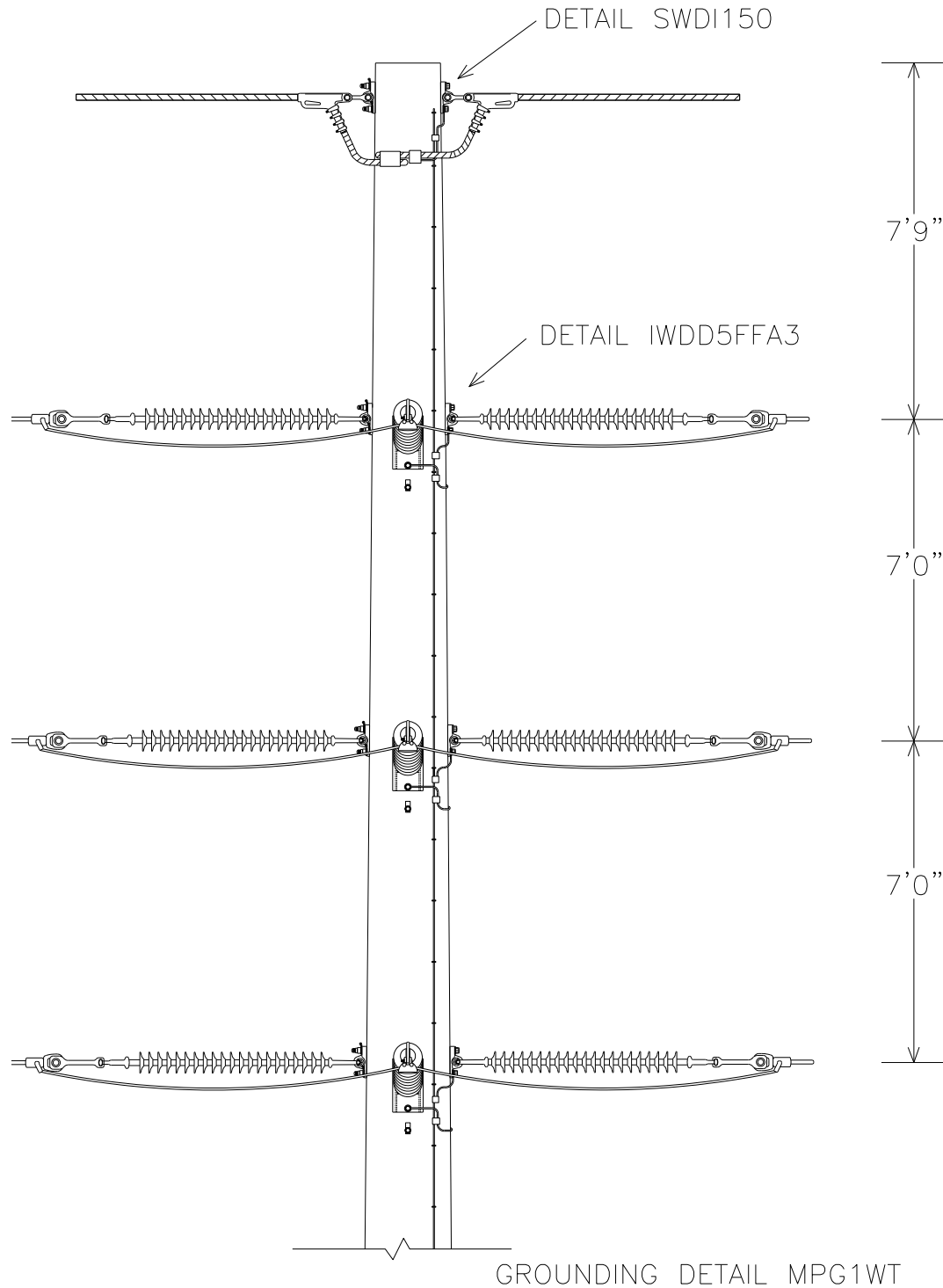


# 69KV WOOD STRUCTURES INDEX

ITEM		PAGE
1.	A1142C: DOUBLE DEADEND 150°, FULL TENSION TO FULL TENSION, 3-PHASE	STW69-2
2.	A1142Q: DOUBLE DEADEND 150°, SLACK TENSION TO SLACK TENSION, 3-PHASE	STW69-8
3.	A1144C: DOUBLE DEADEND 90°, FULL TENSION TO FULL TENSION, 3-PHASE	STW69-14
4.	A1144Q: DOUBLE DEADEND 90°, SLACK TENSION TO SLACK TENSION, 3-PHASE	STW69-20
5.	A1145C: SINGLE DEADEND, FULL TENSION, 3-PHASE	STW69-26
6.	A1145Q: SINGLE DEADEND, SLACK TENSION, 3-PHASE	STW69-32
7.	A1151: SINGLE POST, UNGUYED, TANGENT SHIELD, 3-PHASE	STW69-38
8.	A1152A: SINGLE POST, BACK GUYED, ANGLE SHIELD, 3-PHASE	STW69-44
9.	A2151: DOUBLE POST, TANGENT SHIELD, 3-PHASE	STW69-50
10.	A2153: DOUBLE POST, FRONT GUYED, ANGLE SHIELD, 3-PHASE	STW69-56
11.	A2443: DOUBLE DEADEND 90°, FULL TENSION TO FULL TENSION, DBL CKT	STW69-64
12.	A2444: DOUBLE DEADEND 90°, SLACK TENSION TO SLACK TENSION, DBL CKT	STW69-74
13.	A3411: HORIZONTAL SUSPENSION, 3-PHASE	STW69-84
14.	A3742C: 3-POLE DOUBLE DEADEND, 3-PHASE	STW69-92
15.	A5151: MODIFIED DELTA, 3-PHASE	STW69-106
16.	A6151: SINGLE POST, DELTA, 3-PHASE	STW69-114

# A1142C

69KV, DOUBLE DEADEND 150°, FULL TENSION TO FULL TENSION, 3-PHASE  
CONDUCTOR OPTIONS: 556S, 954S



# A1142C PLATES

## A1142C BASE

NO.	ITEM ID	QTY	DESCRIPTION
1	ADCVF 001	6	VOID FILLER COMPOUND FOR DEADEND ASSEMBLY
7	BALFI 007	3	BALL Y-CLEVIS, CLASS 52-3/5
11	BOLDA 019	3	DOUBLE ARMING BOLT, 3/4" X 22", WITH 4 SQUARE NUTS ATTACHED
12	BOLMS 036	4	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 037	1	MACHINE BOLT, 3/4" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 039	3	MACHINE BOLT, 3/4" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	1	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	1	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 003	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (3#6 AW), ALUMINUM
31	CNNCP 016	7	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	21 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 001	4	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	14	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
69	SOCEY 003	3	SOCKET EYE, CLASS 52-3/5
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
72	TEEDE 002	11	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	11	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	9	SQUARE CURVED WASHER FOR 3/4" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	14	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

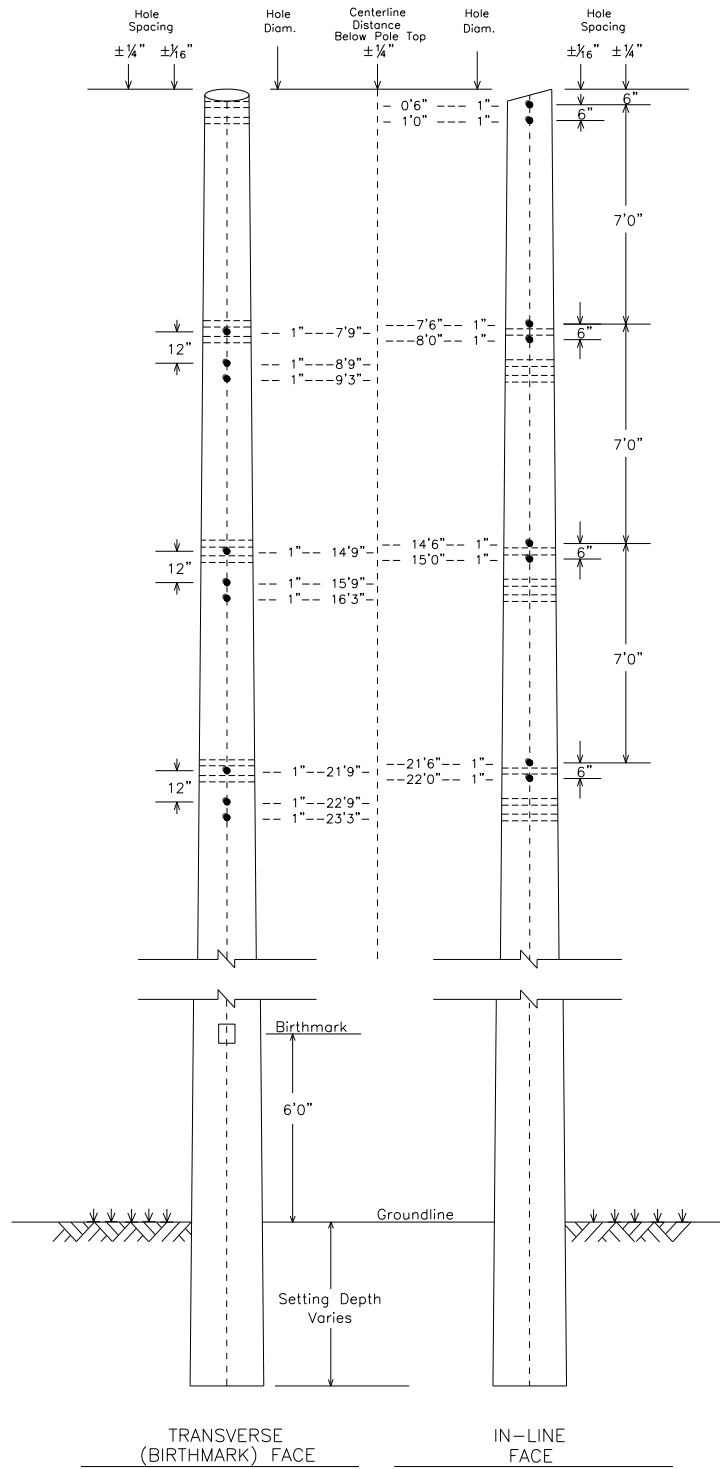
## A1142C\*556S

20	CLAJU 005	3	CUSHION GRIP SUSPENSION CLAMP FOR 556 ACSR
26	CLEHL 004	6	SOCKET-Y CLEVIS, CLASS 52-3, L = 11", PIN = 5/8" HOT DIPPED GALV.
42	DEACB 003	6	DEADEND COMPRESSION ASSEMBLY FOR 556 ACSR, OVAL EYE
50	INSSU 008	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-5

## A1142C\*954S

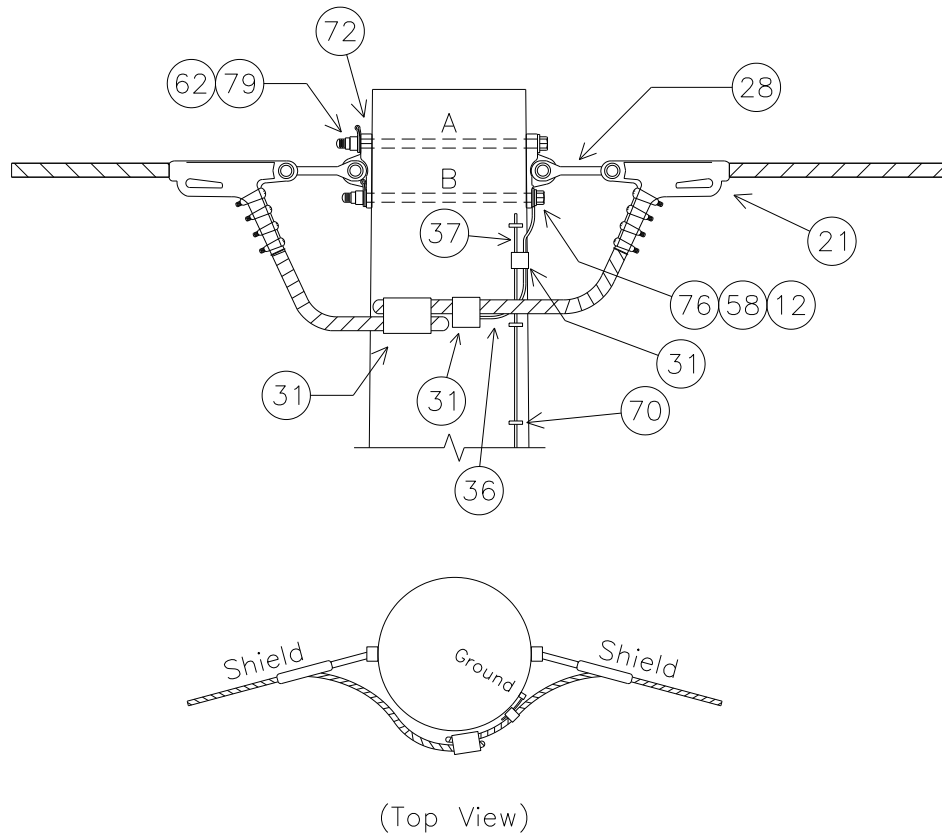
20	CLAJU 007	3	CUSHION GRIP SUSPENSION CLAMP FOR 954 ACSR
26	CLEHL 005	6	SOCKET-Y CLEVIS, CLASS 52-8/11, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 005	6	DEADEND COMPRESSION ASSEMBLY FOR 954 ACSR, OVAL EYE
50	INSDI 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11

# A1142C DRILLING DETAIL



## SWDI150

SHIELD FOR WOOD POLES  
DOUBLE INLINE 150°



NOTE: SEE MISCELLANEOUS DETAIL MBA1 FOR BOLT ASSEMBLY DETAILS

UPPER BOLT LENGTH (INCHES)	13.7
LOWER BOLT LENGTH (INCHES)	12.3

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

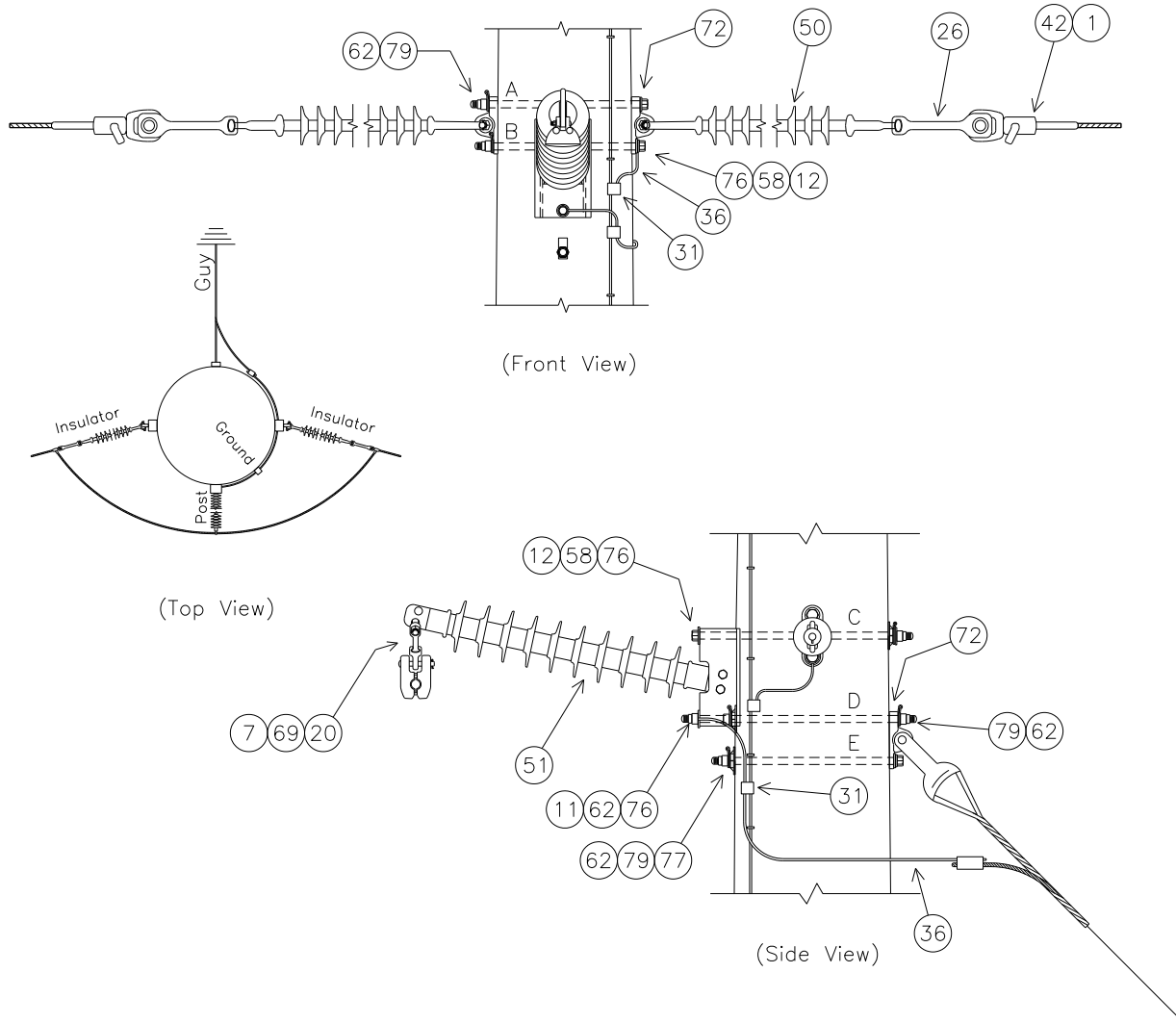
NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 003	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (3#6 AW), ALUMINUM
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	3 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
58	LUGGR 001	1	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	2	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

## IWDD5FFA3

INSULATOR FOR WOOD POLES

DOUBLE DEAD-END 150°, FULL TENSION TO FULL TENSION, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

DEADEND INSULATOR 7/8"	TOP	MIDDLE	BOTTOM
UPPER BOLT 'A' LENGTH (INCHES)	14.8	15.6	16.4
LOWER BOLT 'B' LENGTH (INCHES)	13.4	14.2	15.0

POST INSULATOR 3/4"	TOP	MIDDLE	BOTTOM
UPPER BOLT 'C' LENGTH (INCHES)	18.1	18.9	19.7
MIDDLE BOLT 'D' LENGTH (INCHES) DA	19.4	20.2	21.0
LOWER BOLT 'E' LENGTH (INCHES)	12.9	13.7	14.5

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

## IWDD5FFA3 PLATES

## IWDD5FFA3 BASE

NO.	ITEM ID	QTY	DESCRIPTION
1	ADCVF 001	6	VOID FILLER COMPOUND FOR DEADEND ASSEMBLY
7	BALFI 007	3	BALL Y-CLEVIS, CLASS 52-3/5
11	BOLDA 019	3	DOUBLE ARMING BOLT, 3/4" X 22", WITH 4 SQUARE NUTS ATTACHED
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 037	1	MACHINE BOLT, 3/4" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 039	3	MACHINE BOLT, 3/4" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	1	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	1	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
31	CNNCP 016	6	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	18 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 001	3	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	12	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
69	SOCEY 003	3	SOCKET EYE, CLASS 52-3/5
72	TEEDE 002	9	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	9	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	9	SQUARE CURVED WASHER FOR 3/4" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	12	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWDD5FFA3\*556S

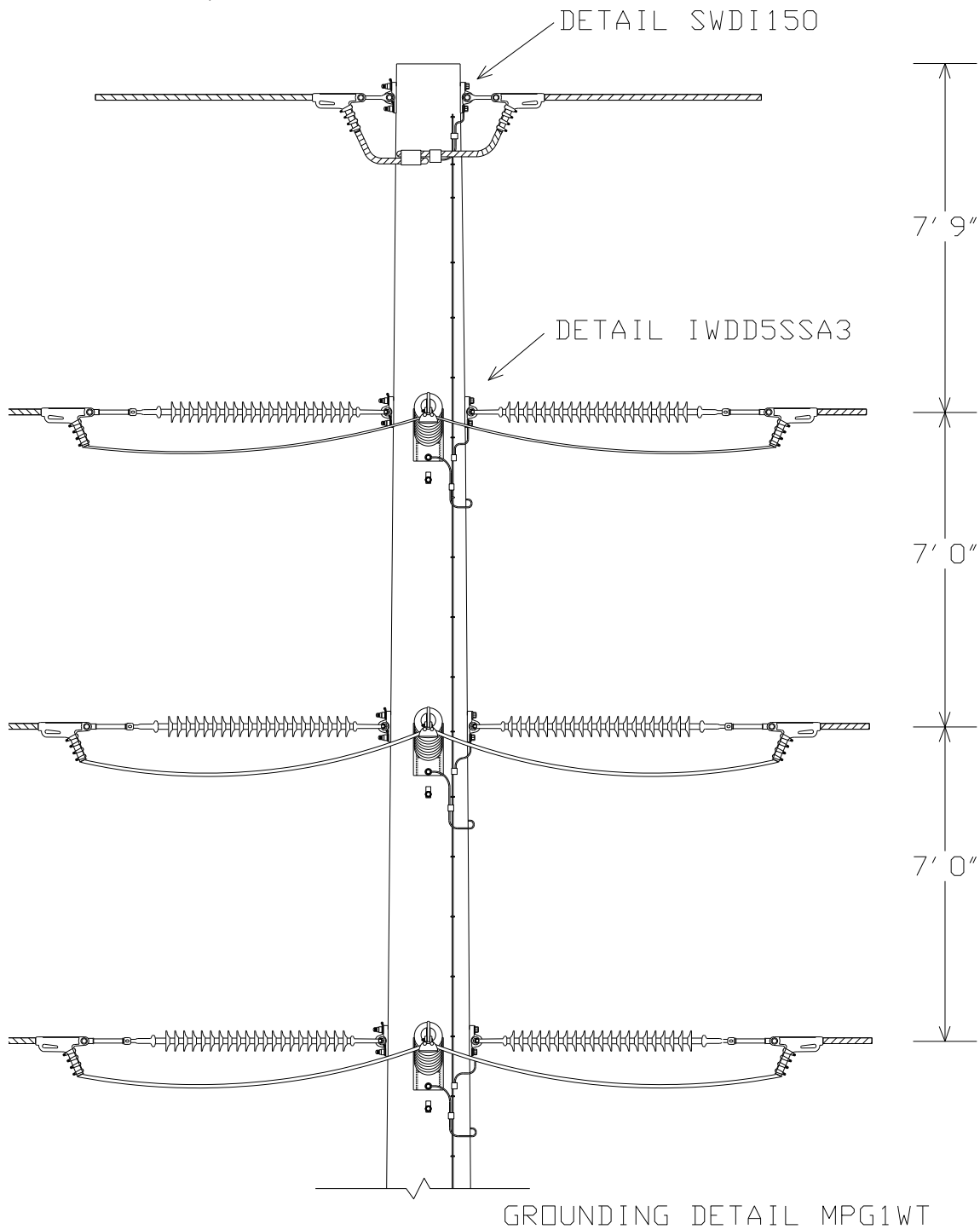
NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 005	3	CUSHION GRIP SUSPENSION CLAMP FOR 556 ACSR
26	CLEHL 004	6	SOCKET-Y CLEVIS, CLASS 52-3, L = 11", PIN = 5/8" HOT DIPPED GALV.
42	DEACB 003	6	DEADEND COMPRESSION ASSEMBLY FOR 556 ACSR, OVAL EYE
50	INSSU 008	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-5

## IWDD5FFA3\*954S

NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 007	3	CUSHION GRIP SUSPENSION CLAMP FOR 954 ACSR
26	CLEHL 005	6	SOCKET-Y CLEVIS, CLASS 52-8/11, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 005	6	DEADEND COMPRESSION ASSEMBLY FOR 954 ACSR, OVAL EYE
50	INSDE 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11

# A1142Q

69KV, DOUBLE DEADEND 150°, SLACK TENSION TO SLACK TENSION, 3-PHASE  
CONDUCTOR OPTIONS: 556S, 954S





# A1142Q PLATES

## A1142Q BASE

NO.	ITEM ID	QTY	DESCRIPTION
7	BALFI 007	3	BALL Y-CLEVIS, CLASS 52-3/5
11	BOLDA 019	3	DOUBLE ARMING BOLT, 3/4" X 22", WITH 4 SQUARE NUTS ATTACHED
12	BOLMS 036	4	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 037	1	MACHINE BOLT, 3/4" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 039	3	MACHINE BOLT, 3/4" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	1	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	1	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
26	CLEHL 008	6	SOCKET-EYE CLEVIS, CLASS 52-8/11, L = 10", EYE = 3/4" THICK W/ 13/16 OPENING, H. D. G.
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 003	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (3#6 AW), ALUMINUM
31	CNNCP 016	7	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	21 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
50	INSDE 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 001	4	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	14	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
69	SOCEY 003	3	SOCKET EYE, CLASS 52-3/5
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
72	TEEDE 002	11	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	11	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	9	SQUARE CURVED WASHER FOR 3/4" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	14	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

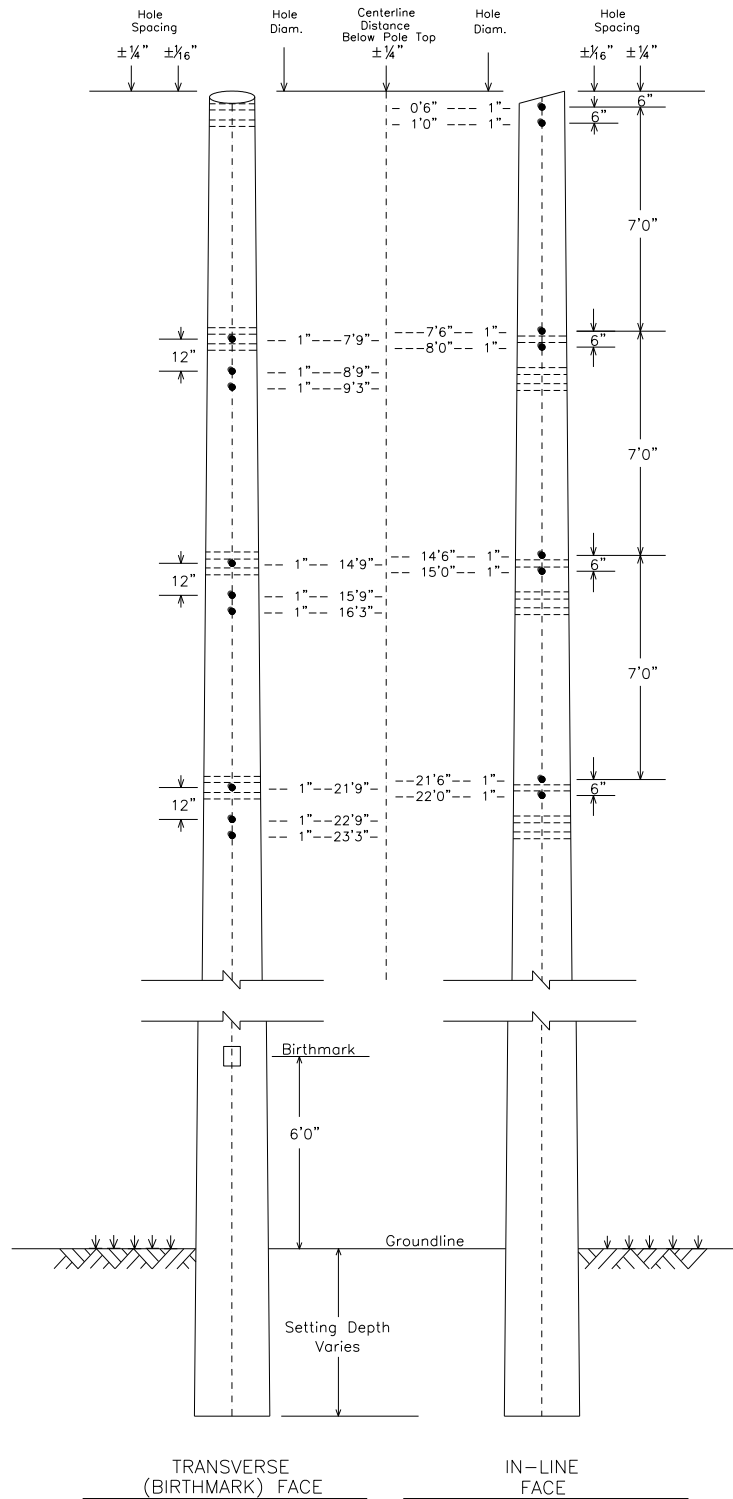
## A1142C\*556S

20	CLAJU 005	3	CUSHION GRIP SUSPENSION CLAMP FOR 556 ACSR
21	CLAQD 005	6	DEADEND CLAMP (.7 - 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 003	3	ALUM. SLEEVE JUMPER FOR 556 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

## A1142C\*954S

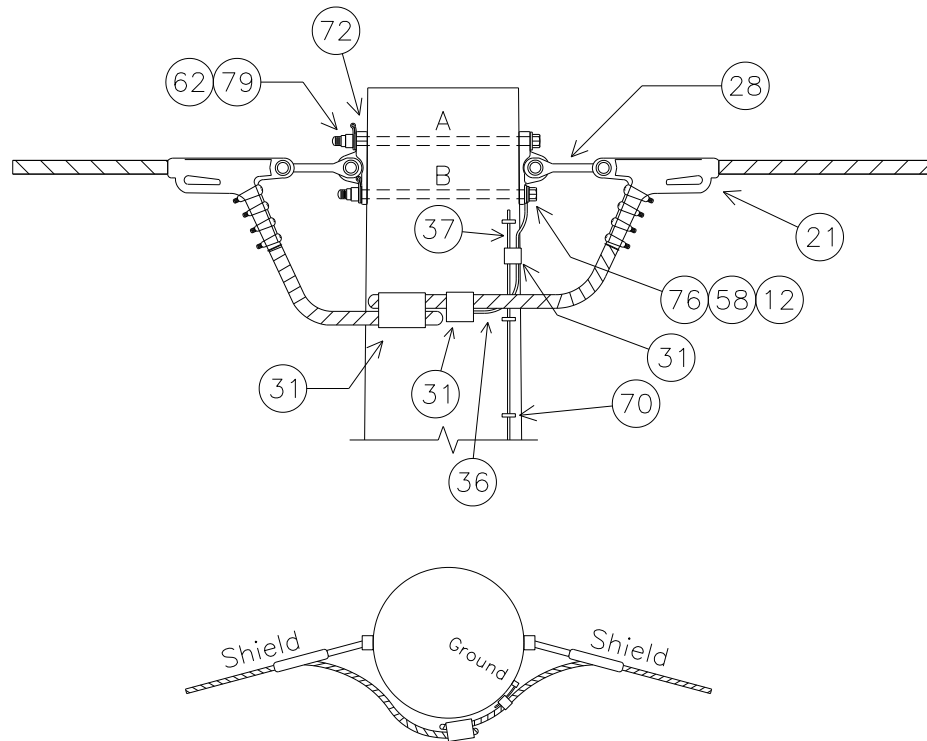
20	CLAJU 007	3	CUSHION GRIP SUSPENSION CLAMP FOR 954 ACSR
21	CLAQD 005	6	DEADEND CLAMP (.7 - 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 005	3	ALUM. SLEEVE JUMPER FOR 954 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

# A1142Q DRILLING DETAIL



## SWDI150

SHIELD FOR WOOD POLES  
DOUBLE INLINE 150°



(Top View)

NOTE: SEE MISCELLANEOUS DETAIL MBA1 FOR BOLT ASSEMBLY DETAILS

UPPER BOLT LENGTH (INCHES)	13.7
LOWER BOLT LENGTH (INCHES)	12.3

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

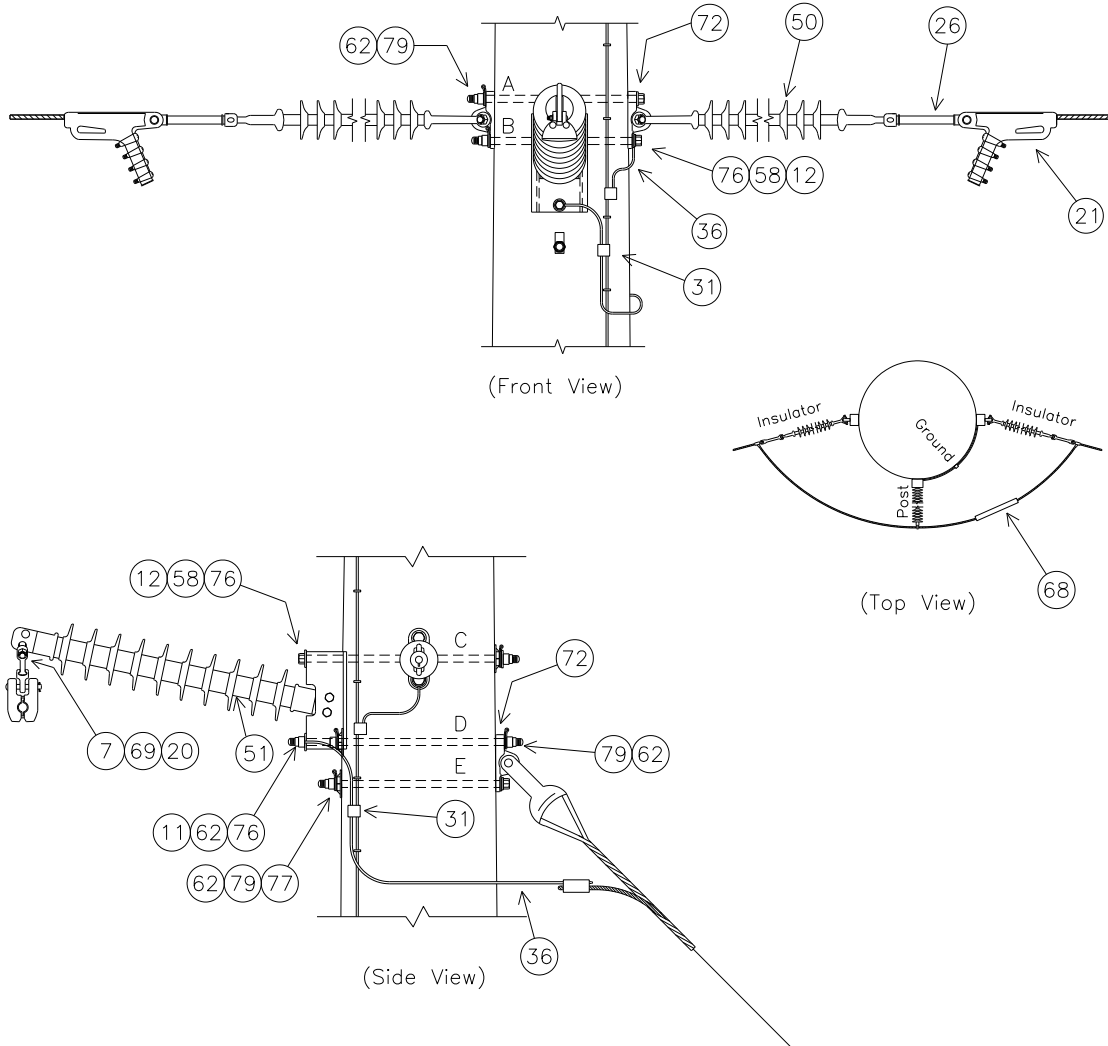
NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 003	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (3#6 AW), ALUMINUM
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	3 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
58	LUGGR 001	1	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	2	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

## IWDD5SSA3

INSULATOR FOR WOOD POLES

DOUBLE DEAD-END 150°, SLACK TENSION TO SLACK TENSION, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

DEADEND INSULATOR 7/8"	TOP	MIDDLE	BOTTOM
UPPER BOLT 'A' LENGTH (INCHES)	14.8	15.6	16.4
LOWER BOLT 'B' LENGTH (INCHES)	13.4	14.2	15.0

POST INSULATOR 3/4"	TOP	MIDDLE	BOTTOM
UPPER BOLT 'C' LENGTH (INCHES)	18.1	18.9	19.7
MIDDLE BOLT 'D' LENGTH (INCHES) DA	19.4	20.2	21.0
LOWER BOLT 'E' LENGTH (INCHES)	12.9	13.7	14.5

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

# IWDD5SSA3 PLATES

## IWDD5SSA3 BASE

NO.	ITEM ID	QTY	DESCRIPTION
7	BALFI 007	3	BALL Y-CLEVIS, CLASS 52-3/5
11	BOLDA 019	3	DOUBLE ARMING BOLT, 3/4" X 22", WITH 4 SQUARE NUTS ATTACHED
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 037	1	MACHINE BOLT, 3/4" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 039	3	MACHINE BOLT, 3/4" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	1	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	1	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
26	CLEHL 008	6	SOCKET-EYE CLEVIS, CLASS 52-8/11, L = 10", EYE = 3/4" THICK W/ 13/16 OPENING, H. D. G.
31	CNNCP 016	6	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	18 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
50	INSDE 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 001	3	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	12	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
69	SOCEY 003	3	SOCKET EYE, CLASS 52-3/5
72	TEEDE 002	9	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	9	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	9	SQUARE CURVED WASHER FOR 3/4" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	12	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWDD5SSA3\*556S

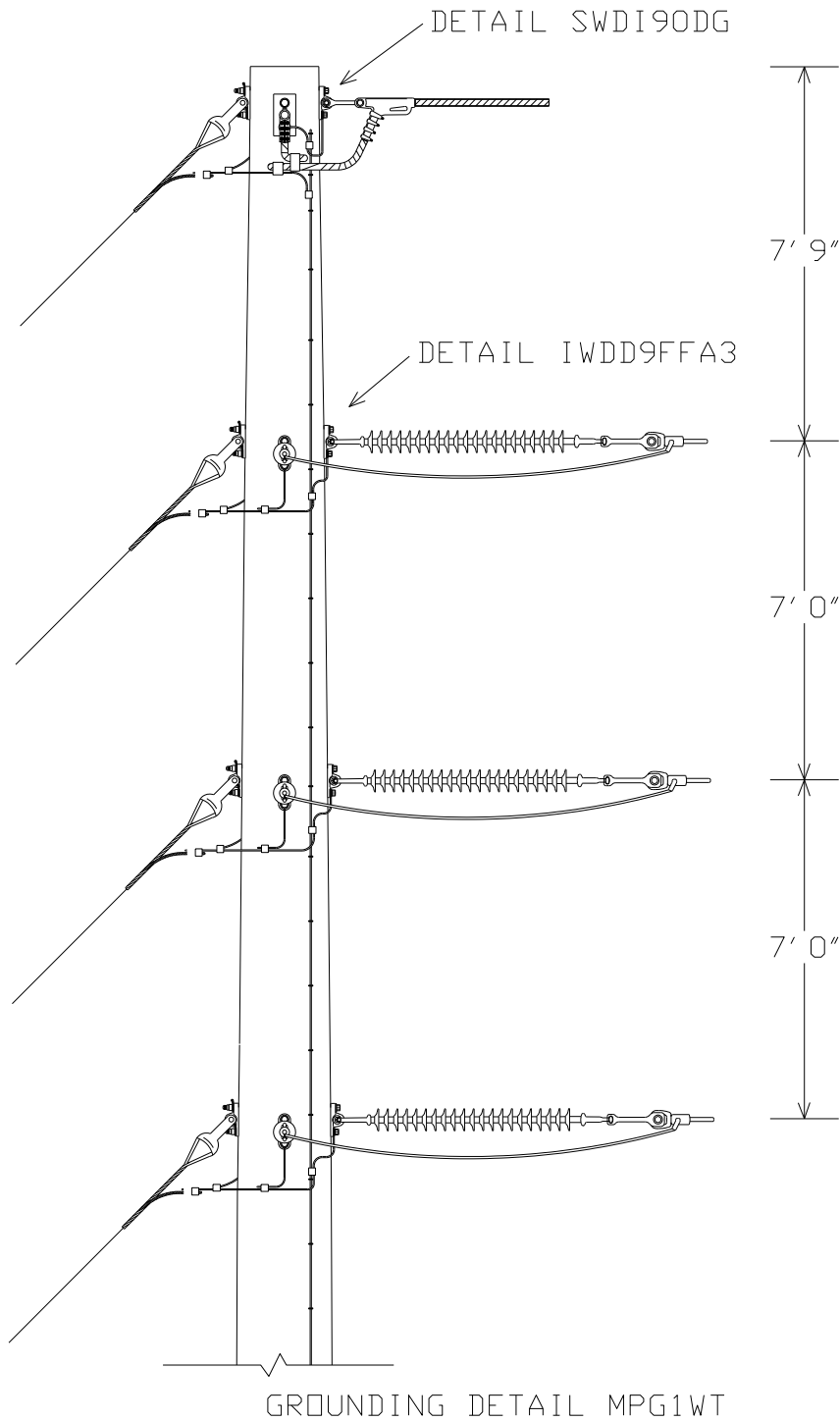
NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 005	3	CUSHION GRIP SUSPENSION CLAMP FOR 556 ACSR
21	CLAQD 005	6	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 003	3	ALUM. SLEEVE JUMPER FOR 556 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

## IWDD5SSA3\*954S

NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 007	3	CUSHION GRIP SUSPENSION CLAMP FOR 954 ACSR
21	CLAQD 005	6	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 005	3	ALUM. SLEEVE JUMPER FOR 954 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

# A1144C

69KV, DOUBLE DEADEND 90°, FULL TENSION TO FULL TENSION, 3-PHASE  
CONDUCTOR OPTIONS: 556S, 954S



# A1144C PLATES

## A1144C BASE

NO.	ITEM ID	QTY	DESCRIPTION
1	ADCVF 001	6	VOID FILLER COMPOUND FOR DEADEND ASSEMBLY
12	BOLMS 036	4	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	2	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	8	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	2	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 003	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (3#6 AW), ALUMINUM
31	CNNCP 016	11	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	37 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
58	LUGGR 001	2	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	6	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	4	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	12	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
72	TEEDE 002	16	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	4	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	12	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
79	WASSP 005	4	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	12	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

