

DRAINAGE SUMMARY

PROJECT: HONOAPIILANI HIGHWAY RESURFACING, Honokahua to Honokohau
PROJECT NO.: 30A-01-91M

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	30A-01-91M	1991	16	31

ITEM NO.	206 2020	206 7000	207 0100	503 0020	503 1020	602 0030	602 1020	603 0010	603 0011	603 1010	604 2314	609 2020	611 0100	612 0100	640 7500
UNIT USED	C.Y.	C.Y.	C.Y.	L.S.	L.S.	L.S.	L.S.	C.Y.	C.Y.	L.F.	Each	L.F.	C.Y.	C.Y.	L.F.
BASELINE STATION	Structure Excavation For Drainage System	Structure Backfill	Ditch and Channel Excavation	Class A Concrete for Drainage System	Concrete In Box Culvert	Reinforcing Steel In Box Culvert	Reinforcing Steel For Drainage System	Bed Course Material For Culvert	Bed Course Material, Aggregate Size No. 67	24-Inch RCP, Cl. III	Type "A-9" GDI, 4.00 Ft. to 4.99 Ft.	Curb, Type 2D	Hand Laid Riprap	Grouted Rubble Paving	Concrete Spillway
Sta. 147+00±	257	39		(15)	(30)	(4540)	(2400)		15					16	
Sta. 182+50±	36			(3)			(48)	5		28	1				
Sta. 189+00±	160	55		(10)	(17)	(2705)	(1380)		10					3	
Sta. 226+50±			30									10	3		200
TOTAL	453	94	30	(28)	(47)	(7245)	(3828)	5	25	28	1	10	3	19	200

DRAINAGE NOTES:

1.

Existing drainage systems will be functional at all times during construction. The Contractor is to furnish materials, equipment, labor, tools and Incidentals necessary to maintain flow. The cost for this work shall be incidental to the various Contract Items.
2.

The Contractor shall verify the locations of all existing culverts and utilities in the field. Any existing culverts and utilities damaged during construction shall be repaired or replaced by the Contractor at his own expense.
3.

Concrete shall be Class A unless otherwise noted.
4.

For added reinforcing around culverts, see Standard Plan H-04.
5.

Chamfer all exposed concrete edges 1".
6.

Flashing Compound Waterproofing for Concrete Box Culverts shall not be paid for separately, but shall be considered incidental to Item No. 503.1020 - Concrete In Box Culvert.
7.

The exact location of the Concrete Spillway and Riprap Outlet shall be determined by the Field Engineer.
8.

Concrete Transition to Concrete Spillway shall be paid for under Item No. 640.7500 - Concrete Spillway. Excavation for Concrete Transition shall be paid for under Item No. 207.0100 - Ditch and Channel Excavation.
9.

Demolishing, removing, and disposing of existing Items consist of the following:

a.

Baseline Station 147+00±

2 - CRM Headwalls

(35 CY)

30" Culvert

(30 LF)

b.

Baseline Station 182+50±

CRM Headwall

(2 CY)

12" Culvert

(26 LF)

GDI (4'x4'x3')

(1 EA)

c.

Baseline Station 189+00±

2 - CRM Headwalls

(7 CY)

2'-6" x 2'-3" CRM Box Culvert

(29 LF)
- All above Items shall not be measured separately but shall be considered incidental to the various Contract Items.
10.

Installation of Metal Guardrail Post Connections and appurtenances at Inlet and outlets shall not be paid for separately, but shall be considered incidental to Item No. 606.3110 - Guardrail, Type 3-single with steel post.

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

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE SUMMARY AND NOTES
HONOAPIILANI HIGHWAY RESURFACING
Honokahua to Honokohau
PROJECT NO. 30A-01-91M

Scale: As ShownDate: May, 1991

SHEET No. H1 OF 9 SHEETS