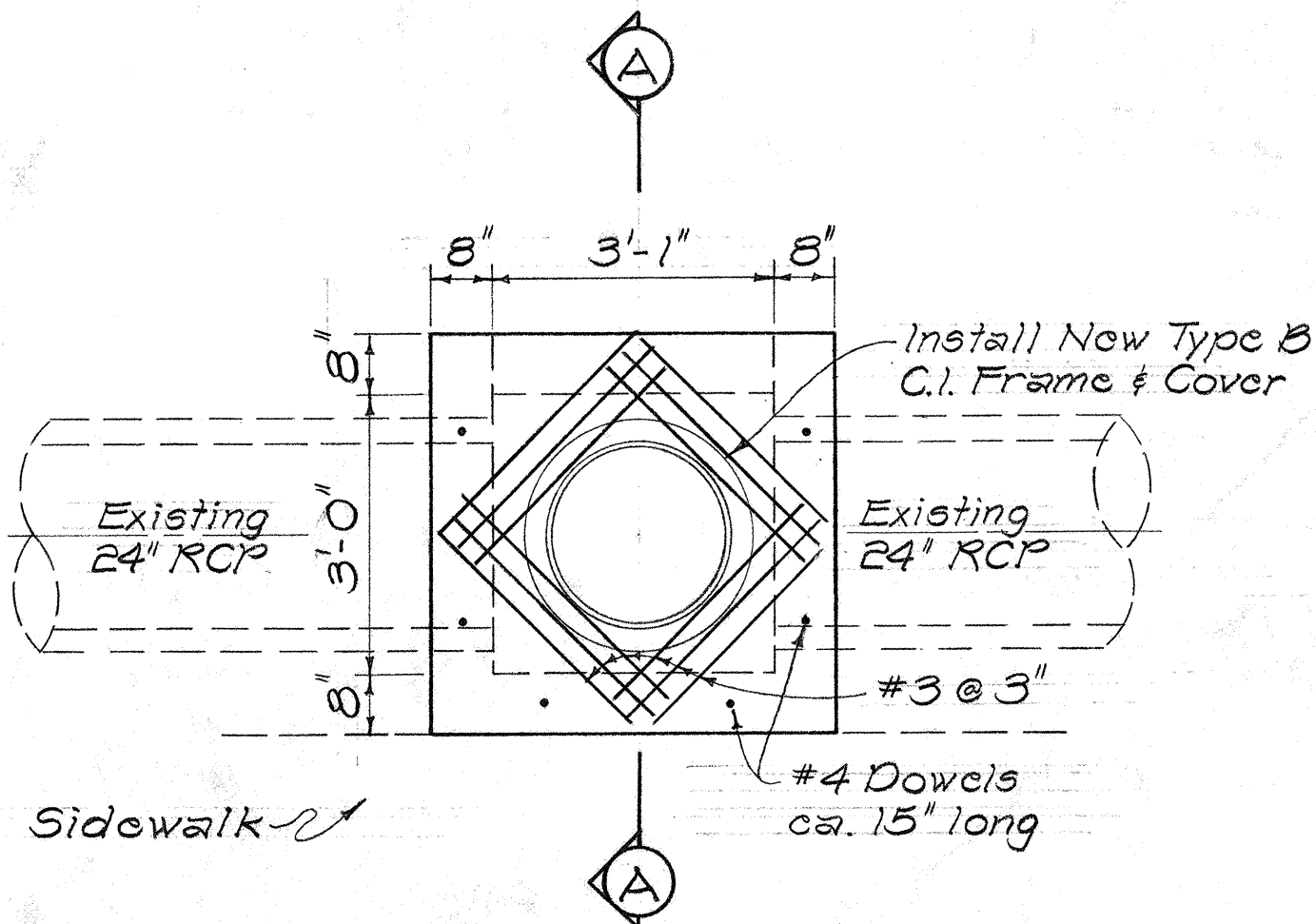


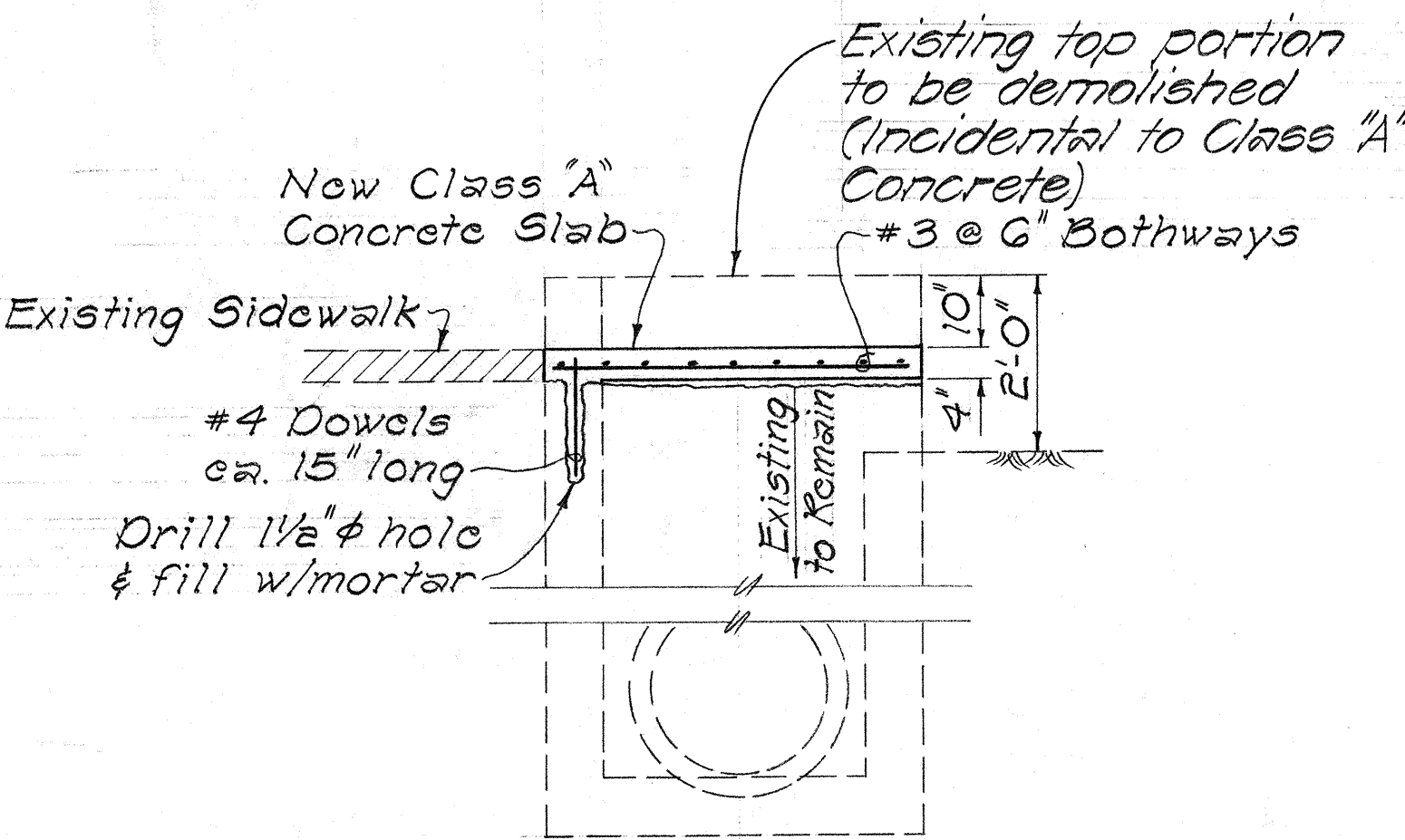
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-02-73 Phase I	1974	6	8

ESTIMATED QUANTITIES

<u>C.B. @ Sta. 96+37 ± Lt.</u>	
Structure Exc.	17.8 C.Y.
Class A Concrete	5.7 C.Y.
Reinf. Steel	150.0 Lbs.
Reinstall Type B C.I. Frame & Cover	1 Ea.
<u>C.D.I. @ Sta. 97+30 ± Lt.</u>	
Class A Concrete	0.3 C.Y.
Reinf. Steel	44.0 Lbs.
Type B C.I. Frame & Cover	1 Ea.
<u>C.D.I. @ Sta. 98+23 ± Lt.</u>	
Class A Concrete	0.3 C.Y.
Reinf. Steel	45.0 Lbs.
Type B C.I. Frame & Cover	1 Ea.

