Appendix E

Tri-State Generation and Transmission Association, Inc. 10-Year Transmission Projects

Tri-State's 2020 Ten Year Transmission Plan Projects

Table of Contents

Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

Burlington - Burlington (KCEA) Rebuild

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	Rebuild the existing Burlington - Burlington (KCEA) 115 kV line
Voltage Class:	115 kV
Facility Rating:	118 MVA
Point of Origin/Location:	Burlington
Point of Termination:	Burlington (KCEA)
Intermediate Points:	
Length of Line (in Miles):	2.0
Type of Project:	Transmission Line
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Increase conductor thermal rating.
Project Driver (Primary):	Reliability
Project Driver (Secondary):	
Estimated Cost (in 2019 Dollars):	$718,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2022
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org
Phone	303-254-3025

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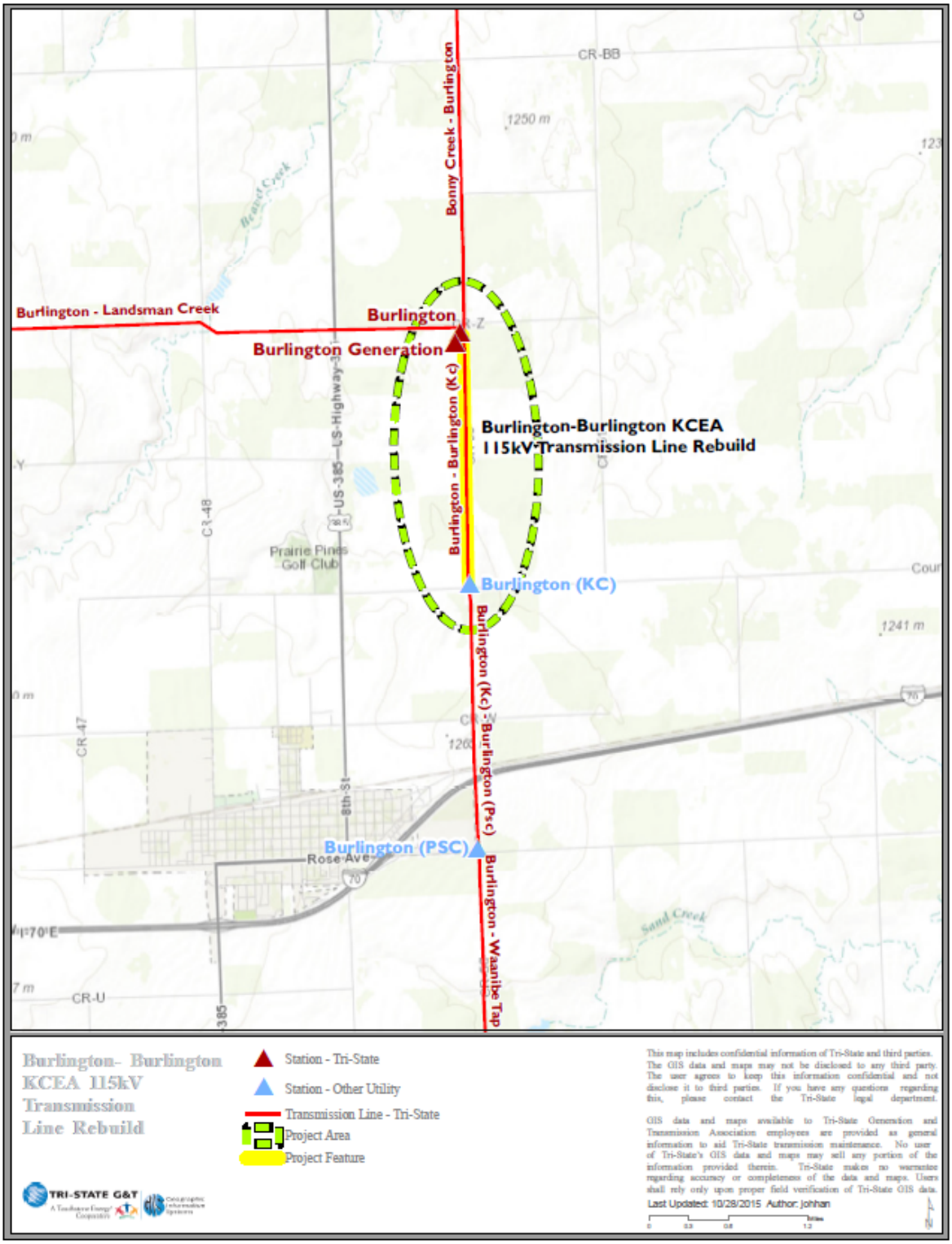
CR-BB
1250 m
Bonny Creek - Burlington
Burlington - Landsman Creek
Burlington
Burlington Generation
Burlington - Burlington (Kc)
Burlington-Burlington KCEA
115kV Transmission Line Rebuild
US-385
Prairie Pines
Golf Club
Burlington (KC)
1241 m
CR-47
8th St
Burlington (Kc)
Burlington (Psc)
Burlington (PSC)
Rose Ave
70
Sand Creek
CR-U
385
Burlington - Waanibe Tap
Burlington- Burlington
KCEA 115kV
Transmission
Line Rebuild
Station - Tri-State
Station - Other Utility
Transmission Line - Tri-State
Project Area
Project Feature
TRI-STATE G&T
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Last Updated: 10/28/2015 Author: johhan
0 0.3 0.6 1.2
Miles
N

Burlington-Burlington (KCEA) Rebuild

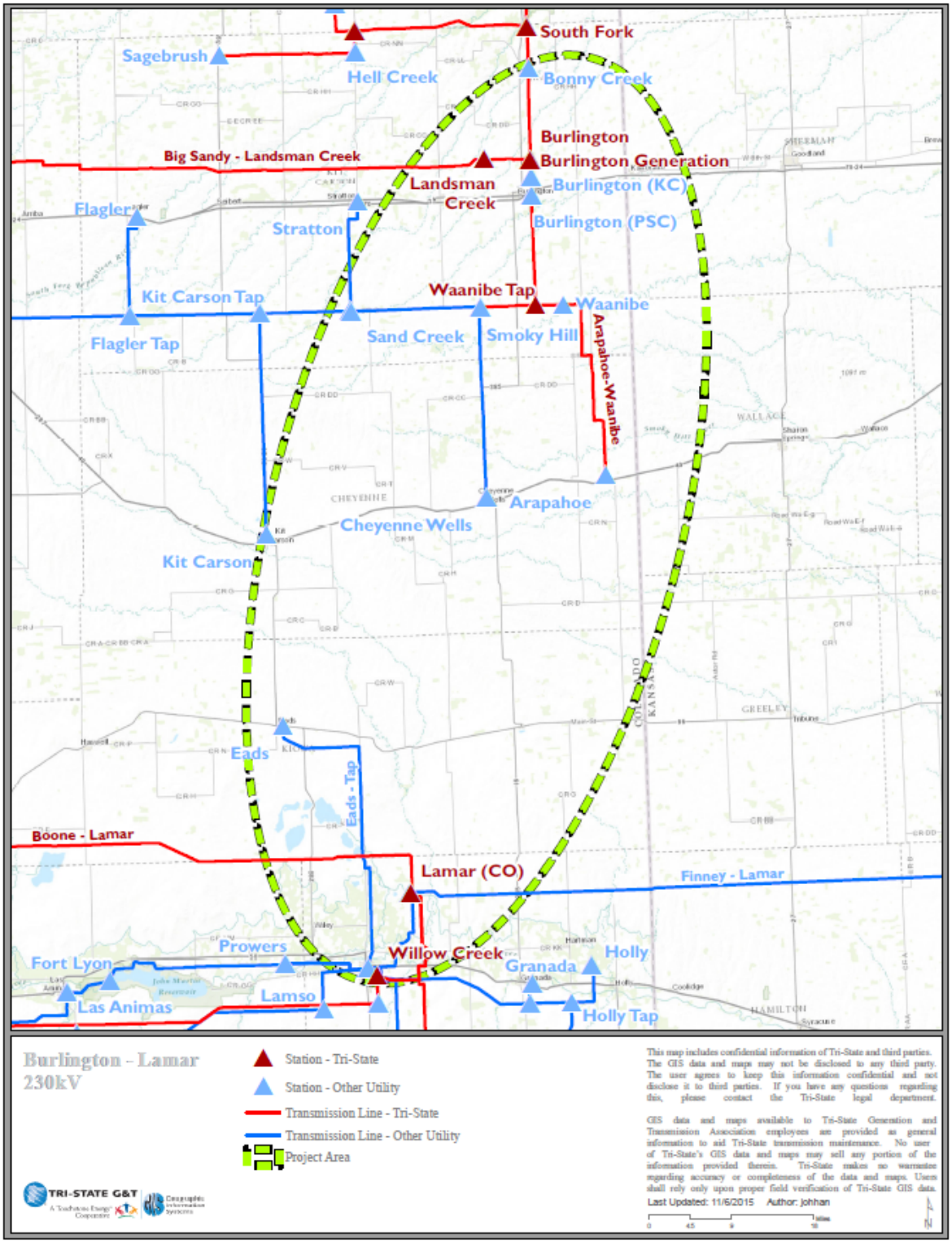
Under peak loading conditions, the K.C. Electric Association (KCEA) 69 kV system fed from Smoky Hill substation cannot be switched to the west to pick up additional load for the loss of the Limon source after the Smoky Hill transformer is replaced with a larger unit. To mitigate this limitation, Tri-State will phase-raise the existing Burlington-Burlington (KCEA) line to increase the thermal rating of the line. The increased capacity additionally will help K.C. Electric Association serve new load in the area.

Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

Burlington-Lamar 230 kV Transmission Project

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	Construct a 230 kV transmission line from Burlington Substation to Lamar Substation
Voltage Class:	230 kV
Facility Rating:	642 MVA
Point of Origin/Location:	Burlington
Point of Termination:	Lamar
Intermediate Points:	
Length of Line (in Miles):	106 Miles
Type of Project:	Transmission Line
Development Status:	Under Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Improve load-serving capability, remove generation operating restrictions & support renewable resource development in eastern Colorado.
Project Driver (Primary):	Reliability
Project Driver (Secondary):	Load Serving
Estimated Cost (in 2019 Dollars):	$58,400,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2024
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org
Phone	303-254-3025


South Fork
Sagebrush
Hell Creek
Bonny Creek
Burlington
Big Sandy - Landsman Creek
Burlington Generation
Landsman Creek
Burlington (KC)
Flagler
Stratton
Burlington (PSC)
Waanibe Tap
Kit Carson Tap
Waanibe
Arapahoe-Waanibe
Flagler Tap
Sand Creek
Smoky Hill
Arapahoe
Cheyenne Wells
Kit Carson
Eads
Eads - Tap
Boone - Lamar
Lamar (CO)
Finney - Lamar
Prowers
Willow Creek
Holly
Fort Lyon
Granada
Las Animas
Lamso
Holly Tap
Burlington – Lamar
230kV
Station - Tri-State
Station - Other Utility
Transmission Line - Tri-State
Transmission Line - Other Utility
Project Area
TRI-STATE G&T
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Last Updated: 11/6/2015 Author: johhan
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Burlington-Lamar 230 kV Transmission Project

Past studies in the Boone-Lamar area of Colorado have shown voltage collapse for the Boone-Lamar 230 kV line outage with cross-trips of all generation injected at Lamar 230 kV. In order to mitigate these violations and provide for future growth and potential new generation, Tri-State determined the best solution was to construct a new transmission line from the existing Burlington substation to the existing Lamar substation.

Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

Del Camino-Slater 115 kV Line Uprate

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	Reconductor portions of the existing Del Camino-Slater 115 kV line
Voltage Class:	115 kV
Facility Rating:	131 MVA
Point of Origin/Location:	Del Camino Switch
Point of Termination:	Slater
Intermediate Points:	
Length of Line (in Miles):	3.6
Type of Project:	Transmission Line
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Increase conductor thermal rating.
Project Driver (Primary):	Reliability
Project Driver (Secondary):	Load Serving
Estimated Cost (in 2019 Dollars):	$1,400,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2021
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org
Phone	303-254-3025

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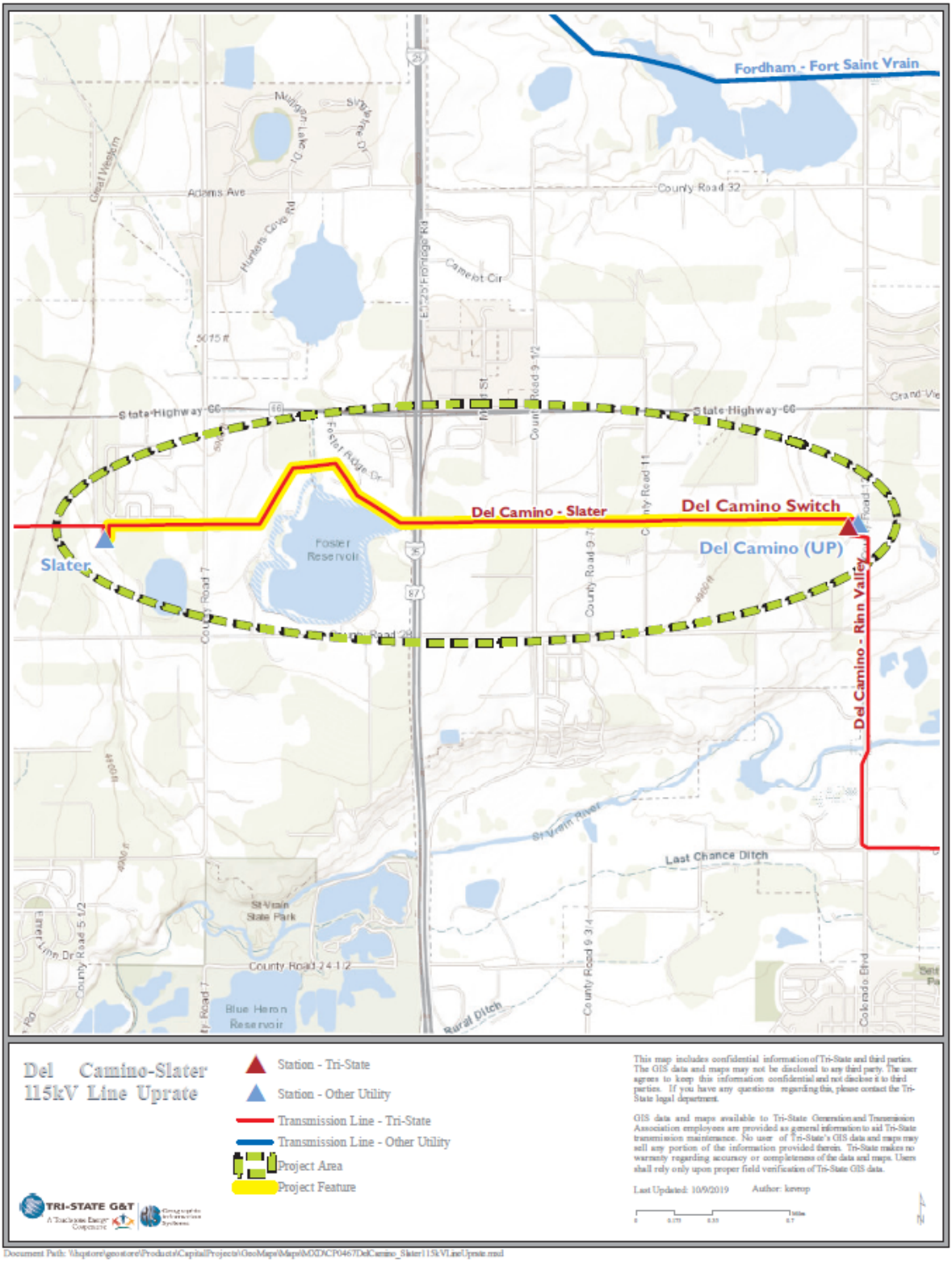

Fordham - Fort Saint Vrain
Del Camino - Slater
Del Camino Switch
Del Camino (UP)
Slater
Del Camino - Rinn Valley
State Highway 66
County Road 32
Foster Reservoir
St Vrain River
Last Chance Ditch
St Vrain State Park
Blue Heron Reservoir
Rural Ditch
Del Camino-Slater 115kV Line Uprate
Station - Tri-State
Station - Other Utility
Transmission Line - Tri-State
Transmission Line - Other Utility
Project Area
Project Feature
TRI-STATE G&T

Del Camino-Slater 115 kV Line Uprate

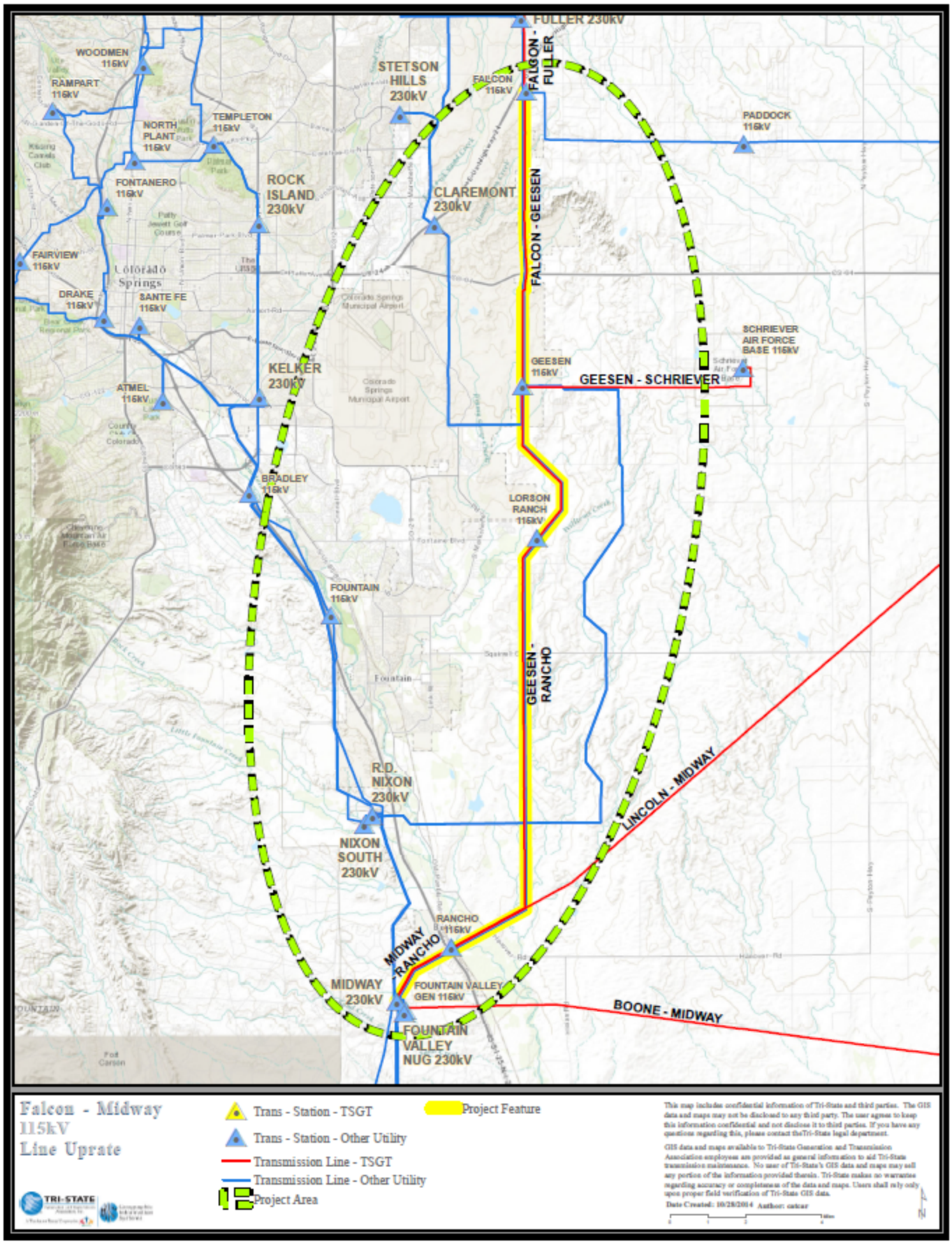
This project will replace all the remaining spans of 397.5 ACSR conductor on the Del-Camino Slater line with 477 ACSR. The increased line rating will address the limited load-serving capability of the line and allow continued area load growth.

Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

Falcon-Midway 115 kV Line Uprate Project

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	Planned uprate of existing 115 kV line between Falcon and Midway.
Voltage Class:	115 kV
Facility Rating:	145 MVA
Point of Origin/Location:	Falcon
Point of Termination:	Midway
Intermediate Points:	Geesen, Lorson Ranch, Rancho
Length of Line (in Miles):	27.0
Type of Project:	Transmission Line
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Increase conductor thermal rating.
Project Driver (Primary):	Reliability
Project Driver (Secondary):	
Estimated Cost (in 2019 Dollars):	$3,800,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2022
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org
Phone	303-254-3025


FULLER 230kV
FALCON - FULLER
WOODMEN 116kV
RAMPART 116kV
STETSON HILLS 230kV
FALCON 116kV
PADDOCK 116kV
NORTH PLANT 116kV
TEMPLETON 115kV
FONTANERO 116kV
ROCK ISLAND 230kV
CLAREMONT 230kV
FALCON - GEESEN
FAIRVIEW 116kV
Colorado Springs
DRAKE 115kV
SANTE FE 116kV
SCHRIEVER AIR FORCE BASE 116kV
GEESEN 116kV
GEESEN - SCHRIEVER
KELKER 230kV
ATMEL 116kV
BRADLEY 115kV
LORSON RANCH 115kV
FOUNTAIN 115kV
GEESEN - RANCHO
R.D. NIXON 230kV
LINCOLN - MIDWAY
NIXON SOUTH 230kV
RANCHO 115kV
MIDWAY - RANCHO
MIDWAY 230kV
FOUNTAIN VALLEY GEN 115kV
BOONE - MIDWAY
FOUNTAIN VALLEY NUG 230kV
Falcon - Midway 115kV Line Uprate
Trans - Station - TSGT
Trans - Station - Other Utility
Transmission Line - TSGT
Transmission Line - Other Utility
Project Area
Project Feature
TRI-STATE

Falcon-Midway 115 kV Line Uprate

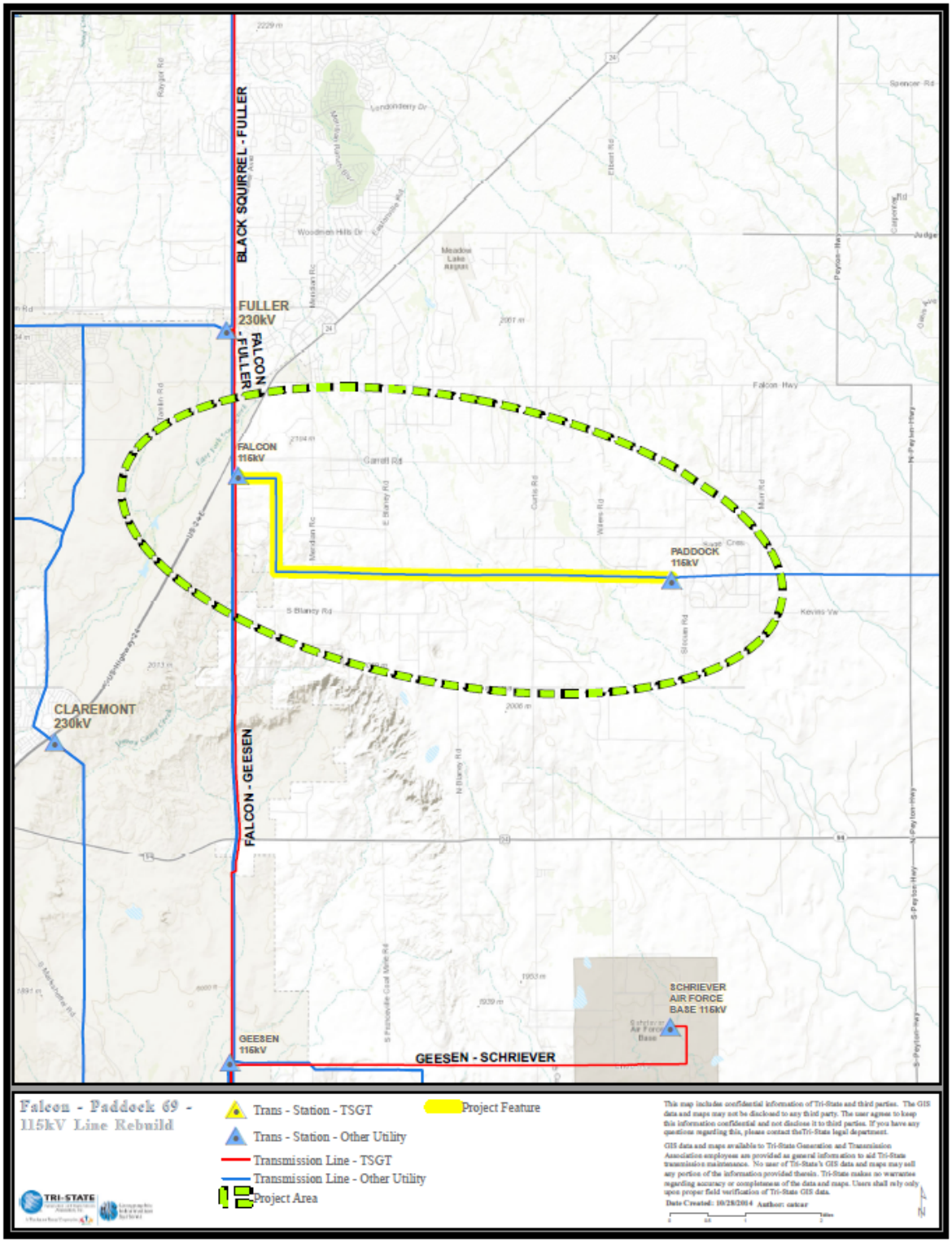
The current Falcon-Midway 115 kV transmission line has a thermal rating of 95MVA, which leads to forecasted overloads from an outage on Tri-State's 115 kV Falcon-Fuller line. In order to mitigate this problem, Tri-State is raising, moving, or rebuilding structures along the line to increase the overall line rating to 145MVA. The increased capacity will help serve Mountain View Electric Association's (MVEA) customer load in the area. The project is being built and financed solely by Tri-State.

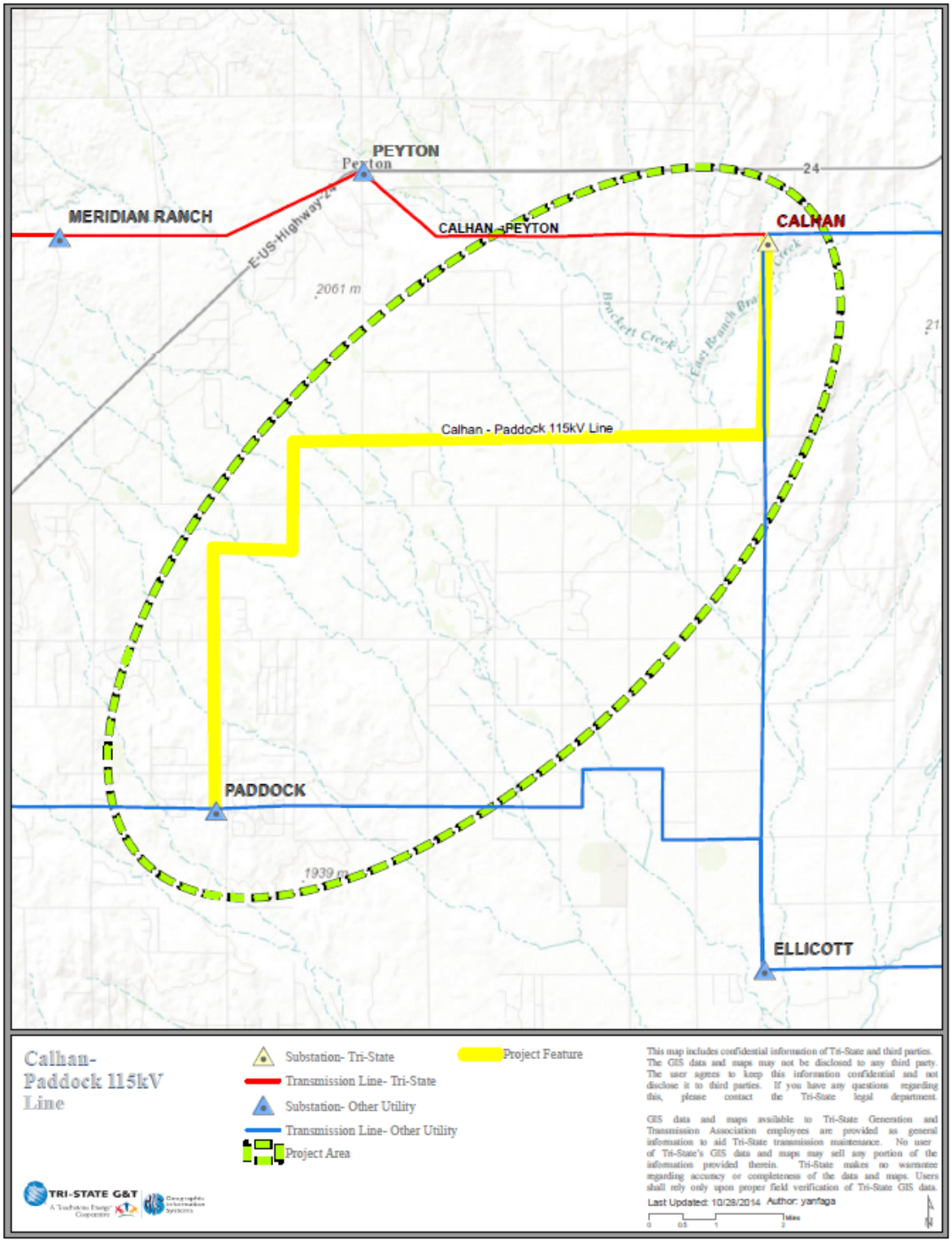
Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

Falcon-Paddock-Calhan 115 kV

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	Rebuild of existing 69 kV line between Falcon and Calhan.
Voltage Class:	115 kV
Facility Rating:	242 MVA
Point of Origin/Location:	Falcon
Point of Termination:	Calhan
Intermediate Points:	Paddock
Length of Line (in Miles):	25.0
Type of Project:	Transmission Line and Substation
Development Status:	Conceptual
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Increase conductor thermal rating and create 115 kV loop.
Project Driver (Primary):	Reliability
Project Driver (Secondary):	
Estimated Cost (in 2014 Dollars):	$33,400,000
Schedule:	
Construction Date:	
Planned In-Service Date:	TBD
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org
Phone	303-254-3028


BLACK SQUIRREL - FULLER
FULLER
230kV
FULLER - FALCON
FALCON
115kV
PADDOCK
115kV
CLAREMONT
230kV
FALCON - GEESEN
SCHRIEVER
AIR FORCE
BASE 115kV
GEESEN
115kV
GEESEN - SCHRIEVER
Falcon - Paddock 69 - 115kV Line Rebuild
Trans - Station - TSGT
Trans - Station - Other Utility
Transmission Line - TSGT
Transmission Line - Other Utility
Project Area
Project Feature
TRI-STATE


