3.7 CIRCUIT 941, STR# 29 – STR# 30 DATA

3.7.1 INDUCED ELECTRICAL FIELD PLOT QUESTIONNAIRE

AFL Telecommunications
A Fujikura Business

AFL ADSS FIBER OPTIC CABLE
INDUCED ELECTRICAL FIELD PLOT QUESTIONNAIRE

PLEASE FILL IN ALL INFORMATION REQUESTED BELOW:

Requested by: Sebastian Chmist (JEA)
Tower Type: Steel H-frame, Structure# 29 & 30
Phase-to-Phase System Voltage (kV): 230kV

The cable is to be deployed in the following environment (please check all that apply):

	High Pollution
	Coastal (< 25 km from coast)
X	High Humidity (> 75% annual average)
	Low Rainfall (<75 days/year rain)
	"Over-insulated" Electrical Environment
	None of the above

OVERHEAD GROUND WIRES:

Number of ground wires: 2
Type of ground wires: All-Alumoweld 3#6 (bird name, gauge, etc.)
Ground wire diameter: 0.349 Dimension unit: inches
Ground wire weight: 0.178 Dimension unit: lb/ft
Ground wire break load: 10,280 Dimension unit: lb
List the coordinates of each ground wire:
X = Horizontal distance from vertical center line of tower (+ or -)
Y = Vertical height from terrain at attachment point:
Ground wire #1: X = -10 Dimension unit: ft
Y = 101.6 Dimension unit: ft
Ground wire #2: X = 10 Dimension unit: ft
Y = 101.6 Dimension unit: ft

PHASE CONDUCTORS:

Number of phases: 6
Conductor type: Falcon, 1590 ACSR (bird name, gauge, etc.)
Conductor diameter: 1.545 Dimension unit: inches
Conductor weight: 2.042 Dimension unit: lb/ft
Conductor break load: 54,500 Dimension unit: lb

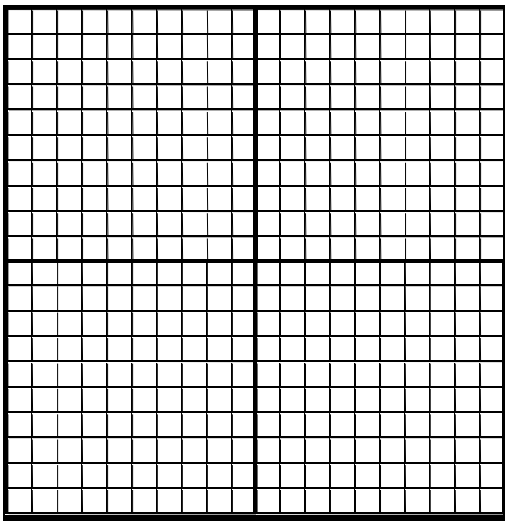
If more than one conductor per phase bundle, what is the number of conductors per phase? N/A,

What is the smallest distance between two adjacent conductors in the phase bundle? N/A

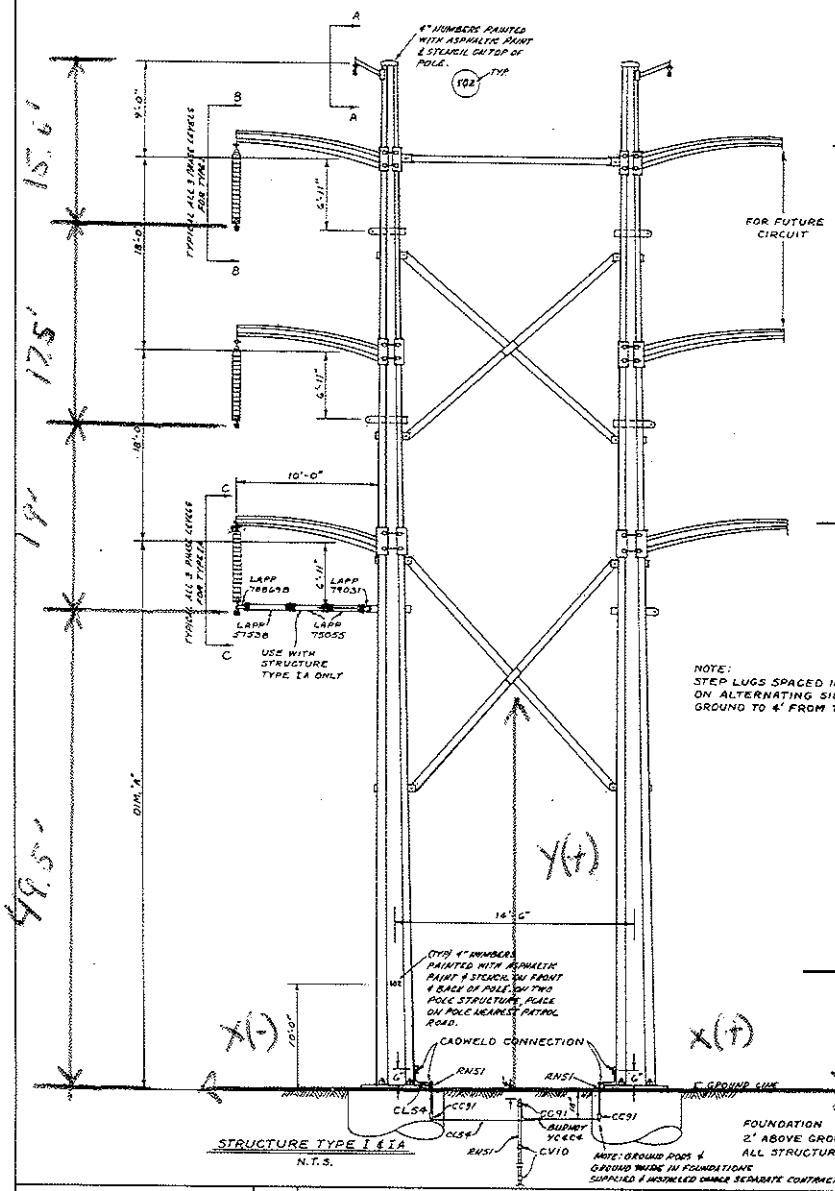
Insulator Length? 83" Number of sheds on insulator 15 Dimensions of each shed 10" DIA

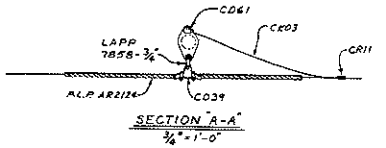
List the conductor coordinates:
X = Horizontal distance from vertical center line of tower (+ or -)
Y = Vertical height from terrain at attachment point

Phase	X-Position		Y-Position		Units
A	-17.25	17.25	86	86	feet
B	-17.25	17.25	68.5	68.5	feet
C	-17.25	17.25	49.5	49.5	feet
ADSS	-7.25				feet

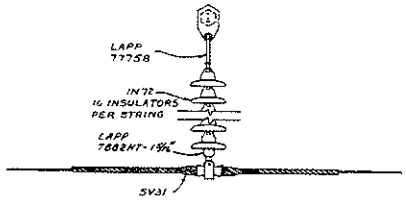


STR #30



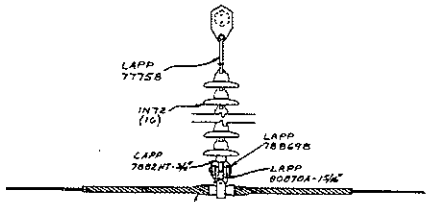


SECTION "A-A"
3/4" = 1'-0"



TYPE I (TYPICAL)
SECTION "B-B"
3/4" = 1'-0"

NOTE:
STEP LUGS SPACED 16" CENTER TO CENTER ON ALTERNATING SIDES OF POLES FROM GROUND TO 4' FROM TOP OF POLE

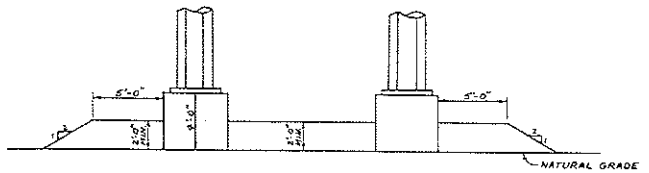


TYPE IA (TYPICAL)
SECTION "C-C"
3/4" = 1'-0"

STRUCTURE TYPE I				
ITEM CODE	JEA STOCK NO.	DESCRIPTION	QUAN.	MFG.
		HOT LINE BALL CLEVIS	3	LAPP 77758
IN72	——	INSULATOR, SUSPENSION	48	
SV31	1266330	SUSPENSION ARMOR GRIP	3	
*		SOCKET EYE	3	LAPP 7882HT-1 5/16"
CD39	——	CLAMP, SUSPENSION	2	
		CLEVIS EYE	2	LAPP 7858-3/4"
		ARMOR ROD	2	P.L.P. AR2124
CC91	3002150	CLAMP, GROUND ROD	3	
RNS1	3100508	GROUND ROD	5	
CV10	3004050	COUPLING, GROUND ROD	2	
		CONNECTOR	1	BURNDY YC4C4
** CL54	1890414	CONDUCTOR	4'	
**		CONNECTION	4	CADWELD
CD61	3002140	CLAMP, SHIELD WIRE	2	
** CK03	1860650	JUMPER, 7#10	8'	
CR11	1262055	CONNECTOR	2	

STRUCTURE TYPE IA				
ITEM CODE	JEA STOCK NO.	DESCRIPTION	QUAN.	MFG.
		ADD TO ABOVE:		
		CLEVIS EYE	3	LAPP 80870A-1 5/16"
		STRUT ADAPTER	3	LAPP 78869B
		STRUT ADAPTER	3	LAPP 79031
		STRUT INSULATOR	6	LAPP 75055
		STRUT INSULATOR	3	LAPP 57338
		SOCKET EYE	3	LAPP 7882HT-3/4"
		DELETE FROM ABOVE:		
*		SOCKET EYE	3	LAPP 7882HT-1 5/16"

** TO BE SUPPLIED BY CONTRACTOR



BUILD UP REQUIRED AROUND POLES 65 THRU 68 ON SECTION I

NO.	REVISION	DATE	BY	CH'D	APP'D
1	SPAN LINES	12/73	D.J.		

PRINT RECORD

DRAWING STATUS		ENGINEERING RECORD		
ISSUED	DATE		BY	DATE
PRELIMINARY		DRAWN	A.R.B.	2-27-73
FOR APPROVAL		TRACED		
FOR CONSTRUCTION		DESIGNED	T.L.W.	2-27-73
AS CONSTRUCTED		CHECKED	T.L.W.	2-27-73
REVISED AND RESUBMITTED FOR APPROVAL REV.		APPROVED	J.W.S.	2-28-73
THIS DRAWING AND DESIGN IS THE PROPERTY OF JACKSONVILLE ELECTRIC AUTHORITY AND IS LOANED SUBJECT TO RETURN UPON DEMAND.		APPROVED		

CONSTRUCTION OF
240KV INTERCONNECTION LINE
STRUCTURE TYPE I & IA
JACKSONVILLE ELECTRIC AUTHORITY
JACKSONVILLE, FLORIDA
TRANSMISSION ENGINEERING DIVISION

W.O. NO. T-001-74C(E)
DRAWING NO. TR1098
SHEET NO. 44 OF 55
SCALE AS SHOWN
SPEC. NO. 42-73

3.7.2 ADSS ELECTRICAL STRESS, 12kV – WITH NO CORONA

ADSS ELECTRICAL STRESS

PROJECT INFORMATION

Customer Name	**JEA**
Project Name	
Line Number	**#29 and 30**
Tower Type	**Steel H-Frame**
Level Of Pollution	○ Heavy ○ Medium ◉ Low ○ Other [Ω/m]: 3.00E+06

INPUT CONDUCTORS

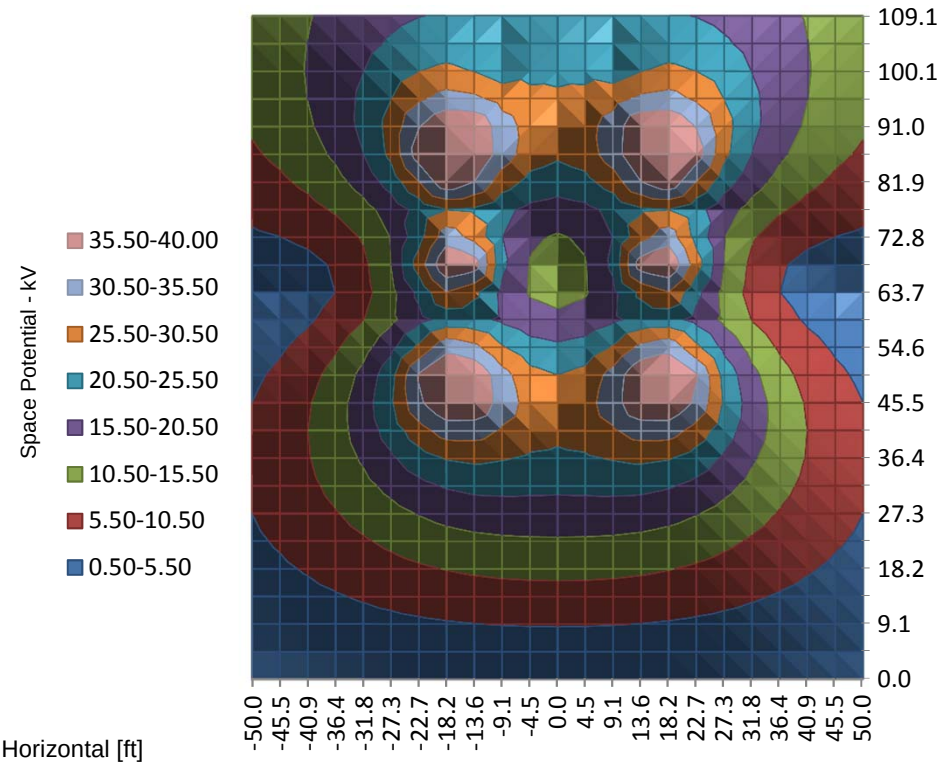
Conductor Type or Name	Falcon		
System Voltage [kV]	230	(Phase to Phase)	
System Frequency [Hz]	60		
Conductor Diameter [in]	1.55		
Conductors Coordinates	Phase A	Phase B	Phase C
X1 [feet]	-17.25	-17.25	-17.25
Y1 [feet]	86.00	68.50	49.50
X2 [feet]	17.25	17.25	17.25
Y2 [feet]	86.00	68.50	49.50
Conductors per Phase	1		
Bundle Diameter [in]	0		
Ground Wire Type or Name	3#6		
Ground Wire Diameter [in]	0.349		
Ground Wire Coordinates			
X1 [feet]	-10		
Y1 [feet]	101.6		
X2 [feet]	10		
Y2 [feet]	101.6		

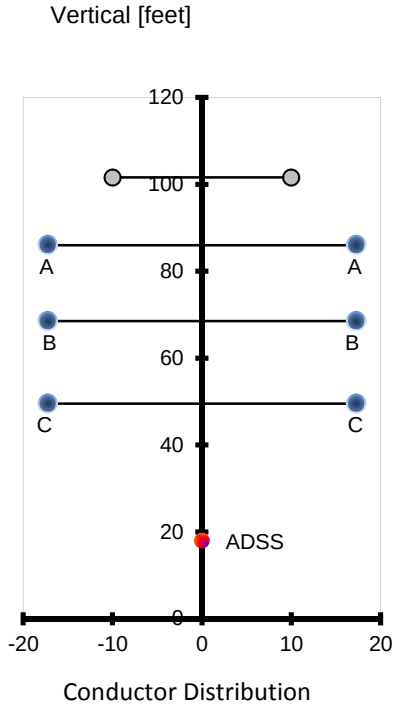
INPUT ADSS

ADSS Design No.	
Cable Diameter [in]	0.500
ADSS Coordinates	
X [feet]	0.0
Y [feet]	18.00
Rod Diameter [in]	3.0
ADSS Resistance [Ω/m]	1.00E+07
Pollution Level	Low

RESULTS

ADSS Capacitance [F/m]	7.46E-12
ADSS Impedance [MW]	59.619
Space Potential [kV]	**11.68**
Electrical Field [kV/cm]	**8.47**
Induced Current [mA]	**0.196**



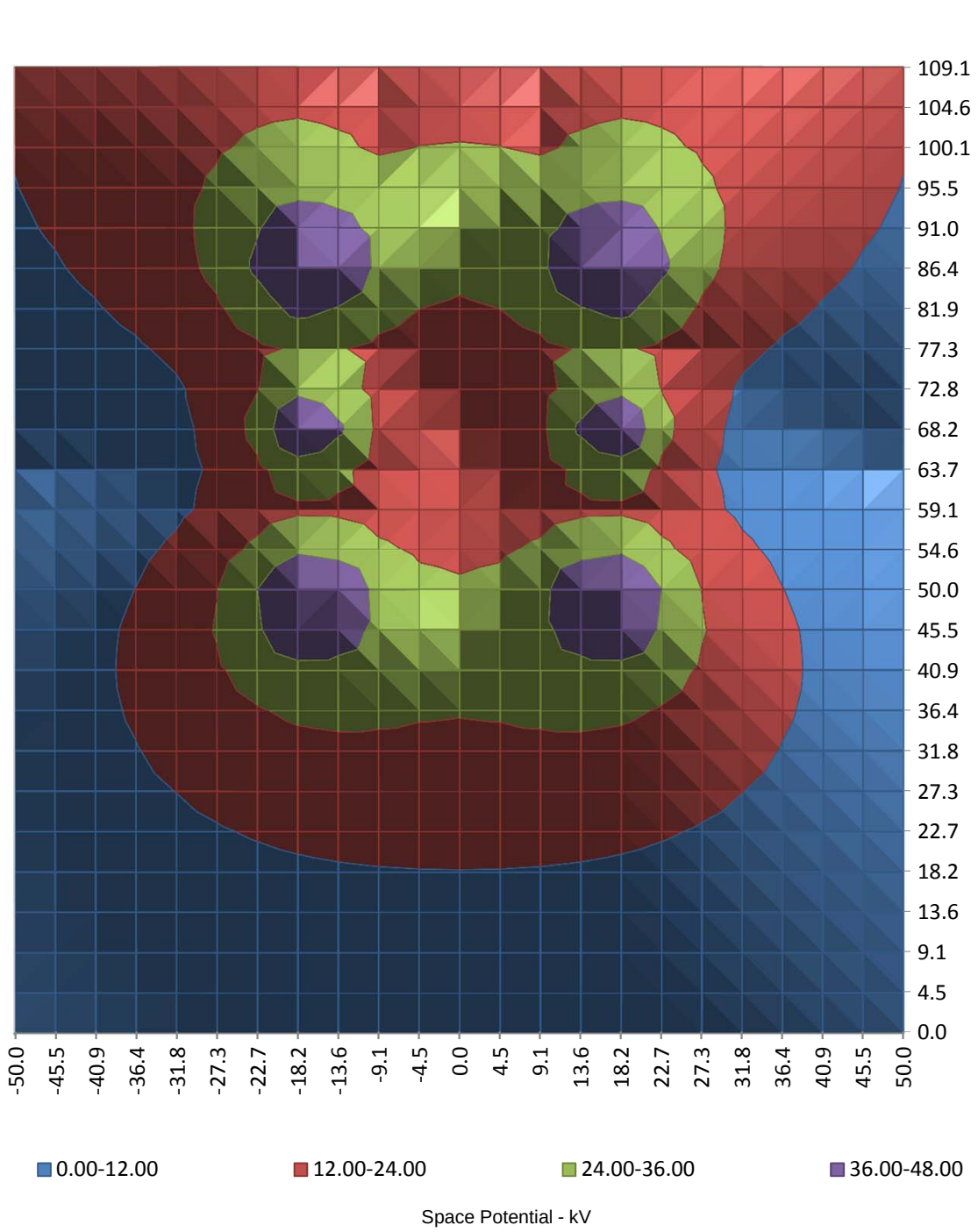


ADSS ELECTRICAL STRESS

PROJECT INFORMATION

Customer Name	**JEA**
Project Name	**0**
Line Number	**#29 and 30**
Tower Type	**Steel H-Frame**

