

= 1.0 CY.

= 75 LB

10"

R/W

10

PLAN
Scale: 1"=10'

existing headwall-

to be demolished

10" force main

**PROFILE** 

*Vert.* 1"=5'

Scale: Horiz. 1"=10'

existing 18" RCP

E.P.

existing ground —

Bed Course Material

Reinforcing Steel

concrete collar

(see detail)

— 6" min. clr.

finish grade

— 11.0± LF

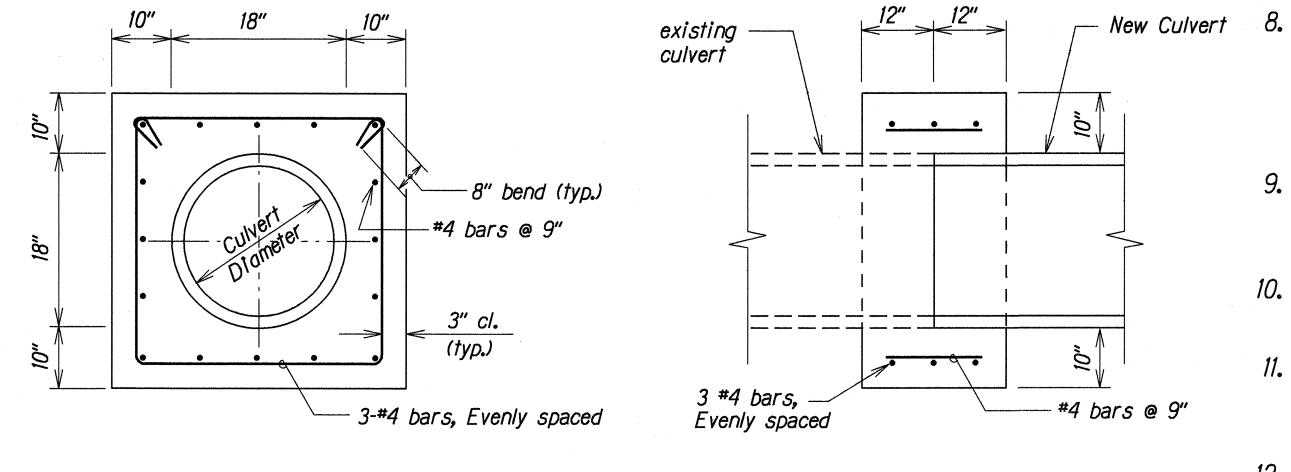
18" RCP

for Culvert

for Headwall

NOTES:

- 1. Modified Concrete Headwall shall generally conform with all the dimensions shown in Standard Plan H-16.
- 2. Fill slope shall be ten (10) percent or flatter.



Note: Reinforcing Steel for Concrete Collar shall conform to the requirements of ASTM 615-Grade 60.

MISCELLANEOUS DRAINAGE NOTES:

FED. ROAD DIST. NO.

STATE

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.

FED. AID PROJ. NO.

HAW. | STP-0900(58)

FISCAL SHEET TOTAL YEAR NO. SHEETS

5

2001

- 2. Demolishing, removing, and/or disposing portion or the entire existing headwall structure shall be paid for under Item No. 202.0440 - Demolition, Removal and Disposal of Existing Headwall, Wingwall and Concrete Apron.
- 3. 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.
- 4. Concrete for headwalls and other structures shall be Class "A" and shall be paid for under Item No. 503,1050 - Concrete in Modified Concrete Headwall (Class A) (2. C. Y.)
- 5. Inlet and Outlet conditions shall be graded to permit free flow of run-off or as directed by the Engineer. Grading shall be to the satisfaction of the Engineer. Above work shall be considered incidental to the various contract items.
- 6. Culvert extension shall include complete removal of any debris that maybe present in the existing culvert. Cleaning of culverts shall be paid for under Item No. 603.1900 - Clean Existing Culvert.
- 7. The Contractor shall provide bedding materials for culvert, Class "C" bedding. Payment for this work shall be paid for under Item No. 603.0010 - Bed Course Material for Culvert.
- The Contractor's attention is directed to Section 102.05 of the Standard Specifications. It is anticipated that borrow materials will be used to backfill the new drainage structures; culverts, etc. Payment for this work will be considered incidental to various culvert pay items.
- 9. Reinforcing Steel for Concrete headwall Structures and other structures shall be paid for under Item No. 602.0050 - Reinforcing Steel for Modified Concrete Headwall (75 LB.)
- 10. Location and elevations of new structures must be laid out in the field for the Engineer's approval.
- 11. Quantities are approximate only. Contractor shall conduct an independent survey of worksites to verify and validate pay quantities.
- Reinforced concrete collar will not be paid for separately but 12. shall be considered incidental to Item No. 602.0050 - Reinforcing Steel for Modified Concrete Headwall (75 LB.)

R/W

ELEVATION

SECTION

TYPICAL DETAILS OF REINFORCED CONCRETE COLLAR

Scale: Not to Scale

**DEPARTMENT OF TRANSPORTATION** HIGHWAYS DIVISION DRAINAGE DETAILS AND NOTES

STATE OF HAWAII

HANA HIGHWAY, Dairy Road to Vicinity of Paia Town 🛊 PIILANI HIGHWAY, Mokulele Hwy. to Wailea Ike Drive GUARDRAIL AND SHOULDER IMPROVEMENTS

Federal-Aid Project No. STP-0900(58) Scale: As Shown Date: February, 2000

OF 1 SHEETS SHEET No. 1