

Because the White Bridge route is within the Rochester School District there are many physicians from the Mayo Clinic and IBM executives who live in the vicinity of the 3P "preferred route". One of my neighbors is a physician at Mayo Clinic and my other neighbor is an executive at IBM. Obviously we will all suffer drops in our high land values because our land is in the Rochester school district and due to the loss of country views, dangerous stray voltage and static electrical noise.

27H

27I

The route that should be utilized for CapX should be 3A route "alternate route" crossing in Wabasha County because the land has a much lower market value and is not slated for residential development within a high powered school district like Rochester's school district. The 3A "alternate route" has flatter terrain for less erosion, less woods to destroy, and is land not planned for significant residential development by a large city like Rochester, Minnesota.

27J

Below is my contact information to provide me with the answers and information I am requesting in numbers 1 – 4 above.

Thanks you in advance for this information.

Sincerely,

Javon Bea
11123 11th Ave. NW
Oronoco, MN 55960
507-254-9745
jbea98@aol.com

FAX

2 pgs including cover

To: Matthew Langan

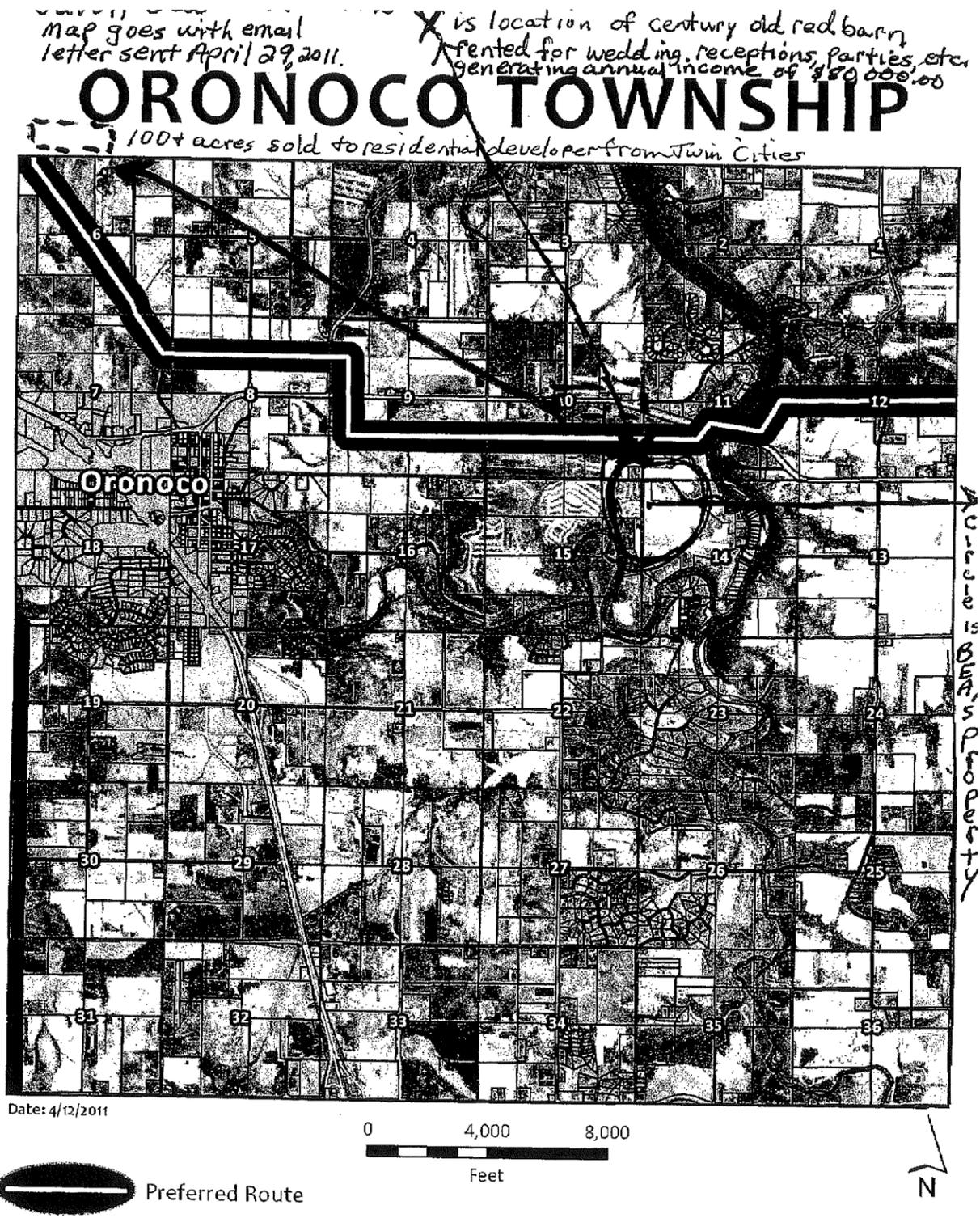
From: Javon Bea
507 254 9745
jbea98@aol.com

Dear Mr. Langan,

The attached map goes with the letter I emailed you today, Friday, April 29, 2011.

Thank you.

Javon Bea



Langan, Matthew (COMM)

From: apache@web.lmic.state.mn.us
 Sent: Friday, April 29, 2011 10:30 PM
 To: Langan, Matthew (COMM)
 Subject: Bea Fri Apr 29 22:30:22 2011 E002/TL-09-1448

This public comment has been sent via the form at:
www.energyfacilities.puc.state.mn.us/publicComments.html

You are receiving it because you are listed as the contact for this project.

Project Name: Hampton to Rochester to La Crosse 345kV and 161kV Transmission Line

Docket number: E002/TL-09-1448

User Name: Javon Bea

County: Olmsted County

City: Oronoco

Email: jbea98@aol.com

Phone: 507-254-9745

Impact: April 29, 2011 Office of Energy Security, MN Department of Commerce Matt Langan, State Permit Manager 85 7th Place East, Suite 500 St. Paul, MN 55101-2198 Re: CapX2020 Hampton-Rochester-LaCrosse 345kV Transmission Line Project PUC Docket # E002/TL-09-1448 Draft Environmental Impact Statement Comments Regarding Segment 3 Dear Mr. Langan, The purpose of this letter is to help you understand the location and impact on my property which I sent to you in a previous email letter dated April 12, 2011. I would have sent this clarification letter earlier but I have had trouble with my internet service. My name is Javon Bea and I am President/CEO of a \$1.2 Billion Health System. I have lived in Oronoco Township since 1980, over 30 years. I own 8 separate farm homesteads for development for a total of 292 acres. All of these acres are a combination of rolling hills, woods, and tillable land with beautiful vista views of the Oronoco river valley and which would be negatively impacted if the 345kV power poles run along 3P "preferred route". The negative impact on my property according to an appraiser, Tim Figge, who has worked on public utility condemnations would be a financial loss in value of my property of \$4,820,333. The total value of my property is \$7,230,500. From all my acreage the 345 KV power poles will destroy the country views. The land is valued at approximately \$10,000/ac for a total of \$2,920,000. There are improvements on the properties including a 10,500 sq. ft. residence, a 4,000 sq. ft. residence, and a 2,000 sq. ft. residence along with several barns. The improvements are valued at \$4,310,500, total value of \$7,230,500. As I mentioned earlier I met with an appraiser, Tim Figge of RVA Residential valuation and administration, Hastings, Minnesota, who has worked on public utility condemnations and he has informed me that I can expect a drop in value of 2/3 or \$4,820,333. This drop in value does not include the loss of business income of one of my completely restored, century old country barns. It is rented for wedding receptions, family reunions, etc. and the loss of repetitive annual income would be between \$67,000 and \$80,000. The power lines will be running within a few hundred feet of this particular barn located at 1197 -- 115th St. NW, Oronoco, Minnesota. I am faxing this letter with a map so you can see the exact location of my property and that the power lines will be running next to this century barn that generates significant business income and would be lost with the power poles. No one will want a wedding reception or party below high voltage power lines throwing

off stray voltage. CapX power line should not run along White Bridge route (3P "preferred route" because this route is plotted by Rochester as future residential development property and is already in the Rochester School District. Already the land is selling for over \$10,000/ac to developers. Over 100 acres on the North side of the intersection of 14th Ave. NW and County Rd. 12, a stone throw from White Bridge sold to a developer for \$10,000/ac. (Also marked on the map) The route that should be utilized for CapX should be 3A route "alternate route" crossing in Wabasha County because the land has a much lower market value and is not slated for residential development within a high powered school district like Rochester's school district. The 3A "alternate route" has flatter terrain for less erosion, less woods to destroy, and is land not planned for significant residential development by a large city like Rochester, Minnesota. My land in the same vicinity will significantly drop in value as the power poles will destroy the vista views from my home and land. In addition there is a family of bald eagles that live in the woods that would be destroyed near the century old red barn. These eagles fly in the river valley where the power poles will be crossing. There are large cliffs that would start severe erosion problems going down to the Oronoco river valley which my property borders on. Please provide me your plan to reimburse me for the following: 1.A loss of repetitive annual revenue of \$80,000 generated from renting out the fully restored century old barn. 2.Loss of over \$4.8 million of land value and improvements on my 8 farms. 3.Cost to restore a wood lot of mature oak, pin, and walnut trees that would be destroyed. 4.Cost to build retaining walls to prevent my land from eroding down the steep cliffs of the Oronoco river valley. Because the White Bridge route is within the Rochester School District there are many physicians from the Mayo Clinic and IBM executives who live in the vicinity of the 3P "preferred route". One of my neighbors is a physician at Mayo Clinic and my other neighbor is an executive at IBM. Obviously we will all suffer drops in our high land values because our land is in the Rochester school district and due to the loss of country views, dangerous stray voltage and static electrical noise. Below is my contact information to provide me with the answers and information I am requesting in numbers 1 -- 4 above. Thanks you in advance for this information. Sincerely, Javon Bea 11123 11th Ave. NW Oronoco, MN 55960 507-254-9745 jbea98@aol.com

Mitigation:

Submission date: Fri Apr 29 22:30:22 2011

This information has also been entered into a centralized database for future analysis.

For questions about the database or the functioning of this tool, contact:

Andrew Koebrick
andrew.koebrick@state.mn.us

Langan, Matthew (COMM)

From: Javon Bea [jbea98@aol.com]
Sent: Friday, April 29, 2011 10:27 PM
To: Langan, Matthew (COMM)
Subject: Oronoco Segment 3

April 29, 2011

Office of Energy Security, MN Department of Commerce
Matt Langan, State Permit Manager
85 7th Place East, Suite 500
St. Paul, MN 55101-2198

Re: CapX2020 Hampton-Rochester-LaCrosse 345kV Transmission Line Project PUC
Docket # E002/TL-09-1448
Draft Environmental Impact Statement Comments **Regarding Segment 3**

Dear Mr. Langan,

*The purpose of this letter is to help you understand the location and impact on my property which I sent to you in a **previous email letter dated April 12, 2011**. I would have sent this clarification letter earlier but I have had trouble with my internet service.*

My name is Javon Bea and I am President/CEO of a \$1.2 Billion Health System. I have lived in Oronoco Township since 1980, over 30 years. I own 8 separate farm homesteads for development for a total of 292 acres. All of these acres are a combination of rolling hills, woods, and tillable land with beautiful vista views of the Oronoco river valley and which would be **negatively impacted** if the 345kV power poles run along 3P "preferred route". The negative impact on my property according to an appraiser, Tim Figge, who has worked on public utility condemnations would be a **financial loss in value of my property of \$4,820,333**. The total value of my property is \$7,230,500. From all my acreage the 345 KV power poles will destroy the country views. The land is valued at approximately \$10,000/ac for a total of \$2,920,000. There are improvements on the properties including a 10,500 sq. ft. residence, a 4,000 sq. ft. residence, and a 2,000 sq. ft. residence along with several barns. The improvements are valued at \$4,310,500,

total value of \$7,230,500. As I mentioned earlier I met with an appraiser, Tim Figge of RVA Residential valuation and administration, Hastings, Minnesota, who has worked on public utility condemnations and he has informed me that I can expect a drop in value of 2/3 or \$4,820,333. **This drop in value does not include the loss of business income of one of my completely restored, century old country barns. It is rented for wedding receptions, family reunions, etc. and the loss of repetitive annual income would be between \$67,000 and \$80,000. The power lines will be running within a few hundred feet of this particular barn located at 1197 – 115th St. NW, Oronoco, Minnesota. I am faxing this letter with a map so you can see the exact location of my property and that the power lines will be running next to this century barn that generates significant business income and would be lost with the power poles. No one will want a wedding reception or party below high voltage power lines throwing off stray voltage.**

CapX power line should not run along White Bridge route (3P “preferred route” because this route is plotted by Rochester as future residential development property and is already in the Rochester School District. Already the land is selling for over \$10,000/ac to developers. Over 100 acres on the North side of the intersection of 14th Ave. NW and County Rd. 12, a stone throw from White Bridge sold to a developer for \$10,000/ac. (Also marked on the map)

The route that should be utilized for CapX should be 3A route “alternate route” crossing in Wabasha County because the land has a much lower market value and is not slated for residential development within a high powered school district like Rochester’s school district. The 3A “alternate route” has flatter terrain for less erosion, less woods to destroy, and is land not planned for significant residential development by a large city like Rochester, Minnesota.

My land in the same vicinity will significantly drop in value as the power poles will destroy the vista views from my home and land. In addition there is a family of bald eagles that live in the woods that would be destroyed near the century old red barn. These eagles fly in the river valley where the power poles will be crossing. There are large cliffs that would start severe erosion problems going down to the Oronoco river valley which my property borders on.

Please provide me your plan to reimburse me for the following:

- 1. A loss of repetitive annual revenue of \$80,000 generated from renting out the fully restored century old barn.**
- 2. Loss of over \$4.8 million of land value and improvements on my 8 farms.**
- 3. Cost to restore a wood lot of mature oak, pin, and walnut trees that would be destroyed.**
- 4. Cost to build retaining walls to prevent my land from eroding down the steep cliffs of the Oronoco river valley.**

Because the White Bridge route is within the Rochester School District there are many physicians from the Mayo Clinic and IBM executives who live in the vicinity of the 3P “preferred route”. One of my neighbors is a physician at Mayo Clinic and my other neighbor is an executive at IBM. Obviously we will all suffer drops in our high land values because our land is in the Rochester school district and due to the loss of country views, dangerous stray voltage and static electrical noise.

