

Appendix C

PSCo

10-Year Transmission Projects

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SB07-100 Projects Summary

Senate Bill 07-100 (SB100) was passed by the Colorado legislature and signed by the Governor in 2007. This bill determined that a robust electric transmission system is critical to ensuring the reliability of electric power for Colorado citizens and Colorado's vibrant economy. It also determined that a high quality of life depends on the continued availability of clean, affordable, reliable electricity. Therefore, Colorado utilities should continually evaluate the adequacy of electric transmission facilities throughout the state, and be encouraged to promptly and efficiently improve such infrastructure as required to meet the state's existing and future energy needs.

The legislation requires Public Service Company of Colorado (PSCo) to:

- Designate "Energy Resource Zones" (ERZs). An ERZ is defined as "a geographic area in which transmission constraints hinder the delivery of electricity to Colorado consumers, the development of new electric generation facilities to serve Colorado consumers, or both."
- Develop plans for transmission necessary to deliver the electric power consistent with the timing of development of energy resources in or near each zone
- Consider how transmission can be provided to encourage local ownership of renewable energy facilities
- Submit proposed plans, designations, and applications for Certificate of Public Convenience and Necessity (CPCN)

PSCo is required to file a report with the Colorado Public Utilities Commission (CPUC) on or before October 31 of each odd number year with the most recent filing in October 2011.

Ault - Cherokee 230kV Transmission Project

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: New transmission from the Ault Substation to the Cherokee Substation

Voltage Class: 230 kV
Facility Rating:
Point of Origin/Location: Ault
Point of Termination: Cherokee
Intermediate Points:
Length of Line (in Miles): 90
Type of Project: Transmission Line
Development Status: Conceptual
Routing:
Subregional Planning Group: CCPG

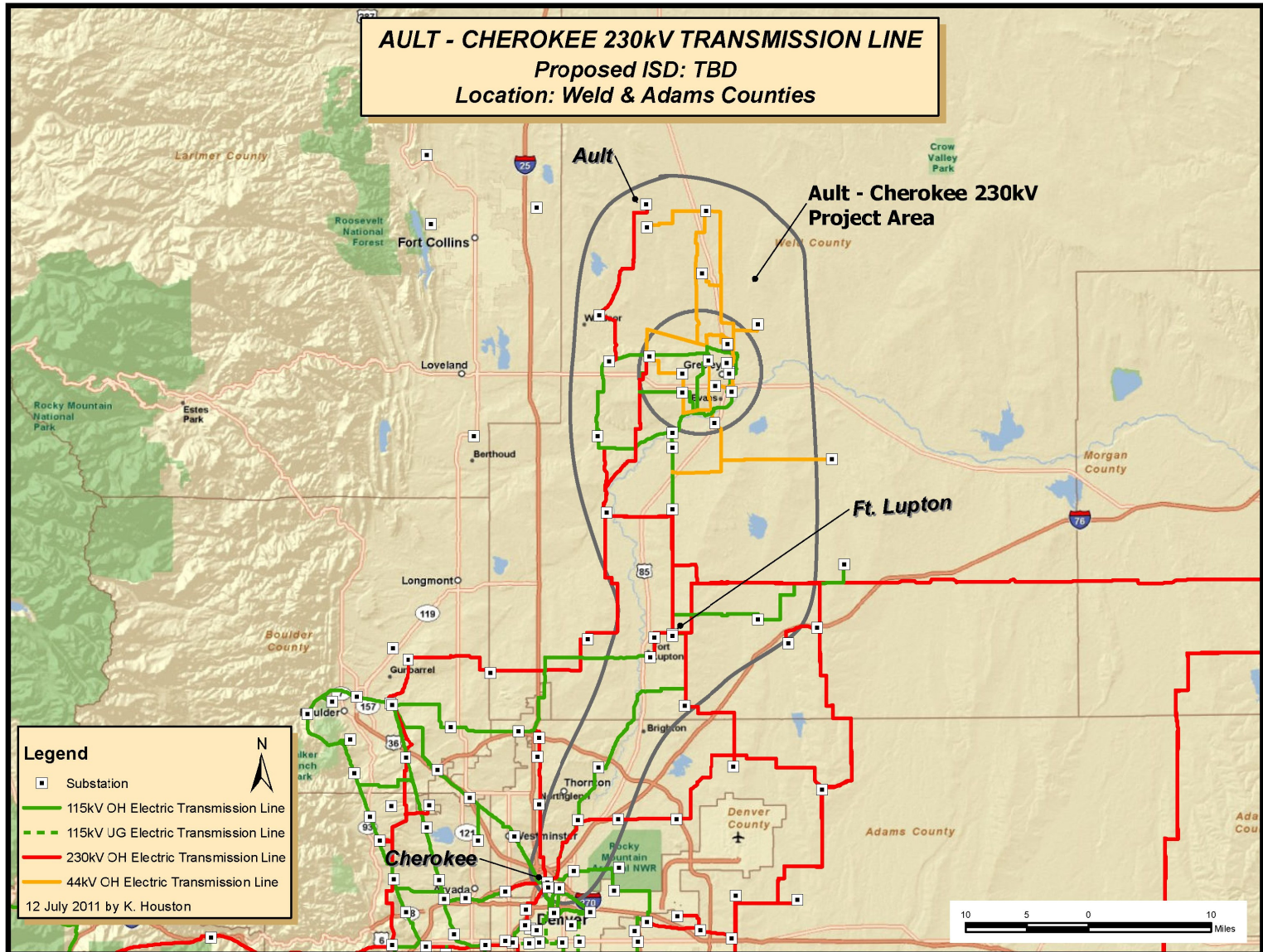
Purpose of Project: SB100. Project for Energy Resource Zone 1

Estimated Cost (in 2010 Dollars): \$77,000,000

Schedule:

Construction Date:
Planned In-Service Date: TBD
Regulatory Info: Submitted to CPUC through Rule 3206: CPCN required
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_psc transmission.php
<http://www.sb100transmission.com/>



Lamar – Front Range Transmission Project

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants: Tri-State
Project Description: Note: THIS JOINT PROJECT IS LISTED UNDER TRI-STATE High voltage transmission originating in southeast Colorado and terminating at various Front Range locations

Voltage Class: 345 kV
Facility Rating:
Point of Origin/Location: Lamar
Point of Termination: Comanche, Missile Site, Story
Intermediate Points: Burlington, Big Sandy, Boone
Length of Line (in Miles): 350
Type of Project: Transmission Line
Development Status: Planned¹
Routing:
Subregional Planning Group: CCPG

Purpose of Project: SB100. Project would facilitate resources in Energy Resource Zones 2 and 3.

Estimated Cost (in 2010 Dollars):

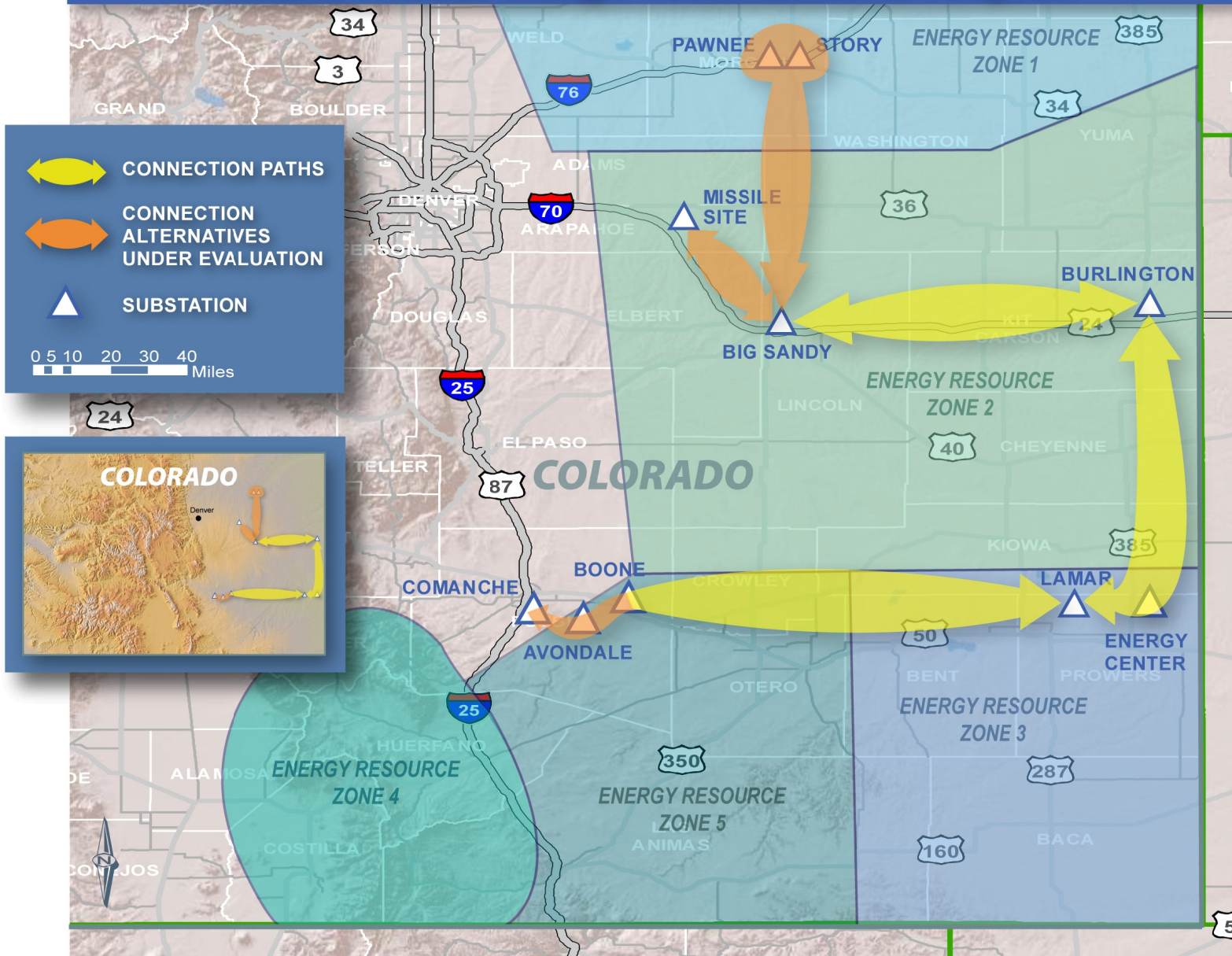
Schedule:

Construction Date:
Planned In-Service Date: 2019
Regulatory Info: Submitted to CPUC through Rule 3206: CPCN required
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xclenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_psc transmission.php
<http://www.sb100transmission.com/>

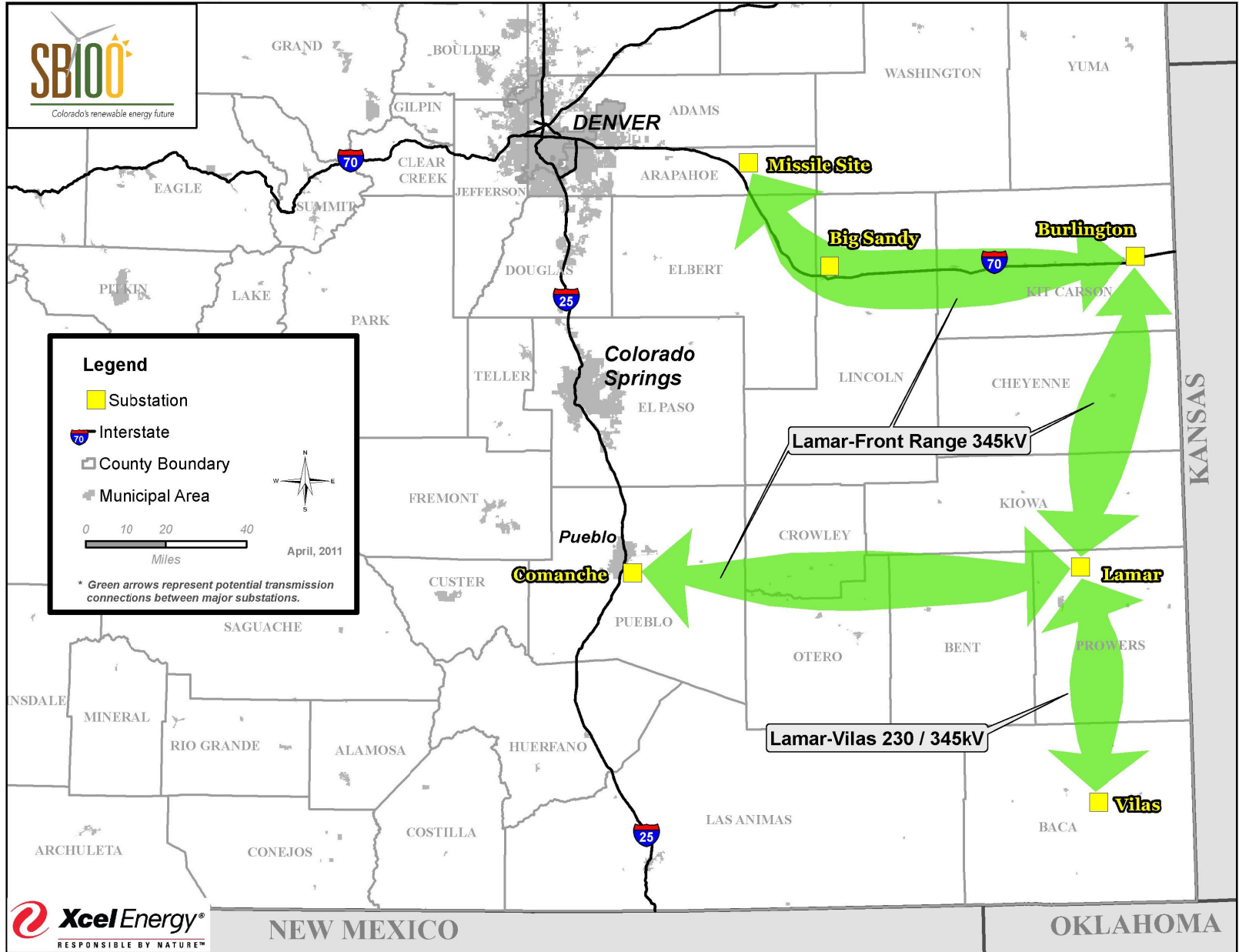
¹ Planning is ongoing. See page 25 of the Public Service Senate Bill 07-100 Report filed October 31, 2011.

Lamar - Front Range Transmission Project



Lamar-Vilas 345/230kV Transmission Project

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	Tri-State
Project Description:	New transmission from Lamar to Vilas
Voltage Class:	345 kV
Facility Rating:	
Point of Origin/Location:	Lamar
Point of Termination:	Vilas
Intermediate Points:	
Length of Line (in Miles):	57
Type of Project:	Transmission Line
Development Status:	Conceptual
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	SB100. Project for Energy Resource Zone 3
Estimated Cost (in 2010 Dollars):	\$90,000,000
Schedule:	
Construction Date:	
Planned In-Service Date:	TBD
Regulatory Info:	Submitted to CPUC through Rule 3206: CPCN required
Regulatory Date:	
Permitting Info:	No
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_psc transmission.php http://www.sb100transmission.com/



Midway – Waterton 345kV Transmission Project

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants: PSCo
Project Description: 345kV transmission from the Midway Substation to the Waterton Substation, southwest of Denver.

Voltage Class: 345 kV
Facility Rating: 1200 MVA
Point of Origin/Location: Midway Substation
Point of Termination: Waterton Substation
Intermediate Points: None
Length of Line (in Miles): 82
Type of Project: Transmission Line
Development Status: In-Service
Routing:
Subregional Planning Group: CCPG

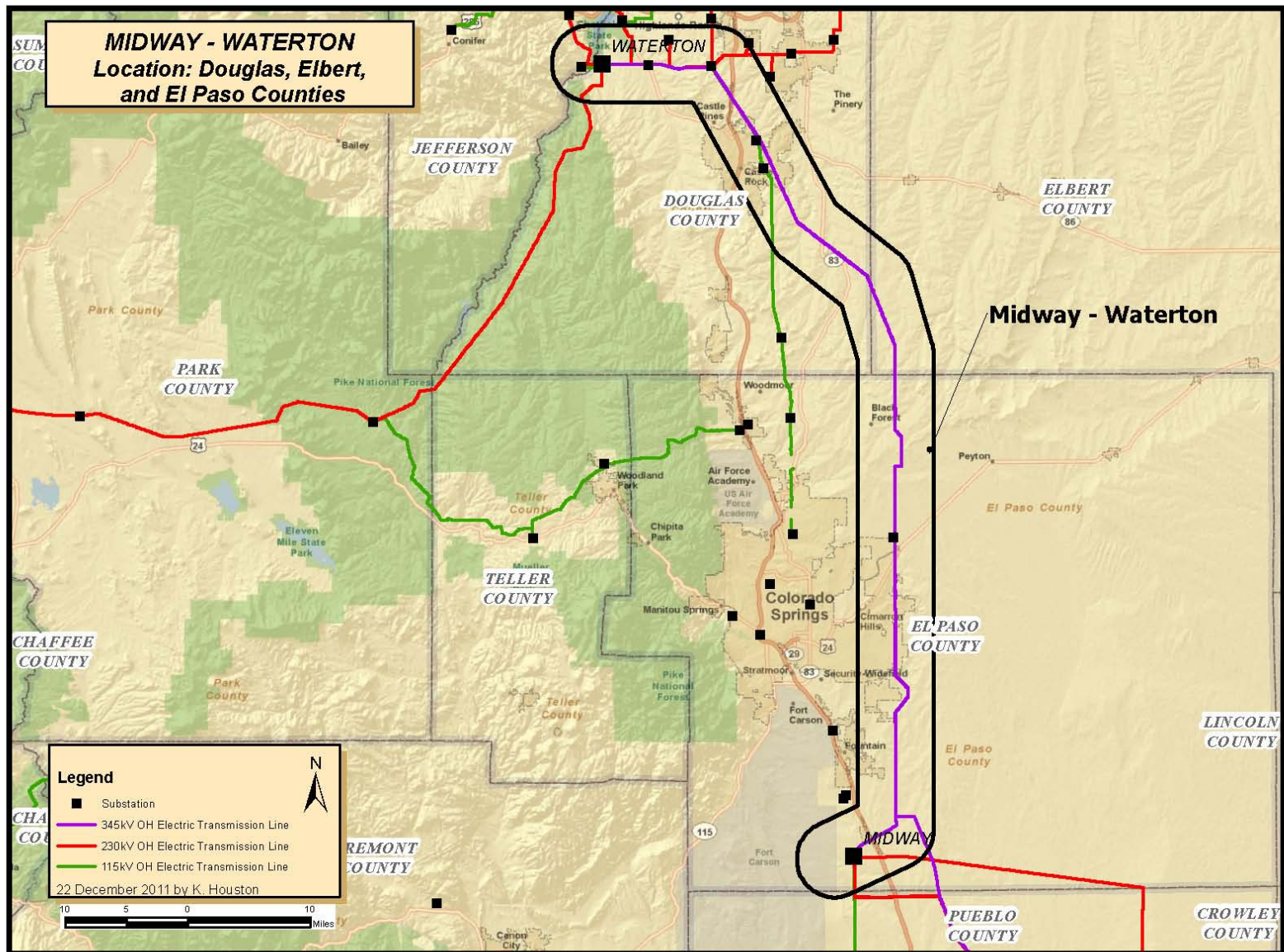
Purpose of Project: SB100. Accommodate new generation in southern Colorado

Estimated Cost (in 2010 Dollars): \$35,000,000

Schedule:

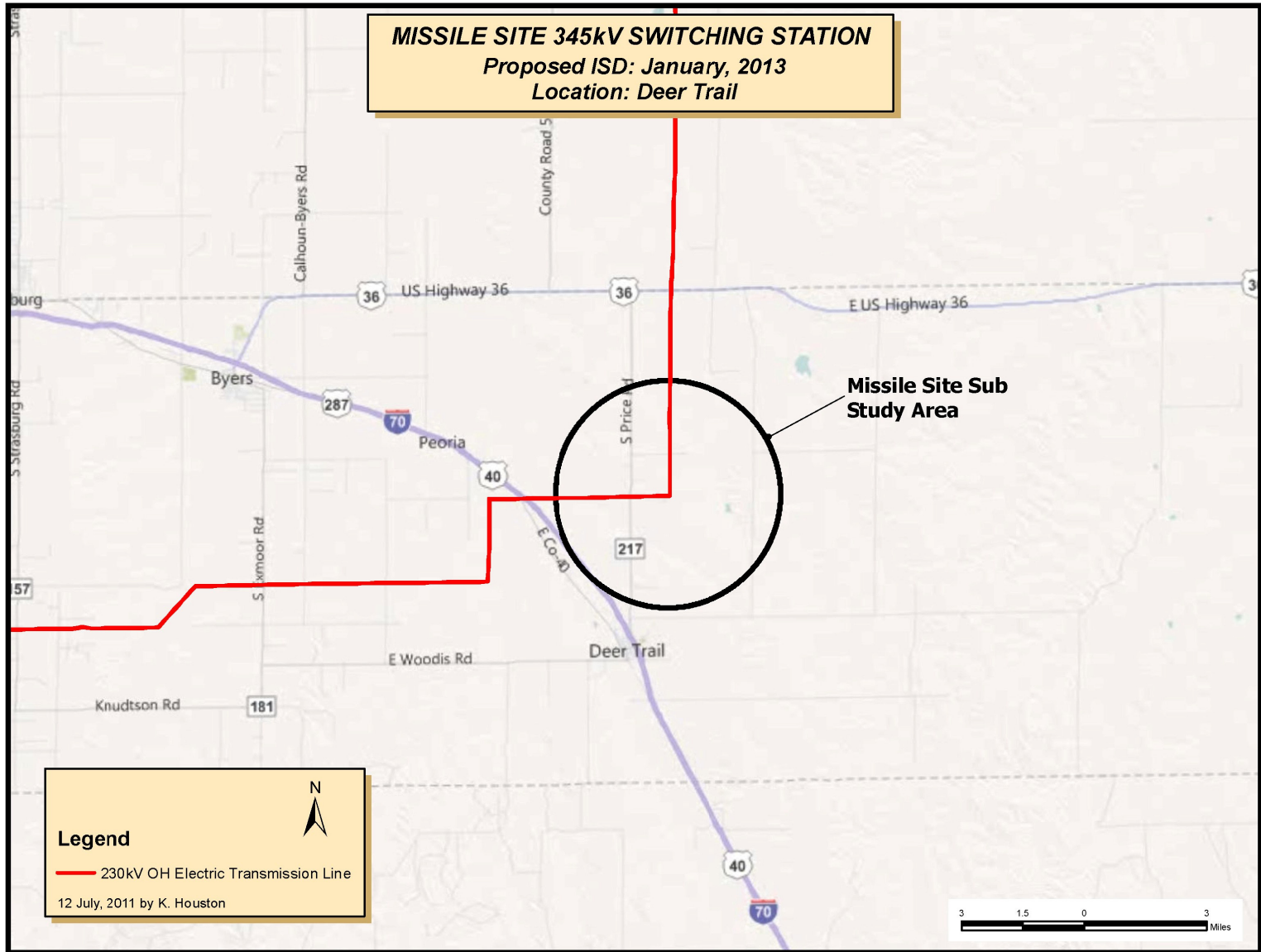
Construction Date: 2008
Planned In-Service Date: 2011
Regulatory Info: CPUC
Regulatory Date:
Permitting Info: Yes
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_psc transmission.php
<http://www.sb100transmission.com>



Missile Site 345 kV Substation

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	Construct a new 345 kV Missile Site Switching Station, sectionalizing the planned Pawnee - Smoky Hill 345 kV line, near Deer Trail, Colorado.
Voltage Class:	345 kV
Facility Rating:	560 MVA
Point of Origin/Location:	Missile Site Substation
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Substation
Development Status:	Under Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	SB100. Project facilitates new resources in Energy Resource Zones 1 and 2
Estimated Cost (in 2010 Dollars):	\$16,200,000
Schedule:	
Construction Date:	2012
Planned In-Service Date:	2013
Regulatory Info:	Submitted to CPUC: CPCN Granted
Regulatory Date:	
Permitting Info:	Yes
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_psc transmission.php http://www.sb100transmission.com



Pawnee - Daniels Park 345 kV Transmission Project

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: 345 kV transmission from Pawnee Substation to the Daniels Park Substation. The project will also result in a new Smoky Hill – Daniels Park 345 kV line.

