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Rocky Mountain Power

Spanish Fork to Mercer
Transmission Line Project

WELCOME!

Thank you for participating in this open house.
Your comments are encouraged.

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Public Open House Meetings

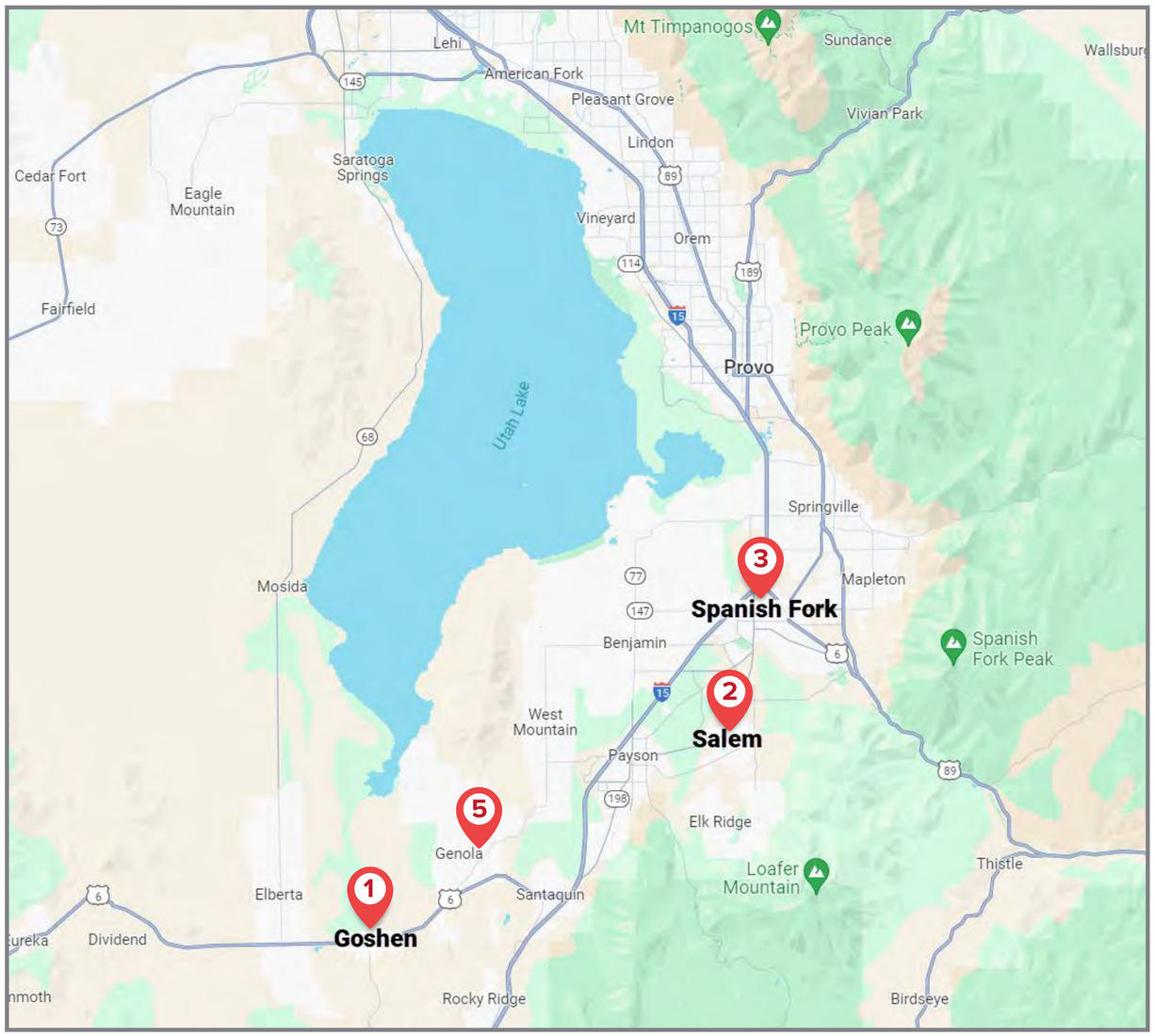
1 **June 18 –** 5:30 to 7:30 p.m.
Goshen Senior Center
79 S. Center Street

2 **June 19 –** 5:30 to 7:30 p.m.
Salem Junior High School Cafeteria
598 N. Main Street

3 **June 20 –** 5:30 to 7:30 p.m.
Spanish Fork Fairgrounds
High Chaparral Room | 475 S. Main Street

4 **June 25 –** 5:30 to 6:30 p.m.
Virtual Open House

5 **July 15 –** 5:30 to 7:30 p.m.
Genola Fire Station
455 N. Main Street



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Project Overview

Rocky Mountain Power is:

- Proposing to construct, operate, and maintain a new 45-mile-long overhead, 345 kilovolt (kV) transmission line in southern Utah Valley between the existing Spanish Fork Substation and Mercer Substation near Eagle Mountain.

- Conducting a routing study to identify, analyze, and compare alternative routes.

- Presenting the most reasonable and feasible routes to the community before selecting a preferred route for permitting and construction.

Project Need

Improve Reliability and Efficiency

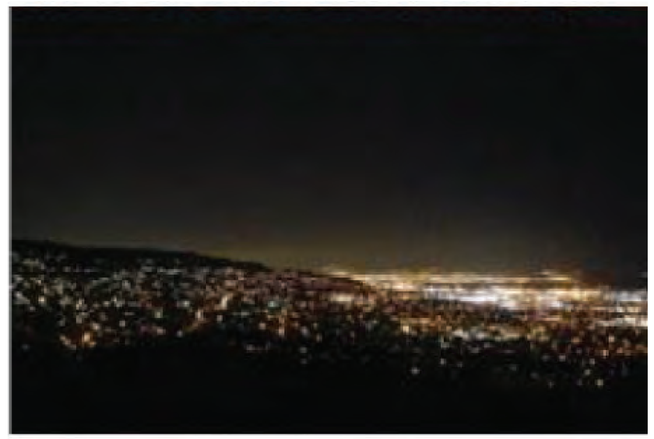
- Establish an additional transmission path to enhance the reliability and resiliency of the electric system.
- Reduce the risk of outages and congestion.

Increase Capacity and Flexibility

- Allow more power to be transmitted over longer distances.
- Address the region's growing demand for electricity effectively.

Support Renewable Energy Integration

- Enable the delivery of power from renewable energy sources to customers.
- Contribute to the reduction of greenhouse gas emissions and decrease dependence on fossil fuels.



