

SHOP BOLTS (W/NUT & PALNUT)
 S1.4 - 5/8" φ x 1 1/2"
 S1.6 - 5/8" φ x 1 3/4"
 S2.0 - 5/8" φ x 2"

FIELD BOLTS (W/NUT & PALNUT)
 F1.4 - 5/8" φ x 1 1/2"
 F1.6 - 5/8" φ x 1 3/4"
 F2.0 - 5/8" φ x 2"
 F2.2 - 5/8" φ x 2 1/4"

NOTE:
 TAPERED WASHER REQUIRED FOR
 CONNECTIONS TO FLANGE OF MARK 104

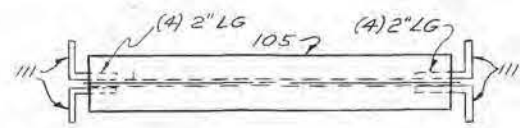
NEW YORK STATE ELECTRIC & GAS CORP.
 STEEL ERECTION DIAGRAM FOR 115 KV.
 TYPE "SMDE-2-96" DEAD END STRUCTURE
 (MAX. TENSION 4000* PER WIRE)

SCALE 3/8" = 1'-0"

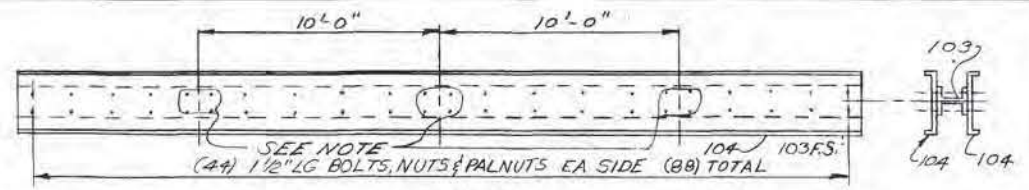
DATE 10-28-85

FILE NO C-16,206-3

NO.	REV.	DATE	DESCRIPTION	BY	CHK.	APP.
1						
2						
3						

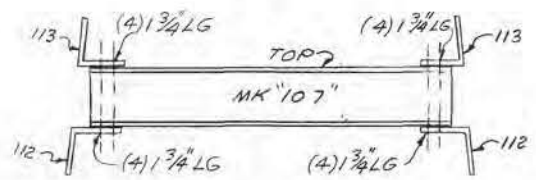


ASSEMBLY "A3"

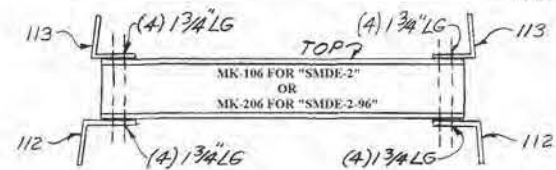


ASSEMBLY "A2"

NOTE:
FIELD INSTALL TAKE OFF
BRACKETS MK100 ON LINE SIDE
OF ASSEMBLY, USE 2" LG BOLTS



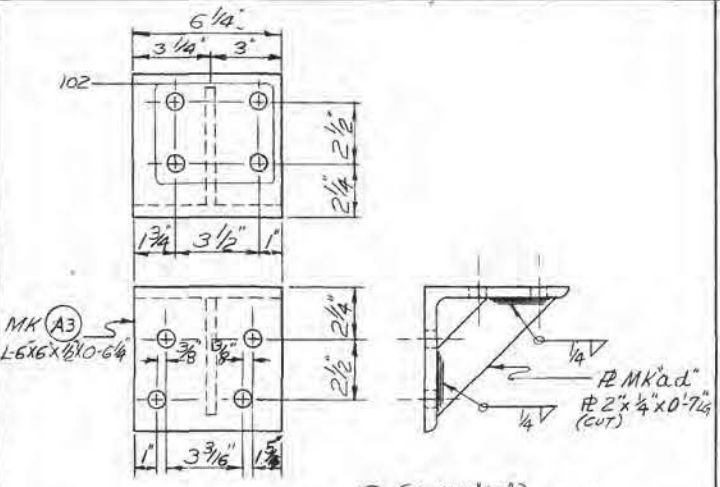
ASSEMBLY "A1"



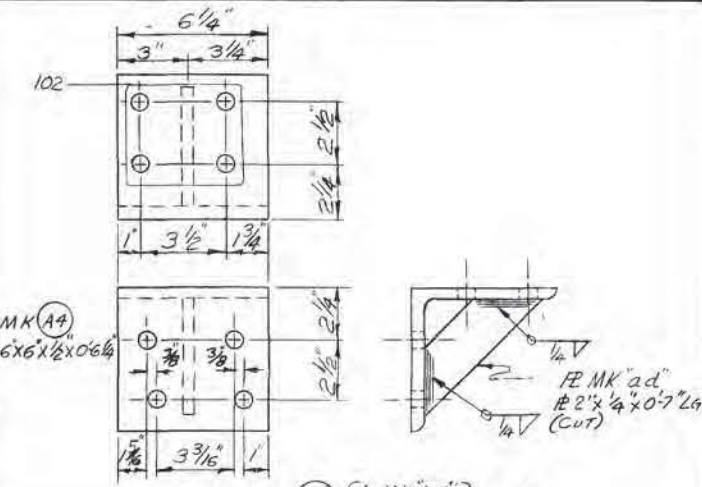
ASSEMBLY "A4"

EACH BOLT TO HAVE
(1) NUT & (1) TAPERED
WASHER

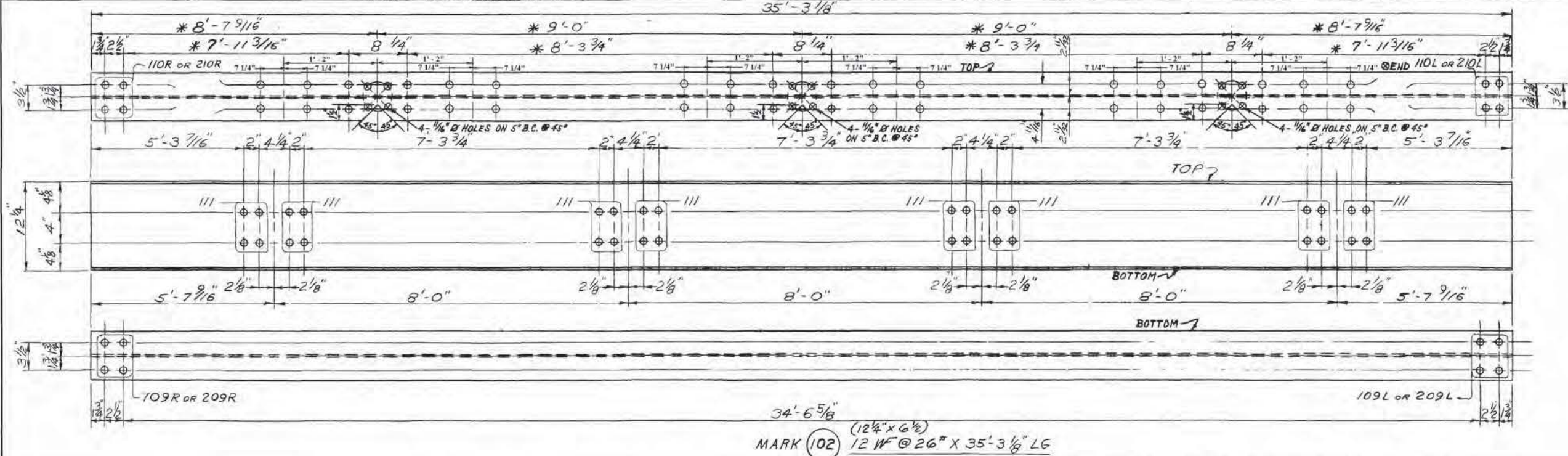
SHOP ASSEMBLIES



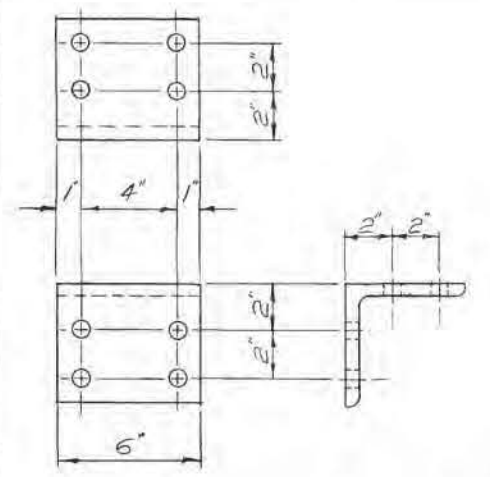
MARK (100) {1-MK 'A3'} WELD.



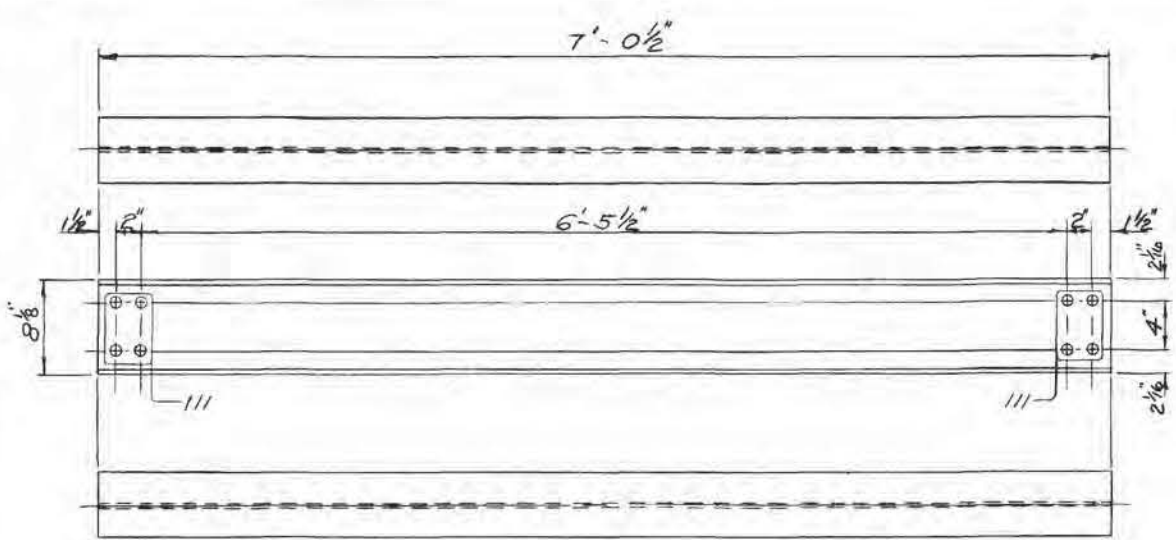
MARK (101) {1-MK 'A4'} WELD.



