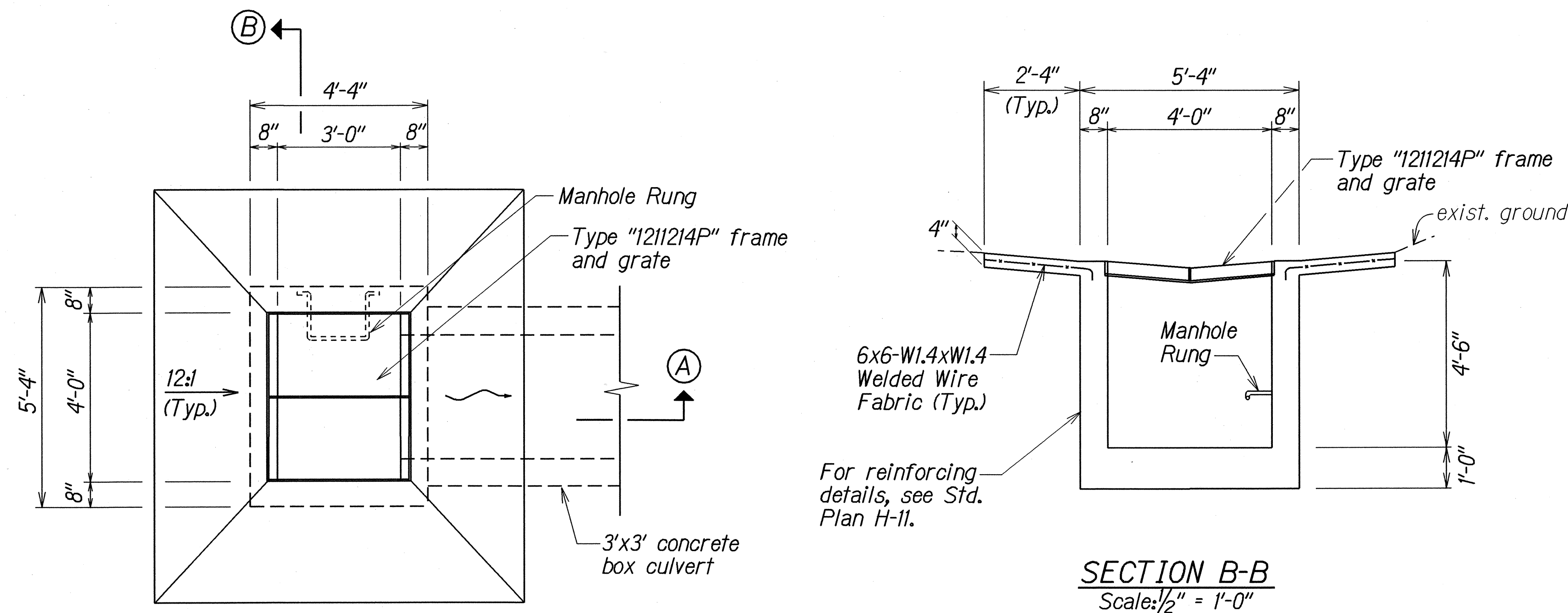


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	440B-01-04M	2004	26	58



TYPE "1211214" GDI
Scale: 1/2" = 1'-0"

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

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

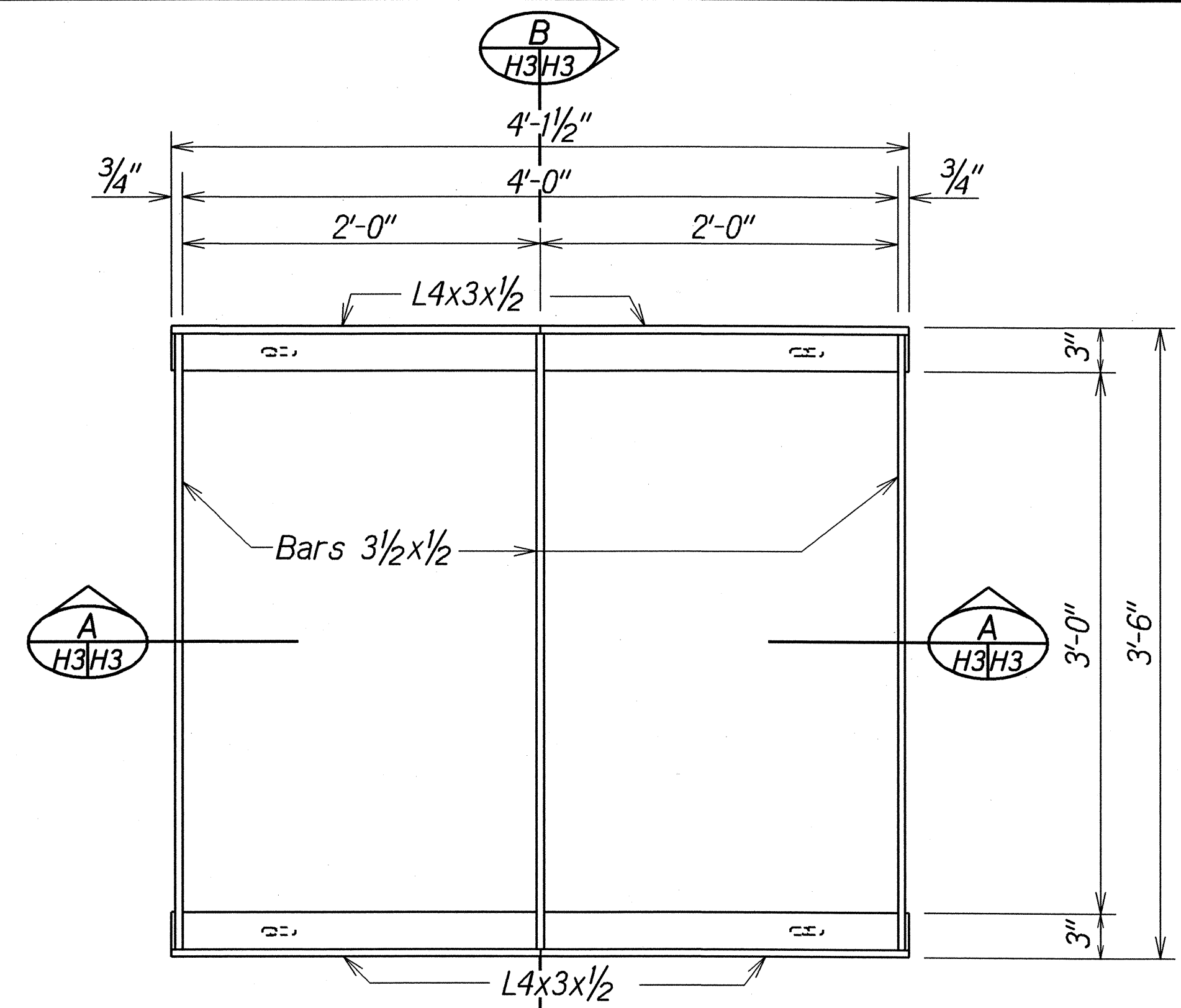
MISCELLANEOUS DRAINAGE NOTES:

- Existing drainage system will be functional at all times during construction. Contractor is to furnish materials, equipment, labor, tools and incidentals necessary to accomplish maintenance of flow, the cost of which shall be incidental to the various contract items.
- Demolishing and/or removing a portion or the entire existing structure shall not be paid for separately, but shall considered incidental to the various contract items.
- Culverts within the grated drop inlets shall be cut flush with the inside face of the wall. Above work shall be considered incidental to the various contract items.
- Contractor shall verify the locations of all culverts in the field. Any culvert damaged during construction shall be repaired or replaced by the Contractor at his expense.
- Concrete for grated drop inlets and other structures shall be Class "A".
- Inlet and Outlet conditions shall be cleaned and graded to permit free flow of run-off or as directed by the Engineer. Cleaning and grading shall be to the satisfaction of the Engineer. Above work shall be paid for under Force Account.
- The Contractor shall provide bedding materials for culvert, Class "C" bedding. Payment for this work will not be paid for separately but will be considered incidental to the various contract items.
- Reinforcing Steel for Concrete Structures will not be paid for separately but shall be considered incidental to various contract items.
- Location and elevations of new structures must be laid out in the field for the Engineer's approval.
- Chamfer all exposed edges 1".
- Quantities are approximate only. Contractor shall conduct an independent survey of worksites to verify and validate pay quantities.