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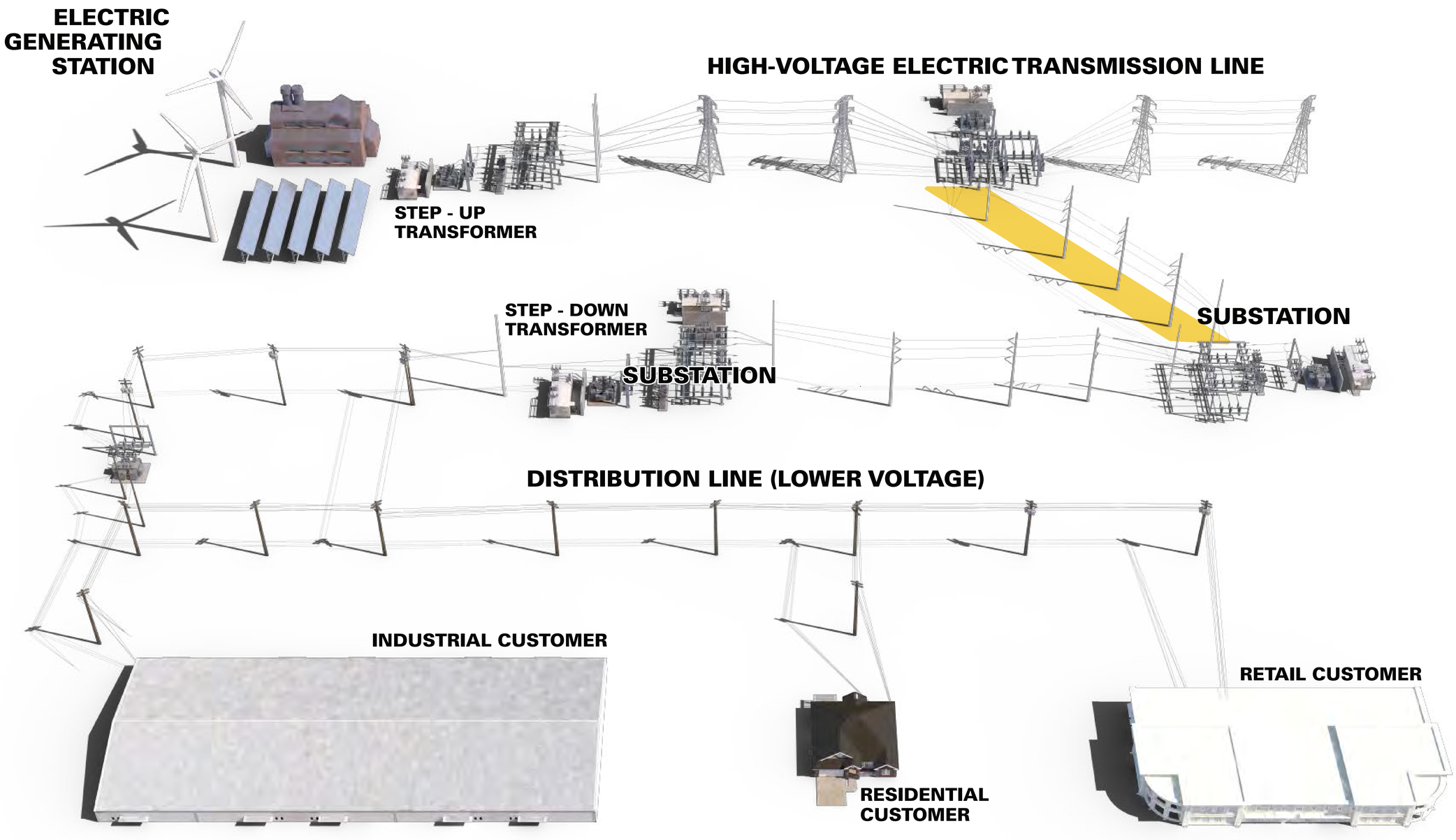
Electricity From Generation Source to the Customer



The proposed 345-kV transmission line will improve reliability, increase capacity and support integration of renewable energy in the grid.

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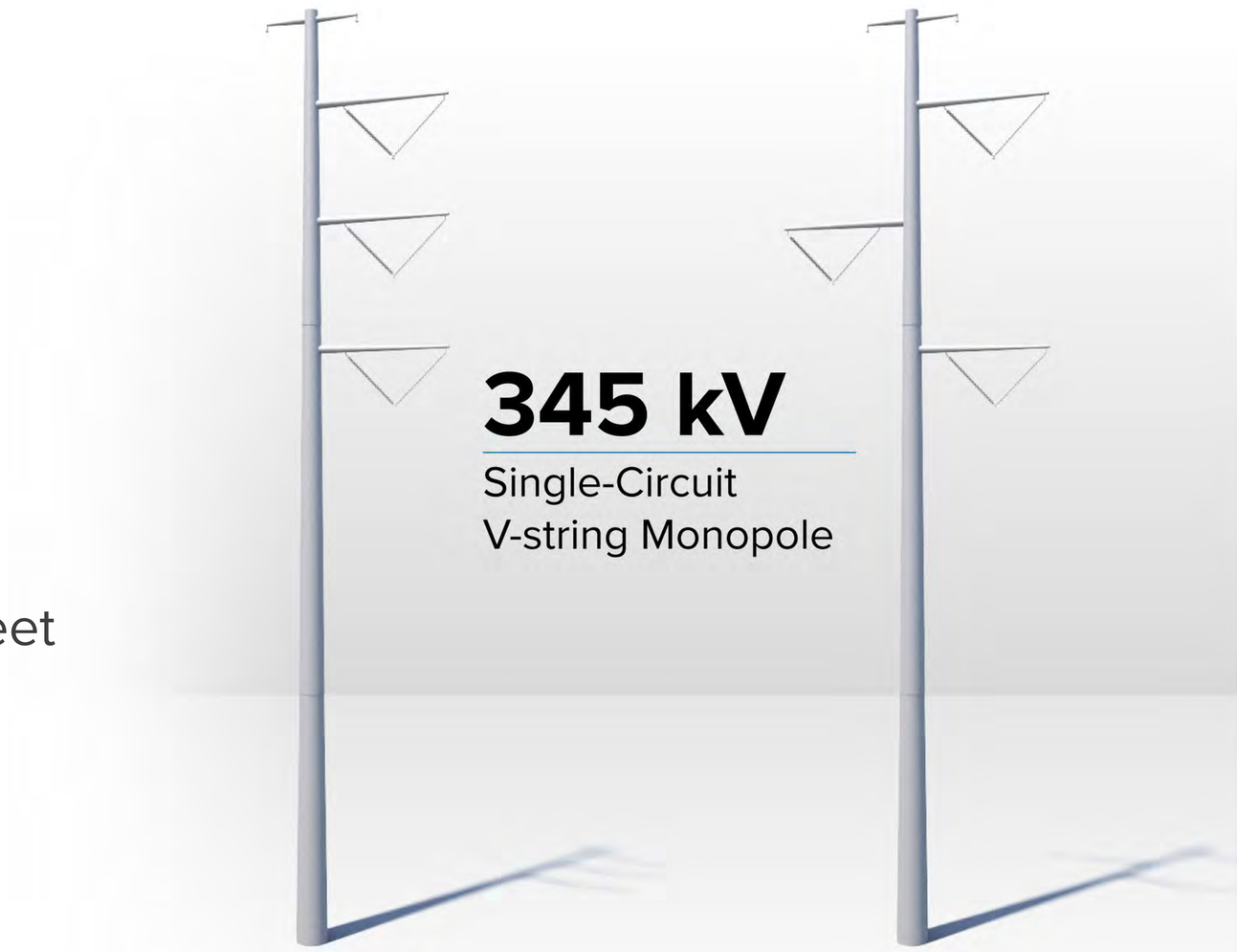
Typical Structure Type

- **Voltage:** 345 kV
- **Type of structure:** Steel monopole, single circuit
- **End points:** Spanish Fork Substation and Mercer Substation
- **Length:** Approximately 45 miles
- **Height of monopoles:** 90 to 135 feet
- **Span between monopoles:** 600 to 800 feet
- **Right-of-way width:** 125 feet



SPANISH FORK TO MERCER

Transmission Line Project

Photo Location Map

1 Viewpoint Location — Proposed Transmission Line ▲ Existing Substation

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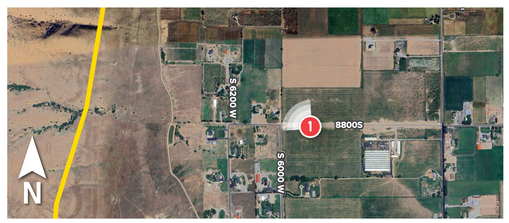
SPANISH FORK TO MERCER
Transmission Line Project

