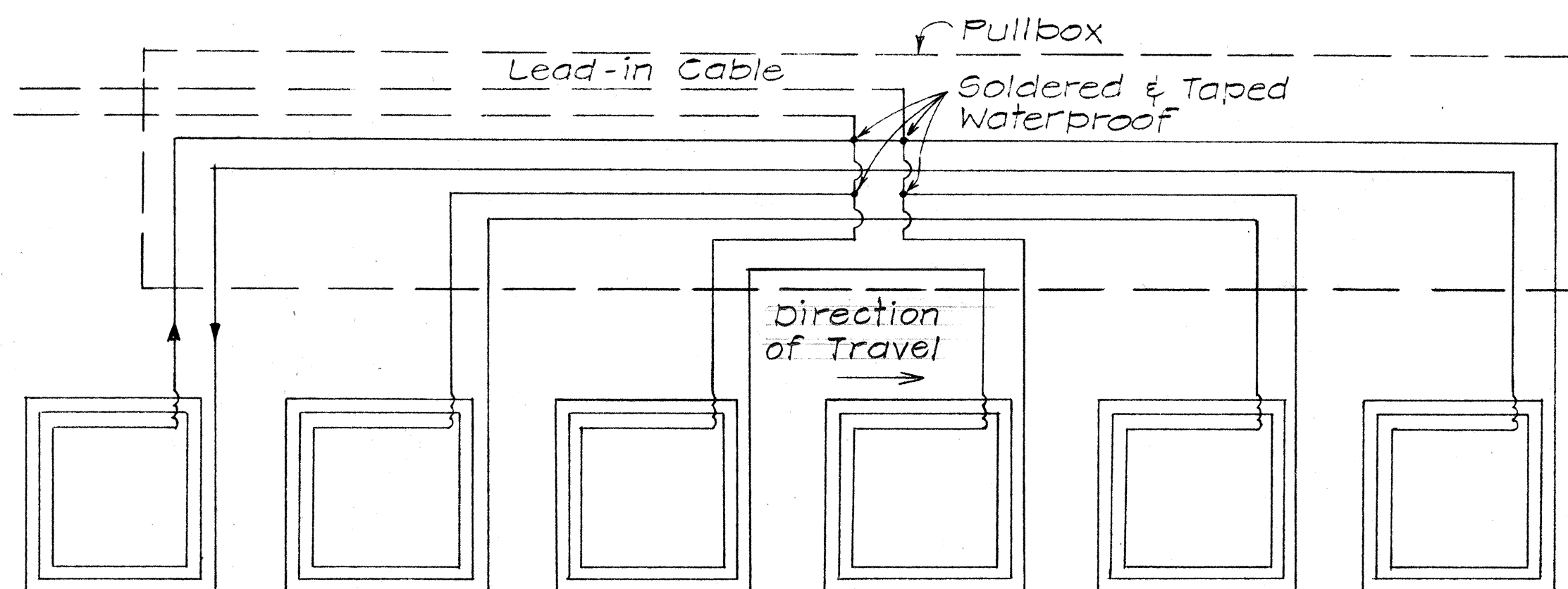


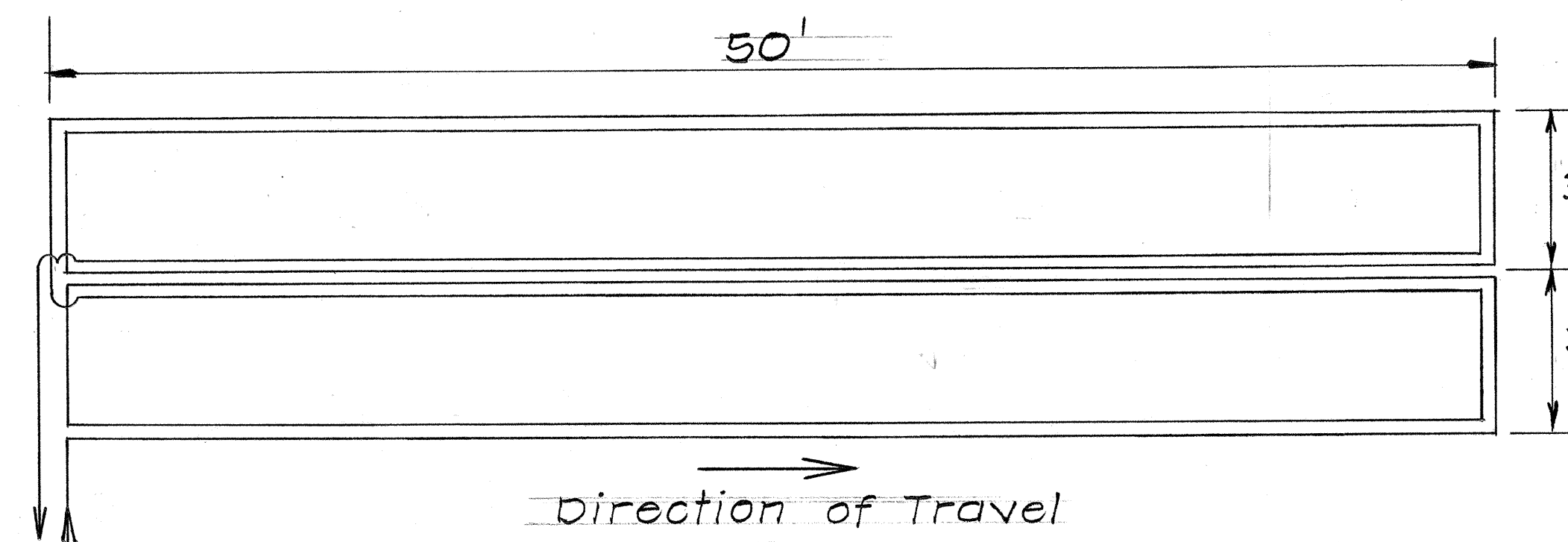
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	32A-01-76	1975	4	7

CONSTRUCTION NOTES

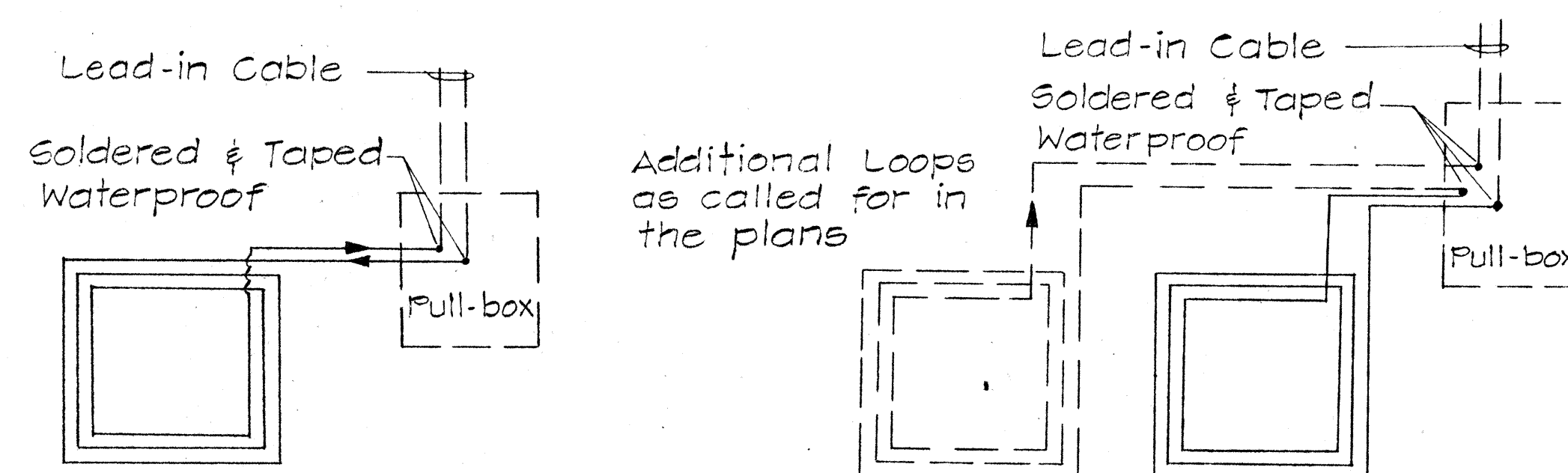
- Locations of existing underground structures & utilities, such as pipe lines, conduits, cables etc., shown on Plans are approximate only. It is not the intent of these Plans to show the exact location of all underground utilities & structures. It is the responsibility of the Contractor to verify the locations of all existing utilities with the respective Owners. Existing utilities damaged by the Contractor shall be repaired by the Contractor at his own cost.
- The locations of the Traffic Signal Standards, Traffic Signal Standards with Mast-Arm, Pedestrian Push Buttons, Traffic Controllers, Pull-Boxes, conduits and Traffic Detectors shall be staked out in the field by the Contractor, and approval of the locations obtained from the Engineer prior to Construction and Installation.
- All Traffic Signal Work shall conform to the Requirements of the "Manual on Uniform Traffic Control Devices for Streets & Highways", Federal Highway Administration (1971), as amended.
- The Contractor shall inform utility companies 3 days prior to commencing construction. For additional requirements, see Subsection 105.05 Cooperation with Utility Companies and Subsection 107.21 Contractors Responsibility for Utility Property and Services of these Specifications and Special Provisions.
- Existing Signs not incorporated in the final traffic pattern shall be removed; removal shall include posts and foundations. Cost incidental to various Contract Items.
- Signal Equipment when shipped unassembled, shall be adequately identified to facilitate proper assembly.



