

Appendix R –  
Rationale for Route Alternatives Included in DEIS  
and  
Comparison of Route Alternatives

**Table R-1. Rationale for Route Alternatives Included in Draft EIS.**

Route Name	Description	Source of Alternative	Stated Rationale for Alternative
1P	Applicant Preferred Route		
1P-001	From the applicant's 345 kV preferred route at the intersection of US 52 and Harry Ave, go south along Harry Ave for 1.9 miles until Harry Ave ends. Continue going south cross-country for 0.75 miles into Goodhue County. Turn east and go cross-country for 0.4 miles, then turn SSE and go cross-country for 0.1 miles, then east and go cross-country for 0.3 miles. Turn SSE and go cross-country for 0.1 miles, then turn east and go cross-country for 0.55 miles returning to the applicant's 345 kV preferred	Public Comment: Dan Boykin	Not stated; however, commenter expressed concern about impact on golf course and the route avoids the golf course.
		Public Comment: Andy and Michelle Sandstrom	
1P-002	From the applicant's 345 kV preferred route at the intersection of US 52 and Harry Ave. Go south on Harry Ave for 1.9 miles parallel with existing line until Harry Ave ends. Cross the Cannon River, still following existing line, and continue south cross-country about 0.3 miles until MN 19. Turn east and follow MN 19 for 1 mile, parallel to existing line returning to the applicant's 345 kV preferred route.	Public Comment: Dan Boykin	Not stated; however, commenter expressed concern about impact on golf course and the route avoids the golf course.
		Public Comment: Andy and Michelle Sandstrom	
1P-003	From the applicant's 345 kV preferred route at the intersection of US 52 and Harry Ave. Go south on Harry Ave for 1.9 miles parallel with existing line until Harry Ave ends. Cross the Cannon River, still following existing line, and continue south cross-country about 0.3 miles until MN 19. Cross MN 19, and continue south cross-country for 1.3 miles, joining up with Stanton Trail. Continue south along Stanton Trail for 0.5 miles. Turn east and go cross-country for 1.55 miles returning to the applicant's	Public Comment: Dan Boykin	Not stated; however, commenter expressed concern about impact on golf course and the route avoids the golf course.
		Public Comment: Andy and Michelle Sandstrom	
1P-004	From the applicant's 345 kV preferred route, at US 52 in Minneola township in Goodhue County, 0.5 miles east of where US 52 and 145th Ave Way intersect. Travel south cross-country for 0.7 miles. Turn east and go cross-country for 1 mile returning to the applicant's 345 kV preferred route.		
1P-005	From the applicant's 345 kV preferred route, at the intersection of US 52 and 145th Ave Way. Go south 0.9 miles along 145th Ave Way. Turn east and go cross-country for 1.5 miles returning to the applicant's 345 kV preferred route.		
1P-006	From the applicant's 345 kV preferred route at US 52 0.2 miles west of the intersection of US 52 and CSAH 7. Follow US 52 going southeast for 0.6 miles. Turn west and go cross-country for 0.35 miles returning to the applicant's 345 kV preferred route.		
1P-007	From the applicant's 345 kV preferred route at US 52 0.2 miles west of the intersection of US 52 and CSAH 7. Follow US 52 going southeast for 1.4 miles. Turn west and follow 440th street for .75 miles returning to the applicant's 345 kV preferred route.	Public Comment: Dennis Veiseth	The alternative would avoid sand/gravel pits.
		Public Comment: Ronald Hunt	The alternative would avoid sand/gravel pits.
		Public Comment: Paul Kalass	The alternative would avoid sand/gravel pits.
1P-008	From the applicant's 345 kV preferred route at the intersection of Emery Ave and Rochester Blvd just south of the town of Hampton, go NE cross-country for .17 miles, until you hit 240th sty E. Then, turn north and go cross-country for .85 miles, running along the eastern municipal boundary of the town of Hampton. Turn NW and go cross-country for .25 miles returning to the applicant's 345 kV preferred route.	Hampton to Northern Hills Task Force Report Group 2 Alternative 1	Outside the City of Hampton.
1P-009	From the applicant's 345 kV preferred route at the intersection Emery Ave and Rochester Blvd, just south of the town of Hampton, go south along Rochester Blvd for 0.1 miles, then turn west and go cross-country for 0.1 miles and hit Emery Ave. At Emery Ave, turn south and follow along Emery for 3.6 miles. The road curves SW and name changes to Randolph Blvd. Follow Randolph Blvd. for 2.1 miles. Keep following along the road and cross into Goodhue County, where Randolph Blvd. changes into MN 56. Keep following MN 56 south and then SE for 8.4 miles to meet up with CSAH 9. Follow CSAH 9 east for about 7 miles returning to the applicant's 345 kV preferred route.	Hampton to Northern Hills Task Force Report Group 2 Alternative 4	According to the task force report, this alternative avoids the following impacts for the City of Cannon Falls: future development land use, health and happiness, environment, and future development.
2P-001	From the applicant's 161 kV preferred route at the intersection of US 52 and CSAH 31, follow US 52 southeast for 0.3 miles. Turn south and go cross-country for 1.2 miles returning to the applicant's 161 kV preferred route at 117th St NW.	Public Comment: Gerald Johnson	
		Public Comment: Stephen & Debbie Walters	Reduction in the number of residences impacted.

Note: Blank cells indicate no information was found.

