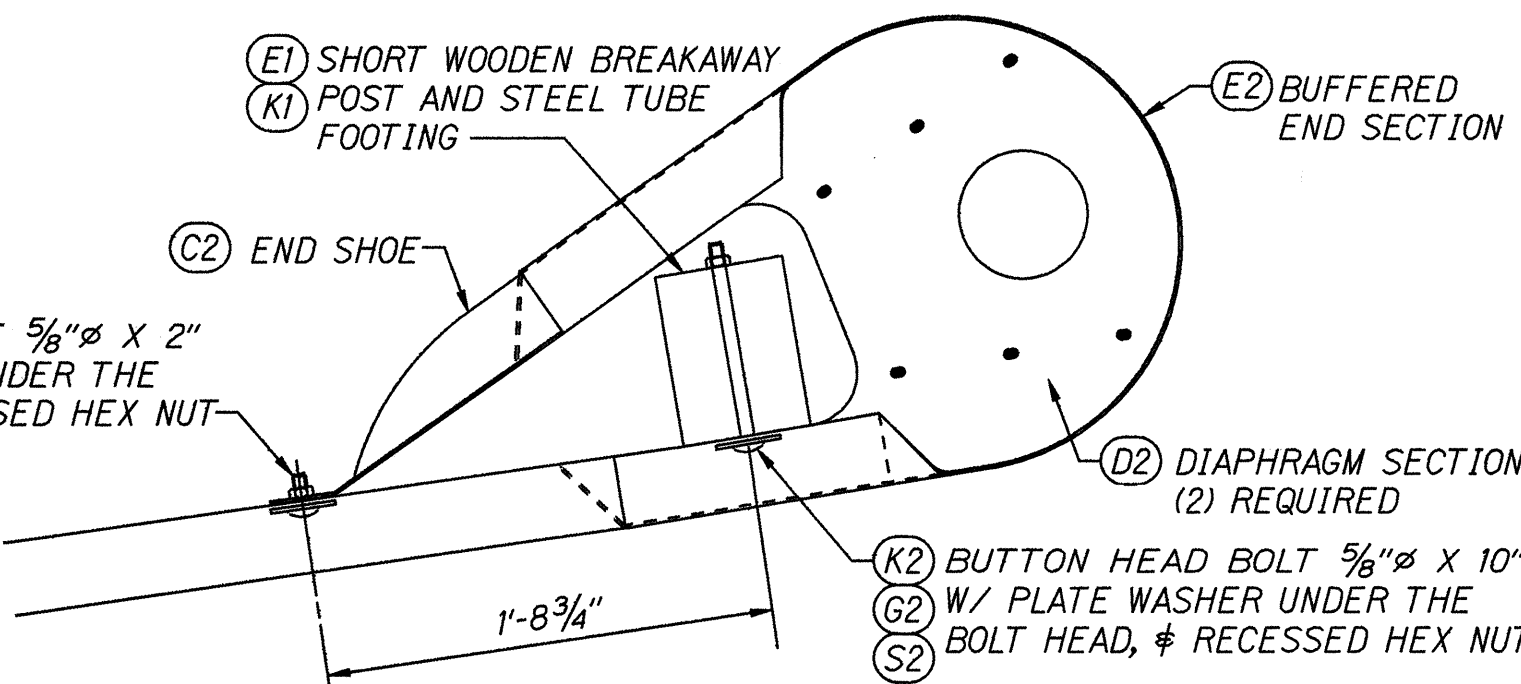


FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-019-2(34)	1995	35	40

NOTES

1. THE POST OFFSET DIMENSIONS ARE GIVEN TO THE CENTER OF THE TRAFFIC FACE OF THE BLOCKOUTS, EXCEPT AT THE FIRST POST, WHERE THE DIMENSION IS TO THE CENTER OF THE TRAFFIC FACE OF THE POST. OFFSET POINTS ARE TO BE LOCATED BY CHORD MEASUREMENTS AT THE BACK OF THE RAIL EQUAL TO THE NOMINAL POST SPACINGS SHOWN. POSTS ARE TO BE SET APPROXIMATELY RADIAL TO THE RAILING AT EACH POST LOCATION.



BUFFERED END ASSEMBLY

SUMMARY OF COMPONENTS

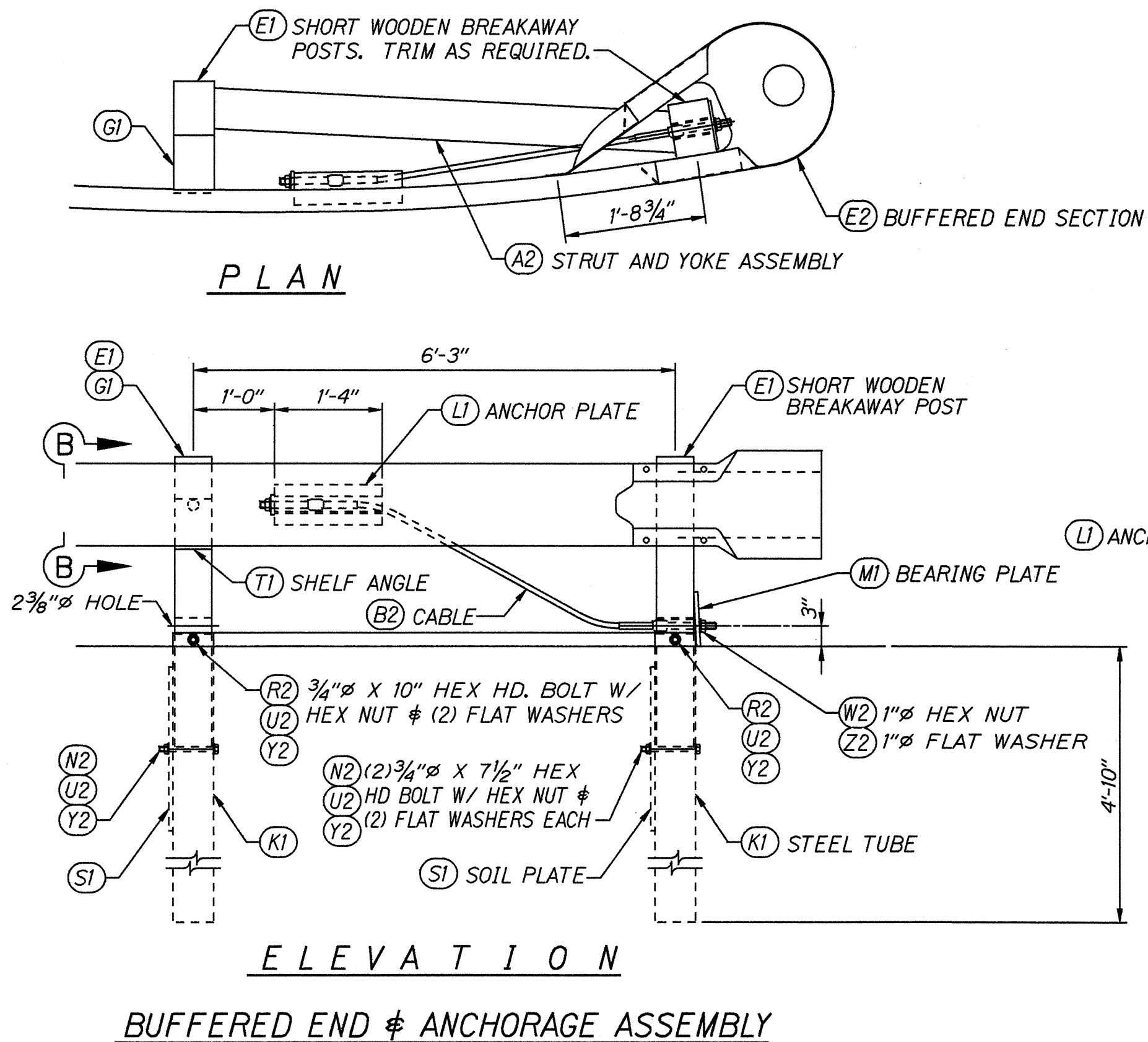
FIND NO.	DESCRIPTION
(A1)	GUARDRAIL, 12GA X 12'-6"
(B1)	GUARDRAIL, 12GA X 12'-6"
(C1)	GUARDRAIL, 12GA X 12'-6"
(D1)	BREAKAWAY LINE POST, TIMBER - 6" X 8" X 6'-0"
(E1)	BREAKAWAY POST, TIMBER - 5 1/2" X 7 1/2" X 3'-6 1/2"
(G1)	BLOCK, TIMBER - 5 1/2" X 7 1/2" X 1'-2"
(H1)	POST - W6 X 8.5 X 6'-0"
(J1)	BLOCK - W6 X 8.5 X 1'-2"
(K1)	SOIL TUBE - TS 8 X 6 X .188 X 5'-0"
(L1)	CABLE ANCHOR BRACKET
(M1)	BEARING PLATE
(R1)	PIPE SPACER
(S1)	SOIL PLATE
(T1)	SHELF ANGLE
(A2)	STRUT & YOKE ASSEMBLY
(B2)	CABLE ASSEMBLY
(C2)	END SHOE
(D2)	DIAPHRAGM PLATE
(E2)	BUFFERED END SECTION
(G2)	WASHER, PLATE
(H2)	BOLT, SPLICE 5/8" X 1 1/4"
(J2)	BOLT, POST 5/8" X 2"
(K2)	BOLT, POST 5/8" X 10"
(L2)	BOLT, POST 5/8" X 18"
(M2)	BOLT, HEX 5/8" X 1 1/2"
(N2)	BOLT, HEX 3/4" X 7 1/2"
(R2)	BOLT, HEX 3/4" X 10"
(S2)	NUT, HEX, RECESSED 5/8"
(T2)	NUT, HEX 5/8"
(U2)	NUT, HEX 3/4"
(W2)	NUT, HEX 1"
(X2)	WASHER, FLAT 5/8"
(Y2)	WASHER, FLAT 3/4"
(Z2)	WASHER, FLAT 1"

NOTE:
ALL WOOD COMPONENTS SHALL BE TREATED TO CONFORM WITH ANY OF THE ACCEPTED METHODS IN SECTION 714 OF THE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND PUBLIC WORKS CONSTRUCTION", 1994.

