DIRECT TESTIMONY OF JASON WEIERS

SCHEDULE B: ALTERNATIVES ANALYSIS

Applicants'
Route Alternatives Analysis for the
Big Stone South to Alexandria 345 kV Transmission Project

August 2025

I. Background

The Environmental Impact Statement Scoping Decision for the Big Stone South to Alexandria 345 kilovolt (kV) Transmission Project in West-Central Minnesota, issued on May 6, 2025 (the Scoping Decision), identified a total of six proposed routes, six route connectors, 19 route segment alternatives and five alignment alternatives for study in the Environmental Impact Statement (EIS). A total of 50 unique scoping alternatives were identified using combinations of the proposed routes, route connectors, and route segment alternatives, as described in Table 1 (each a Scoping Alternative).

A description, as well as maps, of each of these Scoping Alternatives is provided in the Scoping Decision. In addition to the analysis the Minnesota Public Utilities Commission (Commission) Energy Infrastructure Permitting (EIP) unit will complete as part of the EIS, the Applicants evaluated each of these Scoping Alternatives and provide their analysis here. Figure 1 provides an overview of the Scoping Alternatives. Figures 2-4 include combinations of the Scoping Alternatives that were evaluated.

Based on the geographic proximity of the various Scoping Alternatives, the Applicants organized their routing analysis by the three regions[1], each with two proposed routes[2], discussed in the Application:

- **South Region**: Up to approximately 42 miles of double-circuit capable 345 kV high-voltage transmission line (HVTL) between the South Dakota – Minnesota border and continuing east to a point in Tara Township, Swift County, Minnesota.

- **Central Region**: Up to approximately 39 miles of double-circuit capable 345 kV HVTL between a point in Tara Township and continuing east, northeast to a point in Ben Wade Township, Pope County, Minnesota.

- **North Region**: Up to approximately 25 miles of double-circuit capable 345 kV HVTL between a point in Ben Wade Township and continuing northeast to the existing Alexandria Substation southwest of Alexandria, Minnesota.

For this evaluation, each Scoping Alternative was compared to a corresponding portion of another Scoping Alternative with common start and end points. Figures 2 - 4 provide a detailed overview of the Scoping Alternatives evaluated per region. The Applicants have coordinated naming

[1] In the Application, the Applicants referred to these regions as 'Project Segments.'

[2] In the Application, the Applicants referred to the proposed routes as 'Route Options.'

conventions with the Commission's EIP staff to ensure consistency between the EIS and the Applicants' alternatives analysis.

II. Analysis

As described in the Application, the Applicants developed and maintained a geographic information system (GIS) database of information gathered from publicly available data resources, in-field routing review efforts, and outreach efforts. For the alternatives analysis, the Applicants continued to use this data to compare the merits of the various Scoping Alternatives with a goal of developing a Preferred Route that minimizes impacts to the extent practicable. The Applicants considered the criteria in Minn. Stat. § 216E.03, subd. 6 and Minn. R. 7850.4100 for each of the Scoping Alternatives. While all criteria were considered, the following criteria served as the basis for the Applicants' Preferred Route:

- **Residences:** fewer residences within the route and greater distance from residences.
- **Public Comments:** consideration of landowner, stakeholder, agency, and/or Commission comments.
- **Environmental and Cultural Resources:** fewer impacts on environmental and cultural resources and avoids, or has the potential to avoid, sensitive environmental and cultural resources.
- **Existing Infrastructure:** avoids, or has the potential to avoid, interfering with existing infrastructure (e.g., mines, communication towers, airports/airstrips).
- **Agriculture:** fewer impacts on agricultural resources, including reduced impacts on center pivot irrigation and avoids or reduces the need to bisect fields.
- **Existing Linear Features:** parallels existing linear features, including transmission lines, railroads, roadways, and property lines, to minimize impacts of establishing a new right-of-way (ROW).
- **Accessibility:** allows for easier access to the route for construction and future maintenance activities.
- **Risk:** reduced risk of requiring additional permitting due to impacts to resources located on federal and state managed/owned lands that could result in extending the project schedule.
- **Cost and Constructability:** reduced cost resulting from a shorter total length, fewer angle structures, and fewer specialty structures (e.g., taller structures would be required to accommodate longer spans between structures increase).

More detail on the alternatives analysis, including opportunities and constraints, per region is described in the sections below. Figure 5 provides an overview of the Applicants' Preferred Route.

A. South Region

The South Region includes the most routing constraints due to the number and location of sensitive environmental features, existing infrastructure, and residents. Not surprisingly, the greatest number of Scoping Alternatives were proposed through this region, reflecting a wide variety of routing preferences expressed by agencies and members of the public. For example, agencies such as the US Fish and Wildlife Service (USFWS) and Minnesota Department of Natural Resources (MDNR) placed a high priority on avoiding federal and state managed/owned lands acquired for the preservation of habitat and sensitive environmental resources. Members of the public proposed Scoping Alternatives to minimize impacts to agricultural practices and increase the distance from the Project to nearby residences. The Applicants did their best to balance these varied interests as they evaluated the Scoping Alternatives and identified their Preferred Route. As it does in every docket, the Commission will need to balance these varied priorities as it evaluates the Scoping Alternatives and the routing criteria.

There are 29 unique Scoping Alternatives in the South Region as detailed in Table 1, including four alignment alternatives, two proposed routes analyzed in two distinct portions each, and 21 route segment alternatives that are a combination of various proposed routes, route connectors, and route segment alternatives. Many of the Scoping Alternatives are for the portion of the Project in Big Stone County, near the South Dakota – Minnesota border crossing. The Applicants included two proposed routes in the Application with two route connectors in this portion of the South Region. The Scoping Alternatives present different combinations of these previously evaluated routes in addition to new, minor variations of them. Therefore, many of the Scoping Alternatives in this portion of the South Region overlap or intersect with other Scoping Alternatives. As the South Region continues east into Swift County, there are additional routing constraints, such as lakes, resulting in two proposed routes that are entirely independent from one another before coming together at the start of the Central Region. Since the two proposed routes in this area of eastern Big Stone County and Swift County do not intersect or overlap, the Scoping Alternatives proposed are generally specific to a portion of one of the proposed routes, instead of combining portions of each of the proposed routes.

Table 2 compares the environmental, engineering, and human impacts of the South Region Scoping Alternatives. Figures 2A through 2E depict the Scoping Alternatives in the South Region relative to the resources presented below.

For the portion of the Project in Big Stone County, near the South Dakota – Minnesota border crossing (see Figures 2A through 2C), there are two Scoping Alternatives that are the same as what the Applicants proposed in the Application (BSSR01 and BSSR02) and two Scoping Alternatives that use a different combination of the two proposed routes (BSSR03 and BSSR04). An additional eight Scoping Alternatives in this area propose unique combinations of the proposed routes, the Applicants' previously proposed connector segments, and other Scoping Alternatives (BSSR05, BSSR06, BSSR07, BSSR08, BSSR09, BSSR10, BSSR11, and BSSR12).

This area, specifically crossing US Highway 75, is the most heavily constrained area of the entire Project due to residences in proximity to each other, the Big Stone National Wildlife Refuge, state endangered plant species, and a scenic highway. All 12 Scoping Alternatives are similar in length, ranging from 13.66 miles long (BSSR02) to 15.98 miles long (BSSR09). Immediately east of the South Dakota – Minnesota border, Scoping Alternatives BSSR01, BSSR03, BSSR05, BSSR07, and BSSR09 follow Big Stone County Road 15 (which is planned to be vacated as part of the Whetstone River Restoration Project[3]) north and then parallel an existing HVTL, crossing the Minnesota River, railroad and US Highway 75 to 715th Avenue in Ortonville Township. Conversely, Scoping Alternatives BSSR02, BSSR04, BSSR06, BSSR08, BSSR10, BSSR11, and BSSR12 traverse east from the South Dakota – Minnesota border, where they then angle northeast to cross the Minnesota River, a railroad, and US Highway 75.

The Scoping Alternatives that go east in this area instead of north are farther from the City of Ortonville and occupied residences and avoid potential impacts with nearby airports. For the Scoping Alternatives that go north, there are no benefits to paralleling Big Stone County Road 15 because the road is planned to be vacated as part of the proposed Whetstone River Restoration Project; additionally, these alternatives would result in greater impacts to agricultural operations, be closer to more residences and the City of Ortonville, and are in an area prone to flooding and erosion, potentially causing accessibility issues. Since the limited accessibility in this area would impact both construction and ongoing operation and maintenance, the Scoping Alternatives along County Road 15 are not preferred.

Given the complexities of routing in this area, the Applicants have coordinated with the majority landowner on the Minnesota side of the South Dakota – Minnesota border crossing. The landowner has expressed their support for the Scoping Alternatives that go east, as they minimize impacts to ongoing agricultural practices. These Scoping Alternatives also generally impact fewer residences than the Scoping Alternatives that go north towards the City of Ortonville.

For these reasons, the Applicants did not include BSSR01, BSSR03, BSSR05, BSSR07, or BSSR09 in the Preferred Route.

Scoping Alternatives BSSR02, BSSR04, BSSR06, BSSR08, BSSR10, BSSR11, and BSSR12 generally parallel similar lengths of existing linear features. Amongst these, BSSR02 impacts more residences within 300 feet (nine residences). BSSR06 and BSSR10 have more gravel pits within their respective ROWs and are longer. BSSR11 and BSSR12 are routed in close proximity to a known calcareous fen, and indirect impacts can occur at distances of over 500 feet. MDNR strongly recommended that the Applicants avoid this fen. The ROW for BSSR04 crosses less federal and state managed/owned lands, specifically less USFWS fee title lands, USFWS Waterfowl Production Areas (WPA) lands, and MDNR Wildlife Management Areas (WMA). The ROW for BSSR04 also has minimal impacts on other federal and state managed/owned lands including MDNR native plant communities, MDNR rare natural communities, and USFWS

[3] The Upper Minnesota River Watershed District is planning the Whetstone River Restoration Project at the headwaters of the Minnesota River to permanently restore 100 percent of channel forming flow to the historic Whetstone River channel via reconnection of the historic Whetstone River to the Minnesota River and current Whetstone River. This project will be completed in the area where the Scoping Alternatives go north along Big Stone County Road 15.

grassland easements. For these reasons, the Applicants selected BSSR04 in the Preferred Route and rejected BSSR02, BSSR06, BSSR08, BSSR10, BSSR11, and BSSR12.