TYPICAL SERIES PARALLEL LOOP CONNECTION



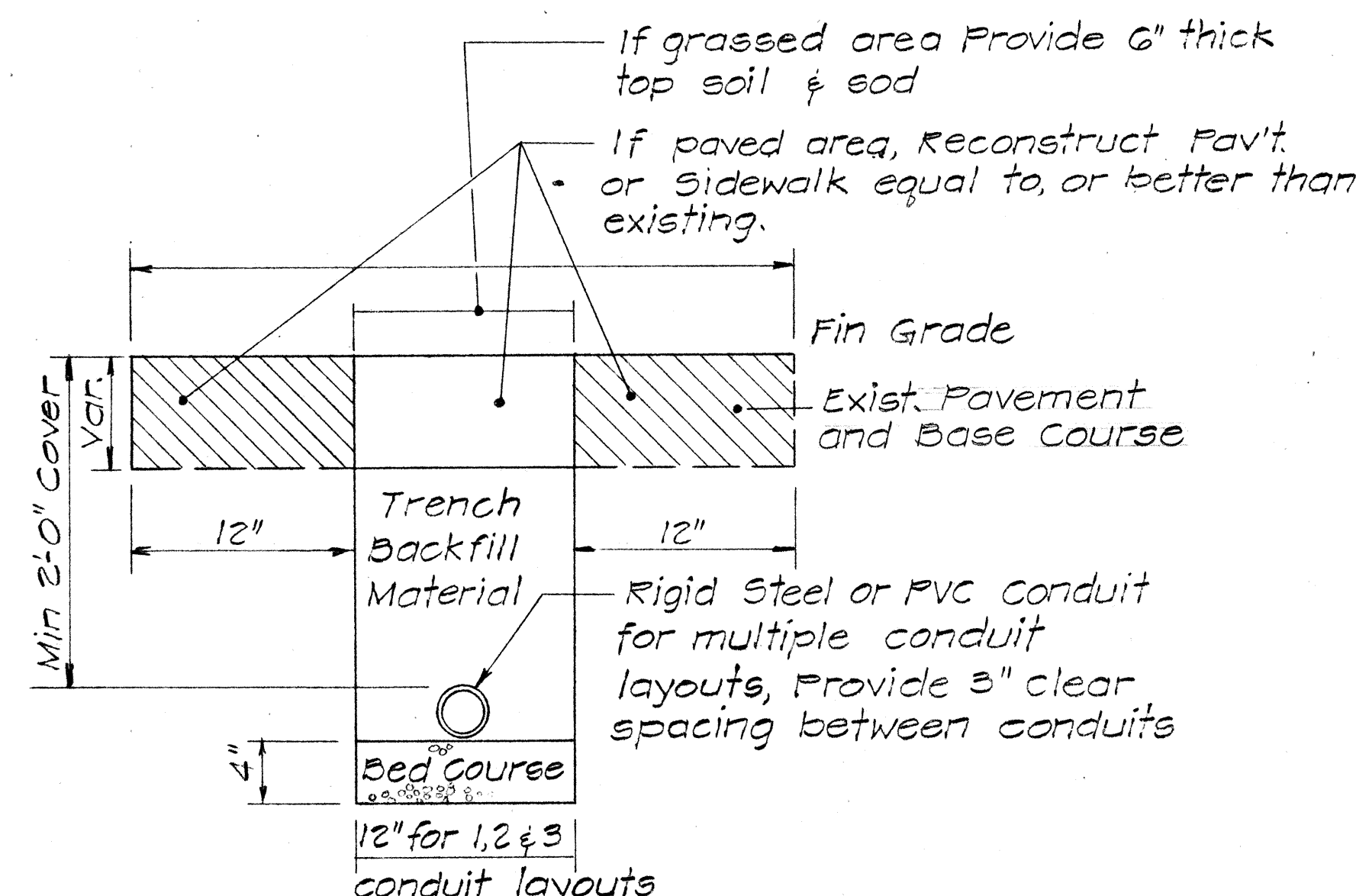
WIRING FOR 6' x 50' LOOP DETECTOR



SINGLE

SERIES

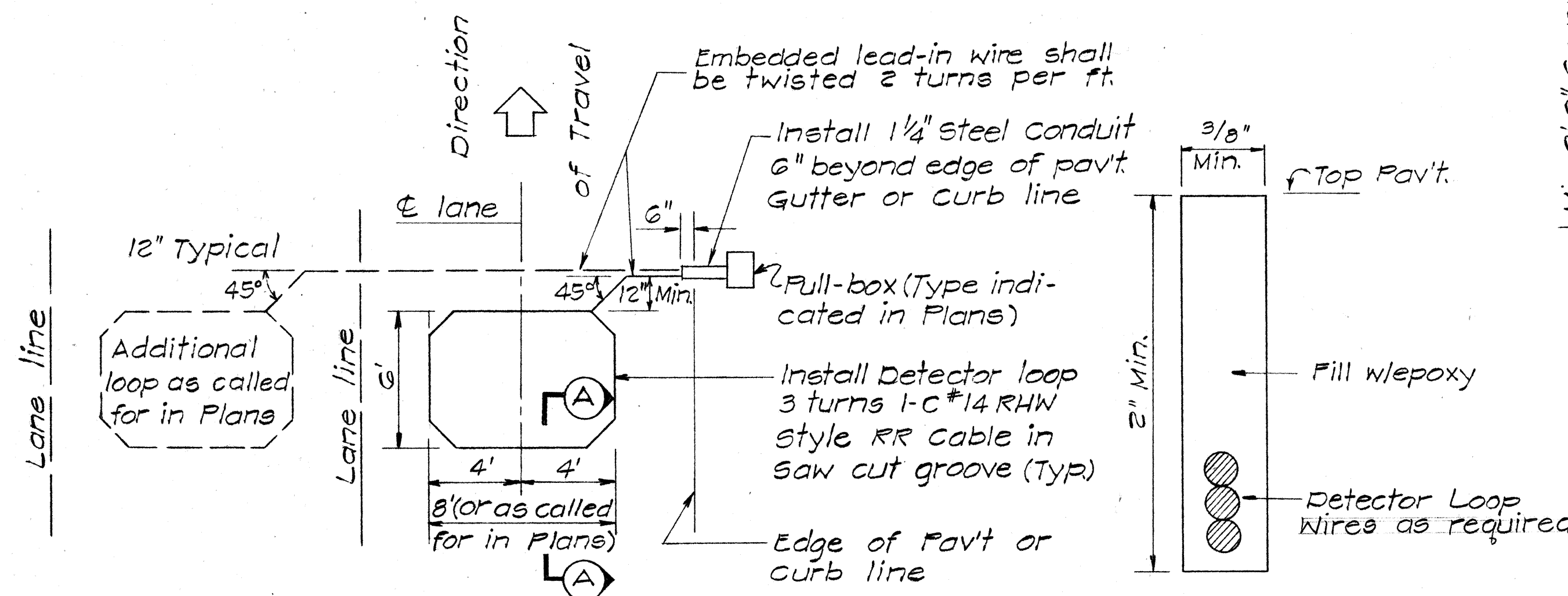
TYPICAL LOOP CONFIGURATIONS
No Scale



TYPICAL TRENCH SECTION FOR CONDUIT
Scale: 1 1/2" = 1'-0"

NOTE:

- All conduits under roadways shall be steel or PVC Schedule 80. All other conduits shall be steel or PVC schedule 40.



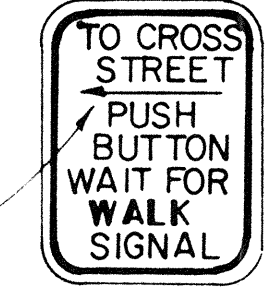
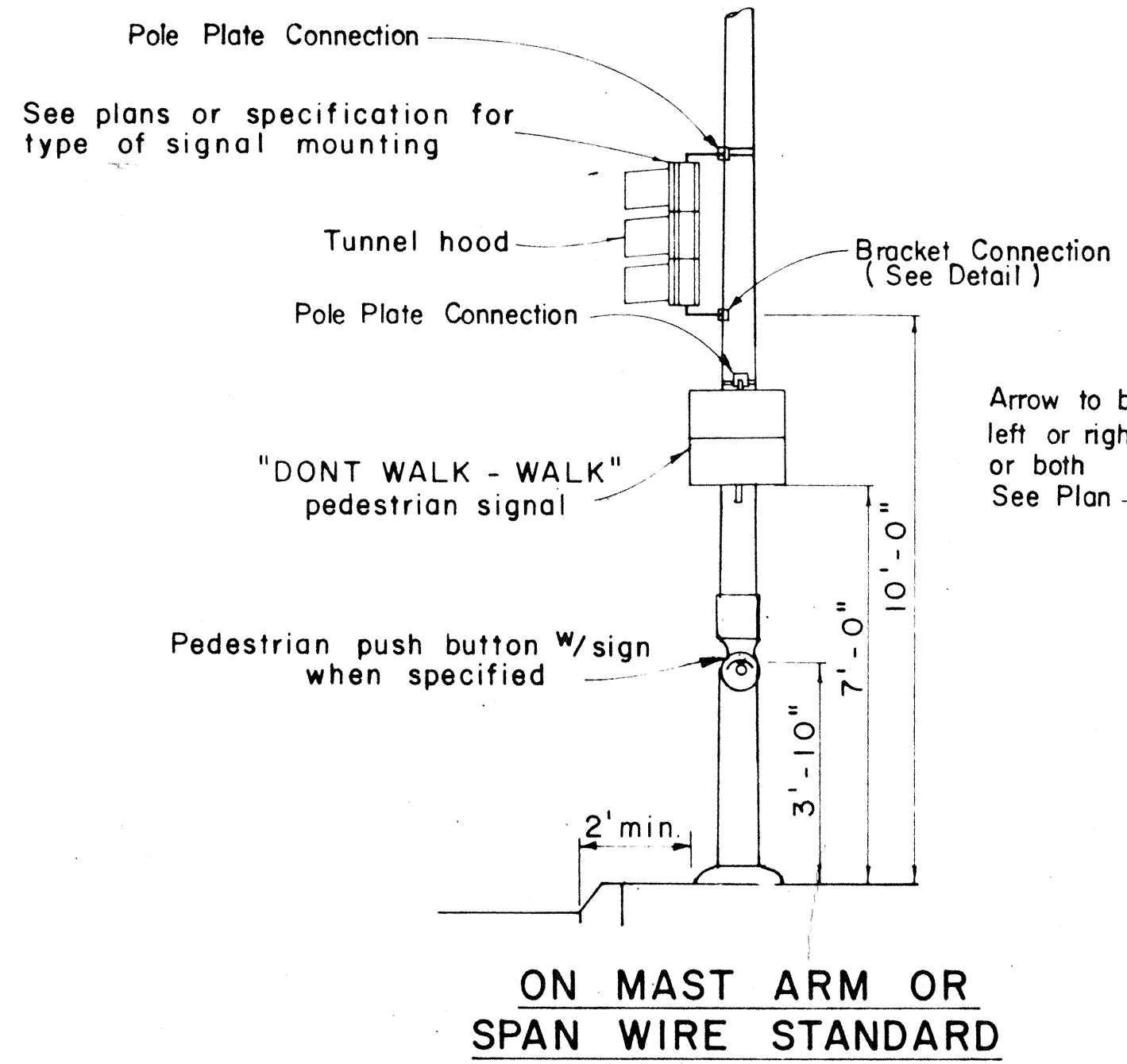
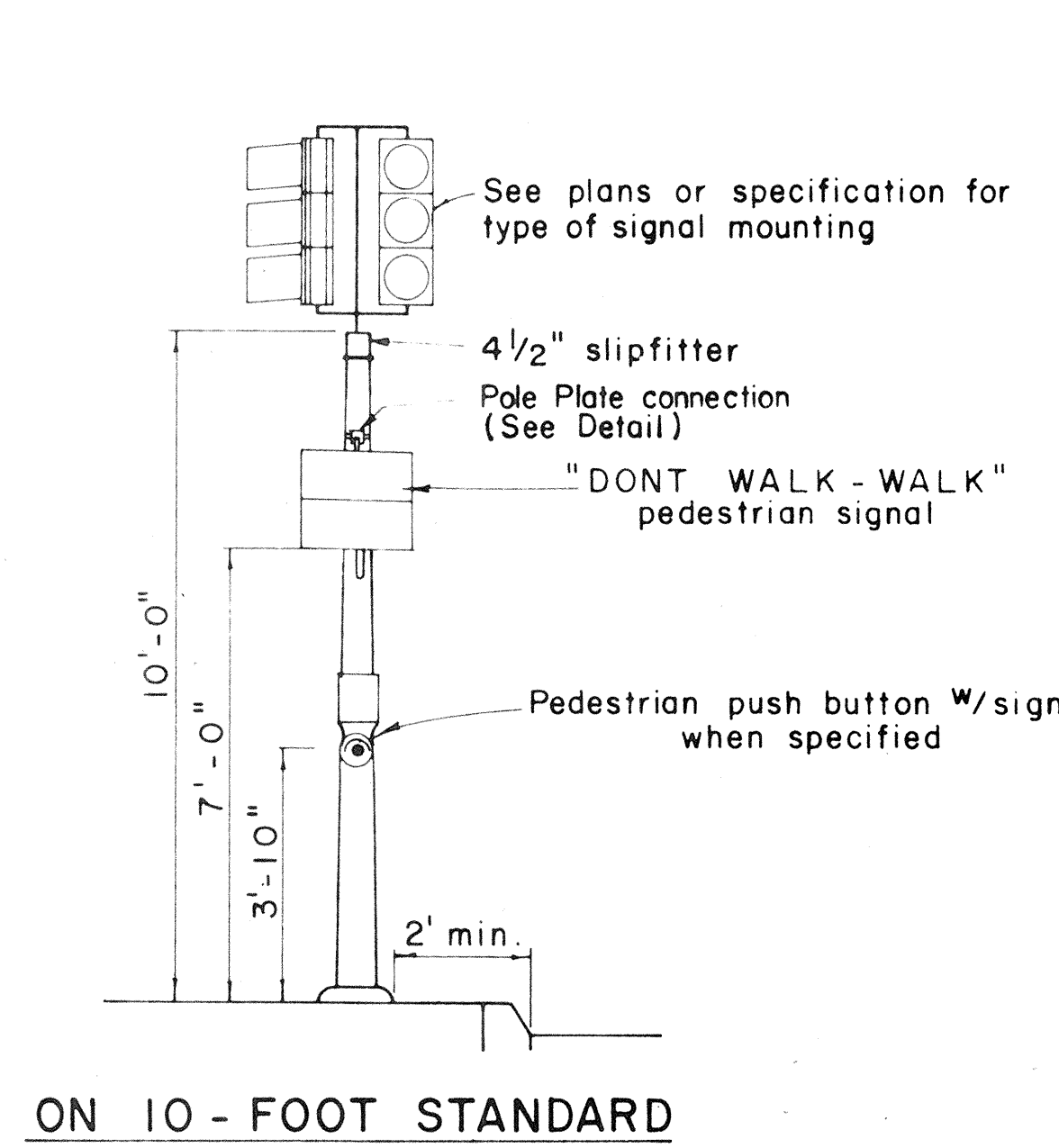
PLAN - MULTIPLE LOOP LAYOUT
Scale: 1" = 5'