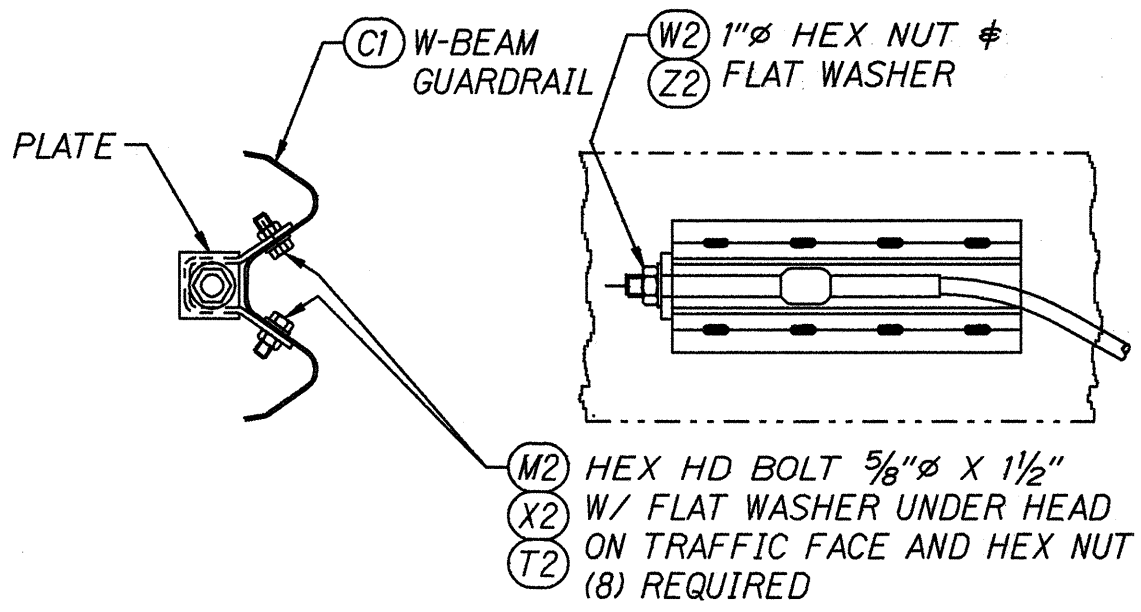
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MODIFIED ECCENTRIC LOADER
TERMINAL (MELT)
POST LAYOUT & ERECTION DETAILS
KULANA STREET TO WAILUKU BRIDGE
F. A. Project No. STP-019-2(34)
Not to Scale
Date: March, 1995

