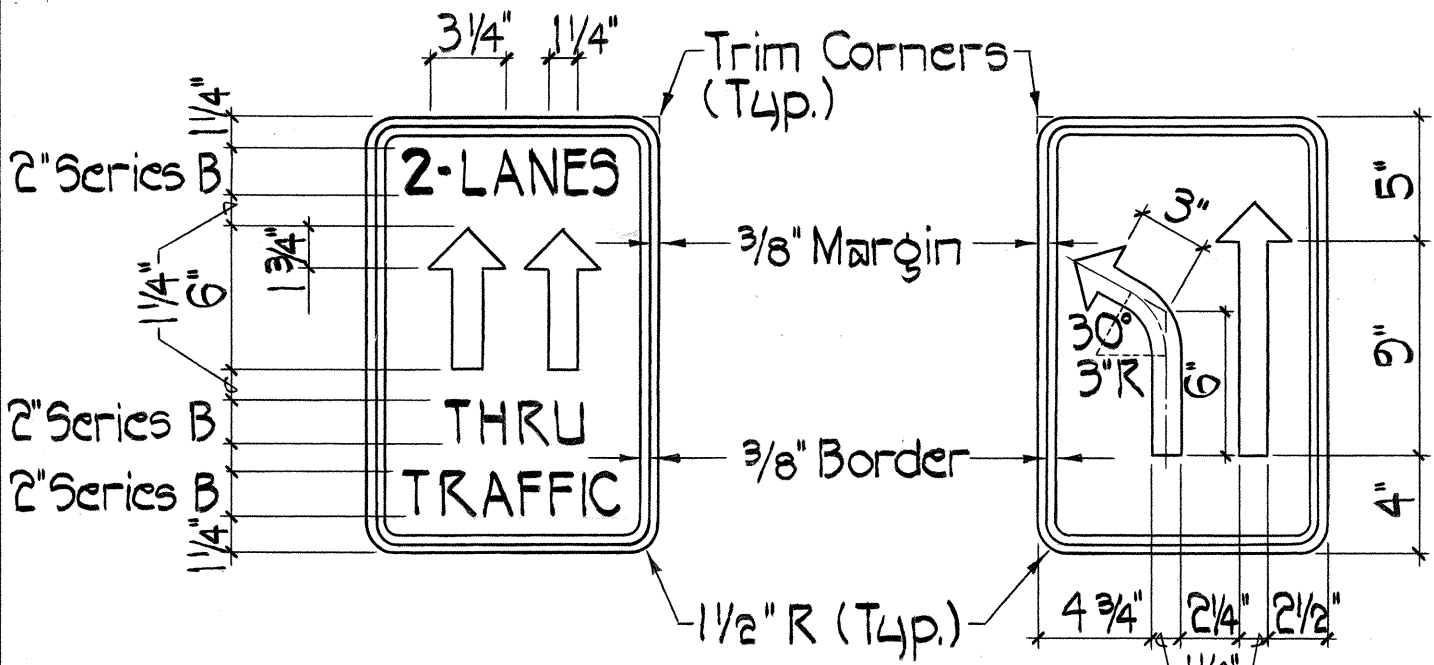
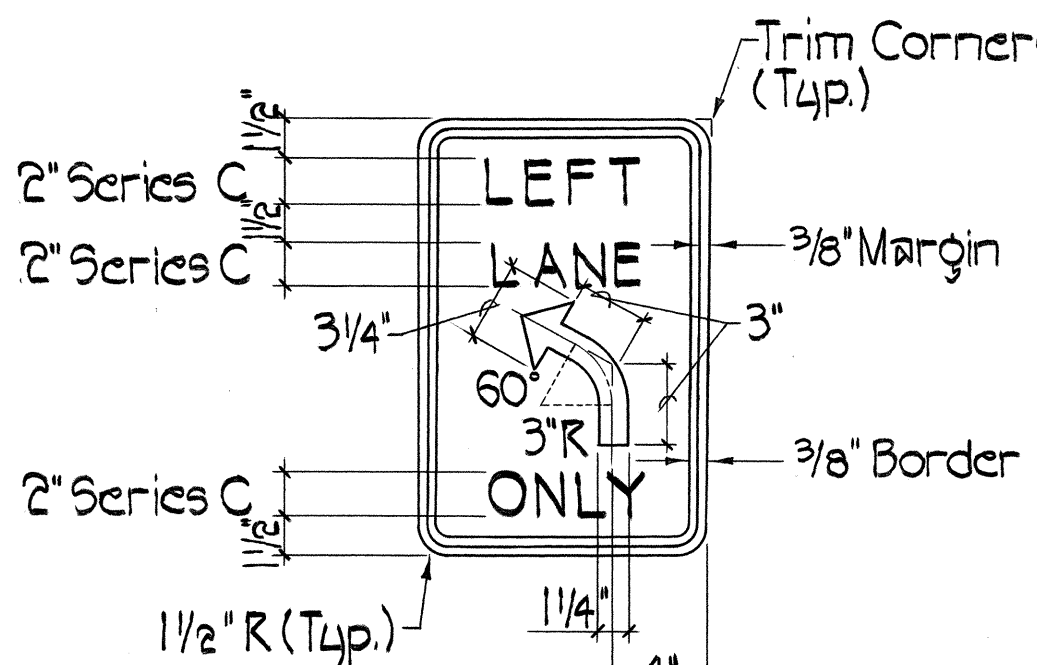


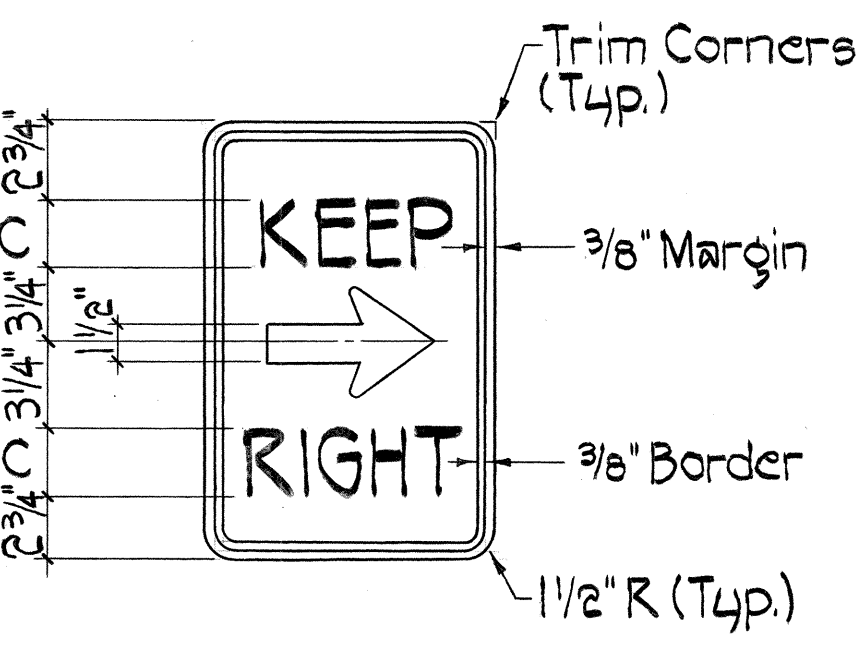
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-92	1992	9	22