Below is my contact information to provide me with the answers and information I am requesting in numbers 1 – 4 above.

Thanks you in advance for this information.

Sincerely,

Javon Bea
11123 11th Ave. NW
Oronoco, MN 55960
507-254-9745
jbea98@aol.com

27A.

The decline in property values suggested by the comment is much higher than existing research indicates is likely under normal circumstances.

27B.

See Section 7.3.1 of the EIS.

27C.

A new transmission line would be visible from the renovated event barn described in the comment, although it is not clear why the view change, while not desirable, would greatly effect the rental business at the facility as people become used to a transmission structure.

27D.

This area is zoned for residential development. However, the exact location and numbers of new residences along a route cannot be predicted at this time, and transmission infrastructure is not specifically prohibited by the zoning ordinance. Therefore, this is one of many factors to be taken into account by OAH and the Commission as part of their final route recommendation and decision.

27E.

See Section 7.6 of the EIS.

27F.

As noted in Section 7.8.7 of the EIS, the construction stormwater general permit (MN R 100001) was re-issued by the PCA on August 1, 2008. Under the re-issued permit an NPDES/State Disposal permit would be required for the construction of this transmission line. The types of activities associated with the construction of powerlines which trigger the need for a stormwater construction permit include ROW clearing, staging areas, access roads, landings for storage of equipment and timber, and other types of activities which disturb soil.

The construction stormwater permit requires the preparation of a project specific pollution prevention plan that identifies controls and practices that would be implemented during construction to prevent erosion. Specific strategies and requirements for controlling erosion will be developed during permitting and will be tailored to the unique erosion challenges that the permitted route presents.

27G.

Any increased erosion or direct damage to the commenter's property would be compensated by the applicant. Regarding the other compensation requested, the issue of fair compensation for utility transmission lines has been debated at the state legislature for nearly a decade without any changes made. Currently, the easement price for the ROW required is the standard payment required.

27H.

See Section 7.1 of the EIS.

27I.

See Section 7.3.2 of the EIS.

27J.

Your objection/preference of the specified route is noted. The comment is part of the record in this matter by its inclusion in the EIS, and will be submitted to the OAH and Commission for consideration.

Langan, Matthew (COMM)

From: apache@web.lmic.state.mn.us
Sent: Friday, April 08, 2011 11:55 AM
To: Langan, Matthew (COMM)
Subject: Blumers Fri Apr 8 11:55:23 2011 E002/TL-09-1448

This public comment has been sent via the form at:
www.energyfacilities.puc.state.mn.us/publicComments.html

You are receiving it because you are listed as the contact for this project.

Project Name: Hampton to Rochester to La Crosse 345kV and 161kV Transmission Line

Docket number: E002/TL-09-1448

User Name: Rae Ann Blumers

County: Olmsted County

City: Pine Island

Email: raeann@earthlink.net

Phone: 507-356-8291

Impact: My name is Rae Ann Blumers. I have great concern about the trasmission line that may be coming towards my house. I will be attending the public meeting next week. And I am not sure which route was chosen for this line. I have a pacemaker and my cardiologist has told me that living close to that high of a voltage of trasmission line could be very dangerous to me. I hope that you can please take this into consideration. I know that not everyone will be pleased with where this is built. I just am very concerned for my health, as a 33 year old with what I hope many years ahead of me. Thank you very much. We live on county road 5, between Pine Island and Byron. Thanks for your time! ~Rae Ann Blumers

Mitigation: I thought there were 3 options as routes originally. I am not sure where that stands at this point. Like I mentioned, I do plan on attending the meeting next week.

Submission date: Fri Apr 8 11:55:23 2011

This information has also been entered into a centralized database for future analysis.

For questions about the database or the functioning of this tool, contact:

Andrew Koebrick
andrew.koebrick@state.mn.us

28A.

Your objection/preference of the specified route is noted. Your comment is now part of the record in this matter by its inclusion in this EIS, and will be submitted to the Office of Administrative Hearings (OAH) and Commission for consideration. See Section 7.1 of the EIS for discussion of impacts to implantable medical devices.

28A

Steven W. Boss
12033 11th Ave NE
Rochester, MN 55906

Dear Public Utilities Commission,

My name is Steven Boss, and I own 52 acres in Section 12, Oronoco Township. The proposed 345kV transmission line runs through my property. I purchased this property five years ago, because of its unique characteristics and biodiversity. Being a Forester, I first realized the uniqueness of the property because it contains both a mature, 'old growth', upland forest as well as a lowland forest, along with the corresponding, 'old growth', plant communities for both timber types. There are also numerous springs on the property that feed directly into Lake Zumbro. As far as "Biodiversity" is concerned, this property has it all, and would be adversely threatened by the removal of vegetation.

29A

My driveway was constructed on my southern most boundary line (this is exactly where the preferred route is located), and I have spent in excess of \$60,000 on the driveway. I wanted the footprint of the driveway to be as small as possible to minimize the number of trees to be removed, and also to prevent erosion on the very steep slopes. I then spent an additional \$10,000 to bury the electrical lines in the driveway so I wouldn't have to look at any overhead power lines. I was shocked to learn that the preferred route would go right along my property line encompassing my driveway and removing trees and vegetation in this very steep and highly erodible area. My thoughts are that there has to be a more efficient route to put a power line than this. Just a quarter mile south of my property are gently rolling agricultural fields. Furthermore, just 1/2 mile south of my property is an existing utility corridor. The cost of construction, would be far less, as well as the impact to an extremely unique plant and wildlife community.

29B

29C

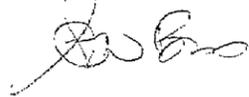
29D

29E

Enclosed is a series of photos beginning with my driveway, showing the property line as the shoulder slope of the driveway. The area to the north of the driveway has slopes exceeding 30%, and the drainage flows directly into Lake Zumbro. Please notice the 'old growth', timber that would be removed to accommodate the power line right of way. The next series of photos show the alternate route, just a quarter mile south. The first picture shows an open crop field to the west that would join the power line at White Bridge Rd. The next photo shows the view going east at 11th Ave. This is clearly a better route, based on your own criteria, and I hope you consider this a viable alternative. This project, in the existing location, would cost me hundreds of thousands of dollars in decreased property values. Please, reconsider the preferred route as it pertains to my property.

29F

Thank you,
Steven W. Boss



29A.

See Section 7.7 of the EIS.

29B.

As noted in Section 7.8.7 of the EIS, the construction stormwater general permit (MN R 100001) was re-issued by the PCA on August 1, 2008. Under the re-issued permit an NPDES/State Disposal permit would be required for the construction of this transmission line. The types of activities associated with the construction of powerlines which trigger the need for a stormwater construction permit include ROW clearing, staging areas, access roads, landings for storage of equipment and timber, and other types of activities which disturb soil.

The construction stormwater permit requires the preparation of a project specific pollution prevention plan that identifies controls and practices that would be implemented during construction to prevent erosion. Specific strategies and requirements for controlling erosion will be developed during permitting and will be tailored to the unique erosion challenges that the permitted route presents.

29C.

See Section 7.11 of the EIS.

29D.

The comment is part of the record in this matter by its inclusion in the EIS, and will be submitted to the OAH and Commission for consideration.

29E.

See Section 7.6 of the EIS.

29F.

Your objection/preference of the specified route is noted. The comment is part of the record in this matter by its inclusion in the EIS, and will be submitted to the OAH and Commission for consideration.

29G.

See Section 7.2 of the EIS.

Langan, Matthew (COMM)

From: Maxine Brehmer [deerpond2@pitel.net]
Sent: Wednesday, April 27, 2011 12:18 PM
To: Langan, Matthew (COMM)
Subject: Oronoco (18th Ave NW) Comments on DEIS for CAPX 2020's Hampton-Alma Line

Dear Mr. Langan,

I live on 18th Avenue NW near Oronoco, and ask you to consider these comments on the proposed route for the CAPX 2020 Power Line.

- 30A** 1. With 38 houses within 500 feet of the proposed route, and houses being the most expensive land to put the line through, it seems this section of the route would be one of the most expensive places for you to locate the power line.
- 30B** 2. It is a long-standing truth that the shortest distance between 2 points is a straight line. On the map we were given, the line comes south on 18th Avenue, crosses Co Road 12, and then just a few miles East, crosses back and goes North again. What is gained by going South through this highly populated road, and then making a right angle turn to go back north? Almost half the distance gained by coming South is lost by going back North again.
- 30C** 3. At the point that this proposed line crosses the Zumbro River (North of where it joins 18th Avenue), there is an area of Wetland. Have you identified this problem? It does not seem to be shown as Wetland on the maps given out.
- 30D** 4. Power lines such as this have a history of being dangerous to animals. When we (in 1992) sold our dairy farm, the buyer bought a herd of Holstein cattle from an area in western Minnesota near a power line just constructed. Nearly all of that purchased herd aborted their calves that winter, causing a great financial loss.
- 30E** 5. We have many deer in our area, as well as wild turkeys, pheasants, and also two American Bald Eagle nests in the wetland area, near the Trost homes. My son walked down there on Easter Sunday and personally saw the Eagle nests (an endangered species), which certainly may be harmed by this power line.
- 30F** 6. It is often stated that these lines may be dangerous to humans, causing cancers in adults, and leukemia in children.
- 30G** 7. The Power Line would, of course, reduce the value of my home and property. I am a Senior Citizen, hoping to stay here as long as I can, but realize someday this home will help pay for my nursing home years. This is an important personal reason for my hoping this line to be located in another area.

I strongly suggest that a different route for this power line be found, possibly going through woods or fields, which would be less expensive than going down our highly populated road with the several quite new houses.

Thank you for considering my comments to this proposed power line.

Sincerely,

Maxine Brehmer
 13105 18th Avenue NW
 Oronoco, MN 55960

30A.

Your objection/preference of the specified route is noted. The comment is part of the record in this matter by its inclusion in the EIS, and will be submitted to the OAH and Commission for consideration.

30B.

The comment does not include a specific route reference, so it was not possible to tell which route segment the comment is referring to. Therefore, it is not possible to respond to the comment.

30C.

See Section 7.8.6. Wetlands were identified using the USFWS National Wetlands Inventory and there are some inaccuracies with these data. During the permitting phase, the wetlands in the route will be delineated and avoided as possible.

30D.

See Section 7.5.1.1 of the EIS.

30E.

See Section 7.7 of the EIS.

30F.

See Section 7.1 of the EIS.

30G.

See Section 7.2 of the EIS.

Langan, Matthew (COMM)

From: apache@web.lmic.state.mn.us
Sent: Wednesday, April 27, 2011 9:06 AM
To: Langan, Matthew (COMM)
Subject: Brislen Wed Apr 27 09:06:00 2011 E002/TL-09-1448

This public comment has been sent via the form at:
www.energyfacilities.puc.state.mn.us/publicComments.html

You are receiving it because you are listed as the contact for this project.

Project Name: Hampton to Rochester to La Crosse 345kV and 161kV Transmission Line

Docket number: E002/TL-09-1448

User Name: Crystal Brislen

County: Douglas County

City: Omaha

Email: bbrislen@cox.net

Phone: 402-393-1030

31A

Impact: My sister, brother-in-law, nephew and niece live next to 65th street. Due to the increased health risks associated with magnetic fields including but not limited to increased rates of cancer, leukemia and brain tumors I am petitioning the committee to use alternatives other than 2P-002. Thank you for the opportunity to comment.

Mitigation:

Submission date: Wed Apr 27 09:06:00 2011

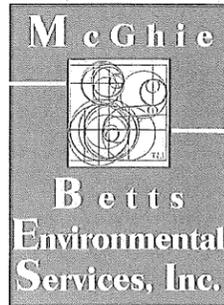
This information has also been entered into a centralized database for future analysis.

For questions about the database or the functioning of this tool, contact:

Andrew Koebrick
andrew.koebrick@state.mn.us

31A.

See Section 7.1 of the EIS.



1648 Third Avenue S.E.
 Rochester, MN 55904
 Tel. 507.289.3919
 Fax. 507.289.7333
 e-mail. mbi@mcghiebetts.com
 Equal Opportunity Employer

April 29, 2011

Matt Langan, State Permit Manager
 Office of Energy Security, Minnesota Department of Commerce
 85 7th Place East, Suite 500
 St. Paul, MN 55101-2198

Re: CapX2020 Hampton-Rochester-La Crosse 345kV and 161kV Transmission
 Line Project (PUC Docket No. E002/TL-09-1448)
 Oronoco Township Draft Environmental Impact Statement Comments

Dear Mr. Langan,

In accordance with the authorization of the Oronoco Township Board of Supervisors; McGhie & Betts Environmental Services, Inc. (MBESI) in collaboration with Biko Associates, Inc. and Malkerson, Gunn, Martin LLP have prepared the attached comments related to the Draft Environmental Impact Statement (DEIS) on their behalf. The proposed CapX2020 power transmission system has two line segments that cross or abut Oronoco Township including the double-circuit capable 345kV White Bridge Zumbro River Crossing (3P) and the various alternative Zumbro River crossing locations (3P-Zumbro-N and 3A), and the 161kV line from the North Rochester Substation to the Northern Hills Substation. We have focused our attention towards the 3P route alternative that crosses Oronoco Township and to the DEIS data that points to justification for rejecting the 3P route.

Oronoco Citizen Involvement:

Oronoco Township has held three recent public meetings since the publication of the DEIS; two with the Oronoco Planning Advisory Commission and one meeting with the Oronoco Township Board. The meetings were attended by dozens of local residents seeking information and wishing to comment on the CapX2020 process and the DEIS and Route Permit Application. The Township wanted to enter both general and specific concerns of their citizens relative to both the process and the DEIS document into the record.

Oronoco's Primary Concerns:

Of primary concern were statements in the DEIS that seem to justify the 3P route crossing through Oronoco Township without adequate consideration of the existing and future land use and settlement patterns that have been directing private and public investments in Oronoco Township for decades. We also have concerns that important elements of potential impacts and risks are not adequately disclosed or are diminished because some form of available mitigation could be used if a problem arises. These types of routing decisions should first focus on maximum avoidance of known or suspected problems, especially when it comes to health, safety and general welfare; the standards that apply to all land use decisions in Oronoco Township. We believe that these standards dictate placing the new route in the least populated area with the fewest neighbors, for now and in the future. Our Township and County Land Use Plans and Zoning Ordinances are our guide to current and future development; we believe that you should employ these same

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32B

32C

32C
(cont)

32D

32E

32F



principles to avoid the conflicts inherent with a transmission route across Oronoco Township. We sense that the preparers and reviewers of the DEIS have taken a broad-brush approach to the review and have an approach that is too casual about the human impacts that will occur if the 3P route crosses Oronoco Township. We feel the justifications revealed for the 3P route in the DEIS are weak and do not consider the unique nature of Lake Zumbro and Oronoco Township. This justification also gives little consideration for avoiding the human conflicts of a route through land that has a very high value for agriculture, recreation and settlement.

