

**Appendix D:
Route Segment Descriptions**

This page intentionally left blank.

Table D-1. Route A Segments

Segment ID	Length (Miles)	Description
S001	0.5	Leaves the Center Substation and heads northeast cross country and ends at 33rd Ave SW.
S002	7.0	Segment follows half-section lines and crosses pasture land west to east for approximately 7 miles. Crosses State Highway 25.
S005	5.5	Heads north following the half-section lines for approximately 5.5 miles approximately 0.5 miles west of State Highway 41. Crosses a 400 kV transmission line, 9 th St SW, Painted Woods Creek.
S007	0.5	Heads east parallel 12 th St NE for 0.5 miles.
S009	6.3	Heads north cross country for approximately 1.3 miles and turns east for approximately 2.1 miles running parallel and crossing State Hwy 41. Segment turns north and is parallel on the east side of State Hwy 41 for approximately 2.9 miles. Segment crosses the McClusky Canal.
S013	6.0	Heads north cross country for approximately 6 miles and parallel to State Highway 41.
S015	1.0	Heads east south of 3 rd Ave NW parallel a 230 kV transmission line for approximately 1 mile.
S016	1.0	Heads east south of 3 rd Ave NW parallel a 230 kV transmission line for approximately 1 mile.
S022	26.6	Heads east cross country and following field lines for approximately 25.5 crossing the McClusky Canal and State Highway 14. Then heads north for approximately 1 mile parallel to State Highway 3.
S025	18.4	Heads north 1 mile, turns east for 15.5 miles crossing US Highway 52, continues north for 1.5 miles, and heads east for 0.4 miles.
S026	43.8	Heads east across the quarter section for 25.5 miles, turns south for 1.5 miles, turns east crossing the James River for 4 miles, turns south for 0.8 miles, continues east along section lines for approximately 12 miles crossing a railroad.
S032	5.5	Heads south for 3 miles following 4 th Street NE and turns east along 30 th Avenue NE for 2.5 miles.
S033	2.9	Heads east along 3 rd Street NE west of State Highway 20.
S035	3.5	Heads east along 3 rd Street NE east of State Highway 20.
S037	3.5	Heads east along 9 th Street NE.
S045	4.0	Heads east parallel 12 th St NE and cross country for 4 miles crossing the Sheyenne River.
S053	2.0	Heads north cross country for 1 mile and turns east following the half-section field lines for 1 mile.
S055	4.0	Heads east parallel to 12 th St NE for 4 miles crossing State Highway 45.
S061	2.3	Segment heads northeast for about 2.3 miles crossing 22 nd ST SW.
S063	1.5	Heads north following field lines for about 1.5 miles crossing an existing 345 kV transmission line and 292 nd Ave NW.
S064	1.0	Heads west to east following field lines and cross country for 1 mile.
S066	1.1	Heads north following half-section lines for 1.1 miles.

Segment ID	Length (Miles)	Description
S081	4.9	Heads north-south along the half-section 0.5 miles east of State Highway 32 for 4.9 miles.
S089	15.8	Heads east parallel 5th Avenue NE for 15.8 miles crossing the Goose River, BNSF Railroad, and State Highway 18.
S098	2.5	Heads north cross country and crosses the northwest portion of Yanktonai Lake.
S101	0.5	Heads north for 0.5 miles crossing an existing 41.6 kV line, State Highway 83 and Yanktonai Creek.
S106	1.0	Heads cross country north between 19 th Avenue SW and 17 th Avenue SW just north of State Highway 83.
S110	1.5	Heads east cross country for approximately 1.5 miles and crosses 17 th Ave SW and the DMVW railroad.
S112	4.0	Heads west to east cross country for approximately 4 miles and crosses 15 th Ave SW, 14 th Ave SW and 13 th Ave SW.
S114	1.5	Heads north cross country for approximately 1.5 miles and crosses 14 th .
S116	9.1	Heads cross country on a northeast diagonal for approximately 9.1 miles. Segment crosses State Highway 200, 41.6 kV line, 6 th St NW, 2 nd Ave SW and 9 th St NW.
S120	2.6	Heads east cross country between 10 th Street NE and 11 th Street NE for 2.6 miles.
S123	5.5	Heads north along 10 th Avenue NE for 3 miles and continues east along 12 th Street NE for 2.5 miles.
S129	7.6	Heads east along 12 th Street NE crossing State Highway 1.
S135	3.9	Heads cross country diagonally to the northwest for 3.9 miles with 0.5 miles within the City of Aneta. Segment ends south of Aneta.
S137	3.7	Heads cross country diagonally to the northeast for 3.7 miles crossing Goose Creek and State Highway 15.
S148	4.7	Heads northeast diagonally cross country for 4.7 miles.
S151	0.8	Heads north cross country for 0.8 miles.
S153	3.5	Heads north for 3.2 miles parallel to 19 th Street NE and turns east for 0.3 miles.
S156	6.0	Heads east cross country for 4.5 miles, turns north 0.5 miles, turns and continues east 1 mile north of 17 th Ave S.
S158	0.6	Heads east 0.6 miles cross country into the Prairie Substation.
S159	7.3	Heads east through quarter sections between 9 th Avenue NE and 8 th Avenue NE for 1.9 miles, turns northeast for 0.3 miles, and then continues east for 5.1 miles.
S160	0.6	Heads northeast on a diagonal cross country for approximately 0.6 miles and crosses 10 th St NE.
S163	2.7	Heads east for 1.5 miles parallel 5 th Avenue NE and heads north for 1.2 miles following half-section lines.
S164	1.9	Heads north for about 0.4 miles following half-section lines, turns east for 1.5 miles crossing 31 st St.