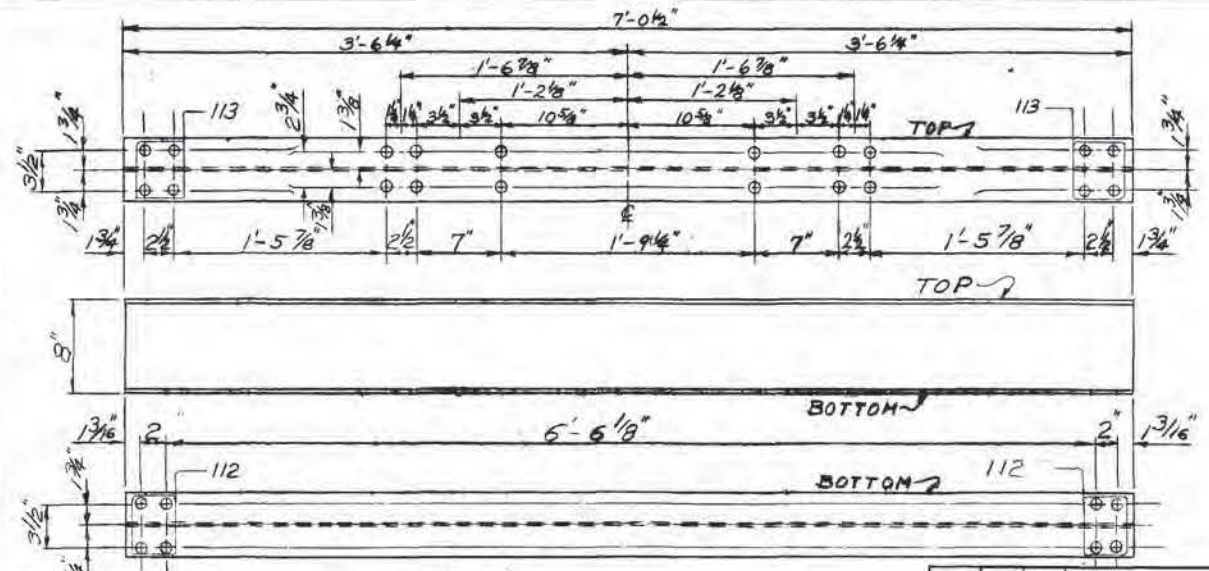
MARK (102) (12 1/4" x 6 1/2")
12 W @ 26" X 35'-3 1/8" LG



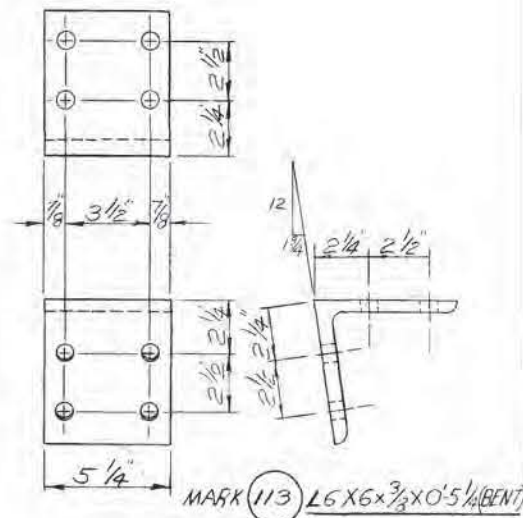
MARK (111) L5X5X3/8" X 0'-6" LG



MARK (105) (8 1/2" x 5 1/4")
8 W @ 18" X 7'-0 1/2" LG



MARK (106) (8 1/2" x 5 1/4")
8 W @ 17" X 7'-0 1/2" LG



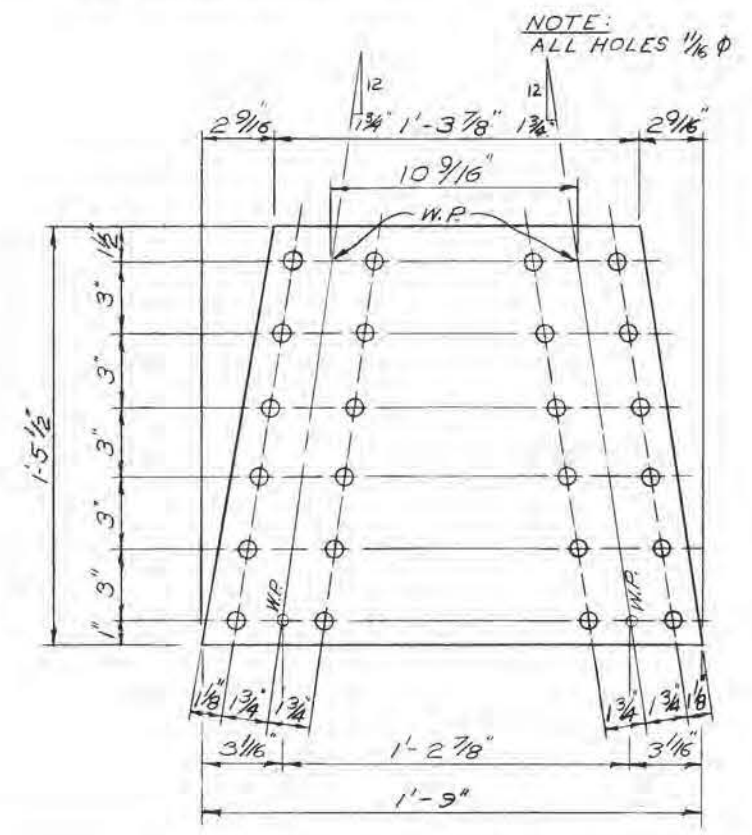
MARK (113) L6X6X3/8" X 0'-5 1/2" LG

NEW YORK STATE ELECTRIC & GAS CORP.

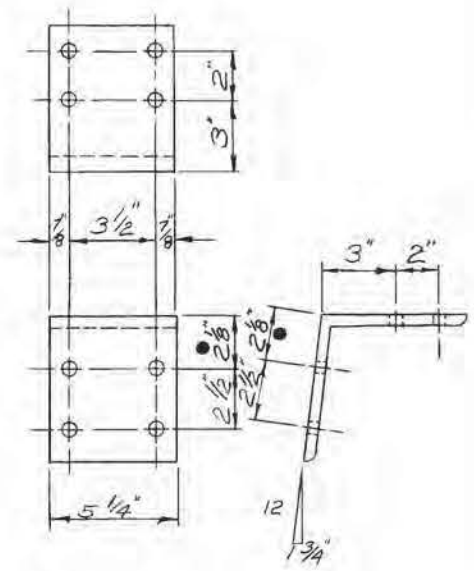
STEEL DETAILS FOR 115 KV
DEAD END STRUCTURE TYPE SMDE-2
SHEET 1 OF 7 SHEETS

REV NO	DATE	DESCRIPTION	MADE BY	CK BY	APP BY	SCALE	DATE	FILE NO.
3	06-23-97	ADDED DRILLING FOR SURGE ARRESTER BRACKET ON MK 102	AJR	AJR	YES			
2	05-27-96	REV SWITCH LOCATION PHASE SPACING MK 102	DR	DR				
1	05-27-97	REV. MK 102 & 106	DR	DR				
1/10/00								
MICRO DATE	REV NO	DATE	DESCRIPTION	MADE BY	CK BY	APP BY	SCALE	DATE
							NONE	9/11/75

(cut) MARK (116) R 17 1/2" X 1/4" X 1'-9" LG

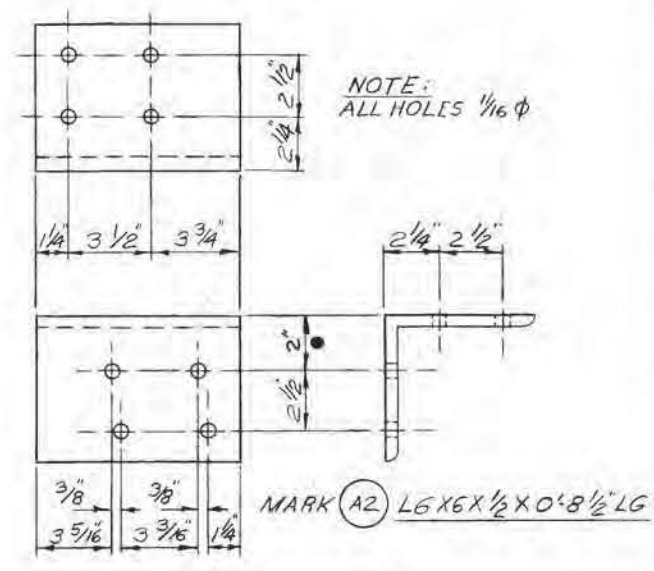


NOTE: ALL HOLES 1/16" φ



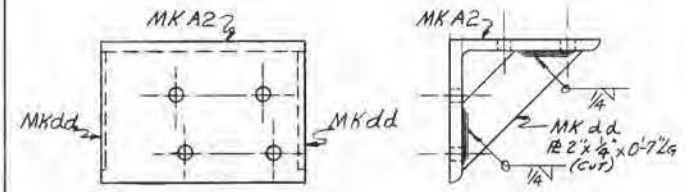
MARK (112) L6" X 6" X 3/8" X 0'-5 1/4" LG (BENT)