SECTION A-A (TYPICAL)
Detector loop saw-cut
No Scale

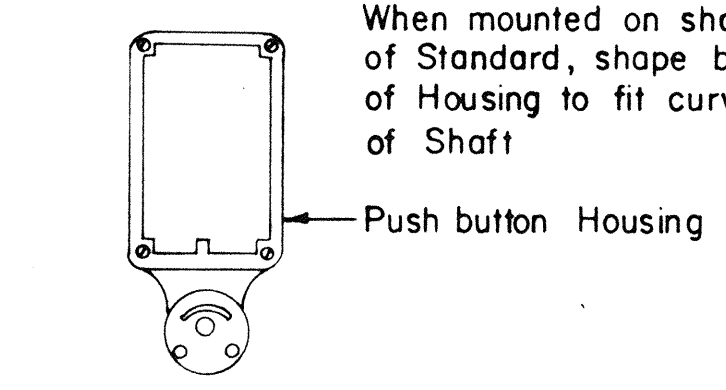
DETECTION LOOP
Scale: as shown

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
TRAFFIC SIGNAL SYSTEM MISCELLANEOUS DETAILS	
PROJECT NO. 32A-01-76	
Scale: As Noted	Date 1975
SHEET No. 2 OF 4 SHEETS	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	32A-01-76	1975	5	

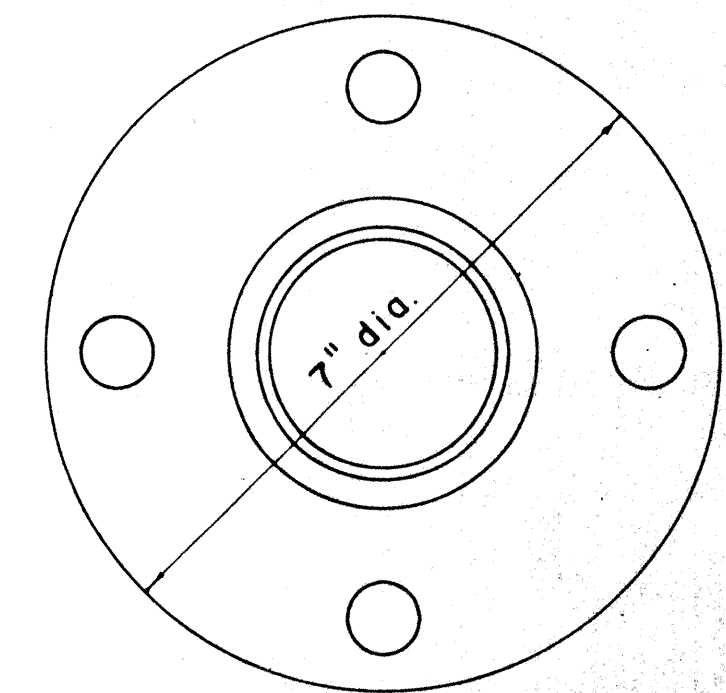
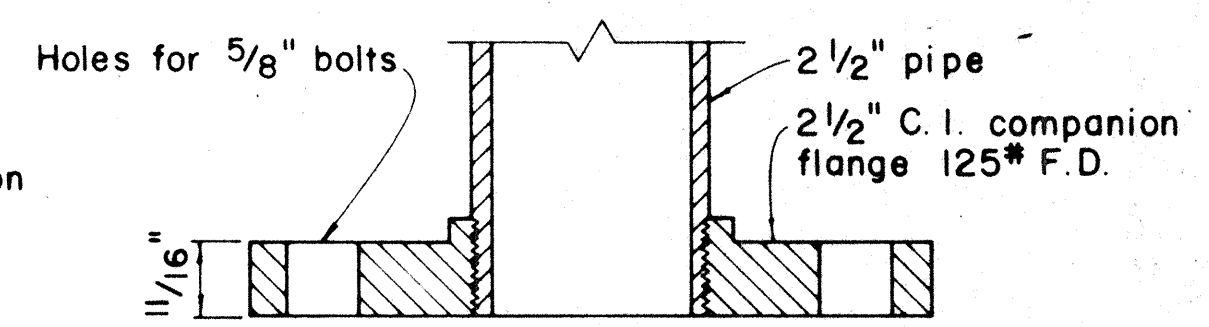
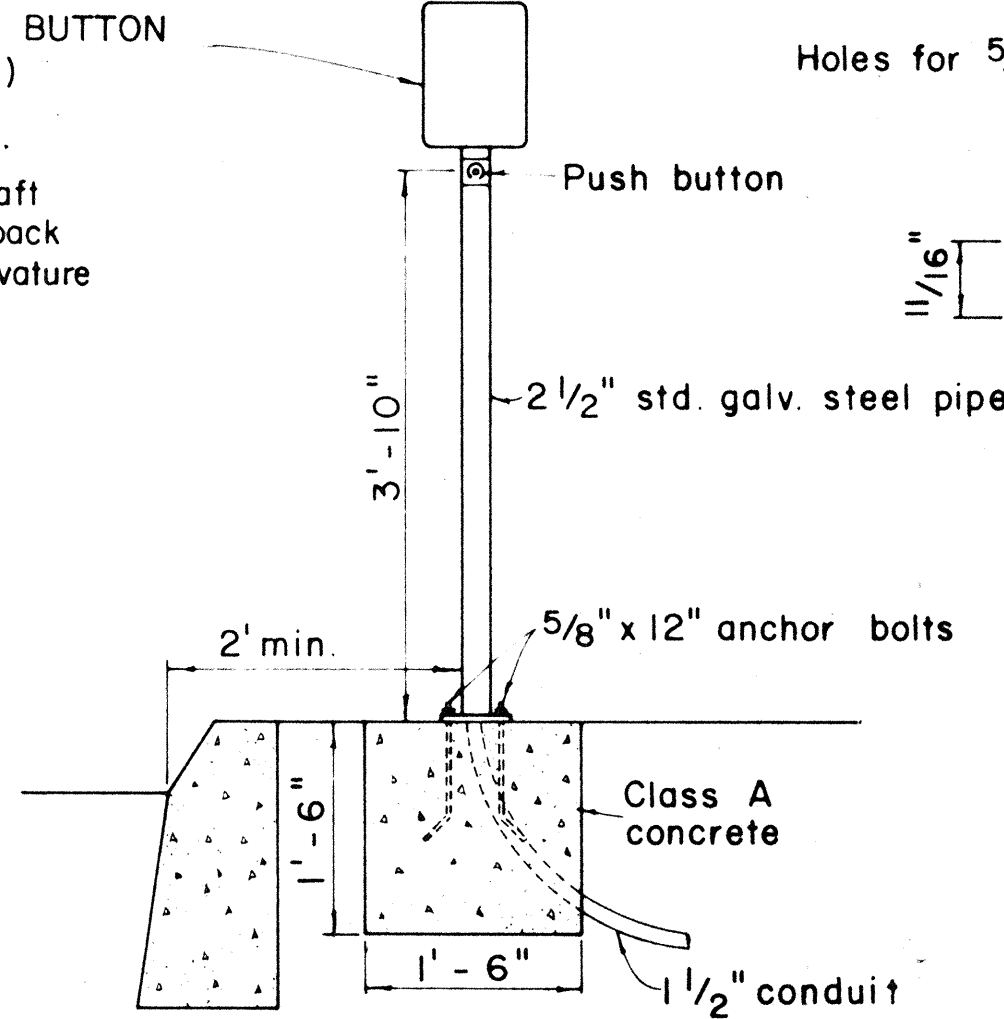


TRAFFIC SIGN AS SPECIFIED IN PLAN
"TO CROSS STREET (ARROW) PUSH BUTTON
WAIT FOR WALK SIGNAL" (R10-4a)



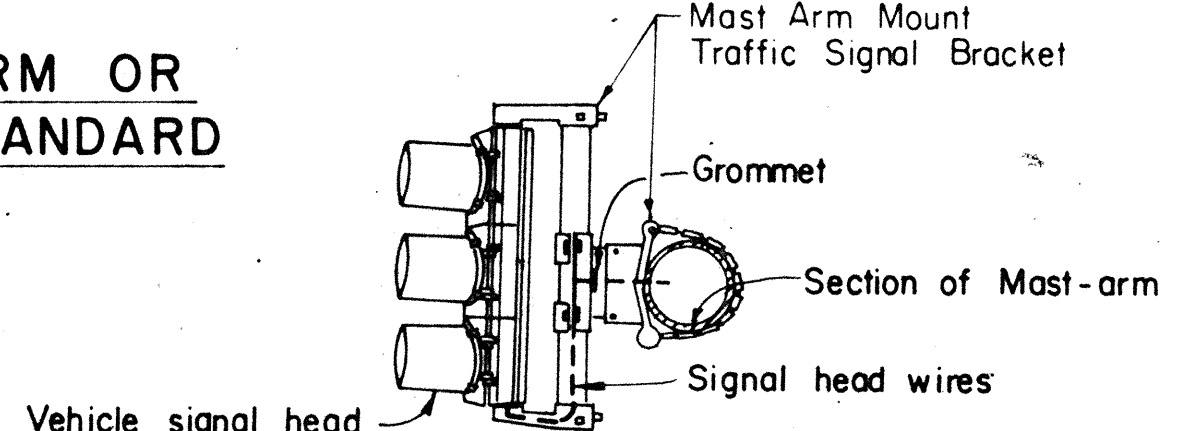
**R10-4a PEDESTRIAN
9"x 12" PUSH BUTTON**

- NOTE:**
1. Conduits shall protrude 2" max. above finished surface of foundation.
 2. Conduits shall slope away from pole foundation.
 3. Post and base shall be painted with one coat of approved weather proof dark green enamel.

