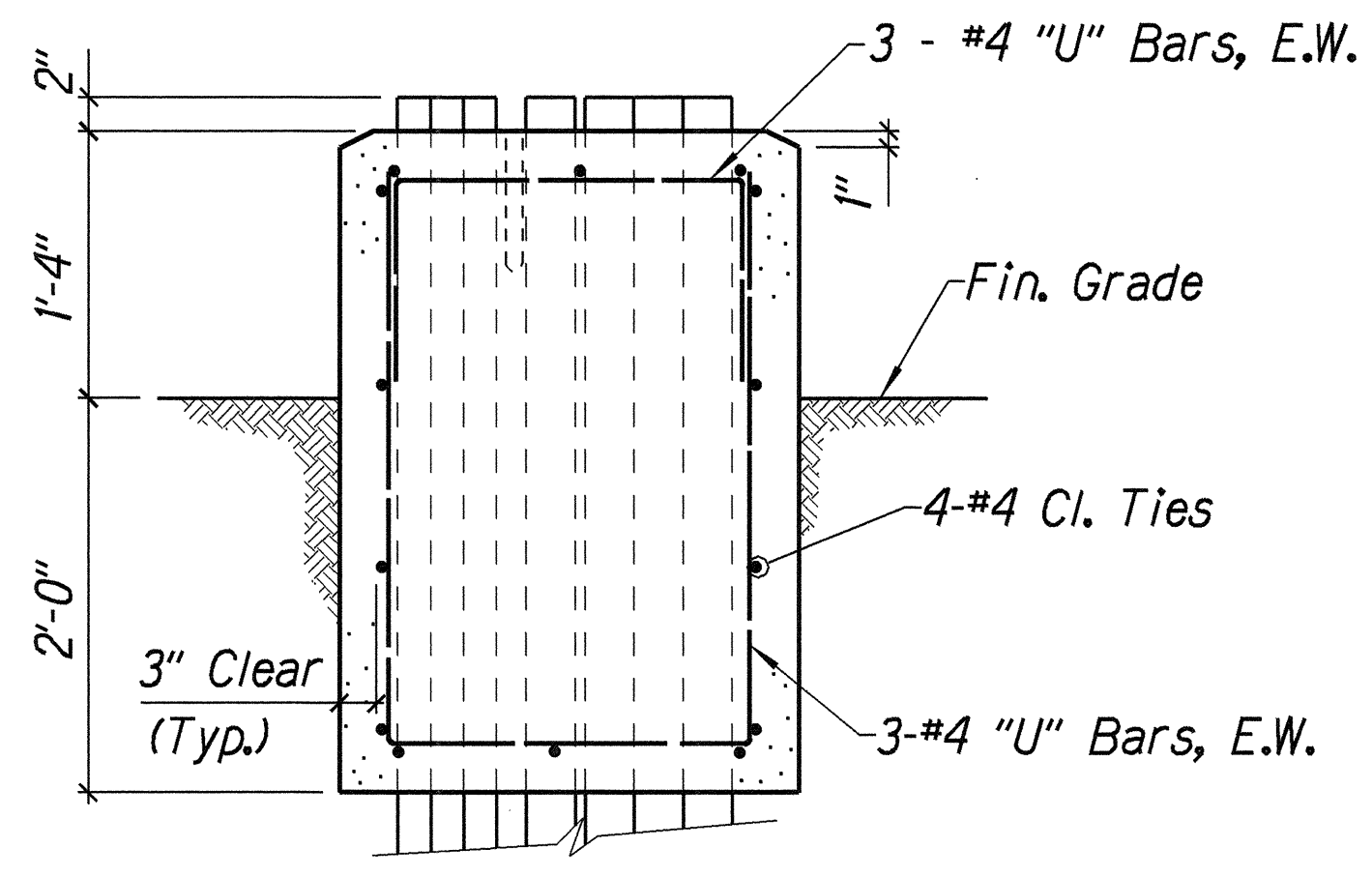


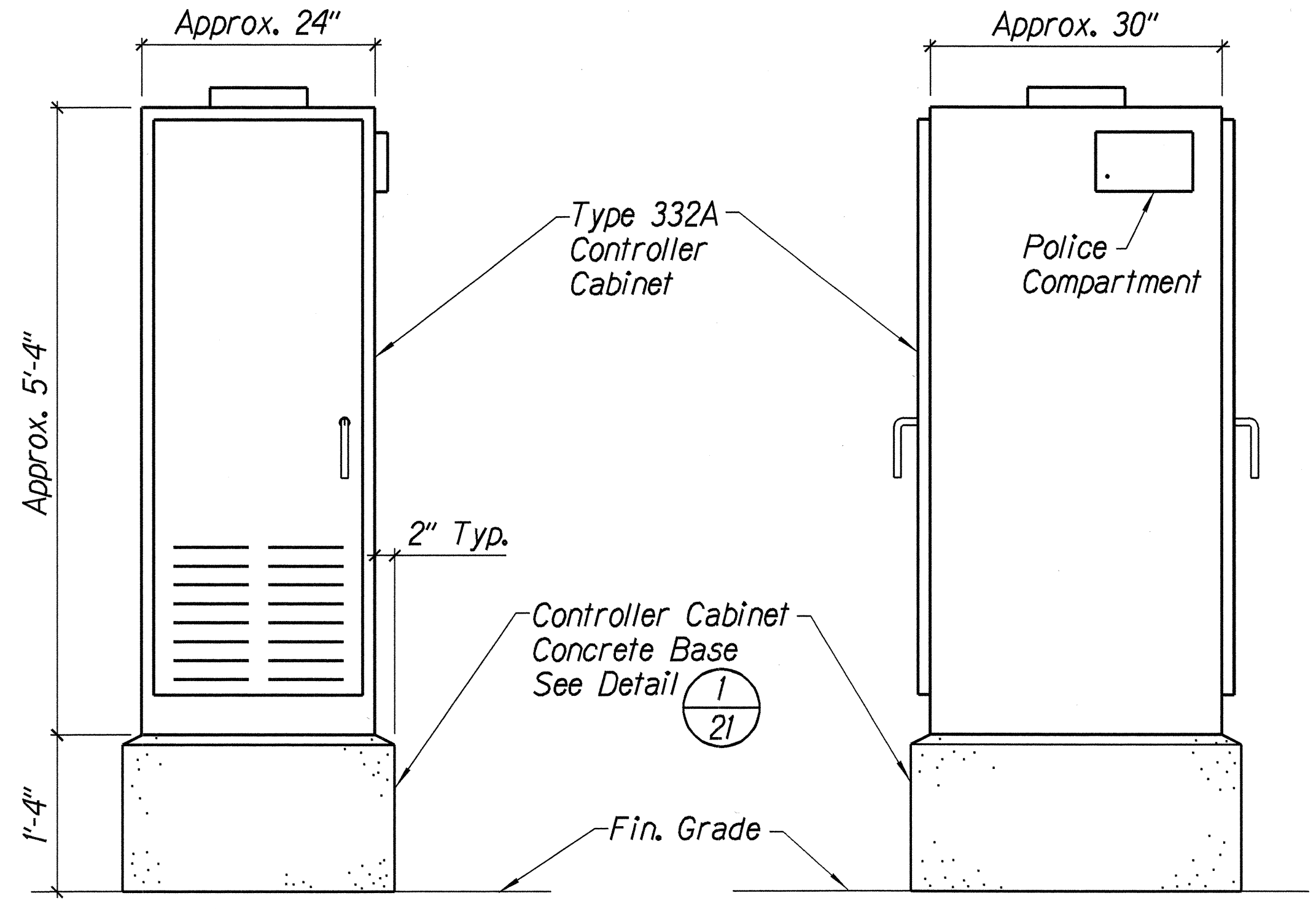
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-050-1(20)	2000	21	28

NOTES FOR CONTROLLER CONCRETE BASE:

- Concrete shall be class "B".
- Dimensions shall be altered to suit controller cabinet actually furnished.
- Conduits, bends, and drain are incidental to concrete base.
- Refer to Cabinet Manufacturer's Specifications for details of anchor bolts and base settings.
- All exposed surfaces of concrete base shall be given a class 2, rubbed finish.
- All Conduits shall be galv. steel.