NOTE: ALL HOLES 1/16" φ

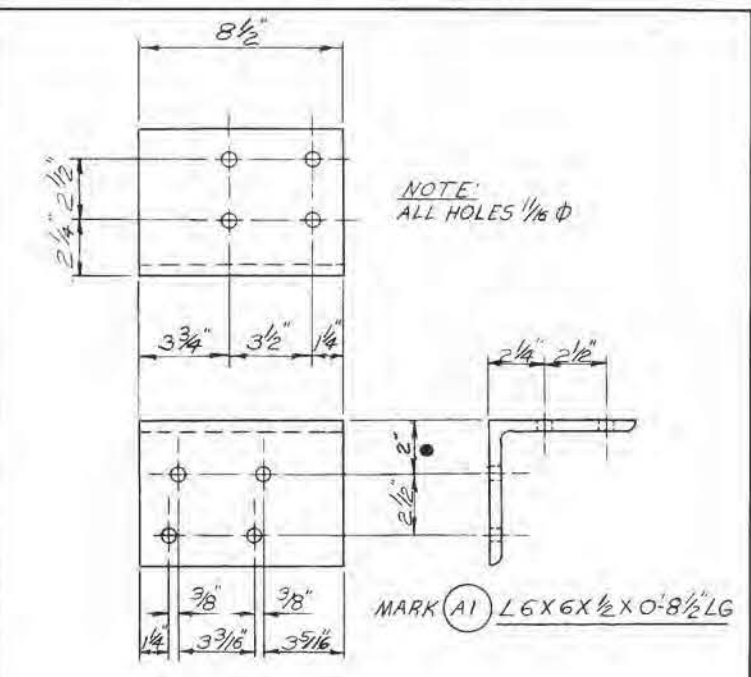


NOTE: ALL HOLES 1/16" φ

MARK (A2) L6 X 6 X 1/2 X 0'-8 1/2" LG

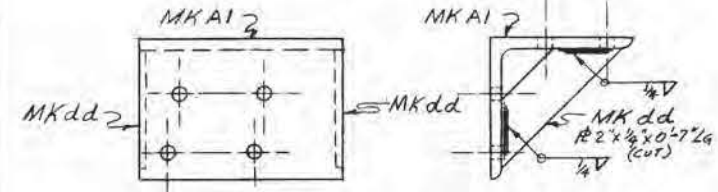


MARK (109A) { 1-MKA2 }
{ 2-MKdd } WELD

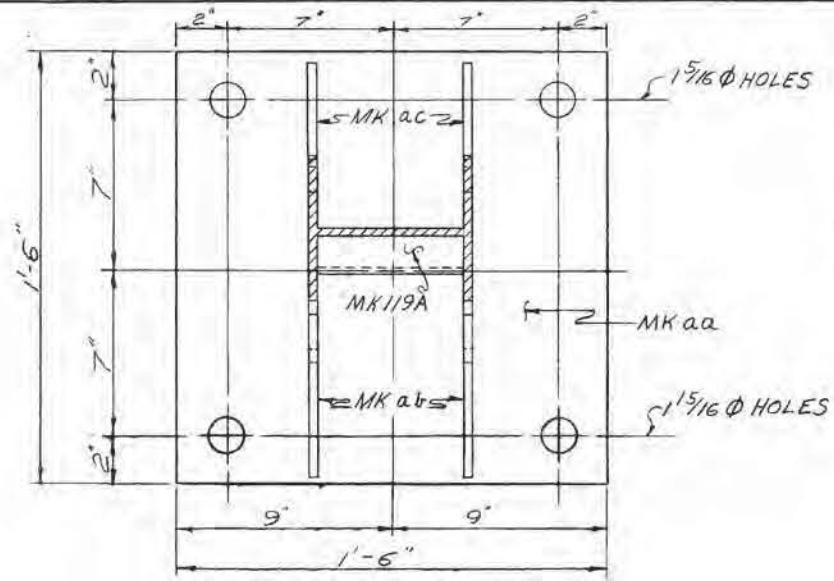


NOTE: ALL HOLES 1/16" φ

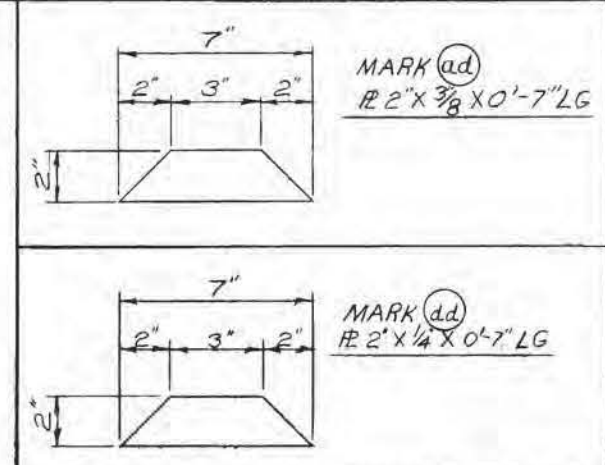
MARK (A1) L6 X 6 X 1/2 X 0'-8 1/2" LG



MARK (109A) { 1-MKA1 }
{ 2-MKdd } WELD

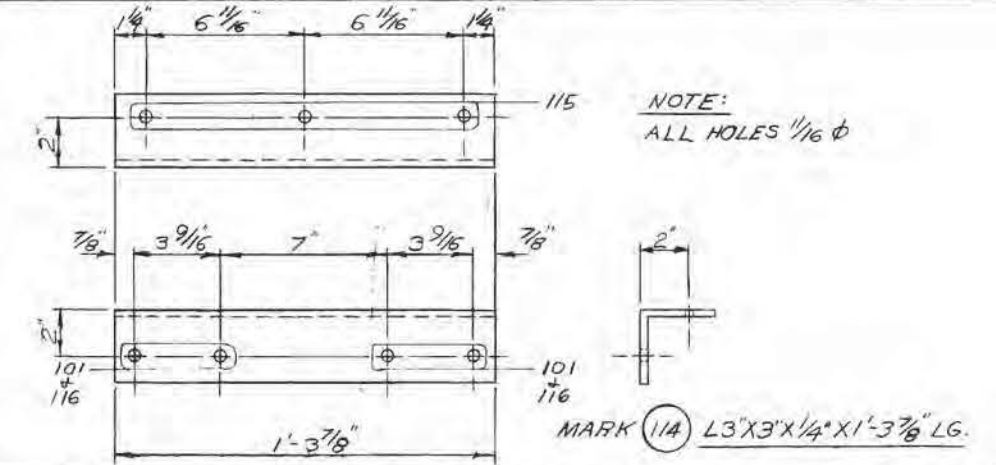


BASE UNIT ASSEMBLY
 MARK (119A) 8" W 24" X 11'-7 1/16"
 MARK (aa) R 1'-6" X 1" X 1'-6"
 MARK (al) R 4" X 3/8" X 1'-0 1/8"
 MARK (ac) R 4" X 3/8" X 0'-10 3/4"
 WELD



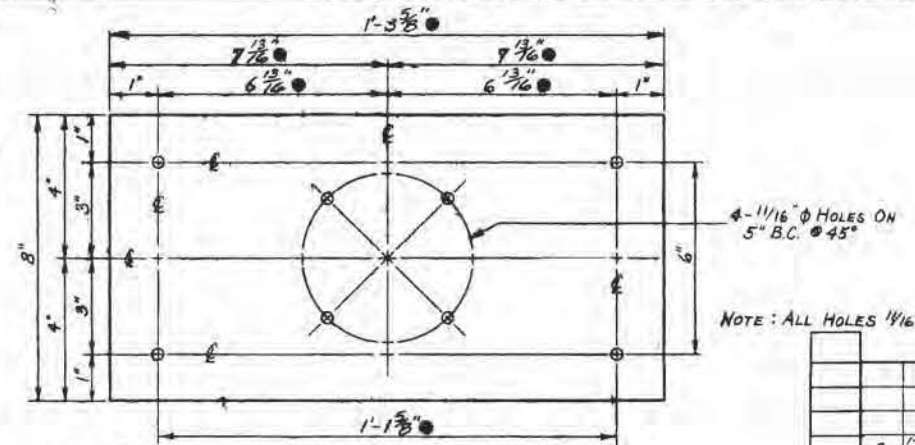
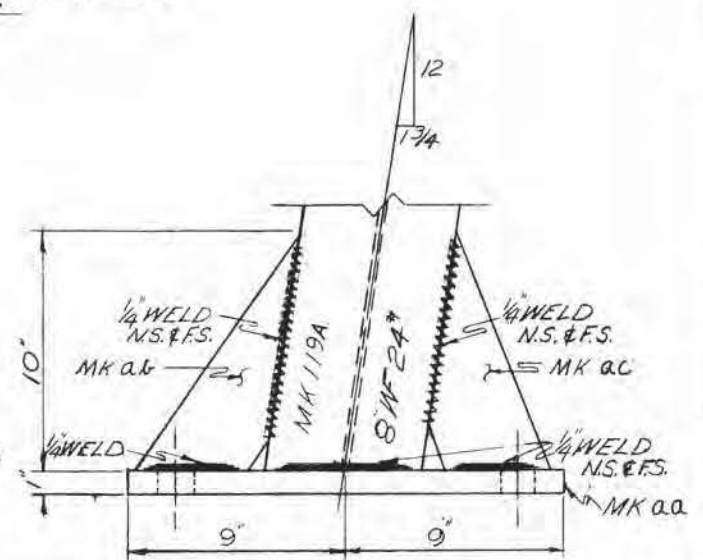
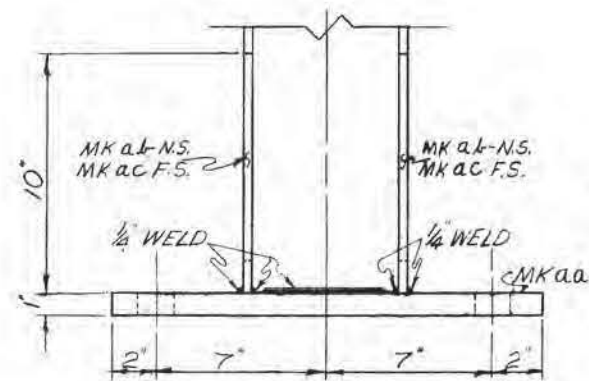
MARK (ad) R 2" X 3/8" X 0'-7" LG

MARK (ad) R 2" X 1/4" X 0'-7" LG



NOTE: ALL HOLES 1/16" φ

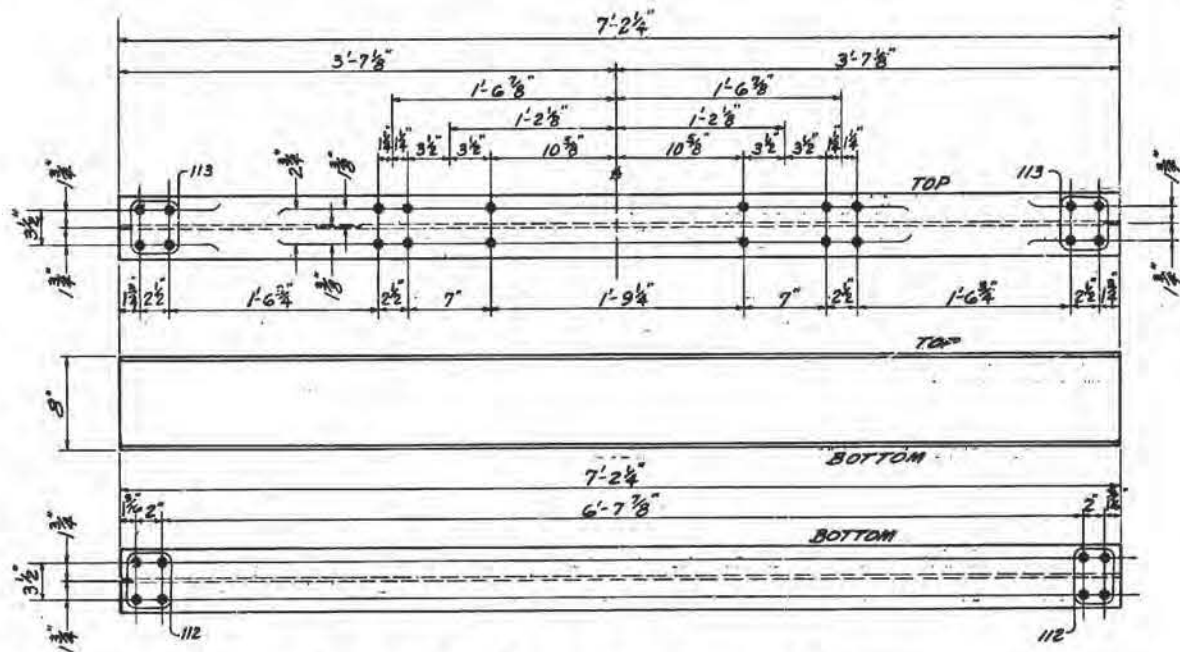
MARK (114) L3" X 3" X 1/4" X 1'-3 7/8" LG.



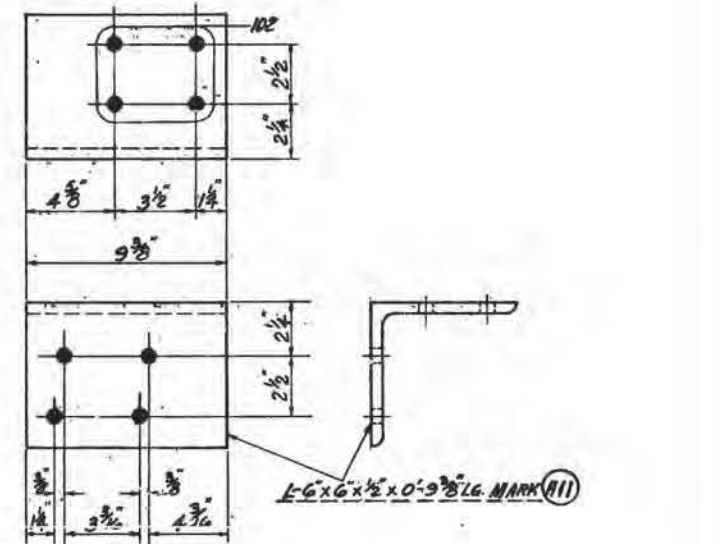
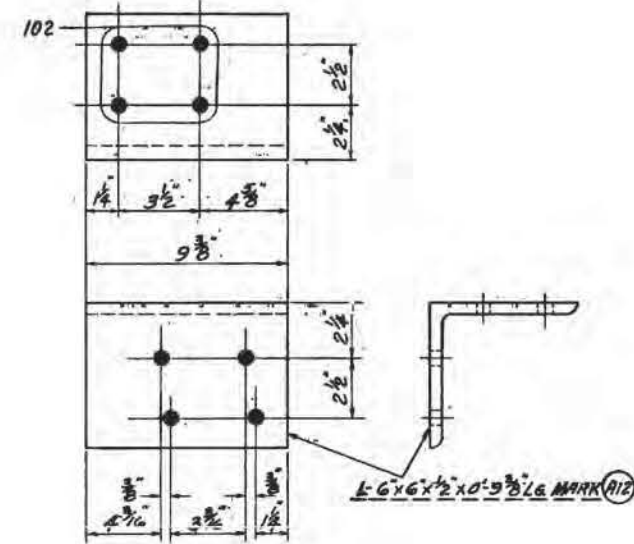
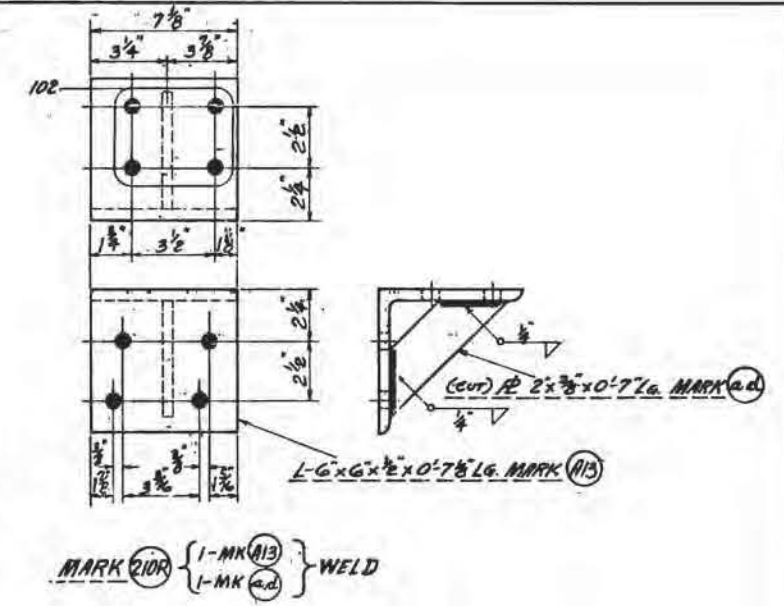
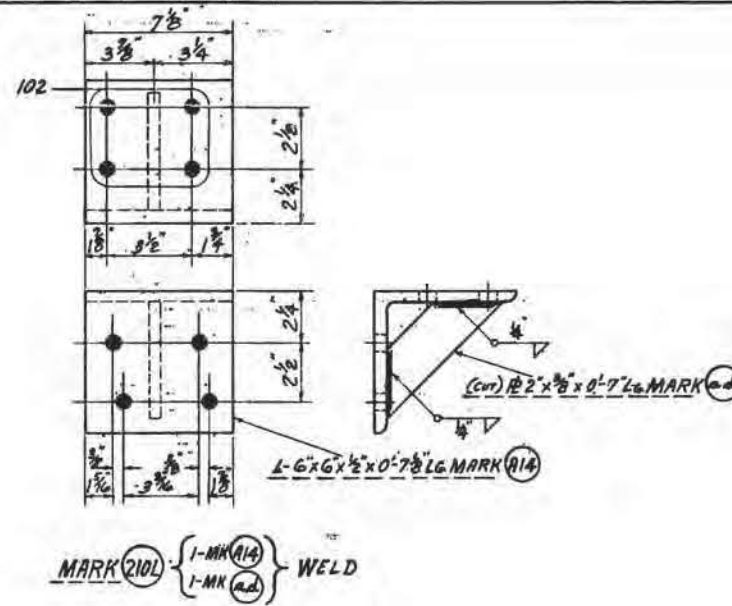
MARK (130) STEEL PLATE 8" X 3/8" X 1'-3 5/8" LONG AS SHOWN

