Appendix B

Segment Calculations

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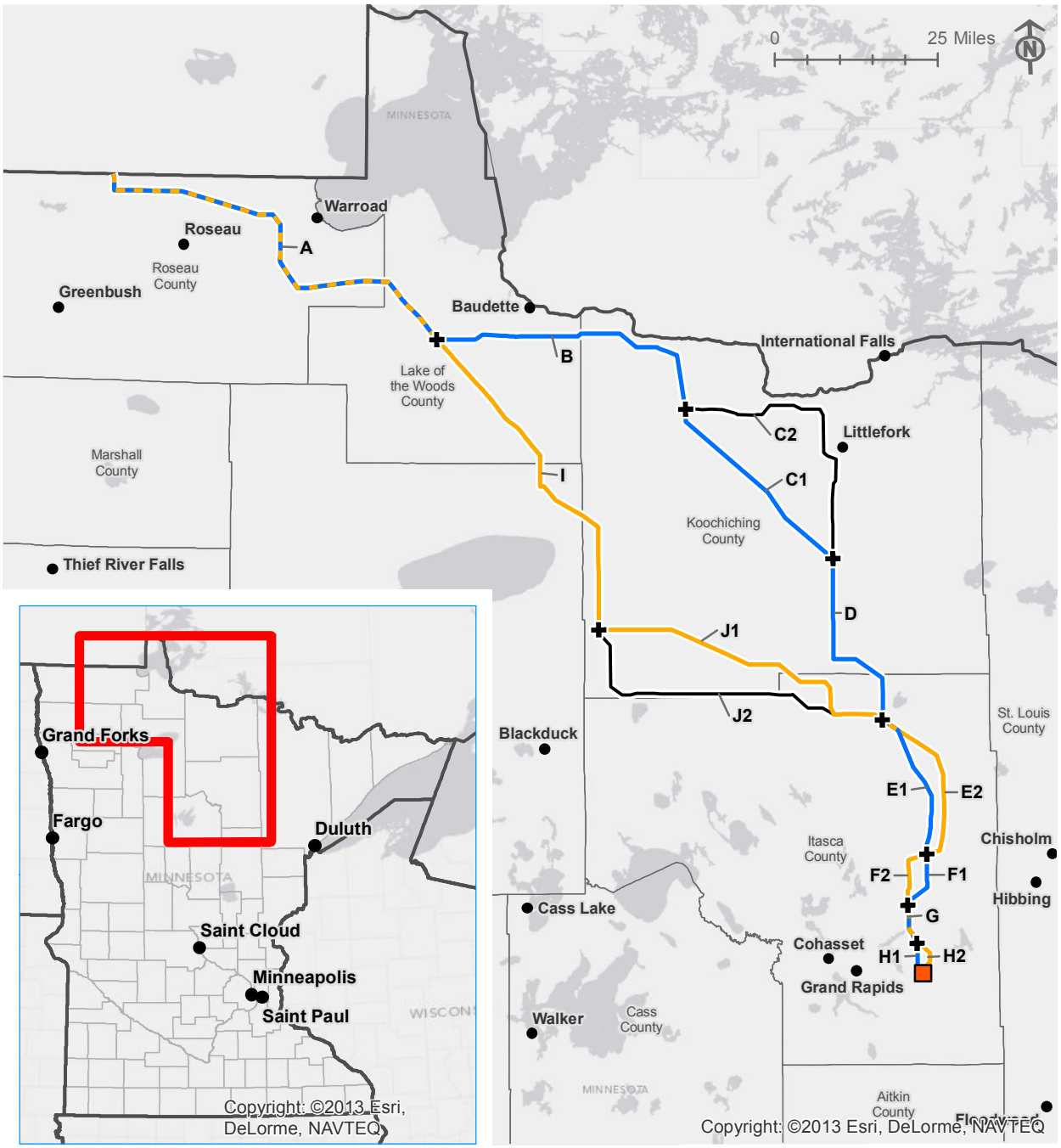
Route Segments

Appendix B



Legend

- Blue Route
- Orange Route
- Segment Option
- Segment Endpoint
- Blackberry 500 kV Substation
- State Boundary
- County Boundary