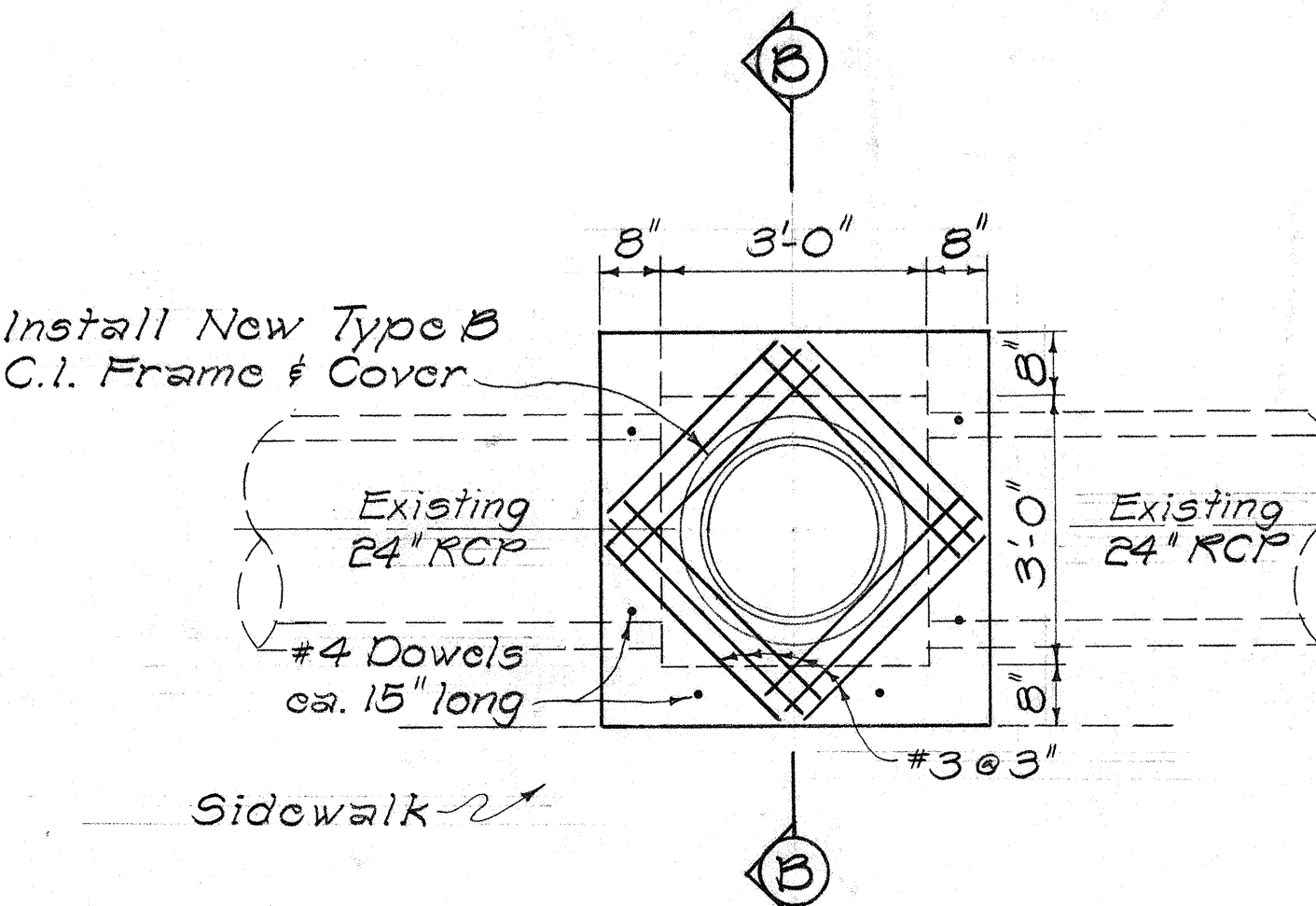


PLAN

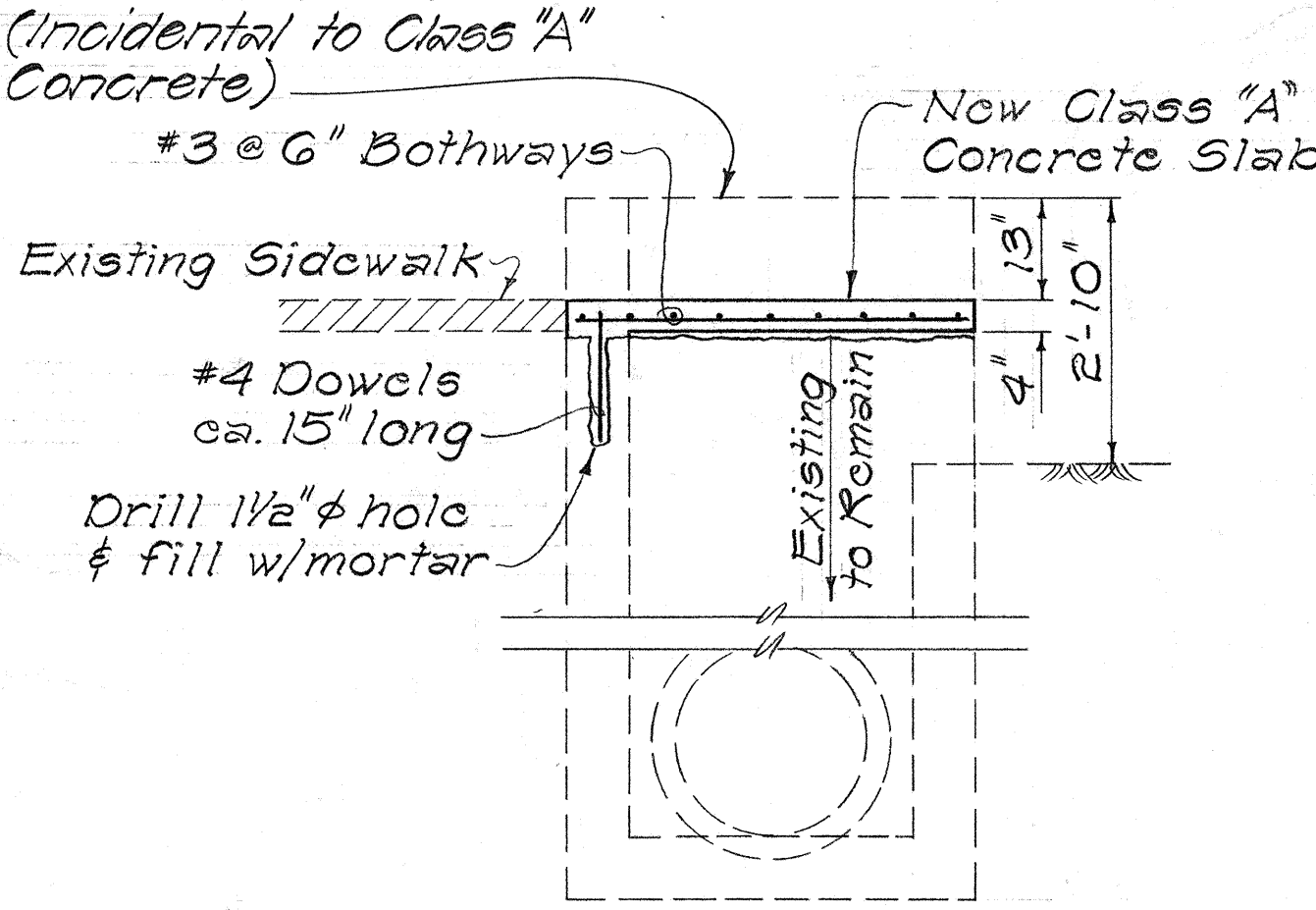


SECTION "A-A"