SPACE POTENTIAL CHART

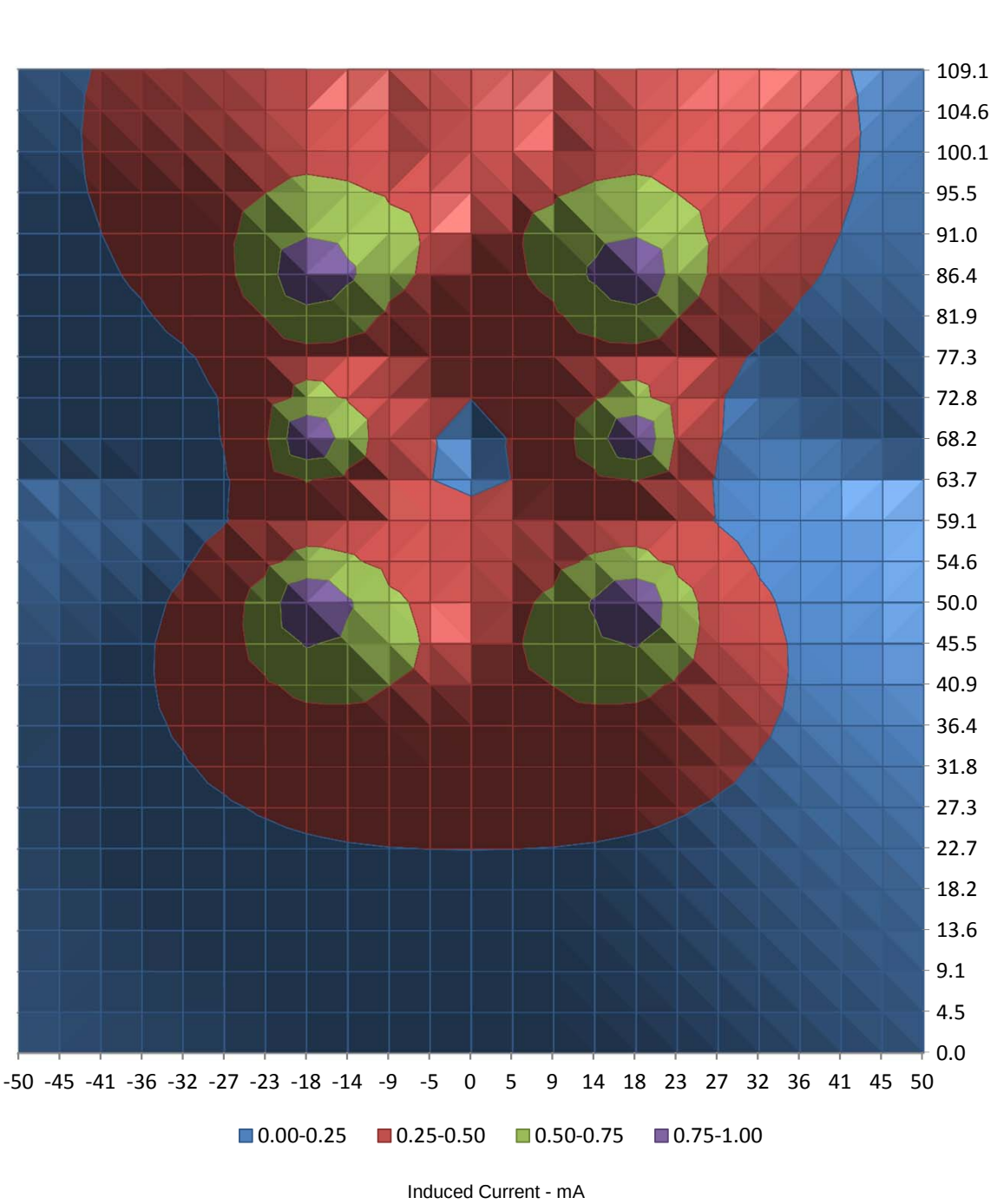


ADSS ELECTRICAL STRESS

PROJECT INFORMATION

Customer Name	**JEA**
Project Name	**0**
Line Number	**#29 and 30**
Tower Type	**Steel H-Frame**

INDUCED CURRENT CHART



3.7.3 ADSS ELECTRICAL STRESS, 25kV – WITH NO CORONA

ADSS ELECTRICAL STRESS

PROJECT INFORMATION

Customer Name	**JEA**
Project Name	
Line Number	**#29 and 30**
Tower Type	**Steel H-Frame**
Level Of Pollution	○ Heavy ○ Medium ◉ Low ○ Other [Ω/m]: 3.00E+06

INPUT CONDUCTORS

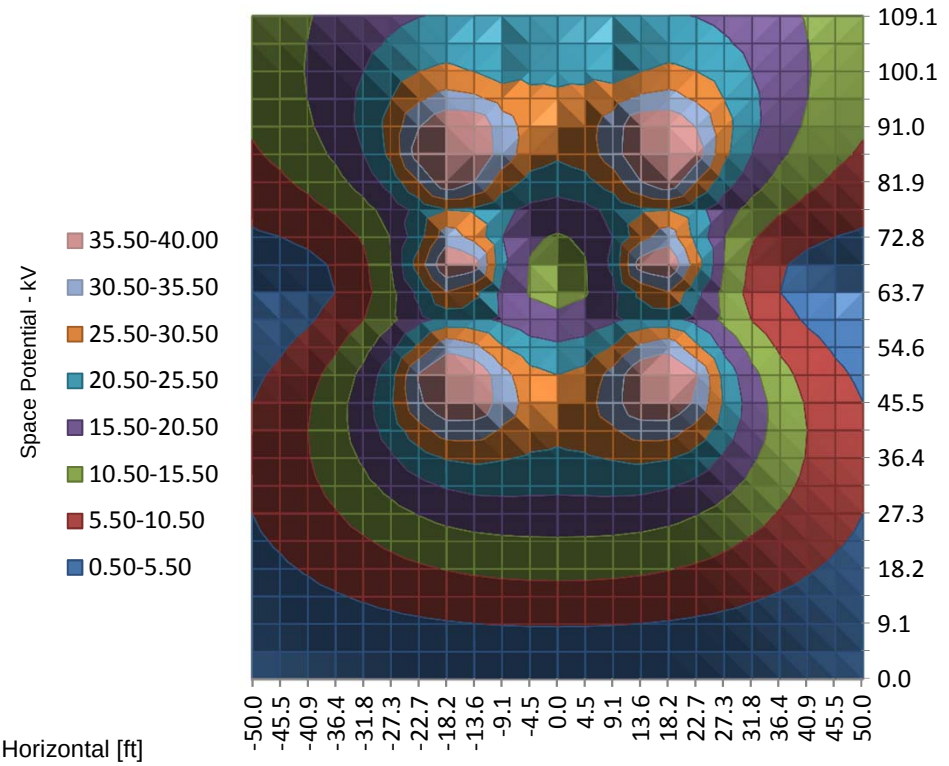
Conductor Type or Name	Falcon		
System Voltage [kV]	230	(Phase to Phase)	
System Frequency [Hz]	60		
Conductor Diameter [in]	1.55		
Conductors Coordinates	Phase A	Phase B	Phase C
X1 [feet]	-17.25	-17.25	-17.25
Y1 [feet]	86.00	68.50	49.50
X2 [feet]	17.25	17.25	17.25
Y2 [feet]	86.00	68.50	49.50
Conductors per Phase	1		
Bundle Diameter [in]	0		
Ground Wire Type or Name	3#6		
Ground Wire Diameter [in]	0.349		
Ground Wire Coordinates			
X1 [feet]	-10		
Y1 [feet]	101.6		
X2 [feet]	10		
Y2 [feet]	101.6		

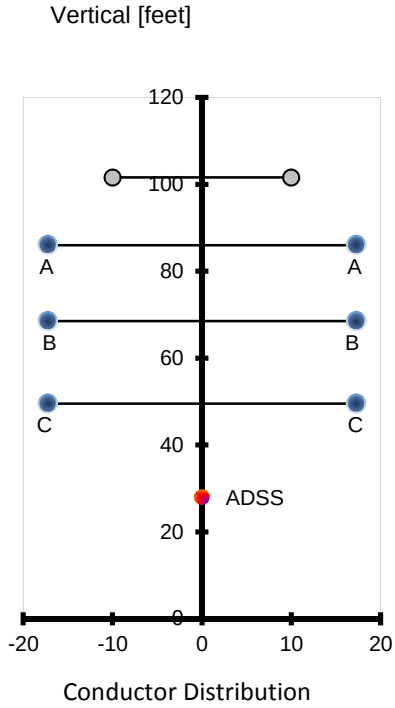
INPUT ADSS

ADSS Design No.	
Cable Diameter [in]	0.500
ADSS Coordinates	
X [feet]	0.0
Y [feet]	28.00
Rod Diameter [in]	3.0
ADSS Resistance [Ω/m]	1.00E+07
Pollution Level	Low

RESULTS

ADSS Capacitance [F/m]	7.05E-12
ADSS Impedance [MW]	61.361
Space Potential [kV]	**18.80**
Electrical Field [kV/cm]	**13.61**
Induced Current [mA]	**0.306**



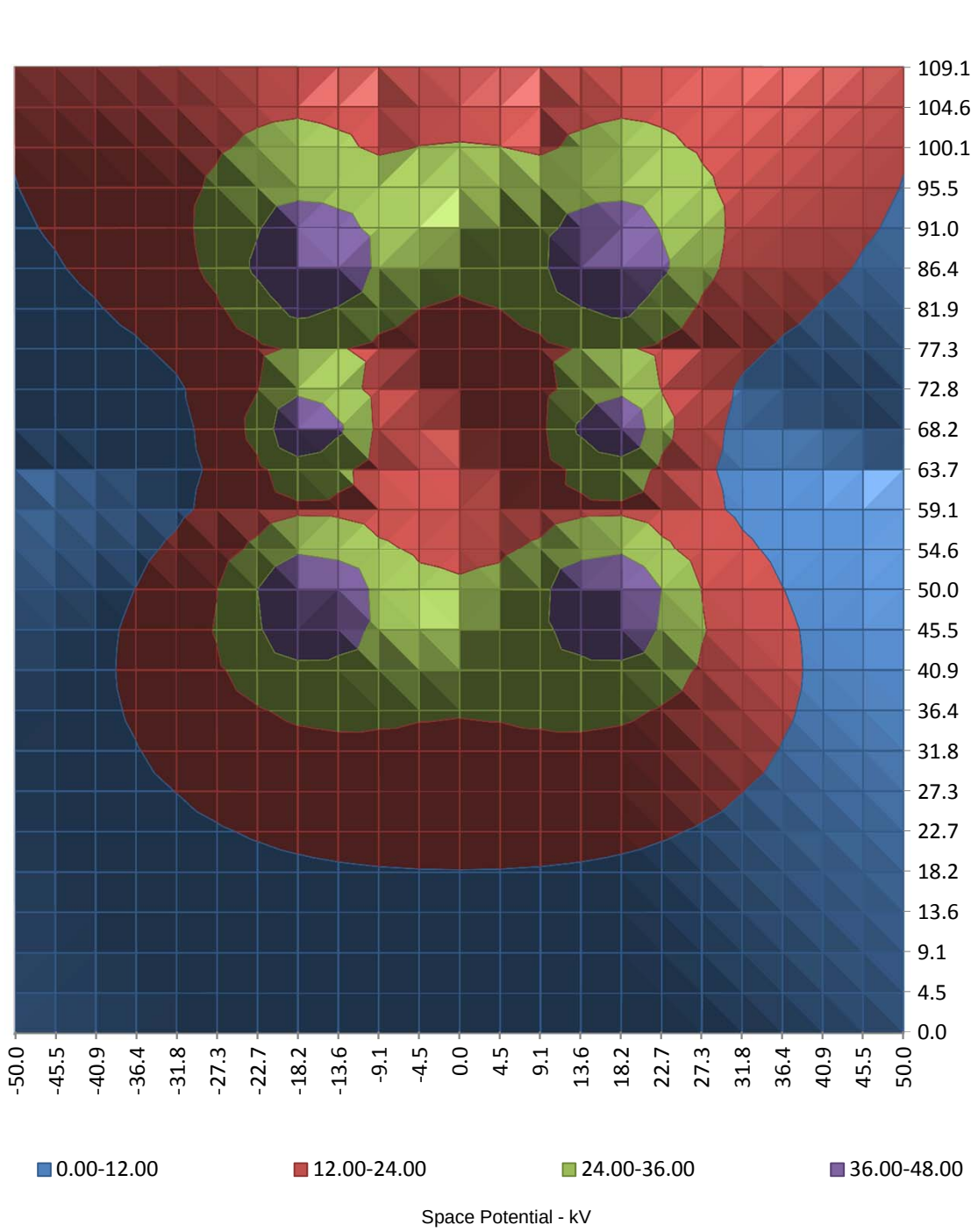


ADSS ELECTRICAL STRESS

PROJECT INFORMATION

Customer Name	**JEA**
Project Name	**0**
Line Number	**#29 and 30**
Tower Type	**Steel H-Frame**

SPACE POTENTIAL CHART

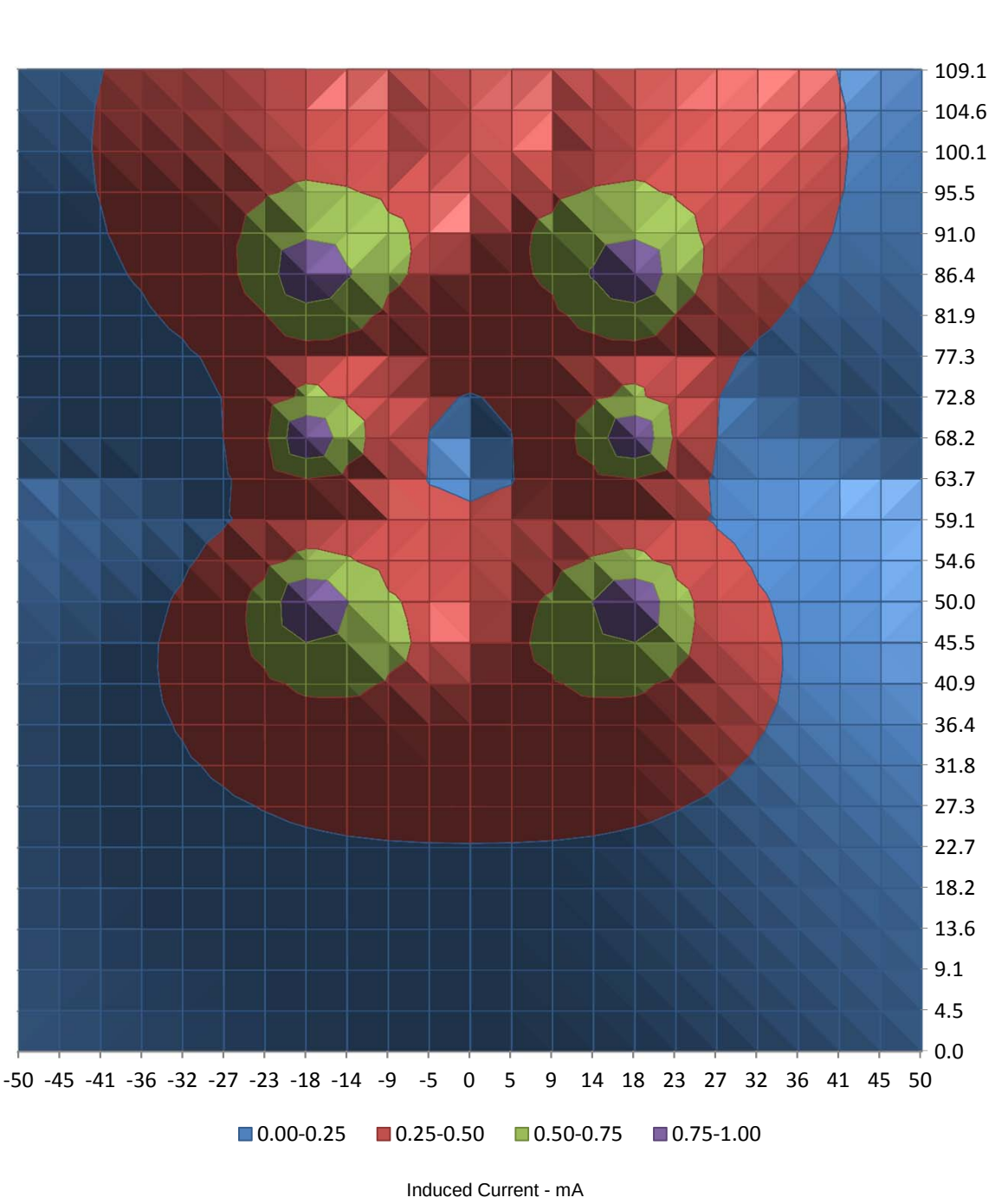


ADSS ELECTRICAL STRESS

PROJECT INFORMATION

Customer Name	**JEA**
Project Name	**0**
Line Number	**#29 and 30**
Tower Type	**Steel H-Frame**