We also simply object to the DEIS justification that the 3P route which crosses White Bridge Road is preferred because it will avoid visual impacts to the other Zumbro Dam Crossings (Section 8.3.4.12 Recreational Resources, p.171). This type of convoluted justification belies the evidence that the 3P route through Oronoco Township has the greatest impact and simply ignores our criteria for land use decisions. We hold to the principles in our planning approval process that any proposed land use should "not be injurious to the use and enjoyment of other property in the neighborhood and will not significantly diminish or impair the values of such property". We also require that "the proposed use will not impede the normal and orderly development and improvements of the surrounding property". The evidence from the DEIS is clear that the 3P route crossing the Zumbro River at White Bridge violates our principals and should be rejected as the preferred alternative.

Oronoco's General DEIS/Routing Decision Concerns

Oronoco Township and the citizens who have participated in the meetings do not feel that they have been given adequate time to review the highly technical DEIS and that route decisions should not be scheduled until the Final EIS is completed. Citizens noted that even now, after two years of public discourse about the routes, that the process and the information is neither adequate nor transparent.

A second concern of the Township is that elected officials and numerous citizens have cited the inability to get "straight answers" from OES staff or CapX officials and consultants. Citizens who commentated at the public input meetings said they would have specific questions about the CapX process and rarely got the answers needed to make informed decisions or comments. Numerous times citizens informed us that nearly every OES or CapX project official gave the answer that "I'm not the right person to answer that question." Personally this was also my experience at the Plainview DEIS meeting with an OES official who was unable to answer or comment on questions relative to the various alternate routes considered in the DEIS. This is frustrating to the affected citizens, thwarts public input and gives the impression that CapX is obfuscating or misdirecting citizens.

The theme stated by Oronoco residents that the DEIS was a difficult document to use and to find answers to specific questions has been raised time and time again. At this stage of the review and permitting we are mostly concerned that the DEIS is compiled in a manner that is difficult to use and challenging to assess. The text of the document largely obfuscates the obvious differences between the multiple alternatives within Segment 3 routes and misdirects the reviewer from the issues of greatest concern to Oronoco. Oronoco Township is a growing township and for the last thirty years has developed settlement patterns and adopted land use plans to encourage more suburban growth and a more dense settlement pattern. This is not true of Wabasha County or the proposed alternate routes in Wabasha (3P-Zumbro-N or 3A). The following comments are among many we received during the Oronoco meetings:

¹ Olmsted County Zoning Ordinance 2/26/07, Section 4.02 Conditional Use, pg 40

32G

- The formatted style of Quattro size pages made the document too difficult to use. It cannot be printed from a home computer and printer, it is difficult to flip the pages when trying to follow references to other sections and the pages cannot be easily viewed on line.

32H

- The map mosaic is divided at inconvenient places that make analysis difficult in Oronoco Township.

32I

- There is much confusion among Oronoco reviewers about where the poles and transmission line along the new route will actually be placed within the corridors or macro corridors. Is it limited to only the 1000-foot corridors that are under evaluation in the DEIS or does it include an area within 1.25 miles of the center line as allowed in Minnesota Statutes 116E.02 subd 1? Based on the available information we feel that the public is not able to understand where the line might actually go. As a local government unit we cannot effectively evaluate the impact on properties, land economics, ecological considerations or any other factor without more clarity. Refer to Attachment B which provides an example of the endless number of route alternative possibilities within the 1,000-foot and 1.25-mile variable width corridors and explain how the DEIS can adequately assess all potential impacts within these buffers.

32J

- The placement of multiple alternate paths within Oronoco Township as substitutes for segment 3P is a burden on the public who wishes to review and comment on the DEIS. For example the 3P route, east of the White Bridge Zumbro River crossing, has the preferred alternative and three short parallel alternatives (3P, 3P-006, 3P-007 and 3P-010), each necessitating a detailed evaluation. This is not viewed as a serious route analysis, but rather, an effective means to frustrate and thwart citizen reviewers. While the OES may have an expectation that the public will review and comment on each route segment and sub-segment this is an unreasonable expectation when multiple sub-segments seem to be nothing more than multiple red-herrings. We view this as an effective means of misdirection to cause reviewer fatigue.

32K

- The text of the document does little to disclose the factors differentiating between the multitudes of sub-routes within the corridor and relies on the composite maps and tabulated data. This makes the information inaccessible to the public wishing to analyze the impacts.

32L

- The tabulated data does not adequately define the beginning and end of each of the various alternative segments, making it difficult or impossible to discern whether there are significant differences between the route alternatives. The report would be more useful if the maps, text and tables were more closely aligned by subject and geography, not by subject or geography. For purposes of the public review the various line segments should be more clearly divided rather than grouping all the factors by subject matter together on one map, then tabulating the confusing array of route alternatives. We believe the multiple route alternatives have been selected to make the analysis much more difficult.

32M

- Much of the ecological data for the DEIS is derived from the MN DNR Natural Heritage Database, a compilation of observations and occurrences of natural features and significant species. This database is fairly complete and thorough on public lands where the DNR has conducted field surveys. Unfortunately the database has severe limitations because it does a notoriously poor job of documenting occurrences on private land. Since all of the land on the 3P route through Oronoco Township is private land; reliance on the DNR database is incomplete and suspect. This is true for most of the CapX2020 routes through Southern Minnesota. Without reliable data on private land, field surveys should be conducted.

32N

- The publication of composite digital maps with as many as 60 indexed features ranging from points to linear features or broad areas fails to add clarity to the DEIS review. When there is only access to the PDF conglomerate maps and not all of the map layers our ability to analyze the data is impaired by the confusion. On many maps it cannot be clearly distinguished between the various natural heritage areas, the biodiversity significance areas and other features (See DEIS; Appendix A, Sheet MR8). By placing so many factors on a single map most people are confused. In our meetings citizens have commented that the “maps look like scrambled eggs” with so much information, at such a small scale, that the details and trends are obscured. We do not understand this conglomerate approach when the document is published in an electronic format and each data layer can be digitally published for easy display. It would be just as easy to provide access to each data layer or to have individual maps for each feature rather than stopping them all together to make a few unintelligible maps. This is a technical flaw in the publication that places a barrier to public review. We have heard numerous comments from citizens who believe that the purpose of OES and CapX is to make the DEIS review difficult for the potentially affected parties.

32O

- While the Township understands that the Certificate of Need has been issued and the route decisions are pending the Supervisors and citizens understand the need for power transmission. They are still concerned that the double-circuit capable 345kV has no benefit to the locals, but has a significant impact on Oronoco Township. Because the 345kV transmission line neither allows input from distributed generators, nor provides power for local consumption this line should be placed where it has the absolute least amount of human impact. The DEIS does not do a good job of analyzing this. We recommend that plat and parcel maps be included for all of Segment 3 alternatives to assess the number of parcels affected by the proposed transmission line that have no local utility. We have completed our own assessment for Oronoco Township within the 1,000-foot and 1.25-mile variable width corridors, as included in Attachment B. Within Oronoco Township alone, there are 184 affected parcels within the 1,000-foot corridor.

32P

- The proposed 161kV transmission line serving Rochester does provide some local utility and provides needed redundancy and reliability for local power service providers and this line must go through more populated areas to provide the service. However, the proposed 345kV transmission line does not need to go along the routes that have the most people. We are very concerned that the DEIS does not adequately address the combination of unique resources or the future settlement patterns in Oronoco Township that could easily be avoided by choosing a Zumbro River crossing farther north in Wabasha County.

32Q

- The Applicant fails to cite the fact that without a current U.S. or State Electric and Magnetic Field (EMF) exposure standard for power transmission lines, the public is faced with unknown risks. Even though the DEIS admits that health, safety and general welfare affects can occur based on distance from the proposed transmission line factors such; as frequency, duration and distance from exposure, source impedance, contact impedance, body impedance and other factors affecting those in close proximity, are not adequately disclosed. It is not enough to state that engineering solutions can be adopted if the affects are noted when a variable option is to avoid exposure for the largest number of current and future residents.
- In general we have noted a reliance on old studies and data and a general lack of relevant current data that we would expect in a DEIS. For example:

32R

- There are no modern, peer reviewed, health risk reports conducted by reputable researchers concerning leukemia and childhood cancers in proximity to transmission lines². We view these studies to be important because they show a leukemia risk when children are born within 600 meters (1,969 feet) compared to children born beyond 600 meters and show the highest correlation to cancer risk at a distance of 70-99 meters (230 - 325 feet). These risk/distance correlations are relative to the safe setbacks, right-of-way width, buyouts for existing homes and the impairment to future growth for the transmission line corridor. The statistical risk estimates should be used for both the current land use, but also for anticipated future growth. Such an analysis would show a clear distinction between Oronoco Township (3P route) and the Zumbro River crossing to the north (3A). Based on this data it is evident any family living within 1,000-feet of the proposed project will have to consider the risks of their children contracting childhood leukemia.

32S

- The current U.S. Census data is not used. This data shows that Oronoco Township has experienced rapid growth over the last decade while the Wabasha Townships remain largely unchanged.

Oronoco Township Specific DEIS Concerns:

In Attachment A we have detailed dozens of issues that are inaccurate or need more information, better disclosure or more realistic analysis. Some of the themes of our specific analysis are:

32T

1. Mitigation measures mentioned in the DEIS typically are to avoid occupied residents, but the 3P route alternative is along the most densely populated area in Segment 3 and crosses the area with the most certain future growth potential.

32U

2. The DEIS lacks reference and analysis of the most currently available land use and land value information for Oronoco Township. The Olmsted County General Land Use Plan was revised and updated in February 2011.

32V

- a. Due consideration needs to be given to the Olmsted County and Oronoco Township Comprehensive Land Use Plans that designate patterns of future growth. The Olmsted General Land Use Plan shows the corridor between Rochester and Pine Island to be designated for future urban growth and the area along Lake Zumbro as principally suburban growth. Both urban and suburban land use rely on higher settlement densities than farming. We believe that this is a clear distinction for Oronoco Township where current residents have made property investments based on future growth potential (Attachment D).

32W

- b. We find no reference to current data on land economics and land values. Later in the detailed section we have cited the most recent statistics on land values for A-2 zoned agricultural land that show values in Oronoco Township to be almost twice as high as in the Wabasha County townships (Attachment A, comments directed to p.150 Property Values). The current land value factors represent the real market considerations of land

²Lowenthal, Tuck, Brey (2007) Residential Exposure to electrical power transmission lines and risks of lymphoproliferative and myeloproliferative disorders: a case – control study. Internal Medicine Journal 37:614-619
Draper, Vincent, Kroll, Swanson (2005) Childhood Cancer in relation to distance from high voltage power lines in England and Wales: a case – control study. British medical Journal 330:1290

32X

productivity, parcel size, proximity to transportation and job centers, proximity to agricultural markets, historic land uses, school districts and other services, as well as factors that influence land economics. All of these factors need to be considered in the routing decision. Oronoco Township is a high value, moderate density area with pending high value development potential.

32Y

- c. Current data on the recreational use and the value of recreational use of Lake Zumbro has been quantified and is omitted from the DEIS. Lake Zumbro Improvement Association (LZIA) has been perusing lake restoration and other improvements. To justify the needed improvements LZIA has compiled use statistics derived from DNR Creel surveys and boat census data to estimate the values for recreational use. This important data and analysis is absent from the DEIS data and should be used in comparison of route alternatives (Attachment A, comments directed to p.55 Water Bodies, and Attachment E).

32Z

- d. Traffic counts for Olmsted County roads show that the 3P route is obviously within sight of the most traveled roads in Oronoco Township. Comparison should be made of the average daily trips along the roads for each of the Segment 3 route alternatives. The data is easily available from the County Public Works Department and the Minnesota Department of Transportation.

32AA

3. The DEIS lacks reference to and analysis of the most currently available technical data. For example:

- a. We find no reference to the new standards from IEEE Standards Association related to reducing bird deaths (IEEE Standard 1651-2010 – IEEE Guide for Reducing Bird-Related Outages).

- b. The DEIS should publish the most currently available, peer reviewed studies that assess the risk of transmission line EMF. EMF and stray voltage concerns in Oronoco Township include not only residents and landowners, but farmers and recreational users who may rely on electronic medical devices, as well as swimming pools, metallic pipelines and energized conductive objects at ground level. Two more recent publications should be incorporated in the analysis of the health risks.

- i. Lowenthal, Tuck, Brey (2007) Residential Exposure to Electrical Power Transmission Lines and Risks of Lymphoproliferative (LPD) and Myeloproliferative (MLD) Disorders: A Case – Control Study. Internal Medicine Journal 37:614-619. The study found “*Adults who had lived within 300 meter of a power line during the first 15 years of life had a threefold increase in risk; those who had lived within the same distance aged 0-5 years had a fivefold increase in risk. Although recognizing that this study has limitations, the results raise the possibility that prolonged residence close to high-voltage power lines, especially early in life, may increase the risk of the development of MPD and LPD later.*”

- ii. Draper, Vincent, Kroll, Swanson (2005) Childhood Cancer in Relation to Distance from High Voltage Power Lines in England and Wales: A Case – Control Study. British Medical Journal 330:1290. This study concluded “*there*

is an association between childhood leukemia and proximity of home address at birth to high voltage power lines, and the apparent risk extends to a greater distance than would have been expected from previous studies."

32AB

c. Interference of electronic communications from corona, field effects and power line noise sources such as gaps and harmonics is not adequately addressed for Segment 3. We are requesting a modeling and review of all of the effects for properties within 1.25 miles of the proposed 3P route corridor.

32AC

4. Oronoco citizens need to know first what the impacts are in the frequency range of 0.010-1000 MHz (the frequencies most used by homes and businesses), 0.535-1.605 MHz, 54-72 MHz, 76-88 MHz, 174-216 MHz and 470-906 MHz (the AM and TV broadcasting ranges), 806-824 MHz, 851-869 MHz (for cellular phone frequencies) and in the 1.9 GHz range used for new devices and geo-location services. While standards for measurement of radio noise have actually been established the modeling discussed in the DEIS is not an adequate and does not disclose the impacts. Since Oronoco Township is a developing area it is not enough to analyze just the impact on existing structures, it is necessary to model and assess the impacts to future suburban and agricultural growth.

