Summary of Route Adjustments

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Since Otter Tail Power Company (Otter Tail) and Western Minnesota Municipal Power Agency (Western Minnesota), through its agent, Missouri River Energy Services (MRES) (collectively, Applicants) filed their Facility Permit Application (Application) on April 15, 2024, the Applicants have continued to gather information for, and coordinate with agencies and landowners on, the South Dakota portion of the Big Stone South to Alexandria 345 kilovolt (kV) Transmission Line Project (the Project). As a result, the Applicants have made minor adjustments to the centerline of the Project's 345 kV transmission line (Route), with corresponding adjustments to the 150-foot-wide right-of-way (ROW) centered on the Route and the Flexibility Area. The adjustments are generally described as follows:

(1) an adjustment to the Route where the Project's 345 kV transmission line exits the Big Stone South Substation, with corresponding adjustments to the ROW and the Flexibility Area. A redline comparison showing this Route adjustment compared to what was filed with the Application is attached as Figure 1.

(2) an adjustment to the Route on the parcel owned by Otter Tail, Montana-Dakota Utilities Co., and NorthWestern Energy (together, the "Big Stone Power Plant Owners") just south of US Highway 12, with a corresponding adjustment to the ROW. A redline comparison showing this Route adjustment compared to what was filed with the Application is attached as Figure 2.

(3) an adjustment to the Route along 146th Street (with corresponding adjustments to the ROW and the Flexibility Area) to shift the Route from the south side of 146th Street to the north side of 146th Street for approximately 0.9 miles, before crossing to the south side of 146th Street and continuing to the South Dakota – Minnesota border. A redline comparison showing this Route adjustment compared to what was filed with the Application is attached as Figures 3A and 3B.

(4) an adjustment to the Route right before the Project crosses the South Dakota-Minnesota border, with a corresponding adjustment to the ROW. A redline comparison showing this Route adjustment compared to what was filed with the Application is attached as Figure 4.

The current Project Route, ROW, and Flexibility Area including the Route adjustments noted above are depicted on updated Appendix A (Figures), included as Exhibit B to the Supplemental Direct Testimony of Jason Weiers. The reasons for these adjustments are discussed in the Supplemental Direct Testimony of Jason Weiers.

The Route adjustments described above and in the Supplemental Direct Testimonies of Jason Weiers and Kevin Scheidecker do not significantly alter the detailed analysis of environmental and land use impacts presented in the Application. As needed, the Applicants conducted additional analysis with respect to the current Project, which includes the Route adjustments, and updates are summarized in Table 1-1 below.

Table 1-1 Updates to Environmental Analysis		
April 15, 2024, Application Environmental Analysis Section		**Current Project (updates)**
Section 9.0: General site and project components description (ARSD 20:10:22:11; 20:10:22:34; 20:10:22:35)	Section 9.1: Site location and overview	No updates needed.
	Section 9.2: Siting flexibility	No updates needed.
	Section 9.3: Transmission facility	The ROW for the Project will be 150 feet wide. The transmission structures will be centered within the ROW. The Project's approximately 3.4-mile-long Route will extend from the existing Big Stone South Substation located in Section 24, Township 121, Range 47, and continue east/northeast approximately 0.9 mile, then south approximately 0.8 mile, then east/southeast approximately 1.7 miles to the Minnesota/South Dakota border. Updated Figure 1 and the updated Figure 4 series of Appendix A (Weiers Supplemental Direct Testimony, Exhibit B) display the proposed Route and ROW for the Project. In addition to the permanent ROW, additional temporary workspace will be needed in certain locations during construction. The Project ROW crosses 22 parcels of land, eight of which are owned or co-owned by Otter Tail.

Table 1-1 Updates to Environmental Analysis		
April 15, 2024, Application Environmental Analysis Section		**Current Project (updates)**
	Section 9.3.2: Configuration of structures and conductors	No updates needed to the number of transmission structures (up to 27). The Project will now include a separate single circuit monopole structure entering the Big Stone South Substation. An example of the structure configuration is provided in updated Figure 5 of Appendix A (Weiers Supplemental Direct Testimony, Exhibit B). Spans are anticipated to range from 400 to 1,300 feet, except that the single circuit monopole structure entering the Big Stone South Substation is anticipated to have a span ranging from 100 feet to 400 feet. Spans may vary depending on geological, environmental, or engineering constraints identified during micro-siting. See updated Table 9-2 (Project configuration summary) below.
	Section 9.4: Construction and operations	No updates needed.
Section 11.0: Environmental information (ARSD 20:10:22:13)		Updated temporary and permanent impacts for the current Project. See updated Table 11-1 (Summary of temporary and permanent project impacts) below.
Section 12.0: Effect on physical environment and geological resources (ARSD 20:10:22:14)	Section 12.1: Geological resources	No updates needed.
	Section 12.2: Soils	Updated soil types within the Flexibility Area to reflect adjustments. See updated Table 12-1 (Soil associations within the Flexibility Area) below.
		Updated prime farmland classifications within the Flexibility Area to reflect adjustments. See updated Table 12-2 (Prime farmland classifications within the Flexibility Area) below.
		Construction of the Project would result in up to approximately 62.6 acres of temporary disturbance

Table 1-1 Updates to Environmental Analysis		
April 15, 2024, Application Environmental Analysis Section		**Current Project (updates)**
		and approximately 0.1 acre of permanent disturbance to surface soils within the current Flexibility Area. The Project will permanently impact approximately 0.1 acre of prime farmland/farmland of statewide importance.
13.0: Effect on hydrology (ARSD 20:10:22:15)	Section 13.1: Groundwater resources	No updates needed.
	Section 13.2: Surface water resources	No updates needed.
	Floodplains	According to Federal Emergency Management Agency floodplain data, there are a total of four mapped floodplains crossed by the current Flexibility Area comprising 5.4 acres. The widest floodplain is one unnamed tributary of the Whetstone River and will be spanned by the Project. Some structures may be placed within the designated floodplain; the locations will be determined during final design.
	Section 13.3 Current and planned water use	No updates needed.
	Section 13.4: Wetlands	A total of 9.2 acres of freshwater emergent delineated/mapped wetlands and 0.1 acre of riverine delineated/mapped wetland are present within the current Flexibility Area (updated Figure 14 of Appendix A (see Weiers Supplemental Direct Testimony, Exhibit B)).
		Updated estimated temporary and permanent impacts to wetlands to reflect adjustments. See updated Table 13-1 (Temporary and permanent impacts to wetlands) below. As currently configured, total permanent impacts to wetlands are anticipated to be less than 0.01 acre and

Table 1-1 Updates to Environmental Analysis		
April 15, 2024, Application Environmental Analysis Section		**Current Project (updates)**
		Applicants will analyze structure placement during final design to determine if permanent wetland impacts can be further minimized or avoided. Based on the current design, the potential impacts to wetlands would still be minor and within the threshold for authorization under the USACE Nationwide Permit program without pre-construction notification. Wetland impacts will be avoided where practicable; if wetland impacts occur, Applicants will comply with USACE Nationwide Permit Program requirements.

