

OPCO NAME XXX XXX STR. XXX	
NOTE A	
POLE TAG PLACEMENT DETAIL STEEL POLE BRACKET ELEVATION VIEW	
1" CLEAR MIN.	
8"	
DLE BRACKET PLAN VIEW	
DO NOT REVISE MANUALLY	
e creation of new standards and CUs. Drawing Scale: 1" -	= 30"
ICTURE STANDARDS - MARKERS AND SIGNS INSTALLATION DETAIL FOR IDENTIFYING STRUCTURES	REVISION 00 DATE 5/21/2015
proved By: Date App.: rry R. Hart 12/24/2014 TM2.23.TK-01-001	Sheet 1

STRUCTURE NUMBERING

ALL NEW TRANSMISSION LINES SHALL BE NUMBERED SEQUENTIALLY WITH INTEGERS FROM THE FIRST STRUCTURE IN LINE TO THE LAST STRUCTURE UNLESS OTHERWISE NOTED. THE FIRST AND LAST STRUCTURE ON A LINE OUTSIDE OF A SUBSTATION SHALL ALWAYS BE AN INTEGER.

WHERE ADDITIONAL STRUCTURES OR AUXILLIARY STRUCTURES (I.E. AERIAL POLES, STUB POLES, FIBER OPTIC RE-ROUTES, ETC.) THAT CONSIST OF SIX (6) STRUCTURE OR LESS SHALL BE NUMBERED WITH A DASH, AND NUMBERED 1 THORUGH 6, AFTER THE NUMBER OF THE ADJACENT TRANSMISSION STRUCTURE.

EXAMPLE #1: IF A TRANSMISSION LINE HAS A SPECIAL SITUATION WHEREAS THE OPGW MUST BE ROUTED SEPARATELY FROM THE MAIN TRANSMISSION LINE TO APPROPRIATELY ENTER THE STATION AFTER STRUCTURE NUMBER 32 THEN THE OPGW RE-ROUTE POLES WOULD BE NUMBERED 32-1, 32-2, ETC.

EXAMPLE #2: IF A LINE IS BEING THERMALLY RE-RATED AND IT IS DEEMED NECESSARY TO ADD A NEW STRUCTURE BETWEEN EXISTING STRUCTURES 11 AND 12 THEN THE NEW MID-SPAN STRUCTURE SHALL BE NUMBERED 11-1. IF TWO NEW STRUCTURES WERE REQUIRED THEN THEY SHALL BE NUMBERED 11-1 AND 11-2 IN THE DIRECTION OF INCREASING STRUCTURE NUMBER RESPECTIVELY.

ALL TRANSMISSION TAPS, OFF AN EXISTING LINE, WILL BE ASSIGNED A NEW LINE NUMBER BY SYSTEM OPERATIONS.

IN THE CMP SYSTEM MULTI-POLE STRUCTURES SHALL BE LABELED AS LEFT, MIDDLE, RIGHT AND OTHER LOOKING IN THE DIRECTION OF INCREASING STRUCTURE NUMBERS.

IN THE NYSE&G AND RG&E SYSTEMS MULTI-POLE STRUCTURES SHALL BE LABELED AS A, B, C, AND D FROM LEFT TO RIGHT LOOKING IN THE DIRECTION OF INCREASING STRUCTURE NUMBERS.

THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY									
Contact Engineering Standards - Transmission Section for the creation of new standards and CUs. Drawing Scale: N/A									
	TRANSMISSION						REVISION		
	CONSTRUCTION	STRUCTURE MARKER PROCEDURES					00		
IBERDROLA	STANDARDS		STRUC	TURE NUM	BERING MET	HOD	DATE		
USA	MANUAL								
Drwn. By: Date Dr.:	Checked By:	Date Ck.:	Approved By:	Date App.:	TM2 21	3 TK_02_001	Sheet 1		
B. Franklin 6/10/2014	Becken/Hart	12/24/2014	Barry R. Hart	12/24/2014		5. I IN-02-00 I	011001 1		

AERIAL STRUCTURE MARKERS

ON HORIZONTAL SINGLE POLE CONSTRUCTION, THE LINE NUMBER SHALL BE INSTALLED TO THE LEFT OF THE POLE AND THE STRUCTURE NUMBERS TO THE RIGHT OF THE POLE. TAGS SHALL BE INSTALLED WITH THE TOP EVEN OR SLIGHTLY BELOW THE BEVELED EDGE OF THE ARM.