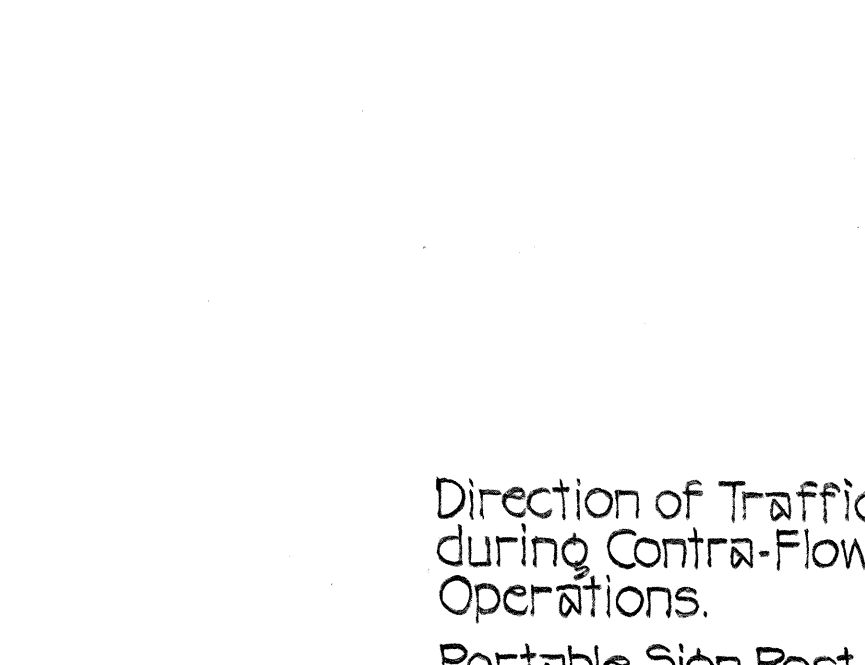
R3-20 (12'x18')
Not to Scale



R3-21(L) (12'x18')
Not to Scale



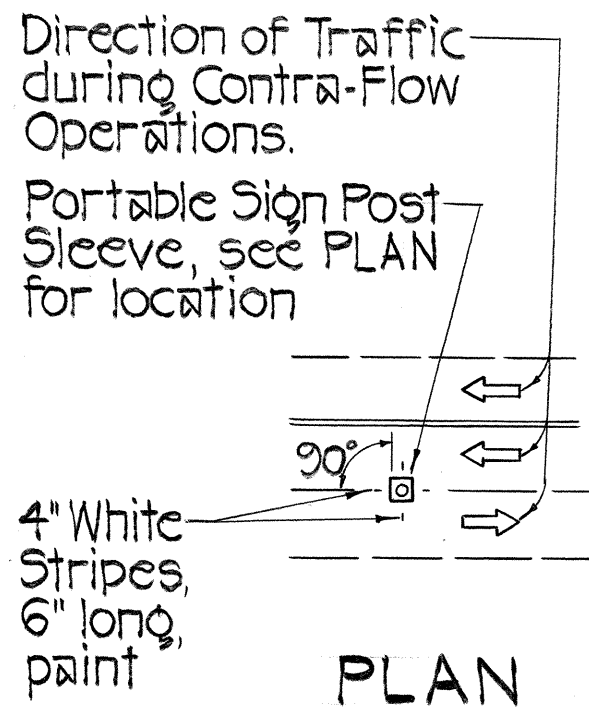
R3-22(L) (12'x18')
Not to Scale



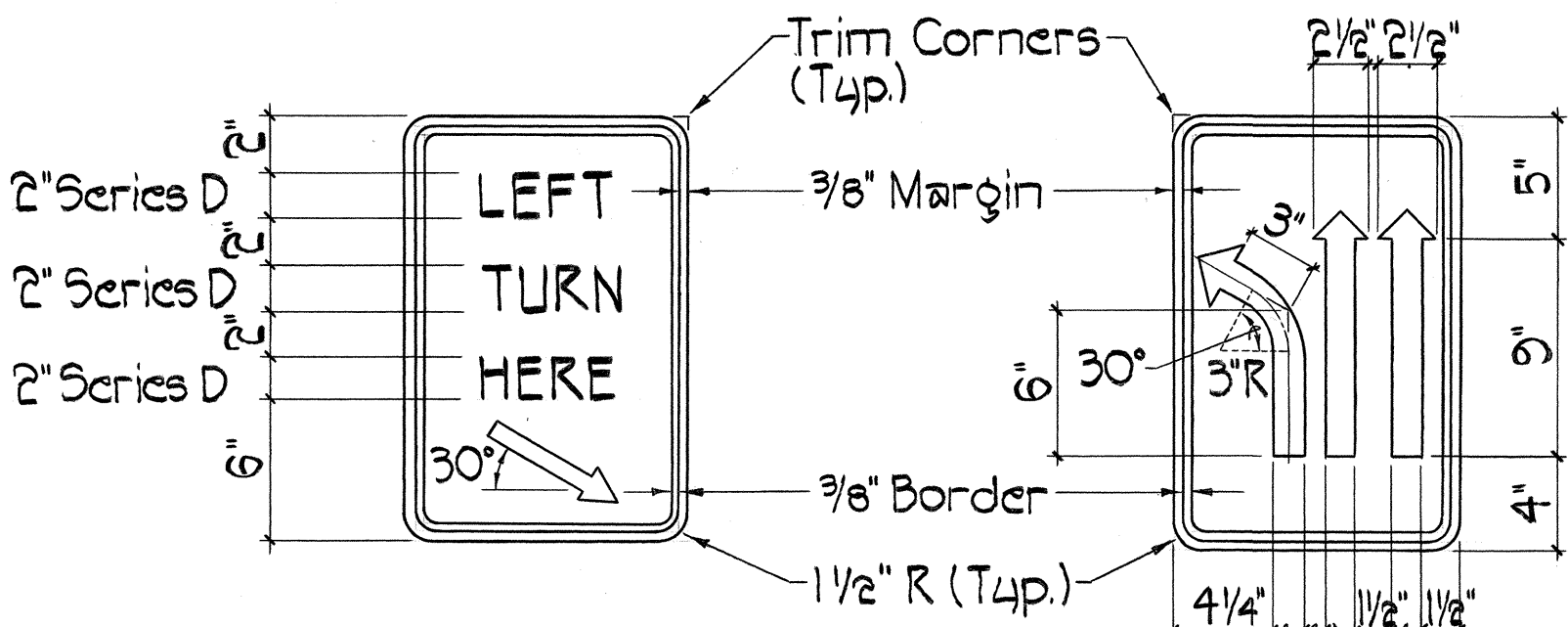
R4-7a(R) (12'x18')
Not to Scale

- NOTES:**
- Sleeves for Portable Signs/Posts shall be incidental to Proposal Item 8218000-Portable Signs with Posts.
 - Contractor shall provide the following Portable Single and Double Faced Signs and Posts with appropriate message as tabulated below.
 - Blank sign face shall be reflectorized with 6"x10" reflectorized material.