INDUCED CURRENT CHART



3.7.4 ADSS ELECTRICAL STRESS, 25kV – WITH CORONA

ADSS ELECTRICAL STRESS

PROJECT INFORMATION

Customer Name	**JEA**
Project Name	
Line Number	**#29 and 30**
Tower Type	**Steel H-Frame**
Level Of Pollution	○ Heavy ○ Medium ◉ Low ○ Other [Ω/m]: 3.00E+06

INPUT CONDUCTORS

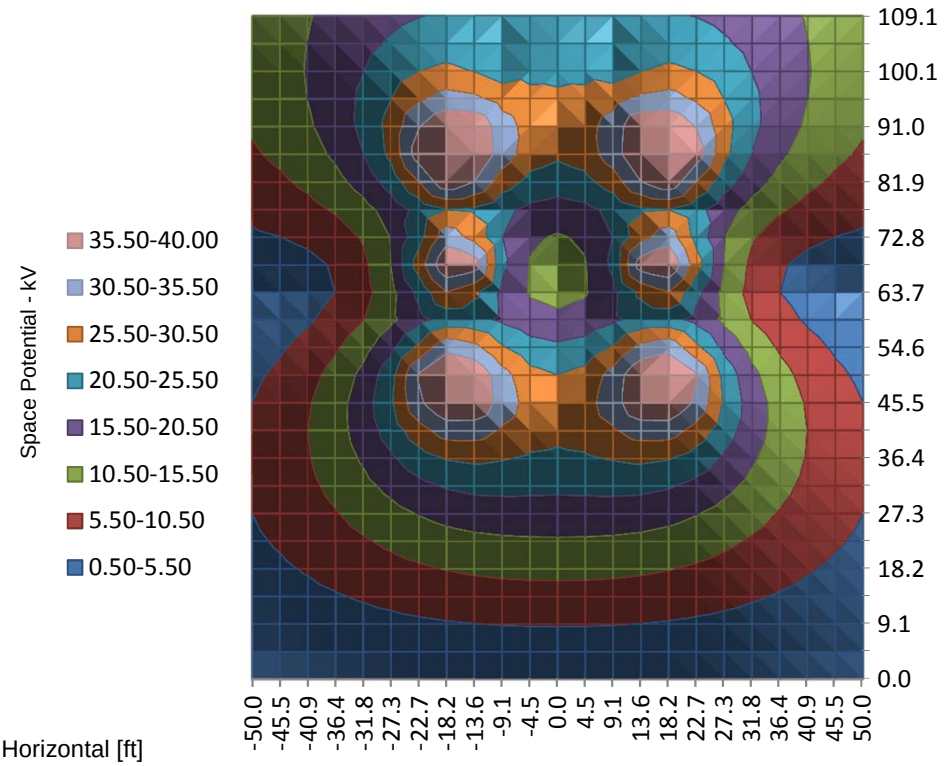
Conductor Type or Name	Falcon		
System Voltage [kV]	230	(Phase to Phase)	
System Frequency [Hz]	60		
Conductor Diameter [in]	1.55		
Conductors Coordinates	Phase A	Phase B	Phase C
X1 [feet]	-17.25	-17.25	-17.25
Y1 [feet]	86.00	68.50	49.50
X2 [feet]	17.25	17.25	17.25
Y2 [feet]	86.00	68.50	49.50
Conductors per Phase	1		
Bundle Diameter [in]	0		
Ground Wire Type or Name	3#6		
Ground Wire Diameter [in]	0.349		
Ground Wire Coordinates			
X1 [feet]	-10		
Y1 [feet]	101.6		
X2 [feet]	10		
Y2 [feet]	101.6		

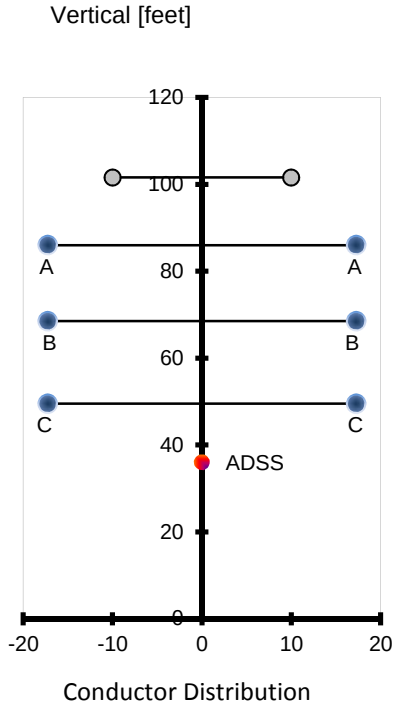
INPUT ADSS

ADSS Design No.	
Cable Diameter [in]	0.500
ADSS Coordinates	
X [feet]	0.0
Y [feet]	36.00
Rod Diameter [in]	3.0
ADSS Resistance [Ω/m]	1.00E+07
Pollution Level	Low

RESULTS

ADSS Capacitance [F/m]	6.83E-12
ADSS Impedance [MW]	62.330
Space Potential [kV]	**24.32**
Electrical Field [kV/cm]	**17.61**
Induced Current [mA]	**0.390**



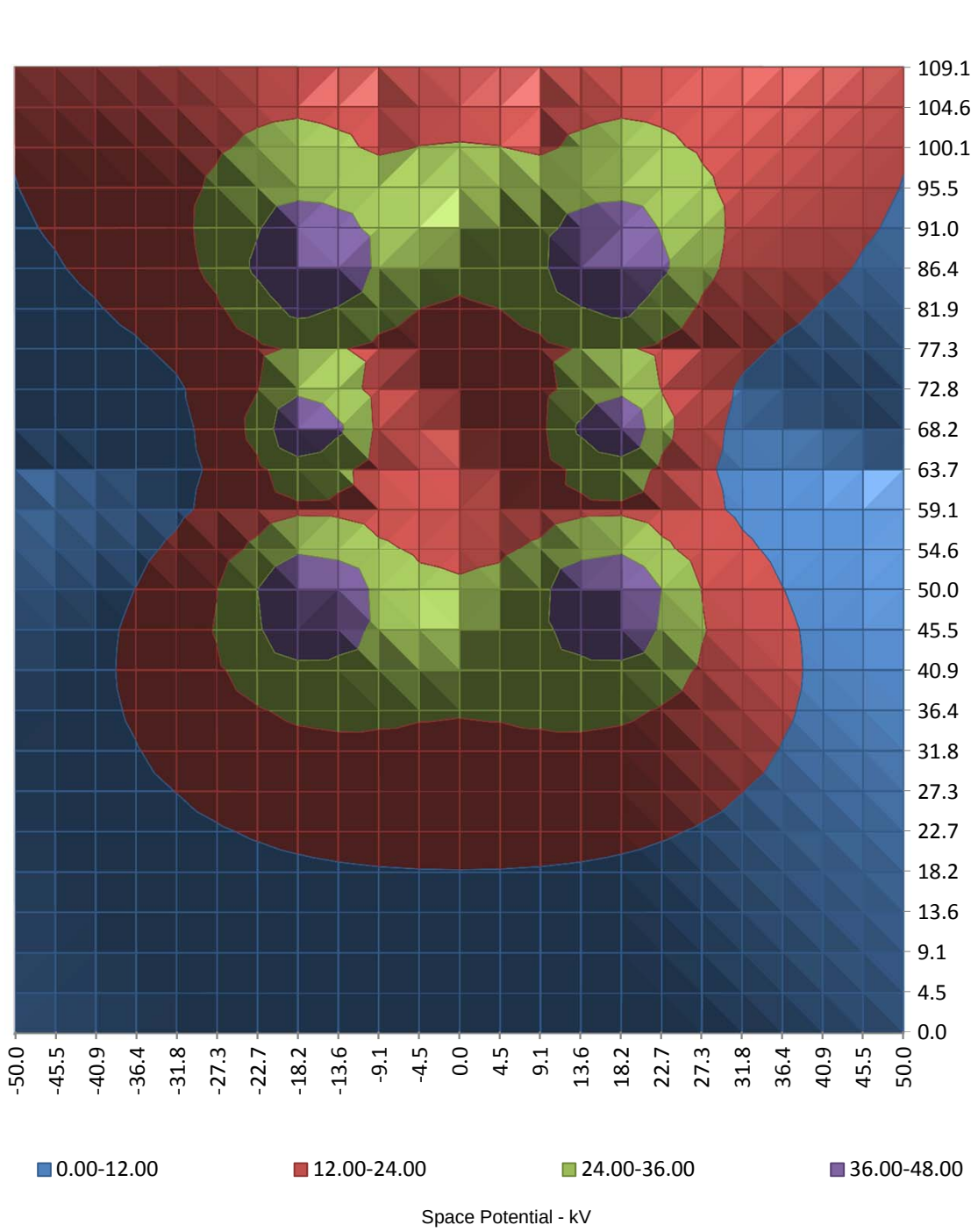


ADSS ELECTRICAL STRESS

PROJECT INFORMATION

Customer Name	**JEA**
Project Name	**0**
Line Number	**#29 and 30**
Tower Type	**Steel H-Frame**

SPACE POTENTIAL CHART

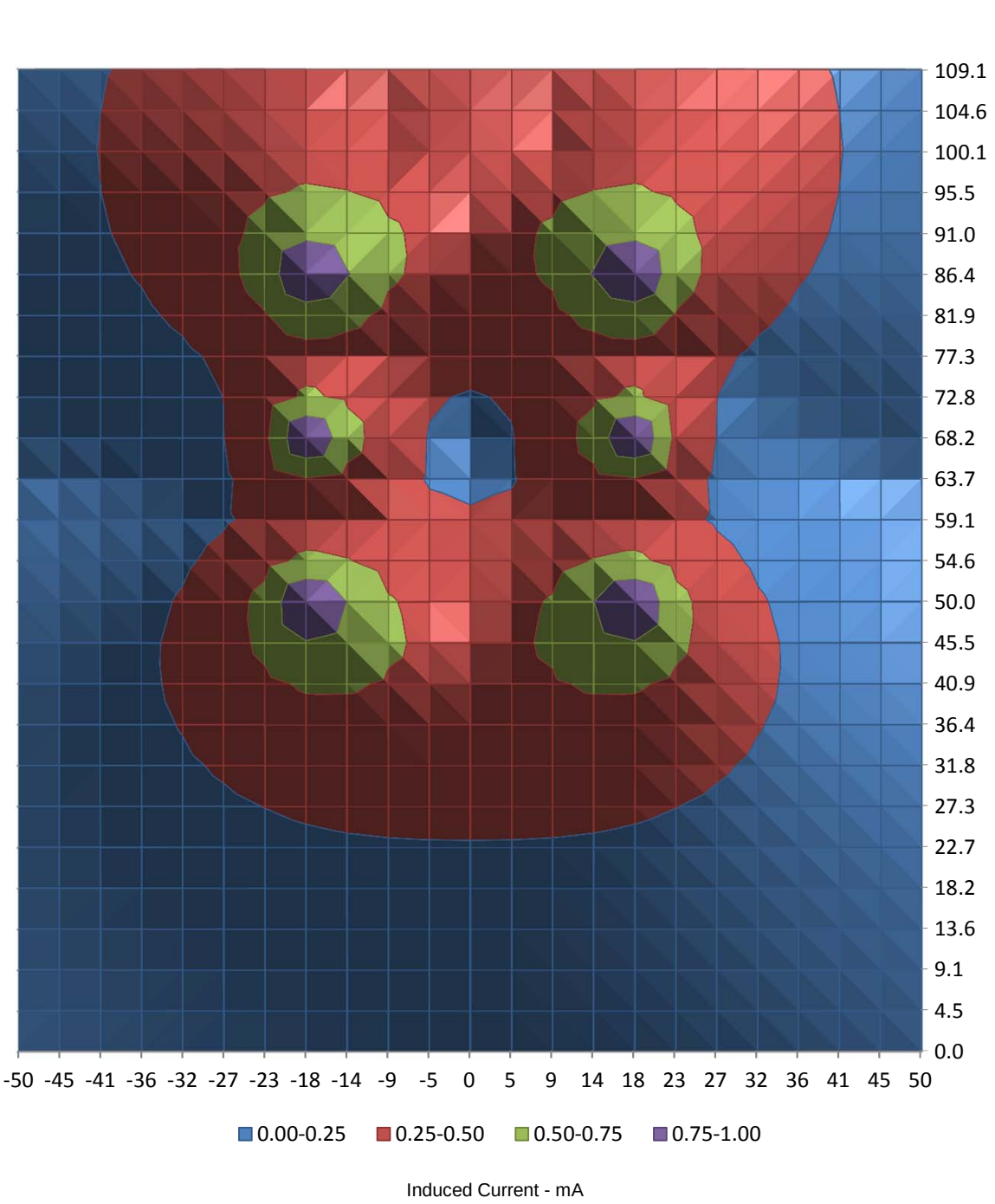


ADSS ELECTRICAL STRESS

PROJECT INFORMATION

Customer Name	**JEA**
Project Name	**0**
Line Number	**#29 and 30**
Tower Type	**Steel H-Frame**

INDUCED CURRENT CHART



IV. FIBER OPTIC - TRANSMISSION

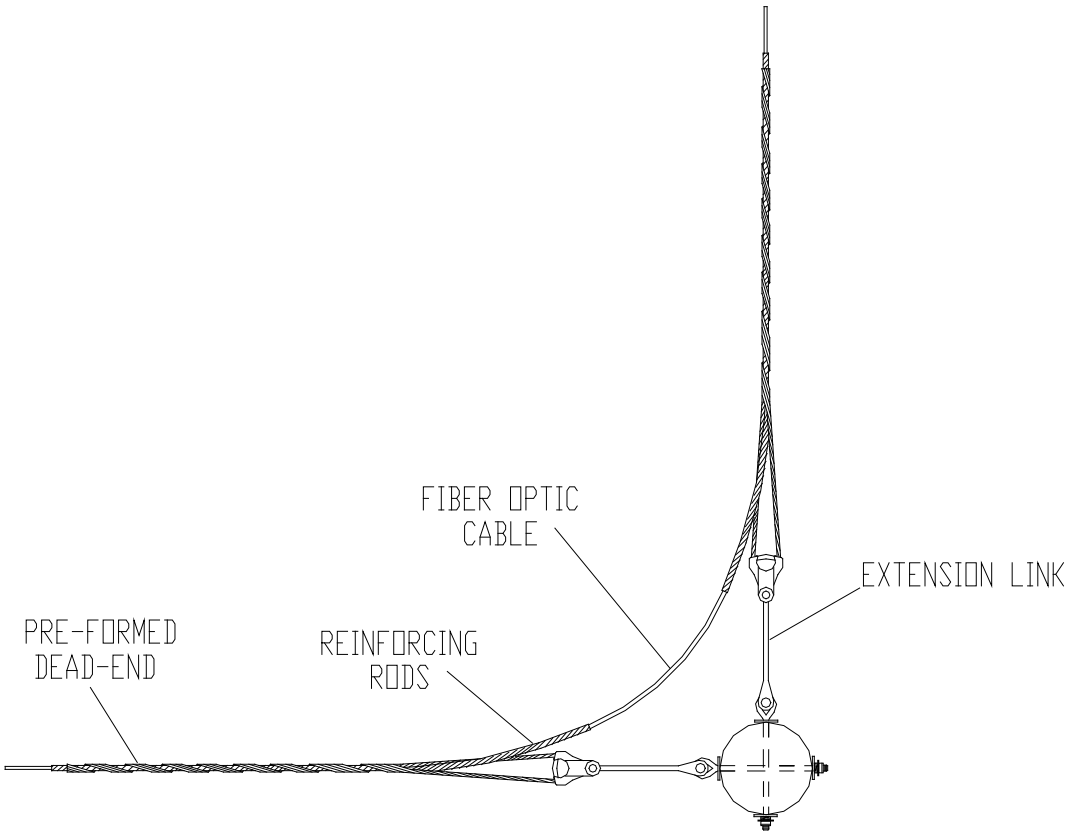
TABLE OF CONTENTS

FO-TX-A 2
FO-TX-ABD 3
FO-TX-CR 4
FO-TX-D 5
FO-TX-DBD 6
FO-TX-DDE 7
FO-TX-DDEBD 8
FO-TX-GRD 9
FO-TX-GUY 10
FO-TX-MH 11
FO-TX-MHBD 12
FO-TX-SB 13
FO-TX-SBBD 14
FO-TX-SBS 15
FO-TX-SBSBD 16
FO-TX-TL 17
FO-TX-TLBD 18
FO-TX-VIB 19

FO-TX-A

90 DEGREE ANGLE

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



FO-TX-A Base

NO.	ITEM ID	QTY	DESCRIPTION
1	BOL EY 015	2	BOLT, EYE, $^{5}/_{8}$"X 36"
2	CNN VG 003	2	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
3	COB CO 028	10	CONDUCTOR, #4 SOLID
4	FIB CL 001	2	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
5	LIK EX 002	2	LINK, EXTENSION, CLEVIS EYE
6	LUG GR 001	2	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
7	NUT SQ 003	2	NUT, SQUARE, $^{5}/_{8}$"
8	WAS RD 004	2	WASHER, ROUND, $1^{3}/_{4}$ ", FOR $^{5}/_{8}$" DIA. BOLT
9	WAS SF 002	4	WASHER, SQUARE, FLAT, $2^{1}/_{4}$ " FOR $^{5}/_{8}$" DIA. BOLT
10	WAS SP 002	2	WASHER, SPRING, DOUBLE HELIX, FOR $^{3}/_{4}$" DIA. BOLT