Table D-2. Route B Segments

Segment ID	Length (Miles)	Description
S001	0.5	Leaves the Center Substation and heads northeast cross country and ends at 33 rd Ave SW.
S002	7.0	Segment follows half-section lines and crosses pasture land west to east for approximately 7 miles. Crosses State Highway 25.
S005	5.5	Heads north following the half-section lines for approximately 5.5 miles approximately 0.5 miles west of State Highway 41. Crosses a 400 kV transmission line, 9 th St SW, Painted Woods Creek.
S009	6.3	Heads north cross country for approximately 1.3 miles and turns east for approximately 2.1 miles running parallel and crossing State Hwy 41. Segment turns north and is parallel on the east side of State Hwy 41 for approximately 2.9 miles. Segment crosses the McClusky Canal.
S013	6.0	Heads north cross country for approximately 6 miles and parallel to State Highway 41.
S015	1.0	Heads east south of 3 rd Ave NW parallel a 230 kV transmission line for approximately 1 mile.
S016	1.0	Heads east south of 3 rd Ave NW parallel a 230 kV transmission line for approximately 1 mile.
S019	6.0	Heads east cross country for approximately 6 miles and parallels 3 rd St NE crossing 5 th Ave NW, 2 nd Ave SW, and 1 st Ave NW.
S023	35.0	Heads east for approximately 19 miles parallel 2 nd Ste NE crossing State Highway 14 and parallels State Highway 200 for approximately 0.8 miles before turns north for 2 miles cross country. Then turns east for 5 miles, turns north for 1.5 miles parallel to 26 th Ave SE, and heads east cross country for 7.5 miles.
S028	32.9	Heads south following half-section lines for 4 miles just west of the Chaseley WPA and crossing State Highway 200, turns east along the quarter sections 1.5 miles south of State Highway 200 for 28.9 miles crossing Pipestone Creek.
S029	59.1	Heads south for 1 mile, continues east for 28 miles crossing gas pipeline, US Highway 52, heads north 1 miles, continues east 7 miles crossing State Highway 20, south 1 mile, east 2 miles, south 0.5 miles, east 6.5 miles parallel Center St, south 0.5 miles, continues east for 10.6 miles crossing State Highway 1. Then heads north for 1 mile southwest of Cooperstown.
S053	2.0	Heads north cross county for 1 mile and turns east following the half-section field lines for 1 mile.
S060	2.7	Heads east cross country for about 2.7 miles.
S062	1.0	Heads north cross country for approximately 0.4 miles and continues north east for approximately 0.2 miles crossing State Highway 1804 and continues north following field lines for 0.4 miles.
S063	1.5	Heads north following field lines for 1.5 miles crossing an existing 345 kV transmission line and 292 nd Ave NW.
S065	2.5	Heads north for 2.5 miles parallel 8 th St NW and 19 th Ave SW and following field lines.
S075	1.5	Heads east parallel to Center Street for 1.5 miles.
S084	33.0	Heads east parallel Center Street for 33 miles crossing State Highway 32, BNSF Railroad, and State Highway 18.
S088	10.2	Heads east parallel to Center St for 4.6 miles, turns north for 3.6 miles crossing the Goose River and parallel 150 th Ave NE. Heads 0.5 miles west and turns following half-section lines for 1.5 miles.
S091	18.1	Heads north-south following half-section line for 18.1 miles between 158 th Avenue NE and 160 th Avenue NE, west of Interstate 29.

Segment ID	Length (Miles)	Description
S095	8.5	Heads north 0.5 miles on the half-section line, turns east 1 mile on the half-section line and then turns north for 7 miles following the half-section line crossing State Highway 15, 0.5 miles west of the City of Thompson.
S096	3.0	Heads north-south between 55 th Street S and 14 th Street NE south west of Grand Forks on the half-section line for 3 miles.
S099	1.0	Heads west to east cross country for approximately 1 mile.
S101	0.5	Heads north for 0.5 miles crossing an existing 41.6 kV line, State Highway 83 and Yanktonai Creek.
S106	1.0	Heads cross country north between 19 th Avenue SW and 17 th Avenue SW just north of State Highway 83.
S110	1.5	Heads east cross country for approximately 1.5 miles and crosses 17 th Ave SW and the DMVW railroad.
S112	4.0	Heads west to east cross country for approximately 4 miles and crosses 15 th Ave SW, 14 th Ave SW and 13 th Ave SW.
S114	1.5	Heads north cross country for approximately 1.5 miles and crosses 14 th .
S117	1.0	Heads east parallel to 3 rd Street NE for 1 mile.
S119	2.0	Heads east for 1 mile crossing the McClusky Canal, and turns south along 2 nd Avenue NE for 1 mile.
S131	1.5	Heads north-south for 1.5 miles on the half-section line between 116 th Avenue NE and 117 th Avenue NE.
S132	4.1	Heads east parallel State Highway 200 and 230 kV transmission line crossing the Sheyenne River.
S133	2.0	Heads north-south on the half-section line between 121 st Avenue NE and 120 th Ave NE for 2 miles. North end starts at State Highway 200 and the segment ends at Center Street to the south crossing 1 st St NE.
S157	0.7	Heads north 0.7 miles on the half-section line 0.5 miles west of Grand Forks.
S158	0.6	Heads east 0.6 miles cross country into the Prairie Substation.
S190	1.7	Heads east crossing the railroad and the Missouri River for 1.7 miles.