Section 14.0: Effect on terrestrial ecosystems (ARSD 20:10:22:16)	Section 14.1: Vegetation	Based on the National Land Cover Database (NLCD) (USGS 2021), the dominant land cover within the current Flexibility Area is cultivated crops (107.2 acres). There are 18.6 acres of other vegetated land cover (i.e., emergent herbaceous wetlands and hay/pasture lands) in the current Flexibility Area. The remaining land cover within the Flexibility Area consists of developed land (20.1 acres). Land classified as developed (open space, low, and medium intensity) is due to the presence of local roads, U.S. Highway 12, and the BNSF railroad. Updated land cover types within the Flexibility Area and temporary and permanent impacts to land cover to reflect adjustments. See Table 14-1 (Temporary and permanent impacts to land cover in the Flexibility Area) below. The existing NLCD land cover types in the vicinity of the Project are depicted on updated Figure 15 of Appendix A (Weiers Supplemental Direct Testimony, Exhibit B). It is anticipated that 48.1 acres of vegetation would be temporarily impacted due to construction of the Project. Permanent impacts to vegetation would occur due to the placement of structure foundations. It is anticipated that 0.09 acre of vegetation would be permanently impacted.

Table 1-1 Updates to Environmental Analysis		
April 15, 2024, Application Environmental Analysis Section		**Current Project (updates)**
	Section 14.2: Wildlife	No updates needed.
	Northern Long-eared Bat and Tricolored Bat	No updates needed.
	Dakota Skipper	No updates needed.
	Monarch butterfly	No updates needed.
	Eagles and Raptors	No updates needed.
Section 15.0: Effect on aquatic ecosystems (ARSD 20:10:22:17)		The delineation/mapping conducted for the Aquatic Resources Delineation Report identified a total of 9.2 acres of freshwater emergent delineated/mapped wetlands and less than 0.1 acre of riverine delineated/mapped wetland present within the current Flexibility Area. See updated Figure 14 of Appendix A (Weiers Supplemental Direct Testimony, Exhibit B).
Section 16.0: Land use (ARSD 20:10:22:18)	Section 16.1: Land use	There are no residences or businesses within the current Flexibility Area. The closest residence is located approximately 245 feet away from the Project ROW and 126 feet away from the Flexibility Area. The closest business, a concrete and bulk material transport company, is located approximately 468 feet away from the Project ROW and is approximately 250 feet away from the Flexibility Area.
		Construction of the Project will result in the conversion of a very small amount of land (<0.1 acre) from existing agricultural land uses into use for a transmission line. Approximately 48.1 acres of agricultural land would be temporarily impacted by construction of the Project, and 0.09 acre of agricultural land would be permanently impacted.

Table 1-1 Updates to Environmental Analysis		
April 15, 2024, Application Environmental Analysis Section		**Current Project (updates)**
	Section 16.2: Public lands and facilities	There are no USFWS WPAs within the Flexibility Area. The nearest USFWS WPA is approximately 2,585 feet from the Flexibility Area. There are no USFWS NWRs within the Flexibility Area. The nearest NWR, the Big Stone NWR in Minnesota, is located approximately 0.3 mile from the edge of the Project ROW. No updates needed regarding the information in the Application pertaining to USFWS grassland and wetland easements, USFWS-managed wildlife/waterfowl conservation easements, NRCS flood-management easements, CRP lands, reservations or other Tribal lands, SDGFP Grassland Reserve Program easements, SDGFP GPAs, SDGFP Walk-In Area Program areas, SDGFP Conservation Reserve Enhancement Program areas, or other public lands/easements.
	Section 16.3: Noise	The closest sensitive land use (residence) is located 245 feet from the Project ROW.
	Section 16.4: Visual resources	No updates needed.
	Section 16.5: Satellite, cellular, radio, TV, and GPS reception	No updates needed.
Section 17.0: Local land use controls (ARSD 20:10:22:19)		No updates needed.
Section 18.0: Water quality (ARSD 20:10:22:20)		No updates needed.
Section 19.0: Air quality (ARSD 20:10:22:21)		No updates needed.
Section 20.0: Time schedule (ARSD 20:10:22:22)		No updates needed.
Section 21.0: Community impact (ARSD 20:10:22:23)	Section 21.1: Socioeconomic and community resources	No updates needed.
	Section 21.2: Commercial, industrial, and agricultural sectors	*Agricultural sector* - It is estimated that approximately 0.09 acre of agricultural land would be permanently impacted and approximately 48.1 acres of agricultural land would be temporarily impacted by the Project. However, this is a conservative estimate

Table 1-1 Updates to Environmental Analysis		
April 15, 2024, Application Environmental Analysis Section		**Current Project (updates)**
		that assumes the entire ROW is needed for temporary disturbances.
	Section 21.3: Community facilities and services	No updates needed.
	Section 21.4: Transportation	The Applicants used the Federal Aviation Administration (FAA) Notice Criteria Tool to analyze potential impacts from the current Project on airspace. No impacts to the Ortonville Municipal Airport or other registered commercial or private aviation facilities are expected based on that analysis.
	Section 21.5: Cultural resources	Applicants conducted a Level I records search and review of historical maps and aerial photographs for the current Flexibility Area around the Route adjustment near the Big Stone South Substation. The Applicants provided the associated report to the South Dakota State Historical Society/State Historic Preservation Office (SHPO). In a letter dated September 11, 2024, SHPO agreed with the Applicants that this Route adjustment (including the associated Flexibility Area) is not anticipated to impact a historic property which is eligible for listing in the National Register of Historic Places (NRHP). Accordingly, no further surveys for cultural resources are needed in relation to the adjustment near the Big Stone South Substation. The Route adjustment near the South Dakota-Minnesota border was covered in previous Level III cultural resource field surveys. Level III field surveys for cultural resources were conducted in October 2024 for the portions of the Flexibility Area and ROW not previously surveyed related to the Route adjustment along 146th Street and the Route adjustment on the Big Stone Power Plant Owners' parcel just south of U.S.

Table 1-1 Updates to Environmental Analysis		
April 15, 2024, Application Environmental Analysis Section		**Current Project (updates)**
		Highway 12. No additional NRHP eligible or potentially eligible cultural resources were identified. The survey results will be included in an addendum cultural resources report documenting the October 2024 cultural field survey efforts.
Section 22.0: Summary of potential impacts and avoidance, minimization, and mitigation measures		See updated Table 22-1 (Summary of potential impacts and proposed avoidance/minimization/ mitigation measures) below.

