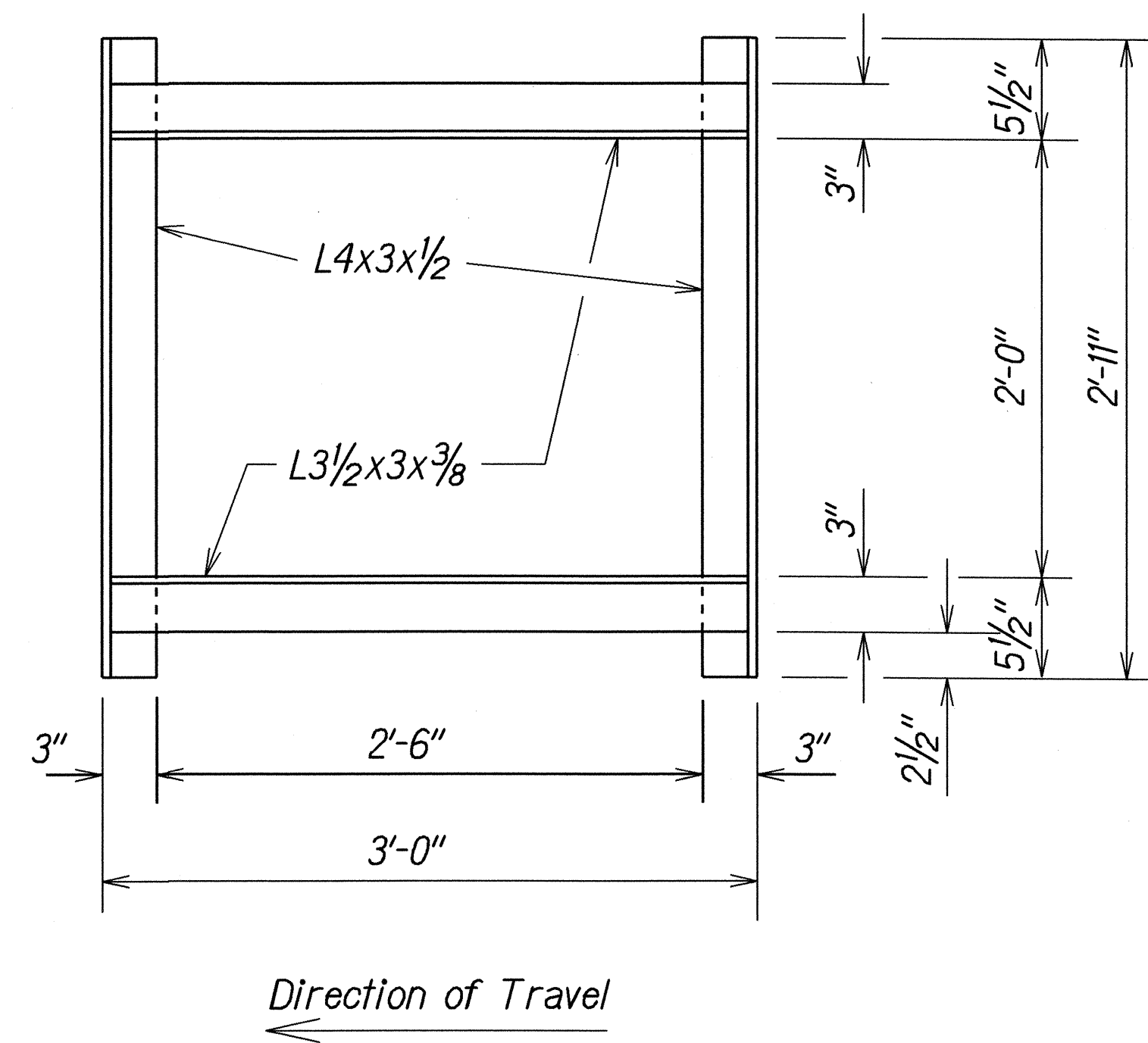
DETAIL OF TYPE 2 GRATED DROP INLET

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

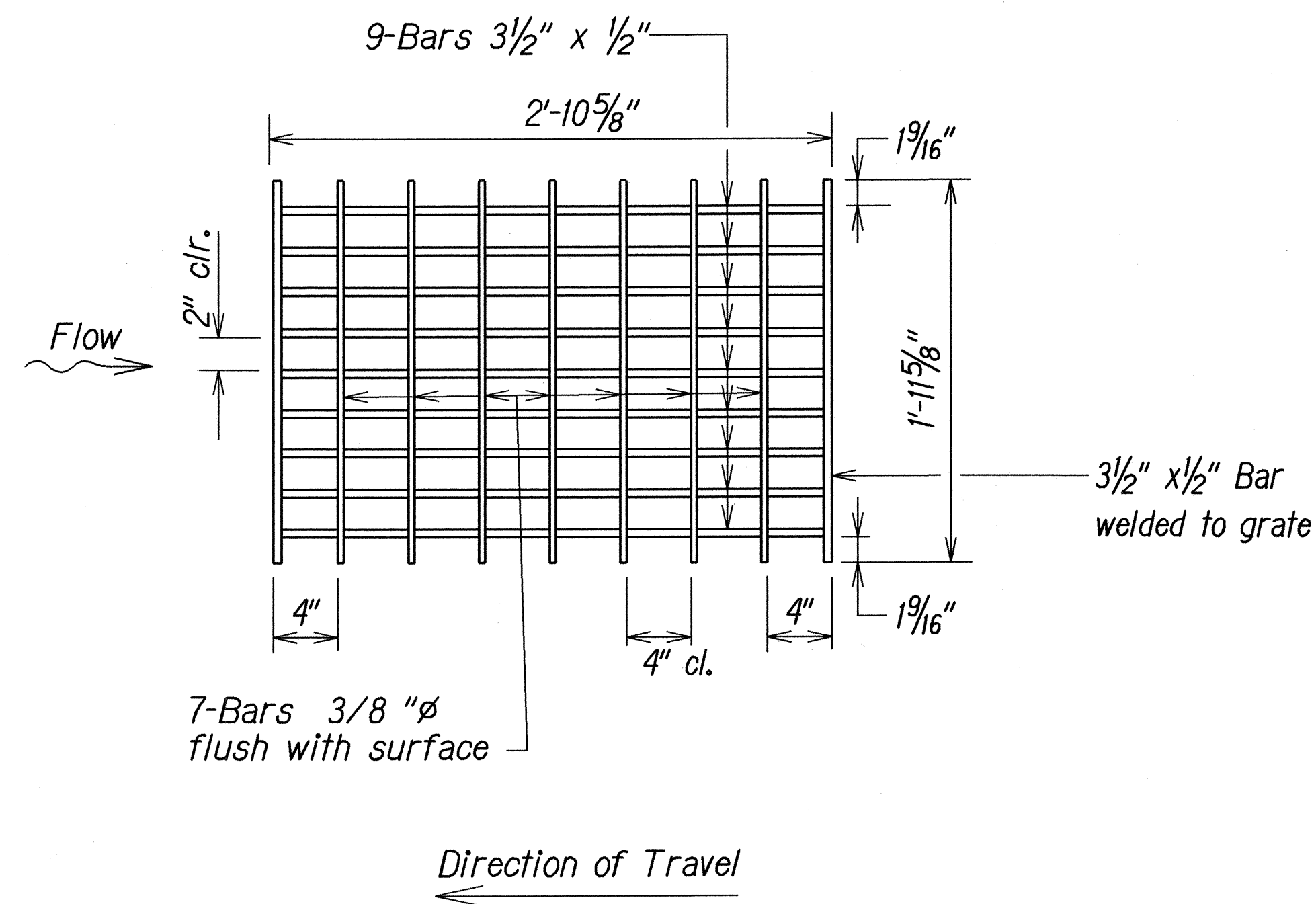
DRAINAGE DETAILS

KAUMUALII HIGHWAY DRAINAGE IMPROVEMENTS
Vicinity of Huleia Stream Bridge
and Hanapepe Valley Scenic Lookout
Project No. 50CD-01-02
Scale: 3/4" = 1'-0" Date: May 2002
SHEET No. H8 OF 10 SHEETS