ON HORIZONTAL SINGLE POLE DOUBLE CIRCUIT CONSTRUCTION, THE AERIAL MARKERS SHALL BE INSTALLED WITH THE LINE NUMBER AND STRUCTURE NUMBER ON THE TOP CROSSARM OF THE STRUCTURE, ON THE SIDE OF THE POLE COORESPONDING WITH THE LINE NUMBER THE MARKERS ARE FOR. ON H-FRAME CONSTRUCTION, THE LINE NUMBER SHALL BE INSTALLED TO THE LEFT OF THE RIGHT MOST POLE AND THE STRUCTURE NUMBERS TO THE RIGHT OF THE RIGHT MOST POLE. TAGS SHALL BE INSTALLED WITH THE TOP EVEN OR SLIGHTLY BELOW THE BEVELED EDGE OF THE ARM.

ON SINGLE POLE VERTICAL CONSTRUCTION, THE LINE NUMBER SHALL BE INSTALLED WITH THE TOP OF THE AERIAL MARKER APPROXIMATELY 1' - 6" FROM THE TOP OF THE POLE. THE TOP OF THE STRUCTURE NUMBER SHALL BE INSTALLED APPROXIMATELY 6" BELOW THE BOTTOM OF THE LINE NUMBER.

ON SINGLE POLE VERTICAL DOUBLE CIRCUIT CONSTRUCTION, THE AERIAL MARKER SHALL BE INSTALLED APPROXIMATELY 45 DEGREES OFFSET FROM THE LONGITUDINAL FACE OF THE POLE TO BE ORIENTED TOWARD THE LINE NUMBER THE AERIAL MARKERS ARE FOR.

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Drawing Scale: N/A

	TRANSMISSION								
4400	CONSTRUCTION								
<i>'IBERDROLA</i>	STANDARDS	AERIAL STRUCTURE MARKER PROCEDURES							
USA	MANUAL								
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B. Franklin 3/01/2012	Becken/Hart	12/24/2014	Barry R. Hart	12/24/2014	1 WIZ.23.1 K-03-00 I	Sheet I			

AERIAL STRUCTURE MARKERS

LINE NUMBERS AND STRUCTURE NUMBERS SHALL BE INSTALLED ON EACH STRUCTURE AT THE FOLLOWING LOCATIONS:

FIRST AND LAST STRUCTURE OF EACH LINE, ON BOTH SIDES OF THE STRUCTURE,
AT ROAD CROSSINGS ON THE CLOSEST STRUCTURE TO THE ROAD, ON BOTH SIDES OF THE STRUCTURE,

- AT TRANSMISSION LINE CROSSINGS, ON BOTH SIDES OF THE STRUCTURE,

- AT EACH STRUCTURE ADJACENT TO A TAP, ON BOTH SIDES OF THE STRUCTURE.

- WHEREVER A LINE NUMBER MARKER IS INSTALLED,

- AT EVERY 10TH STRUCTURE ON 34KV, 46KV AND 69KV CONSTRUCTION ON BOTH SIDES OF THE STRUCTURE,

- AT EVERY 5TH STRUCTURE ON 115KV, 230KV AND 345KV CONSTRUCTION ON BOTH SIDES OF THE STRUCTURE.