CDI @ Sta. 83+55 ± Lt.
Scale: 1/2" = 1'-0"

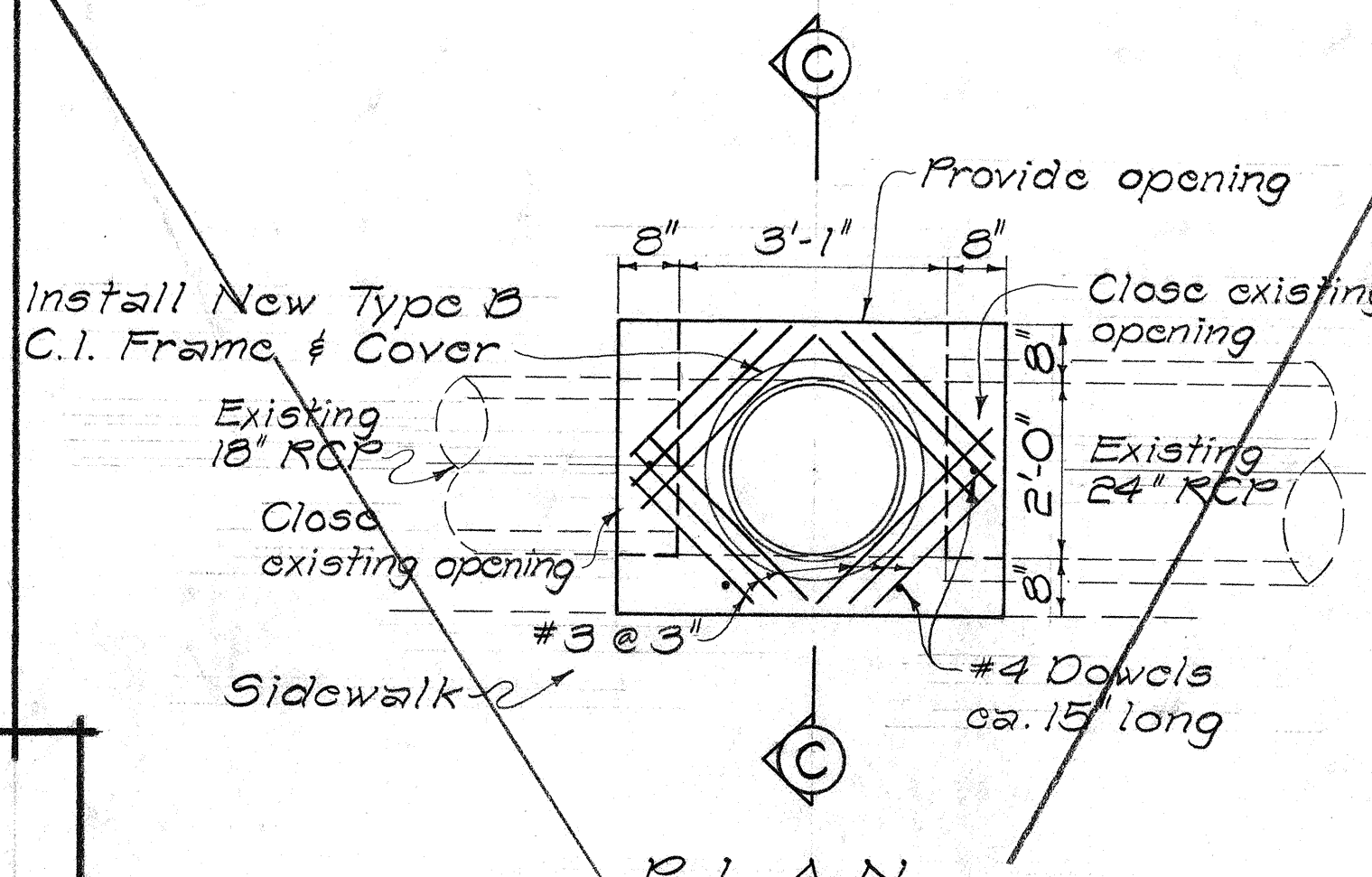


PLAN

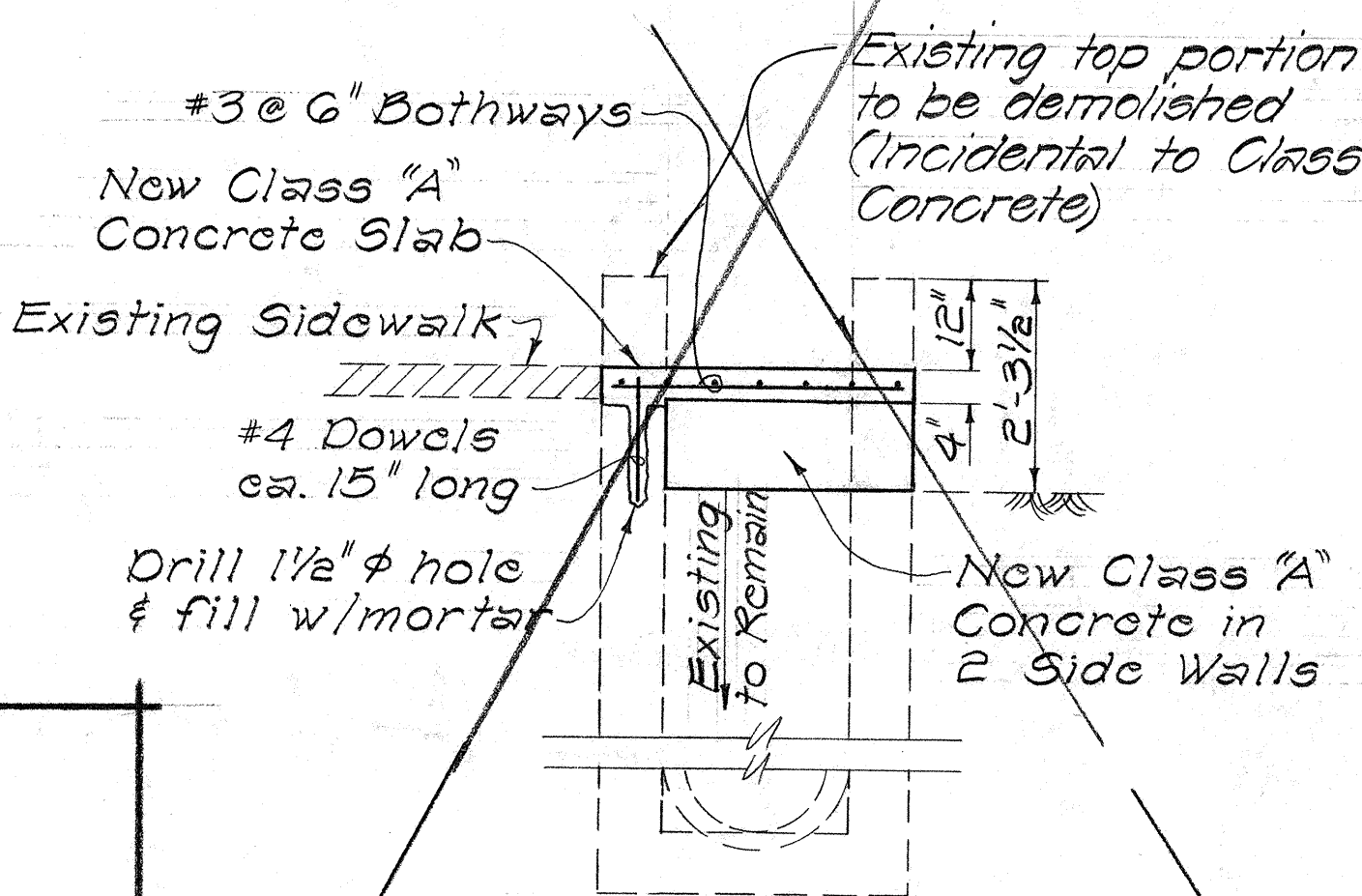


SECTION "B-B"

