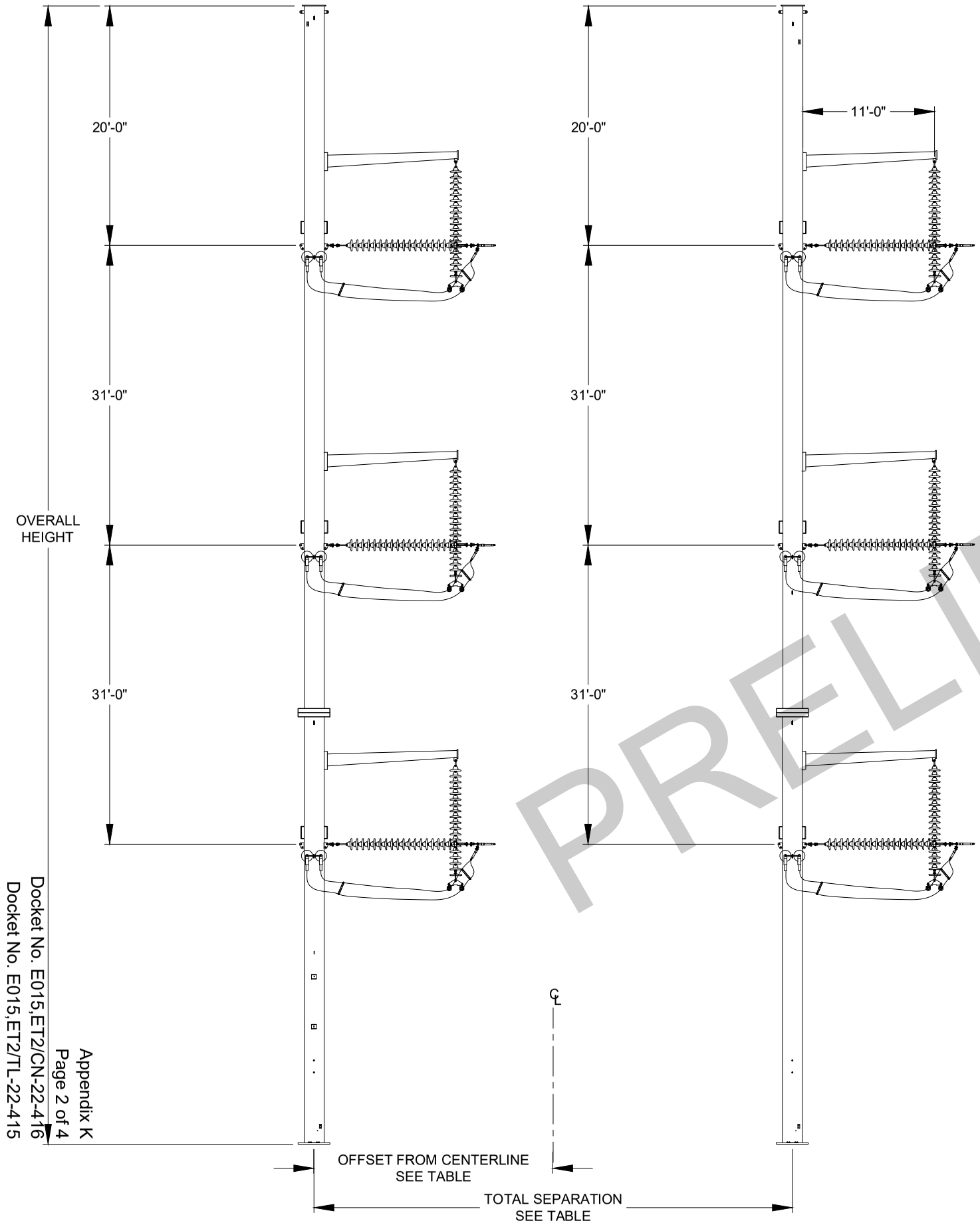
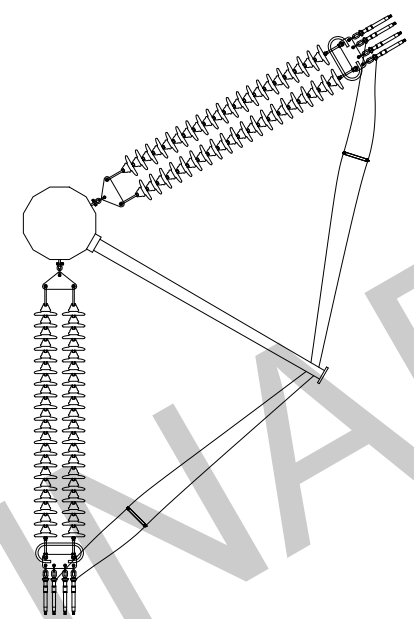
Appendix K