32AD

5. We believe that other important Oronoco Township analytical data is missing including:

a. While some geologic factors are similar across all route alternatives things like earthing resistance and continuity of the earthing connection is more troublesome in the unglaciated karst terrain of Oronoco Township. These areas are characteristic of shallow soils overlying fractured karst bedrock with a shallow water table. This too is a bigger problem in settlements like Oronoco Township where dairy is still a vibrant farm enterprise and other lands are giving way to suburban style development.

32AE

b. In Oronoco Township karst soils are often less than ten feet deep and overly fractured limestone karst where precipitation water flows freely through the thin soils into karst conduits allowing the water to flow rapidly downward to the level of the regional aquifer; below the depth of most grounding. In addition grounding in the high pH limestone bedrock that is overlain by low pH loess derived soils is more difficult to develop reliance grounding. The grounding can also degrade over time due to corrosion that occurs when metal is not in contact with water and is reliant on contacts with both low pH soils and high pH bedrock. The DEIS has no consideration of these factors, especially as they relate to potential grounding failure on the relatively dense population of Oronoco Township.

32AF

6. The disclosure and analysis of the risk of transmission line induced stray voltage when transmission lines cross service and distribution lines is inadequate. While the DEIS concedes that stray voltage can occur, and it defines the circumstances that they claim can be mitigated there is no disclosure of exactly how many places the risk occurs for the proposed route alternatives. There should be a count of each place the transmission line will cross or parallel a service or distribution line.

32AG

a. It is unclear in the DEIS who is responsible for detecting and mitigating for stray voltage caused by transmission lines crossing service lines. Is it the landowner's responsibility to detect new or changed stray voltage? Is it the local service provider's responsibility to

32AH

conduct mitigation? How do potentially affected parties know what the actual risk is if you do not disclose the points of conflict, the means to measure changes or who is responsible for any new impacts?

b. The reasoning in the DEIS that occurrence of transmission line induced stray voltage can be mitigated through guard wire engineering does not take into account the need to avoid and prevent the problem in the first place. Instead it seems predicated on a promise to fix a problem if it does occur and someone complains. We believe that the correct decision is to avoid the problems; not pay for mitigation and damages that are realized and after people or their animals are affected.

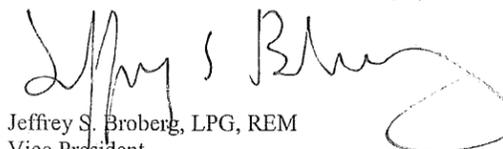
7. The DEIS does not give adequate consideration of the ecological or recreational importance of Lake Zumbro or the impacts that crossing the lake will have to residents, recreational lake users and wildlife.

a. We believe that there should be a detailed field assessment of the migratory bird occurrence along the 3P route. The Oronoco/White Bridge crossing has unique characteristics related to migratory birds that are not an issue for the 3P-009 north river crossing across which crosses a narrow high gradient stream and a narrow river valley. Because the 3P route crosses Lake Zumbro near the middle of the lake at White Bridge the line crosses from bluff top to bluff top, high above a broad exposure of open water and high above the broad perennial floodplain marsh. Large flocks of migrating waterfowl including American White Pelicans (State Special Concern), ducks and geese frequent this part of Lake Zumbro and Bald Eagles nest nearby using the riparian marsh and shoreline of lake for feeding on fish. Many of the birds frequent the lake during migration and breeding, but are infrequent visitors to the riverine valley at the 3P-009 crossing downstream of the Lake Zumbro dam.

Attachment A is a page-by-page, issue-by-issue analysis of the Segment 3 alternatives with comments, corrections, additions and the request for more information. We have included some support data that should be incorporated into the analysis. We look forward to the review of the final EIS and Oronoco Township asks that we be given adequate time between the final EIS publication and the route decision approval to provide additional comments.

We cannot overstate the fact that route 3P has a major impact on Oronoco Township, both existing residents and future growth plans. The 3P route affects our farms, homes, recreation and our future and based on the merits of the facts the impact to Oronoco is fully avoidable.

Sincerely,
McGhie & Betts Environmental Services, Inc.



Jeffrey S. Broberg, LPG, REM
Vice President
Minnesota Licensed Professional Geologist #30019
Registered Environmental Manager #3009



Enclosures

- Attachment A – Oronoco Township Comments to Draft Environmental Impact Statement (PUC Docket No. E002/TL-09-1448)
- Attachment B – Parcel Count Analysis within 1,000-foot Corridor and 1.25-mile Variable Width Corridor for Oronoco Township
- Attachment C – Utilities Resource Map, MN Route Permit Application 8.2-4 Utilities
- Attachment D – Olmsted County Future Land Use Map
- Attachment E – Lake Zumbro and Lower Zumbro River Creel Survey and Calculated Value of Recreation on Lake Zumbro
- Attachment F – Minnesota Land Economics: Estimated Land Values Summary



ATTACHMENT A

**Oronoco Township Comments to Draft Environmental Impact Statement
(PUC Docket No. E002/TL-09-1448)**

Attachment A
 CapX Hampton-Rochester-La Crosse 345kV & 161kV Transmission Line Project
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DEIS Page Number	DEIS Section	Comment
32AI	1.0 Summary	Identify which routes are preferred for each of the three Segments on the image within the text.
32AJ	2.7 Route Width	<p>According to the Minnesota's Power Plant Siting Act (PPSA) which states "the route may have a variable width of up to 1.25 miles, within which the ROW for the facilities can be located." If the proposed route and route alternative can have the ROW located within a variable width up to 1.25 miles then how can the DEIS, and the Final EIS adequately assess the potential impacts of the proposed route and route alternative as they are currently presented in the DEIS? Based on our assessment provided in Attachment B - Parcel Count Analysis within 1,000-foot Corridor and the 1.25 mile Variable Width Corridor for Oronoco Township we have determined the number of affected properties within each corridor to be 184, and 2,297, respectively. With the endless number of route alternative possibilities explain how the DEIS can adequately assess all potential impacts? At what point in the process can the ROW be moved within the 1.25 mile variable width? If the ROW is shifted within the 1.25 mile variable width after Final EIS approval it would be our understanding the Final EIS would no longer be valid (assuming the new alignment was not analyzed in the EIS document).</p> <p>If the route can be located within a 1.25 mile variable width we feel all impacts identified in the DEIS should be analyzed at this distance, instead of the 150-foot, or 1,000-foot route ROW and route corridor, respectively.</p> <p>The ability for the proposed route to be placed within a 1.25 mile route corridor distance is not clearly explained or addressed. As currently written in the DEIS it is not clear when the proposed route (3P with 150-foot ROW) can be moved around to the Applicant's preference within a 1.25 mile variable width corridor, and if changed after the Final EIS is approved what is the point of completing the EIS in the first place?</p>

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32AK	Map 2.6-03 Overview of Route Alternatives North Rochester Substation to Mississippi River 345kV Section	General comment for all maps within the DEIS. Several of the route alternatives are omitted from many of the maps. Make sure all maps in the DEIS have all route alternatives labeled where appropriate. For example, on <i>Map 2.6-09</i> , route alternative 2C3-003-3 is not labeled. It will be difficult to assess impacts between route alternatives if maps are improperly labeled.
32AL	3.0 Regulatory Framework	Provide a more detailed explanation regarding how the 1.25-mile variable route width flexibility fits into the overall regulatory framework.
32AM	4.3 Transmission Line Structures	<i>Figure 4.3-1 Structure designs and foundations being proposed for the project</i> Highlight the structure designs that will likely be selected for the proposed project, according to each route alternative. Provide this information using text boxes below each structure or in some other manner.
32AN	4.5 Underground Options	A detailed assessment that considers undergrounding the proposed transmission line across the Zumbro River should be completed and included in the Final EIS.
32AO	6.1 Crossing the Mississippi River 6.2 The Mississippi River Crossing at Kellogg 6.3 Crossing the Mississippi River at Kellogg	<p><i>Section 6.1</i> should be titled "River Crossings" and a discussion about the Zumbro River crossing should be incorporated to address the following subheadings:</p> <ul style="list-style-type: none"> • Minnesota Power Plant Siting Act • Engineering Challenges and Visual Impacts • Substation Locations. <p>1st paragraph (p.21): In the first sentence after "Mississippi River" the following statement should be added "and the Zumbro River." A table similar to <i>Table 6.1-1 Factors supporting the Kellogg crossing</i> should be prepared and included in this section.</p>

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32AO (cont)		<p>A section similar to <i>Section 6.2</i> (p.23) should be added that is titled "The Zumbro River Crossing" to address information that is pertinent to the three Zumbro River crossings (3P, 3P-Zumbro-N, 3A).</p> <p>A section similar to <i>Section 6.3</i> (p.24) should be added to include a discussion about the Zumbro River crossing. Additional sub-headings such as <i>6.3.1 Aerial River Crossing and Section 6.3.2 Underground River Crossing</i> should be added to specifically address the three proposed routes (3P, 3P-Zumbro-N, 3A) along the Zumbro River. Also prepare a map in the same format as <i>Map 6.3.3-01</i> which displays the conceptual underground crossing plan and profile High-Pressure Fluid-Filled Pipe (HPFF) Method for the Zumbro River crossings (3P, 3P-Zumbro-N, 3A).</p>
32AP	7.1 Public Health and Safety	<p>1st column, 2nd paragraph (p.28): This paragraph indicates the maximum calculated electric field for a single-pole davit arm 345/345 kV double-circuit would be 3.76kV/m, which is less than the state and international electric field guidelines. However, this value would exceed the EPRI's lowerbound pacemaker sensitivity estimate, as shown in <i>Figure 7.1.1.1-1</i> (p.28). Explain health-related impacts that can be expected on pacemakers within the 1.3 kV/m to 6 kV/m sensitivity range. Describe human reactions when their pacemakers are affected by electric fields. Quantify the number of residences along each route where pacemakers are in use and describe the Applicant's approach to mitigating impacts to individuals who might be affected.</p>
32AQ	7.1 Public Health and Safety	<p>Table 7.1.1.1-3 shows an electric field of 3.76 kV/m at the centerline of the ROW for a "Single-Pole, Davit Arm, 345/345 kV Double-Circuit with one Circuit in Service." The same table shows 2.62 kV/m for a "Single-Pole, Davit Arm, 345/345 kV Double-Circuit with one Circuit Active and one Operated at 161 kV/m." This is counter intuitive. Explain this unexpected decrease in the electric field where there is an increase in voltage.</p>
32AR	Table 7.1.1.2-4 State magnetic field regulations of guidelines	<p>Since the Applicant is seeking permit approval for a 345kV transmission line the standards for comparing magnetic field should be for the same voltage. Information</p>

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32AR (cont)		<p>provided in <i>Table 7.1.1.2-4</i> does not provide state standards for magnetic fields at the edge of the ROW for a 345kV transmission line. How can the calculated magnetic values be compared if a standard is not listed? Modify this table to include the 345kV line standards for both the edge of ROW and at the centerline.</p> <p>Then redo the comparison for the following two configurations to determine if the maximum calculated magnetic fields will conform to states that have standards:</p> <ul style="list-style-type: none"> • The maximum calculated magnetic field at the centerline of the project for expected normal conditions for a single-pole davit arm 345/345/69 kV triple-circuit with one 345 circuit in service • the maximum calculated magnetic field at the edge of the ROW for expected normal conditions for a single-pole davit arm 35/345 kV double-circuit with one 345 kV circuit (17.44mG) in service
32AS	Table 7.1.1.1-3, Table 7.1.1.2-1, and Table 7.1.1.2-2	<p>Explain what factors or standards were used to determine 300 feet was an acceptable outer limit distance for evaluating the impacts of electric and magnetic fields.</p>
32AT	7.1.1.4 Implantable Medical Devices	<p>This section states older cardiac device designs can be affected, but impacts are only temporary asynchronous pacing and the device would return to normal operation when the person moves away from the source. Provide evidence through studies or calculations the minimum distance (in feet) an individual with an implantable medical devices can be within proximity to a 345kV transmission line before experiencing electric fields impacts. The minimum distance should correlate to the 1.3 to 6 kV/m pacemaker sensitivity values. Once this distance is known quantify how many residences are within the impact zone. Specify which route and route alternative will have the fewest impacts.</p> <p>Alternatively, route alternative (3P), which has the greatest impact to residences would likely increase the frequency of individual with implantable devices for occurrence, thus the 3P route would have the greatest impact. Therefore, the 3P route is not</p>

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32AT (cont)		considered a good alignment for siting the preferred route.
32AU	7.1.1.5 EMF Mitigation Strategies (Distance)	<p>The recommended mitigation of simply requiring a person with a pacemaker malfunction to move away from the source of the EMFs (as stated in the last paragraph, second column of p. 33) is not acceptable. No documentation has been provided by the Applicant to indicate that a person with a malfunctioning pacemaker will be physically capable of simply moving away.</p> <p>Will signage be installed along segments of the selected alignment to warn people with pacemakers to “Be on Alert” or “Stay Away,” where the threat of a pacemaker malfunctions is a potential threat?</p> <p>Explain with great detail how the transmission line structures can be designed to minimize EMF exposure. This section indicates it can be done, but details are not provided. Schematics would also be helpful.</p>
32AV	7.1.2 Stray Voltage	<p>Transmission lines can induce stray voltage when a distribution circuit is paralleled or the distribution system crosses immediately under the transmission line. Therefore, the frequency of these occurrences should be quantified and included in the Final EIS in a map format. The map should include the following information:</p> <ul style="list-style-type: none"> Existing distribution lines Identify where the distribution system parallels, or crosses under the proposed transmission line for all route and route alternatives within Segments 1-3. Provide a summary table that shows the number of occurrences within each route alternative (e.g. 3-P, Zumbro-N, 3P-001, etc.). <p>This section is also lacking an assessment of the voltage levels that would be experienced by a nearby residence when HVTL-induced stray voltage occurs. Include in this section calculated values (in volts) based upon the proposed project design and identify the extent of impacts in distance (feet). Since agricultural producers with dairy cows, goats, or sheep are most likely to be impacted by</p>

