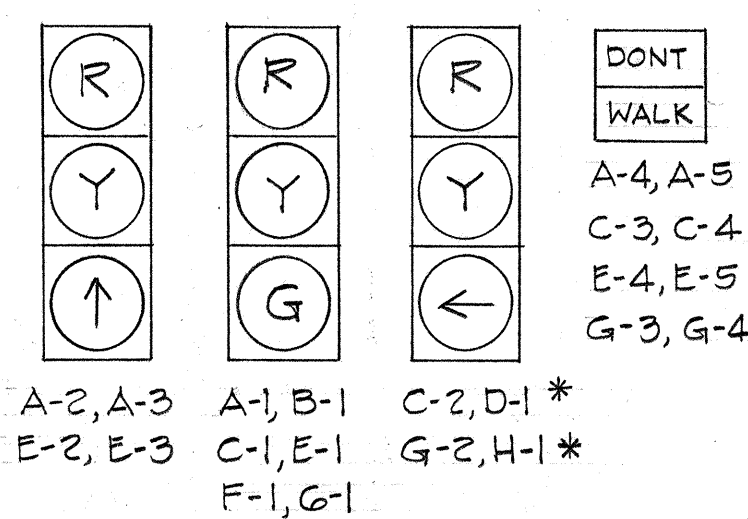


LEGEND

- EXISTING CONDUIT NO., SIZE & CABLES AS INDICATED
- NEW CONDUIT NO., SIZE & CABLES AS INDICATED
- EXISTING PULLBOX
- NEW TYPE B PULLBOX
- NEW TYPE A PULLBOX
- 12" SIGNAL ON TYPE I STANDARD
- 12" SIGNALS ON TYPE II STANDARD 30 FT.
- 12" SIGNAL R,Y,G
- 12" SIGNAL R,Y,↑
- 12" SIGNAL R,Y,←
- PEDESTRIAN SIGNAL
- LOOP DETECTOR NO. & SIZE AS INDICATED
- PEDESTRIAN PUSHBUTTON WITH SIGN ARROW INDICATES DIRECTION OF ARROW ON SIGN TO POINT

SIGNAL INDICATIONS * Programmed Visibility

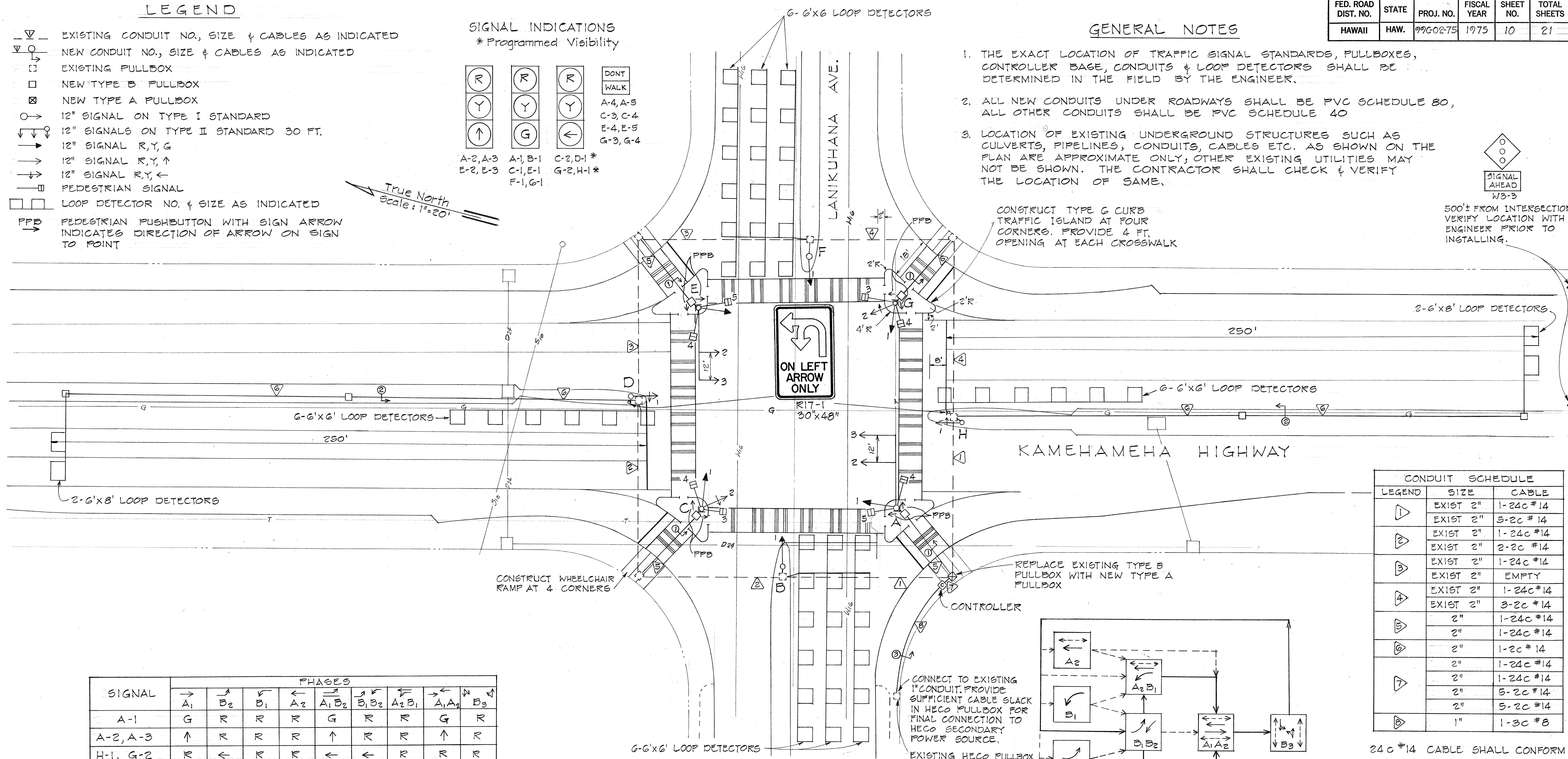


GENERAL NOTES

- THE EXACT LOCATION OF TRAFFIC SIGNAL STANDARDS, PULLBOXES, CONTROLLER BASE, CONDUITS & LOOP DETECTORS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- ALL NEW CONDUITS UNDER ROADWAYS SHALL BE PVC SCHEDULE 80, ALL OTHER CONDUITS SHALL BE PVC SCHEDULE 40
- LOCATION OF EXISTING UNDERGROUND STRUCTURES SUCH AS CULVERTS, PIPELINES, CONDUITS, CABLES ETC. AS SHOWN ON THE PLAN ARE APPROXIMATE ONLY; OTHER EXISTING UTILITIES MAY NOT BE SHOWN. THE CONTRACTOR SHALL CHECK & VERIFY THE LOCATION OF SAME.

CONSTRUCT TYPE G CURB TRAFFIC ISLAND AT FOUR CORNERS. PROVIDE 4 FT. OPENING AT EACH CROSSWALK

500'± FROM INTERSECTION VERIFY LOCATION WITH ENGINEER PRIOR TO INSTALLING.

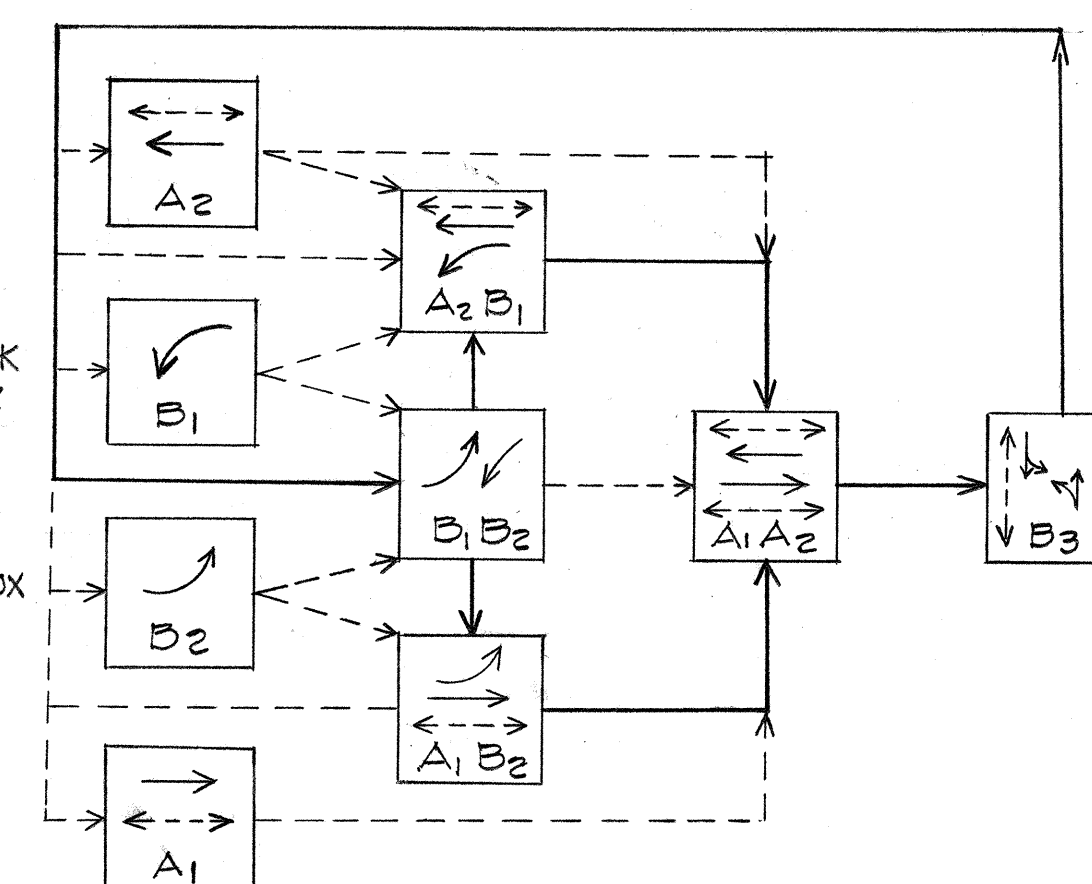


SIGNAL	PHASES								
	→ A ₁	↑ B ₂	↖ B ₁	← A ₂	↗ A ₁ B ₂	↘ B ₁ B ₂	↖ A ₂ B ₁	→ A ₁ A ₂	↗ B ₂ B ₁
A-1	G	R	R	R	G	R	R	G	R
A-2, A-3	↑	R	R	R	↑	R	R	↑	R
H-1, G-2	R	←	R	R	←	←	R	R	R
C-2, D-1	R	R	←	R	R	←	←	R	R
E-1	R	R	R	G	R	R	R	G	R
E-2, E-3	R	R	R	↑	R	R	R	↑	R
B-1, C-1, F-1, G-1	R	R	R	R	R	R	R	R	G
E-5, G-3	DW	DW	DW	W/FDW	DW	DW	W	W/FDW	DW
A-5, C-3	W/FDW	DW	DW	DW	W	DW	DW	W/F	DW
A-4, C-4, E-4, G-4	DW	DW	DW	DW	DW	DW	DW	DW	W/FDW

SIGNAL RIGHT OF WAY INDICATIONS

PHASING DIAGRAM NOTES

- HEAVY SOLID LINES INDICATE PREFERENTIAL SEQUENCE SUBJECT TO DETECTED DEMAND.
- ANY PHASE OR COMBINATION OF PHASES MAY BE SKIPPED SUBJECT TO DETECTED DEMAND.
- SIGNAL INDICATIONS DURING CLEARANCE INTERVAL:
 - IF A SIGNAL IS G, ↑ OR W & WILL REMAIN G, ↑ OR W DURING THE NEXT PHASE IT SHALL REMAIN G, ↑ OR W DURING THE CLEARANCE INTERVAL.
 - IF A SIGNAL IS G, ↑ OR W & WILL BECOME R DURING THE NEXT PHASE, IT SHALL BE Y OR FDW DURING THE CLEARANCE INTERVAL.
 - IF A SIGNAL IS R & WILL REMAIN R DURING THE NEXT PHASE, IT SHALL REMAIN R DURING THE CLEARANCE INTERVAL.