The updated tables referenced above are provided herein.

Table Error! No text of specified style in document.**-1. Project configuration summary**

Type	Material	ROW Width	Approx. Height	Approx. Structure Base Diameter	Approx. Foundation Diameter	Typical Span
Monopole Structure w/ Davit Arms	Corten Steel	150 feet	120-180 feet	5–10 feet	7–14 feet	400–1,300 feet
Monopole Deadend Structure	Corton Steel	150 feet	90-130 feet	5-7 feet	7-9 feet	100-400 feet

Table Error! No text of specified style in document.**-2. Summary of temporary and permanent Project impacts**

Project Component	Total Temporary Impacts (acres)	Total Permanent Impacts (acres)
Temporary Access Roads (30-foot width)[1]	10.9	0
Temporary Laydown/Staging Area (3 acres)	3.0	0
13 Pulling/Tensioning Sites (200 feet x 700 feet)	41.7	0
ROW (150-foot width) (Total)		
27 Structure Foundations (Total)	18.8[2]	0.1[3]
Other Lands within ROW[4]	43.7	0
Total[5]	118.1	0.1

[1]Calculated using a total length of 3 miles (15,840 feet) to account for new temporary access roads and the use of previously disturbed access roads. Impacts to existing roadways (0.25 mile) were not included.
[2]Temporary impacts associated with the temporary workspace for one structure (150 feet x 200 feet) is 0.7 acre per structure.
[3]Permanent impacts associated with the foundation (14-foot diameter) of one structure is 0.003 acre per structure.
[4]The total acreages of the ROW is 62.6 acres. Temporary impacts to other lands within the ROW were calculated by subtracting the permanent impacts and temporary workspace impacts from the total acreage within the ROW.
[5] Addends may not sum due to rounding.

Table Error! No text of specified style in document.**-3. Soil associations within the Flexibility Area**

Soil Association	Soils within the Flexibility Area (acres)
Divide loam	12.9
Egeland sandy loam, 2 to 6 percent slopes	7.9
Estelline silty clay loam	17.7
Fordville-Renshaw loams, 2 to 6 percent slopes	0.1
Esmond-Sisseton-Heimdal, complex, 2 to 12 percent slopes, moderately eroded	12.6
Heimdal-Svea loams, 0 to 2 percent slopes	3.7
Heimdal-Svea loams, 2 to 6 percent slopes	21.3
Parnell silty clay loam, occasionally ponded, 0 to 1 percent slopes	3.9

Soil Association	Soils within the Flexibility Area (acres)
Poinsett- Waubay silty clay loams, 0 to 2 percent slopes	41.2
Renshaw loam, 0 to 2 percent slopes	11.0
Renshaw loam, 1 to 6 percent slopes	0.03
Sioux-Rensaw complex, 15 to 40 percent slopes	3.5
Sisseton-Esmond-Heimdal, complex, 6 to 20 percent slopes, moderately eroded	1.6
Svea loam, 1 to 3 percent slopes	1.0
Tonka silty clay loam, 0 to 1 percent slopes	2.5
Vallers-Tonka complex	4.7
Total[1]	**145.8**

[1] Addends may not sum due to rounding.
Source: NRCS 2023.

Table Error! No text of specified style in document.**-4. Prime farmland classifications within the Flexibility Area**

Prime farmland classification	Prime Farmland within Flexibility Area (acres)
Prime farmland	105.8
Farmland of statewide importance	12.6
Prime farmland if drained	7.2
Prime farmland if irrigated	11.2
Not prime farmland	9.1
Total[1]	**145.8**

[1] Addends may not sum due to rounding.
Source: NRCS 2023.

Table Error! No text of specified style in document.**-5. Temporary and permanent impacts to wetlands**

Wetland Type	Wetland Area within the Flexibility Area (Acres)	Temporary Impacts (Acres)[1]	Permanent Impacts (Acres)[2]
Freshwater Emergent Wetland	9.2	3.6	<0.01
Riverine	0.07	0.03	0.00
Totals[3]	9.3	3.6	<0.01

[1] Impacts are associated with the preliminary location of the temporary construction workspaces for structures located within delineated/mapped wetlands.
[2] Impacts are associated with the preliminary location of the structure foundations located within delineated/mapped wetlands.
[3] Addends may not sum due to rounding.

Table Error! No text of specified style in document.**-6. Temporary and permanent impacts to land cover in the Flexibility Area**

NLCD Land Cover Category	Land Cover in Flexibility Area (acres)	Temporary Impacts (acres)[1]	Permanent Impacts (acres)[2]
Cultivated Crops	107.2	41.7	0.08
Developed, Low Intensity	3.5	2.3	<0.0
Developed, Medium Intensity	1.1	0.4	0.0
Developed, Open Space	15.5	11.9	0.02
Emergent Herbaceous Wetlands[3]	15.4	5.8	0.0
Hay/Pasture	3.1	0.6	<0.01
Total [4]	**145.8**	**62.6**	**0.1**

[1]Temporary impacts vegetation include all vegetation cover within the ROW less the permanent impacts associated with the 27 structure foundations.
[2] Permanent impacts associated with the 27 structure foundations.
[3] NWI wetlands.
[4] Addends may not sum due to rounding.
Source: USGS 2021.

Table 22-1 (Summary of potential impacts and proposed avoidance/minimization/ mitigation measures)

Resource	Potential impact	Proposed avoidance/minimization/mitigation measures
Physical environment		
Geological resources	No impacts to geological resources are anticipated.	Prior to construction, geotechnical soil borings will be conducted at transmission line structure locations to determine the soil suitability to support the transmission line structure foundations.
Soils	Construction of the Project would result in up to approximately 62.6 acres of temporary disturbance and approximately 0.1 acre of permanent disturbance to surface soils within the Flexibility Area. Surface disturbance caused by construction of the transmission structures may cause the soil surface to become more prone to erosion or compaction.	Impacts to soils will be minimized through the use of BMPs. The Applicants will obtain coverage under the SDDANR General Permit for Storm Water Discharges Associated with Construction Activities, which requires preparation of a SWPPP which will specify BMPs to control erosion and sedimentation. BMPs may include erosion and sediment control measures, noxious weed control, segregation of topsoil from subsurface materials, the use of construction equipment appropriately sized to the scope and scale of the Project, reseeding of disturbed areas based on agency recommendations or landowner requests, and decompaction and/or restoration of soils disturbed during construction to preconstruction contours to the extent practicable and in accordance with landowner agreements so that all surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate re-vegetation, provide for proper drainage, and prevent erosion. The Applicants will conduct geotechnical soil borings at transmission line structure locations before construction to determine the soil suitability to support the transmission line structure foundations. The Applicants will also develop and implement a noxious weed control plan.
Hydrology		
Groundwater resources	Construction activities may result in negligible to minor temporary and localized fluctuations in groundwater levels. Once the construction activity has been completed, the groundwater levels typically recover quickly. No groundwater resources will be used for construction or operation of the Project.	The Applicants will develop and implement a SWPPP, which will include sediment and erosion control BMPs.