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32AV (cont)		<p>transmission line induced stray voltage, an analysis of feedlot producers compared to locations where the phenomenon is likely to occur should be completed. The map identified above should also include:</p> <ul style="list-style-type: none"> the MPCA Feedlot data (available on the MPCA website) that identifies feedlot producers (classified by animal type) Identify all dairy feedlots within proximity to the identified transmission line induced stray voltage (e.g. the distance should be appropriate to the impact, if 300-feet is the extent of impact then quantify the number of affected producers). Simply stating transmission line induced stray voltage can occur does not adequately allow the impacts between route alternatives to be compared.
32AW	7.1.2 Stray Voltage	A discussion of stray voltage mitigation measures has not been addressed and should be added in the Final EIS. The discussion should also include schematics to depict stray voltage mitigation measures.
32AX	7.2.1 Property Values Concerns	1st column: Provide a summary table that quantifies the number of homes within 1,000-feet of the proposed routes and route alternatives. Complete an assessment of the viewshed that considers impacts within a 4-mile buffer surrounding the proposed routes and route alternatives for all three Segments (1-3). The viewshed analysis should also quantify how many homes each route alternative will impact.
32AY	7.2.1 Property Values Concerns	1st column: Quantify the total amount of arable land that will be eliminated as a result of permanent impacts of the proposed project. Complete this assessment for all route alternatives considered or identified in the DEIS and summarize the data in a table format.
32AZ	7.2.1 Property Values Concerns	1st column: Cite the source(s) that indicated transmission lines can have a positive impact on property values.
32BA	7.2.2 Property Value Research	The last paragraph, third column on page 36 describes adverse impact of transmission lines on adjacent properties. The Applicant indicates that homeowners and developers, who would not be able to obtain FHA or HUD loans if a dwelling or related property

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32BA (cont)		improvements were located within the engineering (designed) fall distance of any pole, tower, or support structure of a HVTL. The Applicant failed to add that would-be buyers of such property would not be able to obtain loans from these sources, and, thus, the market of purchasers would be caused to shrink, essentially reducing the property owner's ability to sell. Nowhere in the DEIS does the Applicant describe what happens when a pole, tower, or support structure falls. Granted, such occasions are likely to be rare, but it must happen; otherwise FHA and HUD would not have a regulation that accounts for this eventuality. When a pole falls, does it bring a "live" wire down with it? This raises further questions about the safe setback distance between the centerline of a 175 foot-tall pole and adjacent structures. Explain how 75 feet (1/2 of a 150 foot-wide ROW) will be adequate to prevent damage to a structure, especially where there may be up to 1,000 feet of "live" wire on the ground with the pole.
32BB	37	7.3.1 Visual and Aesthetic Impacts As stated above this section should include an assessment of the viewshed surrounding the proposed routes and route alternatives. The assessment should quantify the number of homes within a - mile viewshed (which is the distance identified in the DEIS that an observer would be able to identify the structures on a clear day).
32BC	37	7.3.2 Noise The second paragraph under this heading is factually incorrect. A doubling or halving of noise is represented by a 3.0 dBA change, not a 10.0 dBA change.
32BD	37	7.3.2 Noise 5th paragraph: States " <i>Generally, activity-related noise levels during the operation and maintenance of transmission lines are minimal and do not exceed the PCA noise limits outside the ROW,</i> " but it fails to identify the numerical value that would be generated from operation and maintenance.
32BE	37	7.3.2 Noise (House Count Methodology) Discrepancies have been identified with the Applicant's house count methodology. The process used to quantify the number and location of residences along the various route alternatives needs to be re-evaluated to account for homes that are omitted. This analysis should also include an assessment of homes within the 1,000-foot route

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32BE (cont)		corridor and the 1.25-mile variable route width. For example in <i>Appendix A – Sheet MR7 Detail Map Segment 3, North Rochester Substation to Mississippi River</i> a home in the NW corner of the map is not identified.
32BF	38	7.3.3 Proximity to Structures Table 7.3.2-1 on page 38 compares the State's Noise Standards (measured in L ₅₀ dBA and L ₁₀ dBA) to modeled noise levels by structures at the edge of the ROW. The modeled noise levels are reported in L ₅ dBA, and the Applicant asks reviewers to accept L ₅ as an approximation of L ₁₀ . The comparison should use consistent logarithmic scales.
32BG	40	7.4.2 – Project Area Land Use Karst Features Section: <i>Map 8.3-34 shows the area east of Oronoco along the 3P route is located within an "area with "moderate to high probability" of sinkholes or sinkhole formations that are characterized by sinkhole densities of 5 to 20 per square mile."</i> The DEIS states " <i>areas with active karsts (less than 50 feet of sediment cover over bedrock) and mapped karst features will be evaluated by the Applicant's geotechnical consultant during the design of the pole foundations.</i> " Although, this is a typical best management practice when evaluating the threat of karst features, Oronoco Township would like the Applicant to conduct a pre-construction soil mapping analysis that will be incorporated into the Final EIS. Specifically, the Natural Resource Conservation Service (NRCS) County Soil Survey's provide a wealth of information about soil properties within the first 60 inches of the soil profile, as well as depth to bedrock data that is available from County Geologic Atlases. We recommend conducting a detailed desk-top screening that uses multiple properties and variables to determine the probability of karst features along all routes and route alternatives. Variables that should be included in the analysis include: <ul style="list-style-type: none"> • Depth to bedrock • Soil type (e.g. loess and glacial till) This type of analysis will provide another factor to be considered for route selection and will eliminate impacts to these resources.
32BH	40	7.4.3 Mitigation (Land Use) 2nd paragraph: If the Applicant's primary method to reduce land use impacts is to

32BH (cont)			<p>follow existing ROW as much as possible, then explain why the existing 138 kV transmission line that runs west of Mazeppa along Highway 60 to Zumbro Falls and then south along County Highway 2 then south of Mazeppa is not included as a route alternative (Attachment C – Utilities Resource Map, MN Route Permit Application 8.2-4 Utilities). If this route was considered then nearly half of the proposed transmission line would follow existing transmission lines near existing infrastructure and the Applicant would be minimizing the proliferation of new corridors, and conforming to the People for Environmental Enlightenment & Responsibility [PEER], Inc. v. Minnesota Environmental Quality Council, 266 N.W.2d 858 (Minn. 1978)). Additionally, if collocating transmission line structures were achieved through wooded areas, the degree to which forested habitats would be impacted would be reduced.</p> <p>Provide an explanation stating why this route was either considered, or not considered a valid route.</p>
32BI	40	7.4.3 Mitigation (Land Use)	<p>3rd paragraph: <i>“Although land use would be affected in some areas such as substations, in general, land use along the selected route is not expected to change as a result of construction and operation.”</i> The <u>Olmsted County General Land Use Plan, Amended March 8, 2011</u> indicates the future land use along the “preferred” route (3P) within 0.25 miles to the west and 0.75 miles to the east of the Zumbro River crossing is designated as Potential Suburban and Suburban Development (Attachment D - Olmsted County Future Land Use Map). Additionally, Potential Suburban and Suburban Developments are planned within a 1.0 – 1.5 mile corridor south (to the Rochester City Limits) and north (to the Olmsted County line) of the 3P route crossing. The future residential housing development will be attractive to potential buyers for amenities such as proximity to the Zumbro River and Lake Zumbro, views of the Zumbro River Valley from their homes, and proximity to the City of Rochester. If the transmission lines are constructed at the “preferred” location the project would not conform to the current Olmsted County Land Use Plan.</p>
32BJ	40	7.4.3 Mitigation (Land Use)	<p>4th paragraph: The reference to a detailed discussion of land use plans in the project</p>

32BJ (cont)			<p>area (including the analysis of how the proposed routes may consistent with or in conflict with specific land use plans within the project area) is not provided in <i>Sections 8.1.4, 8.2.4, or 8.3.4</i>. See comments below (page 154, 4th paragraph) and include this information in the appropriate section of the Final EIS.</p> <p>Although it is recognized that the Applicant is not bound or constrained by local land use regulations, it is not clear why the Applicant selected a route that would directly impact a community’s future development plans (as documented in an adopted land use plan) when less invasive and disruptive route alternatives are available. An explanation would be appreciated.</p>
32BK	40	7.5 Land Based Economics	<p>It is recognized that a majority of the affected land uses is agricultural, and the Applicant addresses some of the anticipated impacts under <i>Section 7.5.1</i>. The Applicant, however, does not address the land-based economic potential of suburban-style development, which is described in the comprehensive plan. Completely ignored by the Applicant is land-based economic value that will accrue to property owners as land, were it not for the proposed project would be moved out of agriculture and into the development of residences and commercial/retail uses.</p> <p>Again, it is recognized that the Applicant is not bound or constrained by local land use regulations. Nevertheless, when discussing impacts that will result from the proposed project, an assessment of lost income that will be borne by individuals who own property within future development zones (and resultant losses in tax revenues) should be considered.</p>
32BL	41	7.6.1 State and Federally Listed Threatened and Endangered Species	<p>2nd paragraph: Provide in the Appendix the actual DNR Natural Heritage Information System (NHIS) public data summary sheets of the federally-listed or state-listed endangered or threatened species. Also discuss State species of greatest conservation need (SGCN) and non-status species within Minnesota as they are affected by each route alternative. Even though these species are not regulated by State</p>

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32BL (cont)			or Federal laws, all SGCN have DNR management plans that should be taken into consideration when quantifying potential impacts.
32BM	43	7.6.3 Mitigation (Rare and Unique Natural Resources)	2nd paragraph: Identify the areas along all of the proposed route alternatives where biological surveys would need to be completed.
32BN	43	7.7.1.1 Vegetative Communities	Paragraph 5-7: Provide a map in the Final EIS that details the potential pole placement of the transmission line structures along the length of all proposed routes and route alternatives considered. The maps should also indicate the potential staging area locations and potential access roads that will be required for the installation of transmission line structures. Include a summary table of the estimated temporary and permanent impacts for all route alternatives that quantifies impacts in acres. In addition, indicate on a separate map where existing corridors through wooded areas were considered for potentially collocating structures along each route and route alternative.
32BO	44	7.7.2.1 Wildlife Overview	Paragraph 8 and 9: Not only is the Upper Mississippi River National Wildlife and Fish Refuge a haven for migratory birds, so are the tributaries to the Mississippi River including the Zumbro River. Considering the proposed project will cross the Zumbro River at one of three crossings (3P, 3P-Zumbro-N or 3A), provide data that shows the Applicant has completed bird counts or migratory bird studies to quantify the species of birds impacted. If the Applicant has not completed a bird survey (counts) we recommend one is conducted before construction.
32BP	45	7.7.2.1 Wildlife Overview	2nd column, 1st paragraph (p.45): Provide a schedule breakdown (quarterly) that provides details as to when clearing and grading construction activities would take place that have given consideration to impacts of small birds (e.g., eggs or nestlings) and small mammals. Bird surveys as mentioned above, if completed by the Applicant will provide an indication as to where species are more vulnerable along each route

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32BP (cont)			alternative. This information will provide the Applicant with a wealth of knowledge and assist with the pole placement design to mitigate impacts to avian and non-avian species.
32BQ	45	7.7.2.1 Wildlife Overview	2nd column, 2nd paragraph (p.45): Provide a map that shows existing habitat corridors along each route alternative. Include a table that quantifies the extent to which habitat corridors will be fragmented as a result of the construction of the proposed project. Quantify the information in a table by total length of habitat corridor intersected and estimated acres of temporary and permanent fragmentation.
32BR	46	7.7.2.1 Wildlife Overview	1st paragraph, last sentence (p.46): Does the Applicant intend to limit the clearing of trees in forested areas only when the passage of equipment is difficult? If so, state their intention so it is clear and decisive.
32BS	47	7.7.2.1 Wildlife Overview	3rd column, 1st paragraph (p.47): Since the Avian Power Line Interaction Committee (APLIC) states the effects of transmission lines on avian species are negligible beyond one mile indicate how the Applicant will limit impacts to avian species <u>within one mile</u> of the proposed transmission line structures along all route alternatives.
32BT	47	7.7.2.1 Wildlife Overview	3rd column, 3rd paragraph (p.47): State the anticipated likelihood (as a percentage or risk factor) of birds colliding with transmission lines and suffer injuries due to electrocution.
32BU	48	7.7.2.2 Mitigation (Wildlife Overview)	2nd paragraph: Contrary to what is stated in this paragraph, in addition to routes that follow field and property lines, cross-country routes would also generate fewer wildlife habitat impacts. As stated in the DEIS in previous sections (7.5 and 7.7.2.J) the majority of the project area consists of agricultural land (86%), where 53% is classified as prime farmland. As such, portions of the project with the most-disturbed, tri-

32BU (cont)			<p>monoculture vegetation (corn, soybean, alfalfa) tend to support less wildlife species. Since the majority of the land is in agriculture, the majority of the cross-country routes would also cross highly-disturbed agricultural land. Therefore, the statement that cross-country routes will generate fewer wildlife habitat impacts is not supported in previous DEIS sections. It would be correct to state "Therefore, route alternatives that follow field and property lines or cross-country routes would also generate fewer wildlife habitat impacts than alternatives on new routes."</p>
32BV	48	7.7.2.2 Mitigation (Wildlife Overview)	<p>3rd paragraph: Since most native communities dominated by trees would not be allowed to re-establish under the completed transmission line, quantify in a table format the total number (acres) of anticipated impacts to these communities along each route and route alternatives.</p>
32BW	48	7.7.2.2 Mitigation (Wildlife Overview)	<p>Paragraph 4-6: This section the DEIS omits any discussion about mitigating impacts to avian species as that would result from transmission line structures crossing the Zumbro River in three potential locations (3P-, 3P-Zumbro-N, 3A). Include in this section a discussion about the potential structure configurations for crossing the Zumbro River. It would also make sense to collect more route-specific wildlife data that is specific to all routes and route alternatives prior to permitting one specific route to help determine which route would have the smallest impact. If the Applicant has not begun a study of this nature, it is requested that one is conducted before the Final EIS is completed and the Route Permit Application is approved.</p> <p>Additionally, state the anticipated impacts of the project on non-avian wildlife within the Zumbro River near the 3P route. Provide a table that quantifies the impacts in a numerical form for all three river crossings (3P, 3P-Zumbro-N, 3A) and also compares all proposed route alternatives.</p>
32BX	50	7.9.2 Television 7.9.3 Internet and Cellular Phones 7.9.4 Microwave Communication	<p>Explain in greater detail the shadowing of towers and the interference from receiving TV antennas. What is the total line of sight distance that a satellite TV user could</p>