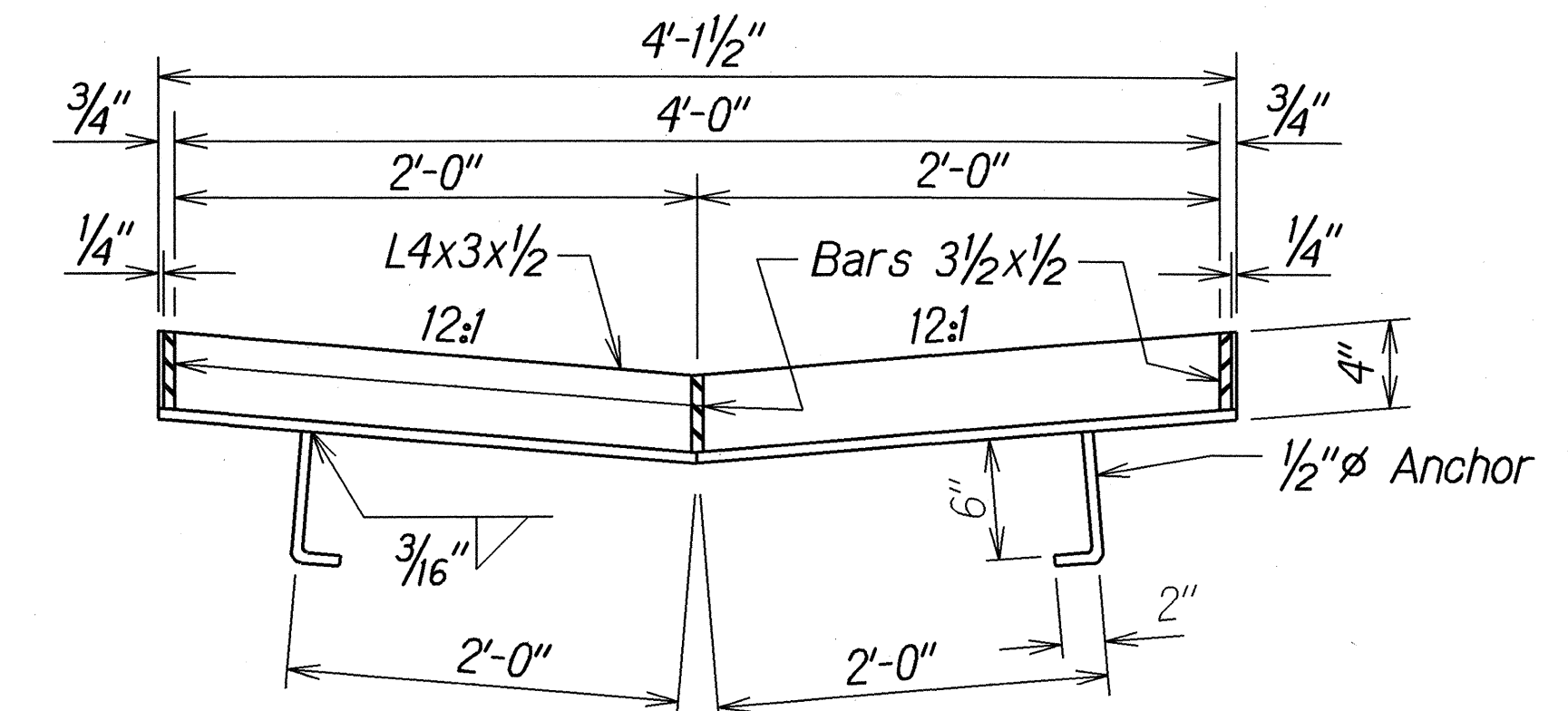
SURVEY PLOTTED BY	DATE
DESIGNED BY	
TRACED BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
No.	

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<u>DRAINAGE DETAILS</u>	
<u>MANELE ROAD RESURFACING</u>	
<u>Lanai City Towards Manele Road</u>	
<u>Project No. 440B-01-04M</u>	
Scale: As Shown	Date: September, 2003
SHEET No. H2 OF 8 SHEETS	

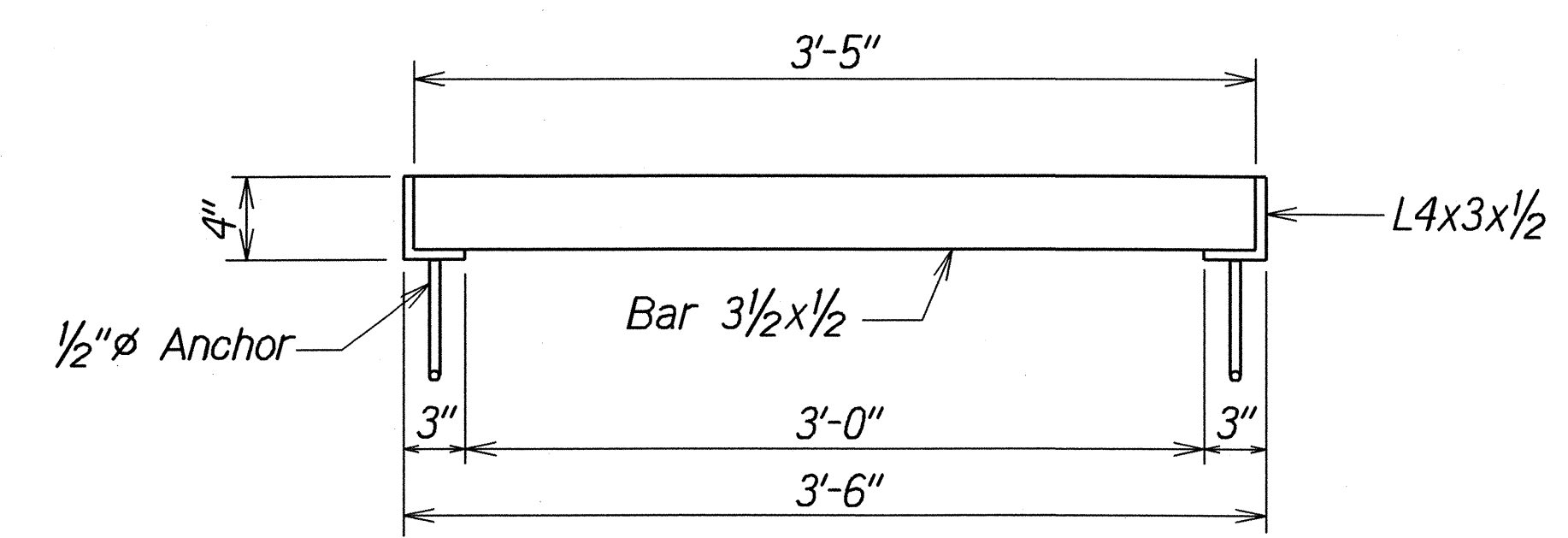
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	440B-01-04M	2004	27	58