Resource	Potential impact	Proposed avoidance/minimization/mitigation measures
Surface water resources	During construction there is the possibility of sediment reaching surface waters as the ground is disturbed by excavation, grading, and construction traffic. The Project is not anticipated to cause changes to existing drainage patterns. Water use for the Project will be restricted to dust control and foundation construction and will be pumped from local surface waters. Some structures may be placed within a designated floodplain. Impacts to floodplain storage capacity will be negligible due to the long spans between transmission structures and the relatively small volume of foundation material used at the structures.	The Project has been designed to avoid surface water features whenever feasible. Structure foundations will be located outside of all streams. It is anticipated that crossing of streams and drainage ways will be avoided by the temporary access roads; if impacts occur, they will be temporary and restored in accordance with applicable requirements. The Applicants will obtain coverage under the SDDANR's General Permit for Storm Water Discharges Associated with Construction Activities, which includes the development and implementation of a SWPPP which would prescribe BMPs to control erosion and avoid and/or minimize the potential for sediment to reach surface waters. Erosion and sediment control BMPs may include use of silt fence, straw wattles, erosion control blankets, re-vegetation, or other features and methods designed to control storm water runoff and mitigate erosion and sedimentation. Water used for the Project will be pumped from local surface waters following consultation with applicable resource agencies. Final structure locations will be determined based on final design, and floodplains will be considered in structure placement. If it is not possible to avoid floodplains with structures, Applicants will coordinate with the Grant County Floodplain Administrator to review structure locations and obtain floodplain development permits, as needed.
Current and planned water use	No impacts to current or planned water uses are anticipated. Water use for the Project will be restricted to dust control and foundation construction and will be pumped from local surface waters.	Water used for the Project will be pumped from local surface waters following consultation with applicable resource agencies.
Wetlands	The Project is anticipated to result in approximately 3.6 acres of temporary impacts and less than 0.01 acre of permanent impacts to wetlands.	The Project has been designed to avoid and/or minimize impacts to wetlands, to the extent practicable. The Applicants will analyze structure placement during final design to determine if permanent wetland impacts can be further minimized or avoided. If wetland impacts occur, Applicants will comply with USACE Nationwide Permit

Resource	Potential impact	Proposed avoidance/minimization/mitigation measures
		Program requirements. Based on the current design, the potential impacts to wetlands would be within the threshold for authorization under the USACE Nationwide Permit program without pre-construction notification. The Applicants will develop and implement a SWPPP, which will include sediment and erosion control BMPs.
Terrestrial ecosystems		
Vegetation	The Project will temporarily impact approximately 48.1 acres of vegetation (the majority of which is cropland) and permanently impact approximately 0.09 acre of vegetation. The Project will avoid areas of potentially undisturbed grasslands.	The Project has been sited to maximize the placement of facilities in previously disturbed agricultural lands, and the majority of the temporary vegetation impacts would occur to cultivated agricultural fields. Temporary impacts to vegetation would be mitigated through BMPs, such as employing appropriate erosion control measures, and reseeding areas disturbed by construction activities unless otherwise directed by the landowner. The Applicants will use a seed mix that is recommended by the NRCS or other resource agency unless otherwise agreed to with the landowner. The Applicants will develop and implement a noxious weed control plan. There are no potentially undisturbed grasslands present in the Project ROW or surrounding area that would be impacted by construction activity. The Applicants will locate temporary use areas used for Project construction outside of potentially undisturbed grasslands.
Wildlife	The Project may impact avian species through increasing the potential for avian collisions and/or habitat impacts. Avian species that utilize wetlands are unlikely to be impacted by the Project due to the limited wetland areas in the vicinity of the Project. Trees for nesting or roosting are limited within the Project ROW and Flexibility Area to a single stream/drainage crossing, so minimal tree removal is anticipated. The potential for federally and state listed species to occur in the vicinity of the Project is low due to limited	The Project has been designed to avoid and/or minimize impacts to wildlife. The Project has been sited to avoid or minimize impacts to federally and state listed and other special-status wildlife species. Effects on terrestrial habitats will be minimized by not altering stream channels or drainage patterns, minimizing placement of fill in wetlands, restoration of temporary disturbance areas, and replanting disturbed areas, if necessary, using a seed mix that is recommended by the NRCS or other resource agency unless otherwise agreed to with the landowner. The USFWS recommends use of milkweed in the seed

Resource	Potential impact	Proposed avoidance/minimization/mitigation measures
	potential habitat; therefore, impacts to listed species are not anticipated.	mix in non-agricultural areas if the landowner agrees. Temporary impacts would also be minimized by utilizing erosion and sedimentation BMPs that minimize or prevent sediment from reaching adjacent waterways and protect topsoil. The structures will be placed outside of the SDGFP GPA to avoid and/or minimize impacts to waterfowl and grassland associated birds. Additionally, the Project will avoid disturbance to potentially undisturbed grasslands in the vicinity of the Project during construction and will avoid placing structures within or immediately adjacent to surface water features. Based on consultation with USFWS, the Applicants will conduct preconstruction surveys for bald eagle, golden eagle, other raptor, and migratory bird/birds of conservation concern nests along the Project ROW. Minimal tree removal is anticipated. Tree removal, ground clearing, or mowing within the Project ROW is anticipated to occur in late fall or early spring (outside of bird nesting and bat roosting periods) to discourage tree and ground nesting within temporary or permanent disturbance areas. Based on consultation with the USFWS, if tree removal would need to occur within the April 1 - October 31 timeframe, trees greater than 3-inch diameter at breast height would be surveyed for suitable habitat prior to removal. The Project will be designed in accordance with APLIC's *Suggested Practices for Avian Protection On Power Lines: State of the Art in 2006*. In accordance with SDGFP's recommendation, the Applicants will conduct an annual NHP database search to review potential new information relevant to the Project. Coordination will occur with SDGFP if any changes to species information is noted.
Aquatic ecosystems	Potential impacts to aquatic resources would be primarily related to installation of structures within the aquatic habitat area or sediment deposition related to construction activities.	The Project has been designed to avoid and/or minimize impacts to aquatic ecosystems. To the extent practicable, the Project will avoid streams and other drainage systems and minimize disturbance to wetlands during