Voltage Class: 345 kV
Facility Rating:
Point of Origin/Location: Pawnee
Point of Termination: Daniels Park
Intermediate Points: Missile Site
Length of Line (in Miles): 124
Type of Project: Transmission Line
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

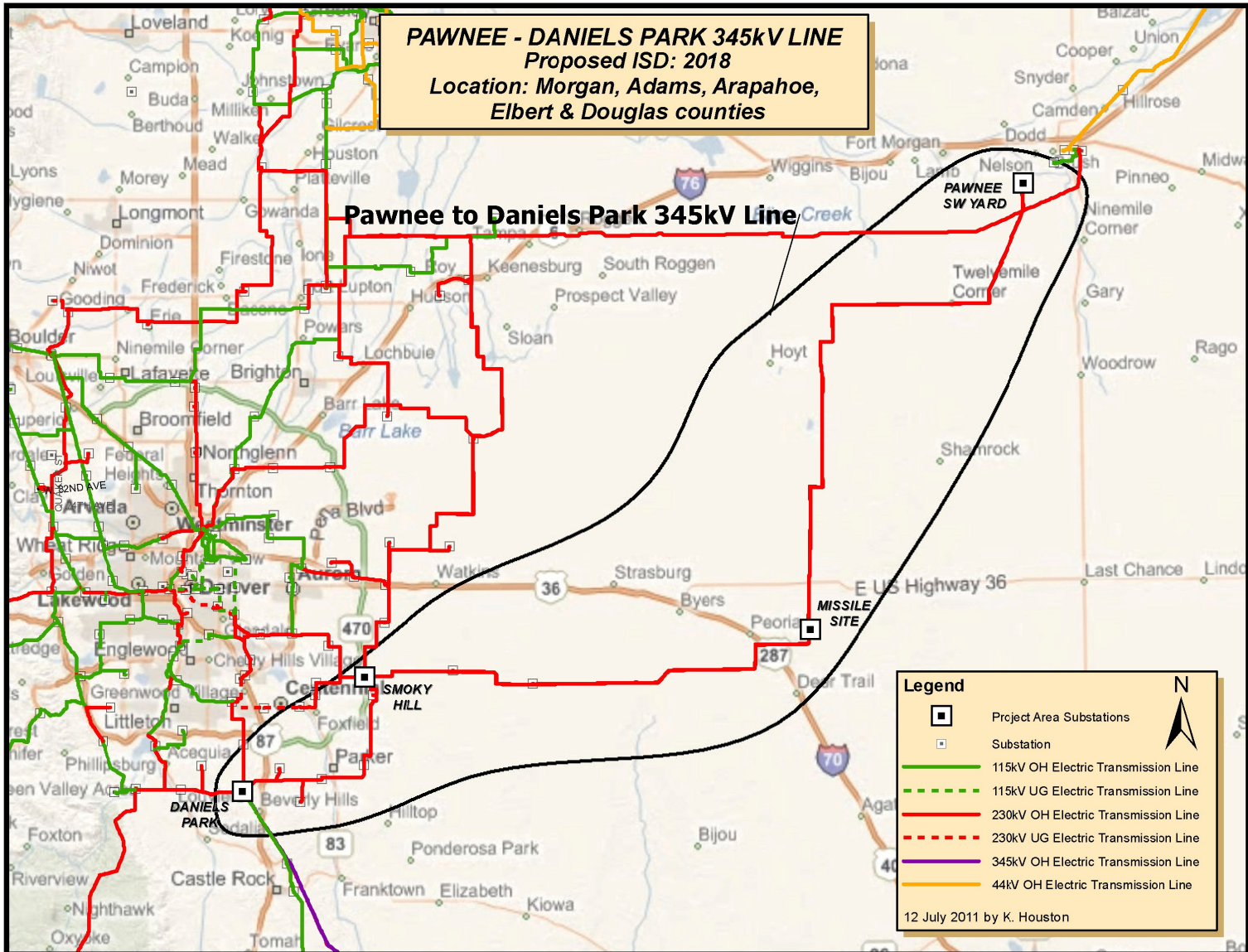
Purpose of Project: SB100. Project would facilitate new resources in Energy Resource Zones 1 and 2

Estimated Cost (in 2010 Dollars): \$100,000,000

Schedule:

Construction Date:
Planned In-Service Date: 2018
Regulatory Info: Submitted to CPUC through Rule 3206: CPCN required
Regulatory Date:
Permitting Info: No
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_psc transmission.php
<http://www.sb100transmission.com>

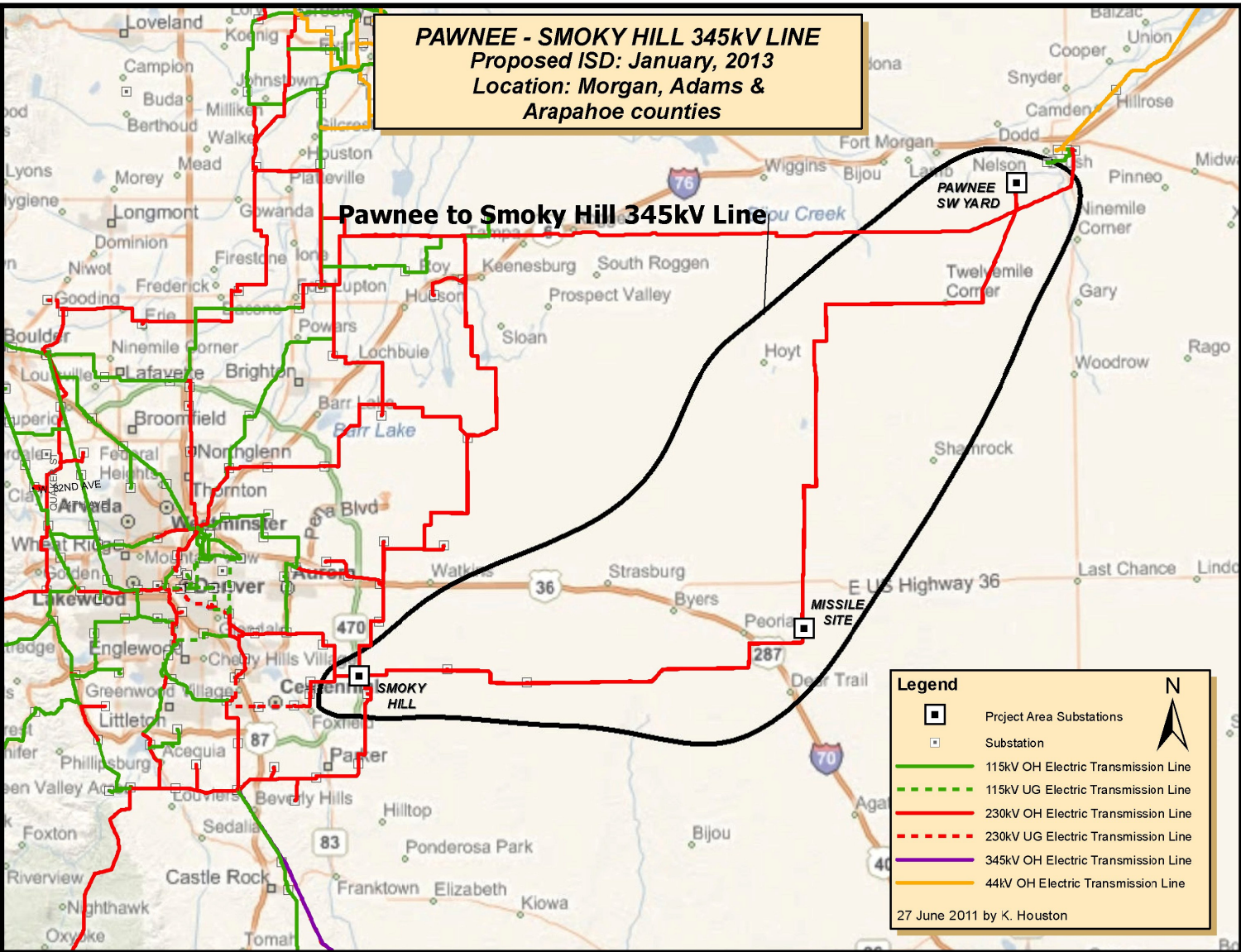


Pawnee – Smoky Hill 345kV Transmission Project

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	PSCo
Project Description:	345kV Transmission from the Pawnee Station, near Brush, CO, to the Smoky Hill Substation, southeast of Denver
Voltage Class:	345 kV
Facility Rating:	1200 MVA
Point of Origin/Location:	Pawnee Substation
Point of Termination:	Smoky Hill Substation
Intermediate Points:	Missile Site Substation
Length of Line (in Miles):	95
Type of Project:	Transmission Line
Development Status:	Under Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	SB100. Accommodate resource additions in Energy Resource Zones 1 and 2
Estimated Cost (in 2010 Dollars):	\$152,000,000
Schedule:	
Construction Date:	2011
Planned In-Service Date:	2013
Regulatory Info:	CPCN granted from CPUC
Regulatory Date:	
Permitting Info:	Yes
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_psc_co_transmission.php http://www.sb100transmission.com

PAWNEE - SMOKY HILL 345kV LINE
 Proposed ISD: January, 2013
 Location: Morgan, Adams &
 Arapahoe counties

Pawnee to Smoky Hill 345kV Line



Legend

- Project Area Substations
- Substation
- 115kV OH Electric Transmission Line
- 115kV UG Electric Transmission Line
- 230kV OH Electric Transmission Line
- 230kV UG Electric Transmission Line
- 345kV OH Electric Transmission Line
- 44kV OH Electric Transmission Line

27 June 2011 by K. Houston



San Luis Valley - Calumet - Comanche Transmission Project

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants: Tri-State
Project Description: The project consists of two basic sections. The first section consists of approximately ninety-five (95) miles of new, double-circuit 230 kV transmission, built from the San Luis Valley Substation to a new Calumet Substation, which would be located approximately six (6) miles north of the existing Tri-State Walsenburg Substation. The second section consists of approximately forty-five (45) miles of 19 new double-circuit 345 kV transmission from Calumet Substation to the existing Comanche Station near Pueblo.

Voltage Class: 230/345 kV
Facility Rating: 1400
Point of Origin/Location: San Luis Valley
Point of Termination: Comanche
Intermediate Points: Calumet
Length of Line (in Miles): 140
Type of Project: Transmission Line
Development Status: Planned²
Routing:
Subregional Planning Group: CCPG

Purpose of Project: SB100 / Reliability. Improve system reliability and accommodate resources in Energy Resource Zones 4 and 5.

Estimated Cost (in 2010 Dollars): \$180,000,000

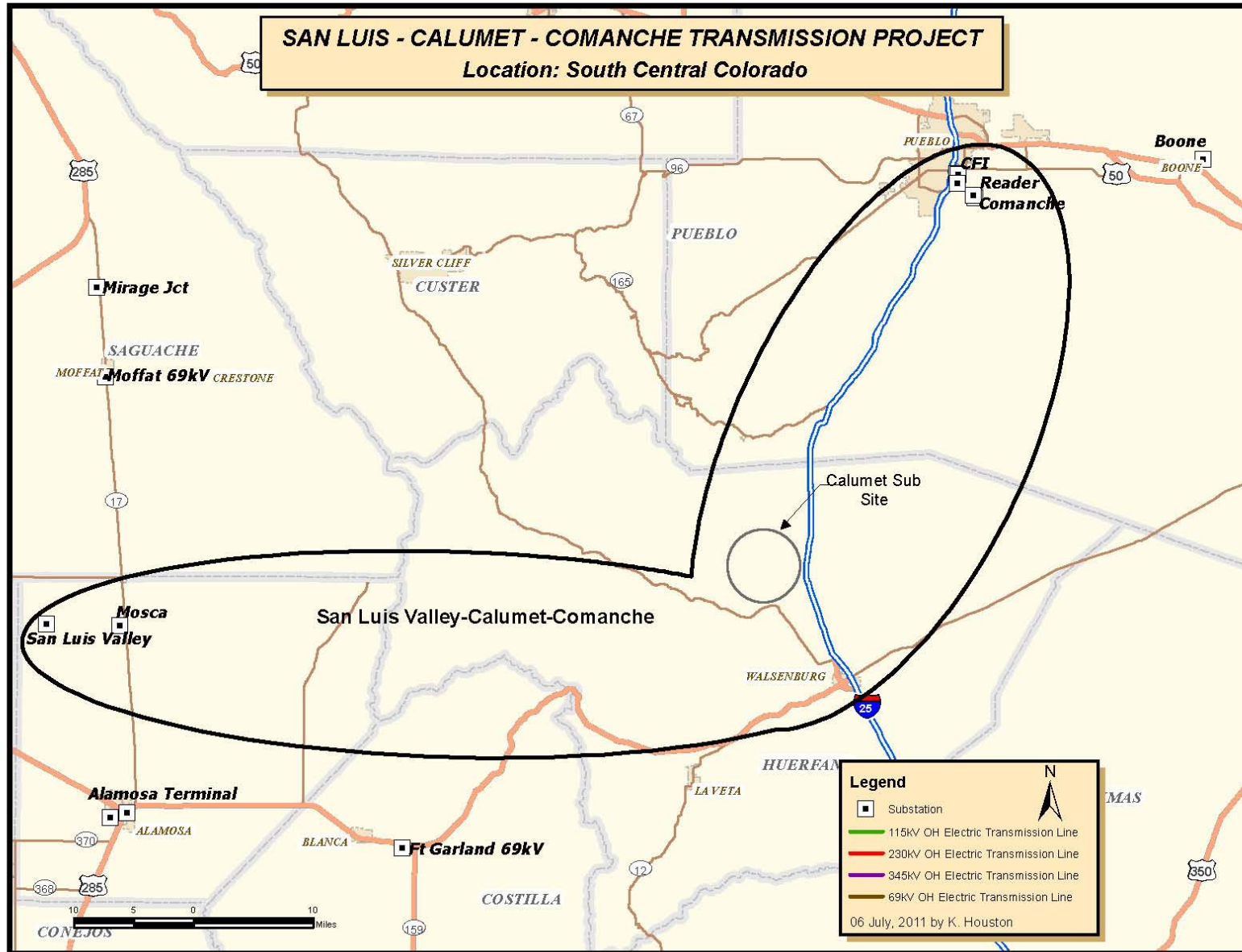
Schedule:

Construction Date:
Planned In-Service Date: TBD
Regulatory Info: CPUC CPCN granted September 2011
Regulatory Date: May, 2009
Permitting Info: No
Permitting Date:

Contact Information:

Tom Green
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Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_pscs_transmission.php
<http://www.sb100transmission.com>

² See pages 18-22 of the Public Service Senate Bill 07-100 Report filed October 31, 2011.

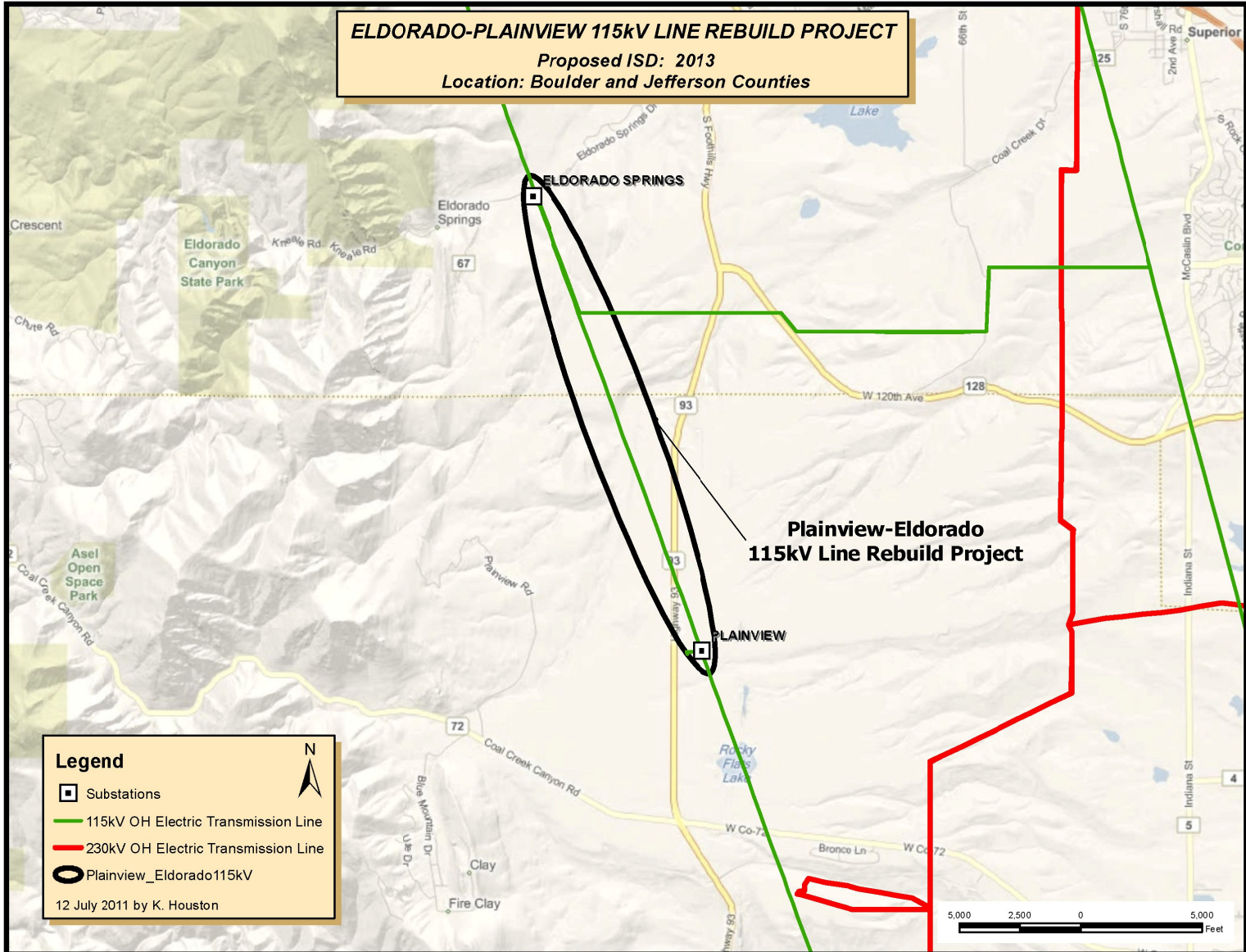


Transmission Projects Summary

PSCo has five transmission projects that are needed for load service and reliability for future load growth. PSCo has two underground lines, the Leetsdale-Sandown 115 kV line was placed in service in 2010 and the Niwot-Gunbarrel should be placed in service early in 2012. The Eldorado-Plainview 115 kV project is a rebuild of an existing 115 kV line that was built in the 1910's and is in need of replacement. A new 230 kV line from Rifle to Parachute to Cameo will be needed for gas processing load growth on the western slope.

Eldorado - Plainview 115kV Transmission Project

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	Rebuild existing 115kV line between Eldorado substation and Plainview substation. The project will be located in Boulder and Jefferson counties
Voltage Class:	115 kV
Facility Rating:	150 MVA
Point of Origin/Location:	Plainview substation
Point of Termination:	Eldorado substation
Intermediate Points:	
Length of Line (in Miles):	4
Type of Project:	Transmission Line
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Reliability. Increases line rating.
Estimated Cost (in 2010 Dollars):	\$3,400,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2013
Regulatory Info:	Submitted to CPUC through Rule 3206: No CPCN required
Regulatory Date:	04/30/2011
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_psc transmission.php



Niwot-Gunbarrel Transmission Project

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Construct a new 230 kV, second UG transmission line approximately 2.3 miles in length between the existing PSCo Niwot and Gunbarrel substations, install new 230 kV breaker and line termination equipment at Niwot and Gunbarrel Substations, and install a second 230-13.8 kV transformer and associated 13.8 kV MCS distribution and #1 - #2 ATO equipment at Gunbarrel Substation

Voltage Class: 230 kV
Facility Rating:
Point of Origin/Location: Niwot
Point of Termination: Gunbarrel
Intermediate Points:
Length of Line (in Miles): 23
Type of Project: Transmission Line
Development Status: Under Construction
Routing:
Subregional Planning Group: CCPG

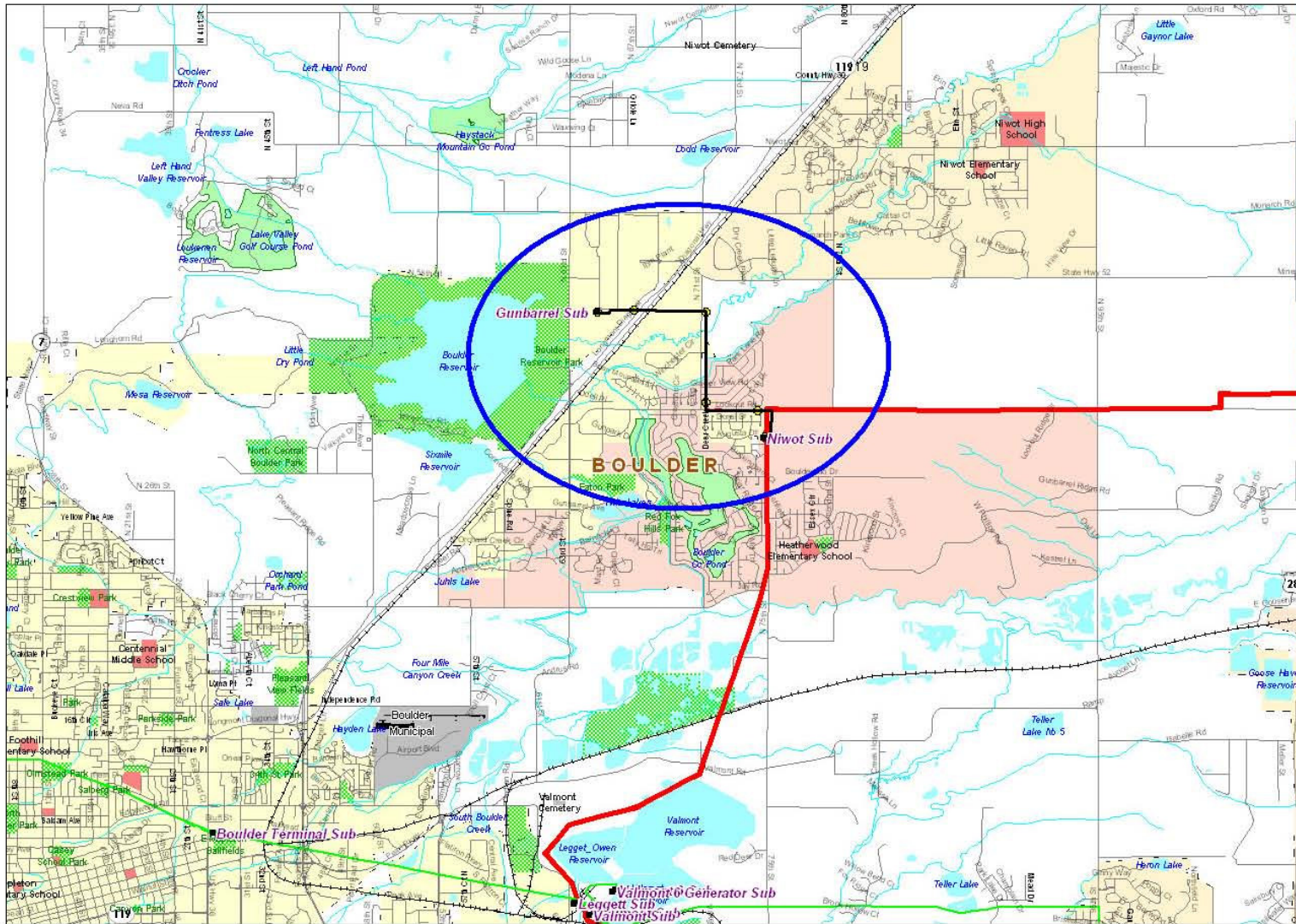
Purpose of Project: Reliability. Provide redundant transmission service to load.