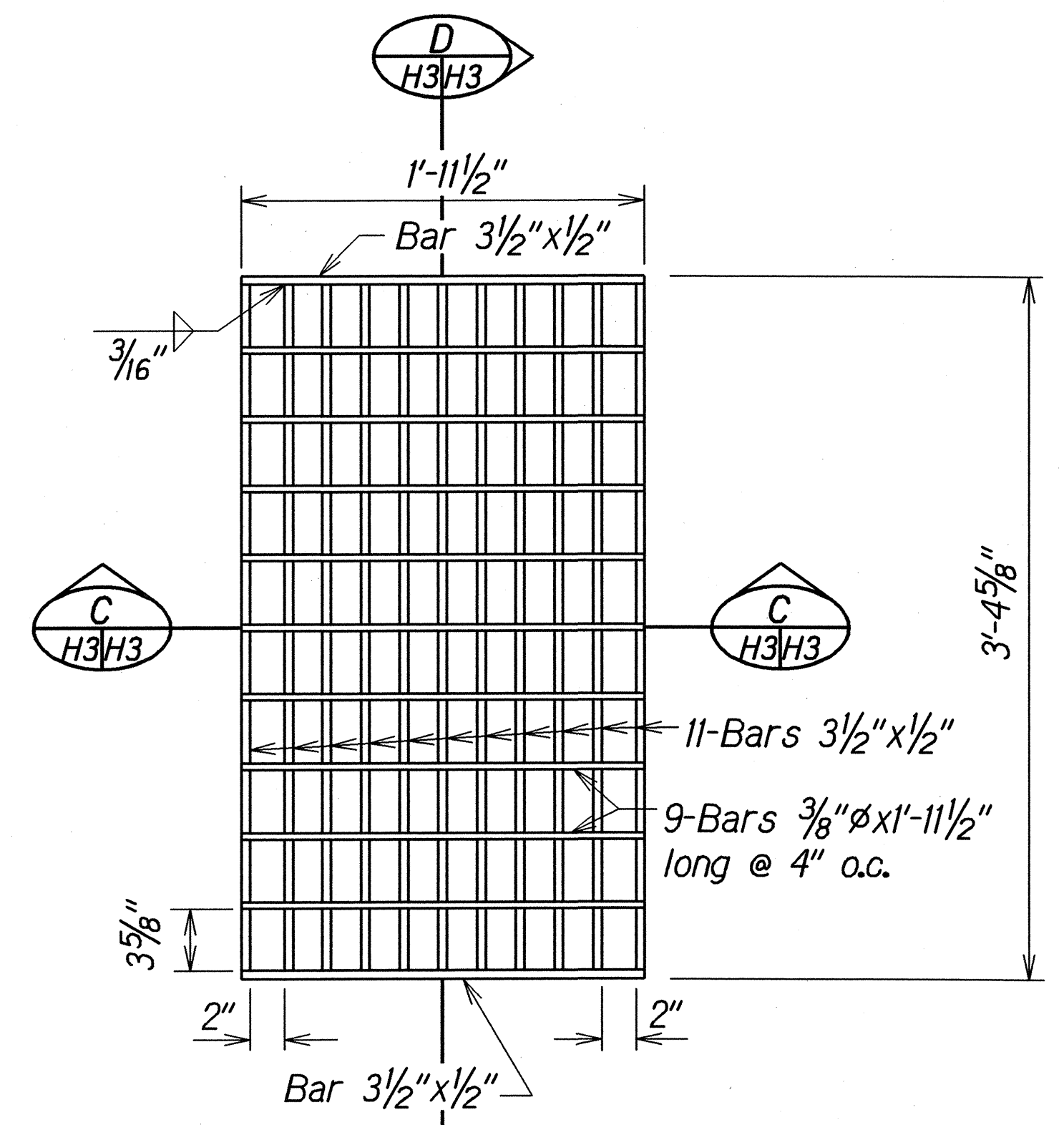
PLAN



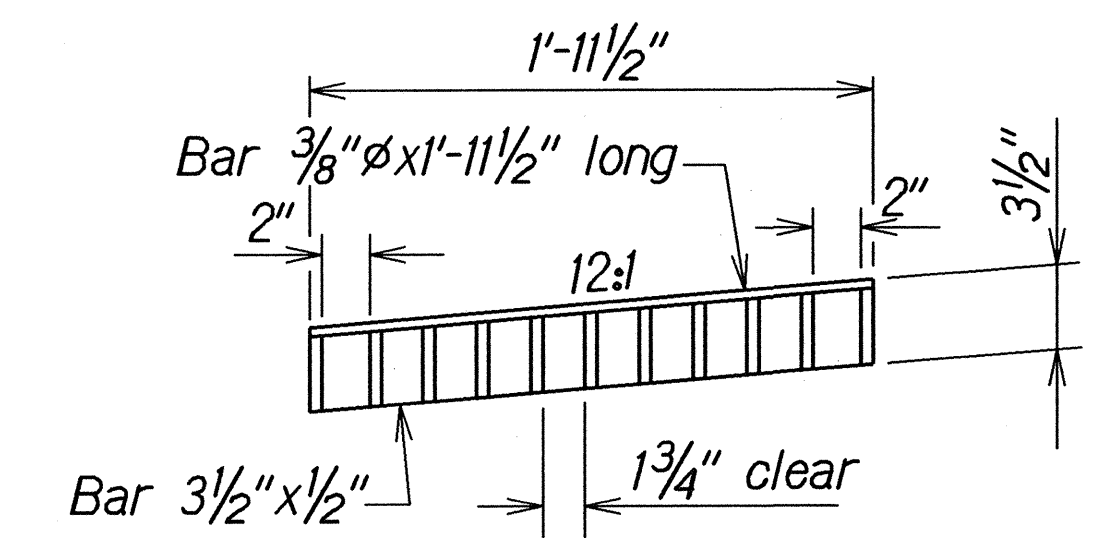
SECTION A



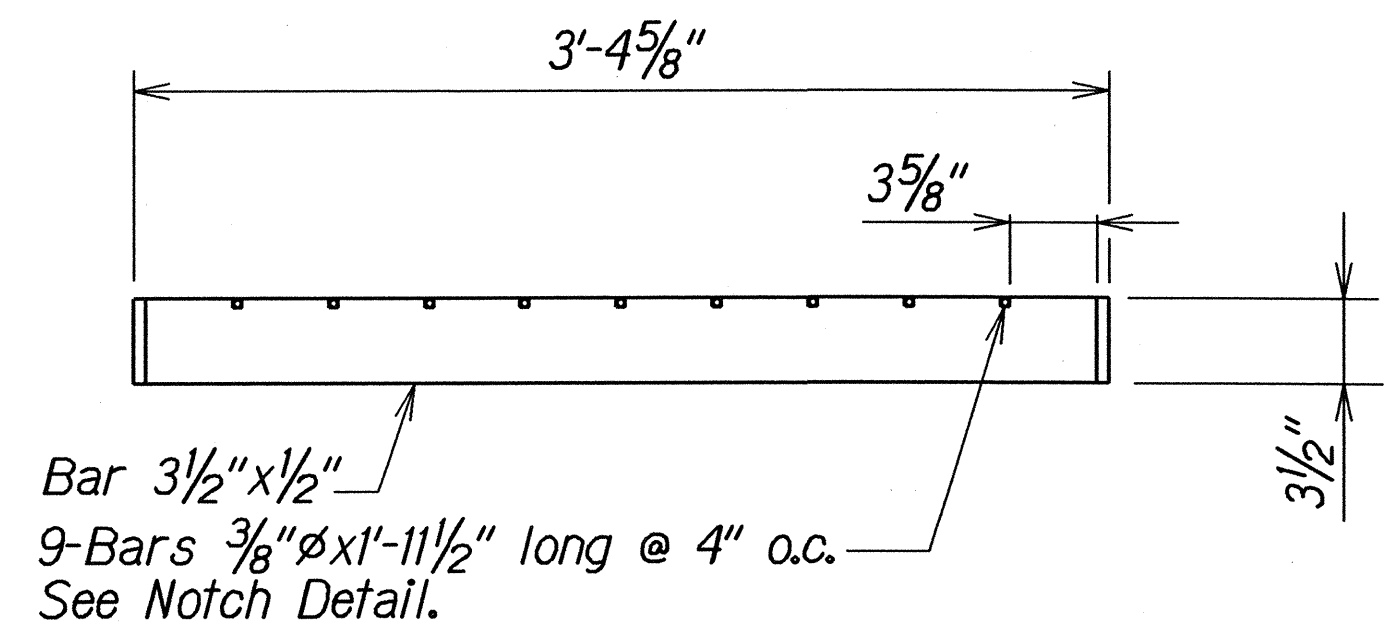
SECTION B
FRAME



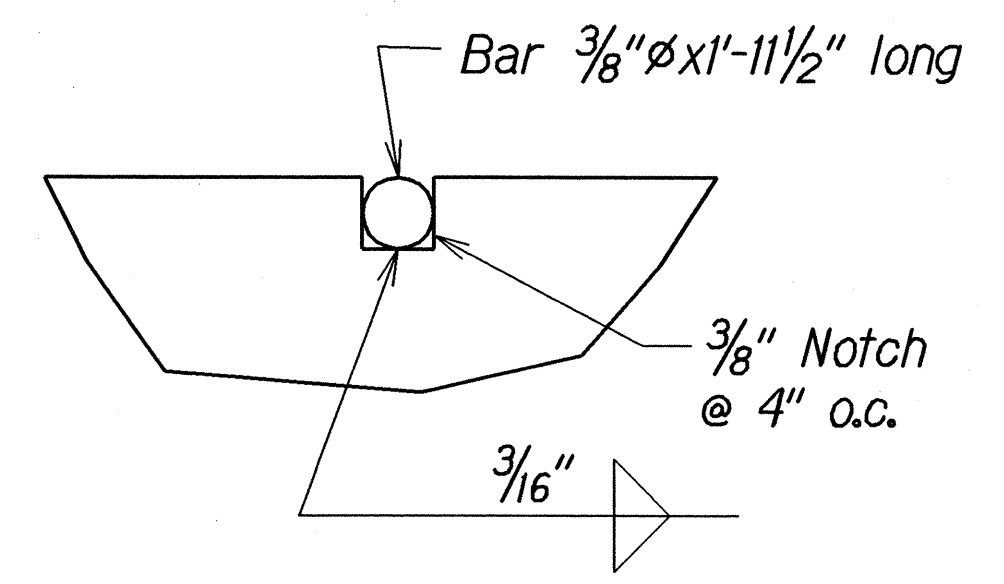
PLAN



SECTION C



SECTION D
GRATE



NOTCH DETAIL
Full Size

NOTE:
All welds 3/8" unless otherwise noted.

