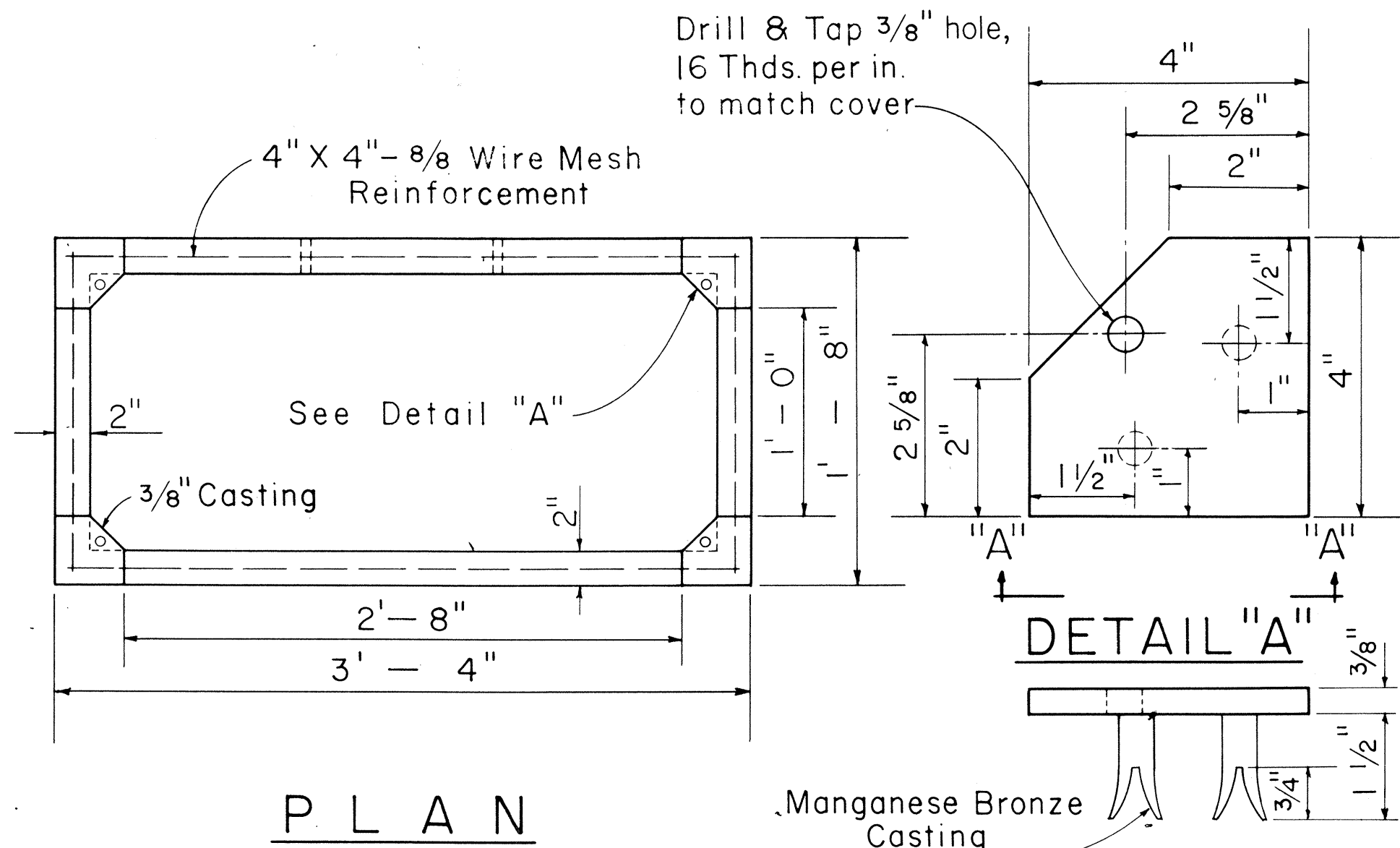
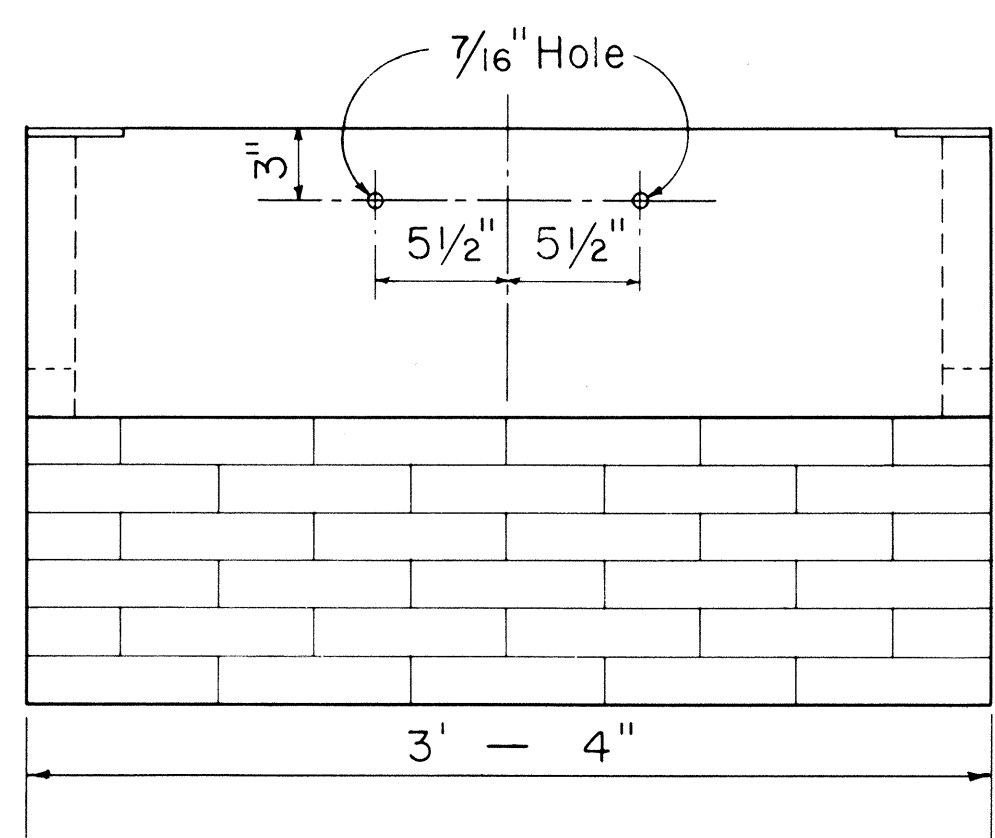




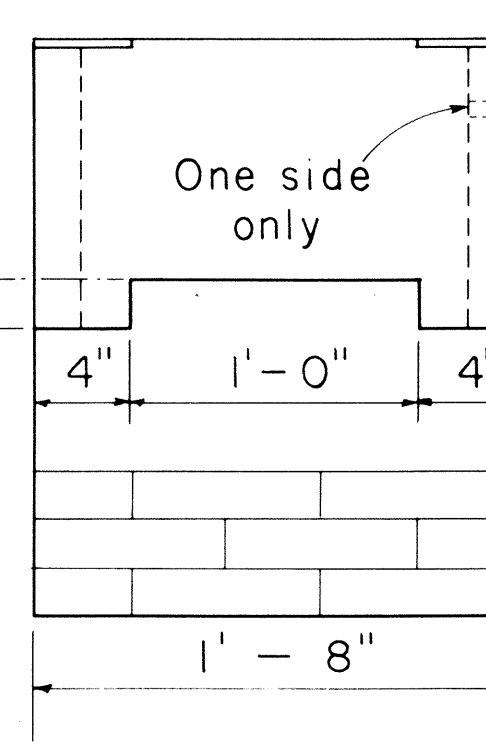
DETAIL "A"

Manganese Bronze Casting

SECTION "A-A"