MESSAGE(S)	NO. REQUIRED
R4-7a(R) & R3-20	9
R4-7a(R) & R10-13	5
R3-20 & R10-13	2
R3-20 & Blank	3
R3-21(L) & Blank	2
R3-23(L) & Blank	5

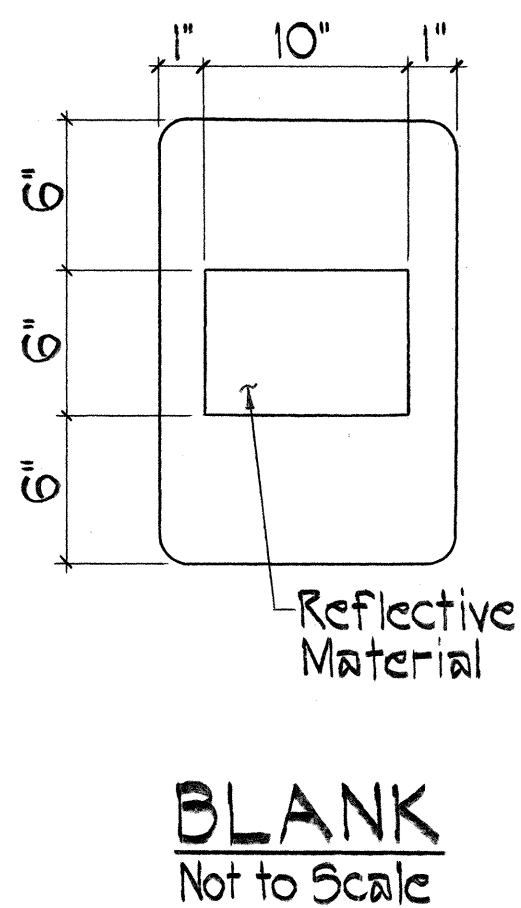


CONDUIT & CABLE SCHEDULE		
Δ	CONDUIT	CABLE
1	5 Exist. 2"	Exist. 2-26C #14, Exist. 11-2C #14
2	1 Exist. Spare 2"	New 2-2C #14
3	3 Exist. 2"	Exist. 1-26C #14, Exist. 8-2C #14
4	1 New 2"	New 2-2C #14
5	2 Exist. 2"	Exist. 1-26C #14, Exist. 7-2C #14
6	1 New 2"	New 2-2C #14
7	2 Exist. 2"	Exist. 1-26C #14, Exist. 4-2C #14
8	1 New 2"	New 1-2C #14
9	2 Exist. 2"	Exist. 1-26C #14, Exist. 3-2C #14
10	1 New 2"	New 1-2C #14
11	2 Exist. 2"	Exist. 1-26C #14, Exist. 2-2C #14
12	1 New 2"	New 1-2C #14

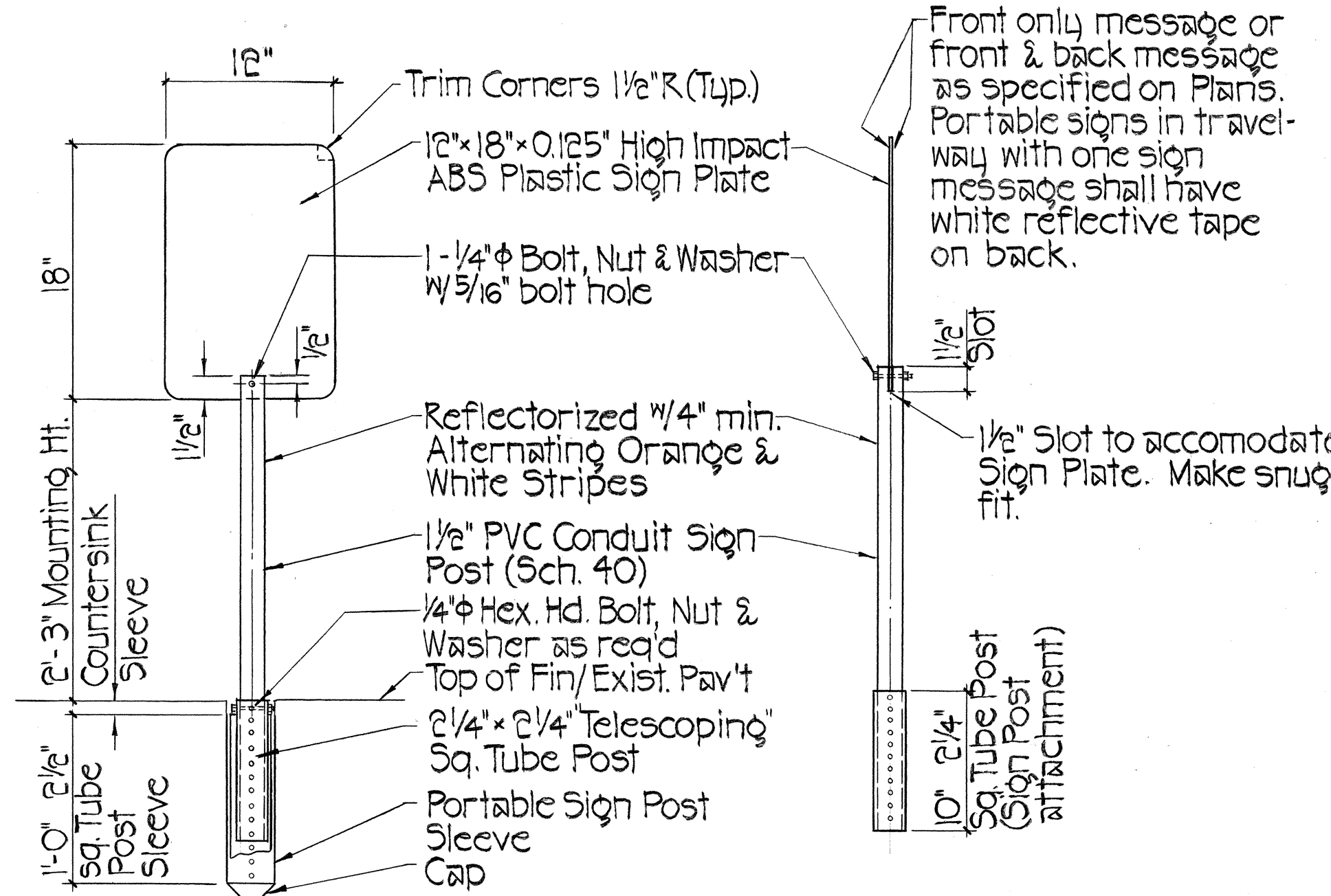
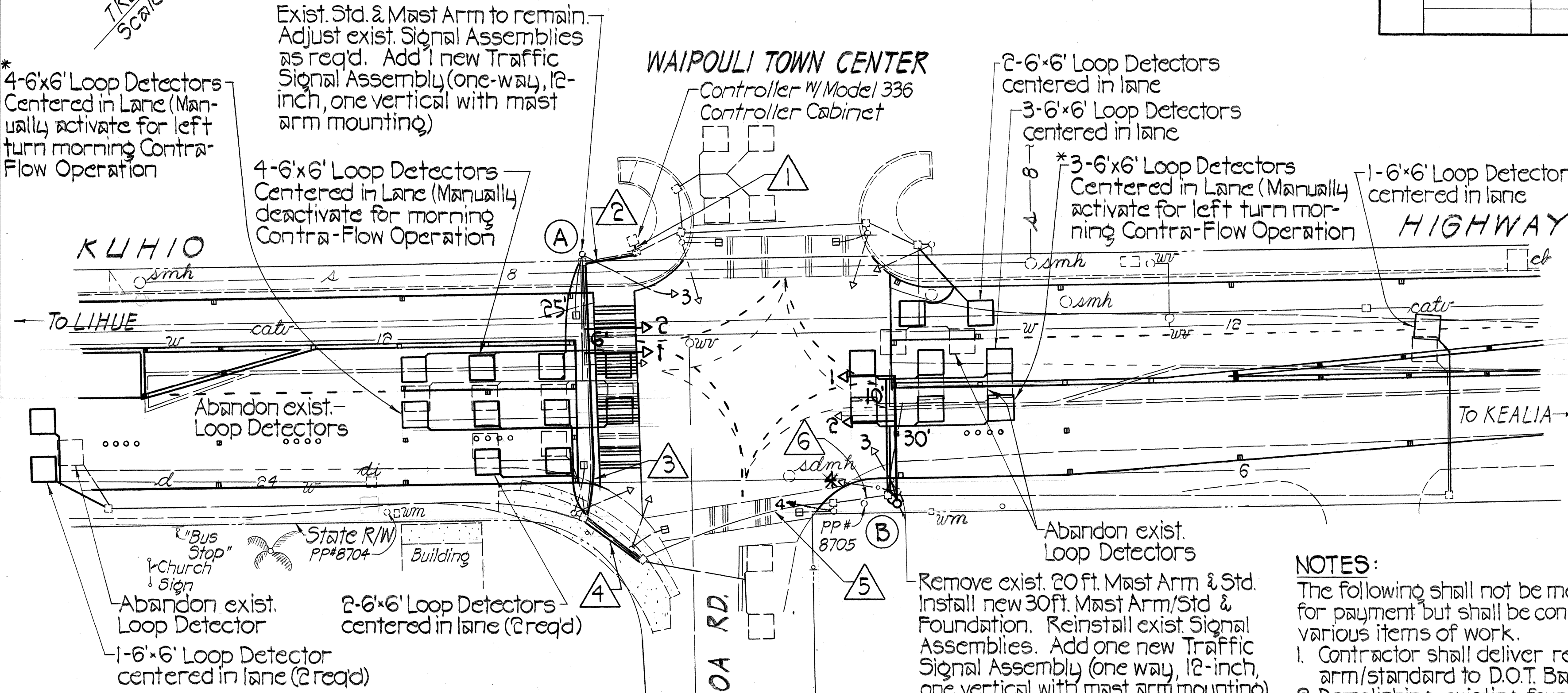


