APPENDIX D

Western Area Power Administration (WAPA) Study

Engineering Analysis of Railroad Overpass Route near Bridgeport, NE Facilities

Nebraska Department of Transportation

BNSF RR at Bridgeport, NE

NH-26-1(161); C.N. 51299

BPT-SD and BPT-GS 115-kV
Transmission Lines

Western Area
Power Administration

February 2024

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1. DESCRIPTION

1.1. Background of Request

In August 2023, the Western Area Power Administration (WAPA) and the Nebraska Department of Transportation (NDOT, formally Nebraska Department of Roads) entered into Letter Agreement No. 23-RMR-3370 to allow WAPA to revisit the study completed in September 2016 under Letter Agreement No. 15-RMR-2705.

The NDOT requested that the WAPA re-study route alternative 2 for the railroad overpass project in Bridgeport, Nebraska. In February 2016, WAPA and NDOT entered into Letter Agreement No. 15-RMR-2705 to allow WAPA to perform the original study of alternatives 1 and 2. WAPA has re-assessed the alternative 2 route preliminary design and the impact to WAPA's electric system near the Bridgeport Substation.

1.2. Purpose

This engineering analysis specifies and estimates the cost of equipment, schedule, engineering, procurement, and construction work required to implement the selected alternative for the bridge alignment.

1.3. Description of Overpass Alternative

Alternative 2 would construct the overpass in a new alignment that would run south of WAPA's Bridgeport Substation reconnecting to the existing highway US-26/N-92.

1.4. Description of WAPA's Bridgeport Facilities

1.4.1. WAPA's Bridgeport Substation, constructed in 1952, consists of one 25-MVA 115/12.47-kV transformer, five 115-kV power circuit breakers in a Main & Transfer bus scheme.

1.4.2. WAPA's Bridgeport-Gering (BPT-GS) 115-kV transmission line, 397 ACSR conductor with OPGW.

1.4.3. WAPA's Bridgeport-Sidney (BPT-SD) 115-kV transmission line, 397 ACSR conductor with OPGW.

1.4.4. Attachment B shows the WAPA facilities in the project area.

2. SUMMARY OF EXISTING STUDIES

2.1. Environmental Studies

2.1.1. NDOT is preparing an Environment Assessment (EA) for their project and WAPA's work on the transmission lines affected by NDOT's project. WAPA will review the Draft Environment Assessment as a Cooperating Agency.

3. STUDY REQUIREMENTS

3.1. Contracts - Letter Agreement No. 23-RMR-3370

3.1.1. Under Contract 23-RMR-3370, WAPA provides this re-study of scope, cost, and schedule for alternative 2.

3.2. Network Upgrades

3.2.1. All facilities to be installed will not be eligible for network credit. See Attachment A for project cost estimate.

3.3. Schedule

3.3.1. A Project Schedule will be developed for alternative 2. The Schedule will capture the time required for WAPA to make the changes specified for the selected alternative. See Attachment C.

3.4. Environmental Requirements

3.4.1. NDOT will perform an Environment Assessment (EA) for their project and WAPA will review the EA as a Cooperating Agency. The parties entered an MOU in 2023 to define agency responsibilities.

3.5. Land Requirements

3.5.1. WAPA will enter into a license agreement with NDOT to authorize the planned road improvements across WAPA's existing transmission line easements for alternative 2.

4. STUDY RESULTS

4.1. Contracts

4.1.1. Under contract 23-RMR-3370, WAPA performed this study to specify and estimate the cost of equipment, provide a draft schedule, and determine the construction work needed to implement the study results based on the alternative selected.

4.1.2. WAPA shall enter into a license agreement with NDOT to authorize the planned road improvements across WAPA's existing electric transmission line easements.

4.1.3. NDOT may offer to convey to WAPA any remnant parcels it may acquire, which are located west of the railroad right of way and north of the new alignment of the planned road right of way. If WAPA accepts the parcel(s), NDOT shall transfer title to WAPA.

4.1.4. WAPA and NDOT shall enter into a construction agreement to make the necessary system changes to support the chosen alternative.

4.2. System modifications

4.2.1. WAPA will raise structures on the BPT-SD 115-kV transmission line, and on the BPT-GS 115-kV transmission line as needed to maintain proper road clearance over the new highway alignment. WAPA will also splice the fiber on the two transmission lines and locate splice points on structure 28/0 on the BPT-SD transmission line, and structure 28/4 on the BPT-GS transmission line. WAPA will work with NDOT to ensure access to the structures are maintained.

4.2.2. System modifications have an Estimated Project Cost (EPC) of: $340,000. NDOT will make payment to WAPA under the construction agreement.

4.3. Operations Requirements

4.3.1. No concurrent line outages will be allowed to keep Bridgeport Substation energized during the project.

4.3.2. Outage requests are required to be submitted 60 days in advance of the work.

4.4. Schedule

4.4.1. Project Schedule is in Attachment C

4.5. Environmental Requirements

4.5.1. WAPA is required to perform all necessary environmental review for compliance with the NEPA and other environmental laws, including, but not limited to, the Endangered Species Act, the Migratory Bird Treaty Act, the National Historic Preservations Act, and

the Clean Water Act. WAPA is a cooperating agency on NDOT EA, and all WAPA's required environmental review will be covered under this document.