NOTE: ALL HOLES 1/16" φ

NEW YORK STATE ELECTRIC & GAS CORP.									
STEEL DETAILS FOR 115 KV									
DEAD END STRUCTURE TYPE SIDER									
SHEET 4 OF 9 SHEETS									
REV.	NO.	DATE	DESCRIPTION	MADE BY	CK. BY	APP. BY	DR.	SCALE	FILE NO.
2	1-3	8-1	REV. DIMENSIONS OF R 115						
1	3-14	76	ADDED MARK (130)						
DATE							DR. D.W. TR.	CK. [Signature]	APP. [Signature]
DATE							SCALE NONE	FILE NO. C-15686-4	



8" WF @ 17" x 7'-2 1/4" LONG AS SHOWN MARK (206)



NEW YORK STATE ELECTRIC & GAS CORP.
 STEEL DETAILS FOR TYPE "SMDE-2"
 115KV. DEAD END STRUCTURE
 SHEET "6" OF 6 SHEETS

REV. NO.	DATE	DESCRIPTION	MADE BY	CK. BY	APP. BY	SCALE	DATE	FILE NO.
							5-22-78	C-15686

BRUNING 17125

STEEL BILL OF MATERIAL C-15,686						
ITEM	REQ	MEMBER	HAND	LENGTH	WEIGHT	SH. NO.
SMDE-2-96 STRUCTURE						
MATERIAL REQUIRED FOR (1) ONE TOP SECTION OF STRUCTURE						
() SECTIONS REQUIRED						
101	4	8" WF @ 24"	A.S.	20'-7 3/16"	1,980	2 495
103	1	10" WF @ 22" (10 1/8" x 5 3/4")	A.S.	35'-2 3/8"	775	3 774.81
104	2	12" L @ 20.7"	A.S.	35'-2 3/8"	1,458	3 729
107	2	8" WF @ 18" (8 1/8" x 5 1/4")	A.S.	4'-2 1/8"	150	2 2519
108 * ad	2	L-6x6x1/2"	A.S.	1'-8 3/8"	68	3 34
ad	4	R 2"x 3/8" (CUT)	A.S.	0'-7"	4	4 1
130		R 8"x 3/8"	A.S.	1'-3 5/8"		4 13.15
112	4	L-6x6x3/8" (BENT)	A.S.	0'-5 1/4"	28	4 7
113	4	L-6x6x3/8" (BENT)	A.S.	0'-5 1/4"	28	1 7
114	2	L-3"x3"x1/4"	A.S.	1'-3 1/8"	12	4 6
115	2	R 16 1/8"x 1/4"	A.S.	1'-7 1/2"	45	2 22.63
116	4	R 17 1/2"x 1/4" (CUT)	A.S.	1'-9"	104	4 26
117	8	R 6 3/8"x 1/2"	A.S.	1'-0 1/2"	96	2 12
118	8	R 6 1/2"x 3/8"	A.S.	2'-0 1/2"	136	2 17
120	3	8" WF @ 24" (CUT)	A.S.	0'-6 1/2"	39	3 13
121	2	6" L @ 8.2"	A.S.	1'-8 3/4"	28	2 14
122	4	L-6x4x3/8" (BENT)	A.S.	0'-4 1/2"	20	2 5
123	2	L-7x4x3/8"	A.S.	0'-6"	14	2 7
124	2	L-6x4x3/8"	A.S.	0'-6"	12	2 6
TOTAL WEIGHT (1) ONE TOP SECTION REQUIRED					4,997	* 4
TOTAL WEIGHT () TOP SECTIONS REQUIRED						* 4
MATERIAL REQUIRED FOR (1) ONE SWITCH MECH. & BEARING MOUNTING						
() MOUNTINGS REQUIRED						
1	1	6" L @ 13" (CUT)	A.S.	10'-2 5/8"	133	5 133
2	1	6" L @ 13" (CUT)	A.S.	9'-3"	120	5 120
3	4	L-6x4x1/2"	A.S.	0'-4"	20	5 5
4	2	5" L @ 9"	A.S.	2'-0"	36	5 18
5	1	R 8 1/2"x 1/2"	A.S.	1'-1 1/4"	16	5 16
6	1	R 4 3/4"x 1/4"	A.S.	0'-9"	3	5 3
TOTAL WEIGHT (1) ONE MOUNTING REQUIRED					328	* 4
TOTAL WEIGHT () MOUNTINGS REQUIRED						* 4
* TO BE WELDED						

STEEL BILL OF MATERIAL C-15,686						
ITEM	REQ	MEMBER	HAND	LENGTH	WEIGHT	SH. NO.
MATERIAL REQUIRED FOR (1) ONE BOTTOM SECTION OF STRUCTURE						
() SECTIONS REQUIRED						
102	2	12" WF @ 26" (12 1/4" x 6 1/2")	A.S.	35'-3 3/8"	1,834	1 916.77
105	4	8" WF @ 18" (8 1/8" x 5 1/4")	A.S.	7'-0 1/2"	507	1 126.75
206	2	8" WF @ 18" (8 1/8" x 5 1/4")	A.S.	7'-2 1/4"	259	6 129.38
* 209 R ad	2	L-6x6x1/2"	A.S.	0'-9 3/8"	30	6 15
ad	4	R 2"x 1/4" (CUT)	A.S.	0'-7"	4	4 1
* 209 L ad	2	L-6x6x1/2"	A.S.	0'-9 3/8"	30	6 15
ad	4	R 2"x 1/4" (CUT)	A.S.	0'-7"	4	4 1
* 210 R ad	2	L-6x6x1/2"	A.S.	0'-7 1/8"	24	6 12
ad	2	R 2"x 3/8" (CUT)	A.S.	0'-7"	2	4 1
* 210 L ad	2	L-6x6x1/2"	A.S.	0'-7 1/8"	24	6 12
ad	2	R 2"x 3/8" (CUT)	A.S.	0'-7"	2	4 1
111	16	L-5x5x3/8"	A.S.	0'-6"	96	1 6
112	4	L-6x6x3/8" (BENT)	A.S.	0'-5 1/4"	28	4 7
113	4	L-6x6x3/8" (BENT)	A.S.	0'-5 1/4"	28	1 7
119A	4	8" WF @ 24" (CUT)	A.S.	11'-7 1/16"	1,112	2 228
* 119 aa	4	R 18"x 1"	A.S.	1'-6"	368	2 92
ab	8	R 4"x 3/8" (CUT)	A.S.	1'-0 1/8"	40	2 5
ac	8	R 4"x 3/8" (CUT)	A.S.	0'-10 3/4"	40	2 5
TOTAL WEIGHT (1) ONE BOTTOM SECTION REQ'D					4,432	* 4
TOTAL WEIGHT () BOTTOM SECTIONS REQ'D						* 4
TOTAL WEIGHT (1) ONE COMPLETE STR. REQ'D.						
TOTAL WEIGHT () COMPLETE STR. REQ'D.						

STEEL 115KV DEAD END STRUCTURE
TYPE "SMDE-2-96"

DATE _____

CHK. _____

DWN _____

SH. NO. BI _____

APP. CHK. _____

SS- _____

FORM A-2

SSF-13,938

REV. 6-17-81
REV. 1-13-81

— SHOP BOLTS —

REQ	MATERIAL	LENGTH	WEIGHT	WT%
85	5/8" Hex. Hd. Bolts & Nuts	1 1/2"	27	.32
70	5/8" Hex. Hd. Bolts & Nuts	1 3/4"	25	.35
35	5/8" Hex. Hd. Bolts & Nuts	2"	13	.37
190	5/8" PALNUTS		2	.012
SUB TOTAL			67*	

— FIELD BOLTS —

REQ	MATERIAL	LENGTH	WEIGHT	WT%
250	5/8" Hex. Hd. Bolts & Nuts	1 1/2"	80	.32
245	5/8" Hex. Hd. Bolts & Nuts	1 3/4"	86	.35
40	5/8" Hex. Hd. Bolts & Nuts	2"	15	.37
65	5/8" Hex. Hd. Bolts & Nuts	2 1/4"	25	.39
600	5/8" PALNUTS		7	.012
25	TAPERED WASHERS FOR 5/8" Bolt DWG. SS-12,363		1	.032
SUB TOTAL			214*	

— MISCELLANEOUS MATERIAL —

ITEM	REQ	MATERIAL	WEIGHT	WT%
FB2	16	1" STEEL ANCHOR BOLTS WITH NUTS & PALNUTS (GALV.) See DWG. S-7463 M.M. FB2	117	.134
	16	STEEL WASHERS (GALV.) 2 1/2" O.D. x 1 1/2" I.D. x 1/16" THICK	—	
	6	U-BOLT 3/8" MARK 17 SEE DWG. SS-8685	2	.37
TOTAL WEIGHT — MISC. MATERIAL			2*	

NEG *

G.O.* ITEM* C.O.* DATE

CUSTOMER NEW YORK STATE ELECTRIC & GAS CORPORATION

DESCRIPTION STEEL TYPE SMDE-2-96", 115 KV. DEAD END STRUCTURE
(MAX. TENSION 4000* PER WIRE)
(SWITCH TRUSS AT 9'-6" HIGH)

— LIST OF DRAWINGS —

DESCRIPTION	DWG. NO.	DWG. NO.
GENERAL ARRANGEMENT		
"		
"		
FOUNDATION PLAN	C-15,701	
CONTROL		
"		
ERECTION PLAN	C-16,206	
"		
"		
"		
BILL OF MATERIAL	SS-13,937	SH.F1, B1
DETAILS	C-15,686	SH.*1-#6
SHOP ASSEMBLY	C-15,686	SH.*1
"		
BOLT COUNT	SS-13,937	SH. BCI
PIECE COUNT		

TOTAL WEIGHT STRUCTURE STEEL 9,757*

" " STRUCTURE BOLTS 281*

" " WITHOUT WASHERS

" " STR. MISC. MATERIAL 2*

" " WITHOUT WASHERS

" " STA. +3 1/2 GALV. 10,391*

MATERIAL SHOWN IS FOR (1) ONE STRUCTURE

NOTE: SIS*101-954-01
3" IPS ALUMINUM BUS FOR STATIC MAST
SIS* 832-795-003
& ALUMINUM END BELLS SUPPLIED BY N.Y.S.E. & G. CORP. — NOT PART OF STRUCTURE.