Viewpoint 1

Date: 5/14/24 **Time:** 8:31 am **Viewing Direction:** Northwest

1 Photo Location — Proposed Transmission Line



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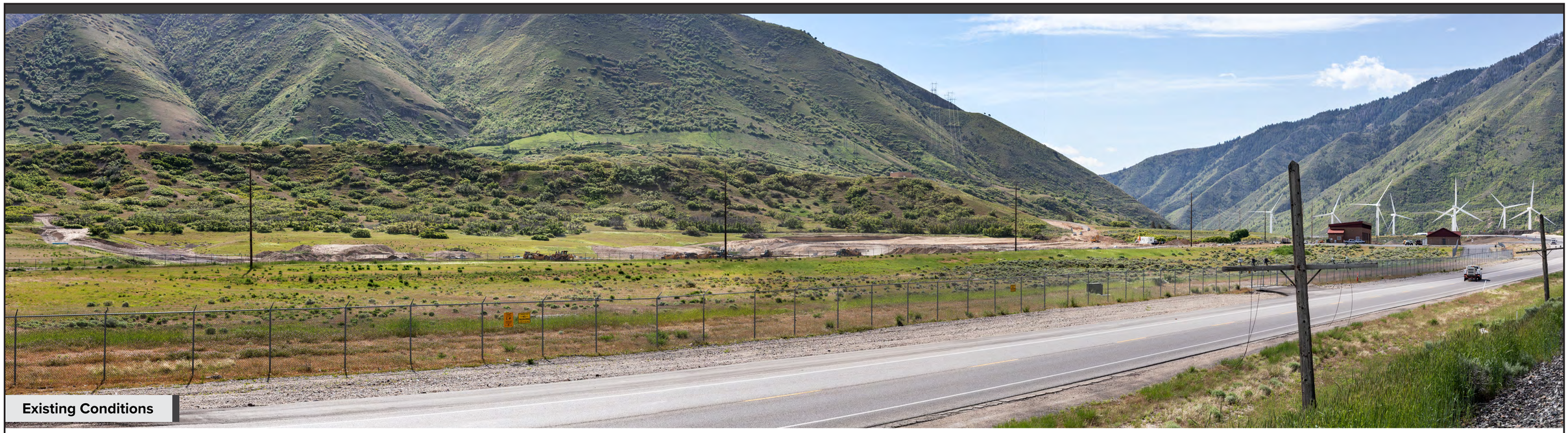

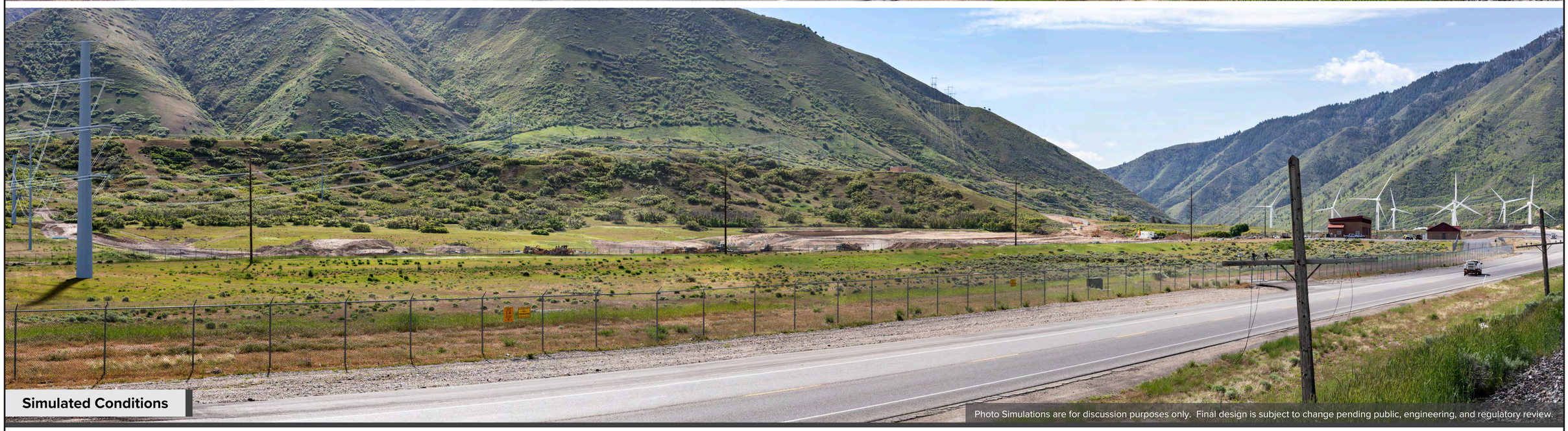

SPANISH FORK TO MERCER
Transmission Line Project

Viewpoint 2

Date: 5/14/24 **Time:** 9:24 am **Viewing Direction:** Southeast

2 Photo Location — Proposed Transmission Line

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Routing Study Approach

We are here

• Purpose and Need • Project Description • Routing Study Area • Data Collection	• Opportunities and Constraints Analysis	• Route Analysis	• Preliminary Alternative Routes	• Alternative Routes • Preferred Route	• Permitting
	• Public Outreach and Engagement Plan	• Briefings	• Briefings	• Briefings • Public Open House Meetings	• Public Hearings

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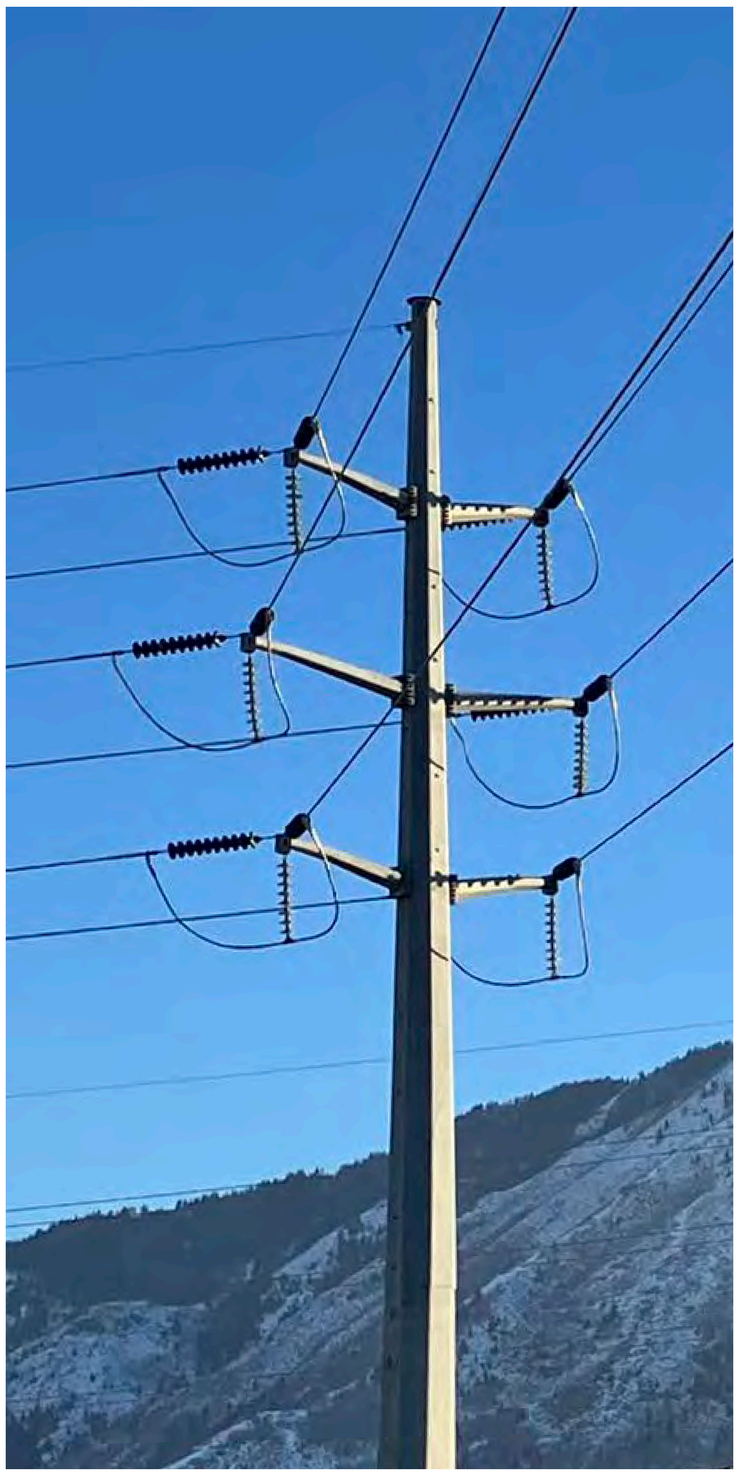
Routing Study

Environmental and Technical Analysis

- Land ownership.
- Existing and planned land use.
- Scenic and aesthetic resources.
- Presence of protected species, critical habitat, conservation areas, plants and wildlife.
- Known cultural resources (e.g., prehistoric, historic resources, Native American traditional use areas).
- Floodplains, wetlands, water crossings.
- Engineering factors (e.g., topography, potential geologic hazards, accessibility, constructability, road and utility crossings).