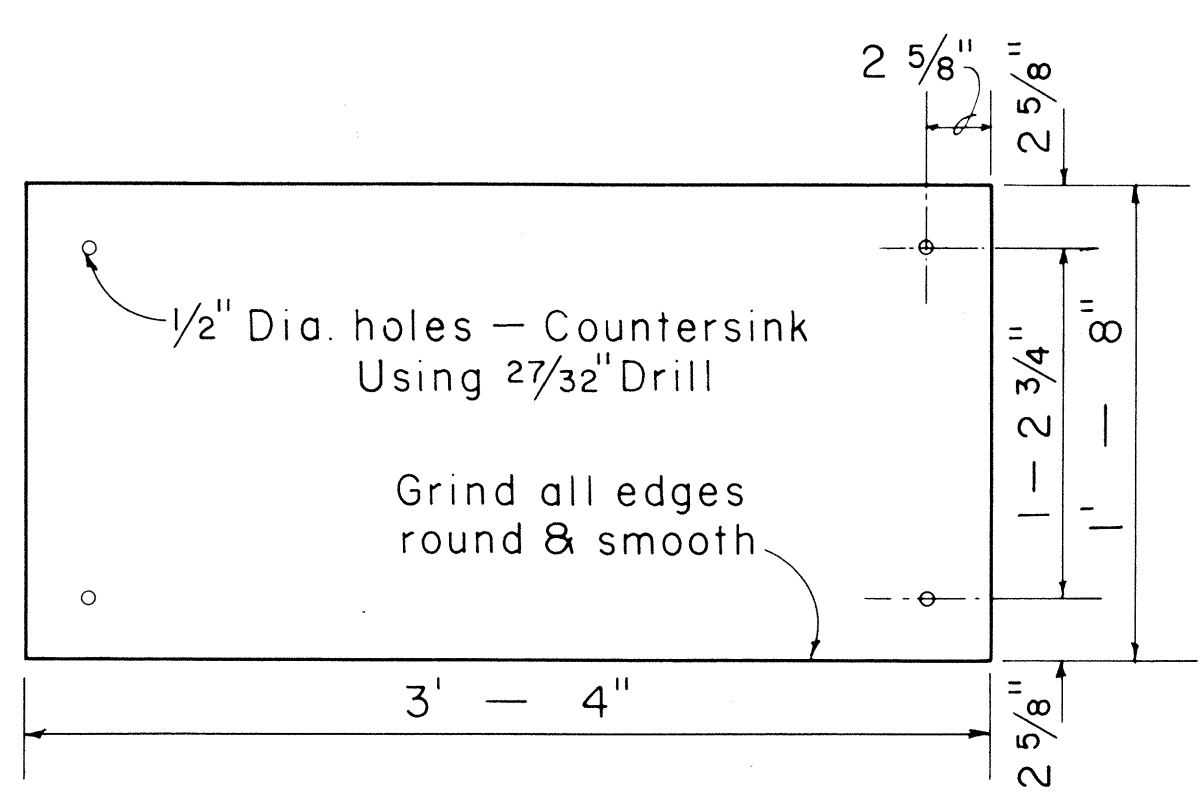


SIDE VIEW



END VIEW

Varies (To be determined in the field) Contractor to build Brickwall



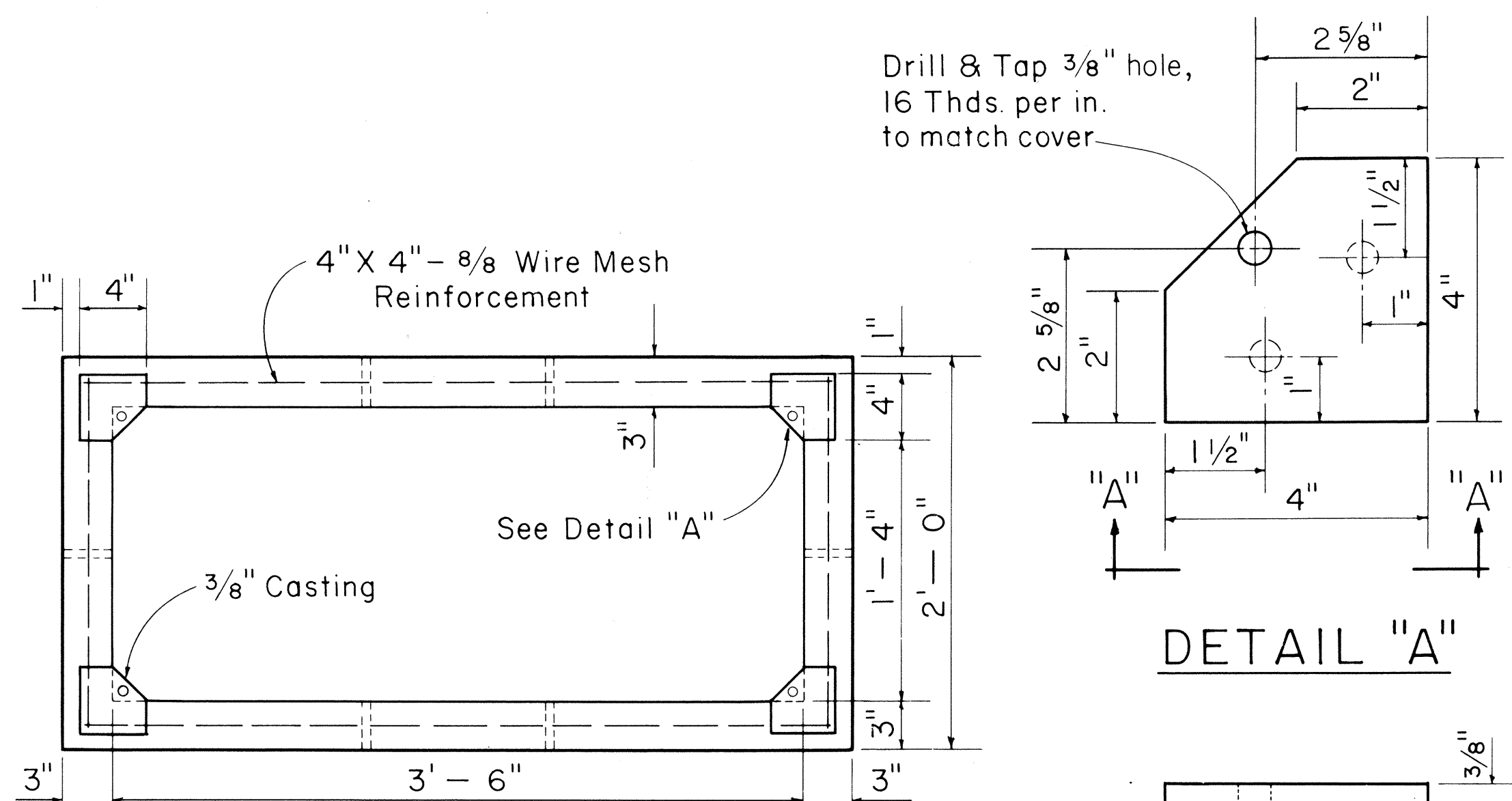
1/4" CHECKER PLATE COVER

(Hot dip galvanize checkered plate after drilling, countersinking, and grinding edge)

1'-4" X 3'-0" CONCRETE SERVICE BOX

Scale: 1 1/2" = 1'-0"

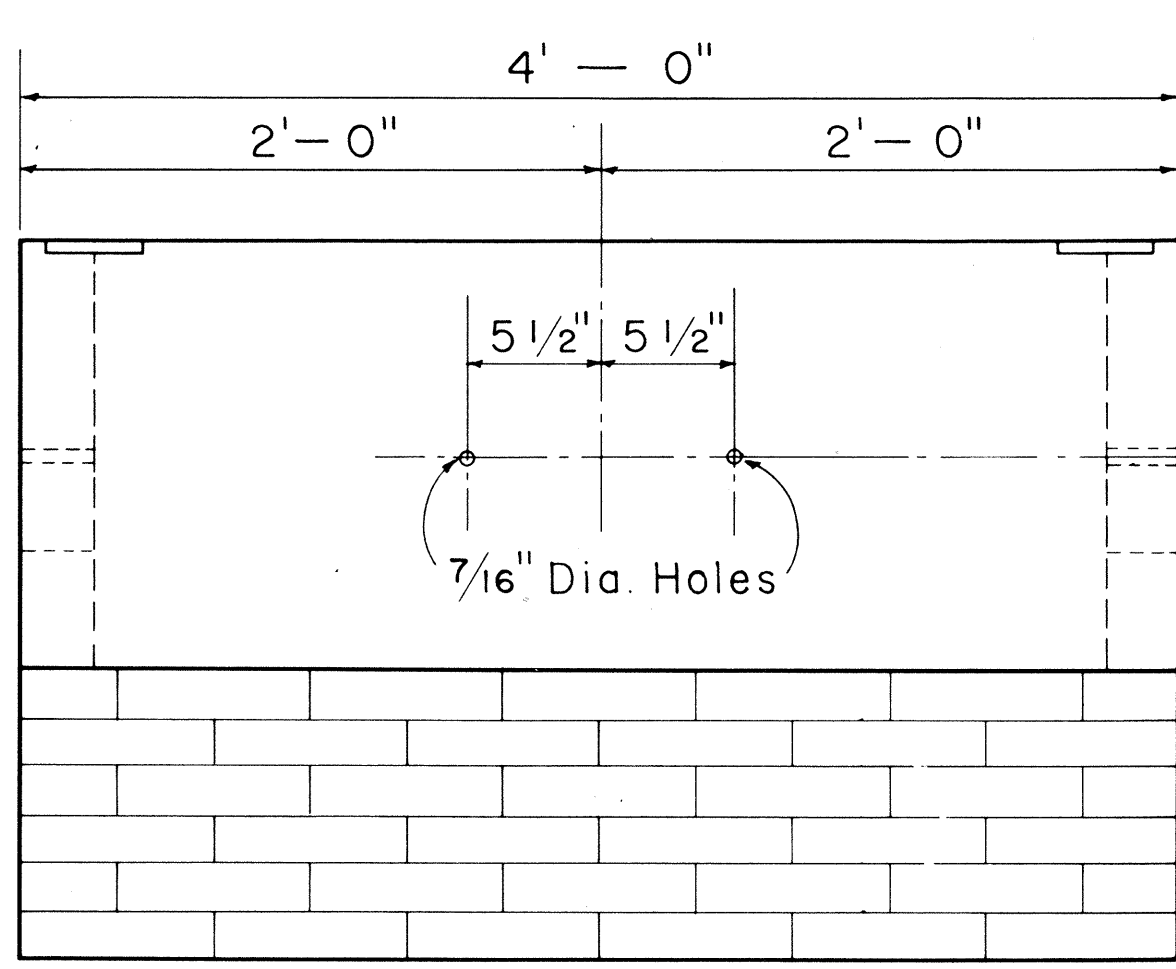
OII250



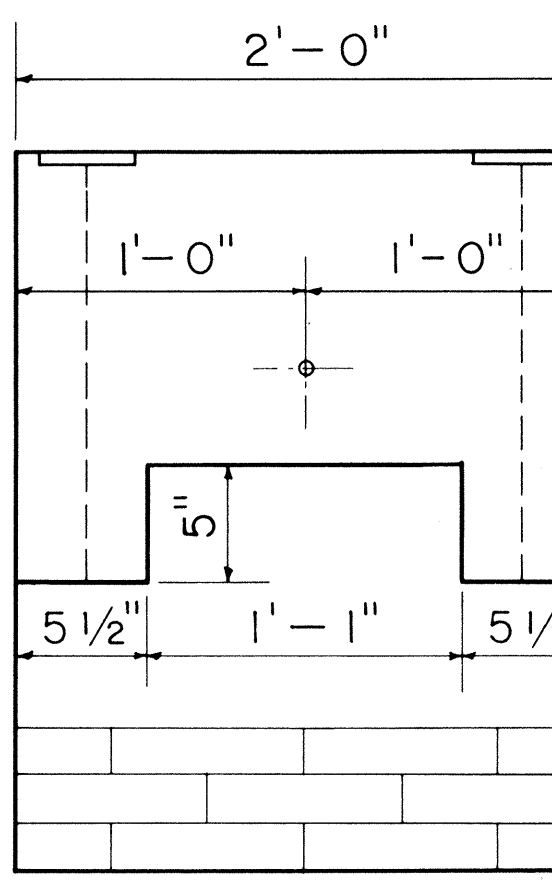
DETAIL "A"