— SHOP NOTES —

ALL HOLES 1/16" DIA. UNLESS NOTED

ALL MATERIAL TO BE HOT DIPPED GALVANIZED

— REVISIONS —

SUB NO.	DATE			

S/S*832-839-01

NEW YORK STATE ELECTRIC & GAS CORP.

APR 1937
SH. NO. F1
CHK. BY: [Signature]
DWG. BY: [Signature]
DATE 10-25-85
SS-13,937

BOLT COUNT REFERENCE LIST FOR (1) ONE STRUCTURE (NO EXTRA INCLUDED)

STRUCTURE SECTION	SHOP						FIELD					
	$\frac{5}{8} \times 1\frac{1}{2}$	$\frac{5}{8} \times 1\frac{3}{4}$	$\frac{5}{8} \times 2$	$\frac{5}{8} \times 2\frac{1}{4}$	TAPERED WASHERS	PALNUTS	$\frac{5}{8} \times 1\frac{1}{2}$	$\frac{5}{8} \times 1\frac{3}{4}$	$\frac{5}{8} \times 2$	$\frac{5}{8} \times 2\frac{1}{4}$	TAPERED WASHER	PALNUTS
TOP	76	32	—	—	—	108	132	160	36	60	20	388
BOTTOM	—	32	32	—	—	64	96	64	—	—	—	160

BOLT COUNT FOR (1) ONE STRUCTURE

STRUCTURE SECTION	SHOP						FIELD					
	$\frac{5}{8} \times 1\frac{1}{2}$	$\frac{5}{8} \times 1\frac{3}{4}$	$\frac{5}{8} \times 2$	$\frac{5}{8} \times 2\frac{1}{4}$	TAPERED WASHERS	PALNUTS	$\frac{5}{8} \times 1\frac{1}{2}$	$\frac{5}{8} \times 1\frac{3}{4}$	$\frac{5}{8} \times 2$	$\frac{5}{8} \times 2\frac{1}{4}$	TAPERED WASHERS	PALNUTS
TOP												
BOTTOM												
SUB TOTAL												
+ 10%												
GRAND TOTAL												

STEEL 115KV DEAD END STRUCTURE
TYPE "SMDE-2-96"

DATE _____ DWN. _____ CHK. _____ SH.NO. BCI _____ APR. _____ SS- _____ SSF-13,939

SFD-DFA-BE

BILL OF MATERIAL

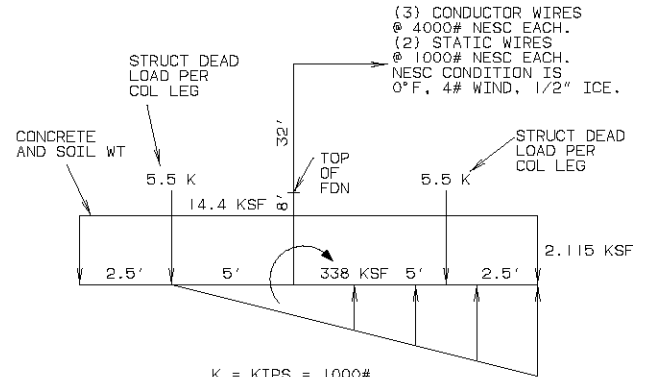
ITEM NO	QTY	STOCK SYMBOL	DESCRIPTION
1	16	021-004-08	BOLT, STEEL ANCHOR, GALV, WK FB27, 1" DIA X 4'-1" LG, COMPLETE WITH GALV NUT, 2 FLAT WASHERS AND PALNUT, PER NYSEG DWG #SFD-AAB-AZ
2	320	082-697-00	INCHES SONOTUBE, ROUND FORM, FIBRE, 36" DIA (4) - 6'-8" LONG PIECES REQUIRED
3	18.8	800-400-02	CONCRETE, GRADE B, 4000 PSI, CONFORMING TO SPEC TD-1070.
4	65.2	804-400-00	EXCAVATION, CUBIC YARD
5	16	820-005-47	ROD STEEL REINFORCING 3/8" R367 DWG #SFD-ARR-AZ
6	100	820-010-73	ROD STEEL REINFORCING 1/2" R195 DWG #SFD-ARR-AZ
7	64	820-015-30	ROD STEEL REINFORCING 5/8" R270 DWG #SFD-ARR-AZ
8	36	820-015-33	ROD STEEL REINFORCING 5/8" R303 DWG #SFD-ARR-AZ
9	40	820-015-34	ROD STEEL REINFORCING 5/8" R304 DWG #SFD-ARR-AZ

GENERAL NOTES

- THIS FOUNDATION IS DESIGNED FOR STR TYPE SMDE-2-96 DEAD END TOWER. (TWO COLUMN FOUNDATION)
- CONCRETE SHALL BE 4000 P.S.I. CONTAINING ADMIXTURES FOR AIR ENTRAINMENT AND A WATER REDUCING AGENT PER SPECIFICATION TD-1070.
- BACKFILL WITH WELL COMPACTED SOIL FROM EXCAVATION.
- UNLESS OTHERWISE INDICATED ON FOUNDATION PLAN, ANCHOR BOLTS ARE PARALLEL TO GRID LINES.
- USE 36" SONOTUBE TO FORM PIERS AS SHOWN. CONTRACTOR HAS THE OPTION OF SUBSTITUTING 36" SQUARE FORMED PIERS WITH THE SAME ANCHOR BOLTS AND EQUIVALENT SQUARE RE-ROD CAGE.
- FOUNDATION HEIGHT ABOVE BASE GRADE IS A MINIMUM OF 4" AND CAN BE 12" OR MORE, BUT IS TYPICALLY ABOUT 8". THIS DIMENSION VARIES BECAUSE THE BASE GRADE IS SLOPED FOR DRAINAGE WHILE THE TOP OF CONCRETE ELEVATION IS GENERALLY CONSTANT FOR A LARGE GROUP OF FOUNDATIONS. REBARS ARE PROPERLY DIMENSIONED FOR THE TYPICAL 8" CASE. THEY CAN BE ADAPTED FOR USE WITH ANY ABOVE GRADE EXPOSURE. DEPTH OF FOUNDATION BELOW BASE GRADE MUST BE AT LEAST THAT SHOWN ON THE DETAIL DRAWING.
- THE EXCAVATION FOR THIS FOUNDATION IS GREATER THAN 5 FEET DEEP. SLOPING OR SHORING OF THE SIDES OF THE EXCAVATION IN ACCORDANCE WITH OSHA 29 CFR 1910 SUBPART P WILL BE REQUIRED.

REFERENCE:

NYSEG SPECIFICATION SP-1445
"INSTALLATION OF SUBSTATION FOUNDATIONS"