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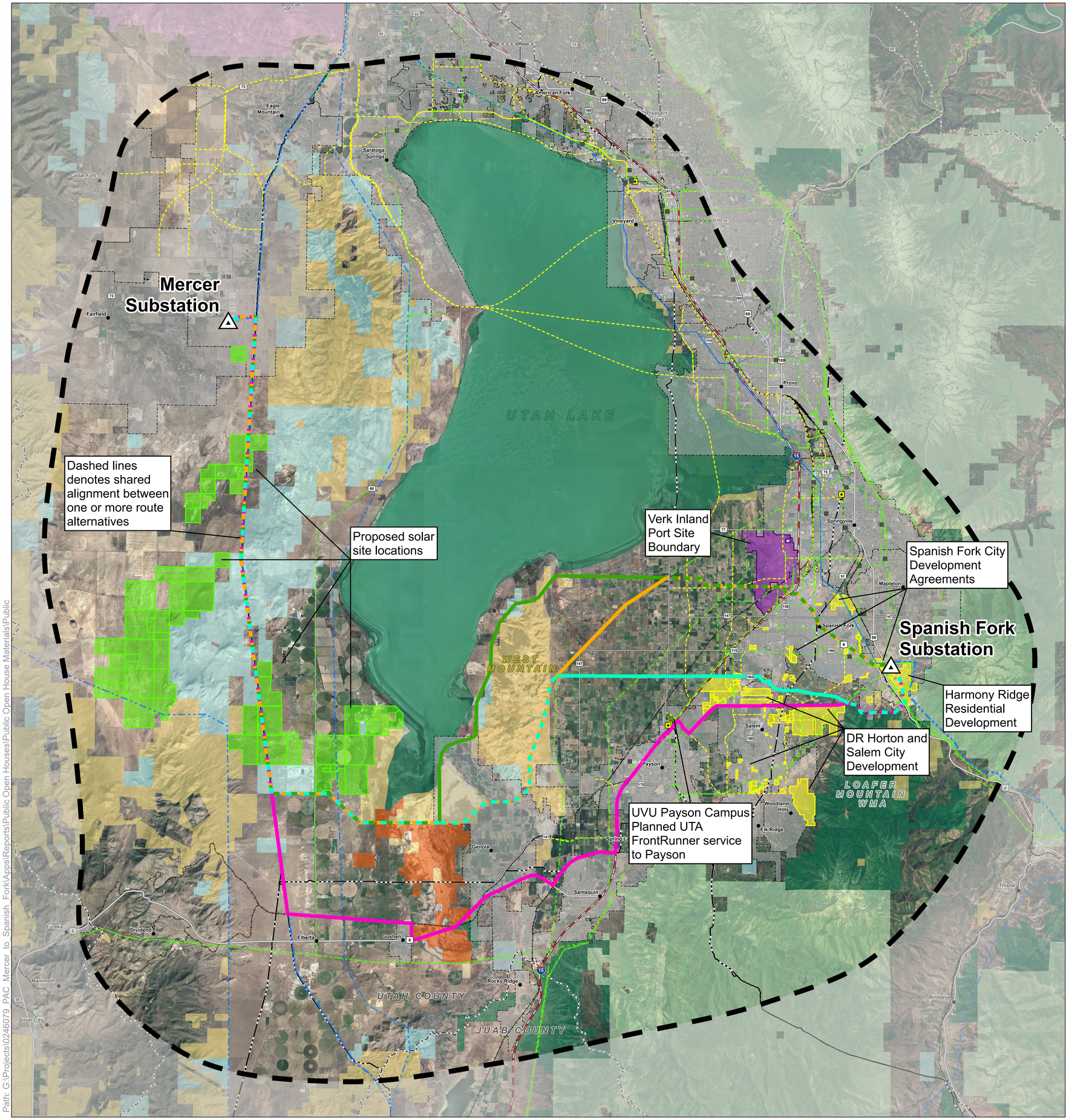
Opportunities to Optimize Routing

- Parallel existing linear facilities (transmission lines, roads/highways, railroad).
- Route in areas of compatible land use (e.g., industrial, commercial), areas previously disturbed.
- Parallel section or property lines.
- Maximize use of existing adjacent, nearby access and areas compatible with overland travel.
- Areas that facilitate efficient and cost-effective transmission line design and construction.



Project Features

- Project Substation
- Preliminary Preferred
- Alternative A
- Alternative B
- Alternative C
- Study Area

Existing Utility

- Substation
- Natural Gas Power Plant
- Transmission 230 kV and above
- Transmission Under 230 kV
- Natural Gas Pipeline
- Incorporated Municipality

Planned or Proposed Development

- Proposed Solar Development
- Planned Residential Development
- Verk Inland Port Boundary
- Planned Utah Valley University Payson Campus
- Proposed Mountainland Association of Governments (MAG) Highway/Transit Project

Jurisdiction

- Bureau of Land Management
- Bureau of Reclamation
- US Forest Service
- Department of Natural Resources
- SITLA
- Private

Reference Features

- City/Town
- Interstate Highway
- U.S. Highway
- State Highway
- Railroad
- County Boundary

SPANISH FORK TO MERCER 345 KV TRANSMISSION PROJECT

ALTERNATIVE ROUTES

UTAH COUNTY, UT

0 1.25 2.5 3.75 5

Miles

1 INCH = 1.25 MILES

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POWER ENGINEERS

6/6/2024

Path: G:\Projects\0246079_PAC_Mercer_to_Spanish_Fork\Apps\Reports\Public Open Houses\Public Open House Materials\Public