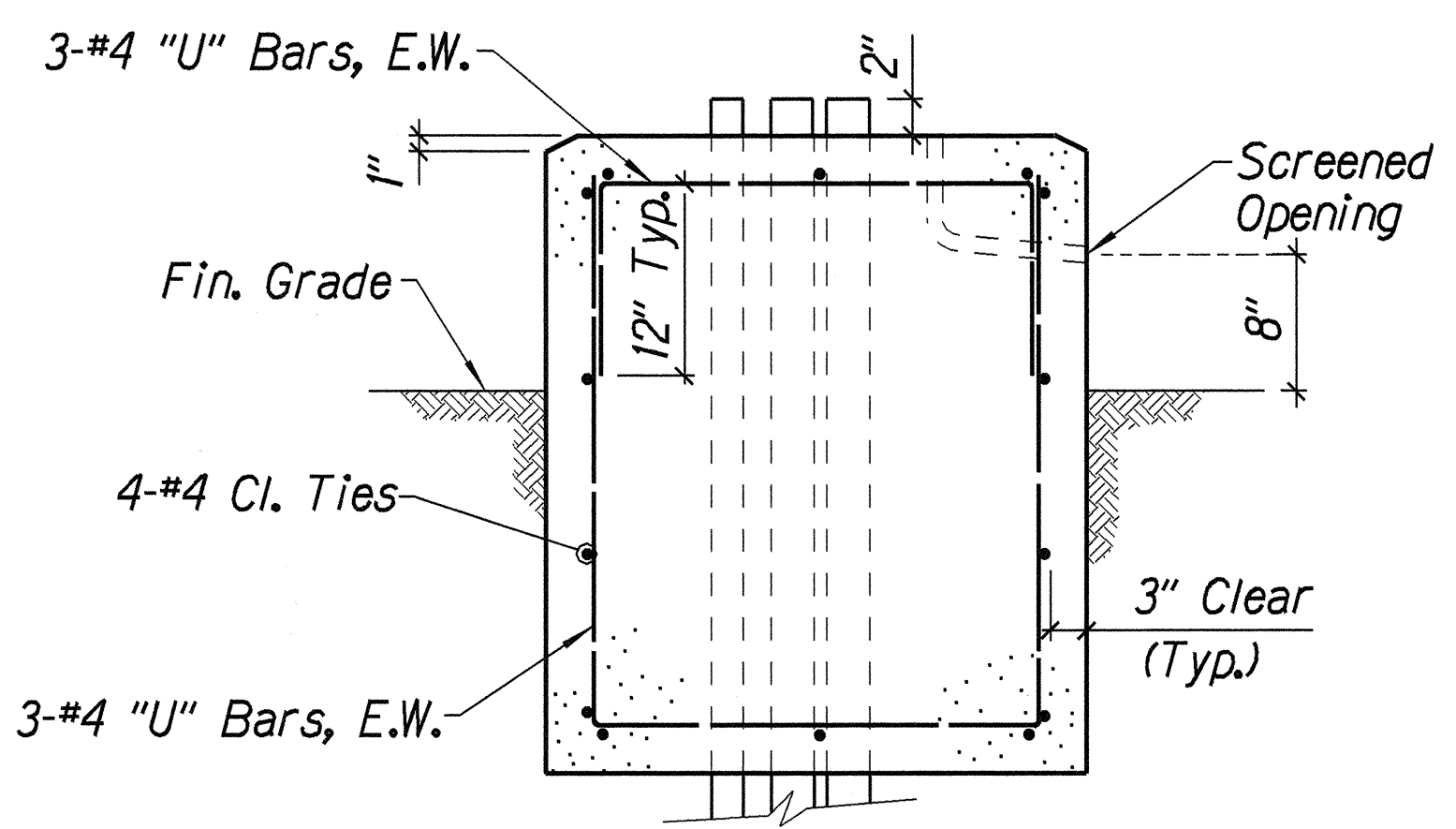


SECTION A
Not to Scale

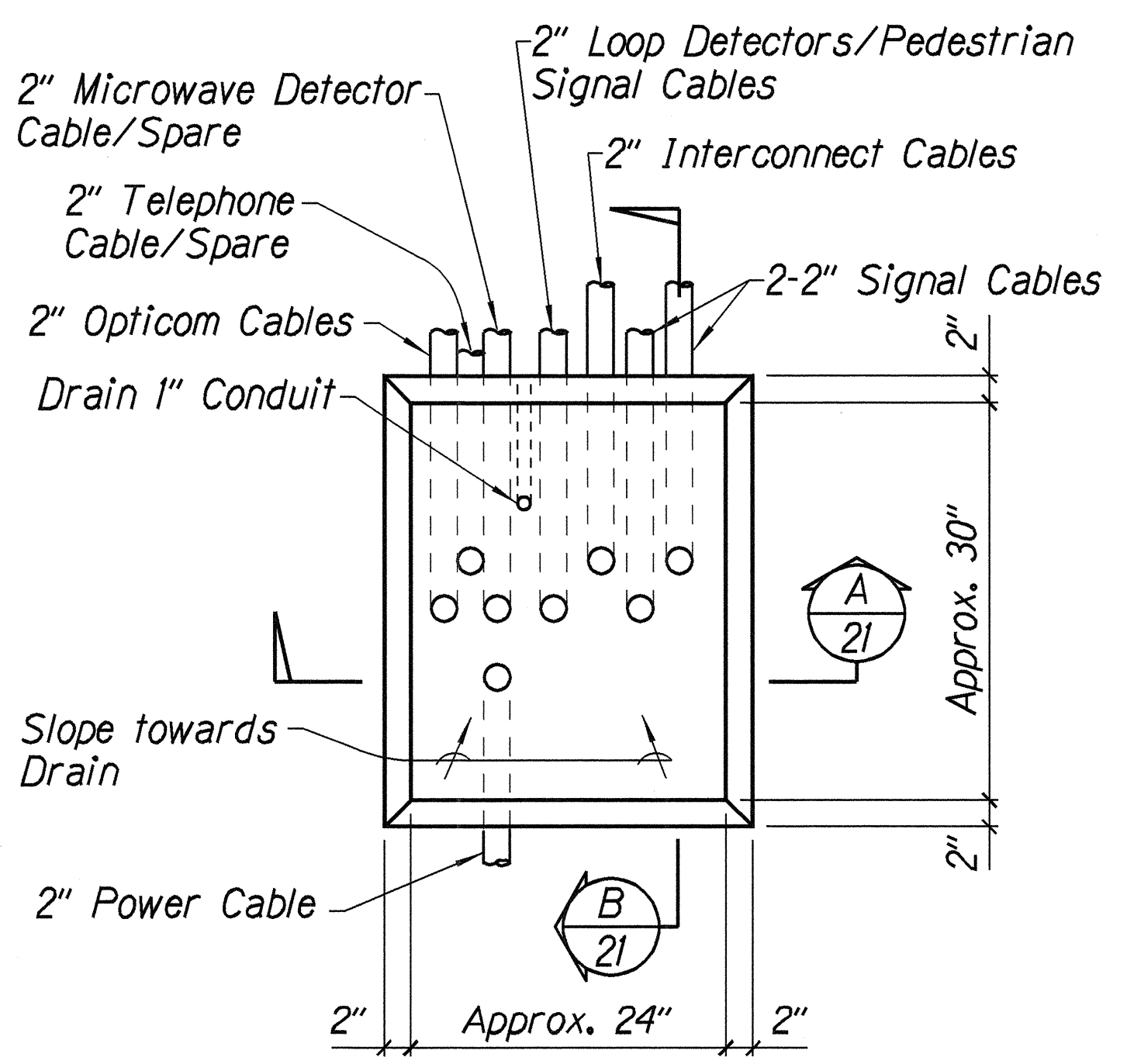


FRONT VIEW **SIDE VIEW**

TRAFFIC SIGNAL CONTROLLER CABINET DETAIL **2**
Not to Scale



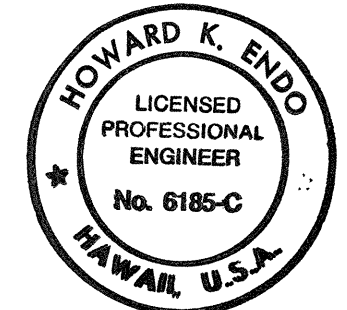
SECTION B
Not to Scale



PLAN

CONTROLLER CABINET CONCRETE BASE DETAIL **1**
Not to Scale

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
TRACED BY	_____
DESIGNED BY	_____
CHECKED BY	_____
NOTED BY	_____
NO.	_____



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Howard K. Endo
SHIMABUKURO, ENDO & YOSHIZAKI, INC.
1126 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TRAFFIC SIGNAL DETAILS
Kaunualii Highway Traffic Signal Modernization at Various Locations
Federal-Aid Project No. STP-050-1(20)
Scale: As Shown Date: Apr., 2000
SHEET No. 1 OF 7 SHEETS

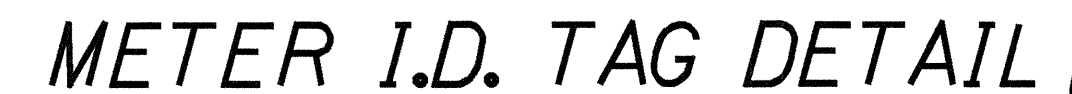
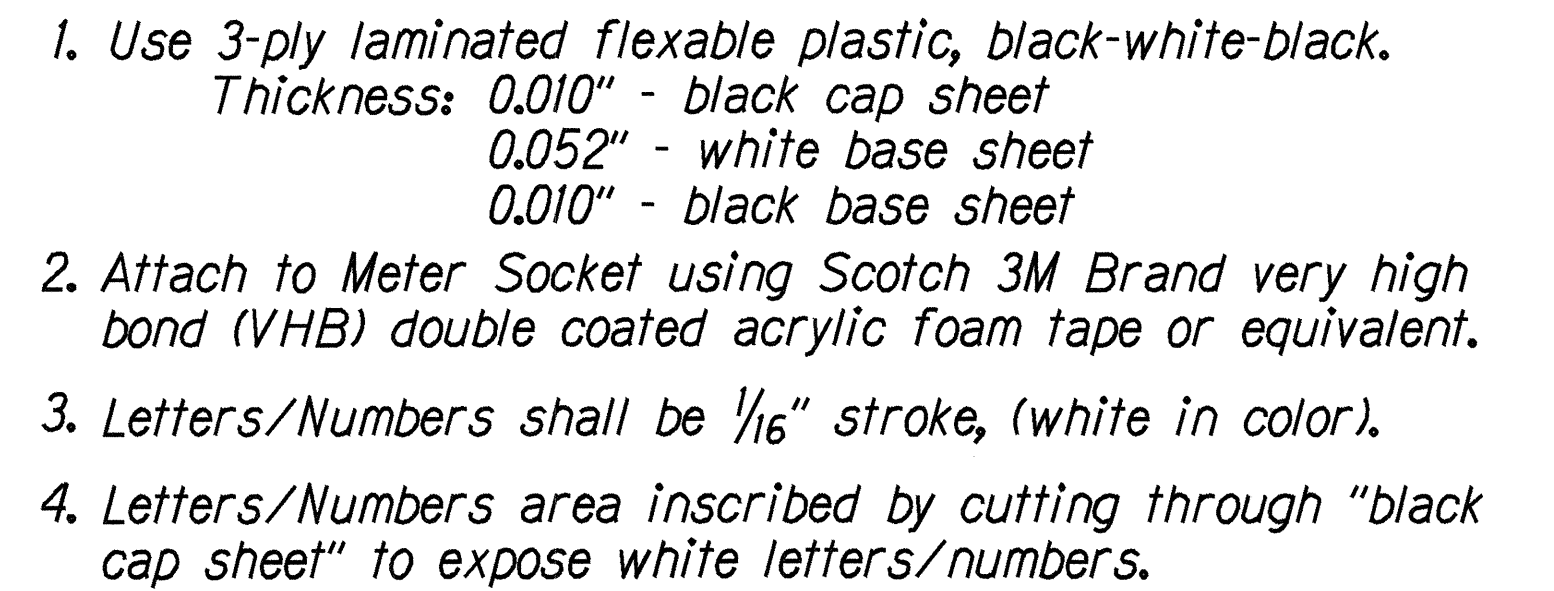
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-050-1(20)	2000	22	28

- | | | |
|-----------------------|-------------------------|------------|
| ORIGINAL PLAN | SURVEY PLOTTED BY _____ | DATE _____ |
| NOTE BOOK | DRAWN BY <u>S.C.</u> | _____ |
| | TRACED BY _____ | _____ |
| | DESIGNED BY <u>CH.</u> | _____ |
| | QUANTITIES BY _____ | _____ |
| N _{o.} _____ | CHECKED BY _____ | _____ |

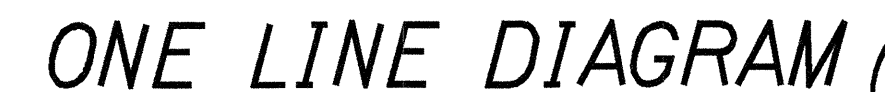


1. Pedestal shall be hot-dipped galvanized after fabrication
2. All fastening bolts, nuts & washers shall be stainless steel.
3. Provide 4 ft. clearance in front of meter.
4. Sealable Stainless Steel Enclosure
18"D x 20"W x 12"H.

