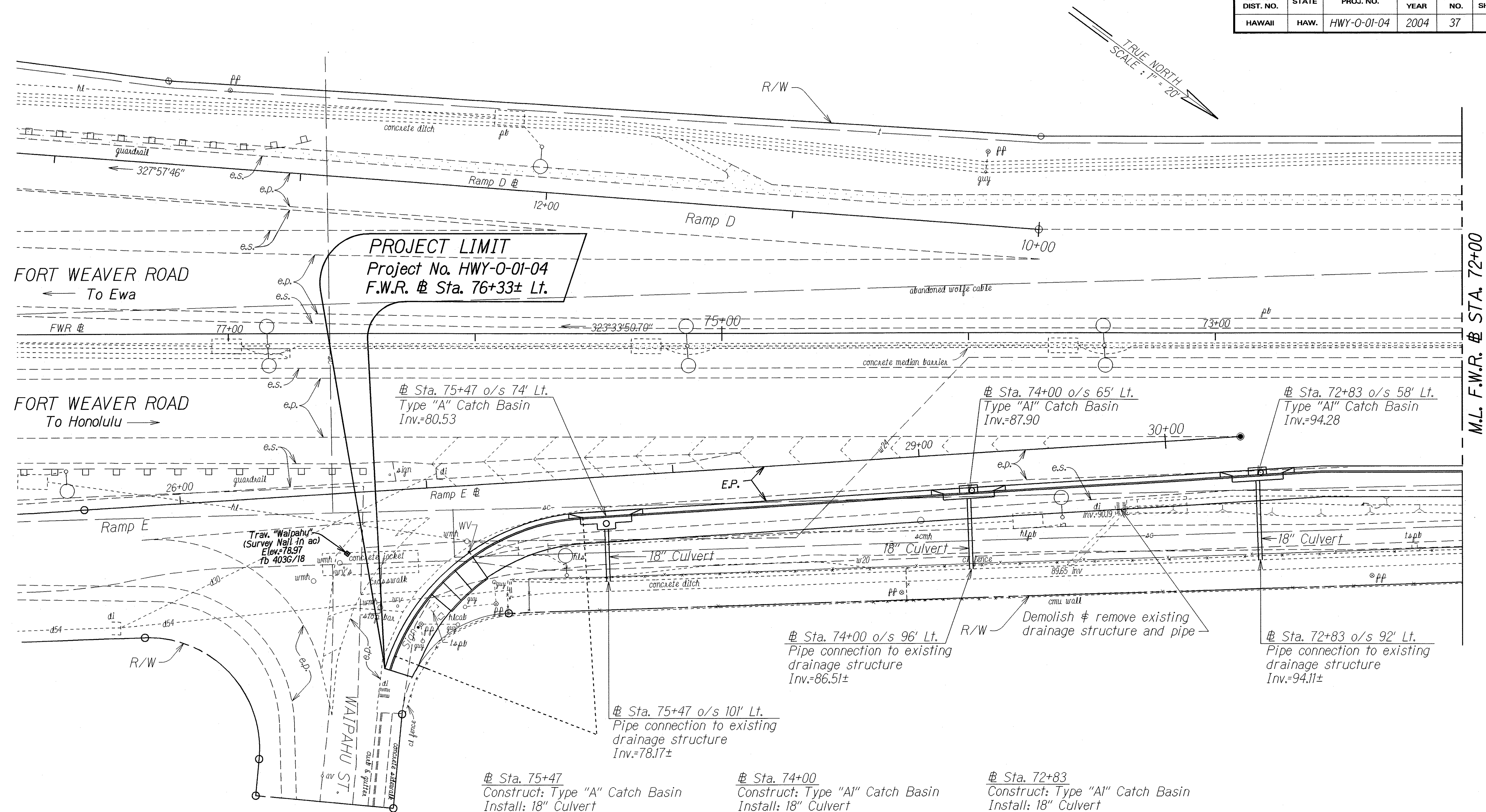


FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04	2004	37	61



DESIGNED BY	DATE
DRAWN BY	12/02/03
CHECKED BY	12/02/03
APPROVED BY	
REVISIONS	
QUANTITIES BY	
CHECKED BY	

Sta. 75+47
Construct: Type "A" Catch Basin
Install: 18" Culvert
Pipe connection to existing drainage structure
(For Detail, see Sht. No. H6)

Estimated Quantities

Type "A" Catch Basin 3.00 to 3.99 feet	= 1 Ea.
18" Culvert	= 22 L.F.
Pipe connection to existing drainage structure	= 1 Ea.
Structure Excavation for Drainage Systems	= 17 C.Y.
Bedcourse Material	= 4 C.Y.