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Contact Engineering Standards - Transmission Section for the creation of new standards and CUs. Drawing Scale: N//								
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	00							
IBERDROLA STANDARDS	DATE							
USA MANUAL	5/21/2015							
Drwn. By: Date Dr.: Checked By: Date Ck.: Approved By: Date App.: TM2 23 TK_03_001	Sheet 2							
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		1	11154		BILL OF			OLE)			
NC	QTY.	UOM	MID		CU	: C*PT-TK	-03-002-	HW2			
	1		6000814812	SIGNA	GE BRAC	KET, VERTICAL	., FOR TWO	TAGS			
	2	FA	6000274780	WASH	ER RD GA	Z X 4 LV. 1/4"					
ITE	M QTY.		IUSA				-03-002	HS2			
	1	FΔ	MID 6000814812	SIGNA		KET VERTICAL					
	2	EA	6000271690	BOLT	MACHINE,	STAINLESS ST	EEL, 5/8" X	1/2"			
7	2	EA	6000273610	NUT, S	STAINLES	S STEEL, HEX 5	5/8"				
ITE NC	QTY.	UOM	IUSA MID		CU	: C*PT-TK	-03-002-	HW3			
	1	EA	6000814813	SIGNA	GE BRAC	KET, VERTICAL	., FOR THRE	EE TAGS			
	2		1007420850	SCREV WASH	N, LAG, 1/	<u>2" X 4"</u> J \/_1/4"					
ITE			IUSA	WAON							
	. 011.		MID	SIGNA							
	2		6000271690	BOLTI	MACHINE	STAINI ESS ST	<u>., FUR INRE</u> FFI 5/8" X	<u>=E_TAGS</u> 1/2"			
	2	EA	6000273610	NUT, S	STAINLES	S STEEL, HEX 5	5/8"	1/2			
ITE	M QTY.	UOM	IUSA	, -	CU	C*PT-TK	-03-002-	HW4			
3	1	EA	6000814814	SIGNA	GE BRAC	KET, VERTICAL	, FOR FOUR	R TAGS			
	2	EA	1007420850	SCRE	N, LAG, 1/	2" X 4"	,				
5	2	EA	6000274780	WASH	ER RD GA	LV. 1/4"					
ITE	M QTY.	UOM	IUSA MID		CU	: C*PT-TK	-03-002-	-HS4			
3	1	EA	6000814814	SIGNA	GE BRAC	KET, VERTICAL	, FOR FOUR	R TAGS			
6 2 EA 6000271690 BOLT MACHINE, STAINLESS STEEL, 5/8" X 1/2"											
	7 2 EA 6000273610 NUT, STAINLESS STEEL, HEX 5/8"										
	$\begin{array}{c} 1 \\ 4 \\ 6 \\ 0 \\ 6 \\ 7 \\ \end{array}$										
CU 345	FUNCTI KV AND	ON: T GREA	L69 FOR 35KV ATER.	& 46KV	, TG69 FO	R 69KV THROU	GH 344KV, ⁻	T345 FOR			
FOF OF	R CORR ASTERI	ECT C SK (C*	U: SUBSTITUT _).	E 5 FOF	R NYSEG,	6 FOR CMP OR	9 FOR RG&	E IN PLACE			
NO BR/ HAF BOI	NOTE A: CONTRACTOR SHALL FIELD DRILL TO ENLARGE THE HOLES IN THE BRACKET IF THE HOLES ARE NOT LARGE ENOUGH FOR THE SPECIFIED MOUNTING HARDWARE. UP TO 9/16" FOR THE 1/2" LAG SCREW (ITEM #4) OR 11/16" FOR THE 5/8" BOLT (ITEM #6).										
TI	THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY										
Conta	ct Engin	eering	Standards - Tra	Insmissio	on Section	for the creation	of new stand	ards and CUs.	Drawing Scale: N	I/A	
			TRANSMISS	SION		AERIAL	MARKER S	TRUCTURE	AGS	REVISION	
			CONSTRUC	ΓΙΟΝ	DETAIL	AND INSTALL	ATION OF A	AERIAL STRU	CTURE MARKERS	00	
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Drwn. B	/: Date	Jr.:	Checked By	/: +	Date Ck.:	Approved By:	Date App.:	TM2.23	3.TK-03-002	Sheet 1	
	11 J/03/2	U12	DECKEN/Hal	L	10/10/2014	Darry N. Hall	112/24/2014				

