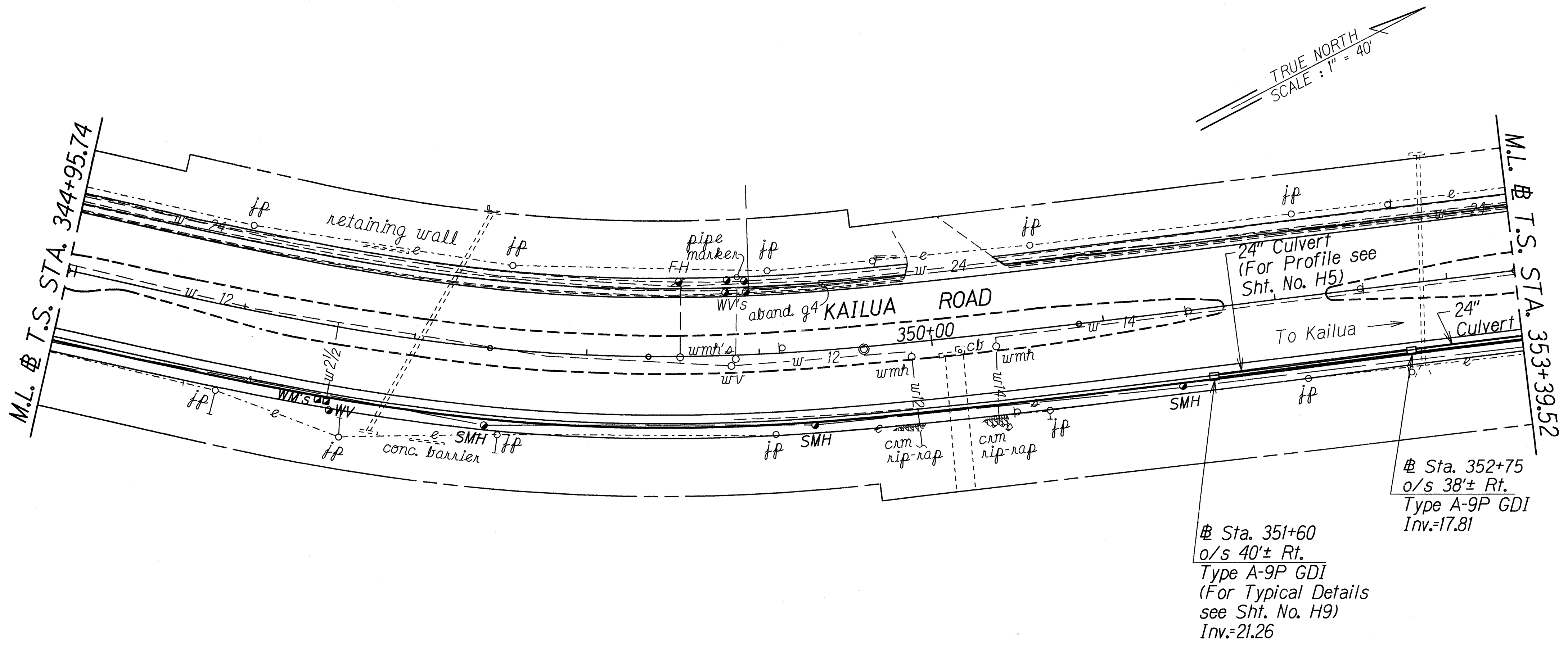
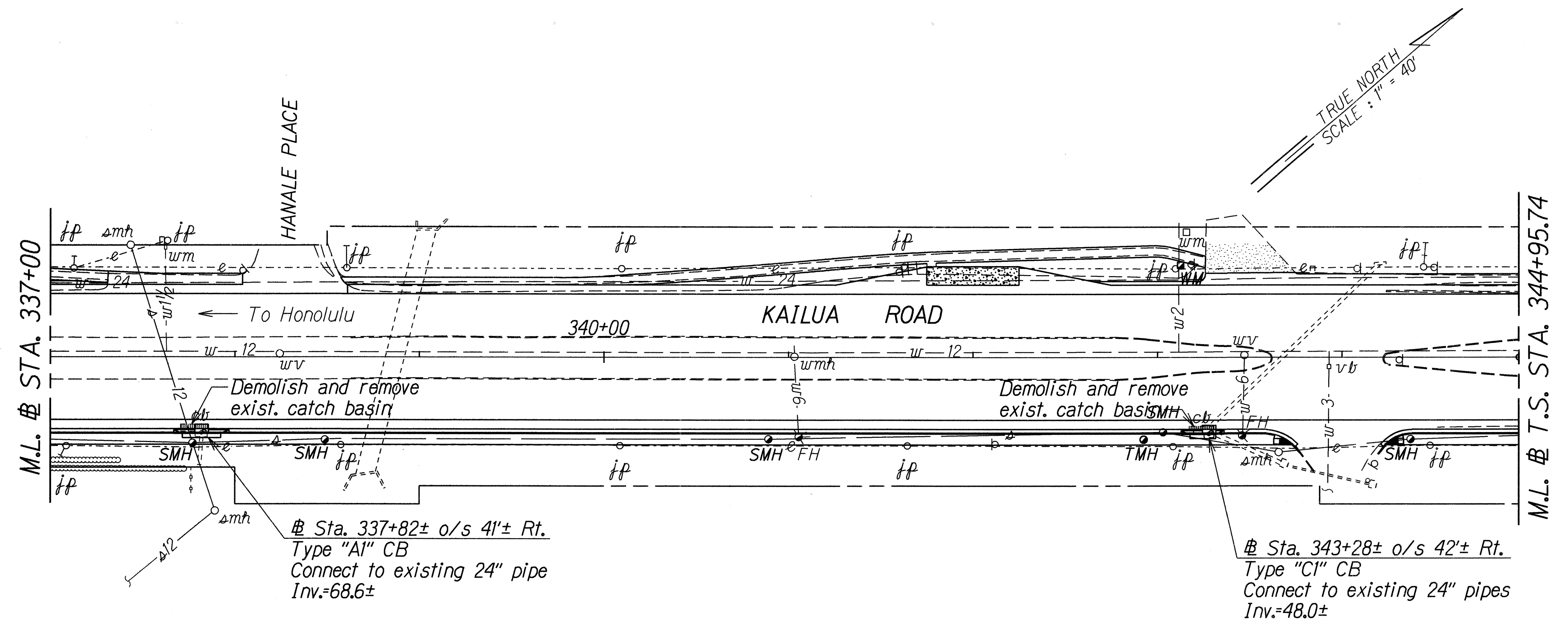


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-061-1(33)	1999	40	58

[illegible]

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY <u>A</u>	<u>7/3/98</u>
NOTE BOOK	TRACED BY	
dhilalzik	DESIGNED BY <u>R. Kawamura</u>	
dhakhsinsidgn	QUANTITIES BY	
	CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-061-1(33)	1999	42	58



DATE	7/31/99
DESIGNED BY	C. Malsuda
DRAWN BY	A. Malsuda
CHECKED BY	A. Malsuda
NOTED BY	A. Malsuda

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

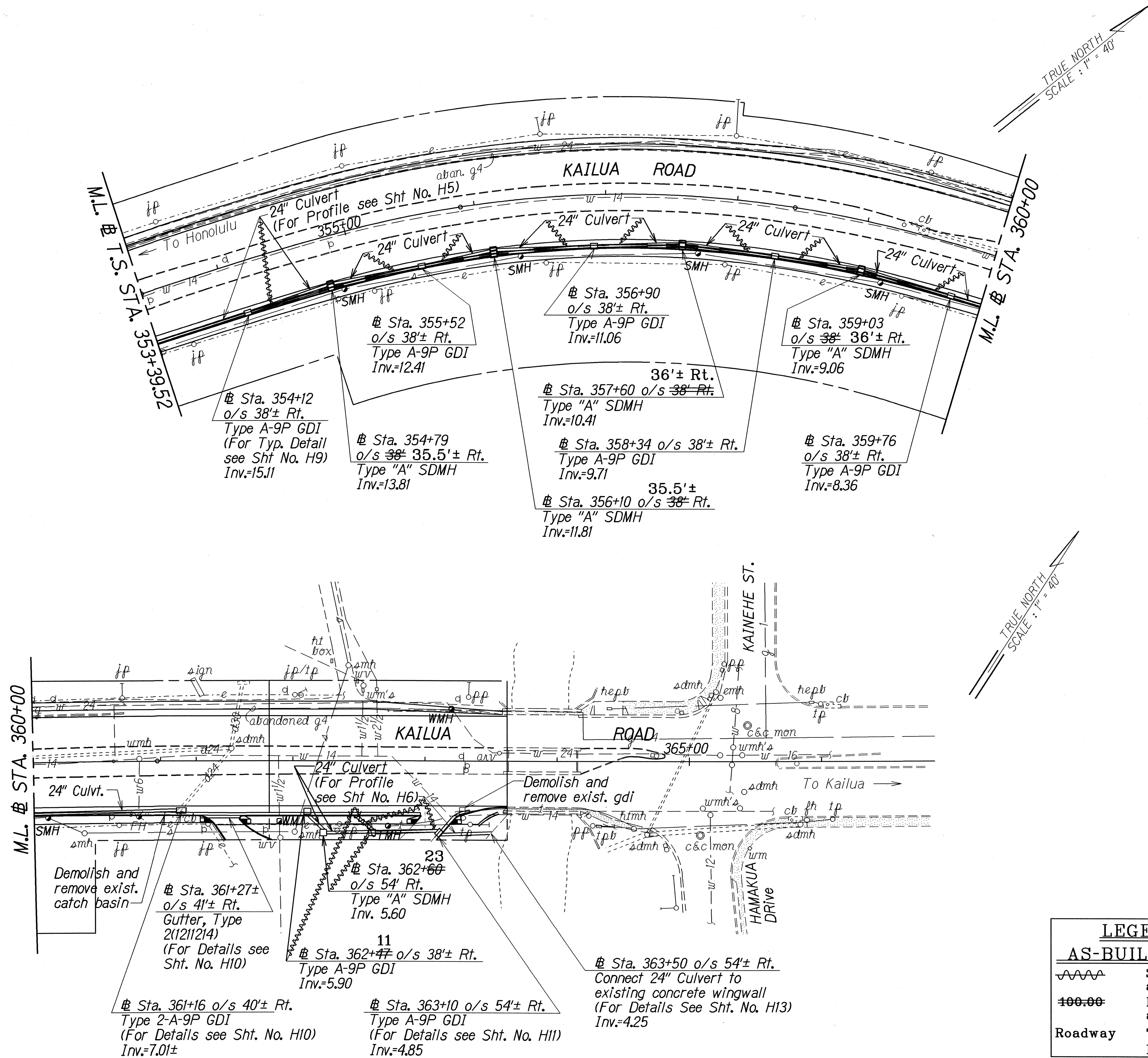
DRAINAGE PLAN

KAILUA ROAD
Shoulder Improvements For Bicycle Route,
Kalaniana'ole Hwy. To Kawai'ui Bridge
F.A. Proj. No. STP-061-1(33)

Scale: 1"=40' Date: Feb. 1999

SHEET No. H3 OF 13 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-061-1(33)	1999	43	58



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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN

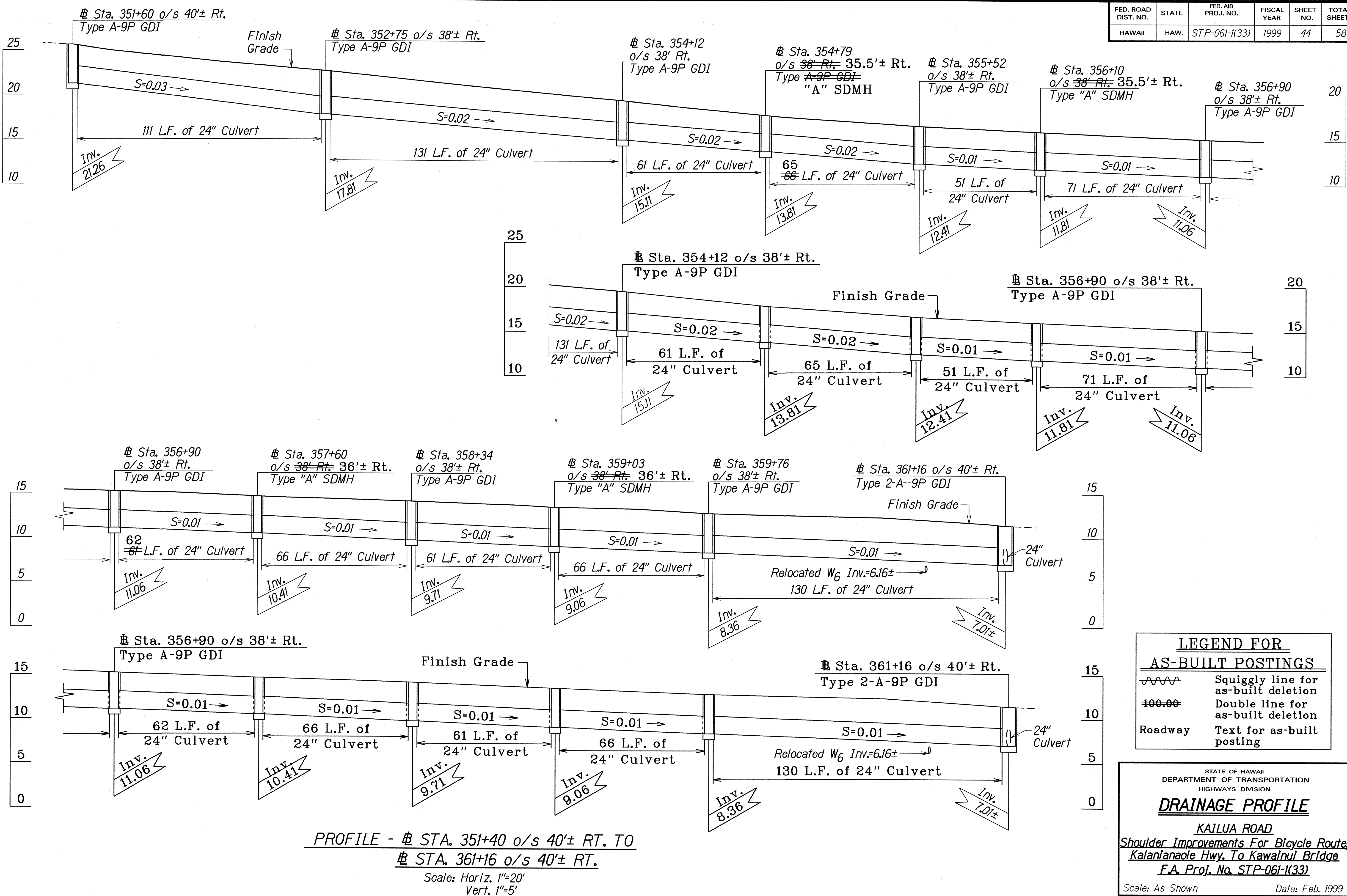
KAILUA ROAD
Shoulder Improvements For Bicycle Route,
Kalanianaʻole Hwy. To Kawaiū Bridge
F.A. Proj. No. STP-061-1(33)

Scale: 1"=40' Date: Feb. 1999

SHEET No. **H4** OF 13 SHEETS

"AS-BUILT"

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-061-1(33)	1999	44	58



DATE	7/31/99
DESIGNED BY	W. K. K. K.
CHECKED BY	W. K. K. K.
NOTED BY	W. K. K. K.
ORIGINAL PLAN	W. K. K. K.

PROFILE - STA. 351+40 o/s 40'± RT. TO
 STA. 361+16 o/s 40'± RT.
 Scale: Horiz. 1"=20'
 Vert. 1"=5'