PHASING DIAGRAM

CONDUIT SCHEDULE		
LEGEND	SIZE	CABLE
1	EXIST 2"	1-24c #14
2	EXIST 2"	5-2c #14
3	EXIST 2"	1-24c #14
4	EXIST 2"	2-2c #14
5	EXIST 2"	1-24c #14
6	EXIST 2"	EMPTY
7	EXIST 2"	1-24c #14
8	EXIST 2"	3-2c #14
9	2"	1-24c #14
10	2"	1-24c #14
11	2"	1-2c #14
12	2"	1-24c #14
13	2"	1-24c #14
14	2"	5-2c #14
15	2"	5-2c #14
16	1"	1-3c #8

24c #14 CABLE SHALL CONFORM TO SECT. 712.34 (B)(6)
2c #14 SHALL CONFORM TO SECT. 712.34 (B)(4)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

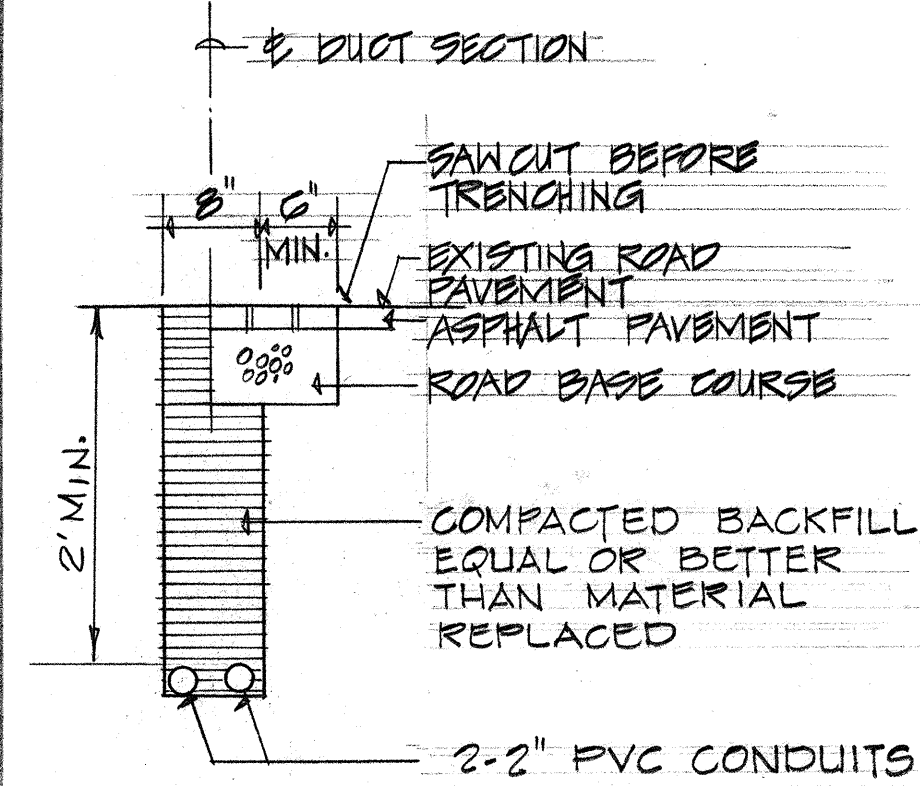
TRAFFIC SIGNALS AT
LANIKUHANA AVE AND
KAMEHAMEHA HIGHWAY

PROJ. NO. 99C-02-75

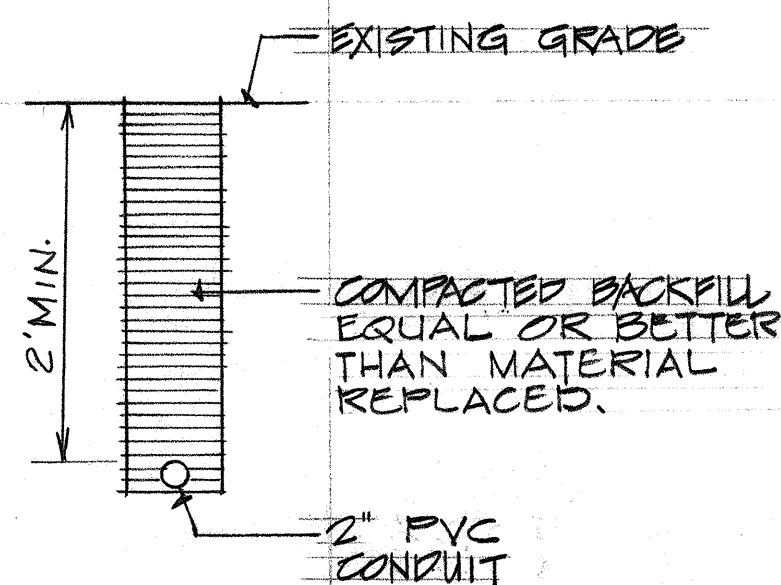
SCALE: 1"=20'

SHEET NO. 1 OF 5 SHEETS

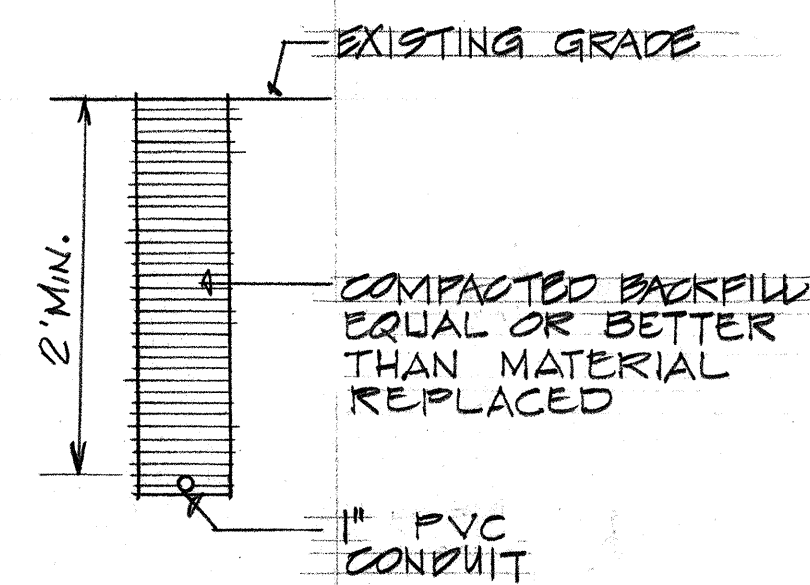
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99C-02-75	1975	11	21