CDI @ Sta. 82+64 ± Lt.
Scale: 1/2" = 1'-0"



PLAN

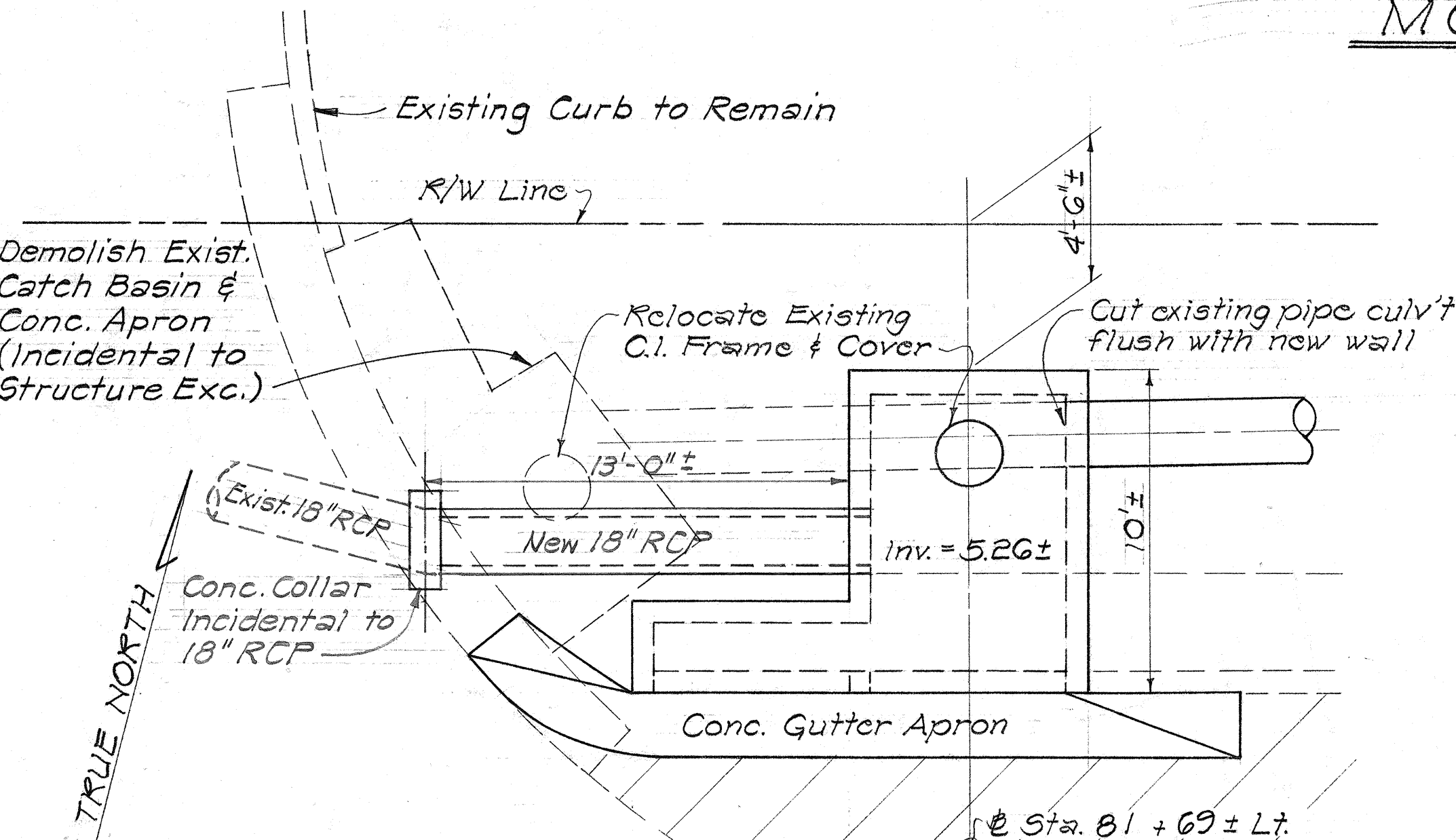


SECTION "C-C"

CDI @ Sta. 123+95 ± Lt.
Scale: 1/2" = 1'-0"

MODIFICATION OF CDI'S

N. I. C.



DETAILS OF NEW TYPE "B" CATCH BASIN
@ Sta. 81+69 ± Lt.
Scale: 1/4" = 1'-0"