SHEET No. 1 OF 3 SHEETS

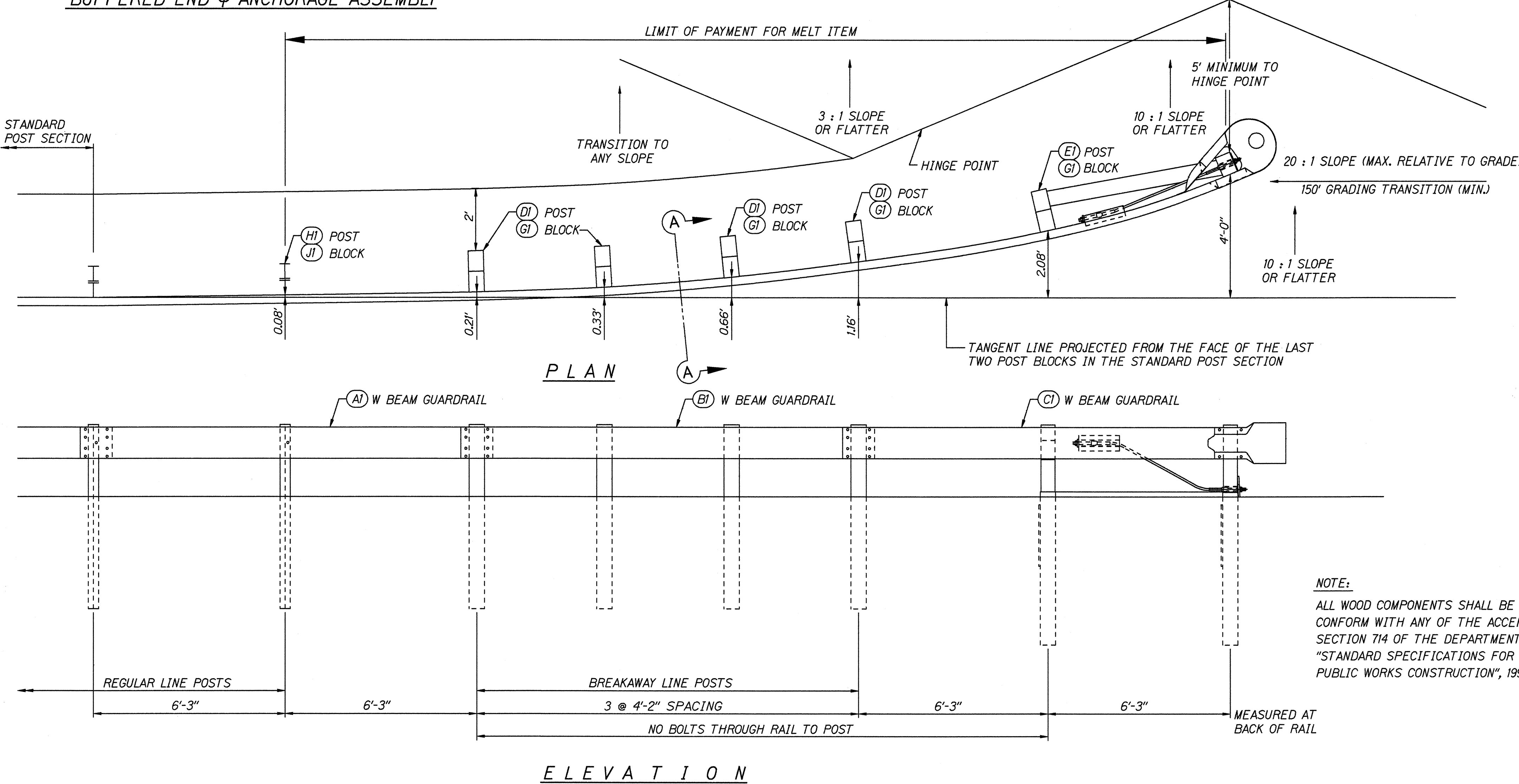


SECTION B - B



ANCHOR PLATE ASSEMBLY DETAILS

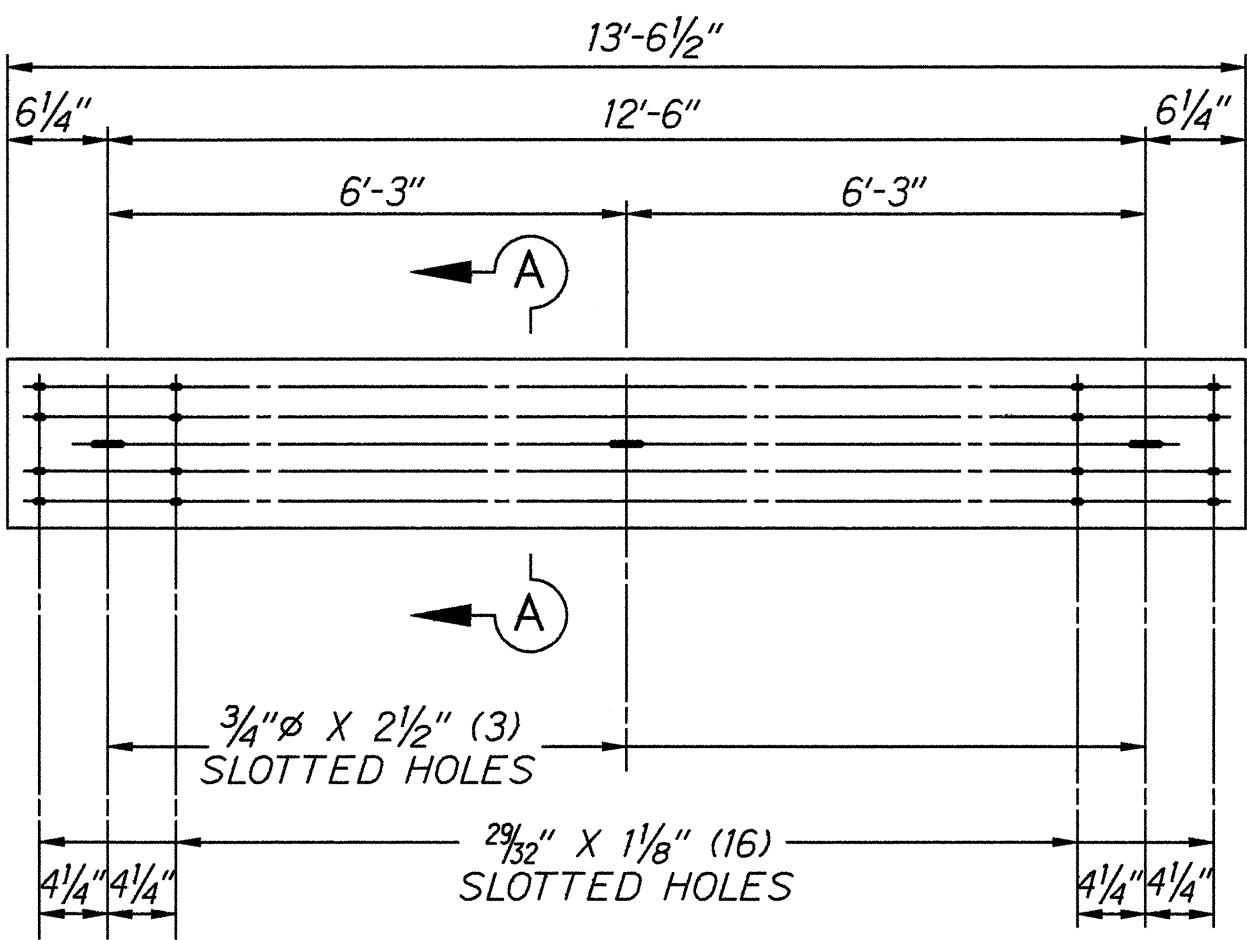
SECTION A - A



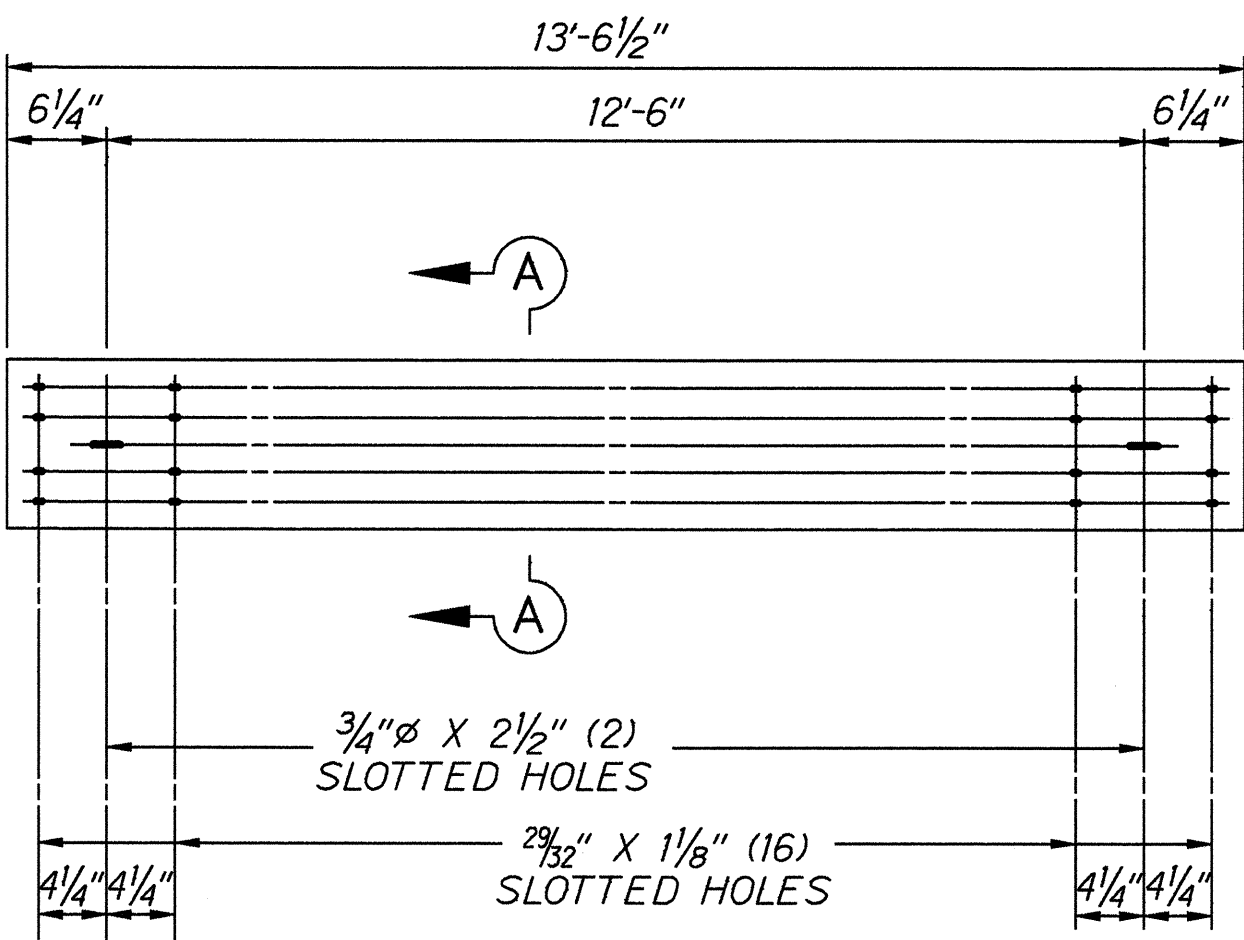
ORIGINAL PLAN	DATE
DRAWN BY	
DESIGNED BY	
QUANTITIES BY	
CHECKED BY	

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-019-2(34)	1995	36	40

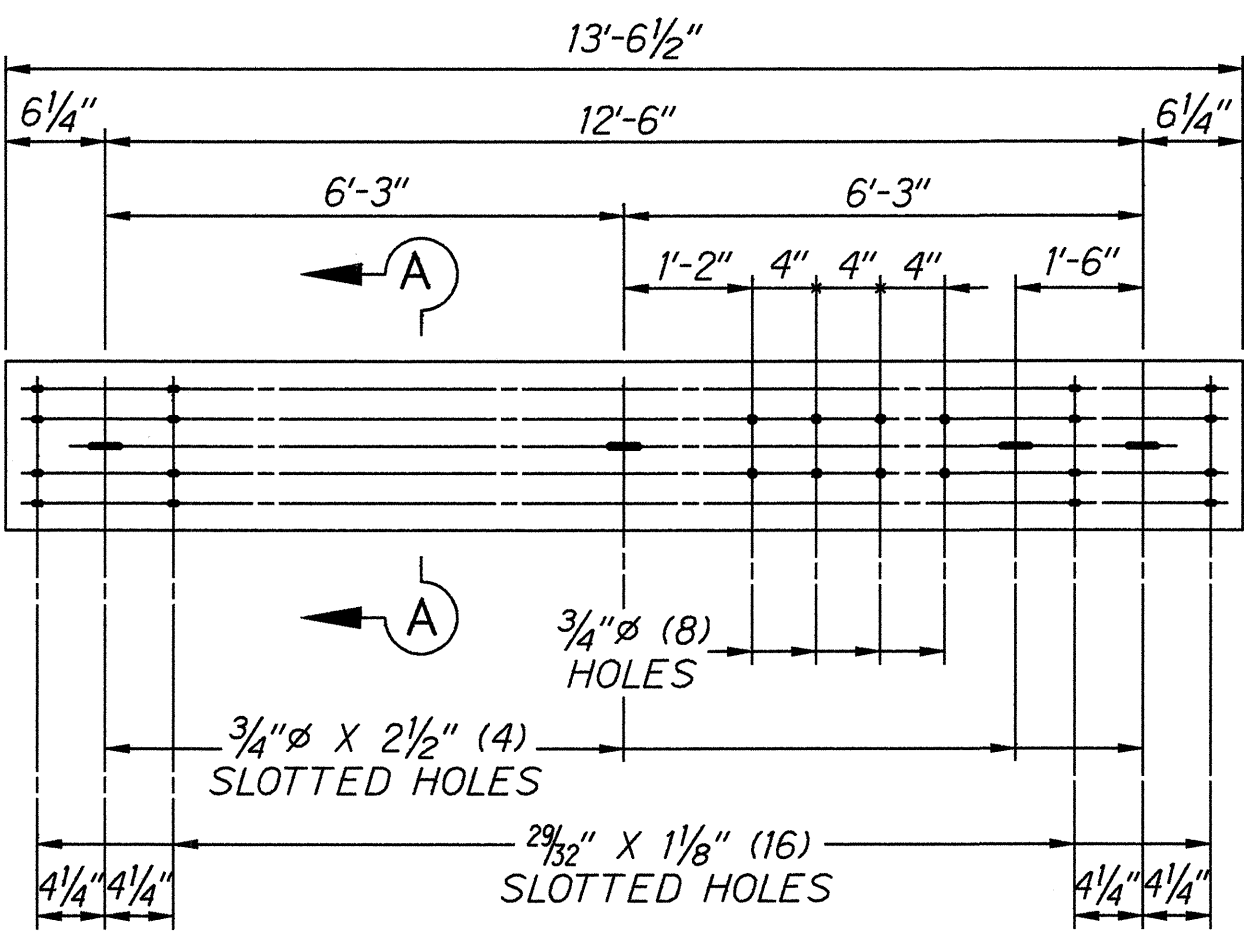
MATERIAL SCHEDULE							
FIND No.	PIECE MARK	MATERIAL	LENGTH		WEIGHT	UNIT WEIGHT	REMARKS
			FEET	INCHES			
AI		GUARDRAIL, W-BEAM				95.0	AI23
		12 GA. W-BEAM GUARDRAIL	12	6	89.0		M180
BI		GUARDRAIL, W-BEAM				95.0	AI23
		12 GA. W-BEAM GUARDRAIL	12	6	89.0		M180
CI		GUARDRAIL, W-BEAM				95.0	AI23
		12 GA. W-BEAM GUARDRAIL	12	6	89.0		M180
DI		BREAKAWAY LINE POST				88.0	
		TIMBER POST 6 X 8	6	0	352.0		M168
EI		BREAKAWAY POST, SHORT				44.6	
		TIMBER POST 5½X 7½	3	6½	89.2		M168
GI		BLOCK				16.8	
		TIMBER BLOCK 5½X 7½	1	2	84.0		M168
HI		POST				54.9	AI23
		W6 X 8.5	6	0	52.0		A36
JI		BLOCK				11.0	AI23
		W6 X 8.5	1	2	10.1		A36
KI		SOIL TUBE				88.9	AI23
		TS 8 X 6 X .1875	5	0	170.8		A500B
LI		CABLE ANCHOR BRACKET				19.3	AI23
	a	PL¼X 12¾	1	4	17.6		A36
	b	PL½X 2¾	0	3	1.17		A36
MI		BEARING PLATE				11.9	AI23
	c	PL⅝X 8	0	8	11.3		A36
	d	PL⅜X 1	0	8	0.4		A36
RI		POST SLEEVE				1.76	AI23
		PIPE 2ø STD	0	5½	1.67		A53
SI		SOIL PLATE				84.8	AI23
		PL¼X 24	2	0	40.8		A36
TI		SHELF ANGLE				3.7	AI23
		PL¼X 6	0	8½	3.61		A36