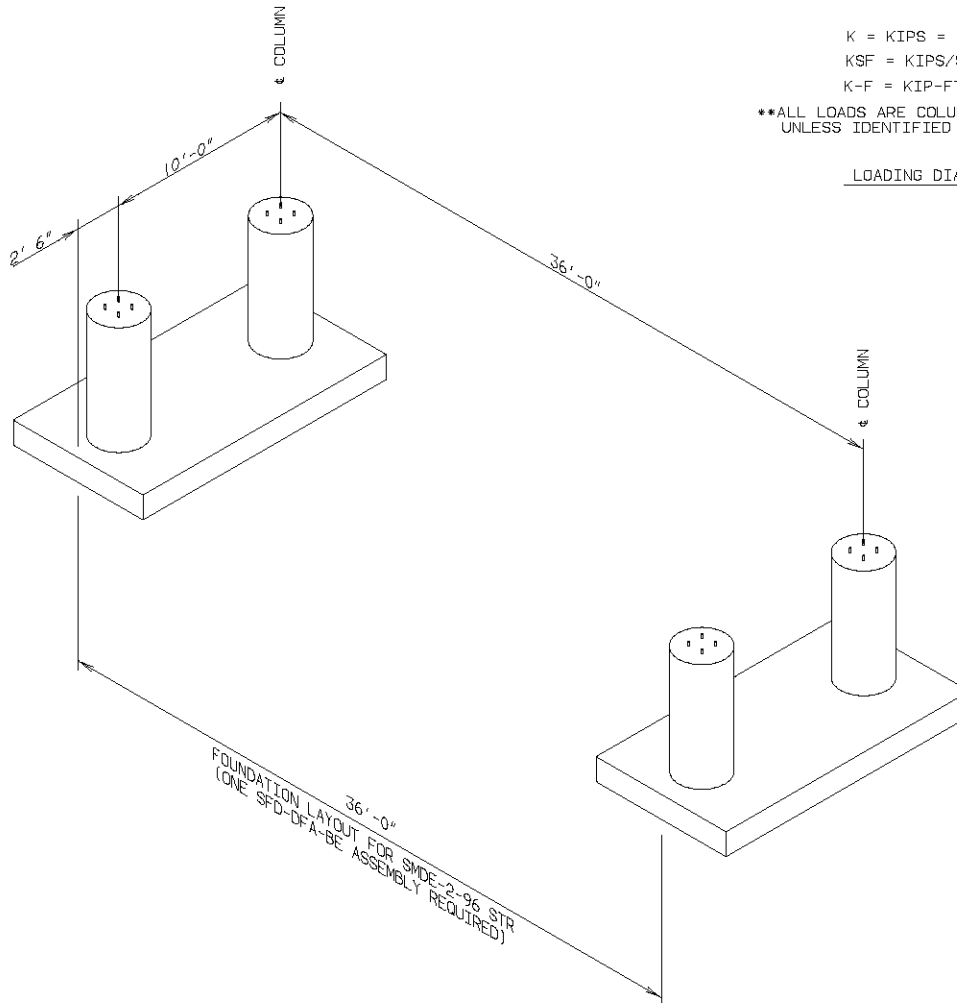
K = KIPS = 1000#

KSF = KIPS/SQ.FT

K-F = KIP-FT

**ALL LOADS ARE COLUMN REACTIONS UNLESS IDENTIFIED OTHERWISE

LOADING DIAGRAM



DR. TES
CK. TES
APP. JWA

SUBSTATION STANDARD
FOUNDATION DETAIL FOR
SMDE-2-96 DEAD END TOWER
CYLINDRICAL PIERS WITH FOOTING

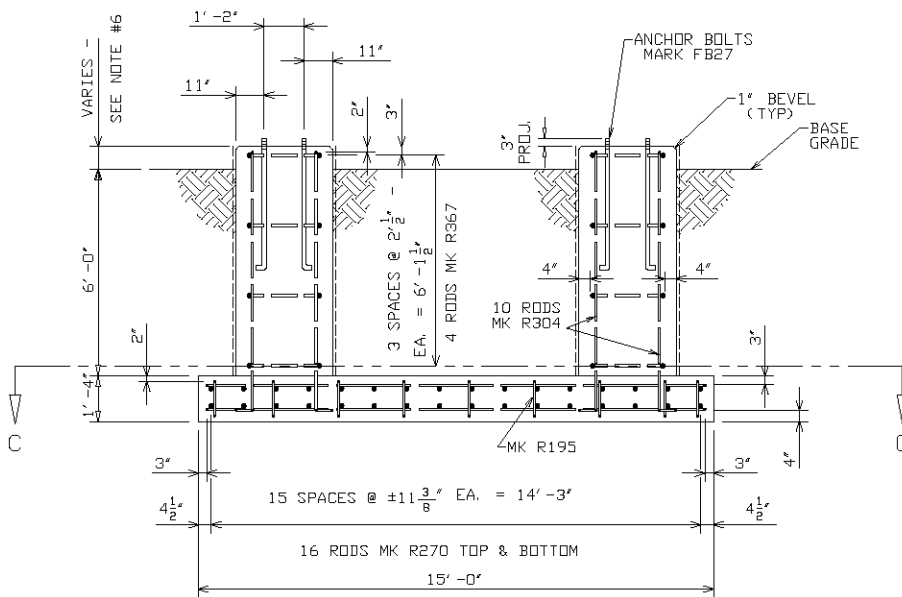
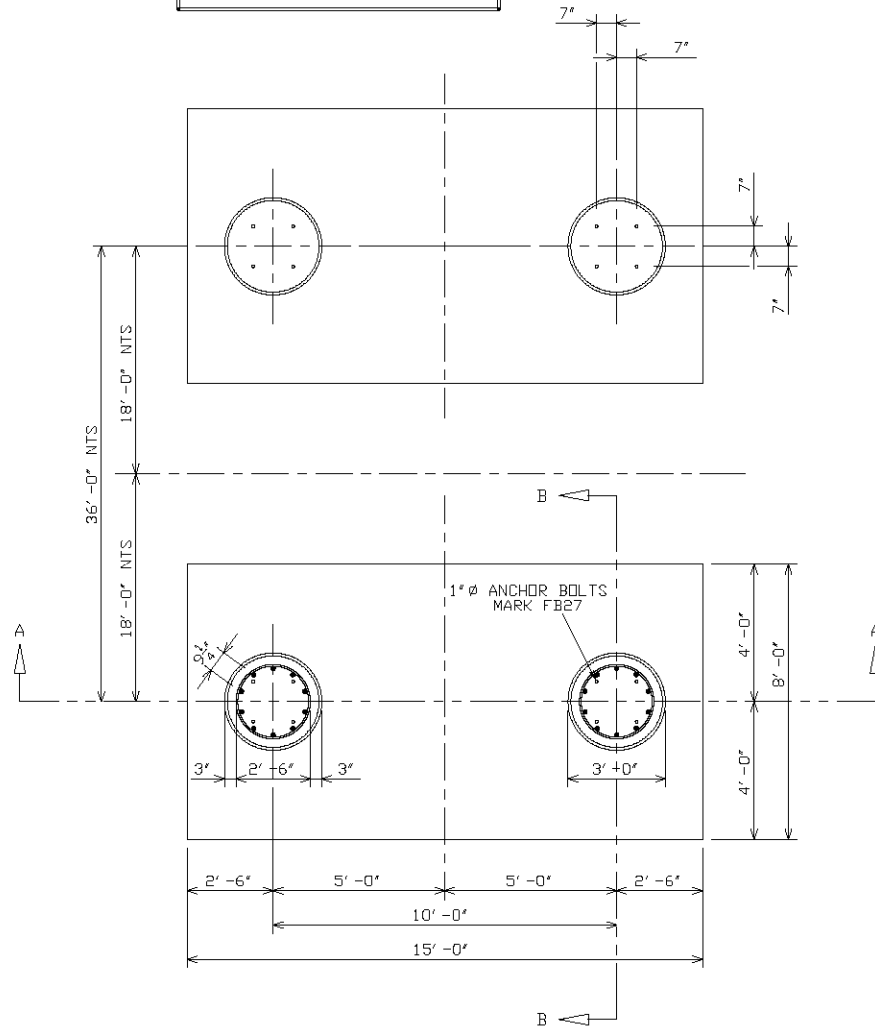
SH 1 CDNT
ON SH 2

ISSUE
2
DATE
01/08/98

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and TRADE SECRET INFORMATION
Property of New York State Electric & Gas Corp.

NYSEG

SFD-DFA-BE



SECTION A-A

DR. TES
 CK. TES
 APP. JWA

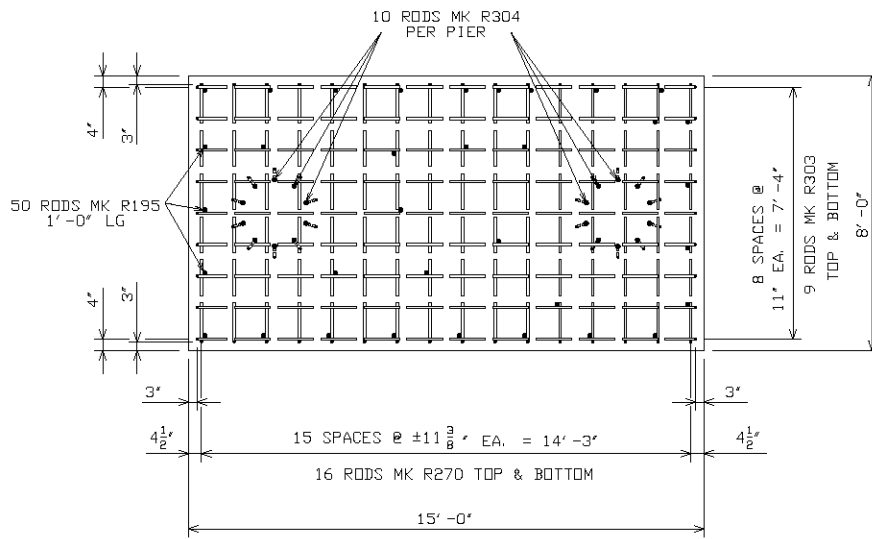
SUBSTATION STANDARD
 FOUNDATION DETAIL FOR
 SMDE-2-96 DEAD END TOWER
 CYLINDRICAL PIERS WITH FOOTING

SH 8 CONT ON SH 3
ISSUE
2
DATE
01/08/98

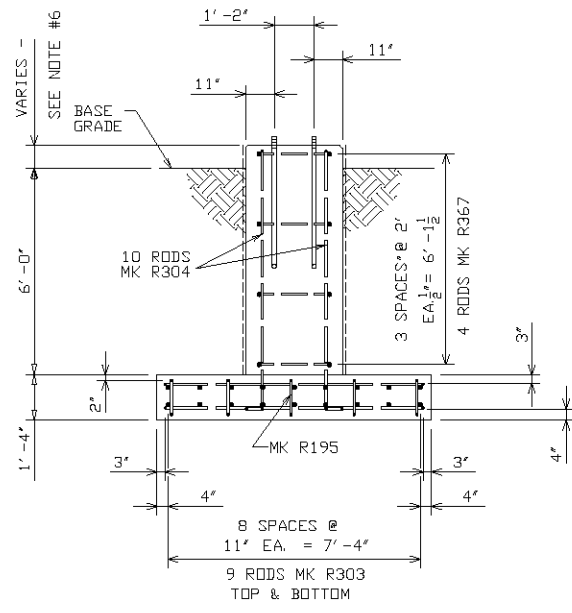
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SFD-DFA-BE



SECTION C-C



SECTION B-B

DR. TES
 CK. TES
 APP. JWA

SUBSTATION STANDARD
 FOUNDATION DETAIL FOR
 SMDE-2-96 DEAD END TOWER
 CYLINDRICAL PIERS WITH FOOTING

SH 3 CONT OR SH FINAL
ISSUE
2
DATE
01/08/98

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SFD-HMC-AC

BILL OF MATERIAL

ITEM NO.	QTY.	SAP MATERIAL ID NUMBER	STOCK SYMBOL	DESCRIPTION
1	1	1002102190	021-021-90	ANCHORING PLATE WITH "J" HOOK PER NYSEG DWG. #SFD-AAP-AZ
2	0.8	-----	800-400-02	CONCRETE, GRADE B, 4000 PSI, CONFORMING TO SPEC TD-1070.
3	2.3	-----	804-400-00	EXCAVATION, CUBIC YARD
4	7	108200105	820-010-51	ROD STEEL REINFORCING 1/2" R-143 PER NYSEG DWG. #SFD-ARR-AZ
5	16	1082001089	820-010-89	ROD STEEL REINFORCING 1/2" R-508 PER NYSEG DWG. #SFD-ARR-AZ
* 6	4	108200200	820-020-01	ROD STEEL REINFORCING 3/4" R-3 PER NYSEG DWG. #SFD-ARR-AZ

GENERAL NOTES

- THIS FOUNDATION IS DESIGNED FOR SUPPORTING A PREFABRICATED CONTROL HOUSE. REFER TO THE PROJECT FOUNDATION PLAN FOR NUMBER AND LOCATION OF REQUIRED PIERS.
- CONCRETE SHALL BE 4000 P. S. I. CONTAINING ADMIXTURES FOR AIR ENTRAINMENT AND A WATER REDUCING AGENT PER SPECIFICATION TD-1070.
- BACKFILL WITH WELL COMPACTED SOIL FROM EXCAVATION.
- UNLESS OTHERWISE INDICATED ON FOUNDATION PLAN, ANCHOR BOLTS ARE PARALLEL TO GRID LINES.
- FOUNDATION HEIGHT ABOVE BASE GRADE IS A MINIMUM OF 4" AND CAN BE 12" OR MORE, BUT IS TYPICALLY ABOUT 8". THIS DIMENSION VARIES BECAUSE THE BASE GRADE IS SLOPED FOR DRAINAGE WHILE THE TOP OF CONCRETE ELEVATION IS GENERALLY CONSTANT FOR A LARGE GROUP OF FOUNDATIONS. REBARS ARE PROPERLY DIMENSIONED FOR THE TYPICAL 8" CASE. THEY CAN BE ADAPTED FOR USE WITH ANY ABOVE GRADE EXPOSURE. DEPTH OF FOUNDATION BELOW BASE GRADE MUST BE AT LEAST THAT SHOWN ON THE DETAIL DRAWING.

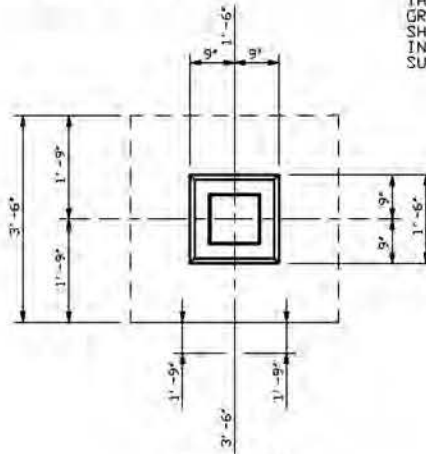
MAXIMUM ALLOWABLE LOADING

COMPRESSION - 30,000 LBS.
UPLIFT - 5,000 LBS.
OVERTURNING MOMENT - 8 FT - KIPS

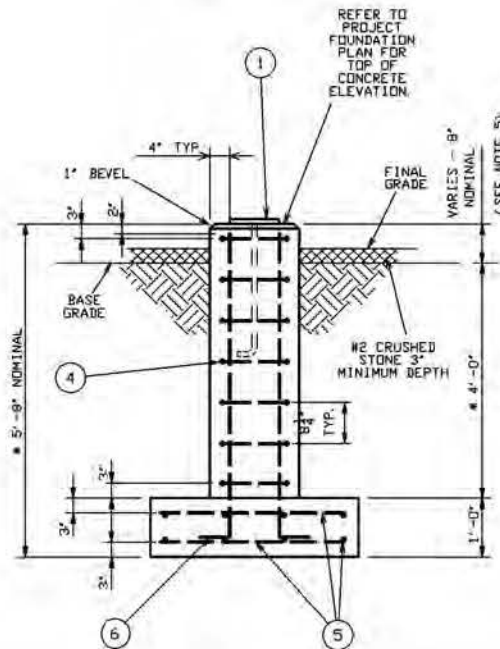
REFERENCE:

NYSEG SPECIFICATION SP-1445
"INSTALLATION OF SUBSTATION FOUNDATIONS"

- FOR CERTAIN APPLICATIONS IN THE PLATTSBURGH DIVISION, THE FOUNDATION DEPTH DIMENSIONS MUST BE INCREASED TO 6'-0" FROM GRADE TO TOP OF FOOTING AND 7'-8" OVERALL. ALSO, THE LENGTH OF RE-INFORCING ROD, ITEM NO. 6, MUST BE INCREASED BY 2'-0". THE EXCAVATION FOR THIS APPLICATION IS GREATER THAN 5 FEET DEEP. SLOPING OR SHORING OF THE SIDES OF THE EXCAVATION IN ACCORDANCE WITH OSHA 29 CFR 1910 SUBPART P WILL BE REQUIRED.