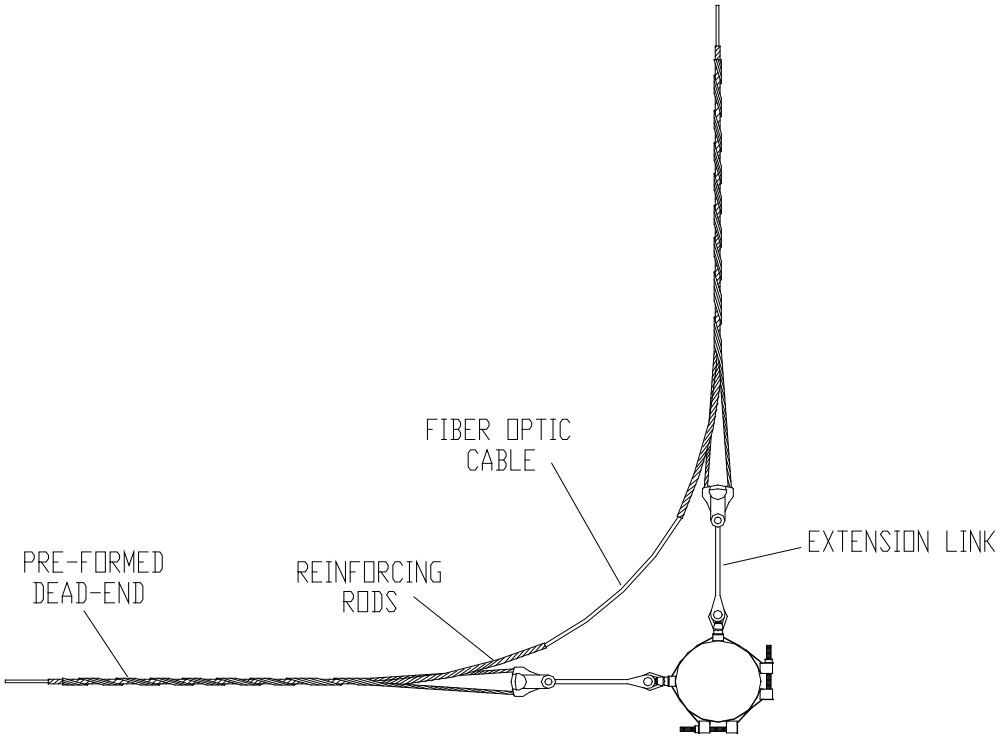
FO-TX-A* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE FOR .594" DIAMETER FIBER CABLE
48	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE FOR .594" DIAMETER FIBER CABLE
72	FIB DE 007	2	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-ABD

90 DEGREE ANGLE, BANDED

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



FO-TX-ABD Base

NO.	ITEM ID	QTY	DESCRIPTION
1	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
2	COB CO 028	5	CONDUCTOR, #4 SOLID
3	FIB BD 001	12	1.25" STAINLESS STEEL BANDING
4	FIB BK 001	2	BUCKLE, FOR BAND-IT 1-1/4" X .044" BAND-IT #G442 (25 EACH PER BOX)
5	FIB CL 001	2	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
6	FIB MT 001	2	FIBER OPTIC MOUNTING PLATE
7	LIK EX 002	2	LINK, EXTENSION, CLEVIS EYE
8	LUG GR 001	1	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
9	NUT EY 002	2	NUT, EYE, $^{5}/_{8}$"

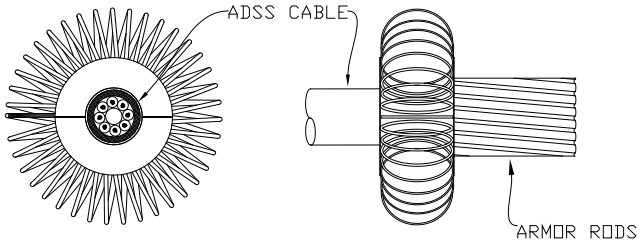
FO-TX-ABD* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE FOR .594" DIAMETER FIBER CABLE
48	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE FOR .594" DIAMETER FIBER CABLE
72	FIB DE 007	2	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

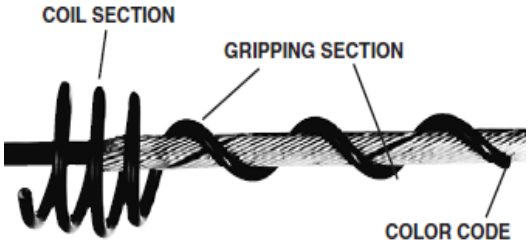
FO-TX-CR

CORONA RING

OPTIONS: 24, 48, 72



AFL TYPE



PLP TYPE

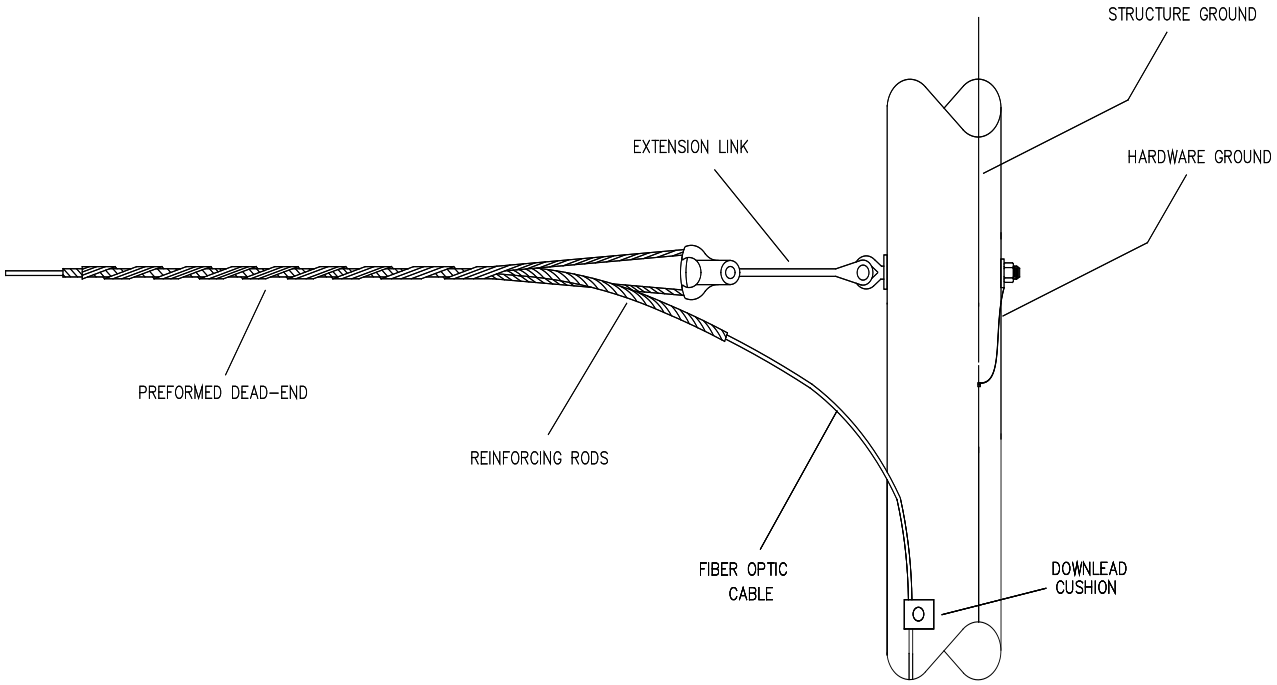
FO-TX-CR* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB CR 001	1	CORONA RING, FIBER OPTIC, FOR 0.594 INCH DIAMETER CABLE.
48	FIB CR 001	1	CORONA RING, FIBER OPTIC, FOR 0.594 INCH DIAMETER CABLE.
72	FIB CR 002	1	CORONA RING, FIBER OPTIC, FOR 0.701 INCH DIAMETER CABLE.

FO-TX-D

DEAD-END, SINGLE

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



FO-TX-D Base

NO.	ITEM ID	QTY	DESCRIPTION
1	BOL EY 015	1	BOLT, EYE, $^{5}/_{8}$" X 36"
2	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
3	COB CO 028	5	CONDUCTOR, #4 SOLID
4	FIB CL 001	1	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
5	FIB CU 001	3	CUSHION, FIBER OPTIC CABLE DOWNLEAD
6	LIK EX 002	1	LINK, EXTENSION, CLEVIS EYE
7	LUG GR 001	1	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
8	NUT SQ 003	1	NUT, SQUARE, $^{5}/_{8}$"
9	WAS RD 004	1	WASHER, ROUND, $1^{3}/_{4}$ ", FOR $^{5}/_{8}$"DIA. BOLT
10	WAS SF 002	2	WASHER, SQUARE, FLAT, $2^{1}/_{4}$", FOR $^{5}/_{8}$"DIA. BOLT
11	WAS SP 002	1	WASHER, SPRING, DOUBLE HELIX, FOR $^{3}/_{4}$" DIA. BOLT

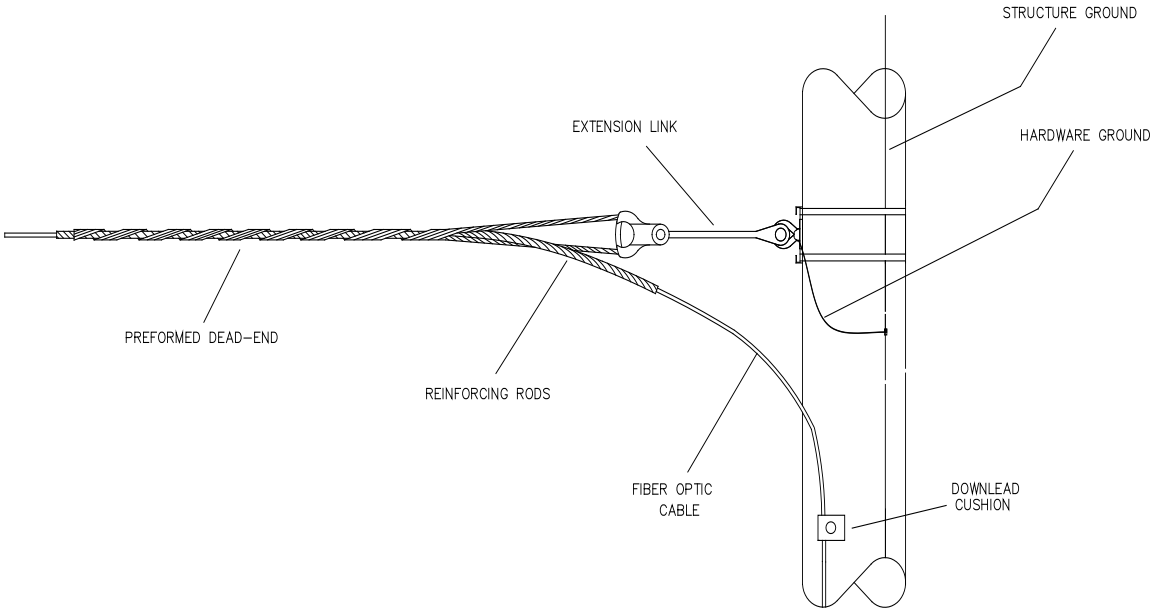
FO-TX-D* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	1	DEADEND, PREFORMED, FOR .594" DIAMETER FIBER OPTIC CABLE
48	FIB DE 003	1	DEADEND, PREFORMED, FOR .594" DIAMETER FIBER OPTIC CABLE
72	FIB DE 007	1	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-DBD

DEAD-END, SINGLE, BANDED

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



FO-TX-DBD Base

NO.	ITEM ID	QTY	DESCRIPTION
1	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
2	COB CO 028	5	CONDUCTOR, #4 SOLID
3	FIB BD 001	12	1.25 IN. STAINLESS STEEL BANDING
4	FIB BK 001	2	BUCKLE, FOR BAND-IT 1-1/4" X .044" BAND-IT #G442 (25 EACH PER BOX)
5	FIB CL 001	1	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
6	FIB CU 001	3	CUSHION, FIBER OPTIC CABLE DOWNLEAD
7	FIB MT 001	1	FIBER OPTIC MOUNTING PLATE
8	LIK EX 002	1	LINK, EXTENSION, CLEVIS EYE
9	LUG GR 001	1	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
10	NUT EY 002	1	NUT, EYE, $^{5}/_{8}$"

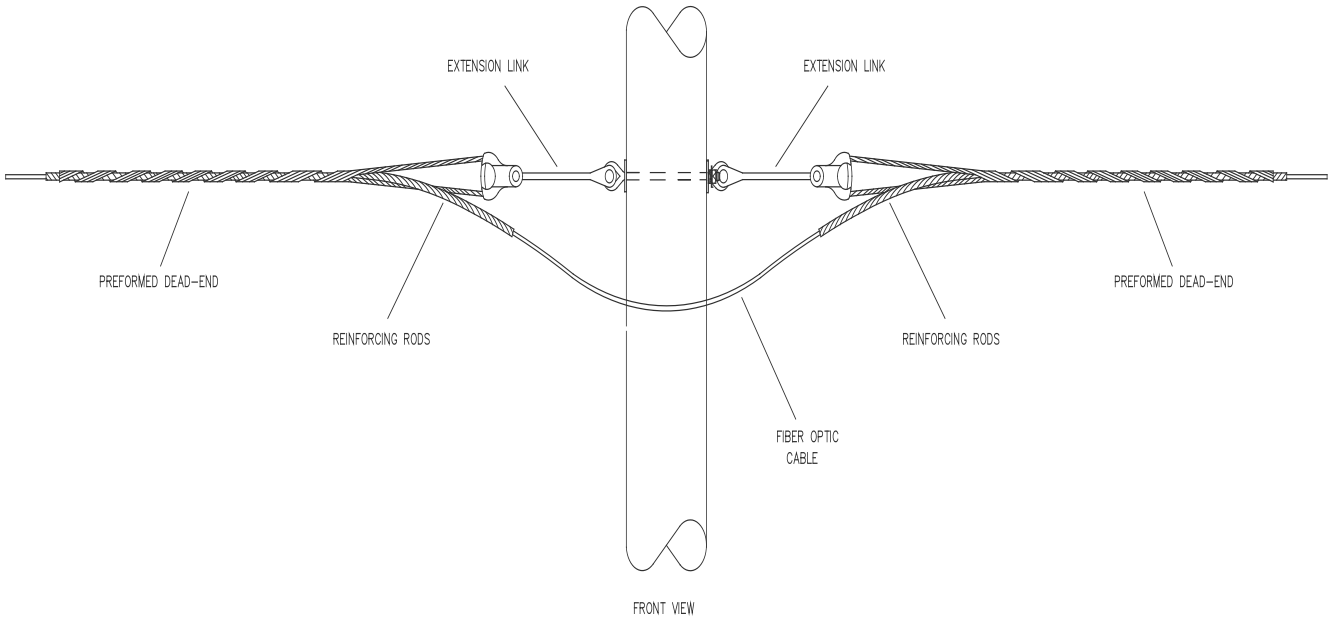
FO-TX-DBD* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	1	DEADEND, FIBER OPTIC CABLE FOR .594" DIAMETER FIBER CABLE
48	FIB DE 003	1	DEADEND, FIBER OPTIC CABLE FOR .594" DIAMETER FIBER CABLE
72	FIB DE 007	1	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-DDE

DOUBLE DEAD-END

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



FO-TX-DDE Base

NO.	ITEM ID	QTY	DESCRIPTION
1	BOL EY 015	1	BOLT, EYE, $^{5}/_{8}$" X 36"
2	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
3	COB CO 028	5	CONDUCTOR, #4 SOLID
4	FIB CL 001	2	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
5	LIK EX 002	2	LINK, EXTENSION, CLEVIS EYE
6	LUG GR 001	1	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMPRESSI
7	NUT EY 002	1	NUT, EYE, $^{5}/_{8}$"
8	WAS RD 004	2	WASHER, ROUND, $1^{3}/_{4}$ ", FOR $^{5}/_{8}$"DIA. BOLT
9	WAS SF 002	2	WASHER, SQUARE, FLAT, $2^{1}/_{4}$", FOR $^{5}/_{8}$"DIA. BOLT
10	WAS SP 002	1	WASHER, SPRING, DOUBLE HELIX, FOR $^{3}/_{4}$" DIA. BOLT

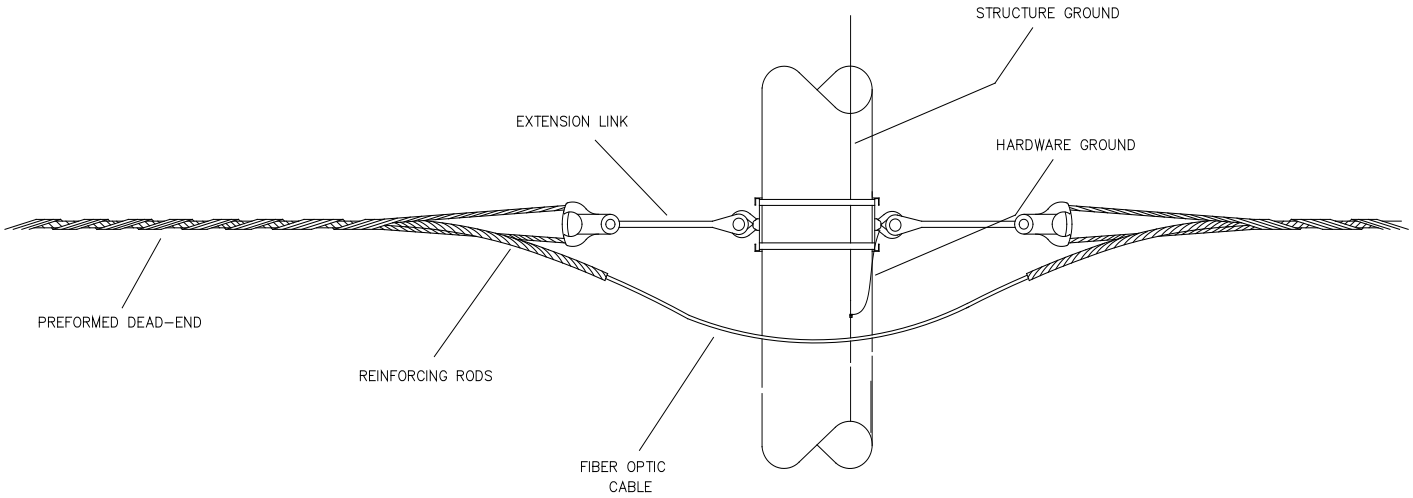
FO-TX-DDE* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	2	DEADEND, PREFORMED, FOR .594" DIAMETER FIBER OPTIC CABLE
48	FIB DE 003	2	DEADEND, PREFORMED, FOR .594" DIAMETER FIBER OPTIC CABLE
72	FIB DE 007	2	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-DDEBD