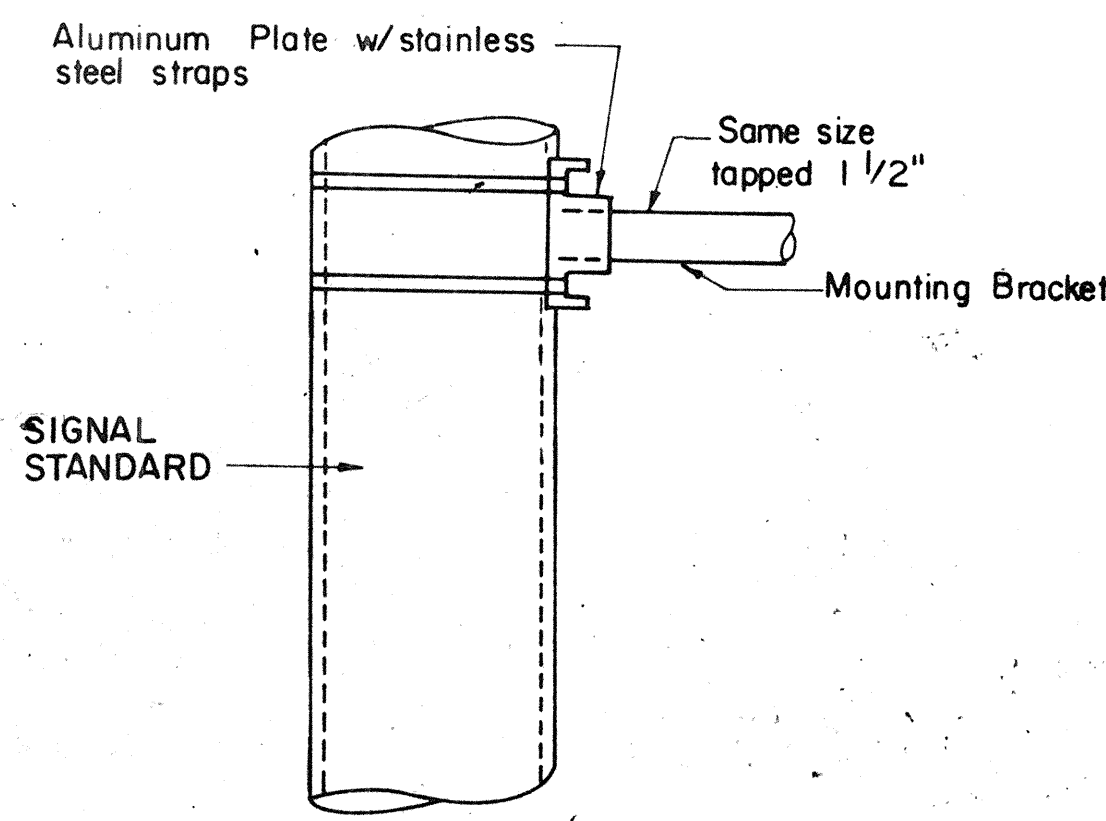


BASE DETAIL

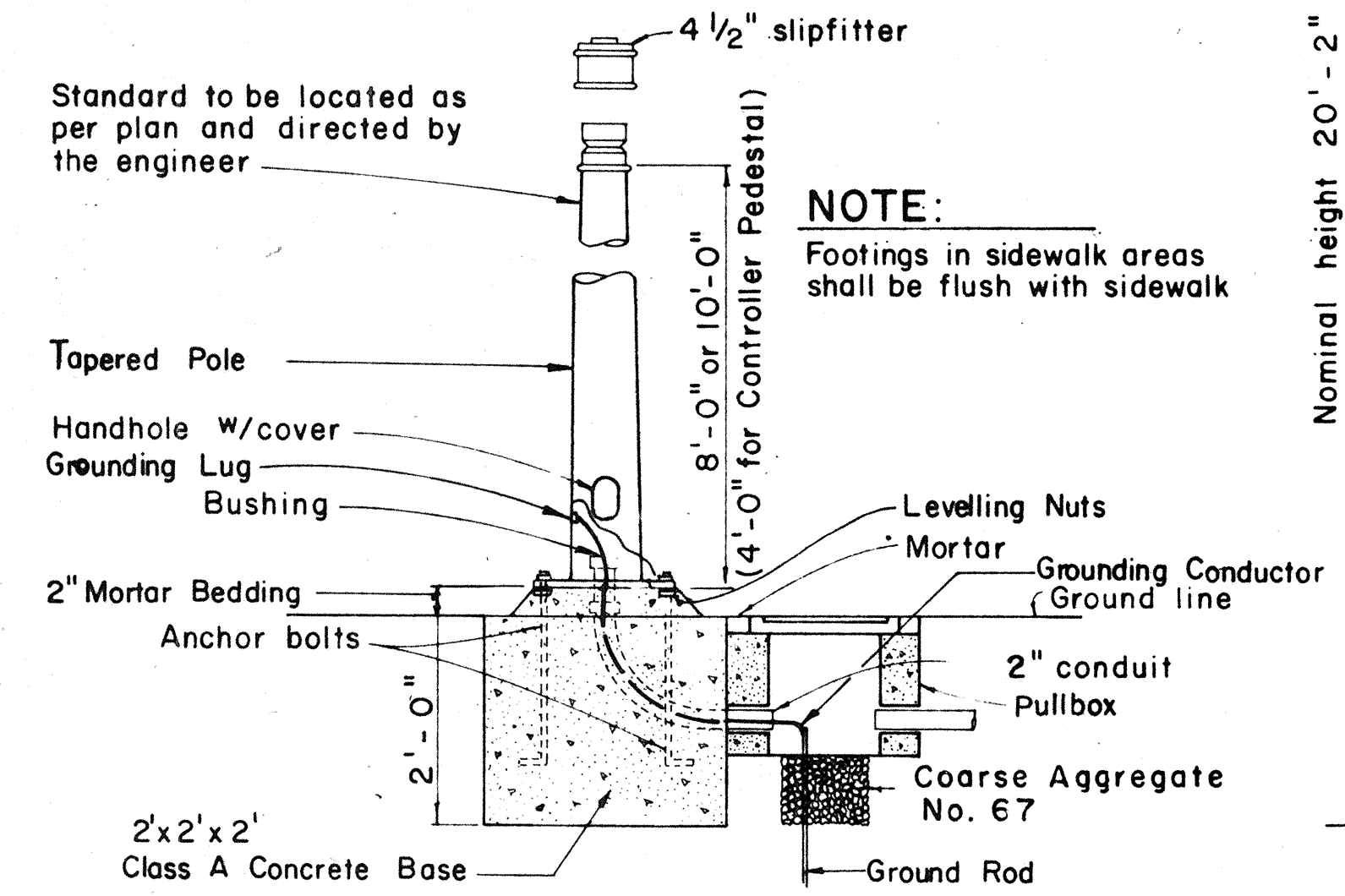
PEDESTRIAN PUSH BUTTON POST AND FOOTING



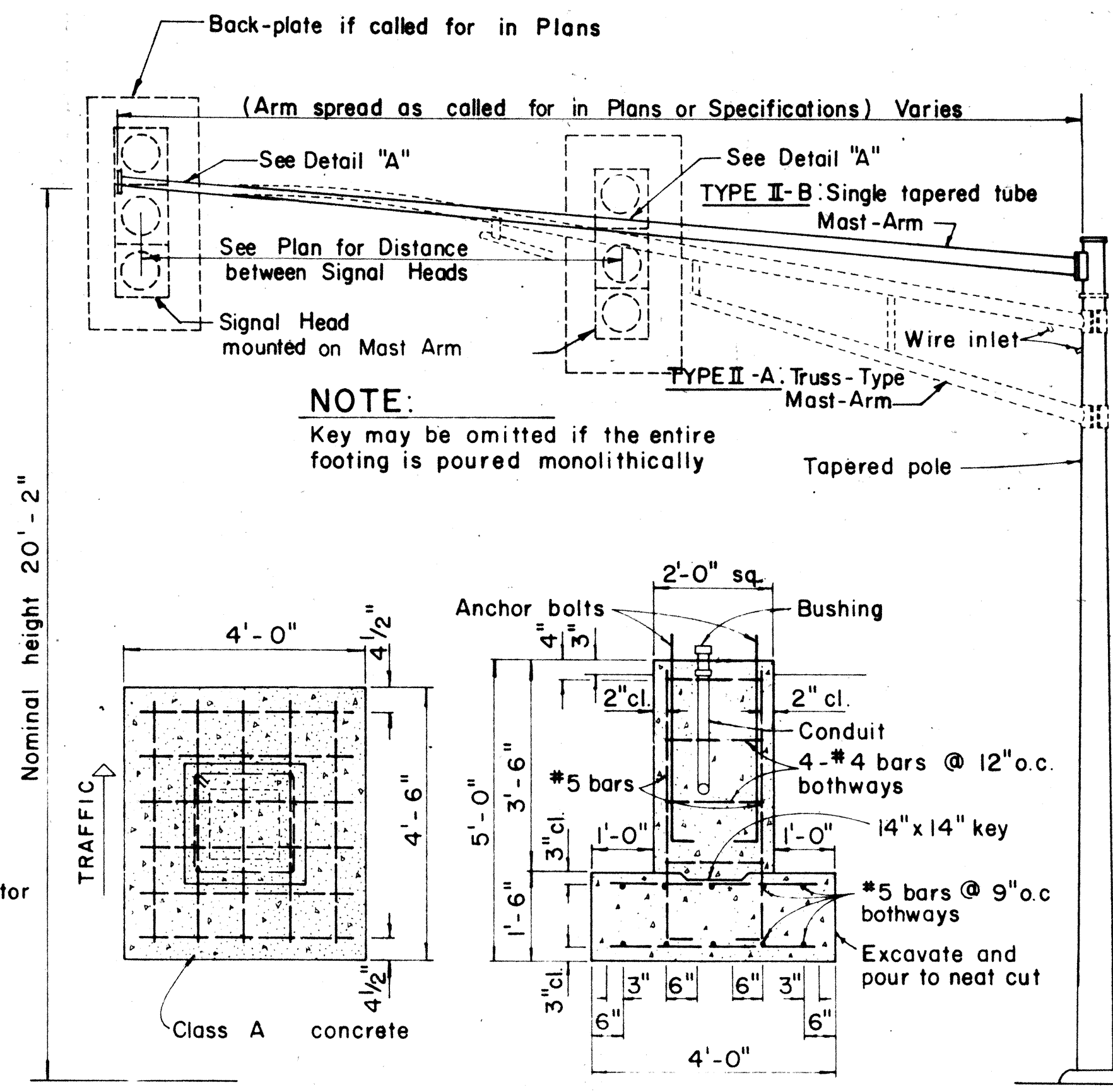
DETAIL "A"
No Scale



**DETAIL OF BRACKET
AND POLE PLATE CONNECTIONS**

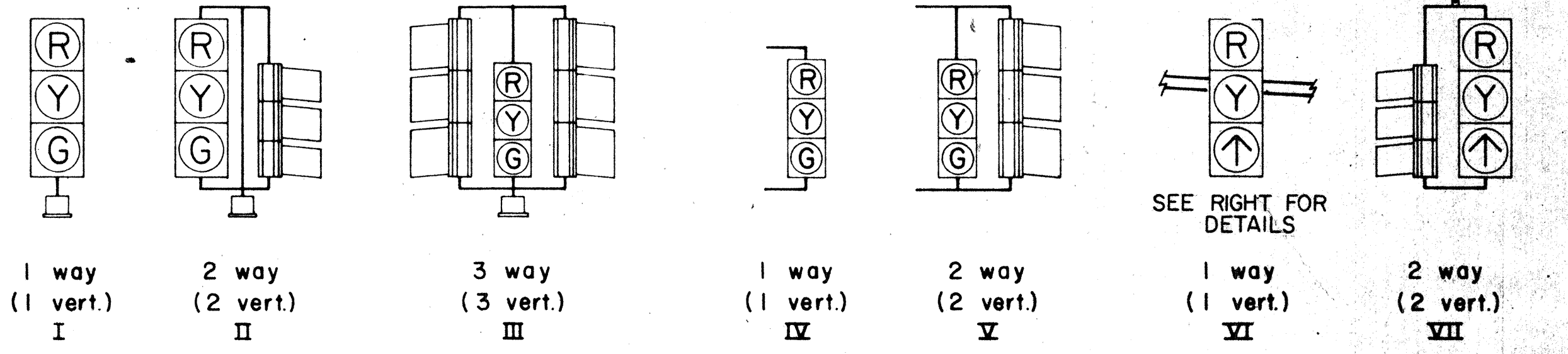


**FOOTING FOR TYPE I SIGNAL STANDARD
OR CONTROLLER PEDESTAL**



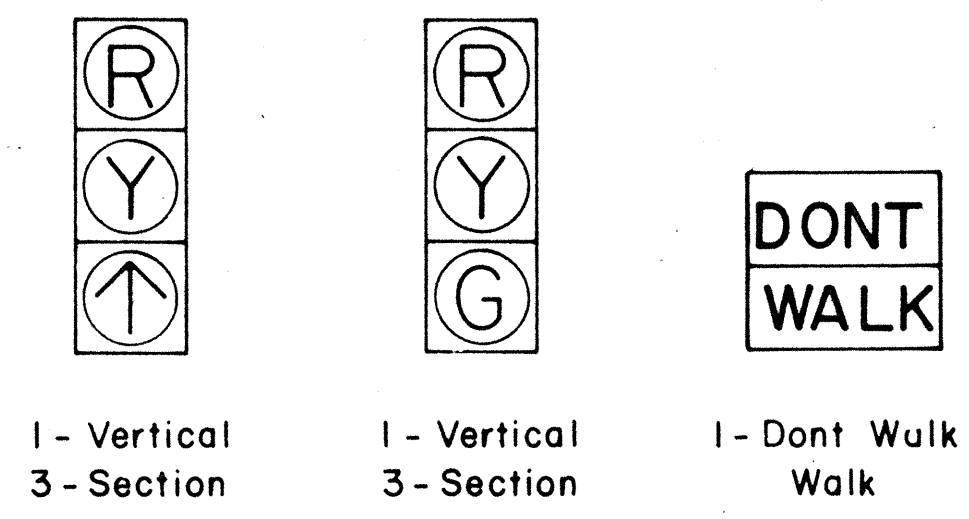
NOTE:
Key may be omitted if the entire footing is poured monolithically

**TYPE II MAST ARM STANDARD
AND FOOTING**