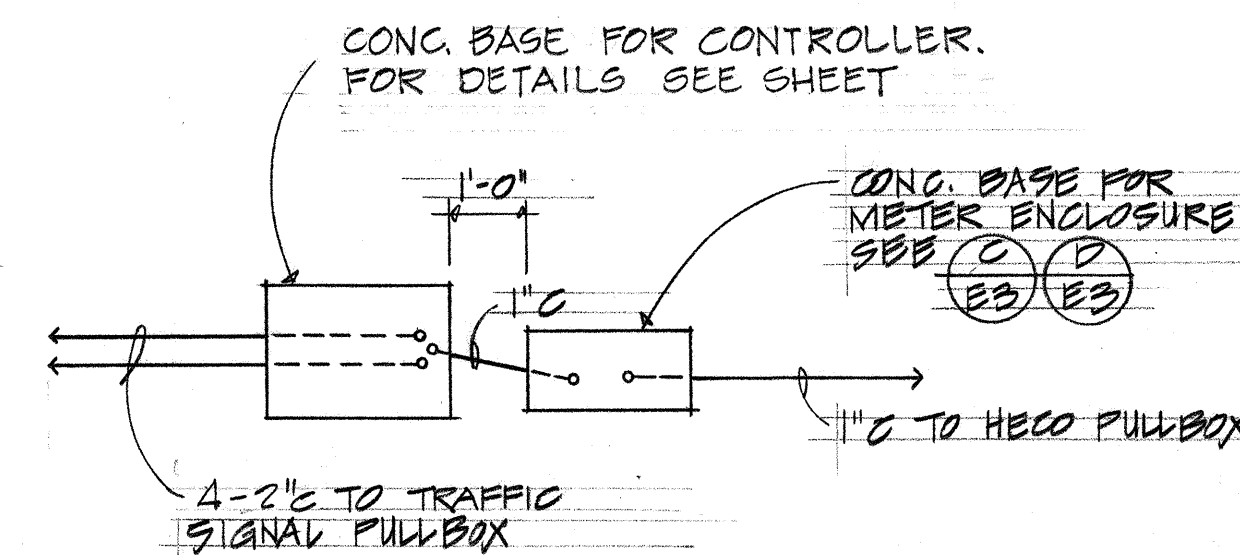
DUCT SECTION 1
NTS



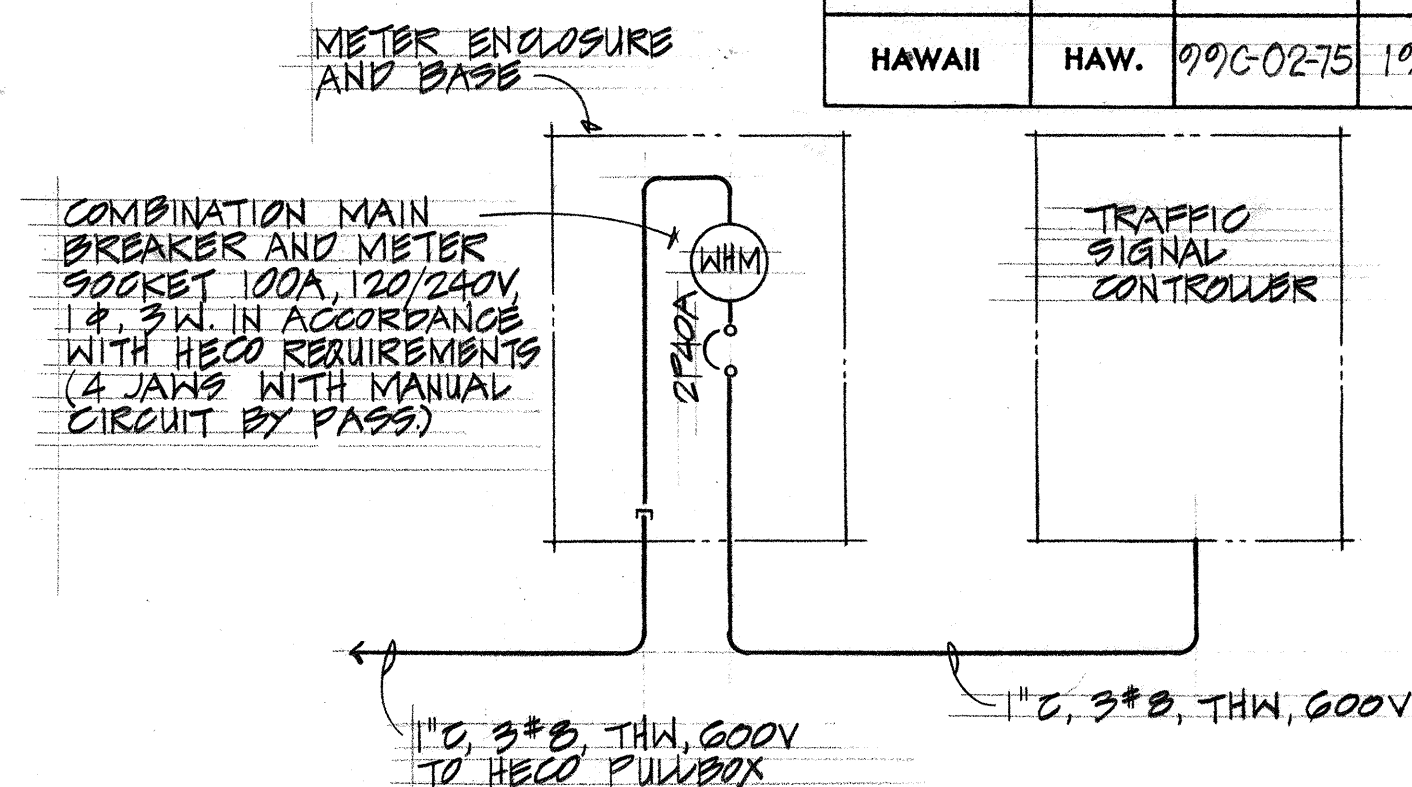
DUCT SECTION 2
NTS



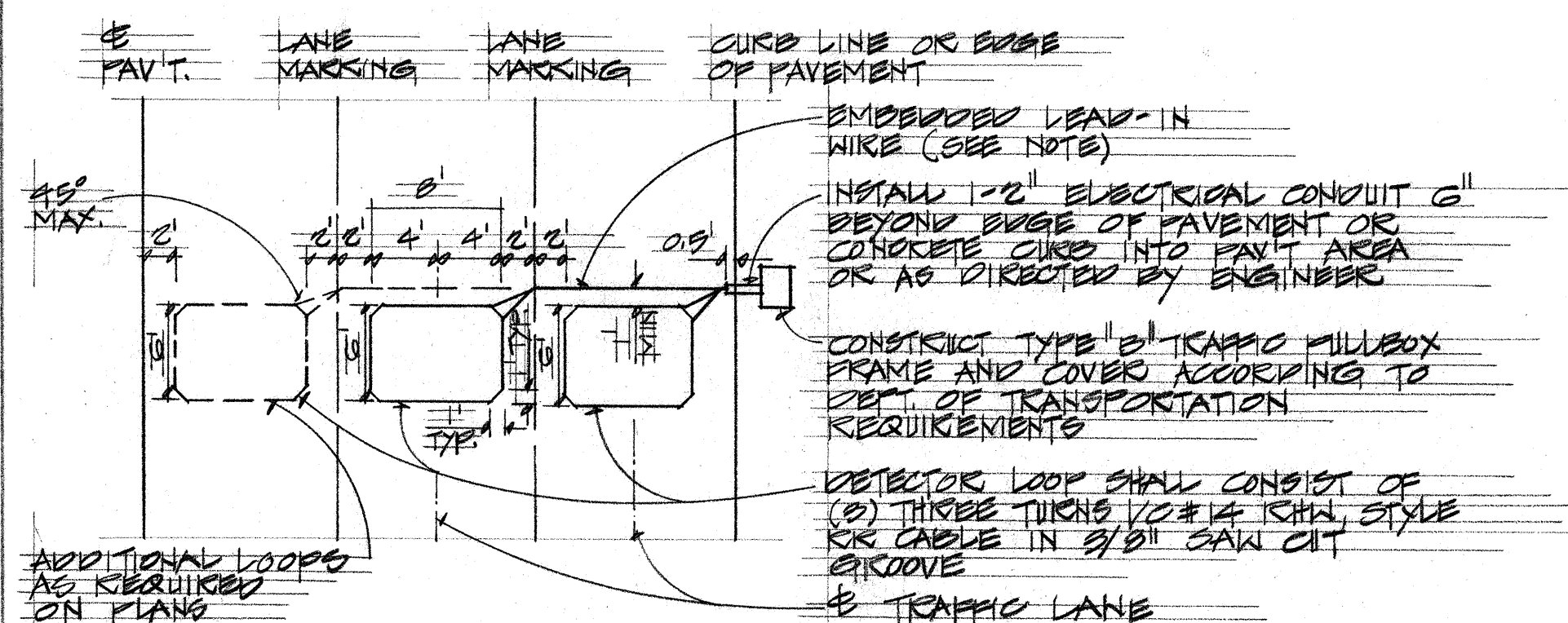
DUCT SECTION 3
NTS



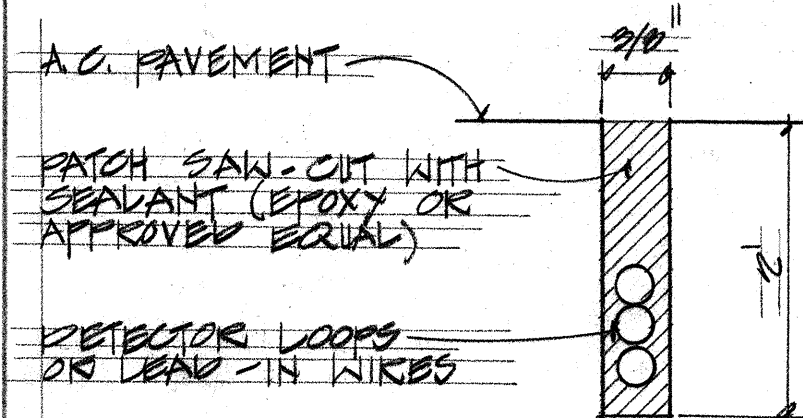
B
ES CONTROLLER PAD/METER ENCLOSURE PLAN
NOT TO SCALE



E
ES ONE LINE DIAGRAM

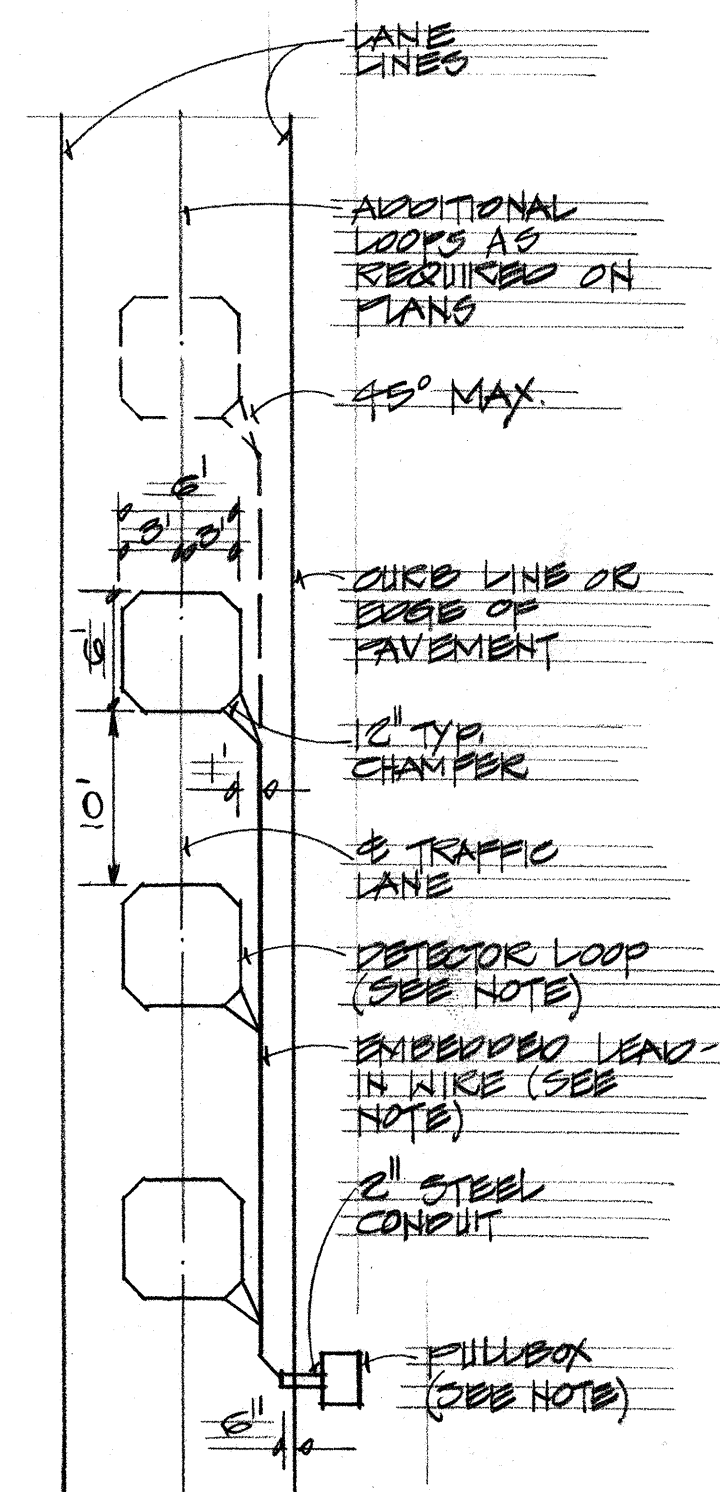


TYPICAL LAYOUT PLAN - THRU LANES

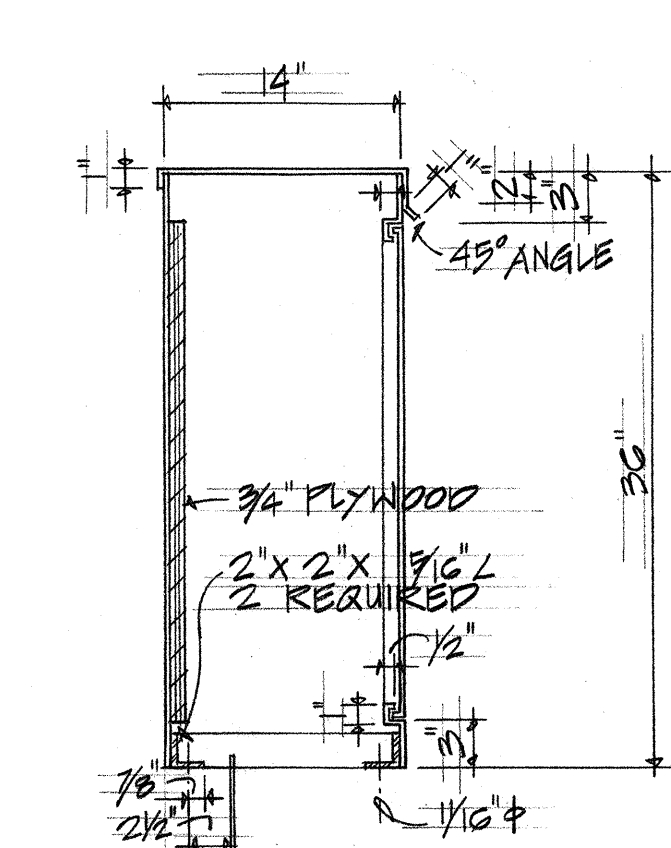


TYPICAL "X" SECTION OF LOOP SAW CUT

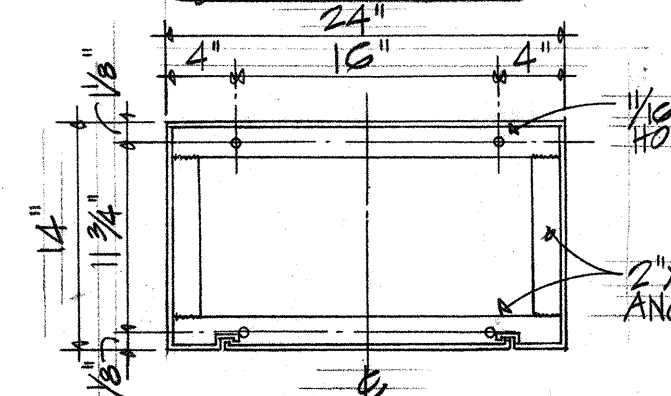
- NOTES:
1. INSTALL DETECTOR LOOP WITH 3 TURNS OF FIVE/14 RHW STYLE RW CABLE IN SAW CUT
 2. EMBEDDED LEAD-IN WIRE SHALL BE TURNED 2 TURNS PER FT.
 3. WIRING IN PULLBOX SHALL BE AS RECOMMENDED BY THE LOOP DETECTOR MANUFACTURER
 4. EXACT LOCATION OF DETECTOR LOOPS SHALL BE DIRECTED BY ENGINEER