Sources: ESRI,NLCD

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Segments	6.2 Soils			6.4 Vegetation															
				GAP Level 4 Landcover Types															
	Alfisols	Histosols	Entisols	Aspen and Birch	Balsam fir mix	Barren	Black ash	Broadleaf sedge & Cattail	Bur and white oak	Cropland	Floating aquatic	Grassland	Jack pine	Lowland black spruce	Lowland coniferous and deciduous mix	Lowland deciduous shrub	Lowland evergreen shrub	Lowland northern white-cedar	Maple & basswood
A	273	542	770	206	2	0	2	104	0	326	0	160	4	60	0	454	3	9	0
B	437	671	25	140	0	1	6	32	0	74	0	77	0	143	0	276	90	56	0
C1	195	602	0	138	1	4	16	0	0	6	0	0	5	212	0	112	0	135	0
C2	840	276	0	192	1	19	23	0	0	3	0	113	4	200	0	314	0	50	0
D	588	145	0	250	10	15	19	1	0	3	1	32	16	65	0	142	0	21	0
E1	98	86	381	140	30	0	6	0	0	0	1	7	41	80	0	71	0	34	2
E2	187	59	404	181	58	0	21	0	0	0	2	6	48	43	0	83	0	28	16
F1	180	0	34	76	16	0	4	0	0	1	0	10	1	0	0	33	0	0	0
F2	141	0	91	69	4	0	8	0	0	6	0	4	0	0	0	48	0	0	1
G	162	0	0	77	4	0	4	0	0	0	0	0	0	0	0	13	0	0	20
H1	133	0	0	68	1	0	10	0	0	0	0	2	0	15	0	14	0	1	3
H2	147	0	0	74	1	0	1	0	0	0	0	21	0	20	0	10	0	1	3
I	414	810	121	182	0	0	13	73	0	2	0	64	0	96	0	393	31	142	0
J1	944	268	0	584	12	3	47	1	4	16	0	43	9	82	0	127	0	111	11
J2	1,251	33	0	597	3	4	36	10	0	8	0	60	3	40	7	31	100	42	26

Segments	6.4 Vegetation (cont.)																		
	GAP Level 4 Landcover Types (cont.)																Greefield Landcover		
	Red oak	Red pine	Red and white pine	Sedge meadow	Stagnant black spruce	Stagnant coniferous	Stagnant northern white-cedar	Stagnant tamarack	Tamarack	Transportation	Upland deciduous	Upland northern white-cedar	Upland shrub	Water	White pine mix	White spruce	Non-Forested Length (miles)	Forested ength (miles)	Total Greefield Length (miles) & Percent
A	0	2	0	180	0	0	0	1	52	0	0	0	23	0	0	0	16.2	3.5	19.7 (30%)
B	0	1	0	89	70	0	0	10	63	0	0	0	3	2	0	0	4.8	11.7	16.5 (35%)
C1	0	4	0	11	11	0	0	16	103	0	0	2	1	16	1	3	6.1	26.8	32.8 (100%)
C2	0	1	0	64	37	0	7	10	44	0	0	0	27	8	0	0	4	1.1	5.1 (11%)
D	0	15	0	36	8	0	6	5	26	0	0	8	26	15	5	1	4.9	12.9	17.8 (59%)
E1	0	6	0	0	11	1	4	18	57	0	0	0	50	4	0	0	5.6	17.8	23.3 (88%)
E2	1	10	0	0	10	1	2	4	42	0	0	0	87	1	0	3	7.4	19.4	26.8 (100%)
F1	0	2	0	0	1	0	0	0	0	0	0	0	64	6	0	0	4.8	4	8.8 (100%)
F2	0	3	0	0	0	0	0	0	0	0	0	0	77	2	0	9	5.8	3.7	9.5 (100%)
G	0	0	0	0	0	0	0	0	0	0	0	0	42	0	0	1	1.3	2.6	3.9 (58%)
H1	0	0	0	0	1	0	0	1	6	0	0	0	9	0	0	0	0.6	3.8	4.4 (81%)
H2	1	0	0	0	1	1	0	0	6	0	0	0	9	0	0	0	1.4	3	4.4 (73%)
I	0	0	0	127	63	0	3	33	111	0	0	0	2	8	0	0	14.9	16.6	31.5 (57%)
J1	0	15	1	4	3	1	1	1	82	0	11	4	19	12	5	6	9.2	40.7	50 (100%)
J2	1	2	1	5	0	0	0	0	34	0	122	2	24	18	2	4	9.5	43.5	52.9 (100%)