DOUBLE DEAD-END, BANDED

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



FO-TX-DDEBD Base

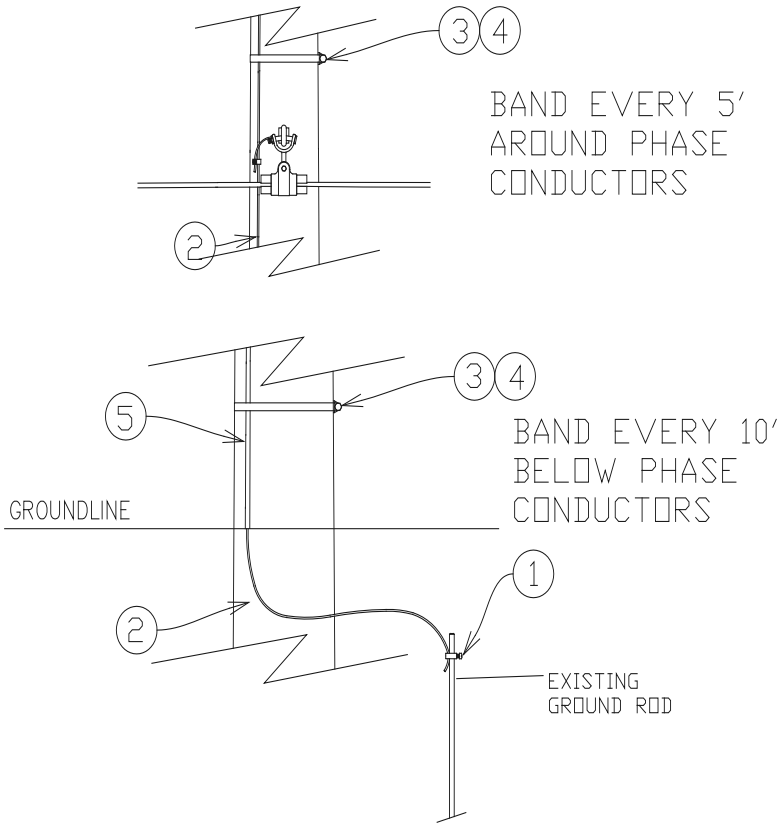
NO.	ITEM ID	QTY	DESCRIPTION
1	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
2	COB CO 028	10	CONDUCTOR, #4 SOLID
3	FIB BD 001	12	1.25 IN. STAINLESS STEEL BANDING
4	FIB BK 001	2	BUCKLE, FOR BAND-IT 1-1/4" X .044" BAND-IT #G442 (25 EACH PER BOX)
5	FIB CL 001	2	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
6	FIB MT 001	2	FIBER OPTIC MOUNTING PLATE
7	LIK EX 002	2	LINK, EXTENSION, CLEVIS EYE
8	LUG GR 001	1	LUG, 4 SOLID, ¾”
9	NUT EY 002	2	NUT, EYE, $^{5}/_{8}$”

FO-TX-DDEBD* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	2	DEADEND, PREFORMED, FOR .594" DIAMETER FIBER OPTIC CABLE
48	FIB DE 003	2	DEADEND, PREFORMED, FOR .594" DIAMETER FIBER OPTIC CABLE
72	FIB DE 007	2	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-GRD

REPLACEMENT GROUND

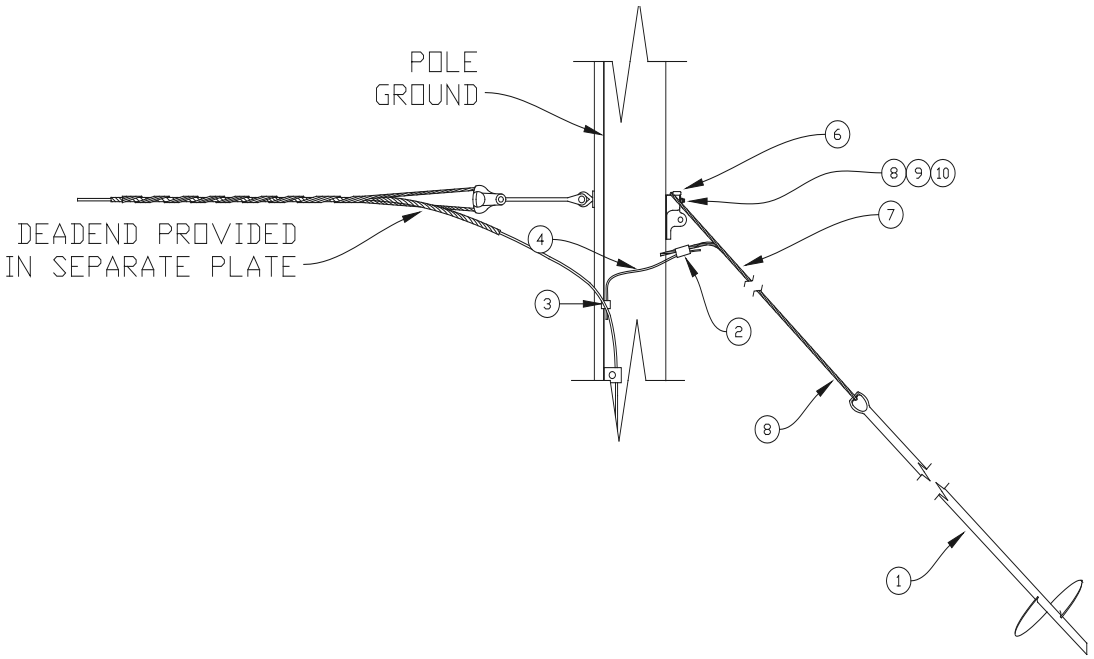


FO-TX-GRD

NO.	ITEM ID	QTY	DESCRIPTION
1	CLA GR 002	1	CLAMP, GROUND ROD, 5/8", 8 SOL - 1/0 STR. "WEDDING BAND"
2	COB CW 014	40	CONDUCTOR, #4 COPPERWELD
3	FIB BD 001	40	1.25 IN. STAINLESS STEEL BANDING
4	FIB BK 002	6	BOLTED RETAINER FOR S.S. BANDING
5	GUA GW 001	2	GUARD, GROUND WIRE, 1/2" X 1/2" X 96", GRAY PLASTIC

FO-TX-GUY

FIBER OPTIC GUY



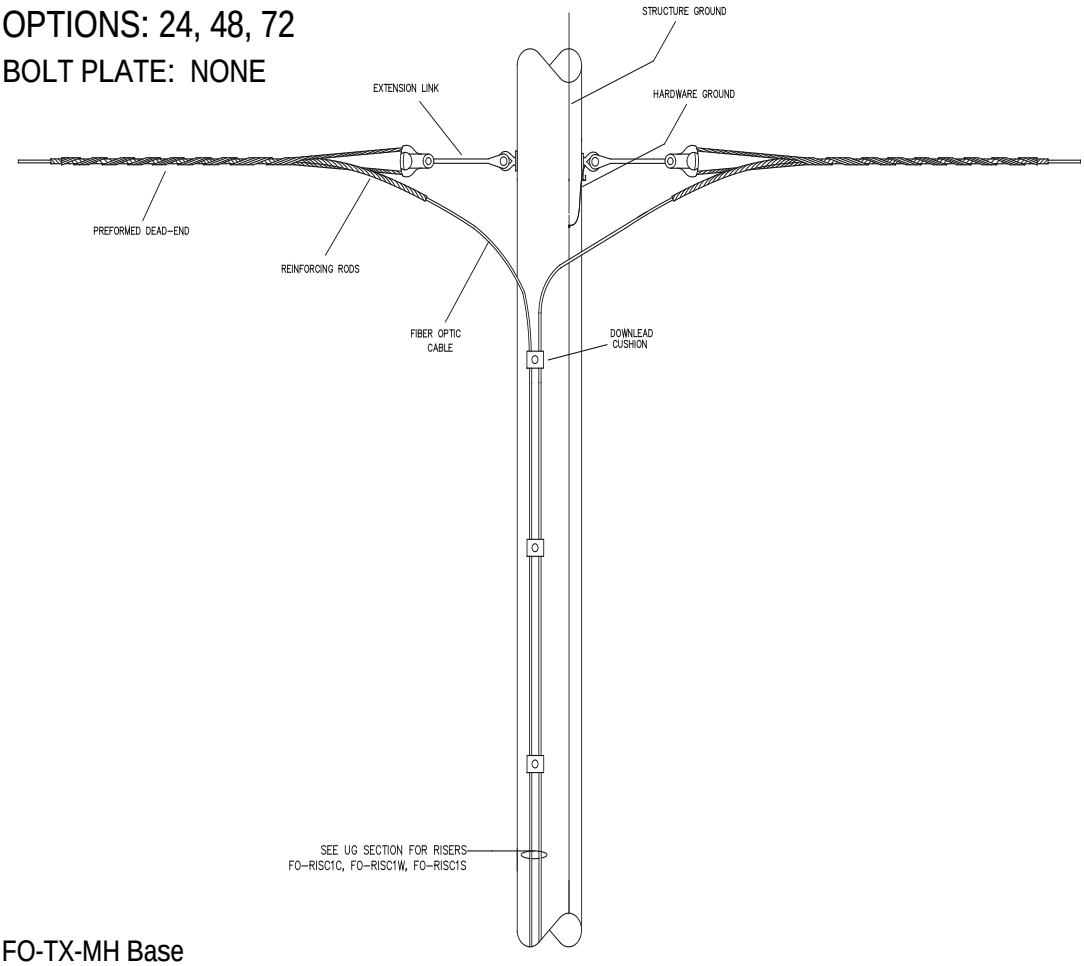
NO.	ITEM ID	QTY	DESCRIPTION
1	ANC SS 002	1	ANCHOR, SINGLE HELIX, 8 FOOT LENGTH
2	CLA PJ 001	1	CLAMP, PARALLEL JUMPER
3	CNN VG 003	1	CONNECTOR, VISE TYPE, #6- #2 SOL., #10- #2 SOL.
4	COB CO 028	3	CONDUCTOR, BARE COPPER, #4 SOL.
5	GUY AT 008	1	GUY ATTACHMENT (COMBINATION) 20,000 POUNDS
6	GUY GR 001	2	GUY GRIP, FOR $^{3}/_{8}$" GUY STRAND
7	GUY ST 005	50	GUY STRAND, $^{3}/_{8}$"
8	NUT SQ 003	1	NUT, SQUARE, $^{5}/_{8}$"
9	WAS RD 004	1	WASHER, ROUND, $^{5}/_{8}$" BOLT SIZE X $1^{3}/_{4}$" DIAMETER, GALVANIZED
10	WAS SP 001	1	WASHER, SPRING, $^{5}/_{8}$" BOLT SIZE, DOUBLE COIL HELICAL TYPE

FO-TX-MH

FIBER OPTIC, OH TO MANHOLE

OPTIONS: 24, 48, 72

BOLT PLATE: NONE



FO-TX-MH Base

NO.	ITEM ID	QTY	DESCRIPTION
1	BOL EY 010	1	BOLT, EYE, $^{5}/_{8}$" X 26"
2	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
3	COB CO 028	5	CONDUCTOR, #4 SOLID
4	FIB CL 001	2	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
5	FIB CU 001	3	CUSHION, FIBER OPTIC CABLE DOWNLEAD
6	LIK EX 002	2	LINK, EXTENSION, CLEVIS EYE
7	LUG GR 001	1	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
8	NUT EY 002	1	NUT, EYE, $^{5}/_{8}$"
9	WAS RD 004	2	WASHER, ROUND, $1^{3}/_{4}$" FOR $^{5}/_{8}$" DIA. BOLT
10	WAS SF 002	2	WASHER, SQUARE, FLAT, $2^{1}/_{4}$", FOR $^{5}/_{8}$" DIA. BOLT
11	WAS SP 002	1	WASHER, SPRING, DOUBLE HELIX, FOR $^{3}/_{4}$" DIA. BOLT

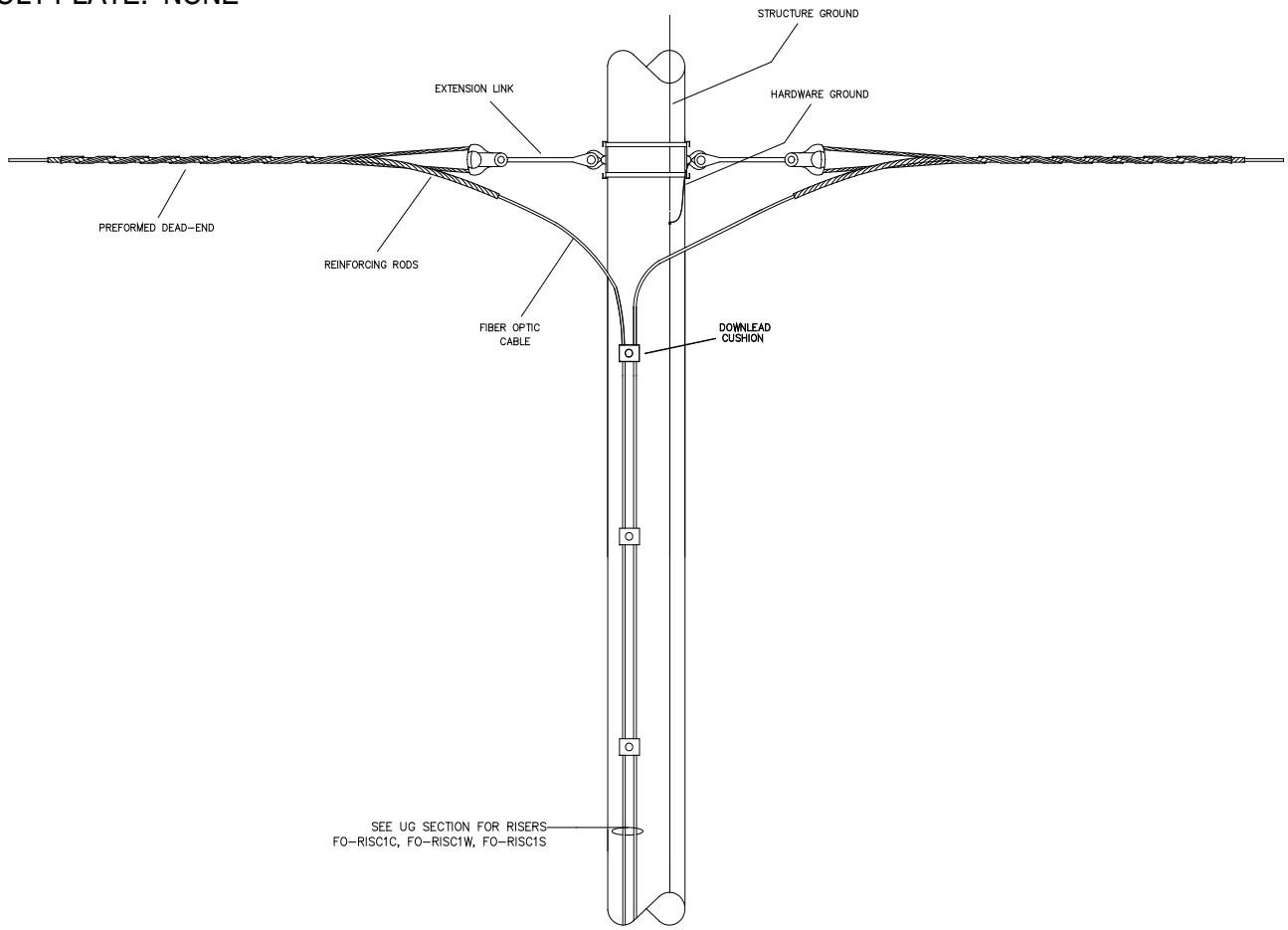
FO-TX-MH* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
48	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
72	FIB DE 007	2	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-MHBD

FIBER OPTIC, OH TO MANHOLE, BANDED

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



FO-TX-MHBD Base

NO.	ITEM ID	QTY	DESCRIPTION
1	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
2	COB CO 028	5	CONDUCTOR, #4 SOLID
3	FIB BD 001	12	1.25 IN. STAINLESS STEEL BANDING
4	FIB BK 001	2	BUCKLE, FOR BAND-IT 1-1/4" X .044" BAND-IT #G442 (25 EACH PER BOX)
5	FIB CL 001	2	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
6	FIB CU 001	3	CUSHION, FIBER OPTIC CABLE DOWNLEAD
7	FIB MT 001	2	FIBER OPTIC MOUNTING PLATE
8	LIK EX 002	2	LINK, EXTENSION, CLEVIS EYE
9	LUG GR 001	1	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
10	NUT EY 002	2	NUT, EYE, $^{5}/_{8}$"

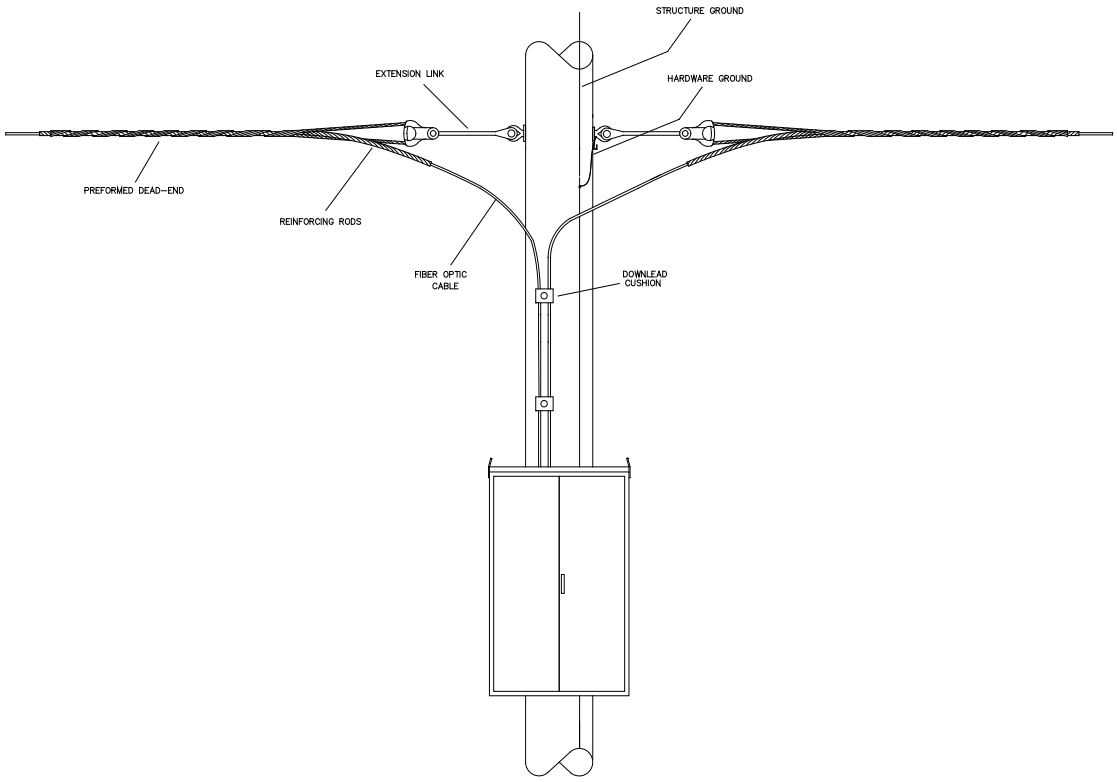
FO-TX-MHBD* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
48	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
72	FIB DE 007	2	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-SB