Estimated Cost (in 2010 Dollars): \$17,000,000

Schedule:

Construction Date: 2009
Planned In-Service Date: 2012
Regulatory Info:
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_psc transmission.php



Approximate Location of the Niwot – Gunbarrel 230 kV Underground Transmission Line

Parachute - Cameo 230 kV Transmission Line

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Construct approximately 31 miles of 230kV transmission between the Parachute and Cameo Substations

Voltage Class: 230 kV
Facility Rating:
Point of Origin/Location: Parachute Substation
Point of Termination: Cameo Substation
Intermediate Points:
Length of Line (in Miles): 31
Type of Project: Transmission Line
Development Status: Conceptual
Routing:
Subregional Planning Group: CCPG

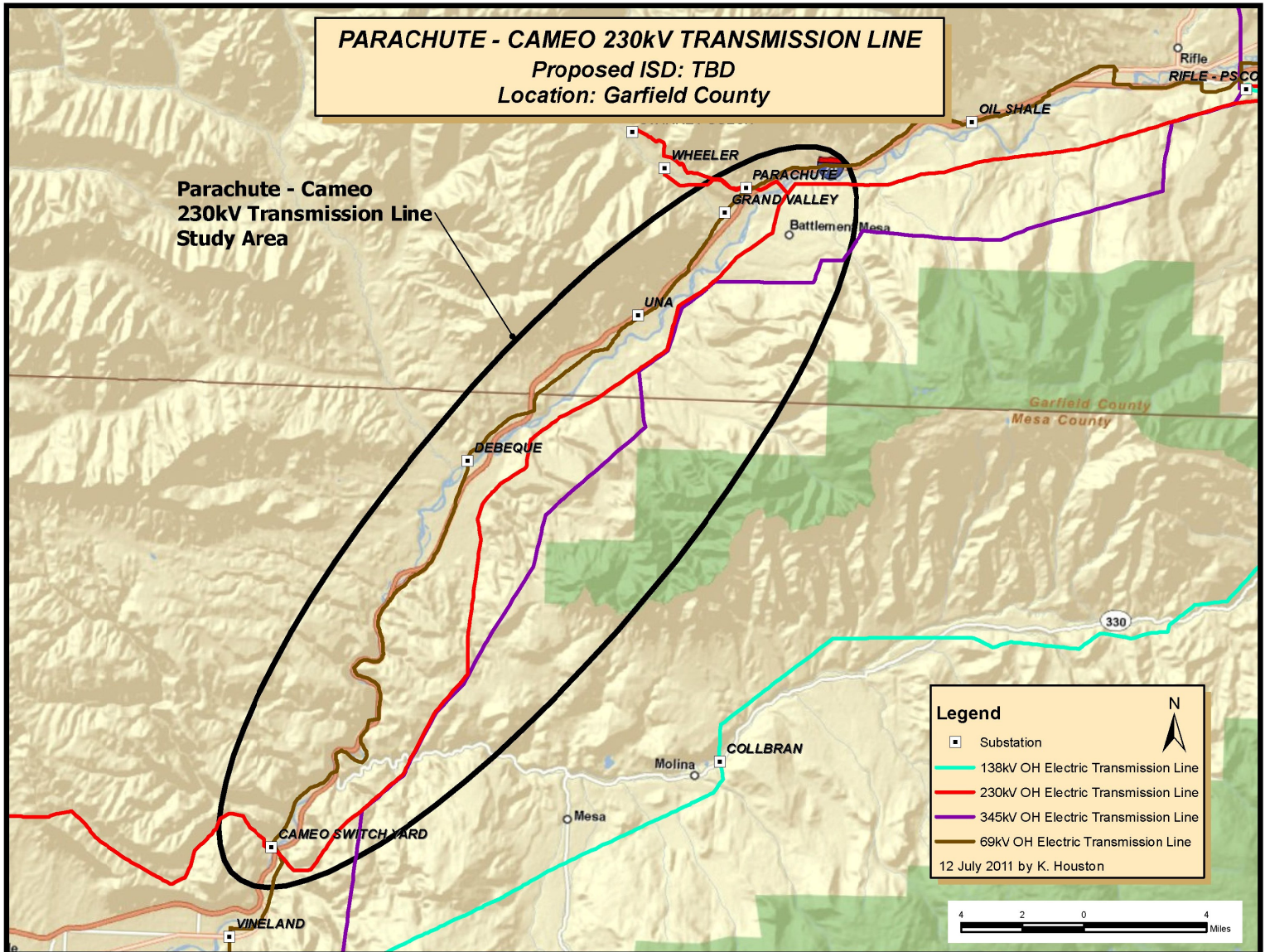
Purpose of Project: Reliability. For future load growth in the region.

Estimated Cost (in 2010 Dollars): \$52,000,000

Schedule:

Construction Date:
Planned In-Service Date: TBD
Regulatory Info: Submitted to CPUC through Rule 3206: CPCN required
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_psc transmission.php



Rifle - Parachute 230 kV Line #2

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Second 230 kV line from PSCo's Rifle Substation to Parachute Substation, located in Garfiled County, Colorado

Voltage Class: 230 kV
Facility Rating: 576 MVA
Point of Origin/Location: Rifle
Point of Termination: Parachute Substation
Intermediate Points: None
Length of Line (in Miles): 21
Type of Project: Transmission Line
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Reliability. Project would serve regional loads.

Estimated Cost (in 2010 Dollars): \$27,000,000

Schedule:

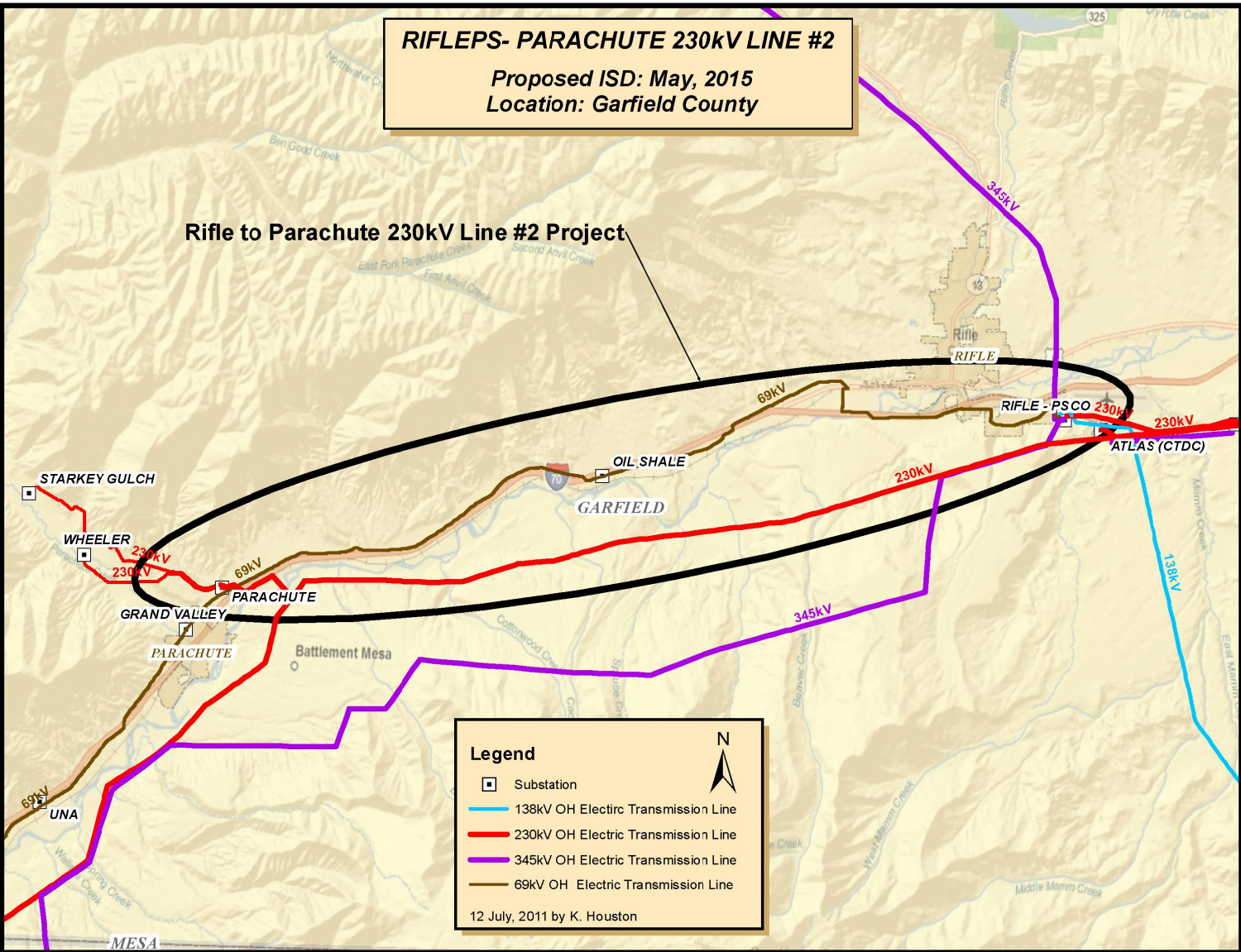
Construction Date:
Planned In-Service Date: 2015
Regulatory Info: Submitted to CPUC through Rule 3206: CPCN required
Regulatory Date: 04/30/2011
Permitting Info: No
Permitting Date:

Contact Information: Green, Thomas W
Email: thomas.green@xclenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_psc_co_transmission.php

RIFLEPS- PARACHUTE 230kV LINE #2
Proposed ISD: May, 2015
Location: Garfield County

Rifle to Parachute 230kV Line #2 Project

C-29



Legend

- ▣ Substation
- 138kV OH Electric Transmission Line
- 230kV OH Electric Transmission Line
- 345kV OH Electric Transmission Line
- 69kV OH Electric Transmission Line

12 July, 2011 by K. Houston

Sandown – Leetsdale 115kV Transmission Project

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants: PSCo
Project Description: 115kV transmission between Sandown and Leetsdale substations in Denver

Voltage Class: 115 kV
Facility Rating: 239 MVA
Point of Origin/Location: Sandown Substation
Point of Termination: Leetsdale Substation
Intermediate Points: None
Length of Line (in Miles): 6
Type of Project: Transmission Line
Development Status: In-Service
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Reliability. Provides additional transmission to alleviate loadings on Denver-metro area transmission system.

Estimated Cost (in 2010 Dollars): \$11,000,000

Schedule:

Construction Date: 2007
Planned In-Service Date: 2010
Regulatory Info: CPCN granted from CPUC
Regulatory Date:
Permitting Info: Yes
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_psc transmission.php

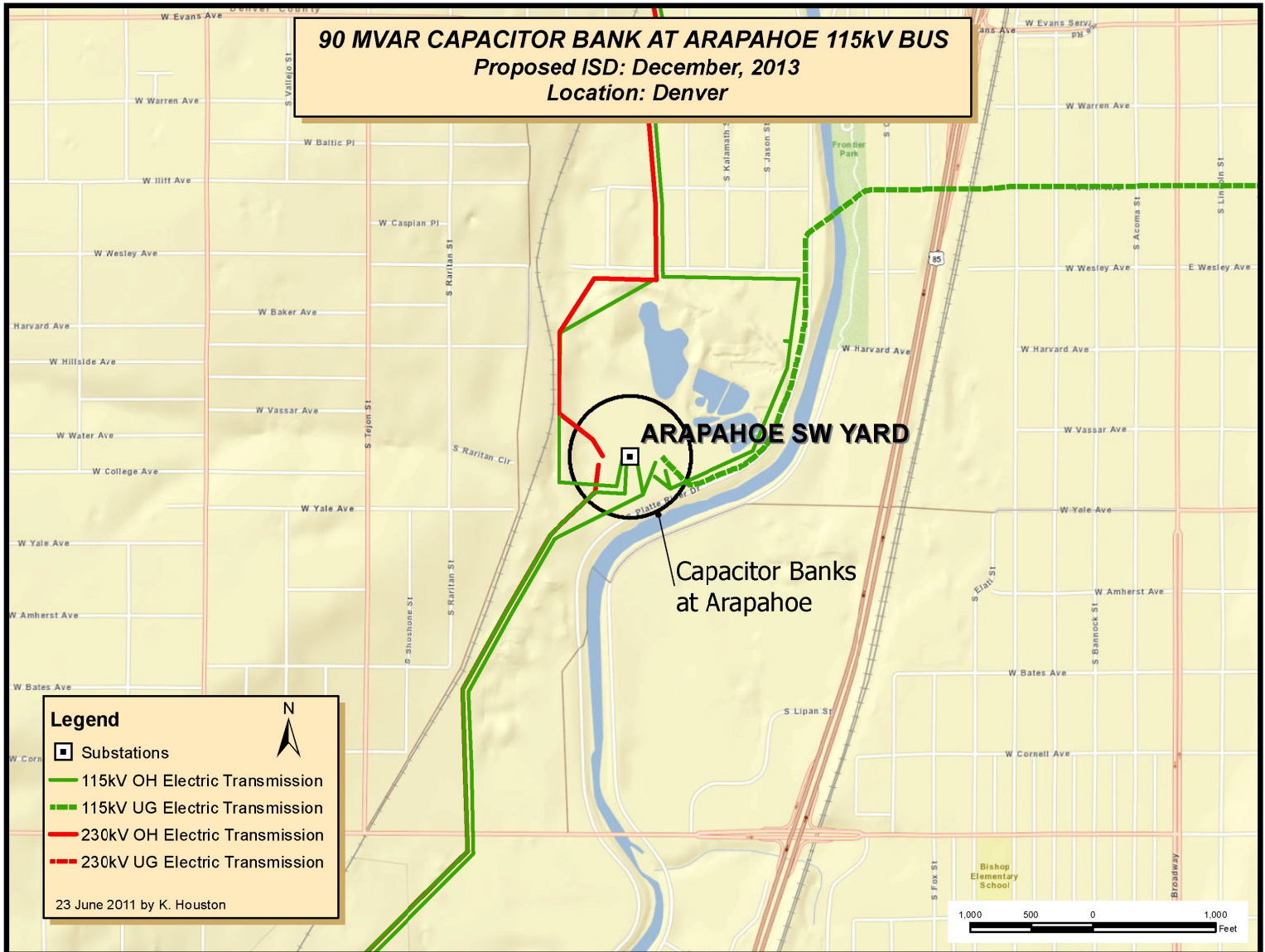
Substation Projects Summary

Substation projects are those that consist of building a new switching station or substation, or upgrading an existing station by adding or replacing equipment. The substation projects may be part of a bigger transmission plan, but those listed in this report generally require little or no new transmission.

The Public Service plan has 16 projects, most of which are modifications to existing stations. The plan includes three new substations that are needed for load service and increased reliability: Blue Stone Valley, Happy Canyon, and Harvest Mile.

Arapahoe 90 MVAR Capacitor Bank

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	Install a 90 MVAR Capacitor bank at Arapahoe 115 kV bus located inside the Arapahoe Substation, Denver, Colorado
Voltage Class:	115 kV
Facility Rating:	90 MVAR
Point of Origin/Location:	Arapahoe
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Substation
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Reliability. Project needed to provide voltage support in the Arapahoe area per the Commission's Clean Air Clean Jobs Act
Estimated Cost (in 2010 Dollars):	\$3,340,000
Schedule:	
Construction Date:	2012
Planned In-Service Date:	2013
Regulatory Info:	Submitted to CPUC through Rule 3206: No CPCN required
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_pscs_substation.php



Bluestone Substation

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Construct a new Blue Stone Substation that would tap PSCo's RiflePS-Parachute-Cameo 230kV line near Debeque, Colorado.

Voltage Class: 230 kV
Facility Rating:
Point of Origin/Location: Bluestone
Point of Termination:
Intermediate Points:
Length of Line (in Miles): 7
Type of Project: Substation
Development Status: Conceptual
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Load Service. The substation would provide load service for PSCo and Grand Valley Power (GVP) customers in the area.

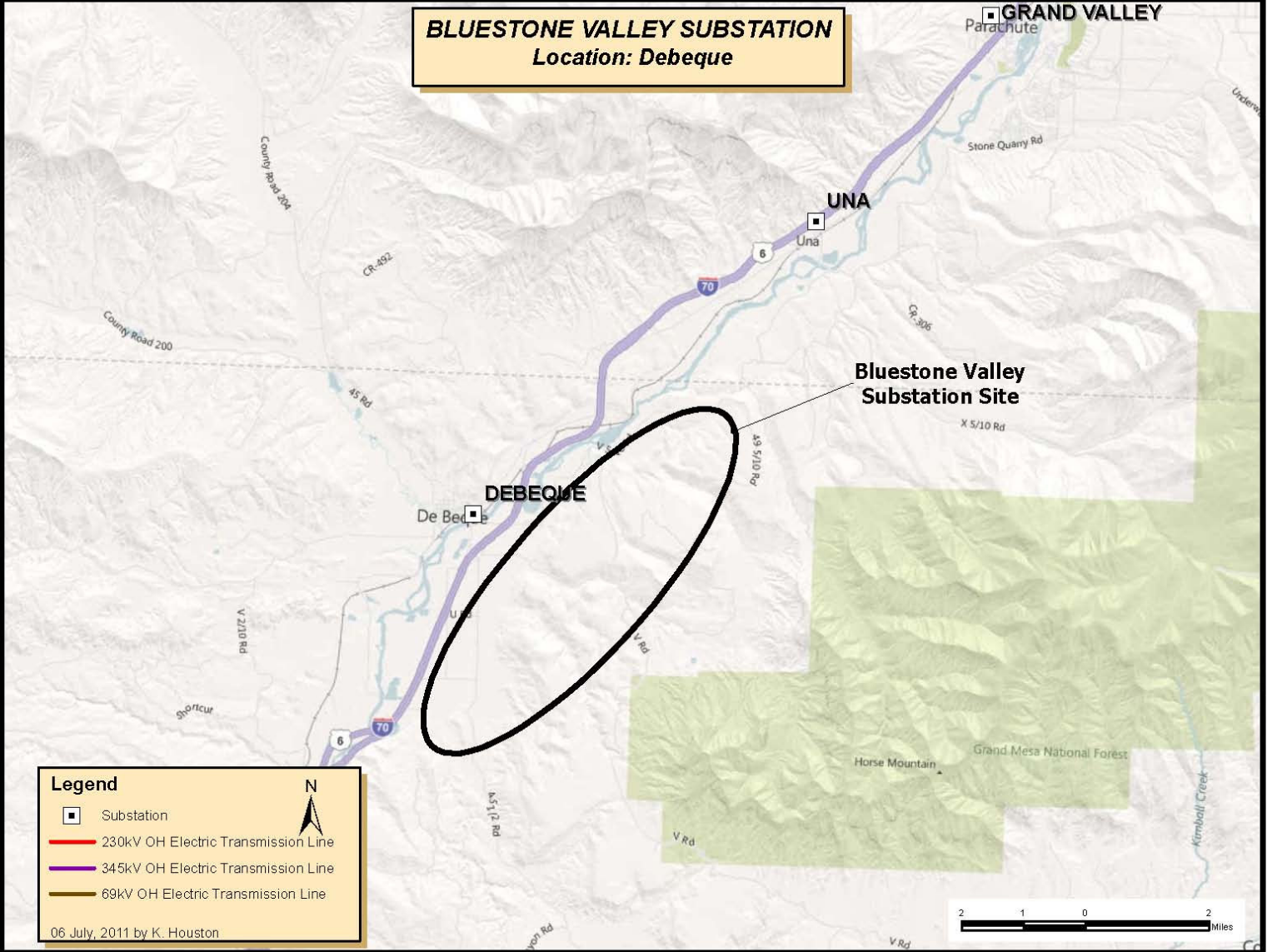
Estimated Cost (in 2010 Dollars): \$7,700,000

Schedule:

Construction Date:
Planned In-Service Date: TBD
Regulatory Info: Submitted to CPUC through Rule 3206: No CPCN required
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: William Anderson
Email: william.anderson@xcelenergy.com
Phone: 303-571-7273
Website Information: http://www.westconnect.com/planning_ccpg_psc_substation.php

BLUESTONE VALLEY SUBSTATION
Location: Debeque



Legend

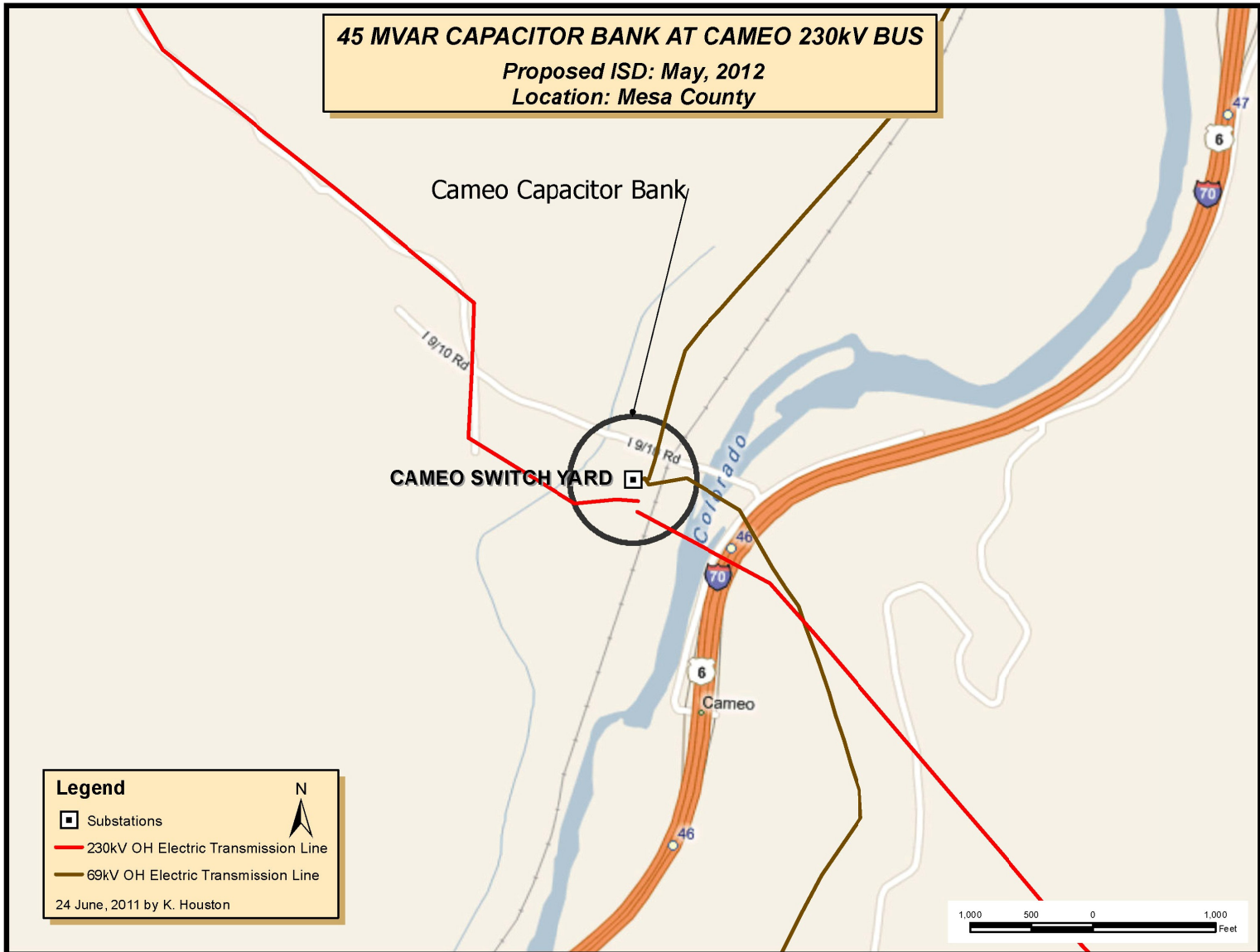
- ▣ Substation
- 230kV OH Electric Transmission Line
- 345kV OH Electric Transmission Line
- 69kV OH Electric Transmission Line

06 July, 2011 by K. Houston

C-36

Cameo 45 MVAR Capacitor Bank

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	Install a 45 MVAR switched shunt capacitor bank at Cameo 230 kV bus in Mesa County, Colorado
Voltage Class:	230 kV
Facility Rating:	
Point of Origin/Location:	Cameo
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Substation
Development Status:	Under Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Reliability. This project is needed for voltage support in the area to support future load growth in the area.
Estimated Cost (in 2010 Dollars):	\$1,070,000
Schedule:	
Construction Date:	2012
Planned In-Service Date:	2012
Regulatory Info:	Rule 3206: No CPCN required
Regulatory Date:	04/30/2011
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_pscs_substation.php



Chambers 230/115 kV, 280 MVA #2

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Install a second 230/115 kV, 280 MVA transformer at the existing Chambers Substation in Aurora, Colorado

Voltage Class: 230 kV
Facility Rating: 280 MVA
Point of Origin/Location: Chambers
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Substation
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Reliability. This project is needed to avoid overloading of the existing transformer under certain double-contingency outages and for increased reliability.