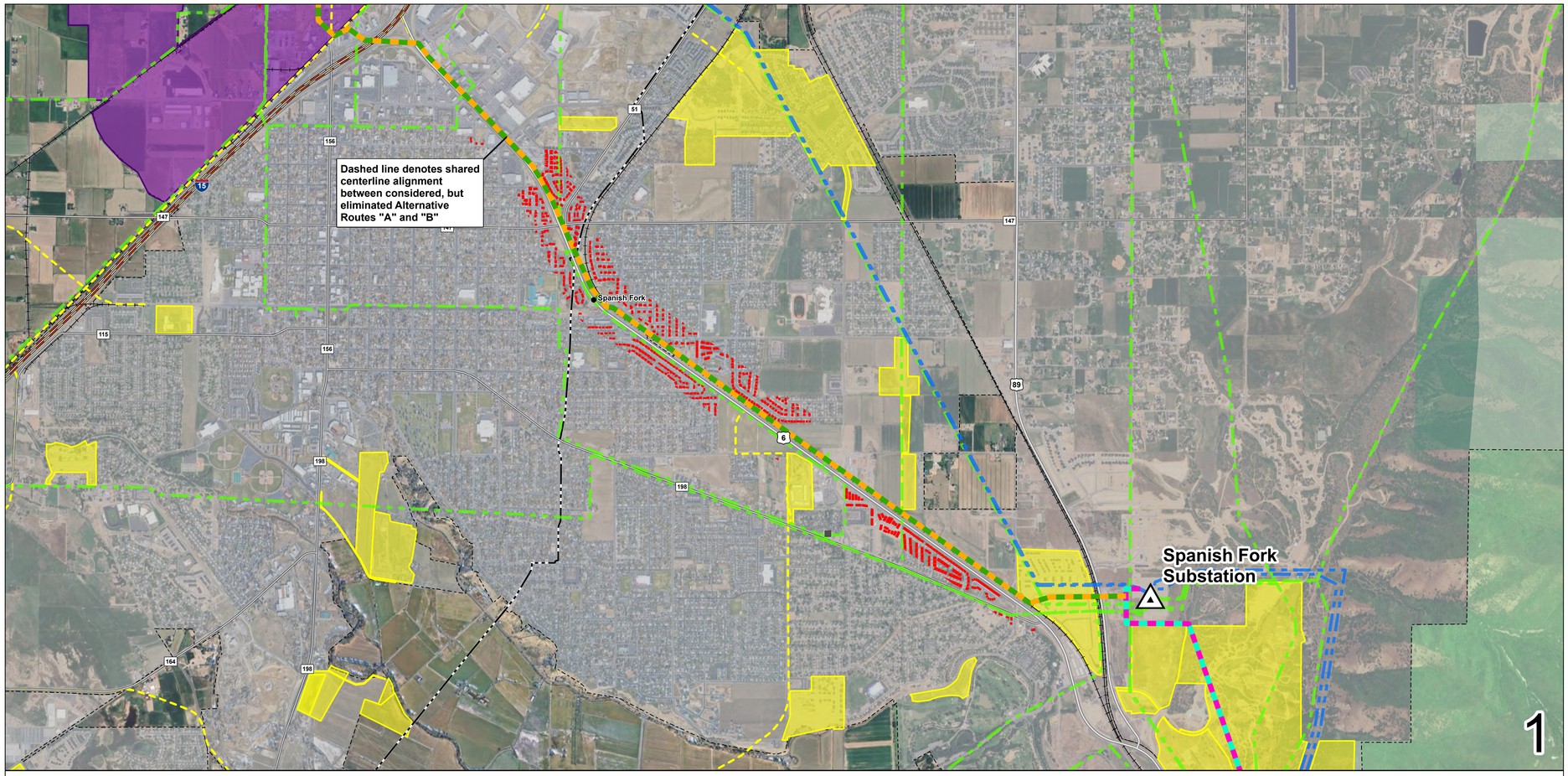
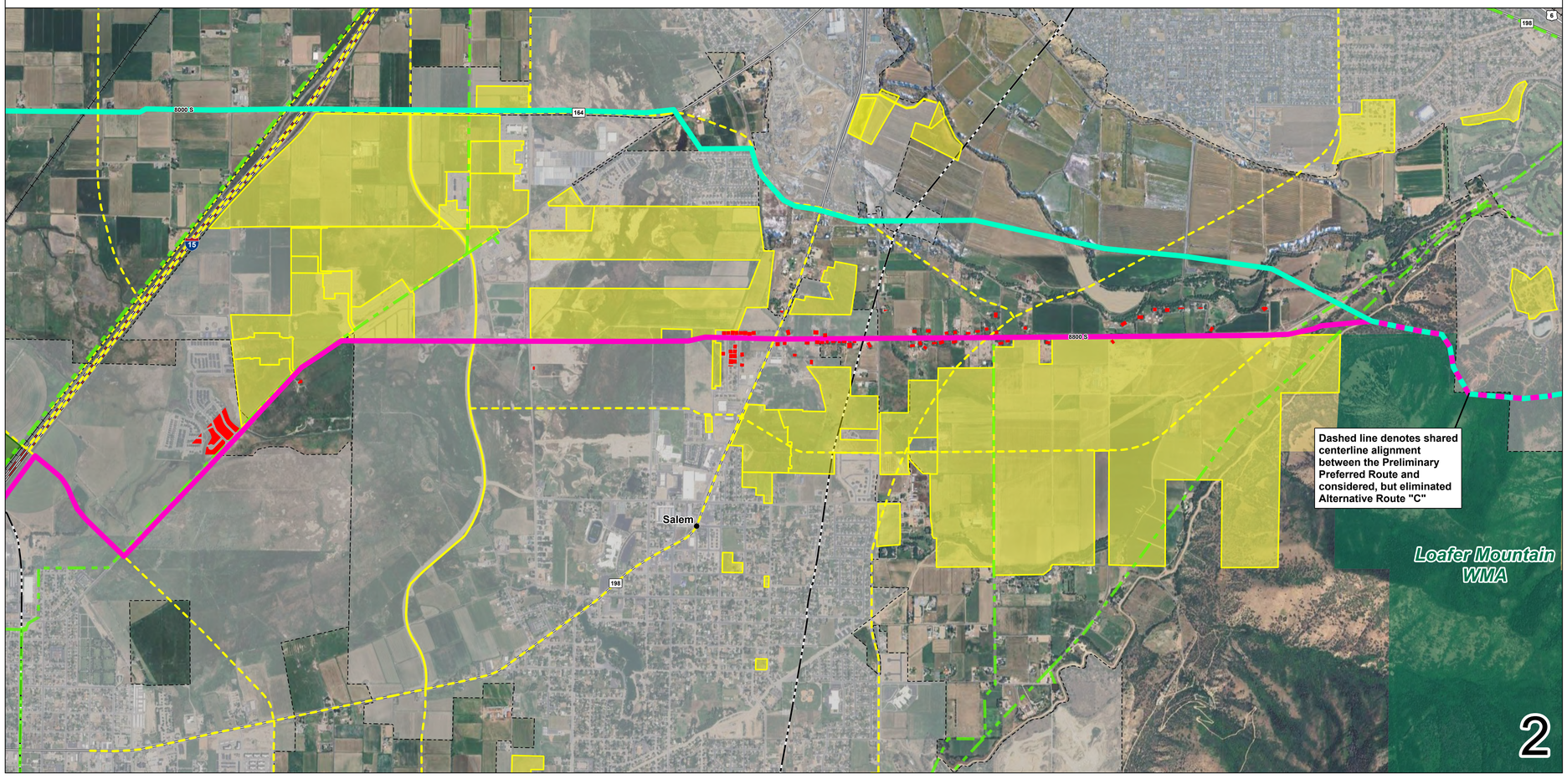


Figure 1 (Above): Considered, but eliminated Alternative Route A and B. Due to physical constraints along the US Highway 6 corridor, Alternative Routes "A" and "B" are not feasible to construct. Constraints include highway and railroad right-of-way, high pressure gas line easements, housing and retail developments and sidewalks.

Figure 2 (Below): Considered, but eliminated Alternative Route C. Existing residences and residences currently under construction prevent a feasible route from traversing the 8800 S corridor.