Table D-3. Route C Segments

Segment ID	Length (Miles)	Description
S001	0.5	Leaves the Center Substation and heads northeast cross country and ends at 33 rd Ave SW.
S003	15.2	Segment runs cross country and following field lines north for approximately 2.5 miles and crosses 18 th St SW. Then heads east near an existing wind farm following field lines for approximately 7.6 miles. Heading east the Route crosses 28 th Ave SW, an existing 345 kV transmission line. The Route turns northeast for approximately 0.6 miles crossing State Highway 1806 and railroad tracks and continues northeast across the Missouri River for 1.5 miles. Then the Route turns east running cross county for approximately 3 miles crossing State Highway 1804.
S006	11.7	Heads north cross country for approximately 4.5 miles crossing Painted Woods Creek and existing 400 kV transmission line. Segment heads northeast on a diagonal for approximately 6.4 miles crossing a 230 kV transmission line, 7 th St SW, 10 ½ Ave SW, and 4 th St SW. Then heads north for approximately 0.8 miles and crosses the McClusky Canal.
S007	0.5	Heads east parallel 12 th St NE for 0.5 miles.
S012	6.0	Heads north following section lines for approximately 6 miles parallel to 10 th Ave SW.
S015	1.0	Heads east south of 3 rd Ave NW parallel a 230 kV transmission line for approximately 1 mile.
S016	1.0	Heads east south of 3 rd Ave NW parallel a 230 kV transmission line for approximately 1 mile.
S019	6.0	Heads east cross country for approximately 6 miles and parallels 3 rd St NE crossing 5 th Ave NW, 2 nd Ave SW, and 1 st Ave NW.
S023	35.0	Heads east for approximately 19 miles parallel 2 nd Ste NE crossing State Highway 14 and parallels State Highway 200 for approximately 0.8 miles before turns north for 2 miles cross country. Then turns east for 5 miles, turns north for 1.5 miles parallel to 26 th Ave SE, and heads east cross country for 7.5 miles.
S024	13.4	Heads east 0.5 miles, turns north 0.5 miles, heads east parallel 6 th Street SE for 11 miles crossing US Highway 52, and then turns north for 1.4 miles.
S031	50.3	Heads east for 31 miles between 8 th Street NE and 7 th Street NE crossing the railroad and then turns north for 2 miles along State Highway 20.
S035	3.5	Heads east along 3 rd Street NE east of State Highway 20.
S036	7.0	Heads south for 0.5 miles, turns east along the quarter section between 9 th street NE and 8 th Street NE for 6 miles, and turns north for 0.5 miles.
S045	4.0	Heads east parallel 12 th St NE and cross country for 4 miles crossing the Sheyenne River.
S054	2.0	Segment heads north for about 0.5 miles crossing State Highway 25 and continues north parallel to field lines for 1.5 miles.
S055	4.0	Heads east parallel to 12 th St NE for 4 miles crossing State Highway 45.
S071	6.5	Heads east along 12 th Street NE south of Sharon.
S082	7.5	Heads north-south along 127 th Avenue NE.
S090	16.5	Heads east through the quarter section between 2 nd Avenue NE and 1 st Avenue NE crossing the railroad line and Goose River.
S092	4.5	Heads north-south between 17 th Street NE and 16 th Street on the half-section line for 4.5 miles.
S094	3.0	Heads north between 16 th Street and 17 th Street NE on the half-section line for 3 miles.
S096	3.0	Heads north-south between 55 th Street S and 14 th Street NE south west of Grand Forks on the half-section line for 3 miles.
S100	0.5	Heads north cross country for 0.5 miles.

Segment ID	Length (Miles)	Description
S103	1.0	Segment follows field lines and heads cross country west to east for 1 mile crossing State Highway 83 and Yankonai Creek.
S105	1.5	Heads east cross country for approximately 1.5 miles crossing a 230 kV transmission line and a gas pipeline.
S108	1.0	Heads north cross country for approximately 1 mile and crosses 15 th St SW and the DMVW railroad.
S113	1.5	Heads north cross country west of 18 th Avenue SW for approximately 1.5 miles.
S117	1.0	Heads east parallel to 3 rd Street NE for 1 mile.
S119	2.0	Heads east for 1 mile crossing the McClusky Canal, and turns south along 2 nd Avenue NE for 1 mile.
S125	1.9	Heads north-south between 102 nd Avenue NE and 103 rd Avenue NE west of Binford.
S128	1.1	Heads north-south between 102 nd Avenue NE and 103 rd Avenue NE.
S129	7.6	Heads east along 12 th Street NE crossing State Highway 1.
S146	17.5	Heads east 4 miles along the quarter section, turns north 3 miles along the quarter section between 26 th and 27 th Street NE, continues east 10 miles north of 4 th Avenue NE, and turns north 0.5 miles.
S154	3.0	Heads east between 13 th Avenue NE and 12 th Avenue on the half-section line for 3 miles. Serves as an alternate for Routes B and C.
S157	0.7	Heads north 0.7 miles on the half-section line 0.5 miles west of Grand Forks.
S158	0.6	Heads east 0.6 miles cross country into the Prairie Substation.