					BILL OF	MATERIAL (CLI Type: F				
ITEM	οτγ		IUSA								
NO.			MID			C PI-IN		·VVVZ			
4	2	EA FA	1007420850	SCRE	N. LAG. 1/	<u>1, vertica</u> 2" X 4"	L, FUR TWO	TAGS			
5	2	EA	6000274780	WASH	ER RD GA	LV. 1/4"					
ITEM	QTY.	UOM	IUSA MID		CU	: C*PT-Th	(-03-002	-VS2			
1	1	EA	6000814802	SIGNA	GE BRAC	KET, VERTICA	L, FOR TWO	TAGS			
6	2	EA	6000271690	BOLT	MACHINE,	STAINLESS S	TEEL, 5/8" X	1/2"			
	2	EA	6000273610	NUT, S	STAINLESS	S STEEL, HEX	5/8"				
NO.	QTY.	UOM	MID		CU	<u>: C*PI-IK</u>	-03-002-	·VW3			
2	1	EA	6000814803	SIGNA	GE BRAC	KET, VERTICA	L, FOR THR	EE TAGS			
4	2	EA FA	6000274780	WASH	VASHER RD GALV. 1/4"						
ITEM	QTY.	UOM	IUSA			C*PT-Th	(-03-002	-VS3			
NO.	1	FA	MID 6000814803	SIGNA	GE BRAC	KET VERTICA		FE TAGS			
6	2	EA	6000271690	BOLT	MACHINE,	STAINLESS S	TEEL, 5/8" X	1/2"			
7	2	ΕA	6000273610	NUT, S	STAINLES	S STEEL, HEX	5/8"				
ITEM NO.	QTY.	UOM	IUSA MID		CU: C*PT-TK-03-002-VW4						
3	1	EA	6000814804	SIGNA	GE BRAC	KET, VERTICA	l, for fou	R TAGS			
4	2	EA	1007420850	SCRE\	<u>N, LAG, 1/</u>	2" X 4"					
5 ITEM		EA	6000274780 IUSA	WASH			(00 000				
NO.	QIY.		MID				x-03-002	-V54			
3	1		6000814804			STAINI ESS S	L, FOR FOU TEEL 5/8" X	R TAGS			
7	2	EA 6000273610 NUT, STAINLESS STEEL, HEX 5/8"									
CU FU 345KV FOR C OF AS	Image: Current of the second state										
BRAC HARD BOLT THIS Contact	BRACKET IF THE HOLES ARE NOT LARGE ENOUGH FOR THE SPECIFIED MOUNTING HARDWARE. UP TO 9/16" FOR THE 1/2" LAG SCREW (ITEM #4) OR 11/16" FOR THE 5/8" BOLT (ITEM #6). THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY Contact Engineering Standards - Transmission Section for the creation of new standards and CUs. Drawing Scale: N/A										
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B. Franklin	3/05/20	012	Becken/Har	t	10/16/2014	Barry R. Hart	12/24/2014	11/12.2	5.1K-U3-UU2	Sneet 2	

BILL OF MATERIAL (CU Type: POLE)						
	CU	QTY.	UOM	IUSA MID		
C*	PT-TK-03-003-1	1	ΕA	6000820101	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "1"	
C*I	PT-TK-03-003-2	1	ĒA	6000820102	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "2"	
C*I	PT-TK-03-003-3	1	ĒΑ	6000820103	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "3"	
C*I	PT-TK-03-003-4	1	ĒA	6000820104	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "4"	
C*I	PT-TK-03-003-5	1	ĒΑ	6000820105	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "5"	
C*I	PT-TK-03-003-6	1	ĒA	6000820106	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "6"	
C*I	PT-TK-03-003-7	1	ĒA	6000820107	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "7"	
C*I	PT-TK-03-003-8	1	ĒΑ	6000820108	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "8"	
C*I	PT-TK-03-003-9	1	ĒΑ	6000820109	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "9"	
C*I	PT-TK-03-003-0	1	ĒA	6000820110	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "0"	
C*F	PT-TK-03-003-Y	1	ĒΑ	6000820111	SIGNAGE TAG, AERIAL, PLASTIC 6 IN BLANK	
C*F	PT-TK-03-003-A	1	ĒΑ	6000820112	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "A"	
C*F	PT-TK-03-003-B	1	EA	6000820113	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "B"	
C*F	PT-TK-03-003-C	1	EA	6000820114	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "C"	
C*F	PT-TK-03-003-D	1	ĒΑ	6000820115	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "D"	
C*I	PT-TK-03-003-E	1	ĒΑ	6000820116	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "E"	
C*I	PT-TK-03-003-F	1	ĒΑ	6000820117	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "F"	
C*I	PT-TK-03-003-Z	1	ĒΑ	6000820118	SIGNAGE TAG, AERIAL, PLASTIC 6 IN "."	



