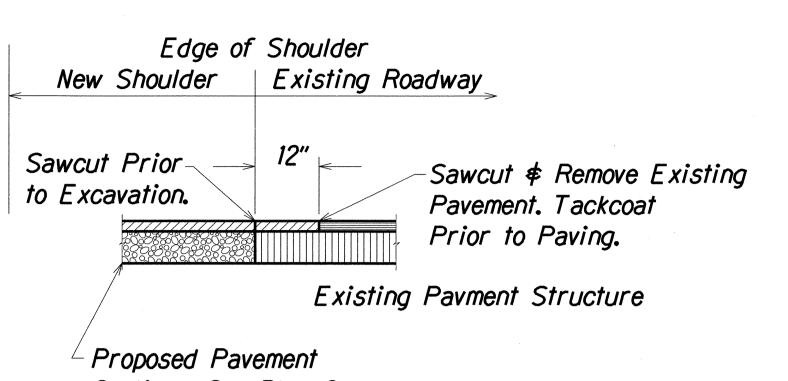


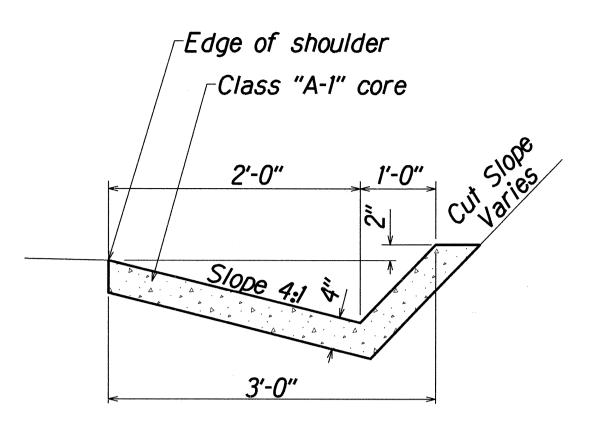
AGGREGATE SUBBASE

1. S.E. > 25
2. 8" MAX. LIFT
3. 95% COMPACTION
LOCAL MATERIAL MAY
BE USED OUTSIDE OF
SHOULDER.

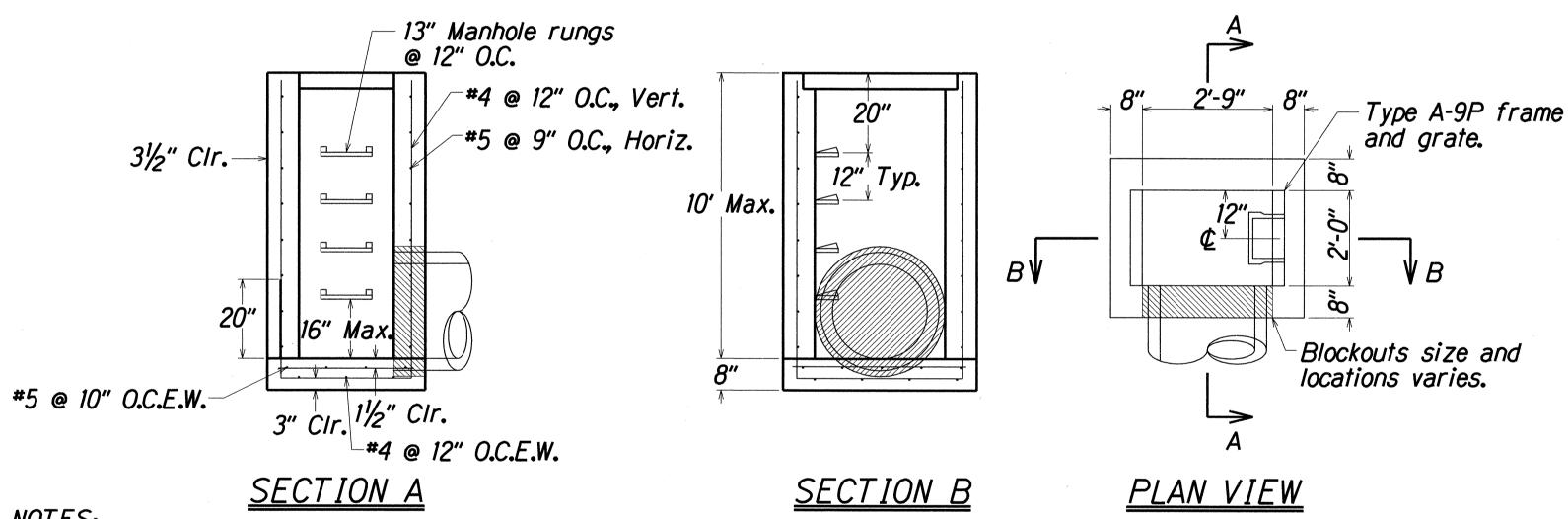


Section. See Plan for Section

SAWCUT DETAIL



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



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 rebars 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.

