

BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION

**IN THE MATTER OF SOUTHWESTERN)
PUBLIC SERVICE COMPANY'S)
APPLICATION REQUESTING A)
DETERMINATION ON LOCATION)
APPROVAL OF TWO SOLAR FACILITIES, A)
BATTERY ENERGY STORAGE SYSTEM,)
AND A 230 KV TRANSMISSION)
GENERATION TIE LINE IN LEA COUNTY)
AND OTHER ASSOCIATED RELIEF,) CASE NO. 24-00 ____-UT
)
)
SOUTHWESTERN PUBLIC SERVICE)
COMPANY,)
)
APPLICANT.)
)
_____)**

DIRECT TESTIMONY

of

MARK LYTAL

on behalf of

SOUTHWESTERN PUBLIC SERVICE COMPANY

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GLOSSARY OF ACRONYMS AND DEFINED TERMS

<u>Acronym/Defined Term</u>	<u>Meaning</u>
BESS	Battery Energy Storage System
Commission	New Mexico Public Regulation Commission
CCN	Certificate of Public Convenience and Necessity
kV	Kilovolt(s)
MW	Megawatt
O&M	Operation and Maintenance
POI	Point of Interconnection
Proposed Project	Proposed 230 kV/115-kV double circuit transmission (Gen-tie) line that will extend from SPS's Cunningham Solar Collector Substation to its Cunningham Generation Station in Lea County, New Mexico
PUA	Public Utility Act (NMSA 1978, § 62-3-1, <i>et al.</i>)
ROW	Right-of-Way
SPS	Southwestern Public Service Company, a New Mexico corporation
SPS Self-Build Projects	SPS's proposed Cunningham 1 and 2 Solar Facilities and Cunningham 1 BESS
Transmission Facilities	Proposed 230/115-kV double circuit transmission (Gen-tie) line route and collector substation.
Xcel Energy	Xcel Energy Services Inc.

LIST OF ATTACHMENTS

<u>Attachment</u>	<u>Description</u>
ML-1	230-kV/115-kV double circuit transmission (Gen-tie) line structure drawings.
ML-2	Map depicting the location of the projects.

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of
Mark Lytal

1 **I. WITNESS IDENTIFICATION AND QUALIFICATIONS**

2 **Q. Please state your name and business address.**

3 A. My name is Mark Lytal. My business address is 790 S. Buchanan Street,
4 Amarillo, Texas 79101.

5 **Q. On whose behalf are you testifying in this proceeding?**

6 A. I am filing testimony on behalf of Southwestern Public Service Company
7 (“SPS”), a New Mexico corporation and wholly owned electric utility subsidiary
8 of Xcel Energy Inc. (“Xcel Energy”).

9 **Q. By whom are you employed and in what position?**

10 A. I am employed by Xcel Energy Services Inc., the service company subsidiary of
11 Xcel Energy, as Director, Regional Capital Projects, in the Projects Department of
12 Energy Supply, which is the generation operation and maintenance (“O&M”)
13 business unit of Xcel Energy.

14 **Q. Please briefly outline your responsibilities as Director, Regional Capital
15 Projects, in the Engineering and Construction Department of Energy Supply.**

16 A. I am responsible for managing the capital budget process and projects for the SPS
17 region within the Energy Supply business unit. Thus, I am responsible for the

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1 regional capital budget, schedules, development, and construction for all SPS
2 electric generating projects. I directly manage the major projects for SPS and
3 supervise other managers handling smaller projects. My management duties
4 include safety, technical design selection, engineering and contractor oversight,
5 management of the bidding process, and negotiation of major equipment supply
6 agreements. I work with the Environmental, Regulatory, Engineering and
7 Technical Resources, and Resource Planning departments to assist with scoping
8 and planning of new generation and major generation retrofit projects.

9 **Q. Please describe your educational background.**

10 A. I have a Bachelor of Science in mechanical engineering from Texas Tech
11 University and a Master of Engineering in engineering management from the
12 University of Colorado.

13 **Q. Please describe your professional experience.**

14 A. I have over 30 years of experience in the utility industry in the design,
15 construction, operation, and maintenance of power generation plants, including
16 coal, combustion turbine/combined cycle facilities, and wind generation. I have
17 worked with Xcel Energy and SPS in engineering management and production,

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1 supervisory, project, and plant engineering positions. I have served as Director,
2 Technical Resources and Compliance. In that position, I oversaw a multi-state,
3 multi-jurisdiction technical team of over fifty engineers, technical specialists, and
4 compliance specialists. In that role, I developed, monitored, and adjusted the
5 policies, procedures, and standards needed to apply comprehensive, effective, and
6 efficient technical knowledge and support of power plant engineering, operations,
7 and maintenance. I have also provided strategic direction and leadership of
8 Energy Supply's internal reliability standard compliance program and its
9 implementation.