FIBER OPTIC, SPLICE BOX

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



FO-TX-SB Base

NO.	ITEM ID	QTY	DESCRIPTION
1	BOL EY 010	1	BOLT, EYE, $^{5}/_{8}$" X 26"
2	BOL MS 028	2	BOLT, MACHINE, $^{5}/_{8}$"x 30"
3	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
4	COB CO 028	5	CONDUCTOR, #4 SOLID
5	FIB BX 001	1	FIBER OPTIC CABLE STORAGE CLOSURE
6	FIB CL 001	2	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
7	FIB CU 001	3	CUSHION, FIBER OPTIC CABLE DOWNLEAD
8	LIK EX 002	2	LINK, EXTENSION, CLEVIS EYE
9	LUG GR 001	1	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
10	NUT EY 002	1	NUT, EYE, $^{5}/_{8}$"
11	NUT SQ 003	2	NUT, SQUARE, $^{5}/_{8}$"
12	WAS RD 004	2	WASHER, ROUND, $1^{3}/_{4}$" FOR $^{5}/_{8}$" DIA. BOLT
13	WAS SF 002	2	WASHER, SQUARE, FLAT, $2^{1}/_{4}$", FOR $^{5}/_{8}$" DIA. BOLT
14	WAS SP 002	1	WASHER, SPRING, DOUBLE HELIX, FOR $^{3}/_{4}$" DIA. BOLT

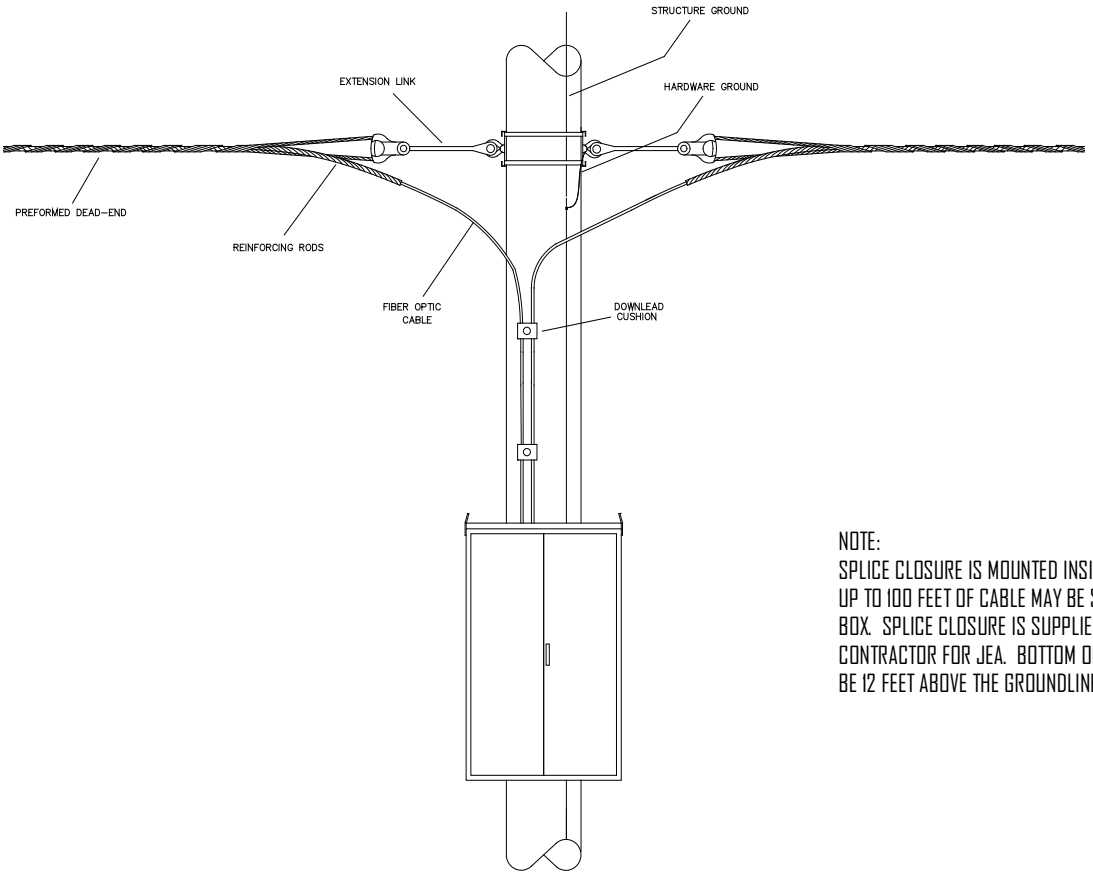
FO-TX-SB* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
48	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
72	FIB DE 007	2	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-SBBD

FIBER OPTIC, SPLICE BOX, BANDED

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



NOTE:
SPLICE CLOSURE IS MOUNTED INSIDE THE SPLICE BOX. UP TO 100 FEET OF CABLE MAY BE STORED INSIDE THE BOX. SPLICE CLOSURE IS SUPPLIED BY THE SPLICING CONTRACTOR FOR JEA. BOTTOM OF SPLICE BOX SHOULD BE 12 FEET ABOVE THE GROUNDLINE.

FO-TX-SBBD Base

NO.	ITEM ID	QTY	DESCRIPTION
1	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
2	COB CO 028	5	CONDUCTOR, #4 SOLID
3	FIB BD 001	36	1.25 IN. STAINLESS STEEL BANDING
4	FIB BK 001	2	BUCKLE, FOR BAND-IT 1-1/4" X .044" BAND-IT #G442 (25 EACH PER BOX)
5	FIB BX 001	1	FIBER OPTIC CABLE STORAGE CLOSURE
6	FIB CL 001	2	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
7	FIB CU 001	3	CUSHION, FIBER OPTIC CABLE DOWNLEAD
8	FIB MT 001	4	FIBER OPTIC MOUNTING PLATE
9	LIK EX 002	2	LINK, EXTENSION, CLEVIS EYE
10	LUG GR 001	1	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
11	NUT EY 002	2	NUT, EYE, $^{5}/_{8}$"
12	NUT SQ 003	2	NUT, SQUARE, $^{5}/_{8}$"
13	WAS RD 004	2	WASHER, ROUND, $1^{3}/_{4}$", FOR $^{5}/_{8}$" DIA. BOLT

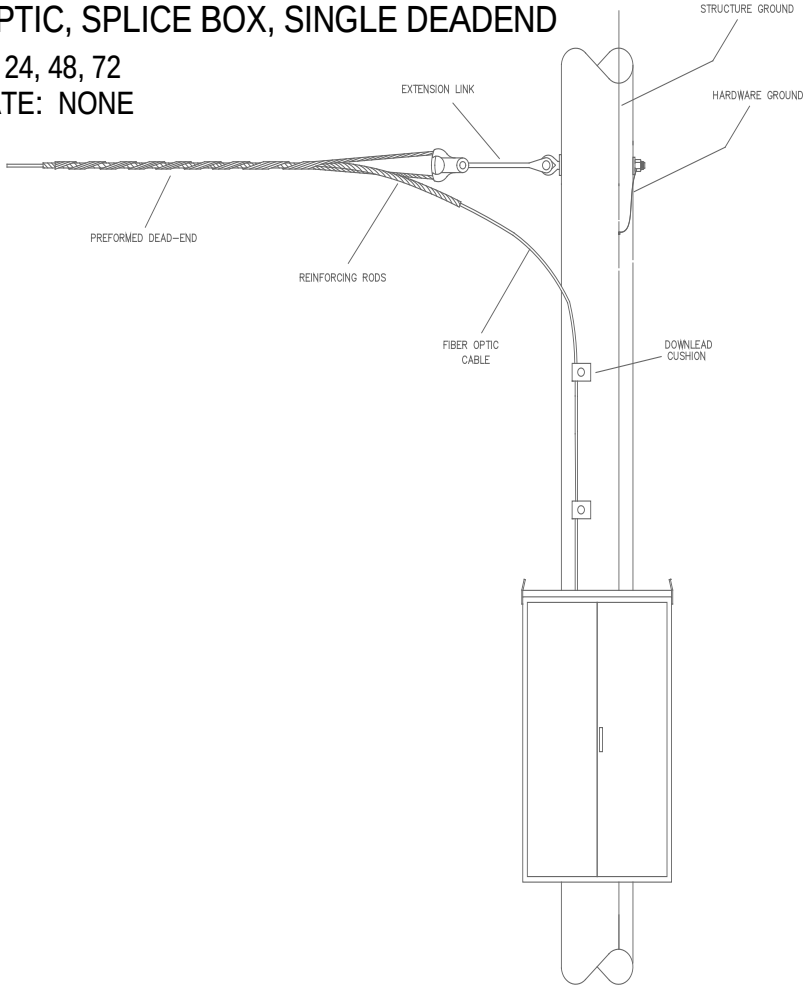
FO-TX-SBBD* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
48	FIB DE 003	2	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
72	FIB DE 007	2	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-SBS

FIBER OPTIC, SPLICE BOX, SINGLE DEADEND

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



FO-TX-SBS Base

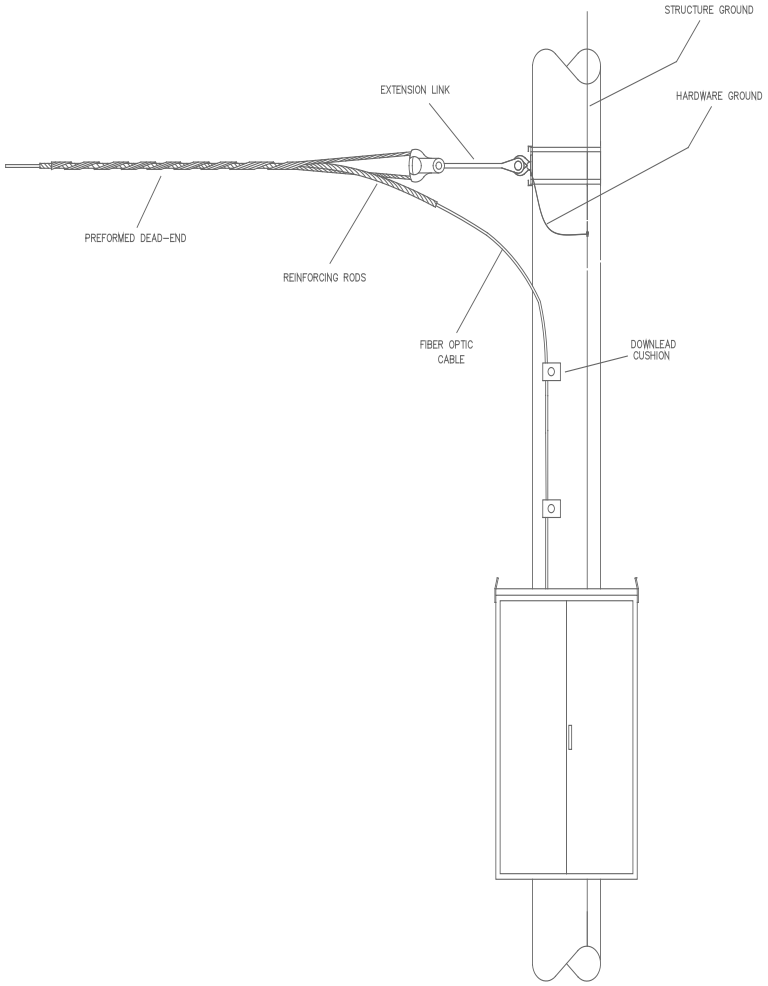
NO.	ITEM ID	QTY	DESCRIPTION
1	BOL EY 010	1	BOLT, EYE, $^{5}/_{8}$" X 26"
2	BOL MS 028	2	BOLT, MACHINE, $^{5}/_{8}$"x 30"
3	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
4	COB CO 028	5	CONDUCTOR, #4 SOLID
5	FIB BX 001	1	FIBER OPTIC CABLE STORAGE CLOSURE
6	FIB CL 001	1	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
7	FIB CU 001	3	CUSHION, FIBER OPTIC CABLE DOWNLEAD
8	LIK EX 002	1	LINK, EXTENSION, CLEVIS EYE
9	LUG GR 001	2	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
10	NUT SQ 003	3	NUT, SQUARE, $^{5}/_{8}$"
11	WAS RD 004	4	WASHER, ROUND, $1^{3}/_{4}$" FOR $^{5}/_{8}$" DIA. BOLT
12	WAS SF 002	4	WASHER, SQUARE, FLAT, $2^{1}/_{4}$", FOR $^{5}/_{8}$" DIA. BOLT
13	WAS SP 002	1	WASHER, SPRING, DOUBLE HELIX, FOR $^{3}/_{4}$" DIA. BOLT

FO-TX-SBS* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	1	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
48	FIB DE 003	1	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
72	FIB DE 007	1	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-SBSBD

FIBER OPTIC, SPLICE BOX, SINGLE DEADEND, BANDED



FO-TX-SBSBD Base

NO.	ITEM ID	QTY	DESCRIPTION
1	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
2	COB CO 028	5	CONDUCTOR, #4 SOLID
3	FIB BD 001	36	1.25 IN. STAINLESS STEEL BANDING
4	FIB BK 001	2	BUCKLE, FOR BAND-IT 1-1/4" X .044" BAND-IT #G442 (25 EACH PER BOX)
5	FIB BX 001	1	FIBER OPTIC CABLE STORAGE CLOSURE
6	FIB CL 001	1	CLEVIS, THIMBLE (FOR FIBER OPTIC CABLE)
7	FIB CU 001	3	CUSHION, FIBER OPTIC CABLE DOWNLEAD
8	FIB MT 001	3	FIBER OPTIC MOUNTING PLATE
9	LIK EX 002	1	LINK, EXTENSION, CLEVIS EYE
10	LUG GR 001	1	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
11	NUT EY 002	1	NUT, EYE, $^{5}/_{8}$"
12	NUT SQ 003	2	NUT, SQUARE, $^{5}/_{8}$"
13	WAS RD 004	2	WASHER, ROUND, $1^{3}/_{4}$", FOR $^{5}/_{8}$" DIA. BOLT

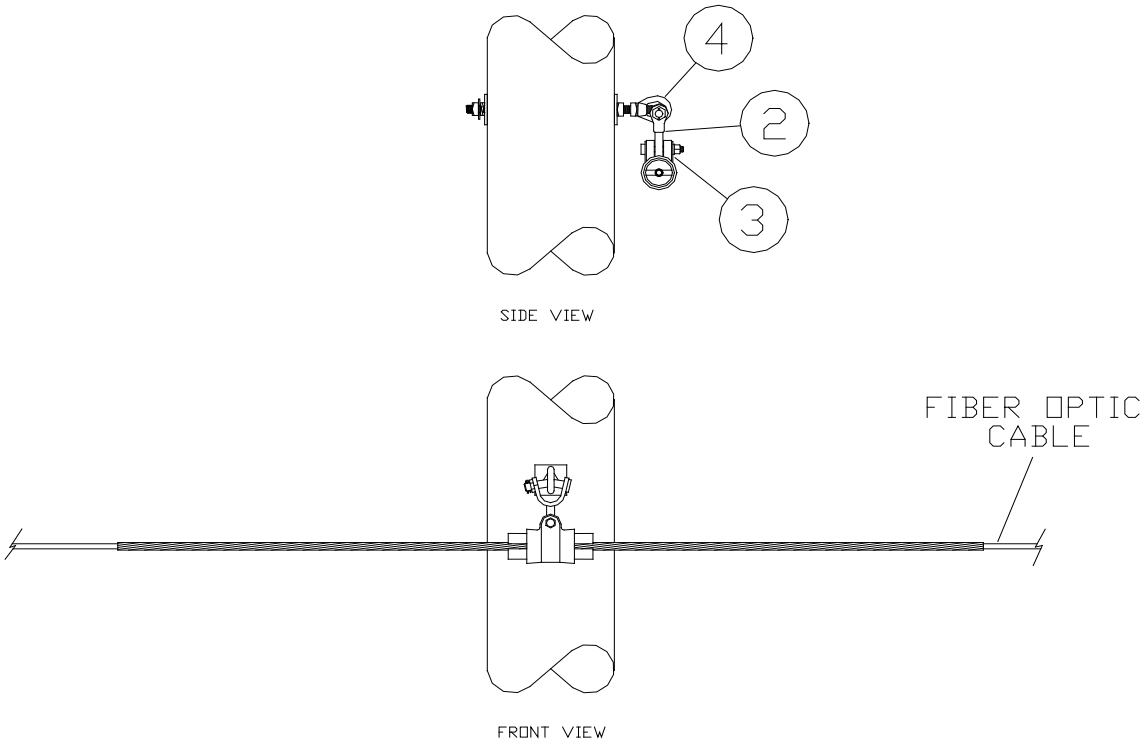
FO-TX-SBSBD* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB DE 003	1	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
48	FIB DE 003	1	DEADEND, FIBER OPTIC CABLE "FOR .594" DIAMETER FIBER CABLE
72	FIB DE 007	1	DEADEND, PREFORMED, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-TL

0 TO 15 DEGREE ANGLE – LONG SPAN

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



FO-TX-TL Base

NO.	ITEM ID	QTY	DESCRIPTION
1	BOL DA 013	1	BOLT, DOUBLE ARMING, $^{5}/_{8}$" X 36'
2	CLE TE 004	1	CLEVIS, TOWER EYE, 90 DEGREE
3	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
4	COB CO 028	5	CONDUCTOR, #4 SOLID
5	LUG GR 001	1	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
6	NUT EY 002	1	NUT, EYE, $^{5}/_{8}$"
7	NUT SQ 003	1	NUT, LOCK, SQUARE, $^{5}/_{8}$"
8	WAS RD 004	1	WASHER, ROUND, $1^{3}/_{4}$", FOR $^{5}/_{8}$" DIA. BOLT
9	WAS SF 002	2	WASHER, SQUARE, FLAT, $2^{1}/_{4}$", FOR $^{5}/_{8}$" DIA. BOLT
10	WAS SP 002	1	WASHER, SPRING, DOUBLE HELIX, FOR $^{3}/_{4}$", DIA. BOLT