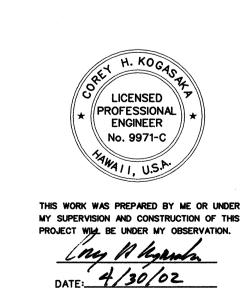
Concrete cover to reinforcing steel shall be 1-1/2" minimum.

#5 @9" O.C., Horiz. 2-#6 with 12" bends-18" @ 4" O.C., both sides. #4 @12" O.C.,-Vert. 4-#5 diagonals with-24" extending past TYP. REINF'G @

TYP. REINF'G @ CULVERT OPENING (NTS)

TYPE A-9P GRATED DROP INLET

CORNER (NTS)



TYPICAL TRENCH DETAIL

WITHIN TRAVELED WAY OUTSIDE TRAVELED WAY

TRENCH VARIES

24" MIN.

SAWCUT PRIOR TO TRENCHING

CUTBACK

SAWCUT AND— TACKCOAT

PRIOR TO RESURFACING.

PROPOSED PAVEMENT— SECTION.SEE PLAN FOR SECTION.

BASE COURSE

VARIES #1 —

(SEE BELOW)

SELECT TRENCH— BACKFILL AASHTO M43, No. 67 Gradation 1. S.E. > 20 2. 8" MAX. LIFT 3. 95% COMPACTION

(AS REQUIRED)

#1 TRENCH BACKFILL

MATERIAL B

1. S.E. > 20
2. 8" MAX. LIFT
3. 95% COMPACTION

MATERIAL B OR STRUCTURE BACKFILL

SEE PLAN FOR PIPE SIZE

CRUSHED ROCK MATERIAL

SHOULDER # ROADSIDE

-#1 SEE BELOW LEFT

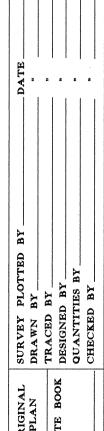
TRENCH BACKFILL
AASHTO M43,
No. 67 Gradation
1. S.E. > 20
2. 8" MAX. LIFT
3. 95% COMPACTION

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

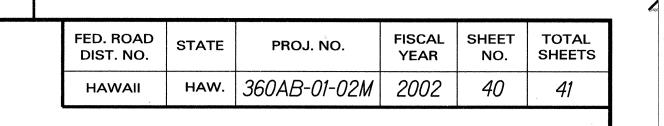
HANA HIGHWAY REPAIRS AND MAINTENANCE PROJECT NO. 360AB-01-02M