ONE - GUARDRAIL - AI

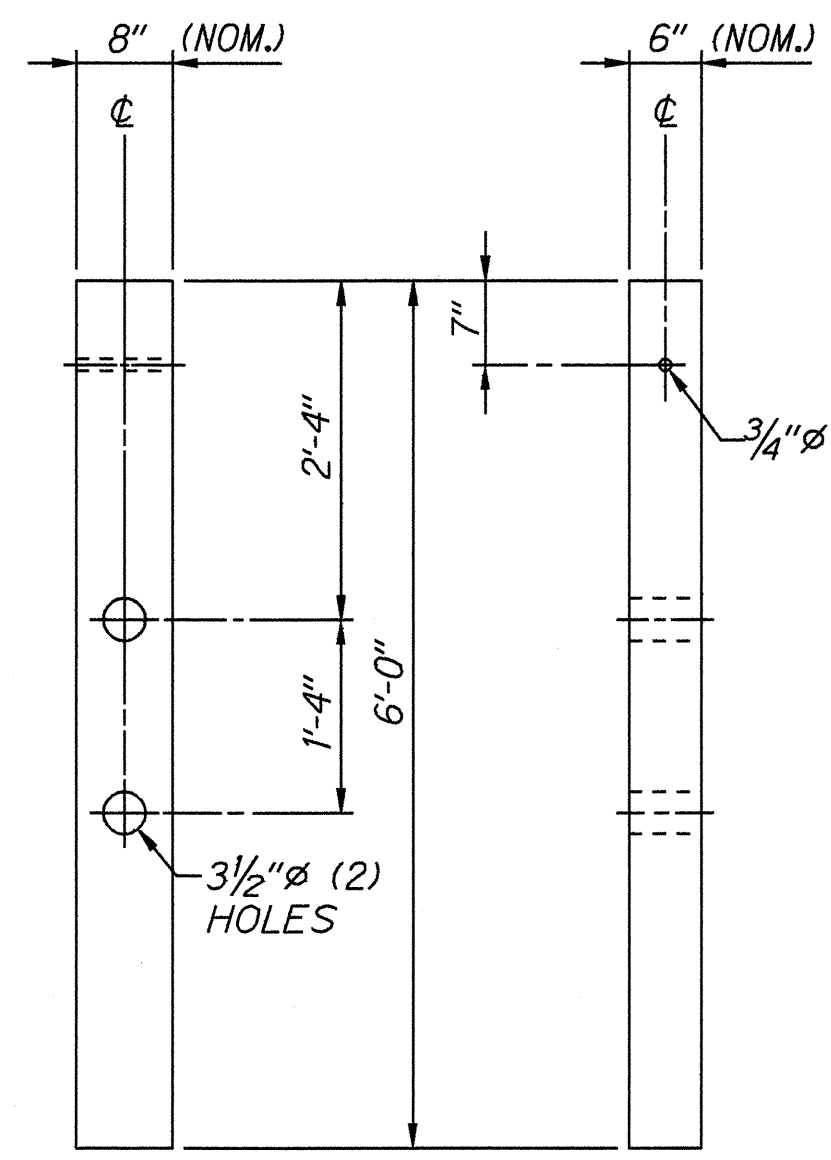


ONE - GUARDRAIL - BI

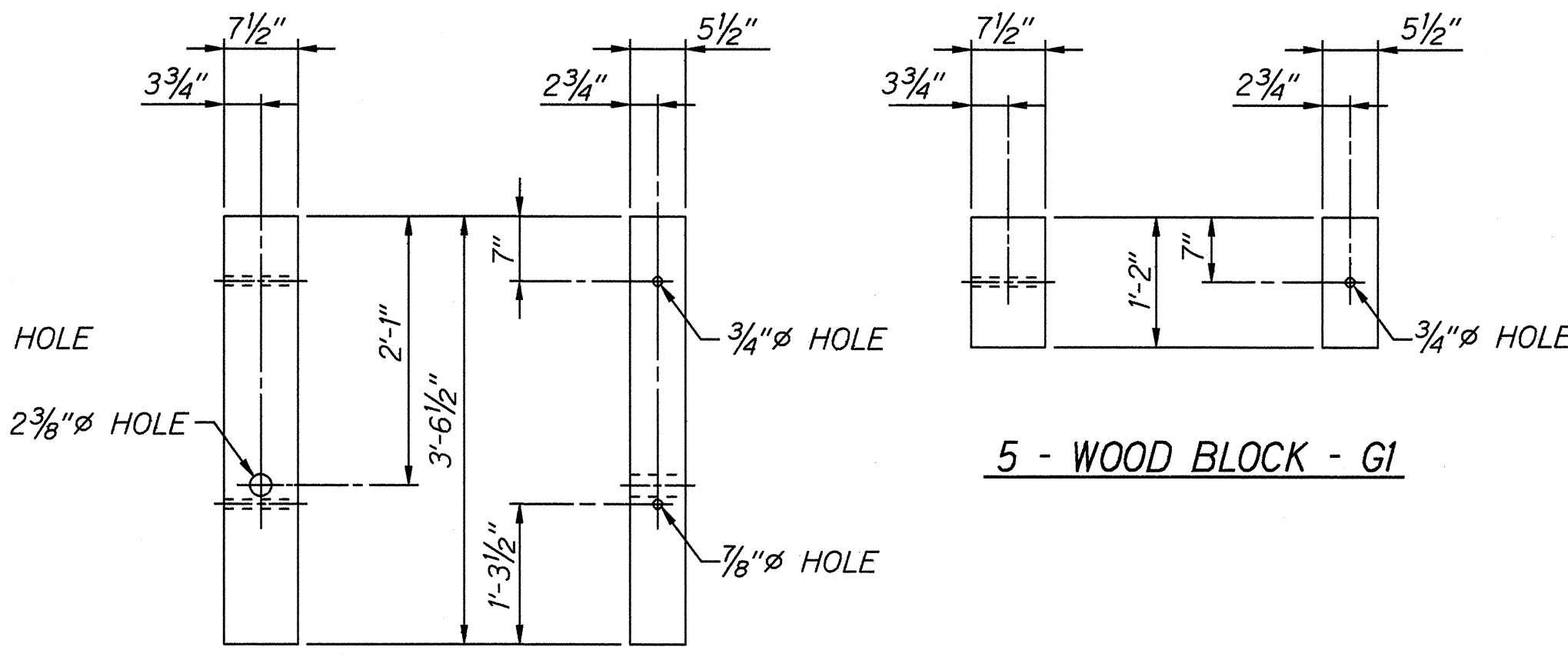


ONE - GUARDRAIL - CI

SECTION A - A

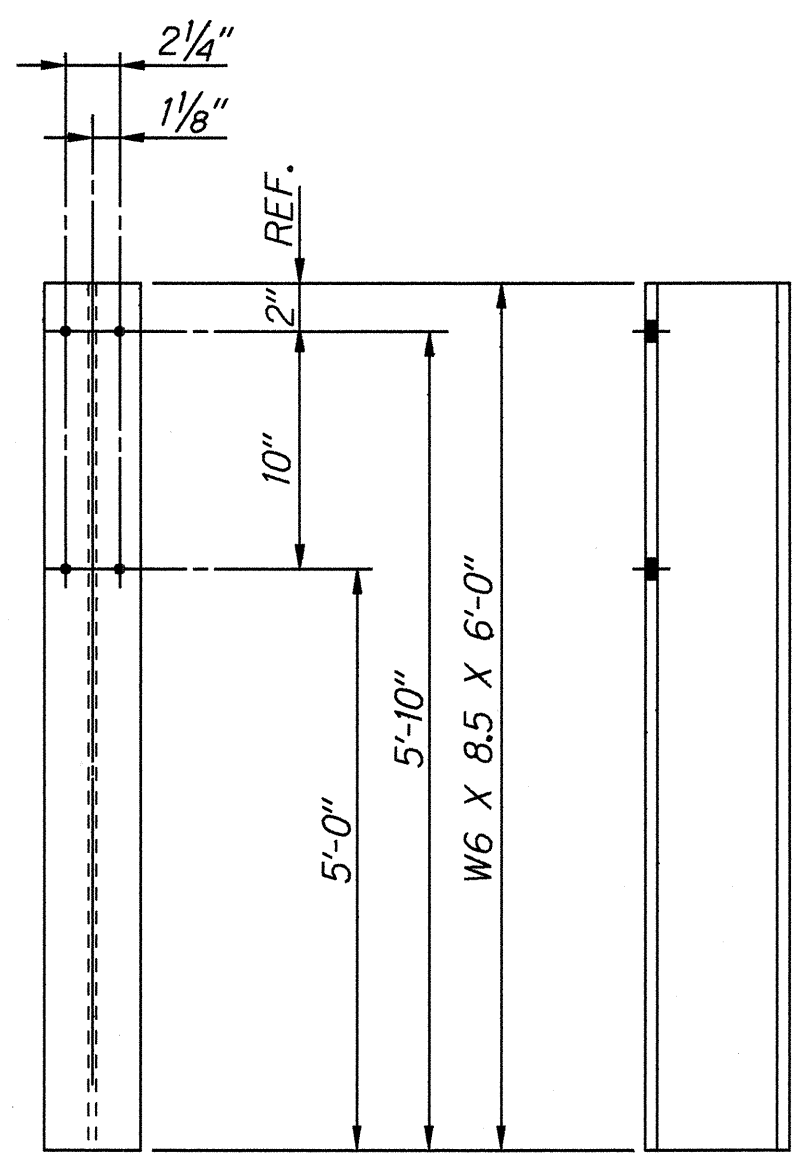


4 - WOOD POST - DI

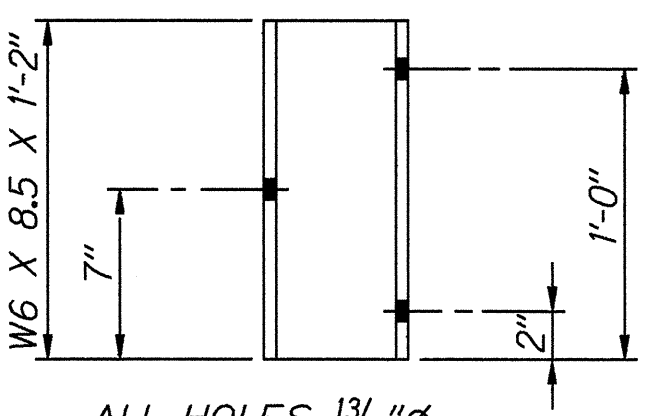


2 - WOOD POST - EI

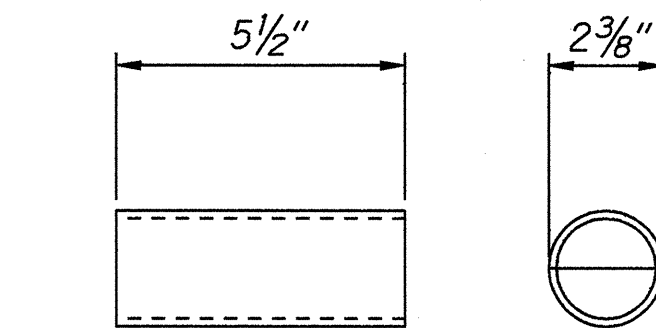
5 - WOOD BLOCK - GI