DETAILS OF TYPE "1211214P" STEEL FRAME AND GRATES

ORIGINAL	DATE	2/29/03
PLAN		
DRAWN BY	LEG	
CHECKED BY	CM	
QUANTITIES BY		
NOTES		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

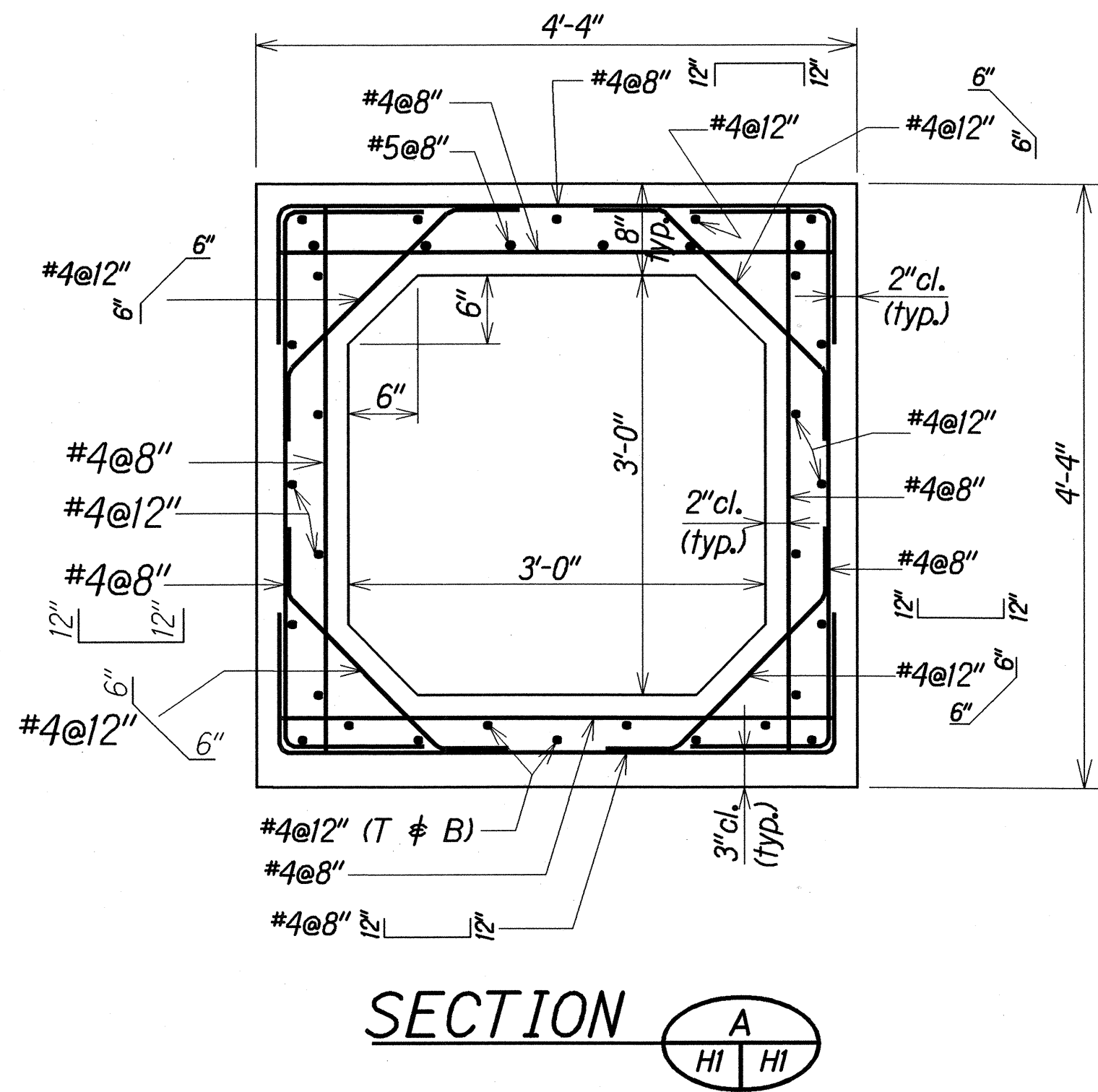
DRAINAGE DETAILS

MANELE ROAD RESURFACING
Lanai City Towards Manele Bay
Project No. 440B-01-04M

Scale: 1 1/2" = 1'-0" Date: September, 2003

SHEET No. H3 OF 8 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	440B-01-04M	2004	28	58



TYPICAL SECTION OF 3'X3' CONCRETE BOX CULVERT
AT STA. 0+50 RT.
Scale: 1" = 1'-0"