10 **Q. Have you attended or taken any special courses or seminars relating to**
11 **public utilities?**

12 A. Yes. Over my career, I have taken numerous courses and seminars related
13 specifically to the construction and operation of power plants. I have given
14 technical presentations on high energy piping, general project management,
15 power plant operations, and maintenance. I have also completed the New Mexico
16 State University Center for Public Utilities training on rate cases.

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1 **Q. Do you hold a professional license?**

2 A. Yes. I am a registered Professional Engineer in Texas.

3 **Q. Are you a member of any professional organizations?**

4 A. Yes. I am a member of the American Society of Mechanical Engineers.

5 **Q. Have you testified before any regulatory authorities?**

6 A. Yes. I have submitted pre-filed testimony on SPS's behalf in its three most recent
7 base rates cases before the New Mexico Public Regulation Commission
8 ("Commission"), including Case No. 22-00286-UT. I also filed testimony in
9 support of SPS's application to amend its Certificate of Public Convenience and
10 Necessity ("CCN") to convert the Harrington Generating Station from coal to
11 natural gas in Case No. 21-00200-UT (Texas Docket No. 52485), and in SPS's
12 current CCN proceeding involving the Cunningham and Plant X Solar Facilities,
13 Case No. 23-00252-UT (Texas Docket No. 55255) and PPA Generational
14 Facilities, Case No. 23-00384 (Texas Docket No. 55849). I also submitted pre-
15 filed testimony to the Federal Energy Regulatory Commission in Docket No.
16 ER20-277. Finally, I have served as an expert witness during North American

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- 1 Electric Reliability Corporation Standards audit engagements in both engineering
- 2 and leadership capacities.

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1 **II. PURPOSE**

2 **Q. What is the purpose of your testimony?**

3 A. I provide information regarding SPS's proposed 230/115-kV double circuit
4 transmission (Gen-tie) line and collector substation (collectively "Transmission
5 Facilities") that will connect SPS's proposed Cunningham Solar Projects and
6 Battery Energy Storage System ("BESS") into SPS's existing Cunningham
7 Generation Substation. The Gen-tie Line will connect SPS's Cunningham Solar
8 Collector Substation, located approximately 10.5 miles northwest of Hobbs, New
9 Mexico, to SPS's existing Cunningham Generation Station, which is
10 approximately ten miles west of Hobbs, New Mexico. I also provide information
11 regarding SPS's proposed Cunningham 1 and 2 Solar Facilities and Cunningham
12 1 BESS (collectively "SPS Self-Build Projects"). These Projects are located in
13 Lea County, New Mexico.

14 Specifically, my testimony: (1) describes the circuit design and
15 construction of the Gen-tie Line; (2) discusses the statutory requirements for
16 determining right-of-way ("ROW") widths and explains why SPS is not

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1 requesting a ROW width approval for the Proposed Project; and (3) provides
2 information regarding the SPS Self-Build Projects.

3 **Q. Was Attachment ML-1 and ML-2 prepared by you or under your**
4 **supervision?**

5 A. Yes.

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1 substantially similar structures, are depicted in Attachment ML-1 to my direct
2 testimony. The new shield wires will be a combination of 3/8 inch extra high
3 strength steel and optical ground wire. One of the two (2) shield wires will
4 contain the fiber optic strands are used for communication between relays and
5 other substation equipment and transmit operational information to SPS control
6 centers. The total length of the transmission line is approximately 7 miles (37,117
7 feet) in length.

8 **Q. What is the construction timetable for the Gen-tie Line?**

9 A. Preliminary transmission (Gen-tie) line design began in 2022 and is ongoing.
10 Material requests will be submitted following approval of SPS's application in
11 this case. All material should be available approximately 12-24 months after the
12 material requests are initiated. Construction should take approximately three
13 months to complete, and the expected in-service date of the Proposed Project is
14 October 2025.