Resource	Potential impact	Proposed avoidance/minimization/mitigation measures
	It is anticipated that the Project will span the unnamed tributary to the Whetstone River, depending on geologic or engineering constraints determined in final design, and no transmission structures will be placed in the unnamed tributary. Therefore, no permanent impacts to aquatic ecosystems as a result of the Project are anticipated. No impacts to aquatic ecosystems as a result of water use during Project construction are anticipated.	construction. The Project is expected to span all rivers and streams, thus avoiding potential permanent impacts. It is anticipated that crossing of streams and drainage ways will be avoided by the temporary access roads; if impacts occur, they will be temporary and restored in accordance with applicable requirements. The Applicants will develop and implement a SWPPP, which will include sediment and erosion control BMPs.
Land use		
Land use	The Project will temporarily impact approximately 48.1 acres of agricultural land and permanently impact approximately 0.09 acre of agricultural land. Construction of the Project will result in the conversion of a very small amount of land (<0.1 acre) from existing agricultural land uses into use for a transmission line. Crop production on some portions of agricultural lands may be temporarily interrupted for one growing season depending on the timing and duration of construction.	The Project is compatible with existing land uses in the vicinity of the Project. In cultivated cropland areas, the Applicants will attempt to conduct construction before crops are planted or following harvest, if possible. The Applicants will compensate landowners for impacts on crops resulting from the construction, operation, and maintenance of the Project. If there are drain tiles, the Applicants will work with landowners on identifying those systems and, if impacted, will coordinate with the landowners on repairs. Following construction, areas subject to temporary disturbance would be revegetated to pre-construction land uses, if necessary, using a seed mix that is recommended by the NRCS or USFWS unless otherwise agreed to with the landowner.
Public lands and facilities	Noise from construction activities may temporarily impact the SDGFP GPA on Otter Tail-owned lands within the Flexibility Area; however, such impacts would be temporary in nature and would be limited to areas in close proximity to the work areas.	The Project has been designed to avoid public lands and facilities. The Applicants have designed the Project so that no structures are located on the SDGFP GPA. The Applicants have consulted with SDGFP regarding the location of the Project ROW and structure placement in relation to the GPA. If impacts to the GPA are unavoidable during Project construction or operation, the Applicants will coordinate with SDGFP in advance. Additionally, construction activities will mostly occur during daytime hours.

Resource	Potential impact	Proposed avoidance/minimization/mitigation measures
Noise	Construction noise will be temporary with the main sources coming from heavy construction equipment operation, and increased vehicle traffic due to construction personnel transporting materials to and from the site. Additional, intermittent construction related noise may occur based on the final Project design (e.g., the use of implosive sleeves). Noise levels during the operation and maintenance of the Project are anticipated to be minimal.	Construction noise levels will be minimized by ensuring that construction equipment is equipped with mufflers that are in good working order. Construction activities will mostly occur during daytime hours.
Visual resources	The Project will create an additional, minor visual element in the vicinity, but the degree to which the transmission line will be visible will vary by location.	The existing viewshed in the vicinity of the Project includes existing transmission lines, railroads, roadways, industrial activities from the Big Stone Power Plant to the north, and two existing substations. The Project is consistent with these existing elements. The Project would parallel existing linear infrastructure, resulting in minimal change to the existing visual landscape. Additionally, modifications to the Big Stone South Substation are not expected to create additional visual impacts in the vicinity of the Project since the substation is part of the existing environment. Measures to minimize/mitigate potential visual impacts may include the following: where feasible, input from landowners and land management agencies will be considered when determining locations of structures and other disturbed areas; structure types (designs) will be uniform, to the extent practical; structures will utilize corten steel (i.e., self-weathering steel) to have a dark brown matte finish to minimize sunlight reflections that could be visible to nearby landowners and commuters using nearby roadways; and construction and operation will be conducted to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings. During operation of the Project, clearing of trees and shrubs will be conducted only as necessary per the NERC standards and to allow safe operation and inspection of the Project.
Electromagnetic interference	No impacts to satellite, cellular, radio, television, or GPS systems are anticipated.	If television or radio interference is caused by or from the operation of the Project in those areas where good reception was available prior to construction of the Project, the Applicants will evaluate the circumstances contributing to the impacts and determine the necessary

Resource	Potential impact	Proposed avoidance/minimization/mitigation measures
		actions to restore reception to the present level. In the unlikely event that the Project causes interference within a television station's primary coverage area, the Applicants will work with the affected viewers to correct the problem at the Applicants' expense.
Local land use controls	No impacts are anticipated.	The Project is compatible with existing land uses and has been designed to comply with local land use ordinances. The County's Board of Adjustments granted a CUP to the Applicants for the Project on June 24, 2024. The Applicants will obtain a building permit prior to commencement of construction. If required, the Applicants will obtain floodplain development permits.
Water quality	During construction, there is a limited possibility of sediment reaching surface waters as the ground is disturbed by excavation, grading, and construction traffic.	The Applicants will obtain coverage under the SDDANR General Permit for Storm Water Discharges Associated with Construction Activities, which requires preparation of a SWPPP, which will include sediment and erosion control BMPs.
Air quality	During construction, fugitive dust emissions would temporarily increase due to equipment vehicle traffic in the vicinity of the Project as well as ROW clearing activities. Additionally, there would be short-term emissions from construction vehicles and equipment onsite. The concentration of pollutants during construction will be greatest near the Project ROW but will decrease rapidly with distance from the Project ROW. Air quality effects caused by dust or vehicle emissions would be short-term, limited to the time of construction, and would not result in any NAAQS exceedances for criteria pollutants. No impacts to air quality due to the operation of the Project are anticipated. Minimal increases in greenhouse gas emissions may result from the maintenance of transmission facilities as repair technicians and personnel access portions of the transmission line, but these impacts will be temporary and insignificant.	The Applicants will employ BMPs throughout construction to suppress fugitive dust emissions, which may include watering unpaved roads and loose gravel areas, implementing spray-on amendments (e.g., calcium chloride, water), staging construction activities to limit soil disturbance, mulching and planting vegetation, limiting construction traffic speeds, and other applicable measures as necessary. Upon completion of construction activities, measures would be taken to revegetate disturbed areas (outside of cultivated areas) to permanently stabilize soil and prevent further production of fugitive dust emissions.
Community impact		