Estimated Cost (in 2010 Dollars): \$5,200,000

Schedule:

Construction Date: 2012
Planned In-Service Date: 2013
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date: 04/30/2011
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_pscs_substation.php

CHAMBERS 230/115kV, 280 MVA #2

*Proposed ISD: June, 2013
Location: Aurora*

CHAMBERS

Chambers 230/115kV #2

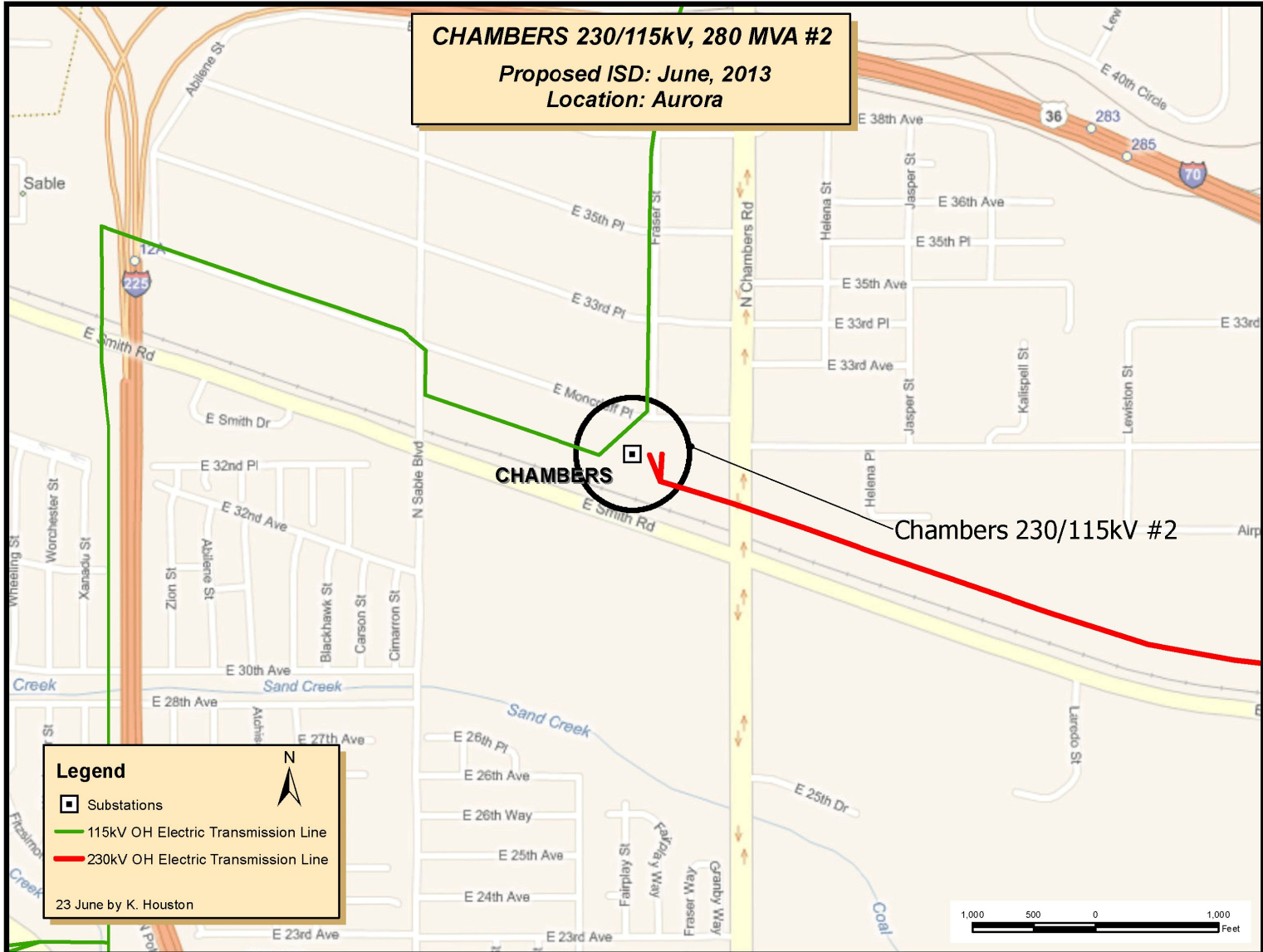
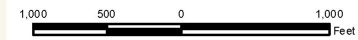
Legend

▣ Substations

— 115kV OH Electric Transmission Line

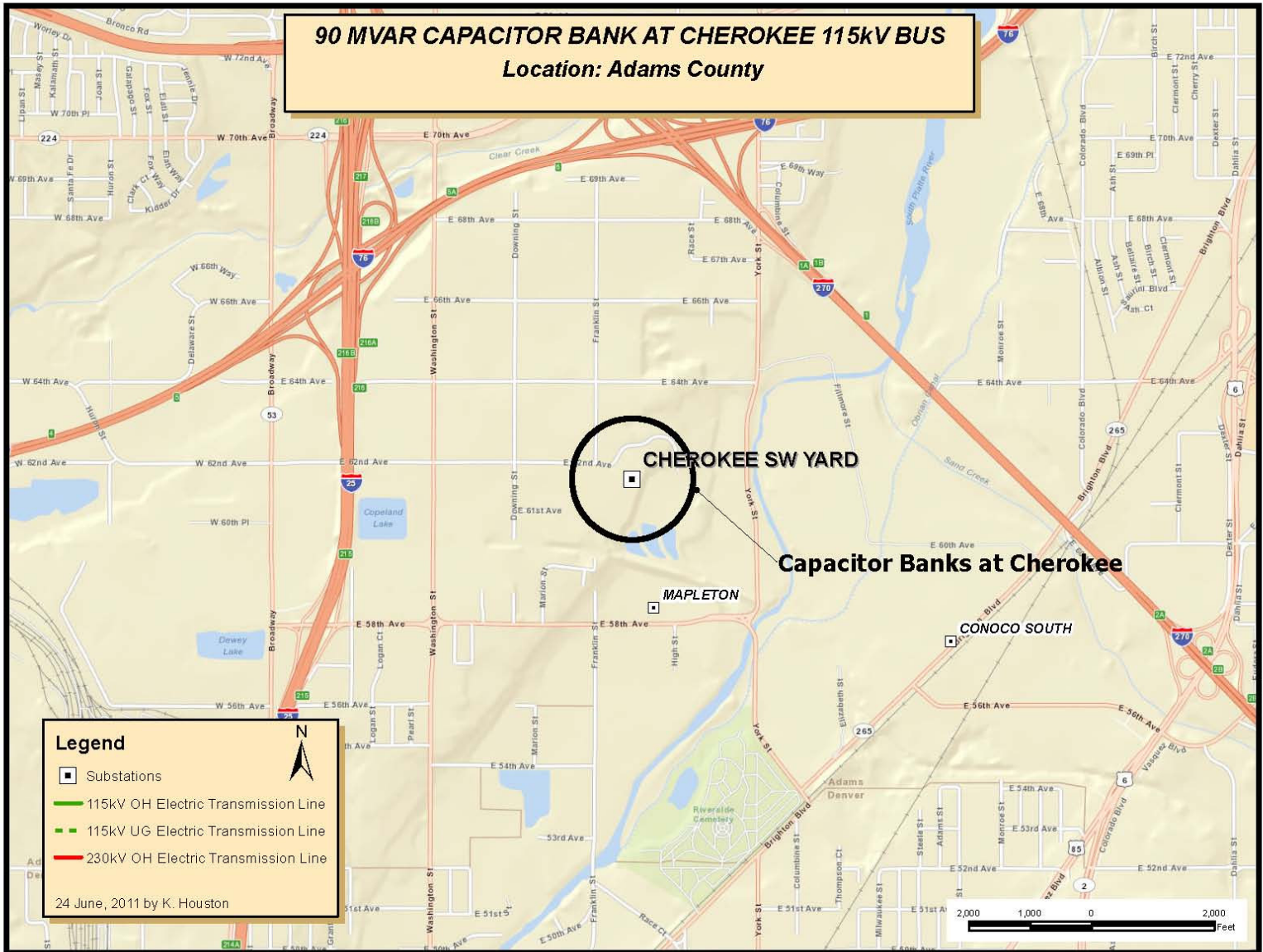
— 230kV OH Electric Transmission Line

23 June by K. Houston



Cherokee 90 MVAR Capacitor Bank

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	Install a 90 MVAR capacitor bank at Cherokee 115 kV bus, located inside the Cherokee Substation in Adams County, Colorado
Voltage Class:	115 kV
Facility Rating:	90 MVAR
Point of Origin/Location:	Cherokee
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Substation
Development Status:	Under Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Reliability. Needed to provide voltage support in the Cherokee area for CACJA.
Estimated Cost (in 2010 Dollars):	\$2,280,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2012
Regulatory Info:	CPUC: approved during CACJA proces
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_pscs_substation.php



Godfrey Breaker Station and 25 MVAR Capacitor Bank

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Convert existing Godfrey switching station to a breaker station to provide a third 115kV transmission source to Greeley.

Voltage Class: 115 kV
Facility Rating:
Point of Origin/Location: Godfrey
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Substation
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

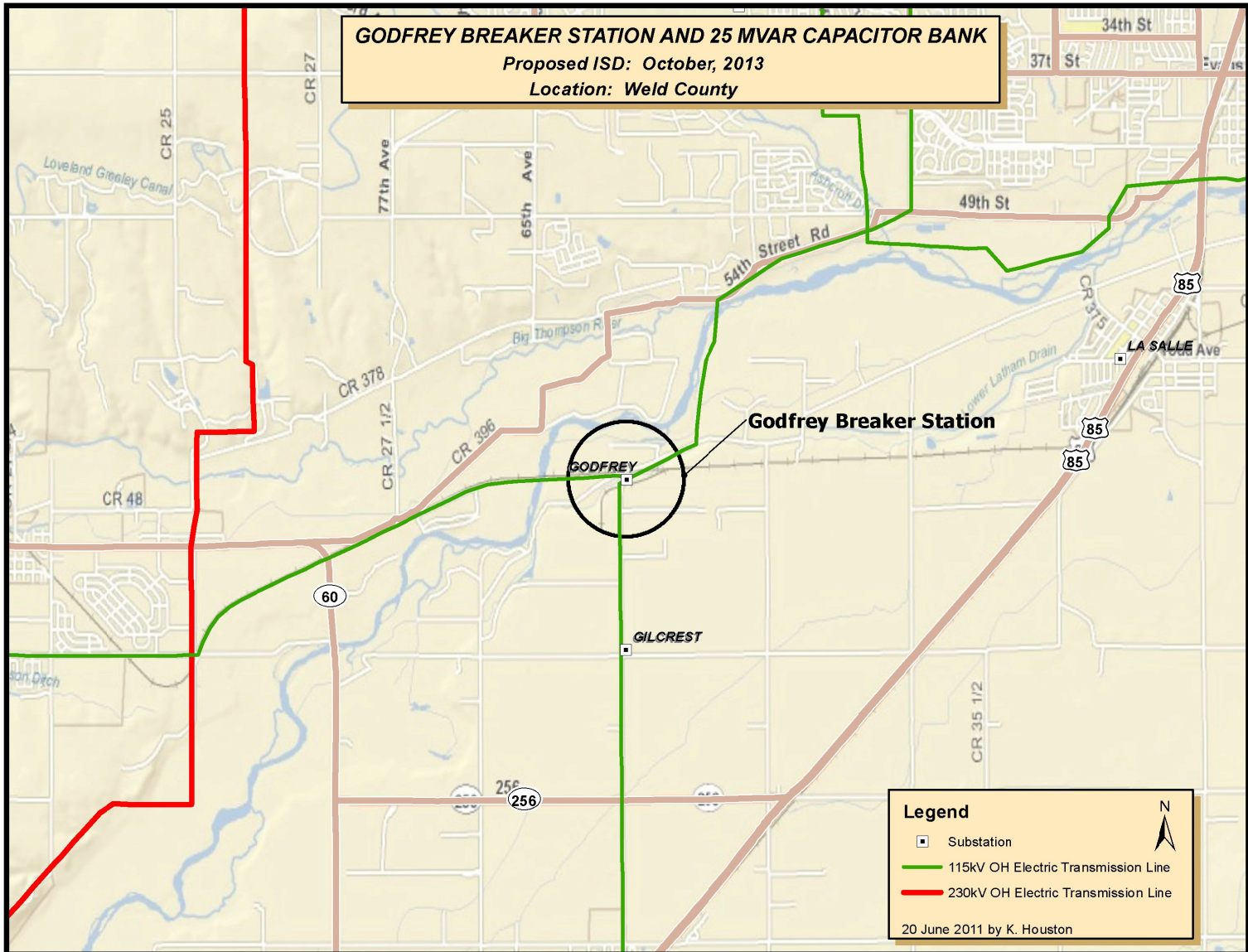
Purpose of Project: Reliability. Provides redundant transmission service to Greeley.

Estimated Cost (in 2010 Dollars): \$4,540,000

Schedule:

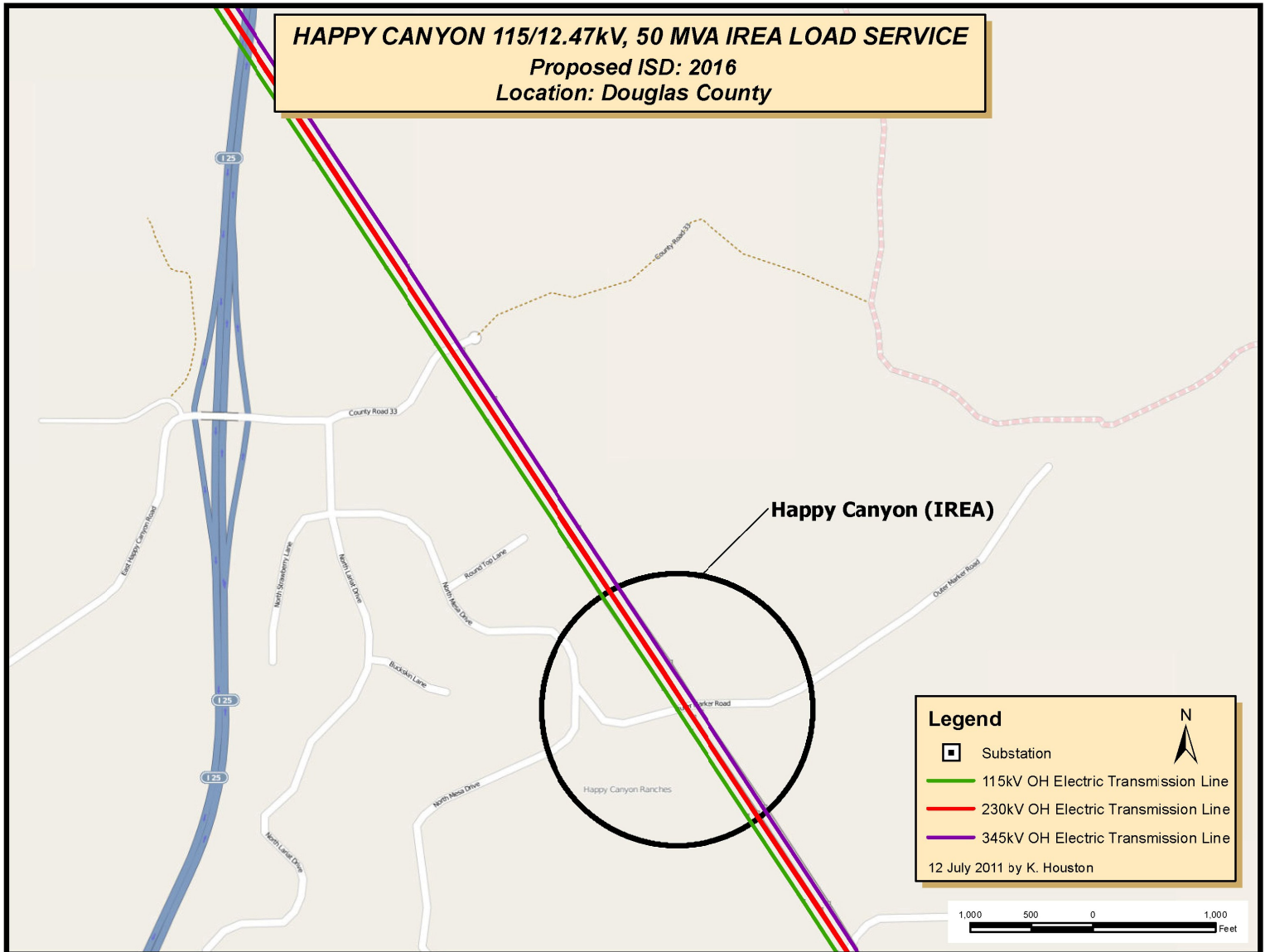
Construction Date: 2012
Planned In-Service Date: 2013
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date: 04/30/2011
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_pscs_substation.php



Happy Canyon Substation

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	Construct a 115 kV Happy Canyon substation tapping PSCo's Daniels Park - Castle Rock 115 kV line to provide load service to IREA.
Voltage Class:	115 kV
Facility Rating:	
Point of Origin/Location:	Happy Canyon
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Substation
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Load Service. To Serve IREA loads
Estimated Cost (in 2010 Dollars):	\$1,800,000
Schedule:	
Construction Date:	
Planned In-Service Date:	2016
Regulatory Info:	CPUC: No CPCN required
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_pscsubstation.php



Harvest Mile 230/345 kV Substation

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: The new Harvest Mile Substation is an extension of the existing Smoky Hill Substation. It will accommodate additional transformation and line terminations for present and future needs. It is located approximately 0.5 miles east of Smoky Hill.

Voltage Class: 345 kV
Facility Rating: 560 MVA
Point of Origin/Location: Harvest Mile Substation
Point of Termination:
Intermediate Points:
Length of Line (in Miles): 1
Type of Project: Substation
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

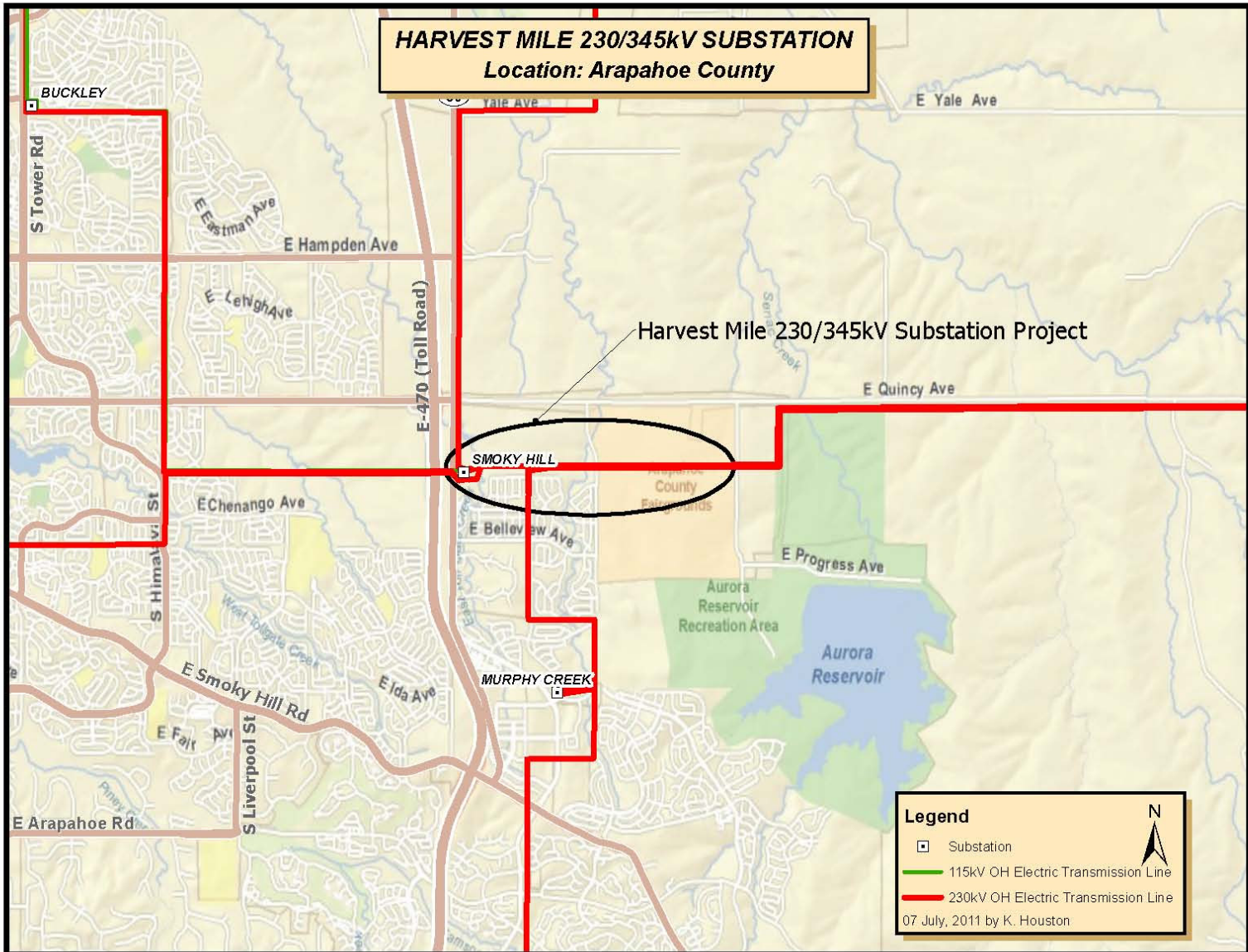
Purpose of Project: Reliability. Project enables future transmission plans.

