

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0900(14)	1981	2	10/11

CDI @ ALA MALAMA ST. LT.
Construct: CDI w/4 Grates
Reconstruct: Existing curb
Install: 18" Slotted CMP Drain
18" CMP sh. "t" = 0.079"

ESTIMATED QUANTITIES
Structure Excavation = 29 C.Y.
Class "A" Concrete = 3 C.Y.
18" CMP = 48 L.F.
18" Slotted Drain = 28 L.F.
Type "A-12" Frame & Grate = 4 Ea.
Pavement Restoration = 260 S.F.

CDI @ ALA MALAMA ST. RT.
Construct: CDI w/6 Grates
Reconstruct: Existing curb
Demolish existing CDI

ESTIMATED QUANTITIES
Structure Excavation = 11 C.Y.
Class "A" Concrete = 3 C.Y.
Type "A-12" Frame & Grate = 6 Ea.

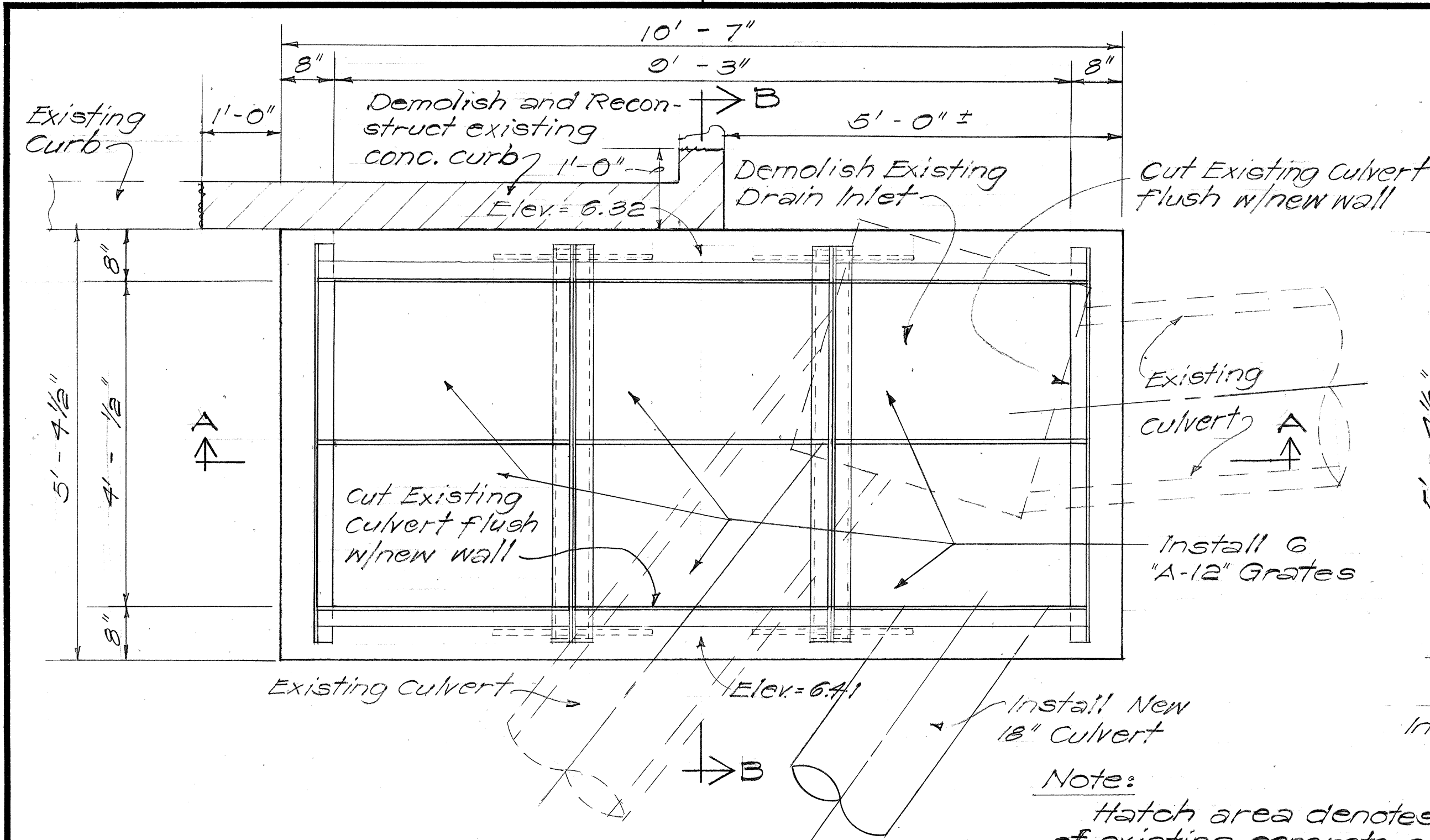
GENERAL NOTES:

1. Utilities shown are approximate, the contractor shall verify the exact locations in the field.
2. Demolishing of existing concrete drop intake and reconstruction of existing concrete curb shall not be paid for separately, but shall be considered incidental to the various contract items.
3. The contractor shall clean out the existing catch basin and the existing 18" and 24" concrete pipes. This work shall not be paid for separately, but shall be considered incidental to the various contract items.
4. Existing pavement shall be restored to the satisfaction of the Engineer.
5. During installation of the 18" Slotted CMP Drain, the Contractor shall conduct his work so that access to the affected Service Station entrance is not closed at all times.

PLAN
Scale: 1" = 10'

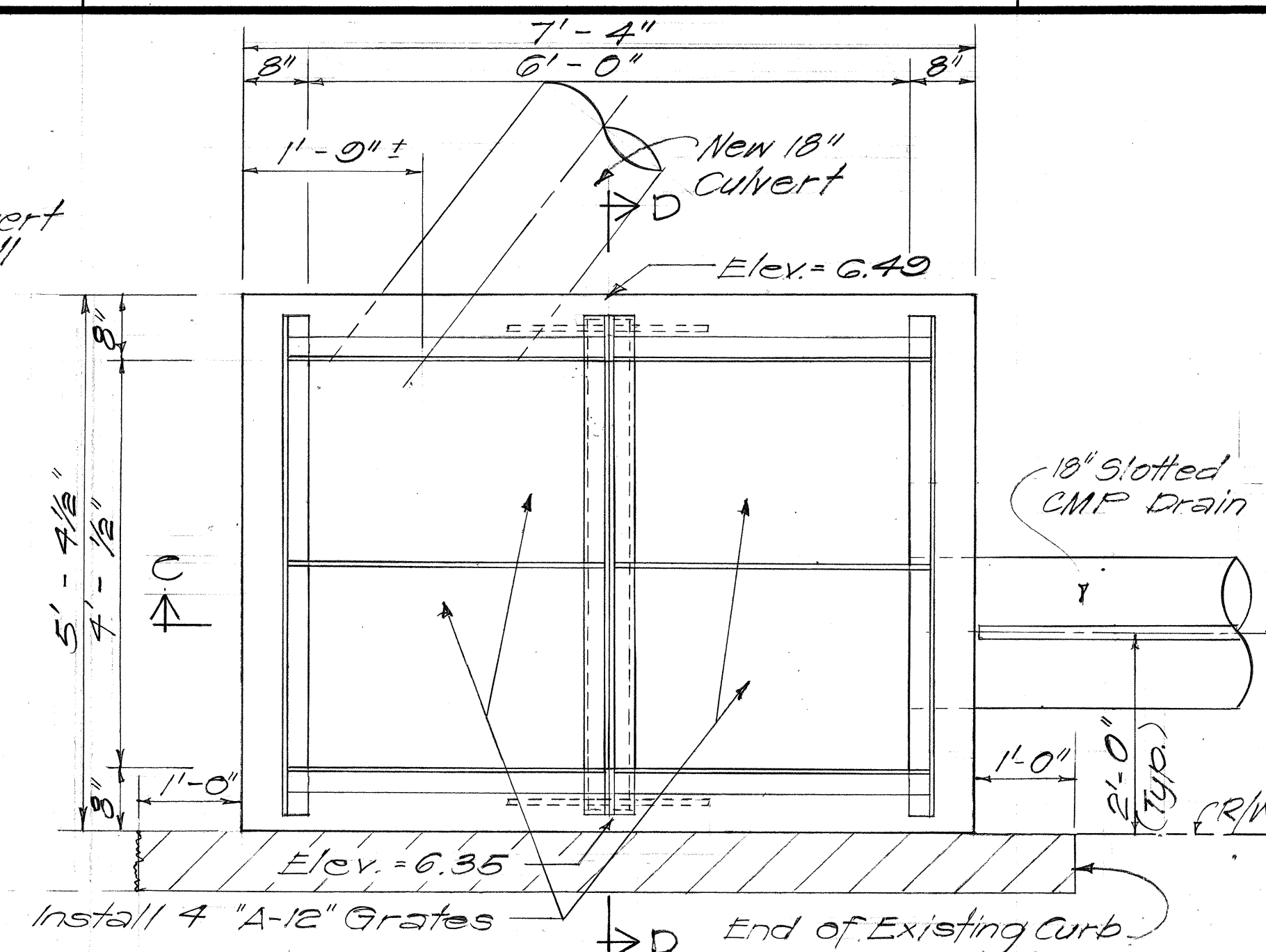
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLAN FOR
KAMEHAMEHA IV & MAUNALO A HWY
DRAINAGE IMPROVEMENTS
KAUNAKAKAI INTERSECTION
PROJ. NO. RS-0900(14)
Scale: As Shown Date: Aug, 1980
SHEET No. 1 OF 2 SHEETS