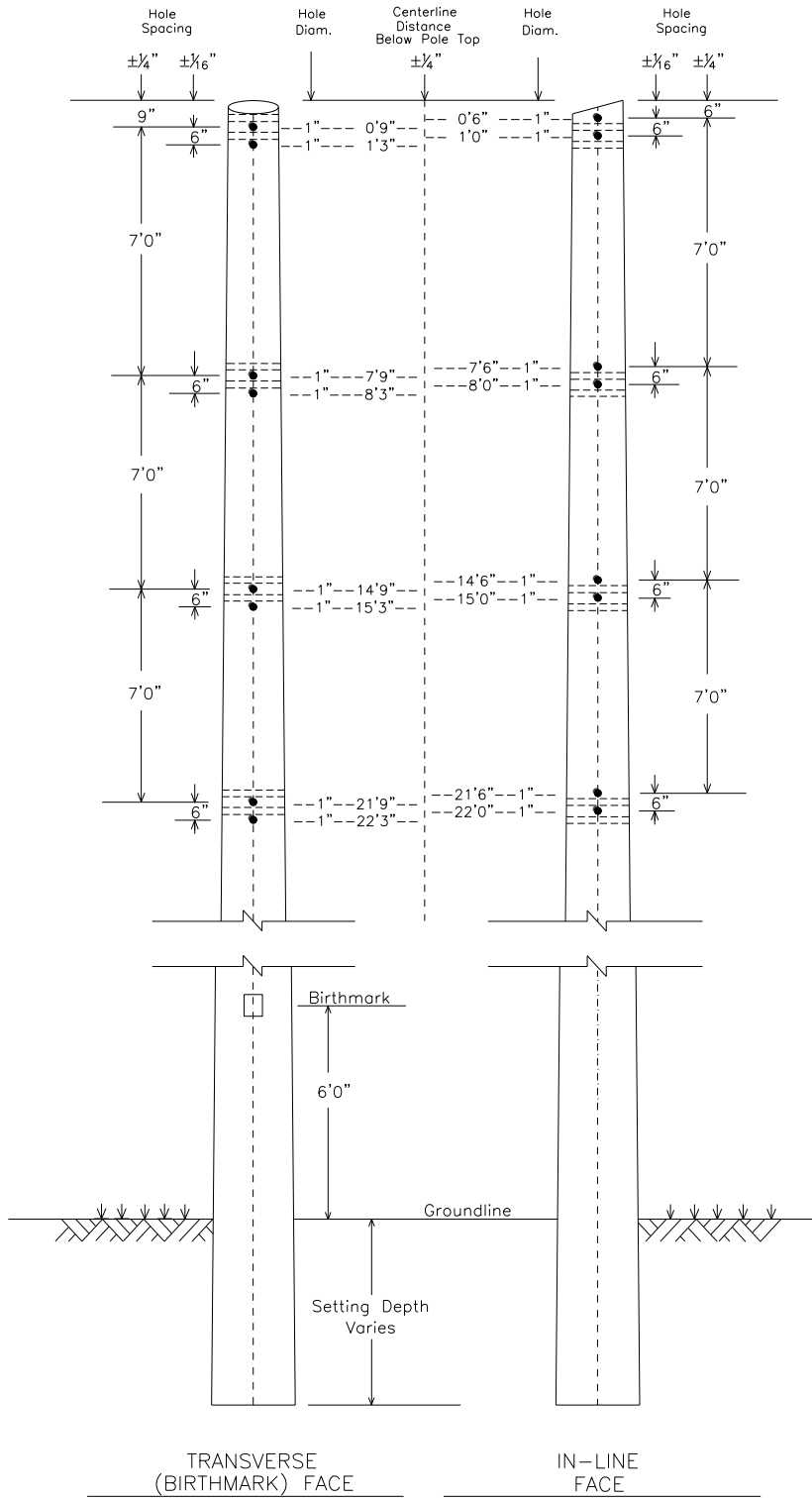
## A1144C\*556S

26	CLEHL 004	6	SOCKET-Y CLEVIS, CLASS 52-3/5, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 003	6	DEADEND COMPRESSION ASSEMBLY FOR 556 ACSR, OVAL EYE
50	INSSU 008	6	SUSPENSION SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-3/5

## A1144C\*954S

26	CLEHL 005	6	SOCKET-Y CLEVIS, CLASS 52-8/11, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 005	6	DEADEND COMPRESSION ASSEMBLY FOR 954 ACSR, OVAL EYE
50	INSDE 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11

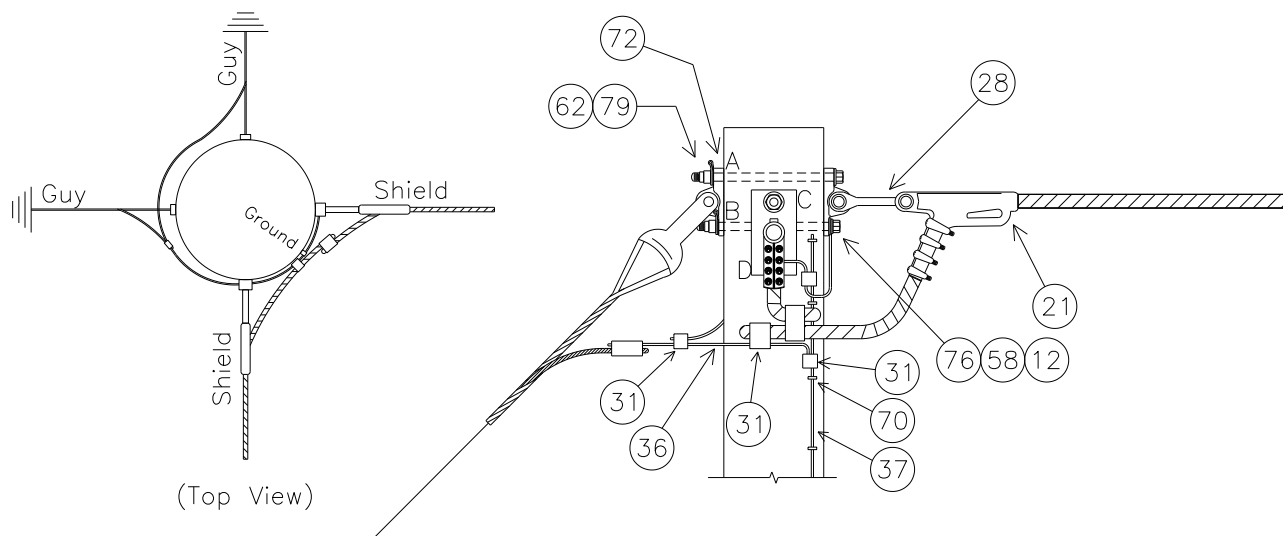
# A1144C DRILLING DETAIL





## SWDI90DG

SHIELD FOR WOOD POLES  
DOUBLE INLINE 90° WITH DOUBLE GUY



NOTE: SEE MISCELLANEOUS DETAIL MBA1 FOR BOLT ASSEMBLY DETAILS

MINIMUM REQUIRED BOLT LENGTH 'A' (INCHES)	13.7
MINIMUM REQUIRED BOLT LENGTH 'B' (INCHES)	12.5
MINIMUM REQUIRED BOLT LENGTH 'C' (INCHES)	13.7
MINIMUM REQUIRED BOLT LENGTH 'D' (INCHES)	12.6

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

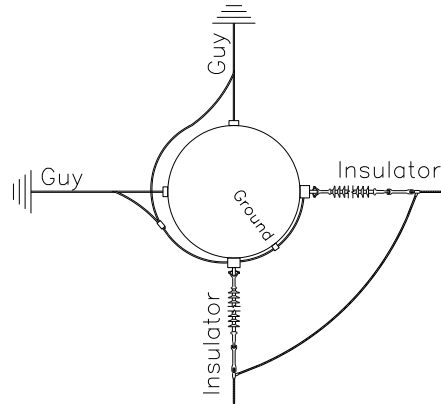
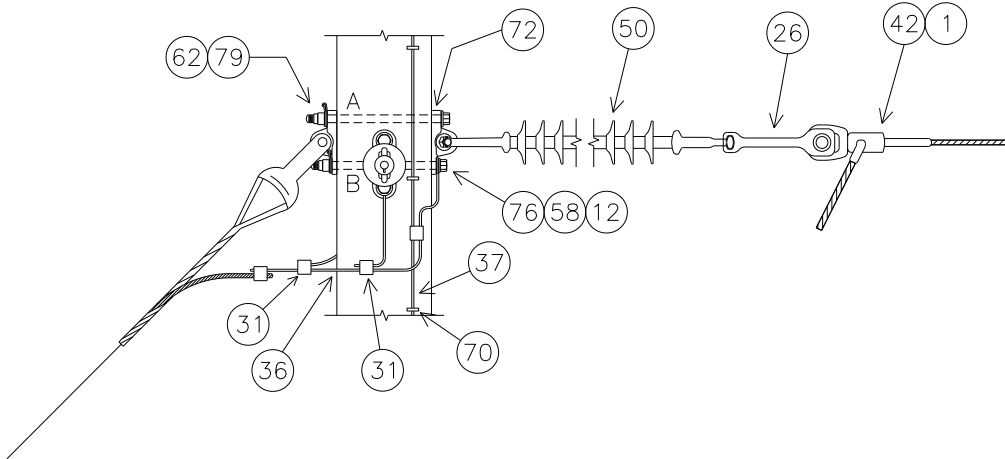
NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	4	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 003	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (3#6 AW), ALUMINUM
31	CNNCP 016	2	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
58	LUGGR 001	2	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 004	4	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	4	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	4	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	4	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

## IWDD9FFA3

INSULATOR FOR WOOD STRUCTURES

DOUBLE DEAD-END 90°, FULL TENSION TO FULL TENSION, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954S



(Top View)

NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

SUBSTRUCTURE	UPPER BRACKET			LOWER BRACKET		
	Top	Mid	Bottom	Top	Mid	Bottom
UPPER BOLT 'A' LENGTH (INCHES)	14.6	15.5	16.3	14.7	15.5	16.3
LOWER BOLT 'B' LENGTH (INCHES)	13.2	14.0	14.8	13.3	14.1	14.9

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

# IWDD9FFA3 PLATES

## IWDD9FFA3 BASE

NO.	ITEM ID	QTY	DESCRIPTION
1	ADCVF 001	6	VOID FILLER COMPOUND FOR DEADEND ASSEMBLY
12	BOLMS 048	2	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	8	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	2	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
31	CNNCP 016	9	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	30 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
58	LUGGR 002	6	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 005	12	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
72	TEEDE 002	12	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 006	12	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
79	WASSP 006	12	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWDD9FFA3\*556S

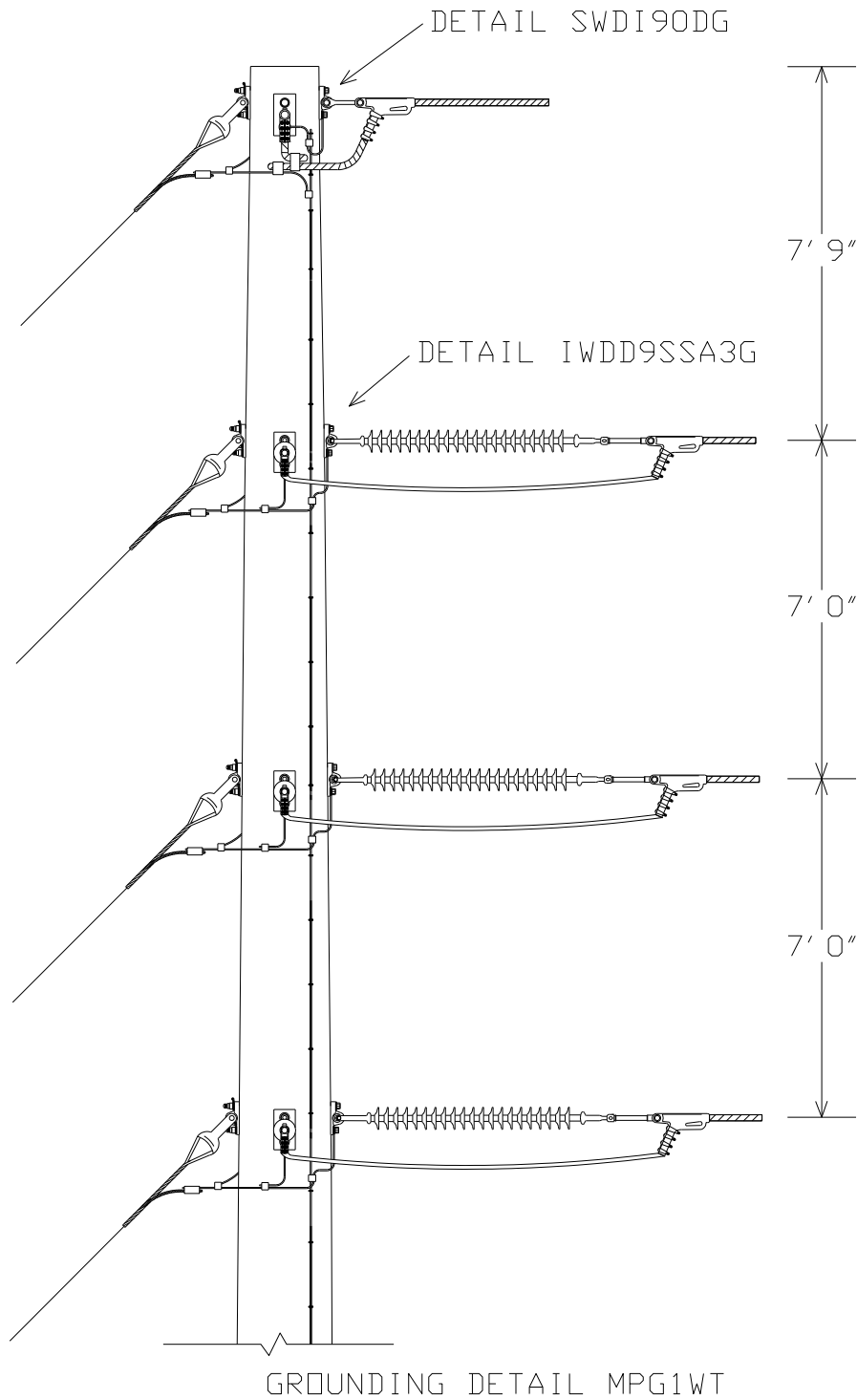
NO.	ITEM ID	QTY	DESCRIPTION
26	CLEHL 005	6	SOCKET-Y CLEVIS, CLASS 52-3/5, L = 11", HOT DIPPED GALV.
42	DEACB 003	6	DEADEND COMPRESSION ASSEMBLY FOR 556 ACSR, OVAL EYE
50	INSSU 008	6	SUSPENSION SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-3/5

## IWDD9FFA3\*954S

NO.	ITEM ID	QTY	DESCRIPTION
26	CLEHL 005	6	SOCKET-Y CLEVIS, CLASS 52-8/11, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 005	6	DEADEND COMPRESSION ASSEMBLY FOR 954 ACSR, OVAL EYE
50	INSDE 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11

# A1144Q

69KV, DOUBLE DEADEND 90°, SLACK TENSION TO SLACK TENSION, 3-PHASE  
CONDUCTOR OPTIONS: 556S, 954A, 954S



# A1144Q PLATES

## A1144Q BASE

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	4	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	2	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	8	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	2	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
26	CLEHL 008	6	SOCKET-EYE CLEVIS, CLASS 52-8/11, L = 10", EYE = 3/4" THICK W/ 13/16 OPENING, H. D. G.
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 003	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (3#6 AW), ALUMINUM
31	CNNCP 016	11	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	37 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
50	INSDE 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11
58	LUGGR 001	2	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	6	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	4	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	12	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
72	TEEDE 002	16	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	4	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	12	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
79	WASSP 005	4	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	12	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## A1144Q\*556S

21	CLAQD 005	6	DEADEND CLAMP (.7 - 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 003	3	ALUM. SLEEVE JUMPER FOR 556 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

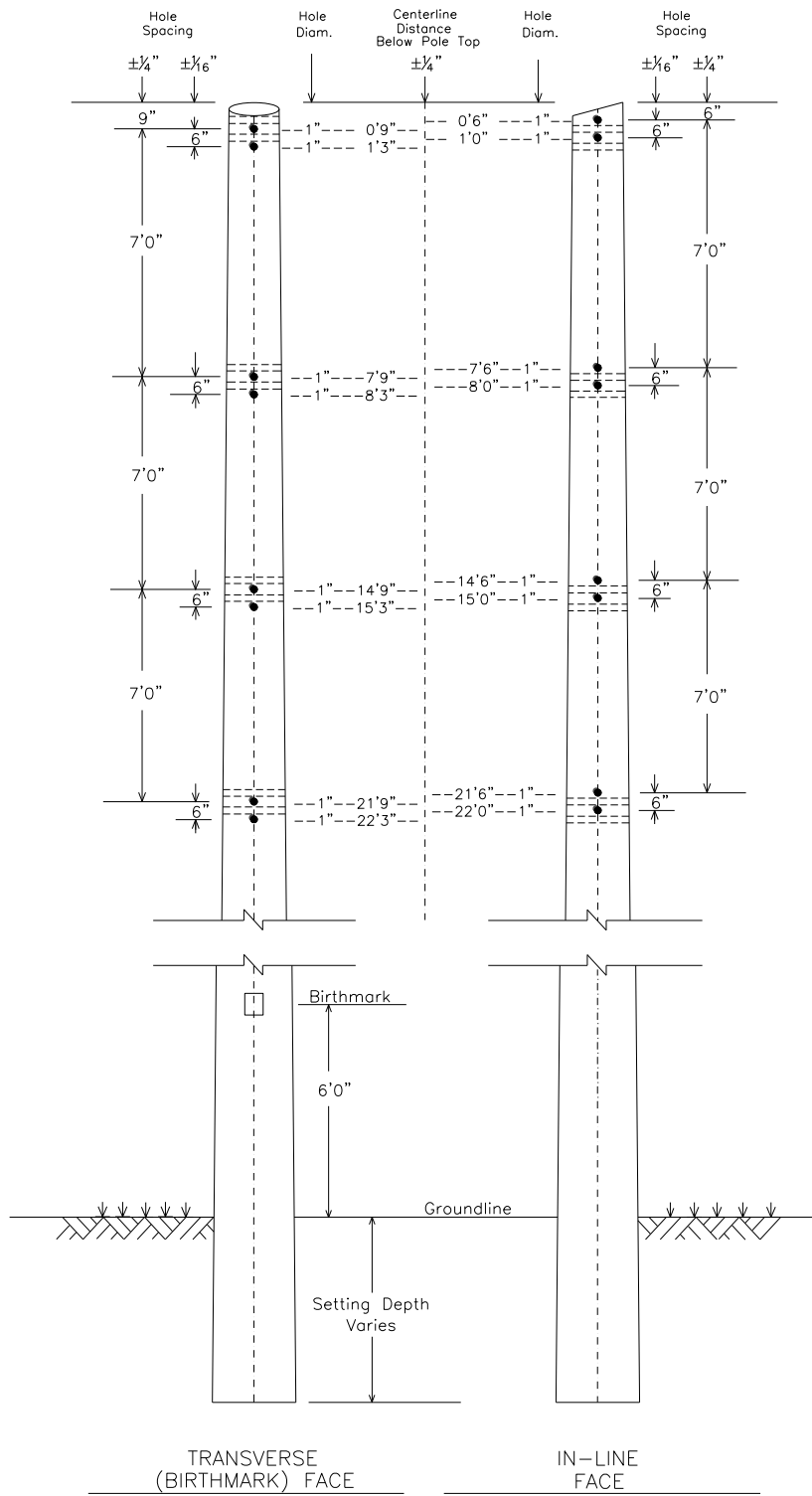
## A1144Q\*954A

21	CLAQD 005	6	DEADEND CLAMP (.7 - 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 006	3	ALUM. SLEEVE JUMPER FOR 954 AAC, COMPRESSION SPLICE, NON-TENSION ONLY

## A1144Q\*954S

21	CLAQD 005	6	DEADEND CLAMP (.7 - 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 005	3	ALUM. SLEEVE JUMPER FOR 954 ASCR, COMPRESSION SPLICE, NON-TENSION ONLY

## A1144Q DRILLING DETAIL



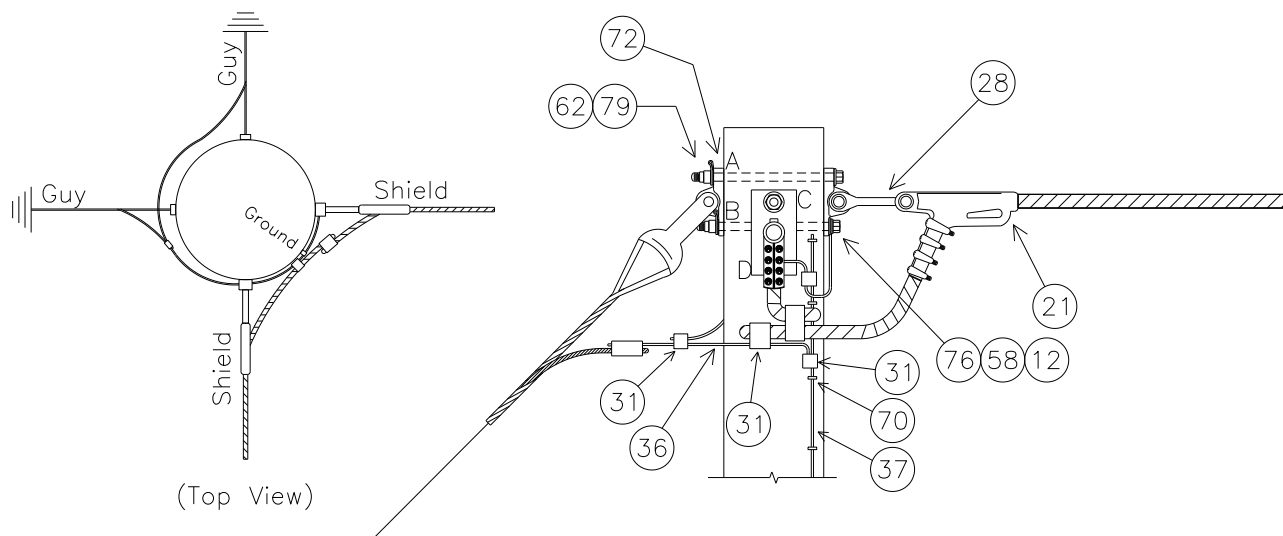
REVISÉ/REVISÉ: OCTOBRE 2013

REVISÉ/REVIEWÉ PAR: MLR

APPROVED BY: KKR

## SWDI90DG

SHIELD FOR WOOD POLES  
DOUBLE INLINE 90° WITH DOUBLE GUY



NOTE: SEE MISCELLANEOUS DETAIL MBA1 FOR BOLT ASSEMBLY DETAILS

MINIMUM REQUIRED BOLT LENGTH 'A' (INCHES)	13.7
MINIMUM REQUIRED BOLT LENGTH 'B' (INCHES)	12.5
MINIMUM REQUIRED BOLT LENGTH 'C' (INCHES)	13.7
MINIMUM REQUIRED BOLT LENGTH 'D' (INCHES)	12.6

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

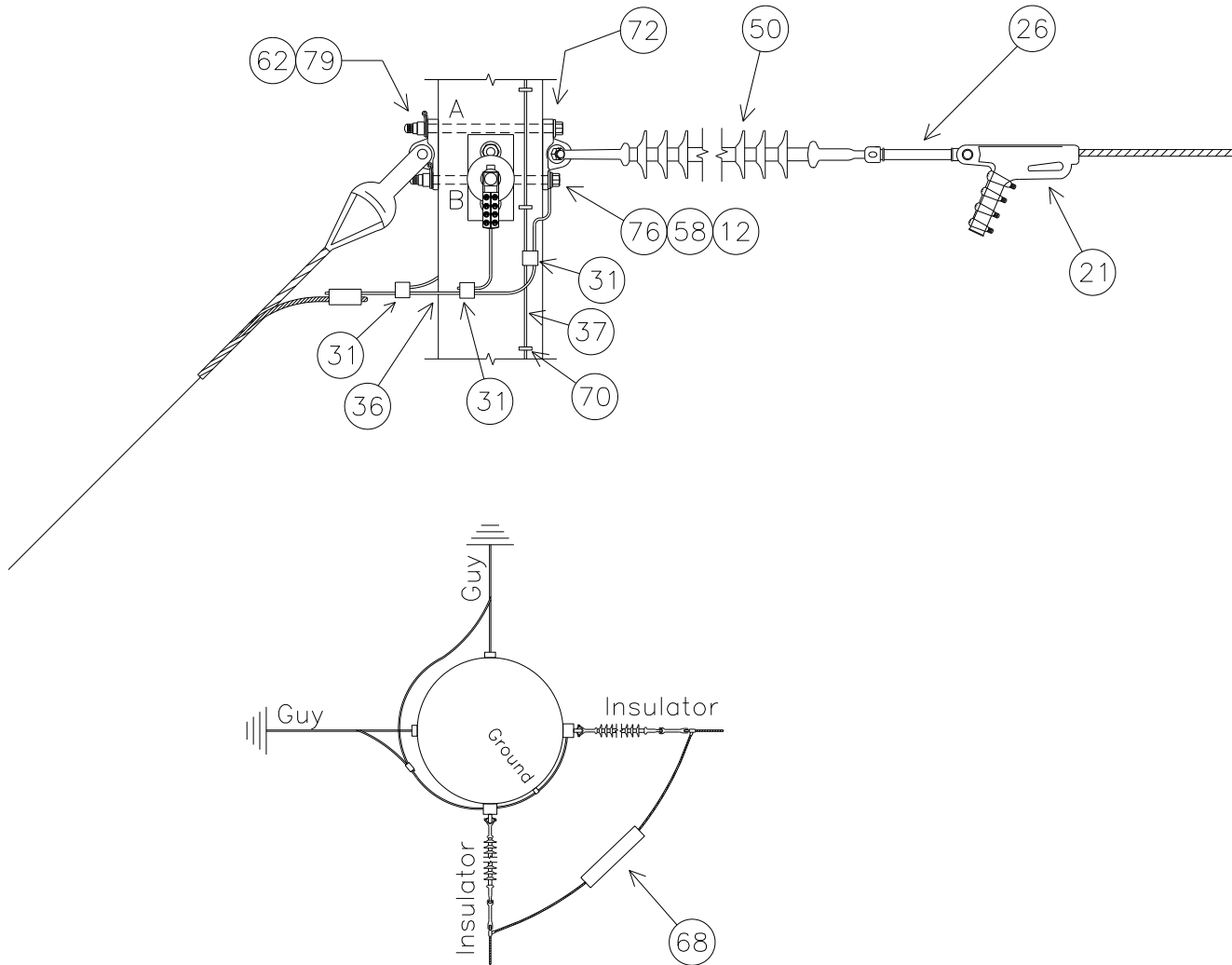
NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	4	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 003	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (3#6 AW), ALUMINUM
31	CNNCP 016	2	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
58	LUGGR 001	2	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 004	4	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	4	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	4	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	4	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

# IWDD9SSA3G

INSULATOR FOR WOOD POLES

DOUBLE DEAD-END 90°, SLACK TENSION TO SLACK TENSION, 69KV, 3-PHASE, GUYED

CONDUCTOR OPTIONS: 556S, 954A, 954S



(Top View)

NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

SUBSTRUCTURE	UPPER BRACKET			LOWER BRACKET		
	Top	Mid	Bottom	Top	Mid	Bottom
UPPER BOLT 'A' LENGTH (INCHES)	14.7	15.5	16.3	14.7	15.5	16.3
LOWER BOLT 'B' LENGTH (INCHES)	13.2	14.0	14.8	13.3	14.1	14.9

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER



# IWDD9SSA3G PLATES

## IWDD9SSA3G BASE

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 048	2	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	8	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	2	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
26	CLEHL 008	6	SOCKET-EYE CLEVIS, CLASS 52-8/11, L = 10", EYE = 3/4" THICK W/ 13/16 OPENING, H. D. G.
31	CNNCP 016	9	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	30 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
50	INSDE 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11
58	LUGGR 002	6	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 005	12	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
72	TEEDE 002	12	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 006	12	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
79	WASSP 006	12	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWDD9SSA3G\*556S

NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	6	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 003	3	ALUM. SLEEVE JUMPER FOR 556 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

## IWDD9SSA3G\*954A

NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	6	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 006	3	ALUM. SLEEVE JUMPER FOR 954 AAC, COMPRESSION SPLICE, NON-TENSION ONLY

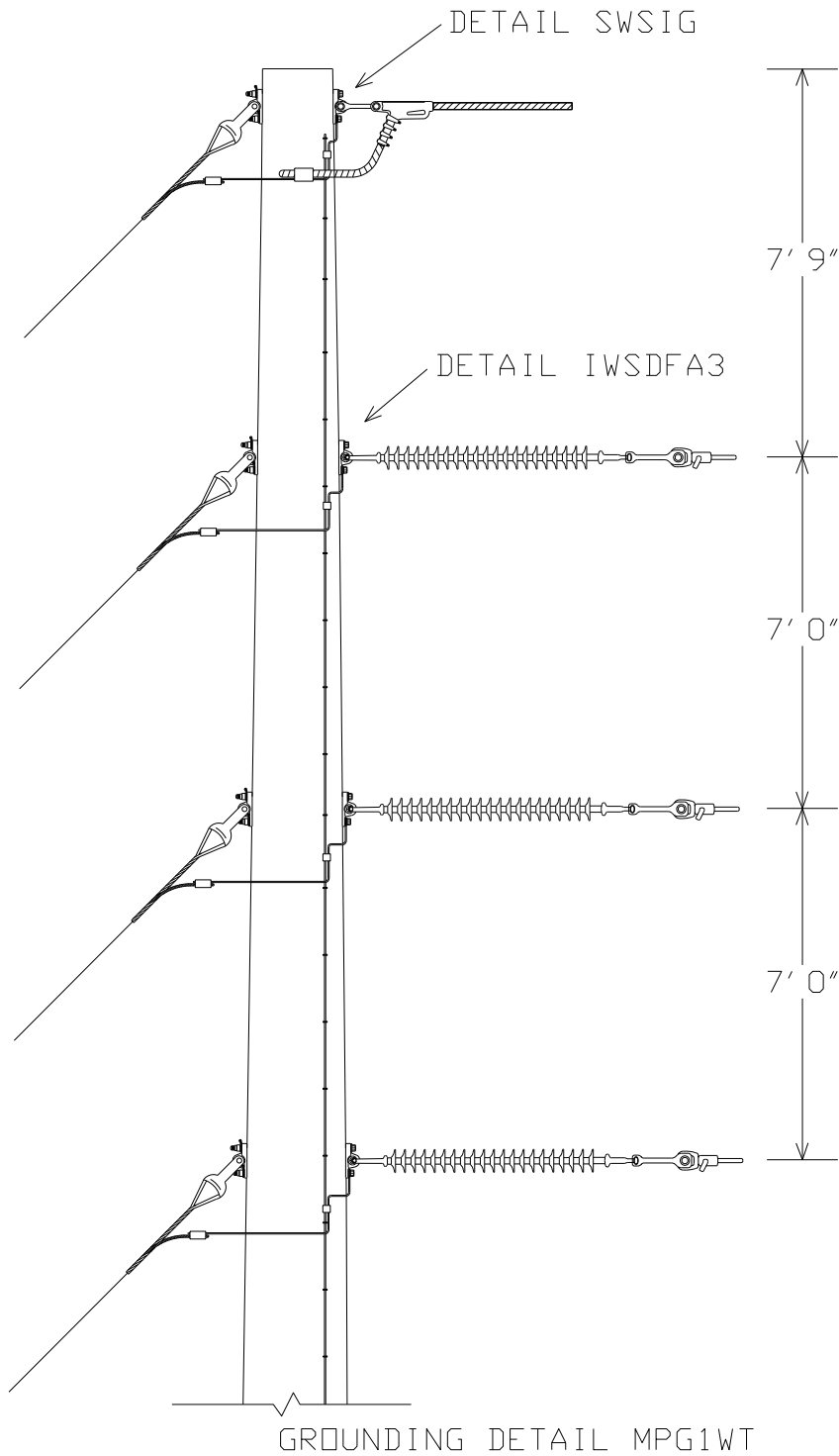
## IWDD9SSA3G\*954S

NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	6	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 005	3	ALUM. SLEEVE JUMPER FOR 954 ASCR, COMPRESSION SPLICE, NON-TENSION ONLY

# A1145C

69KV, SINGLE DEADEND, FULL TENSION, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954S



# A1145C PLATES

## A1145C BASE

NO.	ITEM ID	QTY	DESCRIPTION
1	ADCVF 001	3	VOID FILLER COMPOUND FOR DEADEND ASSEMBLY
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	1	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	1	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	1	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	1	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 016	4	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	12 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
58	LUGGR 001	1	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
72	TEEDE 002	8	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

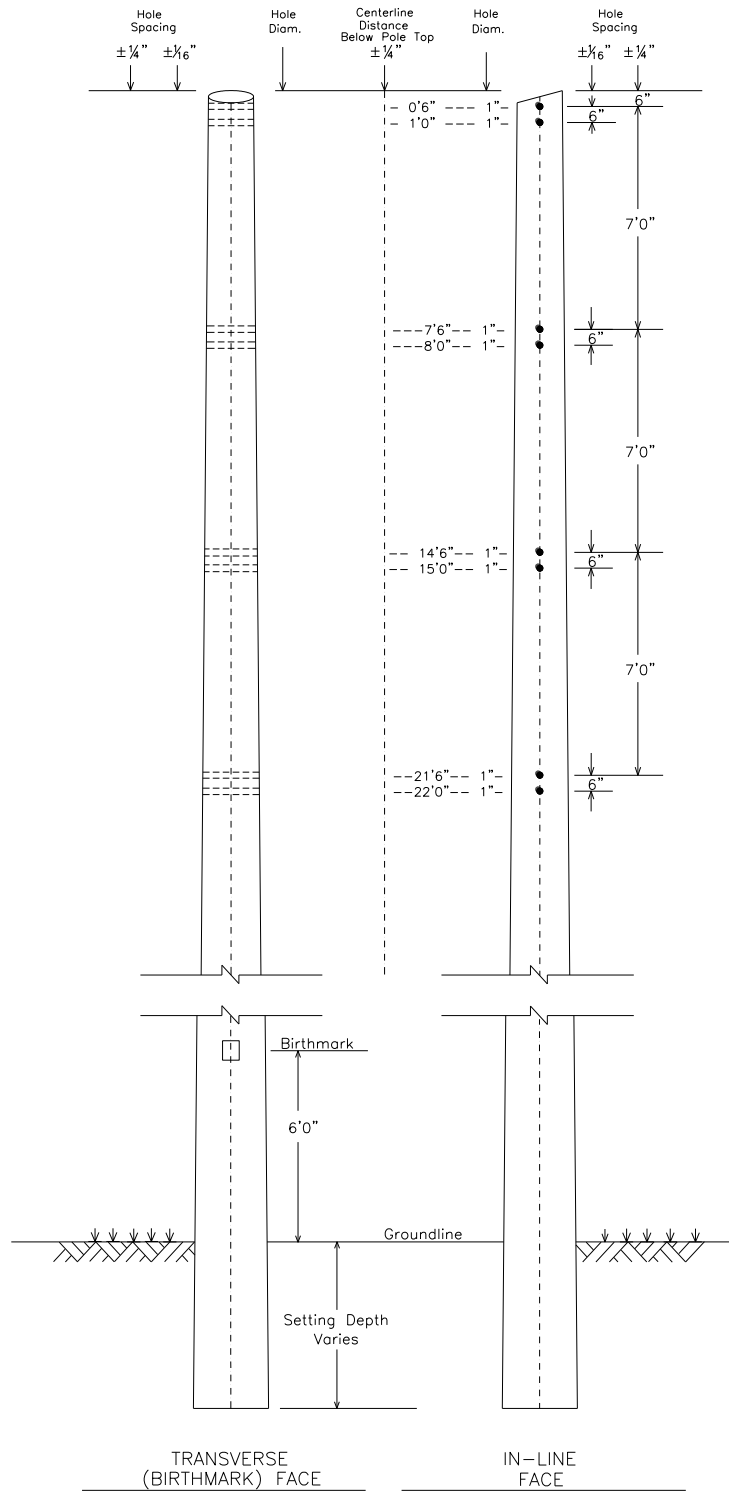
## A1145C\*556S

26	CLEHL 005	3	SOCKET-Y CLEVIS, CLASS 52-3/5, L = 11", HOT DIPPED GALV.
42	DEACB 003	3	DEADEND COMPRESSION ASSEMBLY FOR 556 ACSR, OVAL EYE
50	INSSU 008	3	SUSPENSION SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-3/5

## A1145C\*954S

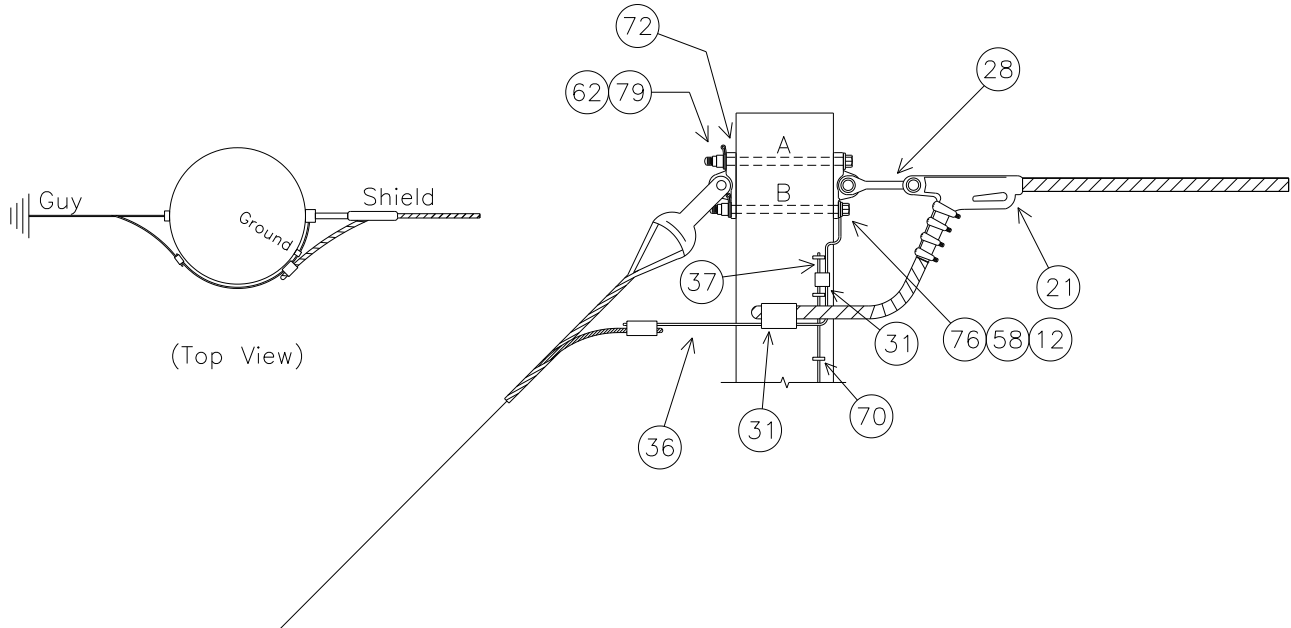
26	CLEHL 005	3	SOCKET-Y CLEVIS, CLASS 52-8/11, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 005	3	DEADEND COMPRESSION ASSEMBLY FOR 954 ACSR, OVAL EYE
50	INSD 004	3	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11

# A1145C DRILLING DETAIL



## SWSIG

SHIELD FOR WOOD POLES  
SINGLE INLINE, GUYED



NOTE: SEE MISCELLANEOUS DETAIL MBA1 FOR BOLT ASSEMBLY DETAILS

UPPER BOLT LENGTH (INCHES)	13.7
LOWER BOLT LENGTH (INCHES)	12.3

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

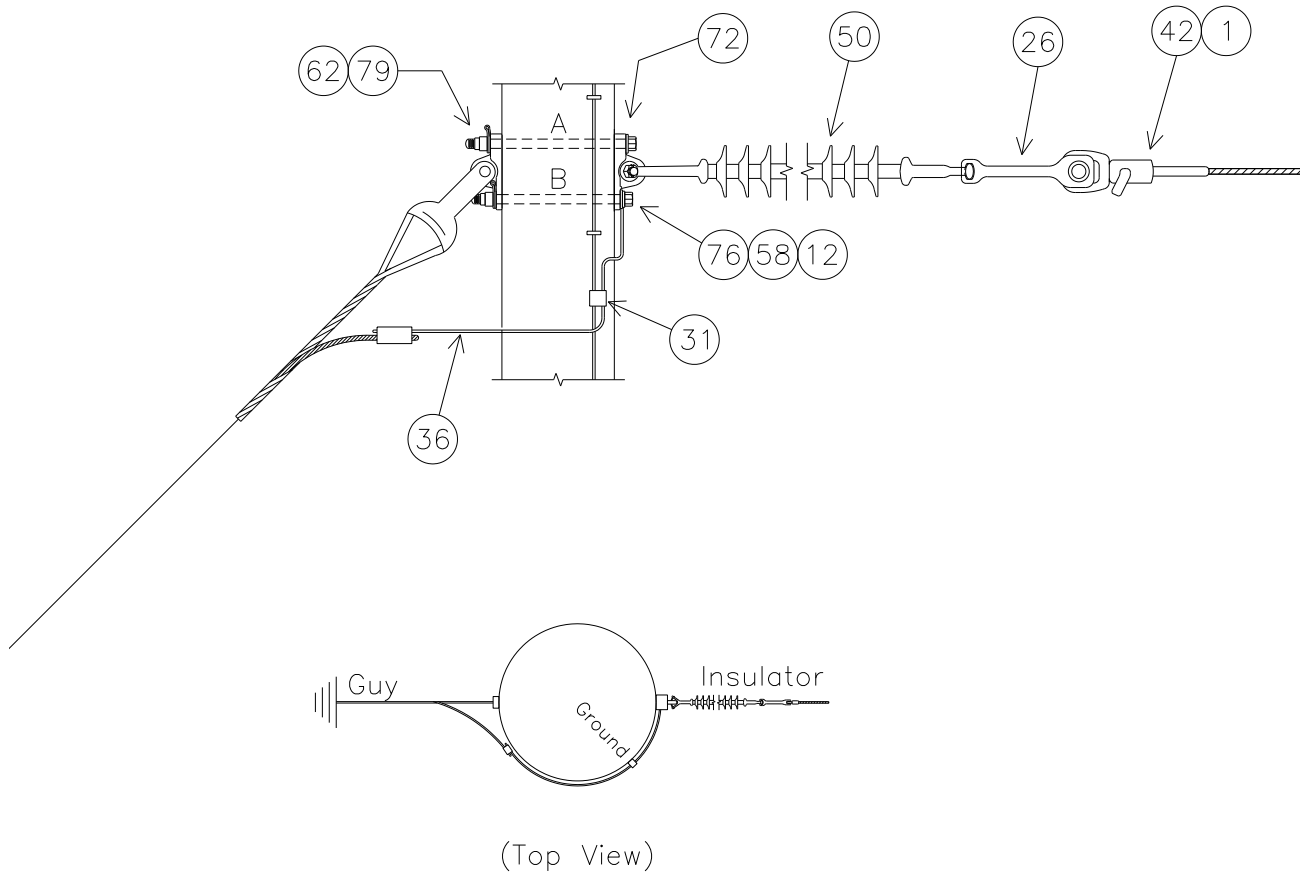
NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	1	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	1	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	3 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
58	LUGGR 001	1	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	2	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