Route Name	Description	Source of Alternative	Stated Rationale for Alternative
2P-002	From the applicant's 161 kV preferred route at the intersection of US 52 and CSAH 31 in Goodhue County. Follow US 52 southwest along the highway for 9 miles. Turn west at 65th sty NW, and go west on 65th for 1.5 miles returning to the applicant's 161 kV preferred route.	Public Comment: Stephen & Debbie Walters	This alternative would combine US Highway 52 ROW with new transmission ROW.
3P-001	From the applicant's 345 kV preferred route at the intersection of US 52 and 500th sty in Pine Island Township in Goodhue County. Go east along 500th sty for 2 miles. 500th street turns into CSAH 11. Go east along CSAH 11 for 1 mile, until CSAH 11 turns back into 500th sty. Continue east along 500th sty for 1 mile, then east cross-country for 0.75 miles. Turn south and go cross-country for 0.75 miles returning to the applicant's 345 kV preferred route.		
3P-002	From the applicant's 345 kV preferred route in Pine Island township in Goodhue County, 0.5 miles west of 220th aver and 0.5 miles north 510th sty. Go east cross-country for 1.5 miles. Turn south on 230th aver and go 0.25 miles returning to the applicant's 345 kV preferred route.	Public Comment: Norm Miller	The alternative would move the transmission line between two parcels with the same owner and would reduce its impact on farming for the two parcels. It would also reduce impact of transmission line on farming the adjacent property as well.
3P-003	From the applicant's 345 kV preferred route at the intersection of US 52 and 500th sty in Pine Island township in Goodhue Count. Go east on 500th sty for 3 miles. Turn south on 220th aver and go for 0.75 miles returning to the applicant's 345 kV preferred route.		
3P-004	From the applicant's 345 kV preferred route on road T-203 in Plainview township in Wabasha County. Go north along road T-203 for .25 miles. Turn east and go cross-country for 0.5 miles returning to the applicant's 345 kV preferred route.	Public Comment: Roland Wood	Reduce impact on dairy farm and reduce the number of trees to be removed.
3P-005	From the applicant's 345 kV preferred route, 0.1 miles east of Power Dam Rd and 0.25 miles north of White Bridge Rd NW. Go east cross-country for 0.9 miles. Turn south on 25th aver NW, and follow 25th for 0.25 miles. Cross White Bridge Rd NW, and continue going south cross-country for 0.25 miles returning to the applicant's 345 kV preferred route.		
3P-006	From the applicant's 345 kV preferred route, 0.1 miles north of White Bridge Rd NE and 0.1 miles east of the Zumbro River. Go SSE for 0.1 miles, to meet up with White Bridge Rd NE. Follow White Bridge Rd east for 1.8 miles, then turn north and go cross-country for 0.5 miles returning to the applicant's 345 kV preferred route.		
3P-007	Follow the applicant's 345 kV preferred route until 0.08 miles north of White Bridge Road NE and 0.11 miles east of Zumbro River. Turn southeast cross country to White Bridge Road NE for 0.08 miles. Continue southeast following White Bridge Road NE for 0.44 miles. Turn southeast cross country for 0.28 miles. Turn east cross country for 1.23 miles. Turn north following field line for 0.78 to return to the applicant's 345 kV preferred route.	Public Comment: Jason Altman	The alternative would reduce the number of residences impacted and the number of trees removed.
3P-008	From the applicant's 345 kV preferred route, 0.5 miles east of 230th aver and 0.25 miles north of 510th sty in Pine Island township in Goodhue County. Go straight south cross-country for 0.25 miles, cross 510th street, and go SE cross- country for 0.33 miles returning to the applicant's 345 kV preferred route.		
3P-009	From the applicant's 345 kV "Dam Option" at CSAH 21 in Wabasha County, 0.25 miles north of the intersection of CSAH 21 and CR 90. Go south on CSAH 21 for .75 miles, then south cross-country for 0.25 miles. Turn SSE and go cross-country 0.3 miles until you meet up with 25th aver NW. Turn east and follow 25th aver for 0.15 miles. Then turn SSE and go cross-country for 0.2 miles. Then, turn east and go cross-country 0.15 miles. Turn south on Postier Dr NW, and go south along Postier for 1.25 miles. Cross White Bridge Rd NW, and continue going south cross-country for 0.25 miles connecting to the applicant's 345 kV preferred route.		
3P-010	From the applicant's 345 kV preferred route at White Bridge Rd. Go east and then east-southeast along White Bridge for 2.3 miles returning to the applicant's 345 kV preferred route.		
3P-011	From the applicant's 345 kV preferred route, 0.11 miles east of the Zumbro River and 0.08 miles north of White Bridge Rd NE, just at the edge of the woods in Cronoco township in Olmsted County. Go east-southeast cross-country for 1.7 miles. Turn north and go cross-country 0.3 miles returning to the applicant's 345 kV preferred route.		