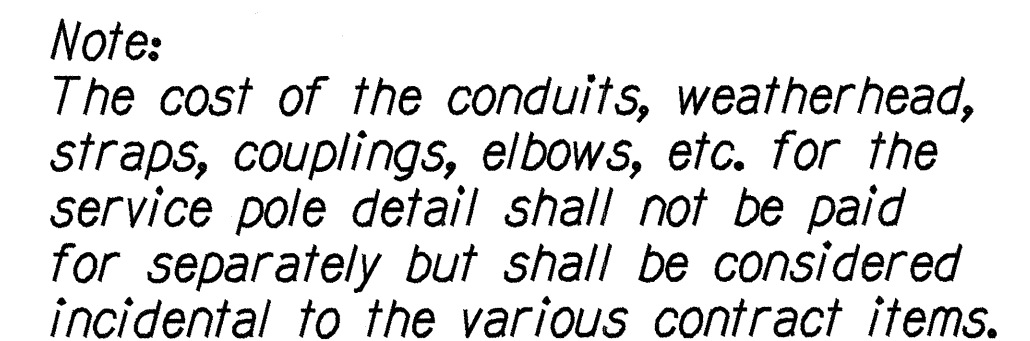
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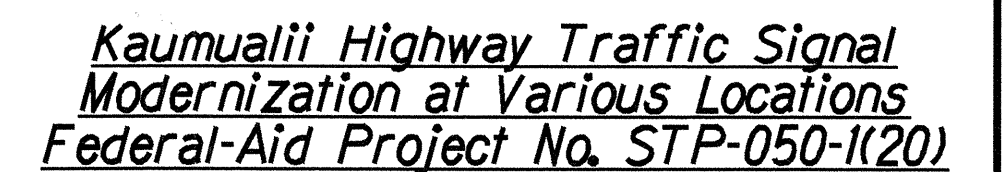
Not to Scale