# IWSDFA3

INSULATOR FOR WOOD POLES

SINGLE DEAD-END, FULL TENSION, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

DEADEND INSULATOR	TOP	MIDDLE	BOTTOM
UPPER BOLT 'A' LENGTH (INCHES)	14.6	15.5	16.3
LOWER BOLT 'B' LENGTH (INCHES)	13.2	14.0	14.8

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

# IWSDFA3 PLATES

## IWSDFA3 BASE

NO.	ITEM ID	QTY	DESCRIPTION
1	ADCVF 001	3	VOID FILLER COMPOUND FOR DEADEND ASSEMBLY
12	BOLMS 048	1	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	1	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
72	TEEDE 002	6	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWSDFA3\*556S

NO.	ITEM ID	QTY	DESCRIPTION
26	CLEHL 004	3	SOCKET-Y CLEVIS, CLASS 52-3/5, L = 11", HOT DIPPED GALV.
42	DEACB 003	3	DEADEND COMPRESSION ASSEMBLY FOR 556 ACSR, OVAL EYE
50	INSSU 008	3	SUSPENSION SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-3/5

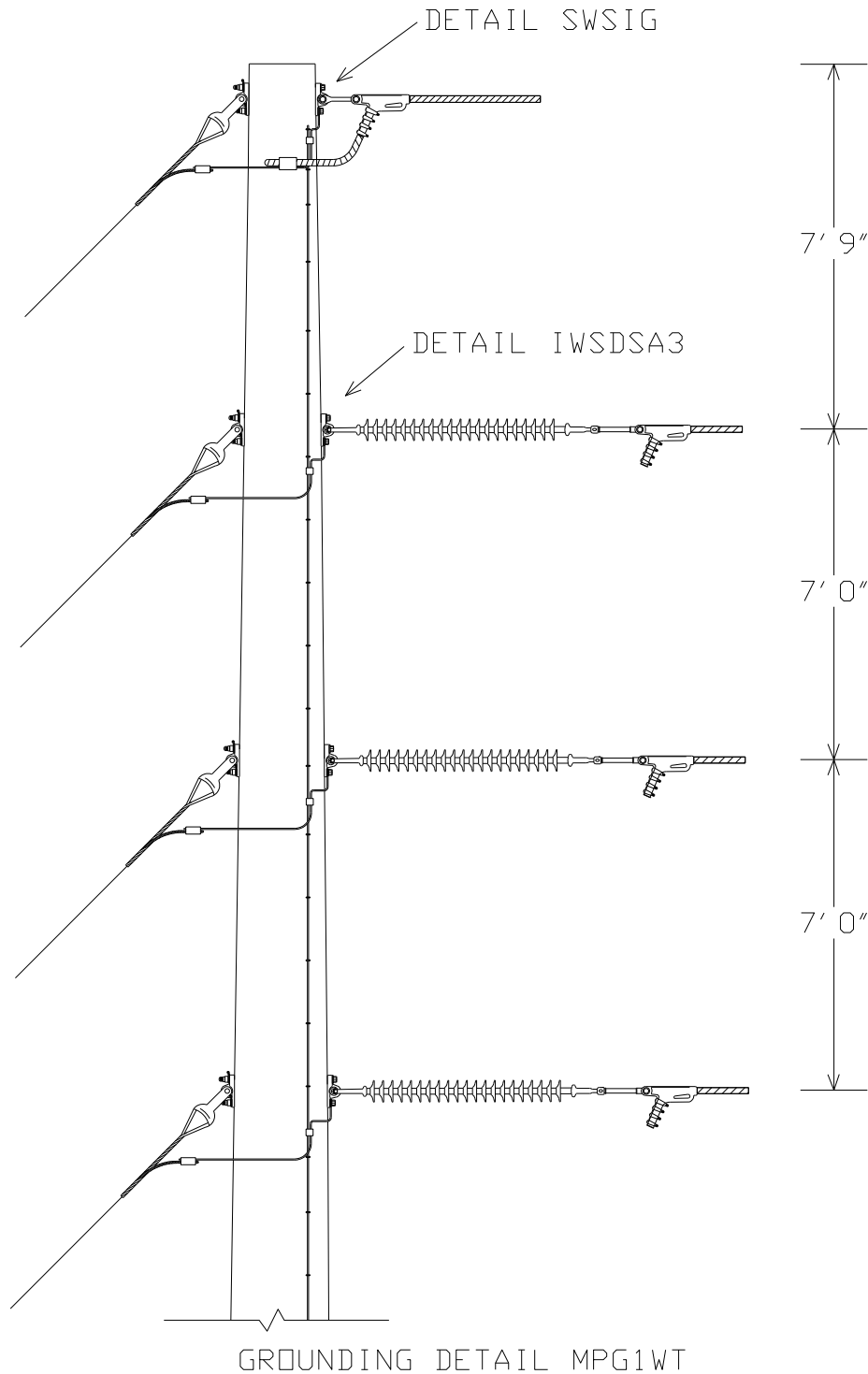
## IWSDFA3\*954S

NO.	ITEM ID	QTY	DESCRIPTION
26	CLEHL 005	3	SOCKET-Y CLEVIS, CLASS 52-8/11, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 005	3	DEADEND COMPRESSION ASSEMBLY FOR 954 ACSR, OVAL EYE
50	INSD 004	3	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11

# A1145Q

69KV, SINGLE DEADEND, SLACK TENSION, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954A, 954S





# A1145Q PLATES

## A1145Q BASE

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	1	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	1	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	1	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
26	CLEHL 008	3	SOCKET-EYE CLEVIS, CLASS 52-8/11, L = 10", EYE = 3/4" THICK W/ 13/16 OPENING, H. D. G.
28	CLETE 004	1	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G.
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 016	4	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	12 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
50	INSDE 004	3	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11
58	LUGGR 001	1	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
72	TEEDE 002	8	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## A1145Q\*556S

21	CLAQD 005	6	DEADEND CLAMP (.7 - 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
----	-----------	---	--

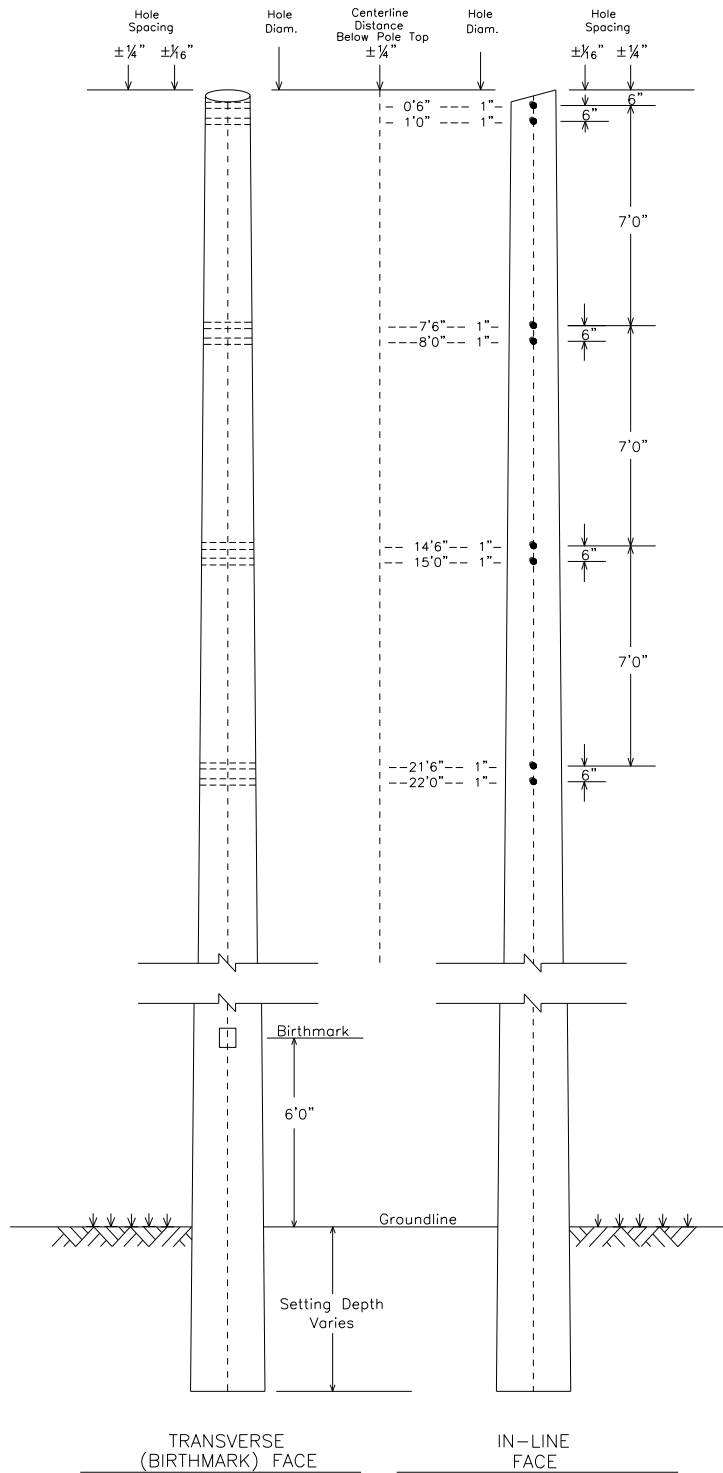
## A1145Q\*954A

21	CLAQD 005	6	DEADEND CLAMP (.7 - 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
----	-----------	---	--

## A1145Q\*954S

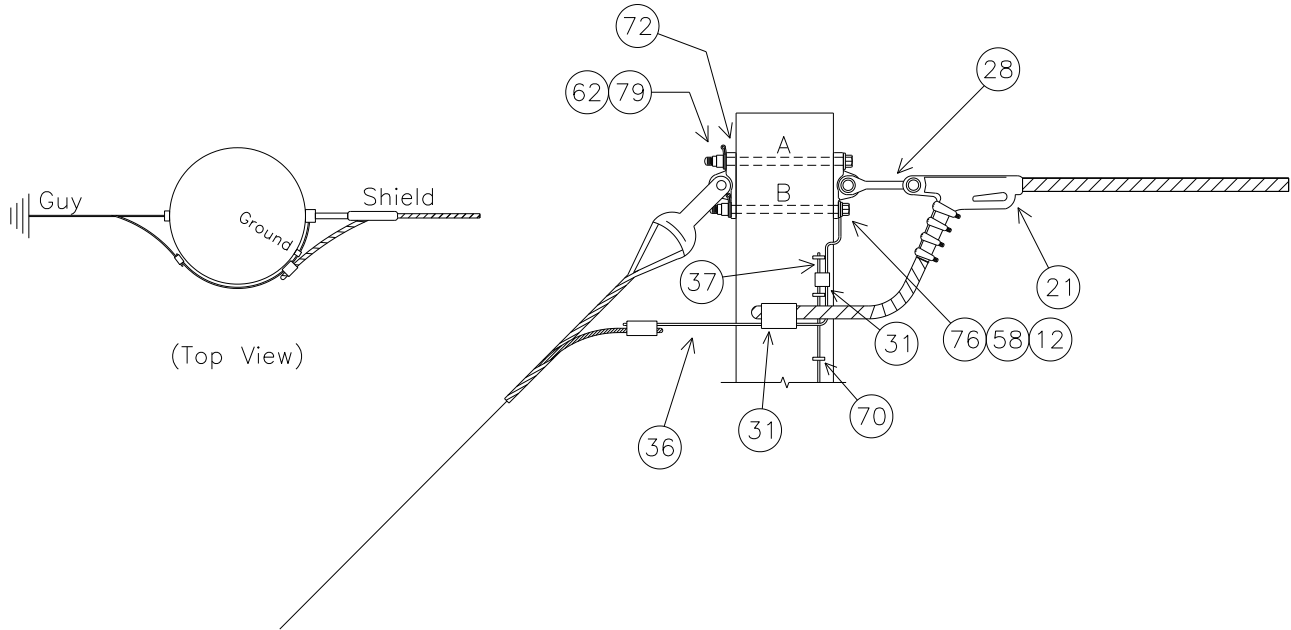
21	CLAQD 005	6	DEADEND CLAMP (.7 - 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
----	-----------	---	--

# A1145Q DRILLING DETAIL



# SWSIG

SHIELD FOR WOOD POLES  
SINGLE INLINE, GUYED



NOTE: SEE MISCELLANEOUS DETAIL MBA1 FOR BOLT ASSEMBLY DETAILS

UPPER BOLT LENGTH (INCHES)	13.7
LOWER BOLT LENGTH (INCHES)	12.3

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	1	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	1	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G.
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	3 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
58	LUGGR 001	1	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	2	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

REVISED/REVIEWED: OCTOBER 2013

REVISED/REVIEWED BY: MLR

APPROVED BY: KKR

**69KV WOOD STRUCTURES-NEW CONSTRUCTION**

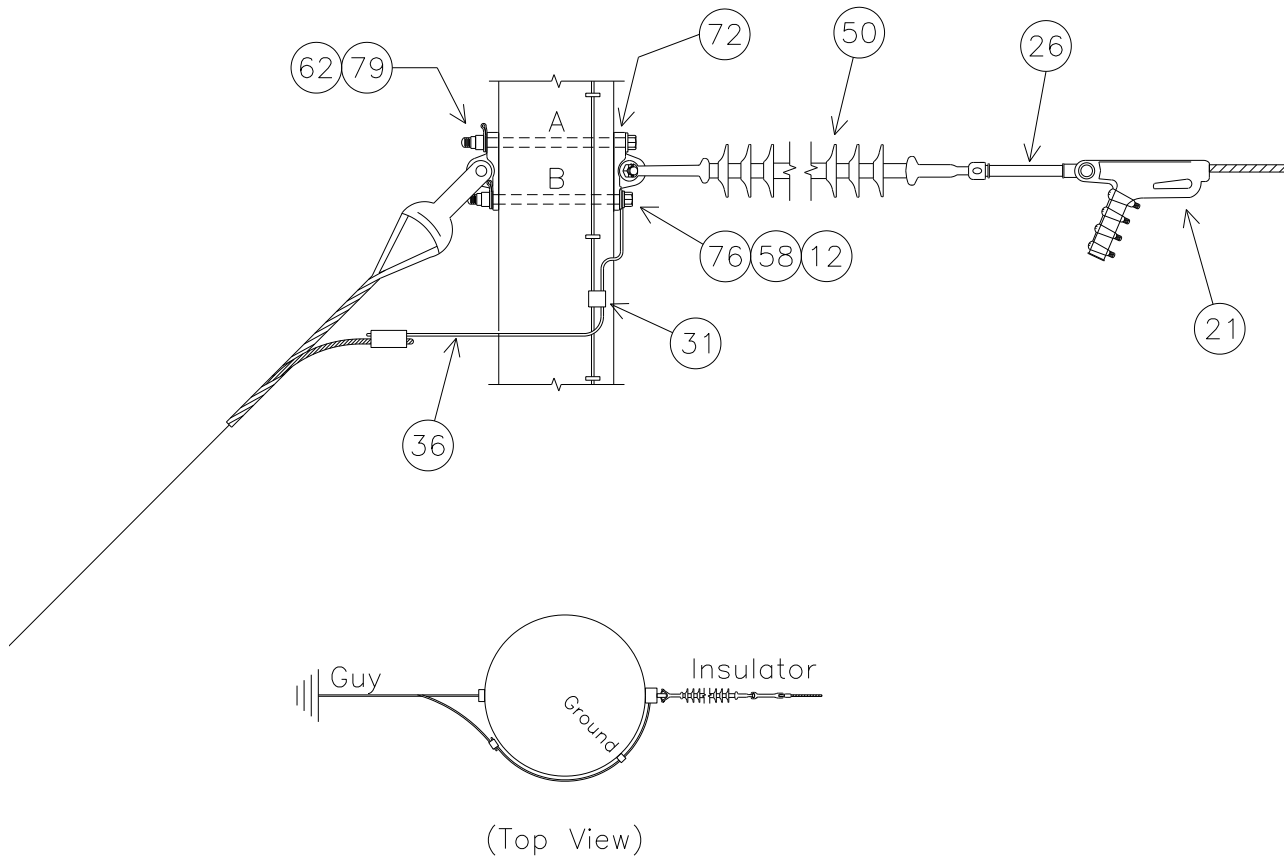
STW69-35

# IWSDSA3

INSULATOR FOR WOOD POLES

SINGLE DEAD-END, SLACK TENSION, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954A, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

DEADEND INSULATOR	TOP	MIDDLE	BOTTOM
UPPER BOLT 'A' LENGTH (INCHES)	14.7	15.5	16.3
LOWER BOLT 'B' LENGTH (INCHES)	13.2	14.0	14.8

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

# IWSDSA3 PLATES

## IWSDSA3 BASE

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 048	1	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	1	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
26	CLEHL 008	3	SOCKET-EYE CLEVIS, CLASS 52-8/11, L = 10", EYE = 3/4" THICK W/ 13/16 OPENING, H. D. G.
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
50	INSDE 004	3	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
72	TEEDE 002	6	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWSDSA3\*556S

NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	3	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"

## IWSDSA3\*954A

NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	3	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"

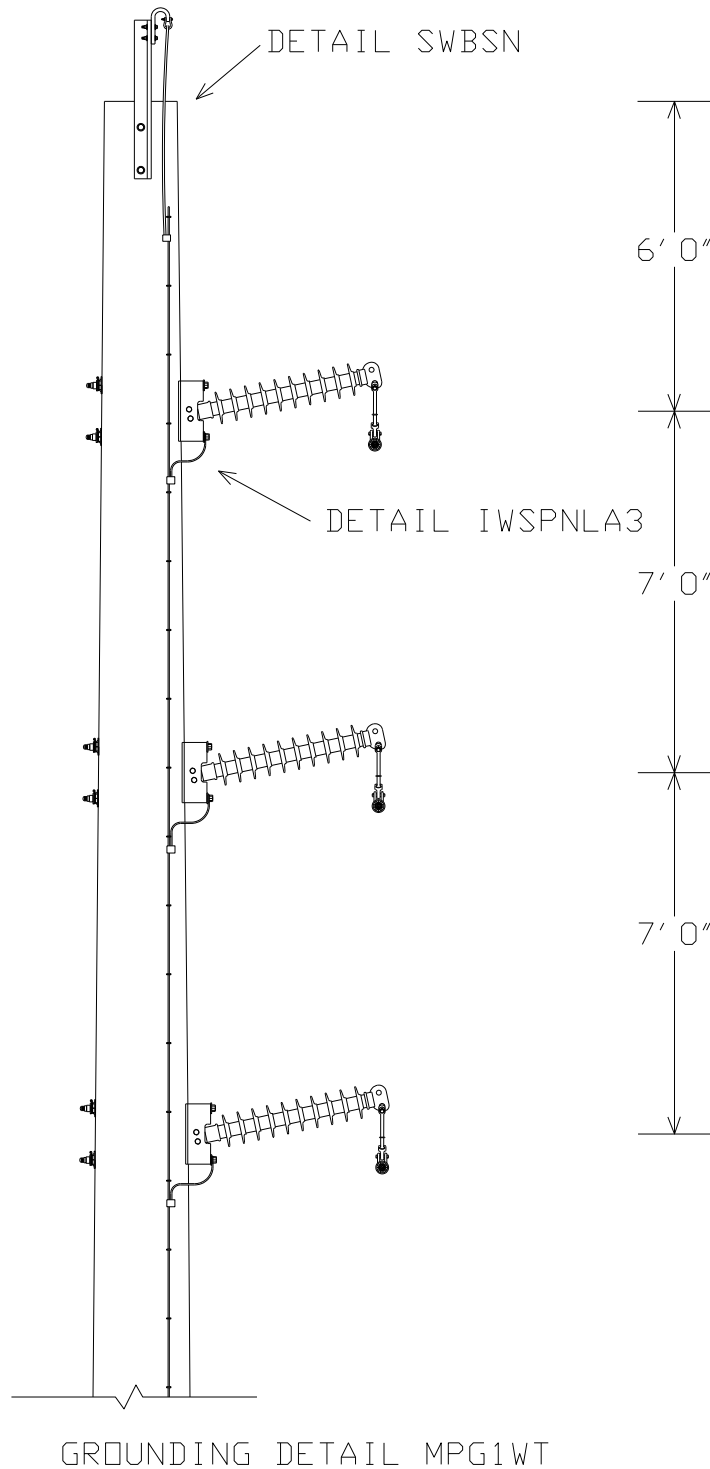
## IWSDSA3\*954S

NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	3	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"

# A1151

69KV SINGLE POST, UNGUYED, TANGENT SHIELD, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954A, 954S



# A1151 PLATES

## A1151 BASE

NO.	ITEM ID	QTY	DESCRIPTION
9	BAYSW 004	1	BAYONET FOR SHIELD WIRE, STRAIGHT 40"
12	BOLMS 001	0	MACHINE BOLT, 1/2" X 2 1/2", PROVIDED WITH SUPSH001
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 051	6	MACHINE BOLT, 7/8" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
22	CLASU 001	1	ALUMINUM SUSPENSION CLAMP FOR 3#6AW / 7#10AW, 15000#
26	CLEHL 001	3	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, L > 9", PIN = 3/4", HOT DIPPED GALV.
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	4	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	10 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 002	0	SQUARE LOCK NUT FOR 1/2" BOLT, PROVIDED WITH SUPSH001
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, HOT DIPPED GALVANIZED
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
71	SUPSH 001	1	SUPPORT, SHIELD WIRE, GALVANIZED, WITH TWO 2 1/2 INCH MACHINE BOLTS AND LOCK NUTS
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 1 3/4" DIAMETER, GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
77	WASSC 002	6	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## A1151\*556S

45	GRISA 001	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556ASCR
69	SOCEY 004	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", GALV.

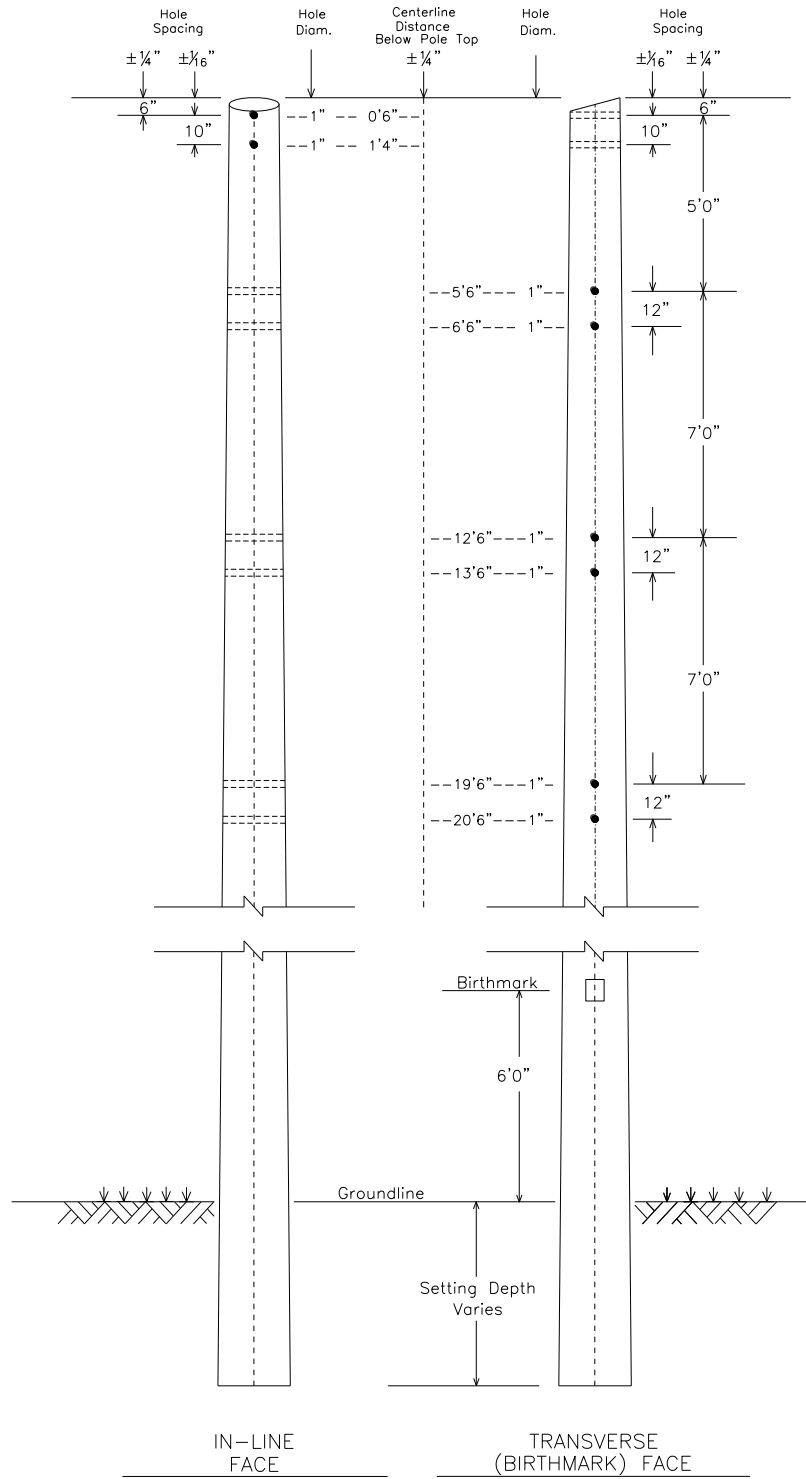
## A1151\*954A

45	GRISA 003	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 AAC, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV.

## A1151\*954S

45	GRISA 004	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ACSR, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV.

# A1151 DRILLING DETAIL

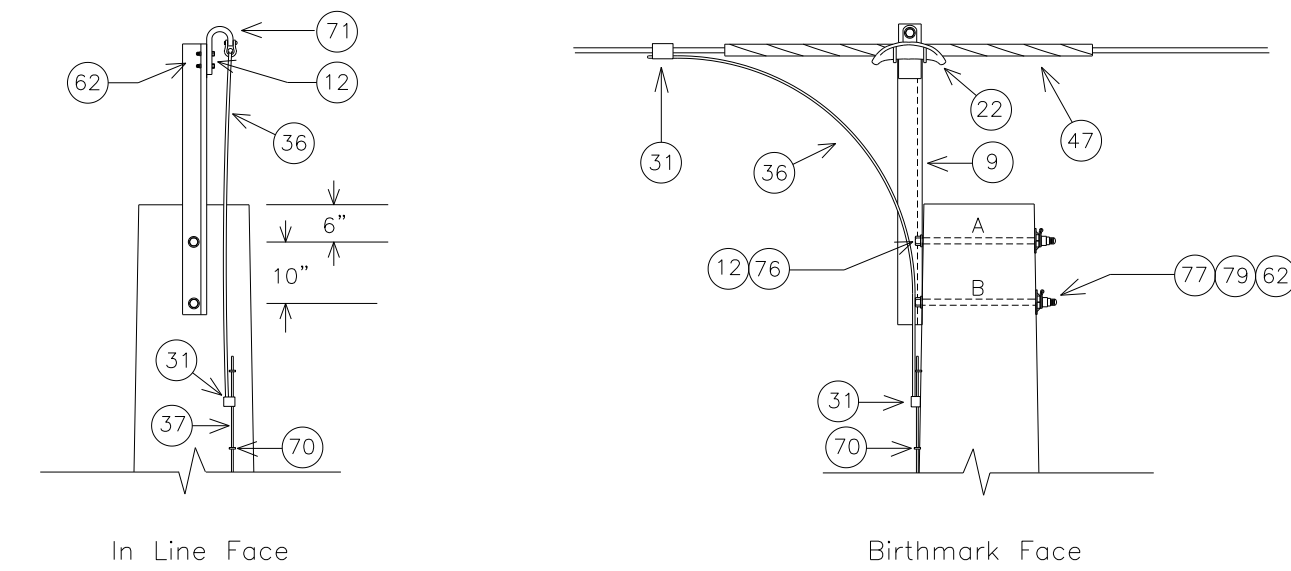




## SWBSN

SHIELD FOR WOOD POLES

BAYONET WITH SUSPENSION CLAMP, NO GUY



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

MINIMUM REQUIRED BOLT LENGTH 'A' (INCHES)	11.5
MINIMUM REQUIRED BOLT LENGTH 'B' (INCHES)	11.6

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

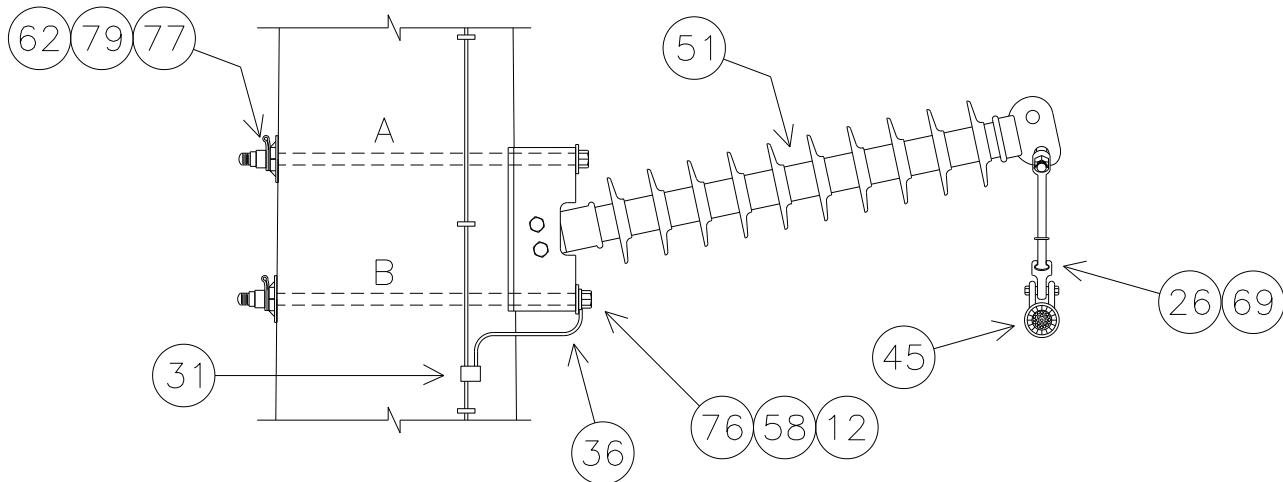
NO.	ITEM ID	QTY	DESCRIPTION
9	BAYSW 004	1	BAYONET FOR SHIELD WIRE, STRAIGHT 40"
12	BOLMS 001	0	MACHINE BOLT, 1/2" X 2 1/2", PROVIDED WITH SUPSH001
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
22	CLASU 001	1	ALUMINUM SUSPENSION CLAMP FOR 3#6AW / 7#10AW, 15000#
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	4 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
62	NUTSL 002	0	SQUARE LOCK NUT FOR 1/2" BOLT, PROVIDED WITH SUPSH001
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, HOT DIPPED GALVANIZED
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
71	SUPSH 001	1	SUPPORT, SHIELD WIRE, GALVANIZED, WITH TWO 2 1/2" MACHINE BOLTS AND LOCK NUTS
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 1 3/4" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

# IWSPNLA3

INSULATOR FOR WOOD POLES

SINGLE POST, NO GUY, LONG CLEVIS, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954A, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

SUBSTRUCTURE	Top	Mid	Bottom
BOLT 'A' LENGTH (INCHES)	18.0	18.8	19.6
BOLT 'B' LENGTH (INCHES)	18.4	19.2	20.0

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER.

# IWSPNLA3 PLATES

## IWSPNLA3 BASE

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 051	6	MACHINE BOLT, 7/8" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
26	CLEHL 001	3	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, L > 9", PIN = 3/4", HOT DIPPED GALV.
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	6 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 002	6	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWSPNLA3\*556S

45	GRISA 001	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
69	SOCEY 004	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV.

## IWSPNLA3\*954A

45	GRISA 003	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 AAC, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV.

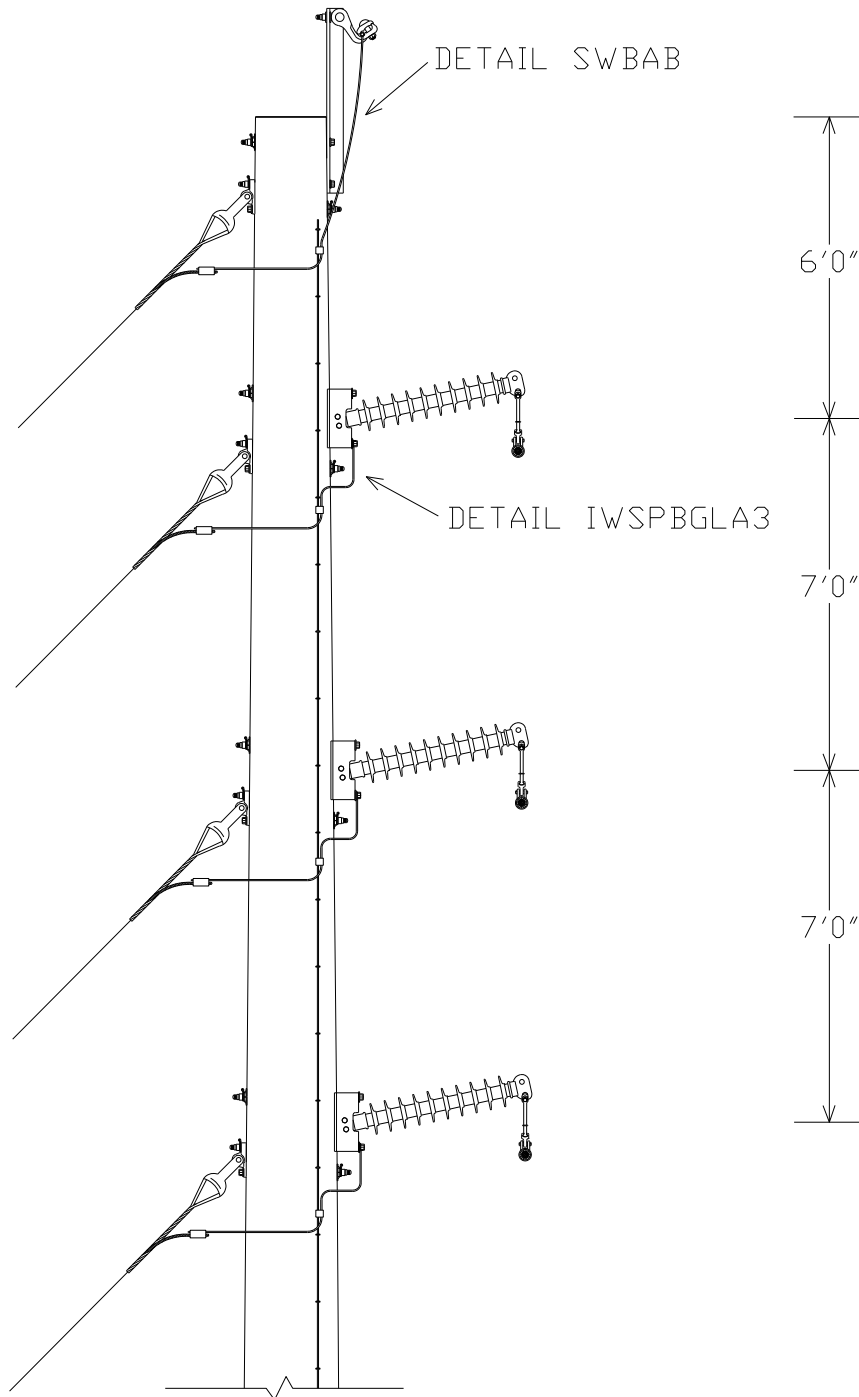
## IWSPNLA3\*954S

45	GRISA 004	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ACSR, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV.