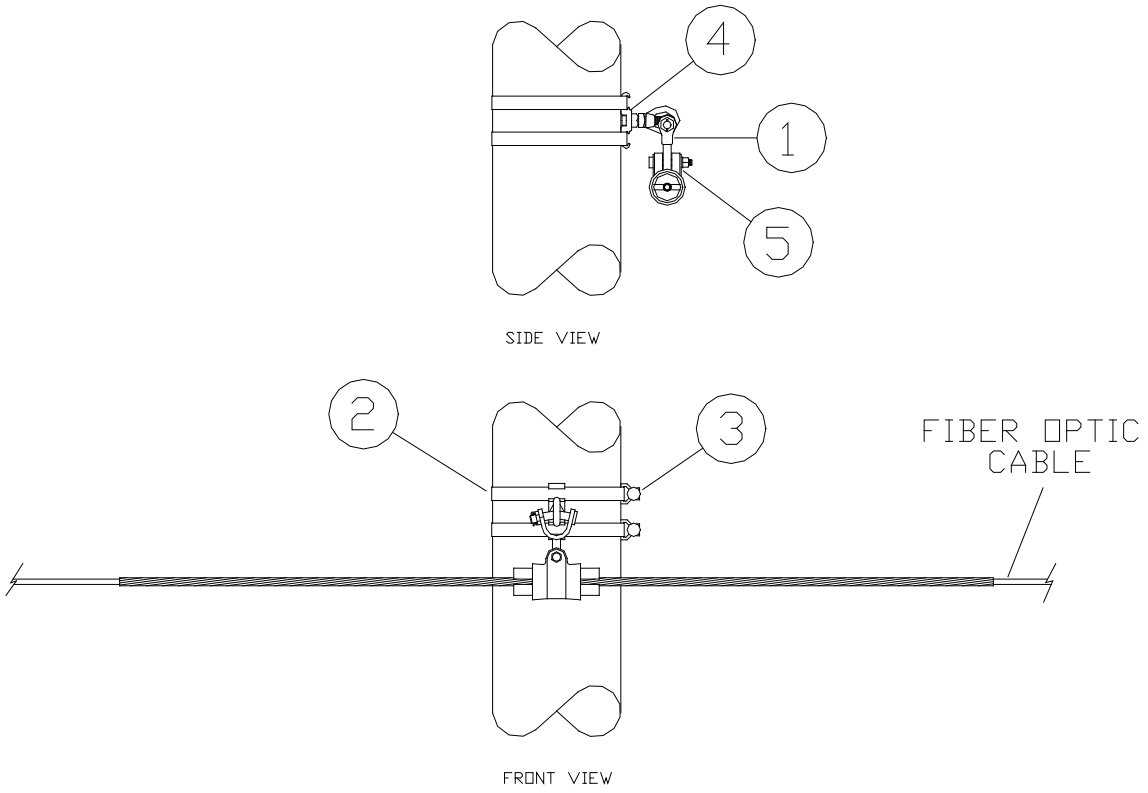
FO-TX-TL* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB SU 005	1	SUPPORT, LONG SPAN TANGENT, FOR .594" DIAMETER FIBER OPTIC CABLE
48	FIB SU 005	1	SUPPORT, LONG SPAN TANGENT, FOR .594" DIAMETER FIBER OPTIC CABLE
72	FIB SU 006	1	SUPPORT, LONG SPAN TANGENT, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-TLBD

0 TO 15 DEGREE ANGLE, LONG SPAN, BANDED

OPTIONS: 24, 48, 72
BOLT PLATE: NONE



FO-TX-TLBD Base

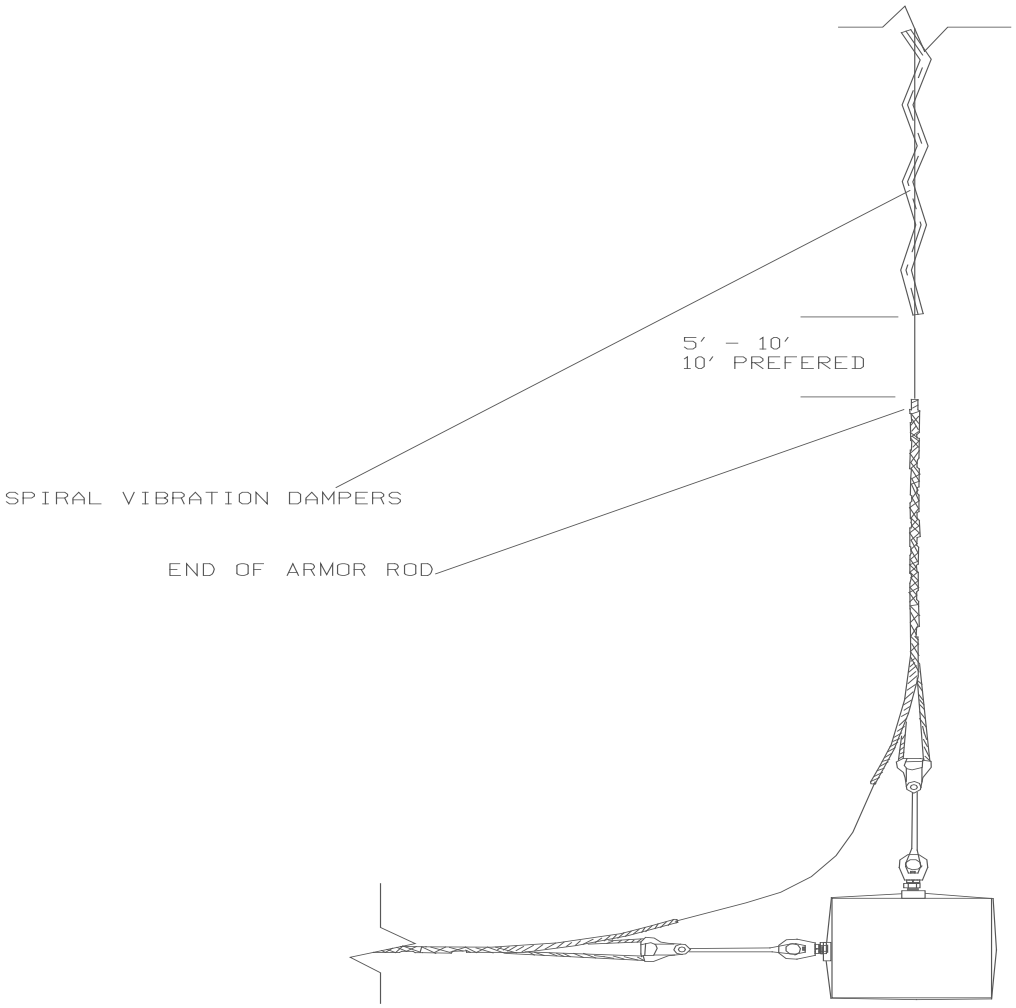
NO.	ITEM ID	QTY	DESCRIPTION
1	CLE TE 004	1	CLEVIS, TOWER EYE, 90 DEGREE
2	CNN VG 003	1	CONNECTOR, 6-2 SOL/10-2 SOL, VISE GRIP PARALLEL
3	COB CO 028	5	CONDUCTOR, #4 SOLID
4	FIB BD 001	12	1.25 IN. STAINLESS STEEL BANDING
5	FIB BK 001	2	BUCKLE, FOR BAND-IT 1-1/4" X .044" BAND-IT #G442 (25 EACH PER BOX)
6	FIB MT 001	1	FIBER OPTIC MOUNTING PLATE
7	LUG GR 001	1	LUG, 4 SOLID WIRE SIZE, 3/4" BOLT SIZE, TIN PLATED COPPER COMP
8	NUT EY 002	1	NUT, EYE, $^{5}/_{8}$"
9	WAS RD 004	1	WASHER, ROUND, $1^{3}/_{4}$ ", FOR $^{5}/_{8}$"DIA. BOLT

FO-TX-TLBD* 24, 48, 72

OPTION.	ITEM ID	QTY	DESCRIPTION
24	FIB SU 005	1	SUPPORT, LONG SPAN TANGENT, FOR 0.594" DIAMETER FIBER OPTIC CABLE
48	FIB SU 005	1	SUPPORT, LONG SPAN TANGENT, FOR 0.594" DIAMETER FIBER OPTIC CABLE
72	FIB SU 006	1	SUPPORT, LONG SPAN TANGENT, FOR 0.701" DIAMETER FIBER OPTIC CABLE

FO-TX-VIB

FIBER OPTIC VIBRATION DAMPER



FO-TX-VIB

NO.	ITEM ID	QTY	DESCRIPTION
1	FIB VD 002	1	DAMPER, SPIRAL VIBRATION, FOR .564" - .760" FIBER OPTIC CABLE

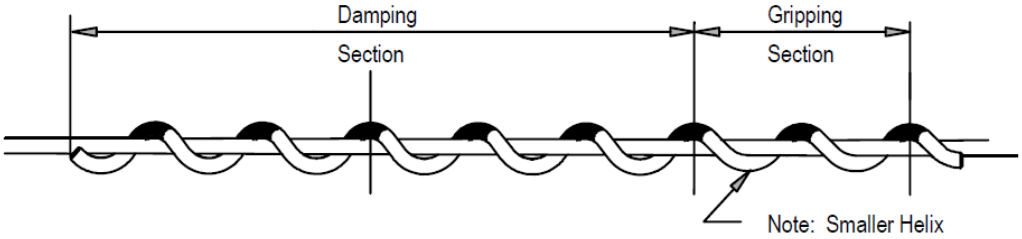
GENERAL GUIDELINES FOR THE USE OF VIBRATION DAMPERS ON AFL-ADSS CABLES

The table below is a general guideline for the application of spiral-shaped dielectric dampers on AFL ADSS cable. To use this matrix, take the initial sagging tension and divide by the cable's rated breaking strength (RBS) to determine the percentage ratio of the initial sagging tension to rated breaking strength. Then look in the column for the appropriate span range of the application, then move across the row to the appropriate tension percentage to find the recommended total number of dampers per span. Follow the guidelines after the table for the proper installation of the dampers.

	Initial Tension as % of Cable RBS				
Span Length(ft)	**0-10%**	**11-15%**	**16-20%**	**21-25%**	**25+%**
< 350	0	1/s	1/s	2/s	2/s
351-600	1/s	1/s	2/s	2/s	4/s
601-1000	1/s	2/s	2/s	4/s	4/s
1001-1500	2/s	2/s	4/s	4/s	6/s
1501-2000	2/s	4/s	4/s	6/s	6/s
2001-2500	4/s	4/s	6/s	6/s	8/s

1/s = 1 damper per span (either end)
2/s = 2 dampers per span, one on each end of the span
4/s = 2 dampers in tandem on each end of the span
6/s = 3 dampers in tandem on each end of the span
8/s = 2 dampers in tandem + 2 dampers in tandem on each end of the span

The term "in tandem" means that the dampers are "nested" or "stacked" together in a bundle. To achieve this orientation, the first damper is wrapped onto the cable. The second damper is then wrapped inside the first damper. So essentially the two dampers are "side-by-side" as opposed to "end-to-end". This can be repeated for up to three dampers being mounted in tandem.



AFL Telecommunications
A Fujikura Business

AFL ADSS FIBER OPTIC CABLE
INDUCED ELECTRICAL FIELD PLOT QUESTIONNAIRE

PLEASE FILL IN ALL INFORMATION REQUESTED BELOW:

Requested by:_____
Tower Type:_____
Phase-to-Phase System Voltage (kV): _____

The cable is to be deployed in the following environment (please check all that apply):

_____ High Pollution
_____ Coastal (< 25 km from coast)
_____ High Humidity (> 75% annual average)
_____ Low Rainfall (<75 days/year rain)
_____ "Over-insulated" Electrical Environment
_____ None of the above

OVERHEAD GROUND WIRES:

Number of ground wires:_____
Type of ground wires:_____(bird name, gauge, etc.)
Ground wire diameter:_____Dimension unit:_____
Ground wire weight: _____Dimension unit:_____
Ground wire break load:_____Dimension unit:_____
List the coordinates of each ground wire:
X = Horizontal distance from vertical center line of tower (+ or -)
Y = Vertical height from terrain at attachment point:
Ground wire #1: X =_____Dimension unit:_____
Y =_____Dimension unit:_____
Ground wire #2: X =_____Dimension unit:_____
Y =_____Dimension unit:_____

PHASE CONDUCTORS:

Number of phases:_____
Conductor type: _____(bird name, gauge, etc.)
Conductor diameter:_____Dimension unit: _____
Conductor weight: _____Dimension unit: _____
Conductor break load: _____Dimension unit: _____

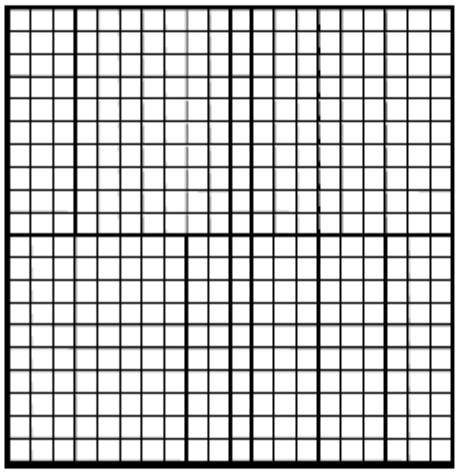
If more than one conductor per phase bundle, what is the number of conductors per phase?_____

What is the smallest distance between two adjacent conductors in the phase bundle? _____

Insulator Length? _____Number of sheds on insulator _____Dimensions of each shed _____

List the conductor coordinates:
X = Horizontal distance from vertical center line of tower (+ or -)
Y = Vertical height from terrain at attachment point

Phase	X-Position		Y-Position		Units



AFL Telecommunications
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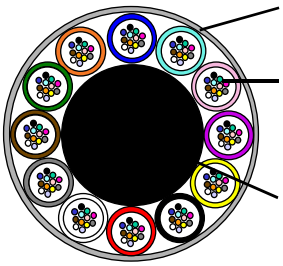
Please provide tower sketch or attach to this sheet.

PO Box 3127
Spartanburg, SC 29304
Tel: 1 800 235 3423
Fax: 1 864 433 5560

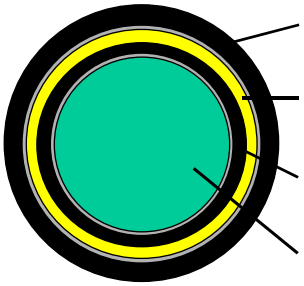
Specification DNA-31428
Tracking Resistant ADSS Cable

AC072AJ6C11BC4

Representative 12 unit Fiber Optic Core



Representative AFL-ADSS® Fiber Optic Cable



Sag / Tension Performance

Span Length (ft) 1,000

Condition	Wind (mi/hr)	Radial Ice (inches)	Add'l Load (lbs/ft)	Input Data Vert. (ft)	Horiz. (ft)	Vector (ft)	Resultant Data Vert. (ft)	Horiz (ft)	Vector (ft)	Tension (lbs)
Installation	---	---	---	10.0	---	---	10.00	---	10.0	2,185
Installation	---	---	---	10.0	---	---	10.00	---	10.0	2,185
Ice Alone	---	---	---	---	---	---	---	---	---	---
Ice Alone	---	---	---	---	---	---	---	---	---	---
Wind Alone	92.0	---	---	---	---	---	5.65	40.9	41.3	3,869
Wind Alone	92.0	---	---	---	---	---	5.65	40.9	41.3	3,869
Ice and Wind	---	---	---	---	---	---	---	---	---	---
Ice and Wind	---	---	---	---	---	---	---	---	---	---
NESC Light	60.0	---	0.1	---	---	---	8.35	25.7	27.0	2,848
NESC Light	60.0	---	0.1	---	---	---	8.35	25.7	27.0	2,848
Other	---	---	---	---	---	---	---	---	---	---
Other	---	---	---	---	---	---	---	---	---	---

Standards

Designed and Manufactured in accordance with the following:	
Cable	*IEEE 1222*
Fiber	*IEC 60793, ITU-T G.65x Series*
Color Code	*ANSI/EIA 359-A, 598-A, IEC 60304*

Specification DNA-31428

Mechanical / Physical Details

Approximate Cable Diameter		17.8 mm	0.701 in
Approximate Cable Weight		260 kg/km	0.175 lbs/ft
Maximum Rated Cable Load (MRCL)		1,954 kg	4,309 lbs
Approximate Cable Breaking Strength		3,126 kg	6,891 lbs
Minimum Bending Radius	Static	18 cm	7 in
	Dynamic	36 cm	14 in
Coefficient of Linear Expansion		1.31E-05 1/°C	7.26E-06 1/°F
Cable Modulus	Initial	7.00 kN/mm²	1,015.5 kpsi
	Final	7.55 kN/mm²	1,095.2 kpsi
	10 Year	5.83 kN/mm²	846.3 kpsi
Environmental Temperature Recommendations			
	Storage	-50 to +70 °C	-58 to +158 °F
	Operation	-40 to +70 °C	-40 to +158 °F
	Installation	-30 to +70 °C	-22 to +158 °F

Optical Details

Attenuation Characteristics for Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers

Max Individual

0.35 dB/km 1310 nm
0.25 dB/km 1550 nm

72 Fiber ADSS Core (12 - 6 fiber buffer tubes)

Unit	Fiber Type	Fiber Count
Blue	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Orange	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Green	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Brown	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Slate	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
White	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Red	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Black	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Yellow	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Violet	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Rose	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Aqua	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
	Total Fiber Count	72

Standard Fiber Color Code

Fiber No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

1) Designs with more than 12 fibers per tube will use the standard color code and binders for identification of the fibers.

2) Designs with mixed fiber types will have multimode or NZDS fibers in the first tube(s) followed by single-mode fibers in the last tube(s).

Installation and Handling Recommendations

AFL to request copies.

Recommended Installation Procedures for All-Dielectric, Self-Supporting (ADSS) Fiber Optic Cable

AFL-ADSS® Fiber Optic Cable Installation Video

Installation Instructions for Installing All-Dielectric, Self-Supporting (ADSS) in an AFL Telecommunications Splice Enclosure

Fiber Optic Cable Receiving, Handling and Storage. Document ACS-WI-809

Specification DNA-31428

Quick Reference Installation Notes

Approximate Cable Diameter	17.80	mm	0.701	in
Maximum Stringing Tension (at tensioner)*	625	kg	1,378	lbs
Minimum Bull Wheel Diameter	125	cm	49	in
Stringing Sheave Diameter**	72	cm	28	in
Minimum Bending Radius				
Cable				
Static (No load)	18	cm	7	in
Dynamic (under tension)	36	cm	14	in
Fiber				
After Installation (Static)	3.8	cm	1.5	in
Plastic Buffer Tube				
After Installation (Static)	8	cm	3	in

* - The stringing tension is always measured at the tensioner side. In general the maximum stringing tension should be a half of the maximum sagging tension and never should exceed 20% RBS of the ADSS Cable.

** - The value indicated is for the first and last structures of the pull and is based on 40 times the diameter of the ADSS cable. Smaller diameters can be used at tangent structures. Reference AFL's installation instructions for more details.

Reference AFL's "Recommended Installation Procedures for All-Dielectric, Self-Supporting (ADSS) Fiber Optic Cable" for detailed installation instructions.