Manganese Bronze Casting

SECTION "A-A"

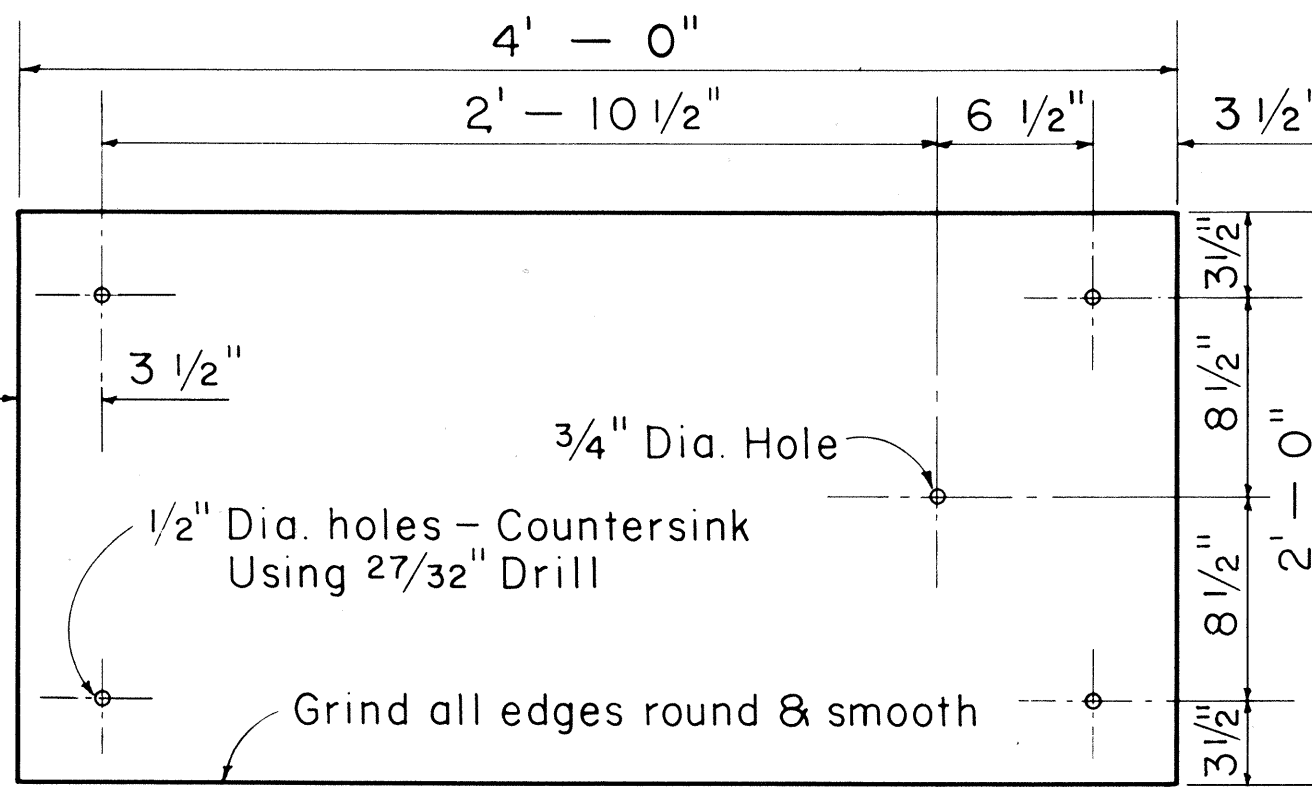


SIDE VIEW



END VIEW

Varies (To be determined in the field) Contractor to build Brickwall



1/4" CHECKER PLATE COVER

(Hot dip galvanize checkered plate after drilling, countersinking, and grinding edge)

1'-6" X 3'-6" CONCRETE SERVICE BOX

Scale: 1 1/2" = 1'-0"

OII255

CREOSOTED DOUGLAS FIR & YELLOW PINE POLE DATA

LENGTH IN FEET	CLASS	APPROX. MINIMUM DIMENSIONS (INCHES)				AVERAGE WEIGHT (LBS.)	POLE SETTING DEPTH (FT.)		BREAKING LOAD 2'-0" BELOW TOP OF POLE (LBS.)
		AT TOP		6' FROM BUTT			DOUGLAS FIR	IN SOIL	
		DIA.	CIR.	DIA.	CIR.				
25	5	6.04	19	8.26	26	525	4.5	3	1900
30	3	7.32	23	10.32	32.5	810	5	3.5	3000
	5	6.04	19	8.90	28	600	5	3.5	1900
35	2	7.96	25	12.23	37.5	1260	5	3.5	3700
	5	6.04	19	9.55	30	770	5	3.5	1900
40	3	7.32	23	11.77	37	1320	5.5	3.5	3000
45	2	7.96	25	13.20	41.5	1845	6	4	3700
	3	7.32	23	12.25	38.5	1575	6	4	3000
50	2	7.96	25	13.70	43	2150	6.5	4	3700
	3	7.32	23	12.70	40	1850	6.5	4	3000
55	1	8.59	27	15.11	47.5	2860	7	4.5	4500
	2	7.96	25	14.15	44.5	2475	7	4.5	3700
	3	7.32	23	13.20	41.5	2145	7	4.5	3000
60	1	8.59	27	15.75	49.5	3360	7	4.5	4500
	2	7.96	25	14.62	46	2820	7	4.5	3700
65	1	8.59	27	16.20	51	3835	7.5	5	4500
	2	7.96	25	15.11	47.5	3250	7.5	5	3700
70	1	8.59	27	16.70	52.5	4340	7.5	5	4500
	2	7.96	25	15.60	49	3640	7.5	5	3700
75	1	8.59	27	17.20	54	4800	8	5.5	4500
	2	7.96	25	16.05	50.5	4050	8	5.5	3700
80	1	8.59	27	17.50	55	5240	8	6	4500
	2	7.96	25	16.40	51.5	4400	8	6	3700
85	1	8.59	27	18.00	56.5	5780	8.5	6.5	4500
	2	7.96	25	16.88	53	4930	8.5	6.5	3700
90	1	8.59	27	18.30	57.5	6300	8.5	6.5	4500
	2	7.96	25	17.20	54	5400	8.5	6.5	3700

NOTE:

The ultimate fiber stress for creosoted Southern Yellow Pine & Douglas Fir is 7,400 Lbs. per square inch.

Weights are for untreated poles. Add 5% as estimate of added weight of creosote treatment.

REFERENCES:

American Standards Association 05.4-1941, 05.6-1945.
Standard Handbook for Electrical Engineers, Eighth Edition
H. E. Co. Specification for Poles.

WOOD POLE DATA

APPROVED:

R. Man
HAWAIIAN TELEPHONE Co. 1-9-74
DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
H.E. Co. AND H.T. Co.
SERVICE BOX DETAILS
AND WOOD POLE DATA

Scales: As Noted Date

SHEET NO. 1 OF 2 SHEETS

FOR 25', & 30' POLES WITH 8'-0" ANCHOR RODS				
"A"	"B"	"C"	"D" = ("A" + "B")	
LEAD - ANCHOR ROD TO C.O.F POLE	ANCHOR ROD TO C.O.F HOLE	VERTICAL DEPTH 18" D.M. 24" D.M.	TOTAL DISTANCE POLE TO HOLE	
5'-0"	1'-8"	7'-1"	7'-4"	6'-8"
10'-0"	3'-0"	6'-7"	7'-0"	13'-0"
15'-0"	4'-0"	6'-1"	6'-6"	19'-0"
20'-0"	4'-8"	5'-6"	5'-10"	24'-8"
25'-0"	5'-2"	4'-11"	5'-4"	30'-2"
FOR 35' THRU 70' POLES WITH 8'-0" ANCHOR RODS				
5'-0"	1'-0"	7'-3"	7'-4"	6'-0"
10'-0"	1'-11"	7'-1"	7'-3"	11'-11"
15'-0"	2'-8"	6'-9"	7'-1"	17'-8"
20'-0"	3'-3"	6'-6"	6'-10"	23'-3"
25'-0"	3'-10"	6'-2"	6'-7"	28'-10"
FOR 40' THRU 70' POLES WITH 1 1/4" x 10'-0" ANCHOR RODS				
5'-0"	1'-7"		9'-4"	6'-7"
10'-0"	3'-0"		9'-0"	13'-0"
15'-0"	4'-2"		8'-6"	19'-2"
20'-0"	5'-3"		7'-11"	25'-3"
25'-0"	6'-2"		7'-3"	31'-2"