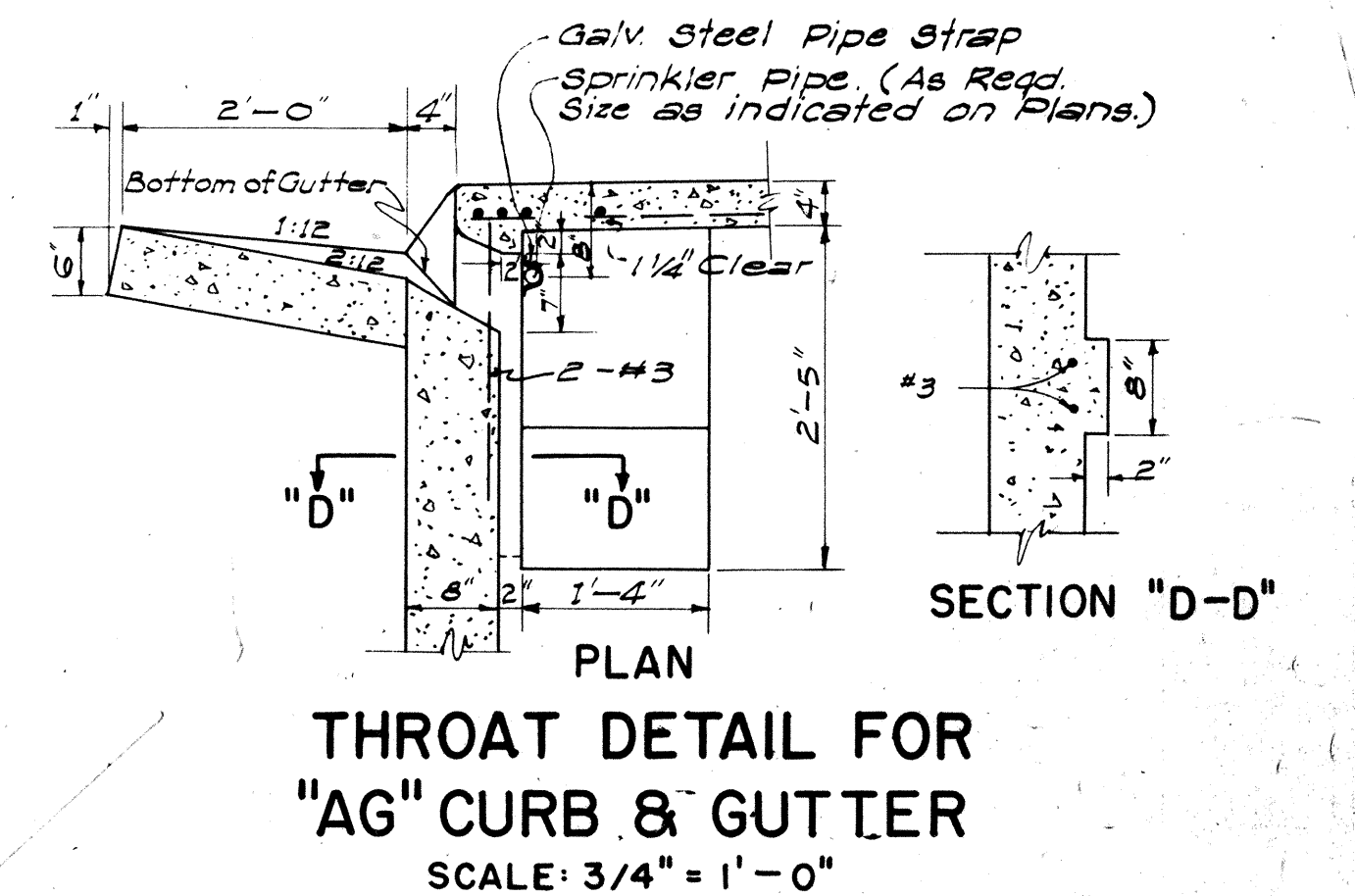
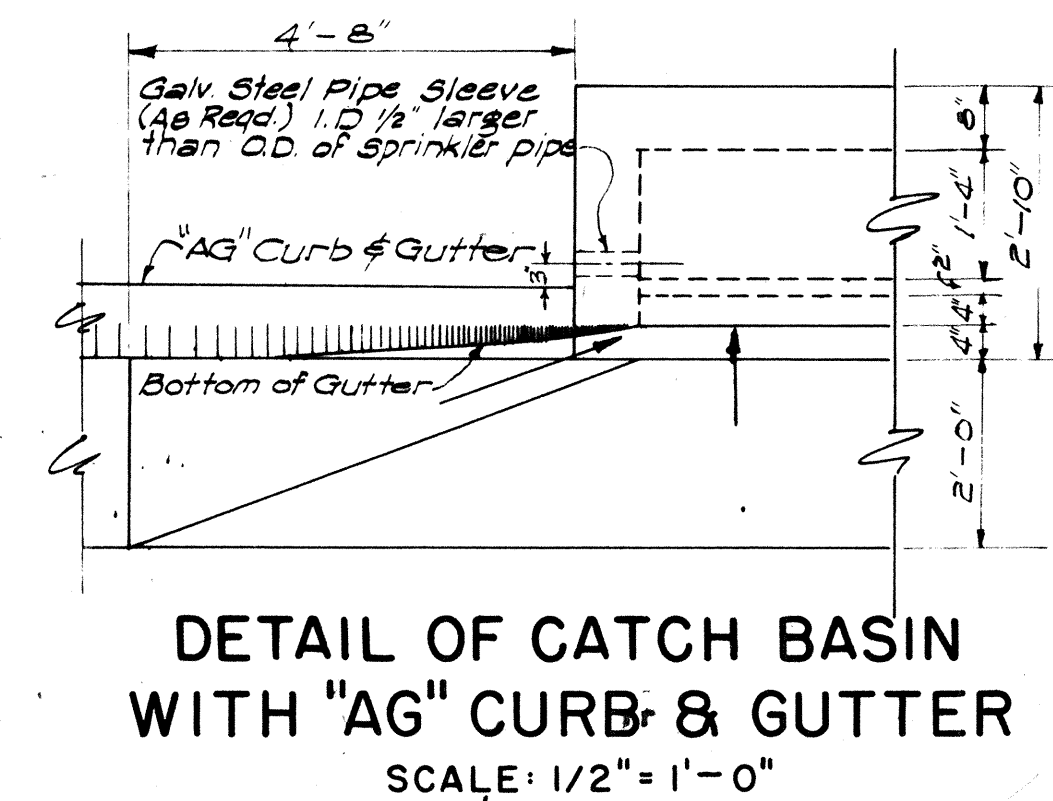
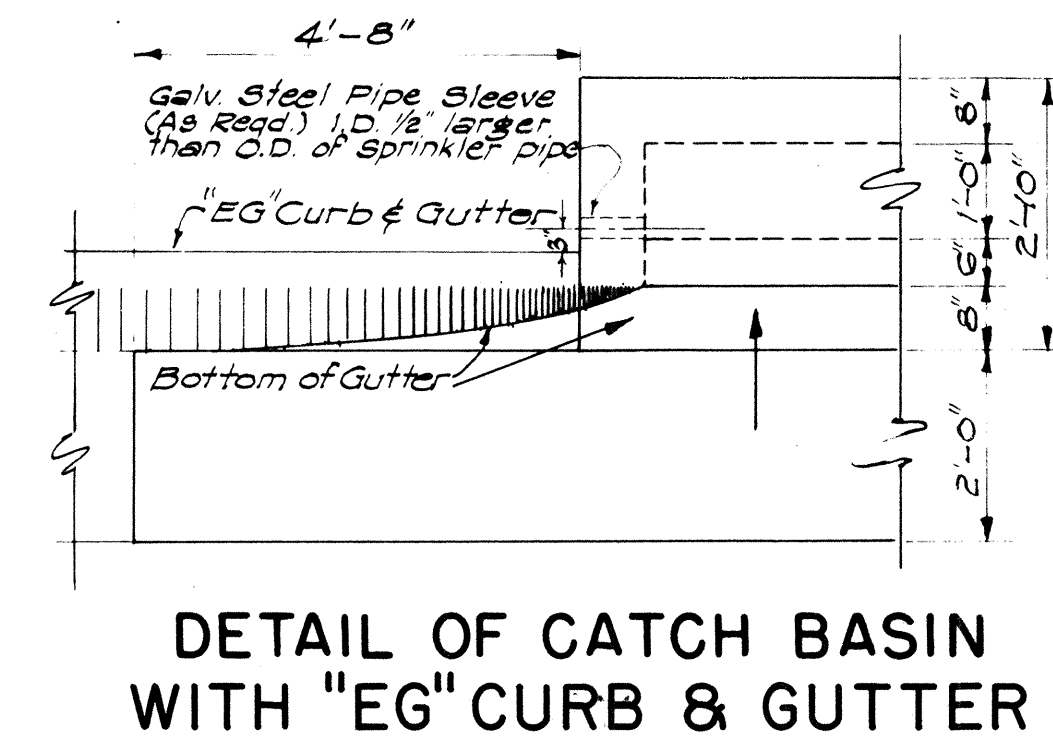
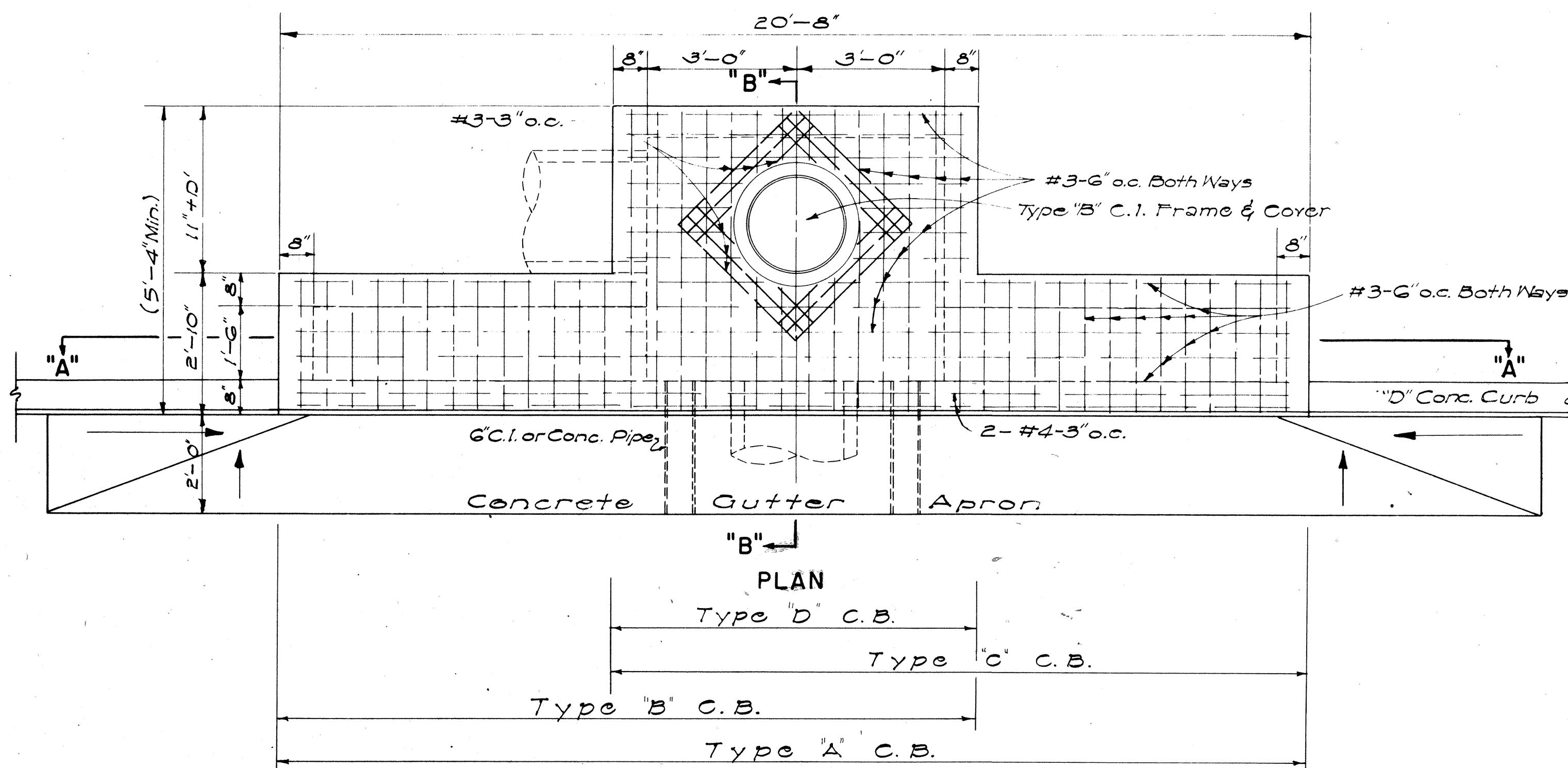
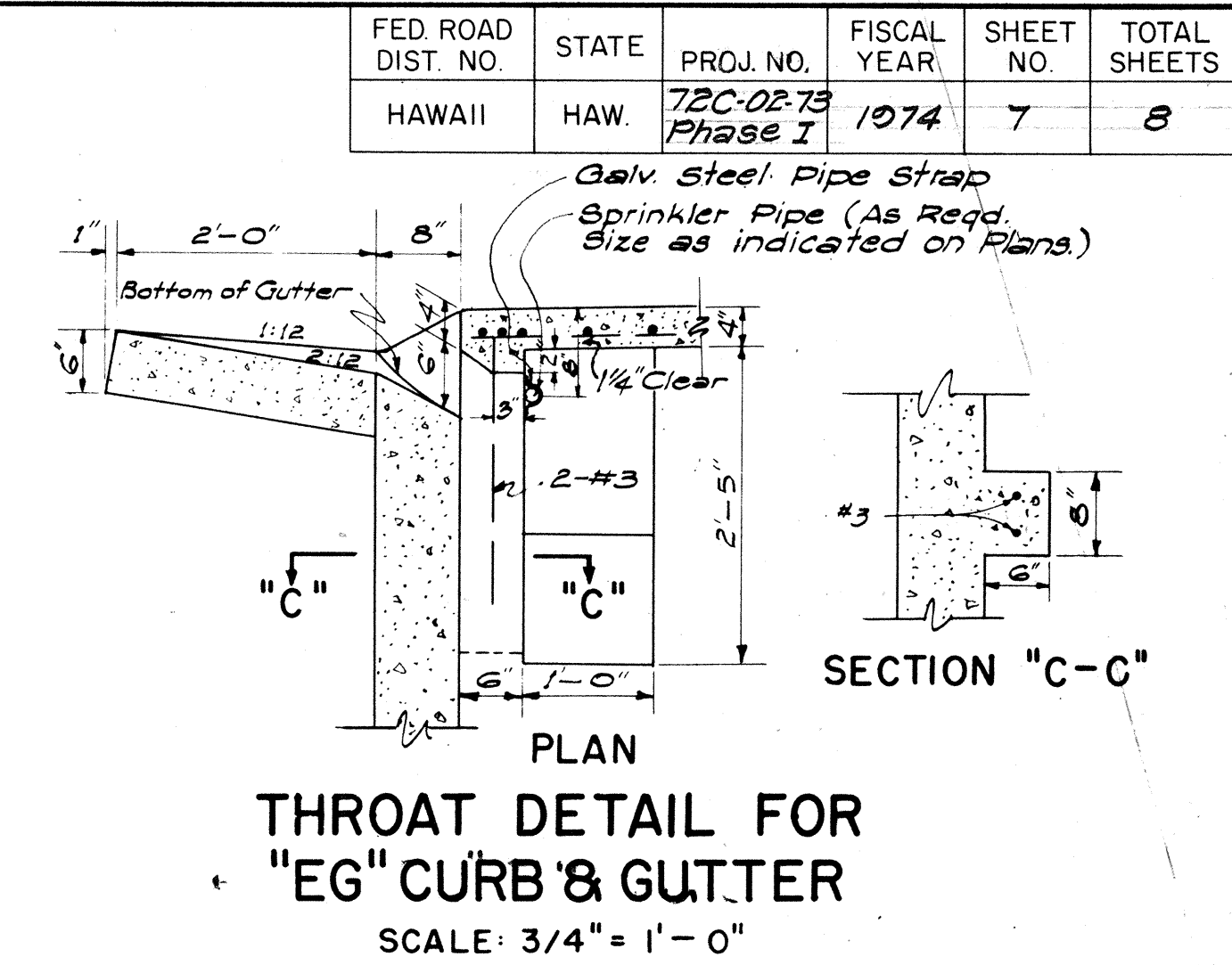
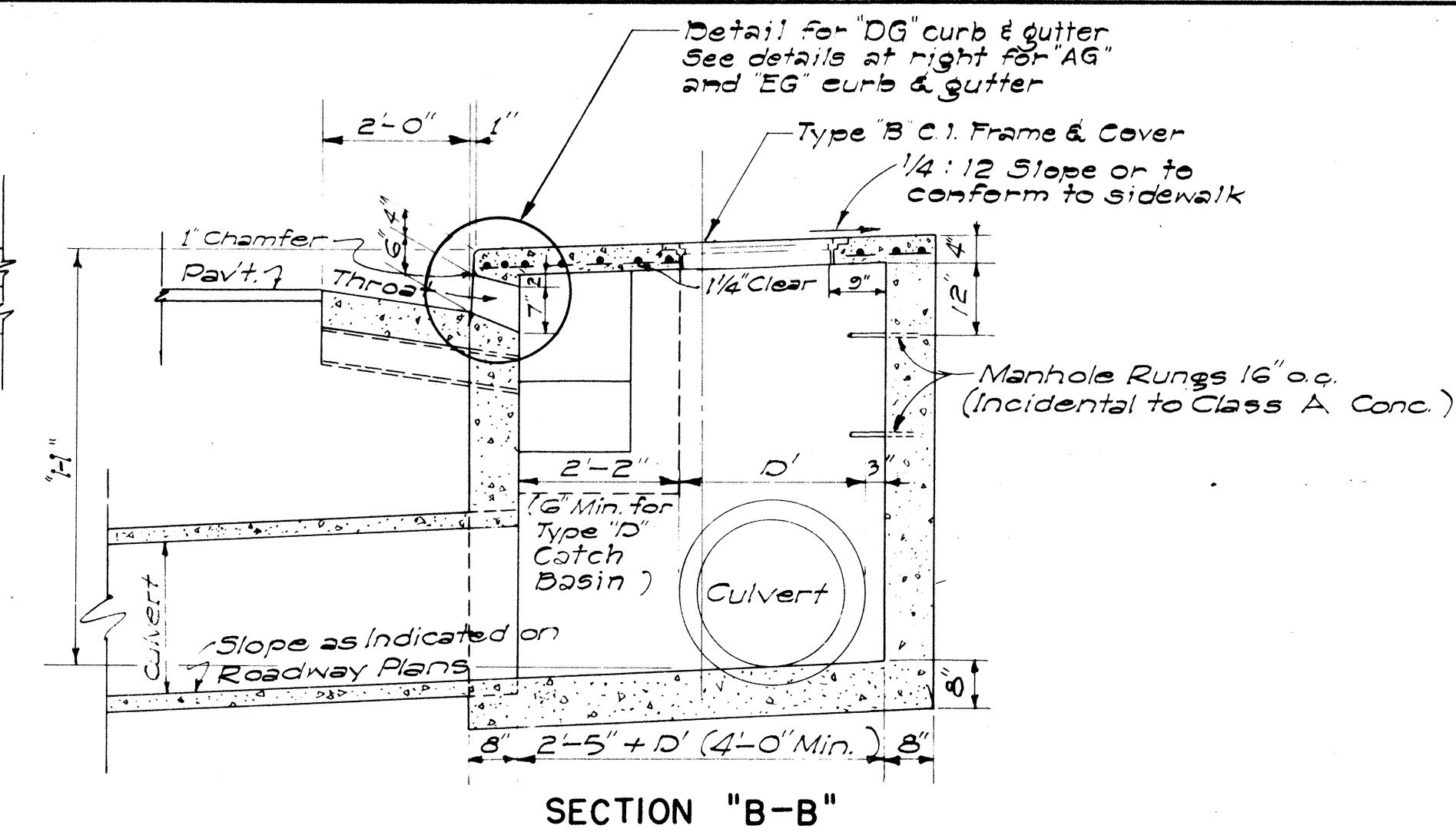