# A1152A

69KV SINGLE POST, BACK GUYED, ANGLE SHIELD, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954A, 954S



GROUNDING DETAIL MPG1WT

## A1152A PLATES

### A1152A BASE

NO.	ITEM ID	QTY	DESCRIPTION
9	BAYSW 003	1	BAYONET FOR SHIELD WIRE, CORNER 40"
11	BOLDA 034	3	DOUBLE ARMING BOLT, 7/8" X 22", WITH 4 SQUARE NUTS ATTACHED
12	BOLMS 032	1	MACHINE BOLT, 3/4" X 6", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 036	1	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	2	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	1	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 051	3	MACHINE BOLT, 7/8" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
16	CLAAAN 001	1	ANGLE CLAMP FOR 4-SOL - 250MCM, 7000#
26	CLEHL 001	3	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, L > 9", PIN = 3/4", HOT DIPPED GALV.
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	4	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	13 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
59	NUTEY 003	1	NUT EYE FOR 3/4" BOLT
62	NUTSL 004	4	SQUARE LOCK NUT FOR 3/4" BOLT, HOT DIPPED GALVANIZED
62	NUTSL 005	12	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
69	SOCEY 004	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 1/2", EYE = 13/16", FORGED STEEL, GALV.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
72	TEEDE 002	4	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	5	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	9	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
77	WASSC 002	9	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	3	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	12	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

### A1152A\*556S

45	GRISA 001	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
----	-----------	---	---

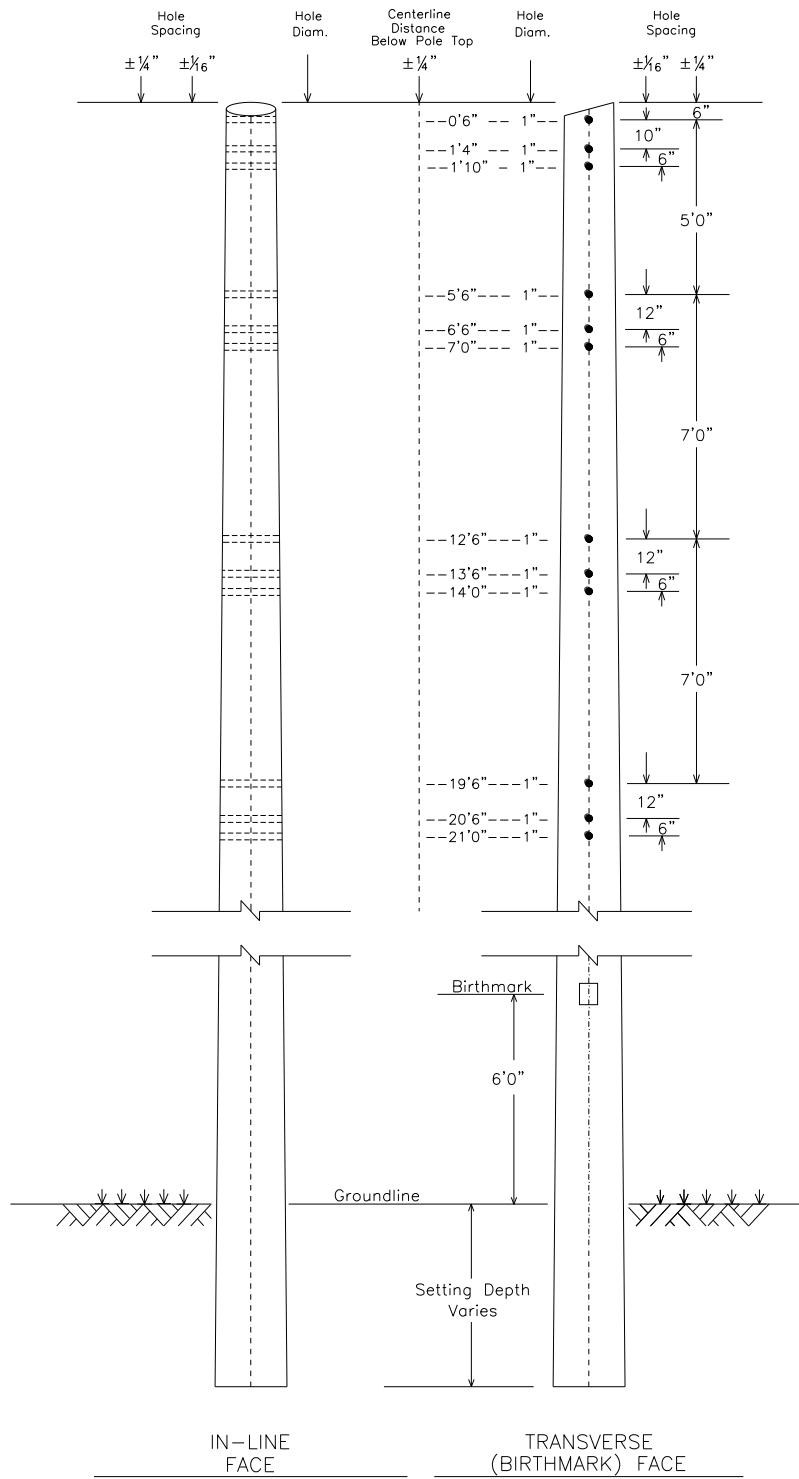
### A1152A\*954A

45	GRISA 003	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 AAC, 82 INCHES, 1 3/16" GAP, 5/8" PIN
----	-----------	---	--

### A1152A\*954S

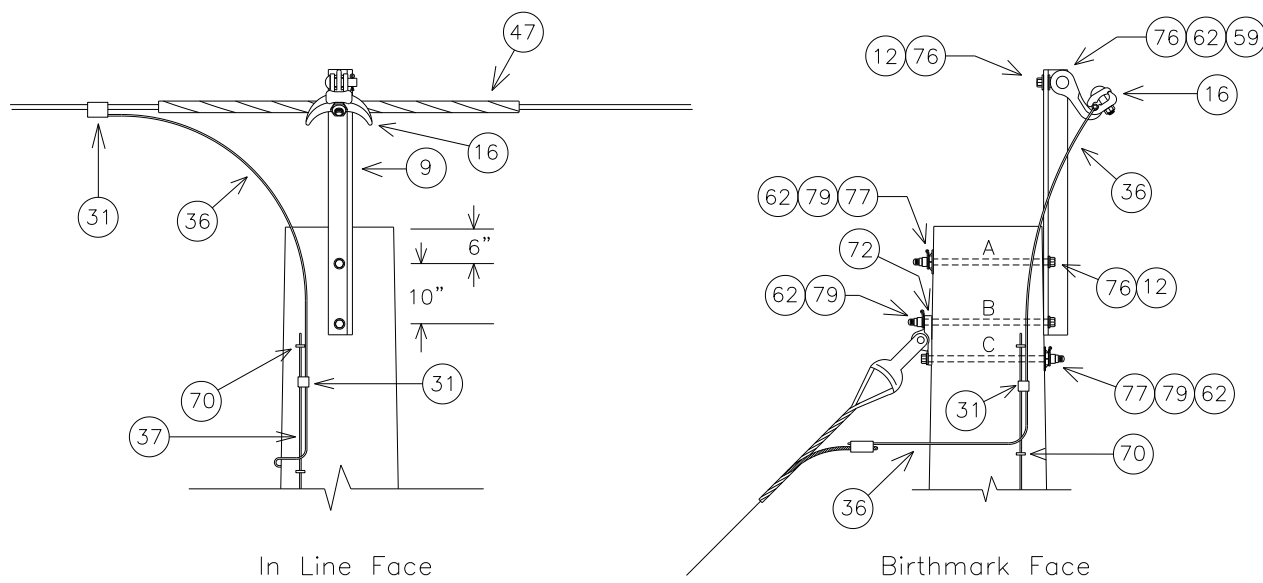
45	GRISA 004	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ACSR, 82 INCHES, 1 3/16" GAP, 5/8" PIN
----	-----------	---	---

# A1152A DRILLING DETAIL



## SWBAB

SHIELD FOR WOOD POLES  
BAYONET WITH ANGLE CLAMP, BOTTOM GUYED



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

MINIMUM REQUIRED BOLT LENGTH 'A' (INCHES)	11.4
MINIMUM REQUIRED BOLT LENGTH 'B' (INCHES)	12.4
MINIMUM REQUIRED BOLT LENGTH 'C' (INCHES)	11.9

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

NO.	ITEM ID	QTY	DESCRIPTION
9	BAYSW 003	1	BAYONET FOR SHIELD WIRE, CORNER 40"
12	BOLMS 032	1	MACHINE BOLT, 3/4" X 6", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 036	1	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
16	CLAA 001	1	ANGLE CLAMP FOR 4-SOL - 250MCM, 7000#
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	4 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
59	NUTEY 003	1	NUT EYE FOR 3/4" BOLT
62	NUTSL 004	4	SQUARE LOCK NUT FOR 3/4" BOLT, HOT DIPPED GALVANIZED
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	1	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	5	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	3	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

REVISED/REVIEWED: OCTOBER 2013

REVISED/REVIEWED BY: MLR

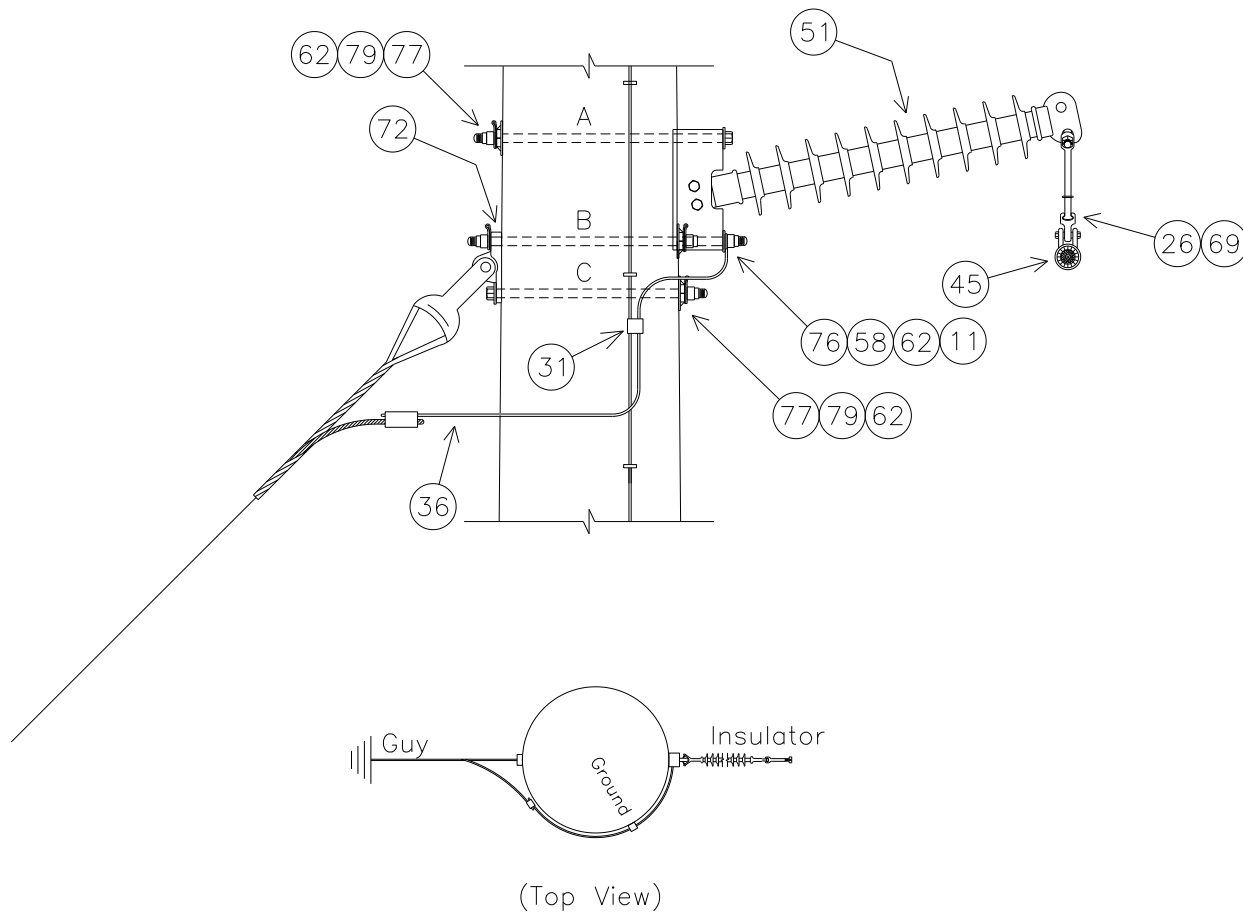
APPROVED BY: KKR

# IWSPBGLA3

INSULATOR FOR WOOD POLES

SINGLE POST, BOTTOM GUYED, LONG CLEVIS, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954A, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

SUBSTRUCTURE	Top	Mid	Bottom
BOLT 'A' LENGTH (INCHES)	18.0	18.8	19.6
BOLT 'B' LENGTH (INCHES) DA	19.3	20.1	20.9
BOLT 'C' LENGTH (INCHES)	13.1	13.9	14.7

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER



# IWSPBGLA3 PLATES

## IWSPBGLA3 BASE

NO.	ITEM ID	QTY	DESCRIPTION
11	BOLDA 034	3	DOUBLE ARMING BOLT, 7/8" X 22", WITH 4 SQUARE NUTS ATTACHED
12	BOLMS 048	2	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	1	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 051	3	MACHINE BOLT, 7/8" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
26	CLEHL 001	3	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, L > 9", PIN = 3/4", HOT DIPPED GALV.
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 005	12	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
69	SOCEY 004	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 1/2", EYE = 13/16", FORGED STEEL, GALV.
72	TEEDE 002	1	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 006	9	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 002	9	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 006	12	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWSPBGLA3\*556S

45	GRISA 001	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
----	-----------	---	---

## IWSPBGLA3\*954A

45	GRISA 003	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 AAC, 82 INCHES, 1 3/16" GAP, 5/8" PIN
----	-----------	---	--

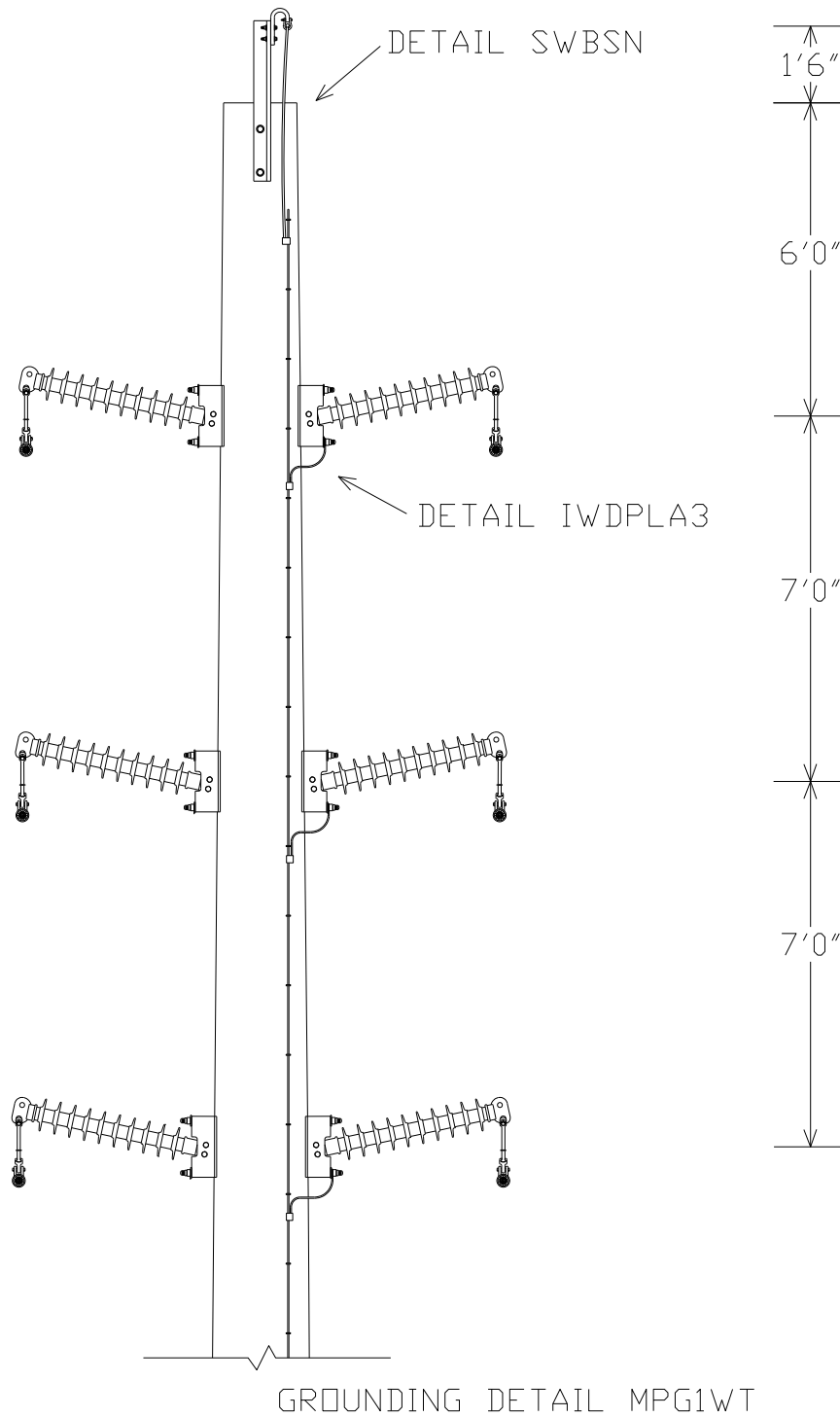
## IWSPBGLA3\*954S

45	GRISA 004	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ACSR, 82 INCHES, 1 3/16" GAP, 5/8" PIN
----	-----------	---	---

# A2151

69KV DOUBLE POST, UNGUYED, TANGENT SHIELD, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954S



# A2151 PLATES

## A2151 BASE

NO.	ITEM ID	QTY	DESCRIPTION
9	BAYSW 004	1	BAYONET FOR SHIELD WIRE, STRAIGHT 40"
11	BOLDA 041	3	DOUBLE ARMING BOLT, 7/8" X 28", WITH 4 SQUARE NUTS ATTACHED
11	BOLDA 042	3	DOUBLE ARMING BOLT, 7/8" X 26", WITH 4 SQUARE NUTS ATTACHED
12	BOLMS 001	0	MACHINE BOLT, 1/2" X 2 1/2", PROVIDED WITH SUPSH001
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
22	CLASU 001	1	ALUMINUM SUSPENSION CLAMP FOR 3#6AW / 7#10AW, 15000#
26	CLEHL 001	6	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, L > 9", PIN = 3/4", HOT DIPPED GALV.
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	4	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	13 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
51	INSHP 020	6	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 002	0	SQUARE LOCK NUT FOR 1/2" BOLT, PROVIDED WITH SUPSH001
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, HOT DIPPED GALVANIZED
62	NUTSL 005	12	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
71	SUPSH 001	1	SUPPORT, SHIELD WIRE, GALVANIZED, WITH TWO 2 1/2 INCH MACHINE BOLTS AND LOCK NUTS
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 1 3/4" DIAMETER, GALVANIZED
76	WASRD 006	12	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
77	WASSC 002	12	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	12	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

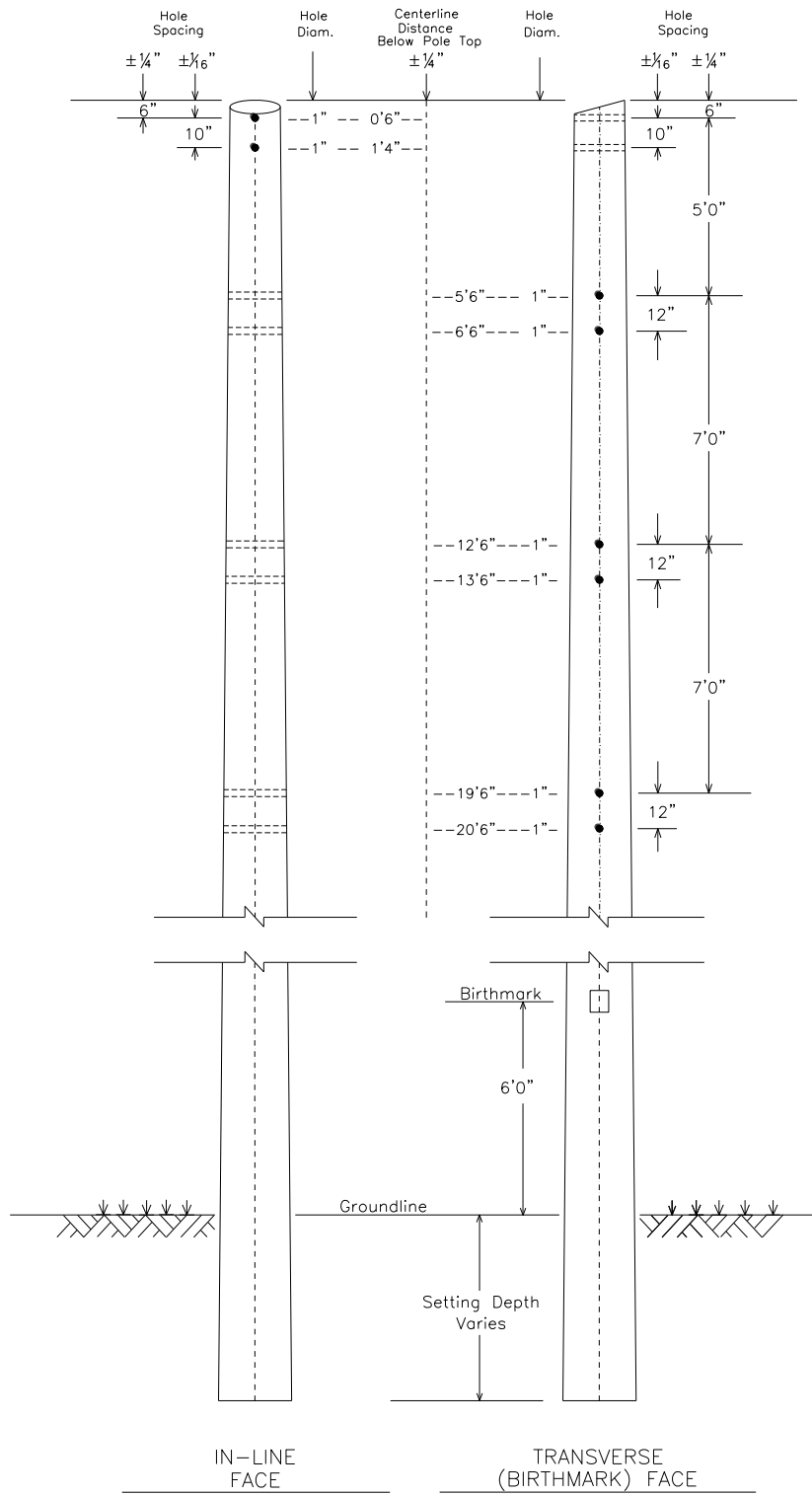
## A2151\*556S

45	GRISA 001	6	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
69	SOCEY 004	6	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4

## A2151\*954S

45	GRISA 004	6	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ACSR, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	6	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=1 1/16

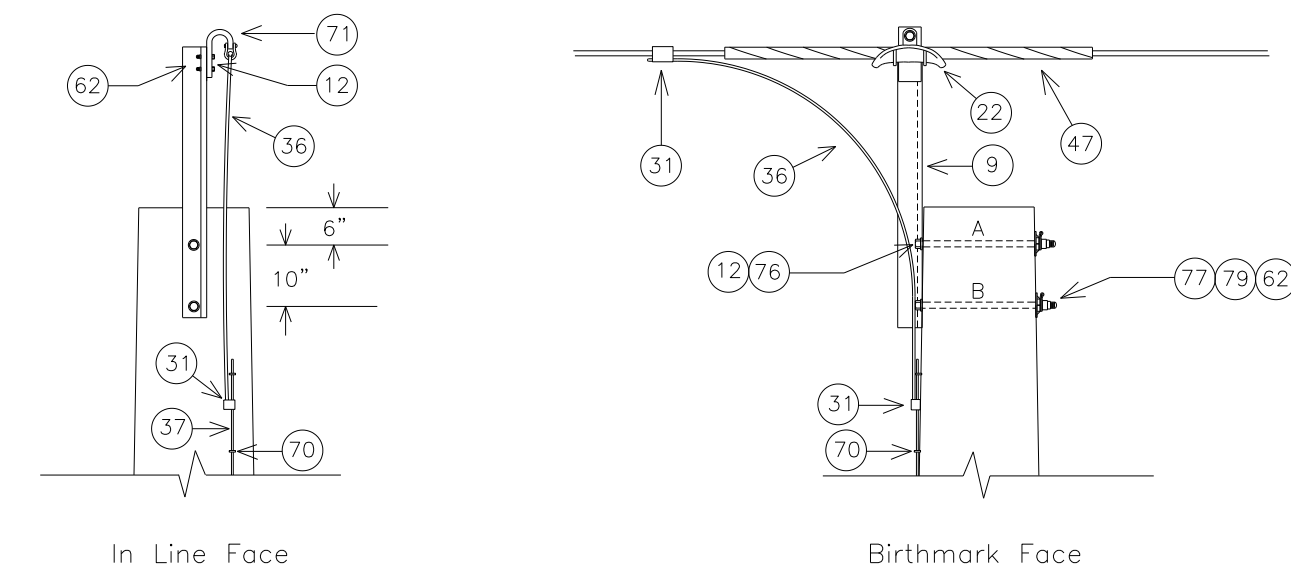
# A2151 DRILLING DETAILS



## SWBSN

SHIELD FOR WOOD POLES

BAYONET WITH SUSPENSION CLAMP, NO GUY



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

MINIMUM REQUIRED BOLT LENGTH 'A' (INCHES)	11.5
MINIMUM REQUIRED BOLT LENGTH 'B' (INCHES)	11.6

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

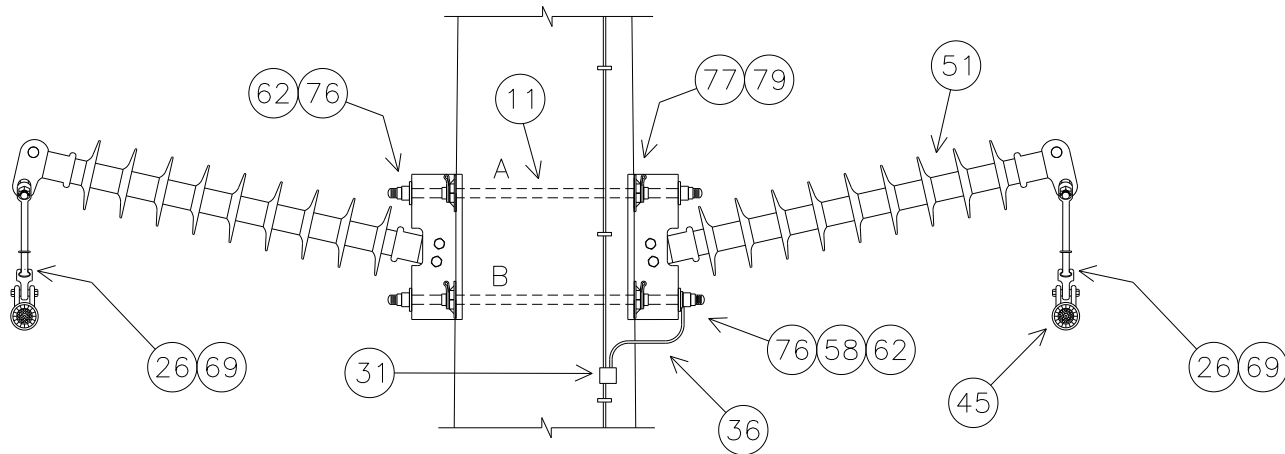
NO.	ITEM ID	QTY	DESCRIPTION
9	BAYSW 004	1	BAYONET FOR SHIELD WIRE, STRAIGHT 40"
12	BOLMS 001	0	MACHINE BOLT, 1/2" X 2 1/2", PROVIDED WITH SUPSH001
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
22	CLASU 001	1	ALUMINUM SUSPENSION CLAMP FOR 3#6AW / 7#10AW, 15000#
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	4 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
62	NUTSL 002	0	SQUARE LOCK NUT FOR 1/2" BOLT, PROVIDED WITH SUPSH001
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, HOT DIPPED GALVANIZED
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
71	SUPSH 001	1	SUPPORT, SHIELD WIRE, GALVANIZED, WITH TWO 2 1/2" MACHINE BOLTS AND LOCK NUTS
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 1 3/4" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

## IWDPLA3

INSULATOR FOR WOOD POLES

DOUBLE POST, NO GUY, LONG CLEVIS, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

SUBSTRUCTURE	Top	Mid	Bottom
BOLT 'A' LENGTH (INCHES)	24.9	25.7	26.5
BOLT 'B' LENGTH (INCHES)	25.3	26.1	26.9

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER.

# IWDPLA3 PLATES

## IWDPLA3 BASE

NO.	ITEM ID	QTY	DESCRIPTION
11	BOLDA 041	3	DOUBLE ARMING BOLT, 7/8" X 28", WITH 4 SQUARE NUTS ATTACHED
11	BOLDA 042	3	DOUBLE ARMING BOLT, 7/8" X 26", WITH 4 SQUARE NUTS ATTACHED
26	CLEHL 001	6	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, L > 9", PIN = 3/4", HOT DIPPED GALV.
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
51	INSHP 020	6	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 005	12	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
76	WASRD 006	12	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 002	12	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 006	12	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWDPLA3\*556S

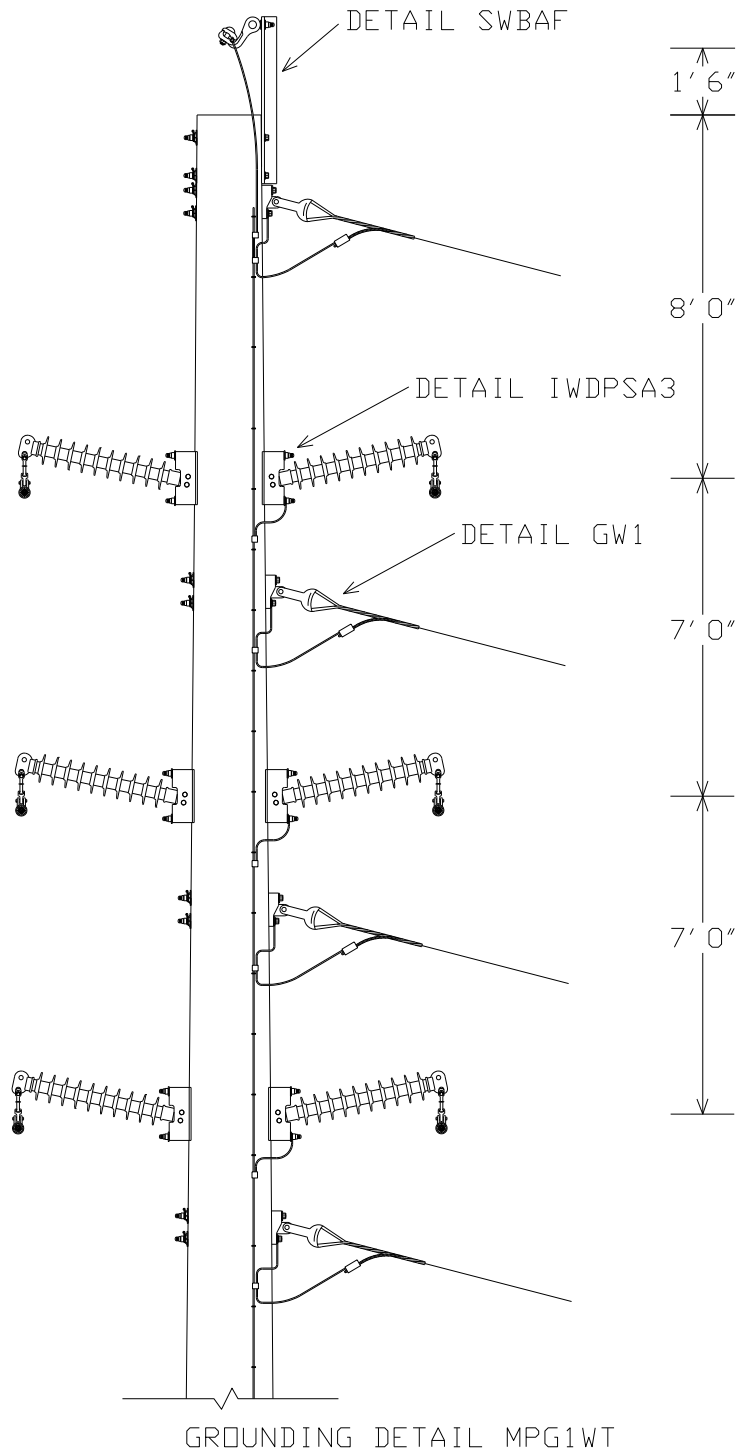
45	GRISA 001	6	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
69	SOCEY 004	6	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4"

## IWDPLA3\*954S

45	GRISA 004	6	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ACSR, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	6	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=1 1/16"

**A2153**

69KV DOUBLE POST, FRONT GUYED, ANGLE SHIELD, 3-PHASE  
CONDUCTOR OPTIONS: 556S





# A2153 PLATES

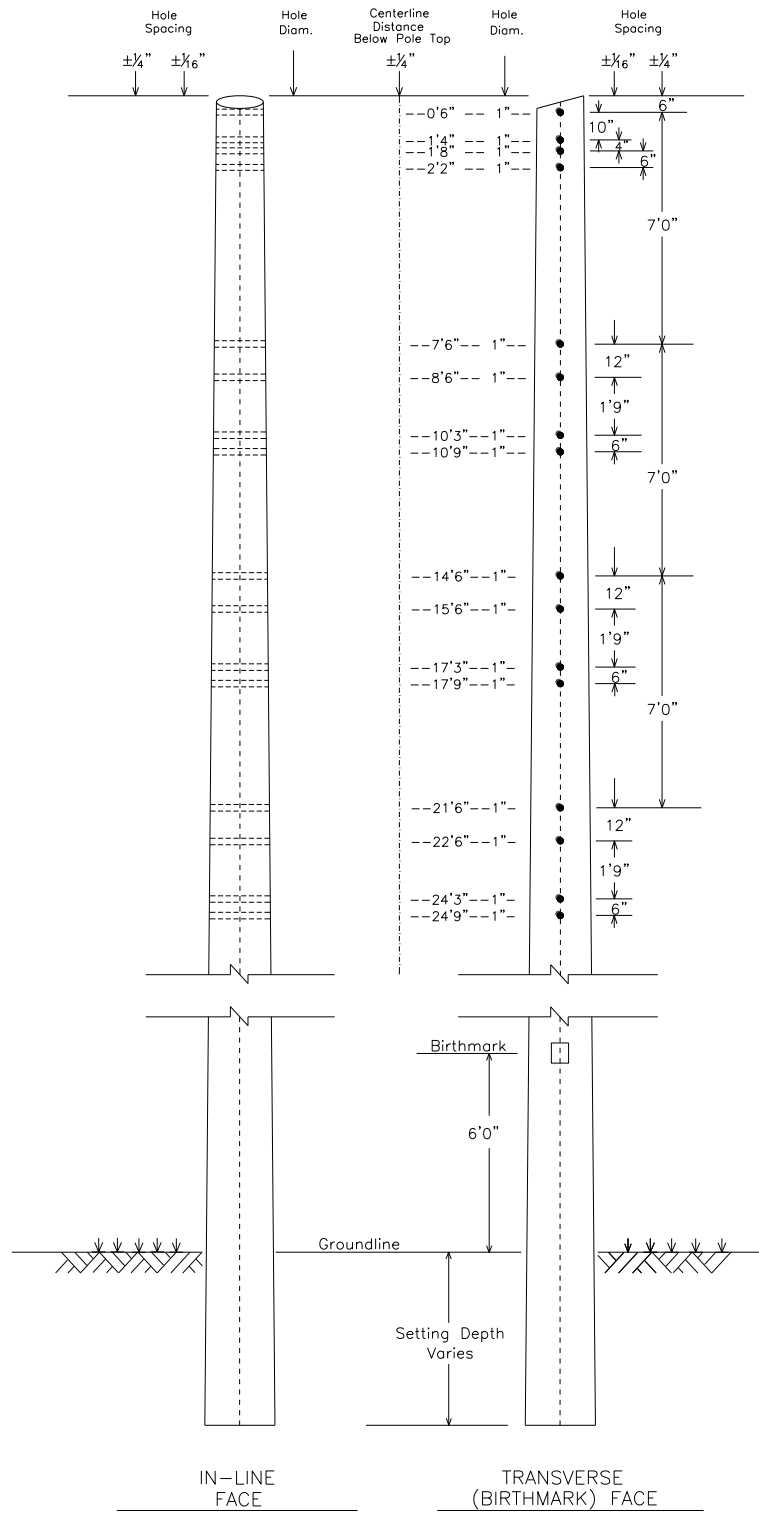
## A2153 BASE

NO.	ITEM ID	QTY	DESCRIPTION
7	BALFI 007	6	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, PIN = 3/4", HOT DIPPED GALV.
9	BAYSW 003	1	BAYONET FOR SHIELD WIRE, CORNER 40"
11	BOLDA 041	3	DOUBLE ARMING BOLT, 7/8" X 28", WITH 4 SQUARE NUTS ATTACHED
11	BOLDA 042	3	DOUBLE ARMING BOLT, 7/8" X 26", WITH 4 SQUARE NUTS ATTACHED
12	BOLMS 032	1	MACHINE BOLT, 3/4" X 6", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	4	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
16	CLAAN 001	1	ANGLE CLAMP FOR 4-SOL - 250MCM, 7000#
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	7	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	24 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN (50# COIL)
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
51	INSHP 020	6	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	7	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
59	NUTEY 003	1	NUT EYE FOR 3/4" BOLT
62	NUTSL 004	3	SQUARE LOCK NUT FOR 3/4" BOLT, HOT DIPPED GALVANIZED
62	NUTSL 005	20	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
72	TEEDE 002	4	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	4	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	20	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
77	WASSC 002	20	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	20	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## A2153\*556S

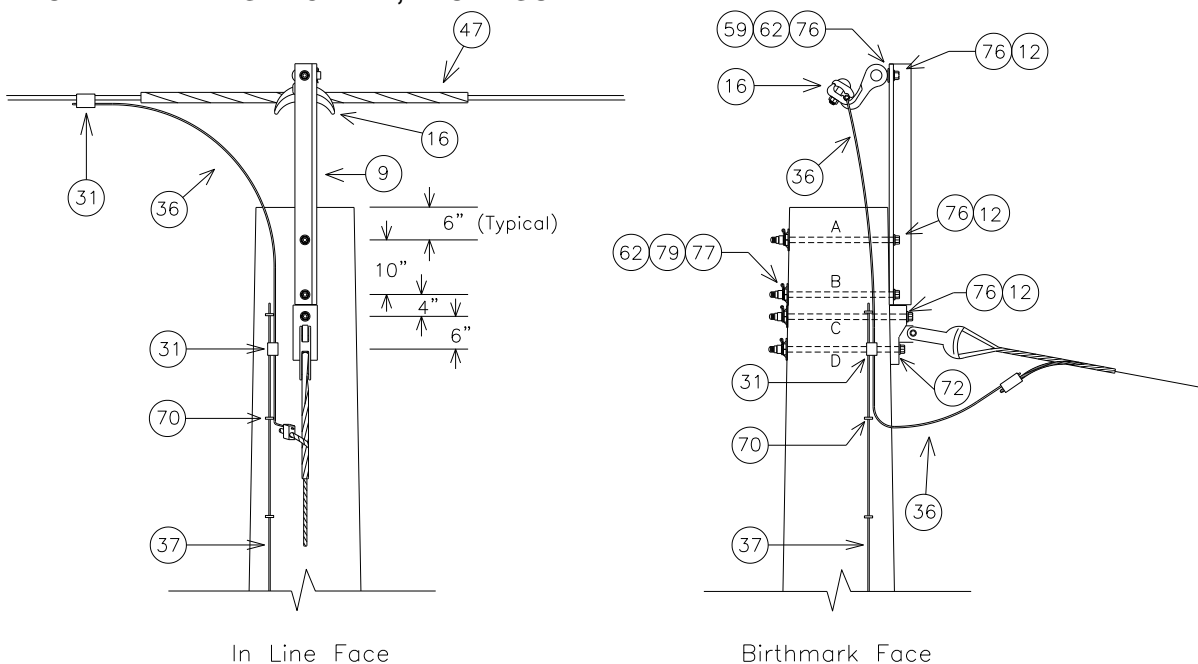
45	GRISA 001	6	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ACSR
69	SOCEY 004	6	SOCKET - EYE, STENGTH = 25,000#, L = 2 1/2", EYE = 13/16", FORGED STEEL, GALV.

# A2153 DRILLING DETAILS



## SWBAF

SHIELD FOR WOOD POLES  
BAYONET WITH ANGLE CLAMP, FRONT GUYED



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

	'A'	'B'	'C'	'D'
MINIMUM REQUIRED BOLT LENGTH (INCHES)	11.5	11.6	13.0	12.2

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER;  
USE  $\frac{3}{4}$ " BOLTS FOR 'A' & 'B' AND  $\frac{7}{8}$ " FOR BOLTS 'C' & 'D'

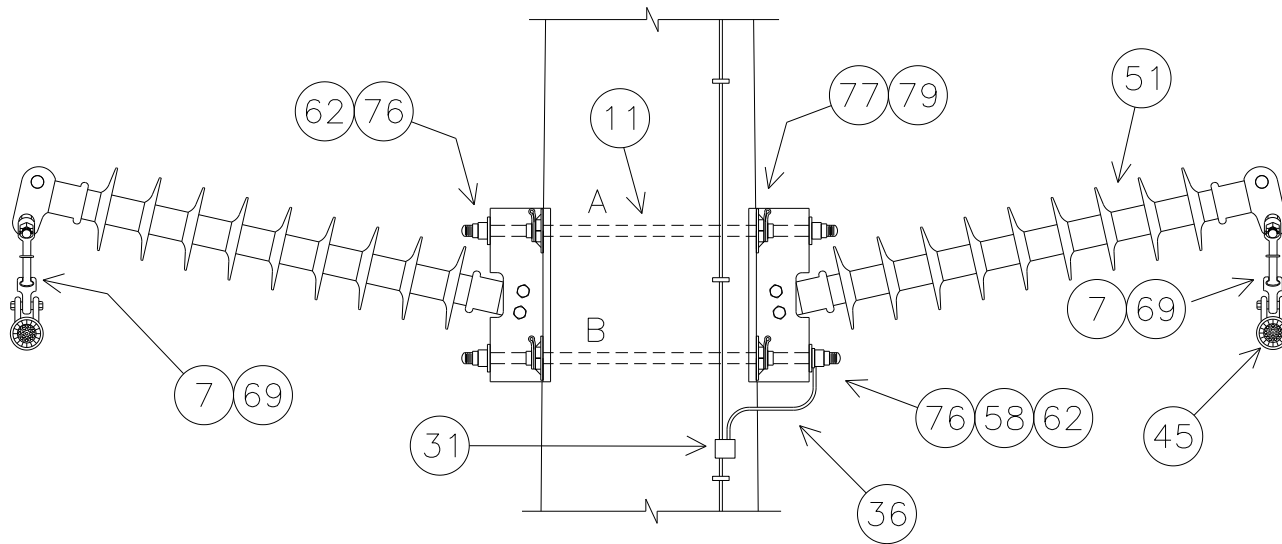
NO.	ITEM ID	QTY	DESCRIPTION
9	BAYSW 003	1	BAYONET FOR SHIELD WIRE, CORNER 40"
12	BOLMS 032	1	MACHINE BOLT, 3/4" X 6", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	2	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
16	CLAA 001	1	ANGLE CLAMP FOR 4-SOL - 250MCM, 7000#
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	4 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN (50# COIL)
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
59	NUTUY 003	1	NUT EYE FOR 3/4" BOLT
62	NUTSL 004	3	SQUARE LOCK NUT FOR 3/4" BOLT, HOT DIPPED GALVANIZED
62	NUTSL 005	2	SQUARE LOCK NUT FOR 7/8" BOLT, HOT DIPPED GALVANIZED
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	1	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	4	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	2	ROUND WASHER FOR 7/8" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
77	WASSC 002	2	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	2	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

# IWDPSA3

INSULATOR FOR WOOD POLES

DOUBLE POST, NO GUY, SHORT CLEVIS, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

SUBSTRUCTURE	Top	Mid	Bottom
BOLT 'A' LENGTH (INCHES)	24.9	25.7	26.5
BOLT 'B' LENGTH (INCHES)	25.3	26.1	26.9

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER.