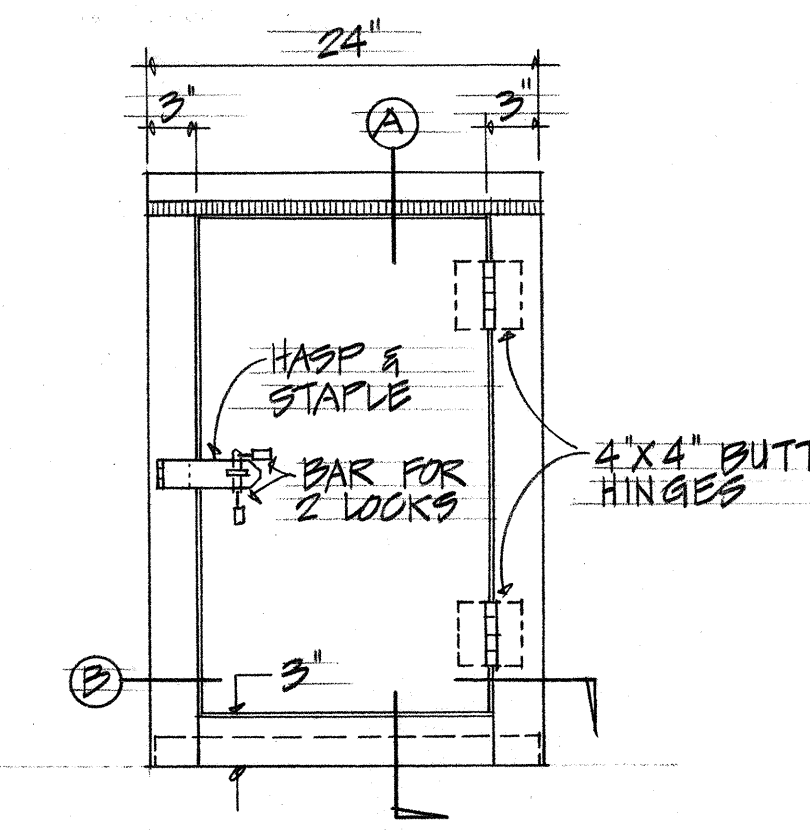
TYPICAL LAYOUT PLAN - LEFT TURN LANES & CROSS STREET



SECTION "A"



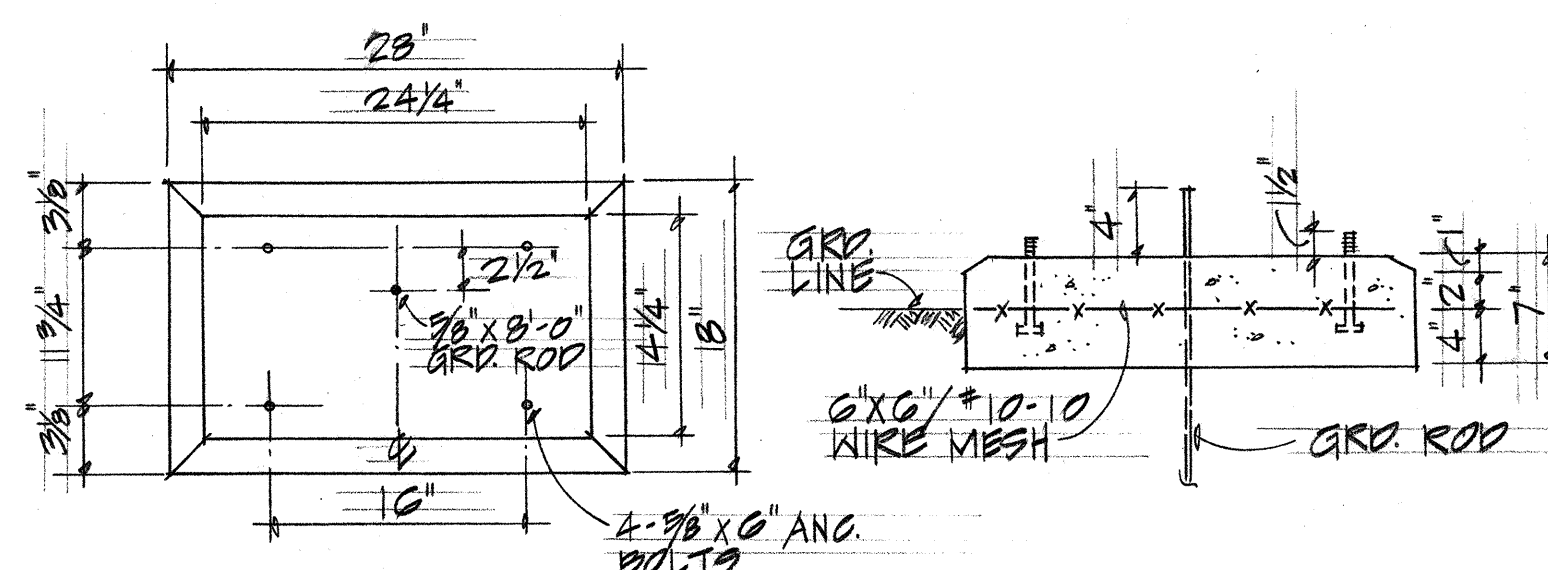
SECTION "B" (ANGLE FRAME)



ELEVATION

- NOTES:
1. BOXES TO BE PRIMED WITH ONE COAT SHOP PRIMER.
 2. PLYWOOD TO BE TREATED (WOLMANIZED) PLYWOOD
 3. MADE FROM 10 GA. GALV SHEET STEEL
 4. PAINT TO MATCH CONTROLLER CABINET.

C
ES METER ENCLOSURE DETAILS
SCALE: 1" = 1'-0"



PLAN

FRONT

D
ES METER ENCLOSURE PAD
SCALE: 1" = 1'-0"