R10-13 (12'x18')
Not to Scale

R3-22(L) (12'x18')
Not to Scale



BLANK
Not to Scale



FRONT VIEW
SIDE VIEW
PORTABLE SIGN DETAIL
Not to Scale

- SIGNAL INDICATIONS**
- | | |
|---|---|
| R | R |
| Y | Y |
| G | G |
- A-2 New
A-3 Exist.
B-2 New
B-3 Exist.
E-4 Exist.
- A-1 Relocated exist.
B-1 Relocated exist.

- NOTES:**
- The following shall not be measured separately for payment but shall be considered incidental to various items of work.
 - Contractor shall deliver removed 20 ft mast arm/standard to D.O.T. Base Yard.
 - Demolishing existing foundation, pipe guards and restoring damaged areas to match surrounding.
 - Reinstalling and adjusting existing traffic signal assemblies with new mounting-as reqd.
 - Connection of new and reconnection of existing traffic signal assemblies including cables and appurtenances.

* The Contractor shall provide on-off switch at the Controller or police monitoring station to activate 4-6'x6' & 3-6'x6' Loop Detectors and deactivate left turn storage lane loops during contra-flow operation. No payment shall be made, but shall be considered incidental to the various traffic signal items.

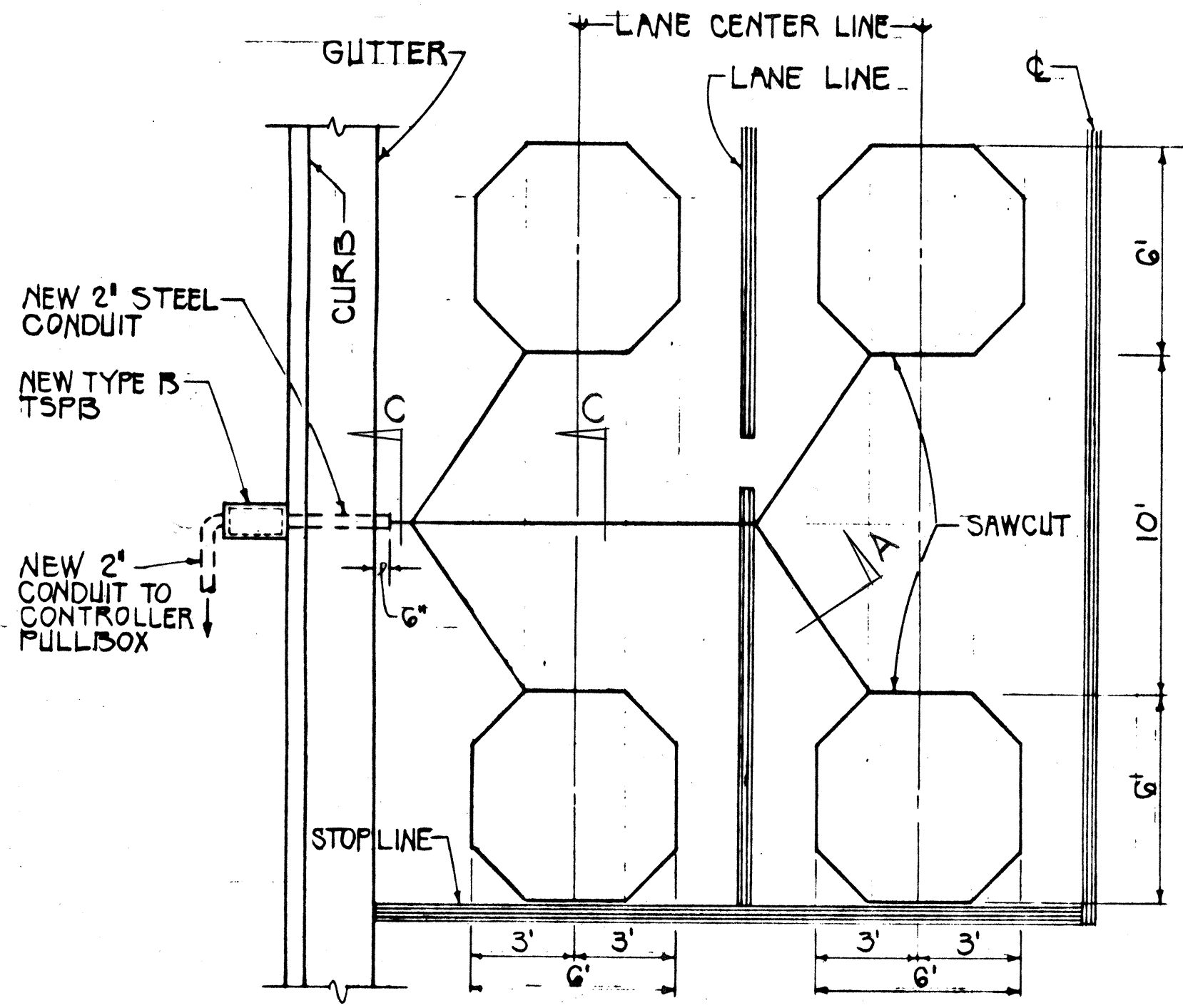
TRAFFIC SIGNAL PLAN @ KAMOA ROAD
Scale: 1" = 20'