# IWDPSA3 PLATES

**IWDPSA3 BASE**

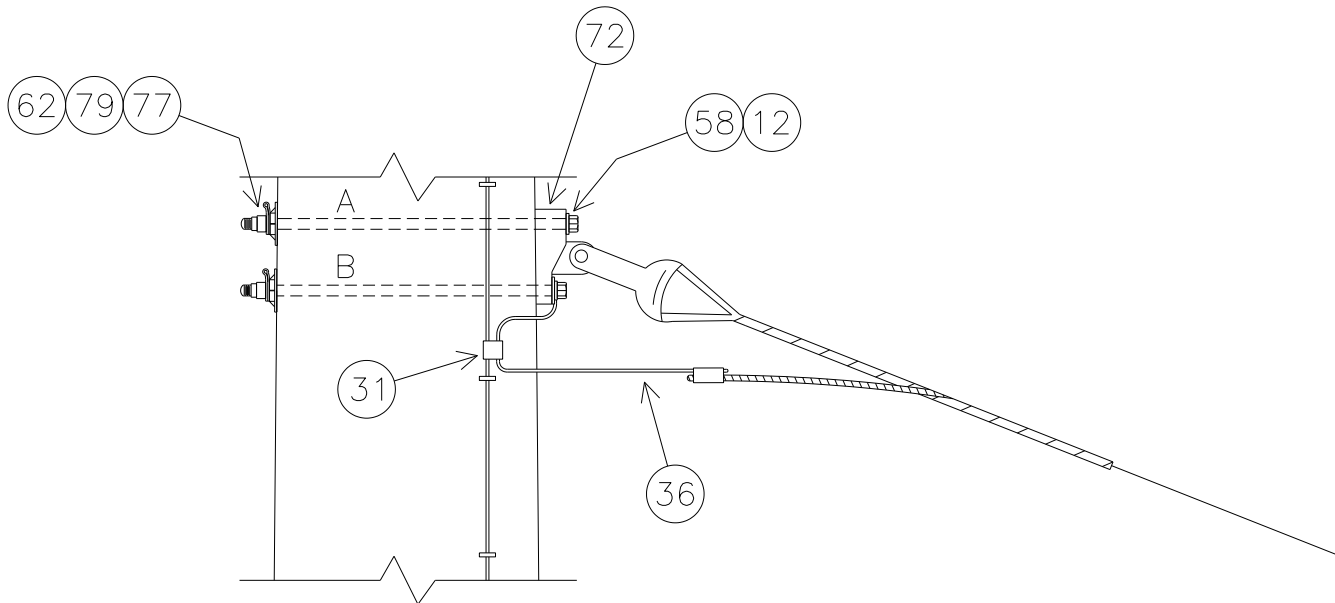
NO.	ITEM ID	QTY	DESCRIPTION
7	BALFI 007	6	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, PIN = 3/4", HOT DIPPED GALV.
11	BOLDA 041	3	DOUBLE ARMING BOLT, 7/8" X 28", WITH 4 SQUARE NUTS ATTACHED
11	BOLDA 042	3	DOUBLE ARMING BOLT, 7/8" X 26", WITH 4 SQUARE NUTS ATTACHED
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
51	INSHP 020	6	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 005	12	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
76	WASRD 006	12	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 002	12	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 006	12	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

**IWDPSA3\*556S**

45	GRISA 001	6	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
69	SOCEY 004	6	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4"

**GW1**

WOOD GUY, 3 SETS



MINIMUM REQUIRED BOLT LENGTH  
(INCHES)

'A'	13.8	14.6	15.4
'B'	13.2	14.0	14.9

NOTE: BOLT CALCULATIONS ASSUMES A 9 INCH POLE TOP DIAMETER

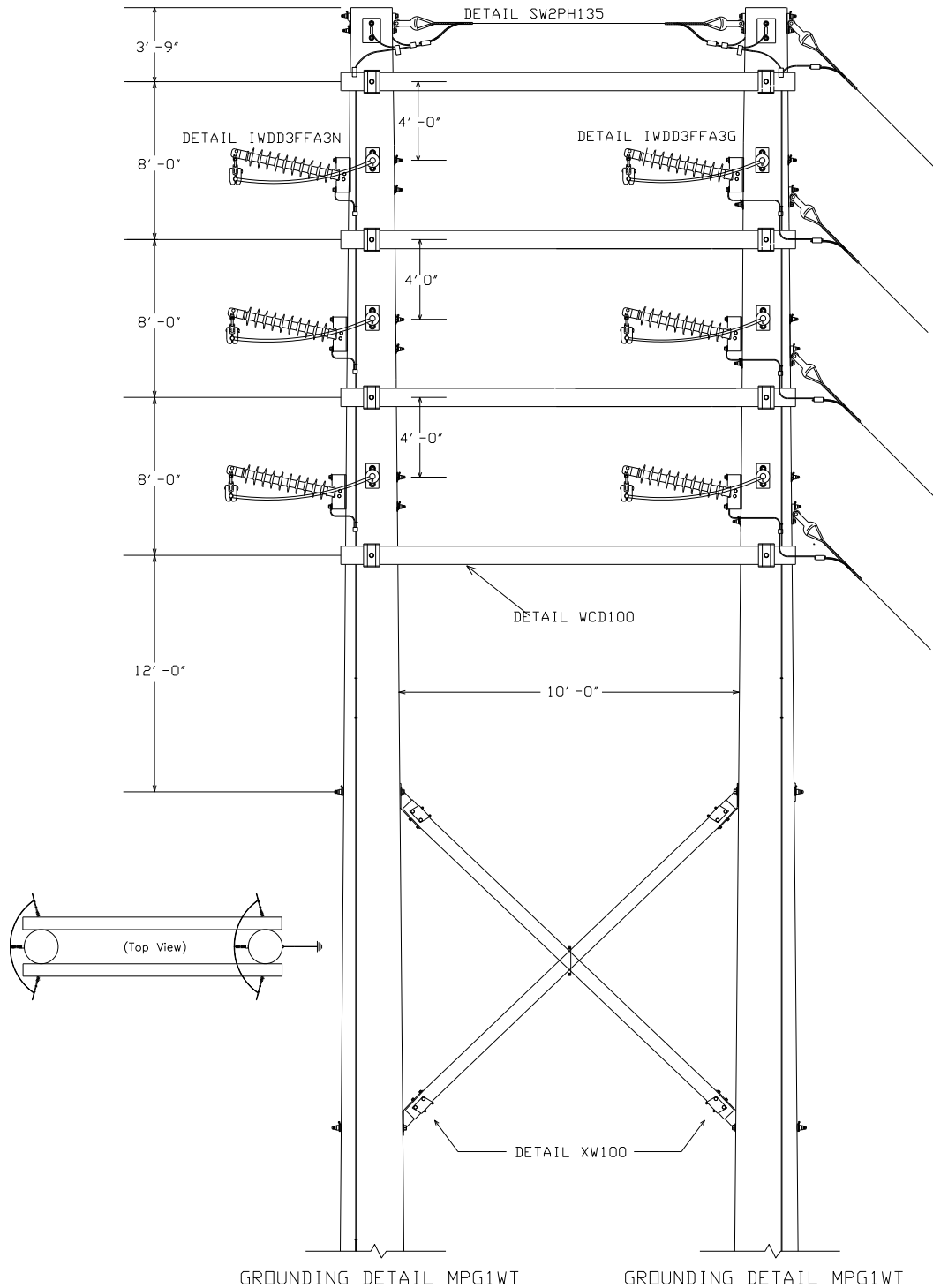
**WG1-3**

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 048	2	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
72	TEEDE 002	3	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 002	6	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

**THIS PAGE IS INTENTIONALLY LEFT BLANK**

# A2443

69KV, DOUBLE DEADEND, FULL TENSION TO FULL TENSION, DOUBLE CIRCUIT, 3-PHASE  
CONDUCTOR OPTIONS: 556S, 954S





# A2443 PLATES

## A2443 BASE

NO.	ITEM ID	QTY	DESCRIPTION
1	ADCVF 001	12	VOID FILLER COMPOUND FOR DEADEND ASSEMBLY
7	BALFI 007	6	BALL Y-CLEVIS, CLASS 52-3/5
11	BOLDA 019	3	DOUBLE ARMING BOLT, 3/4" X 22", GALVANIZED, WITH 4 SQUARE NUT ATTACHED
11	BOLDA 023	8	DOUBLE ARMING BOLT, 3/4" X 30", GALVANIZED, WITH 4 SQUARE NUT ATTACHED
12	BOLMS 036	10	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 037	1	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 039	6	MACHINE BOLT, 3/4" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 040	3	MACHINE BOLT, 3/4" X 22", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	2	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	8	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	6	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
15	BRCCX 001	1 PR	BRACE, WOOD, X, 10' POLE SPACING CENTER TO CENTER
21	CLAQD 008	4	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	4	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G.
29	CLETH 001	2	20,000# THIMBLE CLEVIS, GALVANIZED, PIN DIAMETER = 5/8", USED WITH 3/8" & 7/16"
31	CNNCP 002	4	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 016	13	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
33	CNNTB 001	2	TWO BOLT PARALLEL CONNECTOR FOR CU TO CU CONNECTIONS, 1/0-4/0 MAIN, 8-4/0 TAP
36	COBCO 028	37 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	160 ft	#4 COPPERWELD CONDUCTOR
40	CXAWO 008	8	CROSSARM, WOOD, 5-3/4" X 7-3/4" X 11'
48	GUYGR 002	2	GRIP, GUY, 7/16", GREEN, GALVANIZED
49	GUYST 006	10 ft	7/16" DIAMETER GUY STRAND, 7 PER STRAND, CLASS "B" GALV. (500' COIL)
51	INSHP 020	6	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 001	6	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	6	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	42	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	16	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
64	PLACR 001	16	PLATE, CROSSARM REINFORCING
69	SOCEY 003	6	SOCKET EYE, CLASS 52-3/5
70	STAPL 002	80	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	22	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	39	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	16	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	17	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
77	WASSC 002	4	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	42	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	16	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

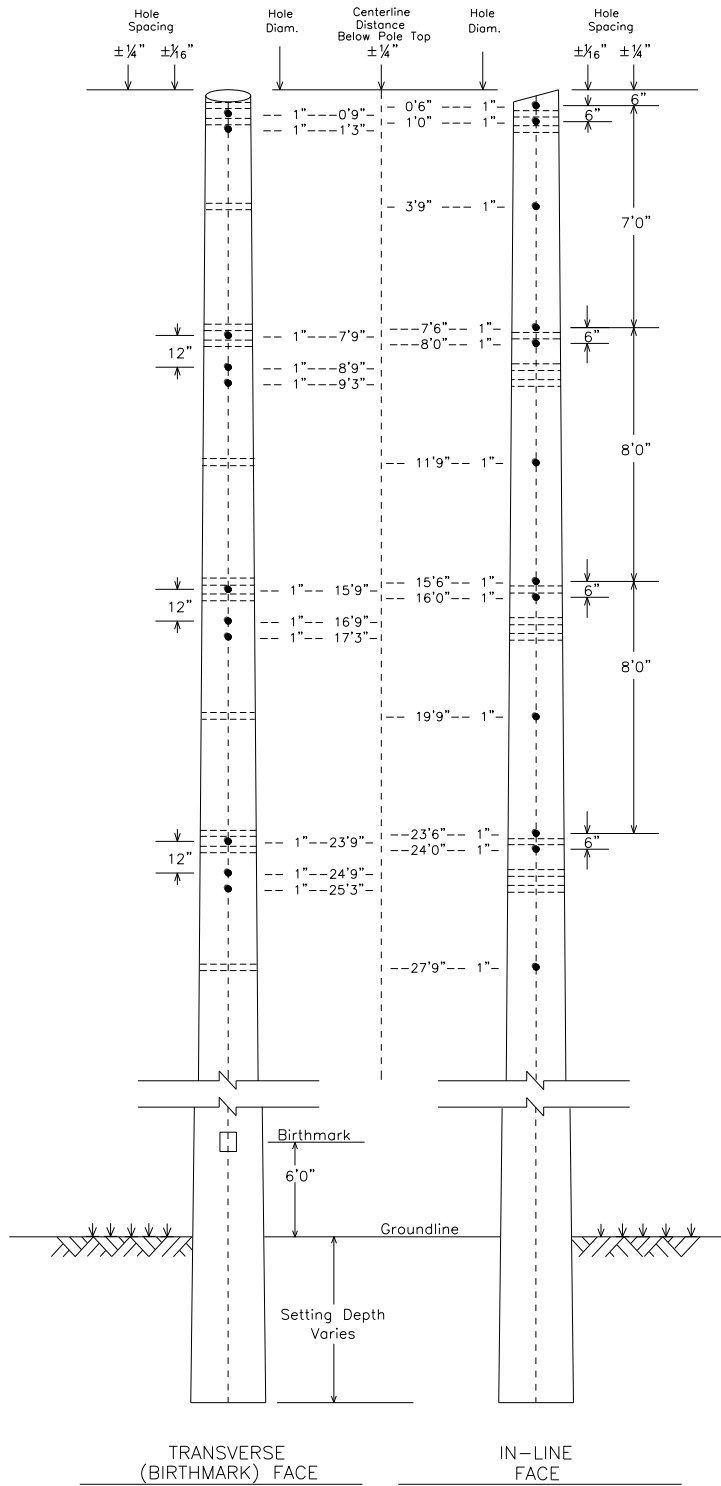
## A2443\*556S

NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 005	6	CUSHION GRIP SUSPENSION CLAMP FOR 556 ACSR
26	CLEHL 004	12	SOCKET-Y CLEVIS, CLASS 52-3, L = 11", PIN = 5/8" HOT DIPPED GALV.
42	DEACB 003	12	DEADEND COMPRESSION ASSEMBLY FOR 556 ACSR, OVAL EYE
50	INSSU 008	12	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-5

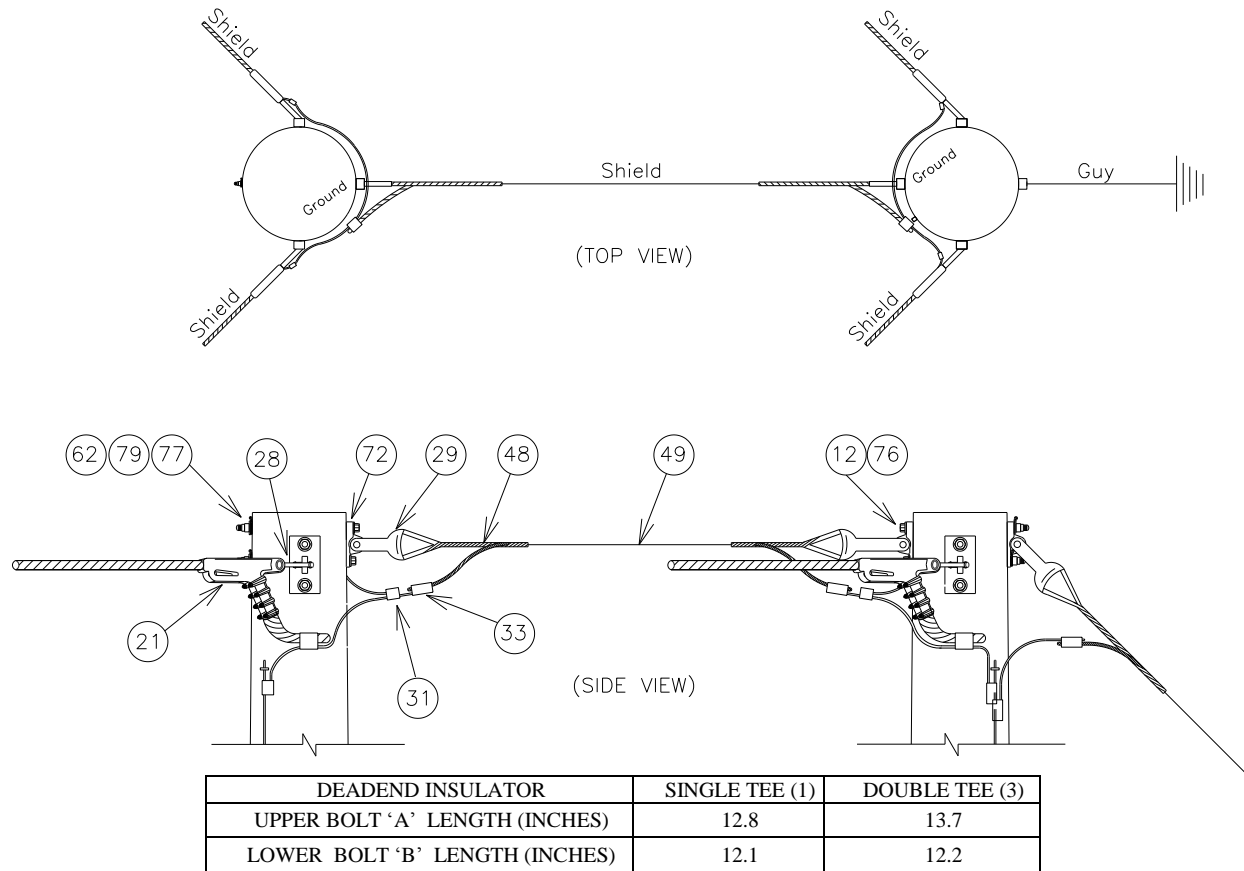
## A2443\*954S

NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 007	6	CUSHION GRIP SUSPENSION CLAMP FOR 954 ACSR
26	CLEHL 005	12	SOCKET-Y CLEVIS, CLASS 52-8/11, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 005	12	DEADEND COMPRESSION ASSEMBLY FOR 954 ACSR, OVAL EYE
50	INSD 004	12	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11

# A2443 DRILLING DETAILS



# SW2PH135

**SHIELD FOR WOOD POLES**
**2-POLE, H-FRAME, 135 DEGREE TURN**


NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

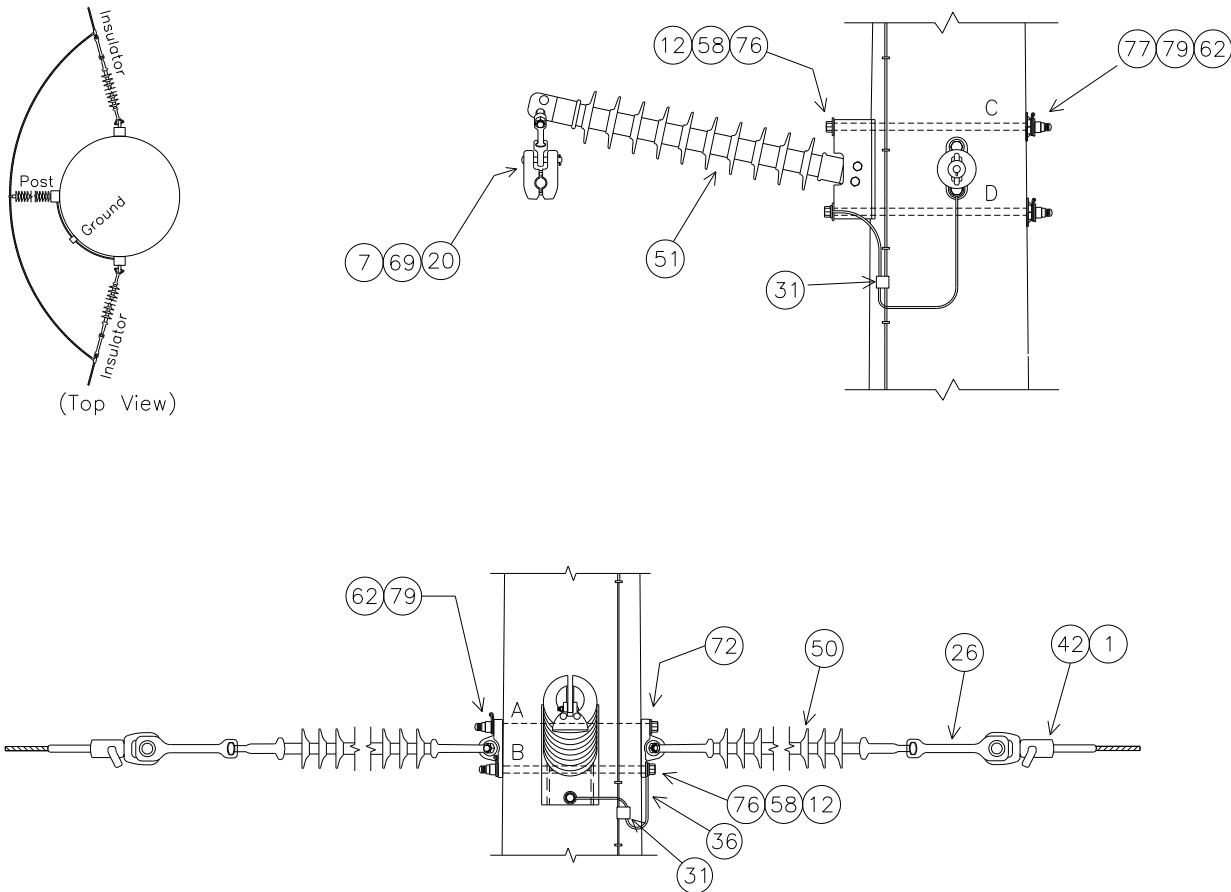
NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	8	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	4	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	4	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G.
29	CLETH 001	2	20,000# THIMBLE CLEVIS, GALVANIZED, PIN DIAMETER = 5/8", USED WITH 3/8" & 7/16"
31	CNNCP 002	4	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 016	4	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
33	CNNTB 001	2	TWO BOLT PARALLEL CONNECTOR FOR CU TO CU CONNECTIONS, 1/0-4/0 MAIN, 8-4/0 TAP
36	COBCO 028	10 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	160 ft	#4 COPPERWELD CONDUCTOR
48	GUYGR 002	2	GRIP, GUY, 7/16", GREEN, GALVANIZED
49	GUYST 006	10 ft	7/16" DIAMETER GUY STRAND, 7 PER STRAND, CLASS "B" GALV. (500' COIL)
62	NUTSL 004	8	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
70	STAPL 002	80	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	7	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	8	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	8	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

## IWDD3FFA3N

INSULATOR FOR WOOD POLES

DOUBLE DEADEND 135, FULL TENSION TO FULL TENSION, 69KV, 3-PHASE, NO GUY

CONDUCTOR OPTIONS: 556S, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

DEADEND INSULATOR	TOP	MIDDLE	BOTTOM
UPPER BOLT 'A' LENGTH (INCHES)	14.7	15.6	16.5
LOWER BOLT 'B' LENGTH (INCHES)	13.2	14.2	15.1

POST INSULATOR	TOP	MIDDLE	BOTTOM
UPPER BOLT 'C' LENGTH (INCHES)	18.1	19.0	20.0
LOWER BOLT 'D' LENGTH (INCHES)	18.5	19.4	20.3

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

# IWDD3FFA3N PLATES

## IWDD3FFA3N BASE

NO.	ITEM ID	QTY	DESCRIPTION
1	ADCVF 001	6	VOID FILLER COMPOUND FOR DEADEND ASSEMBLY
7	BALFI 007	3	BALL Y-CLEVIS, CLASS 52-3/5
12	BOLMS 039	4	MACHINE BOLT, 3/4" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 040	2	MACHINE BOLT, 3/4" X 22", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	1	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	1	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 001	3	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	6	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
69	SOCEY 003	3	SOCKET EYE, CLASS 52-3/5
72	TEEDE 002	6	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	6	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	6	SQUARE CURVED WASHER FOR 3/4" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	6	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWDD3FFA3N\*556S

NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 005	3	CUSHION GRIP SUSPENSION CLAMP FOR 556 ACSR
26	CLEHL 004	6	SOCKET-Y CLEVIS, CLASS 52-3, L = 11", PIN = 5/8" HOT DIPPED GALV.
42	DEACB 003	6	DEADEND COMPRESSION ASSEMBLY FOR 556 ACSR, OVAL EYE
50	INSSU 008	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-5

## IWDD3FFA3N\*954S

NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 007	3	CUSHION GRIP SUSPENSION CLAMP FOR 954 ACSR
26	CLEHL 005	6	SOCKET-Y CLEVIS, CLASS 52-8/11, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 005	6	DEADEND COMPRESSION ASSEMBLY FOR 954 ACSR, OVAL EYE
50	INSDU 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11

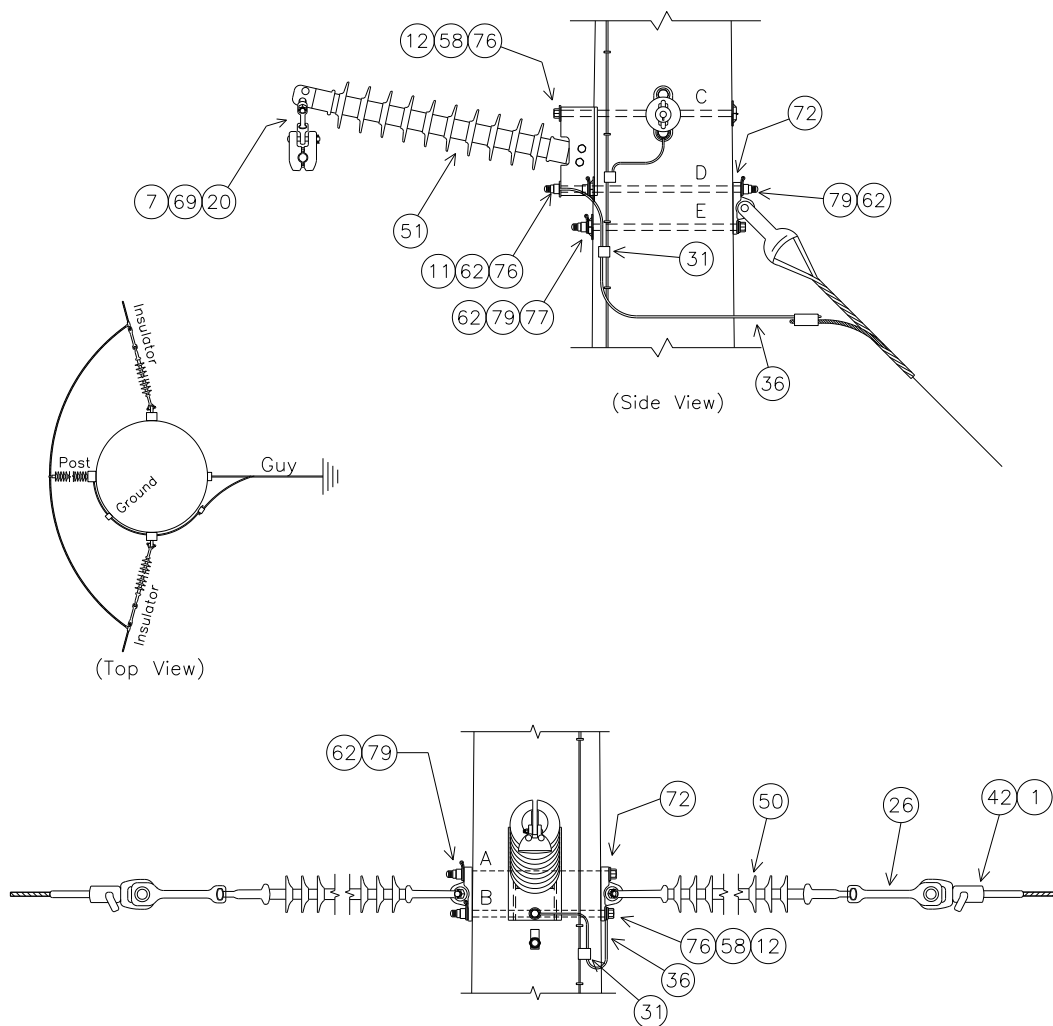
**NOTE: USE 3/4" BOLTS FOR POST INSULATORS AND 7/8" BOLTS FOR DEADEND INSULATORS**

# IWDD3FFA3G

INSULATOR FOR WOOD POLES

DOUBLE DEADEND 135, FULL TENSION TO FULL TENSION, 69KV, 3-PHASE, GUYED

CONDUCTOR OPTIONS: 556S, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

DEADEND INSULATOR 7/8"	TOP	MIDDLE	BOTTOM
UPPER BOLT 'A' LENGTH (INCHES)	14.7	15.6	16.5
LOWER BOLT 'B' LENGTH (INCHES)	13.2	14.2	15.1

POST INSULATOR 3/4"	TOP	MIDDLE	BOTTOM
UPPER BOLT 'C' LENGTH (INCHES)	18.1	19.0	20.0
MIDDLE BOLT 'D' LENGTH (INCHES) DA	19.4	20.3	21.3
LOWER BOLT 'E' LENGTH (INCHES)	12.9	13.8	14.8

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

# IWDD3FFA3G PLATES

## IWDD3FFA3G BASE

NO.	ITEM ID	QTY	DESCRIPTION
1	ADCVF 001	6	VOID FILLER COMPOUND FOR DEADEND ASSEMBLY
7	BALFI 007	3	BALL Y-CLEVIS, CLASS 52-3/5
11	BOLDA 019	3	DOUBLE ARMING BOLT, 3/4" X 22", WITH 4 SQUARE NUTS ATTACHED
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 037	1	MACHINE BOLT, 3/4" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 039	2	MACHINE BOLT, 3/4" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 040	1	MACHINE BOLT, 3/4" X 22", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	1	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	4	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	1	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
31	CNNCP 016	6	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	18 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 001	3	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	12	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
69	SOCEY 003	3	SOCKET EYE, CLASS 52-3/5
72	TEEDE 002	9	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	9	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	9	SQUARE CURVED WASHER FOR 3/4" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	12	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWDD3FFA3G\*556S

NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 005	3	CUSHION GRIP SUSPENSION CLAMP FOR 556 ACSR
26	CLEHL 004	6	SOCKET-Y CLEVIS, CLASS 52-3, L = 11", PIN = 5/8" HOT DIPPED GALV.
42	DEACB 003	6	DEADEND COMPRESSION ASSEMBLY FOR 556 ACSR, OVAL EYE
50	INSSU 008	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-5

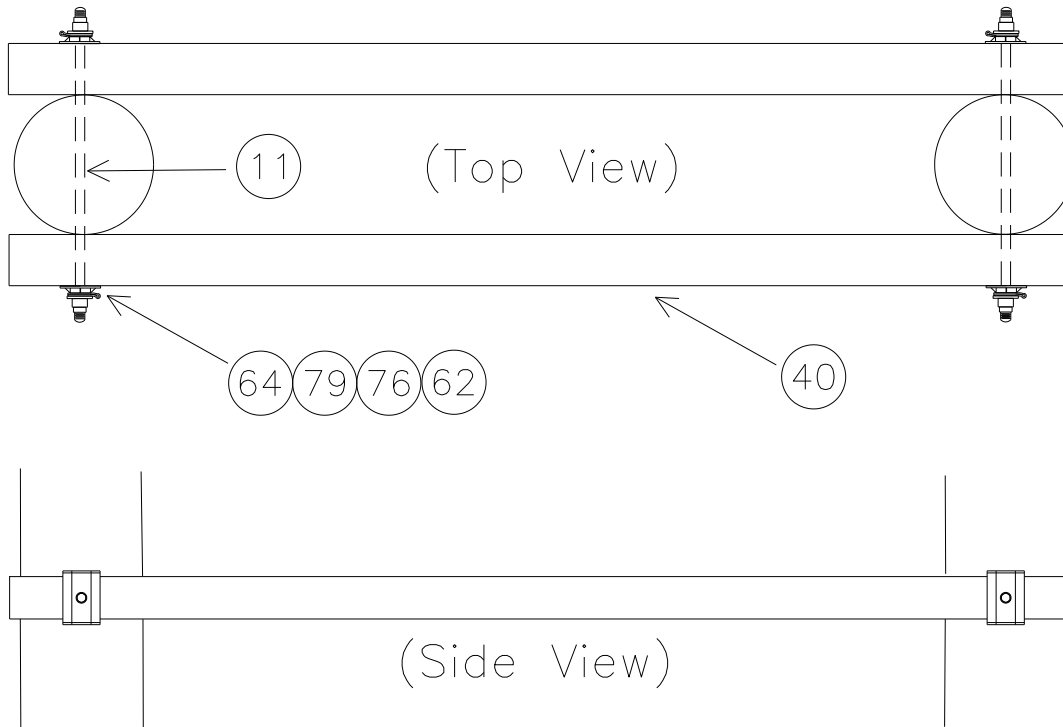
## IWDD3FFA3G\*954S

NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 007	3	CUSHION GRIP SUSPENSION CLAMP FOR 954 ACSR
26	CLEHL 005	6	SOCKET-Y CLEVIS, CLASS 52-8/11, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 005	6	DEADEND COMPRESSION ASSEMBLY FOR 954 ACSR, OVAL EYE
50	INSDU 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11

NOTE: USE 3/4" BOLTS FOR POST INSULATORS AND 7/8" BOLTS FOR DEADEND INSULATORS

# WCD100

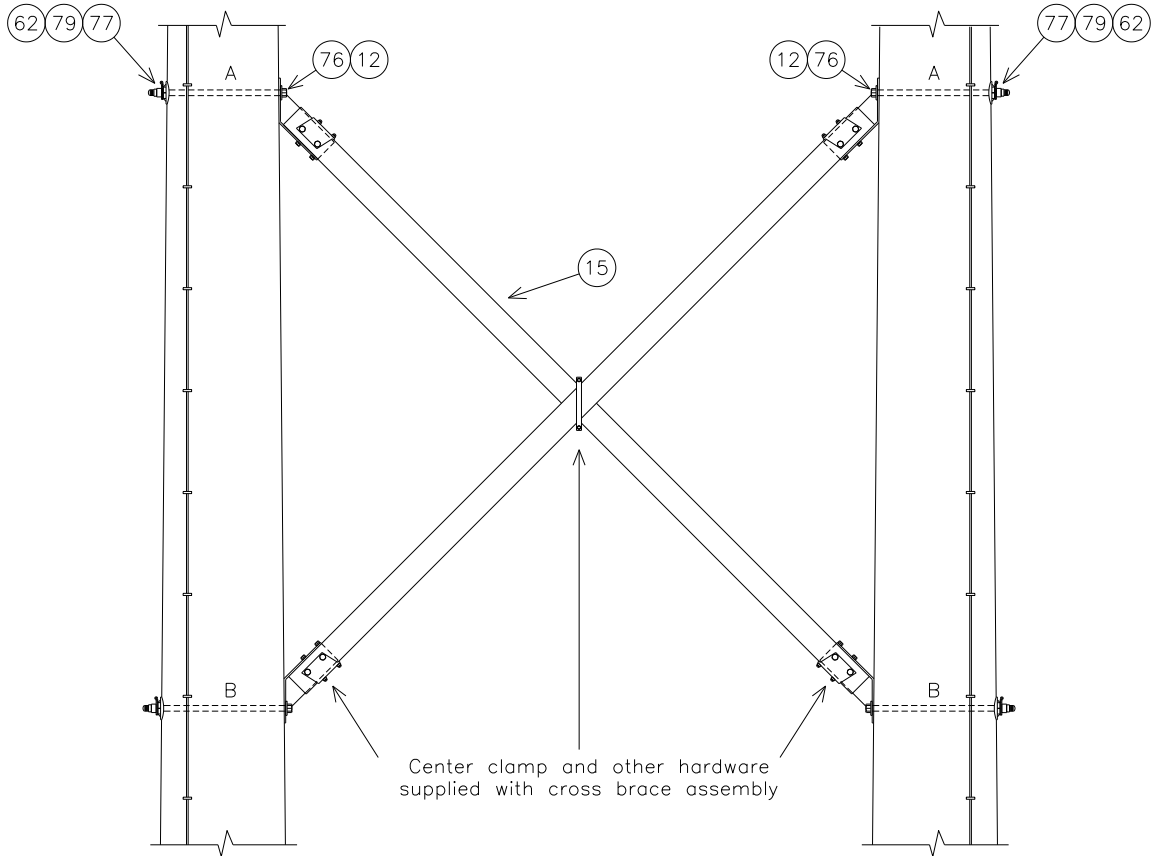
WOOD CROSS ARM, DOUBLE  
10'0" FEET CENTER TO CENTER



## WC1 – 4 SETS

NO.	ITEM ID	QTY	DESCRIPTION
11	BOLDA 022	8	DOUBLE ARMING BOLT, 3/4" X 30", GALVANIZED, WITH 4 SQUARE NUT ATTACHED
40	CXAWO 008	8	CROSSARM, WOOD, 5-3/4" X 7-3/4" X 11'
62	NUTSL 004	16	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
64	PLACR 001	16	PLATE, CROSSARM REINFORCING
76	WASRD 005	16	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	16	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED



**XW100****X BRACE FOR WOOD POLES 10'0" CENTER TO CENTER SPACING**

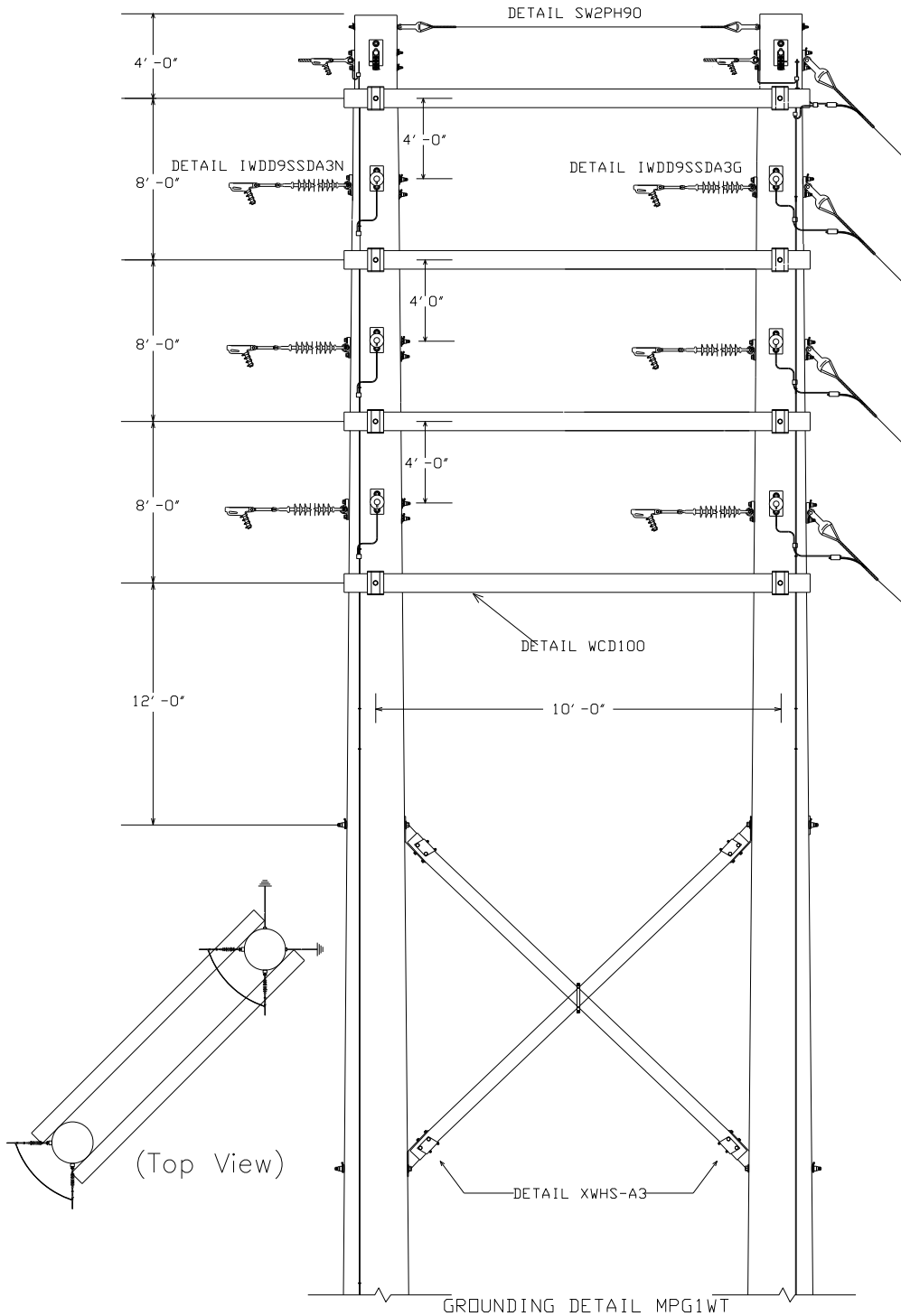
NOTE: DRILL ALL HOLES AS PART OF THIS SUBSTRUCTURE

**XWHS A3**

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 050	4	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
15	BRCCX 001	1 PR	BRACE, WOOD, X, 10' POLE SPACING CENTER TO CENTER
62	NUTSL 005	4	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
76	WASRD 006	4	ROUND WASHER FOR 7/8" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 002	4	SQUARE CURVED WASHER FOR 7/8" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 006	4	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

# A2444

**69KV, 90° DOUBLE DEADEND, SLACK TENSION TO SLACK TENSION, DOUBLE CIRCUIT, 3-PHASE**  
**CONDUCTOR OPTIONS: 556S, 954S**



# A2444 PLATES

## A2444 BASE

NO.	ITEM ID	QTY	DESCRIPTION
11	BOLDA 022	8	DOUBLE ARMING BOLT, 3/4" X 30", GALVANIZED, WITH 4 SQUARE NUT ATTACHED
12	BOLMS 036	8	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	6	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	16	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	6	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
13	BOLSE 010	2	SHOULDER EYE BOLT, 3/4" X 12", WITH SQUARE NUT ATTACHED
15	BRCCX 001	1 PR	BRACE, WOOD, X, 10' POLE SPACING CENTER TO CENTER
21	CLAQD 008	4	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
26	CLEHL 008	12	SOCKET-EYE CLEVIS, CLASS 52-8/11, L = 10", EYE = 3/4" THICK W/ 13/16 OPENING, H. D. G.
28	CLETE 004	4	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G.
29	CLETH 001	2	20,000# THIMBLE CLEVIS, GALVANIZED, PIN DIAMETER = 5/8", USED WITH 3/8" & 7/16"
31	CNNCP 002	2	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 003	5	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
31	CNNCP 016	16	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
33	CNNTB 001	2	TWO BOLT PARALLEL CONNECTOR FOR CU TO CU CONNECTIONS, 1/0-4/0 MAIN, 8-4/0 TAP
36	COBCO 028	45 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	160 ft	#4 COPPERWELD CONDUCTOR
40	CXAWO 008	8	CROSSARM, WOOD, 5-3/4" X 7-3/4" X 11'
48	GUYGR 002	2	GRIP, GUY, 7/16", GREEN, GALVANIZED
49	GUYST 006	10 ft	7/16" DIAMETER GUY STRAND, 7 PER STRAND, CLASS "B" GALV. (500' COIL)
50	INSDE 004	12	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11
58	LUGGR 001	3	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	12	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	26	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	28	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
64	PLACR 001	16	PLATE, CROSSARM REINFORCING
70	STAPL 002	80	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	24	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	24	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	28	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	6	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
77	WASSC 002	16	SQUARE CURVED WASHER FOR 7/8" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	22	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	28	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