CU FUNCTION: TL69 FOR 35KV & 46KV, TG69 FOR 69KV THROUGH 344KV, T345 FOR 345KV AND GREATER. FOR CORRECT CU: SUBSTITUTE 5 FOR NYSEG, 6 FOR CMP OR 9 FOR RG&E IN PLACE OF ASTERISK (C*)									
OF ASTERISK (C*_).									
THIS IS A CO	OMPUTER GENERATED	DRAWIN	G - DO NOT F	REVISE MA	NUALLY				
Contact Engineerin	ig Standards - Transmissi	on Section	for the creation o	of new stand	ards and CUs.	Drawing Scale: I	N/A		
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IBERDROLA	STANDARDS	ON WOOD AND STEEL STRUCTURES							
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		BILL OI	- MATERIAL	(CU Type:	POLE)				
ITEM QTY. UC	M IUSA	CU:	C*PT-TK	03-004-	/WX				
	A 6000821121 A	ERIAL TAG, PL	ASTIC INJECTE	D MOLD, LE	TTER X				
2 1 E	A 6000814801 S	SIGNAGE BRACK	KET, VERTICAL	, SINGLE TA	٨G				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	A 1007420850 5 ∆ 6000274780 V	CREW, LAG, 1/2 VASHER RD GA	2" X 4" \/ 1/4"						
		BILL OI	MATERIAL	(CU Type:	POLE)				
ITEM QTY. UC	M IUSA MID	CU	C*PT-TK	-03-004-	VSX				
	A 6000821121 A	ERIAL TAG, PL	ASTIC INJECTE	D MOLD, LE	TTER X				
5 2 E	A 6000814801 S	OLT MACHINE,	STAINLESS ST	; SINGLE 17 EEL, 5/8" X	1/2"				
6 2 E	A 6000273610 N	IUT, STAINLESS	STEEL, HEX 5	/8"					
	0		0	1					
CU FUNCTION:	TL69 FOR 35KV &	46KV, TG69 FOR		2 — — — — — — — — — — — — — — — — — — —	(3)(4) - OR (5)(6) 				
345KV AND GR FOR CORRECT OF ASTERISK (EATER. ⁻ CU: SUBSTITUTE { C*_).	5 FOR NYSEG, 6	FOR CMP OR	9 FOR RG&I	E IN PLACE				
NOTE A: CONTRACTOR SHALL FIELD DRILL TO ENLARGE THE HOLES IN THE BRACKET IF THE HOLES ARE NOT LARGE ENOUGH FOR THE SPECIFIED MOUNTING HARDWARE. UP TO 9/16" FOR THE 1/2" LAG SCREW (ITEM #3) OR 11/16" FOR THE 5/8" BOLT (ITEM #5).									
THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY									
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	TRANSMISSIC	DN	TRANS	MISSION LI	NE CROSSIN	IGS	REVISION		
440	CONSTRUCTIO	NC	AERIAL	MARKER S	TRUCTURE T	AGS	00		
IBERDROLA	IBERDROLA STANDARDS ON WOOD AND STEEL STRUCTURES DATE LISA MANULAL E/04/004/ E/04/004/								
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		BILL O	F MATERIAL	(CU Type:	POLE)				
	IUSA			00 001					
NO. Q.1. 00	MID MID			03-004-1					
	<u>\ 6000821121</u>	AERIAL IAG, PL	ASTIC INJECTE		TTER X				
		SIGNAGE BRAU	KET, HURIZUN	TAL, SINGLE	TAG				
		SCREW, LAG, 1/2	2" X 4"						
	<u> 6000214100 </u>	WASHER RU GA	LV. 1/4						
				(CO 194 0 .	PULE				
ITEM QTY. UO	M IUSA MID	CU	: C*PT-TK	-03-004-	HSX				
	A 6000821121	AERIAL TAG, PL	ASTIC INJECTE	D MOLD, LE	TTER X				
2 1 E/	A 6000814811	SIGNAGE BRACI	KET. HORIZON	TAL. SINGLE	TAG				
5 <u>2</u> EA	A 60002 <u>71690</u>	BOLT MACHINE,	STAINLESS ST	EEL, 5 <u>/8" X</u>	1/2"				
6 2 E/	A 6000273610	NUT, STAINLESS	S STEEL, HEX 5	/8"					
	3 4 OR 5 6								
CU FUNCTION 345KV AND G	J: TL69 FOR 35KV REATER.	/ & 46KV, TG69 F	OR 69KV THRO	UGH 344KV	, T345 FOR &F IN PLACE				
OF ASTERISK	(C*_).		, 01 01. 2	(0) (
NOTE A: CONTRACTOR SHALL FIELD DRILL TO ENLARGE THE HOLES IN THE BRACKET IF THE HOLES ARE NOT LARGE ENOUGH FOR THE SPECIFIED MOUNTING HARDWARE. UP TO 9/16" FOR THE 1/2" LAG SCREW (ITEM #3) OR 11/16" FOR THE 5/8" BOLT (ITEM #5).									
THIS IS A C	OMPUTER GENER	RATED DRAWIN	G - DO NOT F	REVISE MAN	NUALLY				
Contact Engineerin	ig Standards - Tran	smission Section	for the creation of	of new standa	ards and CUs.	Drawing Scale: N	J/A		
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B Franklin 11/30/2012	Becken/Hart	12/24/2014	Approved By.	12/24/2014	TM2.23.	TK-03-004	Sheet 4		
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					50° MIN		1		
NOTES FOR INSTA 1) INSTALLATION FAA REGULATION 2) ALTERNATE TO AERIAL BALLS IN 3) 9" DIAMETER M NOTES FOR INSTA 1) AERIAL MARKEI CROSSES OVER A 2) IF THERE ARE 1 (UNPROTECTED/U LEVEL, INSTALL M 3) PLACE ONE MA ALONG THE WIRE 4) 20" DIAMETER A 50' ABOVE THE GF WIRE THAT IS 50' 5) THE COLORS O THE NUMBER OF <u>NO. OF BALI</u> 1 2 3 4 5 6 7	ALLATION OF AERIAL MARKE OF AERIAL MARKERS SHALL INSTALLATION. NOTE 3: AERIAL BALLS SHA THE SPAN SHALL BE SPACE ARKER BALLS MAY BE USED ALLATION OF AERIAL MARKE R BALLS SHALL BE INSTALLE NOTHER LINE. TWO STATIC WIRES, INSTALL INSHIELDED), INSTALL THE I IARKER BALLS ON ALL PHAS RKER BALL ON A WIRE DIRE AT 50 FOOT INTERVALS. AERIAL MARKER BALLS SHAI ROUND OR 36" DIAMETER AE OR GREATER ABOVE THE G F THE AERIAL MARKER BALL BALLS PER SPAN OF WIRE: <u>S</u> ORDER OF O - O O - O O - O O - W - Y - 0 O - W - Y - 0	R BALLS FOR CONFORM T LL BE INSTAI D ABOUT EVE D ABOUT EVE D ON THE HI MARKER BAL E WIRES THA CTLY ABOVE LL BE USED (C RIAL MARKER ROUND. LS SHALL ALT COLORS O W - O W - O O - W - Y - O O - W - Y - O	A AERIAL PATROL O THE F.A.A. REG LLED A MINIMUM (ERY 50'. QUIRED BY F.A.A. GHEST WIRE, TYI ALLS ON BOTH WI LS ON THE TOP P AT ARE AT THE HI THE CROSSED L ON ANY MARKED Y R BALLS SHALL B FERNATE AS DES	AND OTHER GULATION AS OF 50' FROM ⁻ PICALLY THE RES AS ILLUS HASE. IF THE GHEST LEVEL INE. INSTALL WIRE THAT IS E USED ON A CRIBED BELO	NON-FAA APPLI SHOWN BELOW THE SUPPORTIN AC 70/7460-1K (STATIC WIRE, O TRATED. IF THE RE ARE TWO OF ADDITIONAL MA LESS THAN NY MARKED W BASED ON	CATIONS: IN NOTES 1, 2 AND 5 LIST IG STRUCTURES, THE REI CHAPTER 10: F THETRANSMISSION LIN RE IS NO STATIC WIRE R THREE PHASES AT THE RKER BALLS SPACED EQ	ED UNDER MAINING E THAT TOP PHASE UALLY		
THIS IS A C	THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY								
Contact Engineering Standards - Transmission Section for the creation of new standards and CUs. Drawing Scale: NTS									
	TRANSMISSION					100	REVISION		
IBERDROLA				NISSION L RIAL MAR	INE CROSSIN	NGS			
USA	MANUAL						5/21/2015		
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D. FTATIKIIT 1/28/2014	Decken/mart	12/24/2014	Бану К. Нап	5/20/2015					