Resource	Potential impact	Proposed avoidance/minimization/mitigation measures
Socioeconomic and community resources	Long-term beneficial socioeconomic impacts from the Project will include beneficial impacts to the local tax base in the form of revenues from property taxes paid by the Applicants. The amount of property taxes generated from the Project will be based on the cost of the Project. Based on a range of total capital costs between $29.7 million and $41.4 million, the Project is estimated to generate between approximately $184,000 and $257,000 in direct economic benefits annually to taxing authorities in South Dakota.	No mitigation measures proposed.
Commercial, industrial, and agricultural sectors	The Project is anticipated to have economic benefits to various commercial and industrial sectors in the vicinity of the Project during construction and operation. Project construction activities will temporarily use cropland and hay land/pasture within the Project ROW and adjacent areas to facilitate equipment movement (construction access roads) and structure laydown pads. These activities would remove land from productivity during the duration of construction, displace livestock (if present), or result in a delay or loss of crop production. The Project is estimated to permanently impact approximately 0.09 acre of agricultural land and temporarily impact approximately 48.1 acres of agricultural land.	Landowners will be compensated for any crop damage that occurs during construction. The Applicants will also work with landowners once a route is finalized to coordinate the need for early crop harvest and compensate landowners for any crop losses. Areas disturbed during construction will be repaired and restored to preconstruction contours to the extent practicable so that surfaces drain naturally, blend with the natural terrain, and are left in a condition that will facilitate natural re-vegetation (outside of cultivated areas), provide for proper drainage, and prevent erosion. The Applicants will use a seed mix that is recommended by the NRCS or other agency unless otherwise agreed to with the landowner. Once construction is completed, agricultural activities will be allowed to resume within the proposed ROW between structures. The Applicants will work with the landowners to identify, and mark drain tile lines and will try to avoid damage during construction. If drain tile lines are damaged by construction of the Project, the Applicants will coordinate with the landowner to ensure the tile lines are repaired in accordance with landowner agreements.
Community facilities and services	The additional workers in the region during construction of the proposed Project could temporarily add an additional demand on some of the existing community facilities and services. However, this demand would be temporary, and it is anticipated that the existing facilities would have sufficient capacity to meet this demand.	The Applicants will develop an emergency response plan. Appropriate safety measures would be implemented before structure foundation excavation begins, including coordinating with utility companies to determine utility locations and complying with South Dakota One-Call system to verify existing utilities are properly marked, as needed.

Resource	Potential impact	Proposed avoidance/minimization/mitigation measures
Transportation	Construction of the Project will temporarily increase traffic on haul roads. Traffic impacts associated with the operations phase after construction will be negligible. No impacts to the Ortonville Municipal Airport or other registered commercial or private aviation facilities are expected. The Project Route crosses the BNSF Railroad just north of U.S. Highway 12.	The Applicants will coordinate with applicable road authorities regarding the use and restoration of roads, as needed. The Applicants will coordinate with USDOT, SDDOT, the Grant County Highway Department, and Township staff and will obtain necessary road-related permits, as needed. All highway crossings will meet or exceed National Electrical Safety Code requirements. The Applicants will obtain FAA DNHs, as needed. The Applicants will coordinate with BNSF Railroad to ensure construction and operation of the Project will not affect the use of the railroad lines.
Cultural resources	Cultural resources within the Project ROW may potentially be subject to direct and/or indirect impacts. Direct impacts would result primarily from ground disturbance associated with the construction and maintenance of the Project, including transmission structures, access roads, and pulling/tensioning areas. Indirect effects to cultural resources may result from activities that occur near, but not physically affecting cultural resources. Indirect visual impacts, for example, may occur to some types of NRHP-eligible cultural resources when modern structures (e.g., transmission towers) are introduced into the viewsheds of these resources. The Project would span across Site 39GT2007 (NRHP eligible).	Project infrastructure has been sited to avoid direct impacts to NRHP-eligible or unevaluated eligible historic and cultural resources. Class I and III surveys have been completed for the current Flexibility Area, including the Project ROW. The Project will span Site 39GT2007 (NRHP eligible); no construction is proposed within the site. The only architectural historic properties within the surveyed area are in Big Stone City. Views of the existing transmission lines paralleling the proposed Project Route are obscured by other buildings and vegetation, and the historic properties are not visible from the proposed Project Route. Thus, the Project is not anticipated to have any visual impacts on historic architectural resources. The Applicants will prepare an Unanticipated Discoveries Plan. The Applicants have engaged in ongoing voluntary coordination with Tribes to seek input on Tribal cultural resources, and Tribal resource surveys of the Project were completed in April and October 2024. No impacts to Tribal resources are anticipated.