LEGEND FOR AS-BUILT POSTINGS

~~~~~ Squiggly line for as-built deletion

== Double line for as-built deletion

Roadway Text for as-built posting

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 HIGHWAYS DIVISION

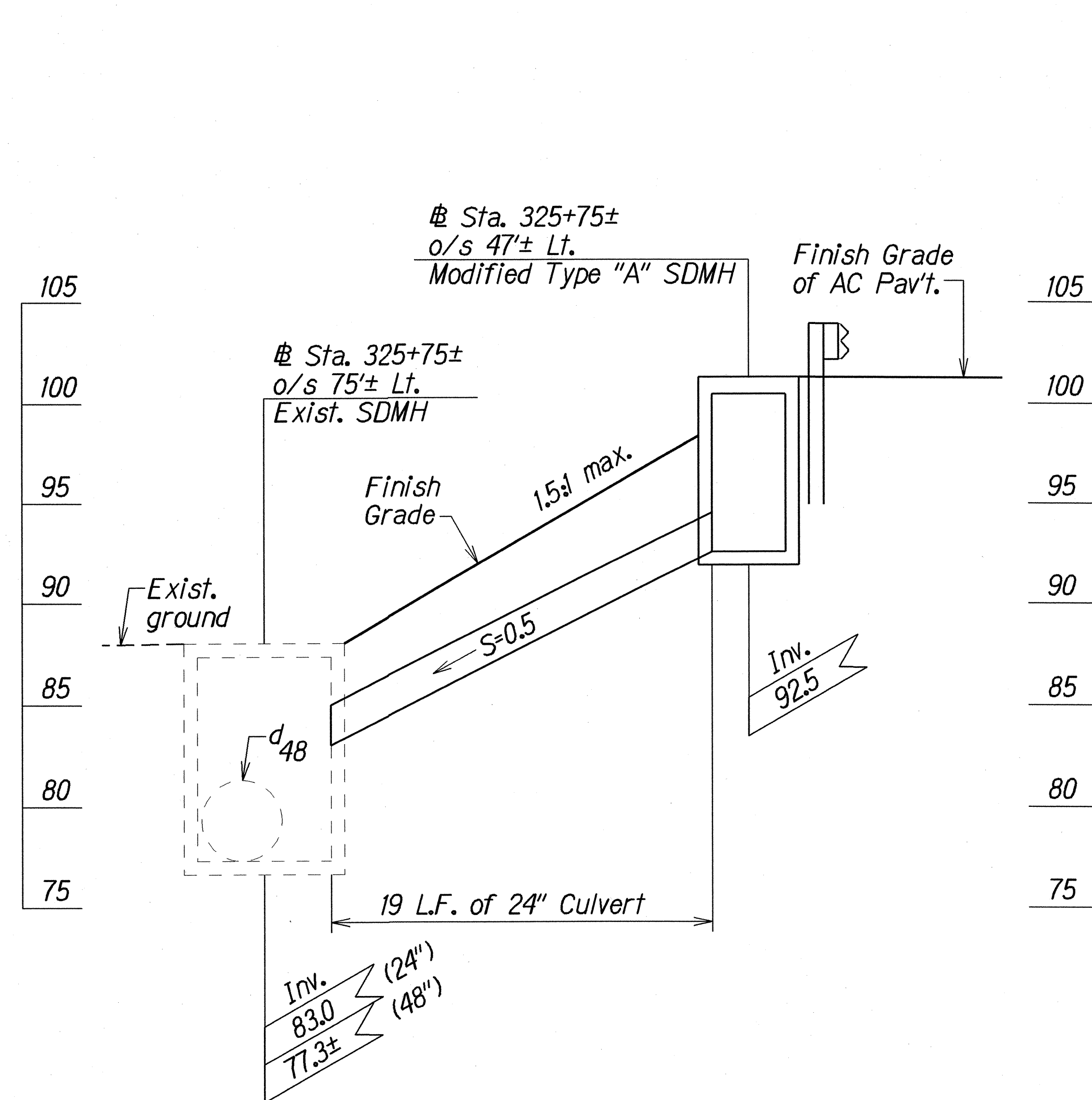
**DRAINAGE PROFILE**

KAILUA ROAD  
 Shoulder Improvements For Bicycle Route,  
 Kalanianaʻole Hwy. To Kawaihuli Bridge  
 F.A. Proj. No. STP-061-1(33)

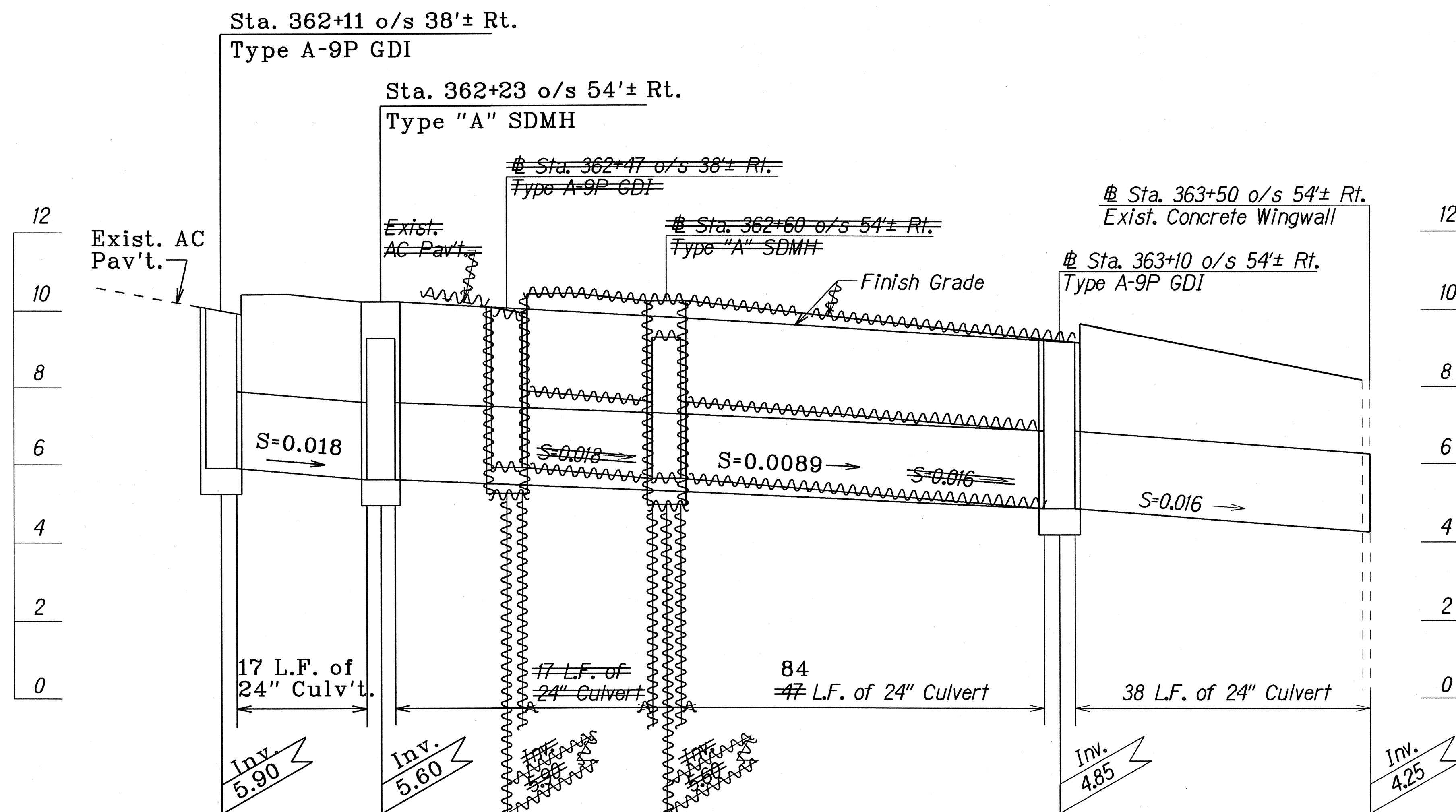
Scale: As Shown Date: Feb. 1999

SHEET No. H5 OF 13 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-061-1(33)      | 1999        | 45        | 58           |



PROFILE - # STA. 325+75± o/s 75'± LT. TO  
# STA. 325+75± o/s 47' LT.  
Scale: Horiz. 1"=5'  
Vert. 1"=5'



11  
PROFILE - # STA. 362+47 o/s 38'± RT. TO  
# STA. 363+50 o/s 54'± RT.  
Scale: Horiz. 1"=10'  
Vert. 1"=2'

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

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE PROFILE**

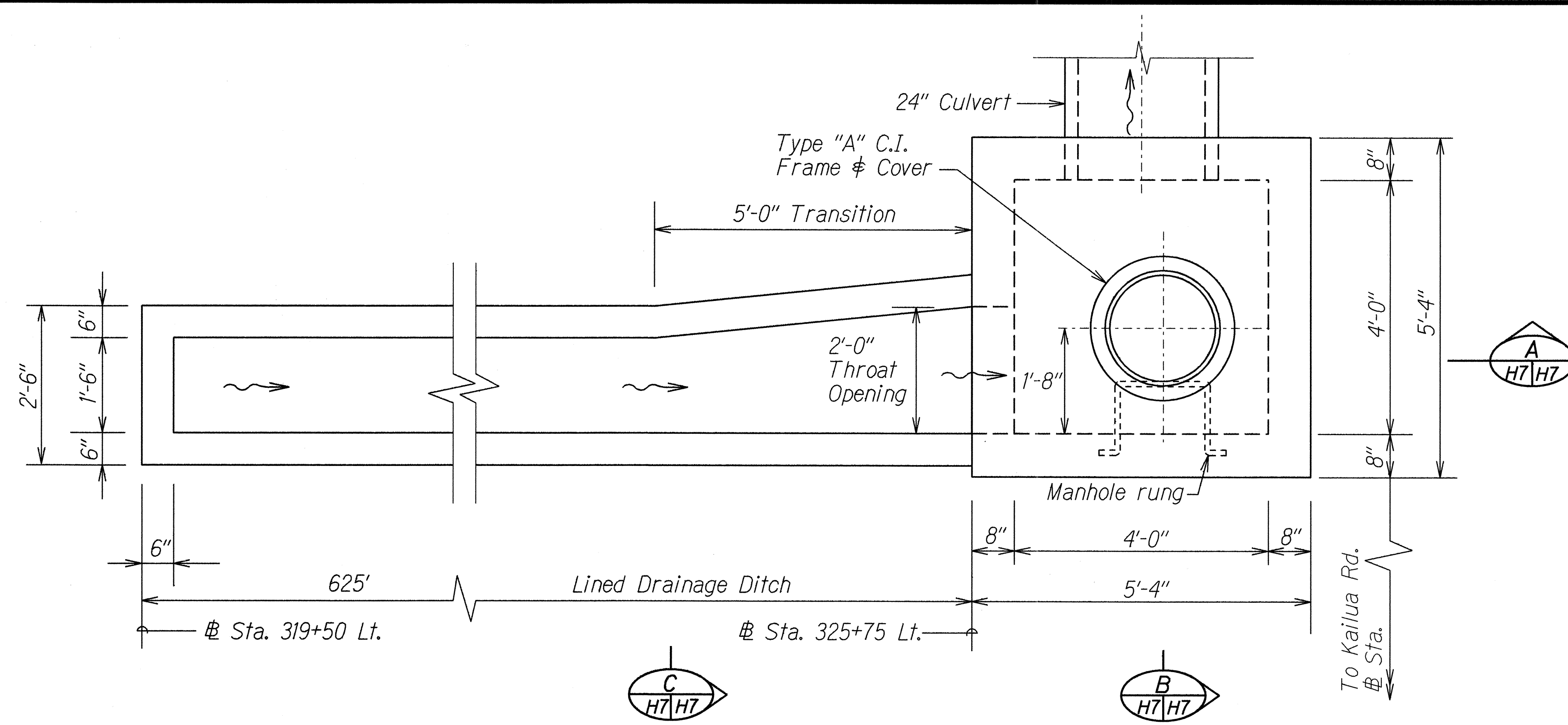