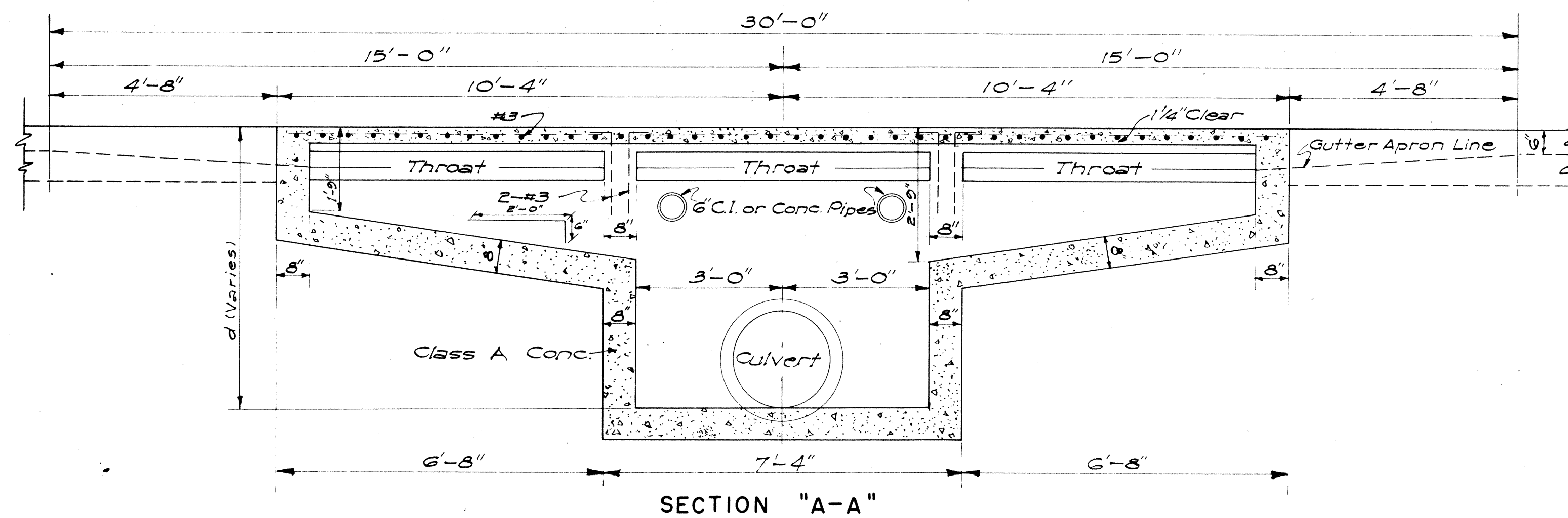
- NOTE:
- For Reinf. Details of C.B. see Std. Detail.
 - Removed curb shall be salvaged for resetting.
 - Concrete Gutter Apron shall be considered incidental to Class "A" Concrete.