Segments	6.4 Vegetation (cont.)																	
	GAP Level 2 Landcover Types within WMAs																	
	Red Lake WMA						Carp Swamp WMA				Cedar Bend WMA					Roseau Lake WMA		
	Acquatic environment	Crop and grass	Lowland coniferous forest	Lowland deciduous forest	Shrubland	Upland deciduous forest	Acquatic environment	Crop and grass	Lowland coniferous forest	Shrubland	Acquatic environment	Crop and grass	Lowland coniferous forest	Shrubland	Upland deciduous forest	Acquatic environment	Crop and grass	Shrubland
A	0	0	0	0	0	0	0	0	0	0	17	4	2	11	5	15	4	6
B	0	0	0	0	0	0	3	0	33	12	0	0	0	0	0	0	0	0
C1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
H2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
I	90	8	122	3	35	20	0	0	0	0	0	0	0	0	0	0	0	0
J1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
J2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Segments	6.4 Vegetation (cont.)									6.6 Land Use							
	GAP Level 2 Landcover Types within WMAs (cont.)				Designated EILC Forests					Private Lands				State Land		Federal Lands	
	Roseau River WMA																
	Acquatic environment	Crop and grass	Shrubland	Upland deciduous forest	Black spruce - lowland	Tamarack	White cedar	Stagnant spruce	Total	State Conservation Easements	The Nature Conservancy Lands	Other Private Lands	County Land	State Forest	WMAs	USFWS Lands	Other Federal Lands
A	0	0	0	0	0	0	0	0	0	0	0	559	0	941	65	23	0
B	0	0	0	0	0	0	0	0	0	0	0	332	0	745	49	8	0
C1	0	0	0	0	13	0	0	0	13	0	0	66	71	661	0	0	0
C2	0	0	0	0	24	0	0	0	24	0	0	481	224	410	0	0	0
D	0	0	0	0	0	4	12	0	16	145	8	33	184	372	0	0	0
E1	0	0	0	0	0	0	0	0	0	179	0	45	205	138	0	0	0
E2	0	0	0	0	0	0	0	0	0	214	3	43	250	142	0	0	0
F1	0	0	0	0	0	0	0	0	0	125	0	44	47	2	0	0	0
F2	0	0	0	0	0	0	0	0	0	110	0	87	32	0	0	0	3
G	0	0	0	0	0	0	0	0	0	62	0	93	18	1	0	0	0
H1	0	0	0	0	0	0	0	0	0	22	0	70	17	24	0	0	0
H2	0	0	0	0	0	0	0	0	0	0	0	93	49	5	0	0	0
I	0	0	0	0	0	0	18	0	18	0	0	88	23	941	277	16	0
J1	0	0	0	0	0	25	0	0	25	13	12	137	563	489	0	0	0
J2	0	0	0	0	0	0	0	0	0	46	16	263	569	378	0	0	14

6.6 Land Use (cont.)												6.13 Public Services		6.16 Archaeological and Historic Resources		
National Land Cover Dataset												Existing Transmission Line Parallel (Miles)	Voltage of Existing Transmission Line	Archaeological Properties		Architectural Properties
Commercial/ Industrial/ Transportation	Deciduous Forest	Emergent Herbaceous Wetland	Evergreen forest	Mixed forest	Open Water	Pasture/Hay	Row Crops	Shrubland	Small grains	Transitional	Woody wetlands			Historic	Prehistoric	
3	54	345	3	1	1	76	199	37	58	35	776	36.2/1.9	500 kV/230 kV	0	0	0
1	9	229	0	7	1	54	59	3	2	9	760	30.2	230 kV	0	0	0
3	24	10	20	27	3	1	0	18	0	12	680	0	-	0	0	0
23	123	69	19	40	2	41	16	18	0	24	742	37.3	230 kV	0	0	0
45	144	34	65	82	6	4	2	30	0	5	315	12.4	230 kV	0	0	0
1	103	17	74	58	2	0	0	25	0	6	280	0	-	0	0	0
1	149	16	110	98	3	0	0	27	0	19	227	0	-	0	0	0
4	87	6	15	16	6	1	1	34	0	1	42	0	-	0	0	0
1	83	9	19	13	1	5	2	24	0	33	41	0	-	0	0	0
0	101	4	11	11	0	3	1	13	0	2	15	2.4	115 kV	0	0	2
0	45	0	13	18	0	2	2	4	0	1	48	1.1	115 kV	0	0	0
0	54	1	8	10	0	20	4	10	0	3	38	2.2	115 kV	0	0	0
0	13	52	1	1	1	0	0	30	0	6	1,240	23.8	500 kV	0	0	0
3	323	36	70	120	2	47	5	58	0	23	525	0	-	0	0	0
3	577	46	31	109	7	66	7	57	0	20	361	0	-	0	0	1