SLIPFITTER MOUNTINGS BRACKET MOUNTINGS MASTARM MOUNTINGS

TYPICAL VEHICULAR AND PEDESTRIAN SIGNAL MOUNTINGS



TYPICAL SIGNAL ARRANGEMENTS

NOTE:
With the approval of the Engineer, the Contractor may use the Traffic Signal Standard Details of the Department of Transportation Services City & County of Honolulu

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL SYSTEM

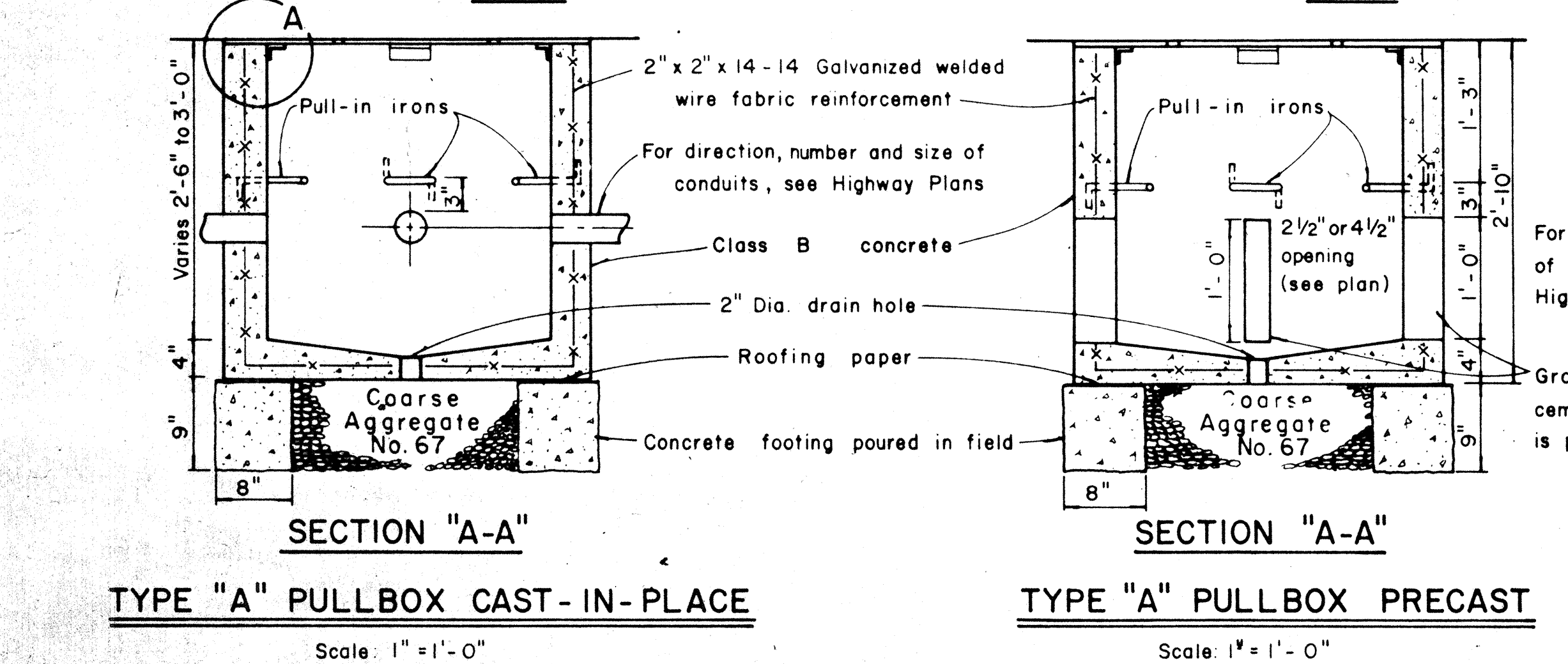
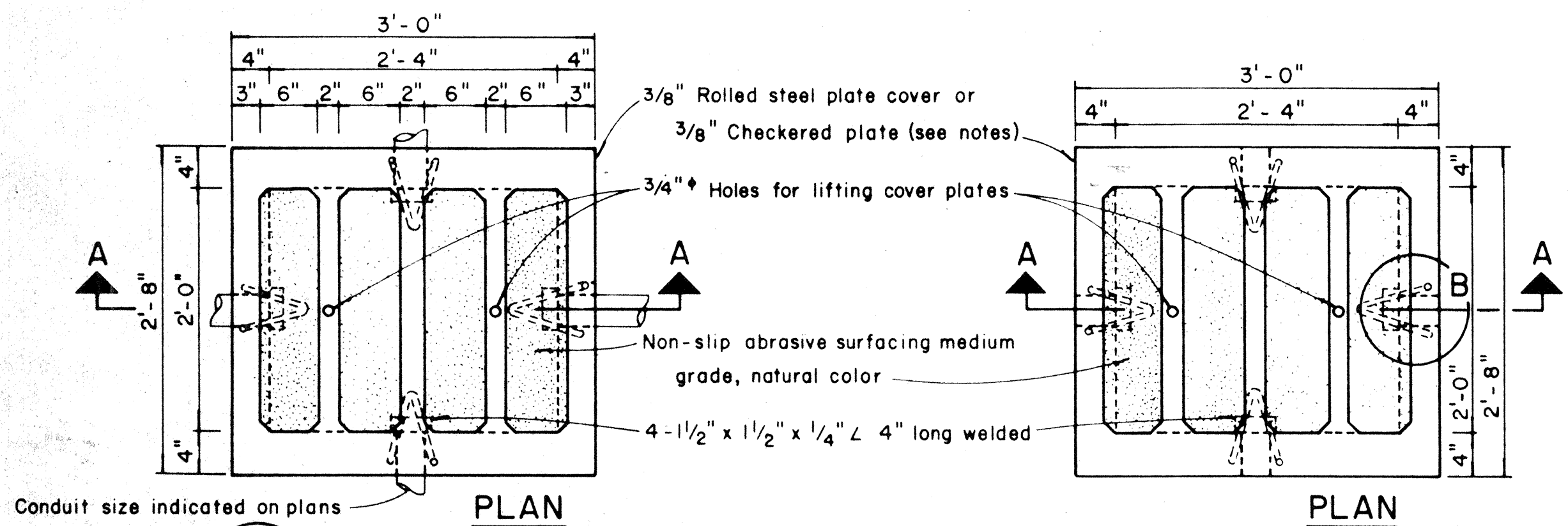
TYPICAL DETAILS
PROJECT NO. 32A-01-76