Project Features

- Project Substation
- Preliminary Preferred
- Considered, but eliminated Alternative Route "A"
- Considered, but eliminated Alternative Route "B"
- Considered, but eliminated Alternative Route "C"

Reference Features

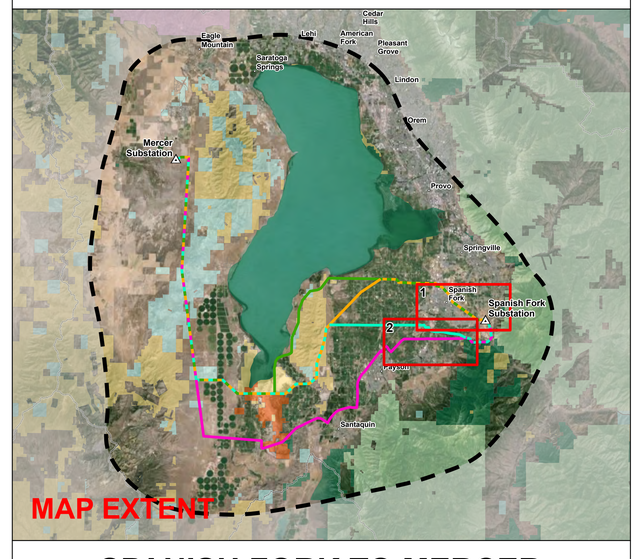
- Substation
- Transmission 230 kV and above
- Transmission under 230 kV
- Interstate Highway
- U.S. Highway
- State Highway
- Railroad
- Natural Gas Pipeline
- Residence within 660 ft
- Incorporated Municipality

Planned or Proposed Development

- Proposed Mountainland Association of Governments (MAG) Highway/Transit Project
- Planned Residential Development
- Verk Inland Port Boundary

Jurisdiction

- US Forest Service
- Department of Natural Resources
- Private



SPANISH FORK TO MERCER 345 KV TRANSMISSION PROJECT

ALTERNATIVE CONSTRAINTS
SPANISH FORK/SALEM AREA

0 1,250 2,500 3,750 5,000
Feet

1 INCH = 1,250 FEET

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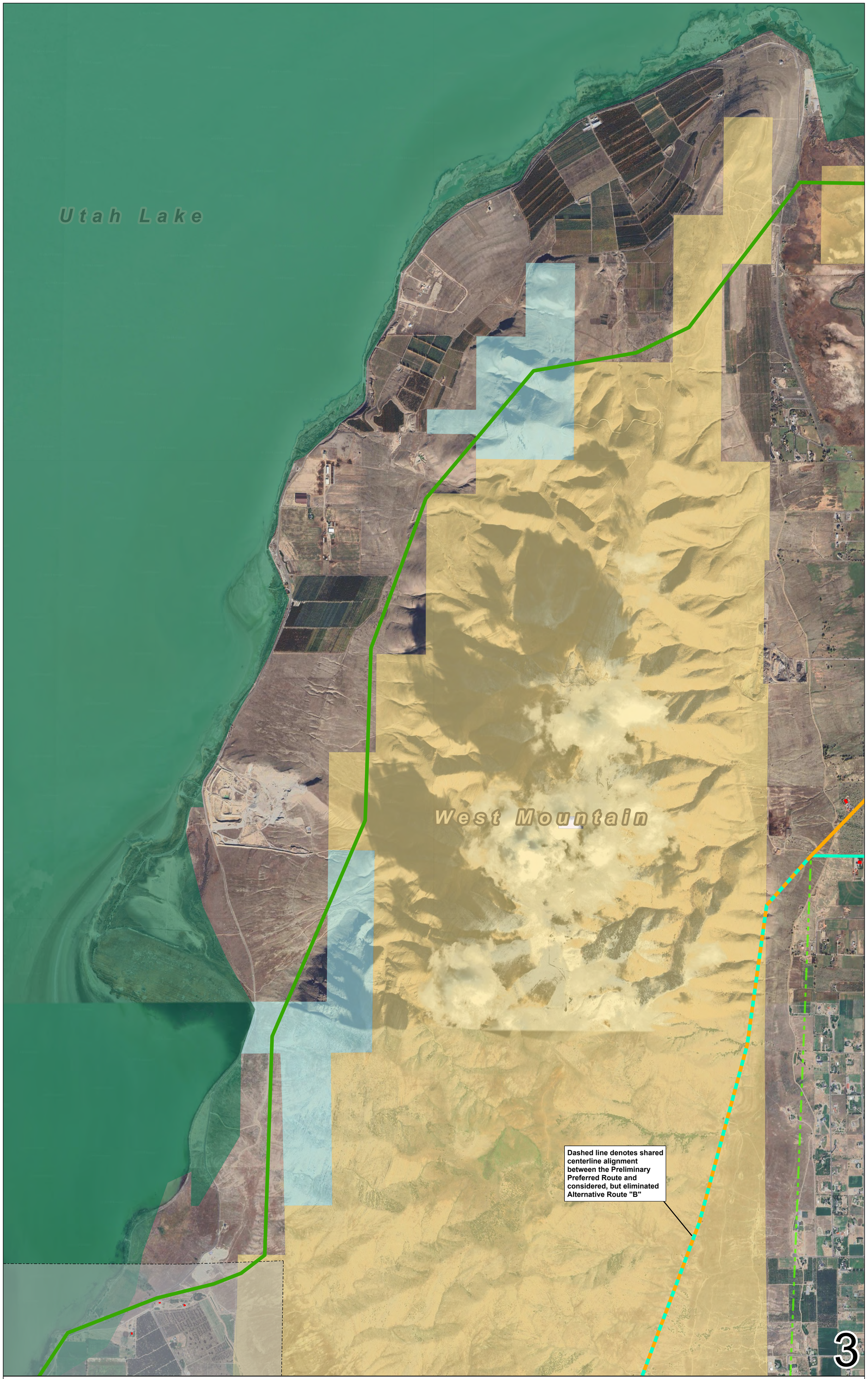


Project Features

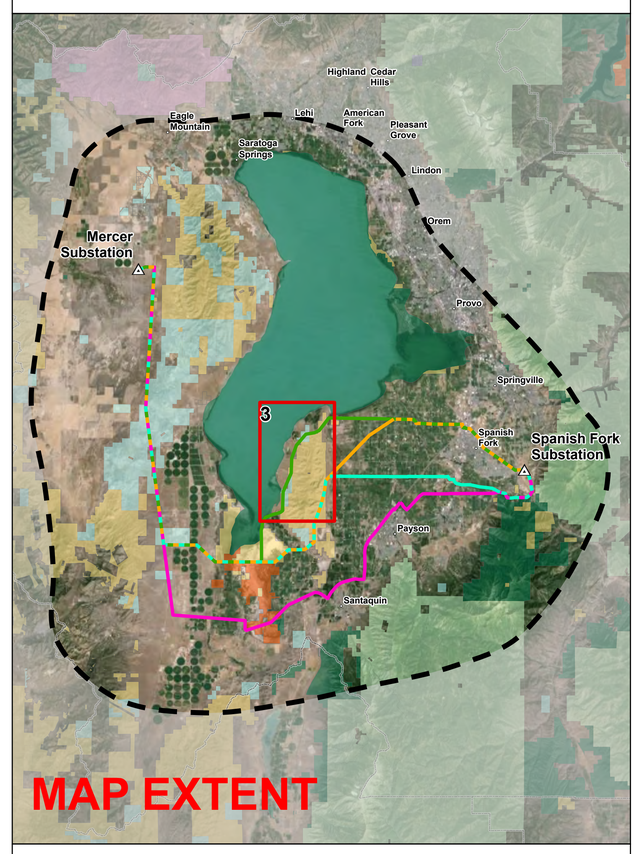
- Project Substation
- Preliminary Preferred
- Considered, but eliminated Alternative Route "A"
- Considered, but eliminated Alternative Route "B"
- Considered, but eliminated Alternative Route "C"

Reference Features

- Transmission under 230 kV
- Residence within 660 ft
- Incorporated Municipality

Jurisdiction

- Bureau of Land Management
- Department of Natural Resources
- SITLA
- Private



SPANISH FORK TO MERCER 345 KV TRANSMISSION PROJECT

ALTERNATIVE CONSTRAINTS
WEST MOUNTAIN AREA

0 2,500 5,000
Feet

1 INCH = 1,000 FEET

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Figure 3: Considered, but eliminated Alternative Route "A". Viewshed sensitivities along the west side of West Mountain present difficulties in permitting with the BLM. Cultural resource sensitivities are also greater on the west side of West Mountain.