32BX (cont)			<p>expect to experience interference? Quantify how many satellite dishes are within the line of sight interference distance along each route and route alternative and determine which route alternative will have the smallest impact. Since the 3P route has the most residences within a 500-foot distance from the proposed transmission line centerline, one could assume this route alternative would have the greatest impact.</p> <p>Explain why a radio frequency, microwave path and broadcast, and broadcast (TV and Radio) studies will not be completed by the Applicant until a final route is selected. Wouldn't this information be useful prior to final route selection to identify the routes with the fewest impacts? We request that all the studies mentioned above should be completed before the EIS is finalized and the final route is selected. These studies should include or identify the frequency/frequencies where corona from transmission line conductors will likely generate broadband interference. Translate the interference into a distance and determine the extent of impact to nearby residences.</p> <p>From our assessment this section in particular (<i>Section 7.9.4 Microwave Communication</i>) is missing a substantial amount of information that specifically addressed the microwave beam path impacts. The DEIS states "<i>the location of microwave communication towers are provided on the detailed route maps in Appendix A,</i>" however, this Appendix has over 51 maps that are comprised of three different segments. After careful review of the 51 maps we found no evidence to suggest the microwave communication towers are even identified in any map legend on any of the maps. Therefore, this information is omitted and should be included in the final EIS. It would also be helpful to provide an overall map within the DEIS document text that identifies the locations for the microwave communication towers along or in close proximity to each route and route alternative. The map should also identify which Federal Communications Commission (FCC) licensed microwave beam paths will pass through the proposed routes and route alternatives. Provide information in a table format or on a separate map that depicts the licensed microwave beam path's source name, identifies their Worst-Case Fresnel Zones (WCFZ) in (feet, or meters), and indicates the WCFZ height above the ground surface to determine if any of the transmission line structures will obstruct any existing microwave beam paths. The map should also include the Minnesota Department of Transportation's (MnDOT) Office of Electronic Communications existing emergency communication towers and explain</p>
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32BX (cont)			how close transmission line structures can be located to these paths.
32BY	51	7.9.5 GPS-Based Agricultural Navigation	1st paragraph: Define the term “minimally” in terms of a unit of measurement, as it is used in the following sentence “Generally, GPS function is very <i>minimally affected</i> by transmission line electromagnetic interference (EMI).” Explain how transmission line structures can potentially interfere with GPS devices due to blocking the view of one satellite. Specifically, what happens to GPS-based farming equipment that is used to plant or spray agricultural field’s when the signal is dropped? Does the sprayer continue to spray? Does it remember where it left off in the program? Discuss how this directly affects agricultural producers that use GPS-based equipment.
32BZ	51	7.9.6 Mitigation (7.9 Electronic Device Interference)	1st paragraph: Provide specific details that describe how design and construction will minimize insulation gaps and sparking to reduce corona discharges. Explain how this will be accomplished and provide more information on the design factors that will accomplish this result. 4th paragraph: Quantify in comparable and tangible values what noise levels or reflections will generate a “great enough” interference to cause interference on individual homes digital reception. Provide a display that graphically demonstrates how the reflections impact digital reception in proximity to homes.
32CA	52	7.10 – Cultural Resources	1st paragraph (p.52): Quantify the number of sites within each segment that have not been evaluated for significance or have not undergone a determination of eligibility for listing on the NRHP. 2nd column, 2nd paragraph (p. 52): Include in the Final EIS the protocol for avoiding previously unknown cultural resources or human remains that are inadvertently discovered during construction. Include this as an appendix in the FEIS that discusses

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32CA (cont)			how the Applicant will address the following items: construction contractor training, construction monitoring by a professional archaeologist, procedures for identification and protection of resources in the field, contact information for parties to address a discovery and procedures for avoidance and associated tasks in the event of work stoppage in a construction area.
32CB	52	7.11 Transportation and Public Services	Italics should not be used on the first three bulleted points under Traffic Use/Travel, Maintenance, Repair and Operational Activities, Future Construction Activities. Provide specific details for each Segment (1-3) in the appropriate section of the document that addresses future construction activities. Specifically focus on where future road expansions and/or realignments are likely to occur along the three route segments and identify their location on a map, even if there are no conflicts. This information can be obtained by contacting each County’s Highway Engineer, and MnDOT to determine where future road construction projects are planned.
32CC	53	7.11 Transportation and Public Services (Long Term Compatibility with Traffic Use)	1st paragraph (p.53): Provide values for the following variables: traffic volume, design speed, roadside geometry, radius of horizontal curve, presence of a curb and presence of urban or rural roads, collectors, arterials, or freeways; as they influence the clear zone and road side obstruction requirements.
32CD	53	7.11 Transportation and Public Services (Impacts to Traveler Experience: Scenic Areas and Scenic Byways)	It appears a discussion regarding the scenic areas of the Zumbro River valley is missing in this section. Although, this area is not designated as a Scenic Byway, many of the residents in the vicinity of the 3P route alternative, or the 3P-Zumbro-N consider the Zumbro River as a scenic area. Therefore, a discussion about how this will impact the experience of the approximately 2,000 daily travelers who commute along White Bridge Road (MnDOT, 2006 Traffic Volumes) should be included in the Final EIS.
32CE	53	7.11 Transportation and Public Services (Maintenance, Repair and Operational Activities)	Identify on the appropriate map(s) areas where power line ROW will overlap with road

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32CE (cont)			<p>ROW, requiring certain roadside structures to be displaced or relocated. Prepare this data for all three proposed route segments (1-3) and route alternatives. Further, the placement of transmission line structures should be identified and analyzed during the EIS process. As requested before, a detailed map of proposed transmission line pole placement should be included in the Final EIS. This will allow the placement of large road signs, light posts, traffic control signals, traffic monitoring cameras, high mast light towers, noise walls, and snow fences to be evaluated by the Applicant before the final route is selected.</p>
32CF	53	7.11 Transportation and Public Services (Future Construction Activities)	<p>Identify along each route Segment (1-3) where future construction activities will require the relocation of utilities for all routes and route alternatives.</p> <p>Column 4, paragraph 2: State LGUs and MnDOT have expressed concerns about the potential for having to pay the high cost of relocating poles in instances where transmission lines parallel roadways. The DEIS states this typically occurs when future construction activities warrant relocation of transmission line structures and the transmission line is outside the public ROW.</p> <p>To understand the potential impact on LGUs and tax payers, the Applicant should prepare another transportation map (Map 8.3-39b) that shows areas along all routes and route alternatives where transmission lines will be paralleled in this fashion. Further analysis should then be conducted to quantify the total length (in miles) of transmission lines that will parallel roadways, and an estimate the total number of structures that will need to be replaced (based on future construction data) should be provided. Estimate costs to replace or relocate structures should also be included.</p> <p>Potential impacts to Hwy 52 corridor management plans are discussed relative to the proposed route alternatives in <i>Section 8</i>. However, there is no mention of potential impacts any other long-term transportation management plans for roads under county or township jurisdiction. Indicate in the Final EIS if management plans exist for other roads or highways (provide their names) and discuss the potential impacts that will result from the proposed project.</p>

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32CG	54	7.11.3 Airports	<p>4th paragraph: State in the Final EIS what the Lake Zumbro Seaplane Base guide slope restrictions are and indicate how these restrictions will be mitigated.</p>
32CH	54	7.11.3 Airports (Mitigation)	<p>Provide more details that show what the shorter structures in the vicinity of airports or landing strips would look like. Include structure heights and a schematic detailing the possible designs at the 3P and the 3P-Zumbro-N crossings. Since the 3P-Zumbro-N is the only crossing with a seaplane base landing strip this route would have the greatest impact regarding airports and landing strips.</p>
32CI	55	7.12.6 Water Bodies	<p>2nd paragraph: Add “skiing, and canoeing” to the last sentence in this paragraph. Also, it should be noted that Lake Zumbro is the only recreational lake that is within Olmsted County and is known to have a higher fishing pressure per acre than greater Minnesota lakes. According to a study conducted on Lake Zumbro in May and August of 2007 by the MDNR, Division of Fish and Wildlife they reported the total estimated fishing pressure for (boat and bank) was 50.3 hours/acre, which is higher than the statewide mean (33.1 hours/acre) on similar lakes during the summer. Meaning, Lake Zumbro is a recreational destination for residents within a 9-County area, including Rice, Goodhue, Wabasha, Winona, Olmsted, Dodge, Steele, Mower, Fillmore and Houston Counties. It is estimated that recreational sport fishing on Lake Zumbro alone generates approximately \$1.65 million per year (Attachment E – Lake Zumbro and Lower Zumbro River Creel Survey and Calculated Value of Recreation on Lake Zumbro). This estimate was generated from the DNR study mentioned above and only accounts for the recreational value of fishing, but is a substantial contribution to the liveliness of local economies. Locating the proposed transmission line along the 3P, or 3P-Zumbro-N route would have a substantial impact to this recreational resource.</p>
32CJ	55	7.12.9 Private Recreational Facilities	<p>Replace “route alternative A1” with “route alternative A).</p>

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32CK	55	7.12.10 Mitigation	Define "prudent routing" and explain specifically the recreational resources that will need to be spanned for all routes and route alternatives.
32CL	56	7.13 Air Quality	1st column, 5th paragraph (p.56): Provide the "corona effect" emission values for ozone and oxides of nitrogen in parts per million (ppm) for the proposed routes and route alternatives based on actual measurements for a transmission line project of this same size.
32CM	56	7.13.1 Ozone and Nitrogen Oxides	2nd paragraph: Provide a reference to the study that states "the operation of the proposed transmission lines would not create any potential for the concentration of these pollutants to exceed the nearby (ambient) air standards," or provide calculations that proves the ambient air standards are not exceeded for a transmission line project of this same magnitude. Also, find a model that can calculate concentrations for NO ₂ . Simply stating the Electric Power Research Institute (EPRI) model does not include a module for NO ₂ is not sufficiently addressing the impact. Replace "1. Modeled concentrations for NO ₂ " with 1. Modeled concentrations for NO ₂ .
32CN	150	8.3.2 Environmental Setting – North Rochester Substation to Mississippi River	4th paragraph: strike "Zumbor" and replace with Zumbro.
32CO	150	8.3.3 Socioeconomic Setting – North Rochester Substation to Mississippi River	Please note that only portions of this segment are located in a sparsely populated, agricultural part of Minnesota where the 2007 USDA Census of Agriculture reports the median farm size in Olmsted County is 80 acres. Other portions of this route segment also traverse more densely populated rural areas where land is divided into many smaller tracts of land that range between 5 to 40 acres.
32CP	150	8.3.4.1 Public Health and Safety – Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	2nd paragraph: States "Any perceived risks to health and safety from EMFs, stray voltage, or impacts to implantable medical devices are likely to be correlated with the proximity of human dwellings to the proposed line," but this statement fails to describe or summarize the distances impacts will likely occur at, nor does it identify the

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32CP (cont)			mitigation measures that will be required. Include more information about setback distances from human dwellings and the effects of electric and magnetic fields, implantable medical devices and stray voltage.
32CQ	150	8.3.4.1 Public Health and Safety – Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	A detailed assessment that compares the route alternatives within Segment 3 regarding electric and magnetic fields, implantable medical devices and stray voltage is not included in this section. The DESI states these issues are addressed in Section 7.1; however this section also fails to address and quantify the impacts between all the proposed route alternatives.
32CR	150	8.3.4.2 Property Values - Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	1st paragraph: discusses the effects of property values and appears to make contradictory statements. For example, it is stated "that no clear cause-and-effect relationship has been identified between property values and proximity to transmission line structures," but then proceeds to state "other studies have found a relationship, but impacts generally dissipated with time and distance." So is there a relationship, or not? If so, please state the values for time and distance for which the impacts dissipate, and present this in a table format, so reviewers can assess these values. Complete this assessment for all of the routes and route alternatives.
32CS	150	8.3.4.2 Property Values - Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	This section is inadequate and fails to discuss the trends in land economics as they relate to the comparison between the 3P route alternative (Olmsted County) and the 3P-Zumbro-N, and 3A (Wabasha County). According to Minnesota Land Economics, which has reported county assessor land value estimates by county, township or city (from 1993 to present day), the land economic trends between Olmsted and Wabasha Counties is drastically different. For example a comparison in land values is depicted below:

32CS (cont)			<table border="1" data-bbox="450 403 668 1098"> <thead> <tr> <th>Year</th> <th>County</th> <th>Township</th> <th>Estimated value per acre</th> </tr> </thead> <tbody> <tr> <td>2009</td> <td>Olmsted Wabasha</td> <td>Oronoco Zumbro</td> <td>6,509 2,624</td> </tr> <tr> <td>2010</td> <td>Olmsted Wabasha</td> <td>Oronoco Zumbro</td> <td>5,792 2,608</td> </tr> </tbody> </table> <p data-bbox="668 504 714 1098">Estimated value per acre is based on the green acres taxable value. Source: MN Land Economics (2009-2010)</p> <p data-bbox="730 322 947 1189">The difference between Olmsted County's and Wabasha County's estimated green acres taxable value for 2009 and 2010 is 40 percent and 45 percent, respectively. This is a significant difference and represents a trend in marketable land where properties in Olmsted County are considerably more expensive than those in Wabasha County. Based on this assessment it would seem more reasonable to locate the proposed transmission line in Wabasha County instead of Olmsted County (Attachment F – Minnesota Land Economics: Estimated Land Values Summary).</p>	Year	County	Township	Estimated value per acre	2009	Olmsted Wabasha	Oronoco Zumbro	6,509 2,624	2010	Olmsted Wabasha	Oronoco Zumbro	5,792 2,608
Year	County	Township	Estimated value per acre												
2009	Olmsted Wabasha	Oronoco Zumbro	6,509 2,624												
2010	Olmsted Wabasha	Oronoco Zumbro	5,792 2,608												
32CT	152	8.3.4.3 Human Settlement - Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	<p data-bbox="988 312 1196 1189">1st paragraph (top of p.152): States “the potential for impacts to tree groves and wind breaks may be closely correlated with the proximity of the line to the human settlement features.” Data that analyzes this statement is inconclusive. The number of homes with tree groves and wind breaks that would be impacted by the 3P route or any other route alternative is absent. Quantify the number of homes with tree groves and wind breaks that would be impacted by any of the route or route alternatives and include this information in the Final EIS with a summary of which route has the fewest impacts.</p>												
32CU	152	8.3.4.3 Human Settlement - Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	<p data-bbox="1236 332 1358 1189">2nd paragraph (top of p.152): If displacement will occur for homes within the ROW (which is indicated to be 150-feet) clarify on Table 8.3.4.3-1 the number of homes within the 0-150-foot zone that will likely be displaced depending upon the final route selection. Make a clear statement regarding which route alternative will have the</p>												