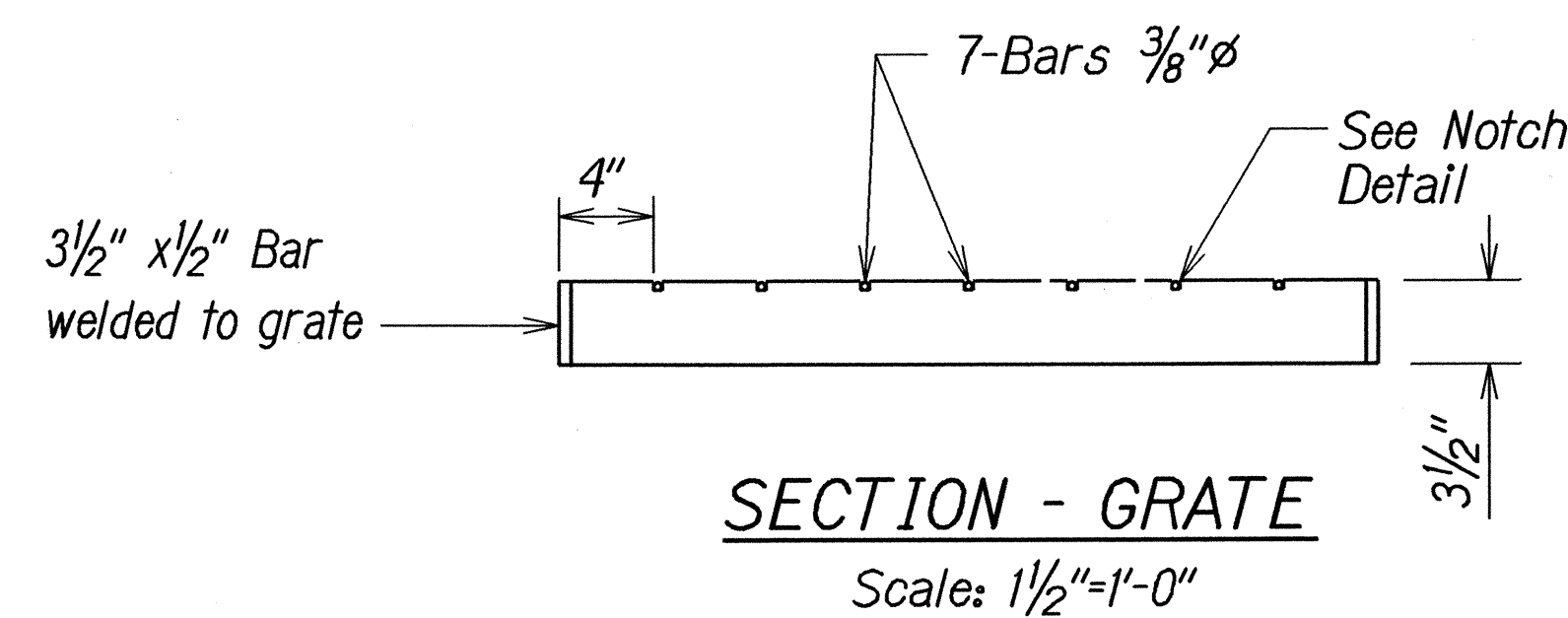
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HAWAII	HAW.	50CD-01-02	2003	14	21



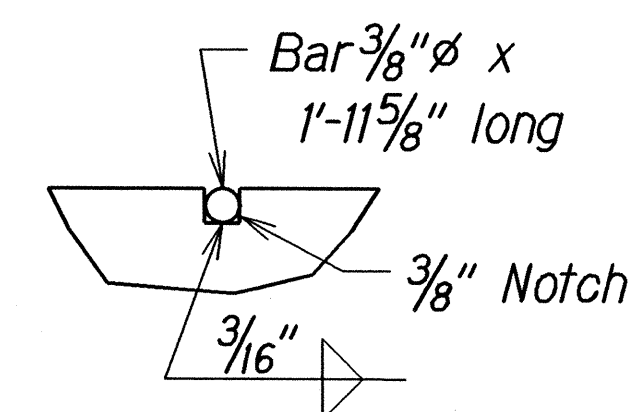
PLAN - FRAME
Scale: 1 1/2"=1'-0"



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



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



NOTCH DETAIL
Not to Scale

- GENERAL NOTES**
1. All welds 3/8" unless otherwise noted.
 2. Frames shall be hot dip galvanized after fabrication.