Along BSSR04 there are two Scoping Alternatives: S207 and S208. S207 deviates significantly from existing linear features (only approximately 49.7 percent parallels existing linear features), while the equivalent portion of BSSR04 entirely (100 percent) parallels existing linear features. The ROW for S207 would also cross more USFWS and MDNR owned/managed lands and would bisect agricultural fields. When comparing S207 to the equivalent portion of BSSR04, the Applicants prefer BSSR04. S208 is longer and would add approximately $14 million to the Project costs due to the additional length and the increased number of structures required. The equivalent portion of BSSR04 has no residences located within 500 feet, is more cost effective, and does not bisect parcels like S208 does. When comparing S208 to the equivalent portion of BSSR04, the Applicants prefer BSSR04.

For the portion of the Project in Swift County (see Figures 2D and 2E), there are two Scoping Alternatives that are the same as what the Applicants proposed in the Application (SSR01 and SSR02) and two Scoping Alternatives (SSR03 and SSR04) that entirely cross this area with the same start and end points. As shown in Table 2, over 95 percent of all four Scoping Alternatives parallel existing linear features. SSR01 would impact the fewest residences (one resident within 500 feet), while the other Scoping Alternatives that parallel longer amounts of highway ROWs would impact more residences and would be closer to residences (150 to 500 feet). The ROW of SSR01 crosses the fewest gravel pits (three) when compared to the other Scoping Alternatives. Additional constraints are present along the other Scoping Alternatives, including a pinch point along SSR02 as it is routed along the north side of Artichoke Lake. For these reasons, the Applicants selected SSR01 as the Preferred Route and rejected SSR02, SSR03, and SSR04.

Along SSR01 there are two Scoping Alternatives (S205 and S204) which the Applicants compared to the corresponding portion of SSR01 of a similar length using the same start and end points. S205 would reduce the total length of the route resulting in the Project costs being reduced by approximately $7.35 million. In addition, S205 aligns with USFWS comments as the ROW avoids USFWS managed/owned lands while the equivalent portion of SSR01 ROW would cross them. When comparing S205 to the equivalent portion of SSR01, the Applicants prefer incorporating S205. S204 and the equivalent portion of SSR01 are the same length, both entirely parallel existing linear features (100 percent), and have no residences within 500 feet. The ROW of S204 crosses the Minnesota Board of Water & Soil Resources (BWSR) easements and the equivalent portion of SSR01 does not. When comparing S204 to the equivalent portion of SSR01, the Applicants prefer SSR01.

Accordingly, the Applicants' Preferred Route in the South Region is as follows: BSSR04 connecting to SSR01 with the incorporation of S205 (Figure 5).

While the Applicants selected SSR01 in the Preferred Route, the Applicants further analyzed the Scoping Alternatives along SSR02 for purposes of a complete record. There are four Scoping Alternatives along SSR02 (S18, S201, S202, and S203) which the Applicants compared to the corresponding portion of SSR02 of a similar length using the same start and end points (see Figures 2D and 2E). If SSR02 is selected as the final route by the Commission, the Applicants would prefer the incorporation of S203 over SSR02, but prefer SSR02 over Scoping Alternatives S18,

S201, and S202. S203 has similar impacts to the corresponding portion of SSR02 but avoids bisecting agricultural fields. S203 would impact one additional residence and add approximately $2.06 million to Project costs when compared to the equivalent portion of SSR02. S18 is longer (2.39 miles) than the corresponding portion of SSR02 (1.46 miles). This increase in length with associated structures would add approximately $7.10 million to Project costs. S18 also bisects agricultural fields. S201 is longer (2.61 miles) and does not leverage existing linear features (93.9 percent) as well as the corresponding portion of SSR02 (1.64 miles and 100 percent, respectively). The ROW of S201 also impacts more wetlands, and USFWS and MDNR managed/owned lands than the corresponding portion of SSR02. S202 is significantly longer (8.10 miles) than the corresponding portion of SSR02 (3.32 miles). This increase in length would add approximately $19.75 million to Project costs.

There were four Alignment Alternatives in the South Region that were proposed through scoping and after evaluating each of them, the Applicants do not have a preference. The Alignment Alternatives proposed in the South Region are within the requested Route Width and can be more specifically refined through coordination with landowners after a final route is selected by the Commission.

B. Central Region

Throughout the Central Region, minimizing impacts on agricultural practices, specifically center point irrigation systems, was a driving consideration. The Applicants also considered landowner comments and routes that minimized impacts to nearby residences. Due to routing constraints, there is an area in the Central Region identified as a pinch point north of Hancock but south of Cyrus near the Solvie Slough (Figure 3B) where there is only one Scoping Alternative considered with a wider Route Width. Outside of this pinch point, there are at least two Scoping Alternatives throughout the Central Region. There are 13 unique Scoping Alternatives in the Central Region as detailed in Table 1, including one alignment alternative, two proposed routes analyzed in three distinct portions each, and six route segment alternatives that are a combination of various proposed routes, route connectors, and route segment alternatives.

Table 3 compares the environmental, engineering, and human impacts of the Central Region scoping alternatives. Figures 3A through 3C depict the Scoping Alternatives in the Central Region presented below.

Near Hancock, there are two Scoping Alternatives that are the same as what the Applicants proposed in the Application (HSR01 and HSR02) and one Scoping Alternative (HSR03) that entirely cross this area with the same start and end points (see Figure 3A). As shown in Table 3, HSR01 is shorter (13.41 miles) when compared to HSR02 (17.55 miles) and HSR03 (17.50 miles) and results in significantly less impacts to center pivot irrigation (26 fewer systems adjacent to the alignment when compared to HSR02 and 27 fewer systems adjacent to the alignment when compared to HSR03). The entirety of HSR01 (100 percent) parallels existing linear features, while 91.3 percent of HSR02 and 91.4 percent of HSR03 do. The Applicants estimate that construction of HSR02 would add approximately $22.61 million and HSR03 would add approximately $24.28 million to total Project costs if selected over HSR01. Additionally, there are no residences within 300 feet of HSR01, and the ROW does not cross state or federally managed/owned lands. Conversely, there are five residences within 300 feet of HSR02 and one residence within 300 feet

of HSR03. For these reasons, the Applicants selected HSR01 as the Preferred Route and rejected HSR02 and HSR03.

Near Cyrus, there are many routing constraints including airstrips, center pivot irrigation systems and waterbodies, such as the Solvie Slough, that would be difficult to span. Therefore, the two Scoping Alternatives that are the same as what the Applicants proposed in the Application (CSR01 and CSR02) are the only Scoping Alternatives proposed for this area, and both parallel existing linear features for their entirety (see Figure 3B). CSR02 reflects agency comments the Applicants received during scoping by minimizing impacts on federal and state managed/owned parcels. CSR02 is slightly shorter (8.93 miles) than CSR01 (8.98 miles) and would require fewer angle structures. CSR02 also has greater distances to the nearest residences (no residences within 150 feet, two residences within 300 feet, and two residences within 500 feet) when compared to CSR01 (one residence within 150 feet, two residences within 300 feet, and three residences within 500 feet). For these reasons, the Applicants selected CSR02 as the Preferred Route and rejected CSR01.

Near White Bear Lake Township, routing constraints such as minimizing impacts to agricultural practices while optimizing opportunities to parallel existing linear features resulted in two Scoping Alternatives that are the same as what the Applicants proposed in the Application (WBLSR01 and WBLSR02) and two Scoping Alternatives in this area (WBLSR03 and WBLSR04), each with similar lengths (see Figure 3C). WBLSR01 and WBLSR04 parallel the most existing linear features at 95.8 percent and 95.7 percent, respectively. WBLSR01 and WBLSR04 would reduce Project costs by approximately $3.63 to 3.18 million when compared toWBLSR02 and WBLSR03, respectively. WBLSR01 would cross a driveway owned and used to access a USFWS owned parcel, while WBLSR04, proposed by USFWS, would avoid this driveway crossing. For these reasons, the Applicants selected WBLSR04 as the Preferred Route in this area.

Accordingly, the Applicants' Preferred Route along the Central Region is as follows: HSR01 connecting to CSR02 and connecting to WBLSR04 (Figure 5).

While the Applicants selected HSR01 connecting to CSR02 and connecting to WBLSR04 as the Preferred Route, the Applicants further analyzed the other Scoping Alternatives (C202, C203, and C208) for purposes of a complete record. The Applicants compared these Scoping Alternatives to the corresponding Scoping Alternative of a similar length using the same start and end points. C202 was proposed by the public to avoid roads and building sites (Figure 3C). C202 also avoids USFWS managed/owned lands but impacts more MDNR managed/owned lands when compared to the corresponding portions of WBLSR01, WBLSR02, and WBLSR03. However, C202 mitigates impacts to residences (no residences within 500 feet), therefore, the Applicants would prefer C202 over the corresponding portions of WBLSR01, WBLSR02, and WBLSR03 if the Commission does not choose WBLSR04 in this portion of the Central Region. C203 and C208 (Figure 3A) were proposed by the public to avoid homes. However, both Scoping Alternatives, when compared to the equivalent alternative in HSR02, would impact more center pivot irrigation systems and impact more USFWS and MNDR managed/owned lands. Therefore, the Applicants would prefer HSR02 over C203 and C208, if HSR02 were selected by the Commission.

There was one Alignment Alternative in the Central Region that was proposed through scoping and after evaluating it, the Applicants do not have a preference. The Alignment Alternative

proposed in the Central Region is within the requested Route Width and can be more specifically refined through coordination with landowners after a final route is selected by the Commission.

