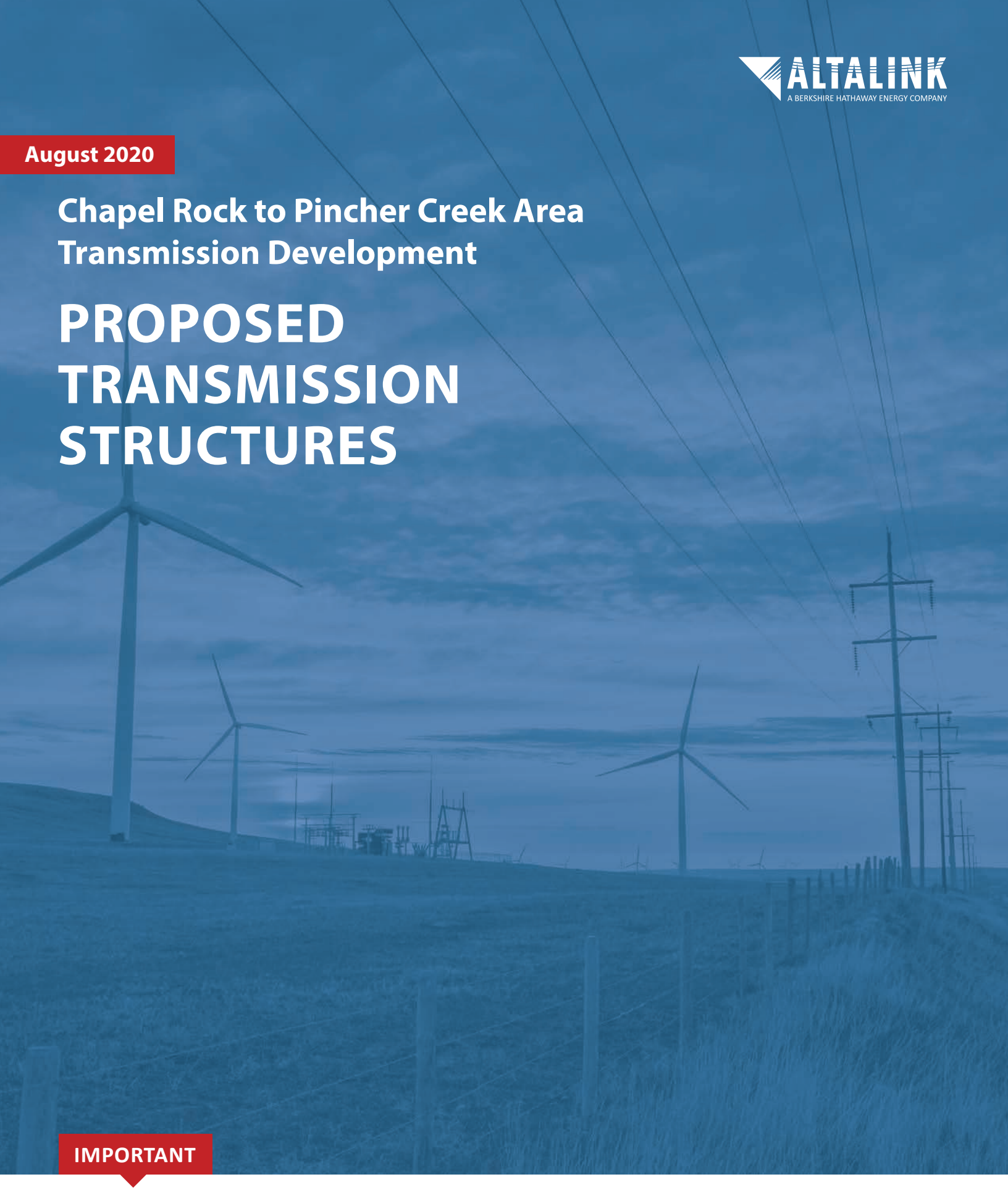
ALTALINK
A BERKSHIRE HATHAWAY ENERGY COMPANY