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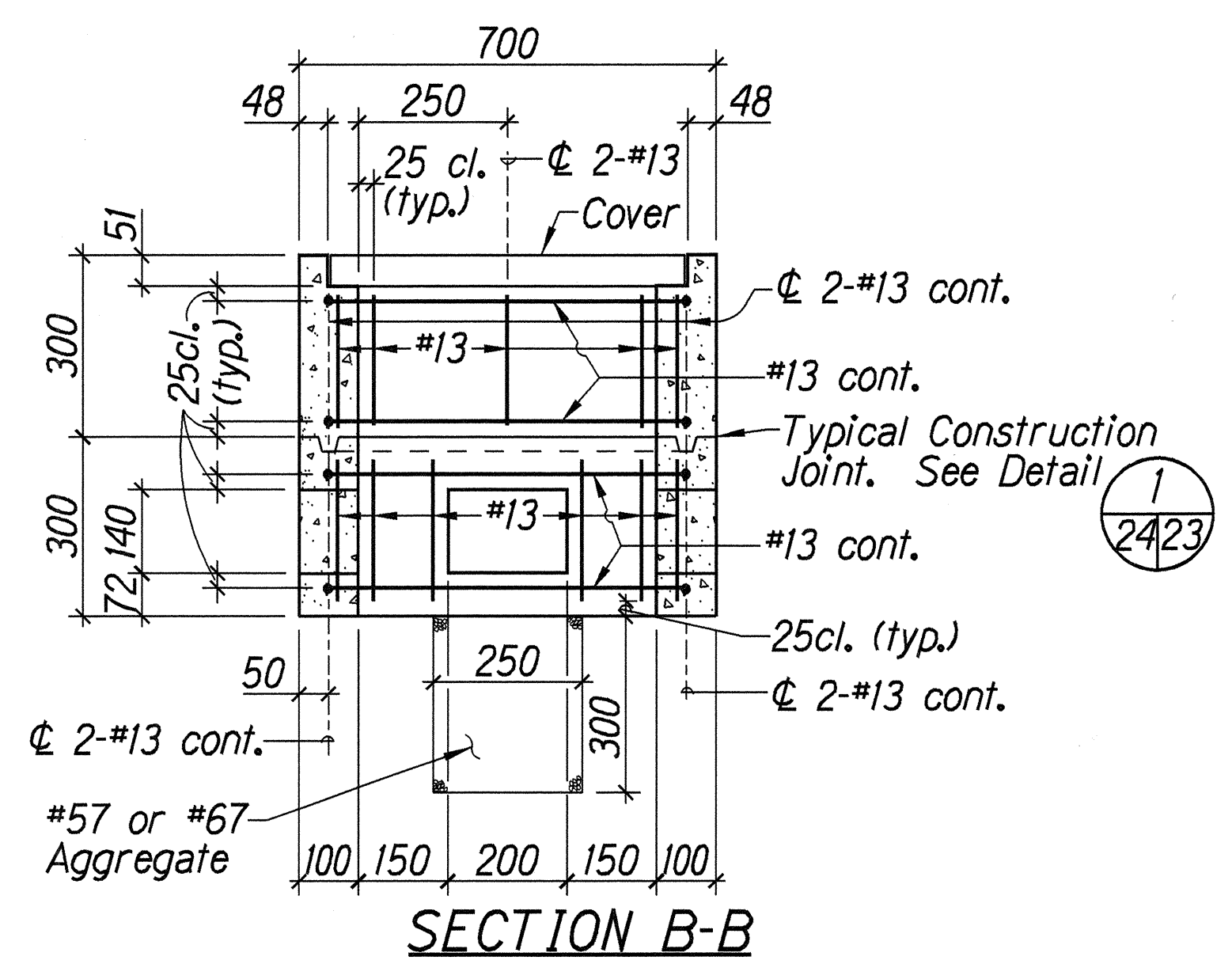
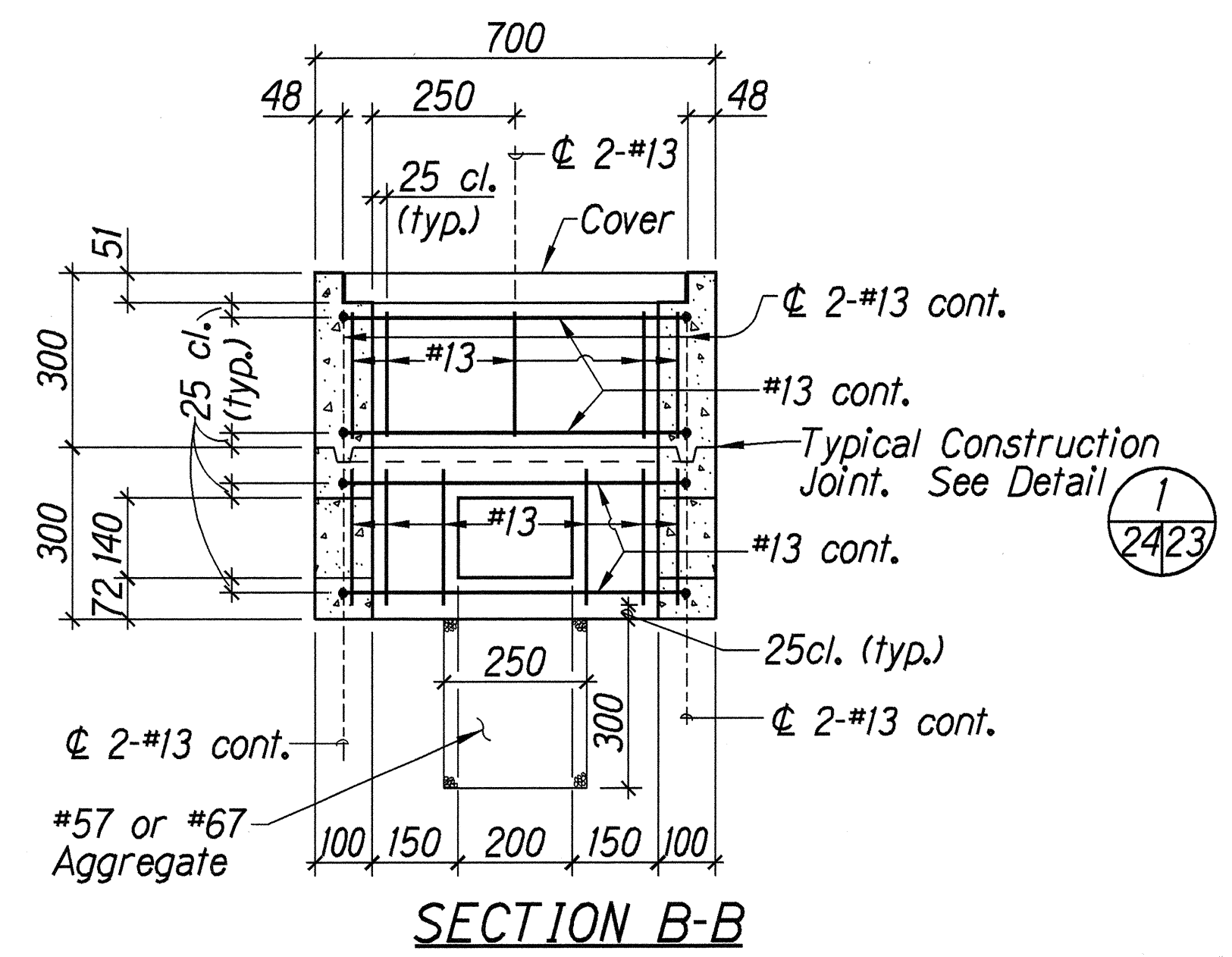
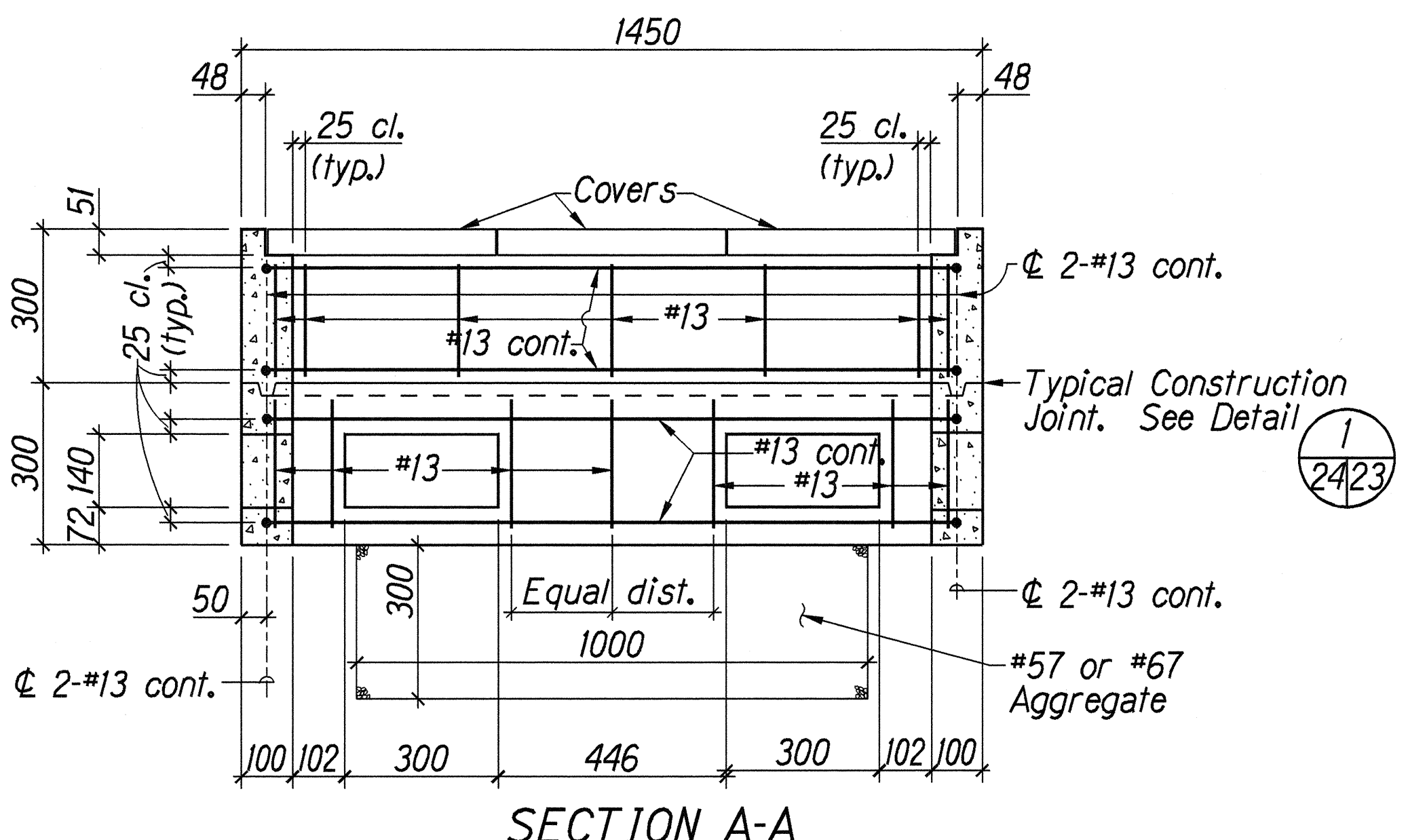
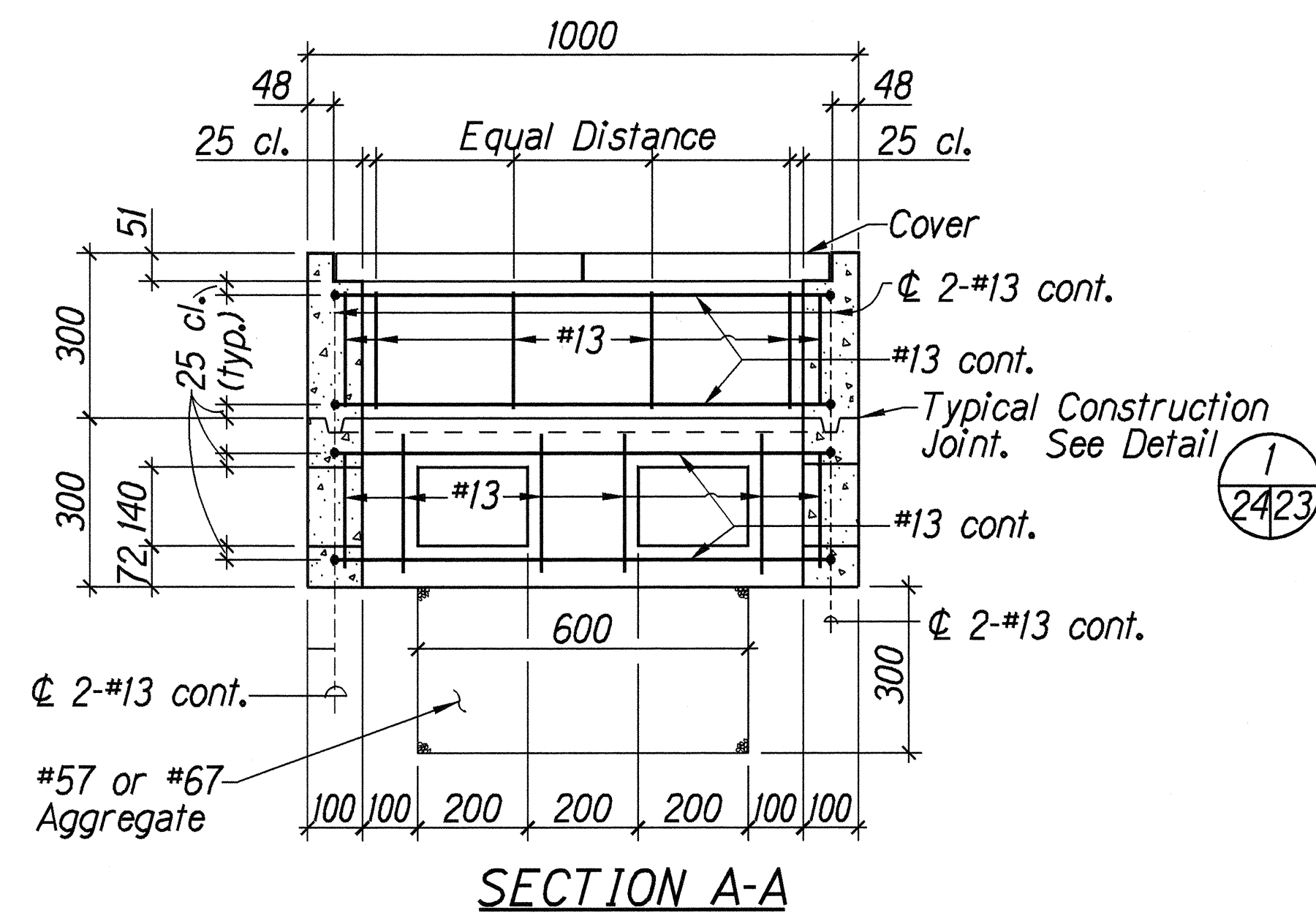
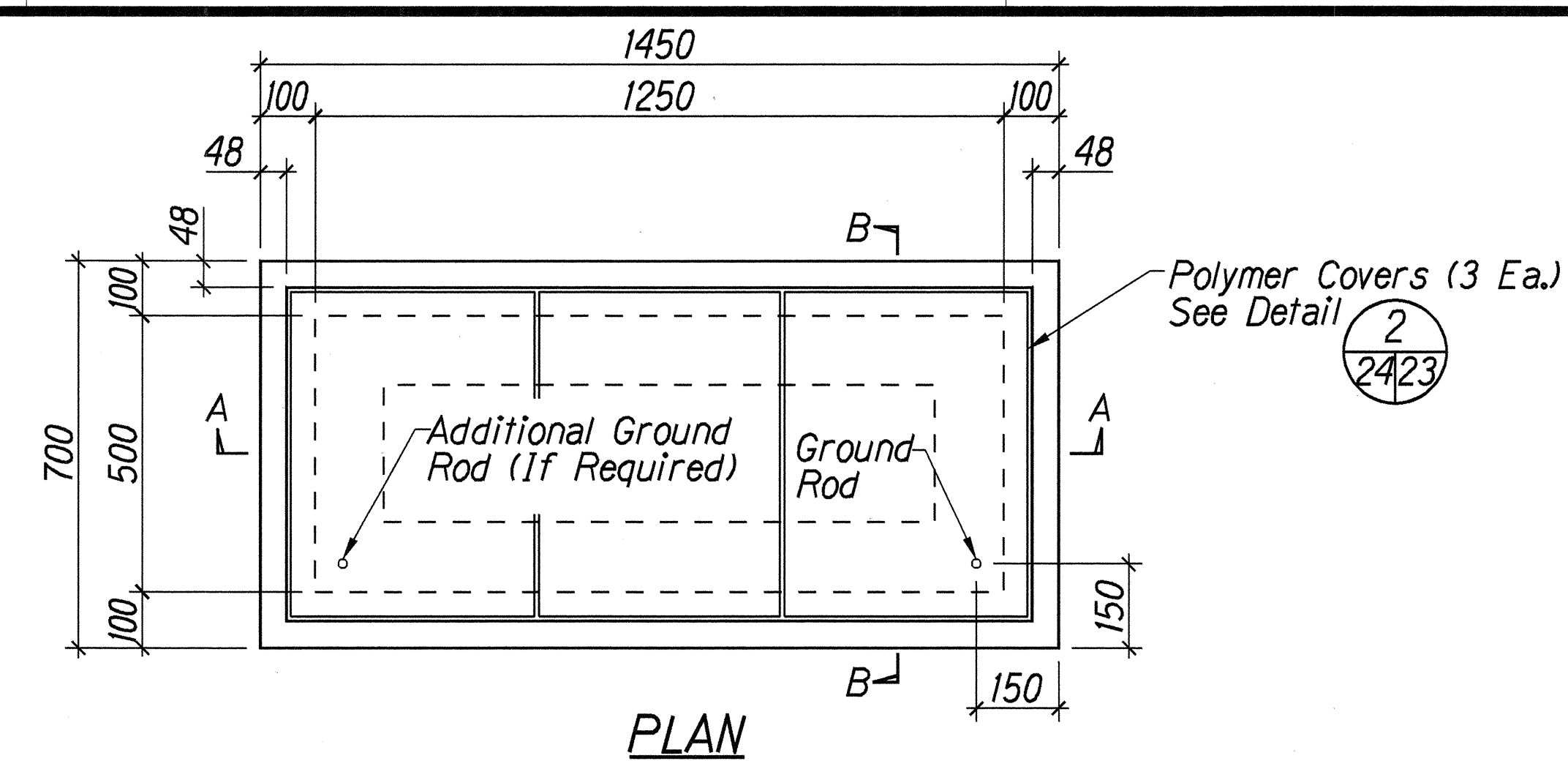
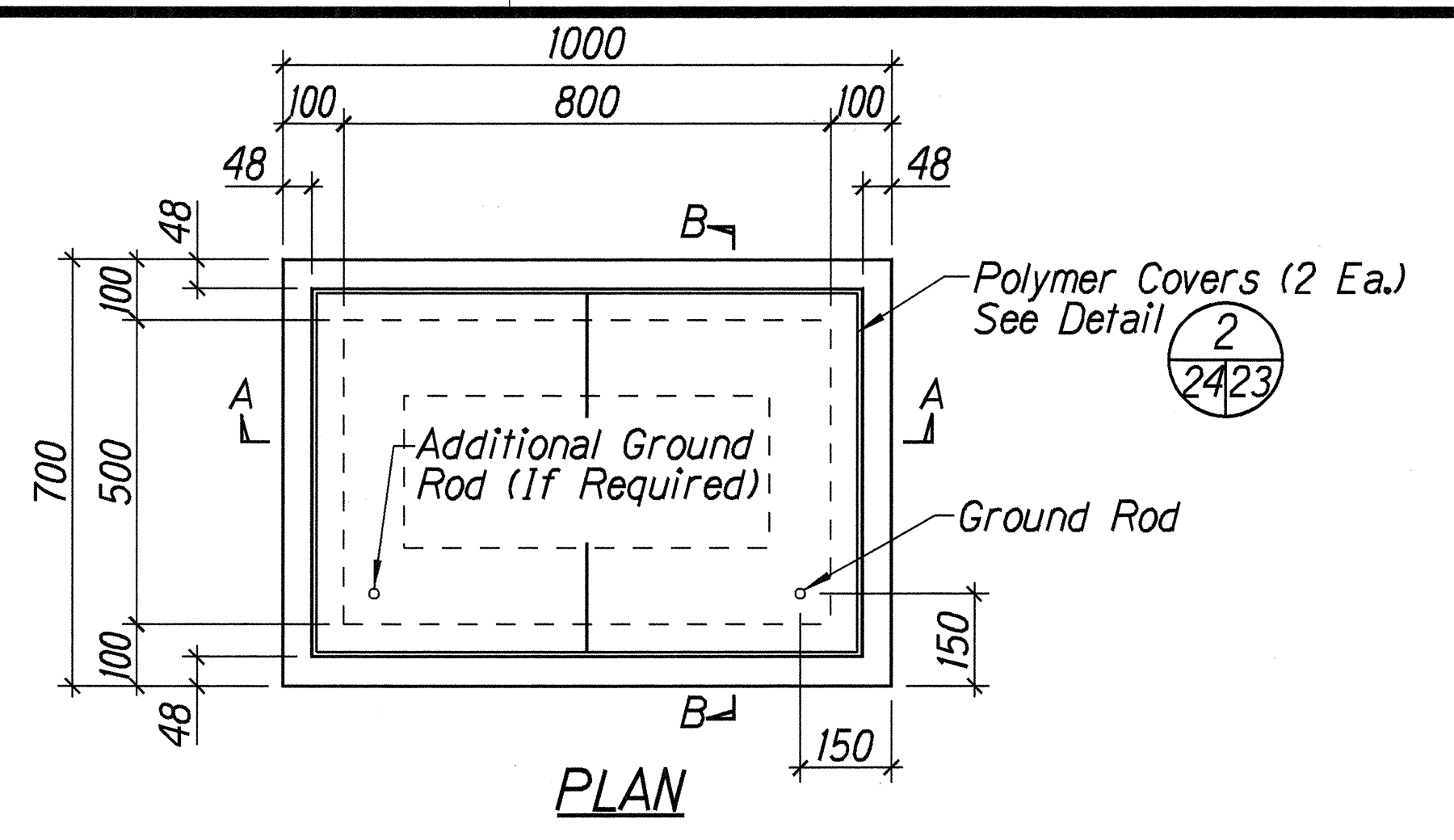