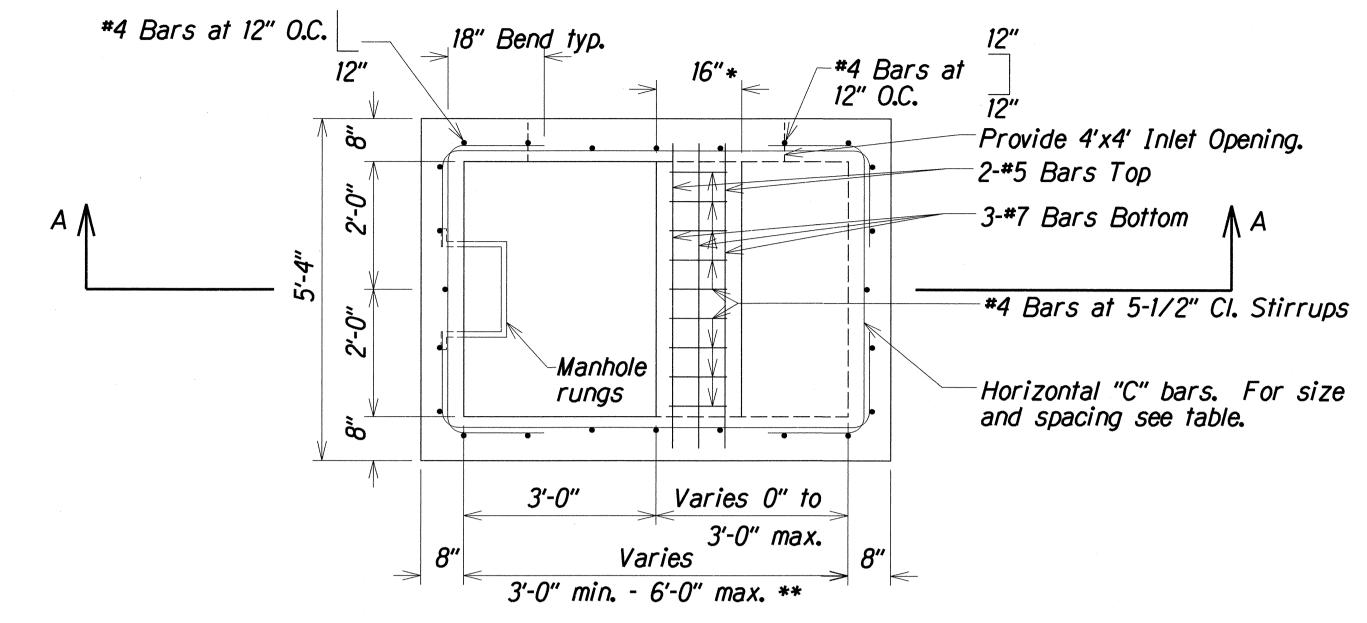
Scale: NTS Date: March, 2001

1 OF 3 SHEETS SHEET No.

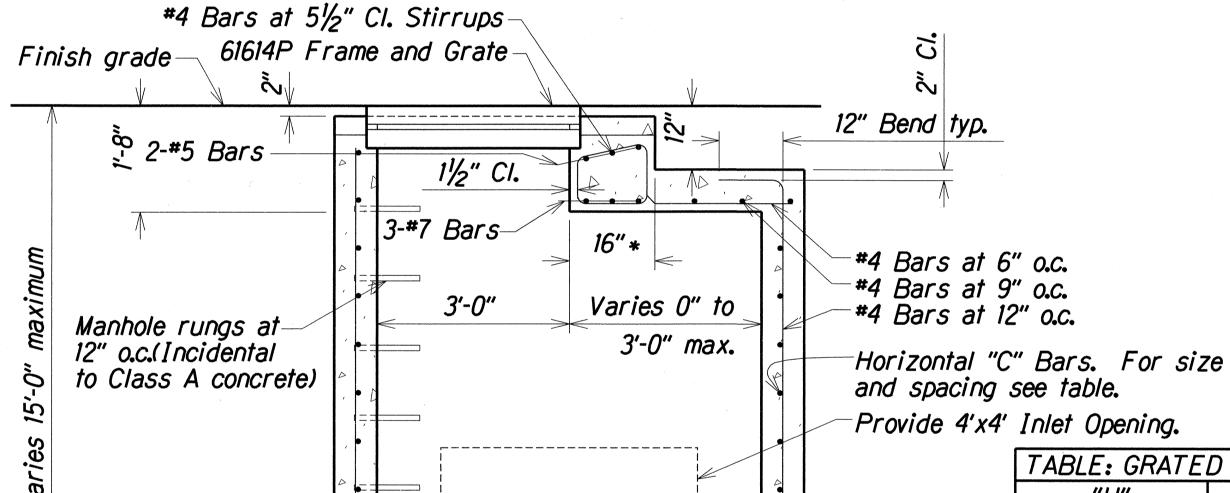


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<u>PLAN</u>



12" Bend typ.

3½" CI.

2-#4 Bars -

#5 Bars at 10"

Varies

3'-0" min. - 6'-0" max.

SECTION A-A

MODIFIED TYPE 61614P GRATED DROP INLET

o.c. both ways

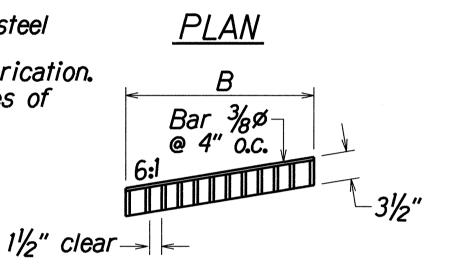
| • • | Thior opening. | | | | | | |
|-----|----------------|------------------------|--|--|--|--|--|
| | TABLE: GRATE | BLE: GRATED DROP INLET | | | | | |
| | "H" | "C" BARS | | | | | |
| | 5'-0" Max. | #4 at 10" o.c. | | | | | |
| | 10'-0" Max. | #5 at 9" o.c. | | | | | |
| | 15'-0" Max. | #5 at 6"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

Bar 31/2x1/2-−9-Bars ¾ø @ 4" o.c. Bar 31/2×1/2

GENERAL NOTES

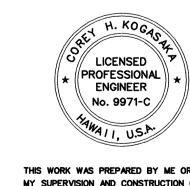
- 1. Steel frame details for grates shall be the steel frames shown on Standard Plan H-18.
 2. Grates shall be hot dip galvanized after fabrication.
 3. Use in locations off the road bed on all types of highways. (Pedestrian safe)



<u>SECTION</u>

| DIMENSIONS | | | | | | | |
|------------|----------|---|---------|----|---|--|--|
| TYPE | NO. BARS | Α | В | С | D | | |
| 61614P | 12 | | 1'-11½" | 2" | | | |