Route Name	Description	Source of Alternative	Stated Rationale for Alternative
3P-Zumbro-N	Follow the applicant's 345 kV preferred route until 0.7 miles east of 230th Ave. Continue east for 6.97 miles cross-country and along field line. Continue east on T-196 for 0.37 miles to return to the applicant's 345 kV alternate route.	Route permit application.	Included as an option for crossing the Zumbro River. Crosses at the dam.
3P-Zumbro-S	Follow the applicant's 345 kV preferred route until 0.7 miles east of 230th Ave. Continue east for 6.97 miles cross-country and along field line. Continue east on T-196 for 0.37 miles. Turn south cross-country and along field line for 0.92 miles. Turn southeast cross-country for 0.13 miles. Turn south cross-country and along field line for 0.70 miles. Turn east along field line for 0.74 miles. Continue east cross-country for 0.25 miles to return to the applicant's 345 kV preferred route.	Route permit application.	Included as an option for crossing the Zumbro River. Crosses at the dam.
1A	Applicant Alternate Route		
1A-001	From the applicant's 345 kV alternate route in southwest Holden township in Goodhue County, Go South on 50th Ave for 0.5 mile, turn east and go cross- country 1 mile, then meet up with existing transmission line and continue east on MNTH 60 for 3 miles, where transmission line turns north. Continue going east on MNTH 60 for 3.3 miles, then turn north and follow MNTH 57 for about .5 miles returning to the applicant's 345 kV alternate route.	Public Comment: Chuck Schwarzhoff	This alternative reduces the impact on residences and future residential construction.
1A-003	From the applicant's 345 kV alternate route at the Goodhue and Rice County boundary, go south along Goodhue Ave for 1 mile, go east on 350th sty. 0.5 miles returning to the applicant's 345 kV alternate route.	Public Comment: Kent Johnson	Stanton Airport Airspace
1A-004	From the applicant's 345 kV alternate route, 0.5 miles north of the intersection of MN 60 and 460th sty in Goodhue County. Go south cross-country for 0.5 miles following existing line. At intersection of MN 60 and 460th street, turn east away from existing line, and follow 460th street for 3.3 miles. Cross MN 57, and go east on 460th street for 2 miles returning to applicant's 345 kV alternate route.	Public Comment: Chuck Schwarzhoff	This alternative reduces the impact on residences and future residential construction.
2A-001	From the applicant's 161 kV alternate route, just north of the intersection of 90th sty NW and 75th Ave NW in Olmsted County. Go SE and follow along 75th Ave NW for about .37 miles. When road turns south, Continue going SE along the Douglas Trail for 2.7 miles returning to the applicant's 161 kV alternate route at 65th sty NW.	Public Comment: Raymond Salvo	The alternative would reduce the number of residences impacted and reduce the impact of the transmission line on future development.
2A-002	From the applicant's 161 kV alternate route at the intersection of 125th sty NW and CSAH 3 in Olmsted County, follow CSAH 3 SE for 1.75 miles. Turn east and go cross-country for 1.3 miles returning to the applicant's 161 kV alternate route.		
2A-003	From the applicant's 161 kV alternate route at the intersection of 125th sty NW and CSAH 3 in Olmsted County, follow along CSAH 3 SE for 3.7 miles returning to the applicant's 161 kV alternate route.		
3A-001	From the applicant's 345 kV alternate route, 0.1 miles south of the intersection of MN 42 and CSAH 14 in Highland township in Wabasha county. Go south along CSAH 14 for 0.25 miles. Turn east and go cross-country for 1.6 miles connecting to the applicant's 345 kV preferred route.	Public Comment: Roy Terry, Jr.	Alternative would reduce the impact on horse training farm.
3A-003	From the applicant's 345 kV alternate route 1 mile east of the intersection of CSAH 7 and US 63 in Wabasha County. Go south cross-country for 0.7 miles connecting to the applicant's 345 kV "Dam Option."	Public Comment: Curtis Kuecker	Alternative would preserve a natural wildlife corridor and reduce the number of trees removed.
3A-004	From the applicant's 345 kV alternate route 0.75 miles east of the intersection of CSAH 7 and US 63 in Wabasha County. Go south cross-country for 0.6 miles connecting to the applicant's 345 kV "Dam Option."	Public Comment: Curtis Kuecker	Alternative would preserve a natural wildlife corridor and reduce the number of trees removed.
3A-Kellogg	Follow the applicant's 345 kV alterante route until the railroad tracks rust east of US Hwy 61. Turn north following railroad line for 2.20 miles. Turn northeast cross-country for 0.14 miles. Turn east along CR-84 for 0.66 miles. Turn south following CR-84 for 0.51 miles. Turn east following CR-84 for 1.26 miles to return to the applicant's 345 kV alternate route.	Route permit application.	Included as an option to avoid impacts to the McCarthy Lake Wildlife Management Area.
3P-Kellogg	Follow the applicant's 345 kV preferred route until the RR tracks just east of US Hwy 61. Turn north following railroad line for 2.20 miles. Turn northeast cross-country for 0.14 miles. Turn east along CR-84 for 0.66 miles. Turn south following CR-84 for 0.51 miles. Turn east following CR-84 for 1.26 miles to return to the applicant's 345 kV preferred route.	Route permit application.	Included as an option to avoid impacts to the McCarthy Lake Wildlife Management Area.