TS. 140(4) 1980 3 10

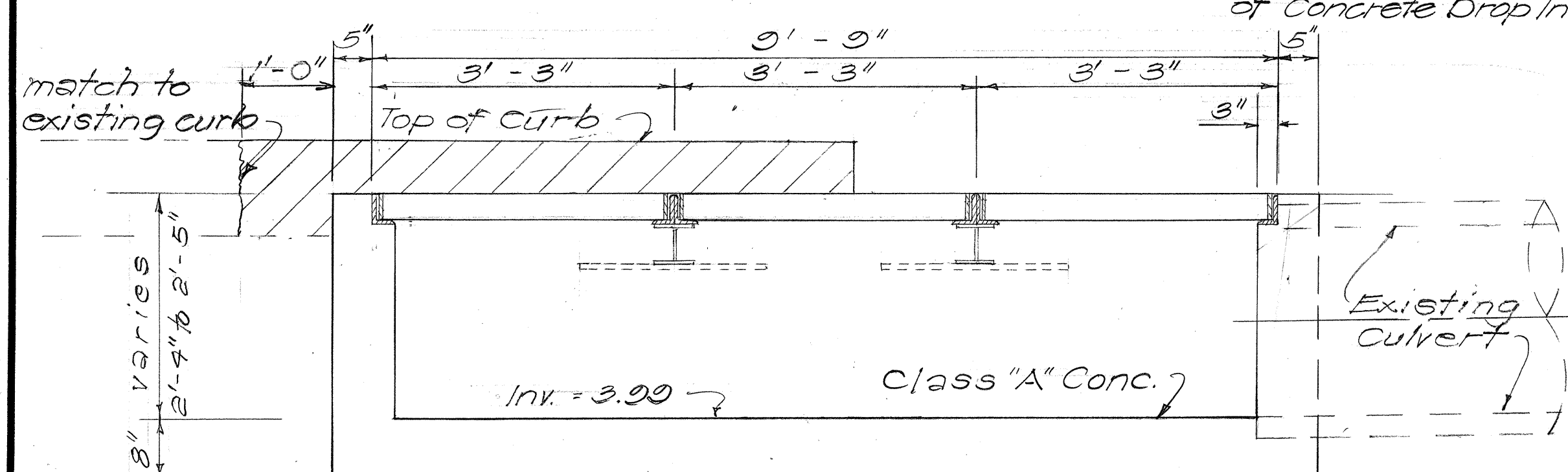


PLAN

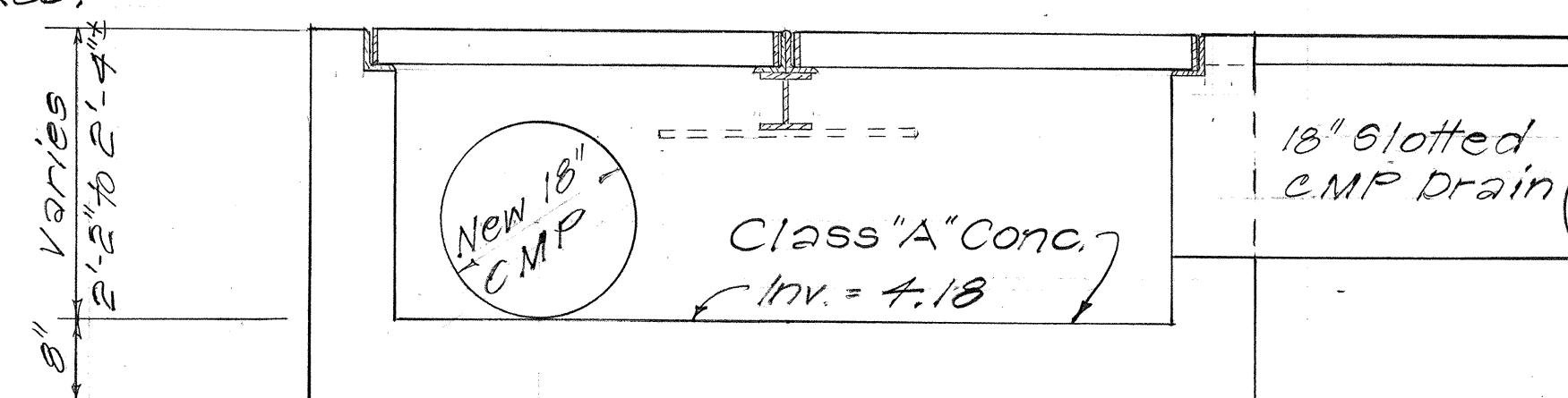
Note:
Hatch area denotes limit
of existing concrete curb to be
restored after construction
of concrete drop in takes.