	BILL O	F MA	TERIAL	CU Type: UC_POLE
ITEM NO.	QTY	UОМ	GLOBAL IUSA MID	CU: U*PT-TK-04-002
1	1	ST	30920346	FO WARNING LABEL FOR POLE 2 X 3
1	0.1	LB	30918792	NAIL CWLD 16D 3-1/2" LONG

ATTACH WITH (4) CWLD 16D 3-1/2 IN LONG NAILS - MID 30918792

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THIS IS A COMPUTER GENERATED



.R generated Evise Manually		POSITI 5' A	ON S ABOV	IGN ON E GROU	WOO IND L	D POI INE	_E	
THIS IS A COMPUTE DRAWING - DO NOT R	CU Function: U_TL69 for 35k For correct CU: substitute 2 for N	/ & 46kV, U_TG69 for 69 √YSEG, 3 for CMP or 4 fc	kV thru 344 or RG&E in	.kV, U_T345 for 3 place of asterisk	945kV & grea (U*_).	ater.		
	Contact Enginee	ring Standards - Transmis	ssion for the	e creation of new	standards a	and CUs.	Drawing Scale:	N/A
ISI A " X 11" ()	IBERDROLA USA	IBERDROLA USA TRANSMISSION CONSTRUCTION STANDARDS MANUAL	TRANSMISSION MARKERS FIBER OPTIC SIGNAGE PLACEMENT ON WOOD POLE BLACK ON ORANGE					
AN 8-1/2	Drwn. By: Date Dr.: L.A. Best 9/5/2013	Checked By: Shepard/Becken/Hart	Date Ck.: / /2015	Approved By: Barry R. Hart	Date App.: / /2015	TM2.2	23.TK-04-002	Sheet 1