Route Name	Description	Source of Alternative	Stated Rationale for Alternative
3A-Crossover	Follow the applicant's 345 kV alternate route to T-196. Continue south cross-country and along field line for 0.92 miles. Turn southeast cross-country for 0.13 miles. Turn south cross-country and along field line for 0.70 miles. Turn east along field line for 0.74 miles. Continue east cross-country for 0.25 miles to return to the applicant's 345 kV preferred route.		
1B-001	From the applicant's 345 kV alternate route, 0.5 miles west of the intersection of US 52 and US 60. Go east cross-country for 0.5 miles to meet up with US 52. Follow US 52 south for 2.3 miles connecting to the applicant's 345 kV preferred route.		
1B-003	From the applicant's 345 kV alternate route, 0.5 miles north of the intersection of 160th Ave and 460th sty in Wabasha County. Go east cross-country for 1.5 miles, crossing 145th Ave and continue east cross-country for 0.5 miles connecting to the applicant's 345 kV preferred route.	Public Comment: Wayne Lystrom	Reduction in the number of buildings impacted.
1B-005	From the applicant's 345 kV preferred route at the intersection of Emery Ave and Rochester Blvd, just south of the town of Hampton, go south along Rochester Blvd for 0.1 miles then turn west and go cross-country for 0.1 miles and hit Emery Ave. At Emery Ave, turn south and follow along Emery for 3.6 miles. The road curves SW and name changes to Randolph Blvd. Follow Randolph Blvd for 2.1 miles. Keep following along the road and cross into Goodhue County, where Randolph Blvd changes into MN 56. Keep following MN 56 south, then SE, then south again for 15.4 miles connecting to the applicant's 345 kV alternate route.	Hampton to Northern Hills Task Force Report Group 2 Alternative 2 and Alternative 3	
2B-001	From the applicant's 161 kV preferred route at the intersection of 117th sty NW and CSAH 31, follow CSAH 31 SSW for 0.2 miles, continue following CSAH 31 as it curves and goes south for 0.8 miles, then SW for 1.1 miles until it meets up with CSAH 3. Turn southeast and follow CSAH 3 for 0.15 miles. Then turn south on CSAH 3 and go about 0.3 miles connecting to the applicant's 161 kV alternate route.	Public Comment: Kevin Michael Monson; Justin & Angie Bowkamp	Suggested alternative will reduce impacts on the Zumbro River as construction and maintenance activities would be supported by an existing roadway. The previous alternative would remove additional trees and have larger visual impacts on the river.
2B-002	From the applicant's preferred route at 117th St NW and CSAH 31, follow CSAH 31 south 2.56 miles		
3B-003	From the applicant's 345 kV preferred route, 0.45 miles north of CSAH 27, and 0.65 miles east of CSAH 4. Run NE along MN 42 for 11.1 miles. Cross US 61, and continue going NE along CSAH 18 for 0.15 miles. Then turn east and go cross-country for 0.2 miles, and continue going east along CR 84 for .35 miles connecting to the applicant's 345 kV "Option."	Public Comment: Joel and Meredith Bell	This comment does not directly suggest this route, but this route does address the commentors concern's.
2C3-001-2	Begin at the southern option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 0.5 miles to meet up with US 52. Turn south and follow along US 52 for about 4.3 miles. The 161 kV line would run parallel along US 52 for about .43 miles. Turn SE and run cross-country for .2 miles, then curve southwest and run cross-country for .15 miles, then curve west and run cross-country for .35 miles to meet up with the applicant's 161 kV preferred route at CSAH 31.		
2C3-001-3	Begin at the southern option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 0.5 miles to meet up with US 52. Turn south and follow along US 52 for about 4.3 miles. The 345 kV line would go SE along US 52 for 0.4 miles. Turn east and go cross-country for 1.7 miles. Turn SE at Ash Rd NW, and go SE for 0.4 miles. Ash Rd merges into CSAH 18, and continue following CSAH 18 for 0.35 miles. Then continue SE cross-country for 0.15 miles, and turn east-southeast and go cross-country for 0.4 miles until you hit White Bridge Rd NW. At White Bridge Rd NW, go east along White Bridge for 0.7 miles connecting with the applicant's 345 kV preferred route.		
2C3-001-3a	From the North Rochester Substation (S), go south following transmission line for 0.51 miles. Turn east following field line for 0.46 miles. Turn south following US Hwy 52 for 4.33 miles. Continue southeast following US Hwy 52 for 0.38 miles. Turn east cross-country to Ash Road NW for 1.67 miles. Turn southeast following Ash Road NW for 0.37 miles to return to the applicant's 345 kV preferred route.		

Route Name	Description	Source of Alternative	Stated Rationale for Alternative
2C3-001-3b	From the North Rochester Substation (S), go south following transmission line for 0.51 miles. Turn east following field line for 0.46 miles. Turn south following US Hwy 52 for 4.33 miles. Continue southeast following US Hwy 52 for 0.38 miles. Turn east cross-country to Ash Road NW for 1.67 miles. Turn southeast following Ash Road NW for 0.37 miles. Continue southeast following CSAH 18 for 0.31 miles. Continue southeast cross-country for 0.14 miles. Continue east/southeast cross-country for 0.41 miles. Turn east following White Bridge Road NW for 0.70 miles to return to the applicant's 345 kV preferred route.		
2C3-002-2N	Begin at the <b>northern</b> option for the proposed North Rochester substation, go east cross-country for 1 mile. Turn south on 195th Ave and go south for 0.75 miles. Turn SE and go cross-country for .56 miles, then turn east and go cross- country for 3.75 miles. Turn south and go cross-country for 3.5 miles to Ash Rd. NW. The 161 kV line goes south cross- country for 3 miles connecting to the applicant's 161 kV preferred route.	Public Comment: City of Pine Island	Avoid current and future residential and business developments. Alternative uses existing ROW.
2C3-002-3N	Begin at the <b>northern</b> option for the proposed North Rochester substation, go east cross-country for 1 mile. Turn south on 195th Ave and go south for 0.75 miles. Turn SE and go cross-country for .56 miles, then turn east and go cross- country for 3.75 miles. Turn south and go cross-country for 3.5 miles to Ash Rd. NW. The 345 kV line goes SE following the applicant's 345 kV preferred route.	Public Comment: City of Pine Island	Avoid current and future residential and business developments. Alternative uses existing ROW.
2C3-002-2S	Begin at the <b>southern</b> option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 2.5 miles, then turn south on CSAH 11 and go for 0.5 miles. Then, turn east and go cross- country for 0.5 miles, turn south and go cross-country for 0.25 miles. Turn East and go cross-country for 2.25 miles. Turn south and go cross- country for 1.25 miles to Ash Rd. NW. The 161 kV line continues south cross-country for 3 miles connecting to the applicant's 161 kV preferred route.		
2C3-002-3S	Begin at the <b>southern</b> option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 2.5 miles, then turn south on CSAH 11 and go for 0.5 miles. Then, turn east and go cross- country for 0.5 miles, turn south and go cross-country for 0.25 miles. Turn East and go cross-country for 2.25 miles. Turn south and go cross- country for 1.25 miles to Ash Rd. NW. The 345 kV line turns SE following the applicant's 345 kV preferred route.		
2C3-003-2	Begin at the northern option for the proposed North Rochester substation, go east cross-country for 1 mile. Turn south on 195th Ave and go south for 0.75 miles. Turn SE and go cross-country for .56 miles, then turn east and go cross- country for 3.75 miles. At this point the 345 kV line continues east along the applicant's 345 kV alternate route. The 161 kV line goes south cross- country for 6.5 miles connecting to the applicant's 161 kV preferred route.	Public Comment: City of Pine Island	Avoid current and future residential and business developments. Alternative uses existing ROW.
2C3-004-2	From the North Rochester Substation (N), go east following field line to 195th Ave for 0.97 miles. Turn south following 195th Ave for 0.78 miles. Turn southeast cross-country for 0.52 miles. Turn east cross-country and following field line for 3.75 miles. Turn south cross-country for 3.53 miles. Continue south cross-country for 2.93 miles to return to the applicant's 161 kV preferred route.	Public Comment: City of Pine Island	Avoid current and future residential and business developments. Alternative uses existing ROW.
2C3-004-3	From the North Rochester Substation (N), go east following field line to 195th Ave for 0.97 miles. Turn south following 195th Ave for 0.78 miles. Turn southeast cross-country for 0.52 miles. Turn east cross-country and following field line for 3.75 miles. Turn south cross-country for 3.53 miles to return to the applicant's 345 kV preferred route.	Public Comment: City of Pine Island	Avoid current and future residential and business developments. Alternative uses existing ROW.
2C3-005-2	Begin at the southern option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 2.5 miles. At this point the 161 and 345 kV lines split. The 161 kV line turns south following the applicant's 161 kV preferred route.		
2C3-005-3	Begin at the southern option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 2.5 miles. At this point the 161 and 345 kV lines split. The 345 kV line continues east along 500th sty for 1 mile, and then continues east cross-country for 0.75 miles. Then, turn south and go cross-country for 0.75 miles connecting to the applicant's 345 kV preferred route.		