August 2020

Chapel Rock to Pincher Creek Area Transmission Development

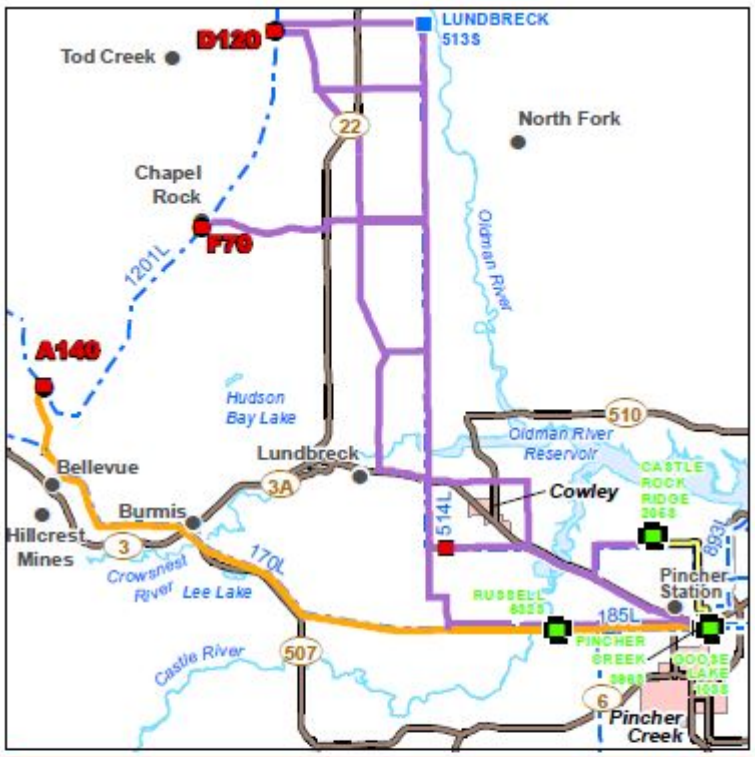
PROPOSED TRANSMISSION STRUCTURES

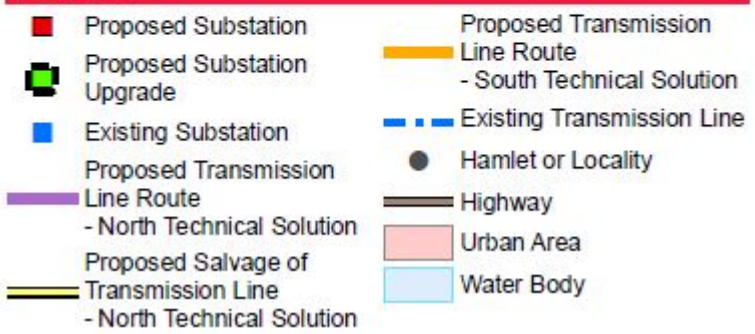


IMPORTANT

Please refer to the newsletter included in this package for details about the proposed project and how you can provide your input.

Proposed transmission structures





There are two different scenarios that we are proposing for this project to meet the two technical solutions proposed by the Alberta Electric System Operator (AESO).

North Technical Solution

shown in purple on the map

This includes several proposed route options and two proposed substation site options.

South Technical Solution

shown in orange on the map

This includes one proposed substation site and one proposed route that uses a portion of the existing 170L and 412L rights-of-way.

There are a number of structure types proposed for this project, depending on the technical solution and transmission line route.

The structures shown on the next page are the primary structures that are being proposed, but in certain areas variations of these structures may be used.

Please refer to the drawings in this booklet for all possible structure options that may be proposed near you. The locations of the 240 kV and 500 kV structures are identified on the strip maps included in the package. Locations for the 69 kV and 138 kV structures will be identified at a later date.

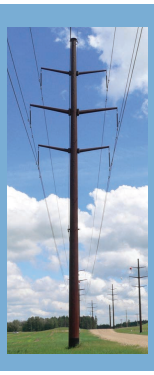
Note: *All dimensions are approximate and subject to change with further engineering. The drawings in this document are not to scale. They are meant to be a representation of what the structure may look like.*

WHAT DO YOU THINK? BROWN FINISH STEEL STRUCTURES

To minimize visual impacts related to the transmission line, the use of brown finish steel for the structures may be an option.