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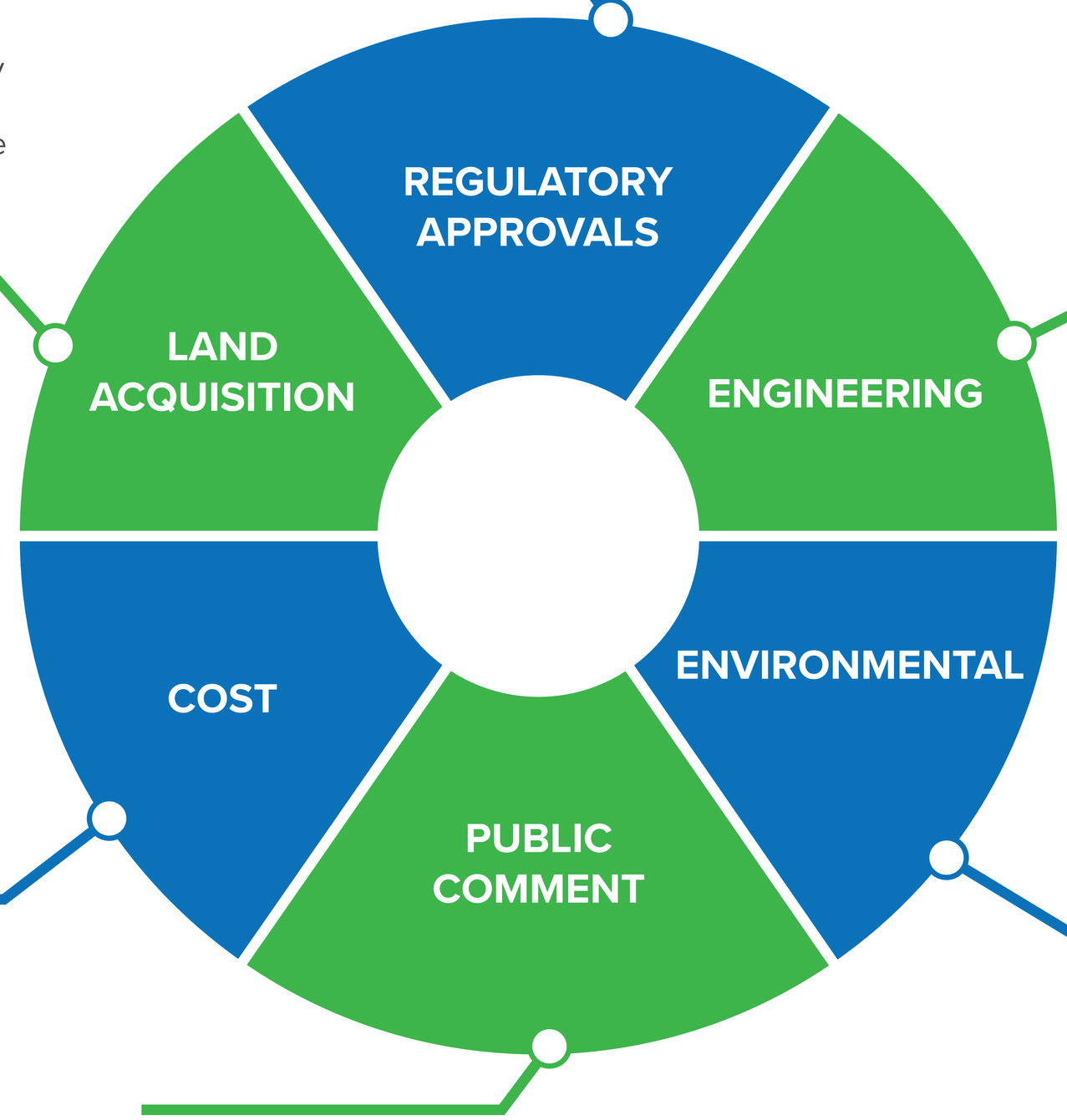
Route Evaluation Factors

Rocky Mountain Power must evaluate several factors in selecting a route for a proposed transmission line.

REGULATORY APPROVALS:
Rocky Mountain Power's ability to obtain the necessary regulatory approvals for construction project involves obtaining various permits from federal, state, and local agencies.

LAND ACQUISITION:
Rocky Mountain Power's ability to obtain the necessary land rights (right-of-way) for the safe construction, operation, and maintenance of the project.



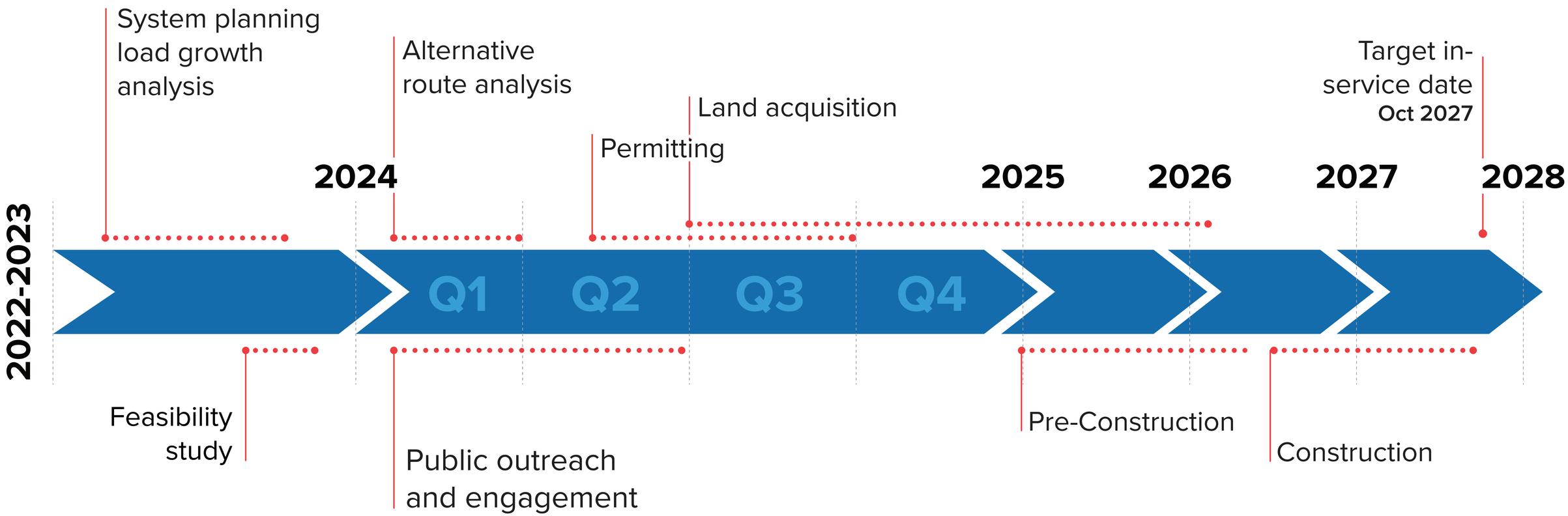
ENGINEERING:
Design and construction of the transmission line may face challenges due to various constraints, such as lack of access, challenging terrain, or crossing large drainage areas.

COST:
The total cost of the project includes the cost of obtaining permits, materials, labor, and land rights necessary to construct the project.

ENVIRONMENTAL:
Effects of a project on environmental resources, such as existing and planned land use, views, cultural resources, surface water, sensitive biological resources, among others, must be identified and, where needed, measures to lessen effects must be considered.

PUBLIC COMMENT:
Comments solicited from affected jurisdictions, agencies, property owners, and residents are valuable and important to routing, permitting, land acquisition, and construction.