Scale: As Shown Date: Apr., 2000

SHEET No. 2 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-050-1(20)	2000	24	28

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN.



TYPE "B" PULLBOX (Old Type "C")
Scale: 1:10

TYPE "C" PULLBOX (Old Type "D")
Scale: 1:10

HOWARD K. ENDO
LICENSED PROFESSIONAL ENGINEER
No. 6185-C
HAWAII, U.S.A.
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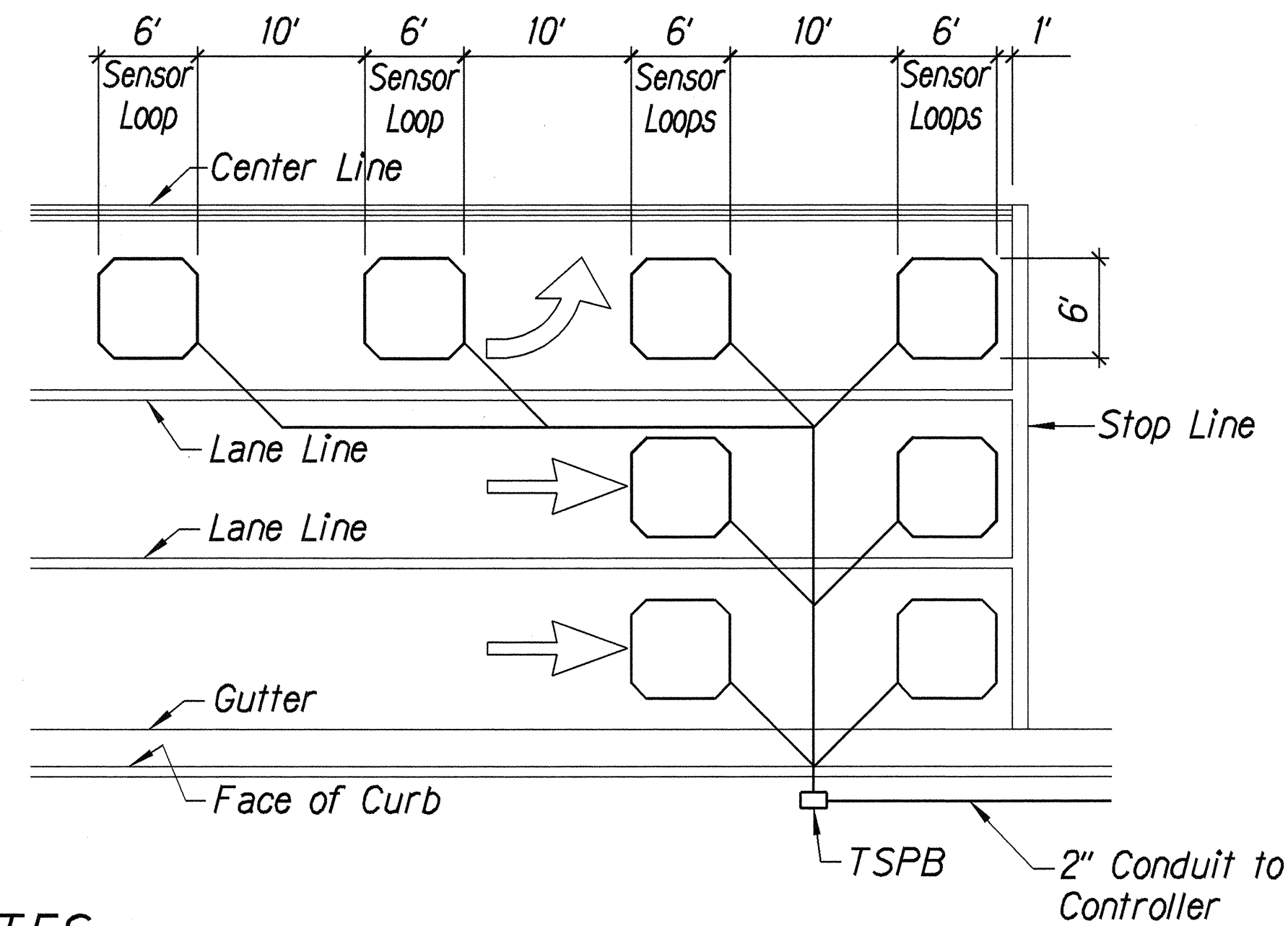
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PULLBOX & COVER DETAILS

Kaunualii Highway Traffic Signal
Modernization at Various Locations
Federal-Aid Project No. STP-050-1(20)

Scale: As Shown Date: Apr., 2000

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-050-1(20)	2000	25	28

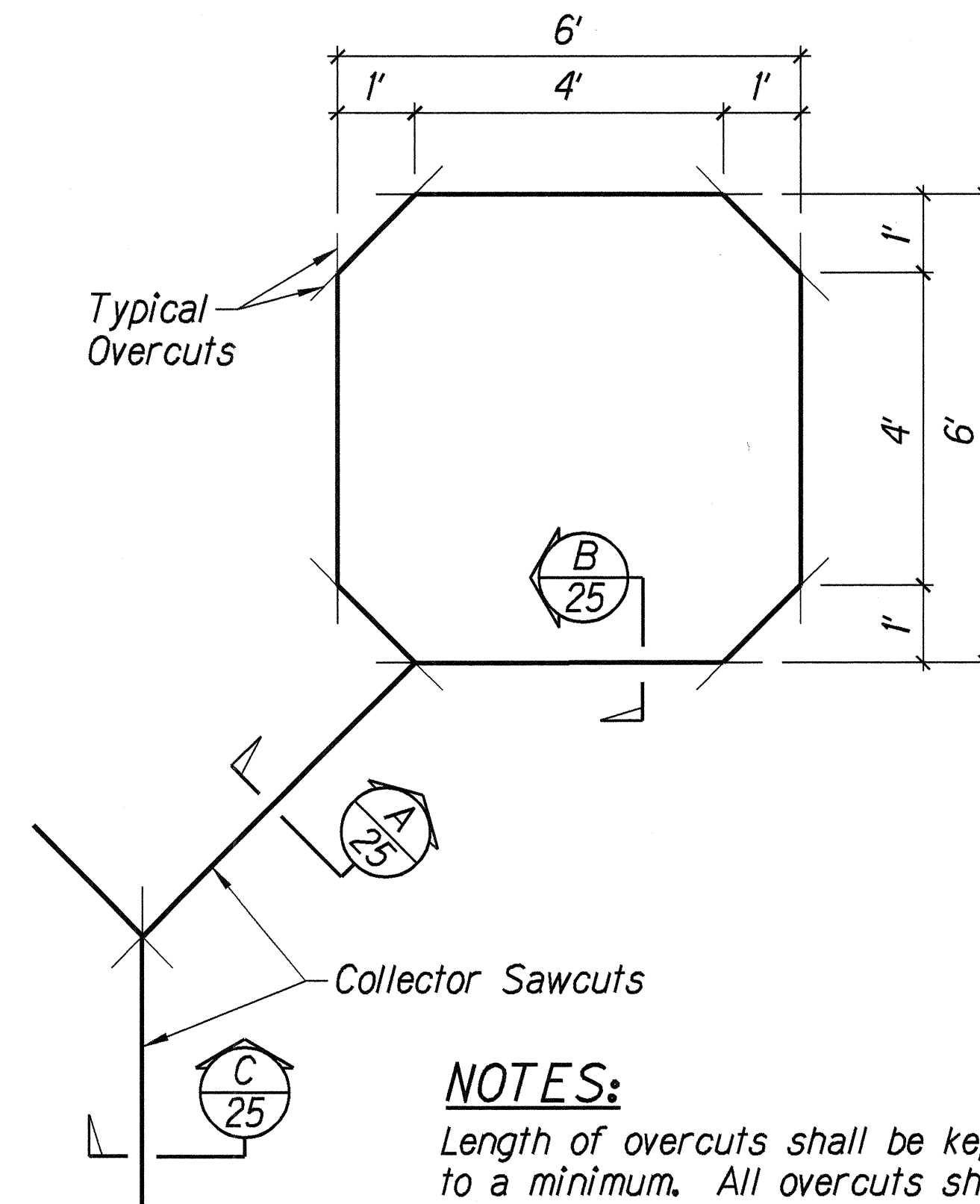


NOTES:

1. Center sensor loops in lanes, unless otherwise noted on plans.
2. Collector cables shall be twisted 2 turns per foot.
3. Number of loops and locations vary. See project plans.
4. Number and locations of collector sawcuts may be varied in the field to suit.