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

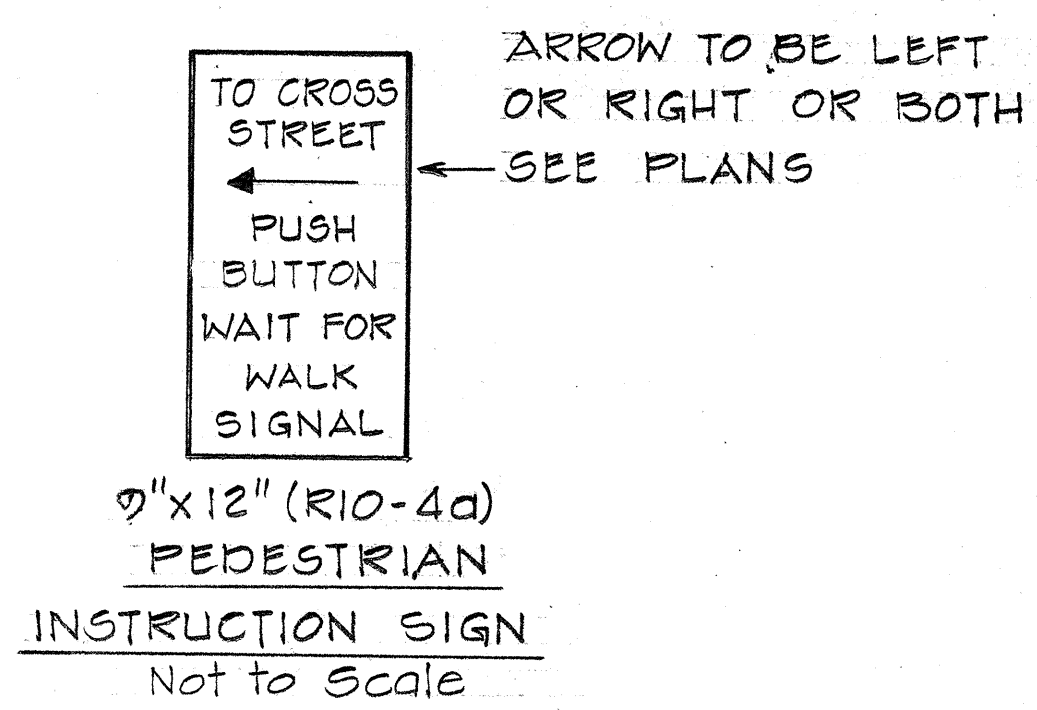
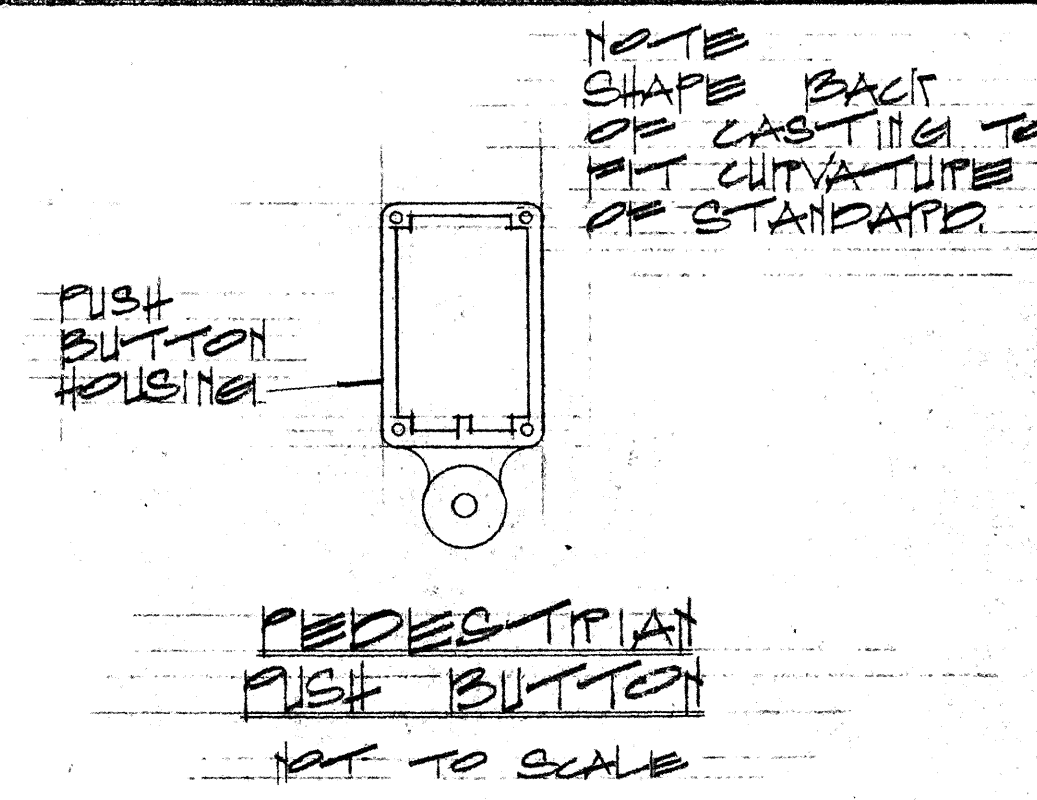
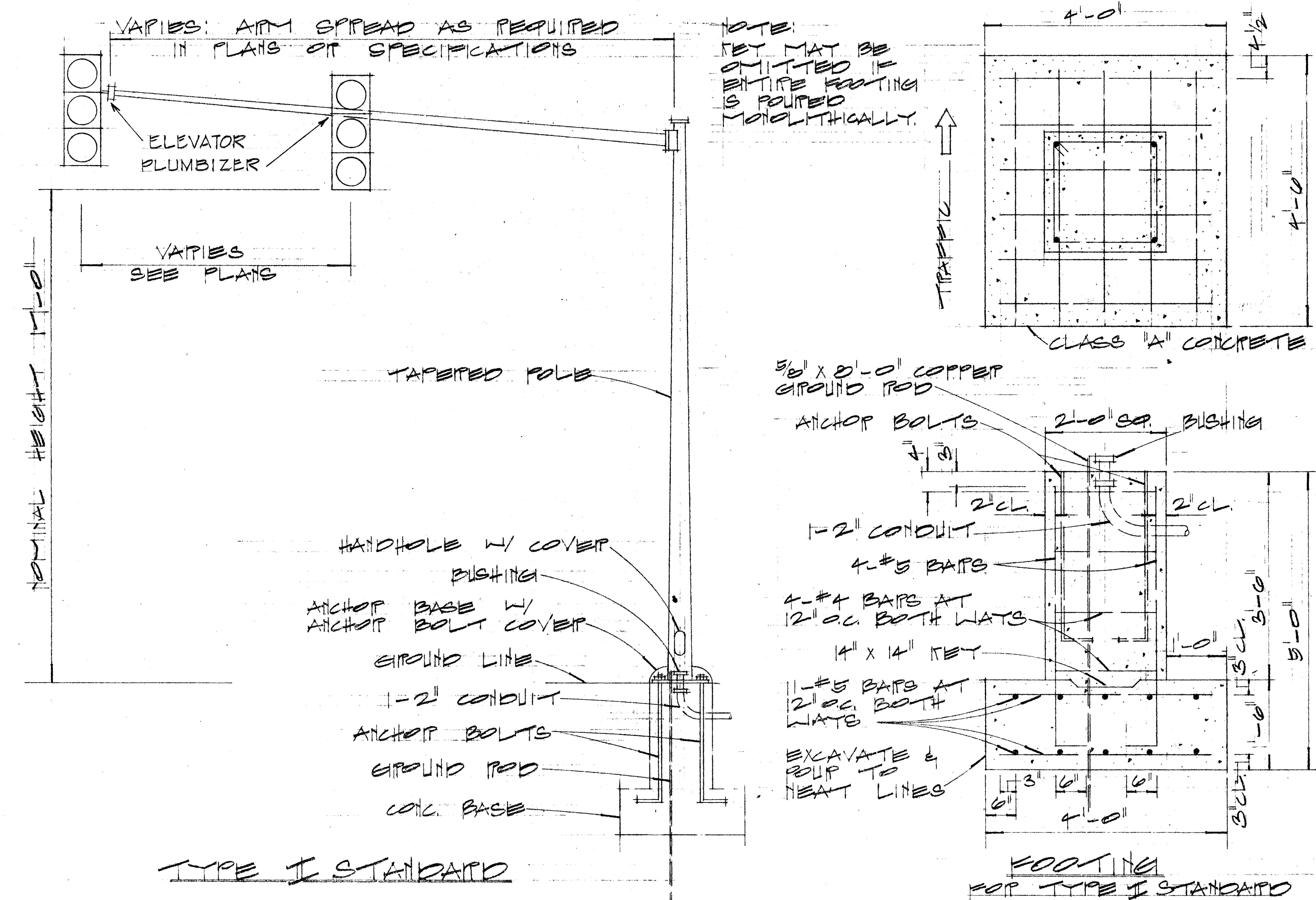
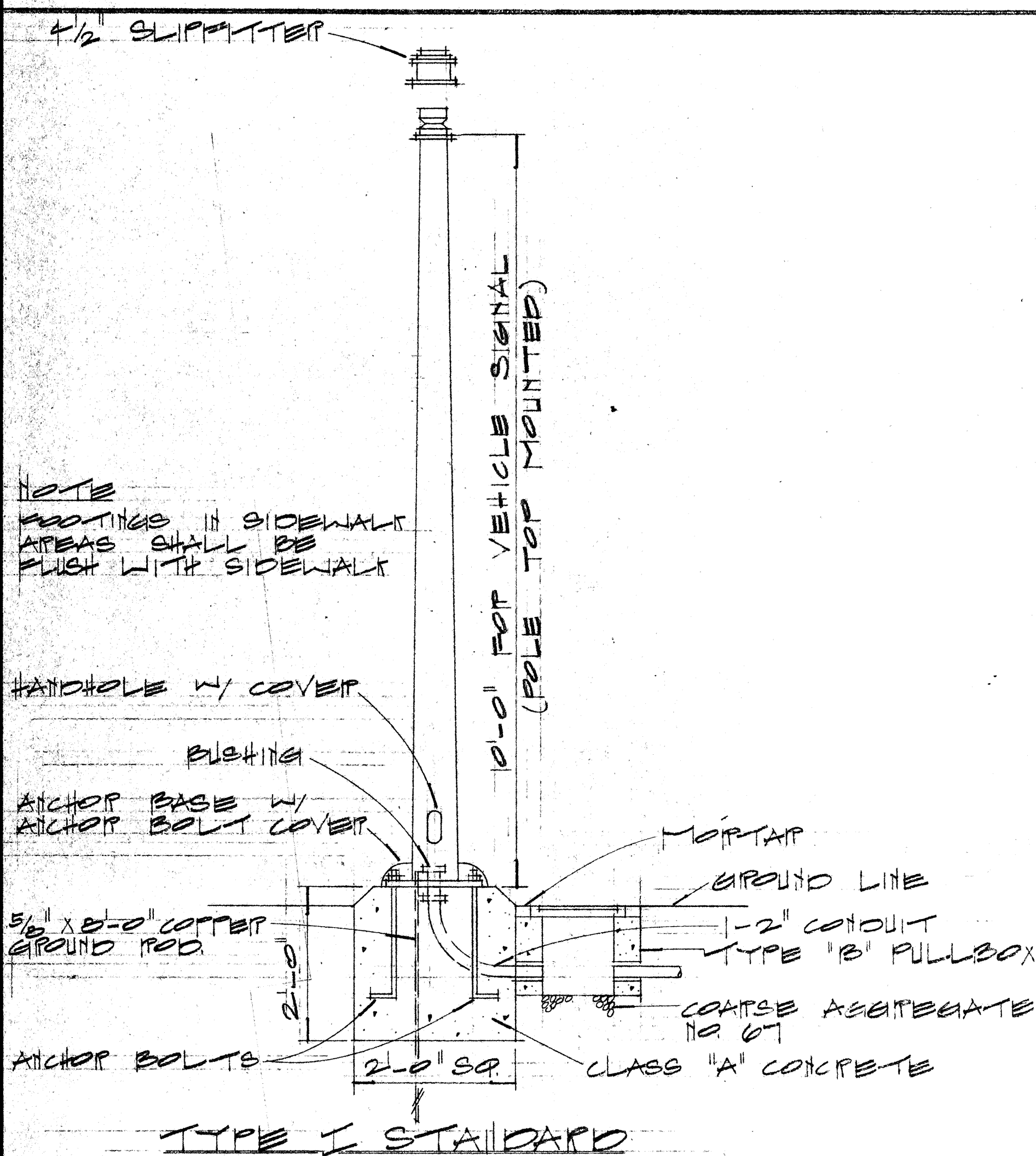
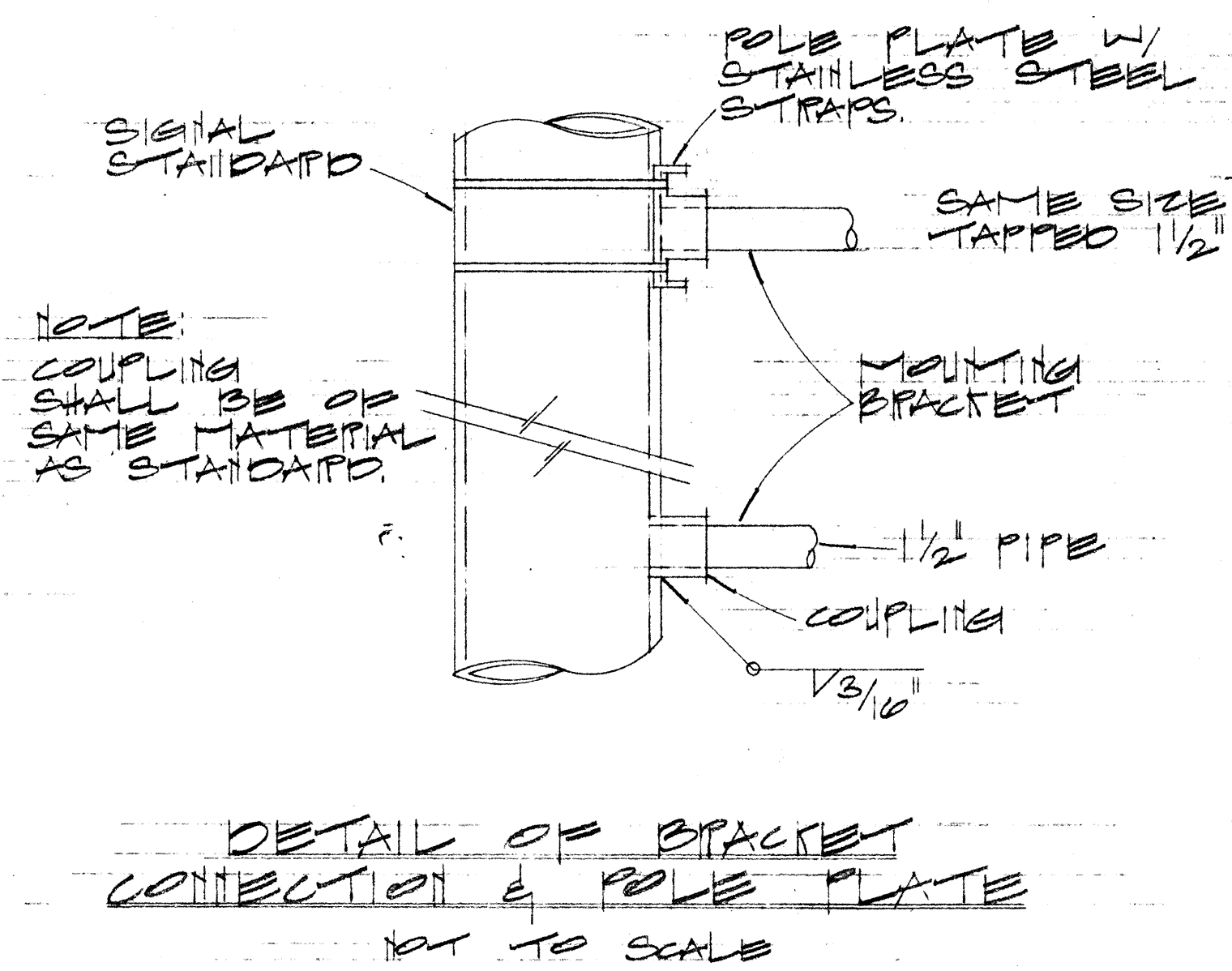
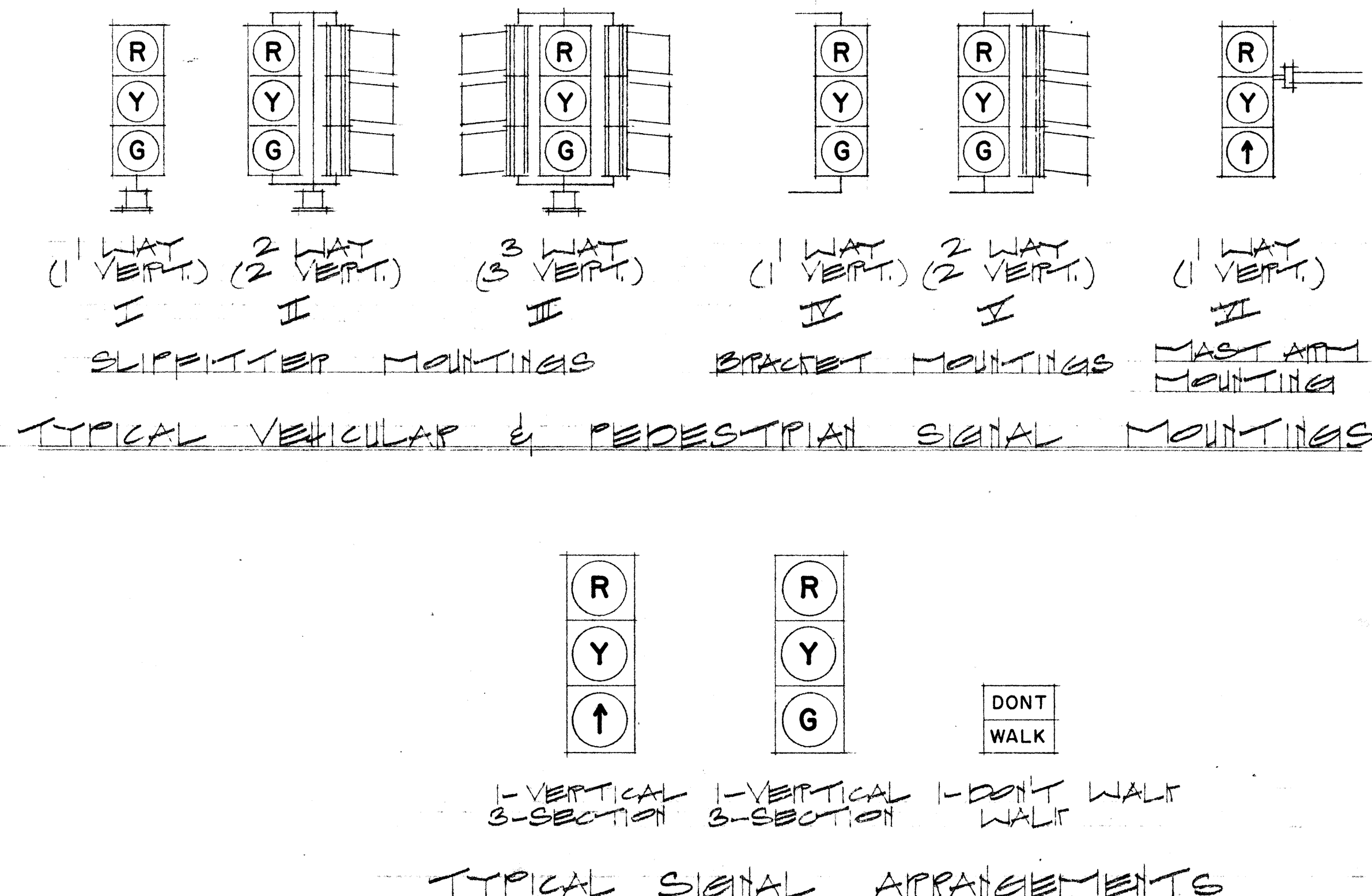
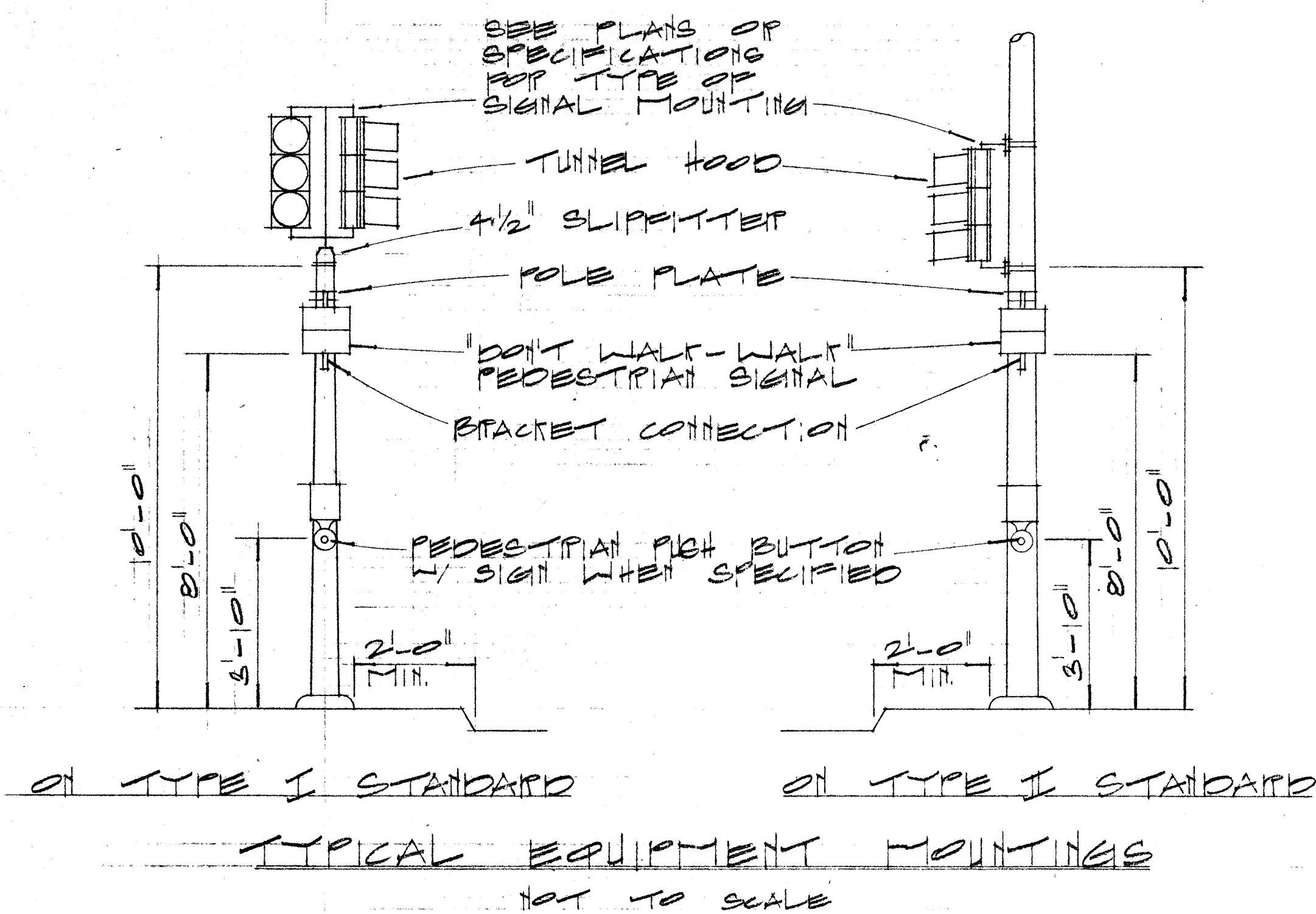
TRAFFIC SIGNALS AT
LANIKUHANA AVE AND
KAMEHAMEHA HIGHWAY