Route Name	Description	Source of Alternative	Stated Rationale for Alternative
2C3-006-2	Begin at the northern option for the proposed North Rochester substation, go east cross-country for 0.5 miles. Go south on US 52 for 2.5 miles, turn east and go along 500th sty for 2 miles. At this point the 161 kV line goes south following the applicant's 161 kV preferred route.	Public Comment: City of Pine Island	Avoid current and future residential and business developments. Alternative uses existing ROW.
		Public Commen: Harold Radtke	Avoid current and future residential and business developments. Alternative uses existing ROW.
2C3-006-3	Begin at the northern option for the proposed North Rochester substation, go east cross-country for 0.5 miles. Go south on US 52 for 2.5 miles, turn east and go along 500th sty for 2 miles. At this point the 345 kV line continue east on 500th St (CSAH 11) for 1 mile, then turn south and follow 220th aver for .75 miles connecting to the applicant's 345 kV preferred route.	Public Comment: City of Pine Island	Avoid current and future residential and business developments. Alternative uses existing ROW.
		Public Commen: Harold Radtke	Avoid current and future residential and business developments. Alternative uses existing ROW.
2C3-007-2	Begin at the southern option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 5.2 miles, then turn south and go cross-country for 2 miles to Ash Rd NW. At this point the 161 and 345 kV lines split. The 161 kV line goes south cross-country for 3 miles connecting to the applicant's 161 kV preferred route.	Public Comment: City of Pine Island	Avoid current and future residential and business developments. Alternative uses existing ROW.
2C3-007-3	Begin at the southern option for the proposed North Rochester substation, go south cross-country for 0.5 miles. Turn east and go cross-country for 5.2 miles, then turn south and go cross-country for 2 miles to Ash Rd NW. At this point the 161 and 345 kV lines split. The 345 kV line continues east along the applicant's 345 kV alternate route.	Public Comment: City of Pine Island	Avoid current and future residential and business developments. Alternative uses existing ROW.
2C3-008-2	From the southern proposed north Rochester substation combine the preferred 345 and 161 kV lines so that the 161 kV line follows the applicant's proposed 345 kV preferred route.		
	Alternative was not moved forward to DEIS	Hampton to Northern Hills Task Force Report Group 1, Alternative 1	
	Alternative was not moved forward to DEIS	Hampton to Northern Hills Task Force Report Group 1, Alternative 2	
	Alternative was not moved forward to DEIS	Hampton to Northern Hills Task Force Report Group 1, Alternative 3	
	Alternative was not moved forward to DEIS	Hampton to Northern Hills Task Force Report Group 1, Alternative 4	
	Alternative does not exist, this number inadvertently skipped	Hampton to Northern Hills Task Force Report Group 1, Alternative 5	
	Alternative was not moved forward to DEIS	Hampton to Northern Hills Task Force Report Group 1, Alternative 6	
	Alternative was not moved forward to DEIS	Hampton to Northern Hills Task Force Report Group 1, Alternative 7	
	Pine Island alternative (double check)	Hampton to Northern Hills Task Force Report Group 2, Alternative 5	
	Alternative was not moved forward to DEIS	Hampton to Northern Hills Task Force Report Group 2, Alternative 6	
	Pine Island alternative (double check)	Hampton to Northern Hills Task Force Report Group 2, Alternative 7	