**KAILUA ROAD**  
Shoulder Improvements For Bicycle Route  
Kalaniana'ole Hwy. To Kawaunui Bridge  
F.A. Proj. No. STP-061-1(33)

Scale: As Shown Date: Feb. 1999

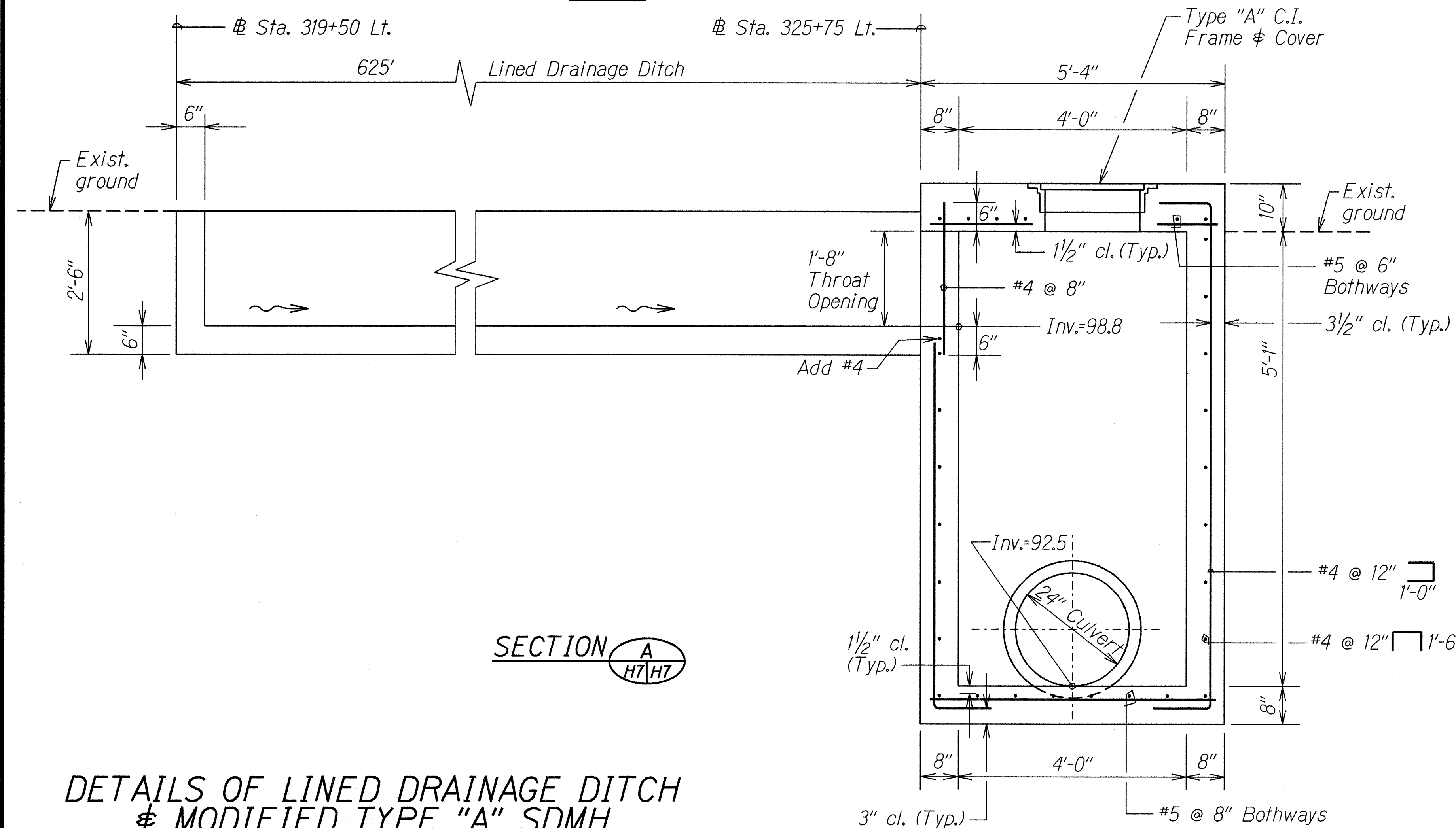
SHEET No. H6 OF 13 SHEETS

"AS-BUILT"

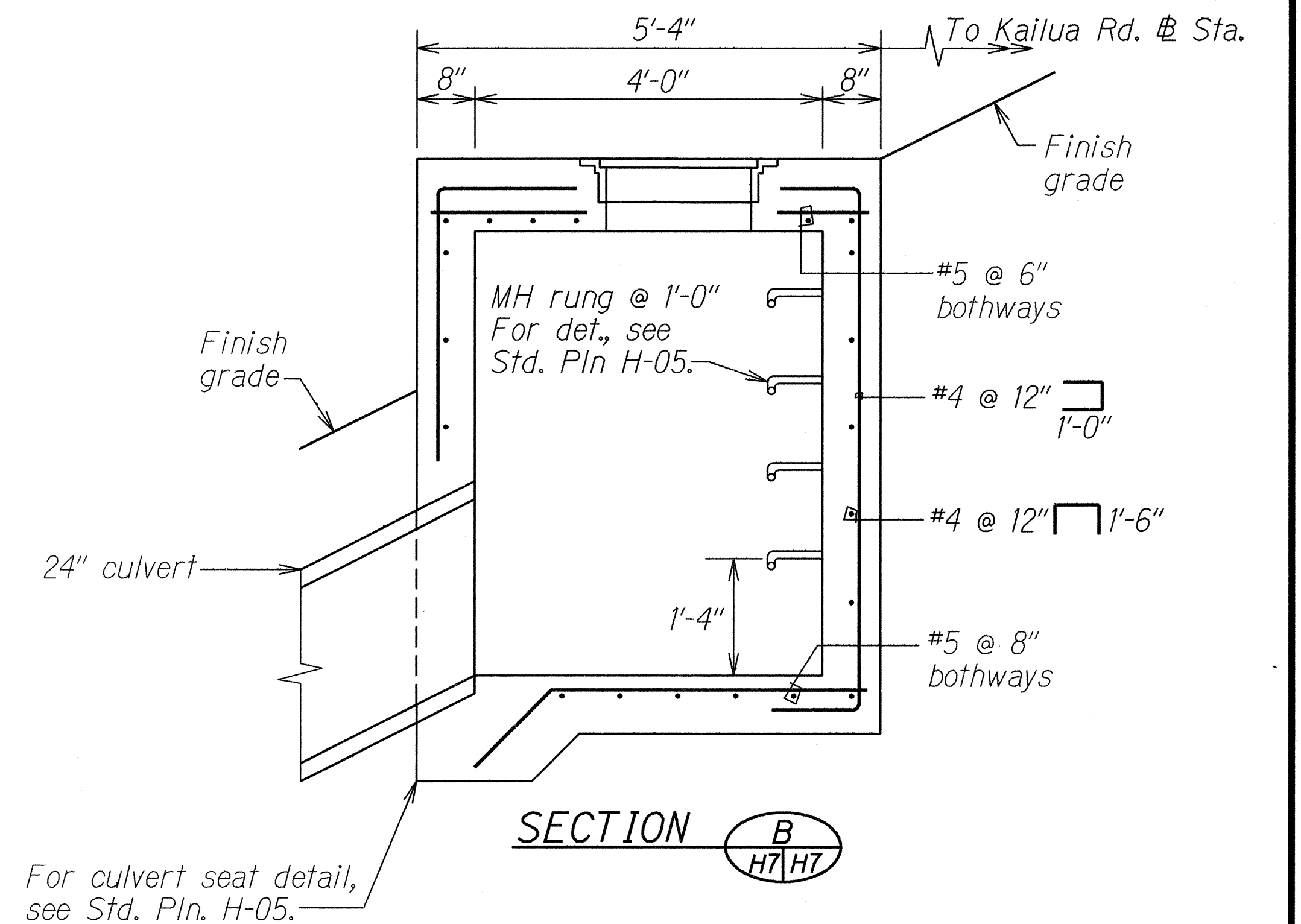
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-061-1(33)      | 1999        | 46        | 58           |



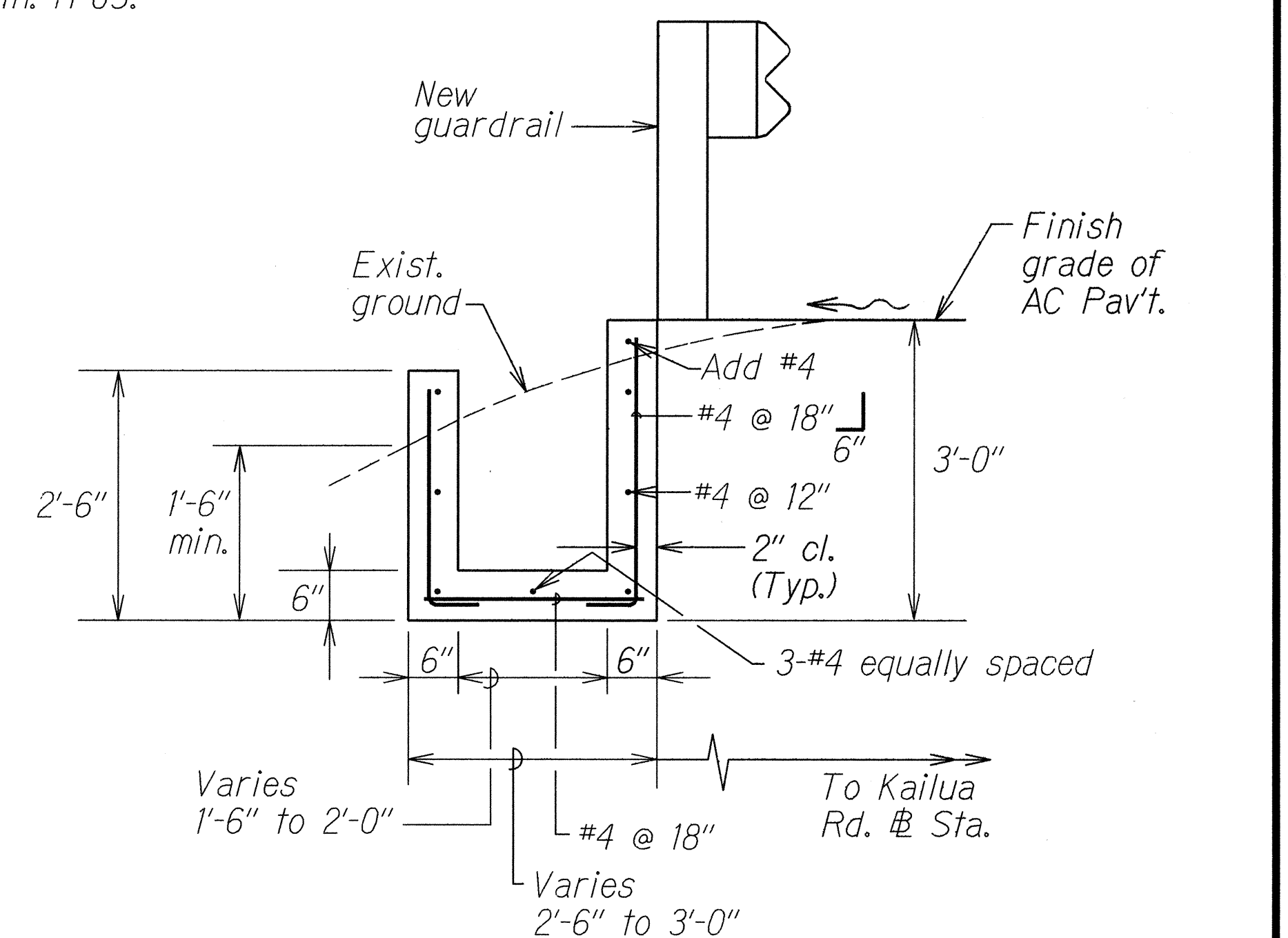
PLAN



SECTION A



SECTION B



SECTION C

DETAILS OF LINED DRAINAGE DITCH & MODIFIED TYPE "A" SDMH

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

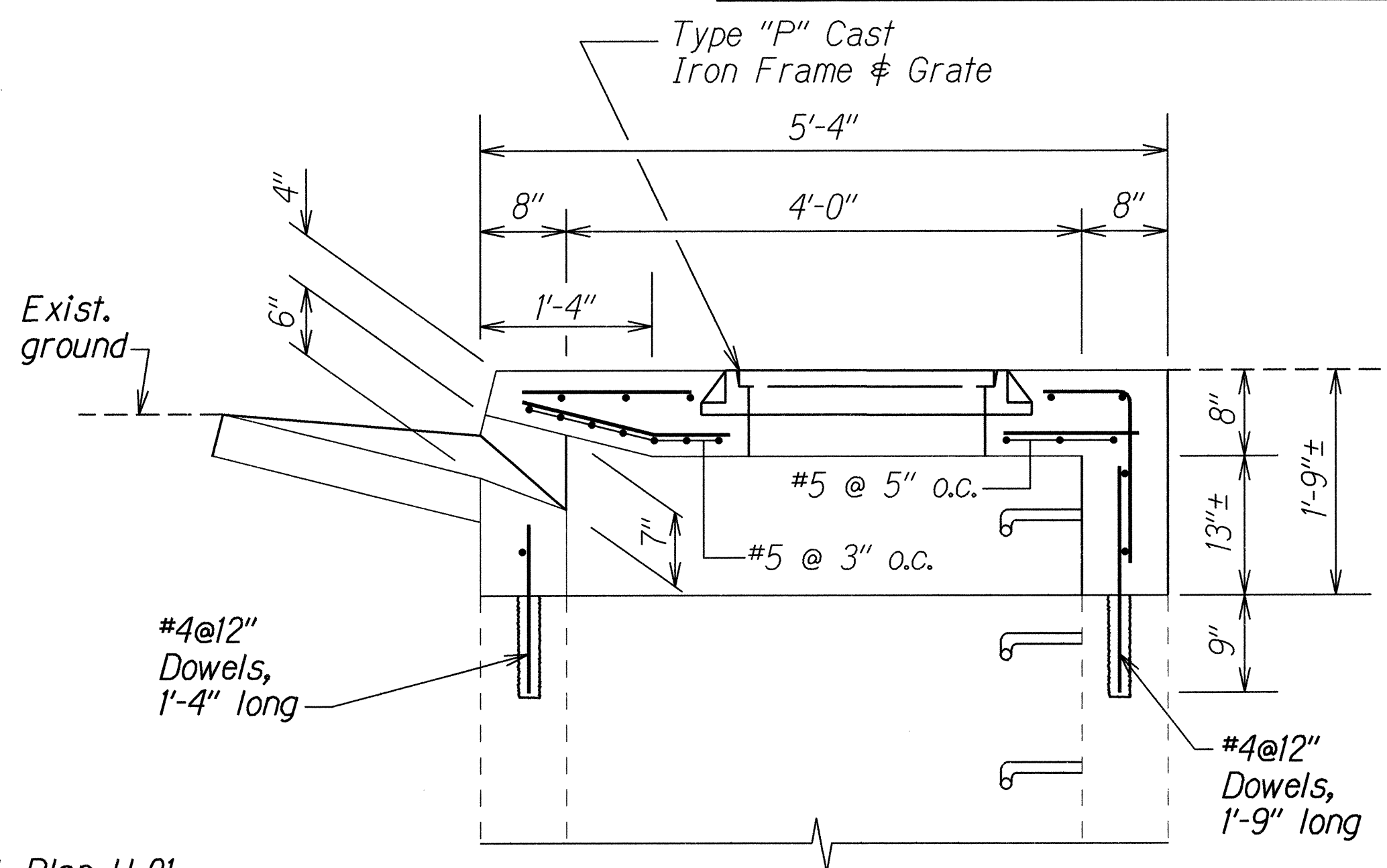
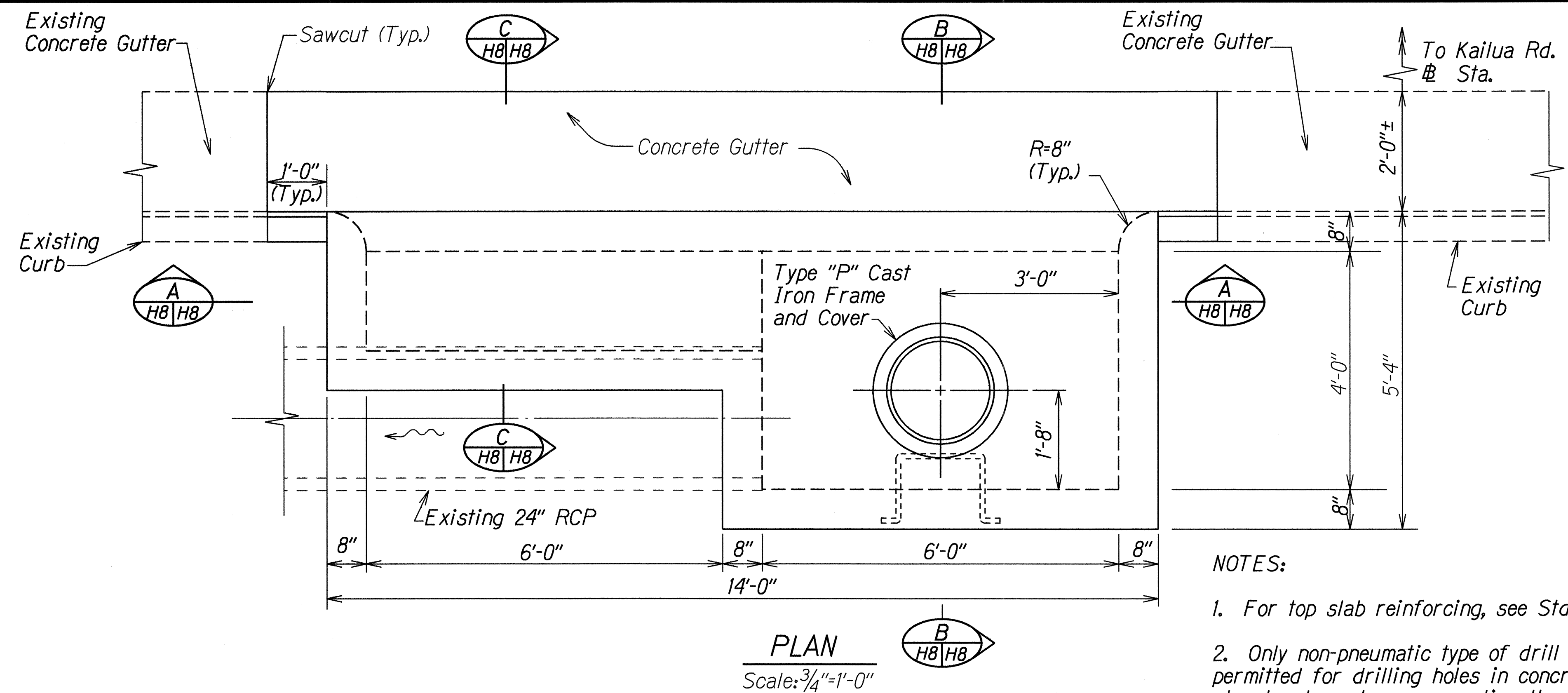
**DRAINAGE DETAILS**

**KAILUA ROAD**  
Shoulder Improvements For Bicycle Route,  
Kalanianaʻole Hwy. To Kawaiunui Bridge  
F.A. Proj. No. STP-061-1(33)

Scale: 3/4"=1'-0" Date: Feb. 1999

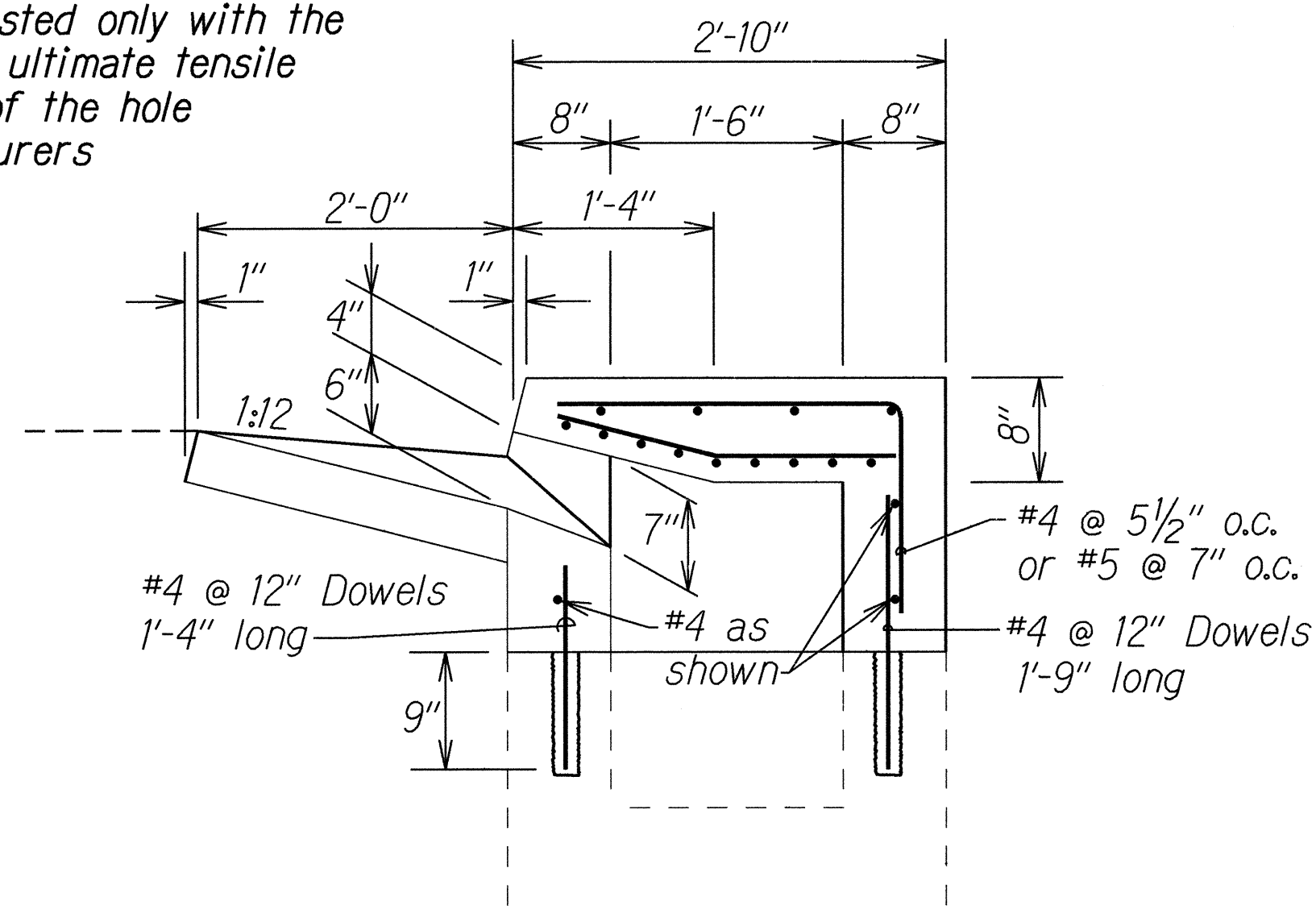
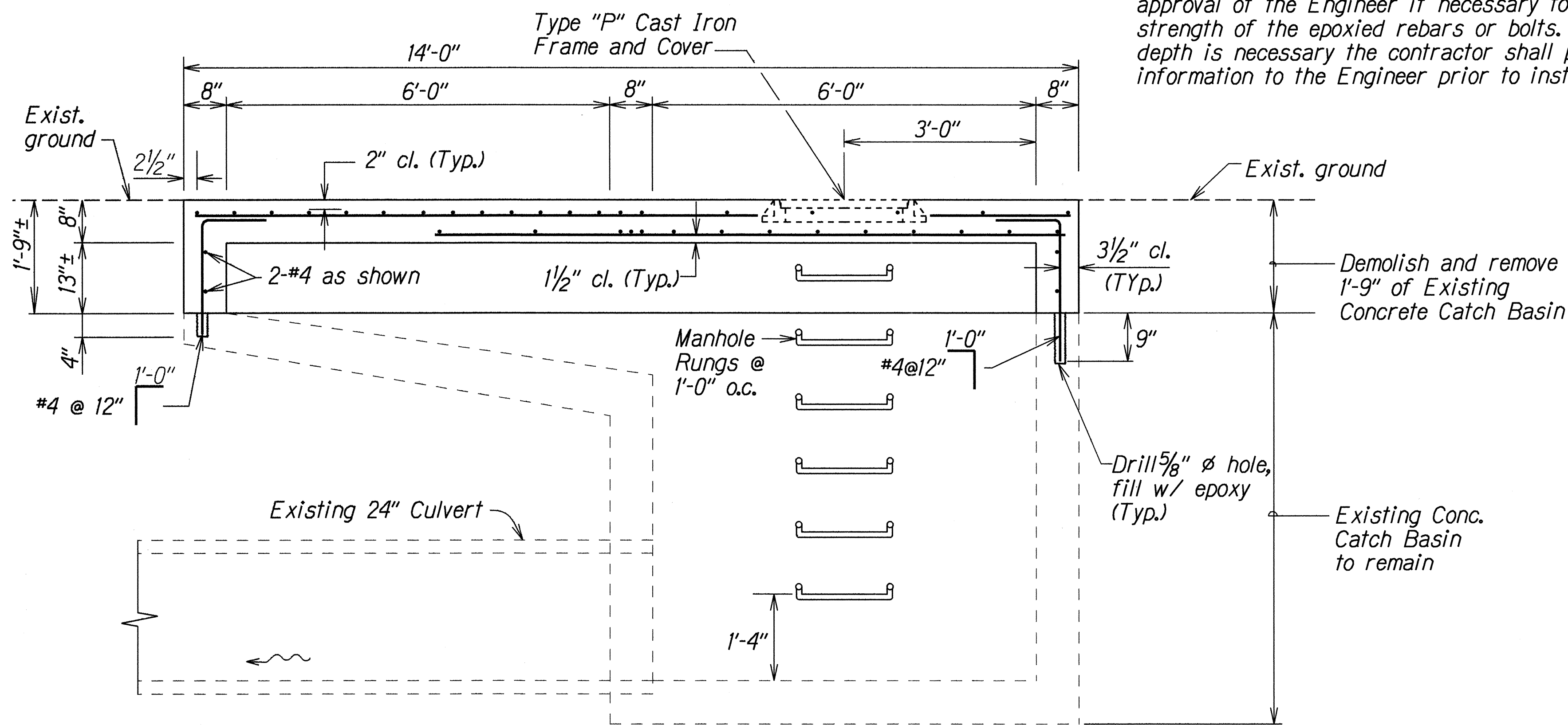