D. M. = Deadman

TABLE 2 ANCHOR ROD - ANCHOR SLUG - SQUARE WASHER COMBINATION						
H.E. CODE NO.	ANCHOR ROD	WORKING TENSION 1/2 ULT (LBS.)	H.E. CONC. NO.	CONC. (IN.)	H.E. CODE NO.	WASHER SIZE QTY.
617	5/8" x 8'-0" Steel	8,000	518	18	2320	4" x 4" x 3/16" 2
615	5/8" x 8'-0" Cu Cov Stl	9,250	518	18	**	3" x 3" x 1/8" 2
618	3/4" x 8'-0" Steel	11,500	518	18	2330	6" x 6" x 3/8" 1
619	1" x 8'-0" Steel	18,000	524	24	2331	6" x 6" x 1/2" 1
616	1" x 8'-0" Cu Cov Stl	22,500	524	24	**	4" x 4" x 3/16" 2
613	1 1/4" x 10'-0" Steel	29,000	524	24	2330	6" x 6" x 3/8" 2

** Use bronze square washers included in anchor rod assembly on copper covered steel (Cu Cov Stl) anchor rods.

ANCHORING DATA

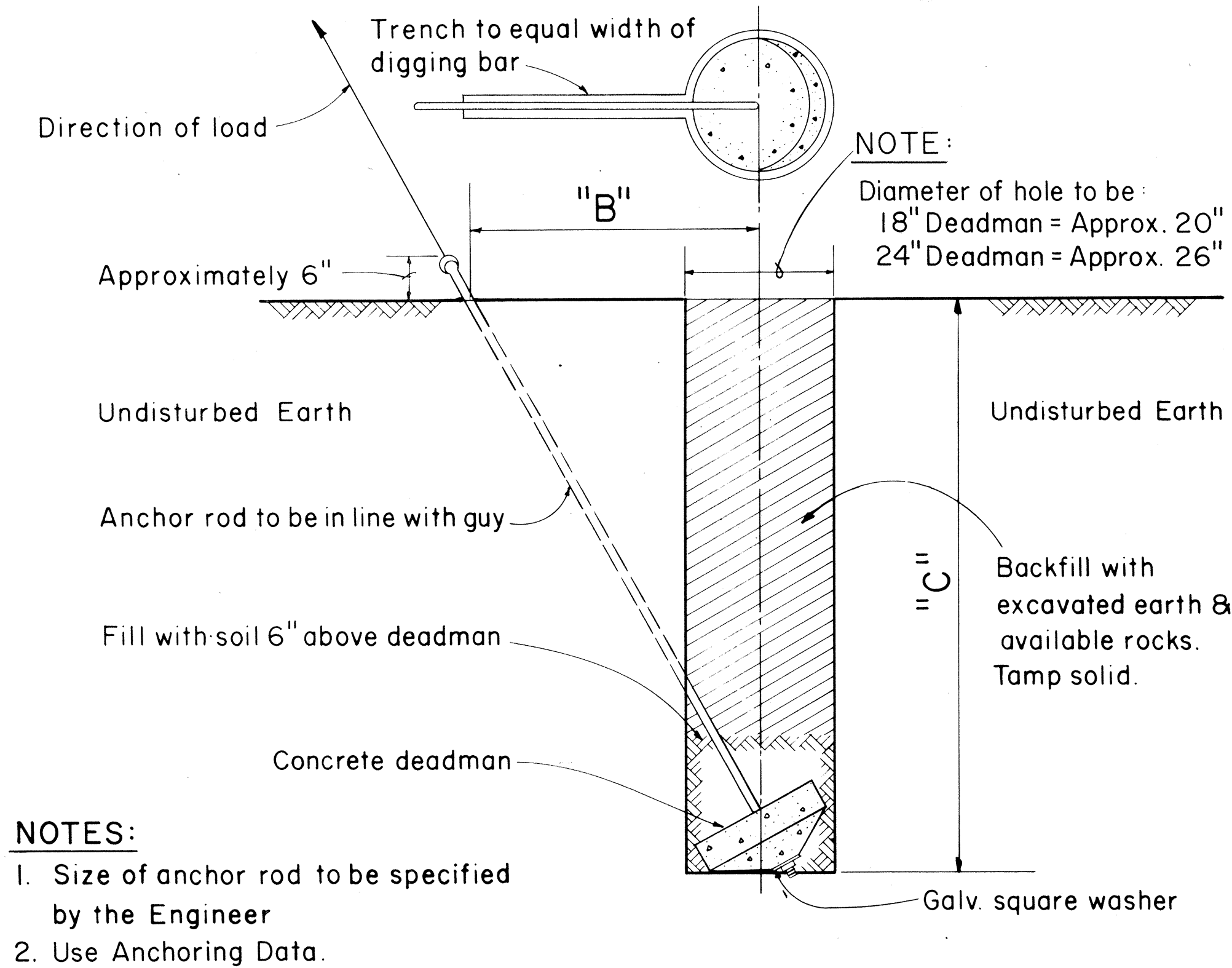
APPROVED:

R. Mow 1-9-74
HAWAIIAN TELEPHONE Co. DATE

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STANDARD DETAILS
H.E.Co. AND H.T.Co.
ANCHOR DETAILS AND
ANCHORING DATA
Scales: As Noted