Table D-4. All Segments

Segment ID	Length (Miles)	Description
S001	0.5	Leaves the Center Substation and heads northeast cross country and ends at 33 rd Ave SW.
S002	7.0	Segment follows half-section lines and crosses pasture land west to east for approximately 7 miles. Crosses State Highway 25.
S003	15.2	Segment runs cross country and following field lines north for approximately 2.5 miles and crosses 18 th St SW. Then heads east near an existing wind farm following field lines for approximately 7.6 miles. Heading east the Route crosses 28 th Ave SW, an existing 345 kV transmission line. The Route turns northeast for approximately 0.6 miles crossing State Highway 1806 and railroad tracks and continues northeast across the Missouri River for 1.5 miles. Then the segment turns east running cross country for approximately 3 miles crossing State Highway 1804.
S004	1.0	Heads north cross country for approximately 1 mile. The segment parallels a 41.6 kV line for approximately 0.5 miles.
S005	5.5	Heads north following the half-section lines for approximately 5.5 miles approximately 0.5 miles west of State Highway 41. Crosses a 400 kV transmission line, 9 th St SW, and Painted Woods Creek.
S006	11.7	Heads north cross country for approximately 4.5 miles crossing Painted Woods Creek and an existing 400 kV transmission line. Segment heads northeast on a diagonal for approximately 6.4 miles crossing a 230 kV transmission line, 7 th St SW, 10 ½ Ave SW, and 4 th St SW. Then heads north for approximately 0.8 miles crossing the McClusky Canal.
S007	0.5	Heads east parallel to 12 th St NE for 0.5 miles.
S008	7.3	Heads east following the half-section line for approximately 3 miles crossing State Highway 41. Segment then heads north cross country for approximately 4.3 miles crossing a 230 kV transmission line, 5 th St SW and the McClusky Canal. Serves as an eastern crossing of the McClusky Canal.
S009	6.3	Heads north cross country for approximately 1.3 miles and turns east for approximately 2.1 miles running parallel and crossing State Highway 41. Segment turns north and is parallel on the east side of State Highway 41 for approximately 2.9 miles. Segment crosses the McClusky Canal.
S010	1.5	Heads west to east cross country for approximately 1.5 miles. Serves as crossover for A/B and C. Also provides crossover to Segment Alternative A11.
S011	1.0	Heads east-west following a section line for approximately 1 mile. Serves as crossover from A/B to eastern alternatives.
S012	6.0	Heads north following section lines for approximately 6 miles parallel to 10 th Ave SW.
S013	6.0	Heads north cross country for approximately 6 miles and parallel to State Highway 41.
S014	6.0	Heads north cross country for approximately 6 miles crossing 1 st St SW and Center St. Serves as eastern alternative to Routes A, B, and C.
S015	1.0	Heads east south of 3 rd Ave NW parallel a 230 kV transmission line for approximately 1 mile.
S016	1.0	Heads east south of 3 rd Ave NW parallel a 230 kV transmission line for approximately 1 mile.
S017	7.0	Heads east cross country for approximately 1 mile and then heads north cross country for approximately 6 miles crossing Center St. Serves as eastern alternative to Routes A, B, and C.
S018	18.9	Heads north for approximately 9 miles parallel to 5 th Ave NW and turns east for approximately 9 miles.
S019	6.0	Heads east cross country for approximately 6 miles and parallels 3 rd St NE crossing 5 th Ave NW, 2 nd Ave SW, and 1 st Ave NW.

Segment ID	Length (Miles)	Description
S020	25.9	Turns east for 25.9 miles, following 11 St NE and section lines. Crosses the McClusky Canal and State Highway 14. Serves primarily as a northern alternative to Route A, but could be used as part of Route B and C.
S021	0.8	North and south segment that runs cross country for approximately 0.8 miles.
S022	26.6	Heads east cross country and following field lines for approximately 25.5 crossing the McClusky Canal and State Highway 14. Then heads north for approximately 1 mile parallel to State Highway 3.
S023	35.0	Heads east for approximately 19 miles parallel 2 nd Ste NE crossing State Highway 14 and parallels State Highway 200 for approximately 0.8 miles before turning north for 2 miles cross country. Then turns east for 5 miles, turns north for 1.5 miles parallel to 26 th Ave SE, and heads east cross country for 7.5 miles.
S024	13.4	Heads east for 0.5 miles, turns north 0.5 miles, heads east parallel 6 th Street SE for 11 miles crossing US Highway 52, and then turns north for 1.4 miles.
S025	18.4	Heads north for 1 mile, turns east for 15.5 miles crossing US Highway 52, continues north for 1.5 miles, and heads east for 0.4 miles.
S026	43.8	Heads east across the quarter section for 25.5 miles, turns south for 1.5 miles, turns east crossing the James River for 4 miles, turns south for 0.8 miles, continues east along section lines for approximately 12 miles crossing a railway.
S027	1.9	A north-south segment along 116.5 Ave NE on the westside of the Sheyenne River.
S028	32.9	Heads south following half-section lines for 4 miles just west of the Chaseley WPA and crossing State Highway 200, turns east along the quarter section lines 1.5 miles south of State Highway 200 for 28.9 miles crossing Pipestone Creek.
S029	59.1	Heads south for 1 mile, continues east for 28 miles crossing gas pipeline, US Highway 52, heads north for 1 miles, continues east 7 miles crossing State Highway 20, south for 1 mile, east 2 miles, south 0.5 miles, east 6.5 miles parallel Center St, south 0.5 miles, continues east for 10.6 miles crossing State Highway 1. Then heads north for 1 mile southwest of Cooperstown.
S030	58.1	Heads east for 7.5 miles, turns north for 1.5 miles, turns east to follow State Highway 200/1 for 50.6 miles.
S031	50.3	Heads east for 31 miles between 8 th Street NE and 7 th Street NE crossing the railway and then turns north for 2 miles along State Highway 20.
S032	5.5	Heads south for 3 miles following 4 th Street NE and turns east along 30 th Avenue NE for 2.5 miles.
S033	2.9	Heads east along 3 rd Street NE west of State Highway 20.
S034	5.5	Head east 2.5 miles east along Eddy/Foster County line, then south for 3 miles. Serves as an alternate point of inflection for Route A.
S035	3.5	Heads east along 3 rd Street NE east of State Highway 20.
S036	7.0	Heads south for 0.5 miles, turns east along the quarter section between 9 th street NE and 8 th Street NE for 6 miles, and turns north for 0.5 miles.
S037	3.5	Heads east along 9 th Street NE.
S038	5.8	An east-west segment on the north side of Lake Jessie along State Highway 65.
S039	3.9	Turns northeast for 0.3 miles cross country, then parallels 11 th St NE and section line for 3.6 miles. Serves as a southern alternative for Route A and C.
S040	2.0	Heads north following half-section line for 2 miles.
S041	3.0	Heads south for 0.5 miles and then turns east for 2.5 miles following half-section line.