NOTE: SIGNAL HEAD B-4 MOVE TO NEW LOCATION AS SHOWN ON NEW 10' STD.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Harold L. Yoshizaki
REGISTERED PROFESSIONAL ENGINEER
No. 2091-C
HAWAII, U.S.A.

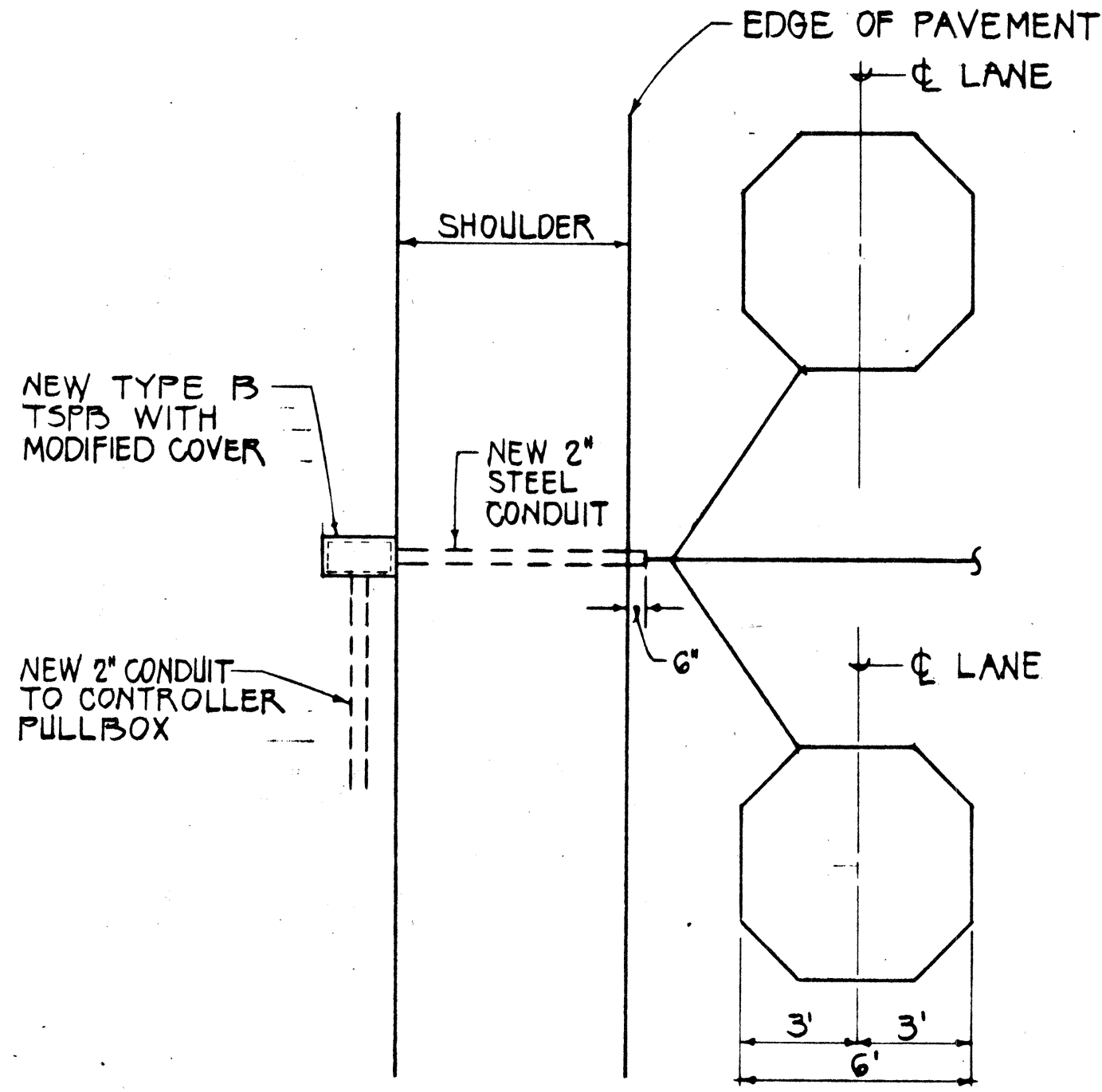
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
TRAFFIC SIGNAL PLAN & PORTABLE SIGN DETAILS
KUHIO HIGHWAY IMPROVEMENTS
HALEILIO ROAD TO UHELEKAWA BRIDGE
PROJECT NO. 56A-01-92
SCALE: AS NOTED DATE: JAN. 1992
SHEET NO. 1 OF 2 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	56A-01-92	1992	10	22