		BILLC	F MATERIAL	(CU Type	POLE)					
NO. QIY. U										
	A 6000825688 SIC	IN, PLASTIC	INJECTED MOL	D, SWITCH	MAT BELOW					
			2 ¹ / ₂ "							
FOR CORRECT	CU: SUBSTITUTE 5 FOR N	IYSEG, 6 FOR C	MP OR 9 FOR RG	&E IN PLACE O	F ASTERISK					
(C*_).										
NOTE A: OTHEI TK- TK- TK- TK-	NOTE A: OTHER STANDARD DRAWINGS REQUIRED TK-08-001 APPLICATION TK-08-003 SWITCH NUMBER HOLDERS TK-08-004 SWITCH NUMBERS									
NOTE B: SWITC THE SWITCH OI PERSONNEL ST	NOTE B: SWITCH MAT BELOW SIGN AND SWITCH NUMBER SHALL BE ON THE UPPER LEFT SIDE OF THE SWITCH OPERATION HANDLE OR MOTOR OPERATOR AND NOT OBSTRUCTED FROM VIEW BY PERSONNEL STANDING IN POSITION TO MANUALLY OPERATE THE SWITCH.									
NOTE C: SIGN IS GREEN WITH WHITE TEXT.										
NOTE D: SWITCH MAT BELOW SIGN MID INCLUDES HOLDER.										
NOTE E: SWITCH MAT BELOW SIGN SHALL BE INSTALLED ON WOOD POLES USING FOUR (4) ALUMINUM ROOFING NAILS. POLE TAGS SHALL BE INSTALLED ON STEEL POLES AND LATTICE STEEL TOWERS USING FOUR (4) 1/4" STAINLESS STEEL BOLTS AND NUTS ON THE PROVIDED BRACKET OR ANGLE. ALL FASTENERS SHALL BE PROVIDED BY CONTRACTOR.										
THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY										
Contact Engineering Standards - Transmission Section for the creation of new standards and CLIs Drawing Scale: N/A										
						Diawing Ocale. I				
			IRAN	NUICCIIVICN NUTCH STI		ко				
IBERDROLA		×	SWITCH MAT BELOW SIGN							
USA	MANUAI		51				5/21/2015			
Drwn. By: Date Dr.:	Checked By:	Date Ck.:	Approved By:	Date App.:			Shoot 1			
B. Franklin 9/16/2014	Becken/Hart	12/24/2014	Barry R. Hart	12/24/2014	111/12.23	5. I N-U8-UUZ	Sneet			

		BILL O	F MATERIAL	(CU Type:	POLE)				
ITEM QTY. UO	M IUSA MID	CU	: C*PT-TK	(-08-003-	VSN				
1 1 E/	A 6000825691 SIGN I	HOLDER, N	/IETAL, 10 CHA	RACTER, VE	ERTICAL				
ITEM OTY UO	IUSA								
NO. QIT. 00	MID A 6000825692 SIGN I		IETAL 10 CHA	RACTER H					
		ICEDER, N							
	2 ¹ / ₂ "								
(C*_).	U: SUBSTITUTE 5 FOR NYSE	EG, 6 FOR CN	IP OR 9 FOR RG8	E IN PLACE OI	FASTERISK				
NOTE A: OTHER		QUIRED							
TK-0 TK-0 TK-0	8-002 SWITCH MAT BELOW 8-004 SWITCH NUMBERS	SIGN							
NOTE B: SWITCH NUMBER SHALL BE ON THE UPPER LEFT SIDE OF THE SWITCH OPERATION HANDLE OR MOTOR OPERATOR AND NOT OBSTRUCTED FROM VIEW BY PERSONNEL STANDING IN POSITION TO MANUALLY OPERATE THE SWITCH.									
NOTE C: IN THE EVENT THAT A HORIZONTAL SWITCH NUMBER SIGN IS UNABLE TO BE USED OR WOULD BE PARTIALLY OBSTRUCTED BY VIEW A VERTICAL SIGN MAY BE USED.									
NOTE D: SWITCH MAT BELOW SIGNS AND SWITCH NUMBERING HOLDERS SHALL BE INSTALLED ON WOOD POLES USING FOUR (4) ALUMINUM ROOFING NAILS. POLE TAGS SHALL BE INSTALLED ON STEEL POLES AND LATTICE STEEL TOWERS USING FOUR (4) 1/4" STAINLESS STEEL BOLTS AND NUTS ON THE PROVIDED BRACKET OR ANGLE. ALL FASTENERS SHALL BE PROVIDED BY CONTRACTOR.									
THIS IS A COMPUTER GENERATED DRAWING - DO NOT REVISE MANUALLY									
Contact Engineerir	ng Standards - Transmissi	on Section	for the creation	of new standa	ards and CUs.	Drawing Scale:	N/A		
	TRANSMISSION		TRAN	ISMISSION		RS	REVISION		
			Q\\/			S			
	MANUARDS		300				5/21/2015		
Drwn. By: Date Dr.:	Checked By:	Date Ck.:	Approved By:	Date App.:			Sheet 1		
B. Franklin 9/16/2014	Becken/Hart	12/24/2014	Barry R Hart	12/24/2014		5.111-00-003	0.10011		