Figure 1. Redline comparison of Route adjustment compared to the Application

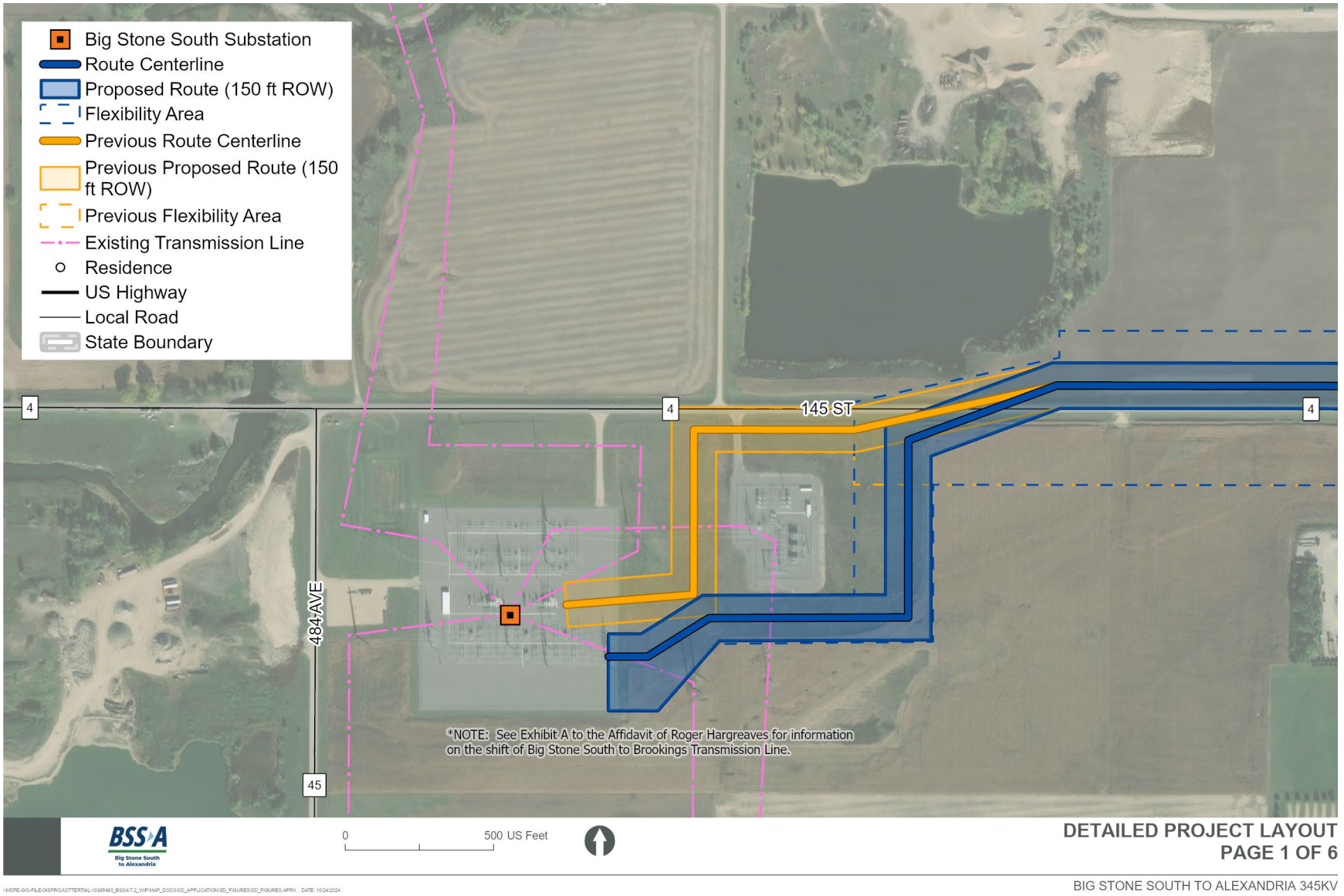

Figure 2. Redline comparison of Route adjustment compared to the Application

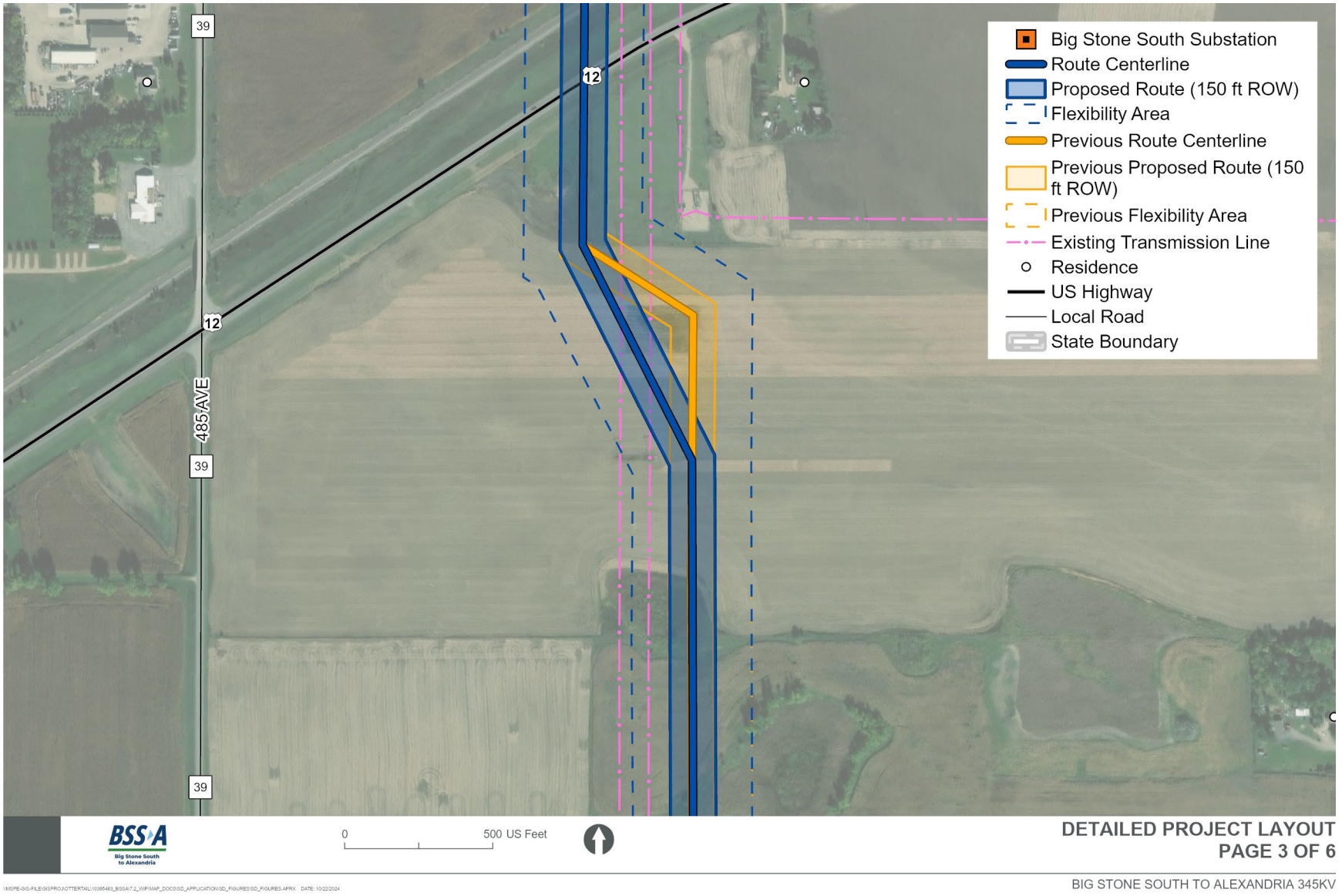