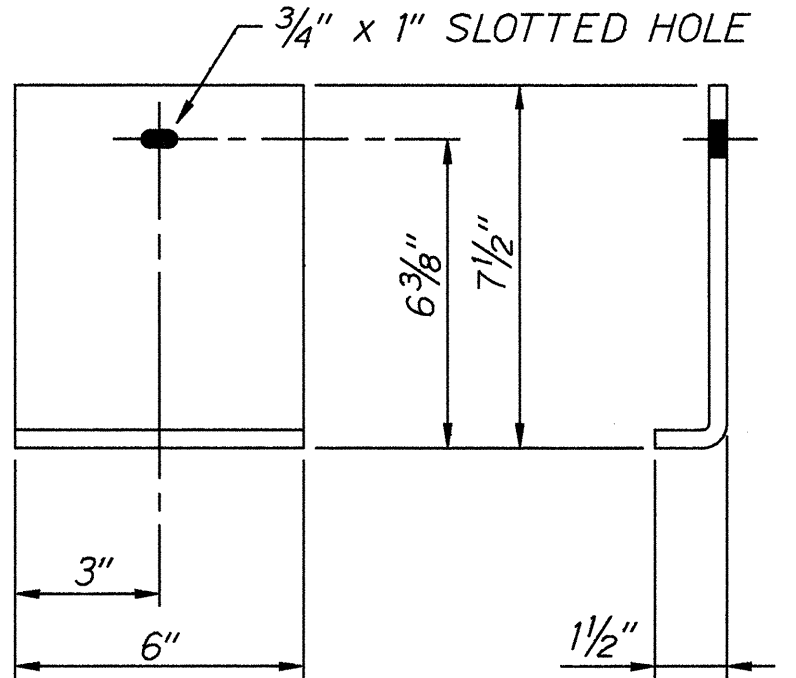
ONE - POST - HI



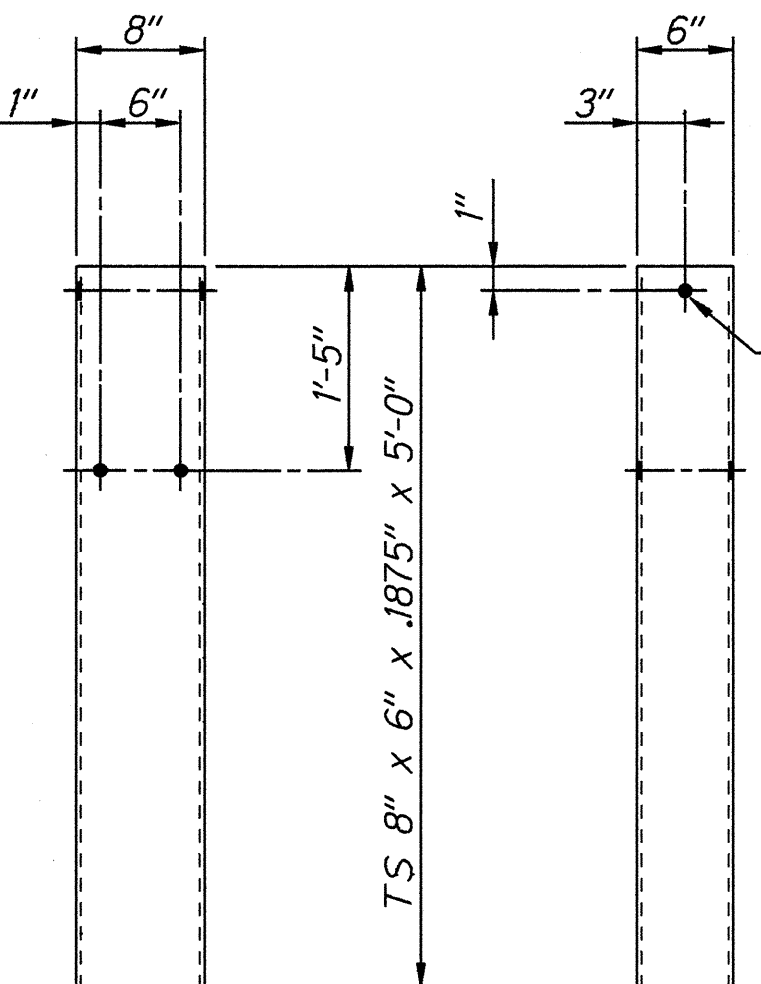
ONE - BLOCK - JI



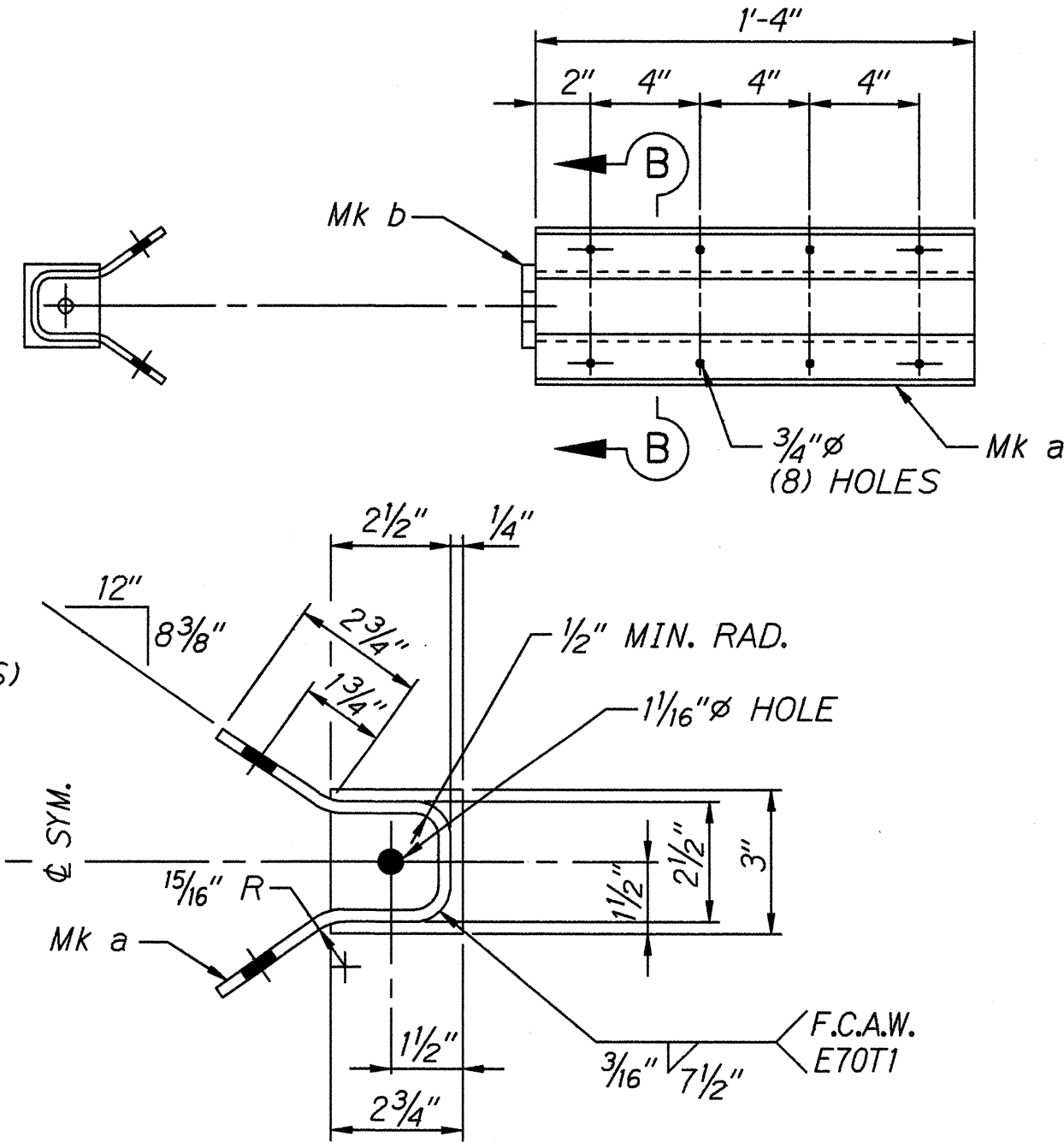
ONE - PIPE SPACER - RI



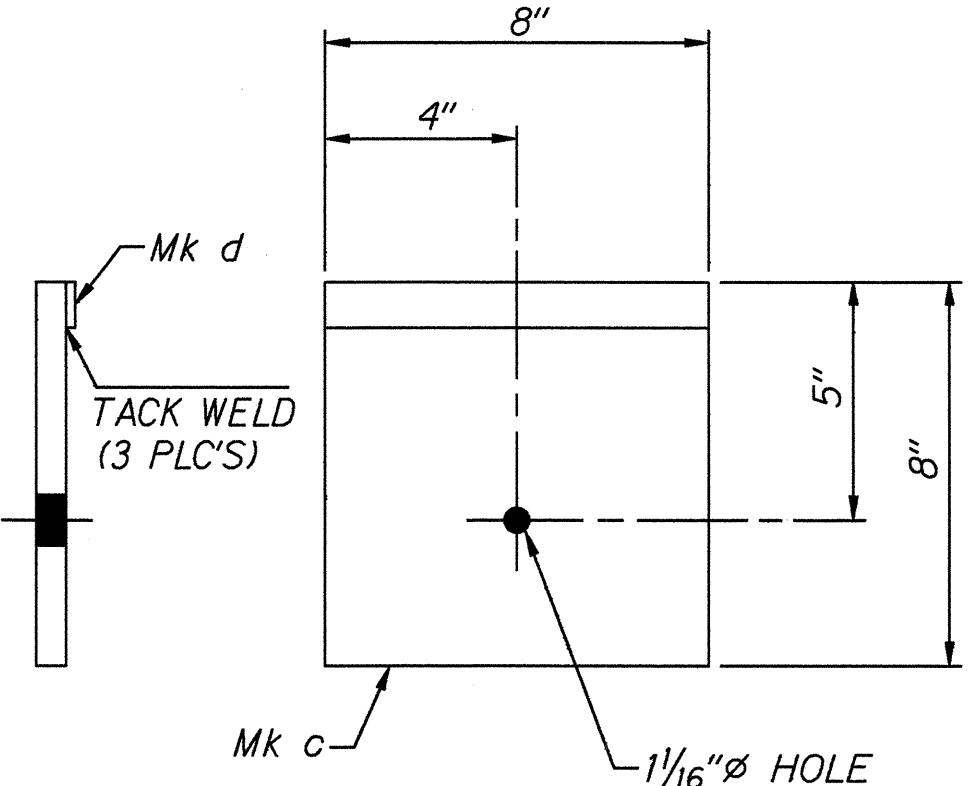
ONE - SHELF ANGLE - TI



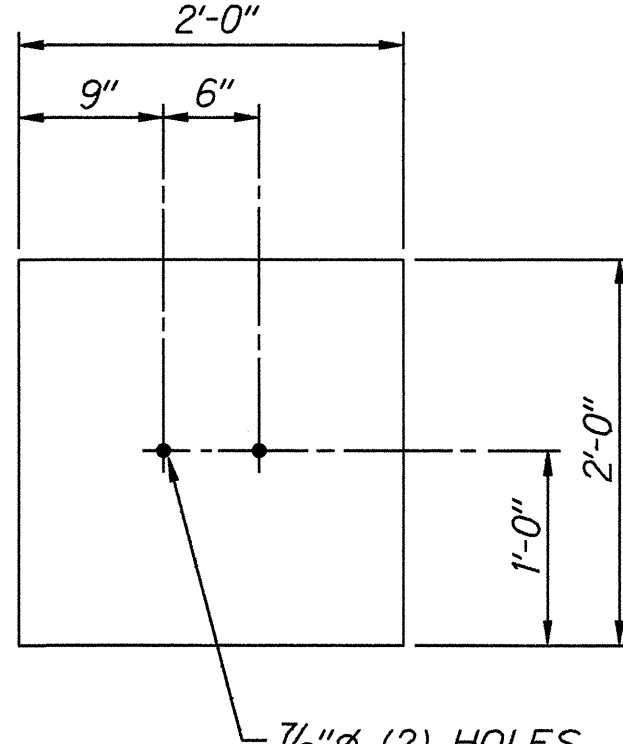
2 - SOIL TUBE - KI



SECTION B - B
ONE - CABLE ANCHOR BRACKET - LI