Shipping Reels

Reel Type	*FL*	*TR*	*DR*	*OW*	*Tare*	*FL*	*TR*	*DR*	*OW*	*Tare*	*Capacity*	
	(cm)				*(kgs)*	*(in)*				*(lbs)*	*(meters)*	*(feet)*
Wood	168	91	91	107	260	66	36	36	42	573	3,720	12,200
Wood	183	91	91	107	300	72	36	36	42	662	4,860	15,940
Wood	213	86	89	104	385	84	34	35	41	849	7,000	22,960
Steel	152	81	81	97	345	60	32	32	38	761	2,740	8,980
Steel	183	91	102	107	540	72	36	40	42	1,191	4,420	14,500
Steel	213	114	107	130	773	84	45	42	51	1,704	7,000	22,960

FL - Flange Diameter; TR - Inside Traverse Width; DR - Drum Diameter; OW - Outside Overall Width

Arbor Hole Diameter: Wood: 3-1/8in (7.9cm)
Steel: 3in (7.6cm)

Maximum lengths shown are the longest lengths that AFL offers. Longer lengths may be possible.

Ordered lengths should include a distribution of lengths, i.e., all reels cannot be ordered at the maximum. A typical reel length distribution is as follows:

6000m – 7000m ~ 15% of reels
4500m – 6000m ~ 55% of reels
2500m – 4500m ~ 25% of reels
<2500m ~ 5% of reels

Wood reels with flex-wrap covering are standard. Non-returnable steel reels and/or wood lagging are available upon request. Additional reel sizes may be available upon request.

Steel reels are recommended for long term storage. Reference AFL's "Fiber Optic Cable Receiving, Handling and Storage" document for additional information.

Specification DNA-31428

The Screen Inputs for ADSS cables in PLS Cad

Cable Data			
Name:			
Description:	AFL ADSS DNA-31428 AC072AJ6C11BC4		
Cross section area (in^2)	0.3857	Unit weight (lbs/ft)	0.175
Outside diameter (in)	0.701	Ultimate Tension (lbs)	6,891
Temperature at which data below were obtained		(deg F)	70

Outer strands	Final modulus of elasticity (psi/100)	10,952
	Thermal expansion coeff. (/100 deg F)	7.26E-04

Generate Coefficients

Polynomial coefficients (all strain in %)

	A0	A1 (psi/100)	A2	A3	A4
Stress-strain		10,155			
Creep		8,463			

Core strands (if different from outer strands)	Final modulus of elasticity (psi/100)				
	Thermal expansion coeff. (/100 deg F)				

Polynomial coefficients (all strain in %)

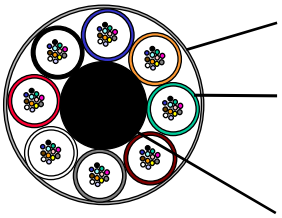
	A0	A1 (psi/100)	A2	A3	A4
Stress-strain					
Creep					

PO Box 3127
Spartanburg, SC 29304
Tel: 1 800 235 3423
Fax: 1 864 433 5560

Specification DNA-31429
Tracking Resistant ADSS Cable

AC048AJ6821BD0

Representative 8 unit Fiber Optic Core

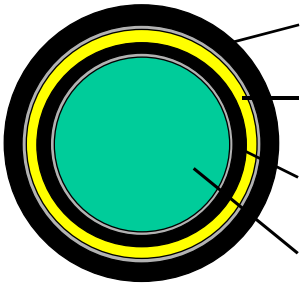


Binder Tape

Color Coded Buffer Tube

Central Strength Member

Representative AFL-ADSS® Fiber Optic Cable



Outer Jacket

Aramid Yarn

Inner Jacket

Optical Core

Sag / Tension Performance

Span Length (ft) 1,000

Condition	Wind (mi/hr)	Radial Ice (inches)	Add'l Load (lbs/ft)	Input Data Vert. (ft)	Horiz. (ft)	Vector (ft)	Resultant Data Vert. (ft)	Horiz (ft)	Vector (ft)	Tension (lbs)
Installation	---	---	---	10.0	---	---	10.00	---	10.0	1,609
Installation	---	---	---	10.0	---	---	10.00	---	10.0	1,609
Ice Alone	---	---	---	---	---	---	---	---	---	---
Ice Alone	---	---	---	---	---	---	---	---	---	---
Wind Alone	93.0	---	---	---	---	---	4.66	39.7	40.0	3,454
Wind Alone	93.0	---	---	---	---	---	4.66	39.7	40.0	3,454
Ice and Wind	---	---	---	---	---	---	---	---	---	---
Ice and Wind	---	---	---	---	---	---	---	---	---	---
NESC Light	60.0	---	0.1	---	---	---	7.40	26.3	27.3	2,403
NESC Light	60.0	---	0.1	---	---	---	7.40	26.3	27.3	2,403
Other	---	---	---	---	---	---	---	---	---	---
Other	---	---	---	---	---	---	---	---	---	---

Standards

Designed and Manufactured in accordance with the following:

Cable	*IEEE 1222*
Fiber	*IEC 60793, ITU-T G.65x Series*
Color Code	*ANSI/EIA 359-A, 598-A, IEC 60304*

Specification DNA-31429

Mechanical / Physical Details

Approximate Cable Diameter		15.1 mm	0.594 in
Approximate Cable Weight		192 kg/km	0.129 lbs/ft
Maximum Rated Cable Load (MRCL)		2,299 kg	5,069 lbs
Approximate Cable Breaking Strength		3,677 kg	8,106 lbs
Minimum Bending Radius	Static	16 cm	6 in
	Dynamic	31 cm	12 in
Coefficient of Linear Expansion		6.95E-06 1/°C	3.86E-06 1/°F
Cable Modulus	Initial	11.45 kN/mm²	1,660.2 kpsi
	Final	12.34 kN/mm²	1,790.4 kpsi
	10 Year	9.54 kN/mm²	1,383.5 kpsi
Environmental Temperature Recommendations			
	Storage	-50 to +70 °C	-58 to +158 °F
	Operation	-40 to +70 °C	-40 to +158 °F
	Installation	-30 to +70 °C	-22 to +158 °F

Optical Details

Attenuation Characteristics for Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers

Max Individual

0.35 dB/km 1310 nm
0.25 dB/km 1550 nm

48 Fiber ADSS Core (8 - 6 fiber buffer tubes)

Unit	Fiber Type	Fiber Count
Blue	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Orange	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Green	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Brown	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Slate	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
White	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Red	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
Black	Corning® SMF-28e+™ Singlemode with NexCor™ Technology fibers	6
	Total Fiber Count	48

Standard Fiber Color Code

Fiber No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

1) Designs with more than 12 fibers per tube will use the standard color code and binders for identification of the fibers.

2) Designs with mixed fiber types will have multimode or NZDS fibers in the first tube(s) followed by single-mode fibers in the last tube(s).

Installation and Handling Recommendations

Installation and cable preparation procedures are outlined in the AFL documents listed below. Contact AFL to request copies.

Recommended Installation Procedures for All-Dielectric, Self-Supporting (ADSS) Fiber Optic Cable

AFL-ADSS® Fiber Optic Cable Installation Video

Specification DNA-31429

Installation Instructions for Installing All-Dielectric, Self-Supporting (ADSS) in an AFL Telecommunications Splice Enclosure

Fiber Optic Cable Receiving, Handling and Storage. Document ACS-WI-809

Specification DNA-31429

Quick Reference Installation Notes

Approximate Cable Diameter	15.10	mm	0.594	in
Maximum Stringing Tension (at tensioner)*	735	kg	1,621	lbs
Minimum Bull Wheel Diameter	106	cm	42	in
Stringing Sheave Diameter**	61	cm	24	in
Minimum Bending Radius				
Cable				
Static (No load)	16	cm	6	in
Dynamic (under tension)	31	cm	12	in
Fiber				
After Installation (Static)	3.8	cm	1.5	in
Plastic Buffer Tube				
After Installation (Static)	8	cm	3	in

* - The stringing tension is always measured at the tensioner side. In general the maximum stringing tension should be a half of the maximum sagging tension and never should exceed 20% RBS of the ADSS Cable.

** - The value indicated is for the first and last structures of the pull and is based on 40 times the diameter of the ADSS cable. Smaller diameters can be used at tangent structures. Reference AFL's installation instructions for more details.

Reference AFL's "Recommended Installation Procedures for All-Dielectric, Self-Supporting (ADSS) Fiber Optic Cable" for detailed installation instructions.

Shipping Reels

Reel Type	*FL*	*TR*	*DR*	*OW*	*Tare*	*FL*	*TR*	*DR*	*OW*	*Tare*	*Capacity*	
	(cm)				*(kgs)*	*(in)*				*(lbs)*	*(meters)*	*(feet)*
Wood	147	81	71	97	200	58	32	28	38	441	3,850	12,630
Wood	168	91	91	107	260	66	36	36	42	573	5,170	16,960
Wood	183	91	91	107	300	72	36	36	42	662	6,760	22,170
Wood	213	86	89	104	385	84	34	35	41	849	7,000	22,960
Steel	152	81	81	97	345	60	32	32	38	761	3,810	12,490
Steel	183	91	102	107	540	72	36	40	42	1,191	6,140	20,140
Steel	213	114	107	130	773	84	45	42	51	1,704	7,000	22,960

FL - Flange Diameter; TR - Inside Traverse Width; DR - Drum Diameter; OW - Outside Overall Width

Arbor Hole Diameter: Wood: 3-1/8in (7.9cm)
Steel: 3in (7.6cm)

Maximum lengths shown are the longest lengths that AFL offers. Longer lengths may be possible.

Ordered lengths should include a distribution of lengths, i.e., all reels cannot be ordered at the maximum. A typical reel length distribution is as follows:

6000m – 7000m ~ 15% of reels
4500m – 6000m ~ 55% of reels
2500m – 4500m ~ 25% of reels
<2500m ~ 5% of reels

Wood reels with flex-wrap covering are standard. Non-returnable steel reels and/or wood lagging are available upon request. Additional reel sizes may be available upon request.

Steel reels are recommended for long term storage. Reference AFL's "Fiber Optic Cable Receiving, Handling and Storage" document for additional information.

Specification DNA-31429

The Screen Inputs for ADSS cables in PLS Cad

Cable Data			
Name:			
Description:	AFL ADSS DNA-31429 AC048AJ6821BD0		
Cross section area (in^2)	0.2776	Unit weight (lbs/ft)	0.129
Outside diameter (in)	0.594	Ultimate Tension (lbs)	8,106
Temperature at which data below were obtained		(deg F)	70

Outer strands	Final modulus of elasticity (psi/100)	17,904
	Thermal expansion coeff. (/100 deg F)	3.86E-04

Generate Coefficients

Polynomial coefficients (all strain in %)

	A0	A1 (psi/100)	A2	A3	A4
Stress-strain		16,602			
Creep		13,835			

Core strands (if different from outer strands)	Final modulus of elasticity (psi/100)	
	Thermal expansion coeff. (/100 deg F)	

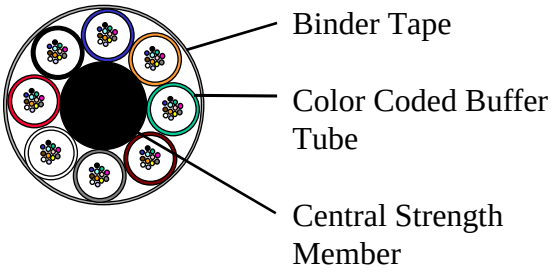
Polynomial coefficients (all strain in %)

	A0	A1 (psi/100)	A2	A3	A4
Stress-strain					
Creep					

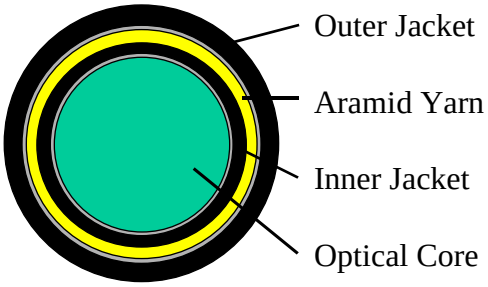
PO Box 3127
Spartanburg, SC 29304
Tel: 1 800 235 3423
Fax: 1 864 433 5560

Specification DNA-31734
Tracking Resistant ADSS Cable

Representative 8 unit Fiber Optic Core



Representative AFL-ADSS® Fiber Optic Cable



AC024AP6821BD0

24 Corning® SMF-28e+™ LL Singlemode

Sag / Tension Performance

Span Length (ft) 1,000

Condition	Wind (mi/hr)	Radial Ice (inches)	Add'l Load (lbs/ft)	Input Data Vert. (ft)	Horiz. (ft)	Vector (ft)	Resultant Data Vert. (ft)	Horiz (ft)	Vector (ft)	Tension (lbs)
Installation	---	---	---	10.0	---	---	10.00	---	10.0	1,580
Ice Alone	---	---	---	---	---	---	---	---	---	---
Wind Alone	93.0	---	---	---	---	---	4.59	39.9	40.1	3,441
Ice and Wind	---	---	---	---	---	---	---	---	---	---
NESC Light	60.0	---	0.1	---	---	---	7.32	26.4	27.4	2,386
Other	---	---	---	---	---	---	---	---	---	---

Standards

Designed and Manufactured in accordance with the following:

Cable	*IEEE 1222*
Fiber	*IEC 60793, ITU-T G.65x Series*
Color Code	*ANSI/EIA 359-A, 598-A, IEC 60304*

Specification DNA-31734

Mechanical / Physical Details

Approximate Cable Diameter		15.1 mm	0.594 in
Approximate Cable Weight		188 kg/km	0.126 lbs/ft
Maximum Rated Cable Load (MRCL)		2,299 kg	5,069 lbs
Approximate Cable Breaking Strength		3,677 kg	8,106 lbs
Minimum Bending Radius	Static	16 cm	6 in
	Dynamic	31 cm	12 in
Coefficient of Linear Expansion		6.24E-06 1/°C	3.47E-06 1/°F
Cable Modulus	Initial	11.45 kN/mm²	1,660.2 kpsi
	Final	12.34 kN/mm²	1,790.4 kpsi
	10 Year	9.54 kN/mm²	1,383.5 kpsi
Environmental Temperature Recommendations			
	Storage	-50 to +70 °C	-58 to +158 °F
	Operation	-40 to +70 °C	-40 to +158 °F
	Installation	-30 to +70 °C	-22 to +158 °F

Optical Details

Attenuation Characteristics for Corning® SMF-28e+™ LL Singlemode fibers

Max Individual

0.35 dB/km 1310 nm
0.25 dB/km 1550 nm

48 Fiber ADSS Core (8 - 6 fiber buffer tubes)

Unit	Fiber Type	Fiber Count
Blue	Corning® SMF-28e+™ LL Singlemode fibers	6
Orange	Corning® SMF-28e+™ LL Singlemode fibers	6
Green	Corning® SMF-28e+™ LL Singlemode fibers	6
Brown	Corning® SMF-28e+™ LL Singlemode fibers	6
	Filler	N/A
	Filler	N/A
	Filler	N/A
	Filler	N/A
	Total Fiber Count	24

Standard Fiber Color Code

Fiber No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

1) Designs with more than 12 fibers per tube will use the standard color code and binders for identification of the fibers.

2) Designs with mixed fiber types will have multimode or NZDS fibers in the first tube(s) followed by single-mode fibers in the last tube(s).

Installation and Handling Recommendations

Installation and cable preparation procedures are outlined in the AFL documents listed below. Contact AFL to request copies.

Recommended Installation Procedures for All-Dielectric, Self-Supporting (ADSS) Fiber Optic Cable

AFL-ADSS® Fiber Optic Cable Installation Video

Specification DNA-31734

Installation Instructions for Installing All-Dielectric, Self-Supporting (ADSS) in an AFL Telecommunications Splice Enclosure

Fiber Optic Cable Receiving, Handling and Storage. Document ACS-WI-809

Specification DNA-31734

Quick Reference Installation Notes

Approximate Cable Diameter	15.10	mm	0.594	in
Maximum Stringing Tension (at tensioner)*	735	kg	1,621	lbs
Minimum Bull Wheel Diameter	106	cm	42	in
Stringing Sheave Diameter**	61	cm	24	in
Minimum Bending Radius				
Cable				
Static (No load)	16	cm	6	in
Dynamic (under tension)	31	cm	12	in
Fiber				
After Installation (Static)	3.8	cm	1.5	in
Plastic Buffer Tube				
After Installation (Static)	8	cm	3	in

* - The stringing tension is always measured at the tensioner side. In general the maximum stringing tension should be a half of the maximum sagging tension and never should exceed 20% RBS of the ADSS Cable.

** - The value indicated is for the first and last structures of the pull and is based on 40 times the diameter of the ADSS cable. Smaller diameters can be used at tangent structures. Reference AFL's installation instructions for more details.

Reference AFL's "Recommended Installation Procedures for All-Dielectric, Self-Supporting (ADSS) Fiber Optic Cable" for detailed installation instructions.

Shipping Reels

Reel Type	*FL*	*TR*	*DR*	*OW*	*Tare*	*FL*	*TR*	*DR*	*OW*	*Tare*	*Capacity*	
	(cm)				*(kgs)*	*(in)*				*(lbs)*	*(meters)*	*(feet)*
Wood	147	81	71	97	200	58	32	28	38	441	4,210	13,810
Wood	168	91	91	107	260	66	36	36	42	573	5,640	18,500
Wood	183	91	91	107	300	72	36	36	42	662	7,000	22,960
Wood	213	86	89	104	385	84	34	35	41	849	7,000	22,960
Steel	152	81	81	97	345	60	32	32	38	761	4,140	13,580
Steel	183	91	102	107	540	72	36	40	42	1,191	6,690	21,940
Steel	213	114	107	130	773	84	45	42	51	1,704	7,000	22,960

FL - Flange Diameter; TR - Inside Traverse Width; DR - Drum Diameter; OW - Outside Overall Width

Arbor Hole Diameter: Wood: 3-1/8in (7.9cm)
Steel: 3in (7.6cm)

Maximum lengths shown are the longest lengths that AFL offers. Longer lengths may be possible.

Ordered lengths should include a distribution of lengths, i.e., all reels cannot be ordered at the maximum. A typical reel length distribution is as follows:

6000m – 7000m ~ 15% of reels
4500m – 6000m ~ 55% of reels
2500m – 4500m ~ 25% of reels
<2500m ~ 5% of reels

Wood reels with flex-wrap covering are standard. Non-returnable steel reels and/or wood lagging are available upon request. Additional reel sizes may be available upon request.

Steel reels are recommended for long term storage. Reference AFL's "Fiber Optic Cable Receiving, Handling and Storage" document for additional information.

Specification DNA-31734

The Screen Inputs for ADSS cables in PLS Cad

Cable Data			
Name:			
Description:	AFL ADSS DNA-31734 AC024AP6821BD0		
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