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1 **Q. Is SPS requesting authorization for a ROW greater than 100-feet in this**
2 **filing?**

3 A. No. SPS is not requesting approval for a ROW greater than 100 feet at this time.

4 **Q. Will SPS notify the Commission if it determines that a ROW width greater**
5 **than 100 feet is necessary at any location of this project?**

6 A. Yes. SPS agrees to file a notice in the record in this proceeding if it determines
7 that a ROW width greater than 100 feet is necessary.

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1 **V. INFORMATION REGARDING THE SPS SELF-BUILD PROJECTS**

2 **Q. Where will the SPS Self-Build Projects be located?**

3 A. The SPS Self-Build Projects will be located west of Hobbs, New Mexico in Lea
4 County. A map depicting the location of the projects is provided as Attachment
5 ML-2 to my direct testimony.

6 **Q. Please describe the Cunningham 1 Solar Project.**

7 A. The scope of the Cunningham 1 Solar Project is to design, engineer, procure,
8 construct, and commission a 72 MW solar facility.

9 **Q. Please describe the Cunningham 1 Solar Project location and**
10 **interconnection.**

11 A. The project site consists of 6,442 acres, and SPS has land-purchase options in
12 place for all 6,442 acres. SPS will build a new collector substation as part of this
13 project with the generation tie line spanning approximately 5.2 miles from the
14 new collector substation to the existing Cunningham Generating Station
15 substation point of interconnection (“POI”). The Cunningham 1 Solar Project
16 utilizes the existing POI.

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1 **Q. Please provide the Cunningham 1 Solar Project schedule and in-service date.**

2 A. Construction will begin in 2025, and SPS's planned in-service date is April 1,
3 2026.

4 **Q. Please describe the Cunningham 2 Solar Project.**

5 A. The scope of the Cunningham 2 Solar Project is to design, engineer, procure,
6 construct, and commission a 196 MW solar facility.

7 **Q. Please describe the Cunningham 2 Solar Project location and**
8 **interconnection.**

9 A. The project site consists of the same 6,442 acres as the Cunningham 1 Solar
10 Project site. SPS will build a new collector substation as part of this project with
11 the generation tie line spanning approximately 7.0 miles from the new collector
12 substation to the existing Cunningham Generating Station substation POI. Like
13 SPS's other proposed solar facilities, the Cunningham 2 Solar Project utilizes an
14 existing POI.

15 **Q. Please provide the Cunningham 2 Solar Project schedule and in-service date.**

16 A. Construction will begin in 2025, and the in-service date is planned for April 1,
17 2027.

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1 **Q. Please describe the Cunningham 1 Battery.**

2 A. The scope of the Cunningham 1 Battery is to design, engineer, procure, construct,
3 and commission a 36 MW, four-hour BESS system. The Cunningham 1 Battery
4 will use SPS's surplus interconnection service at the Cunningham Generating
5 Station POI as part of SPS's plan to retain accredited capacity of 72 MW at that
6 POI.

7 **Q. Please describe the Cunningham 1 Battery location and interconnection.**

8 A. The Cunningham 1 Battery will be co-located on the Cunningham 1 Solar Project
9 site's 6,442 acres. SPS has a purchase option for the Cunningham 1 Battery site.
10 The Cunningham 1 Battery will share the new collector substation and
11 approximately 5.2-mile generation tie line that SPS is building as part of the
12 Cunningham 1 Solar Project. Like the solar projects, the Cunningham 1 Battery
13 utilizes an existing POI.

14 **Q. Please provide the Cunningham 1 Battery schedule and in-service date.**

15 A. Construction will begin in 2025, and the in-service date is planned for April 1,
16 2026.

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1 Q. Does this conclude your pre-filed direct testimony?