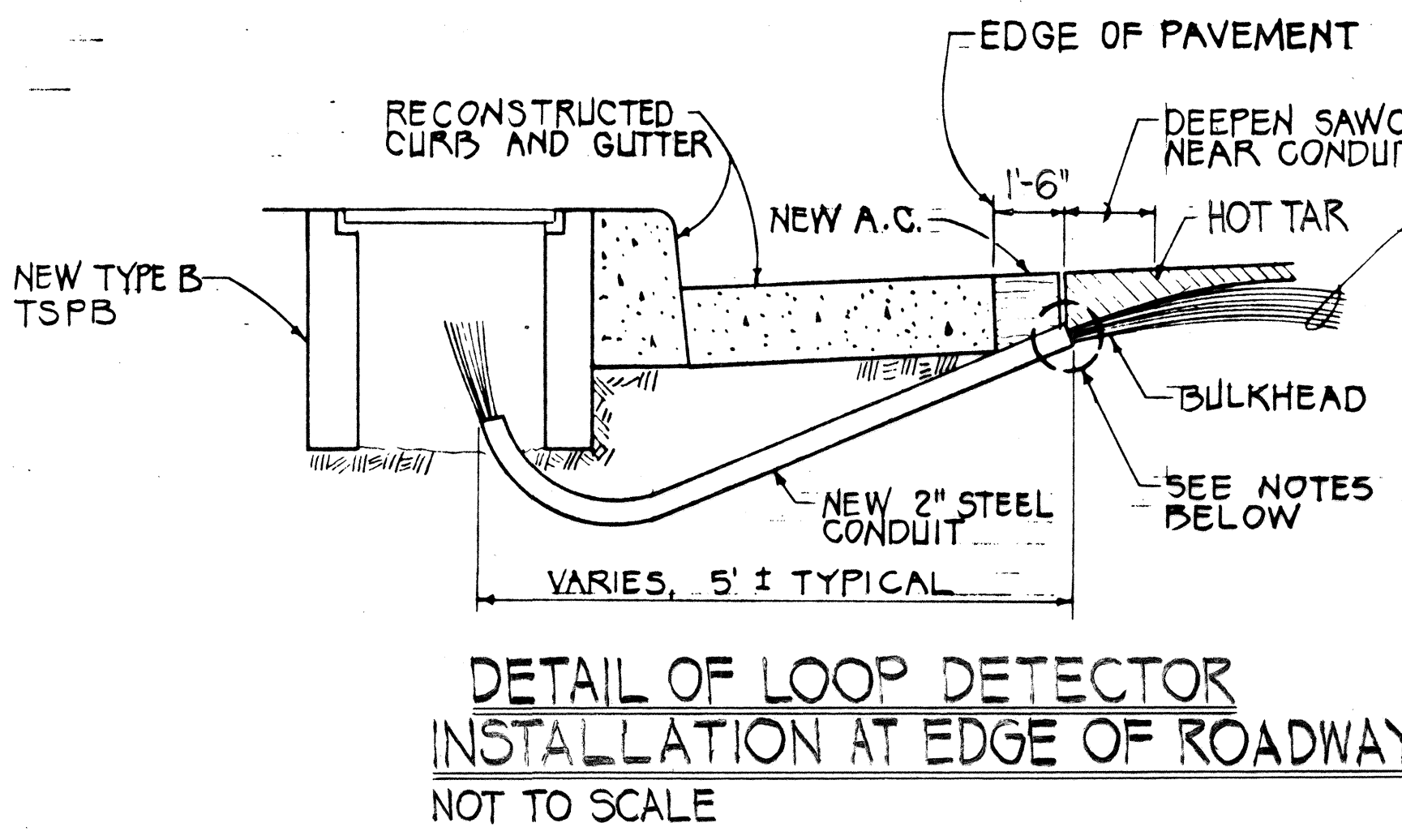


NOTE: ADD ONE PAIR OF LOOPS FOR EACH ADDITIONAL LANE

TYPICAL LAYOUT AT STOPLINES
SCALE: 1/4" = 1'-0"

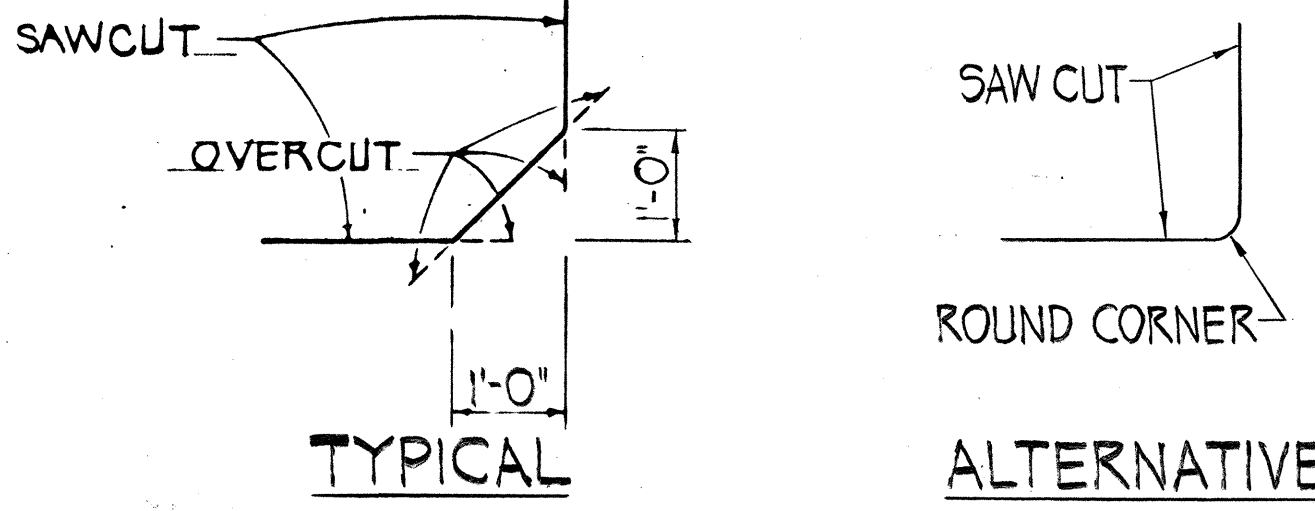


TYPICAL LAYOUT AT SHOULDER AREAS
SCALE: 1/4" = 1'-0"