Sta. 74+00
Construct: Type "A1" Catch Basin
Install: 18" Culvert
Pipe connection to existing drainage structure

Estimated Quantities

Type "A1" Catch Basin 3.00 to 3.99 feet	= 1 Ea.
18" Culvert	= 29 L.F.
Pipe connection to existing drainage structure	= 1 Ea.
Structure Excavation for Drainage Systems	= 23 C.Y.
Bedcourse Material	= 5 C.Y.

Sta. 72+83
Construct: Type "A1" Catch Basin
Install: 18" Culvert
Pipe connection to existing drainage structure

Estimated Quantities

Type "A1" Catch Basin 3.00 to 3.99 feet	= 1 Ea.
18" Culvert	= 33 L.F.
Pipe connection to existing drainage structure	= 1 Ea.
Structure Excavation for Drainage Systems	= 24 C.Y.
Bedcourse Material	= 6 C.Y.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN

KUNIA ROAD IMPROVEMENTS
VICINITY OF SOUTH KUPUNA LOOP TO
VICINITY OF HONOWAI STREET

Project No.: HWY-0-01-04

Scale: As Noted Date: December, 2003

SHEET No. **HI** OF 6 SHEETS

ML F.W.R. # STA. 72+00

Fort Weaver Road
To Ewa
To Honolulu

Stationing: 72+00, 70+00, 68+00, 66+00

Key Features:
 - concrete ditch
 - abandoned wire cable
 - concrete median barrier
 - 18" Culvert
 - 84" Culvert
 - Type "A" Catch Basin
 - Type "C" SDM
 - 48" Corrugated Aluminum Pipe
 - R/W
 - concrete sidewalk
 - relocated fire hydrant
 - sign
 - concrete wall

Station Details:
 - # Sta. 70+50 o/s 66' Lt. Type "A" Catch Basin Inv.=106.27
 - # Sta. 70+50 o/s 85' Lt. Pipe connection to existing drainage structure Inv.=106.20±
 - # Sta. 68+48 o/s 68' Lt. Type "A" Catch Basin Inv.=115.51
 - # Sta. 68+48 o/s 78' Lt. Type "C" SDM* Inv.=115.45 (18" In) Inv.=112.21± (48")

Note: Outside dimension of Type "C" SDM to be 6'-6" in lieu of 6'-0". For reinforcing, refer to Std. Plan H-05.

Scale: TRUE NORTH SCALE: 1" = 20'

Estimated Quantities:

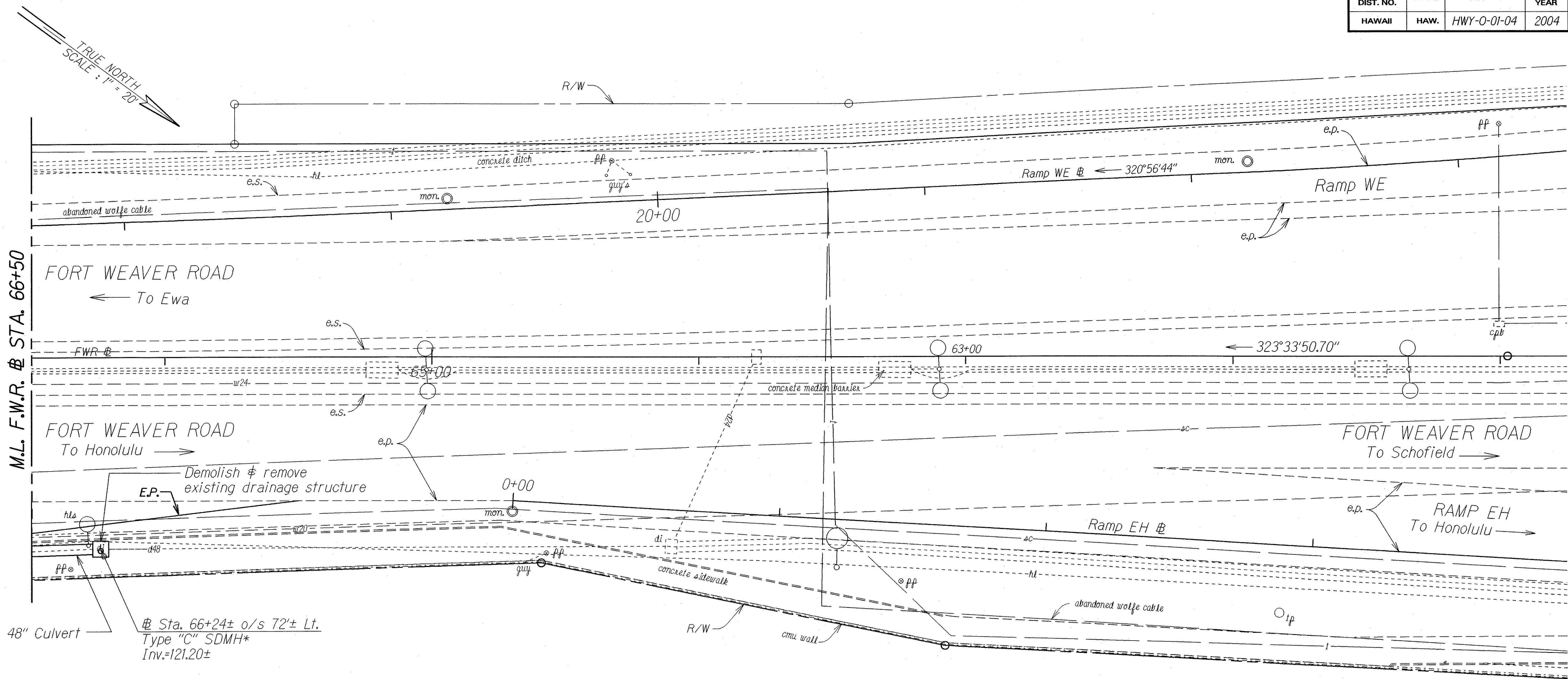
Station Range	Construction	Installation
# Sta. 70+50	Construct: Type "A" Catch Basin	Install: 18" Culvert
# Sta. 68+48 to # Sta. 66+64	Construct: Type "A" Catch Basin	Install: 18" Culvert
# Sta. 66+64 to # Sta. 66+24	Construct: Type "A" Catch Basin	Install: 48" Corrugated Aluminum Pipe

Other Labels: KIPOU, HO, STREET

<u>Estimated Quantities</u>	
Type "A" Catch Basin	
8.00 to 8.99 feet	= 1 Ea.
48" Corrugated Aluminum Pipe	= 40 L.F.
Structure Excavation	
for Drainage Systems	= 87 C.Y.
Bedcourse Material	= 10 C.Y.

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FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04	2004	39	61



M.L. F.W.R. # STA. 66+50

FORT WEAVER ROAD

← To Ewa

FORT WEAVER ROAD

To Honolulu →

FORT WEAVER ROAD

To Schofield →

48" Culvert

Sta. 66+24± o/s 72'± Lt.
Type "C" SDMH*
Inv.=121.20±

Sta. 66+24±
Construct: Type "C" SDMH*

Estimated Quantities
Type "C" SDMH*
8.00 to 8.99 feet = 1 Ea.