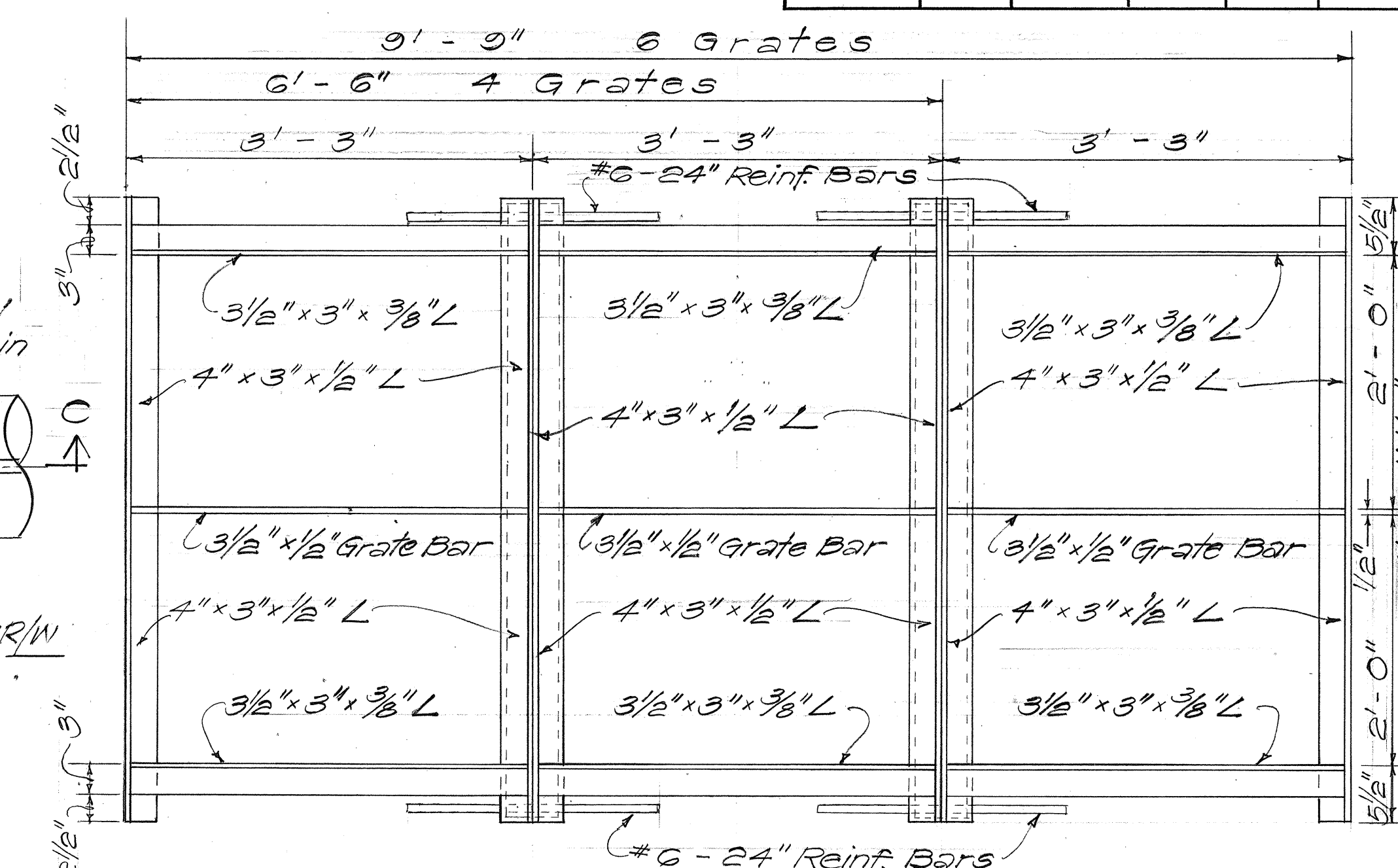
PLAN



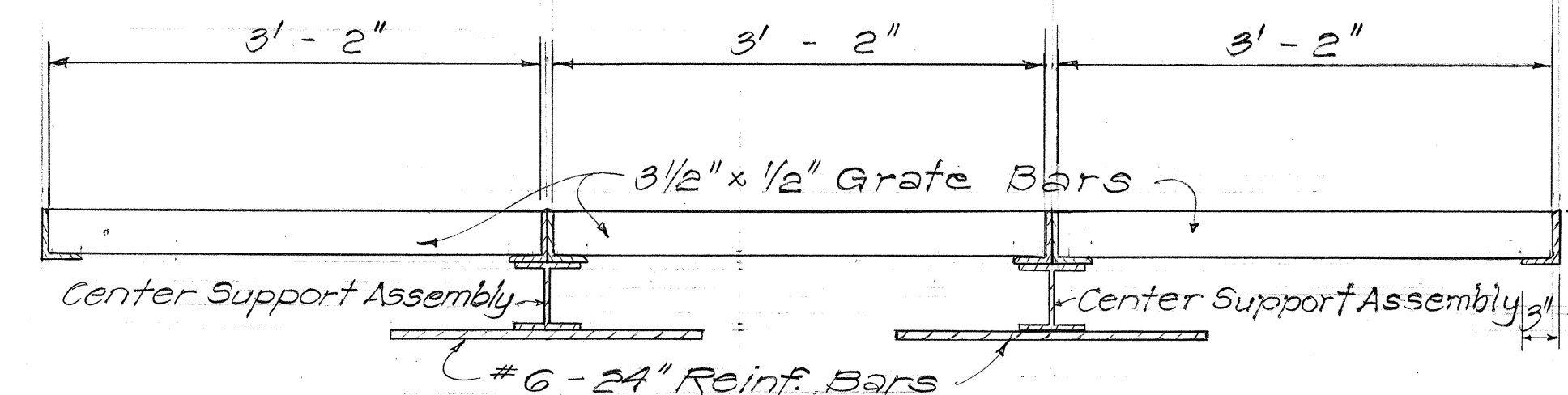
SECTION A-A



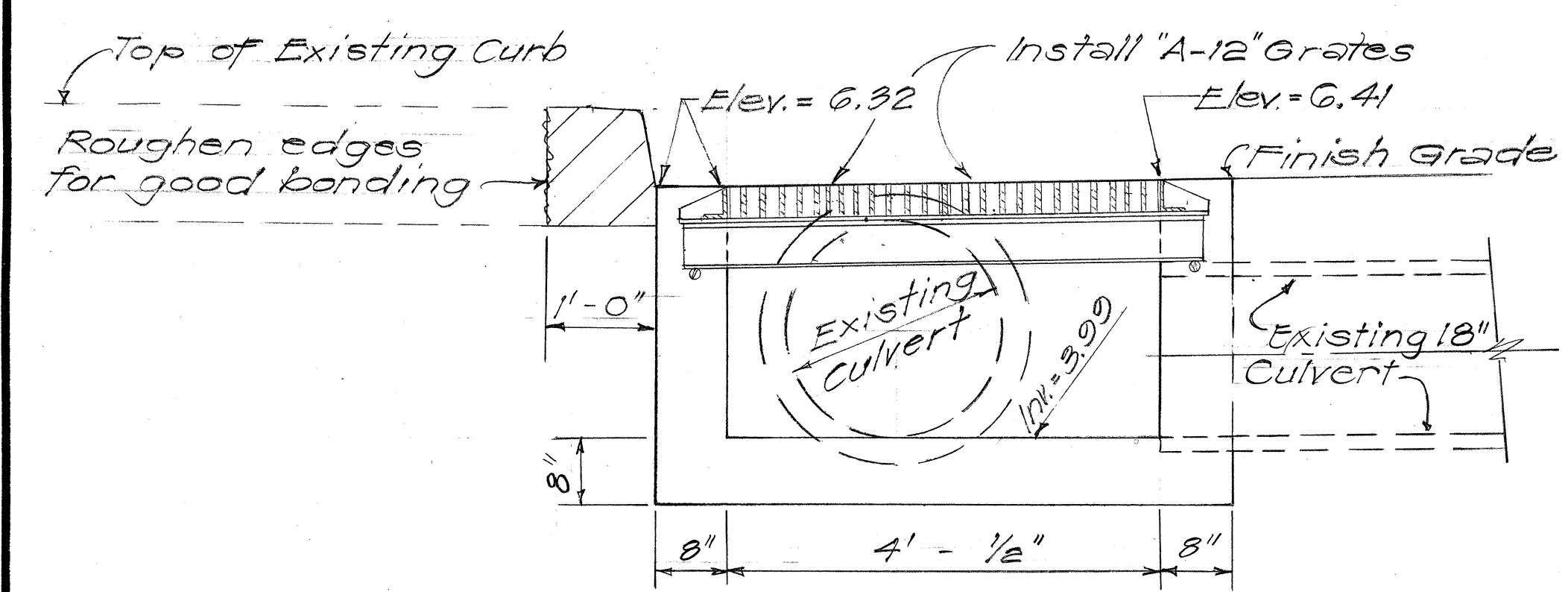
SECTION C-C



PLAN



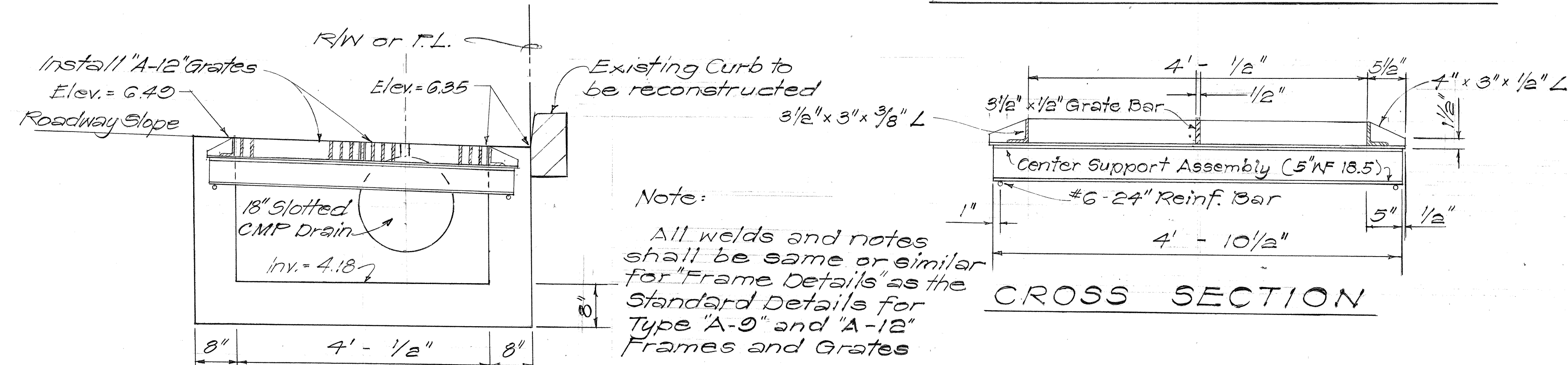
LONGITUDINAL SECTION



SECTION B-B

DETAILS OF SIX (6) GRATES - C.D. 1.
AT ALA MALAMA ST. RT.

Scale: $\frac{3}{4}" = 1'-0"$



CROSS SECTION

FRAME DETAILS

Scale: 1" = 1' - 0"

Note: _____ 1"

All welds and notes shall be same or similar for "Frame Details" as the Standard Details for Type "A-0" and "A-12" Frames and Grates.

DETAILS OF FOUR (4) GRATES-C.D.1.
AT ALA MALAMA ST. LT.