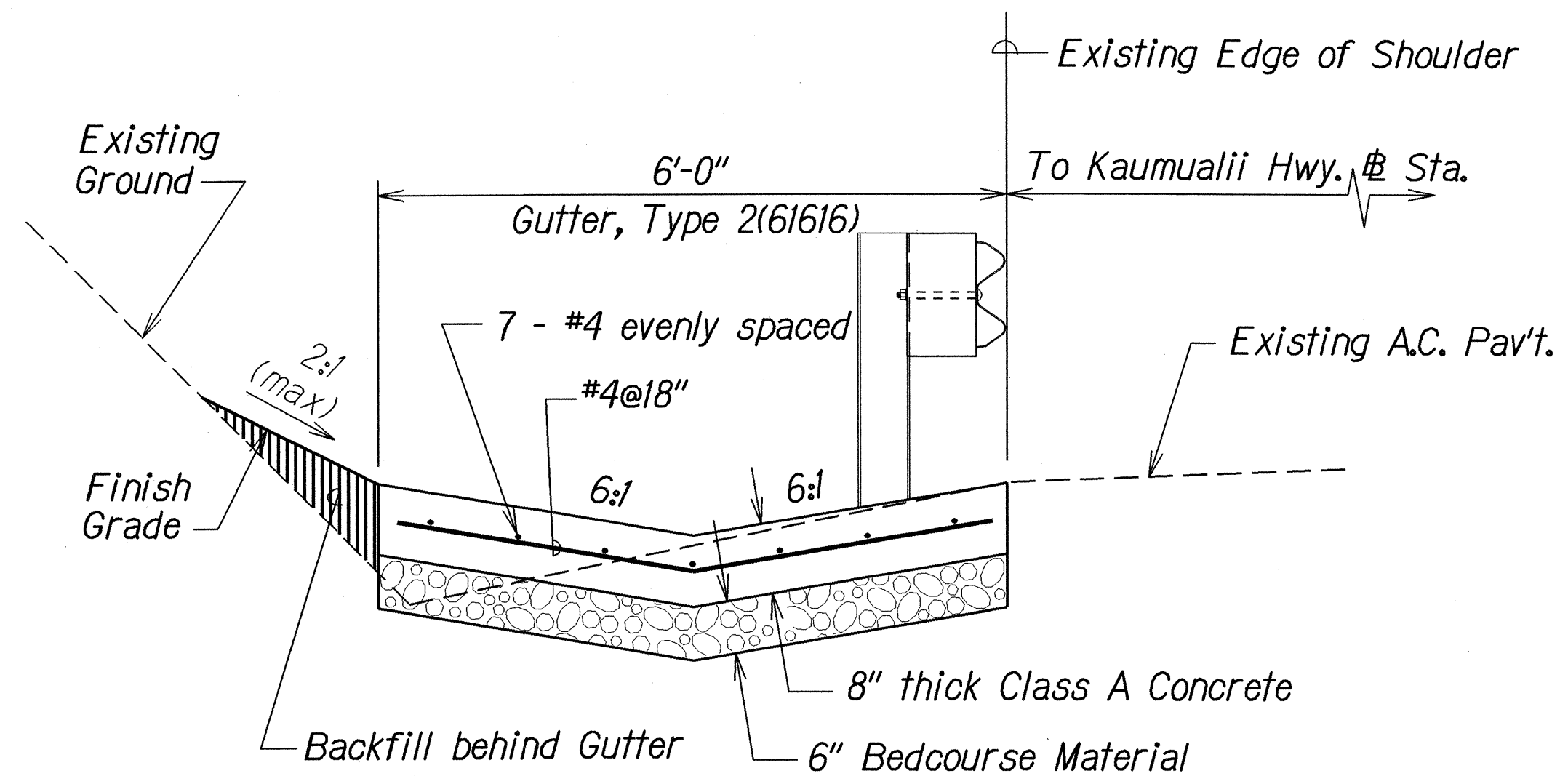
DETAIL OF MODIFIED TYPE A-9P FRAME AND GRATE