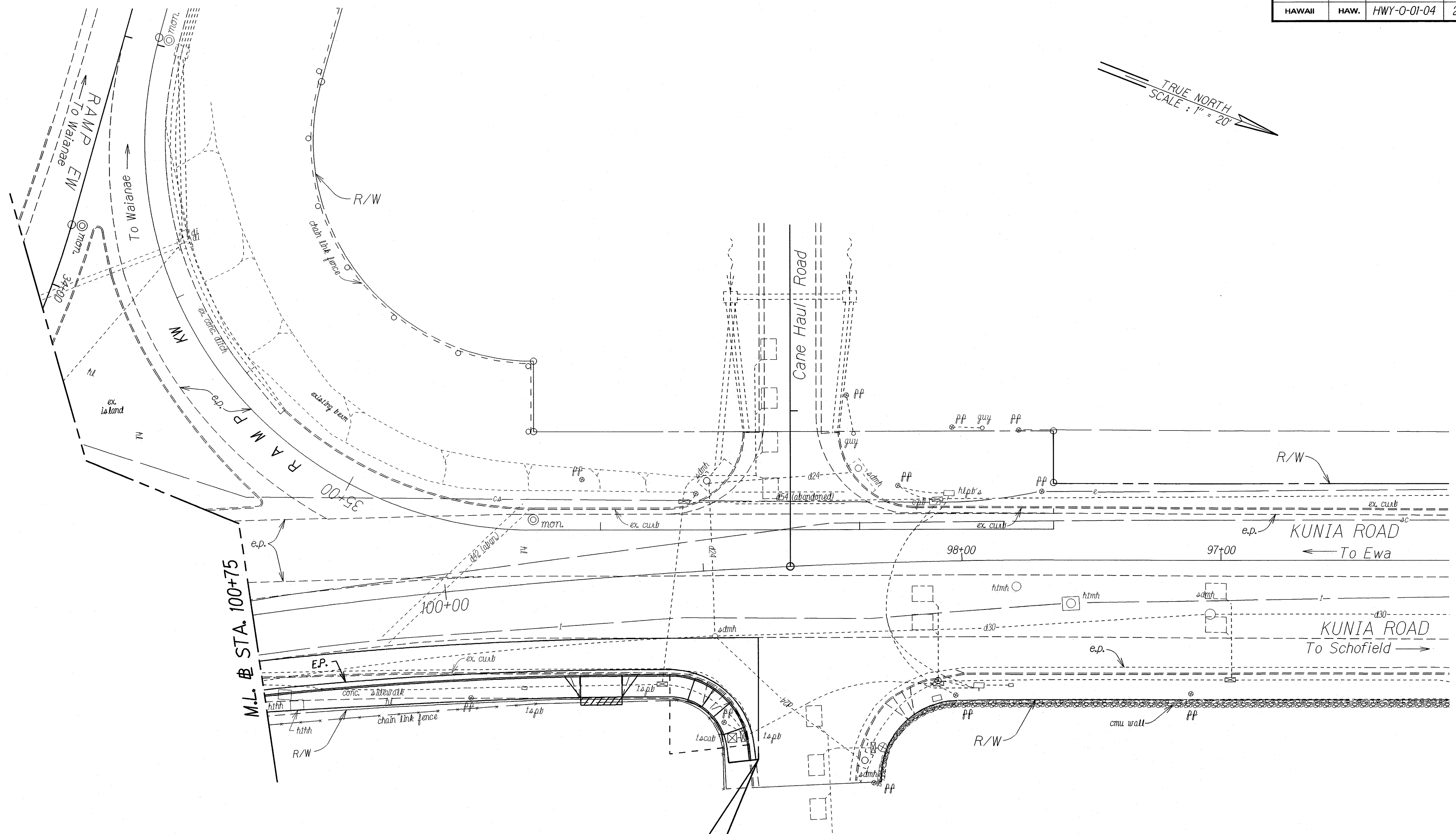
*Note: Outside dimension of
Type "C" SDMH to be 6'-6"
in lieu of 6'-0". For reinforcing,
refer to Std. Plan H-05.

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	<u>LHC</u>	<u>12/09/03</u>
NOTE BOOK	DRAWN BY	
<u>dn2-us-2jona</u>	<u>RAK JM</u>	<u>12/09/03</u>
<u>5kn5lump003</u>	DESIGNED BY	
	<u>ANTITIES BY</u>	
	CHECKED BY	
	<u>Ne</u>	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN
KUNIA ROAD IMPROVEMENTS
VICINITY OF SOUTH KUPUNA LOOP TO
VICINITY OF HONOWAI STREET
Project No.: HWY-0-01-04
Scale: As Noted Date: December, 2003
SHEET No. H3 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04	2004	41	61