TYPICAL SENSOR LOOP LAYOUT

Not to Scale

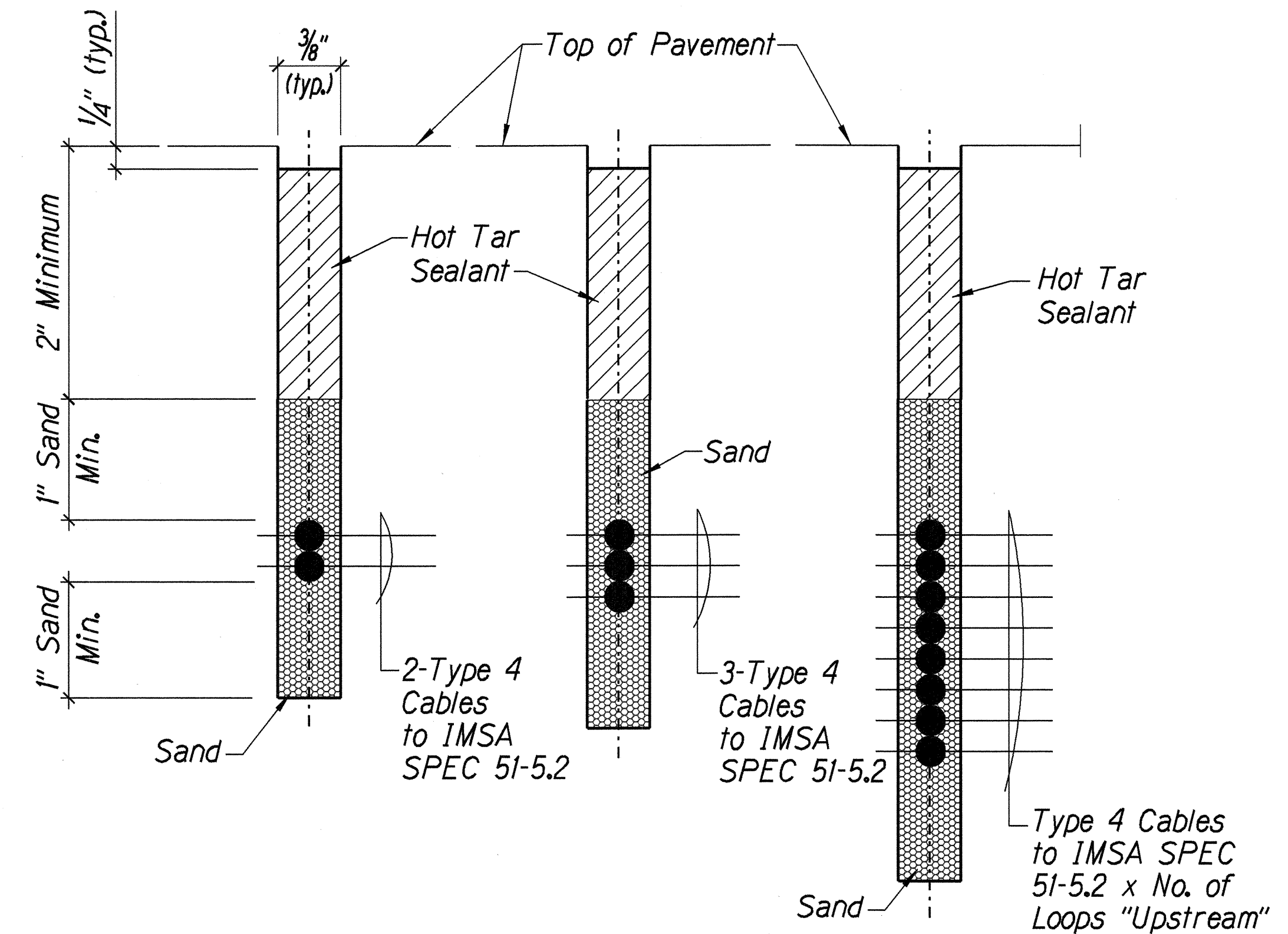


NOTES:

Length of overcuts shall be kept to a minimum. All overcuts shall be back filled with hot tar.

TYP. SENSOR LOOP SAWCUT DETAIL

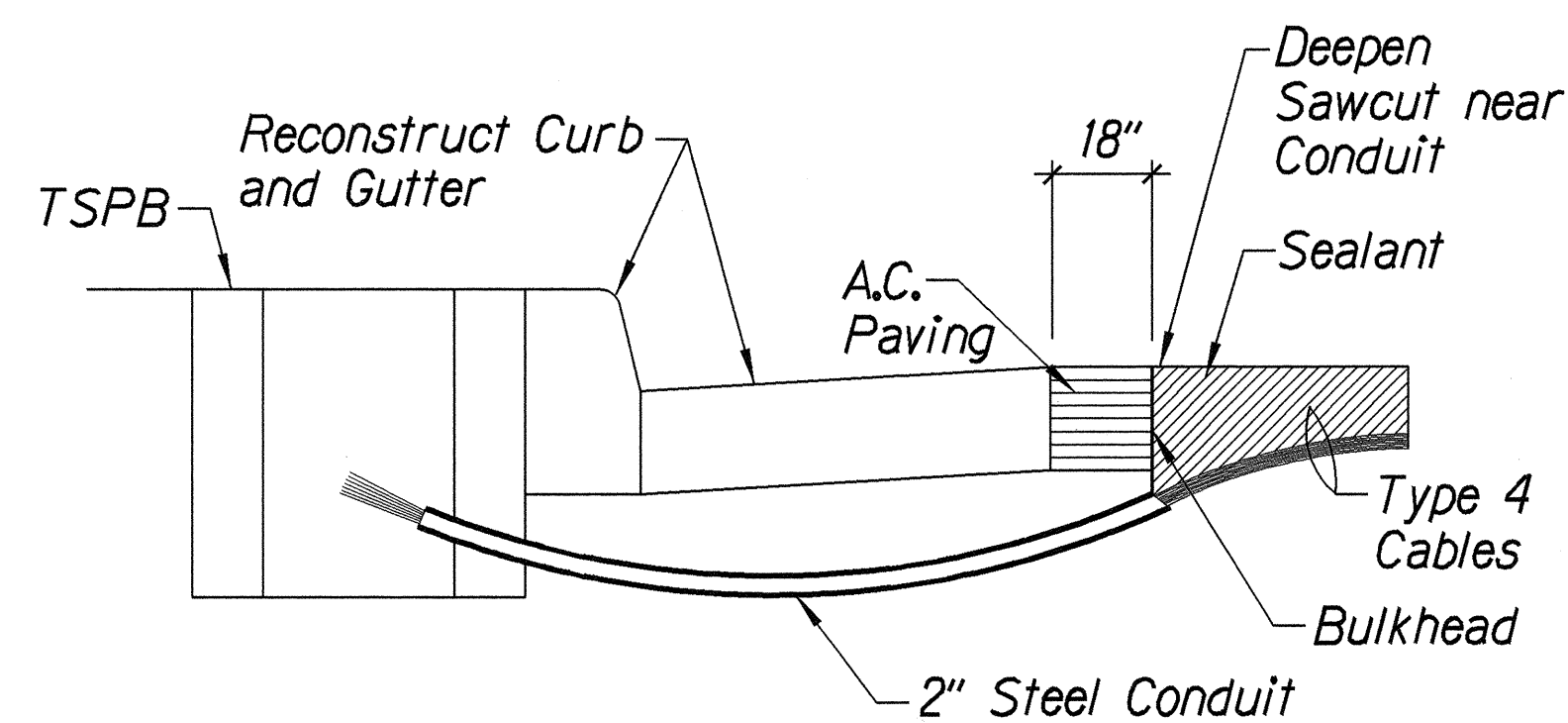
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SECTION A
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SECTION B
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SECTION C
Not to Scale