BILL OF MATERIAL (CU Type: POLE)								
CU	QTY.	UOM	IUSA MID					
C*PT-TK-08-004-0	1	ΕA	6000815570	SIGN, HIGH REFLECTIVE, 2-1/2 IN "0"				
C*PT-TK-08-004-1	1	ΕA	6000815571	SIGN, HIGH REFLECTIVE, 2-1/2 IN "1"				
C*PT-TK-08-004-2	1	EA	6000815572	SIGN, HIGH REFLECTIVE, 2-1/2 IN "2"				
C*PT-TK-08-004-3	1	ΕA	6000815573	SIGN, HIGH REFLECTIVE, 2-1/2 IN "3"				
C*PT-TK-08-004-4	1	EA	6000815574	SIGN, HIGH REFLECTIVE, 2-1/2 IN "4"				
C*PT-TK-08-004-5	1	EA	6000815575	SIGN, HIGH REFLECTIVE, 2-1/2 IN "5"				
C*PT-TK-08-004-6	1	ΕA	6000815576	SIGN, HIGH REFLECTIVE, 2-1/2 IN "6" & "9"				
C*PT-TK-08-004-7	1	ΕA	6000815577	SIGN, HIGH REFLECTIVE, 2-1/2 IN "7"				
C*PT-TK-08-004-8	1	EA	6000815578	SIGN, HIGH REFLECTIVE, 2-1/2 IN "8"				
C*PT-TK-08-004-9	1	EA	6000815579	SIGN, HIGH REFLECTIVE, 2-1/2 IN "1/2"				
C*PT-TK-08-004-A	1	ΕA	6000815581	SIGN, HIGH REFLECTIVE, 2-1/2 IN "A"				
C*PT-TK-08-004-B	1	ΕA	6000815582	SIGN, HIGH REFLECTIVE, 2-1/2 IN "B"				
C*PT-TK-08-004-C	1	EA	6000815583	SIGN, HIGH REFLECTIVE, 2-1/2 IN "C"				
C*PT-TK-08-004-D	1	EA	6000815584	SIGN, HIGH REFLECTIVE, 2-1/2 IN "D"				
C*PT-TK-08-004-E	1	ΕA	6000815585	SIGN, HIGH REFLECTIVE, 2-1/2 IN "E"				
C*PT-TK-08-004-W	1	ΕA	6000815586	SIGN, HIGH REFLECTIVE, 2-1/2 IN "-"				
C*PT-TK-08-004-Y	1	ΕA	6000815587	SIGN, HIGH REFLECTIVE, 2-1/2 IN "/"				
C*PT-TK-08-004-Z	1	EA	6000815580	SIGN, HIGH REFLECTIVE, 2-1/2 IN "."				



FOR CORREC OF ASTERISK							
THIS IS A CO							
Contact Engineerin	Drawing Scale: N/A						
	TRANSMISSION	LINE MARKEF	RS	REVISION			
	CONSTRUCTION		S		00		
IBERDROLA	STANDARDS				DATE		
USA	MANUAL				5/21/2015		
Drwn. By: Date Dr.: B. Franklin 9/16/2014	Checked By: Becken/Hart	Date Ck.: 12/24/2014	Approved By: Barry R. Hart	Date App.: 12/24/2014	TM2.23	5.TK-08-004	Sheet 1