PROJ. NO. 99C-02-75

SCALE: AS NOTED

SHEET NO. 2 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99C-02-75	1975	12	21



STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION

HIGHWAYS DIVISION

TRAFFIC SIGNAL

DETAILS & NOTES

PROJECT NO. 99C-02-75

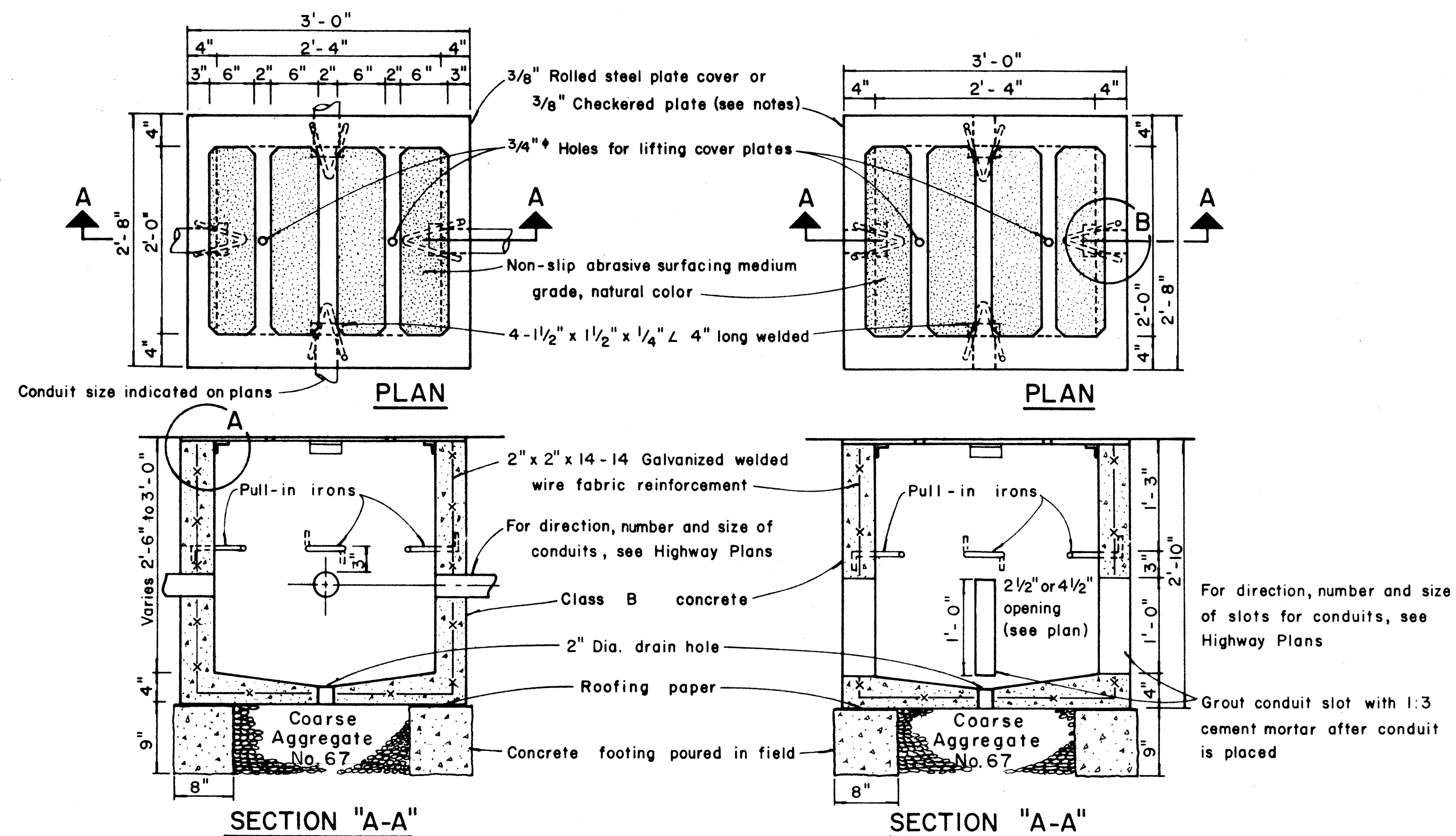
SCALE: AS SHOWN

DATE:

SHEET No. 3 OF 5 SHEETS

DATE	
DESIGNED BY	
CHECKED BY	
QUANTITIES BY	
NOTED BY	
ORIGINAL PLAN	
NO. 67	

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99C-02-75	1975	13	21

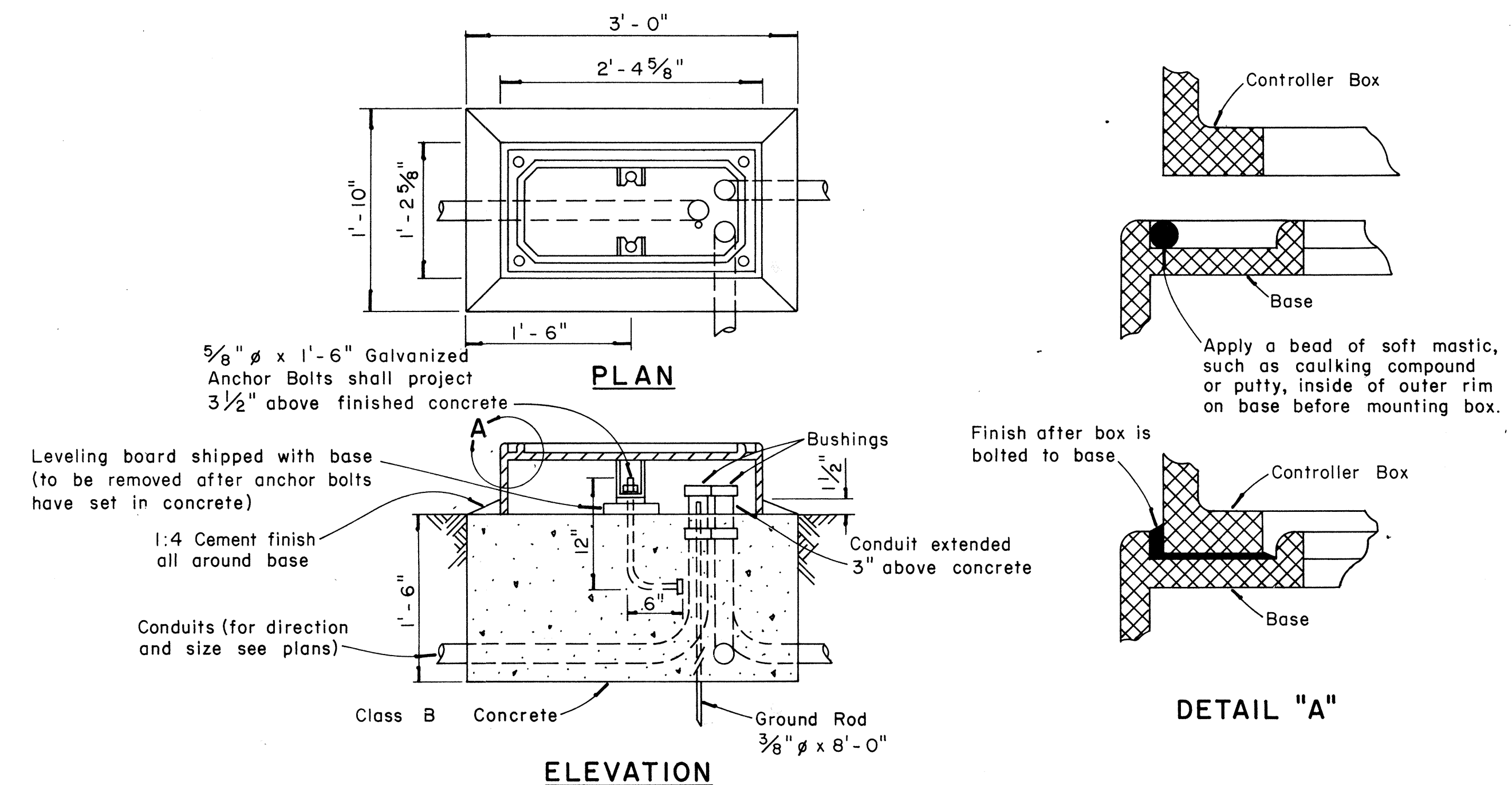


TYPE "A" PULLBOX CAST-IN-PLACE

Scale: 1" = 1'-0"