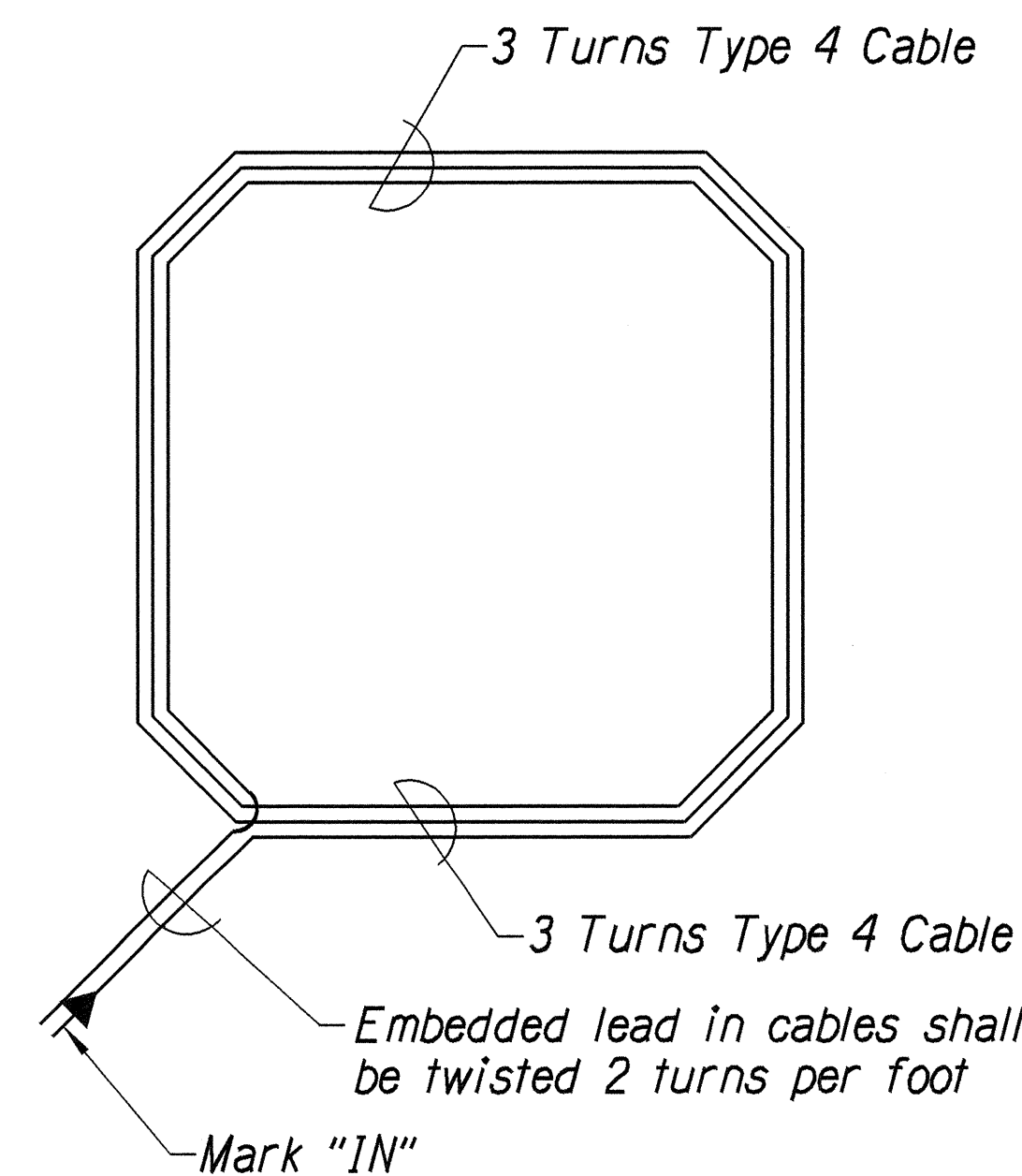


NOTES ON CONSTRUCTION AT END OF SAWCUT

1. Seal roadway end of conduit after installation of conductors.
2. Install bulkhead across conduit trench.
3. Place hot tar in sawcut.
4. Backfill over conduit with new A.C.
5. Reconstruct curb and gutter as required.

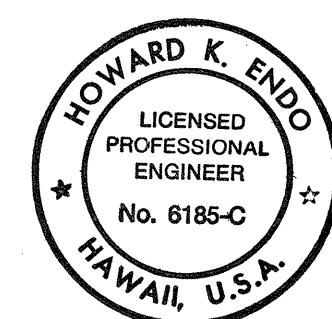
DETAIL OF SENSOR LOOP INSTALLATION AT EDGE OF ROADWAY

Not to Scale



TYP. SENSOR LOOP WIRING DIAGRAM

Not to Scale



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STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION DETECTOR LOOP DETAILS

Kaunualii Highway Traffic Signal
Modernization at Various Locations
Federal-Aid Project No. STP-050-1(20)

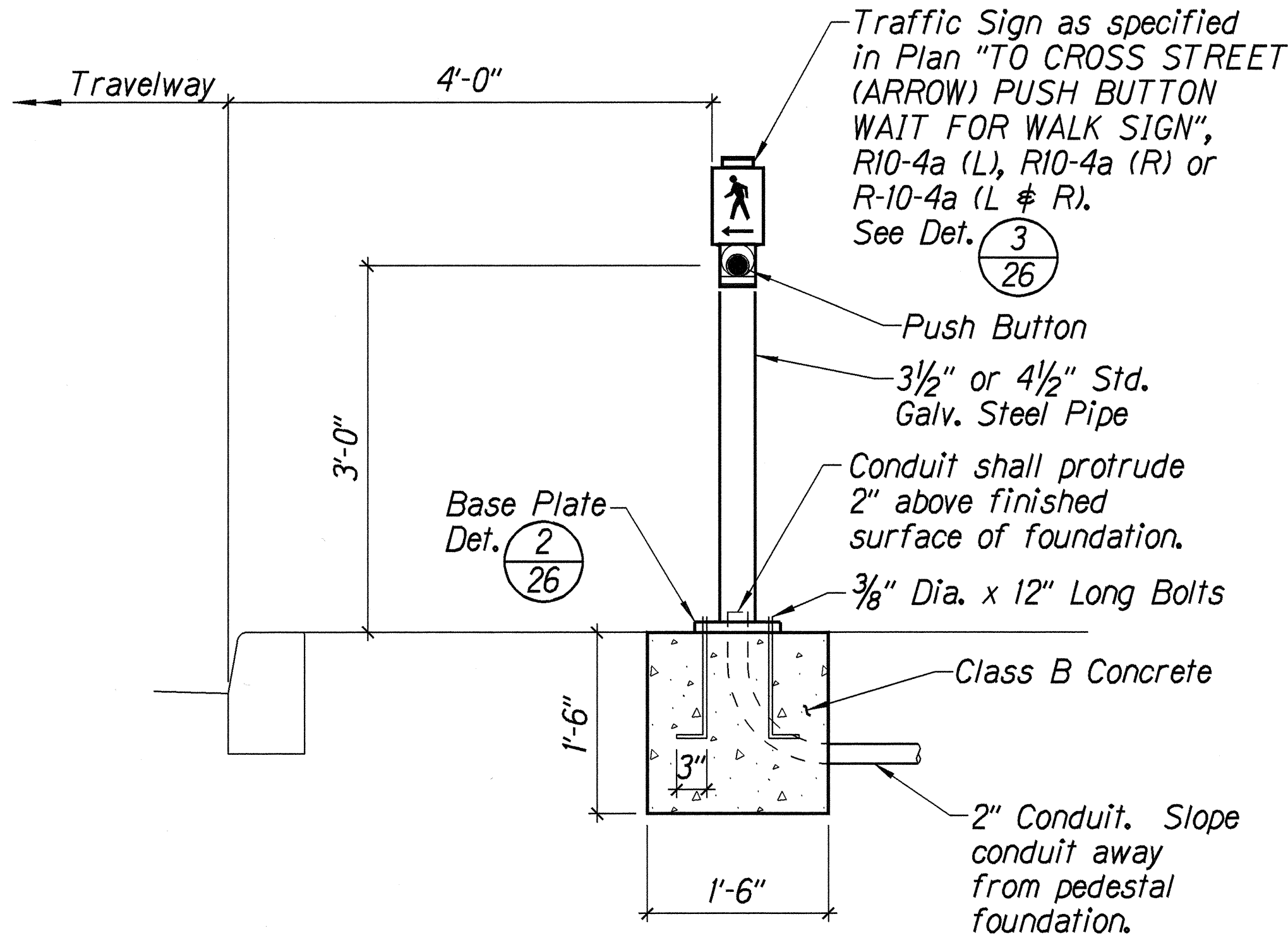
Scale: As Shown Date: Apr., 2000

SHEET No. 5 OF 7 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-050-1(20)	2000	26	28

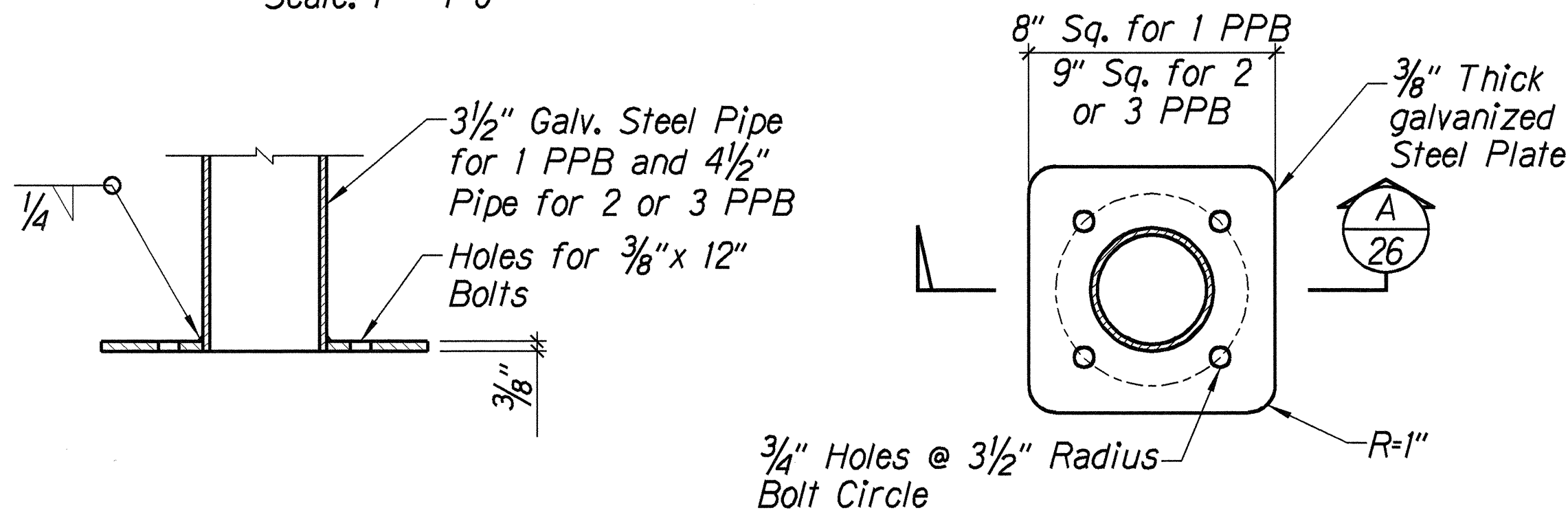
NOTES:

- The pedestrian push button unit shall consist of a one piece assembly with a raised walking man, arrow indication and push button.
- The push button activator shall be of the mushroom plunger type, ADA acceptable, 2-inches in diameter that requires less than 5 lbs. of pressure to activate.
- The raised man and arrows shall be directional and match the directional indication as shown on the plans.
- The push button shall be tamper proof, weatherproof and constructed so that electrical shocks are impossible.
- The color scheme shall be:
White - Man, Arrow and Push Button
Black - Background
- Pedestrian Push Button Standard shall be hot-dipped galvanized after fabrication.