Scale: $\frac{3}{4}" = 1' - 0"$

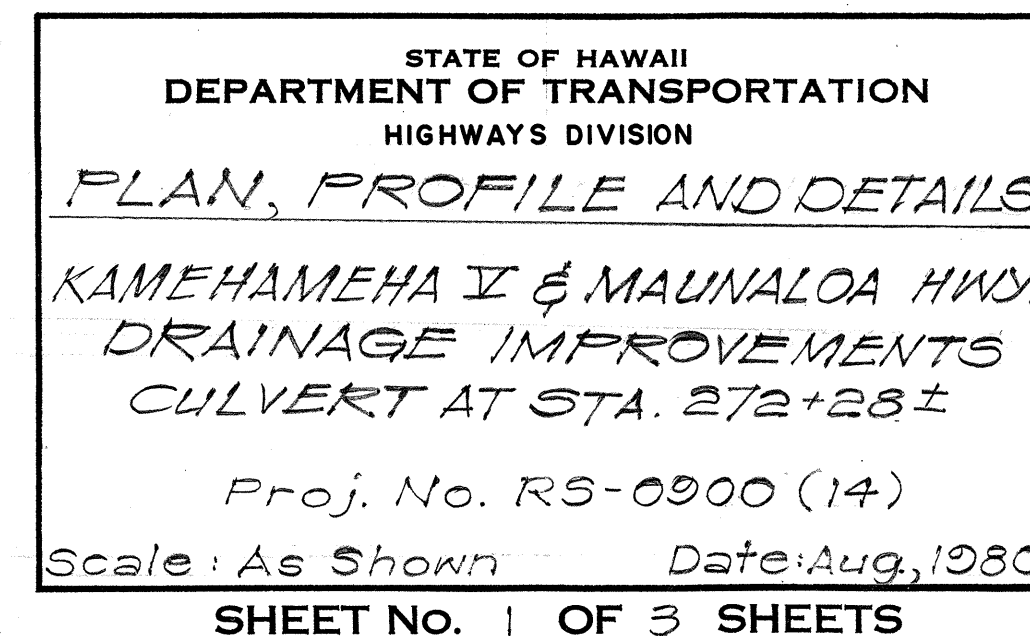
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DETAILS OF C.D.I. WITH
FRAMES AND GRATES

KAMEHAMEHA V & MAUNALOA HWY
DRAINAGE IMPROVEMENTS
KAUNAKAKAI INTERSECTION
Project No. RS-0900(14)

Scale: As Shown Date: Aug, 1980
SHEET No. 2 OF 2 SHEETS

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

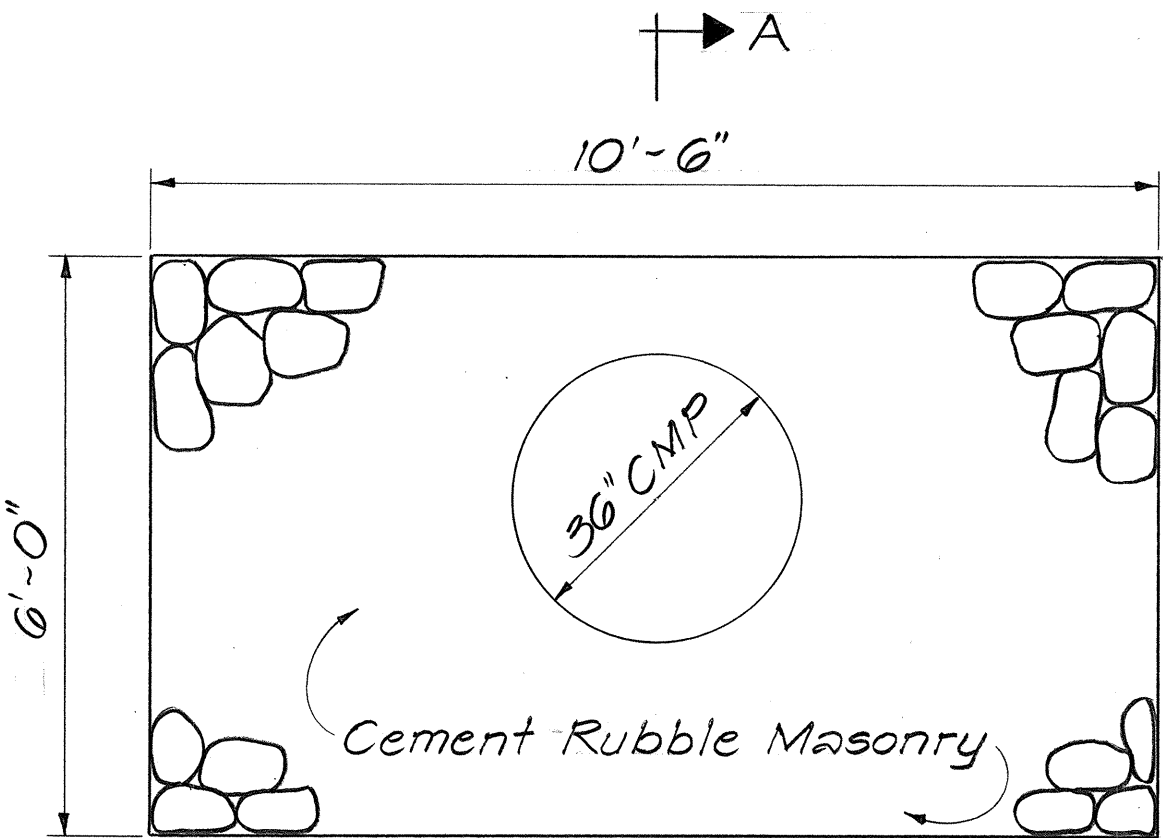


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0900(14)	1981	5	10-11

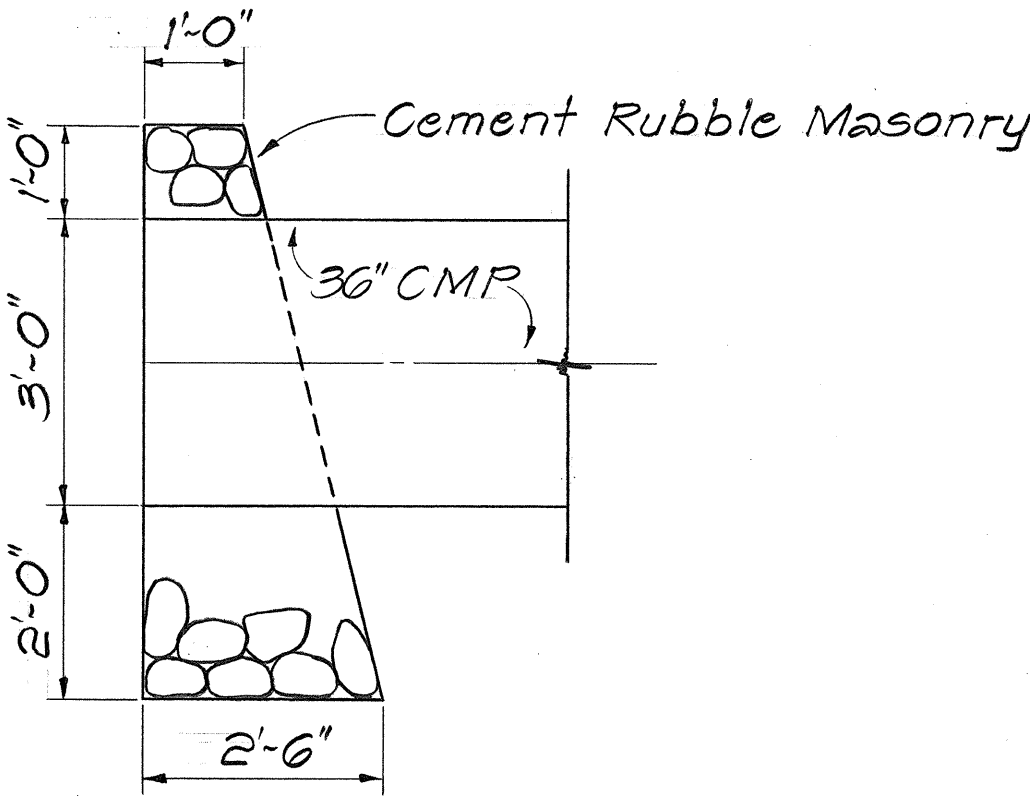
MAUNALOA HWY ROAD PLAN STA. 296+45 ±
Construct: 2 CRM Headwalls
Install: 36" Culvert