Estimated Cost (in 2010 Dollars): \$21,000,000

Schedule:

Construction Date:
Planned In-Service Date: 2018
Regulatory Info: Project submitted to CPUC through Rule 3206: CPCN required
Regulatory Date: 04/30/2011
Permitting Info: No
Permitting Date:

Contact Information: Green, Thomas W
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_pscs_substation.php

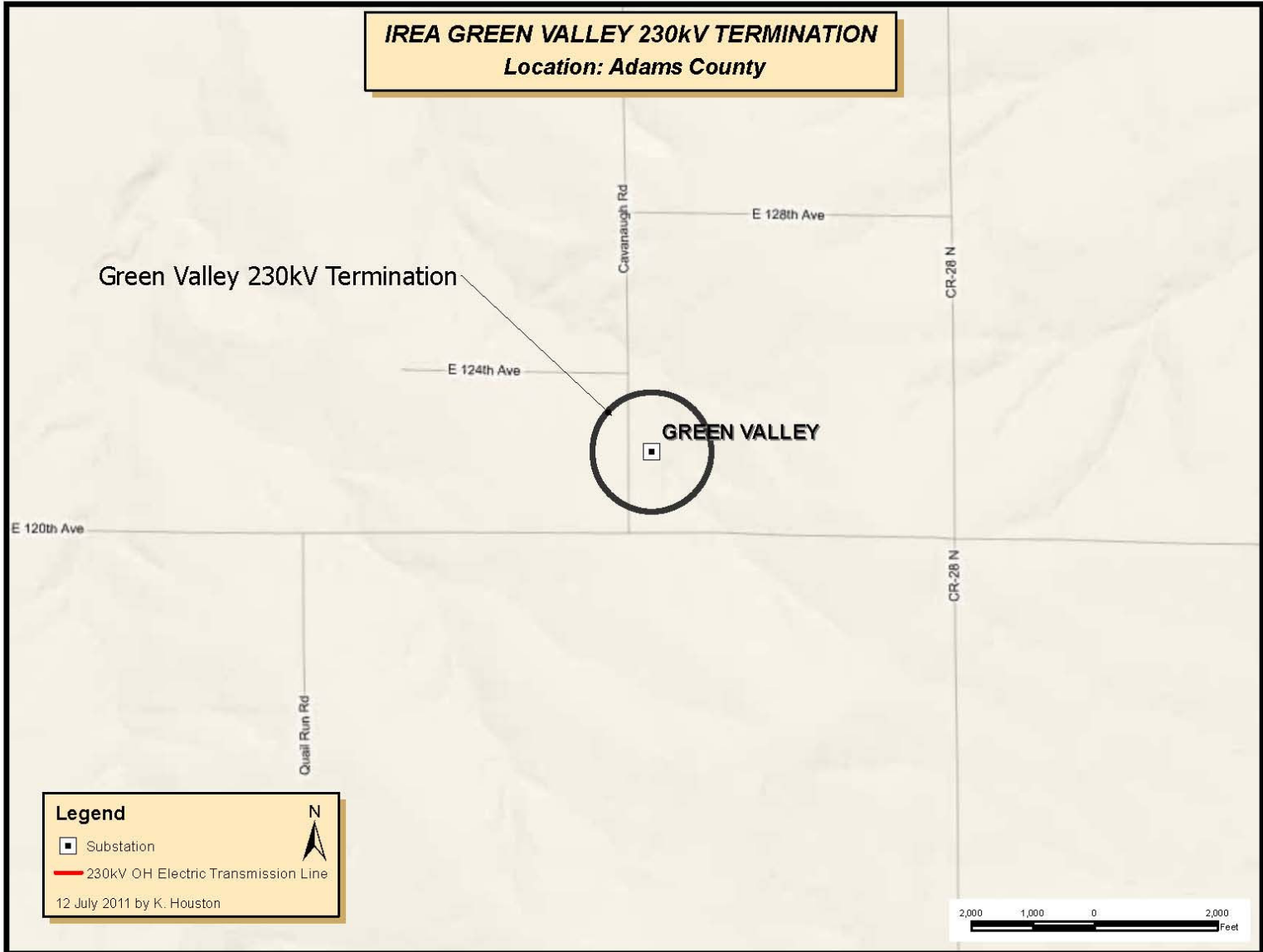


Hopkins 230/115 kV 100 MVA #2

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	The project consists of adding a second Hopkins 100 MVA 230-115kV transformer. The 230kV single bus single breaker arrangement will be converted to a 230kV four breaker ring bus.
Voltage Class:	230 kV
Facility Rating:	
Point of Origin/Location:	Hopkins
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Substation
Development Status:	Under Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Reliability.
Estimated Cost (in 2010 Dollars):	\$8,500,000
Schedule:	
Construction Date:	2010
Planned In-Service Date:	2012
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_pscs_substation.php

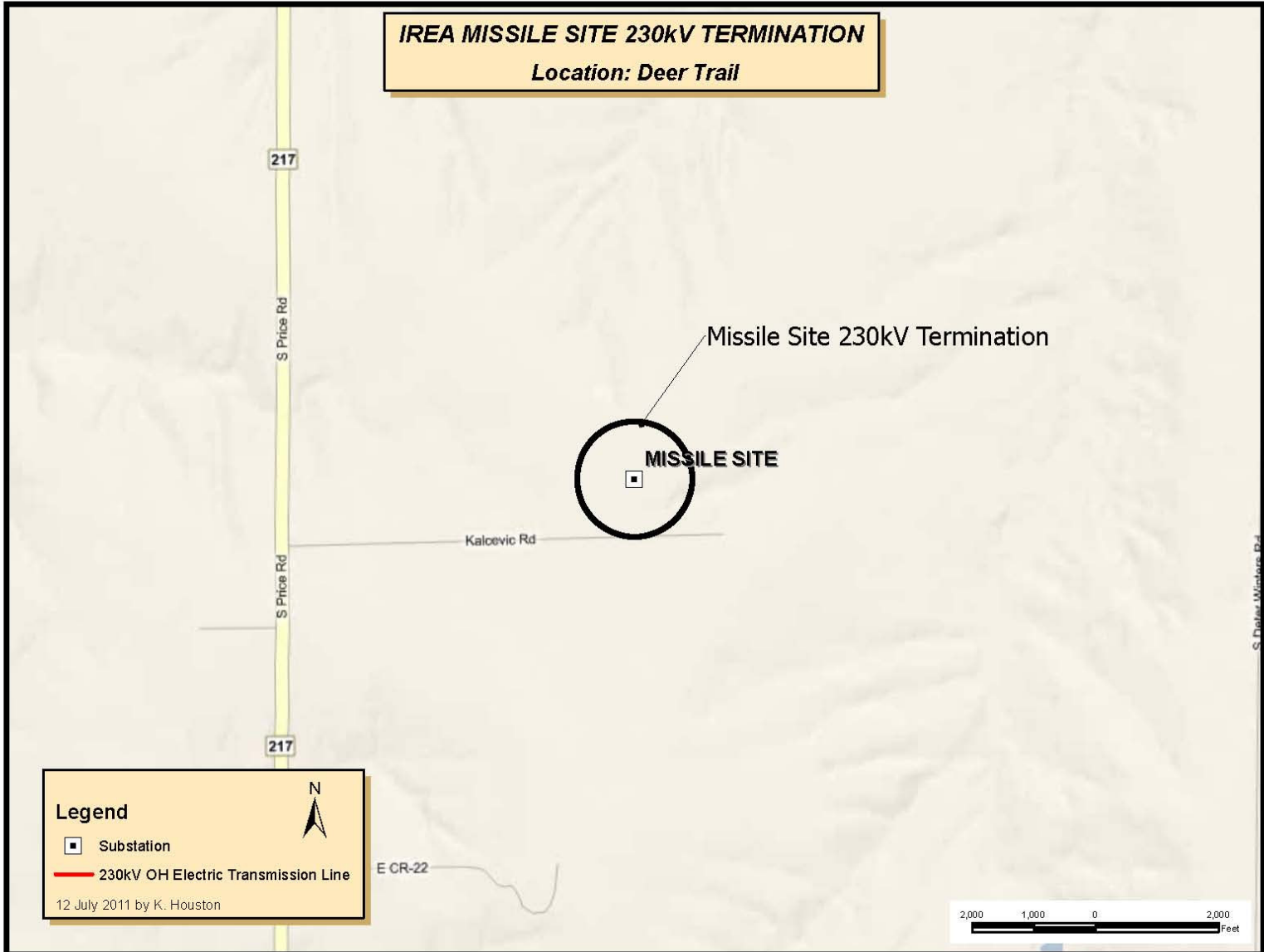
IREA Green Valley 230kV Delivery Point

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	PSCo's share of this project consists of providing the 230 kV substation transmission facilities required to supply IREA's 230/115 kV, 280 MVA transformer at PSCo's Green Valley Substation in Denver, Colorado.
Voltage Class:	230 kV
Facility Rating:	
Point of Origin/Location:	Green Valley
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Substation
Development Status:	Conceptual
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Load Service. Would improve transmission service reliability for the IREA customer loads.
Estimated Cost (in 2010 Dollars):	\$942,000
Schedule:	
Construction Date:	
Planned In-Service Date:	TBD
Regulatory Info:	No
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_pscs_substation.php



IREA Missile Site 230 kV Delivery Point

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	PSCo's share of this project consists of providing the 230 kV substation transmission facilities required to supply IREA's 230/115 kV, 280 MVA transformer at the Missile Site Substation in Deer Trail, Colorado.
Voltage Class:	230 kV
Facility Rating:	
Point of Origin/Location:	Missile Site
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Substation
Development Status:	Conceptual
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Load Service. Improve transmission service reliability for the IREA customer loads.
Estimated Cost (in 2010 Dollars):	\$430,000
Schedule:	
Construction Date:	
Planned In-Service Date:	TBD
Regulatory Info:	No
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_pscs_substation.php



Malta 230/115 kV, 100 MVA #2

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Install a second 230/115 kV, 100 MVA transformer at Malta Substation, in Lake County, Colorado

Voltage Class: 230 kV
Facility Rating: 100 MVA
Point of Origin/Location: Malta
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Substation
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Reliability. Project would support new loads at the Climax Substation.

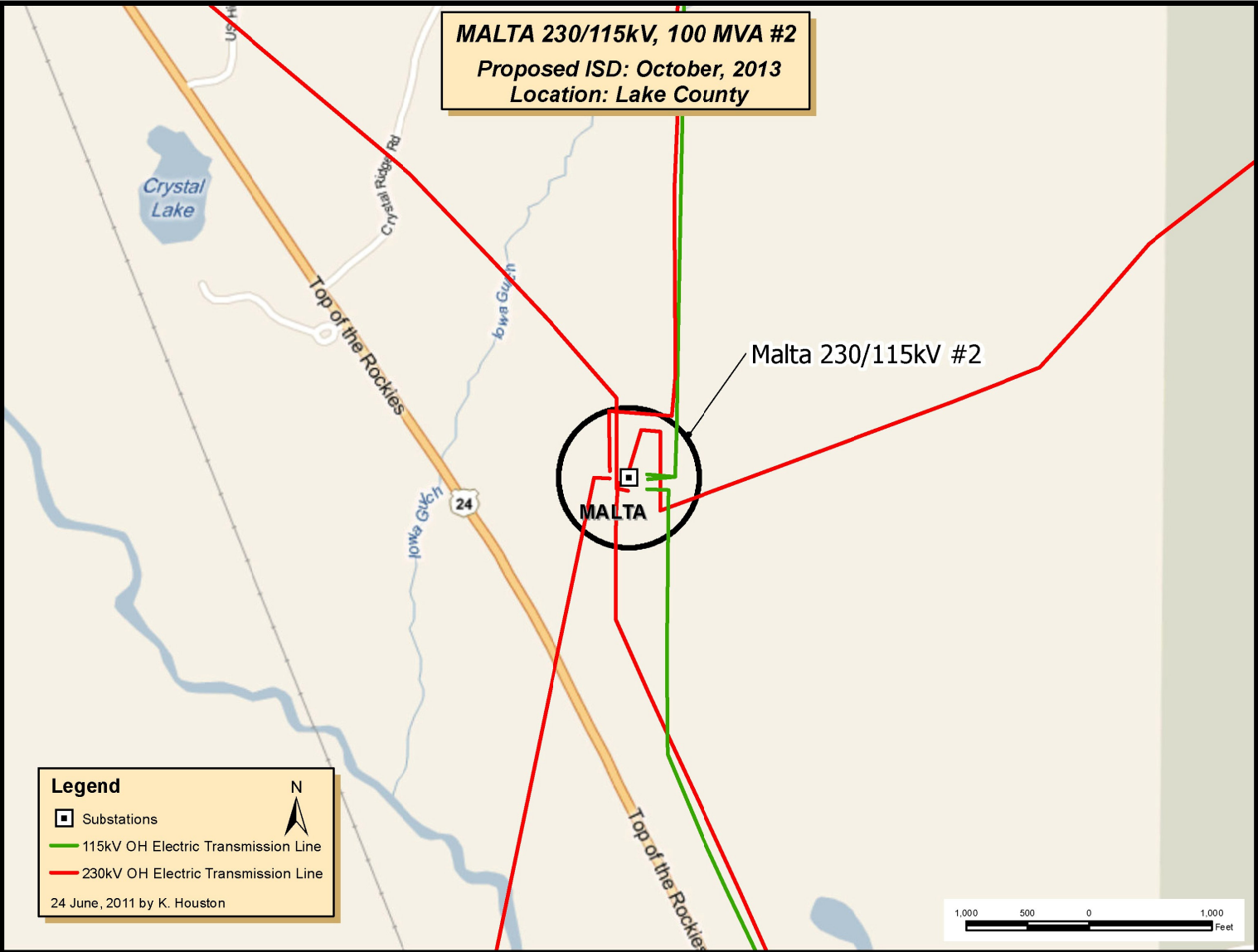
Estimated Cost (in 2010 Dollars): \$13,300,000

Schedule:

Construction Date: 2012
Planned In-Service Date: 2013
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date: 04/30/2011
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_pscs_substation.php

MALTA 230/115kV, 100 MVA #2
Proposed ISD: October, 2013
Location: Lake County



Monfort 115/44 kV 60 MVA Replacement

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Install a new 60 MVA 115/44 kV autotransformer at the PSCo Monfort substation to replace the existing overloaded 42 MVA 115/44 kV autotransformer.

Voltage Class: 115 kV
Facility Rating:
Point of Origin/Location: Monfort
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Under Construction
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Reliability. Project needed for load growth.

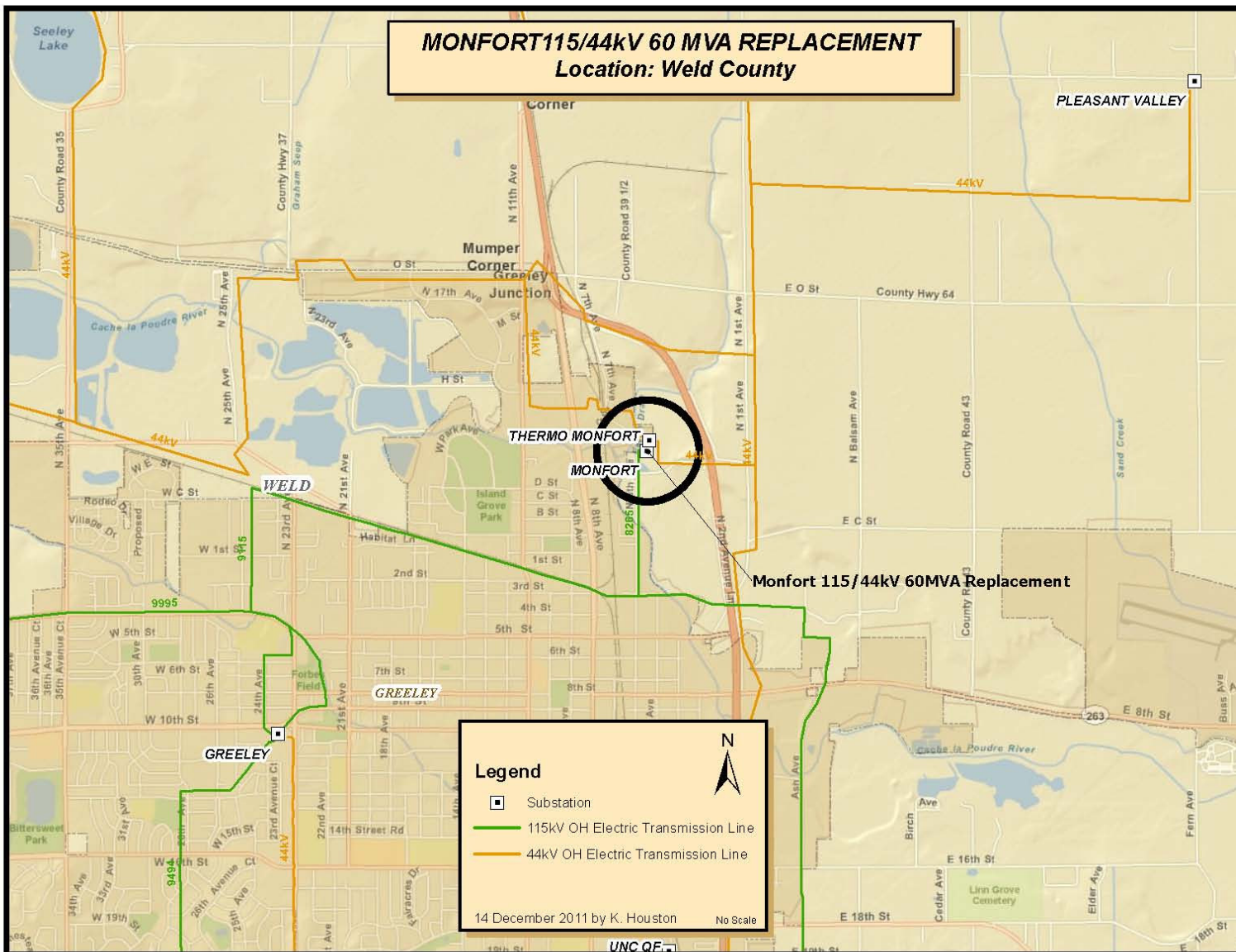
Estimated Cost (in 2010 Dollars): \$2,400,000

Schedule:

Construction Date: 2010
Planned In-Service Date: 2012
Regulatory Info:
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_pscs_substation.php

MONFORT 115/44kV 60 MVA REPLACEMENT
Location: Weld County



Parachute 45 MVAR Capacitor Bank

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Install a 45 MVAR switched shunt capacitor bank at Parachute 230 kV bus in Garfield County, Colorado

Voltage Class: 230 kV
Facility Rating: 45 MVAR
Point of Origin/Location: Parachute
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Substation
Development Status: Under Construction
Routing:
Subregional Planning Group: CCPG

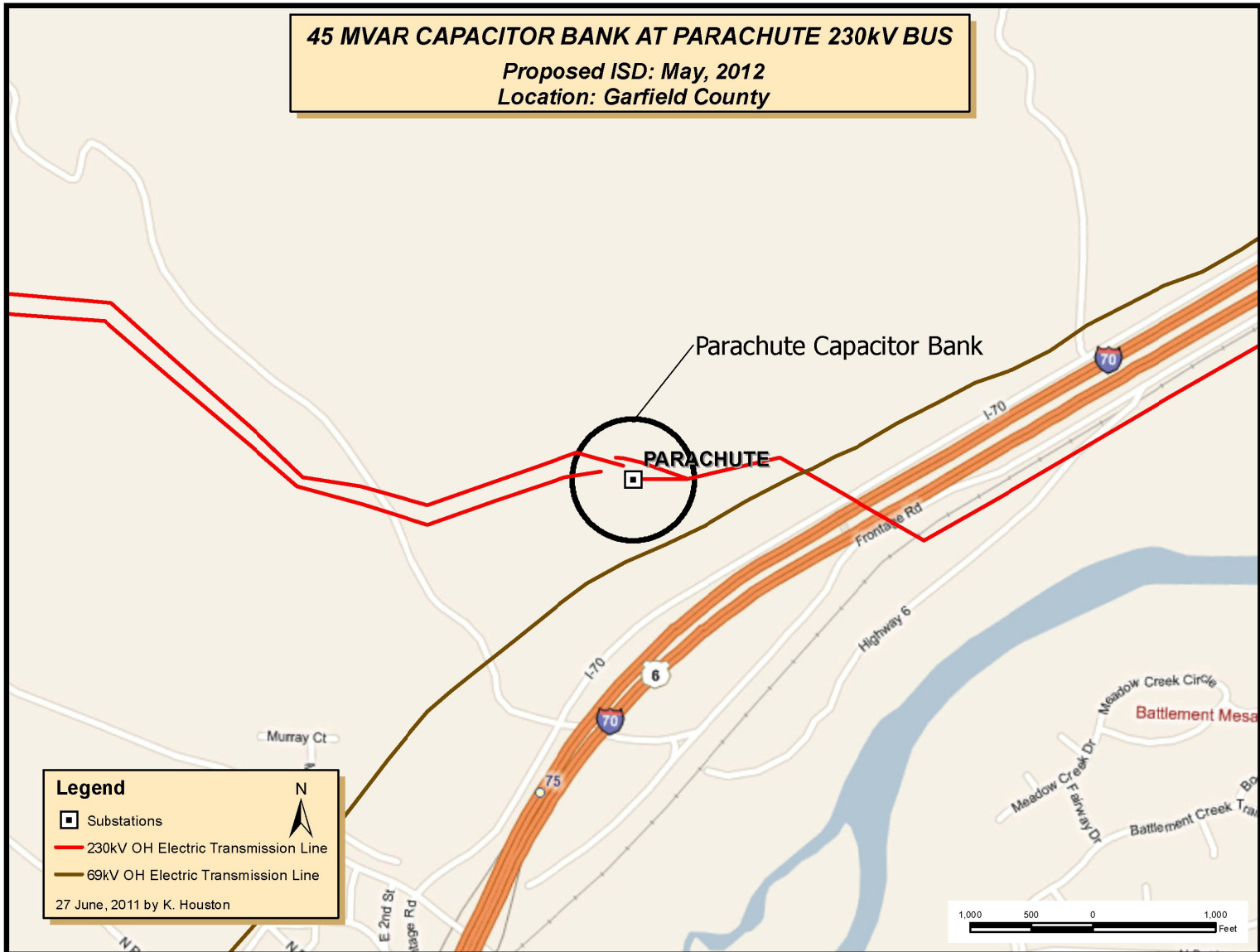
Purpose of Project: Reliability. This project is needed to support load growth in the Starkey Gulch area.

Estimated Cost (in 2010 Dollars): \$1,730,000

Schedule:

Construction Date: 2012
Planned In-Service Date: 2012
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_pscs_substation.php



Poncha Junction Substation 230/115 kV 280 MVA

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Install a new 280 MVA, 115/230 kV auto-transformer at PSCo's Poncha Junction Substation located in Southern Colorado. 1 mile of 230 kV will be built between the new transformer and WAPA's Poncha substations.