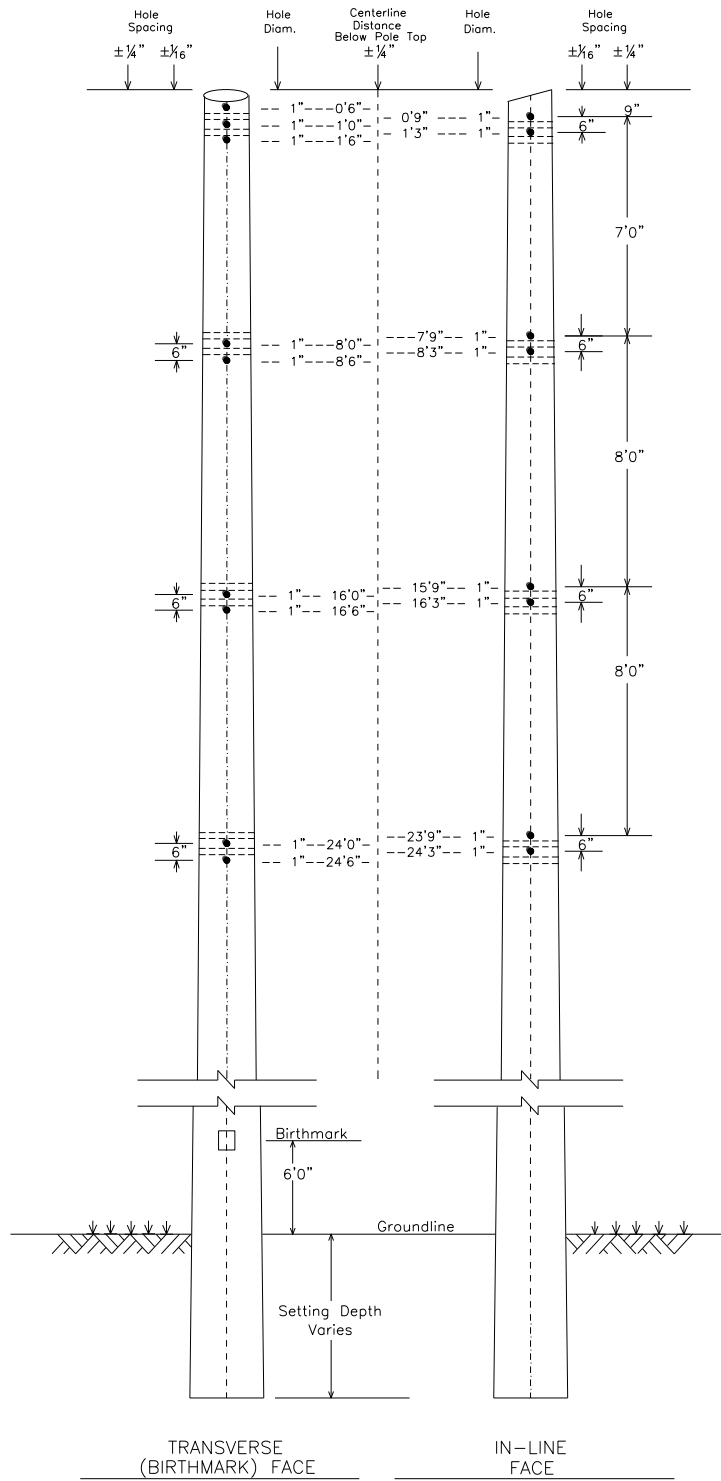
## A2444\*556S

NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	12	DEADEND CLAMP (.7 - 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 003	6	ALUM. SLEEVE JUMPER FOR 556 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

## A2444\*954S

NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	12	DEADEND CLAMP (.7 - 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 005	6	ALUM. SLEEVE JUMPER FOR 954 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

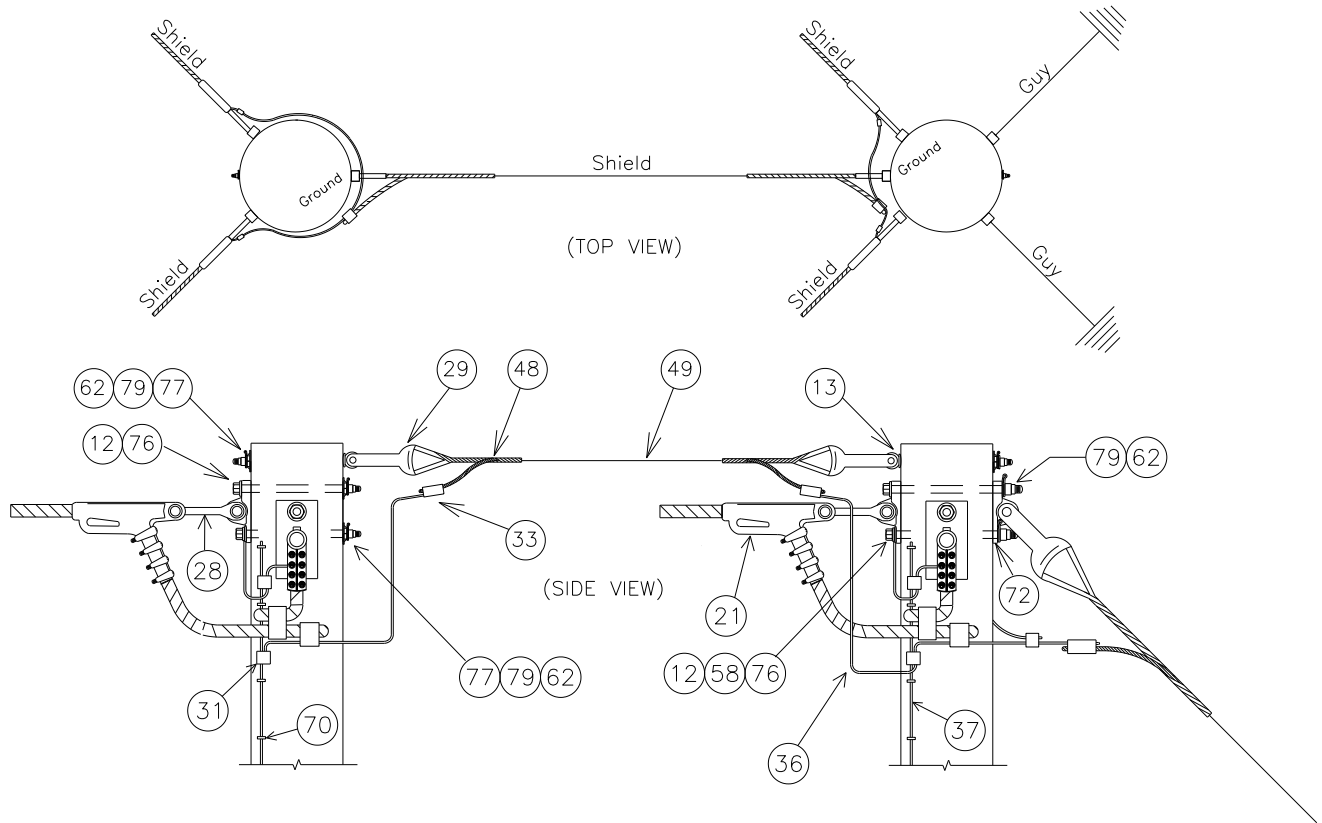
# A2444 DRILLING DETAILS



# SW2PH90

SHIELD FOR WOOD POLES

2-POLE, H-FRAME, 90° DEGREE TURN



NOTE: DRILL HOLES FOR GUY SPAN AS PART OF THIS SUBSTRUCTURE

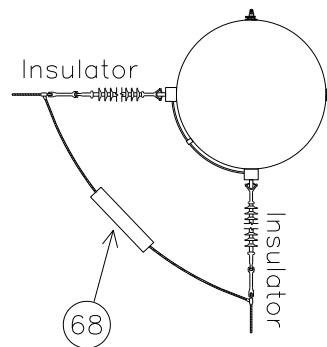
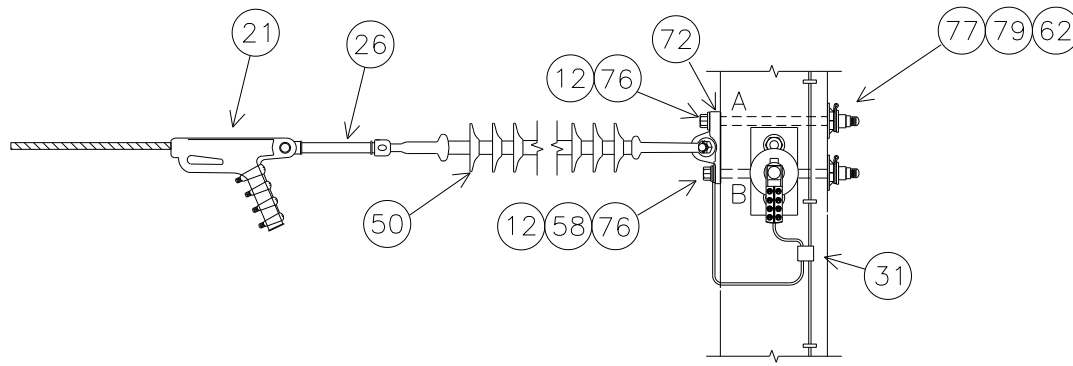
NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	8	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
13	BOLSE 010	2	SHOULDER EYE BOLT, 3/4" X 12", WITH SQUARE NUT ATTACHED
21	CLAQD 008	4	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	4	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G.
29	CLETH 001	2	20,000# THIMBLE CLEVIS, GALVANIZED, PIN DIAMETER = 5/8", USED WITH 3/8" & 7/16"
31	CNNCP 002	2	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 003	5	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
31	CNNCP 016	4	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
33	CNNTB 001	2	TWO BOLT PARALLEL CONNECTOR FOR CU TO CU CONNECTIONS, 1/0-4/0 MAIN, 8-4/0 TAP
36	COBCO 028	12 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	160 ft	#4 COPPERWELD CONDUCTOR
48	GUYGR 002	2	GRIP, GUY, 7/16", GREEN, GALVANIZED
49	GUYST 006	10 ft	7/16" DIAMETER GUY STRAND, 7 PER STRAND, CLASS "B" GALV. (500' COIL)
58	LUGGR 001	3	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	10	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
70	STAPL 002	80	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	6	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	8	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 001	6	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	6	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

# IWDD9SSA3N

INSULATOR FOR WOOD POLES

DOUBLE DEADEND 90°, SLACK TENSION TO SLACK TENSION, 69KV, 3-PHASE, NO GUY

CONDUCTOR OPTIONS: 556S, 954S



(Top View)

NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

SUBSTRUCTURE	UPPER BRACKET			LOWER BRACKET		
	Top	Mid	Bottom	Top	Mid	Bottom
UPPER BOLT 'A' LENGTH (INCHES)	13.8	14.7	15.6	13.8	14.7	15.6
LOWER BOLT 'B' LENGTH (INCHES)	13.2	14.1	15.0	13.2	14.1	15.0

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

# IWDD9SSA3N PLATES

## IWDD9SSA3N BASE

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 048	4	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	8	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
26	CLEHL 008	6	SOCKET-EYE CLEVIS, CLASS 52-8/11, L = 10", EYE = 3/4" THICK W/ 13/16 OPENING, H. D. G.
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
50	INSDE 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11
58	LUGGR 002	6	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 005	12	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
72	TEEDE 002	6	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 006	12	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 002	12	SQUARE CURVED WASHER FOR 7/8" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 006	12	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IWDD9SSA3N\*556S

NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	6	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 003	3	ALUM. SLEEVE JUMPER FOR 556 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

## IWDD9SSA3N\*954S

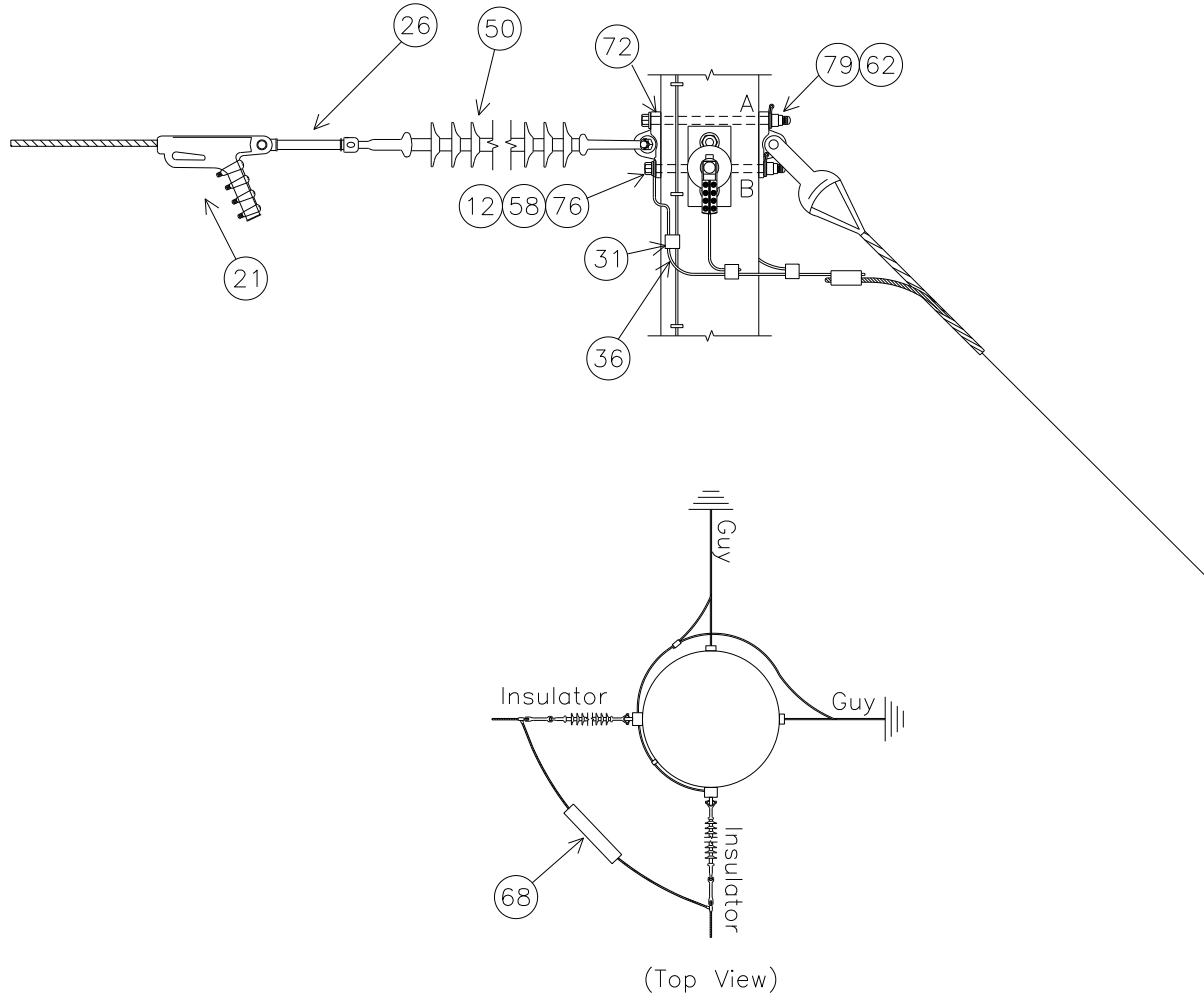
NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	6	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 005	3	ALUM. SLEEVE JUMPER FOR 954 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

## IWDD9SSA3G

INSULATOR FOR WOOD POLES

DOUBLE DEADEND 90°, SLACK TENSION TO SLACK TENSION, 69KV, 3-PHASE, GUYED

CONDUCTOR OPTIONS: 556S, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

SUBSTRUCTURE	UPPER BRACKET			LOWER BRACKET		
	Top	Mid	Bottom	Top	Mid	Bottom
UPPER BOLT 'A' LENGTH (INCHES)	14.7	15.6	16.5	14.7	15.6	16.5
LOWER BOLT 'B' LENGTH (INCHES)	13.2	14.2	15.1	13.2	14.2	15.1

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER



# IWDD9SSA3G PLATES

**IWDD9SSA3G BASE**

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 048	2	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	8	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	2	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
26	CLEHL 008	6	SOCKET-EYE CLEVIS, CLASS 52-8/11, L = 10", EYE = 3/4" THICK W/ 13/16 OPENING, H. D. G.
31	CNNCP 016	9	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	24 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
50	INSDE 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11
58	LUGGR 002	6	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 005	12	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
72	TEEDE 002	12	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 006	12	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
79	WASSP 006	12	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

**IWDD9SSA3G\*556S**

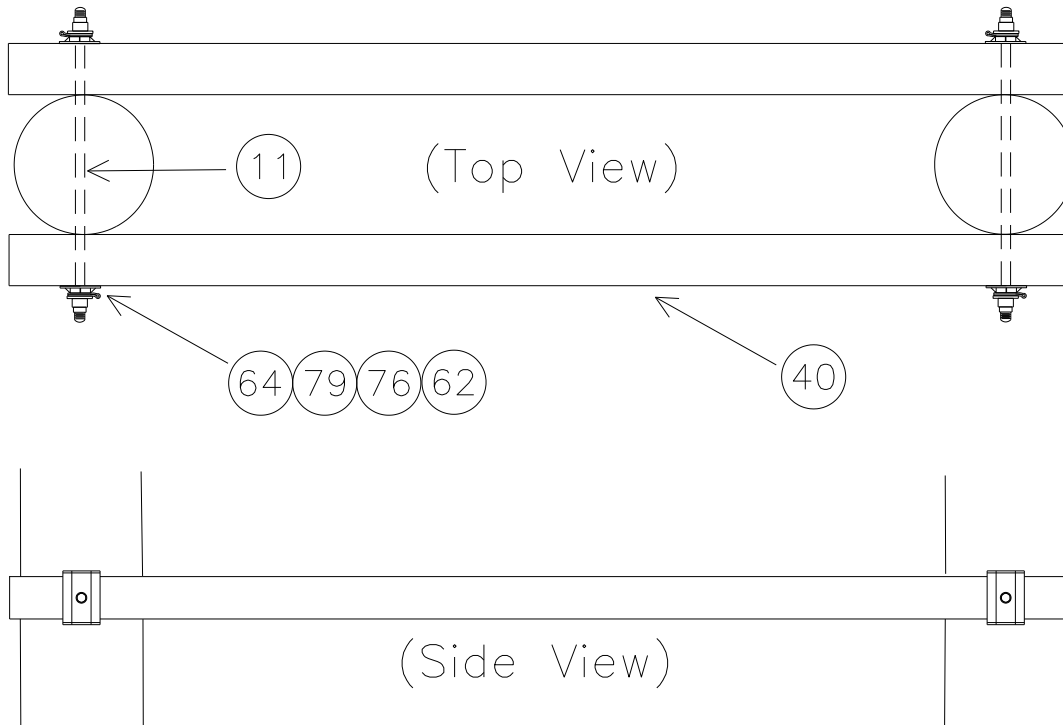
NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	6	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 003	3	ALUM. SLEEVE JUMPER FOR 556 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

**IWDD9SSA3G\*954S**

NO.	ITEM ID	QTY	DESCRIPTION
21	CLAQD 005	6	DEADEND CLAMP (.7 – 1.39") 35,000# STRENGTH, GAP = 1 7/16", PIN = 3/4"
68	SLEAJ 005	3	ALUM. SLEEVE JUMPER FOR 954 ACSR, COMPRESSION SPLICE, NON-TENSION ONLY

# WCD100

WOOD CROSS ARM, DOUBLE  
10'0" FEET CENTER TO CENTER



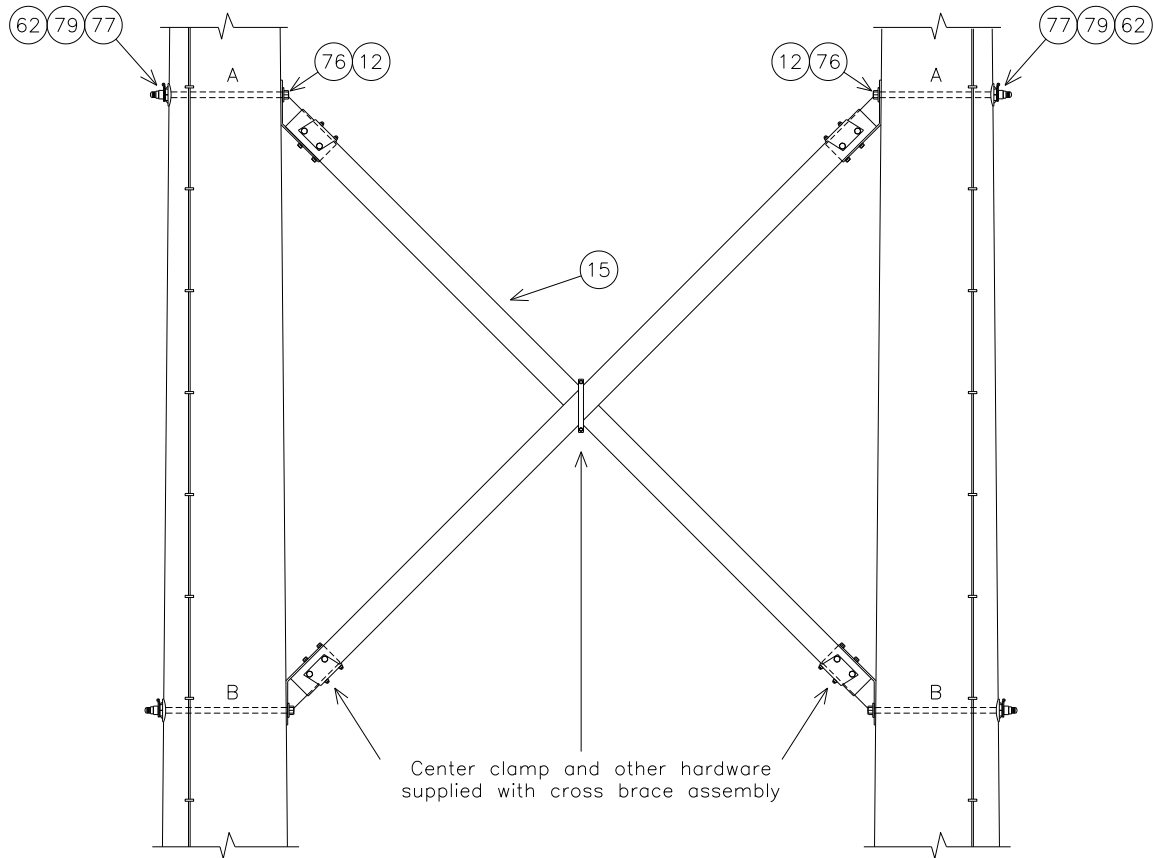
NOTE: DRILL HOLES AS PART OF THIS SUBSTRUCTURE

## WC1 – 4 SETS

NO.	ITEM ID	QTY	DESCRIPTION
11	BOLDA 022	8	DOUBLE ARMING BOLT, 3/4" X 30", GALVANIZED, WITH 4 SQUARE NUT ATTACHED
40	CXAWO 008	8	CROSSARM, WOOD, 5-3/4" X 7-3/4" X 11'
62	NUTSL 004	16	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
64	PLACR 001	16	PLATE, CROSSARM REINFORCING
76	WASRD 005	16	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	16	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

# XW100

X BRACE FOR WOOD POLES 10'0" CENTER TO CENTER SPACING



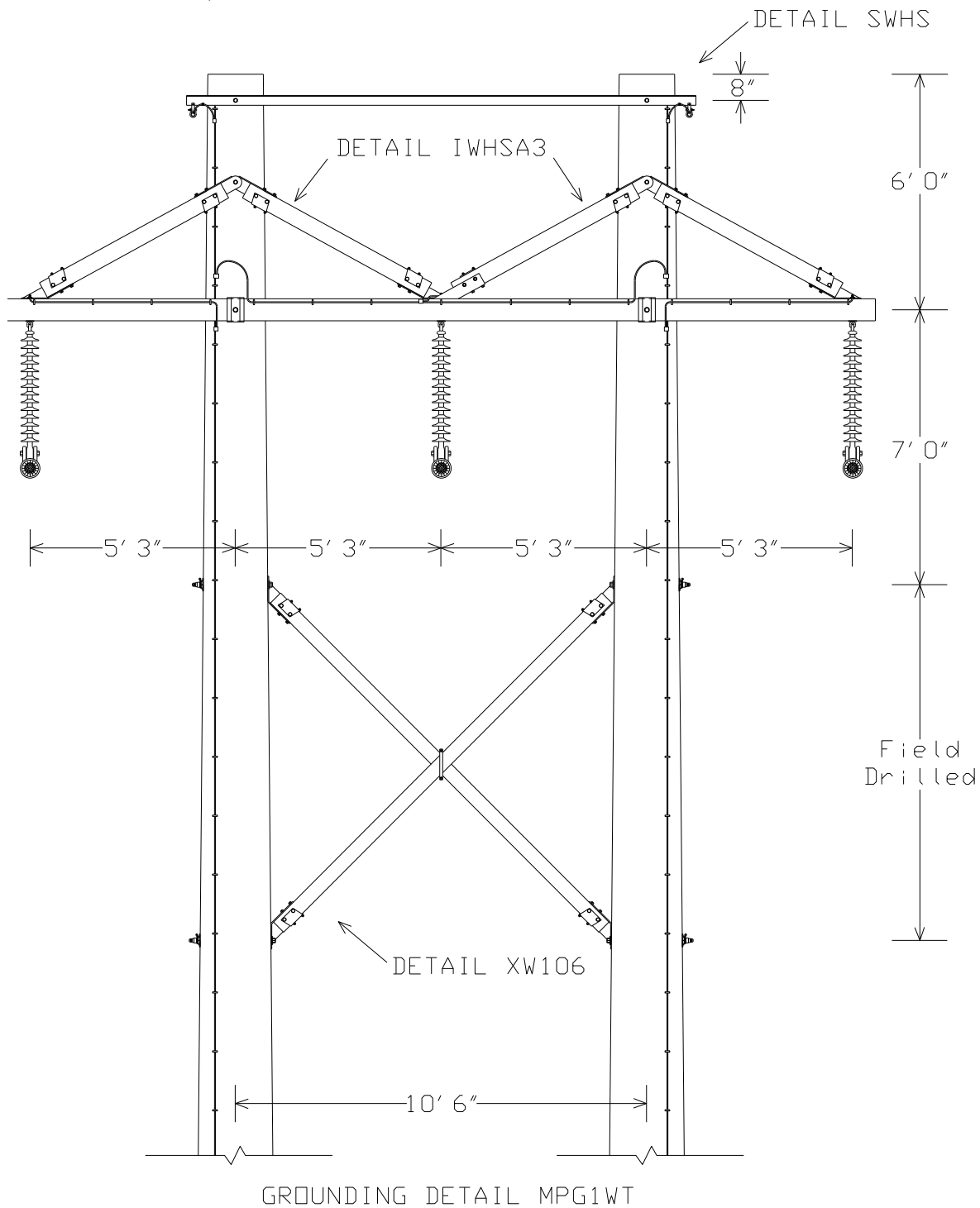
NOTE: DRILL ALL HOLES AS PART OF THIS SUBSTRUCTURE

## XWHS A3

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 050	4	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
15	BRCCX 001	1 PR	BRACE, WOOD, X, 10' POLE SPACING CENTER TO CENTER
62	NUTSL 005	4	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
76	WASRD 006	4	ROUND WASHER FOR 7/8" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 002	4	SQUARE CURVED WASHER FOR 7/8" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 006	4	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

# A3411

69KV, HORIZONTAL SUSPENSION, 3-PHASE  
CONDUCTOR OPTIONS: 556S, 954S



# A3411 PLATES

## A3411 BASE

NO.	ITEM ID	QTY	DESCRIPTION
A		1	ANGLE STEEL, 3" X 3" X 1/4" X 13', PROVIDED BY CONTRACTOR
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 039	2	MACHINE BOLT, 3/4" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	4	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
13	BOLSE 009	3	BOLT, SHOULDER EYE, 3/4" X 10"
14	BRCCF 001	2 PR	BRACE, CROSSARM, 3' 6" DROP, 9' SPAN, PENTA TREATED, GALV. END FITTINGS
15	BRCCX 002	1 PR	BRACE, WOOD, X, 10' 6" POLE SPACING CENTER TO CENTER
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
22	CLASU 001	2	ALUMINUM SUSPENSION CLAMP FOR 3#6AW / 7#10AW, 15000#
23	CLASW 001	2	SHIELD WIRE CLAMP FOR 3#6AW / 3#7CU, GALV.
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 90 DEGREE, 3/4" PIN, 5/8" EYE THICKNESS, H.D.G.
31	CNNCP 002	2	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 016	7	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
35	COBAS 005	6 ft	CONDUCTOR, 3#6 AW
36	COBCO 028	18 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	180 ft	#4 COPPERWELD CONDUCTOR
39	CXAGA 001	2	CROSSARM GAIN, GALV.
40	CXAWO 010	1	22' WOOD CROSSARM, TREATED SOUTHERN YELLOW PINE
46	GUAGW 001	2	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
47	GUALI 001	2	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
56	INSSU 007	3	SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 43", CLASS 52-5
58	LUGGR 001	5	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 004	9	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	4	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
64	PLACR 001	2	PLATE, CROSSARM REINFORCING
70	STAPL 002	90	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	32	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
76	WASRD 005	12	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	4	ROUND WASHER FOR 7/8" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 001	6	SQUARE CURVED WASHER FOR 3/4" BOLTS, GALVANIZED, 4" X 4" SIZE
77	WASSC 002	4	SQUARE CURVED WASHER FOR 7/8" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	6	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	4	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

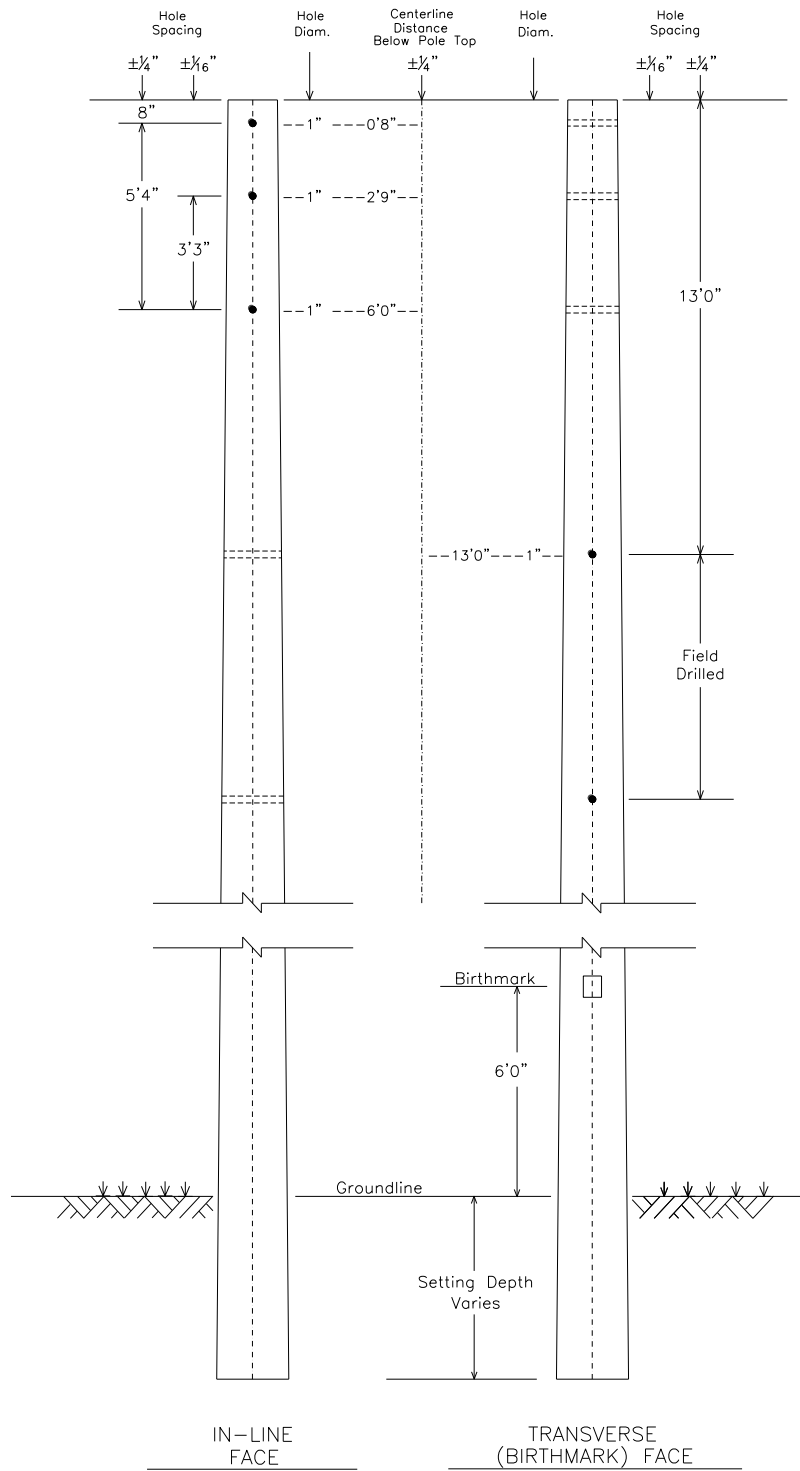
## A3411\*556S

NO.	ITEM ID	QTY	DESCRIPTION
45	GRISA 001	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
69	SOCEY 004	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4"

## A3411\*954S

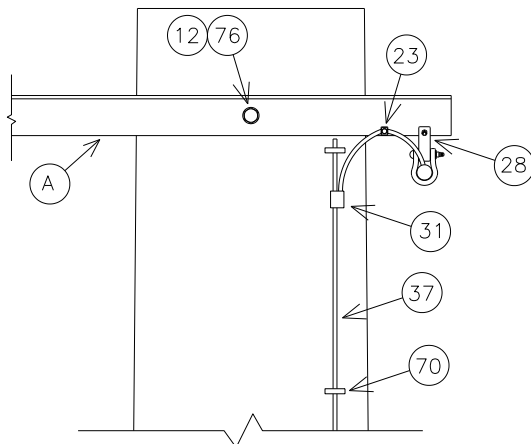
NO.	ITEM ID	QTY	DESCRIPTION
45	GRISA 004	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ASCR
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4"

## A3411 DRILLING DETAILS

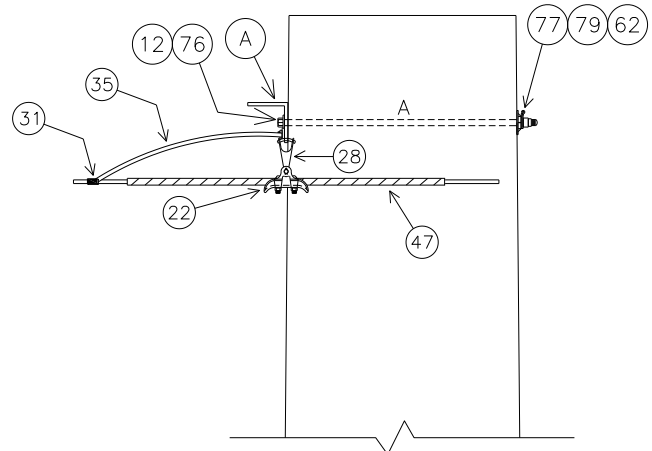


## SWHS

### SHIELD FOR WOOD POLES HORIZONTAL SUSPENSION



Front View



Side View

BOLT LENGTH (INCHES)

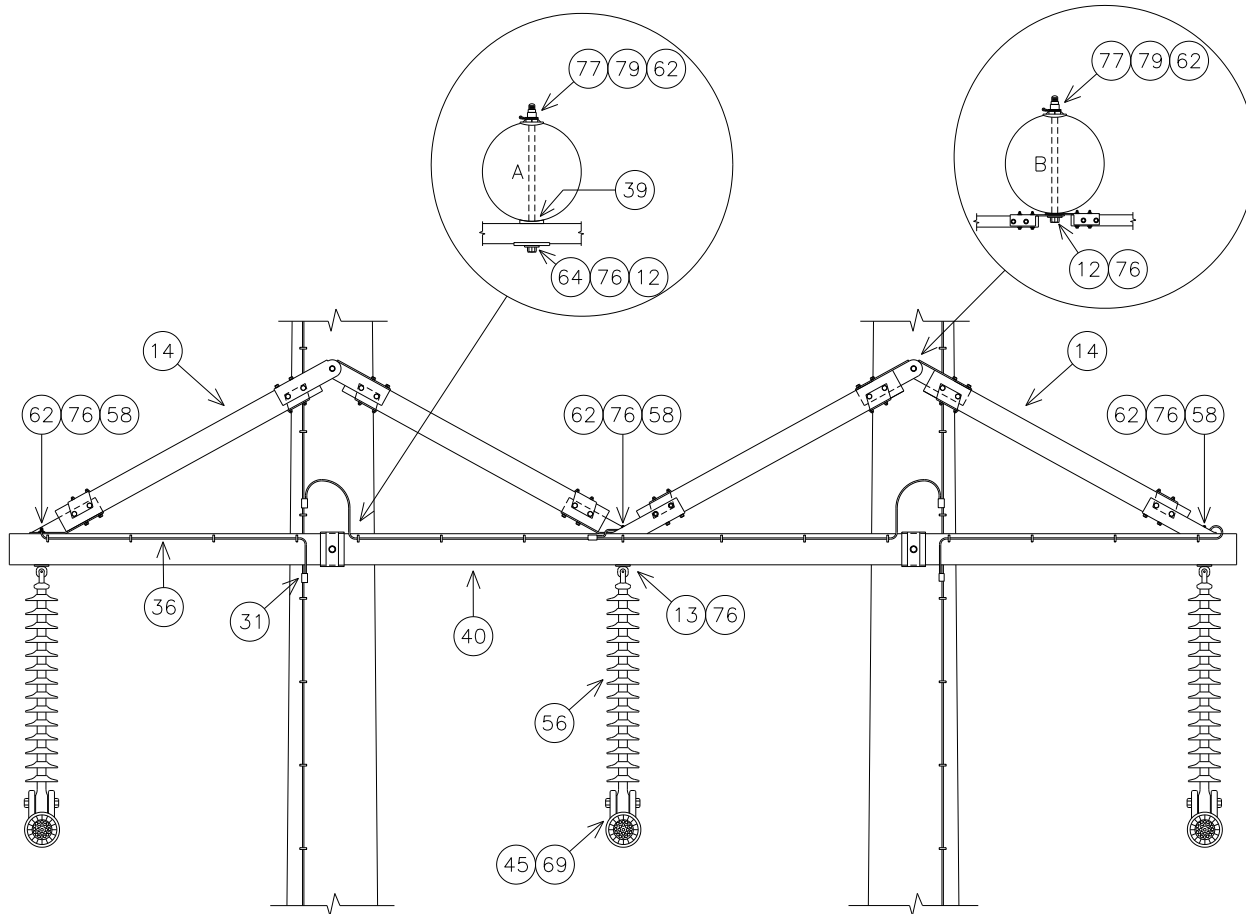
11.6

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

NO.	ITEM ID	QTY	DESCRIPTION
A		1	ANGLE STEEL, 3" X 3" X 1/4" X 13', PROVIDED BY CONTRACTOR
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
22	CLASU 001	2	ALUMINUM SUSPENSION CLAMP FOR 3#6AW / 7#10AW, 15000#
23	CLASW 001	2	SHIELD WIRE CLAMP FOR 3#6AW / 3#7CU, GALV.
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 90 DEGREE, 3/4" PIN, 5/8" EYE THICKNESS, H.D.G.
31	CNNCP 002	2	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 016	2	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
35	COBAS 005	6 ft	CONDUCTOR, 3#6 AW
37	COBCW 014	180 ft	#4 COPPERWELD CONDUCTOR
47	GUALI 001	2	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
58	LUGGR 001	2	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
70	STAPL 002	90	STAPLE, COPPERWELD, 3/8" X 1 1/2"
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

# IWHS A3

INSULATOR FOR WOOD POLES  
HORIZONTAL SUSPENSION, 69KV, 3-PHASE  
CONDUCTOR OPTIONS: 556S, 954S



SUBSTRUCTURE	
CROSSARM BOLT LENGTH (INCHES)	18.4
EYE-BOLT LENGTH (INCHES)	9.6
BRACE BOLT LENGTH (INCHES)	12.3



# IWWSA3 PLATES

## IWWSA3 BASE

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 039	2	MACHINE BOLT, 3/4" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
13	BOLSE 009	3	BOLT, SHOULDER EYE, 3/4" X 10"
14	BRCCF 001	2 PR	BRACE, CROSSARM, 3' 6" DROP, 9' SPAN, PENTA TREATED, GALV. END FITTINGS
31	CNNCP 016	5	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	18 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
39	CXAGA 001	2	CROSSARM GAIN, GALV.
40	CXAWO 010	1	22' WOOD CROSSARM, TREATED SOUTHERN YELLOW PINE
56	INSSU 007	3	SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 43", CLASS 52-5
58	LUGGR 001	3	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	7	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
64	PLACR 001	2	PLATE, CROSSARM REINFORCING
76	WASRD 005	10	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 001	4	SQUARE CURVED WASHER FOR 3/4" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	4	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