Brown finish steel structures will slowly weather over time and result in a dark brown, rust-like appearance. This is different than a typical galvanized steel structure which is largely visually unaffected over time and generally maintains the original appearance. An example of a brown finish steel structure is shown below.

Tell us what you think about this as an option.



SINGLE CIRCUIT MONOPOLE

	69 kV (pages 4-5)	240 kV (pages 6-7)
Structure height	15-27 m	18-40 m
Right-of-way width	**On private property:** 21 m **In road allowance:** 10.5 m from the edge of the road allowance	**On private property:** 22 m **In road allowance:** 10 m from the edge of the road allowance
Technical solution	**North** - in select areas	**North** - primarily used **South** - in select areas

SINGLE CIRCUIT H-FRAME

	69 kV (pages 4-5)	138 kV (pages 8-9)	240 kV (pages 10-11)
Structure height	15-27 m	15-22 m	16-36 m
Right-of-way width	**On private property:** 21 m **In road allowance:** 10.5 m from the edge of the road allowance	N/A - these structures will be located on AltaLink owned land around the Goose Lake Substation	**On private property:** 35-85 m (typically 40 m) **In road allowance:** 20 m
Technical solution	**North** - in select areas	**South** - in select areas	**North** - in select areas **South** - in select areas

DOUBLE CIRCUIT MONOPOLE

	240/69 kV (pages 12-13)
Structure height	27-40 m
Right-of-way width	**On private property:** 22 m **In road allowance:** 10 m from the edge of the road allowance
Technical solution	**North** - in select areas

DOUBLE CIRCUIT H-FRAME

	240/69 kV (pages 12-13)	240/138 kV (pages 14-15)
Structure height	27-40 m	25-38 m
Right-of-way width	**On private property:** 40 m **In road allowance:** 20 m	**On private property:** 30 m **In road allowance:** 14 m
Technical solution	**North** - in select areas	**South** - in select areas

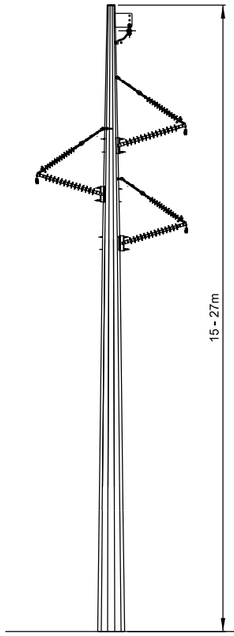
500 kV

Structure height	30-40 m
Structure width	11x11 m up to 18x18 m at the base
Right-of-way width	N/A
Technical solution	**North** and South substation sites

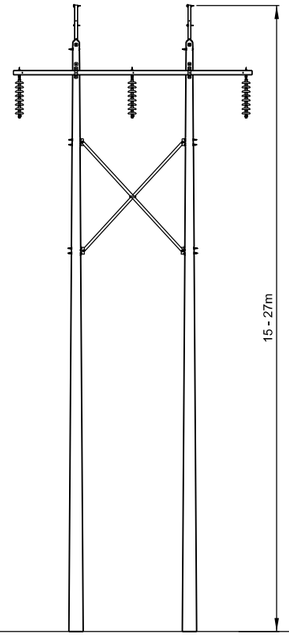
A drawing of the 500 kV structure is not included in this document. There is one 500 kV structure proposed at each of the proposed substation sites and it will look similar to the structure pictured here.