32CU (cont)			<p data-bbox="1827 322 1973 1189">fewest impacts. Based on our assessment of the data, the 3P route would not be a good location for the proposed transmission line since there are at least four homes that would be displaced, and another 25 homes would be impacted within a 500-foot distance.</p>
32CV	152	8.3.4.3 Human Settlement - Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	<p data-bbox="2013 322 2331 1189">5th paragraph (bottom of p.152): states “that the 3A, 3A-001, 3A-003, and 3A-004 route alternatives have the fewest homes within the 1,000-foot route width,” and none of these routes was selected as the preferred route. According to the Applicant’s Route Permit Application, Section 4.1 Summary of Route Selection Process and Guiding Factors the first factor listed gives priority to the Minnesota’s policy of non-proliferation; and the second factor is intended to minimize proximity to homes. If the guiding factors are intended to “funnel” route options and assist in the selection of routes with the fewest impact to homes and the environment, why were these routes not selected as the preferred? Also, many of the mitigation measures mentioned in the DEIS state that identified impacts can be avoided by avoiding residences, but the 3P route along Segment 3 is the most densely populated.</p> <p data-bbox="2346 322 2610 1189">Additionally, it seems the primary goal of comparing route alternatives is to first determine where the proposed route should cross the Zumbro River. Therefore, we request that a comparison between the 3A, 3P and the 3P-Zumbro-N route, and other route options is completed to determine which route has the fewest homes within the 1,000-foot ROW and the 1.25-mile variable width corridor. An analysis of homes within 1,000-feet, and 1.25-miles should be included in Table 8.3.4.3-1 Proximity of homes along each proposed route alternative – Segment 3, which only compares the number of homes within 500-feet of each route. Also lacking in the DEIS is a discussion that describes the extent to which these properties will be impacted.</p> <p data-bbox="2626 322 2741 1189">Stating the 3A, 3A-001, 3A-003, and 3A-004 route alternatives have the fewest impacts to homes does not adequately compare or define the 3P “preferred” route to the 3A “alternate” route and only serves to distract reviewers and lead them to focus on segments within the preferred and alternate routes instead of the routes as a whole.</p>

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32CW	152	8.3.4.3 Human Settlement - Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	<p>3rd column (p.152): The pinch point on the 3P-006 route alternative would not be a good location to install the proposed transmission line, since it would be located along a corridor that is occupied by several homesteads. There are ten established homes along this route alternative that are within 1,000-feet of the proposed alignment that would be impacted by property values, health and aesthetics.</p>
32CX	152	8.3.4.4 Land Use Compatibility - Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	<p>1st paragraph: Provide a summary in a list or table format in the final EIS that lists the current land use plans and zoning ordinances that were evaluated to determine the compatibility of the proposed route alternatives with the proposed projects land use. For example below is a list of some of the plans and zoning ordinances that would be applicable to the propose routes along the 3P, 3P-Zumbro-N and the 3A route alternatives:</p> <ul style="list-style-type: none"> • Olmsted County General Land Use Plan (Amended March 8, 2011) • Olmsted County Zoning Ordinance (Updated February 26, 2007) • Oronoco Township Land Use Plan (February 28, 2002) • Oronoco Township Zoning Ordinance (February 28, 2002) • Comprehensive Land Use Plan for Wabasha County (August 4, 1998) • Wabasha County Zoning Ordinance (Amended August 15, 2006) • Goodhue County Zoning Ordinance (Amended August 12, 2010) • Goodhue County Comprehensive Land Use Plan (2004) <p>Many other land use plans and zoning ordinance will be applicable to the proposed transmission line project for the Counties of Dakota, Goodhue, Rice, Dodge, and Winona. Include these plans in the Section 10.0 References and provide specific details how the proposed transmission project is congruent with these plans.</p> <p>In addition provide a list of criteria (e.g. agricultural protection, suburban urban, commercial, water resources or development of sensitive areas) for which the land use plan were evaluated against.</p>

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32CY	152	8.3.4.4 Land Use Compatibility - Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	<p>2nd paragraph: Include a description of which route will have the fewest impacts on land cover.</p>
32CZ	152	8.3.4.4 Land Use Compatibility - Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	<p>4th paragraph: states “the transmission lines will change the visual quality of the agricultural landscape, but due to relatively low population densities the transmission structures will not affect many people.” This is contrary to the information presented in <i>Table 8.3.4.3-1 Proximity of homes along each proposed route alternative – Segment 3</i> which indicates there are 18, 23, and 25 homes within 500-feet along the 3A, 3P-Zumbro-N and the 3P routes, respectively. According to this table the greatest number of homes along these route alternatives would be along the 3P route. Homes have been established along the 3P route corridor in a manner that is consistent with the Olmsted County General Land Use Plan, Amended March 8, 2011, which has designated the area surrounding the Zumbro River and White Bridge Road as growth corridors for “potential suburban and suburban developments.” Locating the 3P route in this location would be inconsistent with the Olmsted County Land Use Plan.</p>
32DA	154	8.3.4.4 – Mitigation (Land Use Compatibility)	<p>1st paragraph: Provide more detailed information on the specific best management practices (BMPs) that will mitigate impacts to land use compatibility in agricultural areas during construction, operation and maintenance.</p>
32DB	155	8.3.4.5 Land Based Economies – Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment	<p>1st paragraph (top left of page): Routes alternatives (2C3-001-2, 2C3-002-2, 2C3-004-2, and 2C3-007-2) are identified as having a slightly lower percentage of prime farmland within the ROW should be presented in <i>Section 8.2</i> (page 122). The routes along Segment 3 (e.g. 3A, 3P, etc.) that have a lower value of prime farmland within the ROW should be identified in this section.</p>
32DC	155	8.3.4.5 Land Based Economies – Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment	<p>4th paragraph on page 155: Obtain the DNR harvest plans and conduct an analysis of DNR forest stands that are economically important forestry resources along all route alternatives in this Segment and provide this information in the Final EIS. .Again,</p>

32DC (cont)			under the Mitigation Section 2 nd paragraph (page 155) it states forestry resources can be minimized by choosing a route alternative that goes through the fewest DNR stands, so without the DNR harvest plan information how can the route alternatives with the fewest impacts be compared?
32DD	155	Map 8.3-34 Land Use Compatibility Map, Segment 3, North Rochester Substation to Mississippi River	Show the Richard J. Dorer Memorial Hardwood Forest on the Land Use Compatibility Map. It is discussed on page. 155, but is not identified/labeled on <i>Map 8.3-34</i> .
32DE	155	8.3.4.6 Rare and Unique Resources - Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment	1st paragraph: Provide as an Appendix the actual DNR Natural Heritage Information System (NHIS) public data summary sheets of the federally-listed or state-listed endangered or threatened species. Also discuss State species of special concern and non-status species within Minnesota as they are affected by each route alternative.
32DF	158	8.3.4.6 Rare and Unique Resources - Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment	1st and 2nd paragraph (p.158): Provide specific field research that has been completed by the Applicant to determine the impacts of the proposed project transmission lines will have on migratory bird such as bald eagles and bat colonies. If these studies have not been completed we request they are conducted before a final routing decision is made.
32DG	158	8.3.4.6 Rare and Unique Resources - Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment	2nd column, 1st paragraph (p.158): Omit "1A" from the list of freshwater mussel concentrations.
32DH	158	8.3.4.6 Rare and Unique Resources - Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment	3rd column, 1st paragraph (p.158): Replace <i>Figure 8.3.4.6-1</i> with <i>Figure 8.3.4.6-1b</i> . Also, as stated before when comparing route alternatives focus on the entire route alternatives as a whole (e.g. 3P, 3P-Zumbro-N or 3A) rather than the individual route alternative options. The limiting factor is crossing the Zumbro River at one of three locations, so the analysis should first focus on which crossing is most appropriate.
32DI	158	8.3.4.6 Rare and Unique Resources (Mitigation)	2nd paragraph: Replace "moist" with "most."

32DI (cont)	161	8.3.4.7 Flora and Fauna - Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment (Wildlife Resources Near the P Route Alternatives)	2nd column, 2nd paragraph (p.161): Clarify the total number of CRP lands within one mile of the route alternatives. It is indicated in the text a total of 383 CRP lands occur within one mile of the P Routes Alternatives; however, <i>Appendix J (the MCBS Easements and Karst Table)</i> indicates a significantly lower number within the route and route alternative to the MCBS Easement and Karst Table in Appendix J, or only report the easements within the text that are within the route width. Clarify and correct for the FEIS. Also, make the discussion within all of the text for the other two segments consistent with the tables in the Appendices, so if the tables are reported as 150-foot or 1,000-foot the text should report the same findings. Include the total route width distance of 1,000-feet on the <i>Table MCBS Easements and Karst in Appendix J</i> , and make this correction through out all of the tables in the Appendix for the other two route segments. It is not clear if the numbers tabulated are for a 150-foot or 1,000-foot distance.
32DK	161	8.3.4.7 Flora and Fauna - Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment (Wildlife Resources Near the P Route Alternatives)	3rd column, 2nd paragraph (p.161): Include the Zumbro River in the second sentence.
32DL	161	8.3.4.7 Flora and Fauna - Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment (Wildlife Resources Near the A Route Alternatives)	3rd column, 4th paragraph (p.161): Provide more detail in this section or reference the appropriate section where specific conservation measures and practices that would reduce the potential for surface runoff and sedimentation to aquatic habitats is discussed.
32DM	161	8.3.4.7 Flora and Fauna - Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment	4th column, 2nd paragraph (p.161): Include a discussion about the structure design across the Zumbro River crossing and provide details about the design options.

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32DO	162	8.3.4.8 Water Resources - Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment	3rd column, 1st paragraph (p.162): Again, Stating the 3B-003 route alternative has the fewest impacts to trout streams does not adequately compare or define the 3P "preferred" route to the 3A "alternate" route and it distracts the reader to focus on segments within the preferred and alternate routes instead of the routes as a whole. Select one of the route alternatives 3P, 3P-Zumbro-N, or the 3A to define the smallest impact.
32DP	162	8.3.4.8 Water Resources - Analysis of Segment Alternatives for the North Rochester Substation to Mississippi River Segment	4th column, 1st paragraph (p.162): Include a summary table in the FEIS that identifies the total estimated number of wetlands impacted for each route and route alternative. Meaning, the estimated wetland impacts would be derived from field delineations or inventories, or a map-based desktop analysis that uses hydric soils and aerial photographs; not the national wetland inventory (NWI). Identify and quantify on a map wetland areas that are wider than 1,000-feet for all routes and route alternatives. 1st paragraph: If impacts to water resources can be managed by choosing a route alternative that minimizes the proximity of the line to watercourses, lakes and wetlands, why doesn't the DEIS provide detailed schematics that identifies the span distances along the three Zumbro River crossings (3P, 3P-Zumbro-N, 3A). Provide three detailed schematics in the FEIS that identify potential pole placements and required span distances. Then, within the text indicate which crossing has the shortest span width. Based on our assessment using aerial photographs and topography we have determined the 3A Zumbro River crossing will require the shortest span width, thus the smallest impact.
32DQ	164	8.3.4.8 Water Resources (Mitigation)	By indicating the 3B-003 route alternative has the fewest watercourse crossings, trout stream crossings and PWI watercourse crossings it does not consider, or compare the three Zumbro River crossing (3P, 3P-Zumbro-N, 3A) as entire routes from beginning to end. It only provides an indication of the fewest impacts within a smaller segment of Segment 3.
32DR	164	8.3.4.8 Water Resources (Mitigation)	2nd column, 1st paragraph (p.164): Replace 3B-003a with 3B-003.

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32DS	164	8.3.4.9 Electronic Interference - Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	1st paragraph: Provide specific details regarding how structure placement will be utilized to mitigate interference with microwave communication towers. What are the factors for determining if interference will/will not occur, how is the interference measured and which route will generate the smallest amount of interference? Will all route alternatives be analyzed before approval of the FEIS and the route permit application? If not, why?
32DT	164	8.3.4.10 Cultural Resources -- Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	1st paragraph: Provide the actual SHPO database report as an appendix in the Final EIS. 3rd paragraph: State which route alternative has the fewest impacts to cultural or archaeological resources in the text. According to <i>Figure 8.3.4.10-2</i> , route 3A would impact the fewest number of historic sites within one-half mile.
32DU	166	8.3.4.10 Cultural Resources -- Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	3rd paragraph (p.166): The purpose of the DEIS is to quantify and determine what routes and route alternatives will have the least impact to a particular environmental concern. With that being said, stating "actual impacts to any archaeological sites will not be known until a route and alignment are selected" is unacceptable. The DEIS should identify the route with the fewest impacts and use this information to select a final route and alignment. Explicitly state which route (3P, 3P-Zumbro-N, or 3A) will have the fewest impacts. Stating the 3A-Crossover and the 2C3-004-3 will have the fewest archaeological sites does not address the major issue where the routes will cross the Zumbro River.
32DV	166	8.3.4.10 Mitigation (Cultural Resources)	1st paragraph: Indicate when the NHRP assessment of potentially affected sites will be completed and indicate why this assessment will not be conducted until after a route has been selected. Again, it would seem this information would be valuable in determining which route will have the fewest impacts to these resources.