Figure 3-A. Redline comparison of Route adjustment compared to the Application

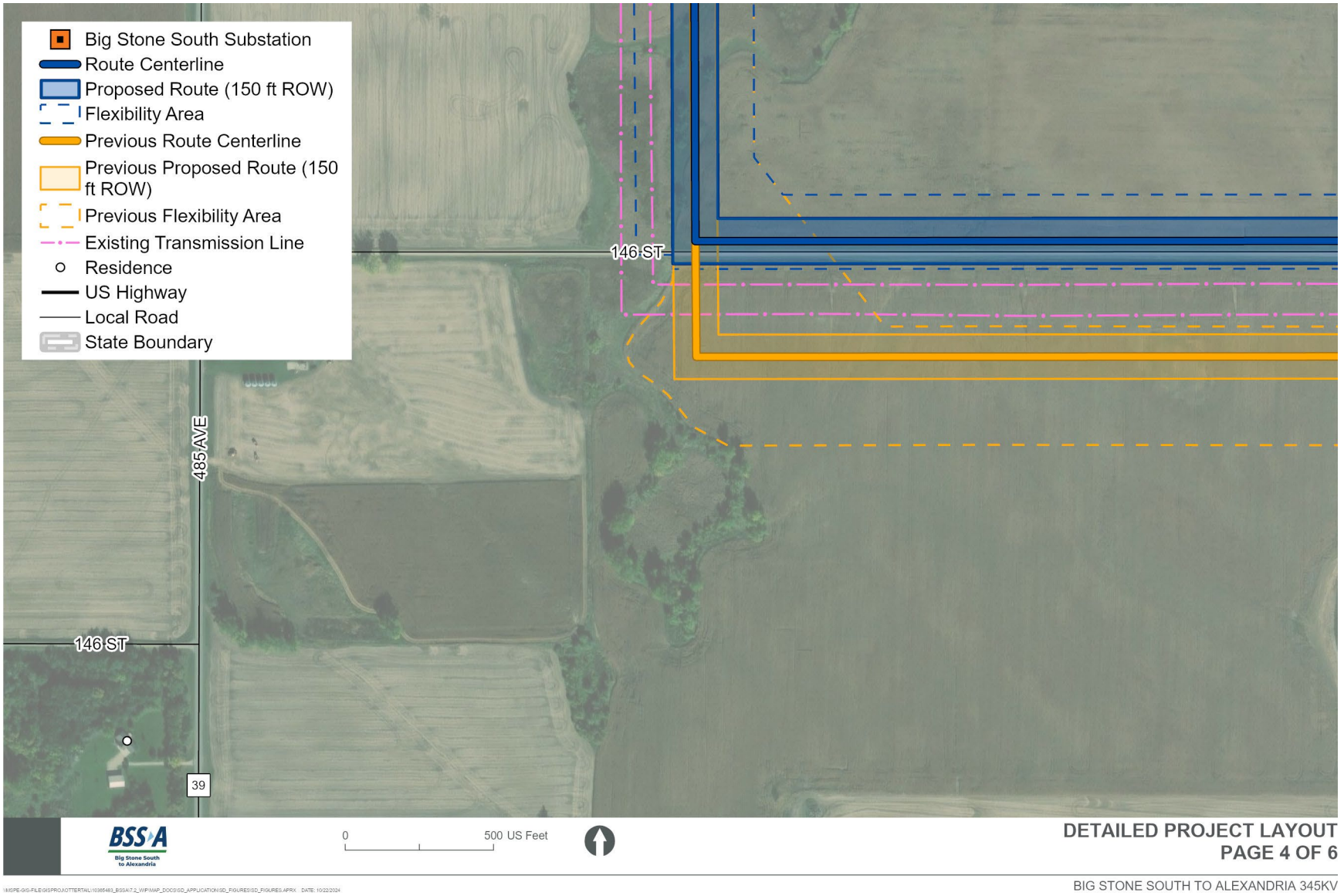

Figure 3-B. Redline comparison of Route adjustment compared to the Application

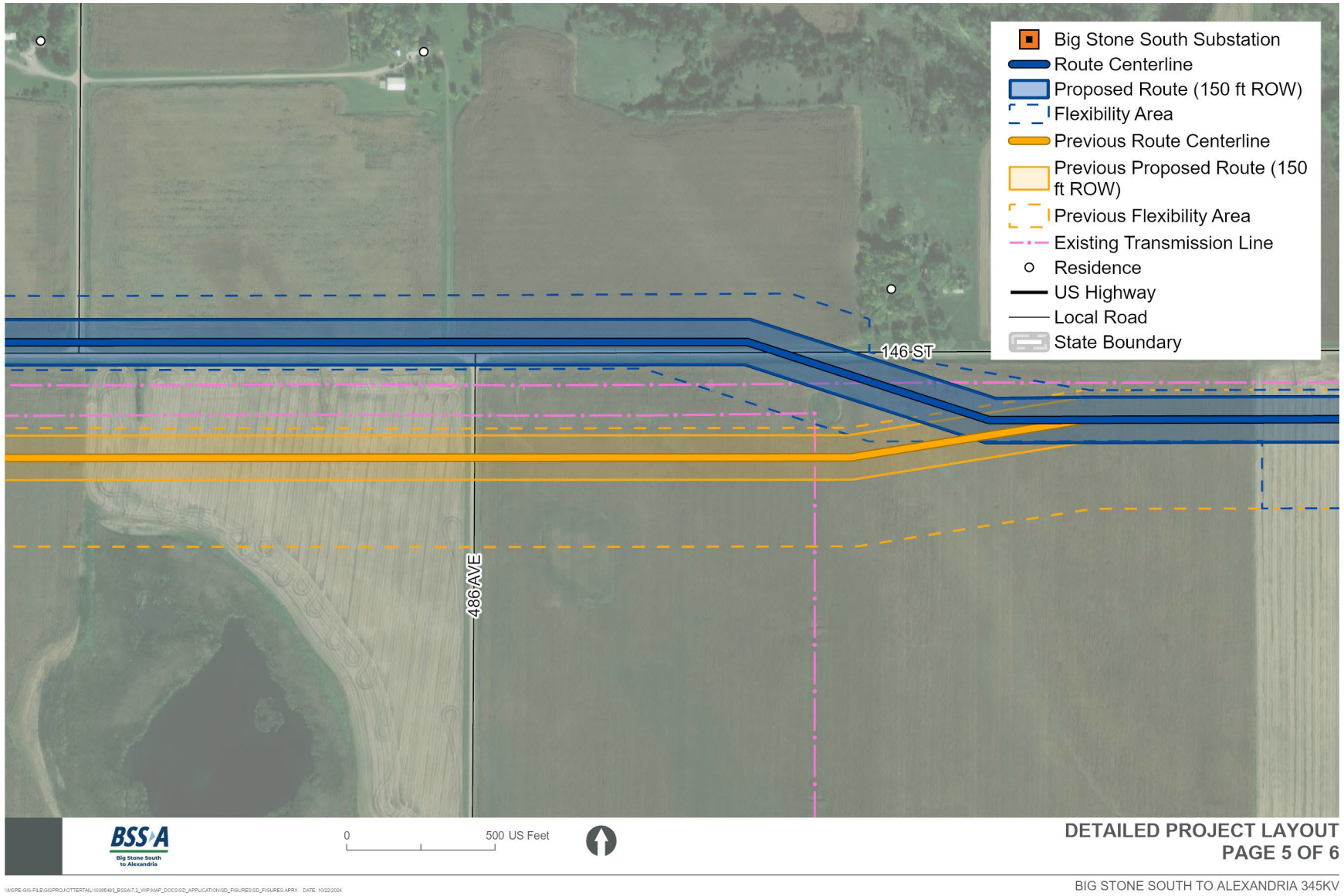

Figure 4. Redline comparison of Route adjustment compared to the Application