ESTIMATED QUANTITIES

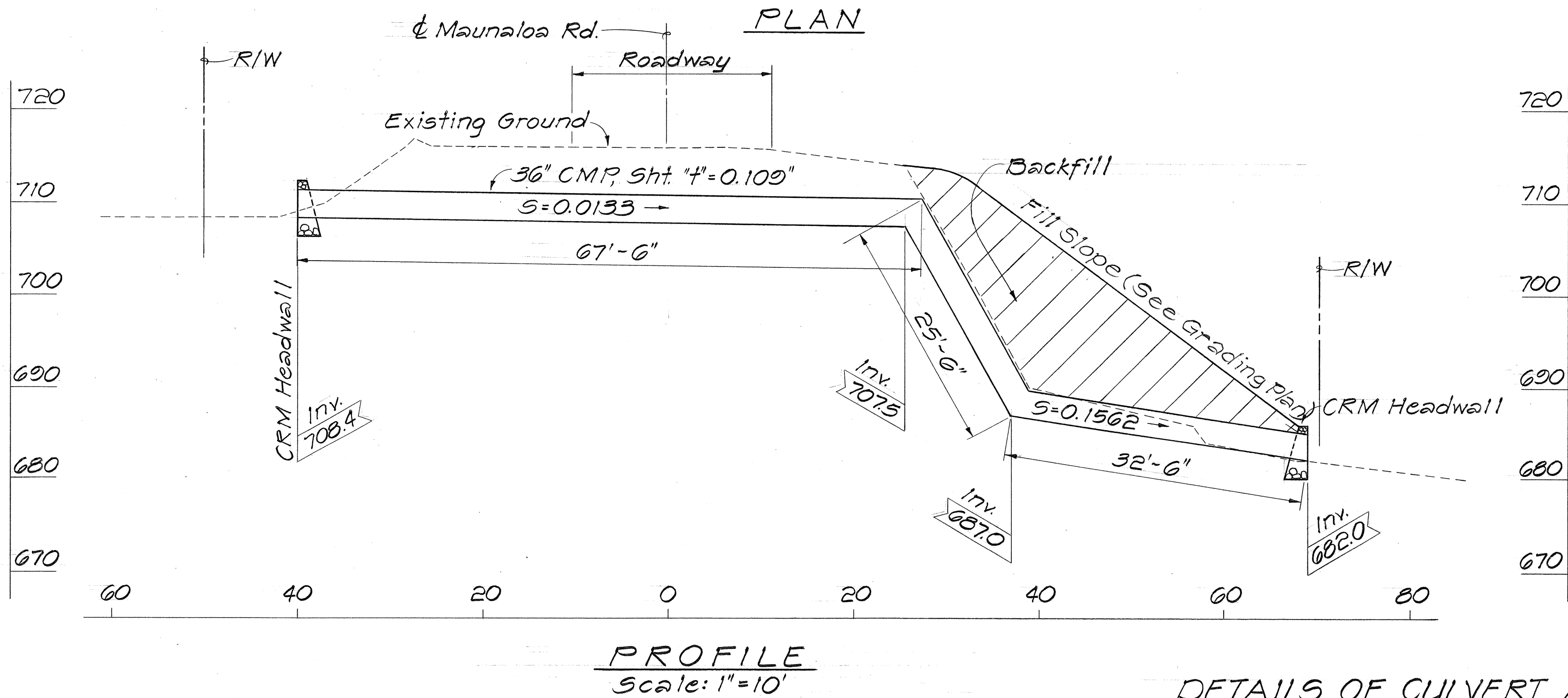
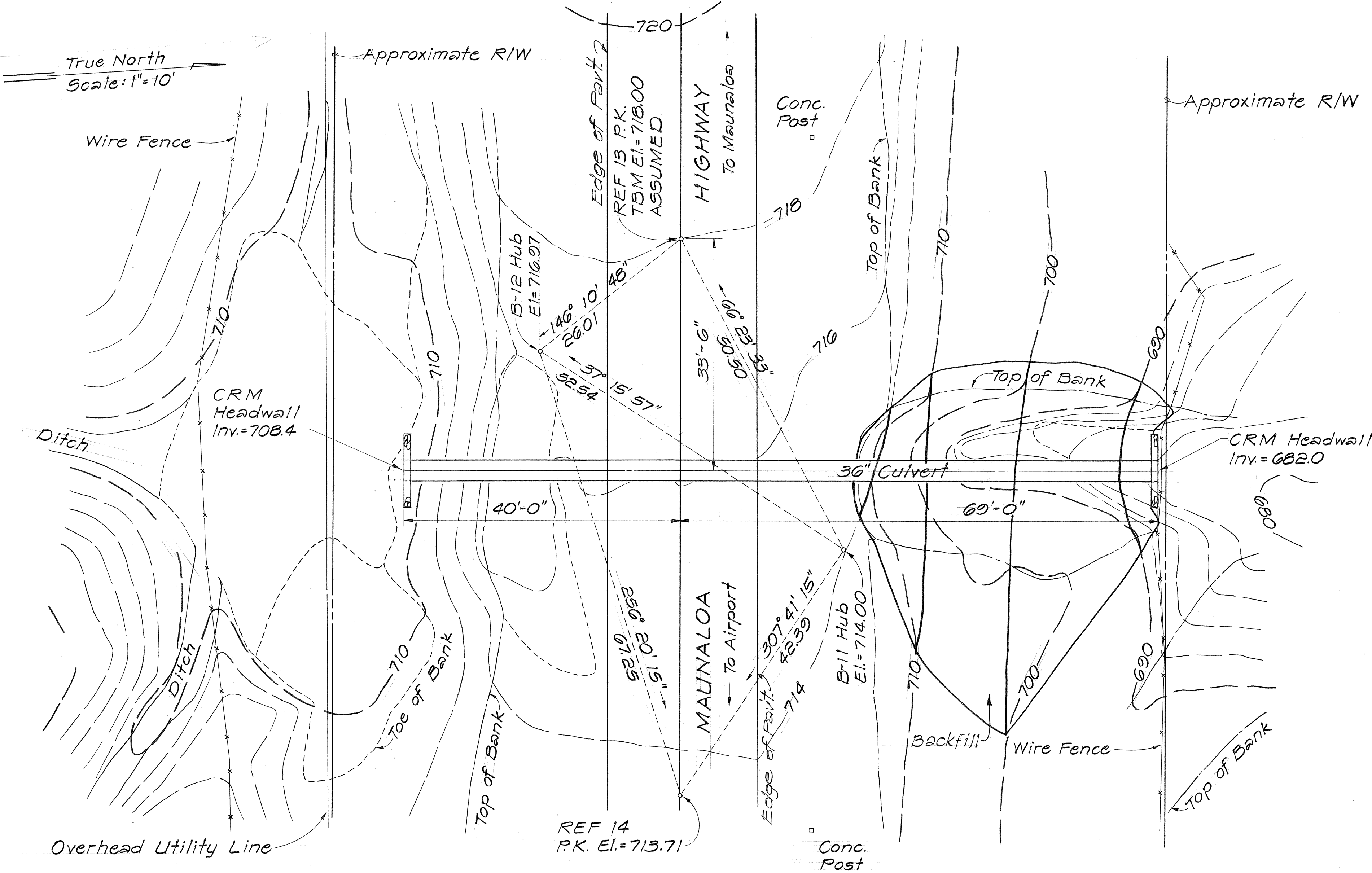
36" CMP, Sht. "4"=0.109" = 126 L.F.
CRM = 8 C.Y.
Structural Excavation = 140 C.Y.
Restoration of Existing Pavement = 120 S.F.
Imported Borrow = 315 C.Y.
Hydro-Mulch Seeding = 2,020 S.F.



FRONT ELEVATION



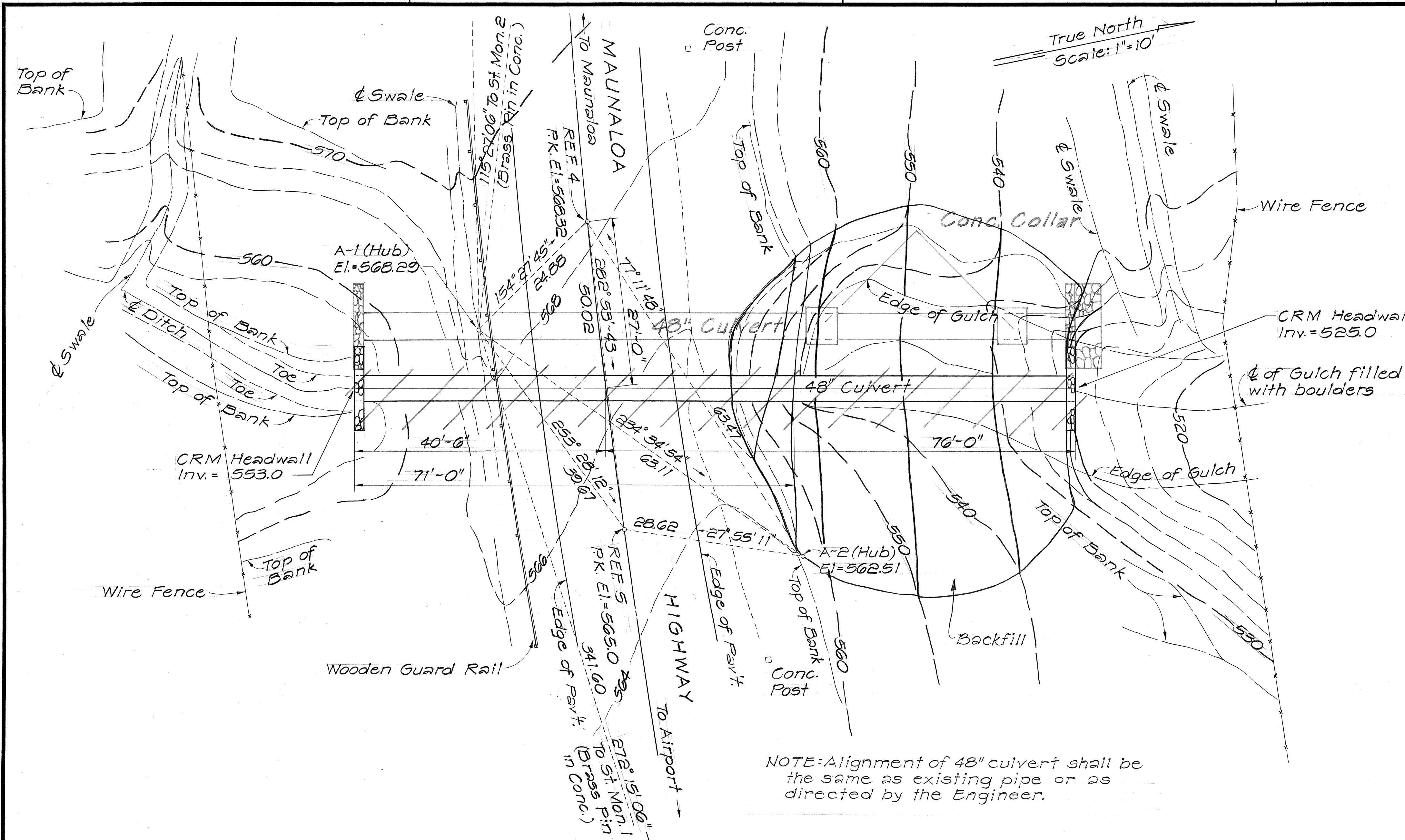
SECTION "A-A"
CRM HEADWALL
Scale: 1/2"=1'-0"