Not to Scale

SHEET No. 3 OF 4 SHEETS

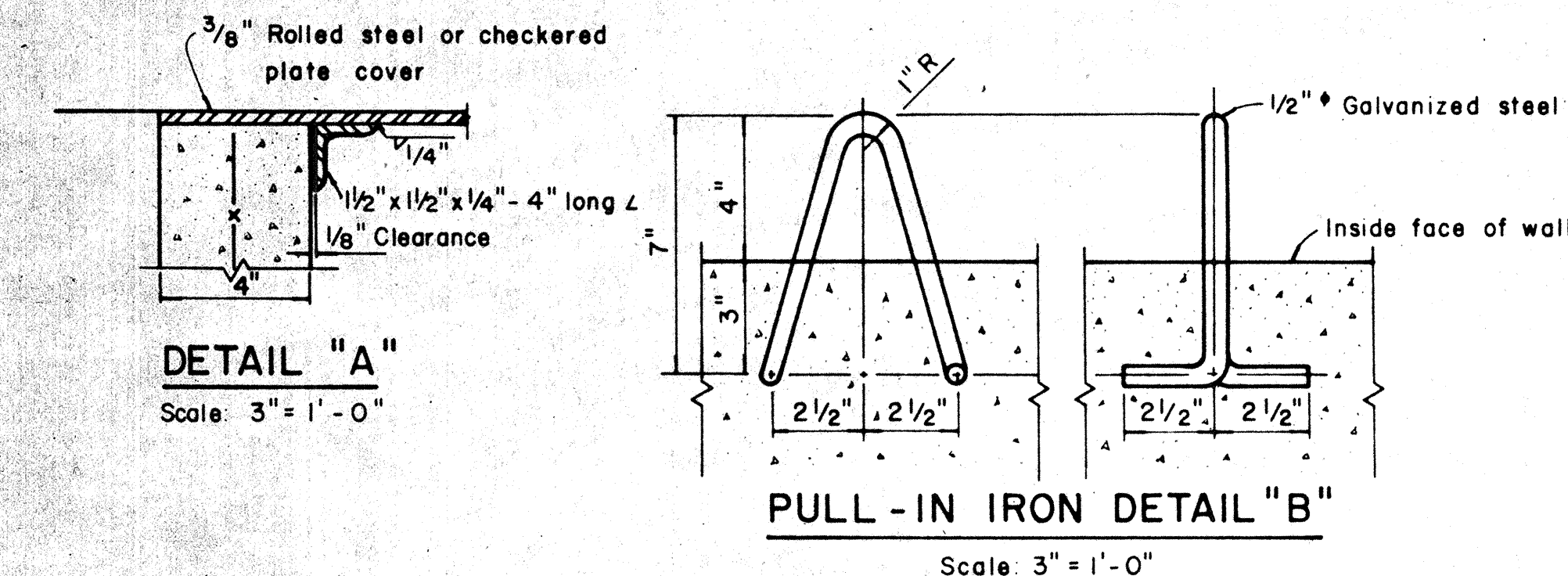
DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
QUANTITIES BY	
TRACED BY	
ORIGINAL PLAN	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	32A-01-76	1975	6	7



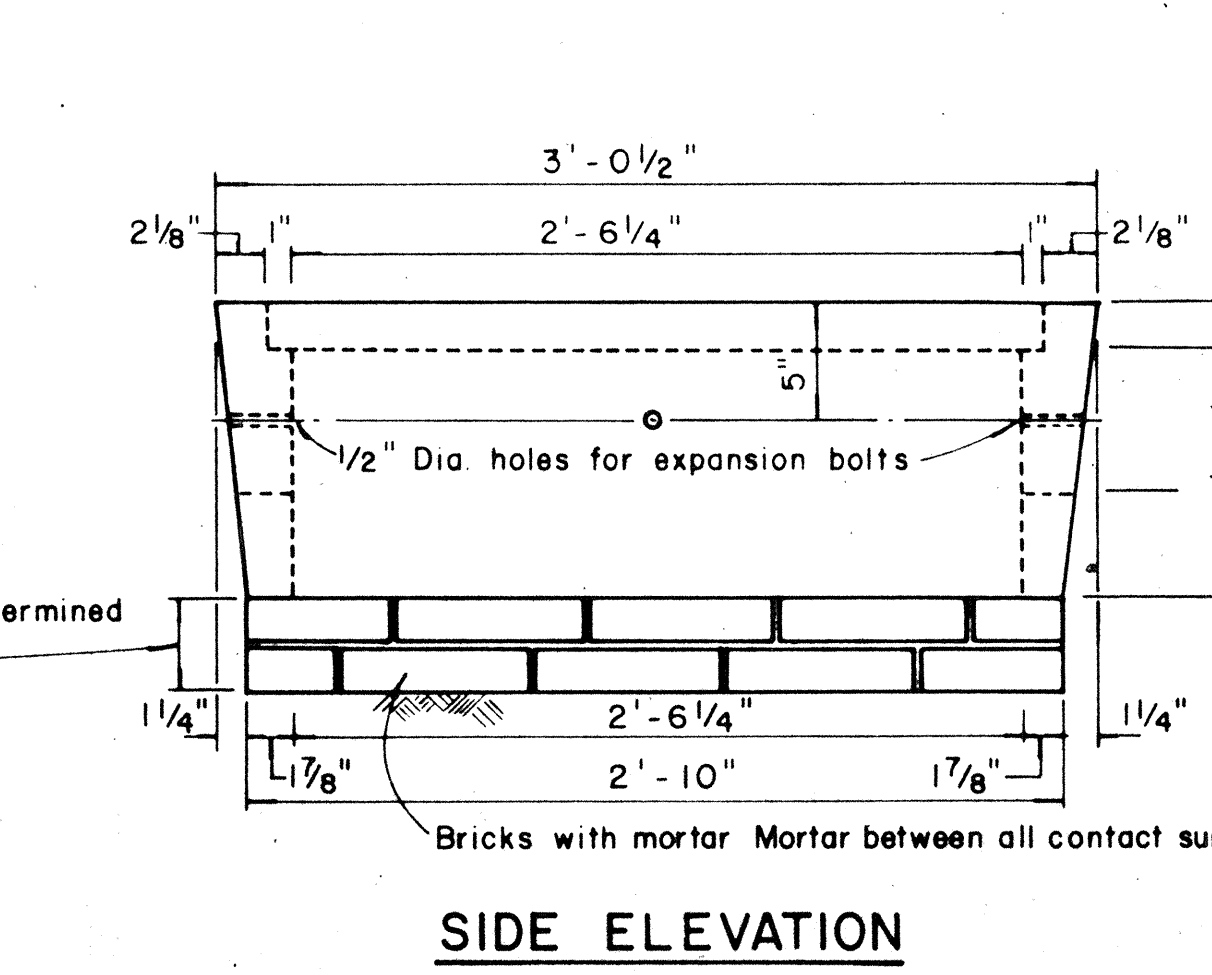
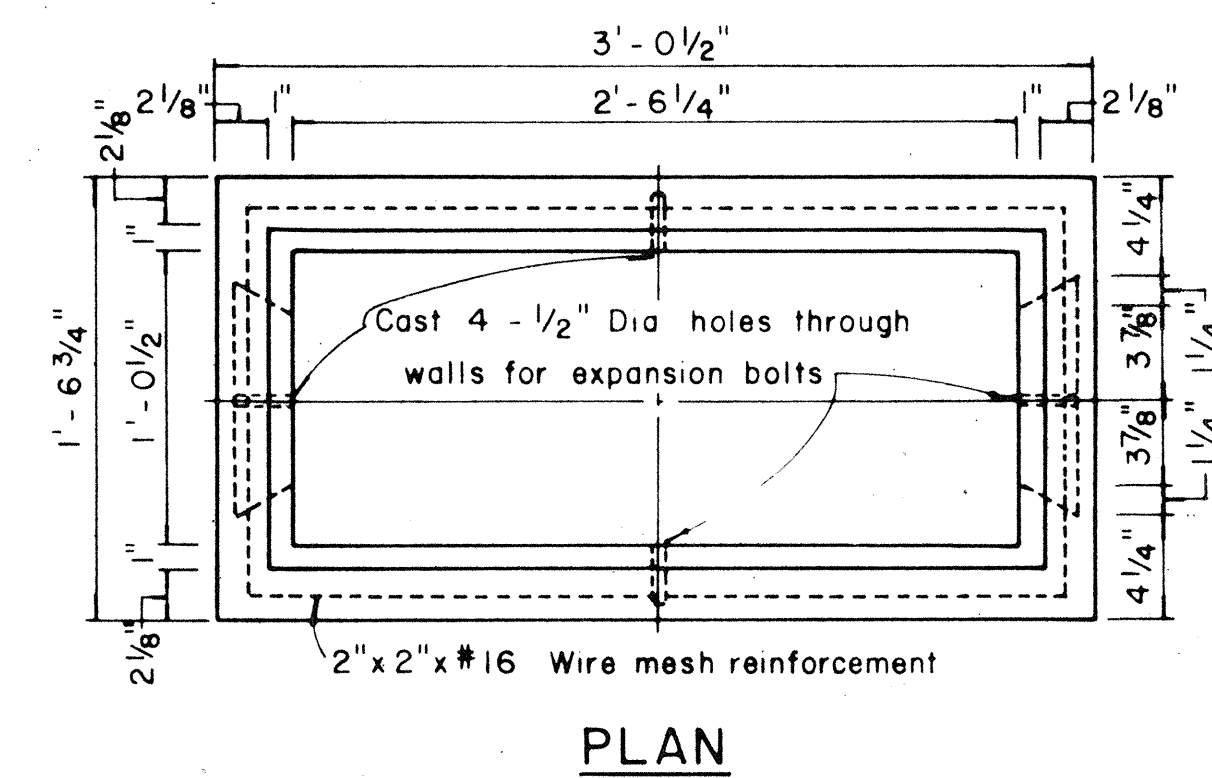
TYPE "A" PULLBOX CAST-IN-PLACE
Scale: 1" = 1'-0"

TYPE "A" PULLBOX PRECAST
Scale: 1" = 1'-0"