## IWWSA3\*556S

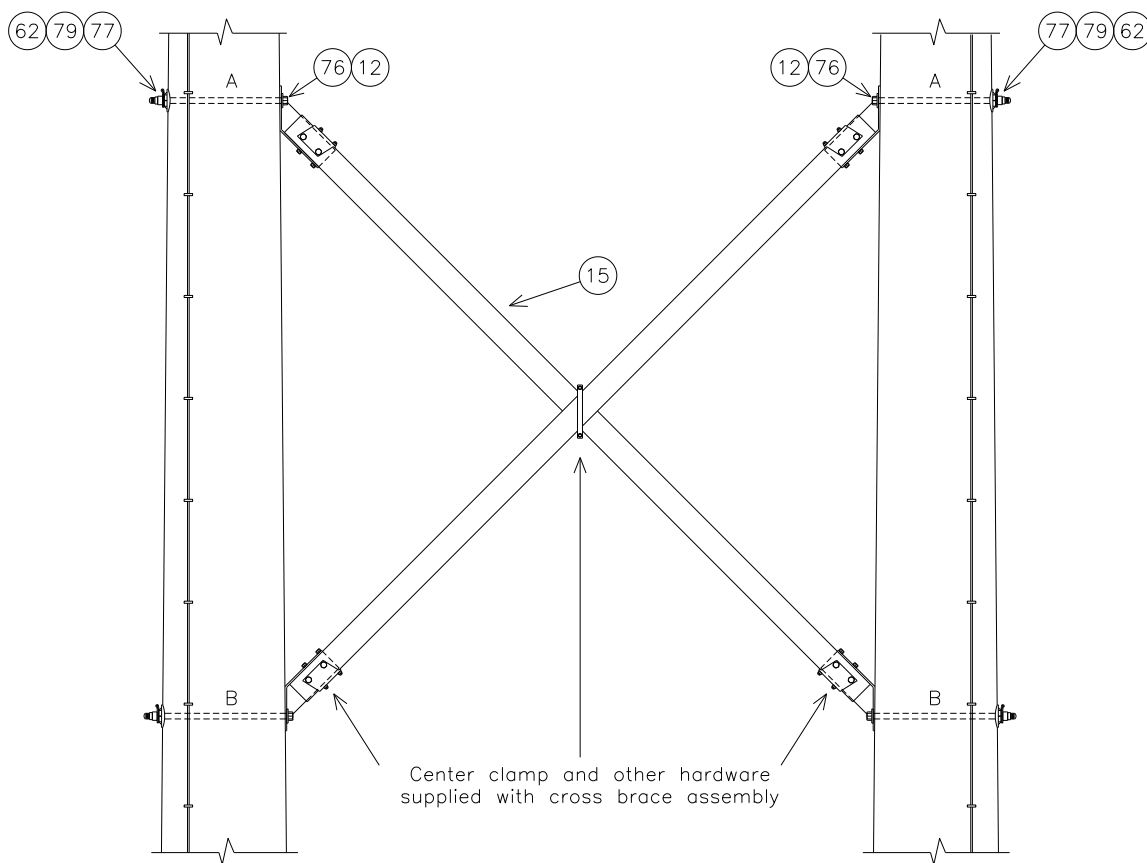
NO.	ITEM ID	QTY	DESCRIPTION
45	GRISA 001	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
69	SOCEY 004	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4"

## IWWSA3\*954S

NO.	ITEM ID	QTY	DESCRIPTION
45	GRISA 004	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ASCR
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4"

# XW106

X BRACE FOR WOOD POLES 10' 6" CENTER TO CENTER SPACING  
HORIZONTAL SUSPENSION, 69KV, 3-PHASE



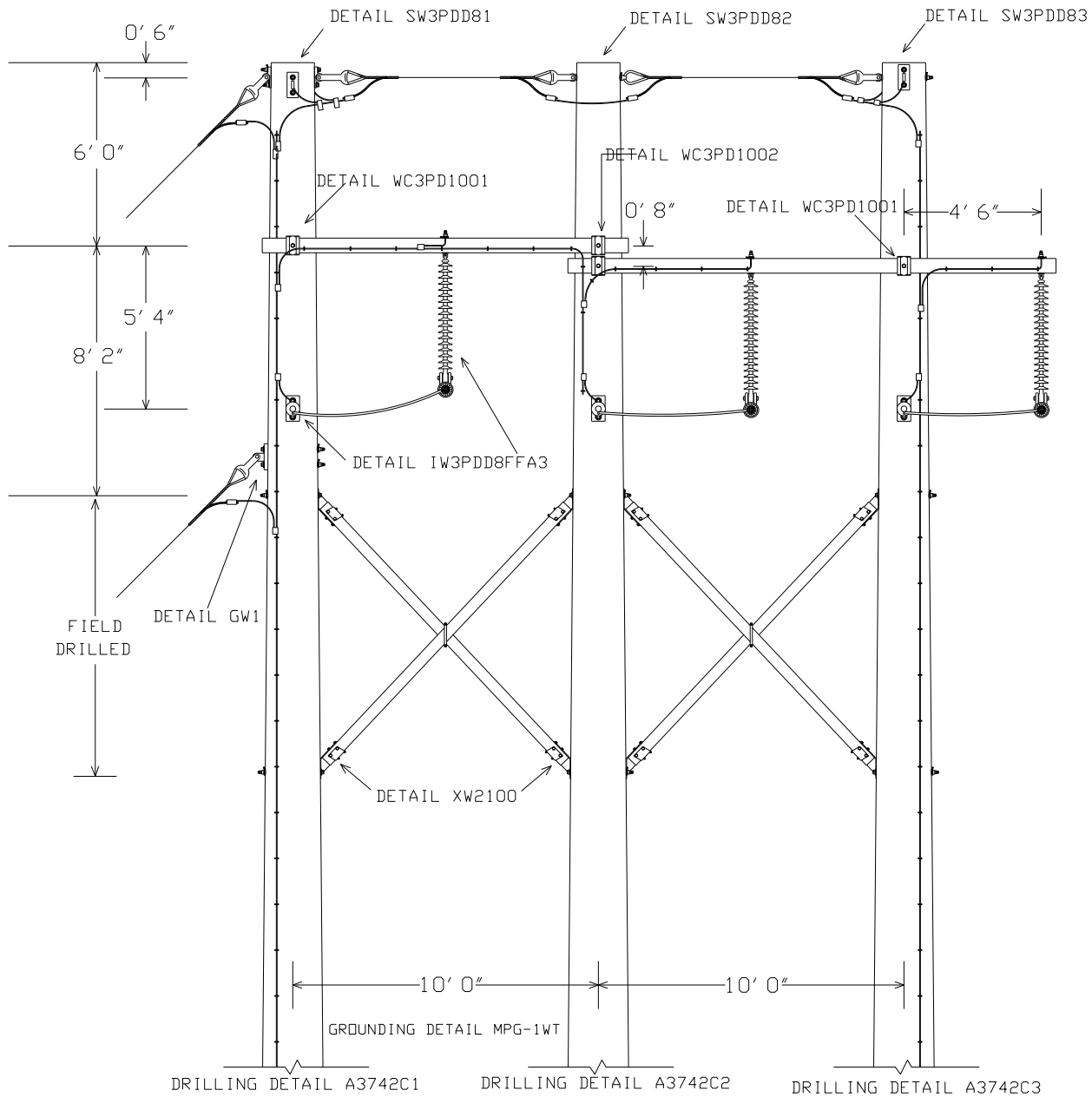
## XWHA3

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 050	4	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
15	BRCCX 002	1 PR	BRACE, WOOD, X, 10' 6" POLE SPACING CENTER TO CENTER
62	NUTSL 005	4	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
76	WASRD 006	4	ROUND WASHER FOR 7/8" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 002	4	SQUARE CURVED WASHER FOR 7/8" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 006	4	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

**THIS PAGE IS INTENTIONALLY LEFT BLANK**

## A3742C

69KV, H-FRAME, DOUBLE DEADEND 180, 3-PHASE  
CONDUCTOR OPTIONS: 556S, 954S



# A3742C PLATES

## A3742C BASE

NO.	ITEM ID	QTY	DESCRIPTION
1	ADCVF 001	6	VOID FILLER COMPOUND FOR DEADEND ASSEMBLY
11	BOLDA 022	4	DOUBLE ARMING BOLT, 3/4" X 30", GALVANIZED, WITH 4 SQUARE NUT ATTACHED
12	BOLMS 036	6	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 048	5	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	3	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 050	6	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
13	BOLSE 009	3	EYE-BOLT, 3/4" X 10", GALVANIZED, WITH SQUARE NUT ATTACHED
13	BOLSE 010	2	EYEBOLT, 3/4" X 12", GALVANIZED, WITH SQUARE NUT ATTACHED
15	BRCCX 001	2 PR	CROSS BRACE, WOOD, 10' POLE SPACING CENTER TO CENTER
21	CLAQD 008	4	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	4	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
29	CLETH 001	4	20,000# THIMBLE CLEVIS, GALVANIZED, PIN DIAMETER = 5/8", USED WITH 3/8" & 7/16"
31	CNNCP 002	6	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 016	11	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	80 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	160 ft	#4 COPPERWELD CONDUCTOR
39	CXAGA 001	8	CROSSARM GAIN, GALV.
40	CXAWO 008	2	CROSSARM, WOOD, 5-3/4" X 7-3/4" X 11' PROVIDED WITH WC3 PLATE
40	CXAWO 009	2	CROSSARM, WOOD, 5-3/4" X 7-3/4" X 15'6" PROVIDED WITH WC3 PLATE
48	GUYGR 002	4	GRIP, GUY, 7/16", GREEN, GALVANIZED
49	GUYST 006	20 ft	7/16" DIAMETER GUY STRAND, 7 PER STRAND, CLASS "B" GALV. (500' COIL)
56	INSSU 007	3	SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 43", CLASS 52-5
58	LUGGR 001	7	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
58	LUGGR 002	4	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
59	NUTEY 003	1	NUT, EYE, 3/4", H.D.G.
62	NUTSL 004	19	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	14	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
64	PLACR 001	8	PLATE, CROSSARM REINFORCING
70	STAPL 002	80	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	13	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	14	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
76	WASRD 006	14	ROUND WASHER FOR 7/8" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC001	5	SQUARE CURVED WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 002	6	SQUARE CURVED WASHER FOR 7/8" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	15	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	14	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

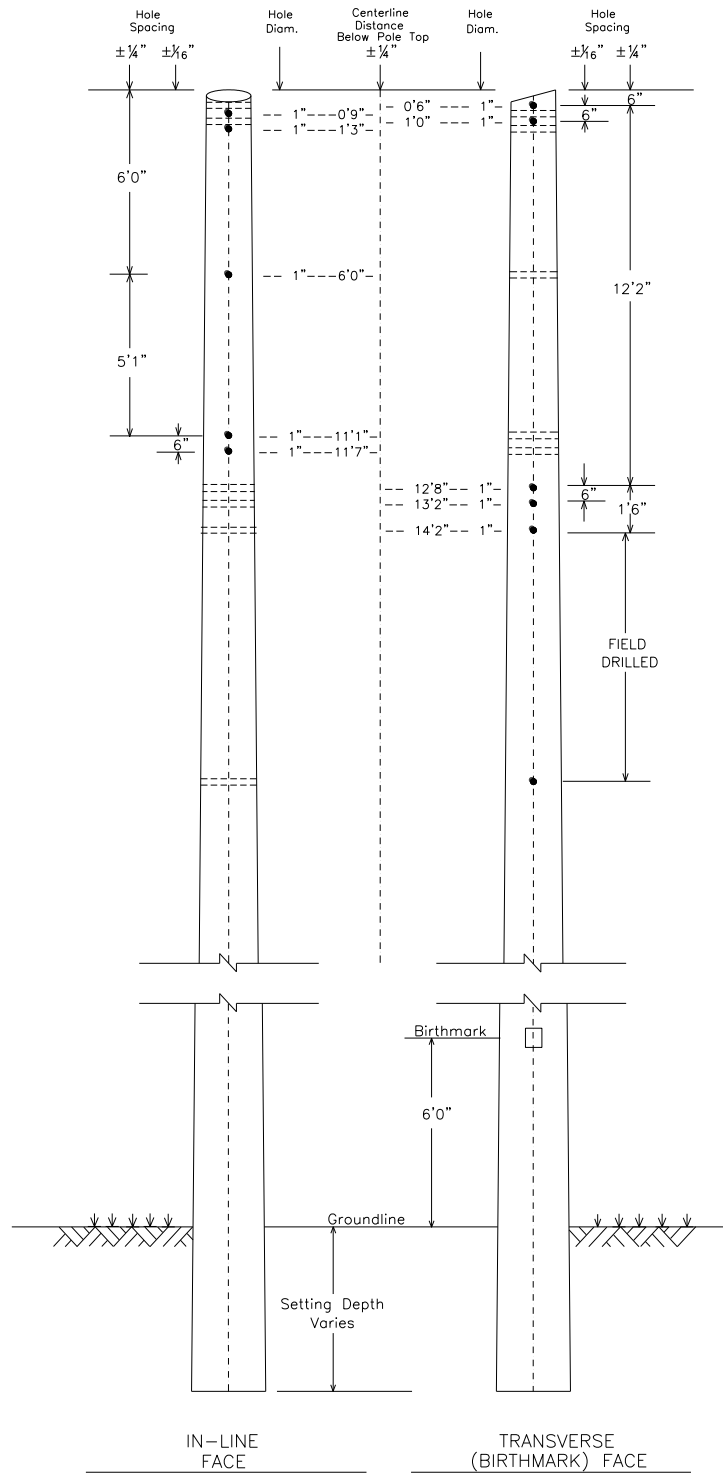
## A3742C\*556S

NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 005	3	CUSHION GRIP SUSPENSION CLAMP FOR 556 ACSR
26	CLEHL 004	6	SOCKET-Y CLEVIS, CLASS 52-3/5, L = 11", PIN = 5/8" HOT DIPPED GALV.
42	DEACB 003	6	DEADEND COMPRESSION ASSEMBLY FOR 556 ACSR, OVAL EYE
50	INSSU 008	6	SUSPENSION SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-3/5
69	SOCEY 004	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4"

## A3742C\*954S

NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 007	3	CUSHION GRIP SUSPENSION CLAMP FOR 954 ACSR
26	CLEHL 005	6	SOCKET-Y CLEVIS, CLASS 52-8/11, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 005	6	DEADEND COMPRESSION ASSEMBLY FOR 954 ACSR, OVAL EYE
50	INSD 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4"

# A3472C1 DRILLING DETAIL

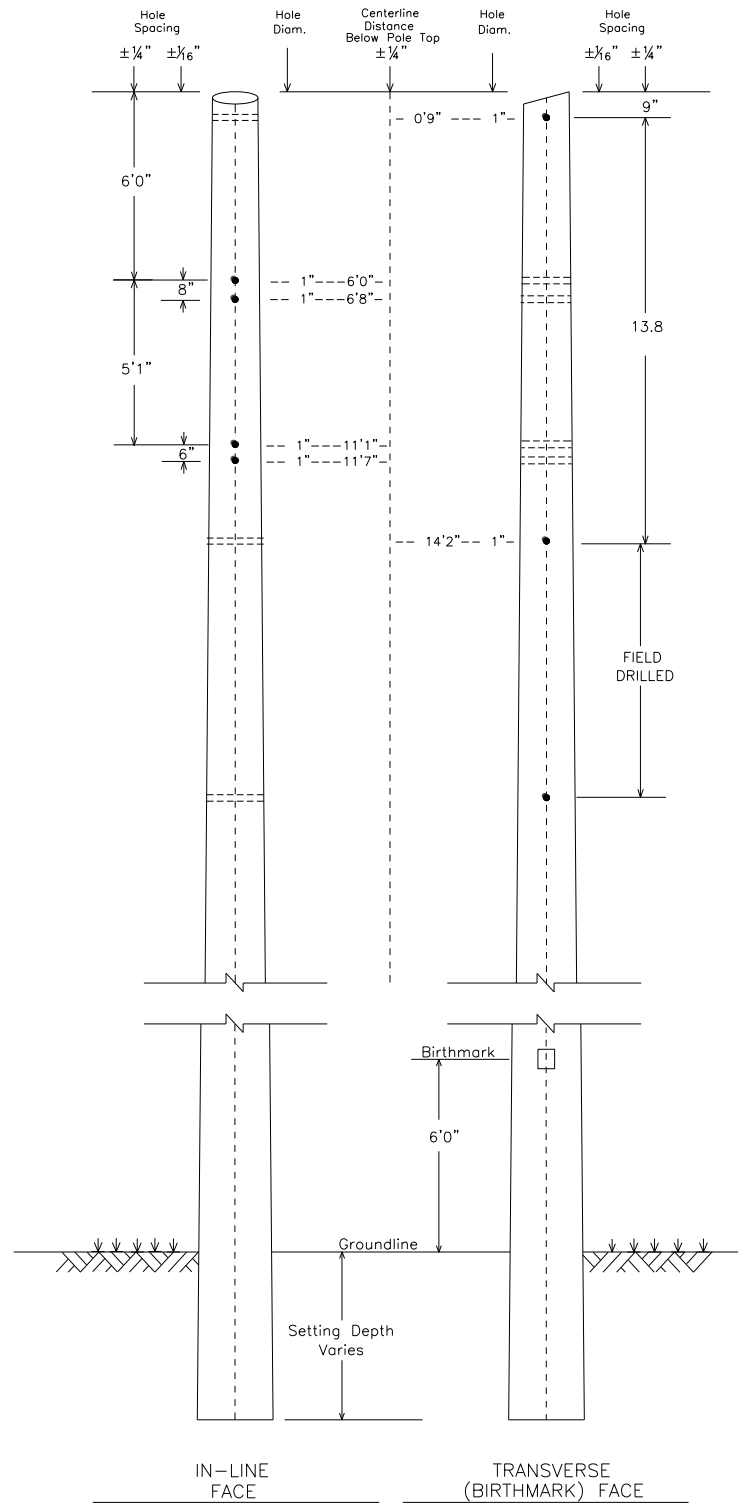


REVISÉ/REVIEWÉ: OCTOBRE 2013

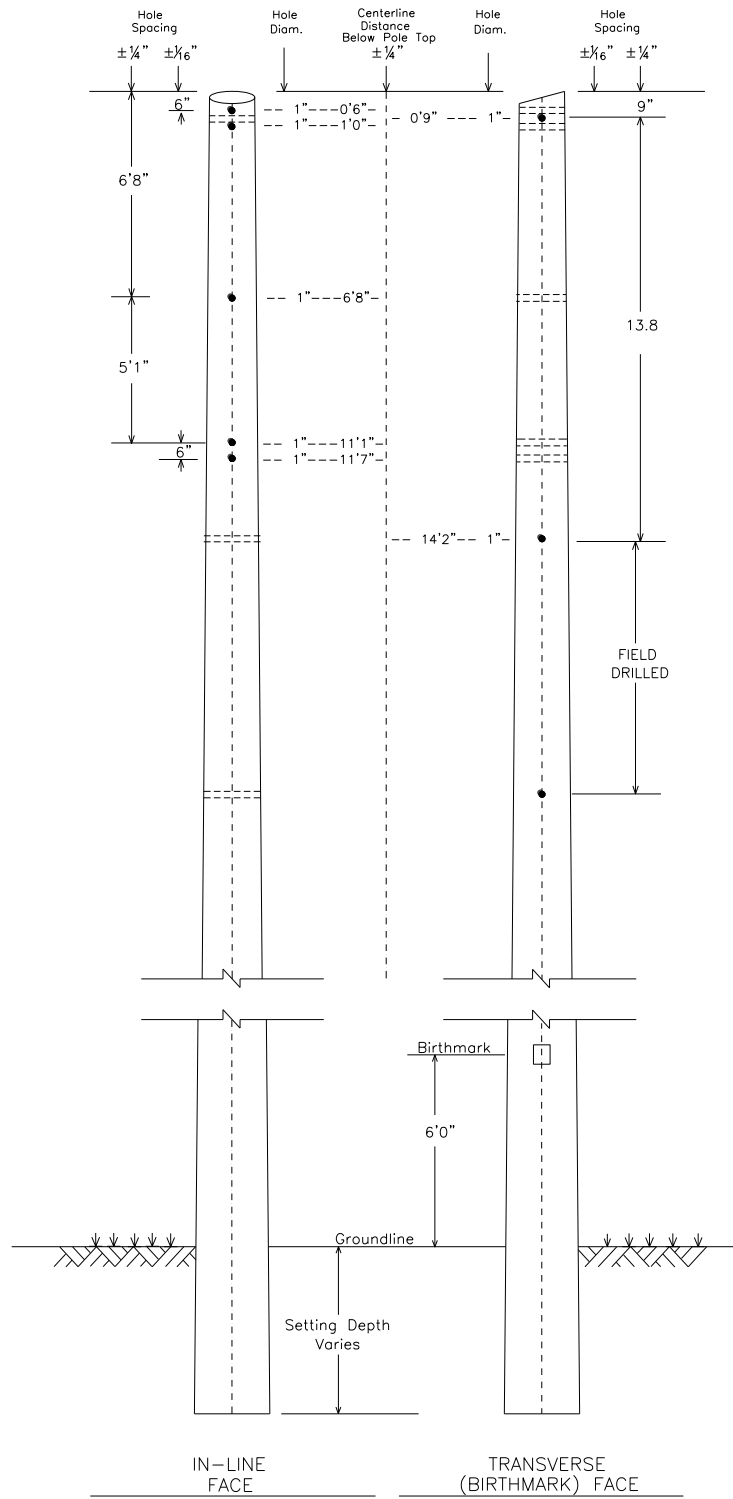
REVISÉ/REVIEWÉ PAR: MLR

APPROVED BY: KKR

## A3742C2 DRILLING DETAIL



# A3742C3 DRILLING DETAIL

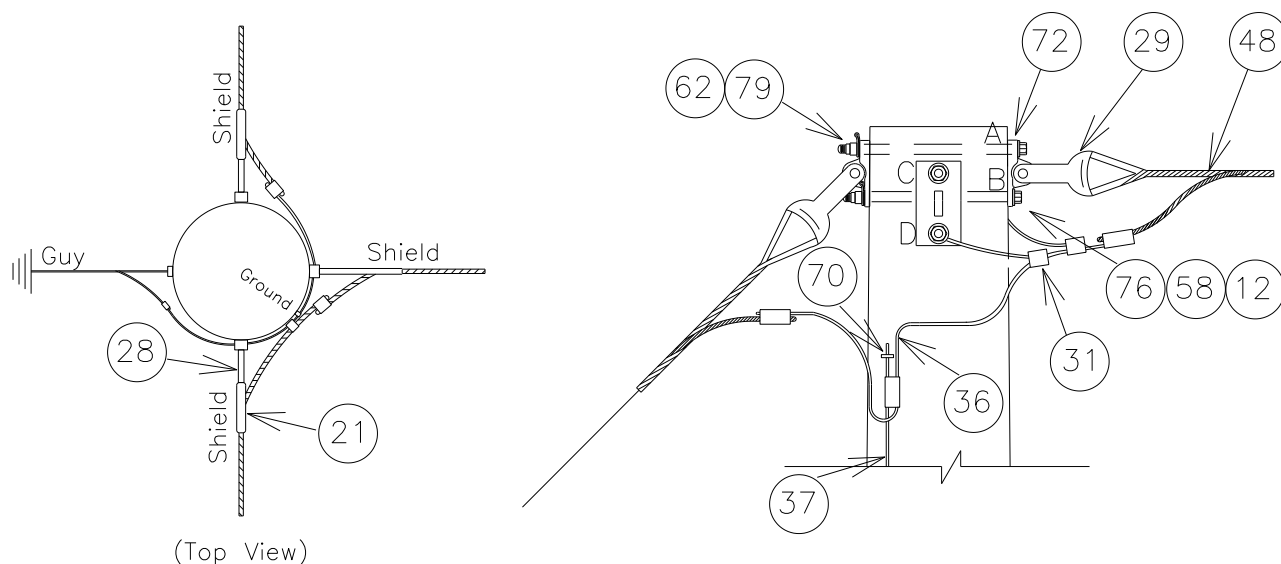




# SW3PDD81

## SHIELD FOR WOOD POLES

### 3 POLE HORIZONTAL CONSTRUCTION, DOUBLE DEADEND, LEFT GUYED



NOTE: SEE MISCELLANEOUS DETAIL MBA1 FOR BOLT ASSEMBLY DETAILS

MINIMUM REQUIRED BOLT LENGTH 'A' (INCHES)	13.7
MINIMUM REQUIRED BOLT LENGTH 'B' (INCHES)	12.5
MINIMUM REQUIRED BOLT LENGTH 'C' (INCHES)	13.7
MINIMUM REQUIRED BOLT LENGTH 'D' (INCHES)	12.6

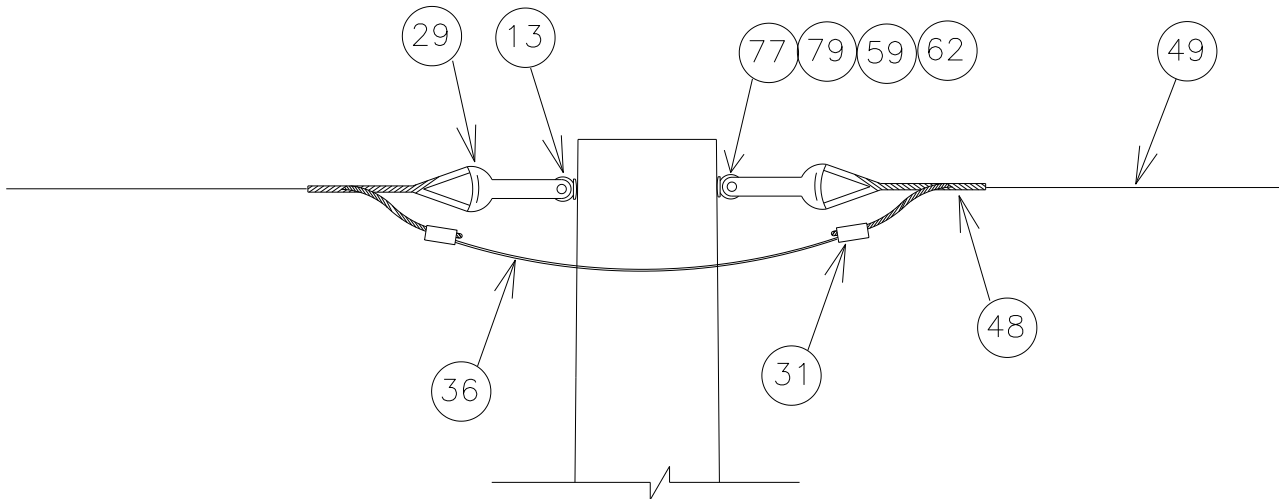
NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	4	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
29	CLETH 001	1	20,000# THIMBLE CLEVIS, GALVANIZED, PIN DIAMETER = 5/8", USED WITH 3/8" & 7/16"
31	CNNCP 002	2	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
48	GUYGR 002	1	GRIP, GUY, 7/16", GREEN, GALVANIZED
58	LUGGR 001	2	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 004	4	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	4	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	4	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	4	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

# SW3PDD82

SHIELD FOR WOOD POLES

3 POLE HORIZONTAL CONSTRUCTION, DOUBLE DEADEND, 180 DEGREE, CENTER



NOTE: SEE MISCELLANEOUS DETAIL MBA1 FOR BOLT ASSEMBLY DETAILS

MINIMUM REQUIRED EYE BOLT LENGTH 'A' (INCHES)	11.0
---	------

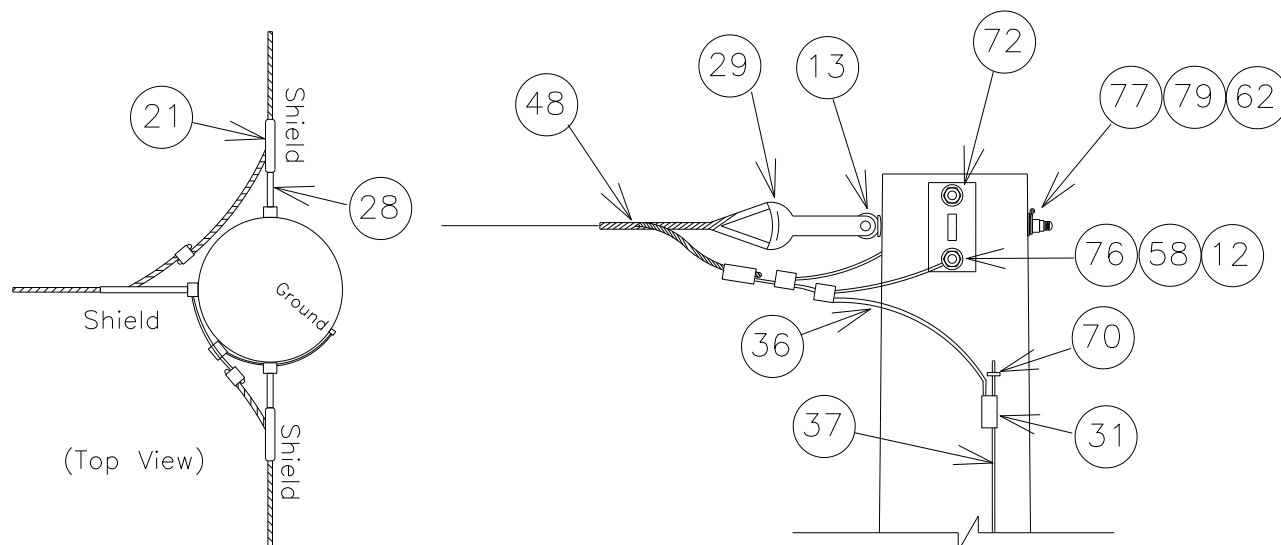
NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

NO.	ITEM ID	QTY	DESCRIPTION
13	BOLSE 010	1	EYEBOLT, 3/4" X 12", GALVANIZED, WITH SQUARE NUT ATTACHED
29	CLETH 001	2	20,000# THIMBLE CLEVIS, GALVANIZED, PIN DIAMETER = 5/8", USED WITH 3/8" & 7/16"
31	CNNCP 002	2	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
36	COBCO 028	4 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
48	GUYGR 002	2	GRIP, GUY, 7/16", GREEN, GALVANIZED
49	GUYST 006	20 ft	7/16" DIAMETER GUY STRAND, 7 PER STRAND, CLASS "B" GALV. (500' COIL)
59	NUTEY 003	1	NUT, EYE, 3/4", H.D.G.
62	NUTSL 004	1	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
77	WASSC001	1	SQUARE CURVED WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	1	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

## SW3PDD83

### SHIELD FOR WOOD POLES

#### 3 POLE HORIZONTAL CONSTRUCTION, DOUBLE DEADEND, 180 DEGREE, RIGHT



NOTE: SEE MISCELLANEOUS DETAIL MBA1 FOR BOLT ASSEMBLY DETAILS

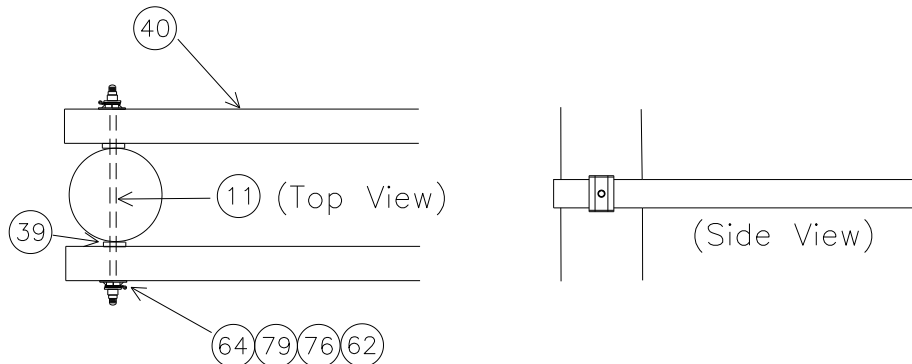
UPPER BOLT LENGTH (INCHES)	13.7
LOWER BOLT LENGTH (INCHES)	12.5
EYE-BOLT LENGTH (INCHES)	11.0

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 036	2	MACHINE BOLT, 3/4" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
13	BOLSE 010	1	EYEBOLT, 3/4" X 12", GALVANIZED, WITH SQUARE NUT ATTACHED
21	CLAQD 008	2	DEADEND CLAMP (.2 - .55") 19,000# STRENGTH, GAP = 7/8", PIN = 5/8" CLAMP, DUCT. IRON, 3#6 AW
28	CLETE 004	2	TOWER Y-EYE CLEVIS, 3/4" PIN, 5/8" EYE THICKNESS, 11/16" EYE DIAMETER H.D.G. 90 DEG
29	CLETH 001	1	20,000# THIMBLE CLEVIS, GALVANIZED, PIN DIAMETER = 5/8", USED WITH 3/8" & 7/16"
31	CNNCP 002	2	COMPRESSION CONNECTOR, TYPE H (3#6 AW) TO (#4 CU), ALUMINUM
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	9 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
48	GUYGR 002	1	GRIP, GUY, 7/16", GREEN, GALVANIZED
58	LUGGR 001	2	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 004	3	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
72	TEEDE 002	2	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC001	1	SQUARE CURVED WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	3	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

# WC3PD1001

WOOD CROSS ARM, 3 POLE CONSTRUCTION, DOUBLE, 10'0" CENTER TO CENTER, TYPE 1

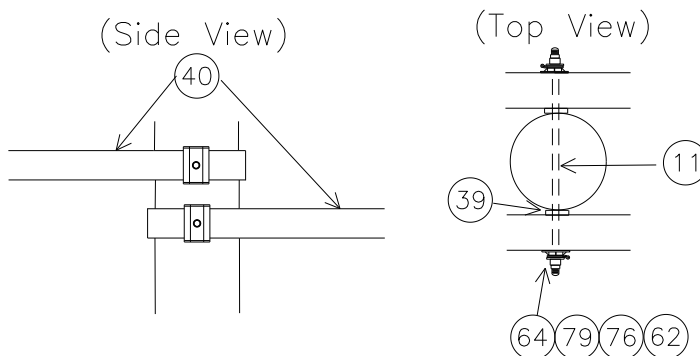


## WC3PD1001 – 2 SETS

NO.	ITEM ID	QTY	DESCRIPTION
11	BOLDA 022	2	DOUBLE ARMING BOLT, 3/4" X 30", GALVANIZED, WITH 4 SQUARE NUT ATTACHED
39	CXAGA 001	4	CROSSARM GAIN, GALV.
40	CXAWO 008	0	CROSSARM, WOOD, 5-3/4" X 7-3/4" X 11' PROVIDED WITH WC3 PLATE
40	CXAWO 009	0	CROSSARM, WOOD, 5-3/4" X 7-3/4" X 15'6" PROVIDED WITH WC3 PLATE
62	NUTSL 004	4	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
64	PLACR 001	4	PLATE, CROSSARM REINFORCING
76	WASRD 005	4	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

# WC3PD1002

WOOD CROSS ARM, 3 POLE CONSTRUCTION, DOUBLE, 10'0" CENTER TO CENTER, TYPE 2

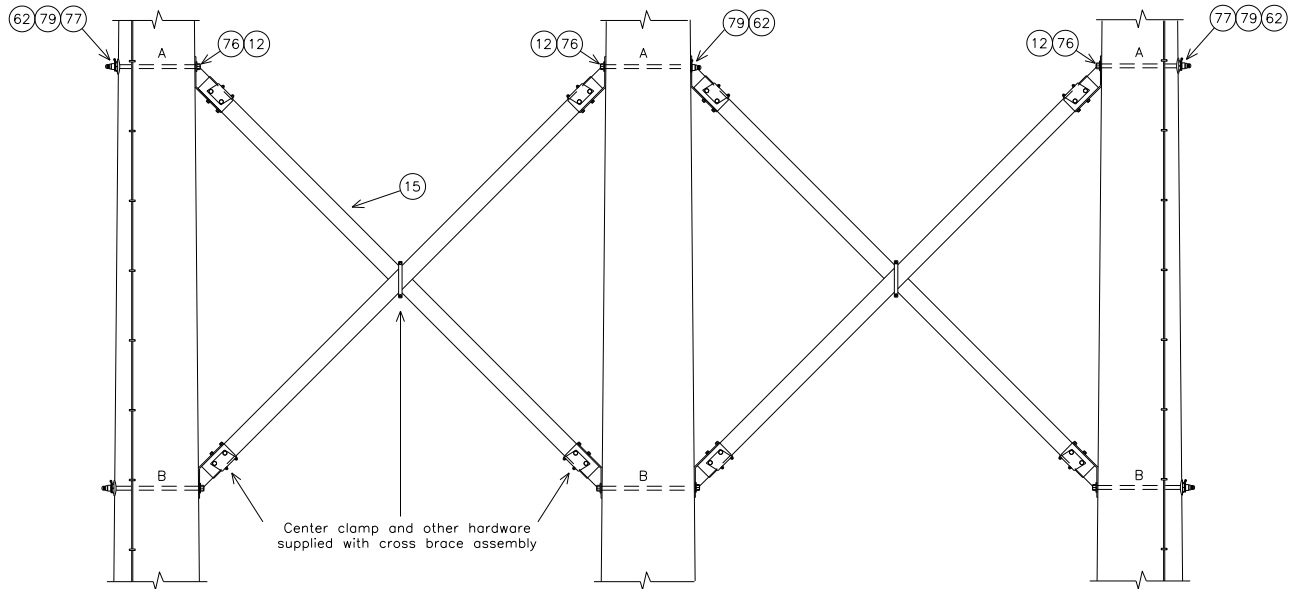


## WC3PD1002

NO.	ITEM ID	QTY	DESCRIPTION
11	BOLDA 022	2	DOUBLE ARMING BOLT, 3/4" X 30", GALVANIZED, WITH 4 SQUARE NUT ATTACHED
36	COBCO 028	25 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
39	CXAGA 001	4	CROSSARM GAIN, GALV.
40	CXAWO 008	2	CROSSARM, WOOD, 5-3/4" X 7-3/4" X 11' PROVIDED WITH WC3 PLATE
40	CXAWO 009	2	CROSSARM, WOOD, 5-3/4" X 7-3/4" X 15'6" PROVIDED WITH WC3 PLATE
62	NUTSL 004	4	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
64	PLACR 001	4	PLATE, CROSSARM REINFORCING
76	WASRD 005	4	ROUND WASHER FOR 3/4" BOLT, 2" DIAMETER, GALVANIZED
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

# XW2100

X BRACE FOR WOOD POLES 10' CENTER TO CENTER SPACING  
3-POLE HORIZONTAL CONSTRUCTION, 69KV, 3-PHASE



## XW2100

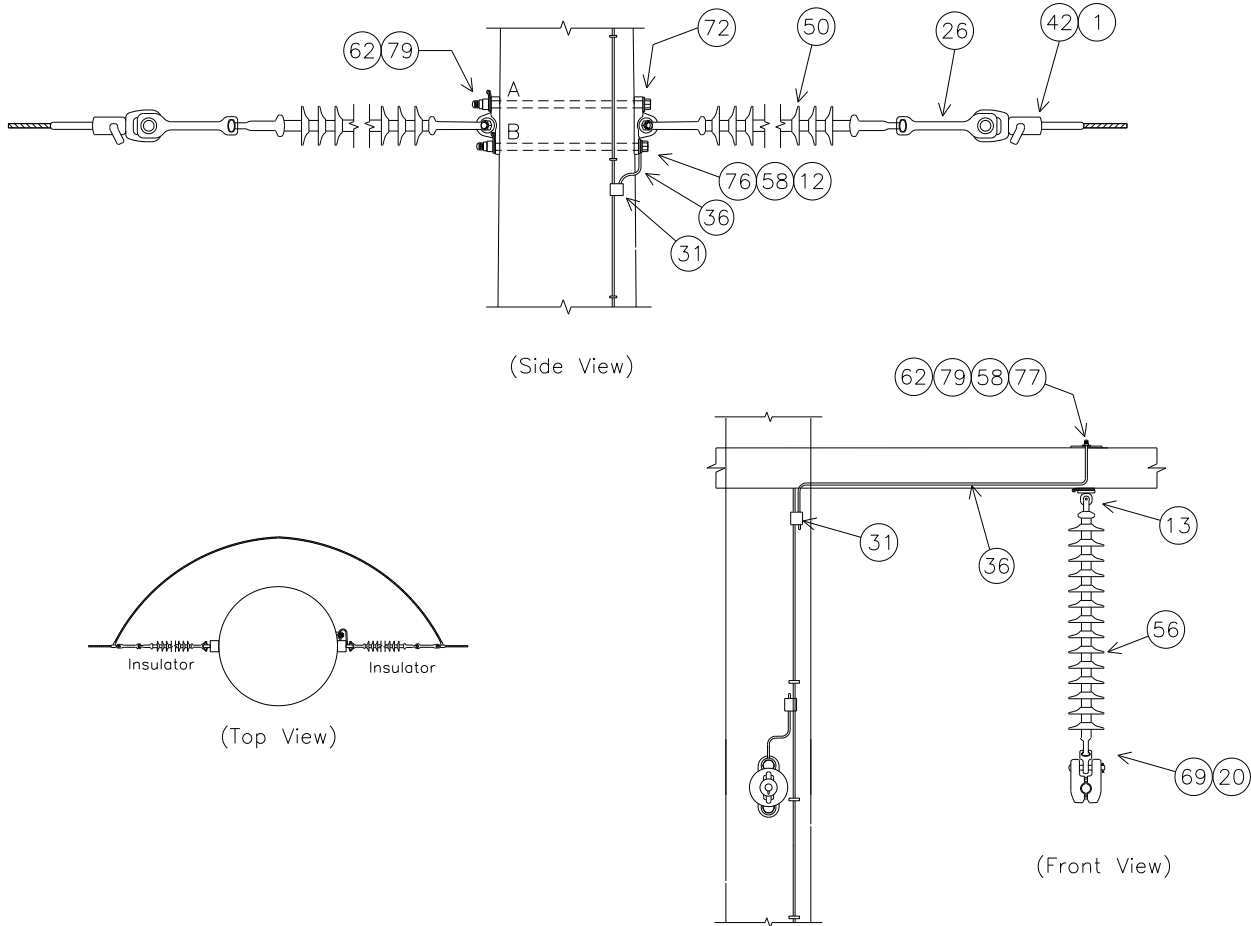
NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 050	6	MACHINE BOLT, 7/8" X 18", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
15	BRCCX 001	2 PR	CROSS BRACE, WOOD, 10' POLE SPACING CENTER TO CENTER
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2" DIAMETER, GALVANIZED
77	WASSC 002	4	SQUARE CURVED WASHER FOR 7/8" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IW3PDD8FFA3

INSULATOR FOR WOOD POLES

DOUBLE DEAD-END 180, FULL TENSION TO FULL TENSION, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

DEADEND INSULATOR	
UPPER BOLT 'A' LENGTH (INCHES)	15.0
LOWER BOLT 'B' LENGTH (INCHES)	13.7
EYEBOLT LENGTH (INCHES)	9.6

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

# IW3PDD8FFA3 PLATES

## IW3PDD8FFA3 BASE

NO.	ITEM ID	QTY	DESCRIPTION
1	ADCVF 001	6	VOID FILLER COMPOUND FOR DEADEND ASSEMBLY
12	BOLMS 048	3	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 049	3	MACHINE BOLT, 7/8" X 16", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
13	BOLSE 009	3	EYE-BOLT, 3/4" X 10", GALVANIZED, WITH SQUARE NUT ATTACHED
31	CNNCP 016	6	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	27 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
56	INSSU 007	3	SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 43", CLASS 52-5
58	LUGGR 001	3	LUG FOR 3/4" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATTED COPPER COMPRESSION
62	NUTSL 004	3	SQUARE LOCK NUT FOR 3/4" BOLT, H.D.G.
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8" BOLT, H.D.G.
69	SOCEY 003	3	SOCKET EYE, CLASS 52-3/5
72	TEEDE 002	6	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	3	SQUARE CURVED WASHER FOR 3/4" BOLTS, GALVANIZED, 4" X 4" SIZE
79	WASSP 005	3	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## IW3PDD8FFA3\*556S