DETAILS OF CULVERT AT MAUNALOA HWY. ROAD PLAN STA. 296+45 ±

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLAN, PROFILE AND DETAILS
KAMEHAMEHA II & MAUNALOA HWY.
DRAINAGE IMPROVEMENTS
CULVERT AT STA. 296+45 ±
Proj. No. RS-0900 (14)
Scale: As Shown Date: Aug. 1980
SHEET No. 2 OF 3 SHEETS

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

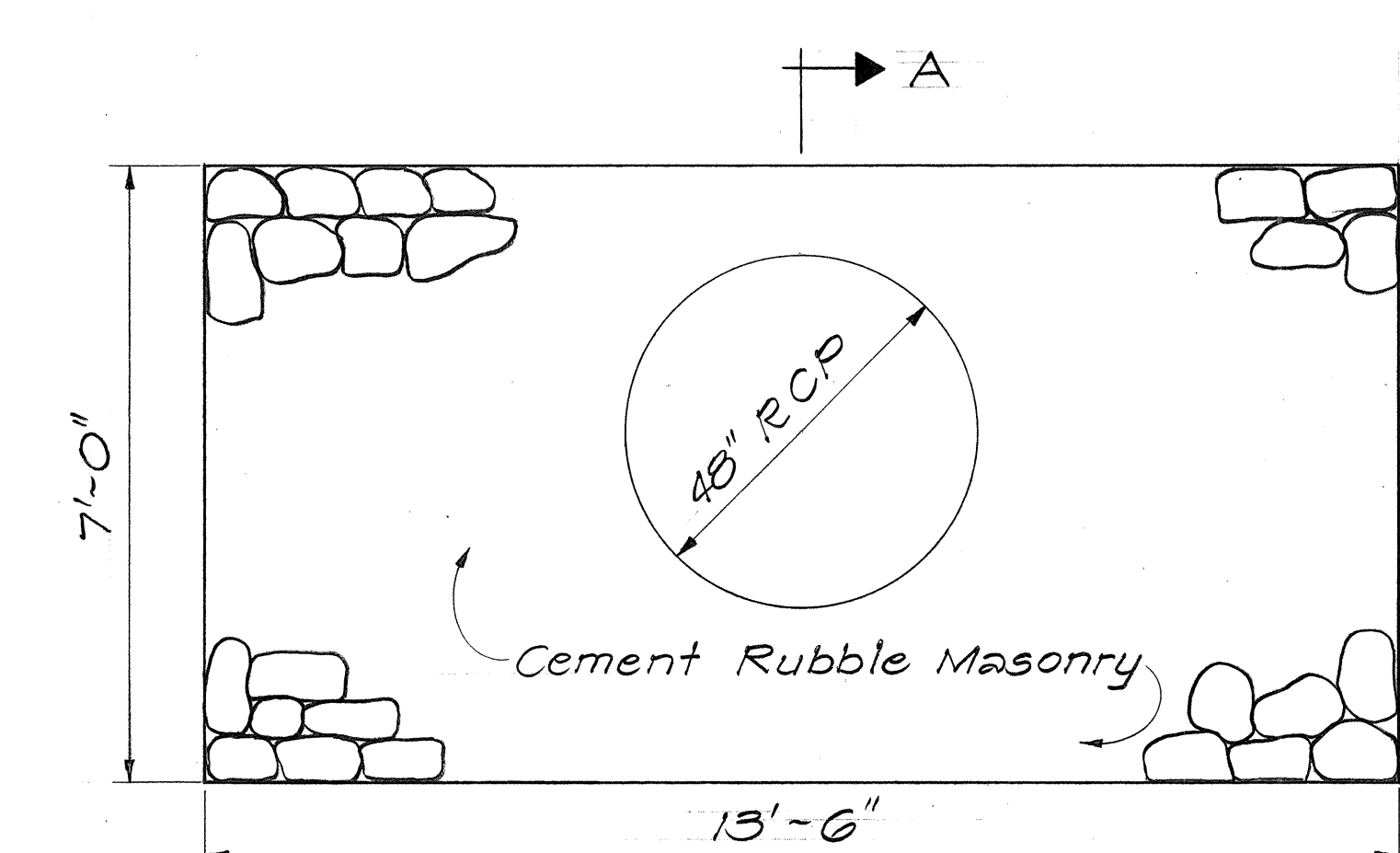


MAUNALOA HWY. RD. PLAN STA. 321+50±
Construct: 2 CRM Headwalls
Install: 48" Culvert

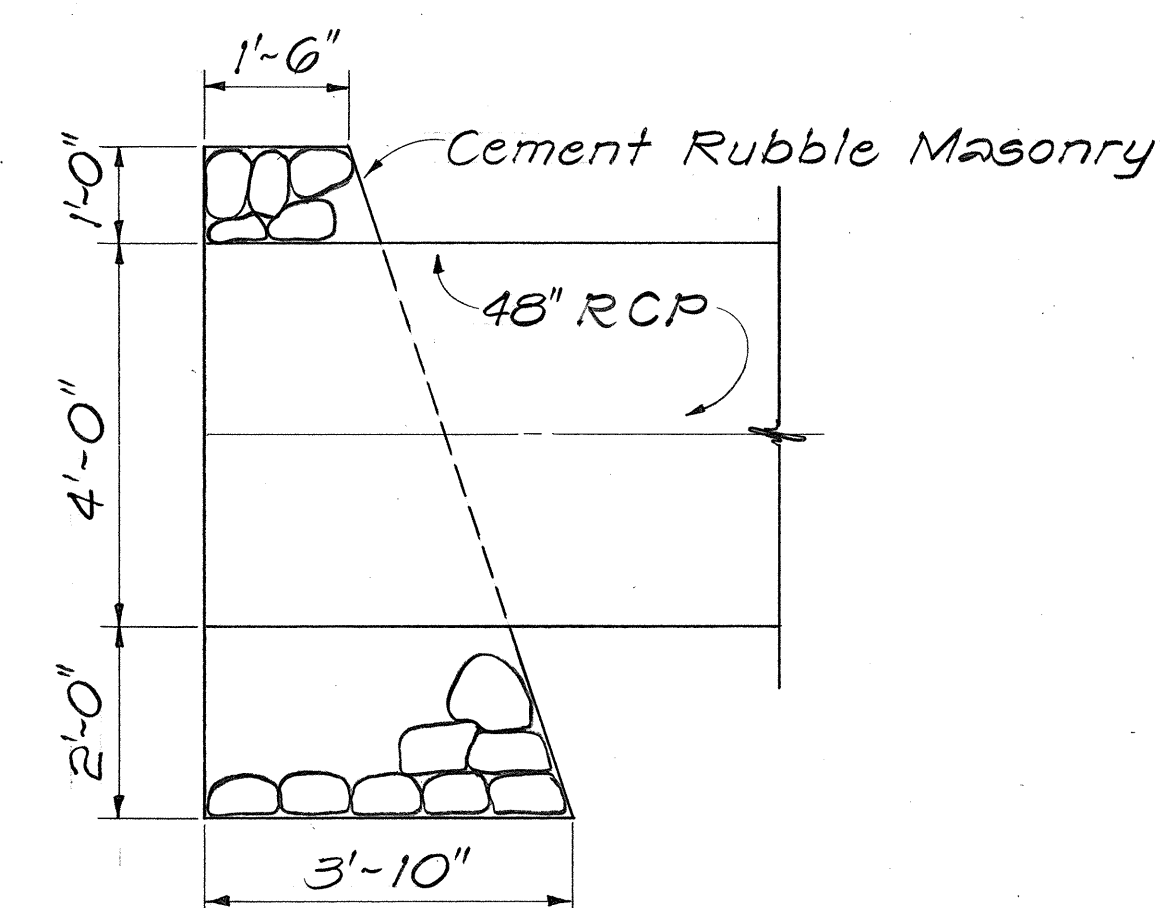
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0900(14)	1981	6	10/11