PEYTON
Peyton
24
MERIDIAN RANCH
E-US-Highway-24
CALHAN - PEYTON
CALHAN
2061 m
Bracket Creek
East Branch Bra
Creek
21
Calhan - Paddock 115kV Line
PADDOCK
1939 m
ELLICOTT
Calhan-
Paddock 115kV
Line
Substation- Tri-State
Transmission Line- Tri-State
Substation- Other Utility
Transmission Line- Other Utility
Project Area
Project Feature
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Last Updated: 10/28/2014 Author: yanfaga
TRI-STATE G&T

Falcon-Paddock-Calhan 115 kV Line

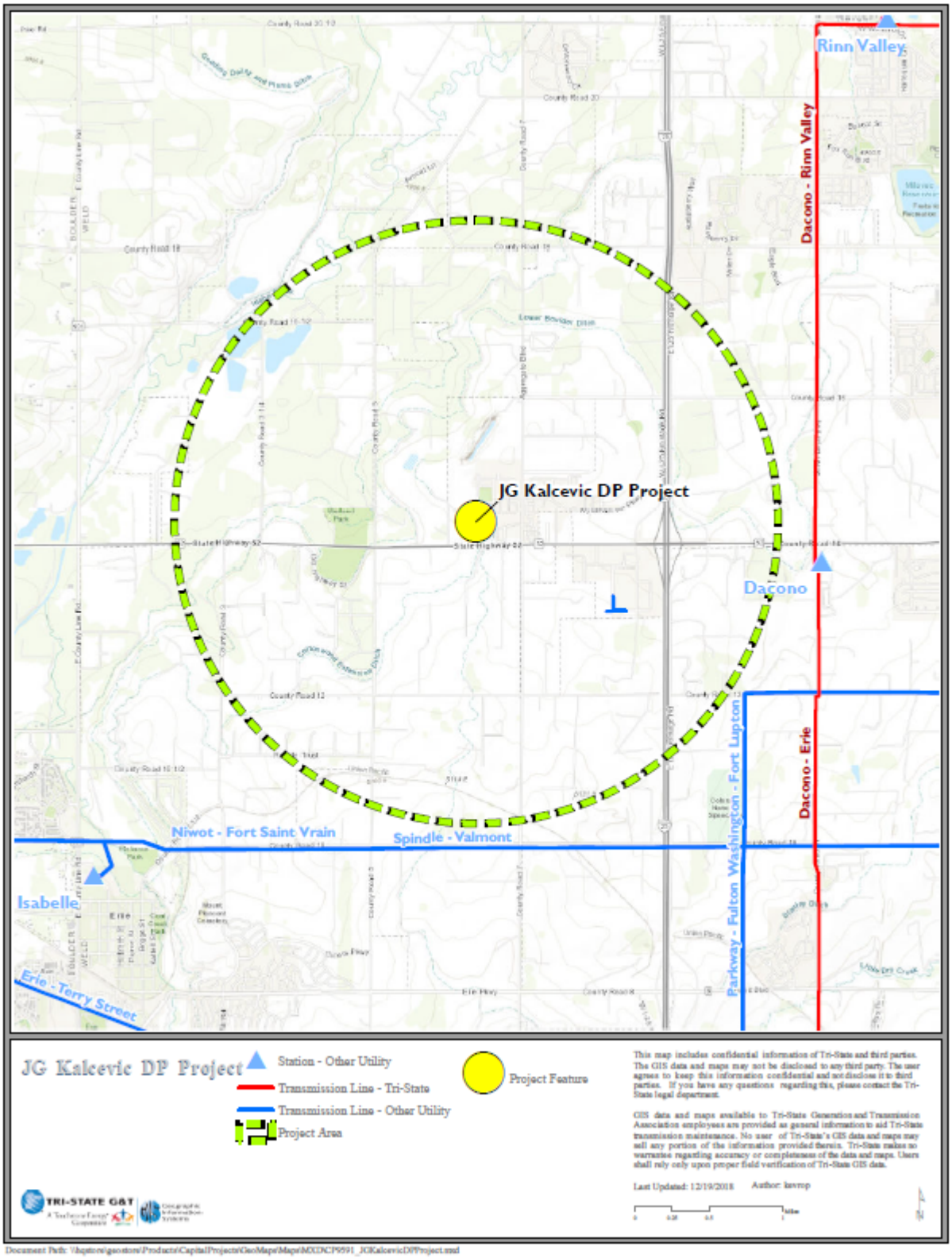
The current Falcon – Paddock – Calhan 69 kV transmission line will be rebuilt to create a 115 kV loop in MVEA's central system. The 115 kV line will improve system reliability by looping the existing radial 115 kV and 69 kV substations in MVEA's system and provide increased voltage support. The 115 kV line also will help serve Mountain View Electric Association's (MVEA) customer load growth in the area. The project is being built and financed solely by Tri-State.

Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

JG Kalcevik Project

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	Substation addition along the Erie-Dacono 115 kV line
Voltage Class:	115 kV
Facility Rating:	175 MVA
Point of Origin/Location:	JG Kalcevik
Point of Termination:	Erie, Dacono
Intermediate Points:	
Length of Line (in Miles):	2.0
Type of Project:	Transmission Line and Substation
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Increase load serving capability and improve system reliability.
Project Driver (Primary):	Load Serving
Project Driver (Secondary):	Reliability
Estimated Cost (in 2019 Dollars):	$14,800,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2022
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org
Phone	303-254-3025


JG Kalcevic DP Project
Rinn Valley
Dacono - Rinn Valley
Dacono
Dacono - Erie
Parkway - Fulton Washington - Fort Lupton
Niwot - Fort Saint Vrain
Spindle - Valmont
Isabelle
Erie - Terry Street
JG Kalcevic DP Project
Station - Other Utility
Transmission Line - Tri-State
Transmission Line - Other Utility
Project Area
Project Feature
TRI-STATE G&T

JG Kalcevik Project

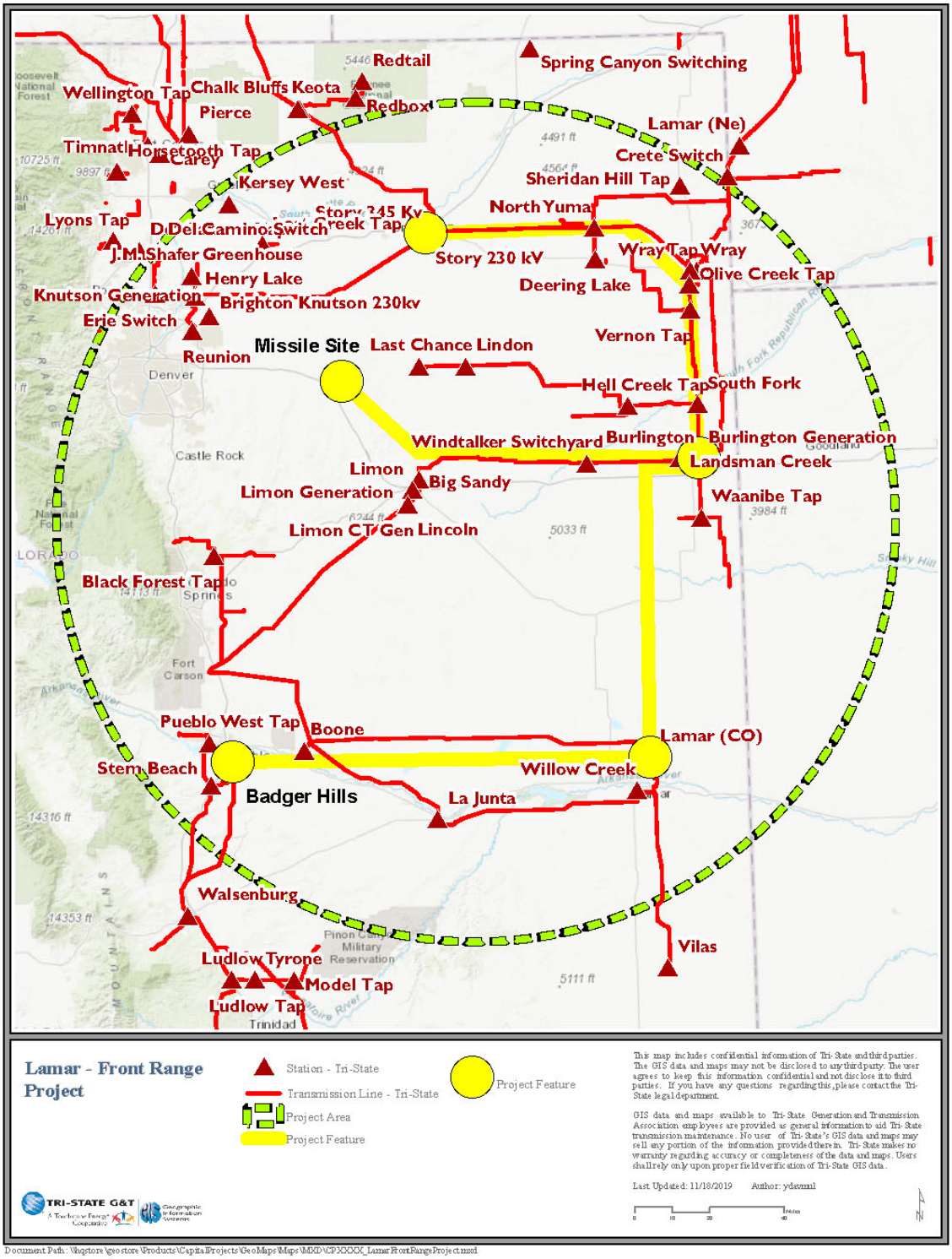
There is significant load growth and development north of Denver along the I-25 corridor. This project will add approximately 2 miles of 115 kV transmission to loop the existing Erie-Dacono 115 kV line through the planned JG Kalcevik substation. The line and substation addition will increase load-serving capability in United Power's service territory north of Denver.

Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

Lamar Front Range Project

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	Public Service Company of Colorado/Xcel Energy
Project Description:	Two high-voltage transmission paths from Lamar Substation to Pueblo area and a second path from Lamar to substations near Brush and/or Deer Trail.
Voltage Class:	345 kV
Facility Rating:	2000 MVA
Point of Origin/Location:	Lamar, CO
Point of Termination:	TBD: Story, Pawnee, Badger Hills, Lamar, Burlington, Missile Site
Intermediate Points:	
Length of Line (in Miles):	300-350
Type of Project:	Transmission Line and Substation
Development Status:	Conceptual
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Improve Tri-State reliability, system load-serving connectivity as regional power provider & accommodate future resources. Xcel Senate Bill 07-100 & reliability.
Project Driver (Primary):	Reliability
Project Driver (Secondary):	
Estimated Cost (in 2019 Dollars):	TBD
Schedule:	
Construction Date:	
Planned In-Service Date:	TBD
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org
Phone	303-254-3025



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Lamar Front Range Project

The Lamar-Front Range Project is a plan currently being re-evaluated jointly through the CCPG to significantly improve load-serving capability, reliability, and potential resource accommodation in eastern and southeastern Colorado. The project could provide connectivity to the bulk transmission systems of Tri-State and PSCo, and provide strong "looped service" to areas with long radial transmission configurations. In concept, the project could create a transmission system capable of at least 2000 MW of new generation in eastern and southeastern Colorado.

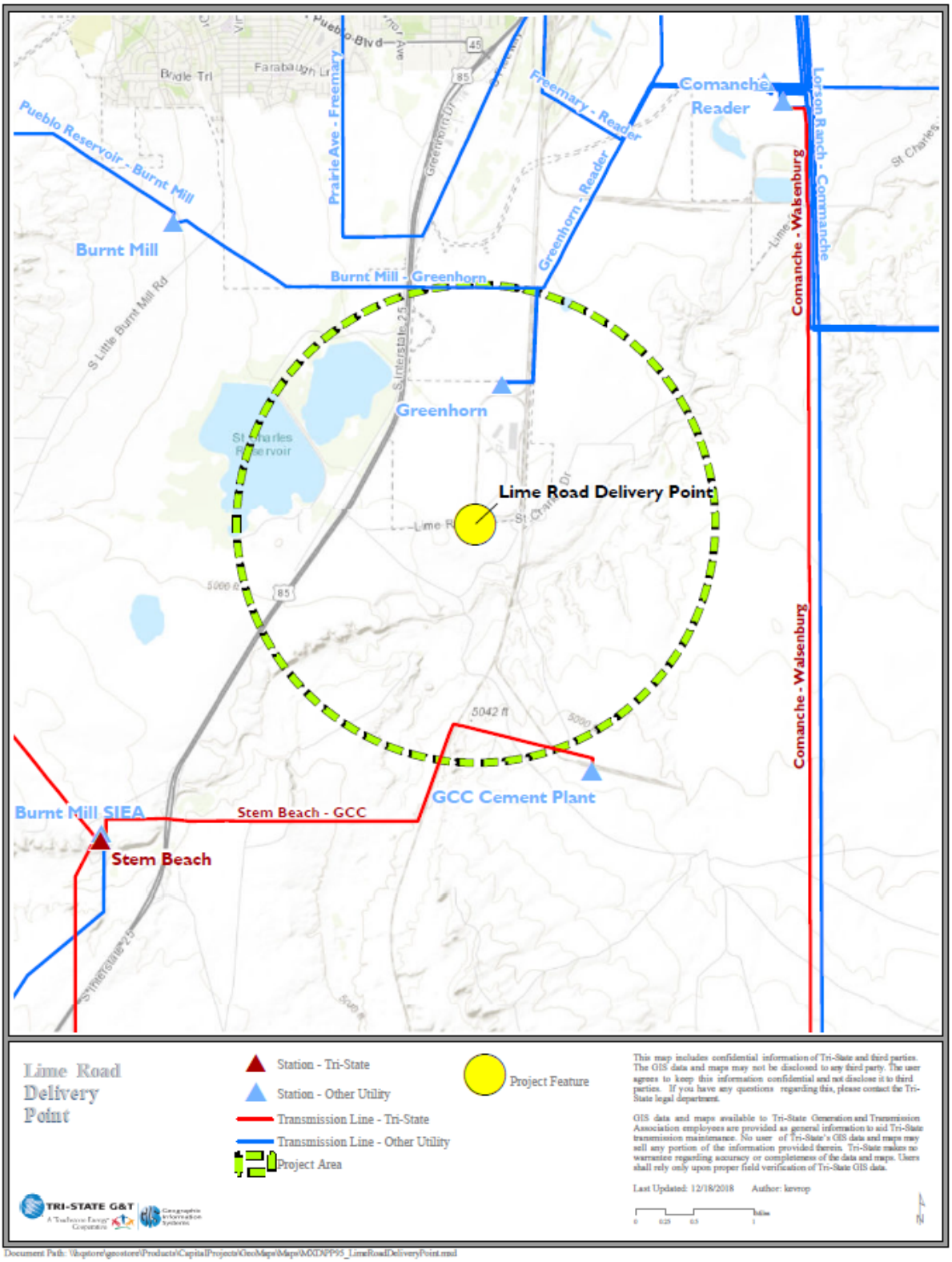
This conceptual project identifies the transmission element additions that are needed to meet both companies' needs, including delivery of future generation to loads in the Denver and Front Range areas. The conceptual project involves 345 kV transmission lines connecting Lamar to the Pueblo area, Lamar to the Burlington area, and the Burlington Area to the Missile Site, Story and Pawnee areas.

Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

Lime Road Delivery Point

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	Substation addition along the Stem Beach-GCC Cement Plant 115 kV
Voltage Class:	115 kV
Facility Rating:	92 MVA
Point of Origin/Location:	Lime Road
Point of Termination:	Stem Beach, GCC Cement Plant
Intermediate Points:	
Length of Line (in Miles):	3.0
Type of Project:	Transmission Line and Substation
Development Status:	Conceptual
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Increase load serving capability.
Project Driver (Primary):	Load Serving
Project Driver (Secondary):	
Estimated Cost (in 2019 Dollars):	$8,100,000
Schedule:	
Construction Date:	
Planned In-Service Date:	TBD
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org
Phone	303-254-3025


Pueblo Blvd
Bridle Trl
Farabaugh Ln
Prairie Ave - Freemary
Freemary - Reader
Comanche
Reader
Lorson Ranch - Commanche
Comanche - Walsenburg
St Charles
Pueblo Reservoir - Burnt Mill
Burnt Mill
Burnt Mill - Greenhorn
Greenhorn - Reader
S Little Burnt Mill Rd
Greenhorn
St Charles Reservoir
Lime Road Delivery Point
St Charles Dr
5042 ft
Comanche - Walsenburg
GCC Cement Plant
Burnt Mill SIEA
Stem Beach - GCC
Stem Beach
Lime Road Delivery Point
Station - Tri-State
Station - Other Utility
Transmission Line - Tri-State
Transmission Line - Other Utility
Project Area
Project Feature
TRI-STATE G&T

Lime Road Delivery Point

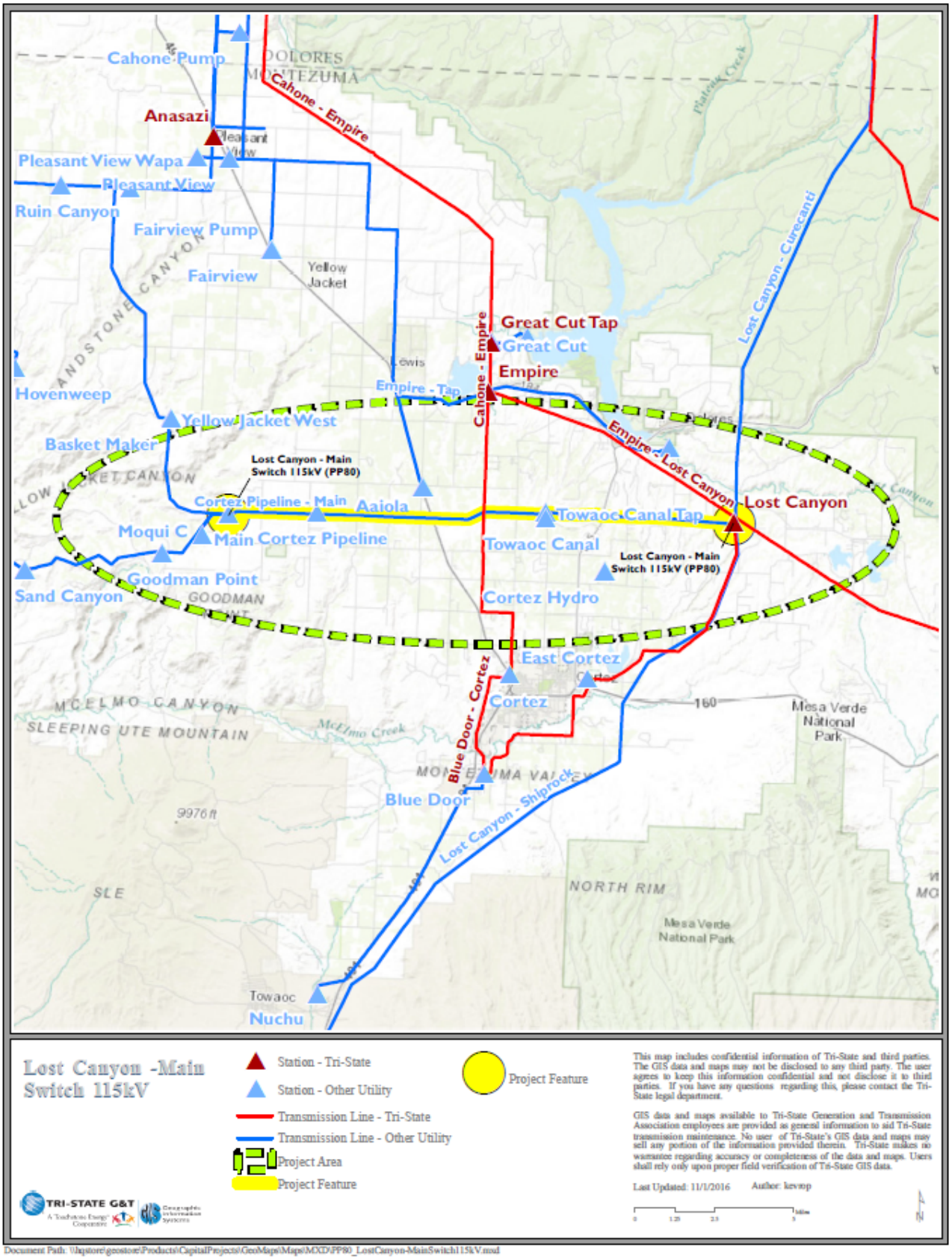
There is oil and gas development south of Pueblo. This project will tap the existing Stem Beach-GCC Cement Plant 115 kV line and add approximately 3 miles of 115 kV transmission to serve the planned Lime Road substation. The line and substation addition will increase load-serving capability for San Isabel Electric Association.

Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

Lost Canyon - Main Switch 115 kV Line

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	New 115 kV transmission line between Lost Canyon and Main Switch Substations.
Voltage Class:	115 kV
Facility Rating:	238 MVA
Point of Origin/Location:	Lost Canyon
Point of Termination:	Main Switch
Intermediate Points:	
Length of Line (in Miles):	16.0
Type of Project:	Transmission Line
Development Status:	Conceptual
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Increase load-serving capability of the CO2 Loop.
Project Driver (Primary):	Load Serving
Project Driver (Secondary):	Reliability
Estimated Cost (in 2019 Dollars):	$22,600,000
Schedule:	
Construction Date:	
Planned In-Service Date:	TBD
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org
Phone	303-254-3025


Cahone Pump
Anasazi
Cahone - Empire
Pleasant View Wapa
Pleasant View
Ruin Canyon
Fairview Pump
Fairview
Yellow Jacket
Great Cut Tap
Great Cut
Empire
Cahone - Empire
Lost Canyon - Curecanti
Hovenweep
Empire - Tap
Yellow Jacket West
Basket Maker
Empire - Lost Canyon
Lost Canyon - Main Switch 115kV (PP80)
Cortez Pipeline - Main
Aaiola
Towaoc Canal Tap
Lost Canyon
Moqui C
Main Cortez Pipeline
Towaoc Canal
Lost Canyon - Main Switch 115kV (PP80)
Goodman Point
Sand Canyon
Cortez Hydro
East Cortez
Cortez
Blue Door - Cortez
Mesa Verde National Park
Blue Door
Lost Canyon - Shiprock
NORTH RIM
Towaoc
Nuchu
Lost Canyon -Main Switch 115kV
Station - Tri-State
Station - Other Utility
Transmission Line - Tri-State
Transmission Line - Other Utility
Project Area
Project Feature
Project Feature
TRI-STATE G&T
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Last Updated: 11/1/2016
Author: kevwp
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Lost Canyon – Main Switch 115 kV Line

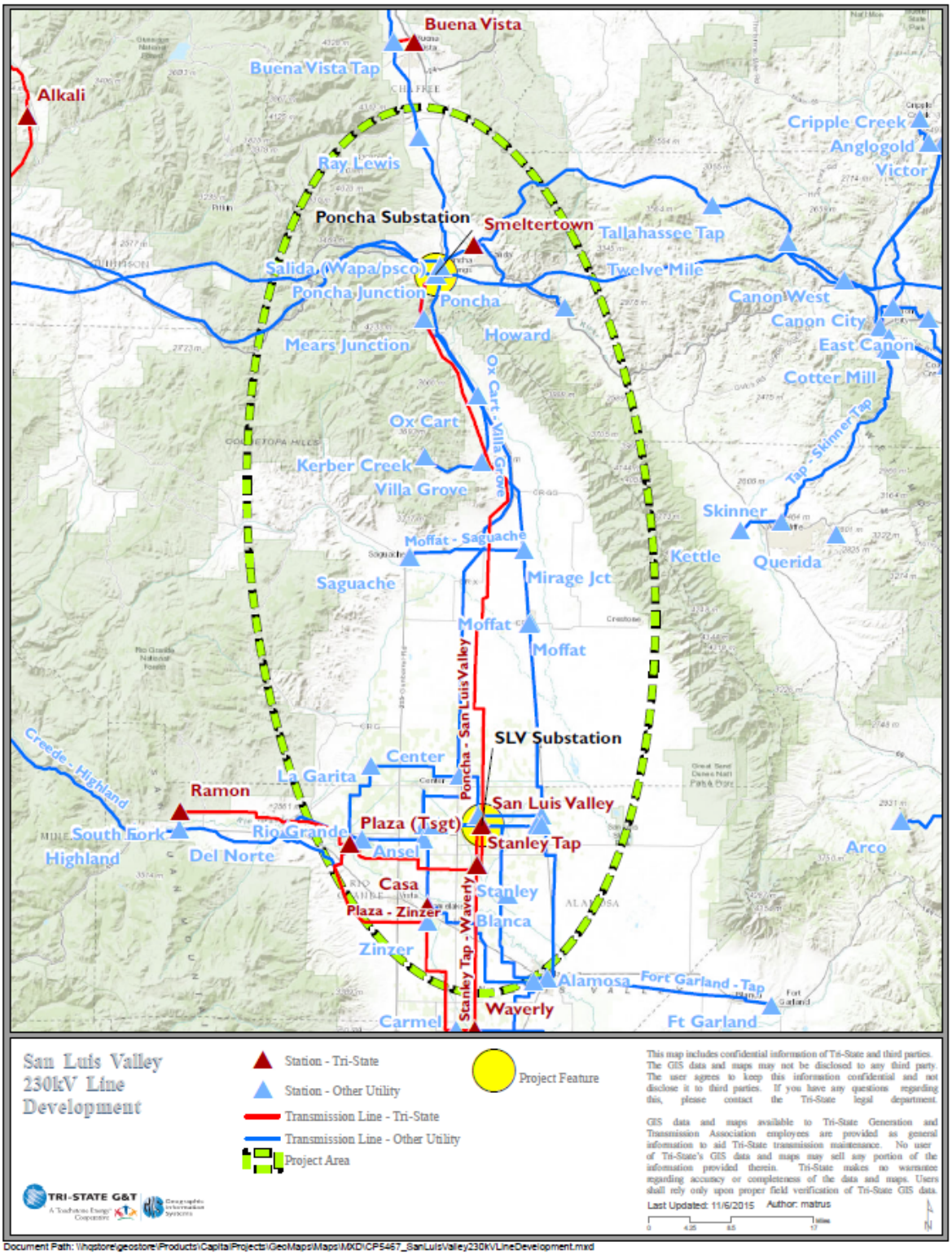
There is heavy load growth in the CO2 Loop consisting of the Yellow Jacket Switch-Main Switch-Sand Canyon-Hovenweep-Yellow Jacket 115 kV system. Constructing the new Lost Canyon-Main Switch 115 kV line will provide support to meet the future load growth for CO2 Loop.

Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

San Luis Valley-Poncha 230 kV Line #2

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	Xcel Energy
Project Description:	Construct a second 230 kV transmission line from San Luis Valley to Poncha.
Voltage Class:	230 kV
Facility Rating:	631 MVA
Point of Origin/Location:	San Luis Valley
Point of Termination:	Poncha
Intermediate Points:	
Length of Line (in Miles):	62 Miles
Type of Project:	Transmission Line
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Provide reliable and adequate load support to San Luis Valley
Project Driver (Primary):	Reliability
Project Driver (Secondary):	
Estimated Cost (in 2014 Dollars):	$58,000,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2025
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org 303-
Phone	254-3025


Buena Vista
Buena Vista Tap
Alkali
Ray Lewis
Poncha Substation
Smeltertown
Salida (Wapa/psco)
Poncha Junction
Poncha
Howard
Mears Junction
Ox Cart - Villa Grove
Ox Cart
Kerber Creek
Villa Grove
Moffat - Saguache
Saguache
Mirage Jct
Moffat
Moffat
Poncha - San Luis Valley
SLV Substation
Center
La Garita
Creede - Highland
Ramon
San Luis Valley
Plaza (Tsgt)
Rio Grande
Stanley Tap
South Fork
Highland
Del Norte
Ansel
Casa
Plaza - Zinzer
Stanley
Blanca
Zinzer
Stanley Tap - Waverly
Alamosa
Fort Garland - Tap
Waverly
Carmel
Ft Garland
Cripple Creek
Anglogold
Victor
Tallahassee Tap
Twelve Mile
Canon West
Canon City
East Canon
Cotter Mill
Tap - Skinner Tap
Skinner
Kettle
Querida
Arco
San Luis Valley
230kV Line
Development
Station - Tri-State
Station - Other Utility
Transmission Line - Tri-State
Transmission Line - Other Utility
Project Area
Project Feature
TRI-STATE G&T
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Last Updated: 11/6/2015
Author: matrus
Document Path: \\hqstore\geostore\Products\Capital\Projects\GeoMaps\Maps\MXD\CP5467_SanLuisValley230kVLineDevelopment.mxd

San Luis Valley – Poncha 230 kV #2

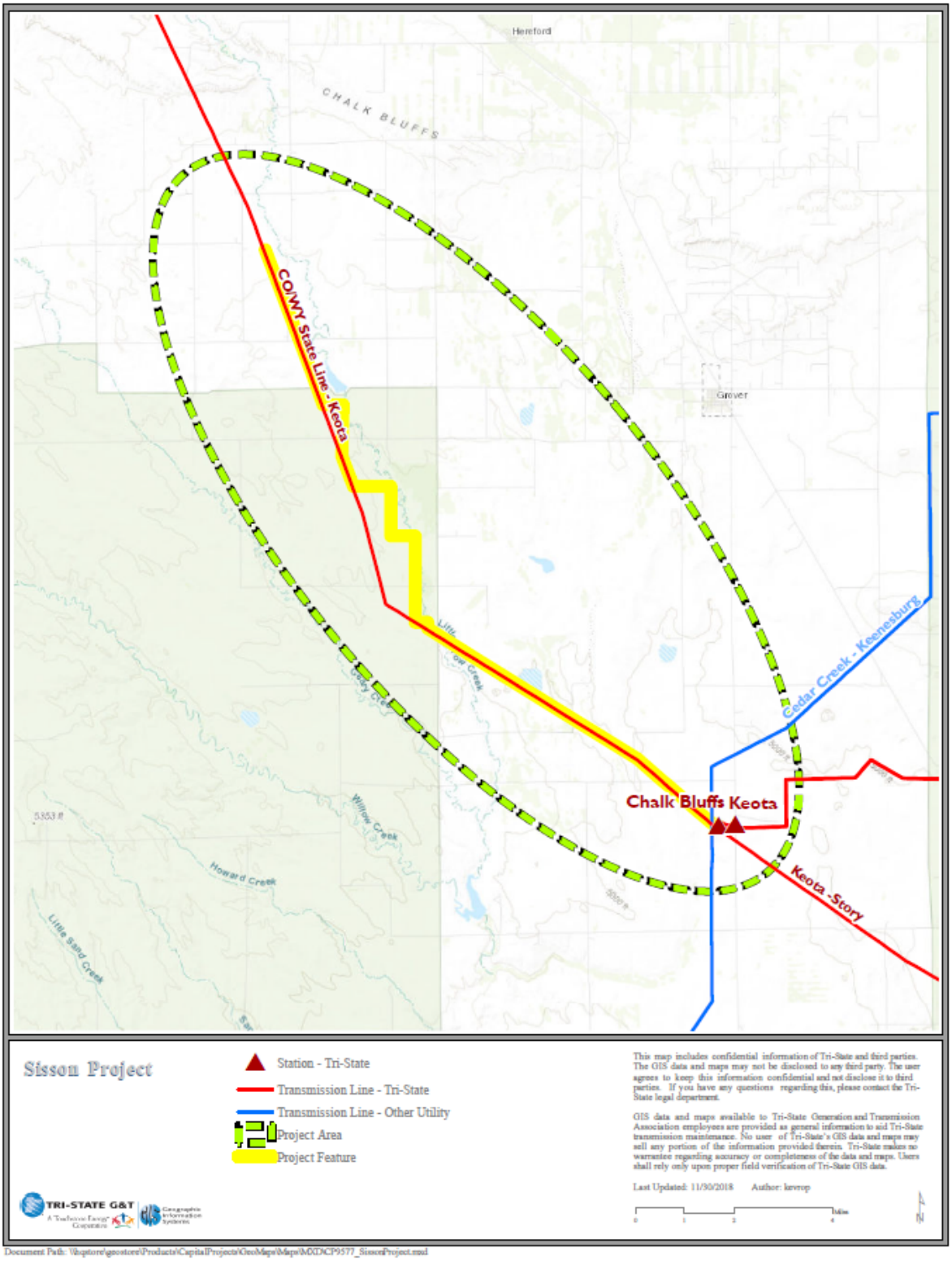
New high-voltage transmission must be built in the San Luis Valley (SLV) region of south-central Colorado to restore electric system reliability and customer load-serving capability, and to accommodate development of potential generation resources. Tri-State Generation and Transmission (Tri-State) and Public Service Company of Colorado (Public Service) facilitated a study effort through the Colorado Coordinated Planning Group (CCPG) to perform an evaluation of the transmission system immediately in and around the SLV and develop system alternatives that would improve the transmission system between the SLV and Poncha Springs (Poncha), Colorado. Both Tri-State and Public Service have electric customer loads in the SLV region that are served radially from transmission that originates at or near Poncha. The study concluded that, at a minimum, an additional 230 kV line is needed to increase system reliability. Studies show that this could be accomplished by either adding a new 230 kV line or rebuilding an existing lower voltage line to and operating it at 230 kV.

Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

Sisson Project

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	Substation addition radially served from Keota substation
Voltage Class:	115 kV
Facility Rating:	244 MVA
Point of Origin/Location:	Keota
Point of Termination:	Lloyd Sisson
Intermediate Points:	
Length of Line (in Miles):	24.0
Type of Project:	Transmission Line and Substation
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Increase load serving capability.
Project Driver (Primary):	Load Serving
Project Driver (Secondary):	
Estimated Cost (in 2019 Dollars):	$18,800,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2020
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org 303-
Phone	254-3025


Hereford
CHALK BLUFFS
COWY State Line - Keota
Grover
Cedar Creek - Keenesburg
Chalk Bluffs Keota
Keota -Story
Howard Creek
Little Sand Creek
Sisson Project
Station - Tri-State
Transmission Line - Tri-State
Transmission Line - Other Utility
Project Area
Project Feature
TRI-STATE G&T
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Last Updated: 11/30/2018 Author: kevrop
Miles
N

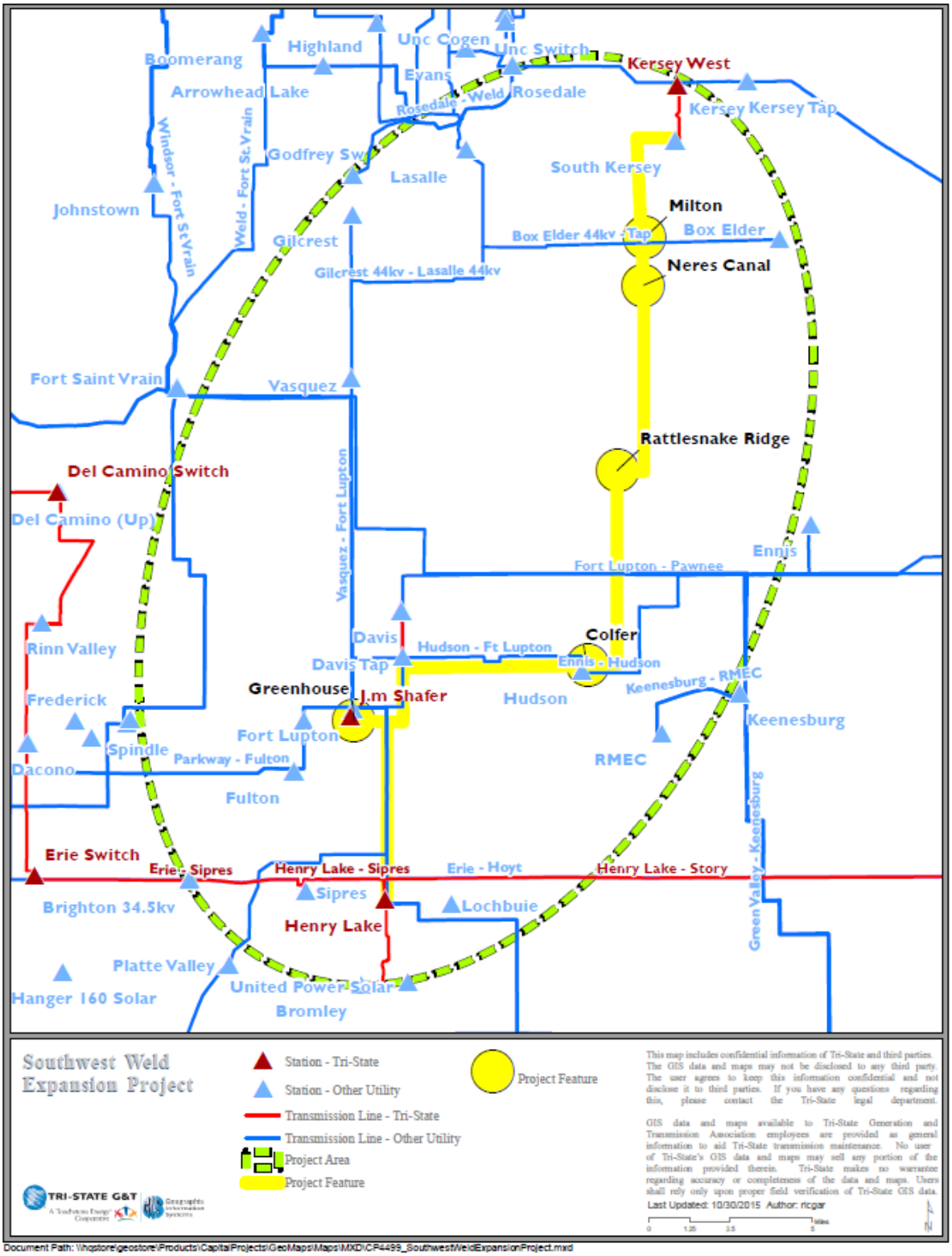
Sisson Project

There is oil and gas development in northeast Colorado. This project will add approximately 24 miles of 115 kV transmission to serve the planned Lloyd Sisson substation. The line and substation addition will increase load-serving capability for High West Energy.

Tri-State Generation and Transmission Association
2020-2030 Transmission Plan

Southwest Weld Expansion Project

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	Construct approximately 30 aggregated miles of 115 kV and 230 kV transmission lines with six potential load-serving substations and/or line taps.
Voltage Class:	230 kV
Facility Rating:	300 MVA
Point of Origin/Location:	JM Shafer
Point of Termination:	South Kersey, Henry Lake
Intermediate Points:	Davis, Colfer (Hudson), Rattlesnake Ridge, Neres Canal, Greenhouse
Length of Line (in Miles):	30 miles
Type of Project:	Transmission Line and Substation
Development Status:	Under Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Increase load-serving capability and system reliability
Project Driver (Primary):	Load Serving
Project Driver (Secondary):	Reliability
Estimated Cost (in 2014 Dollars):	$70,000,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2023
Regulatory Info:	CPCN filed 8/2014
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org 303-
Phone	254-3025



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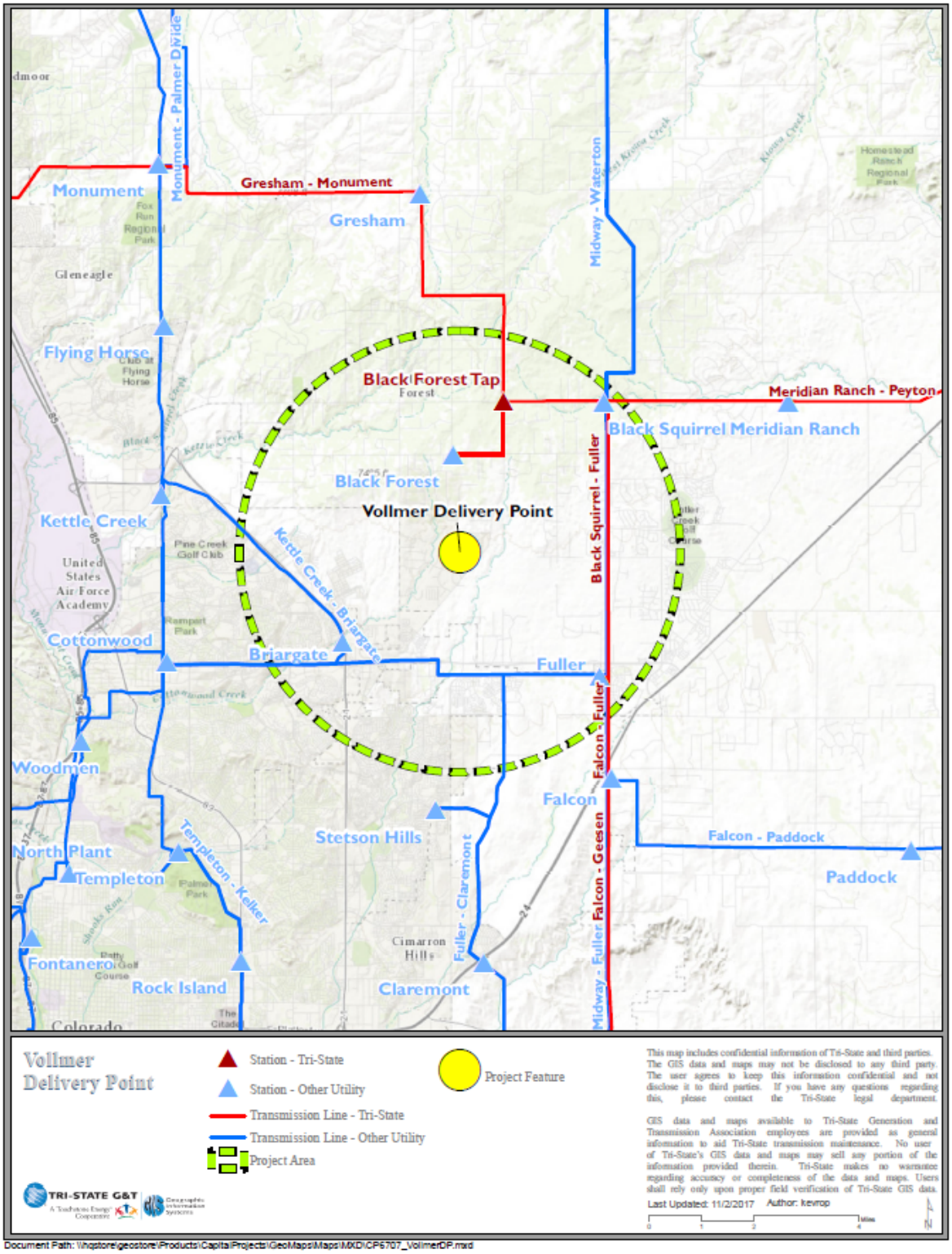
Southwest Weld Expansion Project