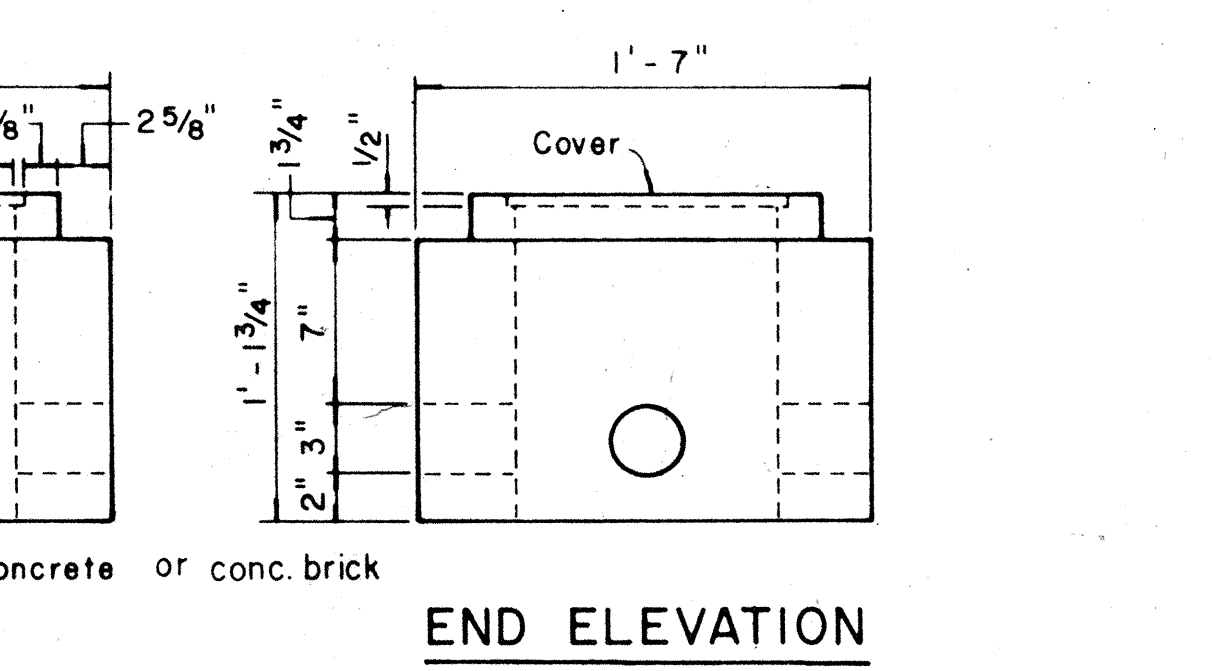
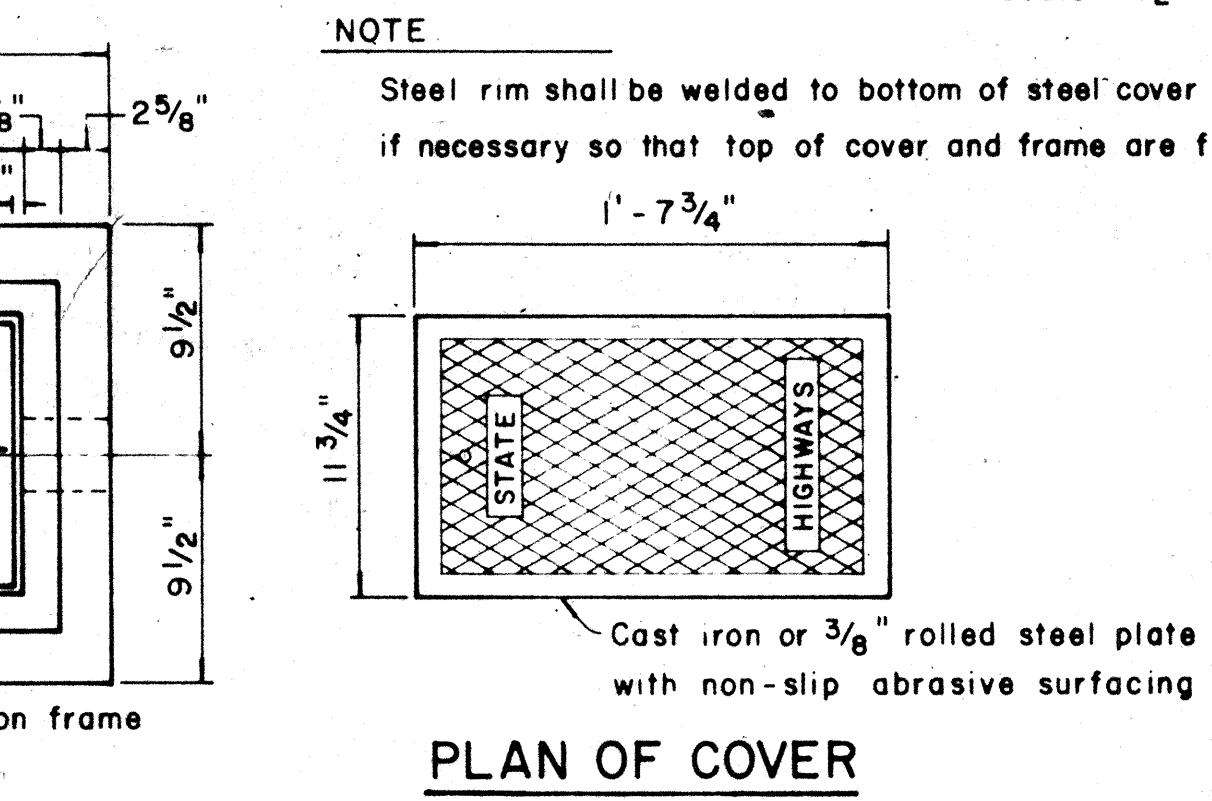


- NOTES: (FOR TYPE "A" PULLBOX)**
- 3/8" Rolled steel plate cover with non-slip abrasive surfacing medium grade, natural color shall be used on all pullboxes located on sidewalk areas where pedestrians are walking.
 - 3/8" Checkered plate cover shall be used on all pullboxes located in median areas and other locations where there are no pedestrians walking.
 - Pull irons shall be placed opposite each conduit slot.
 - Covers on all pullboxes located in sidewalk areas shall be set flush with the concrete sidewalk.
 - Each pullbox shall have a pair of pull irons opposite each other for lifting purposes.

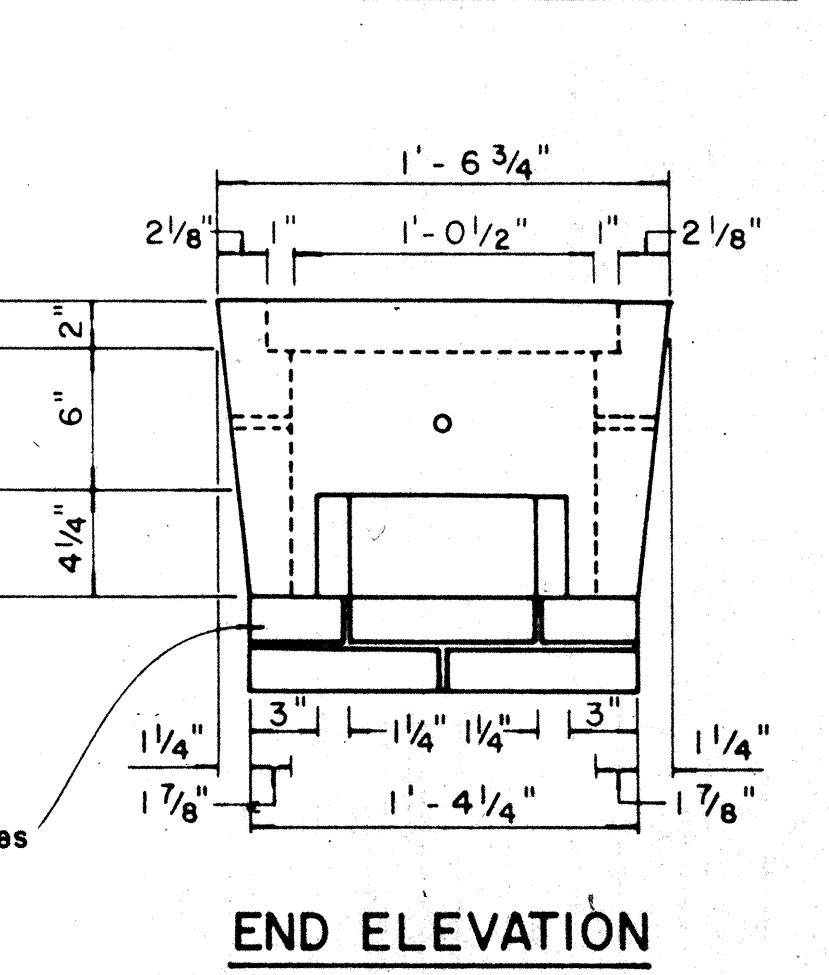
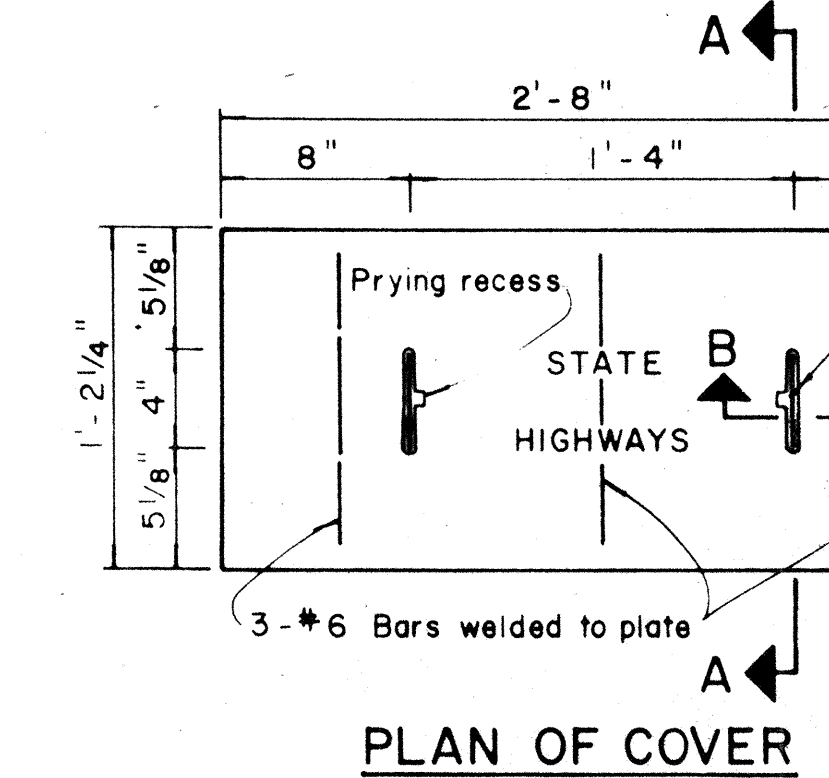
DESIGNED BY	DATE
CHECKED BY	
NOTED BY	
ORIGINAL PLAN	