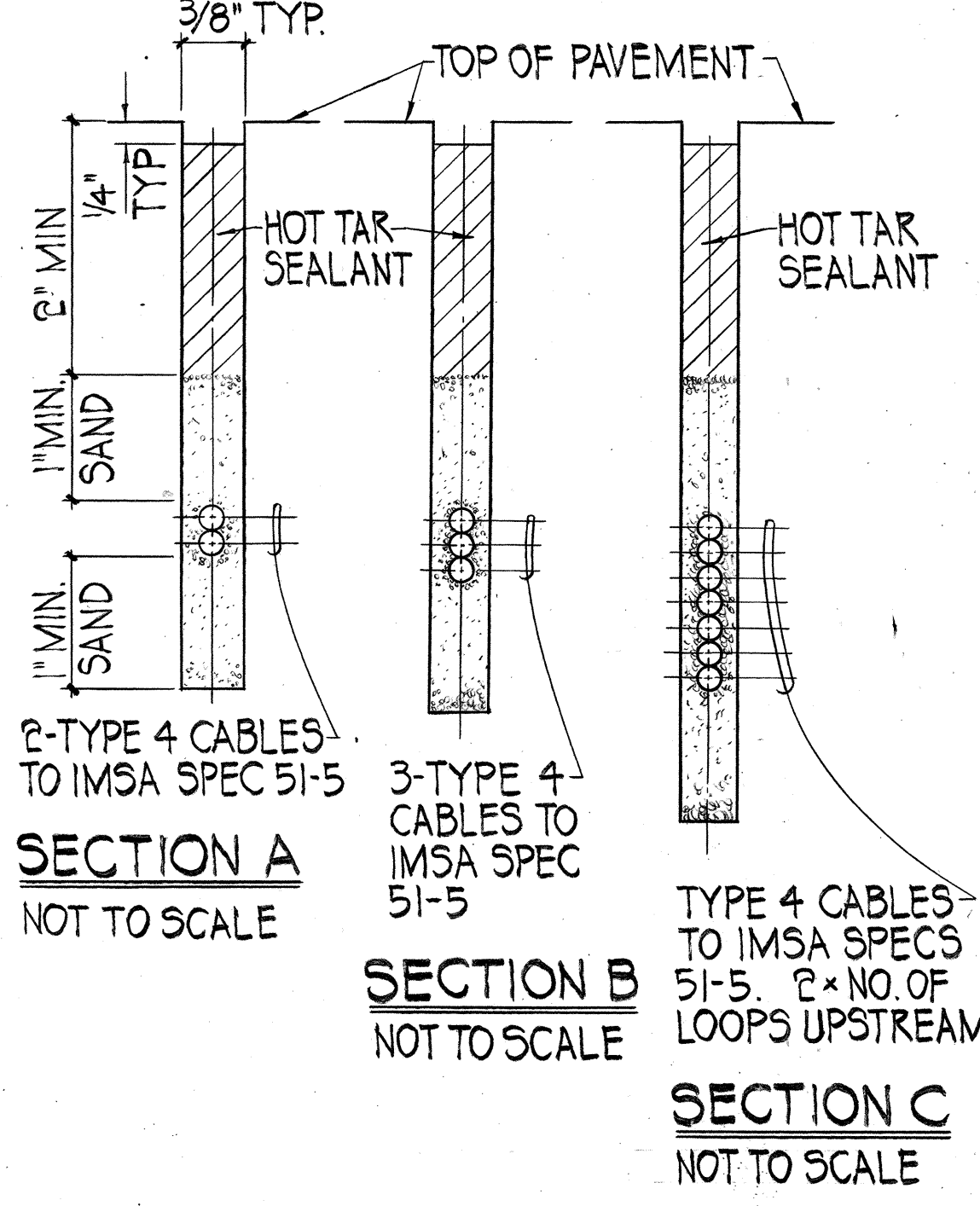


- NOTES ON CONSTRUCTION AT END OF SAWCUT
1. SEAL ROADWAY END OF CONDUIT AFTER INSTALLATION OF CONDUCTORS.
 2. INSTALL BULKHEAD ACROSS CONDUIT TRENCH.
 3. PLACE HOT TAR IN SAWCUT.
 4. BACKFILL OVER CONDUIT WITH NEW A.C.
 5. RECONSTRUCT CURB & GUTTER AS REQUIRED.

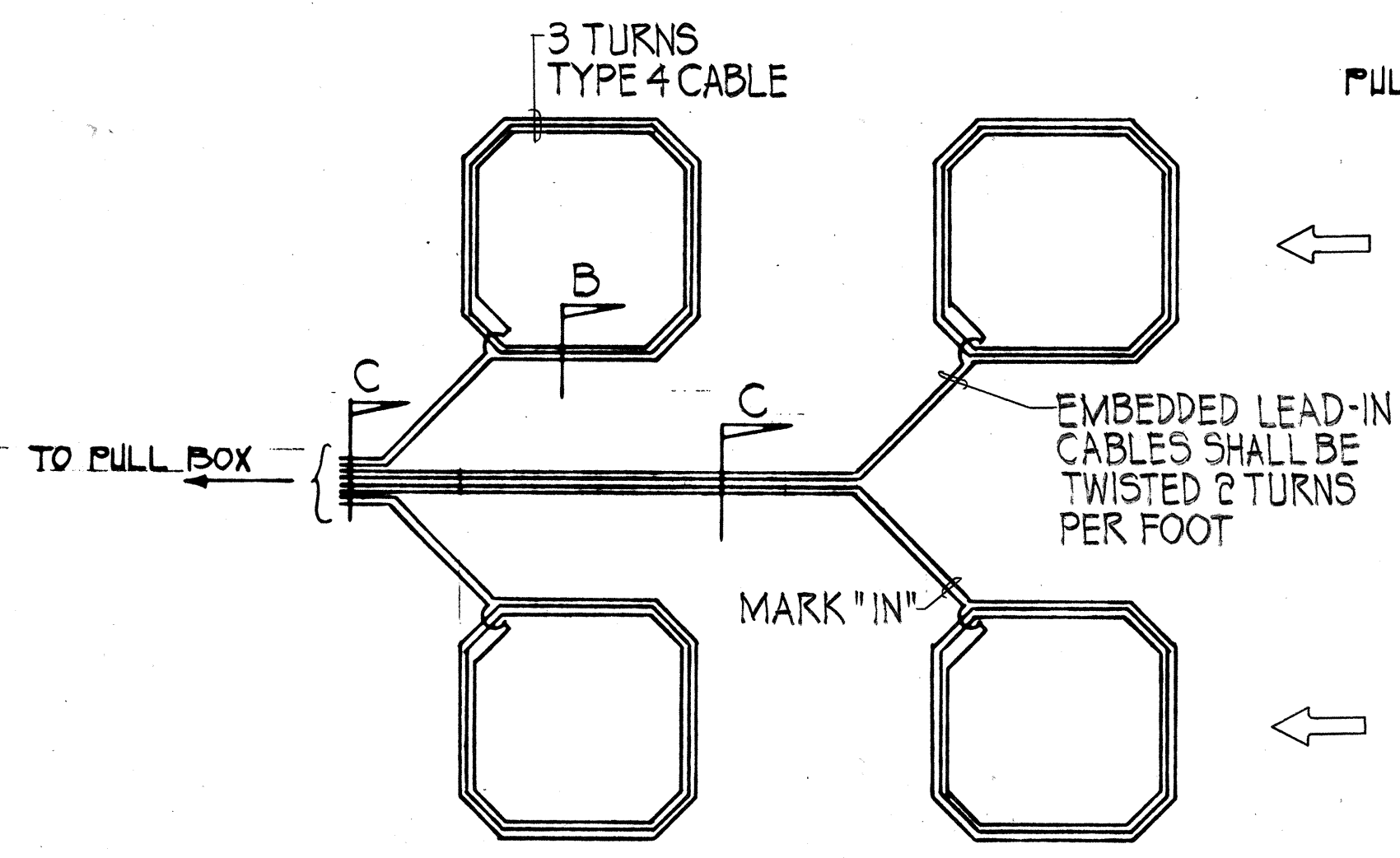
- NOTES:
1. OVERCUTS SHALL BE KEPT TO A MINIMUM.
 2. OVERCUTS SHALL BE FILLED WITH HOT TAR.