4.5.2. WAPA is a Cooperating agency and entered an MOU with NDOT 2023 for environmental reviews and approvals.

4.5.3. NDOT is responsible for signing a separate construction agreement and providing funding to WAPA for the environmental review and system modifications required to support the selected alternative.

4.5.4. NDOT shall coordinate with WAPA to discuss the environmental requirements, agreements, schedules and other activities need to support the project.

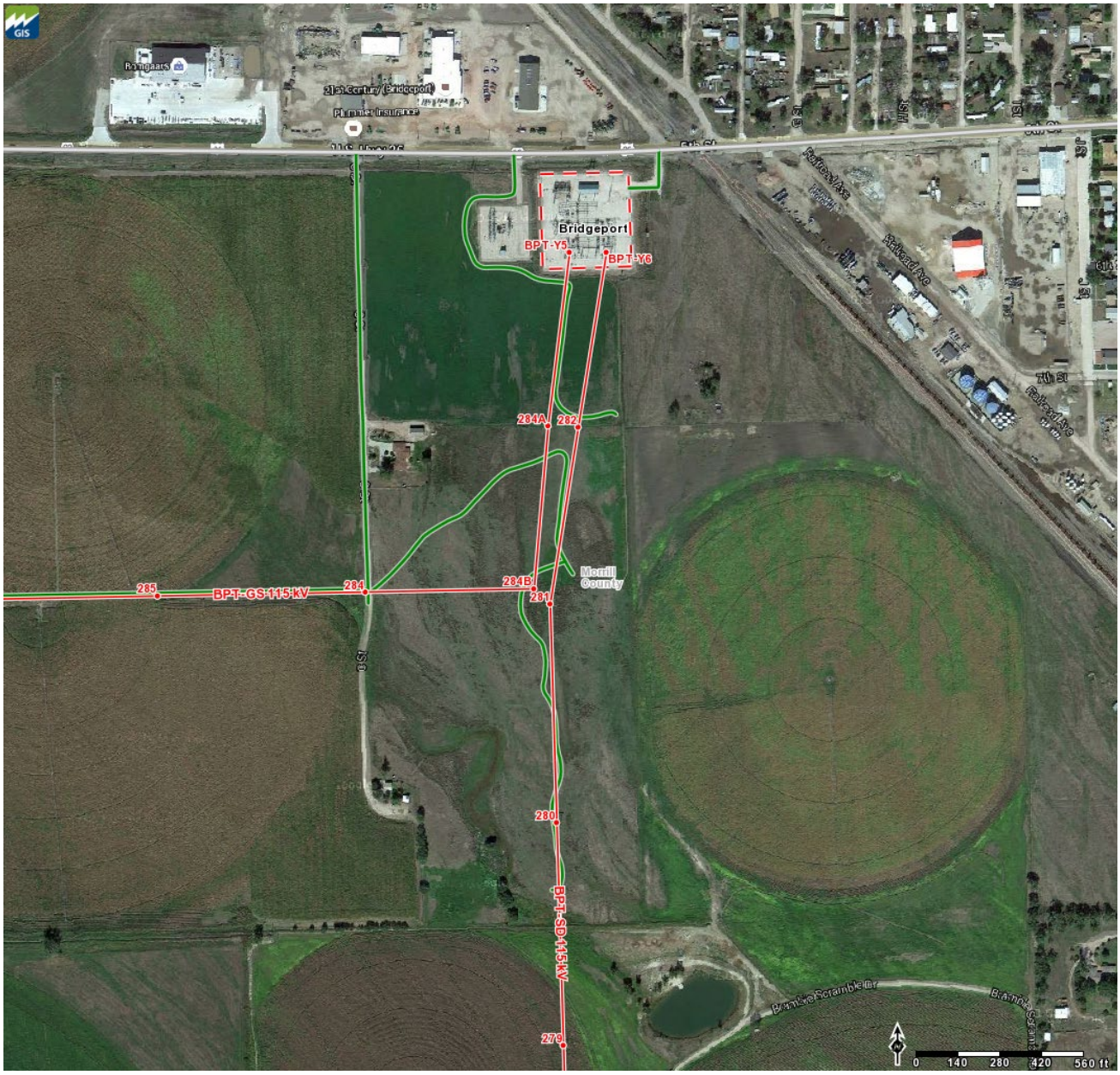
ATTACHMENT A

Design and Construction Budgetary Cost Estimates

Description	Alternative 2	Notes
Construction	$ 215,000	WAPA Labor costs
Planning/Field Data	$ 5,000	WAPA Labor costs
Design	$ 30,000	WAPA Labor costs
Lands	$ 5,000	WAPA Labor costs
Project Management	$ 30,000	WAPA Labor costs
Outage Coordination	$ 5,000	WAPA Labor costs
Environment	$ 15,000	WAPA Labor costs
Wood-H Structures	$ 35,000	Material costs
Total Cost	**$ 340,000**	

ATTACHMENT B

Project Area - Bridgeport, NE



ATTACHMENT C

PROPOSED PROJECT SCHEDULE

Activity	Start	Completion
Construction agreement signed and funds received	February 2024	July 2024
Field Data	August 2024	October 2024
Environmental	August 2024	January 2025
Design	October 2024	April 2025
Construction Period	April 2025	January 2026
Commissioning – Fiber work completed	December 2025	February 2026
In-service Date		February 2026