2 A. Yes.

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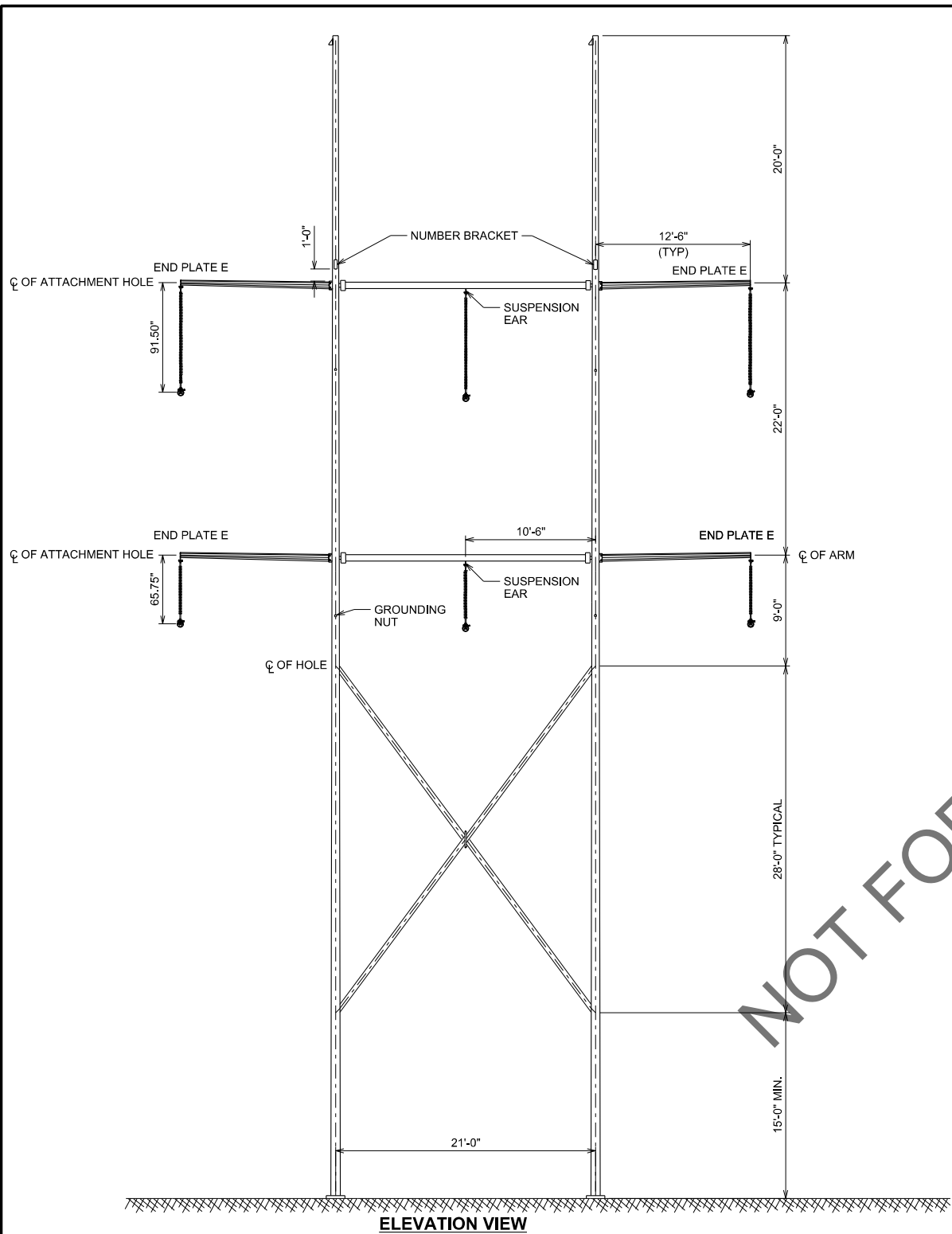
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VERIFICATION

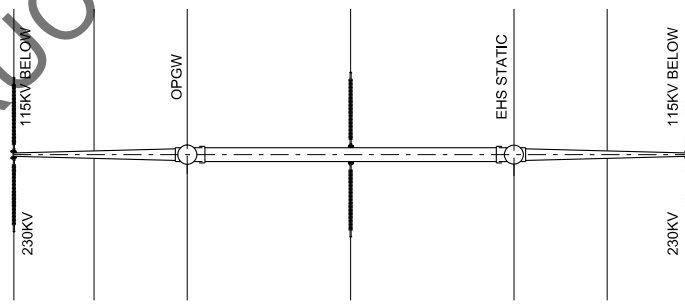
On this day, March 28, 2024, I, Mark Lytal, swear and affirm under penalty of perjury under the law of the State of New Mexico, that my testimony contained in Direct Testimony of Mark Lytal is true and correct.