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

DRAINAGE DETAILS

KALANIANA'OLE HIGHWAY
Bikeway From Ainakoa to Hawaii Kai Drive
Proj. No. 72C-02-73, Phase I
Scale: As Noted Date: May, 1974
SHEET No. 1 OF 3 SHEETS

2/17/69



DETAILS OF TYPES "A", "B", "C" AND "D" CATCH BASINS
SCALE: 1/2" = 1'-0"

GENERAL NOTES

- Quantities based on $d = 5.75'$ and $D = 30'$.
- Quantities do not include concrete for Gutter Apron.
- The Contractor shall install two 6" Cast Iron or Concrete Pipes as incidental to Class A Concrete for Construction Drainage. The Engineer shall determine the exact location in the field.
- Culvert shall leave C.B. from any position and any direction indicated by plans or ordered by the Engineer. Culvert may both enter and leave C.B. so that C.B. will also act as Manhole.
- The Contractor shall install Galvanized Steel Pipe Sleeves and Straps as incidental to Sprinkler System.
- The type of curb and/or gutter (Type 1, 2, 3, etc.) shall conform to the type specified on the Roadway Plans.
- Manhole Rungs (16" o.c.) are required when H is greater than 4 feet 6 inches. Only one rung (12 inches from the bottom) is required if H is 4 feet 6 inches or less. Type "B" Cast Iron Frame and Cover and Manhole Rungs may be placed at any location as ordered by the Engineer.

ESTIMATED QUANTITIES

Type	Class A Conc.	Struct. Exc.	Reinf. Steel	Gutter Length
"A"	7.5 c.y.	24.7 c.y.	145 lb.	30'-0"
"B"	6.0 c.y.	21.5 c.y.	108 lb.	23'-4"
"C"	6.0 c.y.	21.5 c.y.	108 lb.	23'-4"
"D"	4.9 c.y.	16.5 c.y.	77 lb.	16'-8"