SHEET No. H7 OF 13 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP--061-K(33)     | 1999        | 47        | 58           |



**NOTES:**

1. For top slab reinforcing, see Std. Plan H-01.
2. Only non-pneumatic type of drill as approved by the Engineer will be permitted for drilling holes in concrete. Epoxy shall be a two component, structural grade epoxy meeting the requirements of ASTM C881 Type IV, Grade 3, Class C. The epoxy shall be an odorless amine based system supplied from the manufacturer in a two component dispensing system which is dispensed in the proper ratios through a motionless static mixing nozzle system approved and supplied by the manufacturer. The minimum depth of the dowels shall be as shown and shall be adjusted only with the approval of the Engineer if necessary to develop the full ultimate tensile strength of the epoxied rebars or bolts. If adjustment of the hole depth is necessary the contractor shall provide manufacturers information to the Engineer prior to installation.



**DETAILS OF MODIFIED  
TYPE "2" INLET STRUCTURE**

|             |             |
|-------------|-------------|
| DATE        | 7/21/98     |
| DESIGNED BY | R. Kawamura |
| CHECKED BY  | gkh/ldg     |
| NOTES       |             |
| ORIGINAL    |             |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

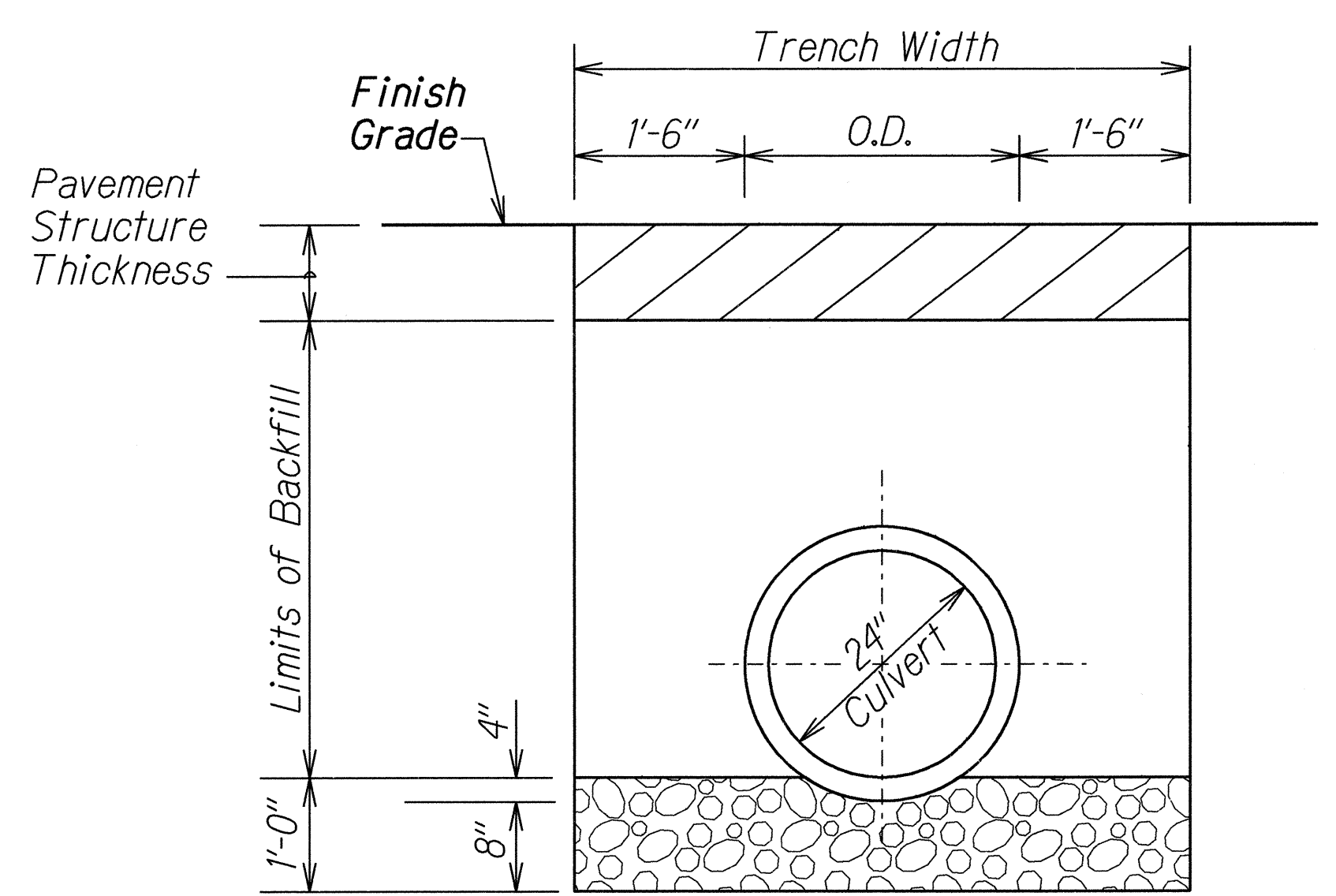
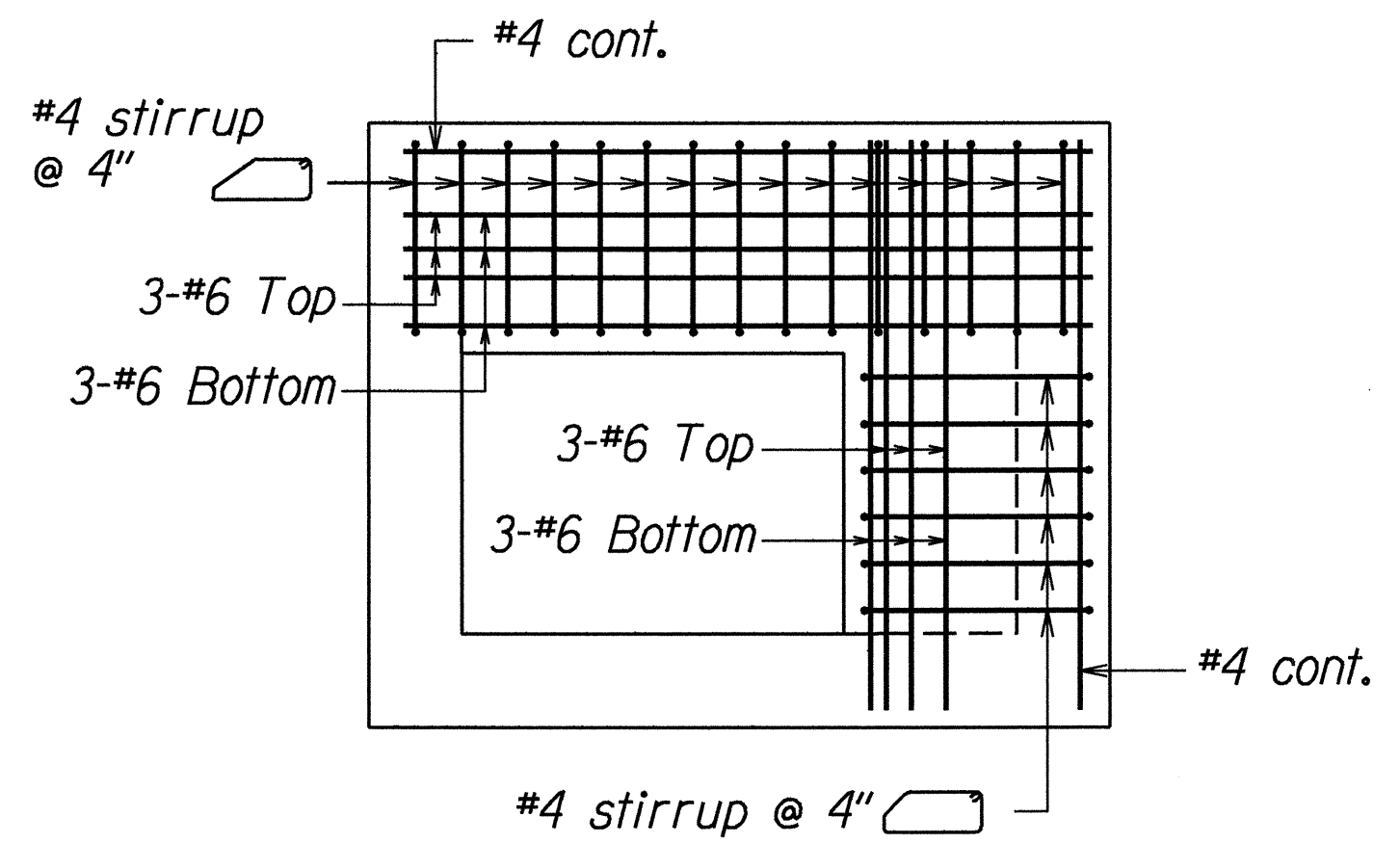
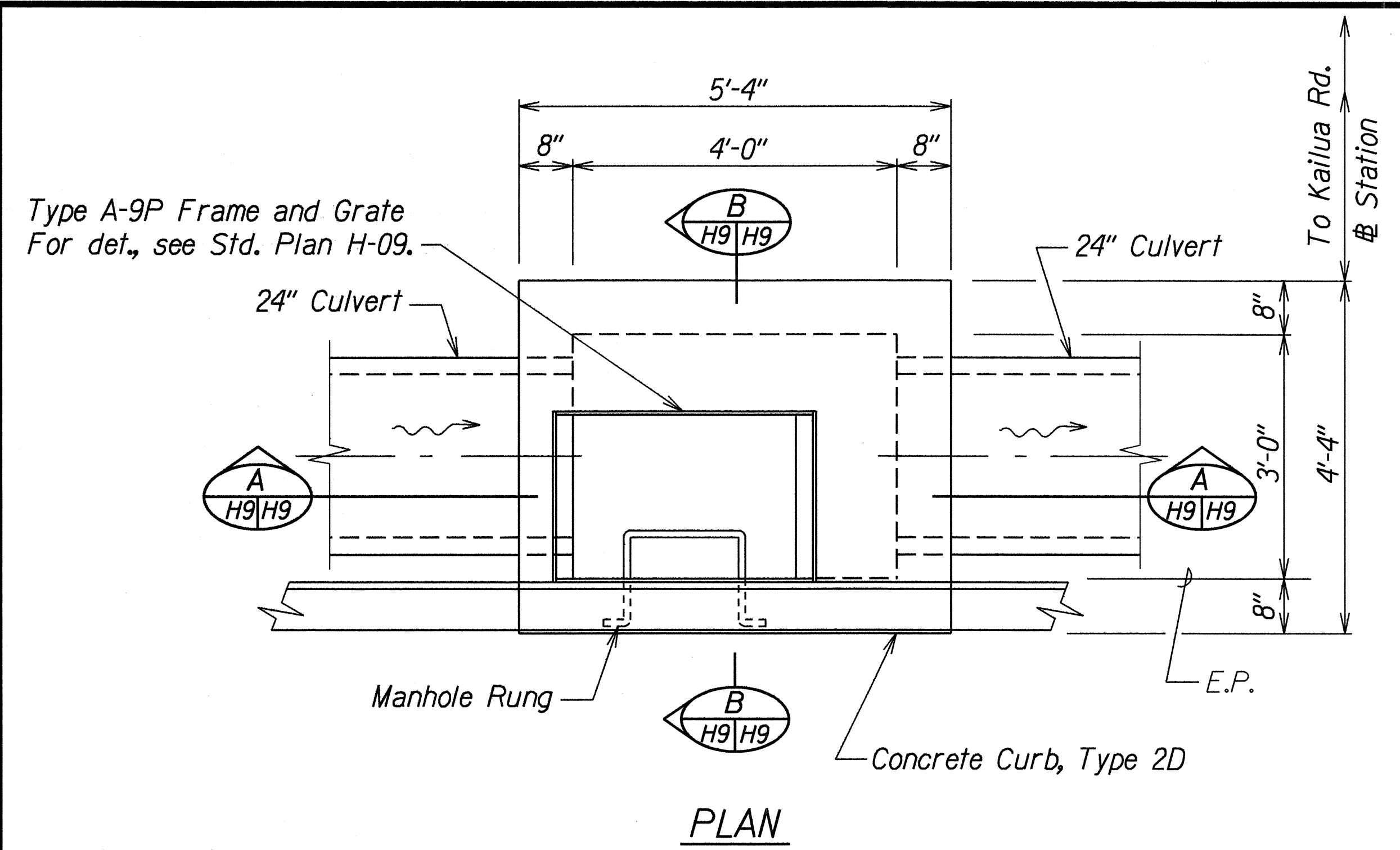
**DRAINAGE DETAILS**

**KAILUA ROAD**  
**Shoulder Improvements For Bicycle Route,**  
**Kalaniana'ole Hwy. To Kawaiunui Bridge**  
**F. A. Project No. STP-061-K(33)**

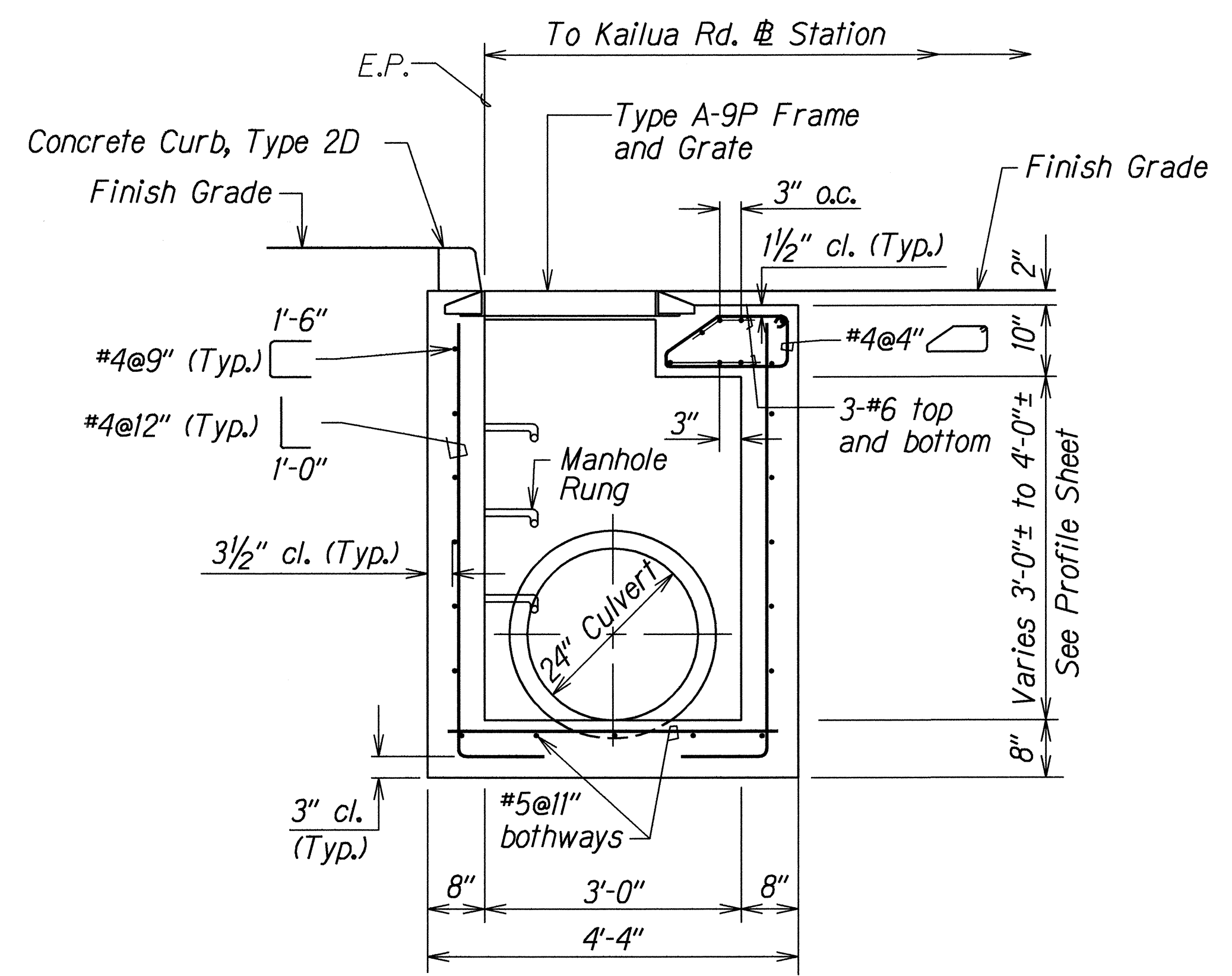
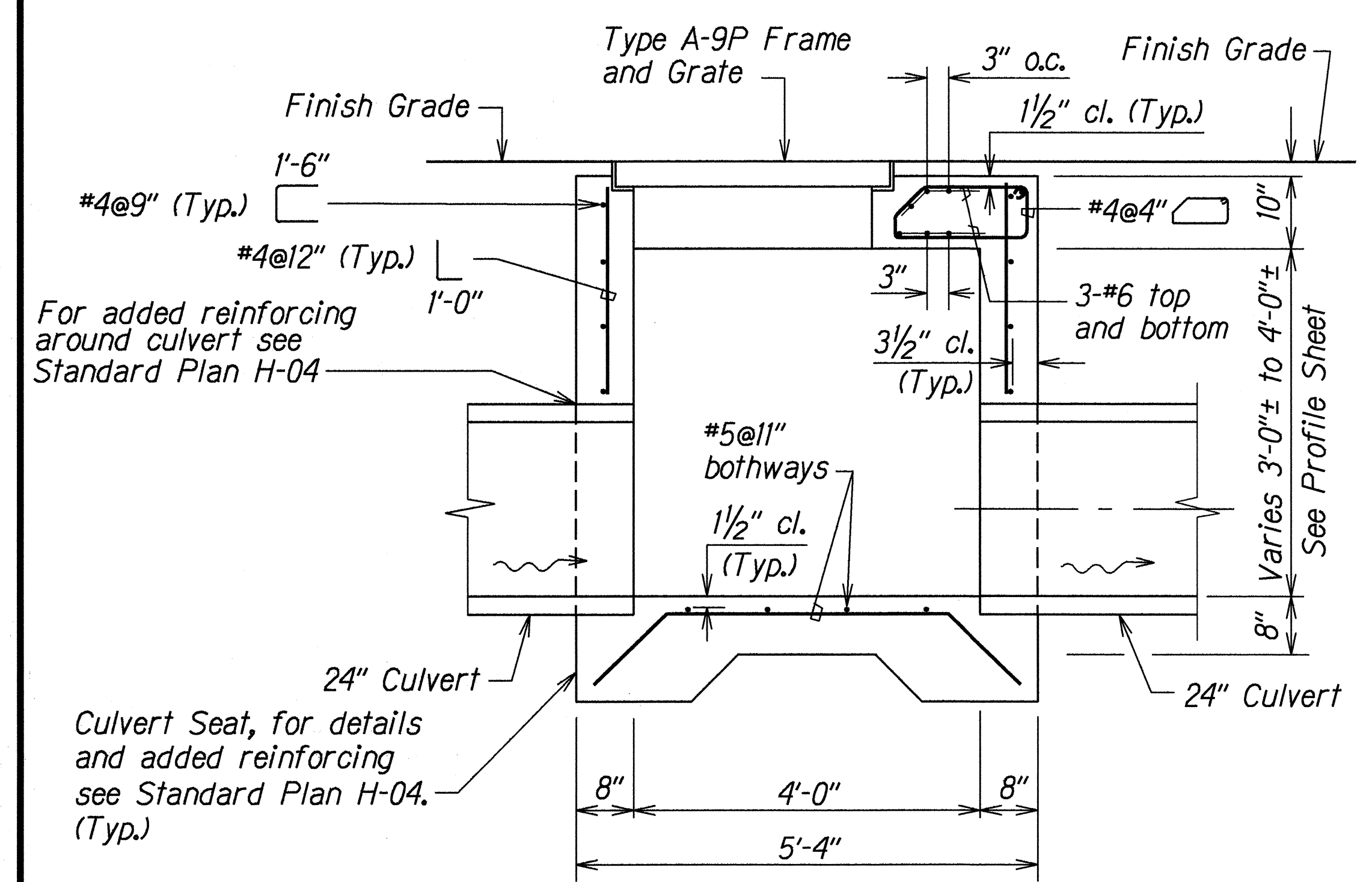
Scale: As Shown Date: Feb. 1999

SHEET No. H8 OF 13 SHEETS

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-061-1(33)      | 1999        | 48        | 58           |



TYPICAL DETAIL OF 24" CULVERT TRENCH RESTORATION



SECTION A A  
H9/H9

SECTION B B  
H9/H9

TYPICAL DETAILS OF TYPE A-9P GRATED DROP INLET

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