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	5/24/02
DESIGNED BY	CHECKED BY	
APPROVED BY		

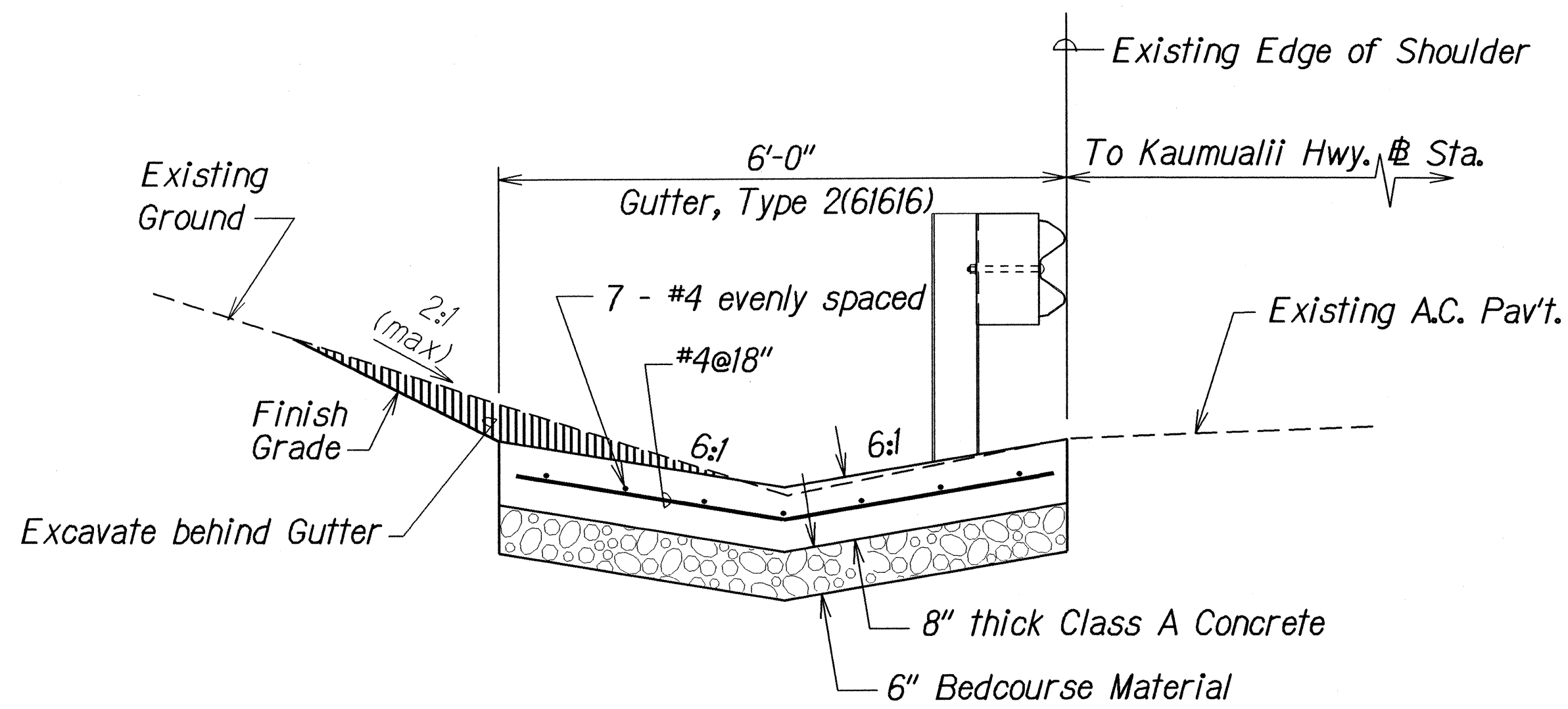
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS
KAUMUALII HIGHWAY DRAINAGE IMPROVEMENTS
Vicinites of Huleia Stream Bridge
and Hanapepe Valley Scenic Lookout
Project No. 50CD-01-02
Scale: As Shown Date: May 2002
SHEET No. H9 OF 10 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	50CD-01-02	2003	15	21