C. North Region

Routing in the North Region involves several considerations, including minimizing impacts to agricultural practices and residences, as well as existing infrastructure, especially near the Alexandria Substation. There are many lakes in this region that represent the primary engineering constraint because these lakes would be difficult to span due to their size, including Lake Reno, Maple Lake, Lake Mary, and Andrew Lake. Therefore, the Scoping Alternatives in this region consist of two Scoping Alternatives that are the same as what the Applicants proposed in the Application that start and end at common points and do not overlap or intersect; one to the south and east of Lake Reno and one to the north and west of Lake Reno. There are eight unique Scoping Alternatives in the North Region as detailed in Table 1, including two proposed routes, and six route segment alternatives.

Table 4 compares the environmental, engineering, and human impacts of the North Region Scoping Alternatives. Figure 4 depicts the Scoping Alternatives in the North Region presented below.

As shown in Table 4, ASR01 is shorter (18.13 miles) when compared to ASR02 (25.26 miles). The Applicants estimate that the additional length of ASR02 would result in approximately $32.42 million of incremental Project costs if selected over ASR01. Both ASR01 and ASR02 parallel existing linear features for the majority of their length: 88.0 percent of ASR01 and 91.0 percent of ASR02. The Applicants have not identified any engineering limitations associated with connecting a new 345 kV transmission line into the Alexandria Substation when following the ASR01 route. However, construction of ASR02 would introduce engineering constraints due to the congestion of an existing single circuit 115 kV and double circuit capable 345 kV transmission lines outside the Alexandria Substations. Additionally, the ROW of ASR01 would cross fewer acres of MDNR managed/owned lands than ASR02 and would avoid crossing USFWS managed/owned lands that would be crossed by ASR02. The ROW of ASR02 would also cross 10 gravel pits which would be completely avoided if ASR01 is selected. For these reasons, the Applicants selected ASR01 as the Preferred Route and rejected ASR02.

Along ASR01 there are three Scoping Alternatives (N9, N205, and N10) which the Applicants compared to the corresponding portion of ASR01 using the same start and end points (see Figure 4). Compared to N9 and N10, ASR01 parallels more existing linear features and would be more cost effective to construct as it would not require specialty structures. Specifically, N10 would cross Mud Lake, requiring taller structures and increased tree clearing resulting in approximately $2.25 million of additional costs when compared to ASR01. Although N9 parallels an existing highway, the location of two adjacent residences requires more angle structures along the route to avoid the residences located immediately along the highway, resulting in approximately $2.22 million in additional Project costs. When comparing N205 to the equivalent portion of ASR01, the Applicants prefer N205 as it addresses comments made by the public and parallels more property lines while ASR01 bisects agricultural fields. N205 also increases the distance to the nearest resident and is more cost effective when compared to the corresponding portion of ASR01 because it would require fewer angle structures.

Accordingly, the Applicants' Preferred Route in the North Region is as follows: ASR01 with the incorporation of N205 (Figure 5).

While the Applicants selected ASR01 as the Preferred Route, the Applicants further analyzed the Scoping Alternatives along ASR02 for purposes of a complete record. There are three Scoping Alternatives along ASR02 (N206, N207, and N11) which the Applicants compared to the corresponding portion of ASR02 using the same start and end points. If ASR02 is selected as the final route by the Commission, the Applicants would prefer the incorporation of N206, N207, and N11 over the corresponding portions of ASR02. N206 is more accessible for construction than the corresponding portion of ASR02, reducing costs by $1.55 million when compared to the corresponding portion of ASR02. N207 is shorter (1.84 miles) compared to the corresponding portion of ASR02 (2.27 miles). While not a constraint, N11 parallels an existing railroad and 345 kV HVTL which would require additional engineering considerations to avoid the Project ROW overlapping with these existing ROWs. However, the equivalent portion of ASR02 would require the installation of additional deadend structures and higher structures that would be required to cross the active gravel pit along the route. While there are more USFWS managed/owned lands associated with N11, the Applicants would still prefer the N11 if ASR02 is selected by the Commission.

D. Colocation Analysis

The Applicants reviewed various end-to-end combinations of Scoping Alternatives to determine if any would result in greater use of existing ROWs than the Preferred Route. A combination of the following Scoping Alternatives would result in the greatest use of existing ROWs (i.e., transmission lines, railroads, roadways) (70.7 percent) (colocation route):

- In the South Region, BSSR03 incorporating S210 connecting to SSR03.
- In the Central Region, HSR01 connecting to CSR02 and then to WBLSR01.
- In the North Region, ASR02 incorporating N206, N207, and N11.

Approximately 48.6 percent of the Preferred Route parallels existing ROWs (i.e., transmission lines, railroads, roadways). Portions of the colocation route in the Central Region, including HSR01 and CSR02, are included in the Applicants' Preferred Route. When considering existing ROWs and property lines, both the Preferred Route (90.8 percent) and colocation route (96.4 percent) almost entirely parallel existing linear features.

The Applicants' Preferred Route when compared to the colocation route is shorter and impacts fewer residences, center pivot irrigation systems, gravel pits, and airports. The Applicants' Preferred Route also results in fewer impacts to federal and state managed/owned lands, except for minimally more impacts to MDNR WMAs and USFWS grassland easements. For these reasons, the Applicants selected the Preferred Route over the colocation route. A comparison of the Preferred Route and colocation route is included as Figure 6 and is summarized in the table below.

Criteria	Colocation Route	Applicants' Preferred Route
Length (miles)	100.20	92.20
Parcels in 150-ft ROW (count)	507	477
Existing Linear Features (miles)		
Paralleling Existing Transmission Lines	1.50	1.50
Paralleling Existing Roads and Railroads	69.36	43.27
Following Property Lines	25.77	38.95
Total (miles)	96.63	83.72
Total (percent)	96.43	90.80
Proximity to Residences (count from centerline)		
Homes within 75 feet	0	0
Homes within 150 feet	3	1
Homes within 300 feet	21	18
Homes within 500 feet	47	34
Existing Infrastructure (count)		
Alignment is adjacent Center Pivot Irrigation	7	5
Gravel Pits within ROW	30	14
Airports within 2 miles of the Project centerline	13	11
Conservation Easements in ROW (acres)		
MDNR Native Plants Communities	13.31	8.17
USFWS Fee Title Lands	6.41	0.00
USFWS Waterfowl Production Areas	160.10	63.47
USFWS Wetland Easements	151.39	53.65
USFWS Grassland Easements	2.30	9.99
MDNR Wildlife Management Areas	1.93	10.07
MDNR Rare Natural Communities	0	0.48

III. Preferred Route

Based on the Applicants' analyses of the potential impacts of the Scoping Alternatives and the Commission's routing criteria, the Applicants respectfully request that the Administrative Law Judge recommend, and the Commission accept, the following findings regarding the Scoping Alternatives for the Project:

- Regarding the South Region Scoping Alternatives, the Applicants' Preferred Route follows BSSR04 (a combination of Route Options South 1 and South 2 in the Application) connecting to SSR01 (Route Option South 1 in the Application) and incorporating S205, because it minimizes impacts when considering all of the Commission's routing criteria. The Applicants do not have a preference on the Alignment Alternatives in the South Region. For the portion of the Project in Big Stone County, the Applicants strongly prefer the route traverse east from the South Dakota – Minnesota border, where it then angles northeast to cross the Minnesota River and US Highway 75. This area, specifically crossing US Highway 75, is the most heavily constrained area of the entire Project due to residences in proximity to each other, the Big Stone National Wildlife Refuge, state endangered plant species, and a scenic highway. By going east instead of north, the Preferred Route is further from the City of Ortonville and avoids potential impacts with nearby airports. The Preferred Route avoids a known calcareous fen location, minimizes impacts to residences, and minimizes impacts to existing infrastructure (e.g., gravel pits). The Preferred Route also avoids and/or minimizes impacts to federal and state managed/owned lands while continuing to parallel existing linear features to the extent practicable. The Preferred Route also avoids many pinch points thereby reducing the need for specialty structures and increased length which would increase the total Project cost.

- Regarding the Central Region Scoping Alternatives, the Applicants' Preferred Route follows HSR01 (Route Option Central 1 in the Application) connecting to CSR02 and then to WBLSR04, which best balances the Commission's routing criteria. The Applicants do not have a preference on the Alignment Alternatives in the Central Region. The Applicants' Preferred Route is shorter and parallels more existing linear features than the other Scoping Alternatives, making it more constructable and cost efficient. Near Hancock, the Preferred Route results in significantly less impacts to center pivot irrigation (26 fewer systems adjacent to the alignment when compared to HSR02 and 27 fewer systems adjacent to the alignment when compared to HSR03). The Preferred Route is also consistent with agency comments by reducing the amount of federal and state managed/owned lands crossed, specifically near Hancock and White Bear Lake Township.

- Regarding the North Region Scoping Alternatives, the Applicants' Preferred Route follows ASR01 (Route Option North 1 in the Application) incorporating N205. The Preferred Route is shorter than the other Scoping Alternatives, reducing impacts throughout the North Region. It also is more constructable, especially when considering the need to make a connection of the new 345 kV transmission line into the Alexandria Substation, thereby reducing the overall cost. The majority of ASR01 (88 percent) and N205 (100 percent) parallel existing linear features. ASR01 also has less potential to interfere with existing infrastructure, including active gravel pits, and crosses less sensitive land owned or managed by USFWS than ASR02. The Applicants recommend incorporating N205 into ASR01 because it reduces potential impacts to nearby residences and parallels property lines rather than bisecting agricultural fields.

DIRECT TESTIMONY OF JASON WEIERS

SCHEDULE B: TABLES

Table 1 - Naming Conventions

Region of the Project	Scoping Alternative Name			Type	Proposer	Equivalent Comparison of Proposed Route[1]
	EIS Name	Route Permit Application Name	Scoping Decision Name			
South	BSSR01	Route Option South 1 *(Portion in Big Stone County)*	N/A	Portion of Proposed Route	Applicants	N/A
South	BSSR02	Route Option South 2 *(Portion in Big Stone County)*	N/A	Portion of Proposed Route	Applicants	N/A
South	BSSR03	Combination of Route Options South 1 and South 2	N/A	Route Segment Alternative	Applicants[2]	N/A
South	BSSR04	Combination of Route Options South 1 and South 2	N/A	Route Segment Alternative	Applicants[2]	N/A
South	BSSR05	Combination of Route Options South 1 and South 2, and Connector Segment S16	N/A	Route Segment Alternative	Applicants[2]	N/A
South	BSSR06	Combination of Route Options South 1 and South 2, and Connector Segment S16	N/A	Route Segment Alternative	Applicants[2]	N/A
South	BSSR07	Combination of Route Options South 1 and South 2, and Connector Segment S17	N/A	Route Segment Alternative	Applicants[2]	N/A
South	BSSR08	Combination of Route Options South 1 and South 2, and Connector Segment S17	N/A	Route Segment Alternative	Applicants[2]	N/A
South	BSSR09	Combination of Route Options South 1 and South 2, Connector Segment S16, and Connector Segment S17	N/A	Route Segment Alternative	Applicants[2]	N/A
South	BSSR10	Combination of Route Options South 1 and South 2 and Connector Segments S16 and S17	N/A	Route Segment Alternative	Applicants[2]	N/A
South	BSSR11	N/A	Combination of Route Options South 1 and South 2, and Scoping Alternative S104	Route Segment Alternative	Applicants/ Public	N/A

Table 1 - Naming Conventions

Region of the Project	Scoping Alternative Name			Type	Proposer	Equivalent Comparison of Proposed Route[1]
	EIS Name	Route Permit Application Name	Scoping Decision Name			
South	BSSR12	N/A	Combination of Route Options South 1 and South 2, Connector Segment S17, and Scoping Alternative S104	Route Segment Alternative	Applicants/ Public	N/A
South	S18	Segment Alternative S18	N/A	Route Segment Alternative	Applicants	S18_South2_Eq
South	SSR01	Route Option South 1 *(Portion in Swift County)*	N/A	Portion of Proposed Route	Applicants	N/A
South	SSR02	Route Option South 2 *(Portion in Swift County)*	N/A	Portion of Proposed Route	Applicants	N/A
South	SSR03	N/A	Combination of Route Option South 1 and Scoping Alternatives S205 and S211	Route Segment Alternative	Applicants/ Commission/ USFWS	N/A
South	SSR04	N/A	Combination of Route Option South1, Scoping Alternatives S205 and S211	Route Segment Alternative	Applicants/ Commission	N/A
South	S201	N/A	S201	Route Segment Alternative	Public	S201_South2_Eq
South	S202	N/A	S202	Route Segment Alternative	USFWS	S202_South2_Eq
South	S203	N/A	S203	Route Segment Alternative	Public	S203_South2_Eq
South	S204	N/A	S204	Route Segment Alternative	Public	S204_South1_Eq
South	S205	N/A	S205	Route Segment Alternative	USFWS	S205_South1_Eq
South	S207	N/A	S207	Route Segment Alternative	USFWS	S207_South2_Eq

Table 1 - Naming Conventions

Region of the Project	Scoping Alternative Name			Type	Proposer	Equivalent Comparison of Proposed Route[1]
	EIS Name	Route Permit Application Name	Scoping Decision Name			
South	S208	N/A	S208	Route Segment Alternative	USFWS	S208_South2_Eq
South	S210	N/A	S210	Route Segment Alternative	Public	S210_South1_Eq
South	SAA01	N/A	SAA01	Alignment Alternative	Public	SAA01_South1_Eq
South	SAA02	N/A	SAA02	Alignment Alternative	Public	SAA02_South2_Eq
South	SAA03	N/A	SAA03	Alignment Alternative	Public	SAA03_South1_Eq
South	SAA04	N/A	SAA04	Alignment Alternative	Public	SAA04_South2_Eq
Central	HSR01	Route Option Central 1 *(Portion near Hancock, MN)*	N/A	Portion of Proposed Route	Applicants	N/A
Central	HSR02	Route Option Central 2 *(Portion near Hancock, MN)*	N/A	Portion of Proposed Route	Applicants	N/A
Central	HSR03	N/A	Combination of Route Option Central 2 and Scoping Alternatives C208 and C102	Route Segment Alternative	Public	N/A
Central	C208	N/A	C208	Route Segment Alternative	Public	C208_Central2_Eq
Central	C203	N/A	C203	Route Segment Alternative	Public	C203_Central2_Eq
Central	CSR01	Route Option Central 1 *(Portion near Cyrus, MN)*	N/A	Portion of Proposed Route	Applicants	N/A

Table 1 - Naming Conventions

Region of the Project	Scoping Alternative Name			Type	Proposer	Equivalent Comparison of Proposed Route[1]
	EIS Name	Route Permit Application Name	Scoping Decision Name			
Central	CSR02	Route Option Central 2 *(Portion near Cyrus, MN)*	N/A	Portion of Proposed Route	Applicants	N/A
Central	WBLSR01	Route Option Central 1 *(Portion near White Bear Lake Township, MN)*	N/A	Portion of Proposed Route	Applicants	N/A
Central	WBLSR02	Route Option Central 2 *(Portion near White Bear Lake Township, MN)*	N/A	Portion of Proposed Route	Applicants	N/A
Central	WBLSR03	Combination of Route Options Central 1 and Central 2, and Connector Segment C11	N/A	Route Segment Alternative	Applicants[2]	N/A
Central	WBLSR04	N/A;	Combination of Route Options Central 1 and Central 2, and Scoping Alternative C101	Route Segment Alternative	USFWS	N/A
Central	C202	N/A	C202	Route Segment Alternative	Public	C202_Central1_2_Eq
Central	CAA01	N/A	CAA01	Alignment Alternative	Public	CAA01_Central2_Eq
North	ASR01	Route Option North 1	N/A	Proposed Route	Applicants	N/A
North	ASR02	Route Option North 2	N/A	Proposed Route	Applicants	N/A
North	N9	Segment Alternative N9	N/A	Route Segment Alternative	Applicants	N9_North1_Eq
North	N10	Segment Alternative N10	N/A	Route Segment Alternative	Applicants	N10_North1_Eq
North	N11	Segment Alternative N11	N/A	Route Segment Alternative	Applicants	N11_North2_Eq

Table 1 - Naming Conventions

Region of the Project	Scoping Alternative Name			Type	Proposer	Equivalent Comparison of Proposed Route[1]
	EIS Name	Route Permit Application Name	Scoping Decision Name			
North	N205	N/A	N205	Route Segment Alternative	Public	N205_North1_Eq
North	N206	N/A	N206	Route Segment Alternative	Commission	N206_North2_Eq
North	N207	N/A	N207	Route Segment Alternative	Commission	N207_North2_Eq

N/A = Not Applicable

[1] The corresponding portion of the applicable Proposed Route and alternative between the common start and end points. The equivalent segment was used for comparative analysis only and is not included as a scoping alternative.

[2] The scoping alternative is a combination of routes originally proposed by the Applicants, however, the unique combination was not evaluated in the Route Permit Application.

Table 2 - Comparison of Human and Environmental Features Crossed by the South Region Scoping Alternatives

	BSSR01	BSSR02	BSSR03	BSSR04	BSSR05	BSSR06	BSSR07	BSSR08	BSSR09	BSSR10	BSSR11	BSSR12
GENERAL												
Length (miles)	15.93	13.66	14.90	14.67	14.97	15.59	15.95	14.67	15.98	15.62	14.10	14.13
150-foot ROW (acres)	289.59	248.43	270.90	266.68	272.19	283.52	290.06	266.78	290.54	284.02	256.43	256.90
Parcels in 150-ft ROW (count)	93.00	94.00	95.00	90.00	101.00	90.00	105.00	89.00	96.00	102.00	82.00	94.00
Paralleling Existing Linear Infrastructure												
Paralleling Existing Transmission Lines (miles)	2.63	0.00	2.63	0.00	2.17	0.46	2.63	0.00	2.17	0.46	0.00	0.00
Paralleling Existing Roads and Railroads (miles)	3.38	4.78	4.93	5.74	8.18	2.48	5.43	5.23	6.13	4.54	1.48	3.54
Paralleling Property Lines (miles)	6.87	4.78	6.72	4.90	4.48	8.15	6.56	6.13	5.83	7.83	9.05	8.73
Total Paralleling Existing Linear Infrastructure (miles)	**12.88**	**9.56**	**14.28**	**10.64**	**14.83**	**11.09**	**14.62**	**11.36**	**14.13**	**12.83**	**10.53**	**12.27**
Total Paralleling Existing Linear Infrastructure (percent)	**80.85%**	**69.99%**	**95.84%**	**72.53%**	**99.06%**	**71.14%**	**91.66%**	**77.44%**	**88.42%**	**82.14%**	**74.68%**	**86.84%**
Proximity to Residences												
Homes within 75 feet (count from centerline)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Homes within 150 feet (count from centerline)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Homes within 300 feet (count from centerline)	3.00	9.00	7.00	5.00	12.00	0.00	7.00	5.00	8.00	4.00	2.00	6.00
Homes within 500 feet (count from centerline)	6.00	10.00	10.00	6.00	15.00	1.00	10.00	6.00	11.00	5.00	4.00	8.00
Community Features												
City Limit (miles of route centerline within limits)	1.10	0.55	1.10	0.55	1.10	0.55	1.10	0.55	1.10	0.55	0.40	0.40
Snow Trails (count of alignment crossings)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	3.00	3.00
Scenic Byways (linear distance within Route Width; miles)	1.15	1.16	1.15	1.16	1.15	1.16	1.15	1.16	1.15	1.16	1.64	1.64
Schools within 0.5 miles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alignment is adjacent Center Pivot Irrigation (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gravel Pits within ROW (count)	14.00	11.00	13.00	11.00	10.00	15.00	15.00	10.00	9.00	16.00	7.00	8.00
Gravel Pits within Route Width (count)	14.00	11.00	14.00	11.00	10.00	15.00	15.00	10.00	9.00	16.00	7.00	8.00
Airports within 2 miles of the Project centerline	2.00	1.00	2.00	1.00	2.00	1.00	2.00	1.00	2.00	1.00	0.00	0.00
Agricultural Land Use Types within ROW												
Land Use Type: Cultivated Crops	191.46	119.88	144.77	164.33	144.49	181.53	160.76	169.34	193.95	150.84	184.48	153.78
Land Use Type: Hay Pasture	23.26	10.12	17.99	16.37	7.56	25.82	24.02	9.36	6.80	26.58	18.05	18.82
TOTAL	**214.72**	**130.00**	**162.76**	**180.70**	**152.05**	**207.35**	**184.78**	**178.70**	**200.75**	**177.42**	**202.53**	**172.60**
Agricultural Land Use Types within Route Width												
Land Use Type: Cultivated Crops	1354.54	980.29	1138.66	1192.61	1165.13	1265.60	1253.60	1204.25	1389.09	1164.72	1291.23	1190.29
Land Use Type: Hay Pasture	142.34	117.98	144.99	115.62	101.73	158.59	149.20	111.12	94.87	165.44	105.44	112.30
TOTAL	**1496.88**	**1098.27**	**1283.65**	**1308.23**	**1266.86**	**1424.19**	**1402.80**	**1315.37**	**1483.96**	**1330.16**	**1396.67**	**1302.59**
Water Features within ROW												
FEMA Flood Zone - 100-yr floodplain (acres)	12.39	22.00	15.13	19.26	14.86	19.53	15.13	19.26	12.12	22.27	19.04	21.77
NWI Wetlands (acres)	32.59	42.56	36.80	38.12	31.71	47.75	33.45	42.21	31.37	48.61	38.90	39.76
NHD Streams (count)	9.00	15.00	8.00	16.00	13.00	14.00	10.00	15.00	13.00	15.00	8.00	9.00
PWI Watercourses (count)	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NHD Waterbodies (count)	6.00	9.00	7.00	8.00	11.00	11.00	6.00	9.00	11.00	11.00	2.00	2.00
PWI Water Basins (count)	3.00	1.00	4.00	0.00	1.00	3.00	3.00	1.00	1.00	3.00	0.00	0.00
Water Features within Route Width												
FEMA Flood Zone - 100-yr floodplain (acres)	93.47	146.27	112.11	127.63	99.10	140.65	112.11	127.63	80.45	159.29	133.32	151.96
NWI Wetlands (acres)	274.75	359.04	320.42	312.56	303.74	356.48	319.82	323.34	268.04	401.55	248.82	293.89
NHD Streams (count)	9.00	15.00	8.00	16.00	13.00	14.00	10.00	15.00	13.00	15.00	8.00	9.00
PWI Watercourses (count)	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
NHD Waterbodies (count)	20.00	21.00	17.00	24.00	25.00	31.00	20.00	21.00	25.00	31.00	14.00	14.00
PWI Water Basins (count)	4.00	1.00	4.00	1.00	1.00	4.00	4.00	1.00	1.00	4.00	1.00	1.00
Conservation Easements in ROW												
BWSR Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Native Plants Communities (acres)	8.47	7.93	8.45	7.95	6.98	9.42	8.47	7.93	6.98	9.42	11.17	11.17
NRCS Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Fee Title Lands (acres)	0.00	6.34	6.34	0.00	6.34		0.00	6.34	6.34	0.00	0.12	0.12
USFWS Waterfowl Production Areas (acres)	66.95	89.51	92.71	62.80	84.56	71.92	91.31	103.02	98.07	96.28	73.64	98.00
USFWS Wetland Easements (acres)	61.93	76.06	84.06	52.98	76.09	61.93	86.29	89.58	89.60	86.29	37.22	61.58
USFWS Grassland Easements (acres)	5.02	7.27	2.30	9.99	2.30	9.99	5.02	7.27	2.30	9.99	36.42	36.42
USFWS Transfer Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Wildlife Management Areas (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Rare Natural Communities (acres)	0.00	0.48	0.00	0.48	0.00	0.48		0.48		0.48	2.31	2.31
MDNR Sites of Biodiversity Significance - HIGH (acres)	4.25	17.85	4.58	17.53	4.58	17.53	4.25	17.85	4.58	17.53	19.50	19.50
MDNR Sites of Biodiversity Significance - MODERATE (acres)	9.78	10.23	12.79	7.22	8.18	11.84	9.78	10.23	8.18	11.84	9.65	9.65
MDNR Sites of Biodiversity Significance - BELOW (acres)	6.86	5.79	7.25	6.98	10.58	11.53	6.86	5.79	10.58	11.53	1.18	1.18
Calcareous Fens within 1.0 miles (count)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Conservation Easements in Route Width												
BWSR Easements (acres)	0.00	23.10	10.37	12.73	23.10	0.00	10.37	12.73	12.73	10.37	0.00	10.37
MDNR Native Plants Communities (acres)	64.46	86.15	87.41	63.21	74.59	76.02	64.46	86.15	74.59	76.02	65.72	65.72
Calcareous Fens (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	1.00	1.00
NRCS Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Fee Title Lands (acres)	15.13	225.84	132.04	108.93	154.41	86.56	15.13	225.84	154.41	86.56	96.37	96.37
USFWS Waterfowl Production Areas (acres)	274.22	390.95	368.71	293.33	378.41	290.64	357.74	430.46	417.92	374.16	276.91	360.43
USFWS Wetland Easements (acres)	450.83	550.08	576.54	418.05	557.92	450.83	619.44	629.73	637.57	619.44	271.62	440.23
USFWS Grassland Easements (acres)	87.44	84.72	35.62	136.54	51.57	120.59	87.44	84.72	51.57	120.59	271.95	271.95
USFWS Transfer Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Wildlife Management Areas (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Rare Natural Communities (acres)	0.00	9.77	0.00	9.77	0.00	9.77		9.77		9.77	6.76	6.76
MDNR Sites of Biodiversity Significance - HIGH (acres)	31.89	132.45	45.61	118.72	45.61	118.72	31.89	132.45	45.61	118.72	137.43	137.43
MDNR Sites of Biodiversity Significance - MODERATE (acres)	85.13	73.99	104.98	54.15	71.95	87.18	85.13	73.99	71.95	87.18	66.80	66.80
MDNR Sites of Biodiversity Significance - BELOW (acres)	48.03	64.53	48.57	65.81	89.23	72.12	53.37	59.19	83.89	77.45	17.27	22.61
Cultural Resources in ROW												
Cemeteries (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Previously Recorded Cultural Sites (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cultural Resources in Route Width												
Cemeteries within (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Previously Recorded Cultural Sites (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	S201	S201_South2_Eq	S202	S202_South2_Eq	S203	S203_South2_Eq	S204	S204_South1_Eq	S205	S205_South1_Eq	S207	S207_South2_Eq	S208	S208_South2_Eq	S210	S210_South1_Eq
GENERAL																
Length (miles)	2.61	1.64	8.10	3.32	1.78	1.98	3.00	3.00	7.52	8.50	1.99	1.52	3.65	2.55	4.66	3.74
150-foot ROW (acres)	47.45	29.76	147.27	60.27	32.33	36.07	54.55	54.49	136.74	154.57	36.20	27.59	66.31	46.38	84.77	67.94
Parcels in 150-ft ROW (count)	13.00	12.00	36.00	22.00	14.00	16.00	23.00	17.00	39.00	50.00	13.00	13.00	21.00	15.00	16.00	20.00
Paralleling Existing Linear Infrastructure																
Paralleling Existing Transmission Lines (miles)	0.00	0.00	8.10	0.00	0.00	0.52	0.00	0.00	0.00	0.53	0.00	0.00	0.00	0.00	0.00	0.00
Paralleling Existing Roads and Railroads (miles)	2.06	0.17	0.00	1.09	1.78	0.00	0.00	0.99	3.52	1.99	0.00	1.01	2.37	0.00	4.66	0.00
Paralleling Property Lines (miles)	0.39	1.47	0.00	1.97	0.00	1.47	3.00	2.01	2.50	4.98	0.99	0.51	0.53	1.83	0.00	3.26
Total Paralleling Existing Linear Infrastructure (miles)	**2.45**	**1.64**	**8.10**	**3.06**	**1.78**	**1.99**	**3.00**	**3.00**	**6.02**	**7.50**	**0.99**	**1.52**	**2.90**	**1.83**	**4.66**	**3.26**
Total Paralleling Existing Linear Infrastructure (percent)	**93.87%**	**100.00%**	**100.00%**	**92.31%**	**100.00%**	**100.51%**	**100.00%**	**100.00%**	**80.05%**	**88.24%**	**49.70%**	**100.00%**	**79.45%**	**71.76%**	**100.00%**	**87.17%**
Proximity to Residences																
Homes within 75 feet (count from centerline)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Homes within 150 feet (count from centerline)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Homes within 300 feet (count from centerline)	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	2.00	2.00	0.00	2.00	0.00
Homes within 500 feet (count from centerline)	0.00	0.00	1.00	3.00	1.00	0.00	0.00	0.00	3.00	0.00	0.00	2.00	4.00	0.00	3.00	0.00
Community Features																
City Limit (miles of route centerline within limits)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Snow Trails (count of alignment crossings)	0.00	0.00	1.00	5.00	2.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	1.00	1.00
Scenic Byways (linear distance within Route Width; miles)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Schools within 0.5 miles	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alignment is adjacent Center Pivot Irrigation (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gravel Pits within ROW (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	2.00	3.00	5.00
Gravel Pits within Route Width (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.00	2.00	5.00	6.00
Airports within 2 miles of the Project centerline	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Agricultural Land Use Types within ROW																
Land Use Type: Cultivated Crops	17.59	27.91	65.37	42.75	23.86	29.07	45.10	36.17	107.09	123.33	32.94	16.75	59.96	36.56	66.35	41.63
Land Use Type: Hay Pasture	0.92	0.00	0.00	0.00	0.00	0.00	0.00	2.96	1.19	1.87	0.00	0.27	1.61	6.56	12.93	8.55
TOTAL	**18.51**	**27.91**	**65.37**	**42.75**	**23.86**	**29.07**	**45.10**	**39.13**	**108.28**	**125.20**	**32.94**	**17.02**	**61.57**	**43.12**	**79.28**	**50.18**
Agricultural Land Use Types within Route Width																
Land Use Type: Cultivated Crops	194.67	198.69	441.81	291.82	160.60	220.65	343.54	304.48	758.07	869.01	223.27	135.17	378.02	243.54	412.97	288.72
Land Use Type: Hay Pasture	4.92	0.00	0.00	7.22	0.00	0.00	2.35	22.71	6.85	23.99	0.02	3.78	19.16	32.86	53.81	49.66
TOTAL	**199.59**	**198.69**	**441.81**	**299.04**	**160.60**	**220.65**	**345.89**	**327.19**	**764.92**	**893.00**	**223.29**	**138.95**	**397.18**	**276.40**	**466.78**	**338.38**
Water Features within ROW																
FEMA Flood Zone - 100-yr floodplain (acres)	0.00	0.00	0.00	0.88	4.07	0.86	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.83	0.82
NWI Wetlands (acres)	11.58	2.58	11.55	10.81	3.98	3.91	1.25	1.26	6.99	12.95	4.73	4.28	4.71	5.06	8.31	11.53
NHD Streams (count)	4.00	1.00	7.00	2.00	9.00	4.00	2.00	6.00	5.00	6.00	3.00	3.00	2.00	2.00	2.00	1.00
PWI Watercourses (count)	0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
NHD Waterbodies (count)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	3.00	0.00	0.00	3.00	4.00
PWI Water Basins (count)	1.00	0.00	1.00	3.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	3.00
Water Features within Route Width																
FEMA Flood Zone - 100-yr floodplain (acres)	0.36	0.70	0.00	16.11	42.11	14.42	0.00	0.00	1.68	8.94	0.00	0.00	0.00	0.00	5.29	18.11
NWI Wetlands (acres)	71.54	17.07	119.47	83.88	37.95	22.51	11.09	12.33	59.59	96.52	38.21	48.62	27.70	40.45	53.73	96.06
NHD Streams (count)	4.00	1.00	7.00	2.00	9.00	4.00	2.00	6.00	5.00	6.00	3.00	3.00	2.00	2.00	2.00	1.00
PWI Watercourses (count)	0.00	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
NHD Waterbodies (count)	3.00	1.00	2.00	2.00	1.00	0.00	1.00	0.00	1.00	4.00	14.00	11.00	1.00	3.00	9.00	6.00
PWI Water Basins (count)	4.00	1.00	1.00	3.00	1.00	1.00	0.00	0.00	0.00	3.00	0.00	0.00	0.00	1.00	1.00	3.00
Conservation Easements in ROW																
BWSR Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Native Plants Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00	5.93	0.00	2.54
NRCS Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Fee Title Lands (acres)	36.96	0.00	0.00	3.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Waterfowl Production Areas (acres)	45.63	6.20	0.00	18.20	0.61	0.62	0.00	0.00	0.00	30.92	40.53	21.24	20.05	34.28	18.11	28.88
USFWS Wetland Easements (acres)	8.67	6.20	0.00	14.27	0.61	0.62	0.00	0.00	0.00	30.92	40.54	21.42	20.05	29.26	18.11	28.88
USFWS Grassland Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.75	5.02	0.00	0.00
USFWS Transfer Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Wildlife Management Areas (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Rare Natural Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - HIGH (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.25	0.00	0.00
MDNR Sites of Biodiversity Significance - MODERATE (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.70	0.00	0.00	0.00	1.68	0.00	6.37
MDNR Sites of Biodiversity Significance - BELOW (acres)	13.77	0.00	0.00	0.00	0.00	0.00	0.00	1.97	3.59	2.59	11.14	5.79	0.00	1.18	9.21	0.25
Calcareous Fens within 1.0 miles (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00
Conservation Easements in Route Width																
BWSR Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	12.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Native Plants Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	3.86	0.00	0.00	0.00	38.28	12.33	13.32
Calcareous Fens (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NRCS Easements (acres)	0.00	0.00	0.00	8.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Fee Title Lands (acres)	158.11	0.00	0.00	70.77	0.00	0.00	0.00	0.00	0.00	51.45	0.00	0.00		15.13	59.27	0.00
USFWS Waterfowl Production Areas (acres)	104.86	24.69	0.00	80.67	7.62	7.59	0.00	0.00	50.91	104.96	139.13	93.19	116.60	148.77	112.46	97.58
USFWS Wetland Easements (acres)	54.40	50.03	0.00	92.68	15.45	15.37	0.00	0.00	102.81	160.57	280.83	188.23	202.04	211.19	166.79	195.98
USFWS Grassland Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	43.69	73.85	34.62	1.00
USFWS Transfer Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Wildlife Management Areas (acres)	0.00	0.00	2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Rare Natural Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - HIGH (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.82	31.53	0.00	0.00
MDNR Sites of Biodiversity Significance - MODERATE (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.09	3.86	0.00	0.00	0.00	14.22	35.93	39.09
MDNR Sites of Biodiversity Significance - BELOW (acres)	56.47	0.00	0.00	20.55	0.00	0.00	0.00	24.84	24.70	50.82	71.13	38.56	0.00	17.27	50.15	5.69
Cultural Resources in ROW																
Cemeteries (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Previously Recorded Cultural Sites (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cultural Resources in Route Width																
Cemeteries within (count)	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Previously Recorded Cultural Sites (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	S18	S18_South2_Eq	SSR01	SSR02	SSR03	SSR04	SAA01	SAA01_South1_Eq	SAA02	SAA02_South2_Eq	SAA03	SAA03_South1_Eq	SAA04	SAA04_South2_Eq
GENERAL														
Length (miles)	2.39	1.46	26.02	25.16	25.50	25.52	2.03	2.03	2.22	2.19	0.51	0.53	0.65	0.68
150-foot ROW (acres)	43.54	26.58	473.04	457.43	463.60	464.08	36.91	36.85	40.39	39.79	9.20	9.62	11.88	12.31
Parcels in 150-ft ROW (count)	13.00	9.00	123.00	129.00	115.00	100.00	7.00	13.00	9.00	16.00	5.00	6.00	3.00	4.00
Paralleling Existing Linear Infrastructure														
Paralleling Existing Transmission Lines (miles)	0.00	1.46	0.53	8.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paralleling Existing Roads and Railroads (miles)	0.00	0.00	11.51	13.15	25.50	24.54	2.03	2.03	2.22	2.19	0.51	0.53	0.00	0.00
Paralleling Property Lines (miles)	2.39	0.00	12.73	3.20	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00	0.65	0.68
Total Paralleling Existing Linear Infrastructure (miles)	**2.39**	**1.46**	**24.77**	**24.91**	**25.50**	**25.53**	**2.03**	**2.03**	**2.22**	**2.19**	**0.51**	**0.53**	**0.65**	**0.68**
Total Paralleling Existing Linear Infrastructure (percent)	**100.00%**	**100.00%**	**95.20%**	**99.01%**	**100.01%**	**100.04%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Proximity to Residences														
Homes within 75 feet (count from centerline)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Homes within 150 feet (count from centerline)	0.00	0.00	0.00	0.00	3.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Homes within 300 feet (count from centerline)	0.00	3.00	0.00	7.00	4.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Homes within 500 feet (count from centerline)	0.00	3.00	1.00	12.00	12.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Community Features														
City Limit (miles of route centerline within limits)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Snow Trails (count of alignment crossings)	0.00	0.00	2.00	7.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scenic Byways (linear distance within Route Width; miles)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Schools within 0.5 miles	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alignment is adjacent Center Pivot Irrigation (count)	0.00	0.00	1.00	3.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gravel Pits within ROW (count)	0.00	0.00	3.00	6.00	8.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gravel Pits within Route Width (count)	0.00	0.00	5.00	6.00	10.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Airports within 2 miles of the Project centerline	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Agricultural Land Use Types within ROW														
Land Use Type: Cultivated Crops	43.53	18.31	333.34	305.20	272.56	266.73	35.35	12.51	37.75	13.46	5.76	6.61	8.35	10.56
Land Use Type: Hay Pasture	0.00	0.00	5.22	0.00	1.98	1.98	0.00	0.00	0.00	0.00	0.00	0.00	1.53	0.55
TOTAL	**43.53**	**18.31**	**338.56**	**305.20**	**274.54**	**268.71**	**35.35**	**12.51**	**37.75**	**13.46**	**5.76**	**6.61**	**9.88**	**11.11**
Agricultural Land Use Types within Route Width														
Land Use Type: Cultivated Crops	295.34	143.77	2702.87	2469.24	2400.54	2414.12	228.93	229.18	249.86	247.70	64.96	66.30	78.94	81.66
Land Use Type: Hay Pasture	0.00	0.00	45.53	16.88	25.98	25.98	0.00	0.00	0.00	0.00	0.00	0.00	4.55	4.23
TOTAL	**295.34**	**143.77**	**2748.40**	**2486.12**	**2426.52**	**2440.10**	**228.93**	**229.18**	**249.86**	**247.70**	**64.96**	**66.30**	**83.49**	**85.89**
Water Features within ROW														
FEMA Flood Zone - 100-yr floodplain (acres)	0.00	0.00	11.74	5.38	4.57	4.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NWI Wetlands (acres)	1.21	1.86	25.83	37.20	28.34	30.81	0.08	0.34	0.08	0.34	0.12	0.26	1.33	1.55
NHD Streams (count)	3.00	3.00	24.00	24.00	31.00	24.00	3.00	2.00	3.00	2.00	0.00	0.00	0.00	0.00
PWI Watercourses (count)	0.00	0.00	2.00	4.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NHD Waterbodies (count)	0.00	0.00	3.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PWI Water Basins (count)	0.00	0.00	2.00	4.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Features within Route Width														
FEMA Flood Zone - 100-yr floodplain (acres)	0.00	0.00	67.76	65.39	32.09	32.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NWI Wetlands (acres)	17.32	17.59	182.51	239.84	208.93	226.68	2.14	2.39	2.14	2.39	6.73	7.03	9.24	9.83
NHD Streams (count)	3.00	3.00	24.00	24.00	31.00	24.00	3.00	2.00	3.00	2.00	0.00	0.00	0.00	0.00
PWI Watercourses (count)	0.00	0.00	2.00	5.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NHD Waterbodies (count)	0.00	0.00	6.00	7.00	6.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PWI Water Basins (count)	0.00	0.00	4.00	5.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conservation Easements in ROW														
BWSR Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Native Plants Communities (acres)	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NRCS Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Fee Title Lands (acres)	0.00	0.00	0.00	3.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Waterfowl Production Areas (acres)	0.00	0.00	30.92	20.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.15	19.04
USFWS Wetland Easements (acres)	0.00	0.00	30.92	16.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.15	19.04
USFWS Grassland Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Transfer Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Wildlife Management Areas (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Rare Natural Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - HIGH (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - MODERATE (acres)	0.00	0.00	0.70	0.00	1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - BELOW (acres)	0.00	0.00	3.60	0.05	9.86	9.86	0.00	0.00	0.00	0.00	0.00	0.00	1.58	0.00
Calcareous Fens within 1.0 miles (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conservation Easements in Route Width														
BWSR Easements (acres)	0.00	0.00	0.00	4.81	4.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Native Plants Communities (acres)	0.00	0.00	3.86	0.00	2.88	2.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Calcareous Fens (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NRCS Easements (acres)	0.00	0.00	0.00	8.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Fee Title Lands (acres)	0.00	0.00	51.45	70.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Waterfowl Production Areas (acres)	0.00	0.00	104.96	96.70	62.64	62.64	0.00	0.00	0.00	0.00	0.00	0.00	67.62	69.91
USFWS Wetland Easements (acres)	0.00	0.00	160.57	101.85	126.50	126.50	0.00	0.00	0.00	0.00	0.00	0.00	136.49	141.10
USFWS Grassland Easements (acres)	0.00	0.00	0.00	23.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Transfer Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Wildlife Management Areas (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Rare Natural Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - HIGH (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - MODERATE (acres)	0.00	0.00	3.86	0.00	26.30	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - BELOW (acres)	0.00	0.00	57.78	24.58	57.51	56.26	0.00	0.00	0.00	0.00	0.00	0.00	6.97	5.15
Cultural Resources in ROW														
Cemeteries (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Previously Recorded Cultural Sites (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cultural Resources in Route Width														
Cemeteries within (count)	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Previously Recorded Cultural Sites (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 3 - Comparison of Human and Environmental Features Crossed by the Central Region Scoping Alternatives

	HSR01	HSR02	HSR03	C202	C202_Central1_2_EQ	C203	C203-Central2_Eq	C208	C208_Central2_Eq	CSR01	CSR02	WBLSR01	WBLSR02	WBLSR03	WBLSR04	CAA01	CAA01_Central2_Eq
GENERAL																	
Length (miles)	13.41	17.55	17.50	2.00	2.01	3.00	2.99	4.58	4.76	8.98	8.93	12.04	12.07	12.05	12.06	0.49	0.47
150-foot ROW (acres)	243.90	319.12	318.14	36.34	36.49	54.48	54.43	83.32	86.47	163.24	162.38	218.92	219.39	219.09	219.20	8.99	8.52
Parcels in 150-ft ROW (count)	66.00	79.00	75.00	11.00	15.00	15.00	18.00	23.00	26.00	54.00	48.00	69.00	65.00	60.00	68.00	7.00	7.00
Paralleling Existing Linear Infrastructure																	
Paralleling Existing Transmission Lines (miles)	1.51	2.99	0.49	0.00	0.00	0.00	0.00	0.00	2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paralleling Existing Roads and Railroads (miles)	7.39	5.03	3.52	0.00	2.01	1.00	1.00	0.00	1.22	5.98	6.92	7.52	5.98	3.50	6.28	0.49	0.47
Paralleling Property Lines (miles)	4.52	8.01	11.99	1.75	0.00	1.75	1.99	4.27	0.52	3.00	2.01	4.01	4.93	7.40	5.26	0.00	0.00
Total Paralleling Existing Linear Infrastructure (miles)	**13.42**	**16.03**	**16.00**	**1.75**	**2.01**	**2.75**	**2.99**	**4.27**	**4.24**	**8.98**	**8.93**	**11.53**	**10.91**	**10.90**	**11.54**	**0.49**	**0.47**
Total Paralleling Existing Linear Infrastructure (percent)	**100.04%**	**91.33%**	**91.44%**	**87.55%**	**100.14%**	**91.78%**	**100.00%**	**93.18%**	**89.15%**	**100.02%**	**99.99%**	**95.76%**	**90.42%**	**90.46%**	**95.72%**	**100.00%**	**100.29%**
Proximity to Residences																	
Homes within 75 feet (count from centerline)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Homes within 150 feet (count from centerline)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Homes within 300 feet (count from centerline)	0.00	5.00	1.00	0.00	0.00	1.00	1.00	0.00	4.00	2.00	2.00	1.00	1.00		1.00	0.00	0.00
Homes within 500 feet (count from centerline)	3.00	6.00	1.00	0.00	2.00	1.00	1.00	0.00	5.00	3.00	2.00	5.00	3.00	2.00	3.00	0.00	0.00
Community Features																	
City Limit (miles of route centerline within limits)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Snow Trails (count of alignment crossings)	2.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00
Scenic Byways (linear distance within Route Width; miles)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Schools within 0.5 miles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
Alignment is adjacent Center Pivot Irrigation (count)	1.00	27.00	28.00	0.00	0.00	11.00	4.00	6.00	5.00	3.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
Gravel Pits within ROW (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gravel Pits within Route Width (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Airports within 2 miles of the Project centerline	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Land Use Types in ROW																	
Land Use Type: Cultivated Crops	155.67	239.63	238.88	32.88	15.67	48.82	40.71	57.62	61.17	105.31	107.82	152.80	152.94	179.30	163.71	3.60	5.90
Land Use Type: Hay Pasture	0.00	0.34	1.26	0.14	0.00	0.00	0.00	0.93	0.00	0.23	0.00	0.08	0.82	0.82	2.61	0.00	0.00
TOTAL	**155.67**	**239.97**	**240.14**	**33.02**	**15.67**	**48.82**	**40.71**	**58.55**	**61.17**	**105.54**	**107.82**	**152.88**	**153.76**	**180.12**	**166.32**	**3.60**	**5.90**
Agricultural Land Use Types in Route Width																	
Land Use Type: Cultivated Crops	1477.45	1881.11	1854.57	222.47	224.51	360.98	347.72	461.24	514.53	925.05	935.06	1318.80	1318.29	1351.47	1306.76	65.08	63.20
Land Use Type: Hay Pasture	0.00	1.12	12.52	7.95	0.77	0.00	0.00	11.39	0.00	27.45	3.64	14.63	17.67	16.91	35.90	0.00	0.00
TOTAL	**1477.45**	**1882.23**	**1867.09**	**230.42**	**225.28**	**360.98**	**347.72**	**472.63**	**514.53**	**952.50**	**938.70**	**1333.43**	**1335.96**	**1368.38**	**1342.66**	**65.08**	**63.20**
Water Features in ROW																	
FEMA Flood Zone - 100-yr floodplain (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NWI Wetlands (acres)	2.66	6.98	10.04	4.20	0.54	1.91	1.86	4.65	0.34	6.09	5.90	6.18	6.33	8.75	9.78	0.00	0.00
NHD Streams (count)	6.00	24.00	26.00	2.00	2.00	3.00	4.00	7.00	7.00	5.00	7.00	8.00	11.00	8.00	7.00	0.00	0.00
PWI Watercourses (count)	3.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00	1.00	1.00	3.00	1.00	1.00	1.00	1.00	0.00	0.00
NHD Waterbodies (count)	0.00	3.00	2.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00

Table 3 - Comparison of Human and Environmental Features Crossed by the Central Region Scoping Alternatives

	HSR01	HSR02	HSR03	C202	C202_Central1_2_EQ	C203	C203-Central2_Eq	C208	C208_Central2_Eq	CSR01	CSR02	WBLSR01	WBLSR02	WBLSR03	WBLSR04	CAA01	CAA01_Central2_Eq
PWI Water Basins (count)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00
Water Features in Route Width																	
FEMA Flood Zone - 100-yr floodplain (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NWI Wetlands (acres)	35.04	58.06	71.33	29.33	7.11	14.32	11.95	23.13	4.86	72.12	66.86	67.54	66.44	60.76	84.13	0.00	0.00
NHD Streams (count)	6.00	24.00	26.00	2.00	2.00	3.00	4.00	7.00	7.00	5.00	7.00	8.00	11.00	8.00	7.00	0.00	0.00
PWI Watercourses (count)	3.00	2.00	2.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	3.00	1.00	1.00	1.00	1.00	0.00	0.00
NHD Waterbodies (count)	0.00	7.00	6.00	0.00	0.00	0.00	1.00	0.00	1.00	2.00	3.00	2.00	1.00	3.00	4.00	0.00	0.00
PWI Water Basins (count)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	2.00	1.00	2.00	4.00	0.00	0.00
Conservation Easements in ROW																	
BWSR Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DNR Native Plants Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00
NRCS Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Fee Title Lands (acres)	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.17	0.00	0.07	0.07	0.07	0.00	0.00	0.00
USFWS Waterfowl Production Areas (acres)	0.00	0.00	0.00	0.00	0.07	10.39	0.00	0.00	0.00	0.17	0.00	0.07	0.07	0.07	0.67	0.00	0.00
USFWS Wetland Easements (acres)	0.00	0.00	0.00	0.00	0.00	10.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.00	0.00
USFWS Grassland Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Transfer Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Wildlife Management Areas (acres)	0.00	0.00	0.00	5.78	1.40	0.00	0.00	0.00	0.00	1.06	0.00	1.79	1.40	1.40	3.45	0.00	0.00
MDNR Rare Natural Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - HIGH (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - MODERATE (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	2.27	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - BELOW (acres)	0.00	0.00	8.25	0.00	0.00	0.00	0.00	8.25	0.00	0.00	2.05	0.00	0.00	0.00	0.00	0.00	0.00
Calcareous Fens within 1.0 miles (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Conservation Easements in Route Width																	
BWSR Easements (acres)	9.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.57	0.00	0.00	15.15	15.15	0.00	0.00	0.00
DNR Native Plants Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.67	0.00	0.00	0.00	0.00	0.00	0.00
Calcareous Fens (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NRCS Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Fee Title Lands (acres)	0.00	26.30	0.00	0.00	0.66	0.00	0.00	3.21	3.21	0.82	0.00	0.66	0.66	0.66	0.00	0.00	0.00
USFWS Waterfowl Production Areas (acres)	0.00	12.98	0.00	0.00	0.32	30.92	0.00	1.58	1.58	0.40	0.00	0.32	0.32	0.32	13.30	0.00	0.00
USFWS Wetland Easements (acres)	0.00	0.00	0.00	0.00	0.00	62.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.22	0.00	0.00
USFWS Grassland Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Transfer Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Wildlife Management Areas (acres)	0.00	0.00	0.00	41.63	6.89	0.00	0.00	0.00	0.00	14.48	0.00	20.10	6.89	6.89	29.17	0.00	0.00
MDNR Rare Natural Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - HIGH (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - MODERATE (acres)	0.00	20.37	0.00	0.00	0.00	0.00	0.00	1.35	1.35	0.00	6.75	0.00	31.21	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - BELOW (acres)	0.00	0.00	33.57	0.00	0.00	0.00	0.00	33.57	0.00	0.00	13.58	0.00	0.00	0.00	0.00	0.00	0.00
Cultural Resources in ROW																	
Cemeteries (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Previously Recorded Cultural Sites (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cultural Resources in Route Width																	
Cemeteries (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Previously Recorded Cultural Sites (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 4 - Comparison of Human and Environmental Features Crossed by the North Region Scoping Alternatives