Due to large scale oil and gas development in southwest Weld County and native load growth, Tri-State is planning on constructing approximately 30 aggregate miles of 115 kV and 230 kV transmission lines to meet the forecasted demand of approximately 300MW within the next five years. Six potential 115 kV load-serving substations and/or line taps will be constructed by Tri-State, while new 69 kV transmission lines and substations will be constructed by United Power for the project.

Tri-State Generation and Transmission Association
2020-2030 Transmission Plan

Vollmer Project

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	Construct approximately 2 miles of 115 kV transmission to serve the planned Vollmer substation
Voltage Class:	115 kV
Facility Rating:	143 MVA
Point of Origin/Location:	Vollmer
Point of Termination:	Jackson Fuller, Black Squirrel
Intermediate Points:	
Length of Line (in Miles):	2 miles
Type of Project:	Transmission Line and Substation
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Increase load-serving capability
Project Driver (Primary):	Load Serving
Project Driver (Secondary):	
Estimated Cost (in 2019 Dollars):	$7,100,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2022
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org 303-
Phone	254-3025


Monument - Palmer Divide
Gresham - Monument
Monument
Gresham
Midway - Waterton
Flying Horse
Black Forest Tap
Meridian Ranch - Peyton
Black Squirrel Meridian Ranch
Black Forest
Vollmer Delivery Point
Black Squirrel - Fuller
Kettle Creek
Kettle Creek - Briargate
Cottonwood
Briargate
Fuller
Falcon - Fuller
Woodmen
Falcon
Stetson Hills
Falcon - Paddock
North Plant
Templeton
Templeton - Kelker
Paddock
Fontanero
Rock Island
Cimarron Hills
Fuller - Claremont
Claremont
Midway - Fuller
Falcon - Geesen
Colorado
Vollmer Delivery Point
Station - Tri-State
Station - Other Utility
Transmission Line - Tri-State
Transmission Line - Other Utility
Project Area
Project Feature
TRI-STATE G&T
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Last Updated: 11/2/2017
Author: kevrop
Miles
N
Document Path: \\hqstore\geostore\Products\Capital\Projects\GeoMaps\Maps\MXD\CP6707_VollmerDP.mxd

Vollmer Project

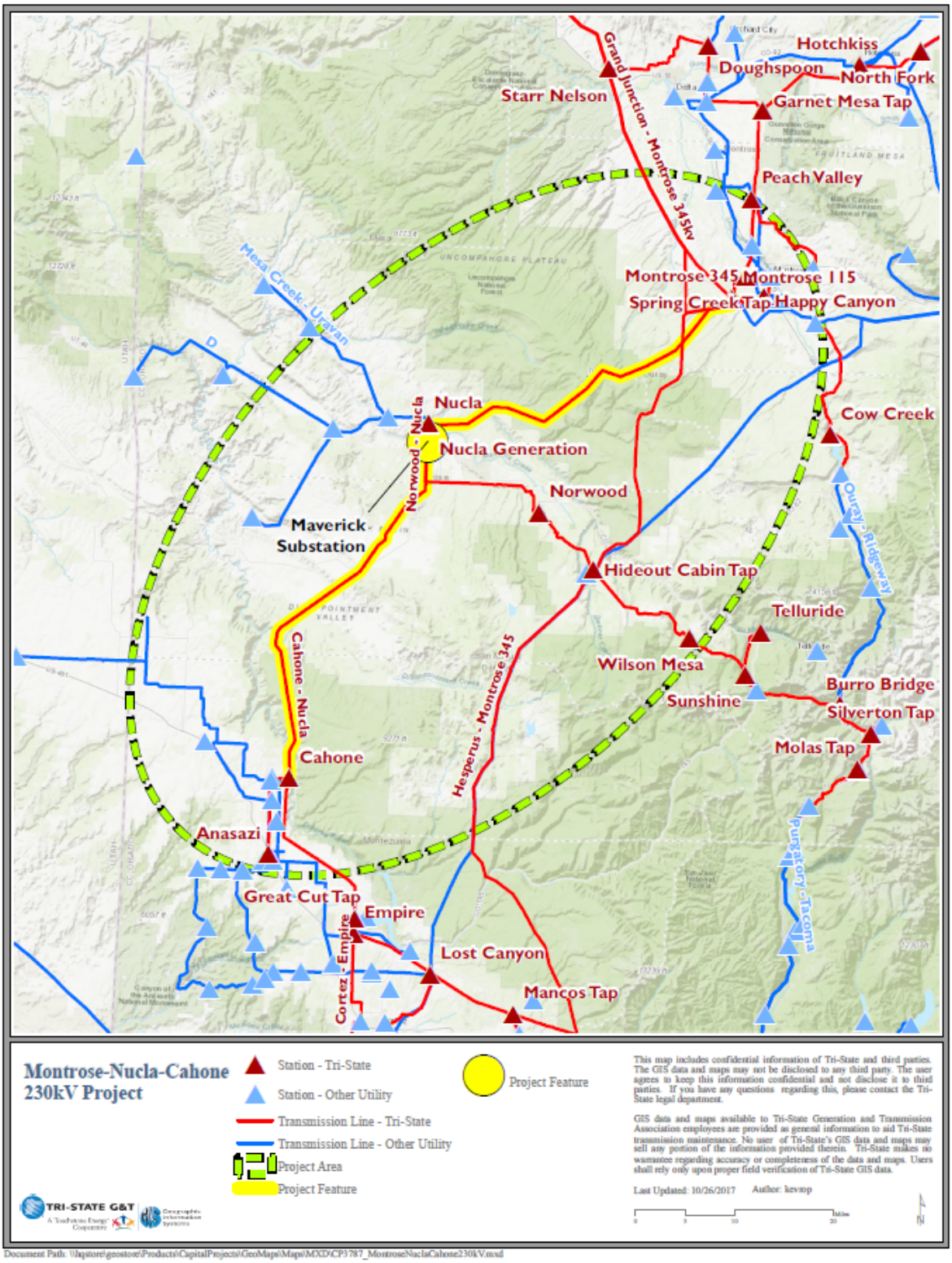
There is development in outside of Colorado Springs. This project will add approximately 2 miles of 115 kV transmission to serve the planned Vollmer substation. The line and substation addition will increase load-serving capability for Mountain View Electric Association.

Tri-State Generation and Transmission Association

2020-2030 Transmission Plan

Western Colorado Transmission Upgrade Project

Project Sponsor:	Tri-State Generation and Transmission Association
Additional Project Participants:	
Project Description:	Rebuild existing transmission line from Montrose Substation to Cahone Substation from 115 kV to 230 kV capable. The transmission line will continue 115 kV operation and be sectionalized at the planned Maverick 115 kV substation, which will be constructed near Nucla substation. The existing Nucla - Norwood 115 kV line will sectionalize at Maverick substation.
Voltage Class:	230 kV
Facility Rating:	239 MVA
Point of Origin/Location:	Montrose
Point of Termination:	Cahone
Intermediate Points:	Maverick
Length of Line (in Miles):	80 Miles
Type of Project:	Transmission Line and Substation
Development Status:	Under Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Reliability - eliminate need for existing Nucla Remedial Action Scheme and replace failing structures.
Project Driver (Primary):	Reliability
Project Driver (Secondary):	
Estimated Cost (in 2019 Dollars):	$57,200,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2020
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Ryan Hubbard
Email	rhubbard@tristategt.org
Phone	303-254-3025


Hotchkiss
Doughspoon
North Fork
Starr Nelson
Garnet Mesa Tap
Grand Junction - Montrose 345kv
Peach Valley
Mesa Creek - Uravan
Montrose 345
Montrose 115
Spring Creek Tap
Happy Canyon
Nucla
Nucla
Cow Creek
Nucla Generation
Norwood - Nucla
Norwood
Maverick Substation
Ourey - Ridgeway
Hideout Cabin Tap
Telluride
Cahone - Nucla
Hesperus - Montrose 345
Wilson Mesa
Burro Bridge
Sunshine
Silverton Tap
Cahone
Molas Tap
Anasazi
Purgatory - Tacoma
Great Cut Tap
Empire
Cortez - Empire
Lost Canyon
Mancos Tap
Montrose-Nucla-Cahone
230kV Project
Station - Tri-State
Station - Other Utility
Transmission Line - Tri-State
Transmission Line - Other Utility
Project Area
Project Feature
Project Feature
TRI-STATE G&T
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Last Updated: 10/26/2017
Author: kevwp
Miles
N
Document Path: \\hqstore\geostore\Products\CapitalProjects\GeoMaps\Maps\MXD\CP3787_MontroseNuclaCahone230kV.mxd

Western Colorado Transmission Upgrade Project (Montrose-Nucla-Cahone 230 kV Line)

The 40-mile-long Montrose – Nucla and Nucla – Cahone 115 kV transmission lines are old, overloaded, undersized, and must be rebuilt. To ensure continued reliability of the southwest Colorado transmission system, Tri-State is replacing them with new, higher-capacity lines rated for 230 kV operation. This project will increase the load-serving capability of the southwest Colorado transmission system and also eliminate the need for the existing Nucla Remedial Action Scheme (RAS), which trips the Montrose-Nucla line when it starts to overload after contingencies/outages in the area.