FILL CONDITION

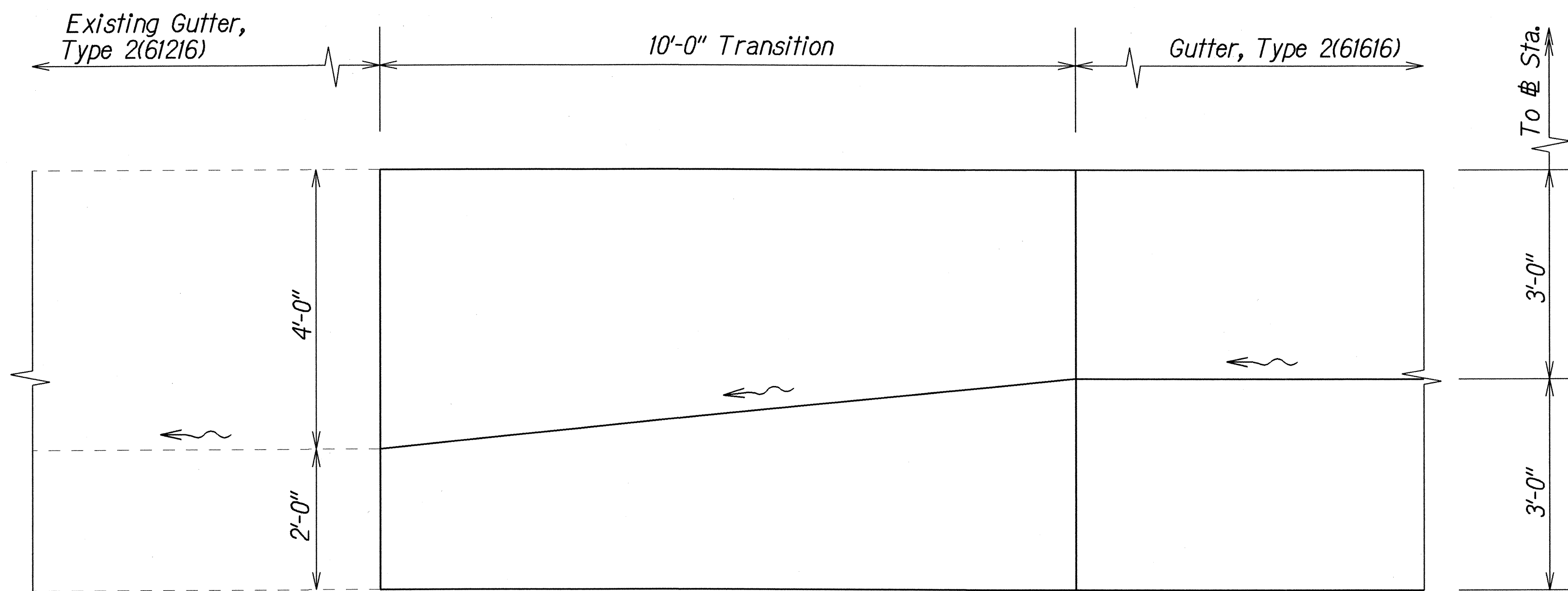


CUT CONDITION

NOTE: Backfill or excavation behind gutter shall be considered incidental to Contract Item No. 609.2216 - Gutter, Type 2(61616).

DETAIL OF GUTTER, TYPE 2(61616)