Segment ID	Length (Miles)	Description
S042	3.5	An east-west segment that is parallel to State Highway 65.
S043	7.5	An east-west segment that is parallel to State Highways 65 and 45 for approximately 5 miles and crosses the Sheyenne River.
S044	4.4	Heads north parallel 113 th Ave NE for 1 mile, then turns east for 3.4 miles following section lines crossing the Sheyenne River.
S045	4.0	Heads east parallel 12 th St NE and cross country for 4 miles crossing the Sheyenne River.
S046	5.5	Runs north-south and then east-west along quarter-section lines. North of the Ronningen WPA and crosses State Highway 45.
S047	1.0	Heads north parallel to 116 th Ave NE for about 1 mile.
S048	4.5	Heads east along a quarter-section line across the Sheyenne River to the Griggs/Steele County line, then south for 1 mile along the county line, the east for 1 mile along Center Street.
S049	6.0	Heads north parallel 45 th Ave SE. Serves as a crossover between Routes A and C.
S050	6.8	Heads north parallel Center Ave for approximately 6.8 miles. Segment crosses State Highway 200, 5 th St NE and 9 th St NW. Serves as crossover from Routes B/C to Route A.
S051	1.6	Heads east following half-section line for 1 mile, then turns north parallel State Highway 45 for 0.6 miles.
S052	11.5	Segment heads west to east cross country for approximately 11.5 miles and crosses the Missouri River.
S053	2.0	Heads north cross county for 1 mile and turns east following the half-section field lines for 1 mile.
S054	2.0	Segment heads north for about 0.5 miles, crossing State Highway 25 and continues north parallel to field lines for 1.5 miles.
S055	4.0	Heads east parallel to 12 th St NE for 4 miles crossing State Highway 45.
S056	4.0	Heads east cross country for 4 miles, crossing State Highway 45.
S057	4.2	Segments heads east-west along a quarter-section line, then diagonally northeast cross-country crossing the Sheyenne River to 6 th St NE where it heads east-west crossing Horse Hill.
S058	5.0	Heads north-south and then west-east crossing the Sheyenne River along quarter-section lines.
S059	5.7	Diagonals southeast cross county for 1.6 miles then heads east for 2.6 miles, turns northeast for 0.4 mile width crossing of Missouri River then turns north for 1.1 miles. Serves as an alternate Missouri River crossing for Route B.
S060	2.7	Heads east cross country for about 2.7 miles.
S061	2.3	Segment heads northeast for approximately 2.3 miles crossing 22 nd ST SW.
S062	1.0	Heads north cross country for approximately 0.4 miles and continues north east for approximately 0.2 miles crossing State Highway 1804 and continues north following field lines for 0.4 miles.
S063	1.5	Heads north following field lines for 1.5 miles crossing an existing 345 kV transmission line and 292 nd Ave NW.
S064	1.0	Heads west to east following field lines and cross county for 1 mile.
S065	2.5	Heads north for 2.5 miles parallel 8 th St NW and 19 th Ave SW and following field lines.
S066	1.1	Heads north following half-section lines for 1.1 miles.
S067	2.0	Heads north cross country along half-section line. Serves primarily as crossover that joins Segment Alternative A22 to Routes A and C.
S068	1.0	Heads north-south cross country along half-section line for 1 mile.