ESTIMATED QUANTITIES

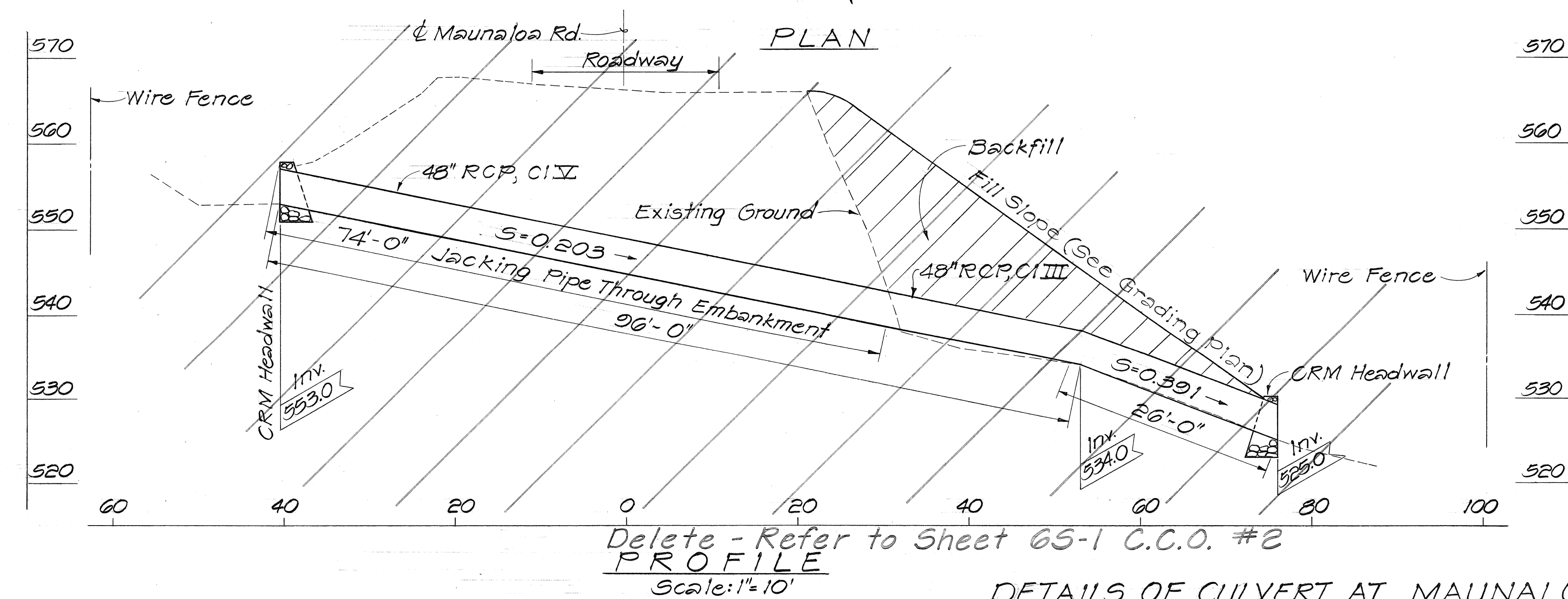
48" RCP, C.I. III	=	48	L.F.
CRM	=	19	C.Y.
Structure Excavation	=	98	C.Y.
48" RCP, C.I. V	=	74	L.F.
(Jacking Pipe Through Embankment)	=	800	C.Y.
Imported Borrow	=	3,780	S.F.
Hydro-Mulch Seeding	=		



FRONT ELEVATION



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



DETAILS OF CULVERT AT MAUNALOA HWY. ROAD PLAN STA. 321+50±

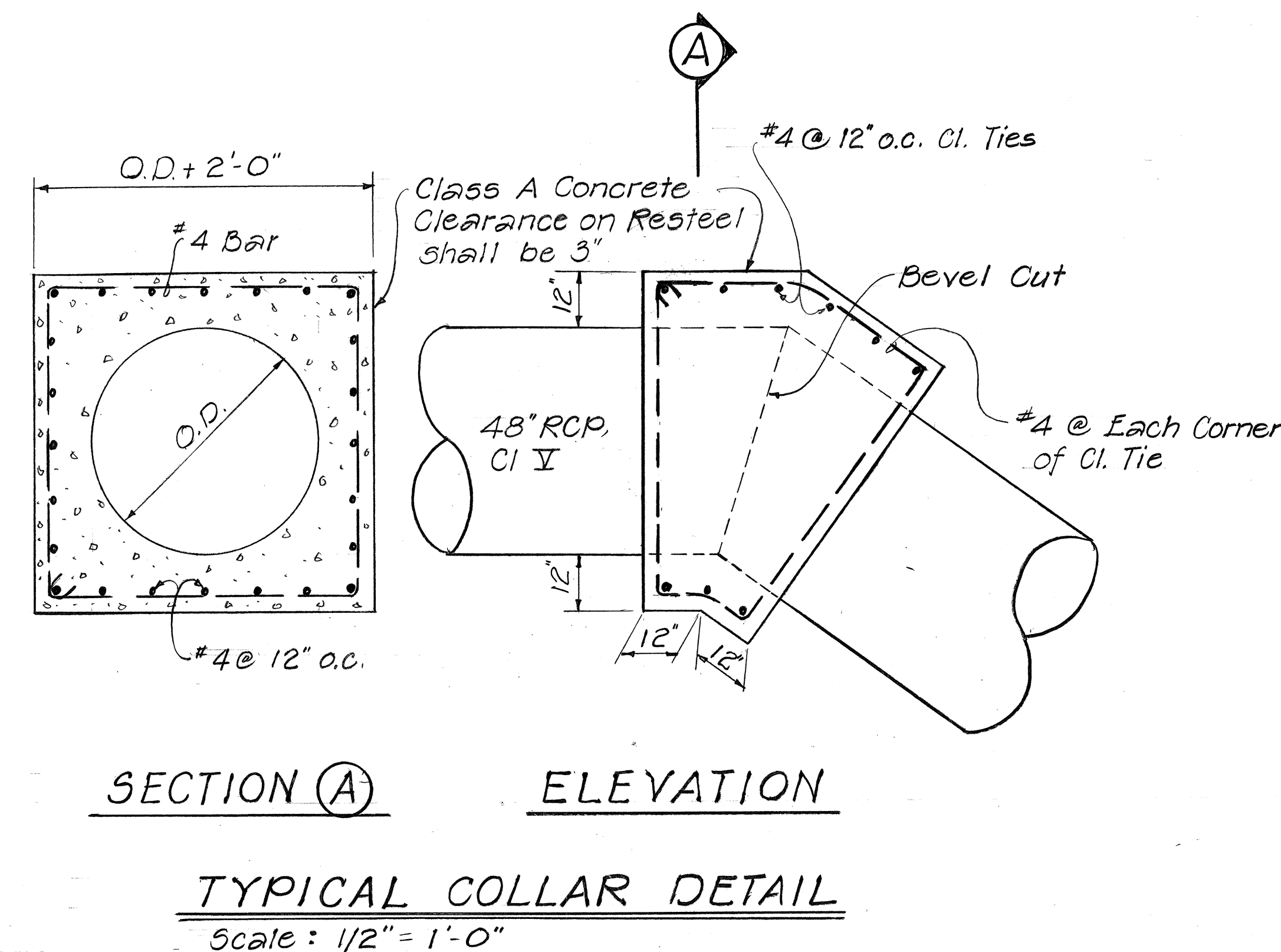
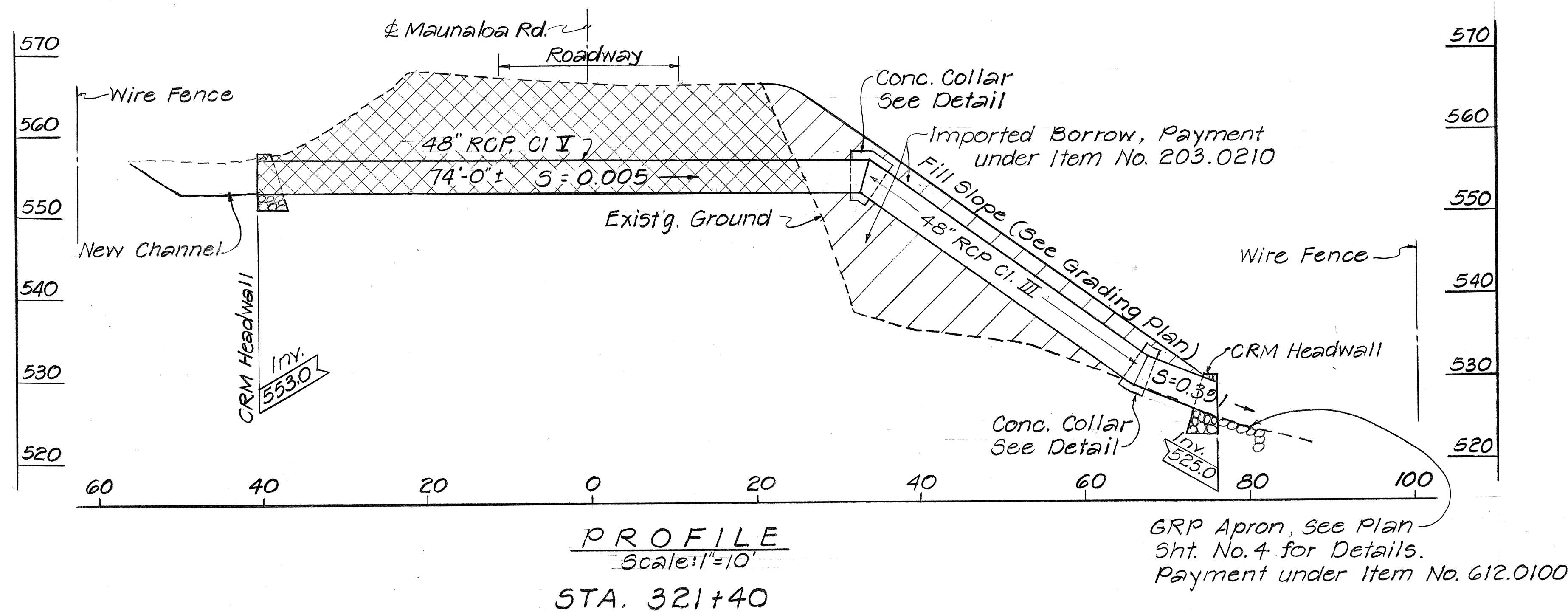
DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
NOTED BY	_____
CHECKED BY	_____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
PLAN, PROFILE AND DETAILS
KAMEHAMEHA I & MAUNALOA HWY.
DRAINAGE IMPROVEMENTS
CULVERT AT STA. 321+50±
Proj. No. RS-0900 (14)
Scale: As Shown Date: Aug, 1980
SHEET No. 3 OF 3 SHEETS