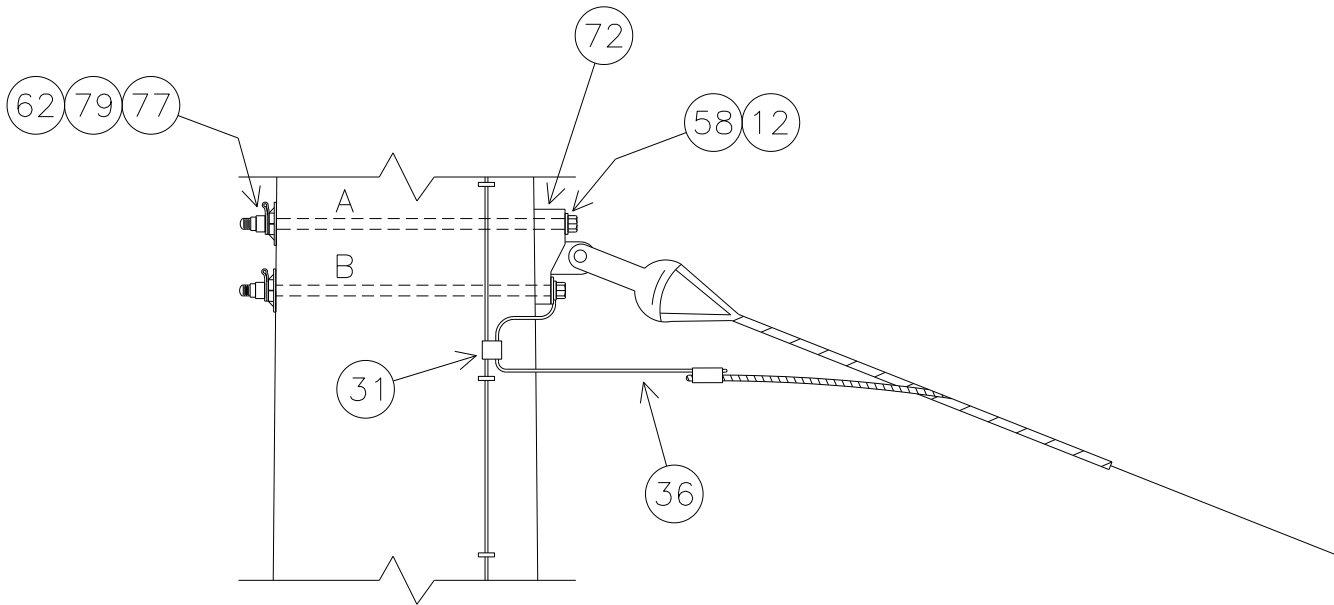
NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 005	3	CUSHION GRIP SUSPENSION CLAMP FOR 556 ACSR
26	CLEHL 004	6	SOCKET-Y CLEVIS, CLASS 52-3/5, L = 11", PIN = 5/8" HOT DIPPED GALV.
42	DEACB 003	6	DEADEND COMPRESSION ASSEMBLY FOR 556 ACSR, OVAL EYE
50	INSSU 008	6	SUSPENSION SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-3/5

## IW3PDD8FFA3\*954S

NO.	ITEM ID	QTY	DESCRIPTION
20	CLAJU 007	3	CUSHION GRIP SUSPENSION CLAMP FOR 954 ACSR
26	CLEHL 005	6	SOCKET-Y CLEVIS, CLASS 52-8/11, L = 11", PIN = 7/8" HOT DIPPED GALV.
42	DEACB 005	6	DEADEND COMPRESSION ASSEMBLY FOR 954 ACSR, OVAL EYE
50	INSDE 004	6	DEADEND SILICON INSULATOR, Y-BALL COUPLING, 69KV, L = 66", CLASS 52-8/11

**GW1**

WOOD GUY,



MINIMUM REQUIRED BOLT LENGTH  
(INCHES)

'A'	13.9
'B'	13.3

NOTE: BOLT CALCULATIONS ASSUMES A 9 INCH POLE TOP DIAMETER

**WG1**

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 048	2	MACHINE BOLT, 7/8" X 14", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	3 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
58	LUGGR 002	1	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 005	2	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
72	TEEDE 002	1	TEE, MALLIABLE IRON, FOR WOOD POLE APPLICATION, H.D.G., 6" HOLE SPACING
76	WASRD 006	2	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 002	2	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 006	2	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

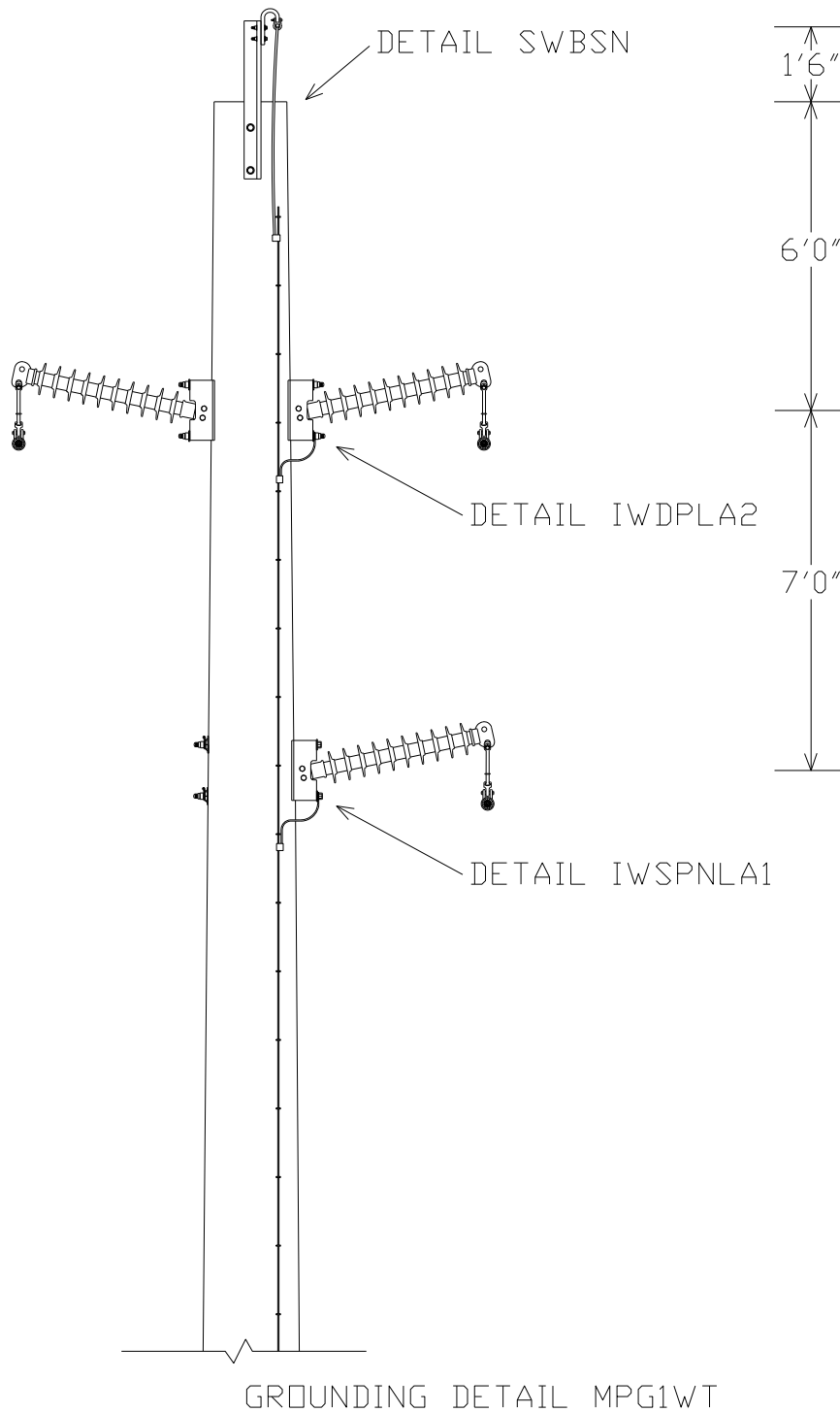


**THIS PAGE IS INTENTIONALLY LEFT BLANK**

# A5151

## 69KV MODIFIED DELTA POST, TANGENT SHIELD, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954A, 954S



# A5151 PLATES

## A5151 BASE

NO.	ITEM ID	QTY	DESCRIPTION
9	BAYSW 004	1	BAYONET FOR SHIELD WIRE, STRAIGHT 40"
11	BOLDA 042	2	DOUBLE ARMING BOLT, 7/8" X 26", WITH 4 SQUARE NUTS ATTACHED
12	BOLMS 001	0	MACHINE BOLT, 1/2" X 2 1/2", PROVIDED WITH SUPSH001
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 051	2	MACHINE BOLT, 7/8" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
22	CLASU 001	1	ALUMINUM SUSPENSION CLAMP FOR 3#6AW / 7#10AW, 15000#
26	CLEHL 001	3	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, L > 9", PIN = 3/4", HOT DIPPED GALV.
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	7 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	2	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 002	0	SQUARE LOCK NUT FOR 1/2" BOLT, PROVIDED WITH SUPSH001
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, HOT DIPPED GALVANIZED
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
71	SUPSH 001	1	SUPPORT, SHIELD WIRE, GALVANIZED, WITH TWO 2 1/2 INCH MACHINE BOLTS AND LOCK NUTS
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 1 3/4" DIAMETER, GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
77	WASSC 002	6	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## A5151\*556S

45	GRISA 001	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
69	SOCEY 004	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4

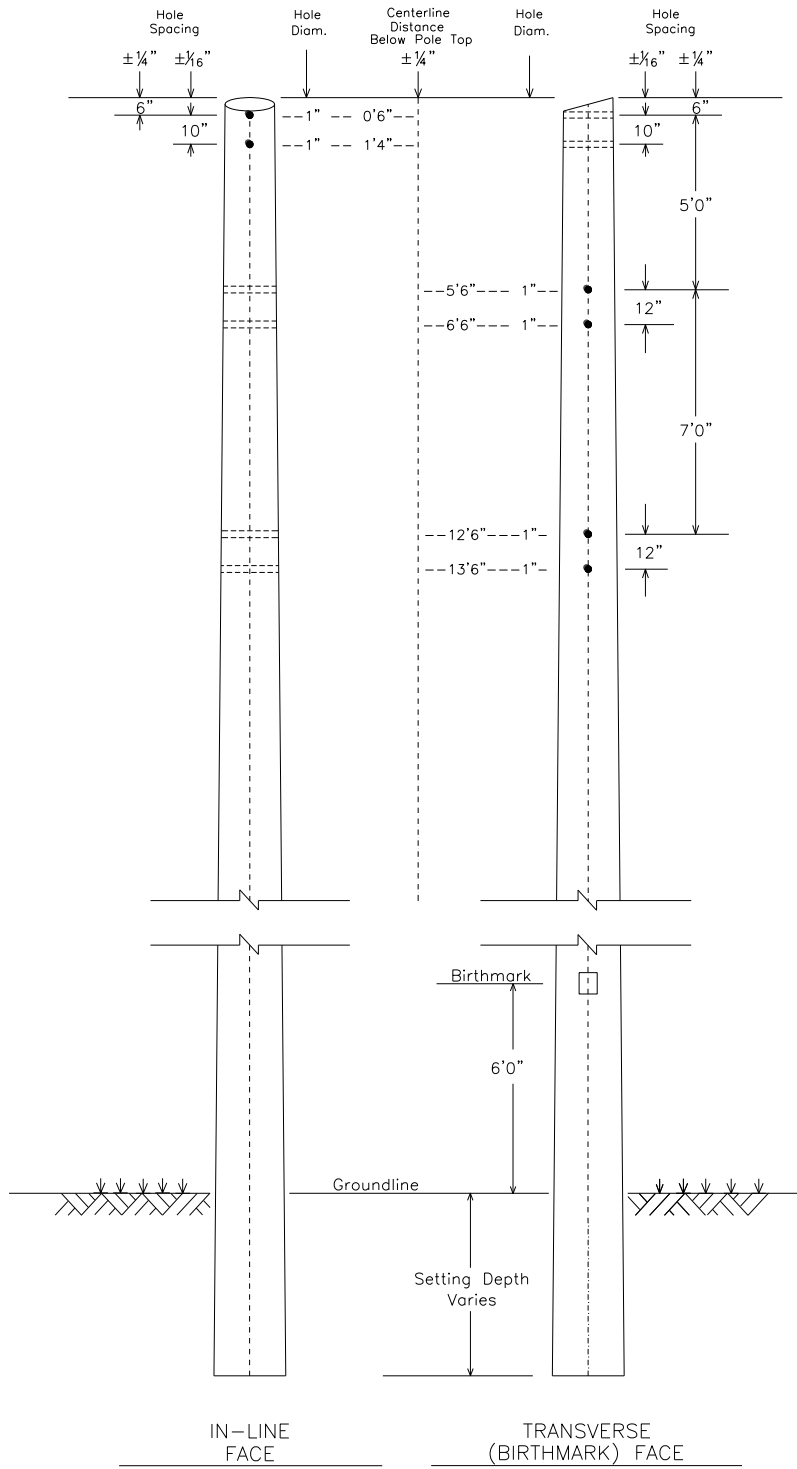
## A5151\*954A

45	GRISA 003	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 AAC, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=1 1/16

## A5151\*954S

45	GRISA 004	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ACSR, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=1 1/16

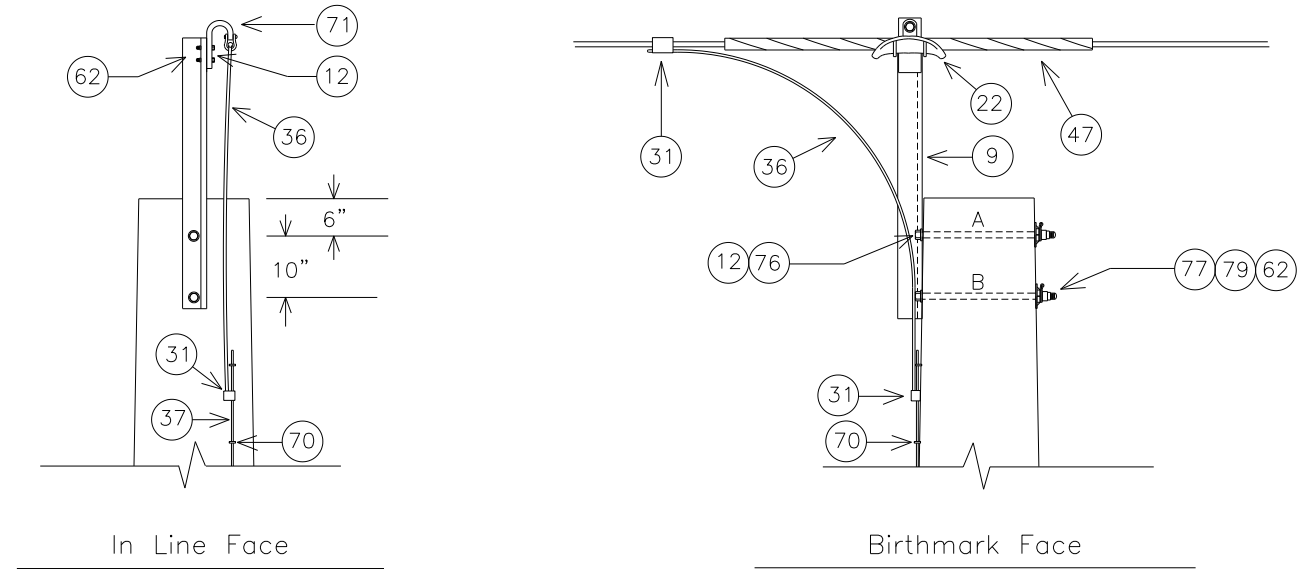
# A5151 DRILLING DETAIL



## SWBSN

SHIELD FOR WOOD POLES

BAYONET WITH SUSPENSION CLAMP, NO GUY



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

MINIMUM REQUIRED BOLT LENGTH 'A' (INCHES)	11.5
MINIMUM REQUIRED BOLT LENGTH 'B' (INCHES)	11.6

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

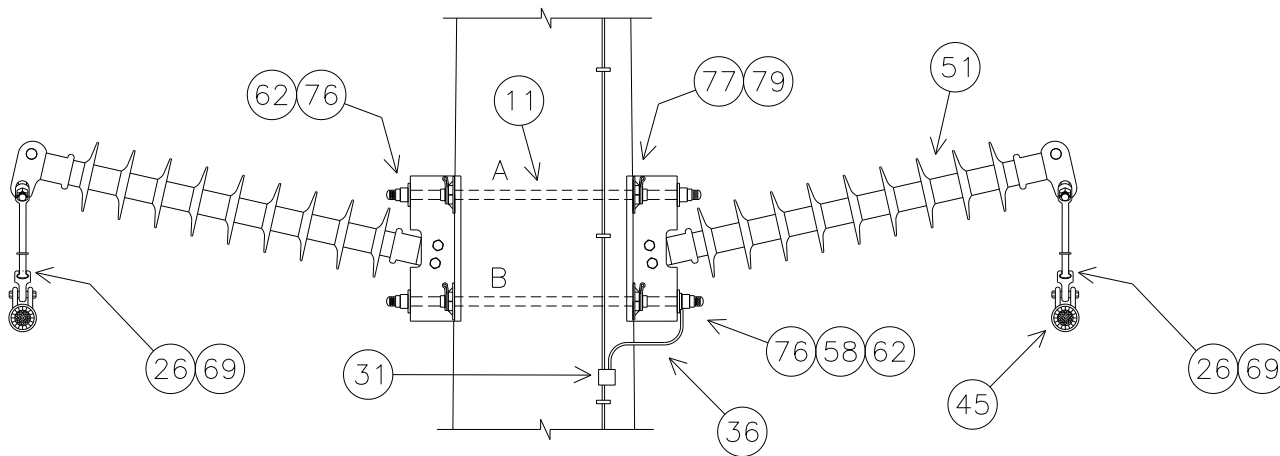
NO.	ITEM ID	QTY	DESCRIPTION
9	BAYSW 004	1	BAYONET FOR SHIELD WIRE, STRAIGHT 40"
12	BOLMS 001	0	MACHINE BOLT, 1/2" X 2 1/2", PROVIDED WITH SUPSH001
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
22	CLASU 001	1	ALUMINUM SUSPENSION CLAMP FOR 3#6AW / 7#10AW, 15000#
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	4 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
62	NUTSL 002	0	SQUARE LOCK NUT FOR 1/2" BOLT, PROVIDED WITH SUPSH001
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, HOT DIPPED GALVANIZED
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
71	SUPSH 001	1	SUPPORT, SHIELD WIRE, GALVANIZED, WITH TWO 2 1/2" MACHINE BOLTS AND LOCK NUTS
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 1 3/4" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

# IWDPLA2

INSULATOR FOR WOOD POLES

DOUBLE POST, NO GUY, LONG CLEVIS, 69KV, 2-PHASE

CONDUCTOR OPTIONS: 556S, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

SUBSTRUCTURE	Top
BOLT 'A' LENGTH (INCHES)	24.9
BOLT 'B' LENGTH (INCHES)	25.3

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER.

# IWDPLA2 PLATES

**IWDPLA2 BASE**

NO.	ITEM ID	QTY	DESCRIPTION
11	BOLDA 042	2	DOUBLE ARMING BOLT, 7/8" X 26", WITH 4 SQUARE NUTS ATTACHED
26	CLEHL 001	2	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, L > 9", PIN = 3/4", HOT DIPPED GALV.
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	3 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
51	INSHP 020	2	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	1	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 005	4	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
76	WASRD 006	4	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 002	4	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 006	4	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

**IWDPLA2\*556S**

45	GRISA 001	2	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
69	SOCEY 004	2	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4"

**IWDPLA2\*954S**

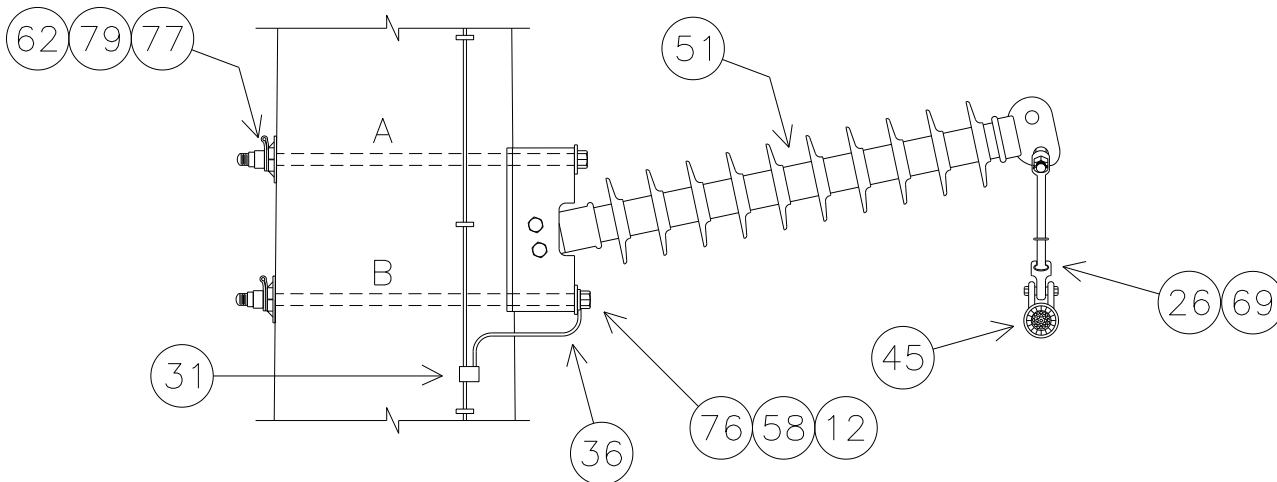
45	GRISA 004	2	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ACSR, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	2	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=1 1/16"

# IWSPNLA1

INSULATOR FOR WOOD POLES

SINGLE POST, NO GUY, LONG CLEVIS, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954A, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

SUBSTRUCTURE	
BOLT 'A' LENGTH (INCHES)	18.8
BOLT 'B' LENGTH (INCHES)	19.2

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER.



# IWSPNLA1 PLATES

**IWSPNLA1 BASE**

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 051	2	MACHINE BOLT, 7/8" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
26	CLEHL 001	1	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, L > 9", PIN = 3/4", HOT DIPPED GALV.
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	2 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
51	INSHP 020	1	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	1	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 005	2	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
76	WASRD 006	2	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 002	2	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 006	2	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

**IWSPNLA1\*556S**

45	GRISA 001	1	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
69	SOCEY 004	1	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV.

**IWSPNLA1\*954A**

45	GRISA 003	1	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 AAC, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	1	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV.

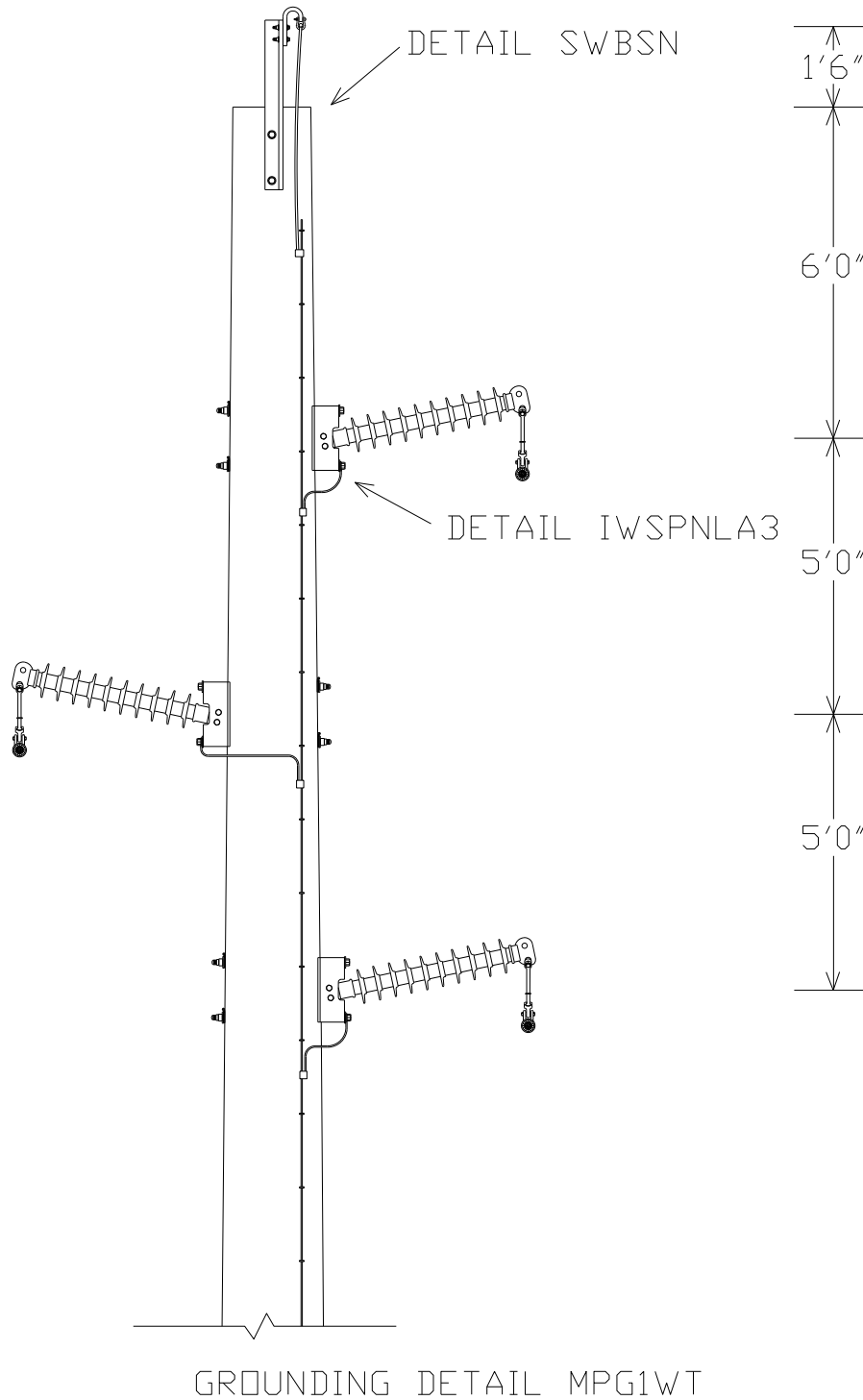
**IWSPNLA1\*954S**

45	GRISA 004	1	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ACSR, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	1	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV.

# A6151

**69KV DELTA POST, TANGENT SHIELD, 3-PHASE**

CONDUCTOR OPTIONS: 556S, 954A, 954S



# A6151 PLATES

## A6151 BASE

NO.	ITEM ID	QTY	DESCRIPTION
9	BAYSW 004	1	BAYONET FOR SHIELD WIRE, STRAIGHT 40"
12	BOLMS 001	0	MACHINE BOLT, 1/2" X 2 1/2", PROVIDED WITH SUPSH001
12	BOLMS 019	2	MACHINE BOLT, 5/8" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
12	BOLMS 051	6	MACHINE BOLT, 7/8" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
22	CLASU 001	1	ALUMINUM SUSPENSION CLAMP FOR 3#6AW / 7#10AW, 15000#
26	CLEHL 001	3	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, L > 9", PIN = 3/4", HOT DIPPED GALV.
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	4	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	16 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
46	GUAGW 001	1	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 002	0	SQUARE LOCK NUT FOR 1/2" BOLT, PROVIDED WITH SUPSH001
62	NUTSL 003	2	SQUARE LOCK NUT FOR 5/8" BOLT, HOT DIPPED GALVANIZED
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
70	STAPL 003	16	STAPLE, COPPERWELD, 1/2" X 2" FOR GROUND WIRE MOLDING
71	SUPSH 001	1	SUPPORT, SHIELD WIRE, GALVANIZED, WITH TWO 2 1/2 INCH MACHINE BOLTS AND LOCK NUTS
76	WASRD 004	2	ROUND WASHER FOR 5/8" BOLT, 1 3/4" DIAMETER, GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 5/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
77	WASSC 002	6	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 004	2	SPRING WASHER FOR 5/8" BOLT, LEAF TYPE, GALVANIZED
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

## A6151\*556S

45	GRISA 001	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
69	SOCEY 004	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=3/4

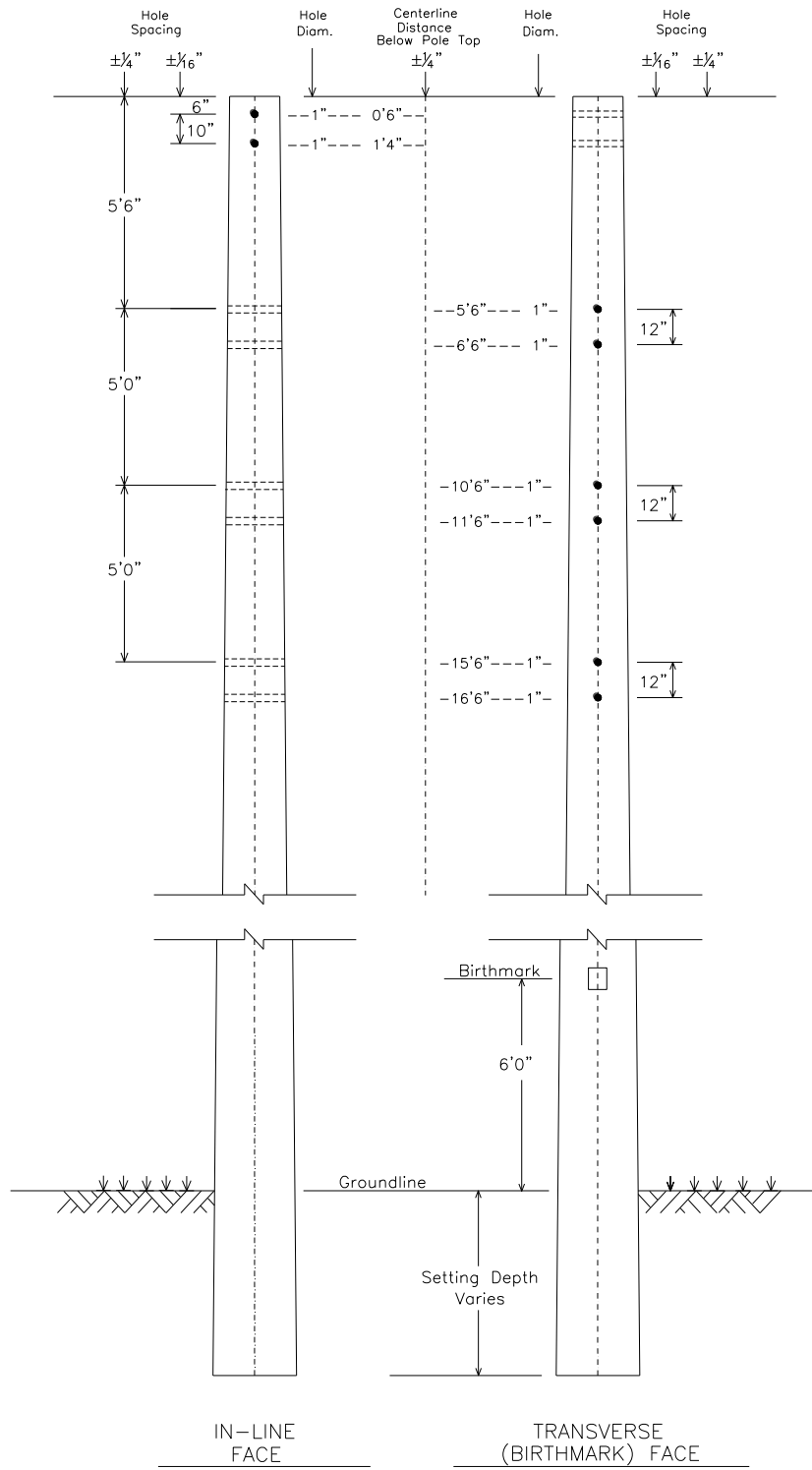
## A6151\*954A

45	GRISA 003	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 AAC, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=1 1/16

## A6151\*954S

45	GRISA 004	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ACSR, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV. T=1 1/16

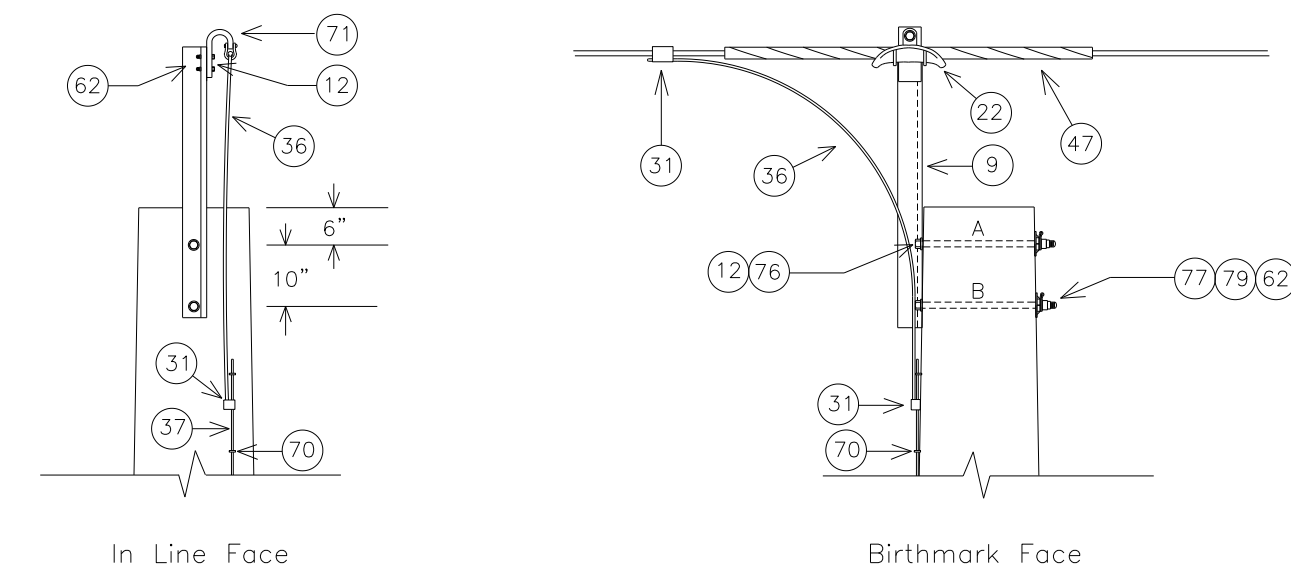
## A6151 DRILLING DETAIL



## SWBSN

SHIELD FOR WOOD POLES

BAYONET WITH SUSPENSION CLAMP, NO GUY



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

MINIMUM REQUIRED BOLT LENGTH 'A' (INCHES)	11.5
MINIMUM REQUIRED BOLT LENGTH 'B' (INCHES)	11.6

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER

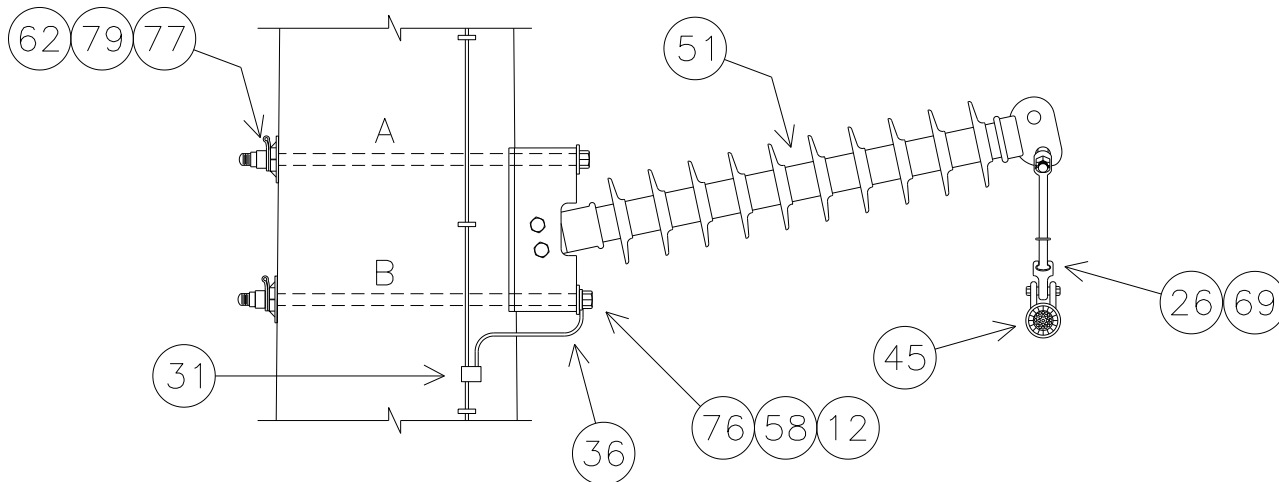
NO.	ITEM ID	QTY	DESCRIPTION
9	BAYSW 004	1	BAYONET FOR SHIELD WIRE, STRAIGHT 40"
12	BOLMS 001	0	MACHINE BOLT, 1/2" X 2 1/2", PROVIDED WITH SUPSH001
12	BOLMS 035	2	MACHINE BOLT, 3/4" X 12", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
22	CLASU 001	1	ALUMINUM SUSPENSION CLAMP FOR 3#6AW / 7#10AW, 15000#
31	CNNCP 002	1	COMPRESSION CONNECTOR, TYPE H, (3#6 AW) TO (#4 CU); (.258 - .420) TO (.162 - .332), ALUMINUM
31	CNNCP 016	1	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	4 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
37	COBCW 014	80 ft	#4 COPPERWELD CONDUCTOR
47	GUALI 001	1	ALUMINUM LINE GUARD FOR 3#6AW, 23" LG, RANGE .347" - 366"
62	NUTSL 002	0	SQUARE LOCK NUT FOR 1/2" BOLT, PROVIDED WITH SUPSH001
62	NUTSL 004	2	SQUARE LOCK NUT FOR 3/4" BOLT, HOT DIPPED GALVANIZED
70	STAPL 002	40	STAPLE, COPPERWELD, 3/8" X 1 1/2"
71	SUPSH 001	1	SUPPORT, SHIELD WIRE, GALVANIZED, WITH TWO 2 1/2" MACHINE BOLTS AND LOCK NUTS
76	WASRD 005	2	ROUND WASHER FOR 3/4" BOLT, 1 3/4" DIAMETER, GALVANIZED
77	WASSC 001	2	SQUARE CURVED WASHER FOR 3/4" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 005	2	SPRING WASHER FOR 3/4" BOLT, LEAF TYPE, GALVANIZED

## IWSPNLA3

INSULATOR FOR WOOD POLES

SINGLE POST, NO GUY, LONG CLEVIS, 69KV, 3-PHASE

CONDUCTOR OPTIONS: 556S, 954A, 954S



NOTE: SEE MBA1 FOR BOLT ASSEMBLY DETAILS

SUBSTRUCTURE	
BOLT 'A' LENGTH (INCHES)	18.8
BOLT 'B' LENGTH (INCHES)	19.2

NOTE: BOLT CALCULATIONS ASSUME A 9 INCH POLE TOP DIAMETER.

# IWSPNLA3 PLATES

**IWSPNLA3 BASE**

NO.	ITEM ID	QTY	DESCRIPTION
12	BOLMS 051	6	MACHINE BOLT, 7/8" X 20", SQUARE HEAD, GALVANIZED, WITH SQUARE NUT ATTACHED
26	CLEHL 001	3	BALL-Y CLEVIS, CLASS 52-3/5, STRENGTH = 30,000#, L > 9", PIN = 3/4", HOT DIPPED GALV.
31	CNNCP 016	3	COMPRESSION CONNECTOR, #4 SOL. CU. TO #4 SOL. CU., COPPER
36	COBCO 028	6 ft	#4 SOLID BARE COPPER CONDUCTOR, SOFT DRAWN
51	INSHP 020	3	HORIZONTAL POST INSULATOR, 69KV, L = 45", GAIN BASE, 12° RISE
58	LUGGR 002	3	LUG FOR 7/8" BOLT, #4 SOLID WIRE, TIN PLATED COPPER COMPRESSION
62	NUTSL 005	6	SQUARE LOCK NUT FOR 7/8 INCH BOLT, HOT DIPPED GALVANIZED
76	WASRD 006	6	ROUND WASHER FOR 7/8" BOLT, 2 1/2" DIAMETER, GALVANIZED
77	WASSC 002	6	SQUARE CURVED WASHER FOR 7/8" BOLTS, RIBBED MALLEABLE IRON-GALVANIZED, 4" X 4"
79	WASSP 006	6	SPRING WASHER FOR 7/8" BOLT, LEAF TYPE, GALVANIZED

**IWSPNLA3\*556S**

45	GRISA 001	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 556 ASCR
69	SOCEY 004	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV.

**IWSPNLA3\*954A**

45	GRISA 003	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 AAC, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV.

**IWSPNLA3\*954S**

45	GRISA 004	3	ARMOR GRIP SUSPENSION ASSEMBLY FOR 954 ACSR, 82 INCHES, 1 3/16" GAP, 5/8" PIN
69	SOCEY 003	3	SOCKET - EYE, STENGTH = 25,000#, L = 2 5/16", EYE = 13/16", FORGED STEEL, GALV.

**THIS PAGE IS INTENTIONALLY LEFT BLANK**