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32DW	166	8.3.4.11 Transportation and Public Services – Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	Paragraph 1-3 and Figure 8.3.4.11-1: Provide a summary table for each route and route alternative that quantifies the total number (length in miles) of proposed routes and route alternatives where ROW is shared with pipeline, County or Township Roads, major highways, rail roads, trails or other transmission lines and include non-ROW sharing of field lines and cross country. Provide this information in the Final EIS. Based on the data in the summary table above indicate in the text which route would most closely conform to Minnesota’s policy of non-proliferation.
32DX	168	8.3.4.11 Transportation and Public Services (Roadways and Emergency Services)	3rd column, 2nd paragraph: Provide a list of available transportation planning documents for the affected counties that were reviewed for each route and route alternatives. Include the name of the plan, and County.
32DY	168	8.3.4.11 Transportation and Public Services (Airports and Landing Strips)	First replace “Olmstead” with Olmsted. Second, provide more details about the Lake Zumbro Seaplane Base and describe how it will be affected by the 3P, or the 3P-Zumbro-N route.
32DZ	168	8.3.4.11 Transportation and Public Services (Mitigation)	Describe in detail the expected length of temporary impacts. Will they be limited to 1 week, or 2 months? Potential impacts to future road expansion/modification will occur, but the DEIS does not list where future road expansion projects will occur, and the DEIS has not adequately compared future expansion project impact against all of the proposed route and route alternatives for all three segments. Provide specific details how the proposed route alternatives will impact future expansion projects, and indicate where this is likely to occur and include a time frame. Provide specific details how the Applicant will minimize impacts to the Lake Zumbro Seaplane Base. Will one of the route alternatives (3P, 3P-Zumbro-N, or the 3A) have a greater impact on this operation? If so, indicate which one will create the most disruption to seaplane business. The DEIS states mitigation to the seaplane base can occur with adequate distance between the transmission line and the operation, indicate what the distance is

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32DZ (cont)			and provide a table that summarizes how close the (3P, 3P-Zumbro-N, 3A) routes are in relation to this operation. Also, provide more information on what the modified structures would look like if sited in close proximity to the seaplane base, include their height, width and a design schematic.
32EA	170	8.3.4.12 Recreation Resources – Analysis of Segment Alternatives for North Rochester Substation to Mississippi River	4th column, 1st paragraph (p.170): Route 2C3-003-3 is not labeled on <i>Map 8.3-40</i> . The McCarthy Lake WMA is discussed in detail, where as a detailed discussion about Lake Zumbro recreational opportunities are missing. A separate section should be added to address the environmental attributes of Lake Zumbro.
32EB	171	8.3.4.12 Recreation Resources (Mitigation)	7th paragraph: As stated in this paragraph “ <i>Although all route alternatives in this segment would cross the Zumbro River, route alternatives 3P-Zumbro-N and 3P-Zumbro-S could minimize visual impacts to recreational resources on Lake Zumbro.</i> ” By minimizing impacts to the Zumbro River, you are then displacing the impacts to Lake Zumbro. Specifically state which route alternative 3P, 3P-Zumbro-N or 3A would minimize impacts to visual and recreational resources. 8th paragraph: It is obvious choosing a route alternative with fewer snowmobile crossings in the ROW and fewer miles of snowmobile trails within the 1,000-foot route width will minimize impacts to this recreational resource, but this section should really address which route will have the fewest impact.
32EC	172	8.4 Mississippi River Crossing at Kellogg	This section provides the details of the Mississippi River Crossing at Kellogg, another stand alone section should be included titled “Zumbro River/Lake Zumbro Crossing.” The Zumbro River/Lake Zumbro Crossing section should have as much detail as the Mississippi River Crossing at Kellogg including all the subheadings (<i>Section 8.4.1 through 8.4.4</i>) that compares the three possible crossings (3P, 3P-Zumbro-N, and 3A) as well as provide the following information: <ul style="list-style-type: none"> • Aerial photograph of the three possible crossings (3P, 3P-Zumbro-N, and 3A) (similar to Figure 8.4.1-1) • A Table similar to 8.4.1-1 that compares the structure heights and required ROW

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32EC (cont)			<p>widths for the plausible configuration options along the (3P, 3P-Zumbro-N, and 3A)</p> <ul style="list-style-type: none"> A figure similar to <i>Figure 8.4.4-1</i> that provides an acre estimate of GAP land cover types within route at the three crossing locations (3P, 3P-Zumbro-N, and 3A) A figure similar to <i>Figure 8.4.4-2</i> that summarizes the acreage of various resources within the route at three river crossings (3P, 3P-Zumbro-N, and 3A) Detailed river crossing maps (similar to <i>Map 8.4.1-02-06</i>) for as many plausible configuration options for the route alternatives (3P, 3P-Zumbro-N, and 3A) To conclude this section identification of the route alternate with the fewest impacts should be identifiable and explicitly stated within the text
32ED	Appendix D – Detailed River Crossing Information		<p>Information that is pertinent to the Zumbro River or Lake Zumbro crossing is omitted. The DEIS only highlights the Mississippi River Crossing at Kellogg. Provide the same information as included in this section for the 3P, 3P-Zumbro-N, and the 3A route alternatives; the following information should be included:</p> <ul style="list-style-type: none"> photos of the existing transmission line along the 3P-Zumbro-N proposed crossing provide a description of the design options for the 3P, 3P-Zumbro-N, and the 3A route alternatives explain why a detailed underground feasibility analysis for the Zumbro River/Lake Zumbro Crossing was not included in the DEIS conduct a detailed underground feasibility analysis for the Zumbro River/Lake Zumbro Crossing and then include the results in the Final EIS oblique aerial photographs of all three proposed crossings 3P, 3P-Zumbro-N, and the 3A looking from the same direction in all photos that identifies existing residences homesteads, property lines and existing transmission lines or distribution lines (69kV) when applicable
32EE	Appendix D – Detailed River Crossing Information		<p>Information provided in <i>Minnesota Route Permit – Appendix E2</i> has scattered text throughout this section with letters missing. For example <i>Table E1 and E2</i> is missing</p>

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32EE (cont)			<p>an “S” on the heading for Structure. Find these errors and correct them in the Final EIS.</p>
32EF	GIS Data/Digital Data		<p>Provide GIS shapefiles¹ for all routes and route alternatives including the original alignments (P Route and A Route), and the additional alternative routes (variation on the P Route, A Route, variation on both, and the parallel alignment). Also provide the GIS shapefiles for the existing transmission lines and distribution lines (69kV) within the vicinity of the project area.</p>
32EG	GIS Data/Digital Data		<p>Provide shapefiles¹ for Residences within 500 feet of Alternatives and Residences within 75 feet of Alternatives as indicated on <i>Map 8.3-33</i>. Also after the analysis of residences within 1,000-feet of the routes and route alternatives is completed (as previously requested) provide this data as shapefiles as well.</p>

¹For all GIS shapefile include the .shp, .shx, .dbf, .prj, .sbn, .sbx, .fbn, .fbx and the .xml extensions.

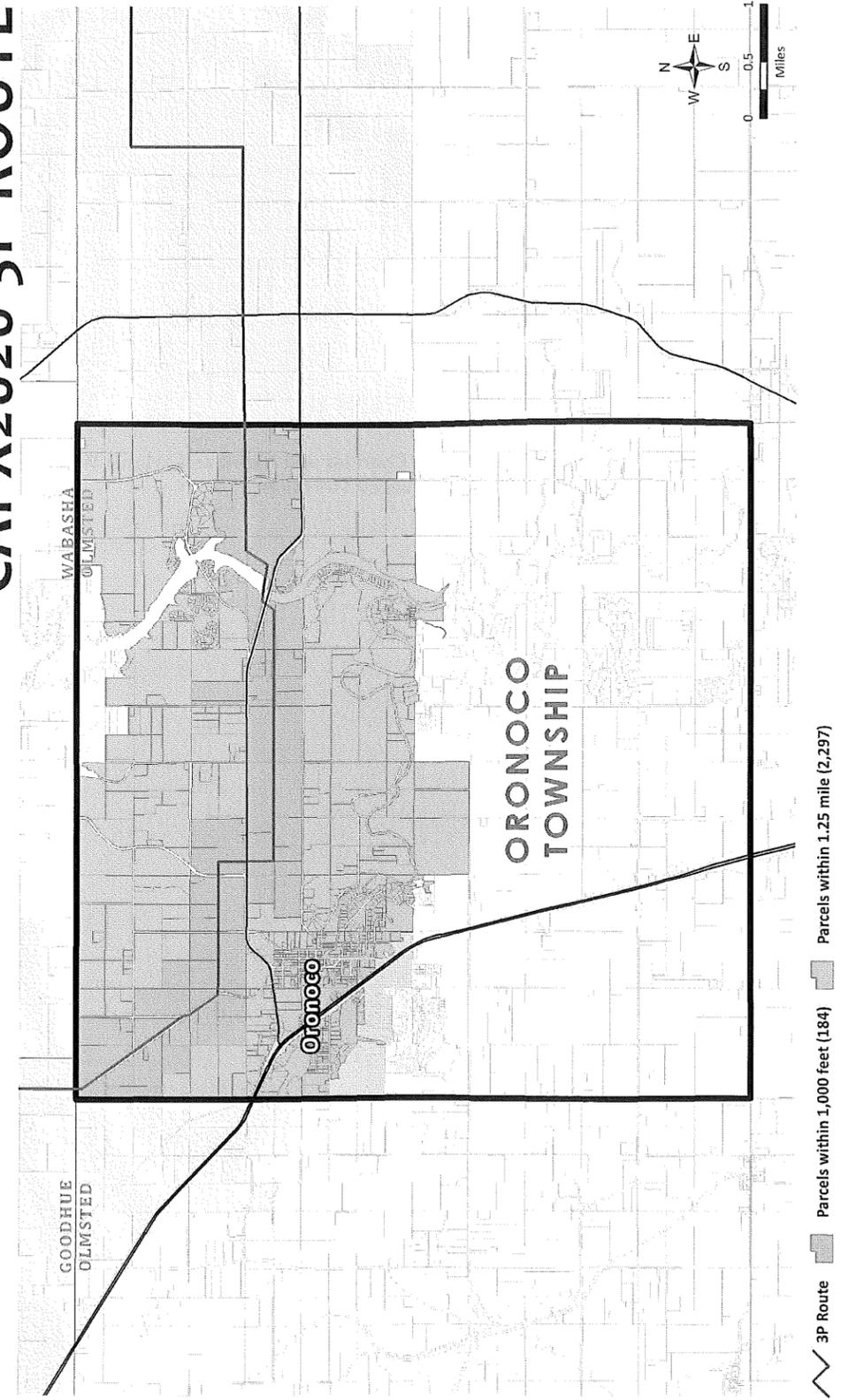
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ATTACHMENT B

Parcel Count Analysis within 1,000-foot Corridor and 1.25-mile Variable Width Corridor for Oronoco Township

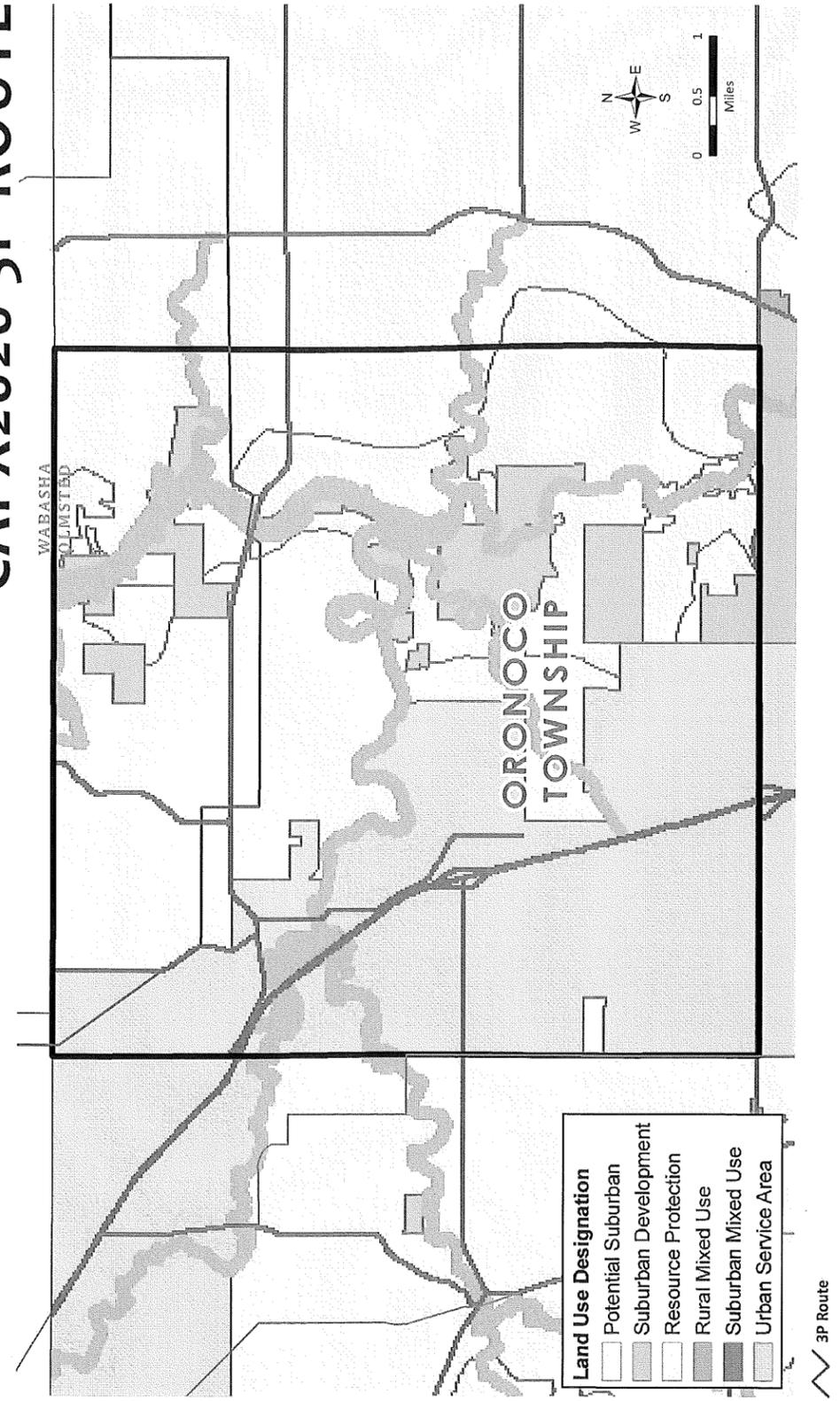
CAPX2020 3P ROUTE



ATTACHMENT D
Olmsted County Future Land Use Map



CAPX2020 3P ROUTE





ATTACHMENT E

Lake Zumbro and Lower Zumbro River Creel Survey and Calculated Value of Recreation on Lake Zumbro

Minnesota
F-29-R(P)-27
Study IV
Job 796
March 2008

MINNESOTA DEPARTMENT OF NATURAL RESOURCES
DIVISION OF FISH AND WILDLIFE

LAKE ZUMBRO AND LOWER ZUMBRO RIVER CREEL SURVEY

MAY - AUGUST 2007

Randy Binder

Funded Under Federal Aid by the Sport Fish Restoration Act F-29-R (P)-27

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