69kV STRUCTURES

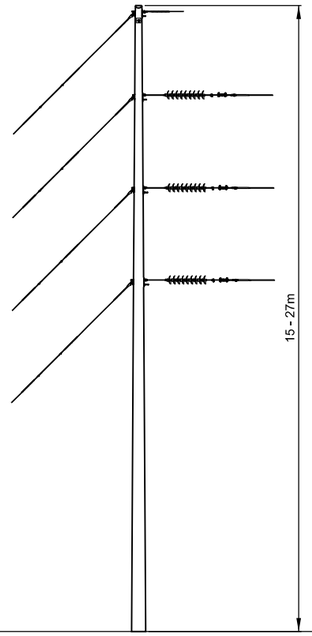
69kV MONOPOLE STRUCTURE



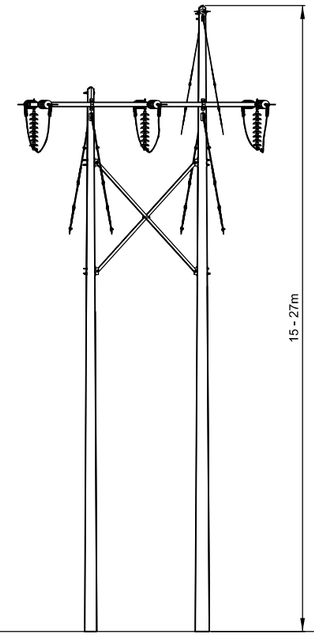
69kV TANGENT STRUCTURE



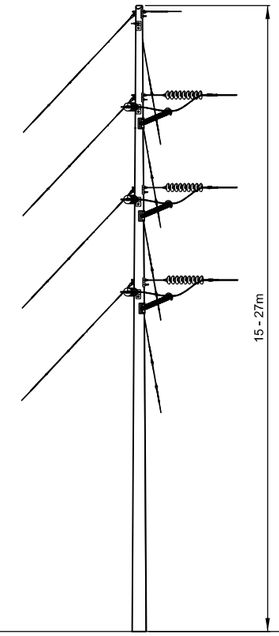
69kV GUYED DEAD-END



69kV TANGENT GUYED DEAD-END



69kV GUYED DEAD END



FOR INFORMATION ONLY

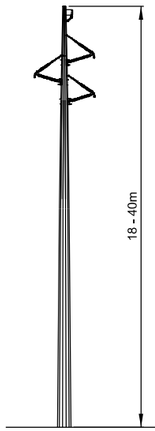
NOTES

-FINAL STRUCTURE LOCATIONS WILL BE DETERMINED AT A LATER DATE.
-THIS DRAWING IS NOT TO SCALE AND IS INTENDED TO PROVIDE A VISUAL REPRESENTATION OF THE STRUCTURES THAT MAY BE LOCATED NEAR YOU.

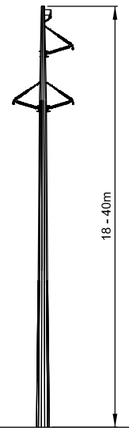
Although there is no reason to believe that there are any errors associated with the data used to generate this product or in the product itself, users of these data are advised that errors in the data may be present. All distances shown are approximate and may change based on final structure type, landowner input, final environmental assessment and engineering.