TYPE "A" PULLBOX PRECAST

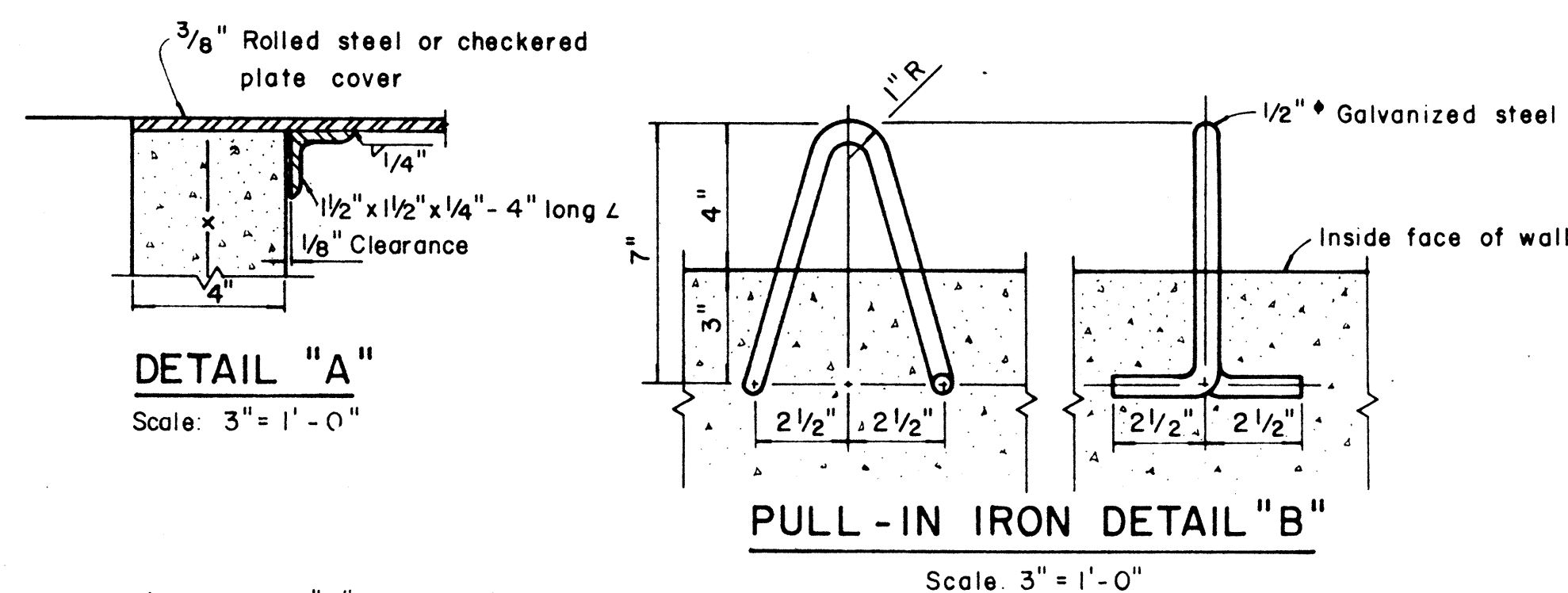
Scale: 1" = 1' - 0"



NOTE:
Dimensions and details are approximate only. Exact details and dimensions shall be furnished by the manufacturer and as directed by the Engineer.

INSTALLATION DETAILS FOR CONTROLLER BOX

Scale: 1" = 1' - 0"

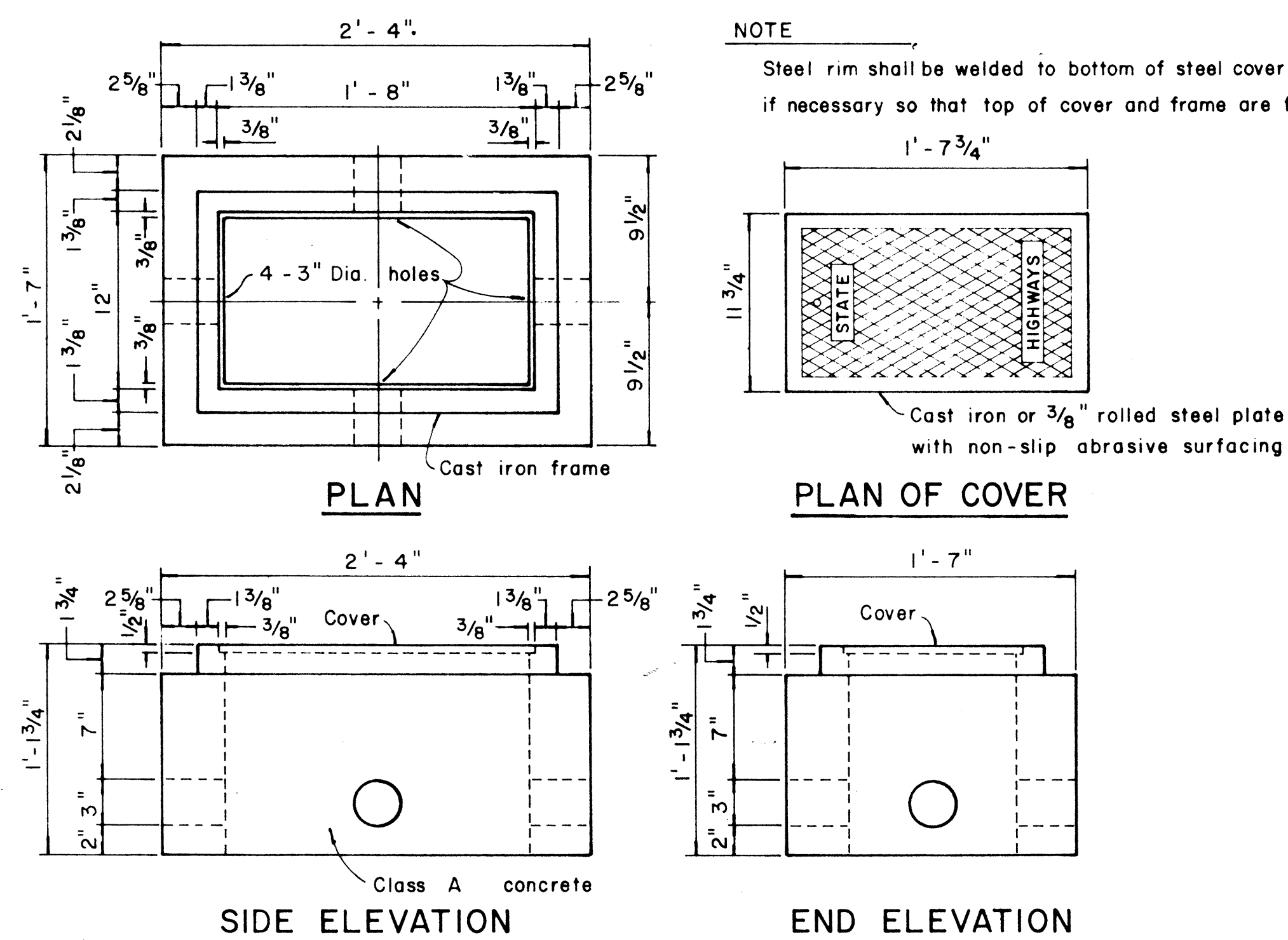


PULL-IN IRON DETAIL "B"

Scale. 3" = 1'-0"

NOTES: (FOR TYPE "A" PULLBOX)

1. 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.
2. 3/8" Checkered plate cover shall be used on all pullboxes located in median areas and other locations where there are no pedestrians walking.
3. Pull irons shall be placed opposite each conduit slot.
4. Covers on all pullboxes located in sidewalk areas shall be set flush with the concrete sidewalk.
5. Each pullbox shall have a pair of pull irons opposite each other for lifting purposes.



NOTE

Steel rim shall be welded to bottom of steel cover if necessary so that top of cover and frame are flush