**Table R-2. Comparison of Route Alternatives - Hampton to North Rochester Substation - 345 kV Section**

Route <sup>1</sup>	Number of Residences Within 0-75 feet of Route Centerline	Number of Residences Within 76-150 feet of Route Centerline	Number of Residences Within 151-300 feet of Route Centerline	Route Length (miles)	Line Following Existing Transmission Lines		Line Following Existing Roads or Railroad		Line Following Neither Transmission Line or Road	
					Length (miles)	Percent	Length (miles)	Percent	Length (miles)	Percent
1P	0	6	12	4.4	0.0	0%	4.4	100%	0.0	0%
1P-001	1	5	12	5.4	0.7	13%	3.2	60%	2.2	40%
1P-002	1	13	12	5.2	1.7	33%	4.8	93%	0.0	0%
1P-003	1	3	11	5.6	0.7	13%	2.5	45%	3.1	55%
1P	0	0	0	1.8	1.5	84%	1.8	100%	0.0	0%
1P-004	0	0	1	2.2	0.5	24%	0.5	24%	1.7	76%
1P-005	0	0	0	2.4	0.0	0%	0.9	38%	1.5	62%
1P	0	0	0	1.0	0.0	0%	0.1	7%	0.9	93%
1P-006	0	0	1	1.6	0.7	42%	0.7	42%	0.9	58%
1P-007	1	1	1	2.2	1.4	63%	2.2	100%	0.0	0%
1P	0	1	2	1.2	0.0	0%	0.8	69%	0.4	31%
1P-008	0	0	0	1.3	0.0	0%	0.0	0%	1.3	100%
1P	1	14	34	16.2	0.0	0%	16.2	100%	0.0	0%
1P-009	6	24	28	21.3	0.0	0%	21.2	99%	0.1	1%
1A	0	0	0	9.9	0.9	9%	0.7	7%	8.9	90%
1A-001	1	5	2	10.9	3.4	31%	7.2	66%	3.6	34%
1A-004	1	3	0	9.9	0.5	5%	5.3	54%	4.1	41%
1A	0	1	0	2.1	0.0	0%	0.0	0%	2.1	100%
1A-003	0	4	2	2.0	0.0	0%	1.8	92%	0.2	9%
1P	0	1	1	3.5	2.5	71%	0.0	0%	1.0	29%
1B-001	0	5	3	4.4	0.0	0%	2.3	53%	2.1	47%
1A	0	0	0	5.0	0.0	0%	0.0	0%	5.0	100%
1B-003	0	0	1	3.6	0.0	0%	0.0	0%	3.6	100%
1A	1	5	3	29.7	0.0	0%	1.8	6%	28.0	94%
1B-005	4	8	28	23.8	0.0	0%	21.2	89%	2.6	11%

<sup>1</sup>Compared routes share endpoints.



**Table R-3. Comparison of Route Alternatives - North Rochester Substation to Northern Hills Substation - 161 kV Section**

Route <sup>1</sup>	Number of Residences Within 0-75 feet of Route Centerline	Number of Residences Within 76-150 feet of Route Centerline	Number of Residences Within 151-300 feet of Route Centerline	Route Length (miles)	Line Following Existing Transmission Lines		Line Following Existing Roads		Line Following Neither Transmission Line or Road	
					Length (miles)	Percent	Length (miles)	Percent	Length (miles)	Percent
2P	1	0	8	1.5	0.0	0%	1.5	100%	0.0	0%
2P-001	0	0	1	1.5	0.0	0%	0.3	19%	1.2	81%
2P	4	7	23	7.8	0.0	0%	6.8	87%	1.0	13%
2P-002	4	8	26	10.4	0.0	0%	10.4	100%	0.0	0%
2A	0	1	3	4.4	0.0	0%	3.4	77%	1.0	23%
2A-001	0	1	5	3.1	0.0	0%	0.4	13%	2.7	87%
2A	1	1	4	4.3	0.0	0%	2.9	68%	1.4	32%
2A-002	2	1	10	4.5	0.0	0%	3.2	71%	1.3	29%
2A-003	2	2	14	3.7	0.0	0%	3.7	100%	0.0	0%
2P	3	7	18	6.7	0.0	0%	5.7	85%	1.0	15%
2B-001	1	4	10	7.6	0.0	0%	6.0	79%	1.6	21%
2A	1	1	6	11.0	5.3	48%	3.2	29%	3.2	29%
2B-001	3	5	19	9.4	0.0	0%	8.9	95%	0.5	5%
2P	2	6	4	6.6	0.5	8%	5.6	85%	0.5	7%
2C3-001-2	5	1	3	6.4	0.5	8%	4.3	68%	1.6	24%
2P	2	3	16	6.4	0.0	0%	5.9	92%	0.5	8%
2C3-002-2	3	4	3	7.2	0.0	0%	0.0	0%	7.2	100%
2P	2	10	19	11.9	2.5	21%	8.5	71%	1.0	8%
2C3-006-2	2	15	26	11.9	0.0	0%	10.9	92%	1.0	8%
2C3-003-/004-2	3	1	5	12.5	0.0	0%	0.8	6%	11.7	94%
2A	1	7	23	16.5	5.8	35%	6.7	40%	4.8	29%
2C3-006-2	2	18	37	16.0	0.0	0%	14.5	91%	1.5	9%
2C3-003-/004-2	3	9	13	16.6	0.0	0%	4.4	27%	12.2	73%
2P	2	5	14	7.0	0.0	0%	6.5	93%	0.5	7%
2C3-007-2	3	1	8	7.7	0.0	0%	2.0	26%	5.7	74%
2P	0	0	0	1.0	0.5	51%	0.0	0%	0.5	49%
2C3-008-2	0	0	0	1.0	0.0	0%	0.5	50%	0.5	50%

1) Compared routes share endpoints.