### DRAINAGE DETAILS

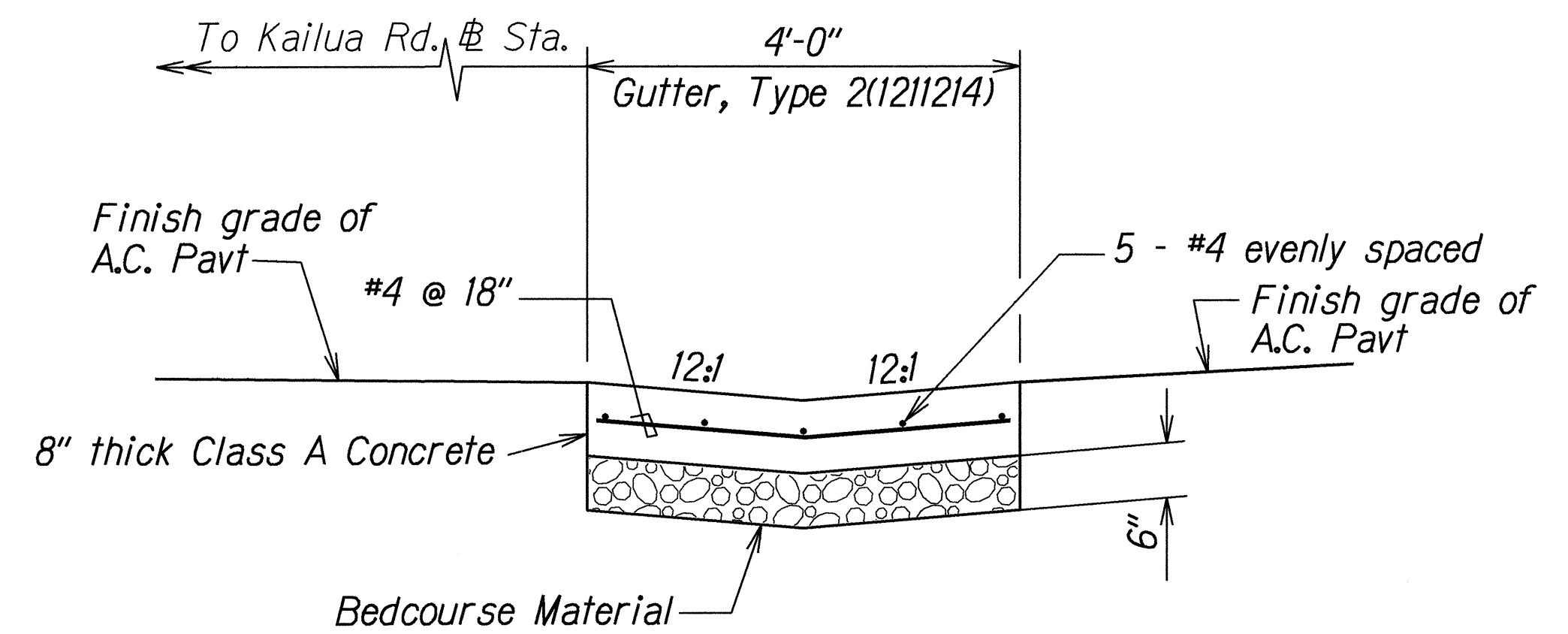
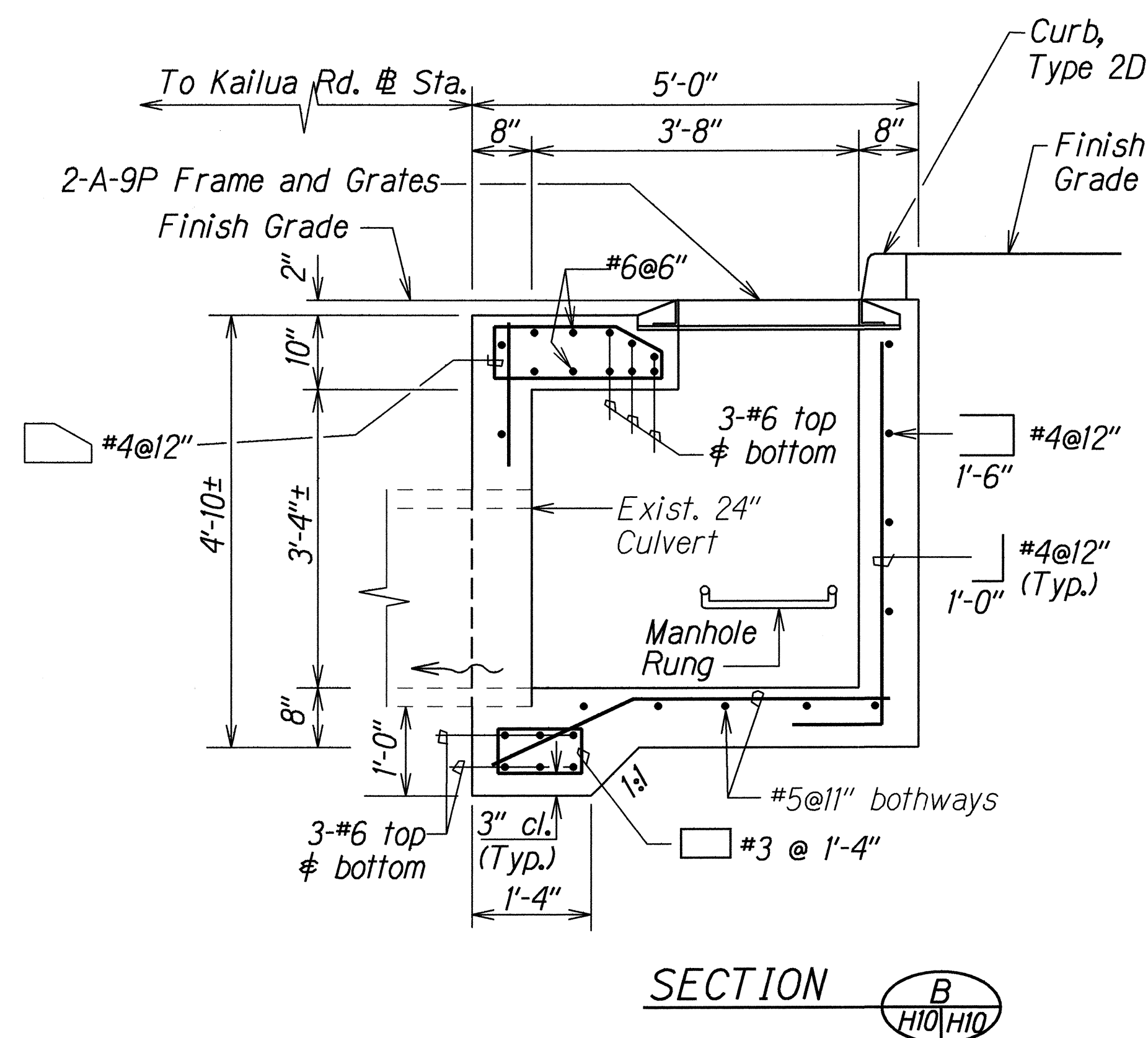
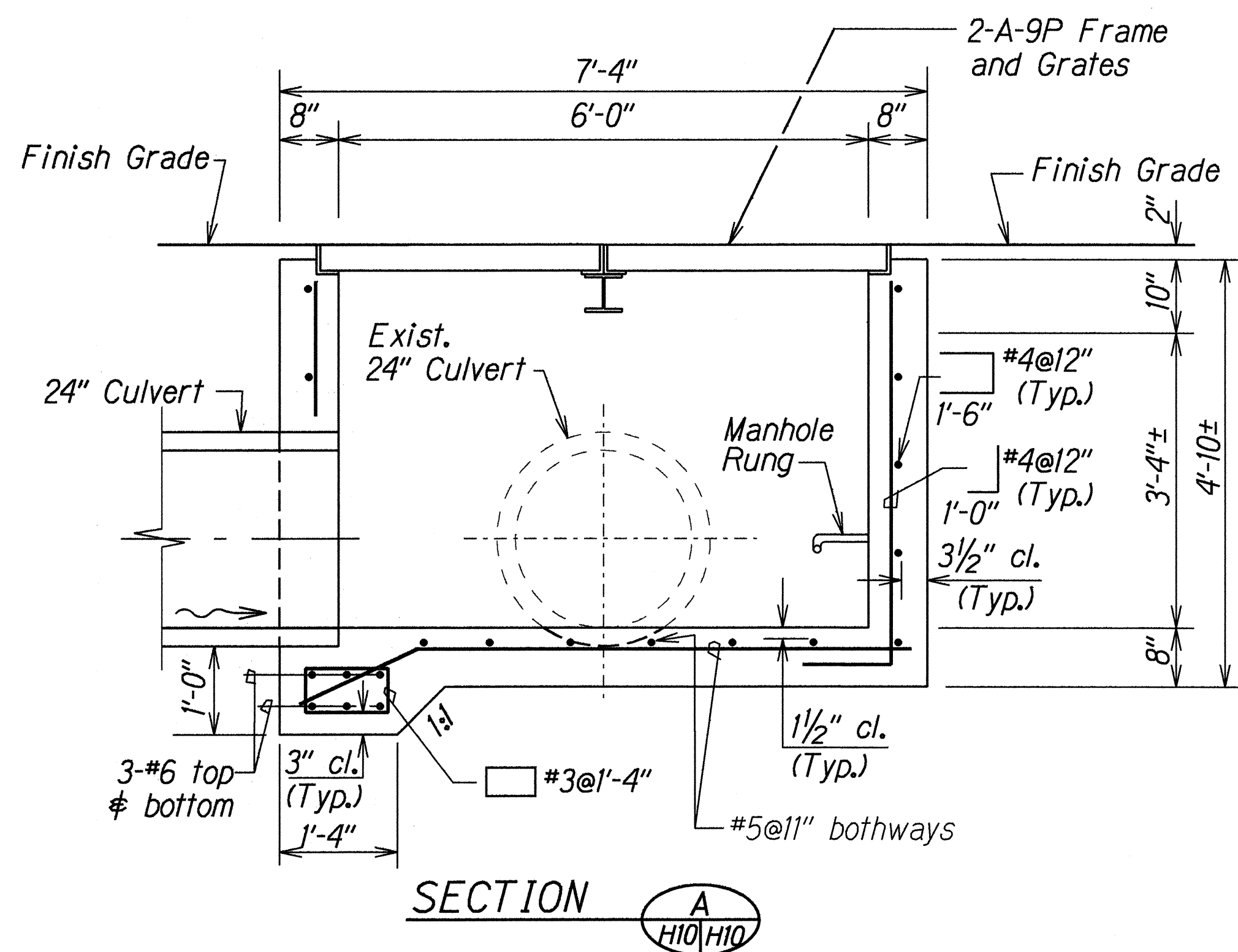
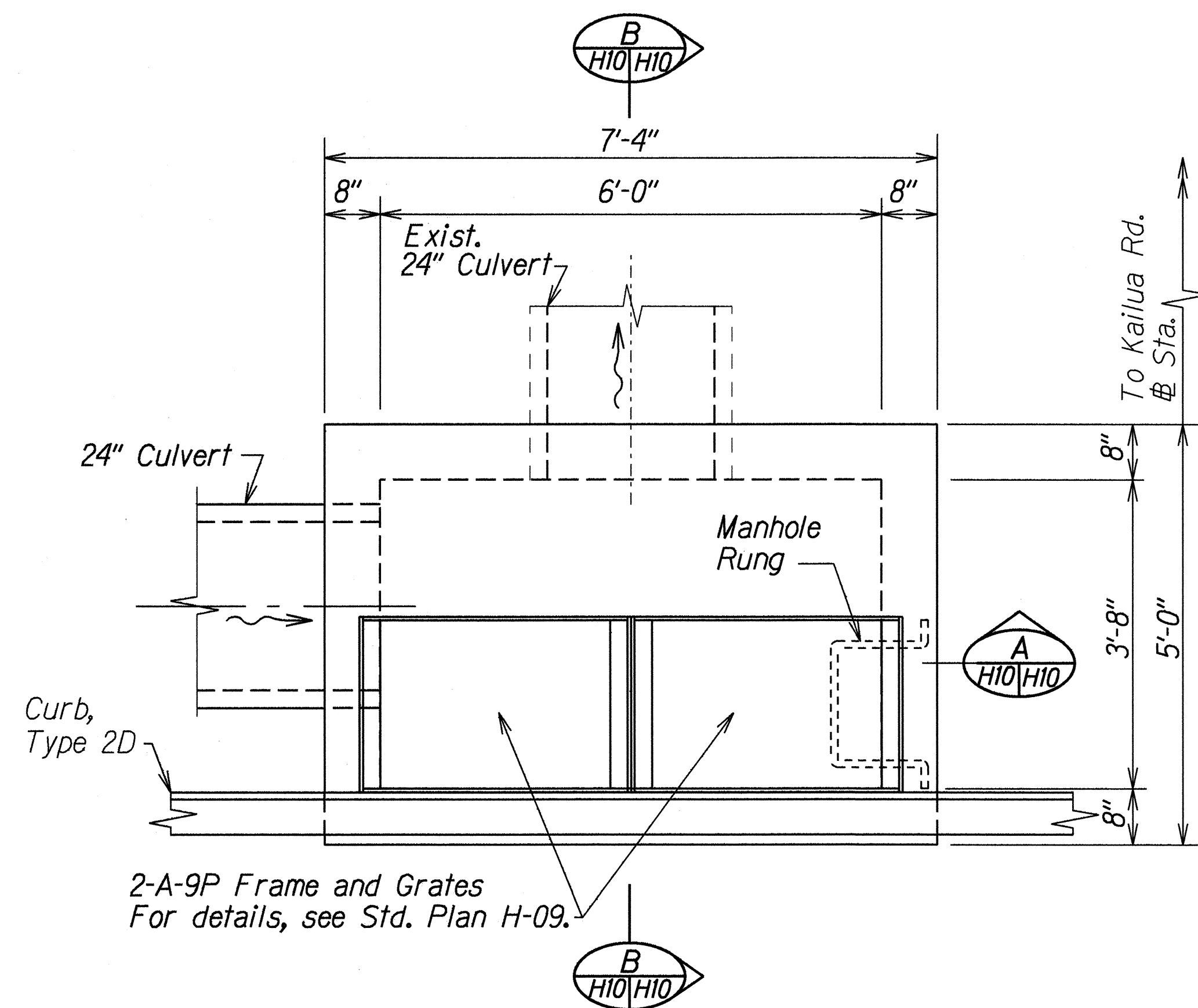
#### KAILUA ROAD

Shoulder Improvements For Bicycle Route,  
Kalanianaʻole Hwy. To Kawainui Bridge  
F.A. Proj. No. STP-061-1(33)

Scale: 3/4"=1'-0"      Date: Feb. 1999

|               |        |
|---------------|--------|
| DESIGNED BY   | DATE   |
| CHECKED BY    | 7/2/98 |
| NOTED BY      |        |
| QUANTITIES BY |        |
| ORIGINAL PLAN |        |

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-061-1(33)      | 1999        | 49        | 58           |



DETAILS OF TYPE "2-A-9P" GRATED DROP INLET

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE DETAILS**

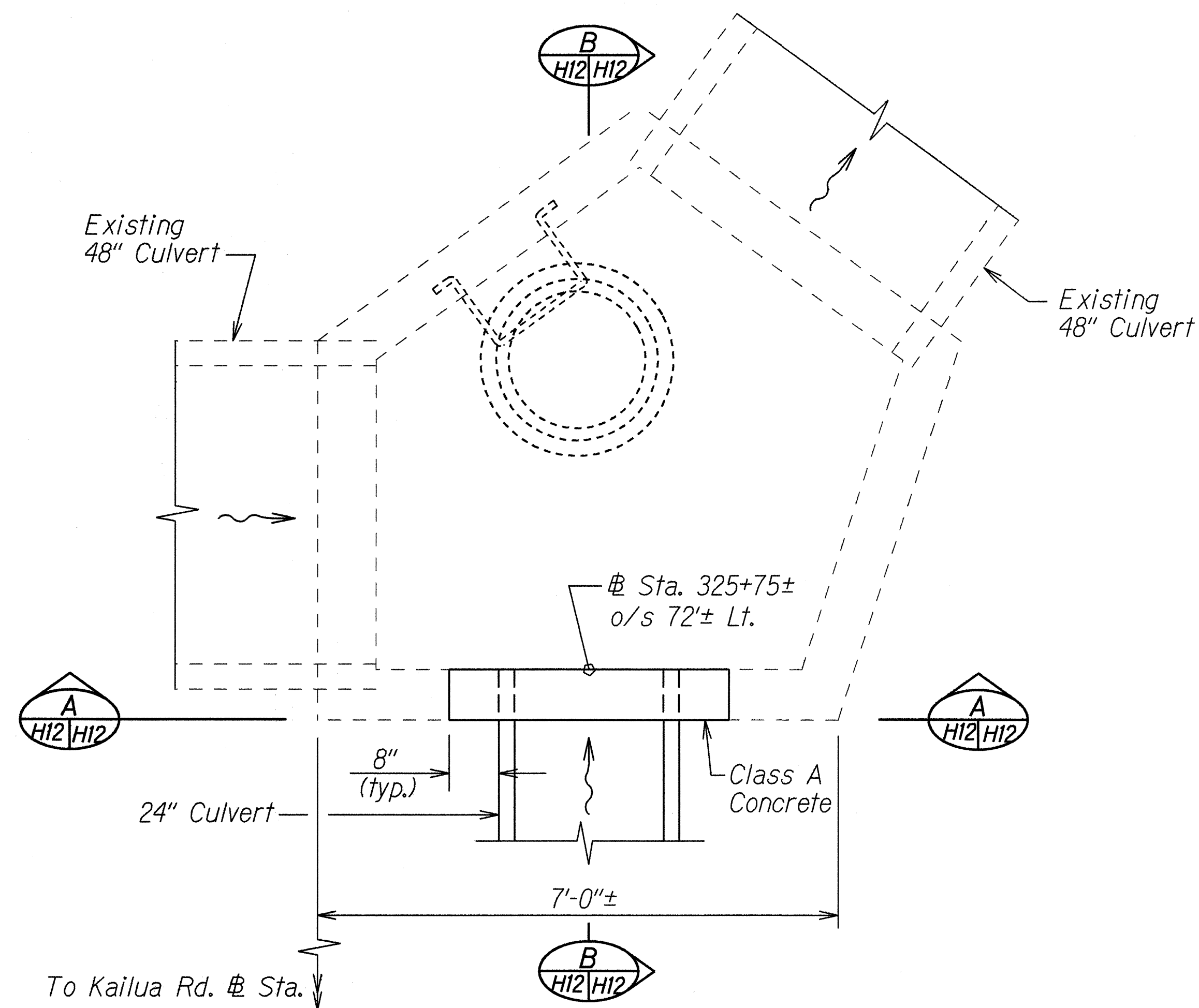
KAILUA ROAD  
Shoulder Improvements For Bicycle Route,  
Kalaniana'ole Hwy. To Kawainui Bridge  
F.A. Proj. No. STP-061-1(33)

Scale: 3/4"=1'-0" Date: Feb. 1999

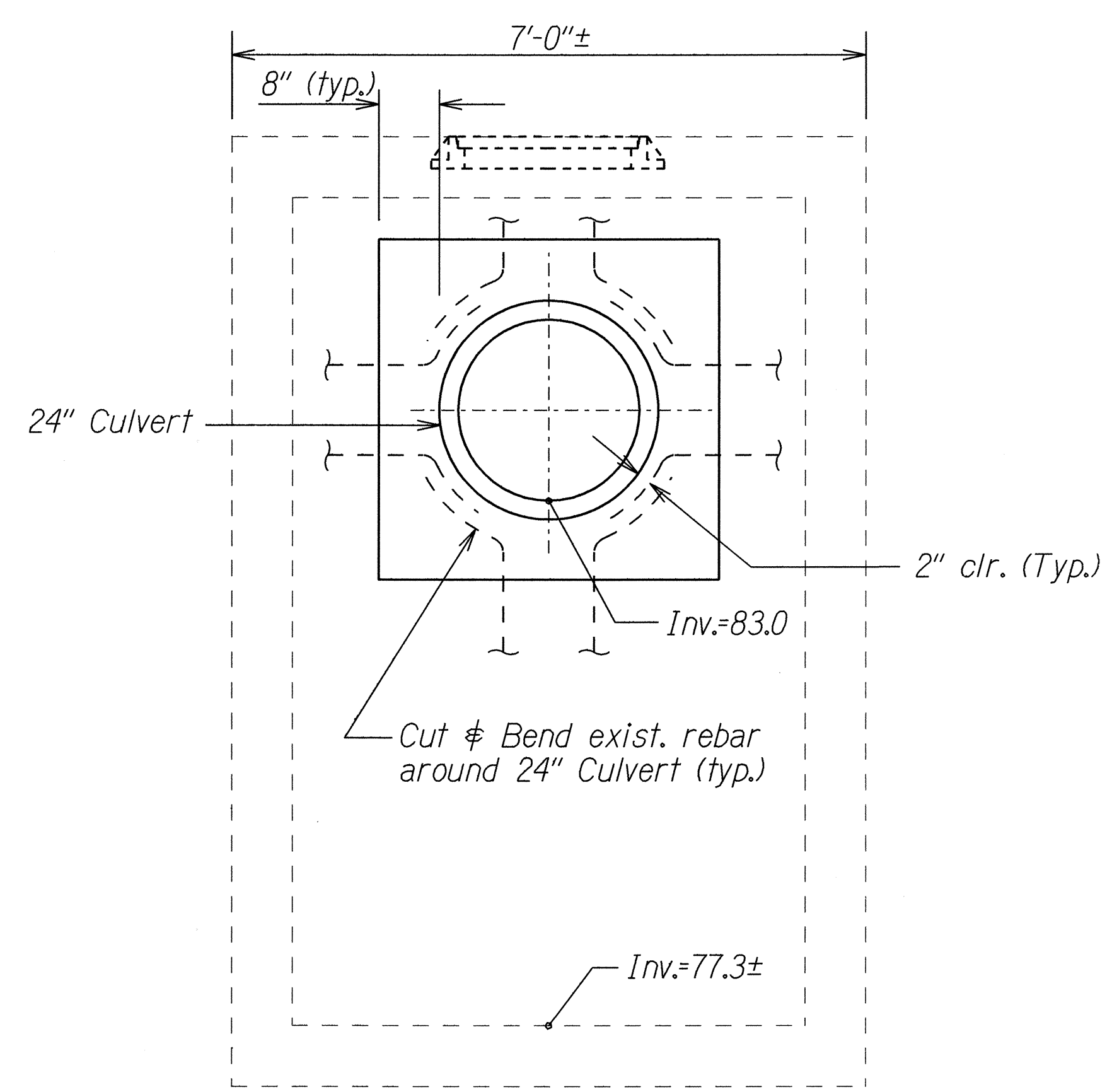