/s/ Mark Lytal

Mark Lytal



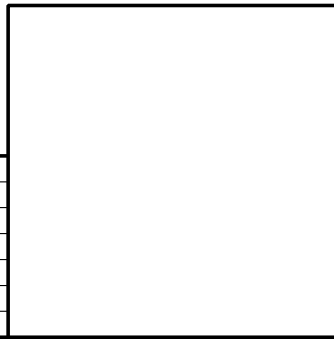
ELEVATION VIEW



PLAN VIEW

NOT FOR CONSTRUCTION

REV	DATE	WBS 4	REVISION DESCRIPTION



THIS PE SEAL IS ONLY APPLICABLE TO THE CURRENT CONSTRUCTION REVISION

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THIS MAP/DOCUMENT IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS, MANUALS AND SPARS. INTERNAL INFORMATION: DO NOT COPY OR DISTRIBUTE WITHOUT EXPRESS WRITTEN CONSENT FROM XCEL ENERGY

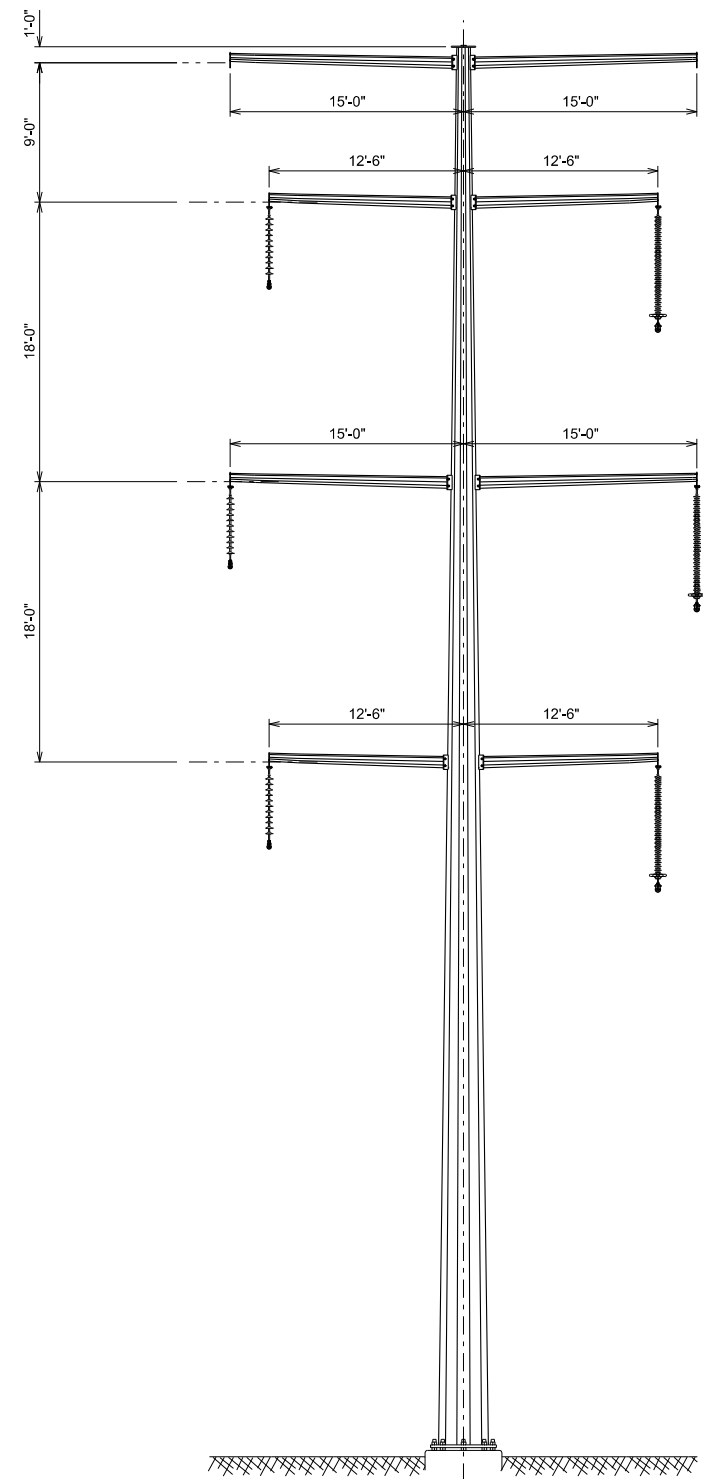
TYPICAL H-FRAME DEADEND 115/230 kV
 STRUCTURE DRAWING
 STEEL H-FRAME - DOUBLE CIRCUIT DEADEND