Technical Drawings of Proposed Structures





CONDUCTOR PLAN VIEW

LINE ANGLE (DEG)	OFFSET FROM CENTERLINE (FT)	TOTAL SEPARATION (FT)
30-40	19.0	38.0
40-50	20.0	40.0
60-80	23.0	46.0
80-90	25.0	50.0

DESIGN DATA:	
POLE TYPE:	(2) STEEL POLES
EMBEDMENT TYPE:	(2) PIER FOUNDATIONS
CIRCUIT TYPE:	DOUBLE CIRCUIT
POLE CONST. TYPE:	TWO POLE DEAD END
LINE ANGLE RANGE:	60°-90°
INSULATOR TYPE:	DEAD END, GLASS
VOLTAGE:	345 kV

PRELIMINARY

REV	DATE: STATUS: W.O.	REVISION DESCRIPTION:	REV BY	APP BY
6				
5				
4				
3				
2				
1				
0	05-25-23	DRAFT - 345KV DC STANDARD STRUCTURE FAMILY		

THIS ASSEMBLY HAS BEEN DESIGNED TO MEET THE TRANSMISSION ENGINEERING STANDARDS OF GREAT RIVER ENERGY. THE SUBSTITUTION OF ANY COMPONENT OR PART, CONTAINED IN THIS ASSEMBLY, REQUIRES THE PRIOR APPROVAL OF GRE'S TRANSMISSION ENGINEERING DEPARTMENT.