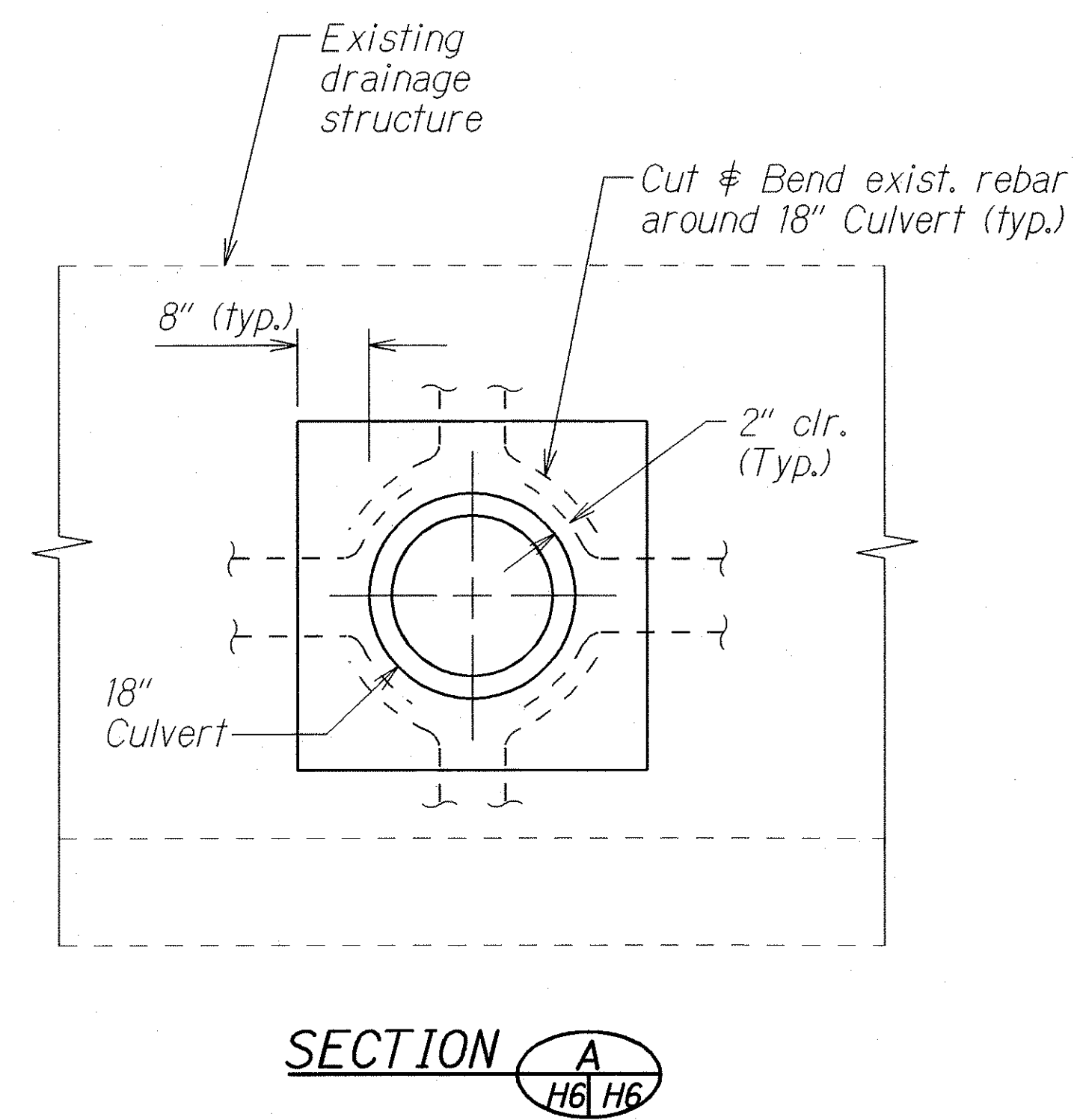
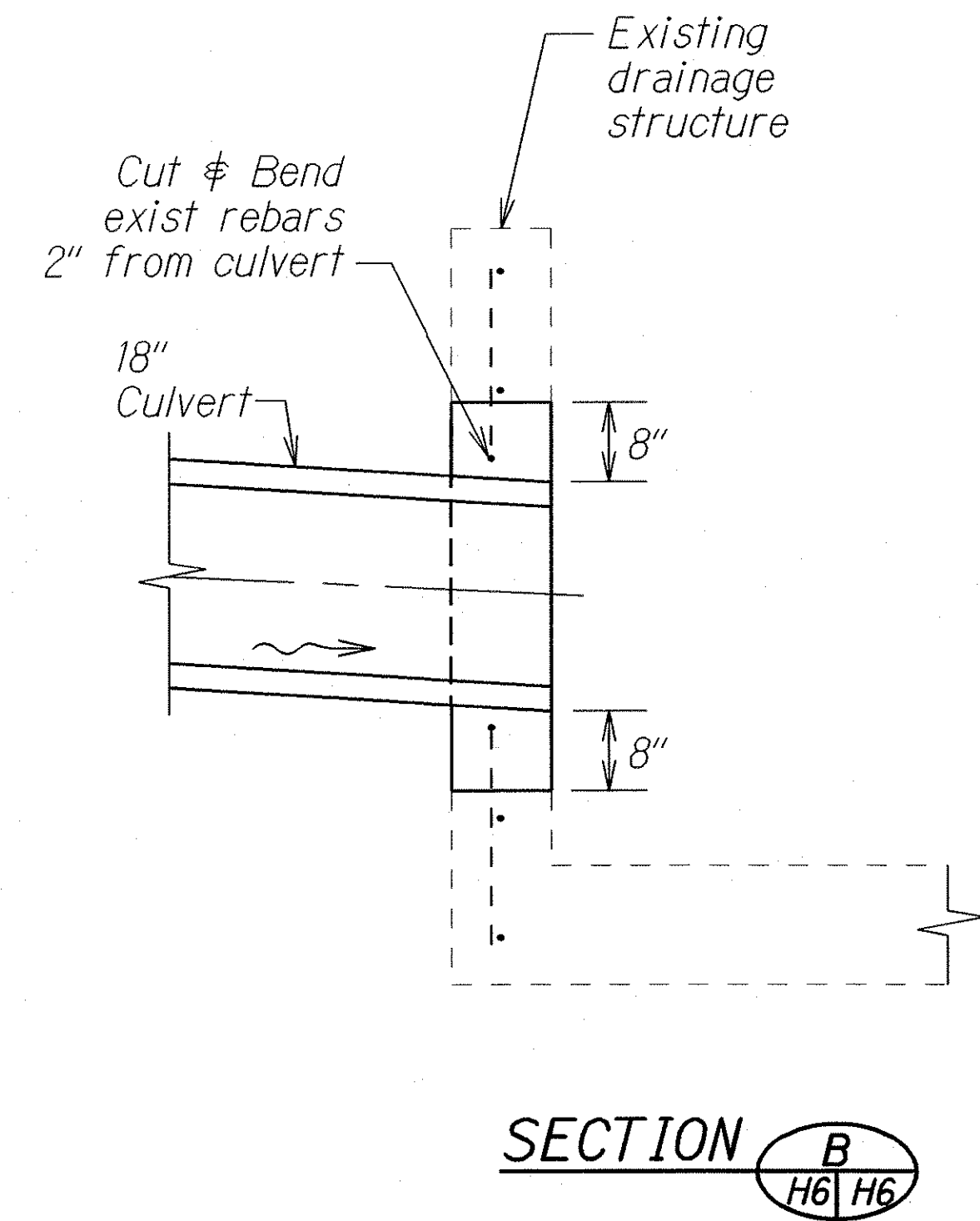
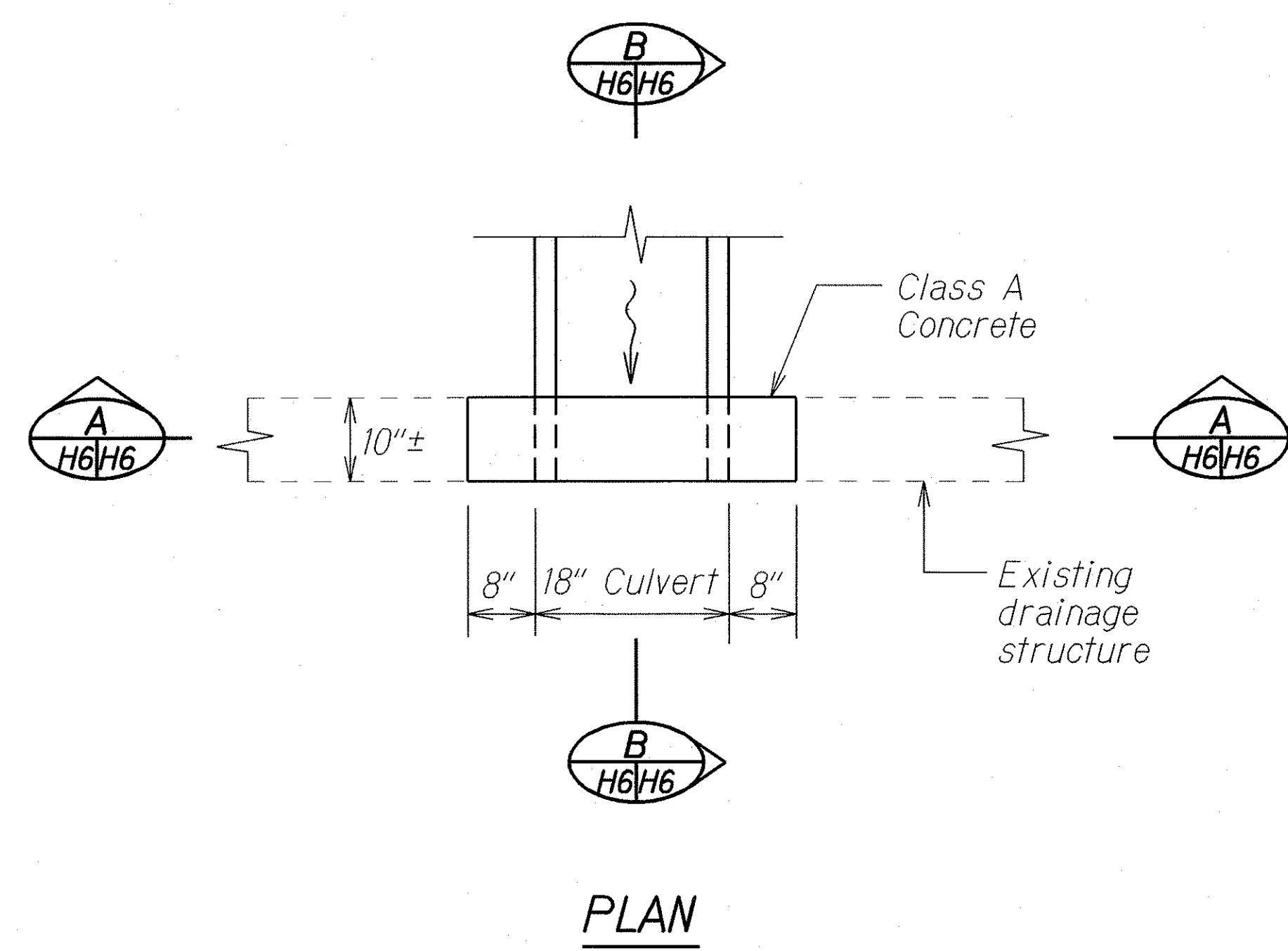
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	12/09/03
REVISIONS	CHECKED BY	12/09/03
NO.		

PROJECT LIMIT
Project No. HWY-0-01-04
Kunia Road @ Sta. 98+83± Lt.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE PLAN
KUNIA ROAD IMPROVEMENTS
VICINITY OF SOUTH KUPUNA LOOP TO
VICINITY OF HONOWAI STREET
Project No.: HWY-0-01-04
Scale: As Noted Date: December, 2003
SHEET No. H5 OF 6 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	HWY-0-01-04	2004	42	61



DETAIL OF 18" CULVERT CONNECTION TO EXISTING DRAINAGE STRUCTURE

ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
NOTE BOOK	DRAWN BY	01/23/03
DESIGNED BY	CHECKED BY	
APPROVED BY		

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

KUNIA ROAD IMPROVEMENTS
VICINITY OF SOUTH KUPUNA LOOP TO
VICINITY OF HONOWAI STREET

Project No.: HWY-0-01-04
Scale: 3/4"=1'-0" Date: December, 2003

SHEET No. H6 OF 6 SHEETS