db2\$usr2\$lea\$dean\$mane/eculv.dgn

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

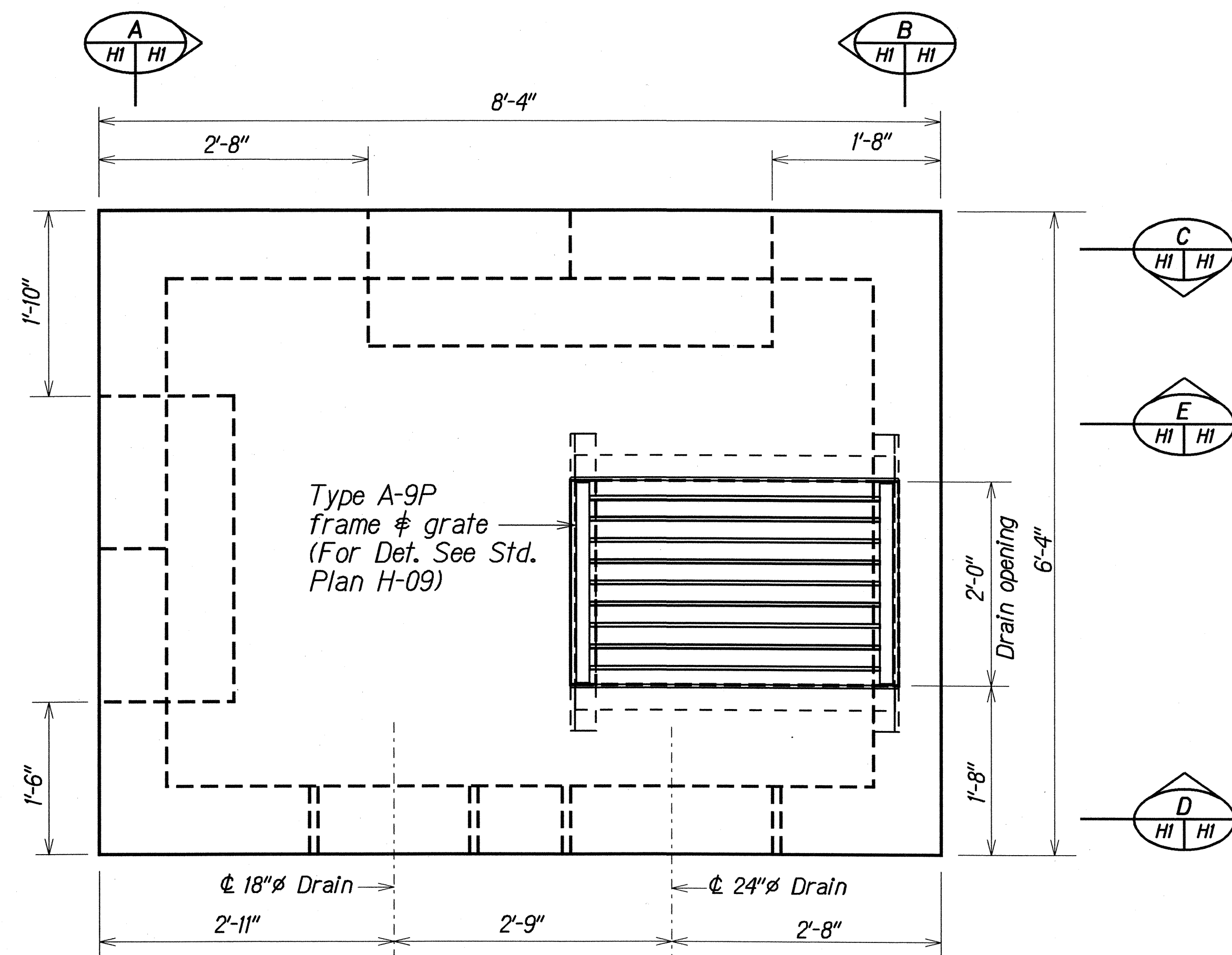
DRAINAGE DETAILS

MANELE ROAD RESURFACING
Lanai City Towards Manele Bay
Project No. 440B-01-04M

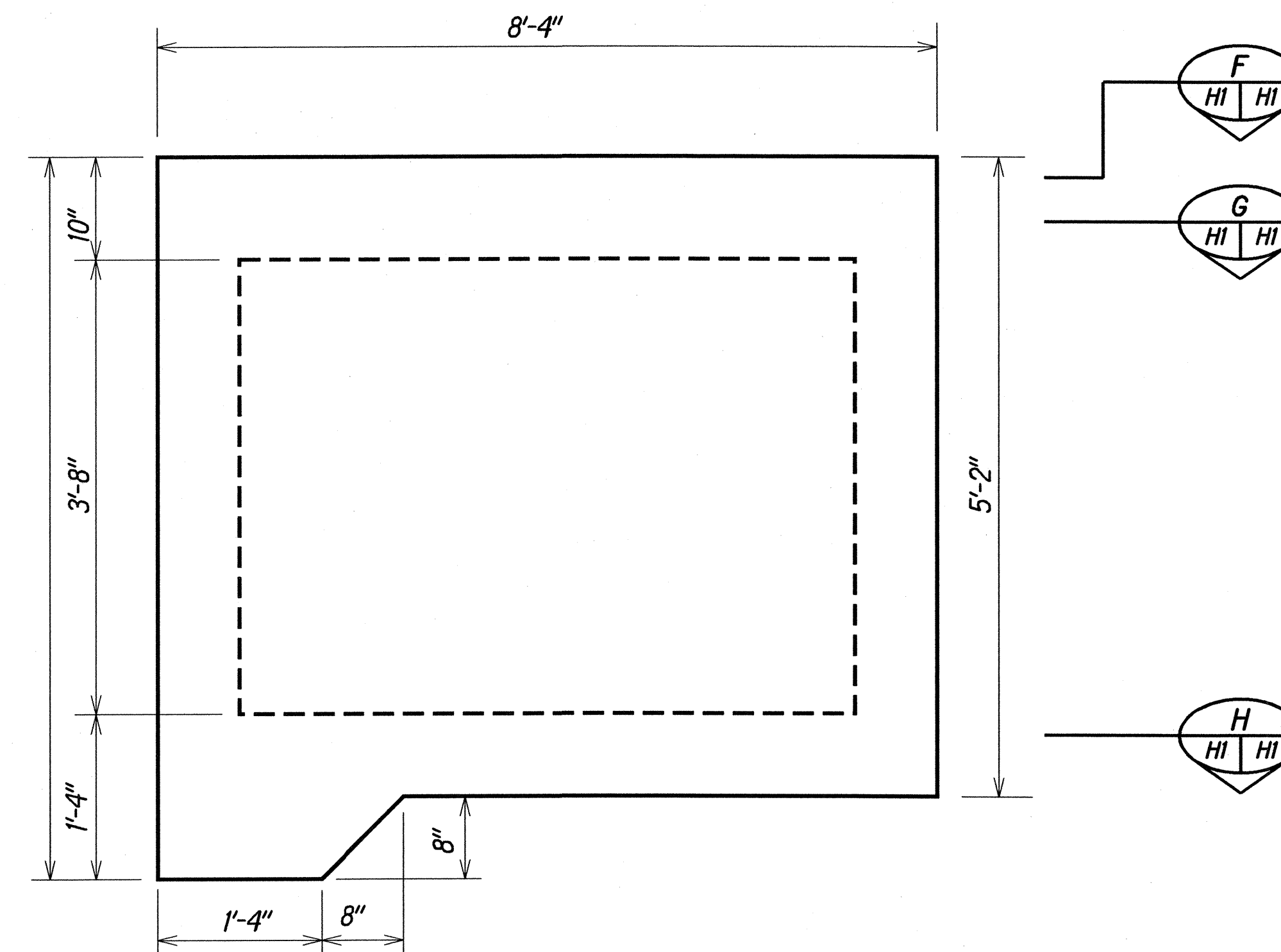
Scale: As Shown Date: September, 2003

SHEET No. *H4* OF 8 SHEETS

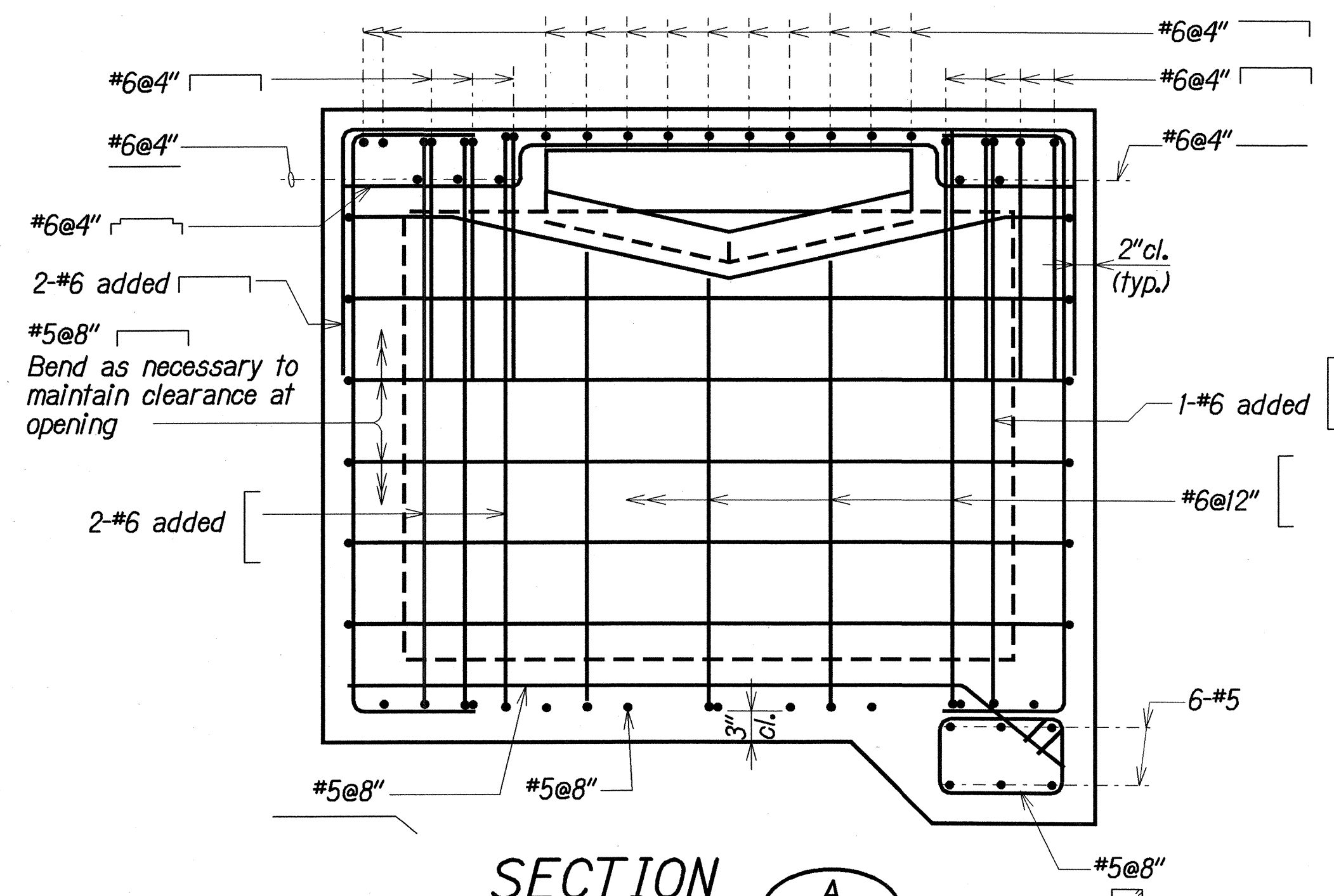
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	440B-01-04M	2004	29	58