TYPE 61614P STEEL GRATES



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

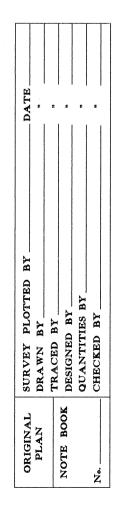
STATE OF HAWAII **DEPARTMENT OF TRANSPORTATION**

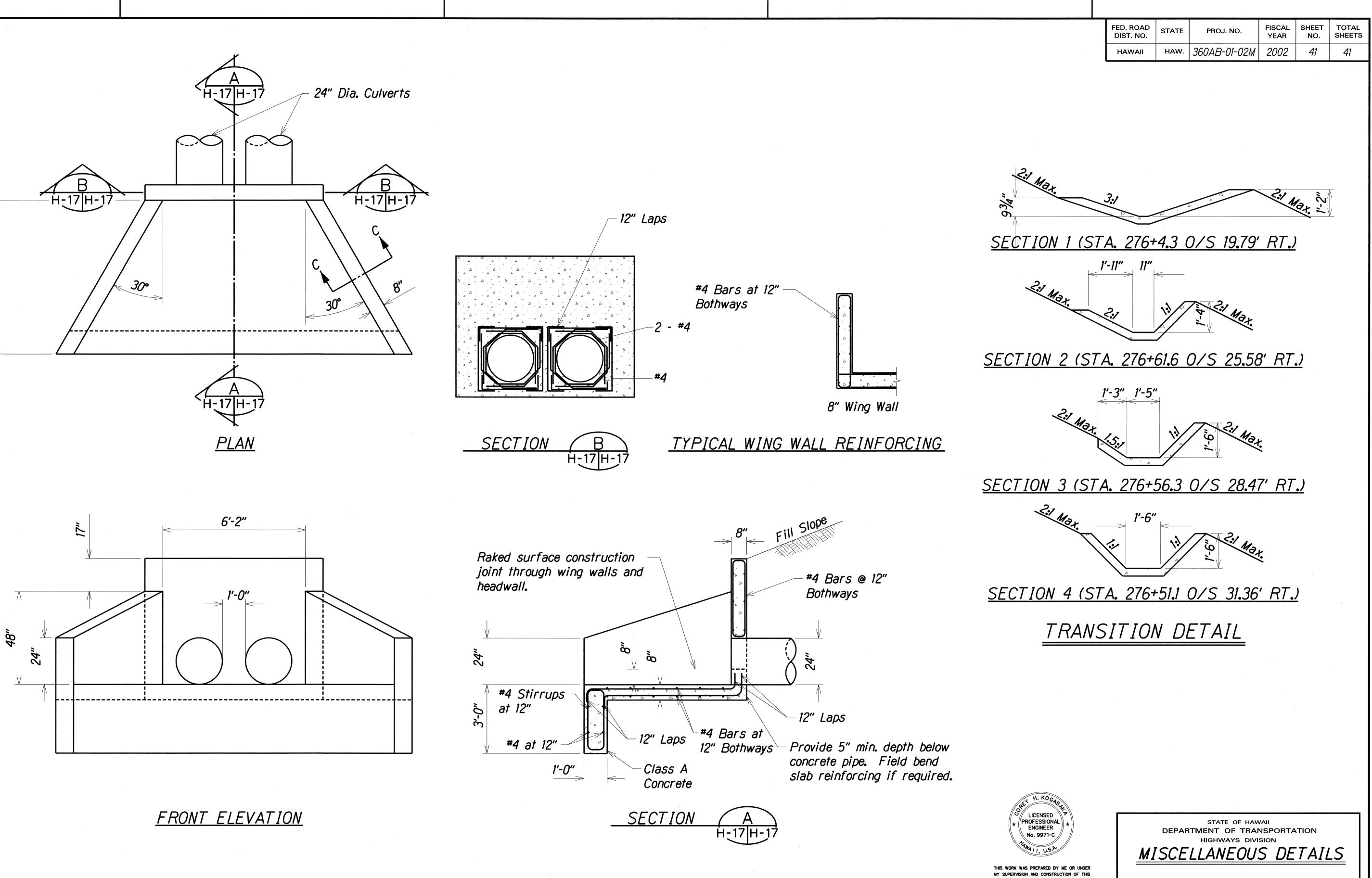
MISCELLANEOUS DETAILS

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

Scale: NTS Date: March, 2001

SHEET No. 2 OF 3 SHEETS





MODIFIED CONCRETE INLET FOR SITE 3

DATE: 4/30/02

HANA HIGHWAY REPAIRS AND MAINTENANCE

PROJECT NO. 360AB-01-02M Scale: NTS Date: March, 2001

SHEET No. 3 OF 3 SHEETS

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