TOP VIEW



SIDE VIEW

DR. JGB
CK. XXX
APP. XXX

SUBSTATION STANDARD
FOUNDATION DETAIL FOR
PREFABRICATED CONTROL HOUSE
RECTANGULAR PIER WITH FOOTING

ISSUE
3
DATE
09/08/04

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SFD-M60-2C

GENERAL NOTES

- 1.) THIS FOUNDATION IS DESIGNED FOR 60 FT. HIGH LIGHTNING MAST WITH 14.125' X 14.125' ANCHOR BOLT PATTERN.
- 2.) CONCRETE SHALL BE 4000 P. S. I. CONTAINING ADMIXTURES FOR AIR ENTRAINMENT AND A WATER REDUCING AGENT PER SPECIFICATION TD-1070.
- 3.) BACKFILL WITH WELL COMPACTED SOIL FROM EXCAVATION.
- 4.) UNLESS OTHERWISE INDICATED ON FOUNDATION PLAN, ANCHOR BOLTS ARE PARALLEL TO GRID LINES.
- 5.) FOUNDATION HEIGHT ABOVE BASE GRADE IS A MINIMUM OF 4' AND CAN BE 12' OR MORE, BUT IS TYPICALLY ABOUT 8'. THIS DIMENSION VARIES BECAUSE THE BASE GRADE IS SLOPED FOR DRAINAGE WHILE THE TOP OF CONCRETE ELEVATION IS GENERALLY CONSTANT FOR A LARGE GROUP OF FOUNDATIONS. REBARS ARE PROPERLY DIMENSIONED FOR THE TYPICAL 8' CASE. THEY CAN BE ADAPTED FOR USE WITH ANY ABOVE GRADE EXPOSURE. DEPTH OF FOUNDATION BELOW BASE GRADE MUST BE AT LEAST THAT SHOWN ON THE DETAIL DRAWING.

REFERENCE:

NYSEG SPECIFICATION SP-1445
'INSTALLATION OF SUBSTATION FOUNDATIONS'

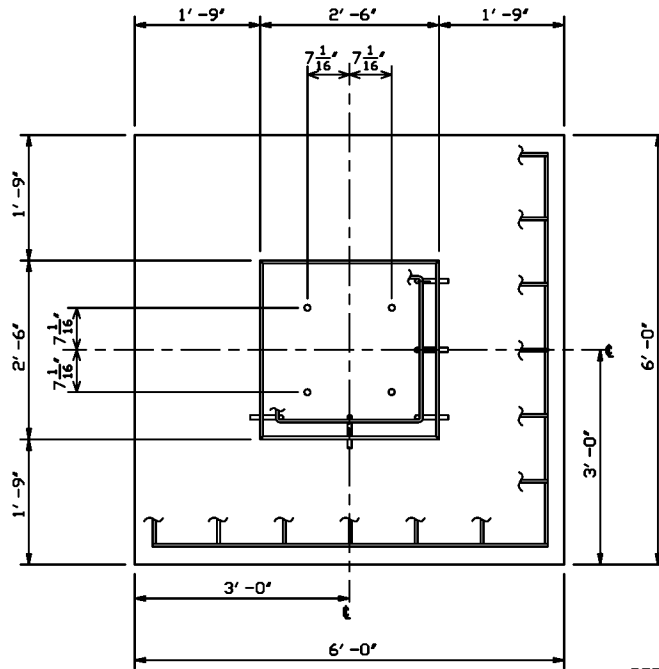
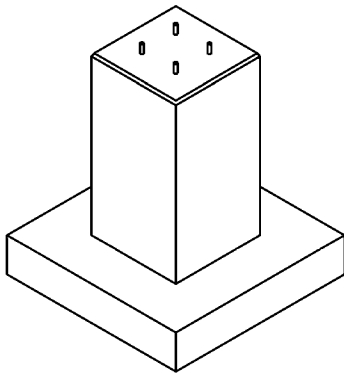
- * FOR CERTAIN APPLICATIONS IN THE PLATTSBURGH DIVISION, THE FOUNDATION DEPTH DIMENSIONS MUST BE INCREASED TO 6'-0" FROM GRADE TO TOP OF FOOTING AND 7'-8" OVERALL. ALSO, THE LENGTH OF RE-INFORCING ROD, ITEM NO. 6, MUST BE INCREASED BY 2'-0".

BILL OF MATERIAL

ITEM NO.	QTY.	STOCK SYMBOL	DESCRIPTION
1	4	021-006-01	BOLT, STEEL ANCHOR, GALV, MK FB10 1 1/4" DIA X 4'11" LG, COMPLETE WITH GALV NUT, WASHERS AND PALNUT, PER SFD-AAB-AZ
2	2.4	800-400-02	CONCRETE, GRADE B, 4000 PSI, CONFORMING TO SPEC TD-1070.
3	5.5	804-400-00	EXCAVATION, CUBIC YARD
4	28	820-010-37	ROD STEEL REINFORCING 1/2" R-100 PER NYSEG DWG. #SFD-ARR-AZ
5	5	820-010-68	ROD STEEL REINFORCING 1/2" R-188 PER NYSEG DWG. #SFD-ARR-AZ
* 6	8	820-020-56	ROD STEEL REINFORCING 3/4" R-234 PER NYSEG DWG. #SFD-ARR-AZ

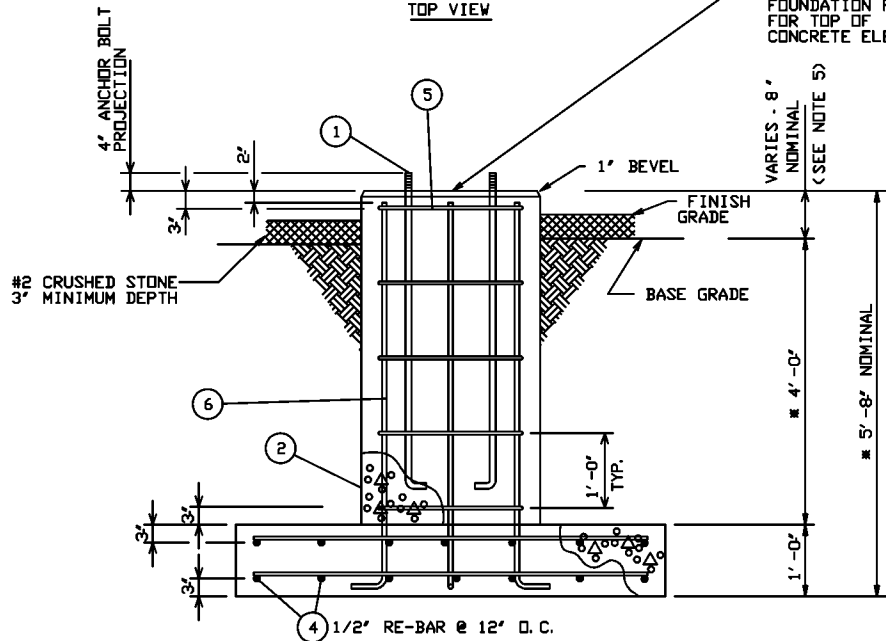
MAXIMUM ALLOWABLE LOADING

COMPRESSION - 90,000 LBS.
UPLIFT - 16,000 LBS.
OVERTURNING MOMENT - 35 FT - KIPS



TOP VIEW

REFER TO PROJECT FOUNDATION PLAN FOR TOP OF CONCRETE ELEVATION



SIDE VIEW

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Property of New York State Electric & Gas Corp.

DR. TES
CK. TES RSB
APP. JWA

SUBSTATION STANDARD
FOUNDATION DETAIL FOR 60 FT. HIGH LIGHTNING MAST
RECTANGULAR PIER WITH FOOTING
14.125' X 14.125' BOLT PATTERN

ISSUE
3
DATE
8/17/00

NYSEG

SFD-P14-AC

BILL OF MATERIAL

ITEM NO.	QTY.	SAP MATERIAL ID NUMBER	STOCK SYMBOL	DESCRIPTION
1	4	1002100401	021-004-01	BOLT, STEEL ANCHOR, GALV, MK F82, 1" DIA X 2'-9" LG, COMPLETE WITH GALV NUT, 2 FLAT WASHERS AND PALNUT, PER NYSEG DWG #SFD-ARR-AZ
2	2.1	-----	800-400-02	CONCRETE, GRADE 8, 4000 PSI, CONFORMING TO SPEC TD-1070.
3	4.6	-----	804-400-00	EXCAVATION, CUBIC YARD
4	20	1082001024	820-010-24	ROD STEEL REINFORCING PER NYSEG DWG. #SFD-ARR-AZ 1/2" R-63
5	5	1082001068	820-010-68	ROD STEEL REINFORCING PER NYSEG DWG. #SFD-ARR-AZ 1/2" R-188
*6	8	1082002056	820-020-56	ROD STEEL REINFORCING PER NYSEG DWG. #SFD-ARR-AZ 3/4" R-234

GENERAL NOTES

- THIS FOUNDATION IS DESIGNED FOR LOW PROFILE STR. WITH 14"X14" ANCHOR BOLT PATTERN.
- CONCRETE SHALL BE 4000 P.S.I. CONTAINING ADMIXTURES FOR AIR ENTRAINMENT AND A WATER REDUCING AGENT PER SPECIFICATION TD-1070.
- BACKFILL WITH WELL COMPACTED SOIL FROM EXCAVATION.
- UNLESS OTHERWISE INDICATED ON FOUNDATION PLAN, ANCHOR BOLTS ARE PARALLEL TO GRID LINES.
- FOUNDATION HEIGHT ABOVE BASE GRADE IS A MINIMUM OF 4" AND CAN BE 12" OR MORE, BUT IS TYPICALLY ABOUT 8". THIS DIMENSION VARIES BECAUSE THE BASE GRADE IS SLOPED FOR DRAINAGE WHILE THE TOP OF CONCRETE ELEVATION IS GENERALLY CONSTANT FOR A LARGE GROUP OF FOUNDATIONS. REBARS ARE PROPERLY DIMENSIONED FOR THE TYPICAL 8" CASE. THEY CAN BE ADAPTED FOR USE WITH ANY ABOVE GRADE EXPOSURE. DEPTH OF FOUNDATION BELOW BASE GRADE MUST BE AT LEAST THAT SHOWN ON THE DETAIL DRAWING.

MAXIMUM ALLOWABLE LOADING

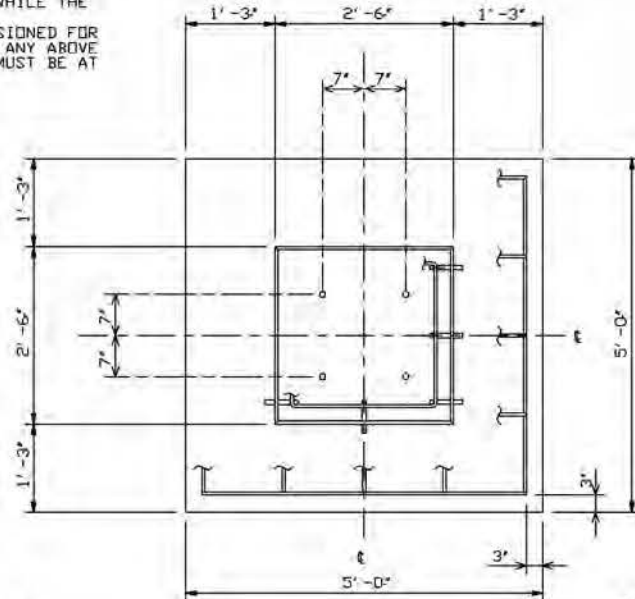
COMPRESSION - 70,000 LBS.
 UPLIFT - 12,000 LBS.
 OVERTURNING MOMENT - 23 FT - KIPS

REFERENCE:

NYSEG SPECIFICATION SP-1445
 'INSTALLATION OF SUBSTATION FOUNDATIONS'