PLAN



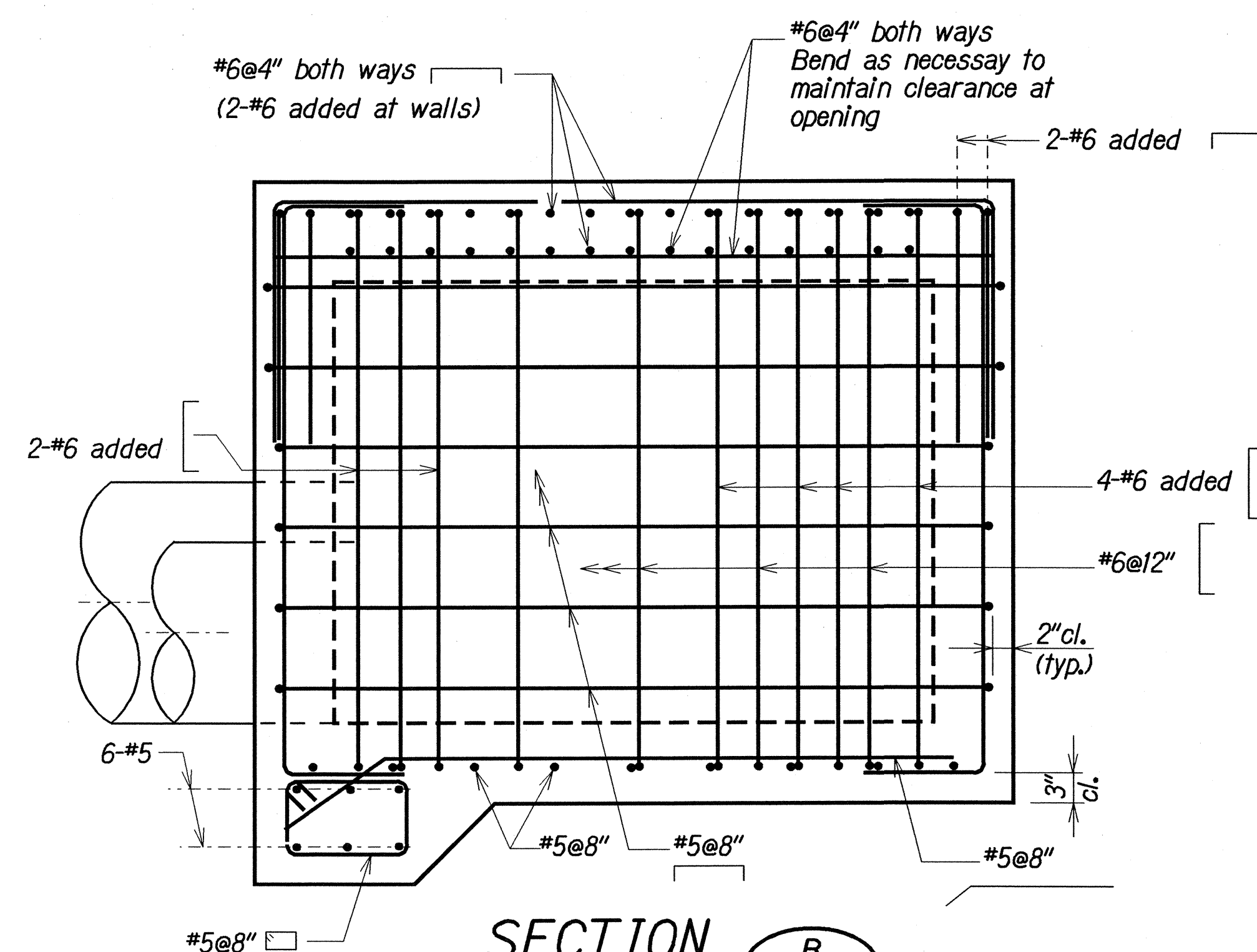
ELEVATION



SECTION A

Scale: 1" = 1'-0"

TYPE "I" INLET STRUCTURE
STA. 38+20 LT.



SECTION B

Scale: 1" = 1'-0"

SURVEY PLOTTED BY	DATE
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TRACED BY	
NOTE BOOK	
QUANTITIES BY	
CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