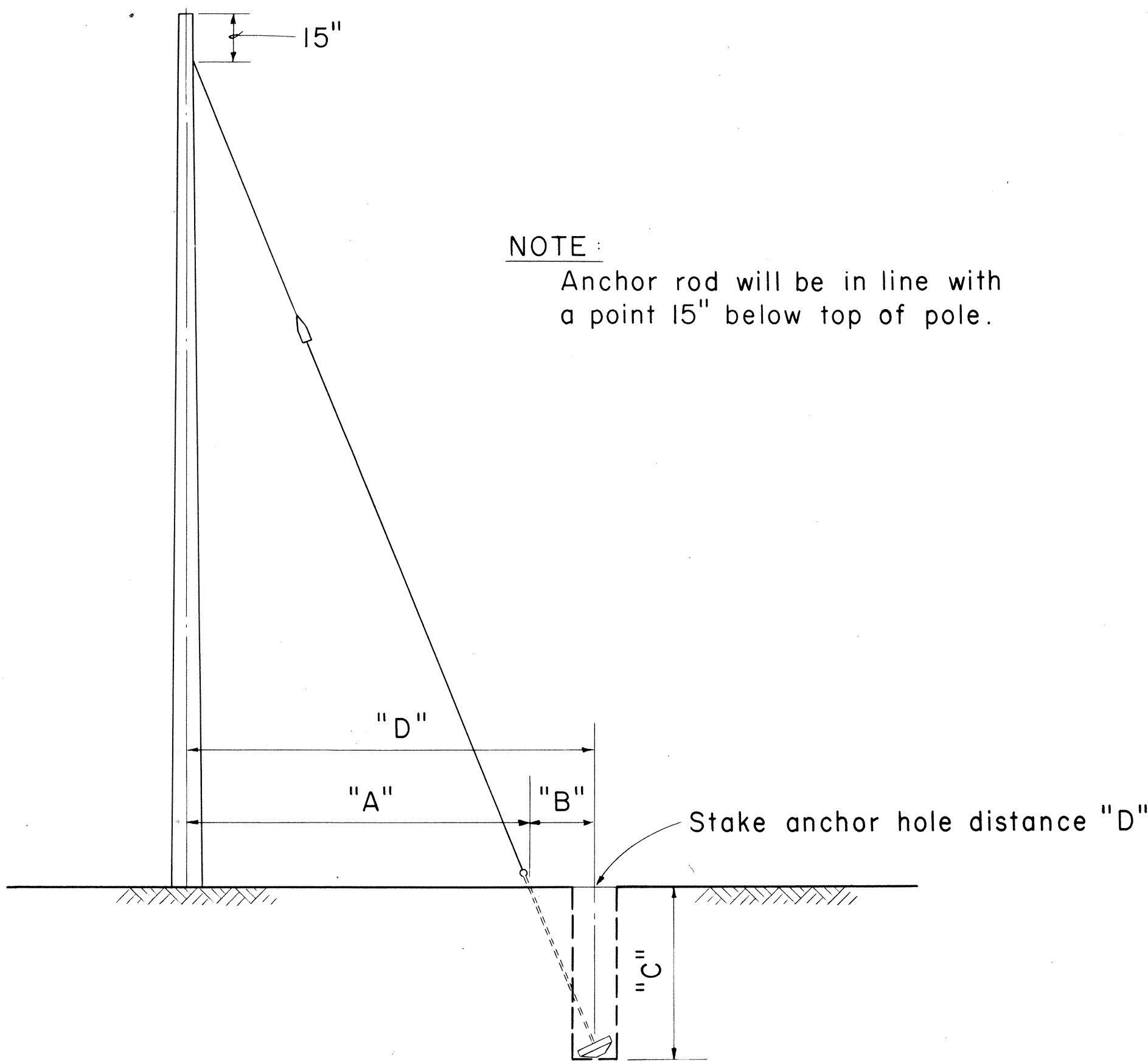
Date

SHEET No. 2 OF 2 SHEETS

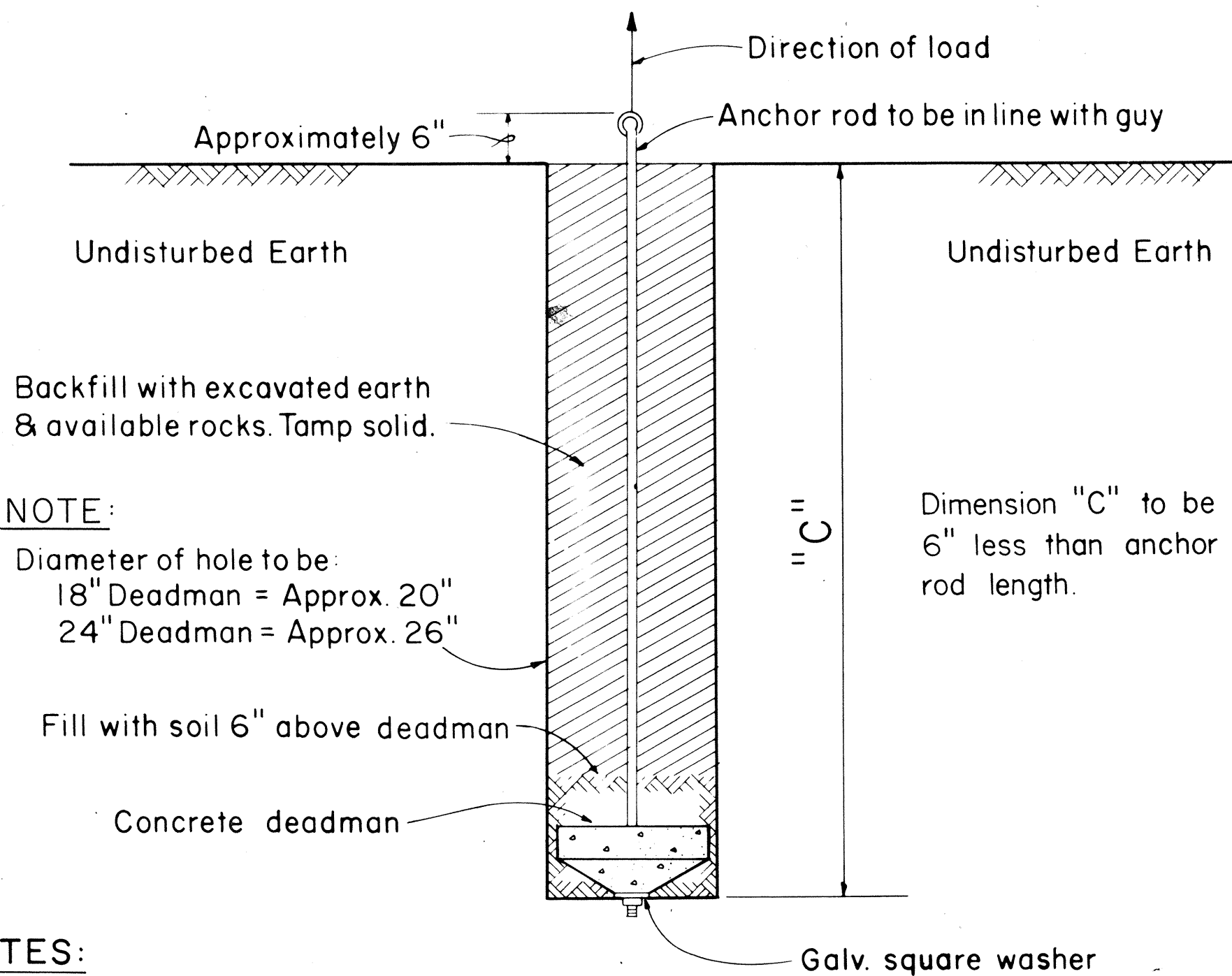


GUY ANCHOR DEADMAN

Scale: 3/4" = 1' - 0"



Not to Scale

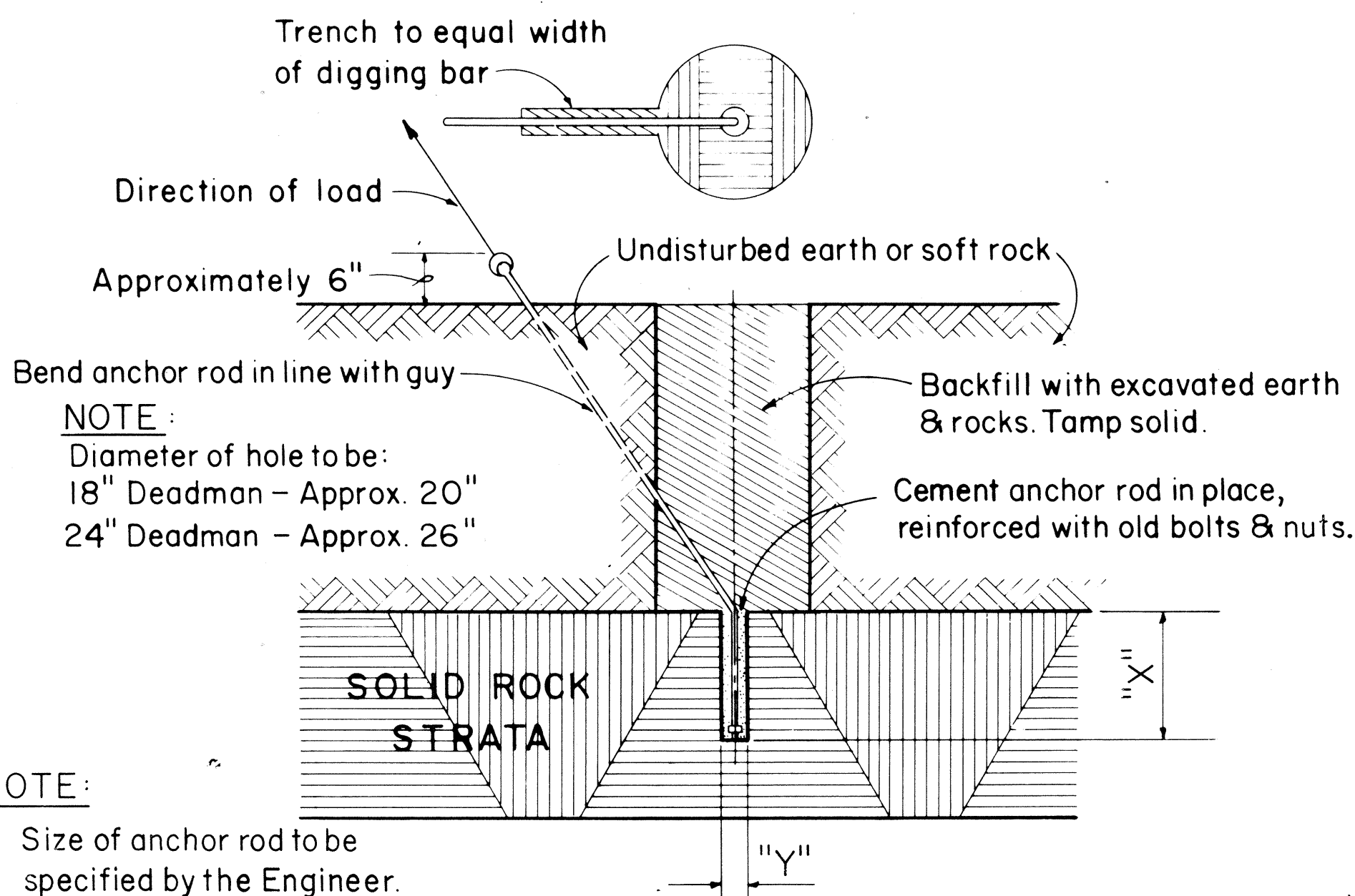


NOTES:

- Size of anchor rod to be specified by the Engineer.
- Use Anchoring Data.

SIDE - WALK ANCHOR

Scale: 3/4" = 1' - 0"



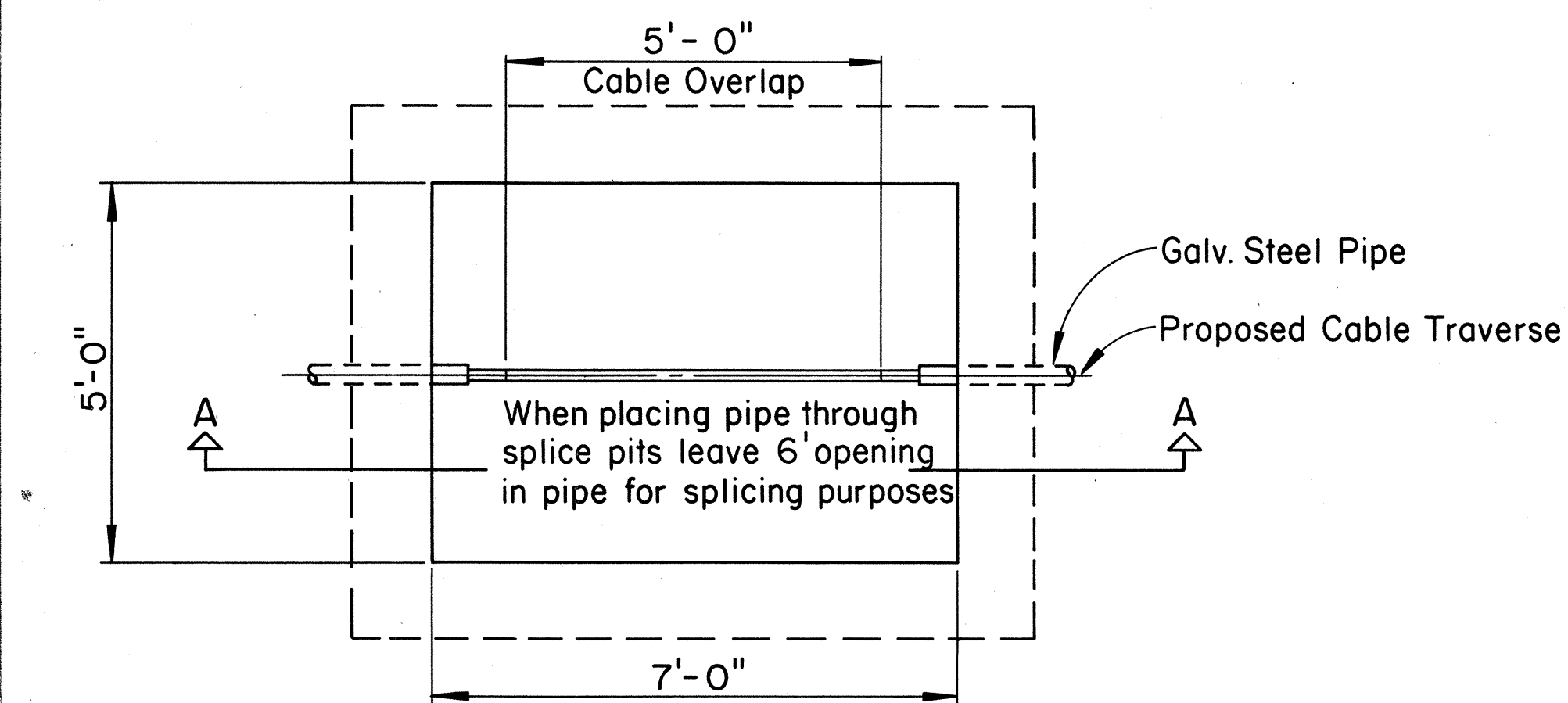
NOTE:

- Size of anchor rod to be specified by the Engineer.
- "X" Should not be less than 24". If "X" is less than 24" complete hole & install anchor.
- "Y" 5/8" Anchor rod drill 2" hole
3/4" Anchor rod drill 2" hole
1" Anchor rod drill 2 1/2" hole
1 1/4" Anchor rod drill 3" hole
- Use Anchoring Data.

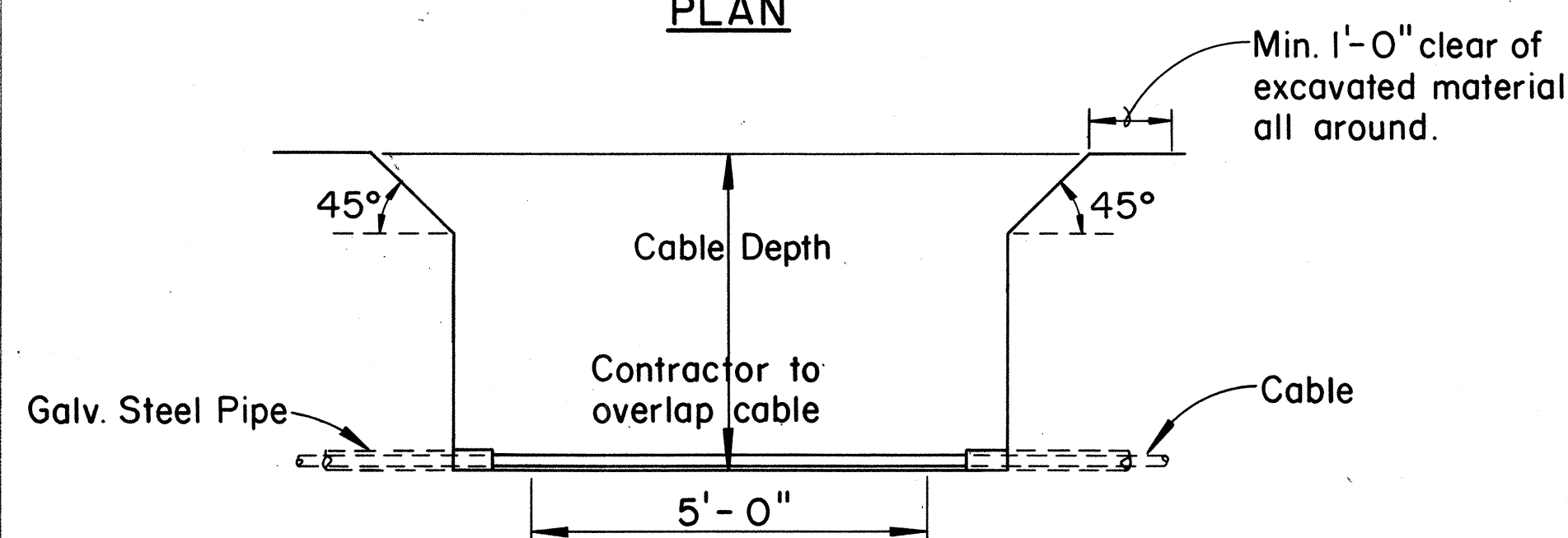
ROCK ANCHOR

Not to Scale

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	2-41-1(115)13	1974	ADD 275-1	53



PLAN

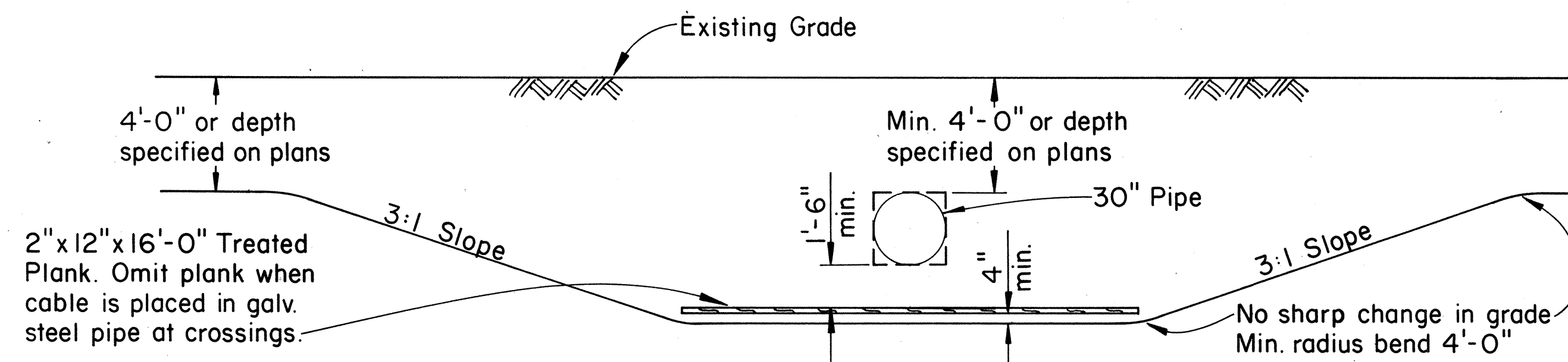


SECTION A-A

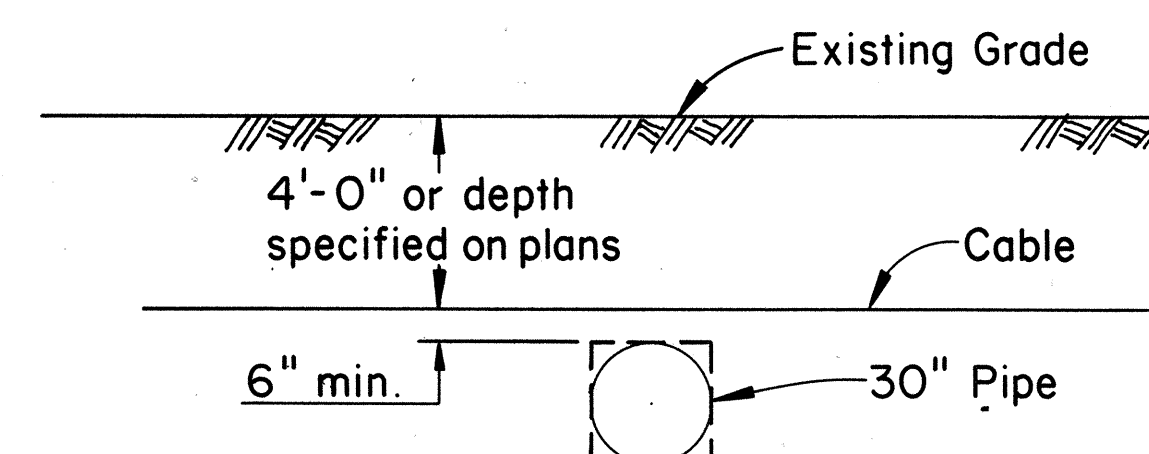
TYPICAL SPLICING PITS FOR BURIED CABLE

NOTES:

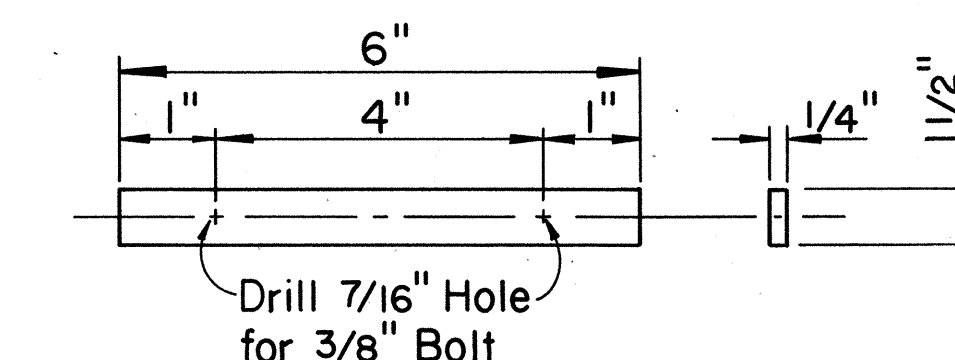
1. The Contractor shall dig pits at specified locations.
2. One face of pit shall be kept free of excavated material.
3. Where pits are located on sloping or irregular ground, the excavated material shall be placed in such a manner as to prevent surface water from draining into the pit.
4. Provide a fence around the pit at any location where stock have access to the route, and pits near farm homes to keep out small animals and pets.