NOTE: Structure Excavation, Laying 48" RCP, Trench backfill for culvert, Concrete Collars will be paid for by Force Account Item No. 603.1001A

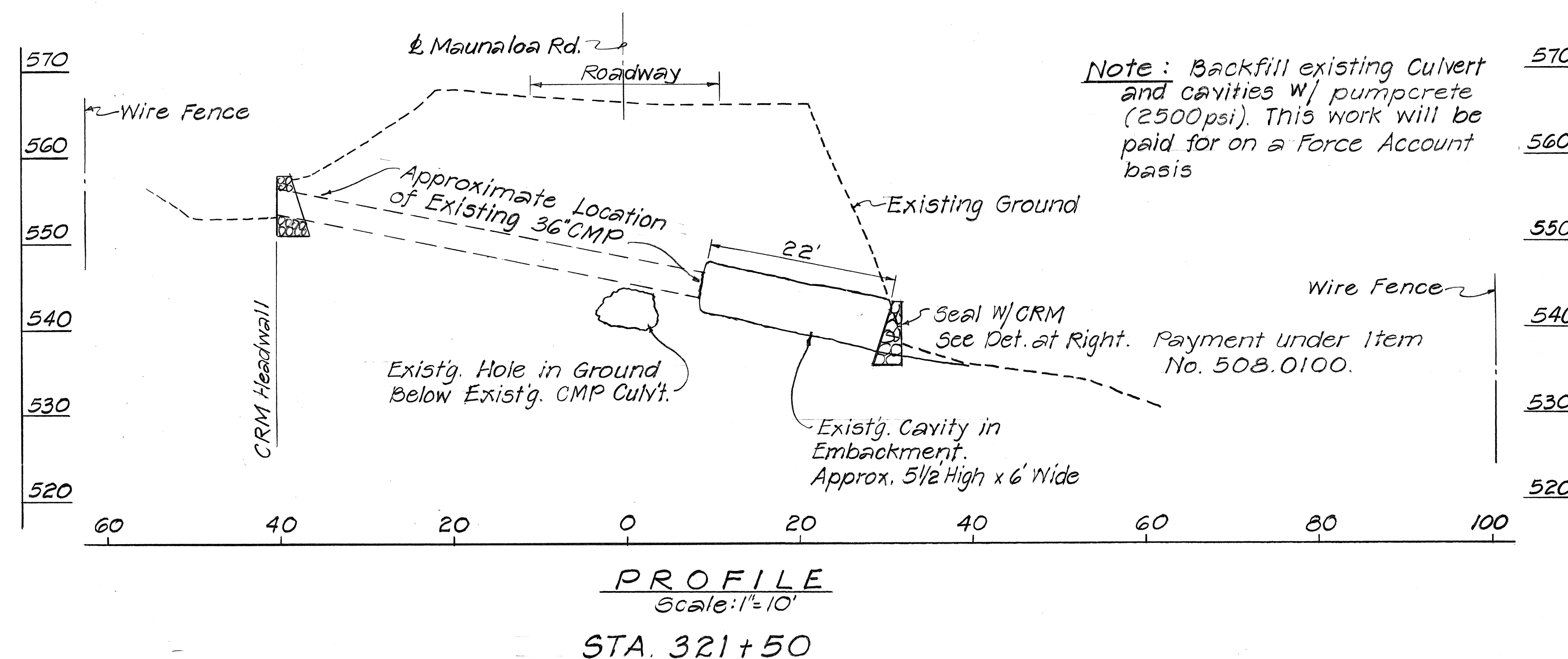
Denotes trench backfill.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	RS-0900(14)	1981	C.O. 65-1	11

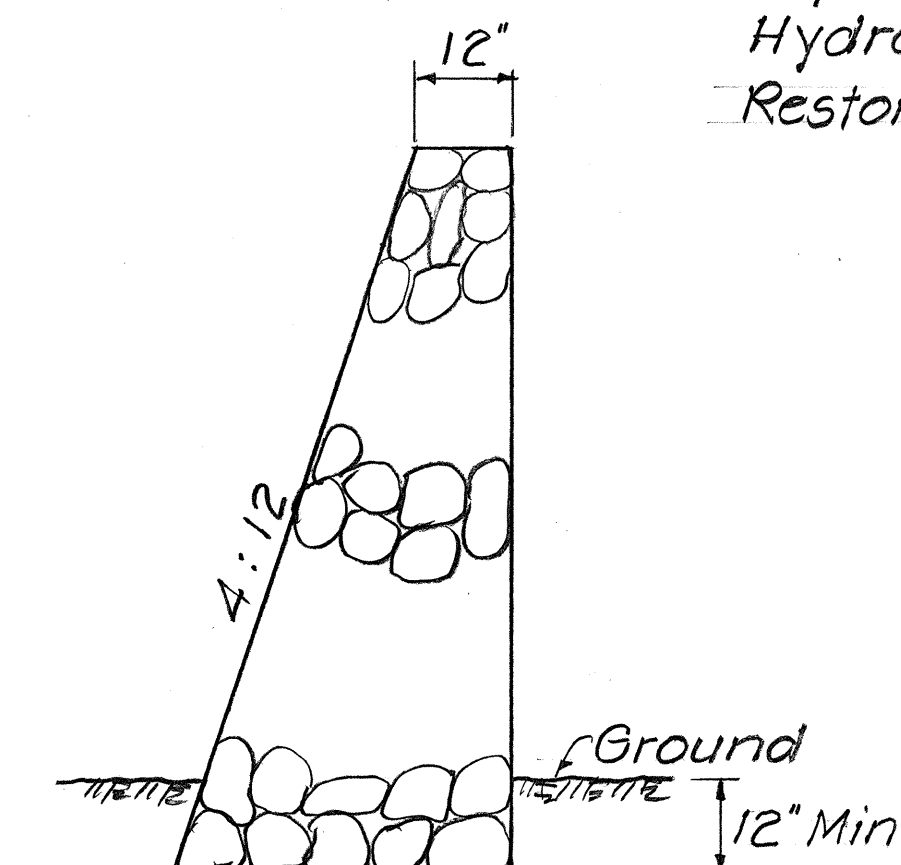


ESTIMATED QUANTITIES TO BE PAID AT EXISTING CONTRACT UNIT PRICES

CRM	22 c.y.
GRP	3 c.y.
Imported Borrow	800 c.y.
Hydro-mulch Seeding	3780 s.f.
Restoration of Existing Pavement	144 s.f.



Note: Backfill existing Culvert and cavities w/ pumpcrete (2500psi). This work will be paid for on a Force Account basis



Date	Revision
12-4-81	Move culvert alignment

C.C.O. # 2

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION
KAMEHAMEHA I & MAUNALOA HWY.
DRAINAGE IMPROVEMENTS
PROJ. NO. RS-0900 (14)

Scale: As Shown Aug. 24, 1981
SHEET NO. OF SHEETS

C.O. 65-1

CULVERT AT MAUNALOA HWY. ROAD PLAN STA. 321+40±

DATE	
DESIGNED BY	
CHECKED BY	
NO.	