Segments	6.17 Water Resources and Floodplains						6.18 Wetlands				6.19 Wildlife	Species & Communities	6.23 Agricultural Production	
	Public Water Inventory (PWI)						National Wetland Inventory (NWI)							
	Watercourse Crossings	Basin Crossings less than 1,000 feet	Basin Crossings greater than 1,000 feet	MPCA Impaired Waters Crossings	Floodplain crossings less than 1,000 feet	Floodplain Crossings greater than 1,000 feet	Acres of Wetlands	Acres of Forested Wetland Conversion	Acres of Shrub Wetland Conversion	Miles Across Peat or Muck Soils	Permanent Acres of Habitat Clearing in WMAs	Known Threatened, Endangered, Special Concern, or Unique Resource Occurences	Acres of Agricultural Land Cover (NLCD) Types in ROW	Acres of Prime Farmland (NRCS) within ROW
A	7	0	1	1	1	1	1,151	453	127	38	65	12	333	335
B	8	0	0	0	4	0	1,004	410	167	34	49	5	115	203
C1	5	0	0	1	2	0	729	633	27	25	0	2	1	172
C2	3	0	0	2	1	1	830	585	56	31	0	3	57	326
D	4	1	0	0	1	0	371	197	41	16	0	5	6	293
E1	6	0	0	0	0	0	294	161	39	10	0	1	0	155
E2	6	1	0	0	0	0	241	124	35	8	0	3	0	268
F1	4	0	1	0	0	0	43	11	9	2	0	0	3	122
F2	3	0	0	0	2	0	59	17	12	2	0	2	7	134
G	2	0	0	0	0	0	16	7	3	1	0	3	4	131
H1	1	0	0	1	0	0	51	36	5	2	0	2	4	82
H2	2	0	1	1	0	0	40	29	4	2	0	3	23	90
I	7	0	0	0	1	0	1,319	612	232	47	277	10	0	119
J1	10	0	0	1	3	0	556	426	35	19	0	1	52	597
J2	8	0	0	1	0	0	399	253	35	15	0	1	73	804

Segments	6.24 Transportation						6.25 Forestry		
	Infrastructure Crossings								
	U.S. Highway	Minnesota Trunk Highway (TH)	County State Aid Highway (CSAH)	Railroad	Federal Aviation Administration (FAA) airport	Airstrips (public/private) w/in 2 miles	Acres of Forest Impact (GAP Level 1 Data)	**TOTAL Length**	**TOTAL Acres (in ROW)**
A	0	3	9	1	1	0	338	**65.5**	**1,588**
B	0	1	3	0	0	1	489	**46.7**	**1,133**
C1	1	0	2	0	0	0	648	**32.8**	**797**
C2	0	0	6	0	1	1	568	**46**	**1,116**
D	0	1	0	0	0	0	461	**30.2**	**733**
E1	0	0	2	0	0	0	432	**26.5**	**566**
E2	0	0	2	0	0	1	471	**26.8**	**650**
F1	0	0	3	0	0	0	99	**8.8**	**214**
F2	0	0	2	0	0	0	95	**9.5**	**232**
G	1	0	0	1	0	0	107	**6.7**	**162**
H1	0	0	1	0	0	0	108	**5.4**	**133**
H2	0	0	2	0	0	0	106	**6**	**147**
I	0	1	0	0	0	0	645	**55.5**	**1,345**
J1	1	2	2	0	0	1	986	**50**	**1,212**
J2	1	4	4	0	0	0	1,055	**52.9**	**1,284**

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