Segment ID	Length (Miles)	Description
S069	1.0	Heads north-south along a quarter-section line about 0.5 miles east of the Griggs/Steele County Line.
S070	4.5	Heads north cross country along half section line for 4.5 miles crossing a 69 kV transmission line. Serves as part of a northern crossover for Route B. Associated with S074, S076, and S077.
S071	6.5	Heads east along 12 th Street NE south of Sharon.
S072	1.5	Follows half-section line east-west for 1.5 miles.
S073	1.5	Runs east-west along section lines along the same line as 8 th St NE in Steele County.
S074	1.5	Follows half section line east-west for 1.5 miles. Serves as part of a northern crossover for Route B.
S075	1.5	Heads east parallel to Center Street for 1.5 miles.
S076	1.0	Follows section line north-south for 1 mile. Serves as part of a northern crossover for Route B.
S077	1.5	Follows section line north-south for 1.5 miles. Serves as part of a northern crossover for Route B.
S078	3.5	Heads north-south along section line and 122 Ave NE parallel to a gas pipelines.
S079	3.0	Heads north-south along section line parallel 122nd Ave NE in Steele County.
S080	5.0	Heads east for 5 miles, generally following 9 th St NE crossing BNSF railway. Serves as part of a southern alternative for Route A and C or northern alternative for Route B.
S081	4.9	Heads north-south along the half-section 0.5 miles east of State Highway 32 for 4.9 miles.
S082	7.5	Heads north-south along 127 th Avenue NE.
S083	33.0	Runs east-west along 3 rd St NE north of Route C.
S084	33.0	Heads east parallel Center Street for 33 miles crossing State Highway 32, BNSF Railroad, and State Highway 18.
S085	4.0	Heads east-west along quarter-section lines between 19 th St NE and 20 th St NE in Nelson County and 1 st Ave NE and 2 nd Ave NE in Grand Forks County.
S086	3.0	Heads north-south along section lines and 155 th Ave NE in agricultural land.
S087	6.4	Heads north along section lines and 155 th Ave NE in agricultural land then east on 5 th St NE.
S088	10.2	Heads east parallel Center St for 4.6 miles, turns north for 3.6 miles crossing the Goose River and parallel 150 th Ave NE. Heads 0.5 miles west and turns following half-section lines for 1.5 miles.
S089	15.8	Heads east parallel to 5 th Avenue NE for 15.8 miles crossing the Goose River, BNSF Railroad, and State Highway 18.
S090	16.5	Heads east through the quarter section between 2 nd Avenue NE and 1 st Avenue NE crossing the railroad line and Goose River.
S091	18.1	Heads north-south following half-section line for 18.1 miles between 158 th Avenue NE and 160 th Avenue NE, west of Interstate 29.
S092	4.5	Heads north-south between 17 th Street NE and 16 th Street on the half-section line for 4.5 miles.
S093	2.0	Heads east-west parallel 5 th Ave NE. Serves as a crossover between Route B and C.
S094	3.0	Heads north between 16 th Street and 17 th Street NE on the half-section line for 3 miles.
S095	8.5	Heads north 0.5 miles on the half-section line, turns east 1 mile on the half-section line and then turns north for 7 miles following the half-section line crossing State Highway 15, 0.5 miles west of the City of Thompson.

Segment ID	Length (Miles)	Description
S096	3.0	Heads north-south between 55 th Street S and 14 th Street NE south west of Grand Forks on the half-section line for 3 miles.
S097	3.5	Heads east cross country for approximately 1.5 miles crossing 41 st St NW and then heads north cross country for approximately 2 miles crossing 18 th St SW, 230 kV WAPA transmission line, gas pipeline. The segment parallels an existing 41.6 kV line for the northern 0.4 miles.
S098	2.5	Heads north cross country and crosses the northwest portion of Yanktonai Lake.
S099	1.0	Heads west to east cross country for approximately 1 mile.
S100	0.5	Heads north cross country for 0.5 miles.
S101	0.5	Heads north for 0.5 miles crossing an existing 41.6 kV line, State Highway 83 and Yanktonai Creek.
S102	5.0	Heads east cross country and following field lines for approximately 4 miles and turns to head north for approximately 1 mile cross country. Crosses the DMVW railroad tracks.
S103	1.0	Segment follows field lines and heads cross country west to east for 1 mile crossing State Highway 83 and Yankonai Creek.
S104	1.4	Heads northeast on a diagonal cross country crossings a 41 kV transmission line, Hwy 83, field irrigation system, Yanktonai Creek, 230 kV WAPA transmission line and a pipeline.
S105	1.5	Heads east cross country for approximately 1.5 miles crossing a 230 kV transmission line and a gas pipeline.
S106	1.0	Heads cross country north between 19 th Avenue SW and 17 th Avenue SW just north of State Highway 83.
S107	4.0	Heads east cross country for approximately 4 miles and crosses the DMVW railroad tracks and 14 th Ave SW.
S108	1.0	Heads north cross country for approximately 1 mile and crosses 15 th St SW and the DMVW railroad.
S109	1.0	Heads north for approximately 1 mile cross country and crosses 15 th St SW.
S110	1.5	Heads east cross country for approximately 1.5 miles and crosses 17 th Ave SW and the DMVW railroad.
S111	2.1	Heads northeast on a diagonal cross country crossing the DMVW railroad. Serves as potential shorter alignment for Routes A, B, and C.
S112	4.0	Heads west to east cross country for approximately 4 miles and crosses 15 th Ave SW, 14 th Ave SW and 13 th Ave SW.
S113	1.5	Heads north cross country west of 18 th Avenue SW for approximately 1.5 miles.
S114	1.5	Heads north cross country for approximately 1.5 miles and crosses 14 th .
S115	4.0	Heads east along section line and 13 th St SW for 4 miles. Serves as a crossover for alternative A05.
S116	9.1	Heads cross country on a northeast diagonal for approximately 9.1 miles. Segment crosses State Highway 200, 41.6 kV line, 6 th St NW, 2 nd Ave SW and 9 th St NW.
S117	1.0	Heads east parallel to 3 rd Street NE for 1 mile.
S118	2.0	Heads south 1 mile along 1 st Ave NE and then east 1 mile along 2 nd St NE, crossing the McClusky Canal.
S119	2.0	Heads east for 1 mile crossing the McClusky Canal, and turns south along 2 nd Avenue NE for 1 mile.
S120	2.6	Heads east cross country between 10 th Street NE and 11 th Street NE for 2.6 miles.