Xcel Energy H-FRAME DC DE SCALE: NONE REV: 0

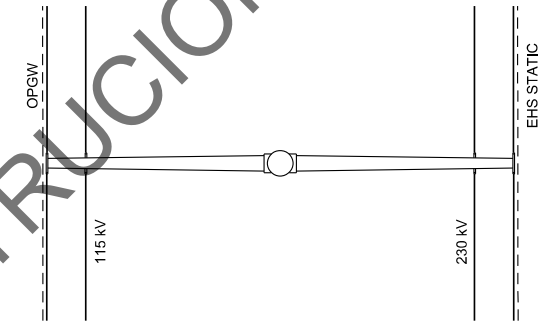
H-FRAME DC DEADEND.DGN

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MONOPOLE DC TANGENT.DGN



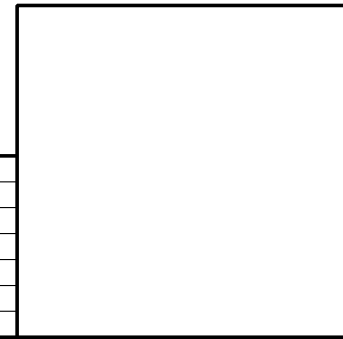
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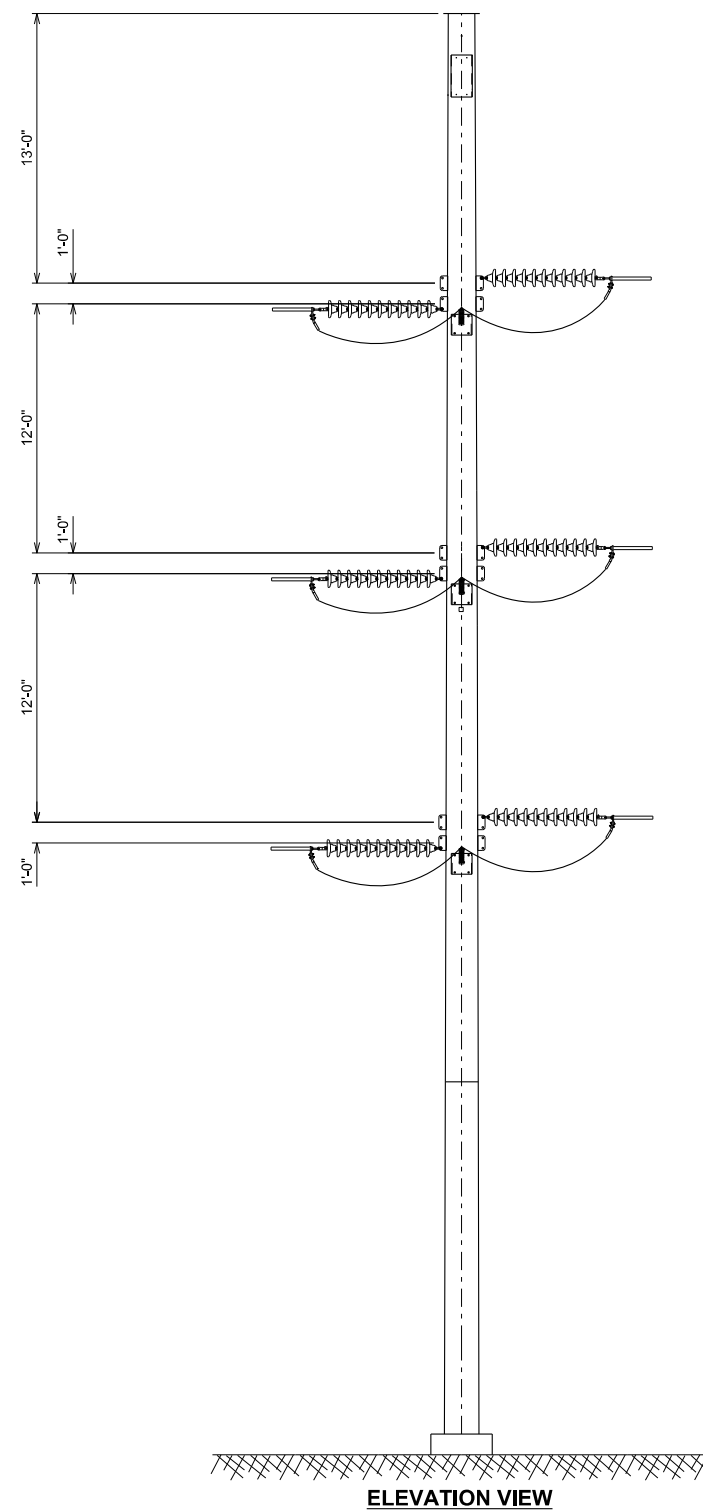
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TYPICAL SINGLE TANGENT 115/230 kV
 STRUCTURE DRAWING
 STEEL MONOPOLE - DOUBLE CIRCUIT 0°-4° TANGENT