GREAT RIVER ENERGY™

STRUCTURAL LAYOUT, STEEL, 345 kV
DBL CIRCUIT TWO POLE DEADEND
DEADEND, 30-90°

DRAWING NUMBER: TS6DC-2P-345

REVISION: 0

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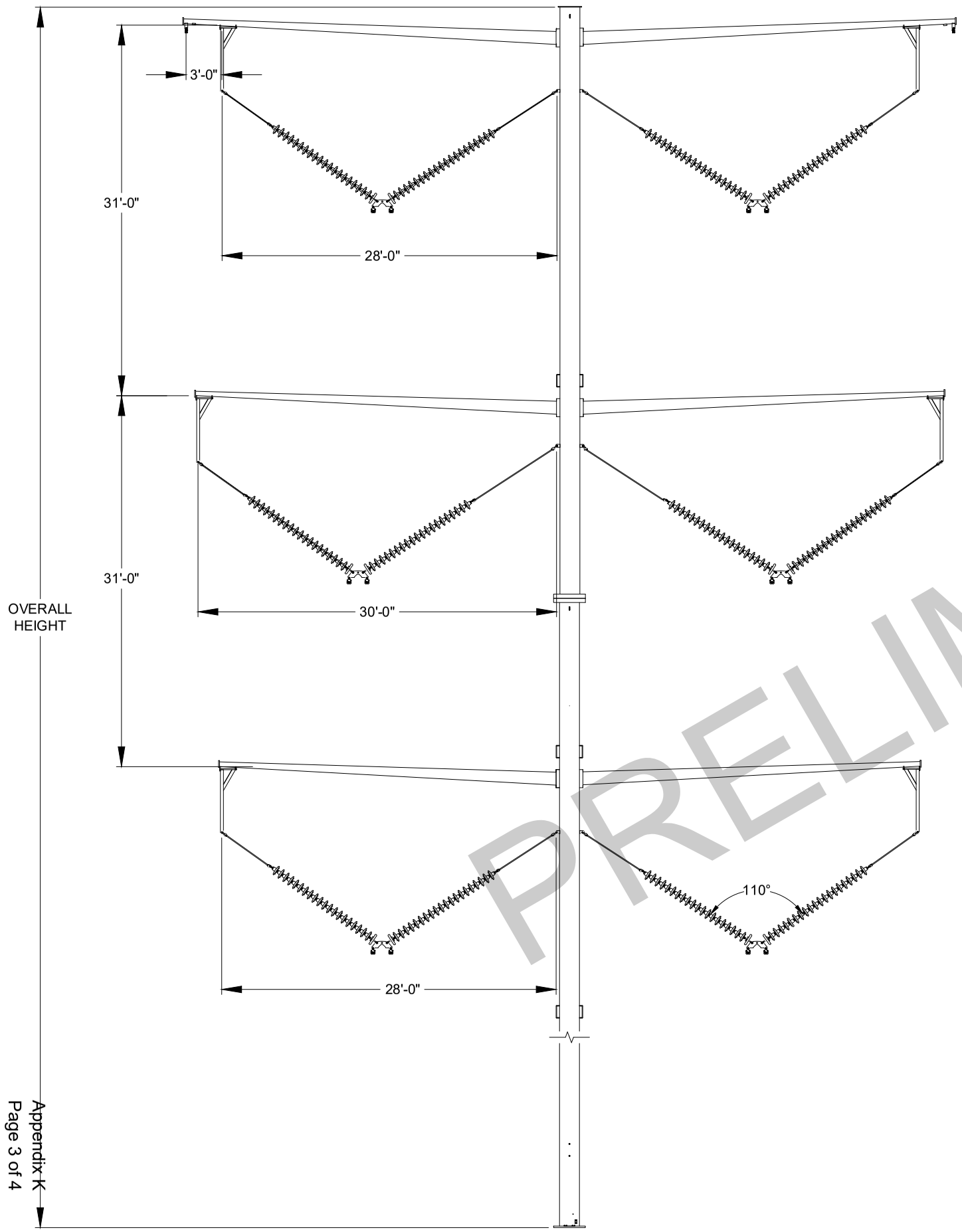

PRELIMINARY

DESIGN DATA:	
POLE TYPE:	(1) STEEL POLE
EMBEDMENT TYPE:	PIER FOUNDATION
CIRCUIT TYPE:	DOUBLE CIRCUIT
POLE CONST. TYPE:	TANGENT W/ V-STRINGS
LINE ANGLE RANGE:	0-2°
INSULATOR TYPE:	V-STRINGS, GLASS
VOLTAGE:	345 kV

REV	DATE: STATUS: W.O.	REVISION DESCRIPTION:	REV BY	APP BY
6				
5				
4				
3				
2				
1		DRAFT - 345KV DC STANDARD STRUCTURE FAMILY		
0	05-25-23			