APPROVAL RECOMMENDED:
[Signature]
HYDRAULIC DESIGN ENGINEER
12-17-69
DATE

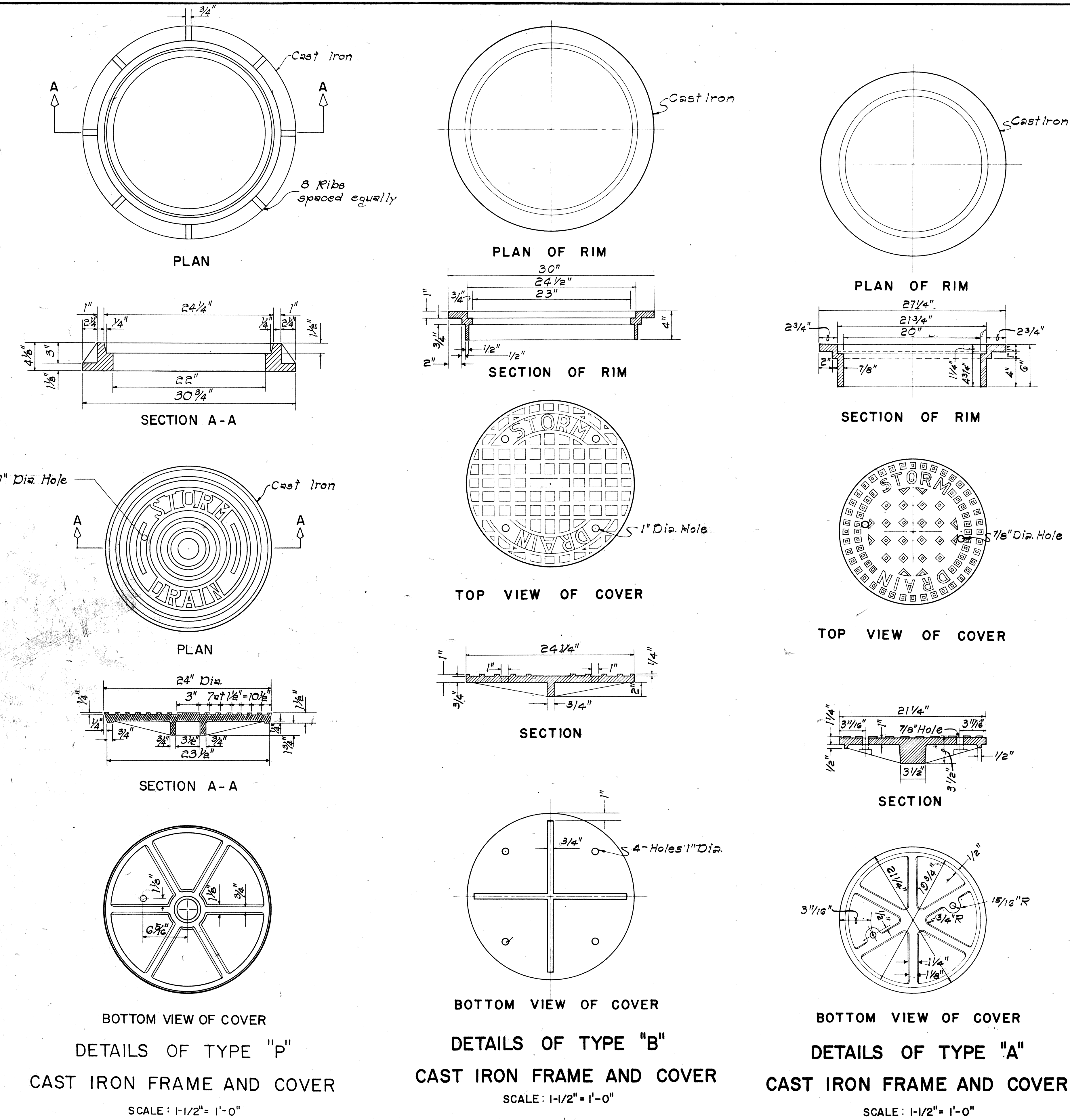
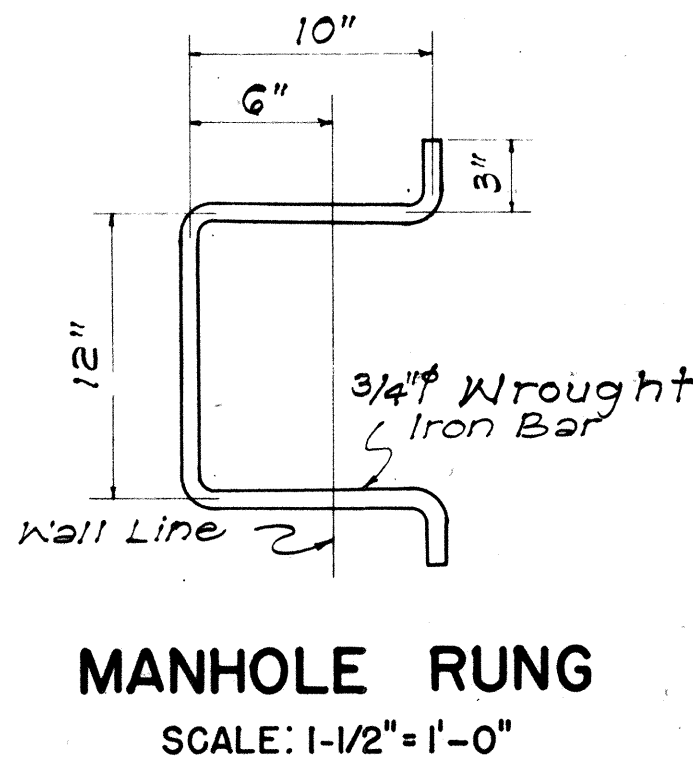
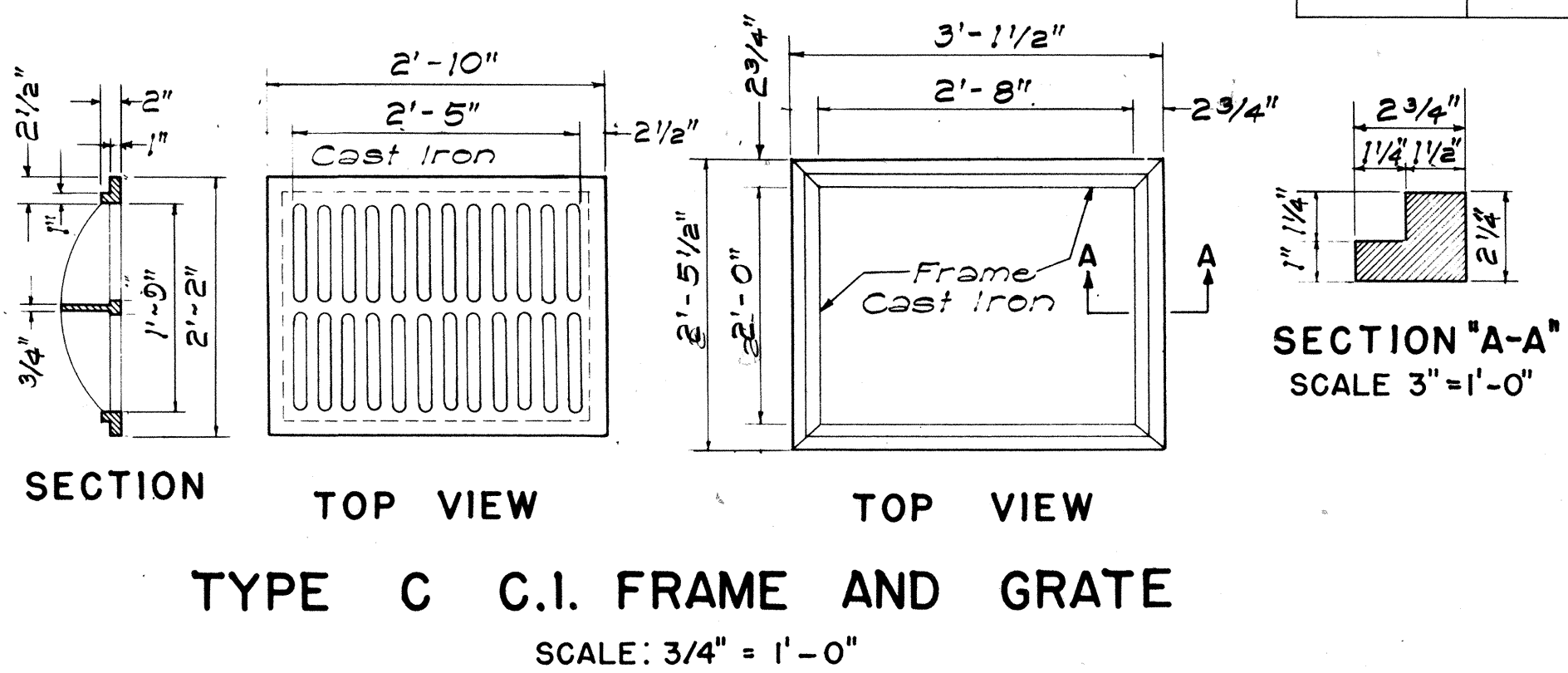
APPROVED:
[Signature]
ASSISTANT CHIEF, ENGINEERING
12-17-69
DATE

NO.	REVISION	APPROVED BY	DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
CATCH BASINS
Scale: As Noted
Date: July, 1969
SHEET NO 2 OF 3 SHEETS
DH 1

DATE: 2/17/69
SURVEY PLOTTED BY: [Signature]
DRAWN BY: [Signature]
NOTE BOOK: [Signature]
QUANTITIES BY: [Signature]
CHECKED BY: [Signature]
ORIGINAL: [Signature]
PLAN: [Signature]
NO.:

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	72C-0273 Phase I	1974	8	8



APPROVAL RECOMMENDED:
HYDRAULIC DESIGN ENGINEER
DATE 12-17-69

APPROVED:
ASSISTANT CHIEF, ENGINEERING
DATE 12-17-69

NO.	REVISION	APPROVED BY	DATE
1.	Detail of Type "P" Cast Iron Frame and Cover	H.T.	1-6-71

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
CATCH BASIN AND
MANHOLE CASTINGS

Scale: As Noted Date: July, 1969
SHEET NO 3 OF 3 SHEETS DH 6