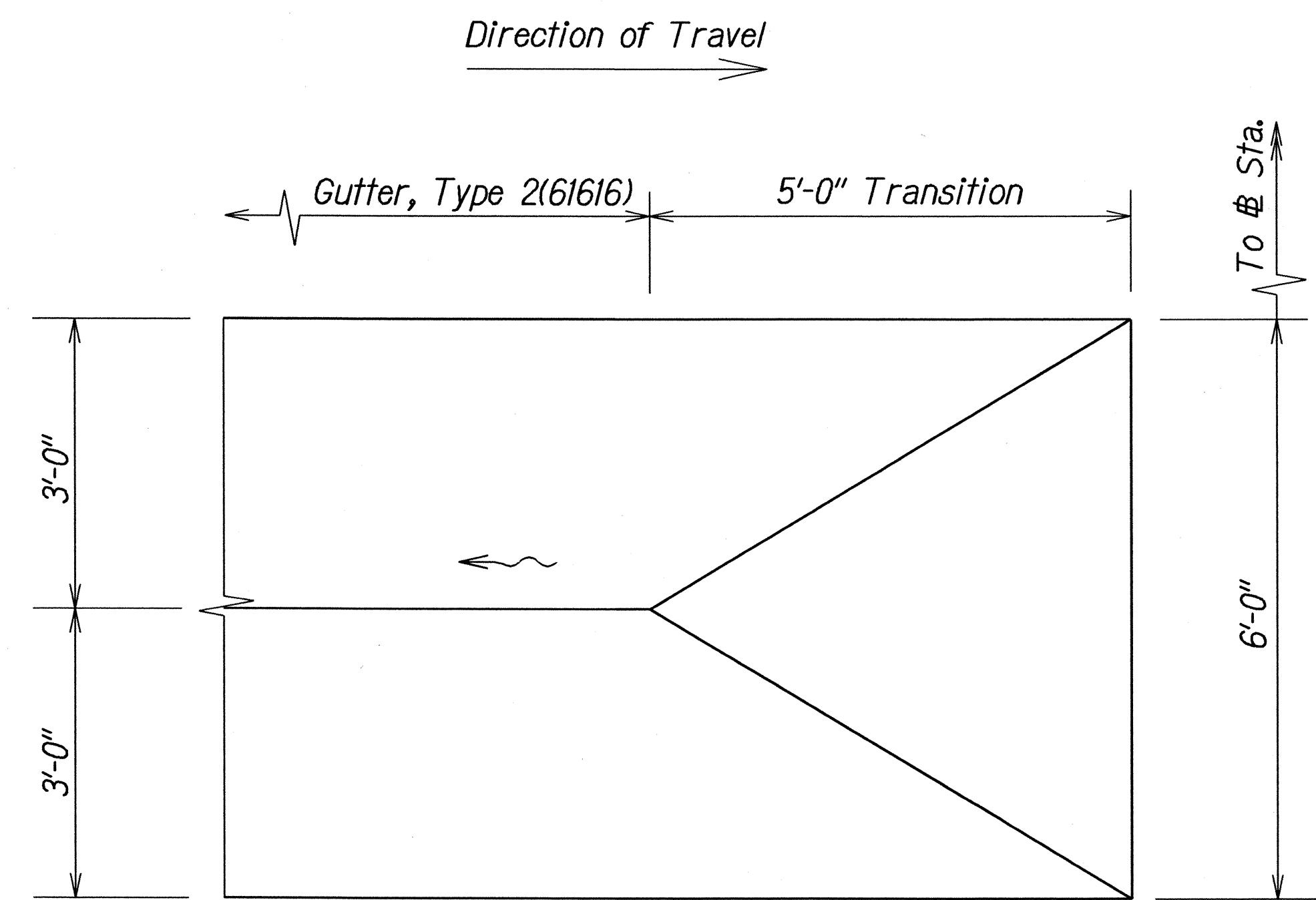
Scale: $\frac{3}{4}$ "=1'-0"



PLAN

TYPICAL DETAIL OF 61616 CONCRETE GUTTER
TRANSITION TO EXISTING 61216 CONCRETE GUTTER

Scale: $\frac{3}{4}$ "=1'-0"



PLAN

TYPICAL DETAIL OF 5'
CONCRETE GUTTER TRANSITION

Scale: $\frac{3}{4}$ "=1'-0"

ORIGINAL	DATE	5/23/02
SURVEY	PLANNED BY	
DRAWN BY		
DESIGNED BY		
CHECKED BY		
NOTED BY		
APPROVED BY		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

KAUNUALII HWY DRAINAGE IMPROVEMENTS
Vicinity of Huleia Stream Bridge
and Hanapepe Valley Scenic Lookout
Project No. 50CD-01-02

Scale: $\frac{3}{4}$ "=1'-0" Date: May 2002

SHEET No. 110 OF 10 SHEETS