**Table R-4. Comparison of Route Alternatives - North Rochester Substation to Mississippi River - 345 kV Section**

Route <sup>1</sup>	Number of Residences Within 0-75 feet of Route Centerline	Number of Residences Within 76-150 feet of Route Centerline	Number of Residences Within 151-300 feet of Route Centerline	Route Length (miles)	Line Following Existing Transmission Lines		Line Following Existing Roads or Railroads		Line Following Neither Transmission Line or Road	
					Length (miles)	Percent	Length (miles)	Percent	Length (miles)	Percent
3P/3A	0	0	0	2.5	2.5	100%	0.0	0%	0.0	0%
3P/3A-Kellogg	1	1	0	4.8	0.0	0%	4.6	97%	0.1	3%
3P	0	1	4	29.1	1.7	6%	1.5	5%	25.9	89%
3P-Zumbro-N	0	0	1	24.9	0.0	0%	0.8	3%	24.1	97%
3P-Zumbro-S	0	1	1	27.3	1.7	6%	0.4	1%	25.2	92%
3P	0	0	0	1.7	0.0	0%	0.0	0%	1.7	100%
3P-002	0	0	0	1.7	0.0	0%	1.7	100%	0.0	0%
3P	0	0	0	0.7	0.0	0%	0.0	0%	0.7	100%
3P-004	0	0	0	0.7	0.0	0%	0.2	30%	0.5	70%
3P	0	0	0	2.8	0.0	0%	0.0	0%	2.8	100%
3P-005	0	0	2	2.8	0.0	0%	0.3	9%	2.5	91%
3P-010	1	4	8	2.5	0.0	0%	2.3	90%	0.3	10%
3P	0	0	1	1.8	0.0	0%	0.0	0%	1.8	100%
3P-006	2	1	4	2.4	0.0	0%	1.8	75%	0.6	25%
3P-007	0	0	0	2.8	0.0	0%	0.4	16%	2.4	84%
3P-011	0	0	2	2.1	0.0	0%	0.0	0%	2.1	100%
3P	0	0	0	0.7	0.0	0%	0.0	0%	0.7	100%
3P-008	0	0	0	0.6	0.0	0%	0.0	0%	0.6	100%
3P	0	0	1	5.8	0.0	0%	1.5	25%	4.4	75%
3P-009	5	4	5	6.2	3.2	52%	2.1	34%	3.0	48%
3A	0	0	1	17.5	0.0	0%	0.4	2%	17.1	98%
3A-Crossover	0	1	1	20.0	1.7	9%	0.0	0%	18.3	91%
3A	0	0	1	1.8	0.0	0%	0.0	0%	1.8	100%
3A-001	0	0	1	2.2	0.3	15%	0.3	11%	1.6	74%
3A	0	0	0	1.5	0.0	0%	0.0	0%	1.5	100%
3A-003	0	0	0	1.2	0.0	0%	0.4	31%	0.8	69%
3A-004	0	0	0	1.4	0.0	0%	0.4	27%	1.0	73%
3A	0	0	1	32.8	0.0	0%	1.7	5%	31.2	95%
2C3-004-3	0	2	3	41.6	1.7	4%	2.3	5%	37.6	90%
2C3-006-3	0	7	10	37.5	1.7	5%	7.7	20%	28.1	75%

<sup>1</sup>Compared segments share endpoints.

Route <sup>1</sup>	Number of Residences Within 0-75 feet of Route Centerline	Number of Residences Within 76-150 feet of Route Centerline	Number of Residences Within 151-300 feet of Route Centerline	Route Length (miles)	Line Following Existing Transmission Lines		Line Following Existing Roads or Railroads		Line Following Neither Transmission Line or Road	
					Length (miles)	Percent	Length (miles)	Percent	Length (miles)	Percent
3P	0	1	1	9.4	0.0	0%	2.5	26%	6.9	74%
2C3-001-3a	0	1	1	9.5	0.5	5%	5.4	57%	3.6	38%
2C3-001-3b	0	1	1	9.3	0.5	5%	6.1	66%	2.7	29%
3P	0	1	1	3.6	0.0	0%	1.0	28%	2.6	72%
2C3-002-3	0	2	3	3.5	0.5	14%	2.5	72%	0.5	13%
3P	0	1	1	6.3	0.0	0%	1.0	16%	5.3	84%
2C3-005	0	0	7	6.4	0.5	8%	4.0	62%	1.9	30%
3P	0	0	1	13.2	9.8	74%	0.0	0%	3.4	26%
3B-003	2	5	9	14.1	0.0	0%	14.0	99%	0.1	1%

<sup>1</sup>Compared segments share endpoints.