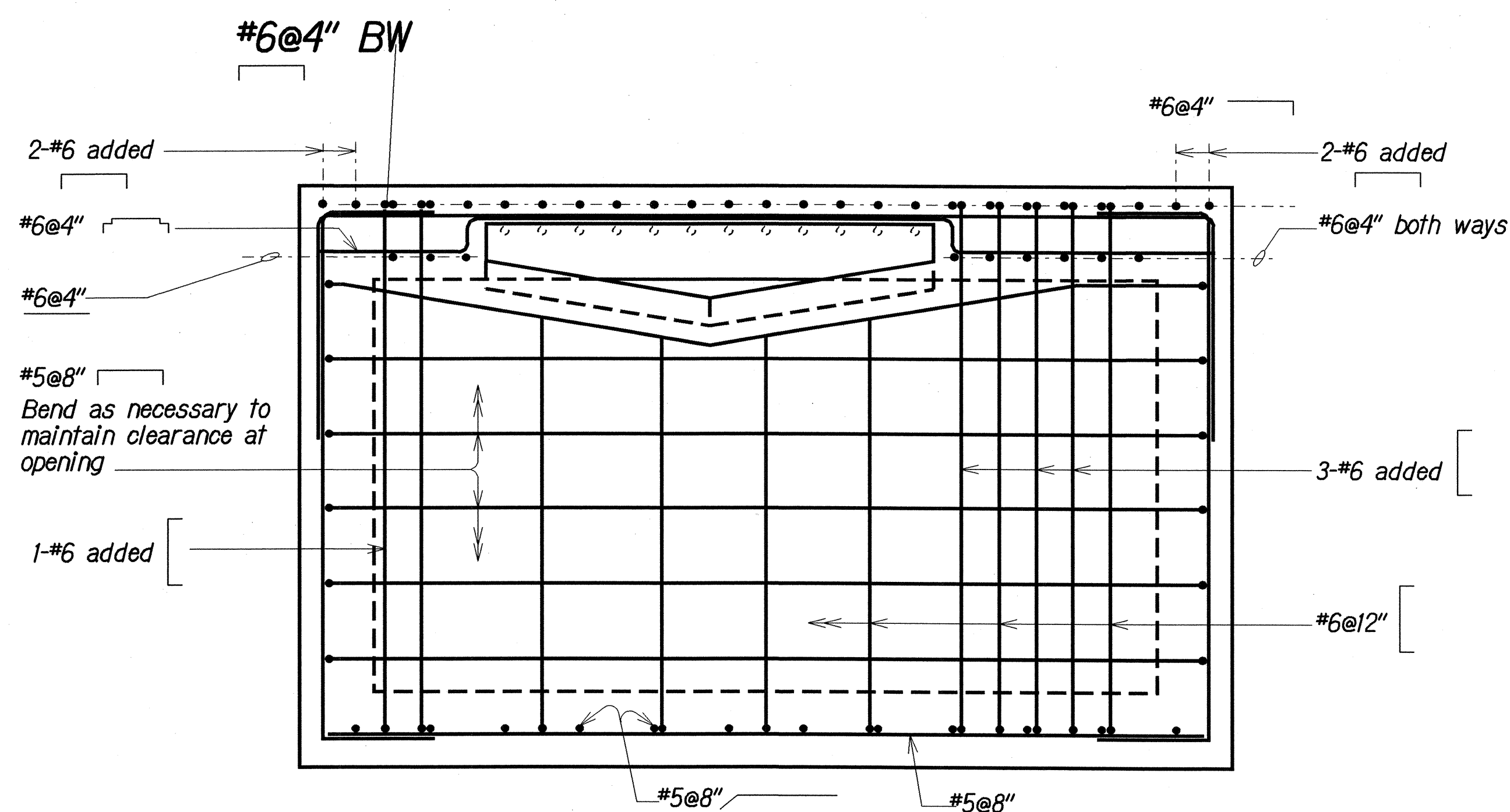
DRAINAGE DETAILS

MANELE ROAD RESURFACING
Lanai City Towards Manele Bay
Project No. 440B-01-04M

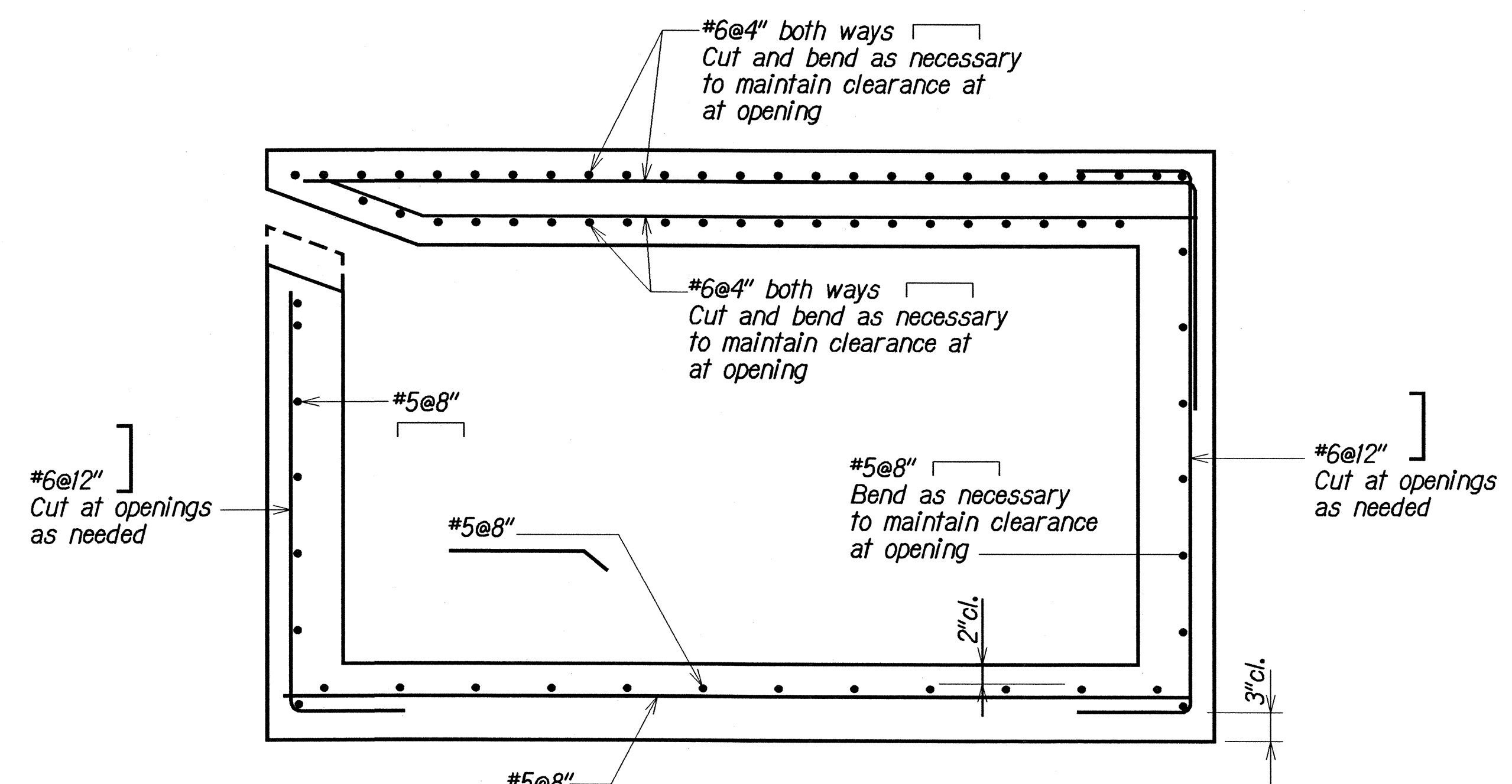
Scale: As Shown Date: September, 2003

SHEET No. H5 OF 8 SHEETS

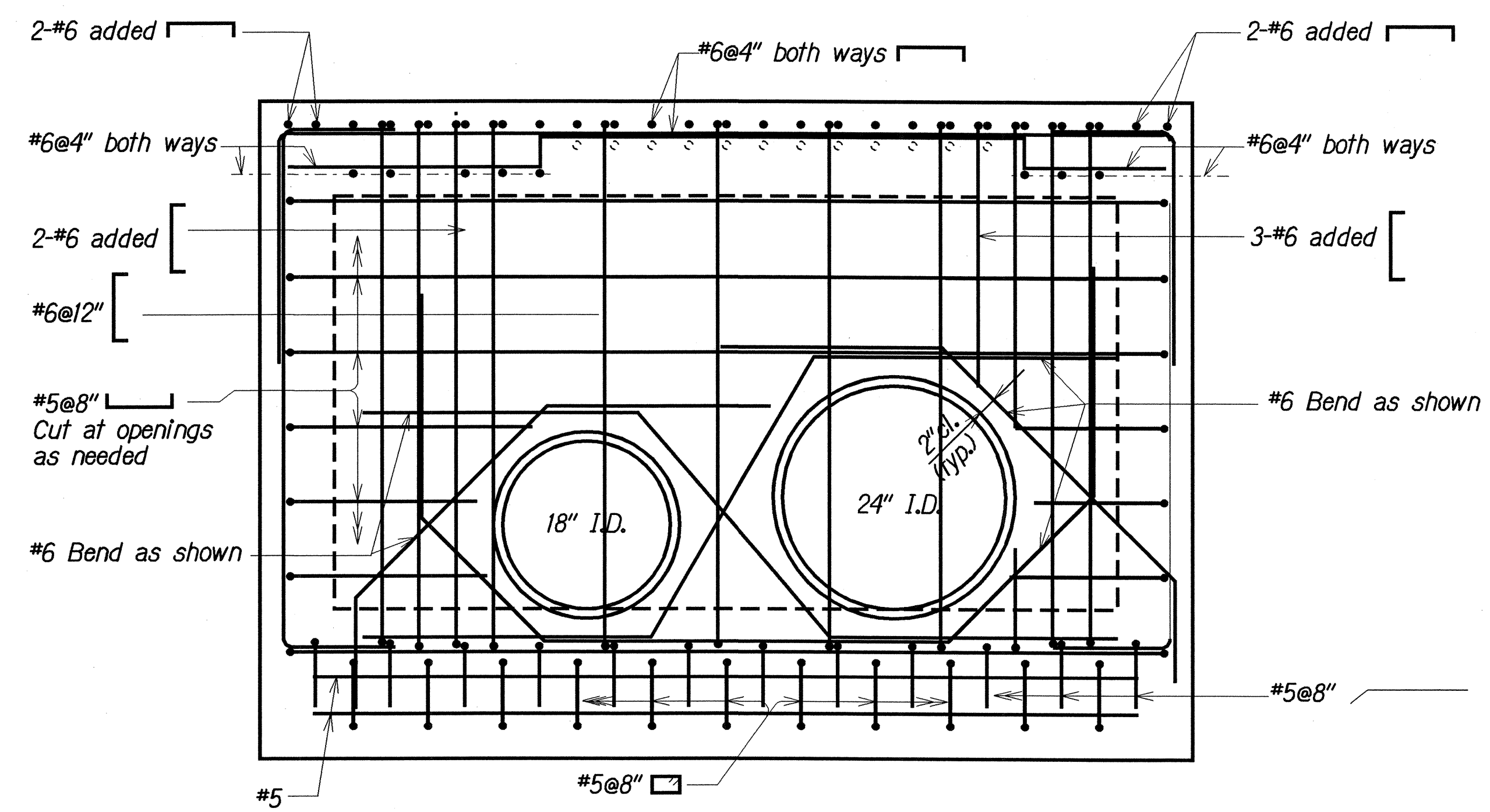
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	440B-01-04M	2004	30	58



SECTION C
H5 H5



SECTION E
Scale: 1" = 1'-0" H5 H5



SECTION D
Scale: 1" = 1'-0" H5 H5

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	
	DESIGNED BY	
	QUANTITIES BY	
	CHECKED BY	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

