

DESIGN DATA REPORT
RHAME TO BELFIELD TRANSMISSION PROJECT
CASE NUMBER PU-07-169

APRIL 2008

<u>Design Component</u>	<u>Value</u>
Voltage	230 kilovolts
ROW width	125 feet
Average span	800 feet
Typical height of structures	110 feet
Average number of structures	6.6/mile
Temporary disturbance per structure (approximately 125-foot x 100-foot area)	12,500 ft ²
Permanent disturbance per structure (approximately 3-foot diameter per structure leg)	7 ft ²
Minimum conductor ground clearance to agricultural land at 100°C	26 feet
Minimum conductor-ground clearance to rural roads at 100°C	28 feet
Minimum conductor-ground clearance to paved highways at 100°C	31 feet
Circuit configuration	Vertical
Line capacity	320 MVA (million volt-amperes)
Conductor	1272 Thousand Circular Mils Aluminum, Steel Reinforced Dia = 1.345 inches

NOTES FOR POLE TOP ASSEMBLY

1. POLE TOP ASSEMBLY INCLUDES INSULATORS, HARDWARE, SUSPENSION CLAMPS, AND OTHER AND OTHER ASSEMBLY
2. POLES WITH CROSSARM, BRACKETS AND MOUNTING BOLTS, GROUNDING, POLE NUMBER SIGN, AND OTHER ITEMS ARE INCLUDED IN SEPARATE CONSTRUCTION UNITS.
3. POLE TOP ASSEMBLY INCLUDES:

ITEM NO.	QTY.	DESCRIPTION	MANUF.	CAT. NO.	RIS. CODE	DETAIL DRAWING
①	1	070K SUSPENSION ASSEMBLY				TU-475
②	3	230KV SUSPENSION INSULATOR ASSEMBLY				TU-2R

NOTES FOR STEEL POLE MATERIALS AND LABOR

1. POLE AND SHALL BE GALVANIZED STEEL POLE TO BE ERECT EMBEDDED
 2. DESIGN CAPACITY WITH 1272 KCM 45/7 ACSR CONDUCTORS 2/3. THIS 7
SIRAD BRSS AND 1/2" ODCW
INSULATED
WEIGHT SPAN 1100 FEET
LINE ANGLE 3 DEG MAX
SPECIFIC LOAD CASES AND LOADING FEELS ARE SHOWN ELSEWHERE
 3. POLES MAY BE SINGLE PIECE OR HAVE A FABRICATION JOINT
 4. IN ADDITION TO THE SPECIFIED DIMENSIONS, ALL ARMS SHALL BE CAPABLE OF WITHSTANDING THE FOLLOWING STIRRING LOADS:
L = 2.0K
M = 2.0K
- TYPICAL PHASE ATTACHMENT IS SHOWN. DESIGN AND DETAILING OF PHASE ATTACHMENT SHALL BE BY FABRICATOR END CLOSURES SHALL BE PROVIDED FOR ALL OPEN SECTIONS.



PRELIMINARY

DESIGNER: J. L. LARSEN	CHECKED: J. L. LARSEN	DATE: 11/11/2011
PROJECT: 181-230KV LINE-BELFELD SUBSTATION TO RYAN SUBSTATION	SCALE: 1" = 10'-0"	PROJECT NO: 181-090-12-001
DESCRIPTION: 230KV SINGLE POLE TANGENT STRUCTURES TYPE ST	DATE: 11/11/2011	PROJECT NO: 181-090-12-001
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