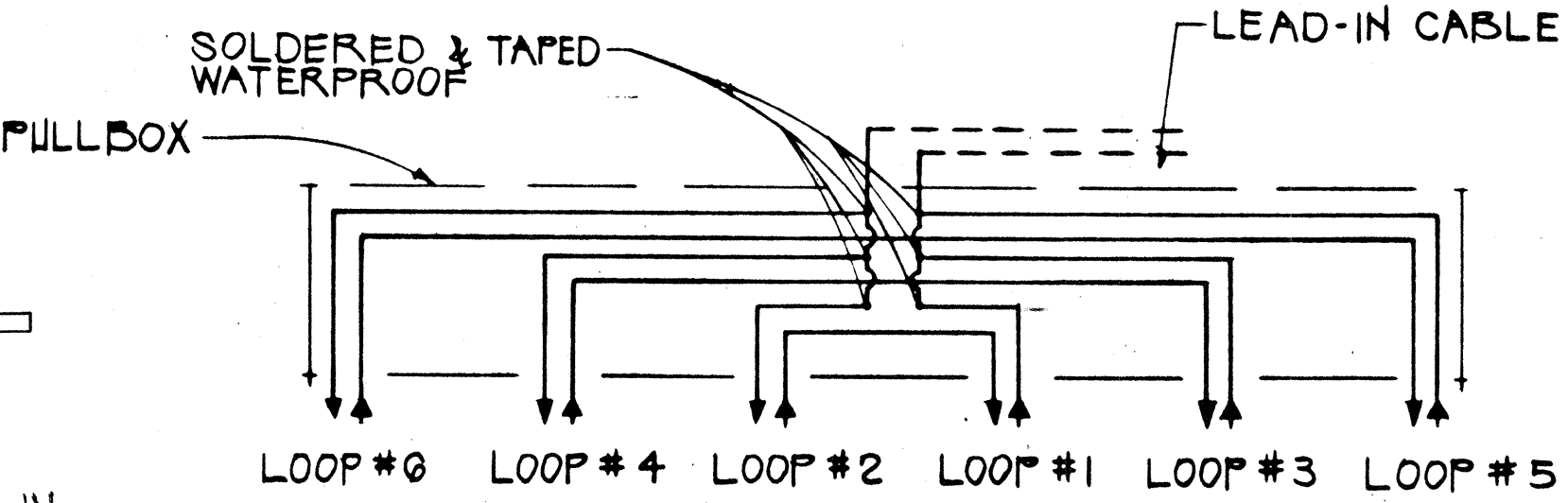
DETAIL OF SAWCUT AT CORNERS
NOT TO SCALE



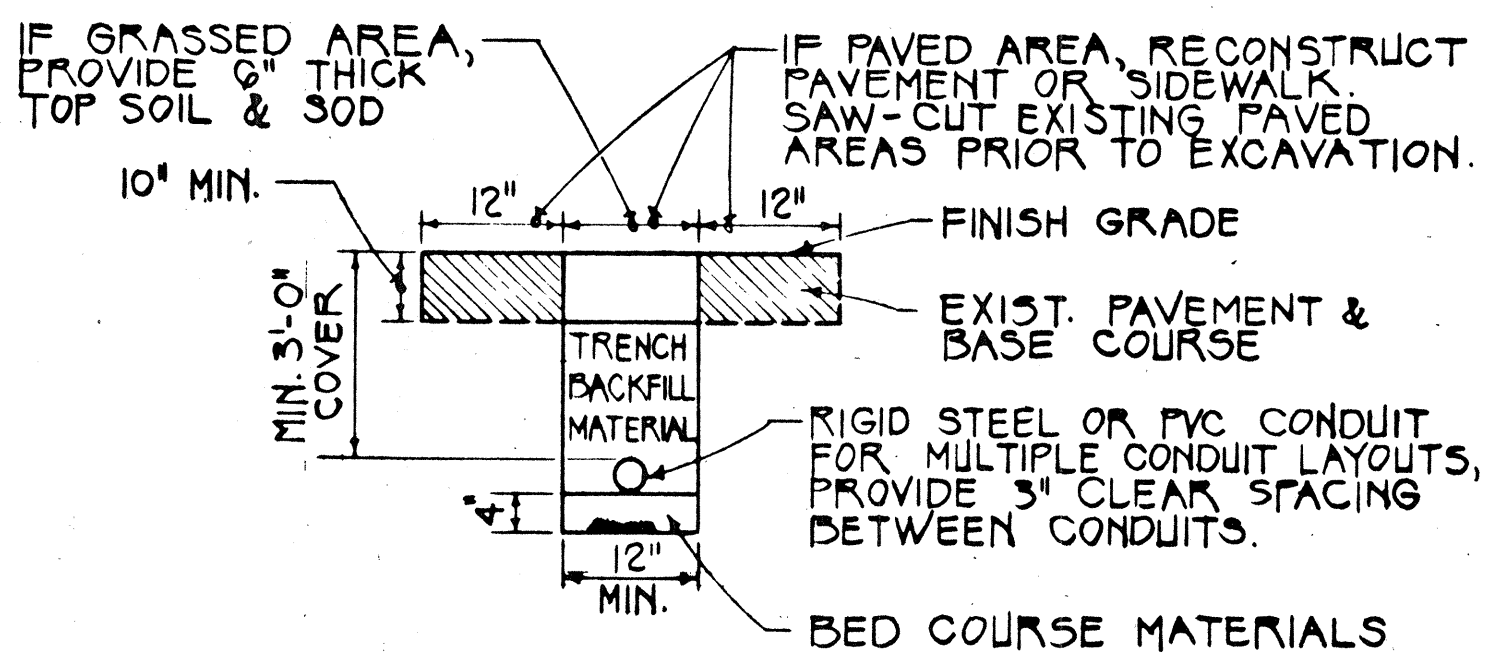
SECTION A NOT TO SCALE
SECTION B NOT TO SCALE
SECTION C NOT TO SCALE



WIRING DIAGRAM
NOT TO SCALE



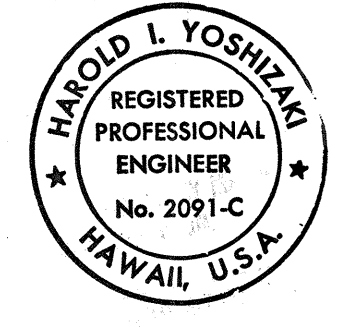
TYPICAL SERIES-PARALLEL LOOP CONNECTION



TYPICAL TRENCH DETAIL
NOT TO SCALE

NOTE: ALL CONDUITS UNDER ROADWAYS SHALL BE STEEL OR PVC SCHEDULE 80.

DATE	
SURVEY PLOTTED BY	
DRAWN BY	
DESIGNED BY	
NOTED BY	
CHECKED BY	
ORIGINAL PLAN	
NOTE BOOK	
NO.	



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.
Harold I. Yoshizaki
SHIMABUKURO, ENDO & YOSHIKAWA, INC.
1126 12th Avenue
Honolulu, Hawaii 96816

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

LOOP DETECTOR DETAILS
KUHIO HIGHWAY IMPROVEMENTS
HALEILIO ROAD TO UHELEKAWAWA BRIDGE
PROJECT NO. 56A-01-92
SCALE: AS NOTED DATE: JAN. 1992
SHEET NO. 2 OF 2 SHEETS