Voltage Class: 230 kV
Facility Rating: 280 MVA
Point of Origin/Location: Poncha Junction
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Substation
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

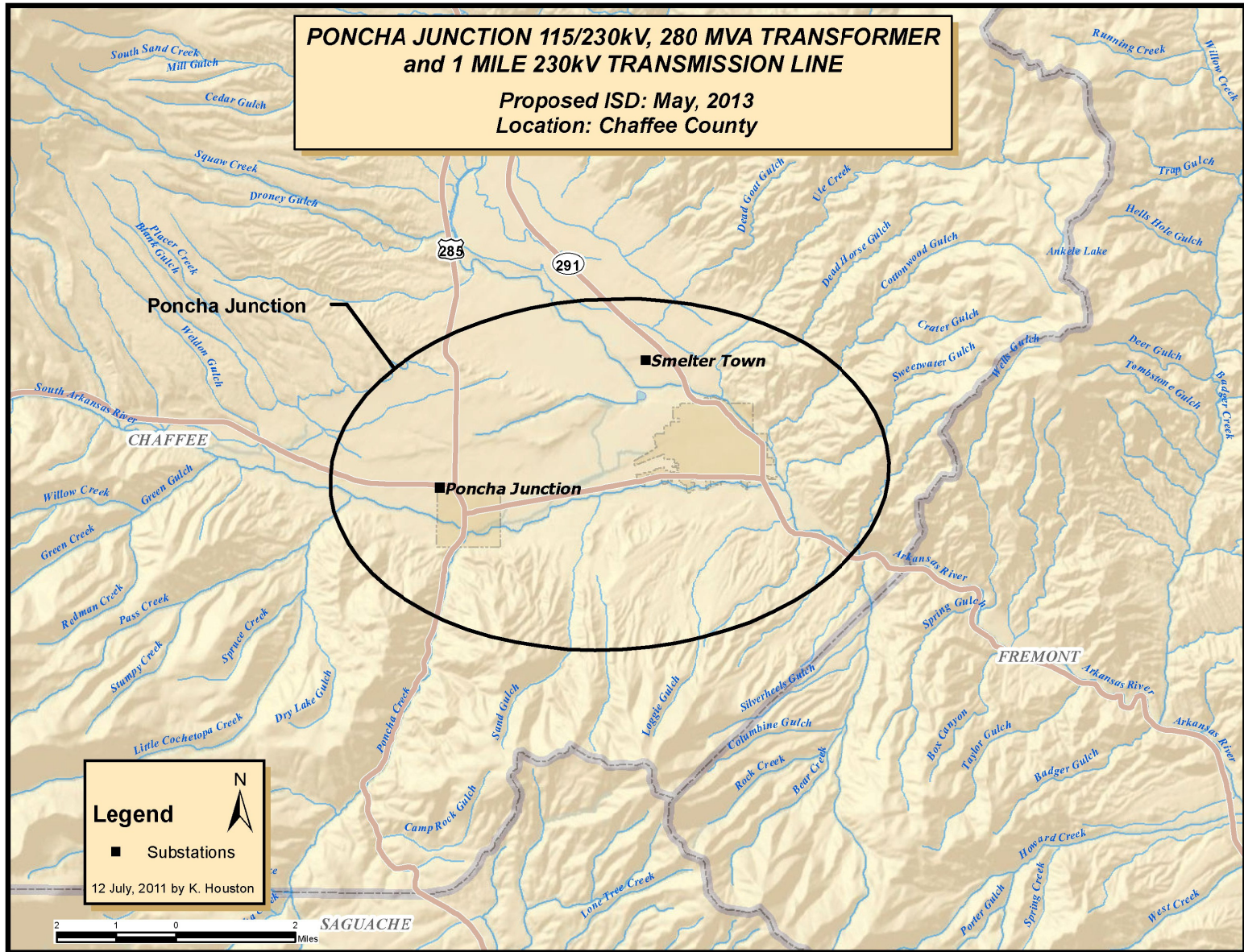
Purpose of Project: Reliability. This project will provide a transmission contract path for Public Service to serve load and transfer solar generation in the San Luis Valley

Estimated Cost (in 2010 Dollars): \$9,300,000

Schedule:

Construction Date: 2012
Planned In-Service Date: 2013
Regulatory Info: CPUC: No CPCN required
Regulatory Date:
Permitting Info:
Permitting Date:

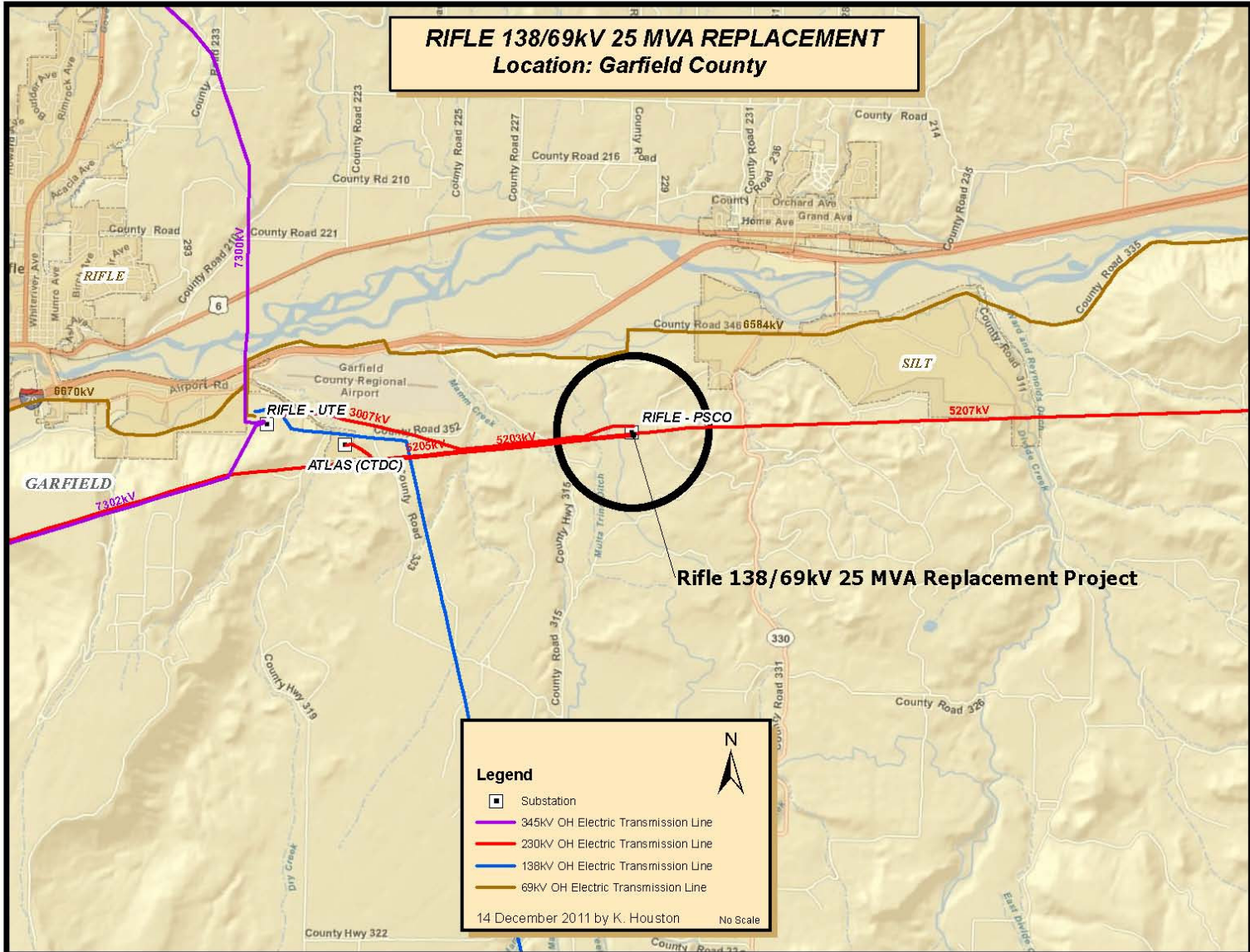
Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information: http://www.westconnect.com/planning_ccpg_pscsco_substation.php



Rifle 138/69 kV 25 MVA Replacement

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	The project consists of replacing the RifleCu PS 138-69 kV 25MVA transformer with a 65 MVA 138-69kV transformer.
Voltage Class:	138 kV
Facility Rating:	
Point of Origin/Location:	Rifle Ute
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Substation
Development Status:	Under Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Reliability. Project needed to protect from potential contingency overloads.
Estimated Cost (in 2010 Dollars):	\$2,180,000
Schedule:	
Construction Date:	2010
Planned In-Service Date:	2012
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	http://www.westconnect.com/planning_ccpg_pscs_substation.php

RIFLE 138/69kV 25 MVA REPLACEMENT
Location: Garfield County



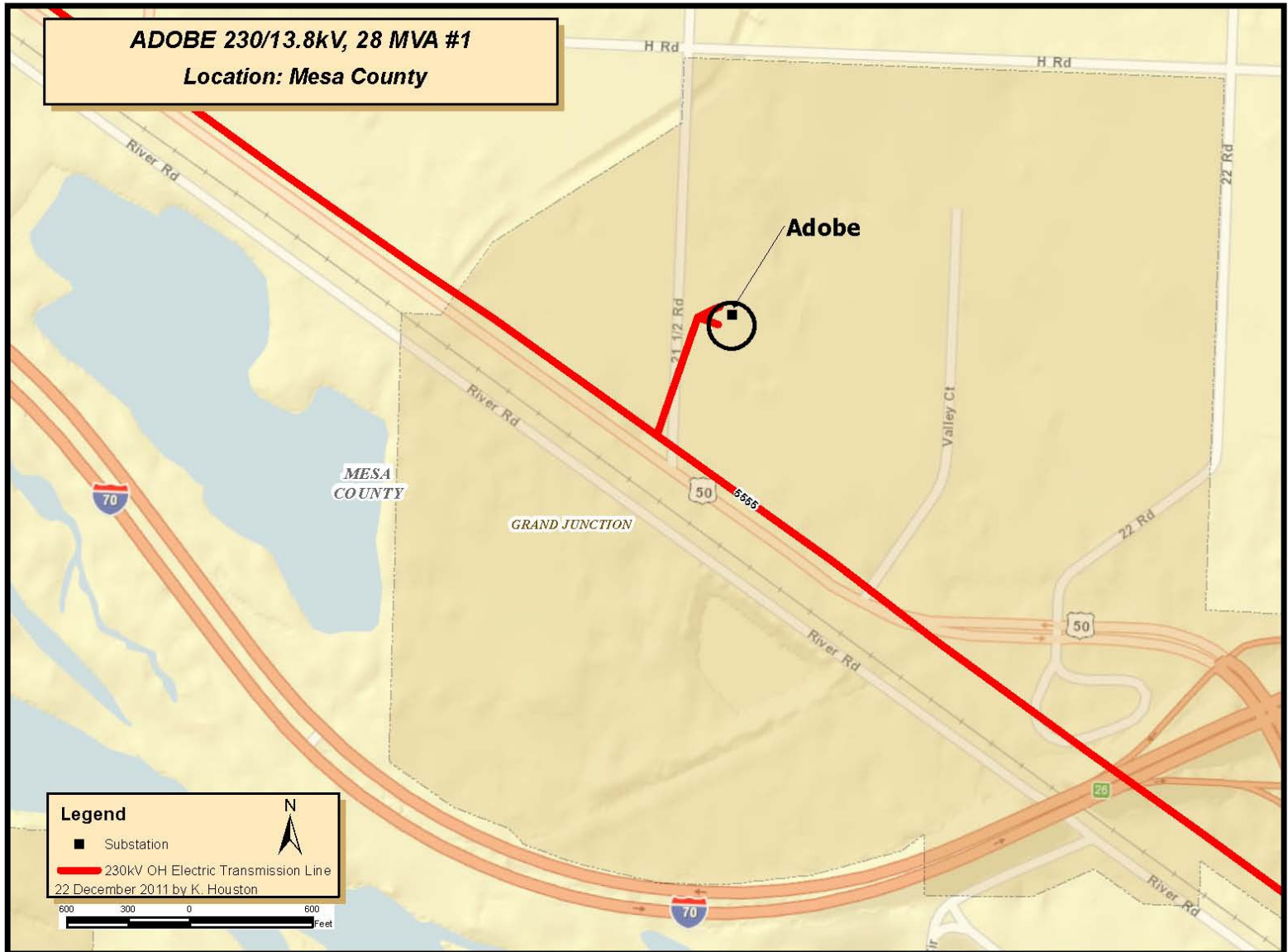
C-64

Distribution Projects Summary

PSCo currently supplies energy to approximately 1.4 million retail customers and 4 wholesale customers with the majority of retail customers served by way of the local distribution systems. Normally the PSCo distribution voltage in the Denver Boulder metro area is a nominal 13.8 kV with the nominal voltage in the mountains at 25 kV. The distribution projects are designed to increase reliability or load serving capability. These facilities are connected to the 115 and 230 kV bulk power transmission systems. In this years plan there are 22 distribution projects of which 14 projects consist of adding a 2nd or 3rd distribution transformer bank to existing substation for reliability and/or redundancy. There are also 8 new substations that are needed for new customer load growth. Those are Adobe, Avery, Barker, Bratner, College Lake, Ptarmigan, Kelim, and Wilson substations.

Adobe 230/13.8 kV 28 MVA #1

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	Install a 230-13.2 kV, 28 MVA transformer bank and 3 feeders, 1 cap bank. 3-feeder MCS. Three new feeders will be installed.
Voltage Class:	230 kV
Facility Rating:	
Point of Origin/Location:	Adobe
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Distribution
Development Status:	Under Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Distribution. New substation to serve load growth.
Estimated Cost (in 2010 Dollars):	\$2,330,000
Schedule:	
Construction Date:	2010
Planned In-Service Date:	2012
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	



Avery 230/13.8 kV, 28 MVA #1

Project Sponsor: Public Service Company of Colorado/ Xcel Energy

Additional Project Participants:

Project Description: Install necessary facilities to serve local load.

Voltage Class: 230 kV
Facility Rating:
Point of Origin/Location: Avery
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

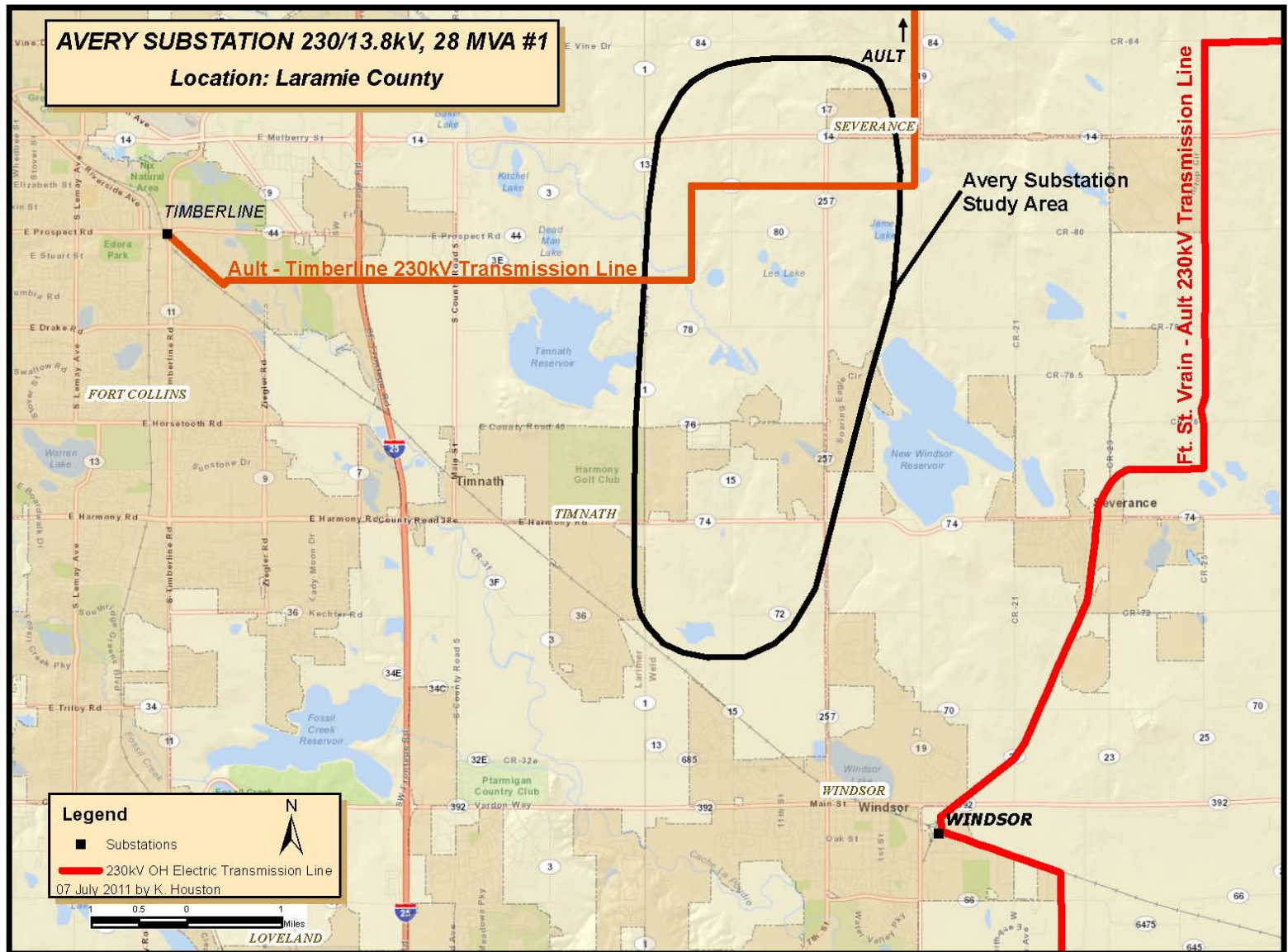
Purpose of Project: Distribution

Estimated Cost (in 2010 Dollars): \$11,500,000

Schedule:

Construction Date:
Planned In-Service Date: 2017
Regulatory Info:
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information



Bancroft 115/13.8 kV, 50 MVA #3

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Install the 115 kV substation transmission facilities required to supply a third 115/13.8 kV, 50 MVA transformer at Bancroft Substation in Lakewood, Colorado

Voltage Class: 115 kV
Facility Rating:
Point of Origin/Location: Bancroft
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Distribution. This project is needed to relieve overloads on the existing transformers for single contingency outage of either transformer.

Estimated Cost (in 2010 Dollars): \$300,000

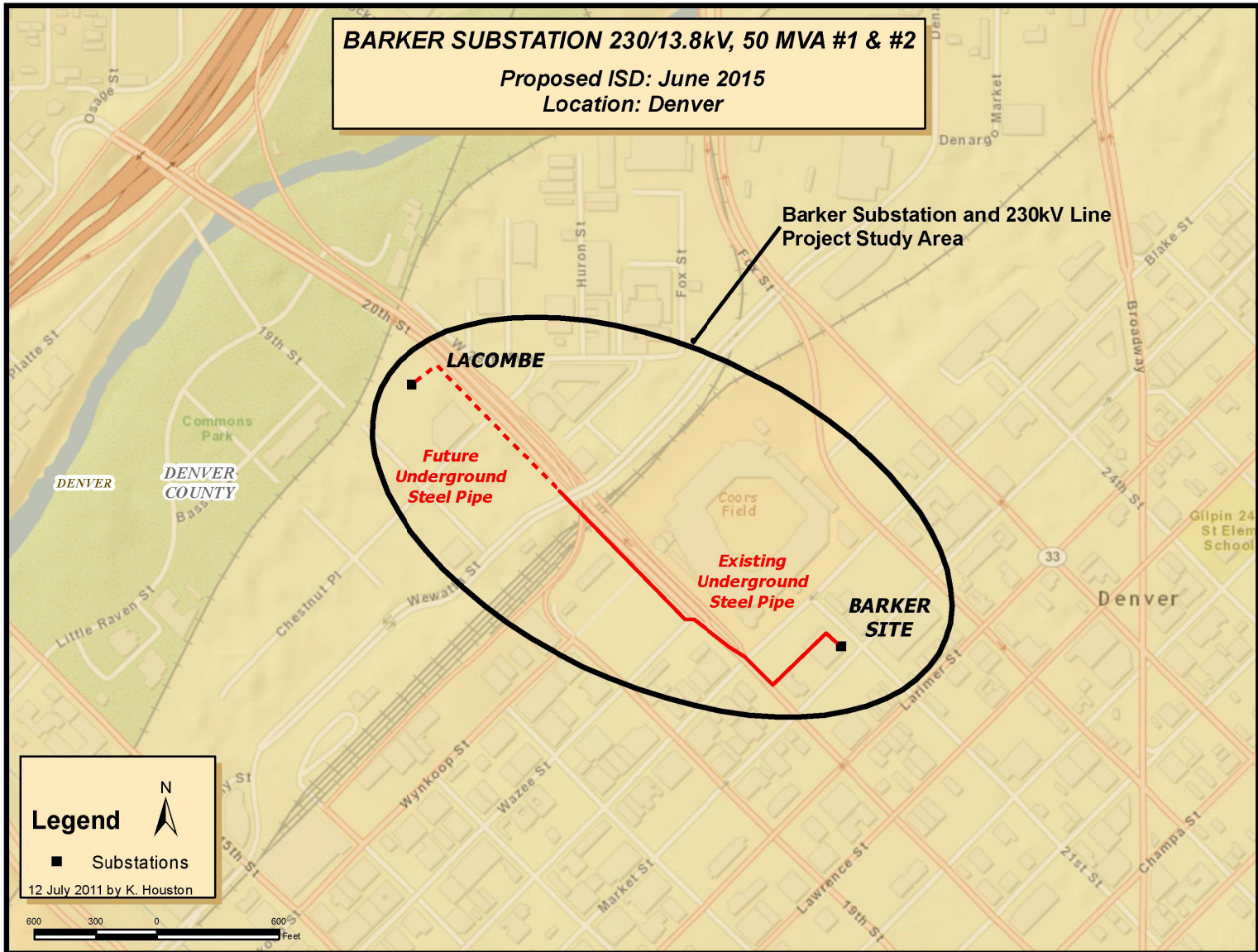
Schedule:

Construction Date: 2012
Planned In-Service Date: 2013
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date: 04/30/2011
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information:

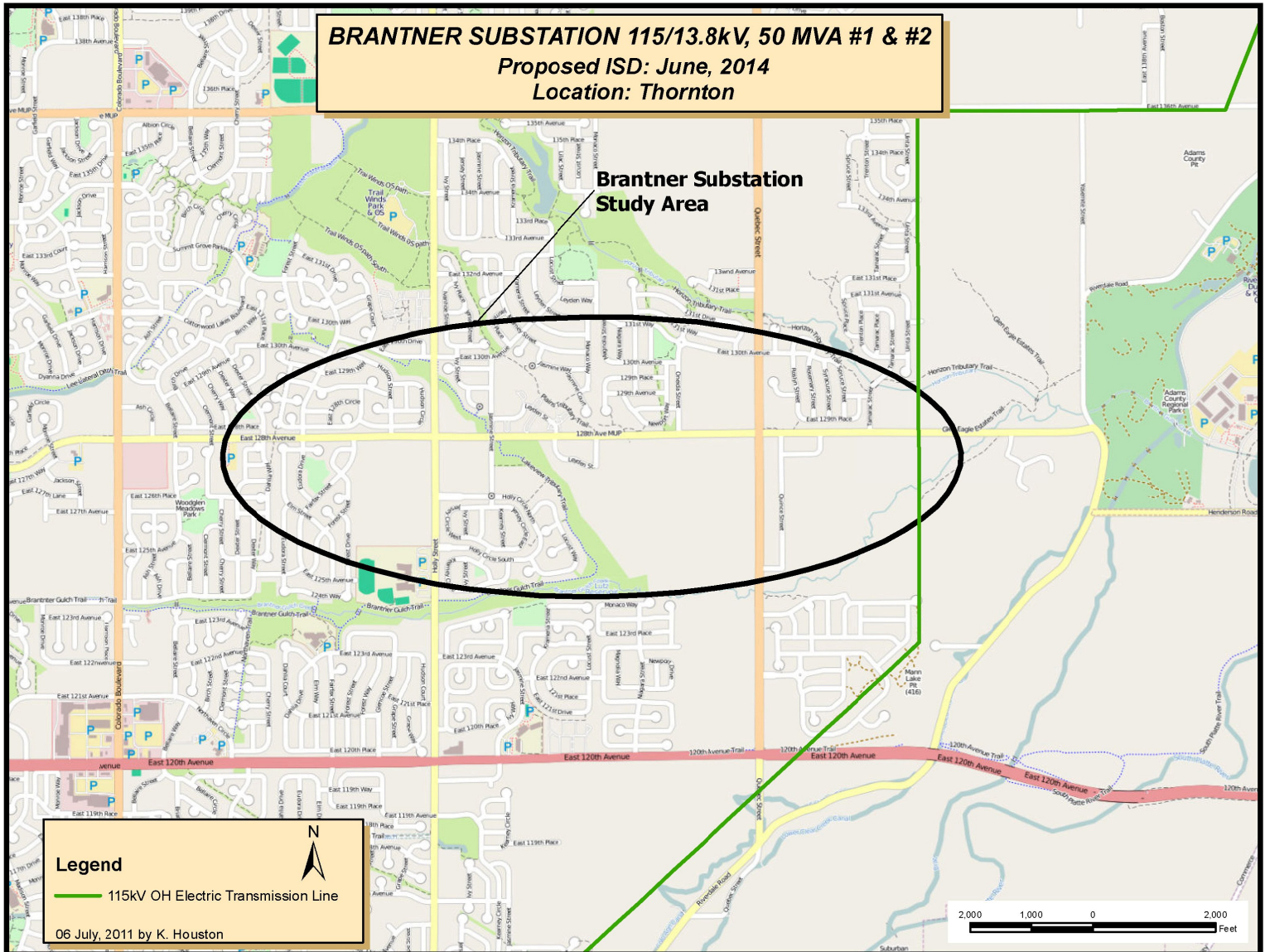
Barker Substation 230/13.8 kV 50 MVA #1 & 2

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	Construct a new Substation called Barker Substation at the existing site at 20th Avenue & Blake Street. Construct 2000 feet of double circuit 230 kV transmission between Lacombe and Barker Substations. The new substation will accommodate two, 230/13.8 kV, 50 MVA transformers.
Voltage Class:	230 kV
Facility Rating:	50 MVA
Point of Origin/Location:	Barker Substation
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Distribution
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Distribution. New substation with two 50 MVA 230/13.8 transformers
Estimated Cost (in 2010 Dollars):	\$17,200,000
Schedule:	
Construction Date:	2015
Planned In-Service Date:	2015
Regulatory Info:	CPUC: No CPCN required
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	



Brantner Substation 115/13.8 kV, 50 MVA #1

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	Construct a new Brantner Substation tapping PSCo's Fort Lupton - Cherokee 115 kV line. The new substation will be located near 120th Avenue and Holly Street in Denver, Colorado. The transmission portion of the project consists of constructing a 1mile in-and-out 115 kV tap and providing the 230 kV Substation transmission facilities required to serve the distribution transformer
Voltage Class:	115 kV
Facility Rating:	
Point of Origin/Location:	Brantner Substation
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Distribution
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Distribution. Project will serve load growth in Thornton, Colorado.
Estimated Cost (in 2010 Dollars):	\$4,500,000
Schedule:	
Construction Date:	2013
Planned In-Service Date:	2014
Regulatory Info:	CPUC: No CPCN required
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email:	thomas.green@xcelenergy.com
Phone:	303-571-7223
Website Information:	



Capitol Hill 115/13.8 kV, 50 MVA #3

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: The transmission portion of the project consists of extending the 115 kV bus and installing the 115 kV substation transmission facilities required to supply the third 115/13.8 kV, 50 MVA transformer at the Capitol Hill Substation in Denver, Colorado.