240kV MONOPOLE STRUCTURES

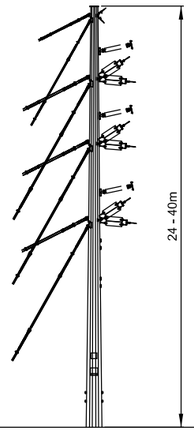
SINGLE CIRCUIT
TANGENT



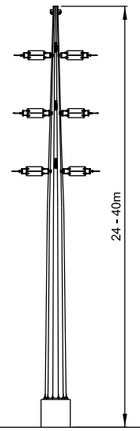
SINGLE CIRCUIT
STEEL TANGENT



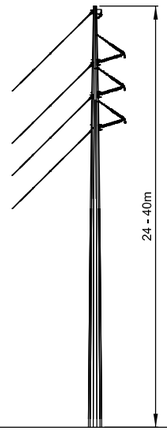
SINGLE CIRCUIT
GUYED DEADEND



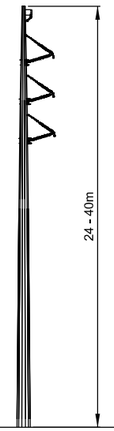
SINGLE CIRCUIT
SELF-SUPPORTING DEADEND



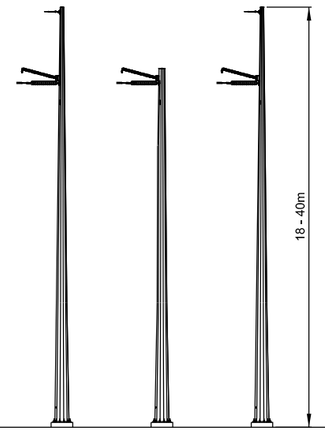
SINGLE CIRCUIT
GUYED ANGLE



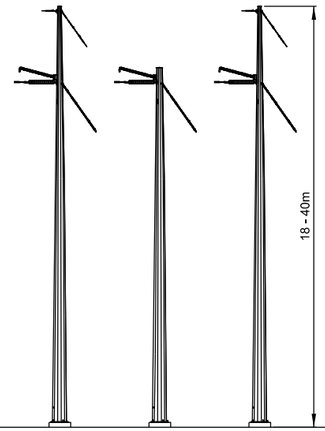
SINGLE CIRCUIT
SELF-SUPPORTING ANGLE



SINGLE CIRCUIT
3 POLE SELF-SUPPORTING DEADEND



SINGLE CIRCUIT
3 POLE GUYED DEADEND



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NOTES

-SEE THE STRIP MOSAIC MAPS FOR LOCATIONS OF THE STRUCTURES.
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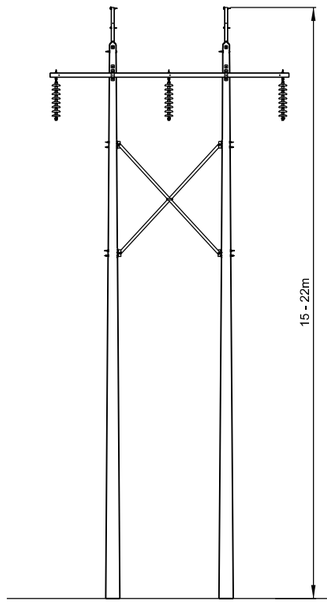
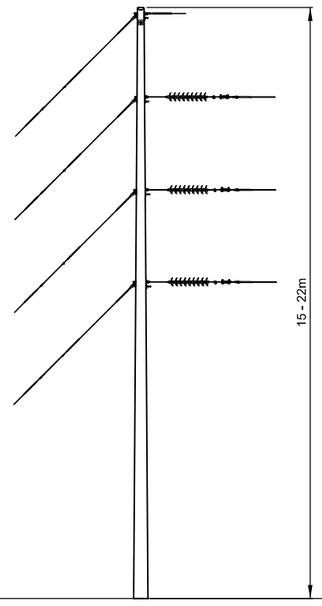
138kV STRUCTURES