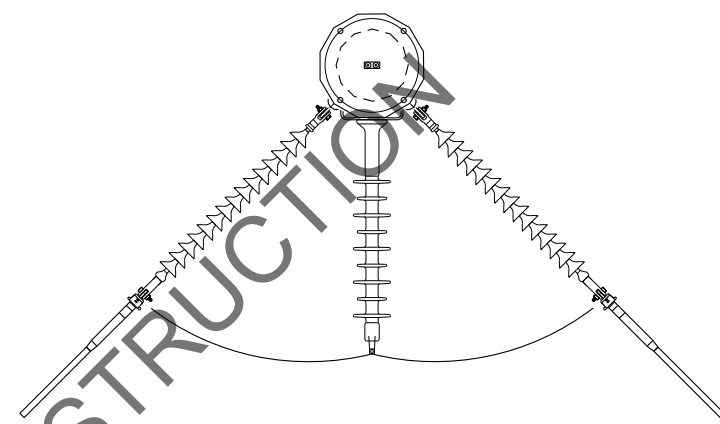
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MONOPOLE SC DEADEND.DGN



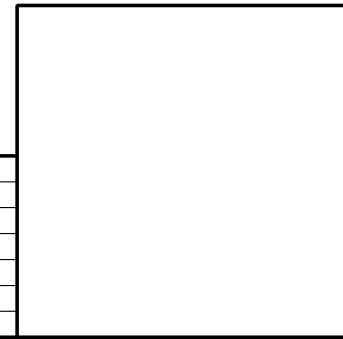
ELEVATION VIEW



PLAN VIEW

NOT FOR CONSTRUCTION

REV	DATE	WBS 4	REVISION DESCRIPTION



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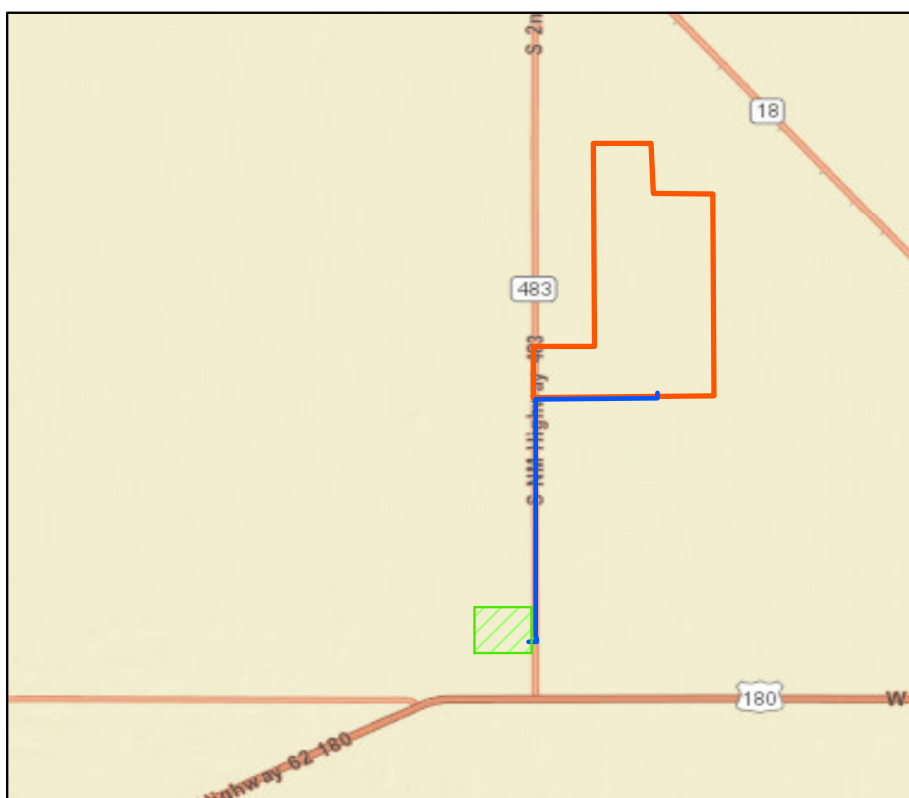
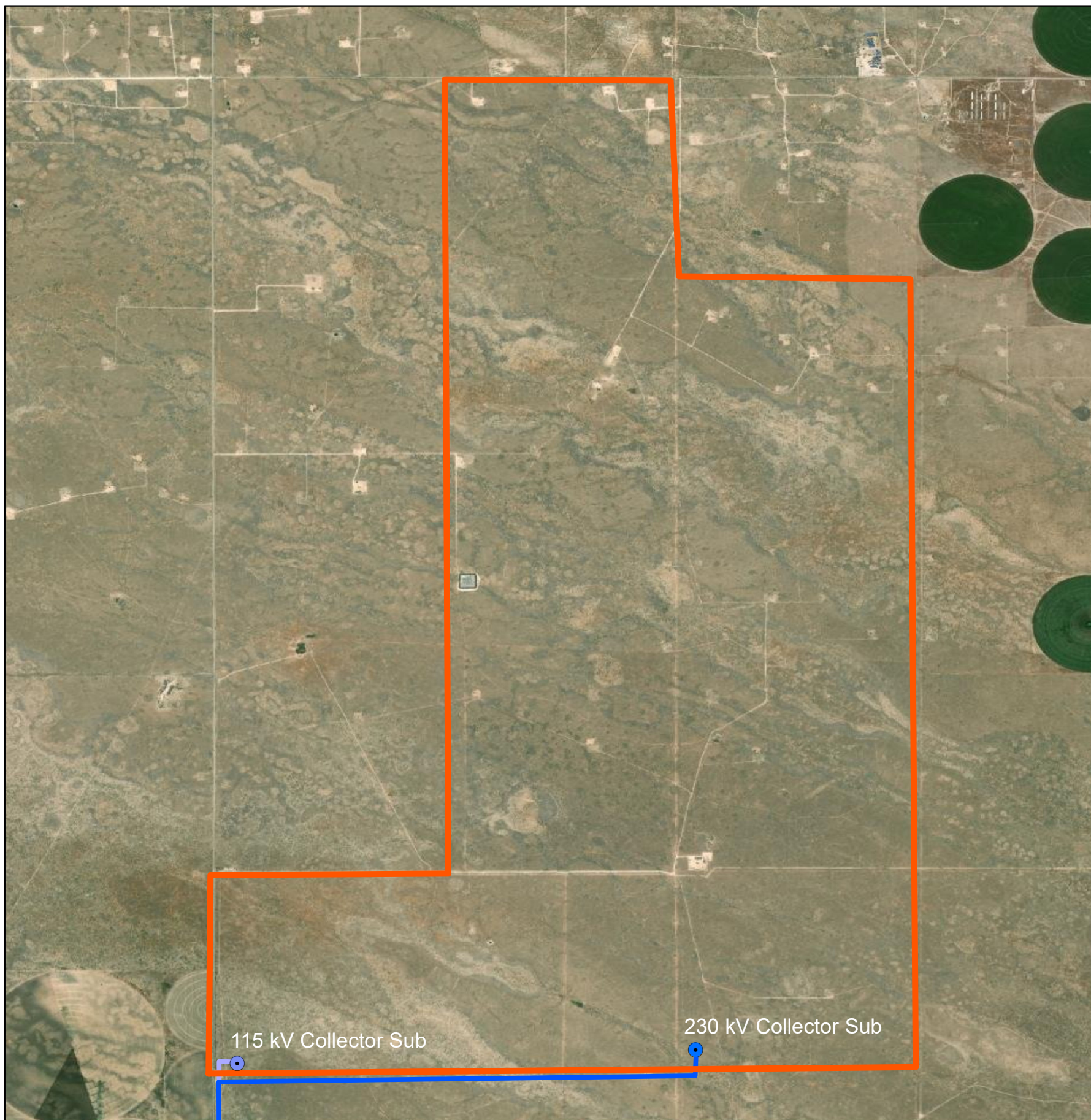
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TYPICAL SINGLE POLE DEADEND 115/230 kV
 STRUCTURE DRAWING
 STEEL - SINGLE CIRCUIT 0°-90° CORNER DEADEND

Xcel Energy MONOPOLE SC DE SCALE: NONE REV: 0

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Cunningham Solar

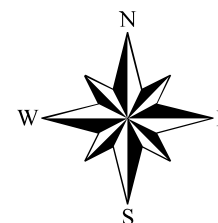


Cunningham Substation



Legend

- Collection Line
- Cunningham Solar



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)	
)	

CERTIFICATE OF SERVICE

I certify that a true and correct copy of *Southwestern Public Service Company's Application and the Direct Testimony of Brooke A. Trammell, Mark Lytal, Sean L. Frederiksen and Andrea R. McArdle* was electronically sent to each of the following on this 28th day of March 2024:

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