Voltage Class: 115 kV
Facility Rating:
Point of Origin/Location: Capitol Hill
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Distribution. This project is needed to eliminate overloads on the existing transformers for single contingency outage of the other transformer.

Estimated Cost (in 2010 Dollars): \$1,400,000

Schedule:

Construction Date: 2013
Planned In-Service Date: 2014
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date: 04/30/2011
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information

CAPITOL HILL 115/13.8kV, 50 MVA #3

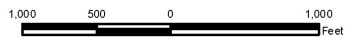
*Proposed ISD: May, 2014
Location: Denver*

CAPITOL HILL
Capitol Hill #3

Legend

- Substations
- 115kV OH Electric Transmission Line
- 115kV UG Electric Transmission Line
- 230kV OH Electric Transmission Line
- 230kV UG Electric Transmission Line

24 June 2011 by K. Houston



C-77



College Lake 230/13.8 kV 28 MVA #1

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: This project is a new College Lake 230-13.8 kV distribution substation. The transmission portion of this project proposes to interconnect with / sectionalize PRPA's Rawhide to Dixon 230 kV line, and construct a new College Lake distribution substation to serve projected PSCo load growth at Colorado State University. The transmission breaker station portion of this substation would be owned by PRPA and located adjacent to the City of Fort Collins' Overland Substation.

Voltage Class: 230 kV
Facility Rating:
Point of Origin/Location: College Lake
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: In-Service
Routing:
Subregional Planning Group: CCPG

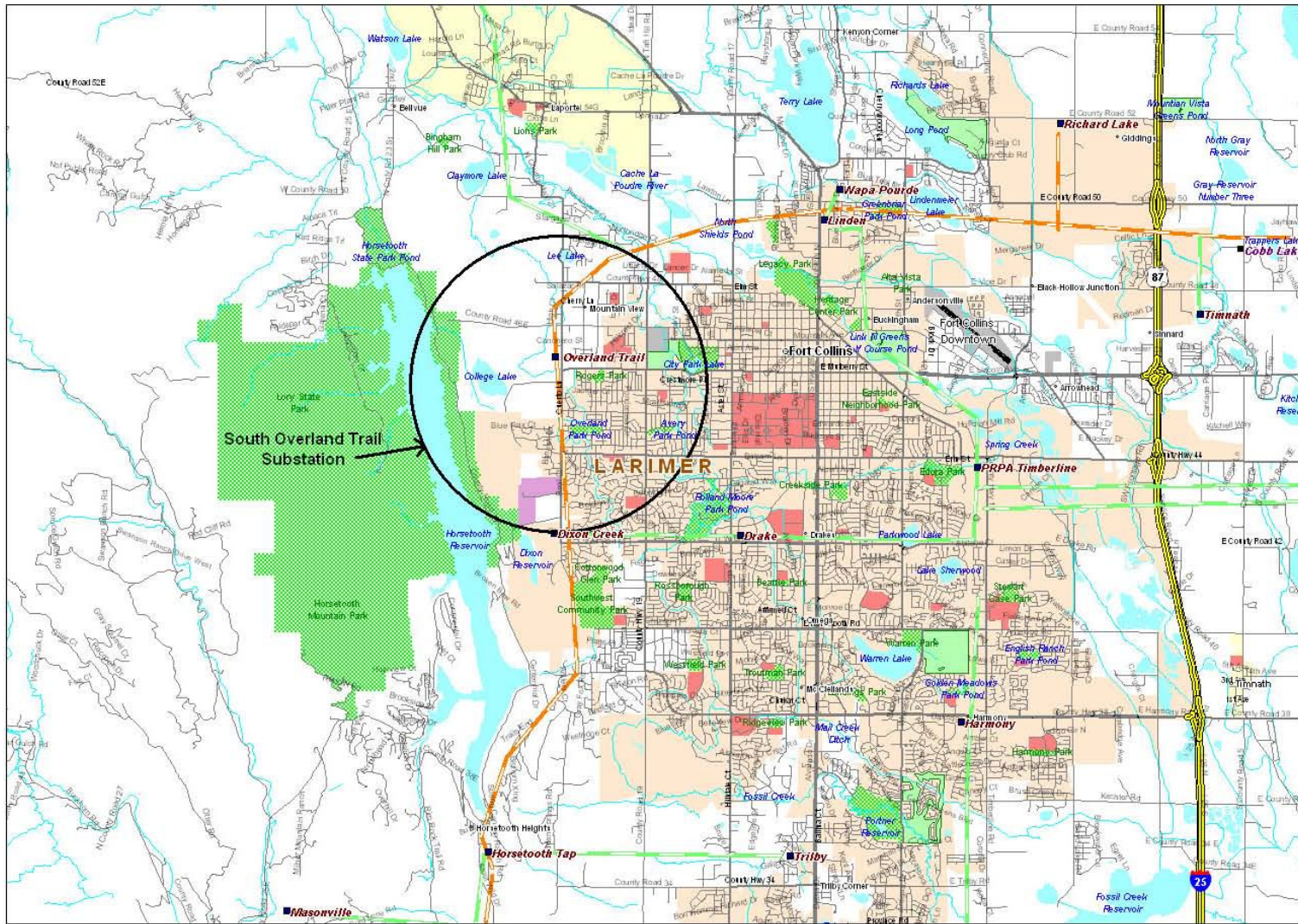
Purpose of Project: Distribution. To serve local load growth.

Estimated Cost (in 2010 Dollars): \$4,020,000

Schedule:

Construction Date: 2009
Planned In-Service Date: 2011
Regulatory Info:
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information:



Approximate Location of the College Lake Substation

Dakota 115/13.8 kV 50 MVA #2

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Install a new 230/13.8 kV 30/40/50 MVA transformer and five (5) feeder MCS per Phase I guidelines at the Dakota substation. Dakota #2 would backup the Dakota #1 transformer in the event of a single contingency (N-1) outage. The 2010 forecasted peak load is 49 MVA; 30 MVA can be picked up from adjacent substations/feeders, however there is 19 MVA at risk.

Voltage Class: 115 kV
Facility Rating:
Point of Origin/Location: Dakota
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

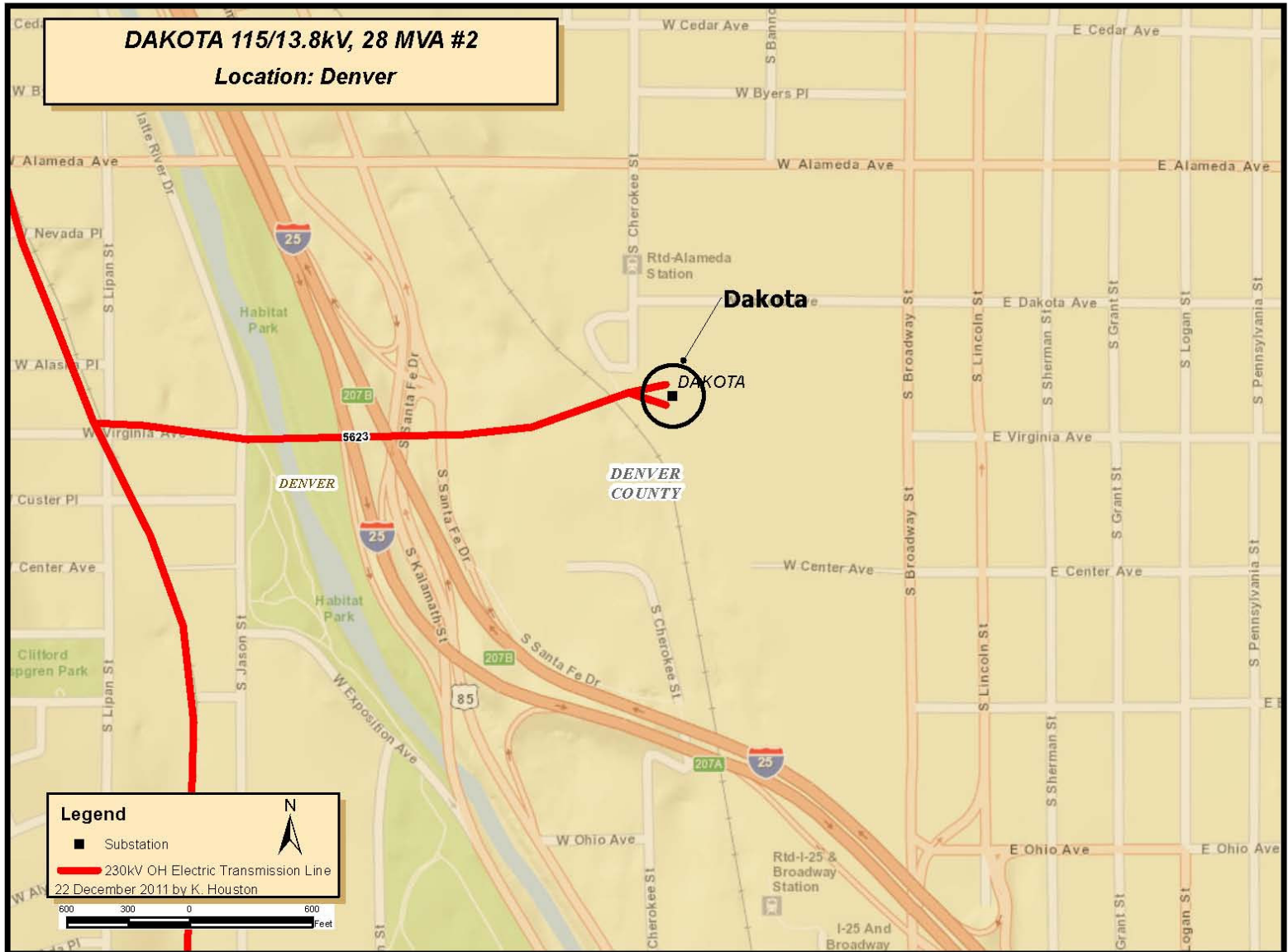
Purpose of Project: Distribution. To serve local load growth.

Estimated Cost (in 2010 Dollars): \$0

Schedule:

Construction Date: 2011
Planned In-Service Date: 2013
Regulatory Info:
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information



Federal Heights 115/13.8 kV, 50 MVA #3

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: The transmission portion of the project consists of installing the 115 kV substation transmission facilities required to supply the third 115/13.8 kV, 50 MVA distribution transformer. This project is located inside the Federal Heights Substation in Federal Heights, Colorado

Voltage Class: 115 kV
Facility Rating:
Point of Origin/Location: Federal Heights
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Distribution. This project is needed to avoid overloading of the existing transformers under a single contingency outage of either transformer.

Estimated Cost (in 2010 Dollars): \$250,000

Schedule:

Construction Date: 2012
Planned In-Service Date: 2013
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date: 04/30/2011
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information

Greenwood 230/13.8 kV, 50 MVA #3

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Install the necessary substation transmission facilities required to supply a third, 230/13.8 kV, 50 MVA transformer at Greenwood Substation in Arapahoe County, Colorado

Voltage Class: 230 kV
Facility Rating: 50 MVA
Point of Origin/Location: Greenwood
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Under Construction
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Distribution. Avoid overloading of the existing distribution transformers under single contingency outage of the other transformer

Estimated Cost (in 2010 Dollars): \$150,000

Schedule:

Construction Date: 2011
Planned In-Service Date: 2012
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date: 04/30/2011
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information:

GREENWOOD 230/13.8kV, 50 MVA #3
 Proposed ISD: March, 2012
 Location: Arapahoe County





Greenwood #3

GREENWOOD

Westlands
Park

Holly Park

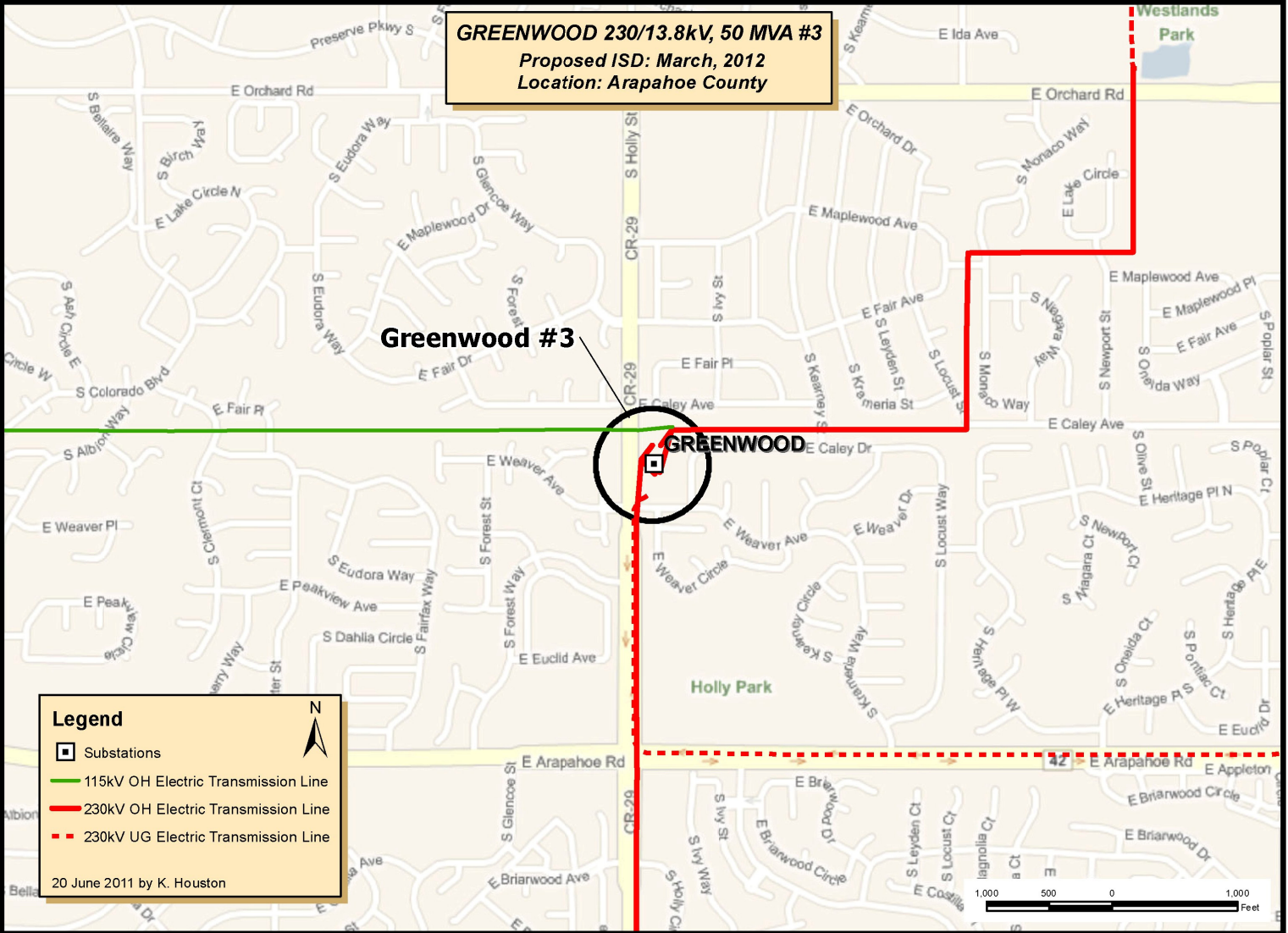
Legend

-  Substations
-  115kV OH Electric Transmission Line
-  230kV OH Electric Transmission Line
-  230kV UG Electric Transmission Line

20 June 2011 by K. Houston



C-85



Havana 115/13.8 kV, 50 MVA #3

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: The transmission portion of the project consists of installing the 115 kV substation transmission facilities required to supply a third 115/13.8 kV, 50 MVA transformer at Havana Substation located in Denver, Colorado.

Voltage Class: 115 kV
Facility Rating:
Point of Origin/Location: Havana
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

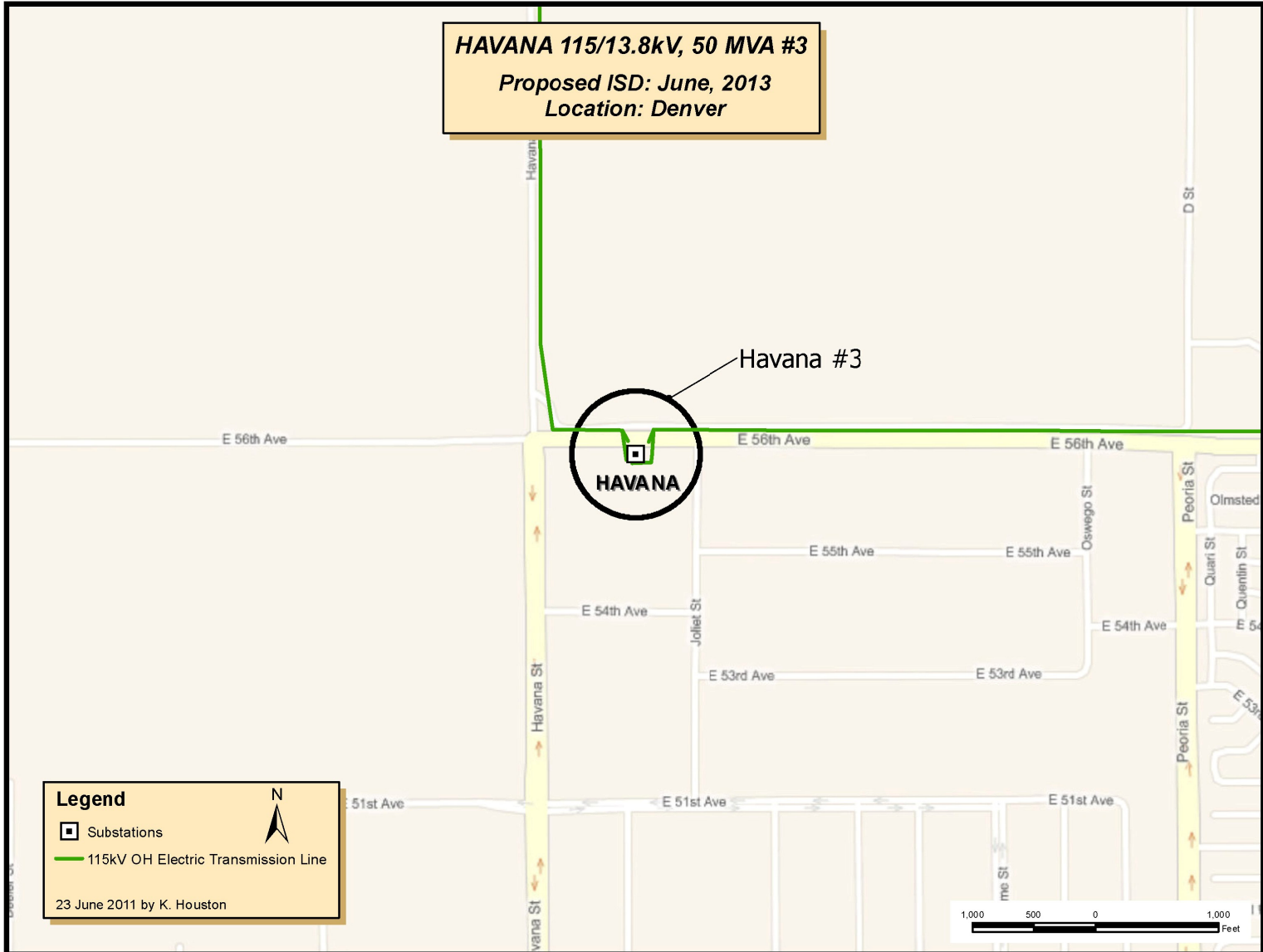
Purpose of Project: Distribution. This project is needed to avoid overloading of the existing transformers in case of a single contingency outage of either transformer.