Segment ID	Length (Miles)	Description
S121	3.2	Heads northeast for 1.2 miles then turns east for 2 miles parallel 11 th St NW and crossing 1 st Ave NE and 2 nd Ave NE. Serves primarily as a northern alternative to Route A, but could be used as part of Route B and C. Associated with S020.
S122	2.5	Runs east-west along 9 th street NE in Griggs County.
S123	5.5	Heads north along 10 th Avenue NE for 3 miles and continues east along 12 th Street NE for 2.5 miles. Serves as an alternative for Route C.
S124	2.4	Heads east-west along 9 th St NE and north-south parallel to State Highway 1.
S125	1.9	Heads north-south between 102 nd Avenue NE and 103 rd Avenue NE west of Binford. Serves as an alternate for Route C.
S126	2.0	Heads diagonal northeast-southwest on a cross country alignment north of State Highway 65 and across Long Lake.
S127	3.2	Heads east cross country for 3.2 miles crossing 103 ½ Ave NE and State Highway 1. Serves as a southern alternative for Route A and C.
S128	1.1	Heads north-south between 102 nd Avenue NE and 103 rd Avenue NE.
S129	7.6	Heads east along 12 th Street NE crossing State Highway 1. Serves as an alternate for Route C.
S130	1.5	Heads east following section lines for 0.5 miles then turns north parallel 110 th Ave NE for 1 mile.
S131	1.5	Heads north-south for 1.5 miles on the half-section line between 116 th Avenue NE and 117 th Avenue NE. Serves as an alternate for Route B.
S132	4.1	Heads east parallel State Highway 200 and 230 kV transmission line crossing the Sheyenne River. Serves as an alternate for Route B.
S133	2.0	Heads north-south on the half-section line between 121 st Avenue NE and 120 th Ave NE for 2 miles. North end starts at State Highway 200 and the segment ends at Center Street to the south crossing 1 st St NE.
S134	3.8	Heads east for 2.3 miles parallel 18 th St NE/Steele-Nelson County line, turns 1.5 miles north parallel 124 th Ave NE. Serves as alternate to a Route A diagonal.
S135	3.9	Heads cross country diagonally to the northwest for 3.9 miles with 0.5 miles within the City of Aneta. Segment ends south of Aneta.
S136	1.6	Heads 1.6 miles north parallel 124 th Ave NE. Serves as alternate to a Route A diagonal. Associated with S134.
S137	3.7	Heads cross country diagonally to the northeast for 3.7 miles crossing Goose Creek and State Highway 15. Serves as an alternate to Route A.
S138	5.2	Heads 2.9 miles north parallel 124 th Ave NE crossing State Highway 15, turns 2.3 miles parallel 24 th St NE crossing Goose Creek. Serves as alternate to a Route A diagonal.
S139	3.0	Runs north-south parallel to State Highway 32.
S140	10.5	Heads east for 10.5 miles, generally following 9 th St NE crossing 230kV line and Middle Branch Goose River. Serves as part of a southern alternative for Route A and C or northern alternative for Route B.
S141	6.0	Heads east for 0.5 miles, generally following 9 th St NE. Turns north for 3 miles following 138 th Ave NE, jogs east along 12 St NE for 1 mile. Turns north along 139 th Ave NE for 3 miles crossing Beaver Creek Serves as part of a southern alternative for Route A and C or northern alternative for Route B.
S142	6.0	Runs north-south for about 5 miles along a quarter-section line between 137 th Ave NE and 138 th Ave NE and east-west for 1 mile along a quarter-section line.

Segment ID	Length (Miles)	Description
S143	6.0	Heads east-west for about 4.5 miles along a quarter-section line between 13 th St NE and 14 th St NE then north-south for 1.5 miles along a quarter-section line between 143 rd Ave NE and 144 th Ave NE. Crosses the Goose River.
S144	6.0	Heads north along 139 th Ave NE for 1.5 miles crossing Goose River. Heads east for 4.5 miles along 15 th St NE. Serves as part of a southern alternative for Route A and C or northern alternative for Route B.
S145	4.5	Heads north for 4.5 miles cross country along half section line crossing 69 kV line and BNSF railroad. Serves as part of a southern alternative for Route A and C or northern alternative for Route B.
S146	17.5	Heads east 4 miles along the quarter section, turns north 3 miles along the quarter section between 26 th and 27 th Street NE, continues east 10 miles north of 4 th Avenue NE, and turns north .5 miles.
S147	3.4	Runs east-west along quarter-section lines between 8 th Ave NE and 9 th Ave NE.
S148	4.7	Heads northeast diagonally cross country for 4.7 miles.
S149	3.7	Runs east-west for about 0.2 miles, then north-south for about 1 mile along 19 th St NE and east-west for 2.5 miles along a quarter-section line between 9 th Ave NE and 10 th Ave NE.
S150	3.1	Runs north-south parallel to 19 th Street SE in Grand Forks County.
S151	0.8	Heads north cross country for 0.8 miles.
S152	3.5	Heads north-south along 19 th Street NE and turns west for 0.25 miles.
S153	3.5	Heads north for 3.2 miles parallel to 19 th Street NE and turns east for 0.3 miles. Serves as an alternative for Route A.
S154	3.0	Heads east between 13 th Avenue NE and 12 th Avenue on the half-section line for 3 miles. Serves as an alternate for Routes B and C.
S155	5.8	Runs north-south along quarter-section lines to the Western 230 kV line, then diagonal along the Western line, the east-west along a quarter-section line north of 15 th Ave NE.
S156	6.0	Heads east cross country for 4.5 miles, turns north 0.5 miles, turns and continues east 1 miles north of 17 th Ave S.
S157	0.7	Heads north 0.7 miles on the half-section line 0.5 miles west of Grand Forks.
S158	0.6	Heads east 0.6 miles cross country into the Prairie Substation.
S159	7.3	Heads east through quarter sections between 9 th Avenue NE and 8 th Avenue NE for 1.9 miles, turns northeast for 0.3 miles, and then continues east for 5.1 miles.
S160	0.6	Heads northeast on a diagonal cross country for approximately 0.6 miles and crosses 10 th St NE.
S161	0.5	Heads north along Center Ave. Serves as an alternative to a Route A diagonal.
S162	0.4	Heads east cross country for approximately 0.4 miles. Serves as an alternative to a Route A diagonal.
S163	2.7	Heads east for 1.5 miles parallel 5 th Avenue NE and heads north for 1.2 miles following half-section lines.
S164	1.9	Heads north for about 0.4 miles following half-section lines , turns east for 1.5 miles crossing 31 st St.
S165	1.9	Diagonals northeast cross country through cropland and tree rows for 1.9 miles. Serves as a shorter diagonal for Route A.
S166	1.2	Heads diagonally northeast for 1.2 miles crossing 31 st St.