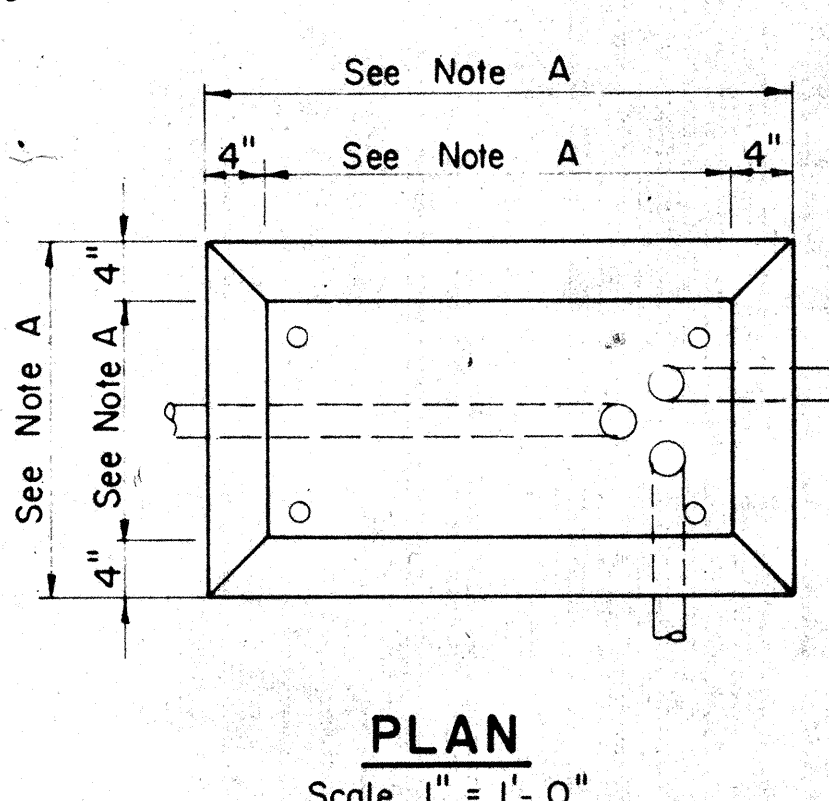
TYPE "C" PULLBOX
Scale: 1 1/2" = 1'-0"



TYPE "B" PULLBOX
Scale: 1 1/2" = 1'-0"

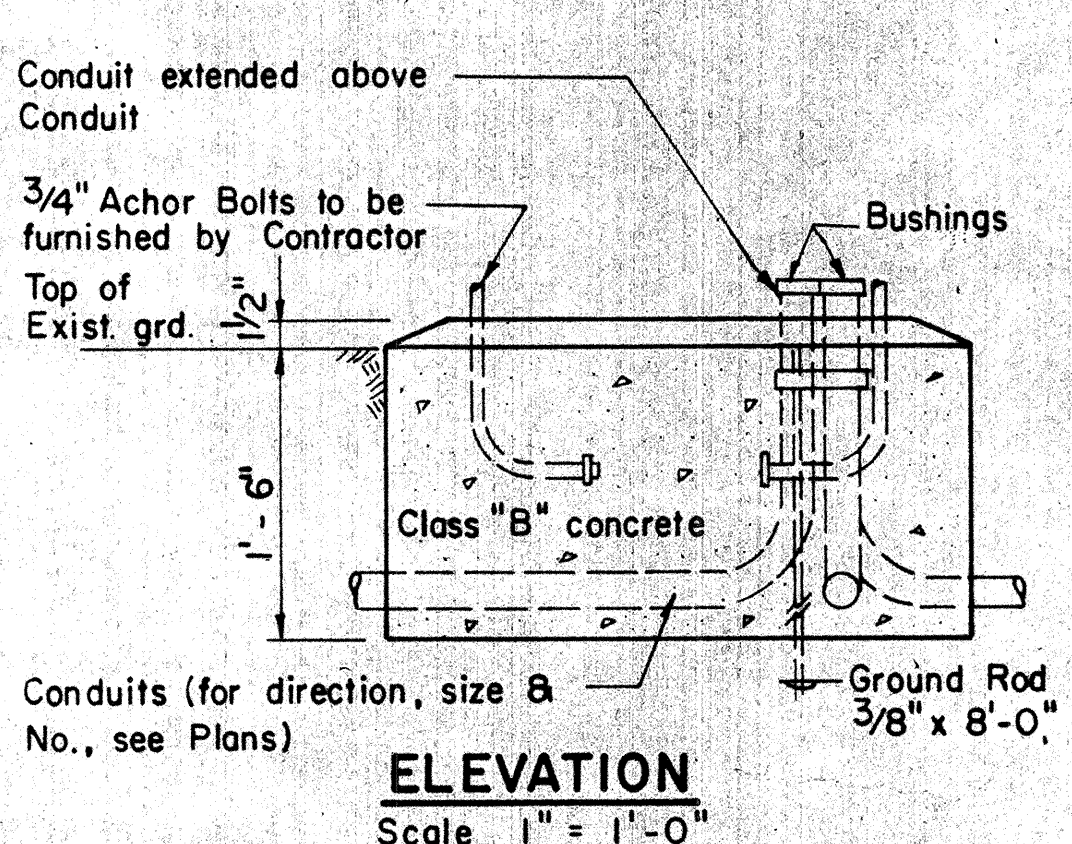
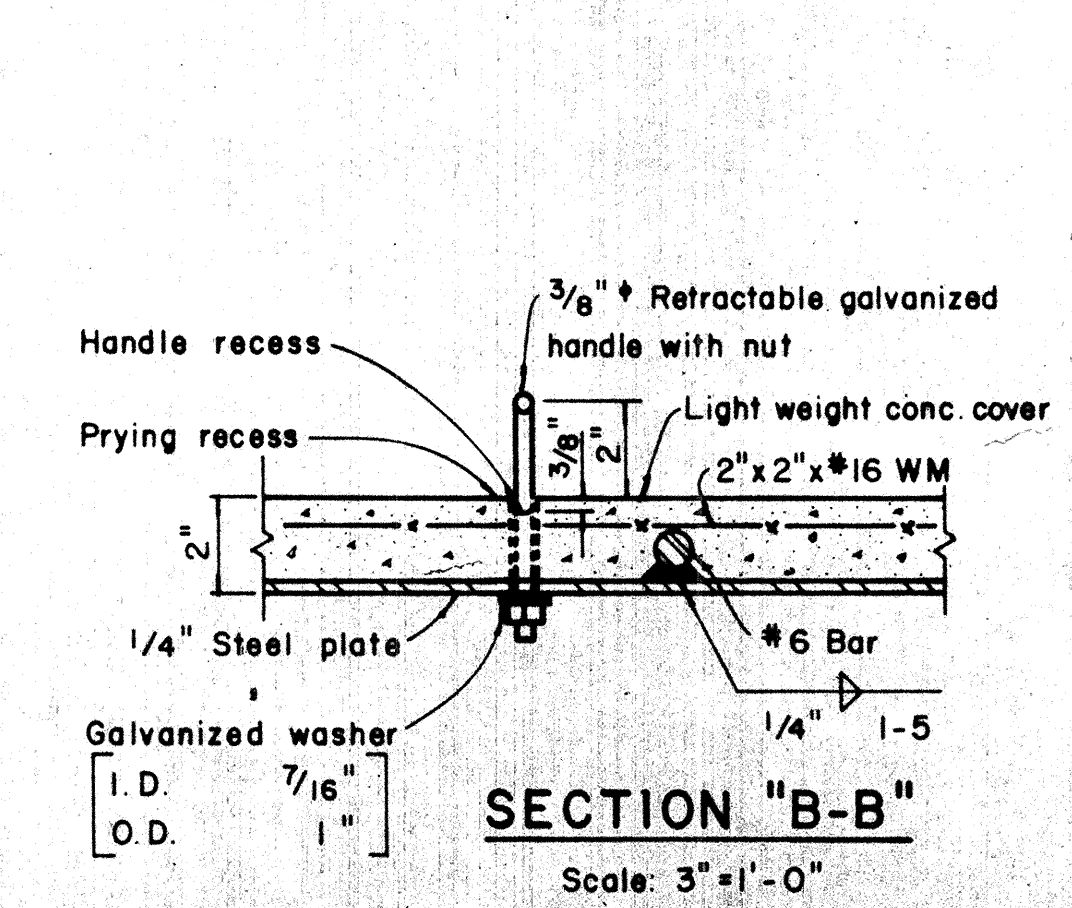
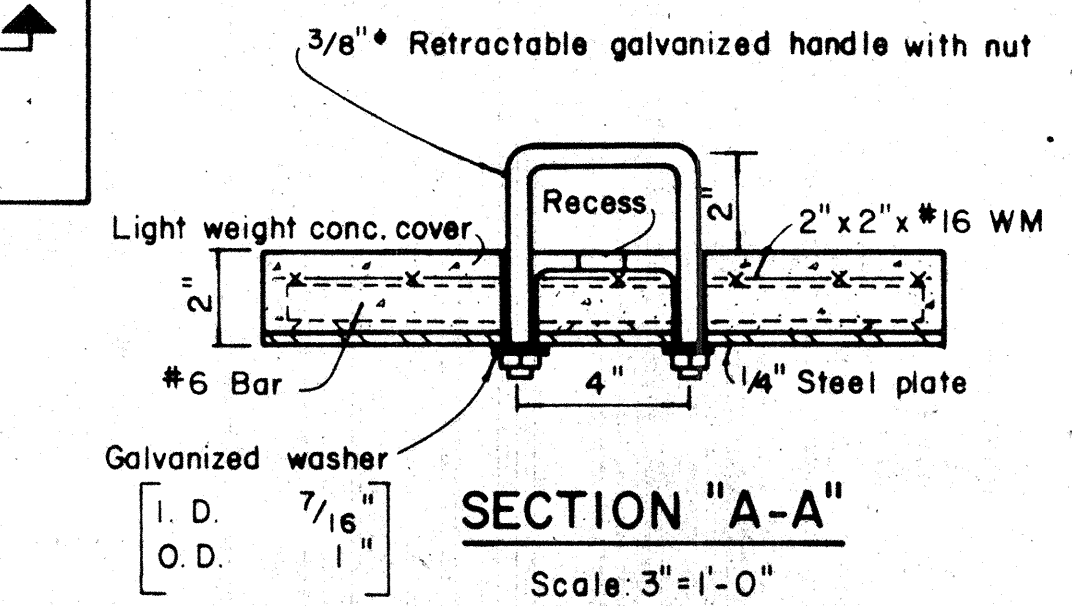


TYPE "B" PULLBOX
Scale: 1" = 1'-0"



- NOTES**
- Dimensions to be determined by the size of the Controller Cabinet to be furnished under this Contract.
 - Details of Conduits, Anchor Bolts, etc. are approximate only. Exact details shall be secured by the Contractor from Manufacturer.

CONCRETE BASE FOR CONTROLLER CABINET



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS
PULLBOXES

PROJECT NO. 32A-01-76

Scale as noted Date OCT. 1975

SHEET No. 4 OF 4 SHEETS