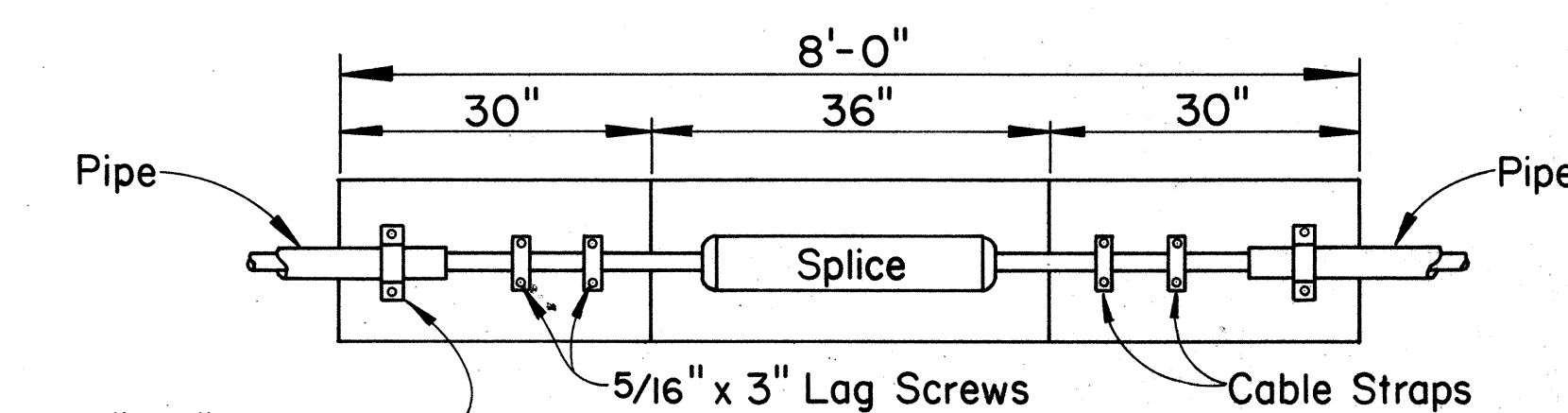
DETAIL OF CABLE CROSSING UNDER STORM CULVERTS-IRRIGATION PIPES, OTHER UTILITIES, OR FOREIGN PIPES



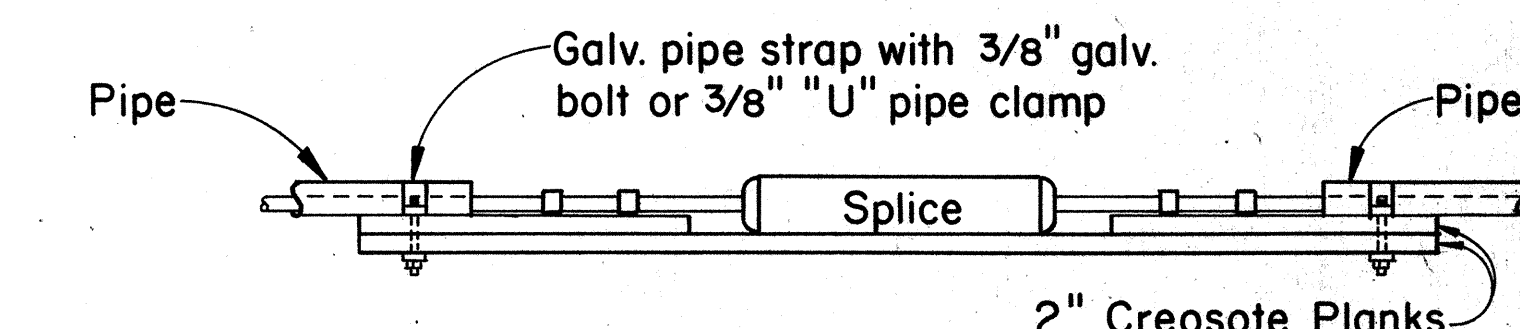
DETAIL OF CABLE CROSSING OVER STORM CULVERTS-IRRIGATION PIPES, OTHER UTILITIES, OR FOREIGN PIPES



GALVANIZED STRAP DETAIL



PLAN

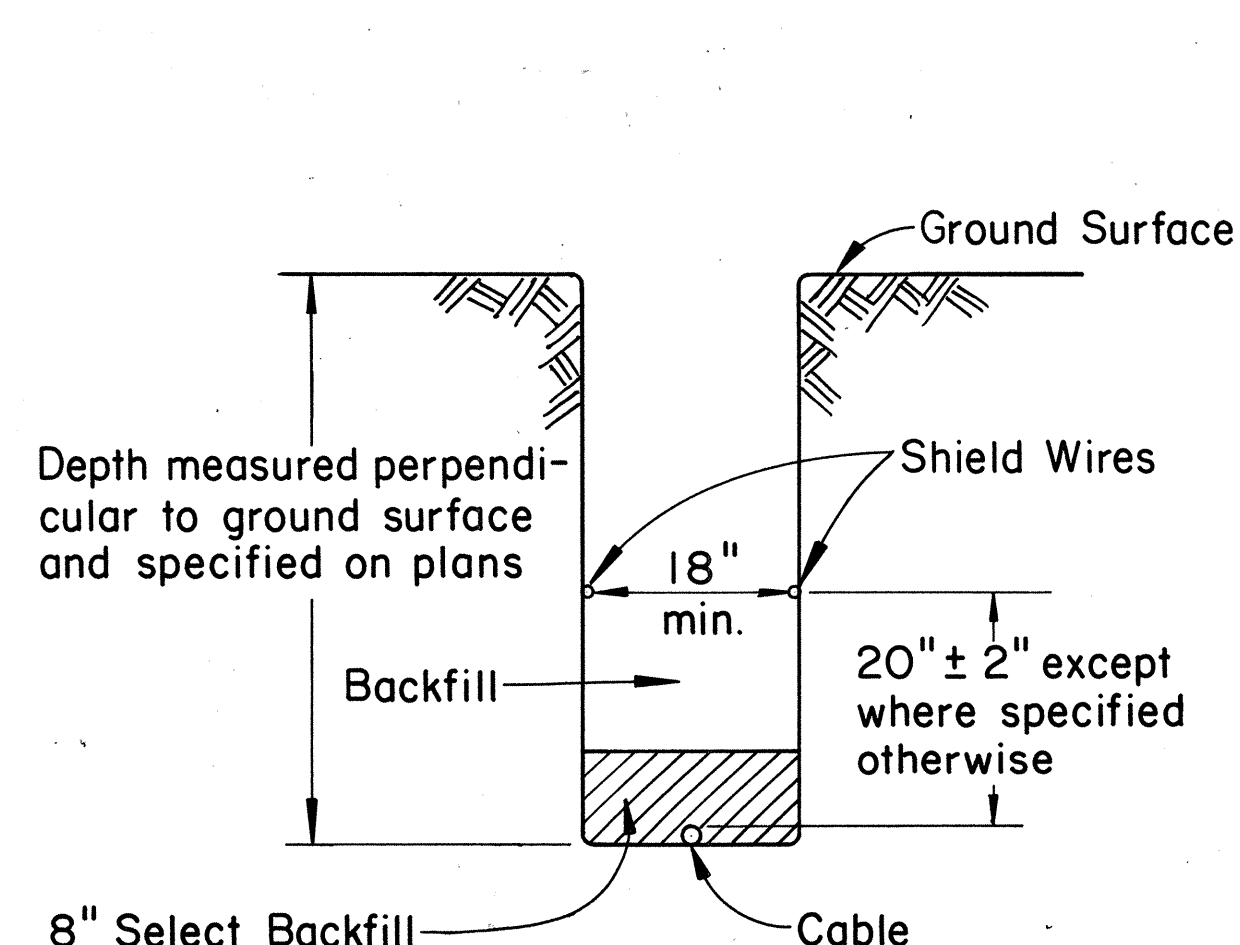


NOTE:

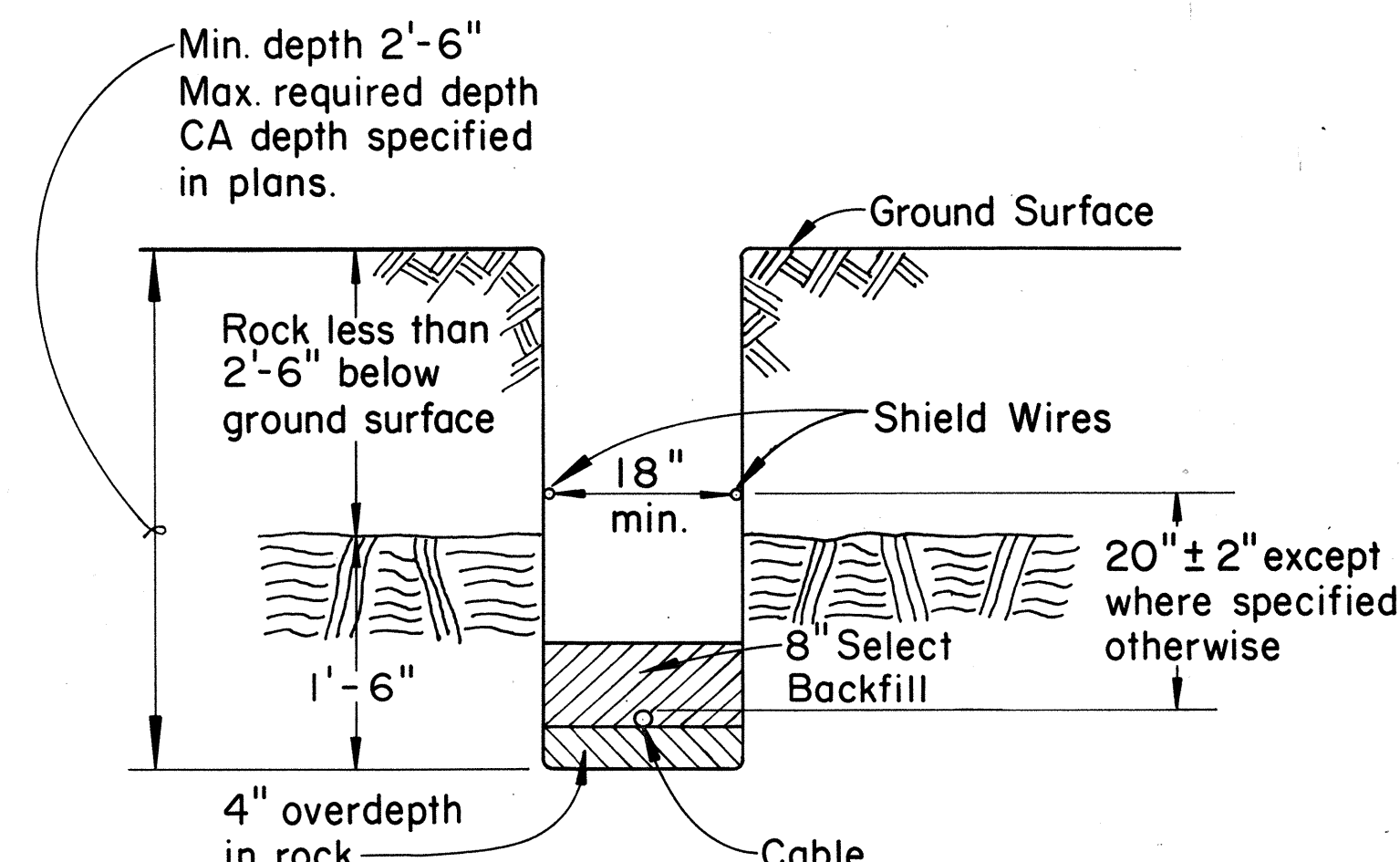
Galv. Strap may be substituted with pipe clamp.