Estimated Cost (in 2010 Dollars): \$410,000

Schedule:

Construction Date: 2012
Planned In-Service Date: 2013
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date: 04/30/2011
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information



Jewell 230/13.8 kV, 50 MVA #3

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: The transmission portion of the project consists of installing the 230 kV substation transmission facilities required to supply the third 230/13.8 kV, 50 MVA transformer at Jewell Substation located in Arapahoe County, Colorado

Voltage Class: 230 kV
Facility Rating:
Point of Origin/Location: Jewell
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

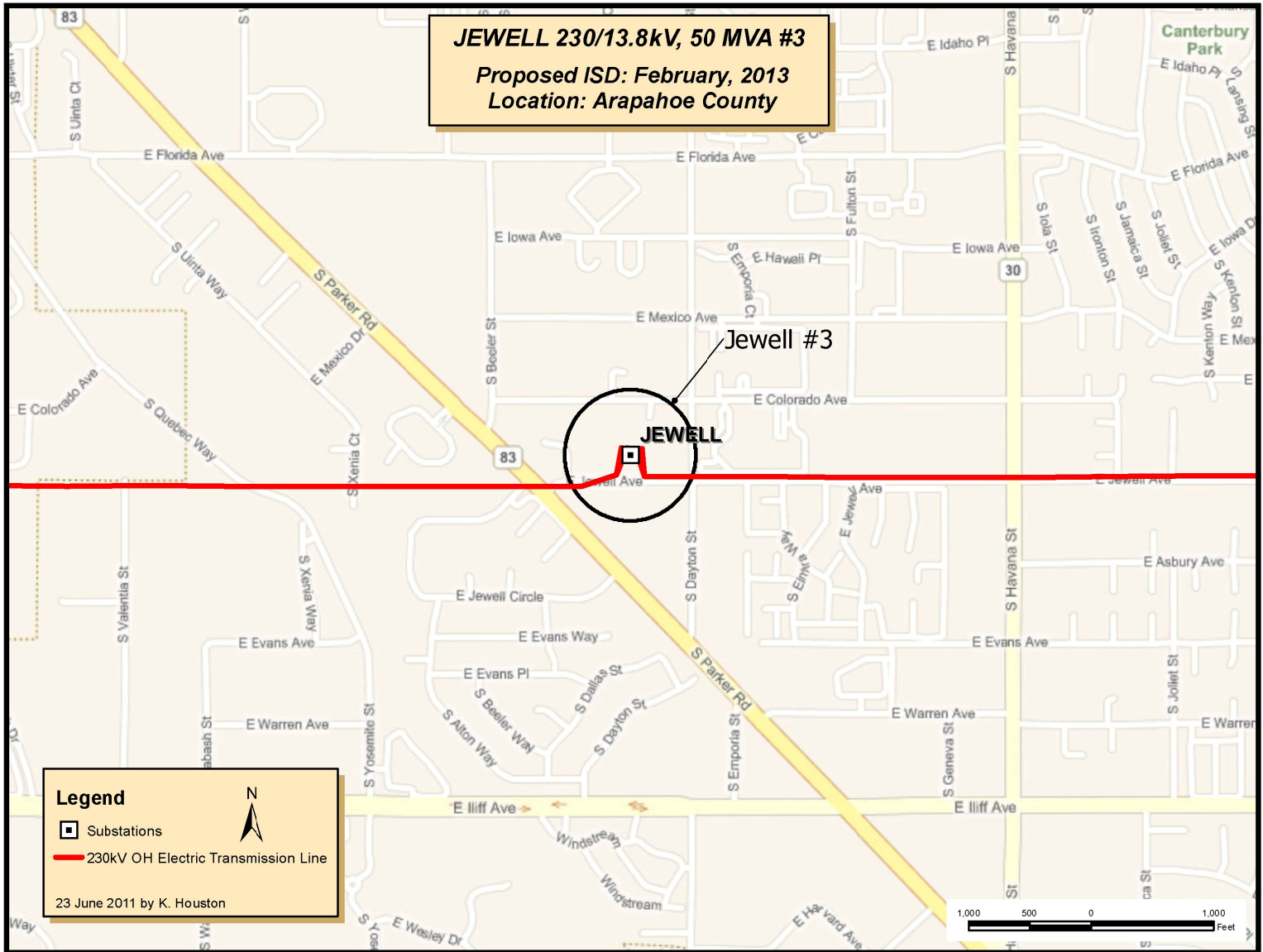
Purpose of Project: Distribution. This project is needed for reliability due to the lack of distribution tie back up support in case of a single contingency outage of one of the existing transformers.

Estimated Cost (in 2010 Dollars): \$100,000

Schedule:

Construction Date: 2012
Planned In-Service Date: 2013
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date: 04/30/2011
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information



Kelim 115/13.8 kV 28 MVA #1

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: This project is a new Kelim 115-13.2 kV distribution substation. The transmission portion of this project proposes an interconnection with Western Area Power Administration on Western's Airport-Boyd 115 kV line near the Airport Substation. As an alternative, the interconnection could occur at Western's Airport Substation. PSCo would construct the new 115-13.2kV, 28 MVA Kelim Substation. The substation would be at or near Western's Airport Substation.

Voltage Class: 115 kV
Facility Rating:
Point of Origin/Location: Kelim
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: In-Service
Routing:
Subregional Planning Group: CCPG

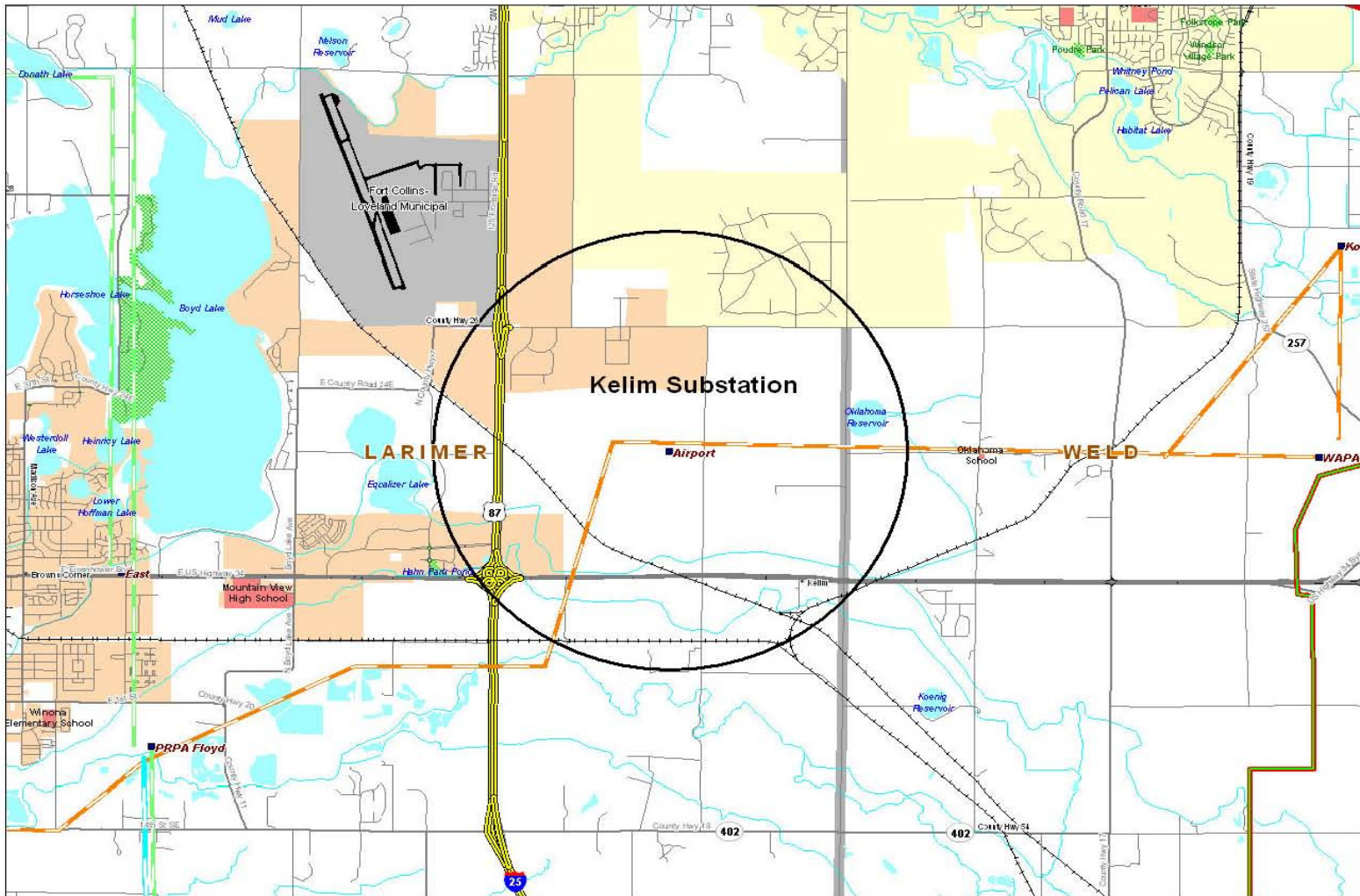
Purpose of Project: Distribution. New sub to serve load growth.

Estimated Cost (in 2010 Dollars): \$1,300,000

Schedule:

Construction Date: 2009
Planned In-Service Date: 2011
Regulatory Info:
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information:



Approximate Location of the Kelim Substation

Lacombe 230/13.8 kV, 50 MVA #3

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: The transmission portion of the project consists of installing the 230 kV substation transmission facilities required to interconnect the third 230/13.8 kV, 50 MVA transformer at the Lacombe Substation in Denver, Colorado

Voltage Class: 230 kV
Facility Rating:
Point of Origin/Location: Lacombe
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Distribution. This project is needed to provide load relief for the 2nd network under system intact conditions and to construct the 14th network off the new Lacombe #3.

Estimated Cost (in 2010 Dollars): \$200,000

Schedule:

Construction Date: 2012
Planned In-Service Date: 2013
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date: 04/30/2011
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information



North 115/13.8 kV, 50 MVA #3

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: The transmission portion of the project consists of installing the 115 kV substation transmission facilities required to serve the third 115/13.8 kV, 50 MVA transformer at the North Substation located in Denver, Colorado

Voltage Class: 115 kV
Facility Rating:
Point of Origin/Location: North
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Distribution. This transformer is needed to avoid overloads on the existing transformers for single contingency outage of the other transformer.

Estimated Cost (in 2010 Dollars): \$540,000

Schedule:

Construction Date: 2014
Planned In-Service Date: 2015
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information

Ptarmigan 230/24.9 kV, 28 MVA #1

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: This project consists of constructing a new Silverthorne substation by sectionalizing PSCo's Blue River - Dillon 230 kV line. The Distribution Substation will consist of one 230/24.9 kV, 28 MVA transformer. Transmission portion of the project consists of tapping the Blue River - Dillon 230 kV line and installing the necessary transmission equipment required to serve the new substation

Voltage Class: 230 kV
Facility Rating:
Point of Origin/Location: Ptarmigan
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Distribution. This new substation is necessary for reliability in Silverthorne and parts of Dillon. It will also provide back up electric supply and improve reliability for Frisco and parts of Keystone.

Estimated Cost (in 2010 Dollars): \$8,200,000

Schedule:

Construction Date:
Planned In-Service Date: 2014
Regulatory Info: No CPCN Required
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information:

Russell 115/13.8 kV, 50 MVA #2

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	The transmission portion of the project consists of installing the 115 kV substation transmission facilities required to supply the second 115/13.8 kV, 50 MVA transformer at the Russeel Substation located in Arvada, Colorado.
Voltage Class:	115 kV
Facility Rating:	
Point of Origin/Location:	Russell
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Distribution
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Distribution. This project is needed due to lack of distribution tie backup support in the area and to avoid single contingency overloads on the existing transformers for the loss of either transformer.
Estimated Cost (in 2010 Dollars):	\$280,000
Schedule:	
Construction Date:	2013
Planned In-Service Date:	2013
Regulatory Info:	Rule 3206: No CPCN required
Regulatory Date:	04/30/2011
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	

RUSSELL 115/13.8kV, 50 MVA #2

Proposed ISD: June, 2014

Location: Arvada

Russel #2

RUSSELL

Legend

■ Substations

— 115kV OH Electric Transmission Line

— 230kV OH Electric Transmission Line

24 June 2011 by K. Houston



Sandown 115/13.8 kV 50 MVA #3

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	This project proposes to modify the existing Sandown substation to add a third 115-13.8kV, 50 MVA transformer and associated equipment. Distribution Planning has determined that the new transformer is needed to eliminate bank overloads and a risk of potential Customer load shedding for an outage of either Sandown bank #1 or #2 transformers.
Voltage Class:	115 kV
Facility Rating:	
Point of Origin/Location:	Sandown
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Distribution
Development Status:	Under Construction
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Distribution. To serve local load growth.
Estimated Cost (in 2010 Dollars):	\$722,000
Schedule:	
Construction Date:	2010
Planned In-Service Date:	2012
Regulatory Info:	
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	

Sheridan 115/13.8 kV, 50 MVA #2

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: The Transmission portion of the project consists of installing the necessary 115 kV substation transmission facilities required to serve the second 115/13.8 kV, 30 MVA transformer at Sheridan, located in Denver, Colorado

Voltage Class: 115 kV
Facility Rating:
Point of Origin/Location: Sheridan
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Distribution. Eliminate overloading of the existing transformer under certain single contingency outages

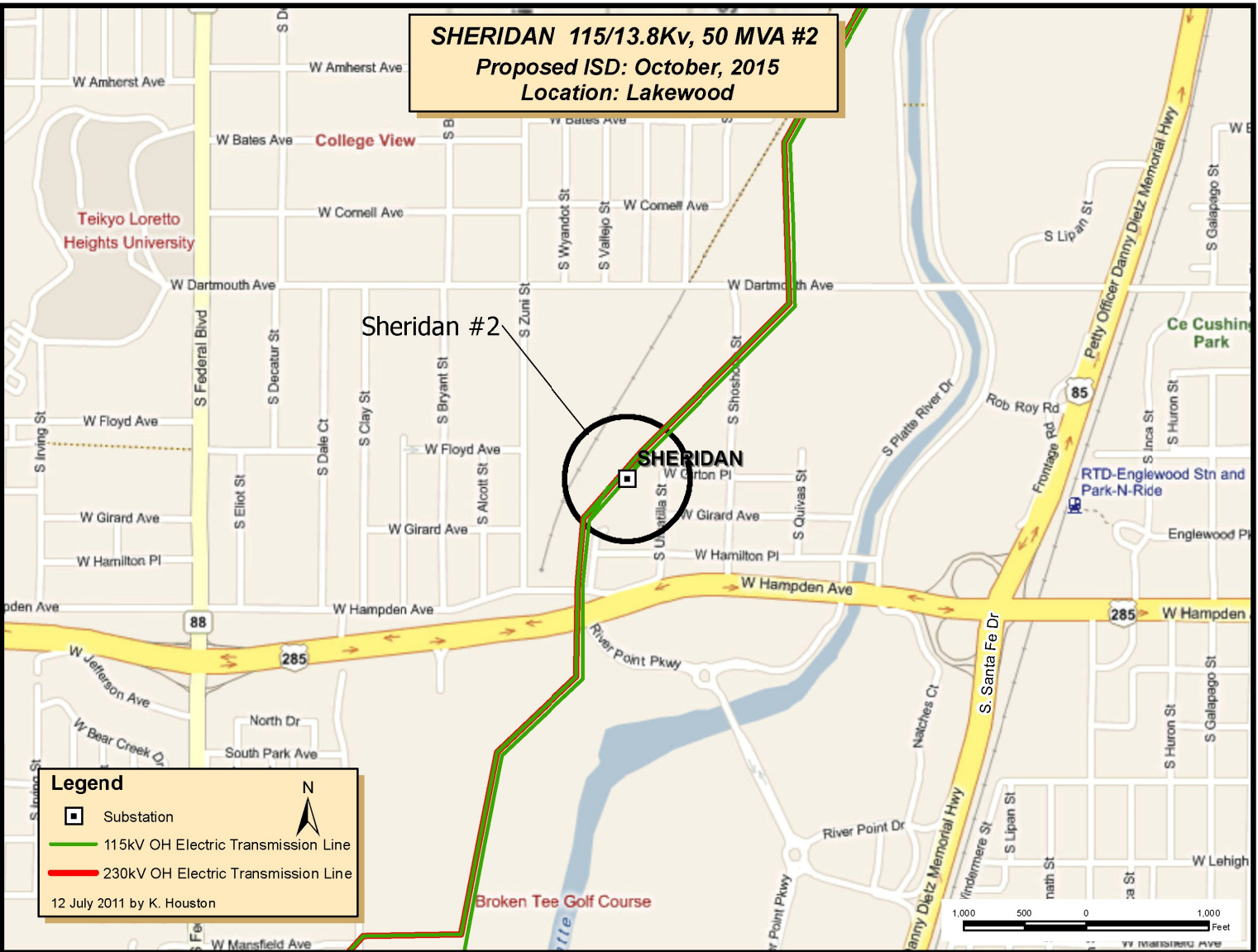
Estimated Cost (in 2010 Dollars): \$251,000

Schedule:

Construction Date: 2014
Planned In-Service Date: 2015
Regulatory Info: No
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information:

SHERIDAN 115/13.8Kv, 50 MVA #2
Proposed ISD: October, 2015
Location: Lakewood



C-103

Tollgate 230/13.8 kV, 50 MVA #3

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Install necessary substation transmission facilities required to supply a third 230/13.8 kV, 50 MVA transformer at the Tollgate Substation in Aurora, Colorado

Voltage Class: 230 kV
Facility Rating: 50 MVA
Point of Origin/Location: Tollgate
Point of Termination:
Intermediate Points:
Length of Line (in Miles):
Type of Project: Distribution
Development Status: Under Construction
Routing:
Subregional Planning Group: CCPG

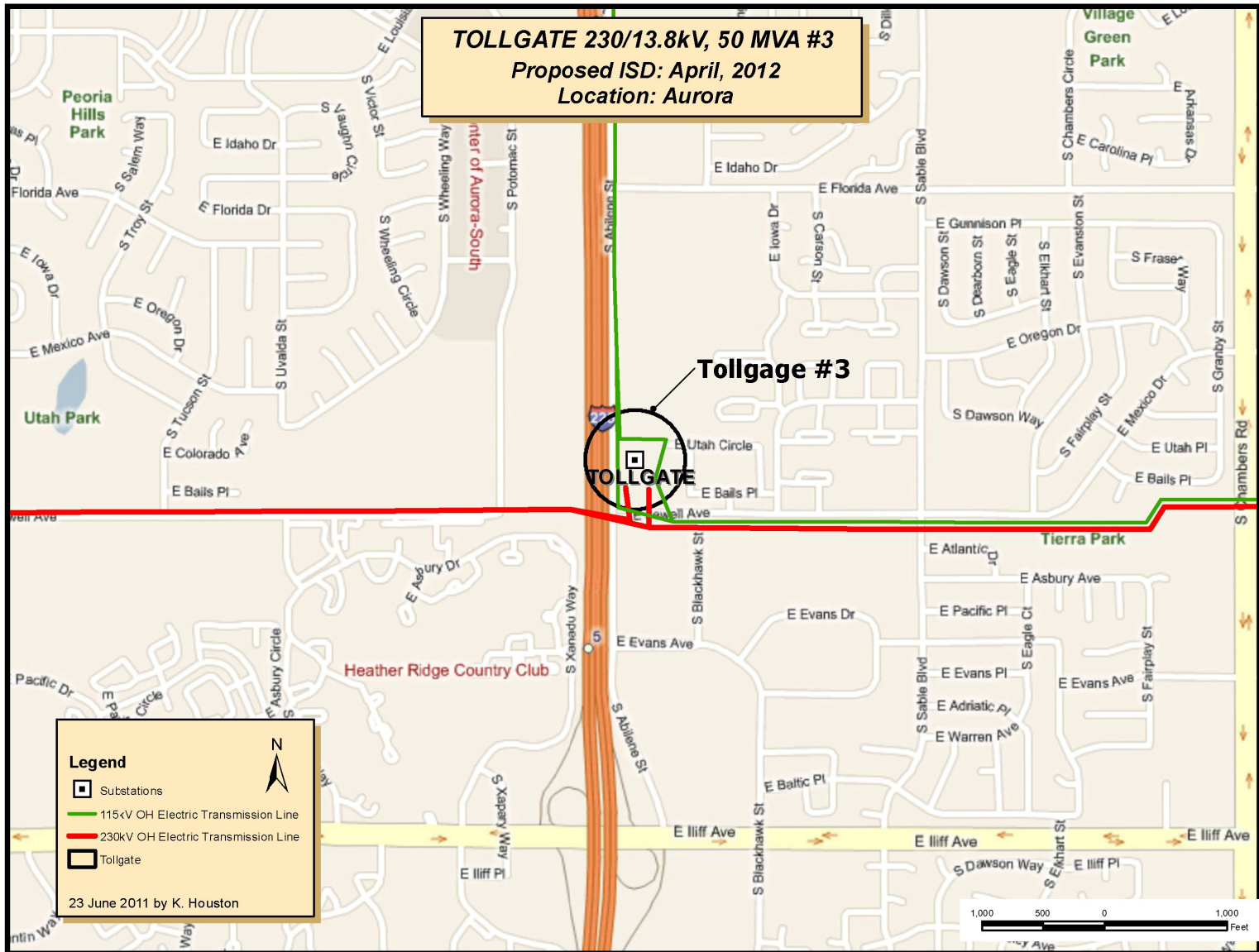
Purpose of Project: Distribution. Project needed for reliability, due to lack of available distribution tie back up support in the area.

Estimated Cost (in 2010 Dollars): \$230,000

Schedule:

Construction Date: 2011
Planned In-Service Date: 2012
Regulatory Info: Rule 3206: No CPCN required
Regulatory Date: 04/30/2011
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information:



University 115/13.8 kV, 50 MVA #3

Project Sponsor:	Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:	
Project Description:	The transmission portion of the project consists of installing the necessary 115 kV substation transmission facilities required to supply the third 115/13.2 kV, 50 MVA transformer at the University Substation located in Denver, Colorado
Voltage Class:	115 kV
Facility Rating:	
Point of Origin/Location:	University
Point of Termination:	
Intermediate Points:	
Length of Line (in Miles):	
Type of Project:	Distribution
Development Status:	Planned
Routing:	
Subregional Planning Group:	CCPG
Purpose of Project:	Distribution. This project is needed to avoid single contingency overloads on the existing transformers for the loss of either one transformer
Estimated Cost (in 2010 Dollars):	\$280,000
Schedule:	
Construction Date:	2011
Planned In-Service Date:	2012
Regulatory Info:	CPUC: No CPCN required
Regulatory Date:	
Permitting Info:	
Permitting Date:	
Contact Information:	Thomas Green
Email	thomas.green@xcelenergy.com
Phone	303-571-7223
Website Information	

UNIVERSITY 115/13.2kV, 50 MVA #3
Proposed ISD: December, 2012
Location: Denver



Legend

- Substations
- 115kV OH Electric Transmission Line
- 115kV UG Electric Transmission Line

27 June, 2011 by K. Houston

Wilson Substation 115/13.8 kV 14 MVA #1

Project Sponsor: Public Service Company of Colorado/ Xcel Energy
Additional Project Participants:
Project Description: Construct a new Wilson Substation tapping PRPA's Horseshoe - West 115 kV line, near Wilson Avenue & Larimer County Road 28 in Loveland, Colorado. Construct 2 miles of 115 kV in-and-out transmission from the tap. Install a 115/13.8 kV, 14 MVA transformer.

Voltage Class: 115 kV
Facility Rating:
Point of Origin/Location: Wilson Substation
Point of Termination:
Intermediate Points:
Length of Line (in Miles): 2
Type of Project: Distribution
Development Status: Planned
Routing:
Subregional Planning Group: CCPG

Purpose of Project: Distribution. To serve load growth in the Loveland area

Estimated Cost (in 2010 Dollars): \$3,370,000

Schedule:

Construction Date: 2016
Planned In-Service Date: 2017
Regulatory Info: CPUC: No CPCN required
Regulatory Date:
Permitting Info:
Permitting Date:

Contact Information: Thomas Green
Email: thomas.green@xcelenergy.com
Phone: 303-571-7223
Website Information:

