Description of Studied Alignments

In developing the routes proposed in this Application, Applicants analyzed the statutory and rule factors set forth in the PPSA, Minn. Stat. Ch. 216E, and Minn. R. Ch. 7850. The routes studied were 1,000-foot-wide corridors based on geographic features deemed appropriate for transmission line routing. To further inform the routing process the Applicants are providing impacts based on selected alignments within the routes. For sections along the I-94 corridor, the alignments are generally described as:

- 75 feet from the I-94 edge of right-of-way, also referred to as the 75-foot offset alignment or the no interstate corridor sharing alignment;
- 25 feet from the I-94 edge of right-of-way is also referred to as the 25-foot offset alignment or the minimum interstate corridor sharing alignment; and
- five feet from the I-94 edge of right-of-way is also referred to as the 5-foot offset alignment or the maximum interstate corridor sharing alignment.

These potential alignments should provide the Commission, agencies and stakeholders with a wide array of data for consideration in this proceeding.

The Appendix F tables identify potential impacts associated with each studied alignment. The values presented in the Appendix F tables represent potential impacts. Actual impacts will vary depending upon the final route selected by the Commission and the final alignment.

APPENDIX F

Part F.1 Alignment Comparison Impact Table

	Alignment	Length (Miles)	Right-of-Way (Acres)[1]	Number of Poles[2]	Number of Spans[3]	Temporary Impacts							Permanent Impacts							
						Total Temporary Construction Impacts (Acres)[3]	Number of Spooling Locations (Every Two Miles)[3]	Temporary Spool Impacts (sq ft)[4]	Temporary Spool Impacts (Acres)[4]	Number of Staging Areas[5]	Temporary Staging Impacts (Acres)[5]	Total Temporary Impacts (Acres)[6]	ROW Agricultural Land (Acres)[7]	ROW Percent Agricultural Land[7]	Number of Poles in Agricultural Land[8]	Permanent Impact in Agricultural Land (sq ft)[9]	Number of Poles in Non-agricultural Land[10]	Permanent Impact in Non-agricultural Land (sq ft)[11]	Total Permanent Pole Impacts (sq ft)[12]	Total Permanent Pole Impacts (Acres)[12]
Preferred Route	Maximum Interstate Corridor Sharing (5-foot offset)	179.7	3,267	1,122	1,121	1,121	90	144,000	3	7	35	1,159	2,170	66.4%	832	832,000	290	15,950	847,950	19
Preferred Route	Minimum Interstate Corridor Sharing (25-foot offset)	179.7	3,267	1,122	1,121	1,121	90	144,000	3	7	35	1,159	2,168	66.4%	832	832,000	290	15,950	847,950	19
Preferred Route	No Interstate Corridor Sharing (75-foot offset)	180.5	3,280	1,126	1,125	1,125	90	144,000	3	7	35	1,163	2,176	66.3%	840	840,000	286	15,730	855,730	20
	Alternate Route A	169.0	3,070	1,036	1,035	1,035	85	136,000	3	7	35	1,073	2,446	79.7%	841	841,000	195	10,725	851,725	20
	Preferred Route Segment Alternative 1	34.7	642	276	275	275	18	28,800	1	2	10	286	619	96.5%	178	178,000	98	5,390	183,390	4
	Comparable Portion of the Preferred Route	37.9	688	231	230	230	19	30,400	1	2	10	241	656	95.3%	162	162,000	69	3,795	165,795	4
	Preferred Route Segment Alternative 2	1.5	28	9	8	8	1	1,600	<1	NA	NA	8	28	100.0%	8	8,000	1	55	8,055	<1
	Preferred Route Segment Alternative 3	3.9	70	29	28	28	2	3,200	<1	NA	NA	28	-	0.0%	9	9,000	20	1,100	10,100	<1
	Comparable Portion of the Preferred Route	2.3	43	16	15	15	1	1,600	<1	NA	NA	15	-	0.0%	7	7,000	9	495	7,495	<1
	Preferred Route Segment Alternative 4	9.7	177	61	60	60	5	8,000	<1	NA	NA	60	166	94.1%	55	55,000	6	330	55,330	1
	Comparable Portion of the Preferred Route	7.9	143	50	49	49	4	6,400	<1	NA	NA	49	99	69.3%	36	36,000	14	770	36,770	1
	Preferred Route Segment Alternative 5	3.9	72	24	23	23	2	3,200	<1	NA	NA	23	72	100.0%	24	24,000	-	-	24,000	<1
	Comparable Portion of the Preferred Route	3.1	57	19	18	18	2	3,200	<1	NA	NA	18	57	100.0%	16	16,000	3	165	16,165	<1

Assumptions:

1. Applicants are requesting a 150-foot wide Right-of-Way (ROW); 75 feet on either side of an alignment. Additional ROW may be required in special situations. ROW acres were calculated based on a width of 150 feet multiplied by the length of the route alignment.
2. The number of poles was determined by preliminary pole spotting conducted by Applicants. This number is approximate since the final number of poles is dependent on final design and engineering.
3. Temporary construction impacts were determined using one acre per span. A span is defined as the distance between two poles. Number of spans for the route is defined as total number of poles minus one.
4. Spooling impacts were determined as a 1,600 square feet stringing location every two miles.
5. Staging area impacts were determined as a five acre staging area every 25 miles.
6. Total temporary impacts were calculated by summing the impacts from the temporary construction impacts, the spooling impacts, and the staging impacts.
7. Agricultural land was determined by land use and zoning data which was acquired from counties and cities in the Project area.
8. Poles in agricultural land was determined based on both aerial interpretation and land use / zoning data which was acquired from counties, cities and townships in the Project area.
9. Agricultural impacts were determined using 1,000 square feet per pole.
10. Poles in non-agricultural land was determined based on both aerial interpretation and land use and zoning data which was acquired from counties, cities, and townships in the Project area.
11. Non-agricultural land impacts were determined using 55 square feet per pole.
12. Total permanent pole impacts are the sum of permanent impacts in agricultural land and permanent impacts in non-agricultural land.
13. This table only includes the sensitivities or impacts that occur along at least one of the alignments.

	Alignment	Length (Miles)	Right-of-Way (Acres)[1]	Corridor Sharing								Homes				
				Corridor Sharing - Roads (Miles)	Corridor Sharing - Transmission Lines (Miles)	Corridor Sharing - Railroads (Miles)	Corridor Sharing - Pipelines (Miles)	Corridor Sharing - Parcel Lines or Field Lines (miles)	No Corridor Sharing (Miles)[2]	Total Corridor Sharing (Miles)[3]	Total Corridor Sharing (Percent)	Number of Homes 0-75 feet from Alignment[4]	Number of Homes 75-150 feet from Alignment[4]	Number of Homes 150-300 feet from Alignment[4]	Number of Homes 300-500 feet from Alignment[4]	Number of Homes 0-500 feet from Alignment[4]
Preferred Route	Maximum Interstate Corridor Sharing (5-foot offset)	179.7	3,267	137.1	11.2	3.4	0.1	24.9	2.8	176.7	98.3%	-	31	87	69	187
Preferred Route	Minimum Interstate Corridor Sharing (25-foot offset)	179.7	3,267	137.2	11.2	3.4	0.1	24.9	2.8	176.8	98.4%	-	31	88	71	190
Preferred Route	No Interstate Corridor Sharing (75-foot offset)	180.5	3,280	136.2	11.2	3.4	0.1	26.7	2.8	177.6	98.4%	-	32	86	71	189
	Alternate Route A	169.0	3,070	96.6	11.8	4.1	-	51.4	4.0	163.9	97.0%	-	36	102	87	225
	Preferred Route Segment Alternative 1	34.7	642	25.4	0.6	1.2	-	5.9	-	33.1	95.4%	-	12	30	27	69
	Comparable Portion of the Preferred Route	37.9	688	14.9	7.4	-	-	14.5	1.1	36.8	97.1%	-	8	36	27	71
	Preferred Route Segment Alternative 2	1.5	28	-	-	-	-	1.5	-	1.5	100.0%	-	-	-	1	1
	Preferred Route Segment Alternative 3	3.9	70	2.4	-	-	-	1.5	-	3.9	100.0%	-	3	33	33	69
	Comparable Portion of the Preferred Route	2.3	43	2.0	0.3	-	-	-	-	2.3	97.9%	-	-	1	5	6
	Preferred Route Segment Alternative 4	9.7	177	5.8	-	-	-	3.5	-	9.3	95.9%	-	2	-	1	3
	Comparable Portion of the Preferred Route	7.9	143	7.5	-	-	-	0.3	-	7.9	100.0%	-	1	7	3	11
	Preferred Route Segment Alternative 5	3.9	72	2.8	-	-	-	0.4	0.6	3.2	82.1%	-	-	1	2	3
	Comparable Portion of the Preferred Route	3.1	57	3.1	-	-	-	-	-	3.1	100.0%	-	-	1	-	1

Assumptions:

1. Applicants are requesting a 150-foot wide Right-of-Way (ROW); 75 feet on either side of an alignment. Additional ROW may be required in special situations. ROW acres were calculated based on a width of 150 feet multiplied by the length of the route alignment.
2. "No Corridor Sharing" is the approximate amount of ROW that does not parallel existing corridors such as roads, transmission lines, railroads, pipelines, parcel lines or field lines.
3. "Total Corridor Sharing" is the approximate amount of ROW that parallels existing corridors such as roads, transmission lines, railroads, pipelines, parcel lines or field lines.
4. Homes were identified during field investigations and using 2006 and 2008 NAIP aerial photographs.
5. This table only includes the sensitivities or impacts that occur along at least one of the alignments.

	Alignment	Length (Miles)	Right-of-Way (Acres)[1]	Land Use and Zoning[2]																	
				ROW Agriculture (Acres)	ROW Commercial / Business / Institutional / Public (Acres)	ROW County Identified Municipal (Acres)	ROW Industrial (Acres)	ROW Recreational / Open Space / Park (Acres)	ROW Residential (Acres)	ROW Special Protection Agriculture (Acres)	ROW Transitional Area / Growth Area (Acres)	ROW Undefined (Acres)	ROW Percent Agriculture	ROW Percent Commercial / Business / Institutional / Public	ROW Percent County Identified Municipal	ROW Percent Industrial	ROW Percent Recreational / Open Space / Park	ROW Percent Residential	ROW Percent Special Protection Agriculture	ROW Percent Transitional Area / Growth Area	ROW Percent Undefined
Preferred Route	Maximum Interstate Corridor Sharing (5-foot offset)	179.7	3,267	2,170	64	4	51	190	210	-	-	578	66.4%	2.0%	0.1%	1.6%	5.8%	6.4%	0.0%	0.0%	17.7%
Preferred Route	Minimum Interstate Corridor Sharing (25-foot offset)	179.7	3,267	2,168	64	4	47	190	213	-	-	579	66.4%	2.0%	0.1%	1.4%	5.8%	6.5%	0.0%	0.0%	17.7%
Preferred Route	No Interstate Corridor Sharing (75-foot offset)	180.5	3,280	2,176	66	4	38	202	211	-	-	584	66.3%	2.0%	0.1%	1.2%	6.1%	6.4%	0.0%	0.0%	17.8%
	Alternate Route A	169.0	3,070	2,446	25	4	17	128	211	122	111	0	79.7%	0.8%	0.1%	0.5%	4.2%	6.9%	4.0%	3.6%	0.0%
	Preferred Route Segment Alternative 1	34.7	642	619	1	-	-	1	11	-	10	-	96.5%	0.1%	0.0%	0.0%	0.2%	1.6%	0.0%	1.6%	0.0%
	Comparable Portion of the Preferred Route	37.9	688	656	10	-	15	7	-	-	-	-	95.3%	1.5%	0.0%	2.2%	1.0%	0.0%	0.0%	0.0%	0.0%
	Preferred Route Segment Alternative 2	1.5	28	28	-	-	-	-	0	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%
	Preferred Route Segment Alternative 3	3.9	70	-	-	-	-	40	32	-	-	-	0.0%	0.0%	0.0%	0.0%	56.2%	45.2%	0.0%	0.0%	0.0%
	Comparable Portion of the Preferred Route	2.3	43	-	-	-	-	17	26	-	-	-	0.0%	0.0%	0.0%	0.0%	39.3%	60.8%	0.0%	0.0%	0.0%
	Preferred Route Segment Alternative 4	9.7	177	166	-	-	-	10	-	-	-	-	94.1%	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	0.0%	0.0%
	Comparable Portion of the Preferred Route	7.9	143	99	-	-	-	44	-	-	-	-	69.3%	0.0%	0.0%	0.0%	30.7%	0.0%	0.0%	0.0%	0.0%
	Preferred Route Segment Alternative 5	3.9	72	72	-	-	-	-	-	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Comparable Portion of the Preferred Route	3.1	57	57	-	-	-	-	-	-	-	-	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Assumptions:

1. Applicants are requesting a 150-foot wide Right-of-Way (ROW); 75 feet on either side of an alignment. Additional ROW may be required in special situations. ROW acres were calculated based on a width of 150 feet multiplied by the length of the route alignment.
2. Land Use and Zoning data was aquired from counties, cities, and townships within the Project area. The dataset that these numbers were based on is the compilation of all of these datasets. The land use and zoning categories above may not be the exact same categories used by the original datasets due to the need to create a complete and uniform dataset for the entire Project area.
3. This table only includes the sensitivities or impacts that occur along at least one of the alignments.

	Alignment	Length (Miles)	Right-of-Way (Acres)[1]	Wetlands[2]								Streams, Lakes and PWI[5]							
				Total Wetlands Within the ROW (Acres)	ROW Percent Wetlands	Number of Wetlands ROW Crosses	Forested Wetlands in ROW (Acres)	Percent of the ROW that Crosses Forested Wetlands	Number of Forested Wetlands ROW Crosses	Number of Poles in Wetlands[3]	Temporary Wetland Impacts (Acres)[4]	Number of Streams and Rivers Crossed by the Alignment	Number of Trout Streams Crossed by the Alignment	Lakes within ROW (Acres)	Number of PWI Streams Crossed by the Alignment	Number of PWI Lakes within ROW	Number of Poles in PWI Lakes by Alignment	Number of PWI Wetlands within ROW	Number of Poles in PWI Wetlands by Alignment
Preferred Route	Maximum Interstate Corridor Sharing (5-foot offset)	179.7	3,267	231	7.1%	374	16	0.5%	14	37	81	97	-	20	35	11	1	8	1
Preferred Route	Minimum Interstate Corridor Sharing (25-foot offset)	179.7	3,267	248	7.6%	380	16	0.5%	14	39	86	97	-	23	35	11	2	8	1
Preferred Route	No Interstate Corridor Sharing (75-foot offset)	180.5	3,280	288	8.8%	399	16	0.5%	13	34	102	99	-	31	35	11	2	8	1
	Alternate Route A	169.0	3,070	250	8.2%	381	20	0.7%	30	35	91	124	-	6	32	8	1	7	2
	Preferred Route Segment Alternative 1	34.7	642	76	11.8%	103	1	0.2%	3	20	43	27	-	2	8	2	-	4	5
	Comparable Portion of the Preferred Route	37.9	688	97	14.1%	116	12	1.8%	5	18	35	25	-	6	10	2	-	2	-
	Preferred Route Segment Alternative 2	1.5	28	1	5.0%	2	-	0.0%	-	-	<1	1	-	-	-	-	-	-	-
	Preferred Route Segment Alternative 3	3.9	70	7	9.4%	22	0	0.2%	1	1	3	-	-	-	-	-	-	1	-
	Comparable Portion of the Preferred Route	2.3	43	5	10.6%	6	-	0.0%	-	-	1	-	-	3	-	1	-	-	-
	Preferred Route Segment Alternative 4	9.7	177	4	2.4%	15	-	0.0%	-	-	2	5	-	<1	2	1	-	-	-
	Comparable Portion of the Preferred Route	7.9	143	5	3.3%	14	-	0.0%	-	-	1	4	-	<1	2	-	-	1	-
	Preferred Route Segment Alternative 5	3.9	72	1	1.1%	2	-	0.0%	-	-	<1	-	-	-	-	-	-	-	-
	Comparable Portion of the Preferred Route	3.1	57	2	3.4%	5	-	0.0%	-	-	<1	-	-	1	-	1	-	-	-

Assumptions:

1. Applicants are requesting a 150-foot wide Right-of-Way (ROW); 75 feet on either side of an alignment. Additional ROW may be required in special situations. ROW acres were calculated based on a width of 150 feet multiplied by the length of the route alignment.
2. Wetland numbers were calculated using the NWI maps. These values represent an estimate of the number of wetlands likely present along the route. These values do not necessarily represent the number of wetland impacts subject to state and federal wetland regulations.
3. The number of poles was determined by preliminary pole spotting conducted by Applicants and the identification of wetlands was determined using NWI wetland data. This final number of poles in wetlands is dependent on final design and engineering and field delineation of wetlands.
4. Temporary impacts were calculated by identifying the acreage of wetlands that are within ten feet of each side of the alignment (20 feet total width) plus the amount of wetland within a one acre area surrounding poles. The 20 feet width is the assumed width of a temporary access road. This estimate is worst-case based as the entire length of the wetland would not likely need to be traversed during construction.
5. Stream crossings were compiled using the MDNR 24K streams dataset. Lakes were identified using the MDNR 24K lakes dataset. PWI streams, waters and wetlands were identified in the MDNR datasets. PWI waters were identified using the MDNR PWI dataset.
6. This table only includes the sensitivities or impacts that occur along at least one of the alignments.

	Alignment	Length (Miles)	Right-of-Way (Acres)[1]	Environmental																		
				Number of MCBS Sites of Biodiversity Significance Crossed within ROW[2,3]	ROW MCBS Sites of Biodiversity Significance (Acres)[2,3]	ROW Percent of MCBS Sites of Biodiversity Significance[2,3]	Number of MCBS ROW Prairies[2] Within ROW	Native Plant Communities (Acres)[2]	ROW Percent Native Plant Communities[2]	ROW Minnesota Restorable Wetlands (Acres)[4]	ROW Percent Minnesota Restorable Wetlands[4]	Number of MDNR Wildlife Management Areas within Route[2]	Number of MDNR Wildlife Management Areas[2] within ROW	ROW Percent MDNR Wildlife Management Areas[2]	State Listed T&E or Candidate Species Within Route[5]	State Listed T&E or Candidate Species Occurrences within Route[5]	State Listed T&E or Candidate Species within 1 mile of Route[5]	State Listed T&E or Candidate Species Occurrences within 1 mile of Route[5]	USFWS Conservation Easement (Acres)[6]	ROW Percent USFWS Conservation Easement[6]	Minnesota Land Trust Easements (Acres)[7]	Percent ROW Minnesota Land Trust Easements[7]
Preferred Route	Maximum Interstate Corridor Sharing (5-foot offset)	179.7	3,267	6	20	0.6%	0	7	0.2%	194	5.9%	0	-	0.0%	8	10	28	70	58	1.8%	3	0.1%
Preferred Route	Minimum Interstate Corridor Sharing (25-foot offset)	179.7	3,267	6	20	0.6%	1	7	0.2%	207	6.3%	0	-	0.0%	8	10	28	70	62	1.9%	3	0.1%
Preferred Route	No Interstate Corridor Sharing (75-foot offset)	180.5	3,280	6	20	0.6%	1	7	0.2%	204	6.2%	0	-	0.0%	8	10	28	70	70	2.1%	4	0.1%
	Alternate Route A	169.0	3,070	9	32	0	5	13	0	255	8.3%	1	12	0.4%	4	4	25	41	15	0.5%	-	0.0%
	Preferred Route Segment Alternative 1	34.7	642	7	8	1.2%	0	3	0.5%	67	10.5%	1	-	0.0%	-	-	10	15	-	0.0%	-	0.0%
	Comparable Portion of the Preferred Route	37.9	688	3	20	2.9%	0	7	1.0%	97	14.1%	0	-	0.0%	2	2	11	17	-	0.0%	-	0.0%
	Preferred Route Segment Alternative 2	1.5	28	-	-	0.0%	0	0	-	2	6.4%	0	-	0.0%	-	-	2	2	-	0.0%	-	0.0%
	Preferred Route Segment Alternative 3	3.9	70	1	-	0.0%	0	0	-	3	4.8%	0	-	0.0%	-	-	1	1	-	0.0%	-	0.0%
	Comparable Portion of the Preferred Route	2.3	43	-	-	0.0%	0	0	-	1	1.3%	0	-	0.0%	-	-	1	1	-	0.0%	3	6.5%
	Preferred Route Segment Alternative 4	9.7	177	1	-	0.0%	0	0	-	10	5.4%	1	-	0.1%	-	-	2	2	2	1.1%	-	0.0%
	Comparable Portion of the Preferred Route	7.9	143	-	-	0.0%	0	0	-	4	2.9%	0	-	0.0%	-	-	3	3	14	9.8%	-	0.0%
	Preferred Route Segment Alternative 5	3.9	72	-	-	0.0%	0	0	-	2	2.4%	0	-	0.0%	-	-	2	2	0	0.0%	-	0.0%
	Comparable Portion of the Preferred Route	3.1	57	-	-	0.0%	0	0	-	5	8.0%	0	-	0.0%	-	-	1	1	9	16.4%	-	0.0%

Assumptions:

1. Applicants are requesting a 150-foot wide Right-of-Way (ROW); 75 feet on either side of an alignment. Additional ROW may be required in special situations. ROW acres were calculated based on a width of 150 feet multiplied by the length of the route alignment.
2. MCBS Sites of Biodiversity Significance, MCBS ROW Prairies, Native Plant Communities, and Wildlife Management Areas data were aquired from the MDNR Data Deli.
3. Includes Medium, High, and Outstanding diversity sites only.
4. Minnesota Restorable Wetlands data was aquired from the Restorable Wetlands Working Group.
5. Threatened and Endangered Species were identified using data licensed from the MDNR for this project.
6. USFWS Conservation Easements were identified using data from the USFWS Region 3 Realty Office.
7. Minnesota Land Trust easements were identified using data received from the Minnesota Land Trust.
8. This table only includes the sensitivities or impacts that occur along at least one of the alignments.

	Alignment	Length (Miles)	Right-of-Way (Acres)[1]	Environmental															
				Number of Non-Residential Buildings or Structures within ROW[2]	Archaeological Sites Within ROW[3]	Historical Sites Within ROW[3]	Number of Center Pivot Irrigation Systems Within ROW[4]	Number of Aggregate Sources Within ROW[5]	ROW USDA Conservation Reserve Program Land (Acres)[6]	ROW Percent USDA Conservation Reserve Program Land[6]	ROW 100-year Floodplain (Acres)[7]	ROW Percent 100-year Floodplain (Acres)[7]	Number of Poles in Floodplain by Alignment[7]	ROW Wooded Areas (Acreage)[8]	ROW Percent Wooded Areas[8]	ROW Population Center (Acres)[9]	ROW Percent Population Center[9]	Scenic Byways Within ROW[10]	Number of County and State Trails Within ROW[11]
Preferred Route	Maximum Interstate Corridor Sharing (5-foot offset)	179.7	3,267	35	11	1	3	1	162	5.0%	63	1.9%	20	115	3.5%	137	4.2%	3	-
Preferred Route	Minimum Interstate Corridor Sharing (25-foot offset)	179.7	3,267	40	11	1	3	1	186	5.7%	64	2.0%	22	119	3.7%	134	4.1%	3	-
Preferred Route	No Interstate Corridor Sharing (75-foot offset)	180.5	3,280	43	11	1	3	1	233	7.1%	65	2.0%	21	130	4.0%	126	3.8%	3	-
	Alternate Route A	169.0	3,070	9	2	4	10	-	126	4.1%	84	2.7%	24	109	3.5%	39	1.3%	3	1
	Preferred Route Segment Alternative 1	34.7	642	5	2	1	2	1	16	2.5%	5	0.8%	5	39	6.1%	1	0.2%	-	-
	Comparable Portion of the Preferred Route	37.9	688	3	-	-	2	-	16	2.4%	16	2.4%	5	64	9.3%	7	1.0%	-	-
	Preferred Route Segment Alternative 2	1.5	28	-	1	-	-	-	-	0.0%	-	0.0%	-	-	0.0%	-	0.0%	-	-
	Preferred Route Segment Alternative 3	3.9	70	-	4	2	-	-	1	0.9%	-	0.0%	-	4	5.6%	-	-	1	-
	Comparable Portion of the Preferred Route	2.3	43	1	-	-	-	-	3	7.9%	-	0.0%	-	1	2.1%	-	-	1	-
	Preferred Route Segment Alternative 4	9.7	177	-	-	-	-	-	7	4.2%	1	0.6%	-	1	0.5%	-	0.0%	-	-
	Comparable Portion of the Preferred Route	7.9	143	8	-	-	-	-	4	3.0%	<1	0.2%	-	1	0.6%	-	0.0%	-	-
	Preferred Route Segment Alternative 5	3.9	72	-	-	-	-	-	4	5.2%	-	0.0%	-	2	2.4%	-	0.0%	-	-
	Comparable Portion of the Preferred Route	3.1	57	-	-	-	-	-	9	15.3%	-	0.0%	-	0	0.1%	-	0.0%	-	-

Assumptions:

1. Applicants are requesting a 150-foot wide Right-of-Way (ROW); 75 feet on either side of an alignment. Additional ROW may be required in special situations. ROW acres were calculated based on a width of 150 feet multiplied by the length of the route alignment.
2. Non-Residential Buildings or Structures were identified during field investigations and using 2006 and 2008 NAIP aerial photographs.
3. Archaeological and historical site information was obtained from the Minnesota State Historic Preservation Office.
4. Center Pivot Irrigation Systems were identified using 2006 and 2008 NAIP aerial photographs.
5. Aggregate Source sites were identified using the Mn/DOT Aggregate Source Information System (ASIS) database.
6. USDA Conservation Reserve Program Land data was aquired from the USDA Farm Service Agency.
7. 100-Year Floodplains were identified using FEMA Digital Flood Insurance Rate Maps (FIRMs). The number of poles within floodplains is preliminary, as the final number and placement of poles is dependent on final design and engineering.
8. Wooded Areas were identified using the USGS 2001 National Land Cover Dataset.
9. Population Centers were identified using municipality boundary data from the MDNR Data Deli and updated using municipal boundary maps provided by cities within the Project area.
10. Scenic byways were identified based on maps on the National Scenic Byways (www.byways.org) and Explore Minnesota (http://www.exploreminnesota.com/scenic-byways) websites.
11. State and County Trails were identified from data provided by the MDNR and counties within the Project area.
12. This table only includes the sensitivities or impacts that occur along at least one of the alignments.