SHEET No. H10 OF 13 SHEETS



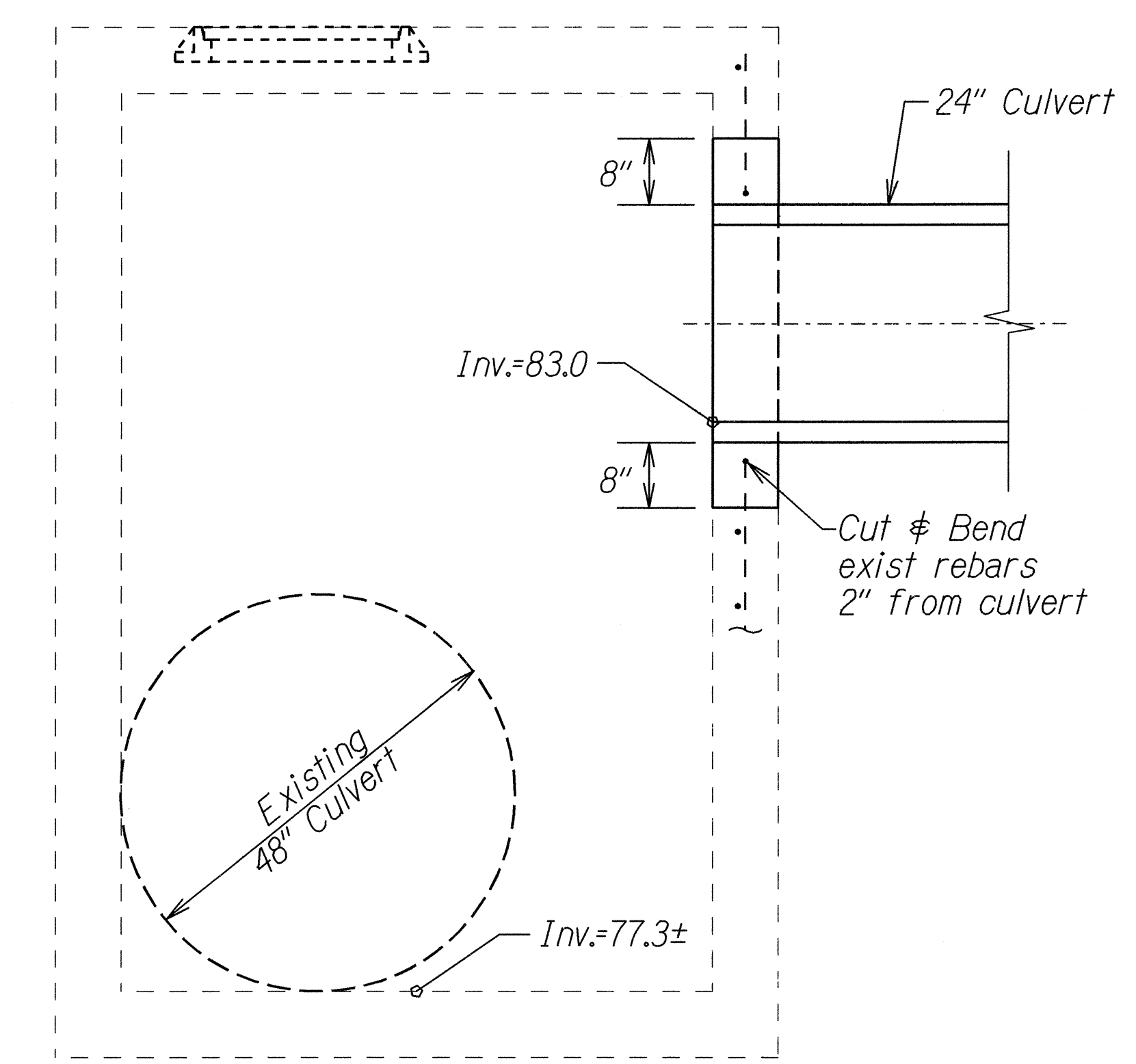
| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---------------------|-------|--------------------|-------------|-----------|--------------|
| HAWAII              | HAW.  | STP-061-1(33)      | 1999        | 51        | 58           |



PLAN



SECTION A  
HI2/HI2



SECTION B  
HI2/HI2

DETAIL OF 24" CULVERT CONNECTION TO EXISTING STORM DRAIN MANHOLE

|                   |               |
|-------------------|---------------|
| ORIGINAL PLAN     | DATE: 7/31/98 |
| SURVEY PLOTTED BY |               |
| DRAWN BY          |               |
| DESIGNED BY       | R. Kawamura   |
| QUANTITIES BY     |               |
| CHECKED BY        |               |

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**DRAINAGE DETAILS**

KAILUA ROAD  
Shoulder Improvements For Bicycle Route,  
Kalanianaʻole Hwy. To Kawainui Bridge  
F.A. Proj. No. STP-061-1(33)

Scale: 3/4"=1'-0" Date: Feb. 1999

SHEET No. HI2 OF 13 SHEETS