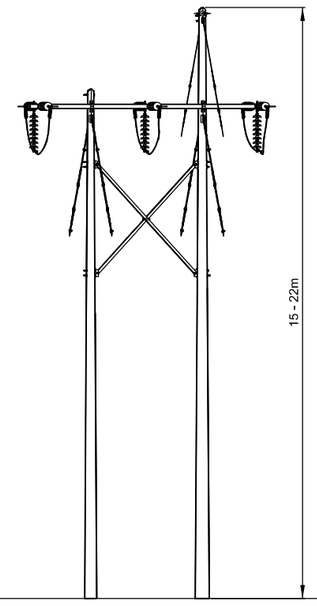
138kV TANGENT STRUCTURE



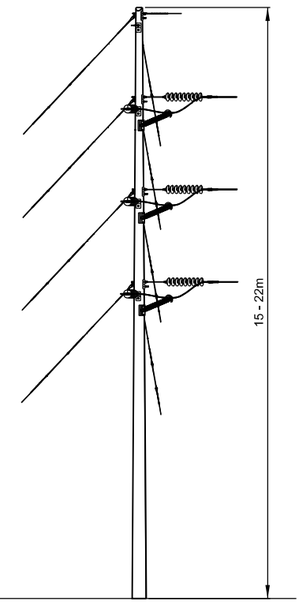
138kV GUYED DEAD-END



138kV TANGENT GUYED DEAD-END



138kV GUYED DEAD END



FOR INFORMATION ONLY

NOTES

-THESE STRUCTURES ARE ONLY USED FOR THE SOUTH TECHNICAL SOLUTION BETWEEN THE PINCHER CREEK AND GOOSE LAKE SUBSTATIONS AND WILL BE LOCATED ON ALTALINK OWNED PROPERTY.
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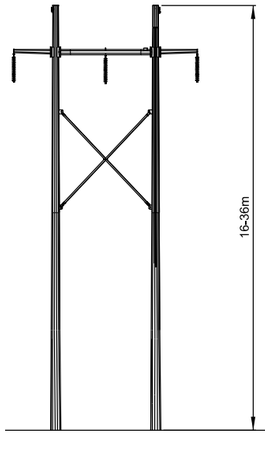
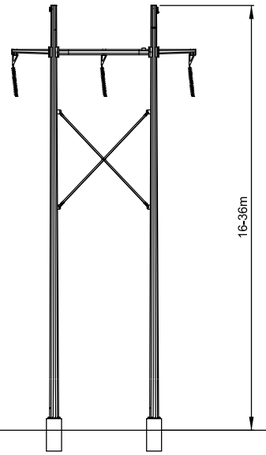
240kV H-FRAME STRUCTURES

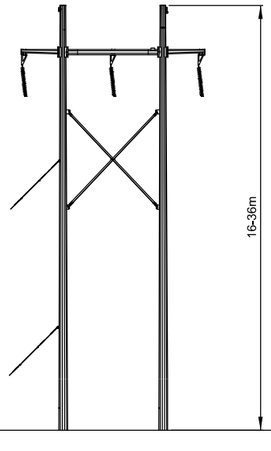
SINGLE CIRCUIT
TANGENT



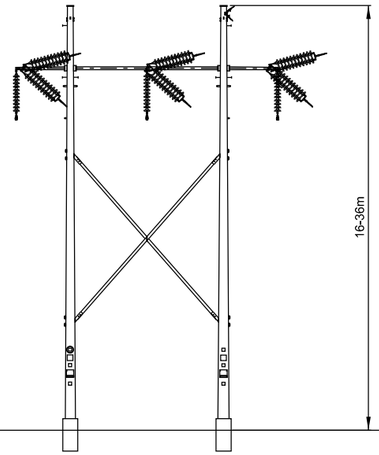
SINGLE CIRCUIT
SELF-SUPPORTING ANGLE



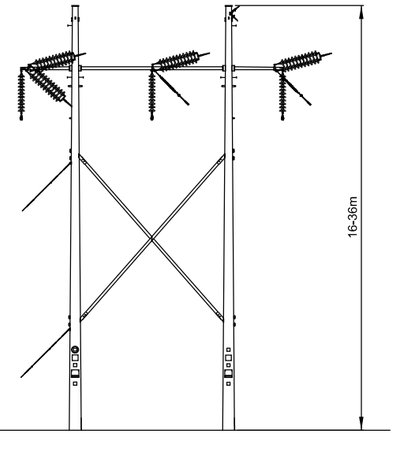
SINGLE CIRCUIT
GUYED ANGLE



SINGLE CIRCUIT
SELF-SUPPORTING DEADEND



SINGLE CIRCUIT
GUYED DEADEND



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240/69kV DOUBLE CIRCUIT STRUCTURES