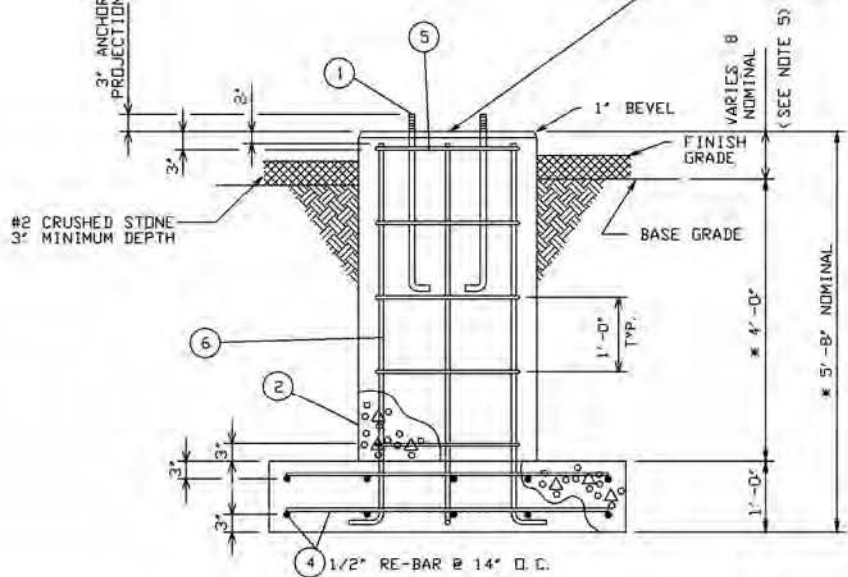
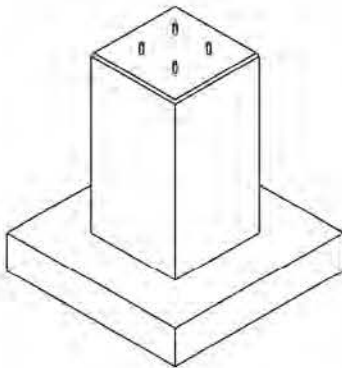
'SIMILAR AUGERED PIER FOUNDATION'
 STANDARD DETAIL SFD-P14-AB

- FOR CERTAIN APPLICATIONS IN THE PLATTSBURGH DIVISION, THE FOUNDATION DEPTH DIMENSIONS MUST BE INCREASED TO 6'-0" FROM GRADE TO TOP OF FOOTING AND 7'-8" OVERALL. ALSO, THE LENGTH OF RE-INFORCING ROD, ITEM NO. 6, MUST BE INCREASED BY 2'-0".
- THE EXCAVATION FOR THIS APPLICATION IS GREATER THAN 5 FEET DEEP. SLOPING OR SHORING OF THE SIDES OF THE EXCAVATION IN ACCORDANCE WITH OSHA 29 CFR 1910 SUBPART F WILL BE REQUIRED.



TOP VIEW

REFER TO PROJECT FOUNDATION PLAN FOR TOP OF CONCRETE ELEVATION



SIDE VIEW

DR. JGB
 CK. XXX
 APP. XXX

SUBSTATION STANDARD
 FOUNDATION DETAIL FOR LOW PROFILE STRUCTURE
 RECTANGULAR PIER WITH FOOTING
 14"X14" BOLT PATTERN

ISSUE
 4
 DATE
 9/22/04

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SFD-P20-AC

BILL OF MATERIAL

ITEM NO.	QTY.	SAP MATERIAL ID NUMBER	STOCK SYMBOL	DESCRIPTION
1	4	1002100401	021-004-01	BOLT, STEEL ANCHOR, GALV, MK FR2, 1" DIA X 2'-9" LG, COMPLETE WITH GALV NUT, 2 FLAT WASHERS AND PALNUT, PER NYSEG DWG #SFD-AAB-AZ
2	2.1	-----	800-400-02	CONCRETE, GRADE B, 4000 PSI, CONFORMING TO SPEC TD-1070.
3	4.6	-----	804-400-00	EXCAVATION, CUBIC YARD
4	20	1082001024	820-010-24	ROD STEEL REINFORCING 1/2" R-63 PER NYSEG DWG. #SFD-ARR-AZ
5	5	1082001068	820-010-68	ROD STEEL REINFORCING 1/2" R-188 PER NYSEG DWG. #SFD-ARR-AZ
*6	8	1082002056	820-020-56	ROD STEEL REINFORCING 3/4" R-234 PER NYSEG DWG. #SFD-ARR-AZ

GENERAL NOTES

- THIS FOUNDATION IS DESIGNED FOR LOW PROFILE STR. WITH 20" X 20" ANCHOR BOLT PATTERN.
- CONCRETE SHALL BE 4000 P.S.I. CONTAINING ADMIXTURES FOR AIR ENTRAINMENT AND A WATER REDUCING AGENT PER SPECIFICATION TD-1070.
- BACKFILL WITH WELL COMPACTED SOIL FROM EXCAVATION.
- UNLESS OTHERWISE INDICATED ON FOUNDATION PLAN, ANCHOR BOLTS ARE PARALLEL TO GRID LINES.
- FOUNDATION HEIGHT ABOVE BASE GRADE IS A MINIMUM OF 4' AND CAN BE 12' OR MORE, BUT IS TYPICALLY ABOUT 8'. THIS DIMENSION VARIES BECAUSE THE BASE GRADE IS SLOPED FOR DRAINAGE WHILE THE TOP OF CONCRETE ELEVATION IS GENERALLY CONSTANT FOR A LARGE GROUP OF FOUNDATIONS. REBARS ARE PROPERLY DIMENSIONED FOR THE TYPICAL 8" CASE. THEY CAN BE ADAPTED FOR USE WITH ANY ABOVE GRADE EXPOSURE. DEPTH OF FOUNDATION BELOW BASE GRADE MUST BE AT LEAST THAT SHOWN ON THE DETAIL DRAWING.

REFERENCE

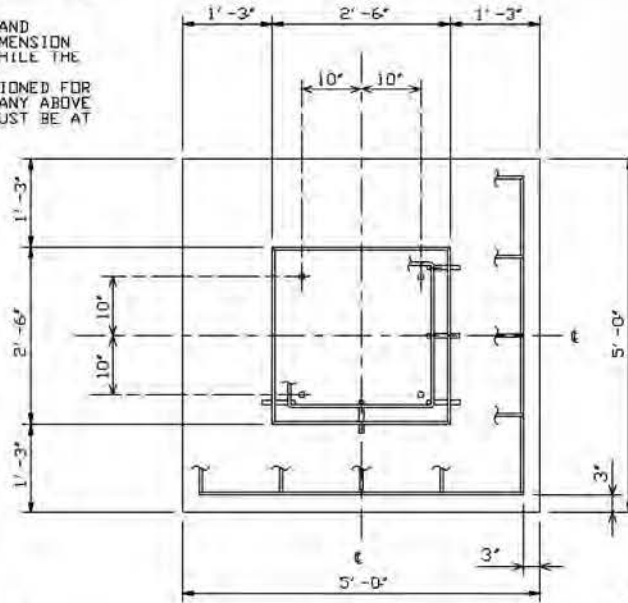
NYSEG SPECIFICATION SF-1445
INSTALLATION OF SUBSTATION FOUNDATIONS

SIMILAR AUGERED PIER FOUNDATION
STANDARD DETAIL SFD-P20-AB

- FOR CERTAIN APPLICATIONS IN THE PLATTSBURGH DIVISION, THE FOUNDATION DEPTH DIMENSIONS MUST BE INCREASED TO 6'-0" FROM GRADE TO TOP OF FOOTING AND 7'-8" OVERALL. ALSO, THE LENGTH OF RE-INFORCING ROD, ITEM NO. 6, MUST BE INCREASED BY 2'-0". THE EXCAVATION FOR THIS APPLICATION IS GREATER THAN 5 FEET DEEP. SLOPING OR SHORING OF THE SIDES OF THE EXCAVATION IN ACCORDANCE WITH OSHA 29 CFR 1910 SUBPART P WILL BE REQUIRED.

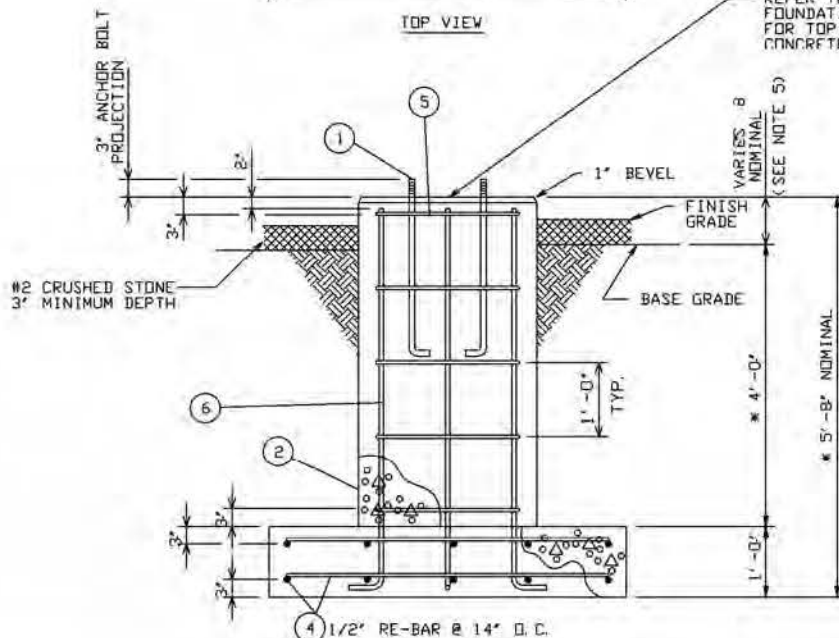
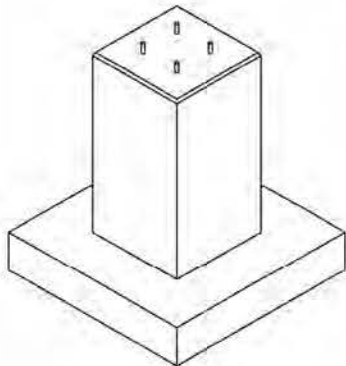
MAXIMUM ALLOWABLE LOADING

COMPRESSION - 70,000 LBS.
UPLIFT - 12,000 LBS.
OVERTURNING MOMENT - 23 FT - KIPS



TOP VIEW

REFER TO PROJECT FOUNDATION PLAN FOR TOP OF CONCRETE ELEVATION



SIDE VIEW

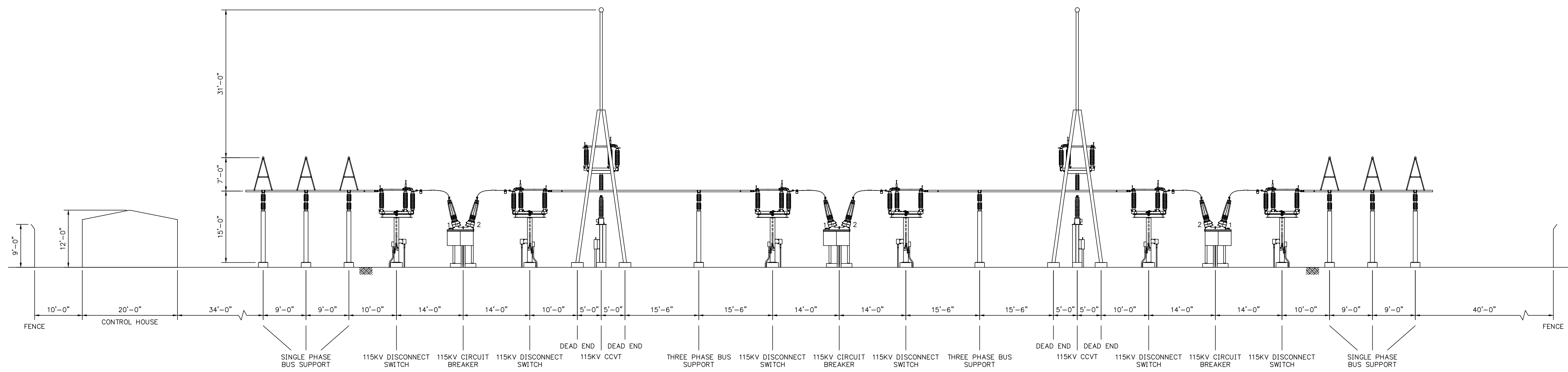
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DR. JGB
CK. XXX
APP. XXX

SUBSTATION STANDARD
FOUNDATION DETAIL FOR LOW PROFILE STRUCTURE
RECTANGULAR PIER WITH FOOTING
20" X 20" BOLT PATTERN

ISSUE
4
DATE
9/10/04





GHENT SWITCHING STATION			
STATION GENERAL ARRANGEMENT ELEVATION VIEW			
DR. AKP	DES. BGC	CK. RJC	APP. ?
SCALE: 3/32" = 1'-0"		APPROVAL DATE: 7/16/2012	
FILE: SKETCH 6.DWG			
NYSEG		SK-006	

REV. NO.	DATE	DESCRIPTION	DR.	CK.	APP.