	ASR01	ASR02	N9	N9_North1_Eq	N10	N10_North1_Eq	N11	N11_North2_Eq	N205	N205_North1_Eq	N206	N206-North2_Eq	N207	N207_North2_Eq
GENERAL														
Length (miles)	18.13	25.26	3.04	3.03	2.06	1.53	2.07	2.13	1.30	1.33	2.09	2.46	1.84	2.27
150-foot ROW (acres)	329.68	459.35	55.22	55.10	37.39	27.87	37.72	38.67	23.68	24.11	37.93	44.77	33.40	41.29
Parcels in 150-ft ROW (count)	110.00	154.00	20.00	22.00	14.00	15.00	15.00	18.00	12.00	10.00	9.00	17.00	8.00	15.00
Paralleling Existing Linear Infrastructure														
Paralleling Existing Transmission Lines (miles)	0.00	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paralleling Existing Roads and Railroads (miles)	4.96	3.81	0.00	0.00	0.23	1.07	1.53	0.10	0.00	1.06	2.09	2.46	1.05	1.55
Paralleling Property Lines (miles)	11.00	17.79	2.35	3.03	1.21	0.00	0.00	2.02	1.30	0.27	0.00	0.00	0.00	0.00
Total Paralleling Existing Linear Infrastructure (miles)	**15.96**	**23.00**	**2.35**	**3.03**	**1.44**	**1.07**	**1.53**	**2.12**	**1.30**	**1.33**	**2.09**	**2.46**	**1.05**	**1.55**
Total Paralleling Existing Linear Infrastructure (percent)	**88.02%**	**91.04%**	**77.37%**	**99.99%**	**70.03%**	**69.81%**	**73.75%**	**99.68%**	**100.00%**	**100.00%**	**100.00%**	**99.91%**	**57.16%**	**68.25%**
Proximity to Residences														
Homes within 75 feet (count from centerline)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Homes within 150 feet (count from centerline)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Homes within 300 feet (count from centerline)	9.00	2.00	1.00	1.00	0.00	5.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00
Homes within 500 feet (count from centerline)	17.00	8.00	1.00	2.00	0.00	8.00	2.00	0.00	0.00	1.00	2.00	0.00	1.00	1.00
Community Features														
City Limit (miles of route centerline within limits)	1.50	0.59	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Snow Trails (count of alignment crossings)	6.00	18.00	1.00	1.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Scenic Byways (linear distance within Route Width; miles)	0.00	1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.41	0.38
Schools within 0.5 miles	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alignment is adjacent Center Pivot Irrigation (count)	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gravel Pits within ROW (count)	0.00	10.00	0.00	0.00	0.00	0.00	4.00	3.00	0.00	0.00	2.00	2.00	0.00	0.00
Gravel Pits within Route Width (count)	0.00	12.00	0.00	0.00	0.00	0.00	0.00	4.00	0.00	0.00	2.00	2.00	0.00	0.00
Airports within 2 miles of the Project centerline	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Agricultural Land Use Types in Routing ROW														
Land Use Type: Cultivated Crops	250.79	284.41	45.00	43.72	28.87	14.35	2.45	15.87	23.38	17.02	32.53	34.05	14.30	30.39
Land Use Type: Hay Pasture	8.53	82.53	0.21	5.34	0.00	1.53	20.81	9.13	0.00	0.00	5.00	5.79	11.17	4.77
TOTAL	**259.32**	**366.94**	**45.21**	**49.06**	**28.87**	**15.88**	**23.26**	**25.00**	**23.38**	**17.02**	**37.53**	**39.84**	**25.47**	**35.16**
Agricultural Land Use Types in Route Width														
Land Use Type: Cultivated Crops	1799.01	1991.23	324.43	294.78	189.53	123.43	62.07	111.73	168.11	156.13	204.47	223.24	103.15	211.94
Land Use Type: Hay Pasture	85.82	551.75	14.90	46.71	0.72	10.15	92.91	58.88	0.00	0.09	36.34	39.12	82.57	44.97
TOTAL	**1884.83**	**2542.98**	**339.33**	**341.49**	**190.25**	**133.58**	**154.98**	**170.61**	**168.11**	**156.22**	**240.81**	**262.36**	**185.72**	**256.91**

Table 4 - Comparison of Human and Environmental Features Crossed by the North Region Scoping Alternatives

	ASR01	ASR02	N9	N9_North1_Eq	N10	N10_North1_Eq	N11	N11_North2_Eq	N205	N205_North1_Eq	N206	N206-North2_Eq	N207	N207_North2_Eq
Water Features in ROW														
FEMA Flood Zone - 100-yr floodplain (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NWI Wetlands (acres)	41.57	62.20	4.98	4.63	4.78	2.95	11.72	9.89	0.69	0.11	1.60	8.64	9.75	4.79
NHD Streams (count)	24.00	4.00	3.00	7.00	2.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
PWI Watercourses (count)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NHD Waterbodies (count)	3.00	8.00	0.00	0.00	1.00	1.00	3.00	1.00	0.00	0.00	0.00	2.00	0.00	0.00
PWI Water Basins (count)	4.00	3.00	0.00	1.00	1.00	2.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Water Features in Route Width														
FEMA Flood Zone - 100-yr floodplain (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NWI Wetlands (acres)	253.51	466.86	40.03	38.18	32.88	30.48	65.24	67.16	10.61	7.84	20.22	56.17	66.30	51.58
NHD Streams (count)	24.00	4.00	3.00	7.00	2.00	5.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00
PWI Watercourses (count)	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NHD Waterbodies (count)	5.00	24.00	1.00	0.00	1.00	2.00	5.00	6.00	0.00	0.00	2.00	3.00	2.00	2.00
PWI Water Basins (count)	7.00	4.00	2.00	3.00	1.00	2.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Conservation Easements in ROW														
BWSR Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Native Plants Communities (acres)	0.04	7.22	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NRCS Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Fee Title Lands (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Waterfowl Production Areas (acres)	0.00	61.50	0.00	0.00	0.00	0.00	29.10	13.41	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Wetland Easements (acres)	0.00	61.50	0.00	0.00	0.00	0.00	29.10	13.41	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Grassland Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Transfer Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Wildlife Management Areas (acres)	6.61	0.13	0.20	4.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Rare Natural Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - HIGH (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - MODERATE (acres)	0.04	7.23	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - BELOW (acres)	0.10	7.46	0.06	0.00	2.51	0.10	0.00	0.00	0.00	0.00	9.68	2.13	7.77	5.33
Calcareous Fens within 1.0 miles (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 4 - Comparison of Human and Environmental Features Crossed by the North Region Scoping Alternatives

	ASR01	ASR02	N9	N9_North1_Eq	N10	N10_North1_Eq	N11	N11_North2_Eq	N205	N205_North1_Eq	N206	N206-North2_Eq	N207	N207_North2_Eq
Conservation Easements in Route Width														
BWSR Easements (acres)		0.81	0.00	0.00	0.00	0.00	6.03	0.81	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Native Plants Communities (acres)	15.40	41.63	3.42	3.42	0.00	6.37	0.00	0.00	0.00	0.00	2.25	0.00	0.00	0.00
Calcareous Fens (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NRCS Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Fee Title Lands (acres)	24.93	31.36	8.45	8.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Waterfowl Production Areas (acres)	12.15	236.02	4.12	4.13	0.00	0.00	89.58	66.24	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Wetland Easements (acres)	0.00	453.70	0.00	0.00	0.00	0.00	184.44	136.36	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Grassland Easements (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USFWS Transfer Easements (acres)	0.00	5.93	0.00	0.00	0.00	0.00	4.70	3.96	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Wildlife Management Areas (acres)	45.26	4.69	8.62	33.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Rare Natural Communities (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - HIGH (acres)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - MODERATE (acres)	15.40	43.29	3.42	3.42	0.00	6.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MDNR Sites of Biodiversity Significance - BELOW (acres)	7.92	46.60	4.74	0.00	24.85	7.92	0.00	0.00	0.00	0.00	63.09	17.11	51.30	31.16
Cultural Resources in ROW														
Cemeteries (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Previously Recorded Cultural Sites (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cultural Resources in Route Width														
Cemeteries (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of Previously Recorded Cultural Sites (count)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00