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GREAT RIVER ENERGY™

STRUCTURAL LAYOUT, STEEL, 345 kV
SINGLE POLE, DBL CIRCUIT W/ V-STRINGS
TANGENT, 0-2°

DRAWING NUMBER: TSDCV-345

REVISION: 0

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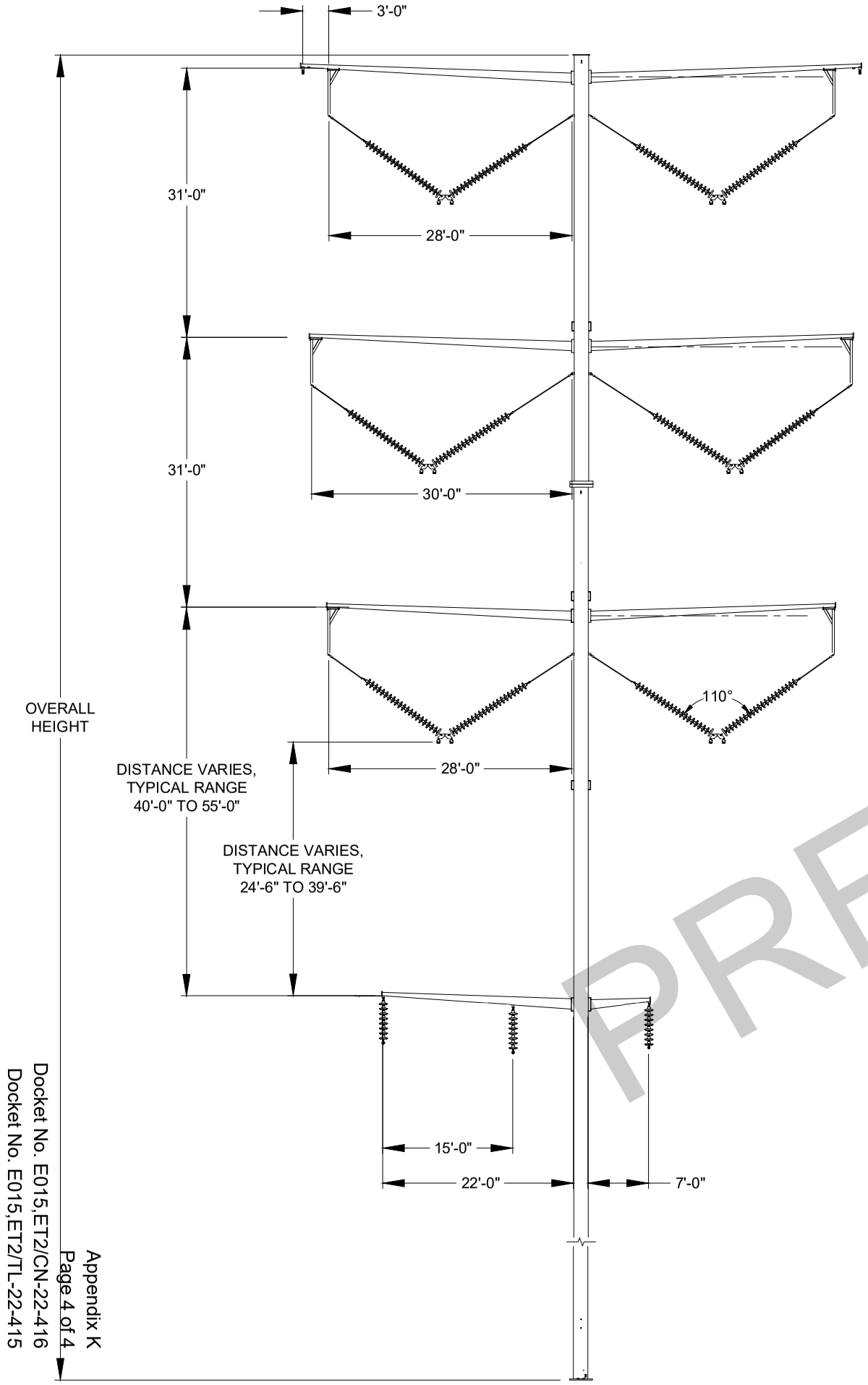

PRELIMINARY

DESIGN DATA:	
POLE TYPE:	(1) STEEL POLE
EMBEDMENT TYPE:	PIER FOUNDATION
CIRCUIT TYPE:	TRIPLE CIRCUIT
POLE CONST. TYPE:	TANGENT W/ V-STRINGS
LINE ANGLE RANGE:	0-2°
INSULATOR TYPE:	V-STRINGS, I-STRINGS, GLASS
VOLTAGE:	(2) 345 kV, (1) 69kV

REV	DATE: STATUS: W.O.	REVISION DESCRIPTION:	REV BY	APP BY
6				
5				
4				
3				
2				
1		DRAFT - 345KV TC STANDARD STRUCTURE FAMILY		
0	05-30-23			

THIS ASSEMBLY HAS BEEN DESIGNED TO MEET THE TRANSMISSION ENGINEERING STANDARDS OF GREAT RIVER ENERGY. THE SUBSTITUTION OF ANY COMPONENT OR PART, CONTAINED IN THIS ASSEMBLY, REQUIRES THE PRIOR APPROVAL OF GRE'S TRANSMISSION ENGINEERING DEPARTMENT.

GREAT RIVER ENERGY™

STRUCTURAL LAYOUT, STEEL, 345 kV SINGLE POLE, TRP CIRCUIT W/ V-STRINGS TANGENT, 0-2°

DRAWING NUMBER: TSTCV-345

REVISION: 0

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