DOUBLE CIRCUIT
TANGENT

DOUBLE CIRCUIT
2-POLE GUYED
DEADEND

DOUBLE CIRCUIT
2-POLE SELF-SUPPORTING
DEADEND

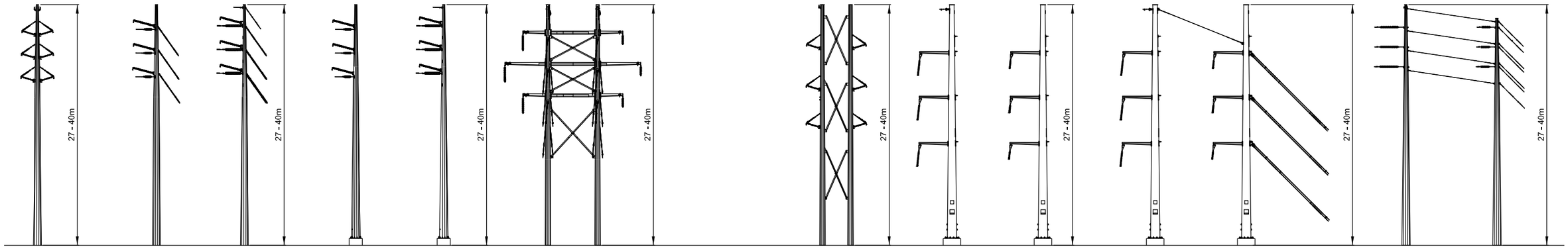
DOUBLE CIRCUIT
GUYED H-FRAME
DEADEND

DOUBLE CIRCUIT
H-FRAME
TANGENT

DOUBLE CIRCUIT
2-POLE SELF-SUPPORTING
ANGLE

DOUBLE CIRCUIT
2-POLE GUYED
ANGLE

DOUBLE CIRCUIT
2-POLE ANGLE
GUYED



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NOTES

-SEE THE STRIP MAPS FOR LOCATIONS OF THE STRUCTURES.
-EITHER 2-POLE ANGLE STRUCTURE MAY BE USED AT IDENTIFIED STRUCTURE LOCATIONS.
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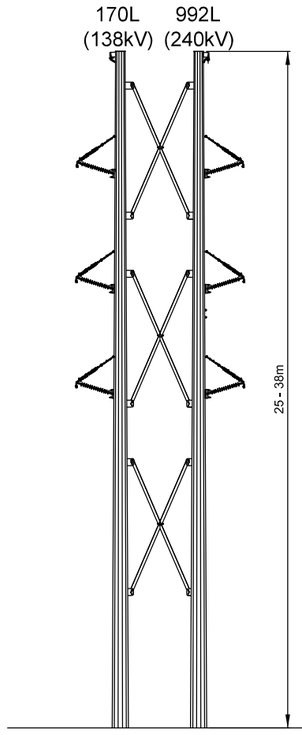
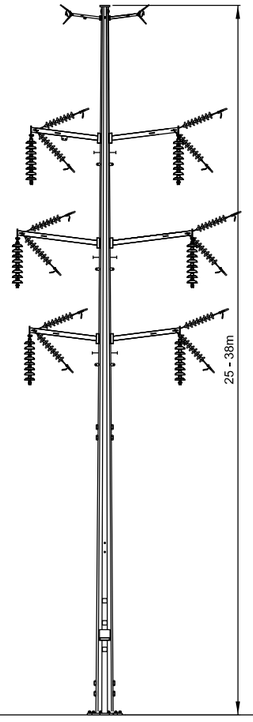
240kV/138kV DOUBLE CIRCUIT STRUCTURES

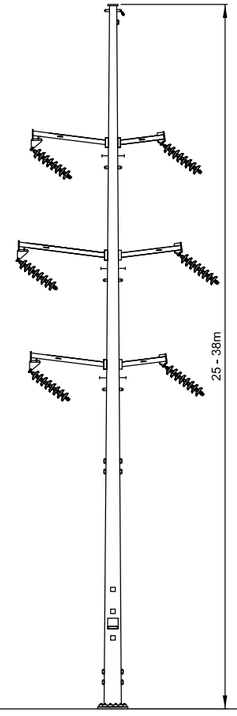
240kV/138kV DOUBLE CIRCUIT
TANGENT



240/138KV DOUBLE CIRCUIT
SELF-SUPPORTING DEADEND STRUCTURE



240/138KV DOUBLE CIRCUIT
SELF-SUPPORTING ANGLE STRUCTURE



FOR INFORMATION ONLY

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-THESE STRUCTURES ARE ONLY USED ALONG THE SOUTH TECHNICAL SOLUTION BETWEEN DESIGNATION POINTS A130 AND A140. SEE THE STRIP MOSAIC MAPS FOR LOCATIONS OF THE STRUCTURES.
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To learn more about the proposed
Chapel Rock to Pincher Creek Area
Transmission Development, please contact:

ALTALINK
1-877-267-1453 (toll-free)
stakeholderrelations@altalink.ca

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