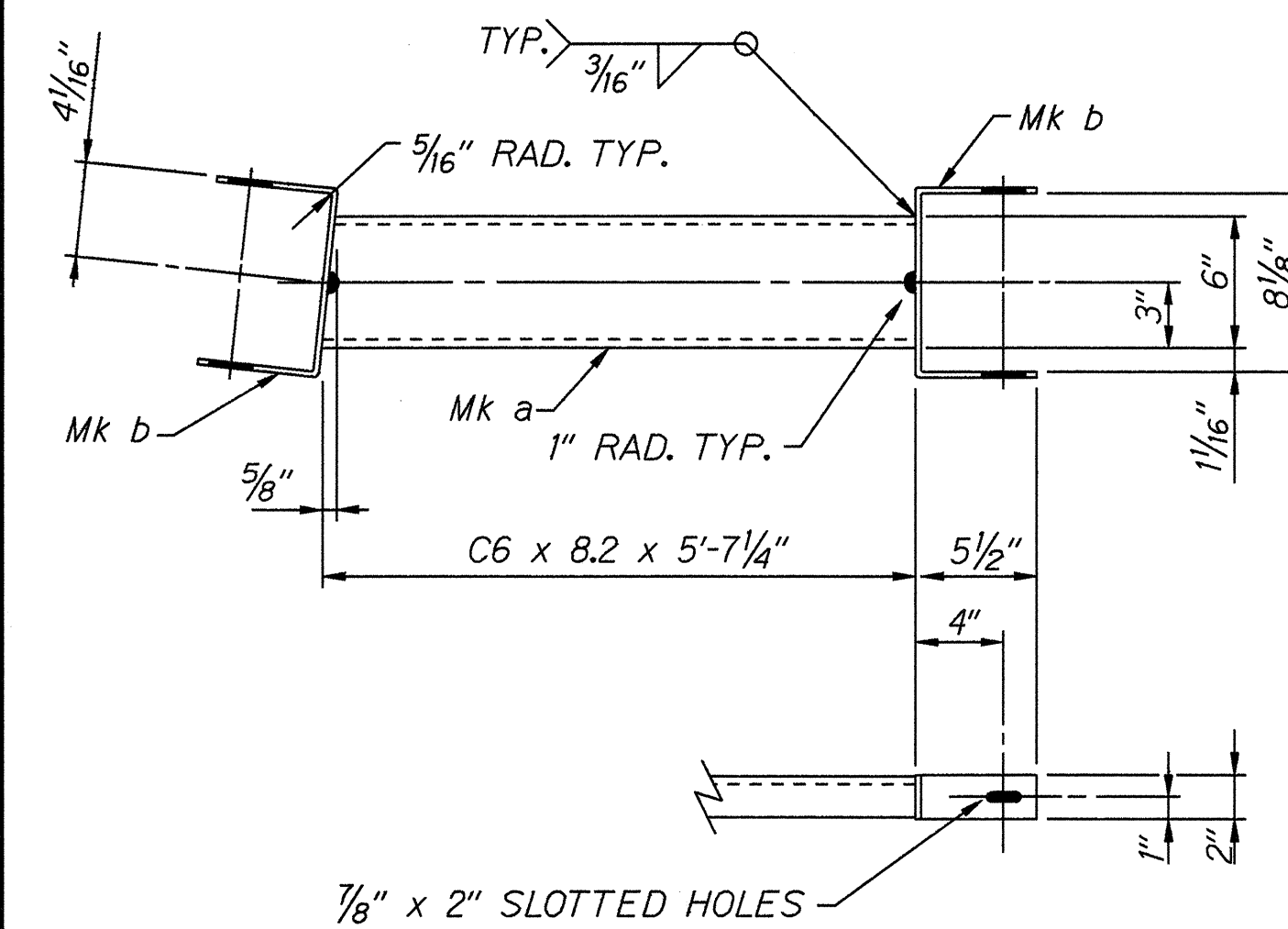
ONE - BEARING PLATE - MI



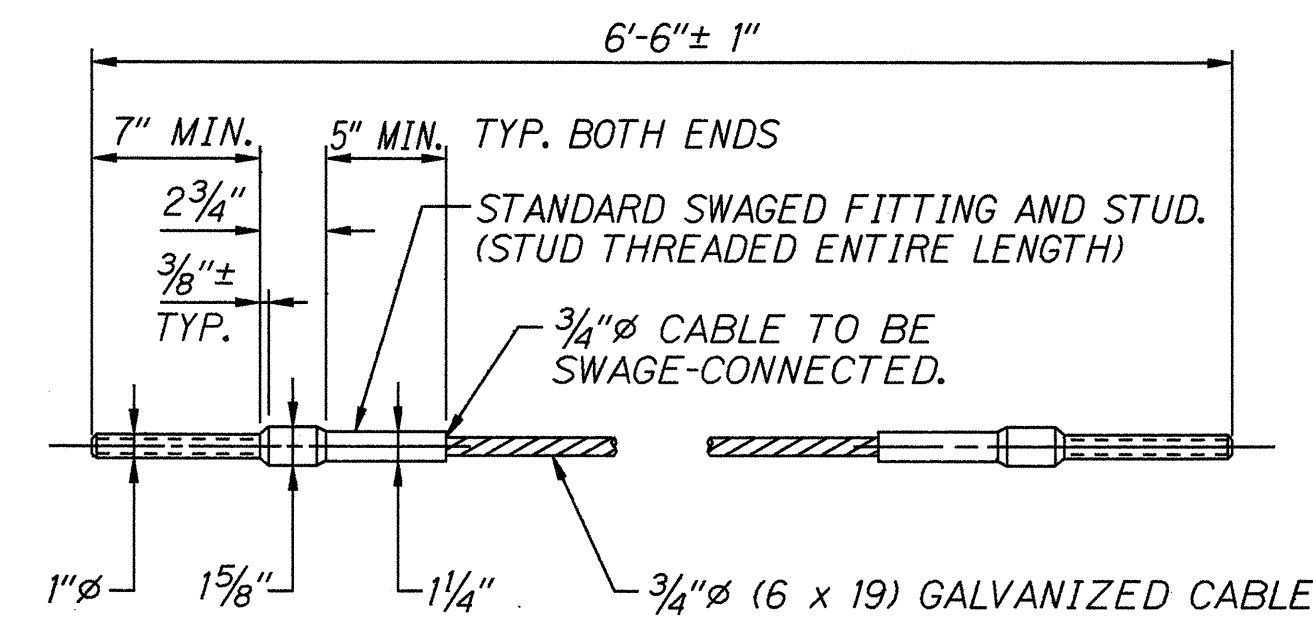
2 - SOIL PLATE - SI

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
MODIFIED ECCENTRIC LOADER
TERMINAL (MELT)
COMPONENT DETAILS
KULANA STREET TO WAILUKU BRIDGE
F. A. Project No. STP-019-2(34)
Not to Scale Date: March, 1995
SHEET No. 2 OF 3 SHEETS