Project Milestones



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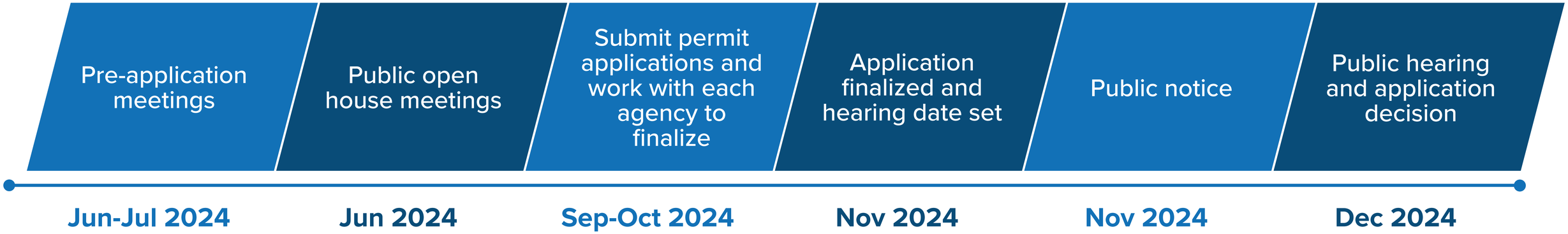
Anticipated Permitting Schedule



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Public Outreach and Engagement - Briefings

In late 2023 and early 2024, briefings were conducted with the county commission, cities, electric utilities and others to inform them about the project and request input.

Government

- U.S. Bureau of Land Management
- U.S. Bureau of Reclamation
- Utah County
- Mapleton City
- Payson City
- Salem City
- Santaquin
- Spanish Fork City
- Springville City

Utilities

- Central Utah Water Conservancy District
- Southern Utah Valley Power Systems
- Utah Association of Municipal Power Systems
- Utah Municipal Power Agency

Developers

- DR Horton
- Edge Homes

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Public Outreach and Engagement - Public Open House Meetings and Hearings

In Q2 of 2024, in-person public open house meetings are being conducted in Spanish Fork, Goshen, Salem and one virtual meeting to introduce and request input on the project and its alternative routes before beginning the permitting process.

Additional public meetings will be conducted as part of the permitting process.

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Underground Transmission

- Technical and electrical system design challenges
- Additional time to troubleshoot repairs, resulting in longer outages
- Substantially greater impacts from trenching
- Use of land above the underground line is restricted
- Substantially higher installation, maintenance, and repair costs than overhead lines - can be 10 times more for initial installation

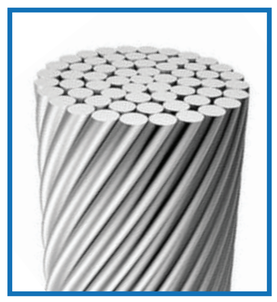
Concrete access vault for transmission line

Underground Cable

Highly specialized; custom engineered and manufactured to project specs (with capacity limits); substantially more costly

Overhead Conductor

Manufactured to standard specifications



Typical structure for transitioning transmission line between overhead and underground

Photos courtesy of Xcel Energy

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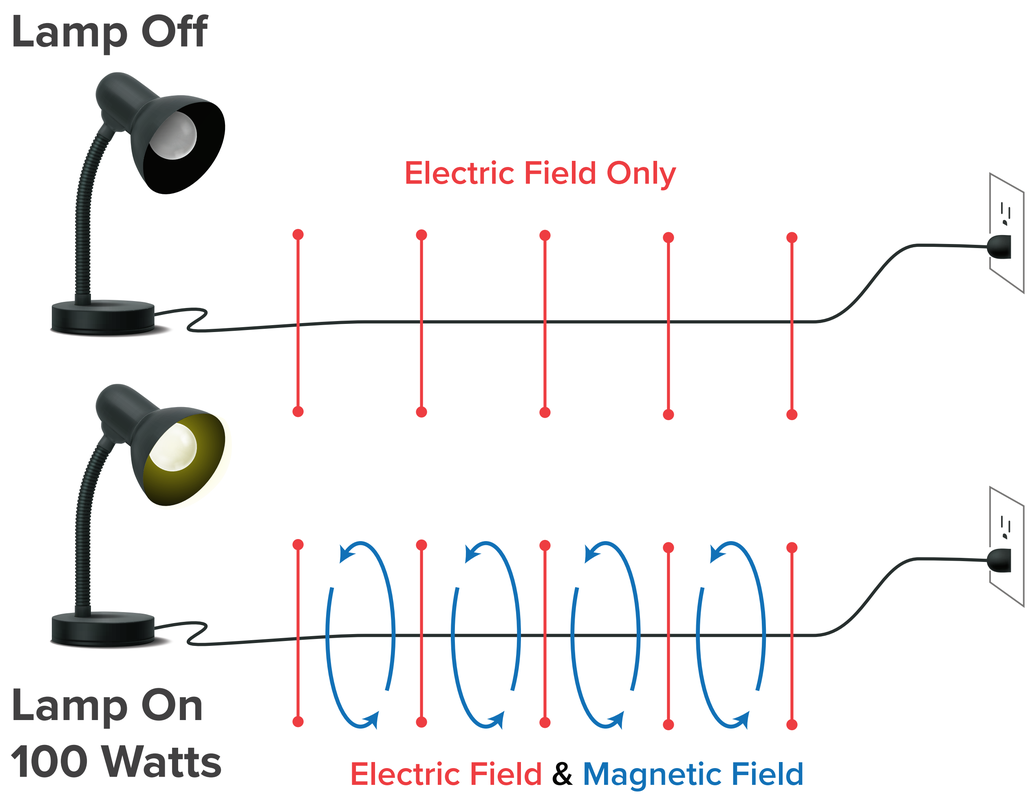
Electric and Magnetic Fields

Electric and magnetic fields, also referred to as EMF, are found everywhere electricity is used, as well as in nature. Electric fields are produced by the presence of electric charges and magnetic fields are produced by the movement of those charges. In the example at right, an electric field is product when the lamp is plugged in. As soon as the lamp is turned on, the flow of current creates a magnetic field. Magnetic fields are greater from appliances that draw more current. Electricity flowing in a wire or being used in an appliance, a device or in equipment creates both electric and magnetic fields. Everyone is exposed to these fields at home when you turn on a lamp, email a friend, or use an electric oven or microwave to cook your dinner.

All electrical appliances and equipment and all power lines that draw current have electric and magnetic fields around them. Field levels from household appliances can be about the same or greater than those fields found near power lines.



Source: EMF Questions and Answers. National Institute of Environmental Health Sciences. 2002

What are typical field Strengths?

The strength of the fields depends on the amount of current flowing through the electrical devices and the voltage level. Fields are strongest immediately surrounding an electric wire or device and rapidly weaken as you move farther from the source.

Field exposure lessens with increased distance from the source (mG).

Electrical Device	At 10 to 12 Inches	At 19 to 22 Inches (Working Distance)
Microwave Oven	17 to 236	5 to 28
Refrigerator	4 to 100	0.6 to 11.4
Electric Range	1.3 to 15.7	0.4 to 10
Fluorescent Light	1.2 to 56.7	0.3 to 15
Color TV	3.5 to 18.6	0.9 to 8.2
Ceiling Fan	0.3 to 49.5	0.0 to 6

SOURCE: Survey of Residential Magnetic Field Sources, Electric Power Research Institute (EPRI), September 1993.
Electric fields are measured in units of volts per meter, magnetic fields are measured in gauss or milligauss (mG),1/1,000 gauss)

The electric power used in the United States typically is a 60 Hertz (Hz) alternating current, meaning the electric charges move back and forth 60 times per second, creating an “extremely low frequency” field. These are different from the much higher frequency fields associated with radio and TV waves and cell phone signals. For power lines, many variables affect electric and magnetic field strength: the amount of current, distance from the wires, and the line configuration (how wires are placed in relation to one another. Current flow depends on how much electricity is being used by customers on that line. Use will very with time of day, time of year, and type of line. Magnetic fields for the 345 kV transmission line are shown below (data from construction cases).

345 kV Transmission Line (at 628 amps normal current flow)	At Centerline	At 40 Feet from Centerline
	95.8 mG	56.4 mG

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FOR MORE INFORMATION:

Website:

pacificorp.com/transmission/transmission-projects/spanish-fork-to-mercer.html

Email:

pmopac@PacifiCorp.com
Please reference the Spanish Fork to Mercer Project.