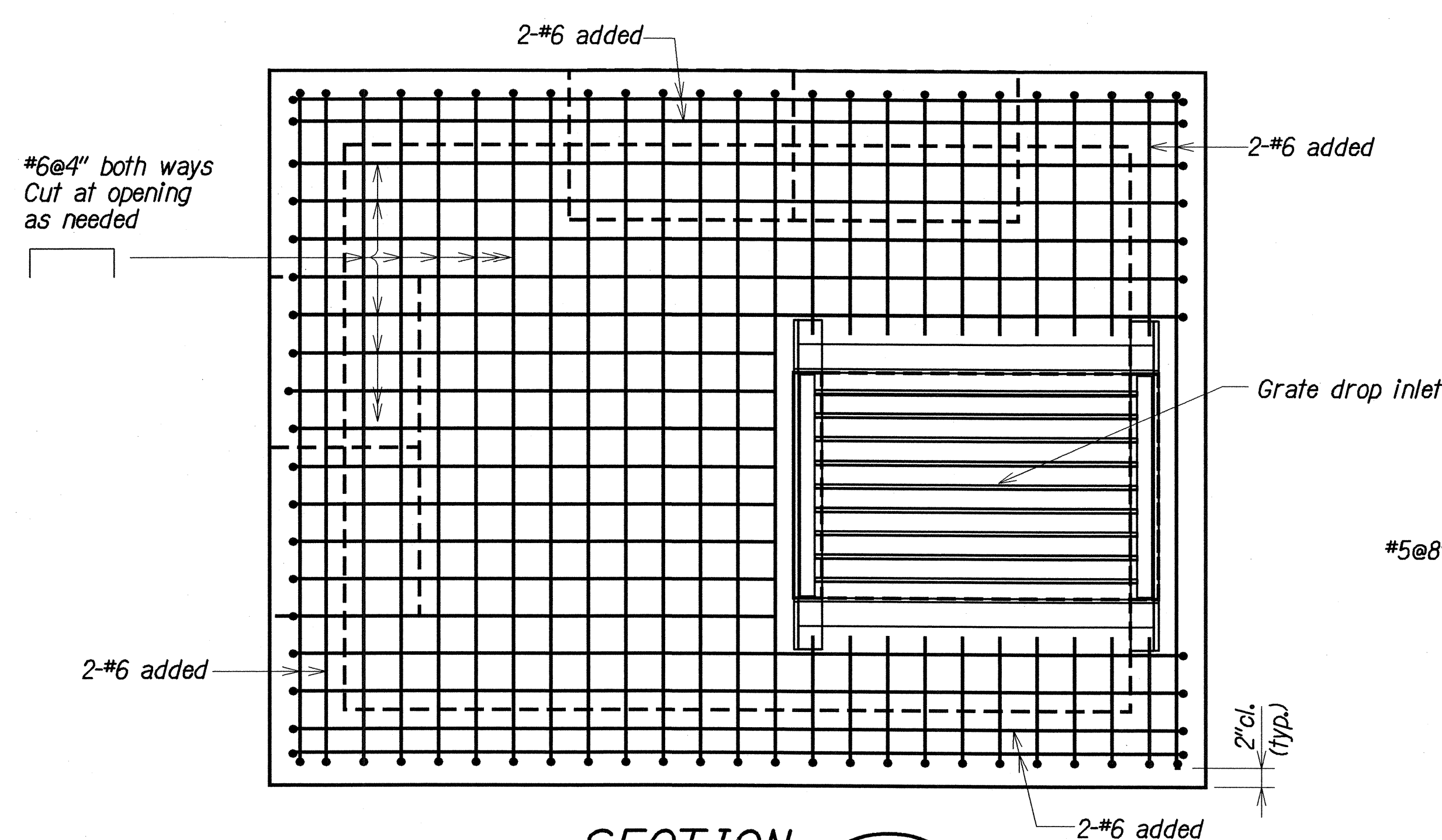
DRAINAGE DETAILS

MANELE ROAD RESURFACING
Lanai City Towards Manele Bay
Project No. 440B-01-04M

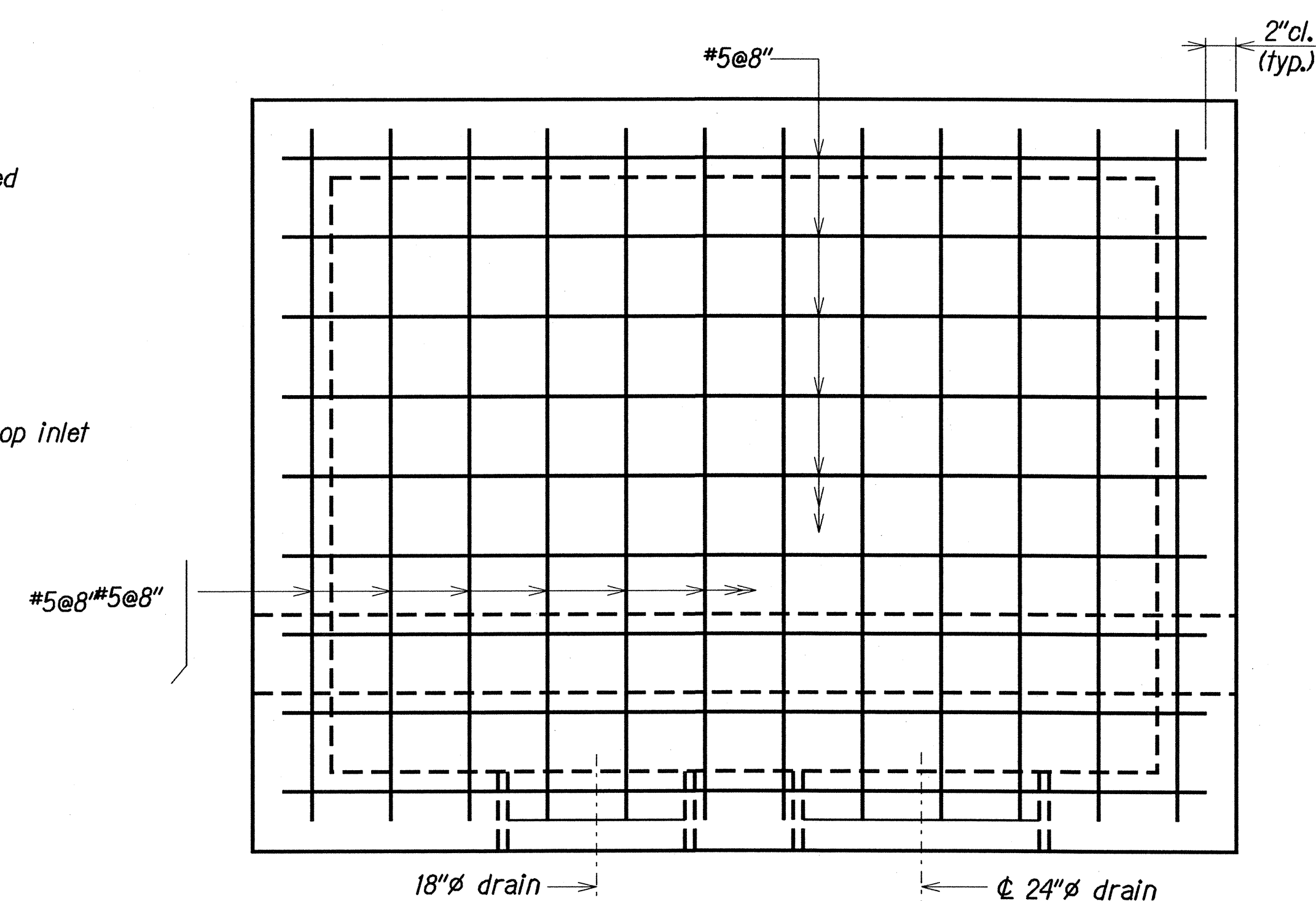
Scale: As Shown Date: September, 2003

SHEET No. H6 OF 8 SHEETS

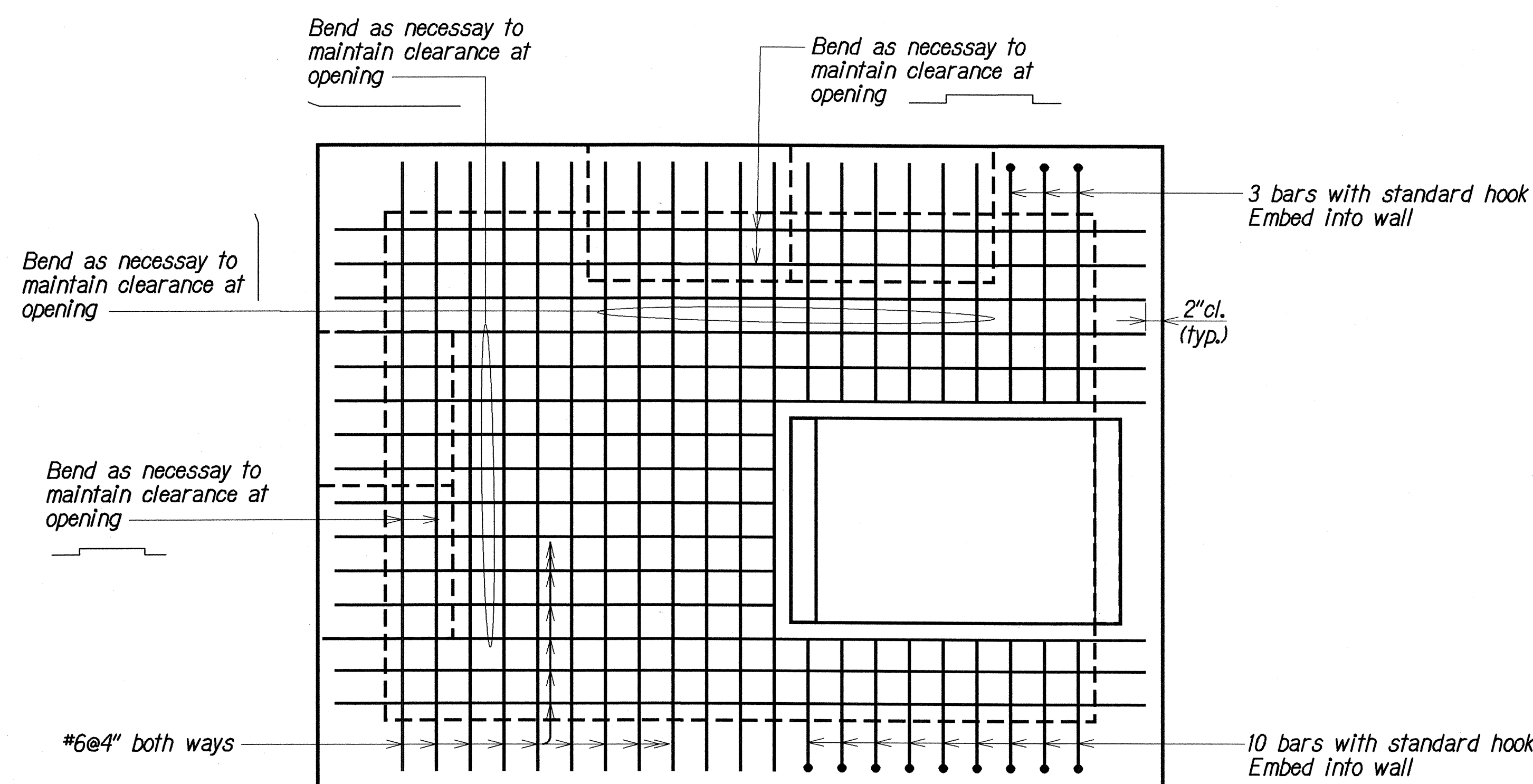
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	440B-01-04M	2004	31	58



SECTION F
(TOP SLAB - TOP LAYER REINFORCEMENT)
Scale: 1" = 1'-0"



SECTION H
(BOTTOM SLAB REINFORCEMENT)
Scale: 1" = 1'-0"



SECTION G
(TOP SLAB - BOTTOM LAYER REINFORCEMENT)
Scale: 1" = 1'-0"

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
NOTED BY	
QUANTITIES BY	
NO.	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

MANELE ROAD RESURFACING
Lanai City Towards Manele Bay
Project No. 440B-01-04M

Scale: As Shown Date: September, 2003

SHEET No. H7 OF 8 SHEETS