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	STP-019-2(34)	1995	37	40



ONE - STRUT AND YOKE ASSEMBLY - A2



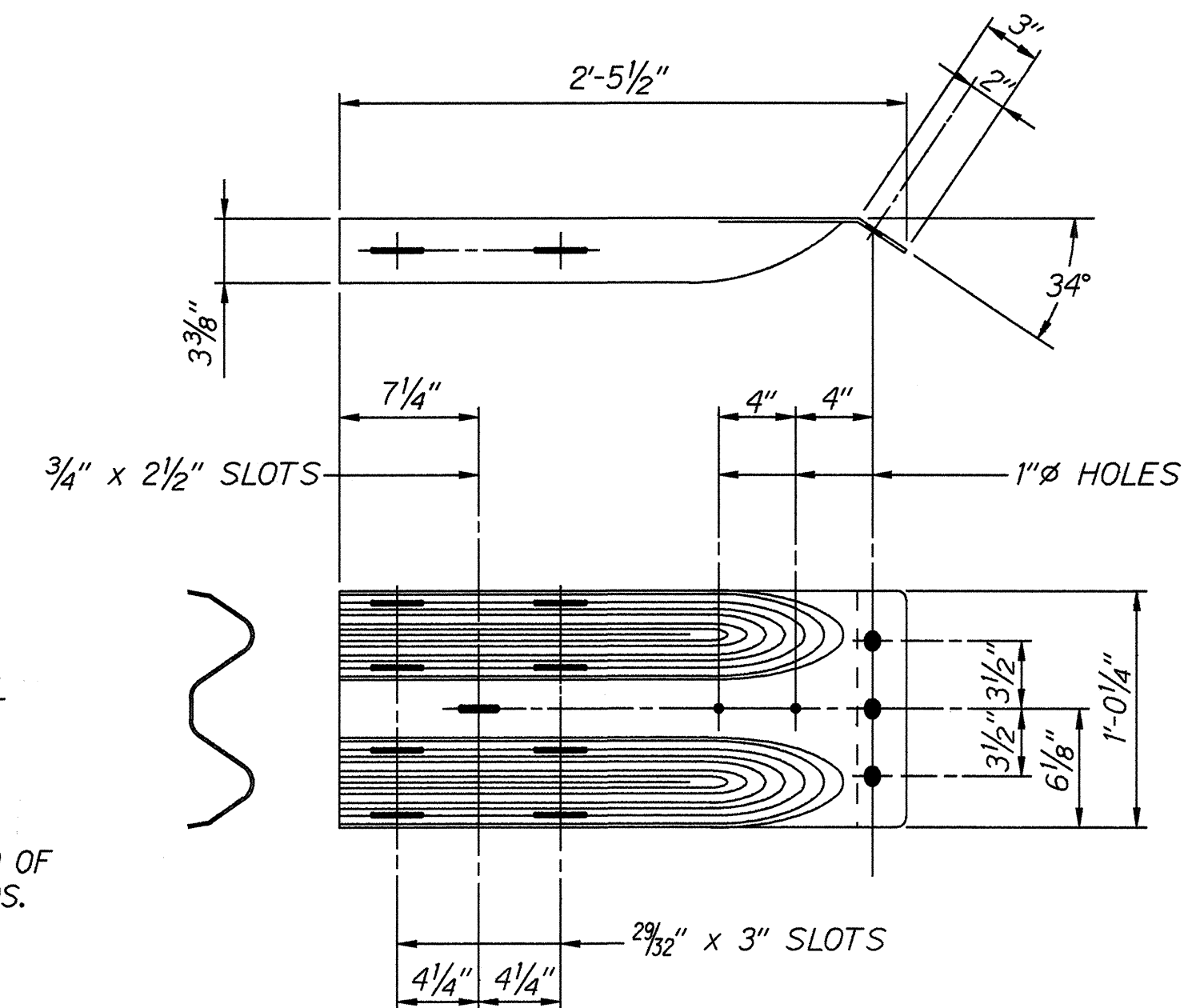
NOTES:

THE STUD SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A449 AND SHALL BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A153. THE THREADS SHALL HAVE A CLASS 2A FIT BEFORE GALVANIZING.

WIRE ROPE SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. M-30 AND SHALL BE 3/4-INCH PREFORMED, 6 x 19, WIRE STRAND CORE OR INDEPENDENT WIRE ROPE CORE (IWRC), GALVANIZED, RIGHT REGULAR LAY, MANUFACTURED OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 46,000 POUNDS.

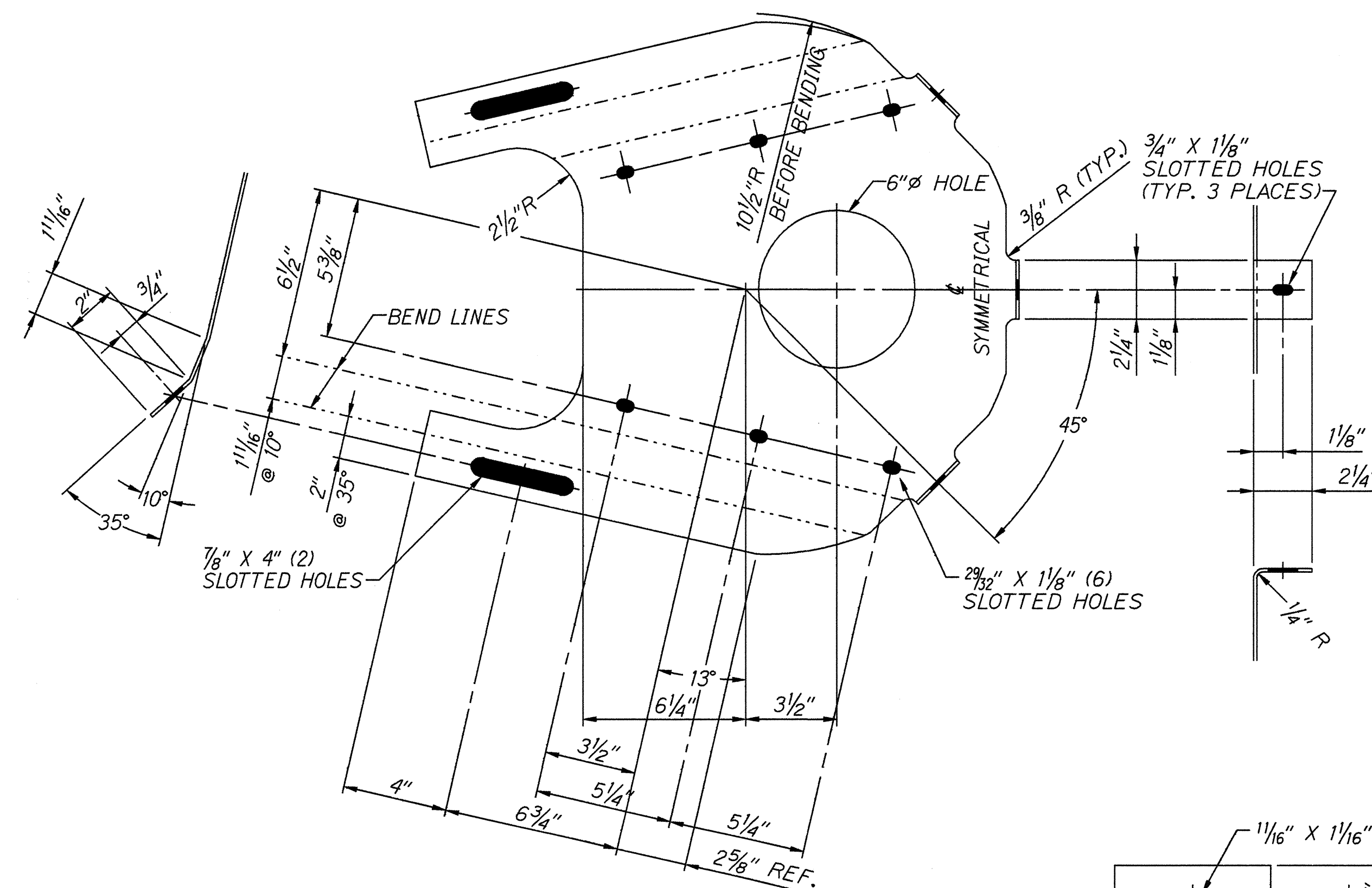
THE SWAGED FITTING, STUD, AND NUT SHALL DEVELOP THE BREAKING STRENGTH OF THE WIRE ROPE.