APPENDIX F

Part F.2 Summary Comparison of Alignments

Part F.2 Summary Comparison of Alignments

Criteria or Consideration[1]	Preferred Route			Alternate Route A
	Maximum Interstate Corridor Sharing Alignment (5-Foot Offset)	Minimum Interstate Corridor Sharing Alignment (25-Foot Offset)	No Interstate Corridor Sharing Alignment (75-Foot Offset)	Alignment
	Area[2] or Number of Occurrences	Area[2] or Number of Occurrences	Area[2] or Number of Occurrences	Area[2] or Number of Occurrences
Agriculture				
Center Pivot Irrigation (count)	3	3	3	10
Number of Poles in Agricultural Land (count)	832	832	840	841
Permanent Agricultural Impacts (acres)	19	19	20	20
Agricultural Zoning or Land Use (acres)	2,170	2,168	2,176	2,444
Special Protection Agricultural Zoning or Land Use (acres)	0	0	0	122
USDA Conservation Reserve Program Land (acres)	162	186	233	126
Cost Considerations				
Length (miles)	179.7	179.7	180.5	169.0
New Right-of-Way (Acres)	1,743	2,178	3,282	3,073
Environmental Sensitivities				
Aggregate Sources (count)	1	1	1	0
Archaeological Sites (count)	11	11	11	2
Historical Sites (count)	1	1	1	4
Minnesota County Biological Survey Sites of Biosignificance (acres)	20	20	20	32
Minnesota County Biological Survey Right-of-Way Prairies (count)	0	1	1	5
Lakes (acres)	20	23	31	6
Minnesota Land Trust Easements (acres)	3	3	4	0
MDNR Wildlife Management Areas (acres)	0	0	0	12
Minnesota Restorable Wetlands (acres)	194	207	204	255
Native Plant Communities (acres)	7	7	7	13
NWI Wetlands (Acres)	231	248	288	250
NWI Wetlands, Poles in (count)	37	39	34	35
Recreational / Open Space / Park Zoning or Land Use (acres)	190	190	202	128
Scenic Byways Crossed or Paralleled (count)	3	3	3	3
Stream Crossings (count)	97	97	99	124

Criteria or Consideration[1]	Preferred Route			Alternate Route A
	Maximum Interstate Corridor Sharing Alignment (5-Foot Offset)	Minimum Interstate Corridor Sharing Alignment (25-Foot Offset)	No Interstate Corridor Sharing Alignment (75-Foot Offset)	Alignment
	Area[2] or Number of Occurrences	Area[2] or Number of Occurrences	Area[2] or Number of Occurrences	Area[2] or Number of Occurrences
Stream Crossings, PWI (count)	35	35	35	32
Trail Crossings, County and State (count)	0	0	0	1
USFWS Conservation Easements (acres)	58	62	70	15
Wooded Areas	115	119	130	109
Residential Sensitivities				
Population Centers (acres)	137	134	126	39
Residential Zoning or Land Use (acres)	210	213	211	211
Residential Structures 0 – 75 feet from Alignment Centerline (count)	0	0	0	0
Residential Structures 75 - 150 feet from Alignment Centerline (count)	31	31	32	36
Residential Structures 150 - 300 feet from Alignment Centerline (count)	87	88	86	102
Residential Structures 300 - 500 feet from Alignment Centerline (count)	69	71	71	87
Residential Structures 0 - 500 feet from Alignment Centerline (count)	187	190	189	225
Residential Structures within 500 feet of Alignment Centerline per Mile (count)	1.0	1.1	1.1	1.3
Other Sensitivities or Considerations				
Commercial / Business / Institutional / Public Zoning or Land Use (acres)	64	64	66	25
Floodplain (acres)	63	64	65	84
Industrial Zoning or Land Use (acres)	51	47	38	17
MN Rule 7849.5910 (h) and (j) (Corridor Sharing Percentage)	98%	98%	98%	97%
Non-Residential Buildings or Structures 0 – 75 feet from Alignment Centerline (count)	35	40	43	9

[1]Criteria included in this table do not compromise the comprehensive list of siting criteria that has been used for the Fargo to St. Cloud Project. In most cases, criteria that were not included here were excluded because they have no occurrence as it relates to the various alignments.
[2]Area of study for the purposes of this comparative analysis is a 150-foot corridor centered on each alignment respectively. 'Area' or 'acres' or 'acreage' = acres traversed by the 150-foot corridor.