TYPE "B" PULLBOX

Scale: $1\frac{1}{2}" = 1'-0"$

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL DETAILS

PULLBOXES

AND
CONTROLLER BOX

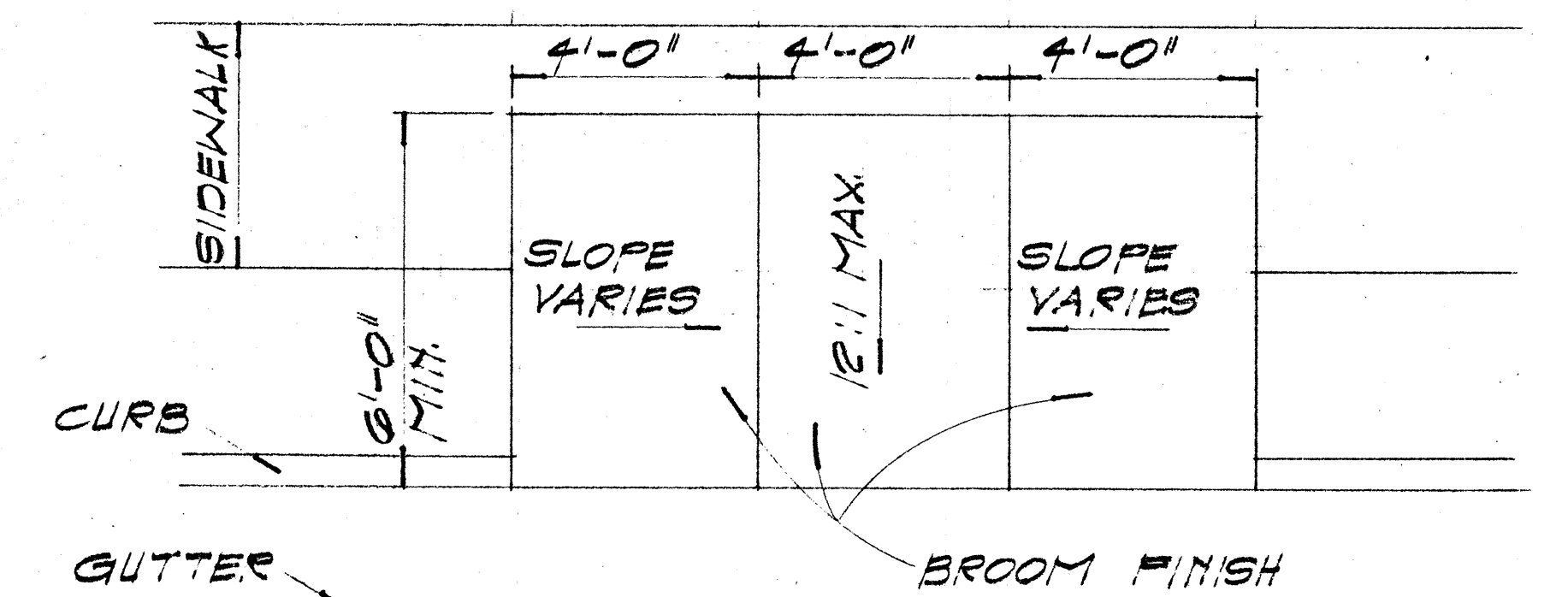
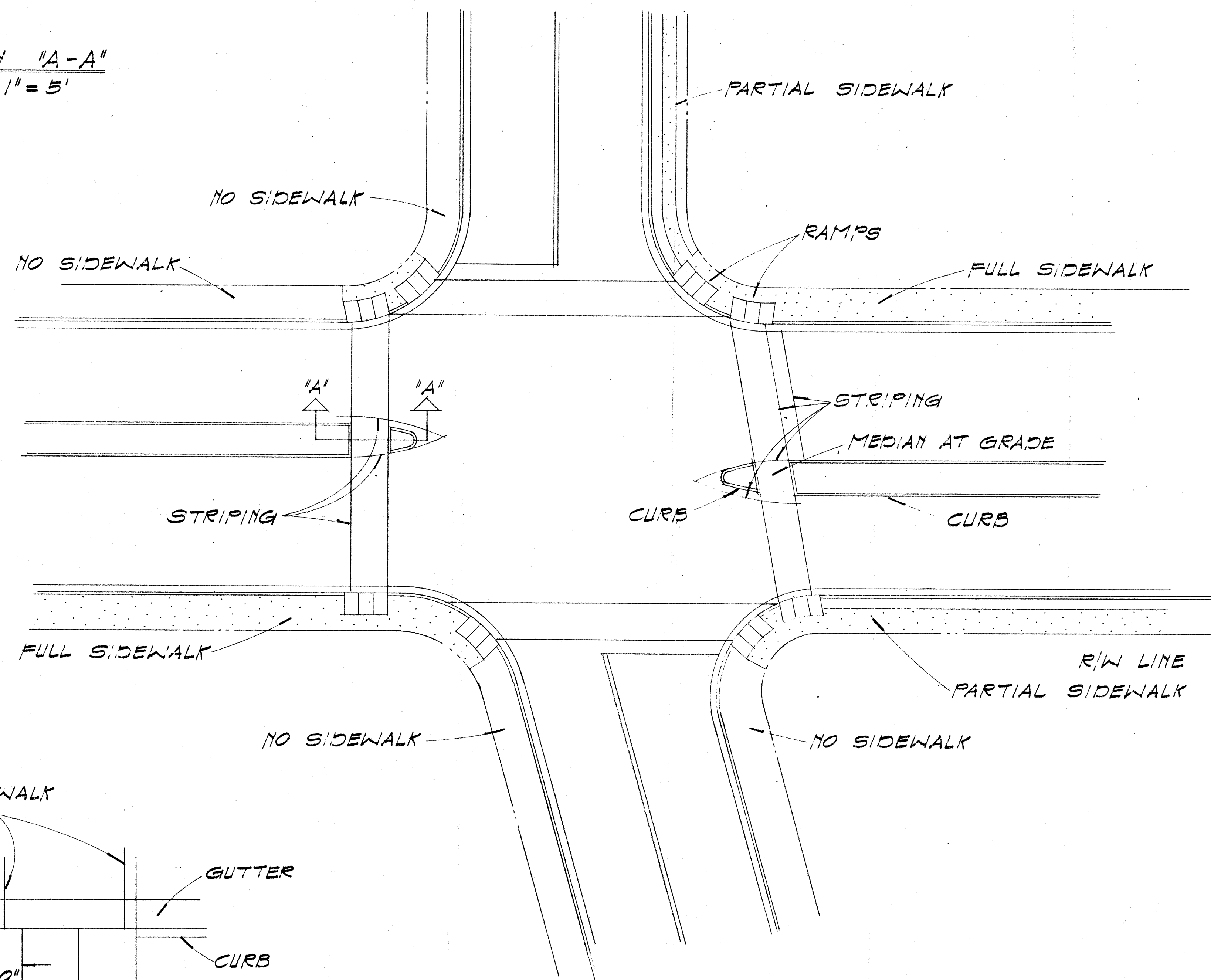
Scale as noted Date:

SHEET No. 4 OF 5 SHEETS DT 402

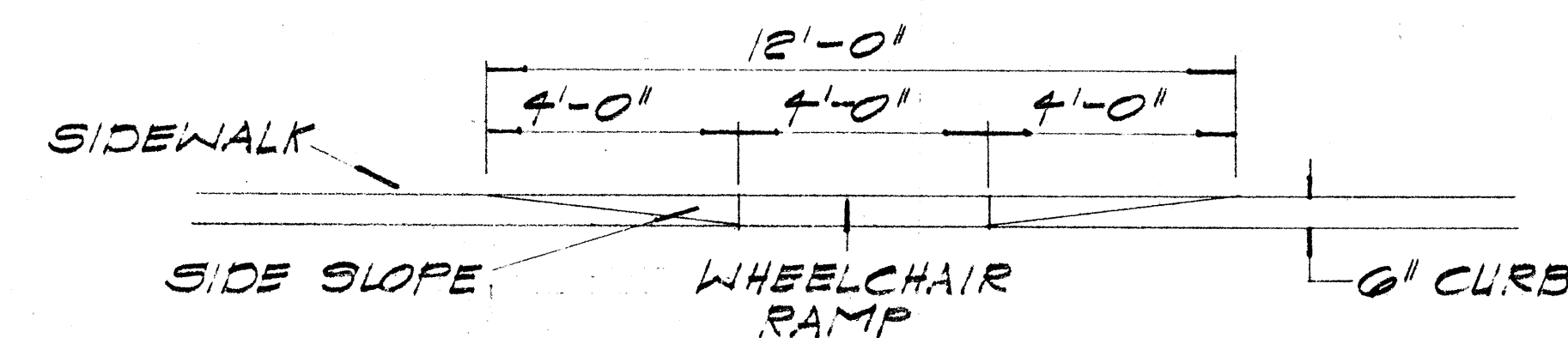
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99C-02-75	1975	14	21

TYPE 2A CURB
CROSSWALK
TYPE 2A CURB
AC SURFACING FLUSH WITH ROADWAY
4" PCC SURFACING

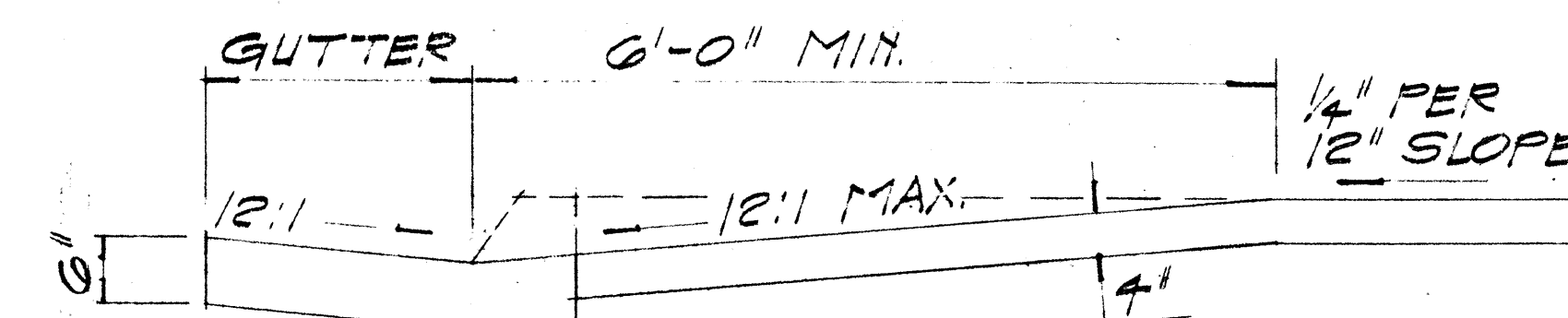
SECTION "A-A"
SCALE: 1" = 5'



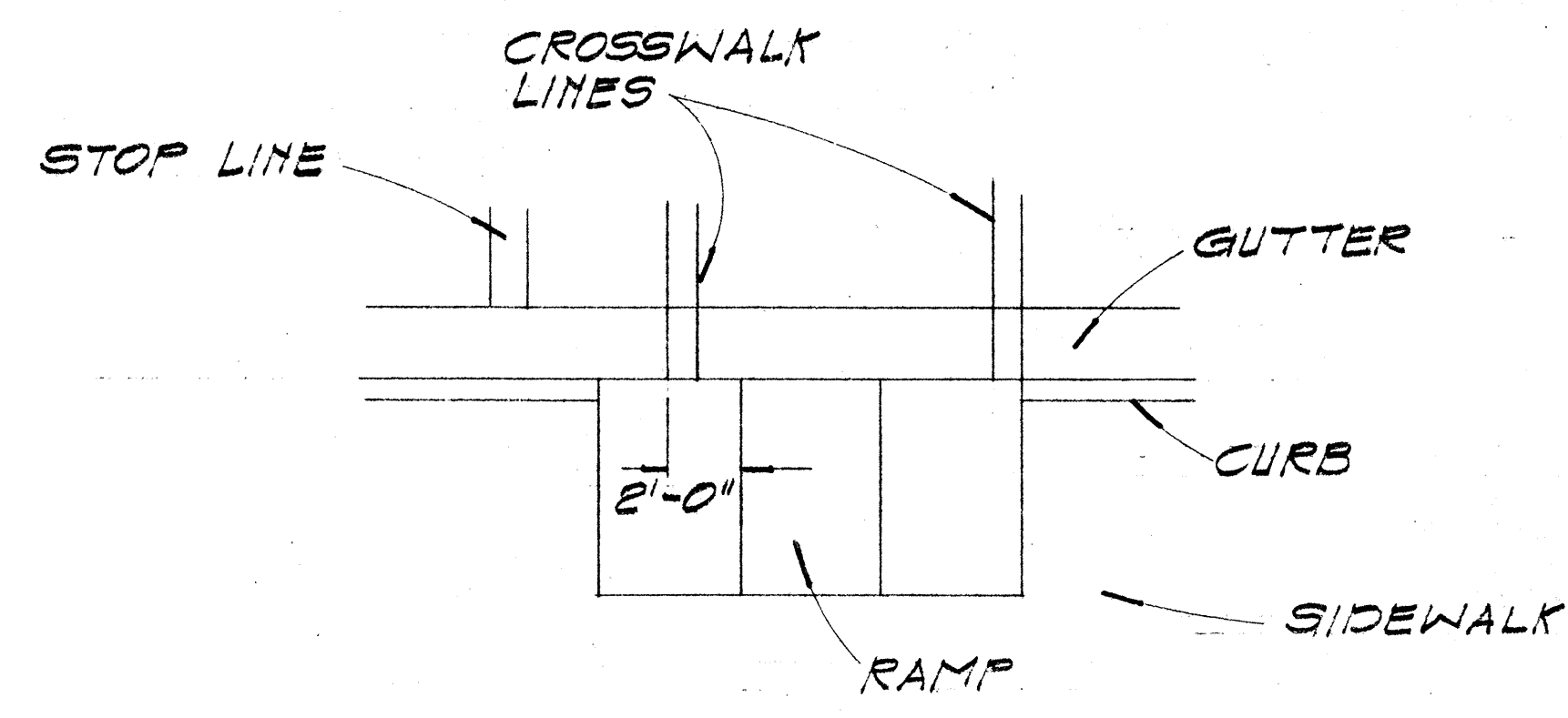
PLAN
SCALE: 3/8" = 1'-0"



ELEVATION
SCALE: 3/8" = 1'-0"



TYPICAL SECTION
SCALE: 3/4" = 1'-0"



TYPICAL INSTALLATION
AT CROSSWALKS
SCALE: 1" = 5'

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TYPICAL INSTALLATION
OF
WHEEL CHAIR RAMPS

SCALE: AS SHOWN

SHEET No. 5 OF 5 SHEETS