ELEVATION

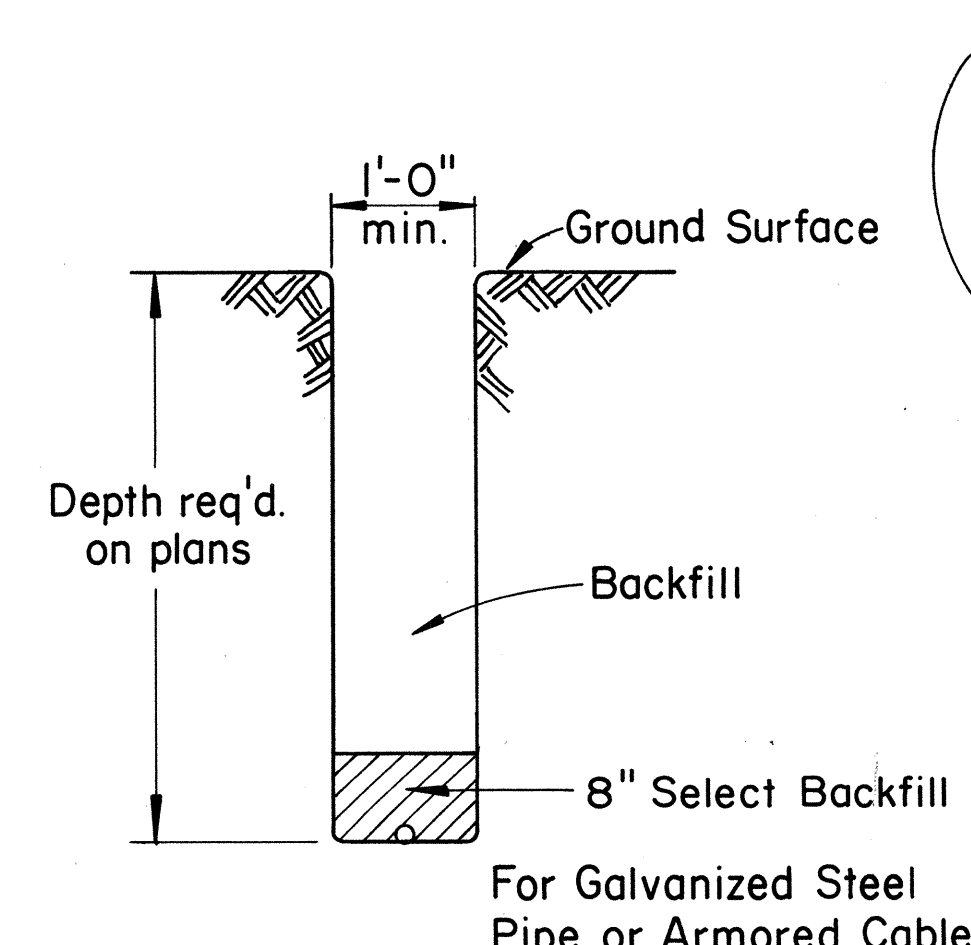
DETAIL OF SPLICE SUPPORT BETWEEN PIPE SECTIONS



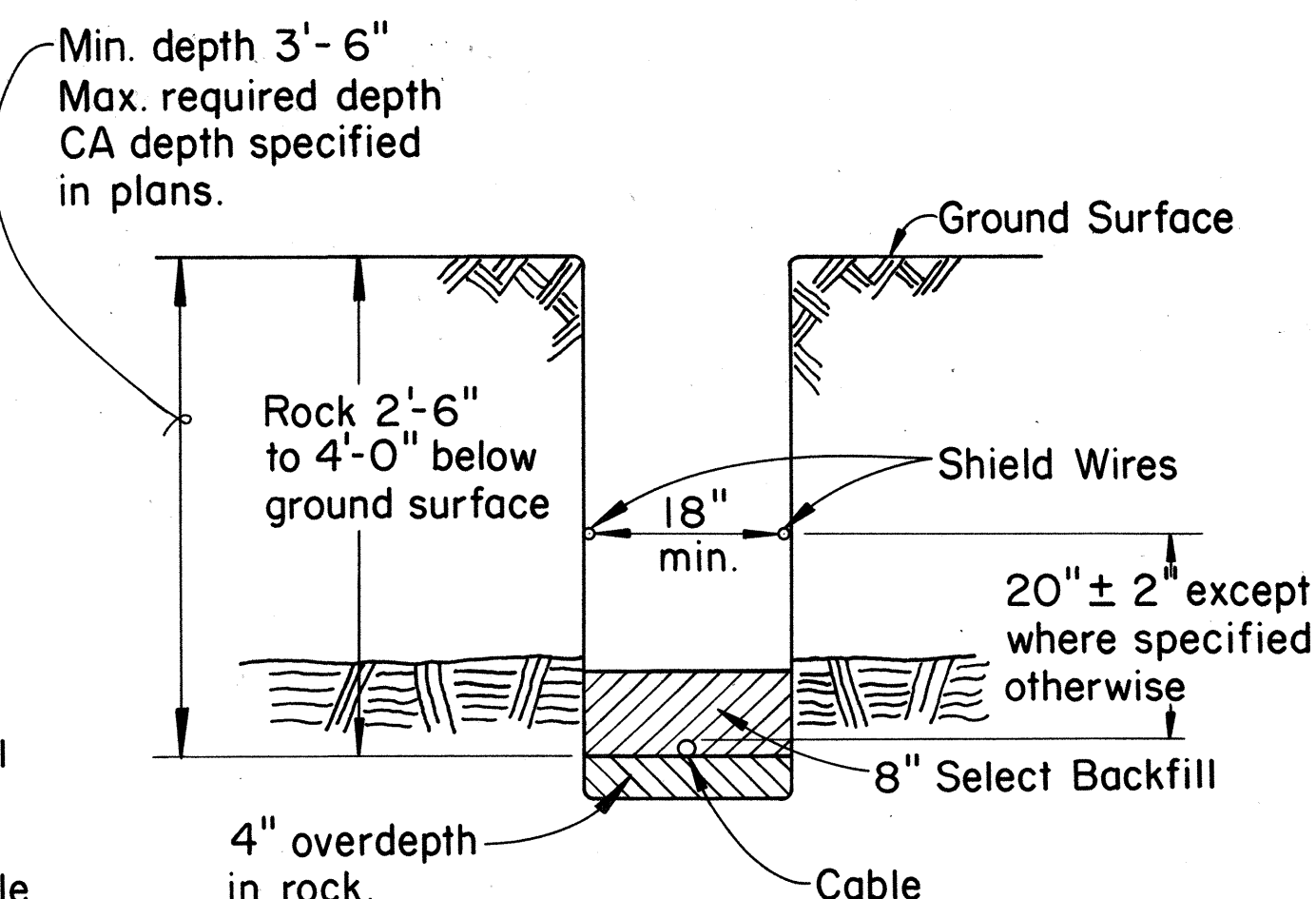
TYPICAL SECTION THROUGH NORMAL TRENCH



TYPICAL SECTION THROUGH TRENCH WITH ROCK LESS THAN 2'-6" BELOW SURFACE



TYPICAL SECTION FOR TRENCH WHERE NO SHIELD WIRE IS REQUIRED



TYPICAL SECTION THROUGH TRENCH WITH ROCK 2'-6" TO 4'-0" BELOW SURFACE

APPROVED:
R. Man
Hawaiian Telephone Co., Ltd. 2-15-74
Date

H.T. Co., Ltd. Drawing Nos. 34047
34048

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STANDARD DETAILS
SPLICING PITS AND
STANDARD TRENCHING DETAILS
FOR BURIED COAXIAL CABLE

Scale: Not to Scale
SHEET No. 2A OF 2 SHEETS

ADD 275-1

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
NOTE BOOK	_____
CHECKED BY	_____
No.	_____