PEDESTRIAN PUSH BUTTON PEDESTAL DETAIL 1/26

Scale: 1" = 1'-0"

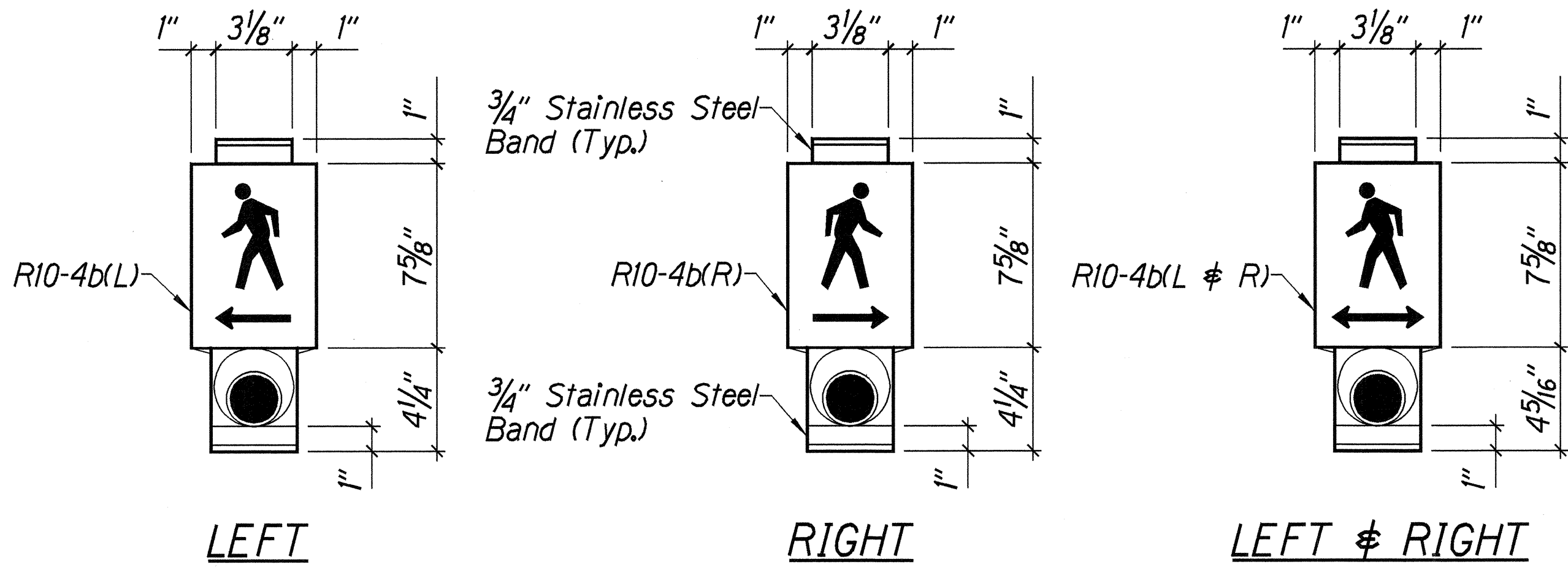


SECTION A 26

Not to Scale

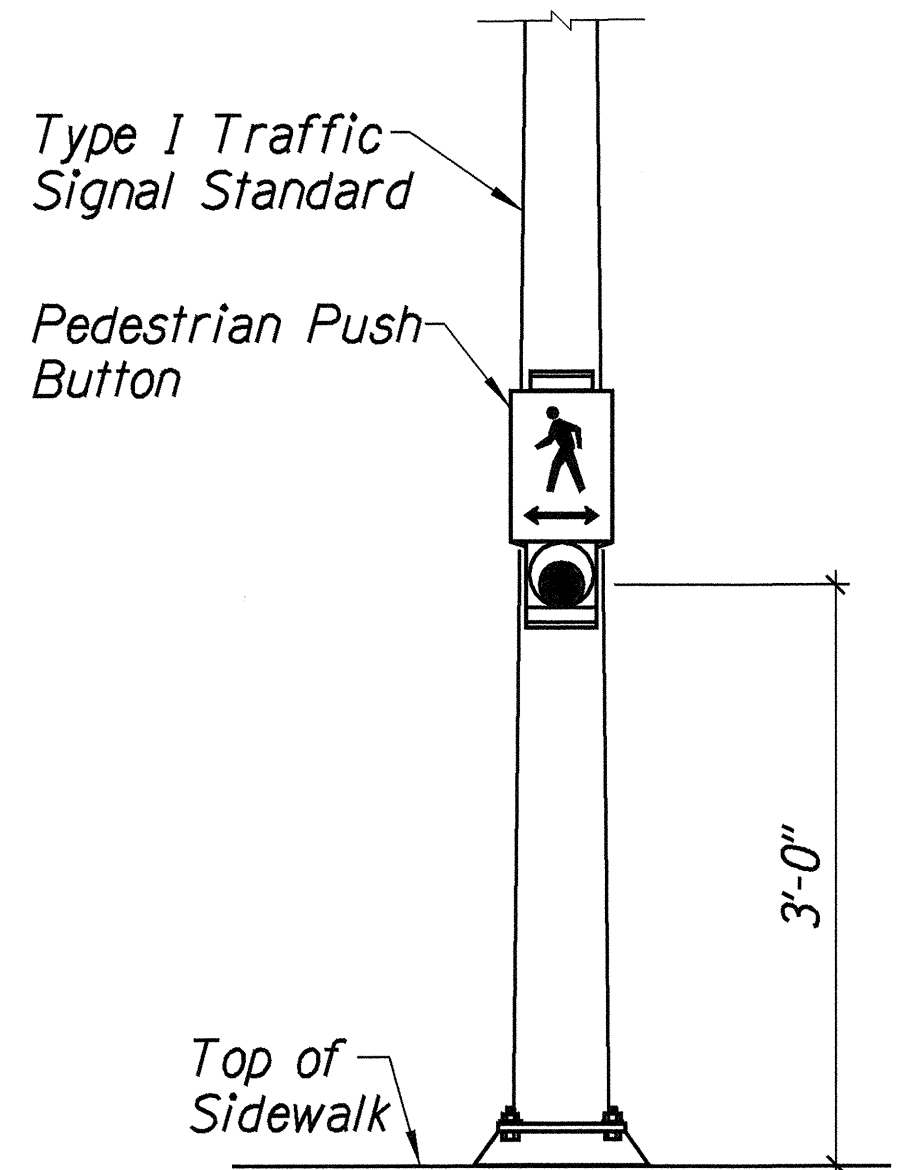
BASE PLATE DETAIL 2/26

Not to Scale



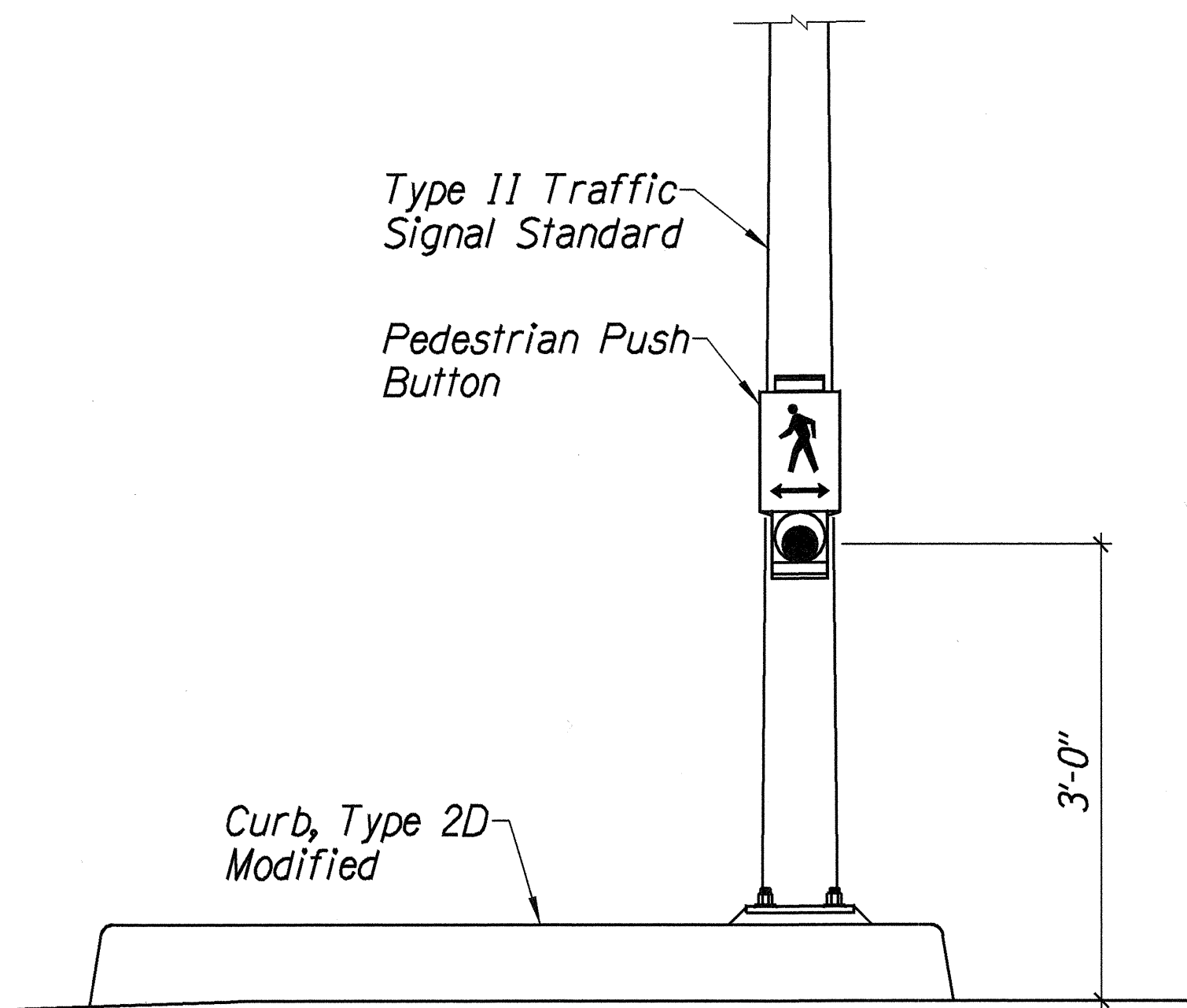
PEDESTRIAN PUSH BUTTON DETAILS 3/26

Not to Scale



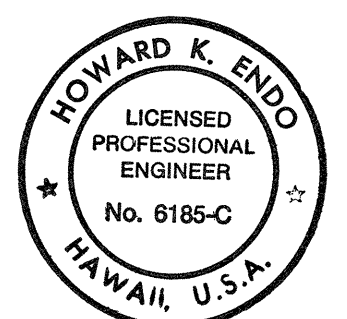
PEDESTRIAN PUSH BUTTON ON TYPE I SIGNAL STANDARD 4/1026

Scale: 1" = 1'-0"



PEDESTRIAN PUSH BUTTON ON TYPE II SIGNAL STANDARD 5/926

Scale: 1" = 1'-0"



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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TRAFFIC SIGNAL DETAILS

Kaumualii Highway Traffic Signal
Modernization at Various Locations
Federal-Aid Project No. STP-050-1(20)
Scale: As Shown Date: Apr., 2000
SHEET No. 6 OF 7 SHEETS

Sawcut Prior to Trenching

Sawcut through and remove all existing material bound by asphalt or portland cement

12" Trench Width 12"

A.C. Pav't

A.C. Base Course

Prime Coat

12"

36" Min.

Metal Detectable Red Plastic Warning Tape, See Note No. 2.

Aggregate Subbase Course

6" * 8" * 4"

Type "A" Backfill

3" 3"

Prior to installing Conduits, level & compact bottom of trench to 95% compaction

PVC Conduits Sch. 80 (typ.) (See Duct Sect.)

27