**Table R-5. Additional Route Comparisons- Segment 1**

Route <sup>1</sup>	Comparative Positive	Comparative Negative
Route 1P	Follows US 52	
1P-001		Follows county highways
1P-002		Follows county highways
1P-003		Follows county highways. Impacts 300 ft HSBS maple-basswood forest (edge). Impacts 700 ft MSBS floodplain forest (bisects).
Route 1P	Single crossing of North Fork Zumbro River, at same location that 1P-004 and 1P-005 eventually cross.	
1P-004		Two crossings of North Fork of Zumbro River at a curve in the river (route ends up on same side of river as it started), with 2,500 ft floodplain and in influence area of zoological NHS.
1P-005		
Route 1P	Total floodplain crossing at North Fork Zumbro River 1,700 ft.	Potential impact to quarry operations.
1P-006	Avoids quarry.	Total floodplain crossing at North Fork Zumbro River, 3,900 ft continuous, includes 2 hard angles.
1P-007	Avoids quarry.	Total floodplain crossing at North Fork Zumbro River, 2,300 ft.
Route 1P	Does not impact Stanton Airport. Avoids many potential impacts associated with Spring Creek/Prairie Creek area (for both Routes 1P-009 and -005) and Little Cannon River area (Route 1P-009 only).	Crosses a 4,500 ft floodplain on minor tributary of Butler Creek. Crosses 1,800 ft floodplain on Little Cannon River, including 100 ft wetlands and influence area of zoological NHS. Crosses 3,000 ft of BSHS maple-basswood forest (edge).
1B-005 and 1P-009	Avoids BSHS forest south of Butler Creek.	May not be feasible due to impacts to Stanton Airport. Route is within area of influence of many NHS sites in the Spring Creek-Prairie Creek area south of Byllesby Lake. Crosses 600 ft of BSHS floodplain forest at Prairie Creek and 1,800 ft of wetland at a Prairie Creek tributary, including a BSHS emergent marsh. Along same tributary, route is constrained by two residences next to MN-56 and 2,300 feet of wetland on the other side of MN-56. The following discussion of potential impacts along County Highway 9 applies only to Route 1P-009. Along County Highway 9 in the Little Cannon River area are many NHS sites with areas of influence overlapping the alignment; and the route crosses 700 ft of a BSOS maple-basswood forest.
Route 1A	Does not cross willow	
1A-001		Crosses 300 ft BSOS willow swamp near Spring Creek.
1A-004		Crosses 1,700 ft of willow swamp near Spring Creek.
Route 1A	Avoids BSMS/NHS conflicts.	Potential conflicts with Stanton Airport.
1A-003	Avoids conflicts with Stanton Airport.	Route crosses 1,200 ft of BSMS and is in area of influence of several NHSs.

<sup>1</sup>Compared segments share endpoints.

**Table R-6. Additional Route Comparisons - Segment 2**

Route <sup>1</sup>	Comparative Postive	Comparative Negative
Route 2P	Narrow crossing of South Branch Middle Fork Zumbro River, with no wetlands.	
2P-002		1,000-ft crossing South Branch Middle Fork Zumbro River at Shady Lake with 200 ft wetlands.
Route 2A	Does not share route with Douglas Trail and does not impact forested wetlands along Douglas Trail.	
2A-001		Shares most of route with Douglas Trail, including two crossings of forested wetland: one at 2,000 ft and one at 1,200 ft.
Route 2A	Does not impact BSMS or BSHS oak forest.	
2A-002		Bisects 1,000 ft of BSMS oak forest, then follows edge of the BSMS forest for 2,200 ft, then follows edge of BSHS forest for 600 ft.
2A-003		Edge impact to 800 ft BSMS oak forest.
Route 2P	1,000-ft crossing of South Fork Middle Branch Zumbro River, with existing roads and no wetlands or NHS features. Also a 600-foot edge crossing of same river nearby, also no wetlands or NHS features.	
2B-001		3,600-ft crossing of South Branch Middle Fork Zumbro River, within area of influence of two NHSs.
Route 2P	Bypasses BSHS forested wetland areas along Middle Fork Zumbro River.	
2C3-001-2		Has two crossings of a continuous BSHS forested floodplain wetland at the Middle Fork of the Zumbro River: 1,200 ft and and 300 ft.
Route 2P	No wetlands or NHSs at crossing of South Fork Middle Branch Zumbro River.	
2C3-002-2, -3, -4, -7; 2C3-003-2, 004-2, 007-2		1,300 ft wetlands, some forested, at South Branch Middle Fork Zumbro River crossing, within area of influence of NHSs.

<sup>1</sup>Compared segments share endpoints.

**Table R-7. Additional Route Comparisons - Segment 3**

Segment <sup>1</sup>	Comparative Positive	Comparative Negative
Route 3P/3A	Falls within the area of influence of 3 NHSs. Crosses 2.5 miles in floodplain.	Crosses McCarthy Lake WMA, including BSHS meadow-marsh-swamp complex, and 1,400 then 6,000 ft of continuous wetland.
3P/3A-Kellogg	Does not cross McCarthy Lake WMA or BSHS. Crosses 4,000 continuous ft wetlands.	Falls within the area of influence of 6 NHSs. Crosses 4.8 miles in floodplain. Follows MN-GRRNSB for 1.3 miles.
Route 3P	Crosses 2,100 ft (not continuous) of BSMS forest, with no NHSs.	
3P-Zumbro		Crosses 2,800 ft of BSHS forest where there is no existing route, within the area of influence of four NHSs.
Route 3P		Requires more tree clearing.
3P-004	Requires less tree clearing.	
Route 3P	Has less impact to agriculture.	Impacts a MSBS forested area east of the Zumbro River.
3P-006	Avoids impacts to the BSMS forest.	
3P-007	Avoids impacts to the BSMS forest.	Has more agricultural impacts.
3P-011	Avoids impacts to the BSMS forest.	Has more agricultural impacts.
Route 3P	Does not have additional crossing of a cove of Zumbro Lake.	
3P-009		Has a crossing of a cove of Zumbro Lake that Route 3P does not have.
Route 3A		Potential impacts on horse-training farm (?)
3A-001	May reduce impacts on horse-training farm.	
Route 3A		More woodland impacts.
3A-003	Less woodland impacts.	
Route 3A/3P	Follows existing transmission line, which would be co-located with Proposal.	Crosses McCarthy Lake WMA, including BSHS meadow-marsh-swamp complex, and 1,400 then 6,000 ft of continuous wetland.
3B-003	Does not cross McCarthy Lake WMA (including BSHS and wetlands).	Does not follow existing transmission line and would result in two transmission lines a few miles apart.

<sup>1</sup>Compared segments share endpoints.