Segment ID	Length (Miles)	Description
S166	1.9	Diagonals northeast cross country through cropland for 1.9 miles. Serves as a shorter diagonal for Route A.
S167	2.6	Diagonals northeast for 0.9 miles, then turns east for 1.7 miles including a 0.5 mile wide Missouri River crossing. Serves as an alternate Missouri River crossing for Route A.
S168	13.1	Heads 6.5 miles north along section line crossing the DMVW Railroad and the Painted Woods Creek and then diagonals northeast 6.6 miles cross country crossing an existing 400 kV and 230 kV transmission lines and the McClusky Canal. Serves as a western option.
S169	1.0	Heads west to east cross country for approximately 1 mile. Serves as crossover for alternative A07.
S170	6.9	Heads north along 11 th Ave SW and section lines for 6 miles then turns east cross country for approximately 0.9 miles. Serves as a western alternative to Routes A, B, and C.
S171	1.6	Diagonal northeast cross country segment through cropland for 1.6 miles crossing 32 nd Ave SW. Serves as an alternative to all Routes.
S172	8.7	Heads east along 23 rd St SW for about 8 miles crossing the Wilbur Boldt WMA and turns northeast cross country for 0.7 miles. Serves as an alternative to Routes A and B.
S173	2.6	Heads northeast cross country for 1.5 miles crossing the Sheyenne River and 115 th Ave NE. Turns north for 0.5 miles and then east parallel to 13 th St NE for 0.6 miles. Serves as an alternative to Routes A and C.
S174	1.2	Heads southeast crossing the Sheyenne River and then heads northeast crossing 115 th Ave NE. Serves as an alternative to all Routes.
S175	1.0	Heads east parallel to 8 th Ave NE for 1 mile. Serves as an alternative to Route A.
S176	0.5	Diagonal northeast cross country through cropland 0.5 miles. Serves as an alternative to all Routes.
S177	1.3	Heads east along the half-section line for 1.3 miles crossing 32 nd Ave SW. Serves as an alternative to all Routes.
S178	1.0	Heads north along the half-section line for 1 mile crossing 22 nd St SW. Serves as an alternative to Route C.
S179	2.1	Heads east for 2 miles crossing Sherk Creek, a railway, the Oliver/Burleigh County line, and the Missouri River. Turns northeast for 0.1 miles ending before State Highway 1804. Serves as an alternative to Route A.
S180	0.3	Heads north through agricultural/grassland for 0.3 miles. Serves as an alternative to Routes A and B.
S181	0.5	Heads east parallel to 3 rd St SW for 0.5 miles. Serves as an alternative to Route C.
S182	2.0	Heads east parallel to the section line for 2 miles ending south of the Gaub WPA. Serves as an alternative to Route C.
S183	4.5	Heads east parallel to 13 th St NE for 4.5 miles and serves as a alternative to Route A.
S184	1.1	Heads east parallel to the section line for 1.1 miles while crossing the Sheyenne River. Serves as an alternative to Routes A and C.
S185	0.9	Heads east parallel to the section line for 0.9 miles and serves as an alternative to Routes A and C.
S186	0.7	Diagonals northeast for 0.7 miles and serves as an alternative to Route A.

Segment ID	Length (Miles)	Description
S187	7.9	Heads east parallel to 8 th Ave SE for approximately 7 miles and then turns northeast for approximately 0.9 miles. Serves as a alternative to Route A.
S188	0.8	Heads north along the quarter section line for 0.8 miles. Serves as an alternative for segment alternatives S165 and S164.
S189	2.1	Heads northeast for approximately 0.5 miles and then turns east crossing the railroad and Missouri River for approximately 1 mile, turns north for approximately 0.6 miles. Serves as an alternative for Routes A and B.
S190	1.7	Heads east crossing the railroad and the Missouri River for 1.7 miles. Serves as an alternative for Route B.
S191	0.6	Heads northeast approximately 0.3 miles and then turns east for an additional 0.3 miles. Serves as an alternative for Routes A and B.

This page intentionally left blank.