ONE - CABLE ASSEMBLY - B2

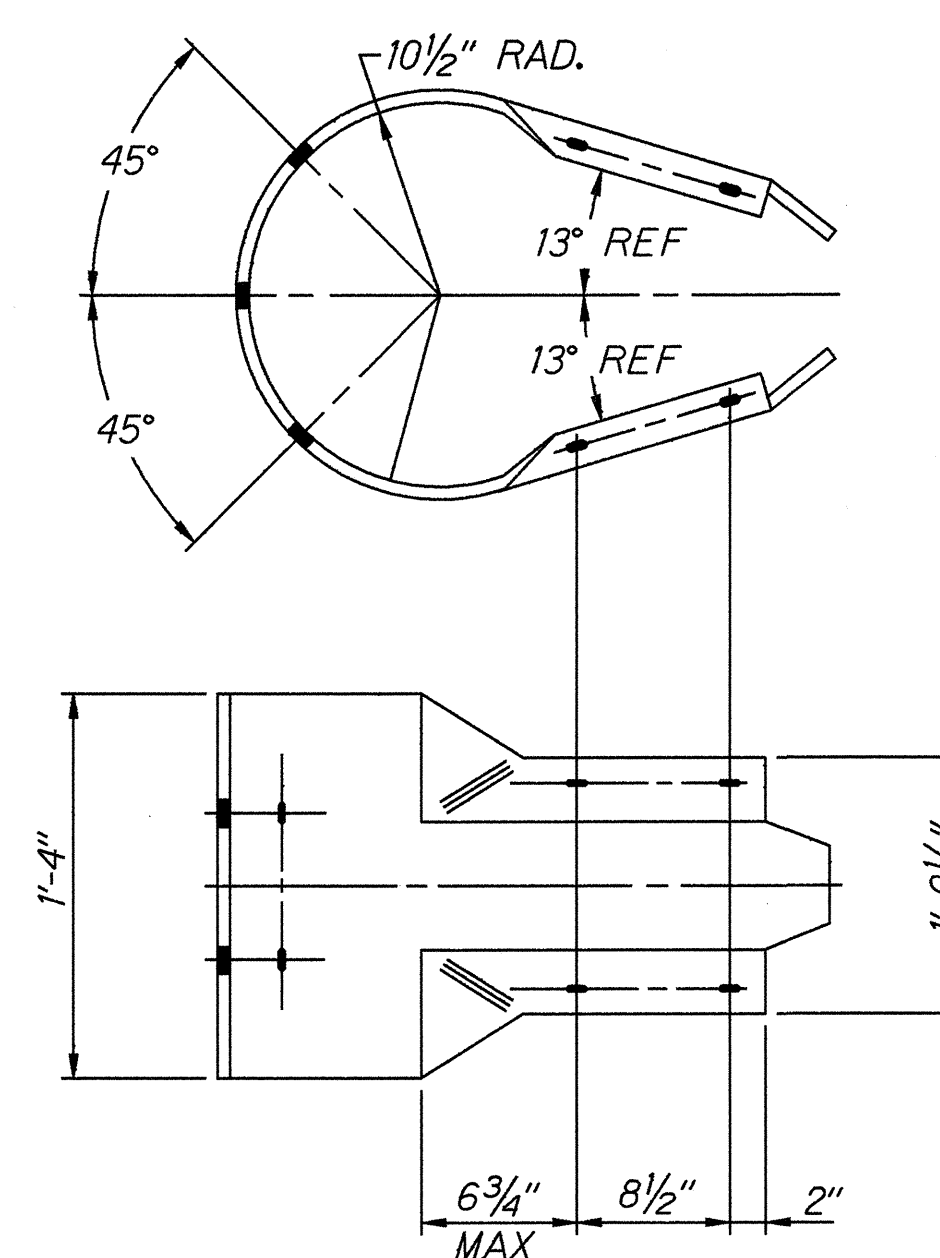


ONE - END SHOE - C2

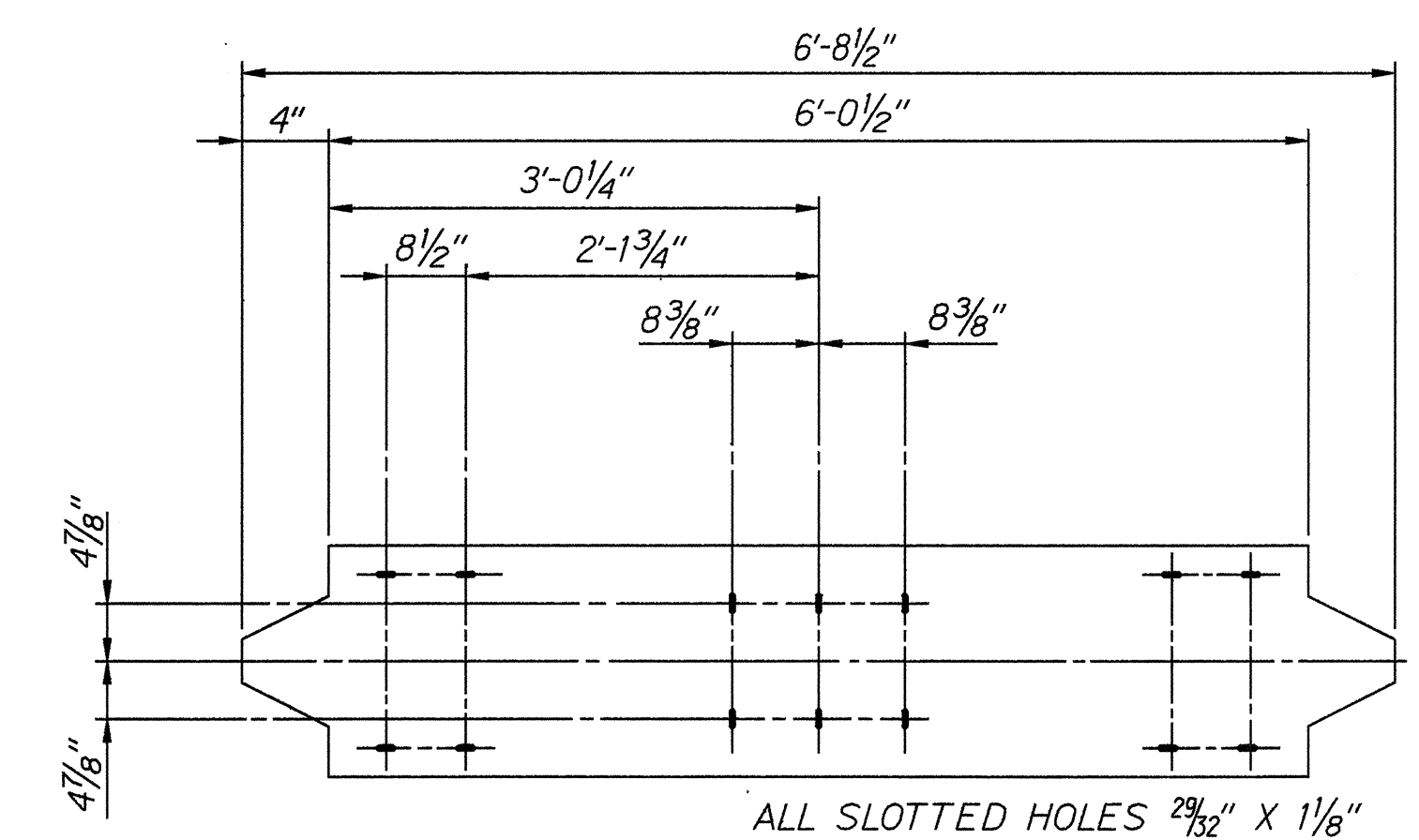
MATERIAL SCHEDULE							
FIND No.	PIECE MARK	MATERIAL	LENGTH		WEIGHT	UNIT WEIGHT	REMARKS
			FEET	INCHES			
A2		STRUT AND YOKE ASSEMBLY				52.0	A123
	a	C6 X 8.2	5	7¼	46.0		A36
	b	BAR 2 X 3½	1	6¾	4.0		A36
B2		CABLE ASSEMBLY				9.6	SEE NOTES
		¾"Ø CABLE ASSEMBLY	6	6			SEE DETAIL
C2		END SHOE				23.1	A123
		PL 10 GA. X 19½	2	6	21.9		M180
D2		DIAPHRAGM PLATE				9.7	A123
		PL 12 GA. X 21	2	15½	32.6		M180
E2		BUFFERED END SECTION				37.5	A123
		PL 12 GA. X 16	6	8½	39.0		M180
G2		WASHER, PLATE				.22	A123
		PL 3½ X 1¾	0	3	.56		A36
		<u>H A R D W A R E</u>					
H2		BOLT, SPLICE 5⁄8Ø x 1¼				6.3	A307 A153
J2		BOLT, POST 5⁄8Ø X 2				.44	A307 A153
K2		BOLT, POST 5⁄8Ø X 10				.88	A307 A153
L2		BOLT, POST 5⁄8Ø X 18				7.75	A307 A153
M2		BOLT, HEX 5⁄8Ø X 1½				2.04	A307 A153
N2		BOLT, HEX ¾Ø X 7½				4.2	A307 A153
R2		BOLT, HEX ¾Ø X 10				2.66	A307 A153
S2		NUT, HEX, RECESSED 5⁄8Ø				7.31	A563 A153
T2		NUT, HEX 5⁄8Ø				1.3	A563 A153
U2		NUT, HEX ¾Ø				.72	A563 A153
W2		NUT, HEX 1Ø				.57	A563 A153
X2		WASHER, FLAT 5⁄8Ø				.75	F844 A123
Y2		WASHER, FLAT ¾Ø				.95	F844 A123
Z2		WASHER, FLAT 1Ø				.29	F844 A123



2 - DIAPHRAGM PLATE - D2



ONE - BUFFERED END SECTION - E2



BUFFERED END SECTION, FLAT PLATE LAYOUT

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

MODIFIED ECCENTRIC LOADER
TERMINAL (MELT)
COMPONENT DETAILS

KULANA STREET TO WAILUKU BRIDGE
F. A. Project No. STP-019-2(34)

Not to Scale *Date: March, 1995*

SHEET No. 3 OF 3 SHEETS